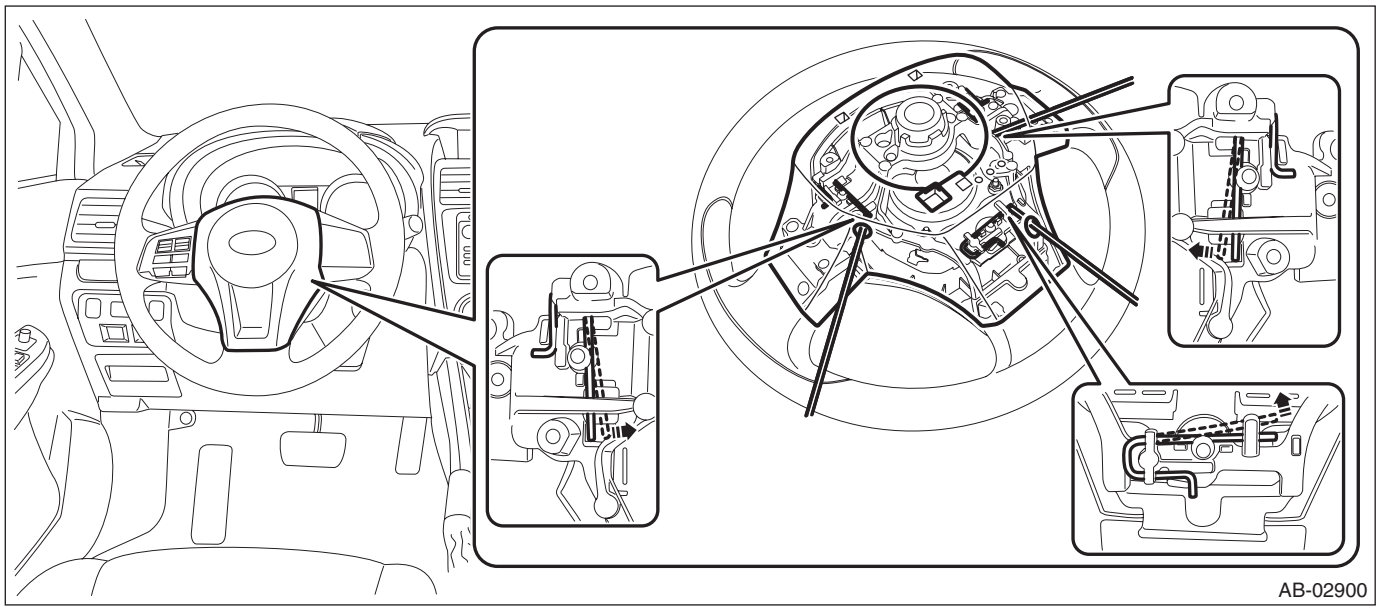
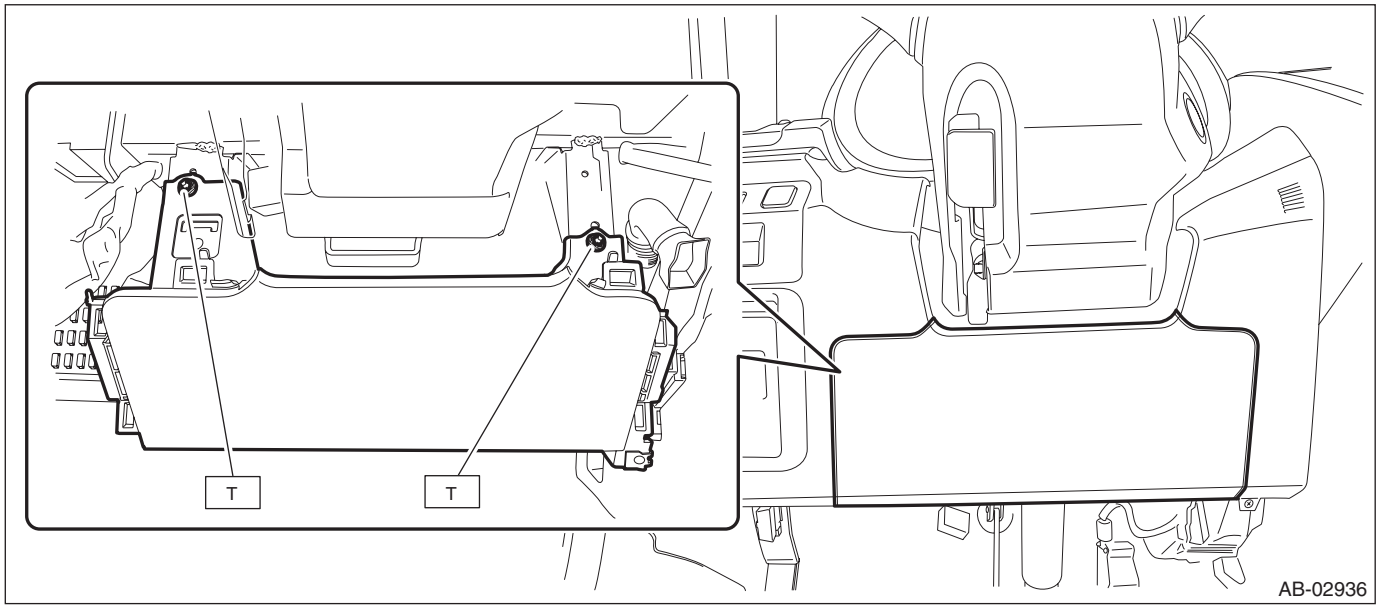
(1) Curtain airbag sensor LH
(2) Curtain airbag module LH
(3) Seat belt pretensioner LH
(4) Front door impact sensor LH
(5) Side airbag module LH
(6) Buckle switch RH
(7) Side airbag module RH
(8) Occupant detection control module
(9) Front door impact sensor RH
(10) Side airbag sensor RH
(11) Seat belt pretensioner RH
(12) Occupant detection sensor
(13) Curtain airbag sensor RH
(14) Curtain airbag module RH
(15) Satellite safing sensor
(16) Side airbag sensor LH

1. DRIVER'S AIRBAG MODULE

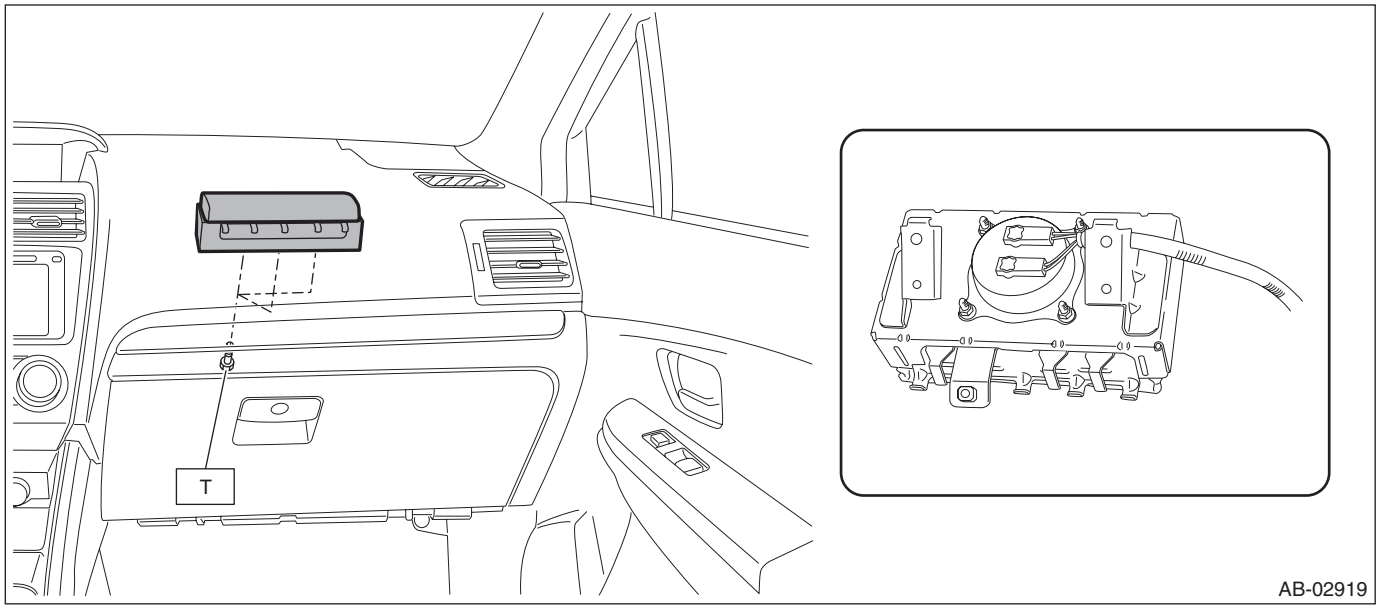


2. KNEE AIRBAG MODULE



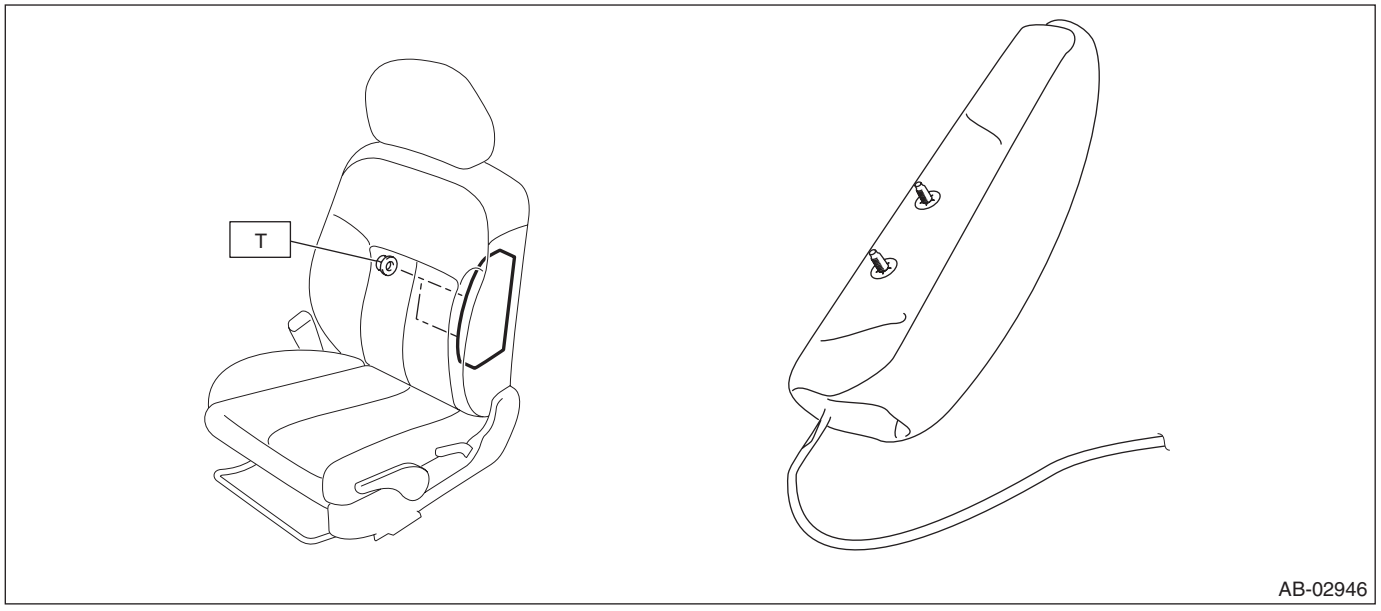
Tightening torque:
7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

3. PASSENGER'S AIRBAG MODULE



Tightening torque:
7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

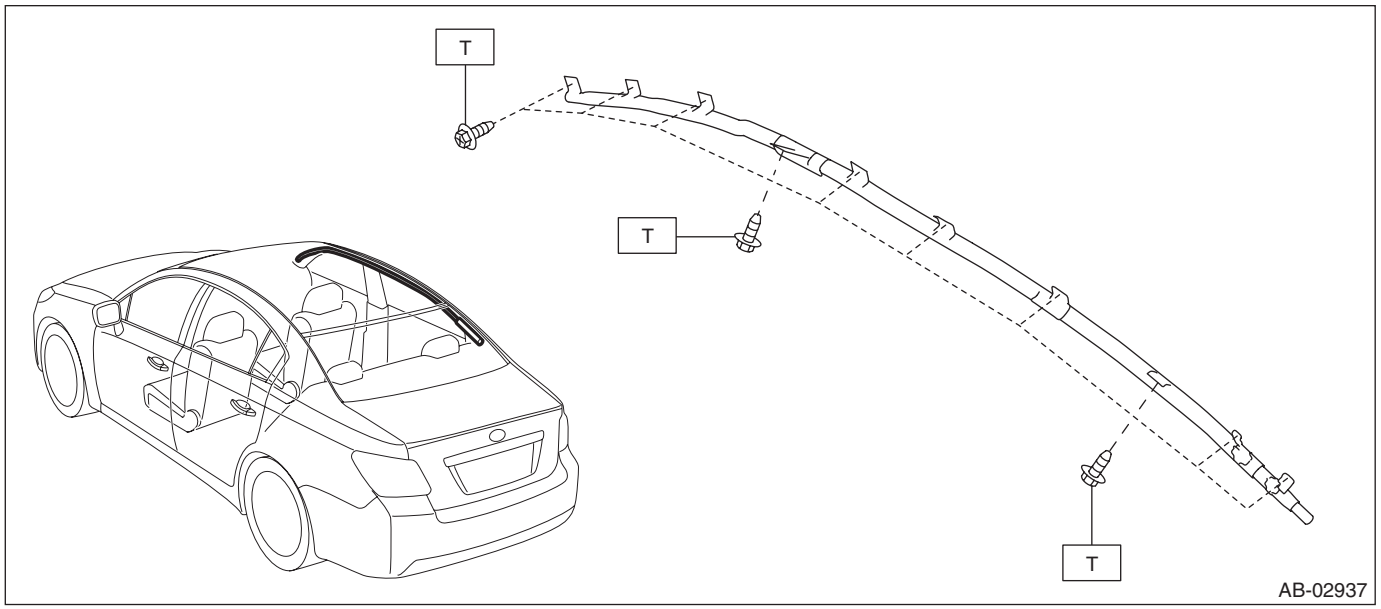
4. SIDE AIRBAG MODULE



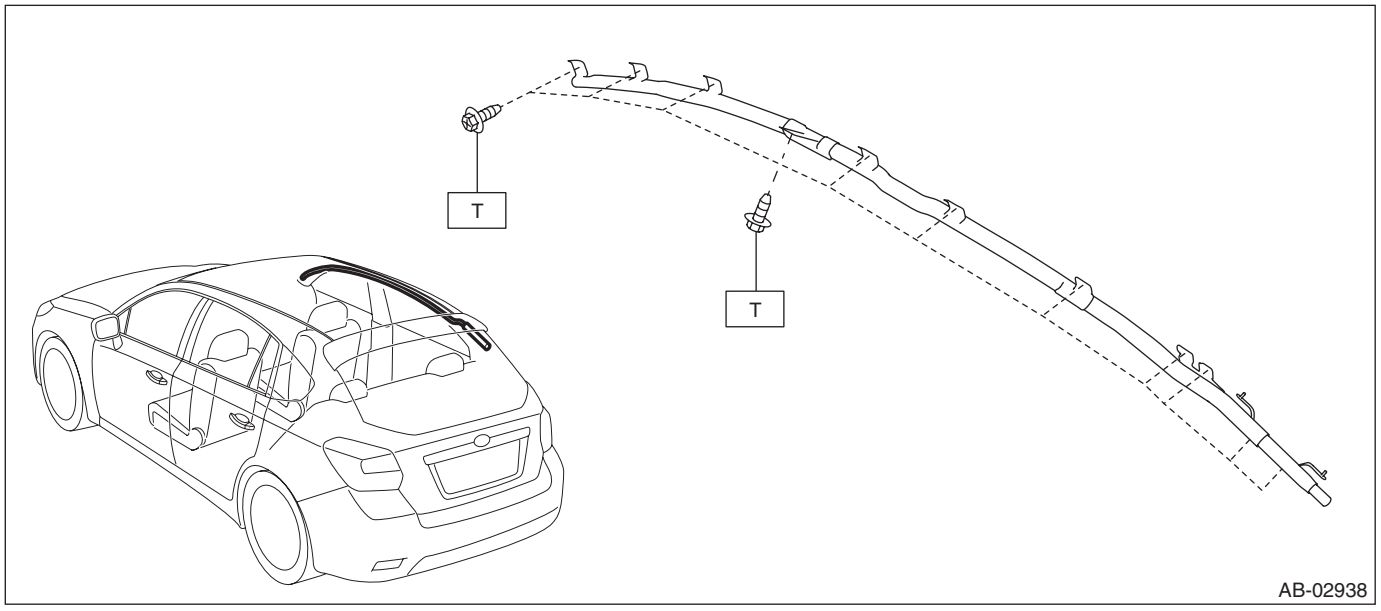
Tightening torque:
6 N·m (0.61 kgf-m, 4.4 ft-lb)

5. CURTAIN AIRBAG MODULE

- 4 door model



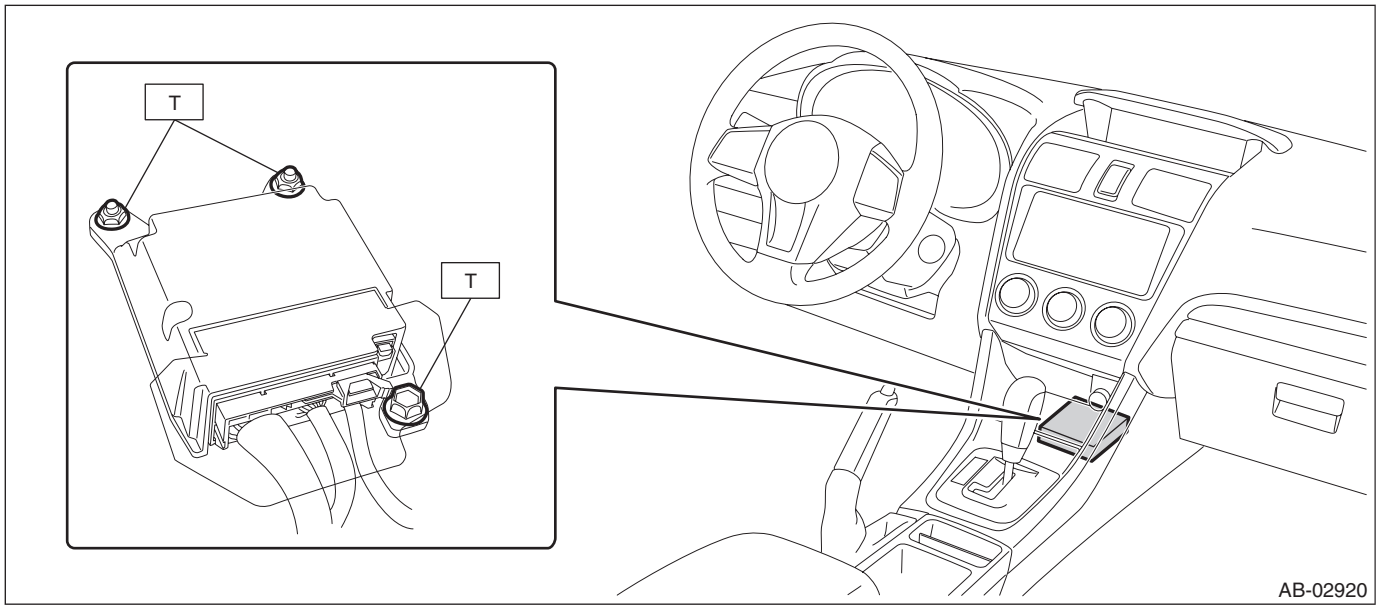
- 5 door model



Tightening torque:
7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

6. AIRBAG CONTROL MODULE

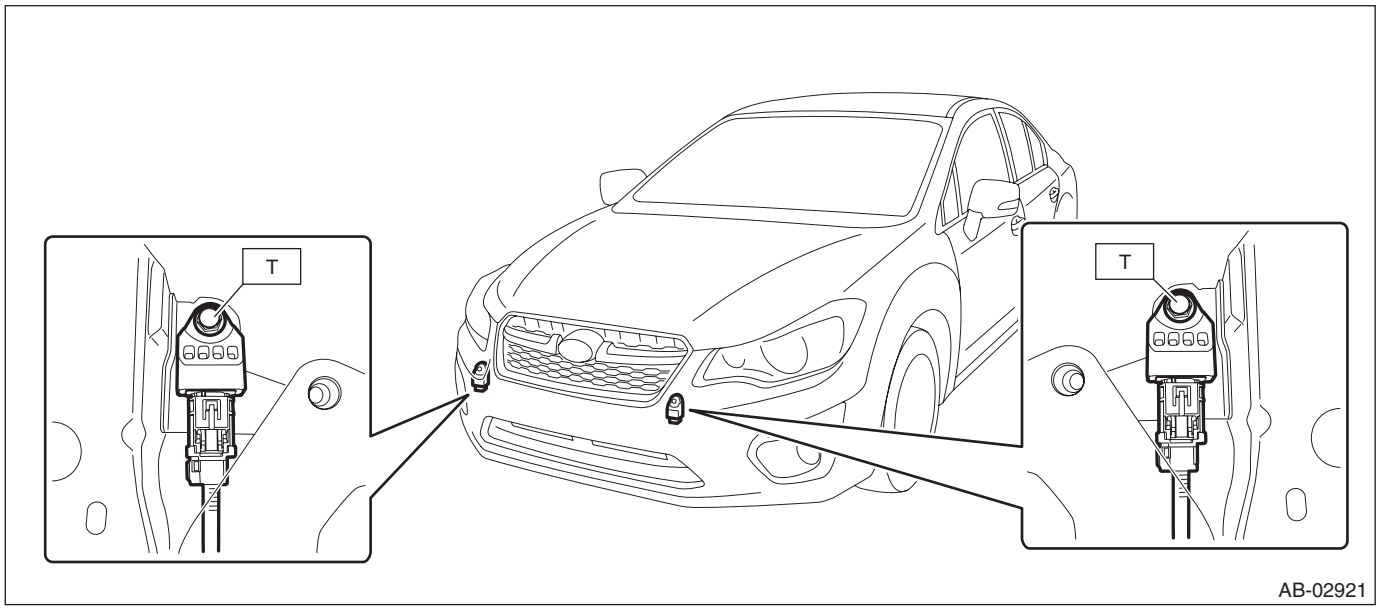
CAUTION:
Do not reuse mounting bolts and nuts.



Tightening torque:
25 N·m (2.55 kgf-m, 18.4 ft-lb)

7. FRONT SUB SENSOR

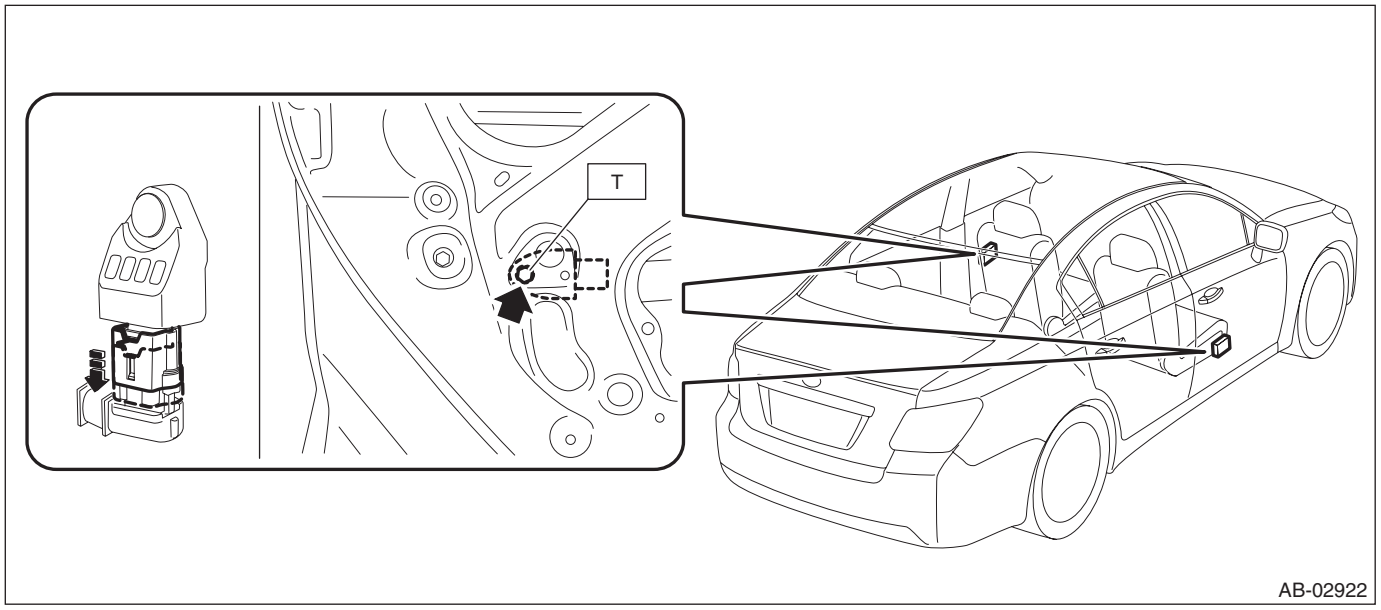
CAUTION:
Do not reuse mounting bolts and nuts.



Tightening torque:
13 N·m (1.33 kgf-m, 9.6 ft-lb)

8. FRONT DOOR IMPACT SENSOR

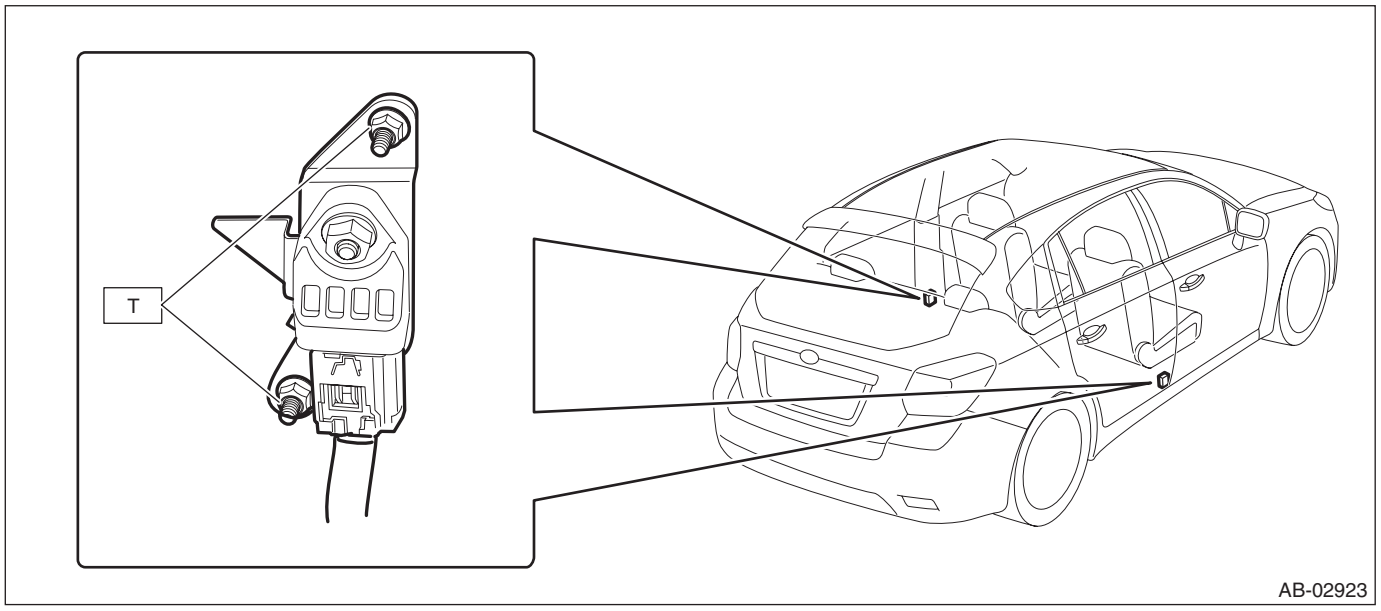
CAUTION:
Do not reuse mounting bolts and nuts.



Tightening torque:
7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

9. SIDE AIRBAG SENSOR

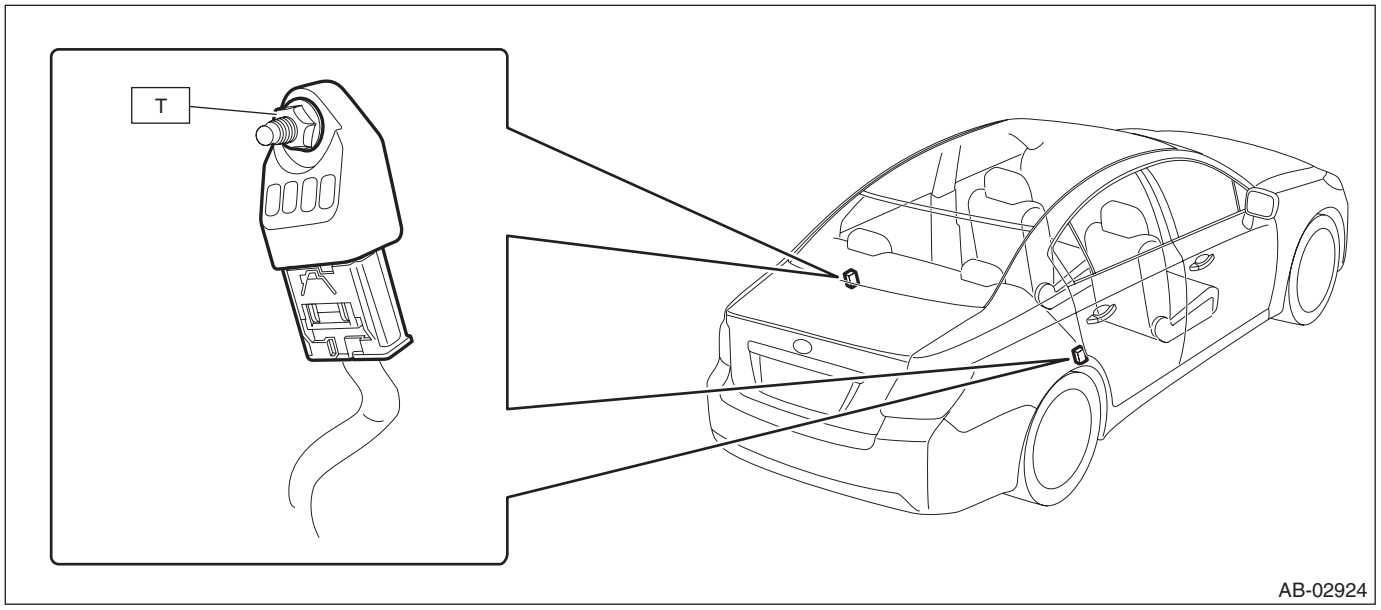
CAUTION:
Do not reuse mounting bolts and nuts.



Tightening torque:
7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

10.CURTAIN AIRBAG SENSOR

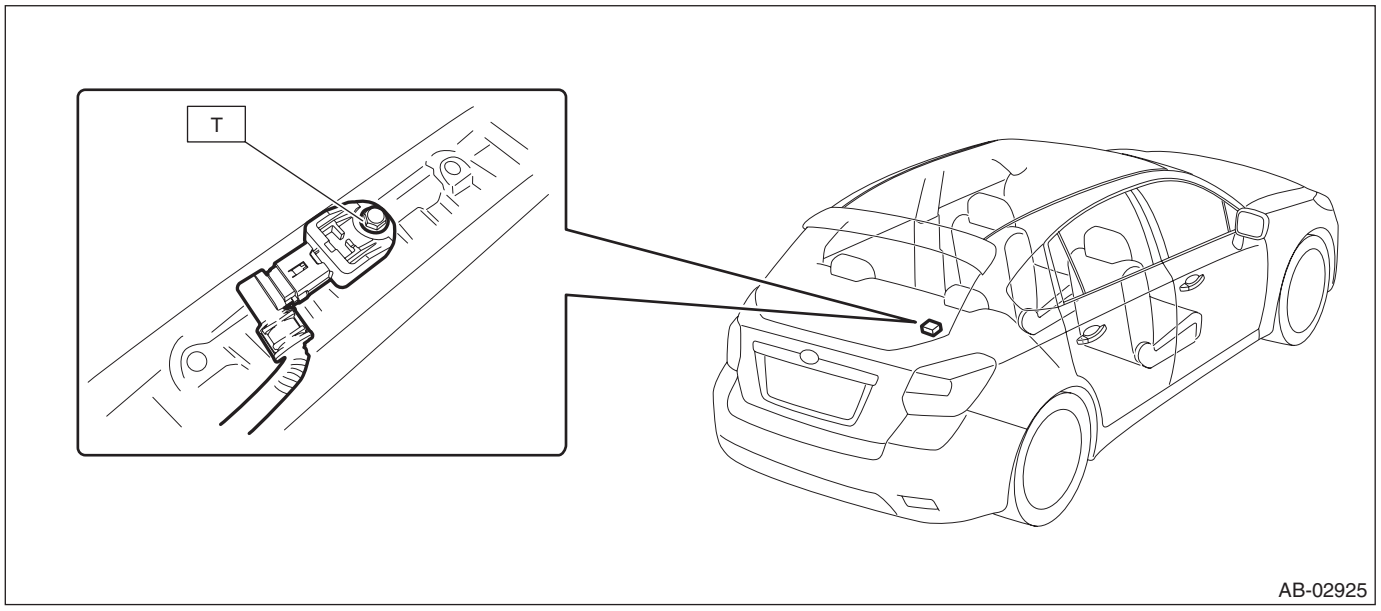
CAUTION:
Do not reuse mounting bolts and nuts.



Tightening torque:
7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

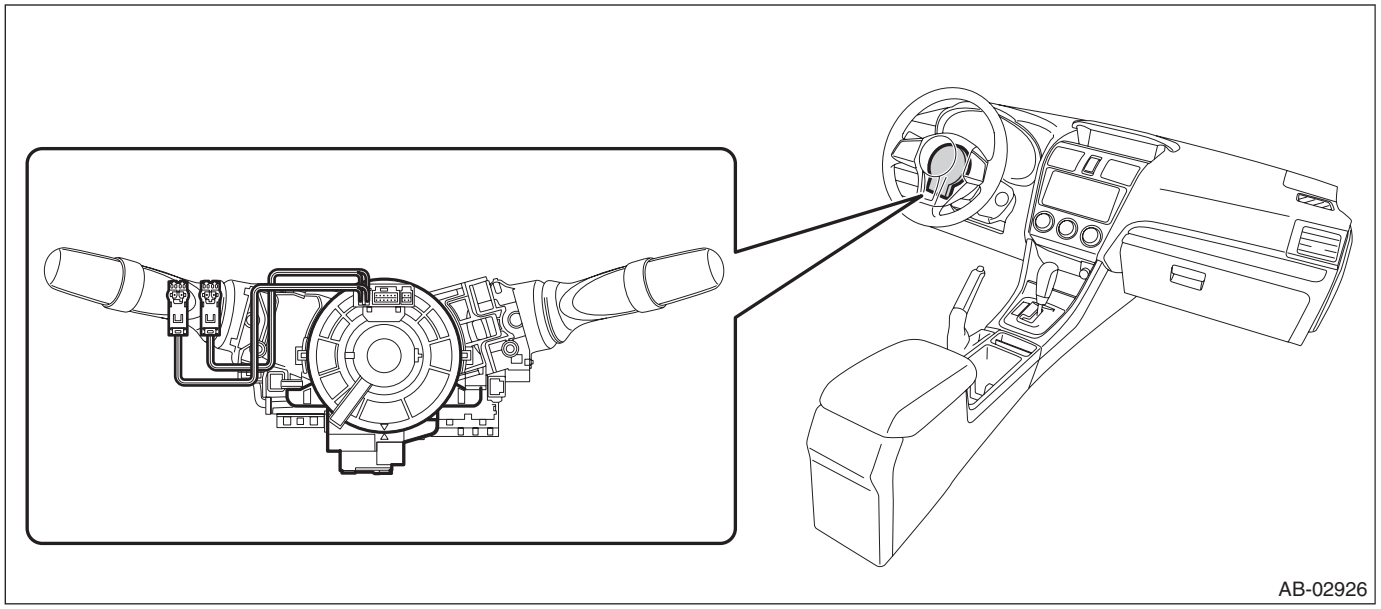
11.SATELLITE SAFING SENSOR

CAUTION:
Do not reuse mounting bolts and nuts.



Tightening torque:
7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

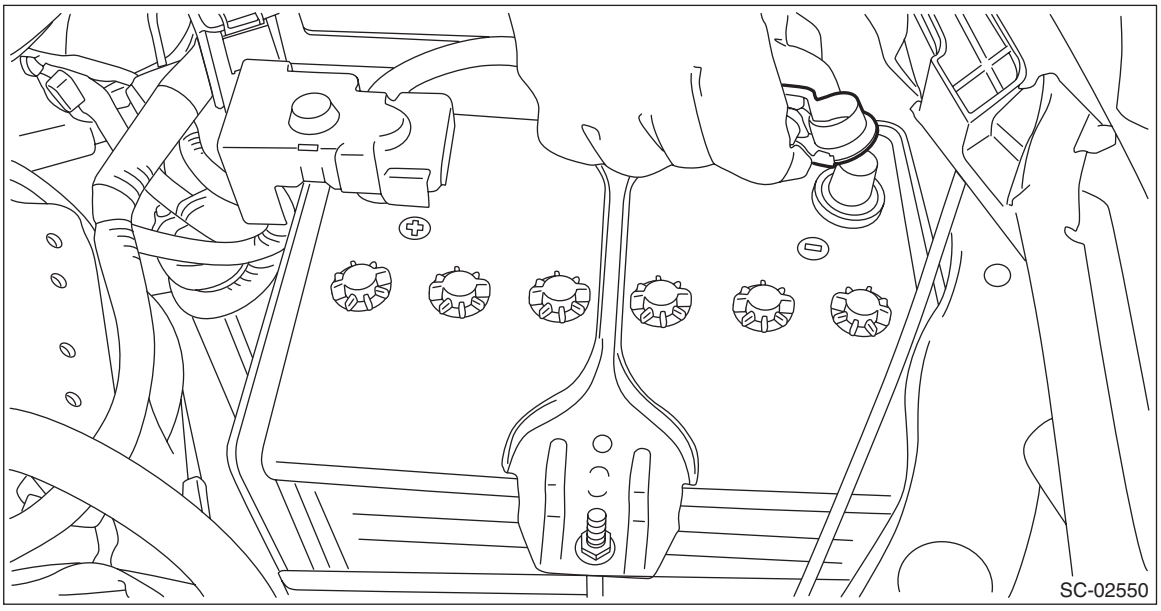
12.STEERING ROLL CONNECTOR



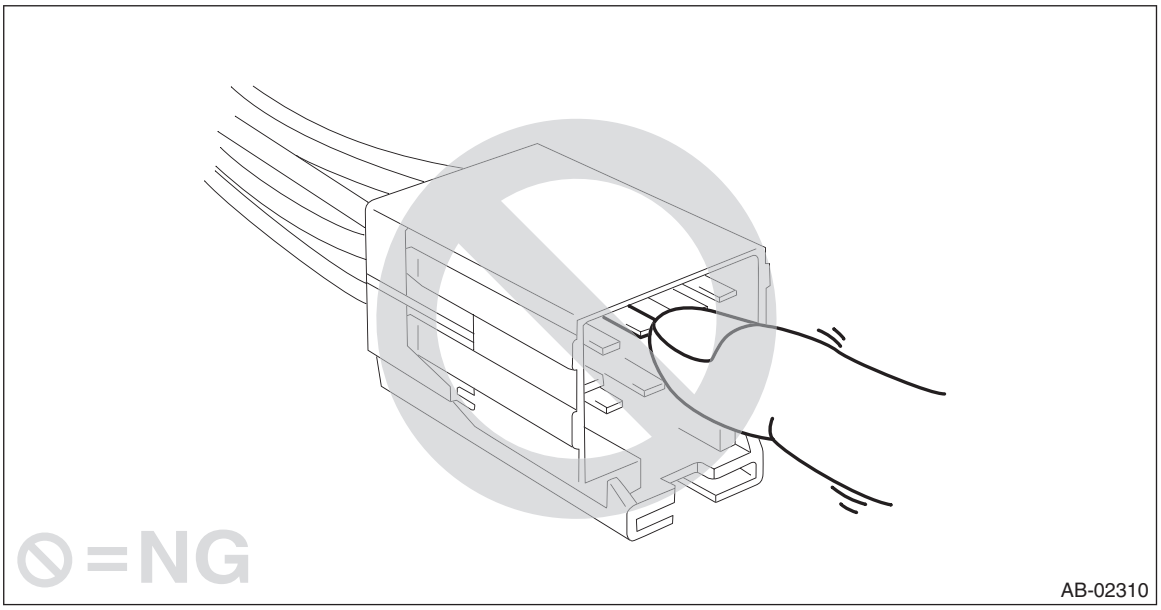
B: CAUTION

1. BEFORE STARTING ALL WORKS

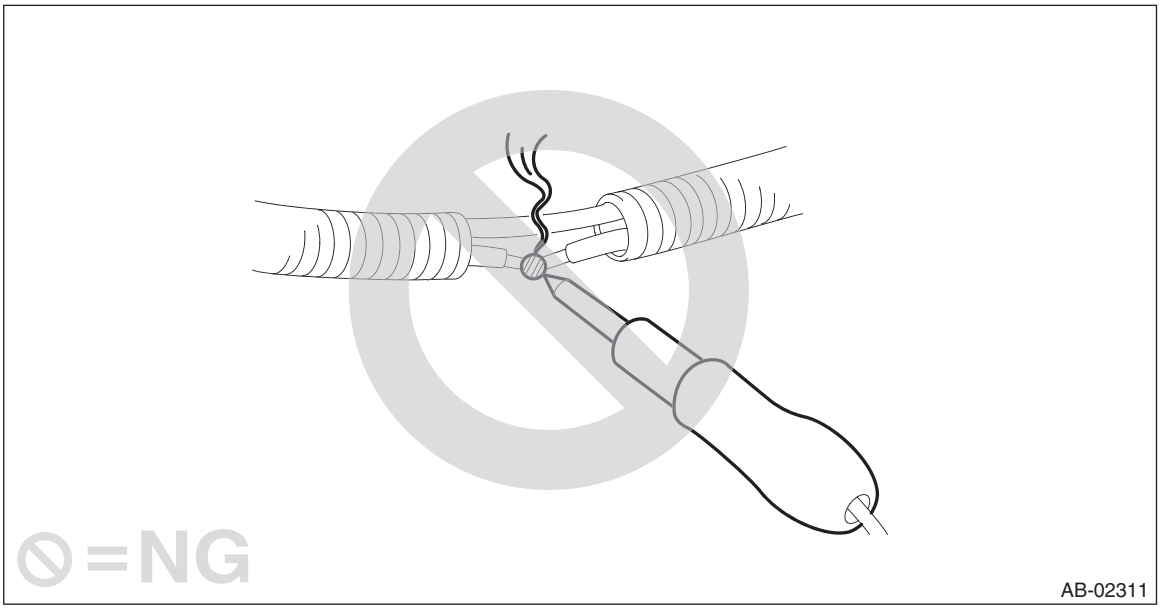
• The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds or more before starting the service of airbag system.



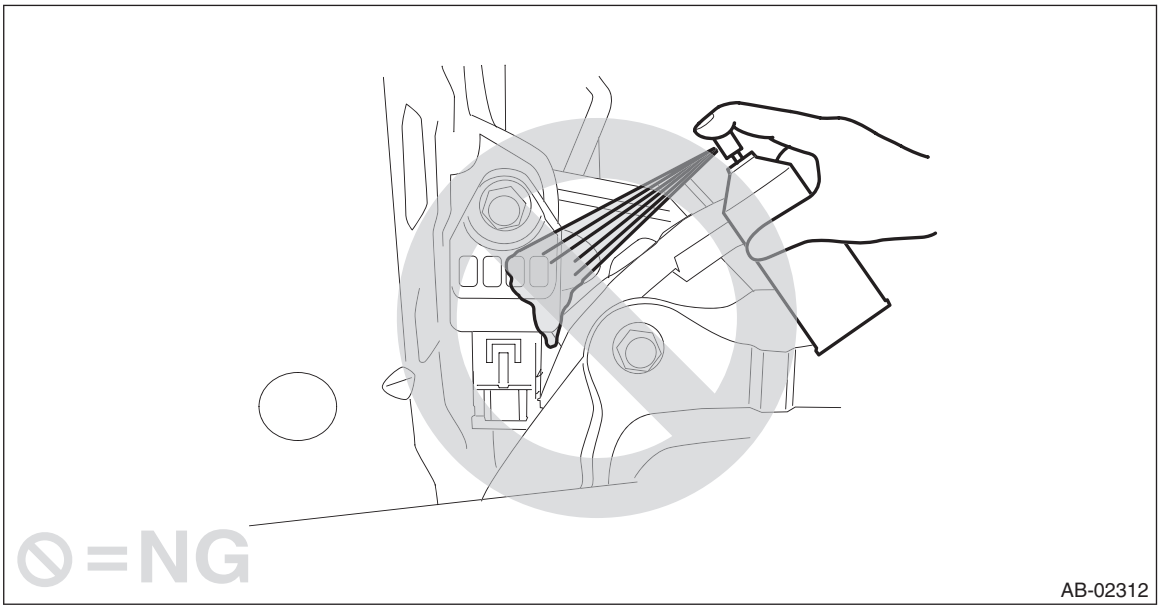
• When servicing a vehicle, be sure to turn the ignition switch to OFF, disconnect the ground cable from battery, and wait for 60 seconds or more before starting work.
• If the airbag warning light illuminates, check or repair the vehicle immediately to prevent it from airbag system malfunction.
• Do not allow water or oil to come in contact with the connector terminals. Also, do not touch the connector terminals directly.



• If damage, open circuit or rust is found on airbag system wiring harness, do not repair the harness. Always replace the faulty harness with a new genuine part.



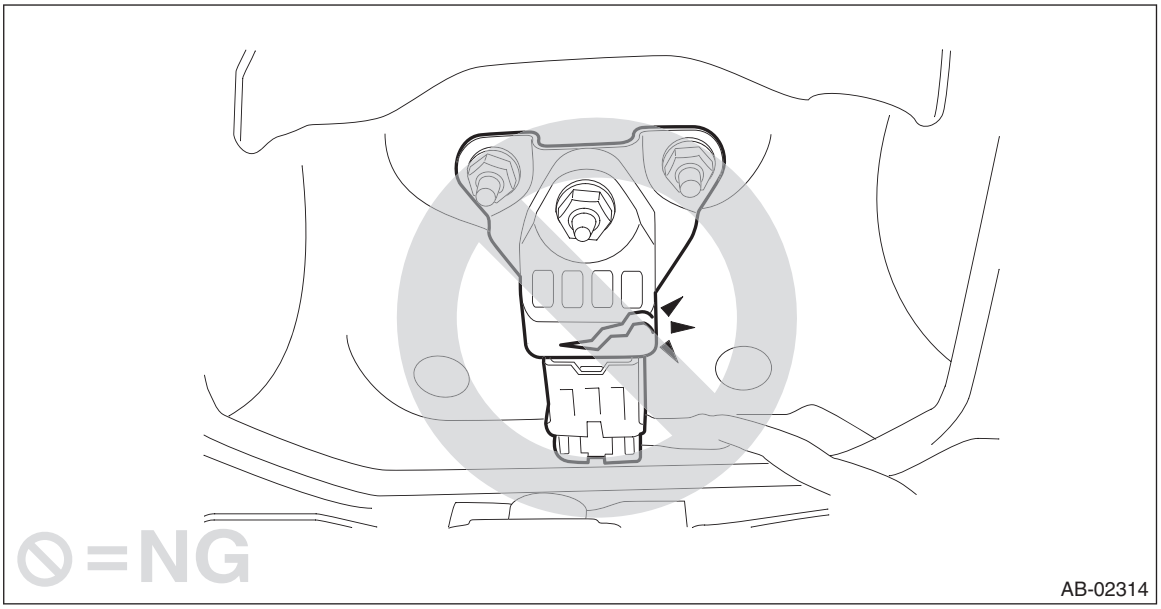
• When painting or performing sheet metal work on the front part of the vehicle, including the front wheel apron, front fender and radiator panel side, remove the front sub sensors and wiring harness of airbag system.
• When painting or performing sheet metal work on the side of the vehicle, including the side sill, center pillar and front and rear doors, remove the front door impact sensor, side airbag sensors, curtain airbag sensor, satellite safing sensor and wiring harness of the airbag system.



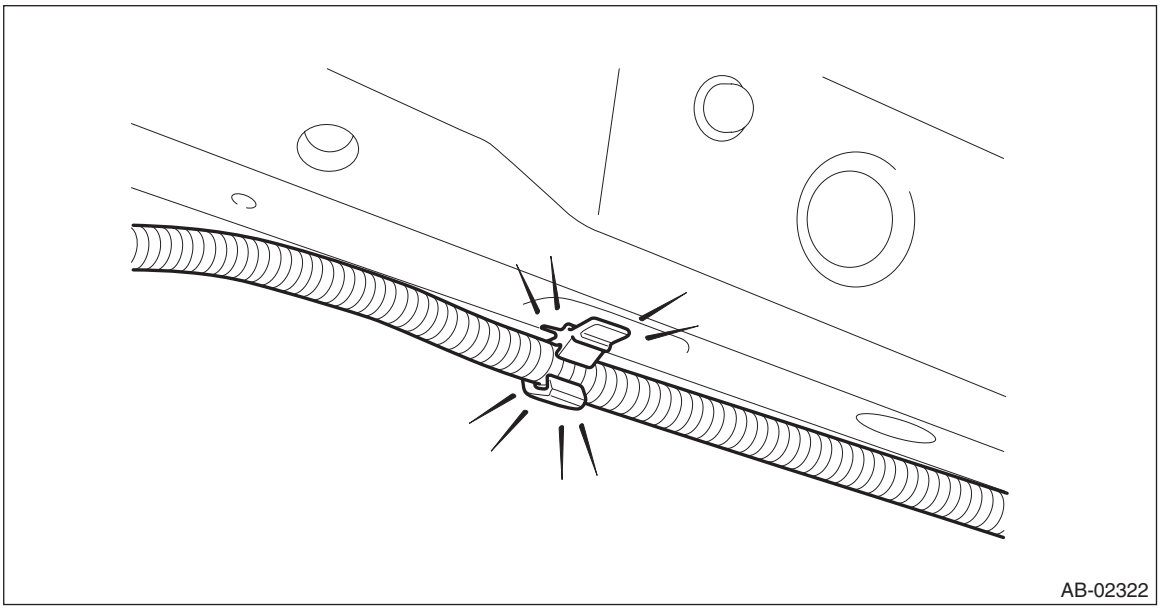
• When attaching the steering wheel and steering roll connector, be sure to adjust the steering roll connector.

2. BEFORE STARTING PARTS REPLACEMENT

• If airbag sensors, airbag module, airbag control module, pretensioners, harnesses, or the cover - satellite safing are deformed or damaged, replace with new parts.

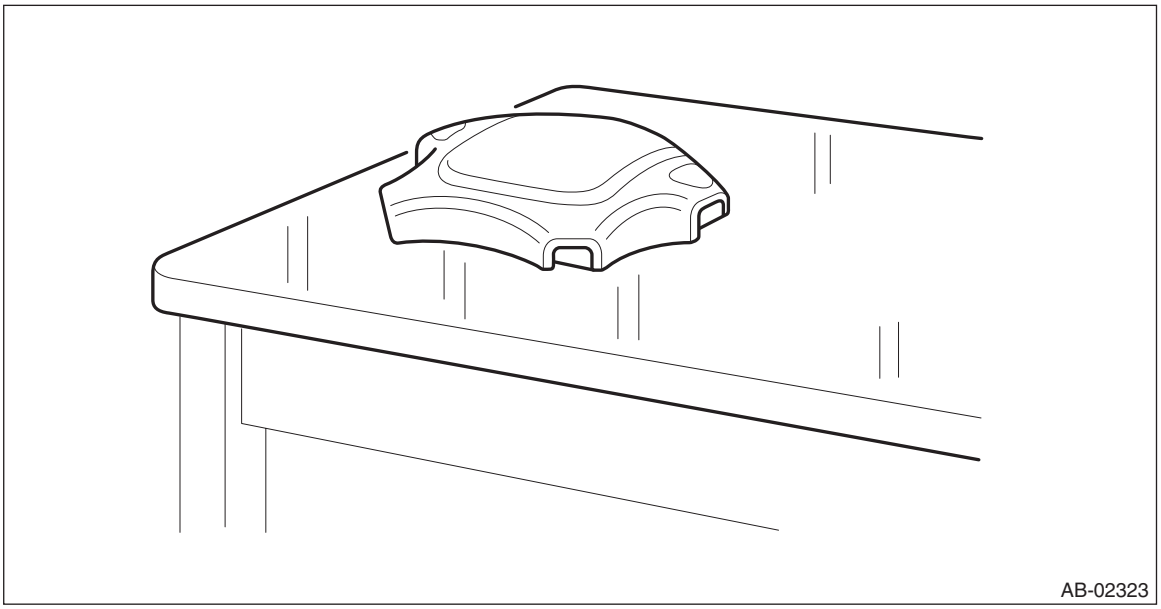


• Install the wiring harness securely with the specified clips to avoid interference or tangled with other parts.

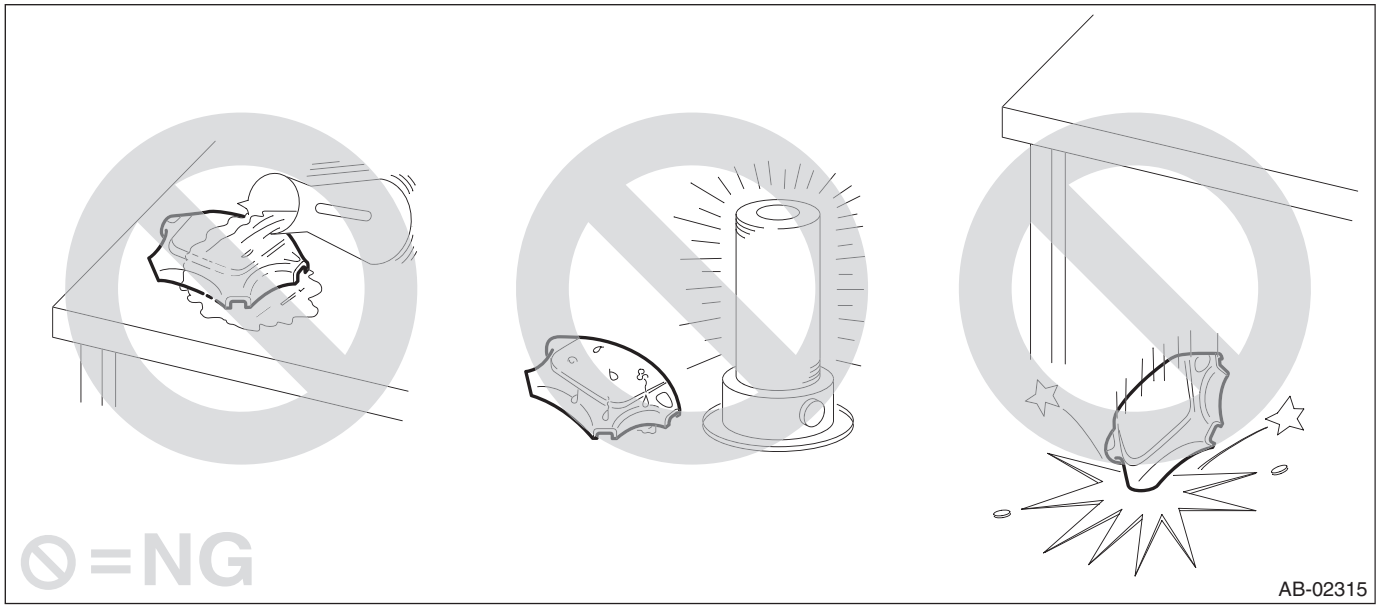


• Do not use the airbag or pretensioner parts from other vehicles. Always replace the defective parts with new parts.
• Never reuse any activated airbag module and pretensioner.
• Do not discard undeployed airbag or pretensioner.
• When airbag control module, front sub sensor, front door impact sensor, side airbag sensor, curtain airbag sensor and satellite safing sensor are removed, do not reuse the bolts and nuts of them. Always replace with the specified new bolts and nuts.
• When attaching the steering wheel and steering roll connector, be sure to adjust the steering roll connector.

• After removing each parts of the airbag system, keep them with the pad side facing upward on a dry, clean and flat surface away from heat, light sources, moisture and dust.

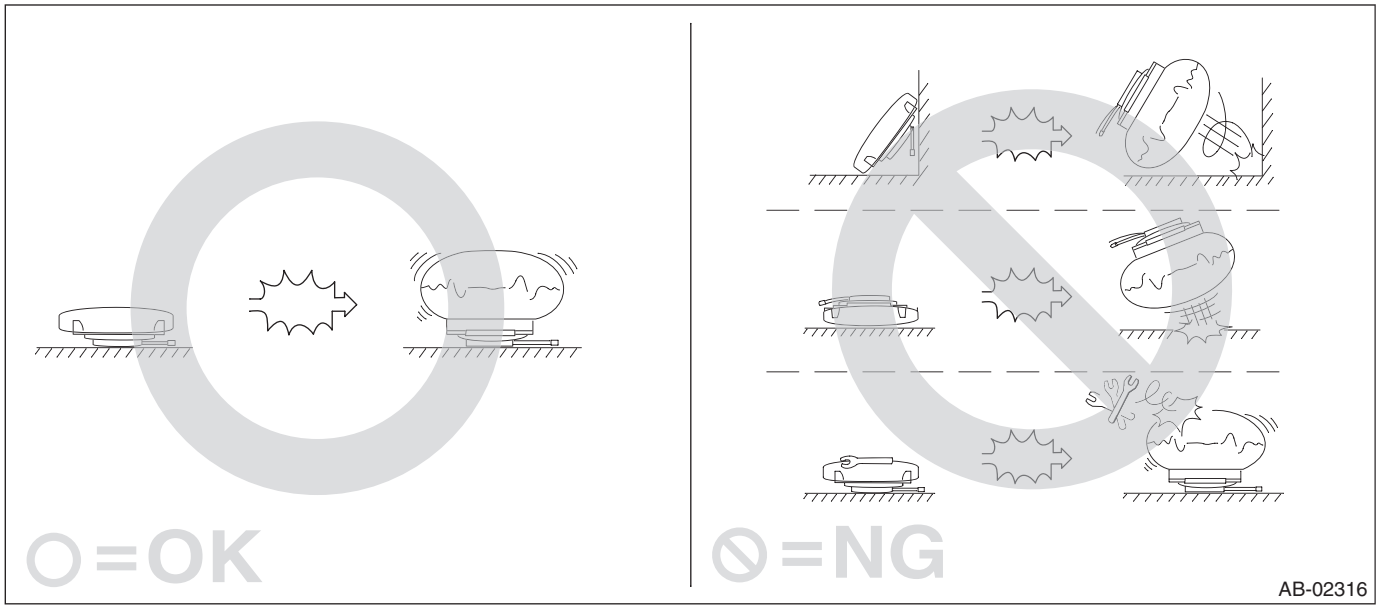


• Do not drop any airbag component, store them under high temperature of 85°C (185°F) or more, or let water, oil or grease get on them; the internal parts may be damaged or the reliability may be greatly lowered.

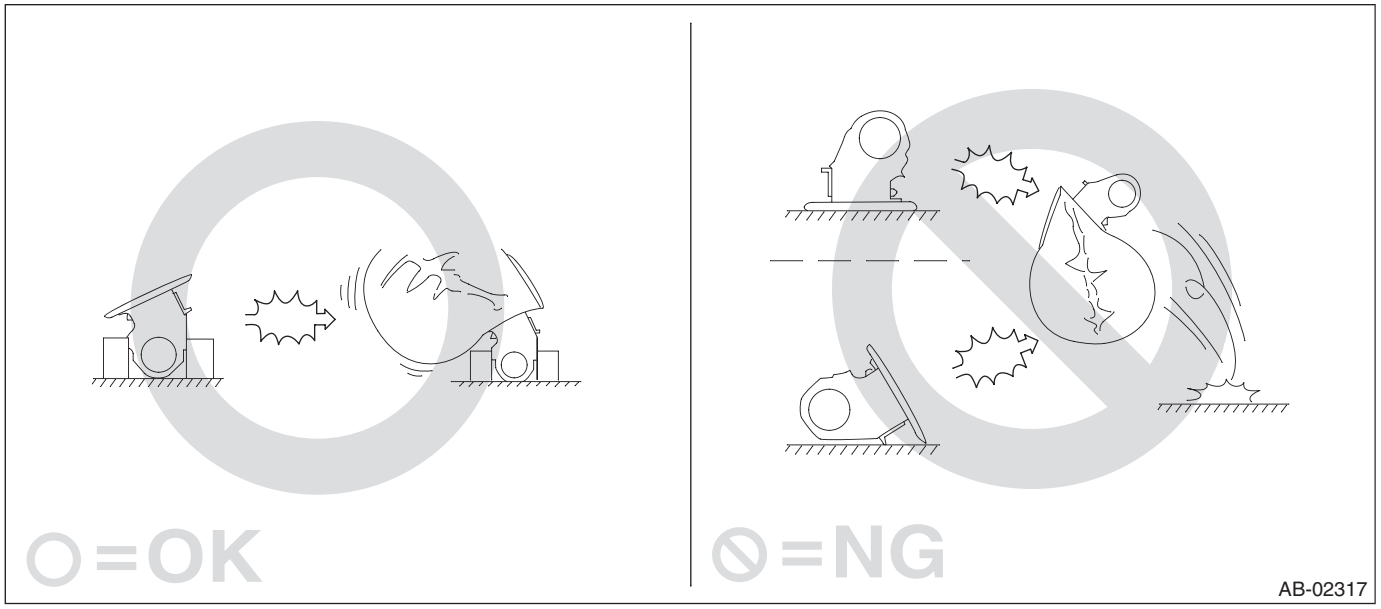


• When storing a removed airbag module, do not place it with the pad side facing downward. Do not place any objects on the airbag module. Do not pile up the airbag module. If the pad of the airbag module is in contact with other objects, it may cause a serious accident if the airbag accidentally operates.

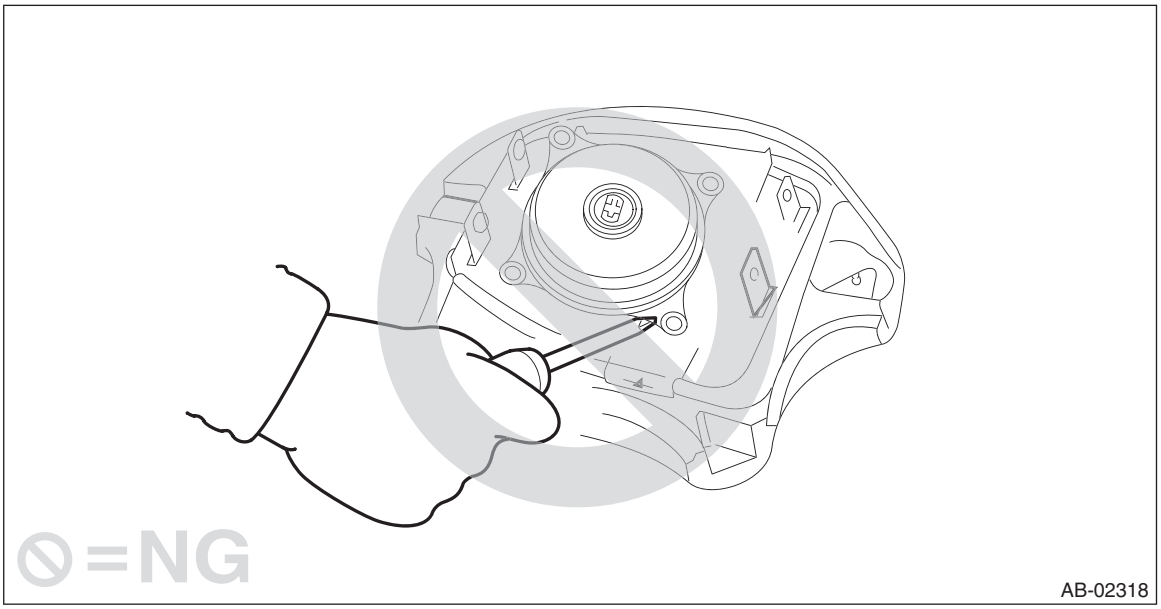
- Driver's airbag module



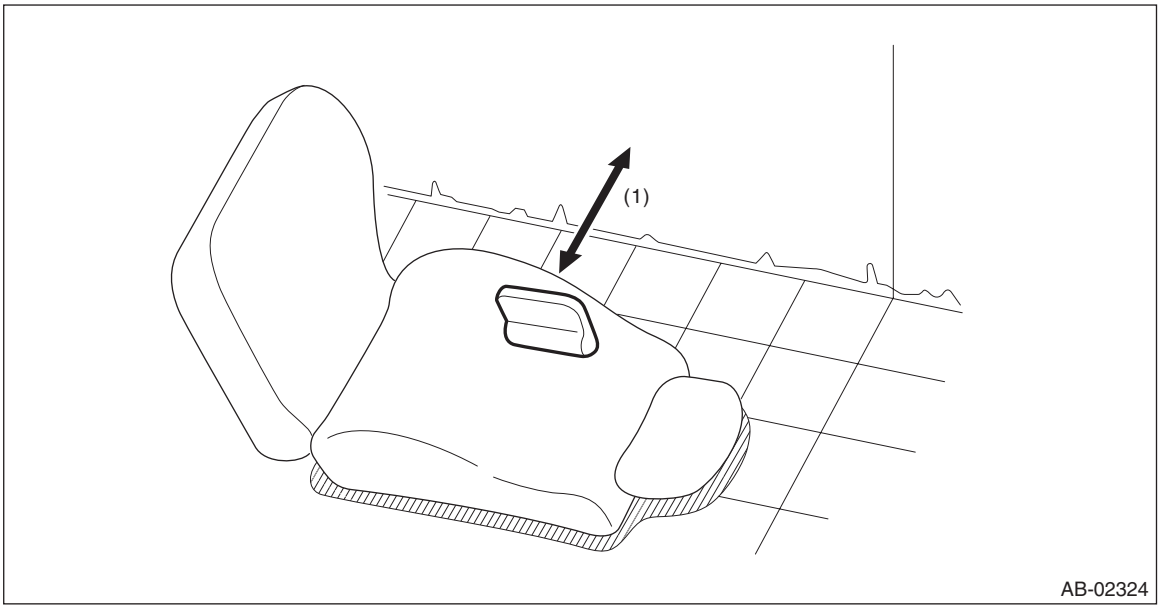
- Passenger's airbag module and side airbag module



• Do not disassemble driver's airbag module, knee airbag module, passenger's airbag module, side airbag module, curtain airbag module or pretensioner.



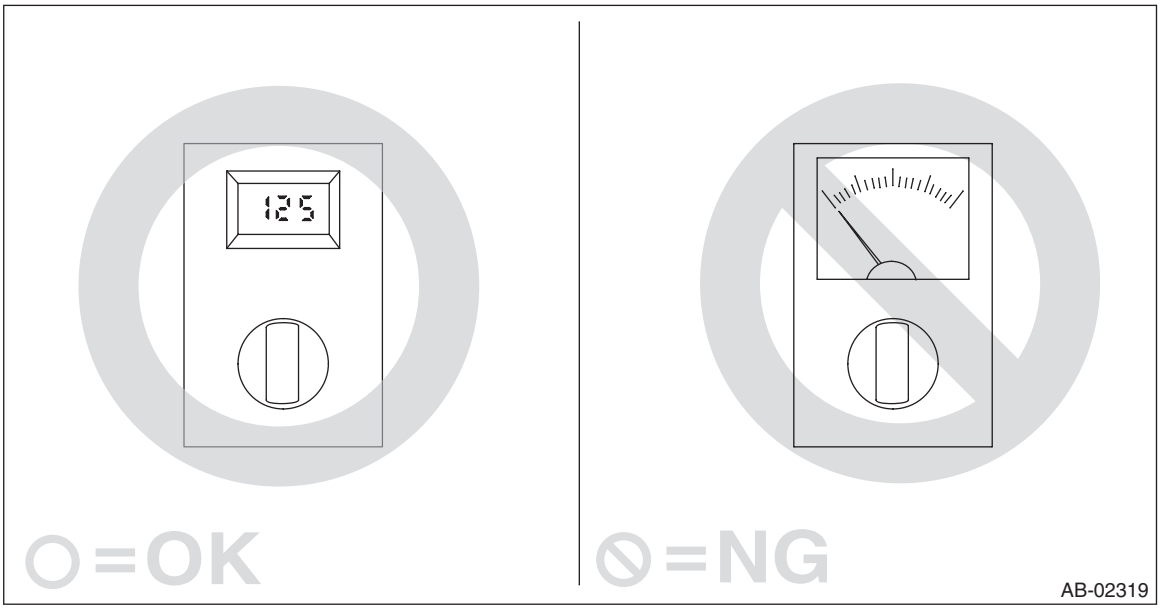
• The removed front seat with airbag module must be kept at least 200 mm (8 in) away from walls and other objects.



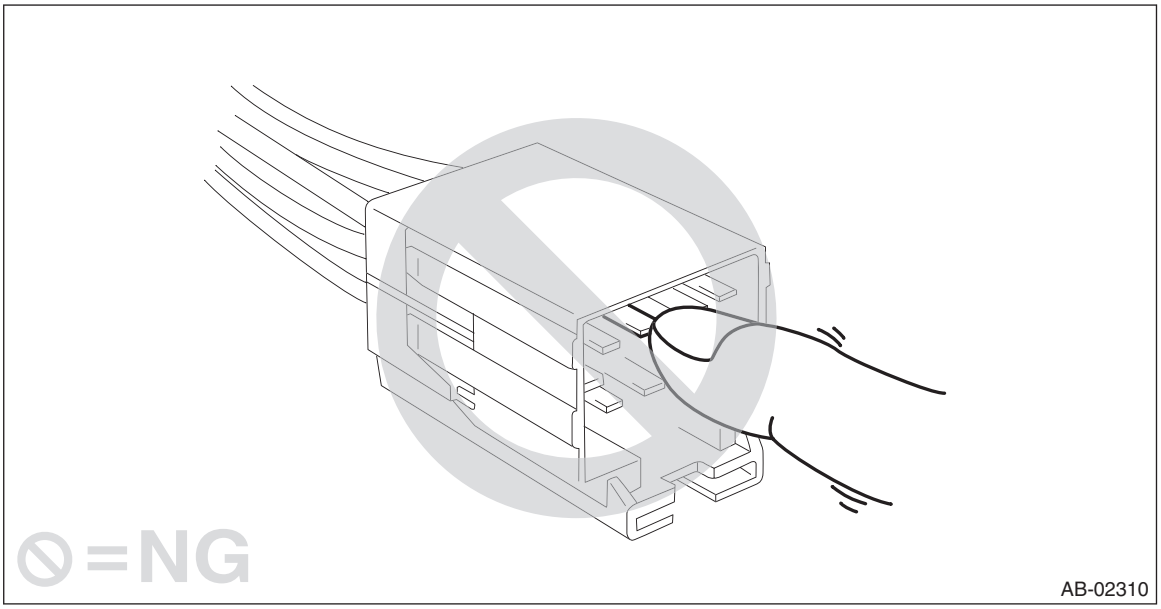
(1) 200 mm (8 in) or more

3. BEFORE STARTING TROUBLESHOOTING

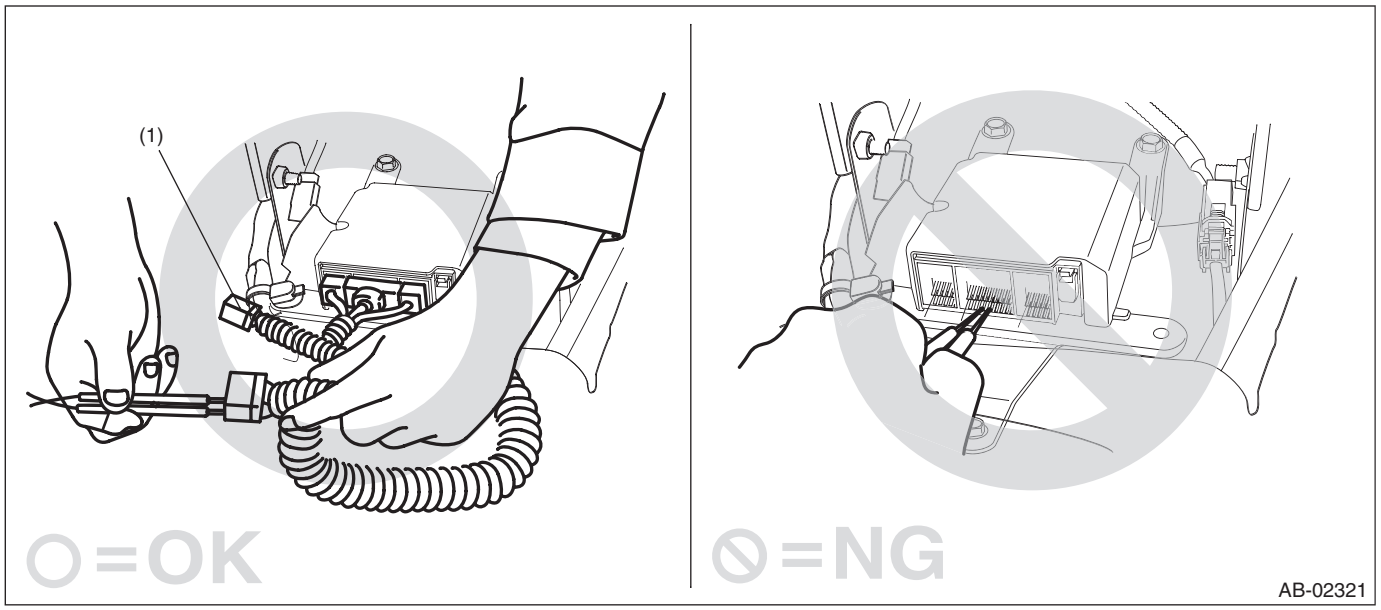
• Even if any part must be replaced as the result of troubleshooting, do not use an airbag part or pretensioner part from other vehicles. Always replace the defective parts with new parts.
• When checking the airbag system, be sure to use a digital circuit tester. Use of an analog circuit tester may cause the airbag to activate erroneously due to a minimal current inside tester.



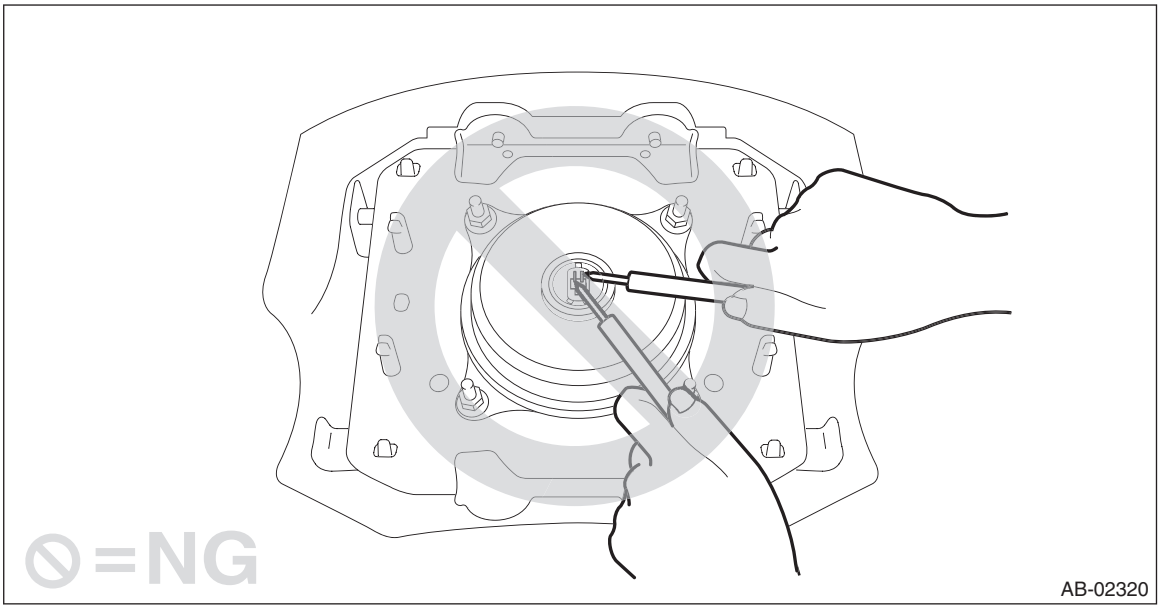
• Do not allow water or oil to come in contact with the connector terminals. Also, do not touch the connector terminals directly.



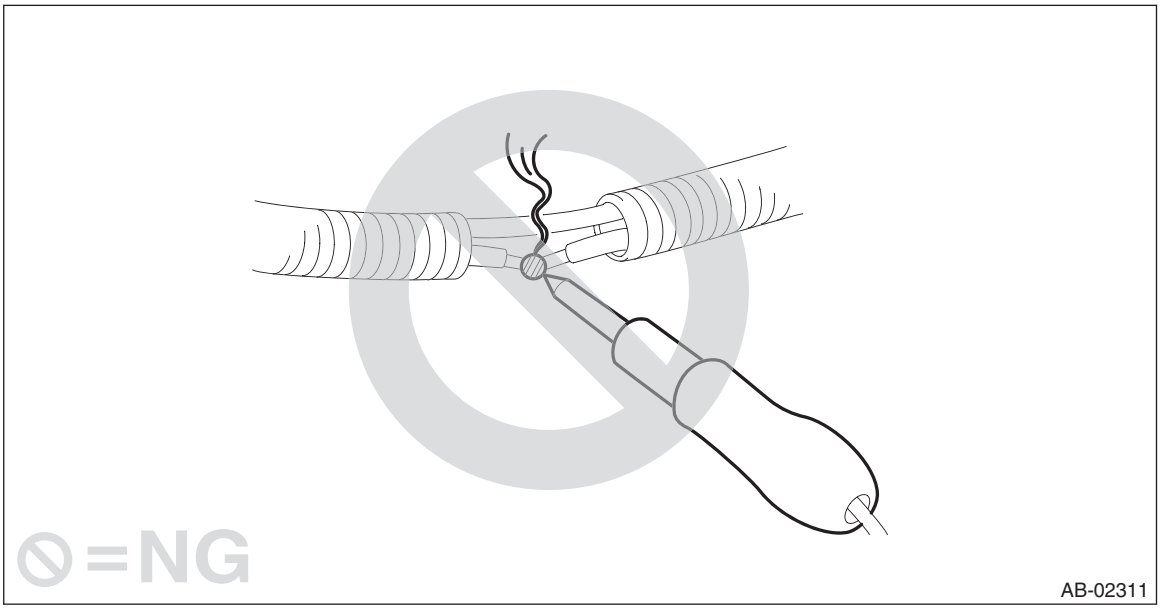
• When checking, use a test harness (1). Damage to connector terminal causes malfunction. Do not directly put the tester probe on airbag connector terminal.



• Do not check continuity of the driver's airbag module, knee airbag module, passenger's airbag module, side airbag module, curtain airbag module or pretensioner.

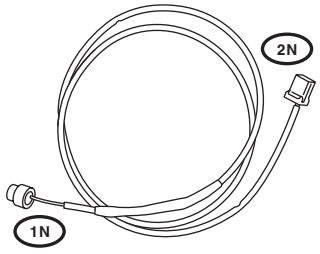
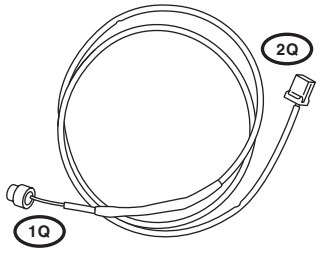


• If damage, open circuit or rust is found on airbag system wiring harness, do not repair the harness. Always replace the faulty harness with a new genuine part.



C: PREPARATION TOOL

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299SA000	98299SA000	TEST HARNESS N	Used for unit inspection of steering roll connector.
 ST98299SA040	98299SA040	TEST HARNESS Q	Used for unit inspection of steering roll connector.

2. GENERAL TOOL

TOOL NAME	REMARKS
Steering wheel puller	Used for removing and installing the steering wheel.
TORX® T40	Used for removing and installing the beam COMPL - steering.

2. Airbag Connector

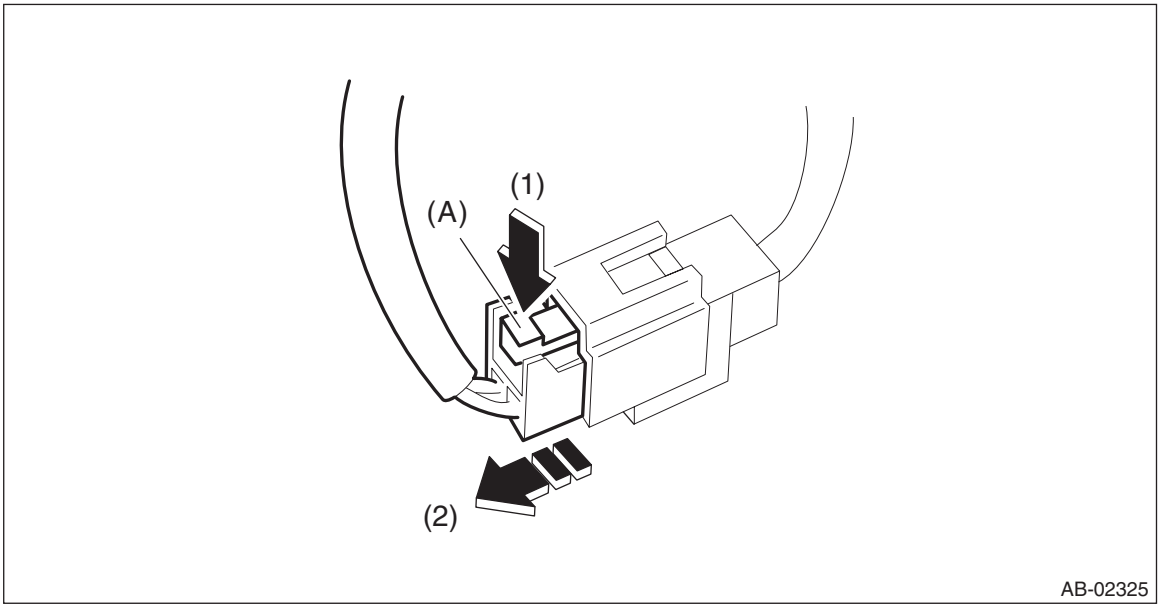
A: PROCEDURE

1. POWER SUPPLY

1) How to disconnect:

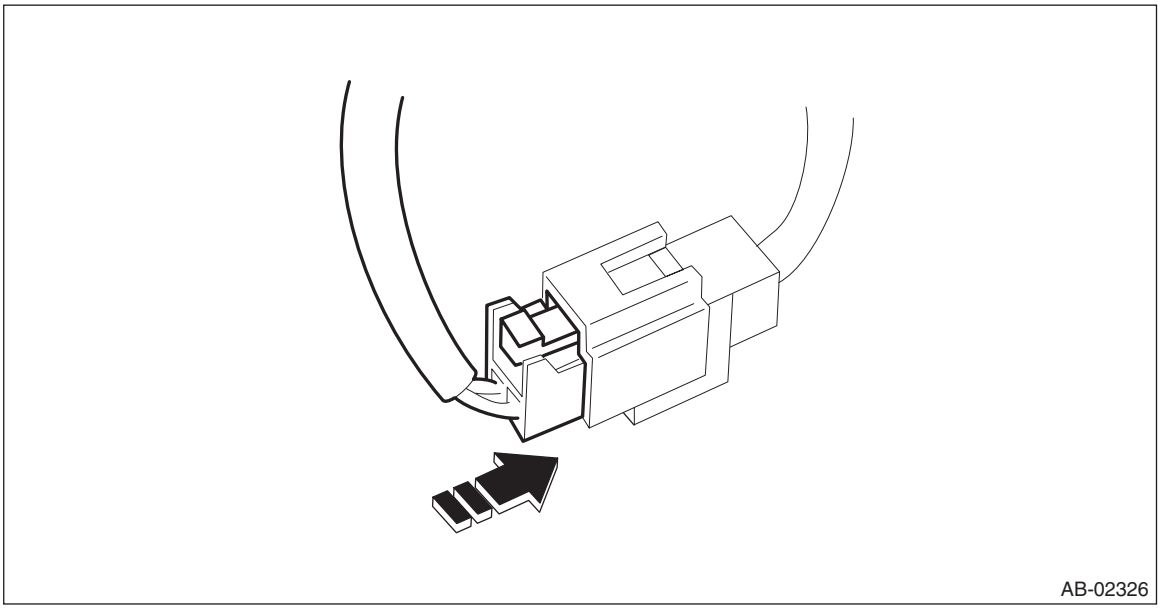
CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.

(1) Push the lock (A).
(2) While holding down the lock (A), disconnect the connector.



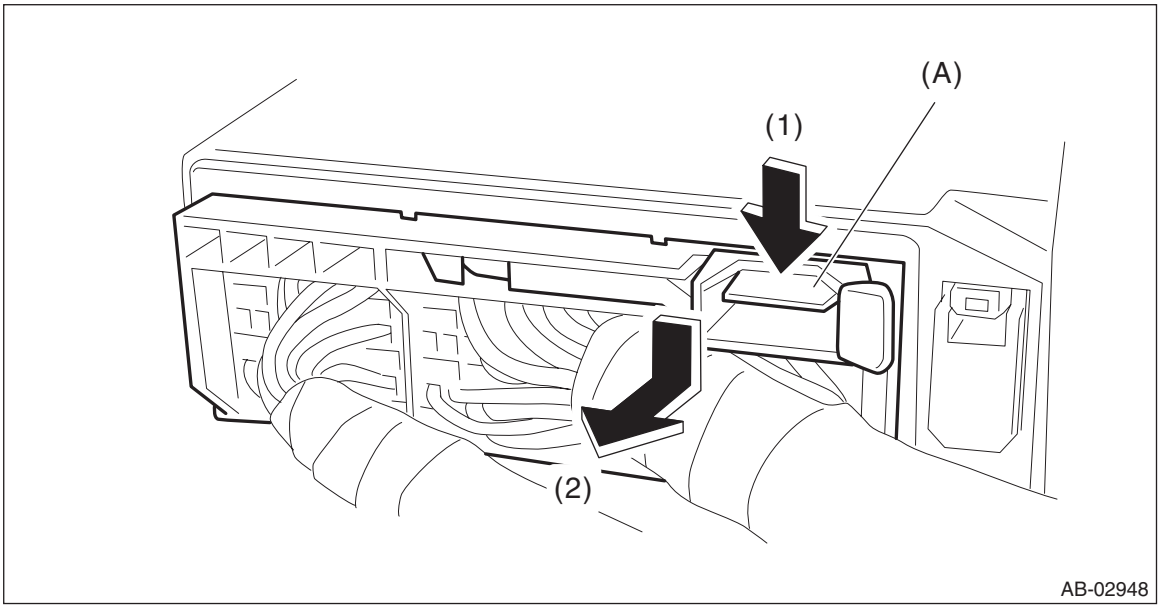
2) How to connect:

CAUTION:
Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.
Holding the connector, push it in securely until a clicking sound is heard.



2. AIRBAG CONTROL MODULE

1) How to disconnect:
   (1) Push the lock lever plate (A).
   (2) While holding down the lock lever plate (A), pull the lever toward you.



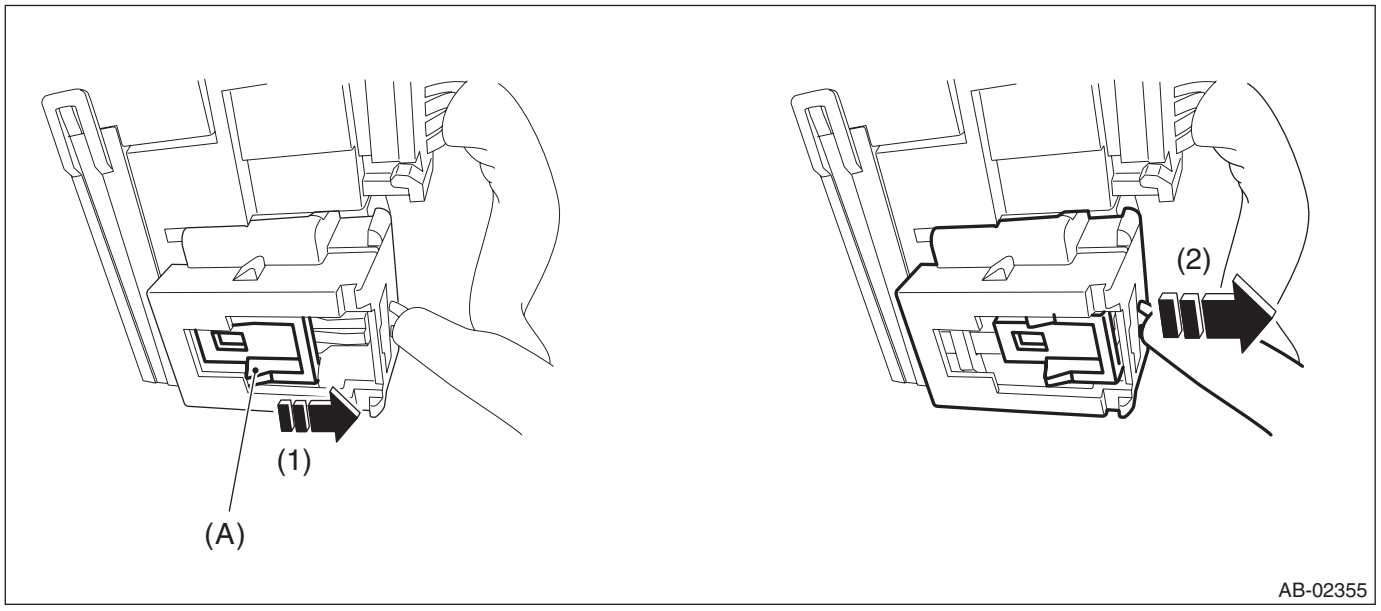
2) How to connect:

CAUTION:
Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.
Insert the connector and push the lock lever in securely.

3. DRIVER'S AIRBAG MODULE (ROLL CONNECTOR)

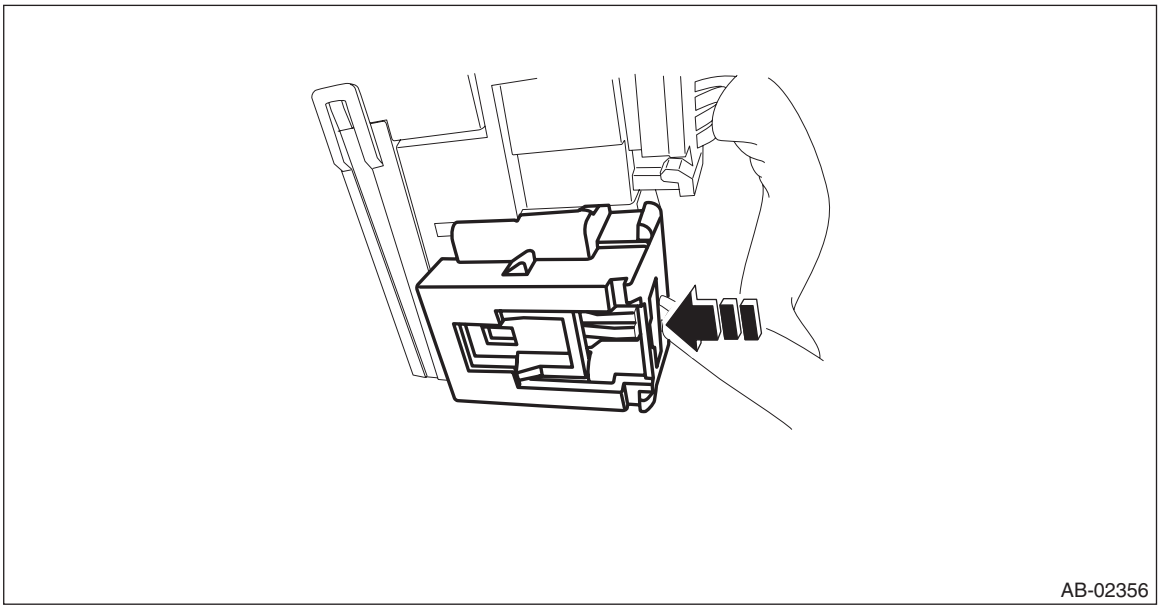
1) How to disconnect:

CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.
   (1) Pull the slide lock (A) in the direction of arrow.
   (2) With the slide lock pulled, disconnect the connector.



2) How to connect:

CAUTION:
Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.
Holding the connector, push it in securely until a clicking sound is heard.

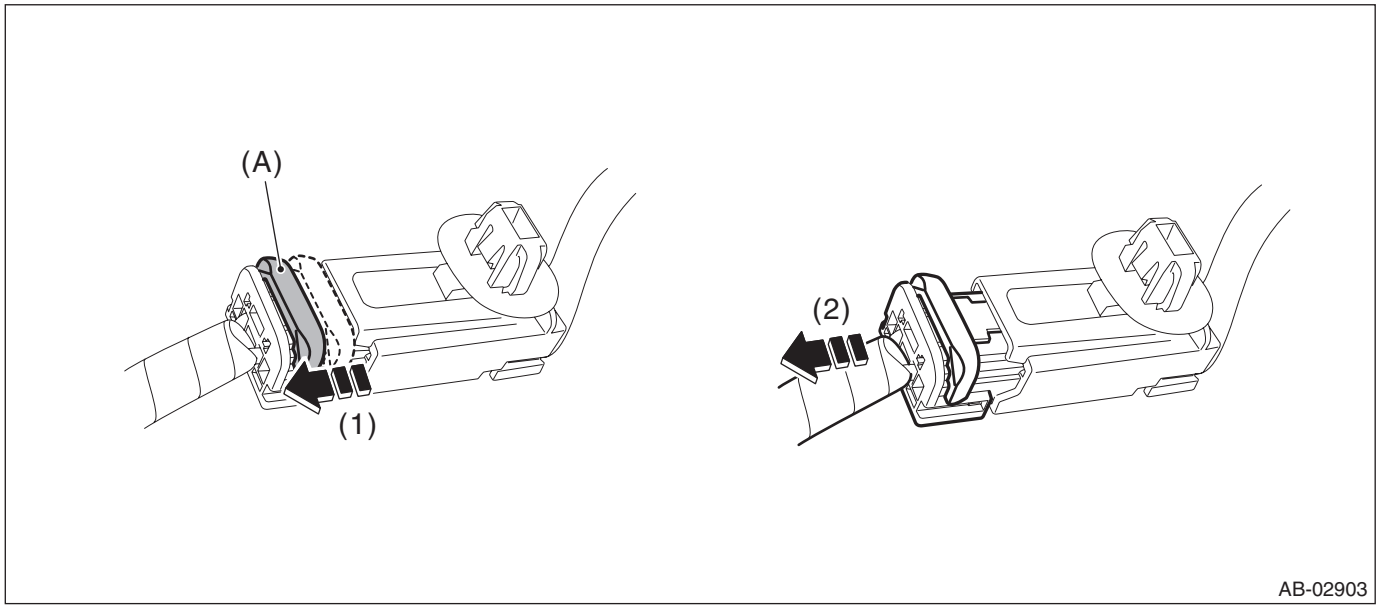


4. PASSENGER'S AIRBAG MODULE

1) How to disconnect:

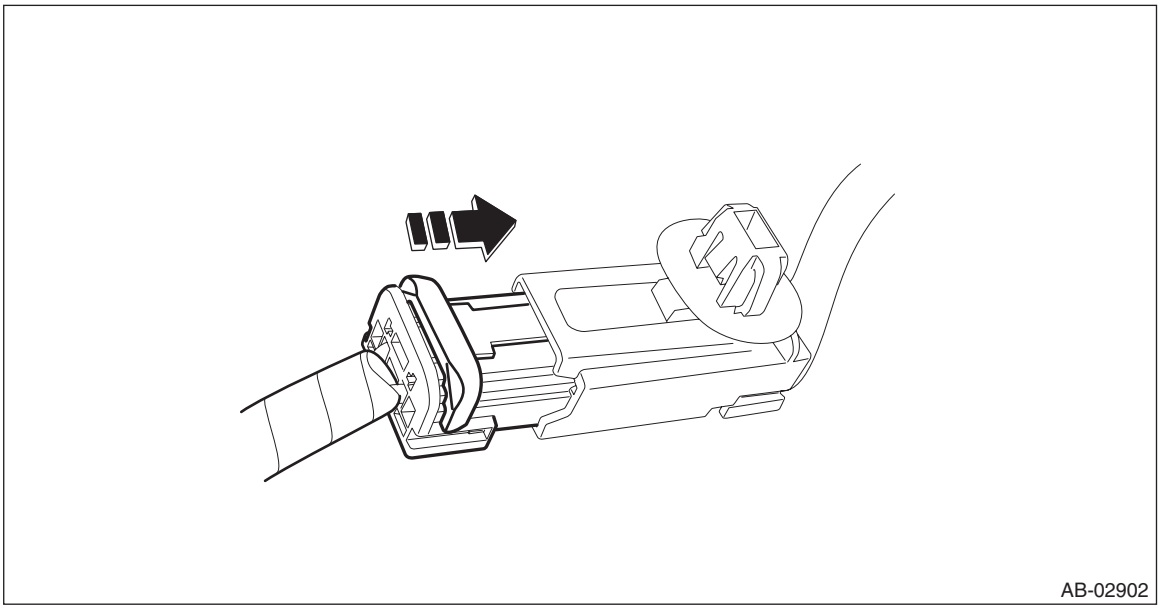
CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.

(1) Pull the slide lock (A) in the direction of arrow.
(2) With the slide lock pulled, disconnect the connector.



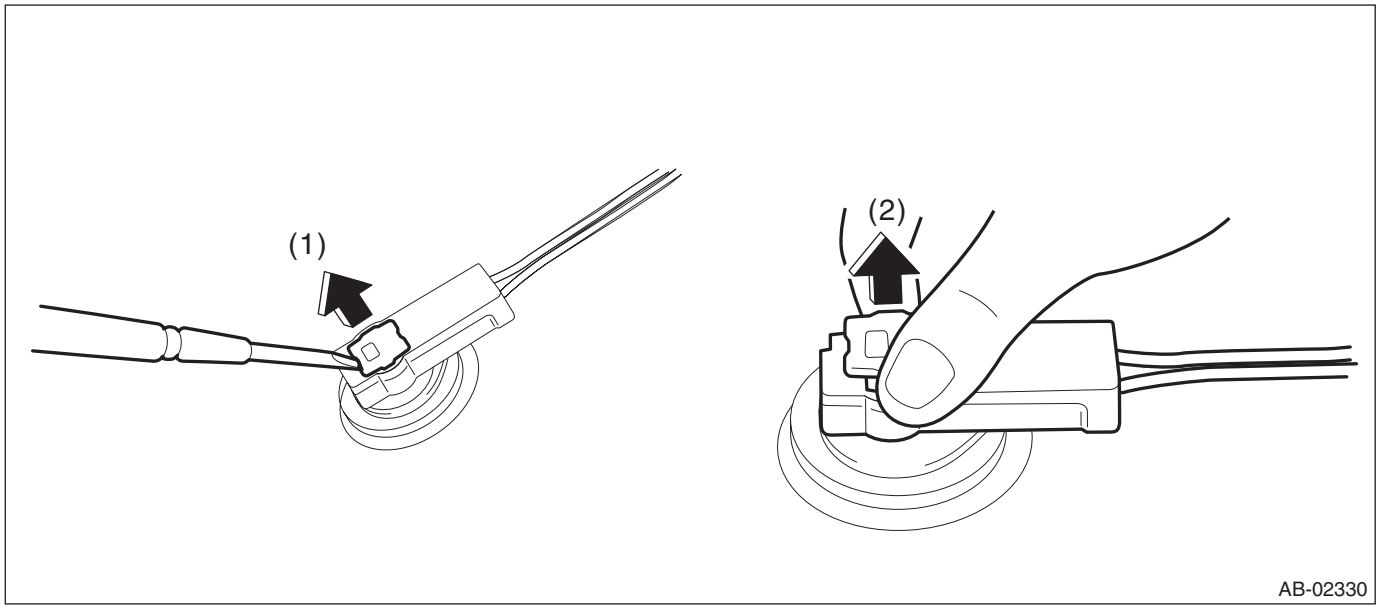
2) How to connect:

CAUTION:
Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.
Holding the connector, push it in securely until a clicking sound is heard.



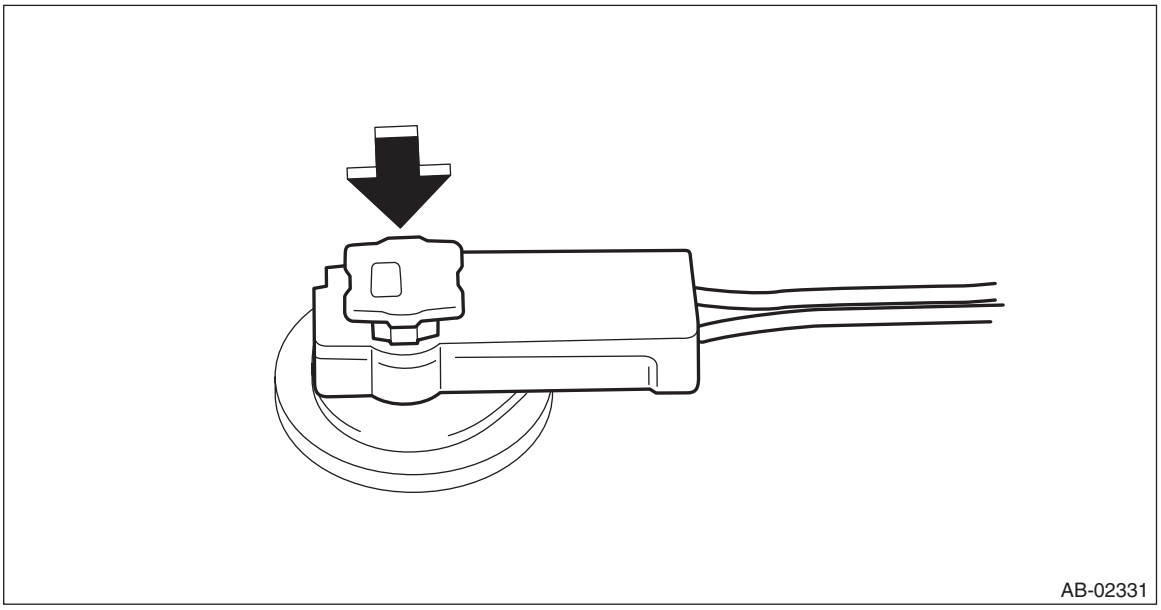
5. DRIVER'S AIRBAG MODULE, CURTAIN AIRBAG MODULE & PRETENSIONER

1) How to disconnect:
(1) Using a flat tip screwdriver, pry the push lock upward to unlock.
(2) Pull the connector to disconnect from the airbag module assembly or the retractor assembly.



2) How to connect:

CAUTION:
- **Be sure to insert the connector in until it is locked.**
- **Press in the push lock securely. Then pull it gently to make sure that it is locked.**



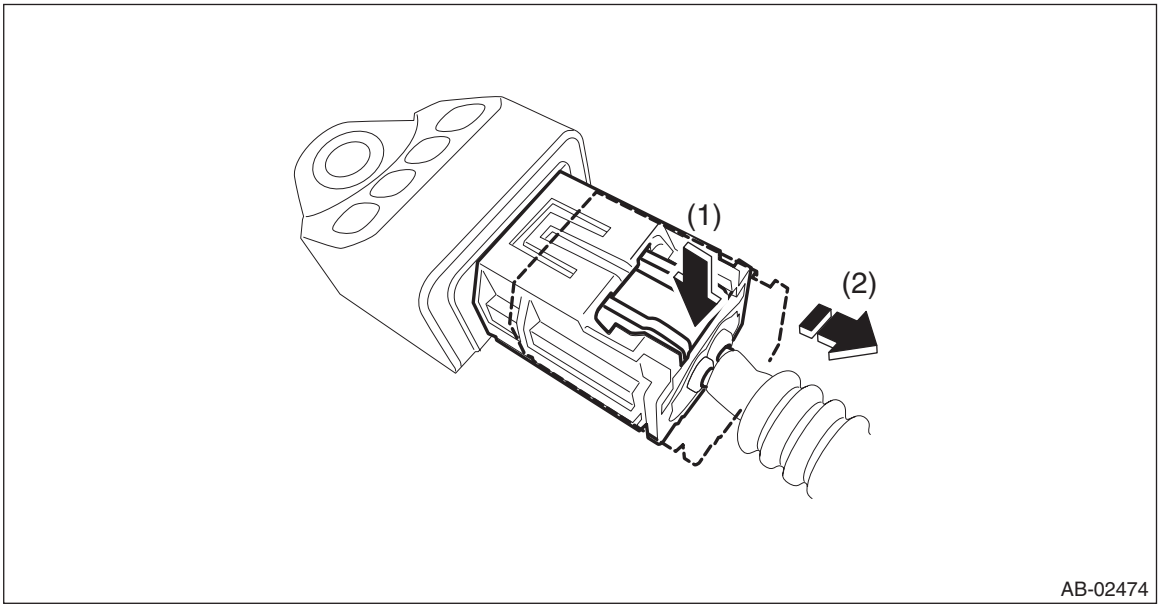
Connect the connector in the reverse order of disconnecting. At this time, be sure to insert until a clicking sound is heard.

6. FRONT SUB SENSOR

1) How to disconnect:

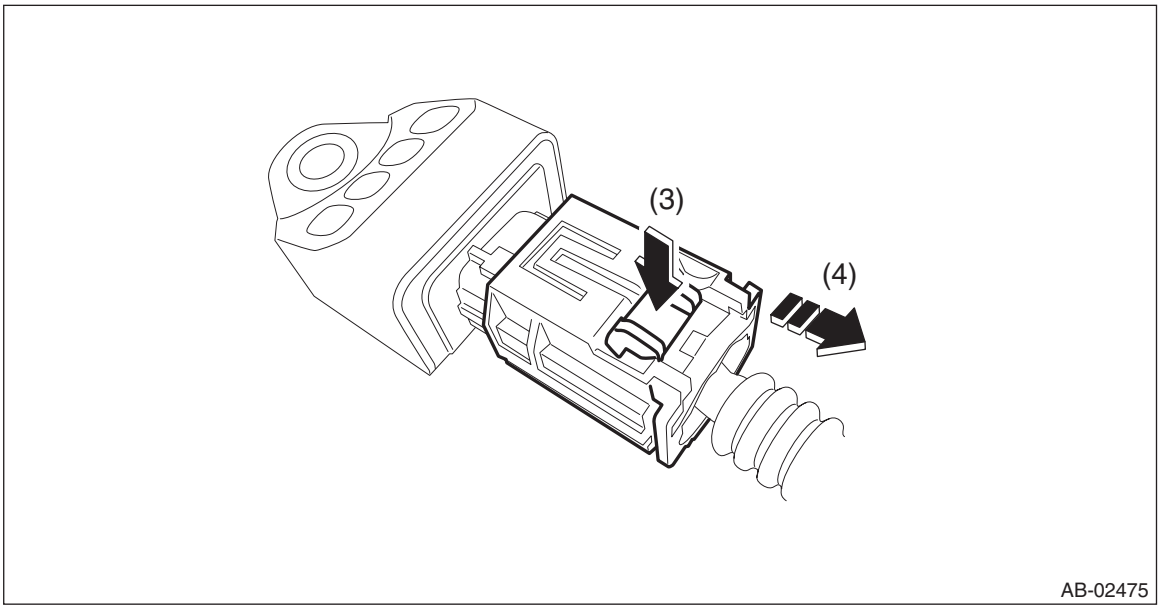
CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.

(1) Push the lock arm.
(2) Holding outer part, pull it one step in the direction of arrow.



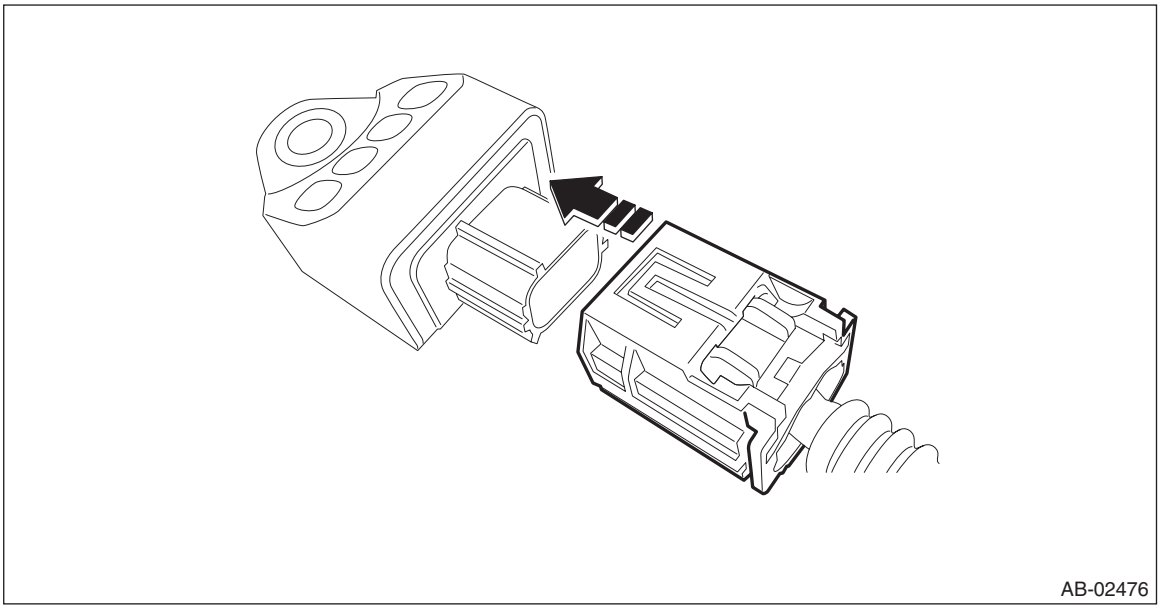
(3) Push the lock arm again.

(4) Holding outer part, pull it in the direction of arrow to disconnect the connector.



2) How to connect:

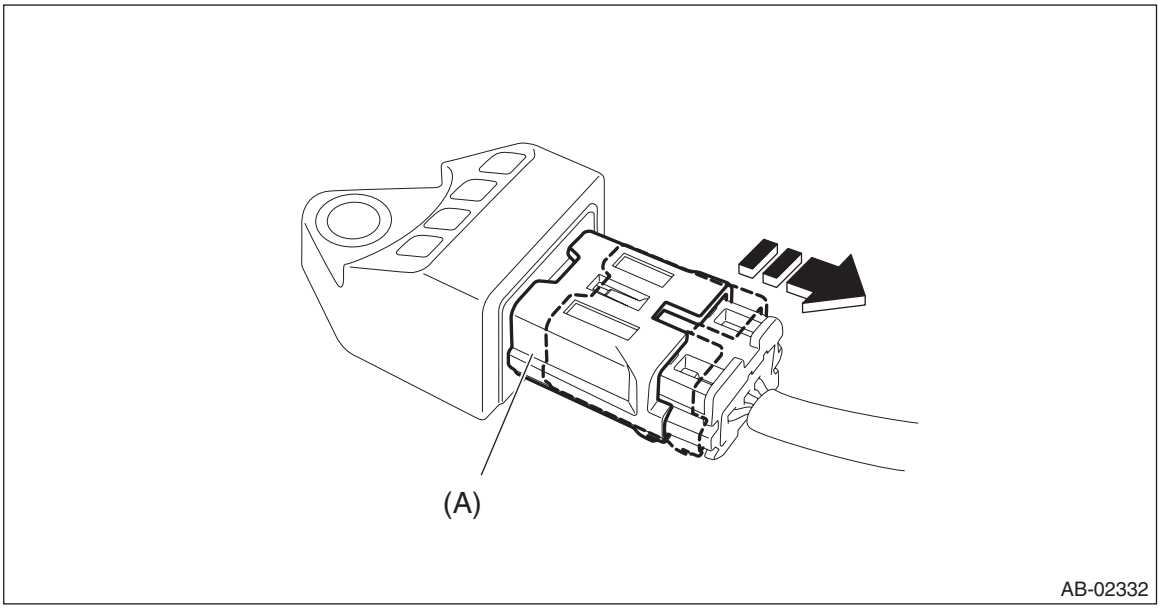
CAUTION:
Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.
Holding the connector, push it in securely until a clicking sound is heard.



7. FRONT DOOR IMPACT SENSOR AND SATELLITE SAFING SENSOR

1) How to disconnect:

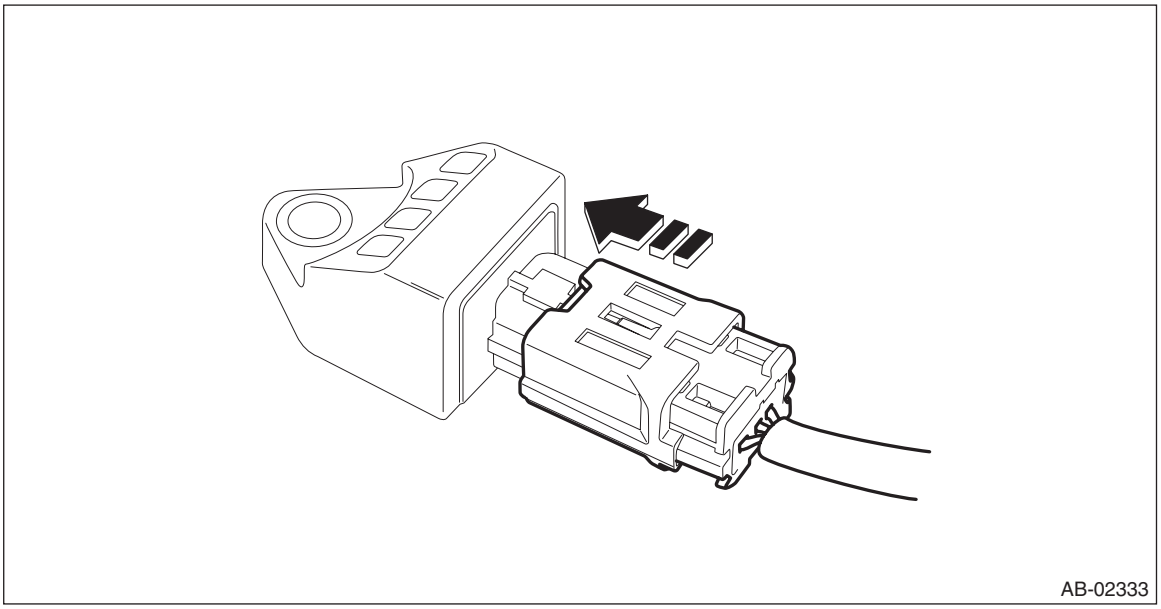
CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.
Holding outer part (A), pull it in the direction of arrow.



2) How to connect:

CAUTION:
- **Do not touch the outer side section or else the outer side (A) will move back.**
- **Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.**

Holding the connector, push it in securely until a clicking sound is heard.

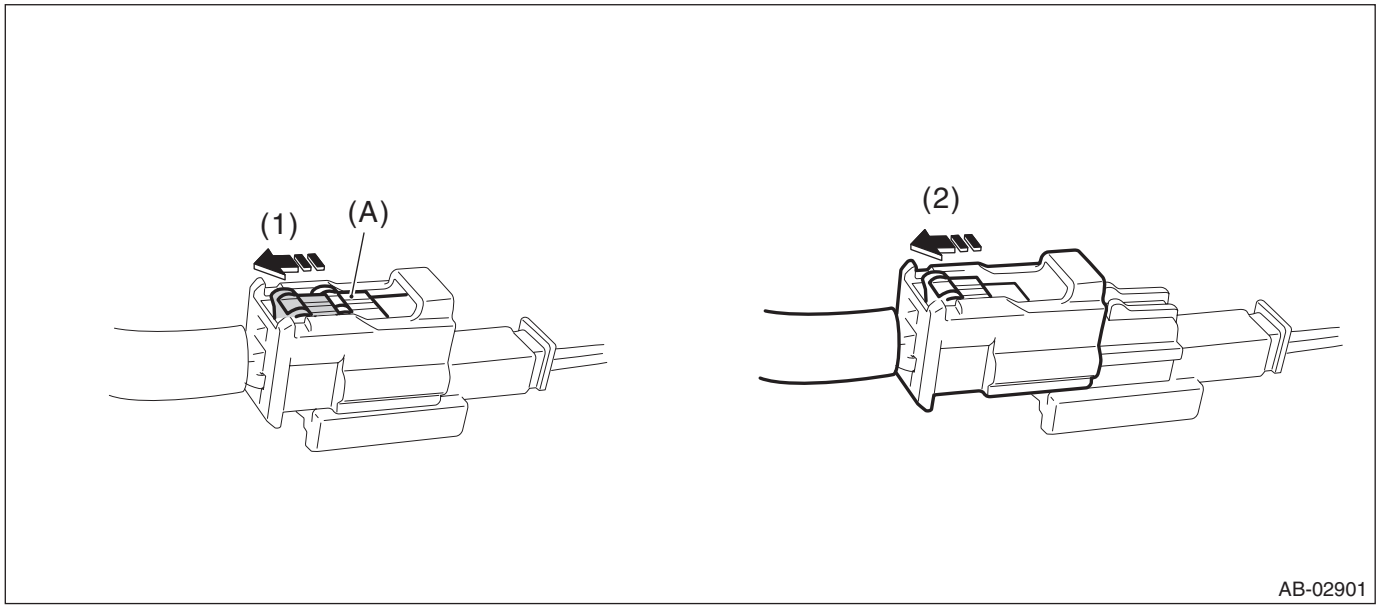


8. FRONT DOOR IMPACT SENSOR (BETWEEN AIRBAG REAR HARNESS AND DOOR HARNESS)

1) How to disconnect:

CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.

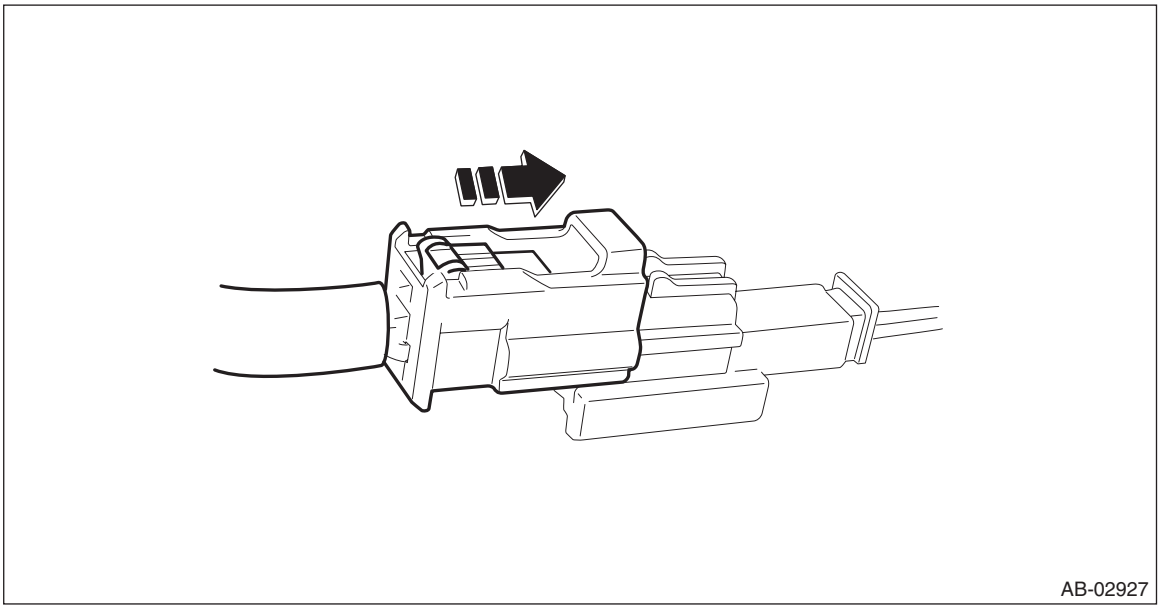
(1) Pull the slide lock (A) in the direction of arrow.
(2) With the slide lock pulled, disconnect the connector.



2) How to connect:

CAUTION:
- **Outer side (A) moves back, and so do not touch the outer part.**
- **Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.**

Holding the connector, push it in securely until a clicking sound is heard.

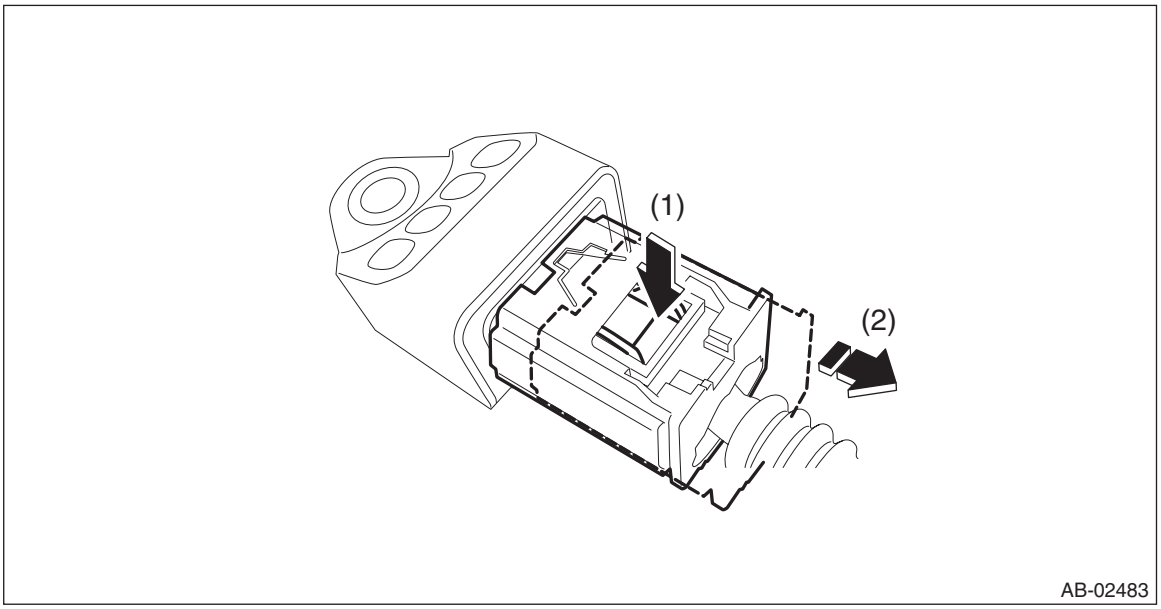


9. SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR

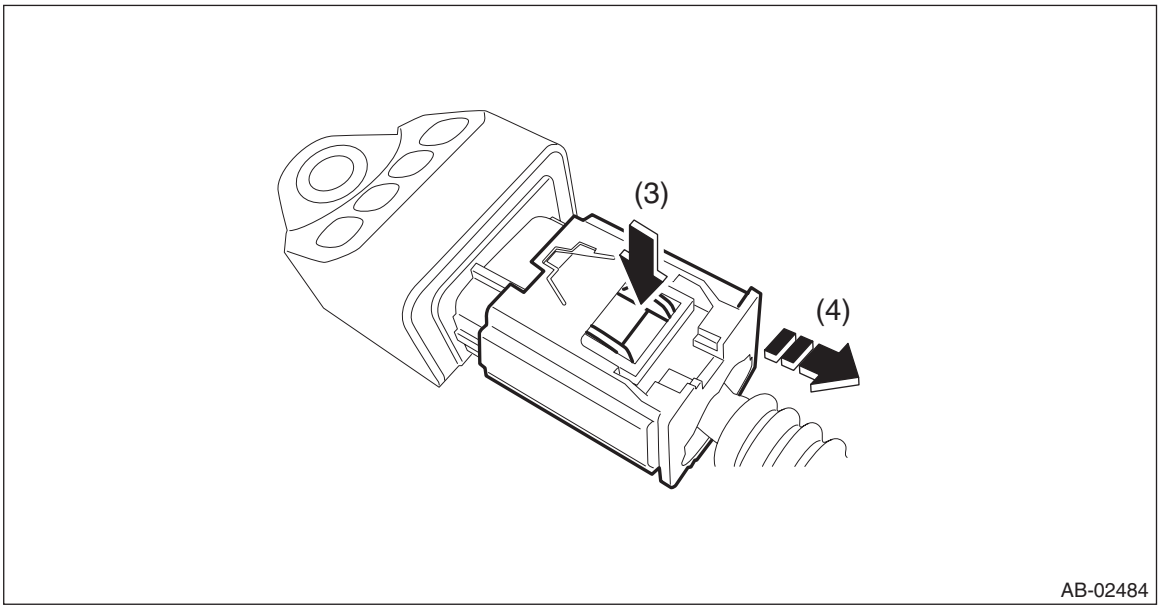
1) How to disconnect:

CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.

(1) Push the lock arm.
(2) Holding outer part, pull it one step in the direction of arrow.

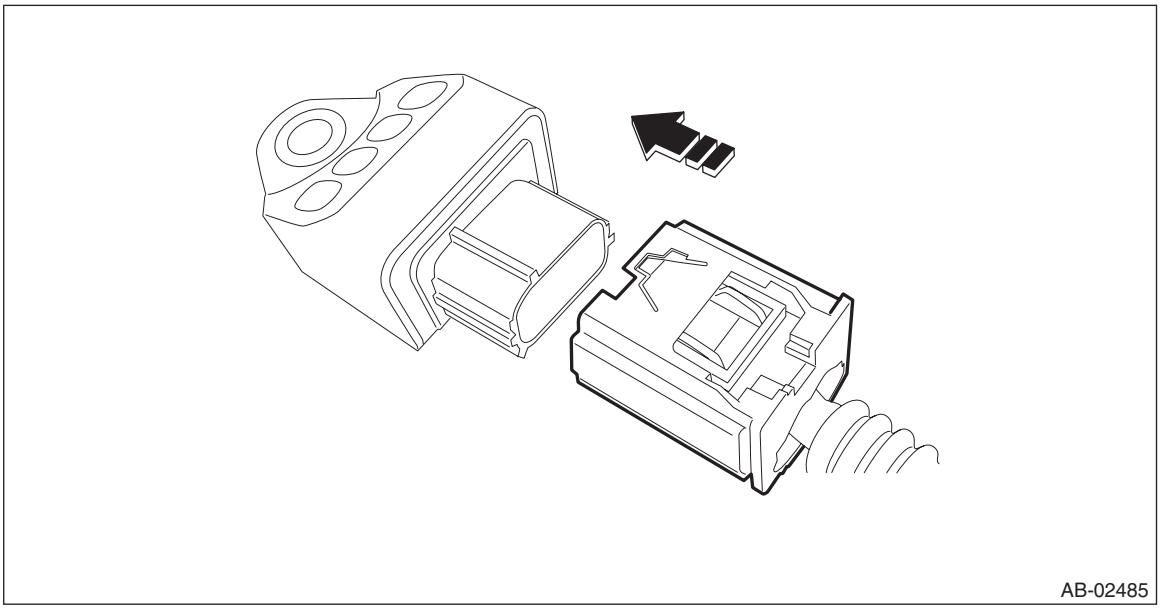


(3) Push the lock arm again.
(4) Holding outer part, pull it in the direction of arrow to disconnect the connector.



2) How to connect:

CAUTION:
Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.
Holding the connector, push it in securely until a clicking sound is heard.

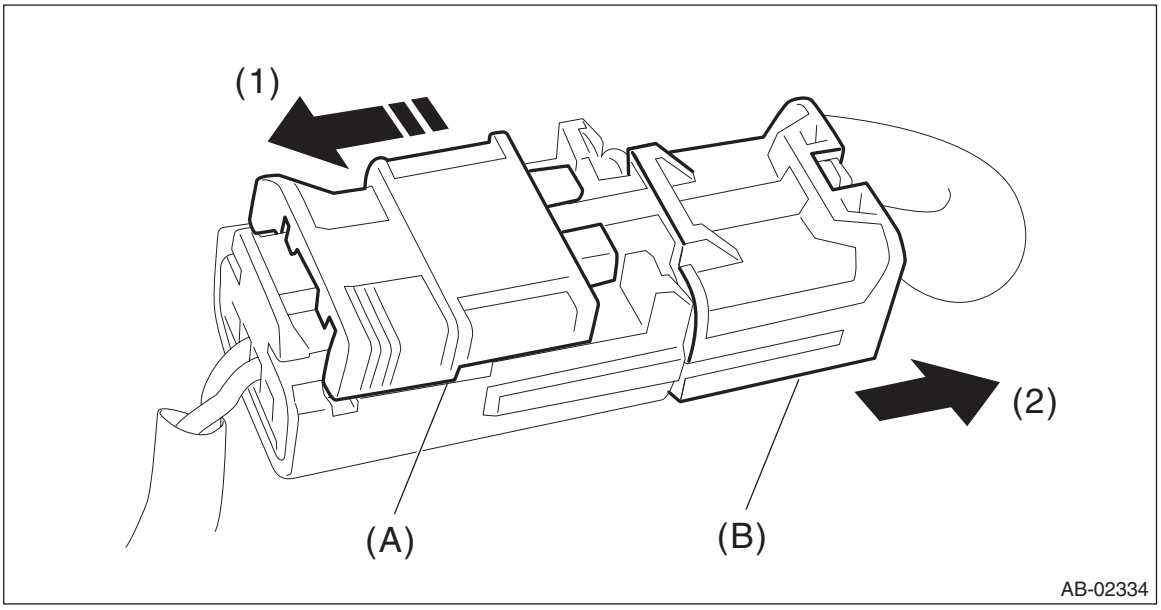


10.SIDE AIRBAG MODULE

1) How to disconnect:

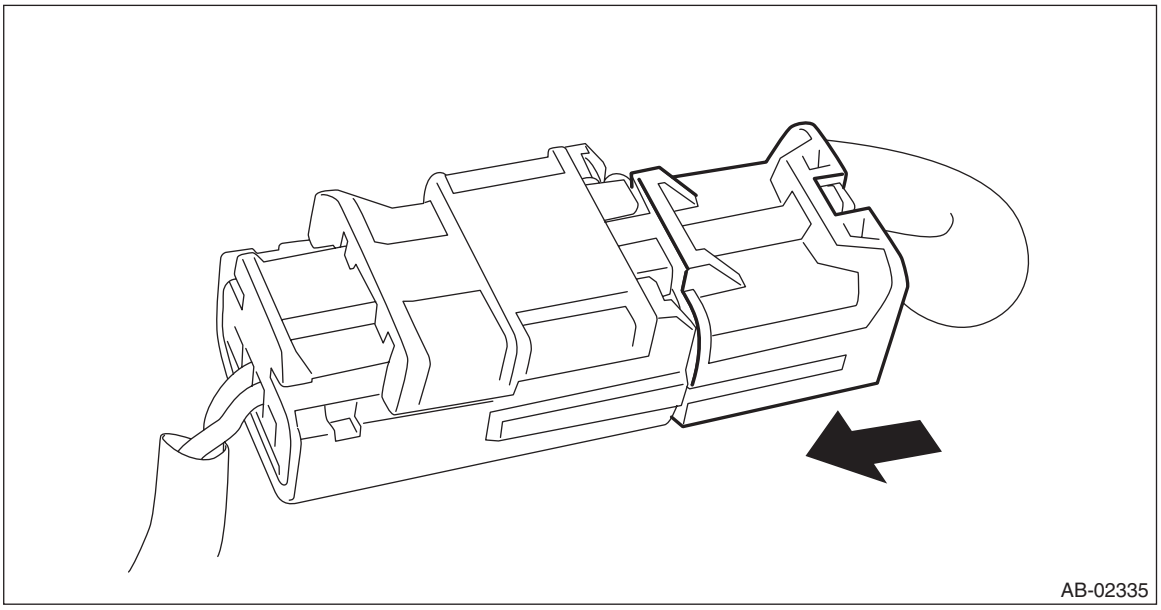
CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.

(1) Move the slide lock (A) in the direction of arrow and hold it.
(2) While holding the slide lock (A) in place, pull the connector (B) to the direction of arrow.



2) How to connect:

CAUTION:
Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.
Holding the connector, push it in securely until a clicking sound is heard.

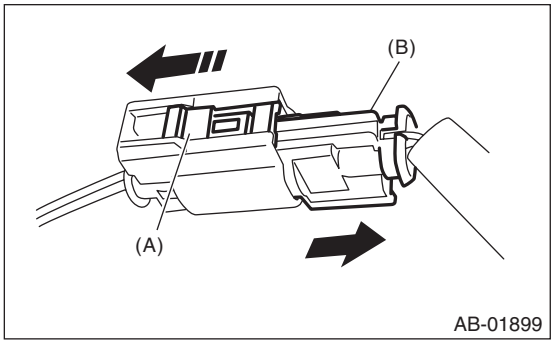


11.BUCKLE SWITCH RH

1) How to disconnect:

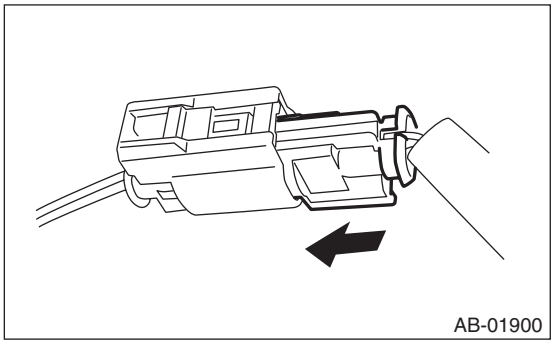
CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.

(1) Move the slide lock (A) in the direction of arrow and hold it.
(2) While holding the slide lock (A), pull the connector (B) in the direction of arrow.



2) How to connect:

CAUTION:
Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.
Holding the connector, push it in securely until a clicking sound is heard.

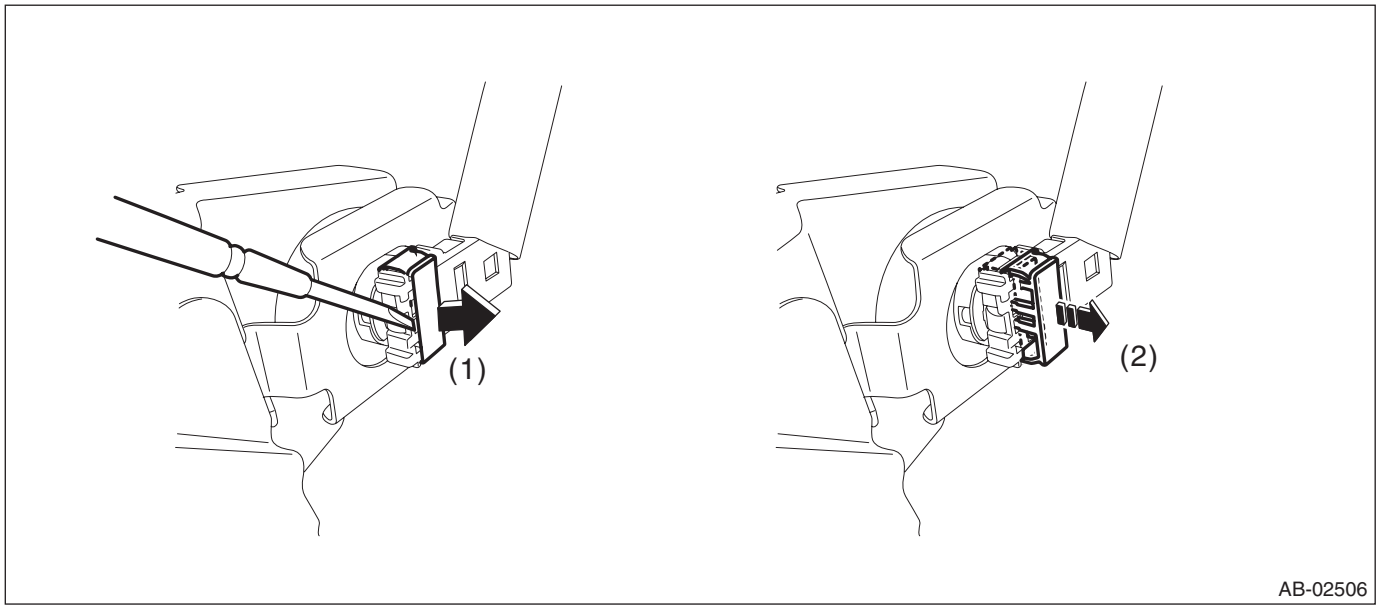


12.OCCUPANT DETECTION SYSTEM (BETWEEN AIRBAG REAR HARNESS AND SEAT HARNESS)

Refer to “OCCUPANT DETECTION SYSTEM” section. <Ref. to OD(diag)-9, OCCUPANT DETECTION SYSTEM (BETWEEN AIRBAG REAR HARNESS AND SEAT HARNESS), PROCEDURE, Airbag Connector.>

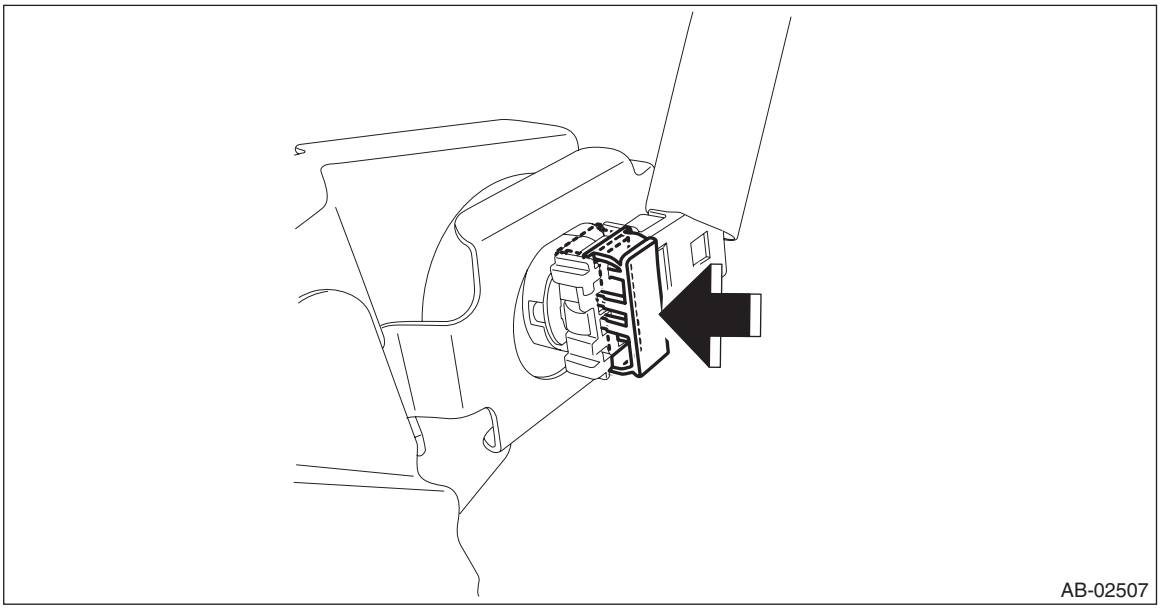
13.KNEE AIRBAG MODULE

1) How to disconnect:
   (1) Using a flat tip screwdriver, pry the push lock upward to unlock.
   (2) Pull the connector to disconnect from the airbag module assembly.



2) How to connect:

CAUTION:
- **Be sure to insert the connector in until it is locked.**
- **Press in the push lock securely. Then pull it gently to make sure that it is locked.**



Connect the connector in the reverse order of disconnecting. At this time, be sure to insert until a clicking sound is heard.

3. Inspection Locations after a Collision

A: REPLACEMENT

Replace the following parts if the airbag system has been activated.

1. FRONT COLLISION

1) Driver's airbag module
2) Knee airbag module
3) Passenger's airbag module
4) Driver's seat belt (pretensioner)
5) Passenger's seat belt (pretensioner)
6) Airbag control module
7) Front sub sensor (right and left)
8) Roll connector
9) Passenger's side seat cushion pad and frame assembly
10) Instrument panel (for integrating with passenger's airbag module)

2. SIDE COLLISION

1) Airbag control module
2) Satellite safing sensor
3) Cover - satellite safing
4) Side airbag module (operating side)
5) Side airbag sensor (operating side)
6) Front door impact sensor (operating side)
7) Curtain airbag module (operating side)
8) Curtain airbag sensor (operating side)
9) Pad assembly - front seat backrest (operating side)
10) Cover COMPL - front backrest (operating side)
11) Trim panel - roof assembly
12) Trim panel for each pillar (operating side)

3. INSPECTION OF OTHER PARTS

Check for the following parts, and replace the damaged parts with new parts.
1) Steering wheel and column assembly - steering
Check the column assembly - steering for mounting conditions and deflection of front and rear, upward and downward directions, and deflection of front and rear direction with tilt lever released. (After a collision, absorbing part of the column assembly - steering may have been operated.)
2) Check the direct type connector of driver's airbag module, knee airbag module, curtain airbag module, and pretensioner for damage, and also check each harness for pinching and connector damage. Replace the main harness as an assembly if damage is found.
3) Check the seat cushion, backrest, slide rail and headrest for installation condition and looseness.
4) If any break or fray is found in the cover COMPL - front backrest of the driver's seat or passenger's seat, the side airbag system may not operate normally. In this case, replace the cover COMPL - front backrest with a new part.
5) For the passenger's seat, replace the frame assembly - front cushion with a new part if the frame assembly - front cushion is deformed or cracked.
6) If there are tears or loosening in the seat cover - front cushion on the passenger's side, it may interfere with the proper operation of the occupant detection system. Replace the cover - front cushion with a new part.
7) When the passenger seat cushion cover has been removed or replaced, make sure that the occupant detection system operates normally.
8) Use the Subaru Select Monitor to check whether the passenger's seat belt buckle switch is operating normally.

B: INSPECTION

If the vehicle is involved in a collision, even if it is a slight collision, be sure to check the following systems.

1. DRIVER'S AIRBAG MODULE ASSEMBLY

1) Frontal collision (driver's airbag module assembly activated)

1. Replace the following parts with new ones.
   - Airbag control module
   - Driver's airbag module
   - Knee airbag module
   - Passenger's airbag module
   - Seat belt pretensioner (LH, RH)
   - Front sub sensor (right and left)
   - Column assembly - steering
2. Visually inspect the following items and replace any damaged part with a new one.
   - Steering wheel
   - Beam COMPL - steering
   - Instrument panel harness and connector on body side

2) Frontal collision (driver's airbag module not activated)

Visually inspect the following items and replace any damaged or cracked part with a new one.
Specially inspect the damage of airbag module body, mounting bracket and harness connector.

- Driver's airbag module
- Knee airbag module
- Passenger's airbag module
- Seat belt pretensioner (LH, RH)
- Front sub sensor (right and left)
- Instrument panel assembly (because it is integrated with passenger's airbag module)

3) No frontal collision

Visually inspect the airbag modules for damage or contamination and replace any faulty part with a new one.

2. KNEE AIRBAG MODULE

1) Frontal collision (knee airbag module activated)

1. Replace the following parts with new ones.
   - Airbag control module
   - Driver's airbag module
   - Knee airbag module
   - Passenger's airbag module
   - Seat belt pretensioner (LH, RH)
   - Front sub sensor (right and left)
   - Column assembly - steering
2. Visually inspect the following items and replace any damaged part with a new one.
   - Steering wheel
   - Beam COMPL - steering
   - Instrument panel harness and connector on body side

2) Frontal collision (knee airbag module not activated)

Visually inspect the following items and replace any damaged or cracked part with a new one.
Specially inspect the damage of airbag module body, mounting bracket and harness connector.

- Driver's airbag module
- Knee airbag module
- Passenger's airbag module
- Seat belt pretensioner (LH, RH)
- Front sub sensor (right and left)
- Instrument panel assembly (because it is integrated with passenger's airbag module)

3) No frontal collision

Visually inspect the airbag modules for damage or contamination and replace any faulty part with a new one.

3. PASSENGER'S AIRBAG MODULE

1) Frontal collision (passenger's airbag module activated)

1. Replace the following parts with new ones.
   - Airbag control module
   - Driver's airbag module
   - Knee airbag module
   - Passenger's airbag module
   - Seat belt pretensioner (LH, RH)
   - Front sub sensor (right and left)
   - Instrument panel assembly (because it is integrated with passenger's airbag module)
2. Visually inspect the following items and replace any damaged part with a new one.
   - Beam COMPL - steering
   - Instrument panel harness and connector on body side

2) Frontal collision (passenger's airbag module not activated)

Visually inspect the following items and replace any damaged or cracked part with a new one.
Specially inspect the damage of airbag module body, mounting bracket and harness connector.

- Driver's airbag module
- Knee airbag module
- Passenger's airbag module
- Seat belt pretensioner (LH, RH)
- Front sub sensor (right and left)
- Instrument panel assembly (because it is integrated with passenger's airbag module)

3) No frontal collision

Visually inspect the airbag modules for damage or contamination and replace any faulty part with a new one.

4. SIDE AIRBAG MODULE

1) Side impact (side airbag module activated)

1. Replace the following parts with new ones.
   - Airbag control module
   - Satellite safing sensor
   - Cover - satellite safing
   - Front Door Impact Sensor
   - Side airbag module
   - Side airbag sensor
   - Curtain airbag module
   - Curtain airbag sensor
   - Pad assembly - front seat backrest
   - Frame assembly - front backrest
   - Cover COMPL - front backrest
   - Trim panel - roof assembly
   - Trim panel for each pillar
2. Visually inspect the following items and replace any damaged part with a new one.
   - Headrest assembly
   - Bushing - lock headrest
   - Slide rail assembly - OUT
   - Slide rail assembly - INN
   - Cover - hinge front seat
   - Knob - lifter
   - Lever - reclining
   - Side airbag harness and connector on body side

2) Side impact (side airbag module not activated)
Visually inspect the following items and replace any damaged or cracked part with a new one.
Specially inspect the damage of airbag module body, mounting bracket and harness connector.
- Pad assembly - front seat backrest
- Frame assembly - front backrest
- Cover COMPL - front backrest
- Sensor assembly - satellite safing
- Cover - satellite safing
- Front Door Impact Sensor
- Side airbag module
- Side airbag sensor
- Curtain airbag module
- Curtain airbag sensor

3) No side impact
Visually inspect the airbag modules for contamination and replace any faulty part with a new one.

5. CURTAIN AIRBAG MODULE

1) Side impact (curtain airbag module activated)
1. Replace the following parts with new ones.
   - Airbag control module
   - Satellite safing sensor
   - Cover - satellite safing
   - Curtain airbag module
   - Front Door Impact Sensor
   - Side airbag sensor
   - Curtain airbag sensor
   - Pad assembly - front seat backrest (operating side)
   - Frame assembly - front backrest (operating side)
   - Cover COMPL - front backrest (operating side)
   - Trim panel - roof assembly
   - Trim panel for each pillar
   - Airbag bracket (model with sunroof)
2. Visually inspect the following items and replace any damaged part with a new one.
   - Assist rail - front and rear
   - Bracket - assist rail front and rear
   - Curtain airbag harness and connector on body side.

2) Side impact (curtain airbag module not activated)
Visually inspect the following items and replace any damaged or cracked part with a new one.
Specially inspect the damage of airbag module body, mounting bracket and harness connector.
- Trim panel - roof assembly
- Trim panel for each pillar
- Curtain airbag module
- Satellite safing sensor
- Cover - satellite safing
- Front Door Impact Sensor
- Side airbag sensor
- Curtain airbag sensor

3) No side impact
Visually inspect the airbag covers for damage or contamination and replace any faulty part with a new one.

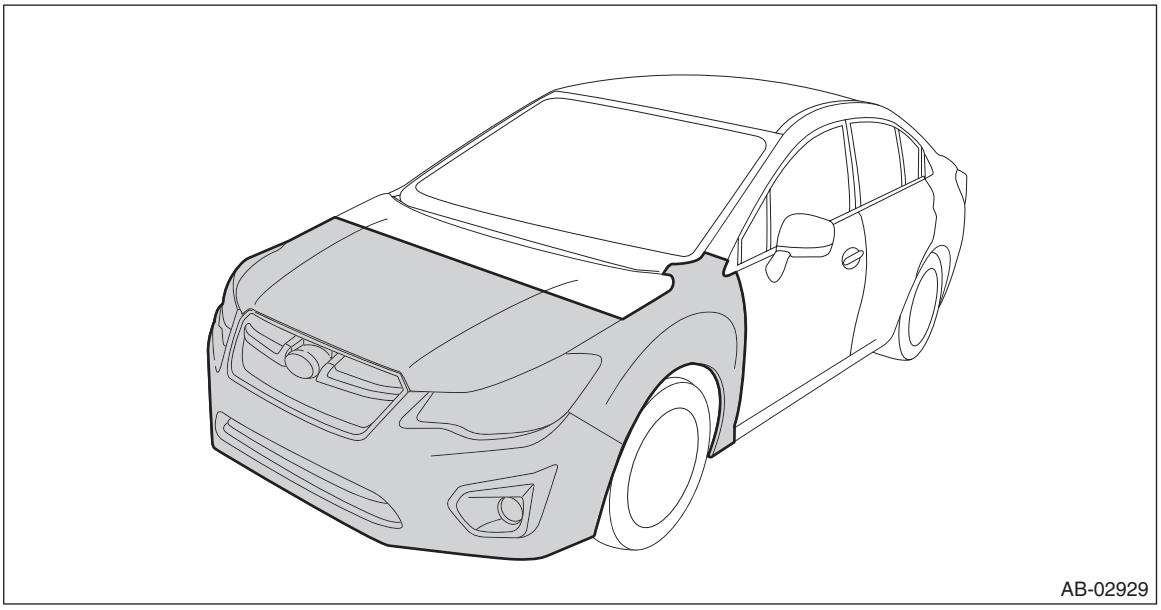
6. AIRBAG CONTROL MODULE

Check for the following, and replace the damaged parts with new parts.

- Control module is cracked or deformed.
- Mounting bracket is cracked or deformed.
- Connector is scratched, cracked or deformed.
- Driver's airbag module has been activated.
- Knee airbag module has been activated.
- Passenger's airbag module has been activated.
- Side airbag module has been activated.
- Curtain airbag module has been activated.
- Seat belt pretensioner has been activated.

7. FRONT SUB SENSOR

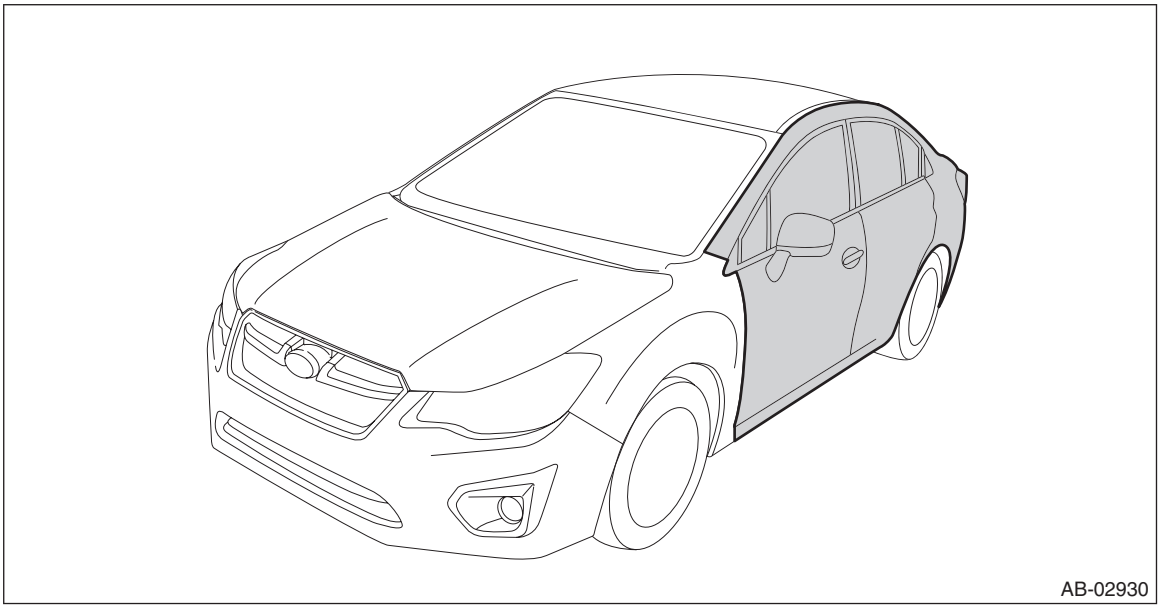
If the section of vehicle as shown in the figure is damaged, check the following items and replace the damaged parts with new parts.



- Front sub sensor is cracked or deformed.
- Connector is scratched, cracked or deformed.
- Driver's airbag module, knee airbag module or passenger's airbag module has been activated.

8. FRONT DOOR IMPACT SENSOR, SATELLITE SAFING SENSOR, SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR

If the section of vehicle as shown in the figure is damaged, check the following items and replace the damaged parts with new parts.



- Front door impact sensor, satellite safing sensor, side airbag sensor and curtain airbag sensor are cracked or deformed.
- Mounting bracket is cracked or deformed.
- Connector is scratched, cracked or deformed.
- Side airbag module or curtain airbag module has been activated. (operating side)

9. ROLL CONNECTOR

Check the following items and replace any damaged, cracked, or deformed parts with new parts.

- Combination switch
- Steering roll connector

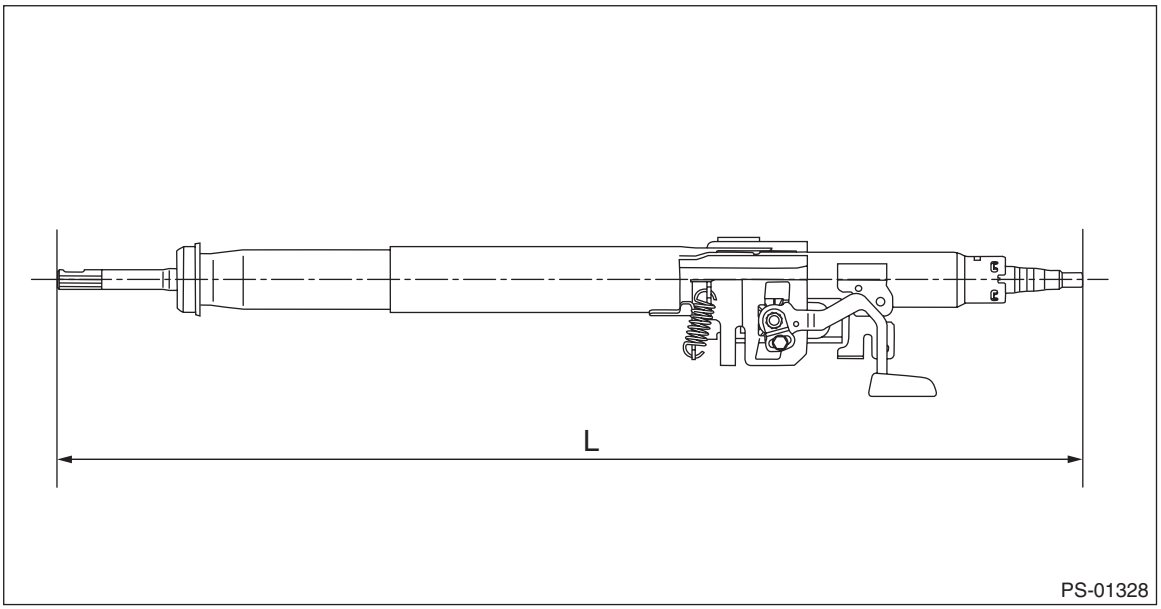
10.COLUMN ASSEMBLY - STEERING & STEERING WHEEL

Check the following items, and if there is anything out of standard, it is considered to be damaged. If so, replace it with a new part.

- Measure the whole length of the column assembly - steering.

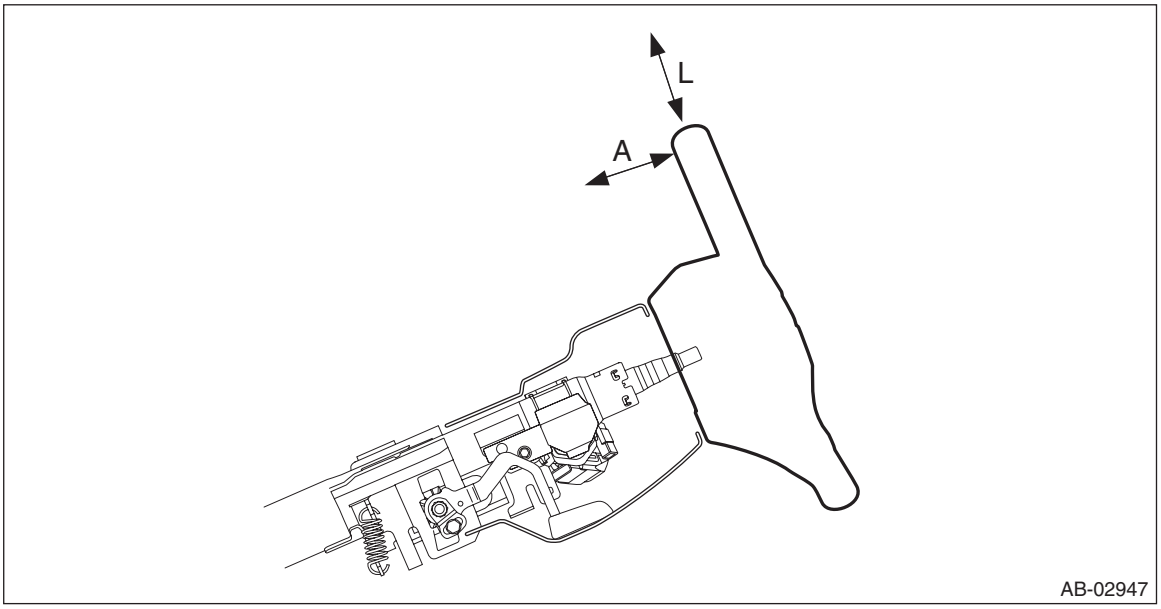
Standard: Overall length L

Tilt and telescopic column (measure while minimized)
$819.7^{+1.5}_{-1.5}$ mm ($32.27^{+0.059}_{-0.059}$ in)



- Check the steering wheel deflection in axial and vertical directions.

Specification:
Axial deflection A (deflection of steering wheel)
Less than 6 mm (0.24 in)
Vertical deflection L (runout of steering wheel)
Less than 17 mm (0.68 in)



11.PASSENGER'S SEAT

Check for the following, and replace the damaged parts with new parts.

- Body or bracket of the seat belt inner - front is scratched, cracked or deformed.
- Frame assembly - front backrest is cracked or deformed.
- Headrest assembly for deformation or play
- If the cover - front cushion and the cover COMPL - front backrest is damaged or frayed, replace the cover with a new part.

CAUTION:

If any of the following applies, replace the pad assembly - front seat cushion & frame assembly - front cushion as a unit. Do not disassemble.

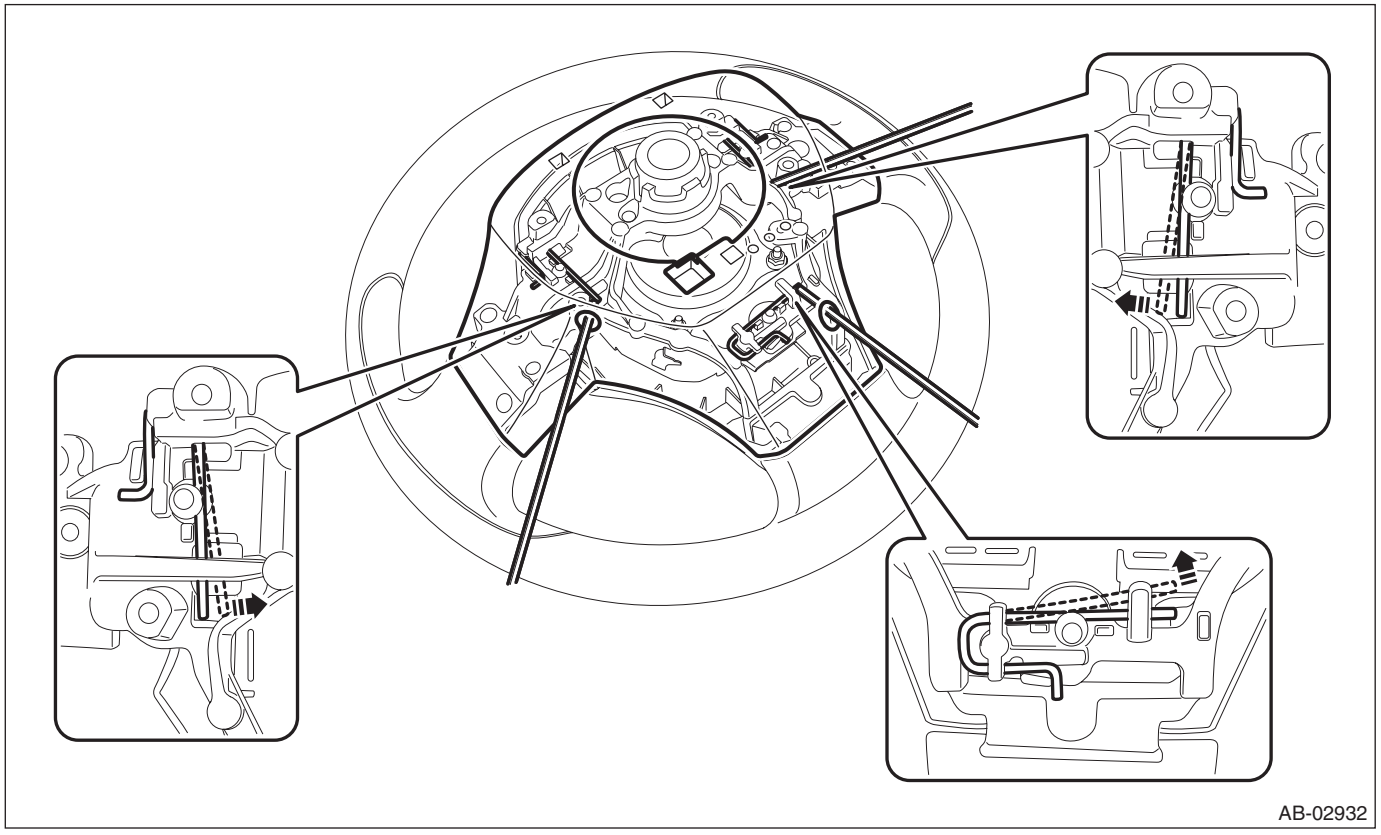
- **The frame assembly - front cushion or the pad assembly - front seat cushion is cracked or deformed.**
- **Scratches, cracks, or deformation found on the occupant detection system sensor mat or occupant detection control module, or attachment brackets of the control module.**
- **Harness and/or connector is cracked, deformed or open. Harness wire is exposed.**

4. Driver's Airbag Module

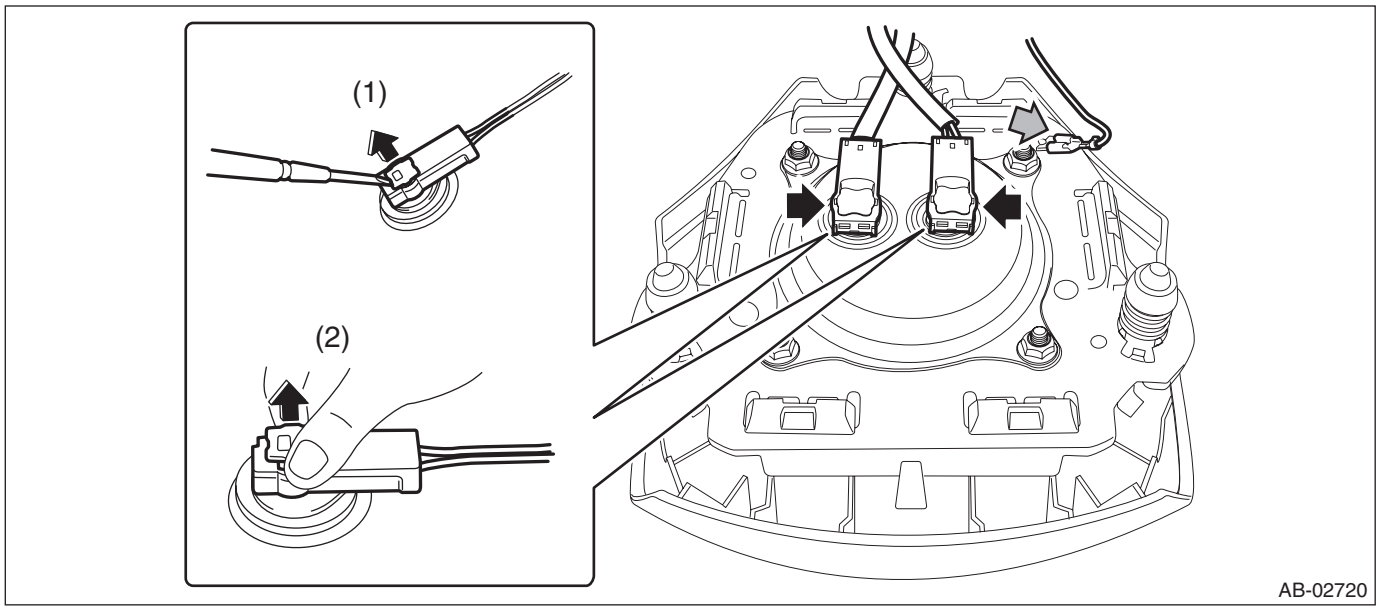
A: REMOVAL

CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-10, CAUTION, General Description.>

1) Position the front wheels straight ahead. (After moving a vehicle 5 m (16 ft) or more with front wheels positioned straight ahead, make sure that the vehicle moves straight ahead.)
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
4) Remove the driver's airbag module.
   (1) Using a hexagon wrench wrapped with protective tape, push in the snap pins to disengage the locks (3 places).



(2) Disconnect the horn harness and airbag connector, and remove the driver's airbag module. <Ref. to AB-22, DRIVER'S AIRBAG MODULE, CURTAIN AIRBAG MODULE & PRETENSIONER, PROCEDURE, Airbag Connector.>



B: INSTALLATION

CAUTION:
• Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-10, CAUTION, General Description.>
• Do not allow harness and connectors to interfere or get tangled up with other parts.

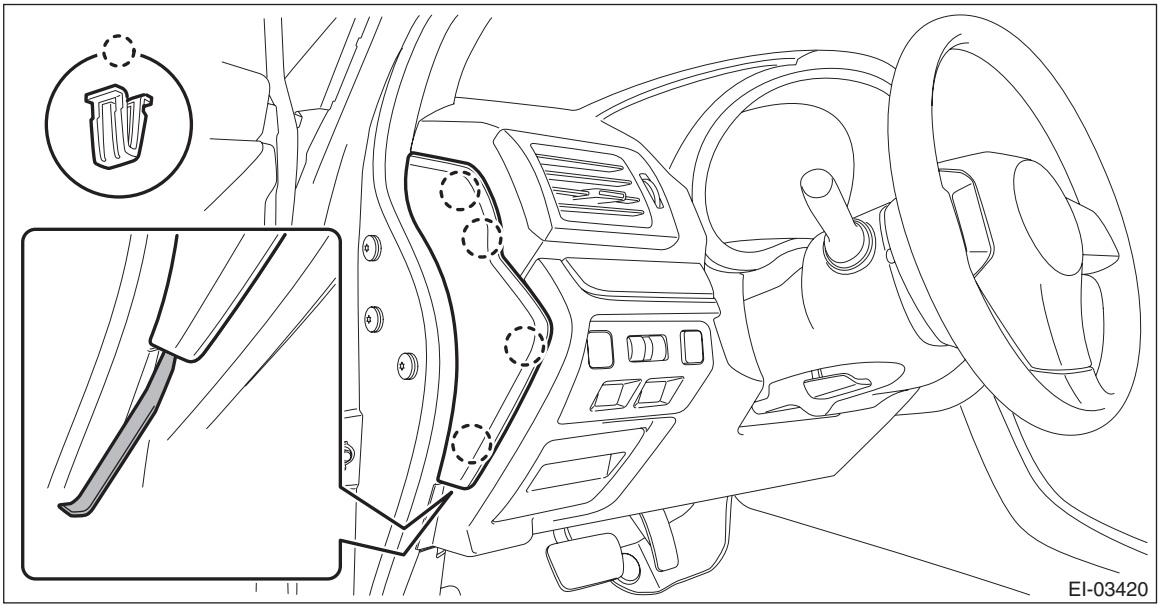
1) Before installation, inspect the following items and replace any faulty part with a new one.
- Airbag module is cracked or deformed.
- Harness and/or connector is cracked, deformed or open.
- Harness wire is exposed.
- The steering wheel is in the way, making it difficult to install the airbag module.
- The clearance between the driver's airbag module and steering wheel is not constant.

2) Install each part in the reverse order of removal.

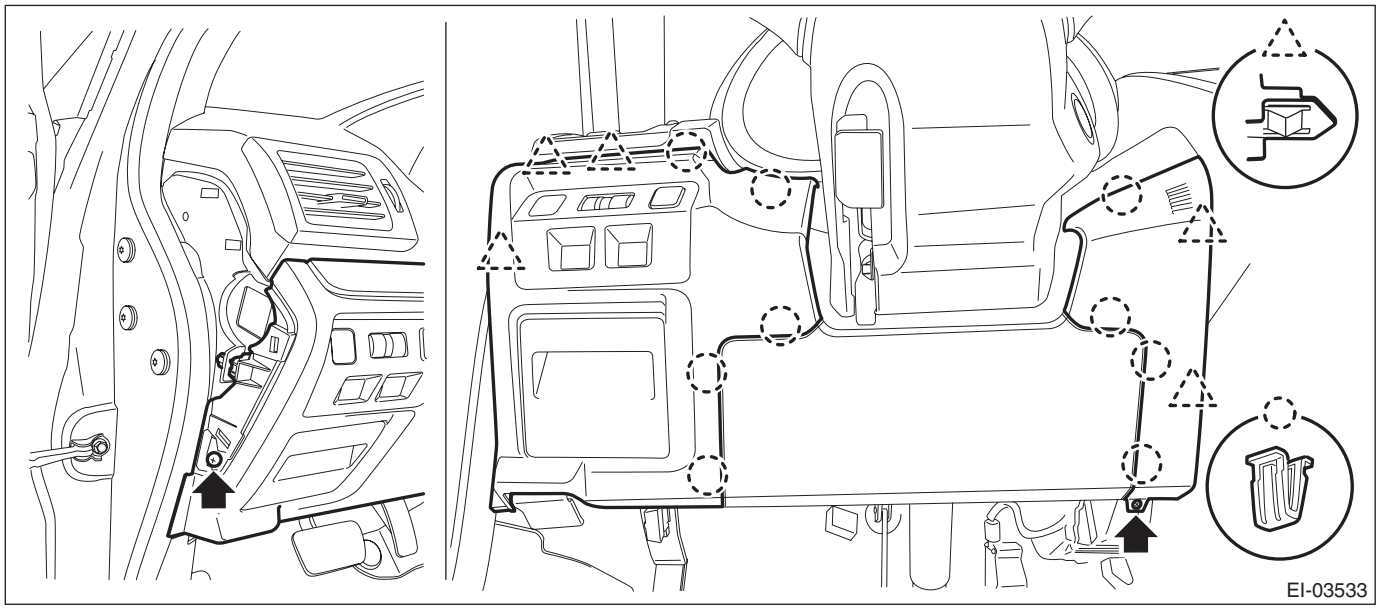
5. Knee Airbag Module

A: REMOVAL

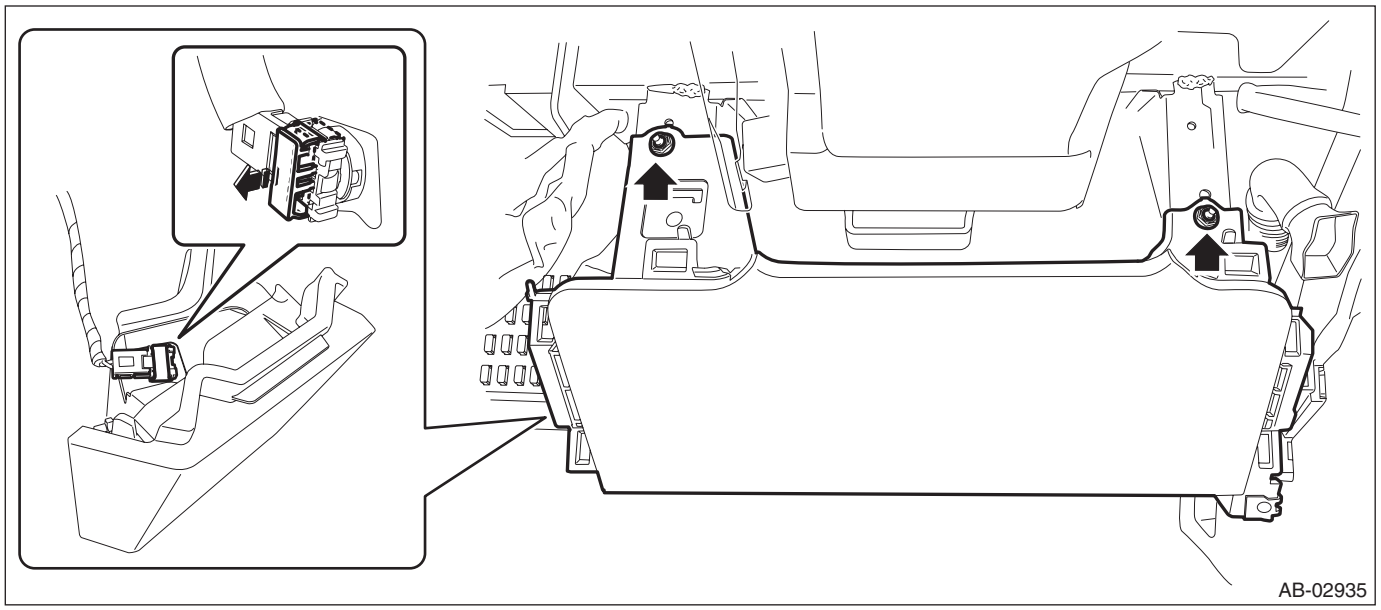
1) Turn the ignition switch to OFF.
2) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
3) Remove the cover assembly - instrument panel LWR driver.
   (1) Remove the clips, and remove the cover - instrument panel side LH.



NOTE:
Using a plastic remover, open the cover - instrument panel side LH.
   (2) Remove the screws and release the clips and claws.
   (3) Disconnect the harness connectors, and remove the cover assembly - instrument panel LWR driver INN and the cover assembly - instrument panel LWR driver OUT.



4) Remove the nuts to remove the knee airbag module and disconnect the harness connector. <Ref. to AB-30, KNEE AIRBAG MODULE, PROCEDURE, Airbag Connector.>



B: INSTALLATION

CAUTION:
• Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-10, CAUTION, General Description.>
• Do not allow harness and connectors to interfere or get tangled up with other parts.
1) Before installation, inspect the following items and replace any faulty part with a new one.
• Airbag module is cracked or deformed.
• Knee airbag module bracket is cracked or deformed.
• Harness and/or connector is cracked, deformed or open.
• Harness wire is exposed.
• Depending on the condition of the beam COMPL - steering, installation of the knee airbag module is difficult.
2) Install each part in the reverse order of removal.

Tightening torque:
Knee airbag module: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

6. Passenger's Airbag Module

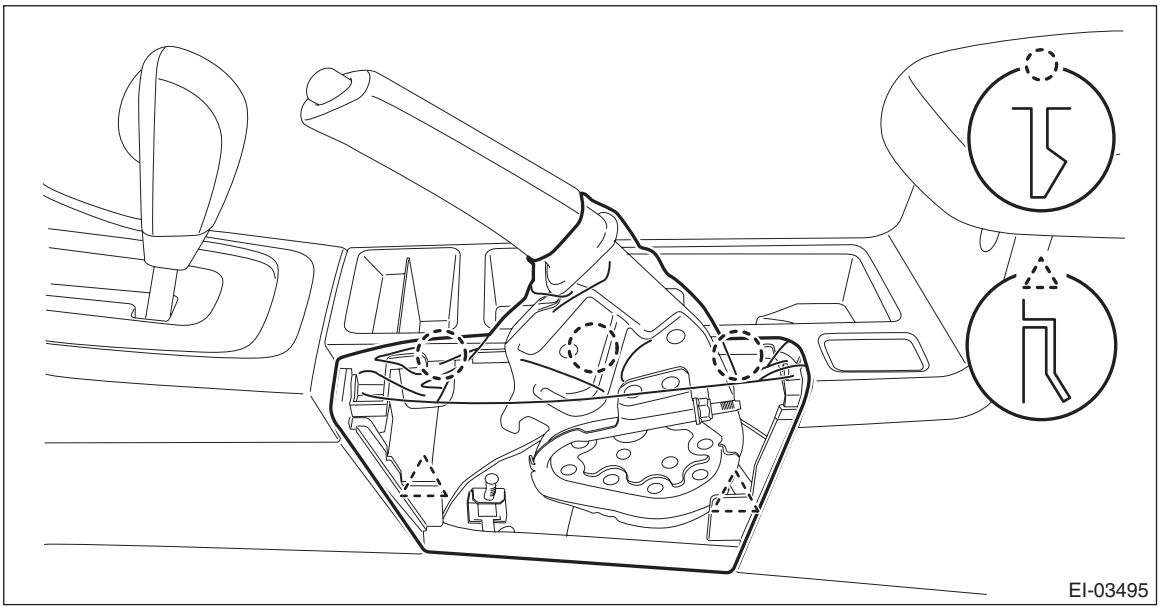
A: REMOVAL

CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-10, CAUTION, General Description.>

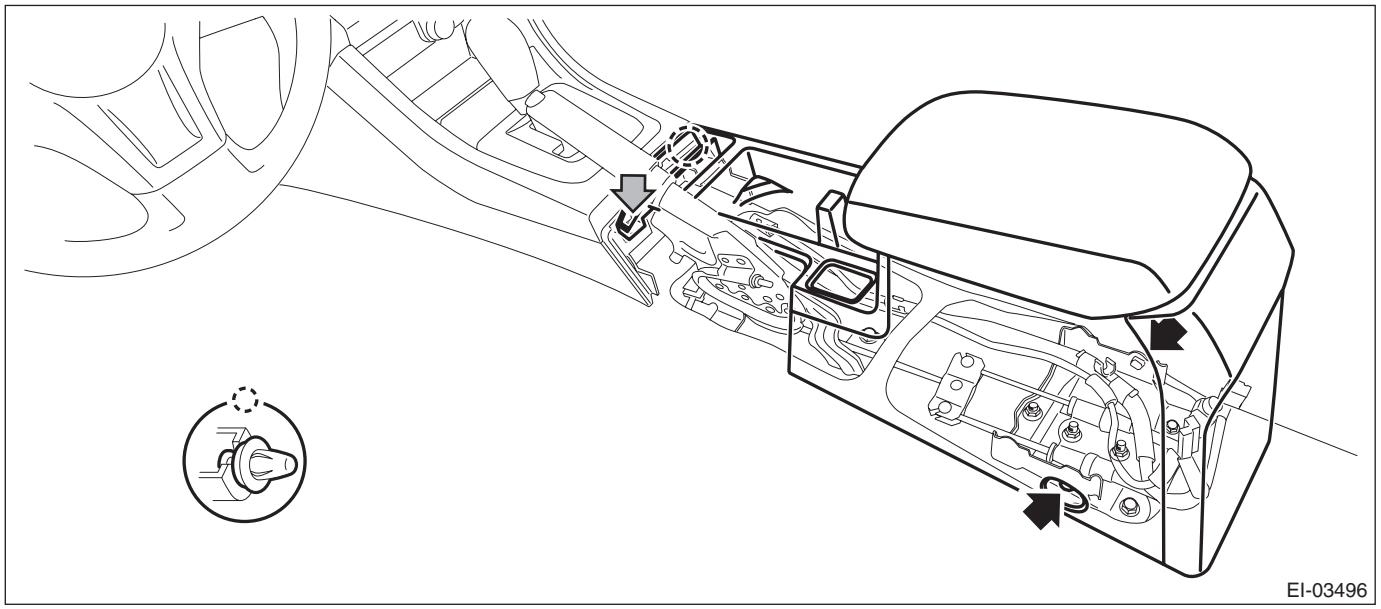
1) Turn the ignition switch to OFF.
2) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

NOTE:
On CVT models, shift the select lever into "D" before disconnecting the battery ground cable.

3) Remove the console box assembly.
   (1) Release the claws, and then remove the boot - hand brake.

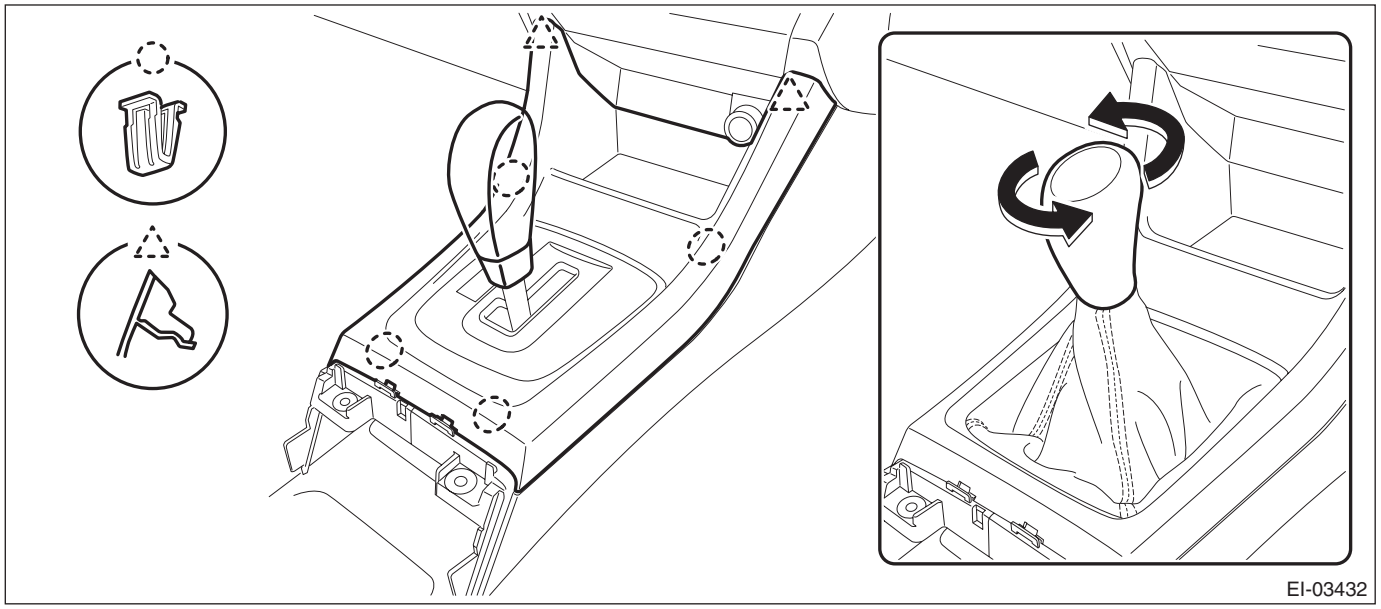


   (2) Move the seat forward, and remove the bolts after detaching the left and right caps.
   (3) Remove the screws, disconnect the harness connector and remove the console box assembly.

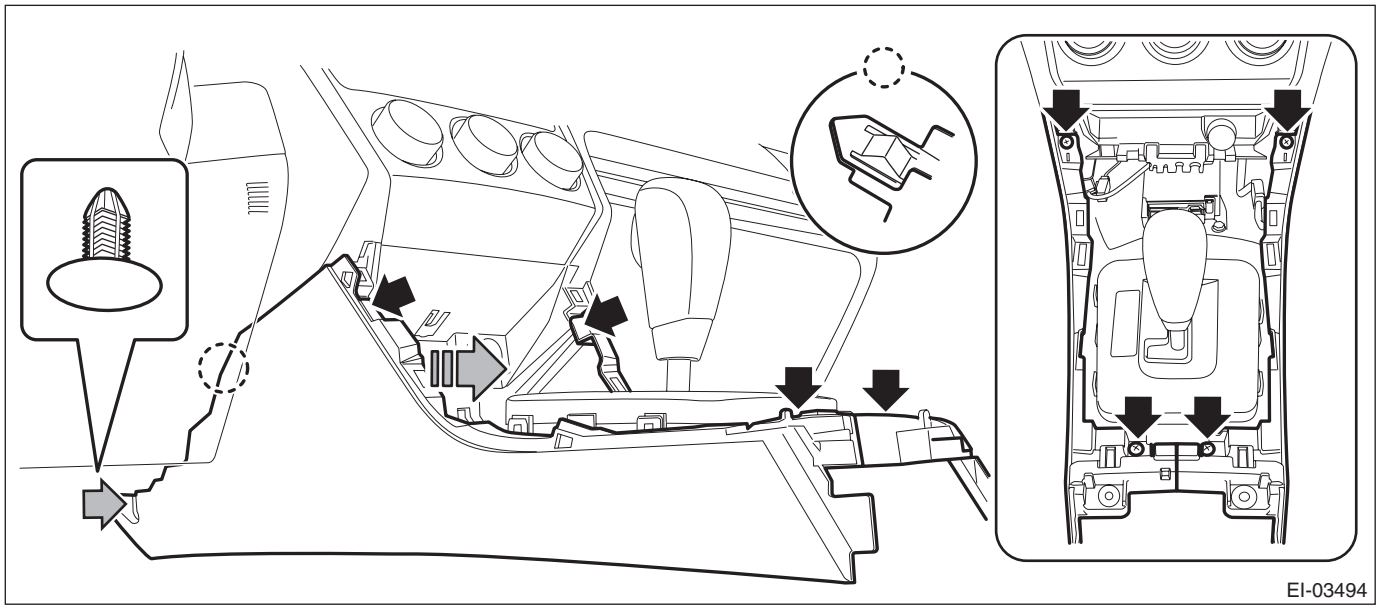


4) Remove the cover - shift lever.
   (1) Remove the shift knob. (MT model)

(2) Release the clips and claws, then pull up the cover - shift lever.

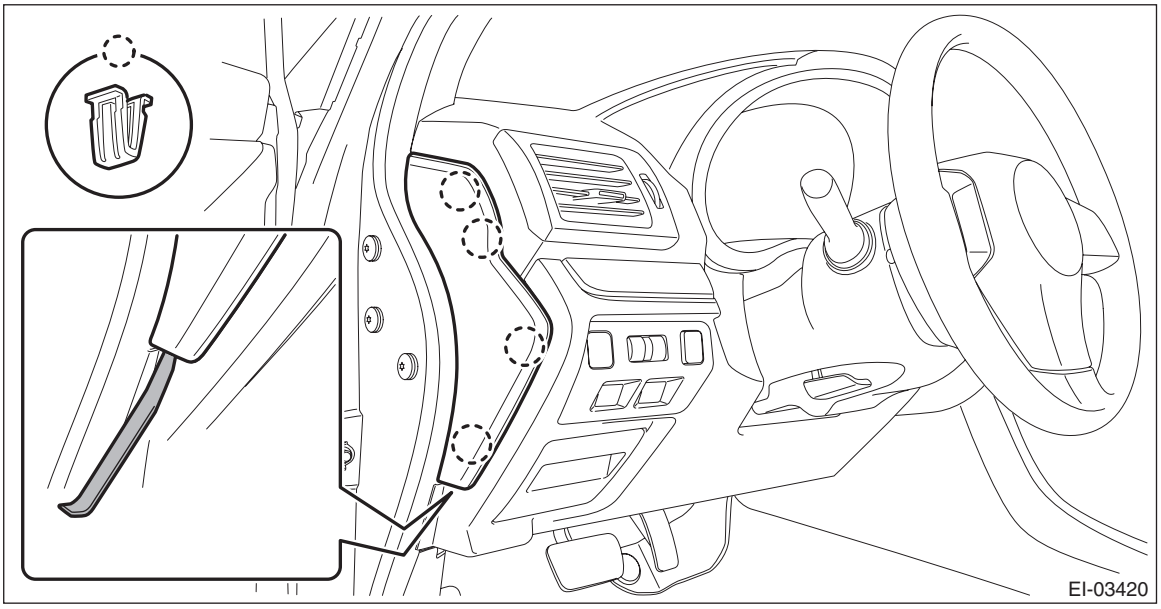


5) Remove the left and right panel center LWR.
(1) Remove the screws and clips.
(2) Release the claws, and then pull the panel center LWR to remove.



6) Remove the cover assembly - instrument panel LWR driver.

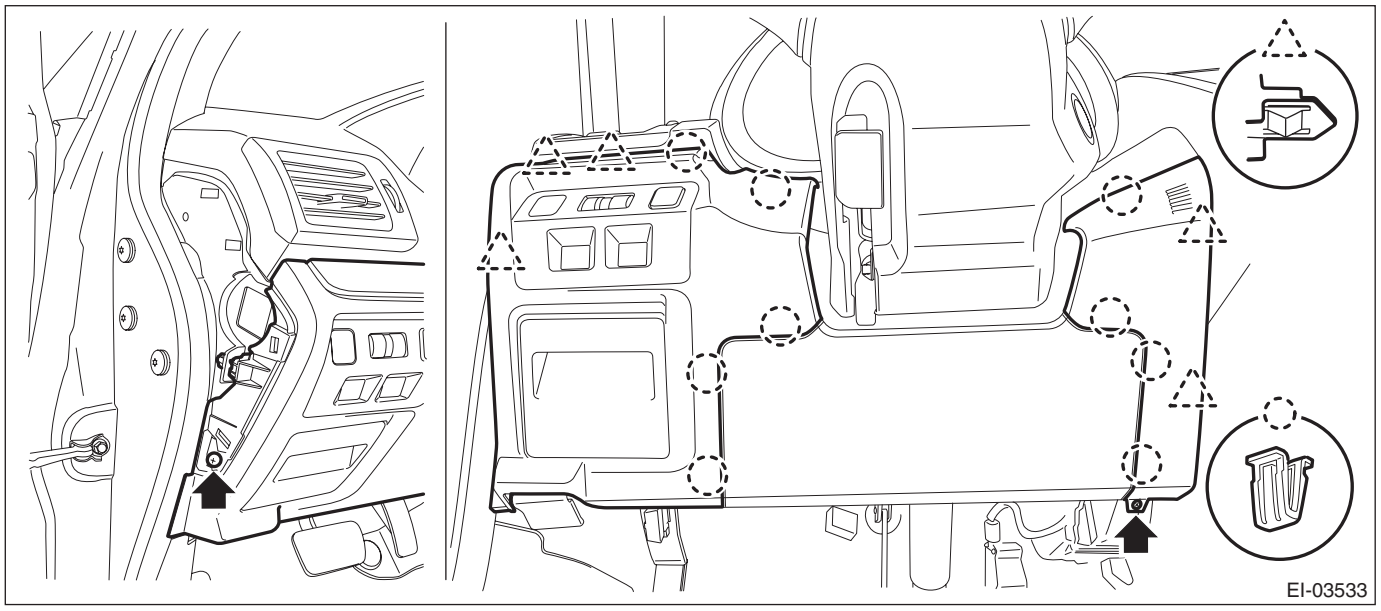
(1) Remove the clips, and remove the cover - instrument panel side LH.



NOTE:
Using a plastic remover, open the cover - instrument panel side LH.

(2) Remove the screws and release the clips and claws.

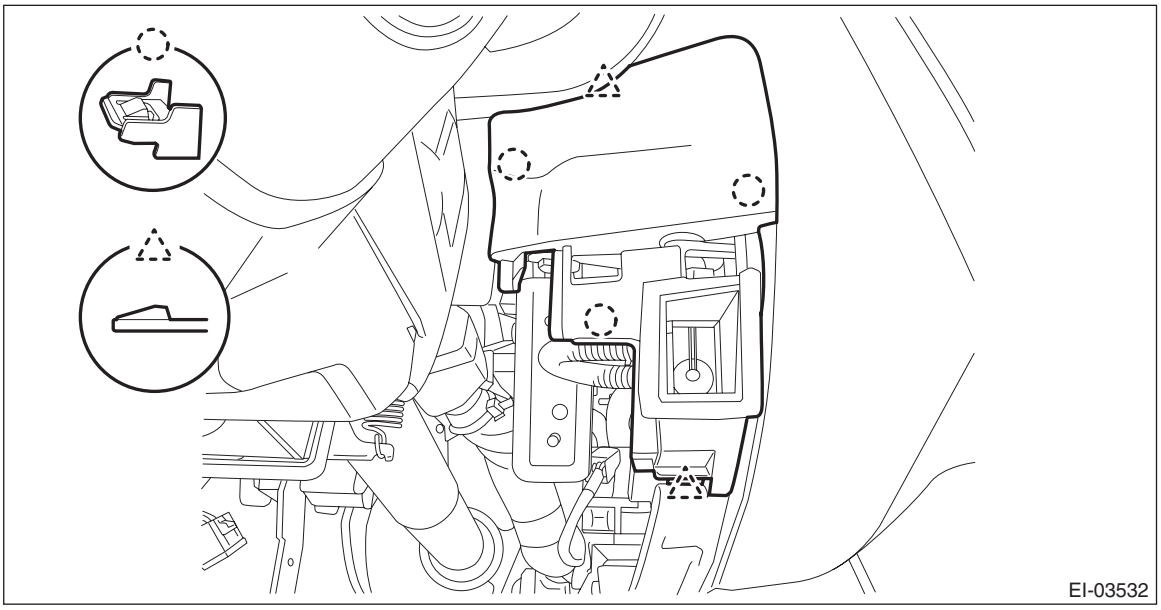
(3) Disconnect the harness connectors, and remove the cover assembly - instrument panel LWR driver INN and OUT.



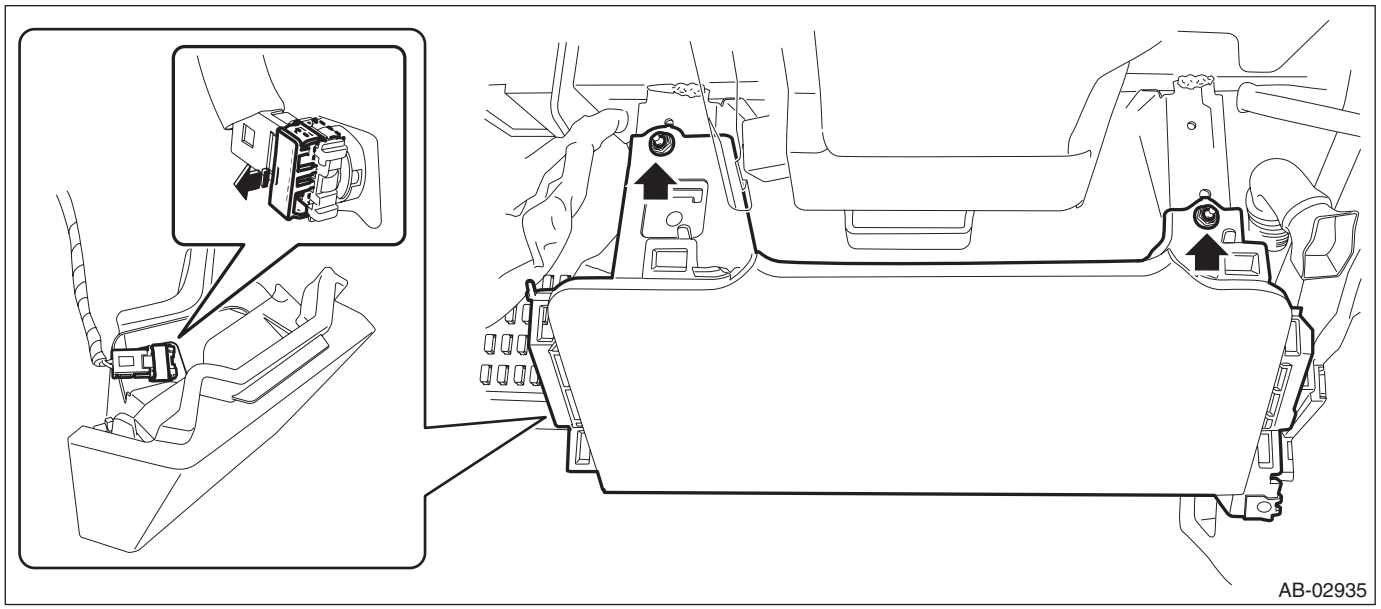
7) Remove the cover switch - starter.

(1) Release the claws and remove the cover switch - starter.

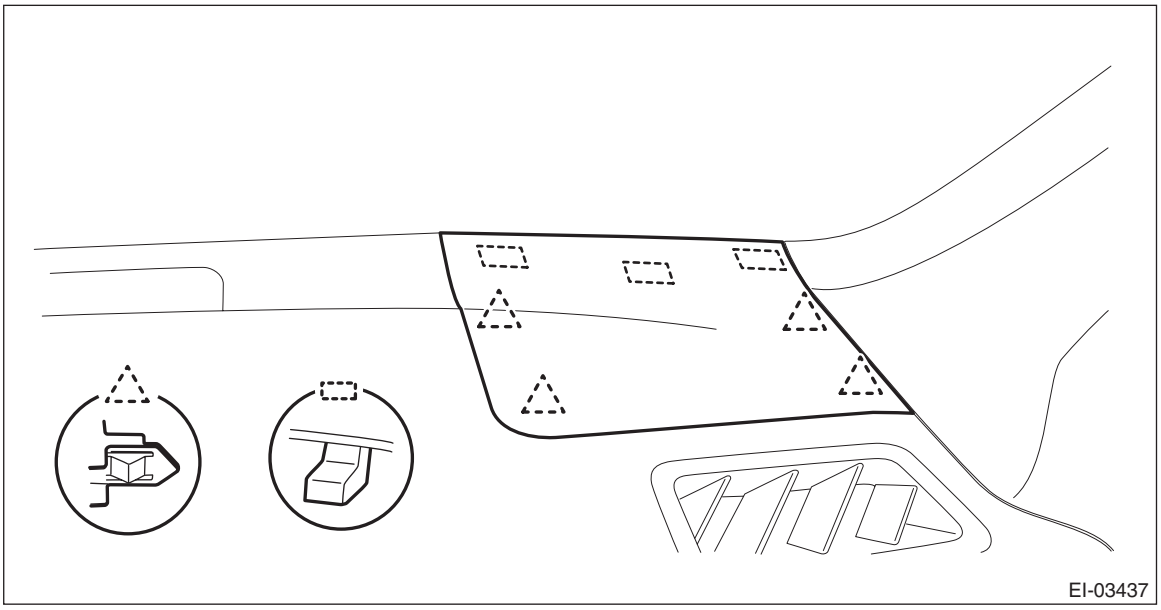
(2) Disconnect the connector and aspirator hose.



8) Remove the nuts to remove the knee airbag module and disconnect the harness connector. <Ref. to AB-30, KNEE AIRBAG MODULE, PROCEDURE, Airbag Connector.>



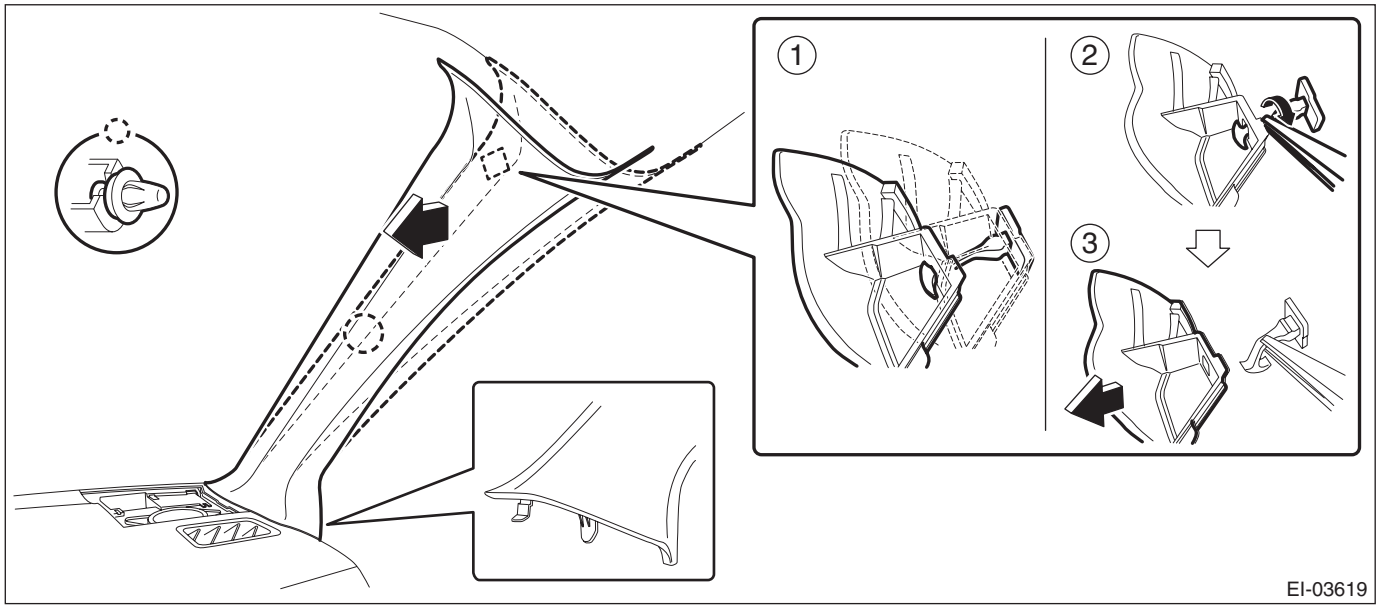
9) Release the clips and claws, then detach the left and right grille speaker side.



NOTE:
Remove the grille speaker side by using a plastic remover.

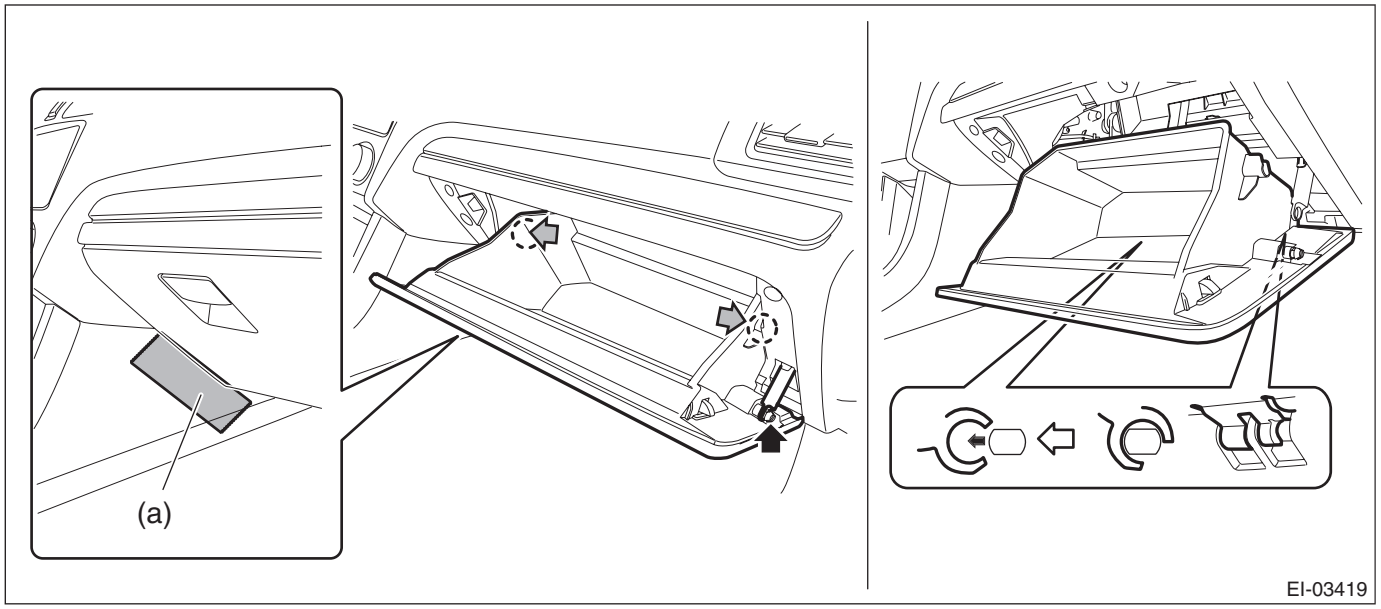
10) Remove the trim panel - front pillar UPR on the left and right sides.
(1) Pull the upper part of the trim panel - front pillar UPR towards the center of the vehicle.
(2) Insert long-nose pliers into the top part of the trim, grip the tether clip with the pliers and twist 90° in that position.

CAUTION:
Be careful not to damage the pillar trim surface and curtain airbag module when inserting the pliers.
(3) Holding the tether clip twisted as in the previous step, remove the trim panel - front pillar UPR from the tether clip.
(4) Remove the clips, and remove the trim panel - front pillar UPR.



11) Remove the pocket assembly.
(1) Attach the protective tape (a) to the panel center LWR.
(2) Remove the damper COMPL - pocket.

(3) Release the stoppers and remove the pocket assembly by pulling it toward you.

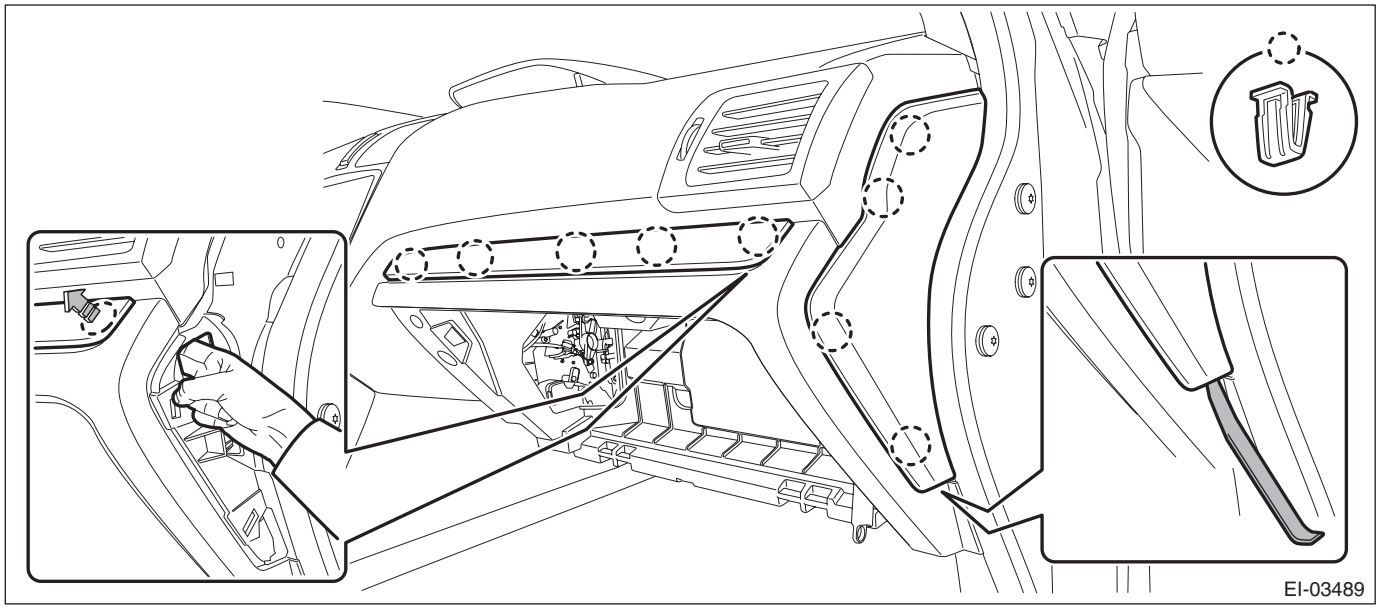


12) Remove the back panel - pocket.

(1) Remove the clips, and remove the cover - instrument panel side RH.

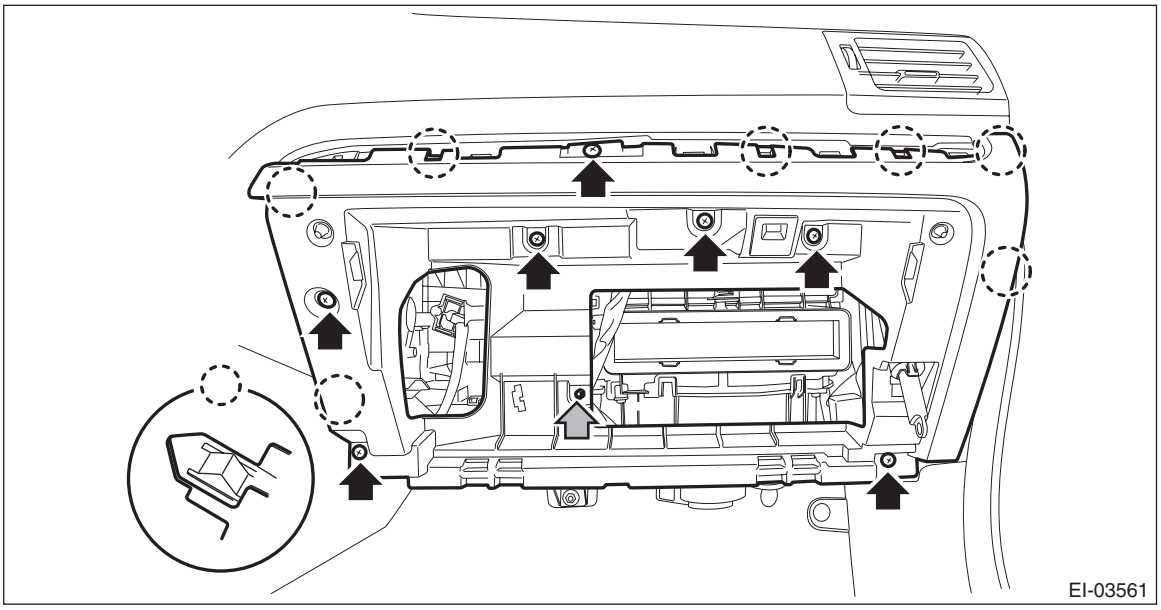
NOTE:
Remove the cover - instrument panel side RH by using a plastic remover.

(2) Release the clips, and remove the ornament - panel assembly passenger.



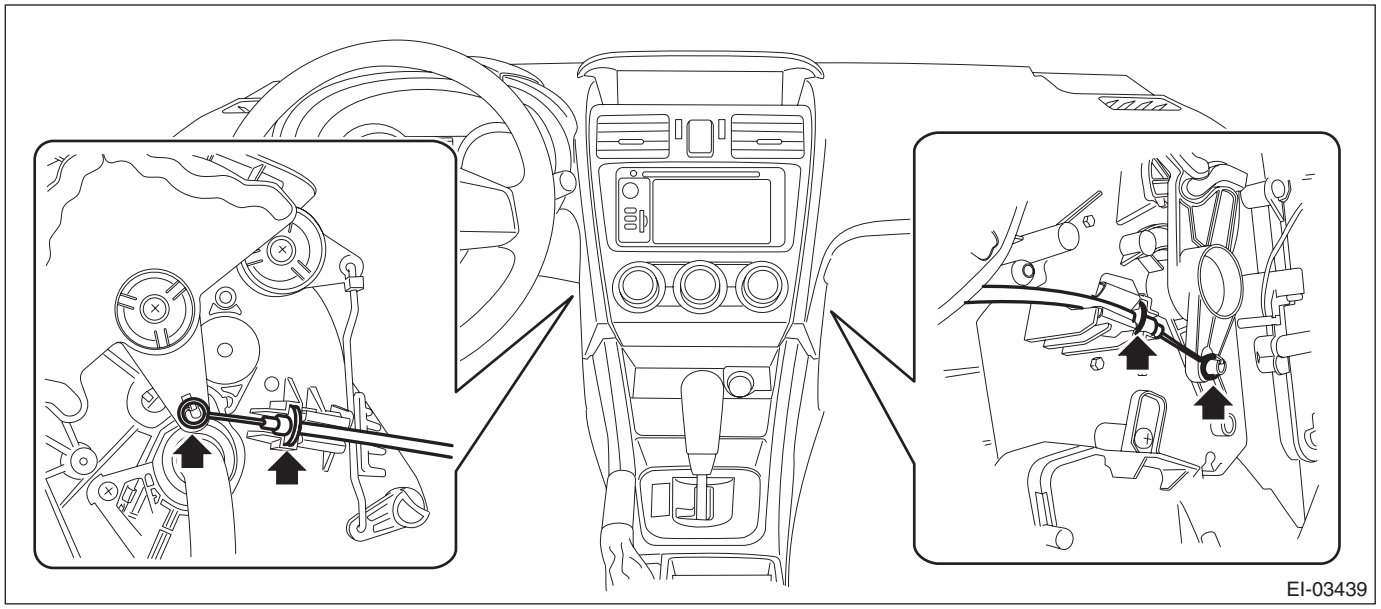
NOTE:
To facilitate the removal, push the clip of the ornament - panel assembly passenger from the backside.

(3) Release the claws and remove the screws, then remove the back panel - pocket.



(4) Disconnect the glove box light LED connector.

13) On manual A/C models, disconnect the control cables from both sides of the heater & cooling unit.



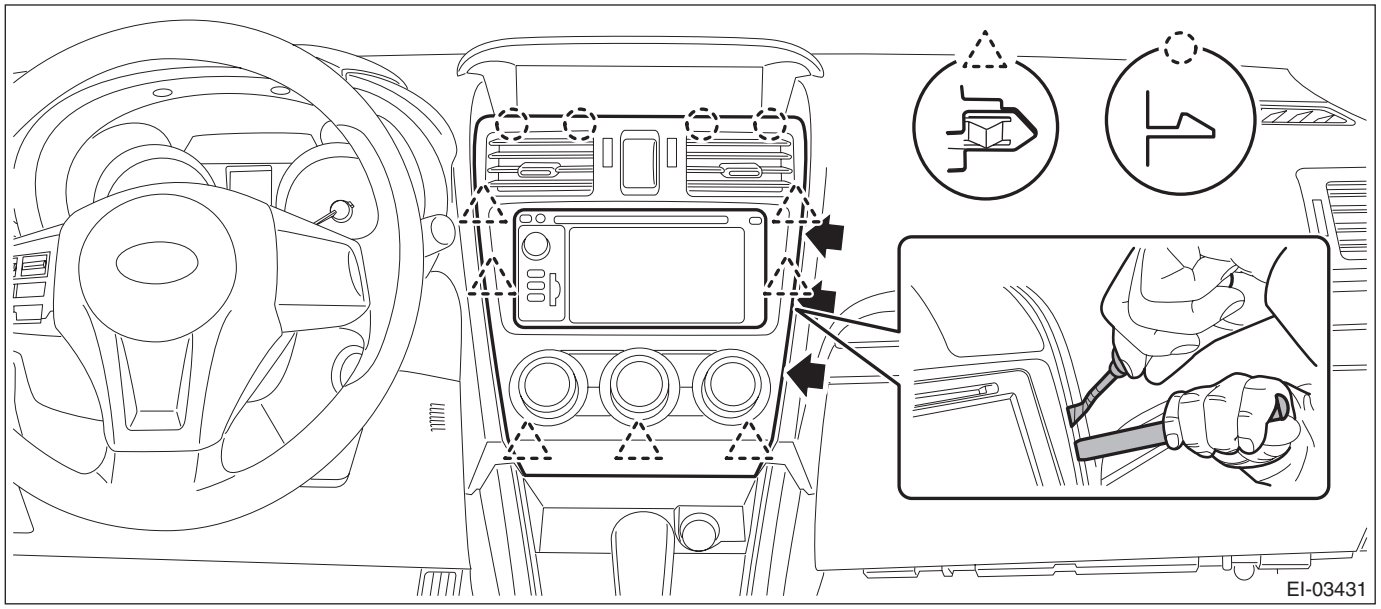
14) Remove the panel center assembly.

CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

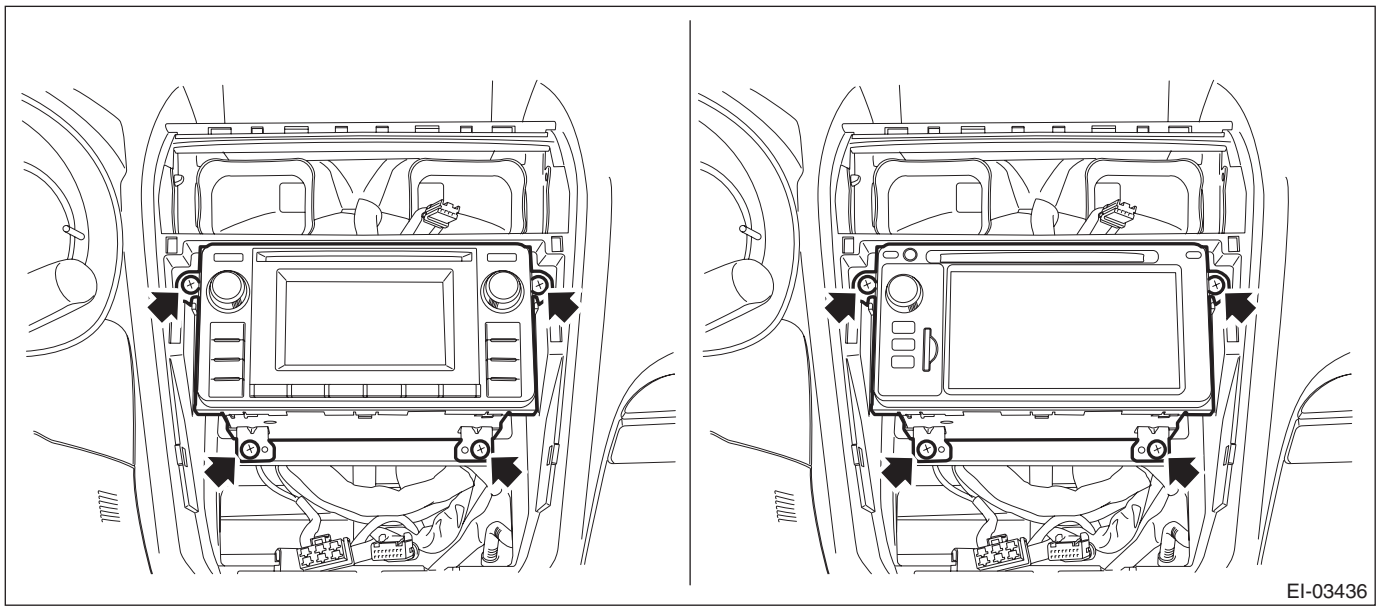
(1) Insert a plastic remover to the three areas shown by the arrows, and lift up the panel center assembly slightly.

(2) With the panel center assembly lifted up slightly, release the claw by using a clip remover wrapped with protective tape.

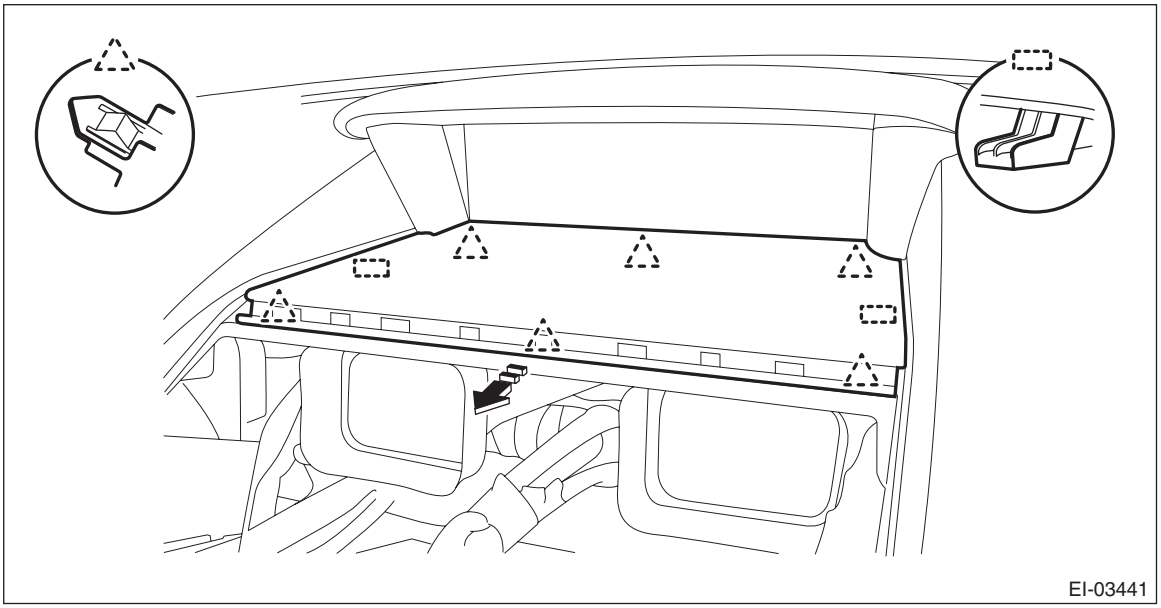
(3) Release the rest of the claws, and remove the panel center assembly.



15) Remove the audio assembly or navigation assembly.
(1) Remove the screws, and partially pull out the audio assembly or navigation assembly.
(2) Disconnect the connectors, and remove the audio assembly or navigation assembly.



16) Remove the multi-function display assembly.
(1) Disconnect the claws and then remove the cover center UPR.

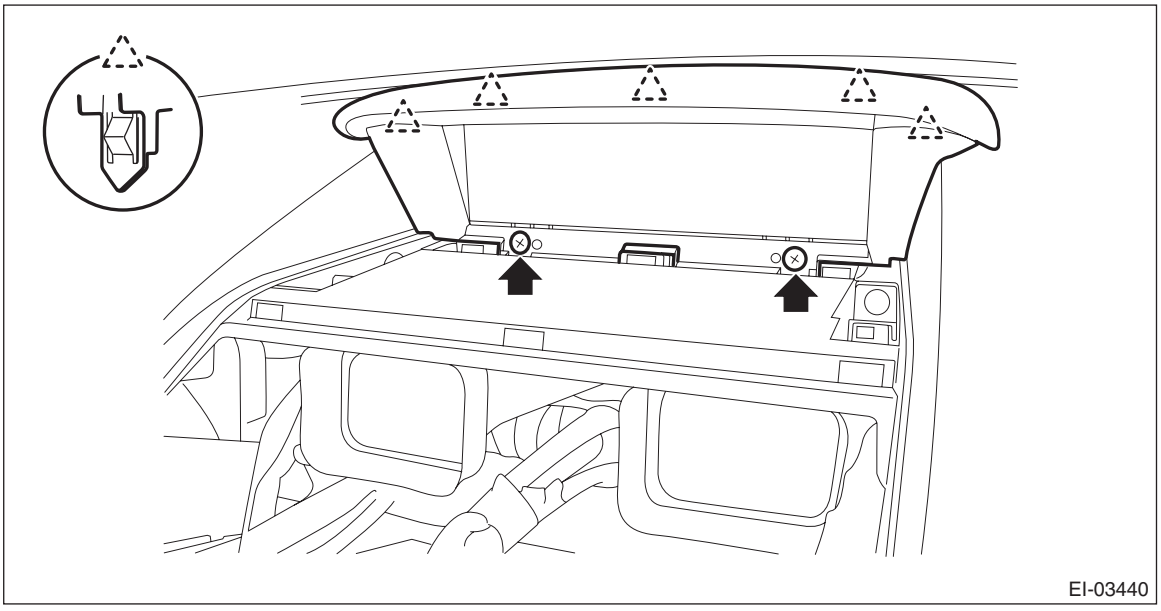


NOTE:
Lightly push up the back of the cover center UPR, hook the finger to the end portion, and pull it toward you to remove it.

(2) Release the claws and remove the screws, and remove the panel - display UPR and the panel - display LWR.

NOTE:
Remove the panel - display UPR & panel - display LWR and the multi-function display assembly as a unit.

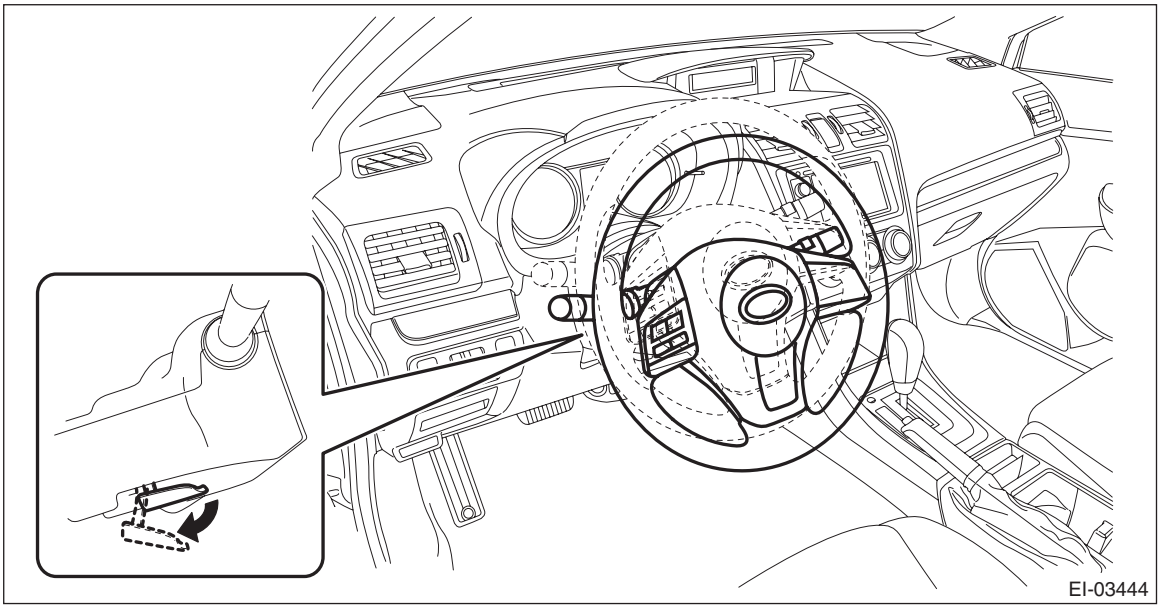
(3) Disconnect the connector and remove the multi-function display assembly.



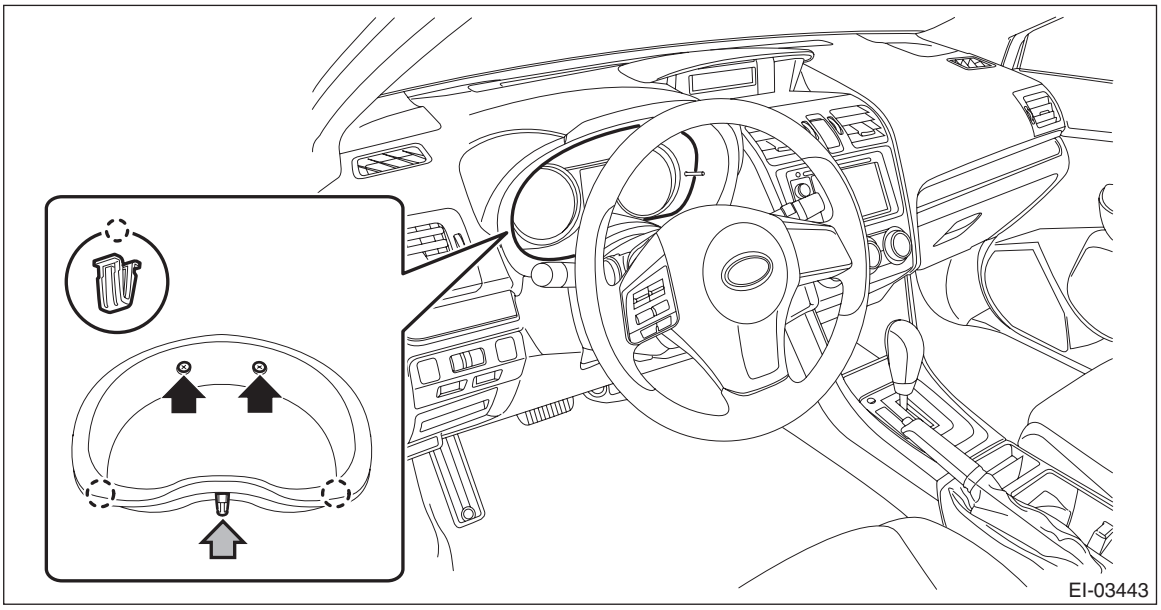
17) Remove the combination meter assembly.

CAUTION:
- **Be careful not to damage the meter or instrument panel.**
- **Pay particular attention to avoid damaging the meter glass.**

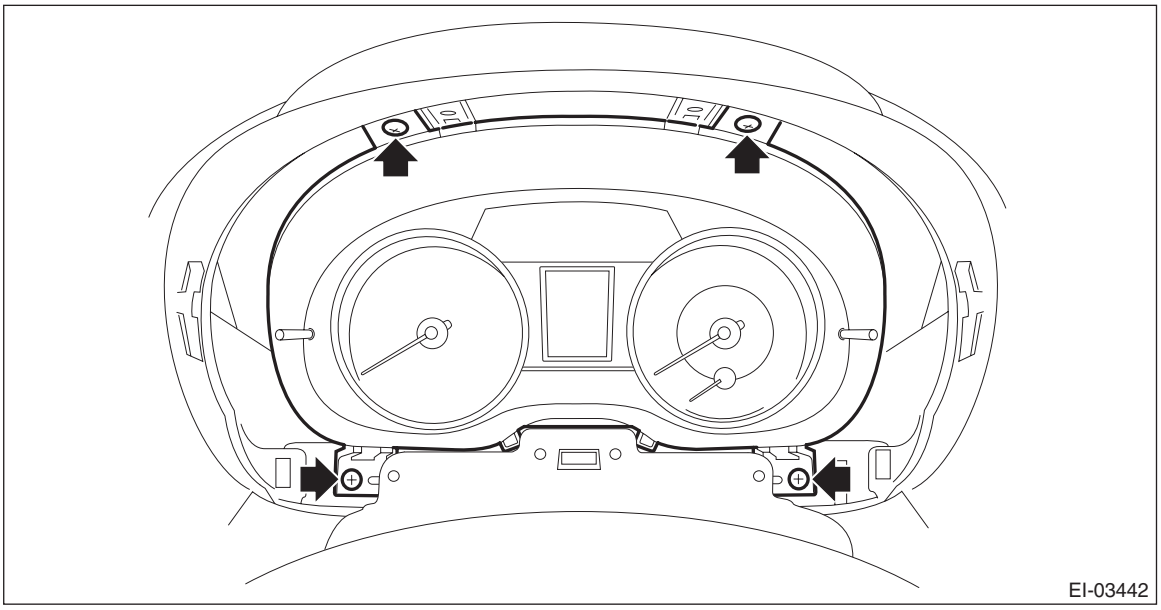
(1) Release the lock, tilt the steering column to the lowest end and fully extend the column by the telescopic system.



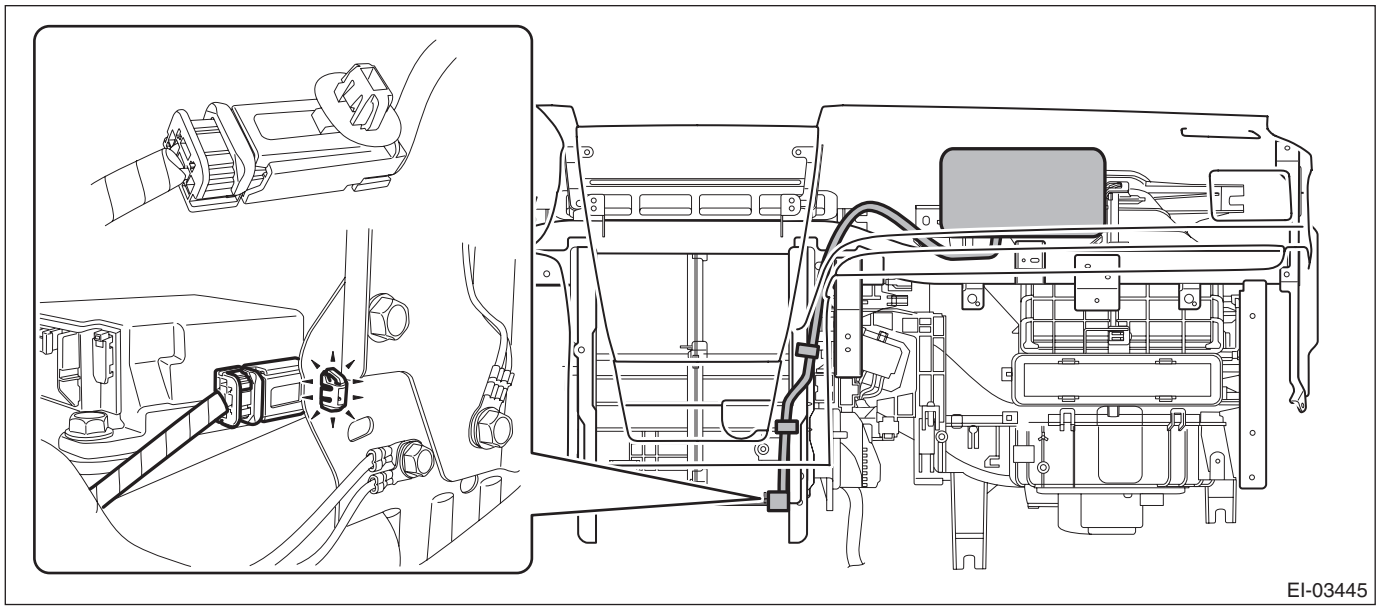
(2) Release the screws and clips, then detach the meter visor assembly.



(3) Remove the screws, disconnect the connector and remove the combination meter assembly.



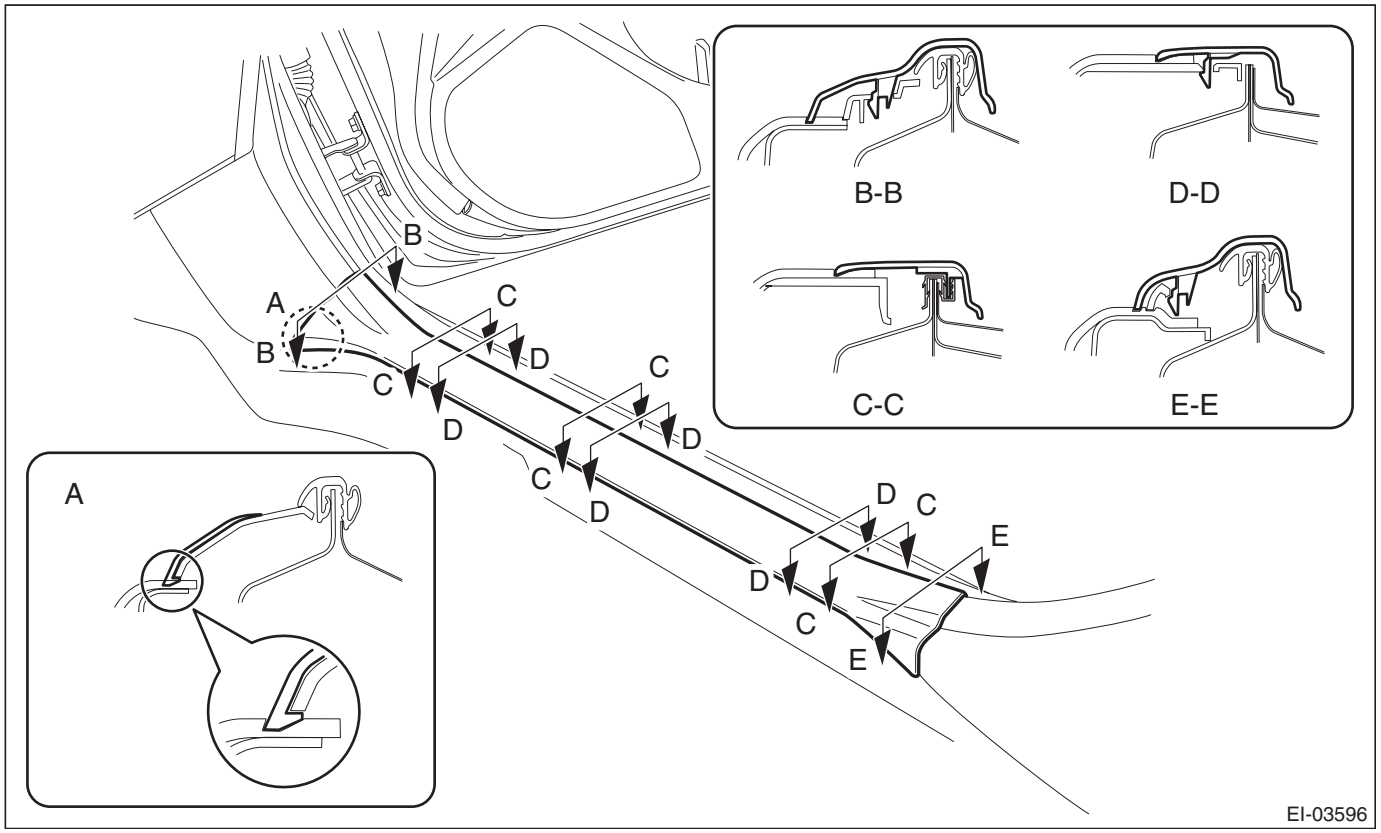
18) Disconnect the passenger's airbag module connector. <Ref. to AB-21, PASSENGER'S AIRBAG MODULE, PROCEDURE, Airbag Connector.>



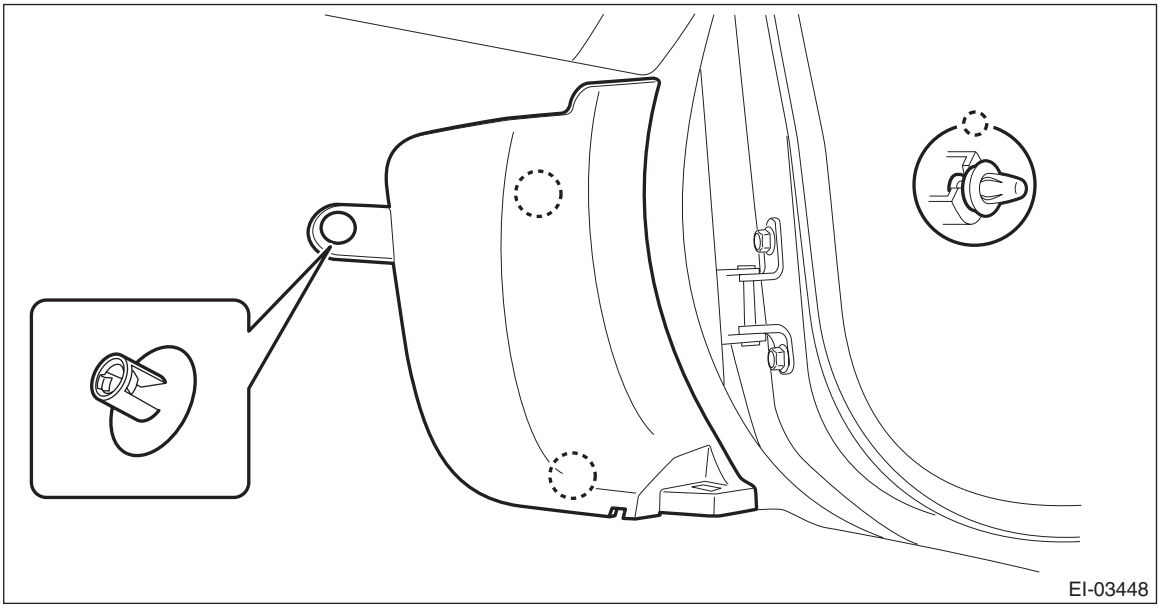
19) Remove the column assembly - steering. <Ref. to PS-18, REMOVAL, Steering Column.>

20) Release the claws, and then remove the cover side sill - front INN on LH and RH sides.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - front INN.



21) Remove the clip, and remove the cover side sill - front on LH and RH sides.



22) Remove the instrument panel assembly and the beam COMPL - steering as a unit.

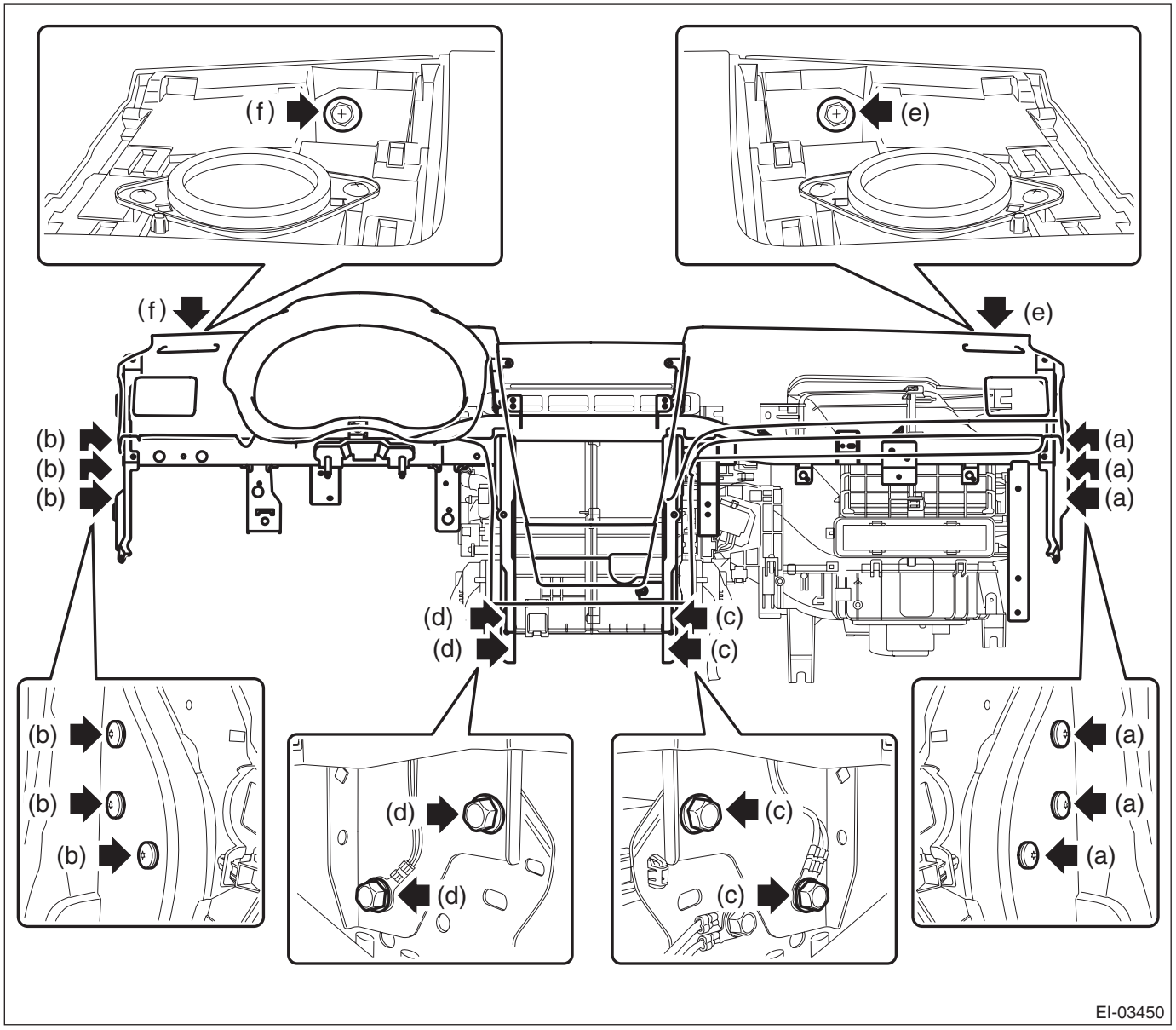
CAUTION:
The instrument panel assembly and the beam COMPL - steering are heavy. Always work in a team of two persons when removing them from the vehicle, so as not to damage the vehicle interior.

(1) Remove the fuse box and relay box.
(2) Disconnect all harness clamps and connectors of the instrument panel harness.
(3) Remove the TORX® bolt. (a), (b)

PREPARATION TOOL:

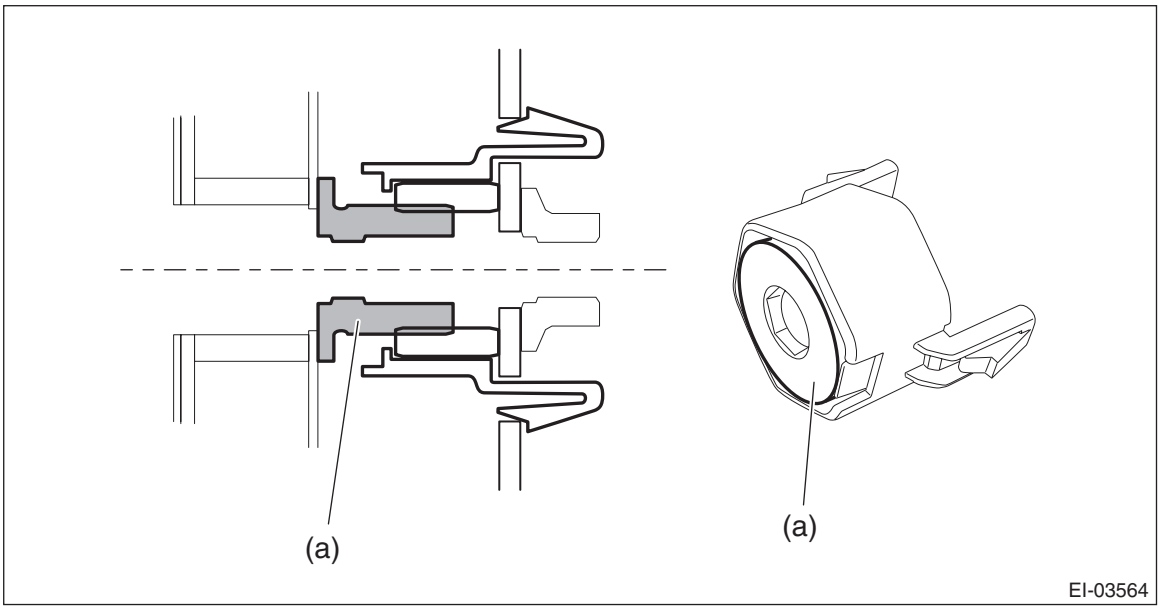
TORX® T40

(4) Remove the bolts at the floor center. (c), (d)
(5) Remove the bolt. (e), (f)



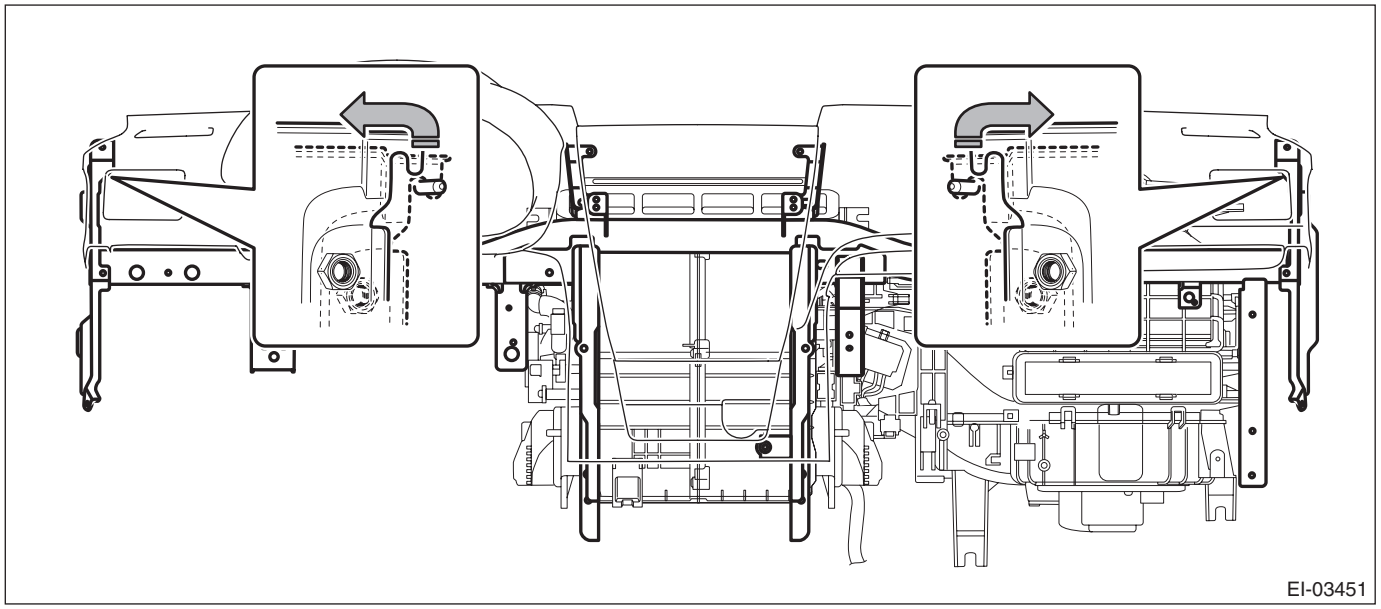
(6) Loosen the adjuster portion (a) of the adjuster - clip space. (only passenger's side of beam COMPL steering)

PREPARATION TOOL:
Hexagon wrench: 8 mm (0.31 in)

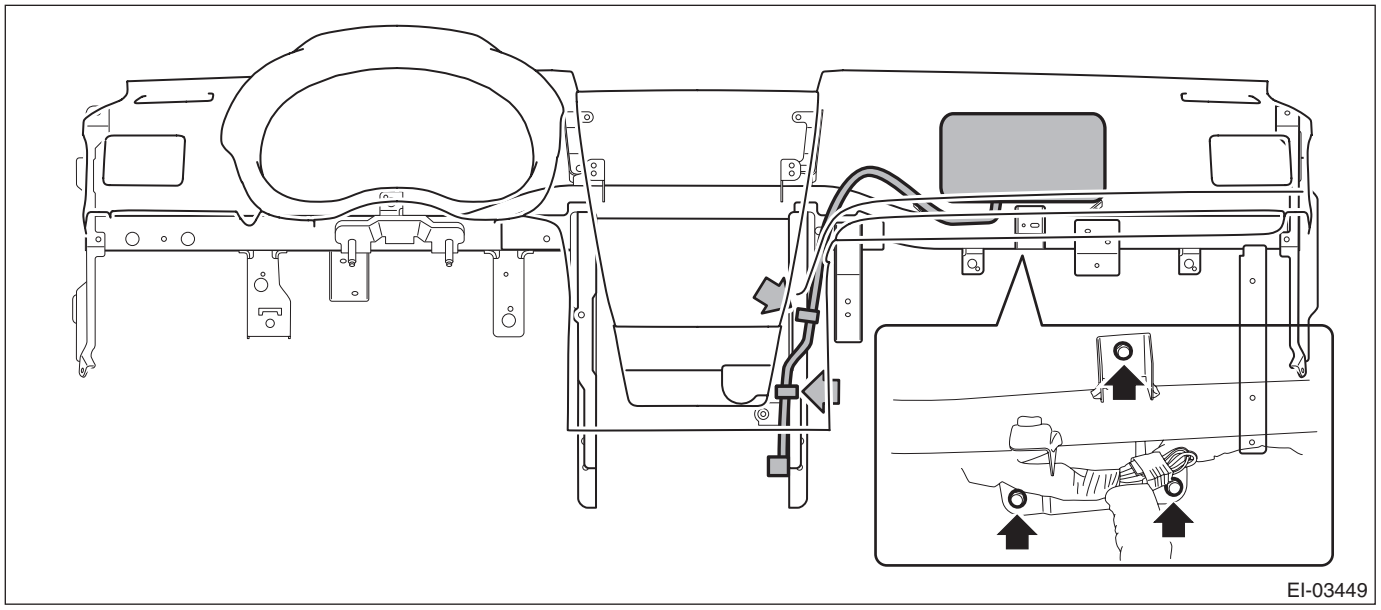


(7) Slightly lift the instrument panel assembly together with the beam COMPL - steering to detach the left and right pins. Then pull it toward you to remove the assembly.

CAUTION:
- **Check that all harness clamps and connectors are detached.**
- **The instrument panel assembly and the beam COMPL - steering are heavy. Always work in a team of two persons when removing them from the vehicle, so as not to damage the vehicle interior.**



23) Separate the panel COMPL - instrument and the beam COMPL - steering.
(1) Remove the clamps and bolts of the passenger's airbag module harness.

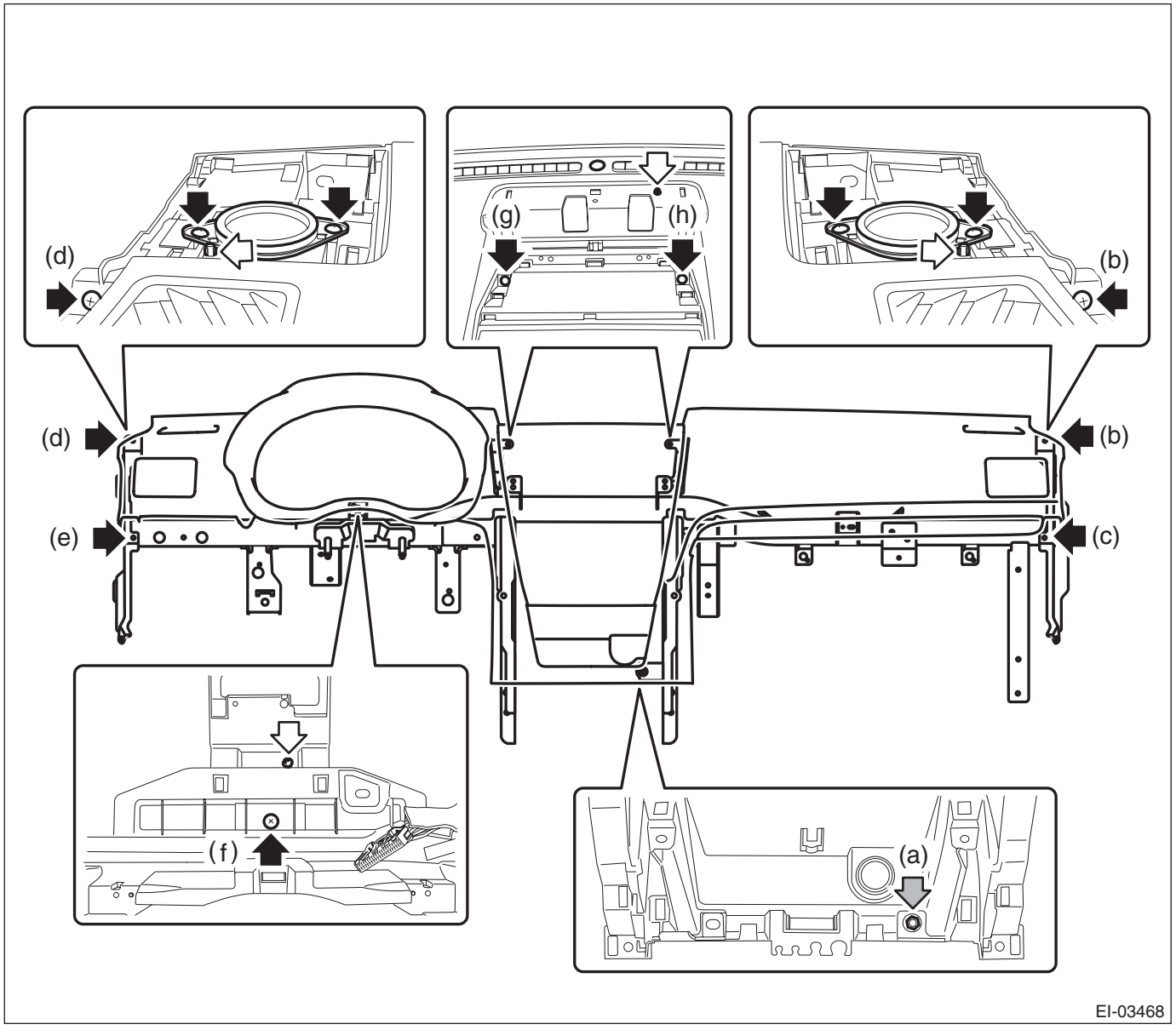


(2) Remove the left and right speakers and the sensor - sunload.

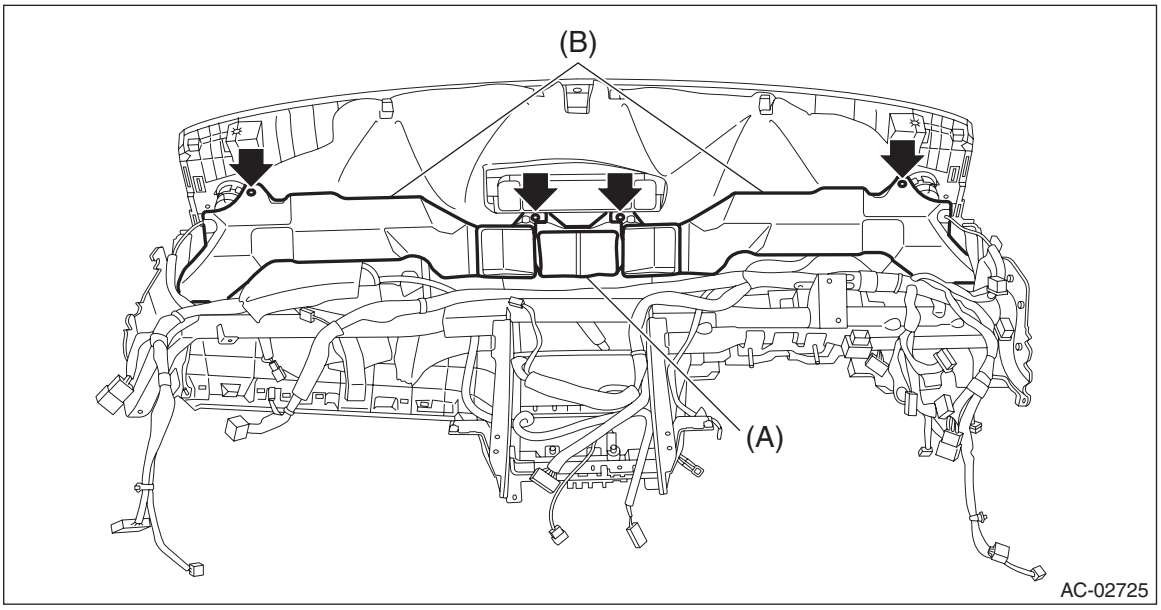
NOTE:
Detach the harness clamp together.

(3) Disconnect the front accessory socket connector.
(4) Remove the nut (a) and screws (b), (c), (d), (e), (f), (g) and (h).

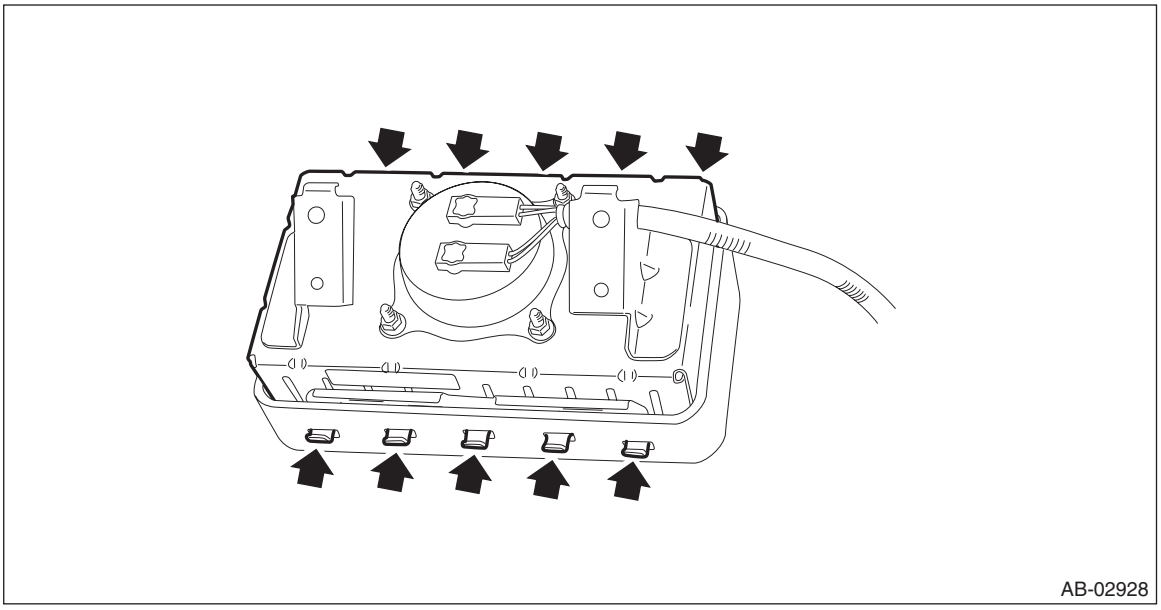
(5) While being careful with the harness, separate the panel COMPL - instrument and the beam COMPL - steering.



24) Remove the screws and remove the front (A) and side vent duct LH/RH (B).



25) Remove the claws, and remove the passenger's airbag module.



26) For handling of the removed airbag module, refer to "CAUTION". <Ref. to AB-10, CAUTION, General Description.>

B: INSTALLATION

CAUTION:
• Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-10, CAUTION, General Description.>
• Do not allow harness and connectors to interfere or get tangled up with other parts.
• When reusing the tether clip on the upper part of the trim panel - front pillar UPR, check that there is no damage to the tether clip. If the tether clip is damaged, its holding force is reduced and the trim panel - front pillar UPR may come off. Be sure to replace it with a new tether clip.

1) Before installation, inspect the following items and replace any faulty part with a new one.
- Passenger's airbag lid (instrument panel surface) is cracked or deformed.
- Airbag module is cracked or deformed.
- Harness and/or connector is cracked, deformed or open.
- Harness wire is exposed.
- Mounting bracket is cracked or deformed.

2) Install each part in the reverse order of removal.

NOTE:
Refer to the installation procedure of the "Instrument Panel Assembly". <Ref. to EI-87, INSTALLATION, Instrument Panel Assembly.>

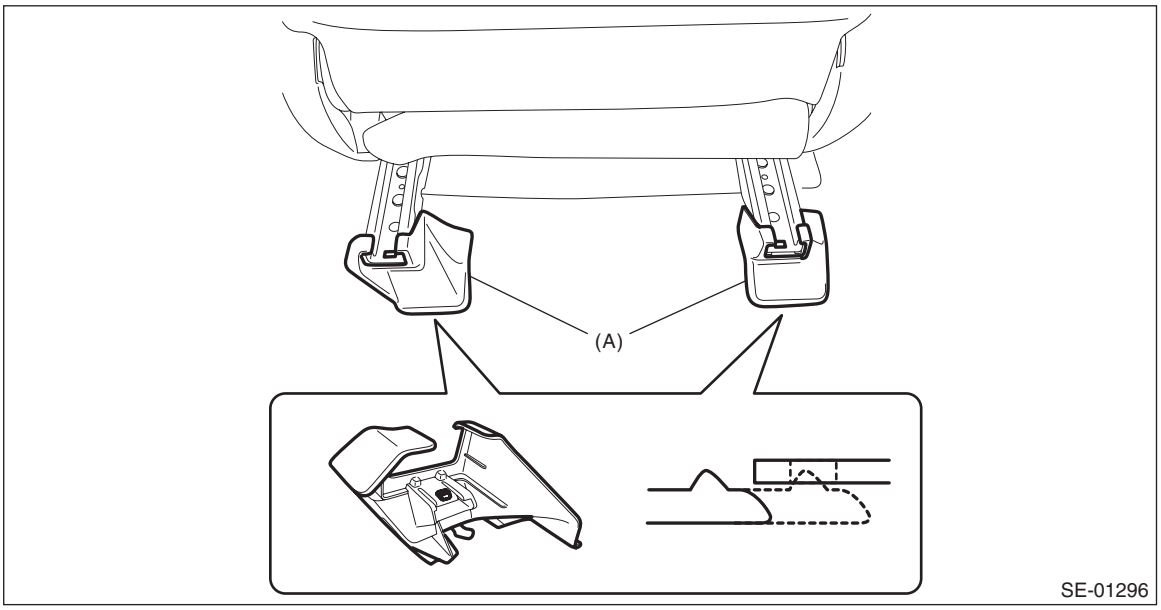
7. Side Airbag Module

A: REMOVAL

CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-10, CAUTION, General Description.>

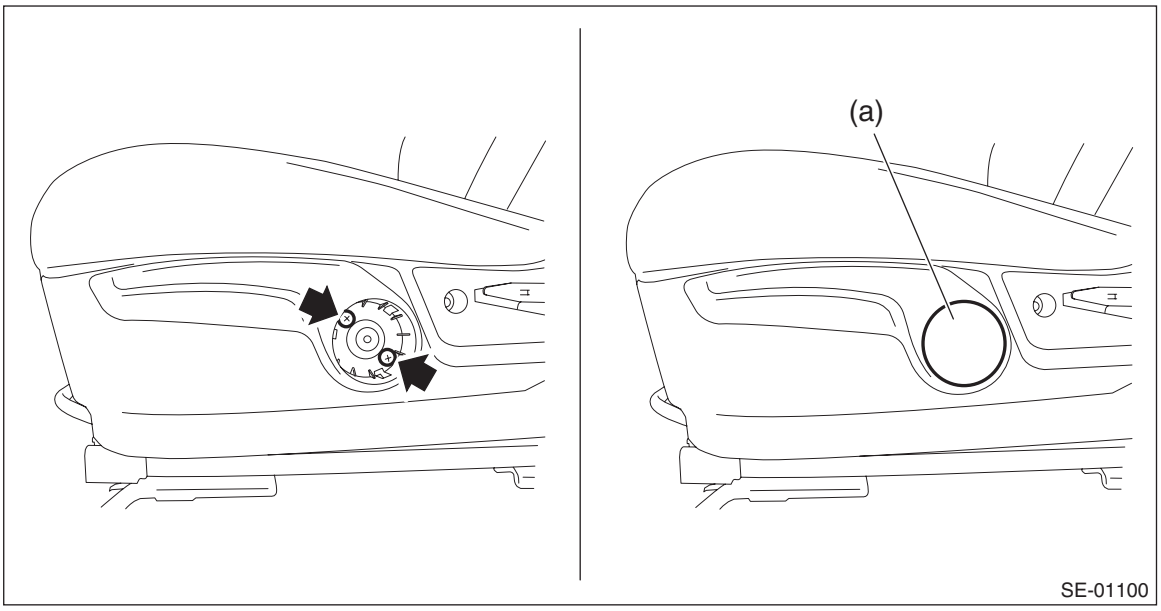
NOTE:
Remove the passenger's side by referring to driver's side.
1) Remove the headrest assembly.
2) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
3) Remove the front seats.

CAUTION:
Be careful not to damage the body when taking out the seat from the vehicle.
(1) Tilt the backrest assembly forward and move the front seat to the front most position.
(2) Remove the cover - bolt rear (A) and remove the bolts.

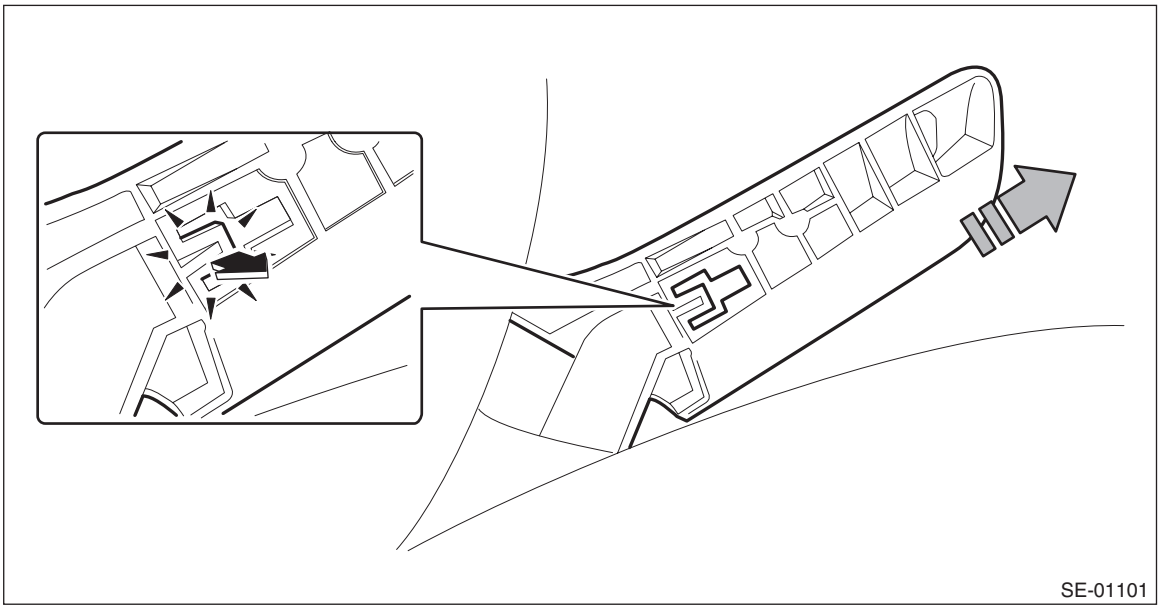


(3) Move the front seat to the rearmost position, and remove the bolts.
(4) Disconnect the connector under the front seat.
• Seat belt warning light connector (driver's seat)
• Occupant detection system harness connector (passenger's seat) <Ref. to OD(diag)-9, OCCUPANT DETECTION SYSTEM (BETWEEN AIRBAG REAR HARNESS AND SEAT HARNESS), PROCEDURE, Airbag Connector.>
• Side airbag module connector <Ref. to AB-28, SIDE AIRBAG MODULE, PROCEDURE, Airbag Connector.>
• Seat heater connector (model with seat heater)
• Buckle switch RH connector (passenger's seat) <Ref. to AB-29, BUCKLE SWITCH RH, PROCEDURE, Airbag Connector.>
(5) Take out the front seat assembly from the vehicle.

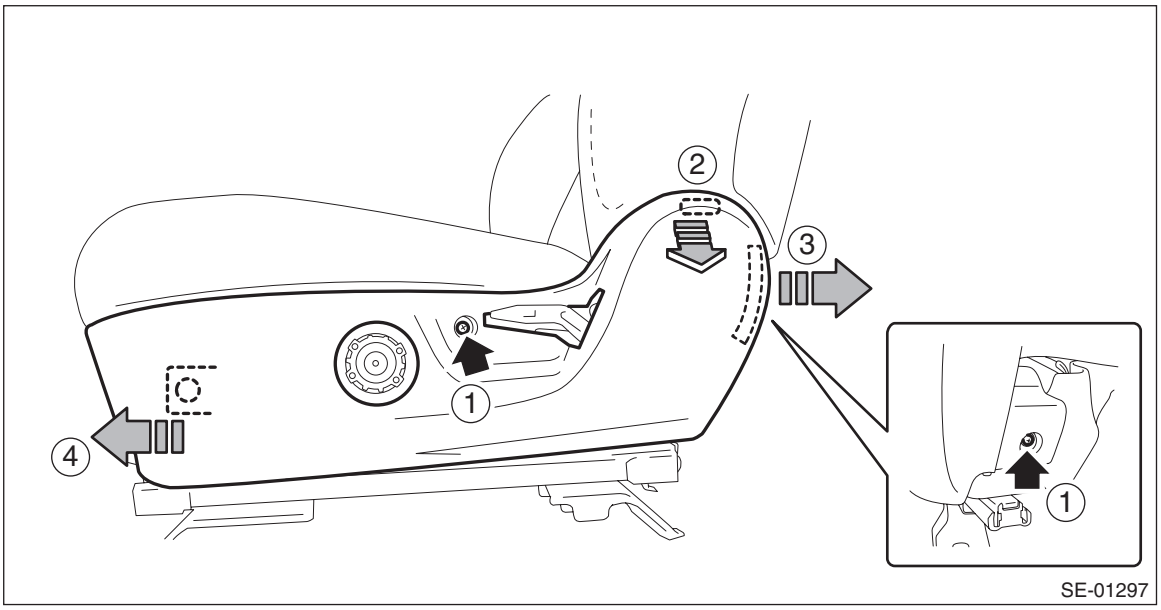
4) Remove the knob - lifter.
   (1) Using a flat tip screwdriver, remove the cap - lifter lever (a).
   (2) Remove the screws and remove the knob - lifter.



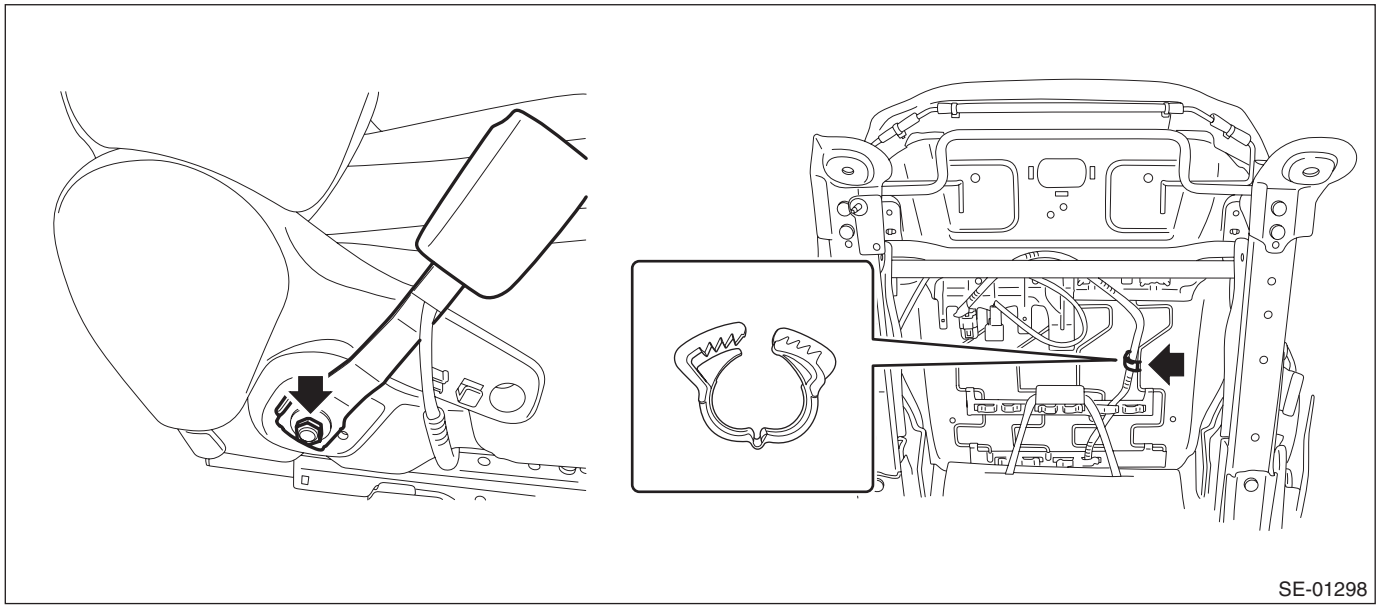
5) Remove the lever - reclining.
   (1) Pull up the lever - reclining and release the claws on the back.
   (2) Pull out the lever - reclining.



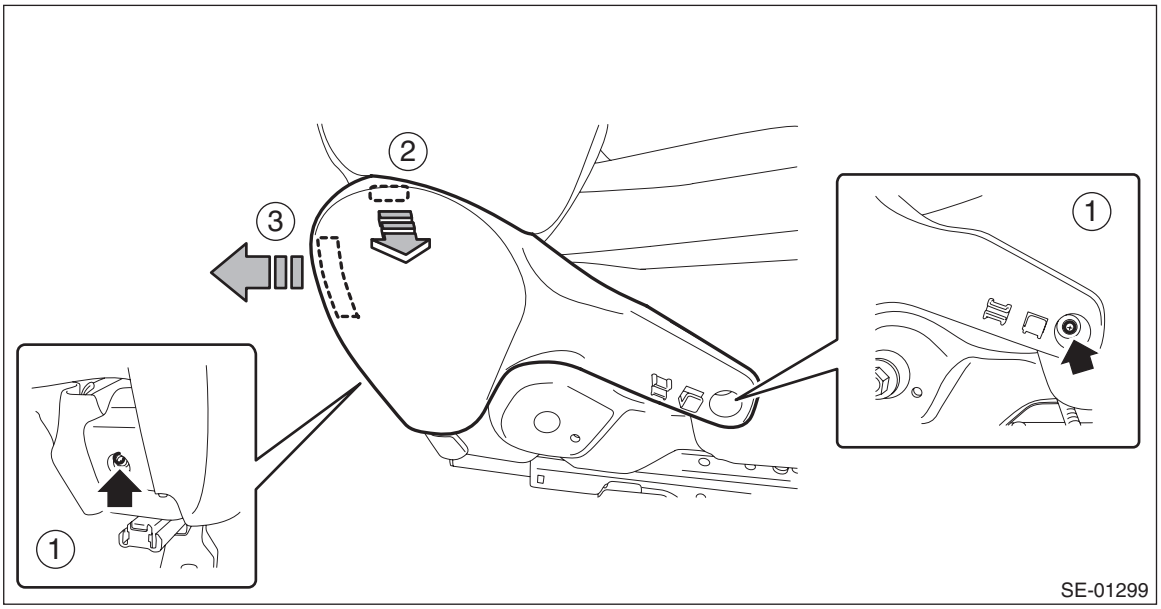
6) Remove the cover - hinge front seat outer.
(1) Remove the screws.
(2) Release the claw in the upper section of the cover - hinge front seat outer.
(3) Release the claw in the rear section of the cover - hinge front seat outer.
(4) Release the claw in the front section of the cover - hinge front seat outer, then remove the cover - hinge front seat outer.



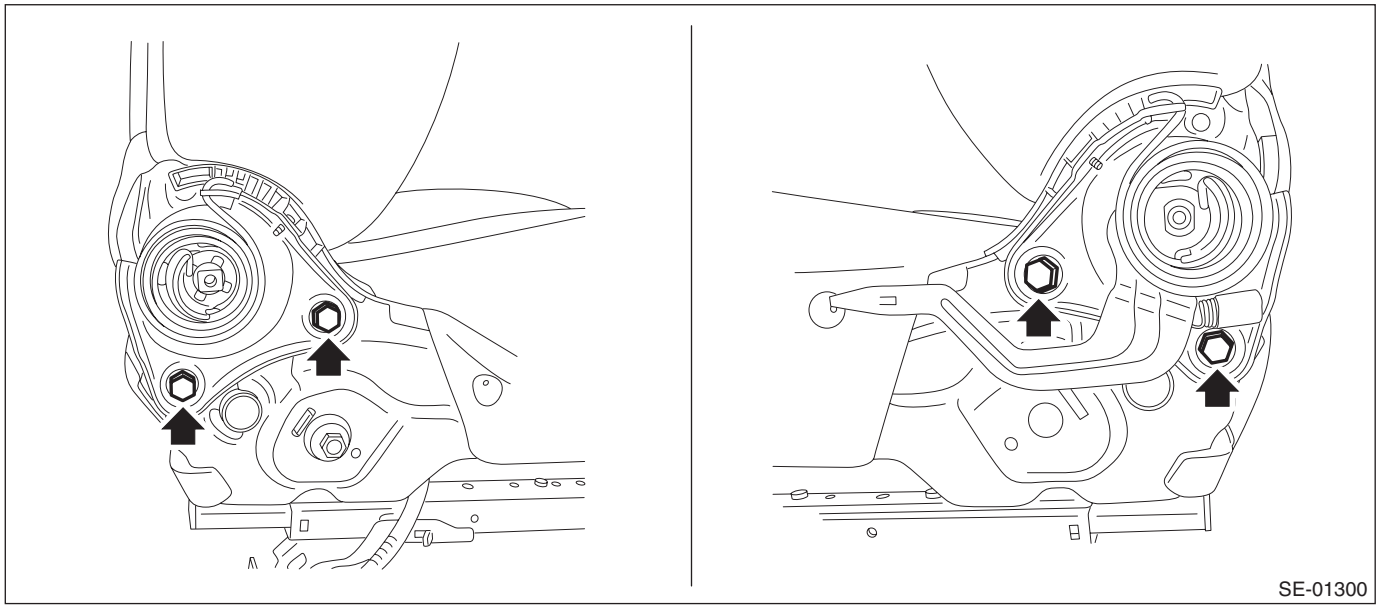
7) Remove the seat belt inner - front.
(1) Remove the nut, and remove the seat belt inner - front.
(2) Remove the clip for the seat belt inner - front located under the seat cushion assembly.



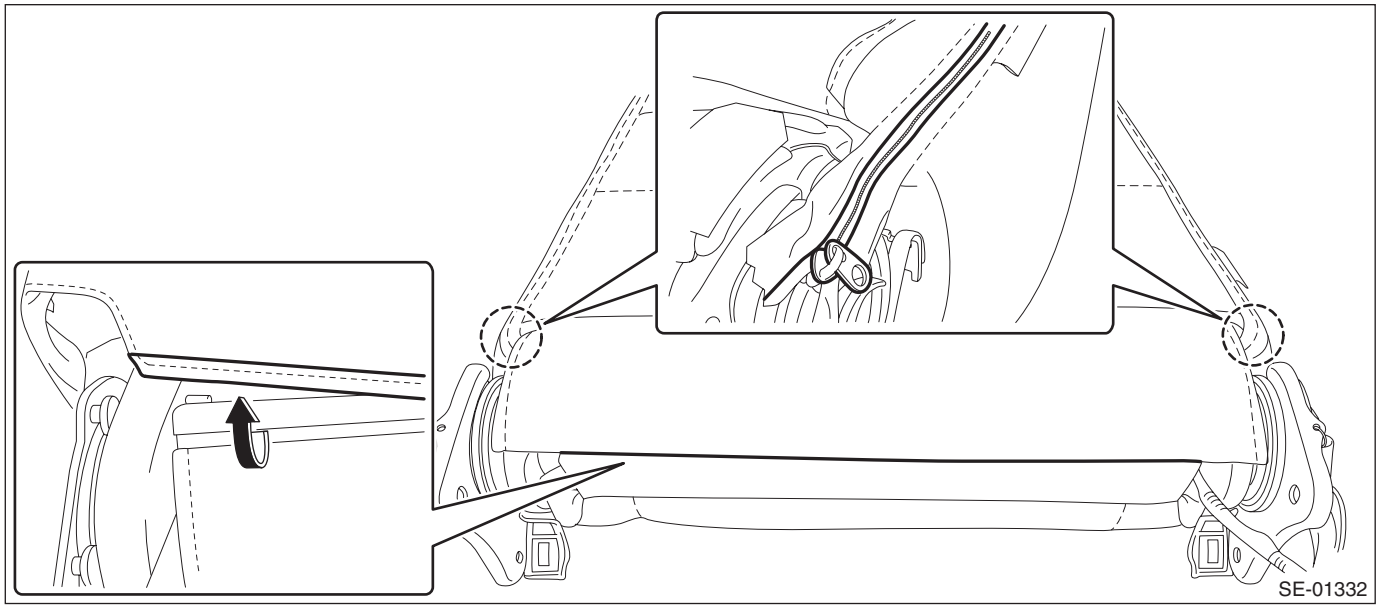
8) Remove the cover - hinge front seat inner.
(1) Remove the screws.
(2) Release the claw in the upper section of the cover - hinge front seat inner.
(3) Release the claw in the rear section of the cover - hinge front seat inner, then remove the cover - hinge front seat inner.



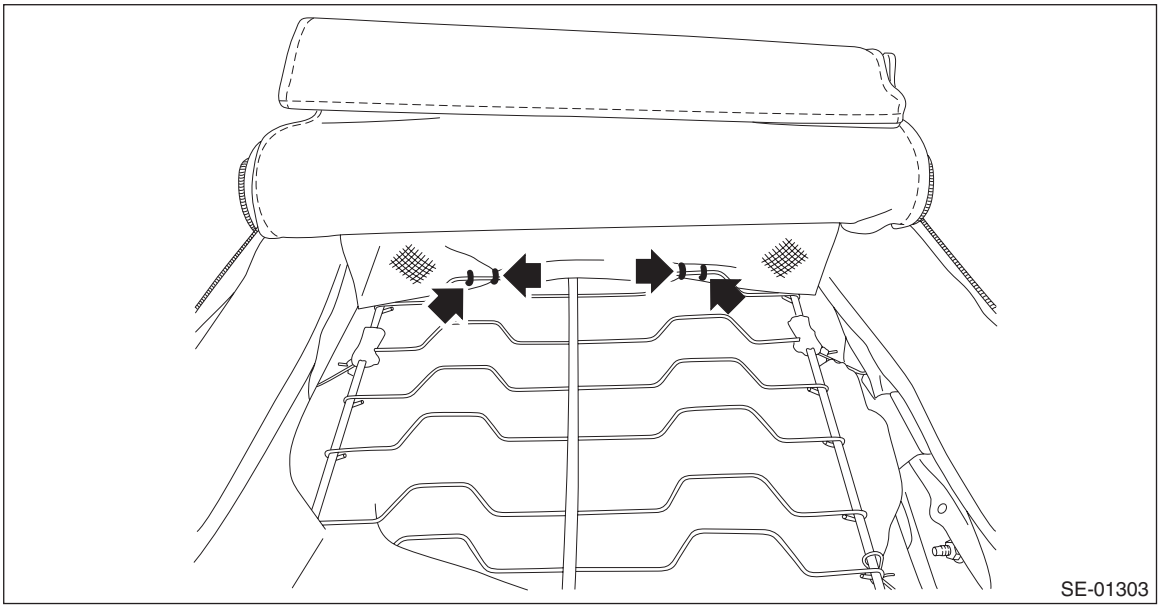
9) Separate the backrest assembly and the seat cushion assembly.
(1) Remove the clip for the side airbag harness located under the seat cushion assembly.
(2) Remove the bolts from reclining hinge of both sides.
(3) While taking care not to damage the airbag harness, separate the backrest assembly and the seat cushion assembly.



10) Remove the pad assembly - front seat backrest and the cover COMPL - front backrest.
(1) Remove the plastic fastener at the back side (bottom) of backrest assembly.
(2) Open the fastener at the rear side of backrest assembly.



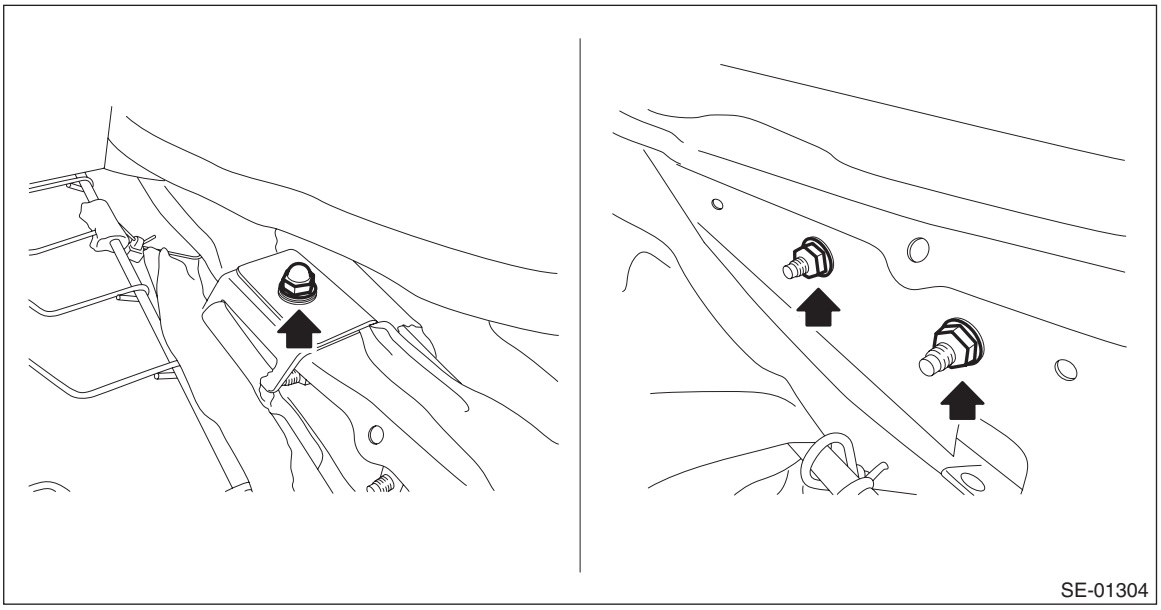
(3) Remove the hog ring.



(4) Remove the pad assembly - front seat backrest and the cover COMPL - front backrest from the backrest assembly.
11) Remove the side airbag module.

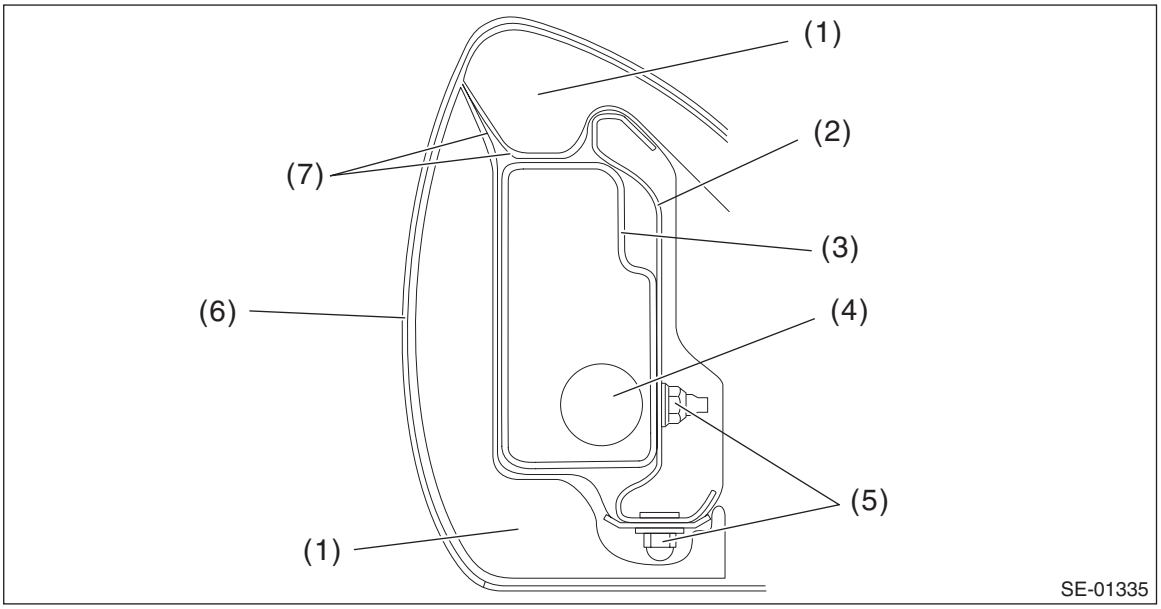
CAUTION:
Do not open the protective cover of the side airbag module. If any damage is present in the protective cover or the cloth of side airbag module comes out from the protective cover slit, replace the side airbag module with a new part.
(1) Remove the hexagon cap nut and nuts.

(2) While taking care not to damage the airbag protective cover, remove the side airbag module.



B: INSTALLATION

CAUTION:
• Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-10, CAUTION, General Description.>
• Make sure that the side airbag module is installed as shown in the figure.



(1)	Pad ASSY - front seat backrest	(4)	Side airbag module inflator	(7)	Side airbag guide cloth
(2)	Frame ASSY - front backrest	(5)	Nut		
(3)	Side airbag module protective cover	(6)	Cover COMPL - front backrest		

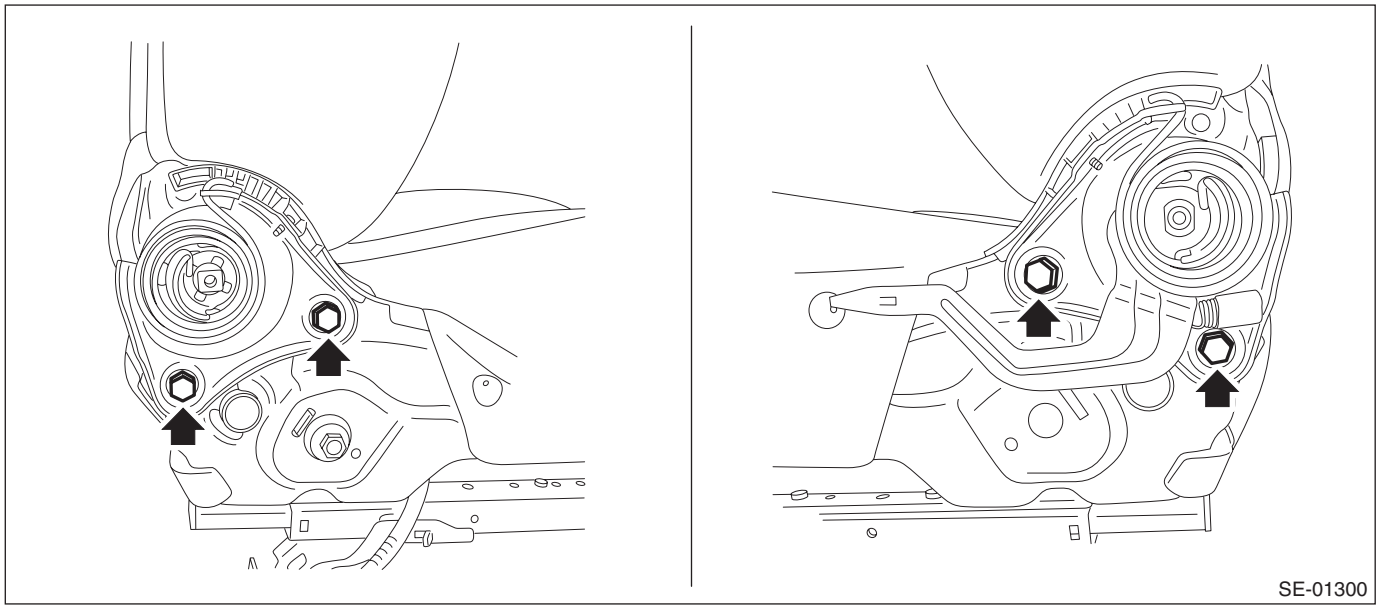
• Be careful not to stain or damage the cover COMPL - front backrest during assembly.
• Do not reuse hog rings.
• Secure the hog ring using hog ring pliers.
• Install the hog rings to the specified points securely and make sure that there is no wrinkle or twisting on the cover COMPL - front backrest.

1) Before installation, inspect the following items and replace any faulty part with a new one.
- Make sure that there is no foreign matter on side airbag module.
- Front seat, airbag module and mounting bracket are damaged or deformed.
- Harness and/or connector is cracked, deformed or open.
- Harness wire is exposed.

2) Install the side airbag module to the frame assembly - front backrest.

Tightening torque:
Side airbag module: 6 N·m (0.61 kgf-m, 4.4 ft-lb)

3) Install the side airbag harness to the frame assembly - front backrest.
4) Install the cover COMPL - front backrest.
5) Secure the backrest hinge.



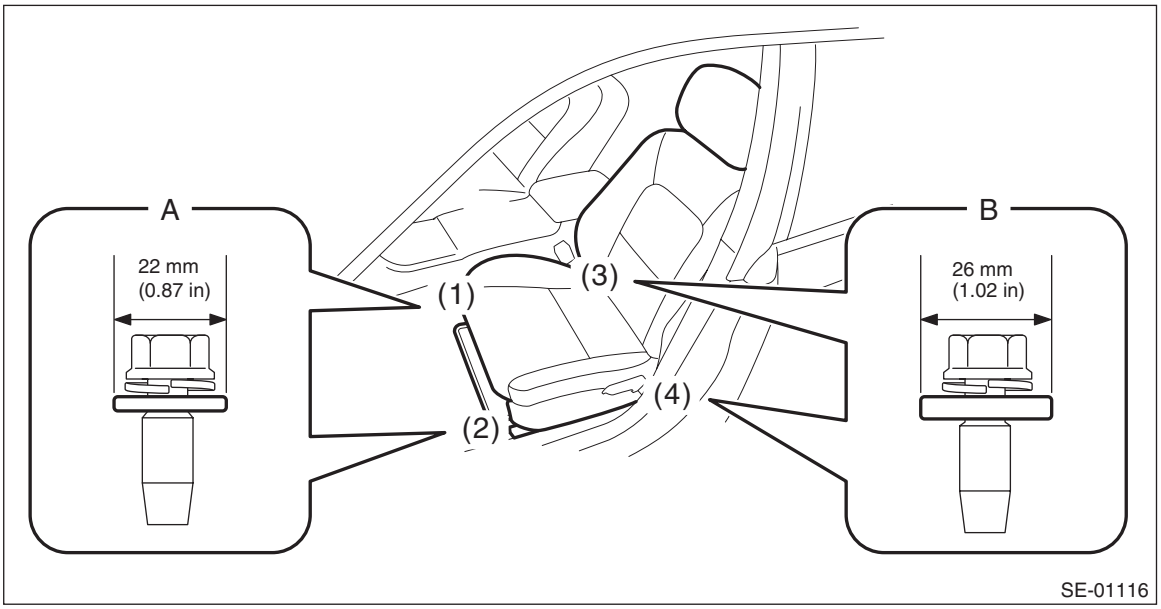
Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SE-2, FRONT SEAT, COMPONENT, General Description.>

6) Install the side airbag harness to the back of the seat cushion assembly using a cable clip.

CAUTION:
After restoring the seat, operate the reclining and sliding mechanisms to check that the side airbag harness is not caught.

7) Install the front seat assembly to the body.

CAUTION:
• The front seat mounting bolts differ between the front mounting points and the rear mounting points. When installing the front seat, make sure that you are using correct bolts at correct positions.
• Tighten the slide rail assembly installing bolts in the order as shown in the figure, in several steps by gradually increasing the torque until they reach the specified torque.



- **Front (bolt A): Washer diameter 22 mm (0.87 in)**
- **Rear (bolt B): Washer diameter 26 mm (1.02 in)**

Tightening torque:
Front seat assembly: 53 N·m (5.40 kgf-m, 39.1 ft-lb)

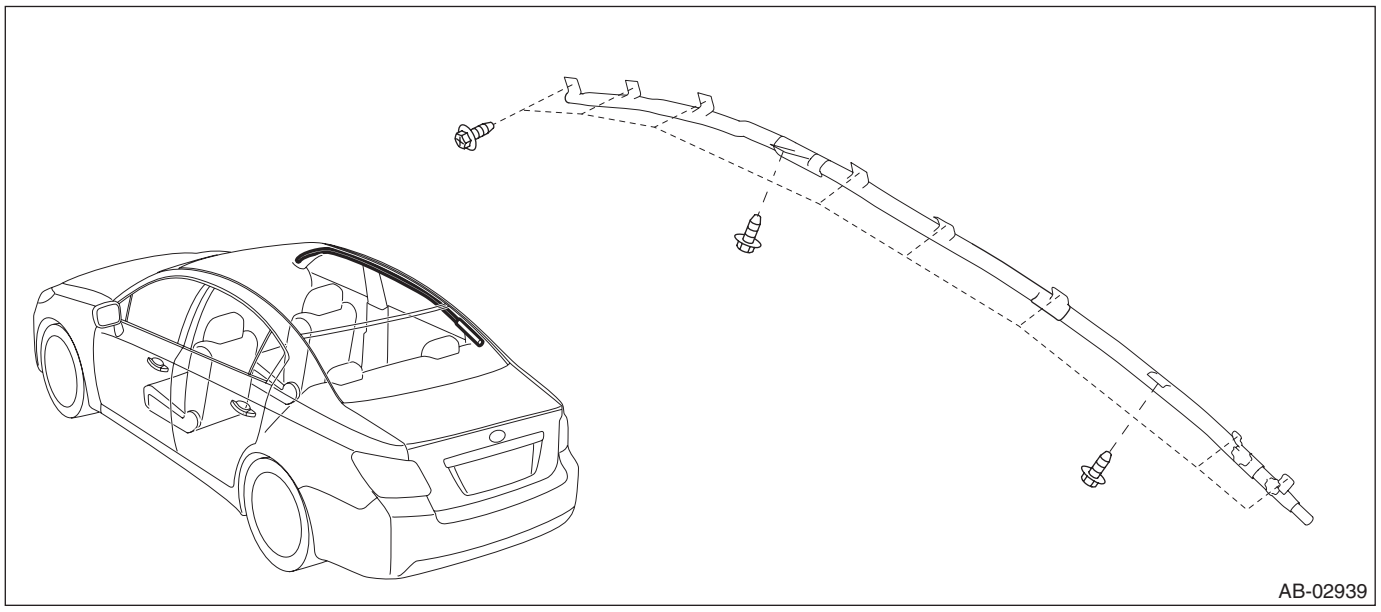
8. Curtain Airbag Module

A: REMOVAL

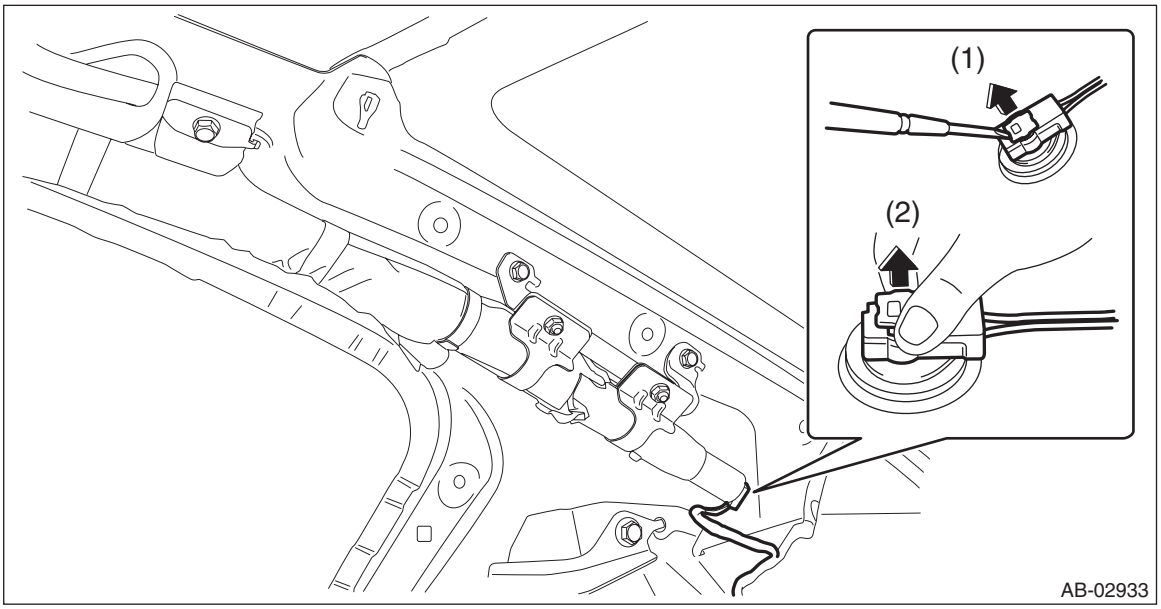
1. 4 DOOR MODEL

CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-10, CAUTION, General Description.>
1) Turn the ignition switch to OFF.
2) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
3) Remove the trim panel - roof assembly. <Ref. to EI-116, 4 DOOR MODEL, REMOVAL, Roof Trim.>
4) Remove the curtain airbag module.

CAUTION:
- **Be careful not to damage the curtain airbag module during removal.**
- **Never open the curtain airbag module before activation. Never reuse the deployed curtain airbag module.**
- **Remove the modules in order starting from the vehicle front.**
  (1) Remove all the bolts and clips, and remove the curtain airbag module.



(2) Disconnect the curtain airbag module connector. <Ref. to AB-22, DRIVER'S AIRBAG MODULE, CURTAIN AIRBAG MODULE & PRETENSIONER, PROCEDURE, Airbag Connector.>



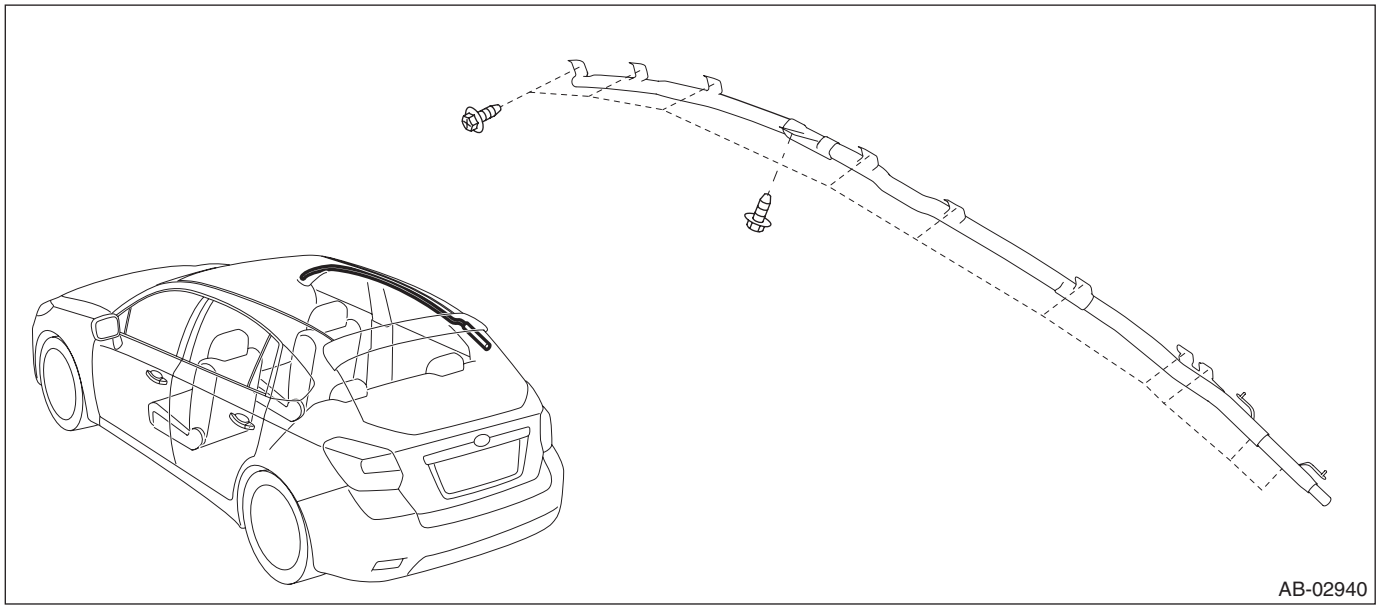
2. 5 DOOR MODEL

CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-10, CAUTION, General Description.>

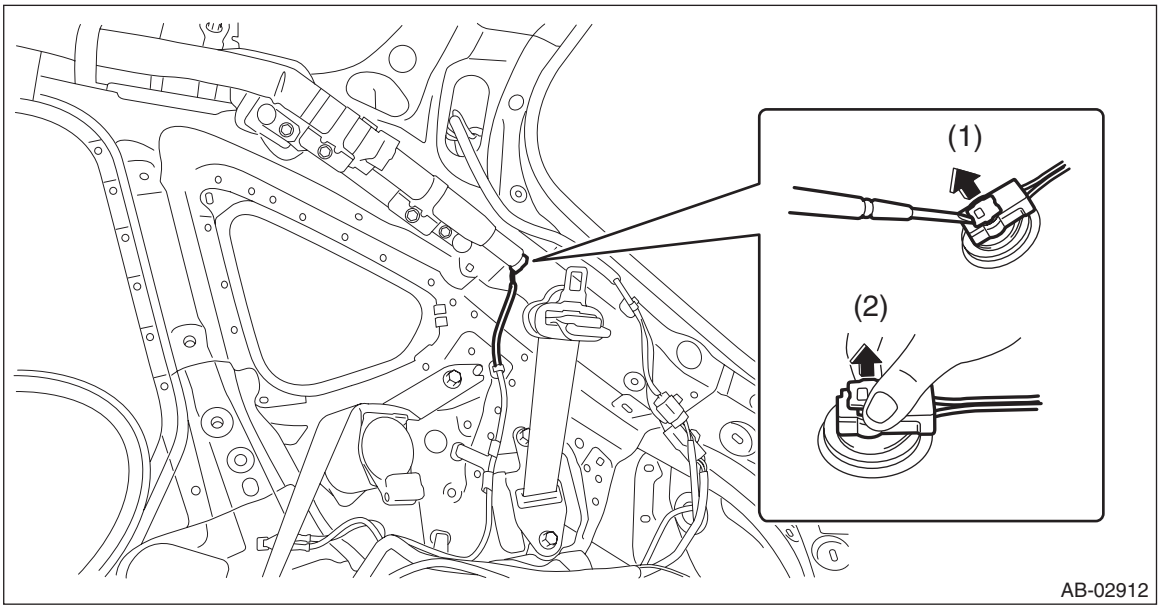
1) Turn the ignition switch to OFF.
2) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
3) Remove the trim panel - roof assembly. <Ref. to EI-126, 5 DOOR MODEL, REMOVAL, Roof Trim.>
4) Remove the curtain airbag module.

CAUTION:
- **Be careful not to damage the curtain airbag module during removal.**
- **Never open the curtain airbag module before activation. Never reuse the deployed curtain airbag module.**
- **Remove the modules in order starting from the vehicle front.**

(1) Remove all the bolts and clips, and remove the curtain airbag module.



(2) Disconnect the curtain airbag module connector. <Ref. to AB-22, DRIVER'S AIRBAG MODULE, CURTAIN AIRBAG MODULE & PRETENSIONER, PROCEDURE, Airbag Connector.>



B: INSTALLATION

CAUTION:
• Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-10, CAUTION, General Description.>
• When installing the curtain airbag module, install a specified part at specified place.
• Be careful not to damage the curtain airbag module during installation.
• Never open the curtain airbag module before activation. Never reuse the deployed curtain airbag module.
• Make sure that there are no foreign matter on airbag module.

1) Before installation, inspect the following items and replace any faulty part with a new one.
- Airbag cover is scratched or torn.
- Harness and/or connector is cracked, deformed or open.
- Harness wire is exposed.
- Mounting bracket and securing clip are cracked or deformed.

2) Install each part in the reverse order of removal.

Tightening torque:
Curtain airbag module: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

9. Airbag Control Module

A: REMOVAL

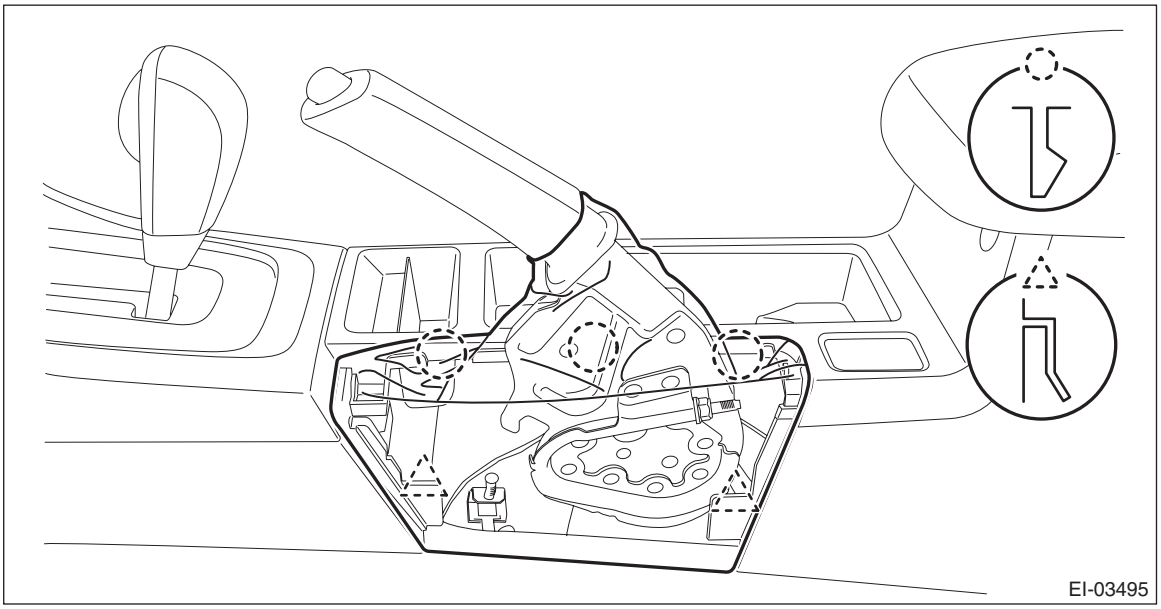
CAUTION:
• Do not disassemble the airbag control module.
• If the airbag control module is deformed or if there is any trace of water on the module, replace the airbag control module with a new one.
• Do not drop the airbag control module.
• After removal, keep the airbag control module on a dry, clean surface away from moisture, heat and dust.

1) Turn the ignition switch to OFF.

CAUTION:
Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

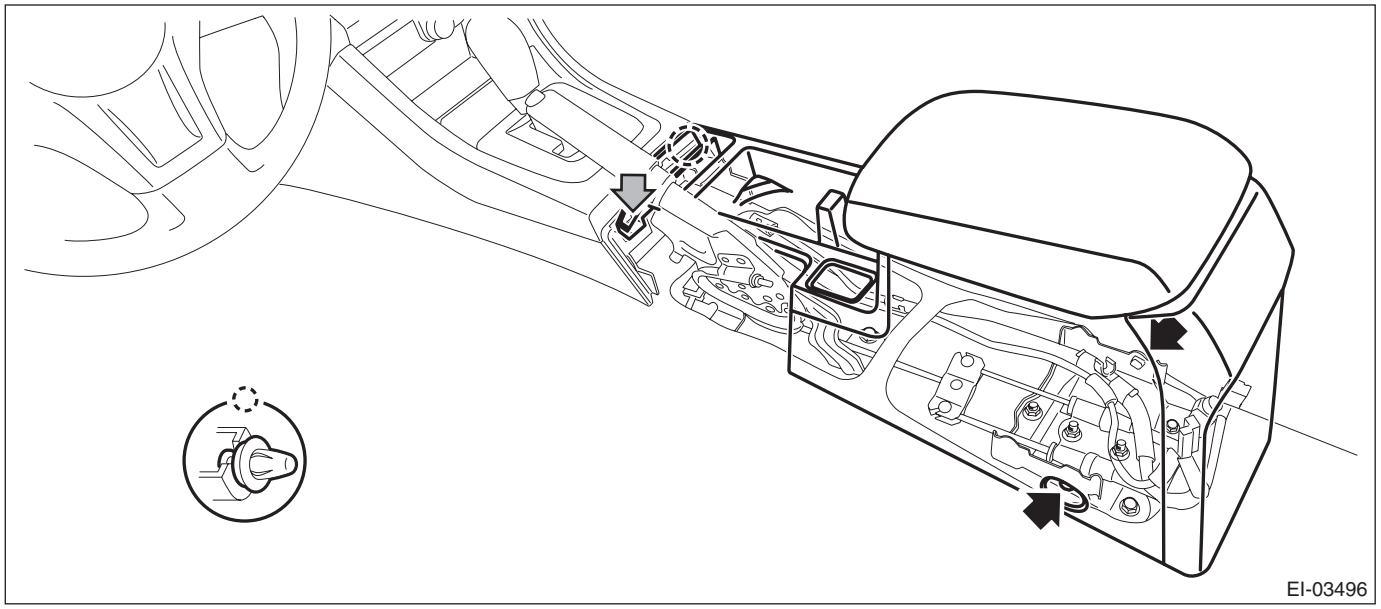
NOTE:
On CVT models, shift the select lever into “D” before disconnecting the battery ground cable.

2) Remove the console box assembly.
(1) Release the claws, and then remove the boot - hand brake.

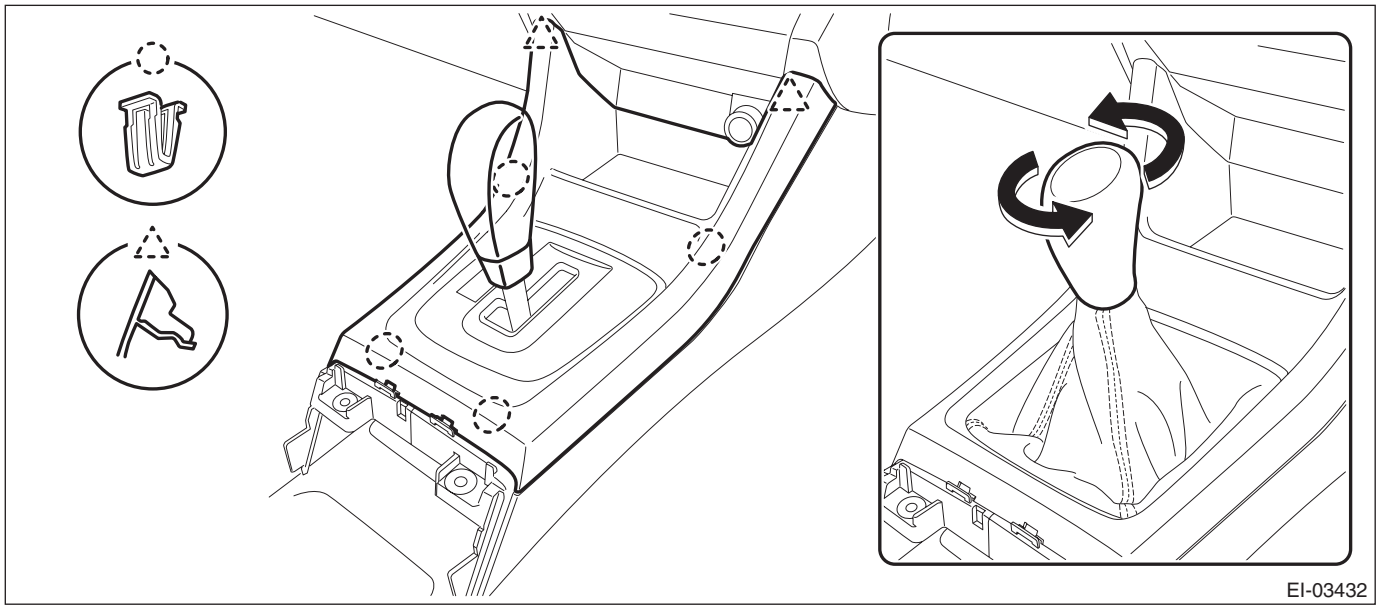


(2) Move the seat forward, and remove the bolts after detaching the left and right caps.

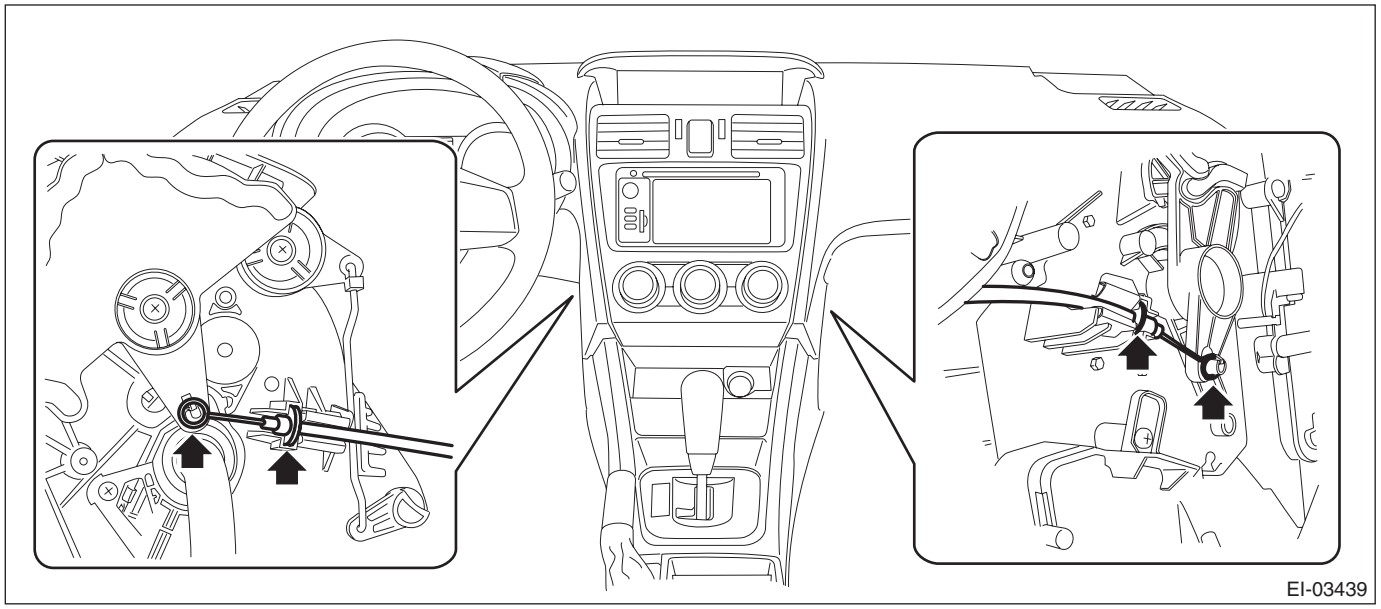
(3) Remove the screws, disconnect the harness connector and remove the console box assembly.



3) Remove the cover - shift lever.
(1) Remove the shift knob. (MT model)
(2) Release the clips and claws, then pull up the cover - shift lever.

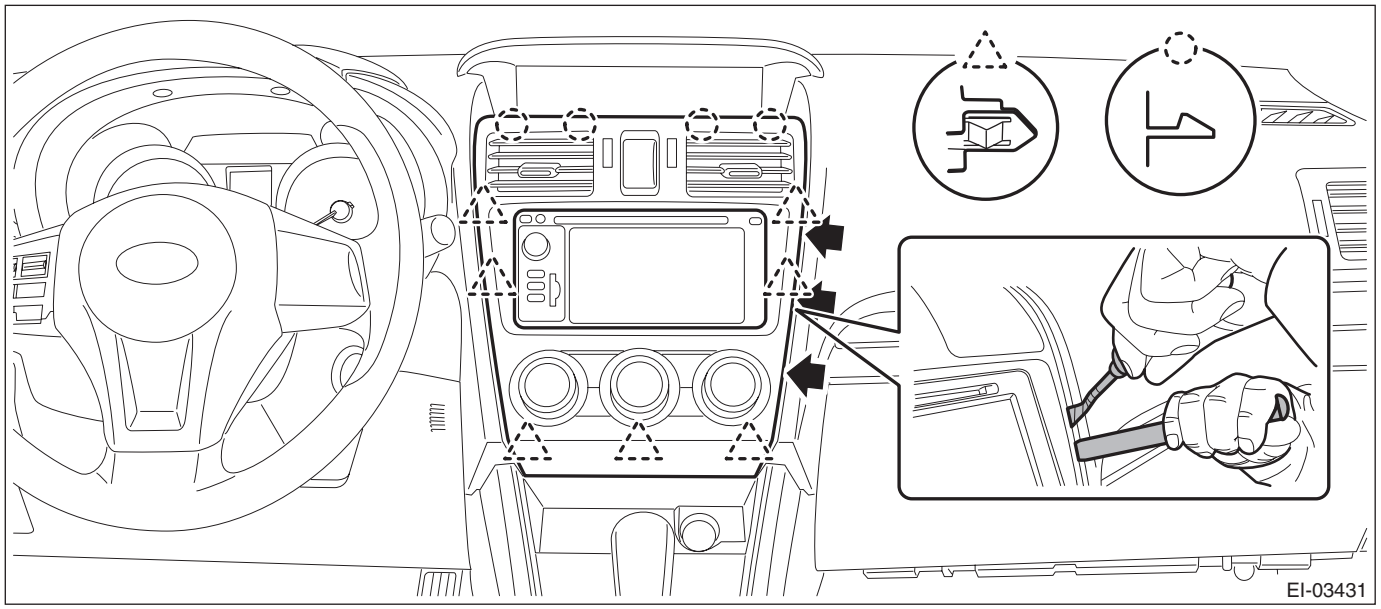


4) On manual A/C models, disconnect the control cables from both sides of the heater & cooling unit.



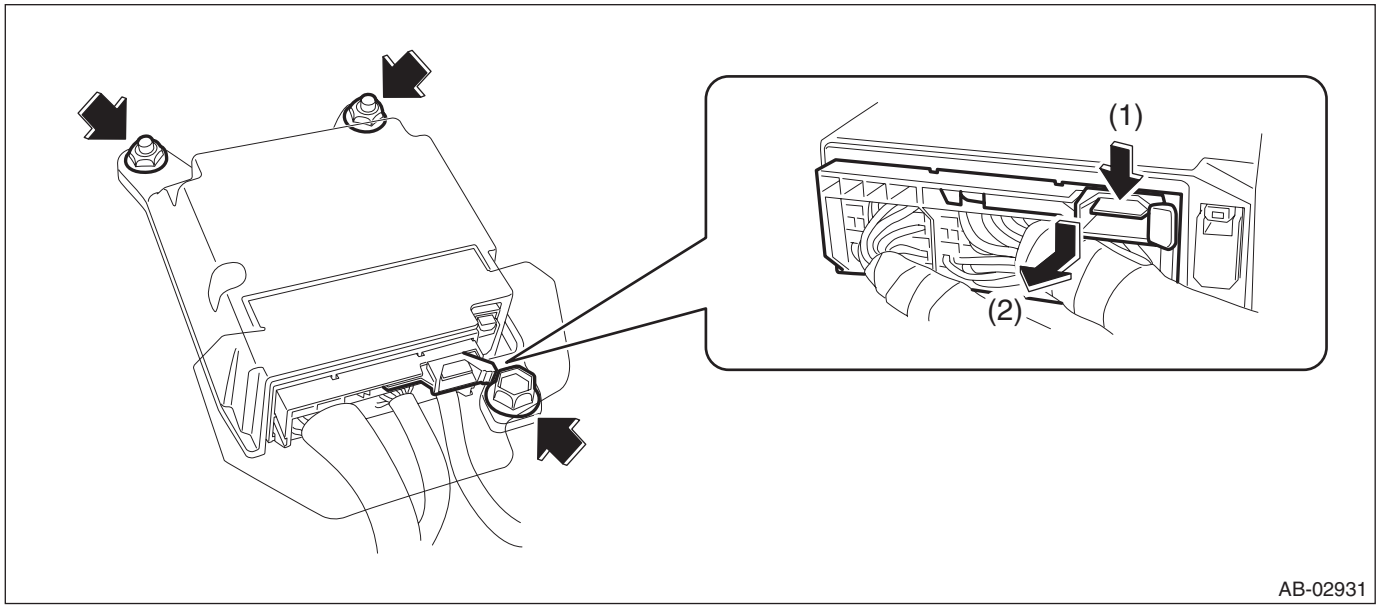
5) Remove the panel center assembly.

CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.



(1) Insert a plastic remover to the three areas shown by the arrows, and lift up the panel center assembly slightly.
(2) With the panel center assembly lifted up slightly, release the claw by using a clip remover wrapped with protective tape.
(3) Release the rest of the claws, and remove the panel center assembly.

6) Remove the airbag control module.
(1) Disconnect the connector from airbag control module. <Ref. to AB-20, AIRBAG CONTROL MODULE, PROCEDURE, Airbag Connector.>
(2) Remove the bolt and nuts and remove the airbag control module.



B: INSTALLATION

CAUTION:
Do not reuse the bolt and nut.
Always use new bolts and nuts for them.

1) Before installation, inspect the following items and replace any faulty part with a new one.
- Control module is deformed.
- Control module connector is damaged.
- Control module mounting bracket is damaged.

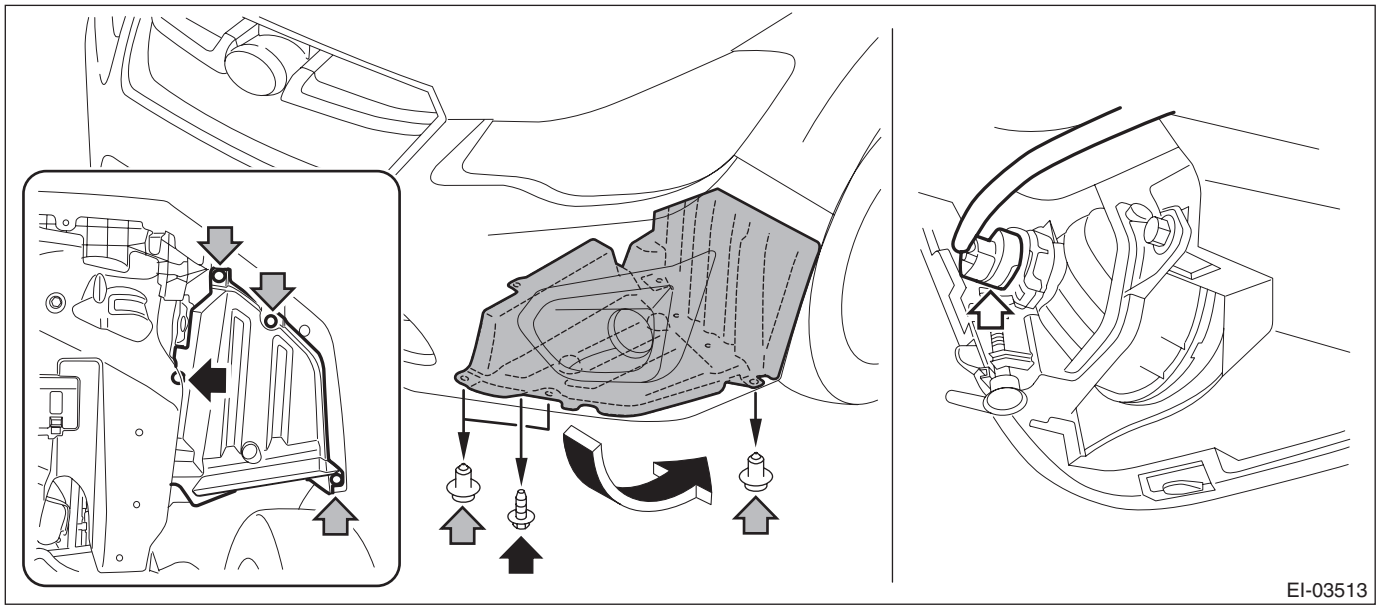
2) Install each part in the reverse order of removal.

Tightening torque:
Airbag control module: 25 N·m (2.55 kgf-m, 18.4 ft-lb)
Console box assembly: 6.5 N·m (0.66 kgf-m, 4.8 ft-lb)

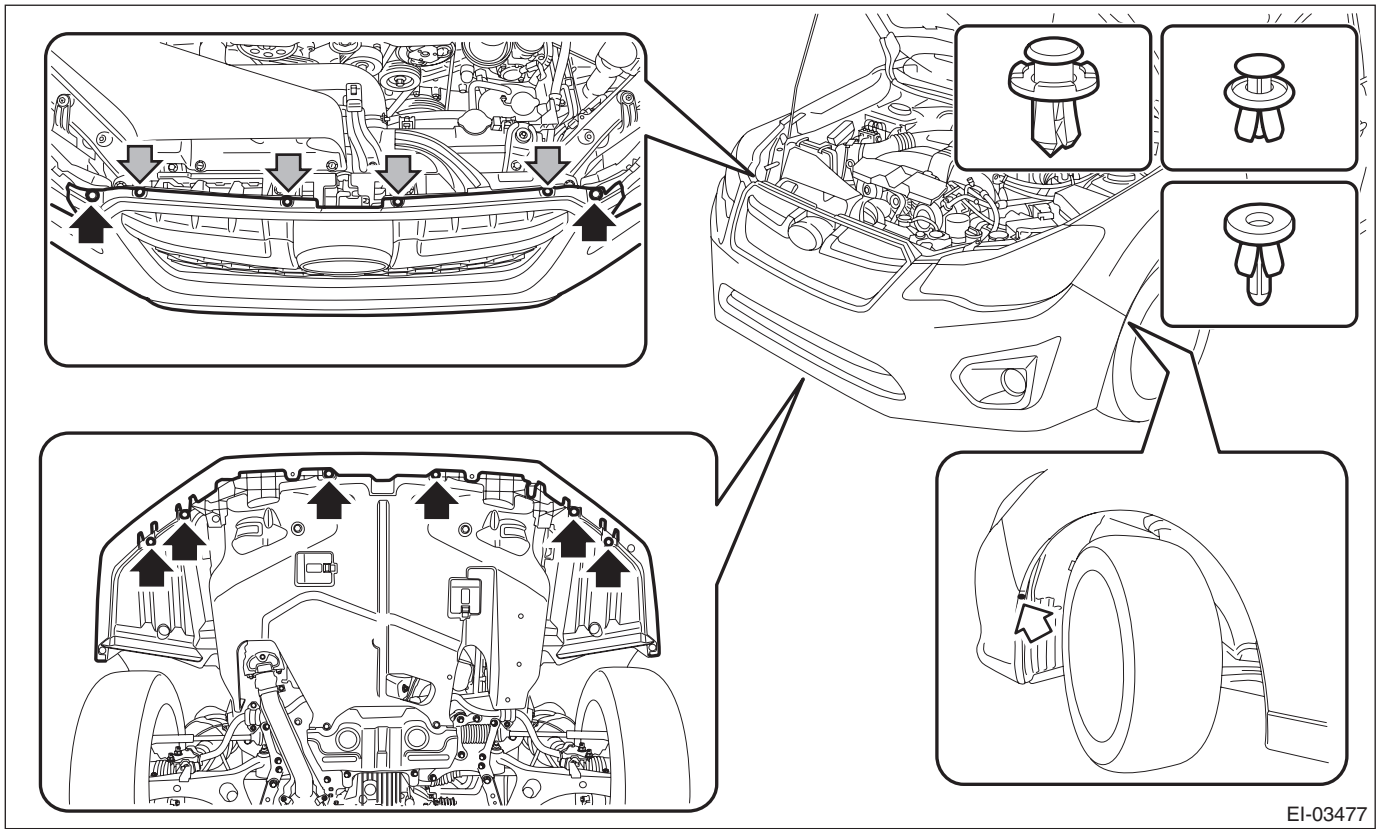
10.Front Sub Sensor

A: REMOVAL

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
2) Remove the bumper face - front.
   (1) Remove the screws and clips, and turn over the mud guard - front, and then disconnect the connectors of the fog light assembly - front on the LH and RH sides. (Model with fog light)



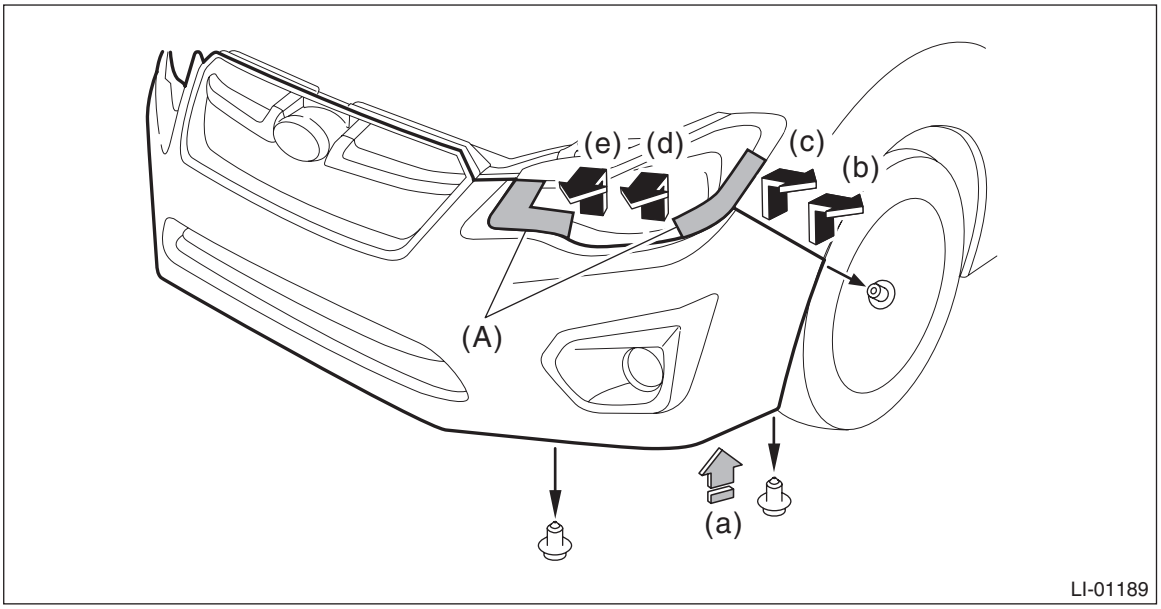
   (2) Remove the clips at the upper side of the bumper face - front.
   (3) Remove the clips from the fender.
   (4) Remove the clips at the lower side of the bumper face - front.



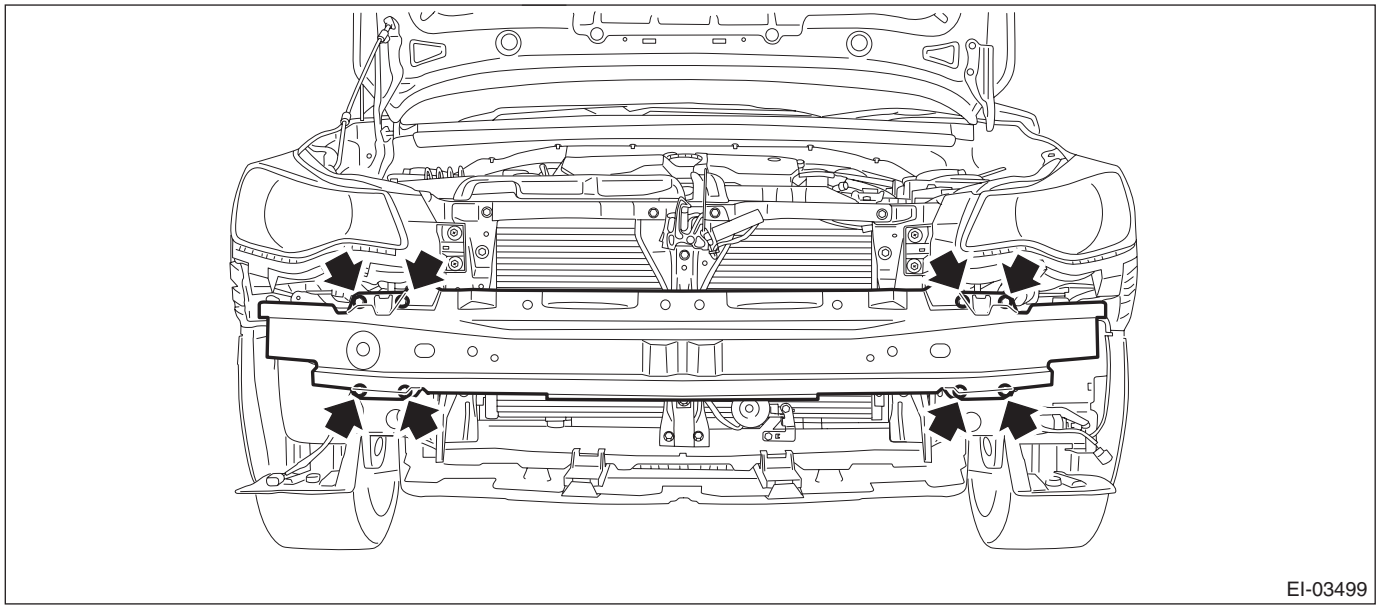
   (5) Apply protective tape (A) to the light assembly - head.

(6) Release the clips, and while pushing up the lower side (a) of the bumper face - front, remove in the order from (b) to (e).

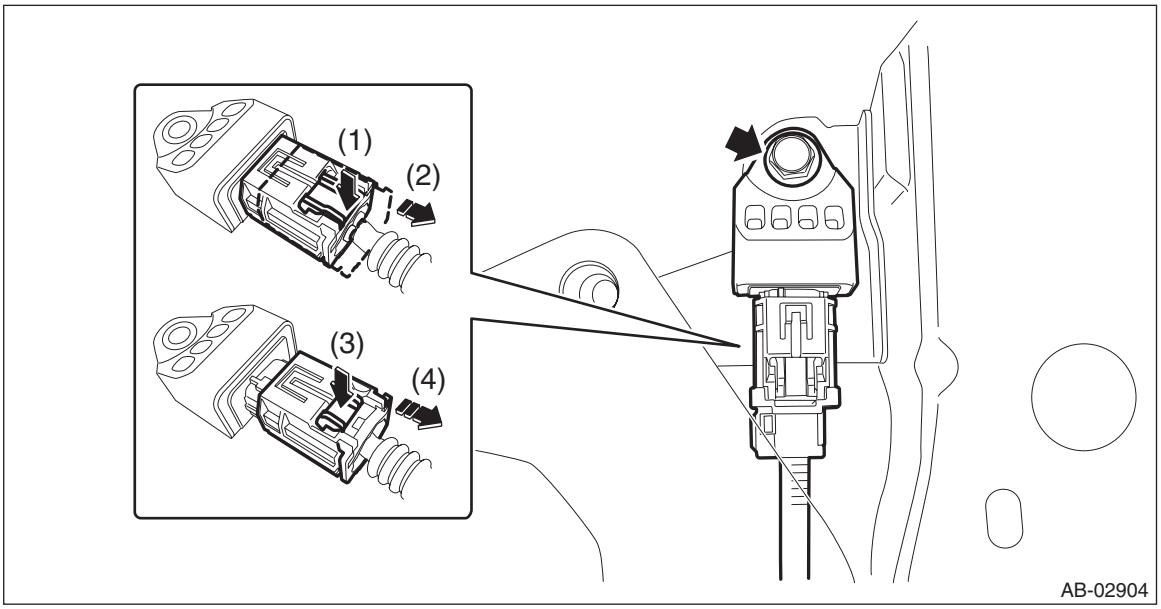
CAUTION:
Do not pull forcibly. It may damage the flange sections of the bumper face - front.



NOTE:
Detach the opposite side in the same manner.
3) Remove the bolts, and remove the bumper beam COMPL - front.



4) Remove the bolt, and then detach the front sub sensor. <Ref. to AB-23, FRONT SUB SENSOR, PROCEDURE, Airbag Connector.>



B: INSTALLATION

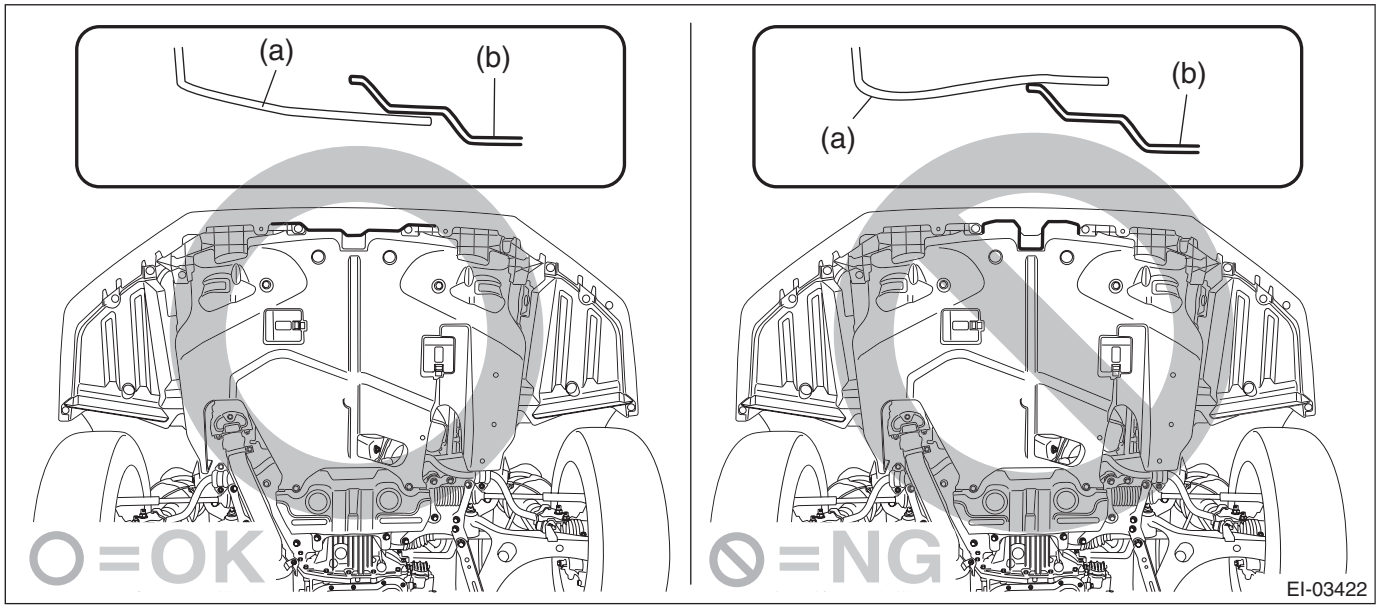
CAUTION:
- **If the airbag has been activated, replace the front sub sensor with a new part.**
- **Do not reuse the bolt and nut.**

Always replace with the specified new bolts and nuts.
- **When installing the sensor, insert the set pin on the backside of the sensor into the hole on the body side securely.**

1) Before installation, inspect the following items and replace any faulty part with a new part.
- Front sub sensor damage
- Connector damage

2) Install each part in the reverse order of removal.

CAUTION:
Install the bumper face so that the under cover front end (b) comes inside the front bumper face (a).

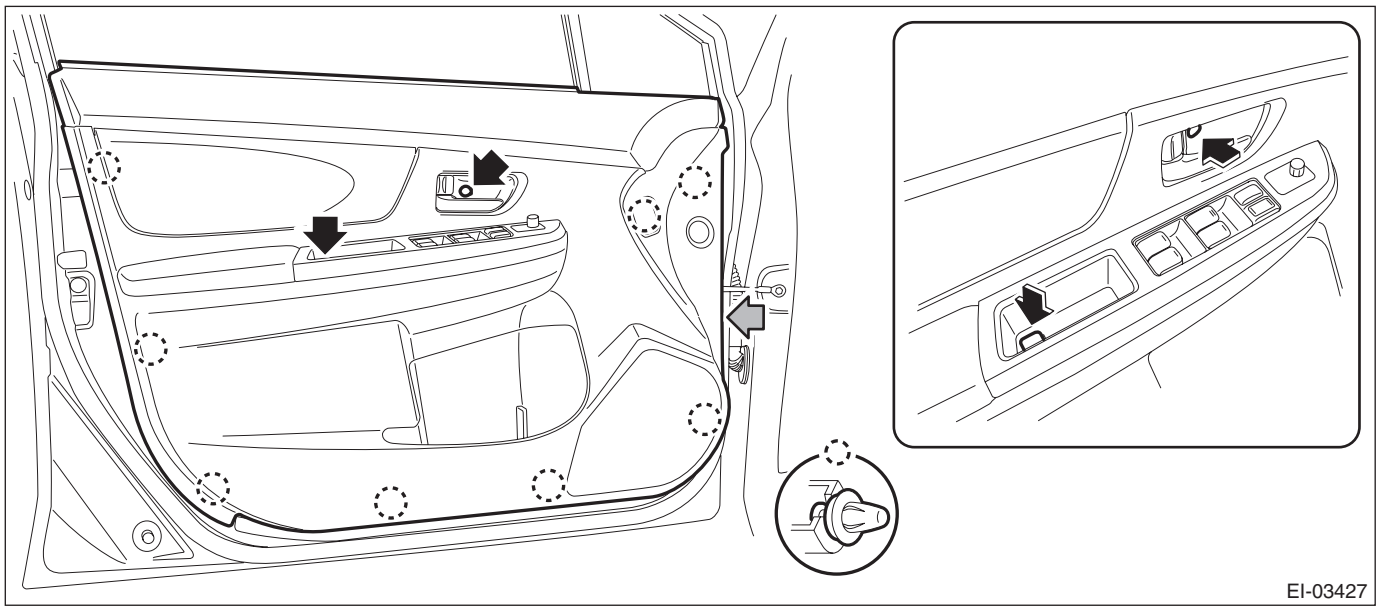


Tightening torque:
Front sub sensor: 13 N·m (1.33 kgf-m, 9.6 ft-lb)
Bumper beam COMPL - front: 32 N·m (3.36 kgf-m, 24.3 ft-lb)

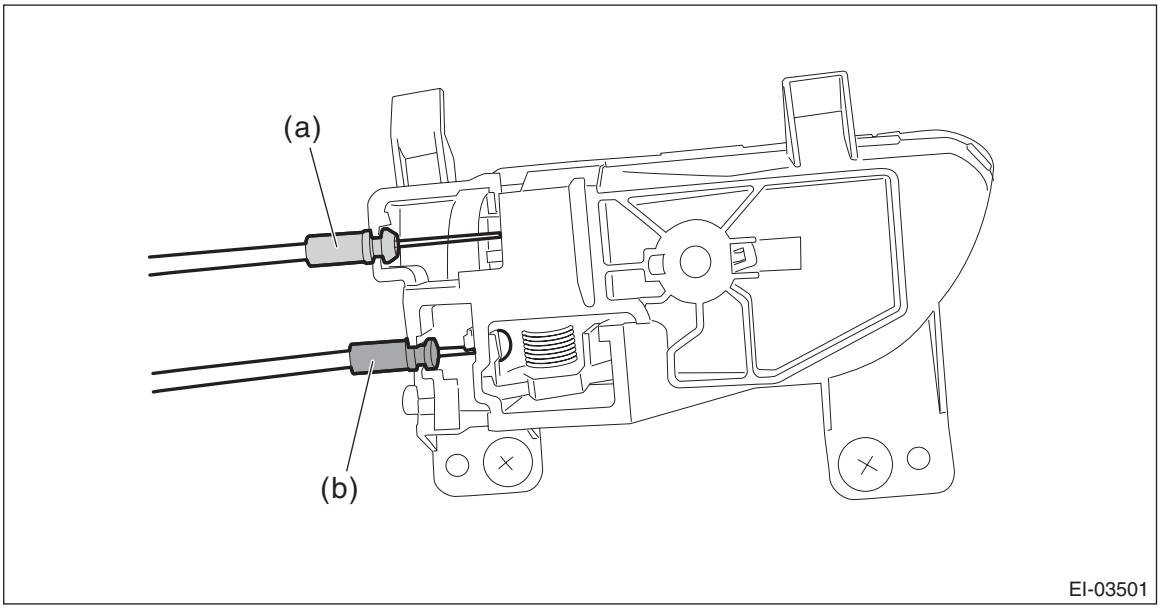
11.Front Door Impact Sensor

A: REMOVAL

1) Operate the power window switch to close the front door glass.
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
4) Remove the trim panel - front door.
   (1) Open the cover and remove the screw.
   (2) Remove the clips, and remove the trim panel - front door from the door panel.



NOTE:
It is easier to remove the door trim if the removal is performed from the gray arrow section.
   (3) Detach the door lock cable (a) and door open cable (b) from the remote assembly - door.

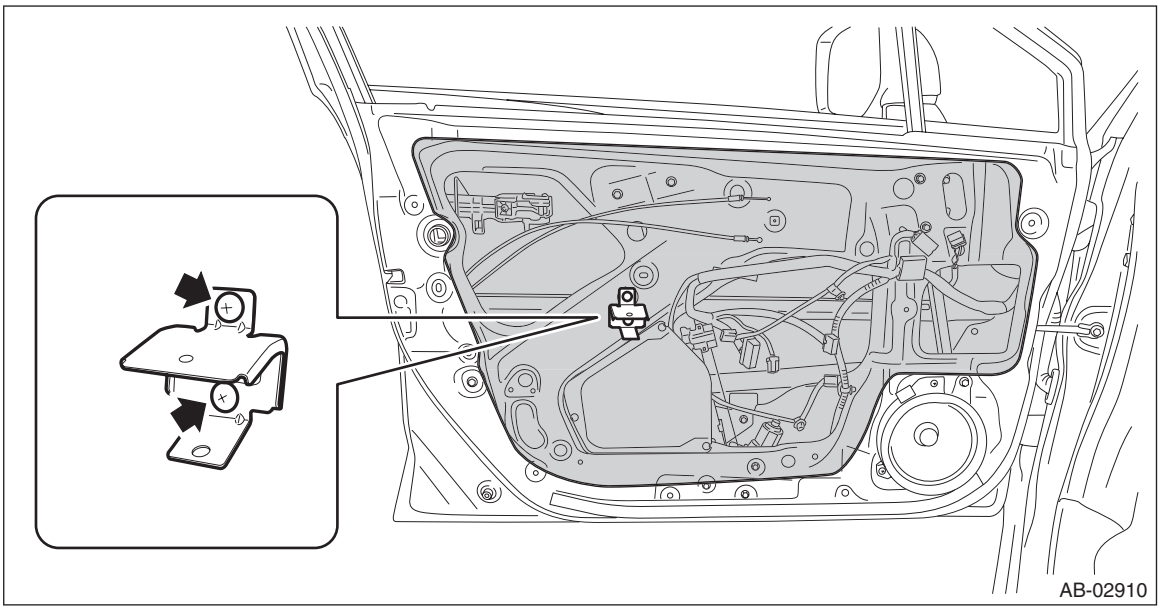


   (4) Disconnect the harness connector and remove the trim panel - front door.

5) Remove the sealing cover.

CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the cover.**
- **If the sealing cover gets broken, replace it with a new part.**

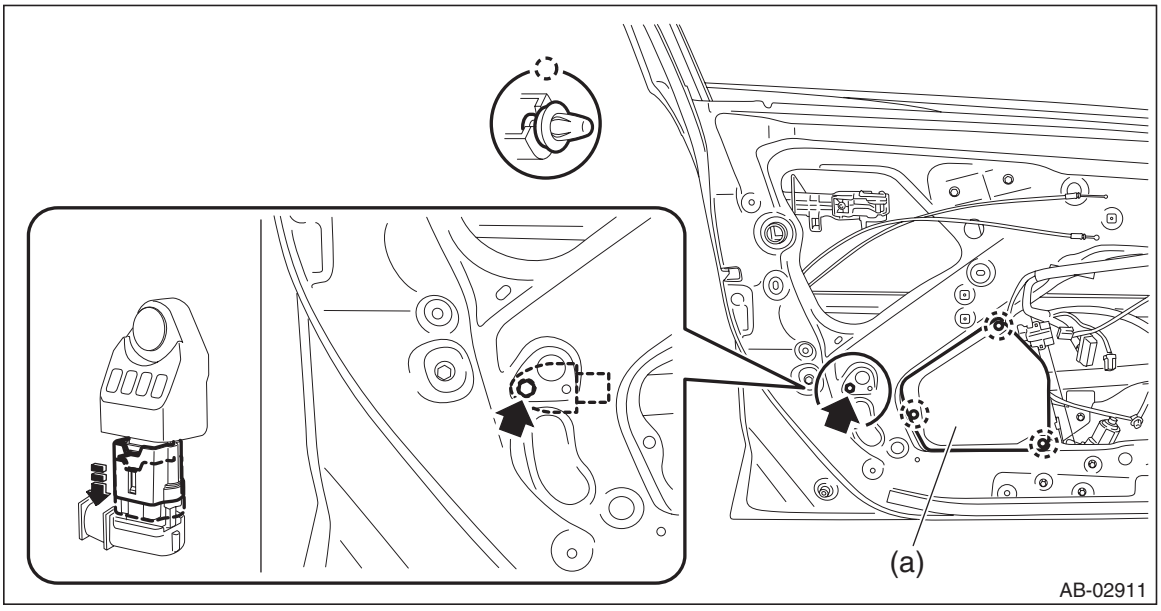
(1) Remove the screw to remove the bracket - door trim.
(2) Carefully remove the butyl tape to remove the sealing cover - front door.



6) Remove the front door impact sensor.
(1) Remove the front door inner pad (a).

CAUTION:
If the clip is damaged, replace it with a new part because the panel assembly - front door may be deformed.

(2) Remove the nuts and then remove the front door impact sensor.
(3) Disconnect the airbag connector and remove the front door impact sensor. <Ref. to AB-25, FRONT DOOR IMPACT SENSOR AND SATELLITE SAFING SENSOR, PROCEDURE, Airbag Connector.>



B: INSTALLATION

CAUTION:
Do not reuse the bolt and nut.
Always replace with the specified new bolts and nuts.

1) Before installation, inspect the following items and replace any faulty part with a new part.
- The front door impact sensor or connector is damaged.
- Inner panel area of the panel assembly - front door is deformed.
- Side airbag module has been activated.

Tightening torque:
Front door impact sensor: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

2) Install each part in the reverse order of removal.

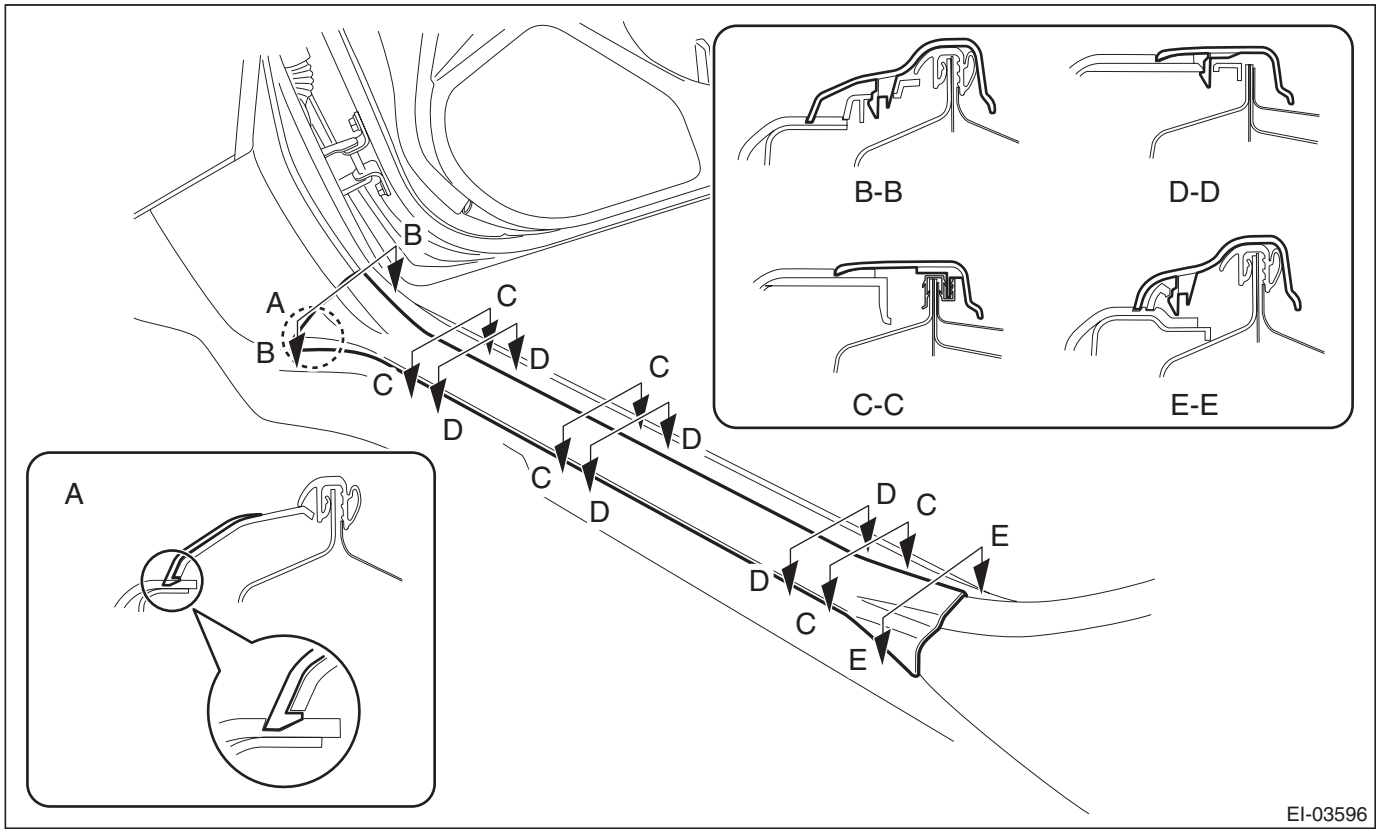
12.Side Airbag Sensor

A: REMOVAL

CAUTION:
• Airbag system satellite safing sensor is located in the lower of the rear seat cushion center. Before removing the rear seat, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM" section. <Ref. to AB-10, CAUTION, General Description.>
• The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.
1) Move the seat all the way forward, from which the side airbag sensor is to be removed.

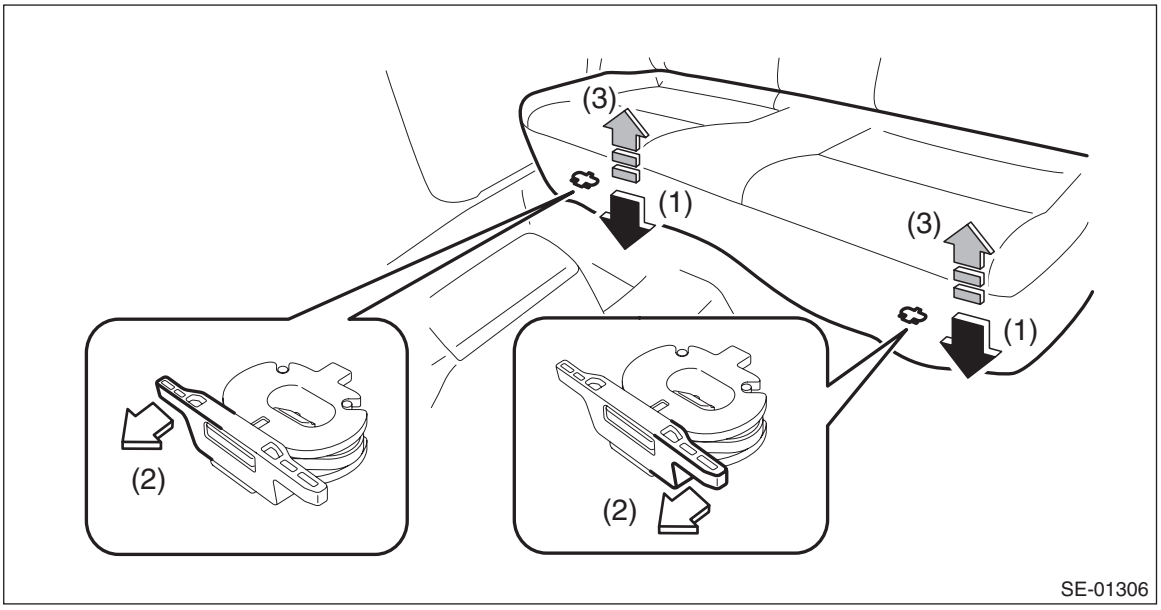
NOTE:
This is to remove the seat belt retractor assembly.
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
4) Release the claws, and then remove the cover side sill - front INN. (On the side where the side airbag sensor is removed)

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - front INN.

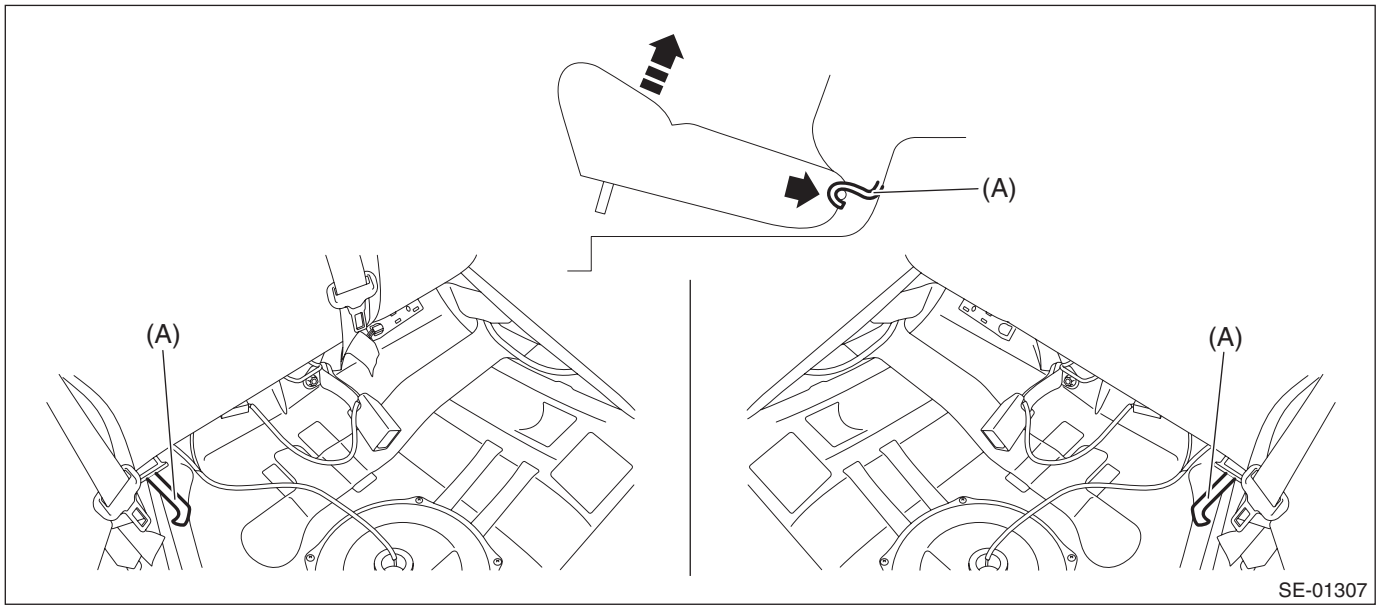


5) Remove the rear seat cushion assembly.
(1) Push the corners of the rear seat cushion from above.
(2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
(3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

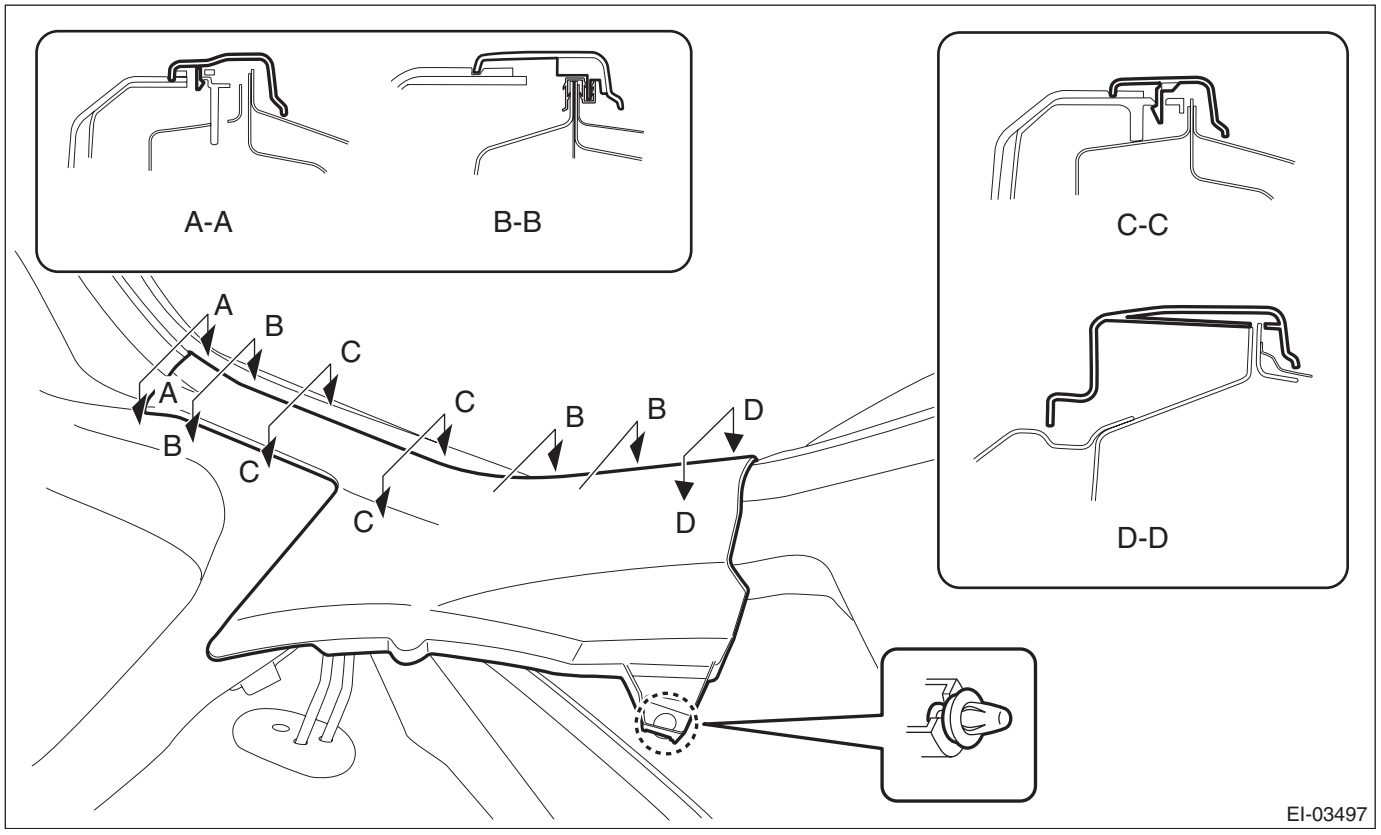


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.



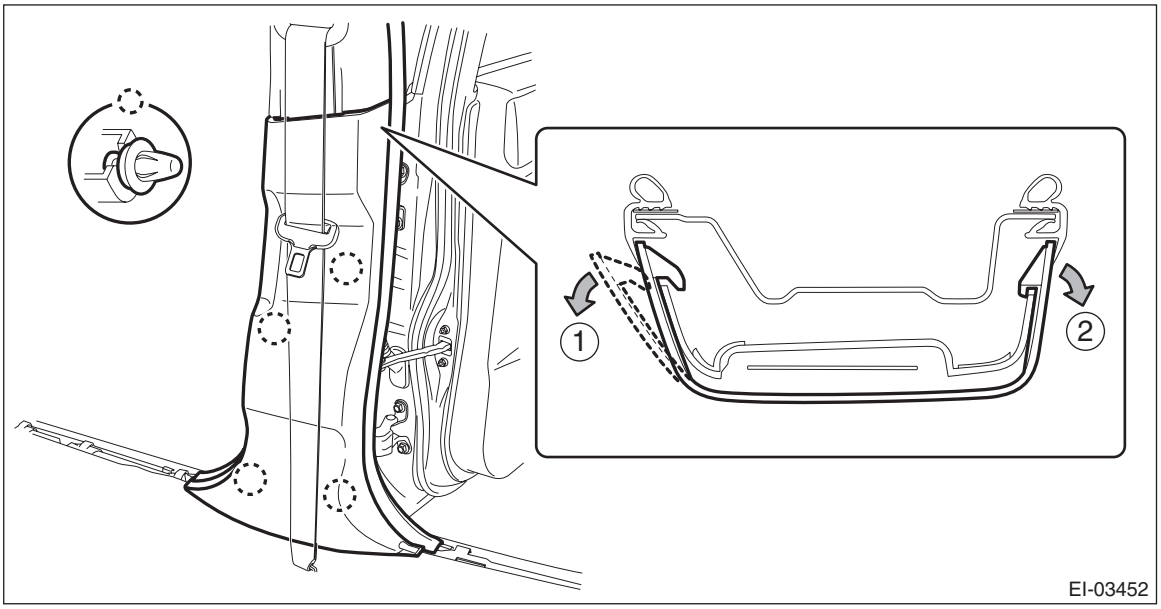
6) Release the clips and claws, and then remove the cover side sill - rear INN. (On the side where the side airbag sensor is removed)

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - rear INN.



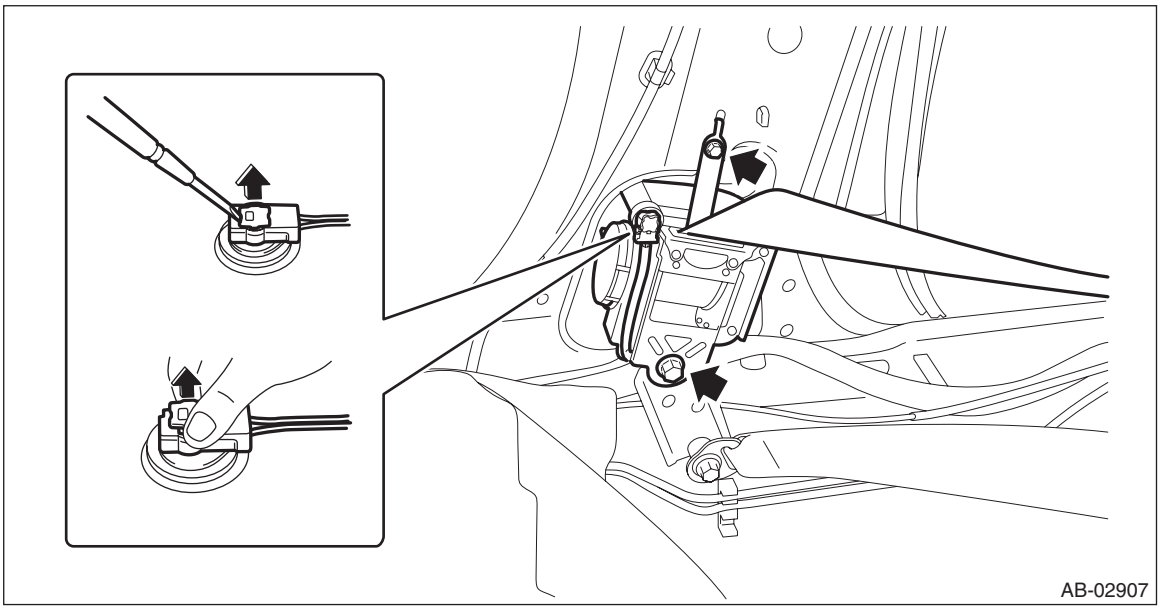
7) Remove the trim panel - center pillar LWR. (On the side where the side airbag sensor is removed)
(1) Release the clip by pulling the trim panel - center pillar LWR toward you.
(2) Expand the claws of the trim panel - center pillar LWR outward, and remove it from the trim panel - center pillar UPR.

CAUTION:
Do not expand the trim panel - center pillar LWR excessively. Doing so may damage the trim.



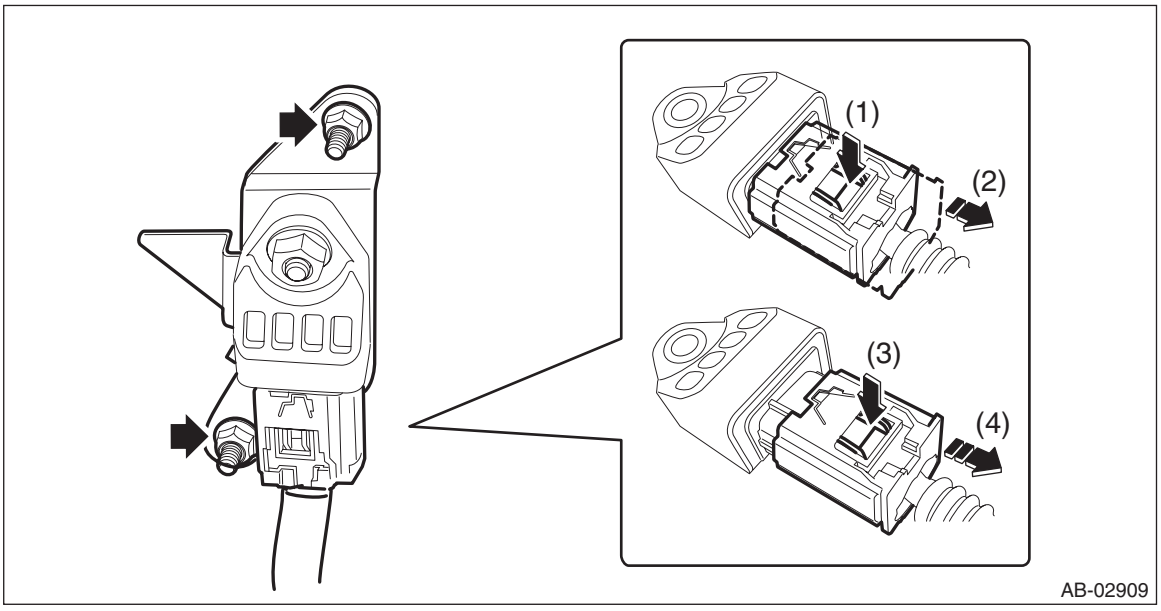
NOTE:
First release the claw located to the front of the vehicle.

8) Remove the seat belt retractor. (On the side where the side airbag sensor is removed)
   (1) Turn over the floor mat to disconnect the belt tension sensor connector. <Ref. to AB-22, DRIVER'S AIRBAG MODULE, CURTAIN AIRBAG MODULE & PRETENSIONER, PROCEDURE, Airbag Connector.>
   (2) Remove the bolt to remove the seat belt retractor.



9) Remove the nuts and then remove the side airbag sensor. <Ref. to AB-27, SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR, PROCEDURE, Airbag Connector.>

CAUTION:
- **Do not separate the side airbag sensor and bracket. It cause the airbag system malfunction.**
- **If the sensor is removed from the bracket, be sure to replace with a new part.**



B: INSTALLATION

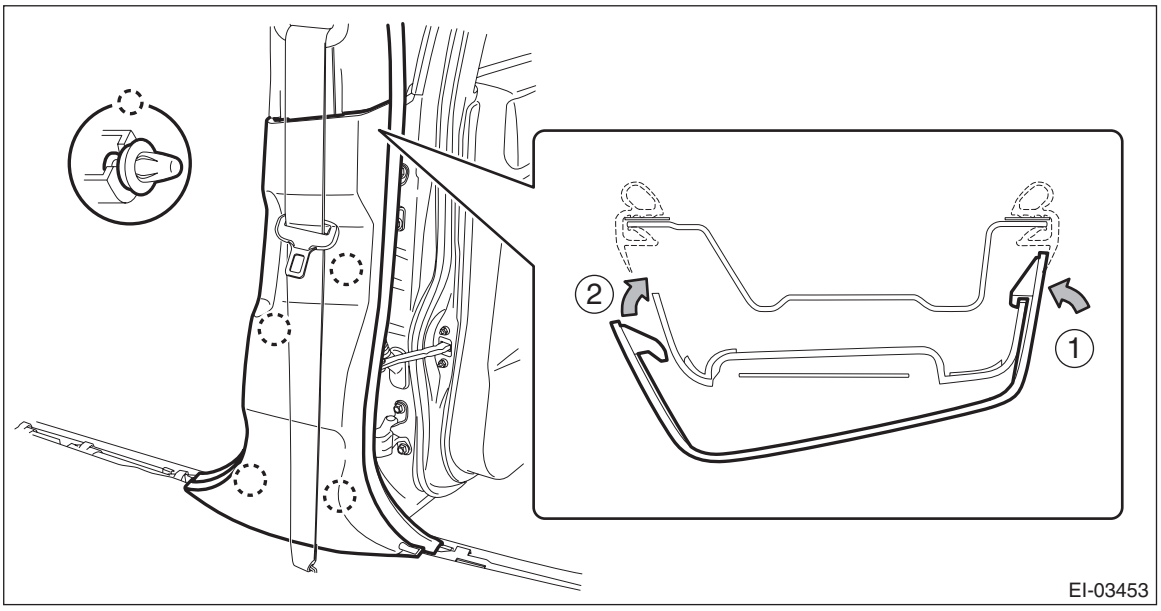
CAUTION:
Do not reuse the bolt and nut.
Always replace with the specified new bolts and nuts.

1) Before installation, inspect the following items and replace any faulty part with a new part.
- The side airbag sensor, sensor bracket, or connector are damaged.
- Side airbag module has been activated.

Tightening torque:
Side airbag sensor: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

2) Install each part in the reverse order of removal.

NOTE:
Assemble the trim panel - center pillar LWR to the trim panel - center pillar UPR securely.



Tightening torque:
Front seat belt: <Ref. to SB-2, FRONT SEAT BELT, COMPONENT, General Description.>

13.Curtain Airbag Sensor

A: REMOVAL

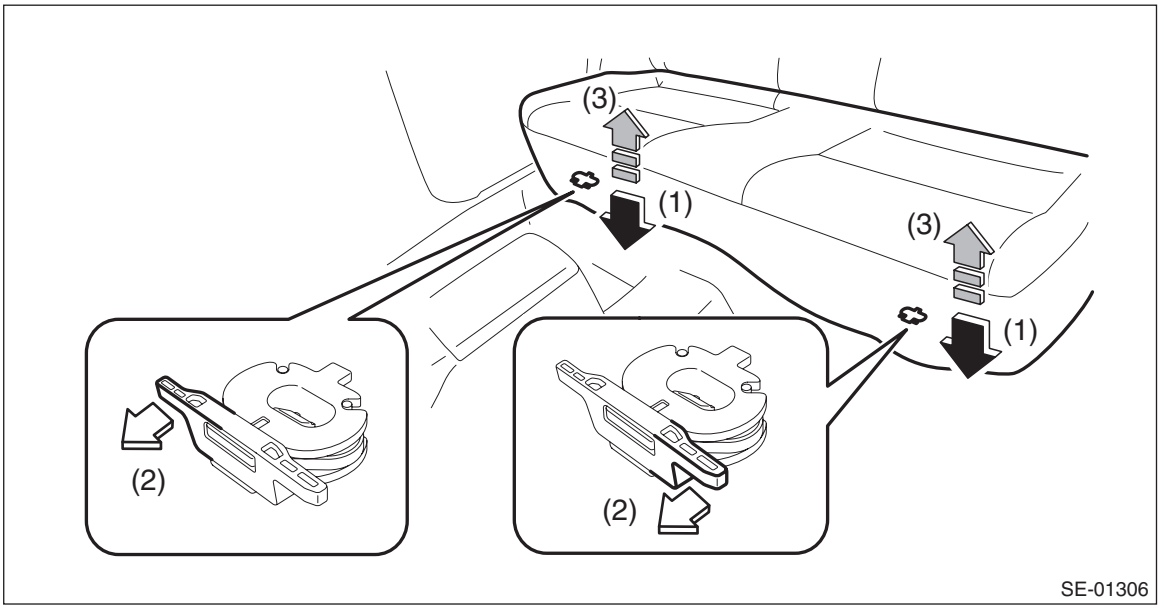
1. 4 DOOR MODEL

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

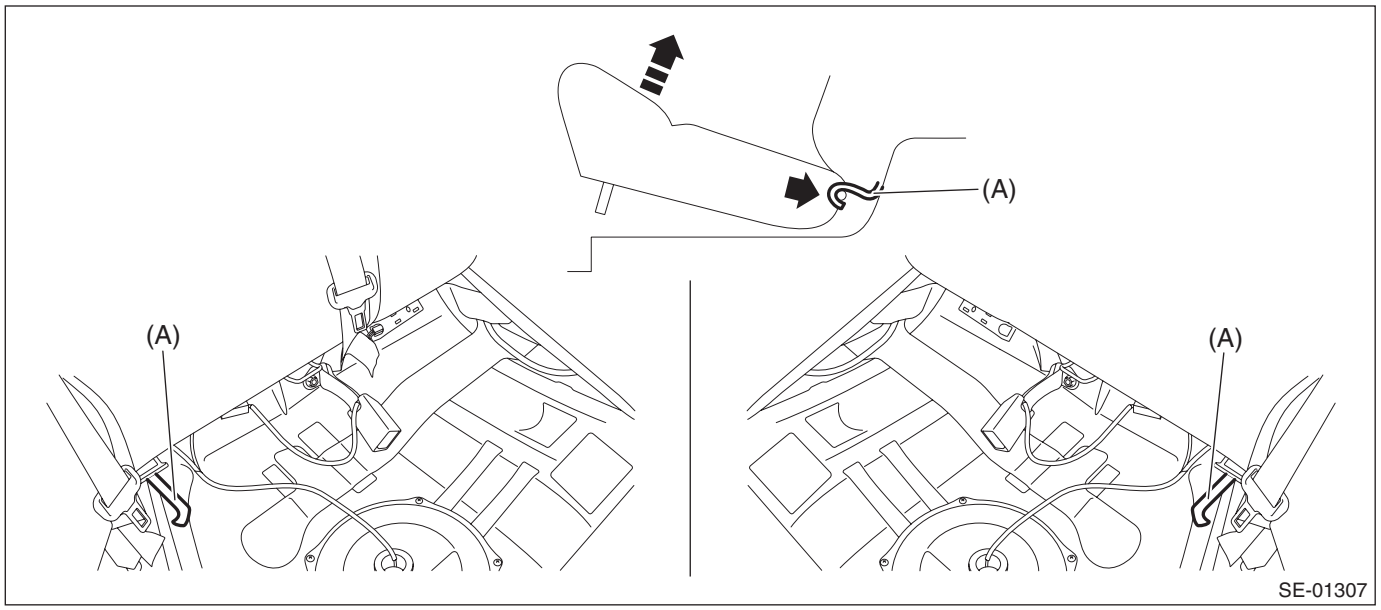
CAUTION:
• Airbag system satellite safing sensor is located in the lower of the rear seat cushion center. Before removing the rear seat, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM" section. <Ref. to AB-10, CAUTION, General Description.>
• The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

2) Remove the rear seat cushion assembly.
(1) Push the corners of the rear seat cushion from above.
(2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
(3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

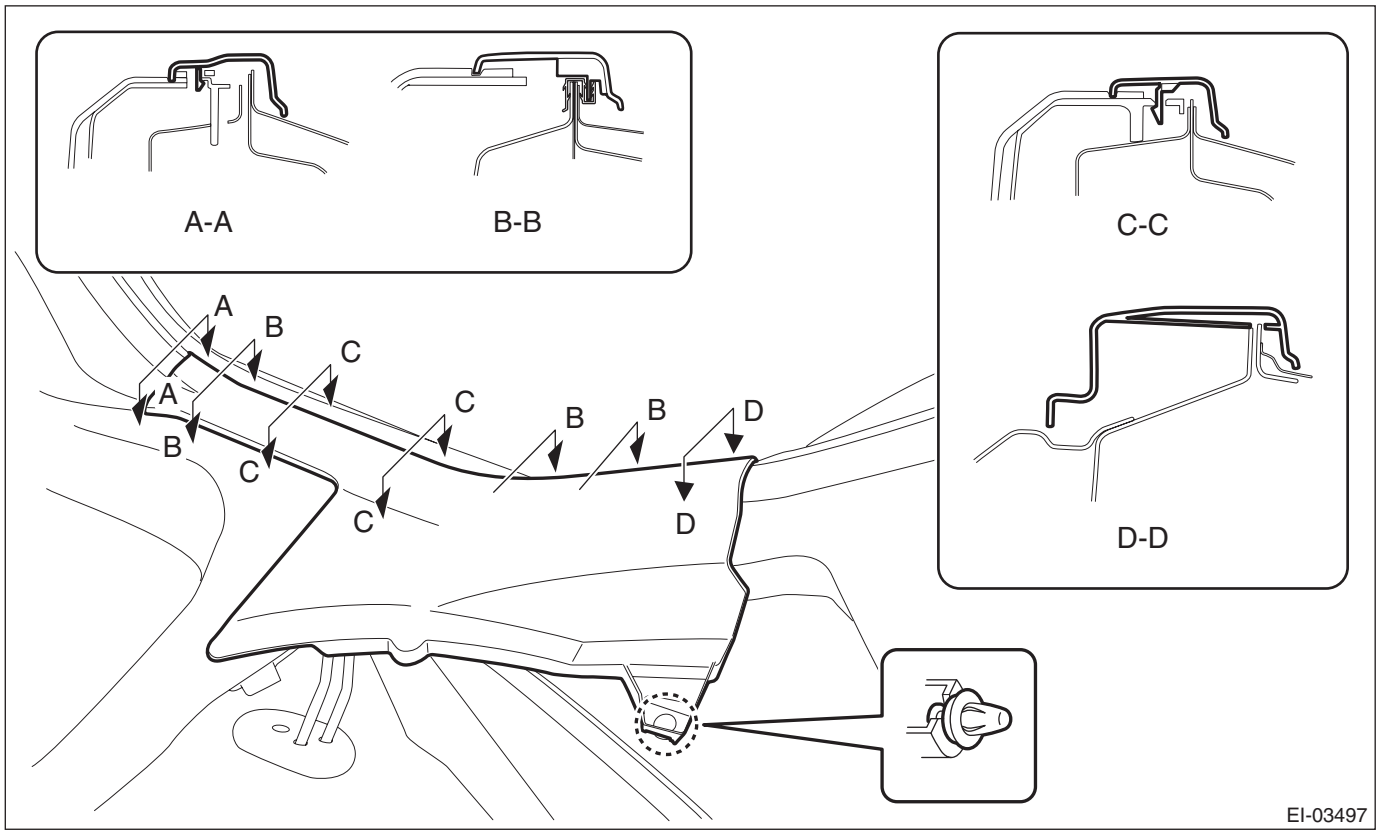


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.

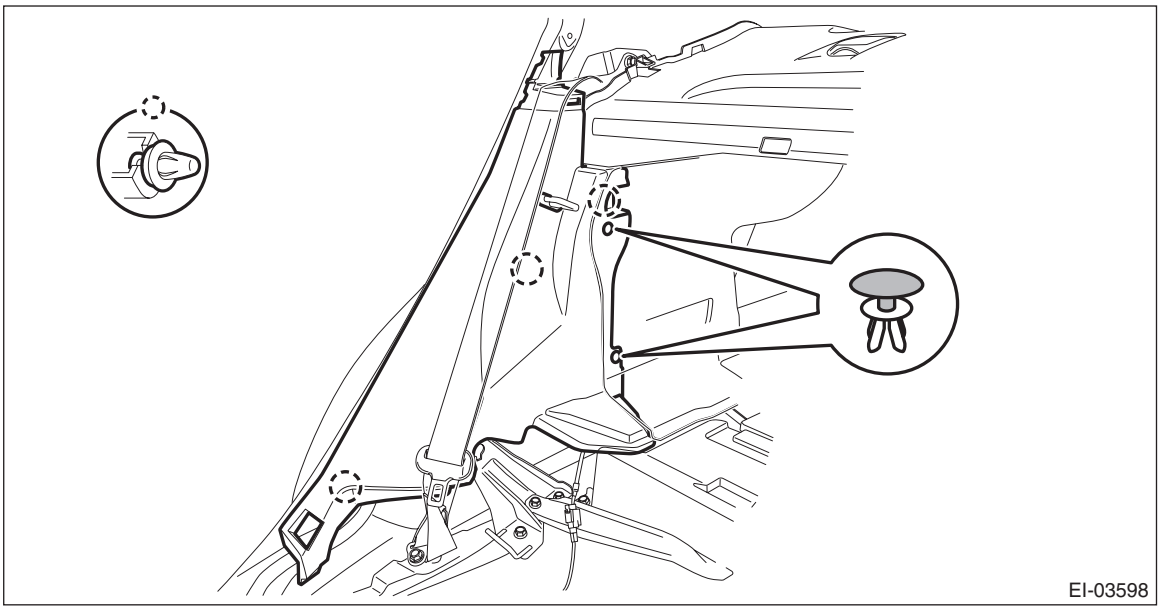


3) Release the clips and claws, and then remove the cover side sill - rear INN.

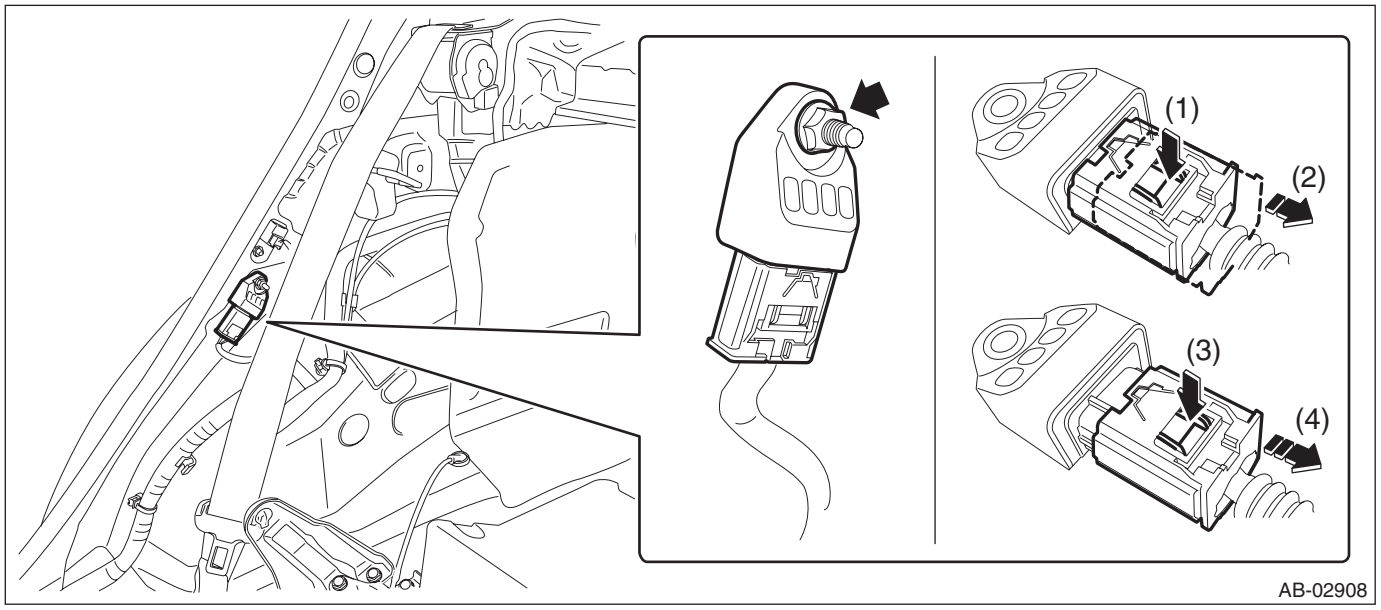
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - rear INN.



4) Remove the trim panel - rear pillar LWR. (On the side where the curtain airbag sensor is removed)
(1) Remove the clips, and turn over the trim panel - trunk side.
(2) Remove the clips, and remove the trim panel - rear pillar LWR.



5) Remove the nuts and then remove the curtain airbag sensor. <Ref. to AB-27, SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR, PROCEDURE, Airbag Connector.>

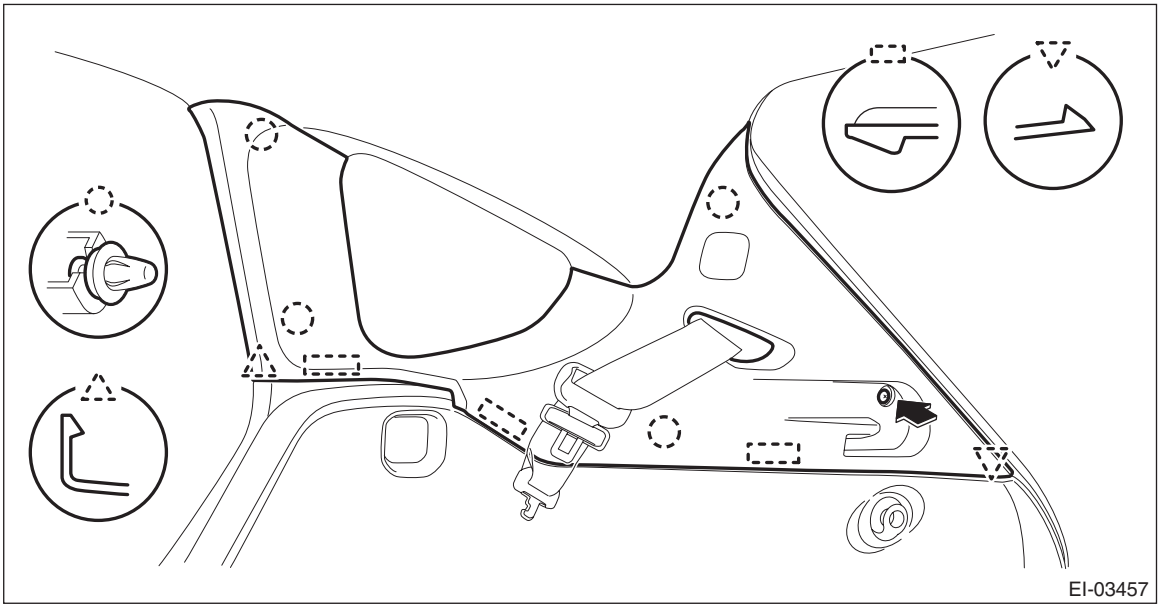


2. 5 DOOR MODEL

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

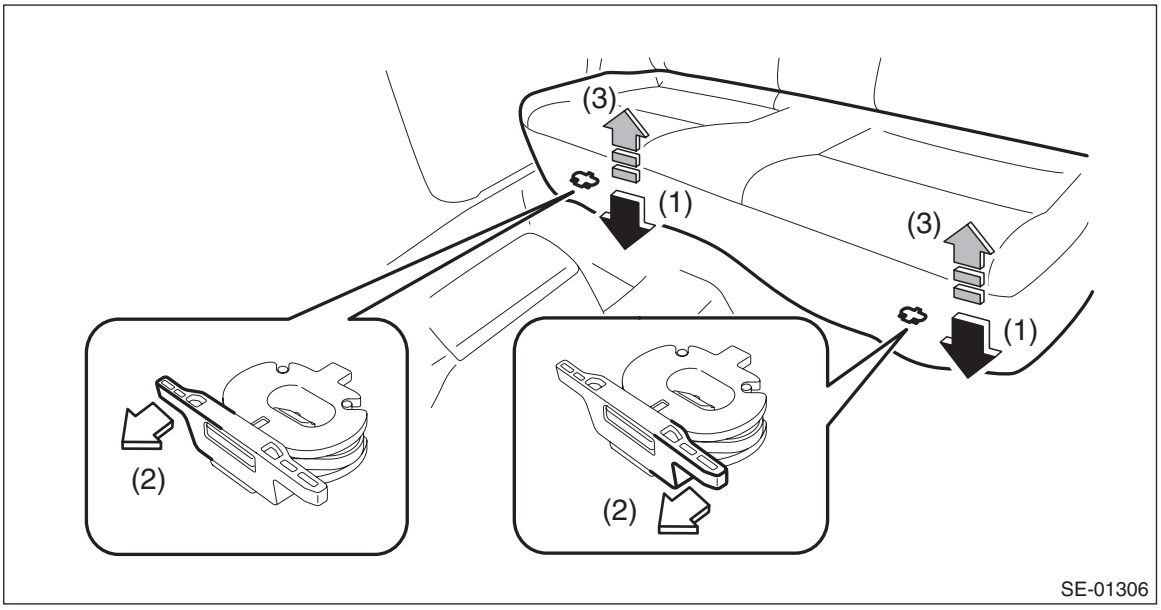
CAUTION:
• Airbag system satellite safing sensor is located in the lower of the rear seat cushion center. Before removing the rear seat, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM" section. <Ref. to AB-10, CAUTION, General Description.>
• The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

2) Remove the screws and clips, and remove the trim panel - rear quarter pillar UPR. (On the side where the curtain airbag sensor is removed)

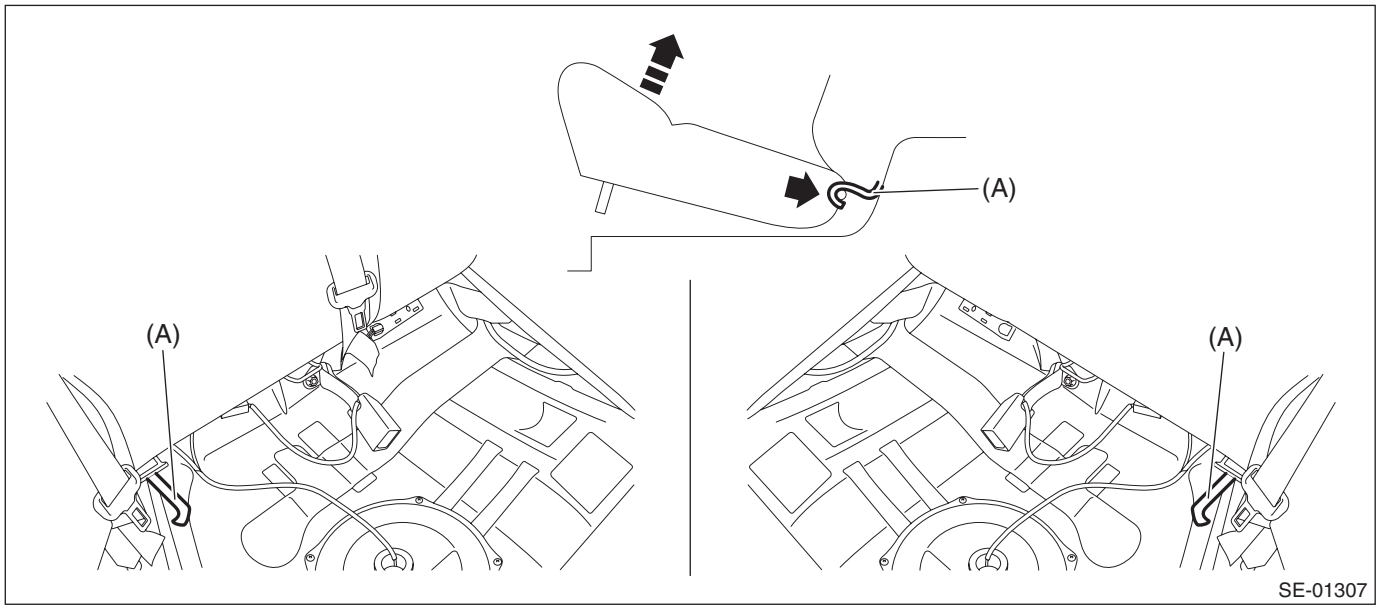


3) Remove the rear seat cushion assembly.
(1) Push the corners of the rear seat cushion from above.
(2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
(3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

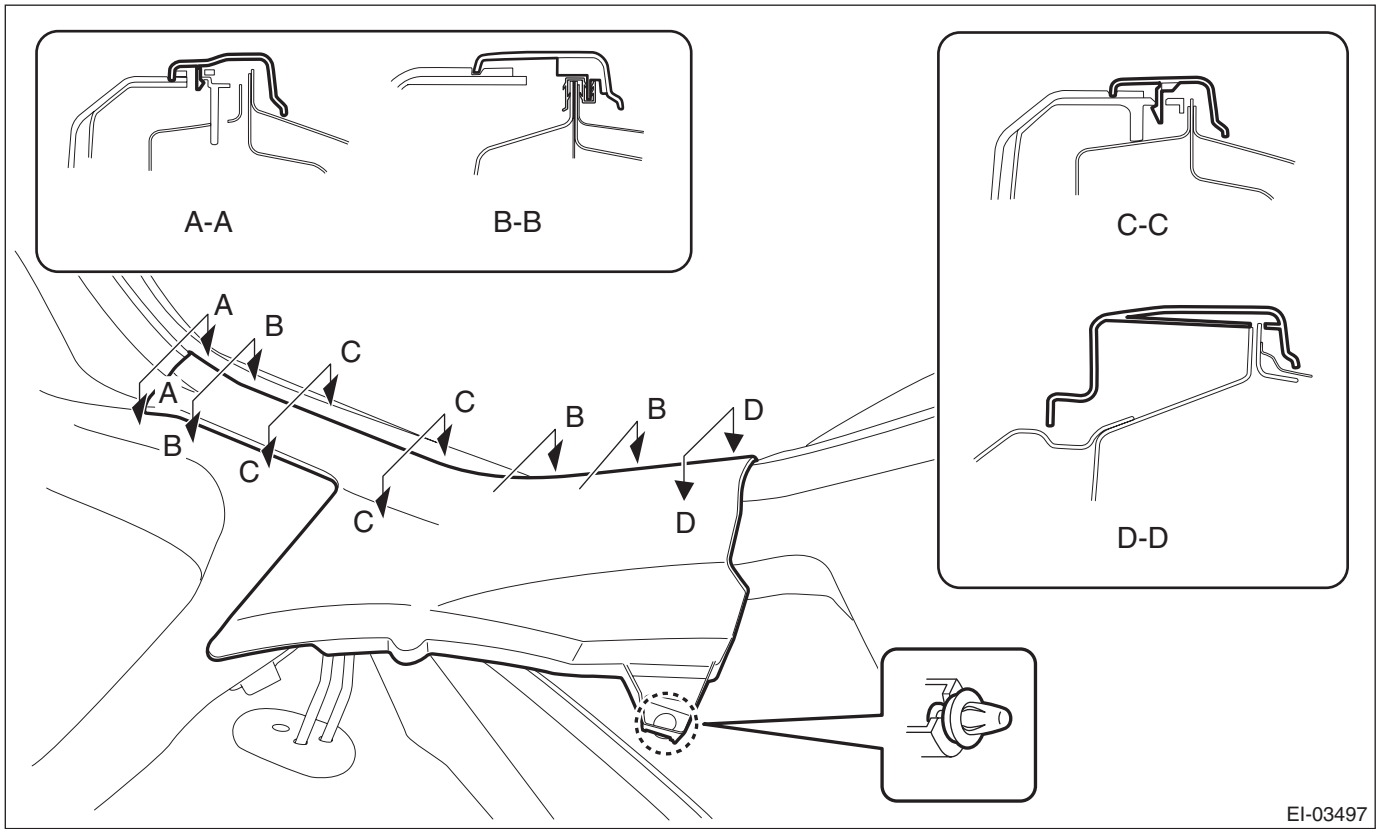


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.

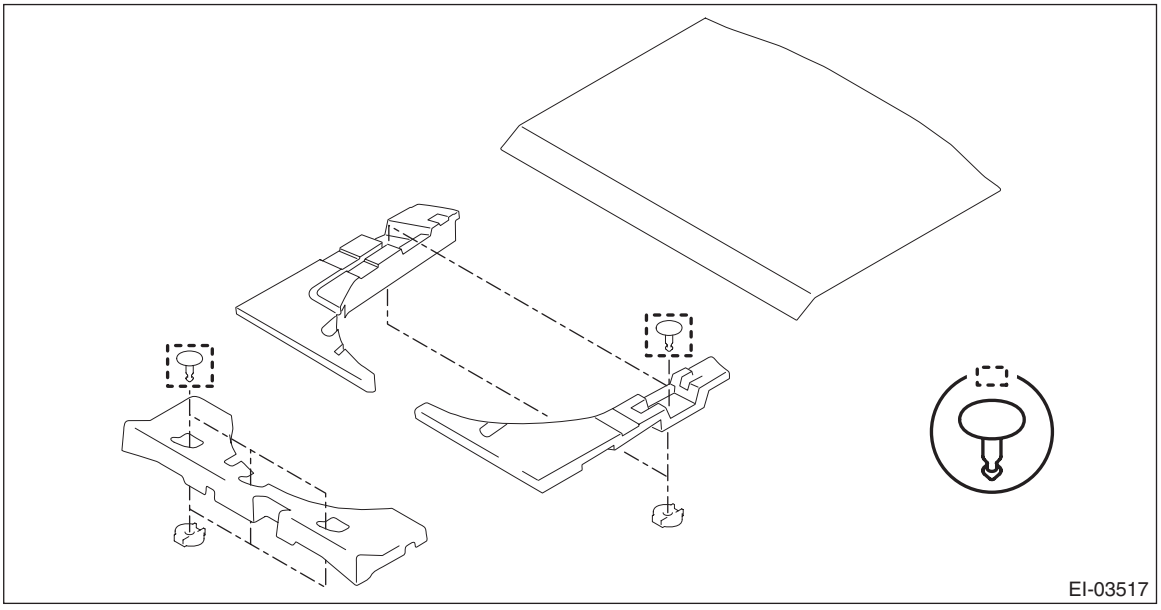


4) Release the clips and claws, and remove the side sill covers - rear INN on the left and right sides. (On the side where the curtain airbag sensor is removed)

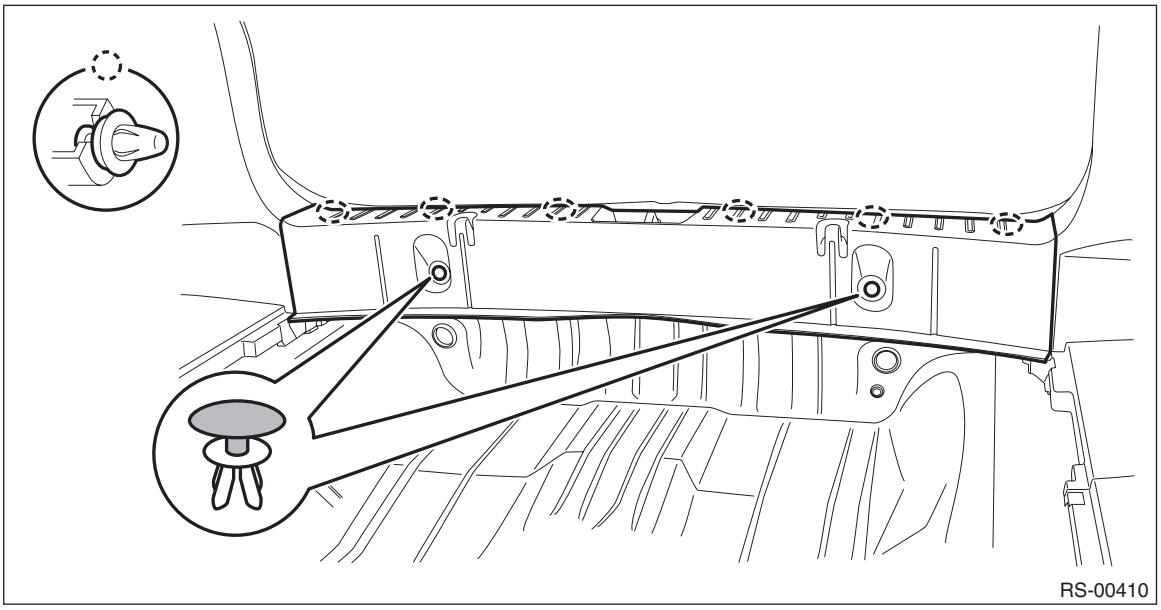
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover - rear INN.



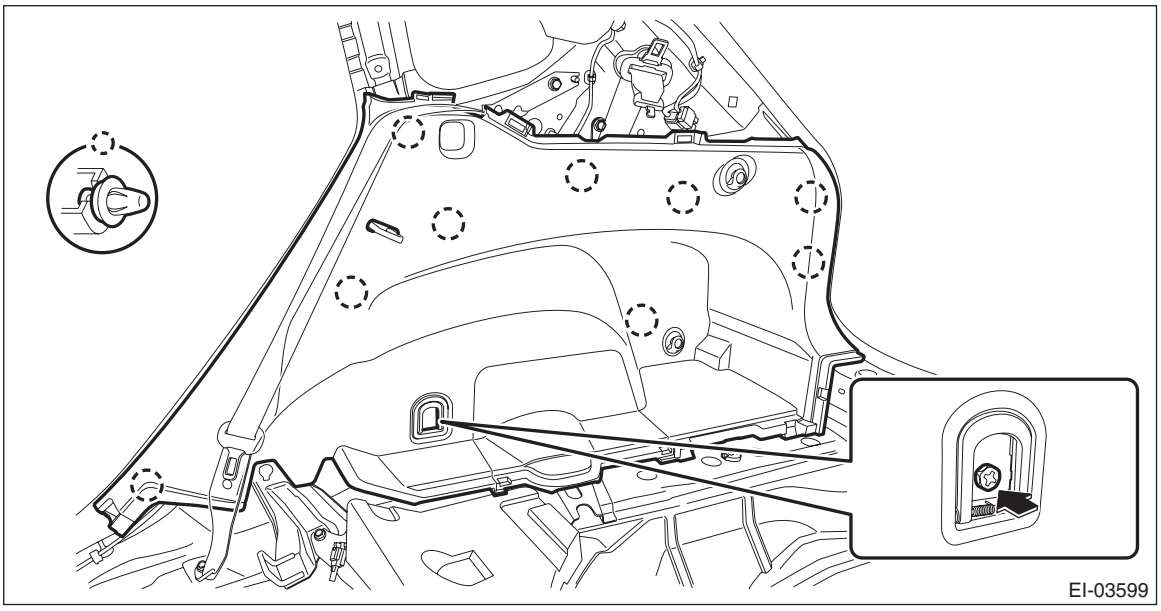
5) Remove the mat - rear floor CTR and the spacer - rear floor side.



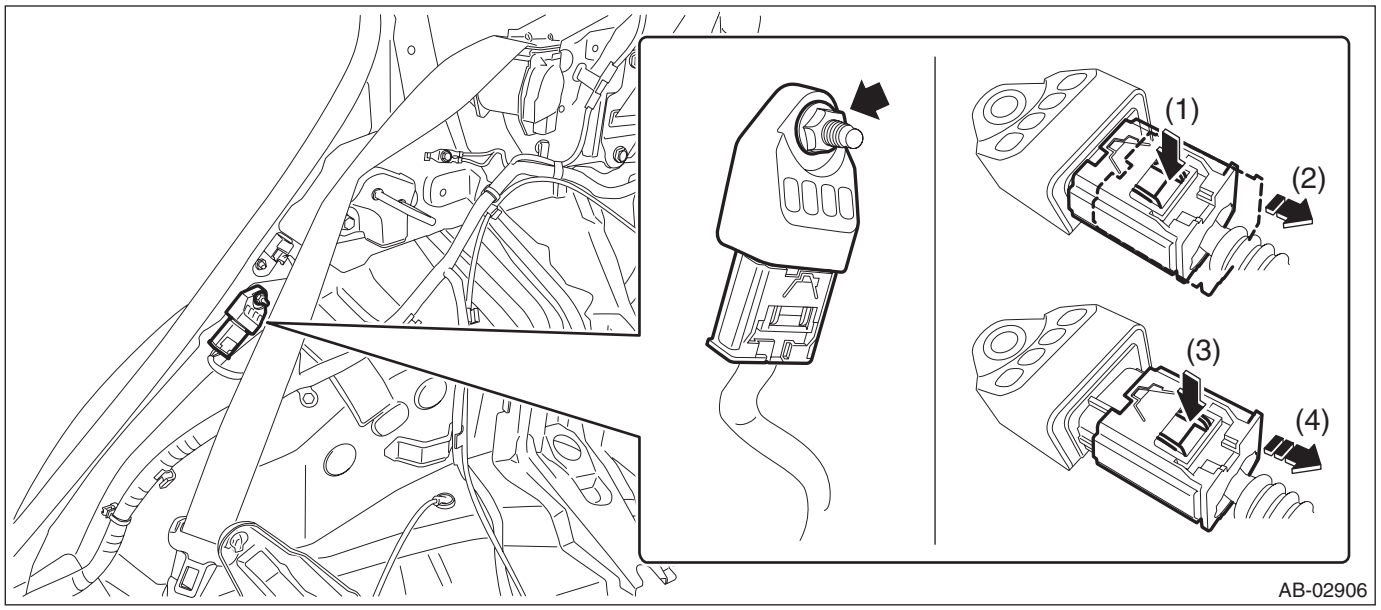
6) Remove the clips, and remove the trim panel - rear skirt.



7) Remove the trim panel - rear apron. (On the side where the curtain airbag sensor is removed)
   (1) Remove the caps, and then remove the screws.
   (2) Remove the clips, and remove the trim panel - rear apron.



8) Remove the nuts and then remove the curtain airbag sensor. <Ref. to AB-27, SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR, PROCEDURE, Airbag Connector.>



B: INSTALLATION

CAUTION:
• Do not reuse the bolt and nut.
Always replace with the specified new bolts and nuts.
• When installing the sensor, insert the set pin on the backside of the sensor into the hole on the body side securely.

1) Before installation, inspect the following items and replace any faulty part with a new one.
- Curtain airbag sensor or connector is damaged.
- Curtain airbag module has been activated.

2) Install each part in the reverse order of removal.

Tightening torque:
Curtain airbag sensor: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)
Rear seat backrest assembly: <Ref. to SE-5, REAR SEAT, COMPONENT, General Description.>

14.Satellite Safing Sensor

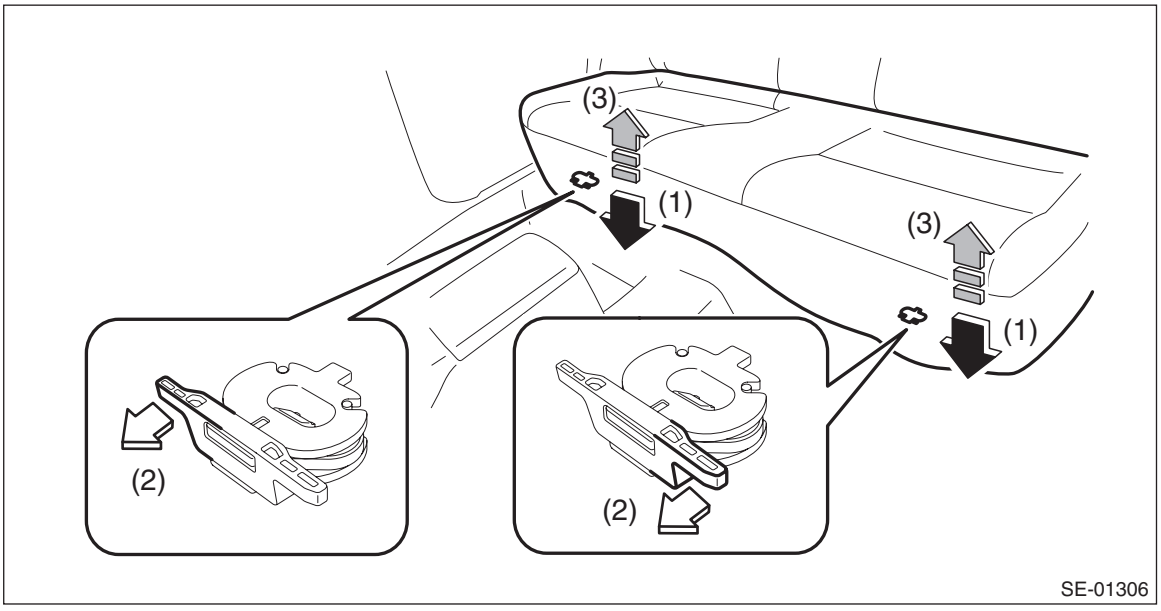
A: REMOVAL

1) Turn the ignition switch to OFF.
2) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

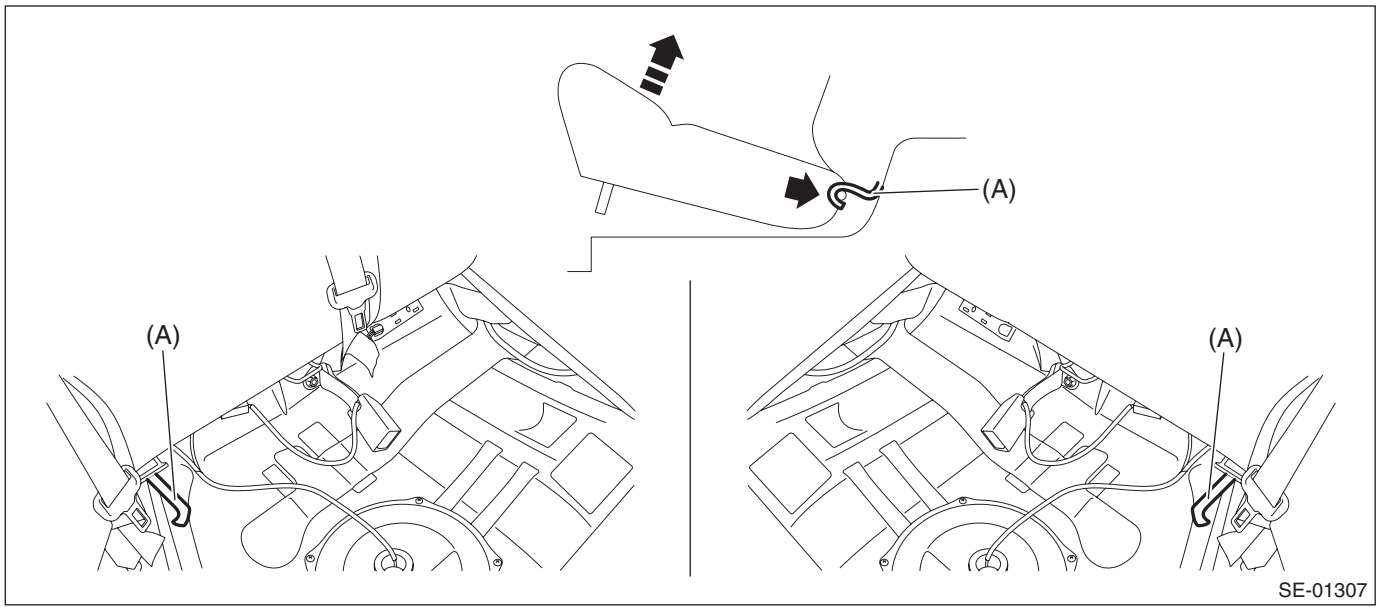
CAUTION:
The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

3) Remove the rear seat cushion assembly.
   (1) Push the corners of the rear seat cushion from above.
   (2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
   (3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

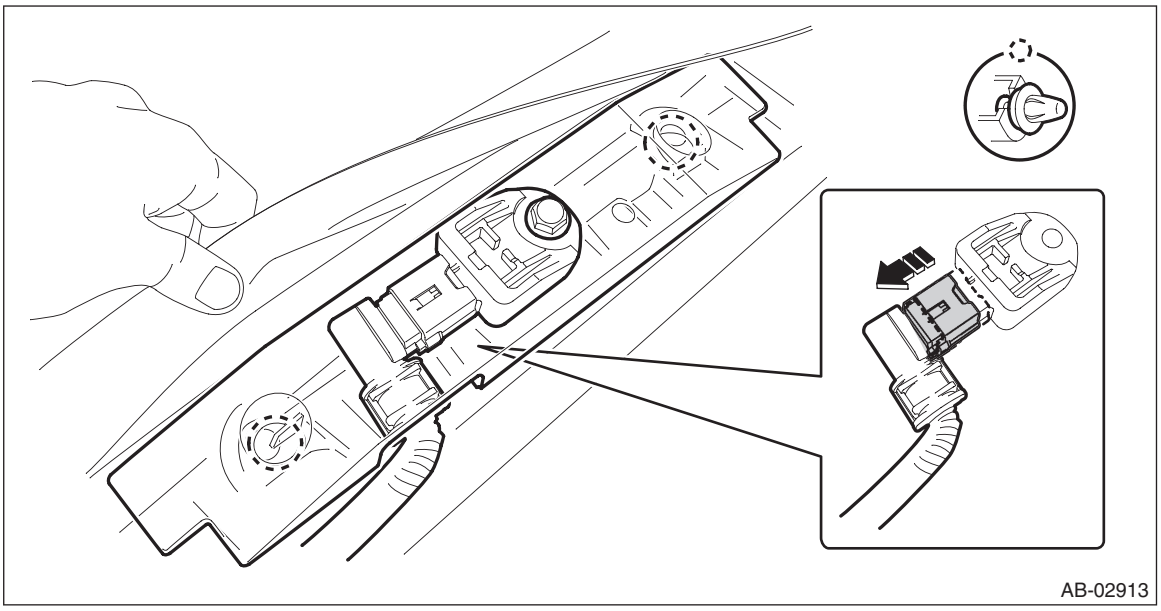
NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.



(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.



4) Remove the satellite safing sensor.
(1) Remove the clip, and remove the cover - satellite safing.
(2) Remove the bolts and then remove the satellite safing sensor. <Ref. to AB-25, FRONT DOOR IMPACT SENSOR AND SATELLITE SAFING SENSOR, PROCEDURE, Airbag Connector.>



B: INSTALLATION

CAUTION:
• Do not reuse the bolt and nut.
Always replace with the specified new bolts and nuts.
• When installing the cover - satellite safing, push the cover securely until it contacts the floor panel.
• If the cover - satellite safing is too loose at its mounting portion to remove easily, replace with a new cover - satellite safing.
• After installing the cover - satellite safing, make sure that the sensor harness does not get caught.
Install each part in the reverse order of removal.

Tightening torque:
7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

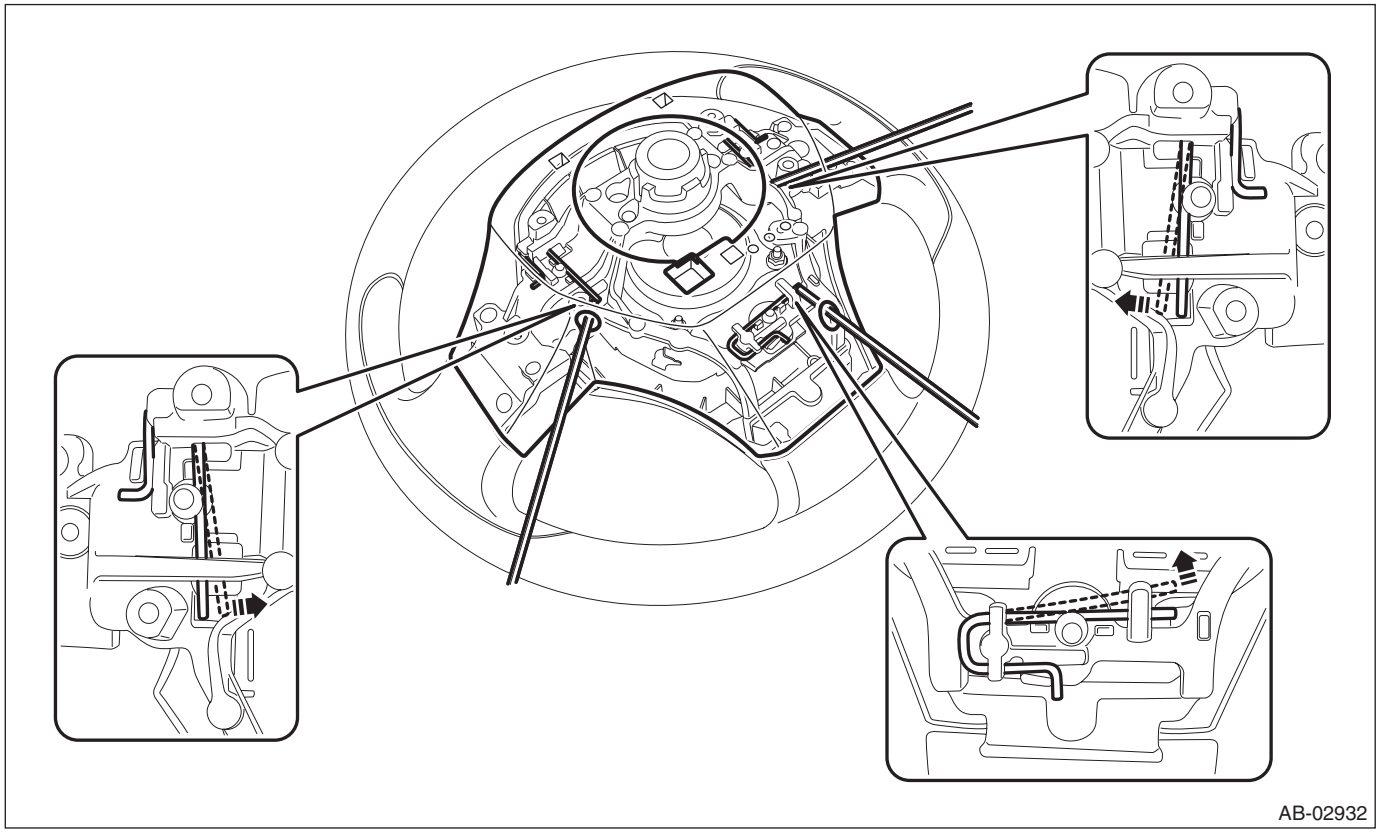
C: INSPECTION

Check for the following, and replace the damaged parts with new parts.
- The satellite safing sensor connector is damaged.
- The cover - satellite safing is damaged
- Side airbag or curtain airbag has been activated.

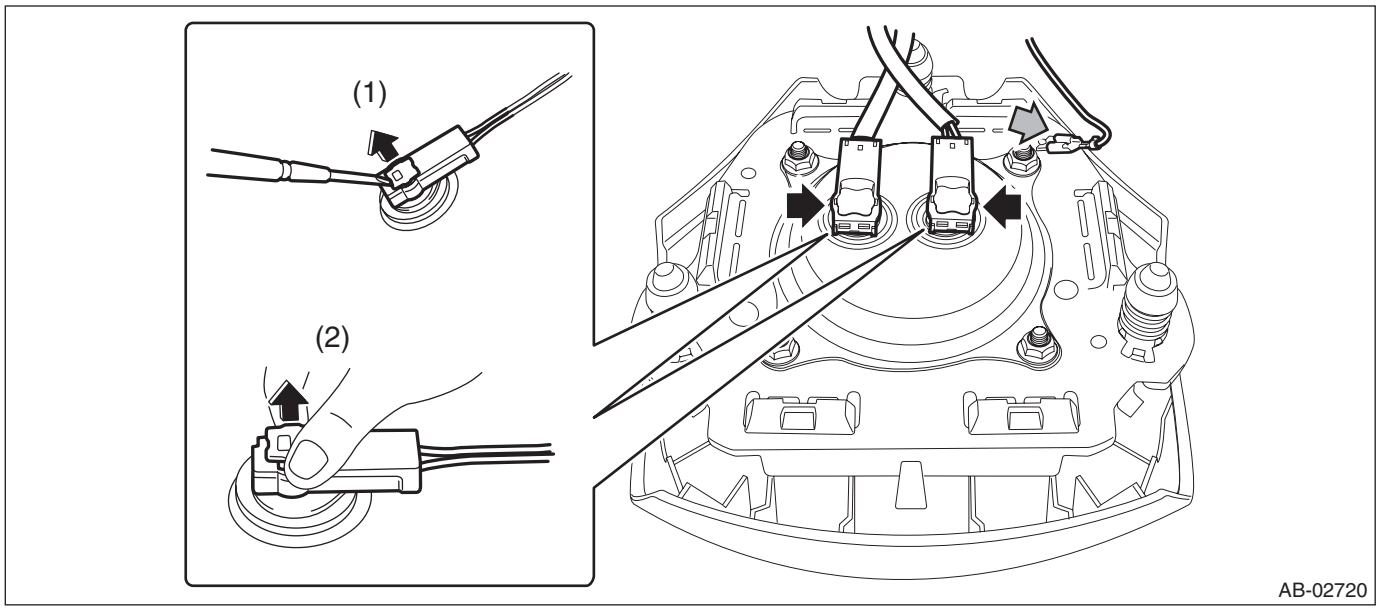
15.Roll Connector

A: REMOVAL

1) Position the front wheels straight ahead. (After moving a vehicle 5 m (16 ft) or more with front wheels positioned straight ahead, make sure that the vehicle moves straight ahead.)
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
4) Remove the driver's airbag module.
   (1) Using a hexagon wrench wrapped with protective tape, push in the snap pins to disengage the locks (3 places).



(2) Disconnect the horn harness and airbag connector, and remove the driver's airbag module. <Ref. to AB-22, DRIVER'S AIRBAG MODULE, CURTAIN AIRBAG MODULE & PRETENSIONER, PROCEDURE, Airbag Connector.>

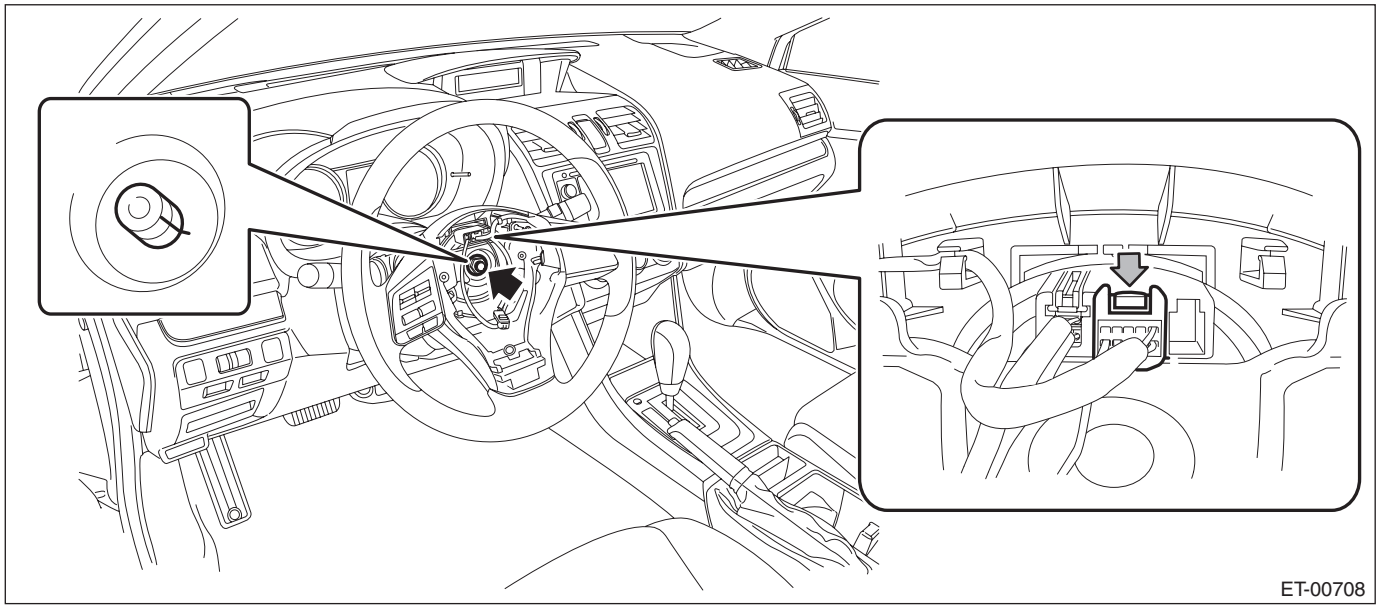


5) Remove the steering wheel.

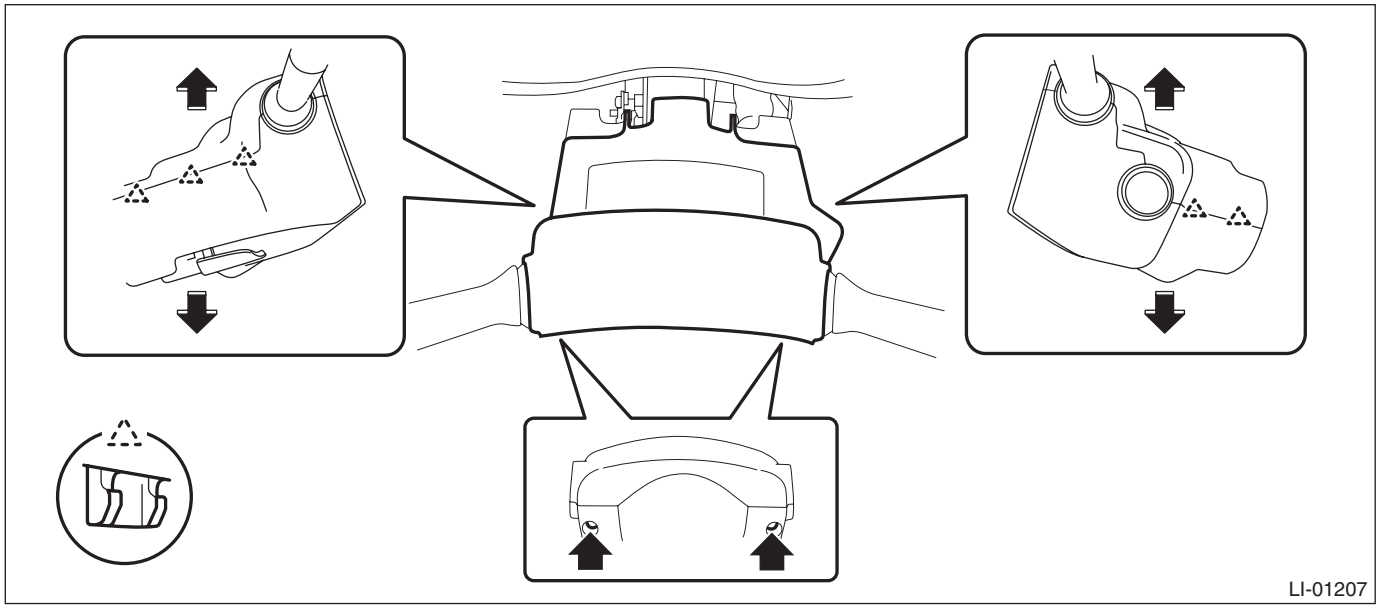
CAUTION:
- **Always use the steering wheel puller for removal to avoid deforming the steering wheel.**
- **If the steering wheel has been removed, make sure that the roll connector is not turned from the original position.**

(1) Disconnect the connector and remove the nut.
(2) Put alignment marks and remove the steering wheel.

Preparation tool:
Steering wheel puller

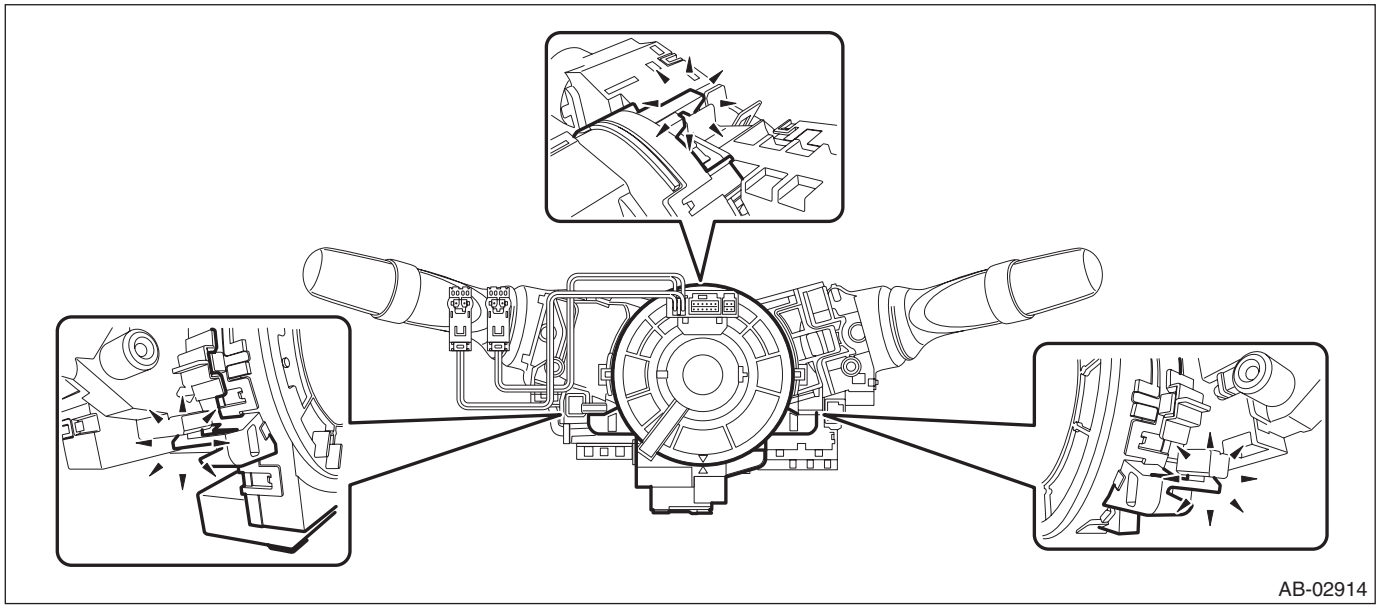


6) Remove the cover assembly - column.
(1) Remove the screws.
(2) Release the claw, and remove the cover assembly - column UPR and the cover assembly - column LWR.

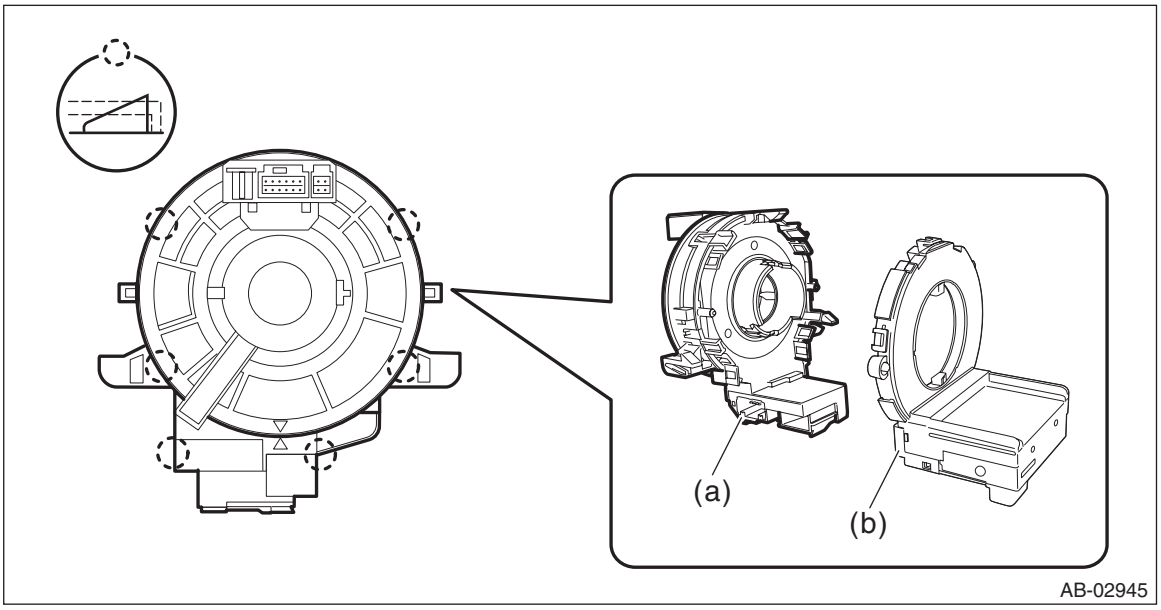


7) Remove the roll connector.

CAUTION:
Make sure that the roll connector is not turned from the original position.
(1) Disconnect the connector under the roll connector.
(2) Release the claws and remove the roll connector.



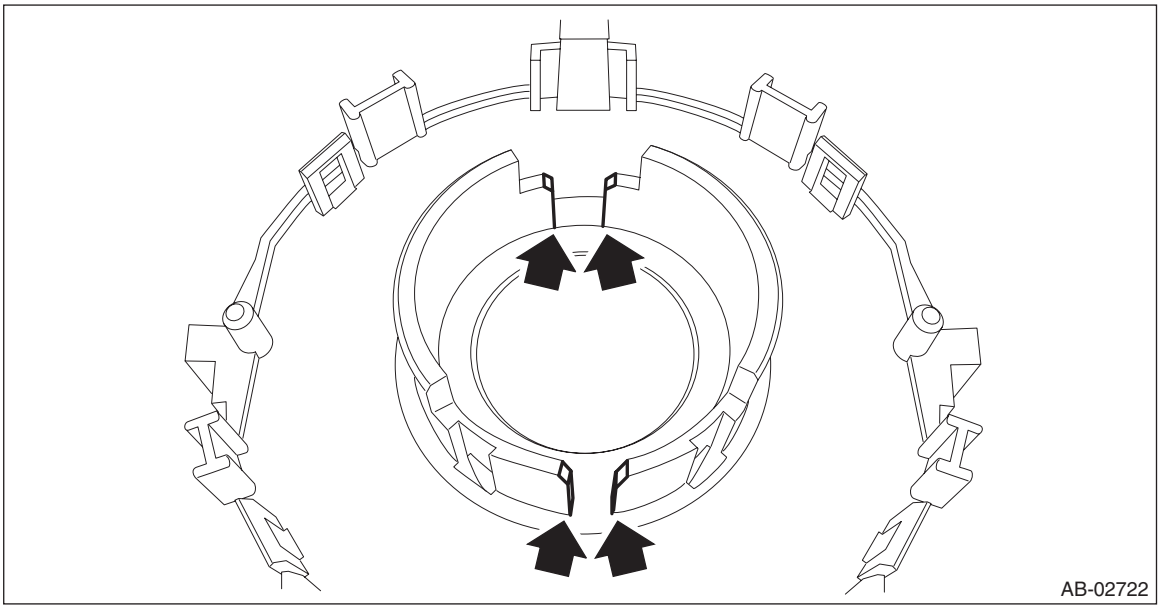
(3) Release the claws and separate the roll connector (a) and steering angle sensor (b).



B: INSTALLATION

CAUTION:
If the steering wheel and steering angle sensor are removed, perform "VDC sensor midpoint setting mode" of the VDC. <Ref. to VDC-18, VDC SENSOR MIDPOINT SETTING MODE, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>

1) Before attaching a new roll connector, apply a thin coat of grease contained in the connector onto the areas shown by the arrows.



2) Install each part in the reverse order of removal.
3) Before installing steering wheel, be sure to adjust the direction of roll connector with steering. <Ref. to AB-105, ADJUSTMENT, Roll Connector.>

Tightening torque:
Steering wheel: 39 N·m (3.98 kgf-m, 28.8 ft-lb)

Clearance:
Cover assembly - column to Steering wheel: 4 — 6 mm (0.16 — 0.24 in)

C: INSPECTION

1. VISUAL INSPECTION

Check for the following, and replace the damaged parts with new parts.
- Combination switch is cracked or deformed.
- Roll connector is cracked or deformed.

2. UNIT INSPECTION OF ROLL CONNECTOR

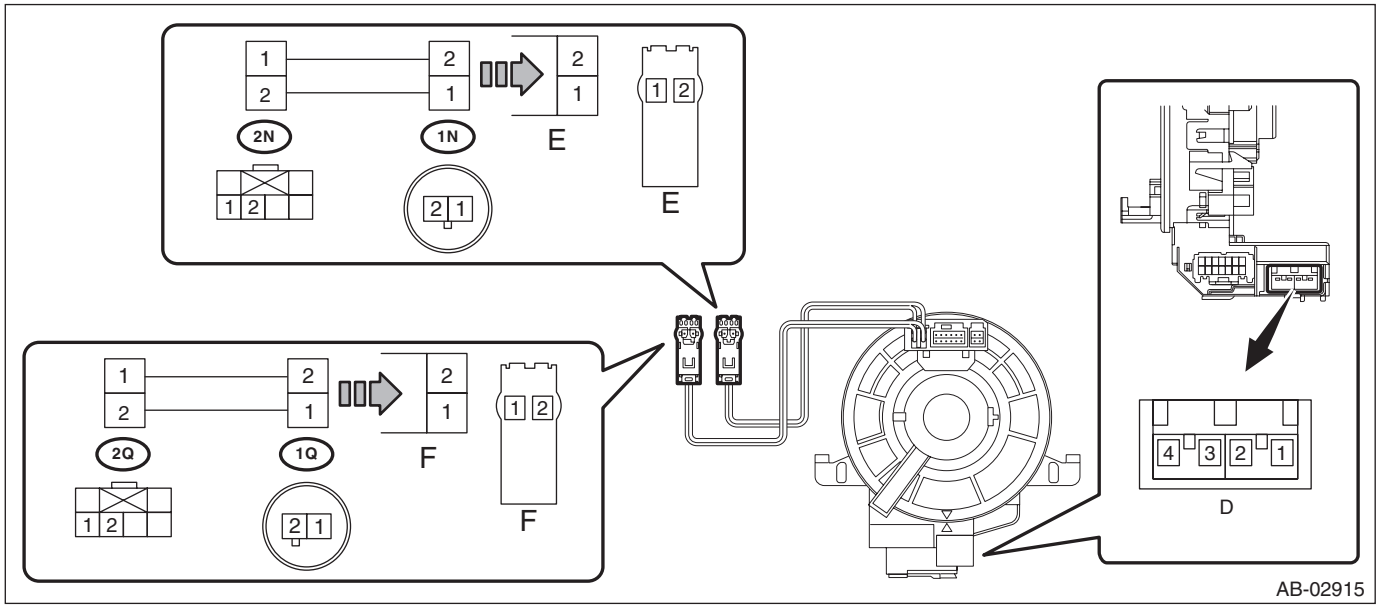
CAUTION:
• Do not rotate the roll connector to more than the specified number of turns. Otherwise, the roll connector internal wire may be broken.
• When determining the end stop, rotate the connector slowly without applying excessive force. Applying excessive force at the end stop may break the internal wire.

1) Adjust the roll connector. <Ref. to AB-105, ADJUSTMENT, Roll Connector.>
2) Set the roll connector to the central position.
3) Connect the test harness to the connector E and connector F.

PREPARATION TOOL:
Test harness N (98299SA000)
Test harness Q (98299SA040)
- Connector E - Test harness N (1N)
- Connector F - Test harness Q (1Q)

4) With the following conditions, check the resistance between the test harness connector terminals.
- Perform the check with the roll connector centered (front wheels direct straightforward).
- Rotate the roll connector counterclockwise from the center (front wheels direct straightforward) to an end stop. Then, perform the check while rotating it clockwise to approximately 4.5 turns.

PREPARATION TOOL:
Circuit tester



Terminal No.	Inspection conditions	Standard
(2N) No. 1 — (2N) No. 2	Always	Less than 1 Ω
(2Q) No. 1 — (2Q) No. 2	Always	Less than 1 Ω

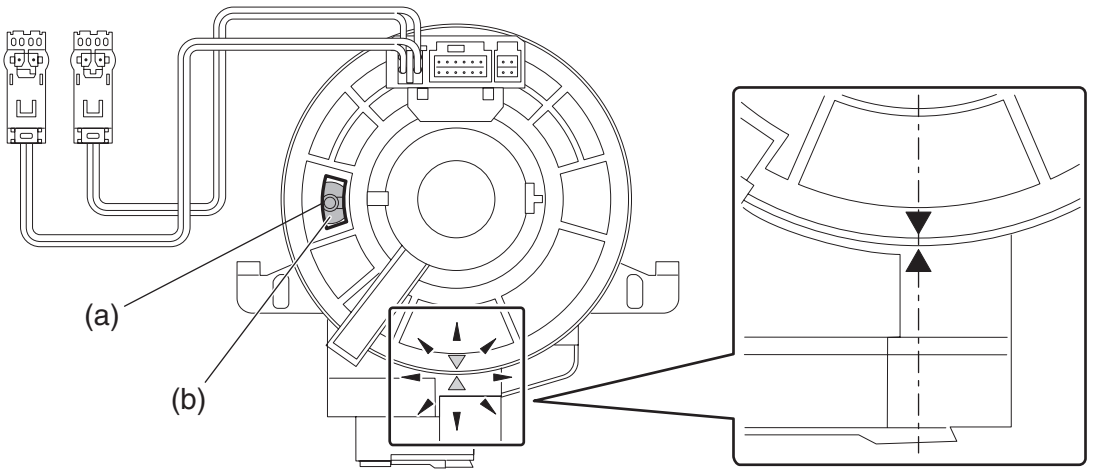
NOTE:
The connector D is designed to short the terminals D1/D2 and D3/D4 when disconnected.

5) Replace the roll connector with a new part if the inspection result is not within the standard.

D: ADJUSTMENT

CAUTION:
• Do not rotate the roll connector to more than the specified number of turns. Otherwise, the roll connector internal wire may be broken.
• When determining the end stop, rotate the connector slowly without applying excessive force. Applying excessive force at the end stop may break the internal wire.
1) Check that front wheels are positioned in straight ahead direction.
2) Rotate the roll connector counterclockwise until it stops.
3) Rotate the roll connector clockwise approx. 2.5 turns until "▲" marks are aligned.

NOTE:
When the roll connector comes to the center position, the orange roller (b) can be seen from the sight glass (a).



AB-02916

AIRBAG SYSTEM (DIAGNOSTICS)

AB(diag)

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1. Basic Diagnostic Procedure

A: PROCEDURE

Step		Check	Yes	No
1	**CHECK WARNING LIGHT.** Check whether the airbag warning light in the combination meter is lit.	Does the airbag warning light illuminate?	Go to step **2**.	Perform the diagnosis according to phenomenon of the problem.
2	**READ DTC.** 1) Turn the ignition switch to OFF. 2) Connect the Subaru Select Monitor to data link connector. 3) Turn the ignition switch to ON and run the Subaru Select Monitor. 4) Read the DTC. (Current malfunction) <Ref. to AB(diag)-24, OPERATION, Read Diagnostic Trouble Code (DTC).> NOTE: If the communication function of the Subaru Select Monitor cannot be executed properly, check the communication circuit. <Ref. to AB(diag)-21, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, INSPECTION, Subaru Select Monitor.> 5) Record all DTCs and freeze frame data.	Is DTC displayed?	Go to step **3**.	Go to "Airbag Warning Light Failure" <Ref. to AB(diag)-30, Airbag Warning Light Failure.>.
3	**PERFORM DIAGNOSIS.** 1) Determine the possible cause from "List of Diagnostic Trouble Code (DTC)" <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>. 2) Inspect the DTC using "List of Diagnostic Trouble Code (DTC)". 3) Repair the trouble cause. 4) Perform the Clear Memory Mode. <Ref. to AB(diag)-26, Clear Memory Mode.> 5) Perform the Inspection Mode. <Ref. to AB(diag)-25, Inspection Mode.> 6) Read any other DTCs displayed.	Is DTC displayed?	Perform the procedure 1) to 5) in step 3.	Finish the diagnosis.

2. Check List for Interview

A: CHECK

Customer's Name		Inspector's Name	
Date Vehicle Brought in	/ /	Registration No.	
Odometer Reading	km miles	V.I.N.	
Date Problem Occurred	/ /	Registration Year	/ /
Weather	❑ Fine ❑ Cloudy ❑ Rainy ❑ Snowy ❑ Others:		
Temperature	°C (°F)		
Road Condition	❑ Flat road ❑ Uphill ❑ Downhill ❑ Gravel road ❑ Others:		

Vehicle Operation	❑ Starting
	❑ Idling
	❑ Driving
	  ❑ Constant speed
	  ❑ Accelerating
	  ❑ Decelerating
	  ❑ Turning
	  ❑ Others:		

Details of Problem			
Airbag Warning Light Operation	❑ Normal (After turning the ignition switch to ON, lit for approximately 6 seconds and goes off.) ❑ Remains ON ❑ Remains OFF		
DTC output	❑ OK code ❑ DTC: (Code:)		

3. General Description

A: CAUTION

Refer to “CAUTION” in “General Description” in Airbag System. <Ref. to AB-10, CAUTION, General Description.>

B: INSPECTION

Measure the battery voltage and check electrolyte.

Standard voltage: 12 V

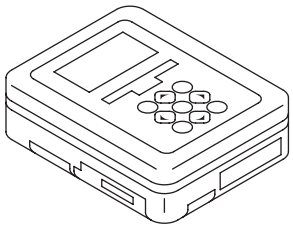
Specific gravity: 1.260 or more

C: PREPARATION TOOL

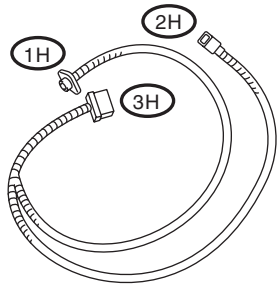
CAUTION:
To measure the voltage and resistance of airbag system component, be sure to use the specified test harness.

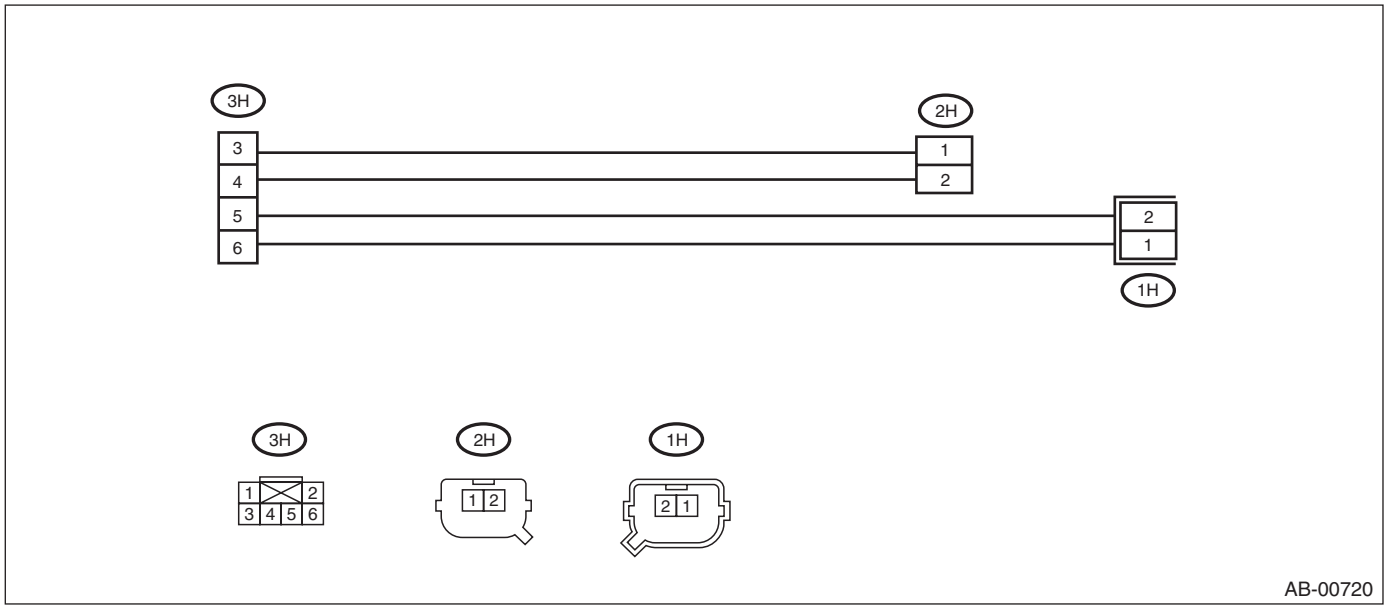
1. SPECIAL TOOL

- Subaru Select Monitor

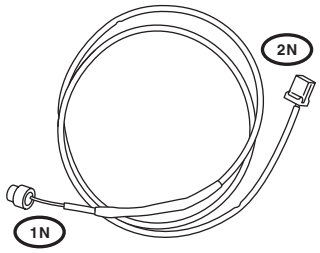
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

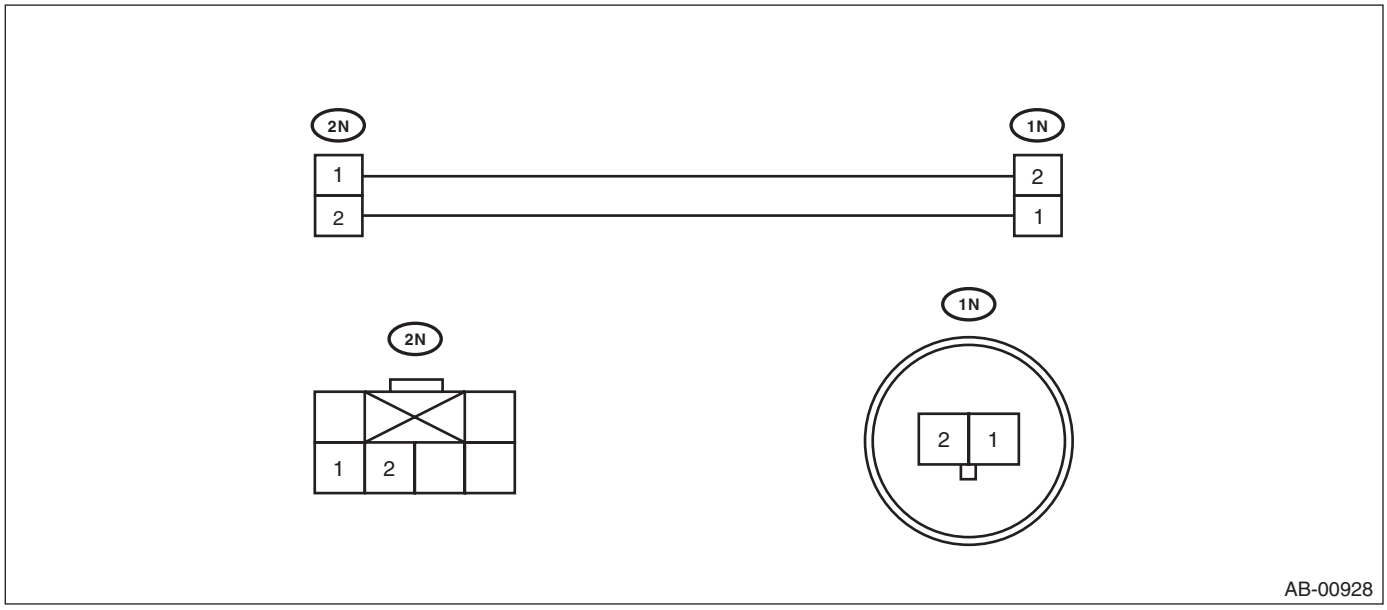
- TEST HARNESS H

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299FA030	98299FA030	TEST HARNESS H	Used when measuring voltage and resistance of front sub sensor and front door impact sensor.

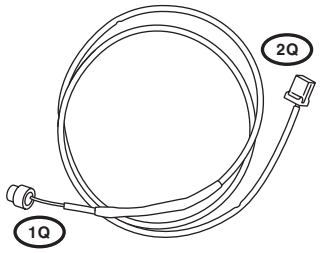


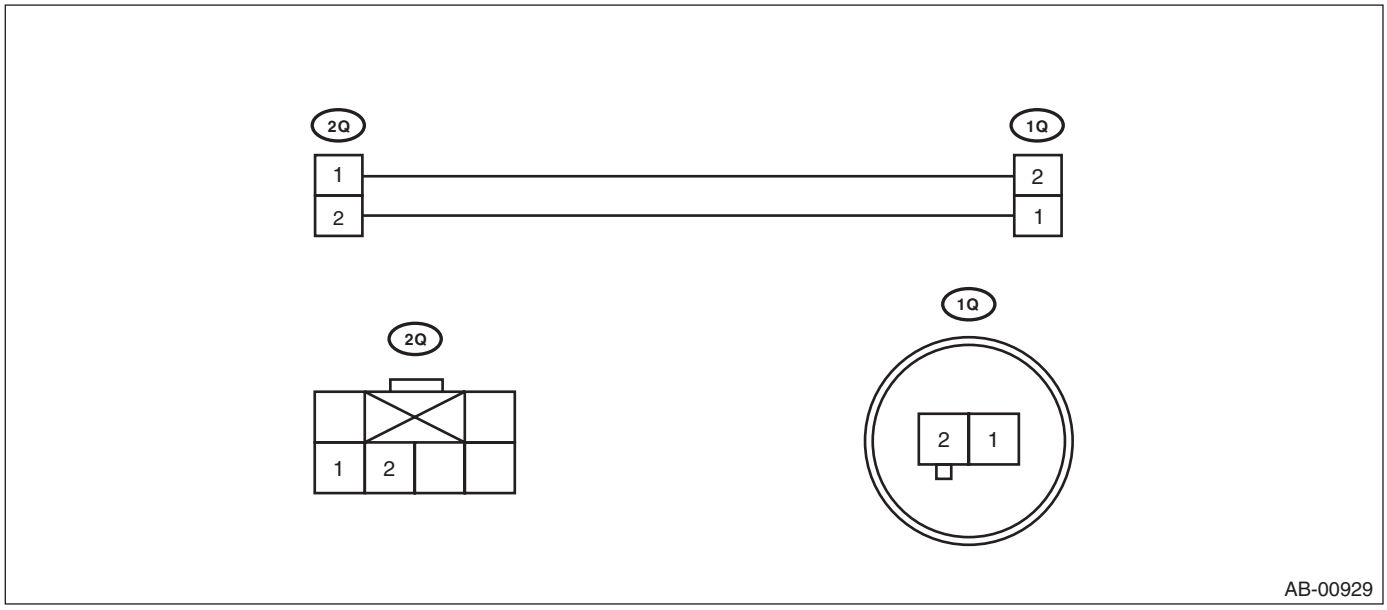
- TEST HARNESS N

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299SA000	98299SA000	TEST HARNESS N	Used when measuring voltage and resistance of driver's airbag module, seat belt pretensioner and curtain airbag module.

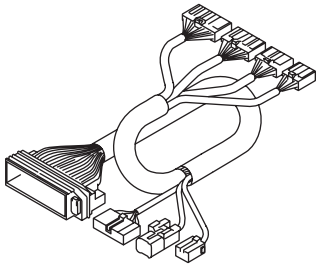


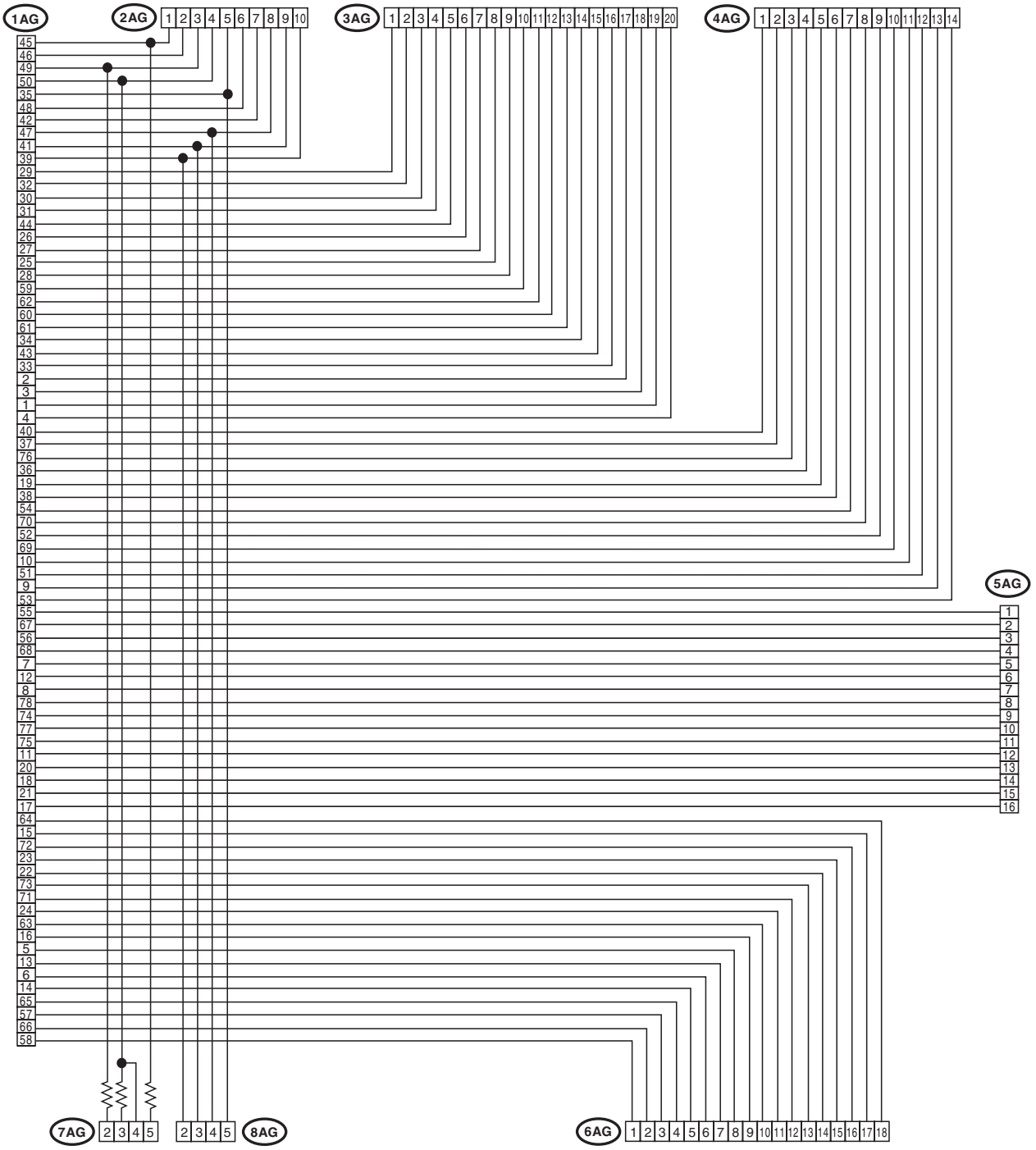
- TEST HARNESS Q

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299SA040	98299SA040	TEST HARNESS Q	Used when measuring voltage and resistance of driver's airbag module.

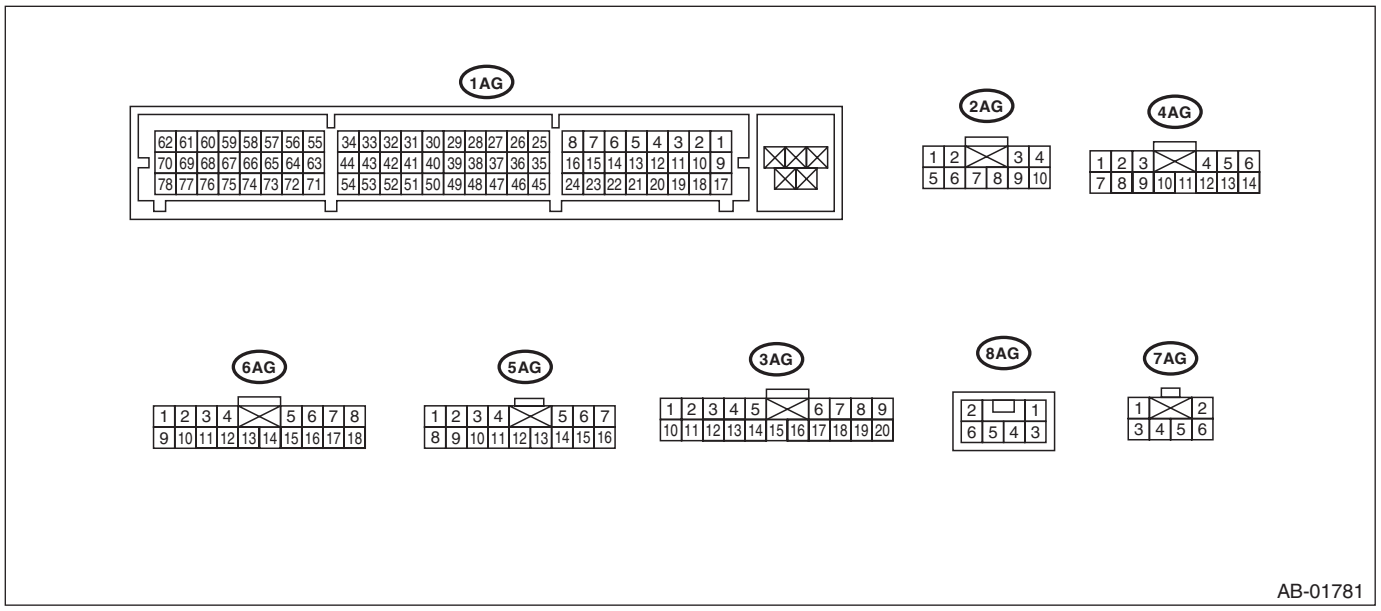


- TEST HARNESS AG

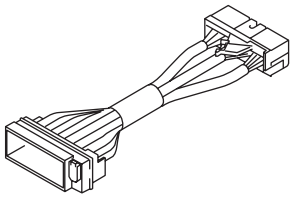
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299AG070	98299AG070	TEST HARNESS AG	Used when measuring voltage and resistance of airbag control module.

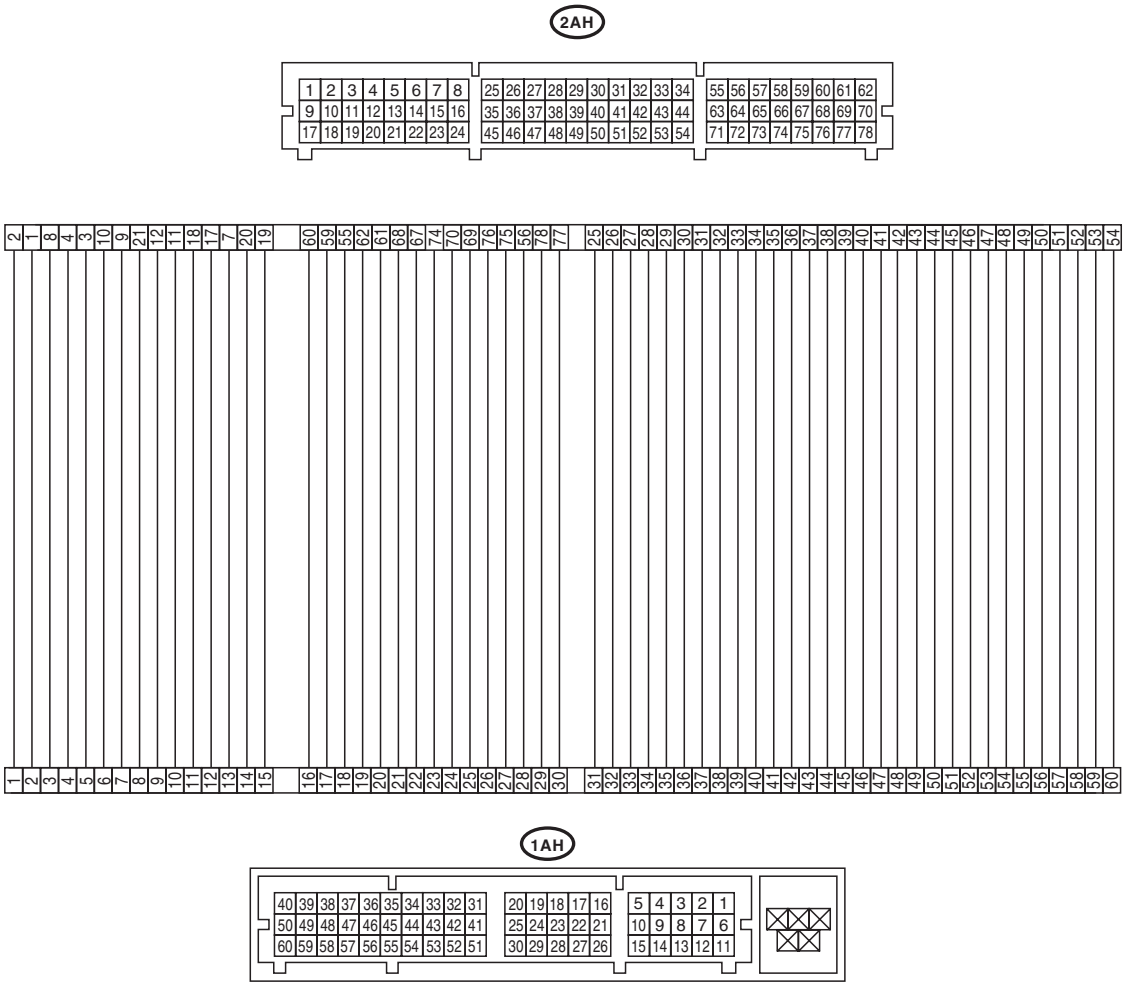


AB-01902

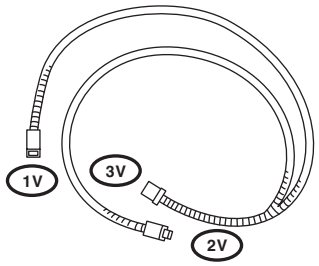

1AG
62 61 60 59 58 57 56 55
70 69 68 67 66 65 64 63
78 77 76 75 74 73 72 71
34 33 32 31 30 29 28 27 26 25
44 43 42 41 40 39 38 37 36 35
54 53 52 51 50 49 48 47 46 45
8 7 6 5 4 3 2 1
16 15 14 13 12 11 10 9
24 23 22 21 20 19 18 17
2AG
1 2 3 4
5 6 7 8 9 10
4AG
1 2 3 4 5 6
7 8 9 10 11 12 13 14
6AG
1 2 3 4 5 6 7 8
9 10 11 12 13 14 15 16 17 18
5AG
1 2 3 4 5 6 7
8 9 10 11 12 13 14 15 16
3AG
1 2 3 4 5 6 7 8 9
10 11 12 13 14 15 16 17 18 19 20
8AG
2 1
6 5 4 3
7AG
1 2
3 4 5 6
AB-01781

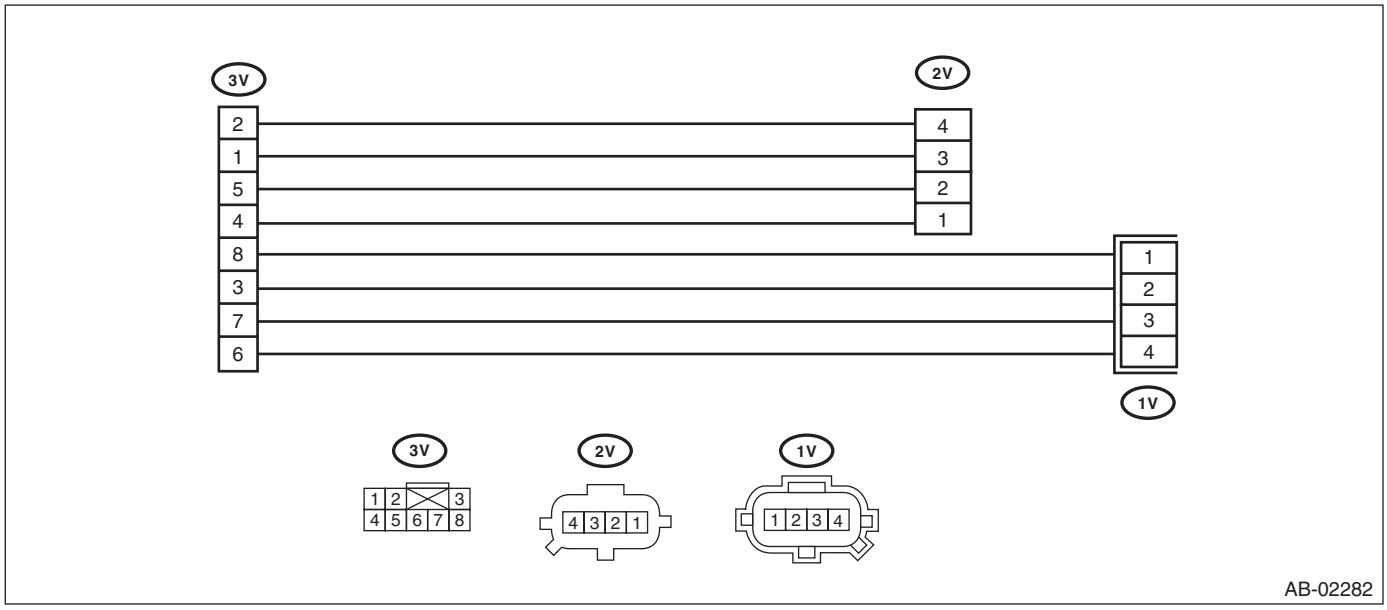
- TEST HARNESS AH

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299AG080	98299AG080	TEST HARNESS AH	Used together with test harness AG when measuring voltage and resistance of the airbag control module.



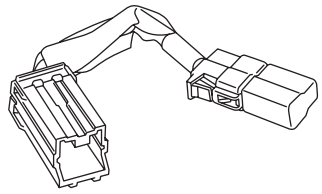
- TEST HARNESS V

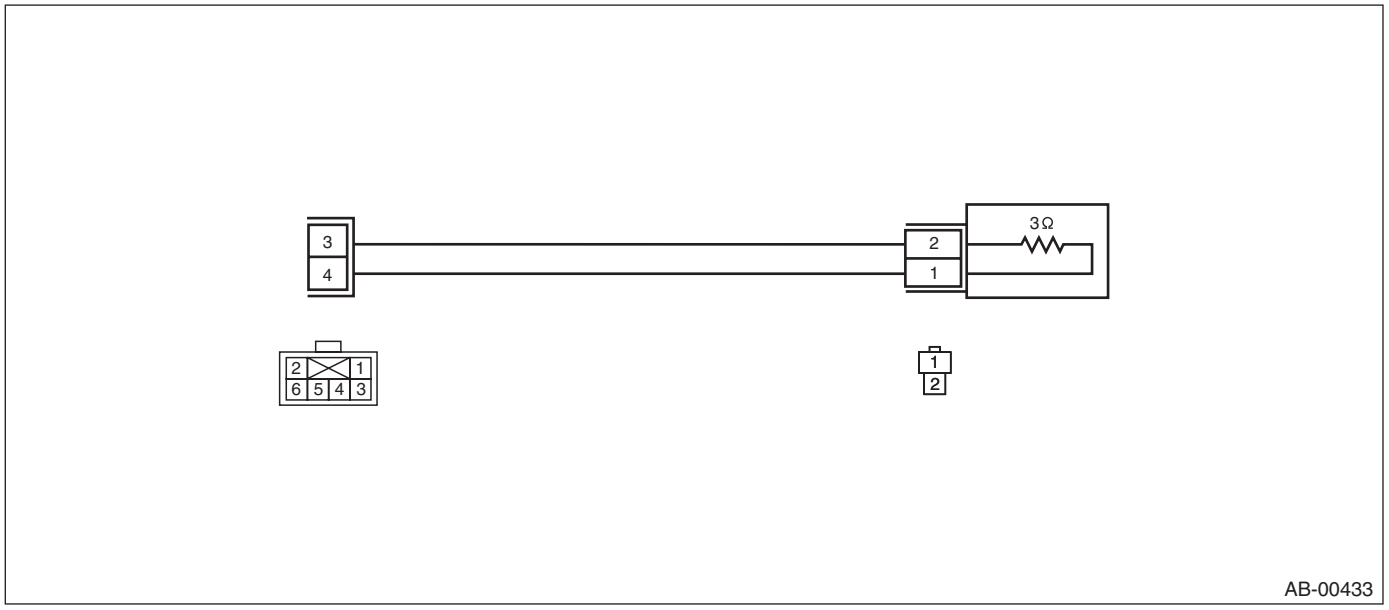
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299AG010	98299AG010	TEST HARNESS V	Used when measuring voltage and resistance of side airbag sensor and curtain airbag sensor.



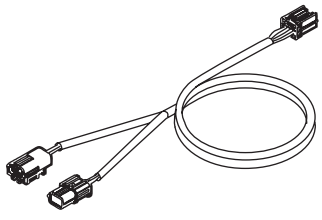
AB-02282

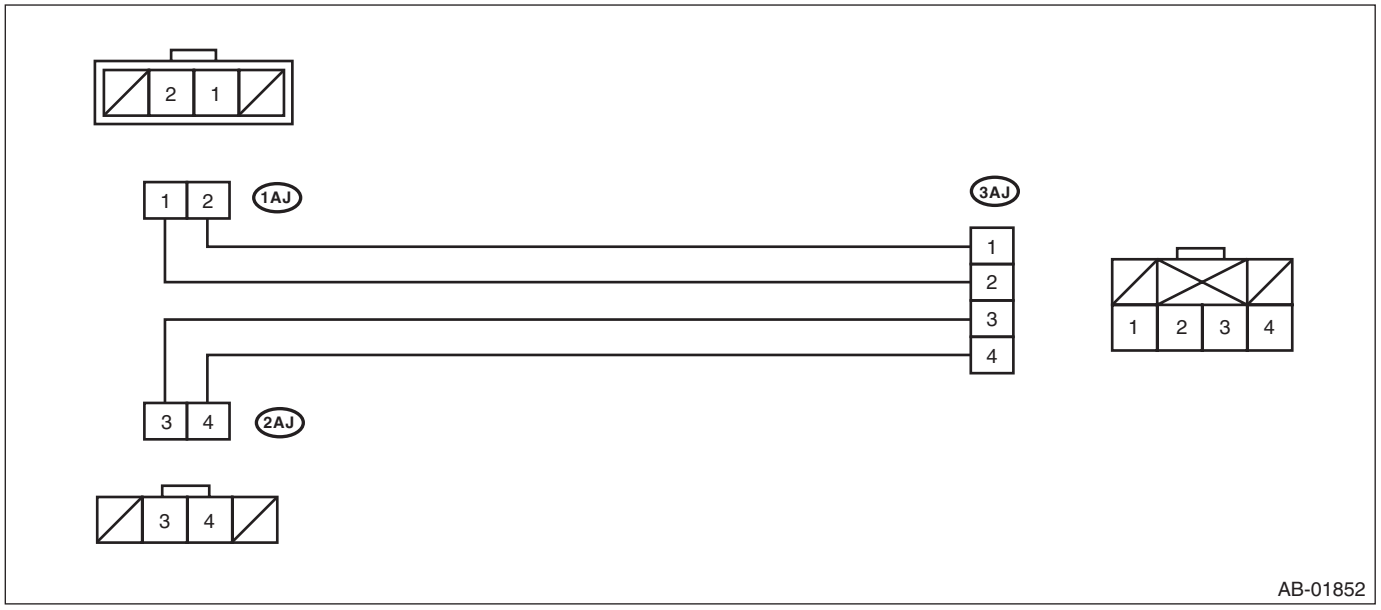
- AIRBAG RESISTOR

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299PA040	98299PA040	AIRBAG RESISTOR	Used in replacement of airbag module for which resistance value is same as airbag module. Two ST are required for diagnosis of two-stage inflator type airbag module.

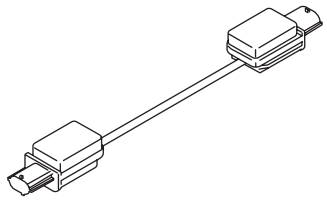


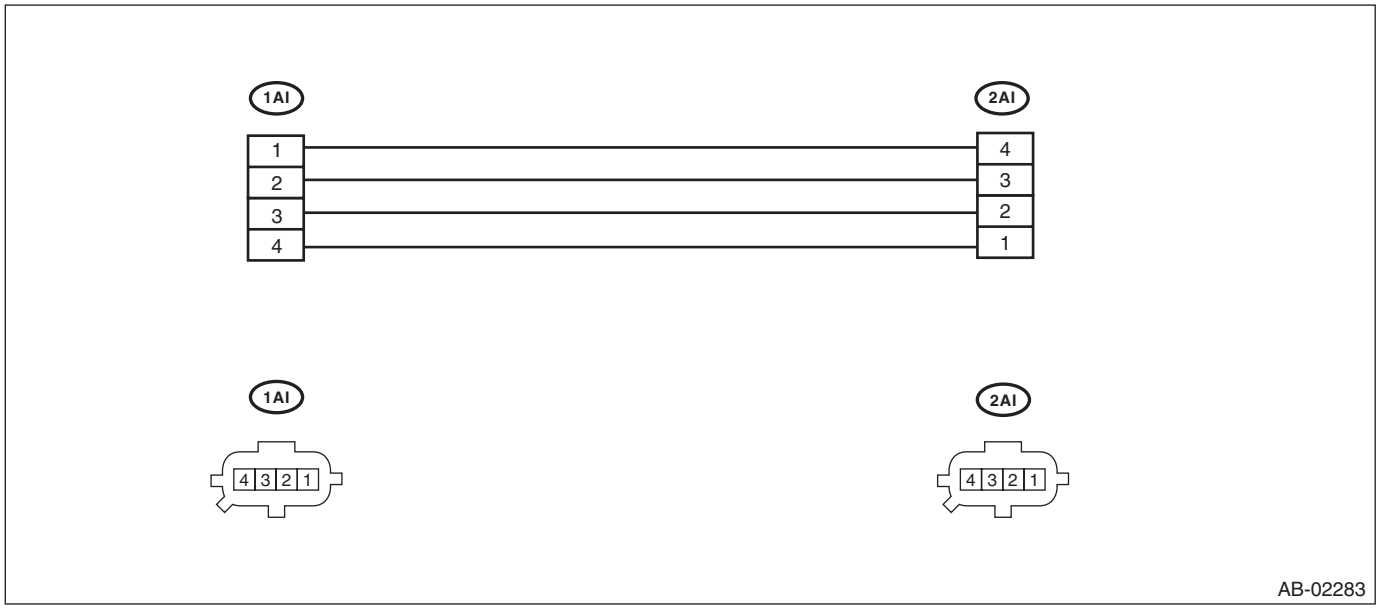
- TEST HARNESS AJ

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299FG000	98299FG000	TEST HARNESS AJ	Used when measuring power supply and resistance of side airbag harness.



- TEST HARNESS AI

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299AG090	98299AG090	TEST HARNESS AI	• Used for diagnoses of side airbag sensor and curtain airbag sensor. • Used together with test harness V.

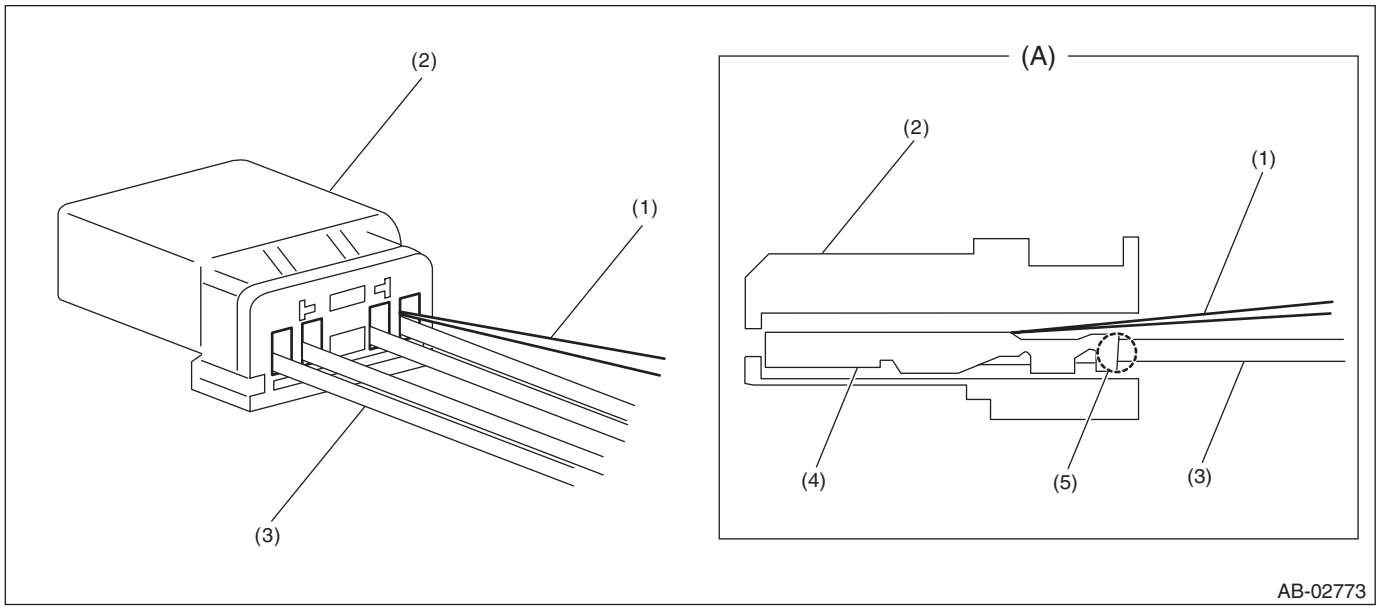


2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.
Oscilloscope	Used for measuring the sensor.
Probe	Used when measuring voltage and resistance of passenger's airbag module.

3. HOW TO USE PROBE

Insert the probe into the harness hole, and contact it with the terminal.



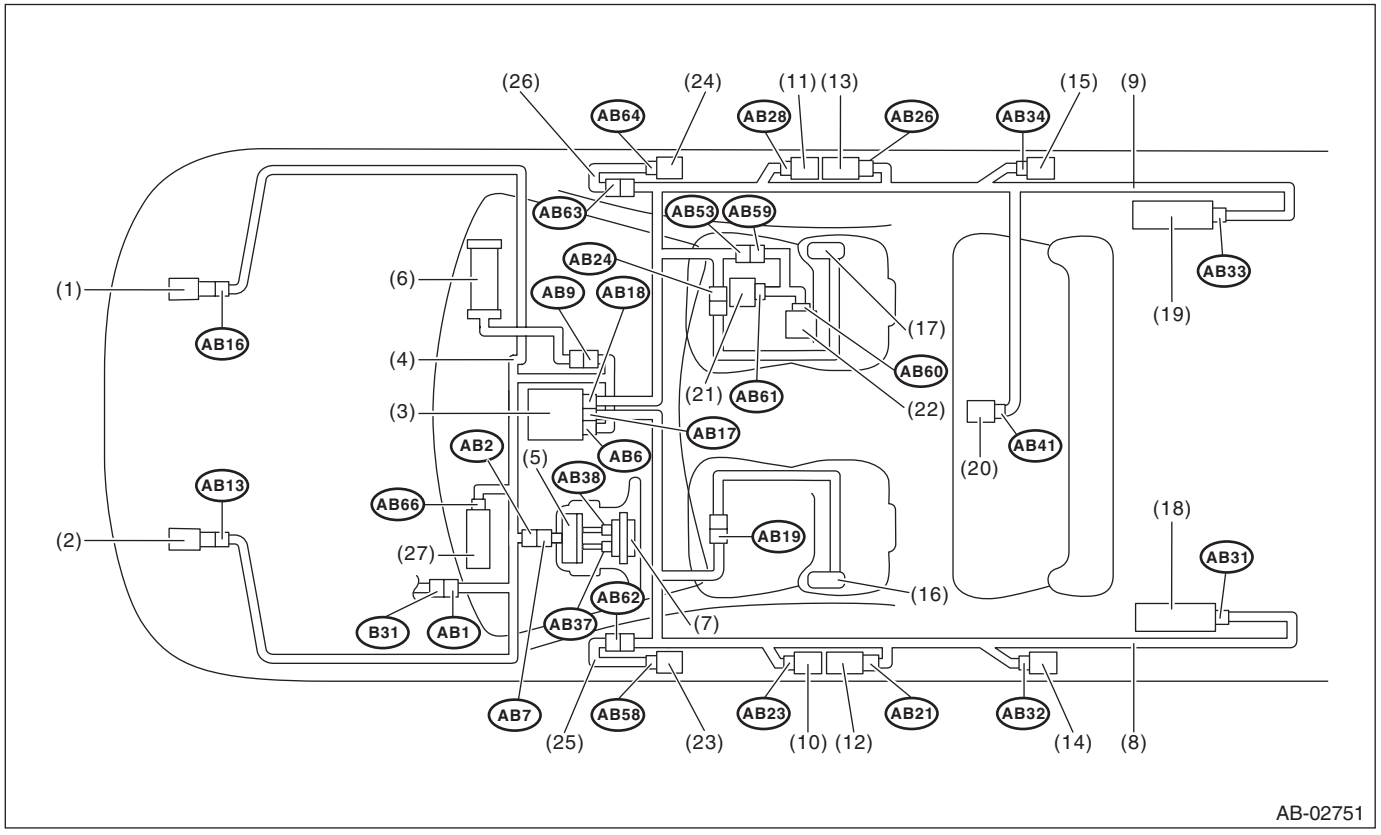
(A) Cross section

(1) Probe
(2) Connector (housing)
(3) Harness
(4) Terminal
(5) Connection

CAUTION:
- **Do not insert the probe forcibly.**
- **Be careful not to contact it to the connection (5) between the terminal and harness. (Harness will come off easily from connector if doing so.)**

4. Electrical Component Location

A: LOCATION



(1) Front sub sensor (RH)
(2) Front sub sensor (LH)
(3) Airbag control module
(4) Airbag main harness
(5) Roll connector
(6) Passenger's airbag inflator
(7) Driver's airbag inflator
(8) Airbag rear harness (LH)
(9) Airbag rear harness (RH)
(10) Side airbag sensor (LH)
(11) Side airbag sensor (RH)
(12) Seat belt pretensioner (LH)
(13) Seat belt pretensioner (RH)
(14) Curtain airbag sensor (LH)
(15) Curtain airbag sensor (RH)
(16) Side airbag inflator (LH)
(17) Side airbag inflator (RH)
(18) Curtain airbag inflator (LH)
(19) Curtain airbag inflator (RH)
(20) Satellite safing sensor
(21) Occupant detection control module
(22) Buckle switch (RH)
(23) Front door impact sensor (LH)
(24) Front door impact sensor (RH)
(25) Door harness (LH)
(26) Door harness (RH)
(27) Knee airbag inflator

Connector No.	(AB1)	(AB2)	(AB6)	(AB7)	(AB9)	(AB13)	(AB16)	(AB17)	(AB18)	(AB19)	(AB21)	(AB23)
Pin	10	4	30	4	4	2	2	15	15	4	2	4
Color	Gray	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Black	Yellow
Male/Female	Female	Female	Female	Male	Female	Female	Female	Female	Female	Female	Female	Female
Connector No.	(AB24)	(AB26)	(AB28)	(AB31)	(AB32)	(AB33)	(AB34)	(AB37)	(AB38)	(AB41)	(AB53)	(AB58)
Pin	4	2	4	2	4	2	4	2	2	2	3	2
Color	Yellow	Black	Yellow	Black	Yellow	Black	Yellow	Orange	Black	Yellow	Brown	Yellow
Male/Female	Female	Female	Female	Female	Female	Female	Female	Female	Female	Female	Female	Female
Connector No.	(AB59)	(AB60)	(AB61)	(AB62)	(AB63)	(AB64)	(AB66)					
Pin	3	2	10	2	2	2	2					
Color	Brown	Yellow	Black	Yellow	Yellow	Yellow	Black					
Male/Female	Male	Male	Female	Female	Female	Female	Female					
★: White or natural color												

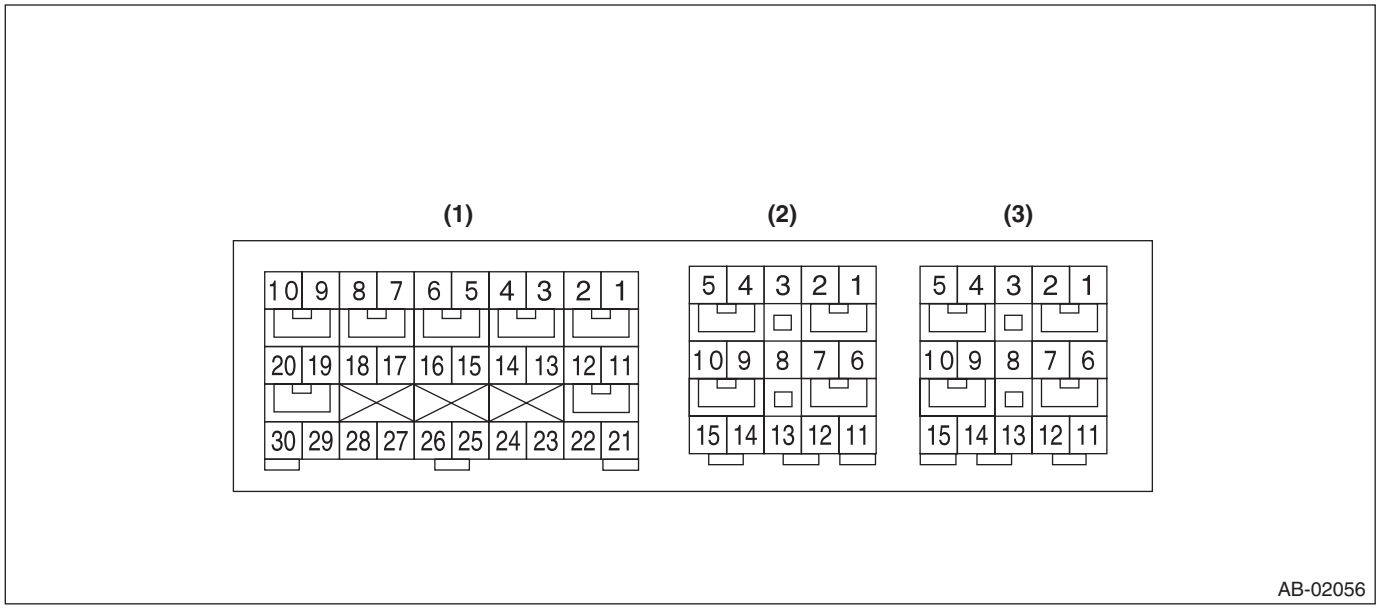
5. Airbag Connector

A: PROCEDURE

For operation procedures, refer to “Airbag Connector” of Airbag System. <Ref. to AB-19, Airbag Connector.>

6. Airbag Control Module I/O Signal

A: ELECTRICAL SPECIFICATION



- Terminal numbers in airbag control module connector are shown in the figure.
- The airbag warning light illuminates when the connector is removed from the airbag control module.

Item		Control module terminal No.
Ignition power supply	Dedicated fuse	(1) — 21
Passenger's airbag module level one	+	(1) — 4
	–	(1) — 3
Passenger's airbag module level two	+	(1) — 1
	–	(1) — 2
Driver's airbag module level one	+	(1) — 5
	–	(1) — 6
Driver's airbag module level two	+	(1) — 8
	–	(1) — 7
Driver's knee airbag module	+	(1) — 9
	–	(1) — 10
CAN-H		(1) — 13
CAN-L		(1) — 22
Front sub sensor LH	+	(1) — 30
	–	(1) — 28
Front sub sensor RH	+	(1) — 29
	–	(1) — 27
Ground line (GND)		(1) — 25
		(1) — 26
Passenger's airbag OFF indicator		(1) — 17
Passenger's airbag ON indicator		(1) — 23
Passenger's seat belt warning		(1) — 15
Side airbag sensor LH Curtain airbag sensor LH Front door impact sensor LH	+	(2) — 8
	–	(2) — 15
Side airbag module LH	+	(2) — 9
	–	(2) — 10

Item		Control module terminal No.
Curtain airbag module LH	+	(2) — 7
	–	(2) — 6
Seat belt pretensioner LH	+	(2) — 2
	–	(2) — 1
Satellite safing sensor	+	(3) — 15
	–	(3) — 14
Seat belt pretensioner RH	+	(3) — 4
	–	(3) — 5
Side airbag sensor RH Curtain airbag sensor RH Front door impact sensor RH	+	(3) — 8
	–	(3) — 11
Side airbag module RH	+	(3) — 7
	–	(3) — 6
Curtain airbag module RH	+	(3) — 9
	–	(3) — 10
Occupant detection control module	+	(3) — 12
	–	(3) — 13

B: WIRING DIAGRAM

Refer to the WI section wiring diagram. <Ref. to WI-30, WIRING DIAGRAM, Airbag System.>

7. Subaru Select Monitor

A: OPERATION

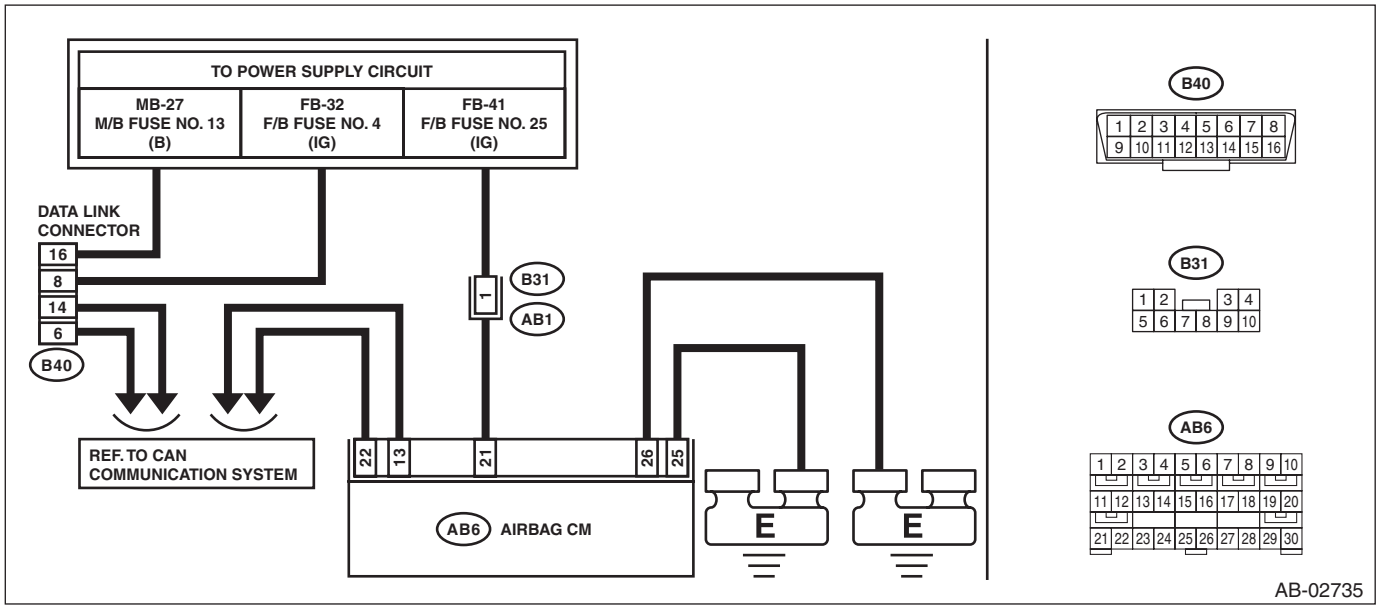
For operation procedures, refer to the “PC application help for Subaru Select Monitor”.

B: INSPECTION

1. COMMUNICATION FOR INITIALIZING IMPOSSIBLE

DTC DETECTING CONDITION:
Defective harness connector
TROUBLE SYMPTOM:
Communication is impossible between the airbag control module and the Subaru Select Monitor.

CAUTION:
Before performing diagnosis, refer to “CAUTION” in “General Description”. <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK IGNITION SWITCH.**	Is the ignition switch ON?	Go to step **2**.	Turn the ignition switch to ON, and select the airbag mode using the Subaru Select Monitor.
2	**CHECK BATTERY.** 1) Turn the ignition switch to OFF. 2) Measure the battery voltage.	Is the voltage 11 V or more?	Go to step **3**.	Charge or replace the battery.
3	**CHECK BATTERY TERMINAL.**	Is there poor contact at battery terminal?	Repair or tighten the battery terminal.	Go to step **4**.
4	**CHECK SUBARU SELECT MONITOR COMMUNICATION.** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, check whether communication to other systems can be executed normally.	Is the system name displayed on Subaru Select Monitor?	Go to step **9**.	Go to step **5**.
5	**CHECK SUBARU SELECT MONITOR.**	Is Subaru Select Monitor powered on?	Go to step **7**.	Go to step **6**.

	Step	Check	Yes	No
6	**CHECK FUSE.** Remove a fuse in the data link connector and visually check the fuse.	Is the fuse OK?	Repair the harness between the battery and the data link connector.	Replace the fuse. If the fuse is blown out again, check the power supply circuit.
7	**CHECK AIRBAG CONTROL MODULE CONNECTOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Confirm that the connectors of airbag control module (AB6, AB17, AB18) are securely connected.	Is the connector of the airbag control module securely connected?	Go to step **8**.	Connect the connector of the airbag control module.
8	**CHECK SUBARU SELECT MONITOR COMMUNICATION.** 1) Disconnect the airbag control module connector. 2) Connect the battery ground terminal. 3) Turn the ignition switch to ON. 4) Check whether communication to other systems can be executed normally.	Is the system name displayed on Subaru Select Monitor?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **9**.
9	**CHECK FUSE.** Remove fuse No. 25 from the fuse & relay box, and perform visual inspection.	Is the fuse OK?	Go to step **10**.	Replace the fuse. If the fuse is blown out again, check the power supply circuit.
10	**CHECK AIRBAG CONTROL MODULE CONNECTOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Confirm that the connectors of airbag control module (AB6, AB17, AB18) are securely connected.	Is the connector of the airbag control module securely connected?	Go to step **11**.	Connect the connector of the airbag control module.
11	**CHECK CAN COMMUNICATION.** Inspect LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>	Is there any fault?	Repair it according to the diagnosis for LAN system.	Go to step **12**.
12	**CHECK POWER SUPPLY CIRCUIT.** 1) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 2) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 3) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 4) Turn the ignition switch to ON. 5) Measure the voltage between connector (2AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(2AG) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **13**.	Repair the harness between the airbag control module and the battery. Or replace the airbag main harness along with the bulkhead harness.
13	**CHECK BETWEEN AIRBAG CONTROL MODULE AND CHASSIS GROUND.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between connector (2AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(2AG) No. 4 — Chassis ground:*** ***(2AG) No. 3 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **14**.	Repair the harness between the airbag control module and the chassis ground. Or replace the airbag main harness along with the bulkhead harness.

Step		Check	Yes	No
14	CHECK POOR CONTACT OF CONNECTOR.	Is there poor contact of the control module power supply, ground circuit and data link connector?	Repair the connector. (Replace the harness instead of repairing the airbag system connector.)	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

8. Read Diagnostic Trouble Code (DTC)

A: OPERATION

For operation procedures, refer to the “PC application help for Subaru Select Monitor”.

NOTE:
For details concerning DTCs, refer to List of Diagnostic Trouble Codes (DTC). <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>

9. Inspection Mode

A: PROCEDURE

Recreate the circumstance by referring to the conditions described in the checklist.

10.Clear Memory Mode

A: OPERATION

For operation procedures, refer to the “PC application help for Subaru Select Monitor”.

NOTE:
Clear the DTC stored in the airbag control module after repairing the airbag system.

11.Display of Status Information

A: OPERATION

Check the operating condition of each sensor, in the event of malfunction in the seat belt buckle switch or when the seat belt buckle switch has been replaced.
1) On «Main Menu» display, select {Each System Check}.
2) On «System Selection Menu» display, select {Airbag System}.
3) On «Airbag System» display, select {Current Data Display & Save}.
The following table is for support data.

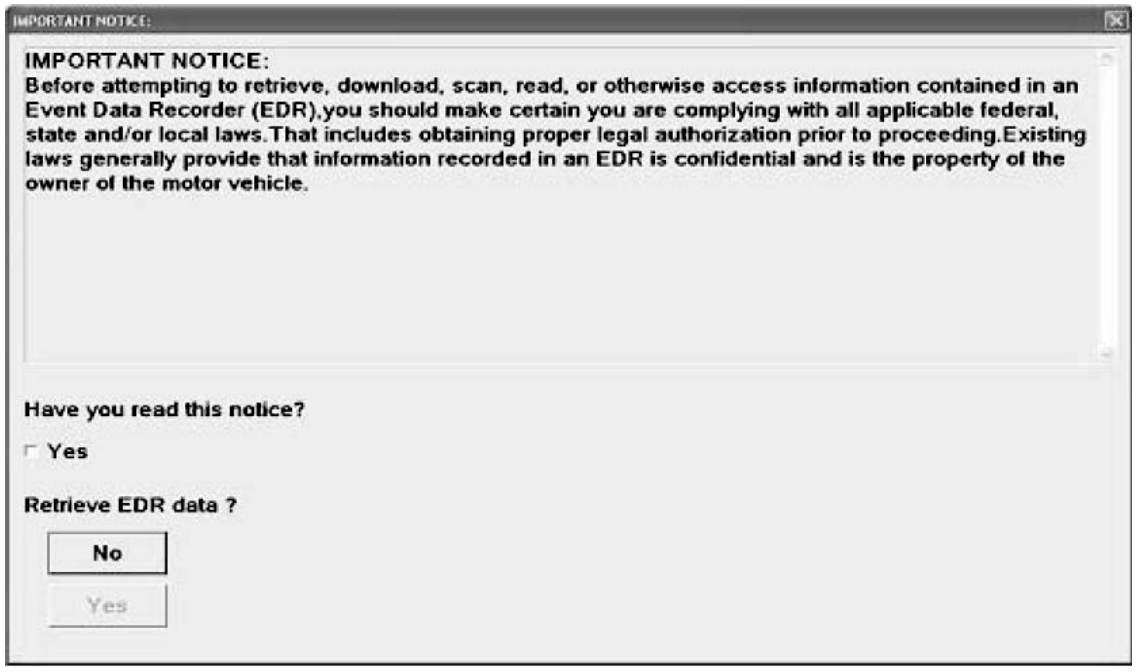
Item	Display	Note
Trip Count	—	—
Count	—	—
Time Count	—	—
Belt Buckle Switch RH	Unbelted/Belted	“Belted” when passenger’s seat belt is fastened “Unbelted” when passenger’s seat belt is not fastened
Passenger Occupant Status	Occupied/Empty or CRS	“Occupied” when the occupant is present “Empty or CRS” when the seat is unoccupied or when child restraint seat is installed
Passenger Airbag Status	ON/OFF	“ON” when the passenger occupant status is “Occupied” “OFF” when the status is “Empty or CRS”

NOTE:
For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

12.Event Record Data

A: OPERATION

1) On «Main Menu» display, select {Each System Check}.
2) On «System Selection Menu» display, select {Airbag System}.
3) On «Airbag System» display, select {Event Record Data}. After it is selected, {IMPORTANT NOTICE} screen is displayed.
4) Once you have read the contents of the «IMPORTANT NOTICE», click the Yes checkbox.
5) If doing so will not violate any laws, click the {Yes} button to retrieve the EDR data.



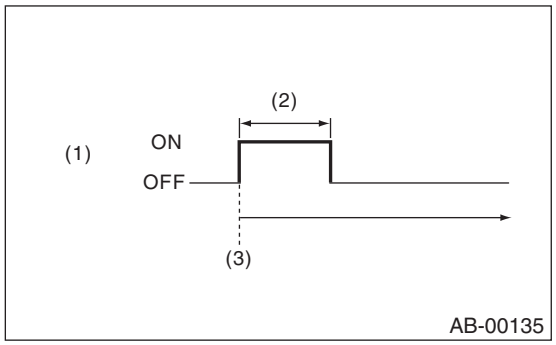
AB-02847

6) Select the items to be checked from each event record data.
7) Select the record data to be checked from each record data.
8) The selected record data is displayed. If there is no data recorded, «No Event Record Data Recorded» is displayed.
9) Select [Exit] to return to each event record data screen.

13. Airbag Warning Light Illumination Pattern

A: INSPECTION

Turn the ignition switch to ON, and confirm that the airbag warning light remains on for approx. 6 seconds then turns off afterwards.



(1) Airbag warning light
(2) Approx. 6 sec.
(3) Ignition switch ON

14.Airbag Warning Light Failure

A: AIRBAG WARNING LIGHT REMAINS ON

DETECTING CONDITION:

- Airbag warning light is faulty.
- Airbag control module to combination meter circuit is shorted or open.
- Grounding circuit is faulty.
- Airbag control module is faulty.
- Connector connection is improper.
- Connections of (AB6, AB17, AB18) to airbag control module are improper.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

	Step	Check	Yes	No
1	**CHECK CAN COMMUNICATION.** Inspect LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>	Is there any fault?	Repair it according to diagnosis of LAN system.	Go to step **2**.
2	**CHECK DTC.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Check the connection status of airbag CM connector.	Is there poor contact of connector?	Reconnect the connector. Or repair the connector.	Go to step **3**.
3	**CHECK FOR POOR CONTACT.** Check the combination meter. <Ref. to IDI(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>	Is there any fault?	Repair it according to INSTRUMENTATION/DRIVER INFO (DIAGNOSTICS).	Replace the airbag CM. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

B: AIRBAG WARNING LIGHT REMAINS OFF

NOTE:
For the diagnostic procedure, refer to "AIRBAG WARNING LIGHT REMAINS ON". <Ref. to AB(diag)-30, AIRBAG WARNING LIGHT REMAINS ON, Airbag Warning Light Failure.>

15.List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Item	Content of diagnosis	Reference
U0073	Control Module Communication Bus "A" Off	CAN communication error occurred.	<Ref. to AB(diag)-43, DTC U0073 CONTROL MODULE COMMUNICATION BUS “A” OFF, Diagnostic Chart with Trouble Code.>
B1000	Airbag ECU Malfunction	Airbag control module is faulty.	<Ref. to AB(diag)-44, DTC B1000 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>
B1003	Airbag ECU Malfunction	Airbag control module is faulty.	<Ref. to AB(diag)-44, DTC B1003 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>
B1105	Airbag ECU Malfunction	Airbag control module is faulty.	<Ref. to AB(diag)-44, DTC B1105 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>
B1106	Airbag ECU Malfunction	Airbag control module is faulty.	<Ref. to AB(diag)-44, DTC B1106 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>
B1115	Airbag ECU Malfunction	Airbag control module is faulty.	<Ref. to AB(diag)-44, DTC B1115 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>
B1116	Airbag ECU Malfunction	Airbag control module is faulty.	<Ref. to AB(diag)-44, DTC B1116 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>
B1170	Airbag ECU Malfunction	Airbag control module is faulty.	<Ref. to AB(diag)-44, DTC B1170 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>
B1185	Airbag ECU Malfunction	Airbag control module is faulty.	<Ref. to AB(diag)-44, DTC B1185 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>
B1195	Airbag ECU Malfunction	Airbag control module is faulty.	<Ref. to AB(diag)-44, DTC B1195 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>

DTC	Item	Content of diagnosis	Reference
B1196	Airbag ECU Malfunction	Airbag control module is faulty.	<Ref. to AB(diag)-45, DTC B1196 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>
B1199	Airbag ECU Malfunction	Airbag control module is faulty.	<Ref. to AB(diag)-45, DTC B1199 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>
B11F2	Front Airbag: Firing output	Front airbag module and seat belt pretensioner (LH/RH) are inflated.	<Ref. to AB(diag)-45, DTC B11F2 FRONT IMPACT IGNITION, Diagnostic Chart with Trouble Code.>
B11F3	Front Airbag: Firing output	Front airbag module and seat belt pretensioner (LH/RH) are inflated.	<Ref. to AB(diag)-45, DTC B11F3 FRONT IMPACT IGNITION, Diagnostic Chart with Trouble Code.>
B11F4	Front Airbag: Firing output	Front airbag module and seat belt pretensioner (LH/RH) are inflated.	<Ref. to AB(diag)-45, DTC B11F4 FRONT IMPACT IGNITION, Diagnostic Chart with Trouble Code.>
B11F5	Front Airbag: Firing output	Front airbag module and seat belt pretensioner (LH/RH) are inflated.	<Ref. to AB(diag)-45, DTC B11F5 FRONT IMPACT IGNITION, Diagnostic Chart with Trouble Code.>
B11F7	Side/Curtain Airbag: Firing output	• Side airbag module and curtain airbag module are deployed. • Curtain airbag module is deployed.	<Ref. to AB(diag)-45, DTC B11F7 SIDE IMPACT IGNITION, Diagnostic Chart with Trouble Code.>
B11F8	Side/Curtain Airbag: Firing output	• Side airbag module and curtain airbag module are deployed. • Curtain airbag module is deployed.	<Ref. to AB(diag)-45, DTC B11F8 SIDE IMPACT IGNITION, Diagnostic Chart with Trouble Code.>
B11F9	Side/Curtain Airbag: Firing output	• Side airbag module and curtain airbag module are deployed. • Curtain airbag module is deployed.	<Ref. to AB(diag)-46, DTC B11F9 SIDE IMPACT IGNITION, Diagnostic Chart with Trouble Code.>
B11FA	Side/Curtain Airbag: Firing output	• Side airbag module and curtain airbag module are deployed. • Curtain airbag module is deployed.	<Ref. to AB(diag)-46, DTC B11FA SIDE IMPACT IGNITION, Diagnostic Chart with Trouble Code.>
B11FB	Side/Curtain Airbag: Firing output	• Side airbag module and curtain airbag module are deployed. • Curtain airbag module is deployed.	<Ref. to AB(diag)-46, DTC B11FB SIDE IMPACT IGNITION, Diagnostic Chart with Trouble Code.>

DTC	Item	Content of diagnosis	Reference
B11FC	Side/Curtain Airbag: Firing output	• Side airbag module and curtain airbag module are deployed. • Curtain airbag module is deployed.	<Ref. to AB(diag)-46, DTC B11FC SIDE IMPACT IGNITION, Diagnostic Chart with Trouble Code.>
B1610	Front Sub Sensor RH Failure	Front sub sensor (RH) is faulty	<Ref. to AB(diag)-46, DTC B1610 FRONT SUB SENSOR RH FAILURE, Diagnostic Chart with Trouble Code.>
B1612	Front Sub Sensor RH Lost Communication	• Open or short circuit in harness (RH) between airbag control module and front sub sensor. • Front sub sensor (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-46, DTC B1612 FRONT SUB SENSOR RH LOST COMMUNICATION, Diagnostic Chart with Trouble Code.>
B1613	Front Sub Sensor RH Initialization Error		<Ref. to AB(diag)-47, DTC B1613 FRONT SUB SENSOR RH INITIALIZATION ERROR, Diagnostic Chart with Trouble Code.>
B1615	Front Sub Sensor LH Failure	Front sub sensor (LH) is faulty.	<Ref. to AB(diag)-49, DTC B1615 FRONT SUB SENSOR LH FAILURE, Diagnostic Chart with Trouble Code.>
B1617	Front Sub Sensor LH Lost Communication	• Open or short circuit in harness (LH) between airbag control module and front sub sensor. • Front sub sensor (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-49, DTC B1617 FRONT SUB SENSOR LH LOST COMMUNICATION, Diagnostic Chart with Trouble Code.>
B1618	Front Sub Sensor LH Initialization Error		<Ref. to AB(diag)-50, DTC B1618 FRONT SUB SENSOR LH INITIALIZATION ERROR, Diagnostic Chart with Trouble Code.>
B16F2	Front Sub Sensor RH Recognition Error	• Front sensor (RH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-52, DTC B16F2 FRONT SUB SENSOR RH RECOGNITION ERROR, Diagnostic Chart with Trouble Code.>
B16F3	Front Sub Sensor LH Recognition Error	• Front sensor (LH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-52, DTC B16F3 FRONT SUB SENSOR LH RECOGNITION ERROR, Diagnostic Chart with Trouble Code.>
B1620	Side Airbag Sensor RH Failure	Side airbag sensor (RH) is faulty.	<Ref. to AB(diag)-52, DTC B1620 SIDE AIRBAG SENSOR RH FAILURE, Diagnostic Chart with Trouble Code.>

DTC	Item	Content of diagnosis	Reference
B1622	Side Airbag Sensor RH Lost Communication	• Open or short circuit in harness (RH) between airbag control module and side airbag sensor. • Side airbag sensor (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-52, DTC B1622 SIDE AIRBAG SENSOR RH LOST COMMUNICATION, Diagnostic Chart with Trouble Code.>
B1623	Side Airbag Sensor RH Initialization Error		<Ref. to AB(diag)-53, DTC B1623 SIDE AIRBAG SENSOR RH INITIALIZATION ERROR, Diagnostic Chart with Trouble Code.>
B1625	Side Airbag Sensor LH Failure	Side airbag sensor (LH) is faulty.	<Ref. to AB(diag)-55, DTC B1625 SIDE AIRBAG SENSOR LH FAILURE, Diagnostic Chart with Trouble Code.>
B1627	Side Airbag Sensor LH Lost Communication	• Open or short circuit in harness (LH) between airbag control module and side airbag sensor. • Side airbag sensor (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-55, DTC B1627 SIDE AIRBAG SENSOR LH LOST COMMUNICATION, Diagnostic Chart with Trouble Code.>
B1628	Side Airbag Sensor LH Initialization Error		<Ref. to AB(diag)-56, DTC B1628 SIDE AIRBAG SENSOR LH INITIALIZATION ERROR, Diagnostic Chart with Trouble Code.>
B1630	Curtain Airbag Sensor RH Failure	Curtain airbag sensor (RH) is faulty.	<Ref. to AB(diag)-58, DTC B1630 CURTAIN AIRBAG SENSOR RH FAILURE, Diagnostic Chart with Trouble Code.>
B1632	Curtain Airbag Sensor RH Lost Communication	• Open or short circuit in harness (RH) between airbag control module and curtain airbag sensor. • Side airbag sensor (RH) is faulty. • Curtain airbag sensor (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-58, DTC B1632 CURTAIN AIRBAG SENSOR RH LOST COMMUNICATION, Diagnostic Chart with Trouble Code.>
B1633	Curtain Airbag Sensor RH Initialization Error		<Ref. to AB(diag)-59, DTC B1633 CURTAIN AIRBAG SENSOR RH INITIALIZATION ERROR, Diagnostic Chart with Trouble Code.>
B1635	Curtain Airbag Sensor LH Failure	Curtain airbag sensor (LH) is faulty.	<Ref. to AB(diag)-61, DTC B1635 CURTAIN AIRBAG SENSOR LH FAILURE, Diagnostic Chart with Trouble Code.>

DTC	Item	Content of diagnosis	Reference
B1637	Curtain Airbag Sensor LH Lost Communication	• Open or short circuit in harness (LH) between airbag control module and curtain airbag sensor. • Side airbag sensor (LH) is faulty. • Curtain airbag sensor (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-61, DTC B1637 CURTAIN AIRBAG SENSOR LH LOST COMMUNICATION, Diagnostic Chart with Trouble Code.>
B1638	Curtain Airbag Sensor LH Initialization Error		<Ref. to AB(diag)-62, DTC B1638 CURTAIN AIRBAG SENSOR LH INITIALIZATION ERROR, Diagnostic Chart with Trouble Code.>
B16F4	Side Airbag Sensor RH Recognition Error	• Side airbag sensor (RH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-65, DTC B16F4 SIDE AIRBAG SENSOR RH RECOGNITION ERROR, Diagnostic Chart with Trouble Code.>
B16F5	Side Airbag Sensor LH Recognition Error	• Side airbag sensor (LH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-65, DTC B16F5 SIDE AIRBAG SENSOR LH RECOGNITION ERROR, Diagnostic Chart with Trouble Code.>
B16F6	Curtain Airbag Sensor RH Recognition Error	• Curtain airbag sensor (RH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-65, DTC B16F6 CURTAIN AIRBAG SENSOR RH RECOGNITION ERROR, Diagnostic Chart with Trouble Code.>
B16F7	Curtain Airbag Sensor LH Recognition Error	• Curtain airbag sensor (LH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-66, DTC B16F7 CURTAIN AIRBAG SENSOR LH RECOGNITION ERROR, Diagnostic Chart with Trouble Code.>
B1642	Side Satellite Sensor Bus RH Lost Communication	• Open or short circuit in harness (RH) between airbag control module and front door impact sensor. • Side airbag sensor (RH) is faulty. • Curtain airbag sensor (RH) is faulty. • Front door impact sensor (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-67, DTC B1642 SIDE SATELLITE SENSOR BUS RH LOST COMMUNICATION, Diagnostic Chart with Trouble Code.>
B1647	Side Satellite Sensor Bus LH Lost Communication	• Open or short circuit in harness (LH) between airbag control module and front door impact sensor. • Side airbag sensor (LH) is faulty. • Curtain airbag sensor (LH) is faulty. • Front door impact sensor (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-71, DTC B1647 SIDE SATELLITE SENSOR BUS LH LOST COMMUNICATION, Diagnostic Chart with Trouble Code.>

DTC	Item	Content of diagnosis	Reference
B1650	Occupant Classification System Malfunction	• Occupant detection sensor is faulty. • Occupant detection control module is faulty. • Occupant detection harness is faulty. • Rear airbag harness (RH) is faulty. • Fuse No. 25 is blown.	<Ref. to AB(diag)-74, DTC B1650 OCCUPANT CLASSIFICATION SYSTEM MALFUNCTION, Diagnostic Chart with Trouble Code.>
B1655	Front Buckle Switch RH Failure	• Buckle switch (RH) circuit is open, shorted or shorted to ground. • Occupant detection system is faulty. • Occupant detection harness is faulty.	<Ref. to AB(diag)-74, DTC B1655 FRONT BUCKLE SWITCH RH FAILURE, Diagnostic Chart with Trouble Code.>
B1660	Passenger's Airbag ON Indicator Failure	• Passenger's airbag indicator is faulty. • Airbag control module is faulty. • Airbag main harness circuit is open, shorted or shorted to ground. • Body harness circuit is open.	<Ref. to AB(diag)-75, DTC B1660 PASSENGER'S AIRBAG ON INDICATOR FAILURE, Diagnostic Chart with Trouble Code.>
B1675	Satellite Safing Sensor Failure	Satellite safing sensor is faulty.	<Ref. to AB(diag)-77, DTC B1675 SATELLITE SAFING SENSOR FAILURE, Diagnostic Chart with Trouble Code.>
B1676	Lost Communication With Satellite Safing Sensor	• Open or short circuit in harness between airbag control module and satellite safing sensor. • Satellite safing sensor is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-77, DTC B1676 LOST COMMUNICATION WITH SATELLITE SAFING SENSOR, Diagnostic Chart with Trouble Code.>
B1677	Satellite Safing Sensor Initialization Incomplete		<Ref. to AB(diag)-78, DTC B1677 SATELLITE SAFING SENSOR INITIALIZATION INCOMPLETE, Diagnostic Chart with Trouble Code.>
B16F8	Satellite Safing Sensor Recognition Error	• Satellite safing sensor is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-80, DTC B16F8 SATELLITE SAFING SENSOR RECOGNITION ERROR, Diagnostic Chart with Trouble Code.>
B16F9	Door Sensor RH Recognition Error	• Front door impact sensor (RH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-80, DTC B16F9 DOOR SENSOR RH RECOGNITION ERROR, Diagnostic Chart with Trouble Code.>
B1690	Door Sensor RH Failure	Front door impact sensor (RH) is faulty.	<Ref. to AB(diag)-80, DTC B1690 DOOR SENSOR RH FAILURE, Diagnostic Chart with Trouble Code.>

DTC	Item	Content of diagnosis	Reference
B1692	Lost Communication With Door Sensor RH	• Open or short circuit in harness between curtain airbag sensor and front door impact sensor. • Front door impact sensor (RH) is faulty. • Curtain airbag sensor (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-80, DTC B1692 LOST COMMUNICATION WITH DOOR SENSOR RH, Diagnostic Chart with Trouble Code.>
B1693	Door Sensor RH Initialization Incomplete		<Ref. to AB(diag)-81, DTC B1693 DOOR SENSOR RH INITIALIZATION INCOMPLETE, Diagnostic Chart with Trouble Code.>
B16FA	Lost Communication With Door Sensor LH	• Front door impact sensor (LH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-84, DTC B16FA LOST COMMUNICATION WITH DOOR SENSOR LH, Diagnostic Chart with Trouble Code.>
B1695	Door sensor LH failure	Front door impact sensor (LH) is faulty.	<Ref. to AB(diag)-84, DTC B1695 DOOR SENSOR LH FAILURE, Diagnostic Chart with Trouble Code.>
B1697	Lost Communication With Door Sensor LH	• Open or short circuit in harness between curtain airbag sensor and front door impact sensor. • Front door impact sensor (LH) is faulty. • Curtain airbag sensor (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-84, DTC B1697 LOST COMMUNICATION WITH DOOR SENSOR LH, Diagnostic Chart with Trouble Code.>
B1698	Door Sensor LH Initialization Incomplete		<Ref. to AB(diag)-85, DTC B1698 DOOR SENSOR LH INITIALIZATION INCOMPLETE, Diagnostic Chart with Trouble Code.>
B161A	Lost Communication with Front Satellite Sensor Bus	• Open or short circuit in harness between airbag control module and front sub sensor. • Front sub sensor is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-88, DTC B161A LOST COMMUNICATION WITH FRONT SATELLITE SENSOR BUS, Diagnostic Chart with Trouble Code.>
B16F1	Passenger's Seat Belt Warning Failure	• Airbag control module is faulty. • Body integrated unit is faulty. • Harness circuits between body integrated unit and airbag control module are open, shorted or shorted to ground.	<Ref. to AB(diag)-91, DTC B16F1 PASSENGER'S SEAT BELT WARNING FAILURE, Diagnostic Chart with Trouble Code.>
B16F0	Passenger's Airbag OFF Indicator Failure	• Airbag warning light is faulty. • Open or short circuit in harness between airbag control module and airbag warning light. • Poor contact of airbag main harness and instrument panel harness. • Ground circuit is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-92, DTC B16F0 PASSENGER'S AIRBAG OFF INDICATOR FAILURE, Diagnostic Chart with Trouble Code.>

DTC	Item	Content of diagnosis	Reference
B1760	Sensor mat abnormal	• Occupant detection sensor is open, shorted between terminals, shorted to power supply or shorted to ground. • Seat heater is open. • Occupant detection control module is faulty.	<Ref. to AB(diag)-92, DTC B1760 SENSOR MAT ABNORMAL, Diagnostic Chart with Trouble Code.>
B1761	Sensor mat liquid coating abnormal	• Detected that the occupant detection sensor is spattered with fluid. • Occupant detection sensor is faulty. • Occupant detection control module is faulty.	<Ref. to AB(diag)-92, DTC B1761 SENSOR MAT LIQUID COATING ABNORMAL, Diagnostic Chart with Trouble Code.>
B1771	Buckle switch abnormal	• Passenger's buckle switch circuit is open, shorted or shorted to ground. • Occupant detection system is faulty. • Occupant detection harness is faulty.	<Ref. to AB(diag)-92, DTC B1771 BUCKLE SWITCH ABNORMAL, Diagnostic Chart with Trouble Code.>
B1795	ECU internal circuit fault	Occupant detection control module is faulty.	<Ref. to AB(diag)-92, DTC B1795 ECU INTERNAL CIRCUIT FAULT, Diagnostic Chart with Trouble Code.>
B1800	Short in Driver's Airbag	• Airbag main harness circuit is shorted. • Airbag module harness (driver's side) circuit is shorted. • Roll connector circuit is shorted. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-93, DTC B1800 SHORT IN DRIVER'S AIRBAG, Diagnostic Chart with Trouble Code.>
B1801	Open in Driver's Airbag	• Airbag main harness circuit is open. • Airbag module harness circuit (driver's side) is open. • Roll connector circuit is open. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-95, DTC B1801 OPEN IN DRIVER'S AIRBAG, Diagnostic Chart with Trouble Code.>
B1802	Short in Driver's Airbag (to Ground)	• Airbag main harness circuit is shorted to ground. • Airbag module harness (driver's side) circuit is shorted to ground. • Roll connector circuit is shorted to ground. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-97, DTC B1802 SHORT IN DRIVER'S AIRBAG (TO GROUND), Diagnostic Chart with Trouble Code.>
B1803	Short in Driver's Airbag (to +B)	• Airbag main harness circuit is shorted to power supply. • Airbag module harness circuit (driver's side) is shorted to power supply. • Roll connector circuit is shorted to power supply. • Airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-99, DTC B1803 SHORT IN DRIVER'S AIRBAG (TO +B), Diagnostic Chart with Trouble Code.>
B1805	Short in Passenger's Airbag	• Airbag main harness circuit is shorted. • Airbag module harness circuit (passenger's side) is shorted. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-101, DTC B1805 SHORT IN PASSENGER'S AIRBAG, Diagnostic Chart with Trouble Code.>
B1806	Open in Passenger's Airbag	• Airbag main harness circuit is open. • Airbag module harness circuit (passenger's side) is open. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-103, DTC B1806 OPEN IN PASSENGER'S AIRBAG, Diagnostic Chart with Trouble Code.>

DTC	Item	Content of diagnosis	Reference
B1807	Short in Passenger's Airbag (to Ground)	• Airbag main harness circuit is shorted to ground. • Airbag module harness (passenger's side) circuit is shorted to ground. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-106, DTC B1807 SHORT IN PASSENGER'S AIRBAG (TO GROUND), Diagnostic Chart with Trouble Code.>
B1808	Short in Passenger's Airbag (to +B)	• Airbag main harness circuit is shorted to power supply. • Airbag module harness (passenger's side) circuit is shorted to power supply. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-109, DTC B1808 SHORT IN PASSENGER'S AIRBAG (TO +B), Diagnostic Chart with Trouble Code.>
B1810	Short in Driver's Airbag Dual Stage - 2nd Step	• Airbag main harness circuit is shorted. • Airbag module harness (driver's side) circuit is shorted. • Roll connector circuit is shorted. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-112, DTC B1810 SHORT IN DRIVER'S AIRBAG DUAL STAGE - 2ND STEP, Diagnostic Chart with Trouble Code.>
B1811	Open in Driver's Airbag Dual Stage - 2nd Step	• Airbag main harness circuit is open. • Airbag module harness circuit (driver's side) is open. • Roll connector circuit is open. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-114, DTC B1811 OPEN IN DRIVER'S AIRBAG DUAL STAGE - 2ND STEP, Diagnostic Chart with Trouble Code.>
B1812	Short in Driver's Airbag Dual Stage - 2nd Step (to Ground)	• Airbag main harness circuit is shorted to ground. • Airbag module harness (driver's side) circuit is shorted to ground. • Roll connector circuit is shorted to ground. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-116, DTC B1812 SHORT IN DRIVER'S AIRBAG DUAL STAGE - 2ND STEP (TO GROUND), Diagnostic Chart with Trouble Code.>
B1813	Short in Driver's Airbag Dual Stage - 2nd Step Circuit (to +B)	• Airbag main harness circuit is shorted to power supply. • Airbag module harness circuit (driver's side) is shorted to power supply. • Roll connector circuit is shorted to power supply. • Airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-118, DTC B1813 SHORT IN DRIVER'S AIRBAG DUAL STAGE - 2ND STEP CIRCUIT (TO +B), Diagnostic Chart with Trouble Code.>
B1815	Short in Passenger's Airbag Dual Stage - 2nd Step	• Airbag main harness circuit is shorted. • Airbag module harness circuit (passenger's side) is shorted. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-120, DTC B1815 OPEN IN PASSENGER'S AIRBAG DUAL STAGE - 2ND STEP, Diagnostic Chart with Trouble Code.>
B1816	Open in Passenger's Airbag Dual Stage - 2nd Step	• Airbag main harness circuit is open. • Airbag module harness circuit (passenger's side) is open. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-122, DTC B1816 OPEN IN PASSENGER'S AIRBAG DUAL STAGE - 2ND STEP, Diagnostic Chart with Trouble Code.>

DTC	Item	Content of diagnosis	Reference
B1817	Short in Passenger's Airbag Dual Stage - 2nd Step (to Ground)	• Airbag main harness circuit is shorted to ground. • Airbag module harness (passenger's side) circuit is shorted to ground. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-125, DTC B1817 SHORT IN PASSENGER'S AIR-BAG DUAL STAGE - 2ND STEP (TO GROUND), Diagnostic Chart with Trouble Code.>
B1818	Short in Passenger's Airbag Dual Stage - 2nd Step Circuit (to +B)	• Airbag main harness circuit is shorted to power supply. • Airbag module harness (passenger's side) circuit is shorted to power supply. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-128, DTC B1818 SHORT IN PASSENGER'S AIR-BAG DUAL STAGE - 2ND STEP CIRCUIT (TO +B), Diagnostic Chart with Trouble Code.>
B1820	Short in Side Airbag RH	• Side airbag harness (RH) circuit is shorted. • Side airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-131, DTC B1820 SHORT IN SIDE AIRBAG RH, Diagnostic Chart with Trouble Code.>
B1821	Open in Side Airbag RH	• Side airbag harness (RH) circuit is open. • Side airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-133, DTC B1821 OPEN IN SIDE AIRBAG RH, Diagnostic Chart with Trouble Code.>
B1822	Short in Side Airbag RH (to Ground)	• Side airbag harness (RH) circuit is shorted to ground. • Side airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-135, DTC B1822 SHORT IN SIDE AIRBAG RH (TO GROUND), Diagnostic Chart with Trouble Code.>
B1823	Short in Side Airbag RH (to +B)	• Side airbag harness (RH) circuit is shorted to power supply. • Side airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-137, DTC B1823 SHORT IN SIDE AIRBAG RH (TO +B), Diagnostic Chart with Trouble Code.>
B1825	Short in Side Airbag LH	• Side airbag harness (LH) circuit is shorted. • Side airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-139, DTC B1825 SHORT IN SIDE AIRBAG LH, Diagnostic Chart with Trouble Code.>
B1826	Open in Side Airbag LH	• Side airbag harness (LH) circuit is open. • Side airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-141, DTC B1826 OPEN IN SIDE AIRBAG LH, Diagnostic Chart with Trouble Code.>
B1827	Short in Side Airbag LH (to Ground)	• Side airbag harness (LH) circuit is shorted to ground. • Side airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-143, DTC B1827 SHORT IN SIDE AIRBAG LH (TO GROUND), Diagnostic Chart with Trouble Code.>
B1828	Short in Side Airbag LH (to +B)	• Side airbag harness (LH) circuit is shorted to power supply. • Side airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-145, DTC B1828 SHORT IN SIDE AIRBAG LH (TO +B), Diagnostic Chart with Trouble Code.>

DTC	Item	Content of diagnosis	Reference
B1830	Short in Curtain Airbag RH Squib Circuit	• Curtain airbag harness (RH) circuit is shorted. • Curtain airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-147, DTC B1830 SHORT IN CURTAIN AIRBAG RH SQUIB CIRCUIT, Diagnostic Chart with Trouble Code.>
B1831	Open in Curtain Airbag RH Squib Circuit	• Curtain airbag harness (RH) circuit is open. • Curtain airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-149, DTC B1831 OPEN IN CURTAIN AIRBAG RH SQUIB CIRCUIT, Diagnostic Chart with Trouble Code.>
B1832	Short in Curtain Airbag RH Squib Circuit (to Ground)	• Curtain airbag harness (RH) circuit is shorted to ground. • Curtain airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-151, DTC B1832 SHORT IN CURTAIN AIRBAG RH SQUIB CIRCUIT (TO GROUND), Diagnostic Chart with Trouble Code.>
B1833	Short in Curtain Airbag RH Squib Circuit (to +B)	• Curtain airbag harness (RH) is shorted to power supply. • Curtain airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-153, DTC B1833 SHORT IN CURTAIN SHIELD AIRBAG RH SQUIB CIRCUIT (TO +B), Diagnostic Chart with Trouble Code.>
B1835	Short in Curtain Airbag LH Squib Circuit	• Curtain airbag harness (LH) circuit is shorted. • Curtain airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-155, DTC B1835 SHORT IN CURTAIN AIRBAG LH SQUIB CIRCUIT, Diagnostic Chart with Trouble Code.>
B1836	Open in Curtain Airbag LH Squib Circuit	• Curtain airbag harness (LH) circuit is open. • Curtain airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-157, DTC B1836 OPEN IN CURTAIN AIRBAG LH SQUIB CIRCUIT, Diagnostic Chart with Trouble Code.>
B1837	Short in Curtain Airbag LH Squib Circuit (to Ground)	• Curtain airbag harness (LH) circuit is shorted to ground. • Curtain airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-159, DTC B1837 SHORT IN CURTAIN AIRBAG LH SQUIB CIRCUIT (TO GROUND), Diagnostic Chart with Trouble Code.>
B1838	Short in Curtain Airbag LH Squib Circuit (to +B)	• Curtain airbag harness (LH) is shorted to power supply. • Curtain airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-161, DTC B1838 SHORT IN CURTAIN SHIELD AIRBAG LH SQUIB CIRCUIT (TO +B), Diagnostic Chart with Trouble Code.>
B1860	Short in Driver's Knee Airbag	• Airbag main harness circuit is shorted. • Knee airbag module harness circuit is shorted. • Knee airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-163, DTC B1860 SHORT IN DRIVER'S KNEE AIRBAG, Diagnostic Chart with Trouble Code.>

DTC	Item	Content of diagnosis	Reference
B1861	Open in Driver's Knee Airbag	• Airbag main harness circuit is open. • Knee airbag module harness circuit is open. • Knee airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-165, DTC B1861 OPEN IN DRIVER'S KNEE AIRBAG, Diagnostic Chart with Trouble Code.>
B1862	Short in Driver's Knee Airbag (to Ground)	• Airbag main harness circuit is shorted to ground. • Knee airbag module harness circuit is shorted to ground. • Knee airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-167, DTC B1862 SHORT IN DRIVER'S KNEE AIRBAG (TO GROUND), Diagnostic Chart with Trouble Code.>
B1863	Short in Driver's Knee Airbag (to +B)	• Airbag main harness circuit is shorted to power supply. • Knee airbag module harness circuit is shorted to power supply. • Knee airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-169, DTC B1863 SHORT IN DRIVER'S KNEE AIRBAG (TO +B), Diagnostic Chart with Trouble Code.>
B1900	Short in Front P/T RH	• Seat belt pretensioner (RH) circuit is shorted. • Pretensioner (RH) is faulty. • Pretensioner harness (RH) is shorted. • Airbag control module is faulty.	<Ref. to AB(diag)-171, DTC B1900 SHORT IN FRONT P/T RH, Diagnostic Chart with Trouble Code.>
B1901	Open in Front P/T RH	• Seat belt pretensioner (RH) circuit is open. • Pretensioner (RH) is faulty. • Pretensioner harness (RH) is shorted. • Airbag control module is faulty.	<Ref. to AB(diag)-173, DTC B1901 OPEN IN FRONT P/T RH, Diagnostic Chart with Trouble Code.>
B1902	Short in Front P/T RH (to Ground)	• Seat belt pretensioner (RH) circuit is shorted to ground. • Pretensioner (RH) is faulty. • Pretensioner harness (RH) is shorted. • Airbag control module is faulty.	<Ref. to AB(diag)-175, DTC B1902 SHORT IN FRONT P/T RH (TO GROUND), Diagnostic Chart with Trouble Code.>
B1903	Short in Front P/T RH (to +B)	• Seat belt pretensioner (RH) circuit is shorted to power supply. • Pretensioner (RH) is faulty. • Pretensioner harness (RH) is shorted. • Airbag control module is faulty.	<Ref. to AB(diag)-177, DTC B1903 SHORT IN FRONT P/T RH (TO +B), Diagnostic Chart with Trouble Code.>
B1905	Short in Front P/T LH	• Seat belt pretensioner (LH) circuit is shorted. • Pretensioner (LH) is faulty. • Pretensioner harness (LH) is shorted. • Airbag control module is faulty.	<Ref. to AB(diag)-179, DTC B1905 SHORT IN FRONT P/T LH, Diagnostic Chart with Trouble Code.>
B1906	Open in Front P/T LH	• Seat belt pretensioner (LH) circuit is open. • Pretensioner (LH) is faulty. • Pretensioner harness (LH) is shorted. • Airbag control module is faulty.	<Ref. to AB(diag)-181, DTC B1906 OPEN IN FRONT P/T LH, Diagnostic Chart with Trouble Code.>
B1907	Short in Front P/T LH (to Ground)	• Seat belt pretensioner (LH) circuit is shorted to ground. • Pretensioner (LH) is faulty. • Pretensioner harness (LH) is shorted. • Airbag control module is faulty.	<Ref. to AB(diag)-183, DTC B1907 SHORT IN FRONT P/T LH (TO GROUND), Diagnostic Chart with Trouble Code.>
B1908	Short in Front P/T LH (to +B)	• Seat belt pretensioner (LH) circuit is shorted to power supply. • Pretensioner (LH) is faulty. • Pretensioner harness (LH) is shorted. • Airbag control module is faulty.	<Ref. to AB(diag)-185, DTC B1908 SHORT IN FRONT P/T LH (TO +B), Diagnostic Chart with Trouble Code.>

16.Diagnostic Chart with Trouble Code

A: DTC U0073 CONTROL MODULE COMMUNICATION BUS “A” OFF

This is detected when a CAN line malfunction occurs.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

B: DTC B1000 AIRBAG ECU MALFUNCTION

DTC DETECTING CONDITION:
Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

	Step	Check	Yes	No
1	**CHECK DTC.** Read the DTC. (Current malfunction) <Ref. to AB(diag)-24, Read Diagnostic Trouble Code (DTC).>	Is any of B1000, B1003, B1105, B1106, B1115, B1116, B1170, B1185, B1195, B1196 or B1199 displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Perform the Clear Memory Mode. <Ref. to AB(diag)-26, Clear Memory Mode.>

C: DTC B1003 AIRBAG ECU MALFUNCTION

NOTE:
For details on DTC B1103, refer to DTC B1100. <Ref. to AB(diag)-44, DTC B1000 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>

D: DTC B1105 AIRBAG ECU MALFUNCTION

NOTE:
For details on DTC B1105, refer to DTC B1100. <Ref. to AB(diag)-44, DTC B1000 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>

E: DTC B1106 AIRBAG ECU MALFUNCTION

NOTE:
For details on DTC B1106, refer to DTC B1100. <Ref. to AB(diag)-44, DTC B1000 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>

F: DTC B1115 AIRBAG ECU MALFUNCTION

NOTE:
For details on DTC B1115, refer to DTC B1100. <Ref. to AB(diag)-44, DTC B1000 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>

G: DTC B1116 AIRBAG ECU MALFUNCTION

NOTE:
For details on DTC B1116, refer to DTC B1100. <Ref. to AB(diag)-44, DTC B1000 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>

H: DTC B1170 AIRBAG ECU MALFUNCTION

NOTE:
For details on DTC B1170, refer to DTC B1100. <Ref. to AB(diag)-44, DTC B1000 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>

I: DTC B1185 AIRBAG ECU MALFUNCTION

NOTE:
For details on DTC B1185, refer to DTC B1100. <Ref. to AB(diag)-44, DTC B1000 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>

J: DTC B1195 AIRBAG ECU MALFUNCTION

NOTE:
For details on DTC B1195, refer to DTC B1100. <Ref. to AB(diag)-44, DTC B1000 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>

K: DTC B1196 AIRBAG ECU MALFUNCTION

NOTE:
For details on DTC B1196, refer to DTC B1100. <Ref. to AB(diag)-44, DTC B1000 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>

L: DTC B1199 AIRBAG ECU MALFUNCTION

NOTE:
For details on DTC B1199, refer to DTC B1100. <Ref. to AB(diag)-44, DTC B1000 AIRBAG ECU MALFUNCTION, Diagnostic Chart with Trouble Code.>

M: DTC B11F2 FRONT IMPACT IGNITION

DTC DETECTING CONDITION:
This DTC is indicated when the front airbag module and the pretensioner are deployed.
Once this DTC is displayed, the memory cannot be cleared. Therefore replace the following parts.

- Airbag control module <Ref. to AB-73, Airbag Control Module.>
- Driver's airbag module <Ref. to AB-40, Driver's Airbag Module.>
- Passenger's airbag module <Ref. to AB-44, Passenger's Airbag Module.>
- Front sub sensor of both sides. <Ref. to AB-77, Front Sub Sensor.>
- Front outer seat belt with pretensioner of both sides. <Ref. to SB-15, Front Seat Belt.>
- Steering roll connector <Ref. to AB-100, Roll Connector.>
- Occupant detection system (passenger's seat cushion & frame assembly) <Ref. to SE-7, Front Seat.>

N: DTC B11F3 FRONT IMPACT IGNITION

NOTE:
For details on DTC B11F3, refer to DTC B11F2. <Ref. to AB(diag)-45, DTC B11F2 FRONT IMPACT IGNITION, Diagnostic Chart with Trouble Code.>

O: DTC B11F4 FRONT IMPACT IGNITION

NOTE:
For details on DTC B11F4, refer to DTC B11F2. <Ref. to AB(diag)-45, DTC B11F2 FRONT IMPACT IGNITION, Diagnostic Chart with Trouble Code.>

P: DTC B11F5 FRONT IMPACT IGNITION

NOTE:
For details on DTC B11F5, refer to DTC B11F2. <Ref. to AB(diag)-45, DTC B11F2 FRONT IMPACT IGNITION, Diagnostic Chart with Trouble Code.>

Q: DTC B11F7 SIDE IMPACT IGNITION

This DTC is displayed when the side airbag module and curtain airbag module are deployed.
Once this DTC is displayed, the memory cannot be cleared. Replace the following parts.

- Airbag control module <Ref. to AB-73, Airbag Control Module.>
- Side airbag module (operating side) <Ref. to AB-62, Side Airbag Module.>
- Side airbag sensor (operating side) <Ref. to AB-84, Side Airbag Sensor.>
- Curtain airbag module (operating side) <Ref. to AB-70, Curtain Airbag Module.>
- Curtain airbag sensor (operating side) <Ref. to AB-89, Curtain Airbag Sensor.>
- Satellite safing sensor <Ref. to AB-97, Satellite Safing Sensor.>

R: DTC B11F8 SIDE IMPACT IGNITION

NOTE:
For details on DTC B11F8. refer to DTC B11F7. <Ref. to AB(diag)-45, DTC B11F7 SIDE IMPACT IGNITION, Diagnostic Chart with Trouble Code.>

S: DTC B11F9 SIDE IMPACT IGNITION

NOTE:
For details on DTC B11F9, refer to DTC B11F7. <Ref. to AB(diag)-45, DTC B11F7 SIDE IMPACT IGNITION, Diagnostic Chart with Trouble Code.>

T: DTC B11FA SIDE IMPACT IGNITION

NOTE:
For details on DTC B11FA, refer to DTC B11F7. <Ref. to AB(diag)-45, DTC B11F7 SIDE IMPACT IGNITION, Diagnostic Chart with Trouble Code.>

U: DTC B11FB SIDE IMPACT IGNITION

NOTE:
For details on DTC B11FB, refer to DTC B11F7. <Ref. to AB(diag)-45, DTC B11F7 SIDE IMPACT IGNITION, Diagnostic Chart with Trouble Code.>

V: DTC B11FC SIDE IMPACT IGNITION

NOTE:
For details on DTC B11FC, refer to DTC B11F7. <Ref. to AB(diag)-45, DTC B11F7 SIDE IMPACT IGNITION, Diagnostic Chart with Trouble Code.>

W: DTC B1610 FRONT SUB SENSOR RH FAILURE

DTC DETECTING CONDITION:
Front sub sensor (RH) is faulty.
If DTC B1610 is displayed, the circuit within the front sub sensor (RH) is faulty.
Replace the front sub sensor (RH). <Ref. to AB-77, Front Sub Sensor.>

X: DTC B1612 FRONT SUB SENSOR RH LOST COMMUNICATION

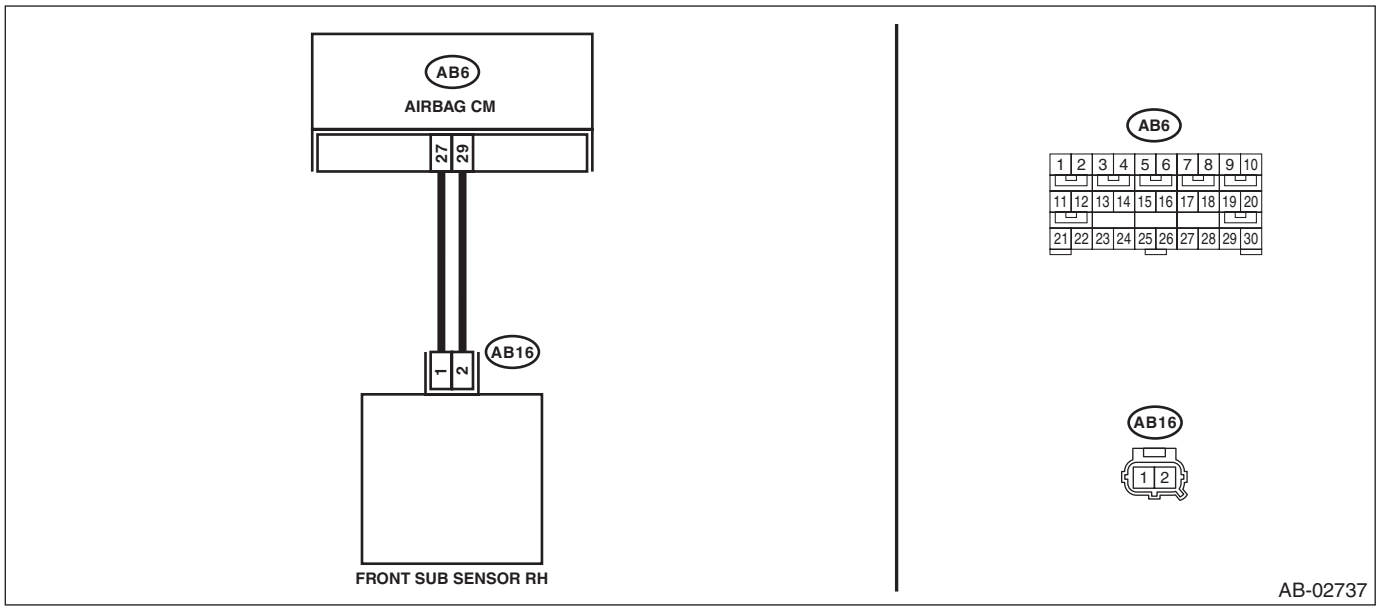
NOTE:
For details on DTC B1612, refer to DTC B1613. <Ref. to AB(diag)-47, DTC B1613 FRONT SUB SENSOR RH INITIALIZATION ERROR, Diagnostic Chart with Trouble Code.>

Y: DTC B1613 FRONT SUB SENSOR RH INITIALIZATION ERROR

DTC DETECTING CONDITION:

- Open or short circuit in harness of front sensor bus (RH).
- Front sub sensor (RH) is faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors (AB6, AB16) between the airbag control module and the front sub sensor (RH).	Is there poor contact?	Replace the airbag main harness along with body harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG MAIN HARNESS (FRONT SENSOR BUS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the instrument panel lower cover and column cover, and disconnect the connectors (AB7) and (AB2). 3) Remove the console front panel and disconnect the connector (AB9). 4) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 5) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 6) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 7) Disconnect the connector (AB16) from the front sub sensor (RH), and then connect the connector (1H) in the test harness H to connector (AB16). 8) Measure the resistance between connector (4AG) in the test harness AG and connector (3H) in the test harness H. ***Connector & terminal*** ***(4AG) No. 14 — (3H) No. 5:*** ***(4AG) No. 12 — (3H) No. 6:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag main harness along with body harness.
3	**CHECK AIRBAG MAIN HARNESS (FRONT SENSOR BUS RH).** Measure the resistance between connector (4AG) in the test harness AG and chassis ground, and the resistance between connector (4AG) terminals in the test harness AG. ***Connector & terminal*** ***(4AG) No. 12 — Chassis ground:*** ***(4AG) No. 14 — Chassis ground:*** ***(4AG) No. 12 — (4AG) No. 14:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the front sub sensor (RH). <Ref. to AB-77, REMOVAL, Front Sub Sensor.> Replace the airbag control module if not operating normally even after replacing the sensor. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

Z: DTC B1615 FRONT SUB SENSOR LH FAILURE

DTC DETECTING CONDITION:

Front sub sensor (LH) is faulty.

If DTC B1615 is displayed, the circuit within the front sub sensor (LH) is faulty.

Replace the front sub sensor (LH). <Ref. to AB-77, Front Sub Sensor.>

AA:DTC B1617 FRONT SUB SENSOR LH LOST COMMUNICATION

NOTE:

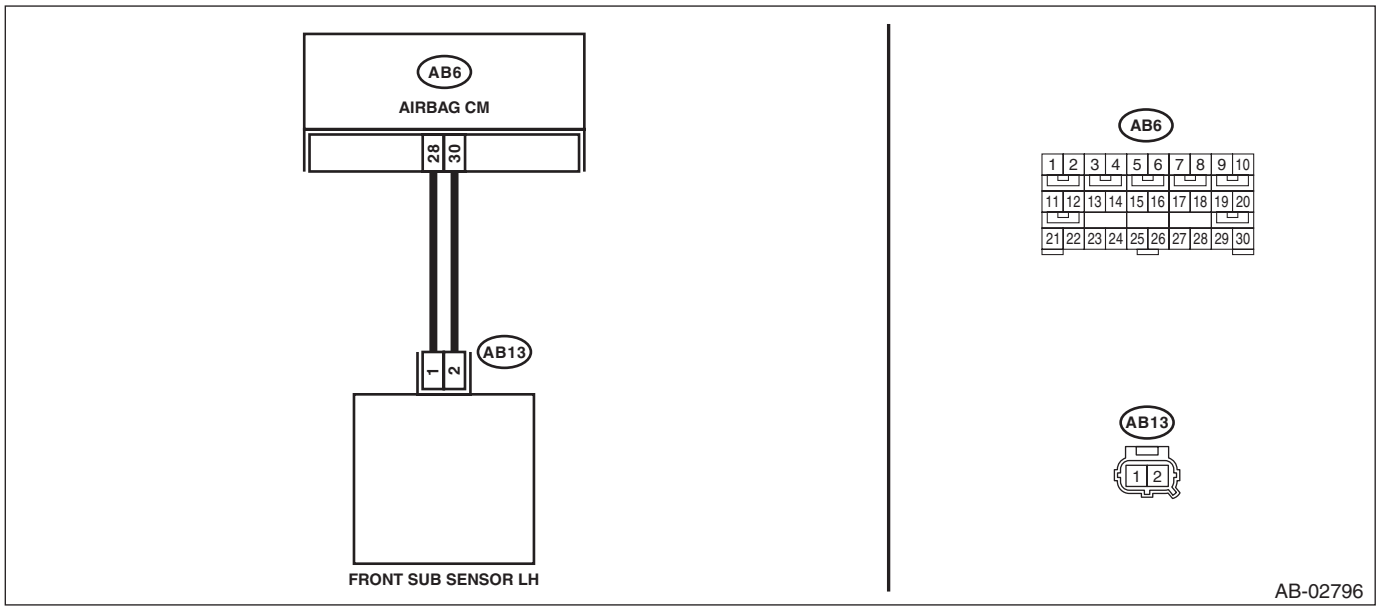
For details on DTC B1617, refer to DTC B1618. <Ref. to AB(diag)-50, DTC B1618 FRONT SUB SENSOR LH INITIALIZATION ERROR, Diagnostic Chart with Trouble Code.>

AB:DTC B1618 FRONT SUB SENSOR LH INITIALIZATION ERROR

DTC DETECTING CONDITION:

- Open or short circuit in harness of front sensor bus (LH).
- Front sub sensor (LH) is faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors (AB6, AB13) between the airbag control module and the front sub sensor (LH).	Is there poor contact?	Replace the airbag main harness along with body harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG MAIN HARNESS (FRONT SENSOR BUS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the instrument panel lower cover and column cover, and disconnect the connectors (AB7) and (AB2). 3) Remove the console front panel and disconnect the connector (AB9). 4) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 5) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 6) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 7) Disconnect the connector (AB13) from the front sub sensor (LH), and then connect the connector (1H) in the test harness H to connector (AB13). 8) Measure the resistance between connector (4AG) in the test harness AG and connector (3H) in the test harness H. ***Connector & terminal*** ***(4AG) No. 7 — (3H) No. 5:*** ***(4AG) No. 9 — (3H) No. 6:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag main harness along with body harness.
3	**CHECK AIRBAG MAIN HARNESS (FRONT SENSOR BUS LH).** Measure the resistance between connector (4AG) in the test harness AG and chassis ground, and the resistance between connector (4AG) terminals in the test harness AG. ***Connector & terminal*** ***(4AG) No. 7 — Chassis ground:*** ***(4AG) No. 9 — Chassis ground:*** ***(4AG) No. 7 — (4AG) No. 9:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the front sub sensor (LH). <Ref. to AB-77, REMOVAL, Front Sub Sensor.> Replace the airbag control module if not operating normally even after replacing the sensor. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AC:DTC B16F2 FRONT SUB SENSOR RH RECOGNITION ERROR

DTC DETECTING CONDITION:
Front sub sensor (RH) is misinstalled.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

	Step	Check	Yes	No
1	**REPLACE FRONT SUB SENSOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the front sub sensor (RH) with a genuine sensor. <Ref. to AB-77, REMOVAL, Front Sub Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

AD:DTC B16F3 FRONT SUB SENSOR LH RECOGNITION ERROR

DTC DETECTING CONDITION:
Front sub sensor (LH) is misinstalled.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

	Step	Check	Yes	No
1	**REPLACE FRONT SUB SENSOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the front sub sensor (LH) with a genuine sensor. <Ref. to AB-77, REMOVAL, Front Sub Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

AE:DTC B1620 SIDE AIRBAG SENSOR RH FAILURE

DTC DETECTING CONDITION:
Side airbag sensor (RH) is faulty.
When DTC B1620 is displayed, the circuit within the side airbag sensor (RH) is faulty.
Replace the side airbag sensor (RH). <Ref. to AB-84, Side Airbag Sensor.>

AF:DTC B1622 SIDE AIRBAG SENSOR RH LOST COMMUNICATION

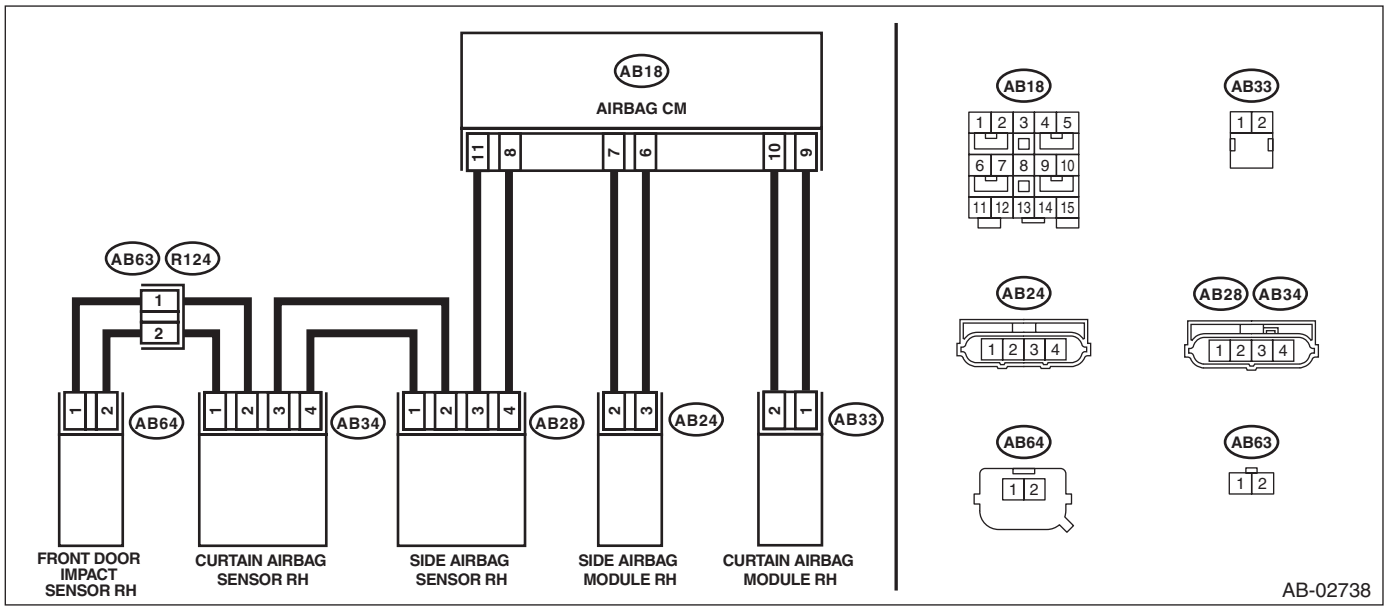
NOTE:
For details on DTC B1622, refer to DTC B1623. <Ref. to AB(diag)-53, DTC B1623 SIDE AIRBAG SENSOR RH INITIALIZATION ERROR, Diagnostic Chart with Trouble Code.>

AG:DTC B1623 SIDE AIRBAG SENSOR RH INITIALIZATION ERROR

DTC DETECTING CONDITION:

- Open or short circuit in harness of side sensor bus (RH).
- Side airbag sensor (RH) and curtain airbag sensor (RH) are faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the side airbag sensor (RH).	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect connector (AB24) of the side airbag module (RH). 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Disconnect the connector (AB28) from side airbag sensor (RH), and connect the connector (2V) in test harness V to connector (AB28). 9) Measure the resistance between connector (5AG) in the test harness AG and connector (3V) in the test harness V. ***Connector & terminal*** ***(5AG) No. 14 — (3V) No. 1:*** ***(5AG) No. 15 — (3V) No. 2:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag rear harness along with body harness.
3	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR RH).** Measure the resistance between test harness AG connectors (5AG) and chassis ground, and the resistance between connectors (5AG) of the test harness AG. ***Connector & terminal*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Go to step **5**.	Go to step **6**.
5	**REPLACE SIDE AIRBAG SENSOR (RH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side airbag sensor (RH). <Ref. to AB-84, REMOVAL, Side Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC. (Current malfunction)	Is the system normal?	Go to step **6**.	Replace the curtain airbag sensor (RH). <Ref. to AB-89, REMOVAL, Curtain Airbag Sensor.> Replace the airbag control module if not operating normally even after replacing the sensor. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

Step		Check	Yes	No
6	CHECK FOR ANY OTHER DTC ON DISPLAY.	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AH:DTC B1625 SIDE AIRBAG SENSOR LH FAILURE

DTC DETECTING CONDITION:

Side airbag sensor (LH) is faulty.

When DTC B1625 is displayed, the circuit within the side airbag sensor (LH) is faulty.

Replace the side airbag sensor (LH). <Ref. to AB-84, Side Airbag Sensor.>

AI: DTC B1627 SIDE AIRBAG SENSOR LH LOST COMMUNICATION

NOTE:

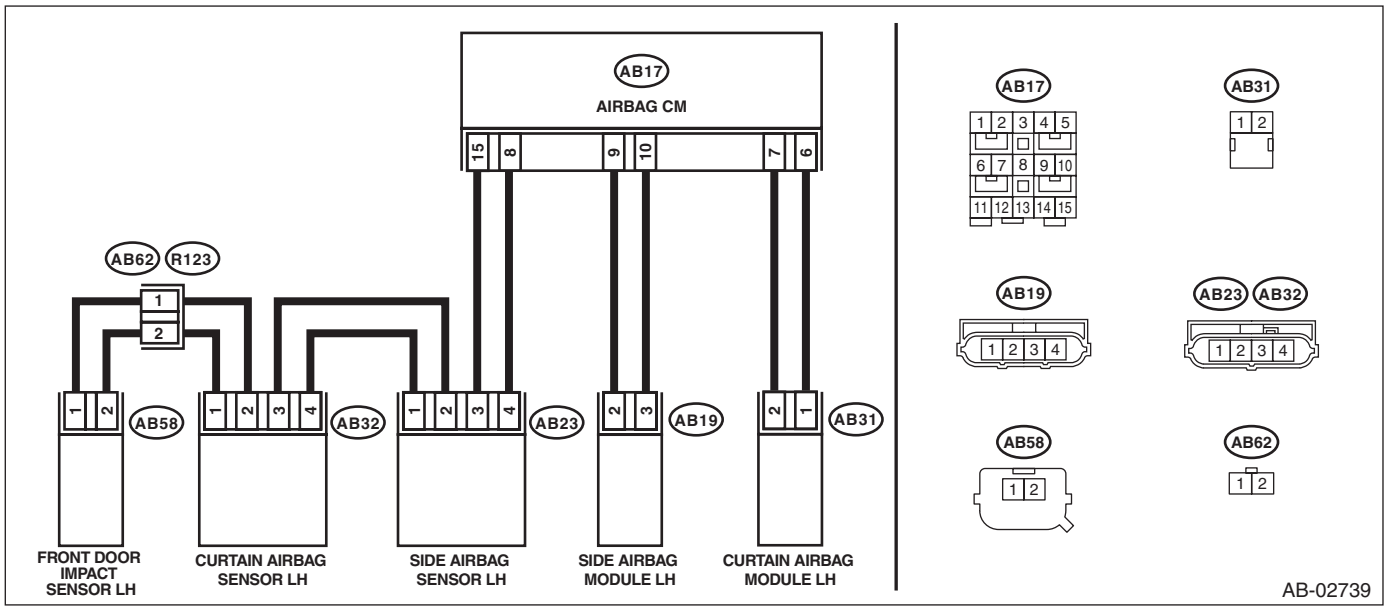
For details on DTC B1627, refer to DTC B1628. <Ref. to AB(diag)-56, DTC B1628 SIDE AIRBAG SENSOR LH INITIALIZATION ERROR, Diagnostic Chart with Trouble Code.>

AJ:DTC B1628 SIDE AIRBAG SENSOR LH INITIALIZATION ERROR

DTC DETECTING CONDITION:

- Open or short circuit in harness of side sensor bus (LH).
- Side airbag sensor (LH) and curtain airbag sensor (LH) are faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the side airbag sensor (RH).	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect connector (AB19) of the side airbag module (LH). 5) Disconnect the connectors (AB17, AB6, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB17, AB6, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Disconnect the connector (AB23) from side airbag sensor (LH), and connect the connector (2V) in test harness V to connector (AB23). 9) Measure the resistance between connector (5AG) in the test harness AG and connector (3V) in the test harness V. ***Connector & terminal*** ***(5AG) No. 9 — (3V) No. 2:*** ***(5AG) No. 10 — (3V) No. 1:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag rear harness along with body harness.
3	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR LH).** Measure the resistance between test harness AG connectors (5AG) and chassis ground, and the resistance between connectors (5AG) of the test harness AG. ***Connector & terminal*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Go to step **5**.	Go to step **6**.
5	**REPLACE SIDE AIRBAG SENSOR (LH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side airbag sensor (LH). <Ref. to AB-84, REMOVAL, Side Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC. (Current malfunction)	Is the system normal?	Go to step **6**.	Replace the curtain airbag sensor (LH). <Ref. to AB-89, REMOVAL, Curtain Airbag Sensor.> Replace the airbag control module if not operating normally even after replacing the sensor. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

Step		Check	Yes	No
6	CHECK FOR ANY OTHER DTC ON DISPLAY.	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AK:DTC B1630 CURTAIN AIRBAG SENSOR RH FAILURE

DTC DETECTING CONDITION:

Curtain airbag sensor (RH) is faulty.

If DTC B1630 is displayed, the circuit within the curtain airbag sensor (RH) is faulty.

Replace the curtain airbag sensor (RH). <Ref. to AB-89, Curtain Airbag Sensor.>

AL:DTC B1632 CURTAIN AIRBAG SENSOR RH LOST COMMUNICATION

NOTE:

For details on DTC B1632, refer to DTC B1633. <Ref. to AB(diag)-59, DTC B1633 CURTAIN AIRBAG SENSOR RH INITIALIZATION ERROR, Diagnostic Chart with Trouble Code.>

AM:DTC B1633 CURTAIN AIRBAG SENSOR RH INITIALIZATION ERROR

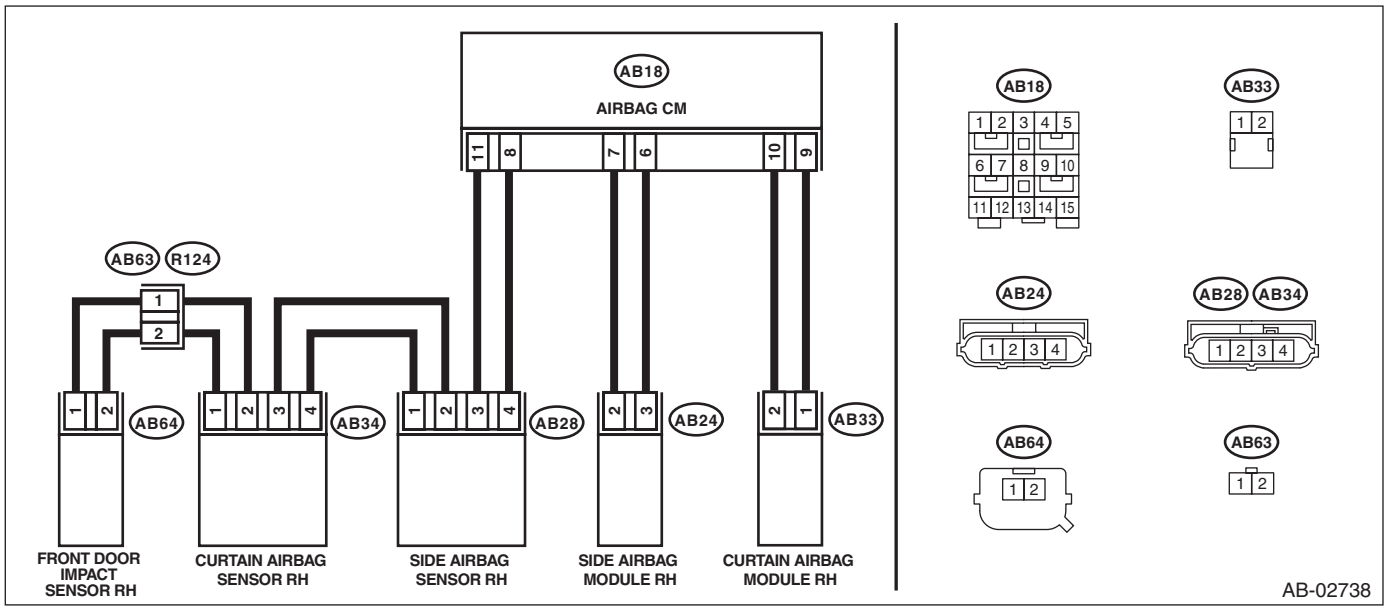
DTC DETECTING CONDITION:

- Open or short circuit in harness of side sensor bus (RH).
- Side airbag sensor (RH) and curtain airbag sensor (RH) are faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.**	Is DTC B1622 or B1623 displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the door sensor (RH).	Is there poor contact?	Replace the airbag rear harness and the door harness.	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR (RH) AND CURTAIN AIRBAG SENSOR (RH)).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect connector (AB24) of the side airbag module (RH). 5) Disconnect connector (AB28) from side airbag sensor (RH). 6) Connect the connector (AB28) of side airbag sensor (RH) and the connector (1AI) in the test harness AI. 7) Connect the connector (2AI) in the test harness AI and the connector (1V) in the test harness V. 8) Disconnect the connector (AB34) from curtain airbag sensor (RH), and connect the connector (2V) in test harness V to connector (AB34). 9) Measure the resistance between connector (3V) terminals in the test harness V. ***Connector & terminal*** ***(3V) No. 2 — (3V) No. 6:*** ***(3V) No. 1 — (3V) No. 7:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR RH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) in test harness V. ***Connector & terminal*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 2 — (3V) No. 1:***	Is the resistance 1 MΩ or more?	Go to step **5**.	Replace the airbag rear harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Go to step **6**.	Go to step **7**.
6	**REPLACE CURTAIN AIRBAG SENSOR (RH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the curtain airbag sensor (RH). <Ref. to AB-89, REMOVAL, Curtain Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Go to step **7**.	Go to step **8**.

	Step	Check	Yes	No
7	**REPLACE SIDE AIRBAG SENSOR (RH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side airbag sensor (RH). <Ref. to AB-84, REMOVAL, Side Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **8**.
8	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AN:DTC B1635 CURTAIN AIRBAG SENSOR LH FAILURE

DTC DETECTING CONDITION:

Curtain airbag sensor (LH) is faulty.

If DTC B1635 is displayed, the circuit within the curtain airbag sensor (LH) is faulty.

Replace the curtain airbag sensor (LH). <Ref. to AB-89, Curtain Airbag Sensor.>

AO:DTC B1637 CURTAIN AIRBAG SENSOR LH LOST COMMUNICATION

NOTE:

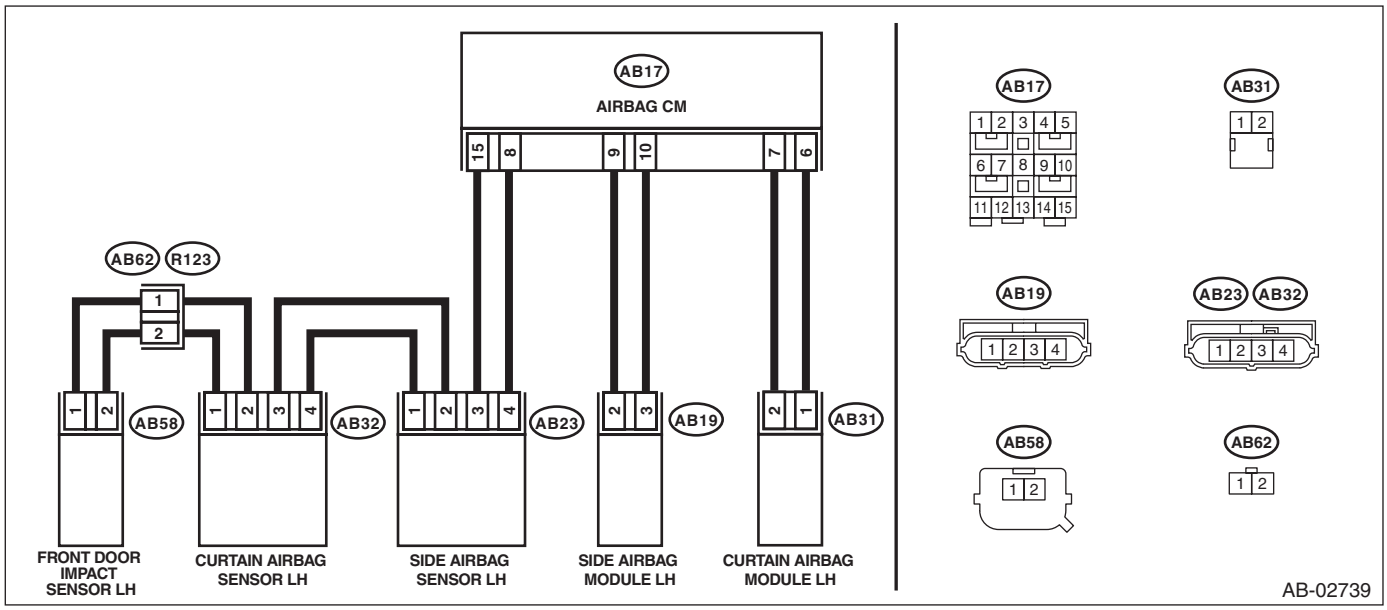
For details on DTC B1637, refer to DTC B1638. <Ref. to AB(diag)-62, DTC B1638 CURTAIN AIRBAG SENSOR LH INITIALIZATION ERROR, Diagnostic Chart with Trouble Code.>

AP:DTC B1638 CURTAIN AIRBAG SENSOR LH INITIALIZATION ERROR

DTC DETECTING CONDITION:

- Open or short circuit in harness of side sensor bus (LH).
- Side airbag sensor (LH) and curtain airbag sensor (LH) are faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.**	Is DTC B1627 or B1628 displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the door sensor (LH).	Is there poor contact?	Replace the airbag rear harness and the door harness.	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR LH AND CURTAIN AIRBAG SENSOR LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect connector (AB19) of the side airbag module (LH). 5) Disconnect the connector (AB23) in the side airbag sensor (LH). 6) Connect the connector (AB23) of side airbag sensor (LH) and the connector (1AI) in the test harness AI. 7) Connect the connector (2AI) in the test harness AI and the connector (1V) in the test harness V. 8) Disconnect the connector (AB32) from curtain airbag sensor (LH), and connect to the connector (2V) in test harness V. 9) Measure the resistance between connector (3V) terminals in the test harness V. ***Connector & terminal*** ***(3V) No. 2 — (3V) No. 6:*** ***(3V) No. 1 — (3V) No. 7:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR LH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) in test harness V. ***Connector & terminal*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **5**.	Replace the airbag rear harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Go to step **6**.	Go to step **8**.
6	**REPLACE CURTAIN AIRBAG SENSOR (LH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the curtain airbag sensor (LH). <Ref. to AB-89, REMOVAL, Curtain Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Go to step **7**.	Go to step **8**.

	Step	Check	Yes	No
7	**REPLACE SIDE AIRBAG SENSOR (LH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side airbag sensor (LH). <Ref. to AB-84, REMOVAL, Side Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **8**.
8	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AQ:DTC B16F4 SIDE AIRBAG SENSOR RH RECOGNITION ERROR

DTC DETECTING CONDITION:

- Side airbag sensor RH is misinstalled.
- Airbag CM is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

	Step	Check	Yes	No
1	**REPLACE SIDE AIRBAG SENSOR (RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side A/B sensor (RH) with a genuine sensor. <Ref. to AB-84, REMOVAL, Side Airbag Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

AR:DTC B16F5 SIDE AIRBAG SENSOR LH RECOGNITION ERROR

DTC DETECTING CONDITION:

- Side airbag sensor LH is misinstalled.
- Airbag CM is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

	Step	Check	Yes	No
1	**REPLACE SIDE AIRBAG SENSOR (LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side A/B sensor (LH) with a genuine sensor. <Ref. to AB-84, REMOVAL, Side Airbag Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

AS:DTC B16F6 CURTAIN AIRBAG SENSOR RH RECOGNITION ERROR

DTC DETECTING CONDITION:

- Curtain airbag sensor RH is misinstalled.
- Airbag CM is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

	Step	Check	Yes	No
1	**REPLACE CURTAIN AIRBAG SENSOR (RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the curtain A/B sensor (RH) with a genuine sensor. <Ref. to AB-89, REMOVAL, Curtain Airbag Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

AT:DTC B16F7 CURTAIN AIRBAG SENSOR LH RECOGNITION ERROR

DTC DETECTING CONDITION:

- Curtain airbag sensor LH is misinstalled.
- Airbag CM is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

	Step	Check	Yes	No
1	**REPLACE CURTAIN AIRBAG SENSOR (LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the curtain A/B sensor (LH) with a genuine sensor. <Ref. to AB-89, REMOVAL, Curtain Airbag Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

AU:DTC B1642 SIDE SATELLITE SENSOR BUS RH LOST COMMUNICATION

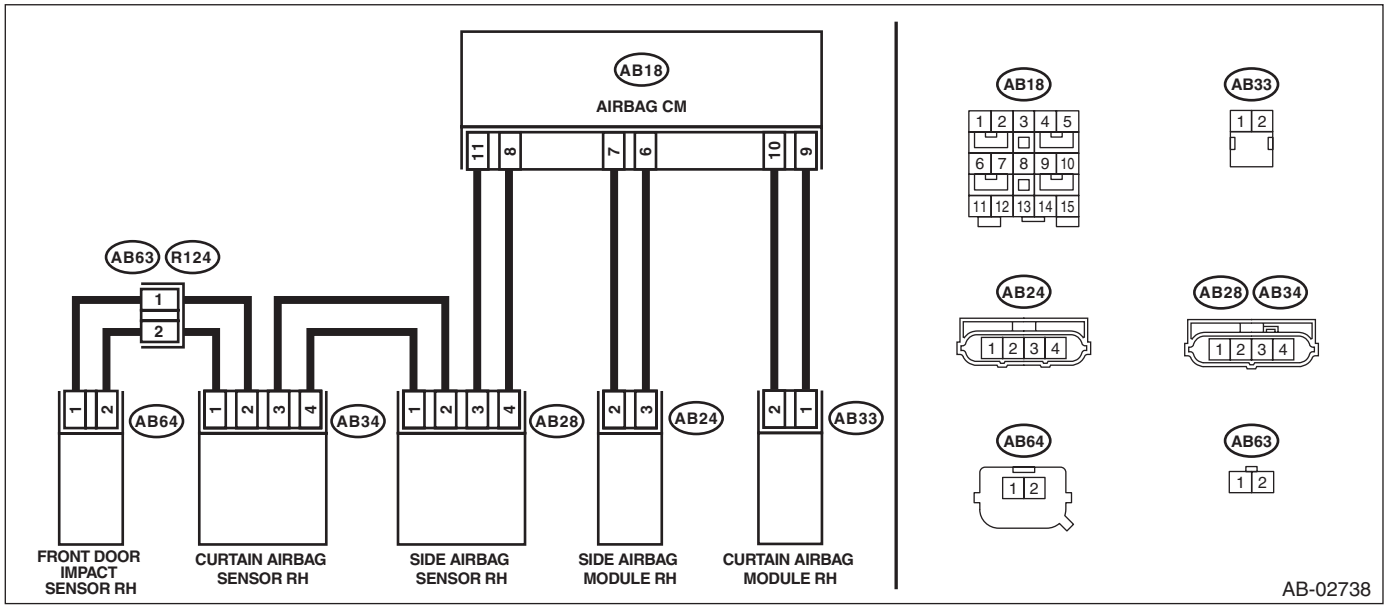
DTC DETECTING CONDITION:

- Open or short circuit in harness of side sensor bus (RH).
- Side airbag sensor (RH) is faulty.
- Curtain airbag sensor (RH) is faulty.
- Front door impact sensor (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC.	Is DTC B1622 or B1623 displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Read the DTC.	Is DTC B1632 or B1633 displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK DTC.** Read the DTC.	Is DTC B1692 or B1693 displayed?	Perform the diagnosis according to DTC.	Go to step **4**.
4	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the front door impact sensor (RH).	Is there poor contact?	Replace the airbag rear harness and the door harness.	Go to step **5**.

	Step	Check	Yes	No
5	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect connector (AB24) of the side airbag module (RH). 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Disconnect connector (AB28) from side airbag sensor (RH). 9) Connect the connector (2V) in the test harness V to the connector (AB28). 10) Measure the resistance between connector (5AG) in the test harness AG and connector (3V) in the test harness V. ***Connector & terminal*** ***(5AG) No. 15 — (3V) No. 2:*** ***(5AG) No. 14 — (3V) No. 1:***	Is the resistance less than 10 Ω?	Go to step **6**.	Replace the airbag rear harness along with body harness.
6	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR RH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals. ***Connector & terminal*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **7**.	Replace the airbag rear harness along with body harness.

	Step	Check	Yes	No
7	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR RH).** 1) Disconnect the connector (2V) in the test harness V from the connector (AB28) of side airbag sensor (RH). 2) Connect the connector (AB28) of side airbag sensor (RH) and the connector (1AI) in the test harness AI. 3) Connect the connector (2AI) in the test harness AI and the connector (1V) in the test harness V. 4) Disconnect the connector (AB34) from curtain airbag sensor (RH), and connect the connector (2V) in test harness V to connector (AB34). 5) Measure the resistance between connector (3V) terminals in the test harness V. ***Connector & terminal*** ***(3V) No. 2 — (3V) No. 6:*** ***(3V) No. 1 — (3V) No. 7:***	Is the resistance less than 10 Ω?	Go to step **8**.	Replace the airbag rear harness along with body harness.
8	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR RH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals in test harness V. ***Connector & terminal*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **9**.	Replace the airbag rear harness along with body harness.
9	**CHECK AIRBAG REAR HARNESS AND DOOR HARNESS (BETWEEN CURTAIN AIRBAG SENSOR RH AND DOOR SENSOR RH).** 1) Disconnect the connector (AB64) from the front door impact sensor (RH), and connect the connector (1H) in the test harness H to connector (AB64). 2) Measure the resistance between connector (3V) in the test harness V and connector (3H) in the test harness H. ***Connector & terminal*** ***(3V) No. 4 — (3H) No. 5:*** ***(3V) No. 5 — (3H) No. 6:***	Is the resistance less than 10 Ω?	Go to step **10**.	Check the door harness, and if any fault is found, replace the harness. If there is no fault, replace the airbag rear harness together with body harness.
10	**CHECK AIRBAG REAR HARNESS AND DOOR HARNESS (BETWEEN CURTAIN AIRBAG SENSOR RH AND FRONT DOOR IMPACT SENSOR RH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals in test harness V. ***Connector & terminal*** ***(3V) No. 4 — Chassis ground:*** ***(3V) No. 5 — Chassis ground:*** ***(3V) No. 4 — (3V) No. 5:***	Is the resistance 1 MΩ or more?	Go to step **11**.	Check the door harness, and if any fault is found, replace the harness. If there is no fault, replace the airbag rear harness together with body harness.

Step		Check	Yes	No
11	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Go to step **12**.	Go to step **15**.
12	**REPLACE SIDE AIRBAG SENSOR (RH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side airbag sensor (RH). <Ref. to AB-84, REMOVAL, Side Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC.	Is the same DTC displayed?	Go to step **13**.	Go to step **15**.
13	**REPLACE CURTAIN AIRBAG SENSOR (RH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the curtain airbag sensor (RH). <Ref. to AB-89, REMOVAL, Curtain Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC.	Is the same DTC displayed?	Go to step **14**.	Go to step **15**.
14	**REPLACE FRONT DOOR IMPACT SENSOR (RH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the front door impact sensor (RH). <Ref. to AB-81, REMOVAL, Front Door Impact Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **15**.
15	**CHECK FOR ANY OTHER DTC ON DISPLAY.** Read the DTC.	Is any other DTC displayed?	Perform the diagnosis according to DTC.	Finish the diagnosis.

AV:DTC B1647 SIDE SATELLITE SENSOR BUS LH LOST COMMUNICATION

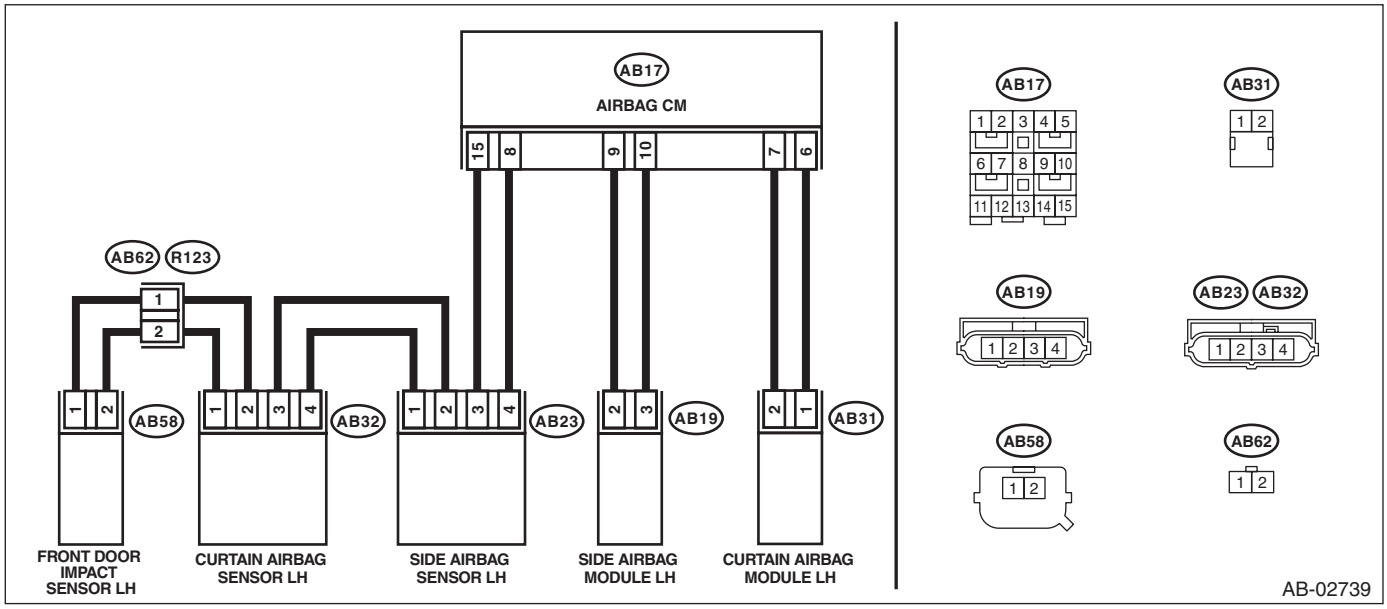
DTC DETECTING CONDITION:

- Open or short circuit in harness of side sensor bus (LH).
- Side airbag sensor (LH) is faulty.
- Curtain airbag sensor (LH) is faulty.
- Front door impact sensor (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC.	Is DTC B1627 or B1628 displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Read the DTC.	Is DTC B1637 or B1638 displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK DTC.** Read the DTC.	Is DTC B1697 or B1698 displayed?	Perform the diagnosis according to DTC.	Go to step **4**.
4	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the front door impact sensor (LH).	Is there poor contact?	Replace the airbag rear harness and the door harness.	Go to step **5**.

	Step	Check	Yes	No
5	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect connector (AB19) of the side airbag module (LH). 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Disconnect the connector (AB23) from the side airbag sensor (LH). 9) Connect the connector (2V) in the test harness V to the connector (AB23). 10) Measure the resistance between connector (5AG) in the test harness AG and connector (3V) in the test harness V. ***Connector & terminal*** ***(5AG) No. 10 — (3V) No. 1:*** ***(5AG) No. 9 — (3V) No. 2:***	Is the resistance less than 10 Ω?	Go to step **6**.	Replace the airbag rear harness along with body harness.
6	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR LH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals. ***Connector & terminal*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **7**.	Replace the airbag rear harness along with body harness.

	Step	Check	Yes	No
7	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR LH).** 1) Disconnect the connector (2V) in the test harness V from the connector (AB23) of side airbag sensor (LH). 2) Connect the connector (AB23) of side airbag sensor (LH) and the connector (1AI) in the test harness AI. 3) Connect the connector (2AI) in the test harness AI and the connector (1V) in the test harness V. 4) Disconnect the connector (AB32) from curtain airbag sensor (LH), and connect the connector (2V) in test harness V to connector (AB32). 5) Measure the resistance between connector (3V) terminals in the test harness V. ***Connector & terminal*** ***(3V) No. 2 — (3V) No. 6:*** ***(3V) No. 1 — (3V) No. 7:***	Is the resistance less than 10 Ω?	Go to step **8**.	Replace the airbag rear harness along with body harness.
8	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR LH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals in test harness V. ***Connector & terminal*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **9**.	Replace the airbag rear harness along with body harness.
9	**CHECK AIRBAG REAR HARNESS AND DOOR HARNESS (BETWEEN CURTAIN AIRBAG SENSOR LH AND DOOR SENSOR LH).** 1) Disconnect the connector (AB58) from the front door impact sensor (LH), and connect the connector (1H) in the test harness H to connector (AB58). 2) Measure the resistance between connector (3V) in the test harness V and connector (3H) in the test harness H. ***Connector & terminal*** ***(3V) No. 4 — (3H) No. 5:*** ***(3V) No. 5 — (3H) No. 6:***	Is the resistance less than 10 Ω?	Go to step **10**.	Check the door harness, and if any fault is found, replace the harness. If there is no fault, replace the airbag rear harness together with body harness.
10	**CHECK AIRBAG REAR HARNESS AND DOOR HARNESS (BETWEEN CURTAIN AIRBAG SENSOR LH AND DOOR SENSOR LH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals in test harness V. ***Connector & terminal*** ***(3V) No. 4 — Chassis ground:*** ***(3V) No. 5 — Chassis ground:*** ***(3V) No. 4 — (3V) No. 5:***	Is the resistance 1 MΩ or more?	Go to step **11**.	Check the door harness, and if any fault is found, replace the harness. If there is no fault, replace the airbag rear harness together with body harness.

Step		Check	Yes	No
11	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Go to step **12**.	Go to step **15**.
12	**REPLACE SIDE AIRBAG SENSOR (LH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side airbag sensor (LH). <Ref. to AB-84, REMOVAL, Side Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC.	Is the same DTC displayed?	Go to step **13**.	Go to step **15**.
13	**REPLACE CURTAIN AIRBAG SENSOR (LH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the curtain airbag sensor (LH). <Ref. to AB-89, REMOVAL, Curtain Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC.	Is the same DTC displayed?	Go to step **14**.	Go to step **15**.
14	**REPLACE FRONT DOOR IMPACT SENSOR (LH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the front door impact sensor (LH). <Ref. to AB-81, REMOVAL, Front Door Impact Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **15**.
15	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Perform the diagnosis according to DTC.	Finish the diagnosis.

AW:DTC B1650 OCCUPANT CLASSIFICATION SYSTEM MALFUNCTION

NOTE:
Refer to “Occupant Detection System” for details on DTC B1650. <Ref. to OD(diag)-19, DTC B1650 OCCUPANT CLASSIFICATION SYSTEM MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

AX:DTC B1655 FRONT BUCKLE SWITCH RH FAILURE

NOTE:
Refer to “Occupant Detection System” for details on DTC B1655. <Ref. to OD(diag)-21, DTC B1655 FRONT BUCKLE SWITCH RH FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

AY:DTC B1660 PASSENGER'S AIRBAG ON INDICATOR FAILURE

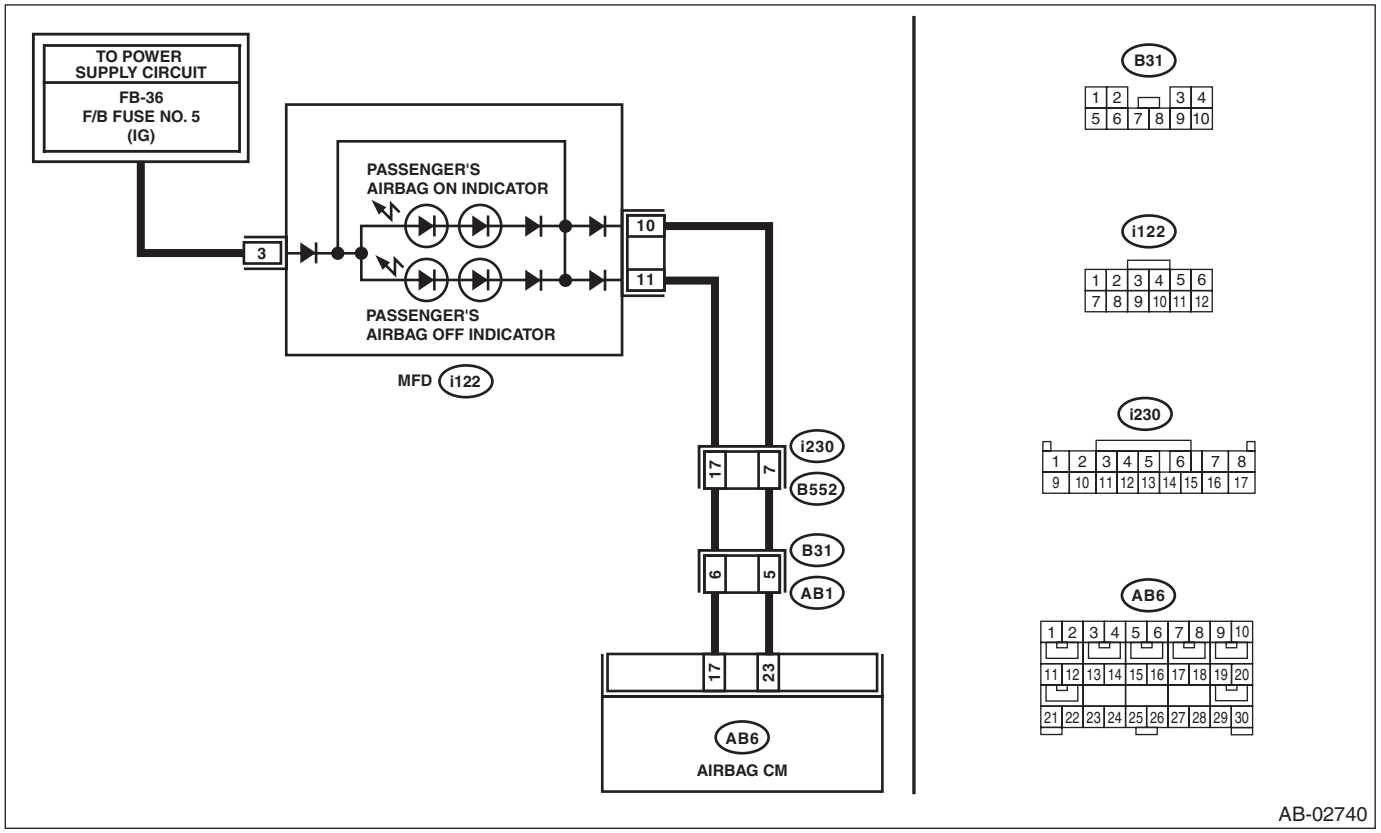
DTC DETECTING CONDITION:

- Passenger's airbag indicator is faulty.
- Airbag control module is faulty.
- Airbag main harness circuit is open or shorted.
- Body harness circuit is open.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK FOR POOR CONTACT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Check that the connector between the airbag control module and MFD is securely connected.	Is there poor contact of any connector?	Repair the bulkhead harness. Or replace the airbag main harness along with body harness.	Go to step **2**.
2	**CHECK AIRBAG MAIN HARNESS.** 1) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 2) Connect the battery ground terminal and turn the ignition switch to ON. NOTE: Neither of ON/OFF illuminates when it is normal.	Does the passenger's airbag indicator illuminate?	Go to step **3**.	Go to step **4**.

	Step	Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the MFD and disconnect the connector (i122). 3) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AH) in the test harness AH. 4) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 5) Measure the resistance between connector (2AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(2AG) No. 9 — (2AG) No. 8:*** ***(2AG) No. 9 — Chassis ground:*** ***(2AG) No. 8 — Chassis ground:***	Is the resistance 1 MΩ or more?	Replace the MFD. <Ref. to IDI-22, REMOVAL, Multi-function Display (MFD).>	Repair the bulkhead harness. Or replace the airbag main harness along with body harness.
4	**CHECK AIRBAG MAIN HARNESS.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AH) in the test harness AH. 3) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 4) Connect the connectors (7AG) and (8AG) in the test harness AG. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the passenger's airbag indicator illuminate?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK AIRBAG MAIN HARNESS.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the MFD and disconnect the connector (i122). 3) Measure the resistance between connector (2AG) in the test harness AG and connector (i122). ***Connector & terminal*** ***(2AG) No. 9 — (i122) No. 11:*** ***(2AG) No. 8 — (i122) No. 10:***	Is the resistance less than 10 Ω?	Go to step **6**.	Repair the bulkhead harness. Or replace the airbag main harness along with body harness.
6	**CHECK BODY HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between connector (i122) and chassis ground. ***Connector & terminal*** ***(i122) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Replace the MFD. <Ref. to IDI-22, REMOVAL, Multi-function Display (MFD).>	Check the power supply circuit of MDF.

AZ:DTC B1675 SATELLITE SAFING SENSOR FAILURE

DTC DETECTING CONDITION:

- Satellite safing sensor is faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

	Step	Check	Yes	No
1	**REPLACE SATELLITE SAFING SENSOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the satellite safing sensor with a genuine sensor. <Ref. to AB-97, REMOVAL, Satellite Safing Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

BA:DTC B1676 LOST COMMUNICATION WITH SATELLITE SAFING SENSOR

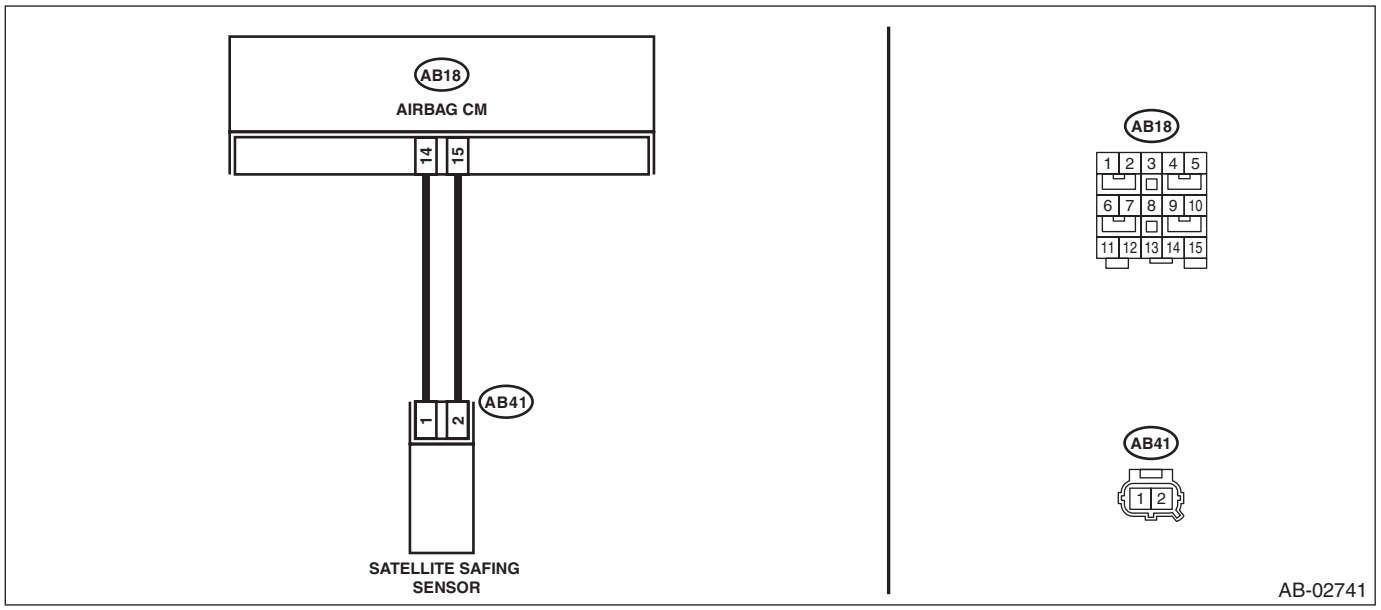
NOTE:
For details on DTC B1676, refer to DTC B1677. <Ref. to AB(diag)-78, DTC B1677 SATELLITE SAFING SENSOR INITIALIZATION INCOMPLETE, Diagnostic Chart with Trouble Code.>

BB:DTC B1677 SATELLITE SAFING SENSOR INITIALIZATION INCOMPLETE

DTC DETECTING CONDITION:

- Open or short circuit in harness of satellite safing sensor.
- Satellite safing sensor is faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors (AB18, AB41) between the airbag control module and the satellite safing sensor.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SATELLITE SAFING SENSOR).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB21, AB26) from seat belt pretensioner. 3) Disconnect the connectors (AB31, AB33) from curtain airbag module. 4) Disconnect connectors (AB19) and (AB24) from the side airbag module. 5) Disconnect the connectors (AB17, AB6, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB17, AB6, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Disconnect the connector (AB41) from the satellite safing sensor and connect to the test harness H connector (1H). 9) Measure the resistance between connectors (5AG) and (4AG) in the test harness AG and connector (3H) in the test harness H. ***Connector & terminal*** ***(4AG) No. 5 — (3H) No. 5:*** ***(5AG) No. 13 — (3H) No. 6:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag rear harness along with body harness.
3	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SATELLITE SAFING SENSOR).** Measure the resistance between connector (5AG) in the test harness AG and chassis ground, and the resistance between connector (5AG) terminals in the test harness AG. ***Connector & terminal*** ***(4AG) No. 5 — Chassis ground:*** ***(5AG) No. 13 — Chassis ground:*** ***(4AG) No. 5 — (5AG) No. 13:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the satellite safing sensor. <Ref. to AB-97, REMOVAL, Satellite Safing Sensor.> Replace the airbag control module if not operating normally even after replacing the sensor. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BC:DTC B16F8 SATELLITE SAFING SENSOR RECOGNITION ERROR

DTC DETECTING CONDITION:

- Satellite safing sensor is misinstalled.
- Airbag control module is faulty.

	Step	Check	Yes	No
1	**REPLACE SATELLITE SAFING SENSOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the satellite safing sensor with a genuine sensor. <Ref. to AB-97, REMOVAL, Satellite Safing Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

BD:DTC B16F9 DOOR SENSOR RH RECOGNITION ERROR

DTC DETECTING CONDITION:

- Front door impact sensor (RH) is misinstalled.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

	Step	Check	Yes	No
1	**REPLACE FRONT DOOR IMPACT SENSOR (RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the front door impact sensor (RH) with a genuine sensor. <Ref. to AB-81, REMOVAL, Front Door Impact Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

BE:DTC B1690 DOOR SENSOR RH FAILURE

DTC DETECTING CONDITION:

Front door impact sensor (RH) is faulty.
If DTC B1690 is displayed, the circuit within the front door impact sensor (RH) is faulty.
Replace the front door impact sensor (RH). <Ref. to AB-81, REMOVAL, Front Door Impact Sensor.>

BF:DTC B1692 LOST COMMUNICATION WITH DOOR SENSOR RH

NOTE:
For details on DTC B1692, refer to DTC B1693. <Ref. to AB(diag)-81, DTC B1693 DOOR SENSOR RH INITIALIZATION INCOMPLETE, Diagnostic Chart with Trouble Code.>

BG:DTC B1693 DOOR SENSOR RH INITIALIZATION INCOMPLETE

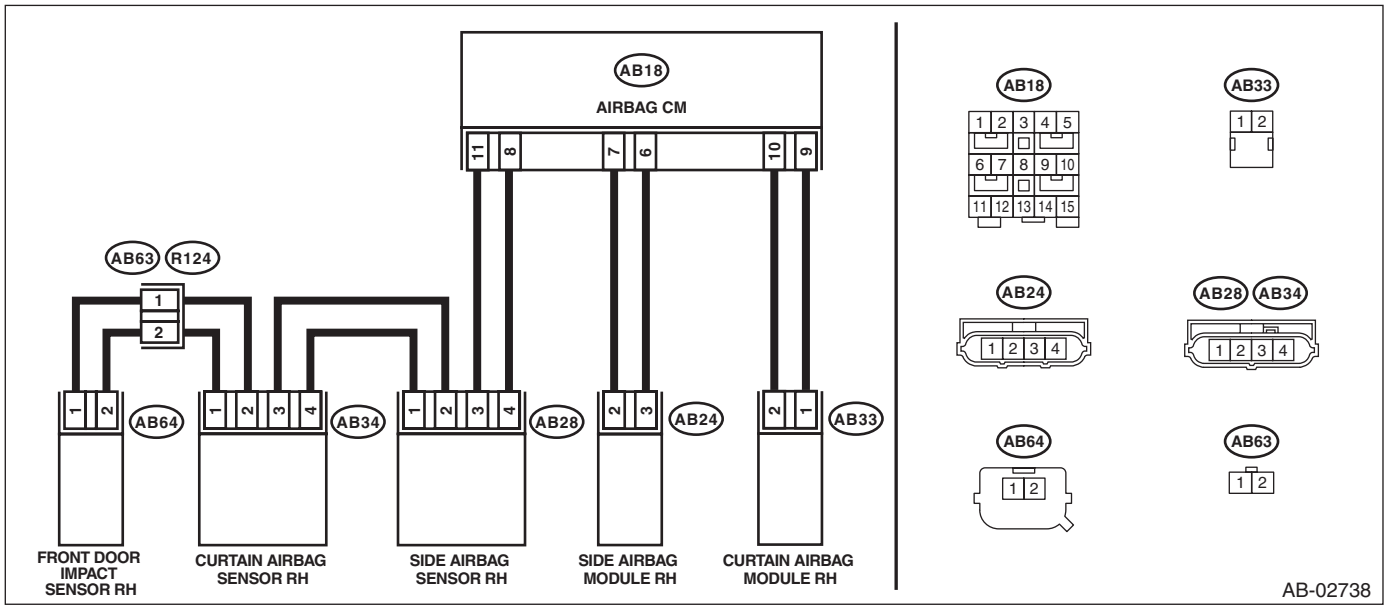
DTC DETECTING CONDITION:

- Open or short circuit in harness of side sensor bus (RH).
- Front door impact sensor (RH) is faulty.
- Curtain airbag sensor (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC. (Current malfunction)	Is DTC B1622 or B1623 displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Read the DTC. (Current malfunction)	Is DTC B1632 or B1633 displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the front door impact sensor (RH).	Is there poor contact?	Replace the airbag rear harness and the door harness.	Go to step **4**.

	Step	Check	Yes	No
4	**CHECK AIRBAG REAR HARNESS AND DOOR HARNESS (BETWEEN CURTAIN AIRBAG SENSOR RH AND DOOR SENSOR RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect connector (AB24) from side airbag module (RH). 5) Disconnect the connector (AB34) from curtain airbag sensor (RH), and connect the connector (2V) in test harness V to connector (AB34). 6) Disconnect the connector (AB64) from the front door impact sensor (RH), and connect the connector (1H) in the test harness H to connector (AB64). 7) Measure the resistance between connector (3V) in the test harness V and connector (3H) in the test harness H. ***Connector & terminal*** ***(3V) No. 4 — (3H) No. 5:*** ***(3V) No. 5 — (3H) No. 6:***	Is the resistance less than 10 Ω?	Go to step **5**.	Check the door harness, and if any fault is found, replace the harness. If there is no fault, replace the airbag rear harness together with body harness.
5	**CHECK AIRBAG REAR HARNESS AND DOOR HARNESS (BETWEEN CURTAIN AIRBAG SENSOR RH AND DOOR SENSOR RH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals in test harness V. ***Connector & terminal*** ***(3V) No. 4 — Chassis ground:*** ***(3V) No. 5 — Chassis ground:*** ***(3V) No. 4 — (3V) No. 5:***	Is the resistance 1 MΩ or more?	Go to step **6**.	Check the door harness, and if any fault is found, replace the harness. If there is no fault, replace the airbag rear harness together with body harness.
6	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Go to step **7**.	Go to step **9**.
7	**REPLACE FRONT DOOR IMPACT SENSOR (RH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the front door impact sensor (RH). <Ref. to AB-81, REMOVAL, Front Door Impact Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Go to step **8**.	Go to step **9**.

	Step	Check	Yes	No
8	**REPLACE CURTAIN AIRBAG SENSOR (RH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the curtain airbag sensor (RH). <Ref. to AB-89, REMOVAL, Curtain Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **9**.
9	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code”. <Ref. to AB(diag)-31, LIST, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BH:DTC B16FA LOST COMMUNICATION WITH DOOR SENSOR LH

DTC DETECTING CONDITION:

- Front door impact sensor (LH) is misinstalled.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

	Step	Check	Yes	No
1	**REPLACE FRONT DOOR IMPACT SENSOR (LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the front door impact sensor (LH) with a genuine sensor. <Ref. to AB-81, REMOVAL, Front Door Impact Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>

BI: DTC B1695 DOOR SENSOR LH FAILURE

DTC DETECTING CONDITION:

Front door impact sensor (LH) is faulty.
If DTC AB is displayed, the circuit within the front door impact sensor (LH) is faulty.
Replace the front door impact sensor (LH). <Ref. to AB-81, REMOVAL, Front Door Impact Sensor.>

BJ:DTC B1697 LOST COMMUNICATION WITH DOOR SENSOR LH

NOTE:
For details on DTC B1697, refer to DTC B1698. <Ref. to AB(diag)-85, DTC B1698 DOOR SENSOR LH INITIALIZATION INCOMPLETE, Diagnostic Chart with Trouble Code.>

BK:DTC B1698 DOOR SENSOR LH INITIALIZATION INCOMPLETE

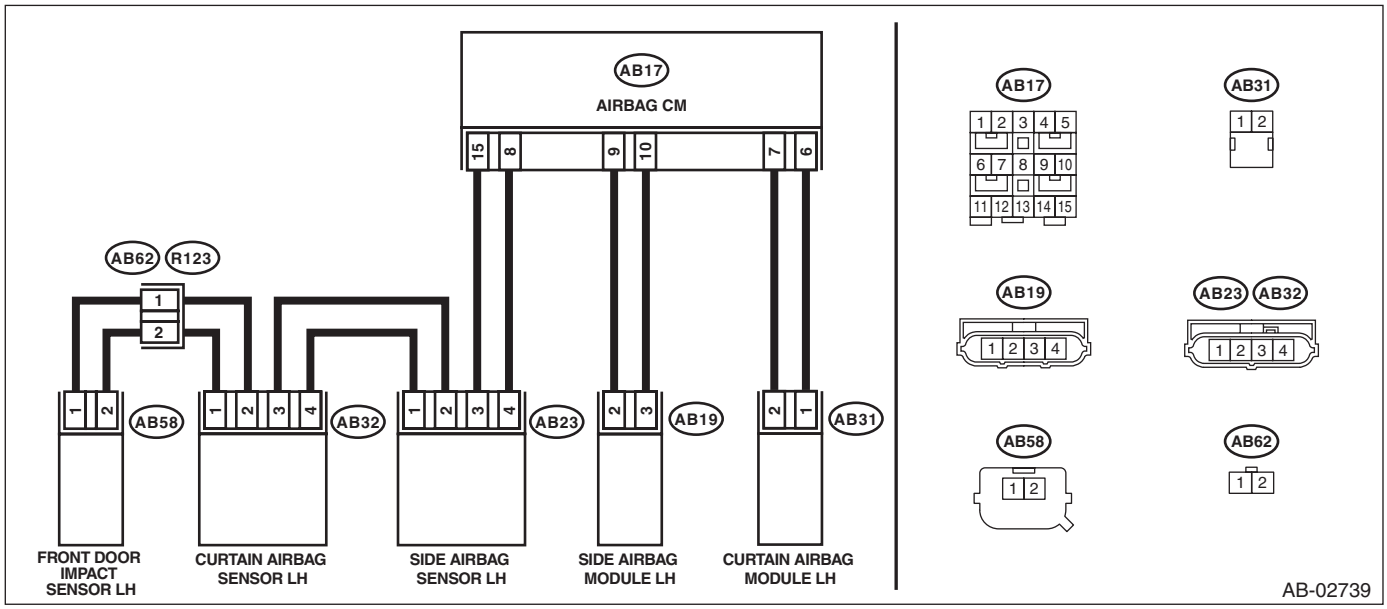
DTC DETECTING CONDITION:

- Open or short circuit in harness of side sensor bus (LH).
- Front door impact sensor (LH) is faulty.
- Curtain airbag sensor (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC. (Current malfunction)	Is DTC B1627 or B1628 displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Read the DTC. (Current malfunction)	Is DTC B1637 or B1638 displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the front door impact sensor (LH).	Is there poor contact?	Replace the airbag rear harness and the door harness.	Go to step **4**.

Step		Check	Yes	No
4	**CHECK AIRBAG REAR HARNESS AND DOOR HARNESS (BETWEEN CURTAIN AIRBAG SENSOR LH AND FRONT DOOR IMPACT SENSOR LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect connector (AB19) from side airbag module (LH). 5) Disconnect the connector (AB32) from curtain airbag sensor (LH), and connect the connector (2V) in test harness V to connector (AB32). 6) Disconnect the connector (AB58) from the front door impact sensor (LH), and connect the connector (1H) in the test harness H to connector (AB58). 7) Measure the resistance between connector (3V) in the test harness V and connector (3H) in the test harness H. ***Connector & terminal*** ***(3V) No. 4 — (3H) No. 5:*** ***(3V) No. 5 — (3H) No. 6:***	Is the resistance less than 10 Ω?	Go to step **5**.	Check the door harness, and if any fault is found, replace the harness. If there is no fault, replace the airbag rear harness together with body harness.
5	**CHECK AIRBAG REAR HARNESS AND DOOR HARNESS (BETWEEN CURTAIN AIRBAG SENSOR LH AND FRONT DOOR IMPACT SENSOR LH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals in test harness V. ***Connector & terminal*** ***(3V) No. 4 — Chassis ground:*** ***(3V) No. 5 — Chassis ground:*** ***(3V) No. 4 — (3V) No. 5:***	Is the resistance 1 MΩ or more?	Go to step **6**.	Check the door harness, and if any fault is found, replace the harness. If there is no fault, replace the airbag rear harness together with body harness.
6	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Go to step **7**.	Go to step **9**.
7	**REPLACE FRONT DOOR IMPACT SENSOR (LH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the front door impact sensor (LH). <Ref. to AB-81, REMOVAL, Front Door Impact Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Go to step **8**.	Go to step **9**.

	Step	Check	Yes	No
8	**REPLACE CURTAIN AIRBAG SENSOR (LH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the curtain airbag sensor (LH). <Ref. to AB-89, REMOVAL, Curtain Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **9**.
9	**CHECK FOR ANY OTHER DTC ON DISPLAY.** Read the DTC. (Current malfunction)	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code”. <Ref. to AB(diag)-31, LIST, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BL:DTC B161A LOST COMMUNICATION WITH FRONT SATELLITE SENSOR BUS

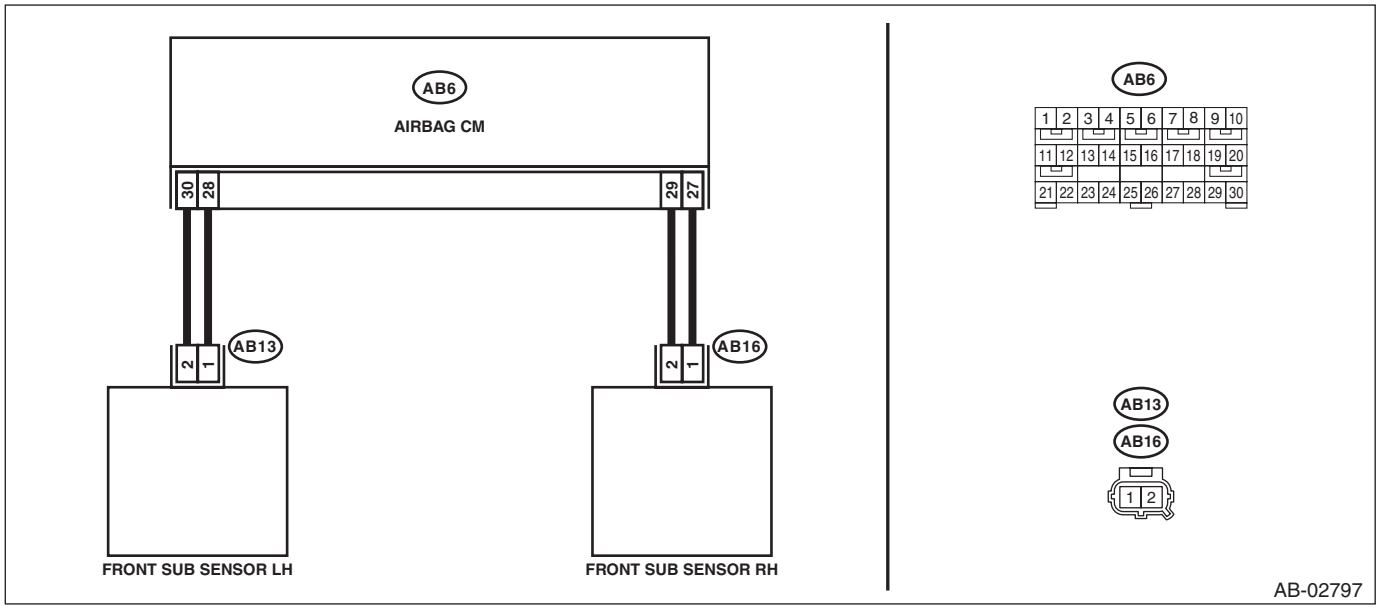
DTC DETECTING CONDITION:

- Harness between airbag control module and front sub sensor is open or shorted.
- Front sub sensor is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the front sub sensor.	Is there poor contact?	Replace the airbag main harness along with body harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG MAIN HARNESS (FRONT SENSOR BUS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the instrument panel lower cover and column cover, and disconnect the connectors (AB7) and (AB2). 3) Remove the console front panel and disconnect the connector (AB9). 4) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 5) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 6) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 7) Disconnect the connector (AB13) from the front sub sensor (LH), and then connect the connector (1H) in the test harness H to connector (AB13). 8) Measure the resistance between connector (4AG) in the test harness AG and connector (3H) in the test harness H. ***Connector & terminal*** ***(4AG) No. 7 — (3H) No. 5:*** ***(4AG) No. 9 — (3H) No. 6:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag main harness along with body harness.
3	**CHECK AIRBAG MAIN HARNESS (FRONT SENSOR BUS LH).** Measure the resistance between connector (4AG) in the test harness AG and chassis ground, and the resistance between connector (4AG) terminals in the test harness AG. ***Connector & terminal*** ***(4AG) No. 7 — Chassis ground:*** ***(4AG) No. 9 — Chassis ground:*** ***(4AG) No. 7 — (4AG) No. 9:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG MAIN HARNESS (FRONT SENSOR BUS RH).** 1) Disconnect the connector (AB16) from the front sub sensor (RH), and then connect the connector (1H) in the test harness H to connector (AB16). 2) Measure the resistance between connector (4AG) in the test harness AG and connector (3H) in the test harness H. ***Connector & terminal*** ***(4AG) No. 14 — (3H) No. 5:*** ***(4AG) No. 12 — (3H) No. 6:***	Is the resistance less than 10 Ω?	Go to step **5**.	Replace the airbag main harness along with body harness.
5	**CHECK AIRBAG MAIN HARNESS (FRONT SENSOR BUS RH).** Measure the resistance between connector (4AG) in the test harness AG and chassis ground, and the resistance between connector (4AG) terminals in the test harness AG. ***Connector & terminal*** ***(4AG) No. 12 — Chassis ground:*** ***(4AG) No. 14 — Chassis ground:*** ***(4AG) No. 12 — (4AG) No. 14:***	Is the resistance 1 MΩ or more?	Go to step **6**.	Replace the airbag rear harness along with body harness.

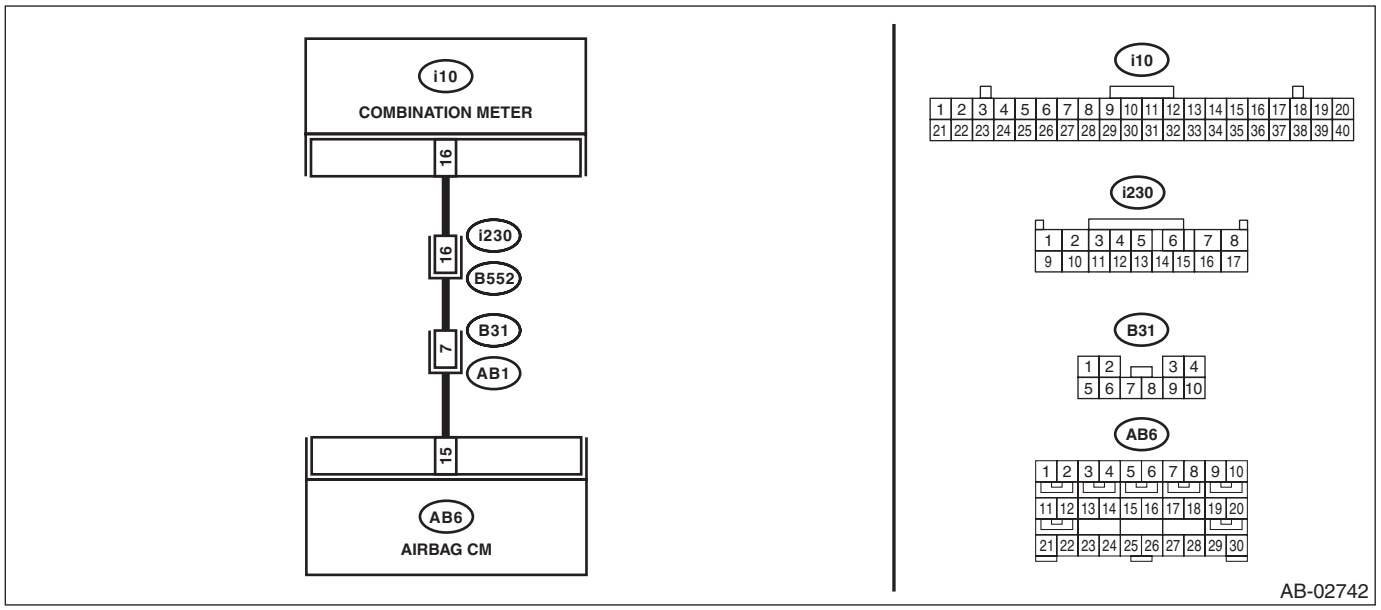
Step		Check	Yes	No
6	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the front sub sensor (LH) and front sub sensor (RH). <Ref. to AB-77, REMOVAL, Front Sub Sensor.> Replace the airbag control module if not operating normally even after replacing the sensor. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **7**.
7	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BM:DTC B16F1 PASSENGER'S SEAT BELT WARNING FAILURE

DTC DETECTING CONDITION:

- Airbag control module is faulty.
- Meter is faulty.
- Harness circuits between meter and airbag control module are open, shorted or shorted to ground.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK AIRBAG HARNESS.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 3) Connect the battery ground terminal and turn the ignition switch to ON.	Does the passenger's seat belt warning light blink for 6 seconds and go off?	Go to step **3**.	Go to step **2**.
2	**CHECK AIRBAG HARNESS.** 1) Turn the ignition switch to OFF. 2) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 3) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 4) Measure the resistance between connector (2AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(2AG) No. 10 — Chassis ground:***	Is the resistance 1 MΩ or more?	Replace the meter. <Ref. to IDI-15, REMOVAL, Combination Meter.>	Repair the bulkhead harness and instrument panel harness. Or replace the airbag main harness along with body harness.

	Step	Check	Yes	No
3	**CHECK AIRBAG HARNESS.** 1) Turn the ignition switch to OFF. 2) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 3) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 4) Connect the connectors (7AG) and (8AG) in the test harness AG. 5) Turn the ignition switch to ON.	Does the passenger's seat belt warning light blink for 6 seconds, then repeatedly light and go off?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **4**.
4	**CHECK AIRBAG HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors (7AG) and (8AG) in the test harness AG in the condition of step 3. 3) Disconnect the connector (i10) from meter. 4) Measure the resistance between connector (2AG) in the test harness AG and connector (i84). ***Connector & terminal*** ***(2AG) No. 10 — (i10) No. 16:***	Is the resistance less than 10 Ω?	Replace the meter. <Ref. to IDI-15, REMOVAL, Combination Meter.>	Repair the bulkhead harness and instrument panel harness. Or replace the airbag main harness along with body harness.

BN:DTC B16F0 PASSENGER'S AIRBAG OFF INDICATOR FAILURE

NOTE:
For details on DTC B16F0, refer to DTC B1660. <Ref. to AB(diag)-75, DTC B1660 PASSENGER'S AIRBAG ON INDICATOR FAILURE, Diagnostic Chart with Trouble Code.>

BO:DTC B1760 SENSOR MAT ABNORMAL

NOTE:
Refer to "Occupant Detection System" for details on DTC B1760. <Ref. to OD(diag)-22, DTC B1760 SENSOR MAT ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

BP:DTC B1761 SENSOR MAT LIQUID COATING ABNORMAL

NOTE:
Refer to "Occupant Detection System" for details on DTC B1761. <Ref. to OD(diag)-22, DTC B1761 SENSOR MAT LIQUID COATING ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

BQ:DTC B1771 BUCKLE SWITCH ABNORMAL

NOTE:
Refer to "Occupant Detection System" for details on DTC B1771. <Ref. to OD(diag)-22, DTC B1771 BUCKLE SWITCH ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

BR:DTC B1795 ECU INTERNAL CIRCUIT FAULT

NOTE:
Refer to "Occupant Detection System" for details on DTC B1795. <Ref. to OD(diag)-22, DTC B1795 ECU INTERNAL CIRCUIT FAULT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

BS:DTC B1800 SHORT IN DRIVER'S AIRBAG

DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted.
- Airbag module harness (driver's side) circuit is shorted.
- Roll connector circuit is shorted.
- Driver's airbag module is faulty.
- Airbag control module is faulty.

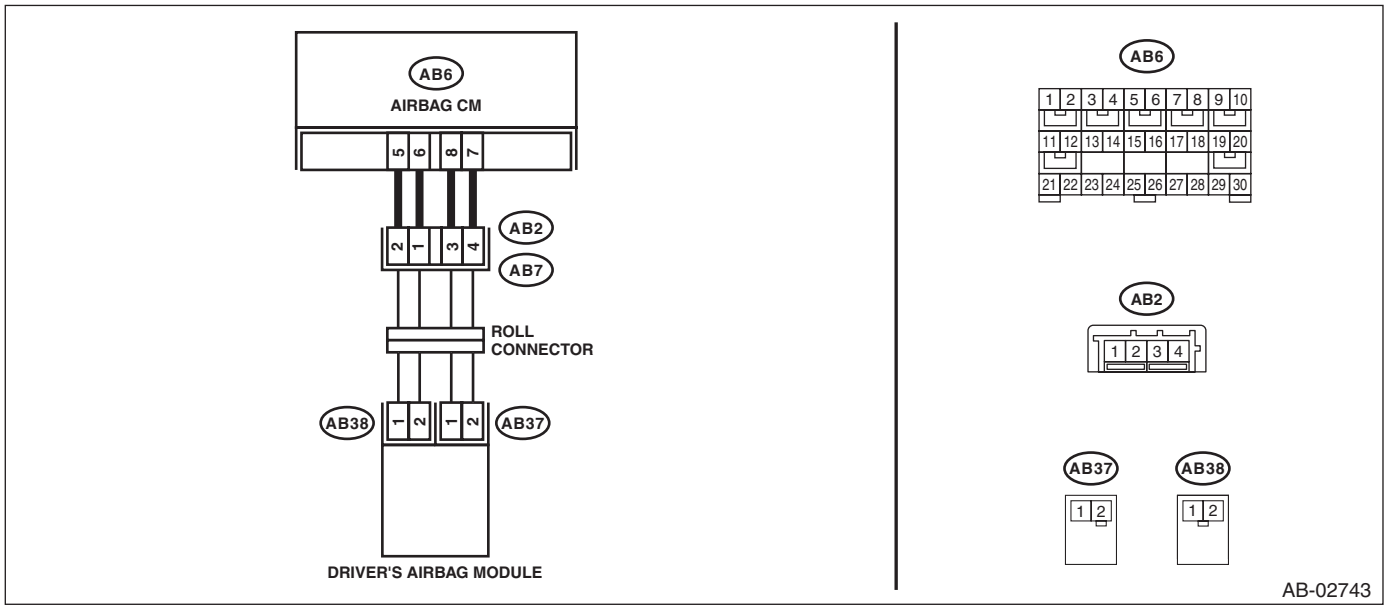
CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

NOTE:

Prior to starting work, prepare two AIRBAG RESISTORs (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-40, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR AND AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Disconnect the driver's knee airbag module connector (AB66). 4) Disconnect the airbag resistor from the connector (2N) in test harness N and from the connector (2Q) in test harness Q. 5) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AH) in the test harness AH. 6) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 7) Measure the resistance between connector (2Q) terminals in test harness Q. ***Connector & terminal*** ***(2Q) No. 1 — (2Q) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **5**.	Go to step **4**.
4	**CHECK AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 2) Measure the resistance between connector (3AG) terminals in test harness AG. ***Connector & terminal*** ***(3AG) No. 1 — (3AG) No. 3:***	Is the resistance 1 MΩ or more?	Replace the roll connector. <Ref. to AB-100, Roll Connector.>	Replace the airbag main harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BT:DTC B1801 OPEN IN DRIVER'S AIRBAG

DTC DETECTING CONDITION:

- Airbag main harness circuit is open.
- Airbag module harness (driver's side) circuit is open.
- Roll connector is open.
- Driver's airbag module is faulty.
- Airbag control module is faulty.

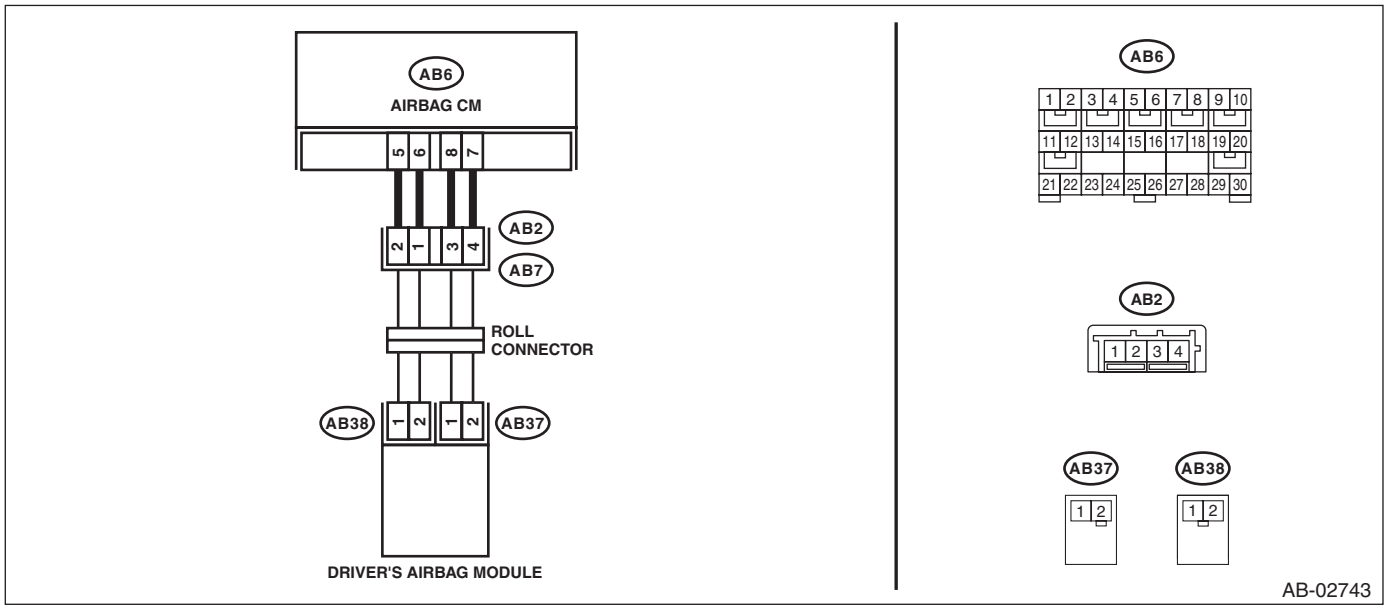
CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

NOTE:

Prior to starting work, prepare two AIRBAG RESISTORs (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-40, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR AND AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Disconnect the driver's knee airbag module connector (AB66). 4) Disconnect the airbag resistor from the connector (2N) in test harness N. 5) Disconnect the airbag resistor from the connector (2Q) of test harness Q. 6) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 7) Measure the resistance between connector (2Q) terminals in test harness Q. ***Connector & terminal (2Q) No. 1 — (2Q) No. 2:***	Is the resistance less than 10 Ω?	Go to step **5**.	Go to step **4**.
4	**CHECK ROLL CONNECTOR.** 1) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 2) Measure the resistance between connector (2Q) terminals in test harness Q. ***Connector & terminal (2Q) No. 1 — (2Q) No. 2:***	Is the resistance less than 10 Ω?	Replace the airbag main harness along with body harness.	Replace the roll connector. <Ref. to AB-100, Roll Connector.>
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BU:DTC B1802 SHORT IN DRIVER'S AIRBAG (TO GROUND)

DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted to ground.
- Airbag module harness (driver's side) circuit is shorted to ground.
- Roll connector circuit is shorted to ground.
- Driver's airbag module is faulty.
- Airbag control module is faulty.

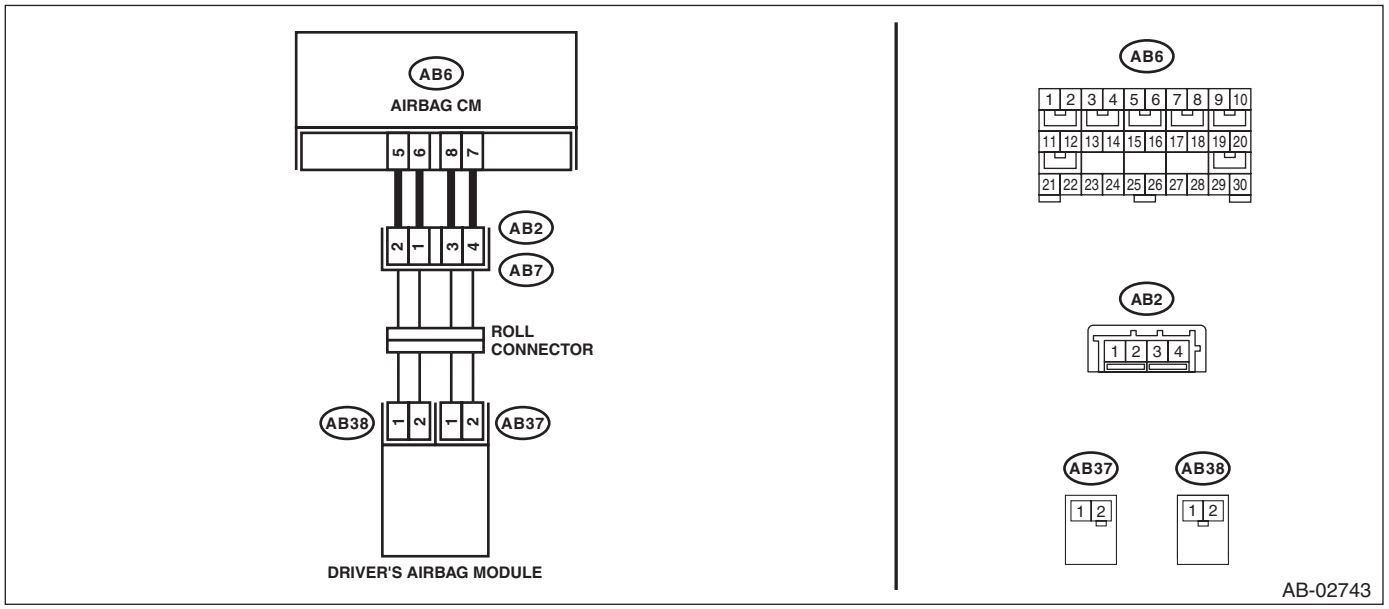
CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

NOTE:

Prior to starting work, prepare two AIRBAG RESISTORs (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-40, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 3) Disconnect the driver's knee airbag module connector (AB66). 4) Disconnect the airbag resistor from the connector (2N) in test harness N and from the connector (2Q) in test harness Q. 5) Measure the resistance between connector (2Q) in the test harness Q and chassis ground. ***Connector & terminal*** ***(2Q) No. 1 — Chassis ground:*** ***(2Q) No. 2 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the roll connector. <Ref. to AB-100, Roll Connector.>
4	**CHECK AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Disconnect the test harness N from connector (AB38). 2) Disconnect the test harness Q from connector (AB37). 3) Remove the console front panel and disconnect the connector (AB9). 4) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AH) in the test harness AH. 5) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 6) Measure the resistance between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 1 — Chassis ground:*** ***(3AG) No. 3 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **5**.	Replace the airbag main harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BV:DTC B1803 SHORT IN DRIVER'S AIRBAG (TO +B)

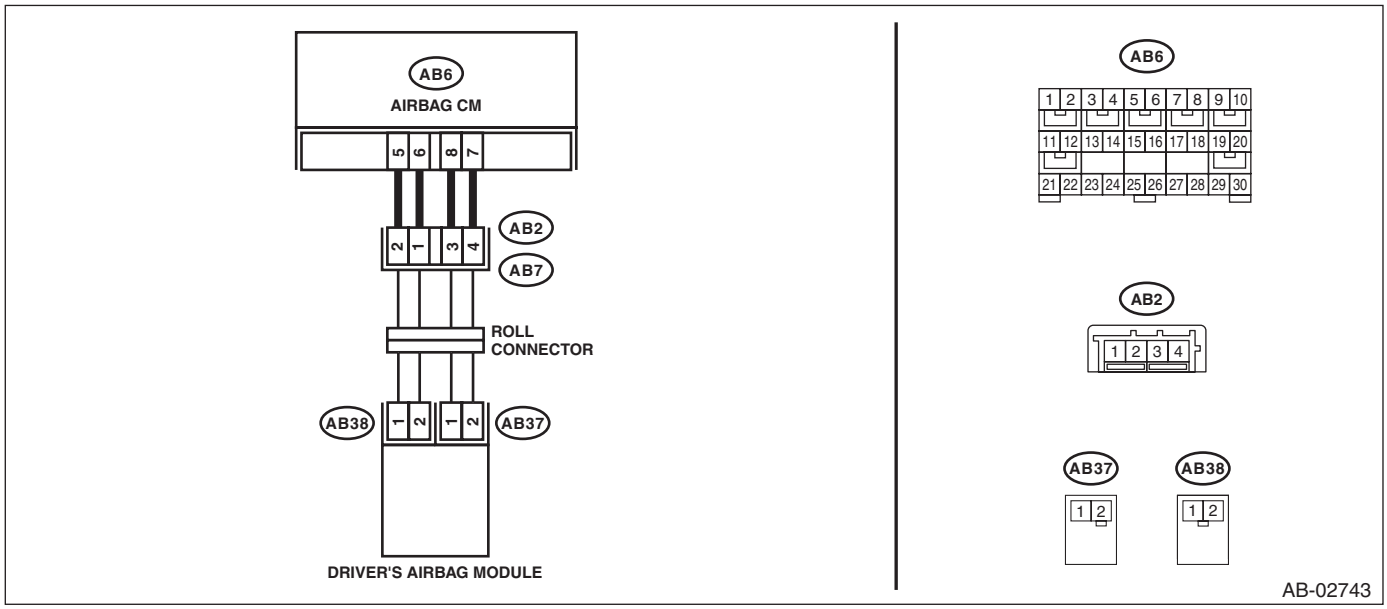
DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted to power supply.
- Airbag module harness (driver's side) circuit is shorted to power supply.
- Roll connector circuit is shorted to power supply.
- Driver's airbag module is faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

NOTE:
Prior to starting work, prepare two AIRBAG RESISTORs (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-40, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 3) Disconnect the driver's knee airbag module connector (AB66). 4) Disconnect the airbag resistor from the connector (2N) in test harness N and from the connector (2Q) in test harness Q. 5) Measure the voltage between connector (2Q) in the test harness Q and chassis ground. ***Connector & terminal*** ***(2Q) No. 1 (+) — Chassis ground (–):*** ***(2Q) No. 2 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the roll connector. <Ref. to AB-100, Roll Connector.>
4	**CHECK AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Disconnect the test harness N from connector (AB38). 2) Disconnect the test harness Q from connector (AB37). 3) Remove the console front panel and disconnect the connector (AB9). 4) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AH) in the test harness AH. 5) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 6) Connect the battery ground terminal and turn the ignition switch to ON. 7) Measure the voltage between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 1 (+) — Chassis ground (–):*** ***(3AG) No. 3 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **5**.	Replace the airbag main harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BW:DTC B1805 SHORT IN PASSENGER'S AIRBAG

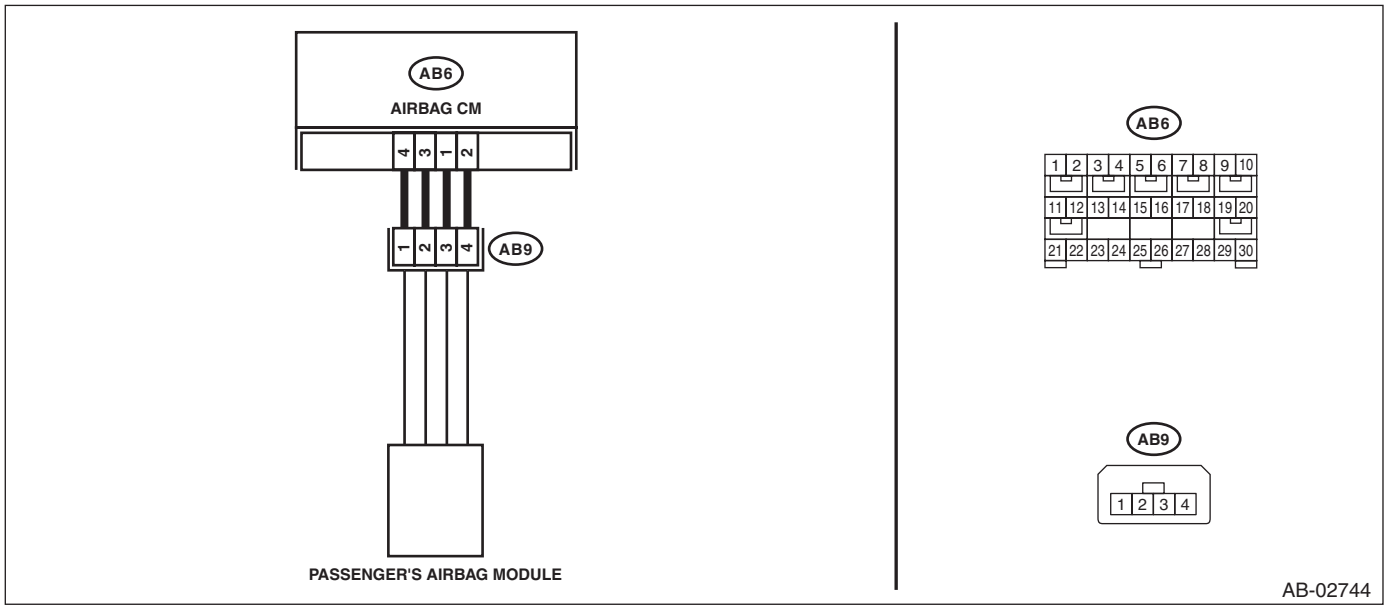
DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted.
- Airbag module harness circuit (passenger's side) is shorted.
- Passenger's airbag module is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB7) and (AB2). 3) Disconnect the connector (AB66) from the driver's knee airbag module. 4) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, connect the connector (1AH) in the test harness AH, and release the short mechanism of the connectors (AB6, AB17, AB18). 5) Disconnect the passenger's airbag module connector (AB9). 6) Using a probe, measure the resistance between the terminals of connector (AB9). <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When measuring the resistance, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 1 — (AB9) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **3**.	Replace the airbag main harness along with body harness.
3	**CHECK AIRBAG CONTROL MODULE.** 1) Disconnect the test harness AH from the connectors (AB6, AB17, AB18). 2) Connect the connectors (AB6, AB17, AB18) and the airbag control module. 3) Connect the connectors (AB7) and (AB2). 4) Connect the connector (AB66) to the driver's knee airbag module. 5) Connect the battery ground terminal and turn the ignition switch to ON. 6) Perform the Inspection Mode. 7) Read the DTC. (Current malfunction)	Is DTC B1805 displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **4**.
4	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Connect the passenger's airbag module connector (AB9). 3) Connect the battery negative terminal, and clear the memory. 4) Perform the Inspection Mode. 5) Read the DTC. (Current malfunction)	Is DTC B1805 displayed?	Replace the passenger's airbag module. <Ref. to AB-44, REMOVAL, Passenger's Airbag Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BX:DTC B1806 OPEN IN PASSENGER'S AIRBAG

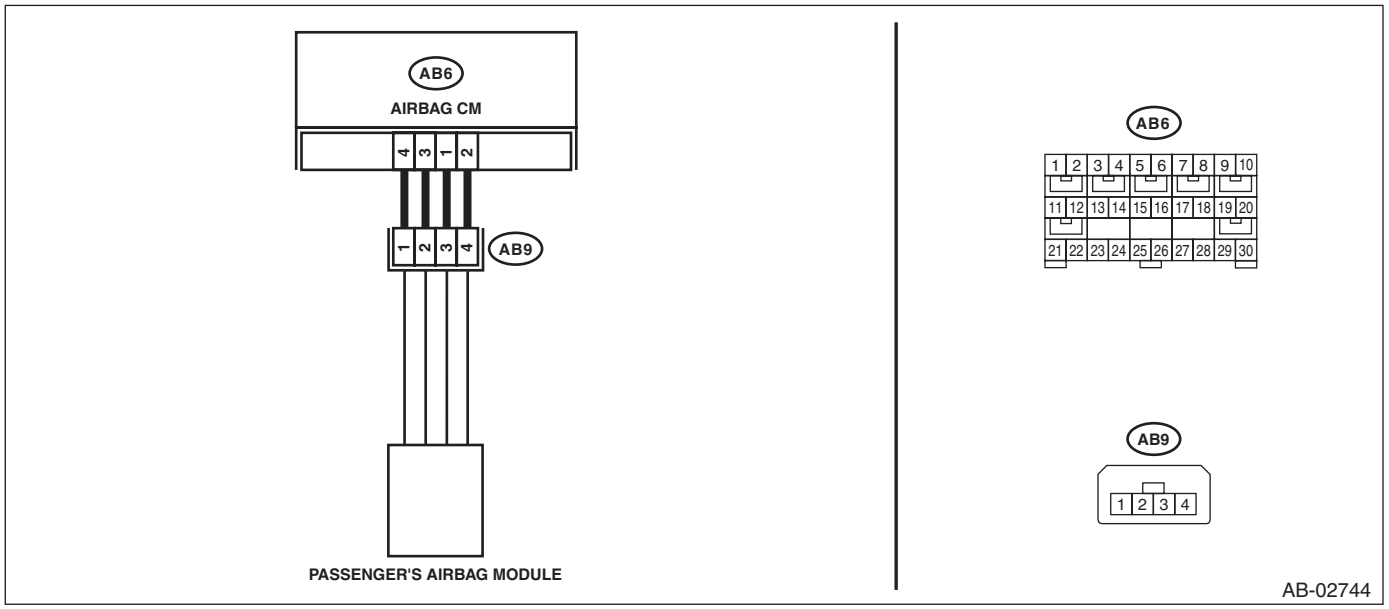
DTC DETECTING CONDITION:

- Airbag main harness circuit is open.
- Airbag module harness (passenger's side) circuit is open.
- Passenger's airbag module is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB7) and (AB2). 3) Disconnect the connector (AB66) from the driver's knee airbag module. 4) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 5) Disconnect the passenger's airbag module connector (AB9). 6) Using a probe, measure the resistance between the terminals of connector (AB9). <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When measuring the resistance, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 1 — (AB9) No. 2:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag main harness along with body harness.
3	**CHECK AIRBAG CONTROL MODULE.** 1) Connect the connectors (AB6, AB17, AB18) and the airbag control module. 2) Connect the connectors (AB7) and (AB2). 3) Connect the connector (AB66) to the driver's knee airbag module. 4) Using a probe, short the terminals No. 1 and No. 2 of connector (AB9). <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When shorting the terminals, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 1 — (AB9) No. 2:*** 5) Connect the battery ground terminal and turn the ignition switch to ON. 6) Perform the Inspection Mode. 7) Read the DTC. (Current malfunction)	Is DTC B1806 displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **4**.
4	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Connect the passenger's airbag module connector (AB9). 3) Connect the battery negative terminal, and clear the memory. 4) Perform the Inspection Mode. 5) Read the DTC. (Current malfunction)	Is DTC B1806 displayed?	Replace the passenger's airbag module. <Ref. to AB-44, REMOVAL, Passenger's Airbag Module.>	Go to step **5**.

Step		Check	Yes	No
5	CHECK FOR ANY OTHER DTC ON DISPLAY.	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BY:DTC B1807 SHORT IN PASSENGER'S AIRBAG (TO GROUND)

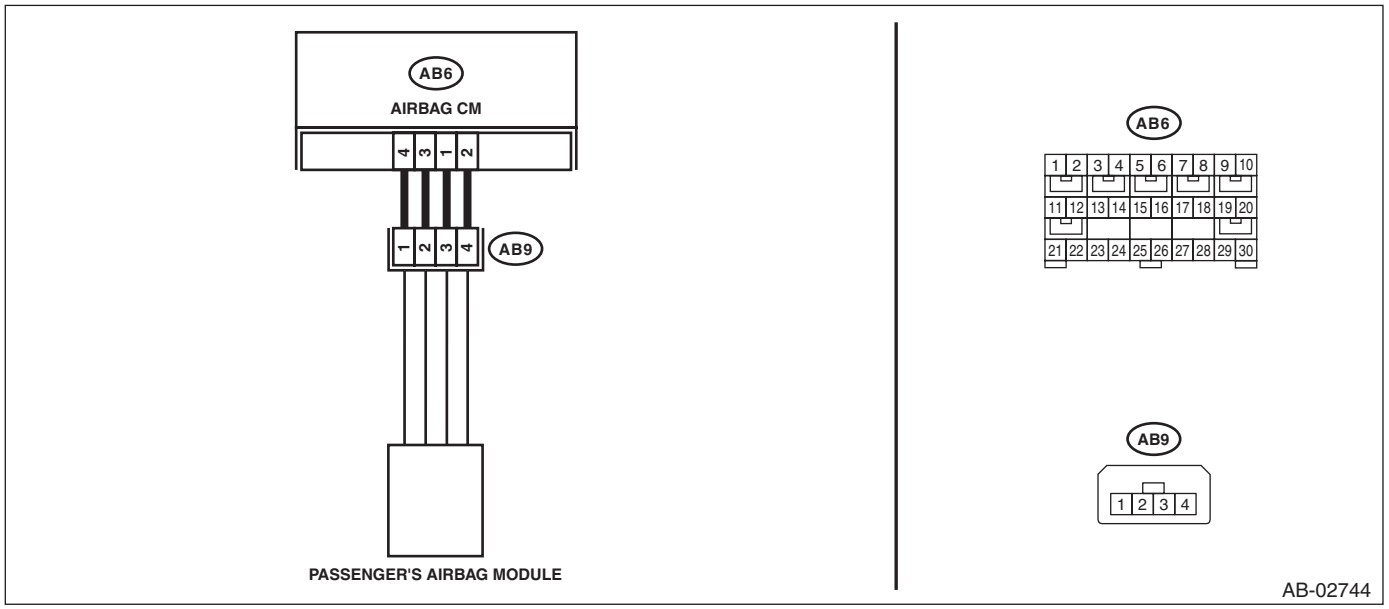
DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted to ground.
- Airbag module harness (passenger's side) circuit is shorted to ground.
- Passenger's airbag module is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB7) and (AB2). 3) Disconnect the connector (AB66) from the driver's knee airbag module. 4) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 5) Disconnect the passenger's airbag module connector (AB9). 6) Using a probe, measure the resistance between the connector (AB9) and chassis ground. <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When measuring the resistance, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 1 — Chassis ground:*** ***(AB9) No. 2 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **3**.	Replace the airbag main harness along with body harness.
3	**CHECK AIRBAG CONTROL MODULE.** 1) Connect the connectors (AB6, AB17, AB18) and the airbag control module. 2) Using a probe, short the terminals No. 1 and No. 2 of connector (AB9). <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When shorting the terminals, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 1 — (AB9) No. 2:*** 3) Connect the battery ground terminal and turn the ignition switch to ON. 4) Perform the Inspection Mode. 5) Read the DTC. (Current malfunction)	Is DTC B1807 displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **4**.
4	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Release the short circuit of connector (AB9). 3) Connect the passenger's airbag module connector (AB9). 4) Connect the connectors (AB7) and (AB2). 5) Connect the connector (AB66) to the driver's knee airbag module. 6) Connect the battery ground terminal and turn the ignition switch to ON. 7) Perform the Inspection Mode. 8) Read the DTC. (Current malfunction)	Is DTC B1807 displayed?	Replace the passenger's airbag module. <Ref. to AB-44, REMOVAL, Passenger's Airbag Module.>	Go to step **5**.

Step		Check	Yes	No
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BZ:DTC B1808 SHORT IN PASSENGER'S AIRBAG (TO +B)

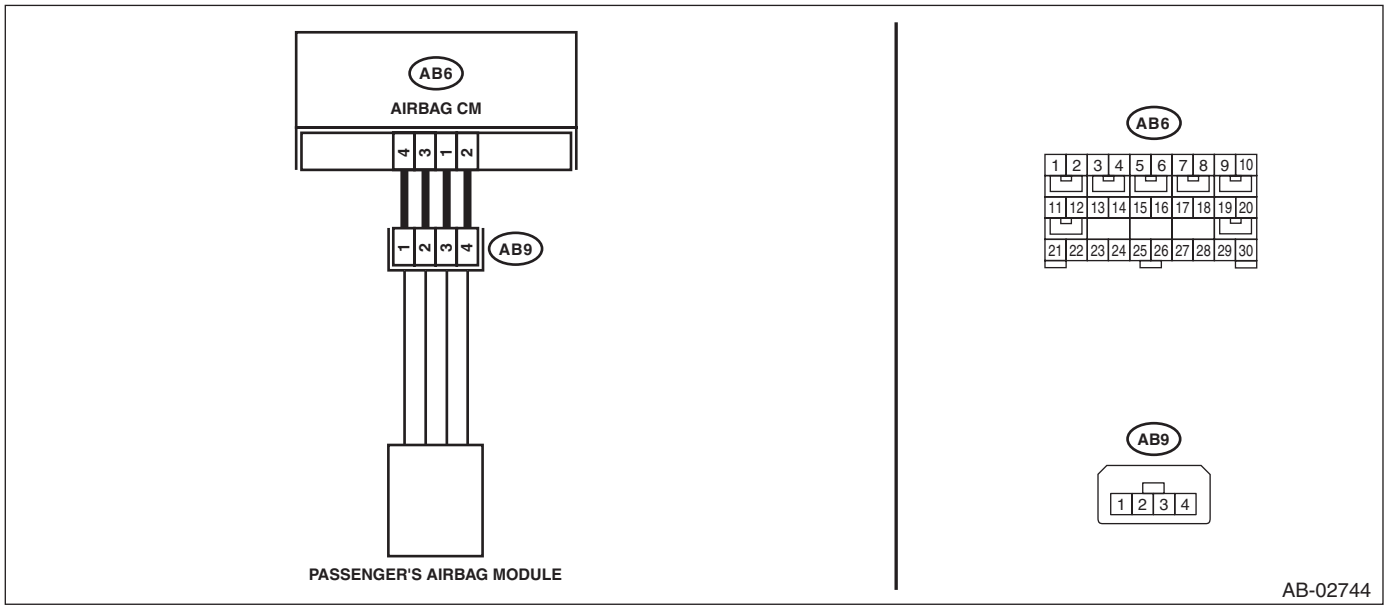
DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted to power supply.
- Airbag module harness (passenger's side) circuit is shorted to power supply.
- Passenger's airbag module is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB7) and (AB2). 3) Disconnect the connector (AB66) from the driver's knee airbag module. 4) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 5) Disconnect the passenger's airbag module connector (AB9). 6) Using a probe, measure the voltage between the connector (AB9) and chassis ground. <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When measuring the voltage, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 1 (+) — Chassis ground (–):*** ***(AB9) No. 2 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **3**.	Replace the airbag main harness along with body harness.
3	**CHECK AIRBAG CONTROL MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Connect the connectors (AB6, AB17, AB18) and the airbag control module. 3) Using a probe, short the terminals No. 1 and No. 2 of connector (AB9). <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When shorting the terminals, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 1 — (AB9) No. 2:*** 4) Connect the battery ground terminal and turn the ignition switch to ON. 5) Perform the Inspection Mode. 6) Read the DTC. (Current malfunction)	Is DTC B1808 displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **4**.

	Step	Check	Yes	No
4	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Release the short circuit of connector (AB9). 3) Connect the passenger's airbag module connector (AB9). 4) Connect the connectors (AB7) and (AB2). 5) Connect the connector (AB66) to the driver's knee airbag module. 6) Connect the battery ground terminal and turn the ignition switch to ON. 7) Perform the Inspection Mode. 8) Read the DTC. (Current malfunction)	Is DTC B1808 displayed?	Replace the passenger's airbag module. <Ref. to AB-44, REMOVAL, Passenger's Airbag Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CA:DTC B1810 SHORT IN DRIVER'S AIRBAG DUAL STAGE - 2ND STEP

DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted.
- Airbag module harness (driver's side) circuit is shorted.
- Roll connector circuit is shorted.
- Driver's airbag module is faulty.
- Airbag control module is faulty.

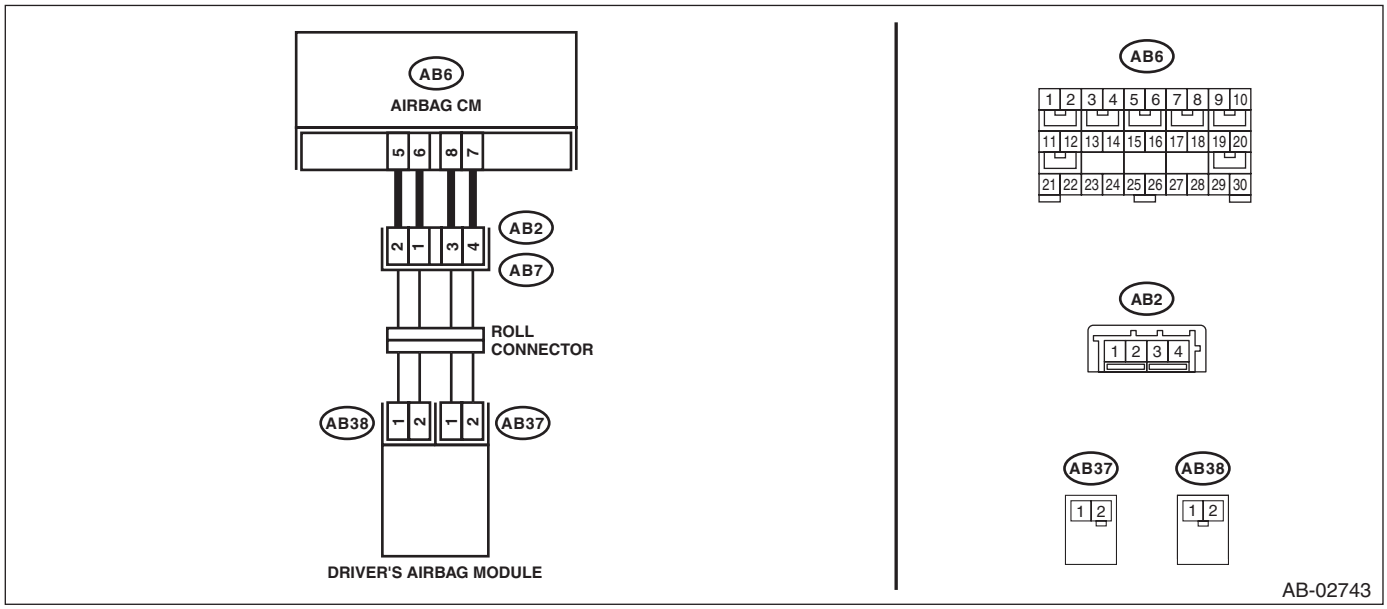
CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

NOTE:

Prior to starting work, prepare two AIRBAG RESISTORs (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-40, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR AND AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Disconnect the connector (AB66) from the driver's knee airbag module. 4) Disconnect the airbag resistor from the connector (2N) in test harness N and from the connector (2Q) in test harness Q. 5) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AH) in the test harness AH. 6) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 7) Measure the resistance between connector (2N) terminals in test harness N. ***Connector & terminal (2N) No. 1 — (2N) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **5**.	Go to step **4**.
4	**CHECK AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 2) Disconnect the test harness Q from connector (AB37). 3) Measure the resistance between connector (3AG) terminals in test harness AG. ***Connector & terminal (3AG) No. 2 — (3AG) No. 4:***	Is the resistance 1 MΩ or more?	Replace the roll connector. <Ref. to AB-100, Roll Connector.>	Replace the airbag main harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CB:DTC B1811 OPEN IN DRIVER'S AIRBAG DUAL STAGE - 2ND STEP

DTC DETECTING CONDITION:

- Airbag main harness circuit is open.
- Airbag module harness (driver's side) circuit is open.
- Roll connector circuit is open.
- Driver's airbag module is faulty.
- Airbag control module is faulty.

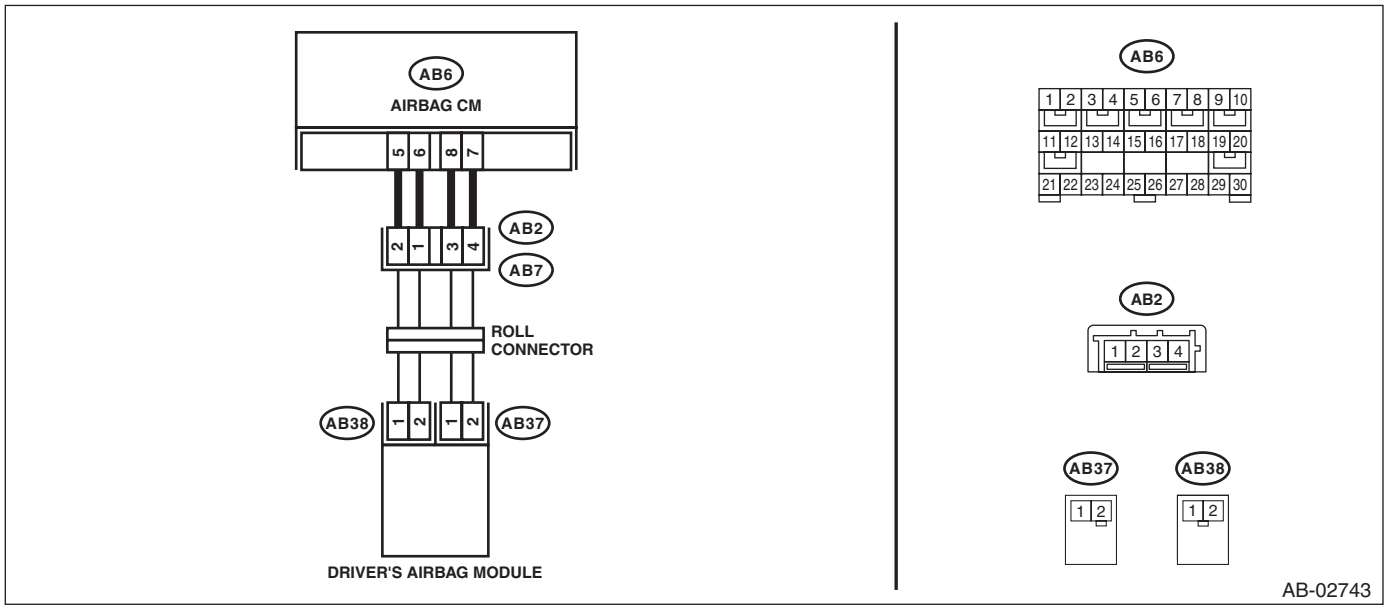
CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

NOTE:

Prior to starting work, prepare two AIRBAG RESISTORs (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-40, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR AND AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Disconnect the connector (AB66) from the driver's knee airbag module. 4) Disconnect the airbag resistor from the connector (2N) in test harness N. 5) Disconnect the airbag resistor from the connector (2Q) of test harness Q. 6) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 7) Measure the resistance between connector (2N) terminals in test harness N. ***Connector & terminal*** ***(2N) No. 1 — (2N) No. 2:***	Is the resistance less than 10 Ω?	Go to step **5**.	Go to step **4**.
4	**CHECK ROLL CONNECTOR.** 1) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 2) Measure the resistance between connector (2N) terminals in test harness N. ***Connector & terminal*** ***(2N) No. 1 — (2N) No. 2:***	Is the resistance less than 10 Ω?	Replace the airbag main harness along with body harness.	Replace the roll connector. <Ref. to AB-100, Roll Connector.>
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CC:DTC B1812 SHORT IN DRIVER'S AIRBAG DUAL STAGE - 2ND STEP (TO GROUND)

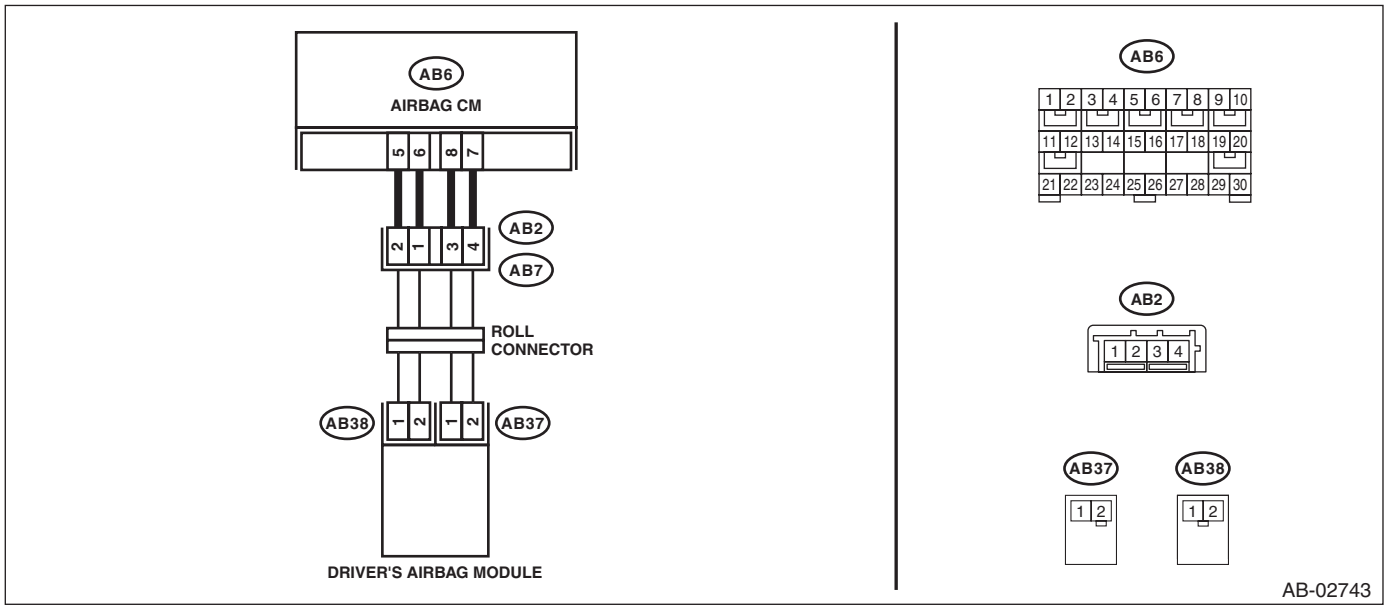
DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted to ground.
- Airbag module harness (driver's side) circuit is shorted to ground.
- Roll connector circuit is shorted to ground.
- Driver's airbag module is faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

NOTE:
Prior to starting work, prepare two AIRBAG RESISTORs (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-40, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 3) Disconnect the connector (AB66) from the driver's knee airbag module. 4) Disconnect the airbag resistor from the connector (2N) in test harness N and from the connector (2Q) in test harness Q. 5) Measure the resistance between connector (2N) in the test harness N and chassis ground. ***Connector & terminal*** ***(2N) No. 1 — Chassis ground:*** ***(2N) No. 2 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the roll connector. <Ref. to AB-100, Roll Connector.>
4	**CHECK AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Disconnect the test harness N from connector (AB38). 2) Disconnect the test harness Q from connector (AB37). 3) Remove the console front panel and disconnect the connector (AB9). 4) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AH) in the test harness AH. 5) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 6) Measure the resistance between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 2 — Chassis ground:*** ***(3AG) No. 4 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **5**.	Replace the airbag main harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CD:DTC B1813 SHORT IN DRIVER'S AIRBAG DUAL STAGE - 2ND STEP CIRCUIT (TO +B)

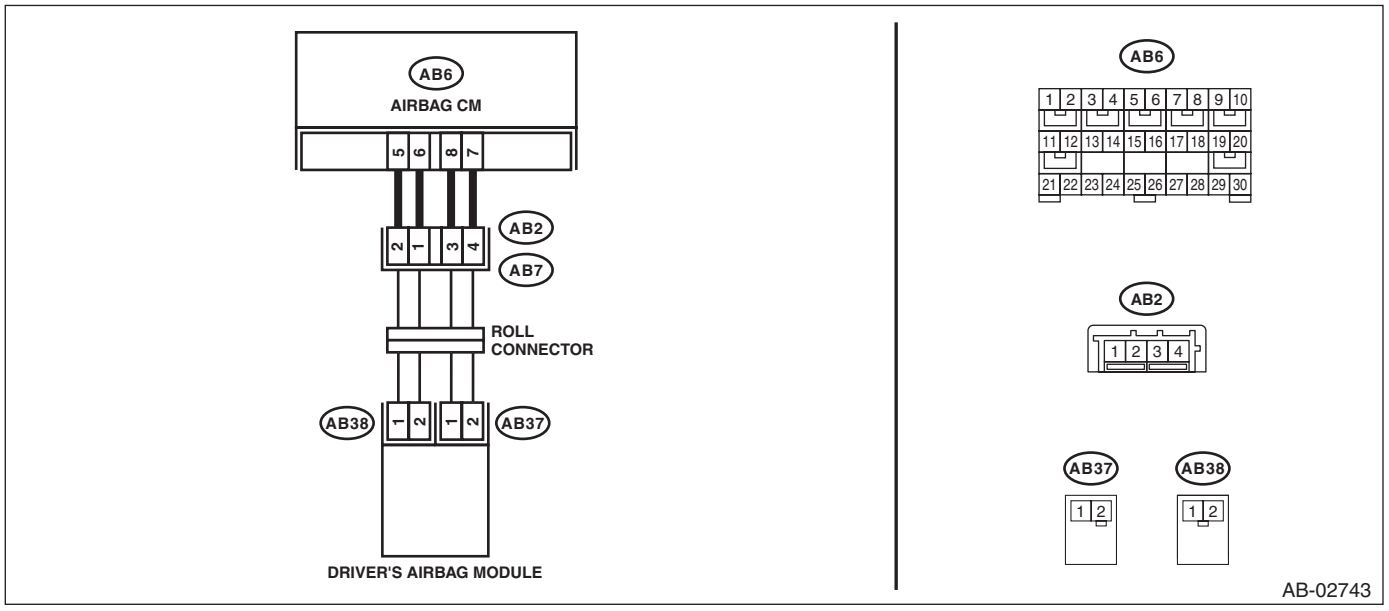
DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted to power supply.
- Airbag module harness (driver's side) circuit is shorted to power supply.
- Roll connector is shorted to power supply.
- Driver's airbag module is faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

NOTE:
Prior to starting work, prepare two AIRBAG RESISTORs (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-40, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 3) Disconnect the connector (AB66) from the driver's knee airbag module. 4) Disconnect the airbag resistor from the connector (2N) in test harness N and from the connector (2Q) in test harness Q. 5) Measure the voltage between connector (2N) in the test harness N and chassis ground. ***Connector & terminal*** ***(2N) No. 1 (+) — Chassis ground (–):*** ***(2N) No. 2 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the roll connector. <Ref. to AB-100, Roll Connector.>
4	**CHECK AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Disconnect the test harness N from connector (AB38). 2) Disconnect the test harness Q from connector (AB37). 3) Remove the console front panel and disconnect the connector (AB9). 4) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AH) in the test harness AH. 5) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 6) Measure the voltage between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 2 (+) — Chassis ground (–):*** ***(3AG) No. 4 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **5**.	Replace the airbag main harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CE:DTC B1815 OPEN IN PASSENGER'S AIRBAG DUAL STAGE - 2ND STEP

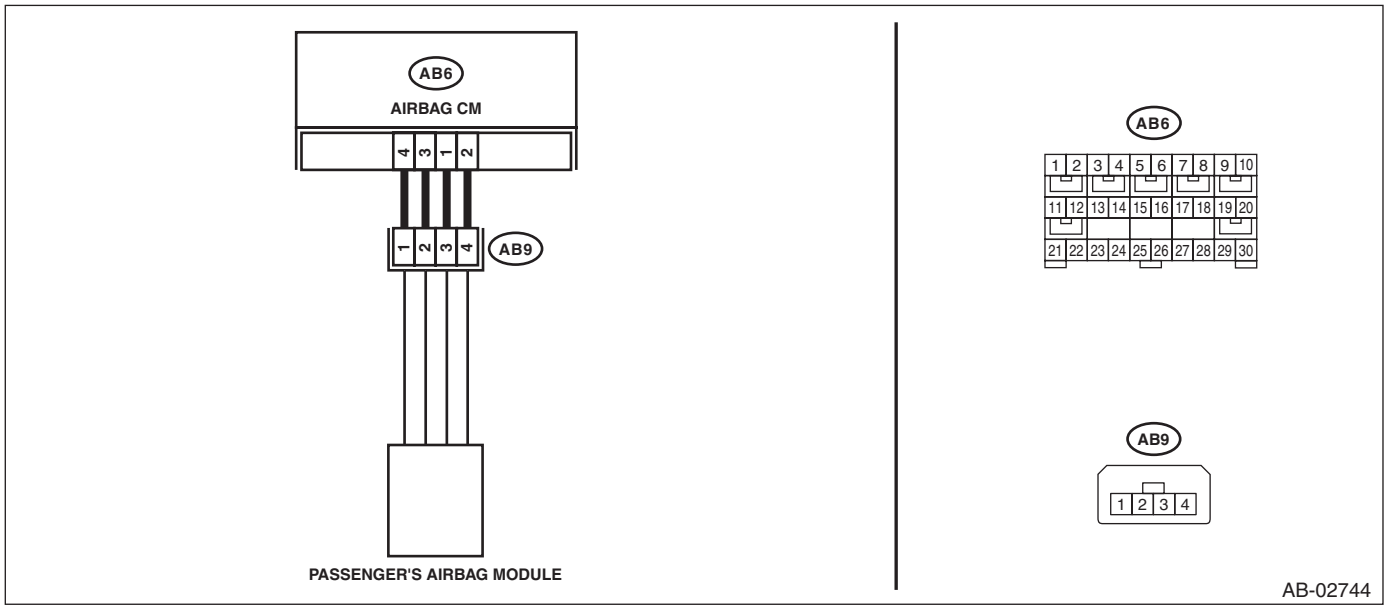
DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted.
- Airbag module harness circuit (passenger's side) is shorted.
- Passenger's airbag module is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB7) and (AB2). 3) Disconnect the connector (AB66) from the driver's knee airbag module. 4) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, connect the connector (1AH) in the test harness AH, and release the short mechanism of the connectors (AB6, AB17, AB18). 5) Disconnect the passenger's airbag module connector (AB9). 6) Using a probe, measure the resistance between the terminals of connector (AB9). <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When measuring the resistance, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 3 — (AB9) No. 4:***	Is the resistance 1 MΩ or more?	Go to step **3**.	Replace the airbag main harness along with body harness.
3	**CHECK AIRBAG CONTROL MODULE.** 1) Disconnect the test harness AH from the connectors (AB6, AB17, AB18). 2) Connect the connectors (AB6, AB17, AB18) and the airbag control module. 3) Connect the connectors (AB7) and (AB2). 4) Connect the connector (AB66) to the driver's knee airbag module. 5) Connect the battery ground terminal and turn the ignition switch to ON. 6) Perform the Inspection Mode. 7) Read the DTC. (Current malfunction)	Is DTC B1815 displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **4**.
4	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Connect the passenger's airbag module connector (AB9). 3) Connect the battery ground terminal and turn the ignition switch to ON. 4) Perform the Inspection Mode. 5) Read the DTC. (Current malfunction)	Is DTC B1815 displayed?	Replace the passenger's airbag module. <Ref. to AB-44, REMOVAL, Passenger's Airbag Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CF:DTC B1816 OPEN IN PASSENGER'S AIRBAG DUAL STAGE - 2ND STEP

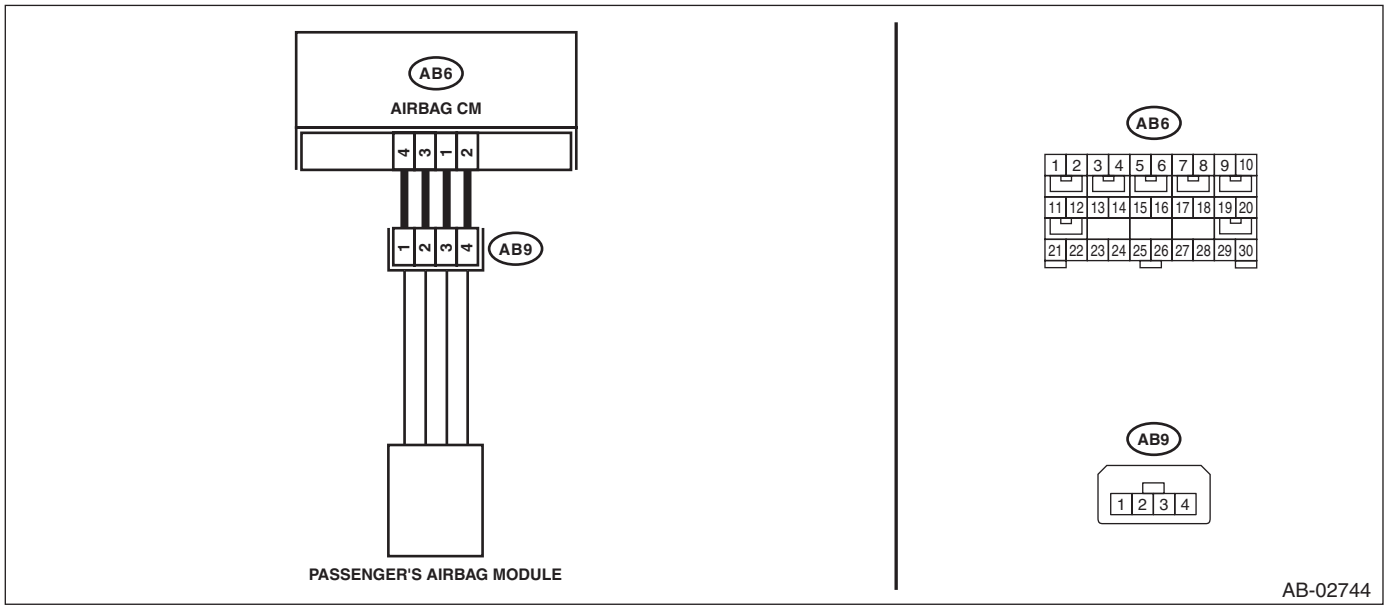
DTC DETECTING CONDITION:

- Airbag main harness circuit is open.
- Airbag module harness (passenger's side) circuit is open.
- Passenger's airbag module is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB7) and (AB2). 3) Disconnect the connector (AB66) from the driver's knee airbag module. 4) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 5) Disconnect the passenger's airbag module connector (AB9). 6) Using a probe, measure the resistance between the terminals of connector (AB9). <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When measuring the resistance, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 3 — (AB9) No. 4:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag main harness along with body harness.
3	**CHECK AIRBAG CONTROL MODULE.** 1) Connect the connectors (AB6, AB17, AB18) and the airbag control module. 2) Connect the connectors (AB7) and (AB2). 3) Connect the connector (AB66) to the driver's knee airbag module. 4) Using a probe, short the terminals No. 3 and No. 4 of connector (AB9). <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When shorting the terminals, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 3 — (AB9) No. 4:*** 5) Connect the battery ground terminal and turn the ignition switch to ON. 6) Perform the Inspection Mode. 7) Read the DTC. (Current malfunction)	Is DTC B1816 displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **4**.
4	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Connect the passenger's airbag module connector (AB9). 3) Connect the battery ground terminal and turn the ignition switch to ON. 4) Perform the Inspection Mode. 5) Read the DTC. (Current malfunction)	Is DTC B1816 displayed?	Replace the passenger's airbag module. <Ref. to AB-44, REMOVAL, Passenger's Airbag Module.>	Go to step **5**.

Step		Check	Yes	No
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CG:DTC B1817 SHORT IN PASSENGER'S AIRBAG DUAL STAGE - 2ND STEP (TO GROUND)

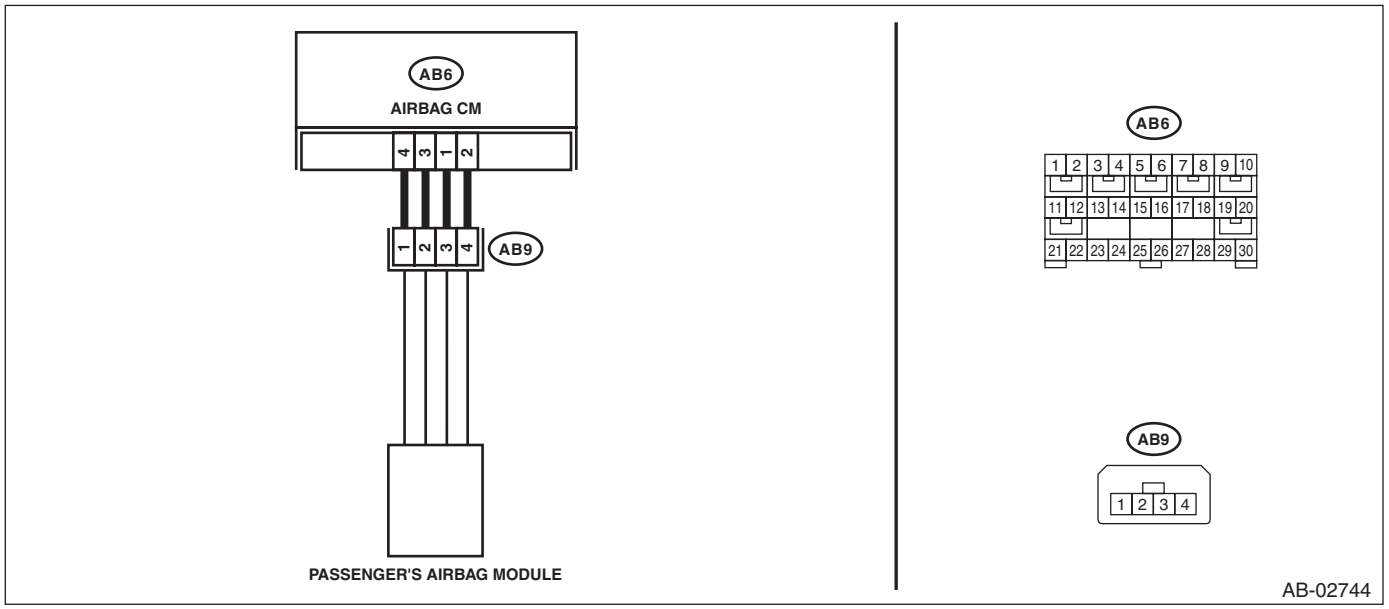
DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted to ground.
- Airbag module harness (passenger's side) circuit is shorted to ground.
- Passenger's airbag module is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB7) and (AB2). 3) Disconnect the connector (AB66) from the driver's knee airbag module. 4) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 5) Disconnect the passenger's airbag module connector (AB9). 6) Using a probe, measure the resistance between the connector (AB9) and chassis ground. <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When measuring the resistance, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 3 — Chassis ground:*** ***(AB9) No. 4 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **3**.	Replace the airbag main harness along with body harness.
3	**CHECK AIRBAG CONTROL MODULE.** 1) Connect the connectors (AB6, AB17, AB18) and the airbag control module. 2) Using a probe, short the terminals No. 3 and No. 4 of connector (AB9). <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When shorting the terminals, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 3 — (AB9) No. 4:*** 3) Connect the battery ground terminal and turn the ignition switch to ON. 4) Perform the Inspection Mode. 5) Read the DTC. (Current malfunction)	Is DTC B1817 displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **4**.
4	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Release the short circuit of connector (AB9). 3) Connect the passenger's airbag module connector (AB9). 4) Connect the connectors (AB7) and (AB2). 5) Connect the connector (AB66) to the driver's knee airbag module. 6) Connect the battery ground terminal and turn the ignition switch to ON. 7) Perform the Inspection Mode. 8) Read the DTC. (Current malfunction)	Is DTC B1817 displayed?	Replace the passenger's airbag module. <Ref. to AB-44, REMOVAL, Passenger's Airbag Module.>	Go to step **5**.

Step		Check	Yes	No
5	CHECK FOR ANY OTHER DTC ON DISPLAY.	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CH:DTC B1818 SHORT IN PASSENGER'S AIRBAG DUAL STAGE - 2ND STEP CIRCUIT (TO +B)

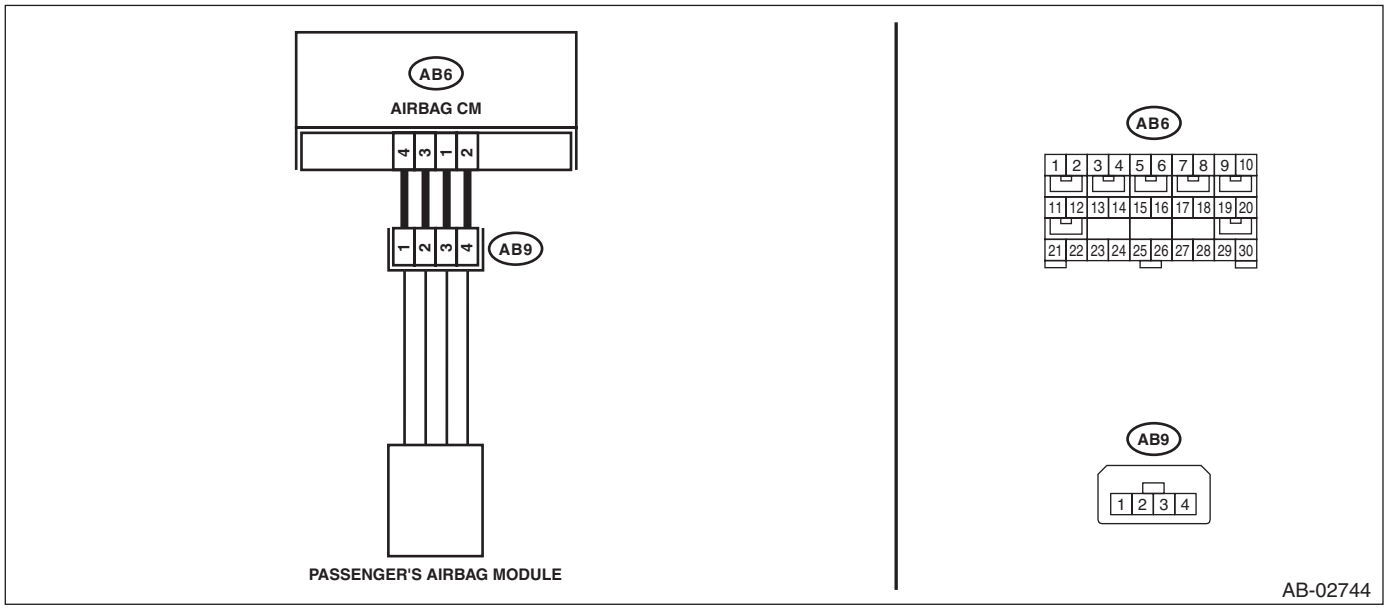
DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted to power supply.
- Airbag module harness (passenger's side) circuit is shorted to power supply.
- Passenger's airbag module is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB7) and (AB2). 3) Disconnect the connector (AB66) from the driver's knee airbag module. 4) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 5) Disconnect the passenger's airbag module connector (AB9). 6) Using a probe, measure the voltage between the connector (AB9) and chassis ground. <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When measuring the voltage, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 3 (+) — Chassis ground (–):*** ***(AB9) No. 4 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **3**.	Replace the airbag main harness along with body harness.
3	**CHECK AIRBAG CONTROL MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Connect the connectors (AB6, AB17, AB18) and the airbag control module. 3) Using a probe, short the terminals No. 3 and No. 4 of connector (AB9). <Ref. to AB(diag)-15, HOW TO USE PROBE, PREPARATION TOOL, General Description.> **CAUTION:** **When shorting the terminals, make sure that the probe is inserted from the back side (harness side) of the connector. Also, do not insert the probe forcibly.** ***Connector & terminal*** ***(AB9) No. 3 — (AB9) No. 4:*** 4) Connect the battery ground terminal and turn the ignition switch to ON. 5) Perform the Inspection Mode. 6) Read the DTC. (Current malfunction)	Is DTC B1818 displayed?	Replace the airbag control module. <Ref. to AB-73, REMOVAL, Airbag Control Module.>	Go to step **4**.

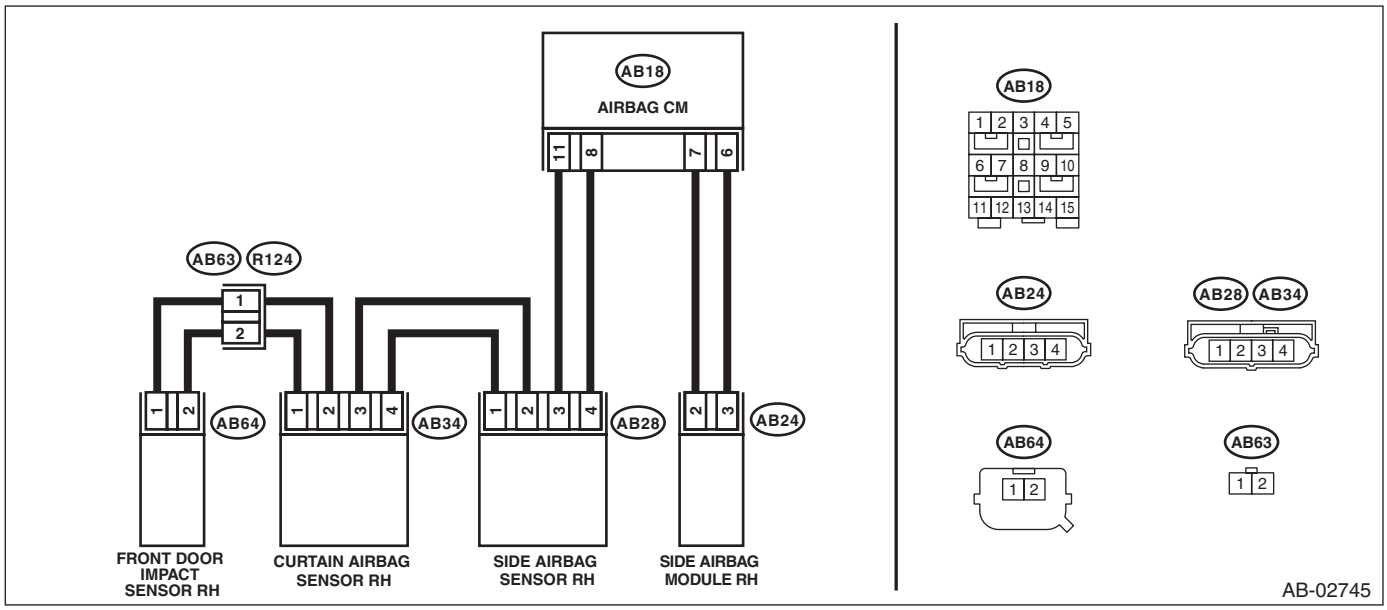
	Step	Check	Yes	No
4	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Release the short circuit of connector (AB9). 3) Connect the passenger's airbag module connector (AB9). 4) Connect the connectors (AB7) and (AB2). 5) Connect the connector (AB66) to the driver's knee airbag module. 6) Connect the battery ground terminal and turn the ignition switch to ON. 7) Perform the Inspection Mode. 8) Read the DTC. (Current malfunction)	Is DTC B1818 displayed?	Replace the passenger's airbag module. <Ref. to AB-44, REMOVAL, Passenger's Airbag Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CI: DTC B1820 SHORT IN SIDE AIRBAG RH

DTC DETECTING CONDITION:

- Side airbag harness (RH) circuit is shorted.
- Side airbag module (RH) is faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module RH and the side airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB24) from the side airbag module (RH), and connect the connector (1AJ) in the test harness AJ to connector (AB24). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the side airbag module (RH). <Ref. to AB-62, REMOVAL, Side Airbag Module.>	Go to step **3**.

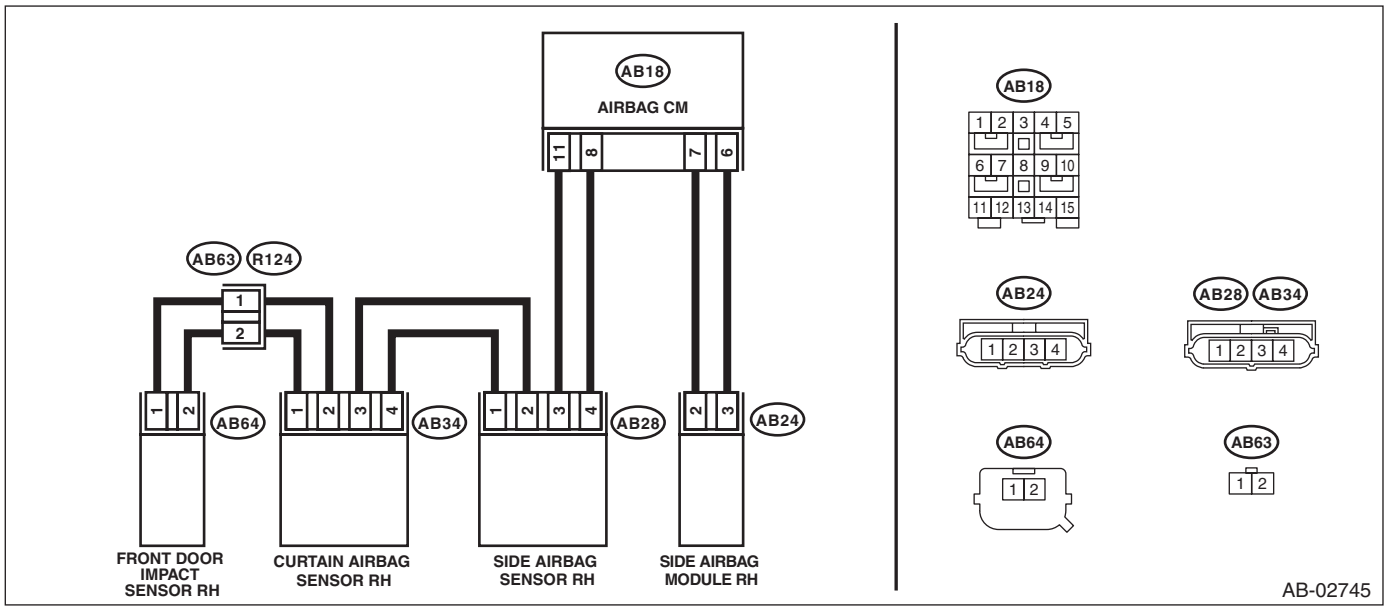
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect the airbag resistor from test harness AJ. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (4AG) terminals in test harness AG. ***Connector & terminal (4AG) No. 11 — (4AG) No. 13:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CJ:DTC B1821 OPEN IN SIDE AIRBAG RH

DTC DETECTING CONDITION:

- Side airbag harness (RH) circuit is open.
- Side airbag module (RH) is faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module RH and the side airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB24) from the side airbag module (RH), and connect the connector (1AJ) in the test harness AJ to connector (AB24). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the side airbag module (RH). <Ref. to AB-62, REMOVAL, Side Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect the airbag resistor from test harness AJ. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between the test harness AG connector (4AG) and the test harness AJ connector (3AJ). ***Connector & terminal*** ***(4AG) No. 11 — (3AJ) No. 1:*** ***(4AG) No. 13 — (3AJ) No. 2:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CK:DTC B1822 SHORT IN SIDE AIRBAG RH (TO GROUND)

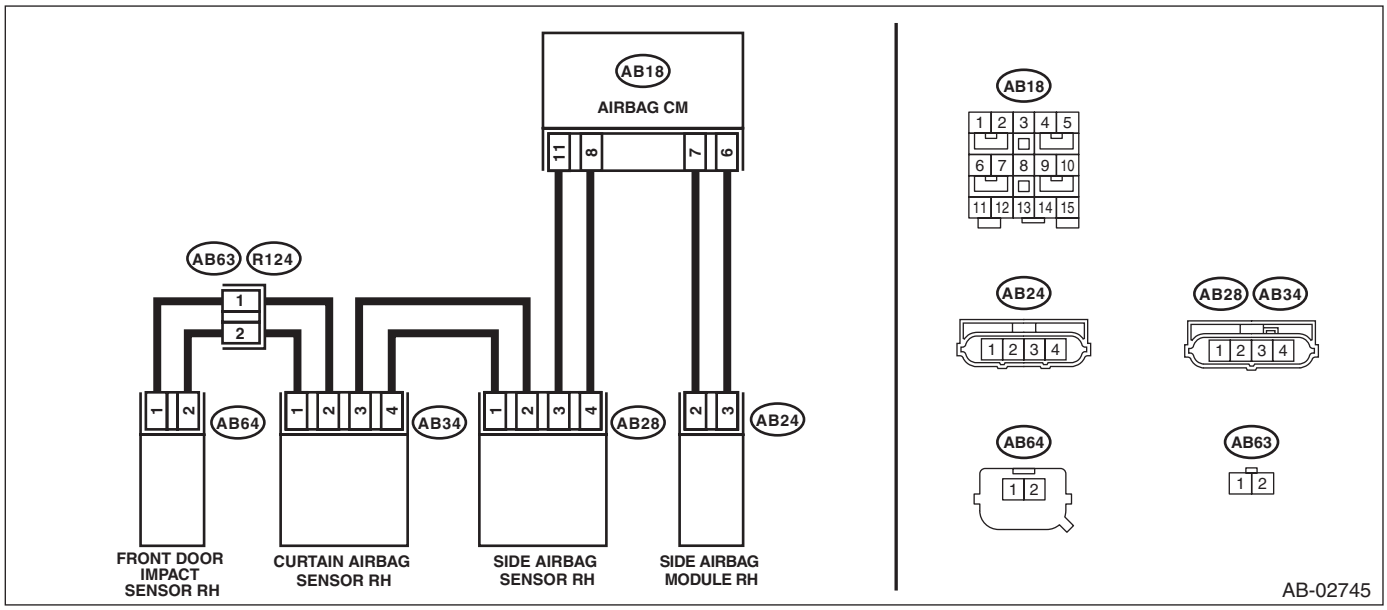
DTC DETECTING CONDITION:

- Side airbag harness (RH) circuit is shorted to ground.
- Side airbag module (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module RH and the side airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB24), and connect the connector (1AJ) in test harness AJ to connector (AB24). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the side airbag module (RH). <Ref. to AB-62, REMOVAL, Side Airbag Module.>	Go to step **3**.

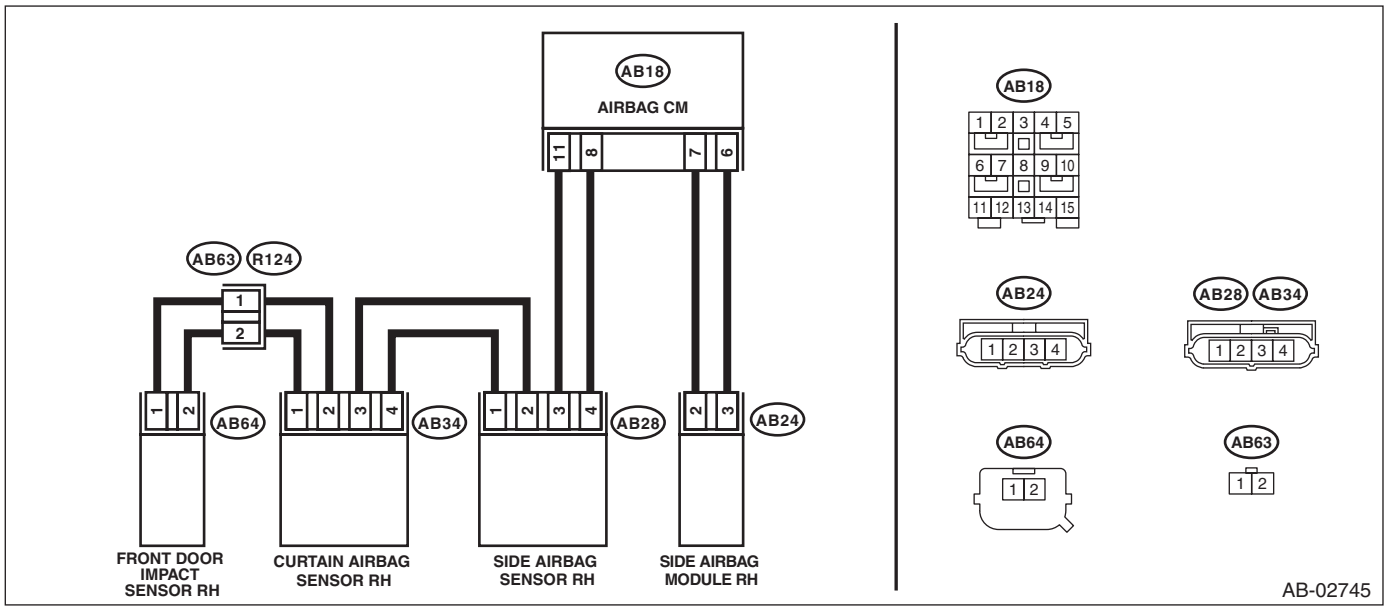
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect the airbag resistor from test harness AJ. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (4AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(4AG) No. 11 — Chassis ground:*** ***(4AG) No. 13 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CL:DTC B1823 SHORT IN SIDE AIRBAG RH (TO +B)

DTC DETECTING CONDITION:

- Side airbag harness (RH) is shorted to power supply.
- Side airbag module (RH) is faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module RH and the side airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB24), and connect the connector (1AJ) in test harness AJ to connector (AB24). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the side airbag module (RH). <Ref. to AB-62, REMOVAL, Side Airbag Module.>	Go to step **3**.

Step		Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect the airbag resistor from test harness. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Connect the battery ground terminal and turn the ignition switch to ON. 9) Measure the voltage between connector (4AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(4AG) No. 11 (+) — Chassis ground (–):*** ***(4AG) No. 13 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CM:DTC B1825 SHORT IN SIDE AIRBAG LH

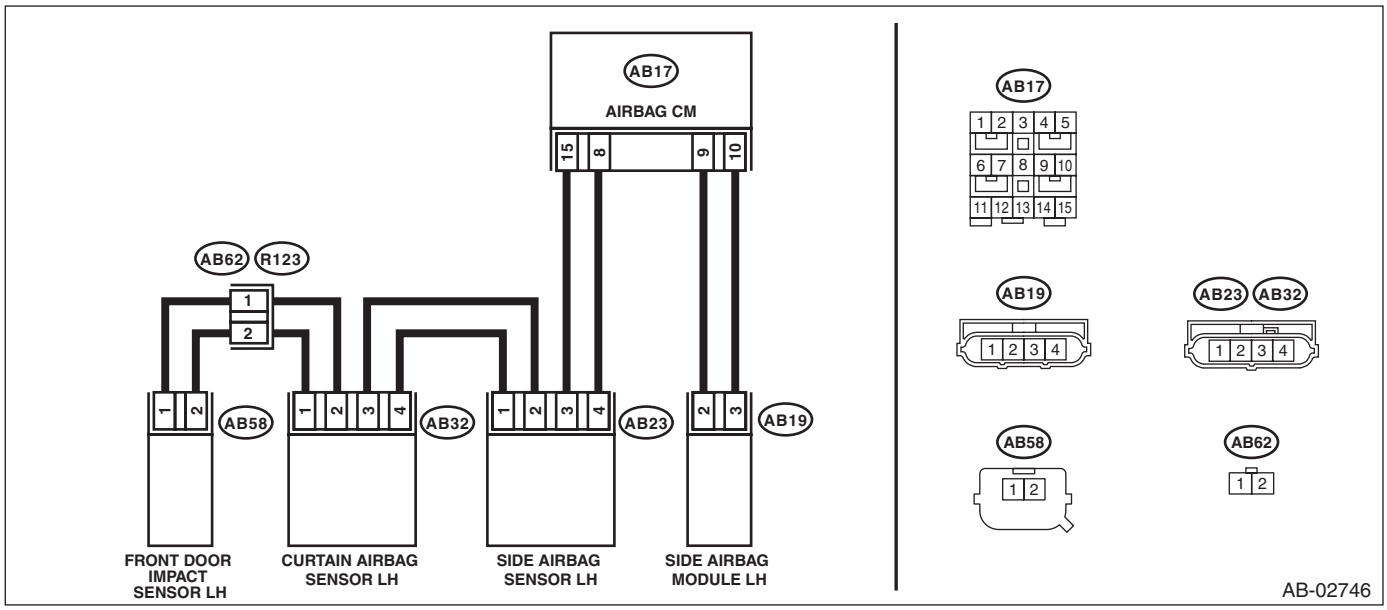
DTC DETECTING CONDITION:

- Side airbag harness (LH) circuit is shorted.
- Side airbag module (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module LH and the side airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB19) from the side airbag module (LH), and connect the connector (1AJ) in test harness AJ to the connector (AB19). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the side airbag module (LH). <Ref. to AB-62, REMOVAL, Side Airbag Module.>	Go to step **3**.

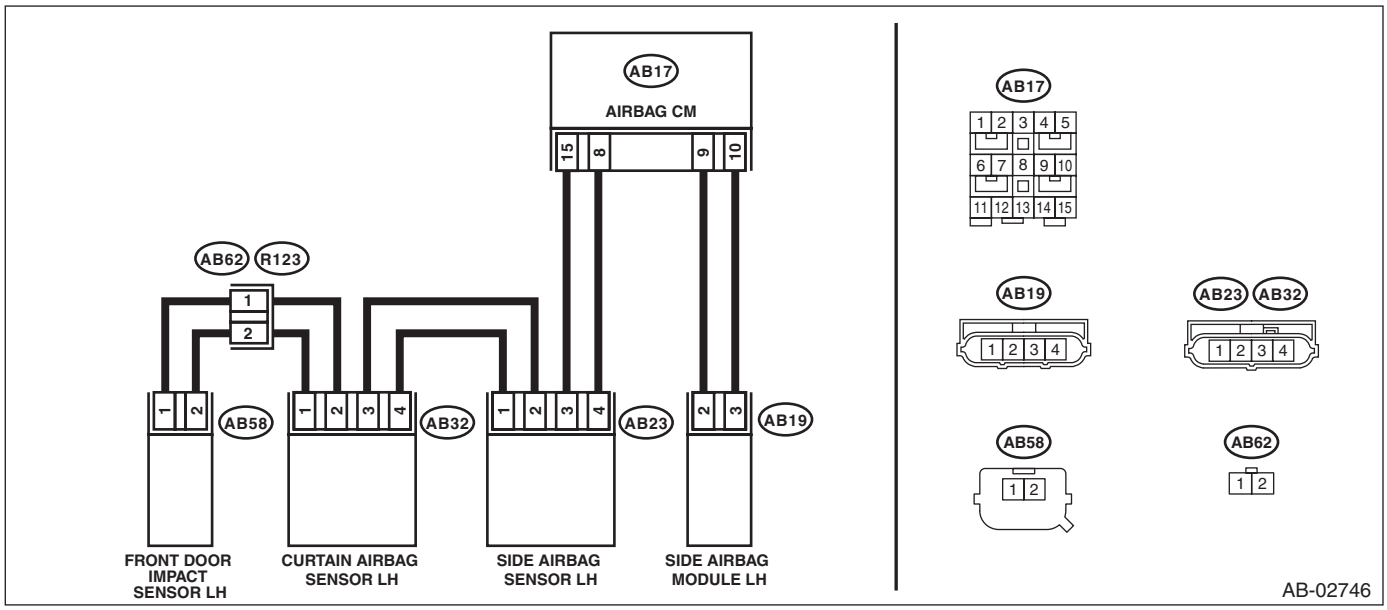
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect the airbag resistor from test harness AJ. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (4AG) terminals in test harness AG. ***Connector & terminal (4AG) No. 8 — (4AG) No. 10:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CN:DTC B1826 OPEN IN SIDE AIRBAG LH

DTC DETECTING CONDITION:

- Side airbag harness (LH) circuit is open.
- Side airbag module (LH) is faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module LH and the side airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB19) from the side airbag module (LH), and connect the connector (1AJ) in test harness AJ to the connector (AB19). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the side airbag module (LH). <Ref. to AB-62, REMOVAL, Side Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect the airbag resistor from test harness AJ. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between the test harness AG connector (4AG) and the test harness AJ connector (3AJ). ***Connector & terminal*** ***(4AG) No. 8 — (3AJ) No. 2:*** ***(4AG) No. 10 — (3AJ) No. 1:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CO:DTC B1827 SHORT IN SIDE AIRBAG LH (TO GROUND)

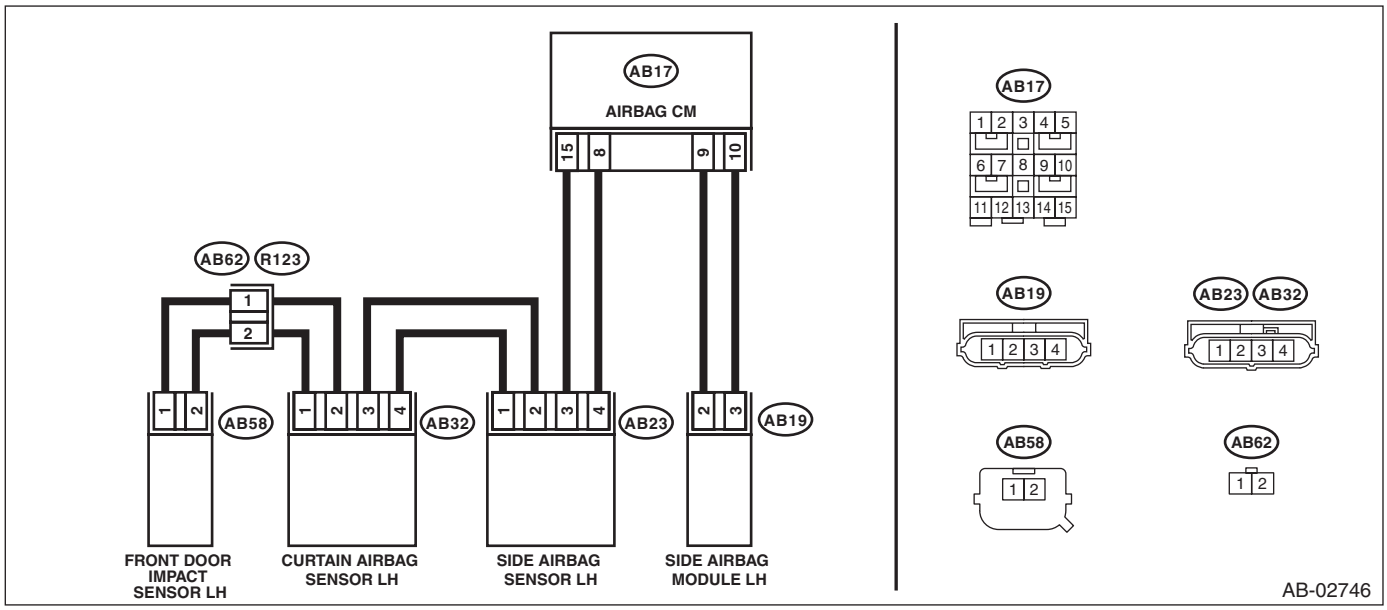
DTC DETECTING CONDITION:

- Side airbag harness (LH) circuit is shorted to ground.
- Side airbag module (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module LH and the side airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB19), and connect the connector (1AJ) in test harness AJ to connector (AB19). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the side airbag module (LH). <Ref. to AB-62, REMOVAL, Side Airbag Module.>	Go to step **3**.

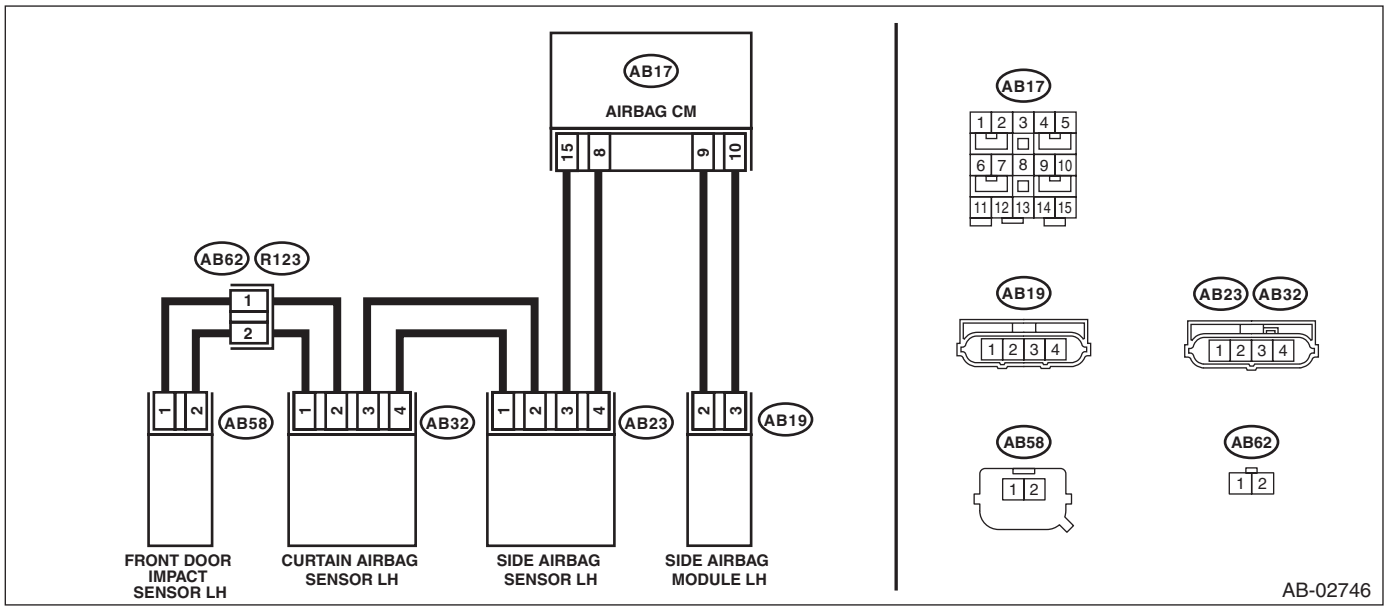
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect the airbag resistor from test harness. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (4AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(4AG) No. 8 — Chassis ground:*** ***(4AG) No. 10 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CP:DTC B1828 SHORT IN SIDE AIRBAG LH (TO +B)

DTC DETECTING CONDITION:

- Side airbag harness (LH) is shorted to power supply.
- Side airbag module (LH) is faulty.
- Airbag control module is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module LH and the side airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB19), and connect the connector (1AJ) in test harness AJ to connector (AB19). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the side airbag module (LH). <Ref. to AB-62, REMOVAL, Side Airbag Module.>	Go to step **3**.

Step		Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect the airbag resistor from test harness. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Connect the battery ground terminal and turn the ignition switch to ON. 9) Measure the voltage between connector (4AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(4AG) No. 8 (+) — Chassis ground (–):*** ***(4AG) No. 10 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CQ:DTC B1830 SHORT IN CURTAIN AIRBAG RH SQUIB CIRCUIT

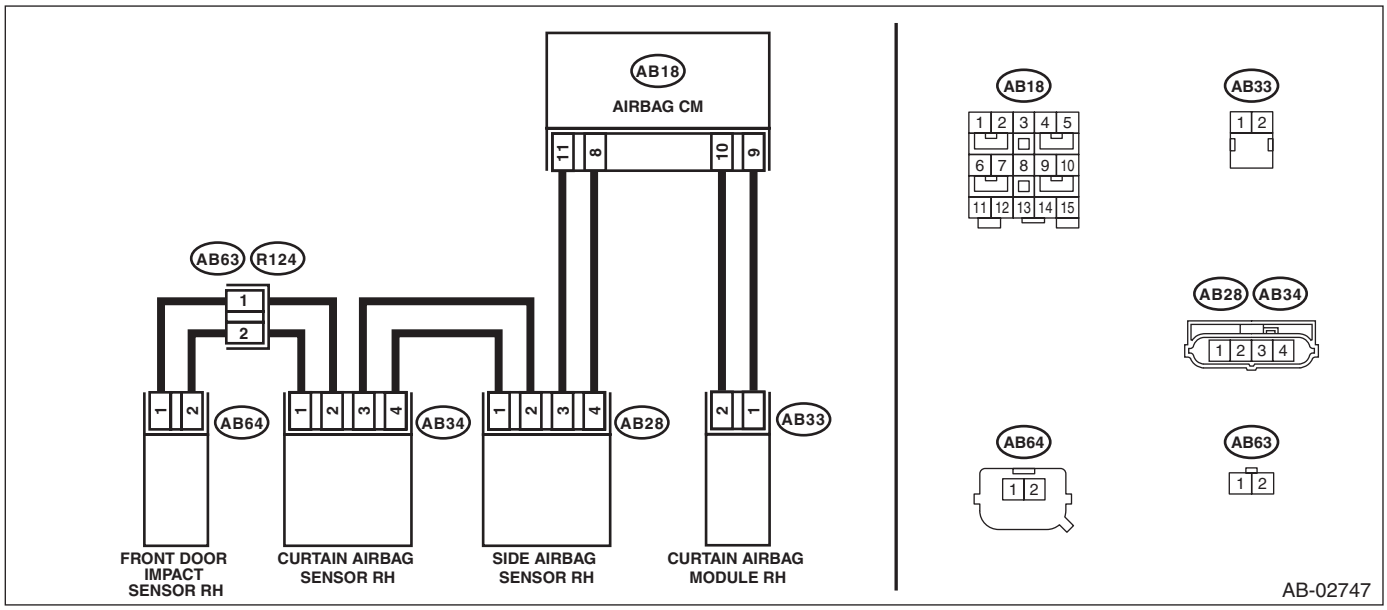
DTC DETECTING CONDITION:

- Curtain airbag harness (RH) circuit is shorted.
- Curtain airbag module (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module RH and the curtain airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB33) from curtain airbag module (RH). 3) Connect the connector (1N) in the test harness N to the connector (AB33). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the curtain airbag module (RH). <Ref. to AB-70, Curtain Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (5AG) terminals in test harness AG. ***Connector & terminal (5AG) No. 6 — (5AG) No. 12:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CR:DTC B1831 OPEN IN CURTAIN AIRBAG RH SQUIB CIRCUIT

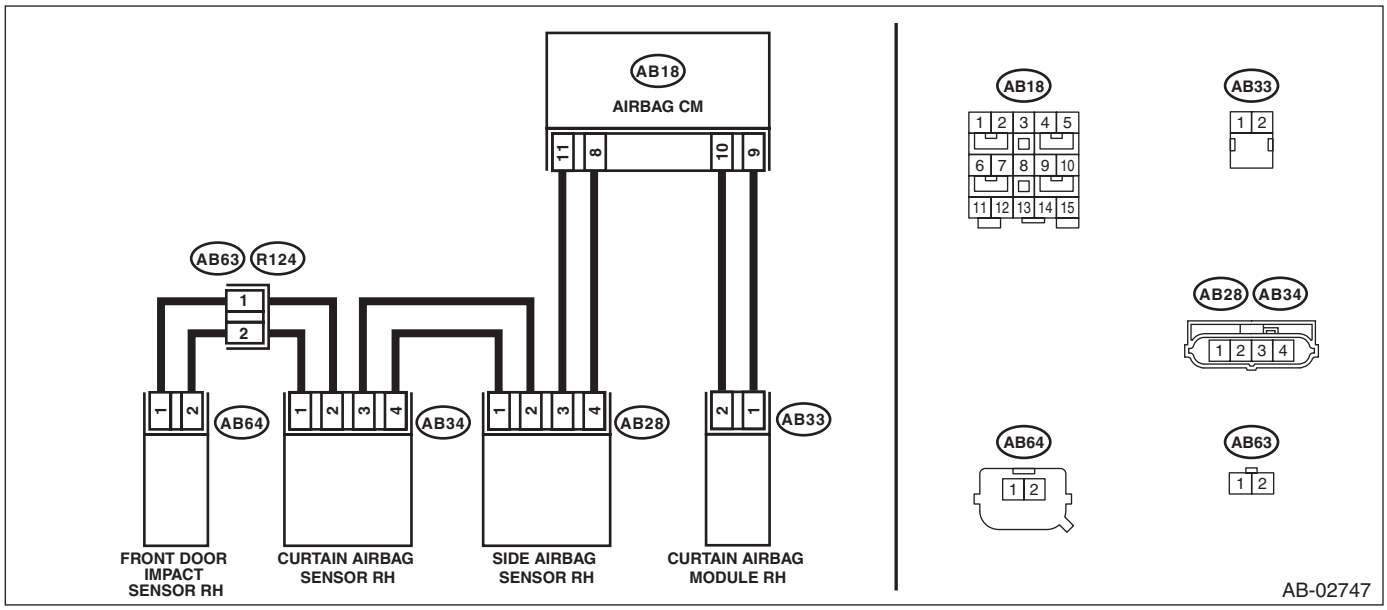
DTC DETECTING CONDITION:

- Curtain airbag harness (RH) circuit is open.
- Curtain airbag module (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module RH and the curtain airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB33) from curtain airbag module (RH). 3) Connect the connector (1N) in the test harness N to the connector (AB33). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the curtain airbag module (RH). <Ref. to AB-70, Curtain Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (5AG) in the test harness AG and connector (2N) in the test harness N. ***Connector & terminal*** ***(5AG) No. 6 — (2N) No. 2:*** ***(5AG) No. 12 — (2N) No. 1:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CS:DTC B1832 SHORT IN CURTAIN AIRBAG RH SQUIB CIRCUIT (TO GROUND)

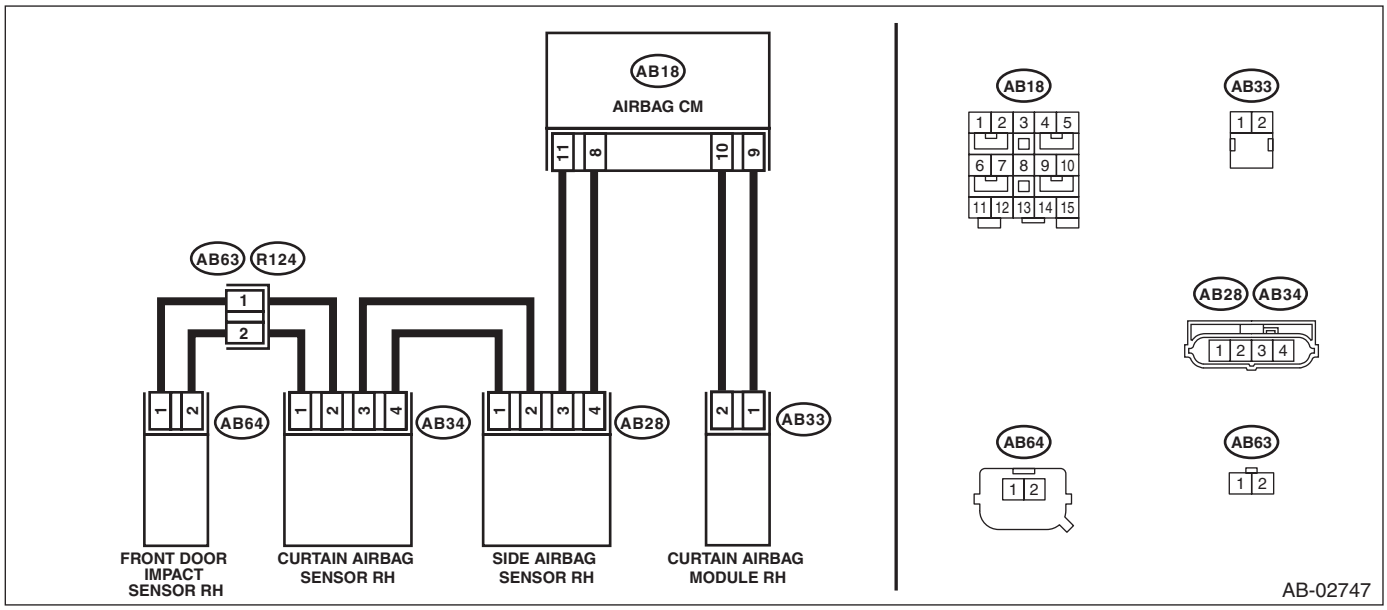
DTC DETECTING CONDITION:

- Curtain airbag harness (RH) circuit is shorted to ground.
- Curtain airbag module (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module RH and the curtain airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB33), and connect the connector (1N) in test harness N to connector (AB33). 3) Connect the airbag resistor to the connector (2N) of test harness N. 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the curtain airbag module (RH). <Ref. to AB-70, Curtain Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (5AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(5AG) No. 6 — Chassis ground:*** ***(5AG) No. 12 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CT:DTC B1833 SHORT IN CURTAIN SHIELD AIRBAG RH SQUIB CIRCUIT (TO +B)

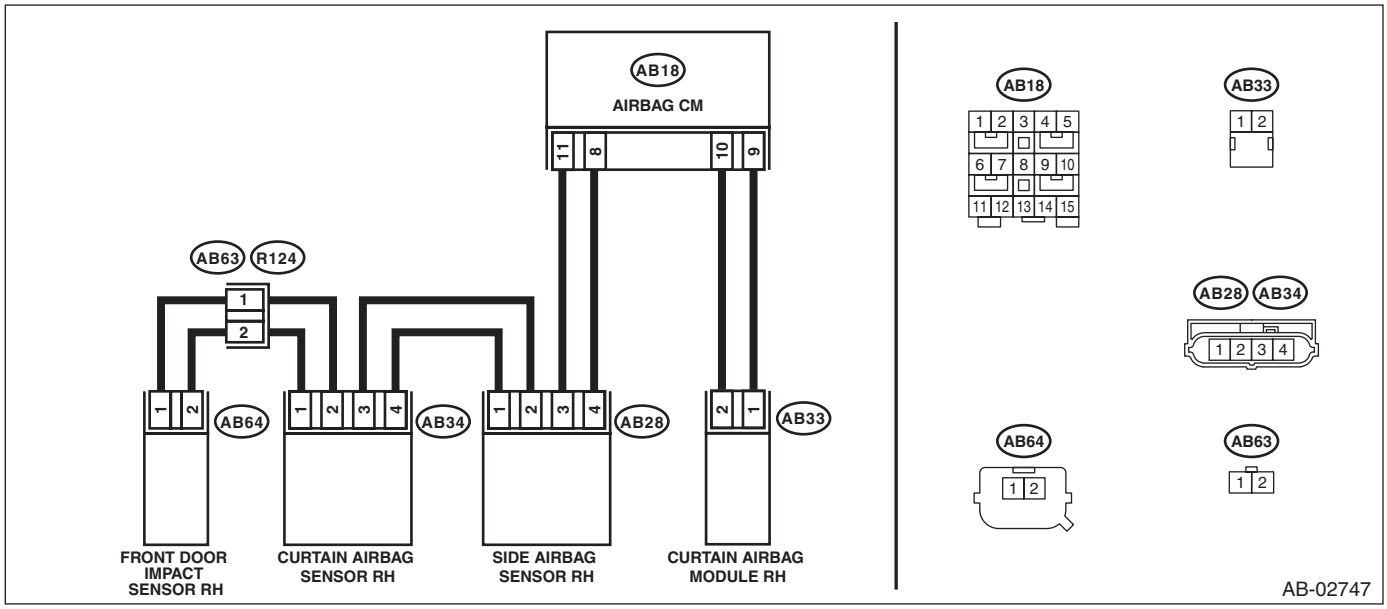
DTC DETECTING CONDITION:

- Curtain airbag harness (RH) is shorted to power supply.
- Curtain airbag module (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module RH and the curtain airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB33), and connect the connector (1N) in test harness N to connector (AB33). 3) Connect the airbag resistor to the connector (2N) of test harness N. 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the curtain airbag module (RH). <Ref. to AB-70, Curtain Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Connect the battery ground terminal and turn the ignition switch to ON. 9) Measure the voltage between connector (5AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(5AG) No. 6 (+) — Chassis ground (–):*** ***(5AG) No. 12 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CU:DTC B1835 SHORT IN CURTAIN AIRBAG LH SQUIB CIRCUIT

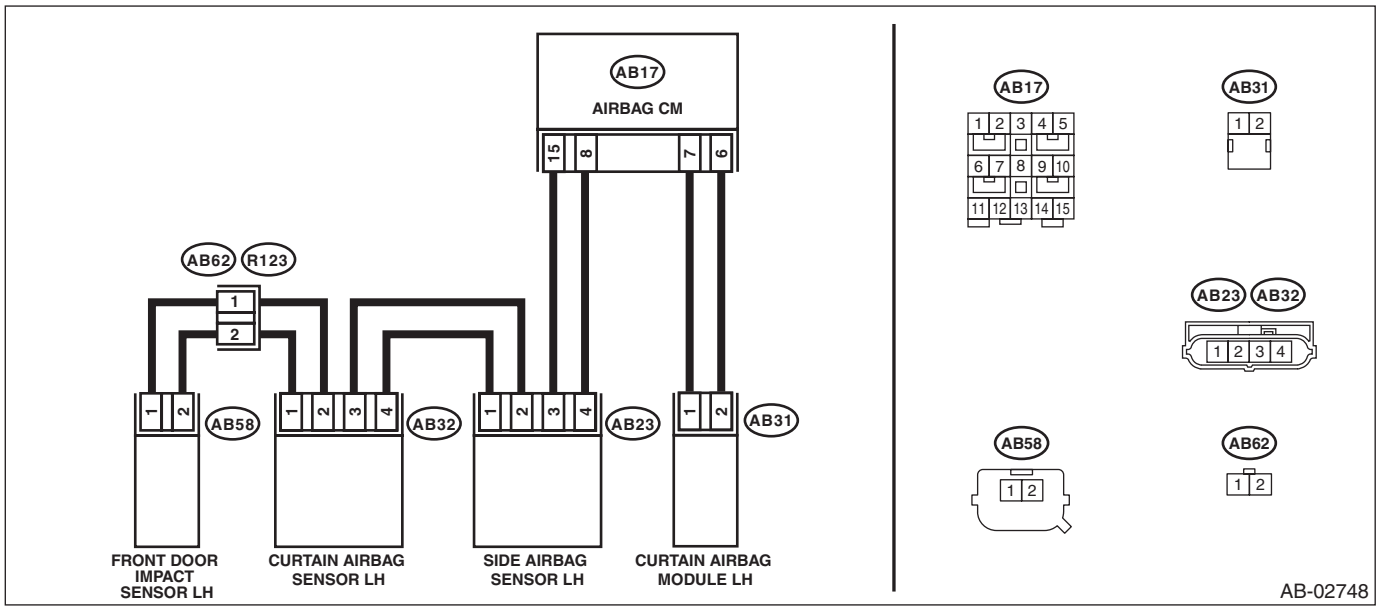
DTC DETECTING CONDITION:

- Curtain airbag harness (LH) circuit is shorted.
- Curtain airbag module (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module LH and the curtain airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB31) from curtain airbag module (LH). 3) Connect the connector (1N) in the test harness N to the connector (AB31). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the curtain airbag module (LH). <Ref. to AB-70, Curtain Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (5AG) terminals in test harness AG. ***Connector & terminal (5AG) No. 2 — (5AG) No. 4:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CV:DTC B1836 OPEN IN CURTAIN AIRBAG LH SQUIB CIRCUIT

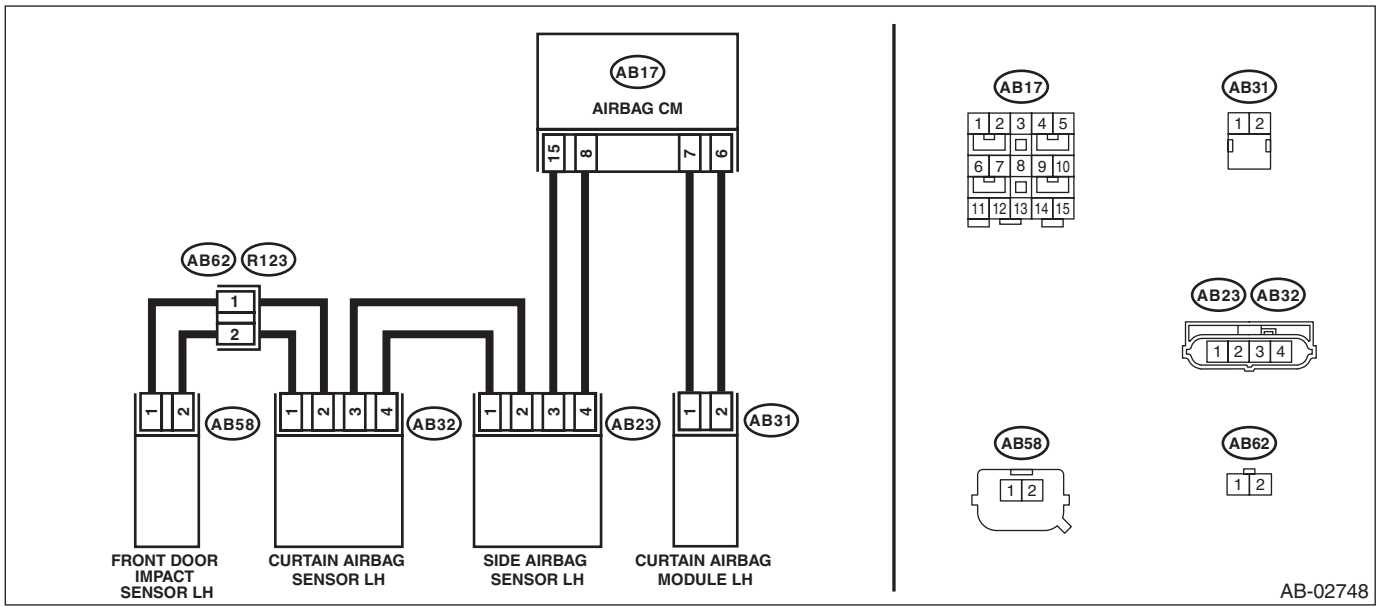
DTC DETECTING CONDITION:

- Curtain airbag harness (LH) circuit is open.
- Curtain airbag module (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module LH and the curtain airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB31) from curtain airbag module (LH). 3) Connect the connector (1N) in the test harness N to the connector (AB31). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the curtain airbag module (LH). <Ref. to AB-70, Curtain Airbag Module.>	Go to step **3**.

Step		Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (5AG) in the test harness AG and connector (2N) in the test harness N. ***Connector & terminal*** ***(5AG) No. 2 — (2N) No. 2:*** ***(5AG) No. 4 — (2N) No. 1:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CW:DTC B1837 SHORT IN CURTAIN AIRBAG LH SQUIB CIRCUIT (TO GROUND)

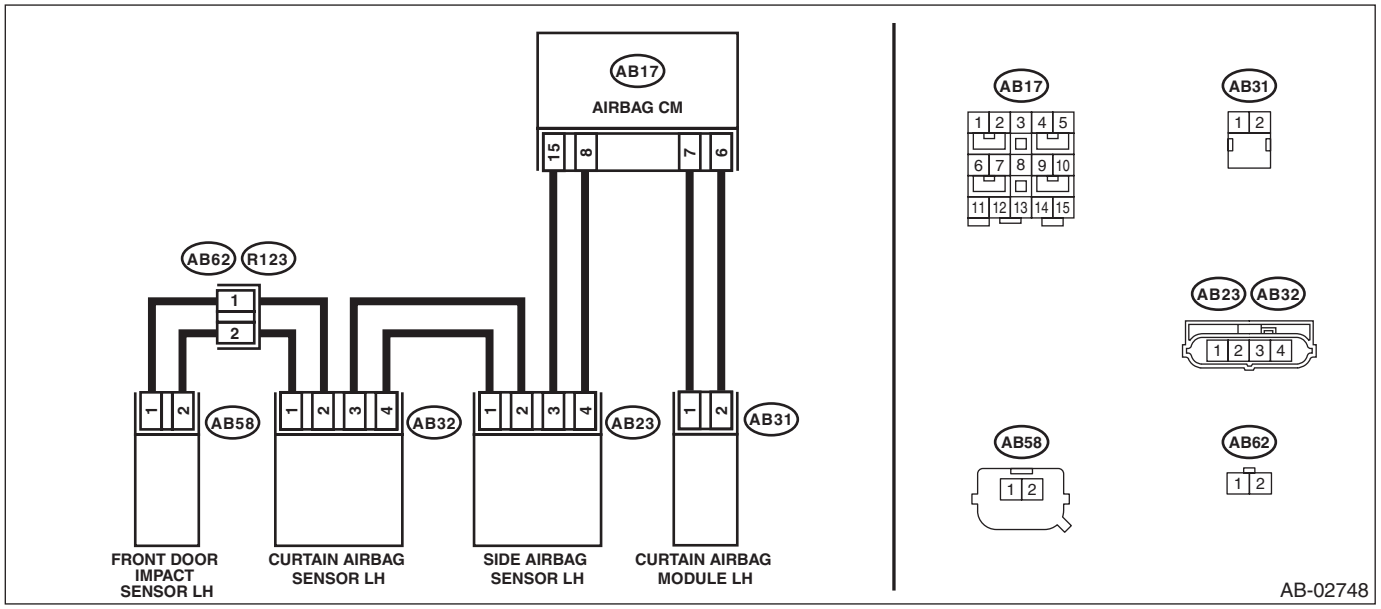
DTC DETECTING CONDITION:

- Curtain airbag harness (LH) circuit is shorted to ground.
- Curtain airbag module (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module LH and the curtain airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB31), and connect the connector (1N) in test harness N to connector (AB31). 3) Connect the airbag resistor to the connector (2N) of test harness N. 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the curtain airbag module (LH). <Ref. to AB-70, Curtain Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (5AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(5AG) No. 2 — Chassis ground:*** ***(5AG) No. 4 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CX:DTC B1838 SHORT IN CURTAIN SHIELD AIRBAG LH SQUIB CIRCUIT (TO +B)

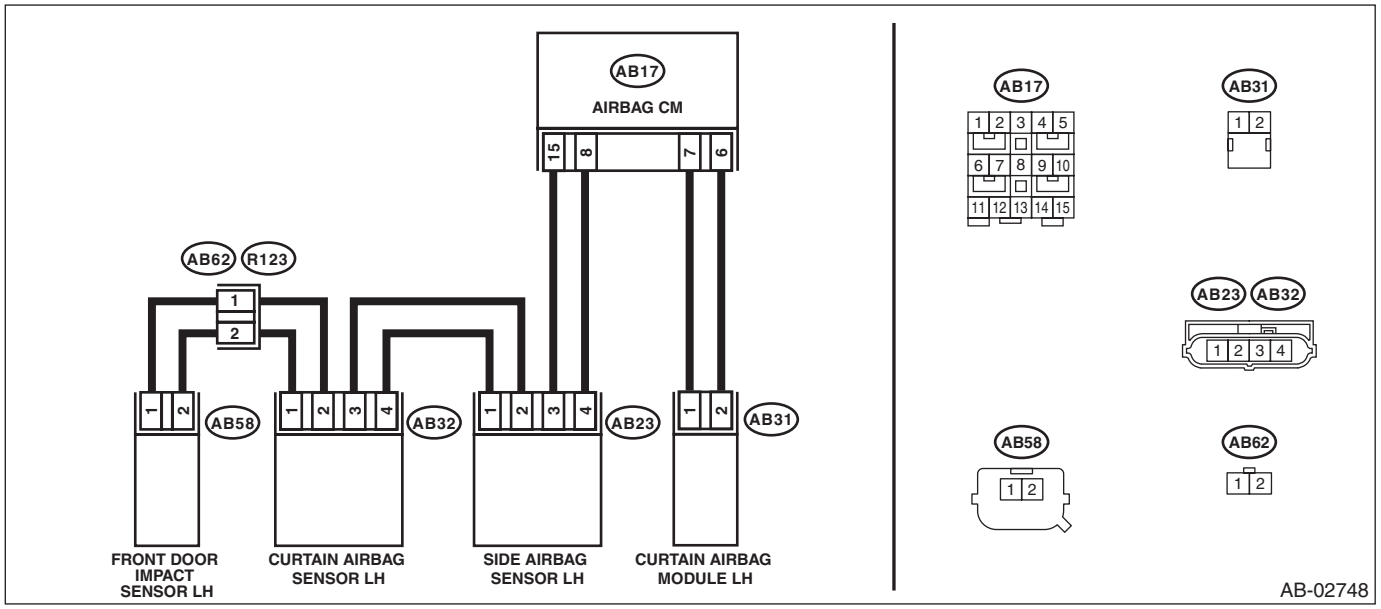
DTC DETECTING CONDITION:

- Curtain airbag harness (LH) is shorted to power supply.
- Curtain airbag module (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module LH and the curtain airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB31), and connect the connector (1N) in test harness N to connector (AB31). 3) Connect the airbag resistor to the connector (2N) of test harness N. 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the curtain airbag module (LH). <Ref. to AB-70, Curtain Airbag Module.>	Go to step **3**.

Step		Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Connect the battery ground terminal and turn the ignition switch to ON. 9) Measure the voltage between connector (5AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(5AG) No. 2 (+) — Chassis ground (–):*** ***(5AG) No. 4 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CY:DTC B1860 SHORT IN DRIVER'S KNEE AIRBAG

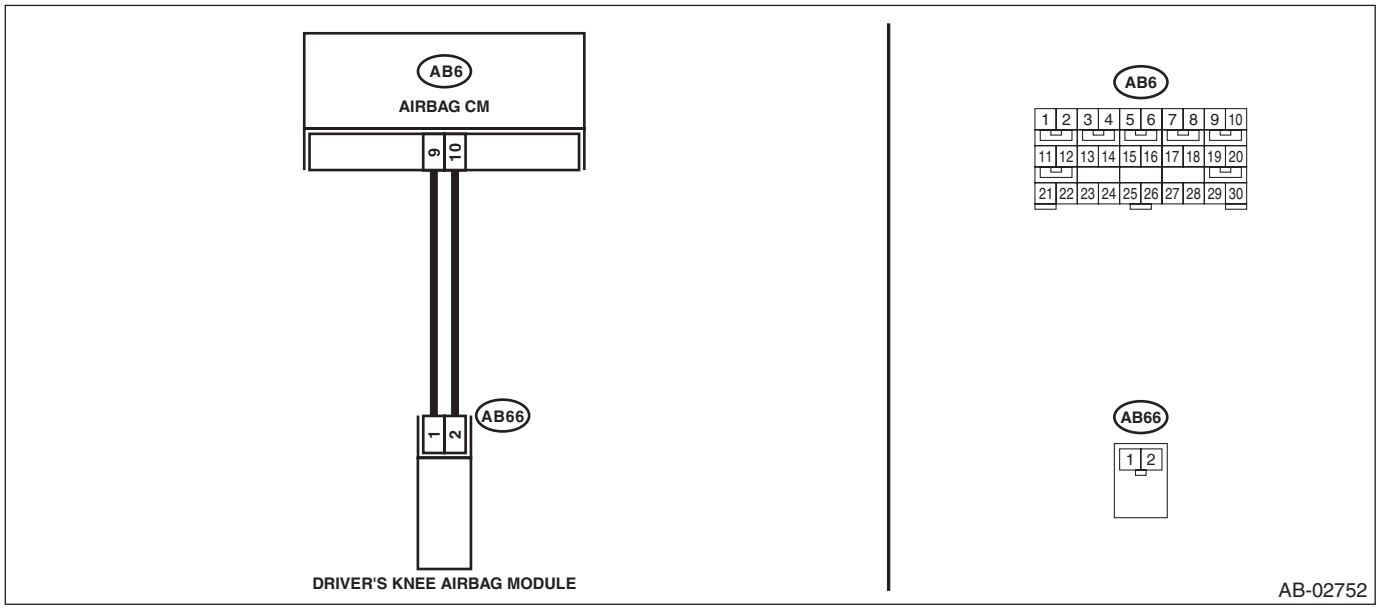
DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted.
- Knee airbag module harness circuit is shorted.
- Knee airbag module is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the knee airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK KNEE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB66) from knee airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB66). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the knee airbag module. <Ref. to AB-42, REMOVAL, Knee Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS (KNEE AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from test harness N. 3) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 4) Remove the console front panel and disconnect the connector (AB9). 5) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AH) in the test harness AH to connectors (AB6, AB17, AB18). 6) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 7) Measure the resistance between connector (3AG) terminals in test harness AG. ***Connector & terminal (3AG) No. 14 — (3AG) No. 16:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

CZ:DTC B1861 OPEN IN DRIVER'S KNEE AIRBAG

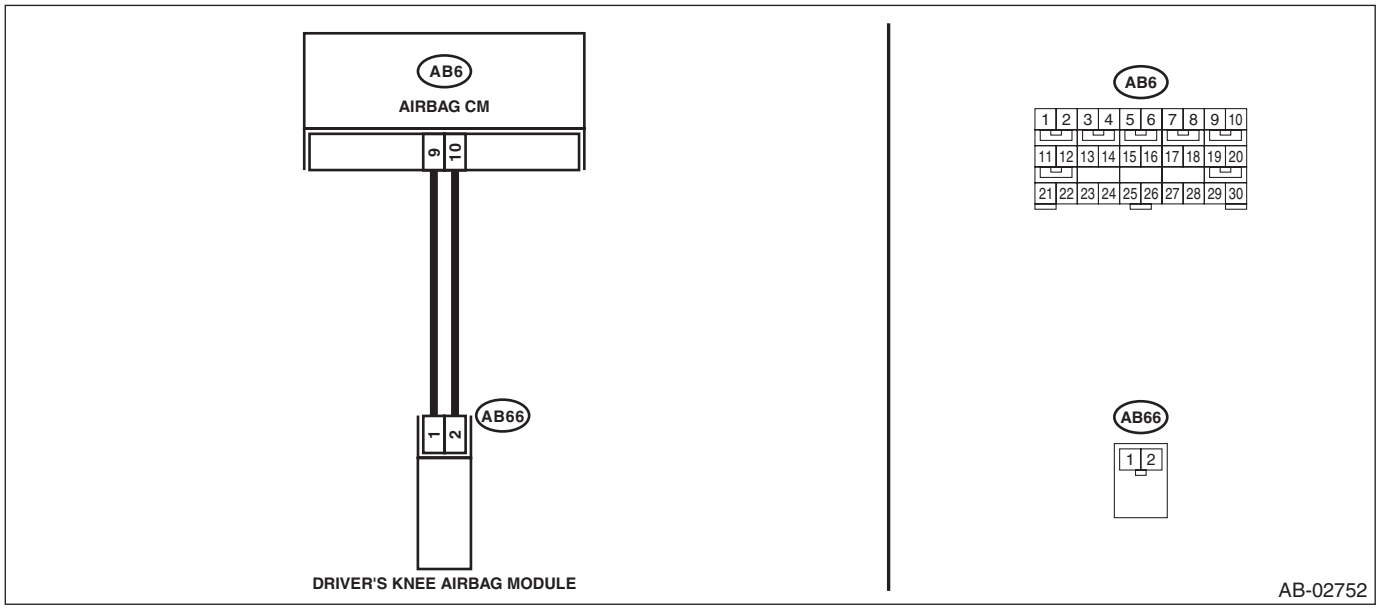
DTC DETECTING CONDITION:

- Airbag main harness circuit is open.
- Knee airbag module harness circuit is open.
- Knee airbag module is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the knee airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK KNEE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB66) from knee airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB66). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the knee airbag module. <Ref. to AB-42, REMOVAL, Knee Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS (KNEE AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from test harness N. 3) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 4) Remove the console front panel and disconnect the connector (AB9). 5) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AH) in the test harness AH to connectors (AB6, AB17, AB18). 6) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 7) Measure the resistance between the test harness AG connector (3AG) and the test harness Q connector (2Q). ***Connector & terminal*** ***(3AG) No. 14 — (2Q) No. 2:*** ***(3AG) No. 16 — (2Q) No. 1:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

DA:DTC B1862 SHORT IN DRIVER'S KNEE AIRBAG (TO GROUND)

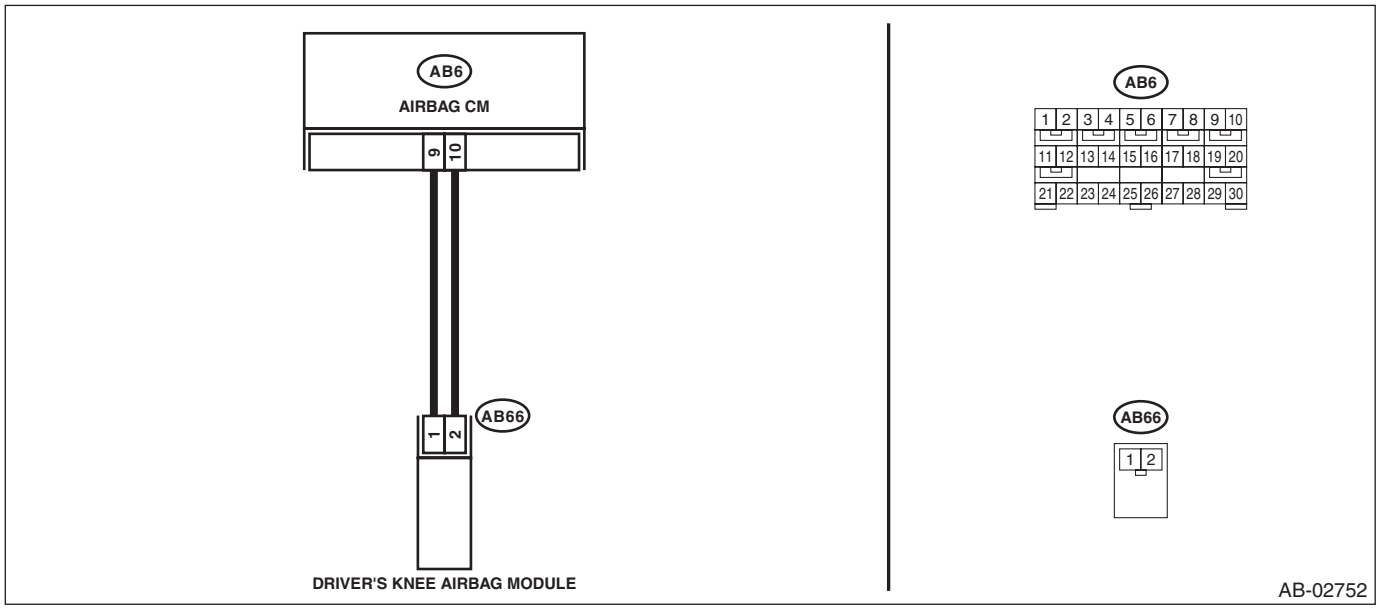
DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted to ground.
- Knee airbag module harness circuit is shorted to ground.
- Knee airbag module is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the knee airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK KNEE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB66) from knee airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB66). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the knee airbag module. <Ref. to AB-42, REMOVAL, Knee Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS (KNEE AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from test harness N. 3) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 4) Remove the console front panel and disconnect the connector (AB9). 5) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AH) in the test harness AH to connectors (AB6, AB17, AB18). 6) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 7) Measure the resistance between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 14 — Chassis ground:*** ***(3AG) No. 16 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

DB:DTC B1863 SHORT IN DRIVER'S KNEE AIRBAG (TO +B)

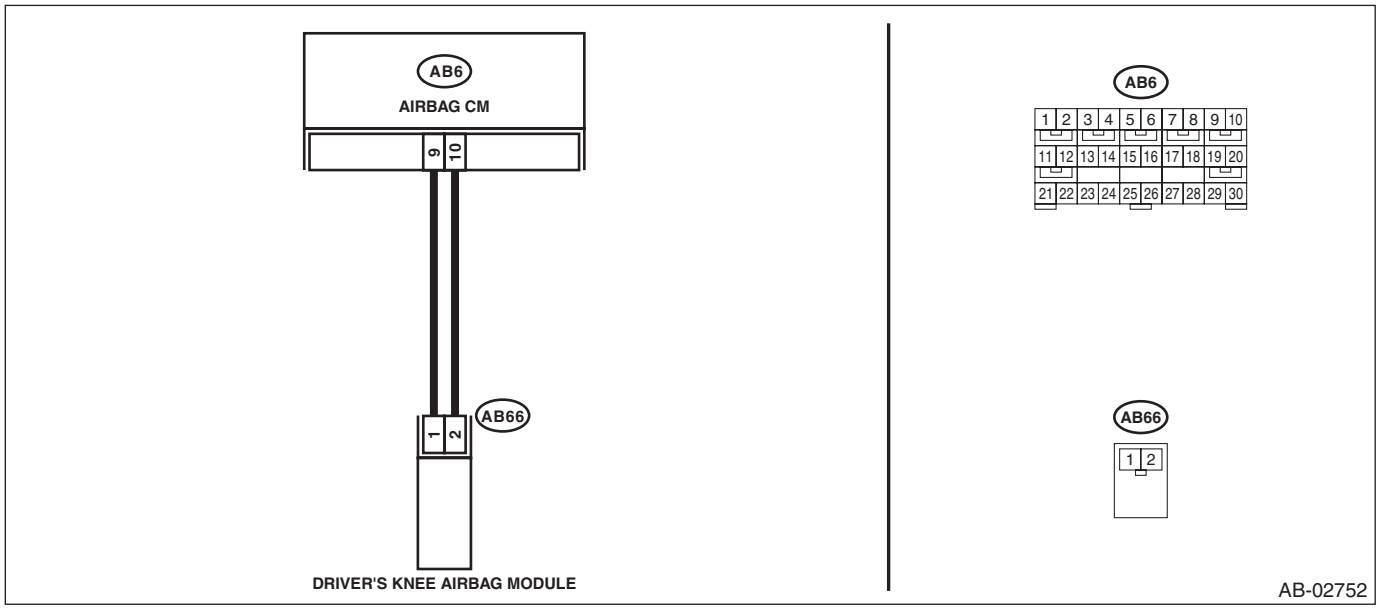
DTC DETECTING CONDITION:

- Airbag main harness circuit is shorted to power supply.
- Knee airbag module harness circuit is shorted to power supply.
- Knee airbag module is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the knee airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK KNEE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB66) from knee airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB66). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the knee airbag module. <Ref. to AB-42, REMOVAL, Knee Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS (KNEE AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from test harness N. 3) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 4) Remove the console front panel and disconnect the connector (AB9). 5) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AH) in the test harness AH to connectors (AB6, AB17, AB18). 6) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 7) Connect the battery ground terminal and turn the ignition switch to ON. 8) Measure the voltage between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 14 (+) — Chassis ground (–):*** ***(3AG) No. 16 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

DC:DTC B1900 SHORT IN FRONT P/T RH

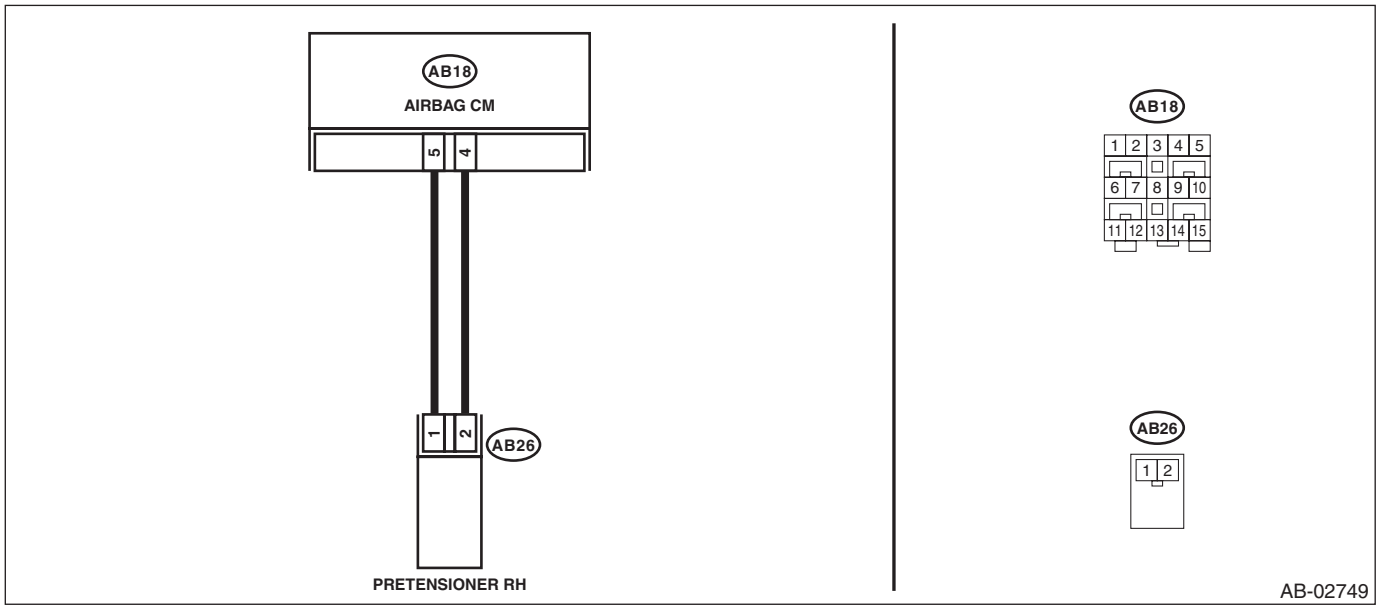
DTC DETECTING CONDITION:

- Seat belt pretensioner (RH) circuit is shorted.
- Pretensioner (RH) is faulty.
- Pretensioner harness (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Connect the connector (1N) in the test harness N to the connector (AB26). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the seat belt pretensioner (RH). <Ref. to SB-15, Front Seat Belt.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from test harness N. 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the connector (AB33) from curtain airbag module (RH). 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (3AG) terminals in test harness AG. ***Connector & terminal (3AG) No. 18 — (3AG) No. 20:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

DD:DTC B1901 OPEN IN FRONT P/T RH

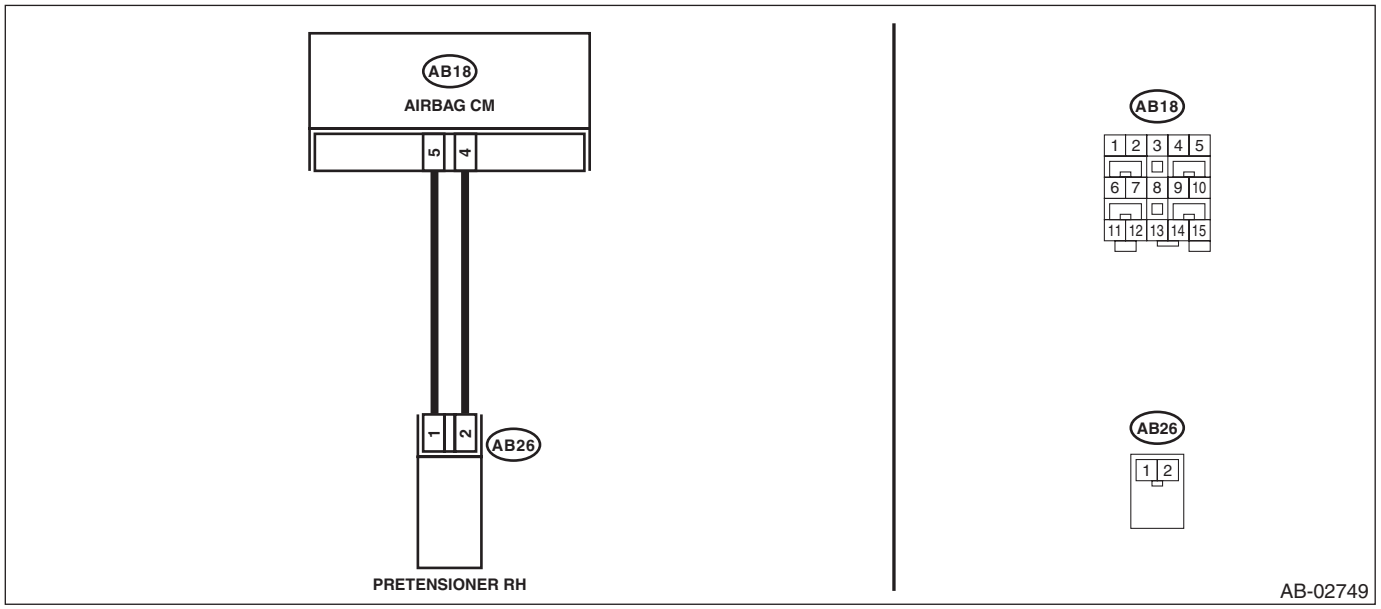
DTC DETECTING CONDITION:

- Seat belt pretensioner (RH) circuit is open.
- Pretensioner (RH) is faulty.
- Pretensioner harness (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Connect the connector (1N) in the test harness N to the connector (AB26). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the seat belt pretensioner (RH). <Ref. to SB-15, Front Seat Belt.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connector (2N) of test harness N. 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the connector (AB33) from curtain airbag module (RH). 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (3AG) in the test harness AG and connector (2N) in the test harness N. ***Connector & terminal*** ***(3AG) No. 18 — (2N) No. 1:*** ***(3AG) No. 20 — (2N) No. 2:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

DE:DTC B1902 SHORT IN FRONT P/T RH (TO GROUND)

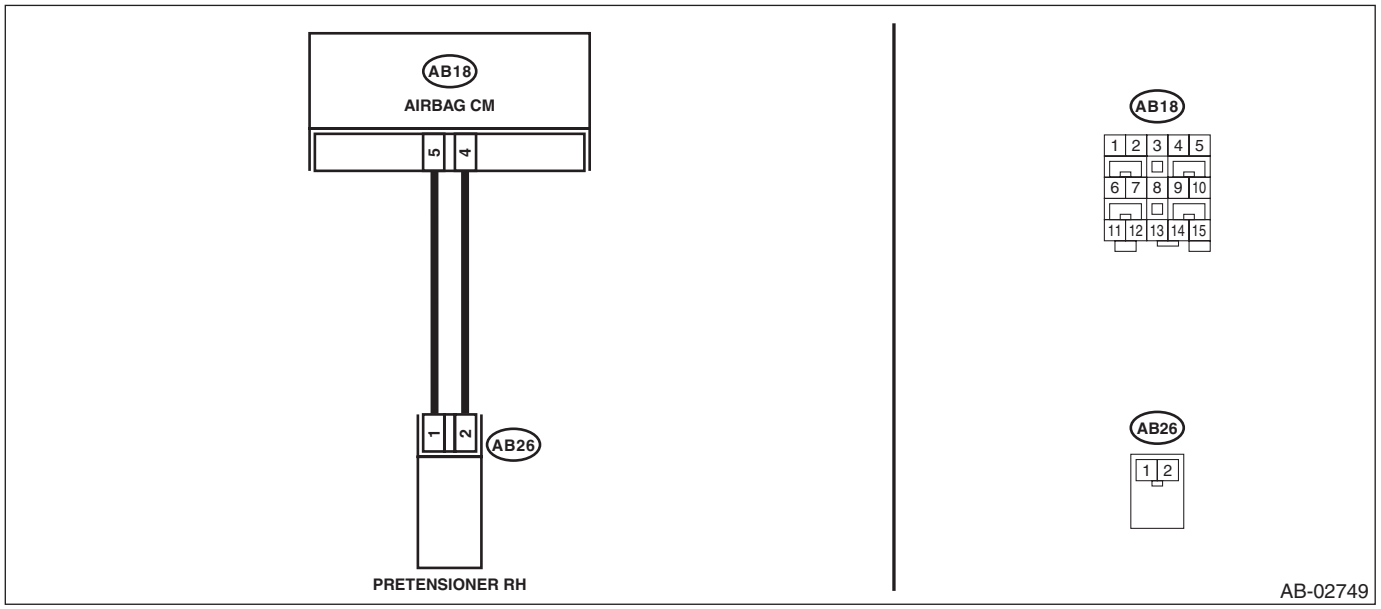
DTC DETECTING CONDITION:

- Seat belt pretensioner (RH) circuit is shorted to ground.
- Pretensioner (RH) is faulty.
- Pretensioner harness (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Connect the connector (1N) in the test harness N to the connector (AB26). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the seat belt pretensioner (RH). <Ref. to SB-15, Front Seat Belt.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connector (2N) of test harness N. 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the connector (AB33) from curtain airbag module (RH). 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB18, AB17, AB6). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 18 — Chassis ground:*** ***(3AG) No. 20 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

DF:DTC B1903 SHORT IN FRONT P/T RH (TO +B)

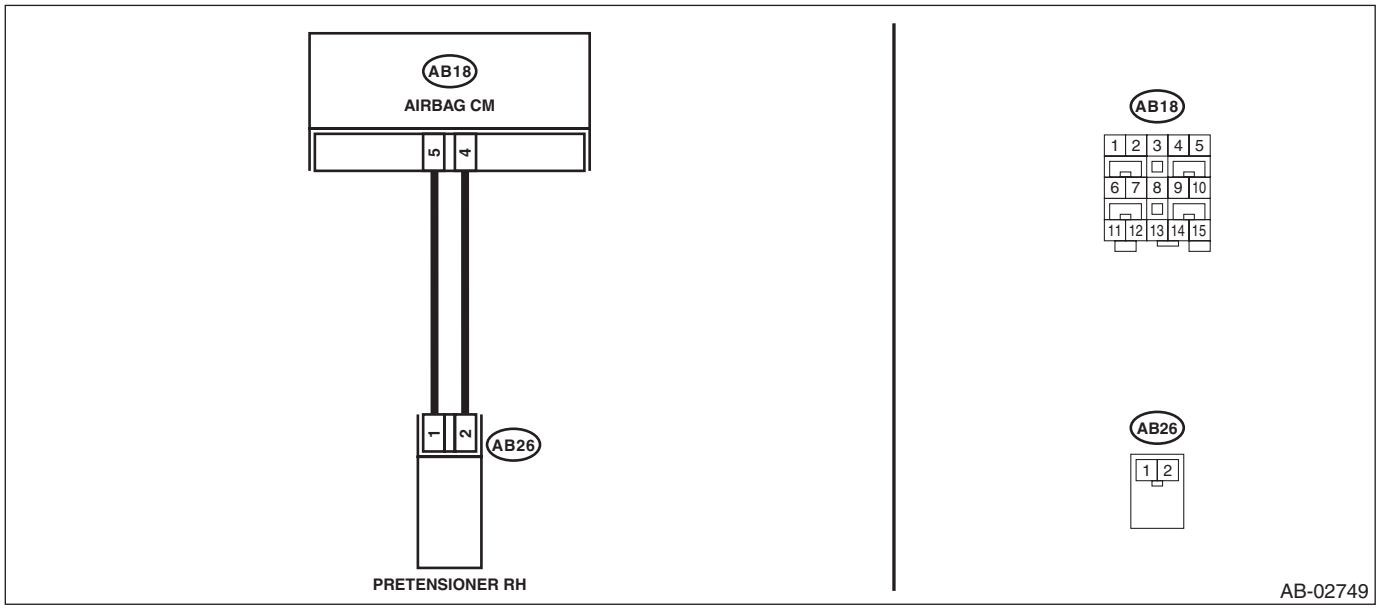
DTC DETECTING CONDITION:

- Seat belt pretensioner (RH) circuit is shorted to power supply.
- Pretensioner (RH) is faulty.
- Pretensioner harness (RH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Connect the connector (1N) in the test harness N to the connector (AB26). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the seat belt pretensioner (RH). <Ref. to SB-15, Front Seat Belt.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connector (2N) of test harness N. 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the connector (AB33) from curtain airbag module (RH). 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Connect the battery ground terminal and turn the ignition switch to ON. 9) Measure the voltage between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 20 (+) — Chassis ground (–):*** ***(3AG) No. 18 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

DG:DTC B1905 SHORT IN FRONT P/T LH

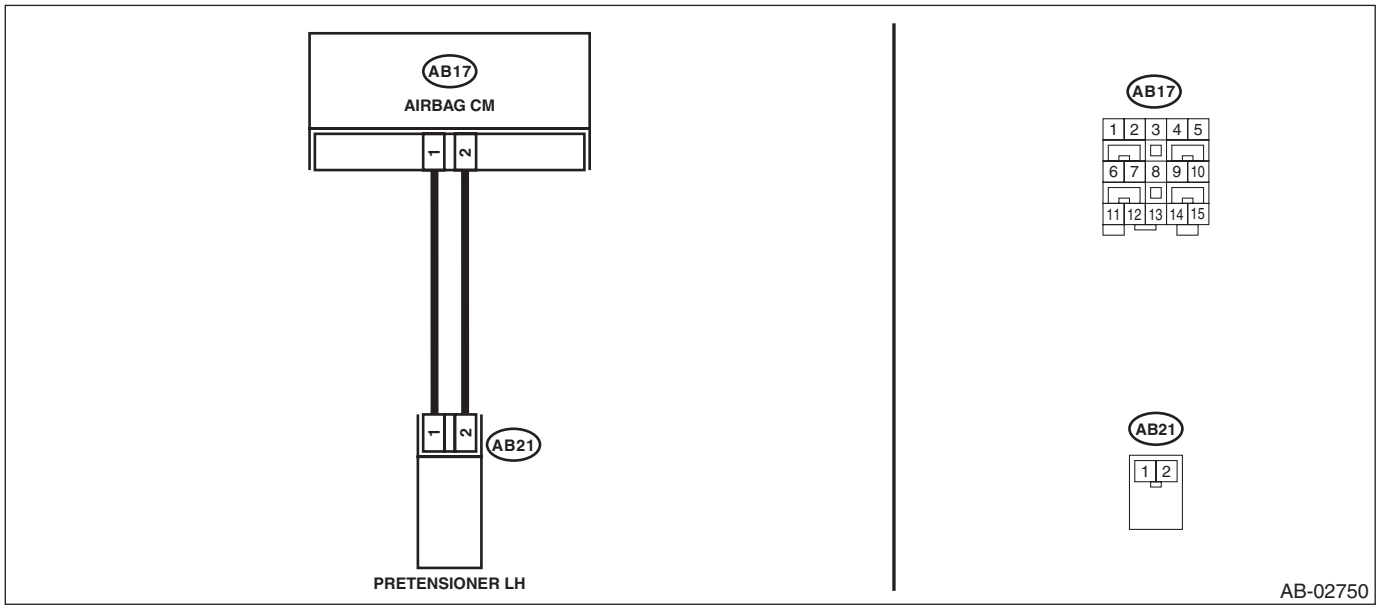
DTC DETECTING CONDITION:

- Seat belt pretensioner (LH) circuit is shorted.
- Pretensioner (LH) is faulty.
- Pretensioner harness (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Connect the connector (1N) in the test harness N to the connector (AB21). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the seat belt pretensioner (LH). <Ref. to SB-15, Front Seat Belt.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connector (2N) of test harness N. 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the connector (AB31) from curtain airbag module (LH). 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (3AG) terminals in test harness AG. ***Connector & terminal (3AG) No. 10 — (3AG) No. 12:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

DH:DTC B1906 OPEN IN FRONT P/T LH

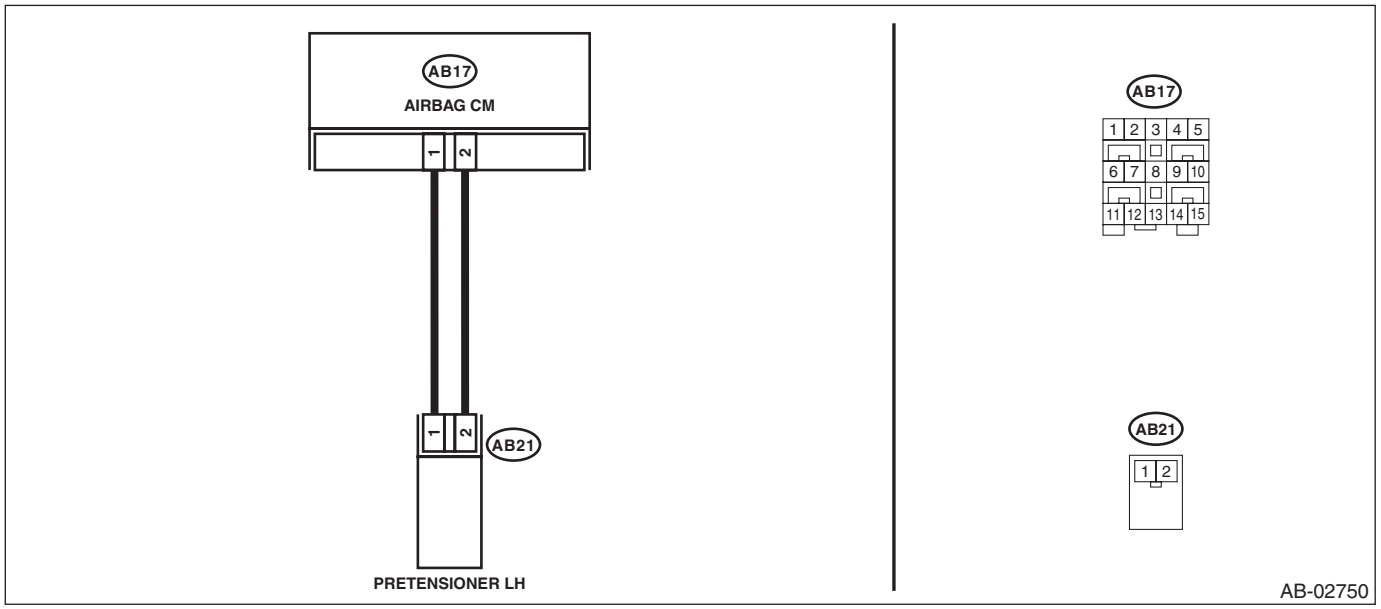
DTC DETECTING CONDITION:

- Seat belt pretensioner (LH) circuit is open.
- Pretensioner (LH) is faulty.
- Pretensioner harness (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Connect the connector (1N) in the test harness N to the connector (AB21). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the seat belt pretensioner (LH). <Ref. to SB-15, Front Seat Belt.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connector (2N) of test harness N. 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the connector (AB31) from curtain airbag module (LH). 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (3AG) in the test harness AG and connector (2N) in the test harness N. ***Connector & terminal*** ***(3AG) No. 10 — (2N) No. 2:*** ***(3AG) No. 12 — (2N) No. 1:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

DI: DTC B1907 SHORT IN FRONT P/T LH (TO GROUND)

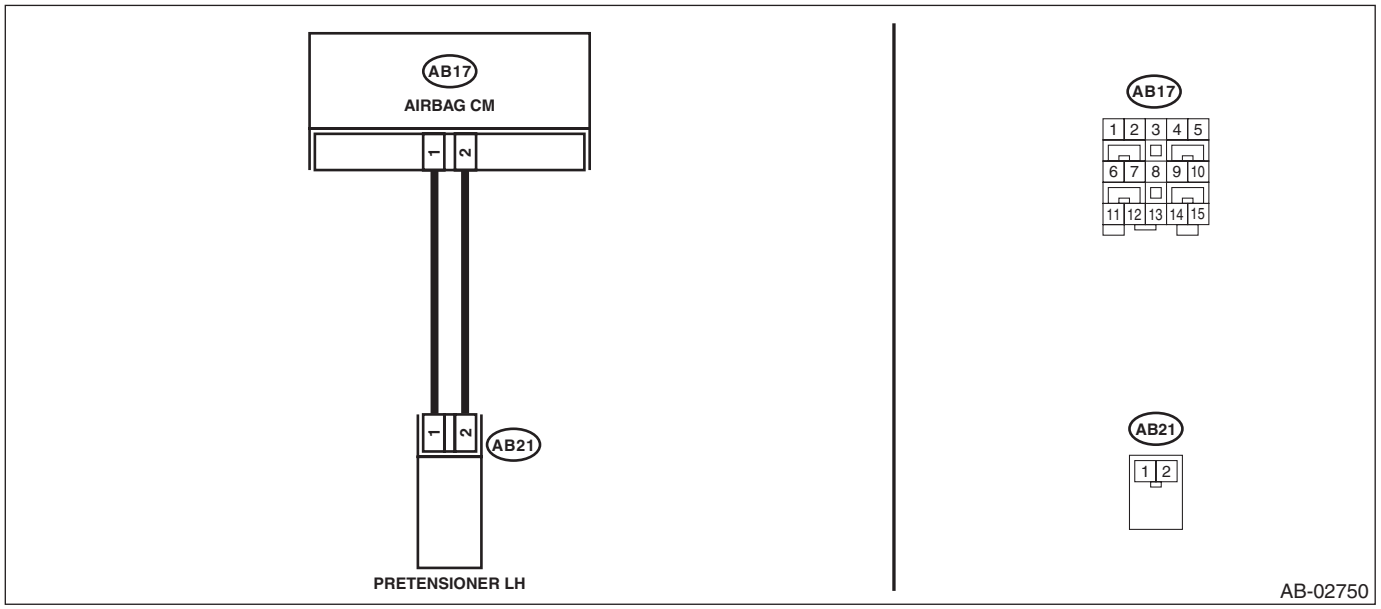
DTC DETECTING CONDITION:

- Seat belt pretensioner (LH) circuit is shorted to ground.
- Pretensioner (LH) is faulty.
- Pretensioner harness (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Connect the connector (1N) in the test harness N to the connector (AB21). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the seat belt pretensioner (LH). <Ref. to SB-15, Front Seat Belt.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connector (2N) of test harness N. 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the connector (AB31) from curtain airbag module (LH). 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Measure the resistance between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 10 — Chassis ground:*** ***(3AG) No. 12 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

DJ:DTC B1908 SHORT IN FRONT P/T LH (TO +B)

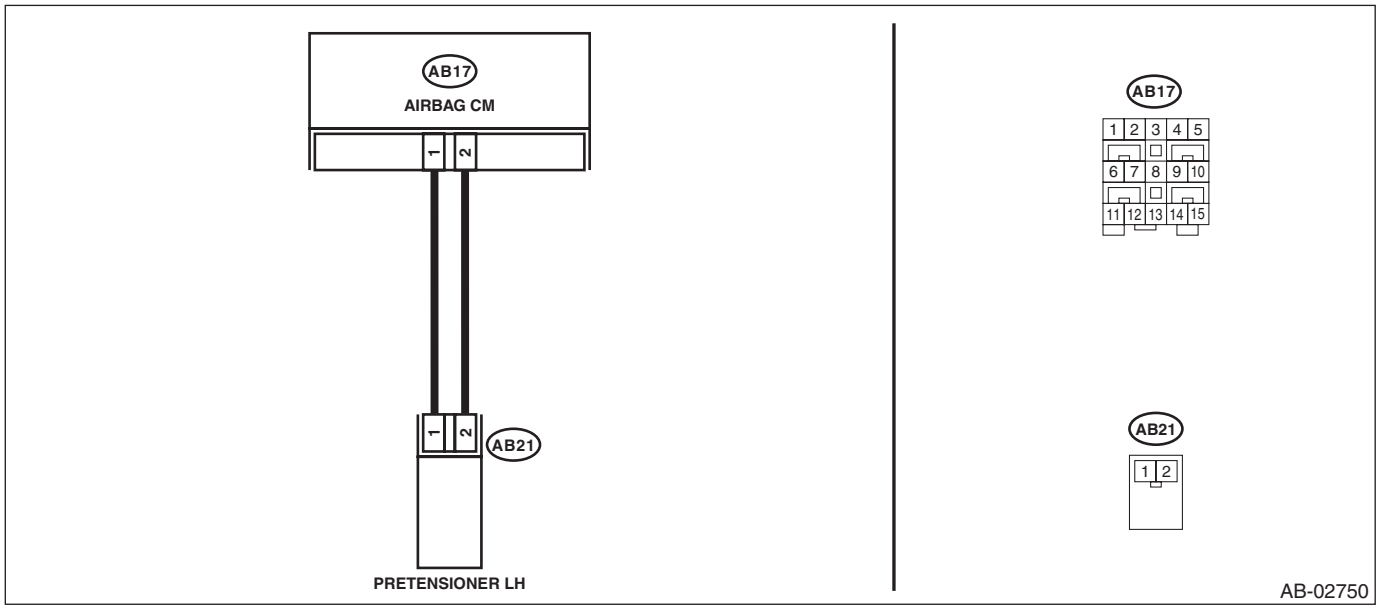
DTC DETECTING CONDITION:

- Seat belt pretensioner (LH) circuit is shorted to power supply.
- Pretensioner (LH) is faulty.
- Pretensioner harness (LH) is faulty.
- Airbag control module is faulty.

CAUTION:

Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Connect the connector (1N) in the test harness N to the connector (AB21). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the seat belt pretensioner (LH). <Ref. to SB-15, Front Seat Belt.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRE-TENSIONER HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connector (2N) of test harness N. 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the connector (AB31) from curtain airbag module (LH). 5) Disconnect the connectors (AB6, AB17, AB18) from airbag control module. 6) Connect the connector (1AH) in the test harness AH to the connectors (AB6, AB17, AB18). 7) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 8) Connect the battery ground terminal and turn the ignition switch to ON. 9) Measure the voltage between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 10 (+) — Chassis ground (–):*** ***(3AG) No. 12 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC. (Current malfunction)	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

OCCUPANT DETECTION SYSTEM (DIAGNOSTICS)

OD(diag)

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1. Basic Diagnostic Procedure

A: PROCEDURE

CAUTION:
• Subaru Select Monitor is required for reading DTC, performing diagnosis and reading current data.
• Remove foreign matter (dust, water, oil, etc.) from the body integrated unit connector during removal and installation.
• Registration of the immobilizer is necessary after the replacement of the control module, etc. For detailed procedure, refer to the REGISTRATION MANUAL FOR IMMOBILIZER.

NOTE:
• To check harness for open or short circuits, shake the suspected trouble spot or connector.
• Check List for Interview <Ref. to BC(diag)-3, Check List for Interview.>

	Step	Check	Yes	No
1	**CHECK PRE-INSPECTION.** Ask the customer when and how the trouble occurred using the interview check list. <Ref. to BC(diag)-3, Check List for Interview.>	Did you interview the customer?	Go to step **2**.	Interview the customer.
2	**BASIC INSPECTION.** Check components which might affect body control. <Ref. to BC(diag)-4, INSPECTION, General Description.>	Is the component that might influence the body control problem normal?	Go to step **3**.	Repair or replace each component.
3	**CHECK DTC.** 1) Read the DTC. <Ref. to BC(diag)-9, OPERATION, Read Diagnostic Trouble Code (DTC).> NOTE: If the communication function of the Subaru Select Monitor cannot be executed properly, check the communication circuit. <Ref. to LAN(diag)-9, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Subaru Select Monitor.> 2) Record all DTCs and freeze frame data.	Is DTC displayed on Subaru Select Monitor?	Go to step **5**.	Go to step **4**.
4	**PERFORM GENERAL DIAGNOSTICS.** Inspect using the “General Diagnostics Table”. <Ref. to BC(diag)-39, General Diagnostic Table.>	Is result of inspection OK?	The body control system is normal.	Go to step **5**.
5	**PERFORM DIAGNOSIS.** 1) Correct the cause of trouble. 2) Perform the Clear Memory Mode. <Ref. to BC(diag)-10, OPERATION, Clear Memory Mode.> 3) Read the DTC. <Ref. to BC(diag)-9, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed on Subaru Select Monitor?	Repeat step 5 until DTC is not shown.	Finish the diagnosis.

2. Check List for Interview

A: CHECK

Inspect the following items regarding the vehicle's state.

Body Control System Check List for Interview		Date of Vehicle Bring-in Year Month Day	
Customer's name		Registration No.	Initial year of registration Year Month Date
		Vehicle model	Frame number
Interviewer	Inspector	Engine type	Odometer reading
Customer specified content			
Date and time when the trouble occurred		Frequency of trouble occurrence	
Condition of trouble occurrence		Weather	
Road conditions		Occurrence location	
Accessory installation condition			
Trouble condition			
❑ Diagnostic code			❑ ( )

3. General Description

A: CAUTION

1. SRS AIRBAG SYSTEM

Airbag system wiring harness is routed near the body integrated unit and body control circuits.

CAUTION:
- **Do not use the electrical test equipment on all airbag system wiring harnesses and connectors.**
- **Be careful not to damage the airbag system wiring harness, when servicing the body control system.**

B: INSPECTION

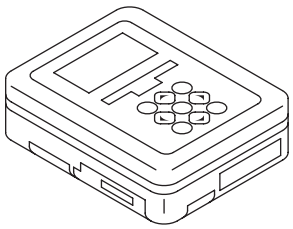
Before performing diagnosis, check the following items which might affect body control system problems.
1) Measure the battery voltage and check electrolyte.

Standard voltage: 12 V or more

Specific gravity: 1.260 or more
2) Check the fuse condition.
Make sure that ampere of the fuse is setting value, and it is not blown out.
3) Check the connecting condition of harness and harness connector.
4) Confirm settings of body integrated unit are corresponded to vehicle equipment. <Ref. to BC(diag)-16, OPERATION, Registration Body Integrated Unit.>
5) Make sure that the User Customizing of the body integrated unit matches the vehicle equipment. <Ref. to BC(diag)-14, OPERATION, User Customizing.>
6) Confirm “Factory initial setting” of body integrated unit registrations is “Market”.
7) Confirm key illumination does not blink with ignition switch turned to ON.

C: PREPARATION TOOL

1. SPECIAL TOOL

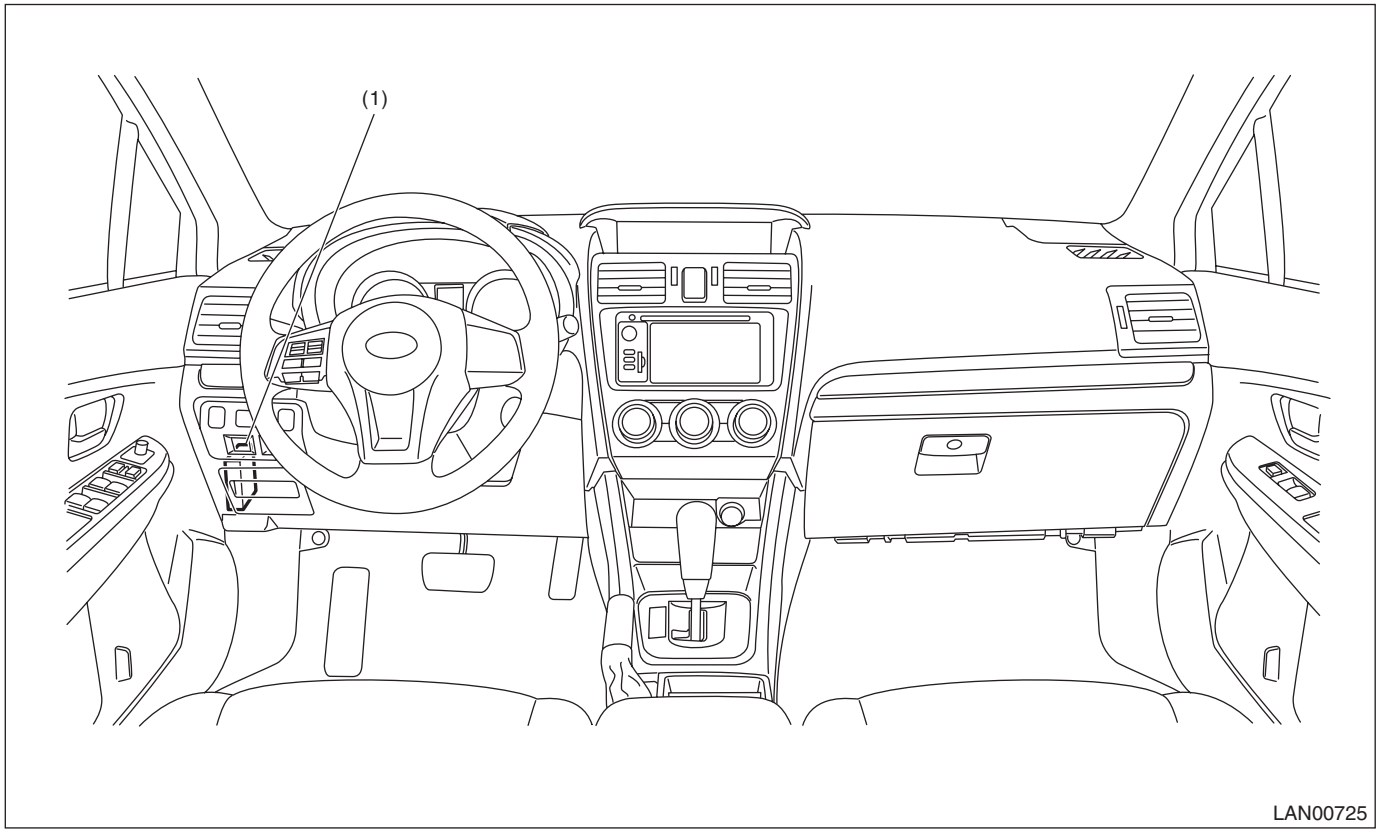
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.

4. Electrical Component Location

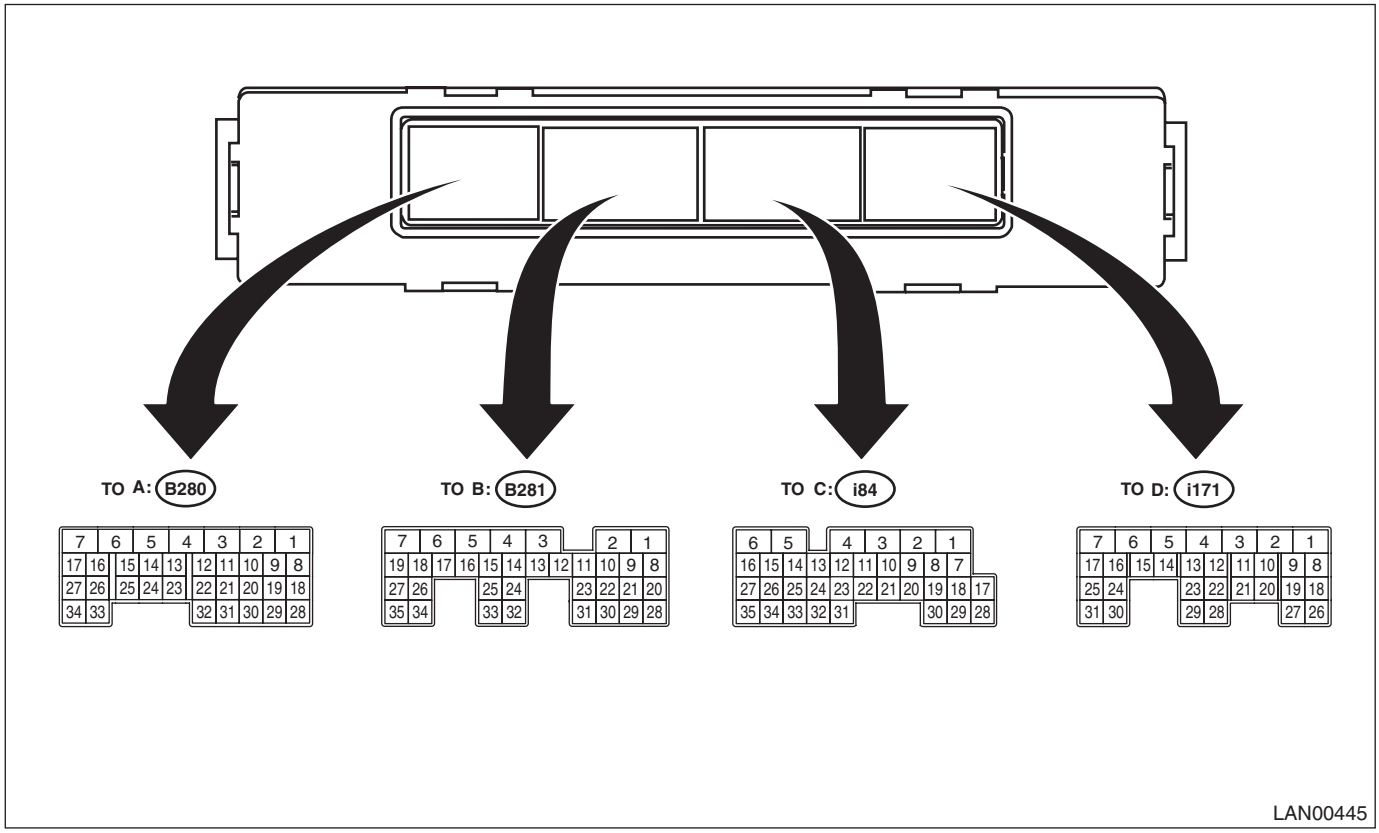
A: LOCATION



(1) Body integrated unit

5. Control Module I/O Signal

A: ELECTRICAL SPECIFICATION



Description	Terminal No.	Signal (V or Ω)	Note
		Ignition switch ON (engine OFF)	
Ignition power supply (rear wiper)	A5 ←→ chassis ground	Less than 1.5 V → 10 — 13 V	Ignition switch OFF → ON
Battery power supply (shift lock/key lock)	B6 ←→ chassis ground	10 — 13 V	Always
Battery power supply (door lock)	D1 ←→ chassis ground	10 — 13 V	Always
Battery power supply (control)	C6 ←→ chassis ground	10 — 13 V	Always
Ground	A1 ←→ chassis ground	Less than 1.5 V	Always
	B31 ←→ chassis ground		
	C1 ←→ chassis ground		
	D29 ←→ chassis ground		
Battery power supply (back-up)	B7 ←→ chassis ground	10 — 13 V	Always
Ignition power supply	B3 ←→ chassis ground	Less than 1.5 V → 10 — 13 V	Ignition switch OFF → ON
ACC power supply	A32 ←→ chassis ground	Less than 1.5 V → 10 — 13 V	Ignition switch OFF → Accessory ON
Key-in switch	A4 ←→ chassis ground	Less than 1.5 V → 10 — 13 V	Key inserted
P range SW	B18 ←→ chassis ground	8 V or more → less than 1.5 V	P range to other than P range
Stop light SW	A10 ←→ chassis ground	Less than 1.5 V → 8 V	Stop light switch OFF → ON
Door SW (driver's)	C14 ←→ chassis ground	8 V or more → less than 1.5 V	Front right door closed → open
Door SW (passenger's)	C13 ←→ chassis ground	8 V or more → less than 1.5 V	Front left door closed → open
Door SW (rear right)	C25 ←→ chassis ground	8 V or more → less than 1.5 V	Rear right door closed → open

Description	Terminal No.	Signal (V or Ω)	Note
		Ignition switch ON (engine OFF)	
Door SW (rear left)	C24 ←→ chassis ground	8 V or more → less than 1.5 V	Rear left door closed → open
Rear gate SW/trunk SW	C33 ←→ chassis ground	8 V or more → less than 1.5 V	Rear gate/trunk closed → open
Opener SW (trunk/rear gate)	C10 ←→ chassis ground	8 V or more → less than 1.5 V	Rear gate/trunk opener switch ON
Manual switch (LOCK)	C9 ←→ chassis ground	8 V or more → less than 1.5 V	Door lock switch ON
Manual switch (UNLOCK)	C20 ←→ chassis ground	8 V or more → less than 1.5 V	Door unlock switch ON
Lighting AUTO	B16 ←→ chassis ground	8 V or more → less than 1.5 V	Switch at AUTO position
Lighting II	A34 ←→ chassis ground	8 V or more → less than 1.5 V	Switch at II position
	B34 ←→ chassis ground		
Lighting I	B17 ←→ chassis ground	8 V or more → less than 1.5 V	Switch at I position
Dimmer passing	B25 ←→ chassis ground	8 V or more → less than 1.5 V	Switch at passing position
Dimmer Hi beam	B15 ←→ chassis ground	8 V or more → less than 1.5 V	Switch at Hi beam position
Front fog light SW	B26 ←→ chassis ground	8 V or more → less than 1.5 V	Front fog light switch ON
Illumination sensor power supply	B1 ←→ A29	Less than 1.5 V → 4.5 V or more	Ignition switch OFF → ON
Illumination sensor signal	A19	0.2 — 4.5 V	Ignition switch OFF → ON
Ground (illumination sensor)	A29 ←→ chassis ground	Less than 1.5 V	Always
Rear wiper SW ON	A12 ←→ chassis ground	8 V or more → less than 1.5 V	Switch at ON position
Rear wiper SW INT	A22 ←→ chassis ground	8 V or more → less than 1.5 V	Switch at INT position
Rear washer SW	A30 ←→ chassis ground	8 V or more → less than 1.5 V	Switch at ON position
Illumination SW (Vi1)	D12 ←→ chassis ground	Approx. 5 V	While clearance light illuminates
Illumination SW (Vi2)	D22 ←→ chassis ground	0.5 — 4.8 V	
Illumination SW (Vi3)	D28 ←→ chassis ground	Less than 1.5 V	Always
Bright SW	C21 ←→ chassis ground	8 V or more → less than 1.5 V	Switch at ON position
Reverse SW (MT)	B12 ←→ chassis ground	Less than 1.5 V → 8 V or more	Reverse SW ON
Impact sensor	A11 ←→ chassis ground	8 V or more	Apply an impact
Hi-speed CAN communication circuit 1 (Hi)	B20	Serial communication	Except for sleep status *1
Hi-speed CAN communication circuit 1 (Lo)	B28		
Hi-speed CAN communication circuit 2 (Hi)	C27	Serial communication	Except for sleep status *1
Hi-speed CAN communication circuit 2 (Lo)	C35		
Immobilizer antenna (B)	B22	Serial communication	Communication with ignition key in progress
Immobilizer antenna (A)	B10		
Immobilizer antenna amplifier GND	B30 ←→ chassis ground	Less than 1.5 V	Always
Immobilizer antenna amplifier power supply	B2 ←→ B30	4.5 — 5.5 V	Always
Security UART	A21	Serial communication	Always
Front wiper return	A2 ←→ chassis ground	8 V	When front wiper is operated
Rear washer switch	A30 ←→ chassis ground	8 V or more → less than 1.5 V	When rear washer switch is ON
Door UNLOCK (driver's seat) output	D4 ← →chassis ground	Less than 0.5 V → 8 V or more	When driver's side door unlock is output

Description	Terminal No.	Signal (V or Ω)	Note
		Ignition switch ON (engine OFF)	
Keyless entry communication line	D11	Serial communication	When door lock/unlock is operated with the keyless transmitter, or when TPMS is operated
Rear defogger switch	C18 ←→ chassis ground	Less than 1.5 V → 8 V or more	When the rear defogger switch is ON
Parking brake switch	C32 ←→ chassis ground	8 V or more → less than 1.5 V	When parking brake is ON
Shift lock solenoid	B5 ←→ chassis ground	Less than 1.5 V → 8 V or more	When shift lock is operating (AT models)
Key actuator	B4 ←→ chassis ground	Less than 1.5 V → 8 V or more	LOCK status ON (AT models)
Rear wiper ON output	A7 ←→ chassis ground	Less than 0.5 V → 8 V or more	Rear wiper operation in progress
Rear wiper return	A6 ←→ chassis ground	Less than 0.5 V → 8 V or more	Rear wiper operation in progress
Door LOCK output	D2 ←→ chassis ground	Less than 0.5 V → 8 V or more	When LOCK signal is output
Door UNLOCK output	D3 ←→ chassis ground	Less than 0.5 V → 8 V or more	When UNLOCK signal is output
Rear gate/trunk UNLOCK output	D7 ←→ chassis ground	Less than 0.5 V → 8 V or more	When UNLOCK signal is output
Lighting relay power supply	A3 ←→ chassis ground	10 — 13 V	ACC or key-in SW ON
	B19 ←→ chassis ground	10 — 13 V	ACC or key-in SW ON
Lighting relay Hi output	A17 ←→ chassis ground	8 V or more → less than 1.0 V	Dimmer SW at Hi position
Lighting relay Lo output	B35 ←→ chassis ground	8 V or more → less than 1.0 V	Lighting II SW at ON position
Lighting Lo relay output 2	A27 ←→ chassis ground	8 V or more → less than 1.0 V	Lighting II SW at ON position
Lighting relay I output	A16 ←→ chassis ground	8 V or more → less than 1.0 V	Lighting I SW at ON position
Front fog light output	A15 ←→ chassis ground	8 V or more → less than 1.0 V	Front fog light SW at ON position
DRL cancel output	D19 ←→ chassis ground	8 V or more → less than 1.0 V	Headlight switch ON or Hi beam ON, passing switch ON
Illumination output	B8	Pulse output	Illumination ON
	C16	Pulse output	Illumination ON
Key ring illumination	A25	Pulse output	Illumination ON
Room light output	C4	Pulse output	Room light ON (doors interlocked)
Map light output	D8	Pulse output	Map light ON (keyless answer-back, etc.)
Luggage/trunk light output	C3	Pulse output	Luggage/trunk at open state
Rear defogger relay output	A26 ←→ chassis ground	8 V or more → less than 1.0 V	Rear defogger SW ON
Wiper deicer relay output	D9 ←→ chassis ground	8 V or more → less than 1.0 V	Wiper deicer SW ON
Turn/hazard output	D18 ←→ chassis ground	8 V or more → less than 1.0 V	When answer-back is output
Security horn output	A24 ←→ chassis ground	8 V or more → less than 1.0 V	When security is operating
Security light	D26	Pulse control	When security light is illuminating
Answer-back buzzer output	A20 ←→ chassis ground	8 V or more → less than 1.0 V	When answer-back operates
Immobilizer communication	A31	Serial communication	

*1: For CAN sleep state, hold on for approx. one minute with ignition OFF and the doors, trunk, and rear gate all closed.

6. Read Diagnostic Trouble Code (DTC)

A: OPERATION

For details concerning the work procedure, refer to the “PC application help for Subaru Select Monitor”.

NOTE:
For details concerning DTC, refer to List of Diagnostic Trouble Code (DTC). <Ref. to BC(diag)-21, List of Diagnostic Trouble Code (DTC).>

7. Clear Memory Mode

A: OPERATION

For details concerning the work procedure, refer to the “PC application help for Subaru Select Monitor”.

8. Read Current Data

A: OPERATION

For details concerning the work procedure, refer to the “PC application help for Subaru Select Monitor”.

B: LIST

Items to be displayed	Unit of measure	Remarks	Note
BATT voltage (control)	10 — 15 V	Body integrated unit input value	Always
BATT voltage (BACKUP)	10 — 15 V	Body integrated unit input value	Always
IG power supply voltage	10 — 15 V	Body integrated unit input value	Ignition switch ON
ACC voltage	10 — 15 V	Body integrated unit input value	Ignition switch ACC
Illumination VR Voltage	0 — 5 V	Body integrated unit input value	Input value from illumination volume
Illumi. output d-ratio	0 — 100%	Body integrated unit output value	Small light ON Illumination volume is other than bright.
number of regist.	0 — 4	Number of keyless key registered	
Front Wheel Speed	km/h	CAN data input value	Reception from VDC module
Fuel consumption	cc/s	CAN data input value	Reception from ECM
Coolant Temperature	–40 — 215°C	CAN data input value	Reception from ECM
Shift Position	1 — 3, D — S, D, N, R, P	CAN data input value	Reception from TCM
Buzzer beeping request	Status for ‘beeping deactivated’ Reverse warning Key warning buzzer Light Remained Buzzer Customize 1 Customize 2 Registration completed 1 Registration completed 2 Registered Registration NG	CAN data output value	Reception from body integrated unit
Destination	JPN U4, U5, U6 C0 EC, EA, E2, EL K4, C4, C6 KS EK ER, EN KA, KC EH C6	CAN data input value	—
Illumination Sensor Output	0 — 5 V	CAN data input value	—
Off delay time	OFF 10 Sec 20 Sec 30 Sec	Body integrated unit setting value	Customize setting
Auto Light Sensitivity Adjustment	Dull Normal Sensitive Very sensitive	Body integrated unit setting value	Customize setting
key-lock warning SW	ON/OFF	Body integrated unit input value	ON when ignition key inserted
Stop light SW	ON/OFF	Body integrated unit input value	ON when brake pedal is depressed

Items to be displayed	Unit of measure	Remarks	Note
Front fog lamp SW input	ON/OFF	Body integrated unit input value	When front fog light switch is ON
Driver's door SW input	ON/OFF	Body integrated unit input value	ON when driver's door is open
P-door SW input	ON/OFF	Body integrated unit input value	ON when passenger's door is open
Rear right door SW input	ON/OFF	Body integrated unit input value	ON when rear right door is open
Rear left door SW input	ON/OFF	Body integrated unit input value	ON when rear left door is open
R Gate SW input	ON/OFF	Body integrated unit input value	ON when rear gate/trunk open
Manual lock SW input	ON/OFF	Body integrated unit input value	Manual lock switch ON
Manual unlock SW input	ON/OFF	Body integrated unit input value	Manual unlock switch ON
Bright SW input	ON/OFF	Body integrated unit input value	Bright switch ON
P SW	ON/OFF	Body integrated unit input value	ON when shift range is in parking Shift lever P switch signal
MT Reverse Switch	ON/OFF	Body integrated unit input value	Reverse switch ON (For MT vehicle only)
R wiper ON SW input	ON/OFF	Body integrated unit input value	Rear wiper switch ON
R wiper INT SW input	ON/OFF	Body integrated unit input value	Rear wiper switch (INT ON)
R washer SW input	ON/OFF	Body integrated unit input value	Rear washer switch ON
Rr Defogger SW	ON/OFF	Body integrated unit input value	Rear defogger switch ON
Fr wiper input	ON/OFF	Body integrated unit input value	ON when front wiper is operating
Parking Brake Switch Input	ON/OFF	Body integrated unit input value	Parking brake ON
Driver's seat lock status SW input	ON/OFF	Body integrated unit input value	Displays latch state, ON when locked
Passenger's seat lock status SW input	ON/OFF	Body integrated unit input value	Displays latch state, ON when locked
R gate lock status SW input	ON/OFF	Body integrated unit input value	Displays latch state, ON when locked
R Gate Release SW input	ON/OFF	Body integrated unit input value	Rear gate release switch ON
Rr Defogger output	ON/OFF	Body integrated unit output value	ON when rear defogger relay is operating
lock actuat. LOCK output	ON/OFF	Body integrated unit output value	ON when LOCK signal is output
All seat UNLOCK output	ON/OFF	Body integrated unit output value	ON when unlock signal is output
D-seat UNLOCK output	ON/OFF	Body integrated unit output value	ON when unlock signal is output
R gate/trunk UNLK output	ON/OFF	Body integrated unit output value	ON when rear gate/trunk unlock signal is output
R wiper output	ON/OFF	Body integrated unit output value	ON when rear wiper motor is operating
Shift Lock Solenoid	ON/OFF	Body integrated unit output value	ON when shift lock solenoid is operating (only AT)
Key lock solenoid output	lock/unlock	Body integrated unit output value	LOCK when the key is locked
wiper deicer output	ON/OFF	Body integrated unit output value	ON when wiper deicer relay is operating
Hazard Output	ON/OFF	Body integrated unit output value	ON when answer-back signal is received or when hazard is operating
Keyless Buzzer Output	ON/OFF	Body integrated unit output value	ON when lock/unlock signal is received
Horn Output	ON/OFF	Body integrated unit output value	ON when security warning is operating
Illumination lamp O/P	ON/OFF	Body integrated unit output value	ON when illumination is illuminated
Room lamp output	ON/OFF	Body integrated unit output value	ON when keyless lock/unlock signal is received, or when opening or closing the door
key illumi. lamp o/p	ON/OFF	Body integrated unit output value	ON when key illumination light is illuminated
Immobilizer lamp output	ON/OFF	Body integrated unit output value	ON when immobilizer pilot light blinks
Keyless operation 1	Regist./Normal	Body integrated unit input value	When keyless registration connector connected
Keyless operation 2	Deletion/Normal	Body integrated unit input value	When keyless registration is deleted

Items to be displayed	Unit of measure	Remarks	Note
Small Light SW	ON/OFF	Body integrated unit input value	ON when small light is illuminated
Headlamp	ON/OFF	Body integrated unit input value	ON when headlight Lo is illuminated
High Beam	ON/OFF	Body integrated unit input value	ON when headlight Hi is illuminated
Blower fan information	ON/OFF	CAN data input value	Reception from ECM
Lighting I Switch Input	ON/OFF	Body integrated unit input value	Small light switch ON
Lighting II Switch Input	ON/OFF	Body integrated unit input value	Headlight switch ON
Lighting AUTO input	ON/OFF	Body integrated unit input value	Headlight AUTO switch ON
Dimmer Hi Switch Input	ON/OFF	Body integrated unit input value	Dimmer Hi switch ON
Dimmer Pass Switch Input	ON/OFF	Body integrated unit input value	Dimmer Pass switch ON
Illumination sensor flag	ON/OFF	Body integrated unit setting value	Fixed depending on the part number
Lighting I Lamp Output	ON/OFF	Relay drive	ON when small light is illuminated
Lighting II Lamp Output	ON/OFF	Relay drive	ON when headlight is illuminated
Lighting Hi Lamp Output	ON/OFF	Relay drive	ON when headlight Hi is illuminated
Front Fog Lamp Output	ON/OFF	Relay drive	When front fog light relay ON output
DRL Cancel Output	ON/OFF	Relay drive	When DRL cancel relay ON output
Power Supply Tr	ON/OFF	Inner Tr drive	Headlight auxiliary power supply ON
Map lamp output	ON/OFF	Body integrated unit output value	ON when map light is illuminated
Luggage/Trunk lamp output	ON/OFF	Body integrated unit output value	ON when luggage/trunk light is illuminated
Rr defogger op. mode	Continuous/Normal	Body integrated unit setting value	Customize setting
Security Alarm Setup	ON/OFF	Body integrated unit setting value	Customize setting
Impact Sensor Setup	ON/OFF	Body integrated unit setting value	Customize setting
Alarm delay setup	ON/OFF	Body integrated unit setting value	Customize setting
Lockout prevention	ON/OFF	Body integrated unit setting value	Customize setting
Impact sensor	ON/OFF	Body integrated unit setting value	Customize setting
Buzzer sounding setting	ON/OFF	Body integrated unit setting value	Customize setting
Abnormal warning lamp flashing setting	ON/OFF	Body integrated unit setting value	Customize setting
Ans.-back Buzzer	ON/OFF	Body integrated unit setting value	Customize setting
Passive Alarm	ON/OFF	Body integrated unit setting value	Customize setting
Door open warning	ON/OFF	Body integrated unit setting value	Customize setting
Dome Light Alarm Setting	ON/OFF	Body integrated unit setting value	Customize setting
Auto A/C ECU Setting	ON/OFF	Body integrated unit setting value	Customize setting
wiperdeicer	ON/OFF	Body integrated unit setting value	Customize setting
Illumination Control On/Off	ON/OFF	Body integrated unit setting value	Customize setting
Sedan/Wagon Setting	Sedan/Wagon	Body integrated unit setting value	Customize setting
MT/AT Setting	MT/AT	Body integrated unit setting value	Customize setting
6MT Setting	6MT/Other than 6MT	Body integrated unit setting value	Customize setting
Destination Setting	JPN KA, KC KS For Europe LHD other than KS C0, C5 U4, U5, U6, C6 EK, ER	Body integrated unit setting value	Displays body integrated unit customizing
Factory initial setting	Market/Factory	Body integrated unit setting value	Displays body integrated unit customizing

NOTE:
For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

9. User Customizing

A: OPERATION

1) On «Main Menu» display, select {Each System Check}.
2) On «System Selection Menu» display, select {Integ. unit mode}.
3) On «Integ. unit mode failure diag.» display, select {Work Support}.
4) On «Work Support» display, select {Unit customizing}.
5) Change the setting with UP/DOWN key and set with the [OK] key.

List of User Customizing item

Data	Initial setting value	Customize setting	Remarks
Off delay time	30 Sec	OFF	Room light off delay time can be selected.
		10 Sec	
		20 Sec	
		30 Sec	
Auto Light Sensitivity Adjustment	Normal	Dull	Slow response
		Normal	Standard
		Sensitive	Quick response
		Very sensitive	Fairly quick response
Rr defogger op. mode	Normal	Normal	Automatically stops in 15 minutes after switch is turned to ON.
		Continuous	Repeats active condition for 15 minutes and inactive condition for 2 minutes until switch is turned to OFF.
Security Alarm Setup	ON	ON	Security alarm (hazard, horn or siren) in active condition
		OFF	Security alarm in inactive condition
Impact Sensor Setup	OFF	ON	Workable when Impact Sensor Setup is set to “ON”. Impact sensor function becomes activated.
		OFF	Impact sensor in inactive condition (Set to “OFF” in models without sensors.)
Alarm delay setup	ON		After the keyless lock operation, the alarm monitor starts after the following delay time has passed.
		ON	Delay time is 30 seconds.
		OFF	Delay time is 0 second.
Lockout prevention	ON	ON	key lockout prevention function is activated. (The function does not operate if safety knob is locked by hand.)
		OFF	Key lockout prevention function is deactivated.
Impact sensor (OP)	OFF	ON	Vehicle is controlled in impact sensor equipped mode. (Make sure to set to “OFF” for models without the impact sensor. When “ON”, hazard, horn or siren become activated by keyless lock (alarm monitor start).)
		OFF	Vehicle is controlled in no impact sensor mode.
Buzzer sounding setting	ON	ON	When lock/unlock is selected by keyless entry system operation, buzzer operates.
		OFF	When lock/unlock is selected by keyless entry system operation, buzzer does not operate.
Abnormal warning lamp flashing setting	ON	ON	When lock/unlock is selected by keyless entry system operation, hazard blinks.
		OFF	When lock/unlock is selected by keyless entry system operation, hazard does not interlock.
Ans.-back Buzzer	ON	ON	
		OFF	
Passive Alarm	OFF	ON	
		OFF	

Data	Initial setting value	Customize setting	Remarks
Door open warning	ON	ON	
		OFF	
Dome Light Alarm Setting	OFF	ON	Room light illuminates interlocking with alarm.
		OFF	Room light does not illuminate interlocking with alarm.
Auto A/C ECU Setting	—	ON	Diagnoses with auto A/C CM.
		OFF	Diagnoses without auto A/C CM.
wiperdeicer	—	ON	Wiper deicer control is performed.
		OFF	Wiper deicer control is not performed.
Illumination Control On/Off	ON	ON	
		OFF	
Sedan/Wagon Setting	—	Sedan	Body control is performed by Sedan.
		Wagon	Body control is performed by Wagon.
MT/AT Setting	—	MT	Body control is performed by MT.
		AT	Body control is performed by AT.
6MT Setting	—	6MT	Body control is performed by 6MT.
		Other than 6MT	Body control is performed by other than 6MT.
Factory initial setting	Market	Market	Customize setting is reset when mode is switched from Market to Factory.
		Factory	

6) After setting, make sure that the setting changed in the {Current Data Display & Save} is same as vehicle equipment.

CAUTION:
- **The above settings must match the actual vehicle equipment.**
- **Do not change settings except for setting above while setting the functions.**
- **Be sure not to change Factory initial setting except when installing a new body integrated unit.**

NOTE:
For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

10.Registration Body Integrated Unit

A: OPERATION

1. CONFIRM CURRENT SETTING

1) On «Main Menu» display, select {Others}.
2) On «Other Menu» display, select {Customized Setting}.
3) Save the setting.

Required items for new registration. (Except for system not equipped)

Item	Item to confirm				Remarks
number of regist.	1	2	3	4	Number of registered ID
Off delay time	OFF	10 Sec	20 Sec	30 Sec	Setting for lighting off time
Auto Light Sensitivity Adjustment	Dull	Normal (Standard)	Sensitive	Very sensitive	1st (slow) — 4th (fairly quick)
Rr defogger op. mode	Normal		Continuous		
Security Alarm Setup	ON		OFF		
Impact Sensor Setup	ON		OFF		Option setting
Alarm delay setup	ON		OFF		
Lockout prevention	ON		OFF		
Impact sensor	ON		OFF		Option setting
Buzzer sounding setting	ON		OFF		
Abnormal warning lamp flashing setting	ON		OFF		
Passive Alarm	ON		OFF		
Door open warning	ON		OFF		
Dome Light Alarm Setting	ON		OFF		
Auto A/C ECU Setting	ON		OFF		
wiperdeicer	ON		OFF		Option setting
Illumination Control On/Off	ON		OFF		
Sedan/Wagon Setting	Wagon		Sedan		
MT/AT Setting	MT		AT		
6MT Setting	6MT		Other than 6MT		
Factory initial setting	Factory		Market		Do not change to factory mode.

2. REGISTRATION BODY INTEGRATED UNIT (FUNCTION SETTING)

CAUTION:
For the body integrated unit, function selection is available to control the entire vehicle systems. It is possible to control the original functions of vehicle when registrations of body integrated unit and function setting are corresponded to vehicle equipment.
If registrations and function setting are different from vehicle equipment, vehicle system does not operate normally and diagnosis cannot be performed correctly. Pay attention to following item.
- **Be sure to correspond registrations, or User Customizing settings to vehicle equipment.**
- **Do not change the settings of vehicle improperly.**
- **Make sure that the key illumination does not blink with ignition switch ON, or that the body integrated unit registration item, "Factory initial setting", is set as "Market". If "Factory initial setting" is set to "Factory", key illumination blinks when ignition key is turned ON, to notify that the settings are unconfirmed.**
- **Key illumination does not blink with ignition switch turned to ON and go off with door closed.**
- **Be sure to register immobilizer if body integrated unit is replaced with a new part.**
- **Make a registration of immobilizer when the parts related to immobilizer have been replaced. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".**

1) On «Main Menu» display, select {Each System Check}.
2) On «System Selection Menu» display, select {Integ. unit mode}.
3) Click the [OK] button after the control module name (integrated unit) is displayed.
4) On «Integ. unit mode failure diag.» display, select {Work Support}.
5) On «Work Support» display, select {Unit customizing}.

NOTE:
For the vehicle requiring the destination setting, if the destination setting is not finished, display can not be shifted into customizing screen. <Ref. to BC(diag)-18, DESTINATION SETTING, OPERATION, Registration Body Integrated Unit.>
6) Change the setting to the contents saved at confirmation of current setting.

CAUTION:
- **To perform normal operation of vehicle and diagnosis, the above settings must match the actual vehicle equipment.**
- **When the body integrated unit is new or in Factory mode, the key illumination blinks, and user customizing is incomplete. Check the user customizing settings.**
- **Be sure not to change Factory initial setting except when installing a new body integrated unit.**

NOTE:
"Factory" mode:
- Body integrated unit has not been set yet. It can be recognized by key illumination blinking with ignition switch turned to ON.
- All replacement body integrated units are set to "Factory" mode. When replacing a body integrated unit, be sure to perform the registration operation.

"Market" mode:
- Each settings have been set. It can be recognized by key ring illumination coming on in concocting with room light and going off with ignition switch turned to ON.

7) Perform the Factory initial setting. On the «Unit customizing» display screen of Subaru Select Monitor, select the {Factory initial setting}.
8) Change the mode from Factory to Market.
9) Turn the ignition switch to OFF to settle the setting.
10) Change the Subaru Select Monitor system selection to «Immobilizer» to register the immobilizer key.
11) Perform the registration according to the procedures of the "IMMOBILIZER REGISTRATION OPERATION MANUAL".
12) When key registration is completed, "Do you want to register remote engine start?" is displayed. Perform registration only for equipped models.
13) Perform the User Customizing. <Ref. to BC(diag)-14, OPERATION, User Customizing.>

NOTE:
For detailed operation procedures, refer to "PC application help for Subaru Select Monitor".

3. DESTINATION SETTING

NOTE:
For the vehicle requiring the destination setting, if the destination setting is not finished, display can not be shifted into customizing screen.

	Step	Check	Yes	No
1	**CONFIRM CURRENT SETTING.** Always perform confirmation of current setting before replacing the module. Record the contents of the “Destination Setting”. NOTE: Refer to the “Read Current Data” and “CONFIRMATION OF CURRENT SETTING” to confirm the current setting. <Ref. to BC(diag)-16, CONFIRM CURRENT SETTING, OPERATION, Registration Body Integrated Unit.> <Ref. to BC(diag)-11, OPERATION, Read Current Data.>	Is the current setting recorded?	Go to step **2**.	Confirm the current setting. Go to step **1**.
2	**CONFIRM DESTINATION SETTING.** 1) Connect the Subaru Select Monitor, and run the application. 2) On «Main Menu» display, select {Each System Check}. 3) On the «System Selection Menu» display, select {Integ. unit mode}. 4) On «Integ. unit mode» display, select {Work Support}. 5) On «Work Support» display, select {Unit customizing}. 6) The vehicle destination screen is displayed.	Is the vehicle destination setting screen displayed?	Go to step **3**.	Go to step **4**.
3	**CONFIRM DESTINATION SETTING.** Confirm the screen displayed on Subaru Select Monitor and the actual vehicle destination.	Is it necessary to change the destination setting?	Select [Yes]. Go to step **4**.	Select [No]. Go to step **5**.
4	**ENTER DESTINATION CODE.** Enter the appropriate code in the screen. JPN: JP00 KA, KC: KA00 KS: KS00 U4, U5, U6, C6 and C0, C5 (with keyless access): U400 C0, C5 (without keyless access): C000 EK, ER: EK00 Except above: EC00	Is the appropriate code entered?	Select [OK]. Go to step **5**.	Enter the destination code. Go to step **5**.
5	**REGISTER VEHICLE EQUIPMENT.** Customizing screen is displayed. NOTE: Match the each item setting of body integrated unit registration item list with the vehicle equipment.	Do all setting contents match with the vehicle equipment specification?	Go to step **6**.	Change the items until each content setting match with the vehicle equipment specification. Go to step **6**.

	Step	Check	Yes	No
6	**CONFIRM MARKET MODE.** 1) Customizing screen, select the {Factory initial setting} to change the setting from “Factory” mode to “Market” mode. 2) Turn the ignition switch to OFF. NOTE: When the setting is changed from “Factory” mode to “Market” mode, turning the ignition switch from ON → OFF confirms the setting. 3) Turn the ignition switch to ON, and check the contents of settings.	Is the mode changed to “Market” mode?	Go to step **7**.	Perform the destination setting from the first step. Go to step **1**.
7	**CONFIRM MARKET MODE.** Check the following. Make sure that the “Destination Setting” in the current data display is the same as the one you confirmed in step 1.	Is the display the same as indicated?	Registration of body integrated unit is finished.	It is possible that harness malfunction may occur. Perform the diagnosis.

11.Function Check

A: OPERATION

NOTE:
In order to check the body integrated unit function, inspect the body integrated unit and actuator using Subaru Select Monitor without operating switches.
1) On «Main Menu» display, select {Each System Check}.
2) On «System Selection Menu» display, select {Integ. unit mode}.
3) On «Integ. unit mode failure diag.» display, select {Work Support}.
4) On «Work Support» display, select {Active Test}.
5) Select an item to be operated on «Active Test» display, and press the [OK] button.
6) Pressing [Next] starts, [End] cancels the operation and [OK] returns to the System Operation Check Mode display screen.

NOTE:
• If not equipped (based on area or condition), process will not go on.
• For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

12.List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Item	Content of diagnosis	Note
None	Communication for Initializing Impossible	Subaru Select Monitor communication is open or shorted.	<Ref. to LAN(diag)-9, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Subaru Select Monitor.>
B1100	Integ. Unit System Error	Body integrated unit internal error	<Ref. to BC(diag)-23, DTC B1100 INTEG. UNIT SYSTEM ERROR, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1101	BATT P/Supply Malfunction Cont	Voltage malfunction caused by poor contact of battery power supply control circuits	<Ref. to BC(diag)-24, DTC B1101 BATT P/SUPPLY MALFUNCTION CONT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1102	BATT P/Supply Malfunction Backup	Voltage malfunction caused by poor contact of battery power supply backup circuits	<Ref. to BC(diag)-26, DTC B1102 BATT P/SUPPLY MALFUNCTION BACKUP, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1103	Ignition Power Failure	Voltage malfunction caused by poor contact of IGN power supply circuits	<Ref. to BC(diag)-28, DTC B1103 IGNITION POWER FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1104	ACC Power Failure	Voltage malfunction caused by poor contact of ACC power supply circuits	<Ref. to BC(diag)-30, DTC B1104 ACC POWER FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1105	Key Interlock Circuit Abnormal	GND-output short of key interlock circuit	<Ref. to BC(diag)-32, DTC B1105 KEY INTERLOCK CIRCUIT ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1106	Shift Lock Circuit Failure	Voltage malfunction caused by poor contact of shift lock circuits	<Ref. to BC(diag)-34, DTC B1106 SHIFT LOCK CIRCUIT FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1401	M Collation NG	Malfunction related immobilizer	<Ref. to BC(diag)-36, DTC B1401 M COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1402	Immobilizer Key Collation NG	Malfunction related immobilizer	<Ref. to BC(diag)-36, DTC B1402 IMMOBILIZER KEY COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1405	SCU Collation NG	Malfunction related immobilizer	<Ref. to BC(diag)-36, DTC B1405 SCU COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1406	SCU_EEPROM_NG	Malfunction of security control module	<Ref. to BC(diag)-36, DTC B1406 SCU_EEPROM_NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1407	M Communication Abnormal	Communication failure between body integrated unit and combination meter	<Ref. to BC(diag)-36, DTC B1407 M COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1408	Meter EEPROM Abnormal	Combination meter malfunction	<Ref. to BC(diag)-36, DTC B1408 METER EEPROM ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1409	SCU Communication Abnormal	Communication failure between body integrated unit and security control module	<Ref. to BC(diag)-36, DTC B1409 SCU COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1410	Transponder Communication Abnormal	Communication failure between key and body integrated unit	<Ref. to BC(diag)-36, DTC B1410 TRANSPONDER COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

DTC	Item	Content of diagnosis	Note
B1411	Immobilizer Antenna Abnormal	Faulty antenna	<Ref. to BC(diag)-36, DTC B1411 IMMOBILIZER ANTENNA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1500	Keyless UART Com. Malfunction	Open or short circuit in keyless UART circuit	<Ref. to BC(diag)-37, DTC B1500 KEYLESS UART COM. MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

13.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC B1100 INTEG. UNIT SYSTEM ERROR

DTC DETECTING CONDITION:
System error in body integrated unit
TROUBLE SYMPTOM:
LAN communication immobilizer function may not be executed normally.

	Step	Check	Yes	No
1	**CHECK DTC.** Check DTC indicated by body integrated unit.	Is B1100 current malfunction?	Go to step **2**.	Temporary EEPROM access error occurred.
2	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector. 3) Connect the disconnected connectors. 4) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1100 current malfunction?	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>	Temporary EEPROM access error occurred.

B: DTC B1101 BATT P/SUPPLY MALFUNCTION CONT

DTC DETECTING CONDITION:

- Voltage malfunction caused by poor contact of battery power supply control circuit
- Battery voltage of body integrated unit is not within the 8.5 — 16.5 V range.

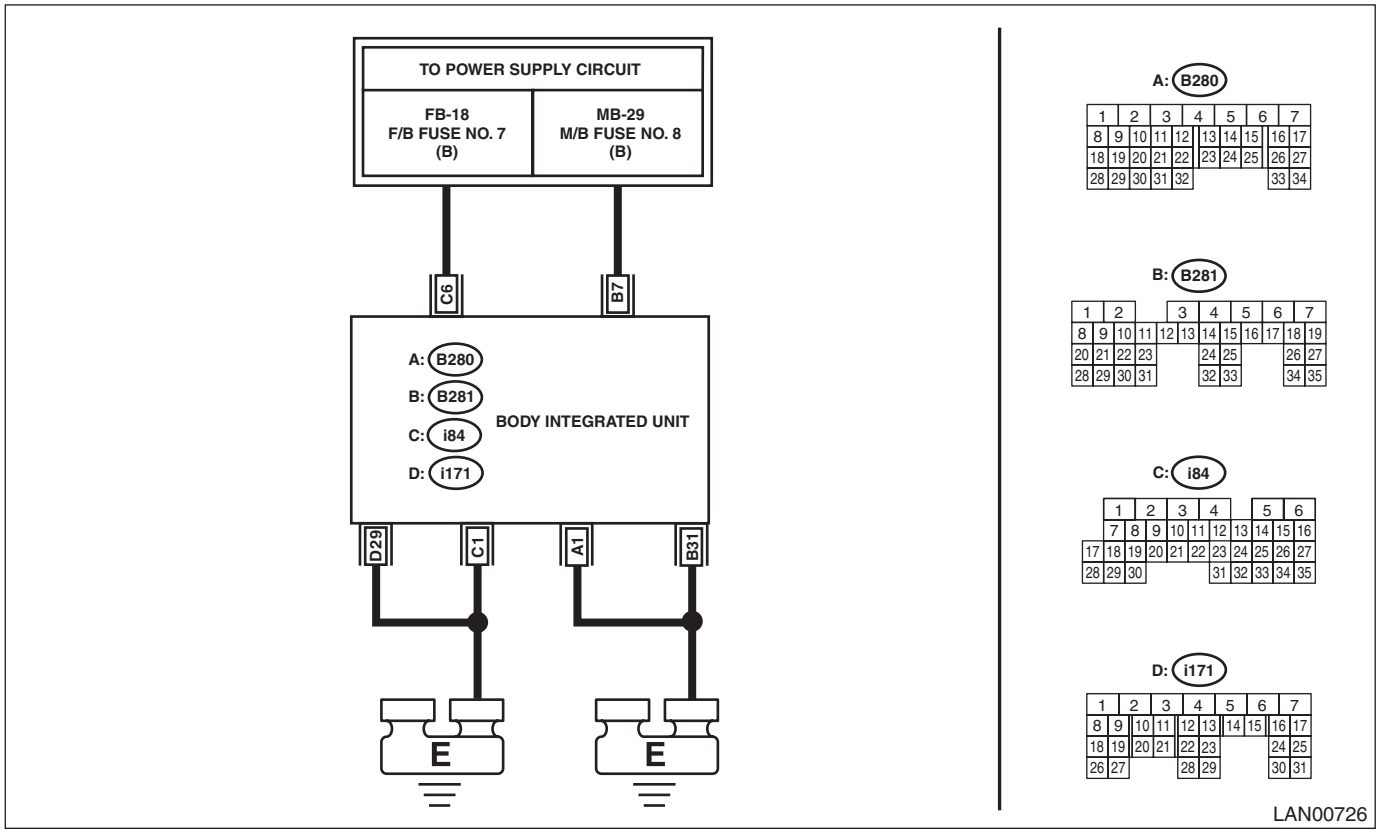
TROUBLE SYMPTOM:

Functions of body integrated unit stop.

NOTE:

When B1102 BATT p/supply (backup) malfunction is output at the same time, all the function of body integrated unit may not operate.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1101 current malfunction?	Go to step **2**.	Go to step **5**.
2	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect and then connect the body integrated unit connector. 3) Wait approx. 2 minutes. 4) Turn the ignition switch to ON. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1101 current malfunction?	Go to step **3**.	Go to step **5**.
3	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Check the fuse.	Is the fuse OK?	Go to step **4**.	Replace the defective fuse.

	Step	Check	Yes	No
4	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i84) No. 6 (+) — Chassis ground (–):***	Is the voltage 8.5 — 16.5 V?	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>	Repair the harness between body integrated unit and fuse.
5	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

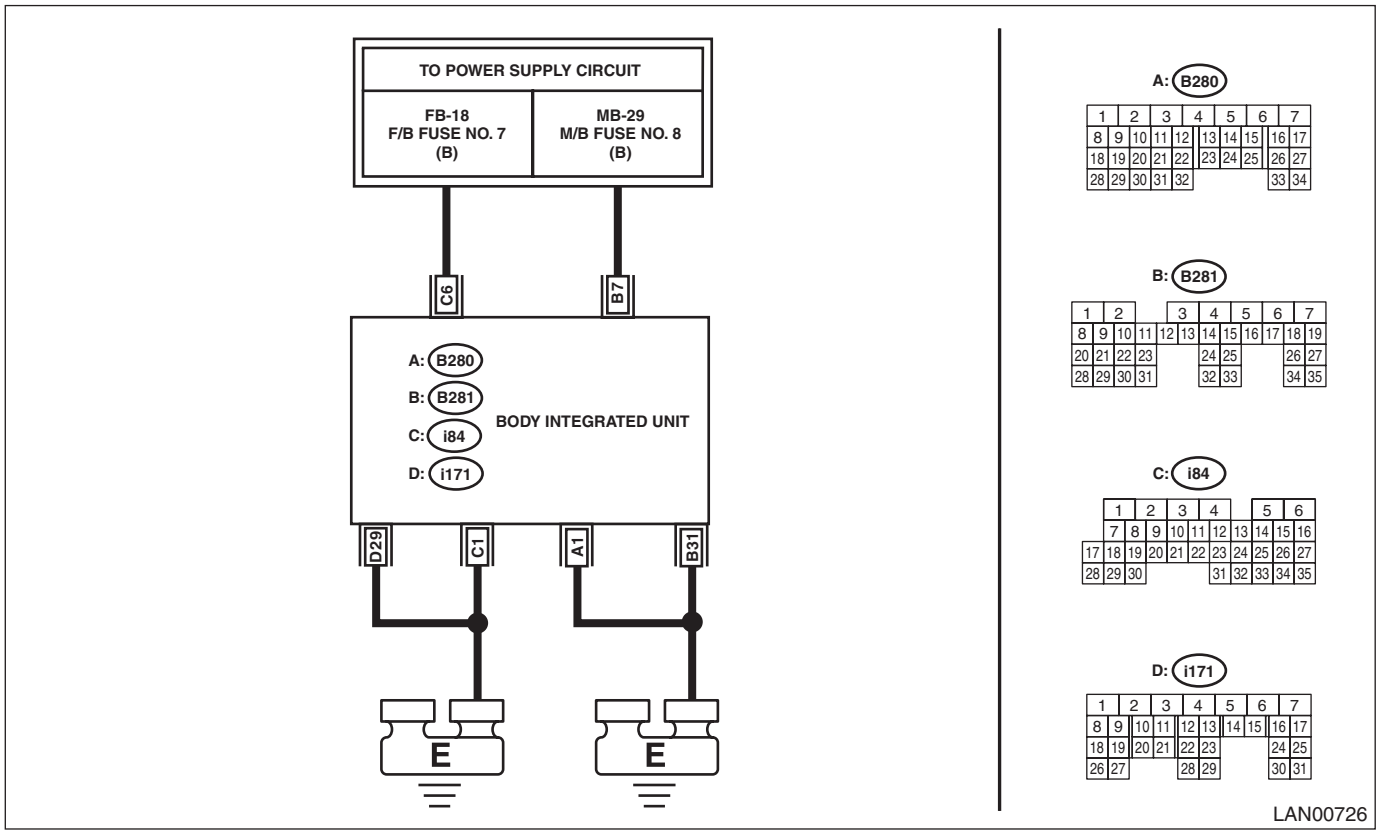
C: DTC B1102 BATT P/SUPPLY MALFUNCTION BACKUP

DTC DETECTING CONDITION:
Voltage malfunction caused by poor contact of battery power supply backup circuits

TROUBLE SYMPTOM:
Illuminations for the keyless entry, map light, luggage light, trunk light, room light, and ignition switch do not turn on.

NOTE:
When B1101 BATT p/supply (cont.) malfunction are output at the same time, all function of body integrated unit may not operate.

WIRING DIAGRAM:

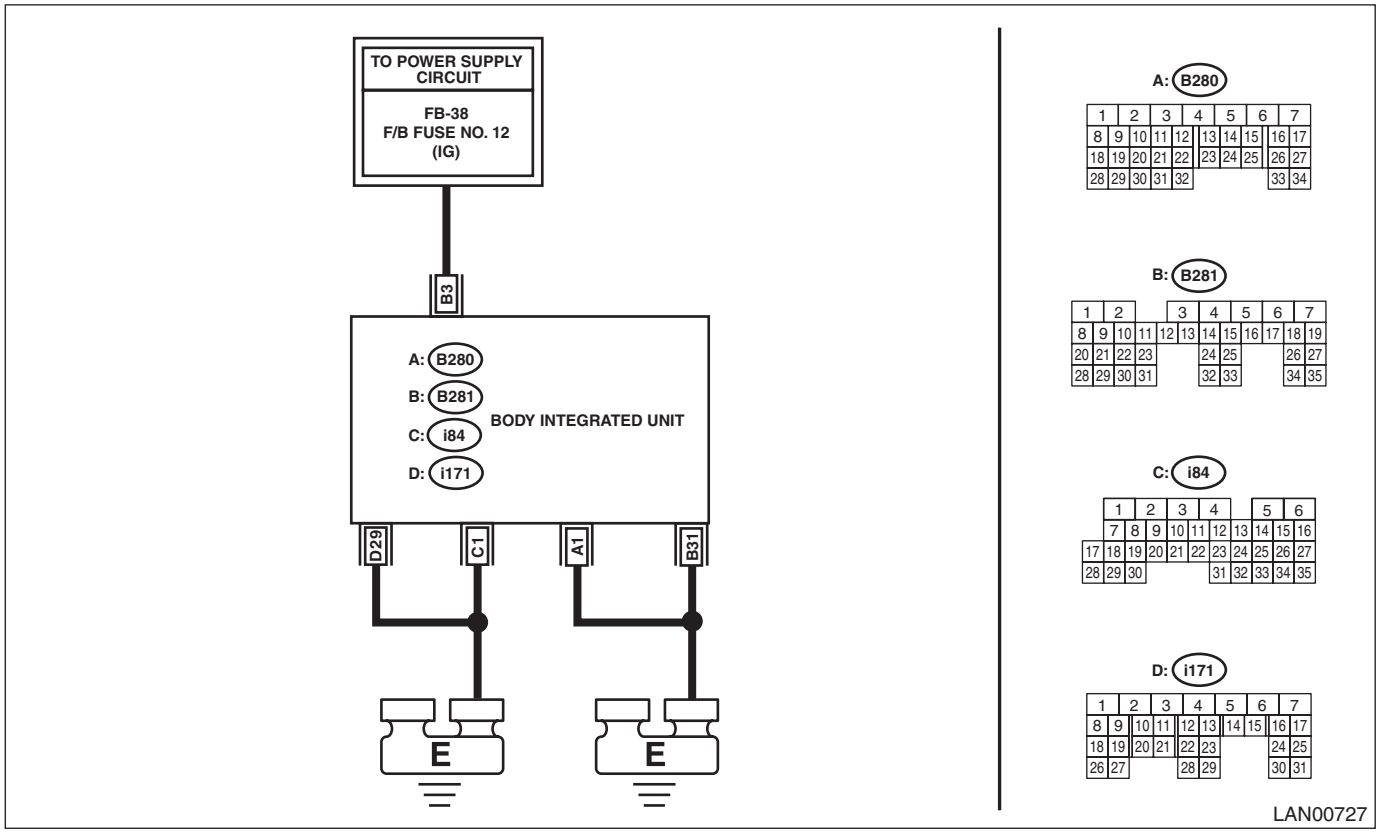


Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1102 current malfunction?	Go to step **2**.	Go to step **5**.
2	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect and then connect the body integrated unit connector. 3) Wait approx. 2 minutes. 4) Turn the ignition switch to ON. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1102 current malfunction?	Go to step **3**.	Go to step **5**.
3	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Check the fuse.	Is the fuse OK?	Go to step **4**.	Replace the defective fuse.

	Step	Check	Yes	No
4	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B281) No. 7 (+) — Chassis ground (–):***	Is the voltage 8.5 — 16.5 V?	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>	Repair the harness between body integrated unit and fuse.
5	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

D: DTC B1103 IGNITION POWER FAILURE

DTC DETECTING CONDITION:
Voltage malfunction caused by poor contact of IGN power supply circuits
TROUBLE SYMPTOM:
Symptoms such as shift lock or wiper not operating may occur.
WIRING DIAGRAM:

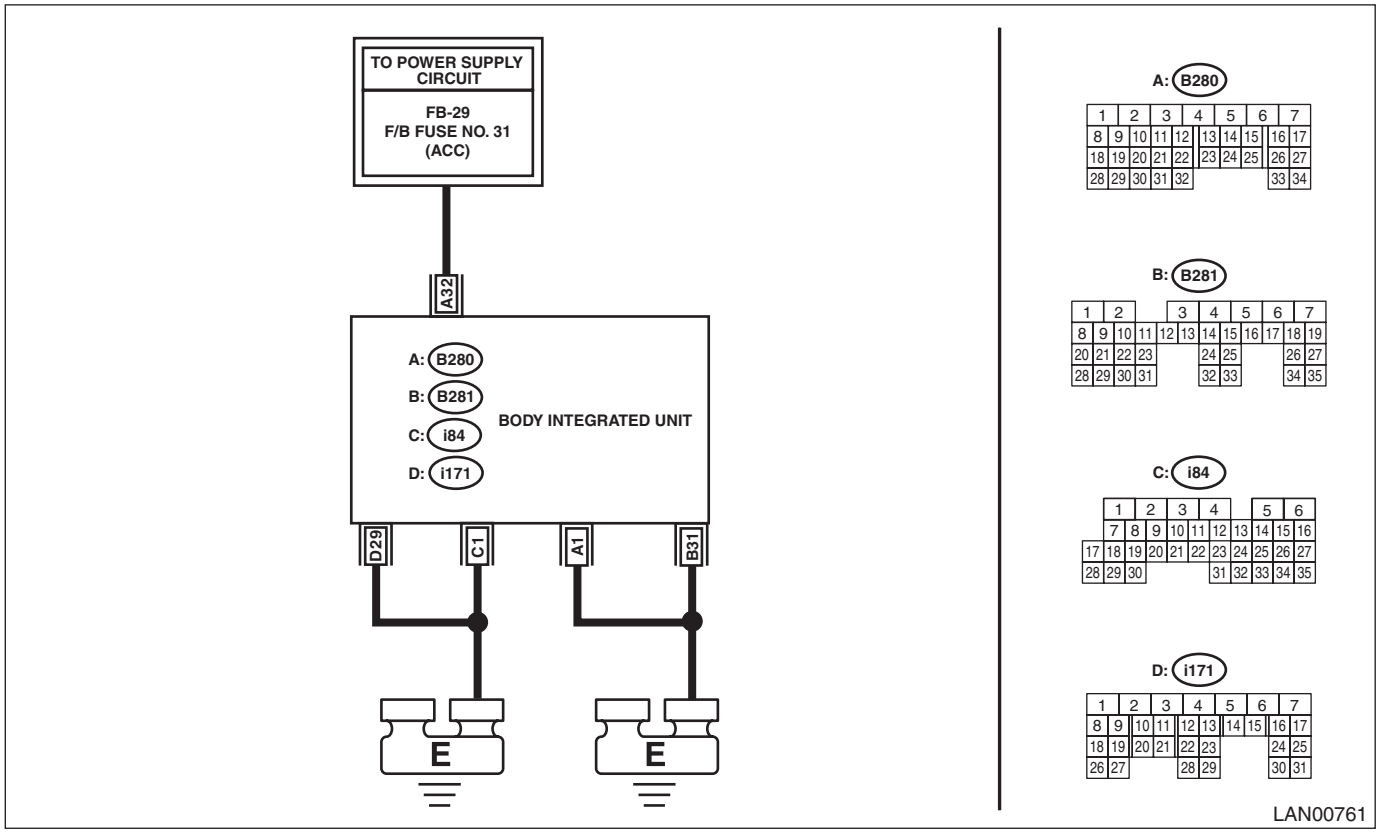


Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1103 current malfunction?	Go to step **2**.	Go to step **5**.
2	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect and then connect the body integrated unit connector. 3) Wait approx. 2 minutes. 4) Turn the ignition switch to ON. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1103 current malfunction?	Go to step **3**.	Go to step **5**.
3	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Check the fuse.	Is the fuse OK?	Go to step **4**.	Replace the defective fuse.
4	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B281) No. 3 (+) — Chassis ground (–):***	Is the voltage 8.5 — 16.5 V?	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>	Repair the harness between body integrated unit and fuse.

	Step	Check	Yes	No
5	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

E: DTC B1104 ACC POWER FAILURE

DTC DETECTING CONDITION:
Voltage malfunction caused by poor contact of ACC power supply circuit
TROUBLE SYMPTOM:
DRL may not illuminate.
WIRING DIAGRAM:

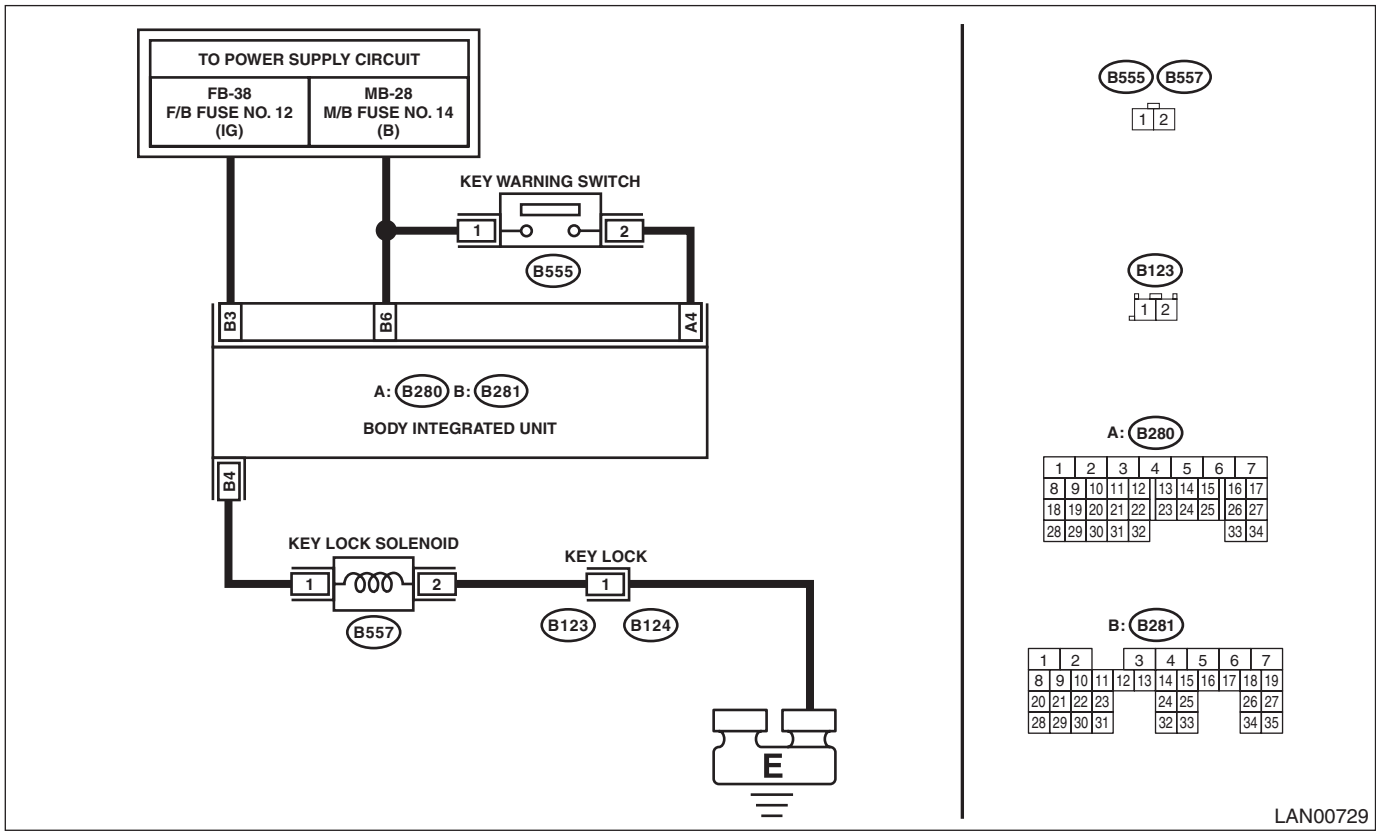


Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1104 current malfunction?	Go to step **2**.	Go to step **5**.
2	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect and then connect the body integrated unit connector. 3) Wait approx. 2 minutes. 4) Turn the ignition switch to ON. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1104 current malfunction?	Go to step **3**.	Go to step **5**.
3	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Check the fuse.	Is the fuse OK?	Go to step **4**.	Replace the defective fuse.
4	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B280) No. 32 (+) — Chassis ground (–):***	Is the voltage 8.5 — 16.5 V?	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>	Repair the harness between body integrated unit and fuse.

	Step	Check	Yes	No
5	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

F: DTC B1105 KEY INTERLOCK CIRCUIT ABNORMAL

DTC DETECTING CONDITION:
Ground short of key interlock circuit
TROUBLE SYMPTOM:
Key interlock does not keep lock condition.
WIRING DIAGRAM:

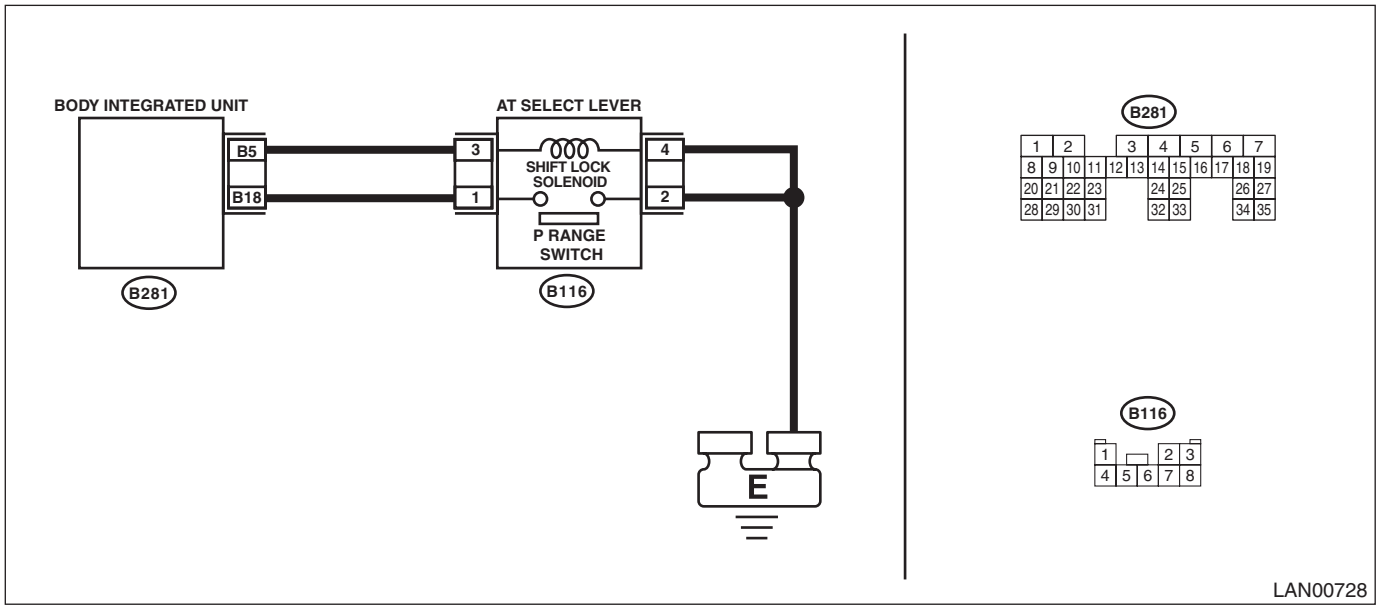


Step		Check	Yes	No
1	**CHECK DTC.** 1) Insert the ignition key. 2) Turn the ignition switch to ON. 3) Shift to the Neutral range. 4) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1105 current malfunction?	Go to step **2**.	Go to step **8**.
2	**CHECK DTC.** 1) Shift the select lever to P range. 2) Remove the ignition key. 3) Disconnect the key actuator connector (B557) and body integrated unit connector (B281). 4) Connect the disconnected connectors. 5) Insert the ignition key. 6) Turn the ignition switch to ON and shift into Neutral. 7) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1105 current malfunction?	Go to step **3**.	Go to step **8**.

	Step	Check	Yes	No
3	**CHECK KEY ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the key actuator connector (B557). 3) Measure the resistance between key actuator connectors. ***Connector & terminal*** ***(B557) No. 1 — No. 2:***	Is the resistance 12 — 14.5 Ω?	Go to step **4**.	Replace the key actuator.
4	**CHECK KEY ACTUATOR.** Connect the battery terminals to the key actuator. ***Terminals*** ***(B557) No. 2 — positive terminal:*** ***(B557) No. 1 — ground terminal:***	Is the actuator activated and then key locked?	Go to step **5**.	Replace the key actuator.
5	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector (B281). 2) Measure the resistance between body integrated unit and key actuator using tester. ***Connector & terminal*** ***(B557) No. 1 — (B281) No. 4:***	Is the resistance less than 10 Ω?	Go to step **6**.	Repair or replace the open circuit of harness.
6	**CHECK HARNESS.** Measure the resistance between body integrated unit and chassis ground using tester. ***Connector & terminal*** ***(B281) No. 4 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **7**.	Repair or replace the short circuit of the harness.
7	**CHECK HARNESS.** 1) Connect the body integrated unit. 2) Turn the ignition switch to ON. 3) Measure the voltage between body integrated unit and chassis ground using tester. ***Connector & terminal*** ***(B281) No. 4 (+) — Chassis ground (–):***	Is the voltage 6 V or more?	Repair or replace the short circuit of the harness.	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>
8	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector (B281) and key actuator connector (B557).	Is there poor contact at disconnected connector terminal?	Repair the terminal where poor contact exists, or replace harness.	It is possible that temporary poor contact occurs.

G: DTC B1106 SHIFT LOCK CIRCUIT FAILURE

DTC DETECTING CONDITION:
Open or power supply-output short, GND-output short in shift lock circuit.
TROUBLE SYMPTOM:
Shift lock does not be released or remain locked.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Keep the Parking range for approx. 5 seconds. 3) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1106 current malfunction?	Go to step **6**.	Go to step **2**.
2	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the shift lock solenoid connector. 3) Connect the disconnected connectors. 4) Turn the ignition switch to ON, then keep the Parking range for approx. 5 seconds. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1106 current malfunction?	Go to step **3**.	Go to step **7**.
3	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the shift lock solenoid connector. 3) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B116) No. 4 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the open circuit of harness.
4	**CHECK SHIFT LOCK SOLENOID.** Using a tester, measure the resistance between shift lock solenoid terminals. ***Connector & terminal*** ***(B116) No. 4 — No. 3:***	Is the resistance less than 27 — 31 Ω?	Go to step **5**.	Replace the shift lock solenoid. <Ref. to CS-33, DISASSEMBLY, Select Lever.>

	Step	Check	Yes	No
5	**CHECK SHIFT LOCK SOLENOID.** Connect the battery terminal to shift lock solenoid. ***Connector & terminal*** ***(B116) No. 3 — positive terminal:*** ***(B116) No. 4 — ground terminal:***	Does the shift lock solenoid operate and then release the lock?	Go to step **6**.	Replace the shift lock solenoid. <Ref. to CS-33, DISASSEMBLY, Select Lever.>
6	**CHECK HARNESS.** Use a tester to measure the resistance between harness terminals. ***Connector & terminal*** ***(B116) No. 3 — (B281) No. 5:*** NOTE: If body integrated unit and shift lock connector are not disconnected, disconnect them first and then perform measurement.	Is the resistance less than 10 Ω?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Repair or replace the open circuit of harness.
7	**CHECK DTC.** 1) Depress the brake pedal at the parking range. 2) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1106 current malfunction?	Go to step **8**.	Go to step **9**.
8	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector and shift lock connector. 3) Connect the disconnected connectors. 4) Turn the ignition switch to ON. 5) Depress the brake pedal at the parking range. 6) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1106 current malfunction?	Go to step **4**.	Go to step **9**.
9	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector and shift lock connector.	Is there poor contact of connector terminal?	Repair or replace the poor contact of terminal.	It is possible that temporary poor contact occurs.

H: DTC B1401 M COLLATION NG

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAG). <Ref. to IM(diag)-24, DTC B1401 M COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

I: DTC B1402 IMMOBILIZER KEY COLLATION NG

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAG). <Ref. to IM(diag)-24, DTC B1402 IMMOBILIZER KEY COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

J: DTC B1405 SCU COLLATION NG

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAG). <Ref. to IM(diag)-25, DTC B1405 SCU COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

K: DTC B1406 SCU_EEPROM_NG

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAG). <Ref. to IM(diag)-25, DTC B1406 SCU_EEPROM_NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

L: DTC B1407 M COMMUNICATION ABNORMAL

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-25, DTC B1407 M COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

M: DTC B1408 METER EEPROM ABNORMAL

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-26, DTC B1408 METER EEPROM ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

N: DTC B1409 SCU COMMUNICATION ABNORMAL

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-27, DTC B1409 SCU COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

O: DTC B1410 TRANSPONDER COMMUNICATION ABNORMAL

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-29, DTC B1410 TRANSPONDER COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

P: DTC B1411 IMMOBILIZER ANTENNA ABNORMAL

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-29, DTC B1411 IMMOBILIZER ANTENNA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

Q: DTC B1500 KEYLESS UART COM. MALFUNCTION

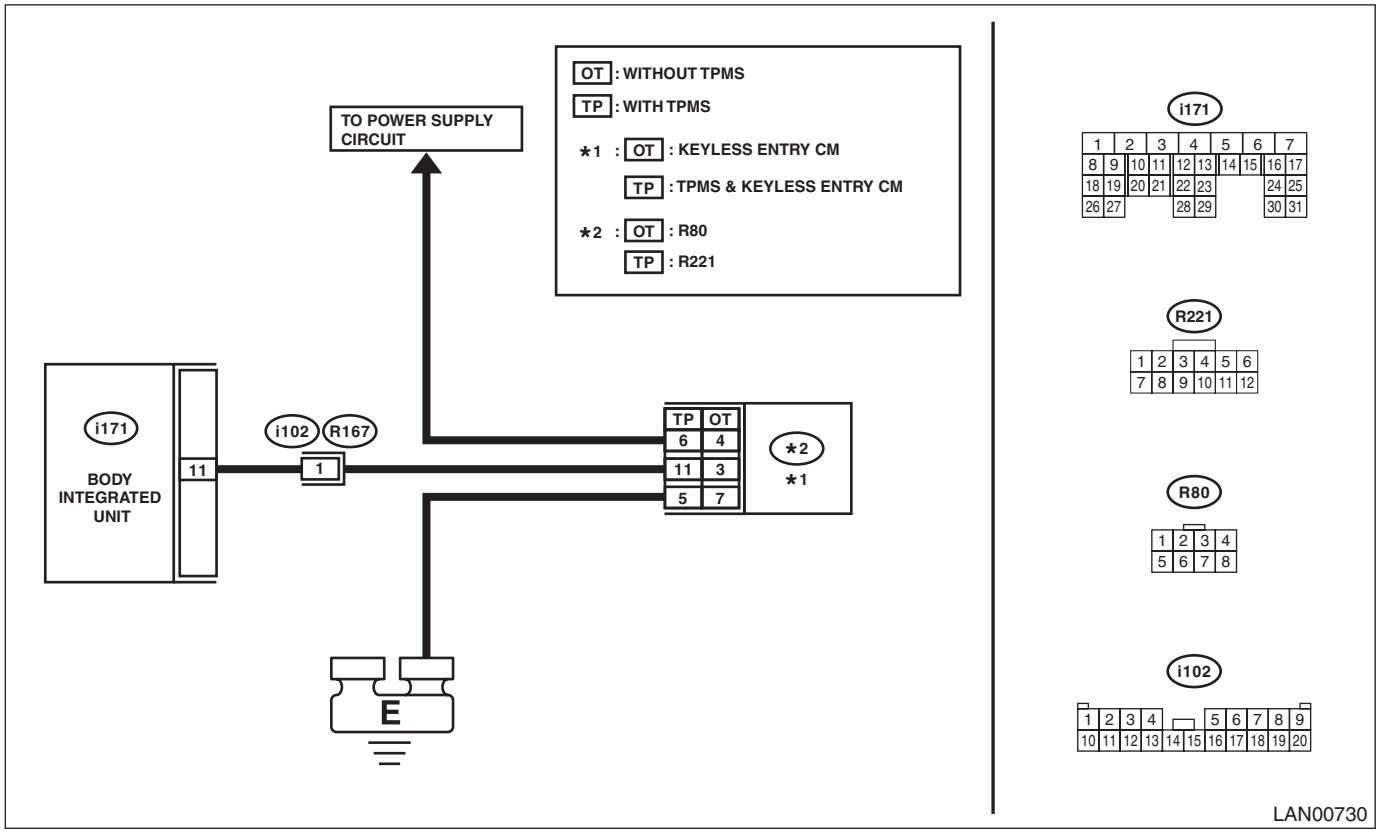
DTC DETECTING CONDITION:

UART between the keyless control module and body integrated unit is open or shorted, or has communication failure.

TROUBLE SYMPTOM:

Door lock does not operate with keyless.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** 1) Insert the ignition key to the ignition key cylinder and remove. 2) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1500 current malfunction?	Go to step **2**.	Go to step **7**.
2	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit and keyless entry control module connector. 3) Connect the disconnected connectors. 4) Insert the ignition key to the ignition key cylinder and remove. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1500 current malfunction?	Go to step **3**.	Go to step **7**.

	Step	Check	Yes	No
3	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit and keyless entry control module connector. 3) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***With TPMS*** ***(i171) No. 11 — (R221) No. 11:*** ***Without TPMS*** ***(i171) No. 11 — (R80) No. 3:***	Is the resistance 10 Ω or less?	Go to step **4**.	Repair the open circuit of harness or replace harness.
4	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Use a tester to measure the voltage between the terminals. ***Connector & terminal*** ***With TPMS*** ***(R221) No. 6 (+) — Chassis ground (–):*** ***Without TPMS*** ***(R80) No. 4 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **5**.	Repair the power supply circuit.
5	**CHECK HARNESS.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***With TPMS*** ***(R221) No. 5 — Chassis ground:*** ***Without TPMS*** ***(R80) No. 7 — Chassis ground:***	Is the resistance 10 Ω or less?	Go to step **6**.	Repair the ground circuit.
6	**CHECK CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Remove the keyless entry control module. 3) Install a keyless entry control module that was operating normally on another vehicle.	Does it operate with the remote control key of another vehicle?	Replace the keyless entry control module. <Ref. to SL-73, REMOVAL, Keyless Entry Control Module.>	Replace the body integrated unit.
7	**CHECK CONNECTOR.** Check the connector used for keyless communication for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

14.General Diagnostic Table

A: INSPECTION

Using the Subaru Select Monitor, read DTC, or check the following data on the current data display to make judgments.

Item	Operation	Specifications		Note
		YES	NO	
Diagnostic code	DTC is not displayed when inspecting all DTCs.	DTC is not displayed.	Perform the diagnosis according to DTC.	—
Clearance light (Low beam) (High beam)	Clearance light and low/high beams illuminate normally when the switch is operated. Indicator in the meter illuminates at the same time.	System is normal.	Check the lighting system, combination meter system and LAN system.	—
Auto light	When the area around the light control sensor is darkened after the ignition switch and the lighting switch (AUTO) are turned to ON, the clearance light and the low beam illuminate after 15 seconds. Indicator in the combination meter illuminates at the same time.	System is normal.	Check the lighting system, combination system and LAN system.	—
	When the ignition switch and the lighting switch (AUTO) are turned to ON after the area around the light control sensor is darkened, the clearance light and the low beam illuminate immediately. Indicator in the combination meter illuminates at the same time.			—
Fog light	Front fog light illuminates when the switch is operated. Indicator in the meter illuminates at the same time.	System is normal.	Check the lighting system, combination meter system and LAN system.	—
Rear defogger	Rear defogger operates when the switch is operated. The indicator illuminates at the same time.	System is normal.	Check the rear window defogger system and A/C system.	—
Wiper deicer	Wiper deicer operates when the switch is operated. The indicator illuminates at the same time. When the ambient temperature is 5°C (41°F) or higher, press the switch 3 seconds or more to forcibly activate the system.	System is normal.	Check the wiper deicer system and A/C system.	Wiper deicer operates when “Wiper deicer setting” of the body integrated unit is set to on.
DRL	After starting the engine and releasing the parking brake, the DRL illuminates.	System is normal.	Check the lighting system and LAN system.	—
Rear wiper	Rear wiper operates when the switch is operated.	System is normal.	Check wiper or washer system.	Depending on user customizing “Sedan/Wagon Setting” of the body integrated unit, vehicle sensory time varies.
Key interlock	• Key cannot be removed in other than P range. • Key can be removed in other than P range.	System is normal.	Check the body control system.	—

General Diagnostic Table

Item	Operation	Specifications		Note
		YES	NO	
Shift lock	The select lever can be moved from the P range to other ranges only when the brake pedal is depressed with IG ON.	System is normal.	Check the body control system.	—
Key warning switch alarm	When the driver's door is open without the key removed, the buzzer sounds.	System is normal.	Check the combination meter and body control system.	—
Door lock	The doors lock/unlock when the door switch is operated. Rear gate/ trunk opens when the rear gate/ trunk release switch is operated.	System is normal.	Check the security & lock and body control system.	If user customizing "Sedan/Wagon Setting" is different, trunk and rear gate do not open.
Keyless entry	The lock locks/unlocks when the keyless transmitter is operated. Trunk/rear gate unlocks when trunk/ rear gate unlock button is operated.	System is normal.	Check the keyless entry and body control system.	—
Answer back	Answer-back operates when the keyless entry locks/unlocks.	System is normal.	Check the security & lock system, and LAN system.	—
Room light	The light illuminates/goes off according to the door open/close.	System is normal.	Check the room light system, security & lock system, and LAN system.	—
Map light	The light illuminates/goes off according to the door open/close. (Except for rear gate)	System is normal.	Check the spot map light, security & lock system, and LAN system.	—
Luggage/trunk light	The light illuminates/goes off according to the rear gate open/ close.	System is normal.	Check the luggage/ trunk light, security & lock system, and LAN system.	—
Key illumination	The light illuminates/goes off according to the driver's door open/ close.	System is normal.	Check the ignition switch illumination, security & lock, and LAN system.	—
Illumination control	Illumination volume control is available.	System is normal.	Check the illumination control switch, combination meter, and body control system.	Illumination volume control is not available when user customizing "Illumination Control On/Off" of the body integrated unit is set to off.
Engine start	Engine starts.	System is normal.	Check the engine system, immobilizer, and LAN system.	—
Vehicle security	Security monitoring/security canceling can be performed by operating the keyless entry.	System is normal.	Check the security & lock system, and LAN system.	Security monitoring starts and at the same time the warning buzzer sounds, when impact sensor is not connected and user customizing "Impact Sensor" of the body integrated unit is set to on.

WIRING SYSTEM SECTION

This service manual has been prepared to provide SUBARU service personnel with the necessary information and data for the correct maintenance and repair of SUBARU vehicles.
This manual includes the procedures for maintenance, disassembling, reassembling, inspection and adjustment of components and diagnostics for guidance of experienced mechanics.
Please peruse and utilize this manual fully to ensure complete repair work for satisfying our customers by keeping their vehicle in optimum condition. When replacement of parts during repair work is needed, be sure to use SUBARU genuine parts.

All information, illustration and specifications contained in this manual are based on the latest product information available at the time of publication approval.

WIRING SYSTEM

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1. General Description

A: SPECIFICATION

Refer to “Body Repair Manual” for general description of body structure, reference points and reference dimensions.

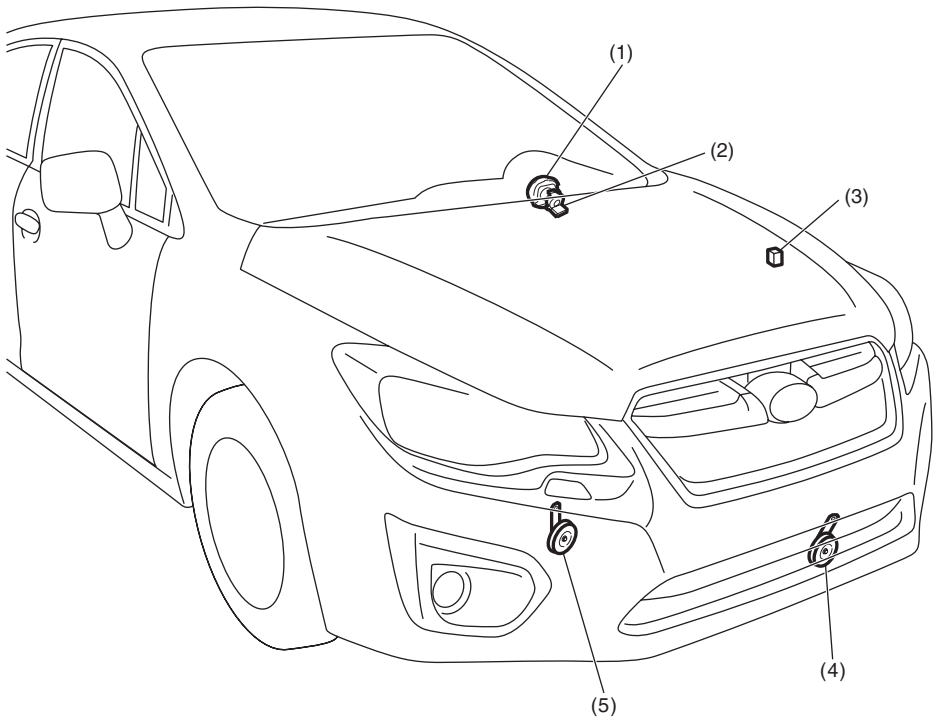
INSTRUMENTATION/DRIVER INFO

IDI

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1. General Description

A: COMPONENT



(1) Horn switch (Driver's airbag module ASSY)
(2) Roll connector
(3) Horn relay
(4) Horn ASSY - Lo
(5) Horn ASSY - Hi

B: CAUTION

• Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When replacing the audio, control module and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
• Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
• Connect the connectors securely during reassembly.
• After reassembly, make sure that the each component operates normally.
• Yellow connectors and harnesses with yellow tapes around them are the connectors and harnesses for the airbag system. Using a tester above such circuits may cause malfunction of airbag system. Follow the cautions of "AIRBAG SYSTEM" in this case. <Ref. to AB-10, CAUTION, General Description.>
• Be careful not to damage the airbag system wiring harness when servicing electrical parts and switches.

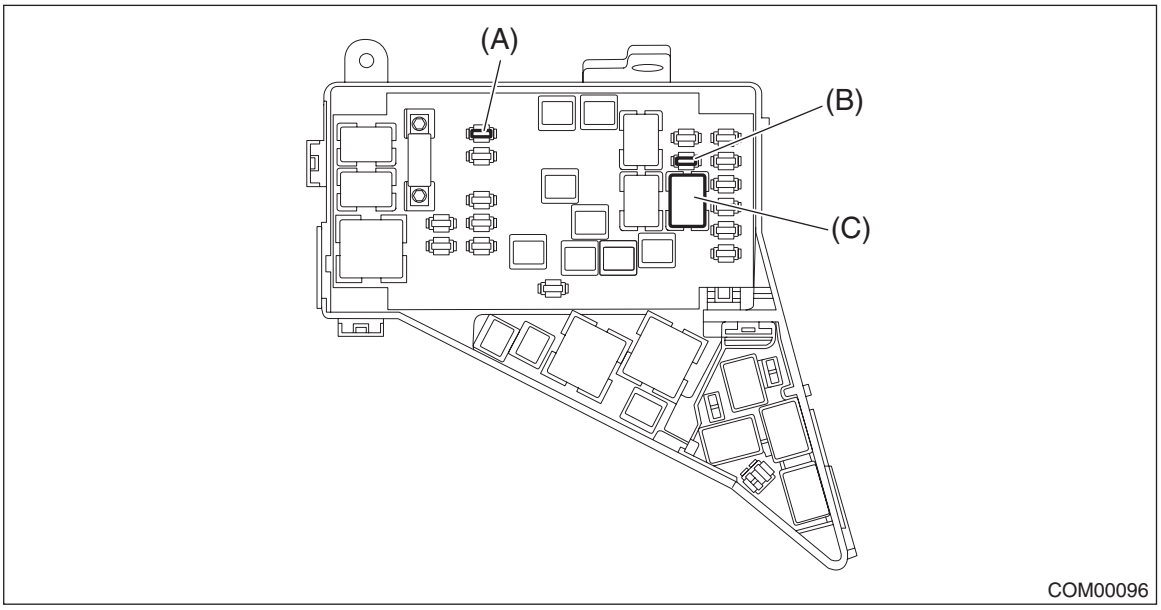
C: PREPARATION TOOL

1. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.

2. Relay and Fuse

A: LOCATION



Main fuse box	Fuse 15 A (horn ASSY - Hi)	(A)
	Fuse 15 A (horn ASSY - Lo)	(B)
	Horn relay	(C)

NOTE:
For other related fuses, refer to the wiring diagram. <Ref. to WI-15, Power Supply Circuit.>

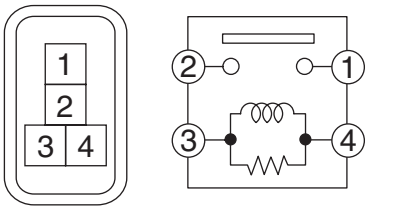
B: INSPECTION

1. CHECK FUSE

1) Remove the fuse and check visually.
2) If the fuse is blown out, replace the fuse.

2. CHECK RELAY

1) Check the resistance between relay terminals.

Terminal No.	Inspection conditions	Specification	Circuit
1 — 2	Always	1 MΩ or more	
1 — 2	Apply battery voltage between 4 — 3 terminals.	Less than 1 Ω	

2) Replace the relay if the inspection result is not within the standard value.

3. Horn System

A: WIRING DIAGRAM

Refer to “Horn System” in the wiring diagram. <Ref. to WI-101, WIRING DIAGRAM, Horn System.>

B: INSPECTION

Symptoms	Inspection steps
Horn does not sound	1. Check the fuse.
	2. Check the horn relay.
	3. Check the role connector.
	4. Check the horn switch.
	5. Check the horn assembly.
	6. Check the harness.

C: NOTE

For operation procedures of each component of the horn system, refer to the respective section.

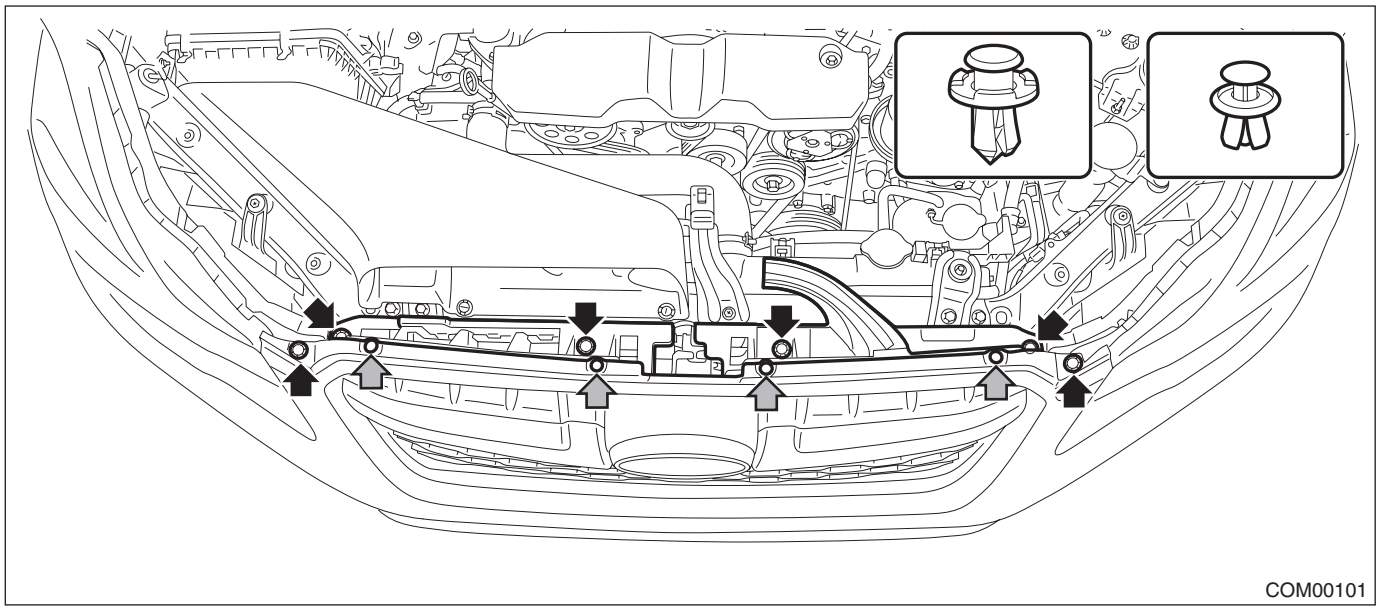
- Horn ASSY: <Ref. to COM-5, Horn.>
- Horn switch: <Ref. to COM-8, Horn Switch.>

4. Horn

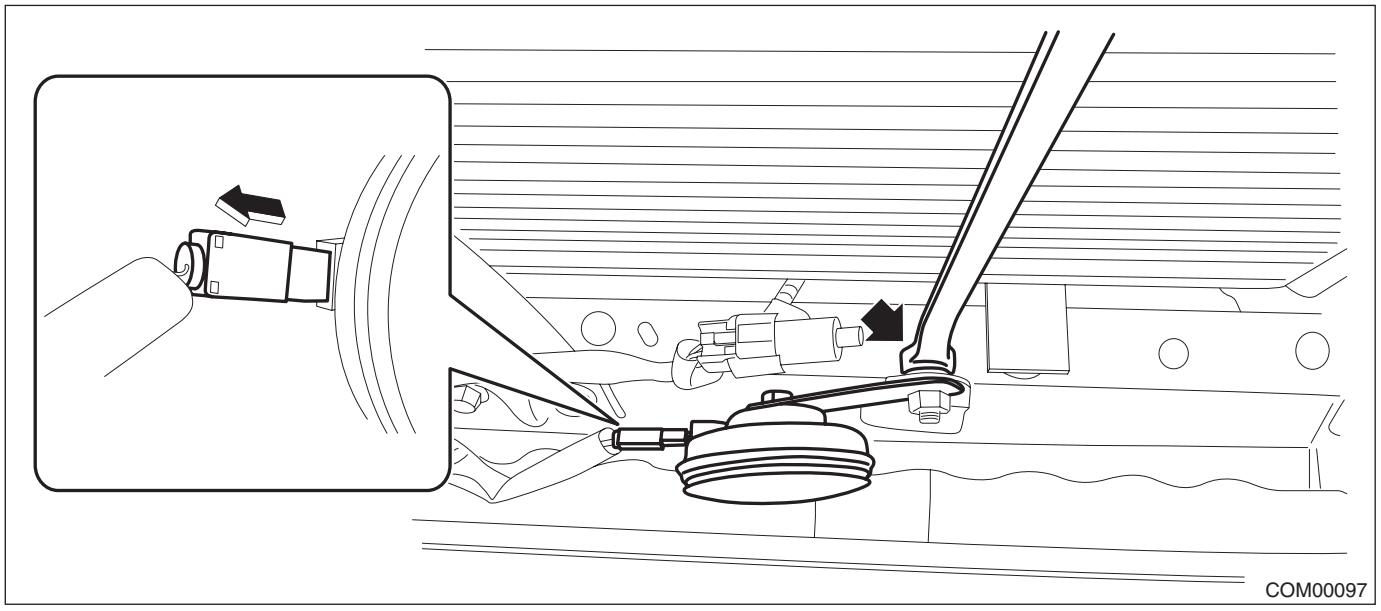
A: REMOVAL

CAUTION:
Do not remove the bumper face - front when removing the horn, in order to prevent damaging the claws of the bracket - front bumper corner and the bracket - front bumper side.

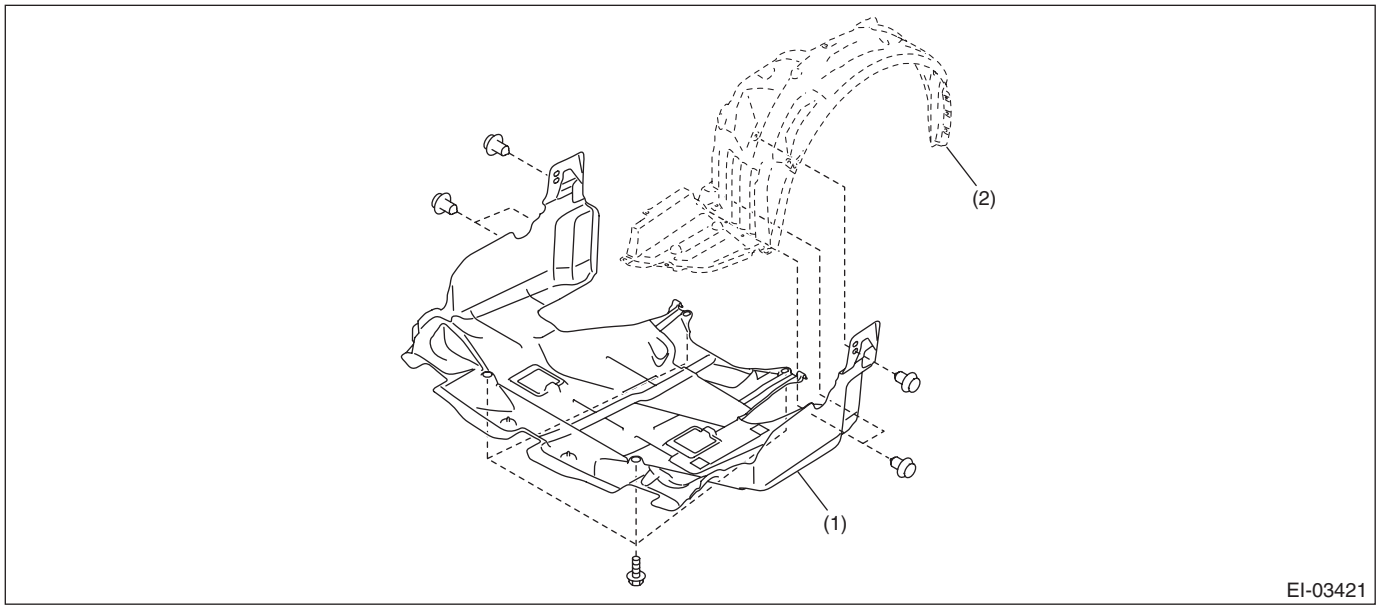
1) Disconnect the ground cable from battery.
2) Remove the clip, and remove the bracket - grille.



3) Remove the horn assembly - Lo.
   (1) Disconnect the connector.
   (2) Remove the horn bracket mounting bolt, and remove the horn assembly - Lo.



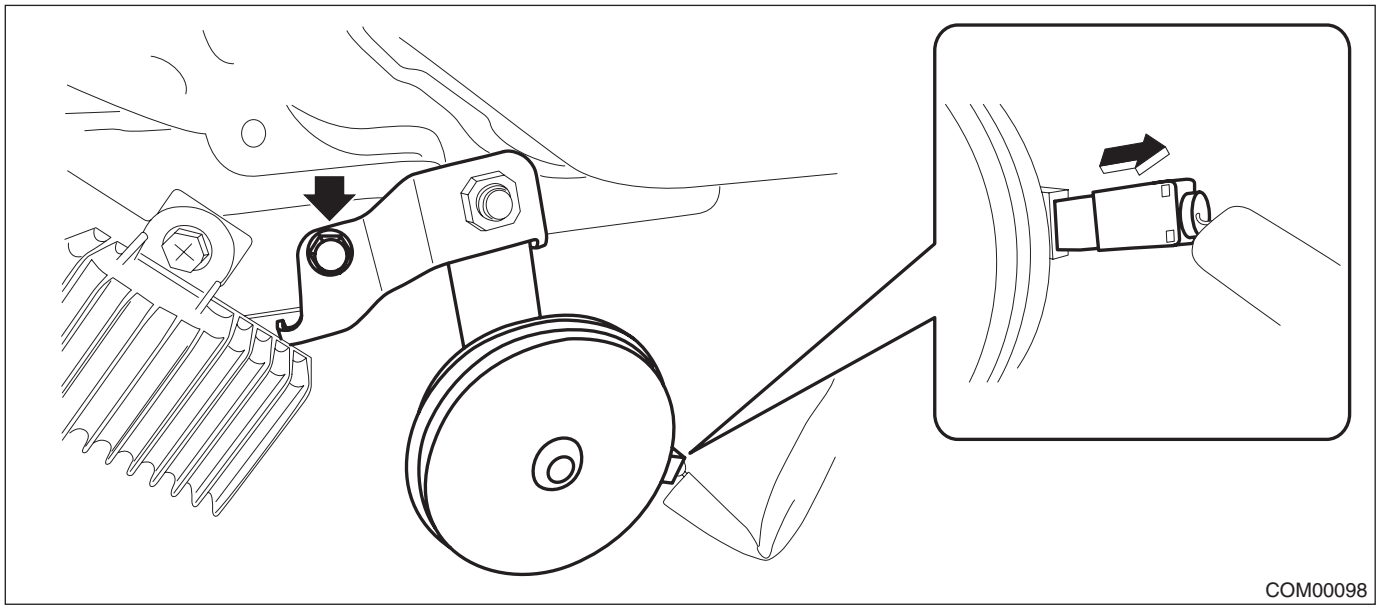
4) Remove the horn assembly - Hi.
(1) Remove the bolts and clips, and remove the under cover - front.



(1) Under cover - front (2) Mud guard - front

(2) Remove the clips, turn over the mud guard - front, and disconnect the horn connector.
(3) Remove the horn bracket mounting bolt, and remove the horn assembly - Hi.

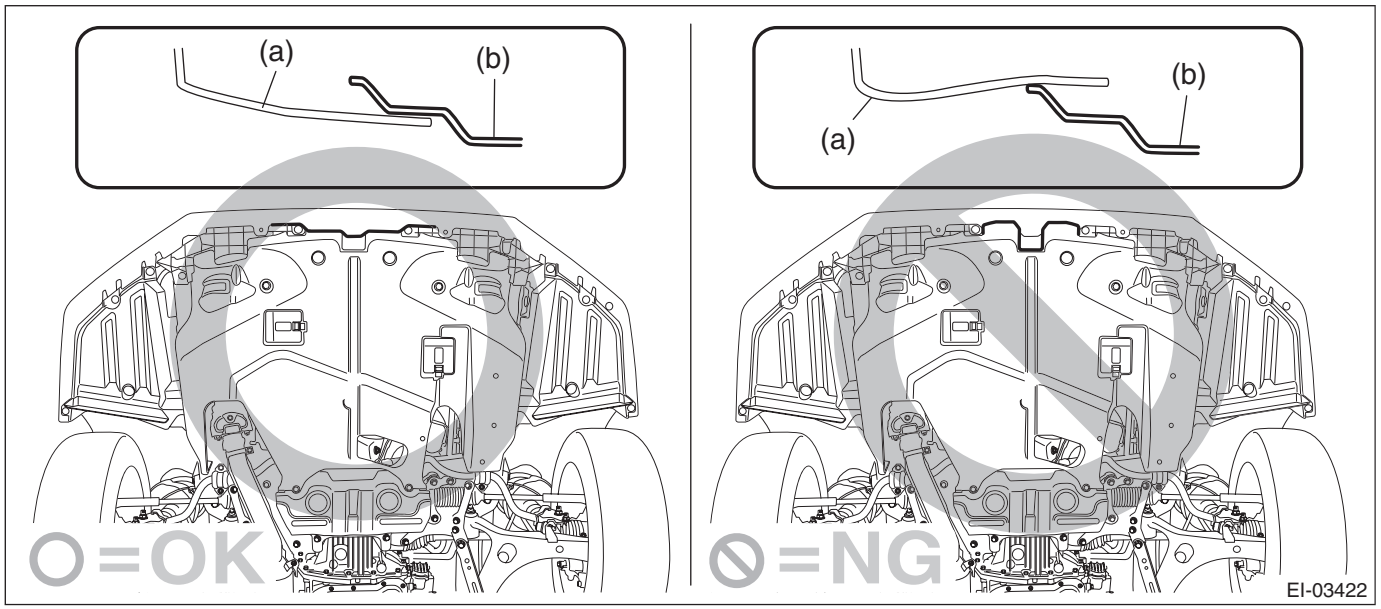
CAUTION:
The resistor may become hot. Be careful not to burn yourself.



B: INSTALLATION

Install each part in the reverse order of removal.

CAUTION:
Install the under cover so that the under cover front end (b) comes inside of the bumper face - front (a).

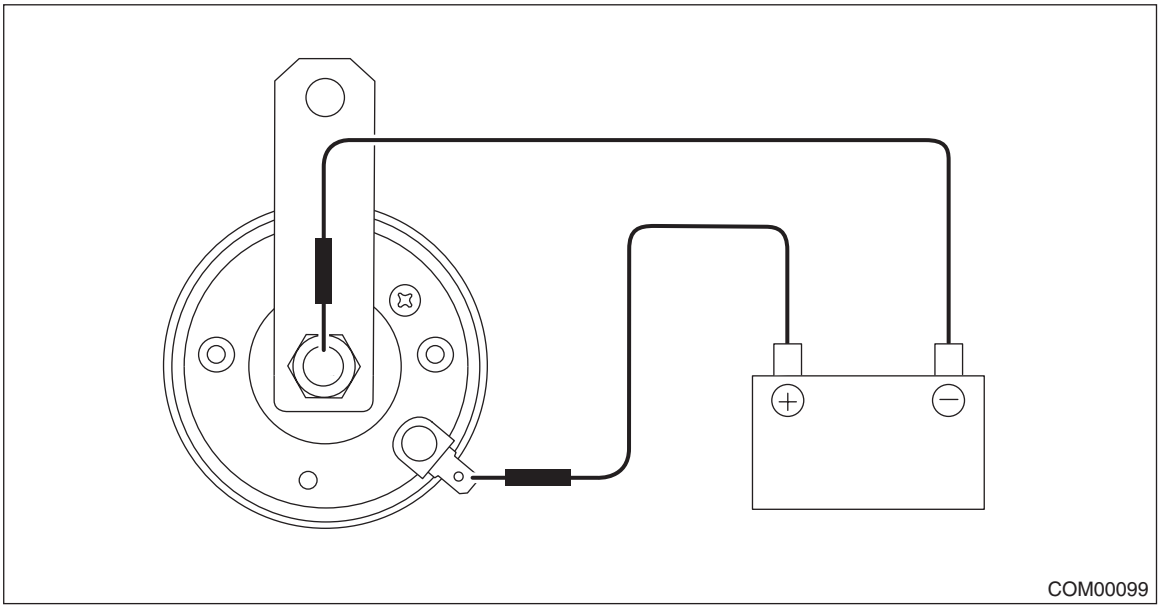


Tightening torque:
Horn assembly - Hi: 13 N·m (1.33 kgf-m, 9.6 ft-lb)
Horn assembly - Lo: 18 N·m (1.84 kgf-m, 13.3 ft-lb)

C: INSPECTION

1. CHECK HORN ASSEMBLY

1) Remove the horn assembly (Hi & Lo). <Ref. to COM-5, REMOVAL, Horn.>
2) Check the horn sounds when applying the battery voltage to the horn assembly.



Terminal No.	Inspection conditions	Specification
Horn terminal (+) — Horn case (–)	Connect battery to the terminals	Sounds

3) If it does not operate normally, replace the horn assembly.

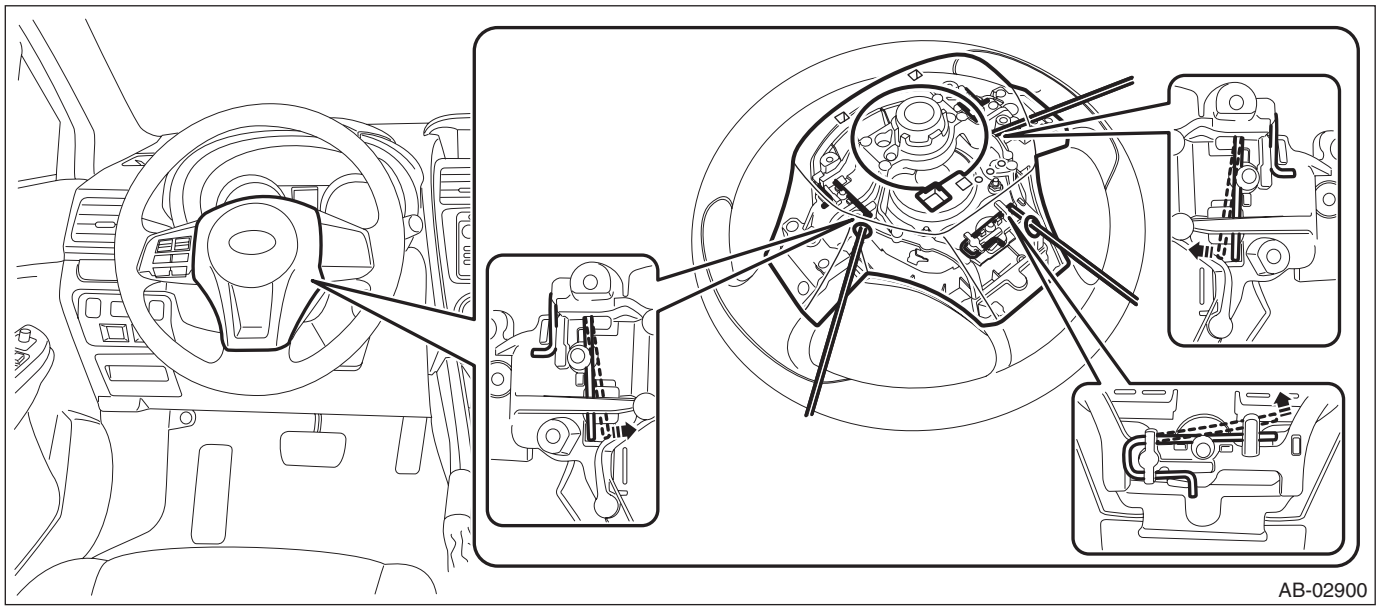
5. Horn Switch

A: REMOVAL

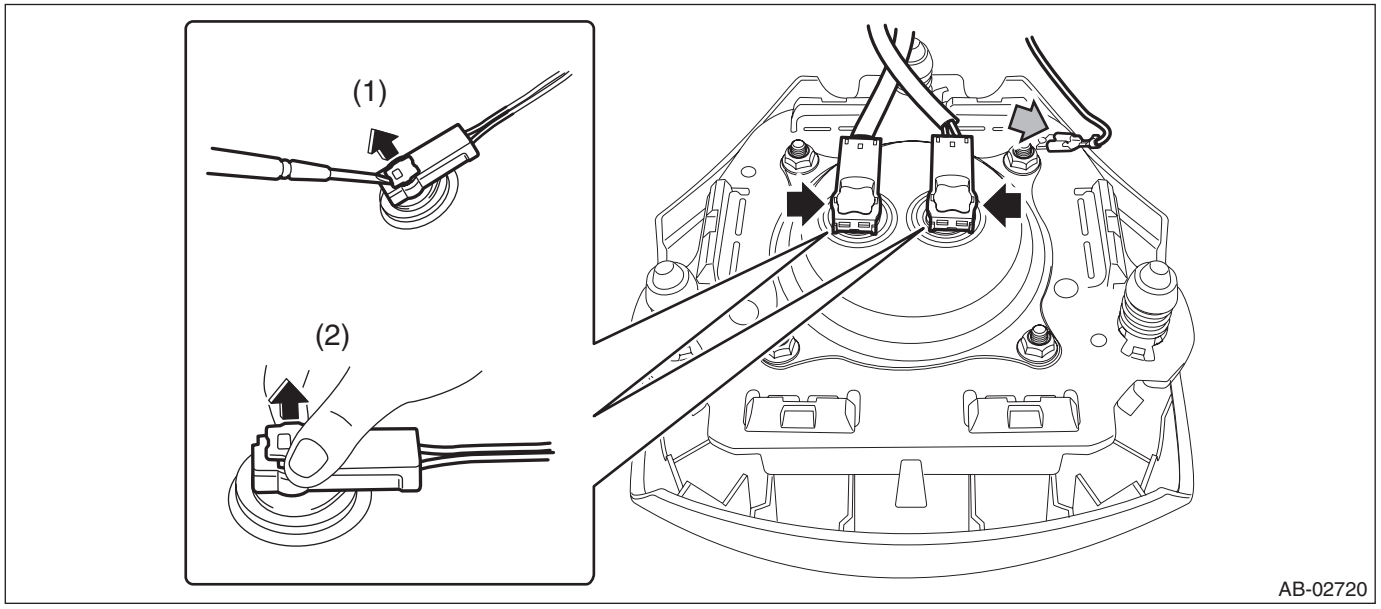
NOTE:
Horn switch is a unit with the driver's airbag module.
1) Position the front wheels straight ahead. (After moving a vehicle 5 m (16 ft) or more with front wheels positioned straight ahead, make sure that the vehicle moves straight ahead.)
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
4) Remove the driver's airbag module.

CAUTION:
Before handling the airbag module, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". <Ref. to AB-10, CAUTION, General Description.>

(1) Using a hexagon wrench wrapped with protective tape, push in the snap pins to disengage the locks (3 places).



(2) Disconnect the horn harness and airbag connector, and remove the driver's airbag module. <Ref. to AB-22, DRIVER'S AIRBAG MODULE, CURTAIN AIRBAG MODULE & PRETENSIONER, PROCEDURE, Airbag Connector.>



B: INSTALLATION

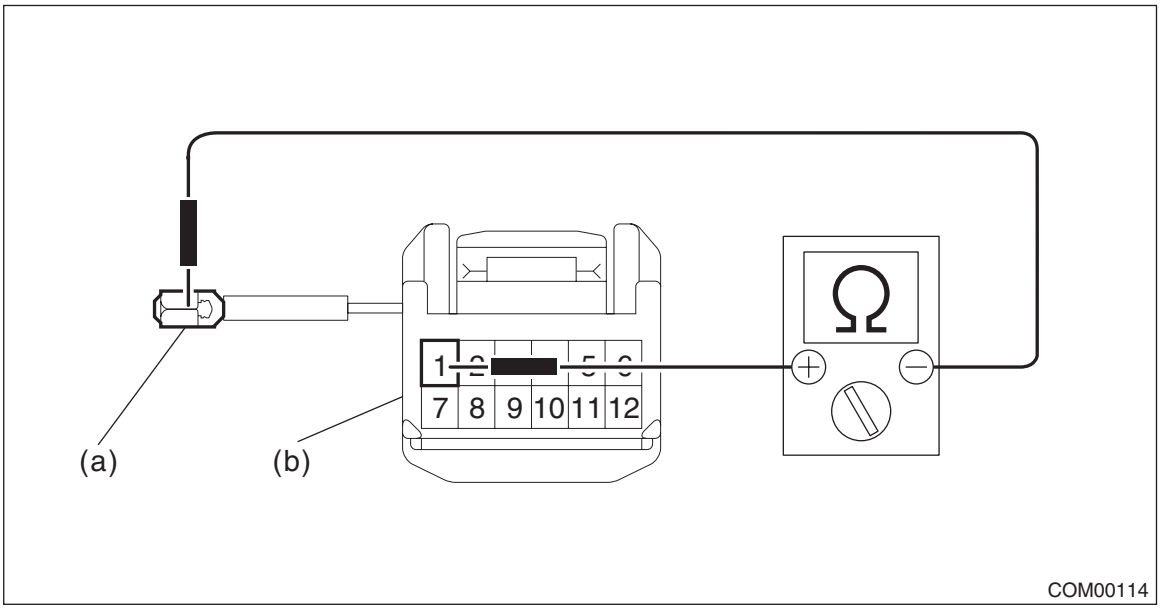
CAUTION:
• Before handling the airbag module, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". <Ref. to AB-10, CAUTION, General Description.>
• Do not allow harness and connectors to interfere or get tangled up with other parts.
1) Install the driver's airbag module. <Ref. to AB-41, INSTALLATION, Driver's Airbag Module.>
2) Install each part in the reverse order of removal.

C: INSPECTION

1. CHECK HORN SWITCH

1) Remove the horn switch. <Ref. to COM-8, REMOVAL, Horn Switch.>
2) Check if the connection of the horn switch harness connector is correct.
3) Disconnect the horn switch harness connector, and check the resistance between harness connectors.

PREPARATION TOOL:
Circuit tester



(a) Ground terminal (b) Horn switch terminal

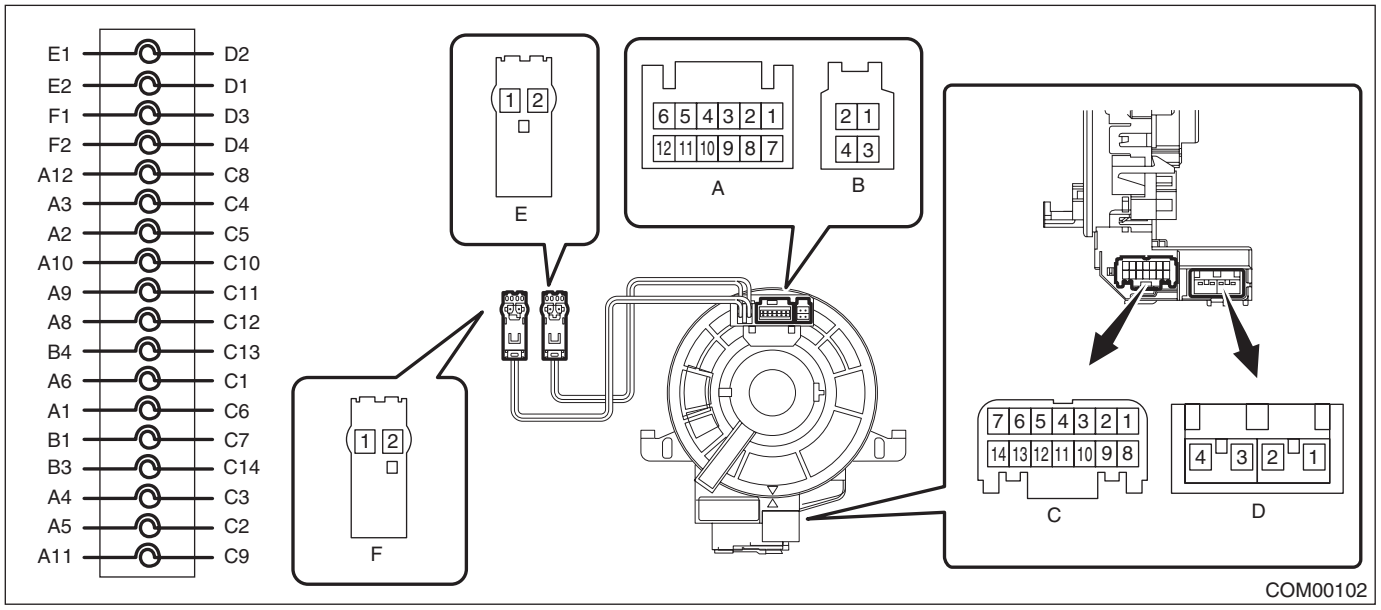
Terminal No.	Standard
Horn switch terminal — ground terminal	Less than 1 Ω

4) Replace the driver's airbag module if the inspection result is not within the standard.

2. CHECK ROLL CONNECTOR

1) Remove the roll connector. <Ref. to AB-100, REMOVAL, Roll Connector.>
2) Check the resistance between roll connector terminals.

PREPARATION TOOL:
Circuit tester



Terminal No.	Inspection conditions	Standard
A1 — C6	Always	Less than 1 Ω

3) Replace the roll connector if the inspection result is not within the standard.

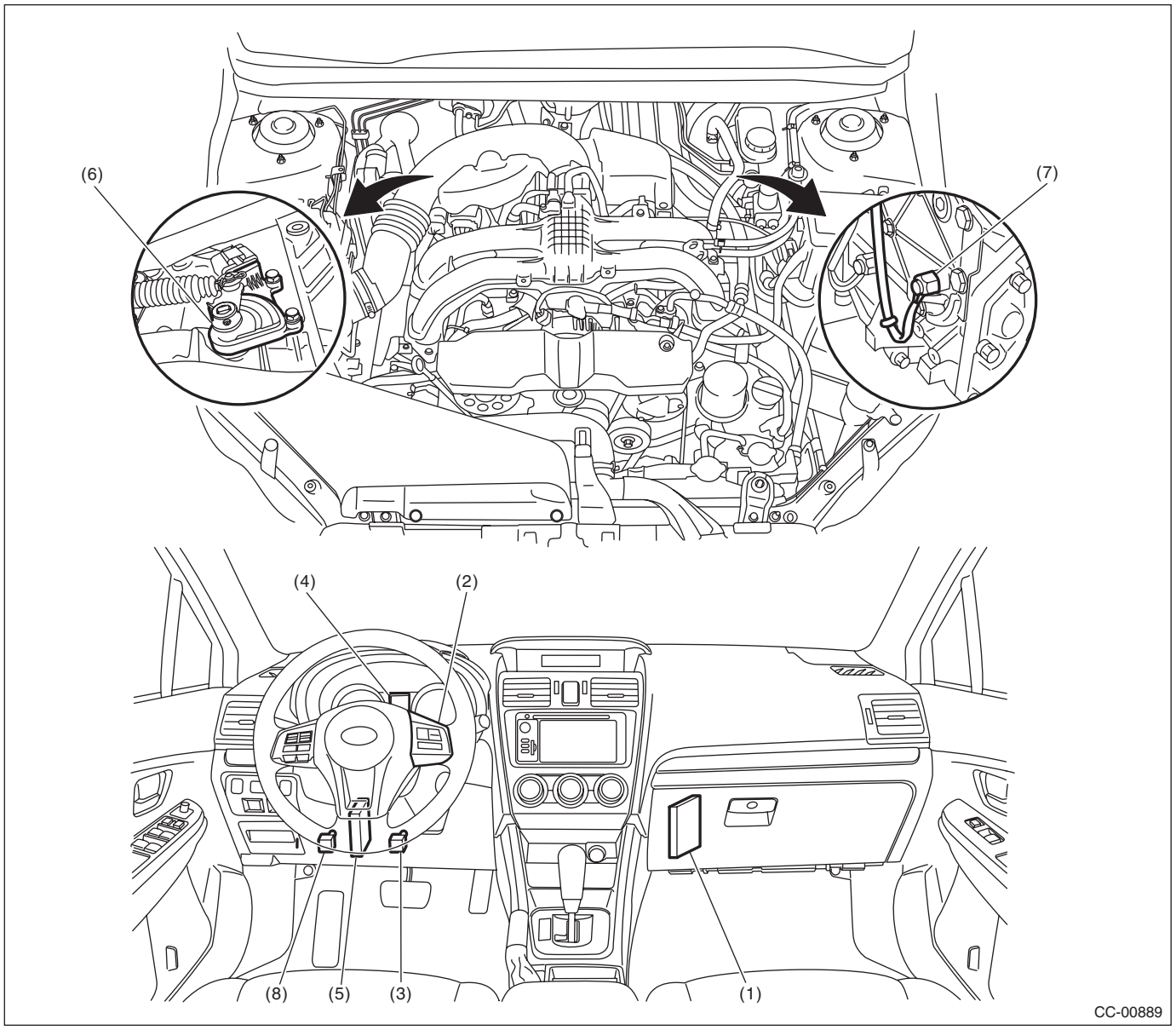
GLASS/WINDOWS/MIRRORS

GW

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14.	Rear Regulator and Motor Assembly	35
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16.	Rear Window Glass	45
17.	Rear Gate Glass	48
18.	Rear Window Defogger System	51
19.	Rear Quarter Glass	54
20.	Wiper Deicer System	57

1. General Description

A: COMPONENT



(1) Engine control module (ECM)
(2) Cruise control command switch
(3) Stop light and brake switch
(4) Cruise indicator light and cruise set indicator light
(5) Transmission control module (TCM) (CVT model)
(6) Inhibitor switch (CVT model)
(7) Neutral position switch (MT model)
(8) Clutch switch (MT model)

B: CAUTION

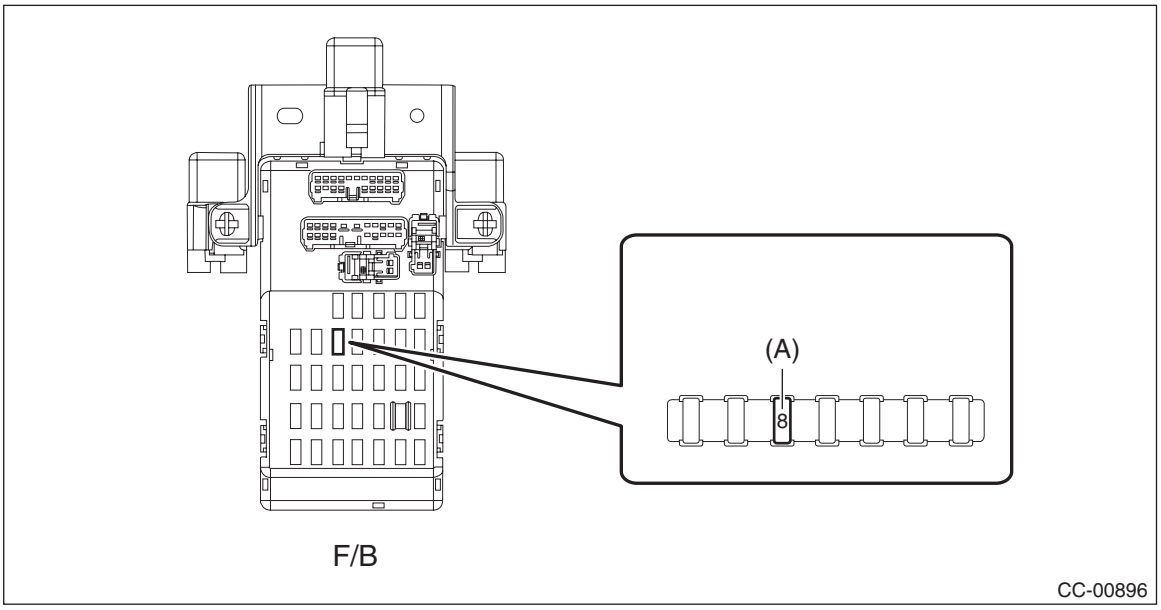
• Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When replacing the audio, control module and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
• Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
• Adjust parts to the given specifications.
• Connect the connectors securely during reassembly.
• After reassembly, make sure that the each component operates normally.
• Yellow connectors and harnesses with yellow tapes around them are the connectors and harnesses for the airbag system. Using a tester above such circuits may cause malfunction of airbag system. Follow the cautions of “AIRBAG SYSTEM” in this case. <Ref. to AB-10, CAUTION, General Description.>
• Be careful not to damage the airbag system wiring harness when servicing electrical parts and switches.
• If the steering wheel and steering angle sensor (steering roll connector) are removed, perform “VDC sensor midpoint setting mode” of the VDC. <Ref. to VDC-18, VDC SENSOR MIDPOINT SETTING MODE, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>

C: PREPARATION TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Steering wheel puller	Used for removing the steering wheel.

2. Relay and Fuse

A: LOCATION



Relay & fuse box	Fuse 20A (stop light and brake switch)	(A)

NOTE:
For other related fuses, refer to the wiring diagram. <Ref. to WI-15, Power Supply Circuit.>

B: INSPECTION

1. CHECK FUSE

1) Remove the fuse and inspect visually.
2) If the fuse is blown out, replace the fuse.

NOTE:
If the fuse is blown again, check the system wiring harness.

3. Cruise Control System

A: WIRING DIAGRAM

Refer to “Cruise Control System” in the wiring diagram. <Ref. to WI-63, WIRING DIAGRAM, Cruise Control System.>

B: INSPECTION

Refer to “Basic Diagnostic Procedure” of “CRUISE CONTROL (DIAGNOSTICS)” section. <Ref. to CC(diag)-2, Basic Diagnostic Procedure.>

C: NOTE

For operation procedures of each component of the cruise control system, refer to the respective section.

- Cruise control unit: <Ref. to CC-6, Cruise Control Module.>
- Cruise control command switch: <Ref. to CC-7, Cruise Control Command Switch.>
- Combination meter: <Ref. to CC-11, Combination Meter.>
- Stop light & brake switch: <Ref. to CC-12, Stop Light & Brake Switch.>
- Clutch switch: <Ref. to CC-13, Clutch Switch.>
- Inhibitor switch: <Ref. to CC-14, Inhibitor Switch.>
- Transmission control module (TCM): <Ref. to CC-15, Transmission Control Module (TCM).>
- Neutral position switch: <Ref. to CC-16, Neutral Position Switch.>

4. Cruise Control Module

A: NOTE

The control of cruise control system is carried out in engine control module (ECM).

B: REMOVAL

For removal procedures of the control module, refer to “FUEL INJECTION (FUEL SYSTEM)”. <Ref. to FU(H4DO)-101, REMOVAL, Engine Control Module (ECM).>

C: INSTALLATION

For installation procedures of the control module, refer to “FUEL INJECTION (FUEL SYSTEM)”. <Ref. to FU(H4DO)-103, INSTALLATION, Engine Control Module (ECM).>

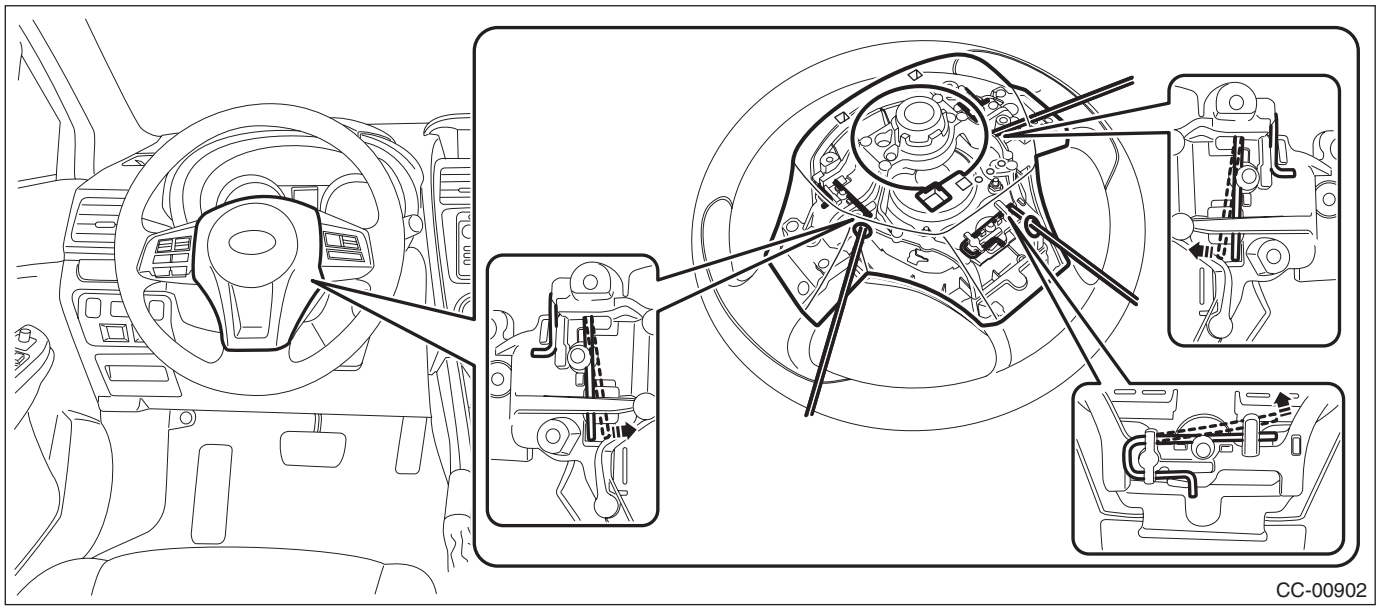
5. Cruise Control Command Switch

A: REMOVAL

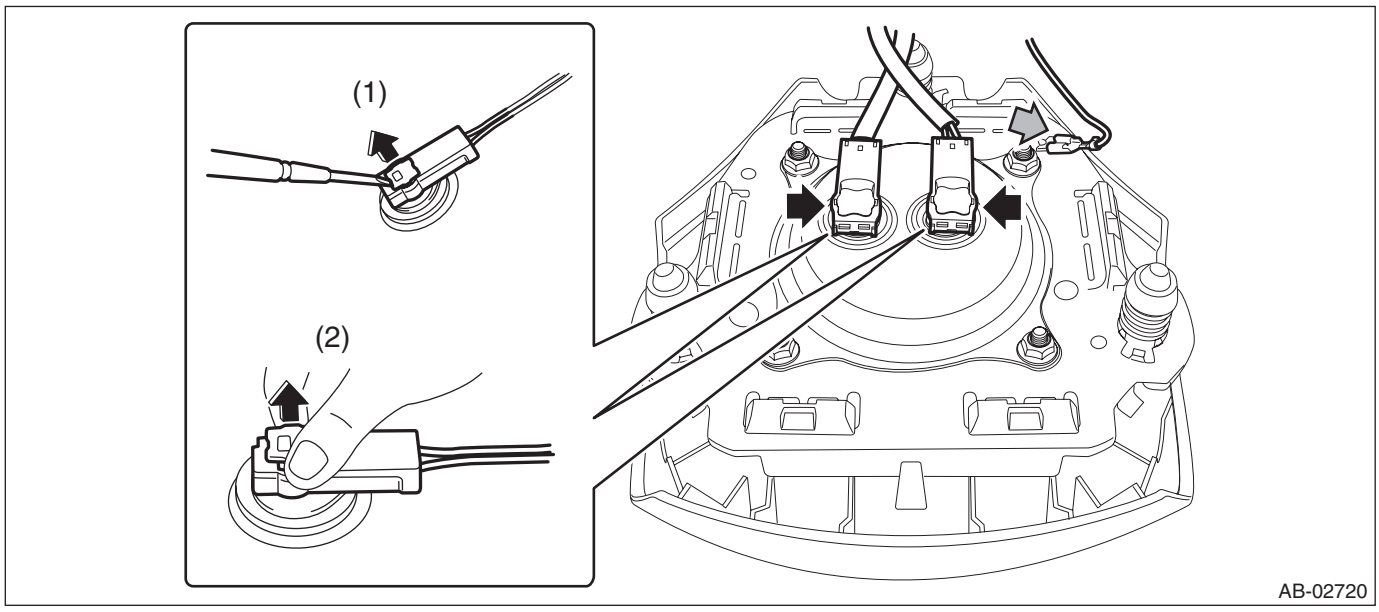
1) Position the front wheels straight ahead. (After moving a vehicle 5 m (16 ft) or more with front wheels positioned straight ahead, make sure that the vehicle moves straight ahead.)
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
4) Remove the driver's airbag module.

CAUTION:
Before handling the airbag module, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". <Ref. to AB-10, CAUTION, General Description.>

(1) Using a hexagon wrench wrapped with protective tape, push in the snap pins to disengage the locks (3 places).



(2) Disconnect the horn harness and airbag connector, and remove the driver's airbag module. <Ref. to AB-19, PROCEDURE, Airbag Connector.>

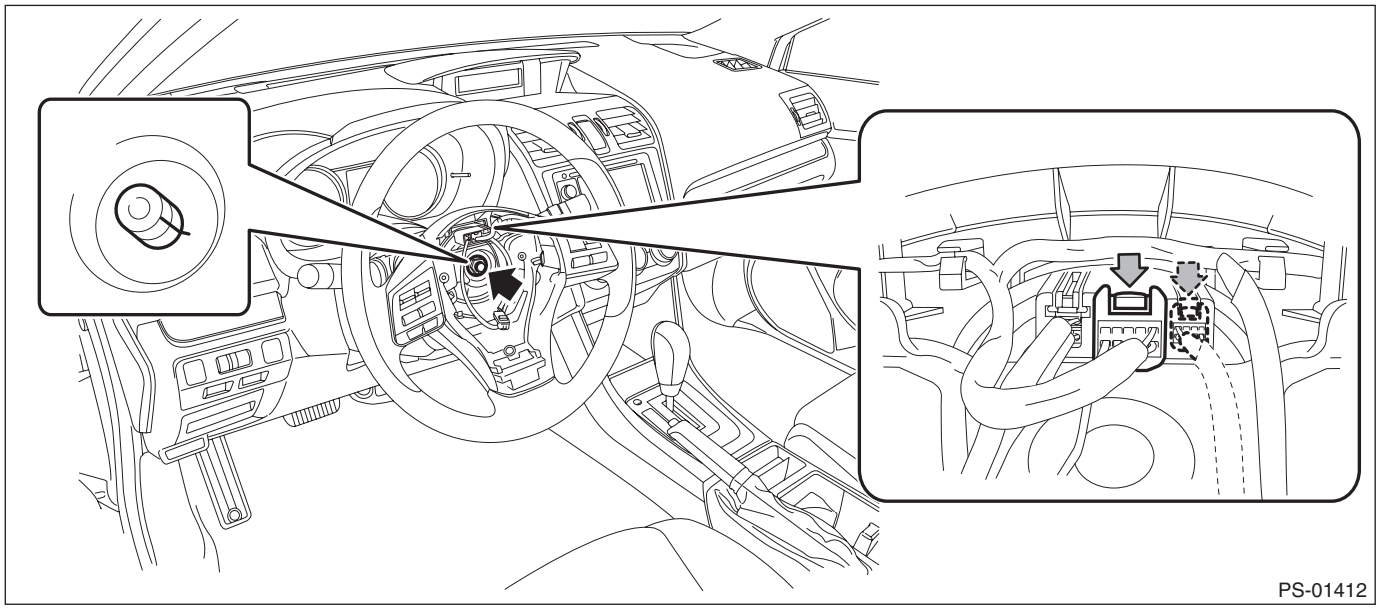


5) Remove the steering wheel.

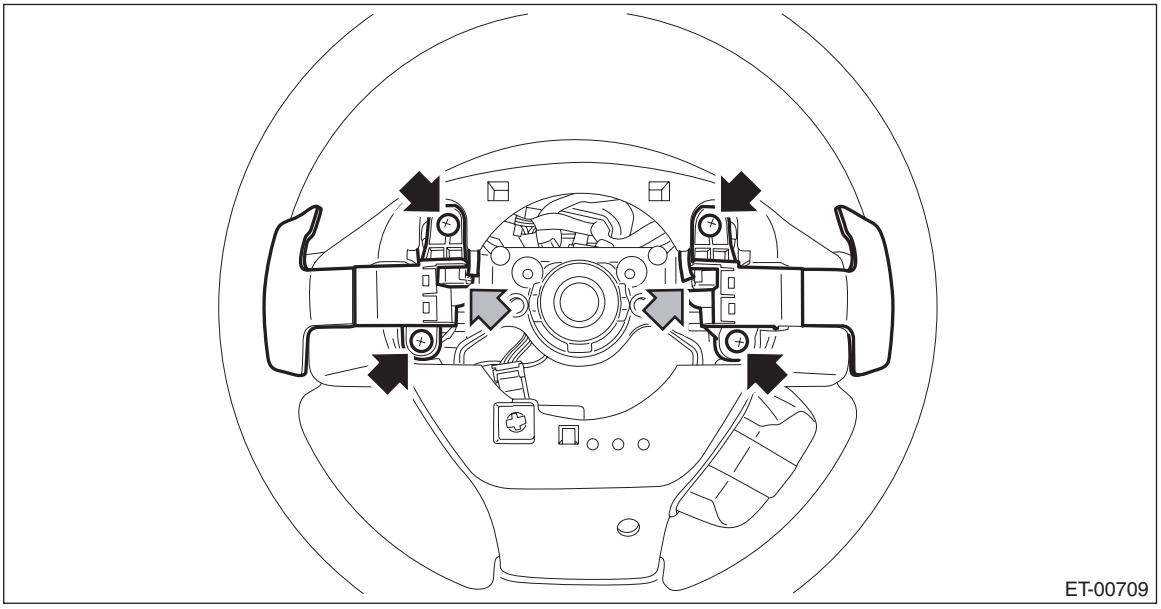
CAUTION:
- **Always use the steering wheel puller for removal to avoid deforming the steering wheel.**
- **If the steering wheel has been removed, make sure that the roll connector is not turned from the original position.**

(1) Disconnect the connector and remove the nut.
(2) Put alignment marks and remove the steering wheel using a steering wheel puller.

PREPARATION TOOL:
Steering wheel puller

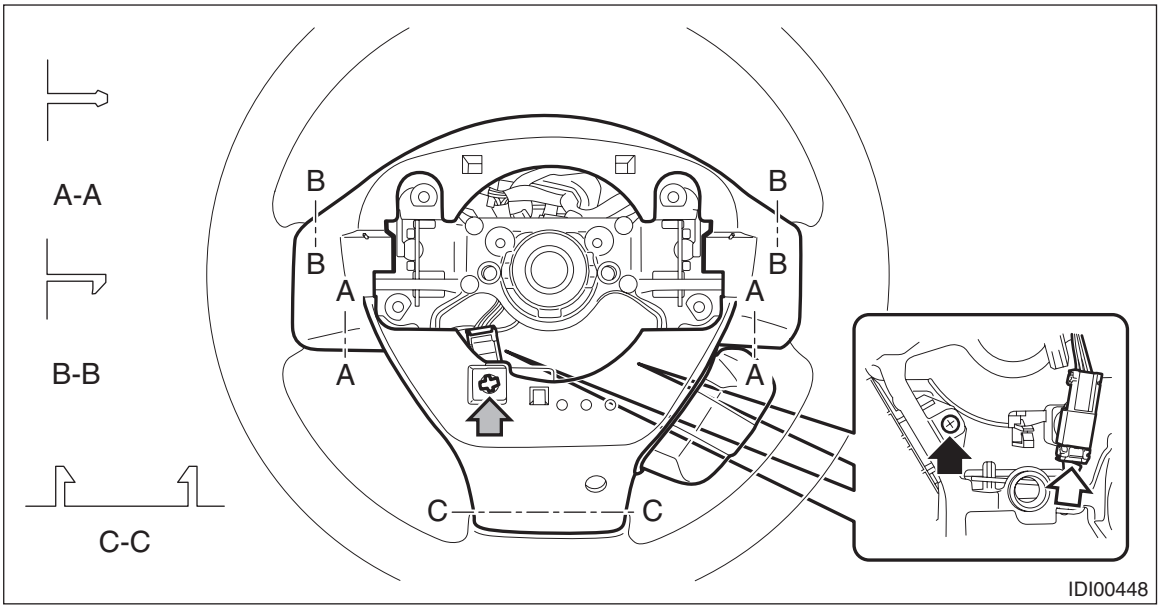


6) Remove the cruise control command switch assembly.
(1) Remove the screw, disconnect the connector and remove the paddle shift switch. (Model with paddle shift)

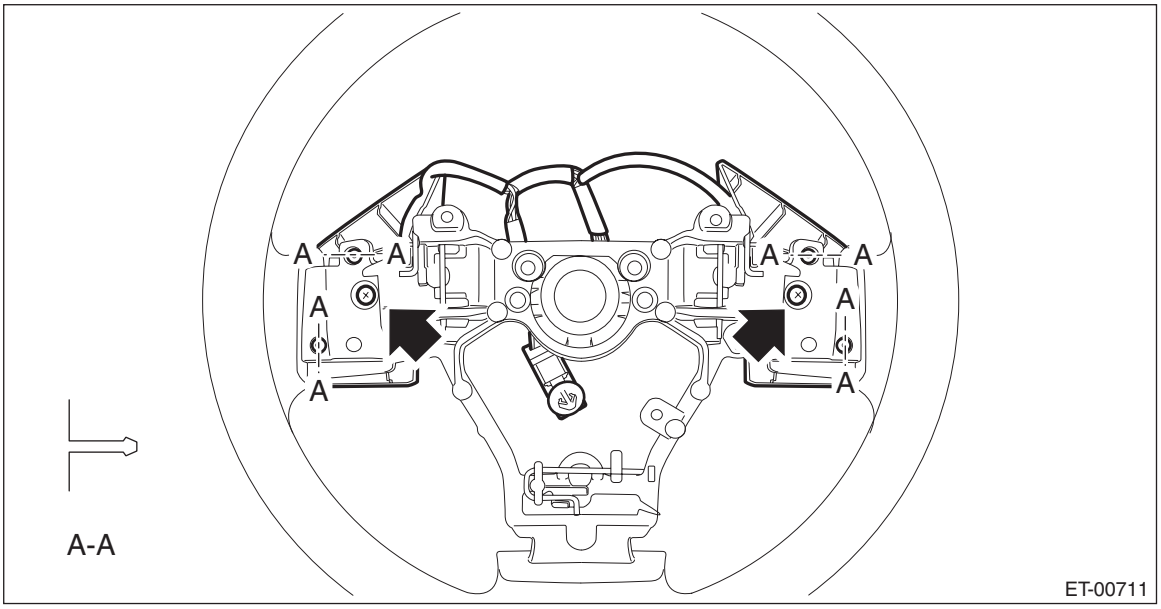


(2) Release the claws and clips, and remove the lower cover - steering wheel LWR.

NOTE:
For model with steering switch, remove the connector and screw.



(3) Remove the screw to remove the cruise control command switch assembly.



B: INSTALLATION

CAUTION:
• Before handling the airbag module, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". <Ref. to AB-10, CAUTION, General Description.>
• Do not allow harness and connectors to interfere or get tangled up with other parts.
• If the steering wheel and steering angle sensor (steering roll connector) are removed, perform "VDC sensor midpoint setting mode" of the VDC. <Ref. to VDC-18, VDC SENSOR MIDPOINT SETTING MODE, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>
1) Before installing steering wheel, be sure to adjust the direction of steering roll connector with steering wheel. <Ref. to AB-105, ADJUSTMENT, Roll Connector.>
2) Install each part in the reverse order of removal.

NOTE:
Align the alignment marks on the steering wheel and the column assembly - steering.

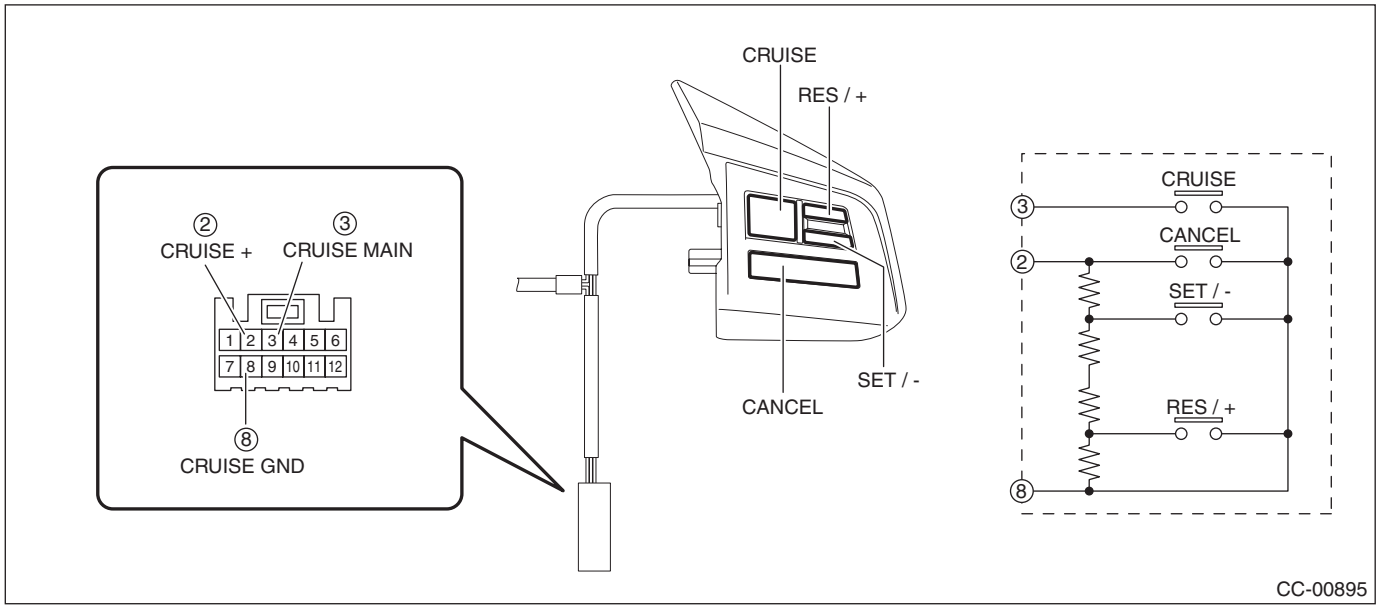
Tightening torque:
Steering wheel: 39 N·m (3.98 kgf-m, 28.8 ft-lb)

Clearance:
Between cover assembly - column and steering wheel: 4 — 6 mm (0.16 — 0.24 in)

C: INSPECTION

UNIT INSPECTION

PREPARATION TOOL:
Circuit tester
1) Check the resistance between switch terminals.



Terminal No.	Inspection conditions		Standard
2 — 8	CANCEL SET/– RES/+	All OFF	Approx. 4020 Ω
2 — 8	CANCEL	ON	Less than 1 Ω
2 — 8	SET/–	ON	Approx. 250 Ω
2 — 8	RES/+	ON	Approx. 1470 Ω
3 — 8	CRUISE (MAIN)	OFF	1 MΩ or more
3 — 8		ON	Less than 1 Ω

2) Replace the cruise control command switch assembly if the inspection result is not within the standard.

6. Combination Meter

A: NOTE

For the combination meter, refer to “INSTRUMENTATION/DRIVER INFO” section. <Ref. to IDI-15, Combination Meter.>

7. Stop Light & Brake Switch

A: NOTE

For stop light and brake switch, refer to “BRAKE” section. <Ref. to BR-72, INSPECTION, Stop Light Switch.>

8. Clutch Switch

A: NOTE

For clutch switch, refer to “CLUTCH SYSTEM” section. <Ref. to CL-27, Clutch Switch.>

9. Inhibitor Switch

A: NOTE

For inhibitor switch, refer to “CONTINUOUSLY VARIABLE TRANSMISSION” section. <Ref. to CVT-92, Inhibitor Switch.>

10.Transmission Control Module (TCM)

A: NOTE

For transmission control module (TCM), refer to “CONTINUOUSLY VARIABLE TRANSMISSION” section. <Ref. to CVT-136, Transmission Control Module (TCM).>

11.Neutral Position Switch

A: NOTE

For neutral position switch, refer to “MANUAL TRANSMISSION AND DIFFERENTIAL” section. <Ref. to 5MT-35, Switches and Harness.>

12.Diagnostics with Phenomenon

A: INSPECTION

Refer to “Diagnostics with Phenomenon” of “CRUISE CONTROL SYSTEM (DIAGNOSTICS)” section. <Ref. to CC(diag)-11, Diagnostics with Phenomenon.>

CRUISE CONTROL SYSTEM (DIAGNOSTICS)

CC(diag)

		Page
1.	Basic Diagnostic Procedure	2
2.	General Description	5
3.	Electrical Component Location	6
4.	Engine Control Module (ECM) I/O Signal	7
5.	Subaru Select Monitor	8
6.	Read Cancel Code	9
7.	Real-time Diagnosis	10
8.	Diagnostics with Phenomenon	11
9.	List of Cancel Code	13
10.	Diagnostic Procedure with Cancel Code	16

1. Basic Diagnostic Procedure

A: PROCEDURE

CAUTION:
• Before performing all diagnostics or cruise control diagnostics, always start the engine and make sure that the initial illumination of the ABS/VDC warning light has been ended. (If you start the diagnostics before performing the above procedures, the cancel code "43" is recorded and CRUISE indicator does not illuminate even though the CRUISE switch is pressed.)
• When performing diagnosis, observe the legal speed limit on the road.
• The cancel code will be also appear when cruise control is cancelled by the driver's operation. Do not confuse them.
• Be sure to get an assistant to support the diagnosis while driving, and have him/her operate the select monitor.

	Step	Check	Yes	No
1	**CHECK MALFUNCTION INDICATOR LIGHT.** Make sure the malfunction indicator light illuminates.	Does the malfunction indicator light illuminate?	Go to step **5**.	Go to step **2**.
2	**CHECK CRUISE INDICATOR LIGHT.** Make sure the cruise indicator light blinks.	Does the cruise indicator light blink?	Go to step **7**.	Go to step **3**.
3	**CHECK CRUISE SWITCH OPERATION.** Check the CRUISE switch operation. (Check the illumination of the CRUISE indicator.)	Is the CRUISE switch turned on? (Does the CRUISE indicator illuminate?)	Go to step **4**.	Go to phenomenon 1. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
4	**CHECK CRUISE CONTROL SET OPERATION.** Check the cruise control setting operation.	Can the cruise control be set while driving at 40 km/h (25 MPH) or more?	Go to step **8**.	Go to step **7**.
5	**CHECK DTC.** Read all DTCs using the Subaru Select Monitor.	Is an engine or ABS/VDC related DTC displayed?	Record the DTC. Go to step **6**.	Go to phenomenon 2. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
6	**CHECK FREEZE FRAME DATA.** Using the Subaru Select Monitor, check the Freeze Frame Data or Information in Trouble State.	Was the Freeze Frame Data or Information in Trouble State recorded?	Record the data. Perform the diagnosis according to the engine or ABS/VDC related DTC.	Perform the diagnosis according to the engine or ABS/VDC related DTC.
7	**CHECK CANCEL CODE.** Using the Subaru Select Monitor, read the cancel codes. NOTE: • Do not turn the ignition switch to OFF after the cruise control is deactivated. • Do not operate the cruise control command switch after the cruise control is deactivated. If the above is performed, the cancel code will be cleared.	Is it possible to read the cancel codes?	Perform the diagnosis according to the cancel code. <Ref. to CC(diag)-13, LIST, List of Cancel Code.>	Go to step **8**.

	Step	Check	Yes	No
8	**CHECK SET INDICATOR.** Check the illumination of the SET indicator.	Does the SET indicator illuminate?	Go to step **9**.	Go to phenomenon 3. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
9	**CHECK VEHICLE SPEED IS HELD WITHIN SET SPEED.** Make sure the vehicle speed is held within set speed.	Is the vehicle speed kept within setting speed ±3 km/h (±2 MPH)? (Make sure that on a level road.)	Go to step **10**.	Go to phenomenon 4. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
10	**CHECK RES/+ OPERATION.** Check the RES/+ switch operation.	Does the vehicle speed increase or return to set speed after RES/+ switch has been pressed?	Go to step **11**.	Go to phenomenon 5. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
11	**CHECK SET/– OPERATION.** Check the SET/– switch operation.	Does the vehicle speed decrease after SET/– switch has been pressed?	Go to step **12**.	Go to phenomenon 6. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
12	**CANCEL OPERATION CHECK.** Check the CANCEL switch operation.	Is the cruise control released after CANCEL switch has been pressed?	Go to step **13**.	Go to phenomenon 7. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
13	**CHECK CRUISE CONTROL RELEASE OPERATION.** Check the cruise control release operation.	Is the cruise control released after brake pedal has been depressed?	Go to step **14**.	Go to phenomenon 8. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>

	Step	Check	Yes	No
14	**CHECK CRUISE CONTROL RELEASE OPERATION.** Check the cruise control release operation.	Is the cruise control released after shifting to the neutral position?	Go to step **15**.	Go to phenomenon 9. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
15	**CHECK CRUISE CONTROL RELEASE OPERATION.** Check the cruise control release operation.	Is the cruise control released after depressing the clutch pedal?	Finish the diagnosis.	Go to phenomenon 10. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>

2. General Description

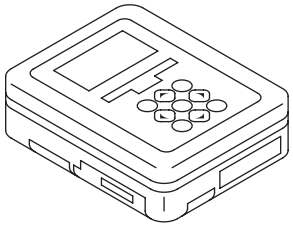
A: CAUTION

Airbag system wiring harness is routed near the cruise control command switch.

CAUTION:
• Do not use the electrical test equipment on the airbag system wiring harnesses and connector circuits.
• Be careful not to damage the airbag system wiring harness when servicing the cruise control command switch. Airbag system wiring harness is routed near the cruise control command switch.

B: PREPARATION TOOL

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.

C: INSPECTION

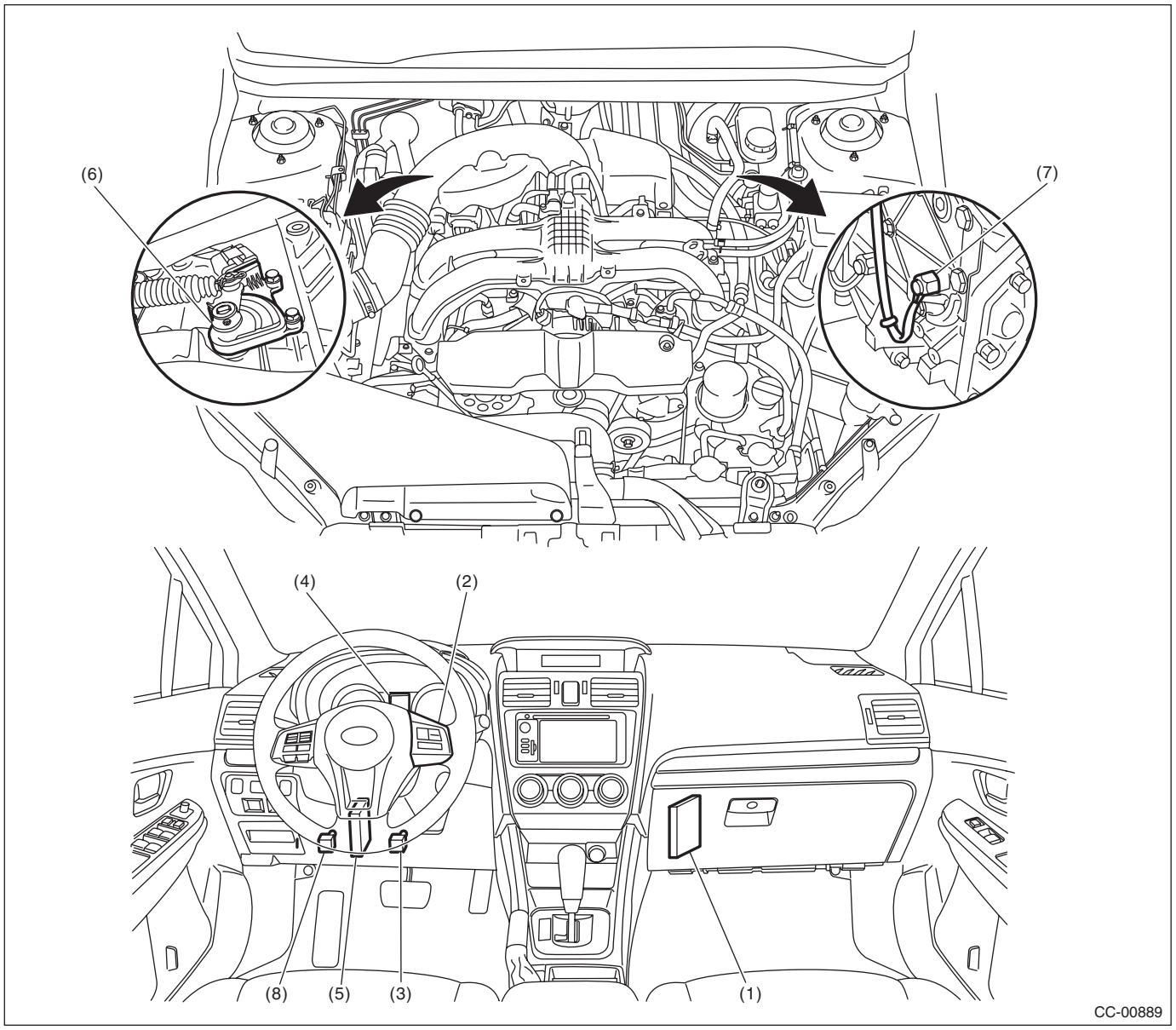
Measure the battery voltage and specific gravity of electrolyte.

Standard voltage:
12 V or more

Specific gravity:
1.260 or more

3. Electrical Component Location

A: LOCATION



(1) Engine control module (ECM)
(2) Cruise control command switch
(3) Stop light and brake switch
(4) Cruise indicator light and cruise set indicator light
(5) Transmission control module (TCM) (CVT model)
(6) Inhibitor switch (CVT model)
(7) Neutral position switch (MT model)
(8) Clutch switch (MT model)

4. Engine Control Module (ECM) I/O Signal

A: ELECTRICAL SPECIFICATION

For details on the input/output signals for the engine control module, refer to ENGINE (DIAGNOSTICS). <Ref. to EN(H4DO)(diag)-19, ELECTRICAL SPECIFICATION, Engine Control Module (ECM) I/O Signal.>

B: WIRING DIAGRAM

<Ref. to WI-63, WIRING DIAGRAM, Cruise Control System.>

5. Subaru Select Monitor

A: OPERATION

1. GENERAL DESCRIPTION

The on-board diagnosis function of the cruise control system uses Subaru Select Monitor.
The on-board diagnosis function operates in two categories, which are used depending on the type of problems;
1) Cruise Control Cancel Conditions Diagnosis:
(1) This category of diagnosis requires actual vehicle driving in order to determine the cause, as when cruise speed is cancelled during driving although cruise cancel condition is not entered.
(2) Cruise control memory in ECM stores the cancel code which occurred during driving. When there are multiple cancel code, they are shown on the Subaru Select Monitor.

CAUTION:
• The cruise control memory stores not only the cruise "cancel" which occurred (although "cancel" operation is not entered by the driver), but also the "cancel" condition input by the driver.
• The content of the latest memory (the latest code) is cleared when the ignition switch is turned to OFF. However, memory contents set by the diagnosis of faulty switches related to the system and cruise control will remain as trouble history (memory code) after the ignition switch is turned to OFF.
2) Real-time Diagnosis:
Real-time diagnosis function is used to determine whether or not the input signal system is in good order, according to signal emitted from switches, sensors, etc.
(1) Vehicle cannot be driven at cruise speed when the problem occurs in the cruise control system or relevant circuits.
(2) Monitor the signal conditions from switches and sensors.

2. BASIC OPERATION

For the operation procedure, refer to the "PC application help for Subaru Select Monitor".

6. Read Cancel Code

A: OPERATION

1) On «Main Menu» display, select {Each System Check}.
On «System Selection Menu» display, select {Engine Control System} and select the [OK]. Select [OK] after the engine type information is displayed.
2) Drive vehicle at 40 km/h (25 MPH) or more and set the cruise control.

CAUTION:
• When performing diagnosis, observe the legal speed limit on the road.
• The cancel code will be also appear when cruise control is cancelled by the driver's operation. Do not confuse them.
• Be sure to get an assistant to support the diagnosis while driving, and have him/her operate the select monitor.
3) When the set speed is cancelled by itself (without any cancel operations such as applying brake) or when the cruise control could not be set by performing the setting operation, selecting the {Cancel Code(s) Display} on the engine malfunction diagnosis screen will display the cancel code on the select monitor display.

NOTE:
The {Latest Diagnostic Code(s)} and {Memorized Diagnostic Code(s)} are contained in the cancel code. The latest code recognized during current test drive is displayed in {Latest Diagnostic Code(s)}. Cancel codes resulting from fault diagnosis of switches relating to the system and cruise control are also displayed in {Memorized Diagnostic Code(s)}.
4) Perform Engine DTC Clear Memory operation. <Ref. to EN(H4DO)(diag)-56, OPERATION, Clear Memory Mode.>
Cancel codes for switches relating to the system and cruise control are deleted by clearing memory on the engine side.

NOTE:
• The latest code will be cleared by turning ignition switch to OFF.
• For detailed operation procedures, refer to "PC application help for Subaru Select Monitor".
• For details on cancel codes, refer to List of Cancel Code. <Ref. to CC(diag)-13, List of Cancel Code.>

7. Real-time Diagnosis

A: OPERATION

1) Select {Current Data Display & Save} in «Engine Diagnosis» display screen.
2) Make sure that normal display is shown when operated as follows:
- Depress and release the brake pedal. (Stop light switch and brake switch are turned ON.)
- Turn the “CRUISE” switch to ON.
- Turn the “CANCEL” switch to ON.
- Turn the “SET/–” switch to ON.
- Turn the “RES/+” switch to ON.
- Depress or release the clutch switch.
- Place the shift lever in any position other than neutral.

NOTE:
For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

8. Diagnostics with Phenomenon

A: DIAGNOSTIC PROCEDURE WITH PHENOMENON

Phenomenon		Check item	Reference
1	CRUISE switch is not turned ON. (CRUISE indicator does not illuminate.) Or the cruise control is cancelled without CRUISE switch operation.	(1) Perform cruise cancel conditions diagnosis.	Perform the diagnosis according to displayed cancel code.
		(2) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(3) Check the cruise control command switch.	<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>
		(4) Check the CRUISE indicator.	<Ref. to CC(diag)-12, CHECK CRUISE INDICATOR LIGHT AND CRUISE SET INDICATOR LIGHT, Diagnostics with Phenomenon.>
2	Cruise control cannot be set. Or the cruise control is cancelled without canceling operation.	(1) Perform cruise cancel conditions diagnosis.	Perform the diagnosis according to displayed cancel code.
		(2) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(3) Check the cruise control command switch.	<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>
		(4) Check stop light switch and brake switch.	<Ref. to BR-69, Stop Light Switch.> <Ref. to CC(diag)-18, 12, Diagnostic Procedure with Cancel Code.>
		(5) Check clutch switch.	<Ref. to CL-27, Clutch Switch.> <Ref. to CC(diag)-20, 13, Diagnostic Procedure with Cancel Code.>
		(6) Check the neutral position switch.	<Ref. to CC(diag)-21, 14, Diagnostic Procedure with Cancel Code.> <Ref. to CC(diag)-25, 62, Diagnostic Procedure with Cancel Code.>
		(7) Check vehicle speed sensor.	<Ref. to CC(diag)-24, 22, Diagnostic Procedure with Cancel Code.>
3	SET indicator does not illuminate.	Check the SET indicator.	<Ref. to CC(diag)-12, CHECK CRUISE INDICATOR LIGHT AND CRUISE SET INDICATOR LIGHT, Diagnostics with Phenomenon.>
4	Vehicle speed is not held within set speed ±3 km/h (±2 MPH).	Check the vehicle speed sensor.	<Ref. to CC(diag)-24, 22, Diagnostic Procedure with Cancel Code.>
5	Vehicle speed does not increase or does not return to set speed after RES/+ switch has been pressed.	(1) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(2) Check the RES/+ switch.	<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>
6	Vehicle speed does not decrease after SET/– switch has been pressed.	(1) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(2) Check the SET/– switch.	<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>
7	Cruise control is not released after CANCEL switch has been pressed.	(1) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(2) Check the CANCEL switch.	<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>
8	Cruise control is not released after brake pedal has been depressed.	(1) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(2) Check stop light switch and brake switch.	<Ref. to CC(diag)-18, 12, Diagnostic Procedure with Cancel Code.> <Ref. to BR-70, INSTALLATION, Stop Light Switch.>
9	Cruise control is not released after shifting to the neutral position.	(1) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(2) Check the neutral position switch.	<Ref. to CC(diag)-21, 14, Diagnostic Procedure with Cancel Code.> <Ref. to CC-16, Neutral Position Switch.>

Phenomenon		Check item	Reference
10	Cruise control is not released after clutch pedal has been depressed.	(1) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(2) Check clutch switch.	<Ref. to CC(diag)-20, 13, Diagnostic Procedure with Cancel Code.> <Ref. to CL-27, CLUTCH SWITCH, INSTALLATION, Clutch Switch.>

B: CHECK CRUISE INDICATOR LIGHT AND CRUISE SET INDICATOR LIGHT

TROUBLE SYMPTOM:

Cruise control can be set, but the CRUISE indicator and SET indicator do not illuminate.

Step		Check	Yes	No
1	**CHECK CRUISE INDICATOR LIGHT AND CRUISE SET INDICATOR LIGHT.** Check the combination meter. <Ref. to IDI-6, OPERATION, Combination Meter System.>	Do the CRUISE & SET indicators illuminate?	Go to step **2**.	Replace the meter case assembly. <Ref. to IDI-15, Combination Meter.>
2	**CHECK LAN SYSTEM.** Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Is a DTC of the LAN system detected?	Perform the diagnosis according to DTC for LAN system.	Replace the ECM. <Ref. to FU(H4DO)-101, Engine Control Module (ECM).>

9. List of Cancel Code

A: LIST

NOTE:
• The cancel code is registered even when cancel is performed intentionally by the driver.
• Cancel codes are cleared if the ignition switch is turned to OFF.
• If a different cancel code is input after a cancel code (latest code) has been input, the latest code is overwritten.
• If the cruise indicator light is flashing, a malfunction is occurring in the system or cruise control related switch. The cancel code at this time is saved even after ignition switch is OFF as a memory code of a past malfunction.
• To display a cancel code, use the Subaru Select Monitor to read the code after the cruise control is deactivated during a driving test.

Cancel code	Item	Contents of diagnosis	Note
11	Main switch	CRUISE switch of cruise control command switch is turned to OFF, and then the cruise control is released.	This code is displayed without operating the CRUISE switch. <Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>
12	Stop & brake switch	Stop light switch or brake switch is turned to ON, and then the cruise control is released.	This code is displayed without depressing the brake pedal. <Ref. to CC(diag)-18, 12, Diagnostic Procedure with Cancel Code.>
13	Clutch switch	Clutch switch is turned to ON, and then the cruise control is released.	This code is displayed without depressing the clutch pedal. <Ref. to CC(diag)-20, 13, Diagnostic Procedure with Cancel Code.>
14	Neutral switch	Neutral position switch is turned to ON, and then the cruise control is released.	This code is displayed without shifting to neutral position. <Ref. to CC(diag)-21, 14, Diagnostic Procedure with Cancel Code.>
15	Cancel switch	Cancel switch is turned to ON, and then the cruise control is released.	This code is displayed without operating the cancel switch. <Ref. to CC(diag)-22, 15, Diagnostic Procedure with Cancel Code.>
16	Ignition switch	Ignition switch is turned to OFF, and then the cruise control is released.	This code is displayed without operating the ignition switch. <Ref. to CC(diag)-23, 16, Diagnostic Procedure with Cancel Code.>

List of Cancel Code

Cancel code	Item	Contents of diagnosis	Note
21	Cruise control switch malfunction when the ignition switch is ON	When the ignition switch is turned to ON, each switch of cruise control command switch is already turned to ON.	This code is displayed when the ignition switch is turned to ON without operating the cruise control command switch. <Ref. to CC(diag)-23, 21, Diagnostic Procedure with Cancel Code.>
22	Abnormality of change in vehicle speed	Malfunction of vehicle speed signal variation is detected.	<Ref. to CC(diag)-24, 22, Diagnostic Procedure with Cancel Code.>
24	Abnormality of switches related to cruise control	Open circuit of the cruise control switch is detected during cruise driving. (The system is judged as model without cruise control.)	This code is displayed with normal operation. <Ref. to CC(diag)-24, 24, Diagnostic Procedure with Cancel Code.>
31	Abnormal engine speed Signal	• Abnormal increase of engine speed is detected. • Gear is placed in Neutral, 1st or Reverse position.	Cruise in 2nd shift position or more. <Ref. to CC(diag)-24, 31, Diagnostic Procedure with Cancel Code.>
32	Cruse Control out of Range	• Controlled vehicle speed decreased under the limit during cruising. • Set operation was performed at vehicle speed unavailable for setting. • RESUME operation was performed without memorized vehicle speed.	This code is displayed, though the vehicle speed is increased to the speed available for cruise set and set operation was performed again. <Ref. to CC(diag)-24, 32, Diagnostic Procedure with Cancel Code.>
34	Prohibition of cruise control at continuing big Accel. angle	The vehicle has been driven at higher speed than set vehicle speed for an abnormally long time (approximately 10 minutes) during cruise driving.	This code is displayed when driving for a long period of time at higher speed than appropriate cruise set vehicle speed by operating accelerator pedal. In this case, the cruise setting is deactivated. <Ref. to CC(diag)-24, 34, Diagnostic Procedure with Cancel Code.>
35	Prohibition of cruise control at vehicle speed F/B malfunction	Set vehicle speed cannot be kept because of some reasons (steep uphill, parking brake, abnormal decrease of engine output, etc.) during cruise driving.	This code is displayed when driving condition is not suitable for cruise control. Perform cruise set operation again after clearing the possible cause. <Ref. to CC(diag)-24, 35, Diagnostic Procedure with Cancel Code.>

List of Cancel Code

Cancel code	Item	Contents of diagnosis	Note
41	VDC/TCS/EPB Operating	Vehicle dynamics control (VDC), TCS or EPB is operated during cruise driving or cruise setting.	This code is displayed when driving condition is not suitable for cruise control. Perform cruise set operation again after clearing the possible cause. <Ref. to CC(diag)-25, 41, Diagnostic Procedure with Cancel Code.>
43	ABS/VDC Failure	• During cruise driving or cruise setting, the situation that some or all functions for ABS or VDC can not work is detected. • CRUISE indicator does not illuminate even though you pressed the CRUISE switch before starting the engine.	<Ref. to CC(diag)-25, 43, Diagnostic Procedure with Cancel Code.>
44	Body Integrated unit Failure	Body integrated unit system malfunction is detected during cruise driving or cruise setting.	<Ref. to CC(diag)-25, 44, Diagnostic Procedure with Cancel Code.>
45	Meter Failure	Combination meter malfunction is detected during cruise driving or cruise setting.	<Ref. to CC(diag)-25, 45, Diagnostic Procedure with Cancel Code.>
49	TCM Failure	Transmission control module (TCM) malfunction is detected during cruise driving or cruise setting.	<Ref. to CC(diag)-25, 49, Diagnostic Procedure with Cancel Code.>
61	Brake switch abnormal	Malfunction in the stop light & brake switch is detected.	<Ref. to CC(diag)-25, 61, Diagnostic Procedure with Cancel Code.>
62	Neutral switch abnormal	Neutral position switch malfunction is detected.	<Ref. to CC(diag)-25, 62, Diagnostic Procedure with Cancel Code.>
63	Abnormality 1 of change in vehicle speed	Malfunction of vehicle speed signal variation is detected.	<Ref. to CC(diag)-25, 63, Diagnostic Procedure with Cancel Code.>
64	Engine Sensor Failure 1	Malfunction related to engine is detected.	<Ref. to CC(diag)-26, 64, Diagnostic Procedure with Cancel Code.>
65	Abnormality of switches related to cruise control 1	Cruise control command switch malfunction is detected. (When the switch is pressed ON for a long time (approximately two minutes), stuck ON condition is detected.)	<Ref. to CC(diag)-26, 65, Diagnostic Procedure with Cancel Code.>
66	Cruise Control Calculation Error	Cruise control calculation (microcomputer) malfunction is detected.	<Ref. to CC(diag)-26, 66, Diagnostic Procedure with Cancel Code.>

10.Diagnostic Procedure with Cancel Code

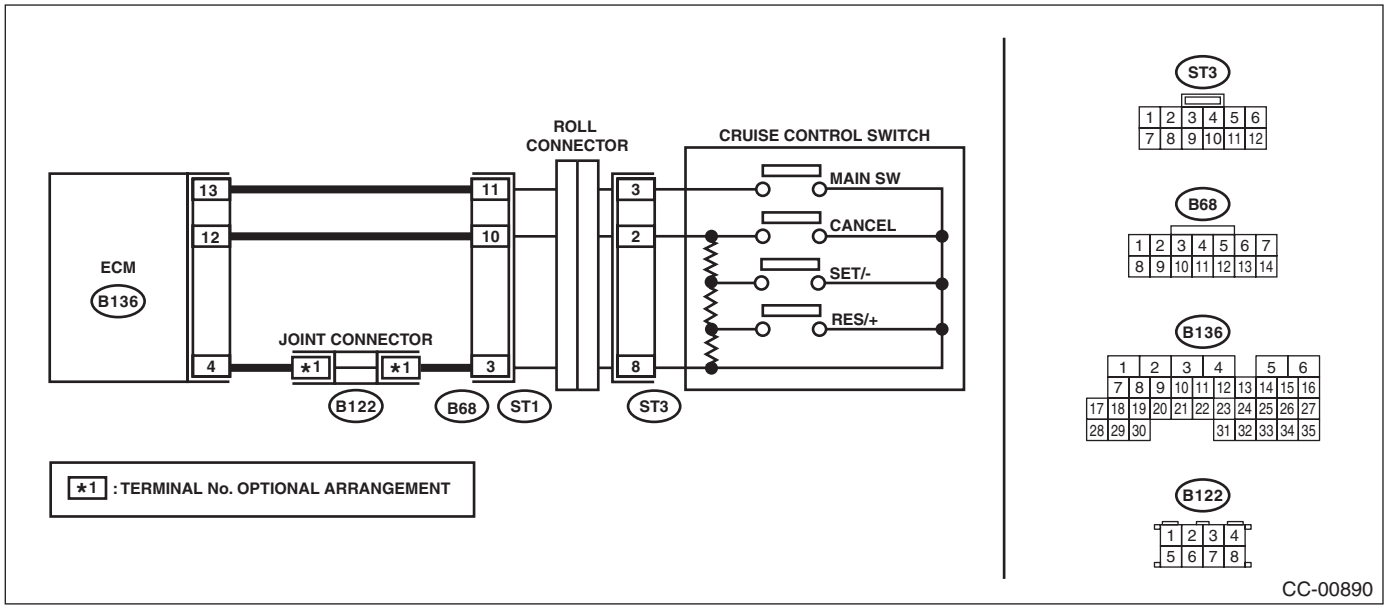
A: 11

When CRUISE switch is pressed, or a malfunction related to CRUISE switch occurs, this is detected.

TROUBLE SYMPTOM:

- Cruise control cannot be set. (Cancelled immediately.)
- Cruise control cannot be released.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CRUISE CONTROL COMMAND SWITCH CIRCUIT.** 1) Remove the driver's airbag module. <Ref. to AB-40, REMOVAL, Driver's Airbag Module.> 2) Disconnect the harness connector of cruise control command switch. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(ST3) No. 3 (+) — Chassis ground (–):*** ***(ST3) No. 2 (+) — Chassis ground (–):***	Is the voltage 5 V or more?	Go to step **2**.	Check the harness between cruise control command switch and ECM, and the steering roll connector for open or short circuit, or for poor contact.
2	**CHECK CRUISE CONTROL COMMAND SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Remove the cruise control command switch. <Ref. to CC-7, REMOVAL, Cruise Control Command Switch.> 3) Measure the resistance between harness connector terminal and chassis ground. ***Connector & terminal*** ***(ST3) No. 8 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **3**.	Check for open circuit between cruise control command switch, ECM, and chassis ground and check the ECM.
3	**CHECK CRUISE CONTROL COMMAND SWITCH.** Measure the resistance between switch terminals when the cruise control command switch is not depressed. ***Terminals*** ***No. 2 — No. 8:***	Is the resistance approx. 4 kΩ?	Go to step **4**.	Replace the cruise control command switch. <Ref. to CC-7, Cruise Control Command Switch.>

	Step	Check	Yes	No
4	**CHECK CANCEL SWITCH.** 1) Turn the ignition switch to OFF. 2) Remove the cruise control command switch. <Ref. to CC-7, REMOVAL, Cruise Control Command Switch.> 3) Measure the resistance between switch terminals with the CANCEL switch pressed. ***Terminals*** ***No. 2 — No. 8:***	Is the resistance approx. less than 1 Ω when the CANCEL switch is pressed?	Go to step **5**.	Replace the cruise control command switch. <Ref. to CC-7, Cruise Control Command Switch.>
5	**CHECK SET/– SWITCH.** Measure the resistance between the switch terminals with the SET/– switch pressed. ***Terminals*** ***No. 2 — No. 8:***	Is the resistance approx. 250 Ω when the SET/– switch is pressed?	Go to step **6**.	Replace the cruise control command switch. <Ref. to CC-7, Cruise Control Command Switch.>
6	**CHECK RES/+ SWITCH.** Measure the resistance between the switch terminals with the RES/+ switch pressed. ***Terminals*** ***No. 2 — No. 8:***	Is the resistance approx. 1,500 Ω when the RES/+ switch is pressed?	Replace the ECM. <Ref. to FU(H4DO)-101, Engine Control Module (ECM).>	Replace the cruise control command switch. <Ref. to CC-7, Cruise Control Command Switch.>

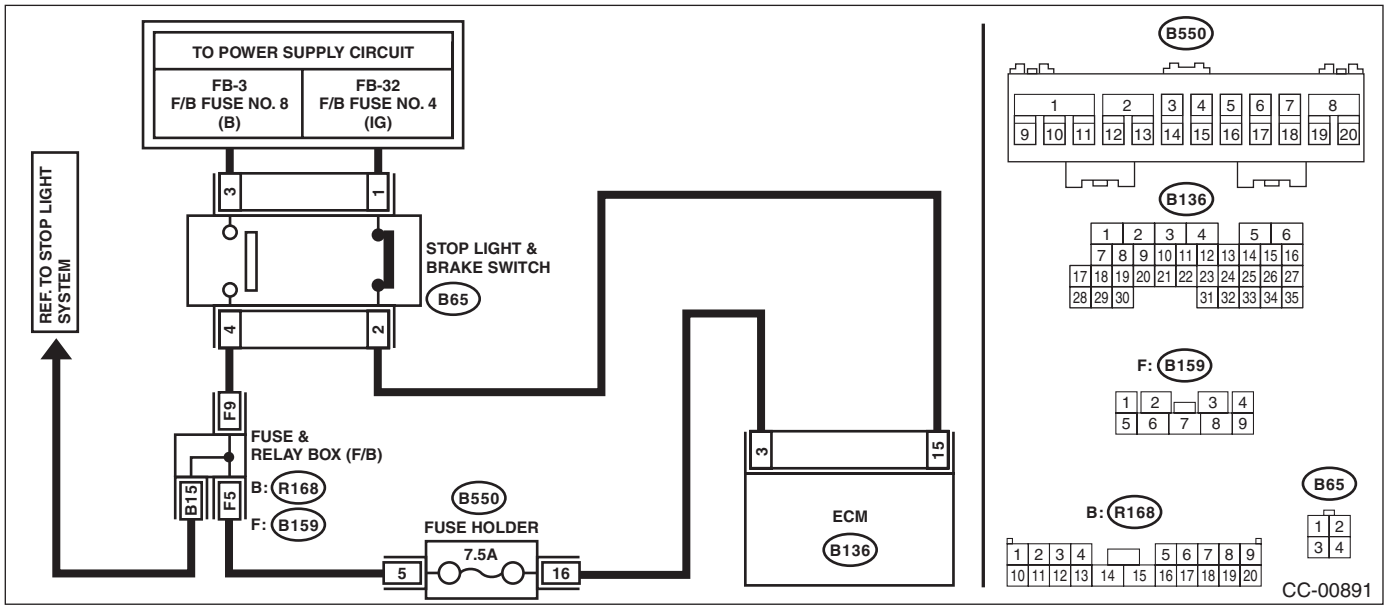
B: 12

Detected when brake pedal is depressed or malfunction related to stop light & brake switch occurs.

TROUBLE SYMPTOM:

- Cruise control cannot be set.
- Cruise control cannot be released.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK STOP LIGHT & BRAKE SWITCH.** Check the stop light & brake switch. <Ref. to CC-12, Stop Light & Brake Switch.>	Is the stop light & brake switch and installation position OK?	Go to step **2**.	Replace the stop light & brake switch. Or adjust the installation position.
2	**CHECK STOP LIGHT & BRAKE SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the stop light & brake switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(B65) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	• Check fuse No. 8 (in fuse & relay box). • Check for open or short in the harness between stop light & brake switch and fuse & relay box.
3	**CHECK STOP LIGHT & BRAKE SWITCH CIRCUIT.** Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(B65) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **4**.	• Check fuse No. 4 (in fuse & relay box). • Check for open or short in the harness between stop light & brake switch and fuse & relay box.

	Step	Check	Yes	No
4	**CHECK STOP LIGHT & BRAKE SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of ECM. 3) Measure the resistance between ECM harness connector terminal and stop light & brake switch harness connector terminal. ***Connector & terminal*** ***(B136) No. 3 — (B65) No. 4:*** ***(B136) No. 15 — (B65) No. 2:***	Is the resistance less than 10 Ω?	Replace the ECM. <Ref. to FU(H4DO)-101, Engine Control Module (ECM).>	Repair the harness.

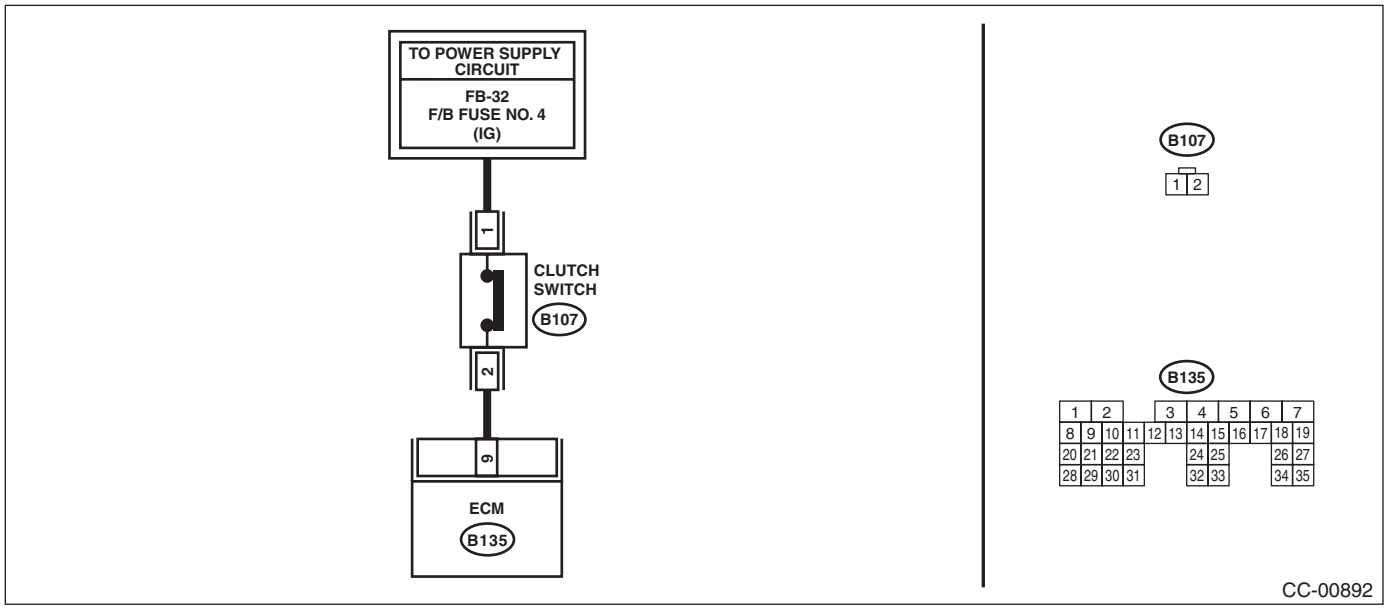
C: 13

Detected when clutch pedal is depressed or malfunction related to clutch switch occurs.

TROUBLE SYMPTOM:

- Cruise control cannot be set.
- Cruise control cannot be released.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CLUTCH SWITCH.** Check the clutch switch. <Ref. to CC-13, Clutch Switch.>	Is the clutch switch and installation position OK?	Go to step **2**.	Replace the clutch switch. Or adjust the installation position.
2	**CHECK CLUTCH SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the clutch switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(B107) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	• Check fuse No. 4 (in fuse & relay box). • Check open or shorted circuit of harness between clutch switch and fuse & relay box.
3	**CHECK CLUTCH SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of ECM. 3) Measure the resistance between clutch switch harness connector terminal and ECM harness connector terminal. ***Connector & terminal*** ***(B107) No. 2 — (B135) No. 9:***	Is the resistance less than 10 Ω?	Replace the ECM. <Ref. to FU(H4DO)-101, Engine Control Module (ECM).>	Repair the harness.

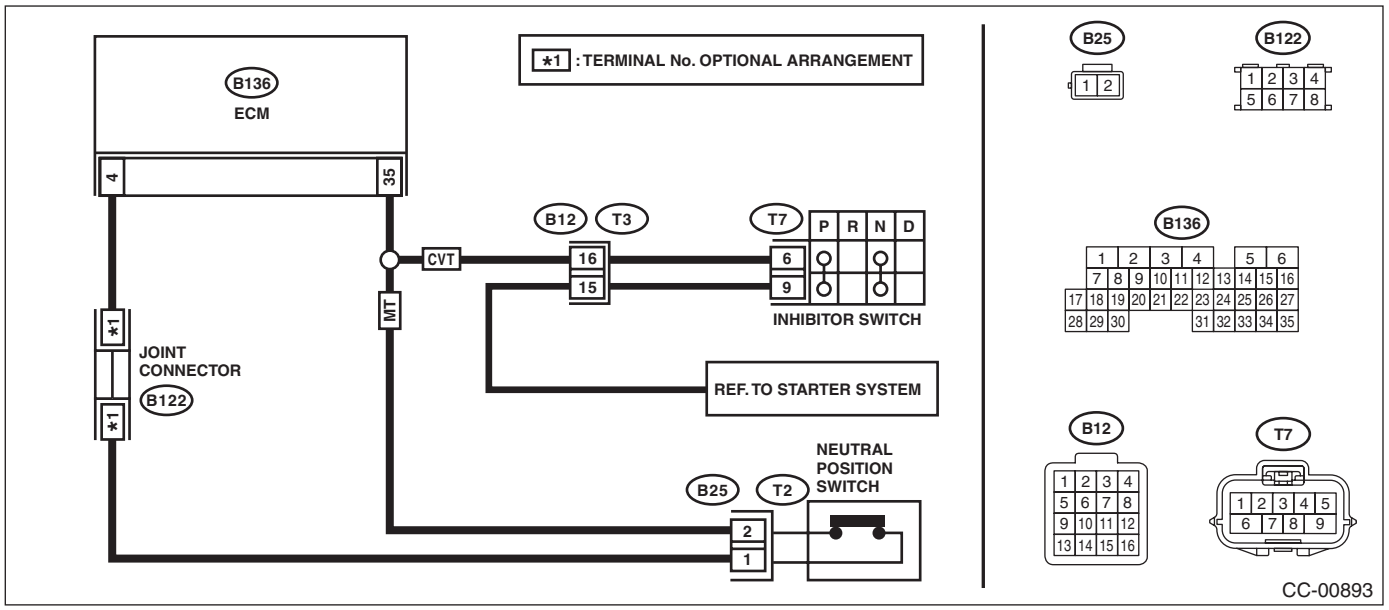
D: 14

Detected when select lever is set in the neutral position, or when malfunction related to neutral position switch occurs.

TROUBLE SYMPTOM:

Cruise control cannot be set.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK TRANSMISSION TYPE.**	Is the transmission type CVT?	Go to step **2**.	Go to step **5**. (MT model)
2	**CHECK INHIBITOR SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the inhibitor switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(T7) No. 6 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Check for open or short in the harness between inhibitor switch and ECM.
3	**CHECK INHIBITOR SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the starter motor harness connector. 3) Measure the resistance between inhibitor switch harness connector terminal and starter motor. ***Connector & terminal*** ***(T7) No. 9 — Starter motor:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair the harness.
4	**CHECK INHIBITOR SWITCH.** Remove and check the inhibitor switch. <Ref. to CC-14, Inhibitor Switch.>	Is the inhibitor switch working normal?	Replace the ECM. <Ref. to FU(H4DO)-101, Engine Control Module (ECM).>	Replace the inhibitor switch.

	Step	Check	Yes	No
5	**CHECK NEUTRAL POSITION SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the neutral position switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(B25) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **6**.	Check for open or short in the harness between neutral position switch and ECM.
6	**CHECK NEUTRAL POSITION SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Measure resistance between harness connector terminal of neutral position switch and chassis ground. ***Connector & terminal*** ***(B25) No. 1 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **7**.	Repair the harness.
7	**CHECK NEUTRAL POSITION SWITCH.** Remove and check the neutral position switch. <Ref. to CC-16, Neutral Position Switch.>	Is the neutral position switch OK?	Replace the ECM. <Ref. to FU(H4DO)-101, Engine Control Module (ECM).>	Replace the neutral position switch.

E: 15

Detected when CANCEL switch is pressed or malfunction related to CRUISE switch occurs.

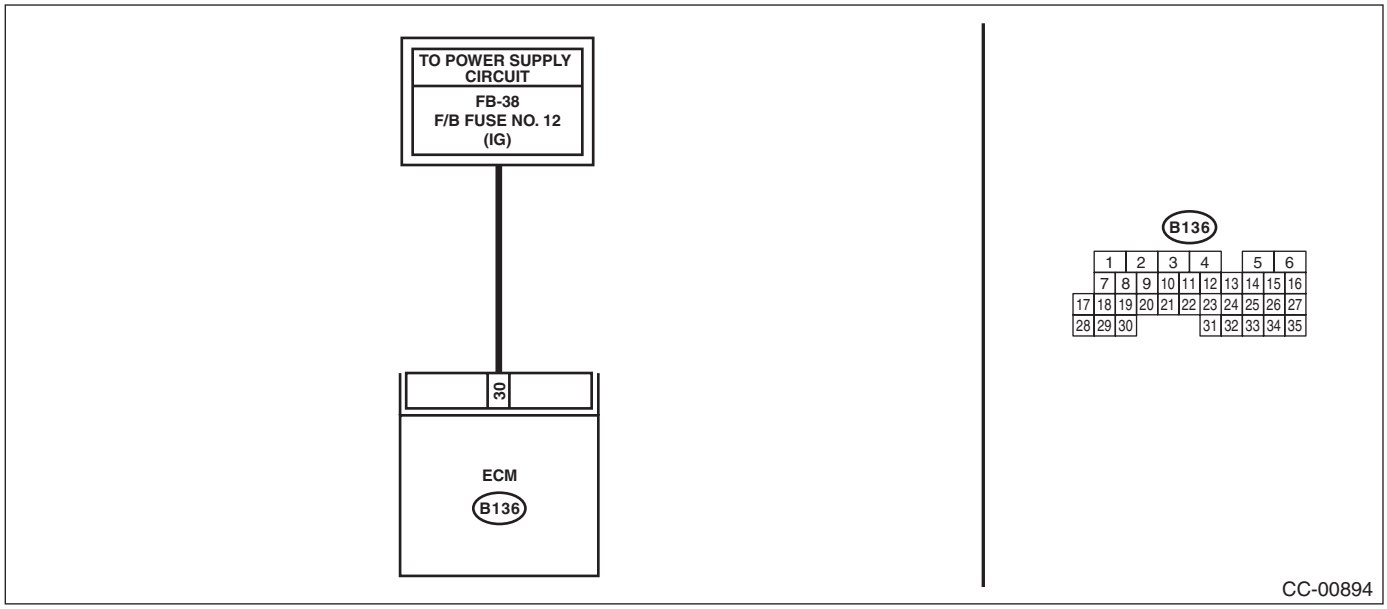
TROUBLE SYMPTOM:

- Cruise control cannot be set. (Cancelled immediately.)
- Cruise control cannot be released.

Refer to DTC 11 for diagnostic procedure.
<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>

F: 16

Detected when ignition switch is turned to OFF or malfunction related to the ignition switch occurs.
TROUBLE SYMPTOM:
Cruise control cannot be set.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK IGNITION SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the ECM harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(B136) No. 30 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Check for poor contact of ECM connector.	• Check fuse No. 12 (in fuse & relay box). • Check the harness for open or short circuit between ignition switch and ECM.

G: 21

Cruise control command switch malfunction is detected.
TROUBLE SYMPTOM:
- Cruise control cannot be set. (Cancelled immediately.)
- Cruise control cannot be released.

Refer to DTC 11 for diagnostic procedure.
<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>

H: 22

Malfunction related to vehicle speed sensor is detected.
DIAGNOSIS:
Open or shorted circuit in vehicle speed sensor system.
TROUBLE SYMPTOM:
Cruise control cannot be set. (Cancelled immediately.)

	Step	Check	Yes	No
1	**CHECK ABS OR VDC WARNING LIGHT.** 1) Turn the ignition switch to ON. 2) After the initial operation of combination meter is completed, check if ABS or VDC warning light continues to illuminate.	Does the warning light continue to illuminate?	Check the VDCCM. <Ref. to VDC(diag)-2, Basic Diagnostic Procedure.>	Go to step **2**.
2	**CHECK DTC OF LAN COMMUNICATION CIRCUIT.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is DTC displayed?	Perform inspection according to DTC.	Replace the ECM. <Ref. to FU(H4DO)-101, Engine Control Module (ECM).>

I: 24

Malfunction in cruise control-related switch is detected.
TROUBLE SYMPTOM:
- Cruise control cannot be set. (Cancelled immediately.)
- Cruise control cannot be released.

Refer to DTC 11 for diagnostic procedure.
<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>

J: 31

Engine speed signal malfunction is detected.
Abnormal increase of engine speed is detected.
Gear is placed in 1st or Reverse position.
After driving at the 2nd gear position or higher, perform the cruise setting again. If a cancel code is not detected, it is normal.

K: 32

This DTC is detected out of vehicle speed range.
Increase vehicle speed high enough to allow the cruise control to function, and then perform setting operation again.
If cancel code is still detected after setting cruise again, perform the diagnosis for DTC 22.
Refer to DTC 22 for diagnostic procedure.
<Ref. to CC(diag)-24, 22, Diagnostic Procedure with Cancel Code.>

L: 34

The vehicle has been driven at a speed higher than set speed for a long time (approximately 10 minutes) during cruise driving.
This cancel code is detected when driving for a long period of time at a speed higher than appropriate for cruise control setting by operating the accelerator pedal.
Perform the cruise control setting operation again. If the cancel code is not detected, it is normal.

M: 35

Detected when it is impossible to perform the vehicle speed feedback.
Set vehicle speed cannot be kept for some reasons (steep uphill, unreleased parking brake, etc.) during cruise driving.
Cancel code is detected when driving conditions are not suitable for cruise control.
Perform cruise set operation again after clearing the possible cause.

N: 41

VDC/TCS/EPB is operated.
Vehicle dynamics control (VDC) or TCS/EPB is operated during cruise driving or cruise setting.
<Ref. to VDC(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

O: 43

- The situation that some or all functions for ABS/VDC can not work is detected.

During cruise driving or cruise setting, the situation that some or all functions for ABS/VDC can not work is detected.
<Ref. to VDC(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

- CRUISE indicator does not illuminate even though you pressed the CRUISE switch before starting the engine.

Detected when the CRUISE switch is pressed during the initial diagnosis of ABS/VDC. It is normal if the CRUISE indicator illuminates when you press the CRUISE switch again after starting the engine and confirming that the initial illumination of the ABS/VDC warning light has been ended.

P: 44

Body integrated unit malfunction is detected.
Body integrated unit system malfunction is detected during cruise driving or cruise setting.
<Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

Q: 45

Malfunction of the combination meter is detected.
Combination meter malfunction is detected during cruise driving or cruise setting.
<Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

R: 49

Automatic transmission malfunction is detected.
Automatic transmission malfunction is detected during cruise driving or cruise control setting.
<Ref. to CVT(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

S: 61

Malfunction in the stop light & brake switch is detected.
TROUBLE SYMPTOM:

- Cruise control cannot be set.
- Cruise control cannot be released.

Refer to DTC 12 for diagnostic procedure.
<Ref. to CC(diag)-18, 12, Diagnostic Procedure with Cancel Code.>

T: 62

Neutral position switch malfunction is detected.
TROUBLE SYMPTOM:
Cruise control cannot be set.
Refer to DTC 14 for diagnostic procedure.
<Ref. to CC(diag)-21, 14, Diagnostic Procedure with Cancel Code.>

U: 63

Malfunction of vehicle speed signal variation is detected.
TROUBLE SYMPTOM:
Cruise control cannot be set. (Cancelled immediately.)
Refer to DTC 22 for diagnostic procedure.
<Ref. to CC(diag)-24, 22, Diagnostic Procedure with Cancel Code.>

V: 64

Malfunction related to engine is detected.
Refer to the Engine Diagnostic Procedure for diagnostic procedure.
<Ref. to EN(H4DO)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

W: 65

Cruise control command switch malfunction is detected.
While the command switch is pressed ON for a long time (approximately two minutes), stuck ON condition is detected.
TROUBLE SYMPTOM:
- Cruise control cannot be set. (Cancelled immediately.)
- Cruise control cannot be released.

Refer to DTC 11 for diagnostic procedure.
<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>

X: 66

Cruise control calculation malfunction is detected.
Refer to the Engine Diagnostic Procedure for diagnostic procedure.
<Ref. to EN(H4DO)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

IMMOBILIZER (DIAGNOSTICS)

IM(diag)

Page

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1. General Description

A: CAUTION

• Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When replacing the audio, control module and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
• Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
• Adjust parts to the given specifications.
• Connect the connectors securely during reassembly.
• After reassembly, make sure that the each component operates smoothly.

B: PREPARATION TOOL

1. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Steering wheel puller	Used for removing the steering wheel.

2. Audio System

A: WIRING DIAGRAM

1. AUDIO

Refer to “Audio System” in the wiring diagram. <Ref. to WI-42, WIRING DIAGRAM, Audio System.>

B: INSPECTION

Symptoms	Repair order
No power coming in. (No display and no sound from speakers)	1. Check the fuse and power supply for audio. 2. Check the audio ground. 3. Remove the audio and repair them.
A specific speaker does not operate.	1. Check the speaker. 2. Check the output circuit between audio and speaker.
Audio generates noise with engine running.	1. Check the audio ground. 2. Check the generator. 3. Check the ignition coil. 4. Remove the audio and repair them.
Volume is low in AM and FM modes or interference noise occurs.	1. Check the antenna. 2. Check the rear window defogger. 3. Check the audio ground. 4. Remove the audio and repair them.
Rear window defogger generates noise when it operate.	1. Check the rear window defogger.

C: NOTE

For procedure of each component in the audio system, refer to the respective sections.

- Audio unit: <Ref. to ET-7, Audio.>
- Front side speaker: <Ref. to ET-9, TWEETER, REMOVAL, Front Speaker.>
- Front door speaker: <Ref. to ET-10, DOOR SPEAKER, REMOVAL, Front Speaker.>
- Rear door speaker: <Ref. to ET-12, Rear Speaker.>
- Antenna: <Ref. to ET-14, Antenna.>
- Steering satellite switch: <Ref. to ET-25, Steering Satellite Switch.>
- AUX input terminal: <Ref. to ET-40, AUX Input Terminal.>

3. Navigation System

A: WIRING DIAGRAM

Refer to “Navigation System” in the wiring diagram. <Ref. to WI-112, WIRING DIAGRAM, Navigation System.>

B: INSPECTION

NOTE:
If no problems are found in “CHECK NAVIGATION OPERATION”, “CHECK EACH CONNECTION” and “CHECK EACH VEHICLE SIGNAL” as described below, check the navigation system circuit. <Ref. to WI-112, WIRING DIAGRAM, Navigation System.>

1. CHECK NAVIGATION OPERATION

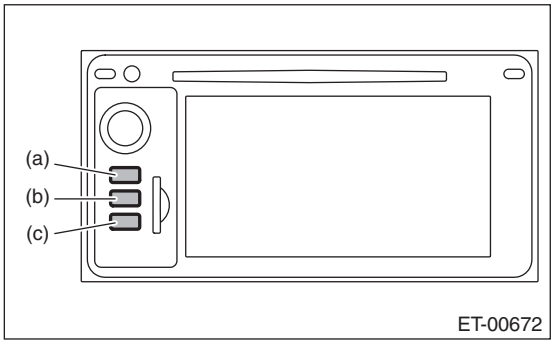
Start the engine and check that the opening screen is displayed.
Standard: Opening screen is displayed.
OK: Normal.
NG: If the screen is not displayed, check the following items.

- The map disk (DVD-ROM) is set in the navigation system unit
- Check the connection of the power supply connector at the backside of the navigation unit. If wire connection is correct or has got repaired, check again that the opening screen is displayed.

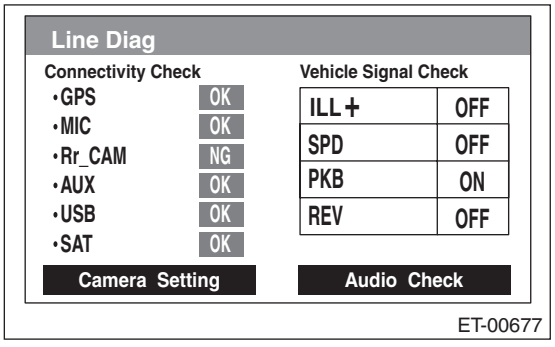
If it is not displayed at this time, it indicates the navigation unit trouble.

2. CHECK EACH CONNECTION

1) With the main power OFF, press and hold the button (c) for 3 seconds or more while pressing the buttons (a) and (b).



NOTE:
Diagnostic mode can be cancelled by pressing the button (a) for 3 seconds or more, or turning the ignition switch from ACC OFF to ON position.
2) Line Diag screen is displayed.
3) Check the connection status by monitoring each item in “Connectivity Check” displayed on the left of the screen.

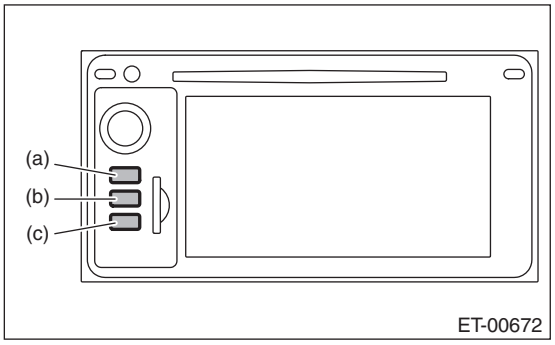


OK: Each connection device is connected correctly.
NG: No connection or faulty connection has been detected.

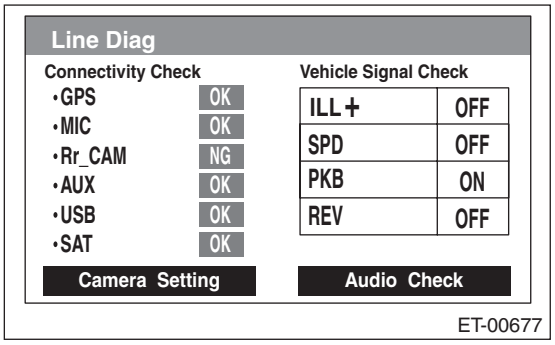
4) Check the connection status of the connector. If there are no problems, the connection device or unit body could be faulty.

3. CHECK EACH VEHICLE SIGNAL

1) With the main power OFF, press and hold the button (c) for 3 seconds or more while pressing the buttons (a) and (b).



NOTE:
Diagnostic mode can be cancelled by pressing the button (a) for 3 seconds or more, or turning the ignition switch from ACC OFF to ON position.
2) Line Diag screen is displayed.
3) Check the connection status by monitoring each item in “Vehicle Signal Check” displayed on the right of the screen.



- **CHECK ILLUMINATION**

NOTE:
Before starting inspections, turn the ignition switch to ON.
1) Turn the lighting switch to level 1.
Make sure that the bright switch is not turned ON at this time.
2) Make sure that “ON” lights in ILL+ and then the screen becomes dim.
ON: Normal.
OFF: Abnormal. Check the signal line connector. If there are no problems, the unit could be faulty.

- **CHECK SPEED SENSOR**

NOTE:
- Before starting inspections, check the safety around the vehicle.
- Lift up the vehicle as necessary.
- When the diagnostic trouble code is input in the VDCCM, perform the Clear Memory operation.

1) Drive the vehicle at 9 km/h (6 mph) or more.
2) Check that “ON” is displayed in SPD.
ON: Normal.
OFF: Vehicle speed is less than 7 km/h (4 mph), or abnormality is found in the signal line. Check the signal line connector. If there are no problems, the unit could be faulty.

- **CHECK PARKING BRAKE SIGNAL**

1) Pull parking brake lever.
2) Check that “ON” is displayed in PKB.
ON: Normal.
OFF: Abnormal. Check the signal line connector. If there are no problems, the unit could be faulty.

- **CHECK BACK SENSOR**

NOTE:
Before starting inspections, check the safety around the rear end of the vehicle and then turn the ignition switch to ON.
1) Pull the parking brake and depress the brake, then put the gear in reverse.
2) Make sure that “ON” is displayed in REV.
ON: Normal.
OFF: Abnormal. Check the signal line connector. If there are no problems, the unit could be faulty.

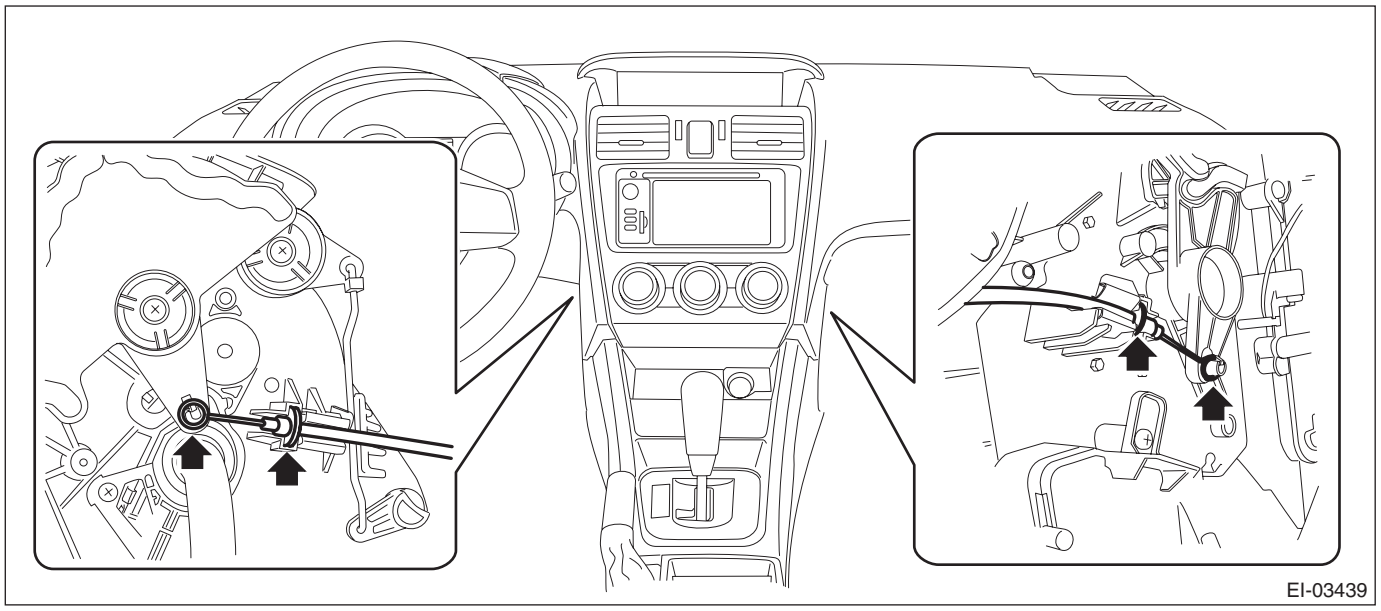
C: NOTE

For procedure of each component in the navigation system, refer to the respective section.
- Navigation unit: <Ref. to ET-31, Navigation Body.>
- GPS antenna: <Ref. to ET-33, GPS Antenna.>

4. Audio

A: REMOVAL

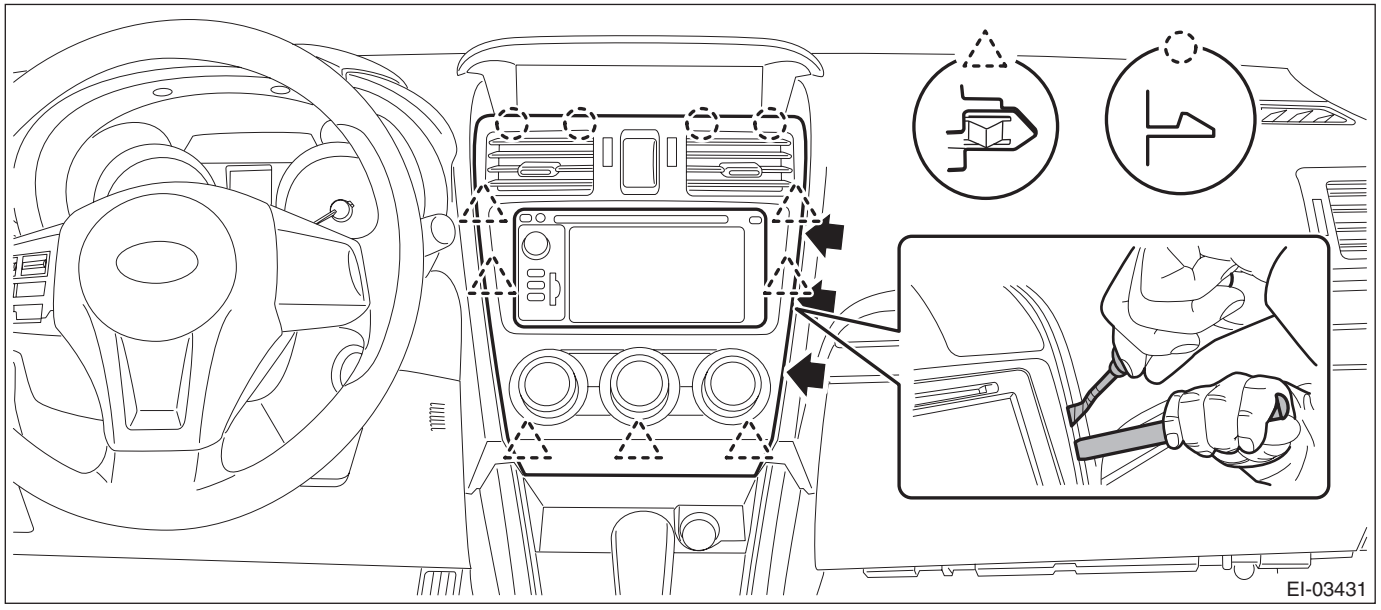
1) Disconnect the ground cable from battery.
2) On manual A/C models, disconnect the control cables from both sides of the heater and cooling unit assembly.



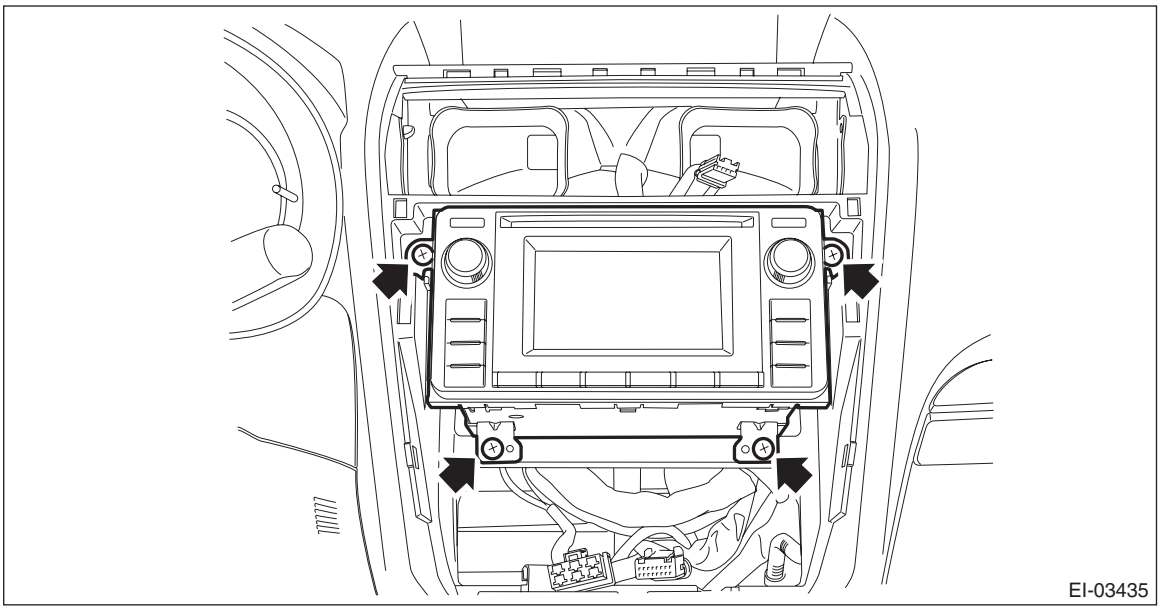
3) Remove the panel center assembly.

CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(1) Insert a plastic remover to the three areas shown by the arrows, and lift up the panel center assembly slightly.
(2) With the panel center assembly lifted up slightly, release the claw by using a clip remover wrapped with protective tape.
(3) Release the rest of the claws, and remove the panel center assembly.



4) Remove the audio assembly.
   (1) Remove the left and right screws, and partially pull out the audio assembly.
   (2) Disconnect the connectors, and remove the audio assembly.



B: INSTALLATION

CAUTION:
After installing the panel center assembly, check that the air vent grille of the panel center assembly is inserted correctly into the air vent duct.
Install each part in the reverse order of removal.

5. Front Speaker

A: REMOVAL

1. TWEETER

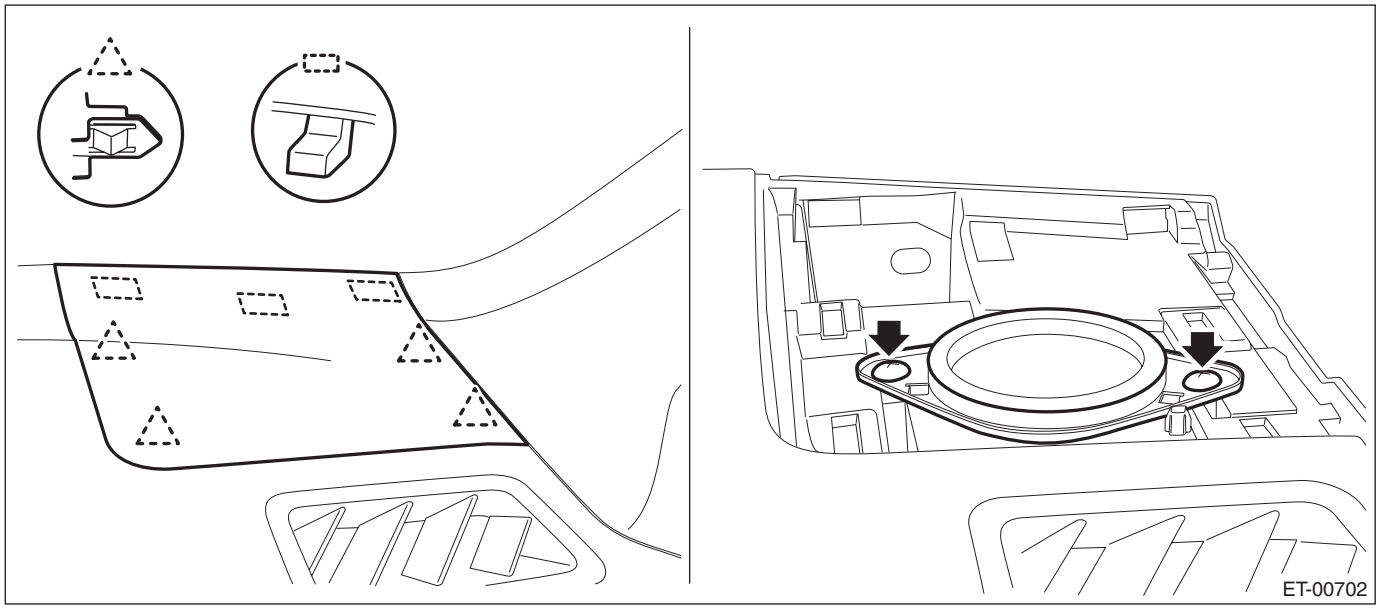
1) Disconnect the ground cable from battery.
2) Remove the speaker assembly - tweeter.
   (1) Release the clips and claws, then detach the grille speaker side.

NOTE:
Remove the grille speaker side by using a plastic remover.

   (2) Remove the screws.

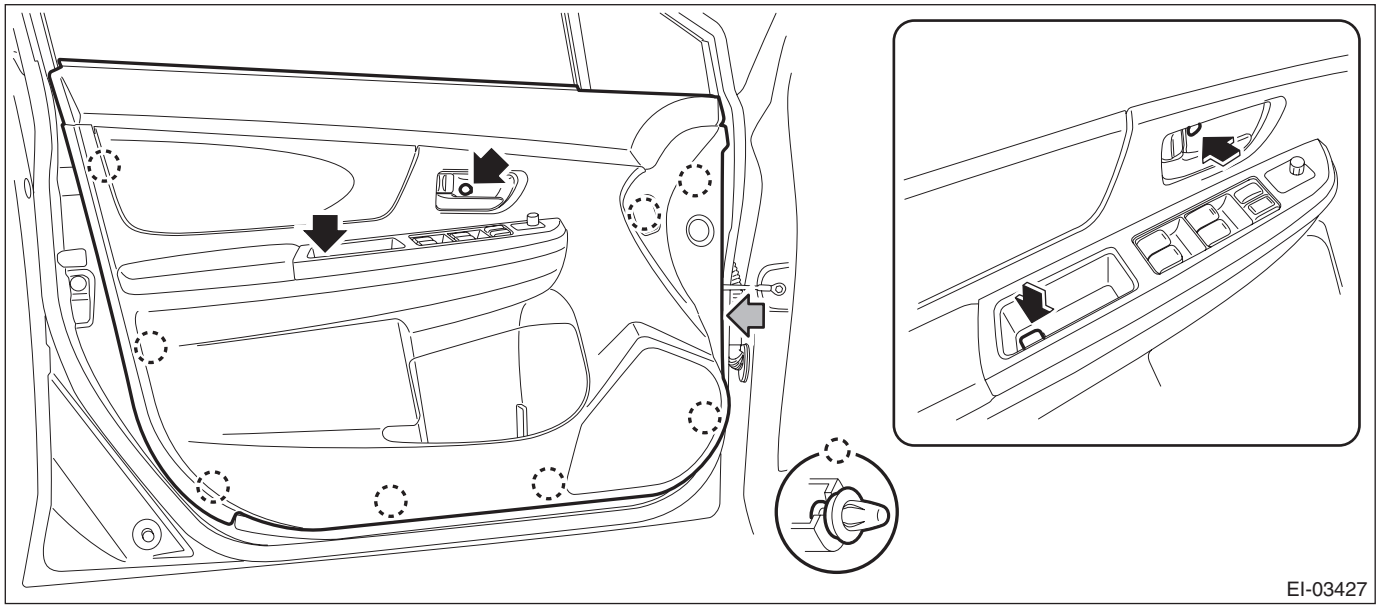
PREPARATION TOOL:
Stubby screwdriver

   (3) Disconnect the connector and remove the speaker assembly - tweeter.



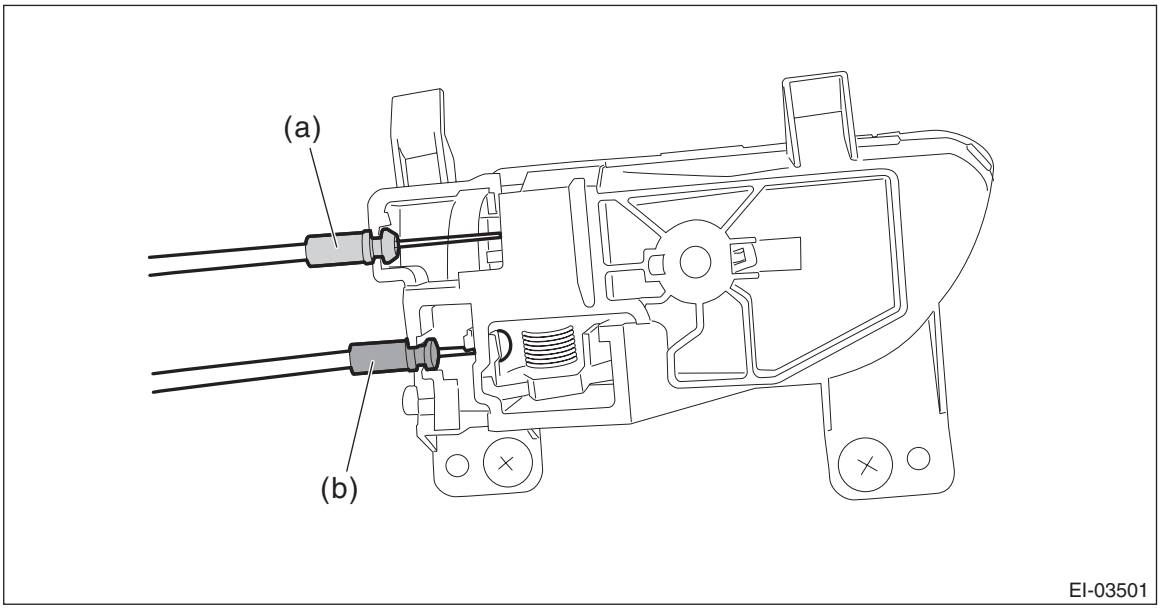
2. DOOR SPEAKER

1) Disconnect the ground cable from battery.
2) Remove the trim panel - front door.
   (1) Open the cover and remove the screw.
   (2) Remove the clips, and remove the trim panel - front door from the panel assembly - front door.



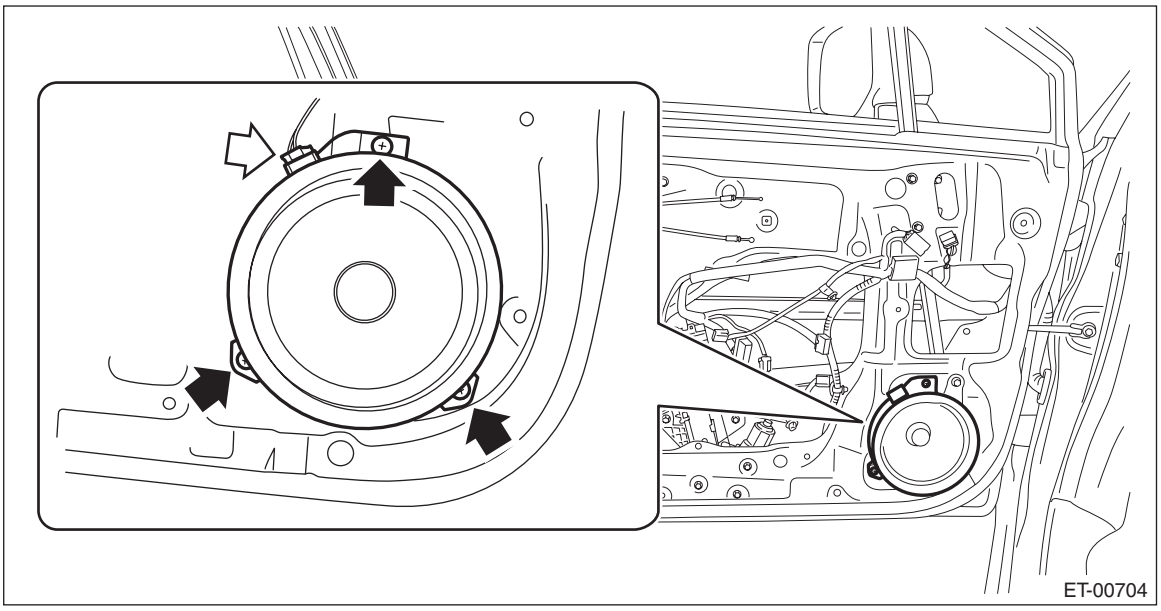
NOTE:
It is easier to remove the door trim if the removal is performed from the gray arrow section.

   (3) Detach the door lock cable (a) and door open cable (b) from the remote assembly - door.



   (4) Disconnect the harness connector and remove the trim panel - front door.

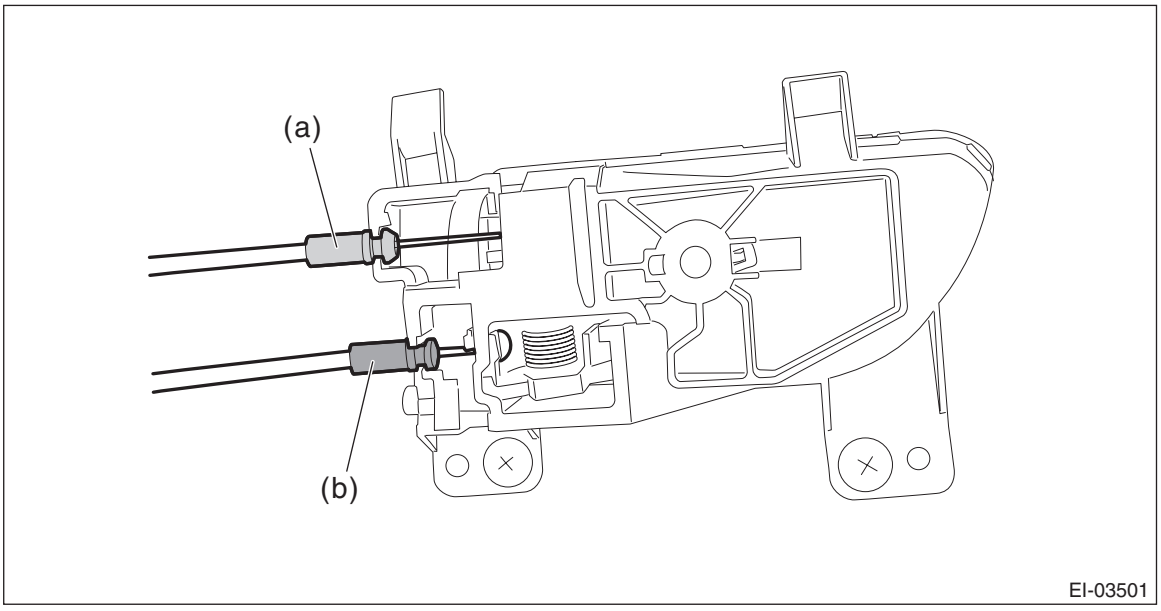
3) Remove the front door speaker assembly.
   (1) Remove the screws.
   (2) Disconnect the connector, and remove the front door speaker assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

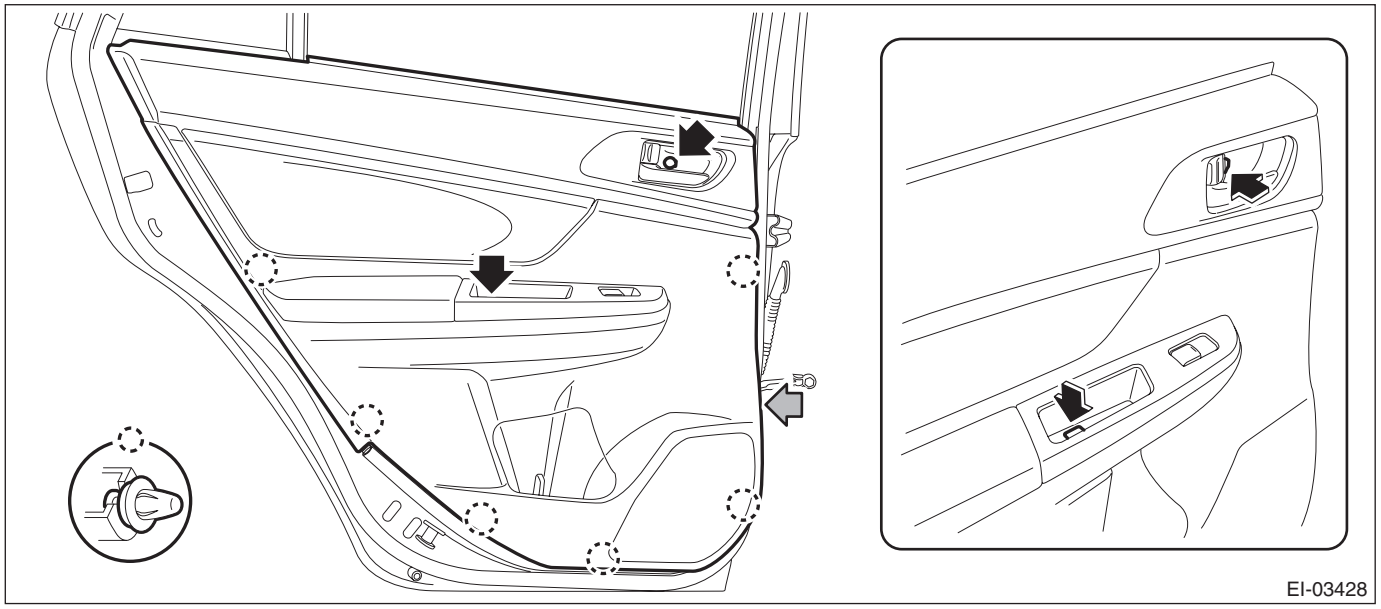
NOTE:
Attach the door lock cable (a - yellow) to the upper side, and attach the door open cable (b - black) to the lower side.



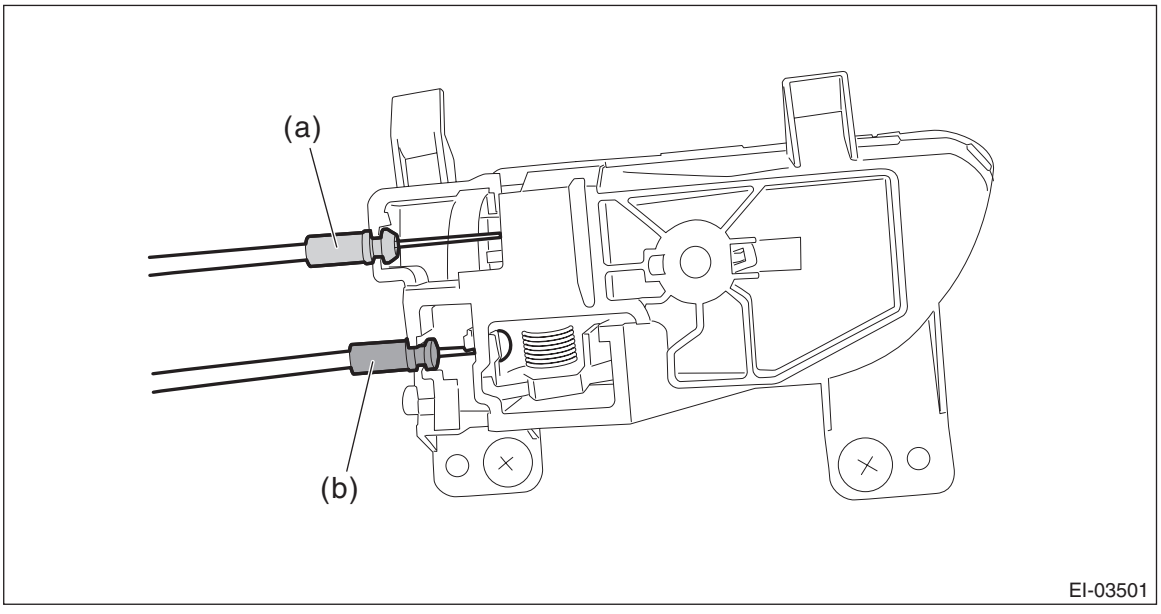
6. Rear Speaker

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear door.
   (1) Open the cover and remove the screw.
   (2) Remove the clips, and remove the trim panel - rear door from the panel assembly - rear door.

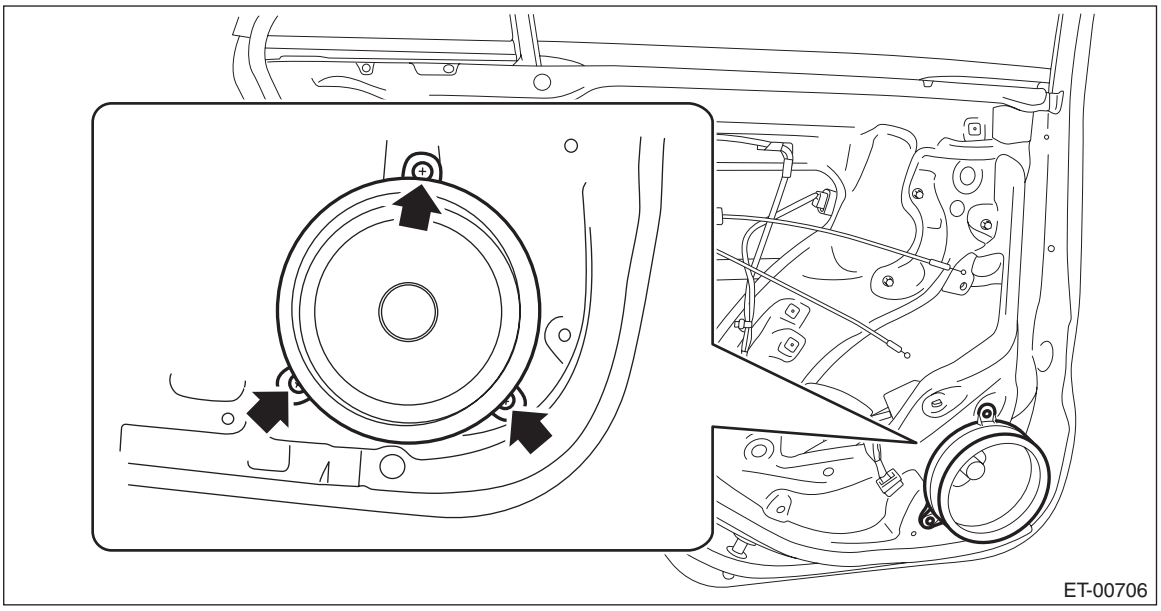


NOTE:
It is easier to remove the door trim if the removal is performed from the gray arrow section.
   (3) Detach the door lock cable (a) and door open cable (b) from the remote assembly - door.



   (4) Disconnect the harness connector and remove the trim panel - rear door.

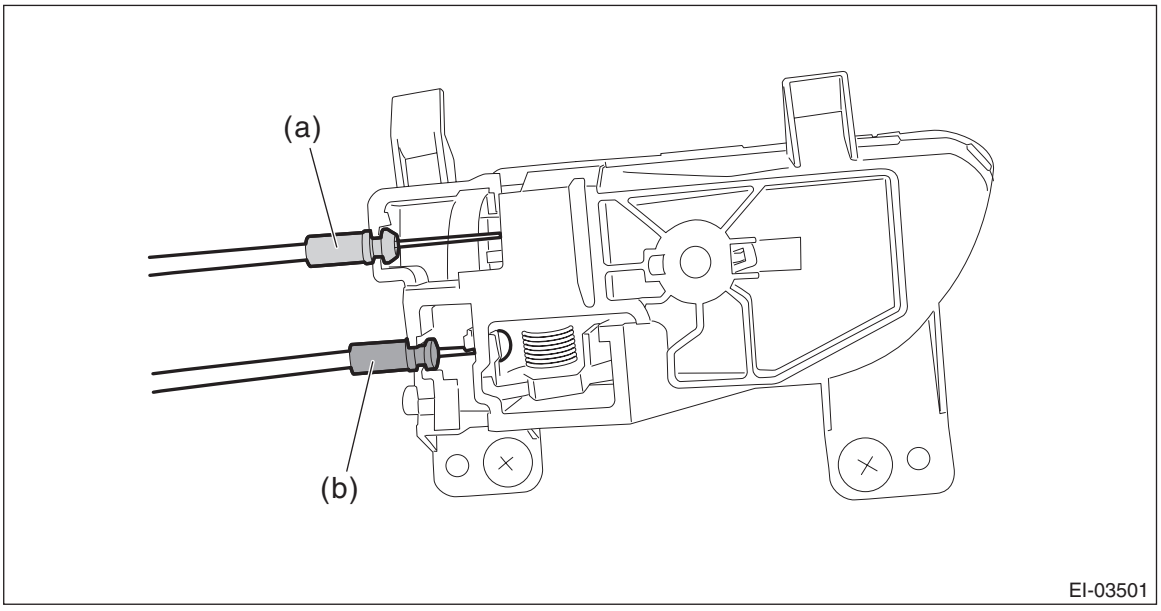
3) Remove the rear speaker assembly.
(1) Remove the screws.
(2) Disconnect the connector behind the speaker and remove the rear speaker assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:
Attach the door lock cable (a - yellow) to the upper side, and attach the door open cable (b - black) to the lower side.



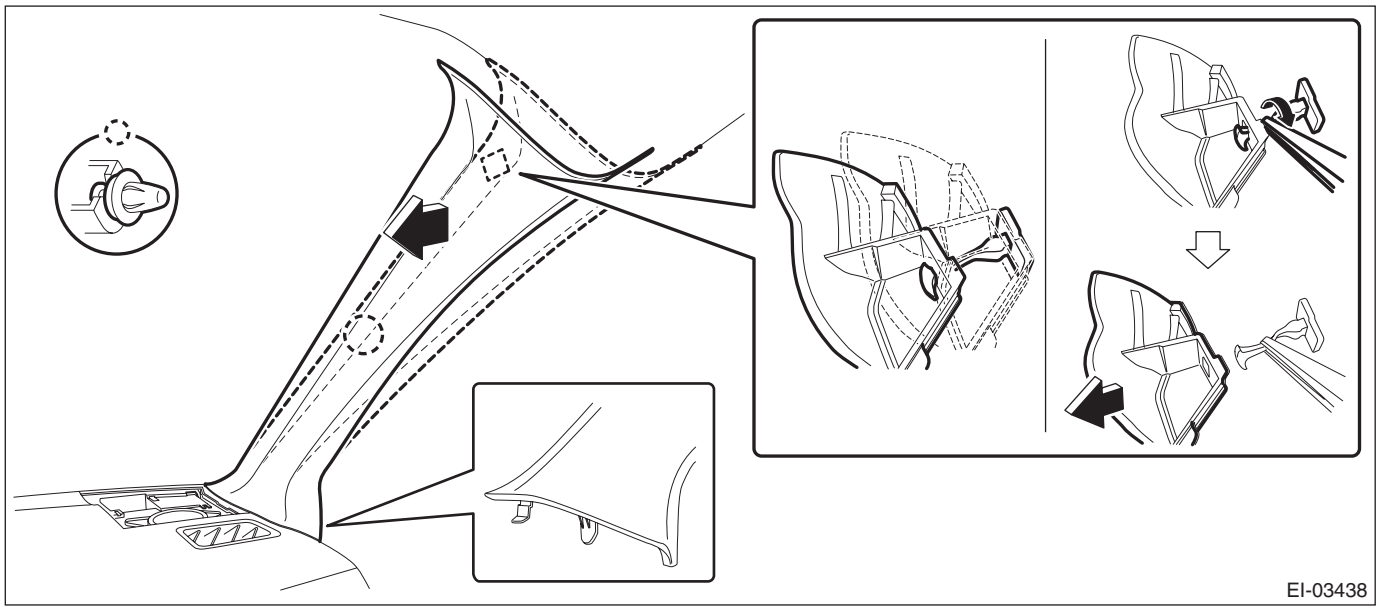
7. Antenna

A: REMOVAL

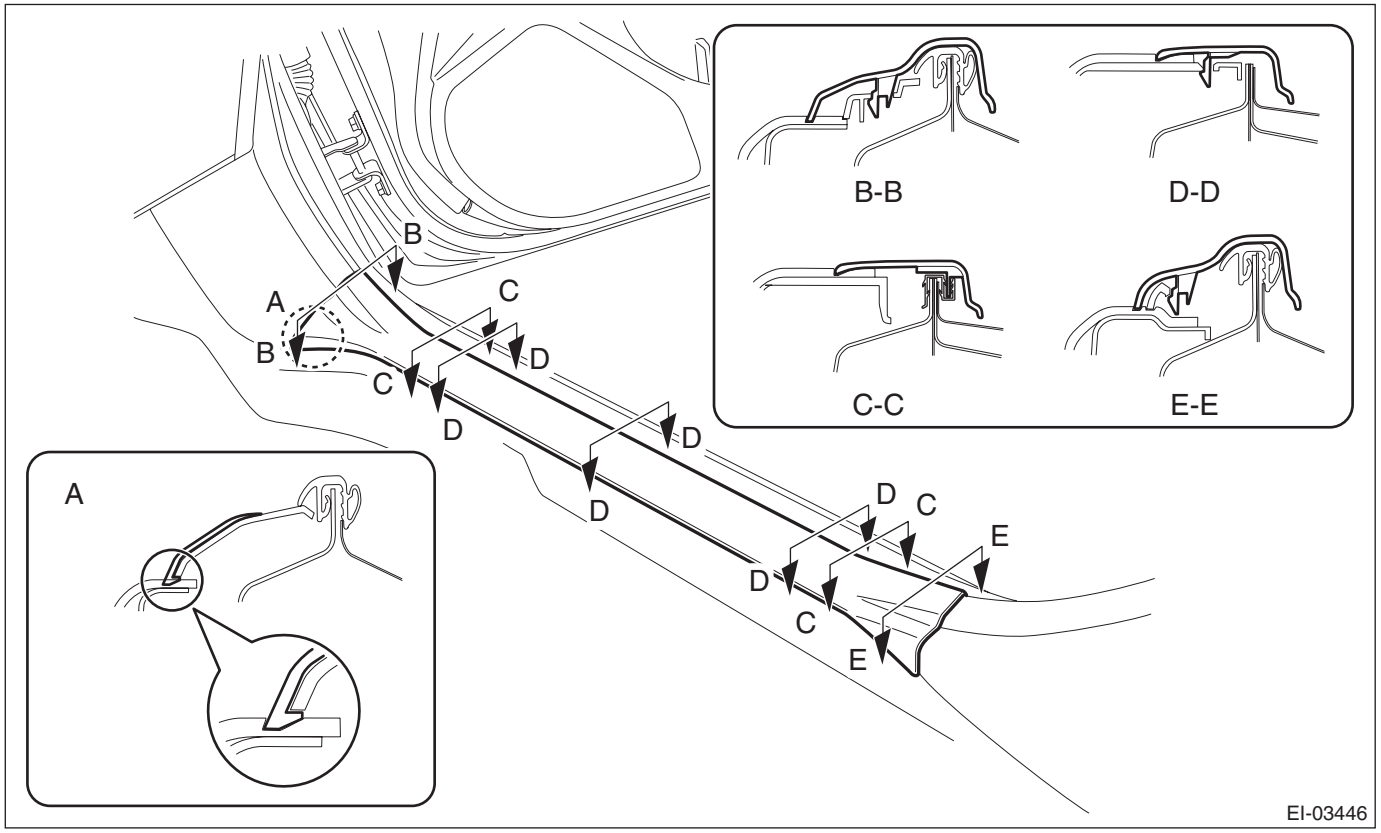
1. ANTENNA

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
2) Remove the trim panel - front pillar UPR on the left and right sides.
   (1) Pull the upper part of the trim panel - front pillar UPR towards the center of the vehicle.
   (2) Insert long-nose pliers into the top part of the trim, grip the clip with the pliers and twist 90° in that position.

CAUTION:
Be careful not to damage the pillar trim surface and curtain airbag module when inserting the pliers.
   (3) Holding the clip twisted as in the previous step, remove the trim panel - front pillar UPR from the clip.
   (4) Remove the clips, and remove the trim panel - front pillar UPR.

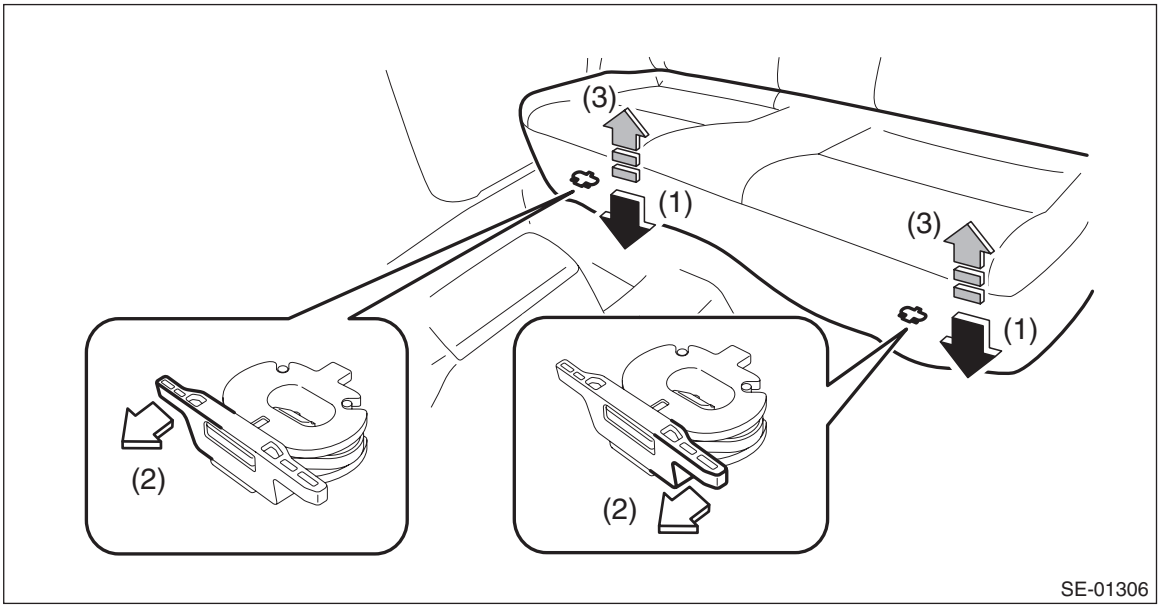


3) Release the claws, and then remove the cover side sill - front INN on LH and RH sides.

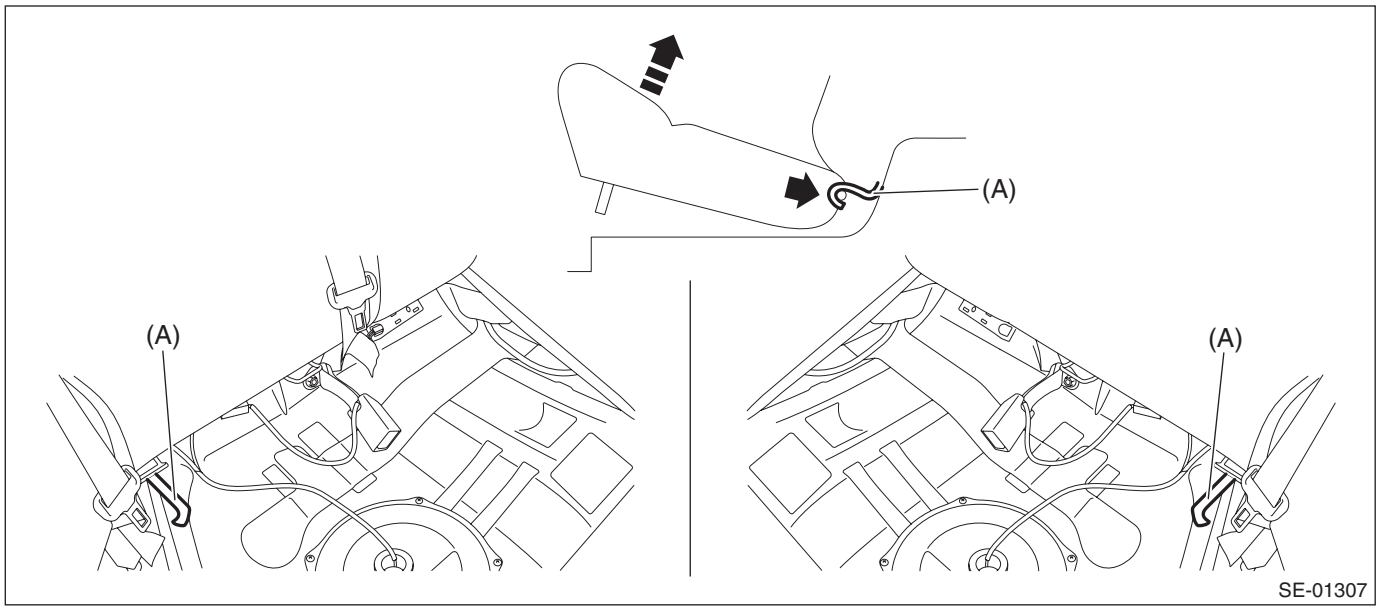


4) Remove the rear seat cushion assembly.
   (1) Push the corners of the rear seat cushion from above.
   (2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
   (3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

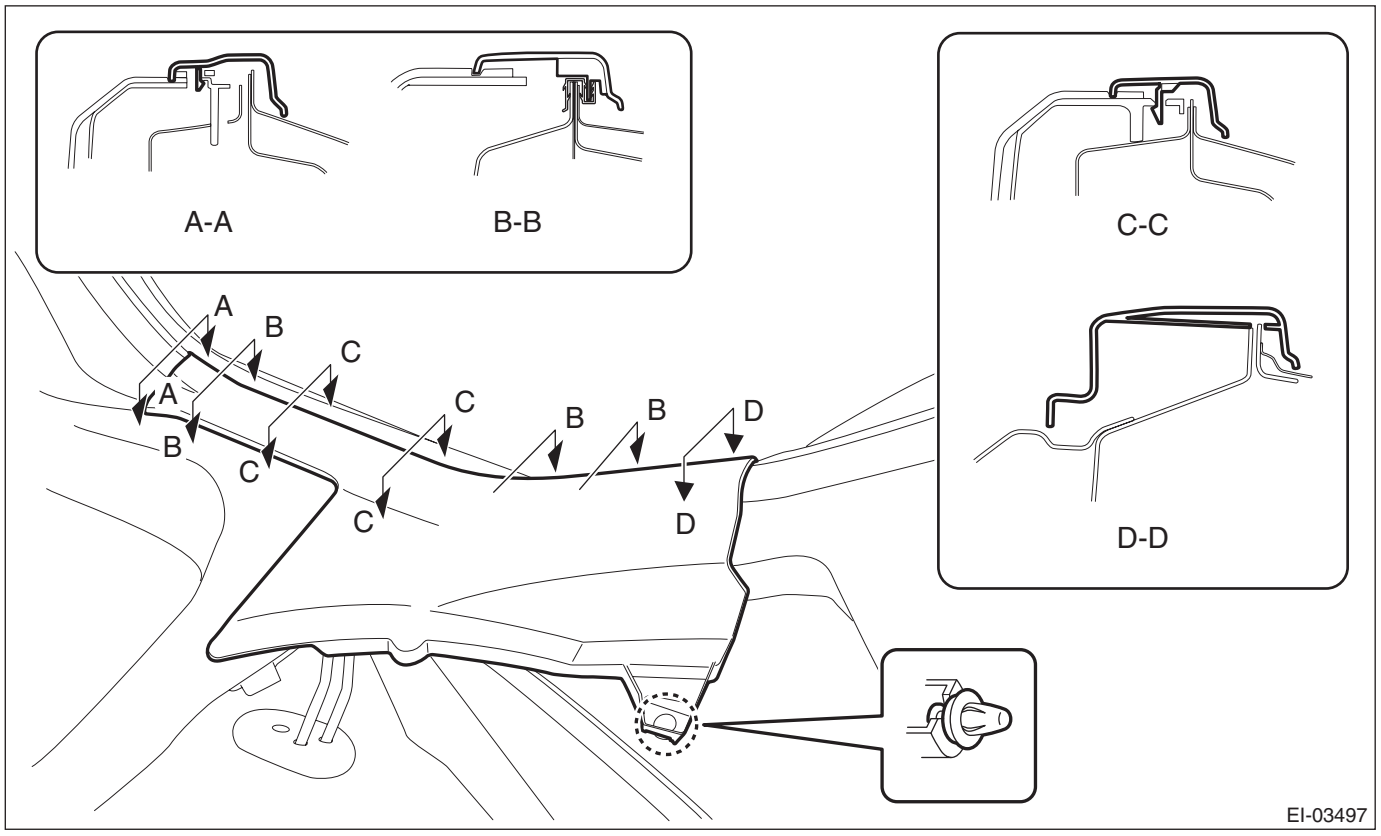


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.



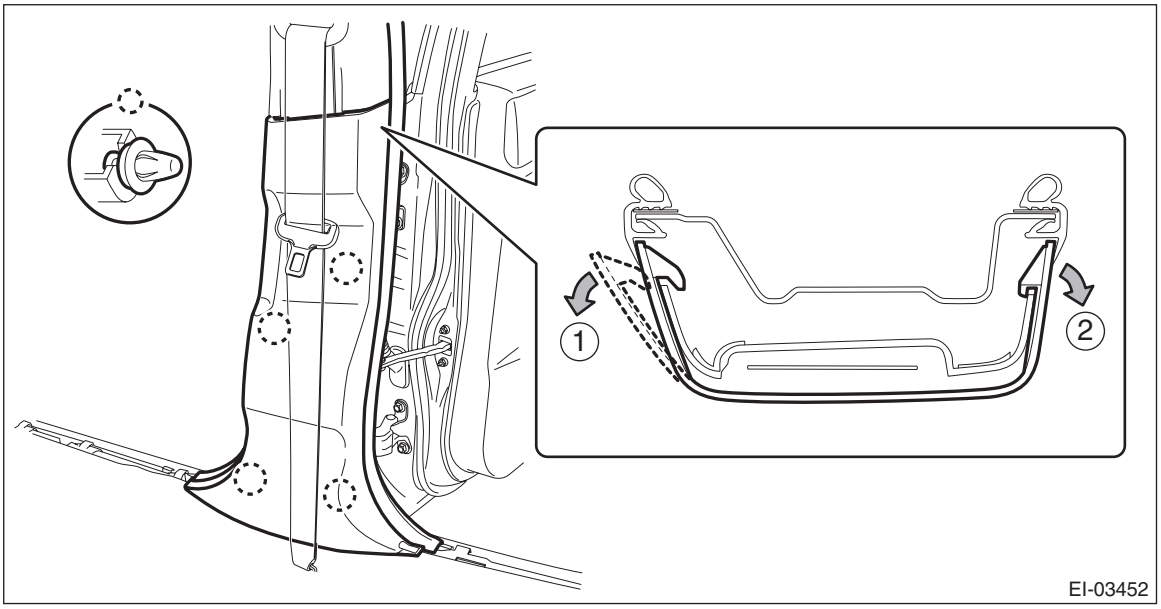
5) Release the clips and claws, and remove the cover side sill - rear INN on LH and RH sides.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - rear INN.

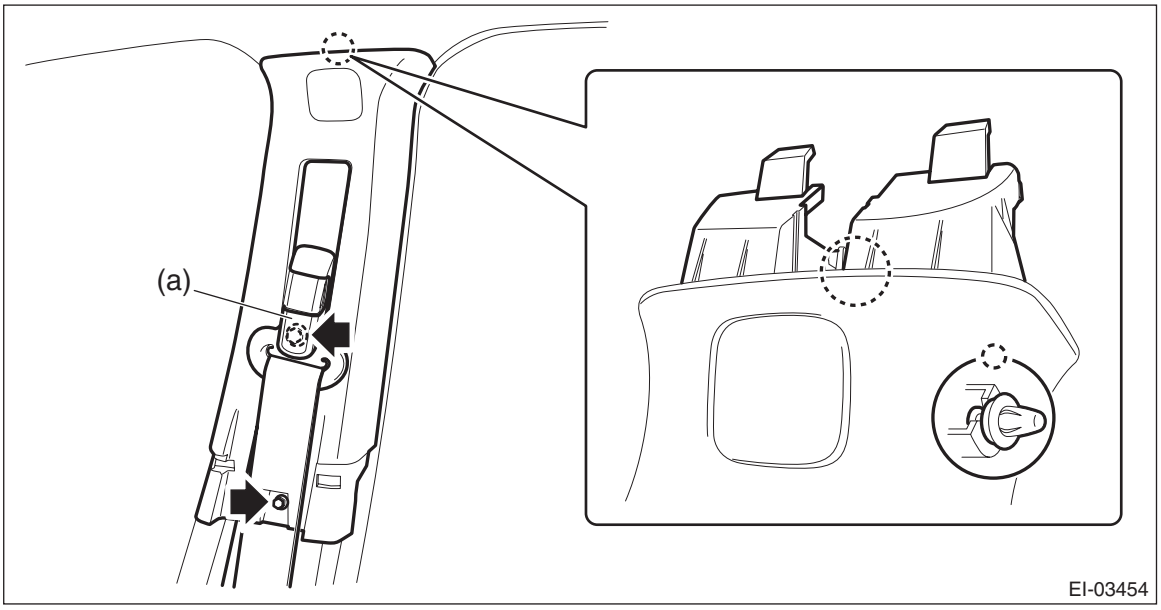


6) Remove the trim panel - center pillar LWR on the left and right sides.
(1) Release the clip by pulling the trim panel - center pillar LWR toward you.
(2) Expand the claws of the trim panel - center pillar LWR outward, and remove it from the trim panel - center pillar UPR.

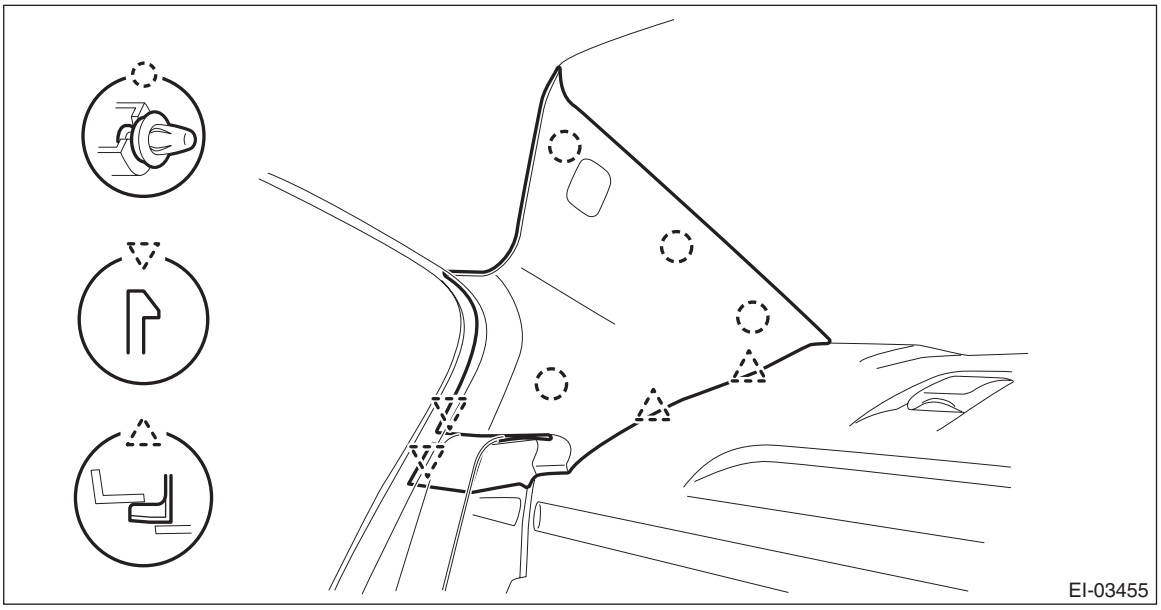
CAUTION:
Do not expand the trim panel - center pillar LWR excessively. Doing so may damage the trim.



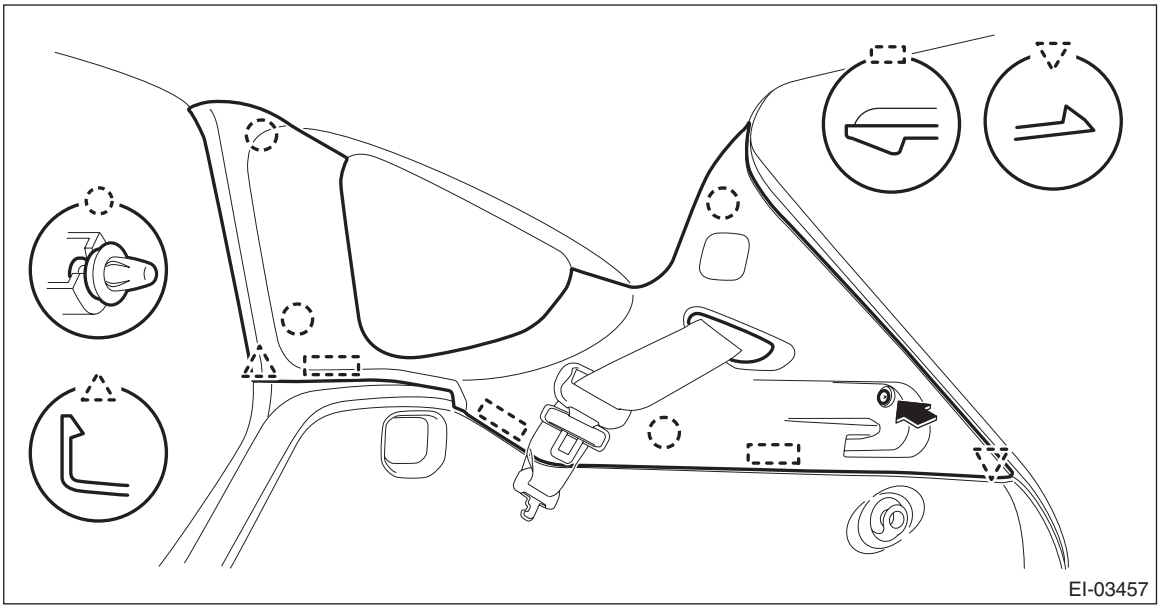
NOTE:
First release the claw located to the front of the vehicle.
7) Remove the trim panel - center pillar UPR on the left and right sides.
(1) Remove the cover through (a), and remove the seat belt anchor bolt.
(2) Remove the bolt on the lower side of the trim panel - center pillar UPR.
(3) Remove the clip, and while lowering the entire trim, remove the trim panel - center pillar UPR.



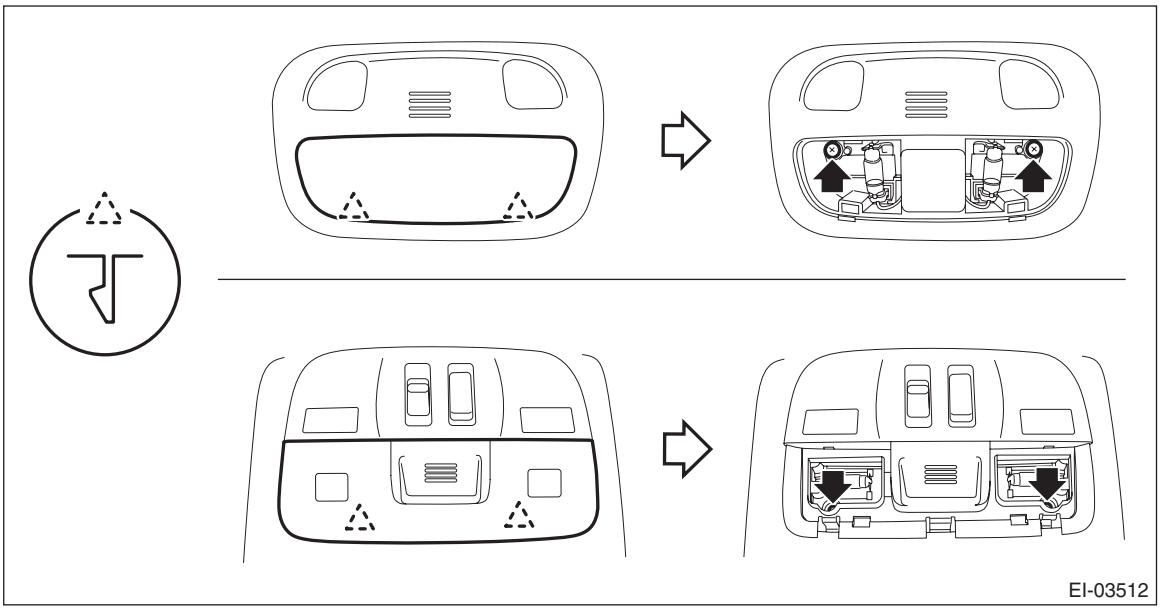
8) Remove the clips, and remove the trim panel - rear pillar UPR on the left and right sides. (4 door model)



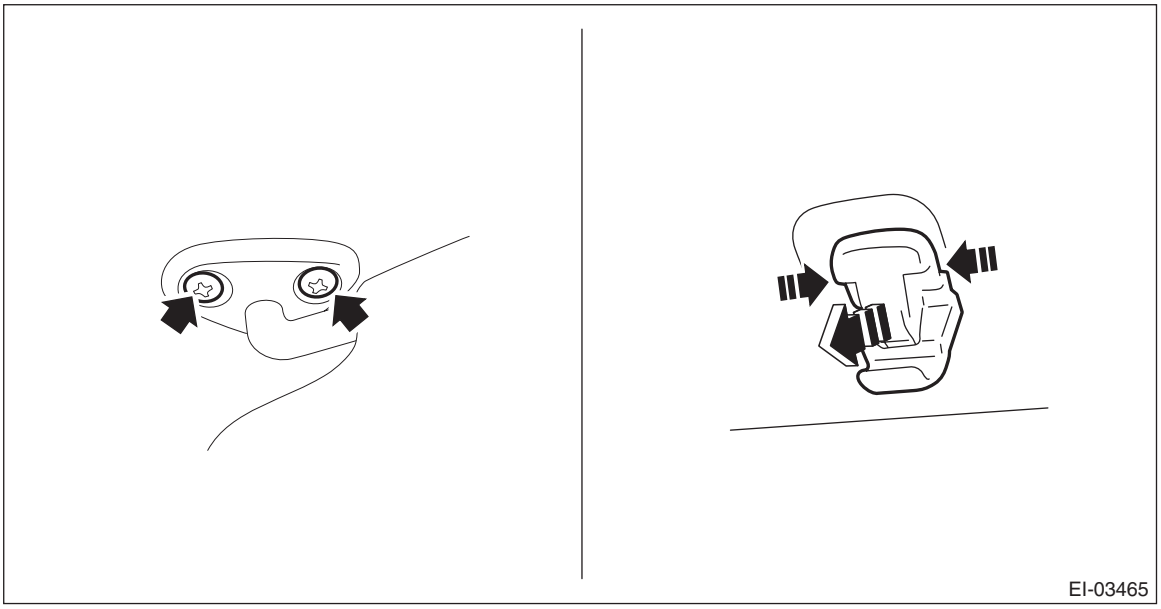
9) Remove the screws and clips, and remove the trim panel - rear quarter pillar UPR on the left and right sides. (5 door model)



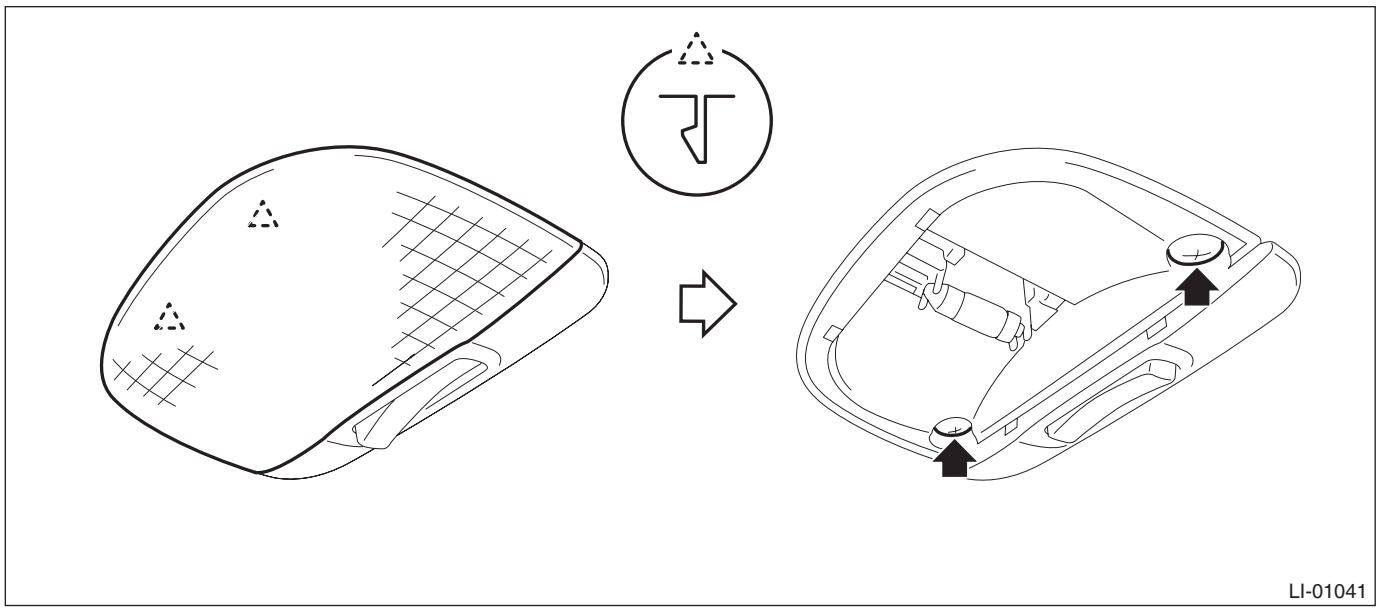
10) Remove the light assembly - map.
(1) Remove the lens and detach the screws.
(2) Disconnect the connector and remove the light assembly - map.



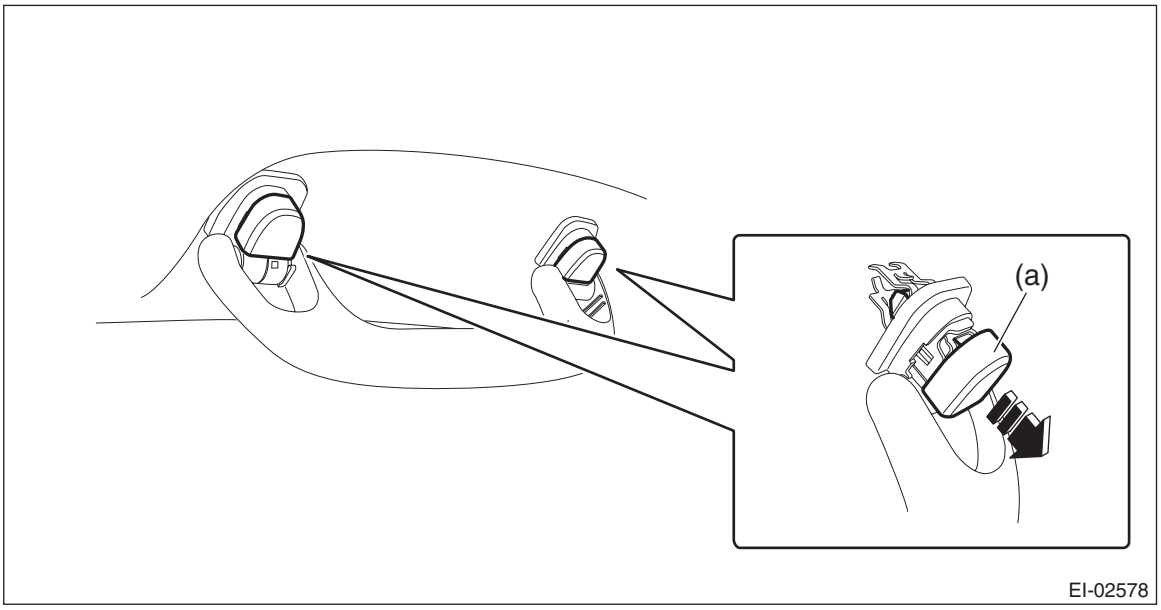
11) Remove the left and right sun visor assembly.
(1) Remove the screws and remove the sun visor assembly.
(2) Press both sides of the hook - sun visor using a flat tip screwdriver.
(3) Remove the hook - sun visor by pulling it toward you.



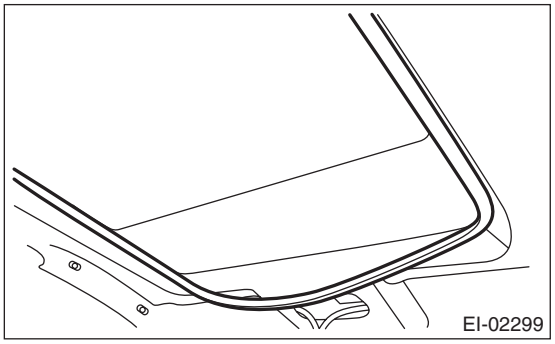
12) Remove the light assembly - room.
(1) Remove the lens and detach the screws.
(2) Disconnect the connector and remove the light assembly - room.



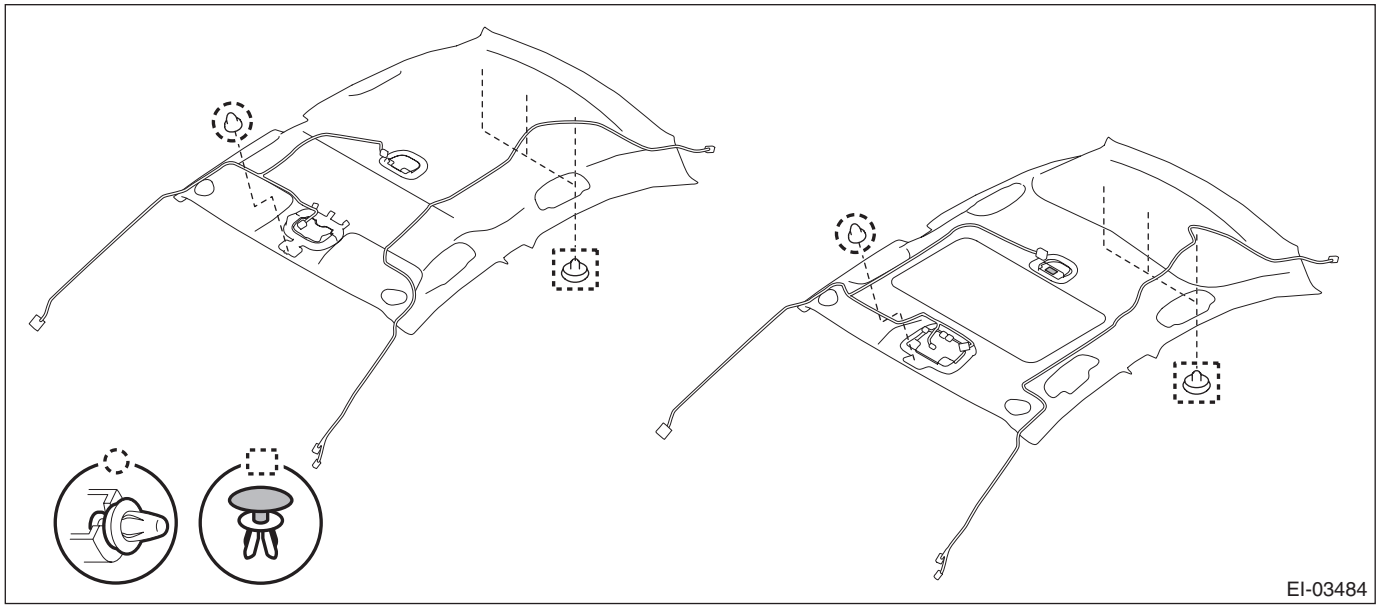
13) Remove all assist rails.
(1) Remove the cap (a).
(2) Pull the assist rail toward you (to the vehicle center) and remove the metal clip from the bracket.

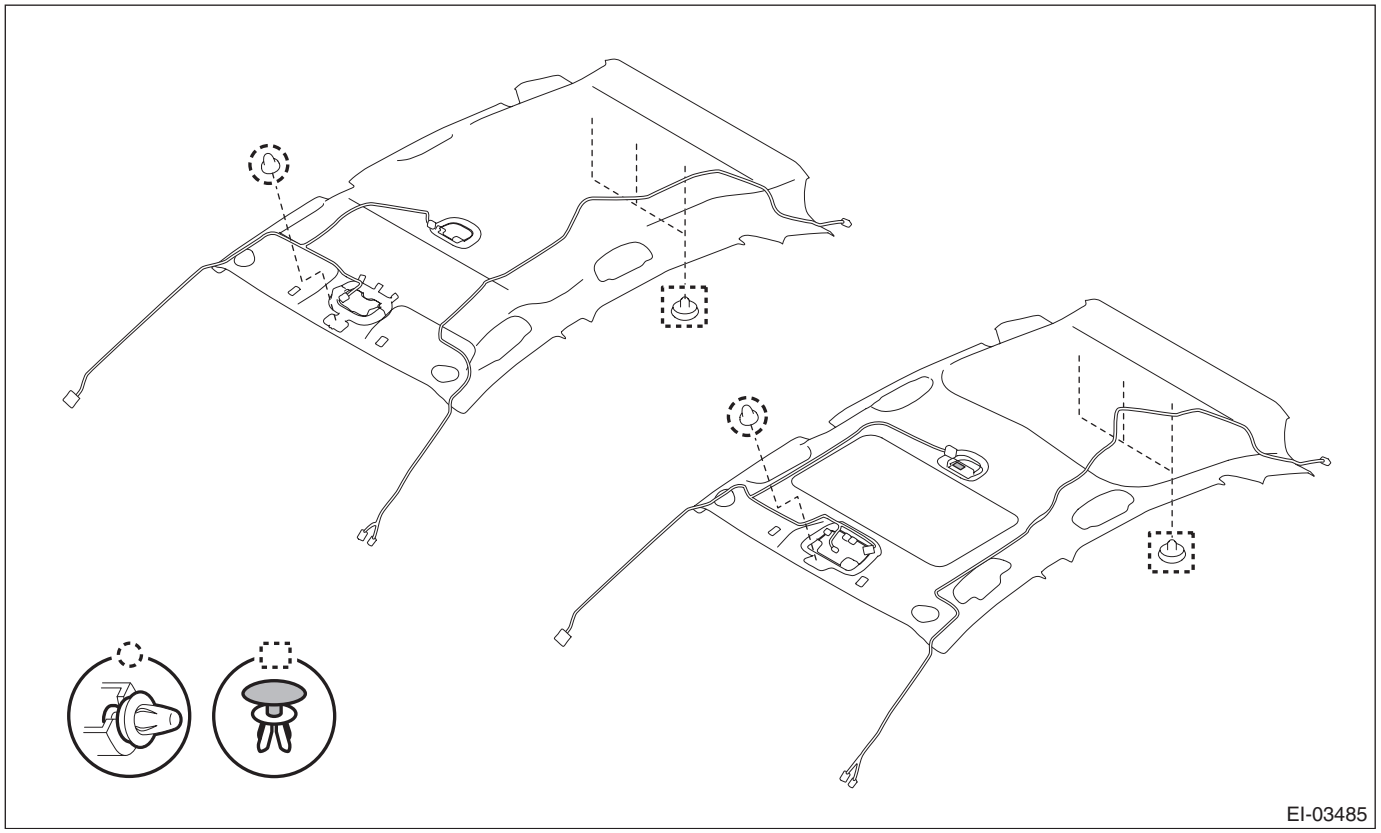


14) Remove the garnish - roof. (model with sunroof)



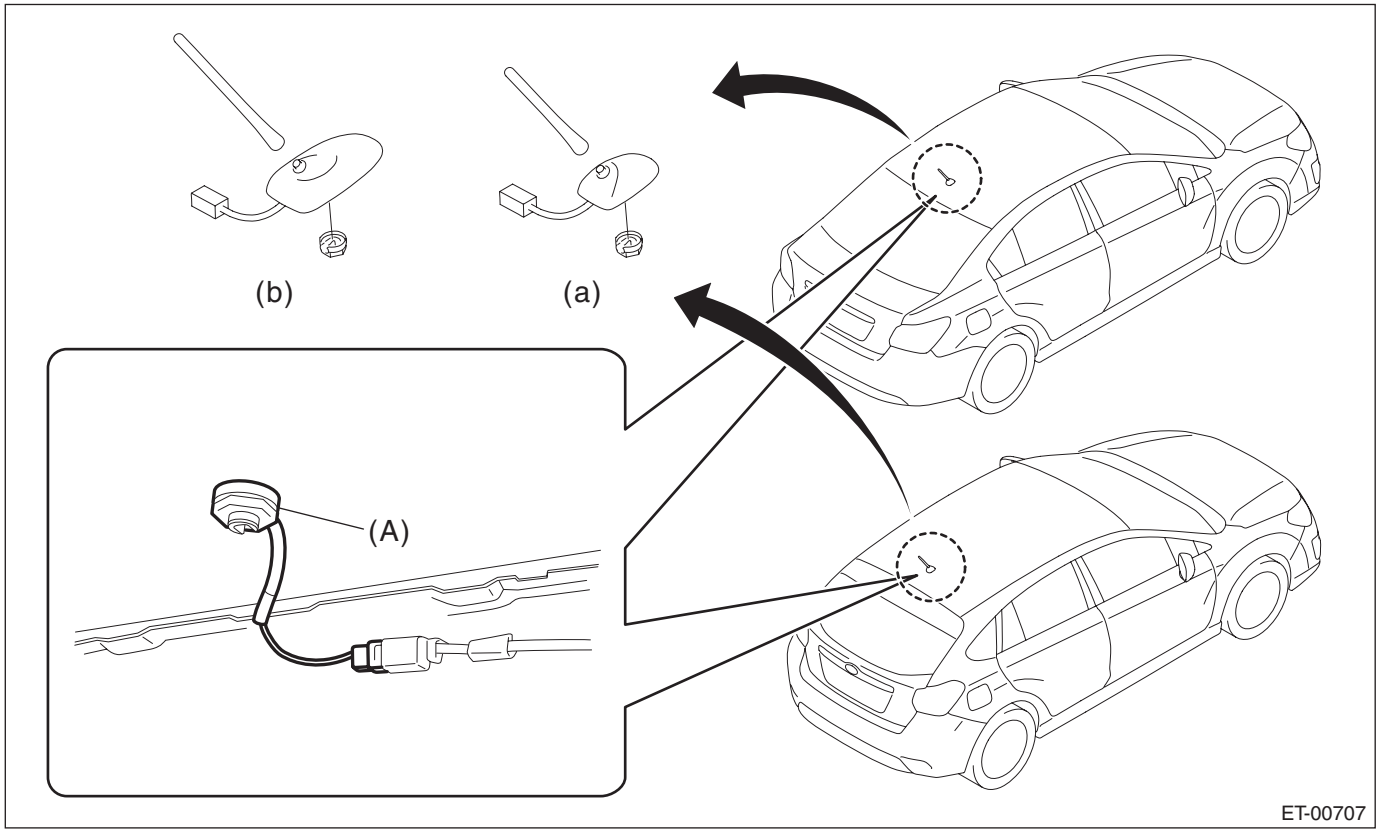
15) Remove the trim panel - roof assembly.
(1) Remove the clips and the Velcro tape behind the room light.
(2) Remove the weather strip - body side flange from the front/rear and left/right doors, and lower the trim panel - roof assembly.


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16) Disconnect the harness connector and terminal, and remove the mounting nut (A).

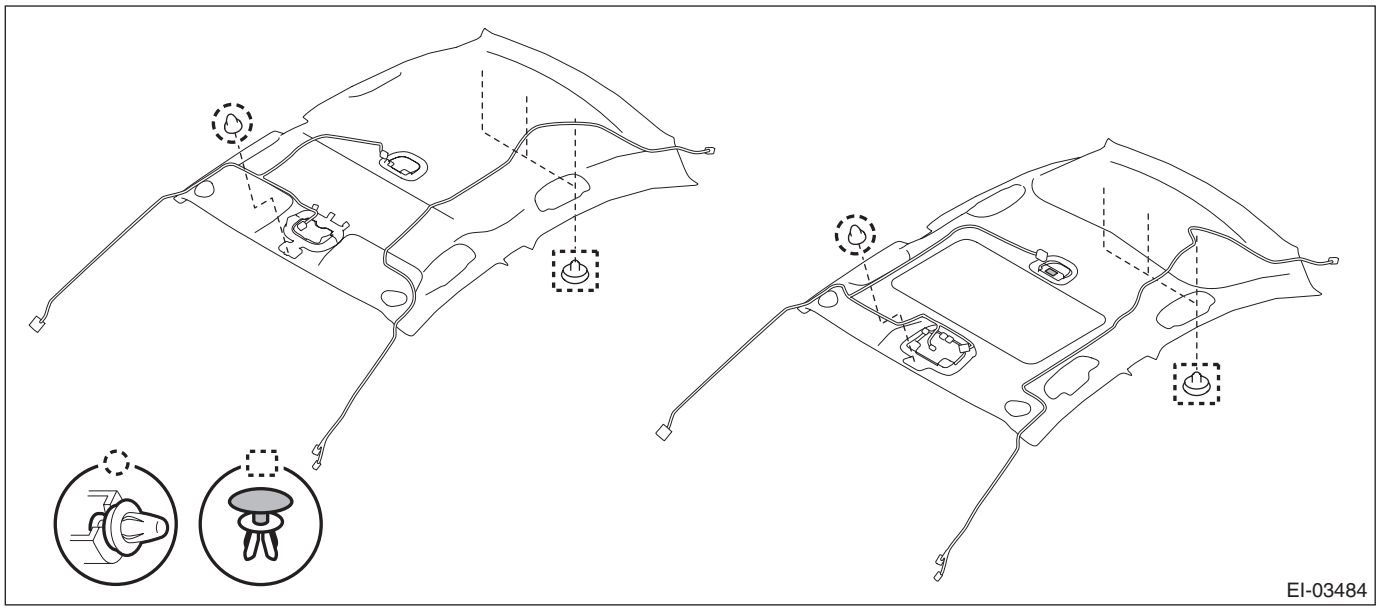
17) Pull out the antenna from the roof top.

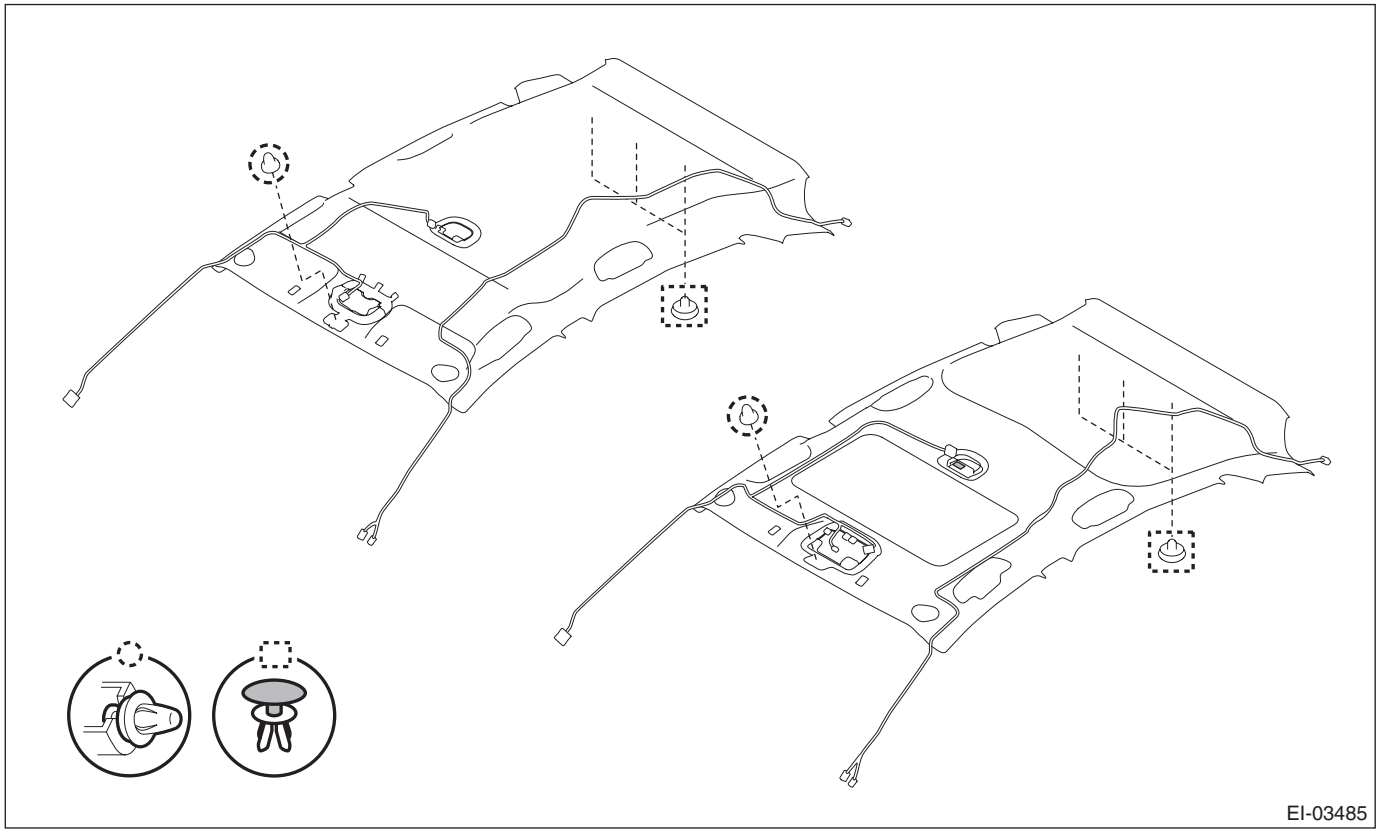


(a) Radio antenna (b) XM radio antenna

2. ANTENNA FEEDER CORD

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
2) Lower the trim panel - roof assembly in the same manner as the removal procedure of antenna. <Ref. to ET-14, ANTENNA, REMOVAL, Antenna.>
   (1) Disconnect the connector of the cord assembly - antenna feeder.
   (2) Remove the clips and the Velcro tape behind the room light.
   (3) Detach the connector of the cord assembly - antenna feeder from the trim panel - roof assembly.


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B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:
For application of feeder cord, refer to installation procedure of the trim panel - roof assembly. <Ref. to EI-138, INSTALLATION, Roof Trim.>

Tightening torque:
Radio antenna: 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)

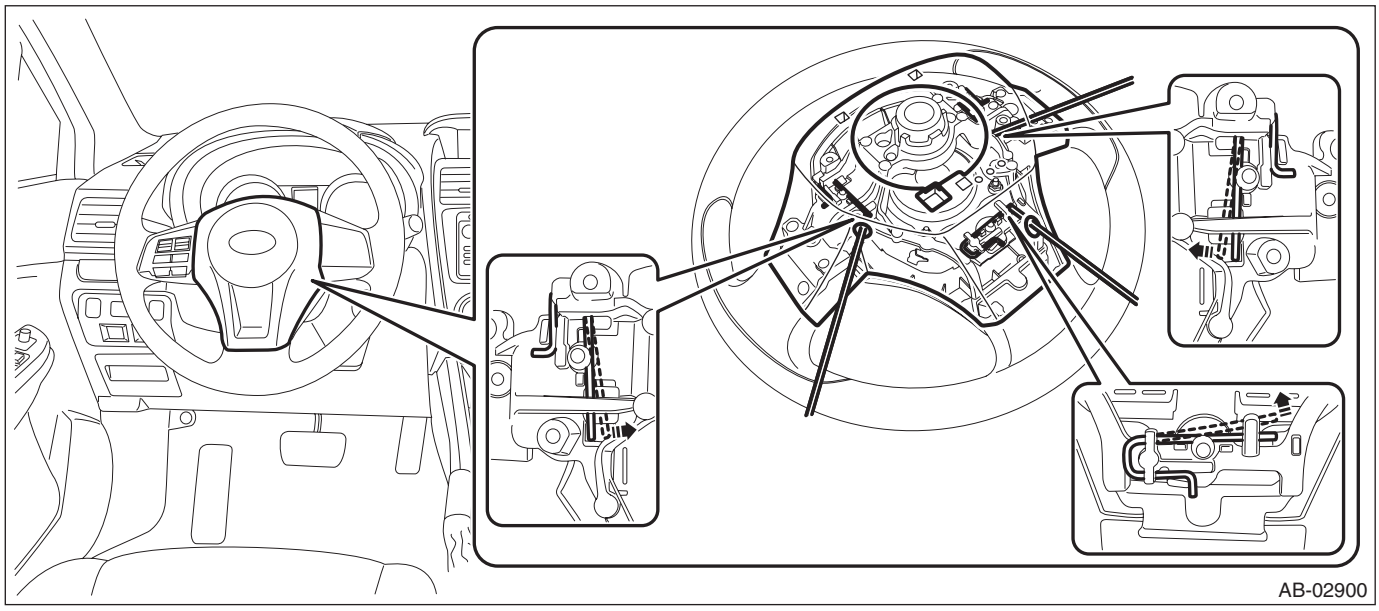
8. Steering Satellite Switch

A: REMOVAL

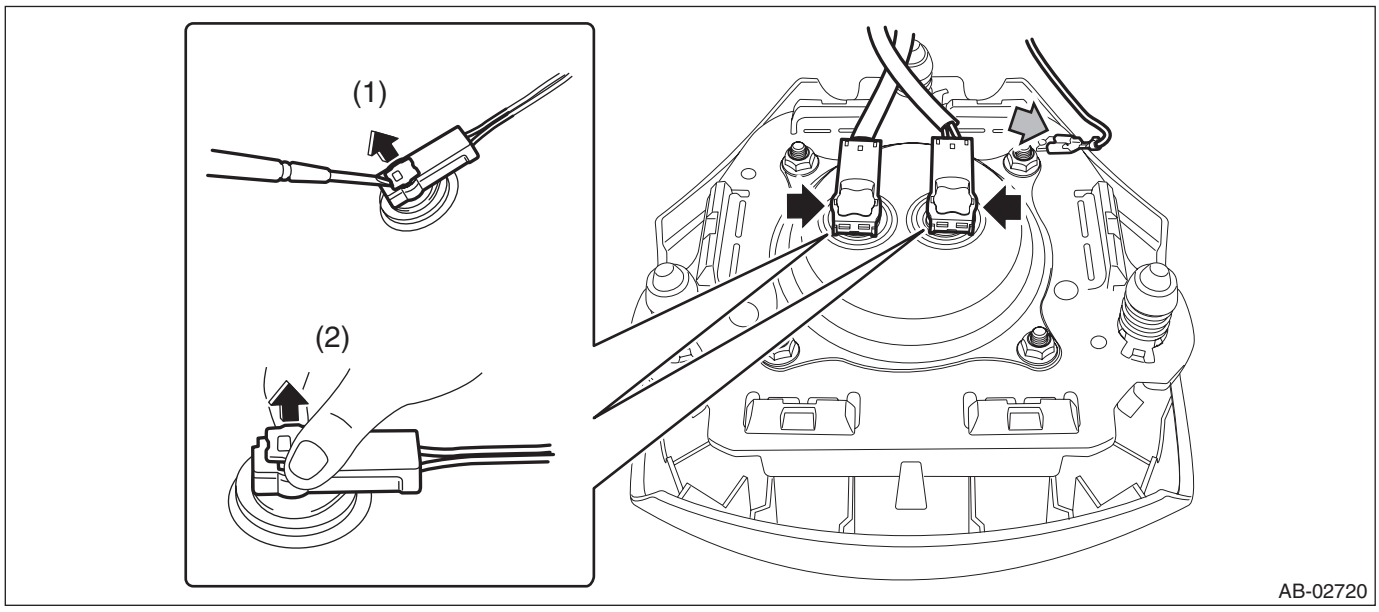
1) Position the front wheels straight ahead. (After moving a vehicle 5 m (16 ft) or more with front wheels positioned straight ahead, make sure that the vehicle moves straight ahead.)
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
4) Remove the driver's airbag module.

CAUTION:
Before handling the airbag module, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". <Ref. to AB-10, CAUTION, General Description.>

(1) Using a hexagon wrench wrapped with protective tape, push in the snap pins to disengage the locks (3 places).



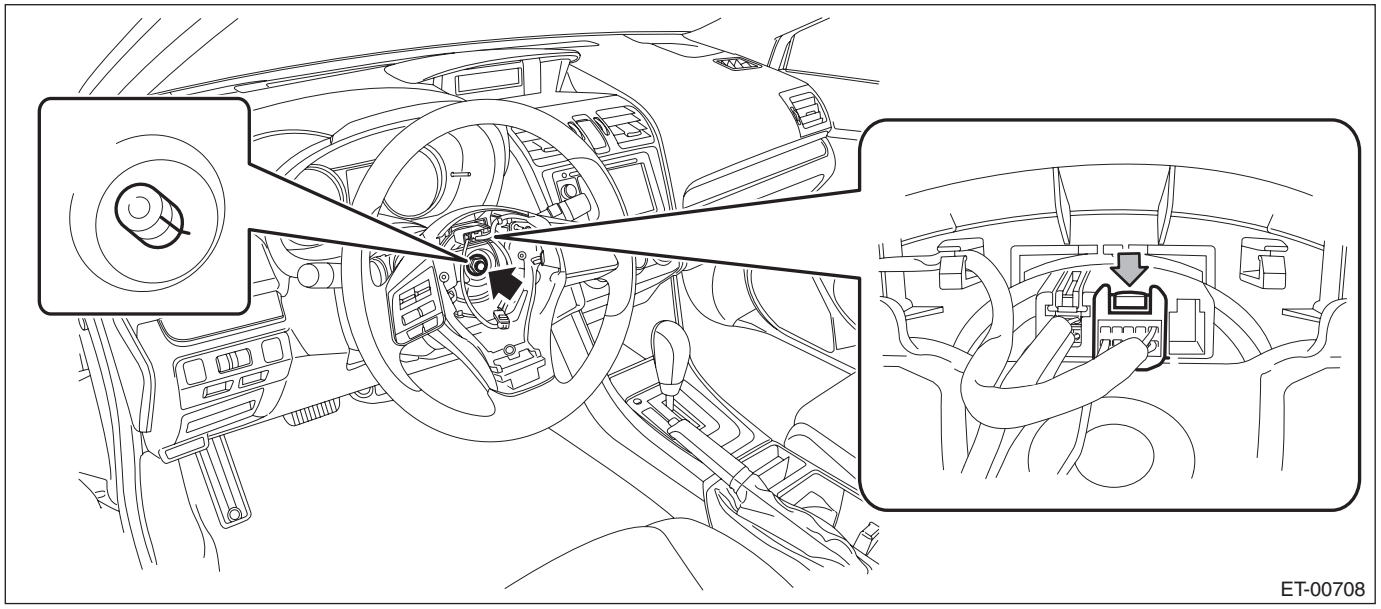
(2) Disconnect the horn harness and airbag connector, and remove the driver's airbag module. <Ref. to AB-19, PROCEDURE, Airbag Connector.>



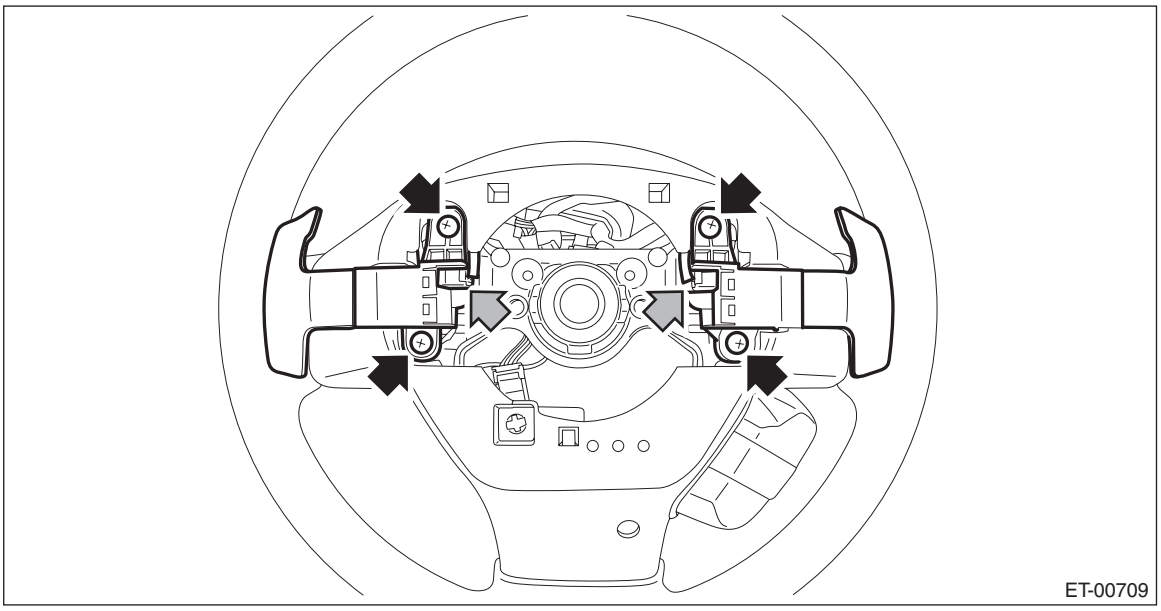
5) Remove the steering wheel.

CAUTION:
- **Always use the steering wheel puller for removal to avoid deforming the steering wheel.**
- **If the steering wheel has been removed, make sure that the roll connector is not turned from the original position.**

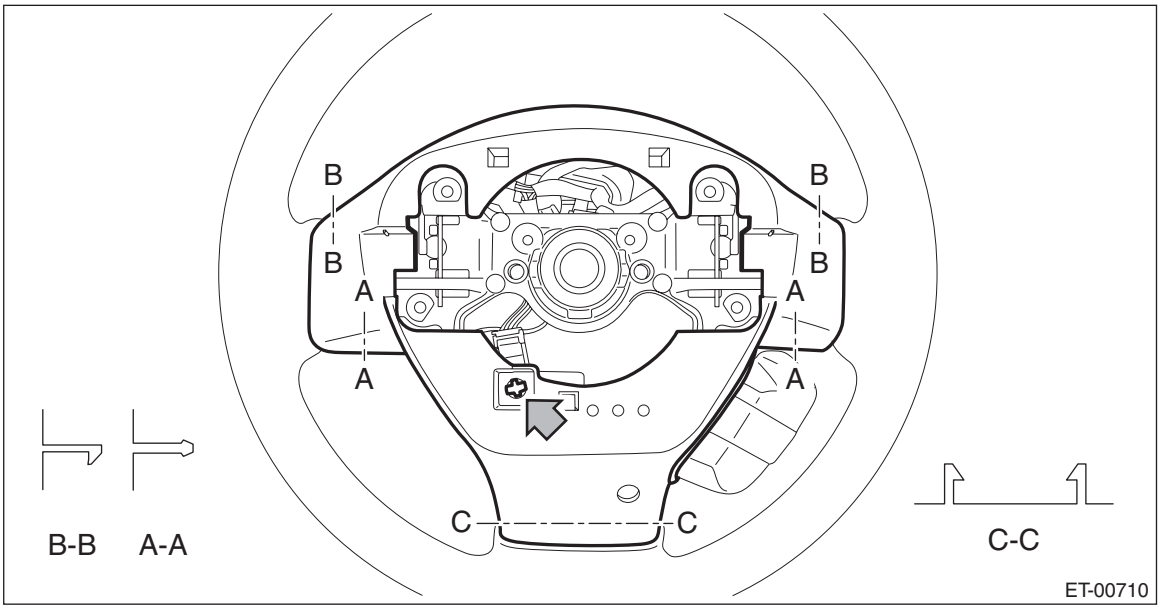
(1) Disconnect the connector and remove the nut.
(2) Put alignment marks and remove the steering wheel.



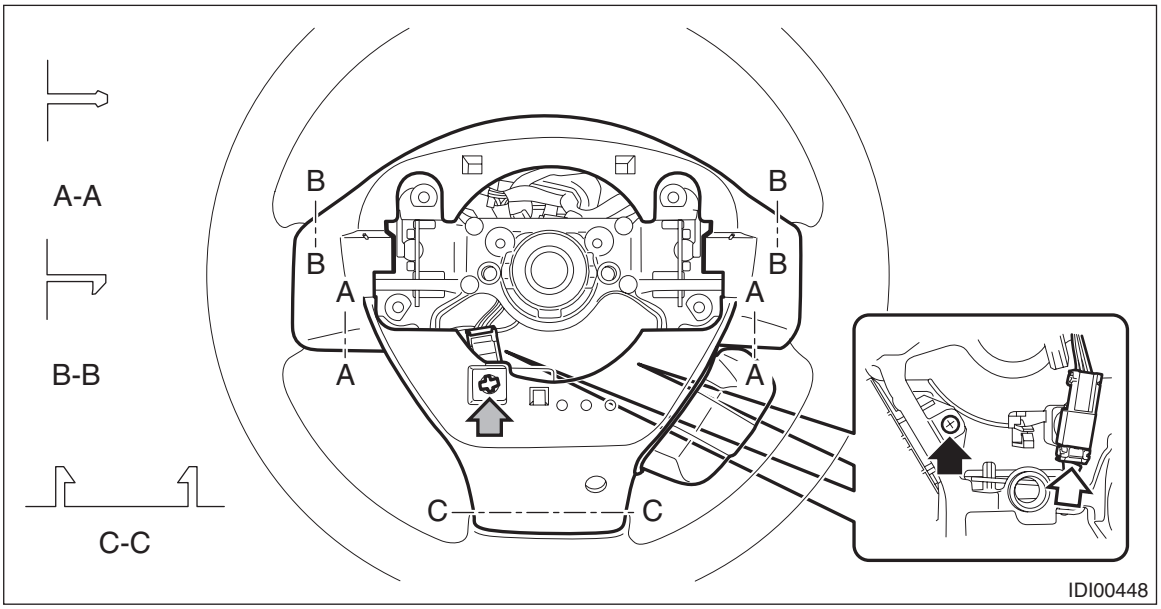
6) Remove the satellite switch assembly.
(1) Remove the screw, disconnect the connector and remove the paddle shift switch. (Model with paddle shift)



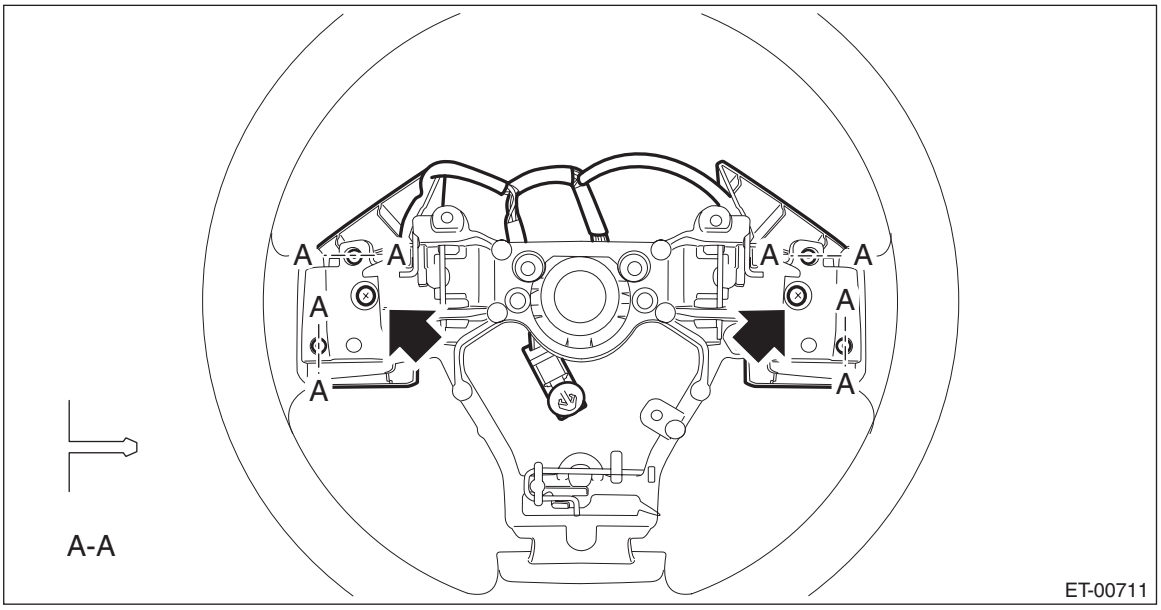
(2) Release the claws and clips, and remove the cover - steering wheel LWR.



NOTE:
For model with steering switch, remove the connector and screw.



(3) Remove the screws and then remove the satellite switch assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

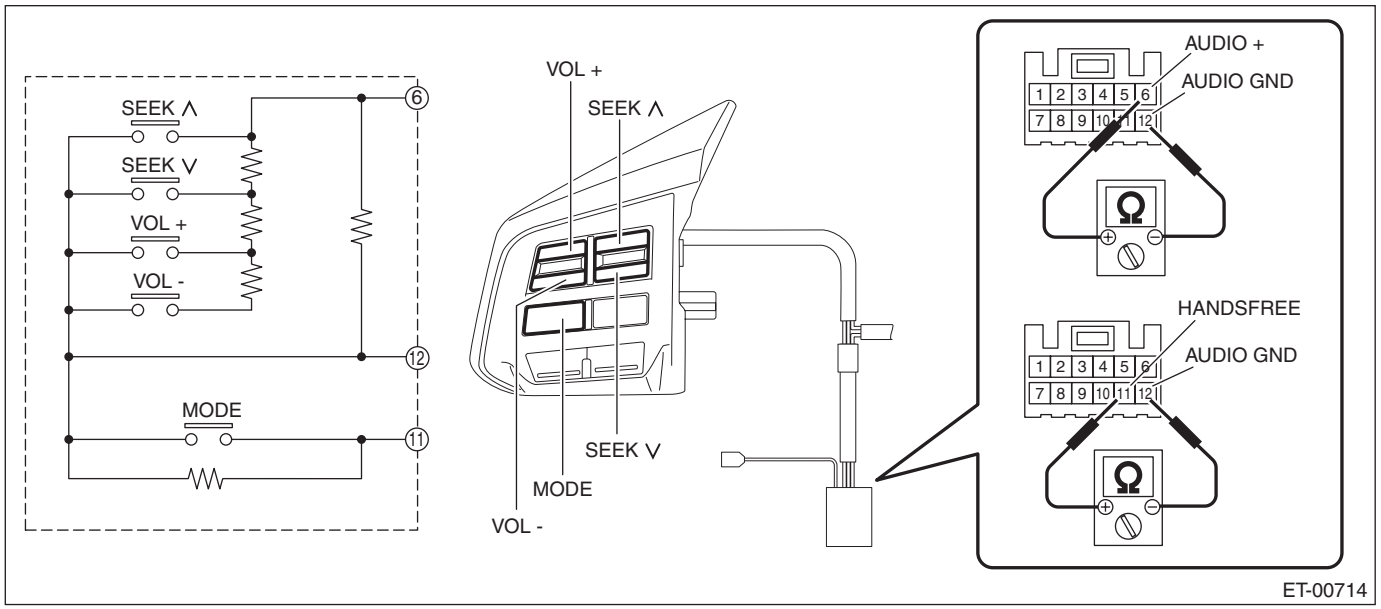
Tightening torque:
Steering wheel: 39 N·m (4.0 kgf-m, 28.8 ft-lb)

Clearance:
Cover assembly - column to Steering wheel: 4 — 6 mm (0.16 — 0.24 in)

C: INSPECTION

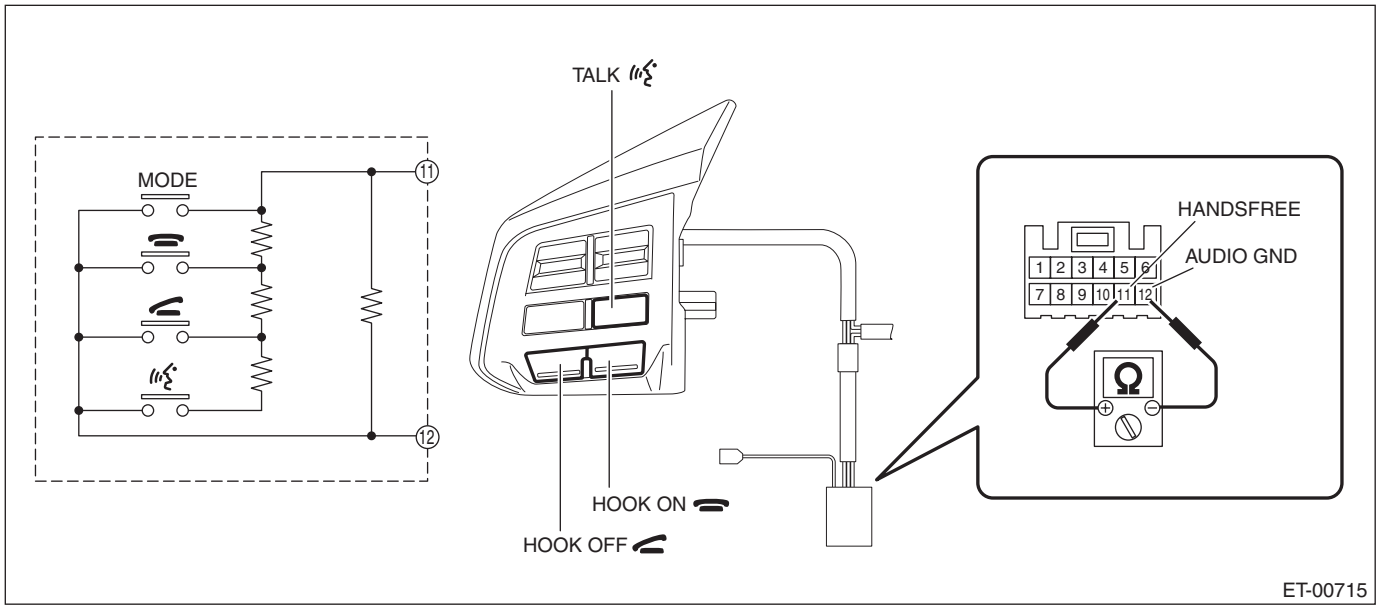
1) Measure the resistance between connector terminals of the satellite switch.

- Audio operation



Switch	Switch operation	Terminal No.	Standard
Volume (+) Volume (–) SEEK (∧) SEEK (∨)	All OFF	6 and 12	Approx. 100 kΩ
Mode	OFF	11 and 12	Approx. 100 kΩ
Volume (+)	ON	6 and 12	Approx. 1010 Ω
Volume (–)	ON	6 and 12	Approx. 3210 Ω
Preset CH UP/SEEK (∧)	ON	6 and 12	Less than approx. 1 Ω
Preset CH DOWN/SEEK (∨)	ON	6 and 12	Approx. 330 Ω
Mode	ON	11 and 12	Less than approx. 1 Ω

- Handsfree operation



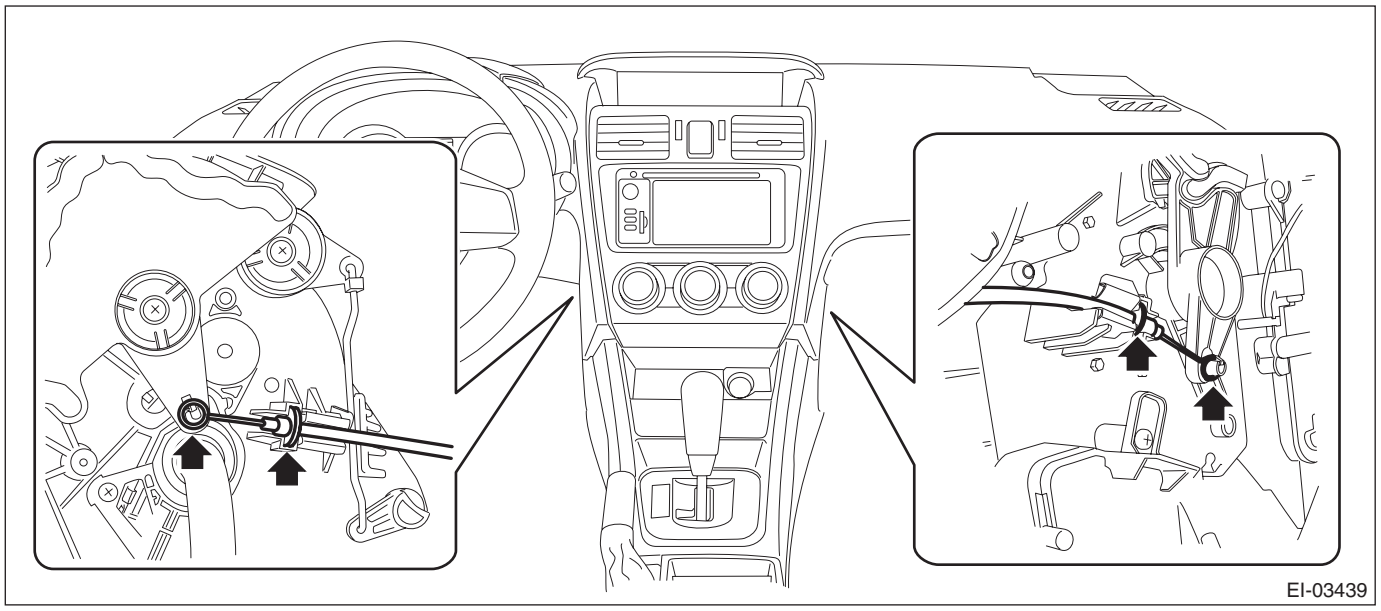
Switch	Switch operation	Terminal No.	Standard
HOOK ON HOOK OFF TALK	All OFF	11 and 12	Approx. 100 kΩ
HOOK ON	ON	11 and 12	Approx. 330 Ω
HOOK OFF	ON	11 and 12	Approx. 1010 Ω
TALK	ON	11 and 12	Approx. 3210 Ω

2) If the result of the measurement is not at the standard, replace the satellite switch assembly.

9. Navigation Body

A: REMOVAL

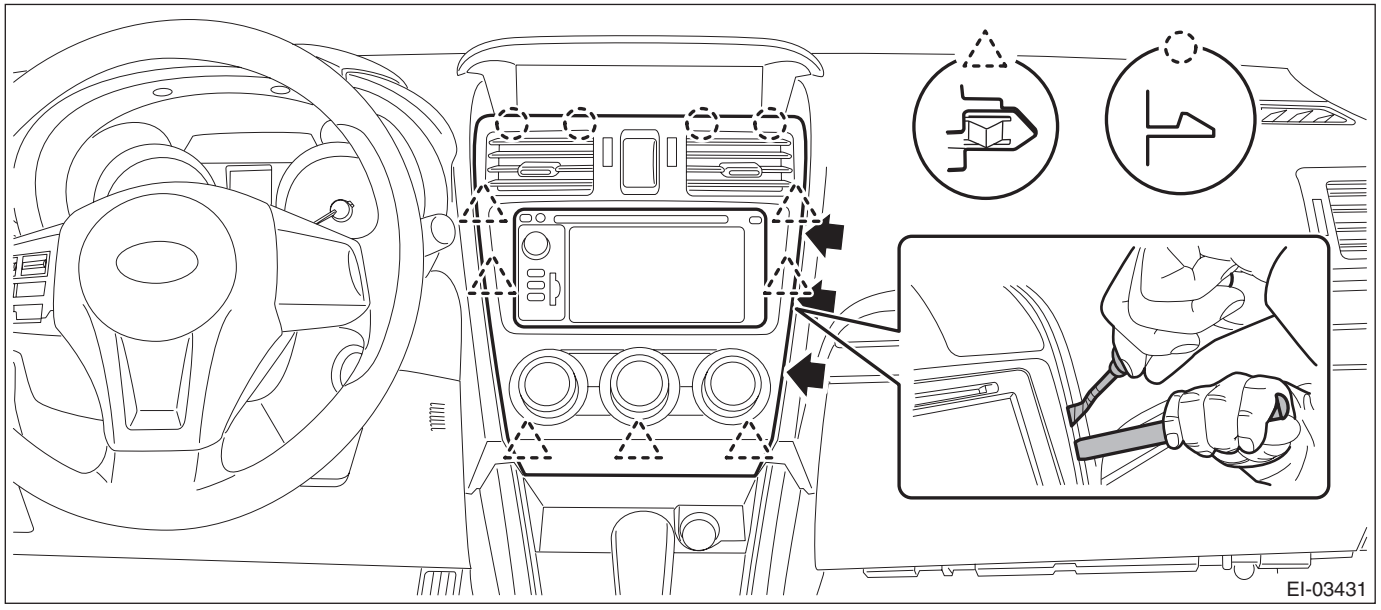
1) Disconnect the ground cable from battery.
2) On manual A/C models, disconnect the control cables from both sides of the heater and cooling unit assembly.



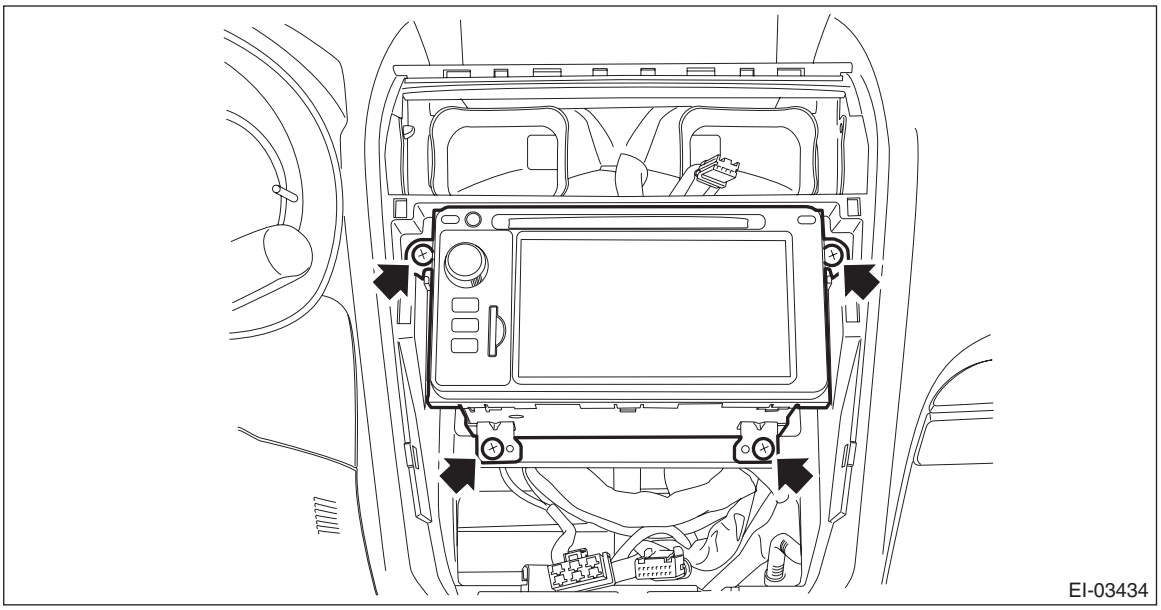
3) Remove the panel center assembly.

CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(1) Insert a plastic remover to the three areas shown by the arrows, and lift up the panel center assembly slightly.
(2) With the panel center assembly lifted up slightly, release the claw by using a clip remover wrapped with protective tape.
(3) Release the rest of the claws, and remove the panel center assembly.



4) Remove the navigation assembly.
   (1) Remove the left and right screws, and partially pull out the navigation assembly.
   (2) Disconnect the connector and remove the navigation assembly.



B: INSTALLATION

CAUTION:
After installing the panel center assembly, check that the air vent grille of the panel center assembly is inserted correctly into the air vent duct.
Install each part in the reverse order of removal.

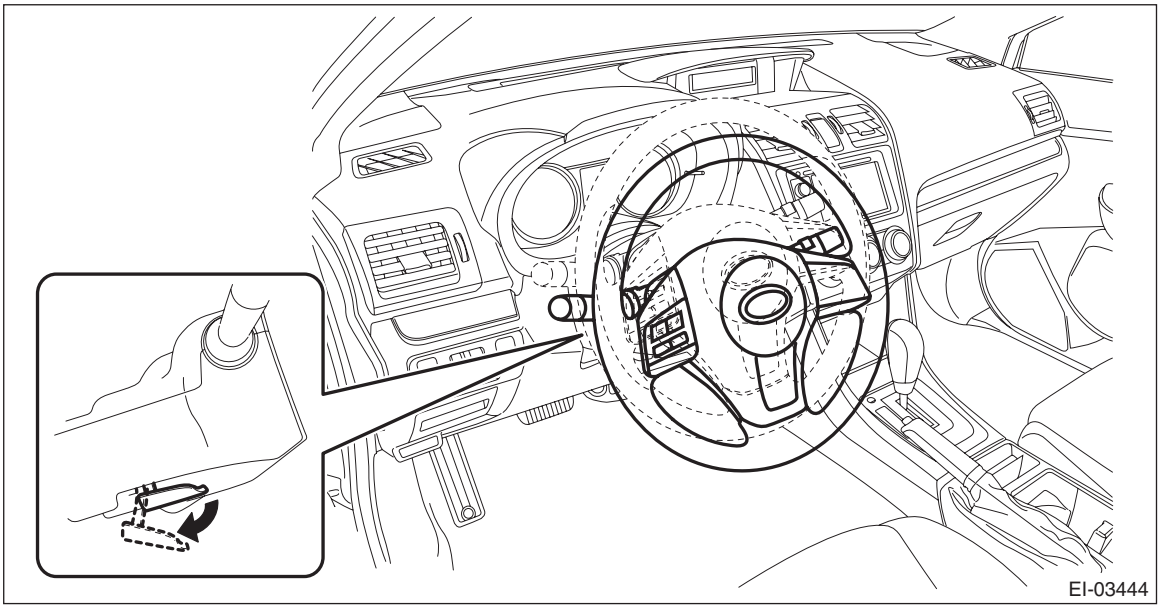
10.GPS Antenna

A: REMOVAL

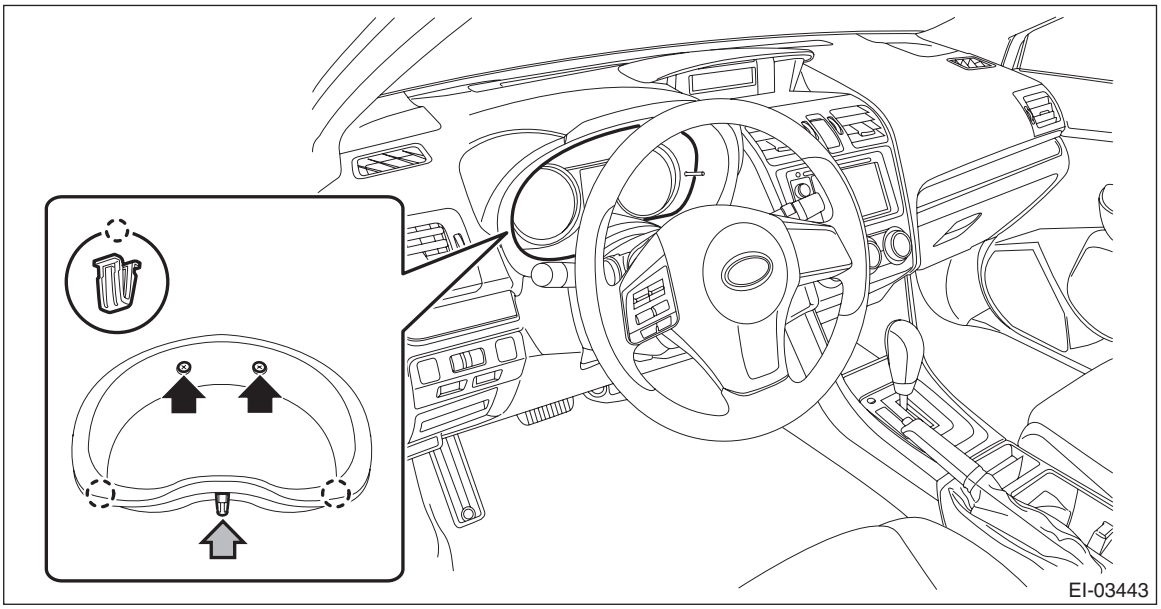
1) Disconnect the ground cable from battery.
2) Remove the combination meter assembly.

CAUTION:
- **Be careful not to damage the meter or instrument panel.**
- **Pay particular attention to avoid damaging the meter glass.**

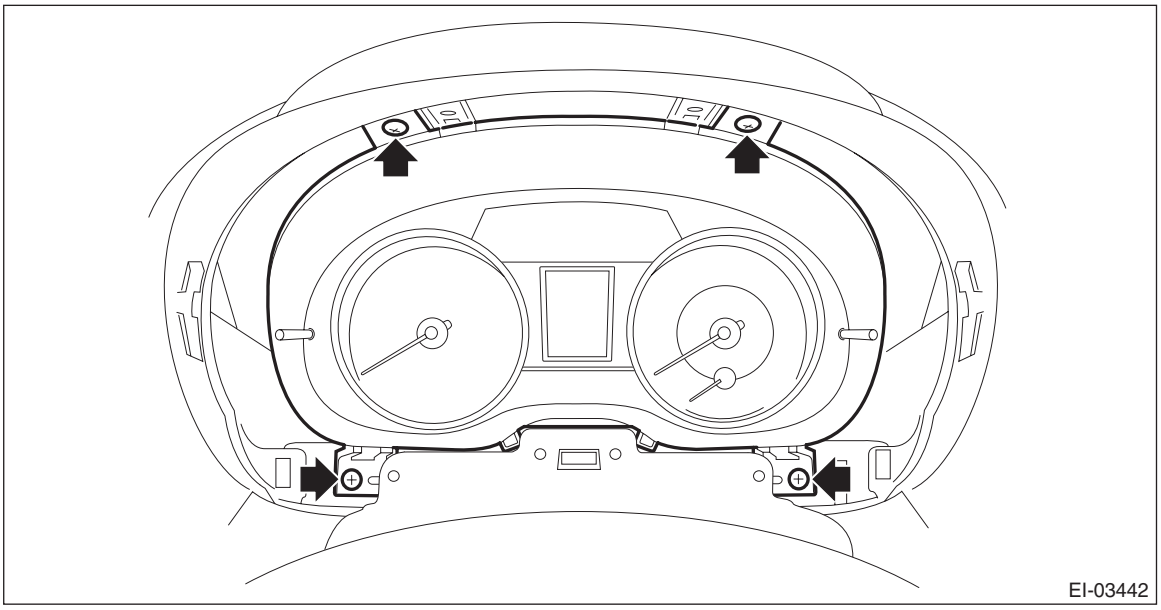
(1) Release the lock, tilt the steering column to the lowest end and fully extend the column by the telescopic system.



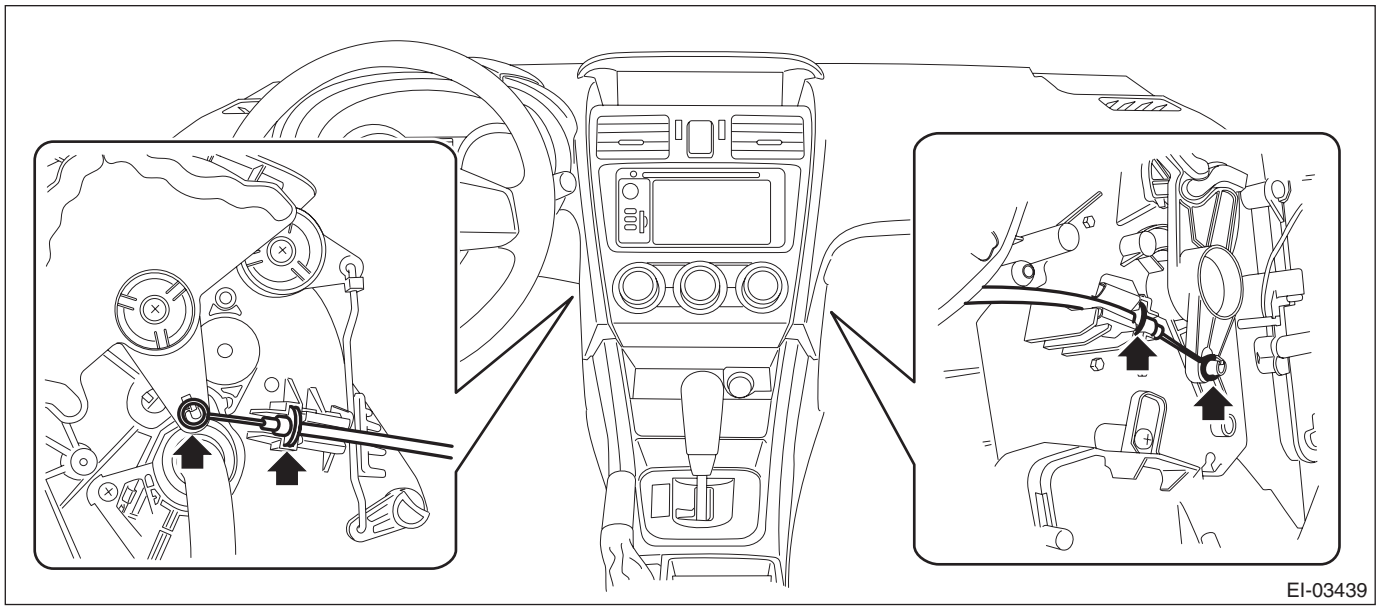
(2) Release the screws and clips, then detach the meter visor assembly.



(3) Remove the screws, disconnect the connector and remove the combination meter assembly.



3) On manual A/C models, disconnect the control cables from both sides of the heater and cooling unit assembly.

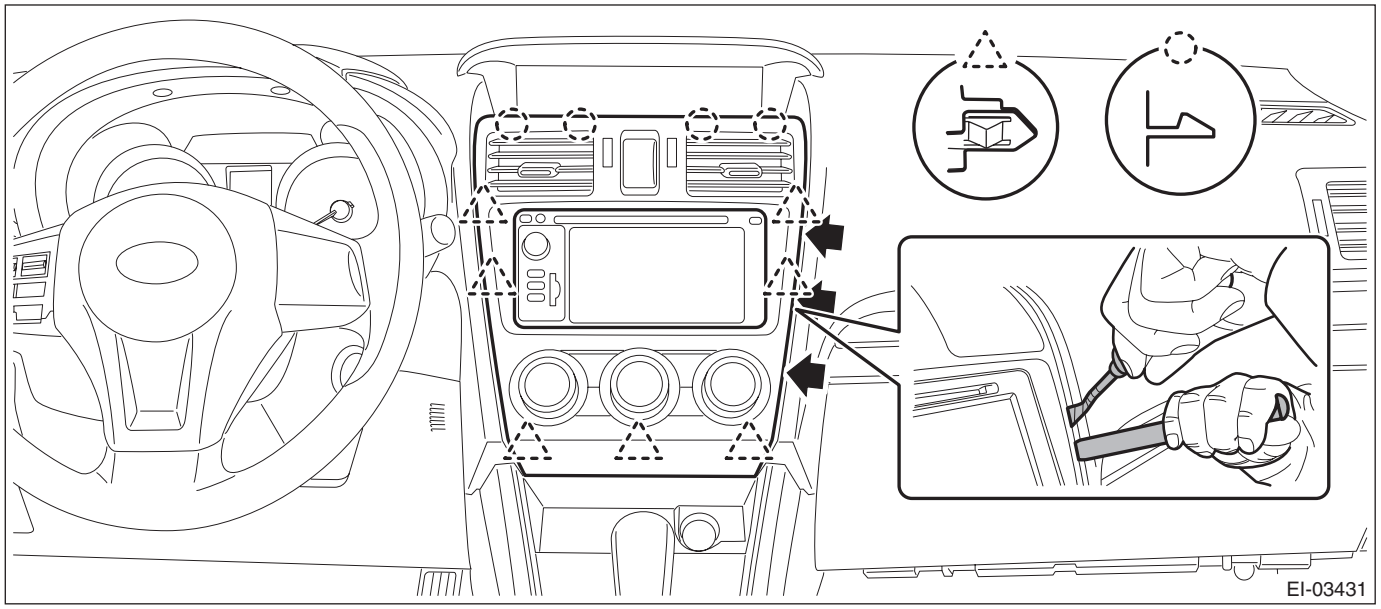


4) Remove the panel center assembly.

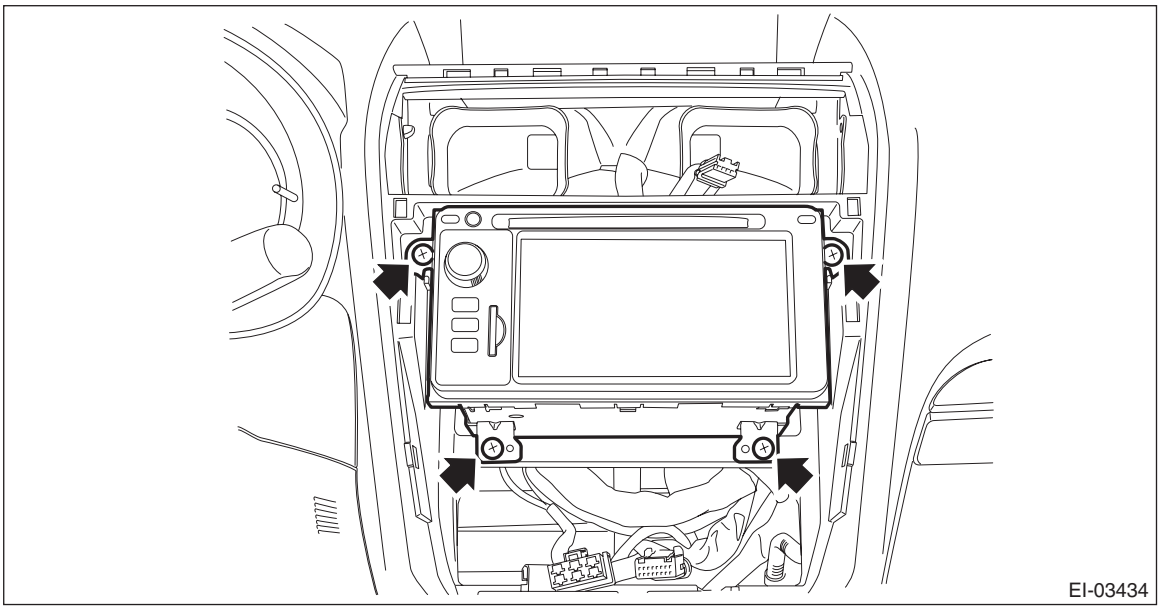
CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(1) Insert a plastic remover to the three areas shown by the arrows, and lift up the panel center assembly slightly.
(2) With the panel center assembly lifted up slightly, release the claw by using a clip remover wrapped with protective tape.

(3) Release the rest of the claws, and remove the panel center assembly.



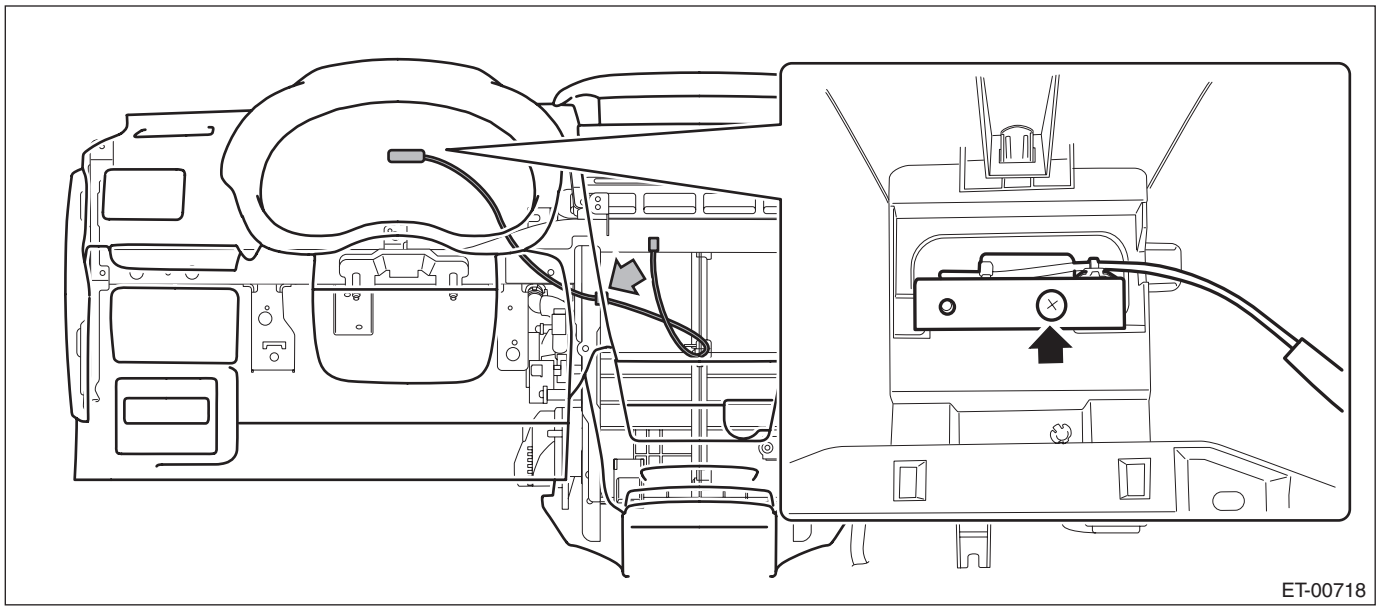
5) Remove the navigation assembly.
(1) Remove the left and right screws, and partially pull out the navigation assembly.
(2) Disconnect the connector and remove the navigation assembly.



6) Remove the GPS antenna assembly.
(1) Tie a string to the GPS antenna assembly harness connector on the navigation unit side.

NOTE:
A string makes operation easier during installation.

(2) Remove the screw and harness clamp, and pull out the GPS antenna assembly harness from the combination meter side.



(3) When the GPS antenna assembly is pulled out, remove the string attached to the connector in step (1).

B: INSTALLATION

CAUTION:
After installing the panel center assembly, check that the air vent grille of the panel center assembly is inserted correctly into the air vent duct.
Install each part in the reverse order of removal.

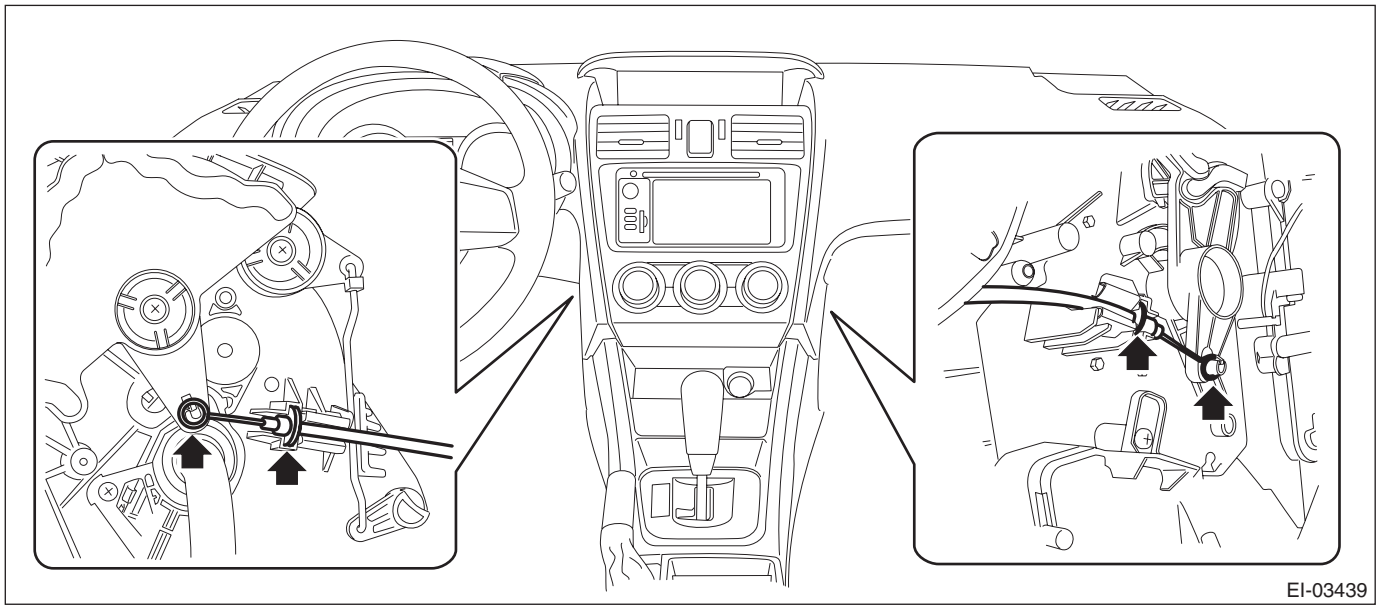
11.Front Accessory Power Supply Socket

A: WIRING DIAGRAM

Refer to “Front Accessory Power Supply Socket System” in the wiring diagram. <Ref. to WI-90, WIRING DIAGRAM, Front Accessory Power Supply Socket System.>

B: REMOVAL

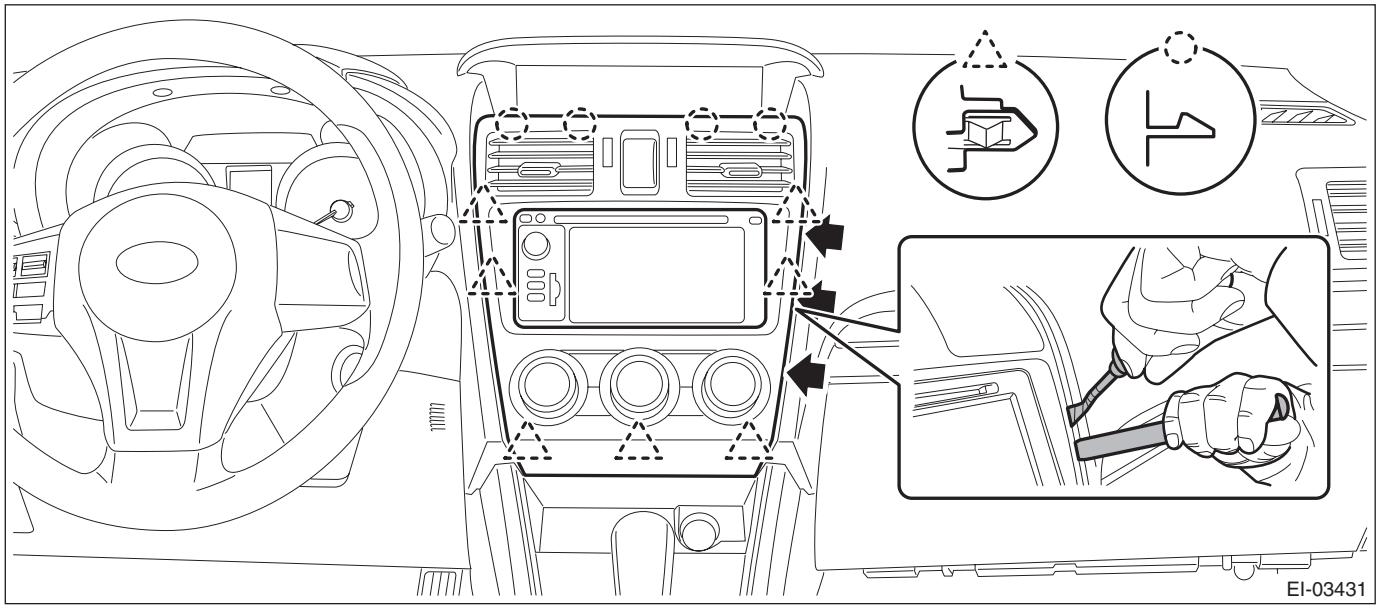
1) Disconnect the ground cable from battery.
2) On manual A/C models, disconnect the control cables from both sides of the heater and cooling unit assembly.



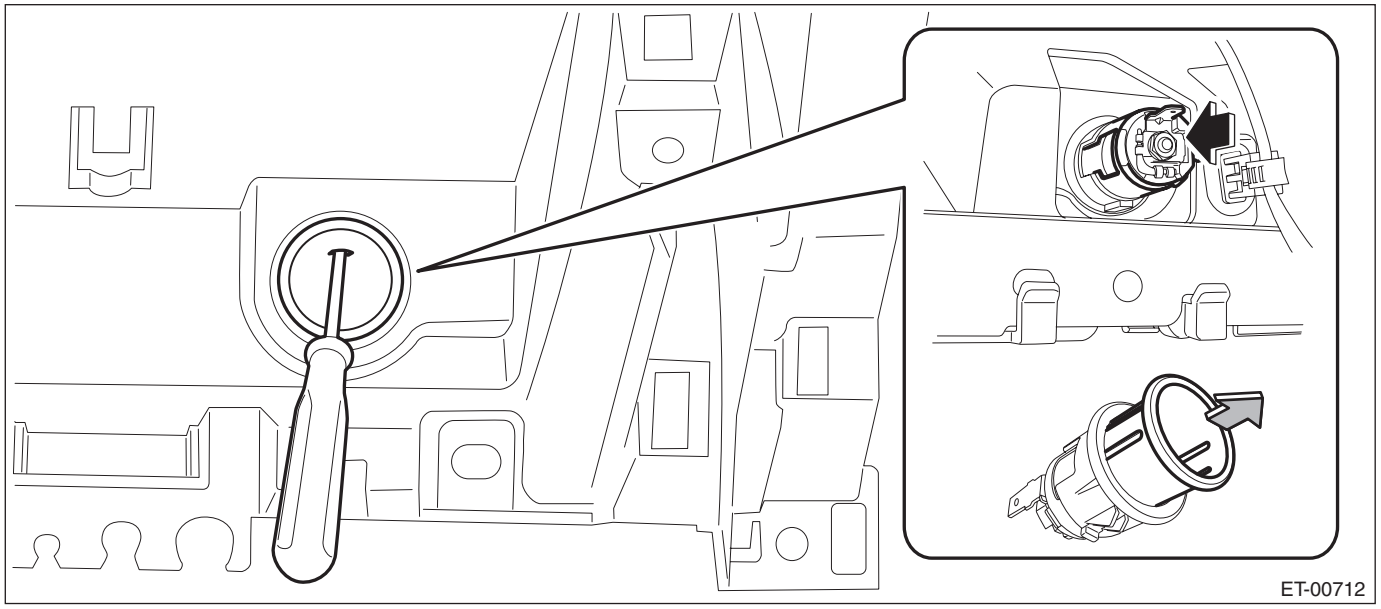
3) Remove the panel center assembly.

CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(1) Insert a plastic remover to the three areas shown by the arrows, and lift up the panel center assembly slightly.
(2) With the panel center assembly lifted up slightly, release the claw by using a clip remover wrapped with protective tape.
(3) Release the rest of the claws, and remove the panel center assembly.



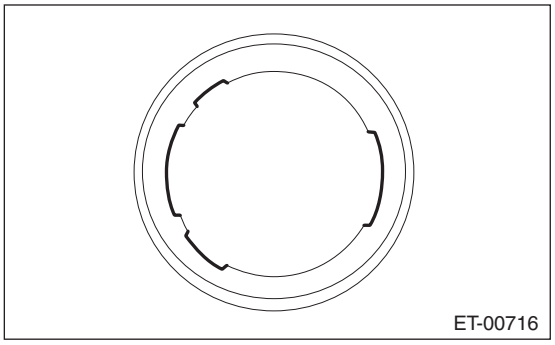
4) Remove the front accessory power supply socket.
(1) Disconnect the connector.
(2) While releasing the claw inside the accessory power supply socket, press in the claw from the rear to remove the accessory power supply socket.



C: INSTALLATION

CAUTION:
After installing the panel center assembly, check that the air vent grille of the panel center assembly is inserted correctly into the air vent duct.
Install each part in the reverse order of removal.

NOTE:
Align the grooves of the holder with the claws of accessory power supply socket.



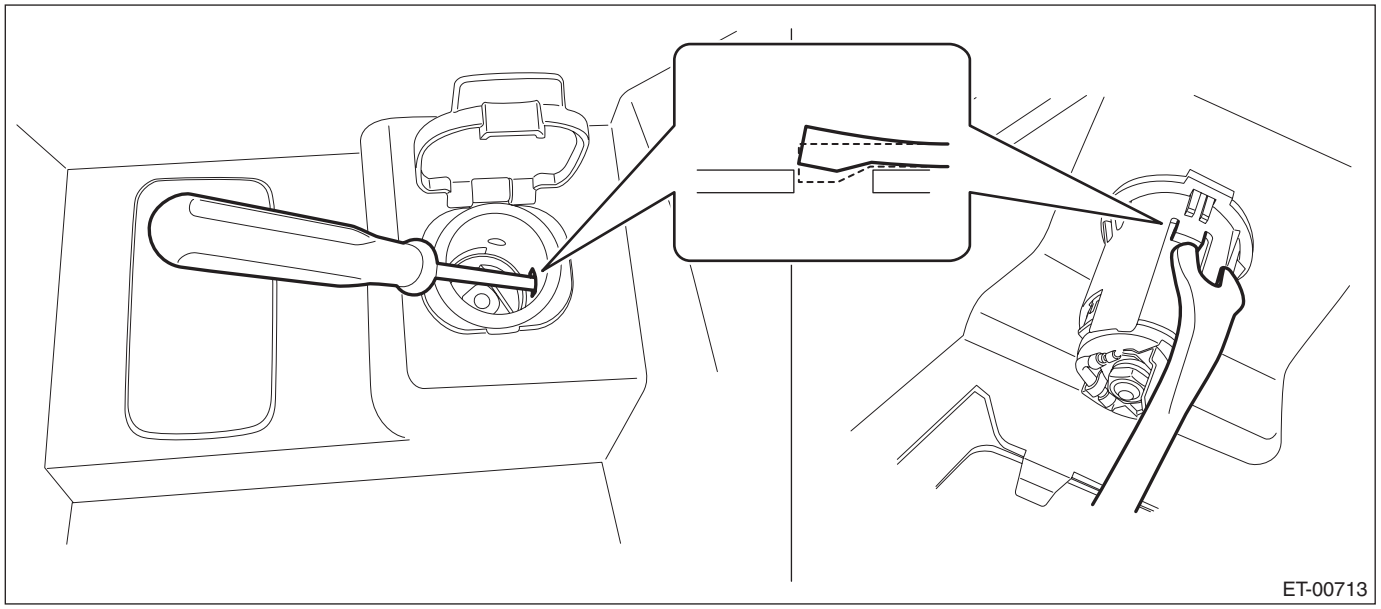
12.Rear Accessory Power Supply Socket

A: WIRING DIAGRAM

Refer to “Rear Accessory Power Supply Socket System” in the wiring diagram. <Ref. to WI-123, WIRING DIAGRAM, Rear Accessory Power Supply Socket System.>

B: REMOVAL

1) Disconnect the ground cable from battery.
2) Open the console box, and remove the rear accessory power supply socket.
   (1) Release the claws inside the accessory power supply socket.
   (2) Pull the accessory power supply socket out to remove.

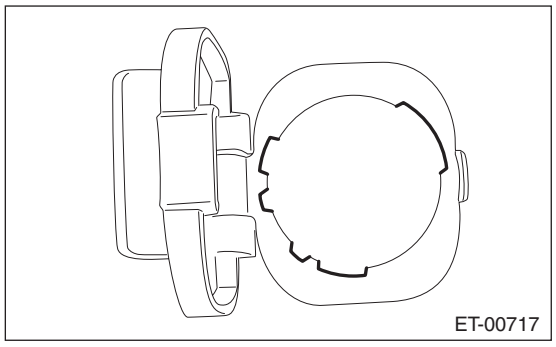


NOTE:
If it is hard to remove, remove the console box assembly and then release the claws from behind.

C: INSTALLATION

Install each part in the reverse order of removal.

NOTE:
Align the grooves of the holder with the claws of accessory power supply socket.



13.AUX Input Terminal

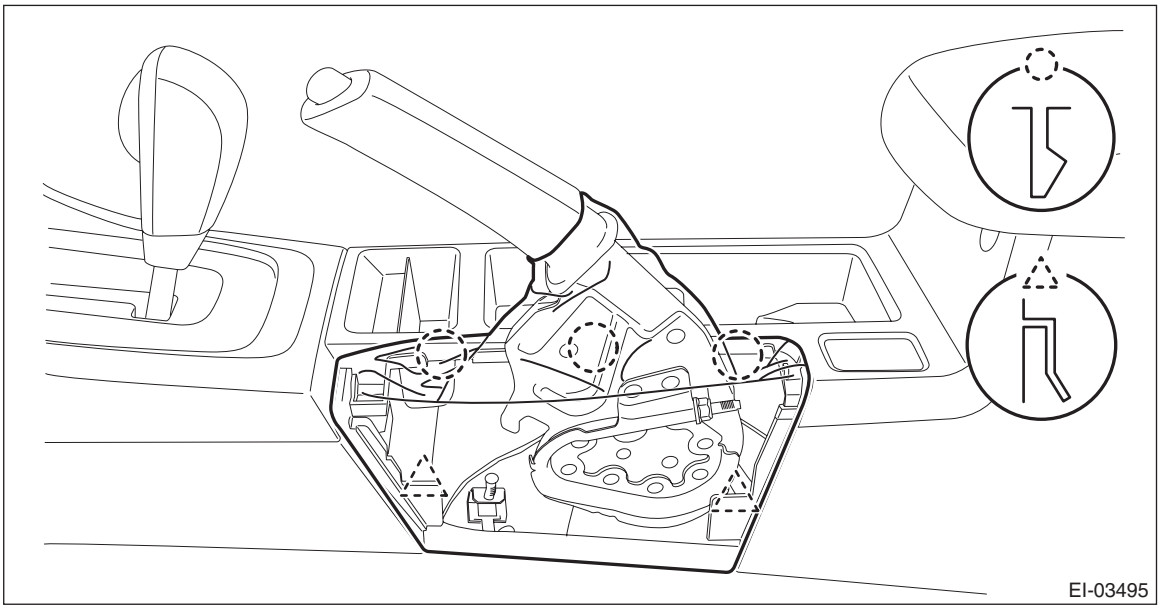
A: REMOVAL

1) Disconnect the ground cable from battery.

NOTE:
On CVT models, shift the select lever into “D” before disconnecting the battery ground cable.

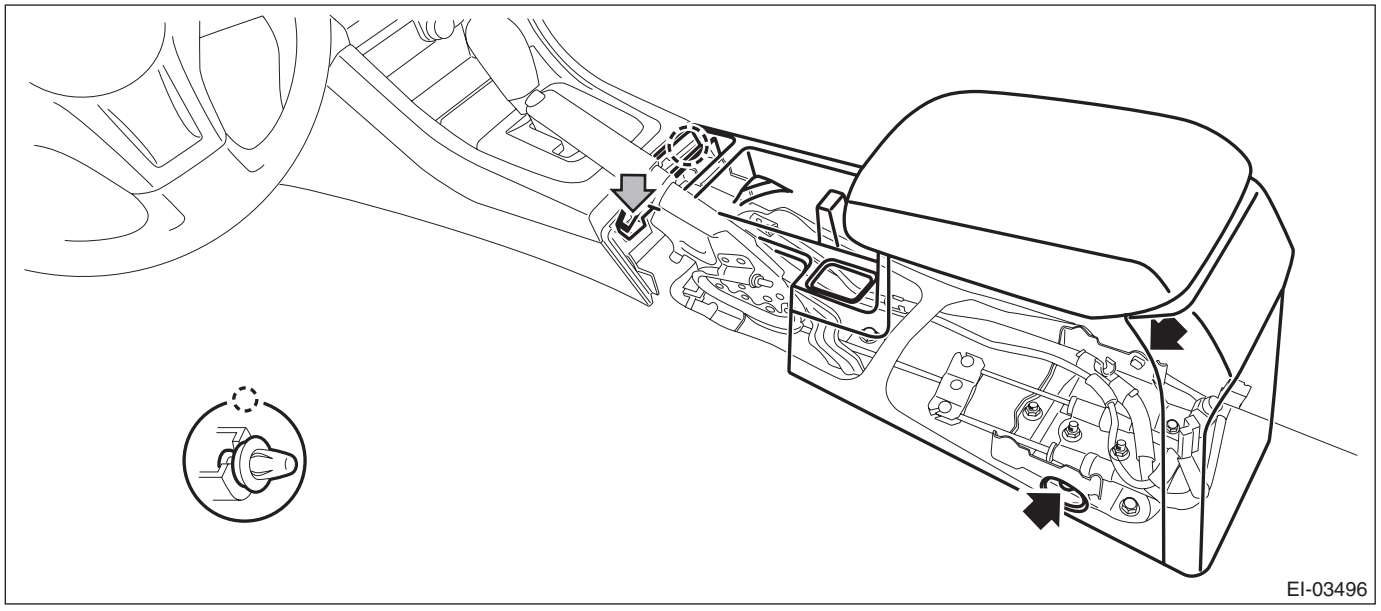
2) Remove the console box assembly.

(1) Release the claws, and then remove the boot - hand brake.

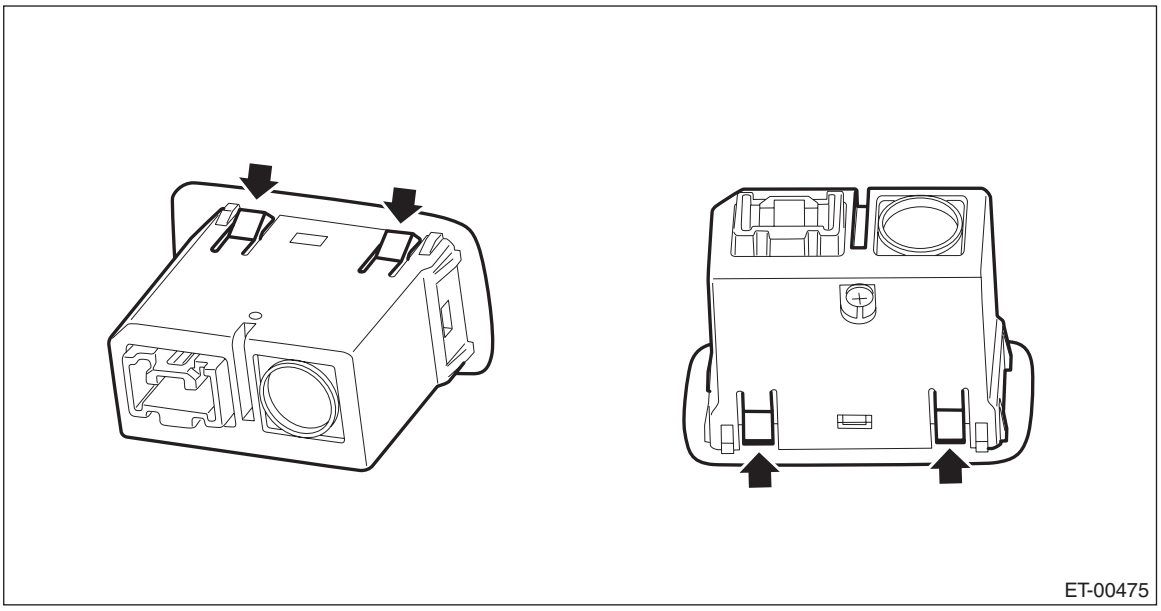


(2) Move the seat forward, and remove the bolts after detaching the left and right caps.

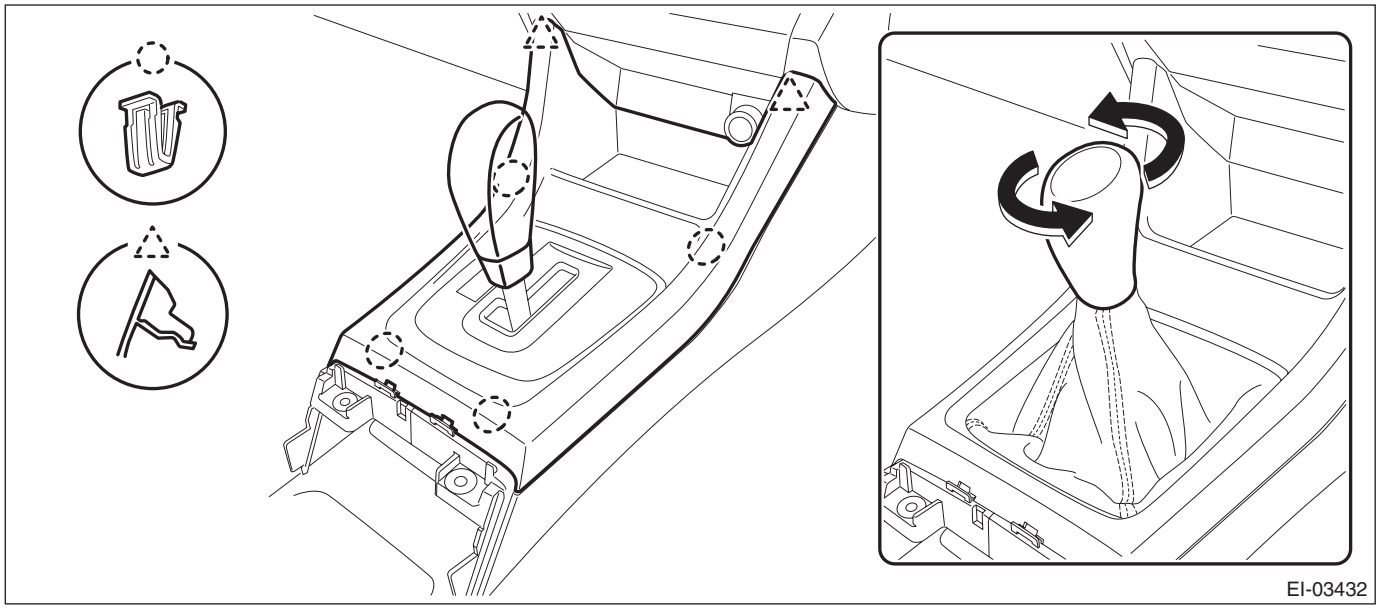
(3) Remove the screws and clips, disconnect the harness connector and remove the console box assembly.



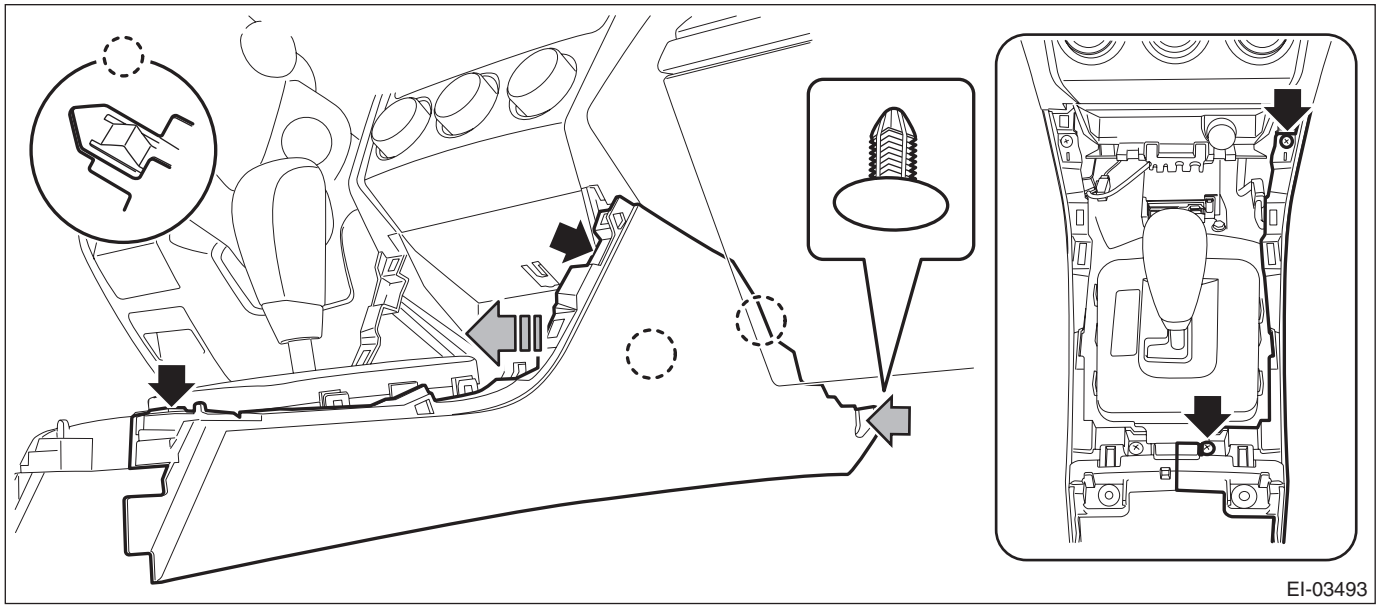
3) Remove the AUX input terminal.
   (1) Remove the claws at four locations.
   (2) Remove the AUX input terminal assembly by pushing it into the console box.



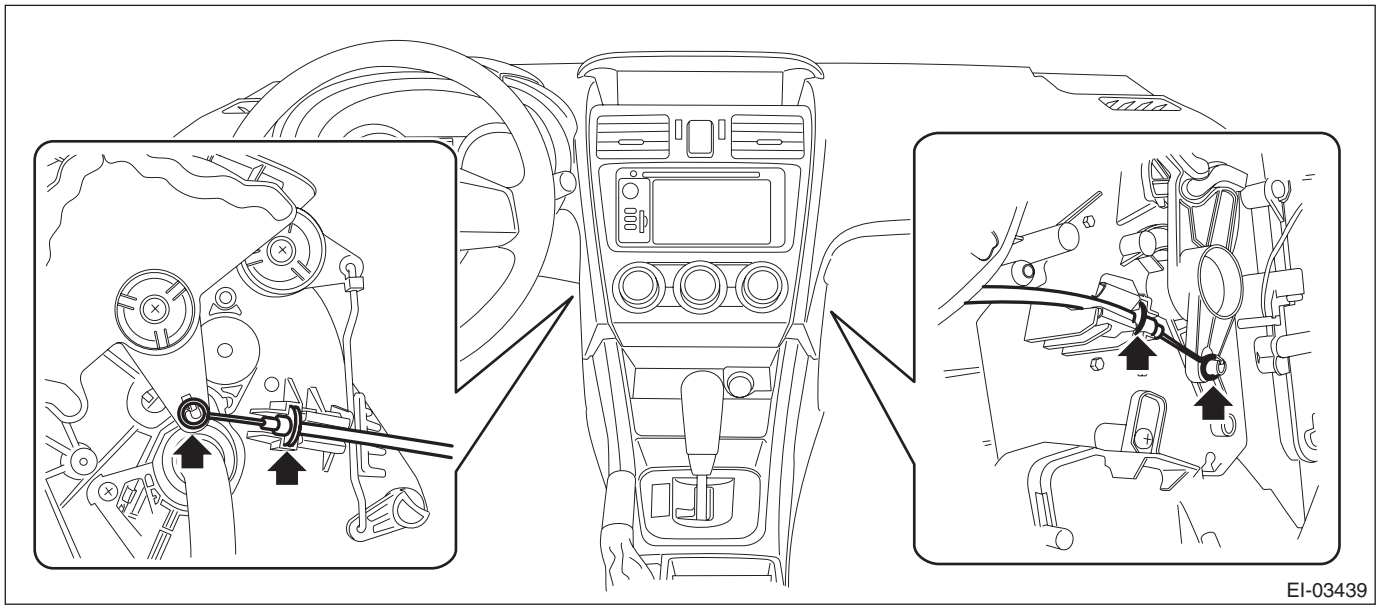
4) Remove the cover - shift lever.
   (1) Remove the shift knob. (MT model)
   (2) Release the clips and claws, then pull up the cover - shift lever.



5) Remove the panel center LWR RH.
(1) Remove the screws and clips.
(2) Release the claws, and pull the panel center LWR RH to remove.


EI-03493

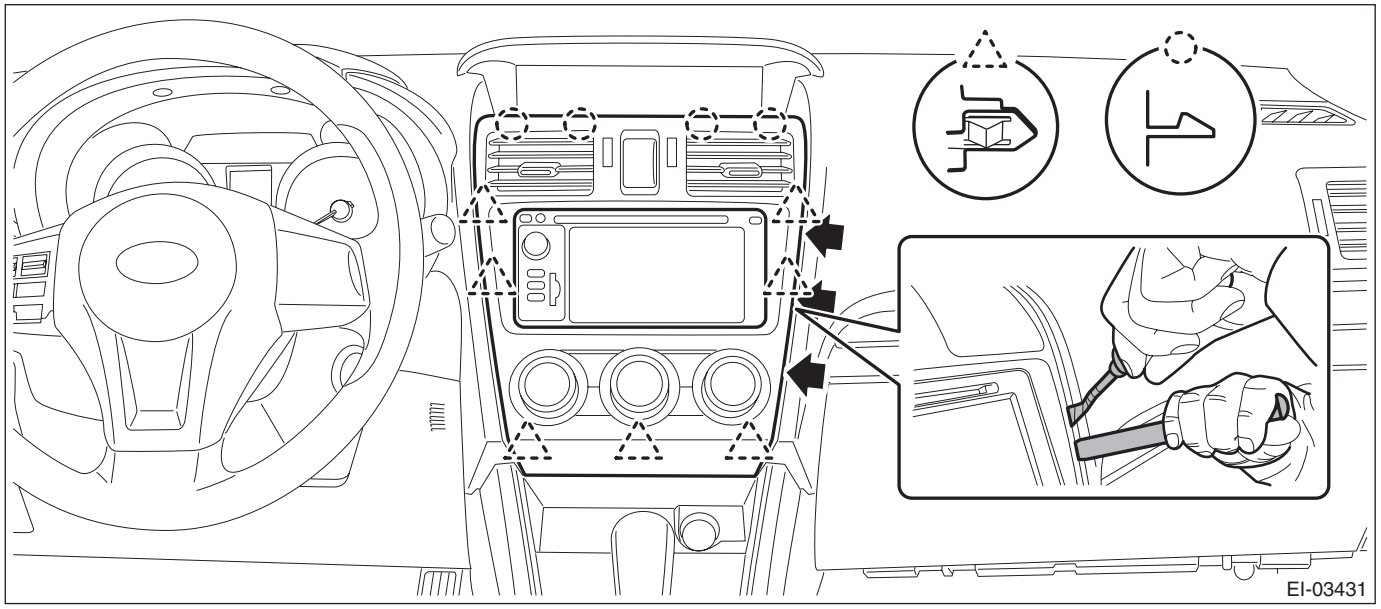
6) On manual A/C models, disconnect the control cables from both sides of the heater and cooling unit assembly.


EI-03439

7) Remove the panel center assembly.

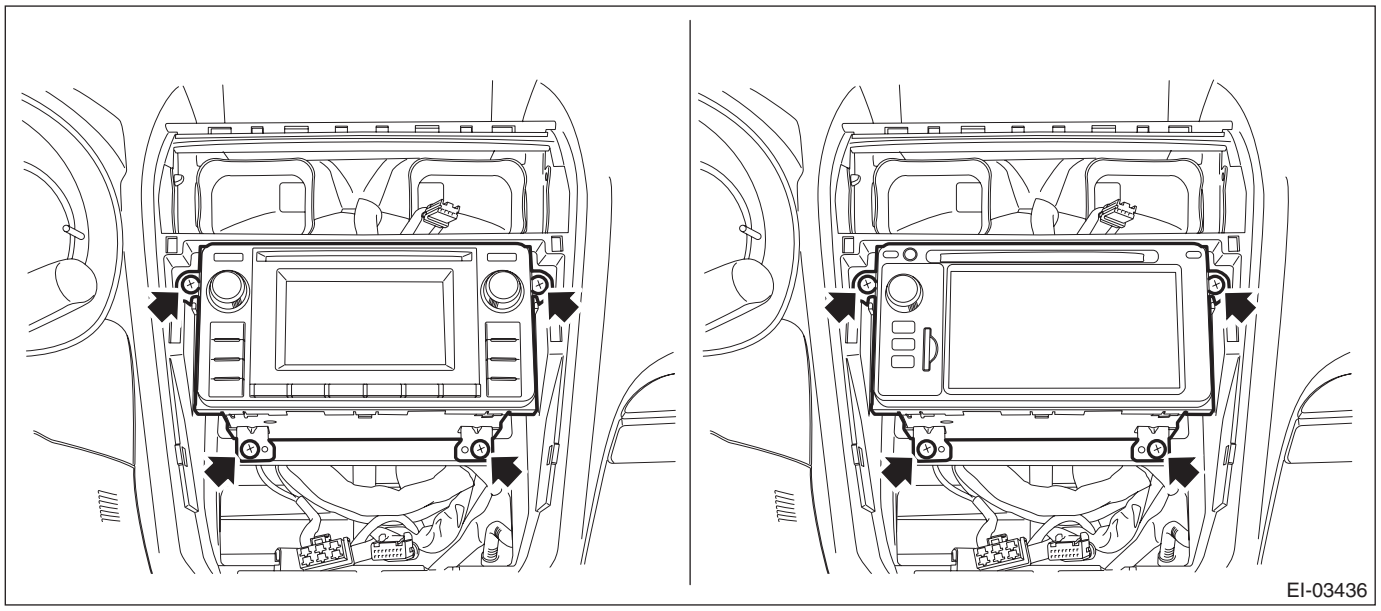
CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(1) Insert a plastic remover to the three areas shown by the arrows, and lift up the panel center assembly slightly.
(2) With the panel center assembly lifted up slightly, release the claw by using a clip remover wrapped with protective tape.
(3) Release the rest of the claws, and remove the panel center assembly.

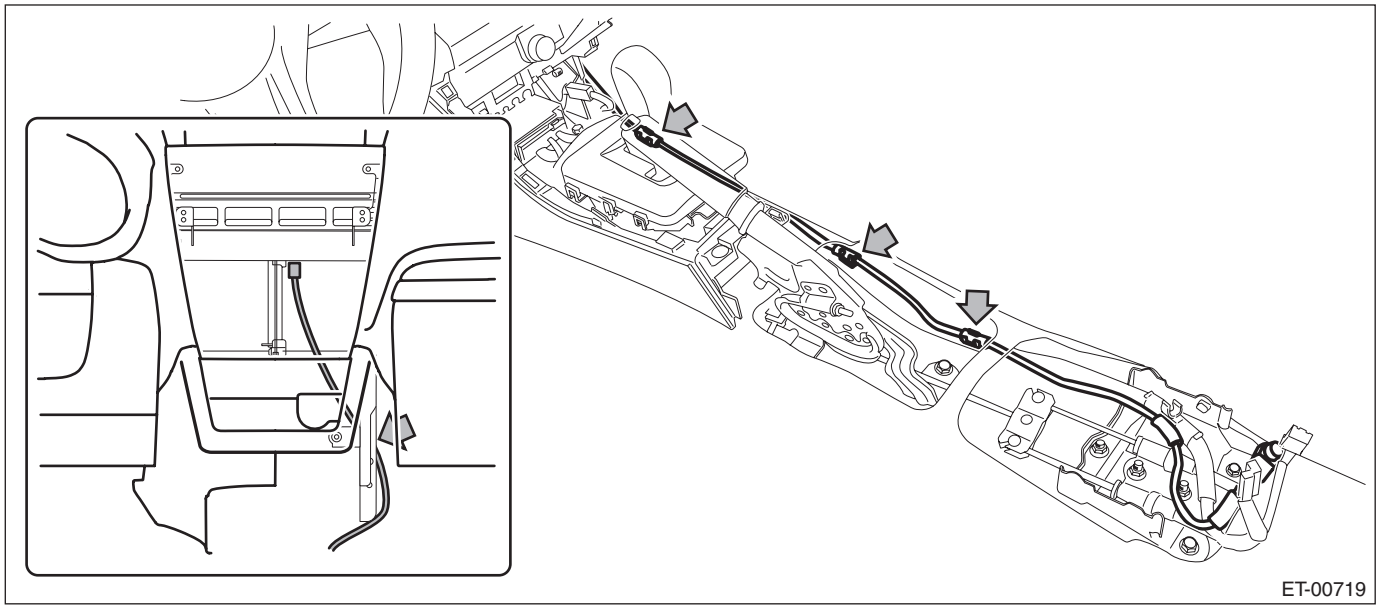


8) Remove the audio assembly or navigation assembly.

(1) Remove the screws, and partially pull out the audio assembly or navigation assembly.
(2) Disconnect the connectors, and remove the audio assembly or navigation assembly.



9) Remove the harness clamp and remove the AUX terminal harness.



B: INSTALLATION

CAUTION:
After installing the panel center assembly, check that the air vent grille of the panel center assembly is inserted correctly into the air vent duct.
Install each part in the reverse order of removal.

Tightening torque:
Console box assembly: 6.5 N·m (0.66 kgf-m, 4.8 ft-lb)

COMMUNICATION SYSTEM

COM

Page

1. General Description 2
2. Relay and Fuse 3
3. Horn System 4
4. Horn 5
5. Horn Switch 8

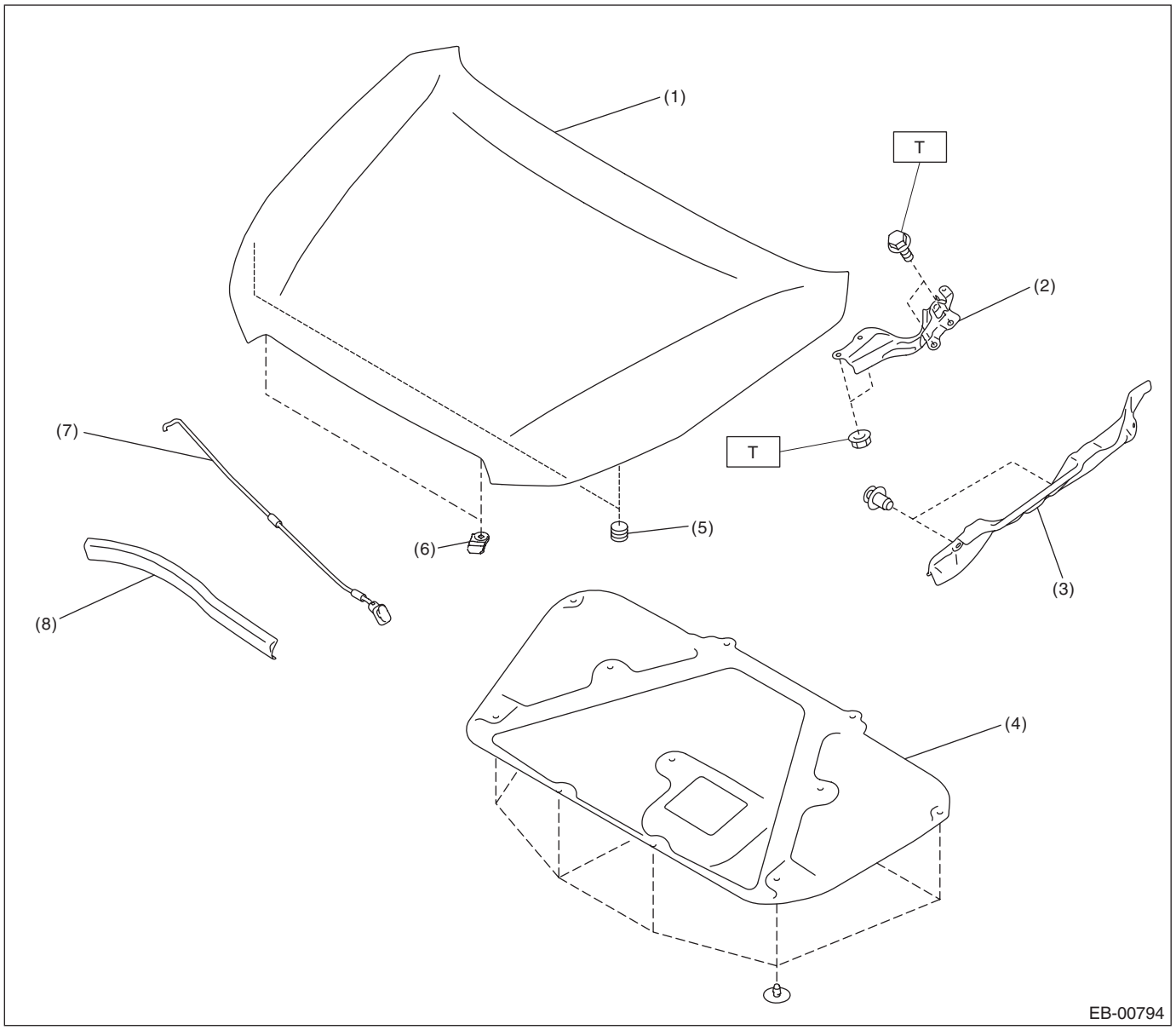
1. General Description

A: SPECIFICATION

Refer to Body Repair Manual for the dimensions of the body.

B: COMPONENT

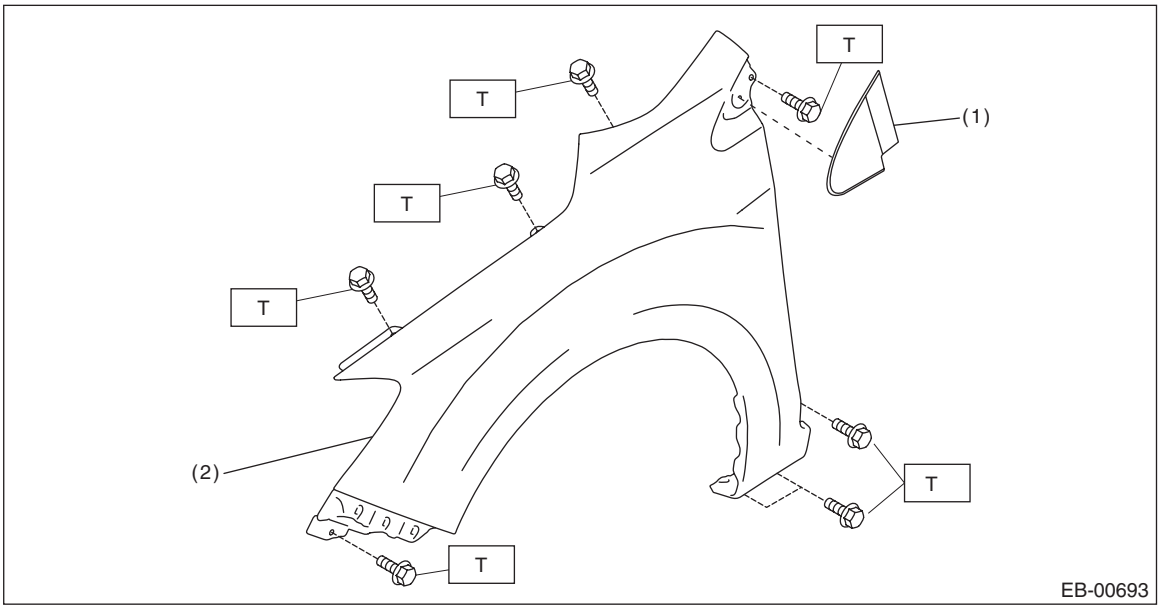
1. FRONT HOOD



(1) Hood COMPL - front
(2) Hinge COMPL - front hood
(3) Cover - front fender
(4) Insulator - front hood
(5) Buffer - front hood
(6) Stopper - front hood
(7) Stay - hood support
(8) Seal - front duct

Tightening torque:N·m (kgf-m, ft-lb)
T: 25 (2.55, 18.4)

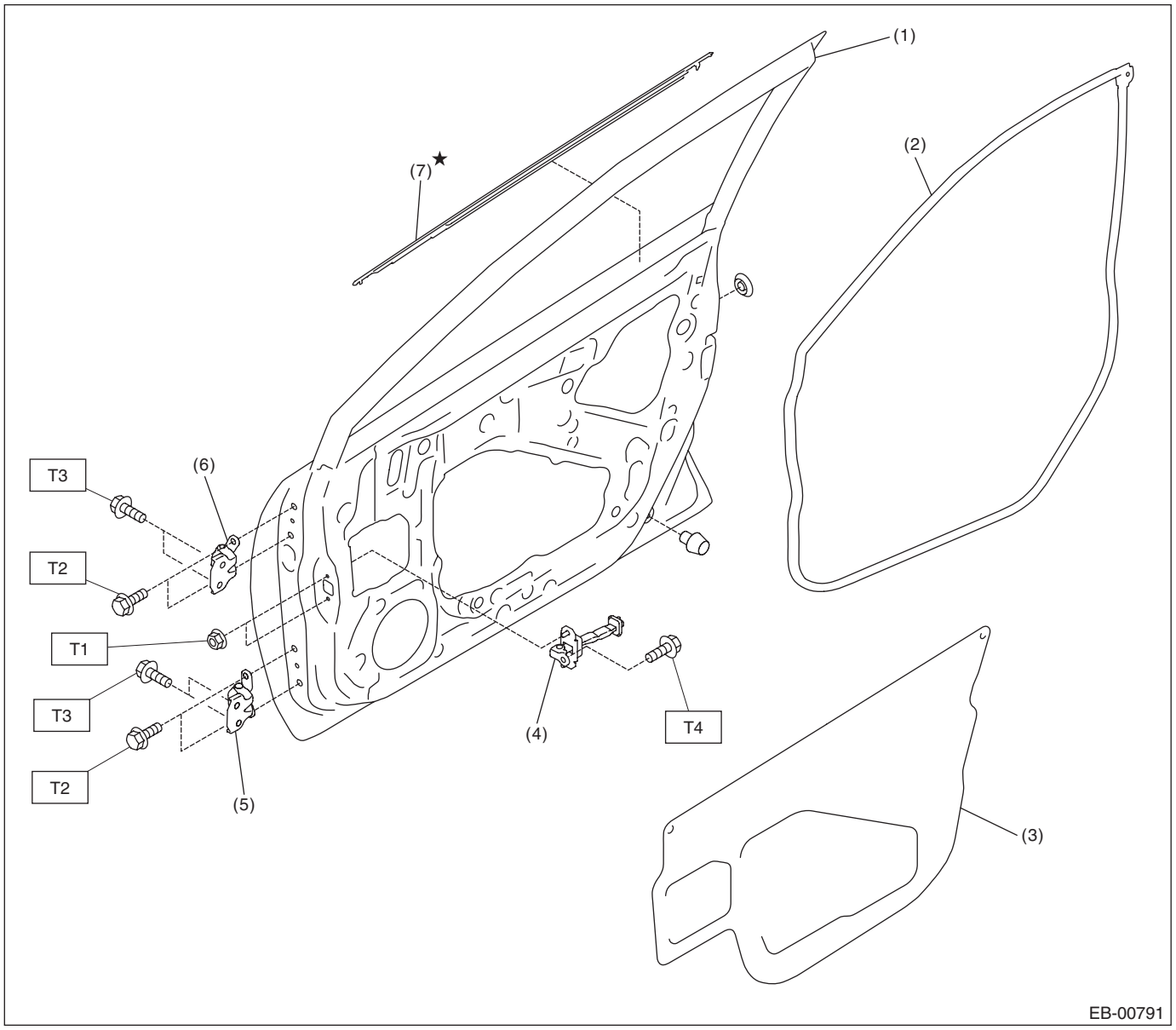
2. FRONT FENDER



(1) Cover - front pillar ASSY
(2) Fender COMPL - front

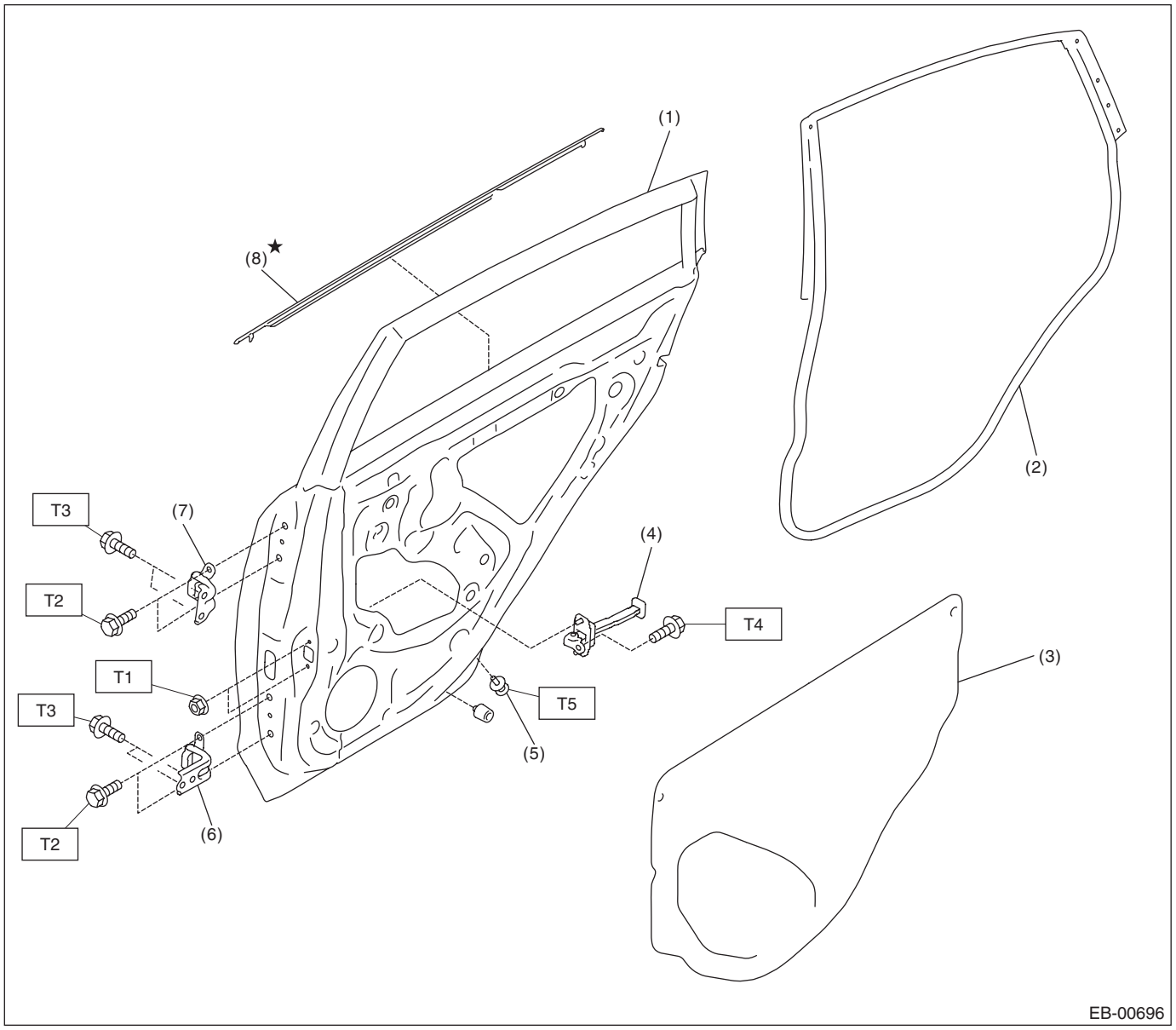
Tightening torque:N·m (kgf-m, ft-lb)
T: 7.5 (0.76, 5.5)

3. FRONT DOOR



(1)	Panel ASSY - front door	(6)	Upper hinge - front door	***Tightening torque:N·m (kgf-m, ft-lb)***
(2)	Weather strip - front door	(7)	Weather strip outer - front door	***T1: 7.5 (0.76, 5.5)***
(3)	Sealing cover - front door			***T2: 25 (2.55, 18.4)***
(4)	Checker ASSY - front door			***T3: 30 (3.06, 22.1)***
(5)	Lower hinge - front door			***T4: 33 (3.36, 24.3)***

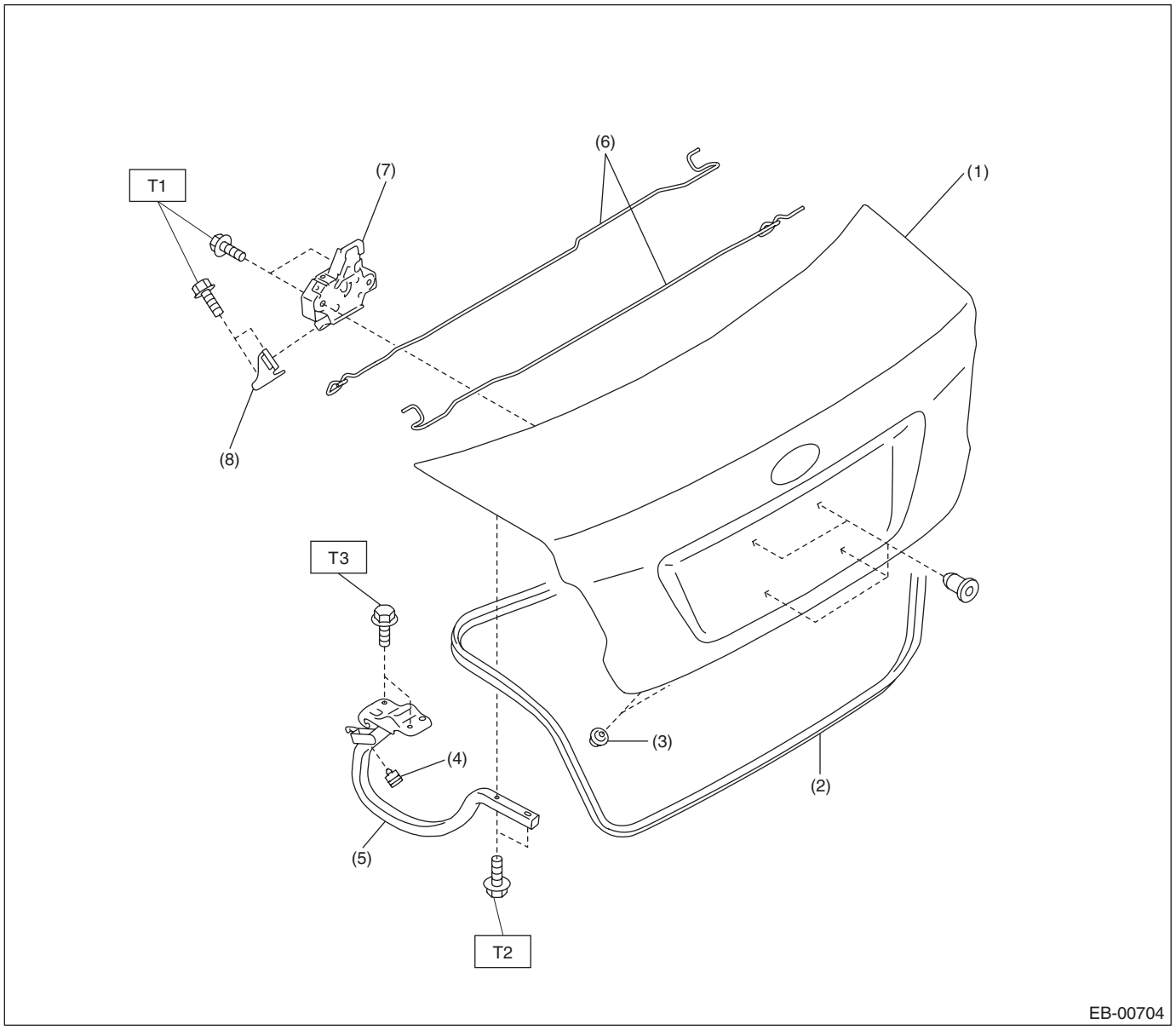
4. REAR DOOR



(1) Panel ASSY - rear door
(2) Weather strip - rear door
(3) Sealing cover - rear door
(4) Checker ASSY - rear door
(5) Catcher - rear door
(6) Lower hinge - rear door
(7) Upper hinge - rear door
(8) Weather strip outer - rear door

Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 25 (2.55, 18.4)
T3: 30 (3.06, 22.1)
T4: 33 (3.36, 24.3)
T5: 38 (3.87, 28.0)

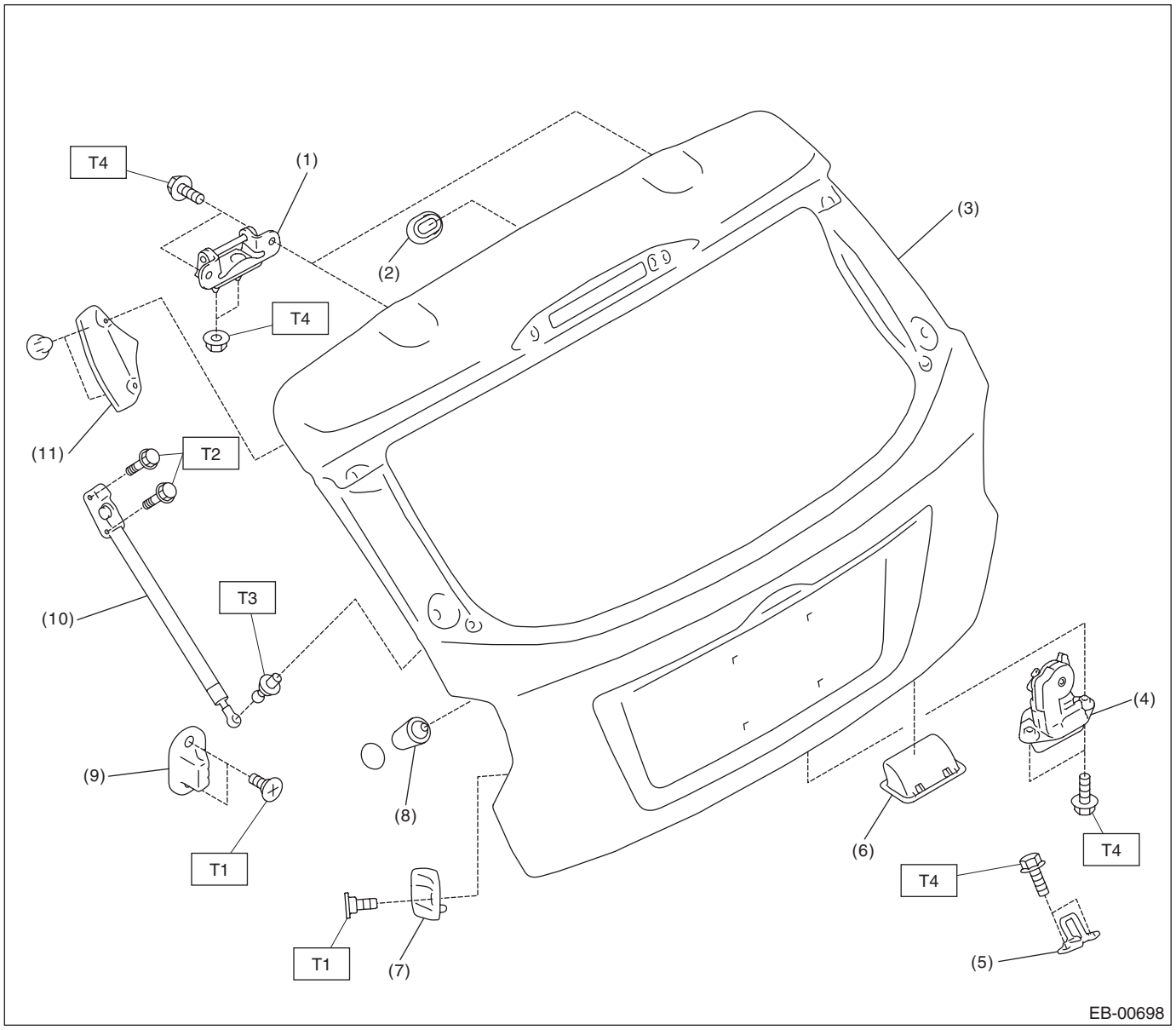
5. TRUNK LID PANEL



(1)	Trunk lid COMPL	(5)	Trunk lid arm ASSY
(2)	Weather strip - trunk lid	(6)	Torsion bar - trunk lid
(3)	Stopper - trunk lid	(7)	Lock ASSY - trunk lid
(4)	Stopper - trunk	(8)	Striker - trunk

Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 14 (1.43, 10.3)
T3: 18 (1.84, 13.3)

6. REAR GATE



(1) Hinge - rear gate
(2) Plug - hole
(3) Panel - rear gate
(4) Latch & actuator - rear gate
(5) Striker - rear gate
(6) Handle - rear gate
(7) Buffer - rear gate
(8) Stopper - rear gate
(9) Buffer - body side
(10) Stay ASSY - rear gate
(11) Drip - rear gate

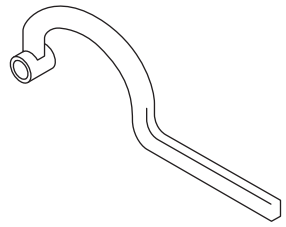
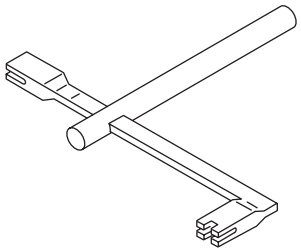
Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 10 (1.02, 7.4)
T3: 20 (2.04, 14.8)
T4: 25 (2.55, 18.4)

C: CAUTION

Exterior body panels are heavy. When removing and installing them, do not drop and damage the panels. Also, be careful not to scratch the coated surfaces of the panels.

D: PREPARATION TOOL

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST-925610000	925610000	WRENCH	Used for removing and installing door hinge.
 ST-927780000	927780000	REMOVER	Used for removing and installing the trunk torsion bar.

2. GENERAL TOOL

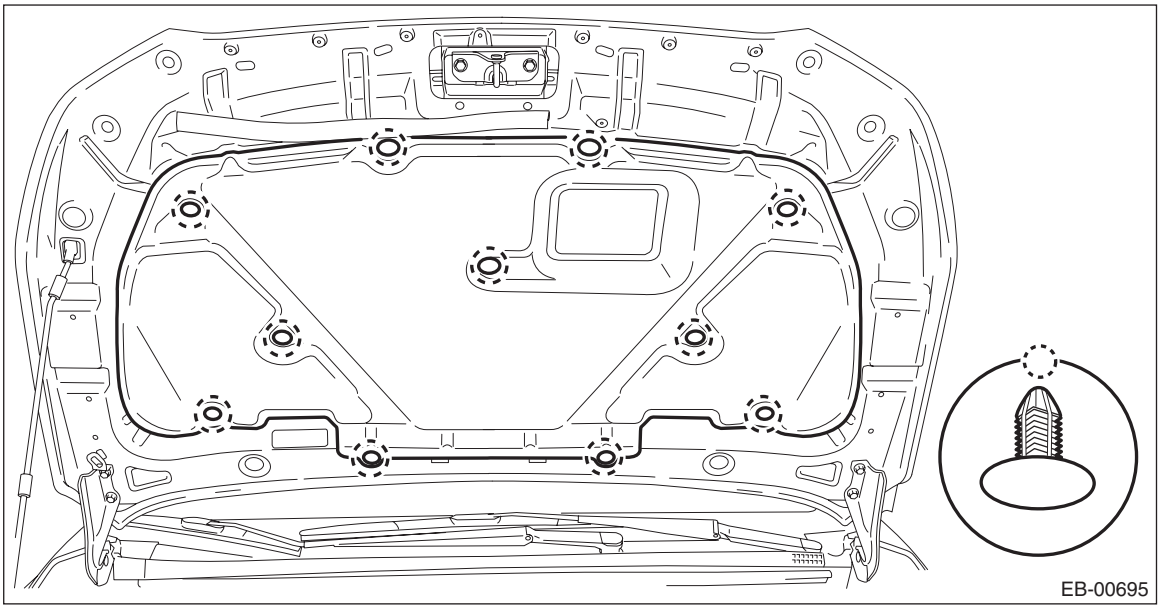
TOOL NAME	REMARKS
Support jack	Used for supporting door panel.
Clip remover	Used for removing various types of clips

2. Front Hood

A: REMOVAL

1. FRONT HOOD INSULATOR

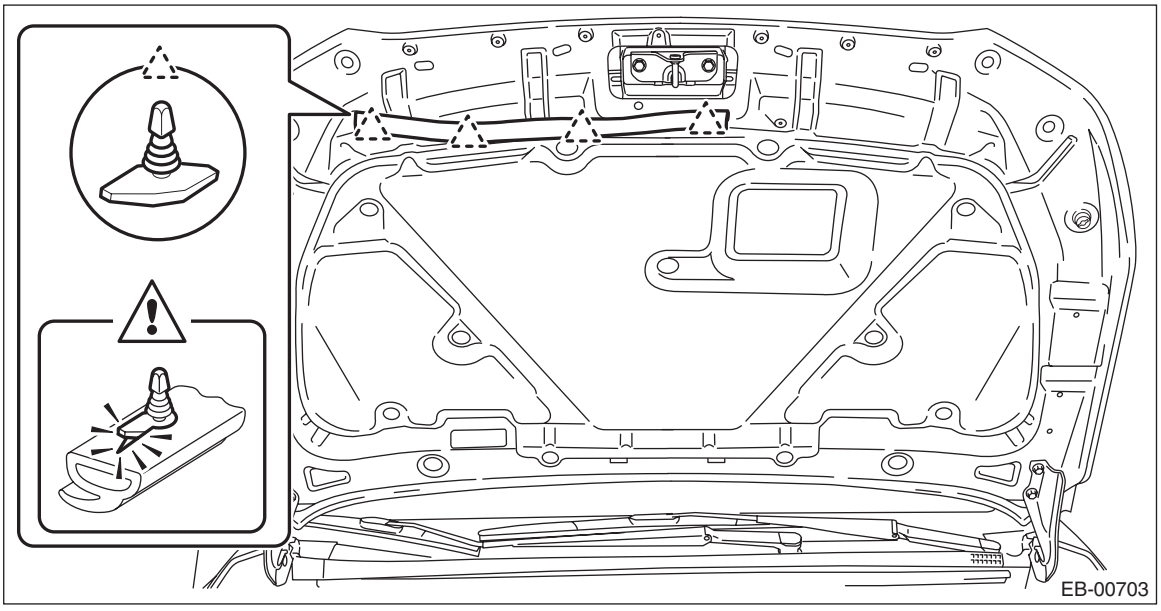
Remove the clips, and remove the insulator - front hood.



2. FRONT DUCT SEAL

Remove the clip, and remove the seal - front duct.

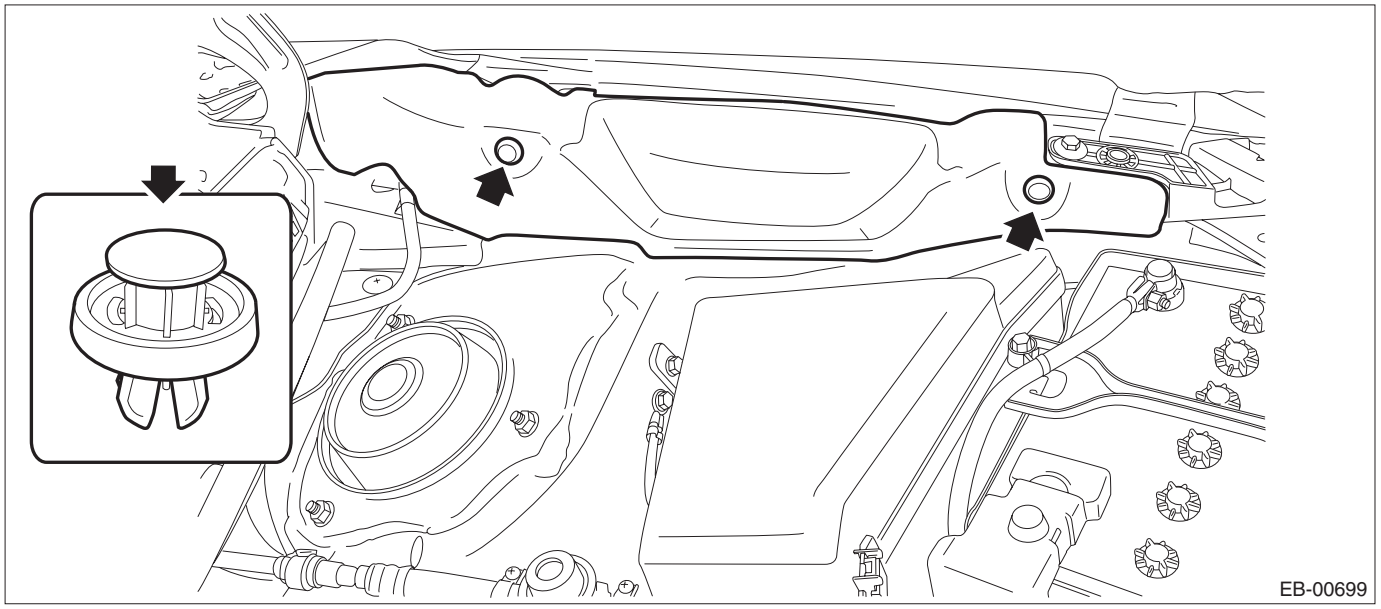
CAUTION:
If the weather strip clip is removed with excessive force, the seal - front duct may be damaged. Be sure to use clip remover, etc. to remove.



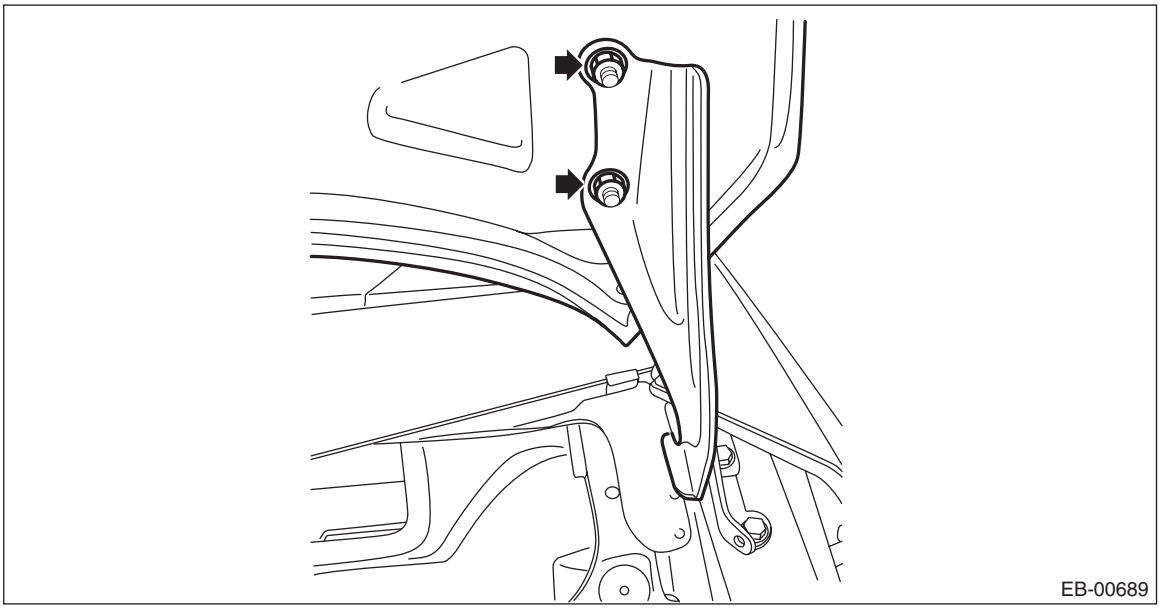
3. FRONT HOOD HINGE

CAUTION:
The hood COMPL - front is heavy. When removing or installing the hinge COMPL - front hood, be sure to work in a group of two or more.

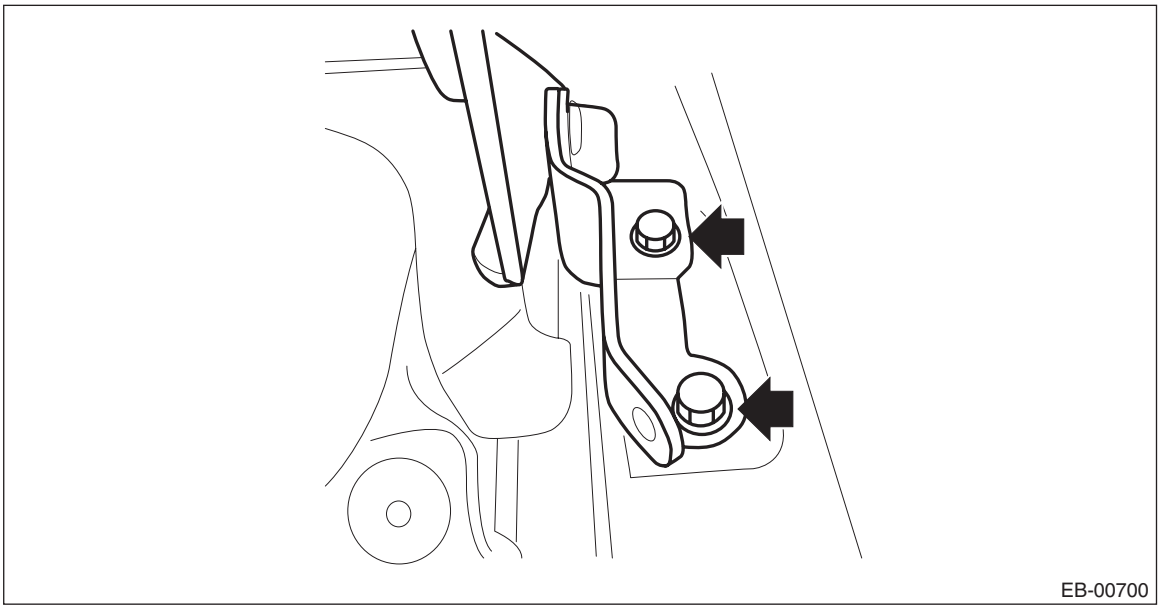
1) Remove the cover - front fender.
   (1) Remove the clip.
   (2) Release the claws by pulling them forward, and remove the cover - front fender.



2) Remove the fender COMPL - front. <Ref. to EB-15, REMOVAL, Front Fender.>
3) Remove the hood COMPL - front.
   (1) Remove the nut on the hood COMPL - front side, and remove the hood COMPL - front.



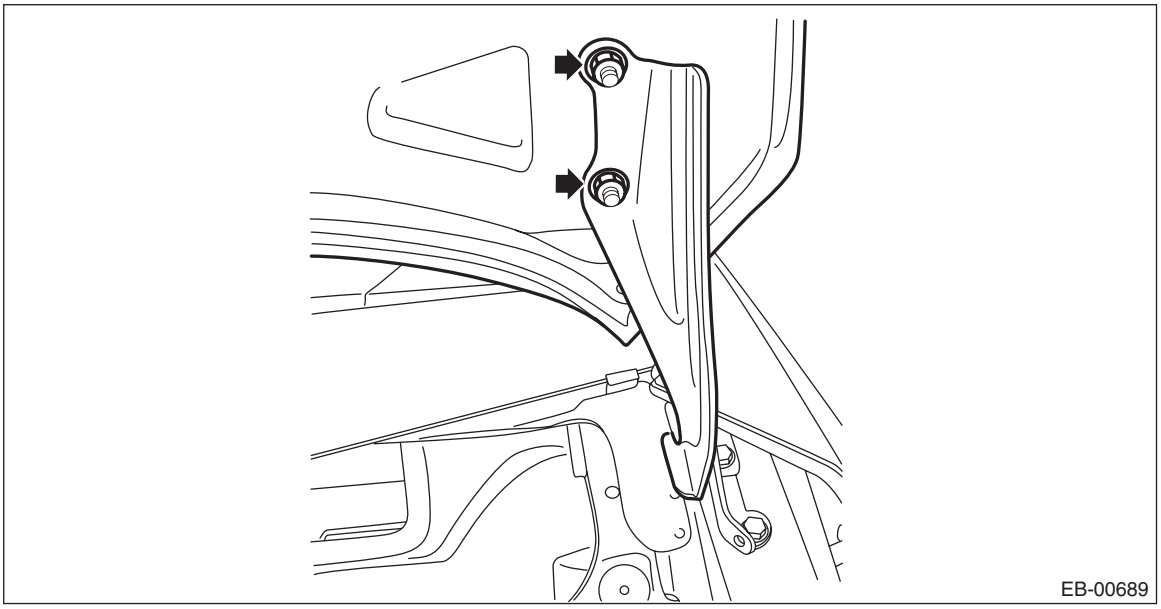
4) Remove the bolts, and remove the hinge COMPL - front hood.



4. FRONT HOOD PANEL

CAUTION:
The hood COMPL - front is heavy. When removing or installing the hinge COMPL - front hood, be sure to work in a group of two or more.

1) Remove the nut on the hood COMPL - front side, and remove the hood COMPL - front.



B: INSTALLATION

CAUTION:
The hood COMPL - front is heavy. When removing or installing the hinge COMPL - front hood, be sure to work in a group of two or more.

To install the insulator - front hood and the seal - front duct, follow the removal procedure in the reverse order.
Follow the procedure below to install the hinge COMPL - front hood and the hood COMPL - front.
1) Install the hinge COMPL - front hood to the vehicle body. (When the hinge COMPL - front hood is removed)
2) Temporarily install the hood COMPL - front to the hinge COMPL - front hood.

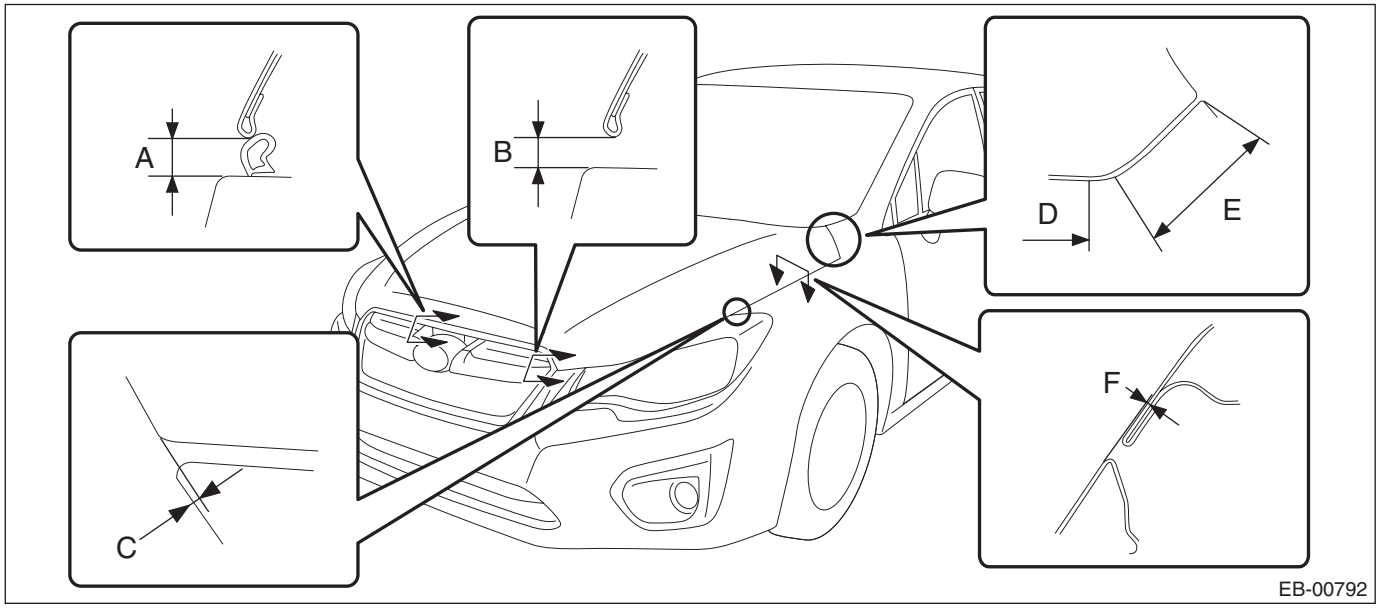
NOTE:
When installing the hood COMPL - front, make sure that a uniform clearance is created around it.
3) Adjust the clearance around the hood COMPL - front. <Ref. to EB-12, ADJUSTMENT, Front Hood.>
4) Tighten the bolts and nuts of the hinge COMPL - front hood.

Tightening torque:
25 N·m (2.55 kgf-m, 18.4 ft-lb)

5) Install each part of the hood COMPL - front in the reverse order of removal.

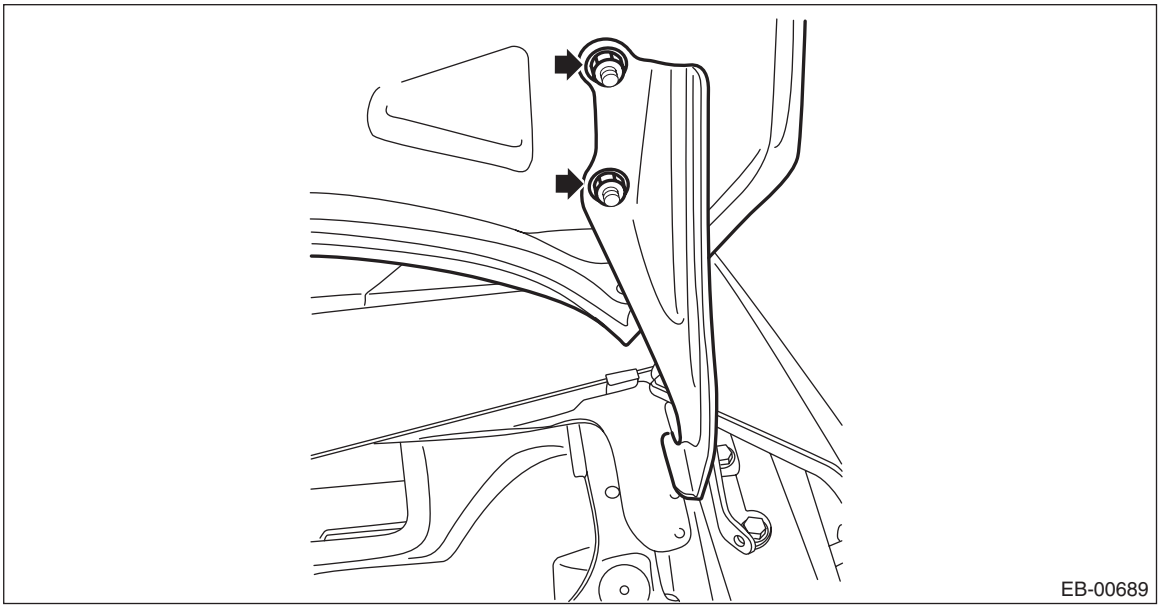
C: ADJUSTMENT

Adjust the clearance around the hood COMPL - front as follows.



Part		Standard
A	Hood COMPL - front to Bumper face - front	7.5±1.0 mm (0.30±0.04 in)
B	Hood COMPL - front to Bumper face - front	6.0±1.0 mm (0.24±0.04 in)
C	Offset value: Hood COMPL - front to Front end of fender COMPL - front	0+0.5, –1.0 mm (0+0.02, –0.04 in)
D	Hood COMPL - front to Fender COMPL - front (from front end to just before curved portion)	3.5±1.0 mm (0.14±0.04 in)
E	Hood COMPL - front to Fender COMPL - front (from rear end to just before curved portion)	4.5±1.0 mm (0.18±0.04 in)
F	Surface level gap: Hood COMPL - front to Fender COMPL - front	0.5+0.5, –1.0 mm (0.02+0.02, –0.04 in)

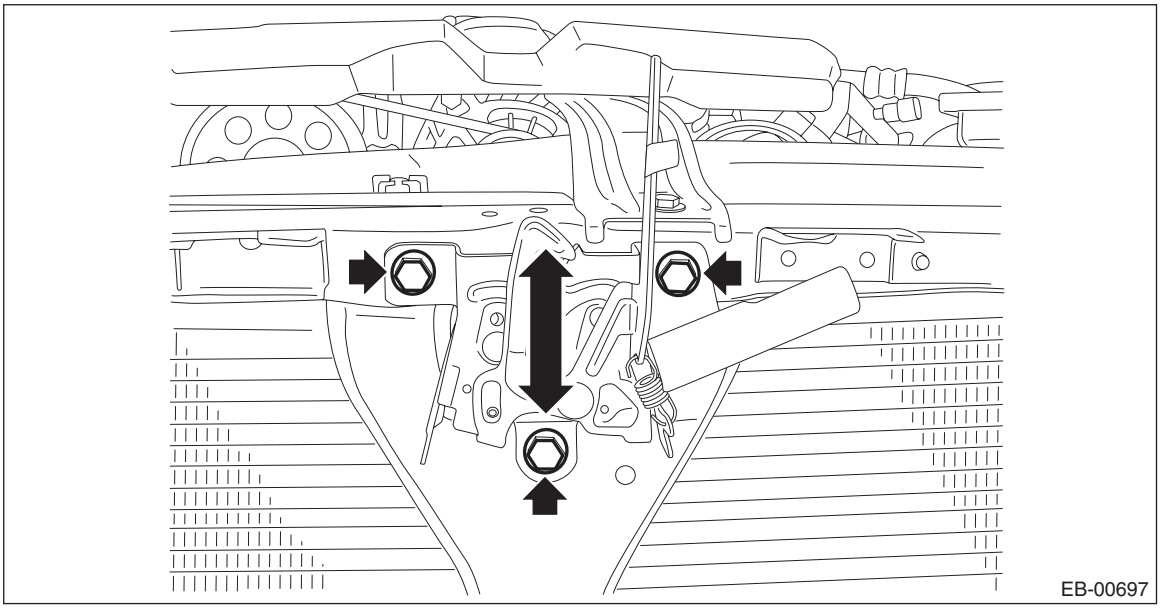
1) Adjust the horizontal position of the hood COMPL - front.
   (1) Loosen the attaching nuts of the hinge COMPL - front hood on the left and right sides.



   (2) Adjust the horizontal clearance of the hood COMPL - front, and tighten the attaching nuts of the hinge COMPL - front hood.

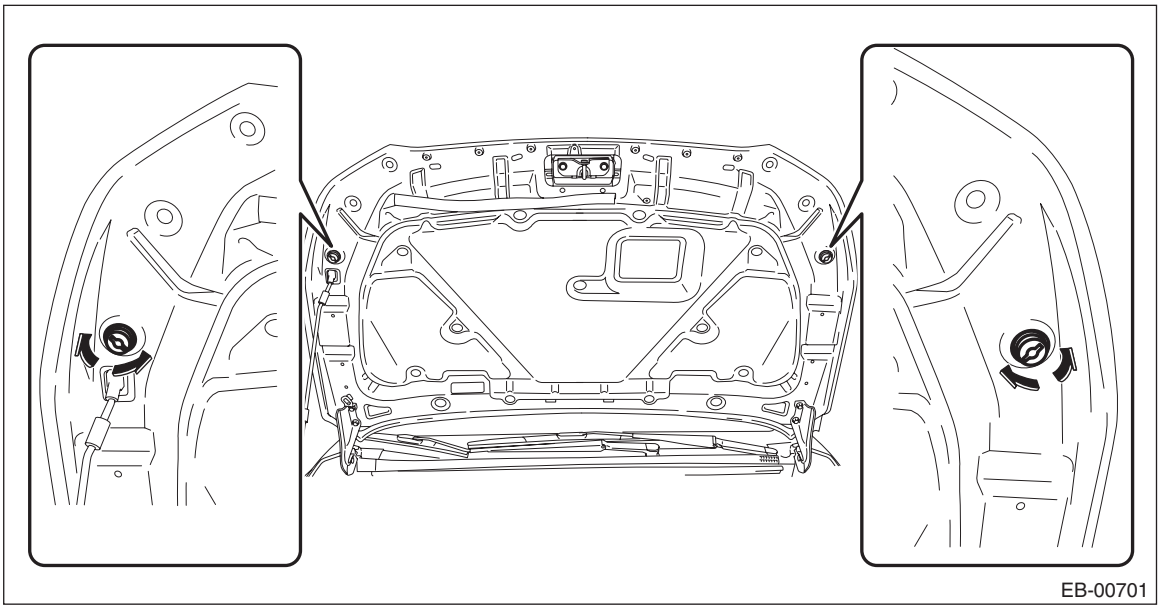
Tightening torque:
25 N·m (2.55 kgf-m, 18.4 ft-lb)

2) Adjust the front end height of the hood COMPL - front.
   (1) Loosen the bolts on the lock assembly - front hood.
   (2) Adjust the lock assembly - front hood by moving it up and down.



Tightening torque:
33 N·m (3.36 kgf-m, 24.3 ft-lb)

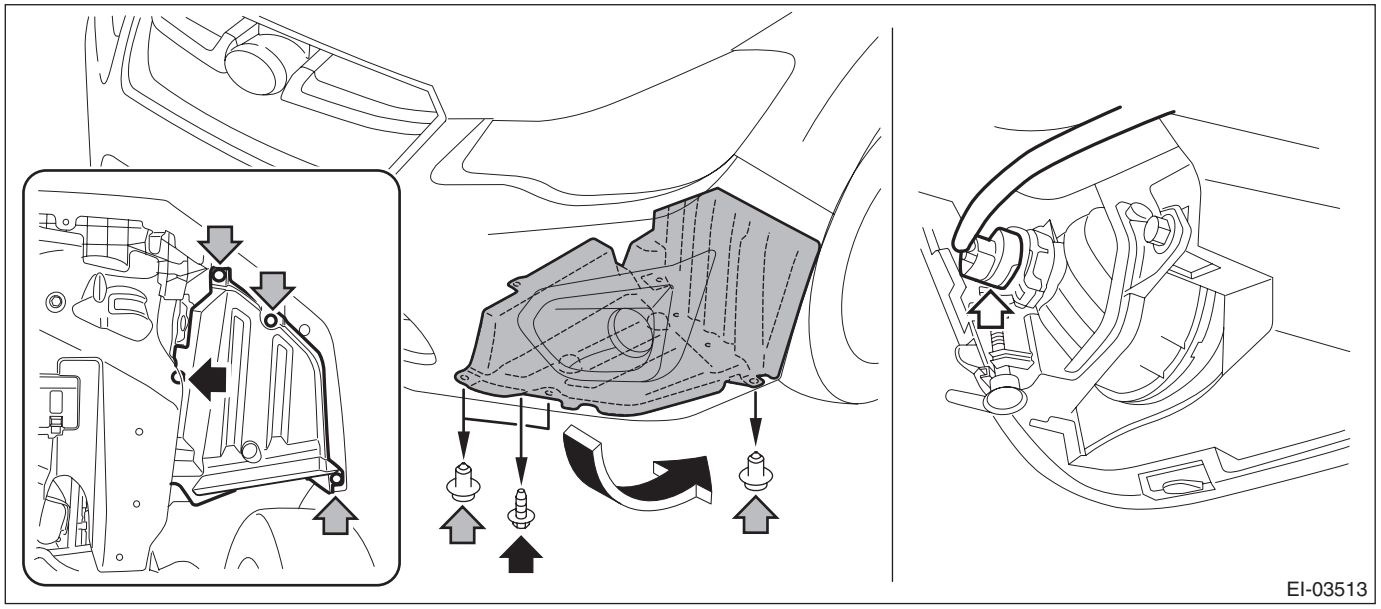
3) Rotate the buffer - front hood of the hood COMPL - front to adjust the height.



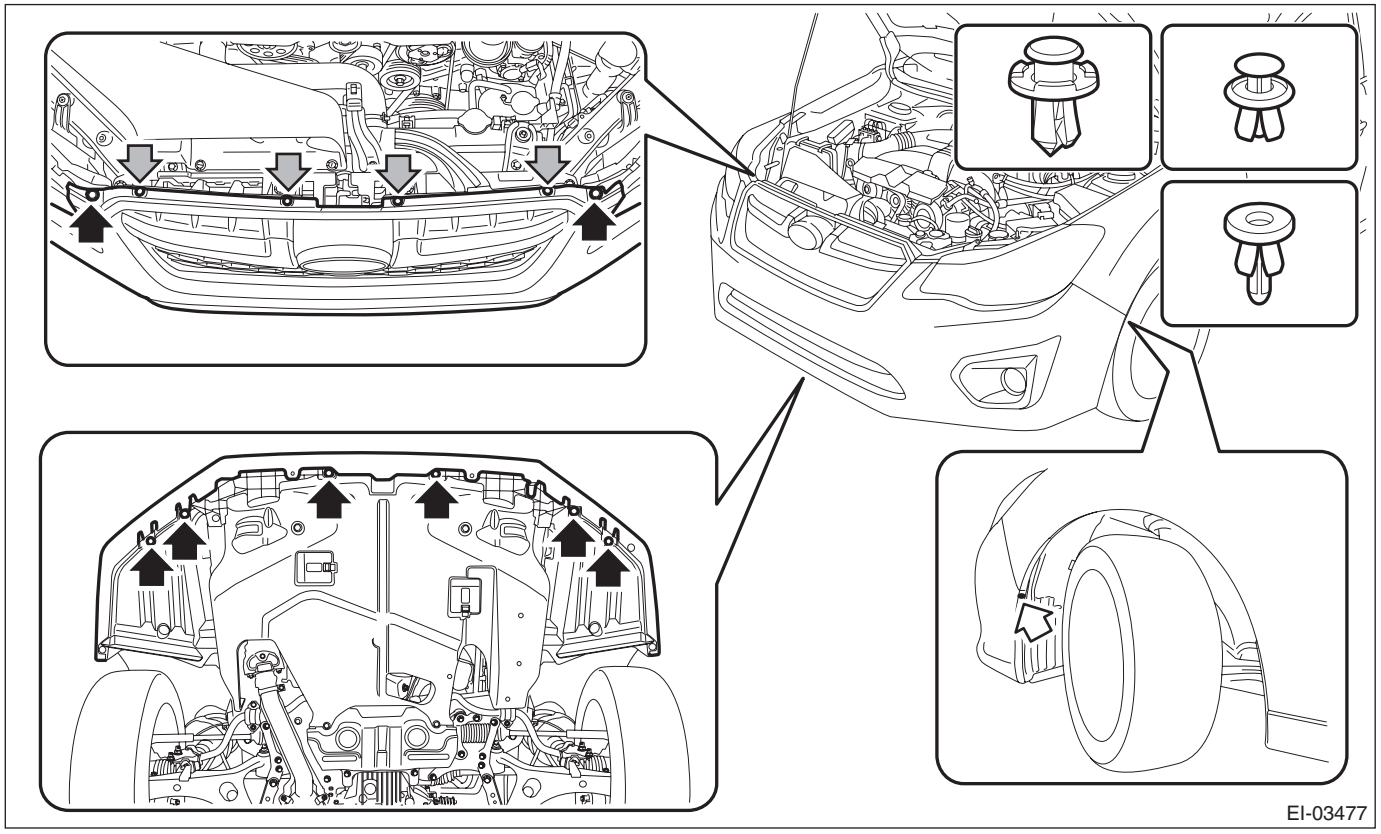
3. Front Fender

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the bumper face - front.
   (1) Remove the screws and clips, and turn over the mud guard - front.
   (2) Disconnect the connectors of the fog light assembly - front on the LH and RH sides. (Model with fog light)

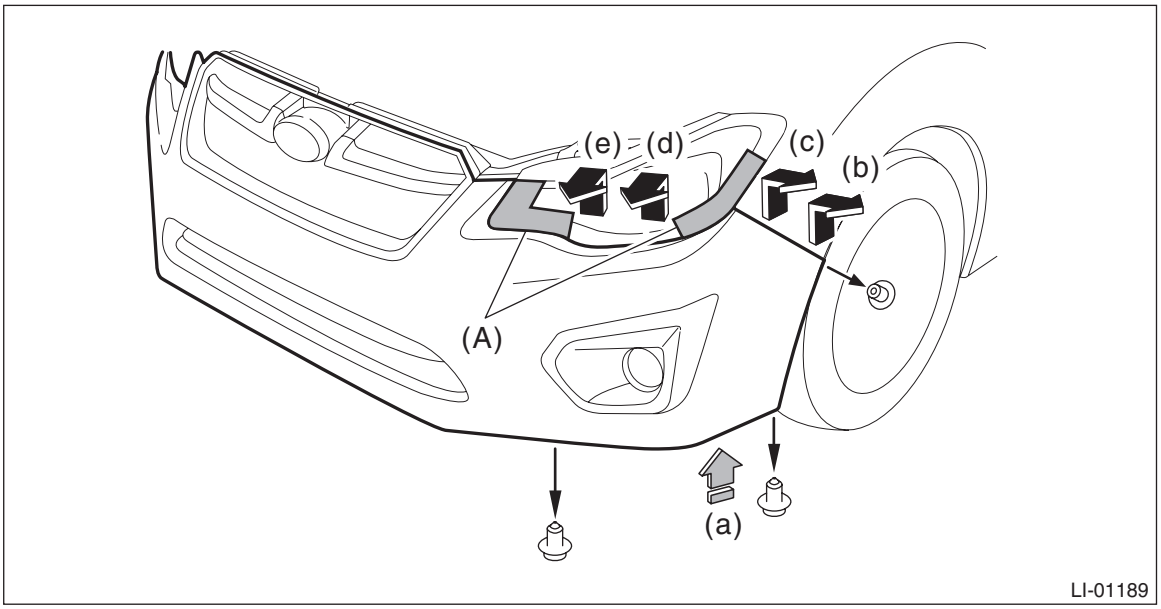


   (3) Remove the clips at the upper side of the bumper face - front.
   (4) Remove the clips from the fender.
   (5) Remove the clips at the lower side of the bumper face - front.

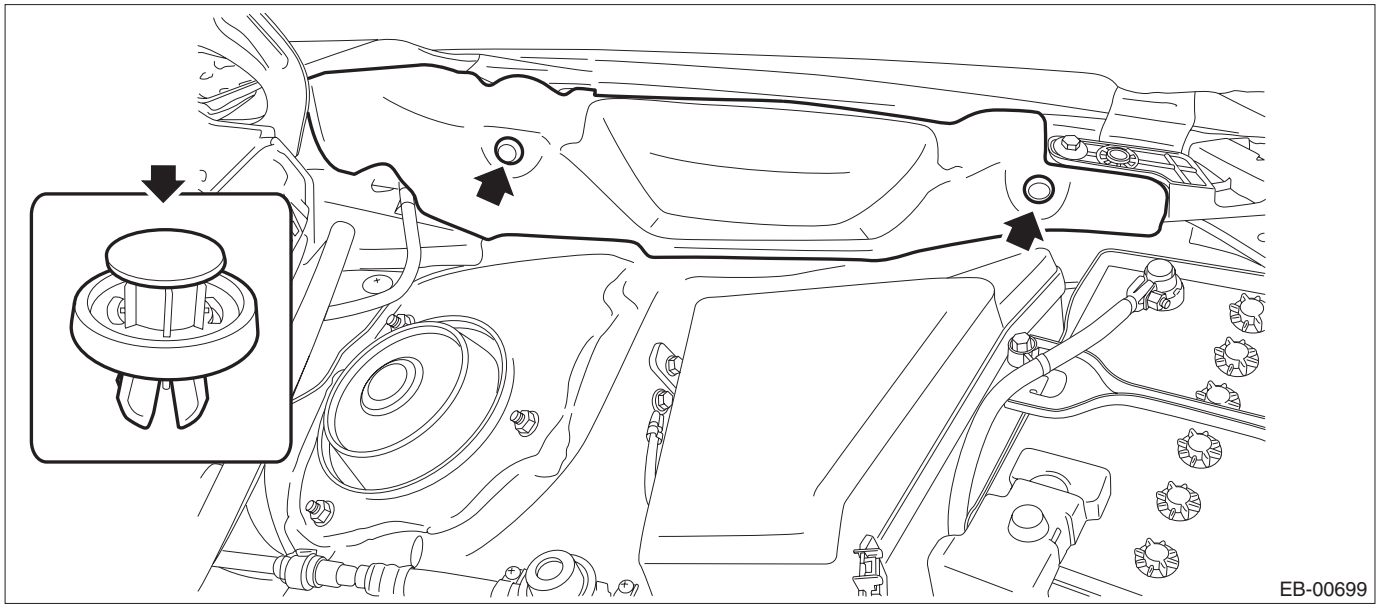


(6) Apply protective tape (A) to the light assembly - head.
(7) Release the clips, and while pushing up the lower side (a) of the bumper face - front, remove in the order from (b) to (e).

CAUTION:
Do not pull forcibly. It may damage the flange sections of the bumper face - front.

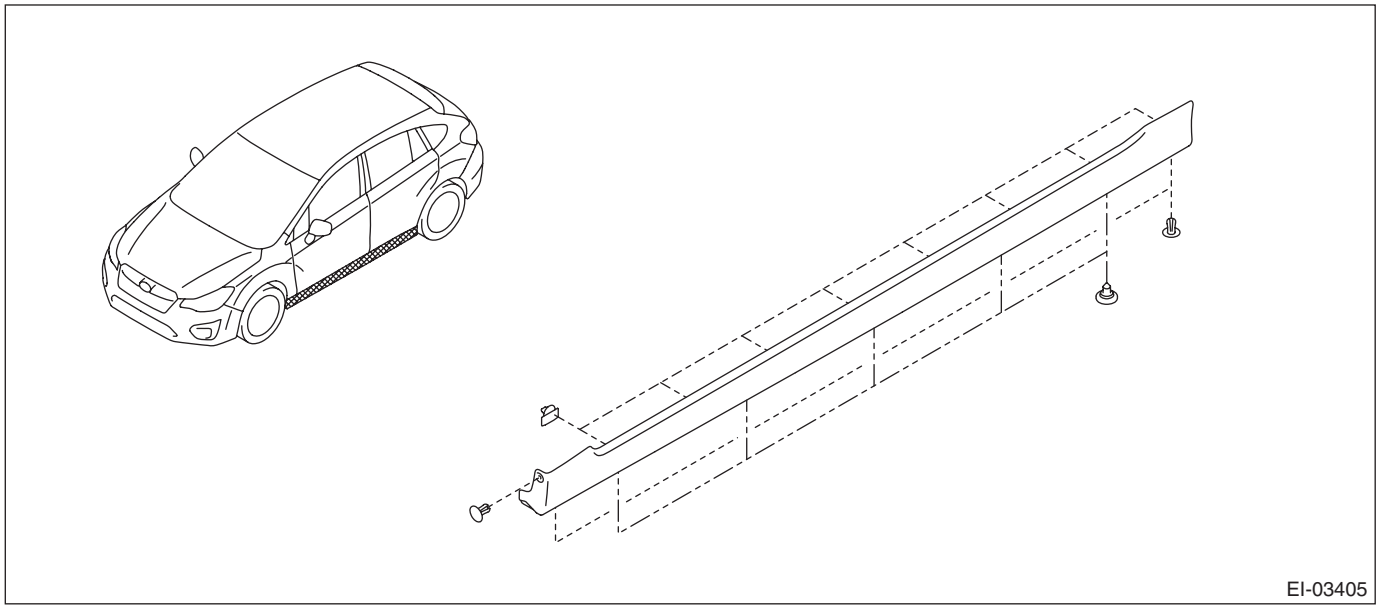


NOTE:
Detach the opposite side in the same manner.
3) Remove the cover - front fender.
(1) Remove the clip.
(2) Release the claws by pulling them forward, and remove the cover - front fender.

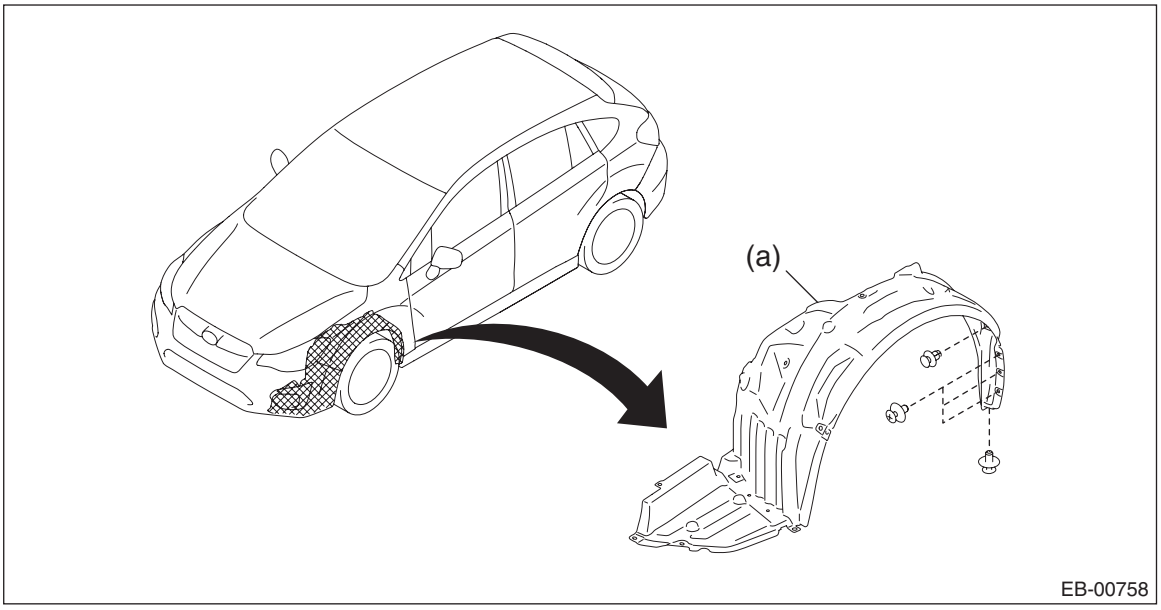


(3) Remove the light assembly - head. <Ref. to LI-28, WHEN REMOVING RH SIDE, REMOVAL, Headlight Assembly.>

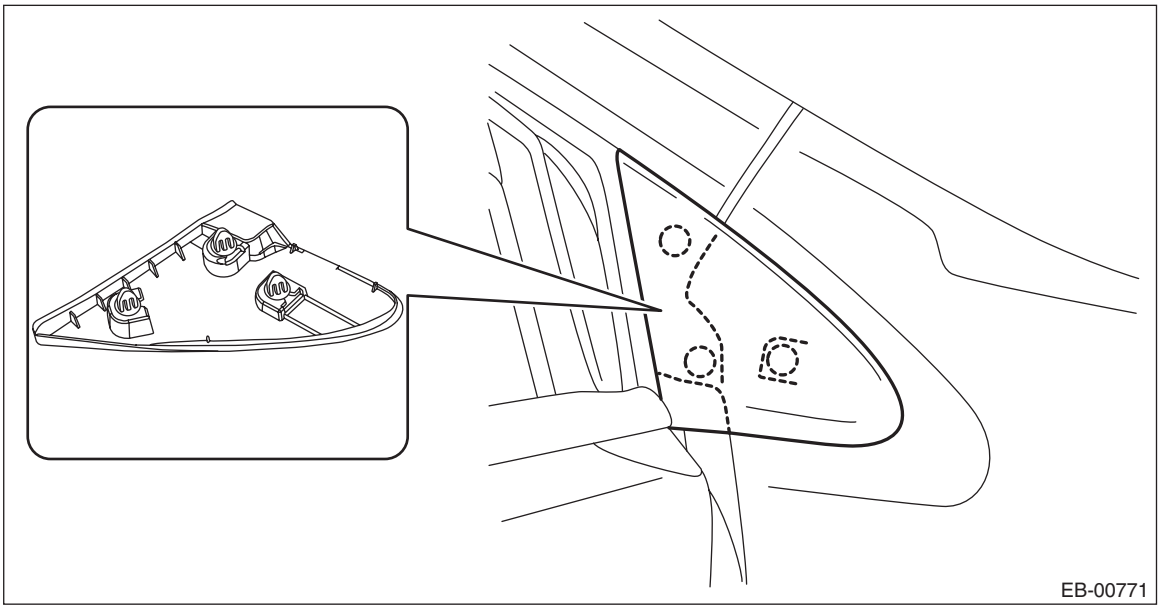
4) Remove the clips and detach the side sill spoiler assembly.



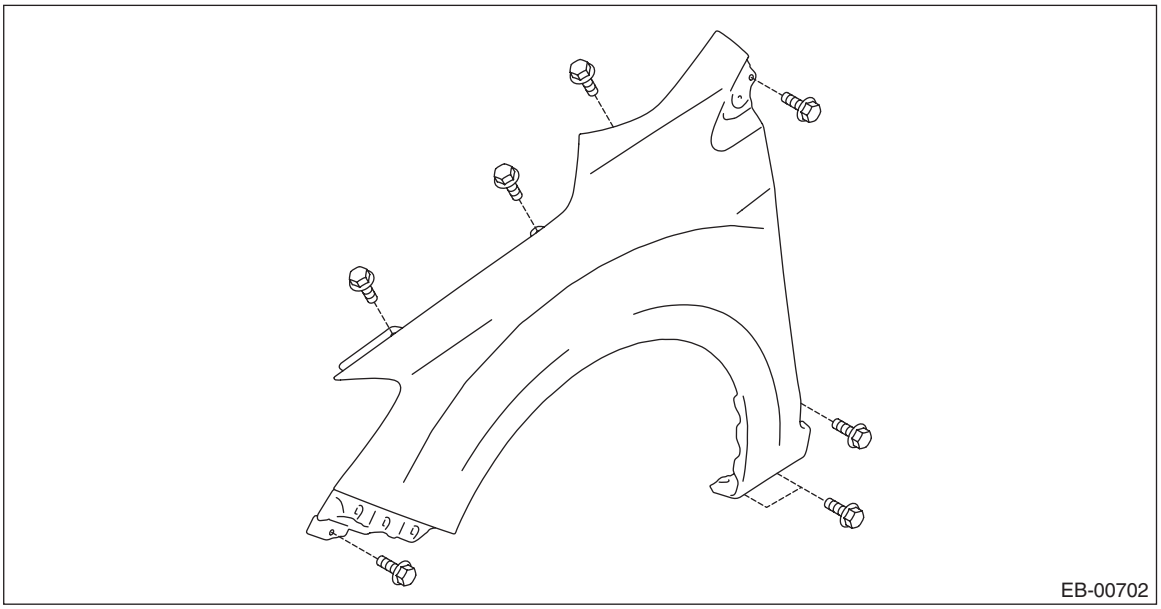
5) Remove the clips, and remove the mud guard - front (a).



6) Remove the cover - front pillar assembly.



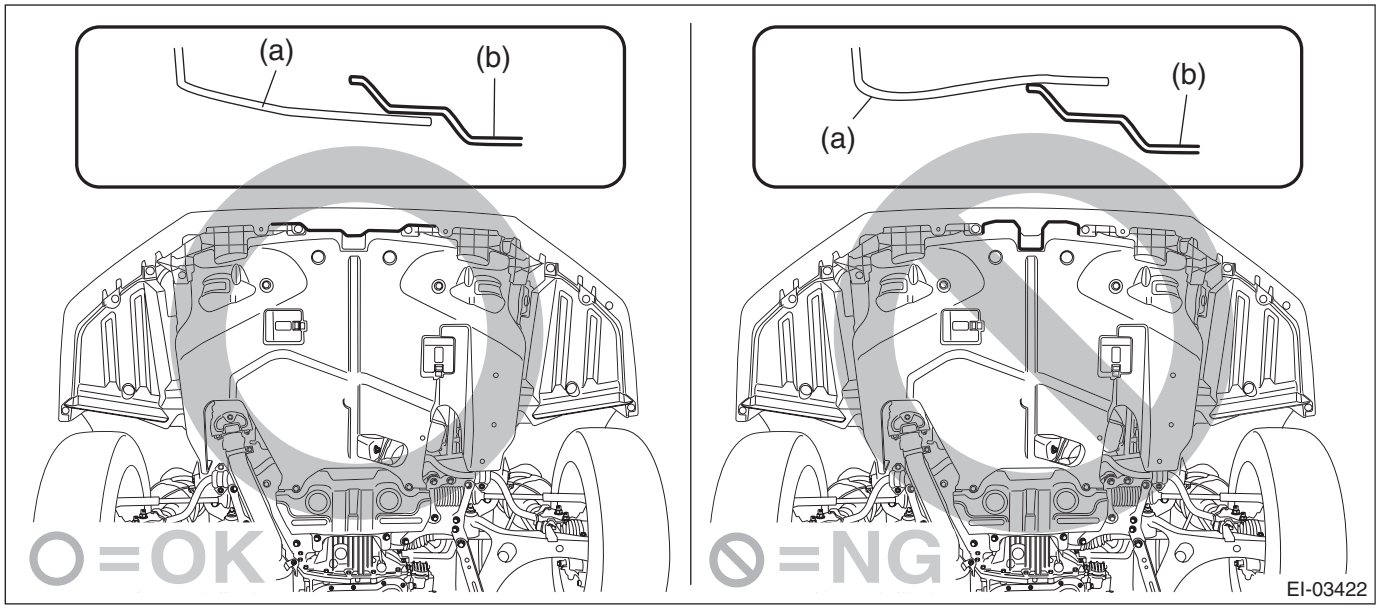
7) Remove the fender COMPL - front.
   (1) Remove the bolts, and remove the fender COMPL - front.



B: INSTALLATION

1) Install each part in the reverse order of removal.

CAUTION:
- **After installing the fender COMPL - front, be sure to perform headlight beam adjustment.**
- **Install the bumper face - front so that the front end of the under cover (b) comes inside the bumper face - front (a).**



Tightening torque:
Fender COMPL - front: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)
Light assembly - head: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

NOTE:
When installing the fender COMPL - front, make sure that a uniform clearance is created around it.
- Fender COMPL - front to Hood COMPL - front: <Ref. to EB-12, ADJUSTMENT, Front Hood.>
- Fender COMPL - front to Panel assembly - front door: <Ref. to EB-27, ADJUSTMENT, Front Door.>

2) Adjust the headlight beam and fog light beam.
- Adjust the headlight beam. <Ref. to LI-35, HEADLIGHT BEAM ADJUSTMENT, ADJUSTMENT, Headlight Assembly.>
- Adjust the fog light beam. (Model with fog light) <Ref. to LI-55, FOG LIGHT AIMING, ADJUSTMENT, Front Fog Light Assembly.>

4. Front Door

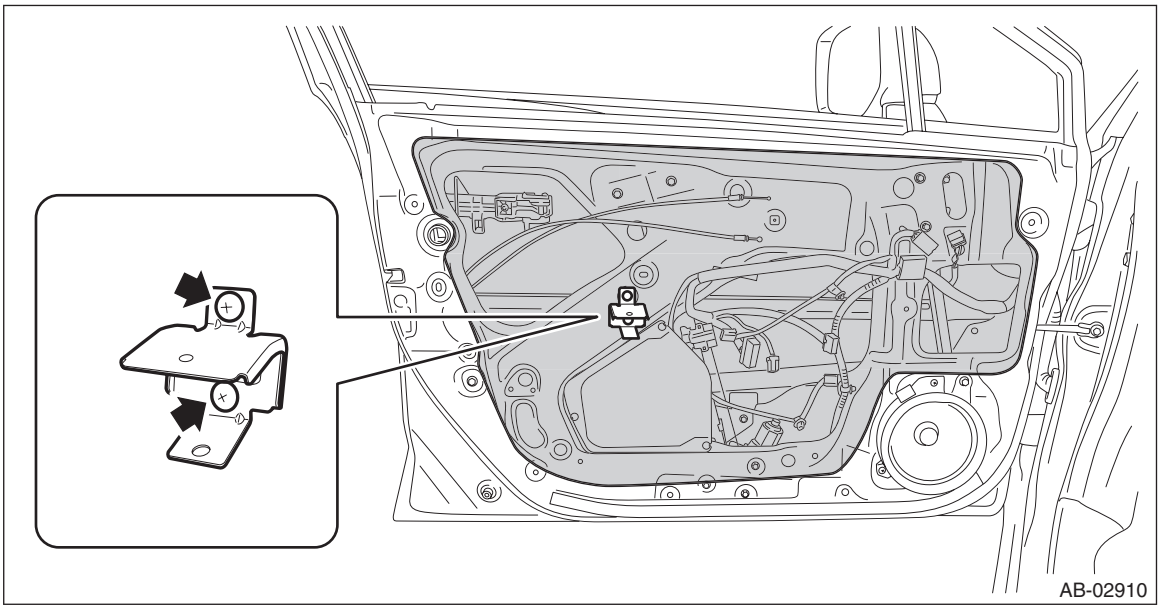
A: REMOVAL

1. FRONT DOOR PANEL

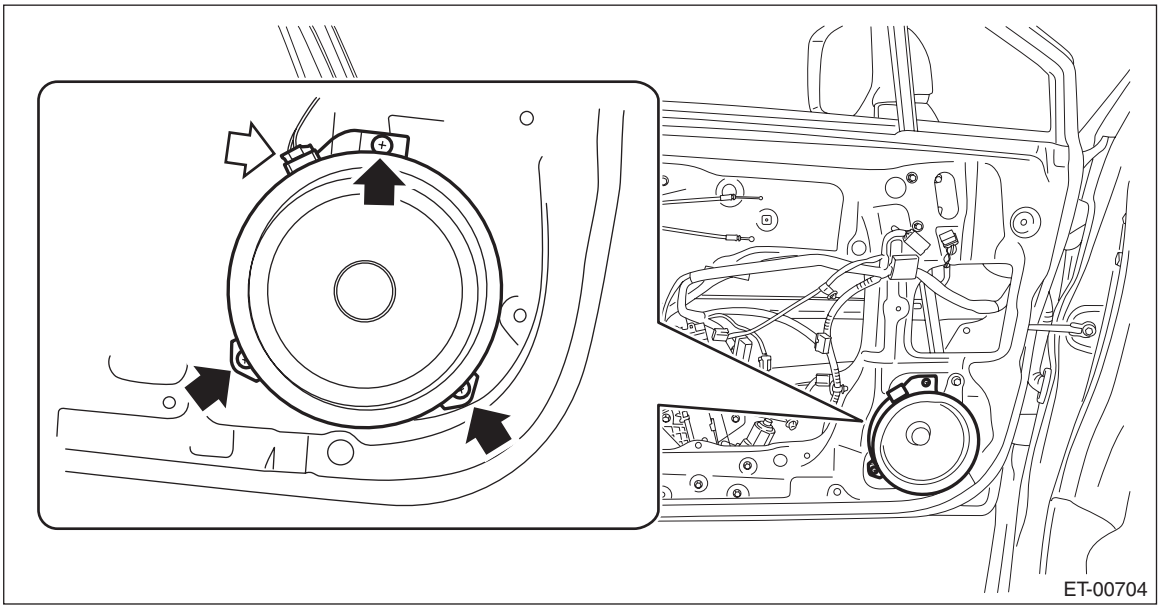
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
2) Remove the trim panel - front door. <Ref. to EI-58, FRONT DOOR, REMOVAL, Door Trim.>
3) Remove the sealing cover - front door.

CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the cover.**
- **If the sealing cover - front door gets broken, replace it with a new part.**

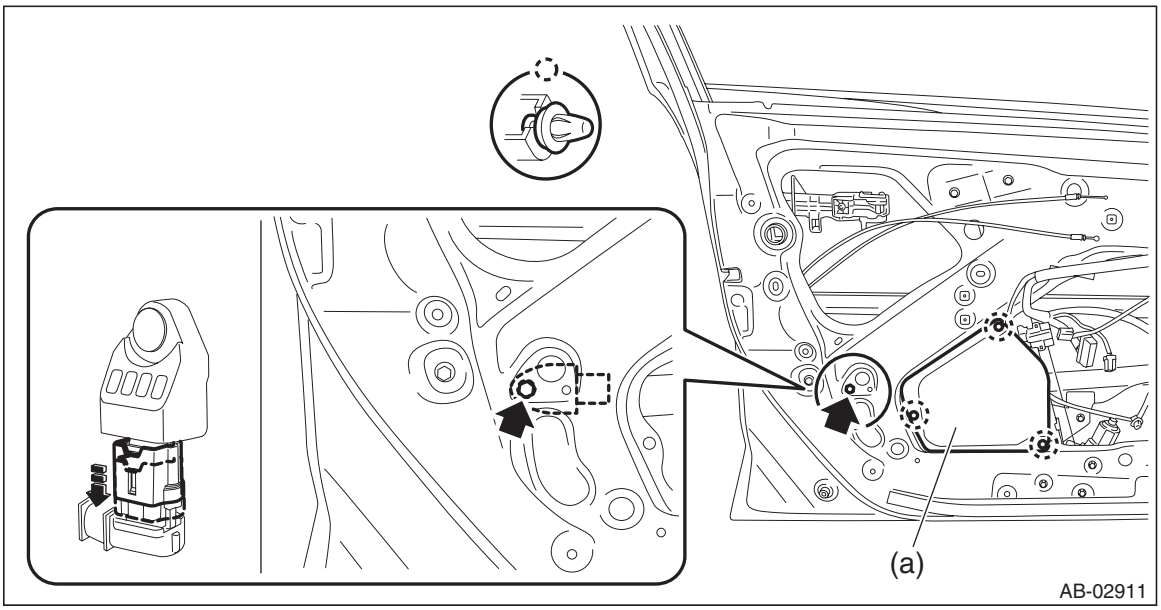
(1) Remove the screw to remove the bracket - door trim front.
(2) Carefully remove the butyl tape to remove the sealing cover - front door.



4) Remove the outer mirror assembly. <Ref. to GW-27, REMOVAL, Outer Mirror Assembly.>
5) Remove the front door speaker assembly.
(1) Remove the screws.
(2) Disconnect the connector and remove the front speaker assembly.

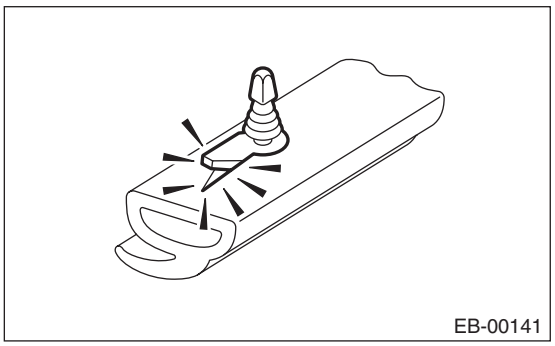


6) Remove the front door impact sensor assembly.
(1) Remove the front door inner pad (a).
(2) Remove the nuts and then remove the front door impact sensor assembly.
(3) Disconnect the airbag connector and remove the airbag door sensor assembly. <Ref. to AB-25, FRONT DOOR IMPACT SENSOR AND SATELLITE SAFING SENSOR, PROCEDURE, Airbag Connector.>

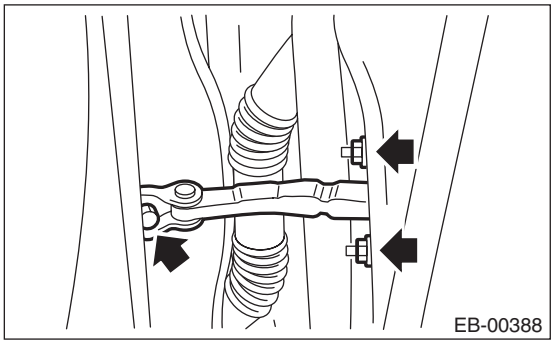


7) Remove the glass assembly - front door and the glass - front door partition. <Ref. to GW-18, REMOVAL, Front Door Glass.>
8) Remove the regulator & motor assembly - front of the front door. <Ref. to GW-21, REMOVAL, Front Regulator and Motor Assembly.>
9) Remove the latch and actuator assembly - front. <Ref. to SL-35, REMOVAL, Front Door Latch and Door Lock Actuator Assembly.>
10) Remove the handle - door outer. <Ref. to SL-31, REMOVAL, Front Outer Handle.>
11) Remove the weather strip - front door.

CAUTION:
If the weather strip clip is removed with excessive force, the weather strip may be damaged. Be sure to use clip remover to remove.

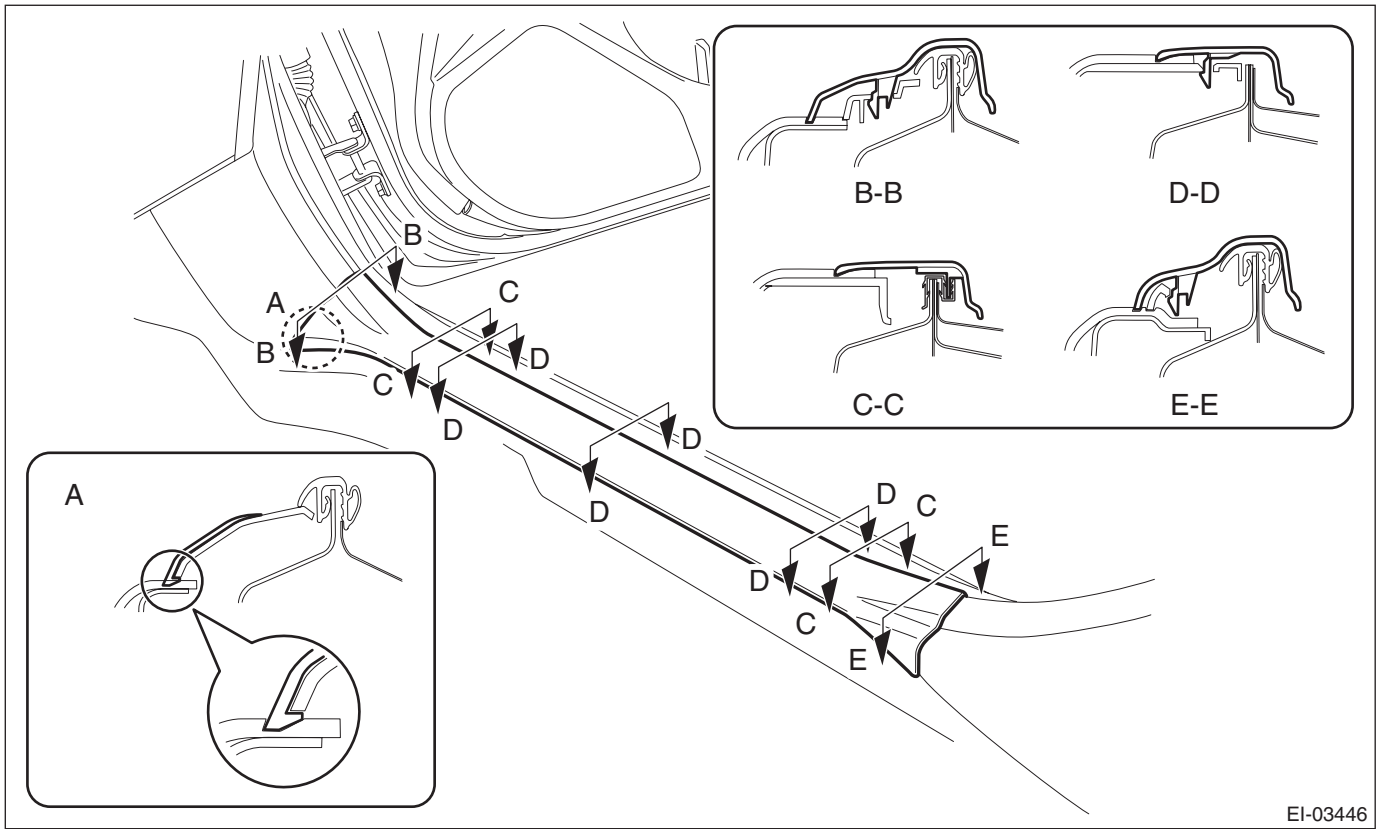


12) Remove the bolts and nuts, and then detach the checker assembly - front door.

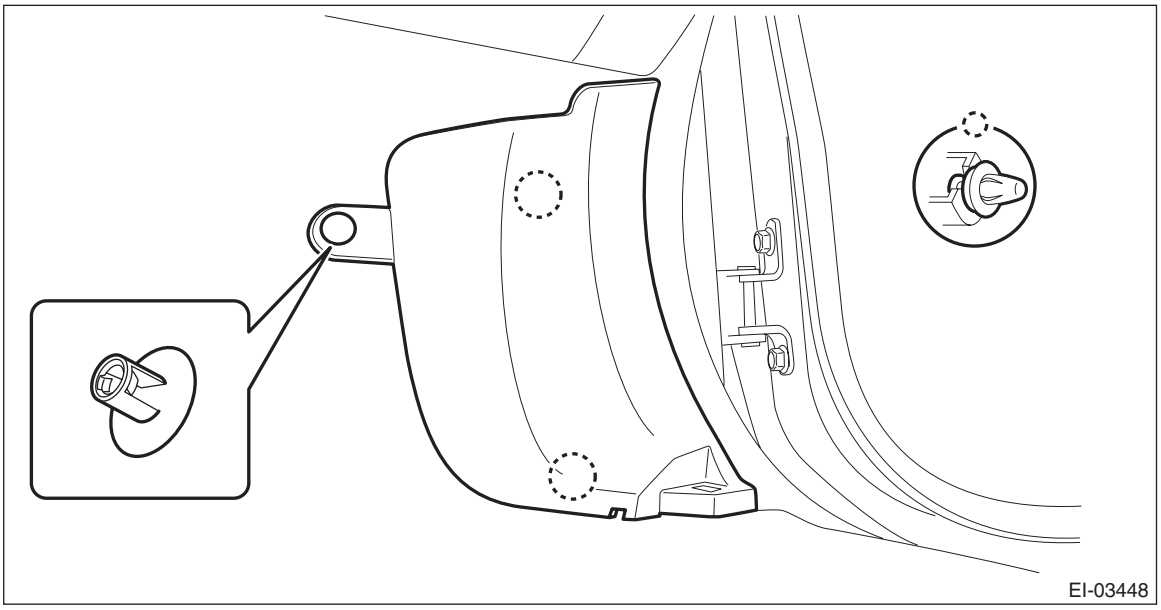


13) Release the claws, and then remove the cover side sill - front INN.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - front INN.



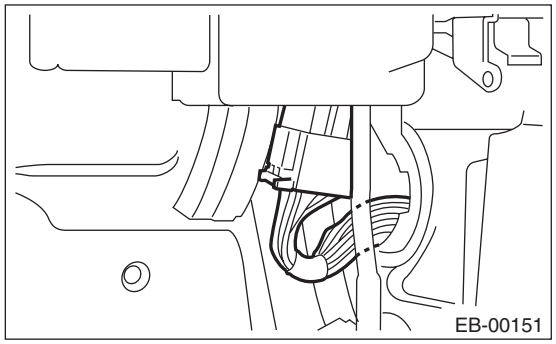
14) Remove the clips, and remove the cover side sill - front.



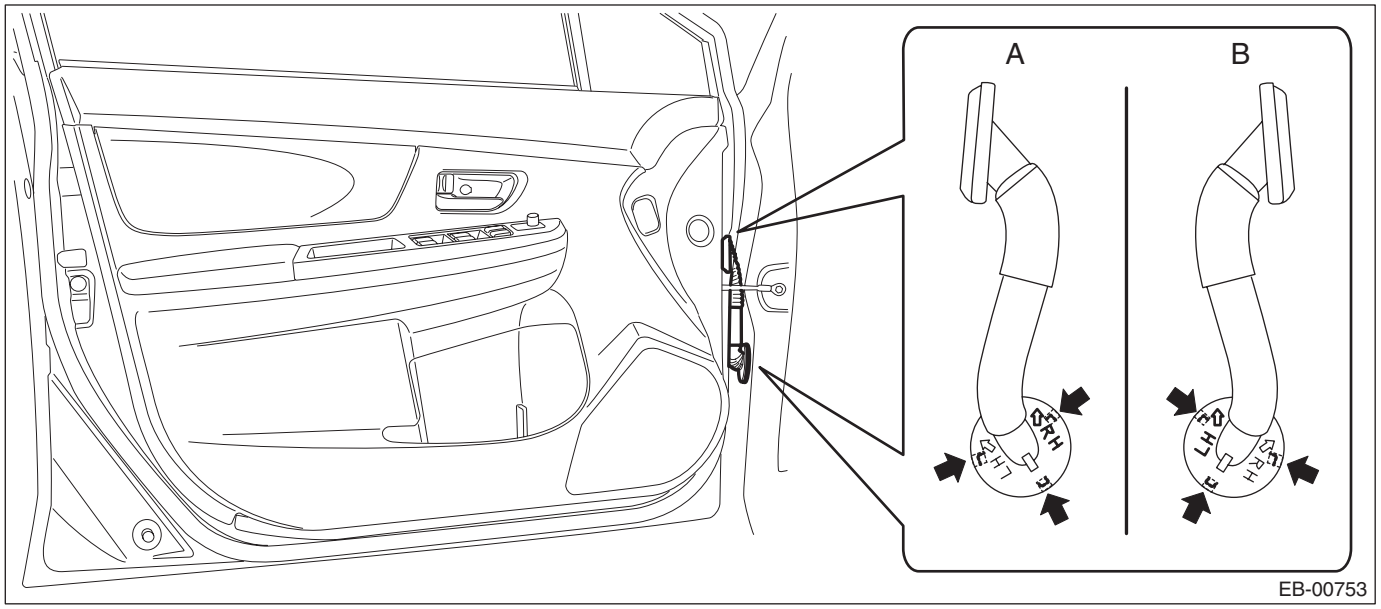
15) Disconnect the front door impact sensor harness connector. <Ref. to AB-26, FRONT DOOR IMPACT SENSOR (BETWEEN AIRBAG REAR HARNESS AND DOOR HARNESS), PROCEDURE, Airbag Connector.>

CAUTION:
Always refer to "CAUTION" of "General Description" in the "AIRBAG SYSTEM" before performing any service that handles the airbag connectors. <Ref. to AB-10, CAUTION, General Description.>

16) Disconnect the front door harness connectors.
(1) Disconnect the connector of door harness from body harness.

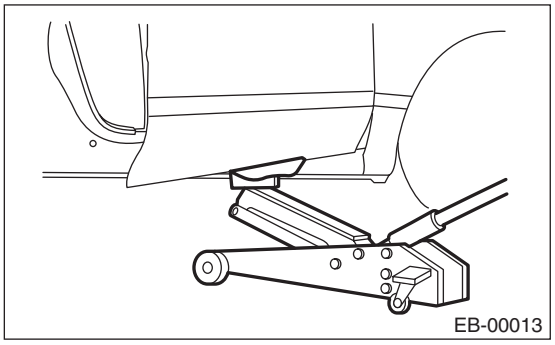


(2) Push in the claws to remove the grommet, and pull out the door harness connector.



A	Driver's side
B	Passenger's side

17) Before removing the panel assembly - front door, make the following preparations.

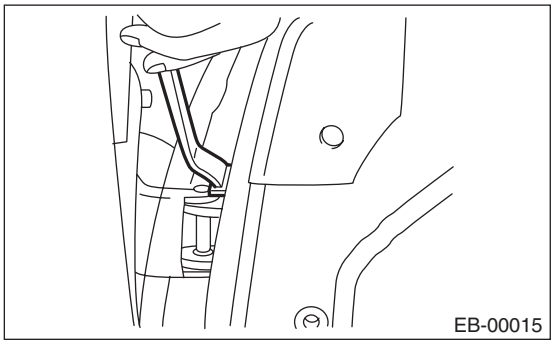


(1) Put a wooden block on a floor jack and place the jack under the panel assembly - front door.
(2) Support the panel assembly - front door with the jack to protect it from damage.

CAUTION:
Do not excessively lift the panel assembly - front door with the floor jack. The door hinges may be damaged.

18) Remove the door-side bolts for the upper hinge - front door and the lower hinge - front door to remove the panel assembly - front door.

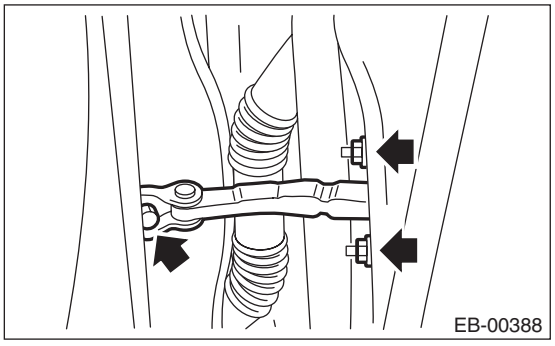
CAUTION:
The panel assembly - front door is heavy. When removing and installing it, always work in a team of two or more persons.



19) Remove the door hinge from vehicle.

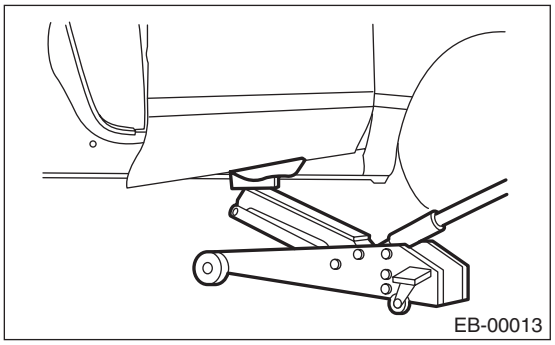
2. FRONT DOOR HINGE

1) Remove the bolts from the vehicle side to disconnect the checker assembly - front door.



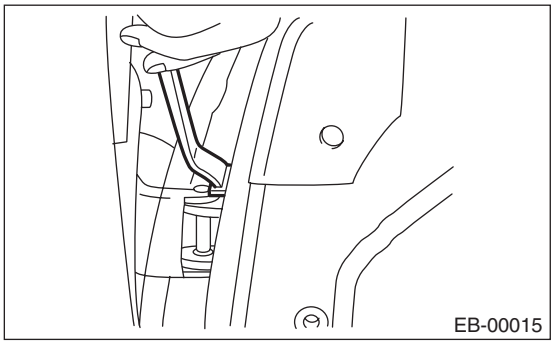
2) Before removing the door hinge, make the following preparations.
   (1) Put a wooden block on a floor jack and place the jack under the panel assembly - front door.
   (2) Support the panel assembly - front door with the jack to protect it from damage.

CAUTION:
Do not excessively lift the panel assembly - front door with the floor jack. The door hinges may be damaged.



3) Remove the bolts of the upper hinge - front door or the lower hinge - front door.

CAUTION:
Do not remove the upper hinge - front door and the lower hinge - front door at the same time.

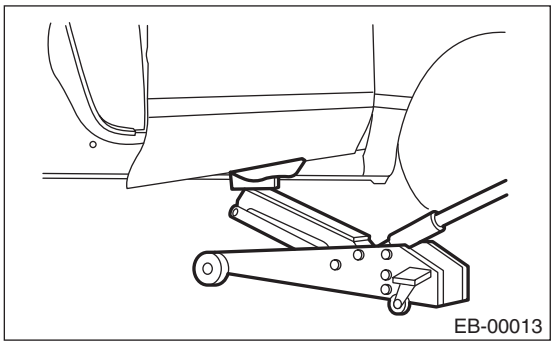


4) Remove the hinge - front door from the vehicle.

B: INSTALLATION

1. FRONT DOOR PANEL

1) Put a wooden block on a jack and place the panel assembly - front door on it.



2) Apply grease to the sliding area of door hinges, and install the door hinge to vehicle.
3) Adjust the height by the jack, and temporarily install the panel assembly - front door to the upper hinge - front door and the lower hinge - front door.

NOTE:
• When installing the panel assembly - front door, make sure that a uniform clearance is created around the panel.
• Perform installation while paying attention to the assembly direction of the grommet.

4) Adjust the clearance around the panel assembly - front door. <Ref. to EB-27, ADJUSTMENT, Front Door.>
5) Tighten the bolts and nuts of the door hinge and the checker assembly - front door.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EB-4, FRONT DOOR, COMPONENT, General Description.>

6) Install door internal parts in the reverse order of removal.
7) Connect door harness connector, and install the cover side sill - front.

2. FRONT DOOR HINGE

1) Apply grease to the sliding area of door hinges, and install the door hinge to vehicle.
2) Adjust the height by the jack, and temporarily install the panel assembly - front door to the upper hinge - front door and the lower hinge - front door.

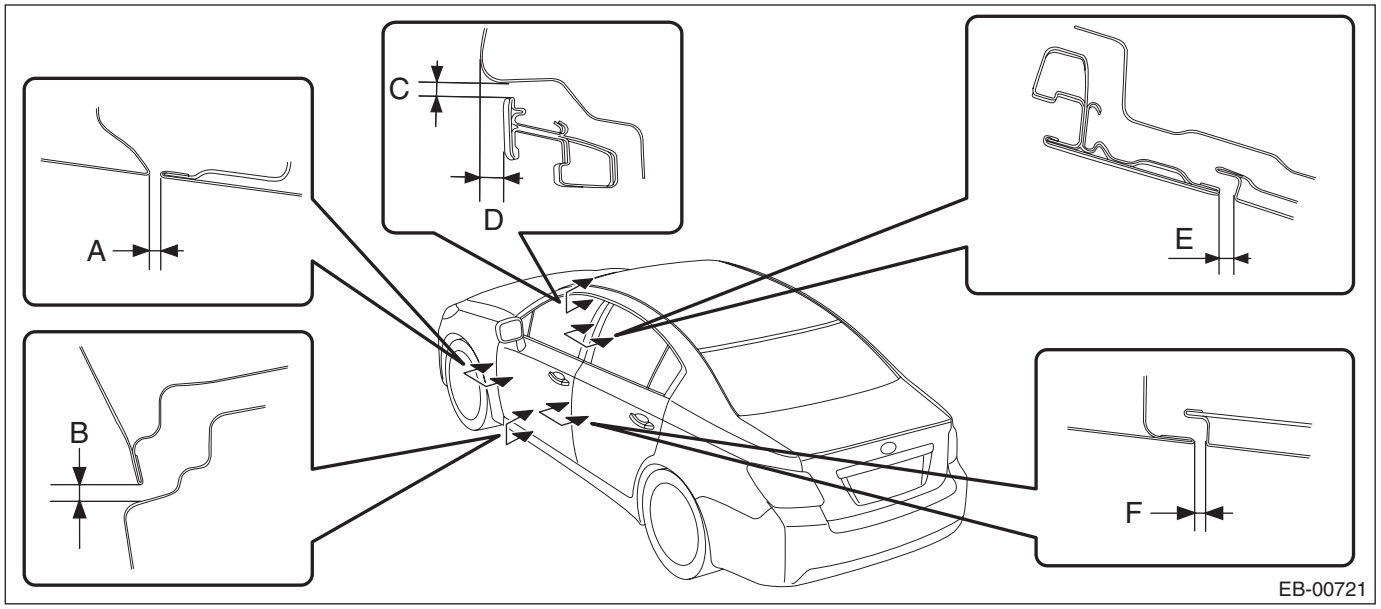
NOTE:
When installing the panel assembly - front door, make sure that a uniform clearance is created around the panel.

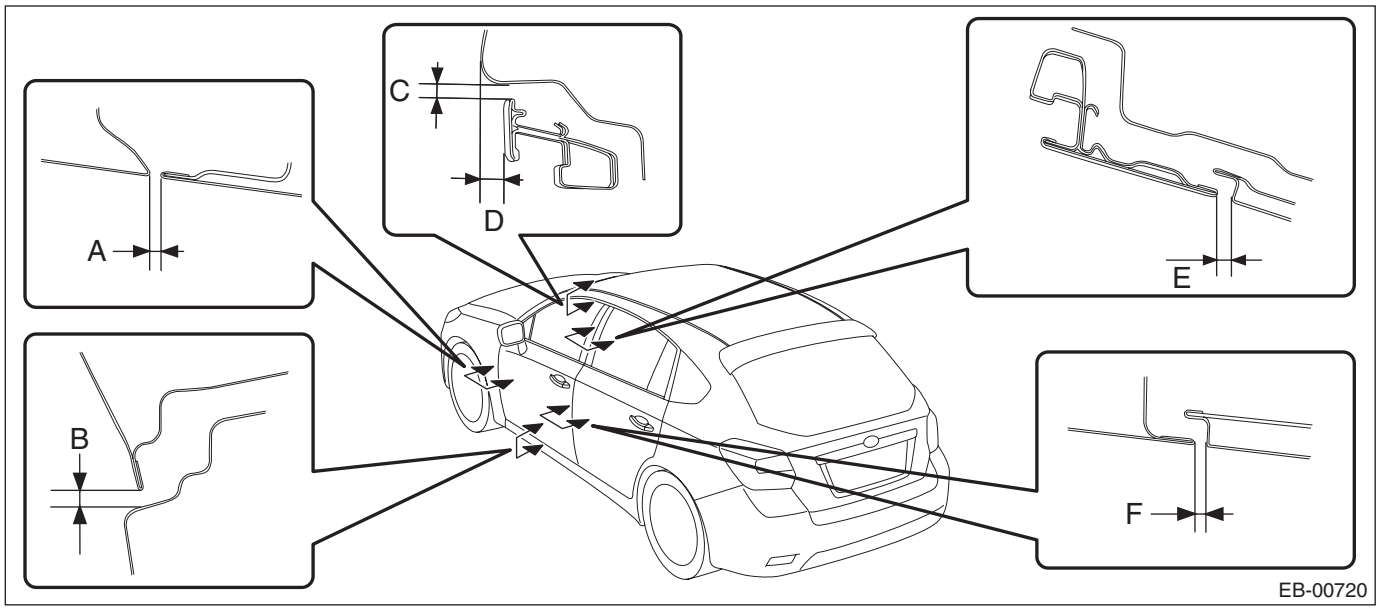
3) Adjust the clearance around the panel assembly - front door. <Ref. to EB-27, ADJUSTMENT, Front Door.>
4) Tighten the bolts and nuts of the door hinge and the checker assembly - front door.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EB-4, FRONT DOOR, COMPONENT, General Description.>

C: ADJUSTMENT

Adjust the clearance around the panel assembly - front door as follows.



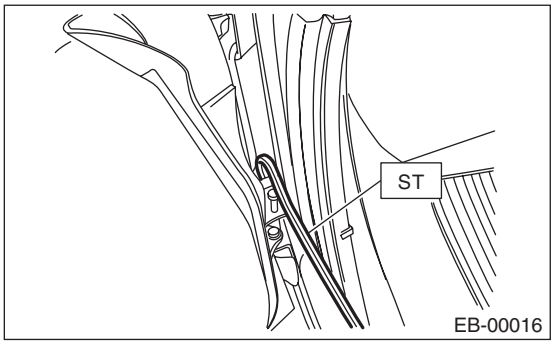


Part		Standard
A	Fender COMPL - front to Panel assembly - front door	4.5±1.0 mm (0.18±0.04 in)
B	Panel assembly - front door to Side sill spoiler	6.0+1.5, –1.0 mm (0.24+0.06, -0.04 in)
C	Roof panel to Front door sash	5.1+1.5, –1.0 mm (0.20+0.06, -0.04 in)
D	Surface level gap between roof panel and front door sash	7±1.5 mm (0.28±0.06 in)
E	Front door sash to Rear door sash	5.5+1.5, –1.0 mm (0.22+0.06, -0.04 in)
F	Panel assembly - front door to Panel assembly - rear door	4.5±1.0 mm (0.18±0.04 in)

NOTE:
Common to 4 door and 5 door models

1) Adjust the vertical and horizontal positions of the panel assembly - front door.

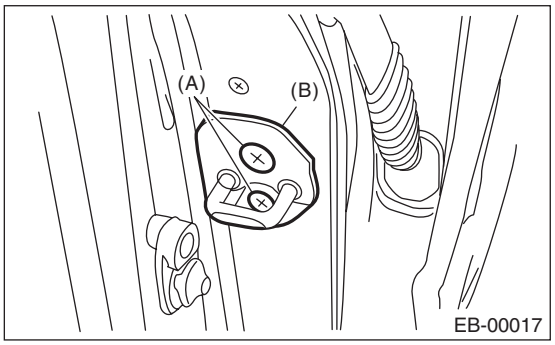
Preparation tool:
ST: WRENCH (925610000)



(1) Using ST, loosen the body side bolts of the upper hinge - front door and the lower hinge - front door.
(2) Adjust the vertical and horizontal clearance of the panel assembly - front door.

2) Adjust the surface level gap between the panel assembly - front door and the panel assembly - rear door.

CAUTION:
Do not use an impact wrench. Welding area on the striker nut plate is easily broken.

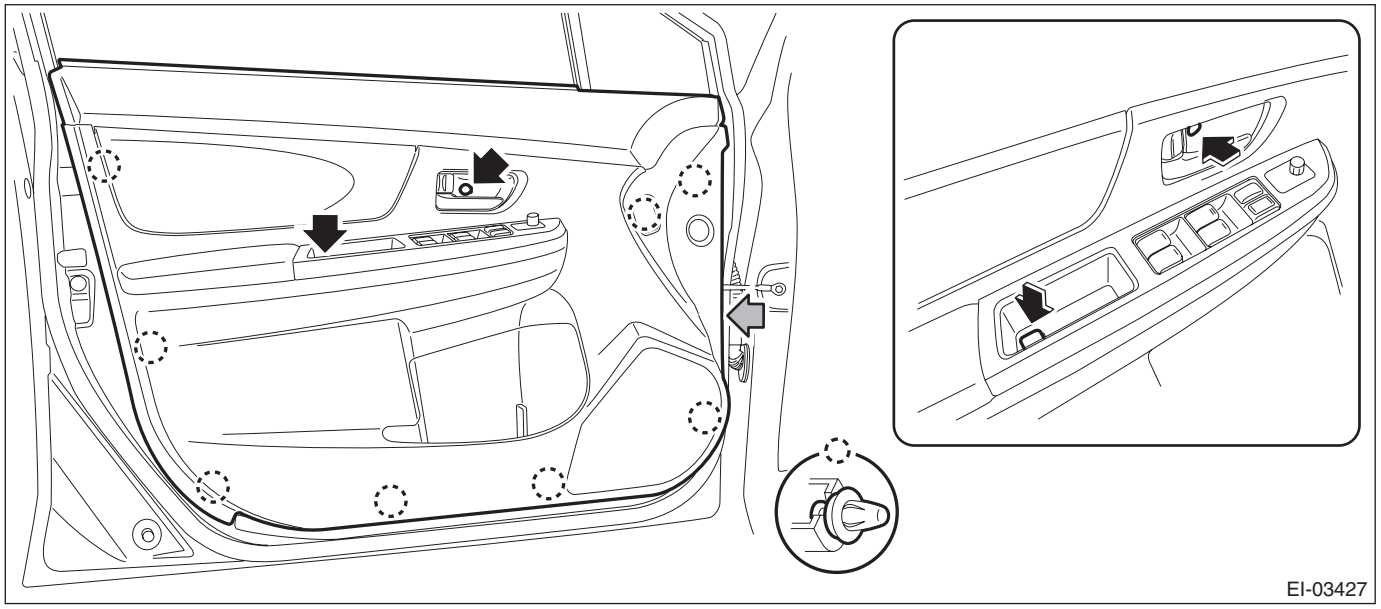


(1) Loosen the screws (A).
(2) Tap the striker - front door (B) using a plastic hammer to adjust the surface level gap between the rear end of the panel assembly - front door and the front end of the panel assembly - rear door.

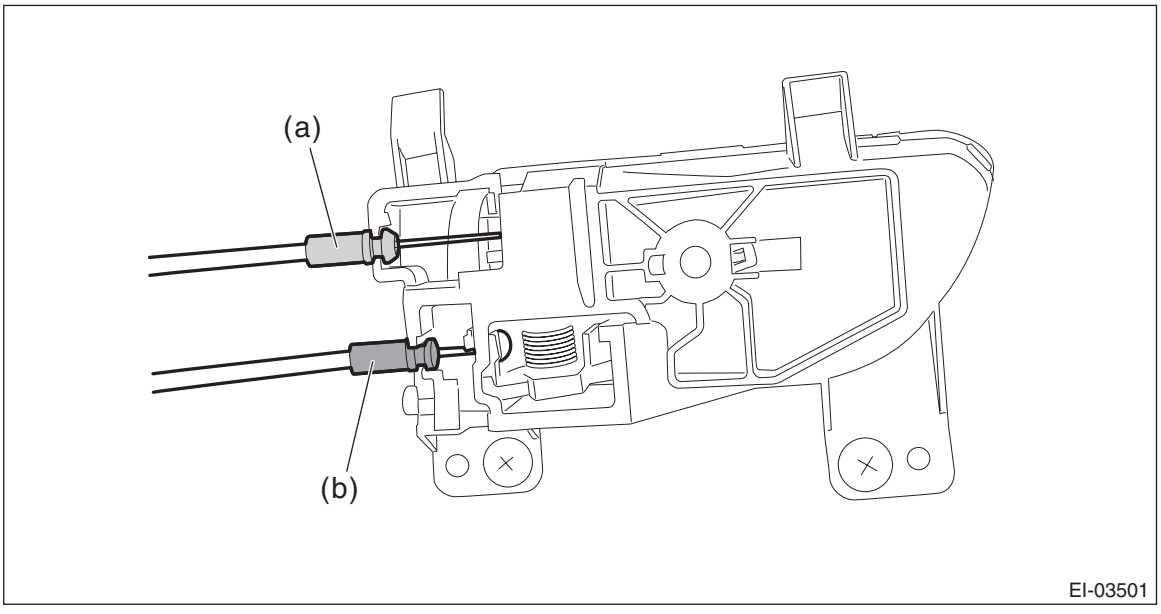
5. Front Sealing Cover

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the trim panel - front door.
   (1) Open the cover and remove the screw.
   (2) Remove the clips, and remove the trim panel - front door from the panel assembly - front door.



NOTE:
It is easier to remove the trim panel - front door if the removal is performed from the gray arrow section.
   (3) Detach the door lock cable (a) and door open cable (b) from the remote assembly - door.

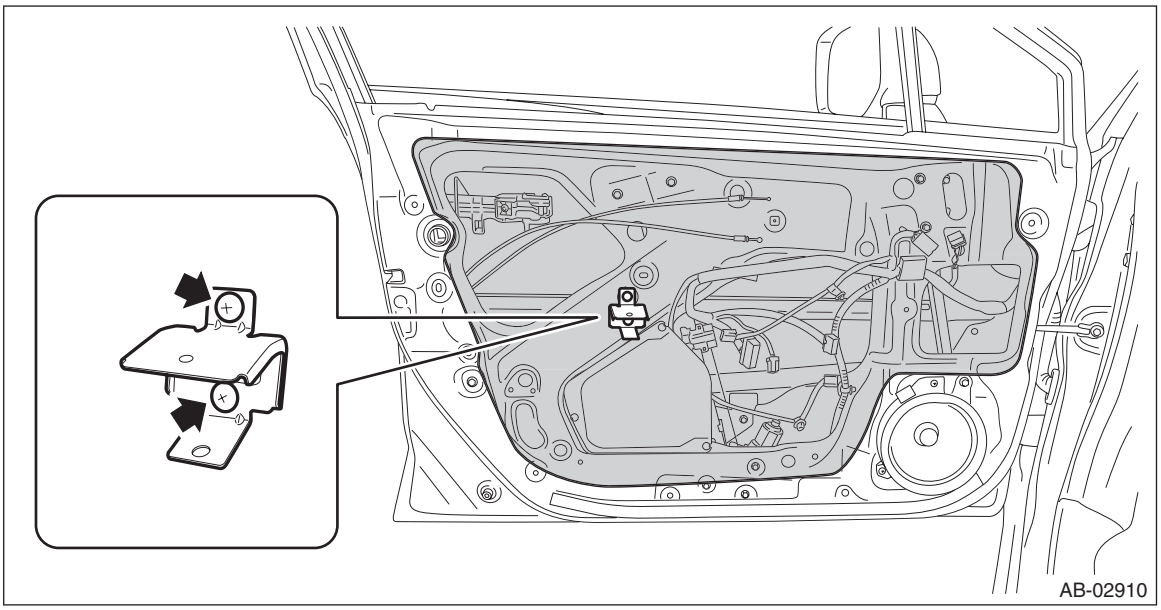


   (4) Disconnect the harness connector and remove the trim panel - front door.

3) Remove the sealing cover - front door.

CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the cover.**
- **If the sealing cover - front door gets broken, replace it with a new part.**

(1) Remove the screw to remove the bracket - door trim front.
(2) Carefully remove the butyl tape to remove the sealing cover - front door.



B: INSTALLATION

CAUTION:
- **If the sealing cover - front door gets broken, replace it with a new part.**
- **Apply a uniform bead of butyl tape.**
- **Attach the sealing cover - front door, keeping it from becoming wrinkled.**
- **Breaks in the bead will allow water leakage and contamination.**

1) Install each part in the reverse order of removal.
2) When replacing the sealing cover - front door, use the butyl tape.
3) Press the butyl tape-applied area firmly to prevent any floating on surface.

Butyl tape:
3M8626 or the equivalent

C: INSPECTION

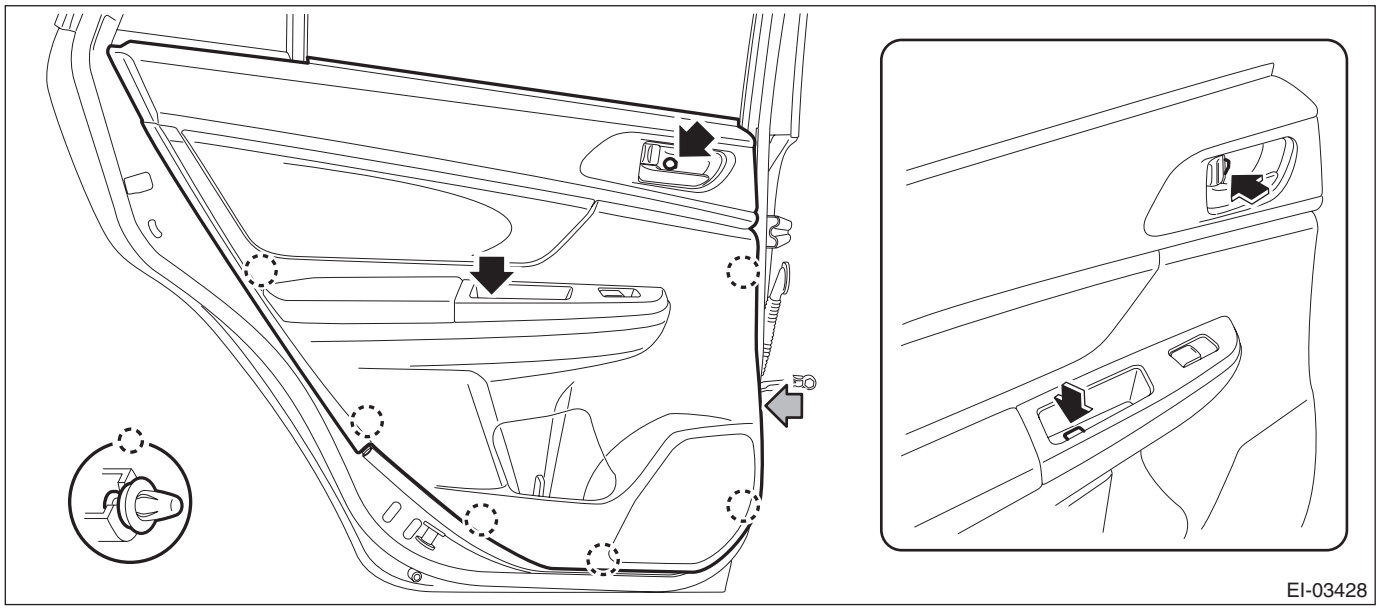
If the sealing cover - front door is broken, replace it with a new part.

6. Rear Door

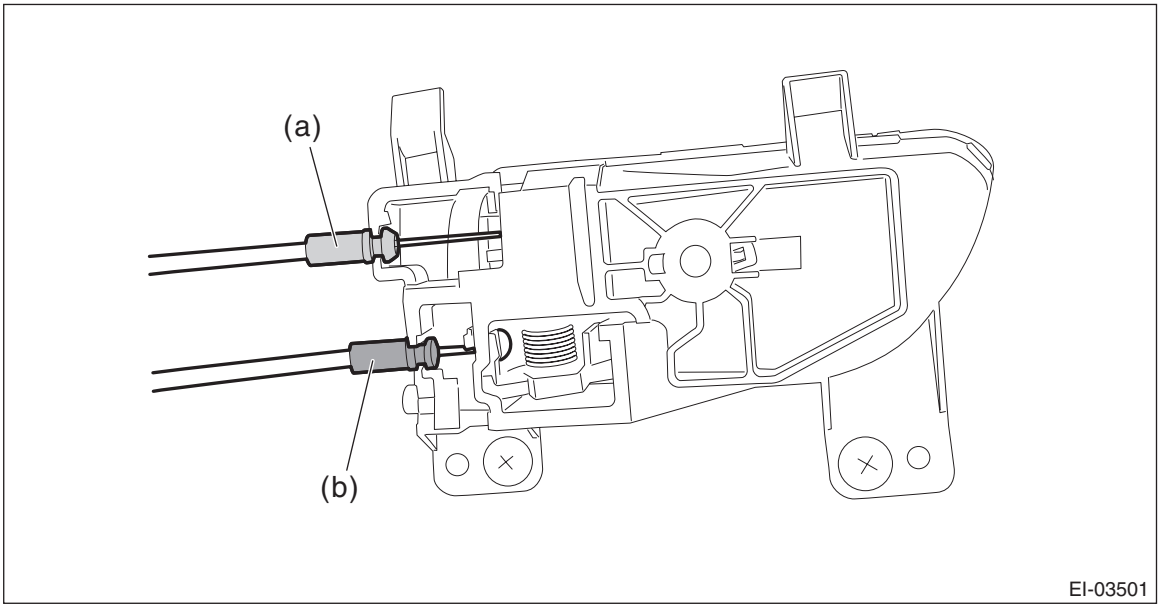
A: REMOVAL

1. REAR DOOR PANEL

1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear door.
   (1) Open the cover and remove the screw.
   (2) Remove the clips, and remove the trim panel - rear door from the panel assembly - rear door.



NOTE:
It is easier to remove the trim panel - rear door if the removal is performed from the gray arrow section.
   (3) Detach the door lock cable (a) and door open cable (b) from the remote assembly - door.

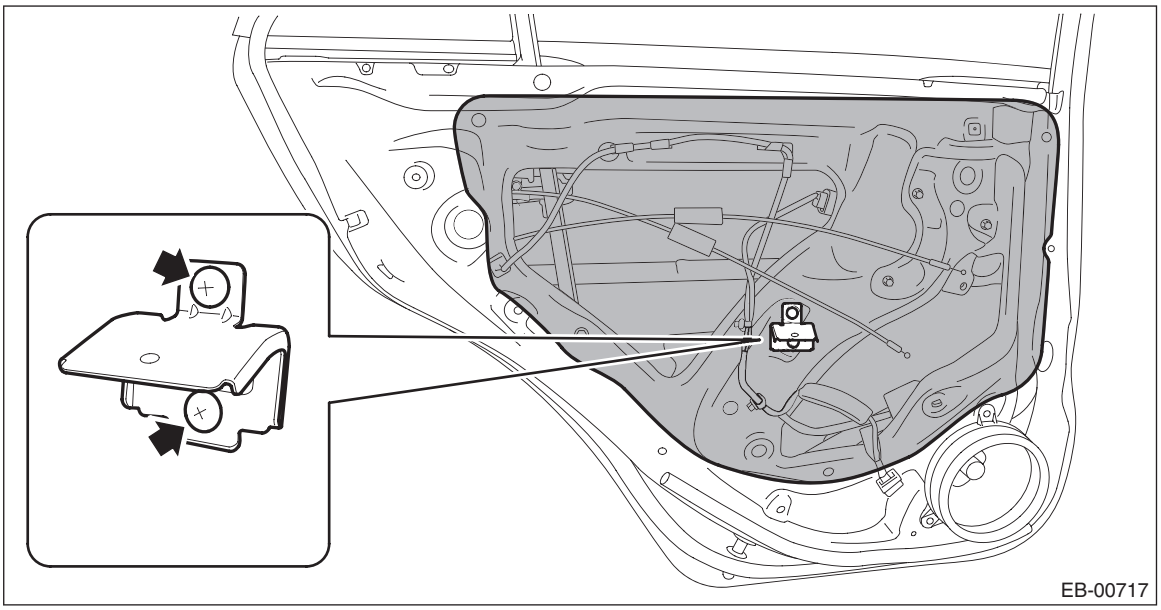


   (4) Disconnect the harness connector and remove the trim panel - rear door.

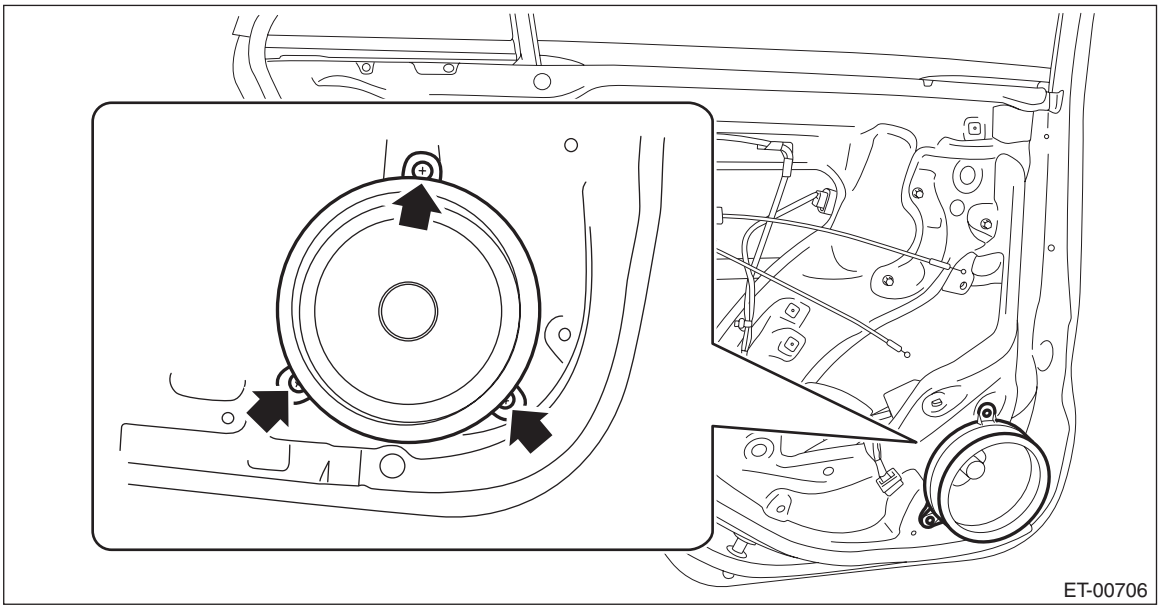
3) Remove the sealing cover - rear door.

CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the cover.**
- **If the sealing cover - rear door gets broken, replace it with a new part.**

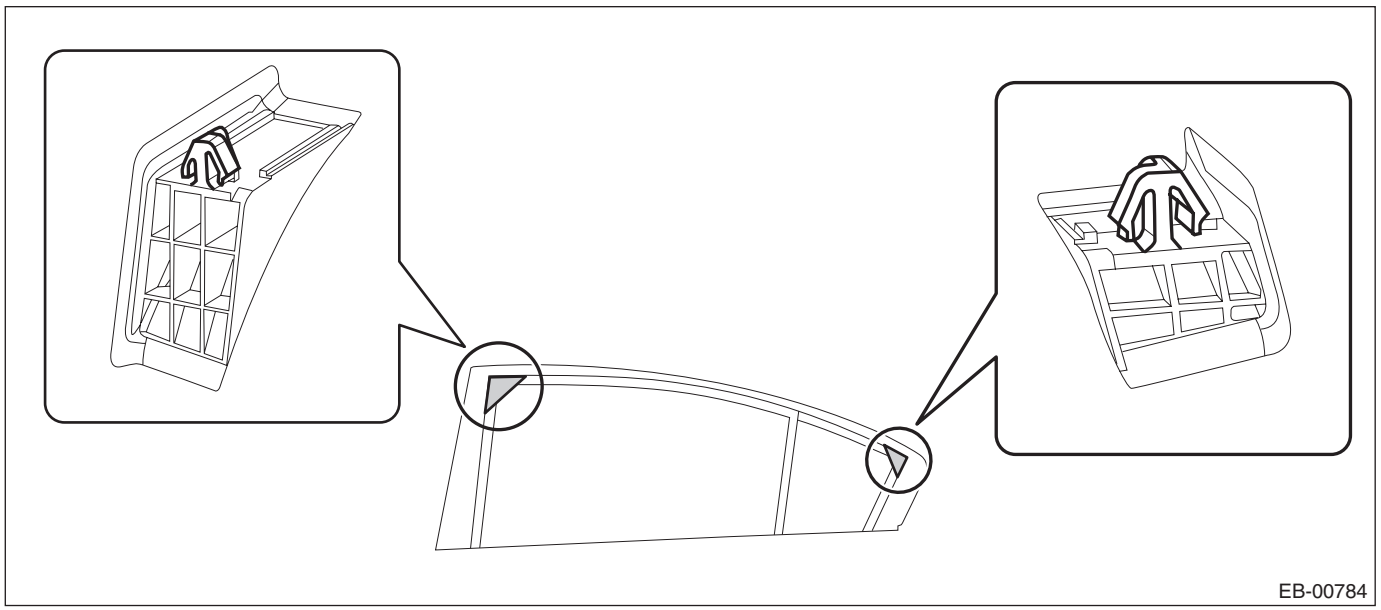
(1) Remove the screw to remove the bracket - door trim rear.
(2) Carefully remove the butyl tape to remove the sealing cover - rear door.



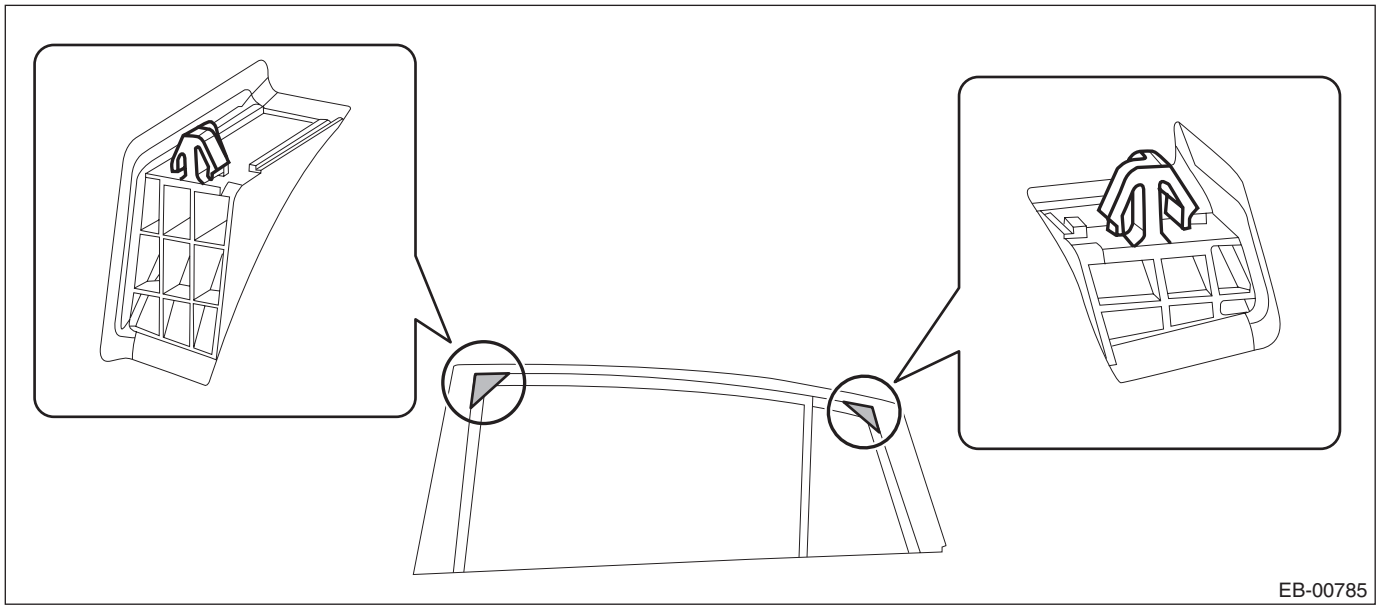
4) Remove the rear door speaker assembly.
(1) Remove the screws.
(2) Disconnect the connector behind the speaker and remove the rear speaker assembly.



5) Remove the B and C pillar upper clip.
• 4 door model



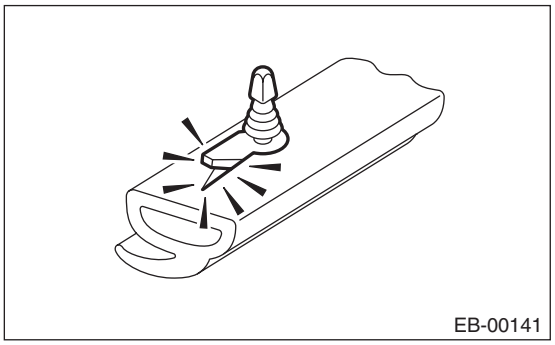
• 5 door model



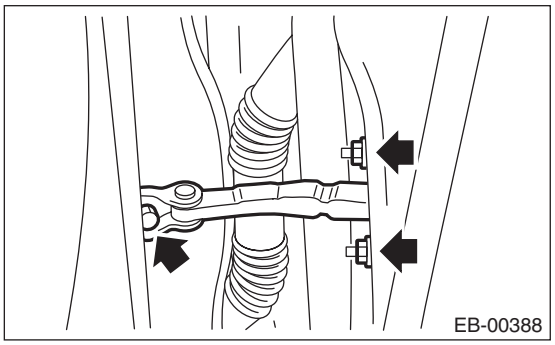
6) Remove the sash COMPL - rear partition and the glass assembly - rear door. <Ref. to GW-33, REMOVAL, Rear Door Glass.>
7) Remove the regulator - rear. <Ref. to GW-35, REMOVAL, Rear Regulator and Motor Assembly.>
8) Remove the latch and actuator assembly - rear. <Ref. to SL-43, REMOVAL, Rear Door Latch and Door Lock Actuator Assembly.>
9) Remove the cover - handle rear outer. <Ref. to SL-39, REMOVAL, Rear Outer Handle.>

10) Remove the rear door weather strip.

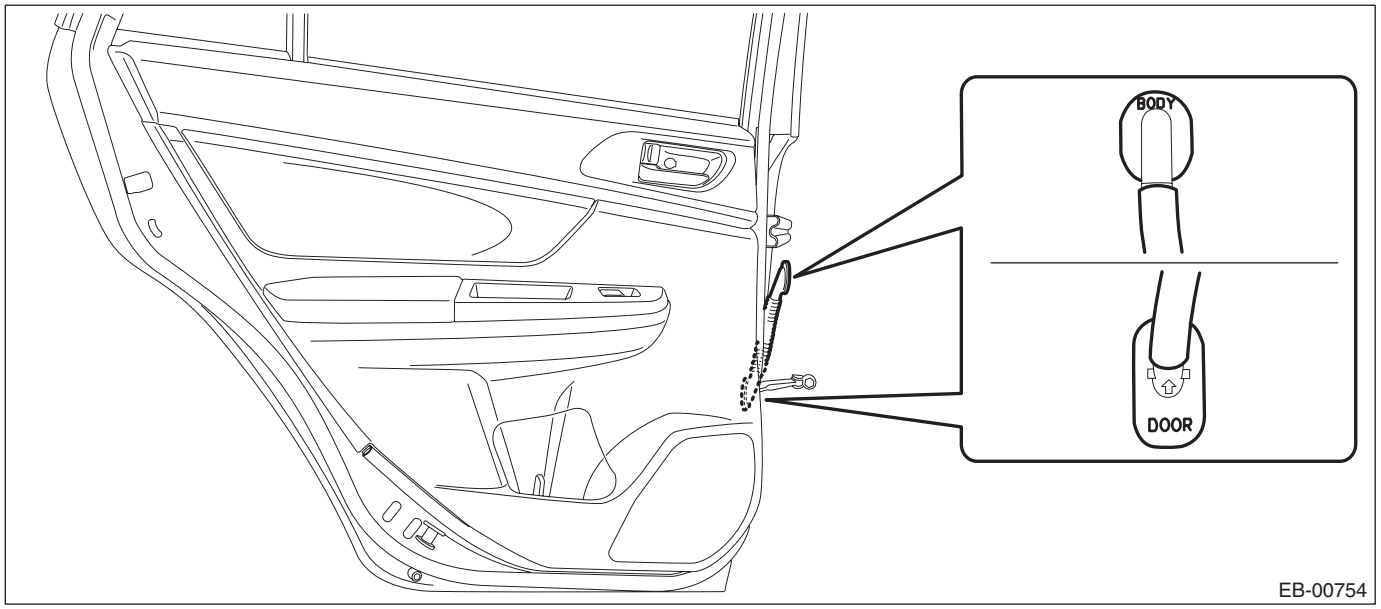
CAUTION:
If the weather strip clip is removed with excessive force, the weather strip may be damaged. Be sure to use clip remover to remove.



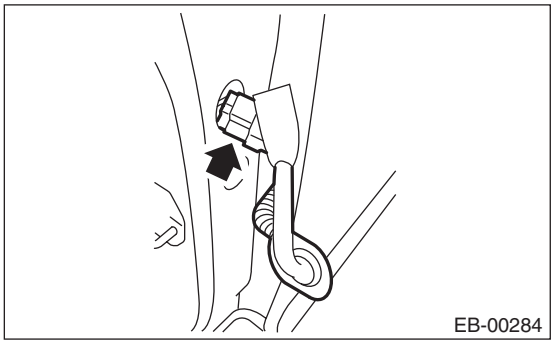
11) Remove the bolts and nuts, and then detach the checker assembly - rear door.



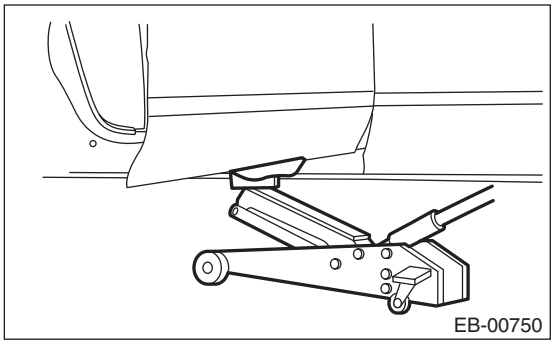
12) Disconnect the rear door harness connectors.
(1) Remove the grommet and pull out the rear door harness connector from inside the center pillar.



(2) Disconnect the rear door harness connectors.



13) Before removing the panel assembly - rear door, make the following preparations.

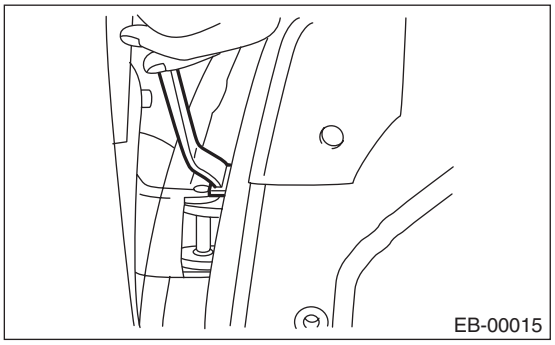


(1) Put a wooden block on a floor jack and place the jack under the panel assembly - rear door.
(2) Support the panel assembly - rear door with the jack to protect it from damage.

CAUTION:
Do not excessively lift the panel assembly - rear door with the floor jack. The door hinges may be damaged.

14) Remove the door-side bolts for the upper hinge - rear door and the lower hinge - rear door to remove the panel assembly - rear door.

CAUTION:
The panel assembly - rear door is heavy. When removing and installing it, always work in a team of two or more persons.



15) Remove the door hinge from vehicle. <Ref. to EB-35, REAR DOOR HINGE, REMOVAL, Rear Door.>

2. REAR DOOR HINGE

1) Open the panel assembly - front door, and remove the bolts of the upper hinge - rear door or the lower hinge - rear door.

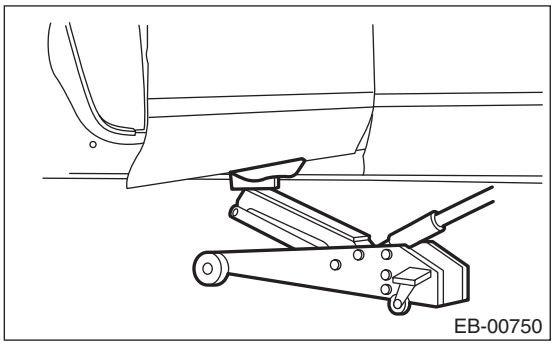
CAUTION:
- **Do not remove the upper hinge - front door and the lower hinge - front door at the same time.**
- **Removal and installation of the panel assembly - rear door must be performed with the door closed.**

2) Remove the rear door hinge from vehicle.

B: INSTALLATION

1. REAR DOOR PANEL

1) Put a wooden block on a jack and place the panel assembly - rear door on it.



2) Apply grease to the moving part of door hinges.
3) Adjust the height by the jack, and temporarily install the panel assembly - rear door to the upper hinge - rear door and the lower hinge - rear door.

NOTE:
• When installing the panel assembly - rear door, make sure that a uniform clearance is created around the panel.
• Perform installation while paying attention to the assembly direction of the grommet.

4) Adjust the clearance around the panel assembly - rear door. <Ref. to EB-37, ADJUSTMENT, Rear Door.>
5) Tighten the bolts and nuts of the door hinge and the checker assembly - rear door.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EB-5, REAR DOOR, COMPONENT, General Description.>

6) Install door internal parts in the reverse order of removal.
7) Connect the door harness connector, and install the trim panel - center pillar LWR.

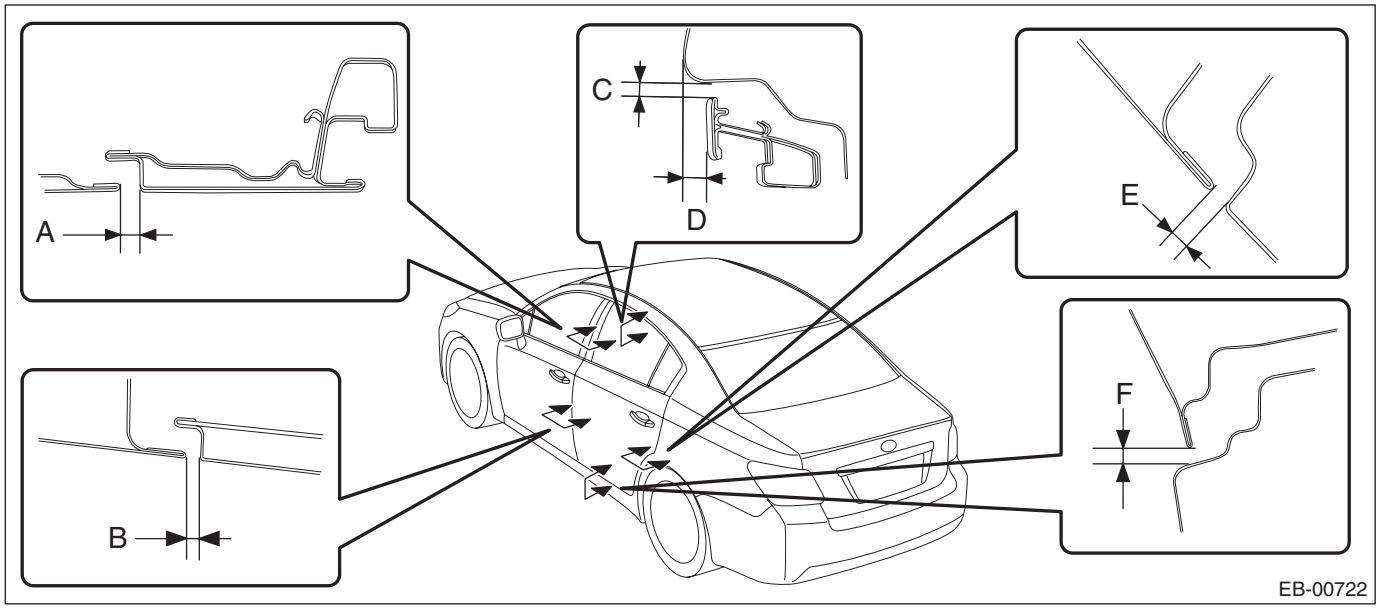
2. REAR DOOR HINGE

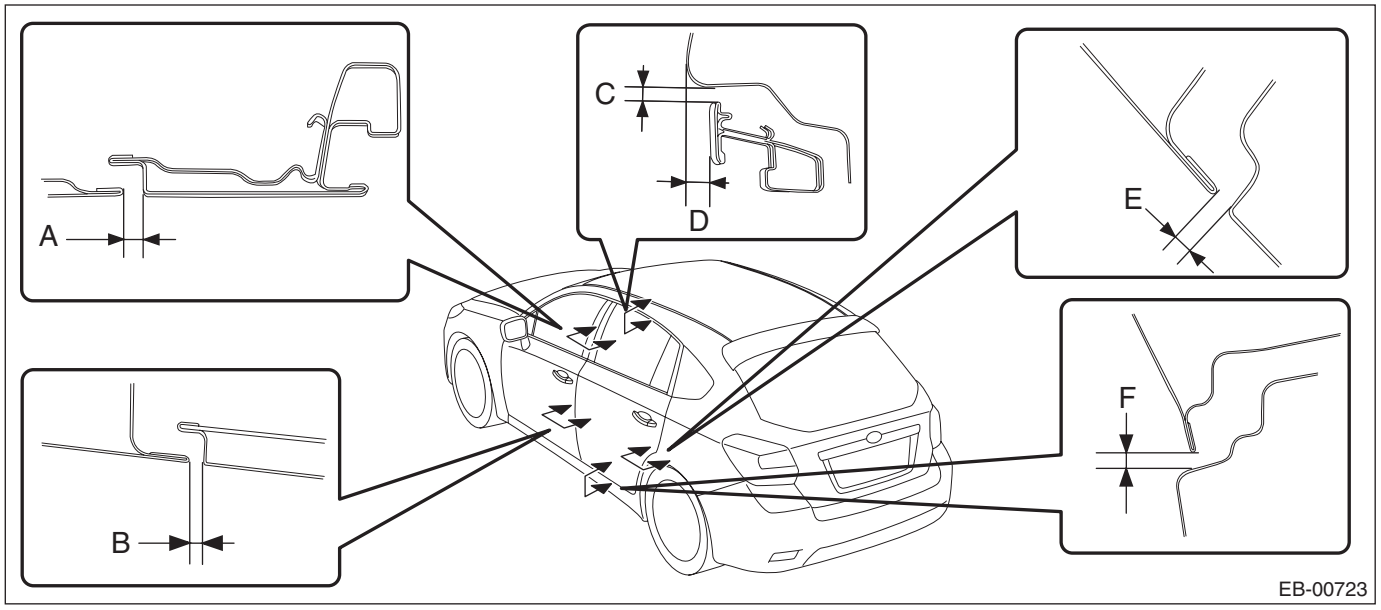
1) Apply grease to the moving part of door hinges.
2) Adjust the clearance around the panel assembly - rear door. <Ref. to EB-37, ADJUSTMENT, Rear Door.>
3) Tighten the door hinge bolts.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EB-5, REAR DOOR, COMPONENT, General Description.>

C: ADJUSTMENT

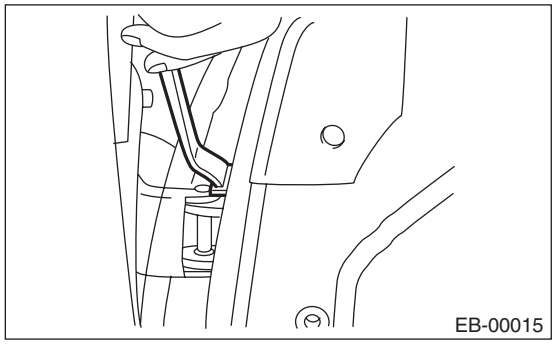
Adjust the clearance around the panel assembly - rear door as follows.





Part		Standard
A	Front door sash to Rear door sash	5.5+1.5, -1.0 mm (0.22+0.06, -0.04 in)
B	Panel assembly - front door to Panel assembly - rear door	4.5±1.0 mm (0.18±0.04 in)
C	Roof panel to Rear door sash	5.1+1.5, -1.0 mm (0.20+0.06, -0.04 in)
D	Surface level gap between roof panel and rear door sash	6.6±1.5 mm (0.26±0.06 in)
E	Panel assembly - rear door to Rear quarter panel	4.1±1.0 mm (0.16±0.04 in)
F	Panel assembly - rear door to Side sill spoiler	6.0±1.5 mm (0.24±0.06 in)

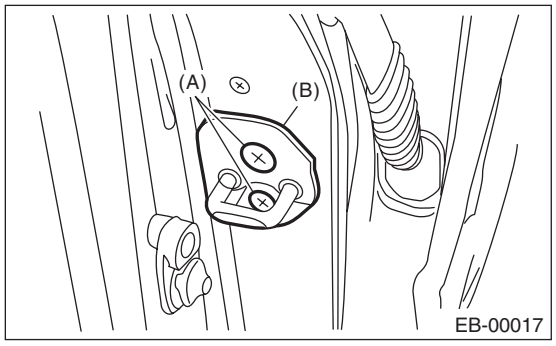
1) Adjust the vertical and horizontal positions of the panel assembly - rear door.



(1) Loosen the body side bolts of the upper hinge - rear door and the lower hinge - rear door.
(2) Adjust the vertical and horizontal clearance of the panel assembly - rear door.

2) Adjust the surface level gap between the panel assembly - rear door and the body.

CAUTION:
Do not use an impact wrench. Welding area on the striker nut plate is easily broken.

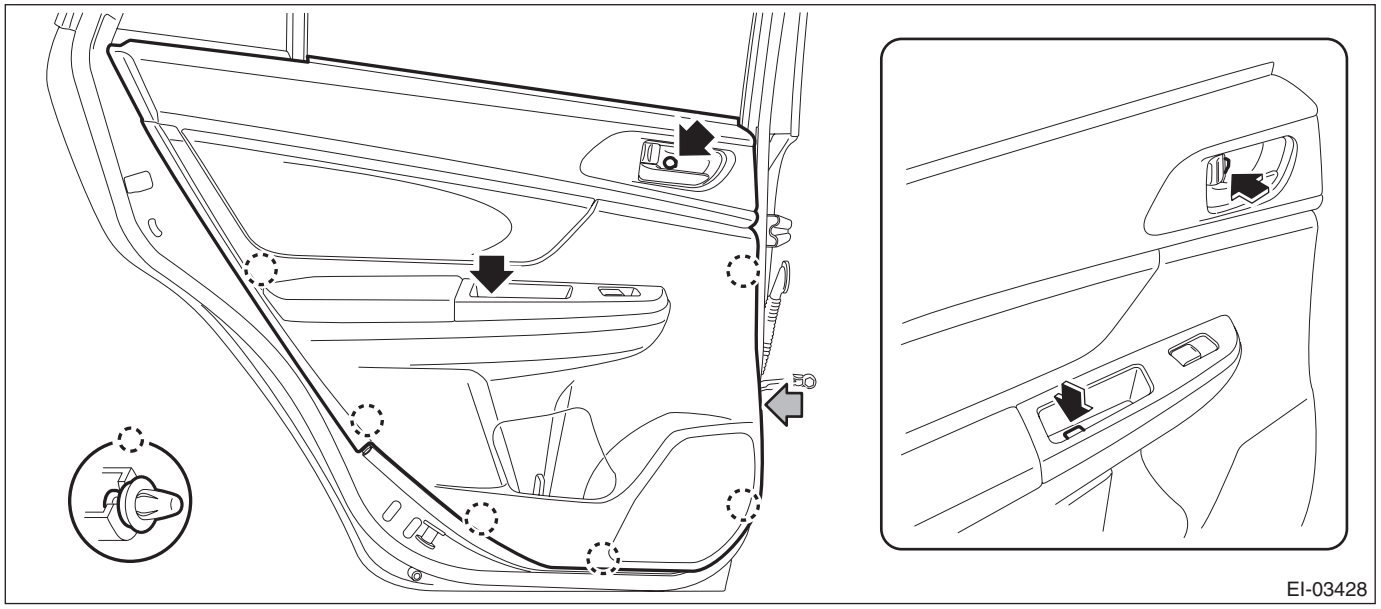


(1) Loosen the screws (A).
(2) Tap the striker - rear door (B) using a plastic hammer to adjust the surface level gap between the rear end of the panel assembly - rear door and the rear quarter.

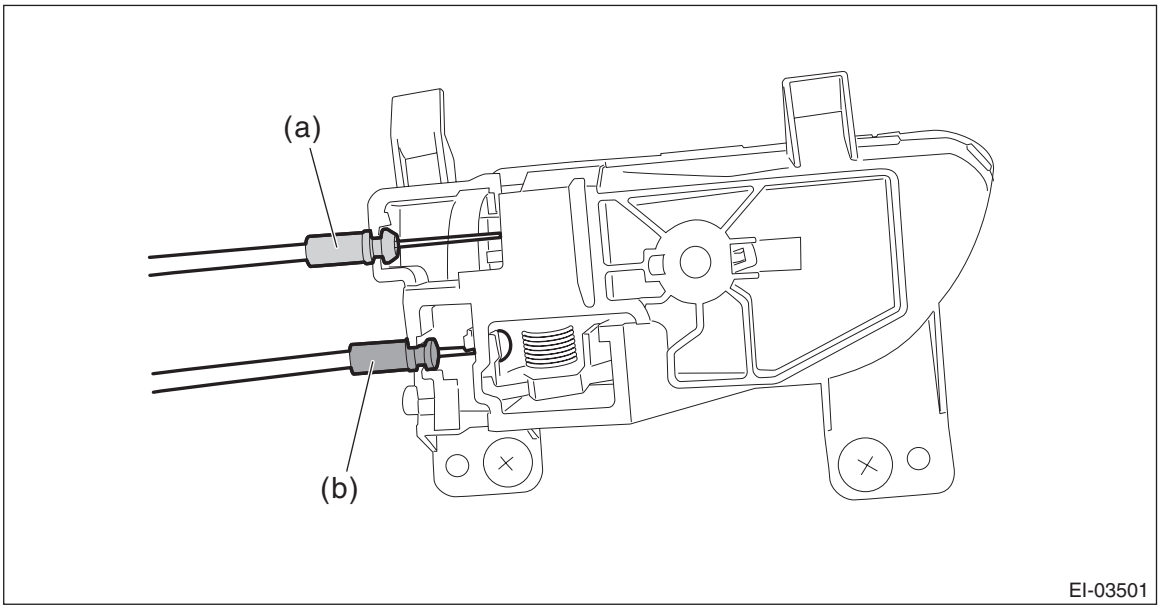
7. Rear Sealing Cover

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear door.
   (1) Open the cover and remove the screw.
   (2) Remove the clips, and remove the trim panel - rear door from the panel assembly - rear door.



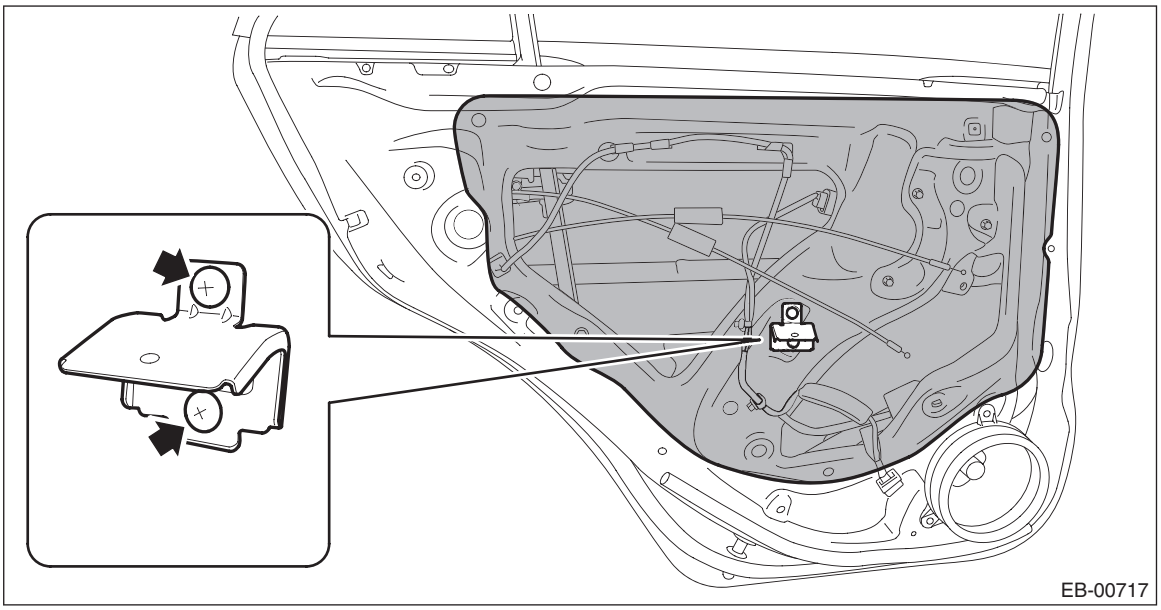
NOTE:
It is easier to remove the door trim if the removal is performed from the gray arrow section.
   (3) Detach the door lock cable (a) and door open cable (b) from the remote assembly - door.



   (4) Disconnect the harness connector and remove the trim panel - rear door.

3) Remove the sealing cover - rear door.

CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the cover.**
- **If the sealing cover - rear door gets broken, replace it with a new part.**
  (1) Remove the screw to remove the bracket - door trim rear.
  (2) Carefully remove the butyl tape to remove the sealing cover - rear door.



B: INSTALLATION

CAUTION:
- **If the sealing cover - rear door gets broken, replace it with a new part.**
- **Apply a butyl tape evenly.**
- **Attach the sealing cover - rear door, keeping it from becoming wrinkled.**
- **If the butyl tape is applied unevenly, it will cause water leakage and soiling.**

1) Install each part in the reverse order of removal.
2) When replacing the sealing cover - rear door, use the butyl tape.
3) Press the butyl tape-applied area firmly to prevent any floating on surface.

Butyl tape:
3M8626 or the equivalent

C: INSPECTION

If the sealing cover - rear door is broken, replace it with a new part.

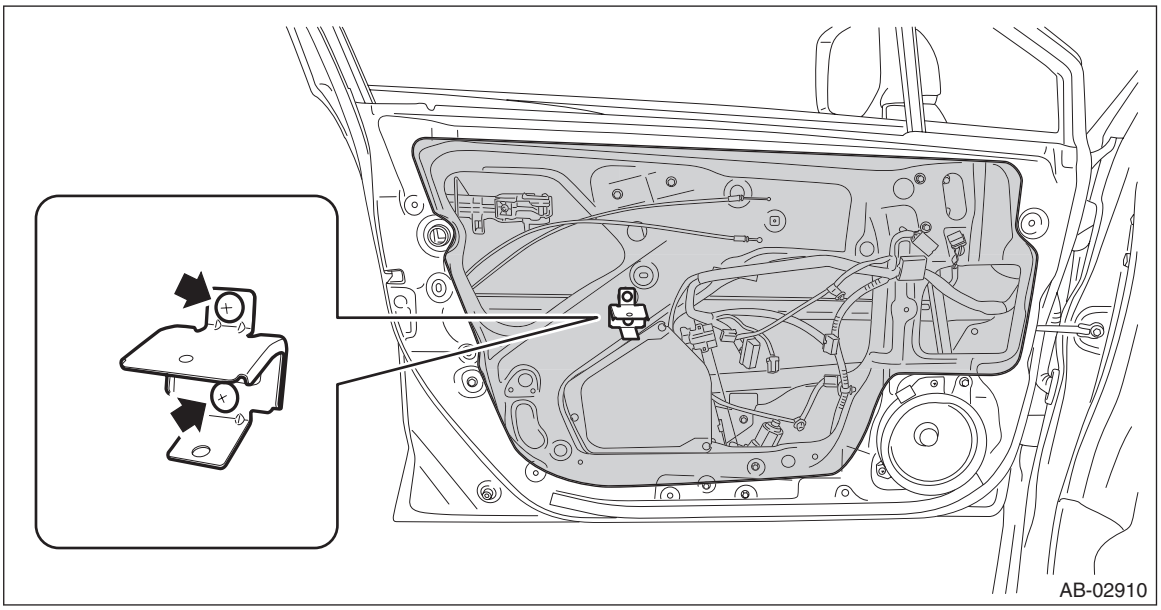
8. Door Sash Tape

A: REMOVAL

1. FRONT DOOR

1) Disconnect the ground cable from battery.
2) Remove the trim panel - front door. <Ref. to EI-58, FRONT DOOR, REMOVAL, Door Trim.>
3) Remove the outer mirror assembly. <Ref. to GW-27, REMOVAL, Outer Mirror Assembly.>
4) Remove the sealing cover - front door.

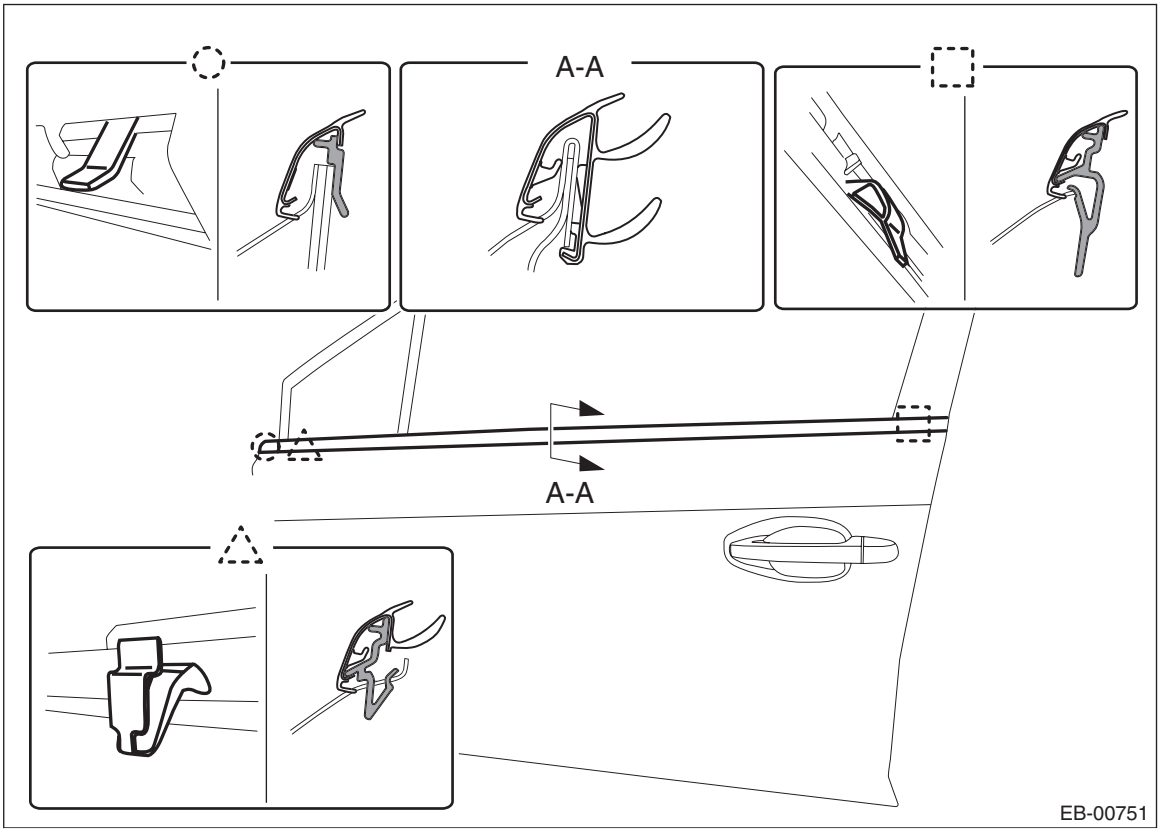
CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the cover.**
- **If the sealing cover - front door gets broken, replace it with a new part.**



5) Remove the glass assembly - front door. <Ref. to GW-18, REMOVAL, Front Door Glass.>
6) Remove the running channel - front door.

7) Remove the weather strip outer - front door.

CAUTION:
- **When removing the weather strip outer, be careful not to damage the vehicle.**
- **Do not reuse the weather strip outer. Always replace with a new part.**



8) Peel the door sash tape from the door sash.

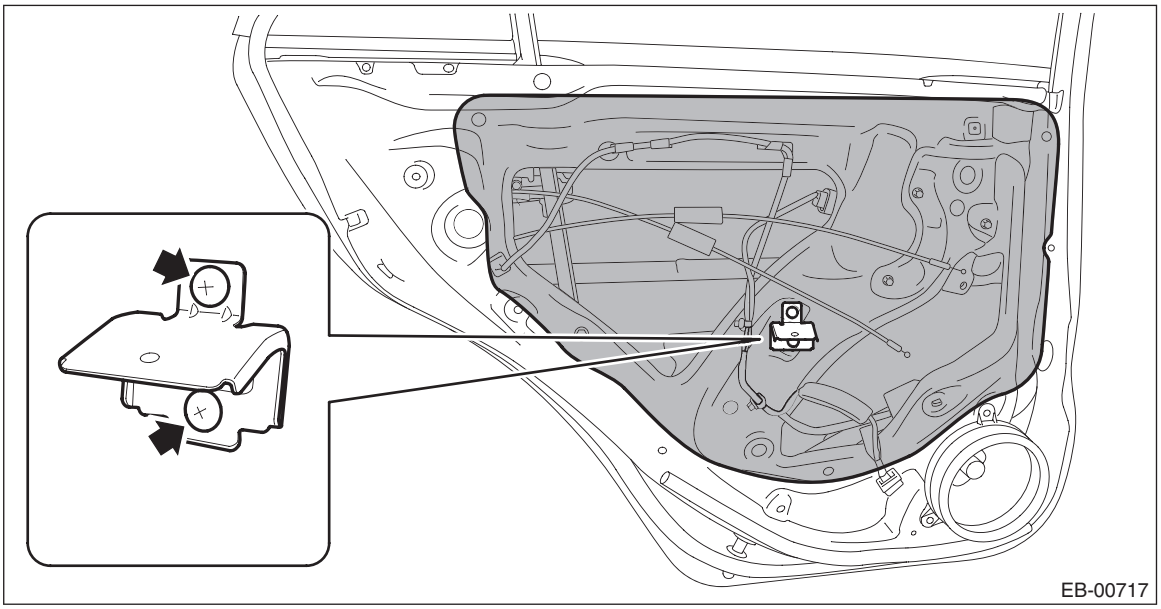
NOTE:
- If the tape is difficult to detach, warm it by a hot air drier.

Use a household hairdryer. Do not use industrial dryers.
- If tape residue is remaining on the door sash, wipe clean.

2. REAR DOOR

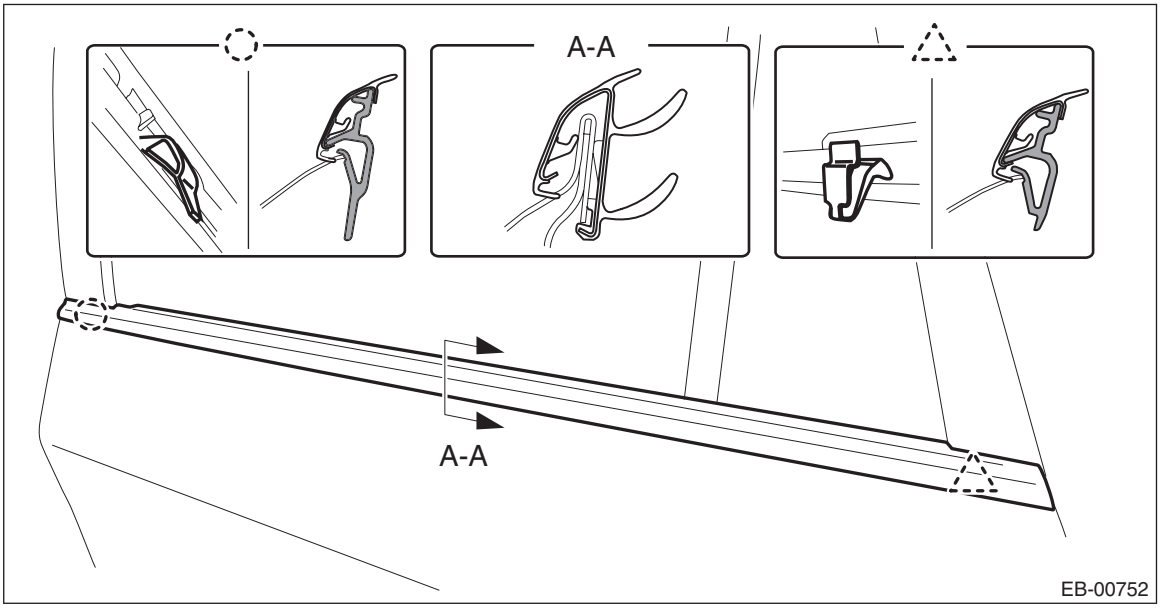
1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear door. <Ref. to EI-59, REAR DOOR, REMOVAL, Door Trim.>
3) Remove the sealing cover - rear door.

CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the cover.**
- **If the sealing cover - rear door gets broken, replace it with a new part.**



4) Remove the glass assembly - rear door. <Ref. to GW-33, REMOVAL, Rear Door Glass.>
5) Remove the running channel - rear door.
6) Remove the weather strip outer - rear door.

CAUTION:
- **When removing the weather strip outer, be careful not to damage the vehicle.**
- **Do not reuse the weather strip outer. Always replace with a new part.**



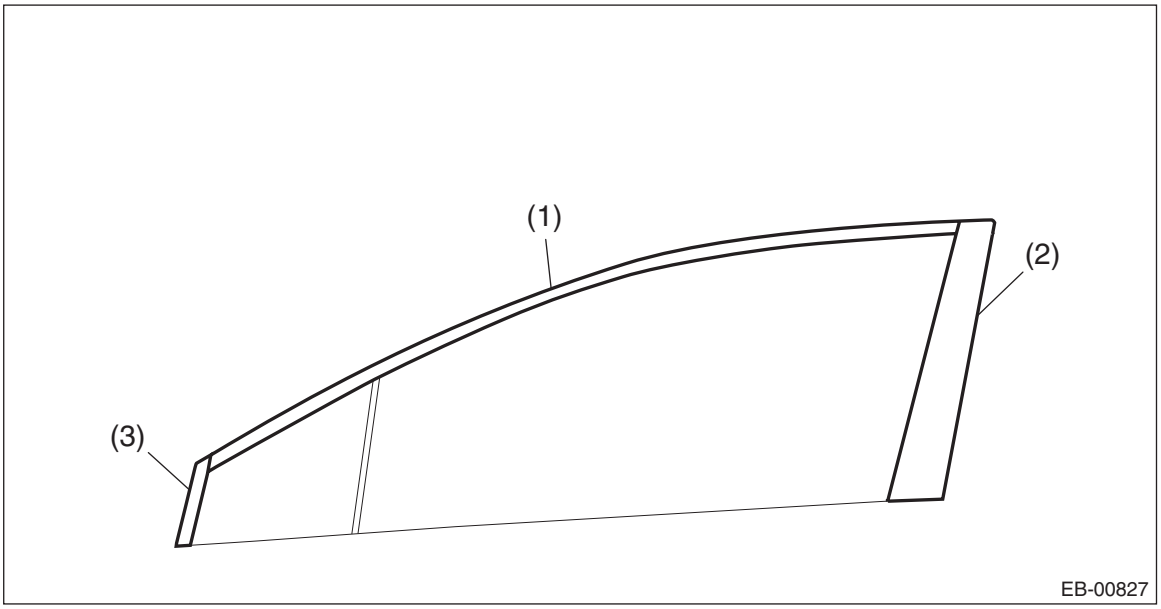
7) Peel the door sash tape from the door sash.

NOTE:
- If the tape is difficult to detach, warm it by a hot air drier.
Use a household hairdryer. Do not use industrial dryers.
- If tape residue is remaining on the door sash, wipe clean.

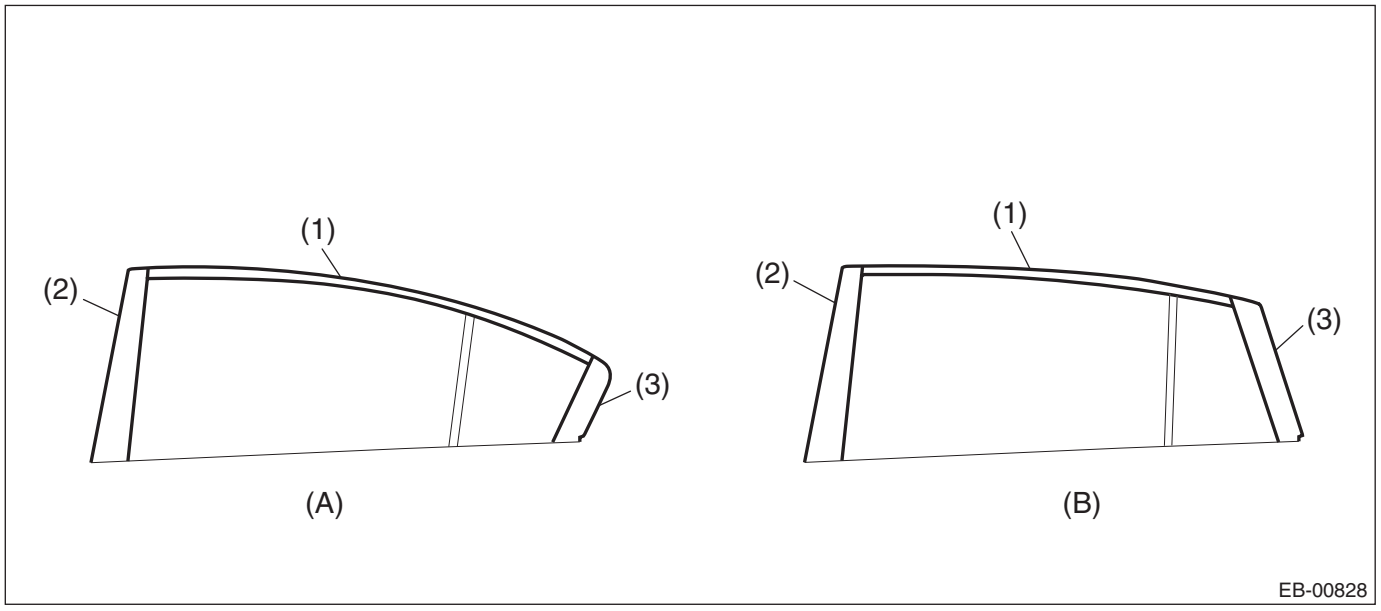
B: INSTALLATION

CAUTION:
- **Do not reuse the removed door sash tape. Replace it with a new tape.**
- **Press evenly along the sash when applying the tape using a spatula or similar object to make sure no bubbles are formed.**

If air bubbles are formed, reapply the tape.
- **If the tape is wrinkled, etc. during application, replace the tape.**
- **Be sure to press the ends of the tape firmly to adhere securely. If the tape comes off at the ends or where folded, the adhesive strength is weakened and the tape may peel off.**
- **There are locations where the tape ends will overlap each other. When applying the tape, be careful of the order of their application.**
  - **Front**



  - **Rear**

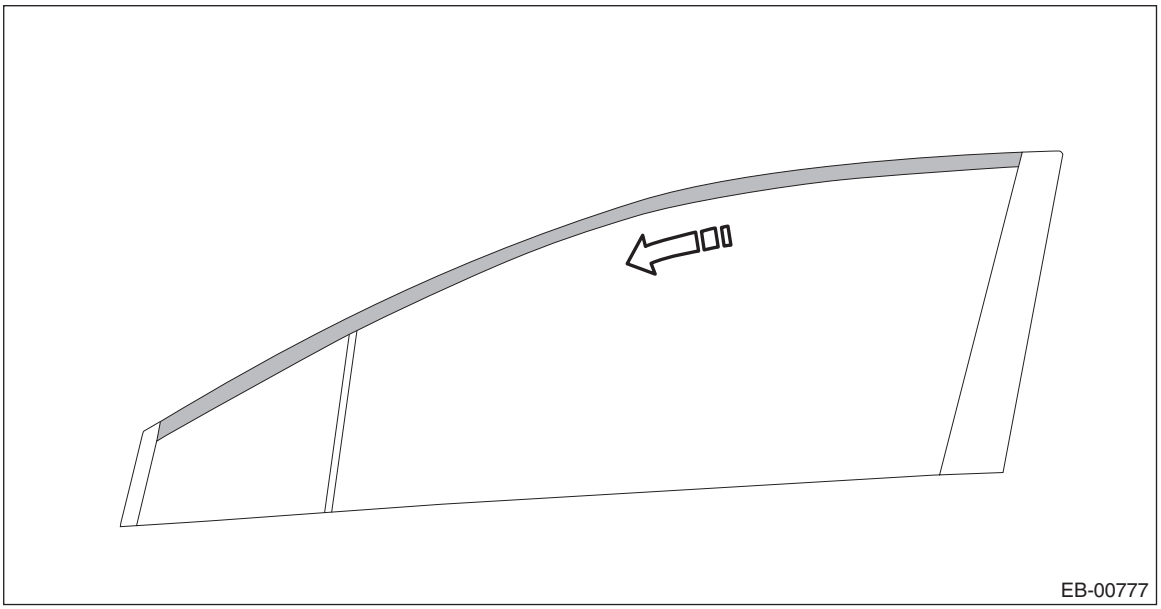


(A) 4 door model (B) 5 door model

1. FRONT DOOR

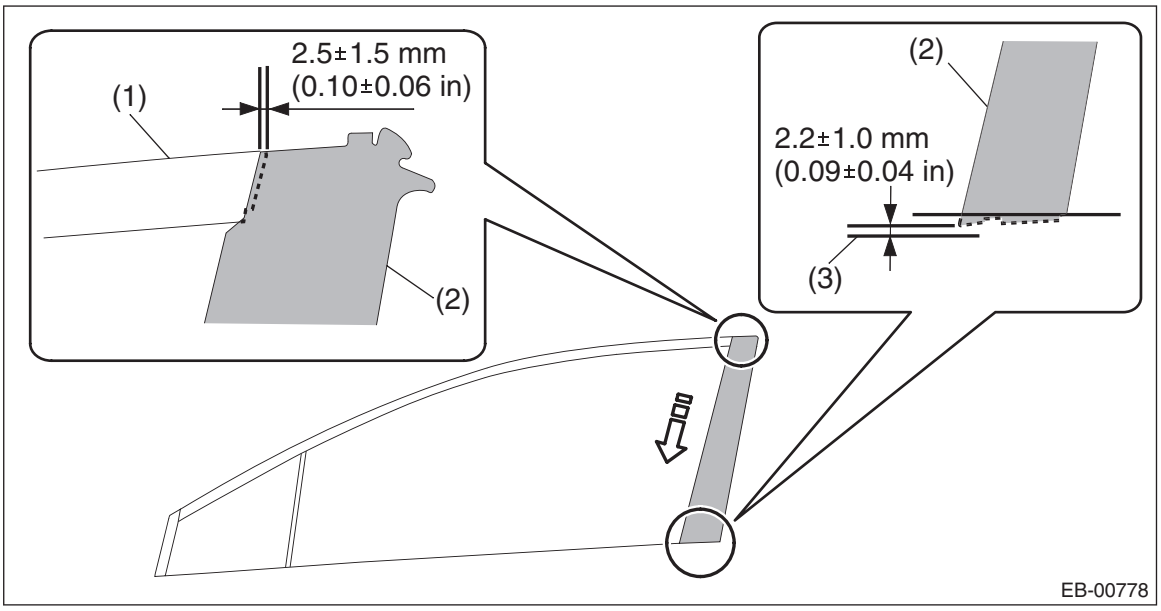
1) Apply the front door sash tape - medium from the rear of the vehicle towards the front.

NOTE:
Apply the end of the tape to the position shown in the figure.



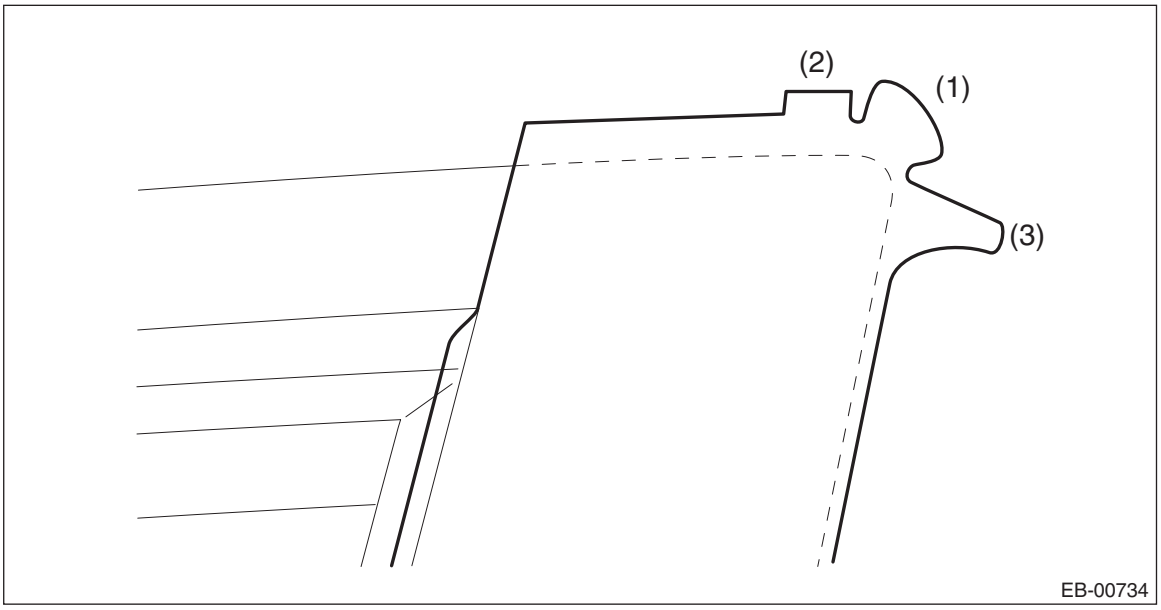
2) Apply the front door sash tape - rear from the top of the vehicle towards the bottom.

NOTE:
Apply the end of the tape to the position shown in the figure.



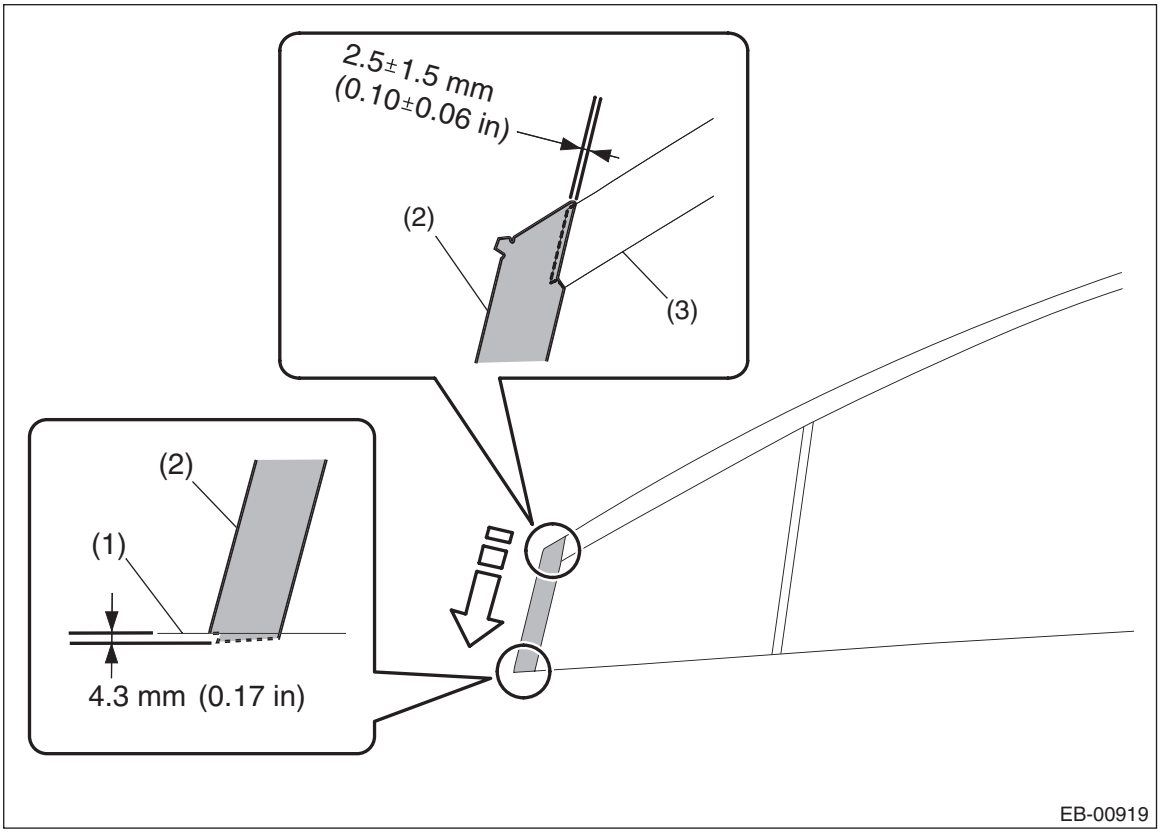
(1) Front door sash tape - medium (2) Front door sash tape - rear (3) End of panel outer

3) Fold the corners at the door upper end area in the order of (1) — (3).



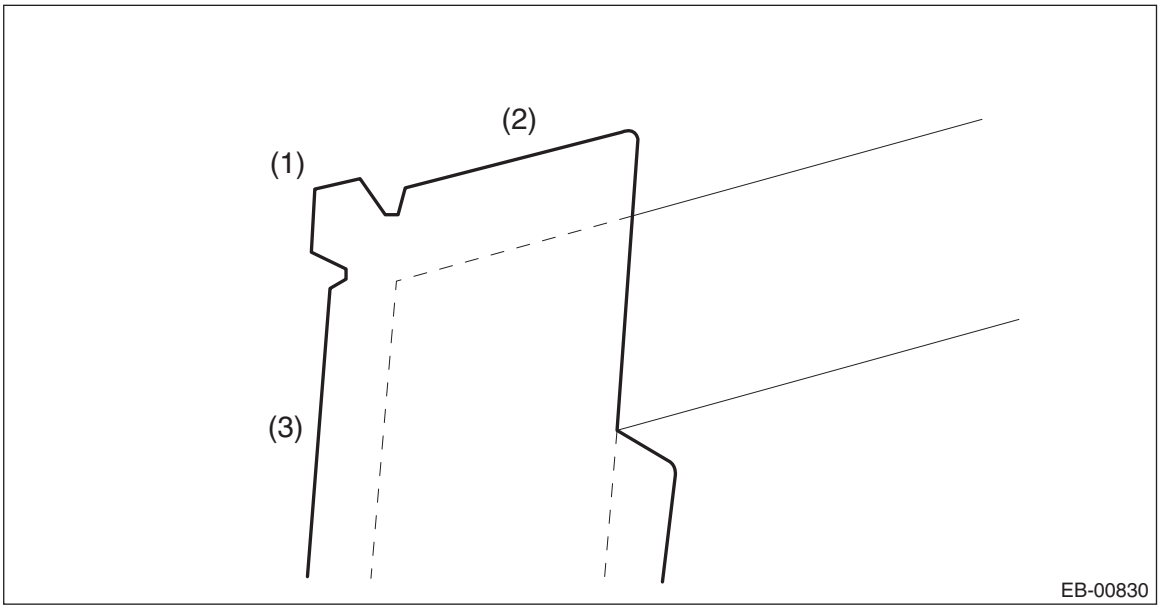
4) Apply the front door sash tape - front from the top of the vehicle towards the bottom.

NOTE:
Apply the end of the tape to the position shown in the figure.



(1) Upper end of weather strip (2) Front door sash tape - front (3) Front door sash tape - medium

5) Fold the corners at the door upper end area in the order of (1) — (3).



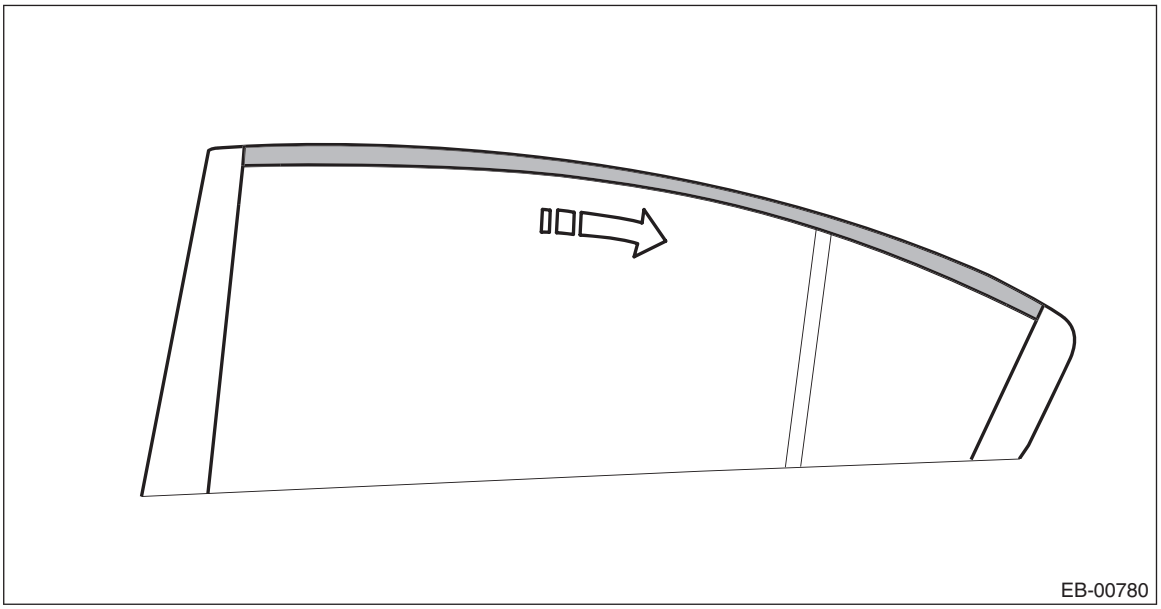
6) Thereafter, install door parts in the reverse order of disassembly.
7) When installing the panel assembly - front door, make sure that a uniform clearance is created around the panel. For the dimension of clearance, refer to “SPECIFICATION” in “General Description”. <Ref. to EB-2, SPECIFICATION, General Description.>

2. REAR DOOR

4 door type

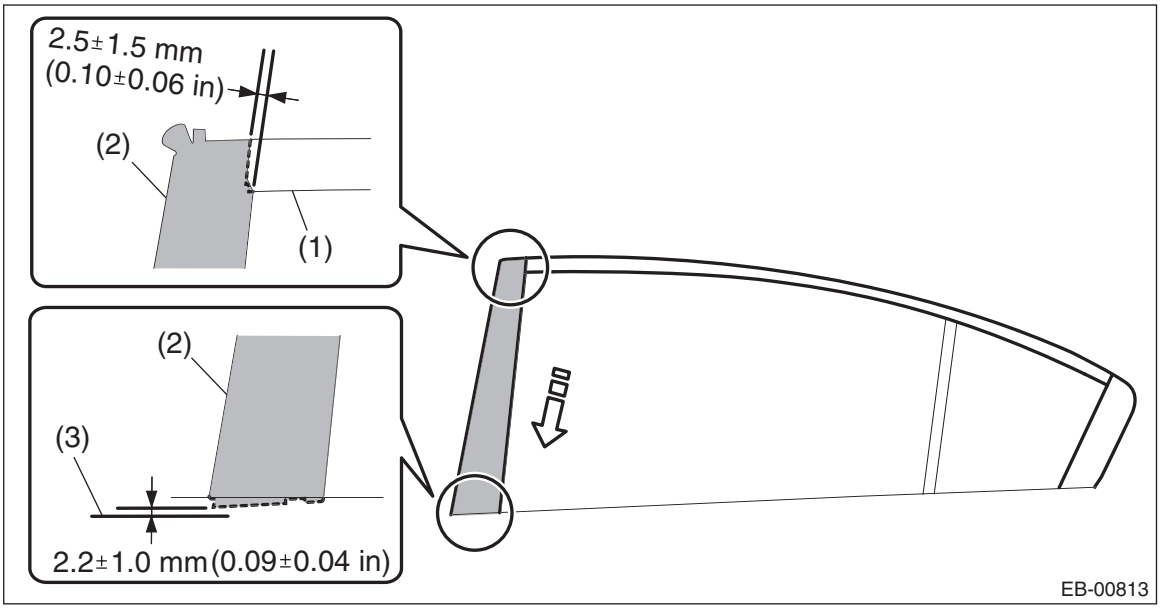
1) Apply the rear door sash tape - medium from the rear of the vehicle towards the front.

NOTE:
Apply the end of the tape to the position shown in the figure.



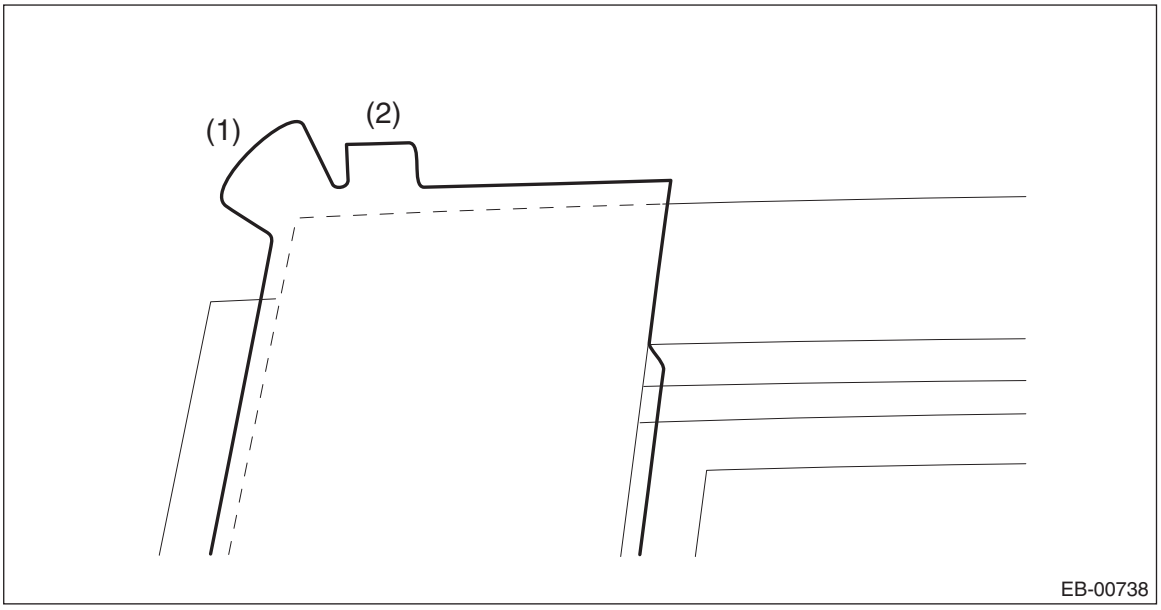
2) Apply the rear door sash tape - front from the top of the vehicle towards the bottom.

NOTE:
Apply the end of the tape to the position shown in the figure.



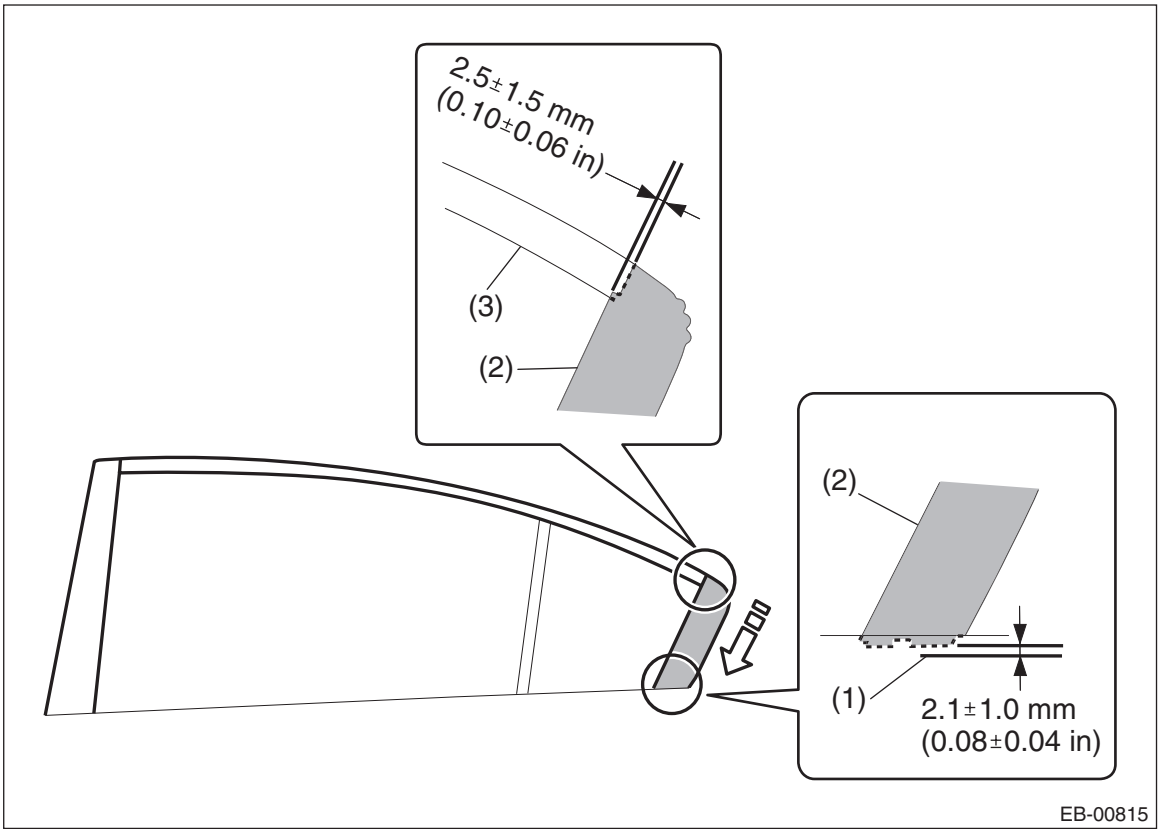
(1) Rear door sash tape - medium (2) Rear door sash tape - front (3) End of panel outer

3) Fold the corners at the door upper end area in the order of (1) — (2).



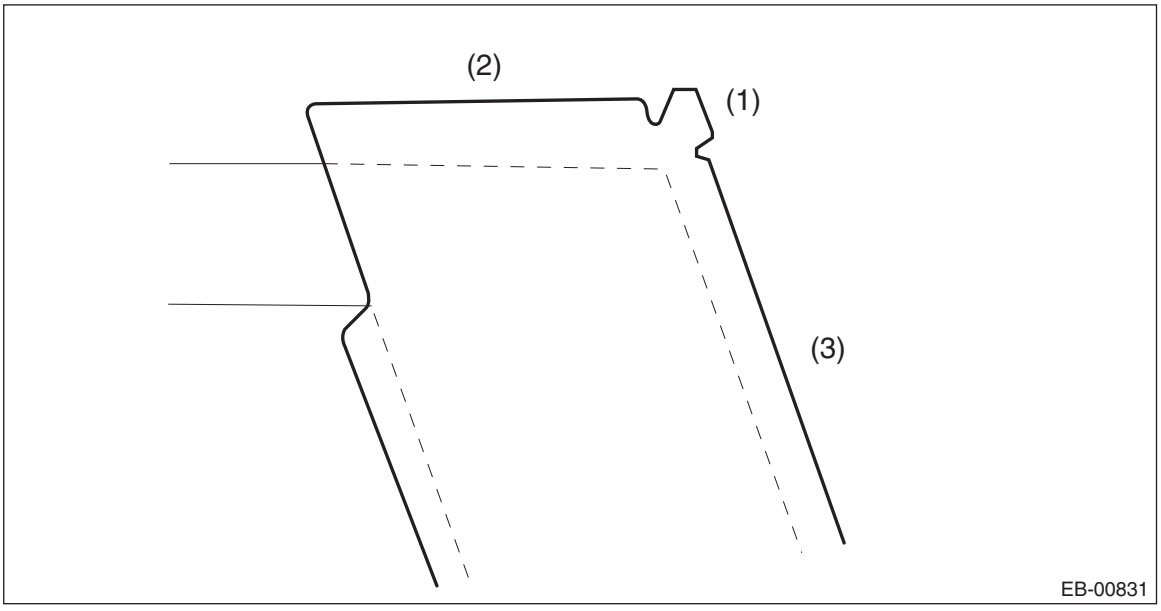
4) Apply the rear door sash tape - rear from the top of the vehicle towards the bottom.

NOTE:
Apply the end of the tape to the position shown in the figure.



(1) End of panel outer (2) Rear door sash tape - rear (3) Rear door sash tape - medium

5) Fold the corners at the door upper end area in the order of (1) — (3).



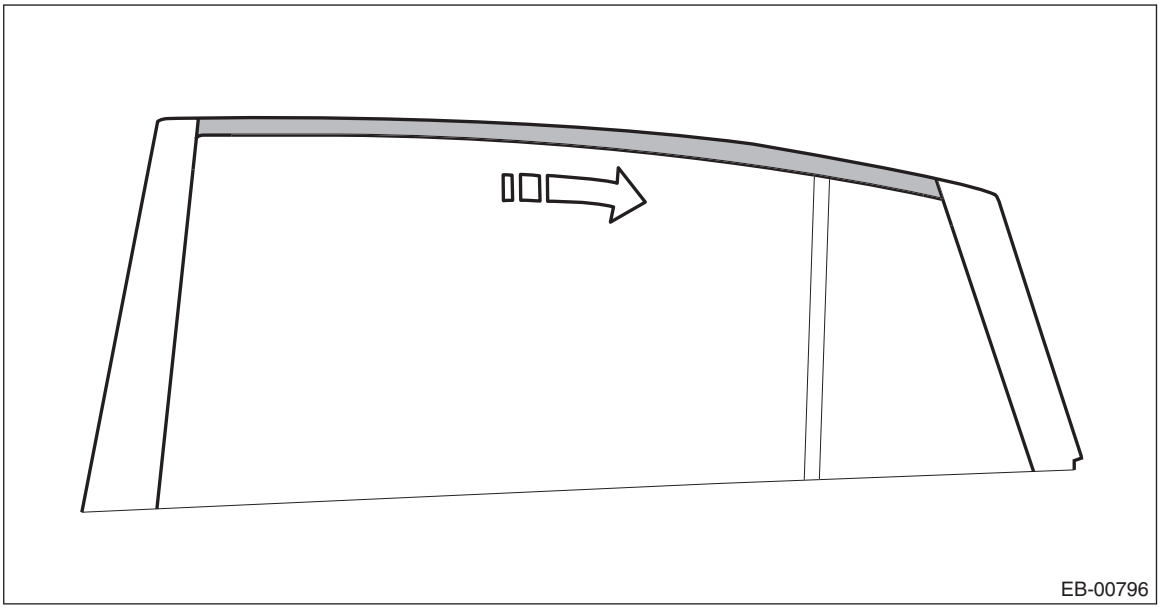
6) Thereafter, install door parts in the reverse order of disassembly.
7) When installing the panel assembly - front door, make sure that a uniform clearance is created around the panel. For the dimension of clearance, refer to “SPECIFICATION” in “General Description”. <Ref. to EB-2, SPECIFICATION, General Description.>

3. REAR DOOR

5 door type

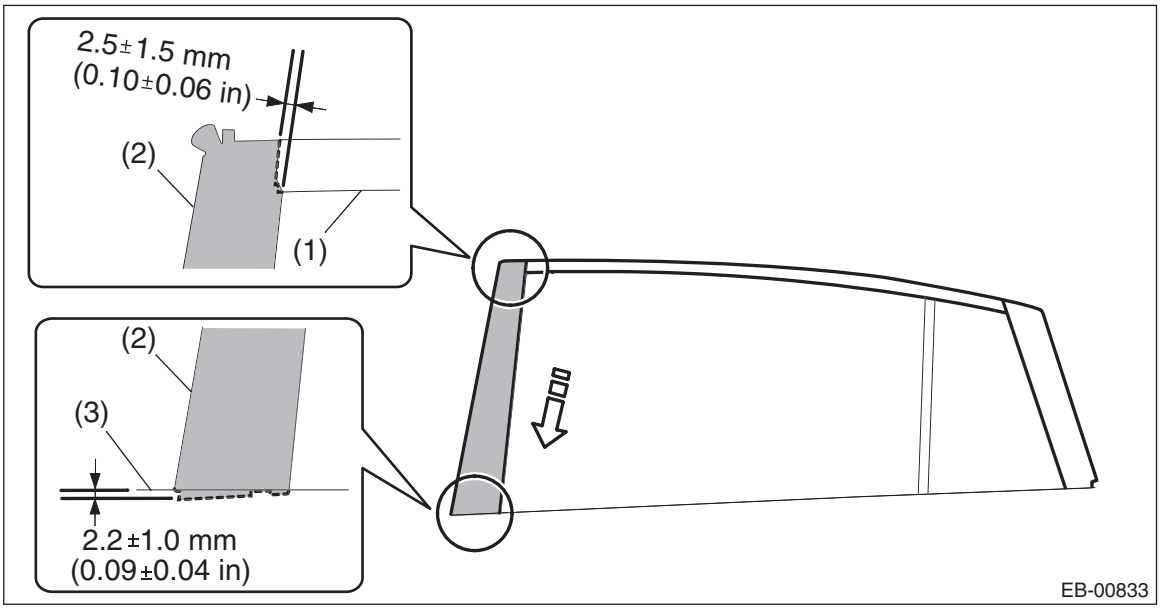
1) Apply the rear door sash tape - medium from the rear of the vehicle towards the front.

NOTE:
Apply the end of the tape to the position shown in the figure.



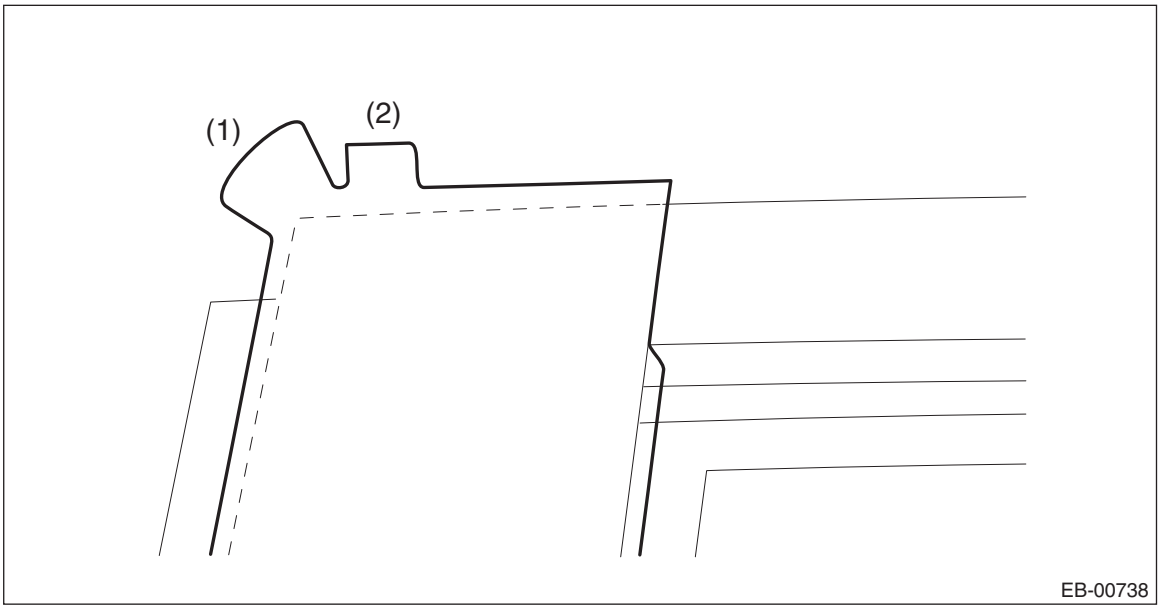
2) Apply the rear door sash tape - front from the top of the vehicle towards the bottom.

NOTE:
Apply the end of the tape to the position shown in the figure.



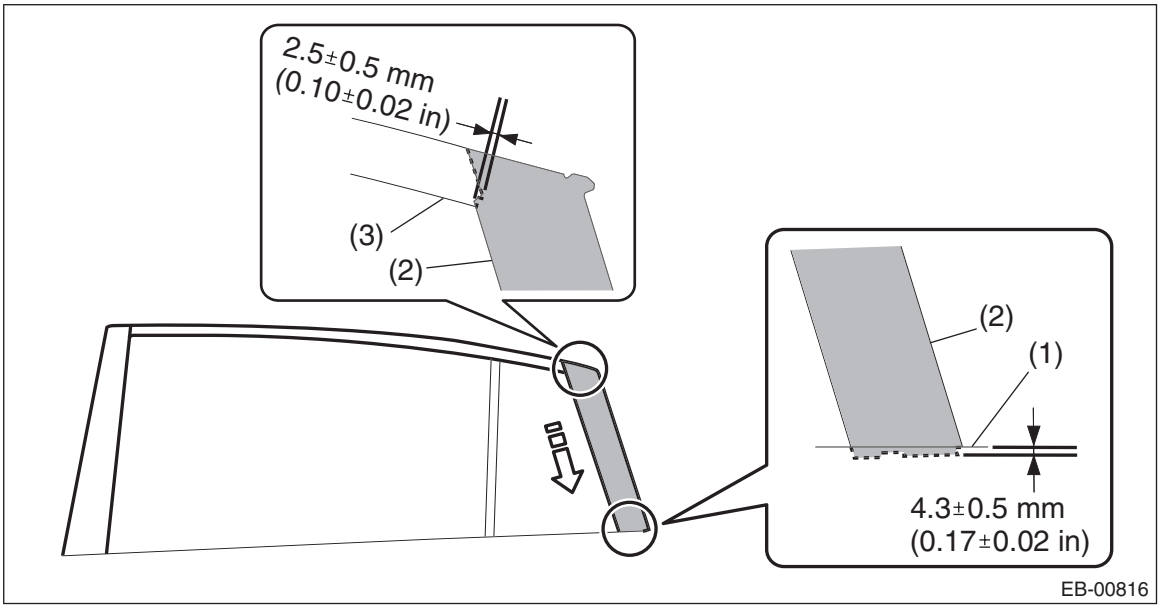
(1) Rear door sash tape - medium (2) Rear door sash tape - front (3) Upper end of weather strip

3) Fold the corners at the door upper end area in the order of (1) — (2).



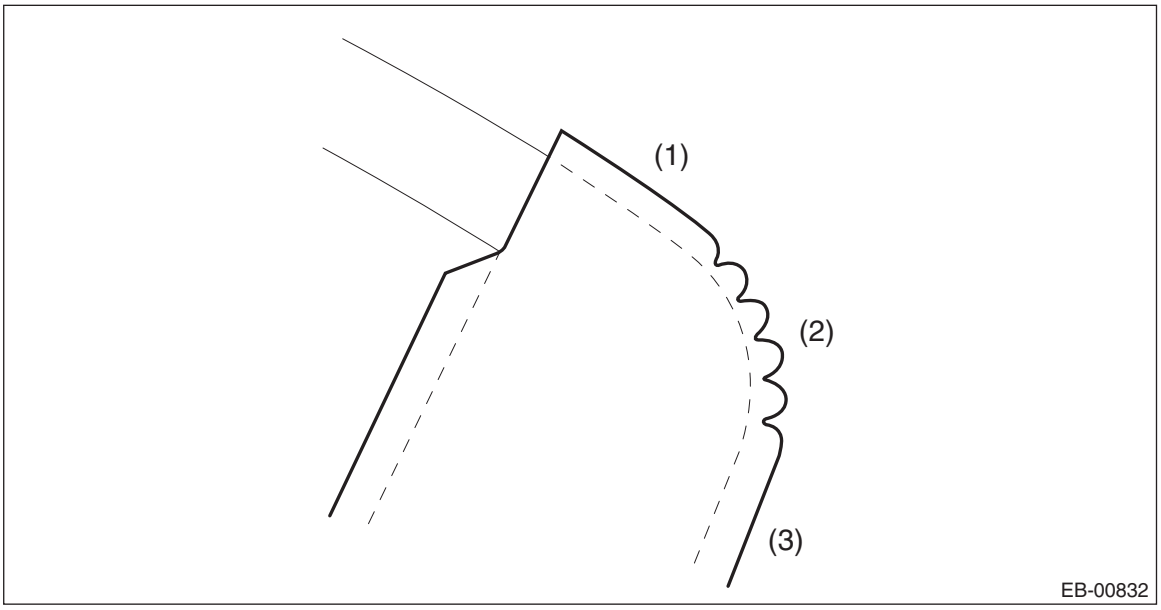
4) Apply the rear door sash tape - rear from the top of the vehicle towards the bottom.

NOTE:
Apply the end of the tape to the position shown in the figure.



(1) Upper end of weather strip (2) Rear door sash tape - rear (3) Rear door sash tape - medium

5) Fold the corners at the door upper end area in the order of (1) — (3).



6) Thereafter, install door parts in the reverse order of disassembly.
7) When installing the panel assembly - front door, make sure that a uniform clearance is created around the panel. For the dimension of clearance, refer to “SPECIFICATION” in “General Description”. <Ref. to EB-2, SPECIFICATION, General Description.>

9. Trunk Lid

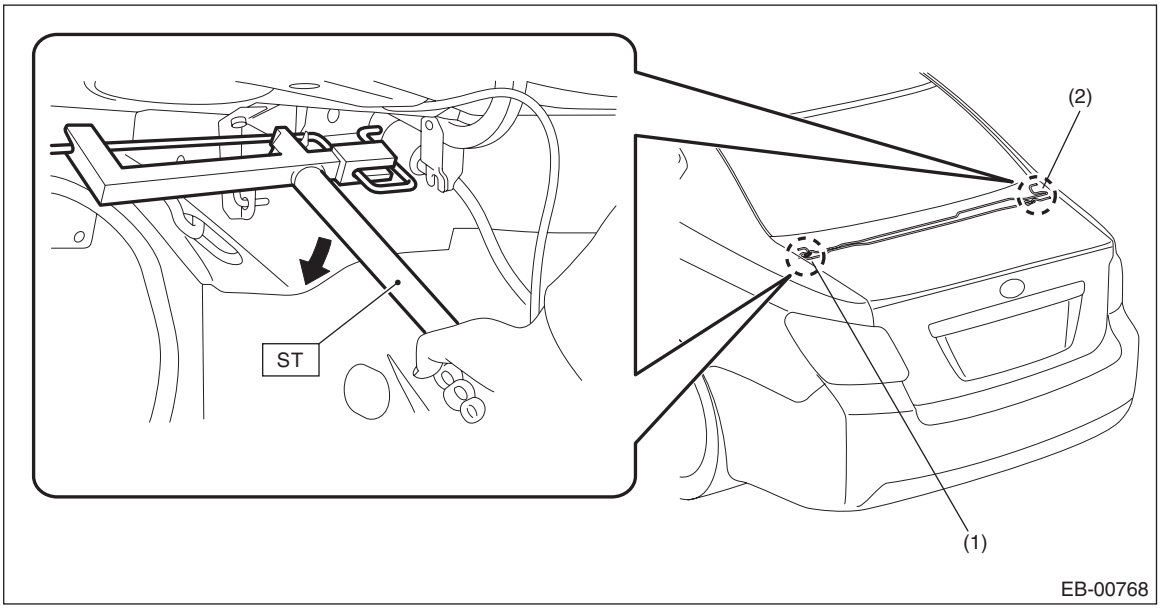
A: REMOVAL

1. TORSION BAR

1) Open the trunk lid COMPL.
2) Using the ST, remove the torsion bar - trunk lid.

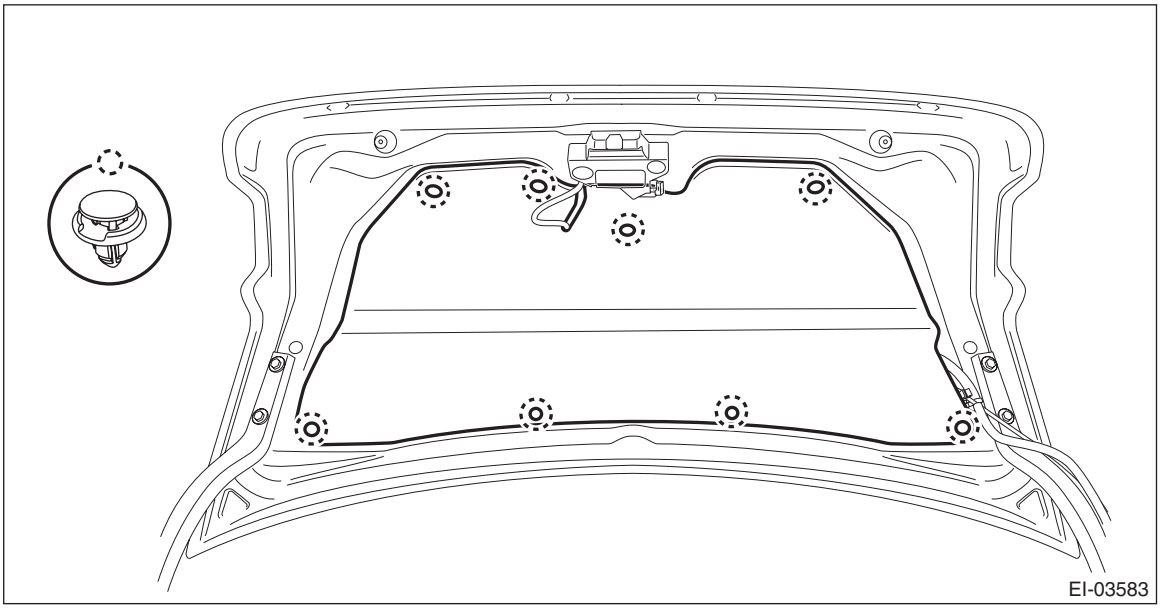
CAUTION:
During removal and installation, handle the torsion bar - trunk lid carefully, because it will generate reactive force.

PREPARATION TOOL:
ST: REMOVER (927780000)
(1) Remove the torsion bar - trunk lid on the LH side from the hinge link.
(2) Remove the torsion bar - trunk lid on the RH side from the hinge link.

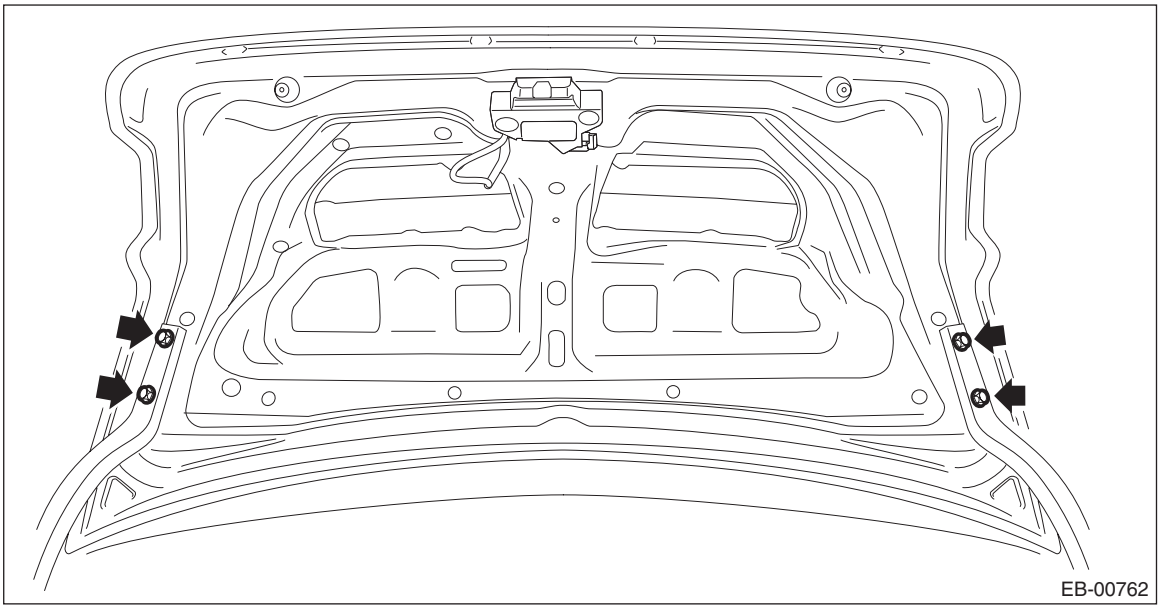


2. TRUNK LID PANEL

1) Disconnect the ground cable from battery.
2) Remove the clips, and remove the trim panel - trunk lid.



3) Disconnect the connector to remove the trunk lid harness.
4) Remove the lock assembly - trunk lid. <Ref. to SL-48, REMOVAL, Trunk Lid Latch and Actuator Assembly.>
5) Remove the garnish - trunk. <Ref. to EI-146, REMOVAL, Trunk Lid Garnish.>
6) Remove the trunk lid COMPL.
   (1) Remove the grommet and pull out the trunk lid harness. (RH side only)
   (2) Remove the left and right bolts, and remove the trunk lid COMPL.



7) Remove the trunk lid arm assembly.
   (1) Remove the torsion bar - trunk lid from the trunk lid arm. <Ref. to EB-53, TORSION BAR, REMOVAL, Trunk Lid.>
   (2) Remove the trim panel assembly - rear shelf. <Ref. to EI-107, REMOVAL, Rear Shelf Trim.>
   (3) Remove the bolts, then remove the trunk lid arm assembly.

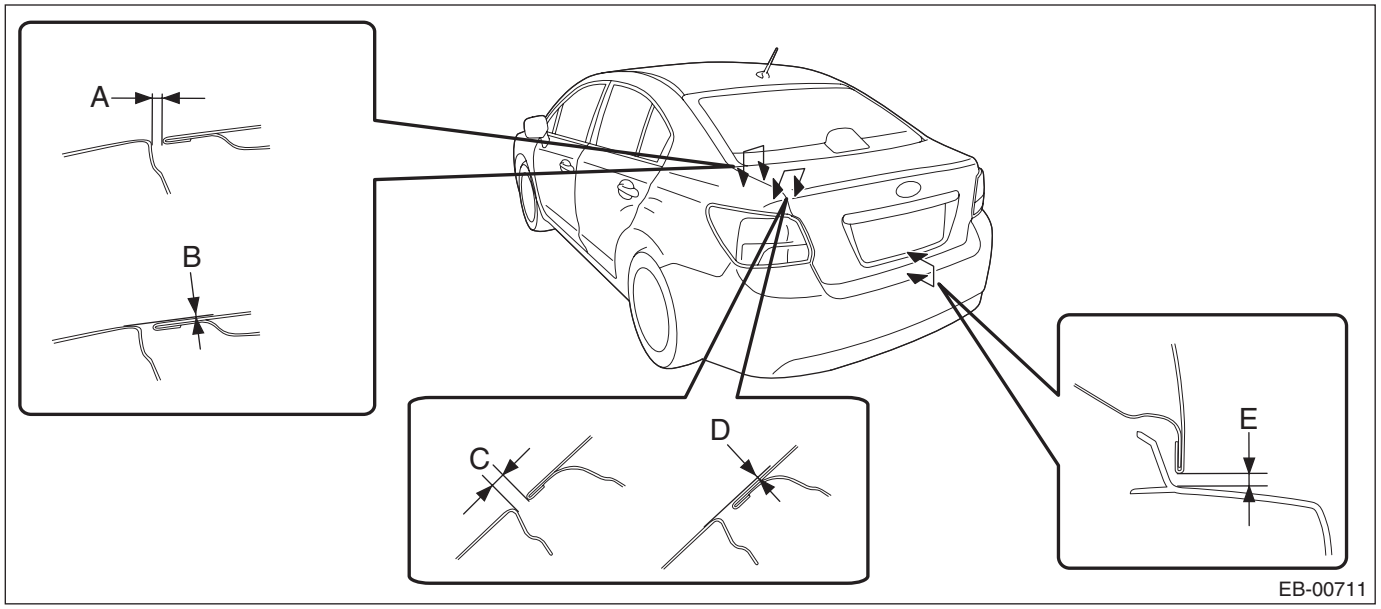
B: INSTALLATION

1) Install each part in the reverse order of removal.
2) Apply grease to the rotating area of hinges.
3) Install while paying attention to make a uniform clearance around the trunk lid COMPL. <Ref. to EB-55, ADJUSTMENT, Trunk Lid.>

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EB-6, TRUNK LID PANEL, COMPONENT, General Description.>

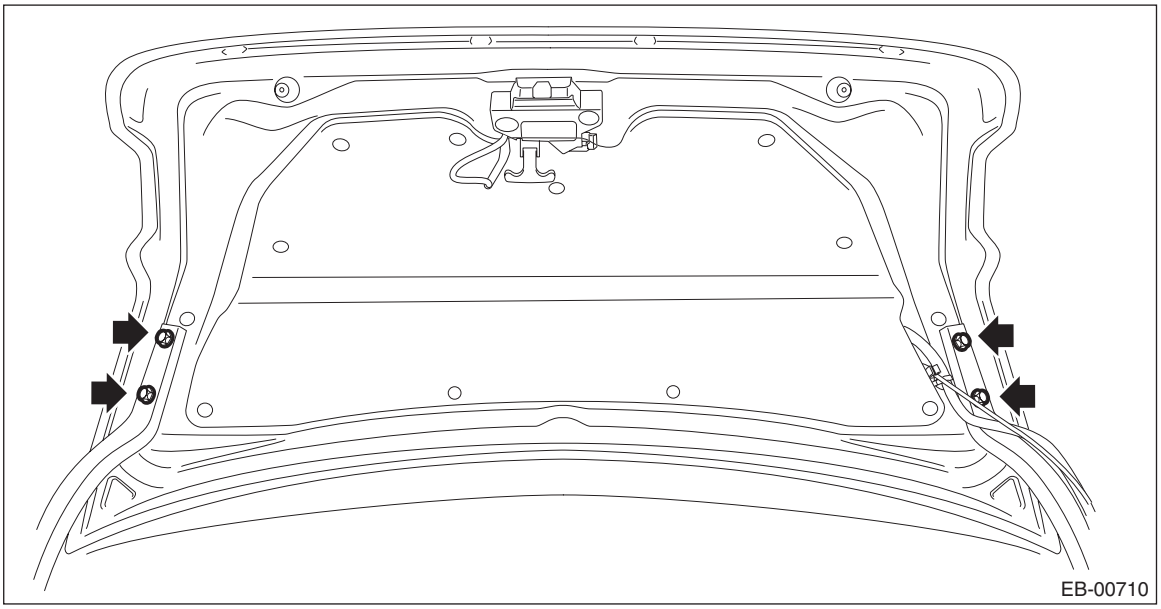
C: ADJUSTMENT

Adjust the clearance around the trunk lid COMPL as follows.

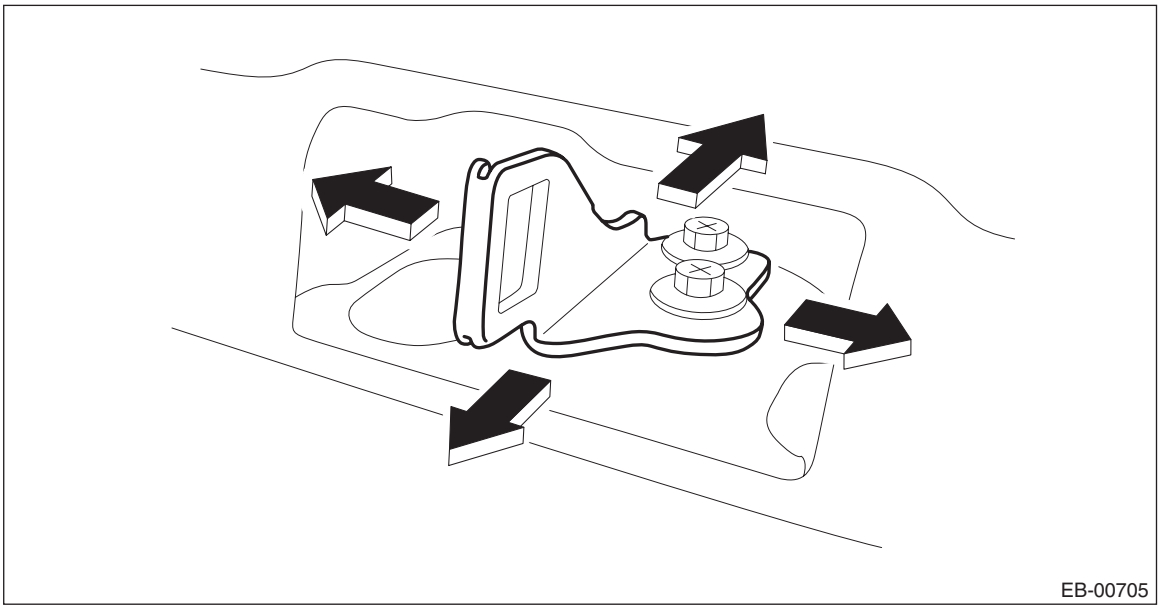


Part		Standard
A	Trunk lid COMPL to Rear quarter panel	3.5±1.0 mm (0.14±0.04 in)
B	Surface level gap between trunk lid COMPL and rear quarter panel	–0.5+1.0, –0.5 mm (–0.02+0.04, –0.02 in)
C	Trunk lid COMPL to Rear quarter panel	3.5±1.0 mm (0.14±0.04 in)
D	Surface level gap between trunk lid COMPL and rear quarter panel	–0.5+1.0, –0.5 mm (–0.02+0.04, –0.02 in)
E	Trunk lid COMPL to Bumper face - rear	7.5±1.0 mm (0.3±0.04 in)

1) Adjust the horizontal position of the trunk lid COMPL.
   (1) Loosen the mounting bolt.
   (2) Adjust the horizontal clearance of the trunk lid COMPL.



2) Adjust the surface level gap between the trunk lid COMPL and the body.
   (1) Remove the trim panel - trunk rear.
   (2) Loosen the bolt.
   (3) Tap the striker - trunk using a plastic hammer to adjust the surface level gap between the trunk lid COMPL and the body.



10.Rear Gate

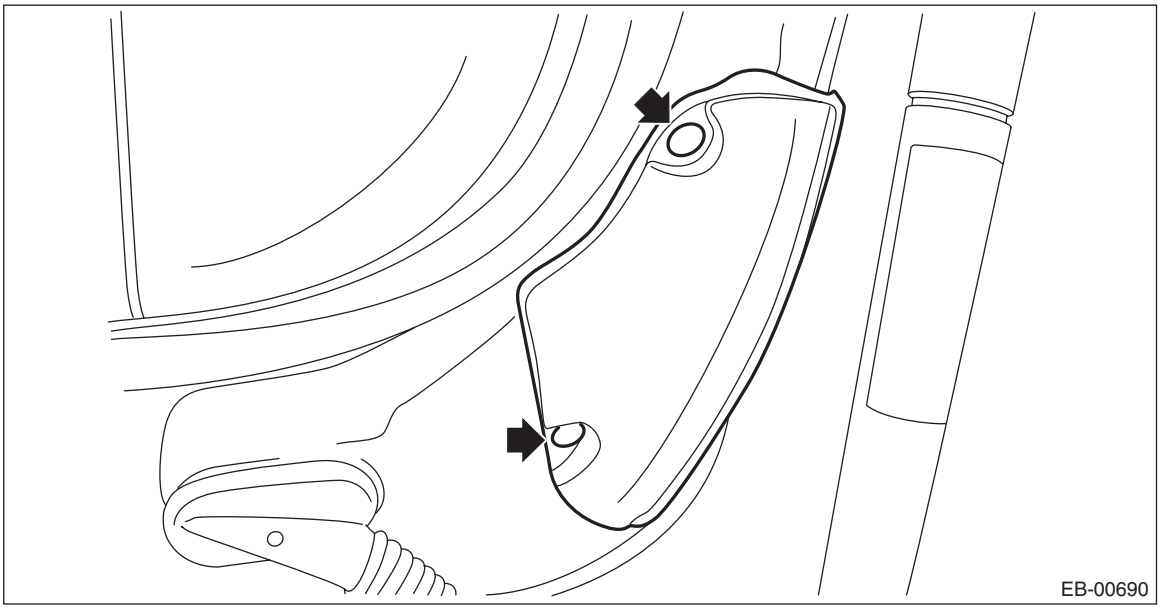
A: REMOVAL

CAUTION:
The panel - rear gate is heavy. When removing and installing it, always work in a team of two or more persons.

1. REAR GATE PANEL

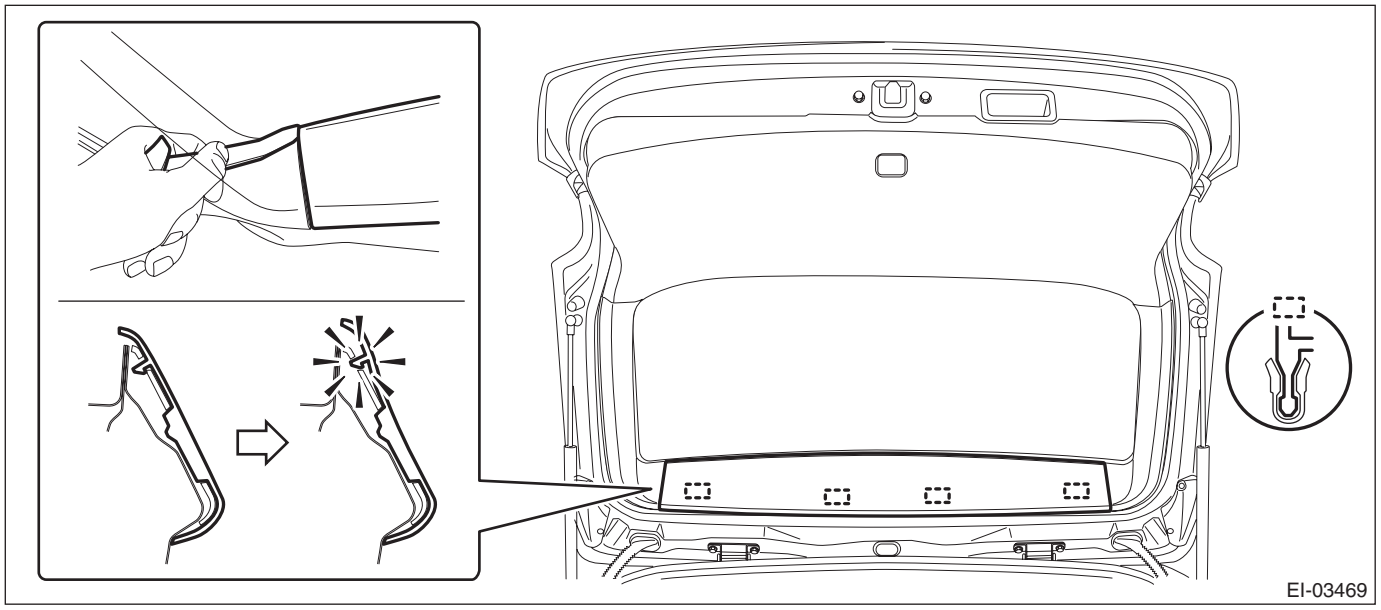
1) Disconnect the ground cable from battery.
2) Remove the following parts. <Ref. to EI-147, REMOVAL, Rear Gate Garnish.>
- Trim panel - rear gate
- Arm assembly - rear wiper and motor assembly - rear wiper
- Garnish assembly - rear gate

3) Remove the light assembly - high-mounted and the nozzle - rear washer. <Ref. to WW-45, REMOVAL, Rear Washer.>
4) Remove the rear gate latch and actuator - rear gate. <Ref. to SL-46, REMOVAL, Rear Gate Latch and Actuator Assembly.>
5) Remove the clips, and remove the drip - rear gate.

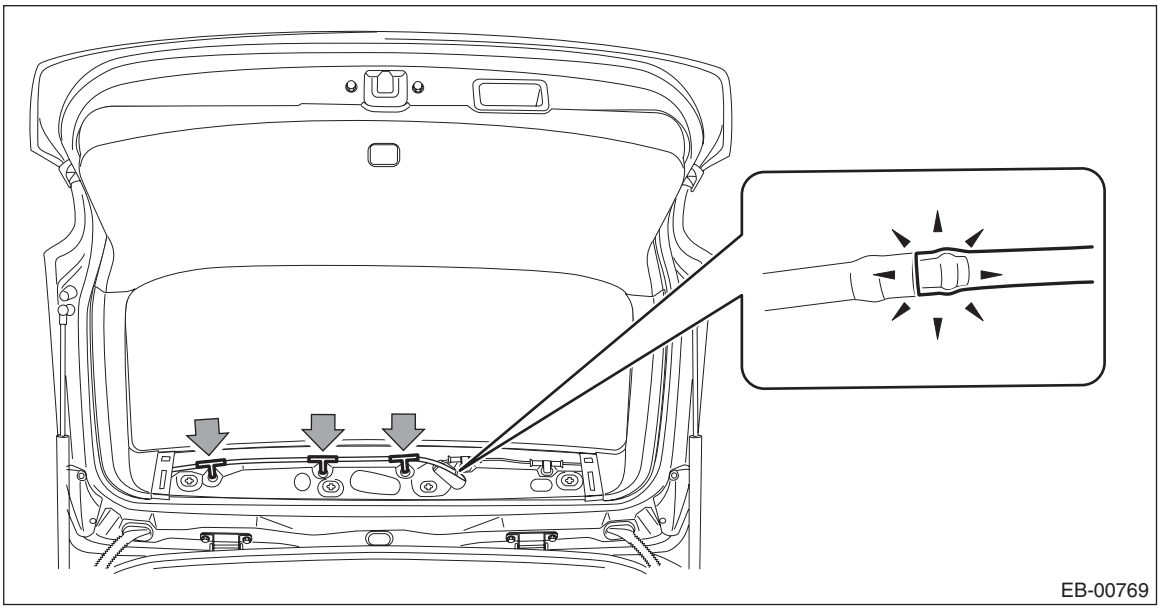


6) Remove the trim panel - rear gate UPR.
(1) Remove the claws on the trim edge.

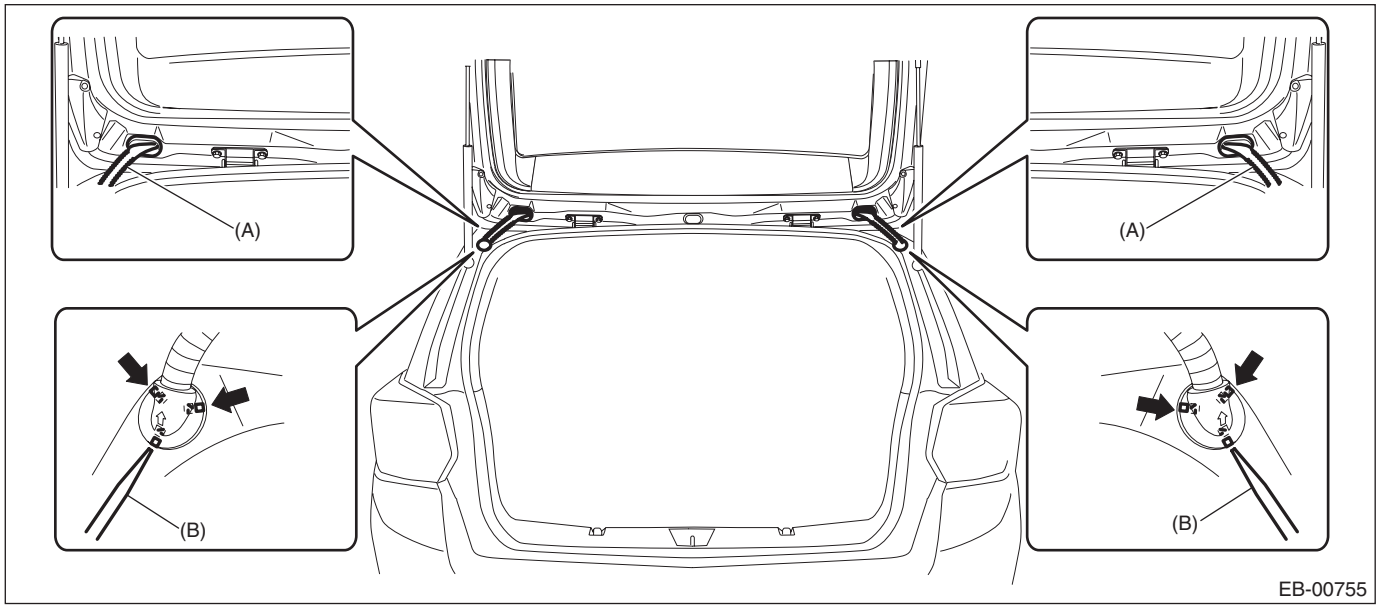
(2) Release the claws in the center of trim, and remove the trim panel - rear gate UPR.



7) Disconnect the hose assembly - rear washer.
(1) Disconnect the joint portion of the hose assembly - rear washer.
(2) Remove the clip.

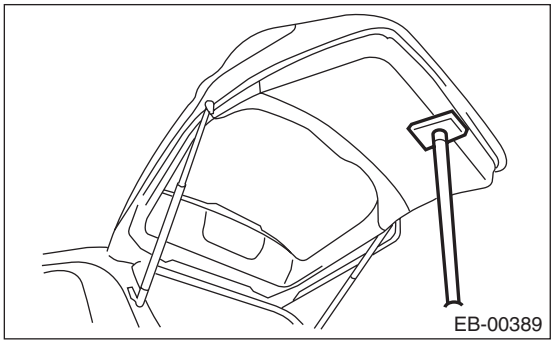


8) Remove the rubber duct (A).
(1) Pull out the claw while pushing it using a flat tip screwdriver (B) or similar tools.
(2) Remove the rubber duct (A) connection.

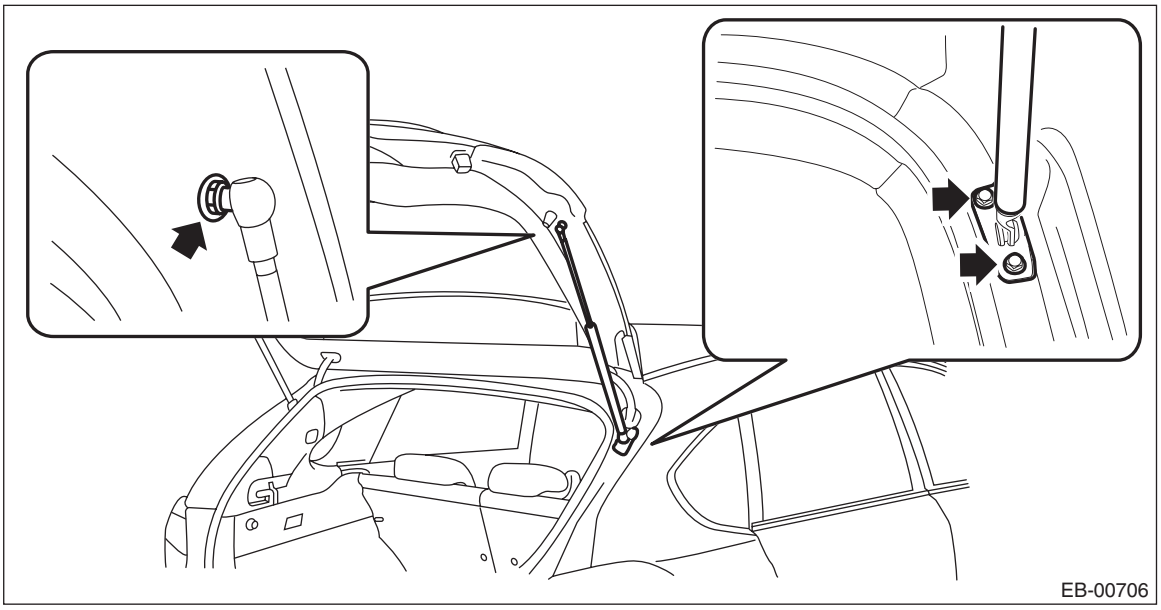


9) Pull out the harness and the hose assembly - rear washer from the panel - rear gate.
10) Remove harness clip of each harness from the panel - rear gate.
11) Before removing the stay assembly - rear gate, prevent the panel - rear gate from closing by using a prop or the like.

CAUTION:
If the prop comes off, operators may get injured and vehicle may get damaged. Make sure to support the panel - rear gate with secure material to prevent injury or damage.

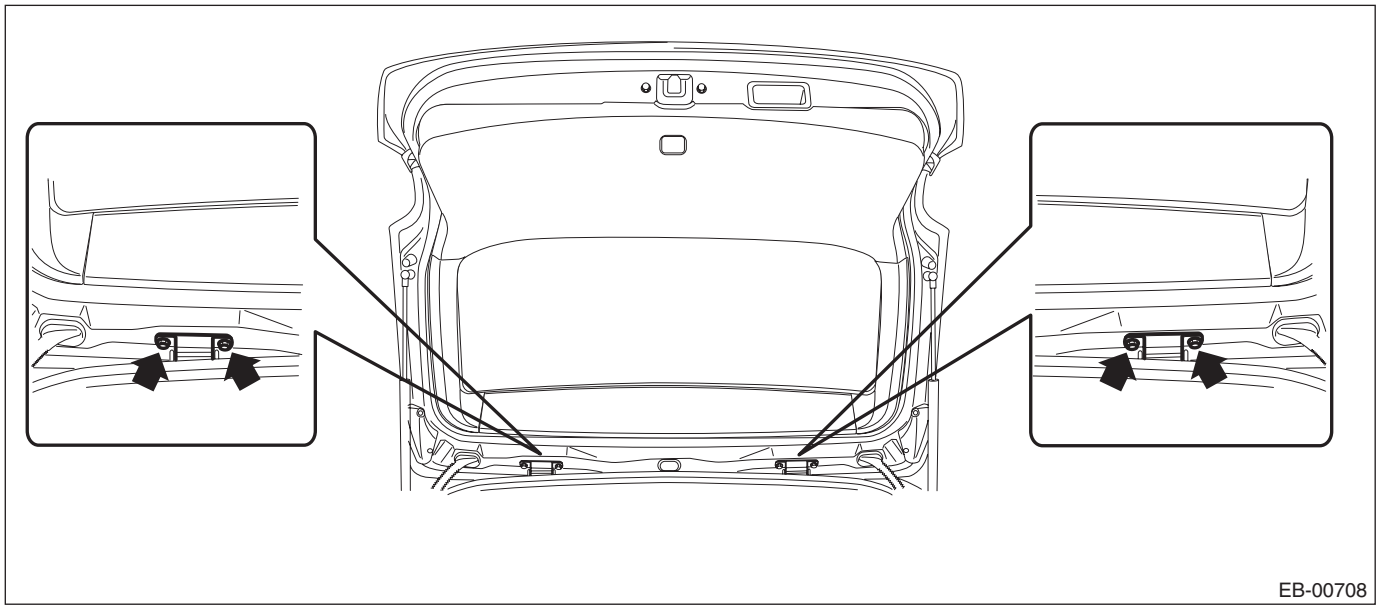


12) Remove the mounting bolts from the stay assembly - rear gate.



13) Remove the bolts of the hinge - rear gate, and remove the panel - rear gate.

CAUTION:
The panel - rear gate is heavy. When removing and installing it, always work in a team of two or more persons.



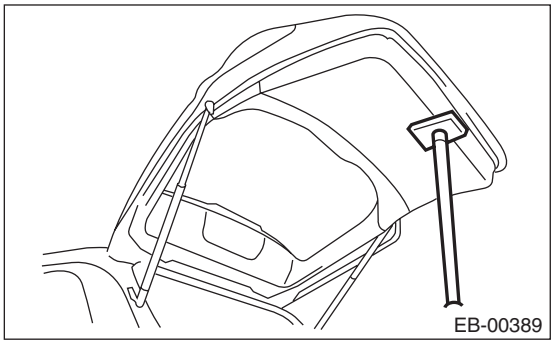
14) Remove the hinge - rear gate from the vehicle.

2. REAR GATE DAMPER STAY

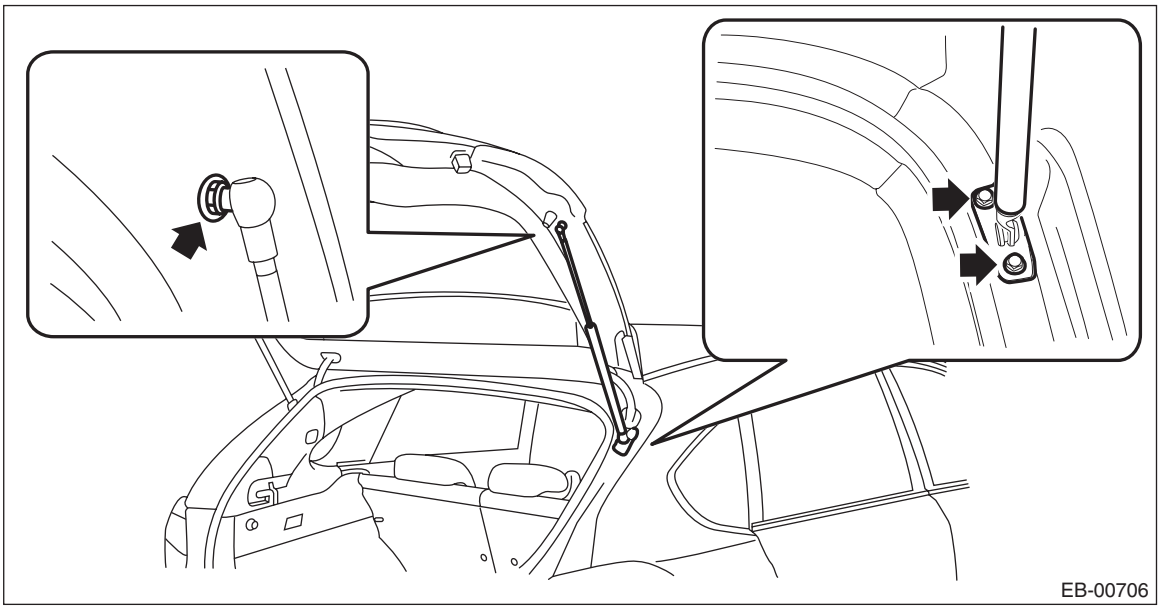
CAUTION:
- **Do not damage piston rods and oil seals.**
- **Never disassemble cylinders: They contain gas.**
- **The panel - rear gate is heavy. When removing and installing it, always work in a team of two or more persons.**

1) Before removing the stay assembly - rear gate, prevent the panel - rear gate from closing by using a prop or the like.

CAUTION:
If the prop comes off, operators may get injured and vehicle may get damaged. Make sure to support the panel - rear gate with secure material to prevent injury or damage.



2) Remove the mounting bolts and remove the stay assembly - rear gate.



B: INSTALLATION

1. REAR GATE PANEL

CAUTION:
The panel - rear gate is heavy. When removing and installing it, always work in a team of two or more persons.

1) Install the hinge - rear gate to the vehicle body.
2) Temporarily install the panel - rear gate to the hinge - rear gate.

NOTE:
When installing, make sure that a uniform clearance is created around the panel - rear gate.

3) Adjust the clearance around the panel - rear gate. <Ref. to EB-63, ADJUSTMENT, Rear Gate.>
4) Tighten the bolts of the hinge - rear gate.

Tightening torque:
25 N·m (2.55 kgf-m, 18.4 ft-lb)

5) Install each part in the reverse order of removal.

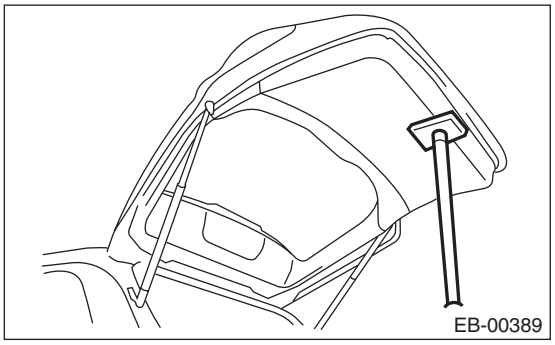
Tightening torque:
Rear gate parts: <Ref. to EB-7, REAR GATE, COMPONENT, General Description.>
Garnish assembly - rear gate: 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)
Arm assembly - rear wiper and motor assembly - rear wiper: <Ref. to WW-3, REAR WIPER, COMPONENT, General Description.>

2. REAR GATE DAMPER STAY

CAUTION:
The panel - rear gate is heavy. When removing and installing it, always work in a team of two or more persons.

1) Prevent the panel - rear gate from closing using prop or the like.

CAUTION:
If the prop comes off, operators may get injured and vehicle may get damaged. Make sure to support the panel - rear gate with secure material to prevent injury or damage.

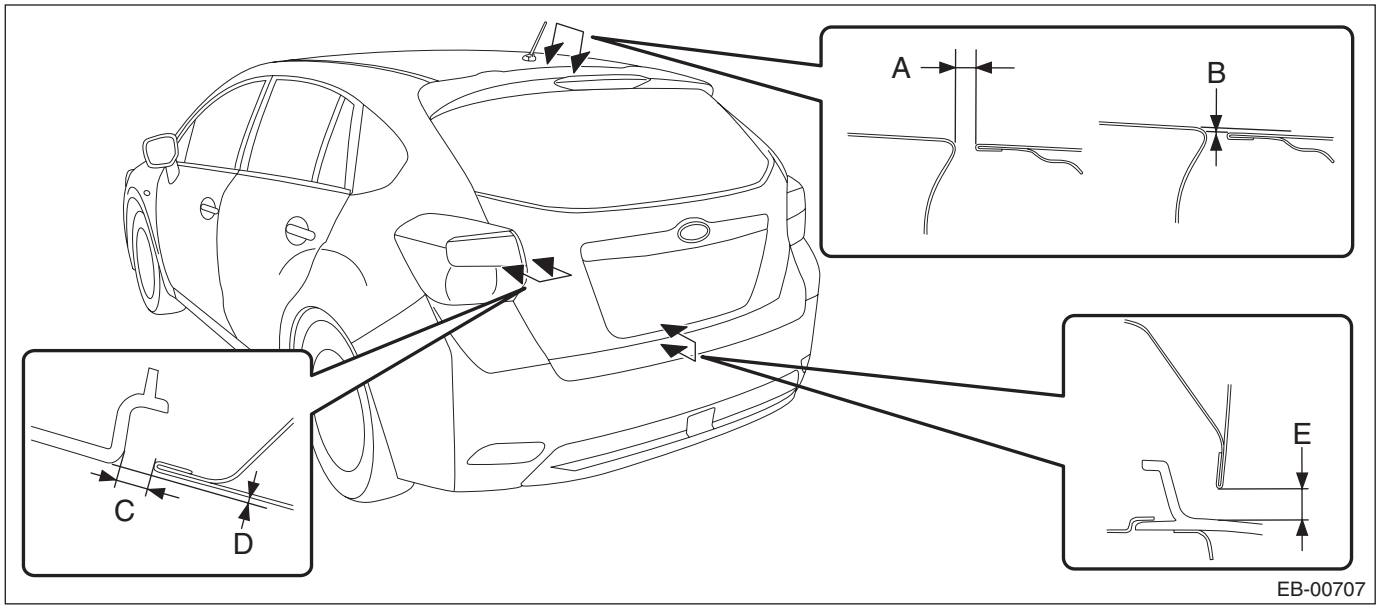


2) Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EB-7, REAR GATE, COMPONENT, General Description.>

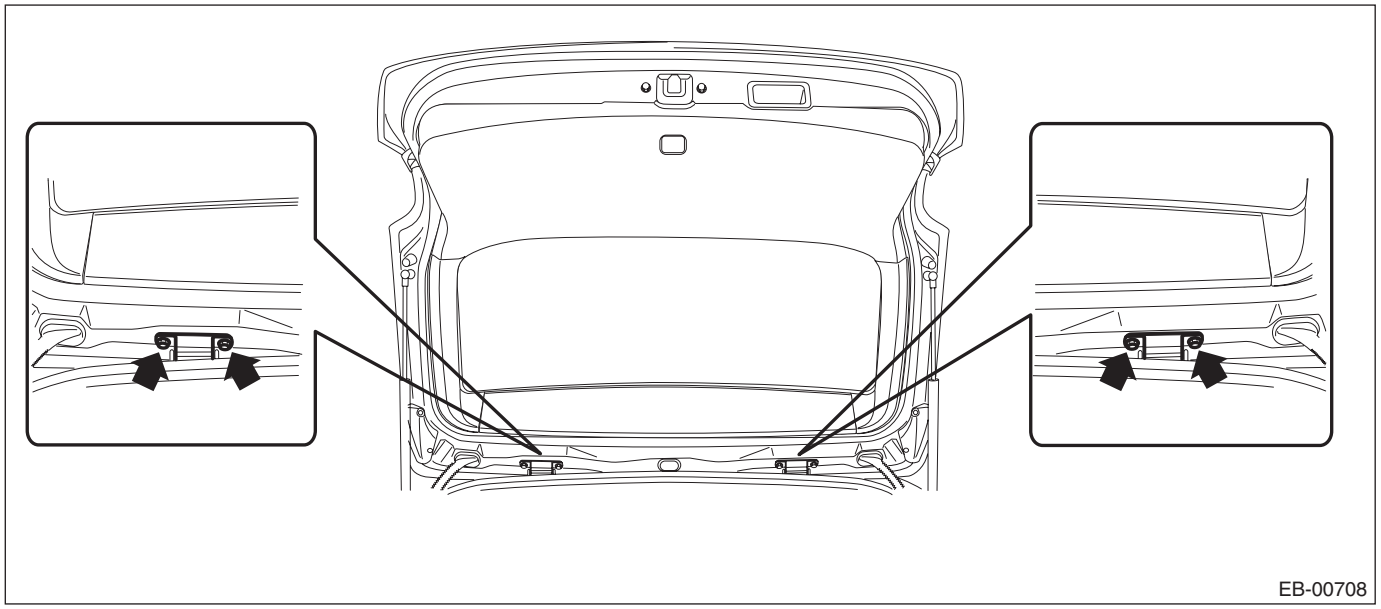
C: ADJUSTMENT

Adjust the clearance around the panel - rear gate as follows.



Part		Standard
A	Panel - rear gate to Roof panel	6.0+1.0, –0.5 mm (0.24+0.04, –0.02 in)
B	Surface level gap: Panel - rear gate to Roof panel	1.0±1.0 mm (0.04±0.04 in)
C	Panel - rear gate to Light assembly - rear combination	6.0±1.0 mm (0.24±0.04 in)
D	Surface level gap: Panel - rear gate to Light assembly - rear combination	1.0±1.0 mm (0.04±0.04 in)
E	Panel - rear gate to Bumper face - rear	8.0±1.5 mm (0.31±0.06 in)

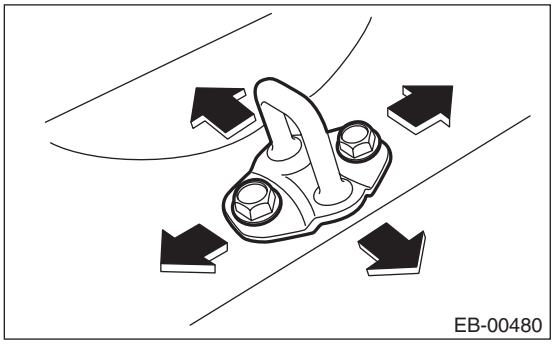
1) Adjust the vertical and horizontal positions of the panel - rear gate.



(1) Loosen the mounting bolts of the hinge - rear gate.
(2) Adjust the vertical and horizontal clearance of the panel - rear gate.

Tightening torque:
25 N·m (2.55 kgf-m, 18.4 ft-lb)

2) Adjust the surface level gap between the panel - rear gate and the body.



(1) Remove the trim panel - rear skirt.
(2) Loosen the bolt.
(3) Tap the striker - rear gate using a plastic hammer to adjust the surface level gap between the panel - rear gate and the body.

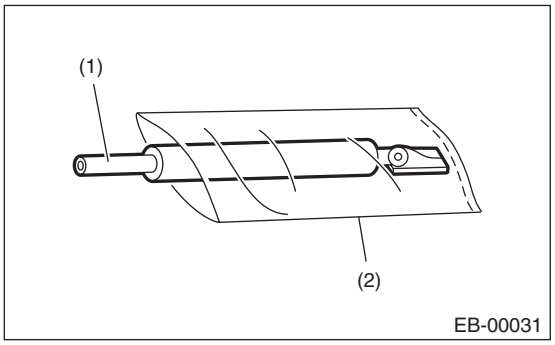
Tightening torque:
25 N·m (2.55 kgf-m, 18.4 ft-lb)

D: DISPOSAL

1. REAR GATE DAMPER STAY

CAUTION:
Gas is colorless, odorless, and harmless. However, gas pressure may spray cutting powder or oil. Be sure to wear dust-resistant goggles.

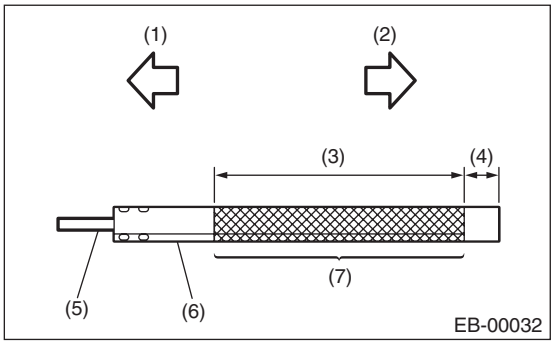
1) Cover with a vinyl sack as shown in the figure.



(1) Stay ASSY - rear gate
(2) Vinyl sack

NOTE:
Prevent the vinyl sack from being caught by drill cutting edge.

2) Lift the body side slightly with piston rods fully extended, and secure the body side with vise.
Drill a hole of 2 to 3 mm (0.08 to 0.12 in) diameter at a point 6 to 196 mm (0.24 to 7.72 in) from the body side, and bleed the gas in the stay assembly - rear gate completely.



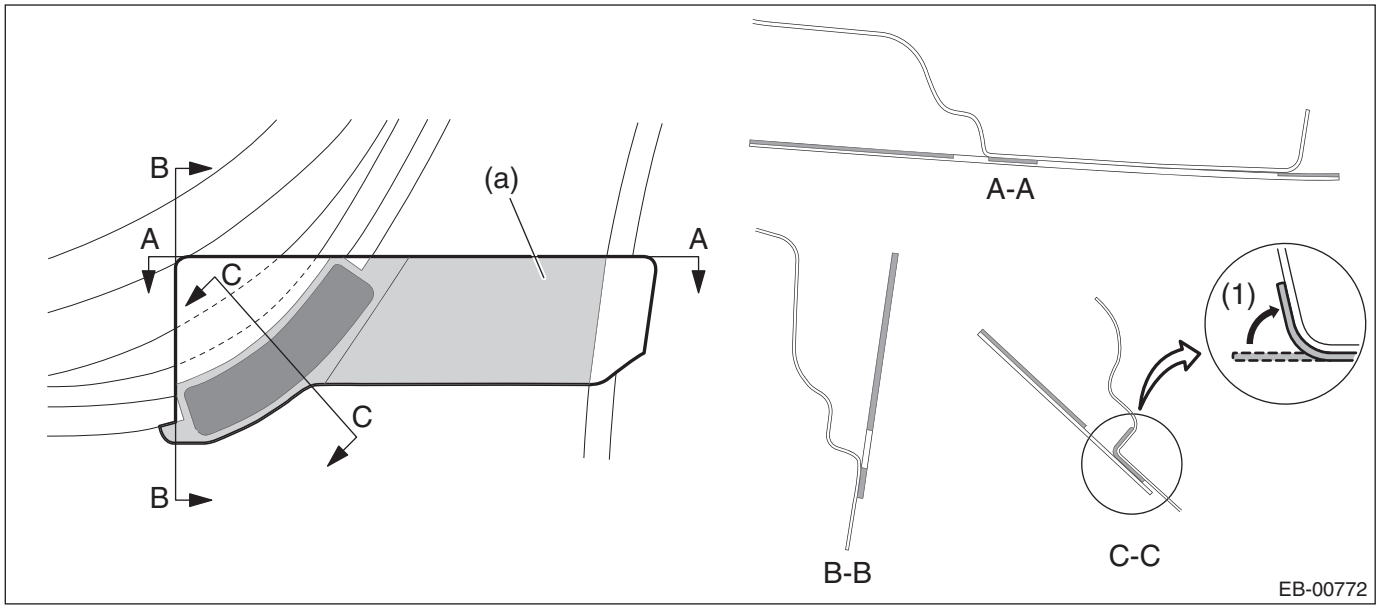
(1) Door side
(2) Body side
(3) 196 mm (7.72 in)
(4) 6 mm (0.24 in)
(5) Piston rod
(6) Cylinder
(7) Portion to be drilled

11.Protector Tape

A: INSTALLATION

Apply the protector tape by the following steps.

1. REAR QUARTER PROTECTOR (MODEL WITHOUT SIDE SILL SPOILER)



(1) Apply the protector tape by aligning it to the rounded edge.

1) Clean the area around applying position to remove any foreign objects on body.
2) Detach the backing paper from the temporary retention area (a) and apply the protector tape after positioning it correctly.
3) Detach the backing papers, and moisten the applying area and the backside of protector tape by spraying liquid (mild detergent solution at 3% concentration).
4) Apply the protector tape to the vehicle body.

CAUTION:
Remove the water or air bubbles out of the protector tape by using the plastic or rubber spatula.
5) Detach the application tape and temporary retention tape.
6) Bend the tack-in end and apply it as shown by (1) in the figure.

CRUISE CONTROL SYSTEM

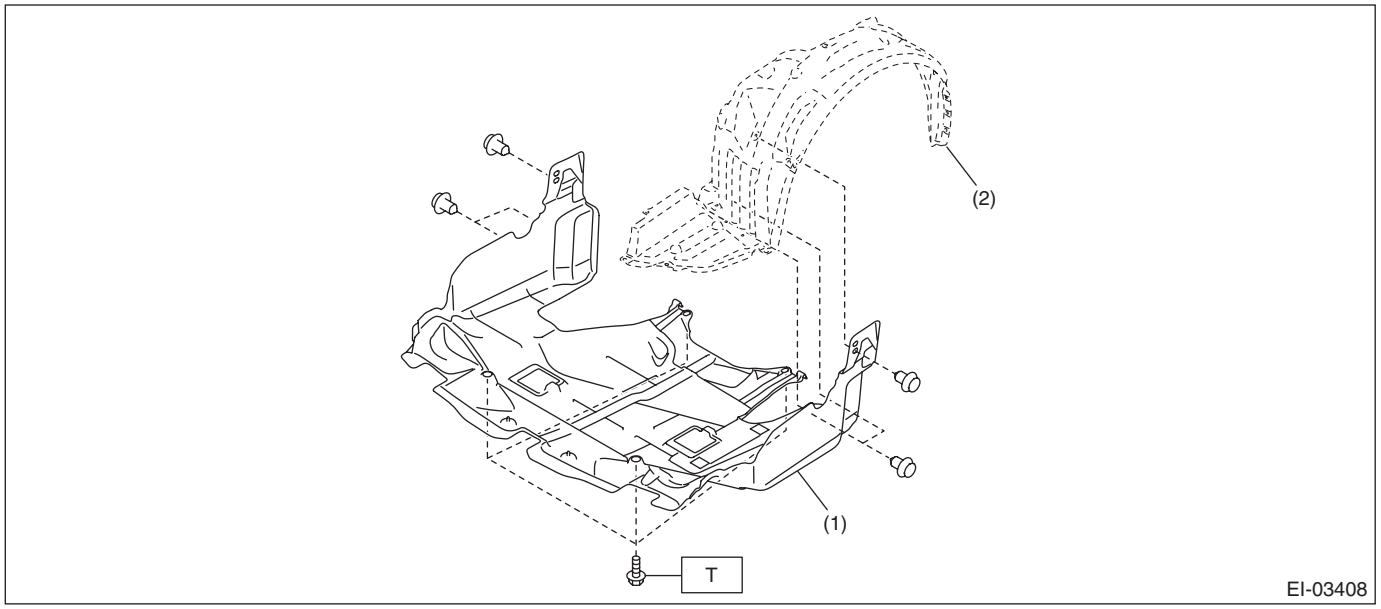
CC

		Page
1.	General Description	2
2.	Relay and Fuse	4
3.	Cruise Control System	5
4.	Cruise Control Module	6
5.	Cruise Control Command Switch	7
6.	Combination Meter	11
7.	Stop Light & Brake Switch	12
8.	Clutch Switch	13
9.	Inhibitor Switch	14
10.	Transmission Control Module (TCM)	15
11.	Neutral Position Switch	16
12.	Diagnostics with Phenomenon	17

1. General Description

A: COMPONENT

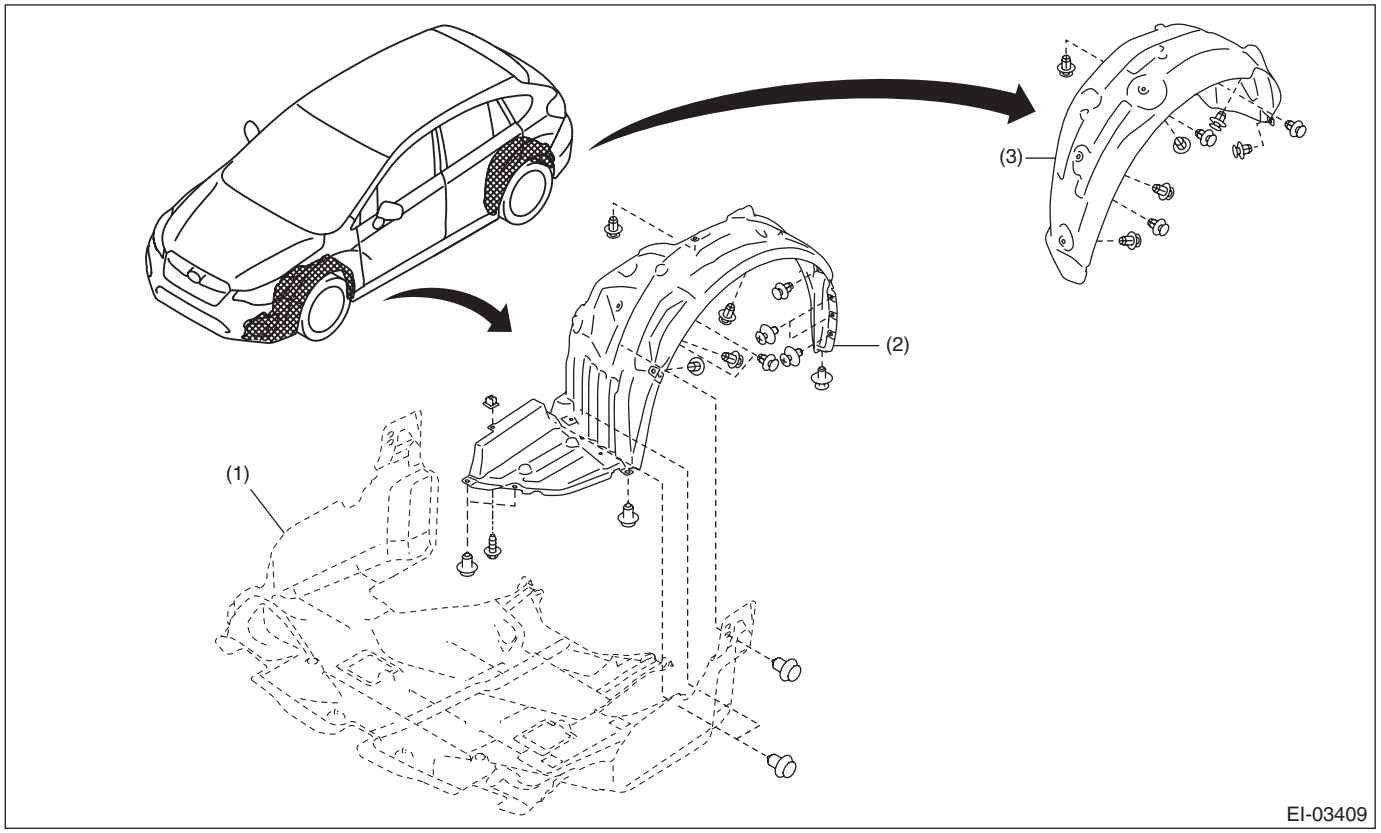
1. FRONT UNDER COVER



(1) Under cover - front
(2) Mud guard - front

Tightening torque: N·m (kgf-m, ft-lb)
T: 18 (1.84, 13.3)

2. MUD GUARD

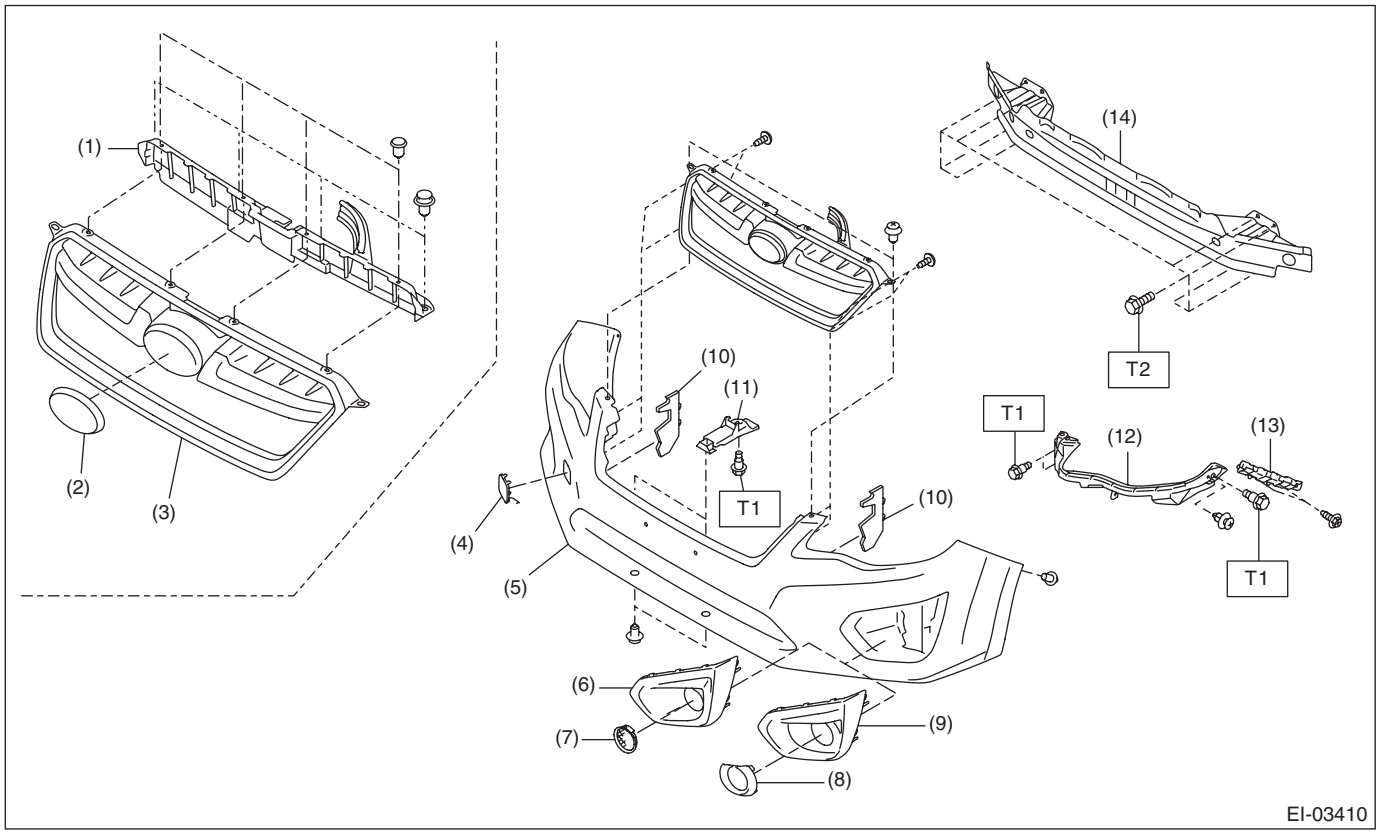


(1) Under cover - front
(2) Mud guard - front
(3) Mud guard - rear

3. FUEL TANK PROTECTOR

For exploded view of the fuel tank protector, refer to “FUEL TANK” of “FUEL INJECTION” section. <Ref. to FU(H4DO)-7, FUEL TANK, COMPONENT, General Description.>

4. FRONT BUMPER

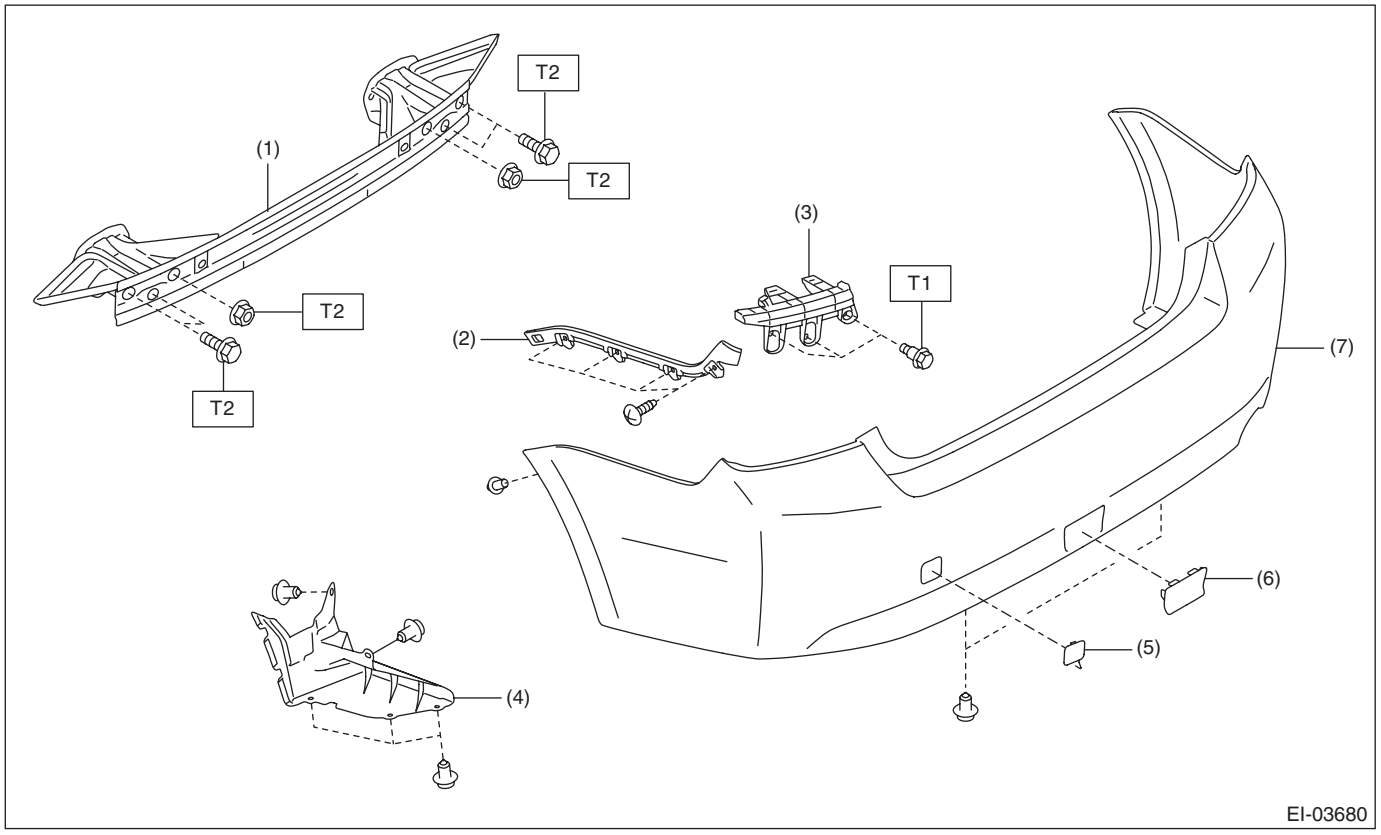


(1)	Bracket - grille	(8)	Fog ring
(2)	Ornament front	(9)	Cover - fog light B
(3)	Front grille ASSY	(10)	Radiator gasket
(4)	Cover - front bumper A	(11)	Bracket - front center LWR
(5)	Bumper face - front	(12)	Bracket - front bumper corner
(6)	Cover - fog light A	(13)	Bracket - front bumper side
(7)	Cover - front bumper B	(14)	Bumper beam COMPL - front

Tightening torque: N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 32 (3.26, 23.6)

5. REAR BUMPER

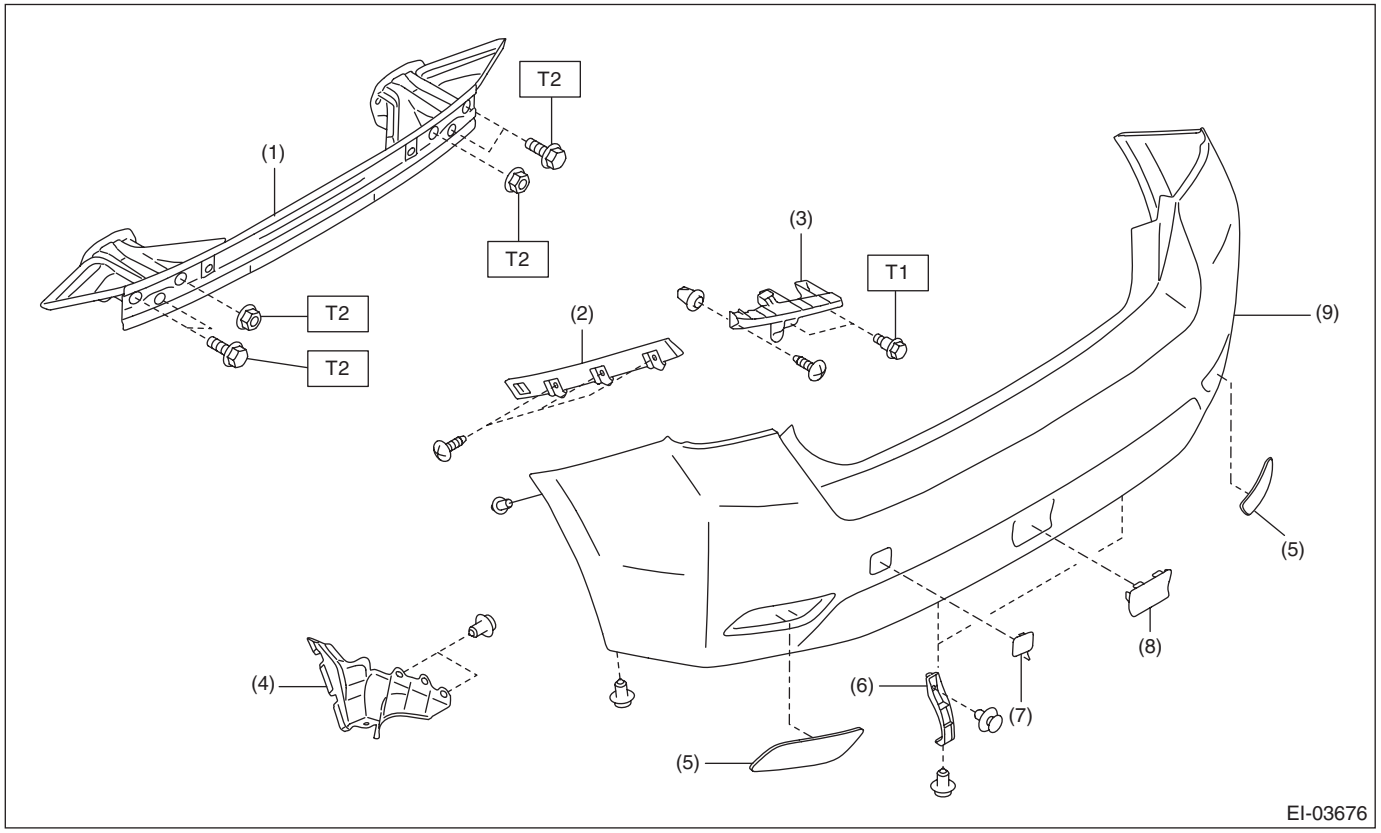
- 4 door model



(1) Bumper beam COMPL - rear
(2) Bracket - rear bumper side
(3) Bracket - rear bumper corner
(4) Cover - rear bumper side
(5) Cover - rear bumper A
(6) Cover - rear bumper B
(7) Bumper face - rear

Tightening torque: N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 70 (7.14, 51.6)

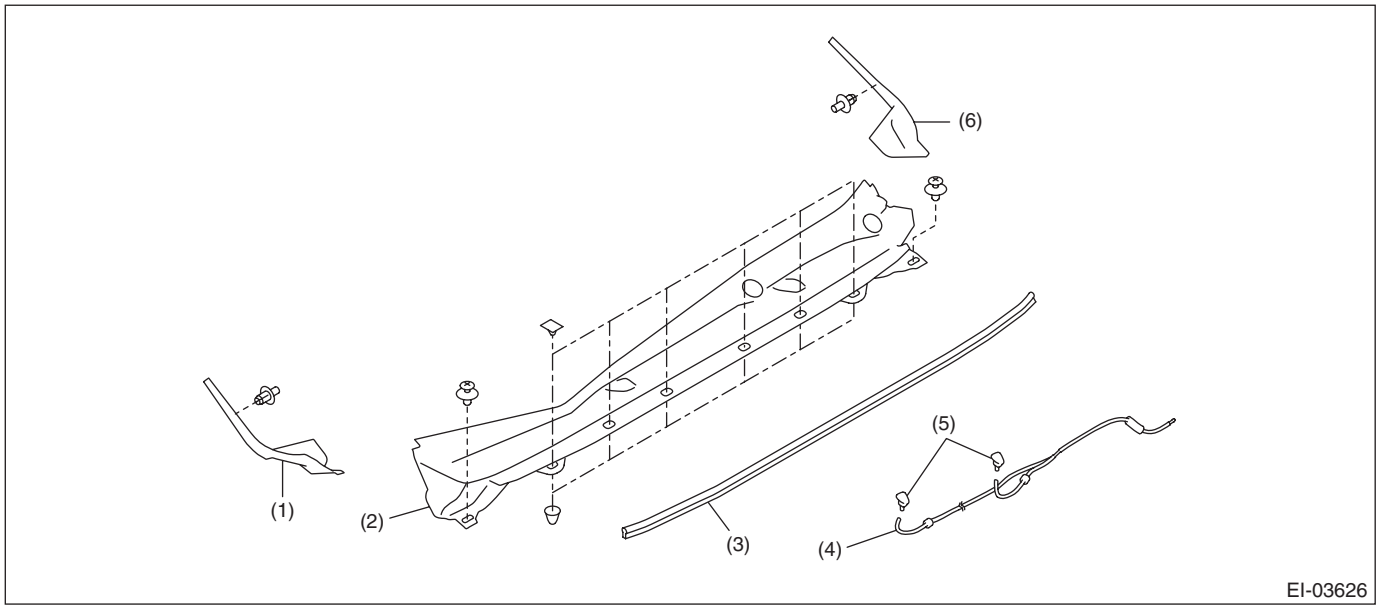
- 5 door model



(1) Bumper beam COMPL - rear
(2) Bracket - rear bumper side
(3) Bracket - rear bumper corner
(4) Cover - rear bumper side
(5) Reflex reflector ASSY
(6) Bracket - rear bumper lower
(7) Cover - rear bumper A
(8) Cover - rear bumper B
(9) Bumper face - rear

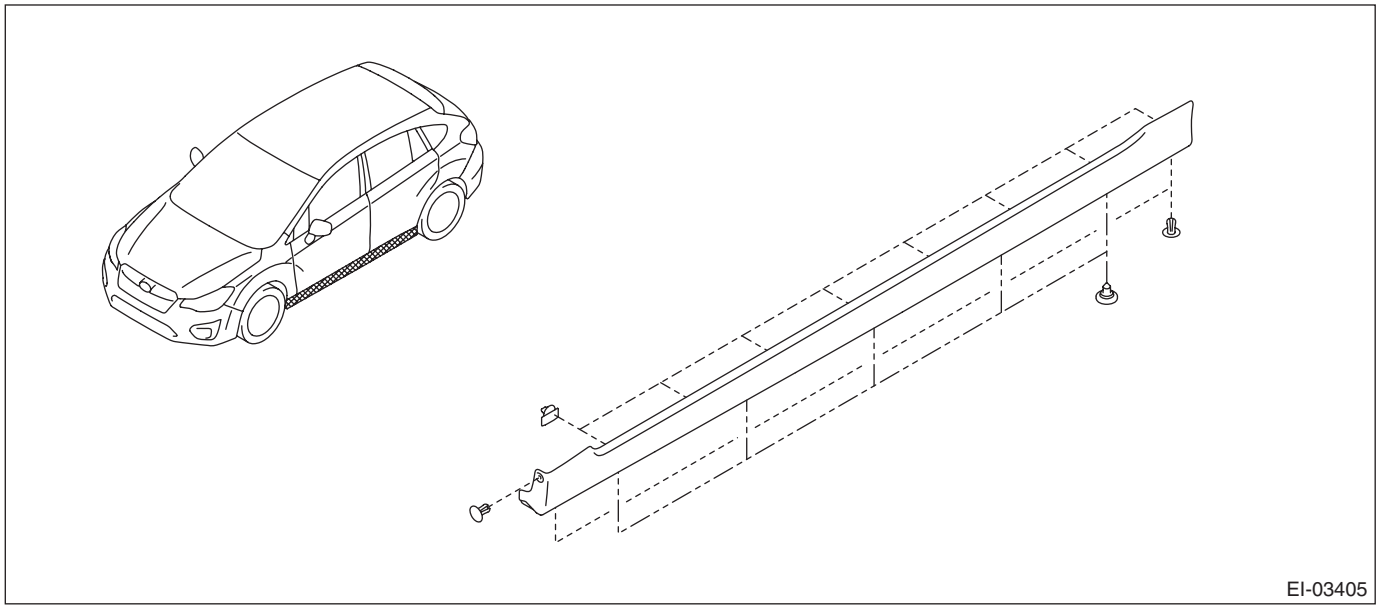
Tightening torque: N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 70 (7.14, 51.6)

6. COWL PANEL

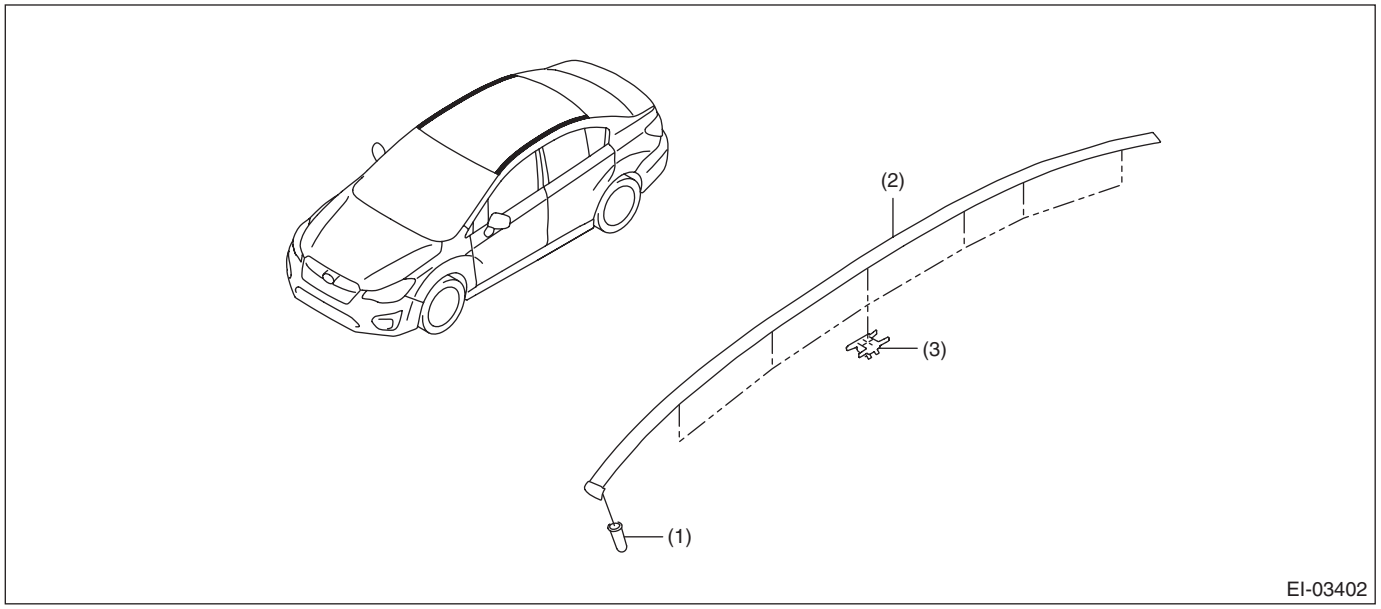


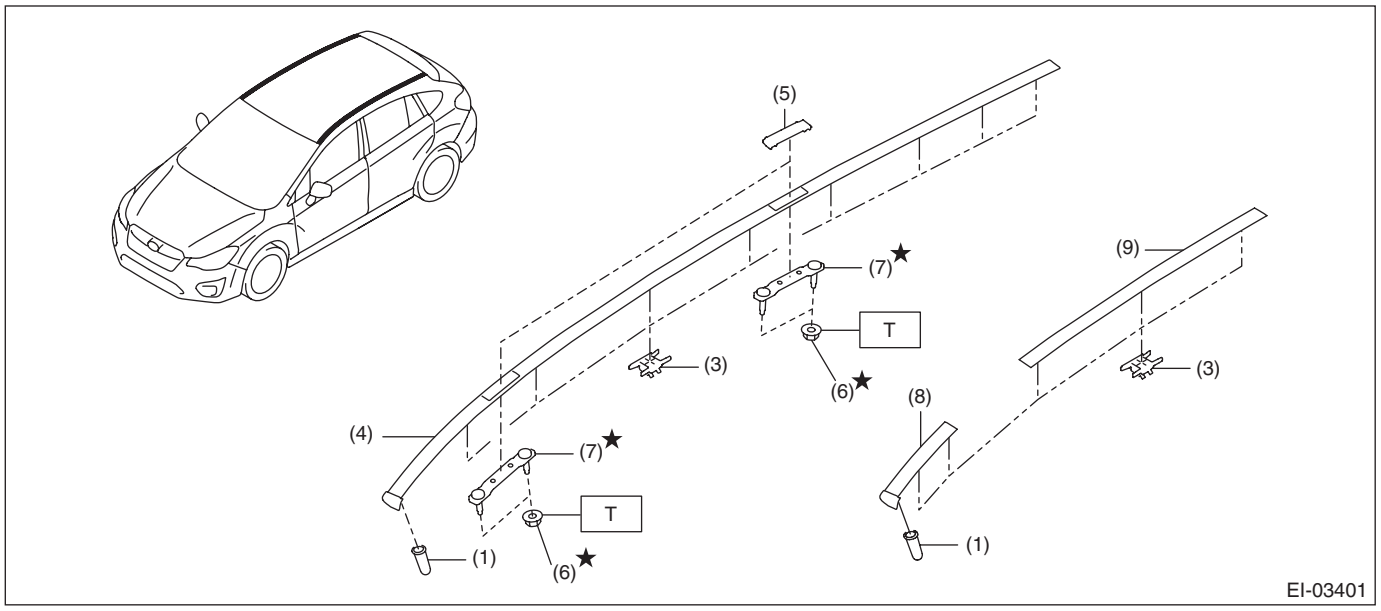
(1) Cowl panel - side RH
(2) Cowl panel ASSY
(3) Seal - front panel
(4) Hose ASSY - washer UPR
(5) Nozzle
(6) Cowl panel - side LH

7. SIDE SILL SPOILER



8. ROOF MOLDING

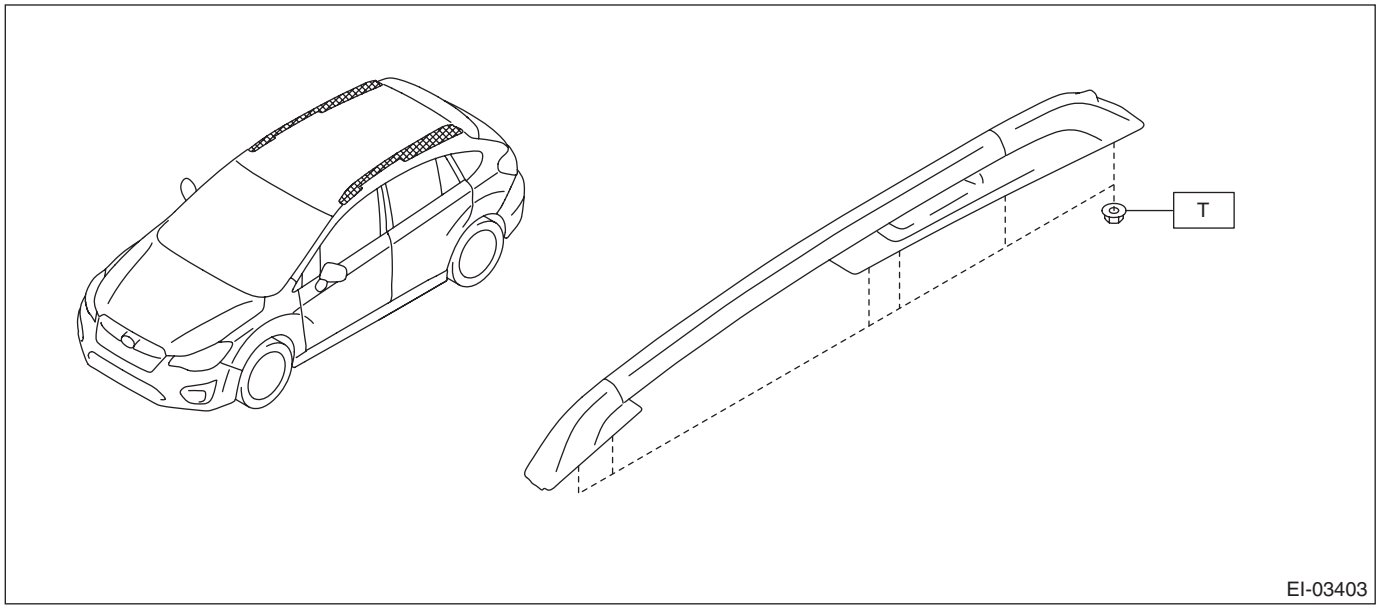




(1) Rivet
(2) Molding - roof (4 door model)
(3) Fastener
(4) Molding - roof (5 door model)
(5) Cap - molding
(6) Flange nut
(7) Bracket - molding roof
(8) Molding - roof front (models with roof rail)
(9) Molding - roof rear (models with roof rail)

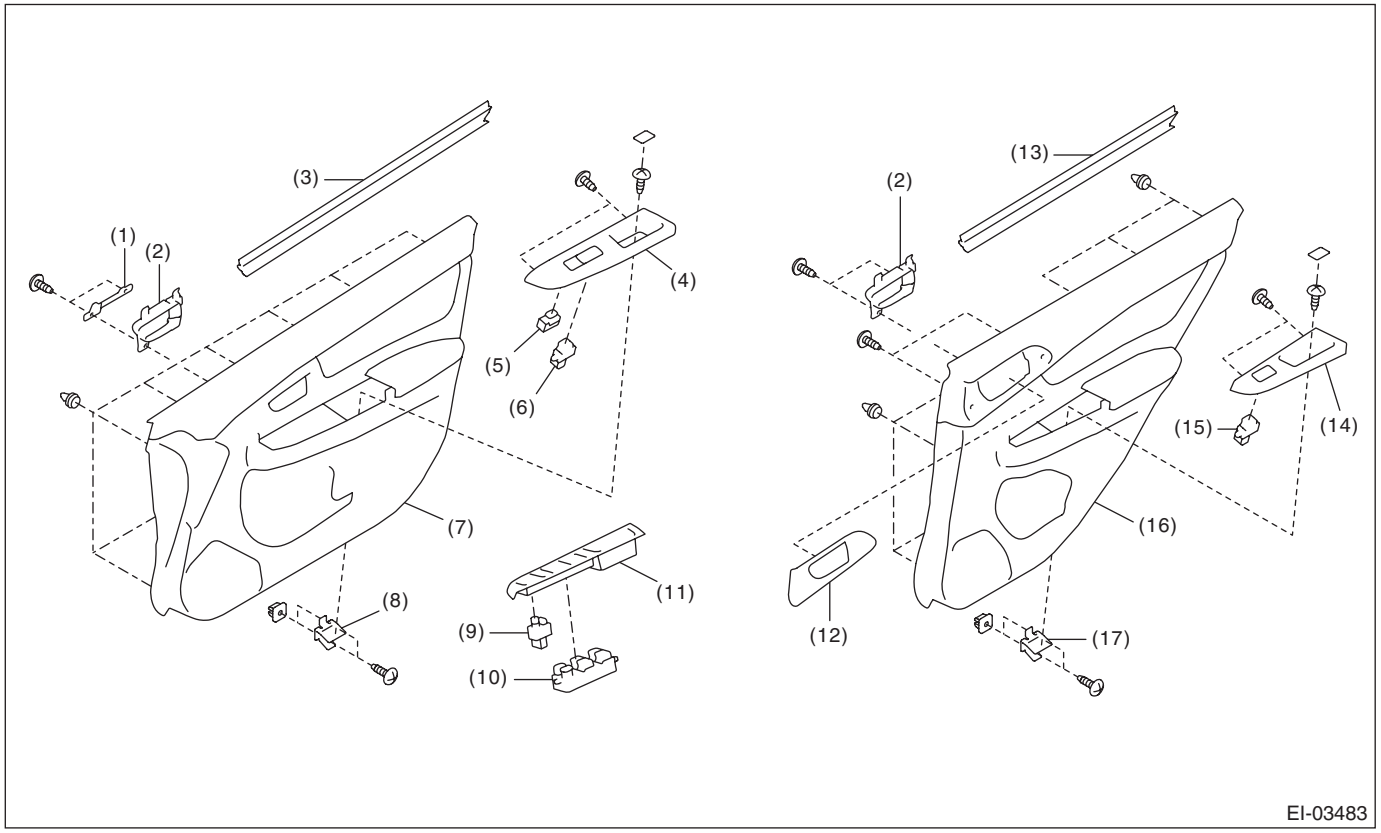
Tightening torque: N·m (kgf-m, ft-lb)
T: 7.5 (0.76, 5.5)

9. ROOF RAIL



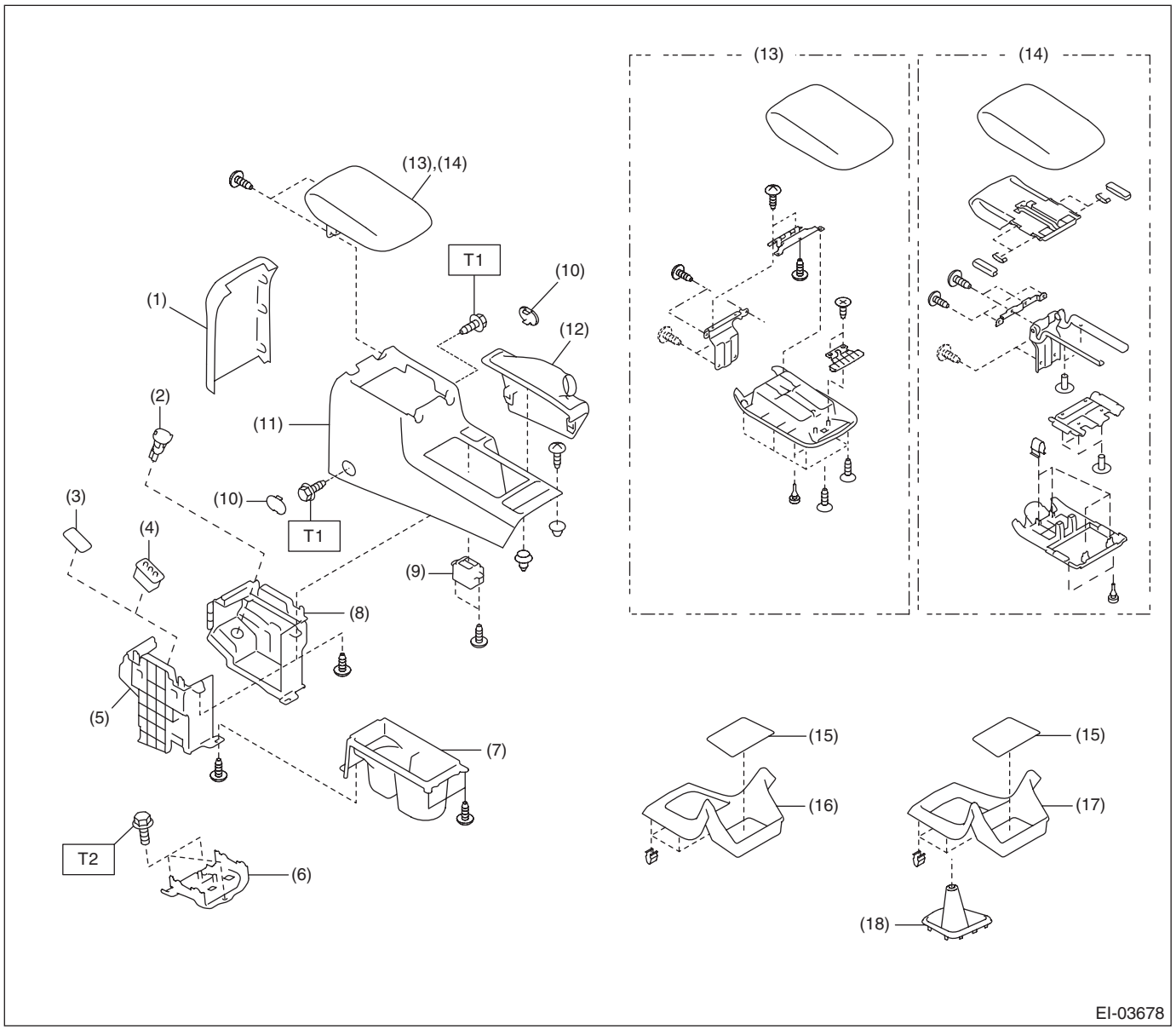
Tightening torque: N·m (kgf-m, ft-lb)
T: 7.5 (0.76, 5.5)

10.DOOR TRIM



(1)	Plate	(7)	Trim panel - front door	(13)	Weather strip - door rear INN
(2)	Remote ASSY - door	(8)	Bracket - door trim front	(14)	Panel - power window sub-switch rear
(3)	Weather strip - door front INN	(9)	Switch - door mirror	(15)	Switch - power window sub rear
(4)	Panel - power window sub-switch front	(10)	Switch - power window main	(16)	Trim panel - rear door
(5)	Switch - door lock sub	(11)	Panel - power window main switch	(17)	Bracket - door trim rear
(6)	Switch - power window sub front	(12)	Cover - remote rear door		

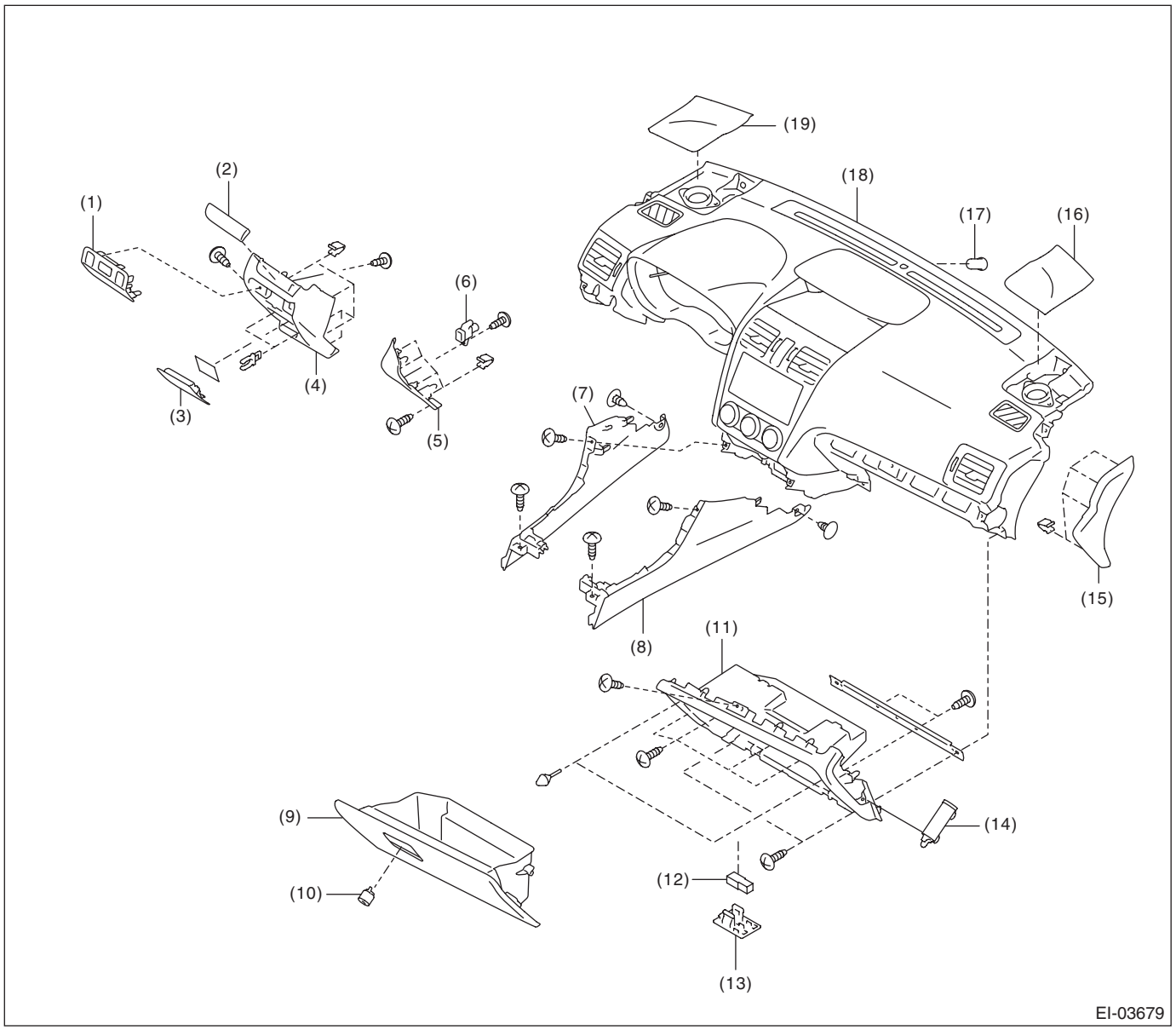
11.CONSOLE BOX



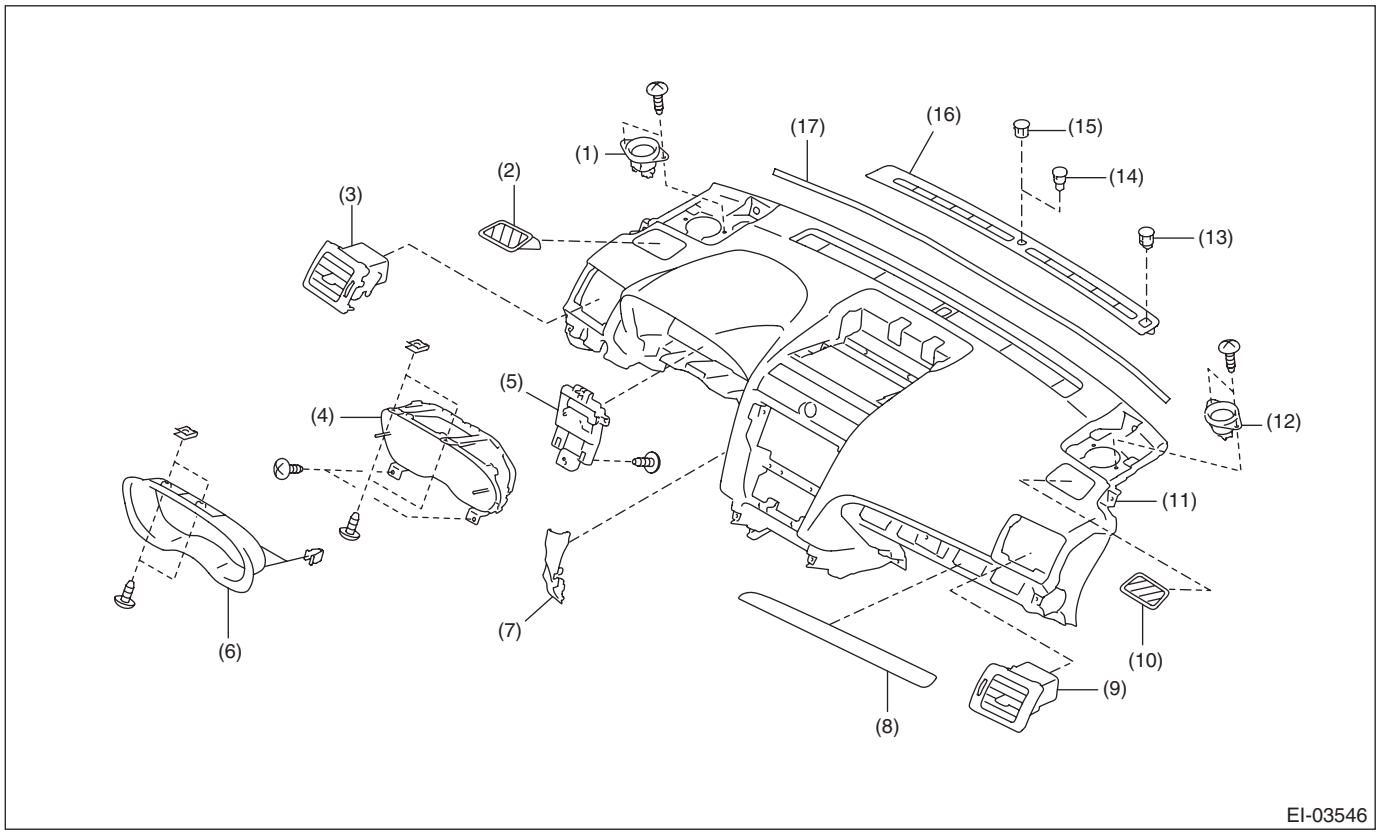
(1) Console box, rear
(2) Accessory socket
(3) Cap
(4) AUX unit
(5) Pocket console box RH
(6) Bracket - console box
(7) Cup holder
(8) Pocket console box LH
(9) Switch - seat heater
(10) Cap - console box
(11) Console box
(12) Boot - parking brake
(13) Lid ASSY - console box (fixed type)
(14) Lid ASSY - console box (sliding type)
(15) Mat
(16) Cover front (CVT model)
(17) Cover front (MT model)
(18) Boot - shift lever (MT model)

Tightening torque: N·m (kgf-m, ft-lb)
T1: 6.5 (0.66, 4.8)
T2: 18 (1.84, 13.3)

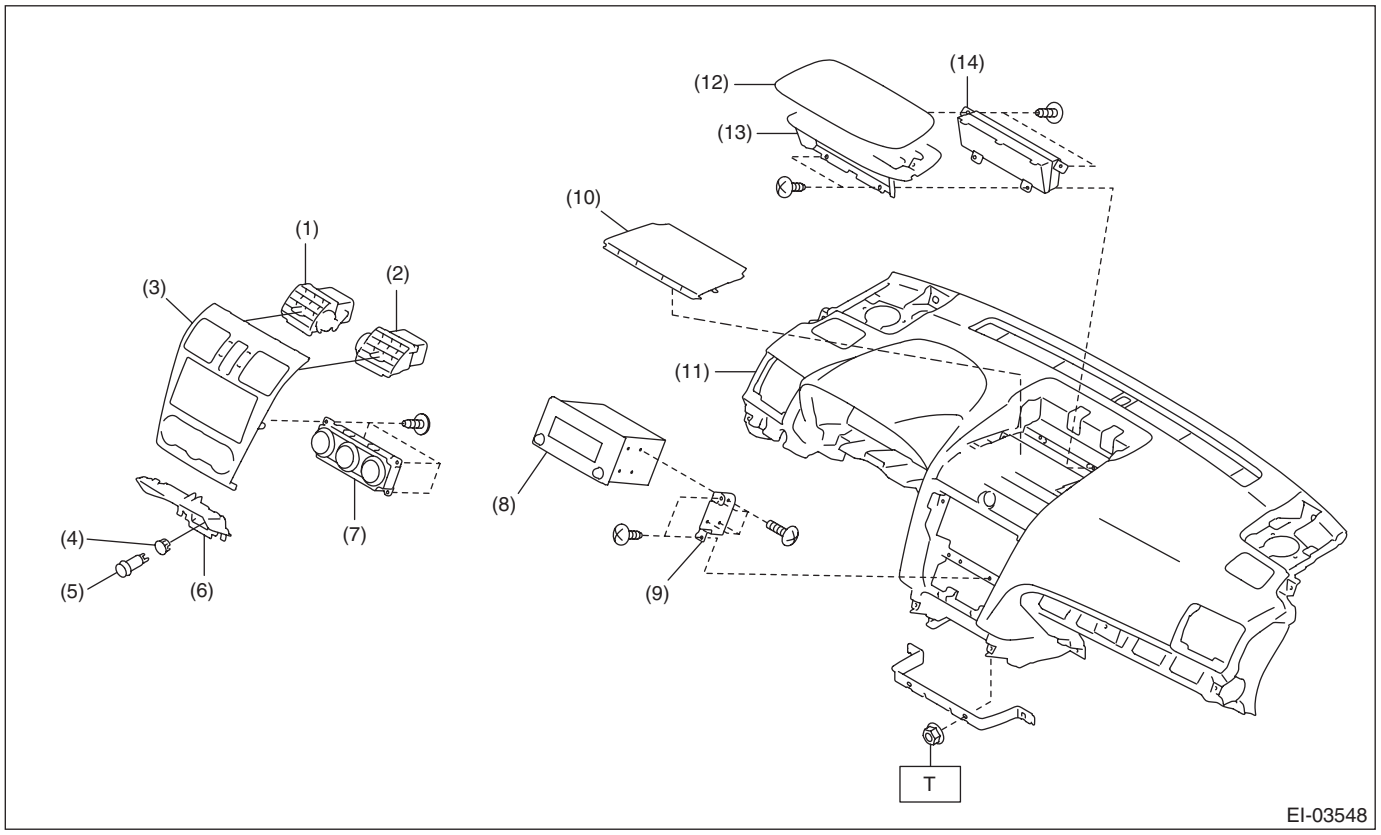
12.INSTRUMENT PANEL



(1) Panel - switch
(2) Ornament - panel ASSY driver
(3) Lid ASSY - fuse box
(4) Cover ASSY - instrument panel LWR driver OUT
(5) Cover ASSY - instrument panel LWR driver INN
(6) Case - sensor
(7) Panel center LWR LH
(8) Panel center LWR RH
(9) Pocket ASSY
(10) Key cylinder - pocket
(11) Back panel - pocket
(12) Light - pocket
(13) Holder
(14) Damper COMPL - pocket
(15) Cover - instrument panel side RH
(16) Grille speaker side RH
(17) Cap - guide pin
(18) Panel COMPL - instrument
(19) Grille speaker side LH

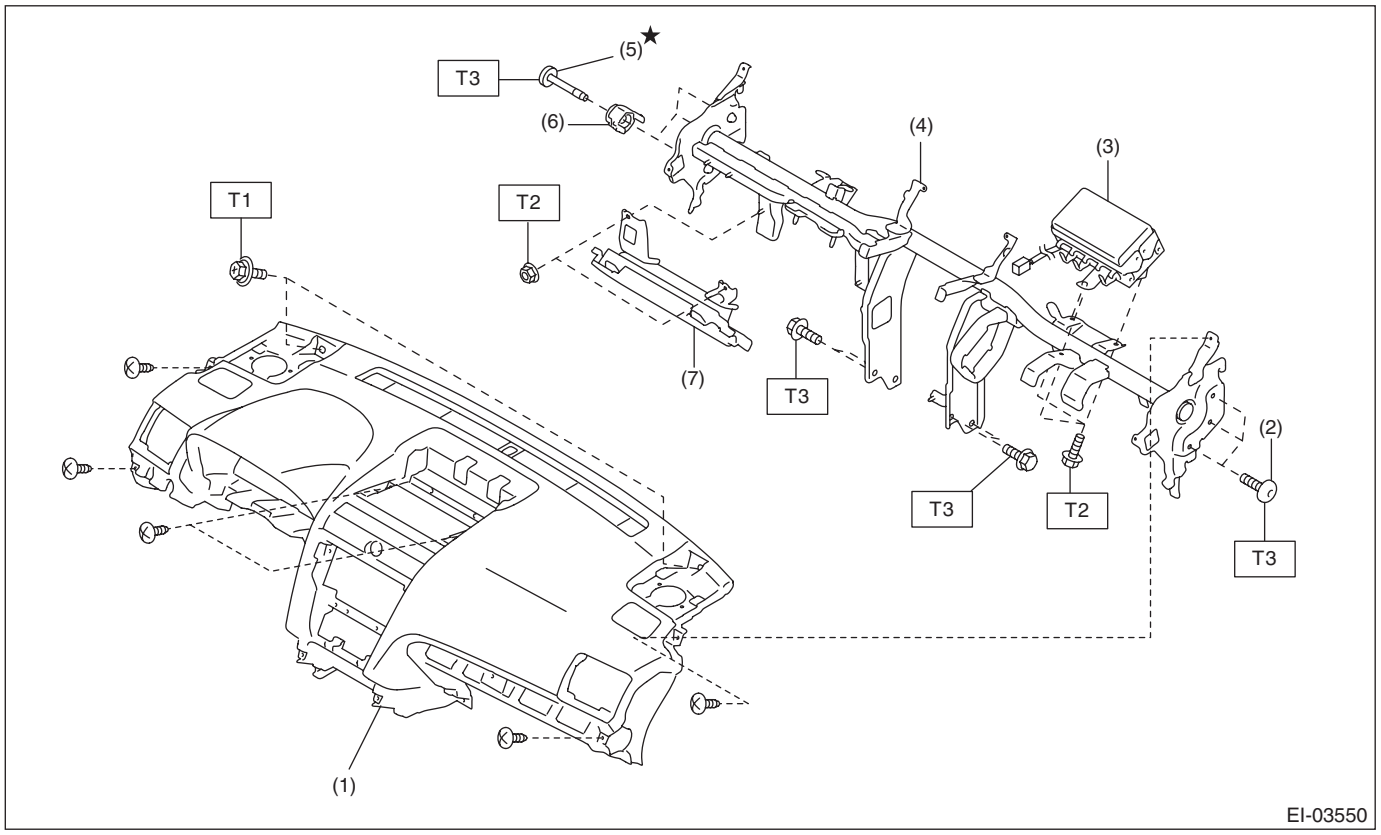


(1)	Speaker ASSY - tweeter LH	(7)	Cover - switch starter	(13)	Sensor - rain
(2)	Grille defroster - front LH	(8)	Ornament - panel ASSY passenger	(14)	Sensor - sunload
(3)	Grille ASSY - ventilation LH	(9)	Grille ASSY - ventilation RH	(15)	Cap
(4)	Combination meter ASSY	(10)	Grille defroster - front RH	(16)	Panel COMPL - instrument UPR
(5)	Reinforcement - combination meter	(11)	Panel COMPL - instrument	(17)	Cushion
(6)	Visor - combination meter	(12)	Speaker ASSY - tweeter RH		



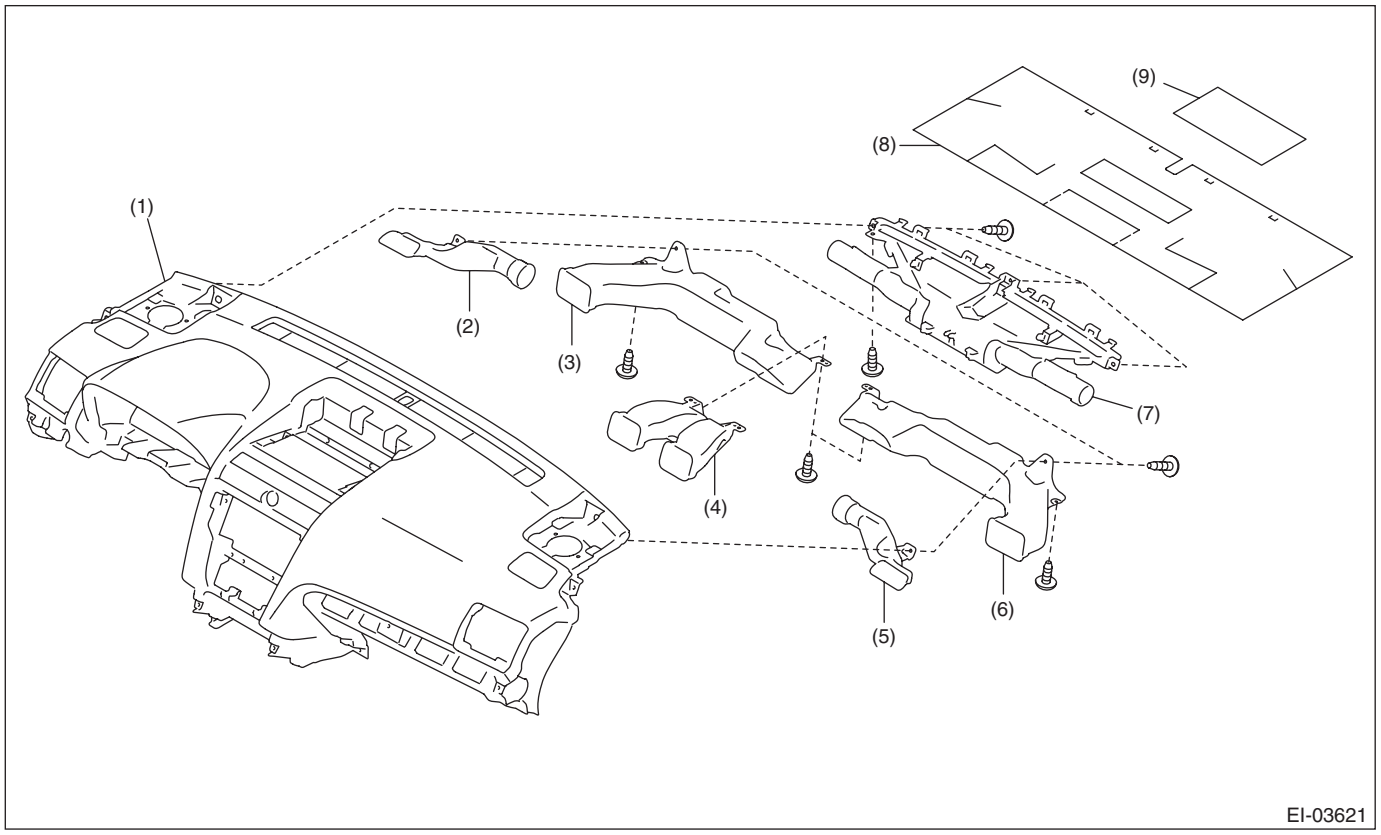
(1) Grille ASSY - CTR ventilation LH
(2) Grille ASSY - CTR ventilation RH
(3) Panel center ASSY
(4) Cap
(5) Socket ASSY
(6) Back panel - center pocket
(7) Heater control ASSY
(8) Audio ASSY
(9) Bracket - audio
(10) Cover center UPR
(11) Panel COMPL - instrument
(12) Panel - display UPR
(13) Panel - display LWR
(14) Multi-function display ASSY

Tightening torque: N·m (kgf-m, ft-lb)
T: 7 (0.71, 5.2)



(1) Panel COMPL - instrument
(2) TORX® bolt (M8 × 37)
(3) Passenger's airbag module
(4) Beam COMPL - steering
(5) TORX® bolt (M8 × 57)
(6) Adjuster - clip space
(7) Knee airbag module

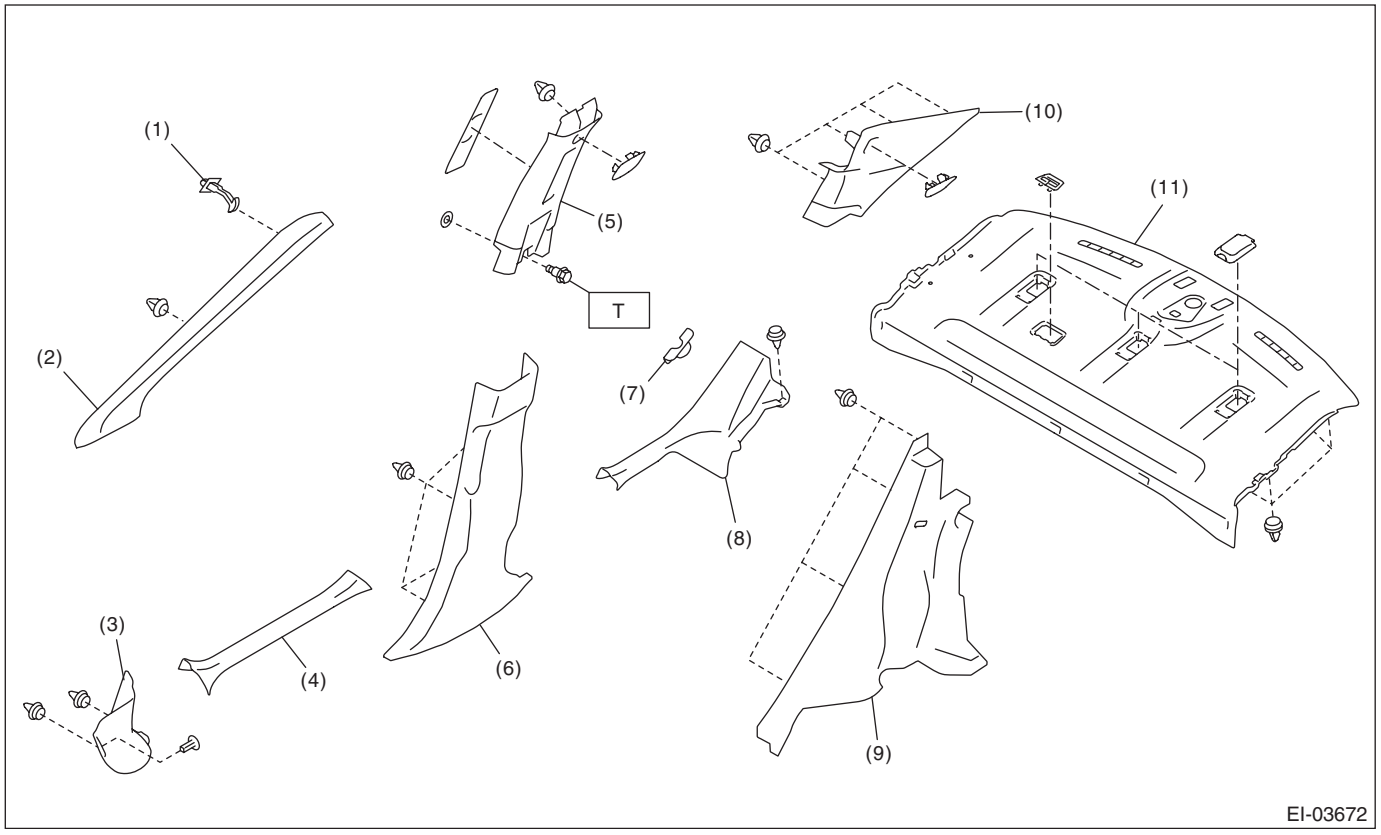
Tightening torque: N·m (kgf-m, ft-lb)
T1: 7 (0.71, 5.2)
T2: 7.5 (0.76, 5.5)
T3: 25 (2.55, 18.4)



(1) Panel COMPL - instrument
(2) Duct - side defroster LH
(3) Duct - side ventilation LH
(4) Duct - center vent
(5) Duct - side defroster RH
(6) Duct - side ventilation RH
(7) Nozzle - front defroster
(8) Insulator - instrument
(9) Insulator - airbag

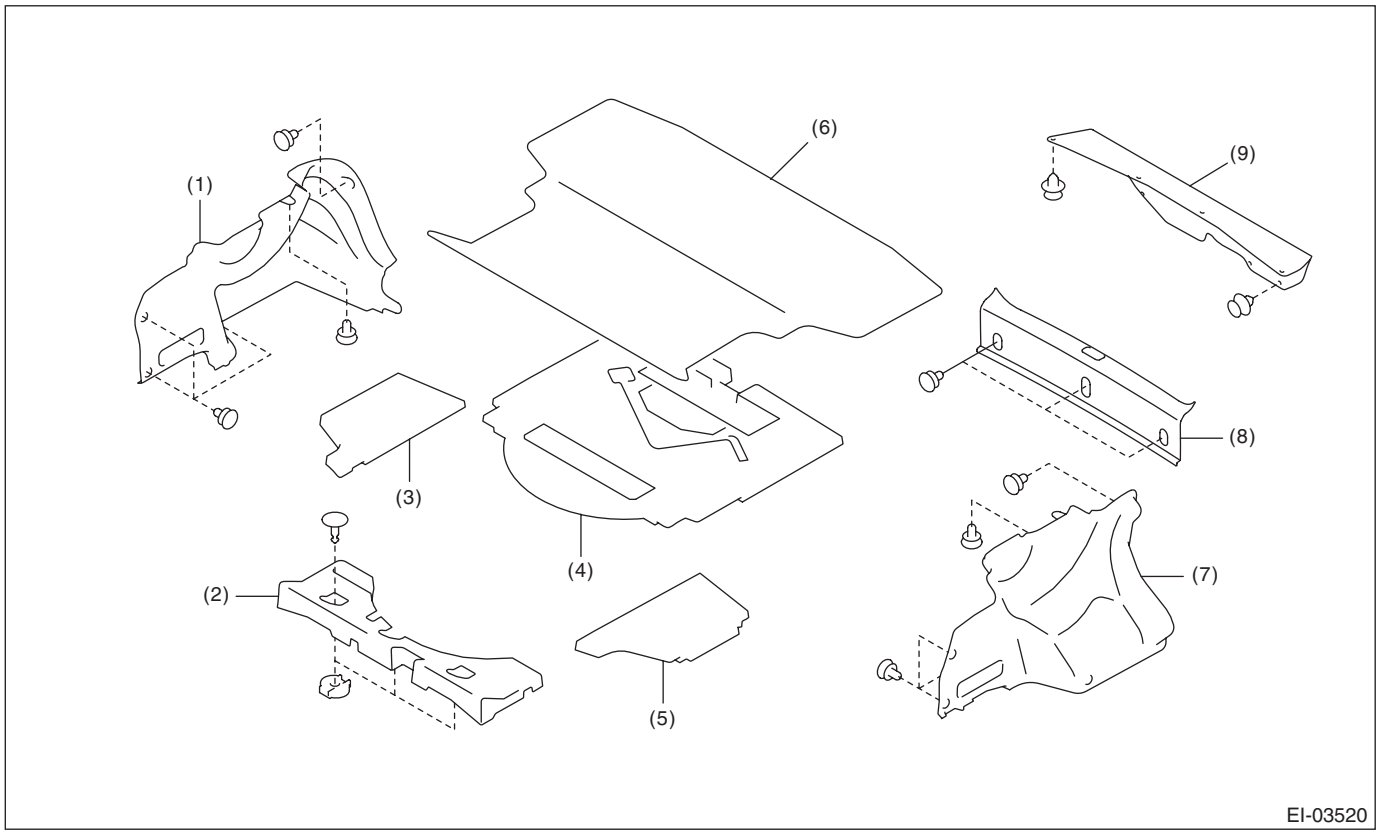
13.INNER TRIM

- 4 door model



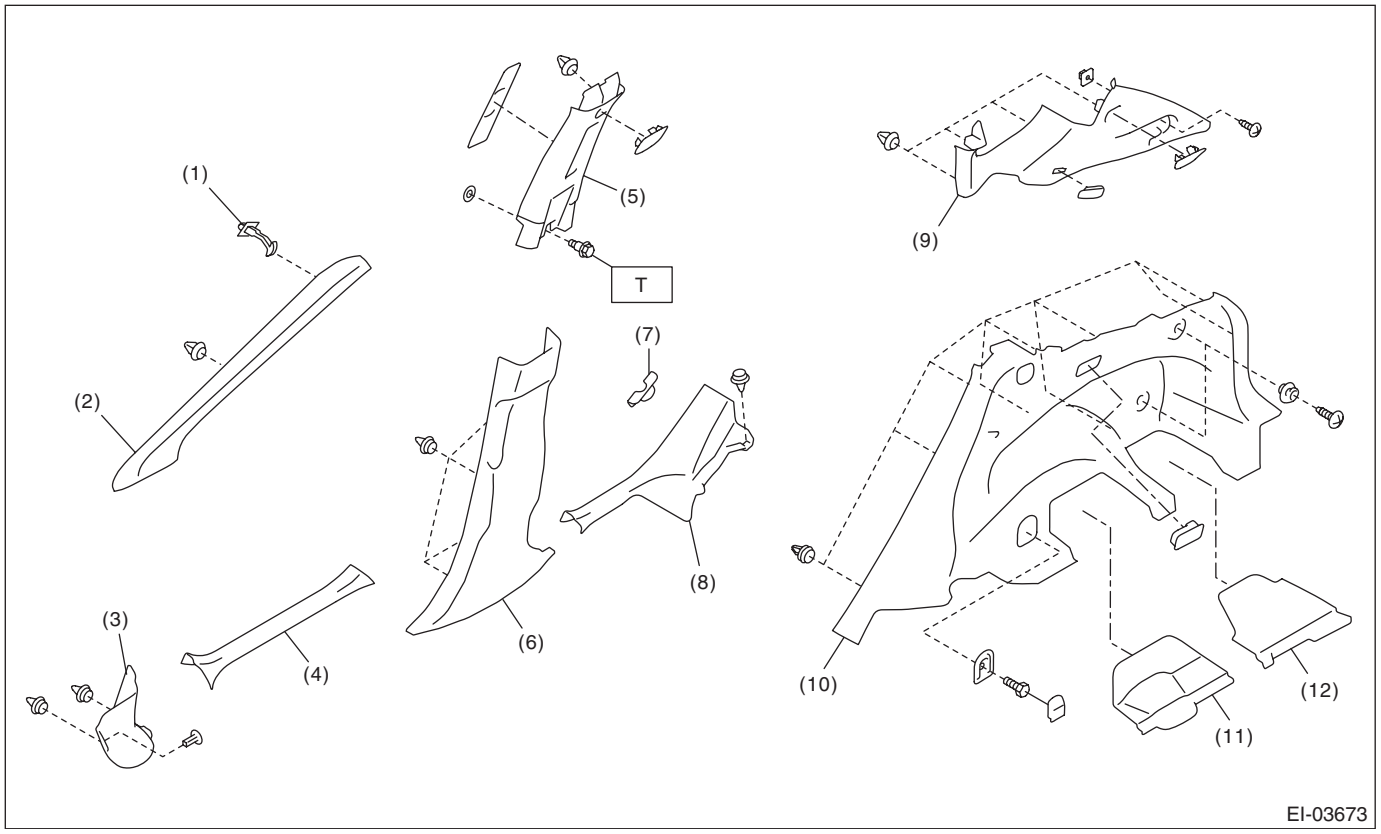
(1) Tether clip
(2) Trim panel - front pillar UPR
(3) Cover side sill - front
(4) Cover side sill - front INN
(5) Trim panel - center pillar UPR
(6) Trim panel - center pillar LWR
(7) Cover - catcher
(8) Cover side sill - rear INN
(9) Trim panel - rear pillar LWR
(10) Trim panel - rear pillar UPR
(11) Trim panel ASSY - rear shelf

Tightening torque: N·m (kgf-m, ft-lb)
T: 7.5 (0.76, 5.5)



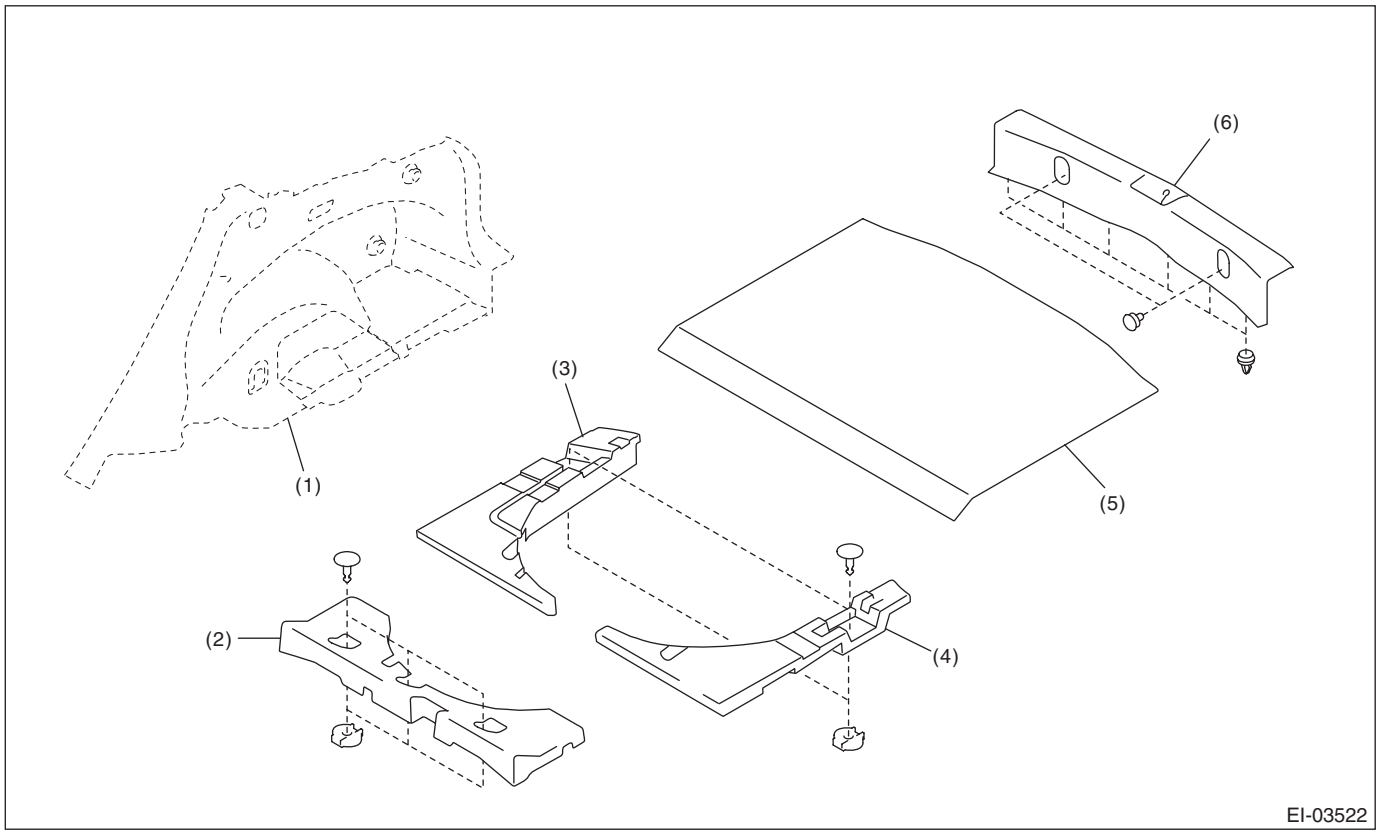
(1) Trim panel - trunk side RH
(2) Spacer - rear floor front
(3) Spacer - rear floor side RH
(4) Sub-trunk ASSY
(5) Spacer - rear floor side LH
(6) Mat - trunk
(7) Trim panel - trunk side LH
(8) Trim panel - trunk rear
(9) Trim panel - trunk lid

- 5 door model



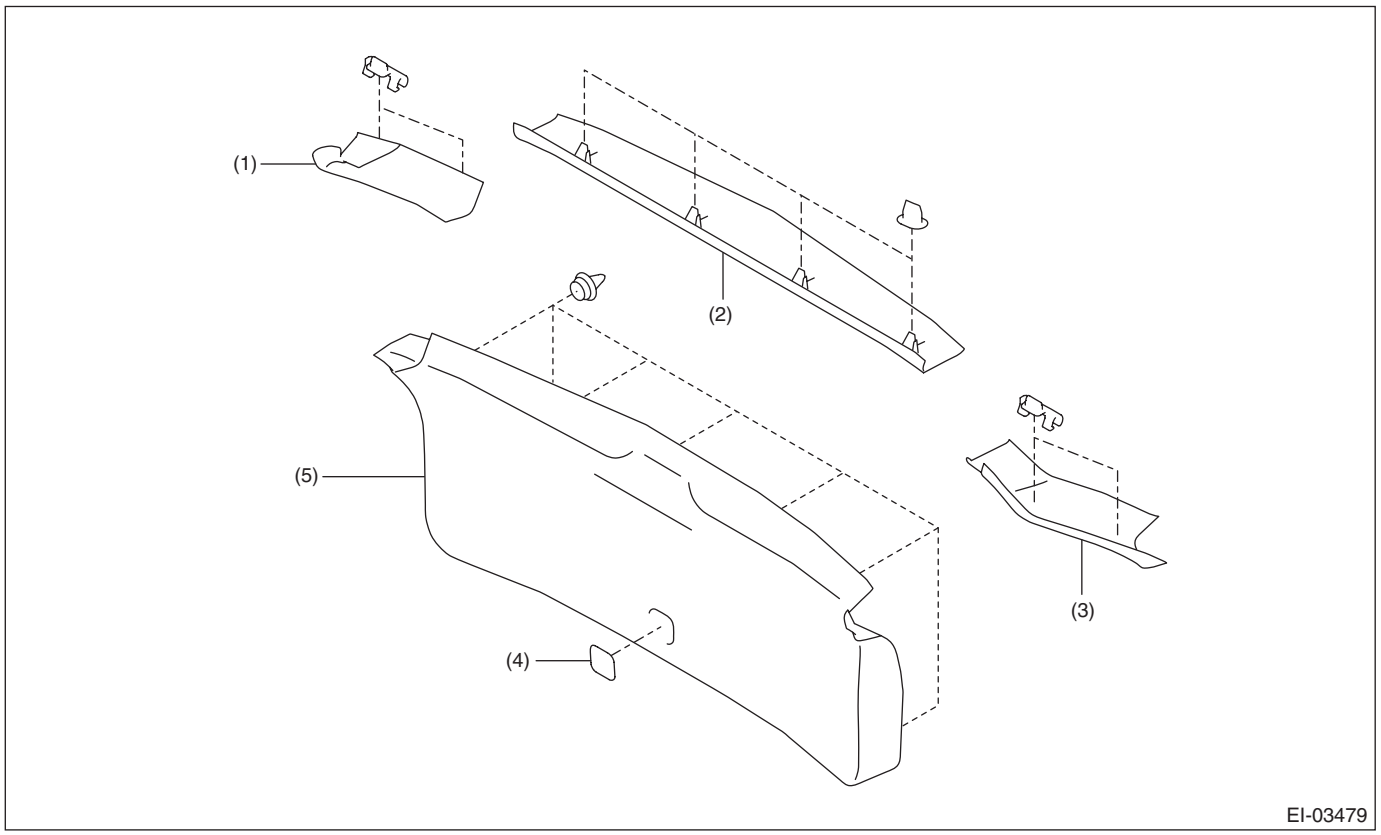
(1) Tether clip
(2) Trim panel - front pillar UPR
(3) Cover side sill - front
(4) Cover side sill - front INN
(5) Trim panel - center pillar UPR
(6) Trim panel - center pillar LWR
(7) Cover - catcher
(8) Cover side sill - rear INN
(9) Trim panel - rear quarter UPR
(10) Trim panel - rear apron
(11) Cap - rear strut
(12) Lid upper rear

Tightening torque: N·m (kgf-m, ft-lb)
T: 7.5 (0.76, 5.5)



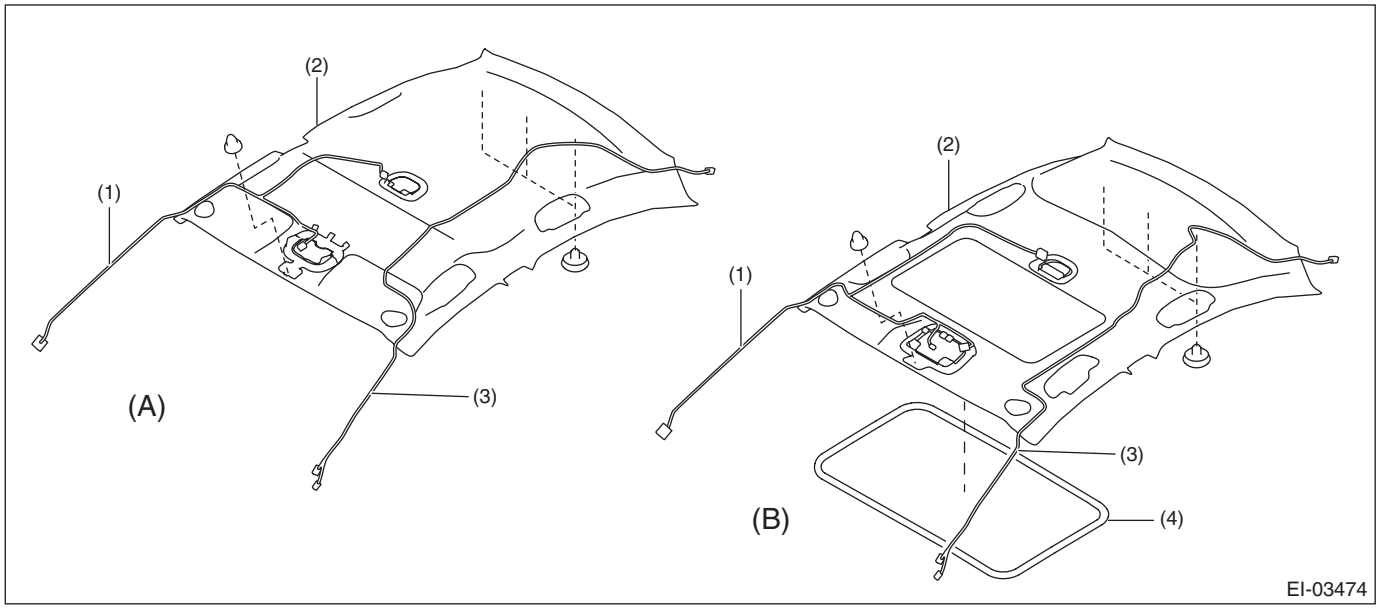
(1) Trim panel - rear apron
(2) Spacer - rear floor
(3) Spacer - rear floor side RH
(4) Spacer - rear floor side LH
(5) Mat - rear floor CTR
(6) Trim panel - rear skirt

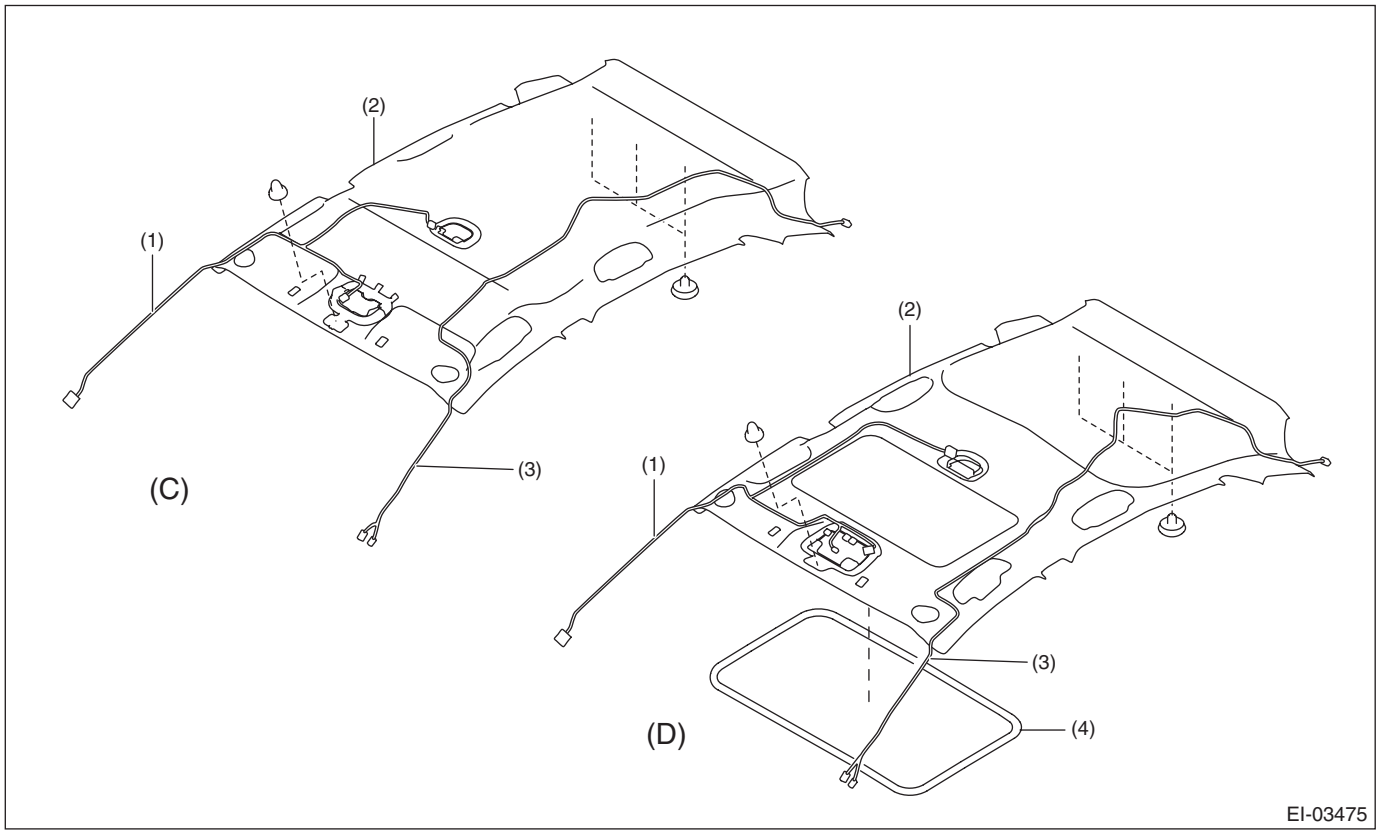
14.REAR GATE TRIM



(1) Trim panel - rear gate pillar side RH
(2) Trim panel - rear gate UPR
(3) Trim panel - rear gate pillar side LH
(4) Cap
(5) Trim panel - rear gate LWR

15.ROOF TRIM

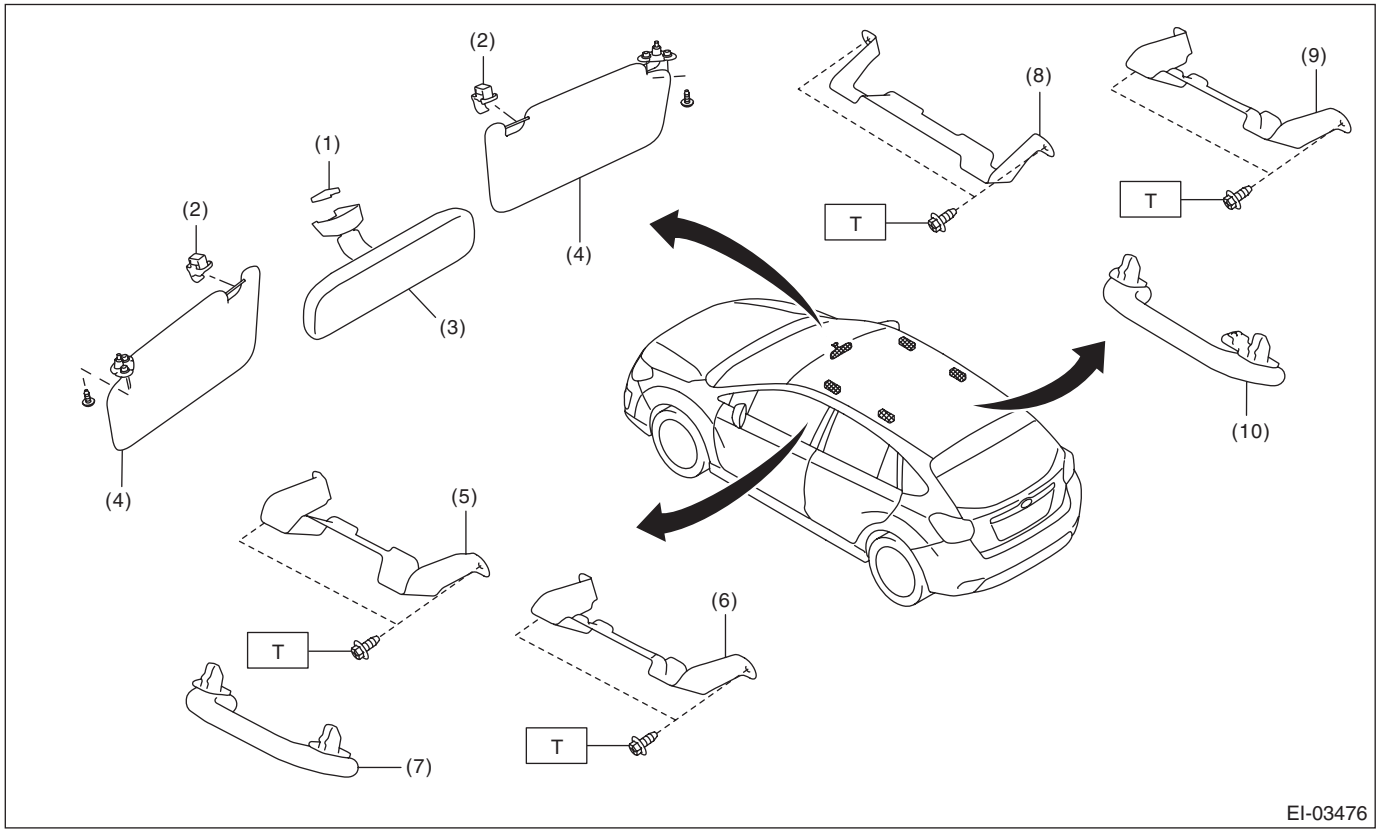




(A) Normal roof type (4 door model)
(B) Sunroof type (4 door model)
(C) Normal roof type (5 door model)
(D) Sunroof type (5 door model)

(1) Cord - roof
(2) Trim panel - roof ASSY
(3) Cord ASSY - antenna feeder
(4) Garnish - roof

16.ROOM INNER PARTS

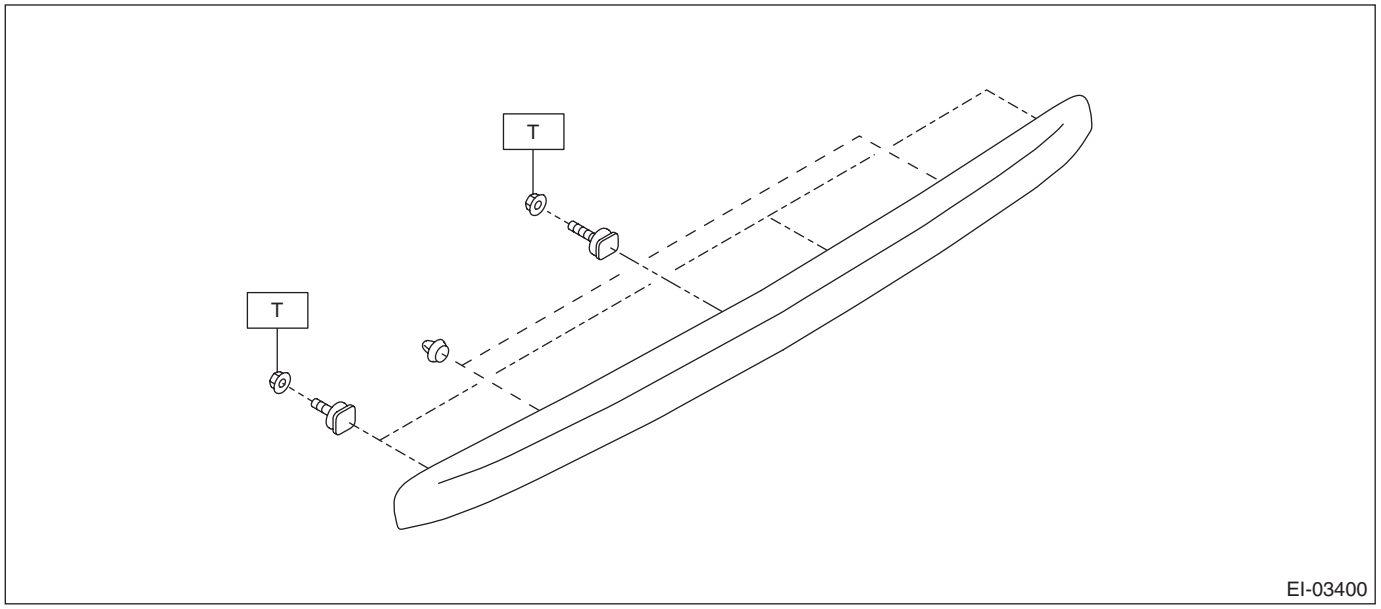


(1)	Base - inner mirror	(6)	Bracket - assist rail front (normal roof)
(2)	Hook - sun visor	(7)	Assist rail - front
(3)	Mirror ASSY rearview inner	(8)	Bracket - assist rail rear (model with sunroof)
(4)	Sun visor ASSY	(9)	Bracket - assist rail rear (normal roof)
(5)	Bracket - assist rail front (model with sunroof)	(10)	Assist rail - rear

Tightening torque: N·m (kgf-m, ft-lb)

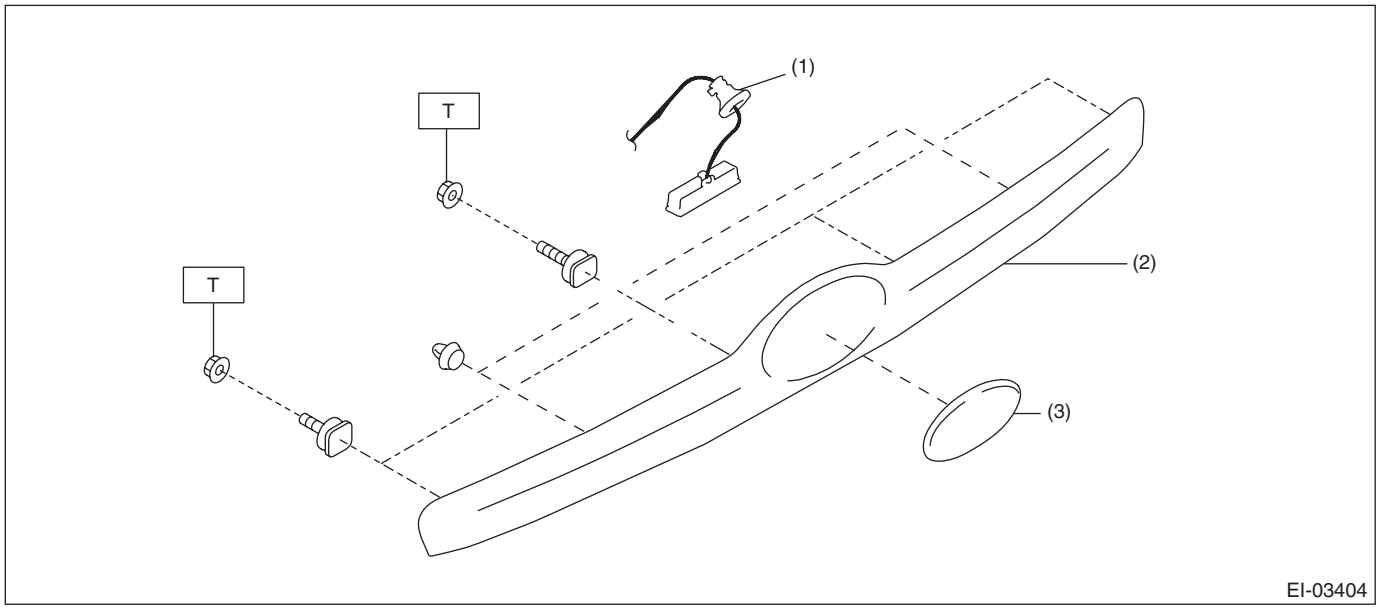
T: 7.5 (0.76, 5.5)

17.TRUNK LID GARNISH



Tightening torque: N·m (kgf-m, ft-lb)
T: 4.5 (0.46, 3.3)

18.REAR GATE GARNISH



(1) Switch - opener rear gate
(2) Garnish assembly - rear gate
(3) Ornament rear

Tightening torque: N·m (kgf-m, ft-lb)
T: 4.5 (0.46, 3.3)

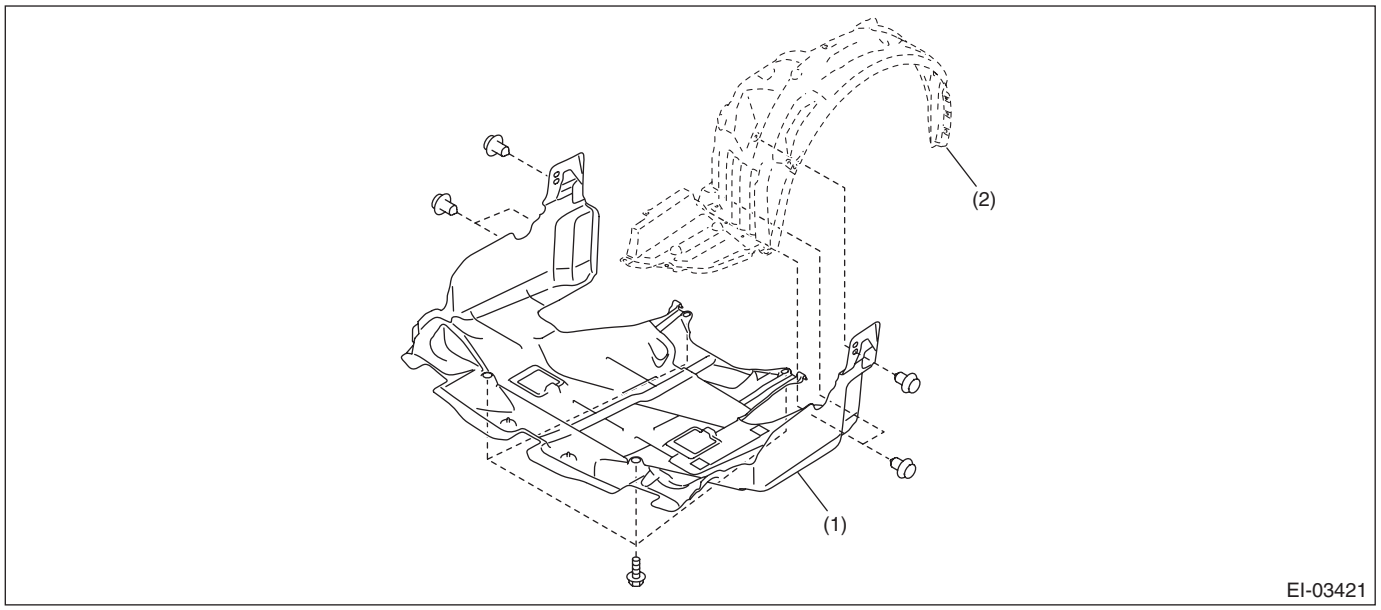
B: PREPARATION TOOL

TOOL NAME	REMARKS
Clip remover	Used for removing trim. • KTC AP201-10A • KTC AP201-N • KTC AP203-10A • KTC AP20L-10B or equivalent
Clip clamp pliers	Used for removal of various clips and clamps. • KTC CCP-190 or equivalent

2. Front Under Cover

A: REMOVAL

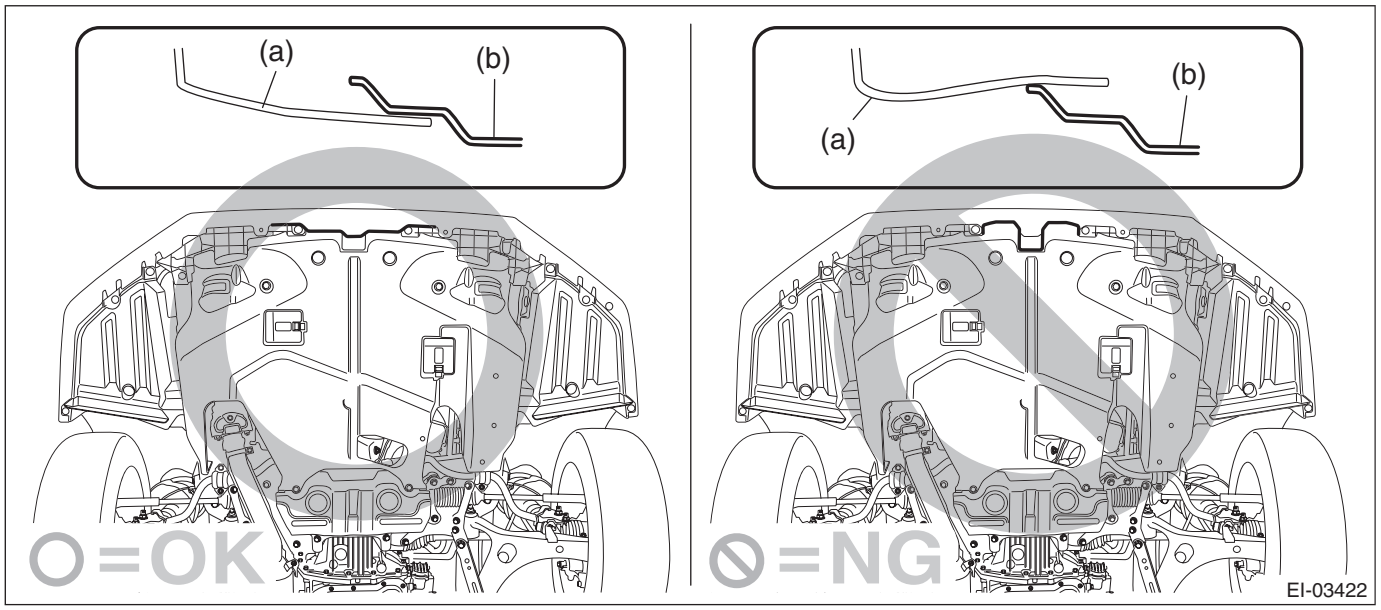
1) Lift up the vehicle.
2) Remove the bolts and clips, and remove the under cover - front.



(1) Under cover - front (2) Mud guard - front

B: INSTALLATION

CAUTION:
Install the under cover so that the under cover front end (b) comes inside of the bumper face - front (a).



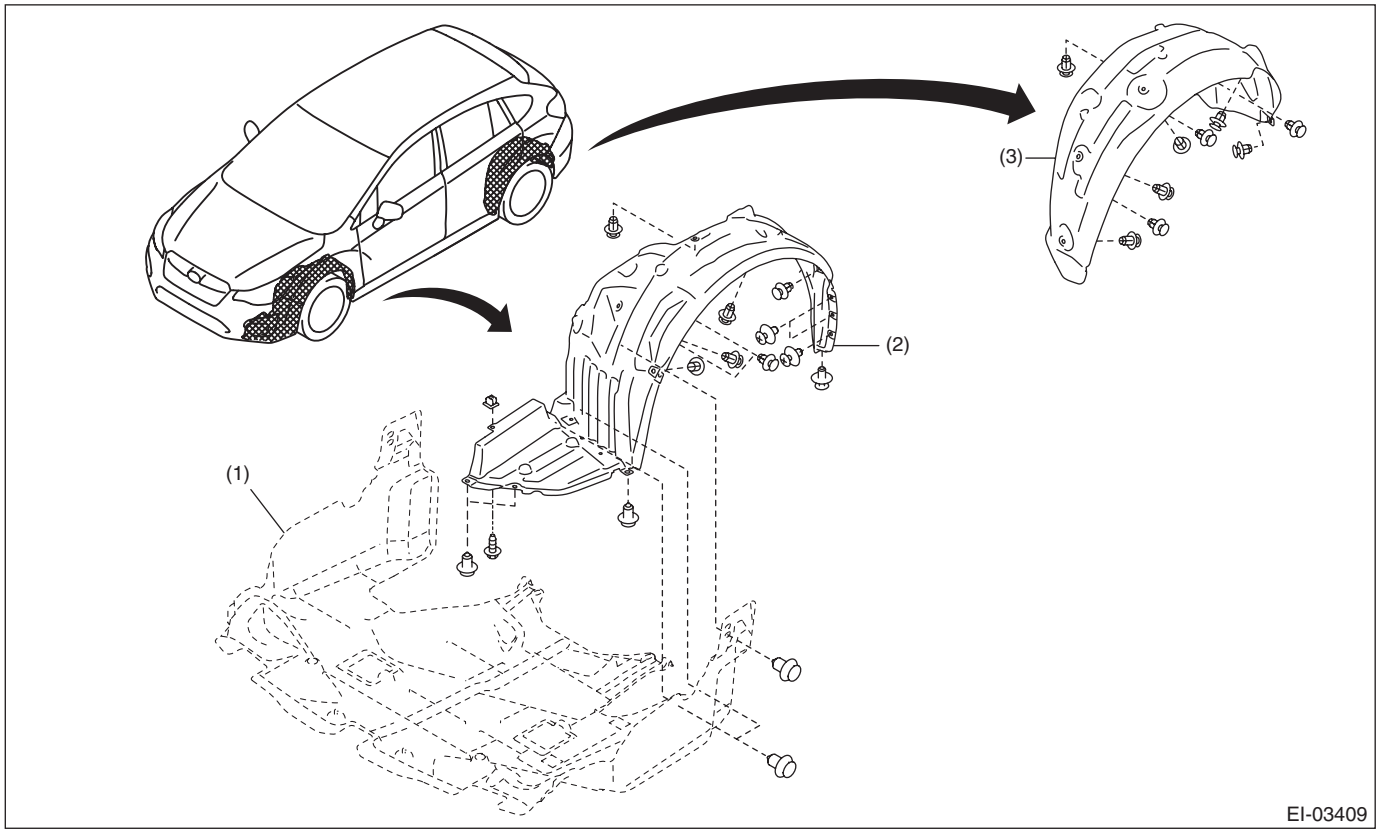
Install each part in the reverse order of removal.

Tightening torque:
17.5 N·m (1.78 kgf-m, 12.9 ft-lb)

3. Mud Guard

A: REMOVAL

1) Lift up the vehicle.
2) Remove the wheels.
3) Remove the screws and clips to remove the mud guard.



(1) Under cover - front
(2) Mud guard - front
(3) Mud guard - rear

B: INSTALLATION

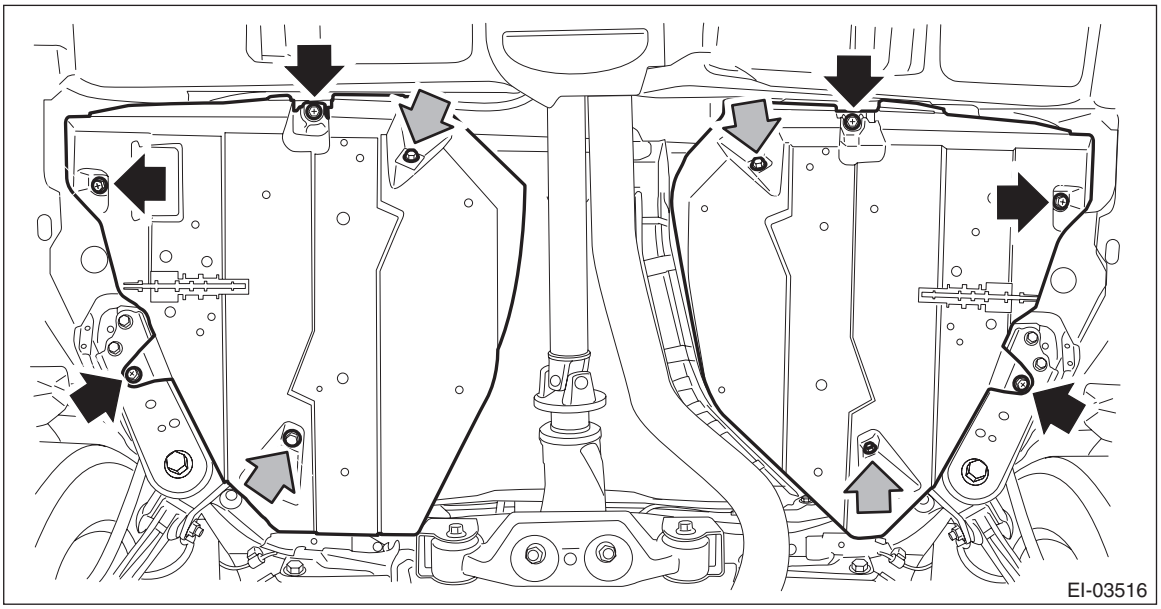
Install each part in the reverse order of removal.

Tightening torque:
Wheel nut: 120 N·m (10.24 kgf-m, 88.5 ft-lb)

4. Fuel Tank Protector

A: REMOVAL

1) Lift up the vehicle.
2) Remove the bolts and nuts and remove the fuel tank protector.



B: INSTALLATION

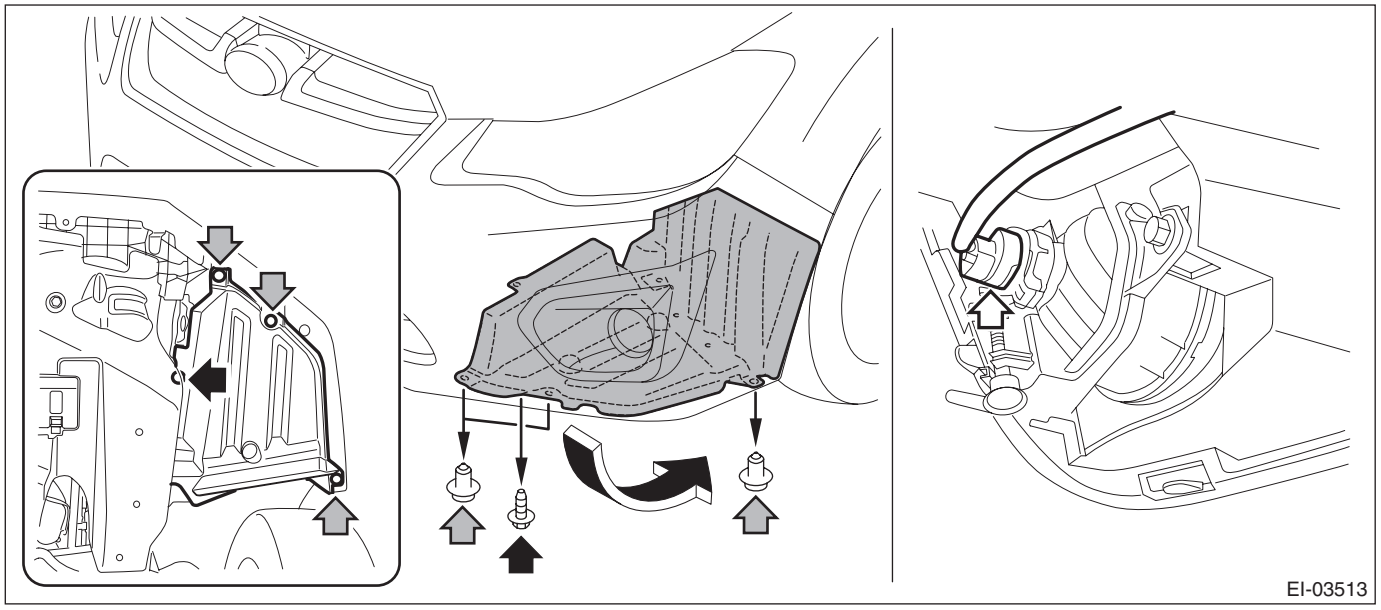
CAUTION:
Do not reuse the nut (self locking nut). Always replace with a new part.
Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EI-3, FUEL TANK PROTECTOR, COMPONENT, General Description.>

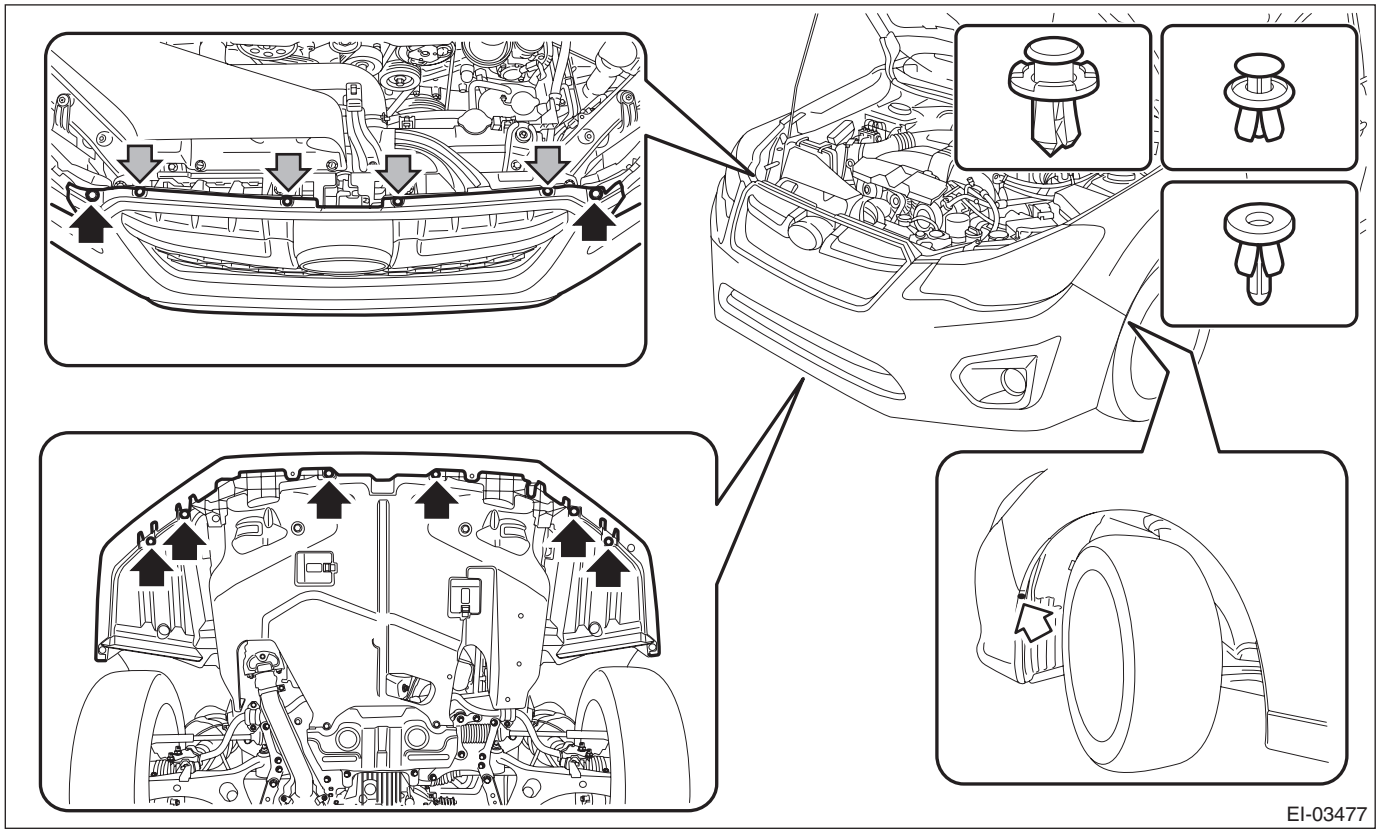
5. Front Grille

A: REMOVAL

1) Remove the bumper face - front.
   (1) Remove the screws and clips, and turn over the mud guard - front, and then disconnect the connectors of the fog light assembly - front on the LH and RH sides. (Model with fog light)



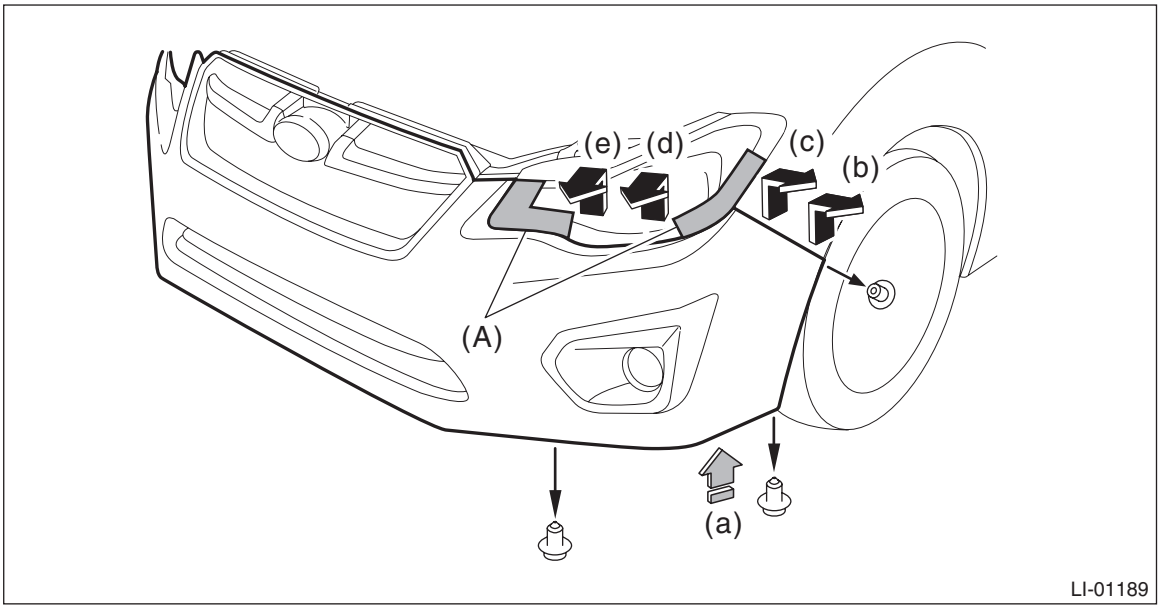
   (2) Remove the clips at the upper side of the bumper face - front.
   (3) Remove the clips from the fender.
   (4) Remove the clips at the lower side of the bumper face - front.



   (5) Apply protective tape (A) to the light assembly - head.

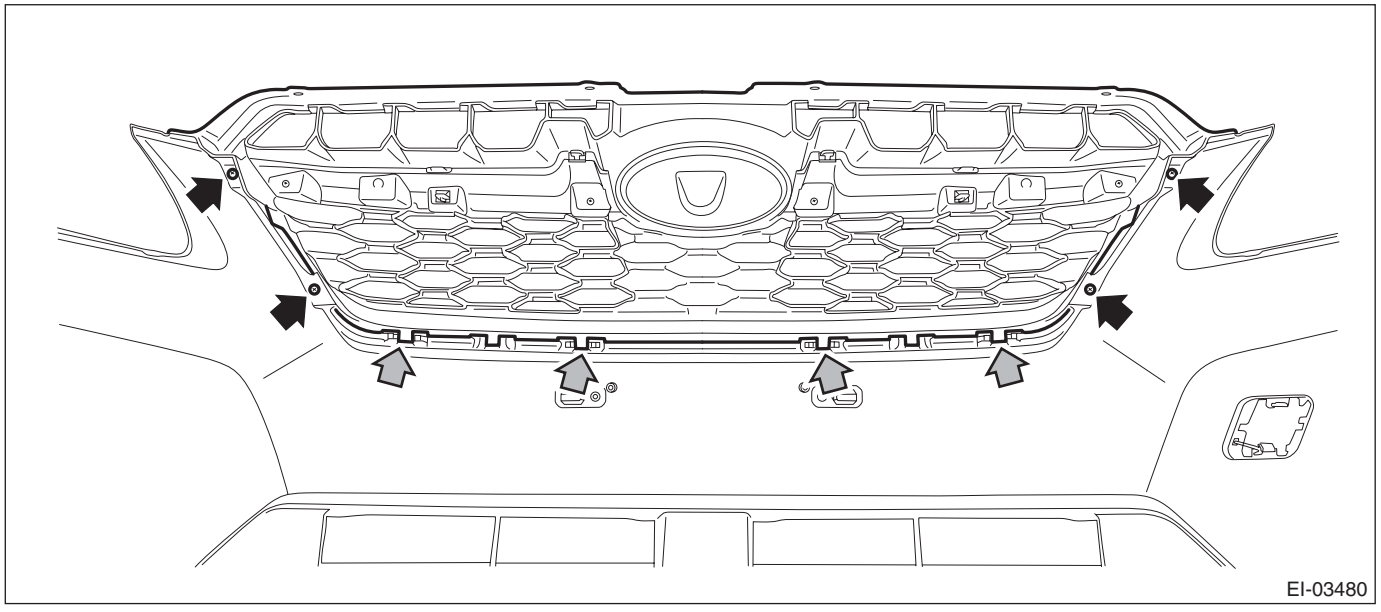
(6) Release the clips, and while pushing up the lower side (a) of the bumper face - front, remove in the order from (b) to (e).

CAUTION:
Do not pull forcibly. It may damage the flange sections of the bumper face - front.



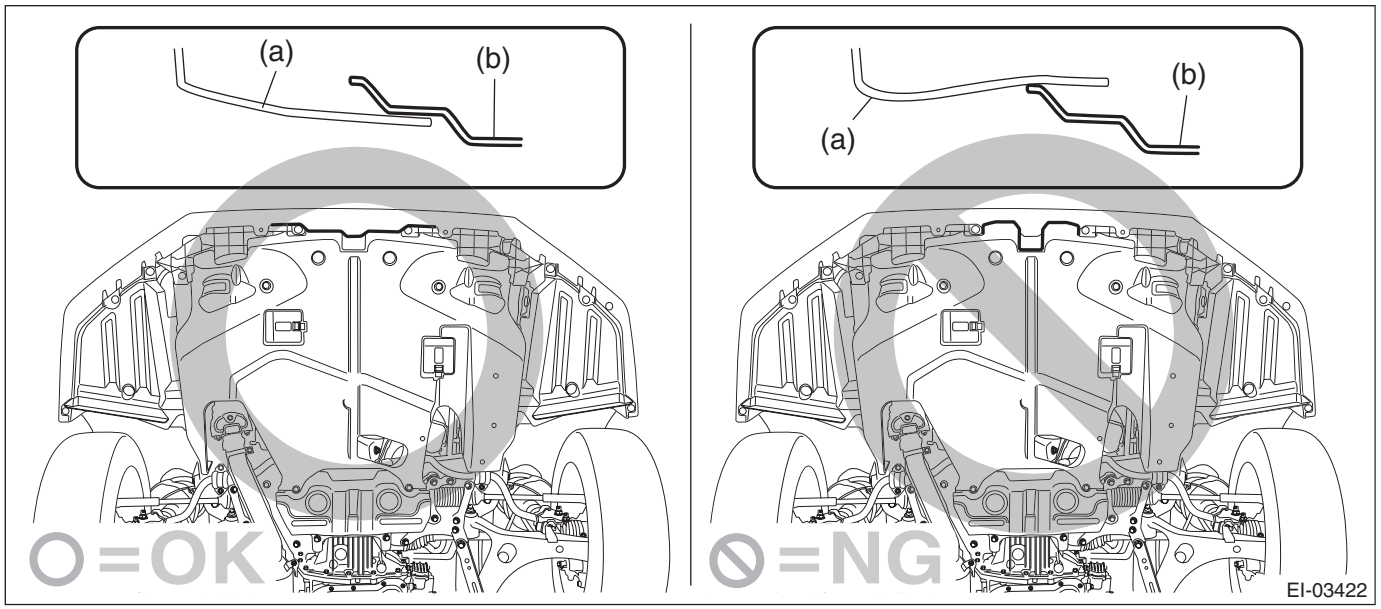
NOTE:
Detach the opposite side in the same manner.

2) Remove the front grille assembly.
(1) Remove the screws from the back side of the bumper face - front.
(2) Release the claws, and remove the front grille assembly.



B: INSTALLATION

CAUTION:
Install the bumper face - front so that the front end of the under cover (b) comes inside the bumper face - front (a).

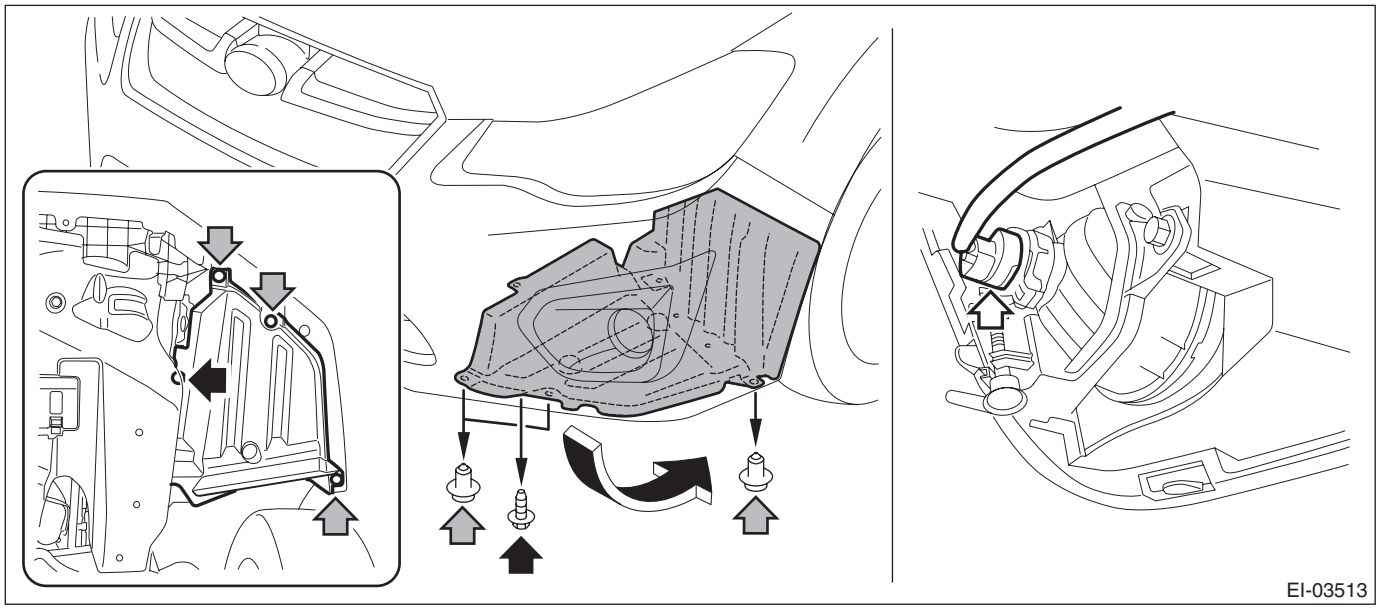


1) Install each part in the reverse order of removal.
2) Adjust the fog light beam. (model with fog light) <Ref. to LI-55, FOG LIGHT AIMING, ADJUSTMENT, Front Fog Light Assembly.>

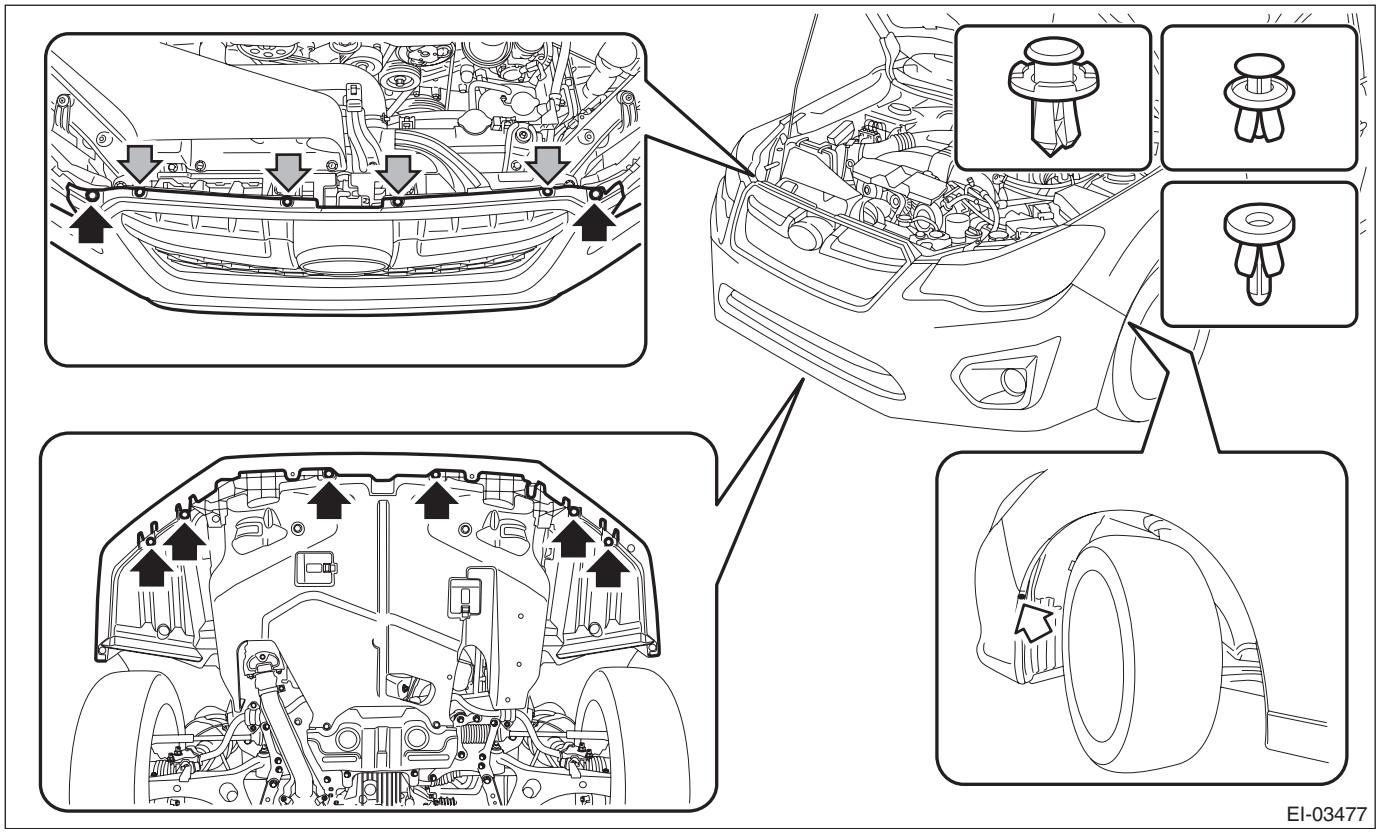
6. Front Bumper

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the bumper face - front.
   (1) Remove the screws and clips, and turn over the mud guard - front, and then disconnect the connectors of the fog light assembly - front on the LH and RH sides. (Model with fog light)



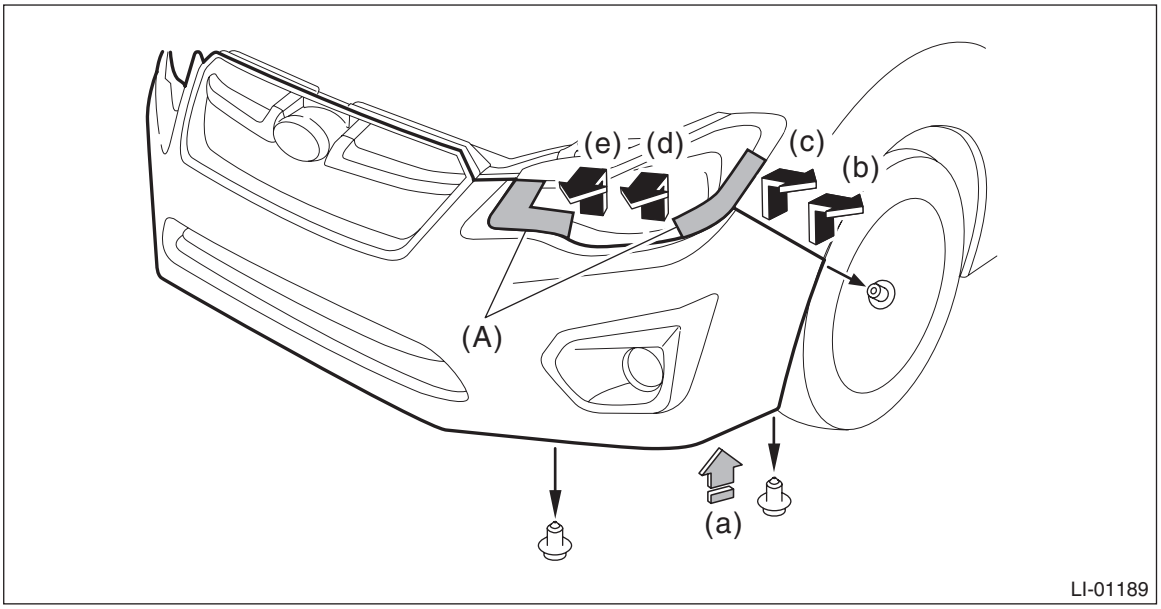
   (2) Remove the clips at the upper side of the bumper face - front.
   (3) Remove the clips from the fender.
   (4) Remove the clips at the lower side of the bumper face - front.



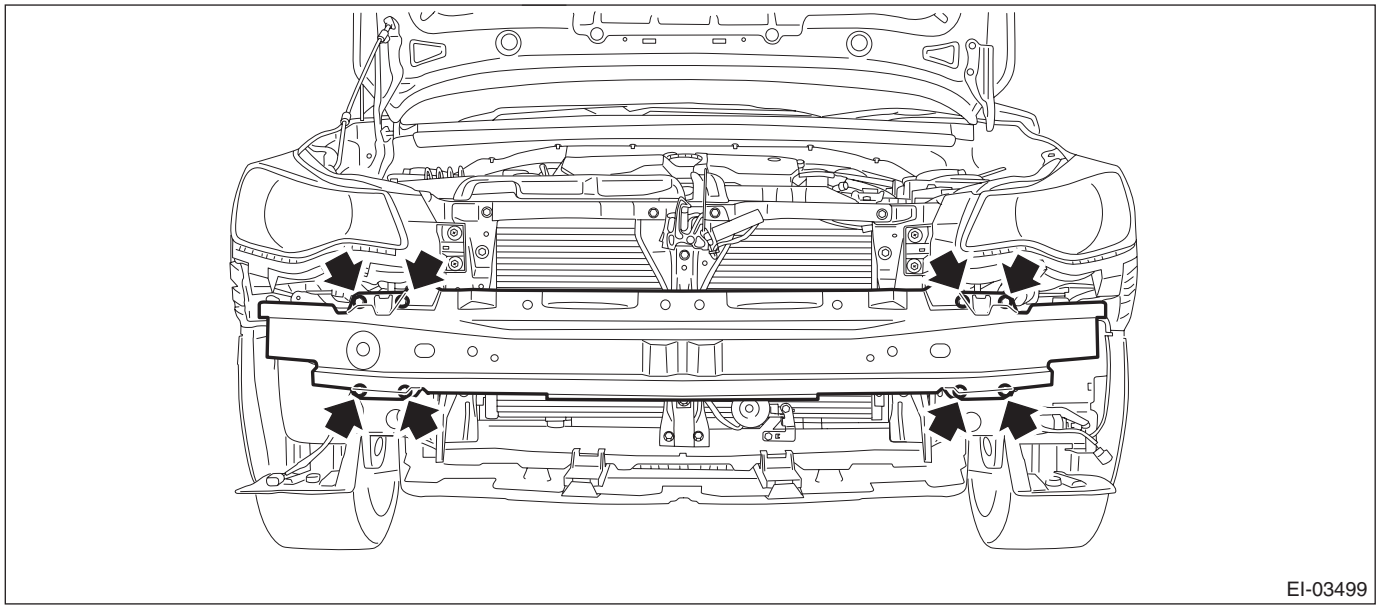
   (5) Apply protective tape (A) to the light assembly - head.

(6) Release the clips, and while pushing up the lower side (a) of the bumper face - front, remove in the order from (b) to (e).

CAUTION:
Do not pull forcibly. It may damage the flange sections of the bumper face - front.

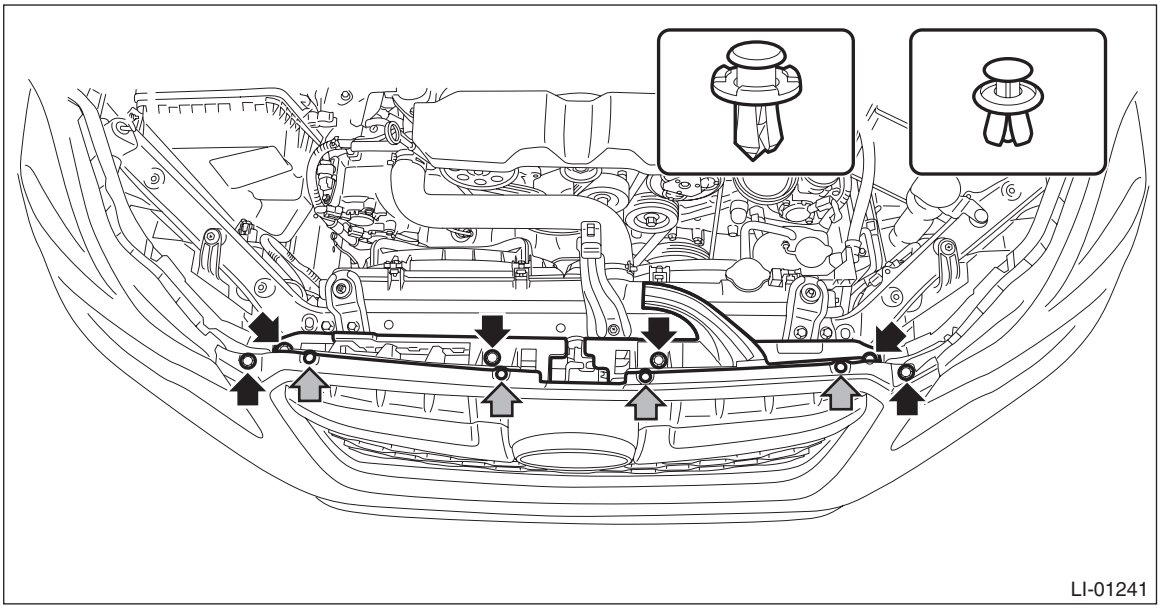


NOTE:
Detach the opposite side in the same manner.
3) Remove the bolts, and remove the bumper beam COMPL - front.



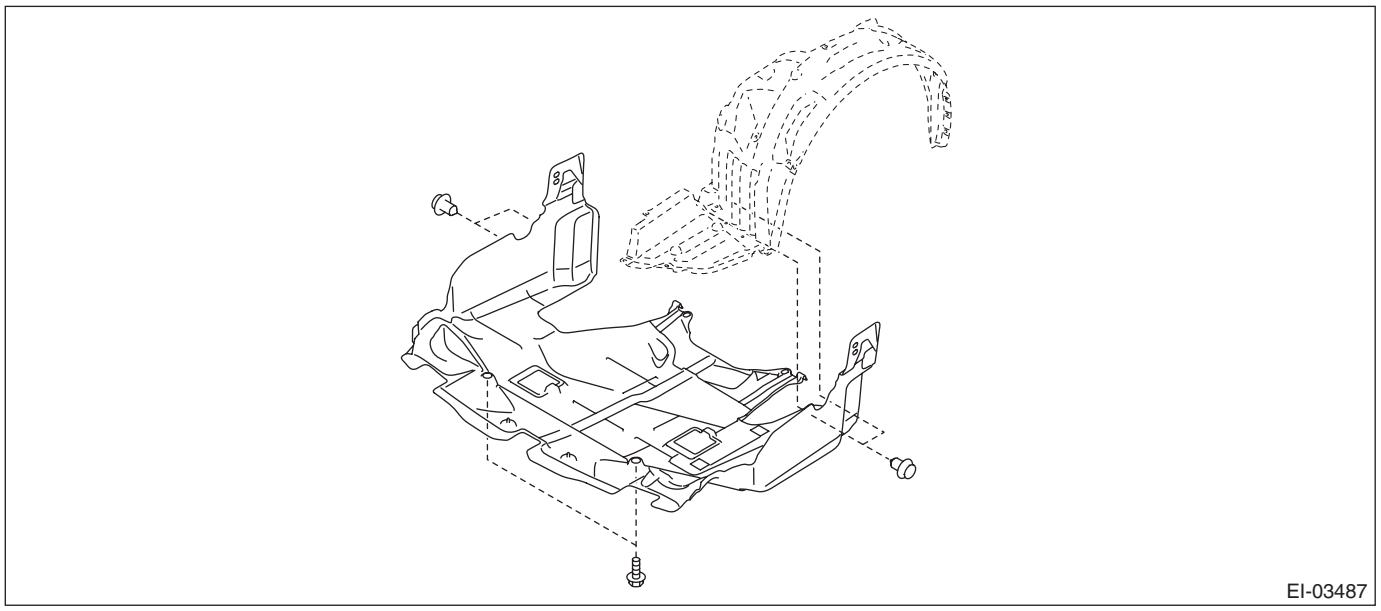
4) Remove the clip, and remove the bracket - grille.

CAUTION:
To prevent damage to the bracket - grille, make sure to remove all clips.

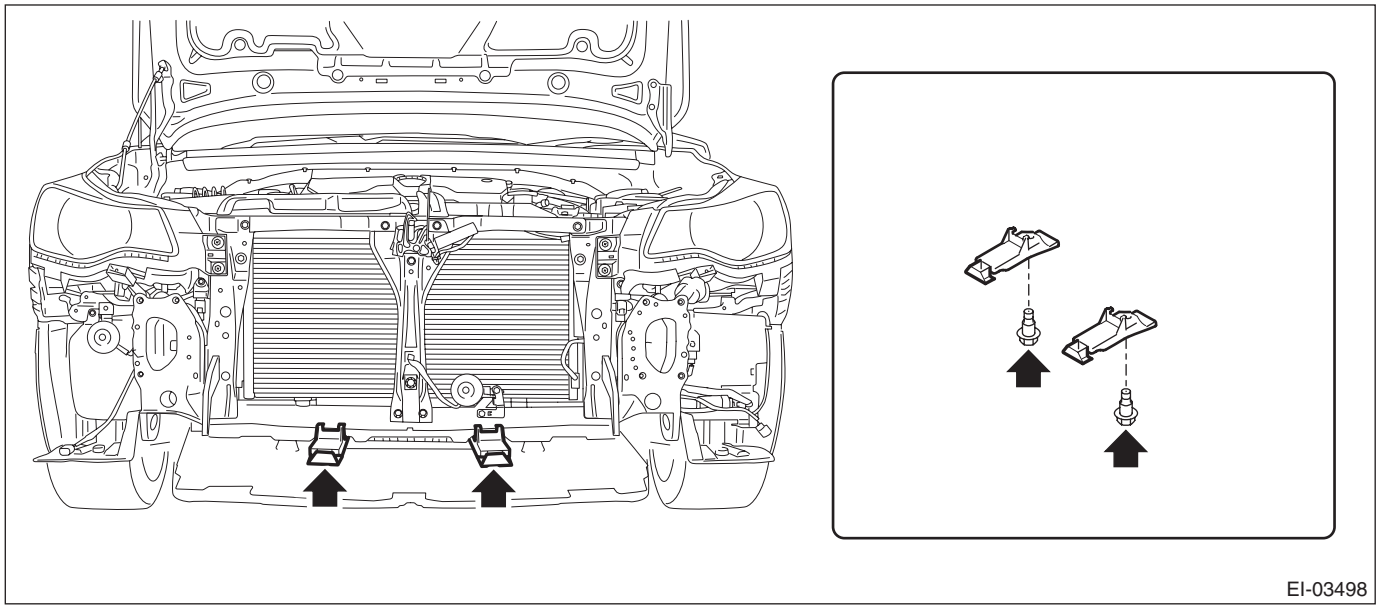


NOTE:
The bracket - grille can be removed without removing the bumper face - front.

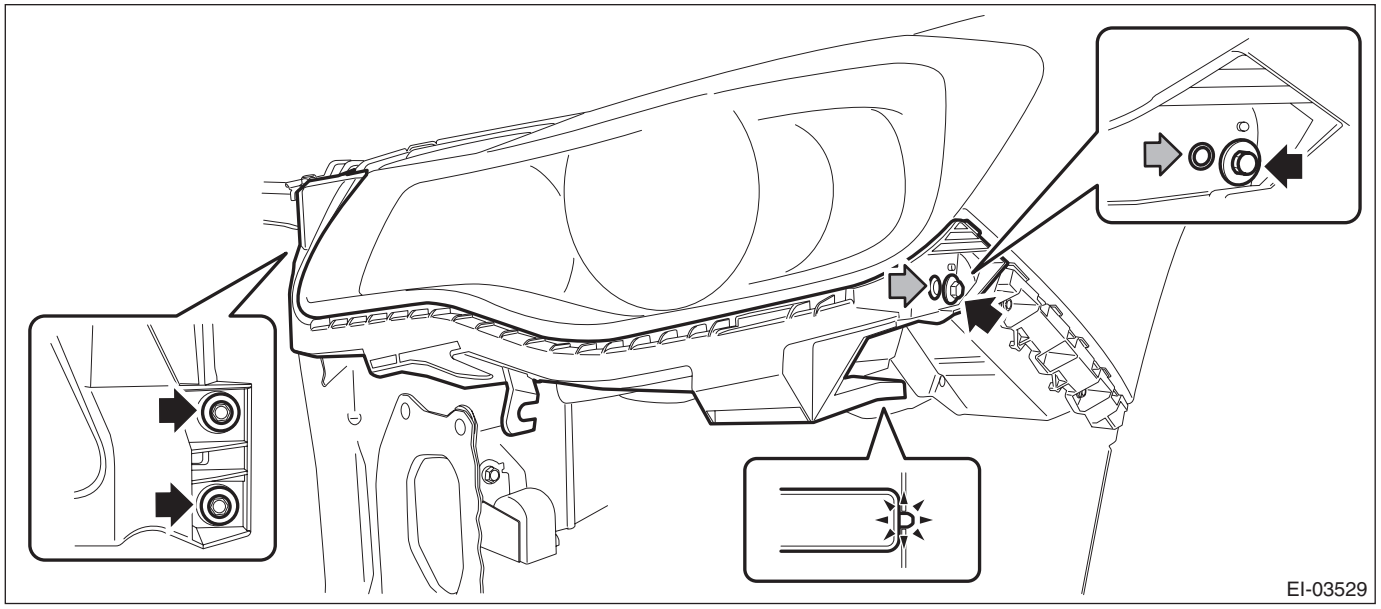
5) Remove the bracket - front center LWR.
(1) Remove the bolts and clips, and turn over the under cover - front.



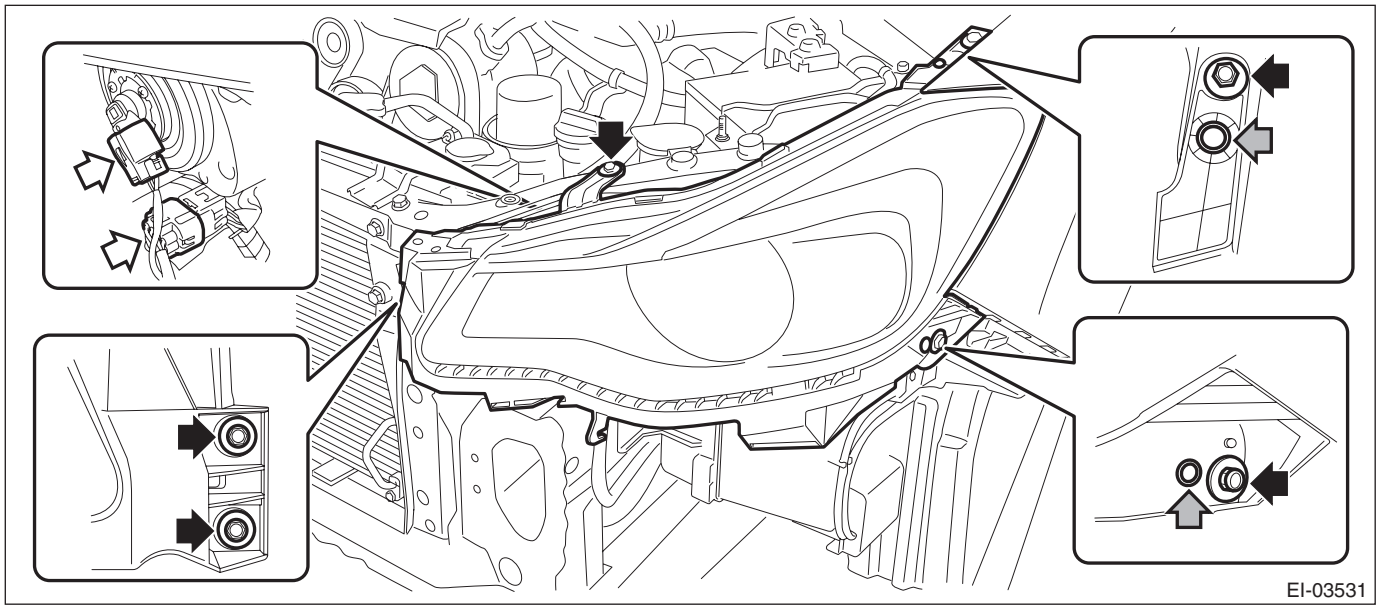
(2) Remove the bolts, and remove the bracket - front center LWR.



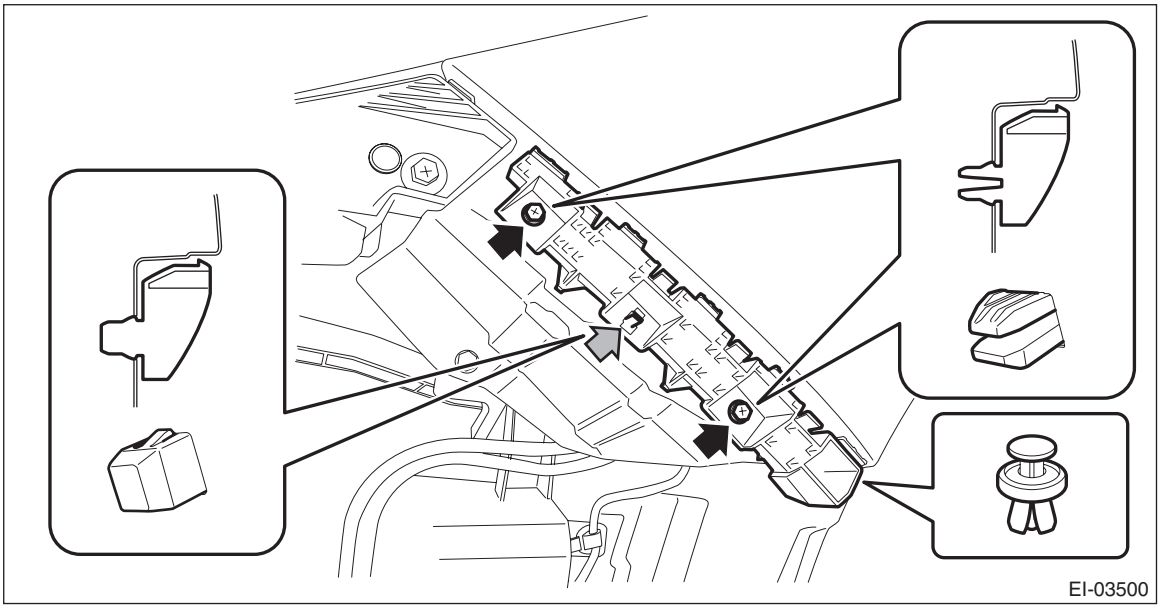
6) Remove the bolts and clips, and remove the bracket - front bumper corner.



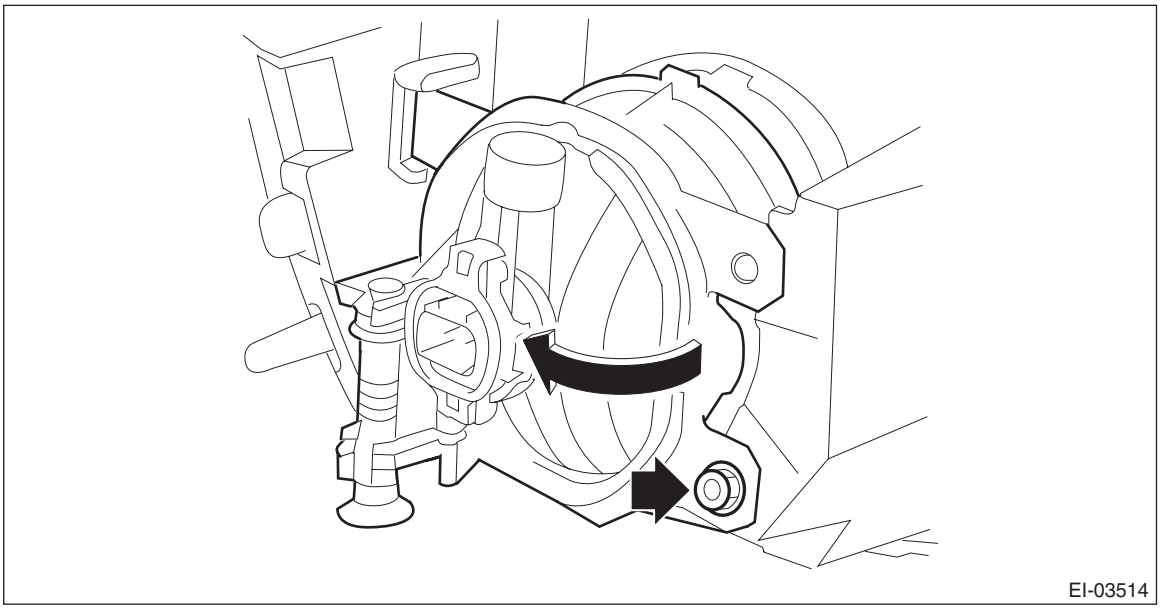
7) Remove the bracket - front bumper side.
(1) Remove the bolts and clips, and remove the light assembly - head and the bracket - front bumper corner.


EI-03531

(2) Remove the screws.
(3) Remove the claws from behind the fender COMPL - front, and remove the bracket - front bumper side.


EI-03500

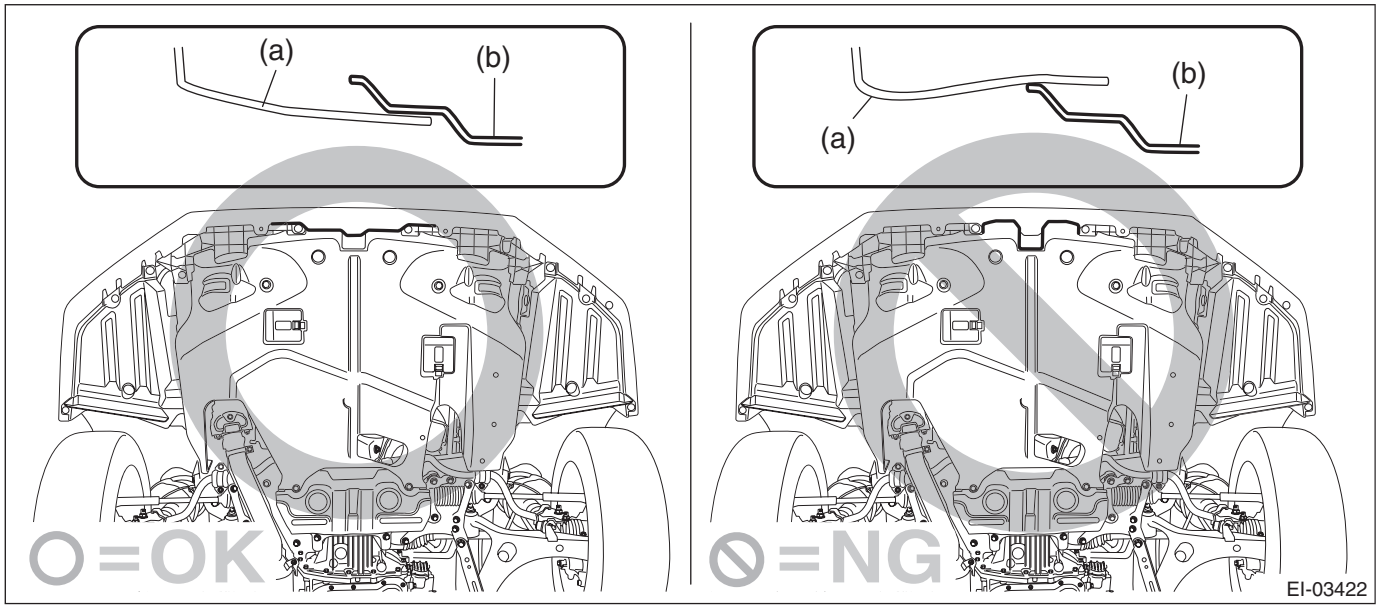
8) Remove the bolt and pin, and remove the fog light assembly - front.



B: INSTALLATION

1) Install each part in the reverse order of removal.
2) Secure the flange section of the bumper face - front to the bracket - front bumper side.

CAUTION:
Install the bumper face - front so that the front end of the under cover (b) comes inside the bumper face - front (a).

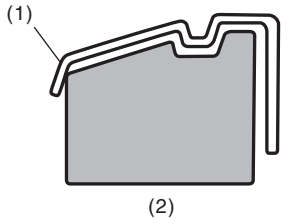


Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EI-3, FRONT BUMPER, COMPONENT, General Description.>

3) Install each part in the reverse order of removal.
4) Adjust the headlight beam and fog light beam.
• Adjust the headlight beam. <Ref. to LI-35, HEADLIGHT BEAM ADJUSTMENT, ADJUSTMENT, Headlight Assembly.>
• Adjust the fog light beam. (model with fog light) <Ref. to LI-55, FOG LIGHT AIMING, ADJUSTMENT, Front Fog Light Assembly.>

C: REPAIR

1. COATING METHOD FOR PP BUMPER

Process No.	Process name	Job contents	
1	Bumper installation	Place the bumper on a paint worktable as required. Use the paint worktable conforming to inner shape of bumper if possible.	 EI-00234 (1) Bumper (2) Set bumper section
2	Masking	Mask specified part (black base) with masking tape. Use masking tape for PP.	
3	Degreasing/cleaning	Clean all parts to be painted with white gasoline, normal alcohol, etc. to remove dirt, oil, fat, etc.	
4	Primer paint	Apply primer to all parts to be painted, using spray gun. Use primer (clear).	
5	Drying	Dry at normal temperature. [10 — 15 min. at 20°C (68°F)] In half-dried condition, PP primer paint is dissolved by solvent, e.g. thinner, etc. Therefore, if dust or dirt must be removed, use ordinary alcohol etc.	
6	Top coat paint (I)	Non-colored	Metallic paint
		Use section (block) paint for top coat. For paint/hardener mixture, observe the specifications recommended by the manufacturers. • Viscosity: 10 — 13 sec./20°C (68°F) • Film thickness: 35 — 45 μ • Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi)	Use section (block) paint for top coat. For paint/hardener mixture, observe the specifications recommended by the manufacturers. • Viscosity: 10 — 13 sec./20°C (68°F) • Film thickness: 15 — 20 μ • Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi)
7	Drying	Not required.	Dry at normal temperature [at least 10 min. at 20°C (68°F)]. In half-dried condition, avoid dust, dirt.
8	Top coat paint (II)	Not required.	Apply a clear coat to parts with top coat paint (I), three times at 5 — 7 minute intervals. For paint/hardener mixture, observe the specifications recommended by the manufacturers. • Viscosity: 14 — 16 sec./20°C (68°F) • Film thickness: 25 — 30 μ • Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi)
9	Drying	60°C (140°F), 60 min. or 80°C (176°F), 30 min. If the temperature is higher than 80°C (176°F), PP may be deformed. Keep maximum temperature at 80°C (176°F) or less.	
10	Inspection	Check paint.	
11	Removal of masking	Remove the masking tape applied in procedure 2.	

2. REPAIR INSTRUCTIONS FOR COLORED PP BUMPER

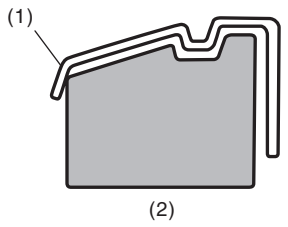
NOTE:
All PP bumpers are provided with a grained surface, and if the surface is damaged, it cannot normally be restored to its former condition. Damages limited to the shallow scratches that cause only a change in the luster of the base material or coating, can be almost fully restored. Before repairing a damaged area, explain this point to the customer and obtain an understanding about the matter.
Repair methods are outlined below, based on a classification of the extent of damage.
1) Minor damage causing only a change in the luster of the bumper due to a light touch
Almost restorable.

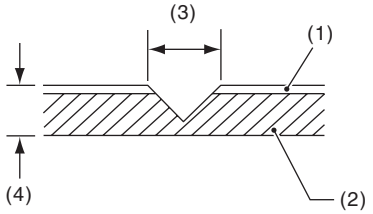
<table>
<tr><th>Process No.</th><th>Process name</th><th colspan="2">Job contents</th></tr>
<tr><td>1</td><td>Cleaning</td><td colspan="2">Clean the area to be repaired using water.</td></tr>
<tr><td>2</td><td>Sanding</td><td colspan="2">Grind the repairing area with #500 sand paper in a “feathering” motion.</td></tr>
<tr><td rowspan="3">3</td><td rowspan="3">Finish</td><td>Resin section</td><td>Coated section</td></tr>
<tr><td>Repeatedly apply wax to the affected area using soft cloth (such as flannel).
Recommended wax: Tire wax or equivalent</td><td rowspan="2">Perform either the same procedures as for the resin section or process No. 18 and subsequent in section 3), depending on the degree and nature of damage.</td></tr>
<tr><td>Polish the waxed area with clean cloth after 5 — 10 minutes.</td></tr>
</table>

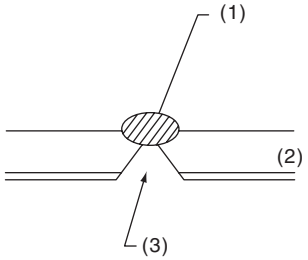
2) Deep damage caused by scratching with fences etc.
A dent cannot be repaired but a whitened or swelled part can be removed.

<table>
<tr><th>Process No.</th><th>Process name</th><th colspan="2">Job contents</th></tr>
<tr><td>1</td><td>Cleaning</td><td colspan="2">Clean the damaged area with water.</td></tr>
<tr><td>2</td><td>Removal of damaged area</td><td colspan="2">Cut off protruding area, if any, due to collision, using a putty knife.</td></tr>
<tr><td>3</td><td>Sanding</td><td colspan="2">Grind the affected area with #100 — #500 sand paper.</td></tr>
<tr><td rowspan="2">4</td><td rowspan="2">Finish</td><td>Resin section</td><td>Coated section</td></tr>
<tr><td>Same as process No. 3 in section “1)”.</td><td>Perform process No. 12 and subsequent operations in section “3)”.</td></tr>
</table>

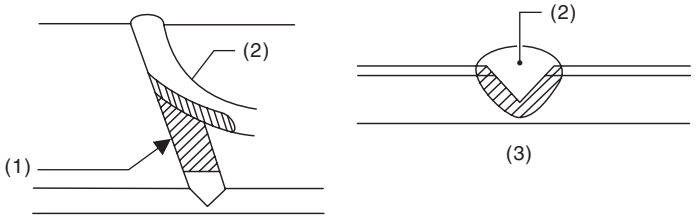
3) Deep damage such as a break or hole that requires filling
Much of the peripheral grained surface must be sacrificed for repair. The degree of restoration is not really worth the expense. (The surface, however, will become almost flush with adjacent areas.)

<table>
<tr><th>Process No.</th><th>Process name</th><th colspan="2">Job contents</th></tr>
<tr><td>1</td><td>Bumper removal</td><td colspan="2">Remove the bumper as required.</td></tr>
<tr><td>2</td><td>Removal of parts</td><td colspan="2">Remove the parts built into bumper as required.</td></tr>
<tr><td>3</td><td>Bumper placement</td><td>Place the bumper on a paint worktable as required.
It is recommended to use the paint worktable conforming to internal shape of bumper.</td><td> 

EI-00234
(1) Bumper
(2) Set bumper section</td></tr>
<tr><td>4</td><td>Surface preparation</td><td colspan="2">Remove dust, oil, etc. from areas to be repaired and surrounding areas, using a suitable solvent (white gasoline or alcohol, etc.).</td></tr>
<tr><td>5</td><td>Cutting</td><td>If the damage is a crack or a hole, cut a guide slit of 20 to 30 mm (0.79 to 1.18 in) in length along the crack or hole to the depth of the bumper base surface. Next, use a knife or grinder to carve a V-shaped groove in the area for repair.</td><td> 

EI-00235
(1) Paint surface
(2) PP base surface
(3) 20 — 30 mm (0.79 — 1.18 in)
(4) 3 mm (0.12 in)</td></tr>
<tr><td>6</td><td>Sanding (I)</td><td colspan="2">Grind beveled surface with sand paper (#40 — #60) to smooth finish.</td></tr>
<tr><td>7</td><td>Cleaning</td><td colspan="2">Clean the sanded surface with the same solvent as used in process No. 4.</td></tr>
<tr><td>8</td><td>Temporary welding</td><td colspan="2">Grind the side just opposite the beveled area with sand paper (#40 — #60) and clean using a solvent.
Temporarily spot-weld the side, using PP welding rod and heater gun.
 

EI-00236
(1) Welded point (Use heater gun and PP welding rod)
(2) PP base surface
(3) Beveled section
NOTE:
• Do not melt welding rod until it flows out. This results in reduced strength.
• Leave the welded spot unattended until it cools completely.</td></tr>
</table>

Process No.	Process name	Job contents
9	Welding	Using a heater gun and PP welding rod, weld the beveled spot while melting both the rod and damaged area.
		 EI-00237 (1) Welding rod (2) Melt hatched area (3) Section NOTE: • Melt the sections indicated by hatched area. • Do not melt the welding rod until it flows out, in order to provide strength. • Always keep the heater gun 1 to 2 cm (0.4 to 0.8 in) away from the welding spot. • Leave the welded spot unattended until it cools completely.
10	Sanding (II)	Remove excess part of weld with a putty knife. If a drill or disc wheel is used instead of the knife, operate it at a rate less than 1,500 rpm and grind the excess part little by little. A higher rpm will cause the PP substrate to melt from the heat.
		 EI-00042
		Sand the welded spot smooth with #240 sand paper.
11	Masking	Mask the black substrate section using masking tape.
12	Cleaning/degreasing	Completely clean the entire coated area, using solvent similar to that used in process No. 4.
13	Primer coating	Apply a coat of primer for bumpers to the repaired surface and its surrounding areas. Mask these areas, if necessary. NOTE: Be sure to apply a coat of primer using a spray gun at a pressure of 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi).
14	Leave unattended	Leave the repaired area unattended at 20°C (68°F) for 10 to 15 minutes until primer is half-dry. NOTE: If dirt or dust comes in contact with the coated area, wipe it off with a cloth dampened with alcohol. (Do not use thinner since the coated area tends to melt.)
15	Surfacer coating	Apply a coat of surfacer for PP bumpers to the repaired area two or three times at an interval of 3 — 5 minutes. For surfacer/hardener mixture, viscosity and paint thickness, observe the specifications of the surfacers to be used.
16	Drying	Allow the coated surface to dry for 20 minutes at 20°C (68°F) [or 30 minutes at 60°C (140°F)].
17	Sanding (III)	Sand the coated surface and its surrounding areas using #400 sand paper and water.
18	Cleaning/degreasing	Same as process No. 12.

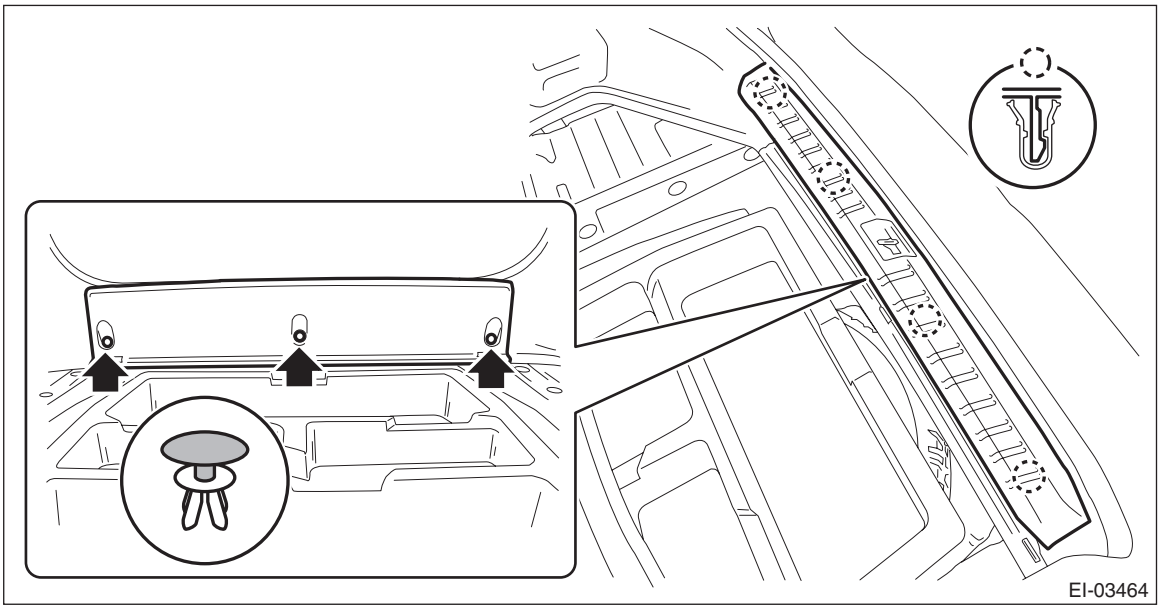
Process No.	Process name	Job contents	
		Non-colored	Metallic paint
19	Top coat (I)	Use a “block” coating method. For paint/hardener mixture, observe the specifications recommended by the manufacturers. • Viscosity: 11 — 13 sec./20°C (68°F) • Coating film thickness: 40 — 50 µ • Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi)	Use a “block” coating method. For paint/hardener mixture, observe the specifications recommended by the manufacturers. • Viscosity: 11 — 13 sec./20°C (68°F) • Coating film thickness: 20 — 30 µ • Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi)
20	Leave unattended	Not required.	Leave unattended at 20°C (68°F) for at least 10 minutes until the topcoated area is half-dry. NOTE: Be careful to keep dust or dirt from coming in contact with the affected area.
21	Top coat (II)	Not required.	Apply a clear coat three times at an interval of 3 to 5 minutes. For paint/hardener mixture, observe the specifications recommended by the manufacturers. • Viscosity: 10 — 13 sec./20°C (68°F) • Coating film thickness: 20 — 30 µ • Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi)
22	Drying	Allow the coated surface to dry for two hours at 20°C (68°F) or 30 minutes at 60°C (140°F). NOTE: Do not allow the temperature to exceed 80°C (176°F) since this will deform the PP substrate.	
23	Inspection	Carefully check the condition of the repaired area.	
24	Removal of masking	Remove the masking tape applied in process No. 11 and 13.	
25	Parts installation	Install parts on the bumper in reverse order of removal.	
26	Bumper installation	Install the bumper.	

7. Rear Bumper

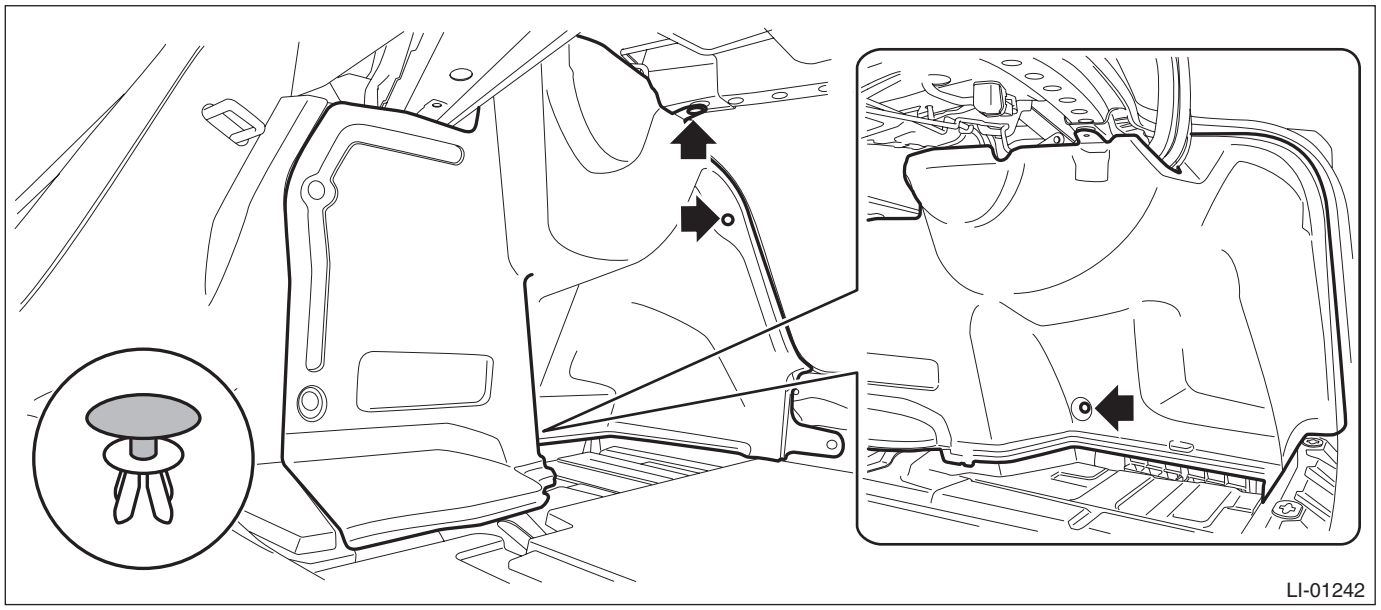
A: REMOVAL

1. 4 DOOR MODEL

1) Disconnect the ground cable from battery.
2) Remove the trunk room mat.
3) Remove the trim panel - trunk rear.
   (1) Remove the clip.
   (2) Release the claws, and remove the trim panel - trunk rear.

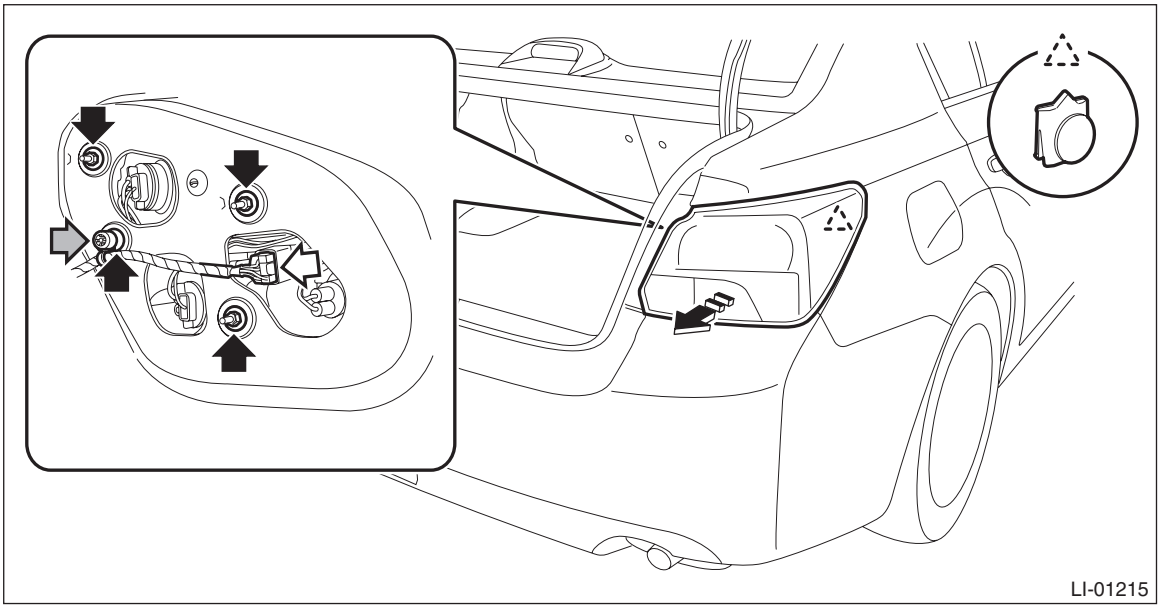


4) Remove the clips, and turn over the trim panel - trunk side.

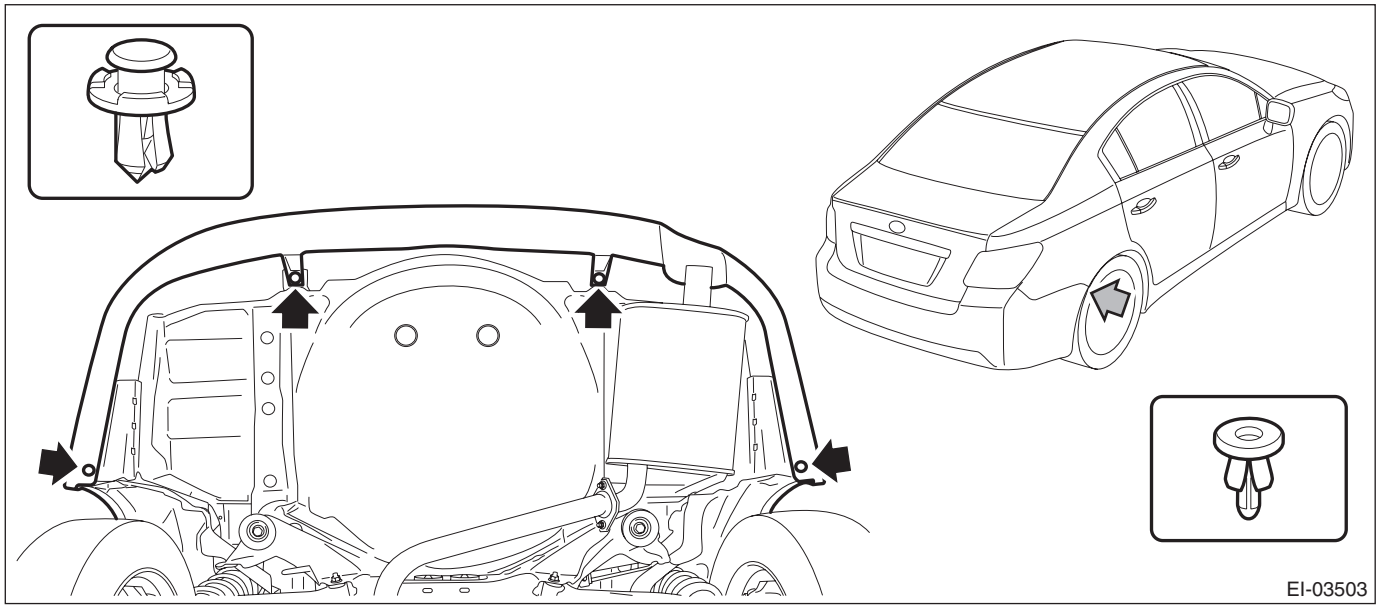


5) Remove the light assembly - rear combination.
(1) Remove the harness clamp and connector.
(2) Release the nuts and clips, then remove the light assembly - rear combination.

CAUTION:
Be careful not to damage the clips.



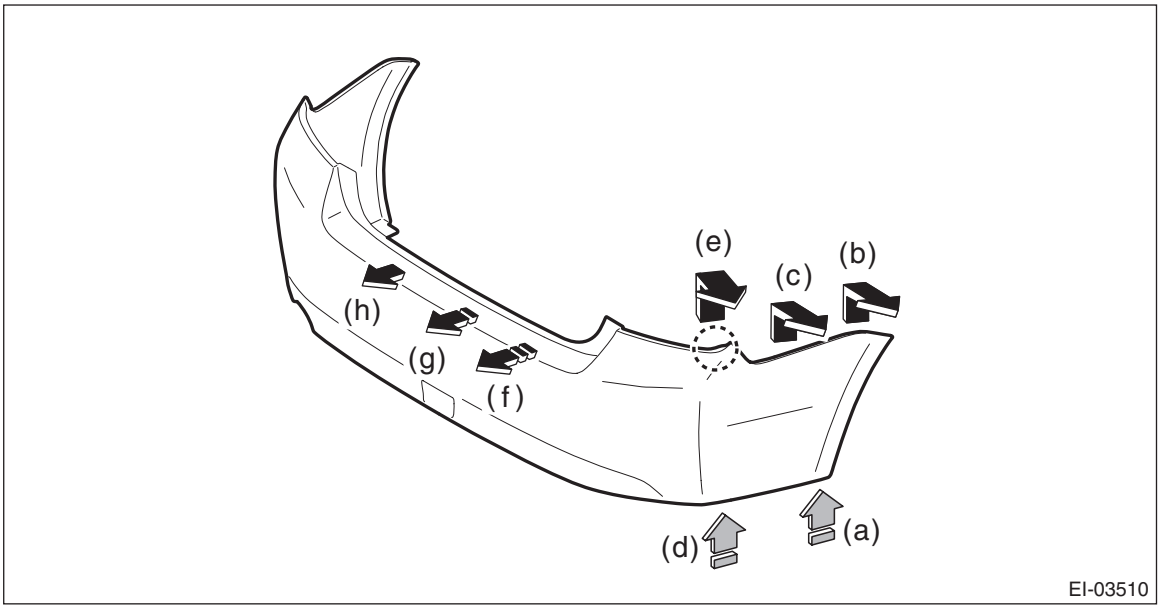
6) Remove the bumper face - rear.
(1) Remove the clips inside the wheel housing.
(2) Remove the clips at the lower side of the bumper face - rear.



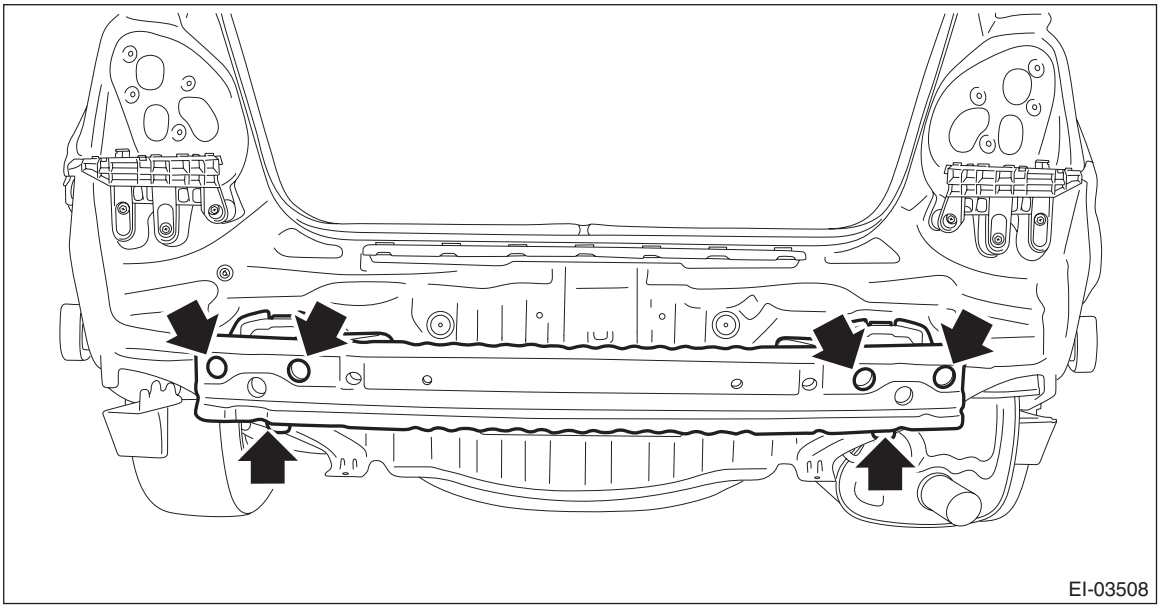
(3) Detach (b) and (c) while pulling up (a) of the bumper face - rear.
(4) Detach (e) while pulling up (d) of the bumper face - rear.
(5) Detach the opposite side in the same manner.

(6) Detach in order from (f) to (h) while pulling up the center part of the bumper face - rear.

CAUTION:
Pulling with excessive force may damage the bracket.

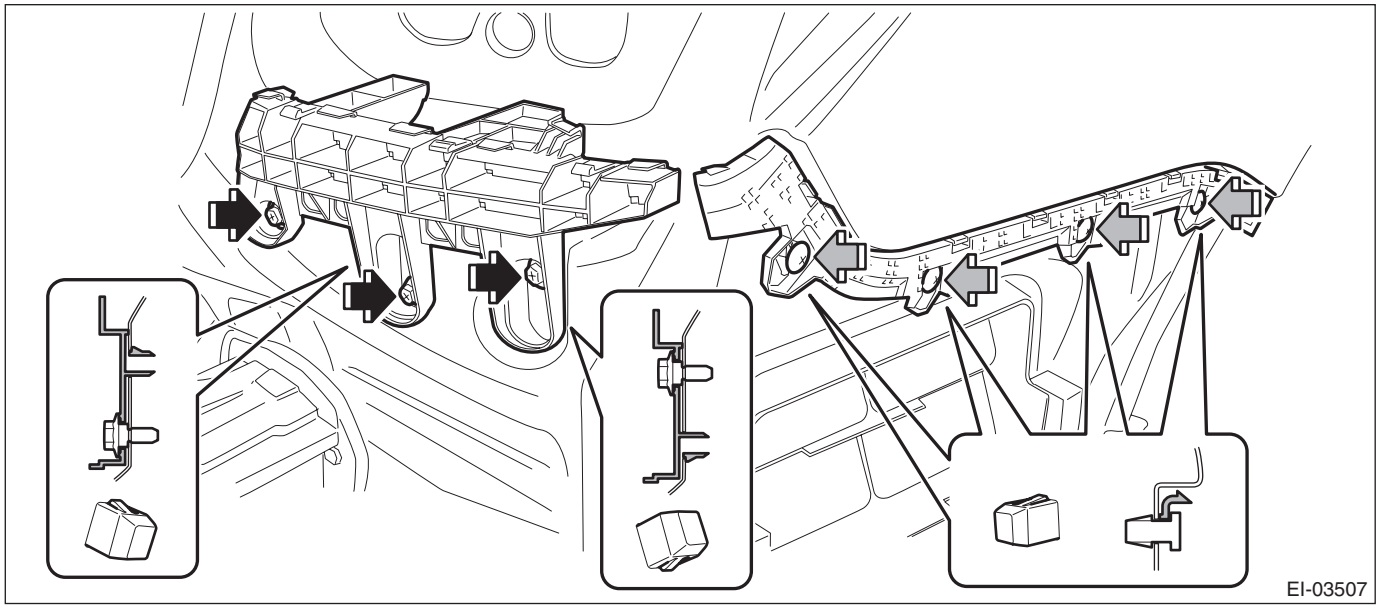


7) Remove the bolts and nuts, and remove the bumper beam COMPL - rear.



NOTE:
After all nuts are removed, raise the bumper beam COMPL - rear a little to remove it from vehicle body.

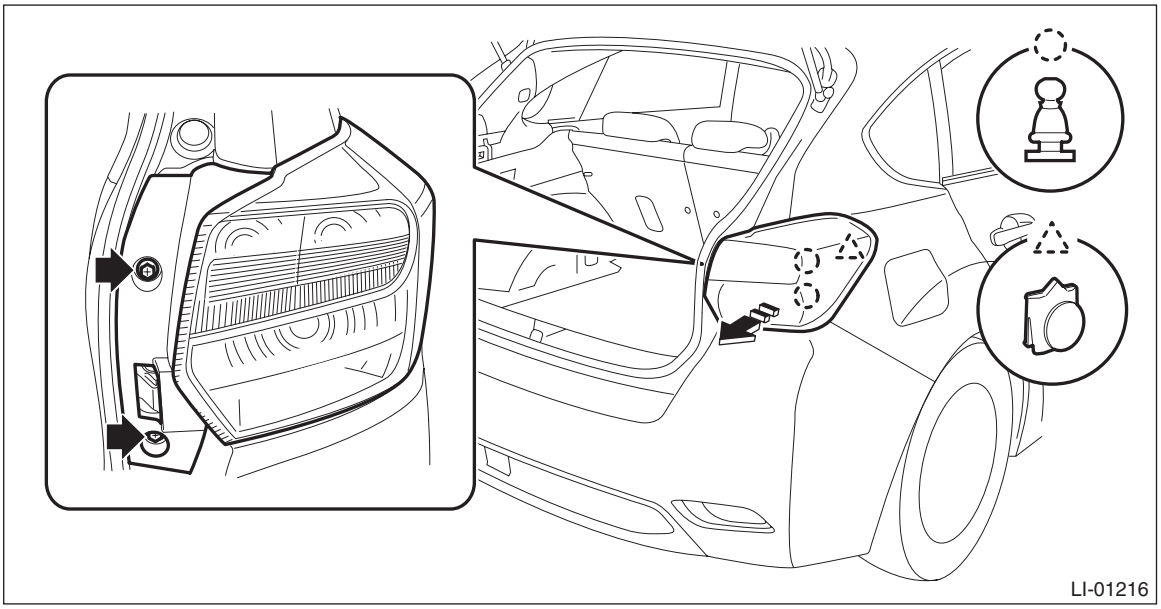
8) Remove bumper brackets.
(1) Remove the screws.
(2) Turn over the trim panel - trunk side, and detach the claw of the clip from the back side.



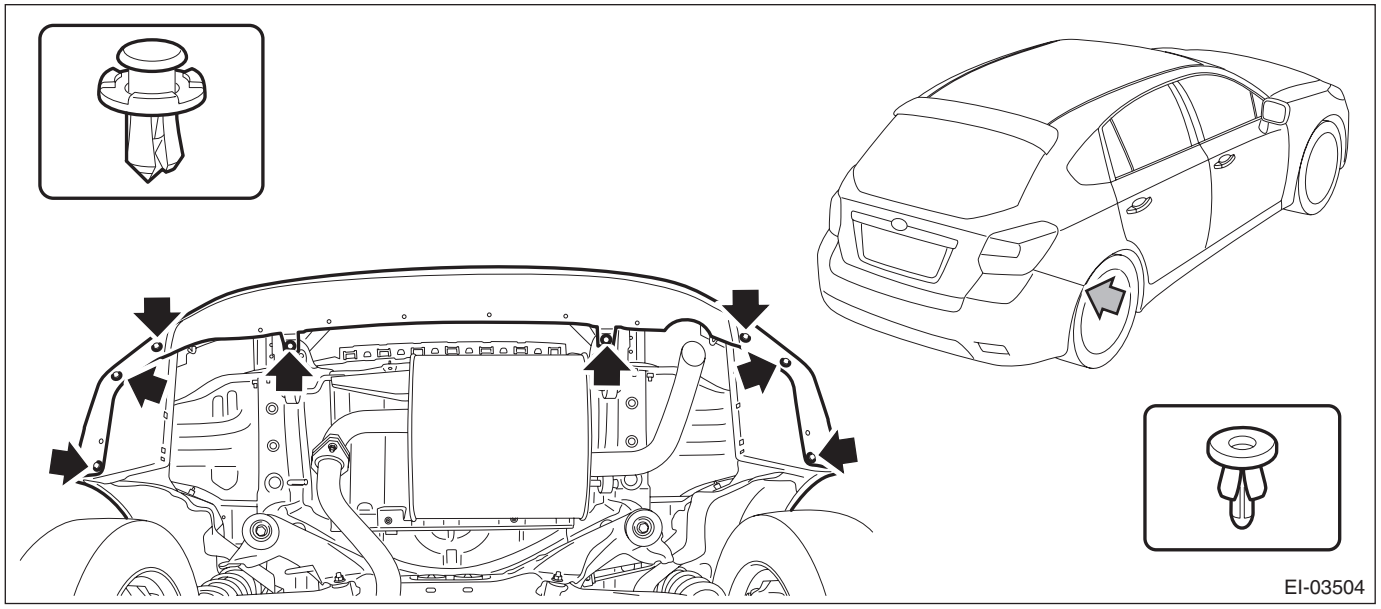
2. 5 DOOR MODEL

1) Disconnect the ground cable from battery.
2) Remove the light assembly - rear combination.

CAUTION:
Be careful not to damage the clips.
(1) Release the bolts and clips, then pull out the light assembly - rear combination to the vehicle rear.
(2) Disconnect the connector and remove the light assembly - rear combination.

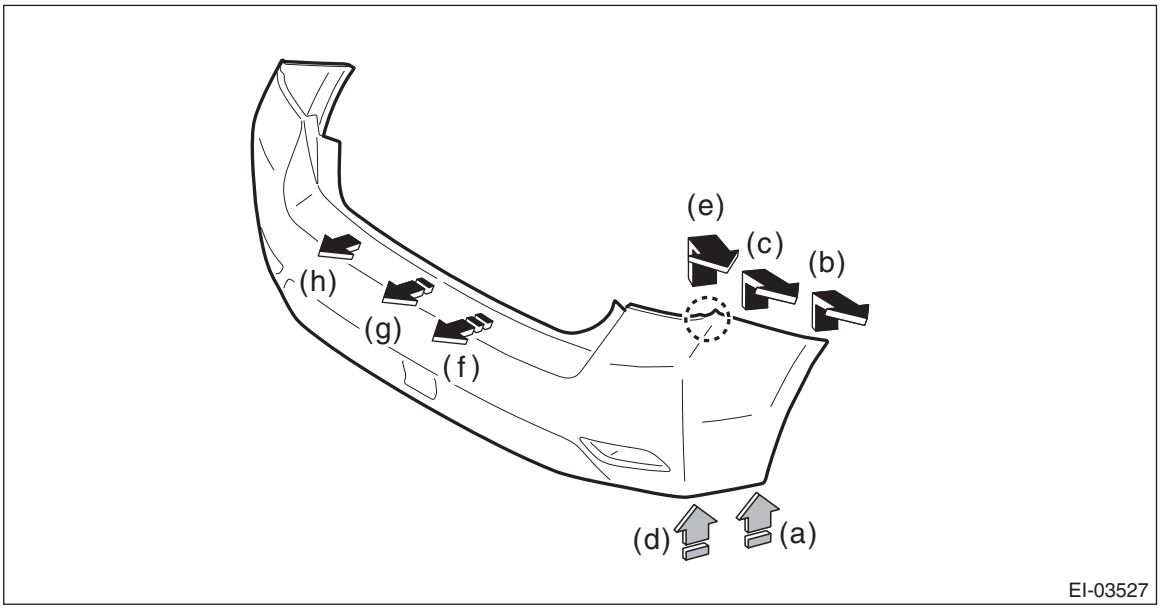


3) Remove the bumper face - rear.
(1) Remove the clips inside the wheel housing.
(2) Remove the clips at the lower side of the bumper face - rear.

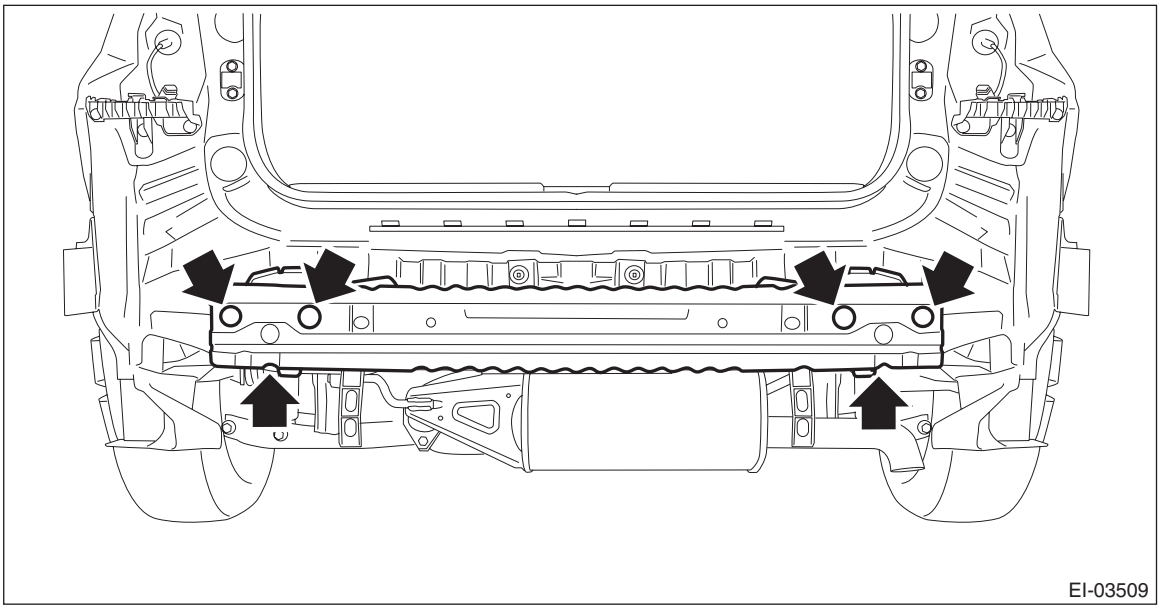


(3) Detach (b) and (c) while pulling up (a) of the bumper face - rear.
(4) Detach (e) while pulling up (d) of the bumper face - rear.
(5) Detach the opposite side in the same manner.
(6) Detach in order from (f) to (h) while pulling up the center part of the bumper face - rear.

CAUTION:
Pulling with excessive force may damage the bracket.

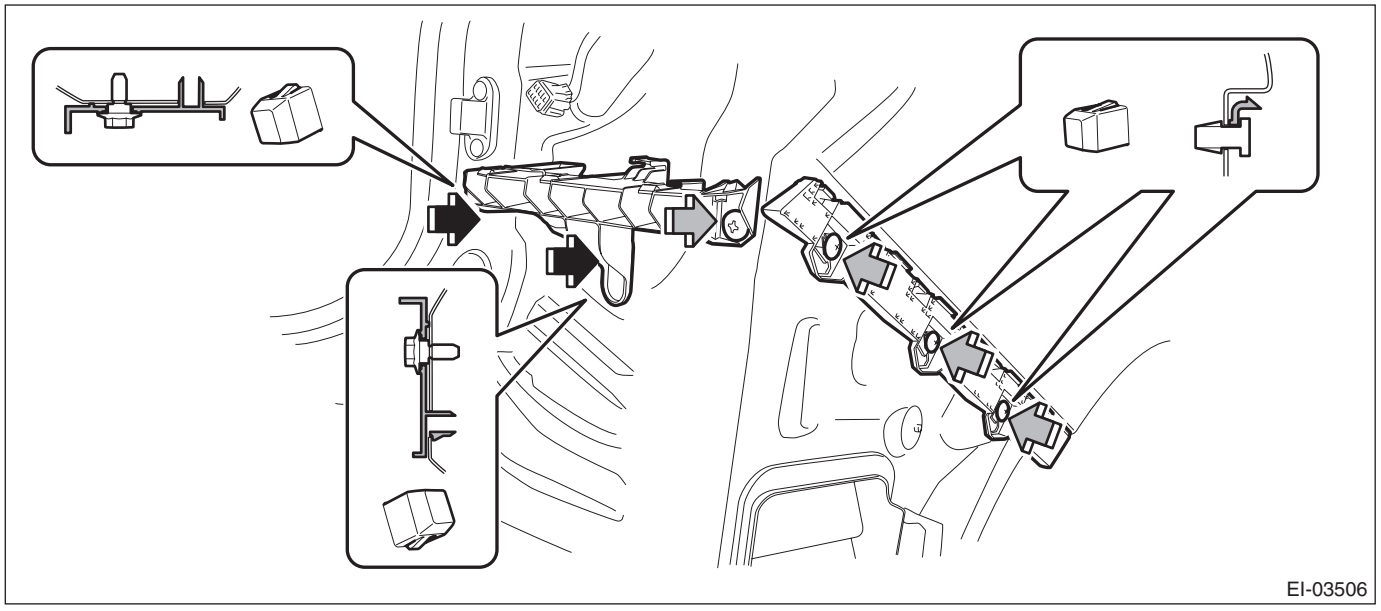


4) Remove the bolts and nuts, and remove the bumper beam COMPL - rear.

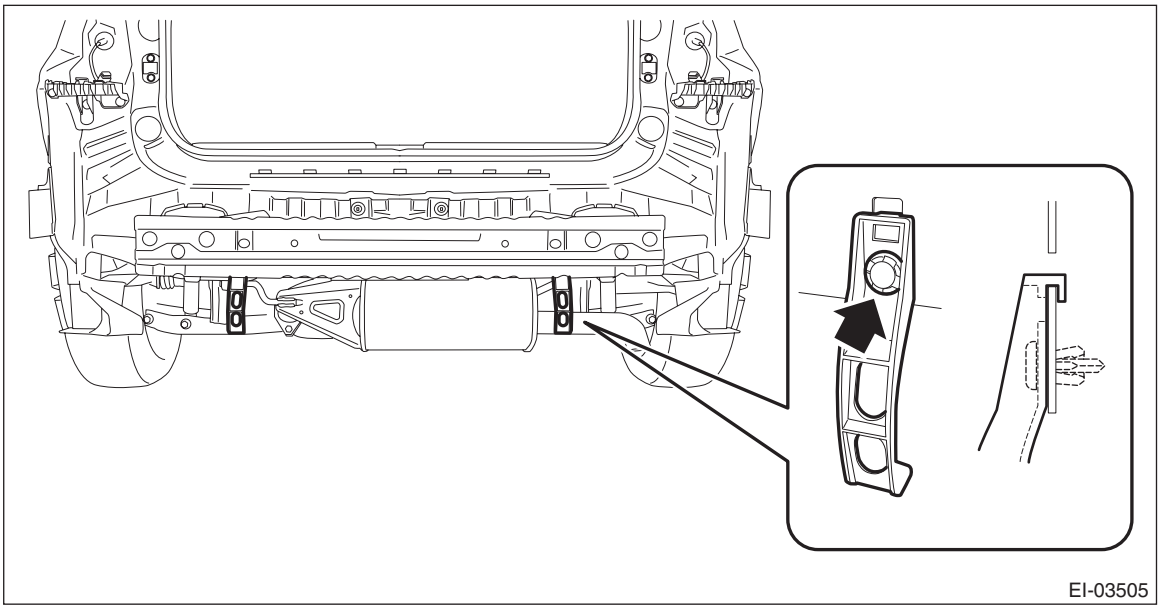


NOTE:
After all nuts are removed, raise the bumper beam COMPL - rear a little to remove it from vehicle body.

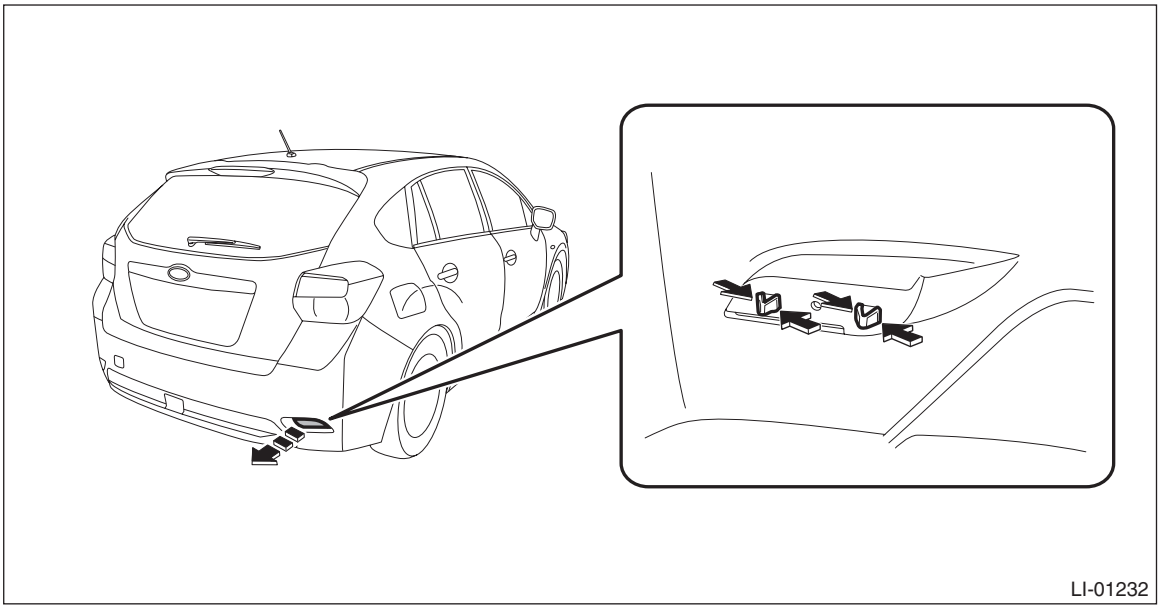
5) Remove bumper brackets.
(1) Remove the screws.
(2) Turn over the trim panel - trunk side, and detach the claw of the clip from the back side.



(3) Remove the clip, and remove the bracket - rear bumper lower.



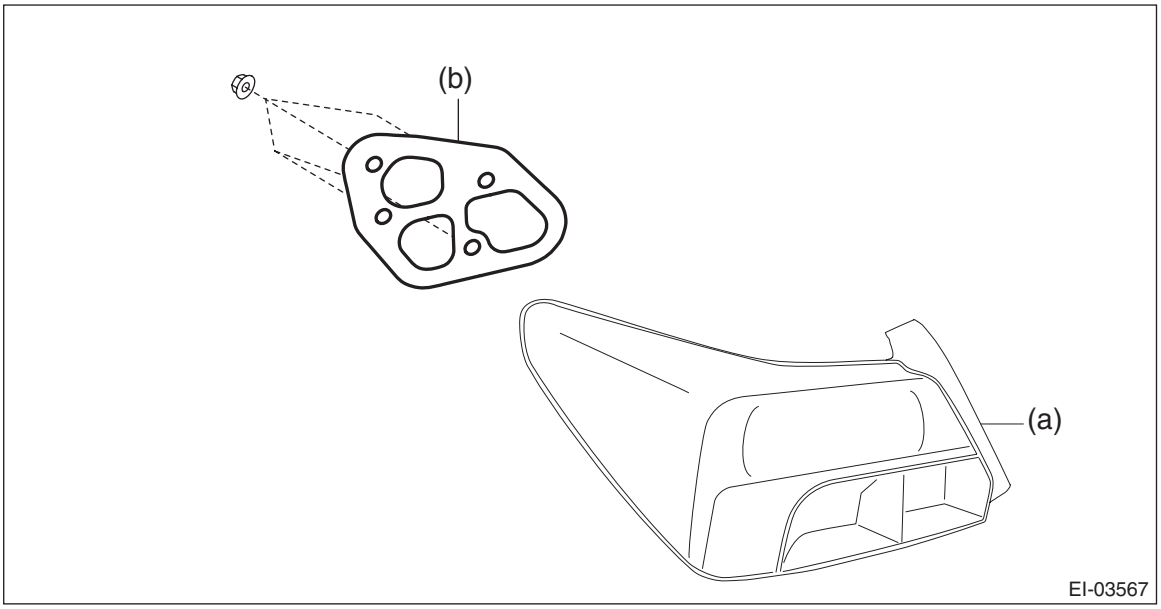
6) From behind the bumper, release the claws, and remove the reflex reflector assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

CAUTION:
For 4 door model, replace the seal gasket (b) of the light assembly - rear combination (a) with a new part. If the seal gasket is reused, water leaks may occur.



NOTE:
If the bumper face - rear comes off too easily, adjust the hook of the bracket side.

Tightening torque:
Rear bumper component: <Ref. to EI-4, REAR BUMPER, COMPONENT, General Description.>
Light assembly - rear combination: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

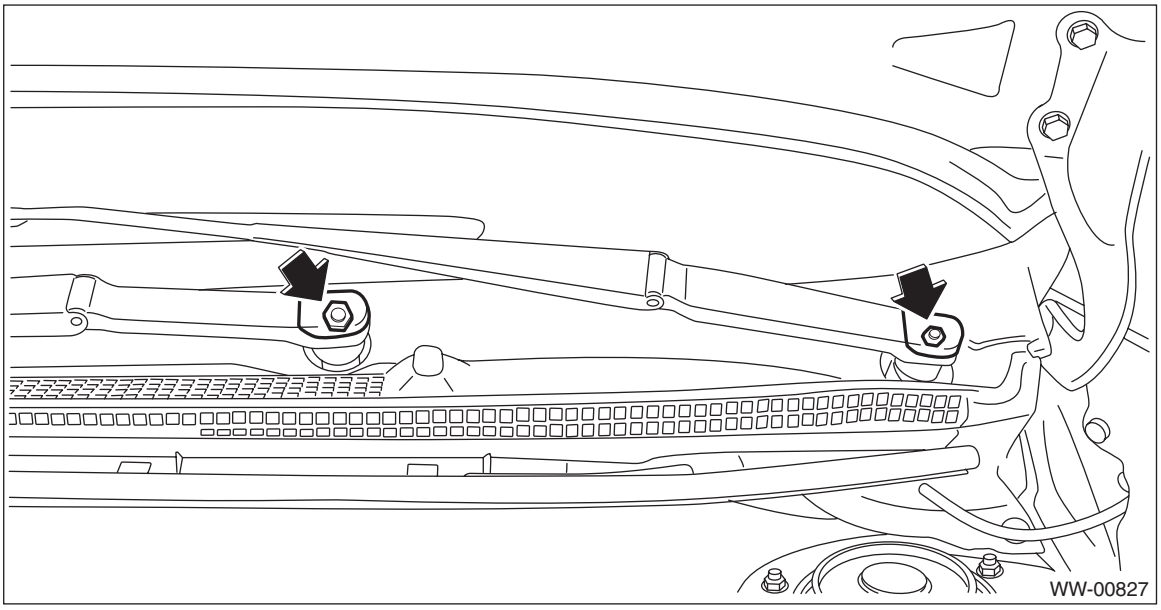
C: REPAIR

Refer to the description concerning repair in “Front Bumper” section. <Ref. to EI-37, REPAIR, Front Bumper.>

8. Cowl Panel

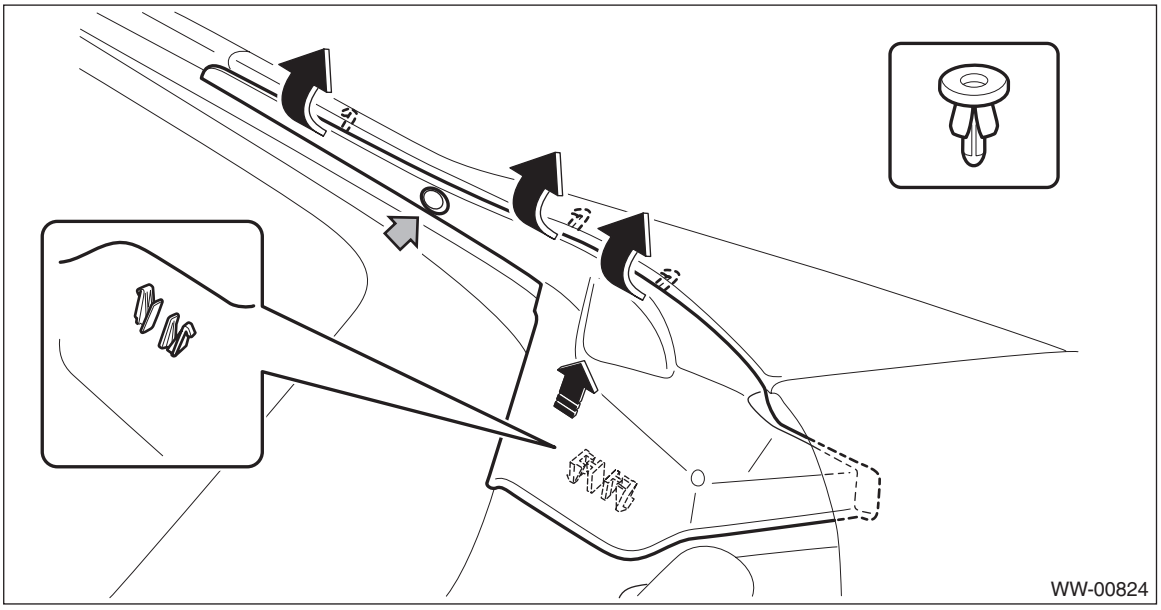
A: REMOVAL

1) Open the front hood.
2) Remove the arm assembly - windshield wiper.
   (1) Remove the cover - windshield wiper arm.
   (2) Remove the nuts, and remove the arm assembly - windshield wiper.



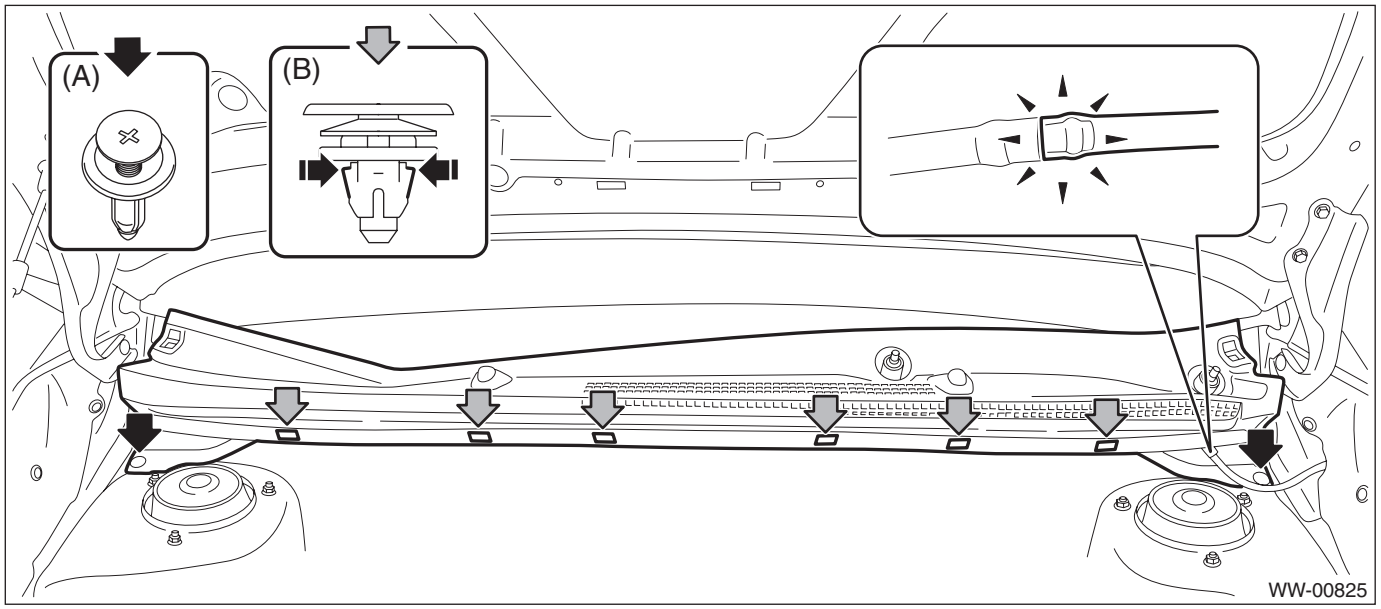
3) Remove the cowl panel - side.
   (1) Remove the clips.
   (2) Release the claws, and then remove the cowl panel - side.

CAUTION:
Pulling with excessive force may damage the cowl panel - side. If it is difficult to remove, use a plastic remover or equivalent tool.



4) Remove the cowl panel assembly.
(1) Disconnect the washer hose.
(2) Remove clips (A).
(3) Check the direction of the clip (B), and push the claws from both sides to remove it.

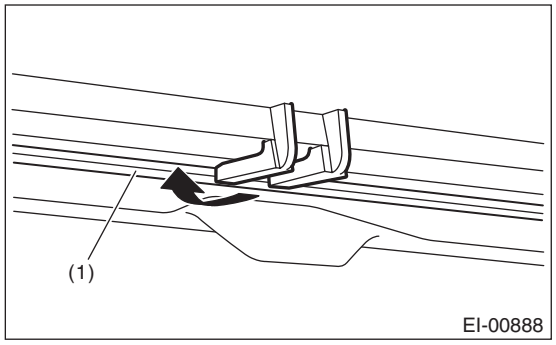
CAUTION:
When removing the clip (B), push the claw of the clip.
Be careful not to apply excessive force when pulling the clip (B), as the clip may become damaged.
(4) Remove the cowl panel assembly by pulling it out towards the front of the vehicle.



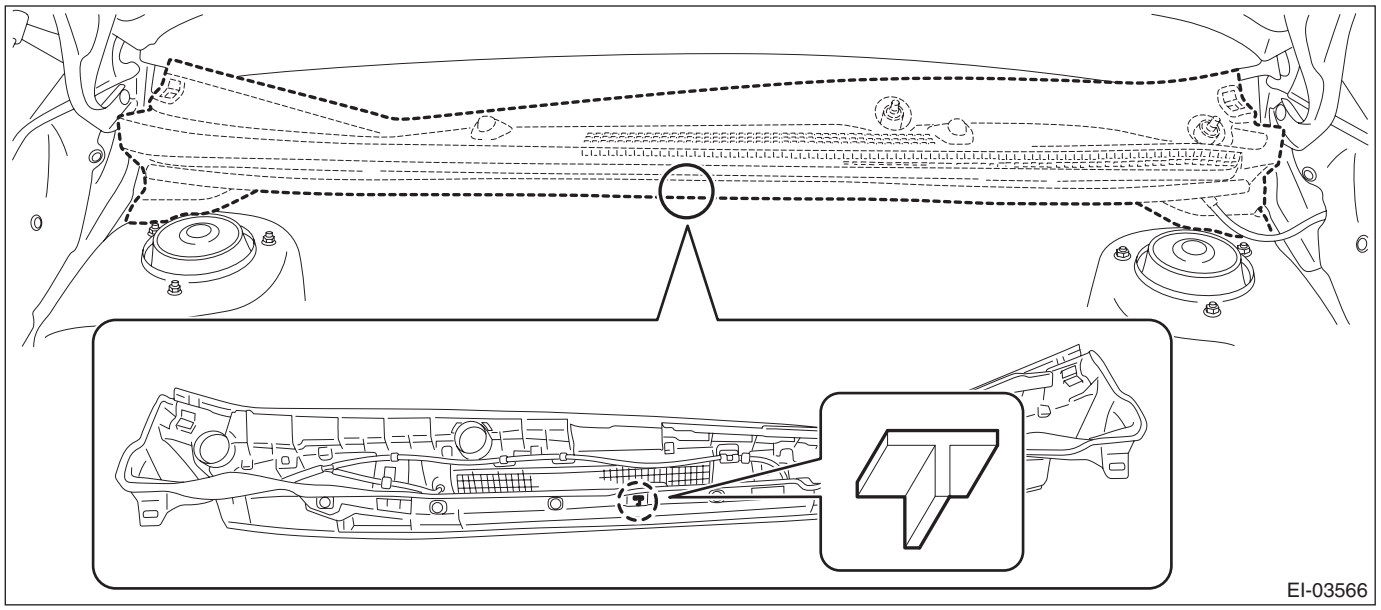
B: INSTALLATION

1) Install the cowl panel assembly.

CAUTION:
If the cowl panel assembly cannot be installed properly, do not hit or set it forcibly. The claws of the cowl panel or the windshield glass may be damaged.
(1) Hook the claw of the cowl panel on the lower end (1) of the windshield.



(2) Align the center claw of the cowl panel assembly to the cutout portion of the vehicle side, then install the cowl panel assembly.



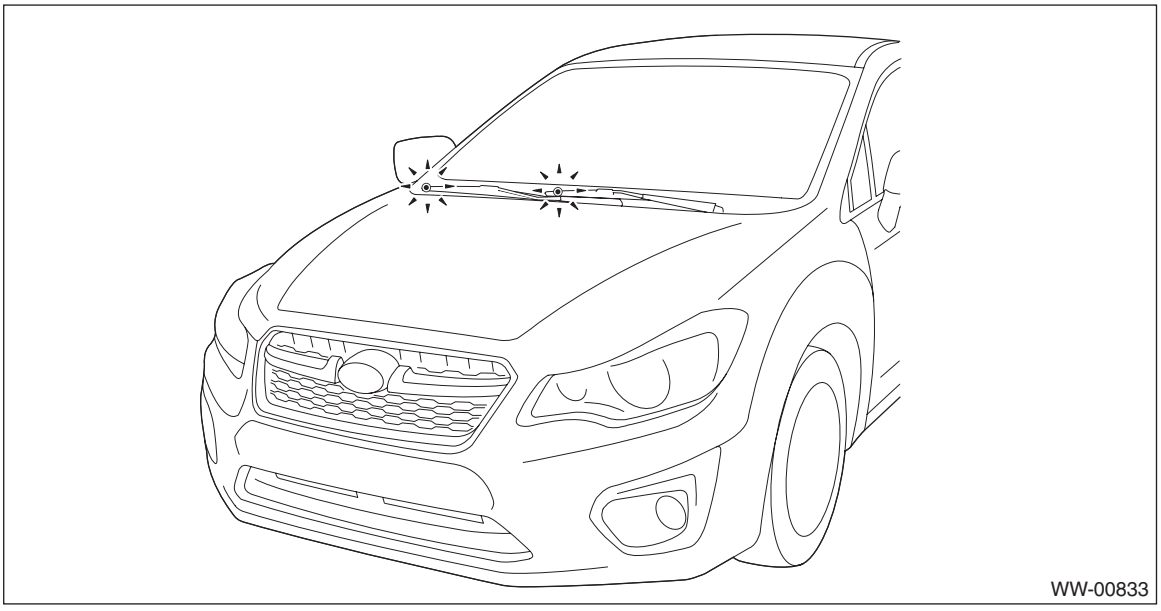
2) Install the arm assembly - windshield wiper.

(1) Assemble the arm assembly - windshield wiper so that the blade assembly - windshield wiper is aligned to the ceramic print point mark of the windshield glass.

(2) Tighten the arm assembly - windshield wiper to specified torque and install the cap.

Tightening torque:

22 N·m (2.24 kgf-m, 16.2 ft-lb)



3) Install the remaining parts in the reverse order of removal.

Tightening torque:

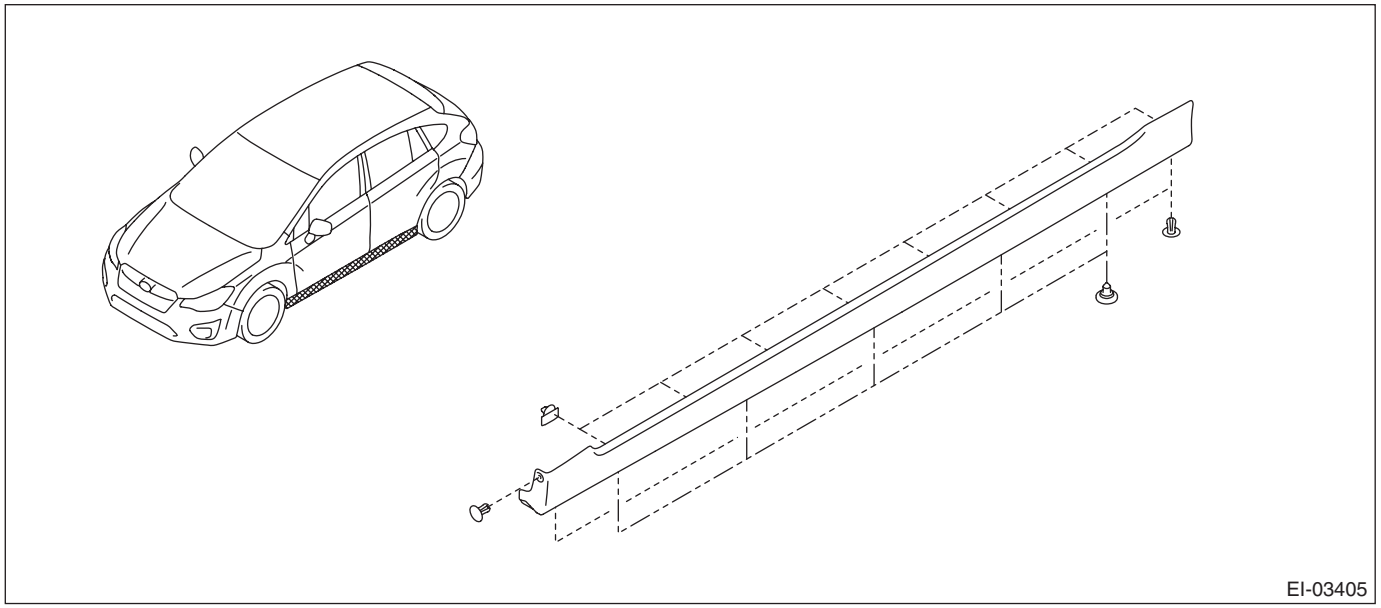
Arm assembly - windshield wiper: <Ref. to WW-2, FRONT WIPER, COMPONENT, General Description.>

4) If the washer nozzles have been removed from the cowl panel assembly, adjust the washer spray positions. <Ref. to WW-37, ADJUSTMENT, Front Washer Nozzle.>

9. Side Sill Spoiler

A: REMOVAL

Remove the clips and detach the side sill spoiler assembly.



B: INSTALLATION

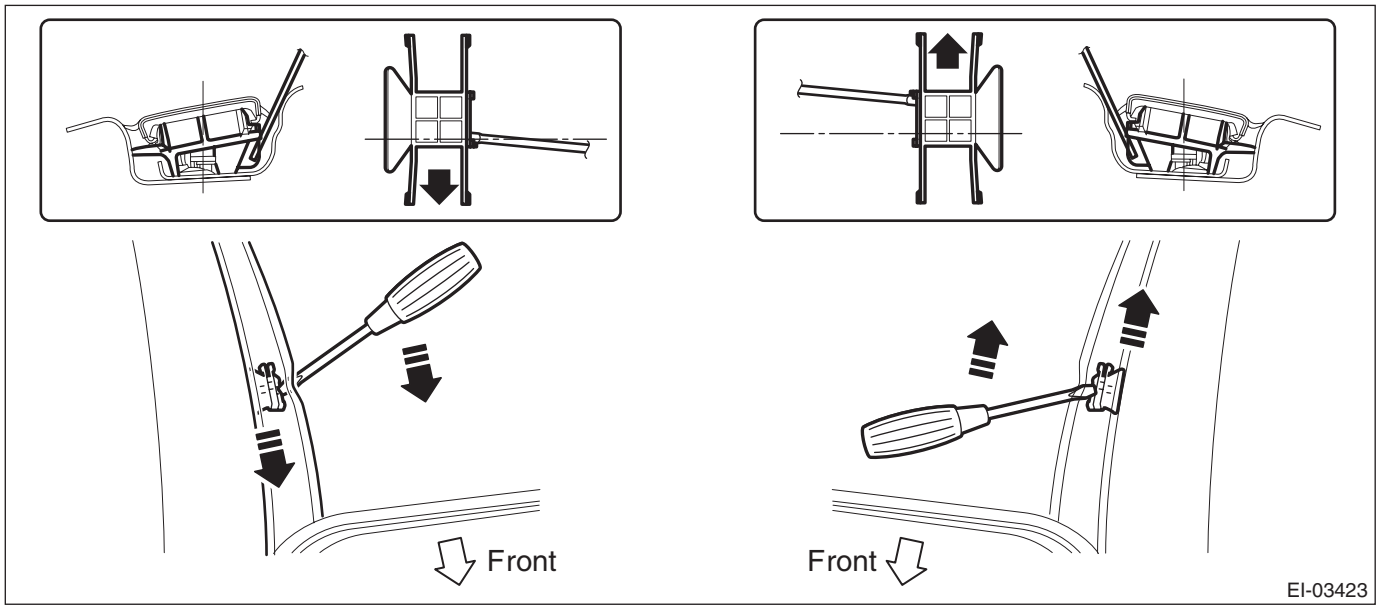
Install each part in the reverse order of removal.

10.Roof Molding

A: REMOVAL

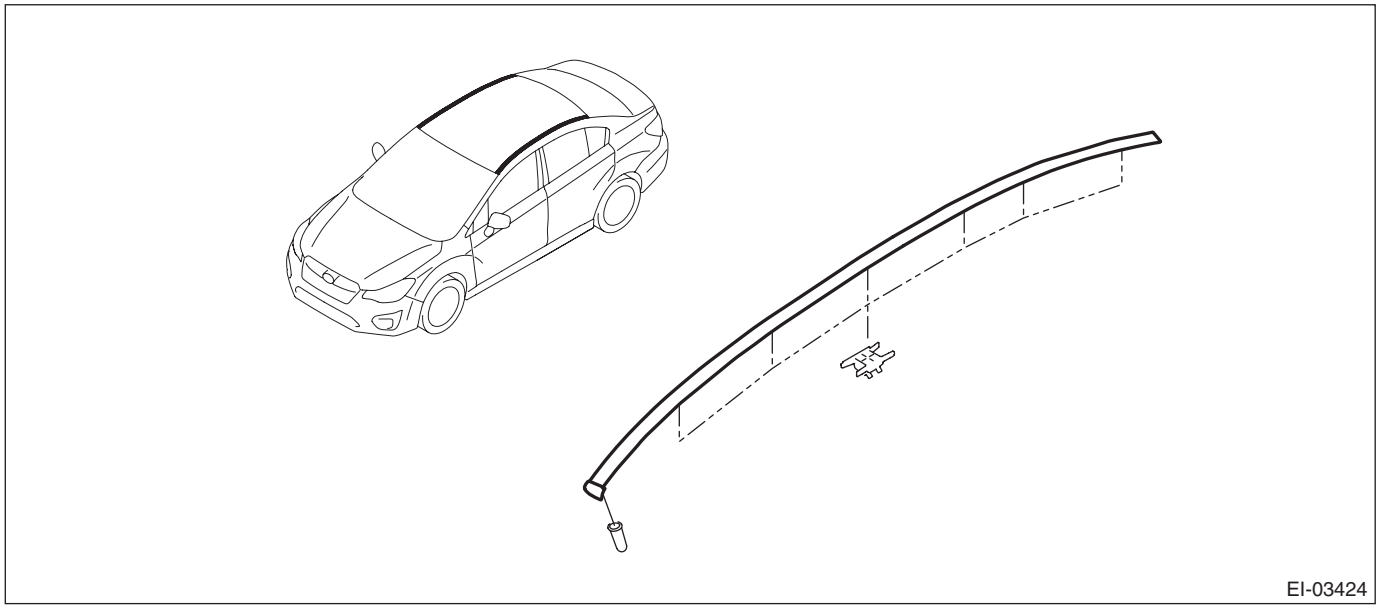
CAUTION:
Be careful not to damage the body.

1) Remove the roof rail assembly. (model with roof rail) <Ref. to EI-57, REMOVAL, Roof Rail.>
2) Turn over the front end of the molding - roof.
3) Slide the inner fastener in the direction of the arrow using a flat tip screwdriver, then remove the fastener from the stud on the vehicle side.

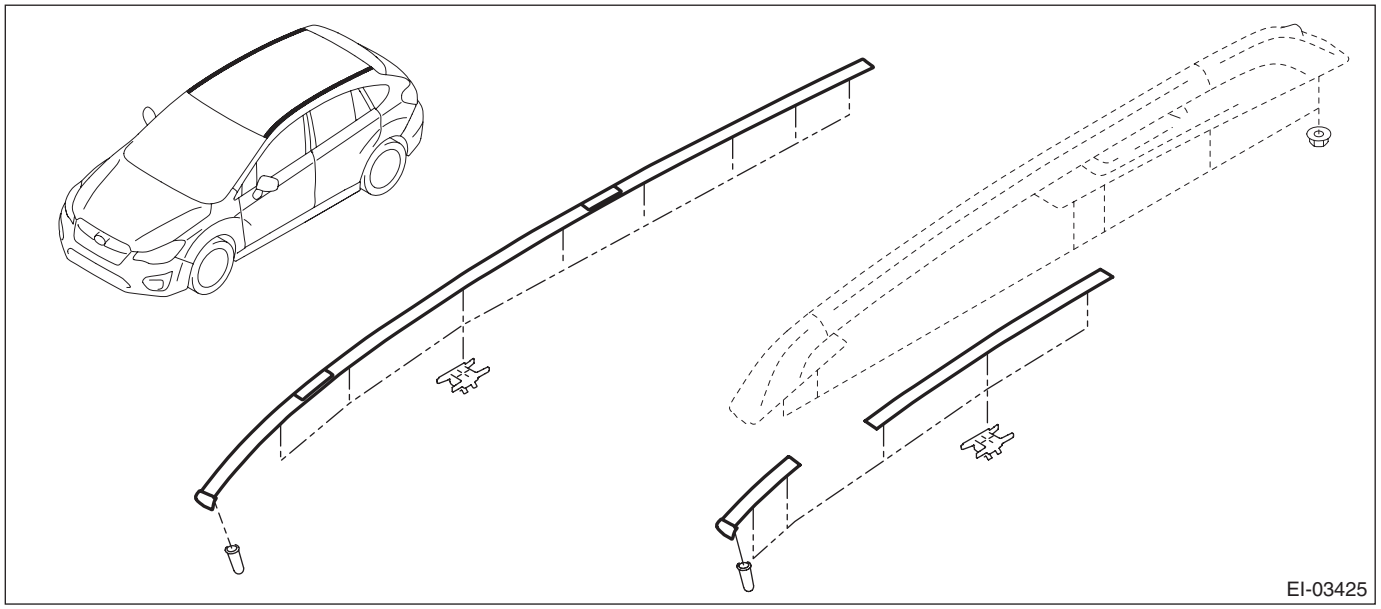


Right side: Slide towards the front of the vehicle.
Left side: Slide towards the rear of the vehicle.

- 4 door model: 6 locations per side



- 5 door model
  - Models without roof rail: 8 locations per side
  - Models with roof rail: 5 locations per side

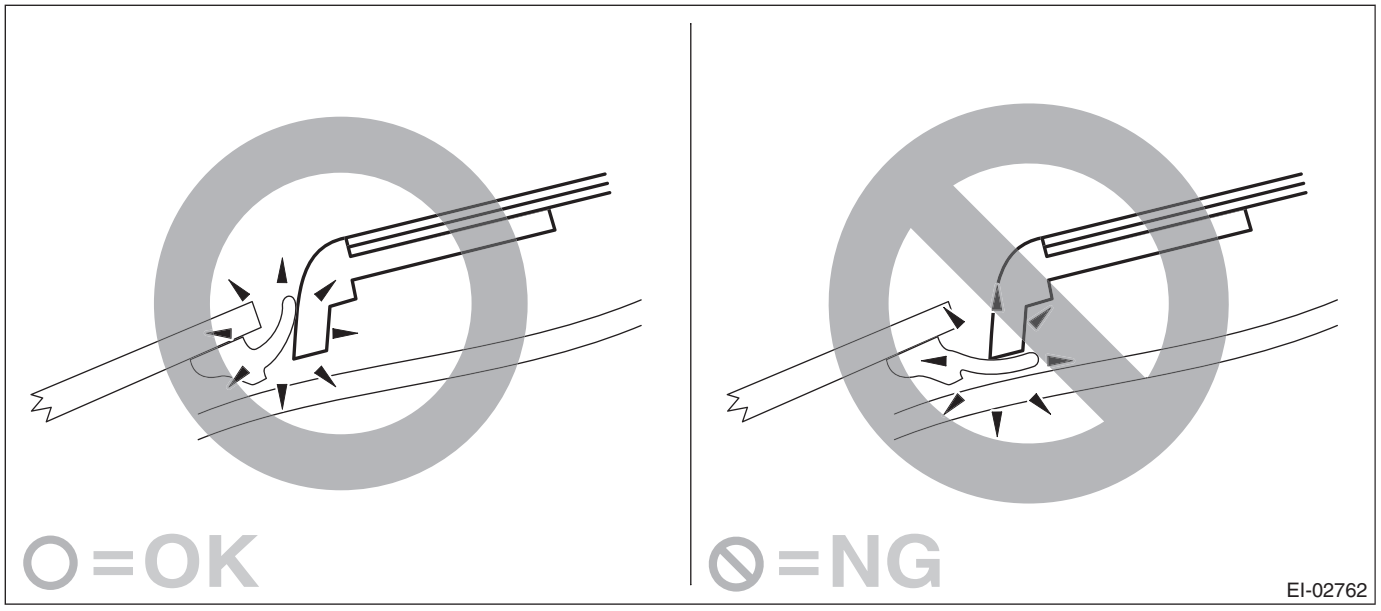


4) Pull up the molding - roof, and remove from the vehicle.

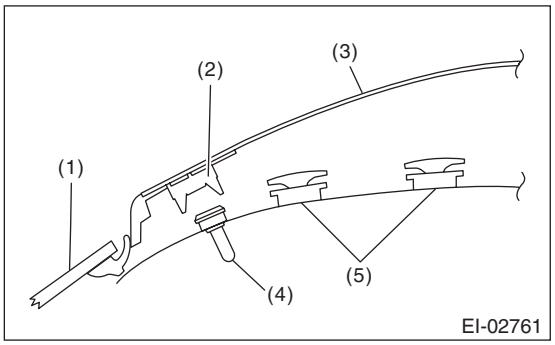
B: INSTALLATION

1) Remove the clips from the molding - roof, and attach to the studs on the vehicle.

CAUTION:
- **Always replace the clips that were damaged during removal of the molding - roof with new parts.**
- **While installing the molding - roof, be careful not to catch the glass molding with the tip of the front side and rear side.**



2) Push the front end of the molding - roof against the front window, and attach the forward positioning clip onto the rivet on the body.



(1) Windshield
(2) Positioning clip
(3) Molding - roof
(4) Rivet
(5) Clip

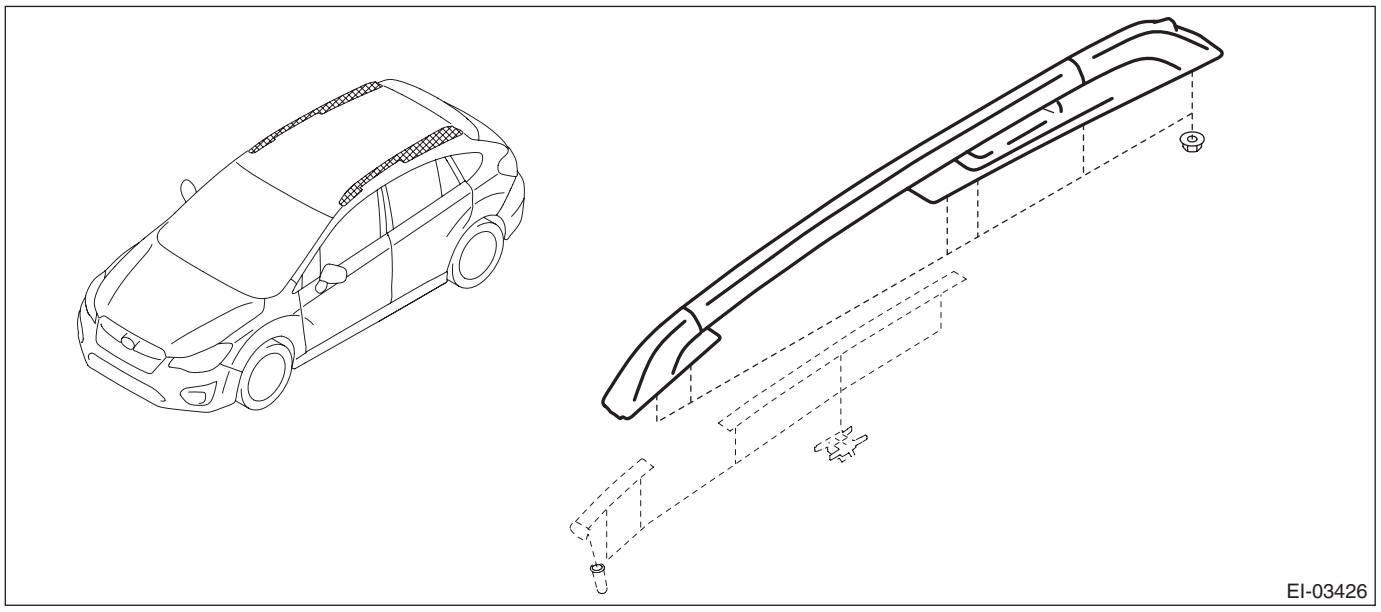
3) While pushing down the molding - roof from above, connect the molding - roof and the clip.

11.Roof Rail

A: REMOVAL

1) Remove the trim panel - roof. <Ref. to EI-126, 5 DOOR MODEL, REMOVAL, Roof Trim.>
2) Remove the curtain airbag module. <Ref. to AB-71, 5 DOOR MODEL, REMOVAL, Curtain Airbag Module.>

CAUTION:
• Before handling the airbag module, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". <Ref. to AB-10, CAUTION, General Description.>
• Be careful not to damage the curtain airbag module during removal.
3) Remove the six installing nuts.



B: INSTALLATION

CAUTION:
When removing or installing the roof rail, be careful not to scratch the body panel with the stud bolt of roof rail.
Install each part in the reverse order of removal.

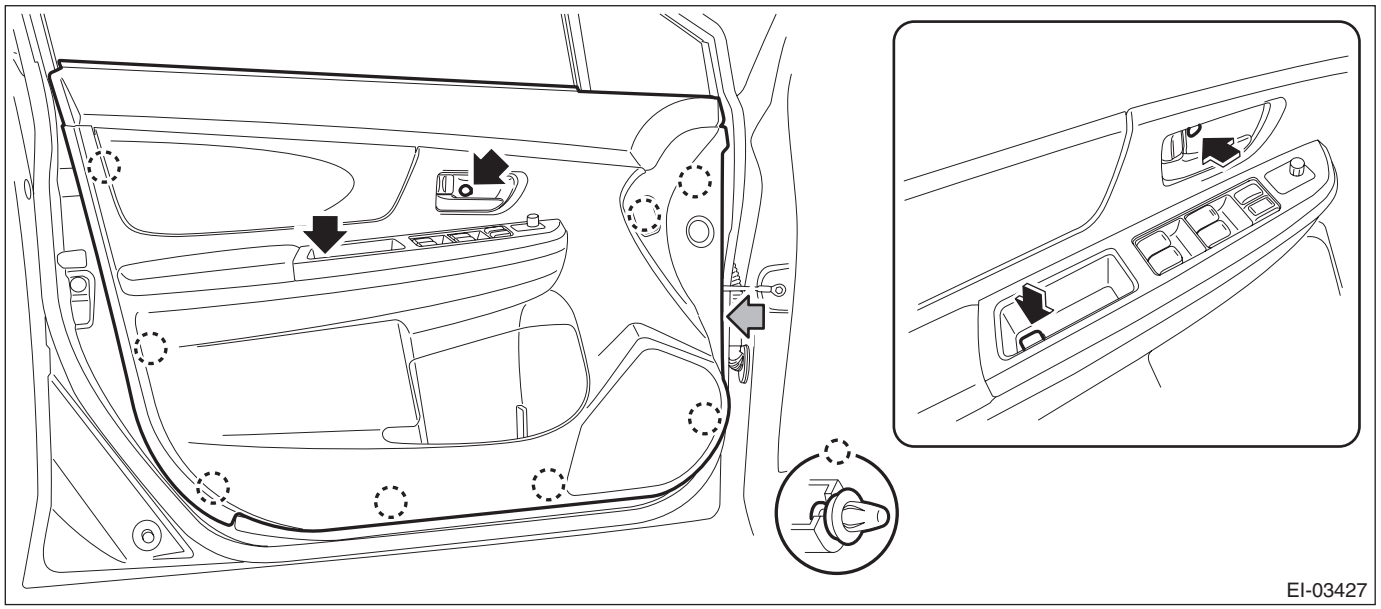
Tightening torque:
7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

12.Door Trim

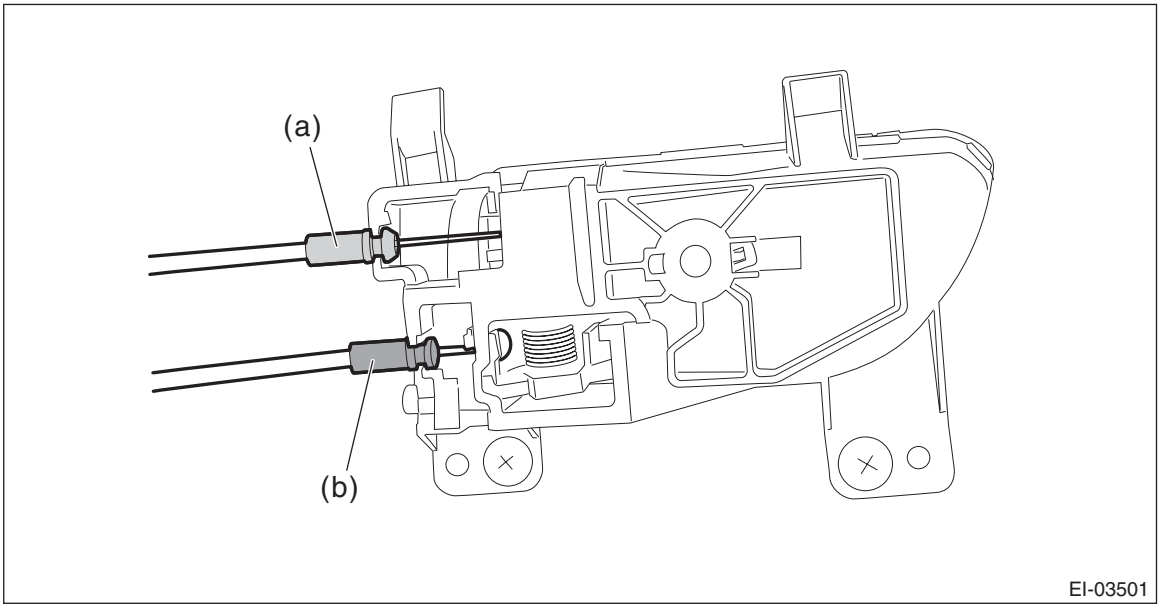
A: REMOVAL

1. FRONT DOOR

1) Disconnect the ground cable from battery.
2) Remove the trim panel - front door.
   (1) Open the cover and remove the screw.
   (2) Remove the clips, and remove the trim panel - front door from the panel assembly - front door.



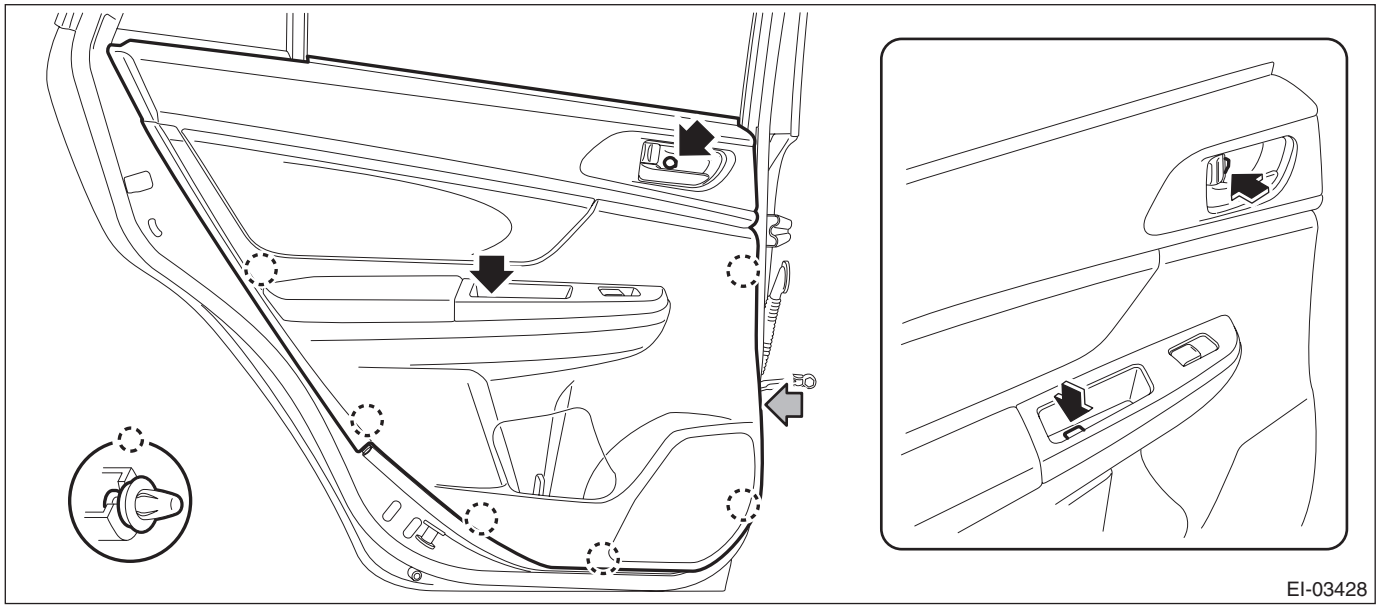
NOTE:
It is easier to remove the door trim if the removal is performed from the gray arrow section.
   (3) Detach the door lock cable (a) and door open cable (b) from the remote assembly - door.



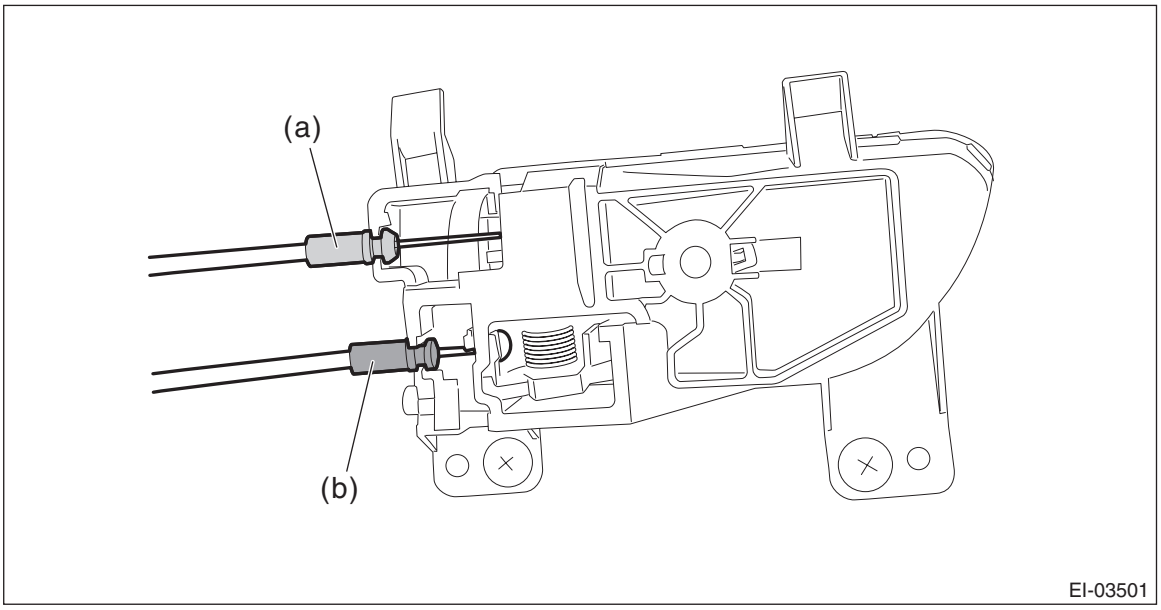
   (4) Disconnect the harness connector and remove the trim panel - front door.
3) Remove each part as required.
- Remote assembly - door: <Ref. to SL-30, REMOVAL, Front Inner Remote.>
- Switch - power window main: <Ref. to GW-12, MAIN SWITCH, REMOVAL, Power Window Control Switch.>
- Weather strip - door INN: <Ref. to EI-60, DISASSEMBLY, Door Trim.>

2. REAR DOOR

1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear door.
   (1) Open the cover and remove the screw.
   (2) Remove the clips, and remove the trim panel - rear door from the panel assembly - rear door.



NOTE:
It is easier to remove the door trim if the removal is performed from the gray arrow section.
   (3) Detach the door lock cable (a) and door open cable (b) from the remote assembly - door.

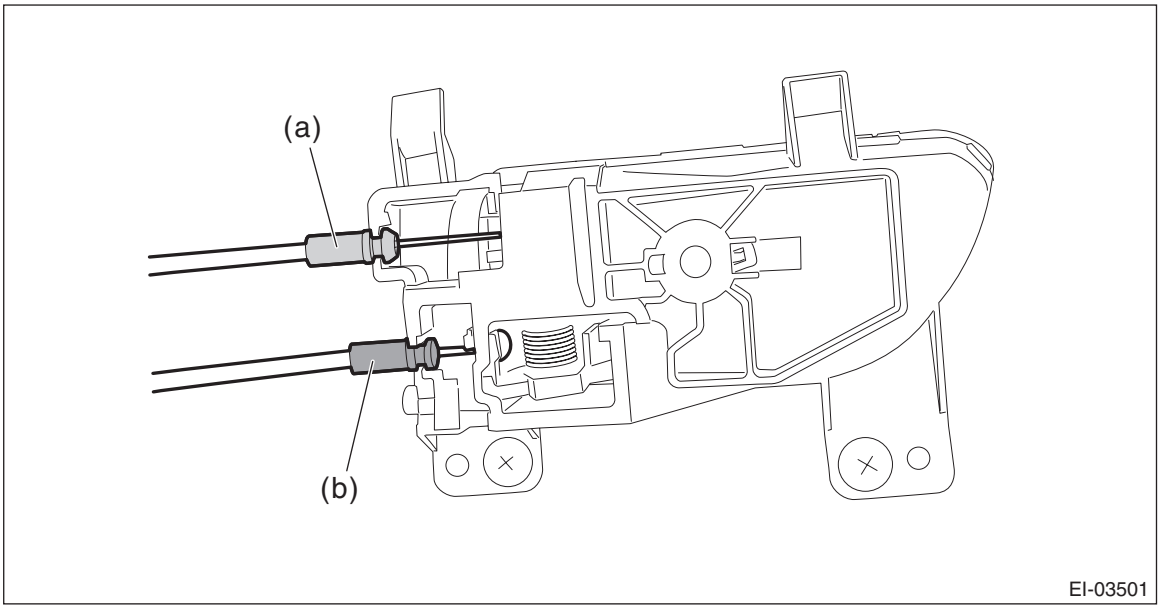


   (4) Disconnect the harness connector and remove the trim panel - rear door.
3) Remove each part as required.
- Remote assembly - door: <Ref. to SL-38, REMOVAL, Rear Inner Remote.>
- Switch - power window sub: <Ref. to GW-13, SUB-SWITCH, REMOVAL, Power Window Control Switch.>
- Weather strip - door INN: <Ref. to EI-60, DISASSEMBLY, Door Trim.>

B: INSTALLATION

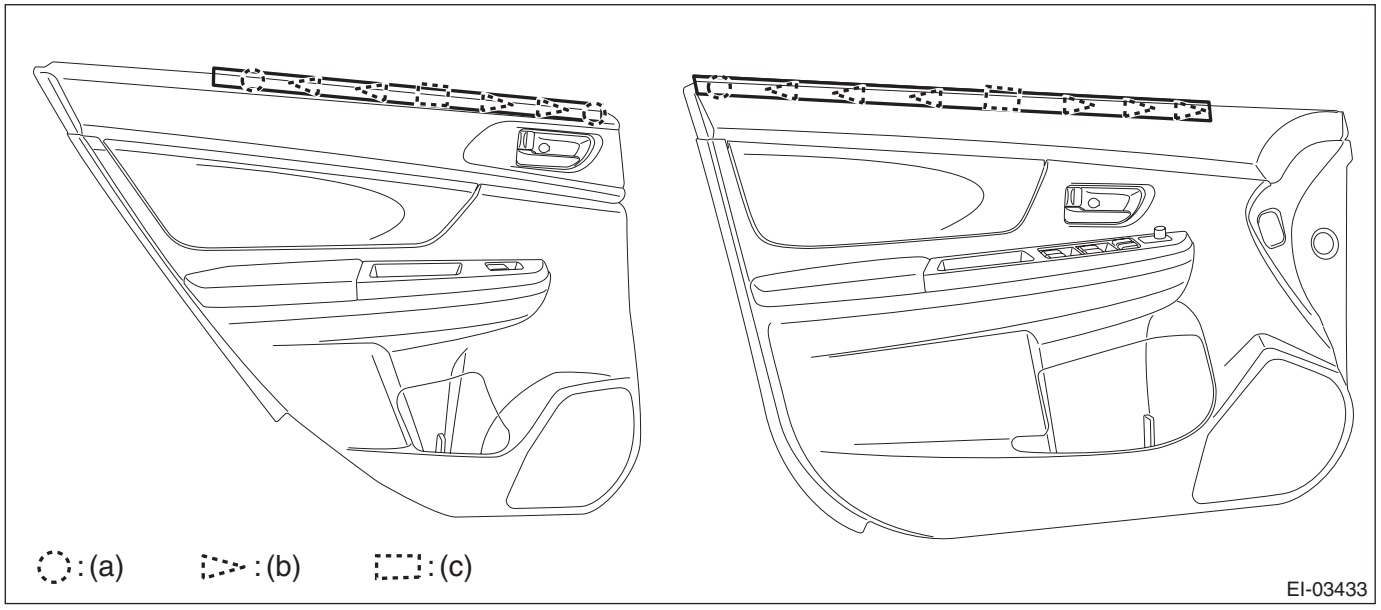
Install each part in the reverse order of removal.

NOTE:
Attach the door lock cable (a - end ball: small) to the upper side, and attach the door open cable (b - end ball: large) to the lower side.



C: DISASSEMBLY

1) Remove the door trim.
2) Remove the rivets and claws, and remove the weather strip - door INN from the door trim.



(a) Rivet (b) Claw (c) Claw

NOTE:
Remove the rivets by using the rivet cutter or nippers.

D: ASSEMBLY

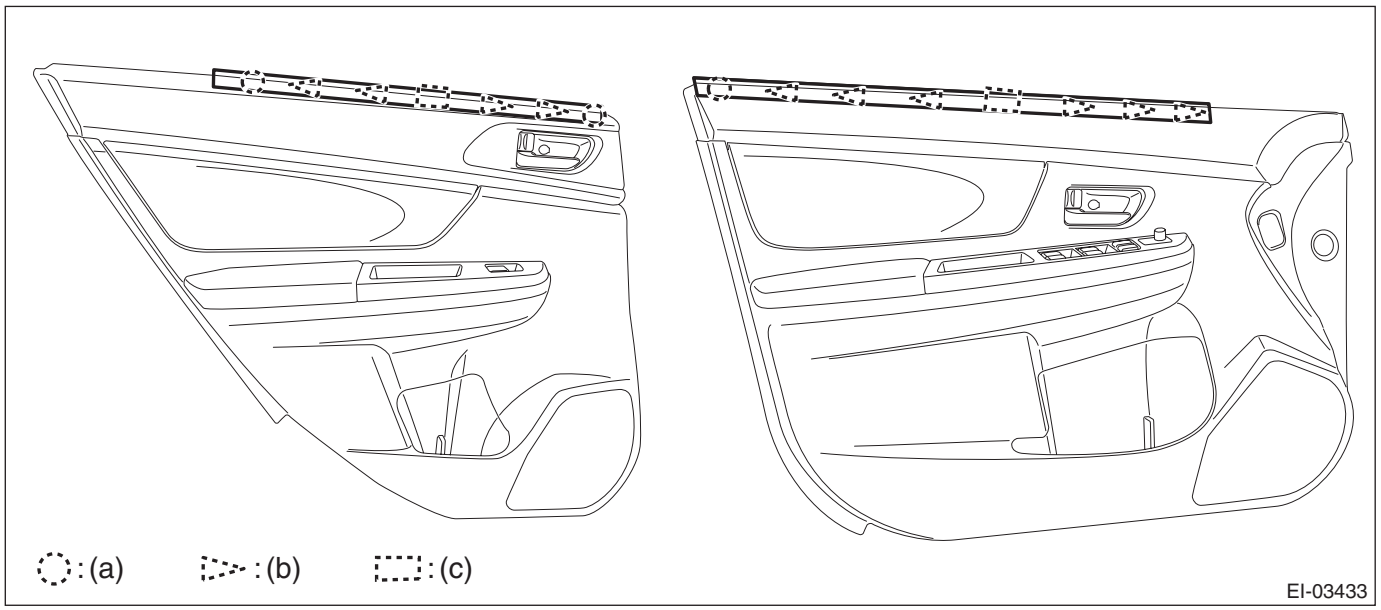
1) Bend the claws while pushing the weather strip - door INN against the door trim.

CAUTION:
Be careful of the bending direction of the claws.

2) Install the rivet.

CAUTION:
The height of the crimped rivet must be 3 mm (0.12 in). Squash the rivets with the pliers if the crimping is not enough, because the rivet may interference with the door trim.

PREPARATION TOOL & REQUIRED MATERIALS:
Hand riveter (ϕ3.2 mm (0.13 in) compliant)
Rivet



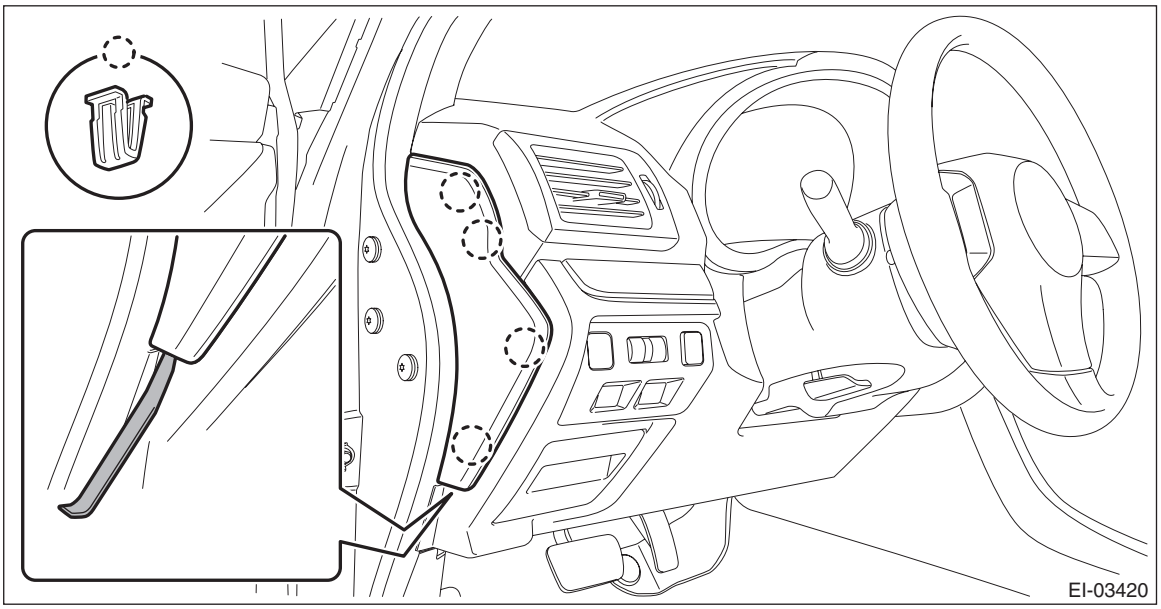
(a) Rivet
(b) Claw bending direction
(c) Claw bending direction: bend forward for LH side, backward for RH side.

3) After installing the weather strip - door INN, perform the following checks.
- Make sure there are no gaps between the weather strip - door INN and the door trim.
- Make sure there are no looseness when pulling the weather strip - door INN lightly.

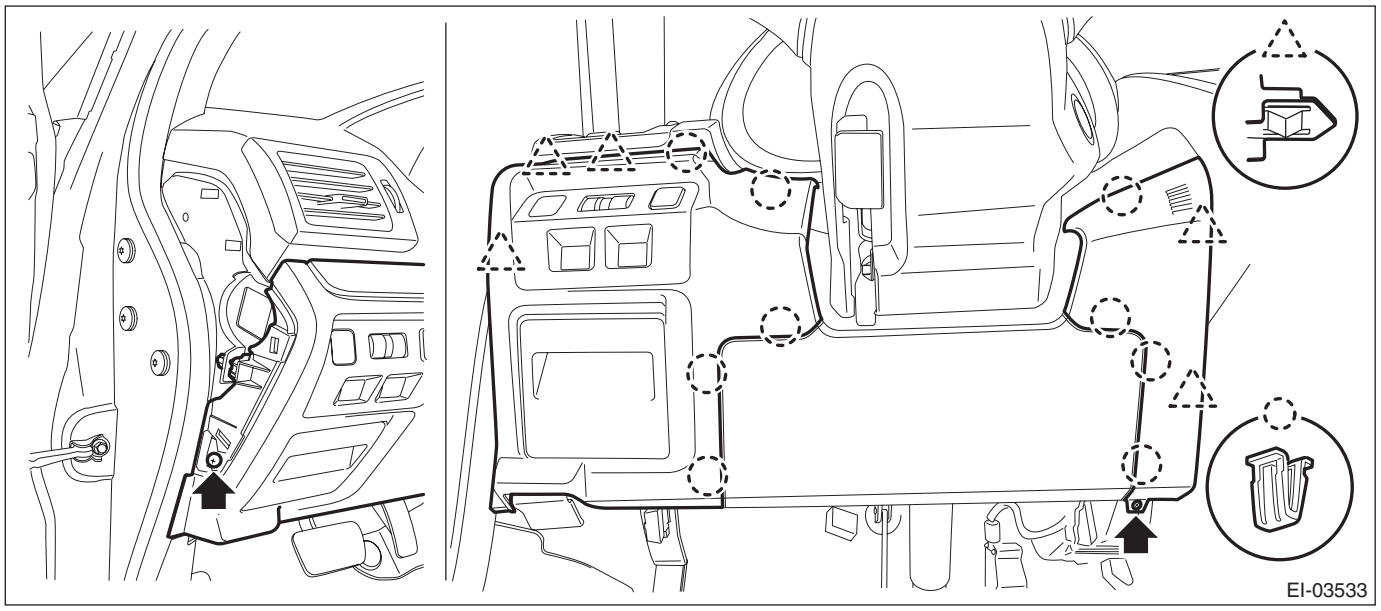
13.Instrument Panel Lower Cover

A: REMOVAL

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
2) Remove the clips, and remove the cover - instrument panel side LH.



NOTE:
Using a plastic remover, open the cover - instrument panel side LH.
3) Remove the cover assembly - instrument panel LWR driver INN and OUT.
   (1) Remove the screws and release the clips and claws.
   (2) Disconnect the harness connectors, and remove the cover assembly - instrument panel LWR driver INN and OUT.



B: INSTALLATION

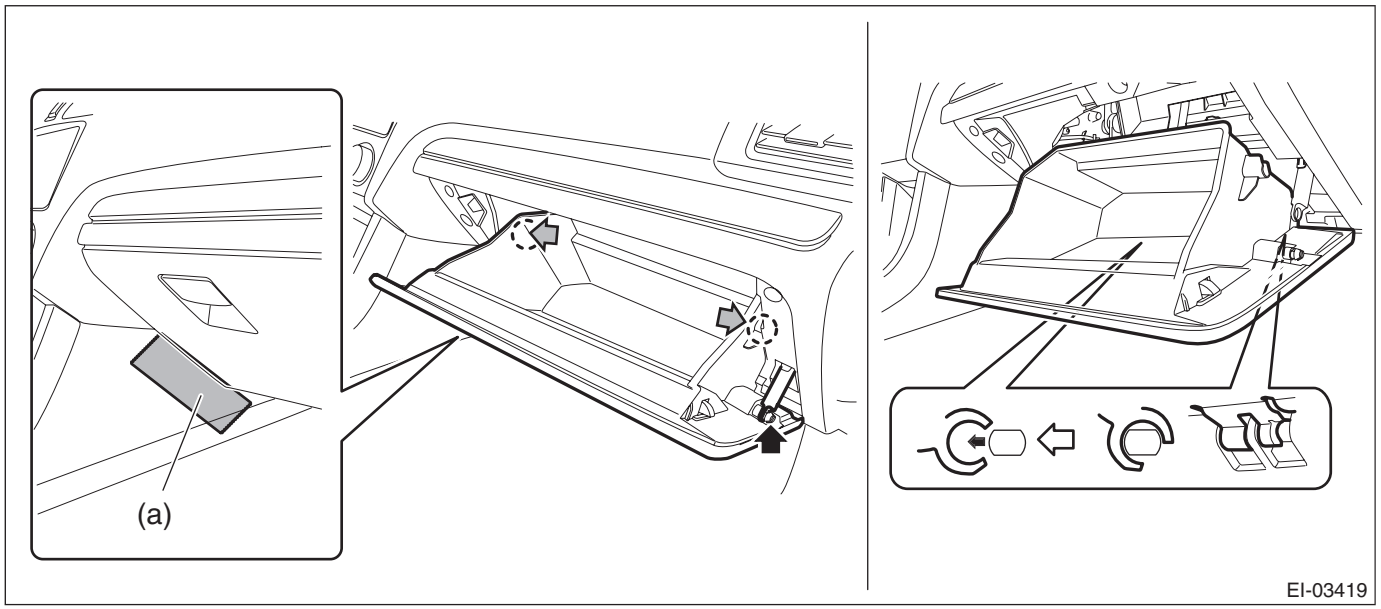
Install each part in the reverse order of removal.

14.Glove Box

A: REMOVAL

NOTE:
Refer to “Security and Locks” section for key cylinder replacement. <Ref. to SL-68, GLOVE BOX LID, REPLACEMENT, Key Lock Cylinders.>

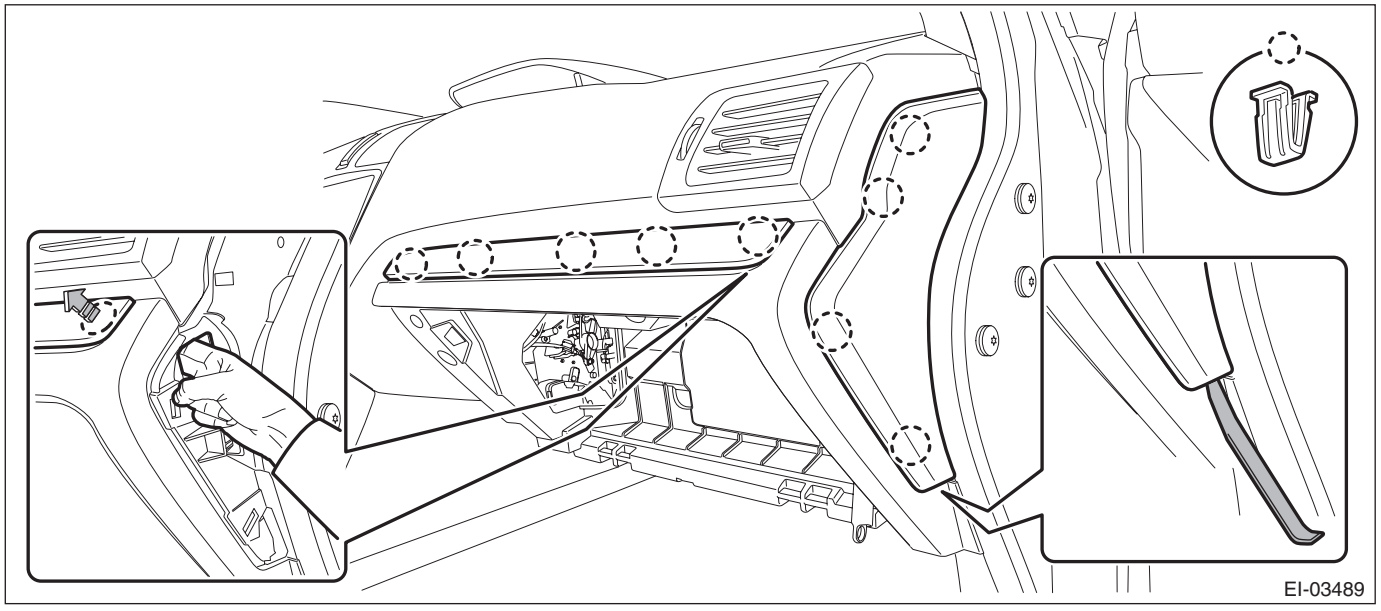
1) Remove the pocket assembly.
   (1) Attach the protective tape (a) to the panel center LWR.
   (2) Remove the damper COMPL - pocket.
   (3) Release the stoppers and remove the pocket assembly by pulling it toward you.



2) Remove the back panel - pocket.
   (1) Remove the clips, and remove the cover - instrument panel side RH.

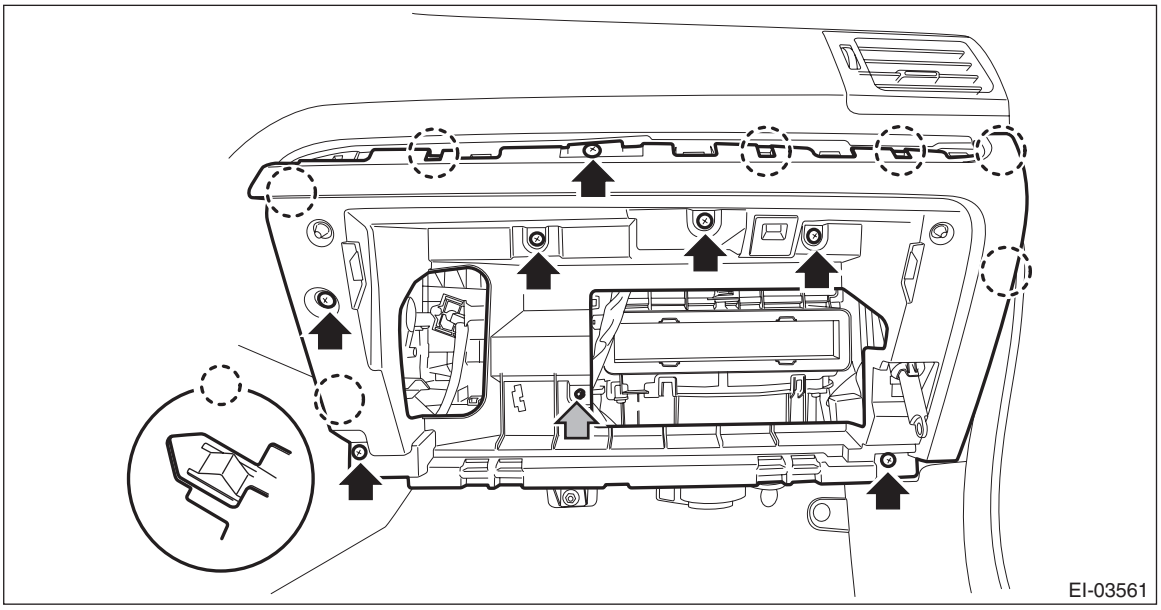
NOTE:
Remove the cover - instrument panel side RH by using a plastic remover.

   (2) Release the clips, and remove the ornament - panel assembly passenger.



NOTE:
To facilitate the removal, push the clip of the ornament - panel assembly passenger from the backside.

(3) Remove the screws, claws and harness clamp, then remove the back panel - pocket.



(4) Disconnect the glove box light LED connector.

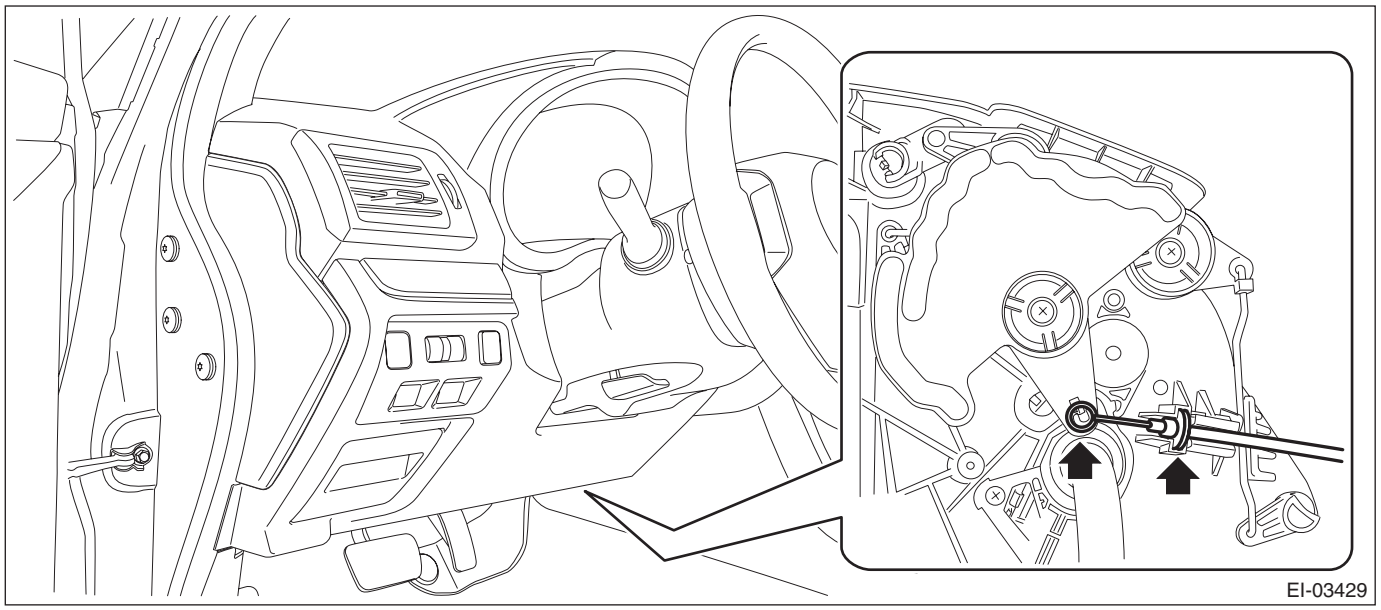
B: INSTALLATION

Install each part in the reverse order of removal.

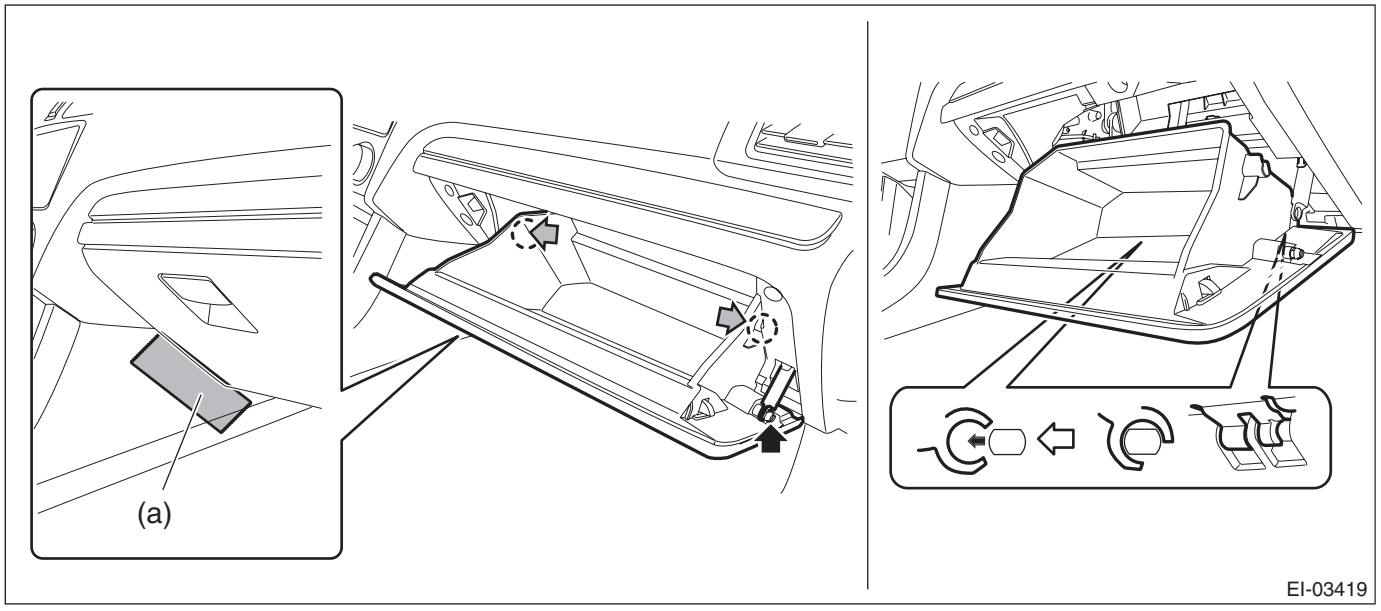
15.Center Console

A: REMOVAL

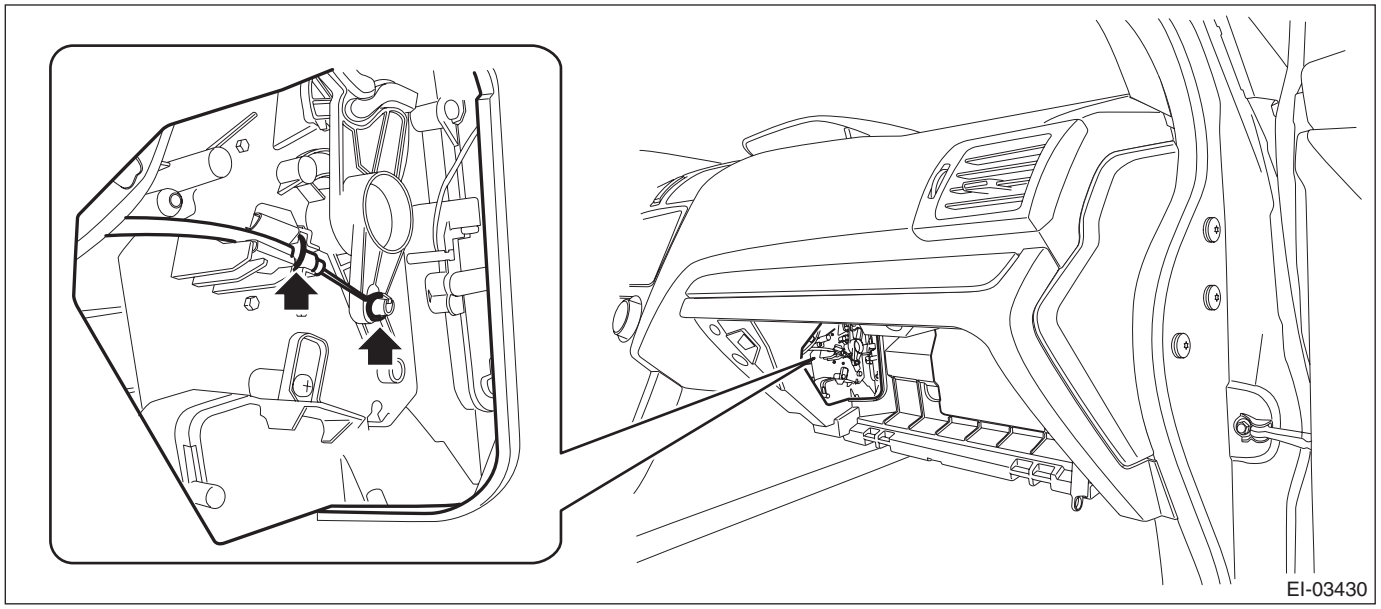
1) On manual A/C models, disconnect the control cables from both sides of the heater & cooling unit.
   (1) Disconnect the cable on the driver's side.



   (2) Attach the protective tape (a) to the panel center LWR.
   (3) Release the glove box dampers and stoppers, and remove the pocket assembly by pulling it toward you.



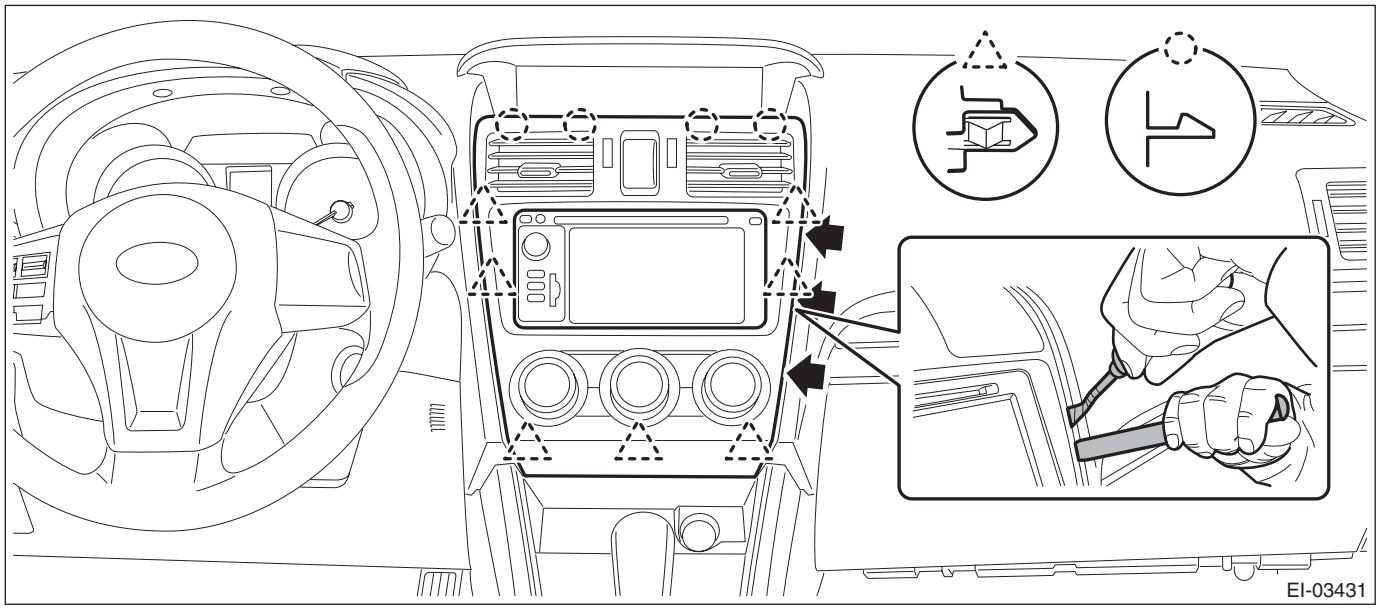
(4) Disconnect the cable on the passenger's side.



2) Remove the panel center assembly.

CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(1) Insert a plastic remover to the three areas shown by the arrows, and lift up the panel center assembly slightly.
(2) With the panel center assembly lifted up slightly, release the claw by using a clip remover wrapped with protective tape.
(3) Release the rest of the claws, and remove the panel center assembly.



B: INSTALLATION

CAUTION:
After installing the panel center assembly, check that the air vent grille of the panel center assembly is inserted correctly into the air vent duct.

Install each part in the reverse order of removal.

16.Console Box

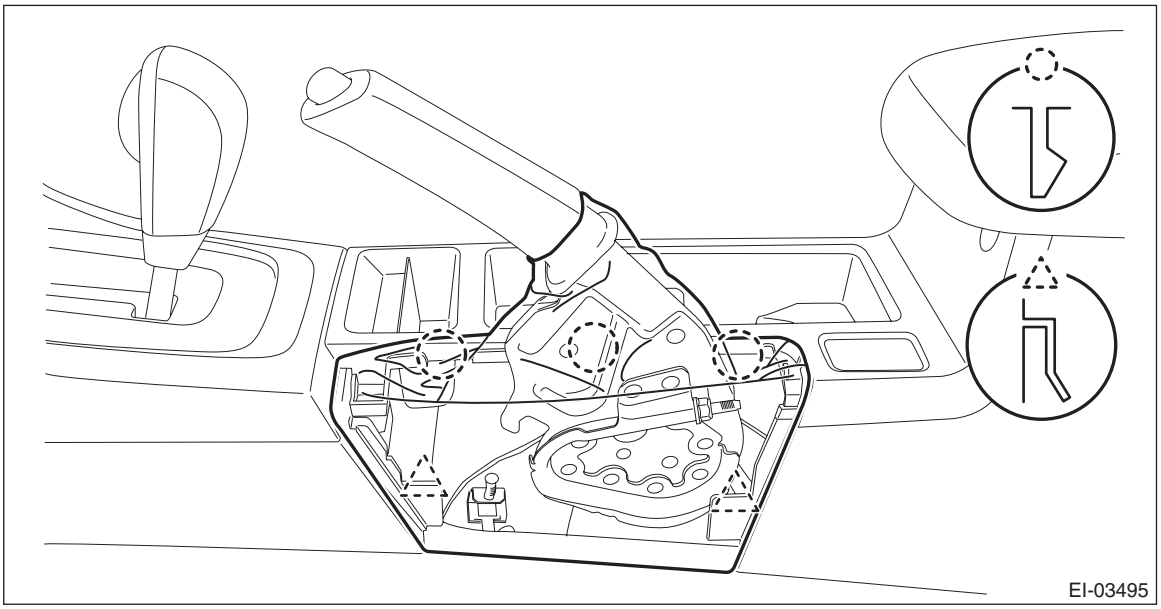
A: REMOVAL

1) Disconnect the ground cable from battery.

NOTE:
On CVT models, shift the select lever into “D” before disconnecting the battery ground cable.

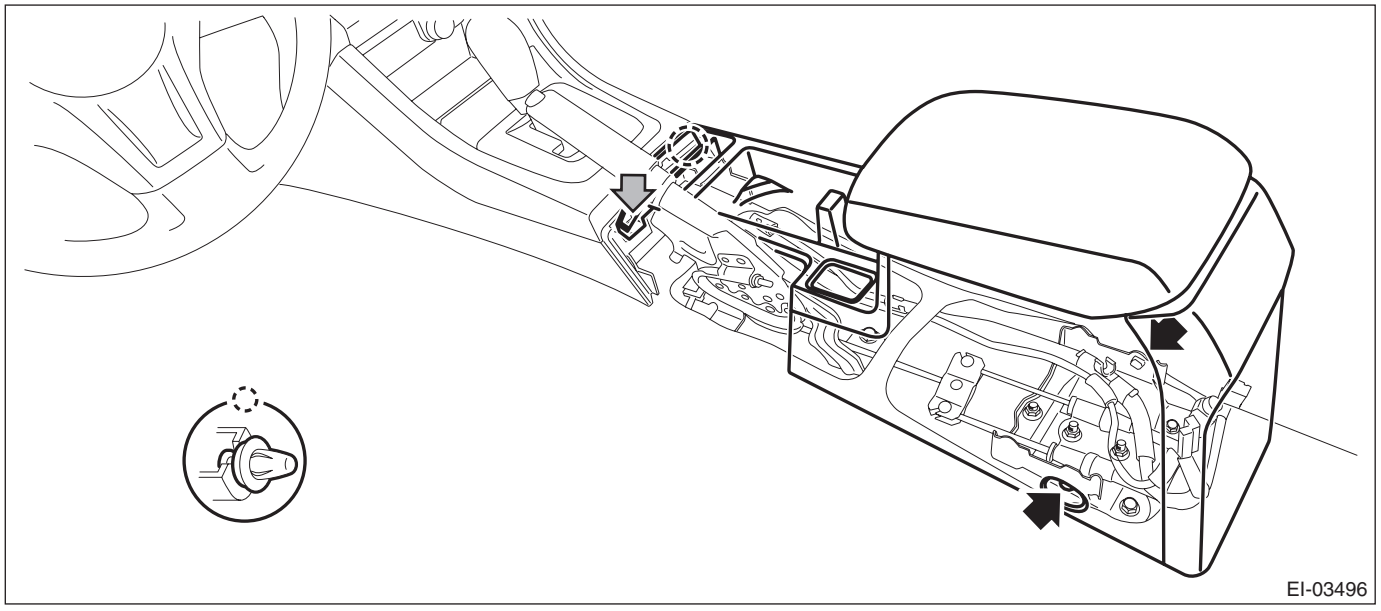
2) Remove the console box assembly.

(1) Release the claws, and then remove the boot - hand brake.

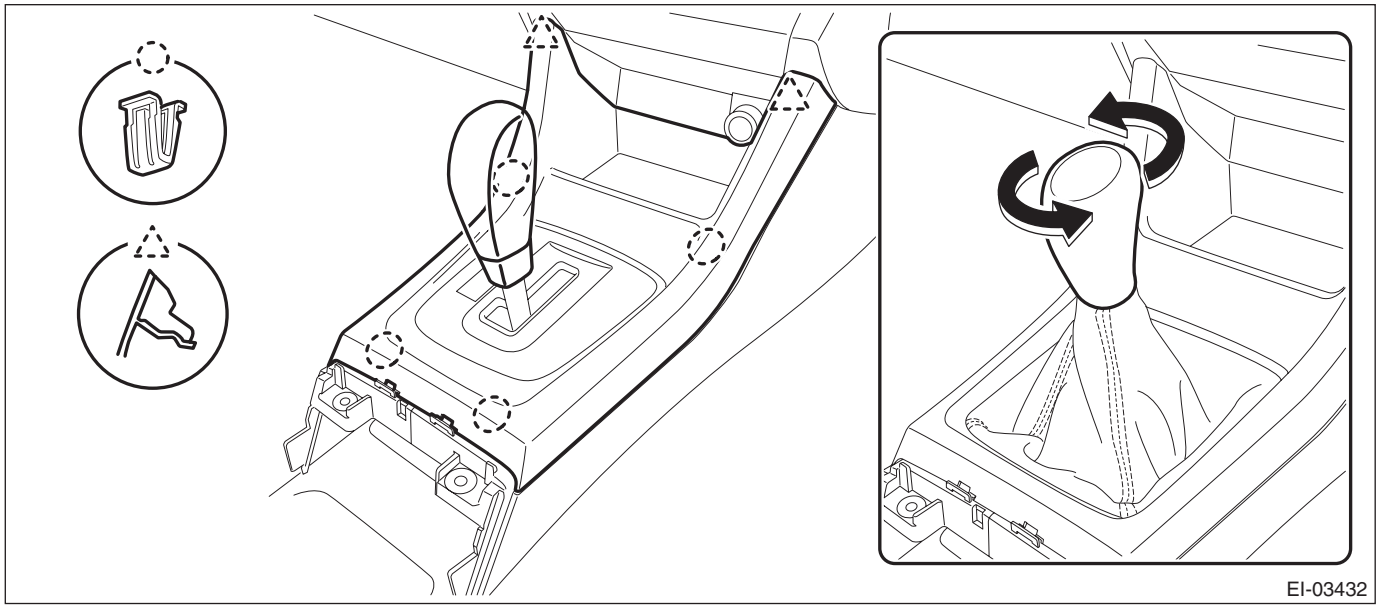


(2) Move the seat forward, and remove the bolts after detaching the left and right caps.

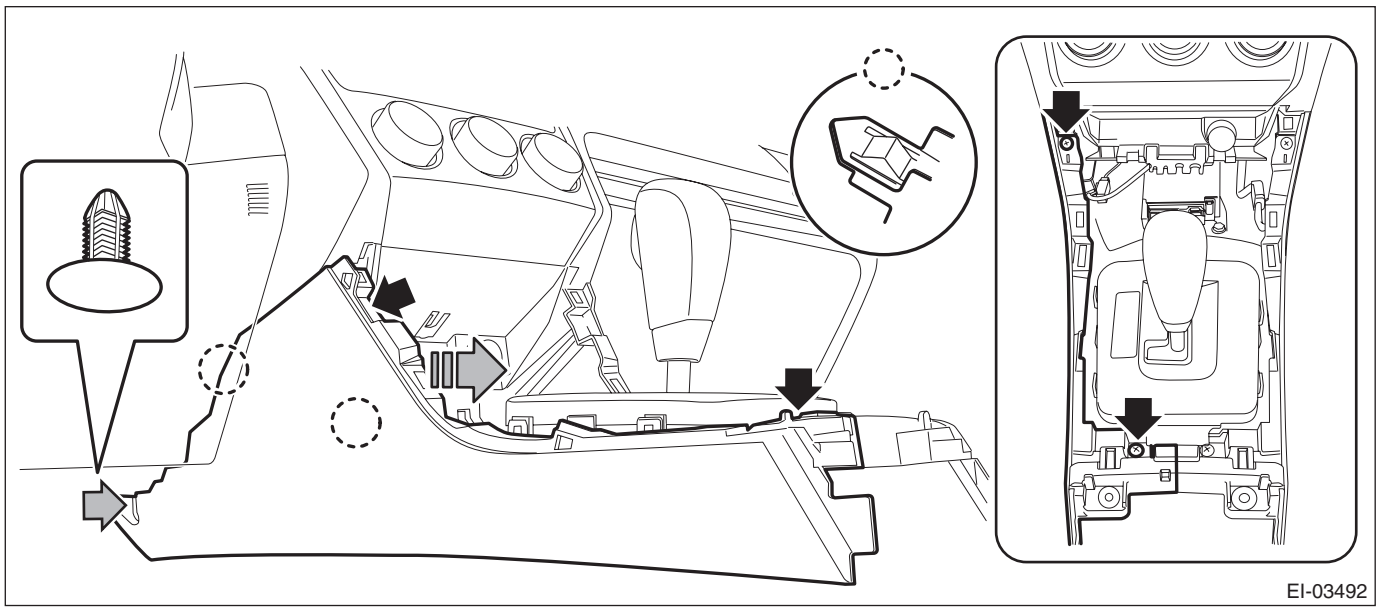
(3) Remove the screws and clips, disconnect the harness connector and remove the console box assembly.

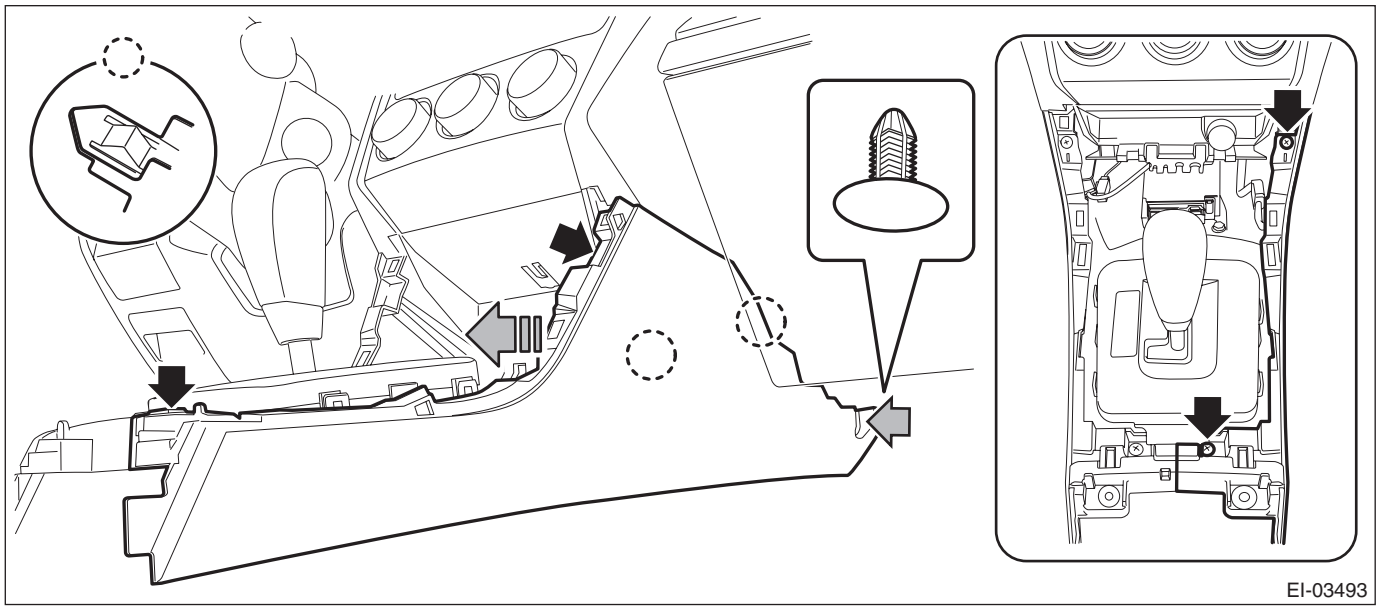


3) Remove the cover - shift lever.
   (1) Remove the shift knob. (MT model)
   (2) Release the clips and claws, then pull up the cover - shift lever.



4) Remove the left and right panel center LWR.
   (1) Remove the screws and clips.
   (2) Release the claws, and then pull the panel center LWR to remove.


EI-03492


EI-03493

B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
6.5 N·m (0.66 kgf-m, 4.8 ft-lb)

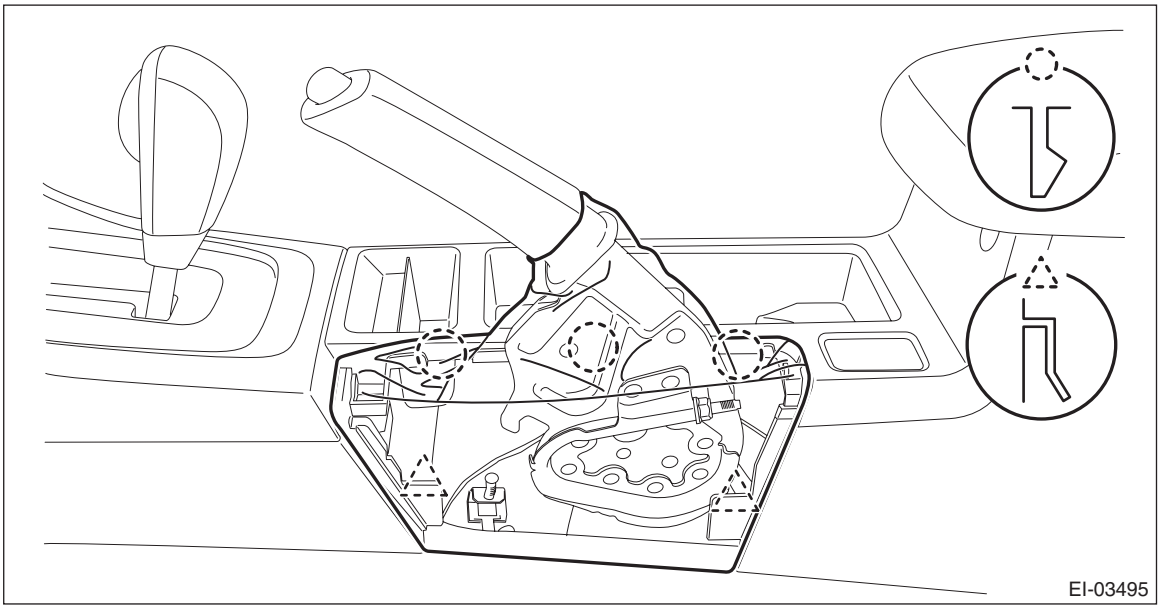
17.Instrument Panel Assembly

A: REMOVAL

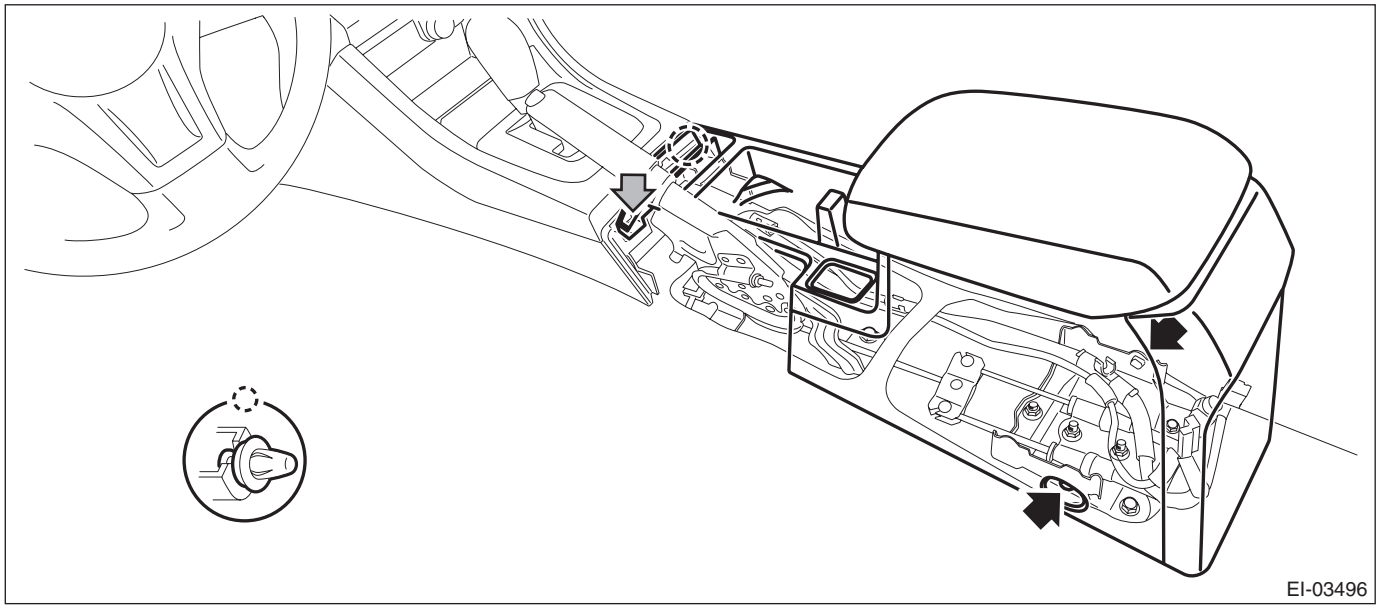
CAUTION:
Be careful not to damage the airbag system harness when servicing the instrument panel. Damage may cause the system to malfunction.

NOTE:
Remove the instrument panel assembly and the beam COMPL - steering as a unit.
1) Disconnect the ground cable from battery.

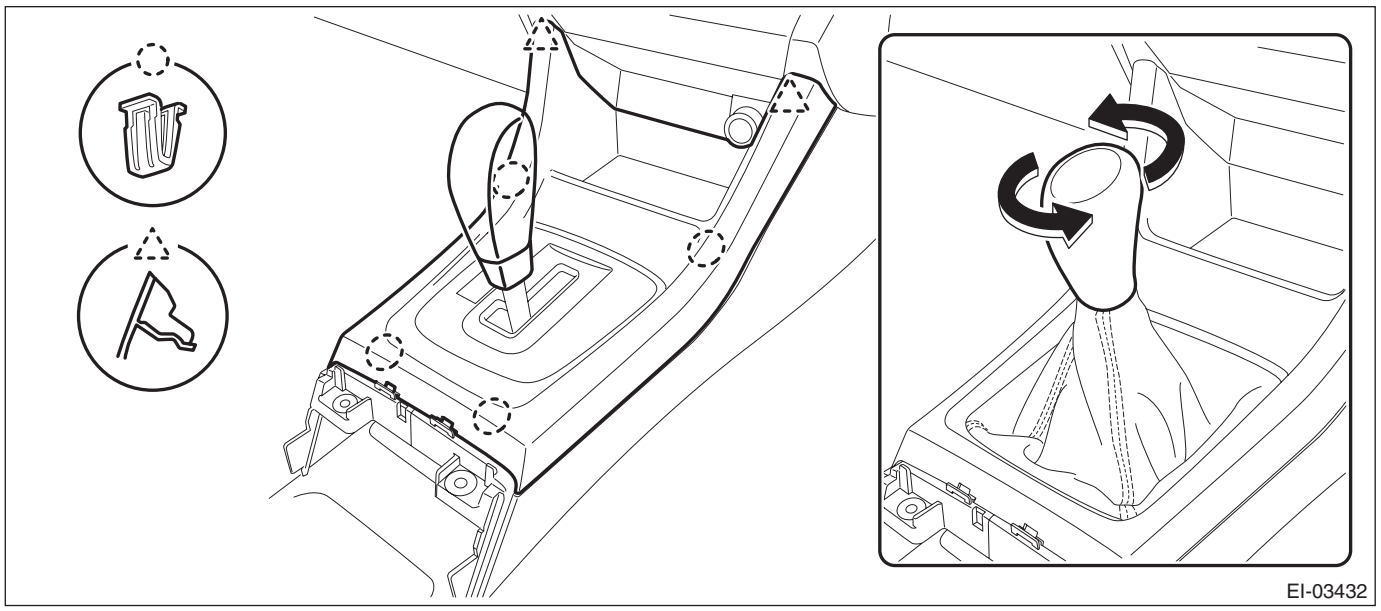
NOTE:
On CVT models, shift the select lever into “D” before disconnecting the battery ground cable.
2) Remove the console box assembly.
(1) Release the claws, and then remove the boot - hand brake.



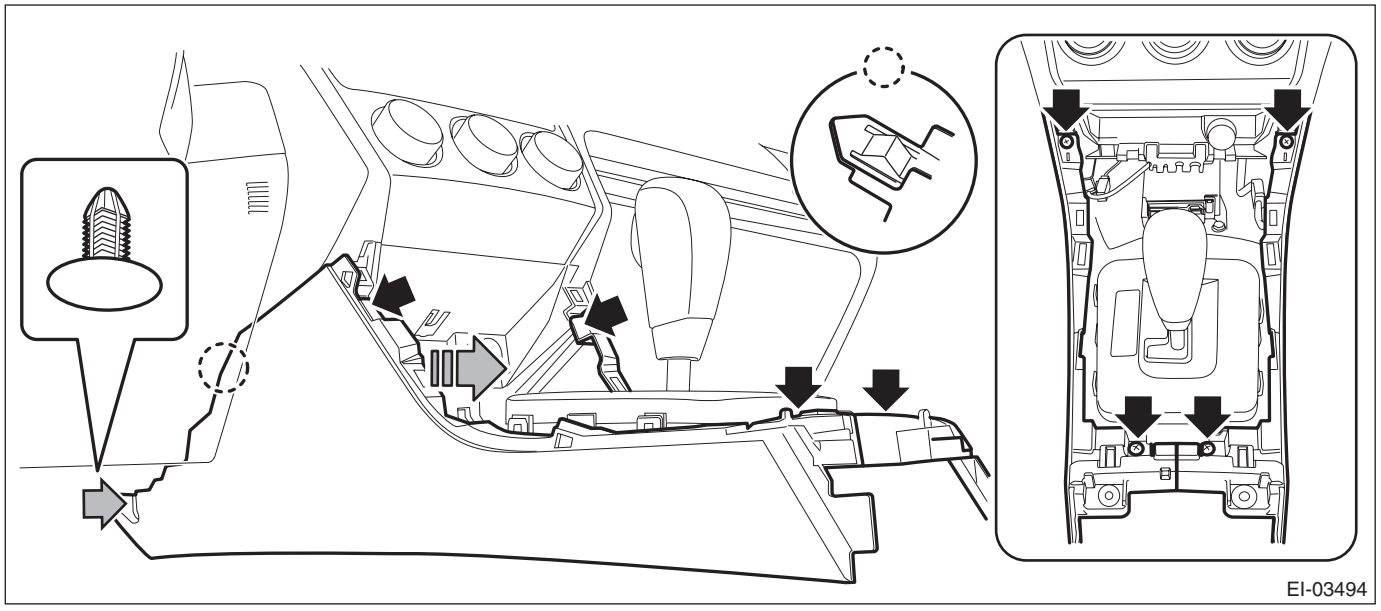
(2) Move the seat forward, and remove the bolts after detaching the left and right caps.
(3) Remove the screws, disconnect the harness connector and remove the console box assembly.



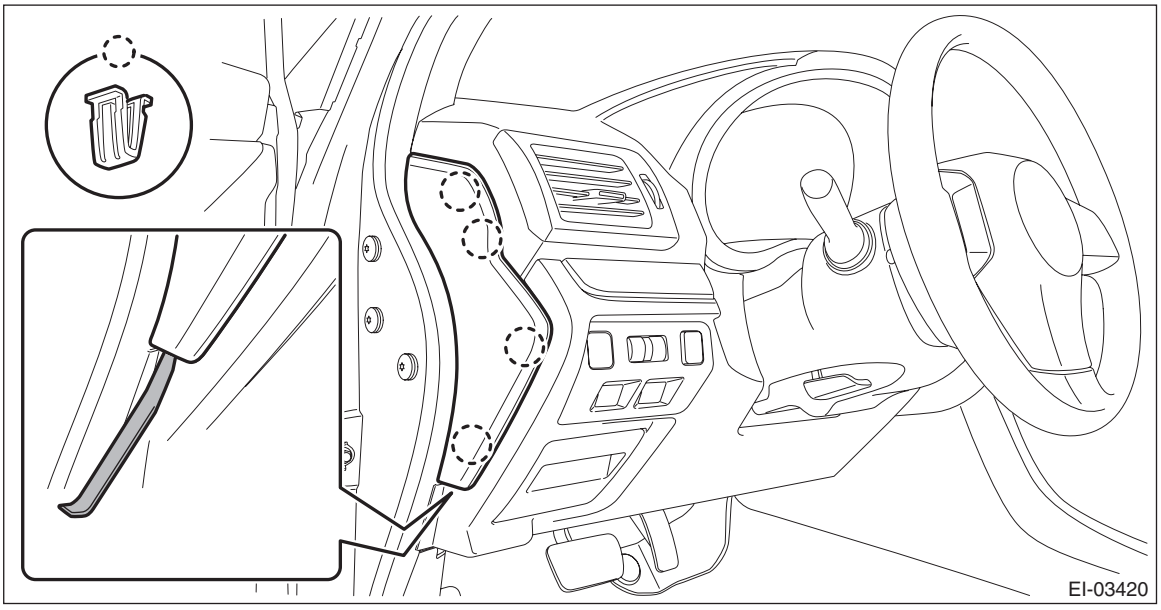
3) Remove the cover - shift lever.
   (1) Remove the shift knob. (MT model)
   (2) Release the clips and claws, then pull up the cover - shift lever.



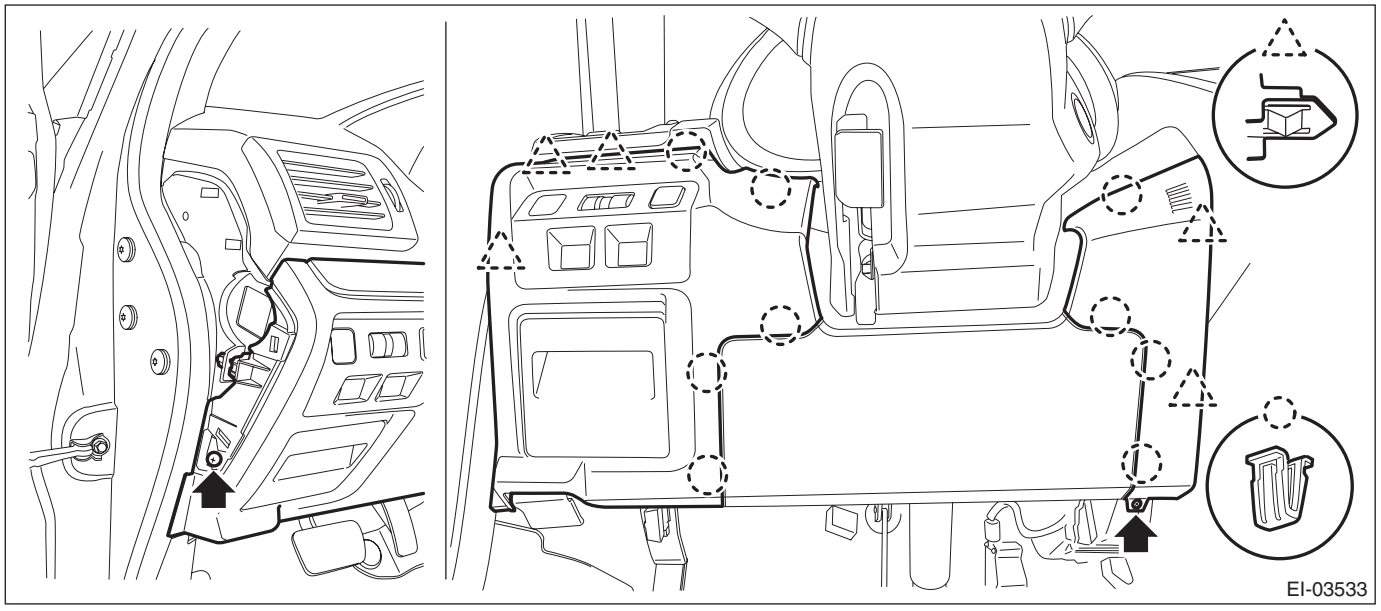
4) Remove the left and right panel center LWR.
   (1) Remove the screws and clips.
   (2) Release the claws, and then pull the panel center LWR to remove.



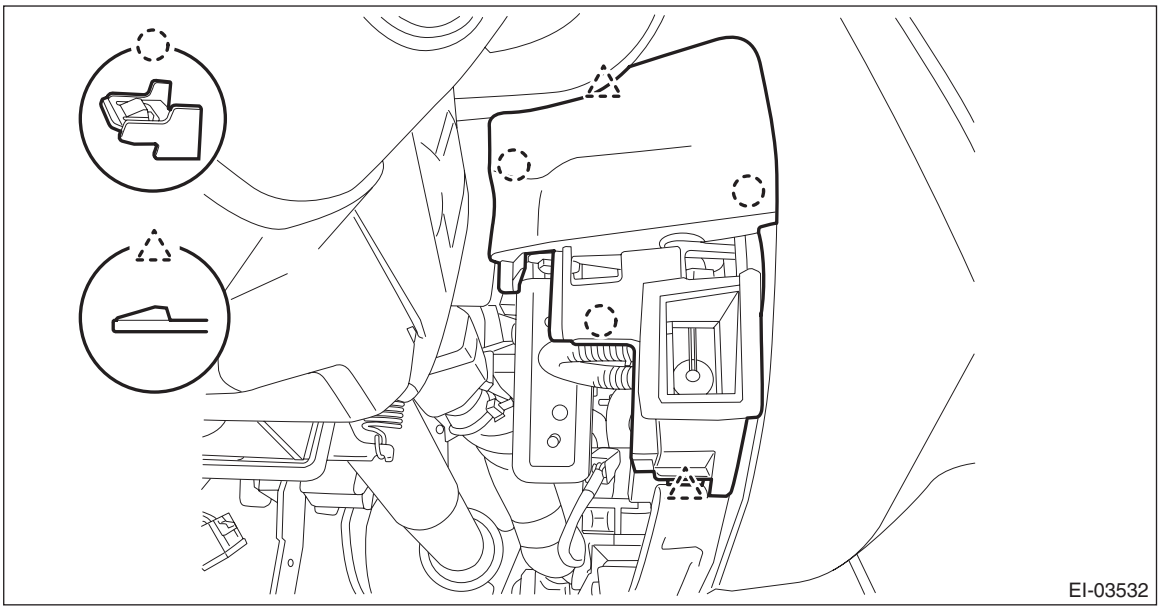
5) Remove the cover assembly - instrument panel LWR driver.
(1) Remove the clips, and remove the cover - instrument panel side LH.



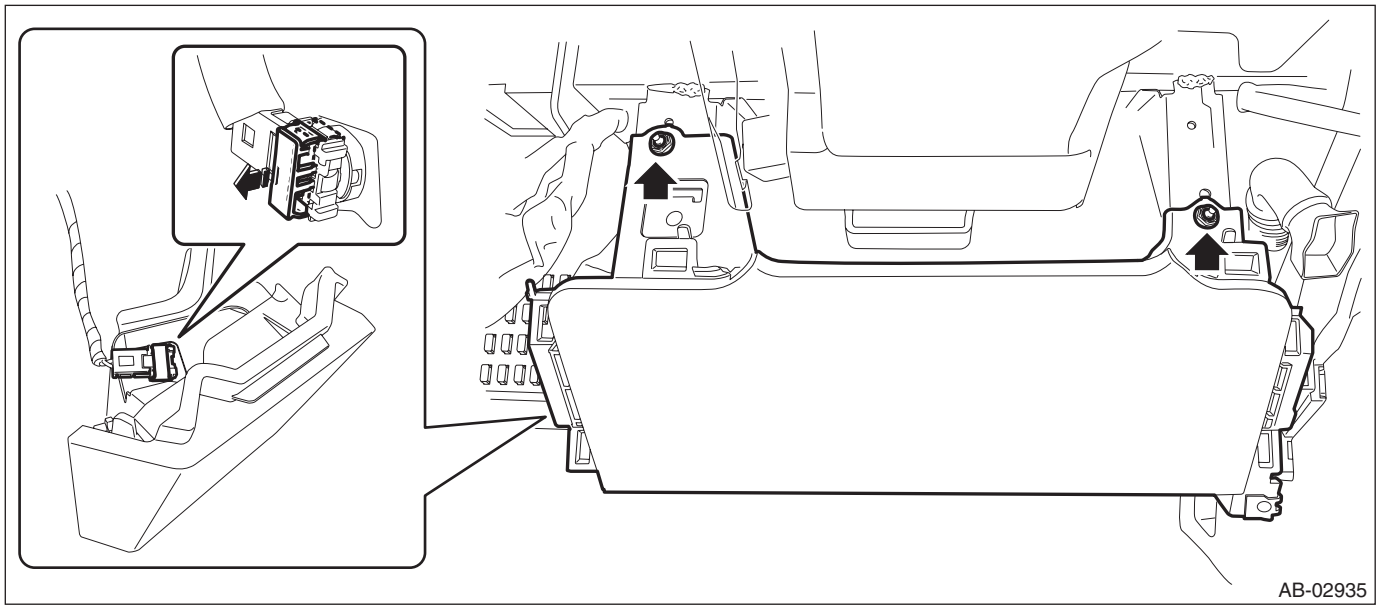
NOTE:
Using a plastic remover, open the cover - instrument panel side LH.
(2) Remove the screws and release the clips and claws.
(3) Disconnect the harness connectors, and remove the cover assembly - instrument panel LWR driver INN and OUT.



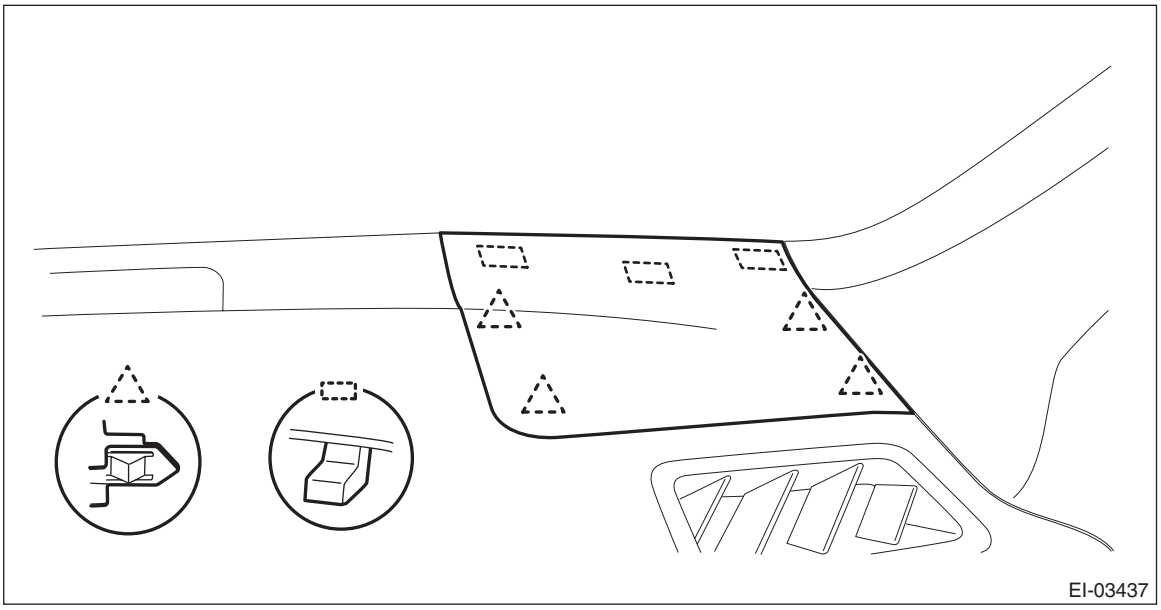
6) Remove the cover switch - starter.
(1) Release the claws and remove the cover switch - starter.
(2) Disconnect the connector and aspirator hose.



7) Remove the nuts to remove the knee airbag module and disconnect the harness connector. <Ref. to AB-30, KNEE AIRBAG MODULE, PROCEDURE, Airbag Connector.>



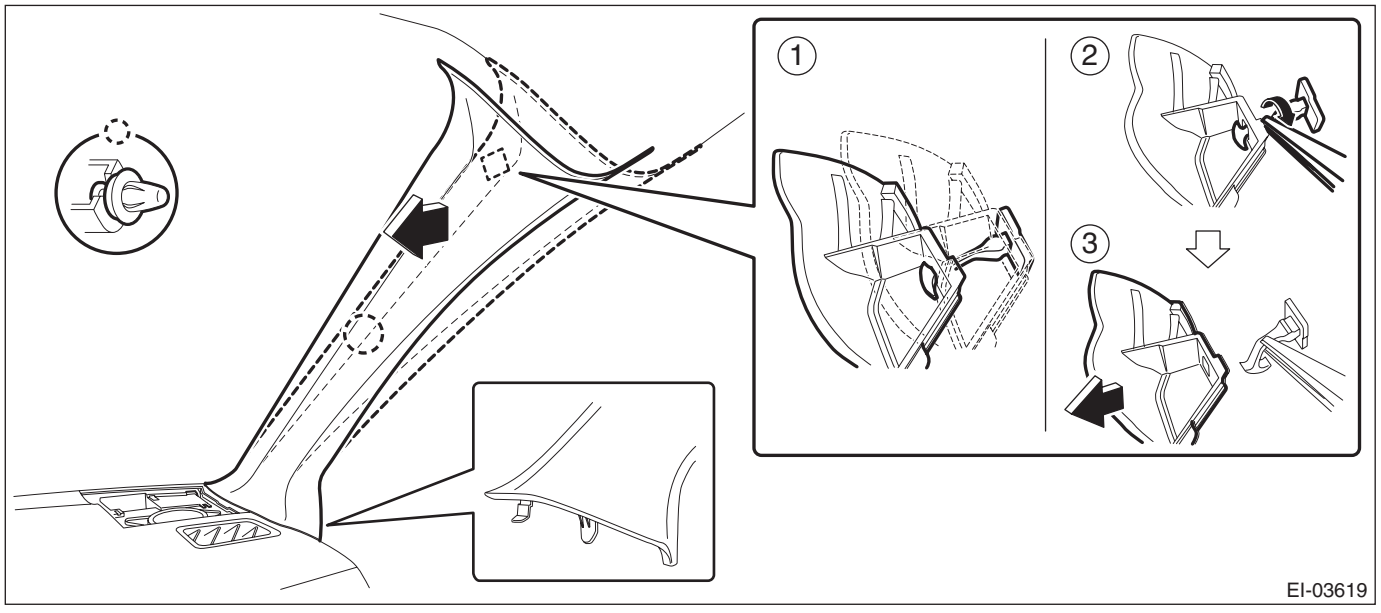
8) Release the clips and claws, then detach the left and right grille speaker side.



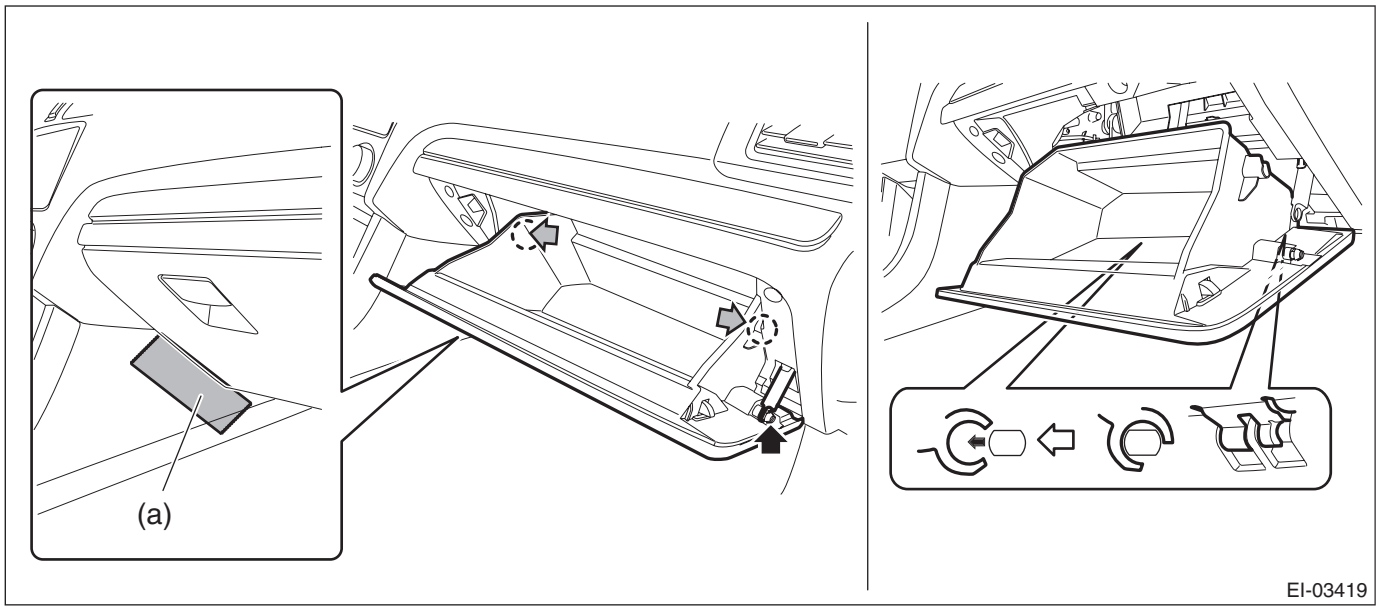
NOTE:
Remove the grille speaker side by using a plastic remover.

9) Remove the trim panel - front pillar UPR on the left and right sides.
(1) Pull the upper part of the trim panel - front pillar UPR towards the center of the vehicle.
(2) Insert long-nose pliers into the top part of the trim, grip the tether clip with the pliers and twist 90° in that position.

CAUTION:
Be careful not to damage the pillar trim surface and curtain airbag module when inserting the pliers.
(3) Holding the tether clip twisted as in the previous step, remove the trim panel - front pillar UPR from the tether clip.
(4) Remove the clips, and remove the trim panel - front pillar UPR.

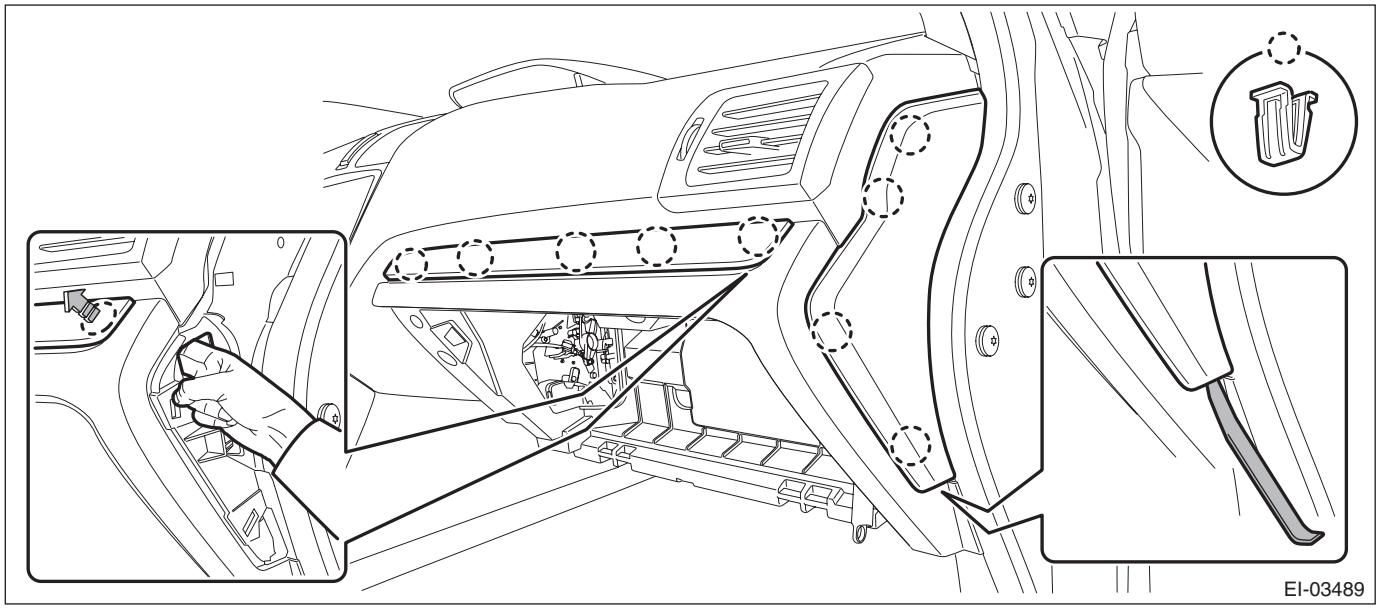


10) Remove the pocket assembly.
(1) Attach the protective tape (a) to the panel center LWR.
(2) Remove the damper COMPL - pocket.
(3) Release the stoppers and remove the pocket assembly by pulling it toward you.



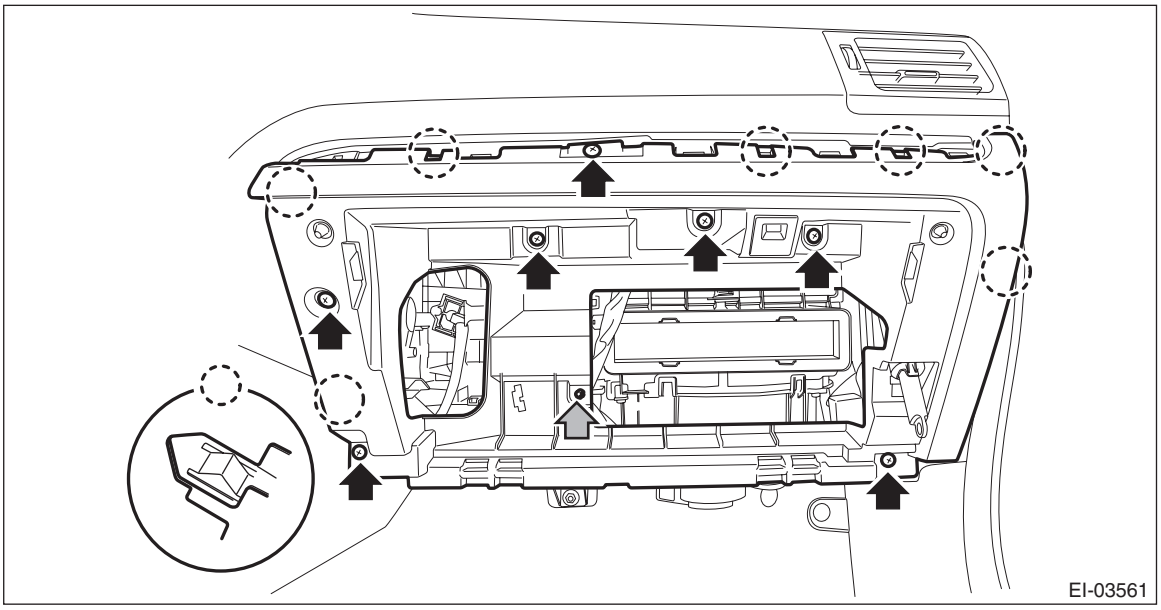
11) Remove the back panel - pocket.
(1) Remove the clips, and remove the cover - instrument panel side RH.

NOTE:
Remove the cover - instrument panel side RH by using a plastic remover.
(2) Release the clips, and remove the ornament - panel assembly passenger.



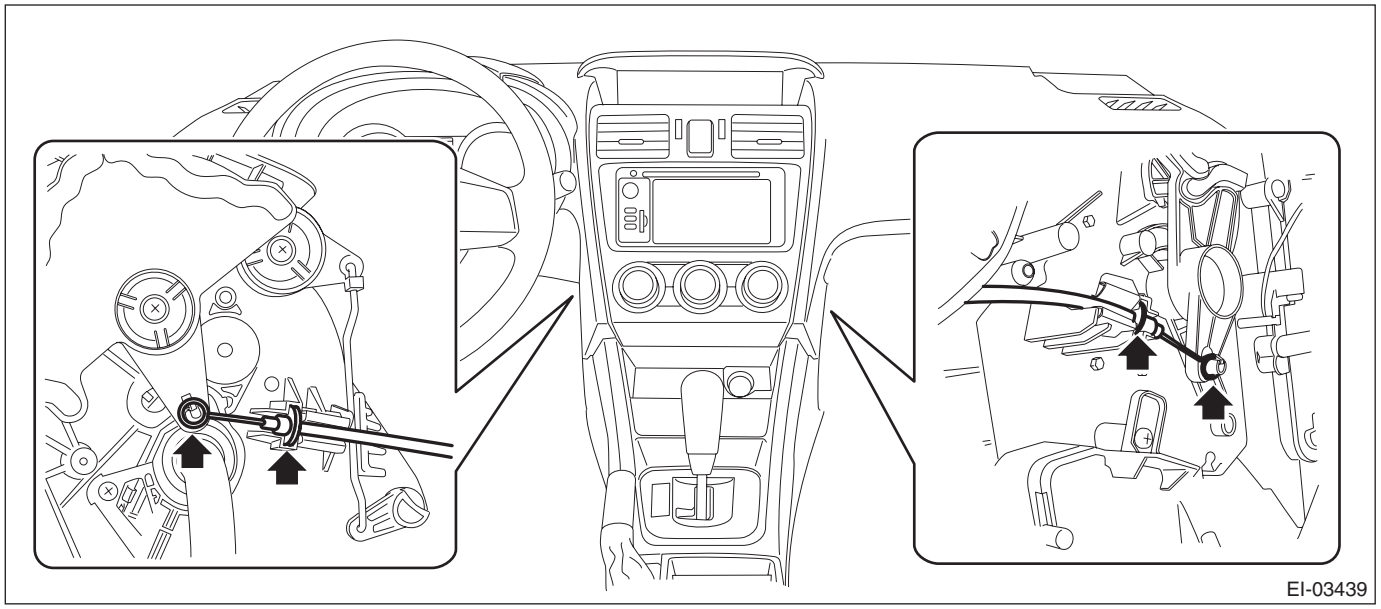
NOTE:
To facilitate the removal, push the clip of the ornament - panel assembly passenger from the backside.

(3) Remove the screws, claws and harness clamp, then remove the back panel - pocket.



(4) Disconnect the glove box light LED connector.

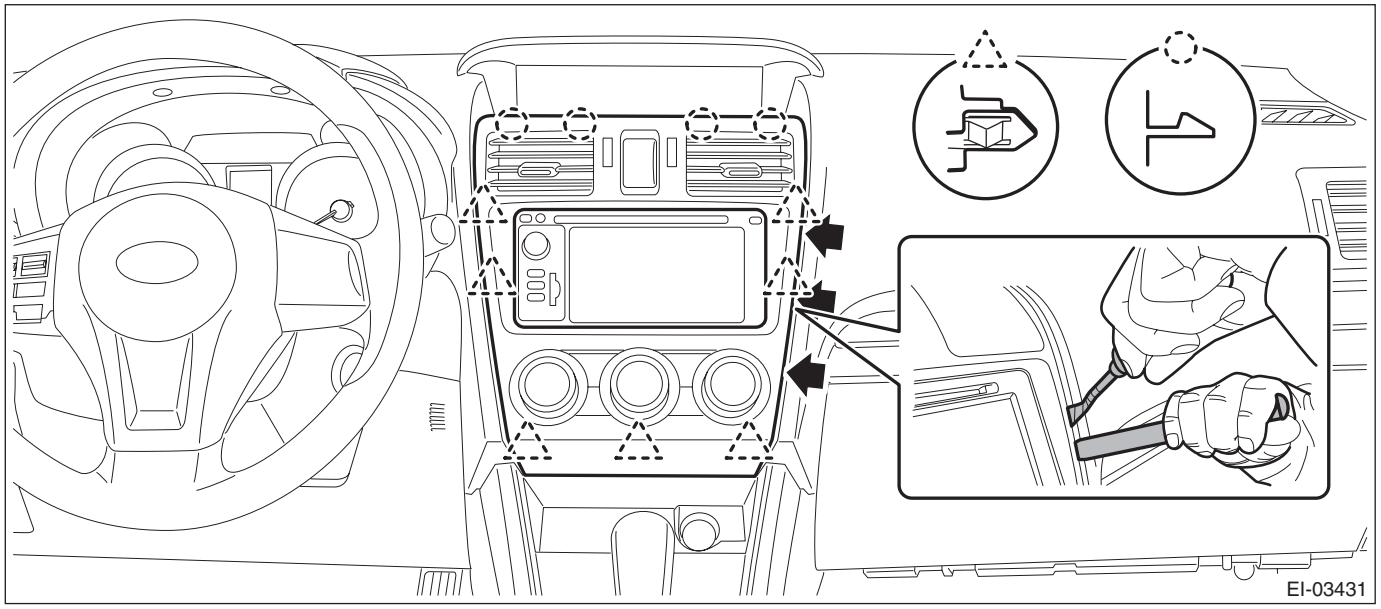
12) On manual A/C models, disconnect the control cables from both sides of the heater & cooling unit.



13) Remove the panel center assembly.

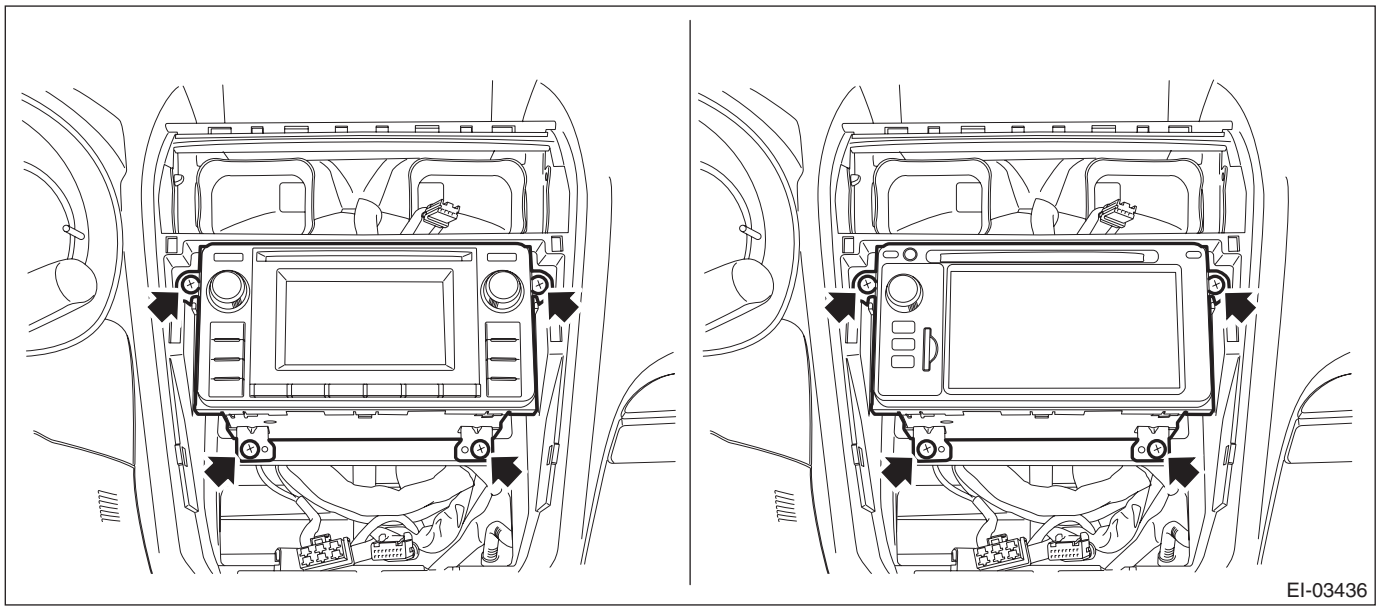
CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(1) Insert a plastic remover to the three areas shown by the arrows, and lift up the panel center assembly slightly.
(2) With the panel center assembly lifted up slightly, release the claw by using a clip remover wrapped with protective tape.
(3) Release the rest of the claws, and remove the panel center assembly.

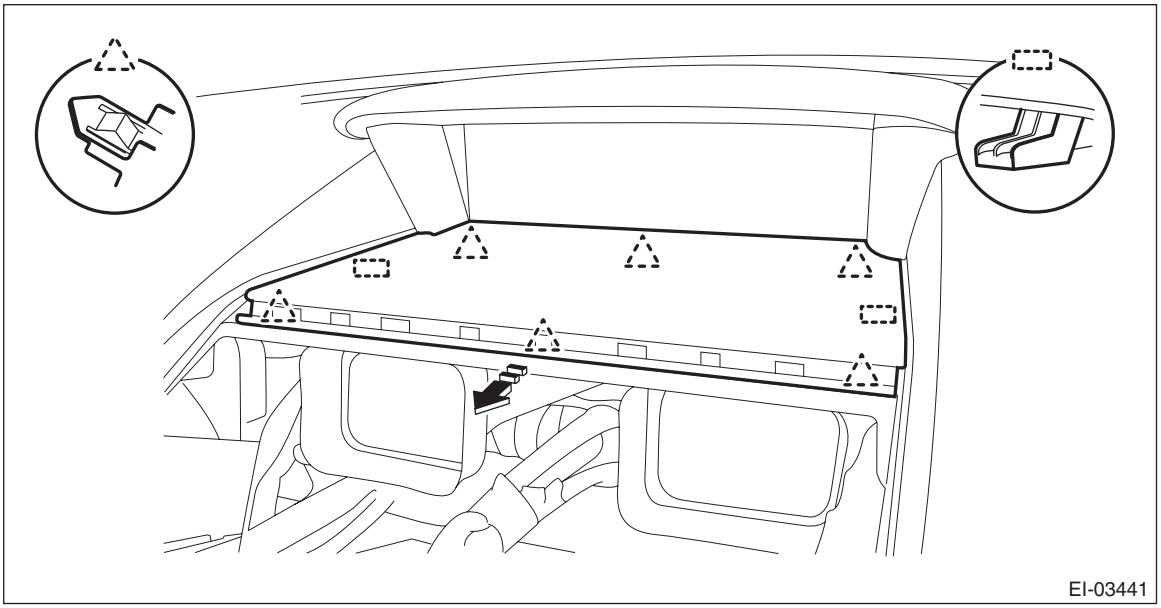


14) Remove the audio assembly or navigation assembly.

(1) Remove the screws, and partially pull out the audio assembly or navigation assembly.
(2) Disconnect the connectors, and remove the audio assembly or navigation assembly.

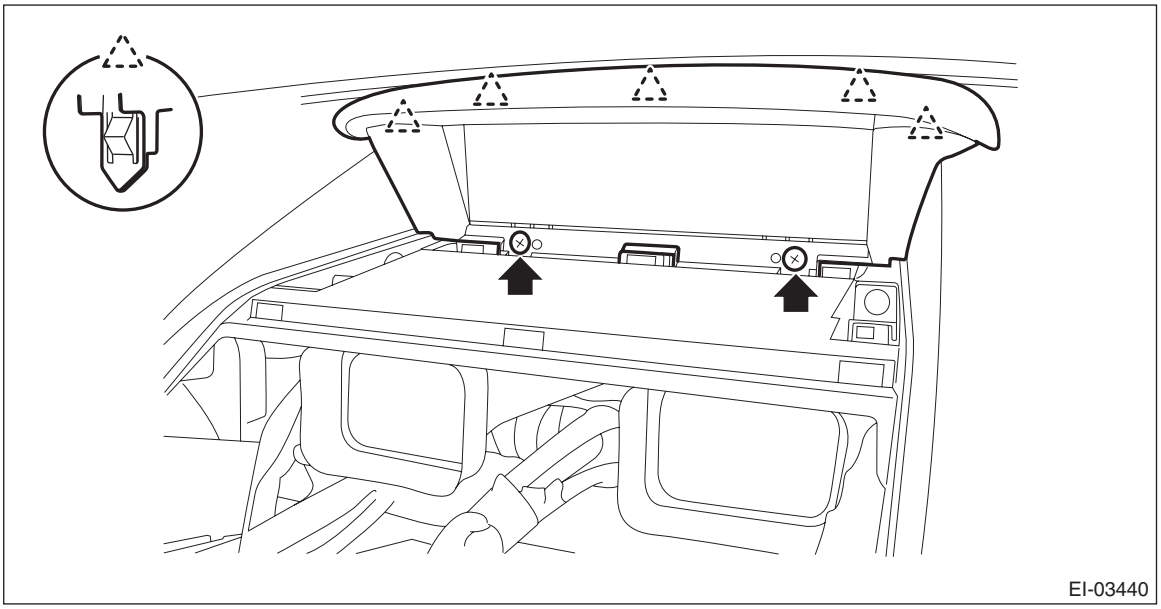


15) Remove the multi-function display assembly.
(1) Disconnect the claws and then remove the cover center UPR.



NOTE:
Lightly push up the back of the cover center UPR, hook the finger to the end portion, and pull it toward you to remove it.
(2) Release the claws and remove the screws, then remove the panel - display assembly.

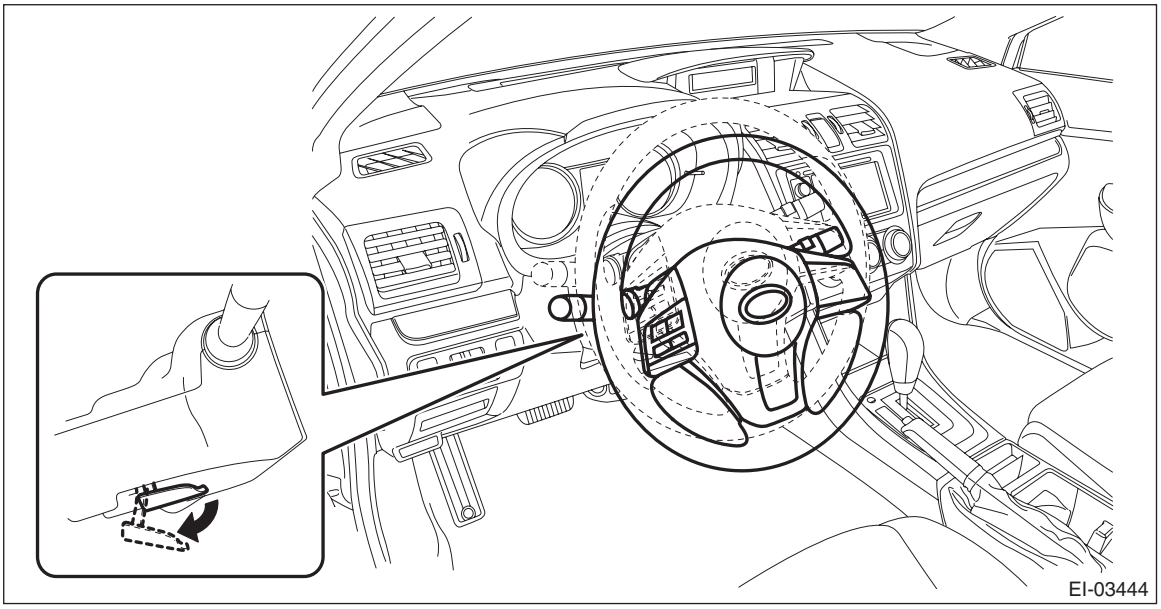
NOTE:
Remove the panel - display UPR & panel - display LWR and the multi-function display assembly as a unit.
(3) Disconnect the connector and remove the multi-function display assembly.



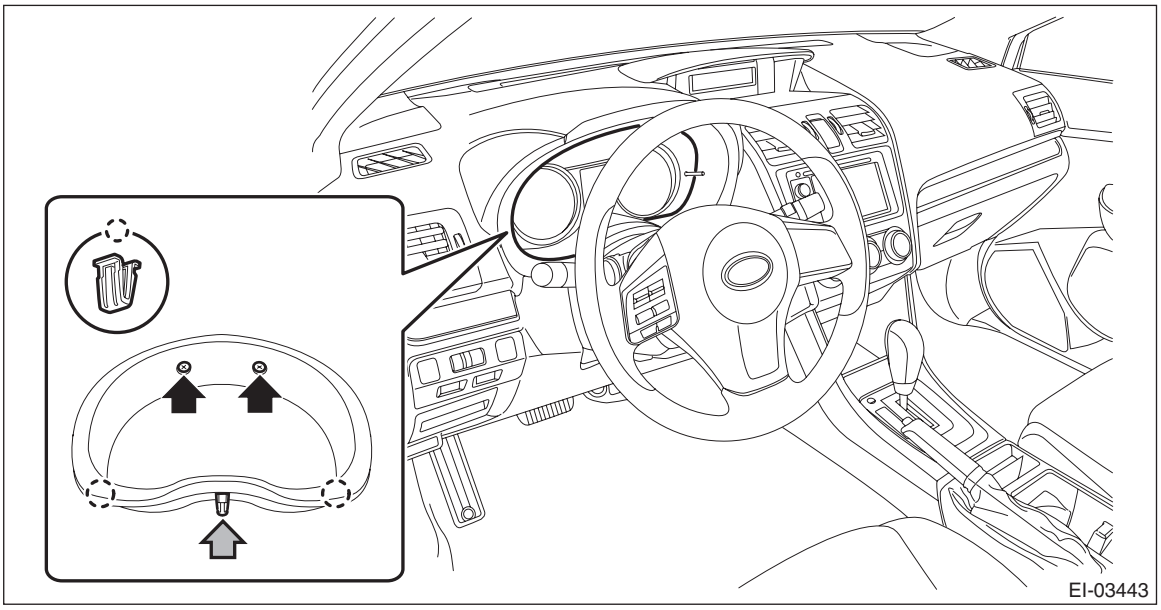
16) Remove the combination meter assembly.

CAUTION:
- **Be careful not to damage the meter or instrument panel.**
- **Pay particular attention to avoid damaging the meter glass.**

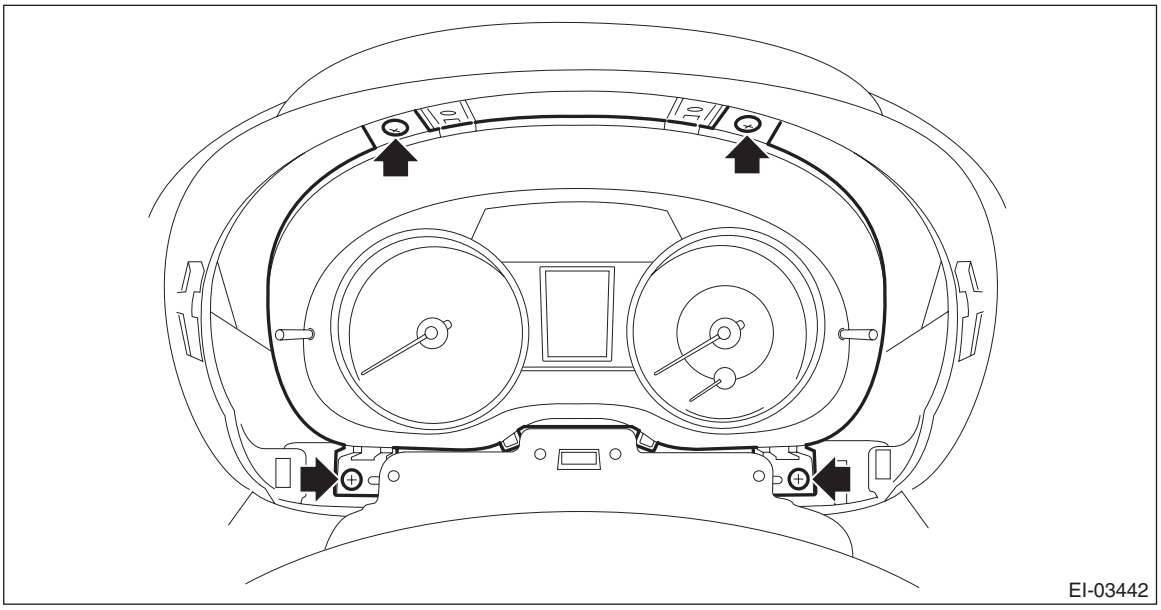
(1) Release the lock, tilt the steering column to the lowest end and fully extend the column by the telescopic system.



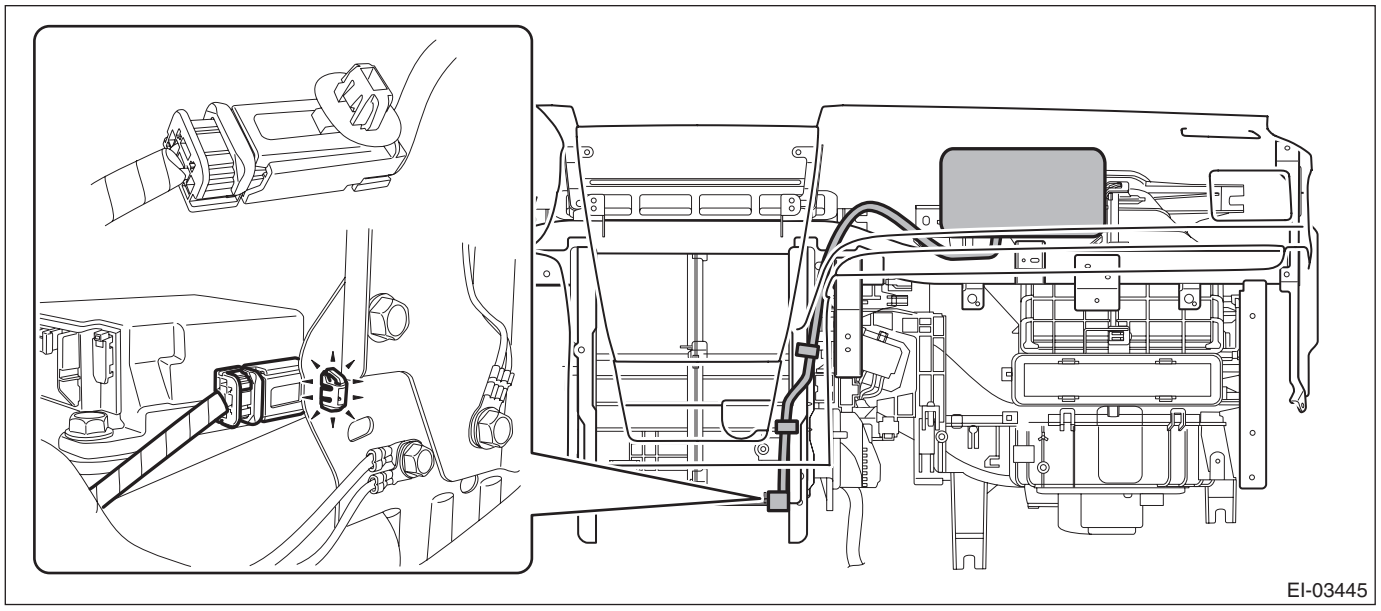
(2) Release the screws and clips, then detach the visor - combination meter.



(3) Remove the screws, disconnect the connector and remove the combination meter assembly.



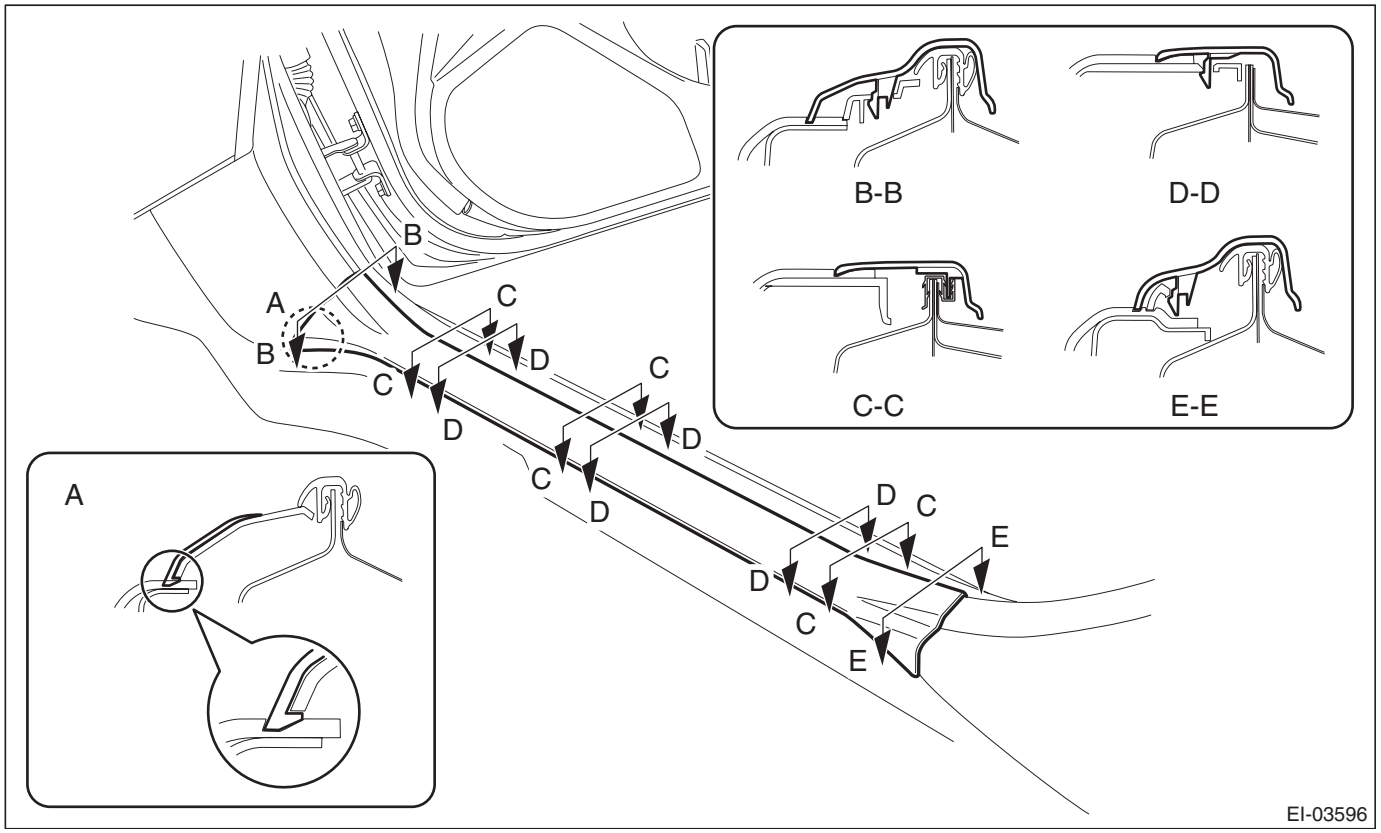
17) Disconnect the passenger's airbag module connector. <Ref. to AB-21, PASSENGER'S AIRBAG MODULE, PROCEDURE, Airbag Connector.>



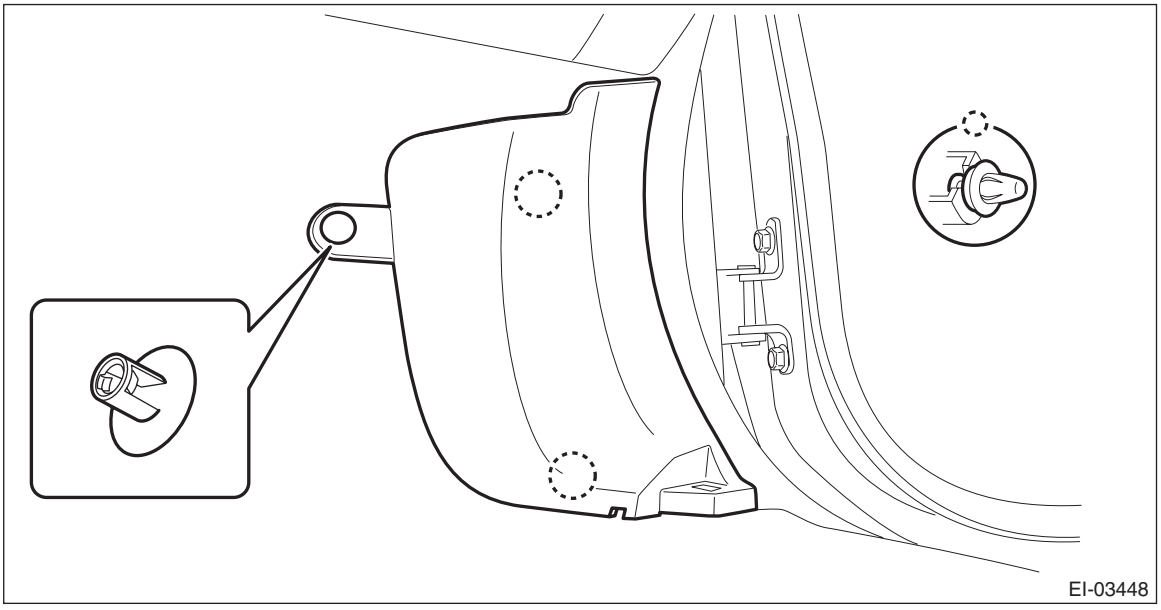
18) Remove the column assembly - steering. <Ref. to PS-18, REMOVAL, Steering Column.>

19) Release the claws, and then remove the cover side sill - front INN on LH and RH sides.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - front INN.



20) Remove the clip, and remove the cover side sill - front on LH and RH sides.



21) Remove the body side weather strip - flange front.

22) Remove the instrument panel assembly and the beam COMPL - steering as a unit.

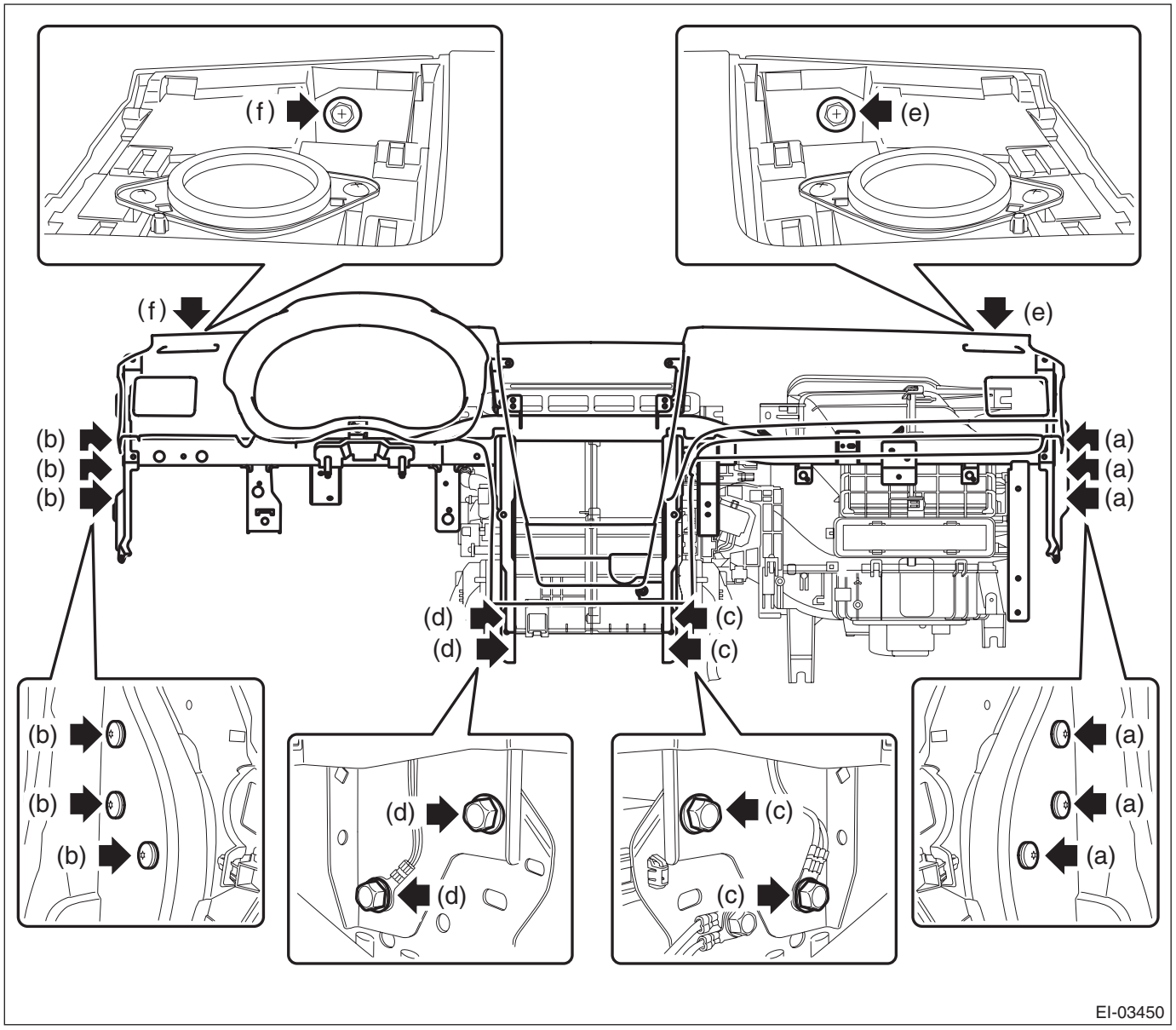
CAUTION:
The instrument panel assembly and the beam COMPL - steering are heavy. Always work in a team of two persons when removing them from the vehicle, so as not to damage the vehicle interior.

(1) Remove the fuse box and relay box.
(2) Disconnect all harness clamps and connectors of the instrument panel harness.
(3) Remove the TORX® bolt. (a), (b)

PREPARATION TOOL:

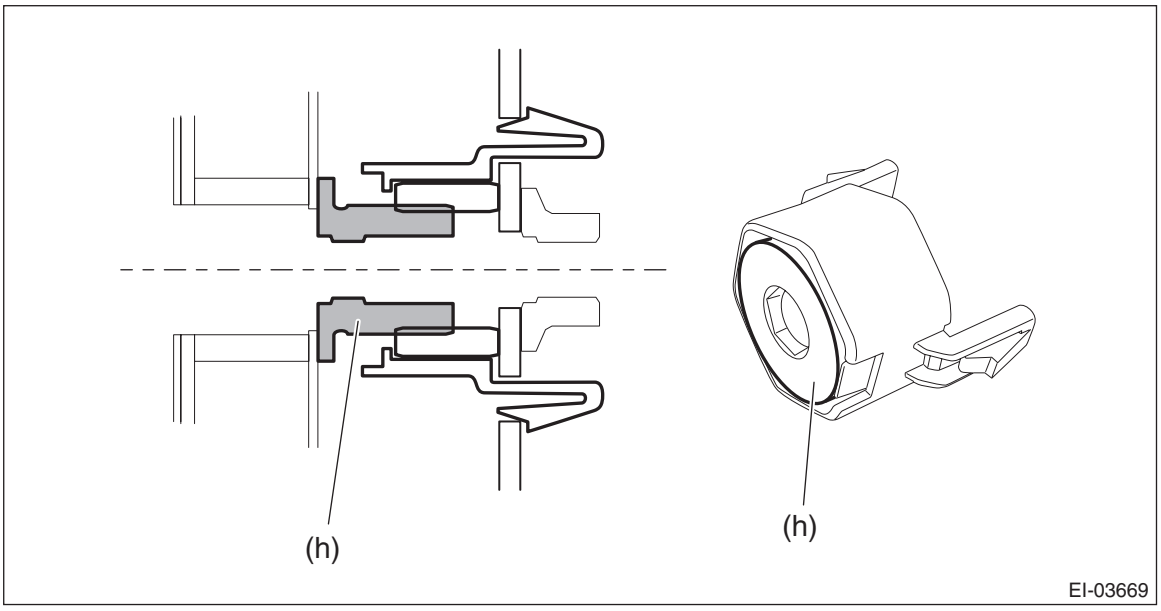
TORX® T40

(4) Remove the bolts at the floor center. (c), (d)
(5) Remove the bolt. (e), (f)



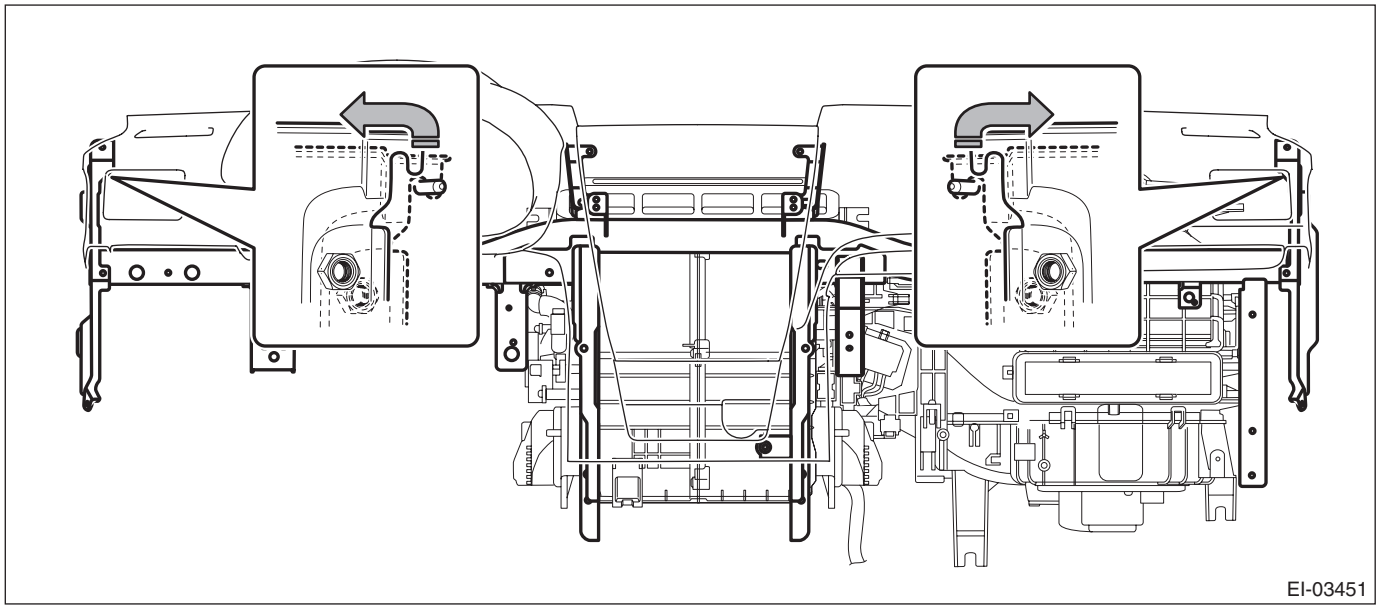
(6) Loosen the adjuster portion (h) of the adjuster - clip space. (only LH side of the beam COMPL - steering)

PREPARATION TOOL:
Hexagon wrench: 8 mm (0.31 in)

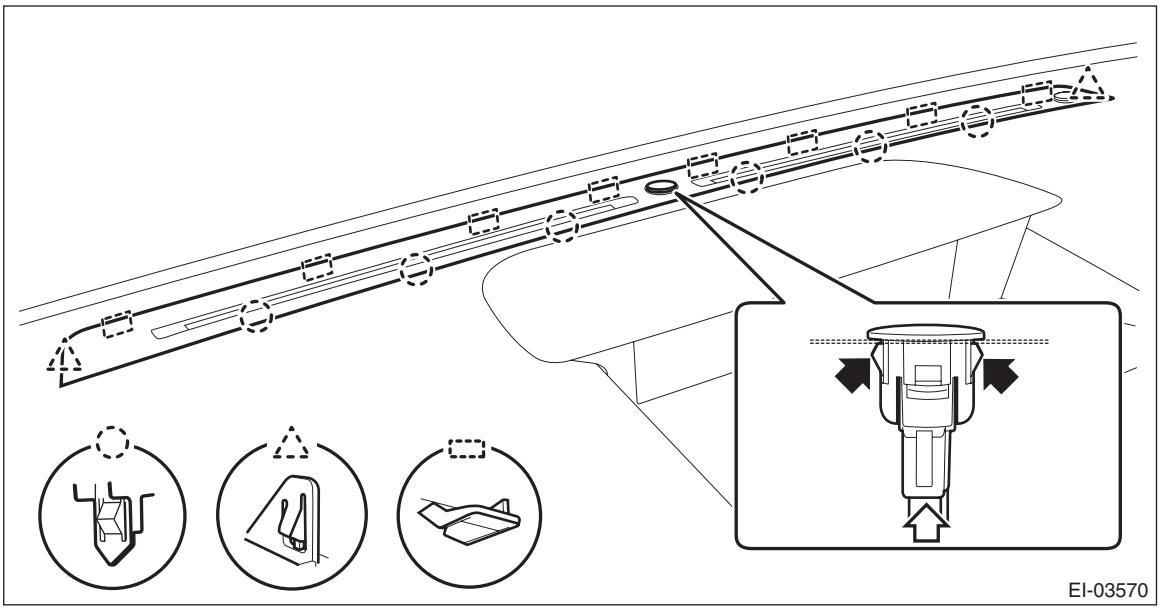


(7) Slightly lift the instrument panel assembly together with the beam COMPL - steering to detach the left and right pins. Then pull it toward you to remove the assembly.

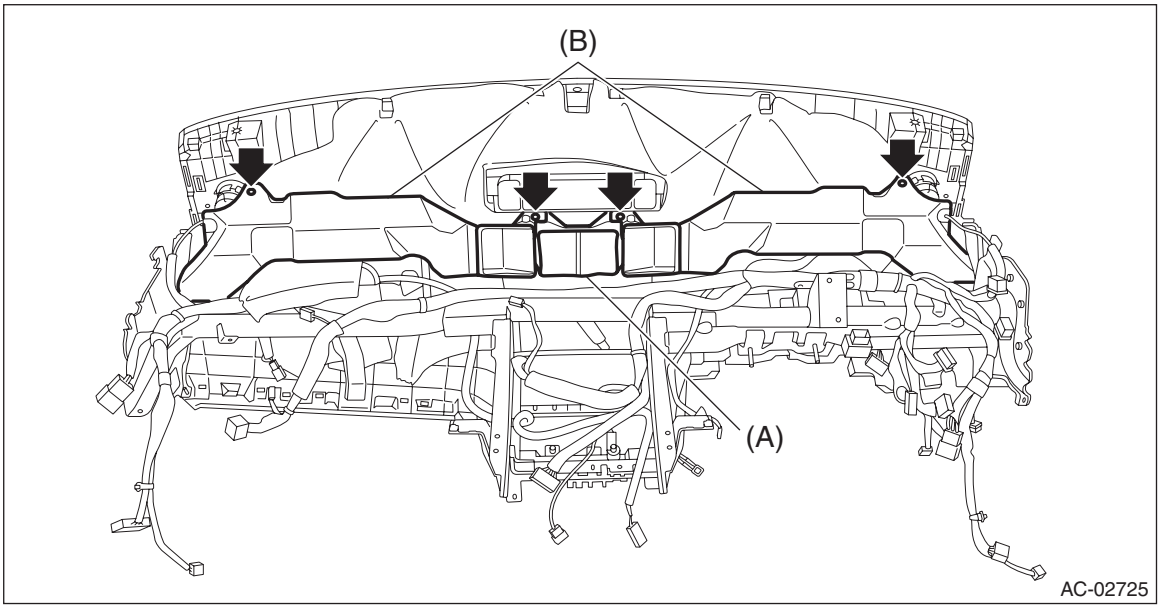
CAUTION:
• Check that all harness clamps and connectors are detached.
• The instrument panel assembly and the beam COMPL - steering are heavy. Always work in a team of two persons when removing them from the vehicle, so as not to damage the vehicle interior.



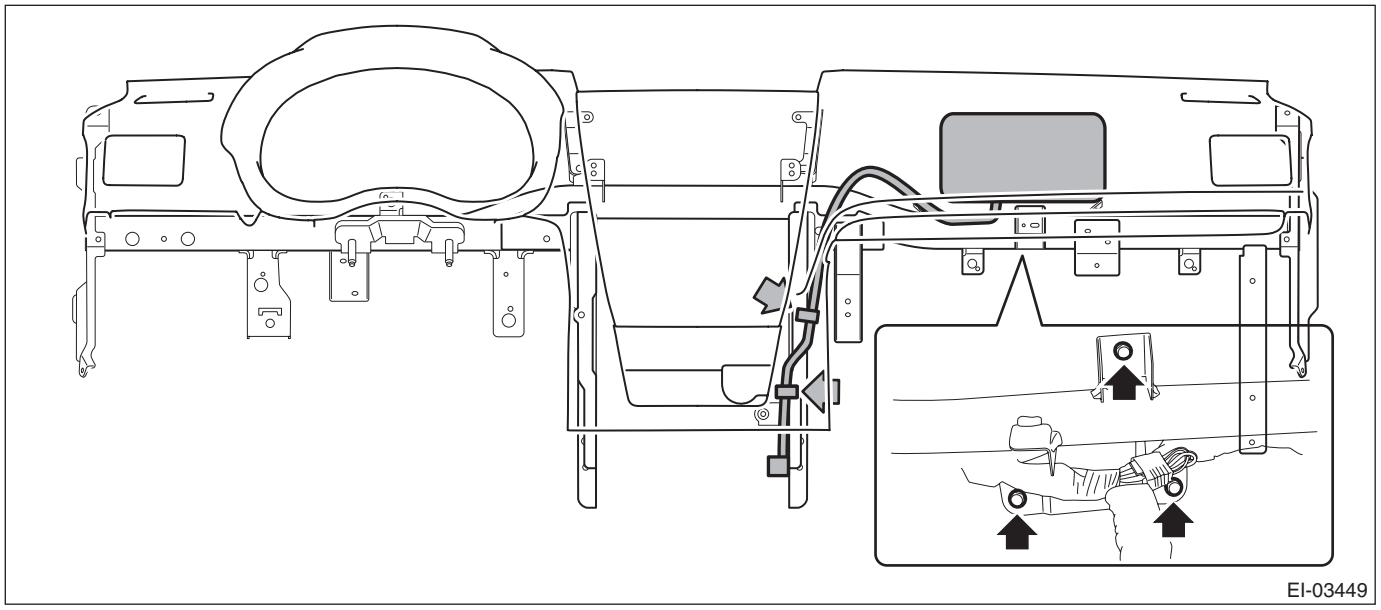
23) Remove the panel COMPL - instrument UPR.
(1) Disconnect the connector of the sensor - sunload.
(2) Release the claws, and remove the panel COMPL - instrument UPR.



24) Remove the screws and remove the front (A) and side vent duct (B) LH, RH.



25) Separate the panel COMPL - instrument and the beam COMPL - steering.
(1) Remove the clamps and bolts of the passenger's airbag module harness.

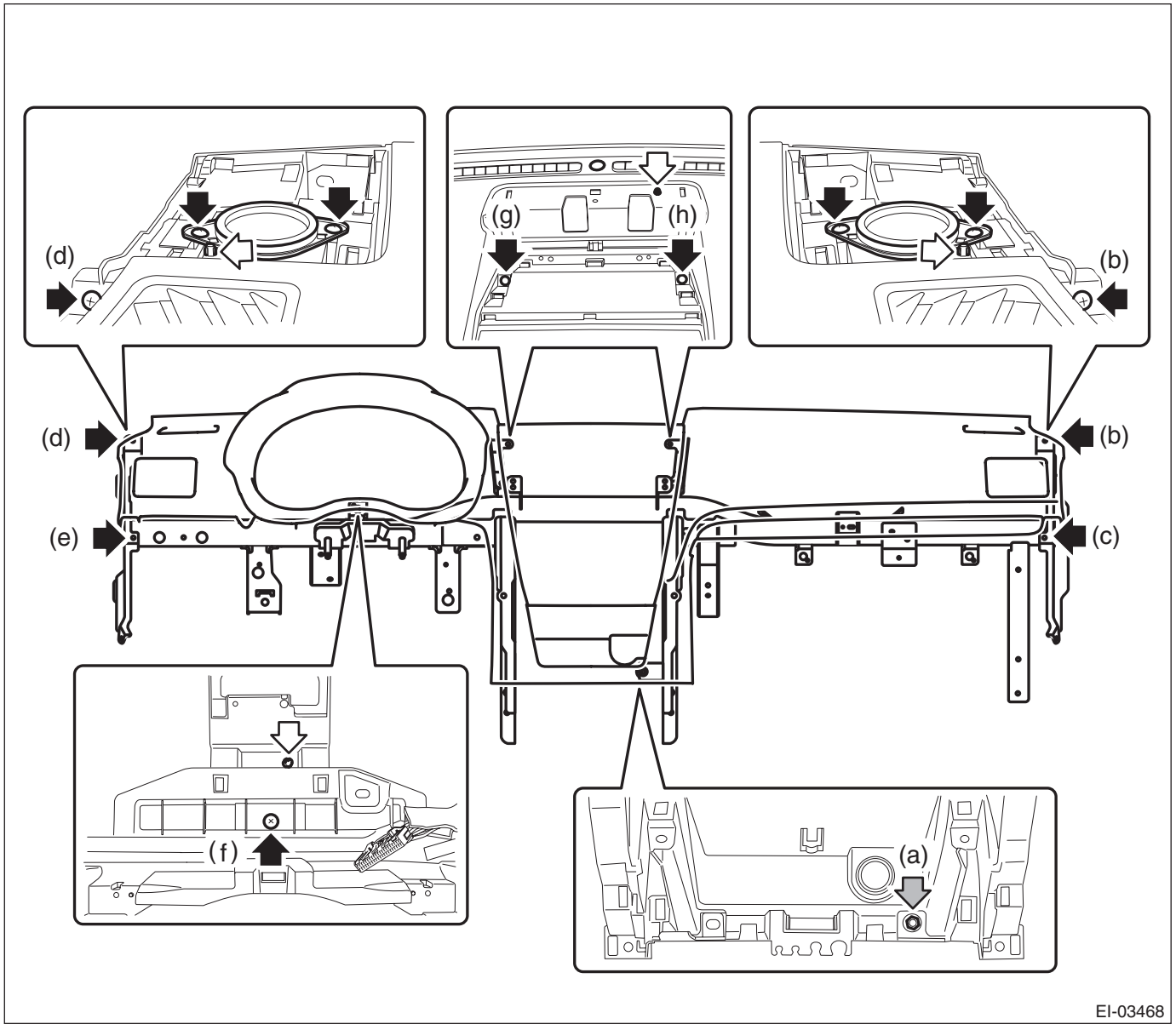

EI-03449

(2) Remove the left and right speakers.

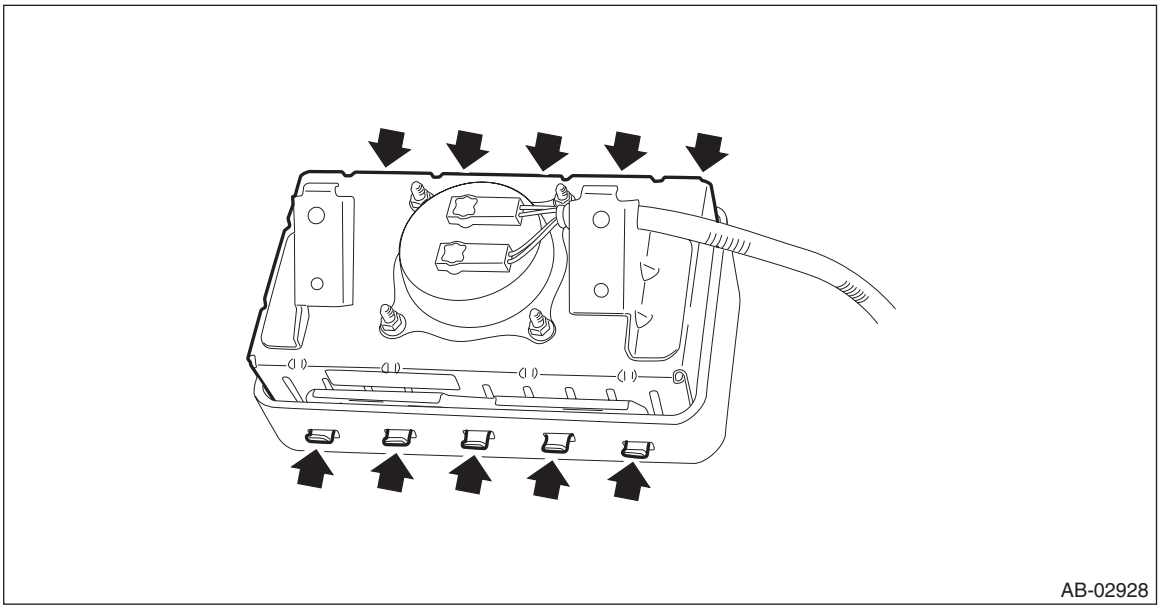
NOTE:
Detach the harness clamp together.

(3) Disconnect the front accessory socket connector.
(4) Remove the nut (a) and screws (b), (c), (d), (e), (f), (g) and (h).

(5) While being careful with the harness, separate the panel COMPL - instrument and the beam COMPL - steering.



26) Remove the claws, and remove the passenger's airbag module.



B: INSTALLATION

1) Attach components until the instrument panel assembly is formed, in the reverse order of removal.

Tightening torque:
Passenger's airbag module: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

NOTE:
Method of installing insulator
- Adhesive

Use polyurethane adhesive. When assembling the instrument panel assembly, wait until the adhesive has evaporated to prevent filling of the smell in the compartment.
- Double-sided tape

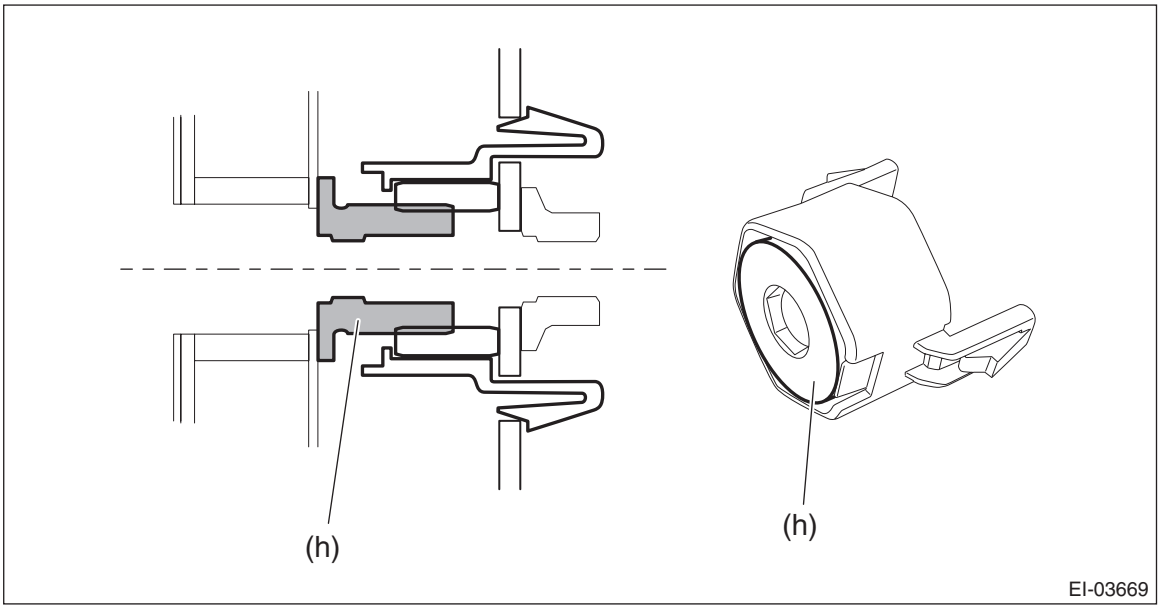
Use commercial double-sided tape. (Use strong double-sided adhesive tape.)
2) Insert the matching pins on the body side (three locations - one in the center and the remaining two on both sides) into the instrument panel assembly and the beam COMPL - steering.
3) Check that the matching pins are inserted securely, and then route the harness.

4) Secure the instrument panel assembly and the beam COMPL - steering to the vehicle body.
(1) Position the instrument panel assembly and the beam COMPL - steering to the vehicle body and tighten the adjuster - clip space.

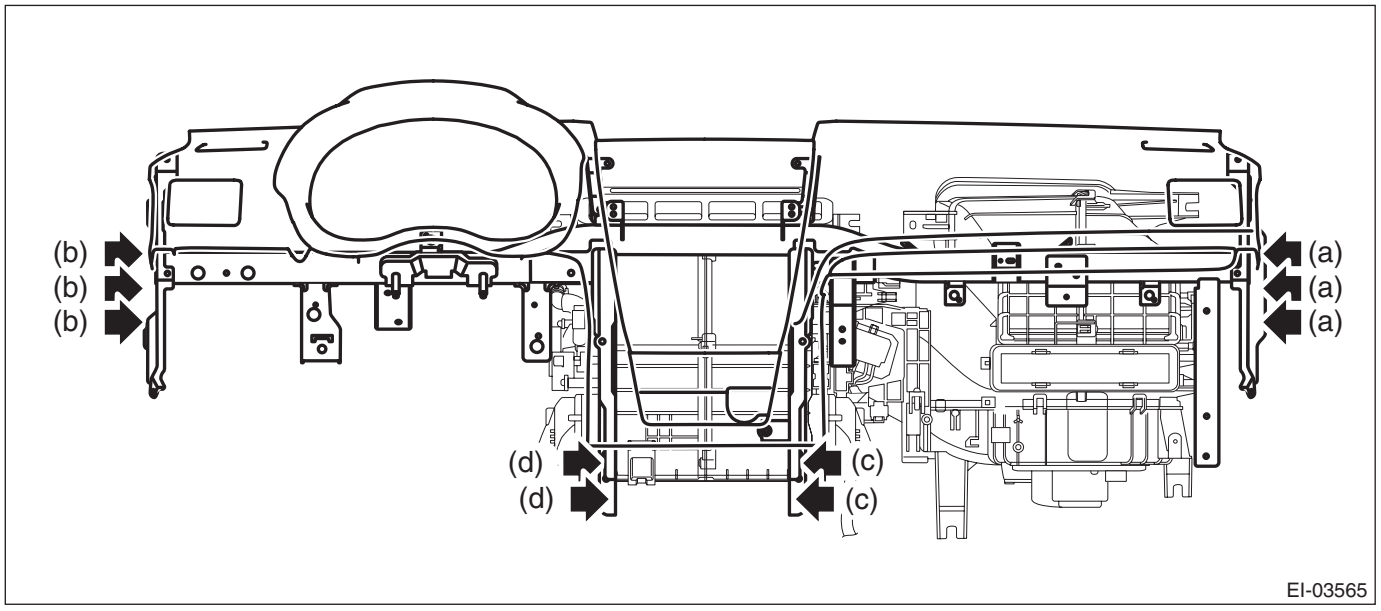
Preparation tool:
Hexagon wrench: 8 mm (0.31 in)

NOTE:
Tighten so that there is no gap between the adjuster portion (h) and the body.

Tightening torque:
Adjuster - clip space: 0.4 — 4 N·m (0.04 — 0.41 kgf-m, 0.3 — 2.95 ft-lb)



(2) Temporarily tighten the bolts (a), (b), (c) and (d) of the beam COMPL - steering.

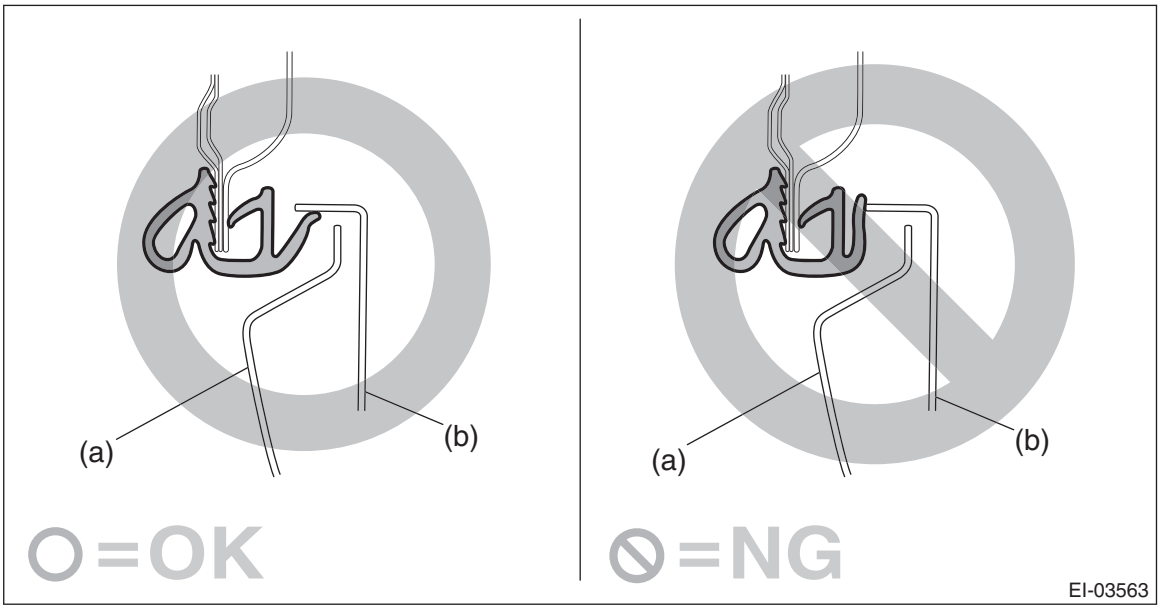


(3) Tighten the beam COMPL - steering in the order from (a) to (d) to the specified torque.

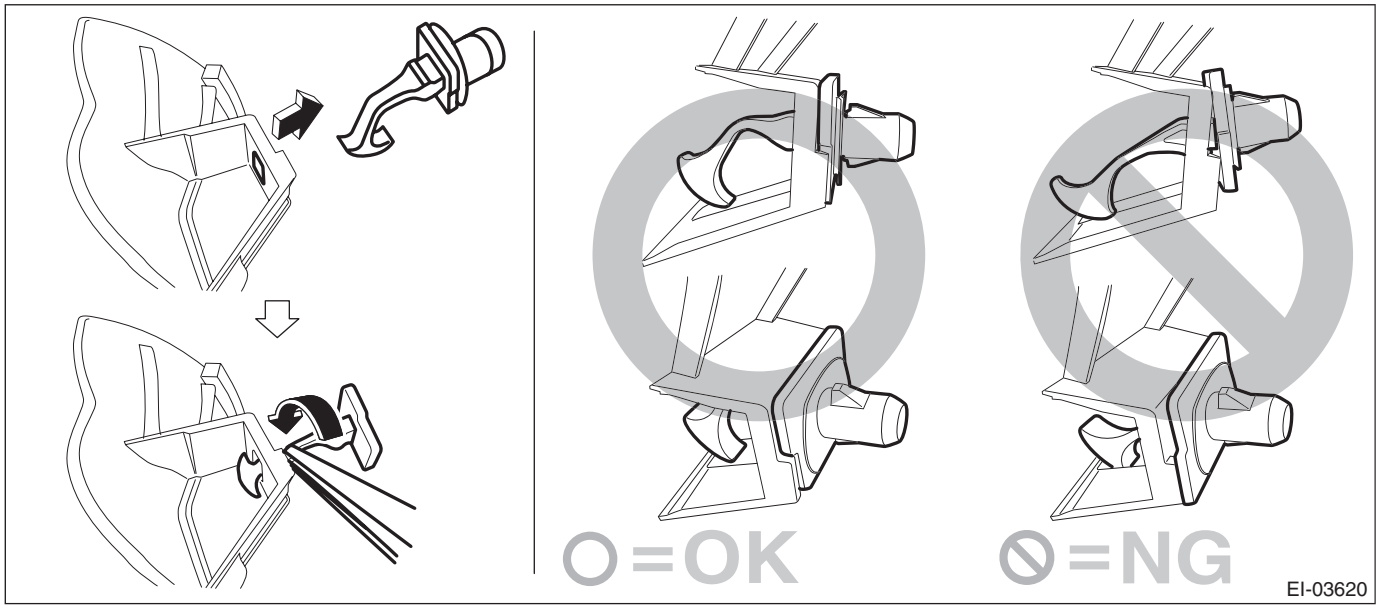
Tightening torque:
Beam COMPL - steering: 25 N·m (2.55 kgf-m, 18.4 ft-lb)

5) Install each part in the reverse order of removal.

CAUTION:
• After installing the panel center assembly, check that the air vent grille of the panel center assembly is inserted correctly into the air vent duct.
• When installing the cover - instrument panel side (a), make sure that the body side weather strip - flange front does not come inside the panel COMPL - instrument (b).



• When reusing the tether clip on the upper part of the trim panel - front pillar UPR, check that there is no damage to the tether clip. If the tether clip is damaged, its holding force is reduced and the trim panel - front pillar UPR may come off. Be sure to replace it with a new tether clip.
• Do not reuse the tether clip removed from the upper part of the trim panel - front pillar UPR. Always replace with a new part.
• Check the installation status of the tether clips and install the trim panel - front pillar UPR.



Tightening torque:
Column assembly - steering: <Ref. to PS-3, STEERING WHEEL AND COLUMN, COMPONENT, General Description.>
Console box assembly: 6.5 N·m (0.66 kgf-m, 4.8 ft-lb)

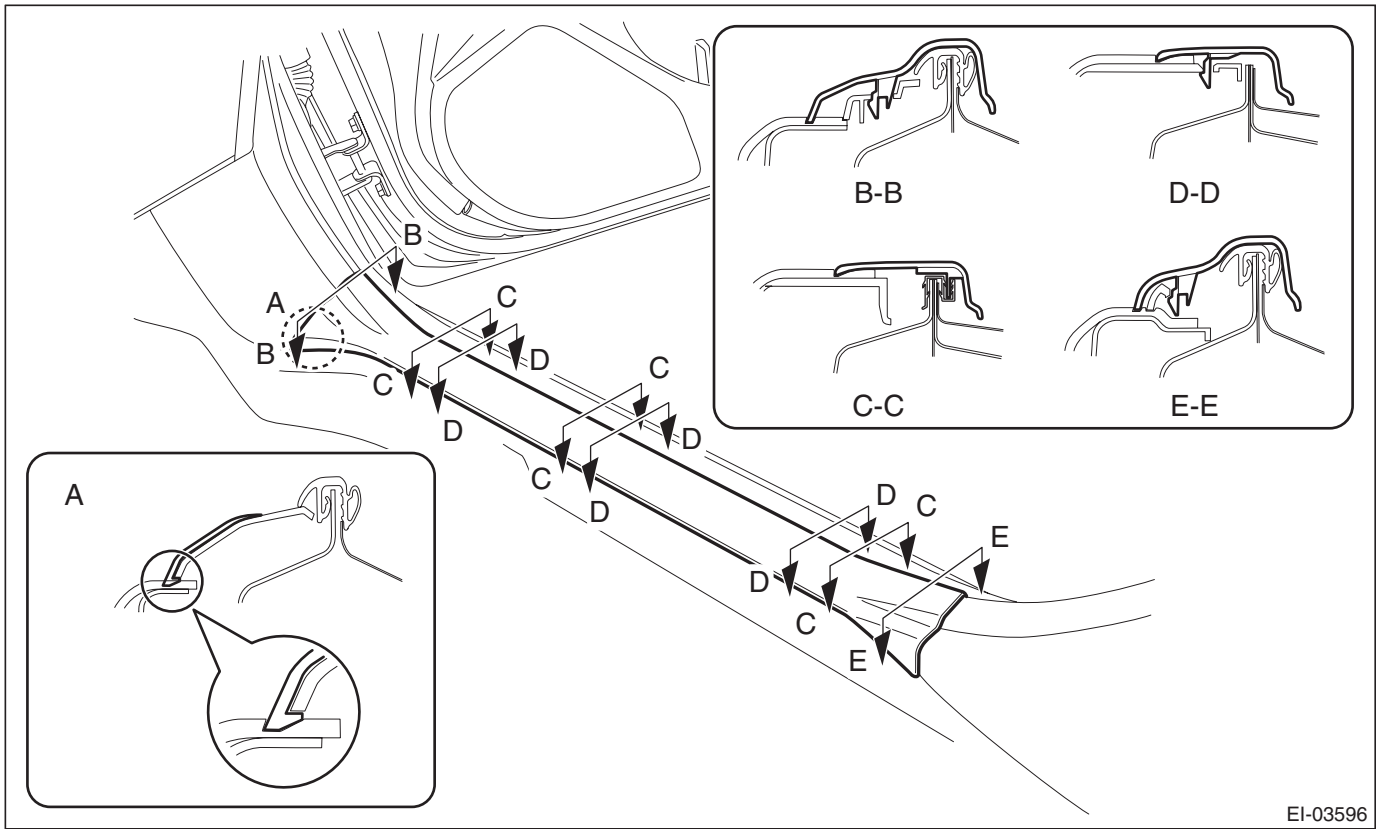
18.Lower Inner Trim

A: REMOVAL

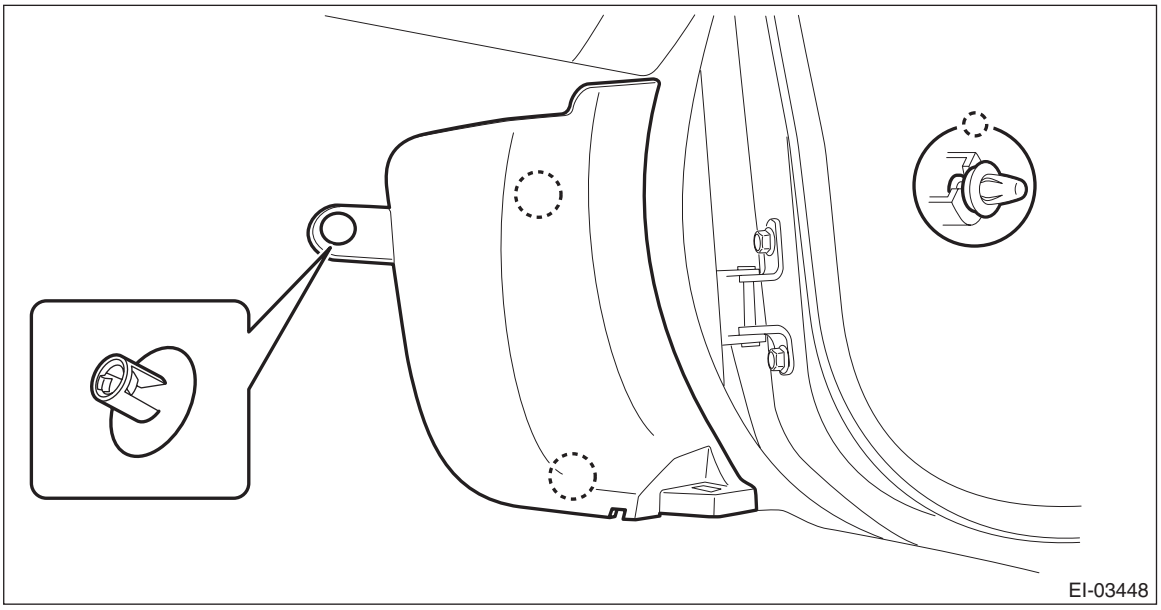
CAUTION:
• Airbag system satellite safing sensor is located in the lower of the rear seat cushion center. Before removing the rear seat, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM" section. <Ref. to AB-10, CAUTION, General Description.>
• The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

1) Release the claws, and then remove the cover side sill - front INN.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - front INN.

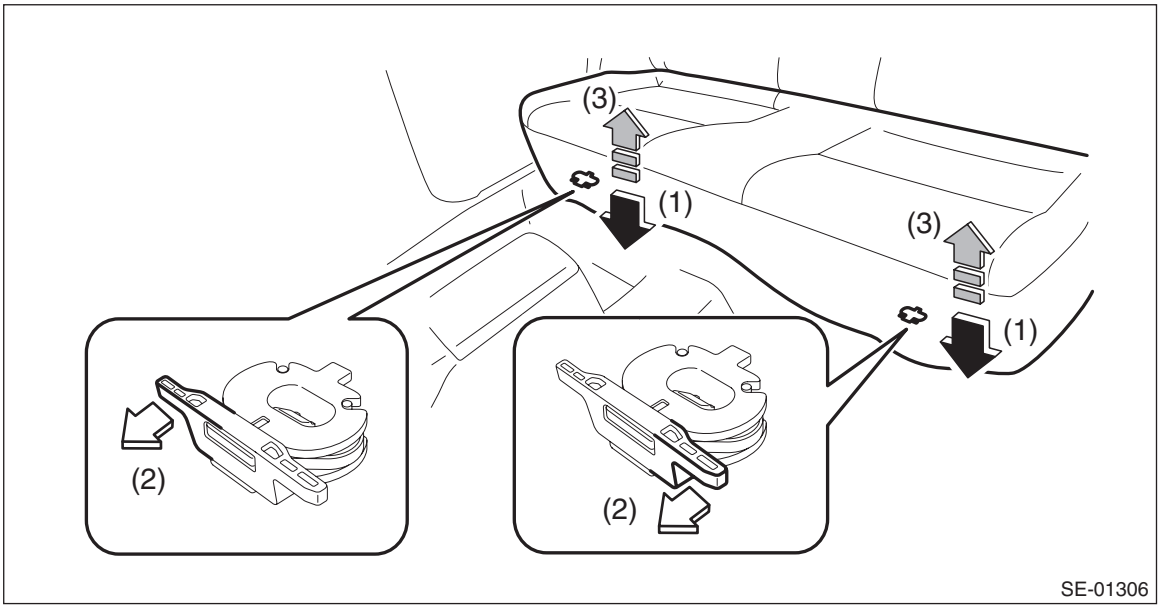


2) Remove the clips, and remove the cover side sill - front.

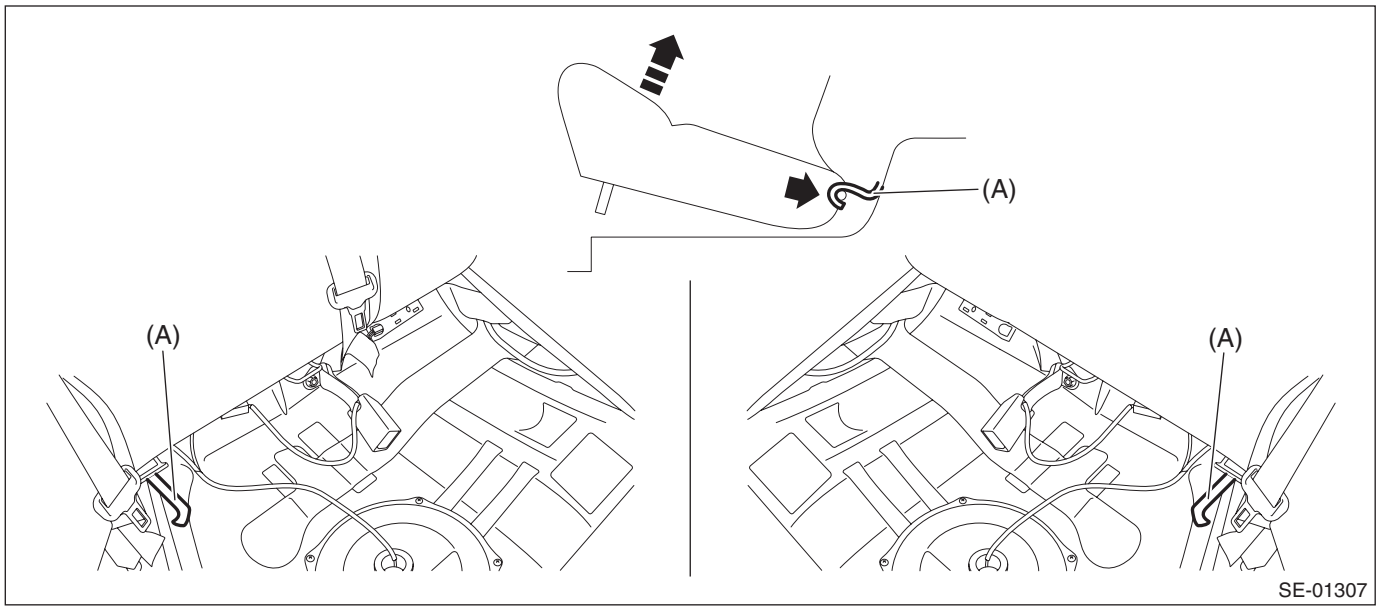


3) Remove the rear seat cushion assembly.
   (1) Push the corners of the rear seat cushion from above.
   (2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
   (3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

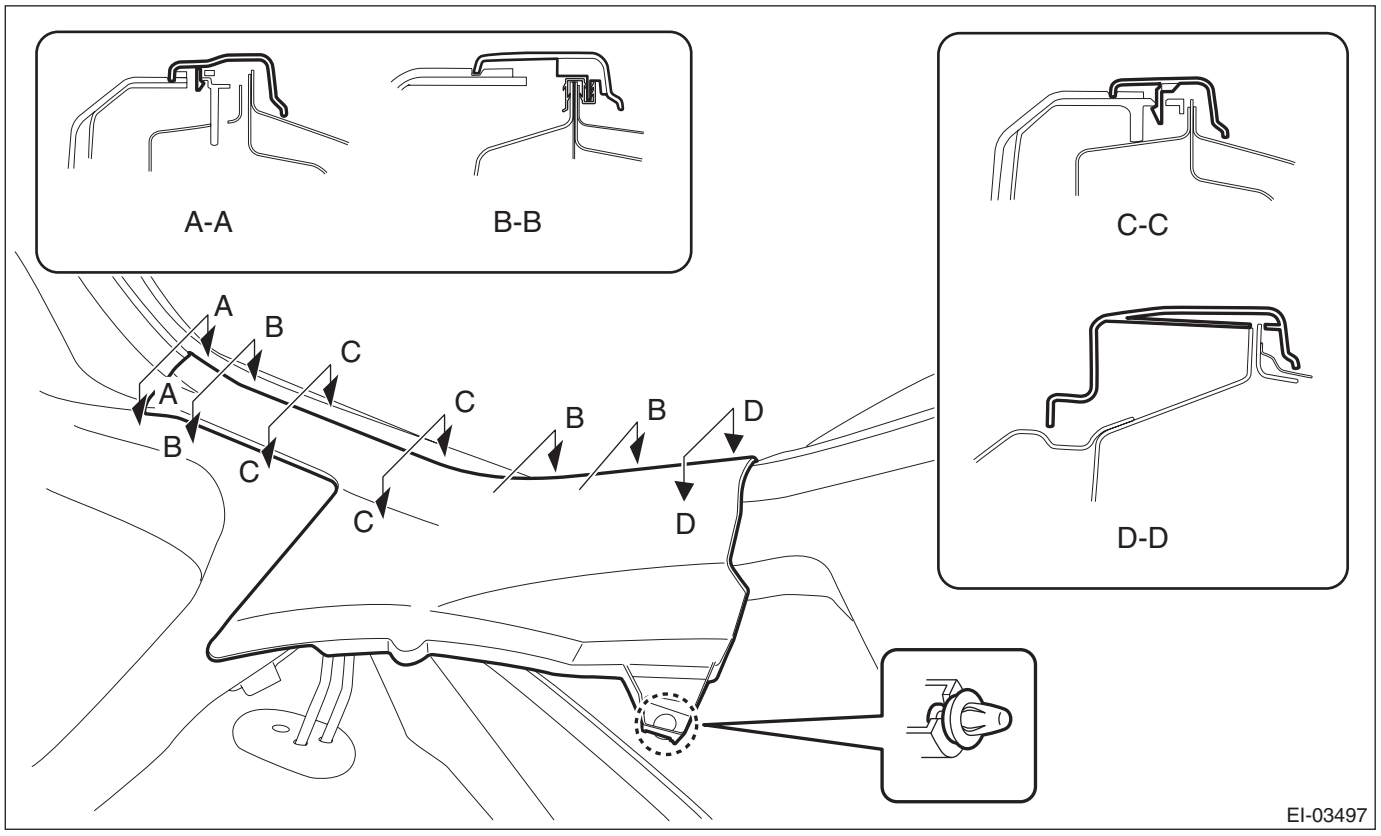


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.



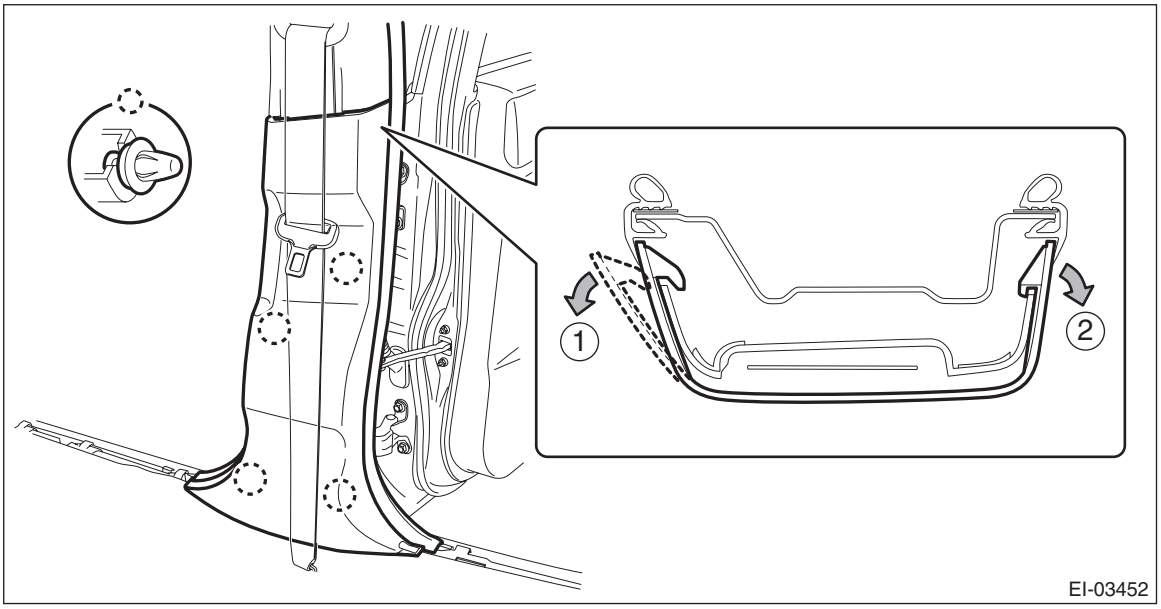
4) Release the clips and claws, and then remove the cover side sill - rear INN.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - rear INN.

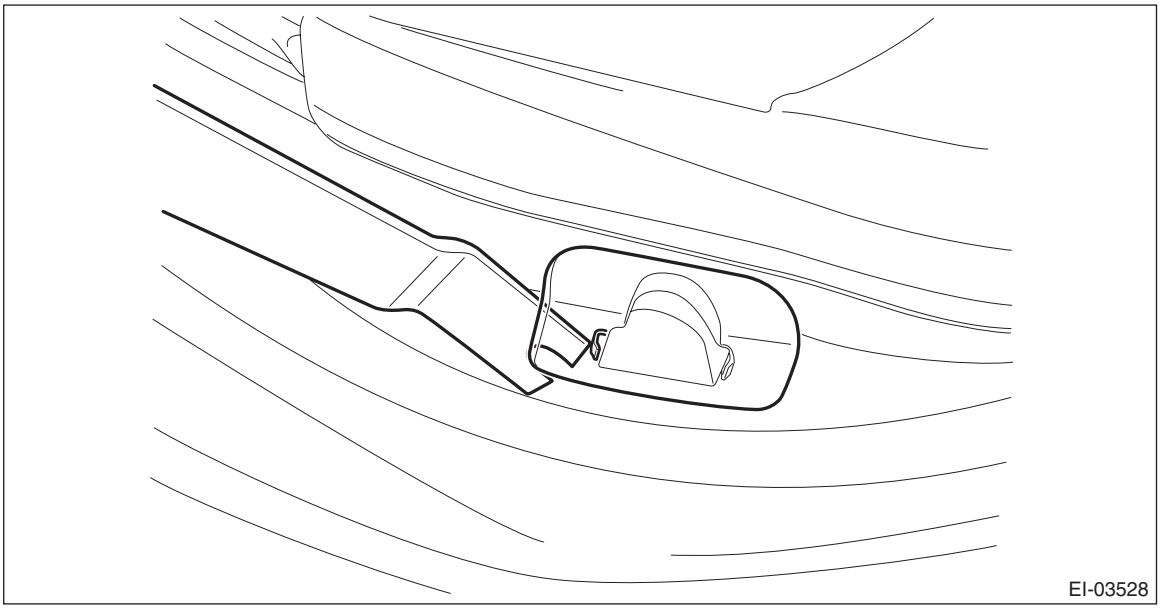


5) Remove the trim panel - center pillar LWR.
(1) Release the clip by pulling the trim panel - center pillar LWR toward you.
(2) Expand the claws of the trim panel - center pillar LWR outward, and remove it from the trim panel - center pillar UPR.

CAUTION:
Do not expand the trim panel - center pillar LWR excessively. Doing so may damage the trim.



NOTE:
First release the claw located to the front of the vehicle.
6) Disconnect the claws and remove the cover - catcher.

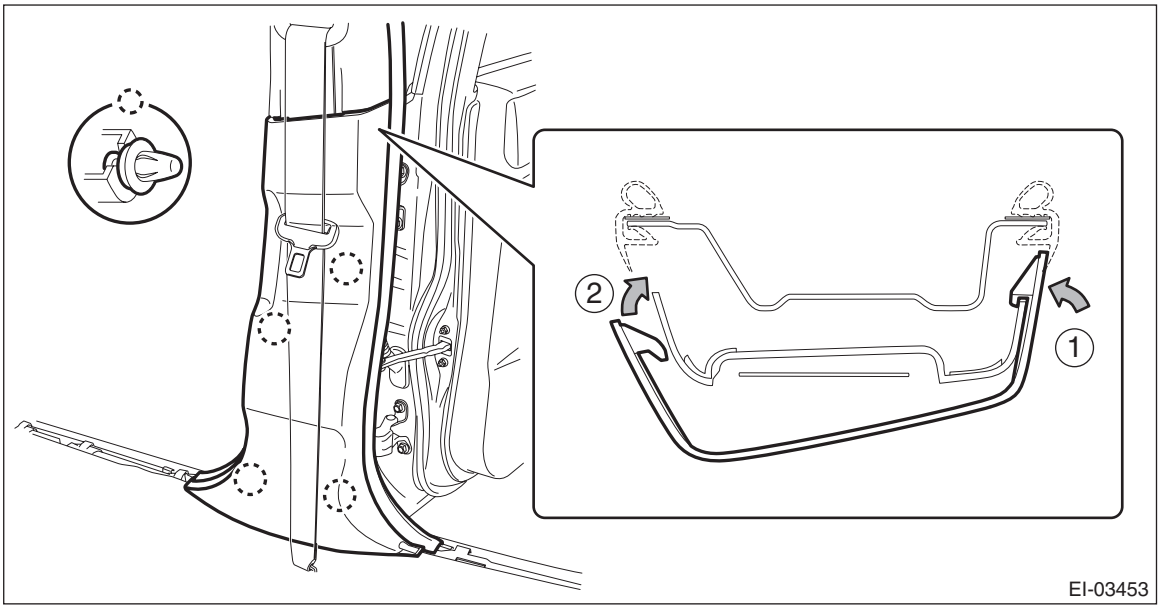


NOTE:
Remove the cover - catcher by using a plastic remover.

B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:
Assemble the trim panel - center pillar LWR to the trim panel - center pillar UPR securely.



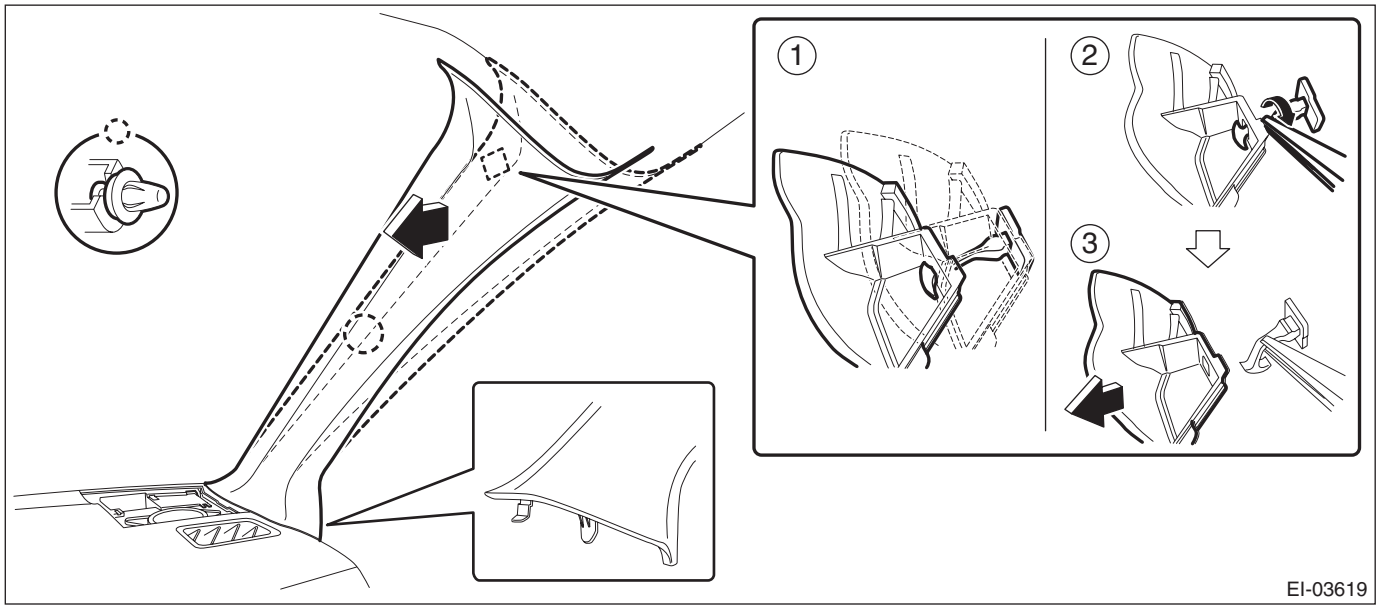
19.Upper Inner Trim

A: REMOVAL

CAUTION:
• Airbag system satellite safing sensor is located in the lower of the rear seat cushion center. Before removing the rear seat, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM" section. <Ref. to AB-10, CAUTION, General Description.>
• The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

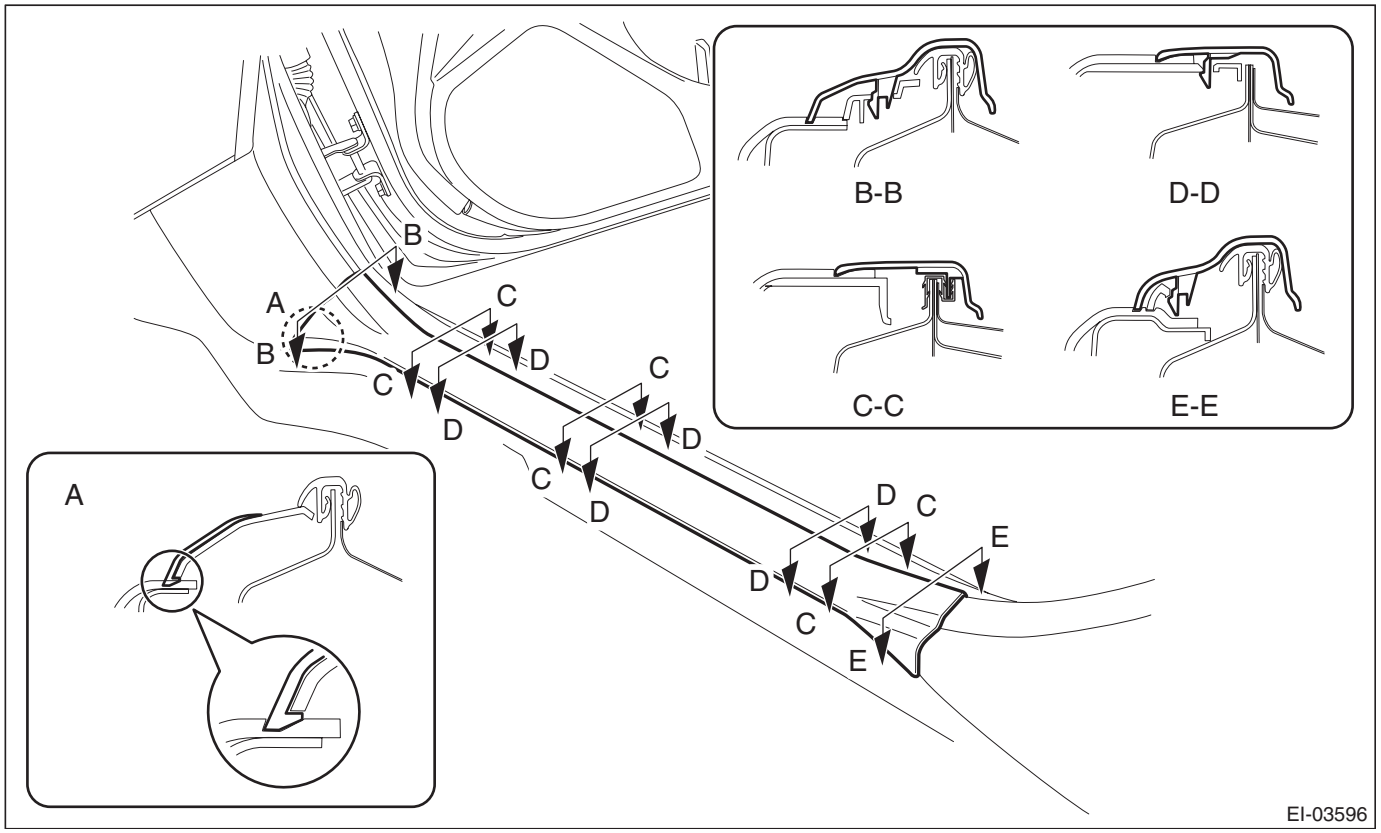
1) Remove the trim panel - front pillar UPR.
   (1) Pull the upper part of the trim panel - front pillar UPR towards the center of the vehicle.
   (2) Insert long-nose pliers into the top part of the trim, grip the tether clip with the pliers and twist 90° in that position.

CAUTION:
Be careful not to damage the pillar trim surface and curtain airbag module when inserting the pliers.
   (3) Holding the tether clip twisted as in the previous step, remove the trim panel - front pillar UPR from the tether clip.
   (4) Remove the clips, and remove the trim panel - front pillar UPR.



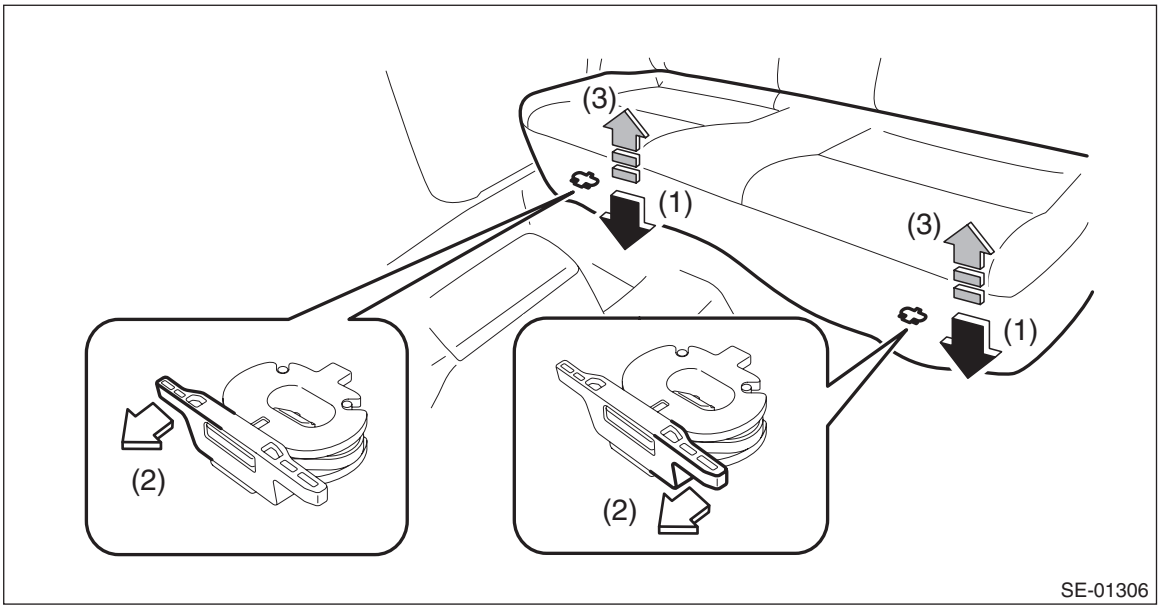
2) Release the claws, and then remove the cover side sill - front INN.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - front INN.

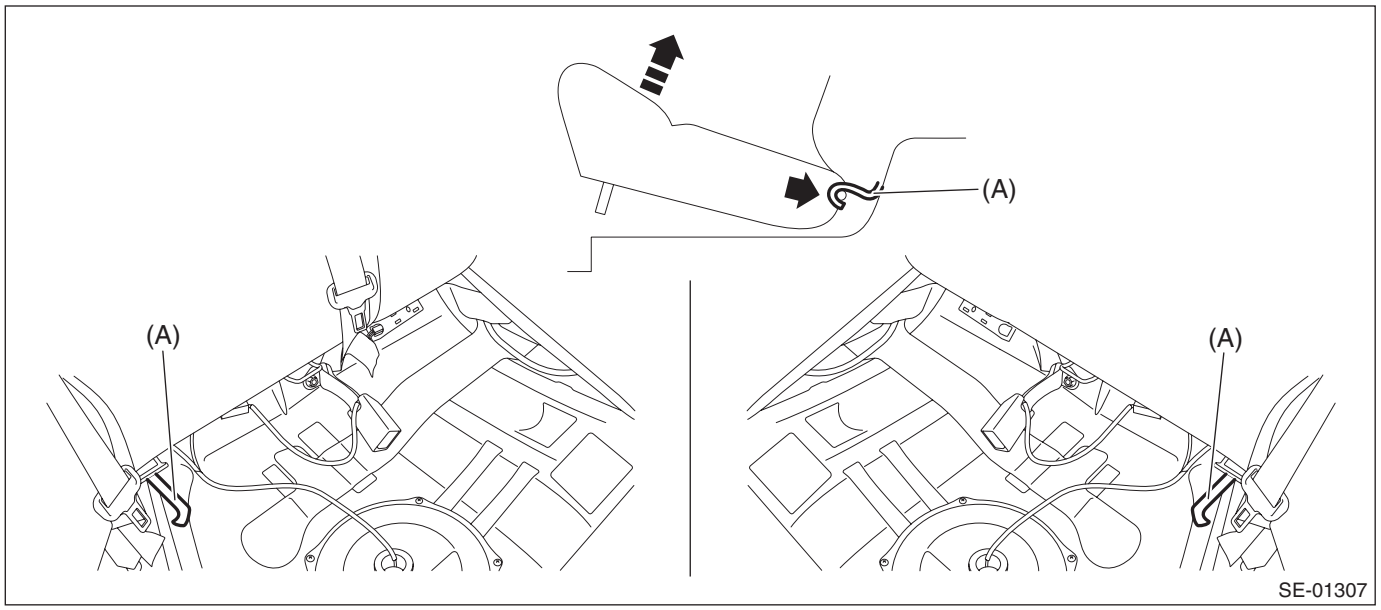


3) Remove the rear seat cushion assembly.
(1) Push the corners of the rear seat cushion from above.
(2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
(3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

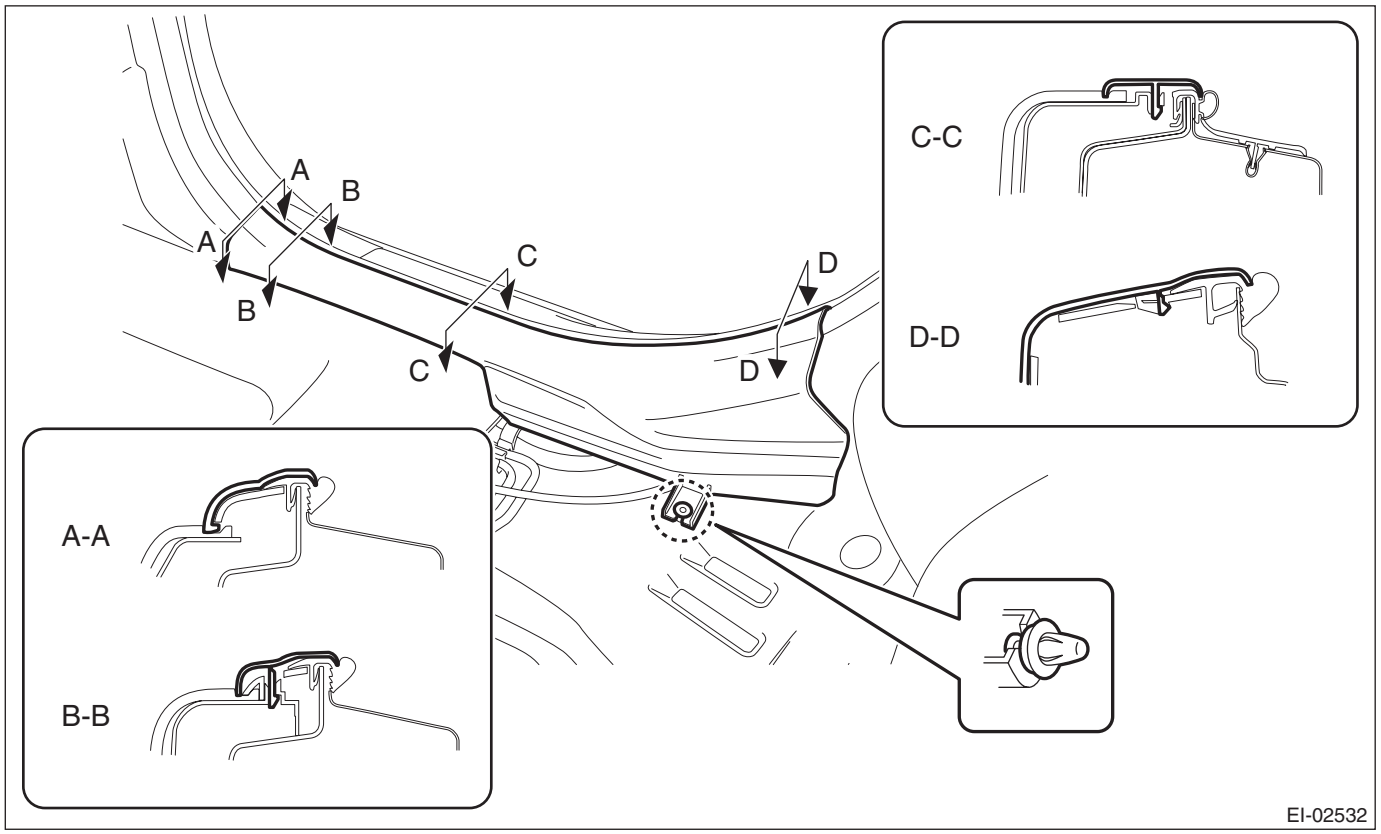


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.



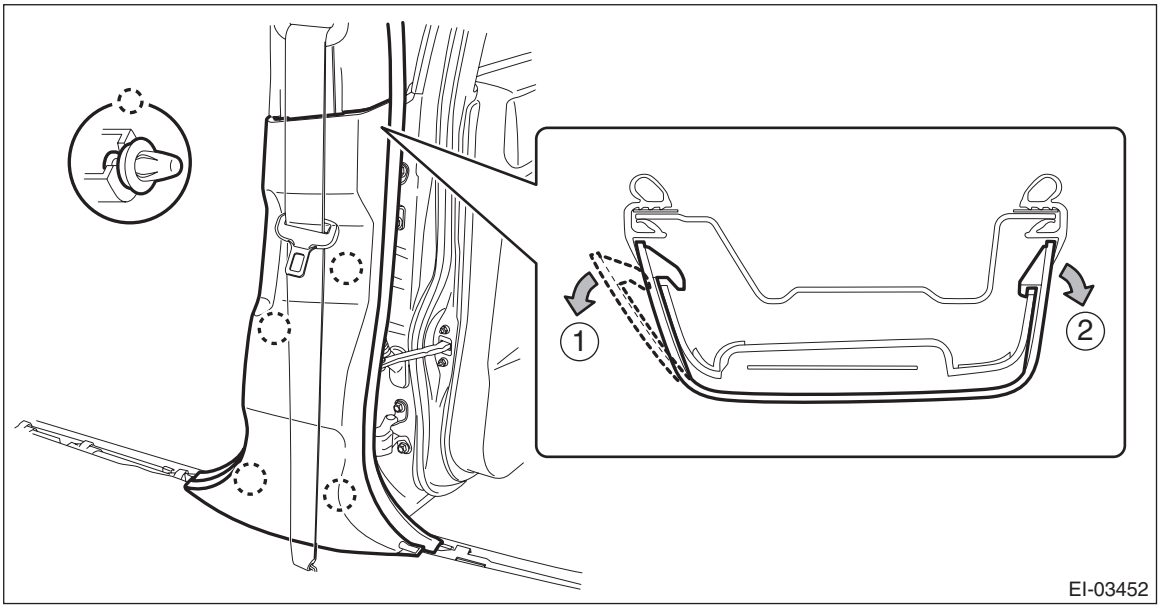
4) Release the clips and claws, and then remove the cover side sill - rear INN.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - rear INN.

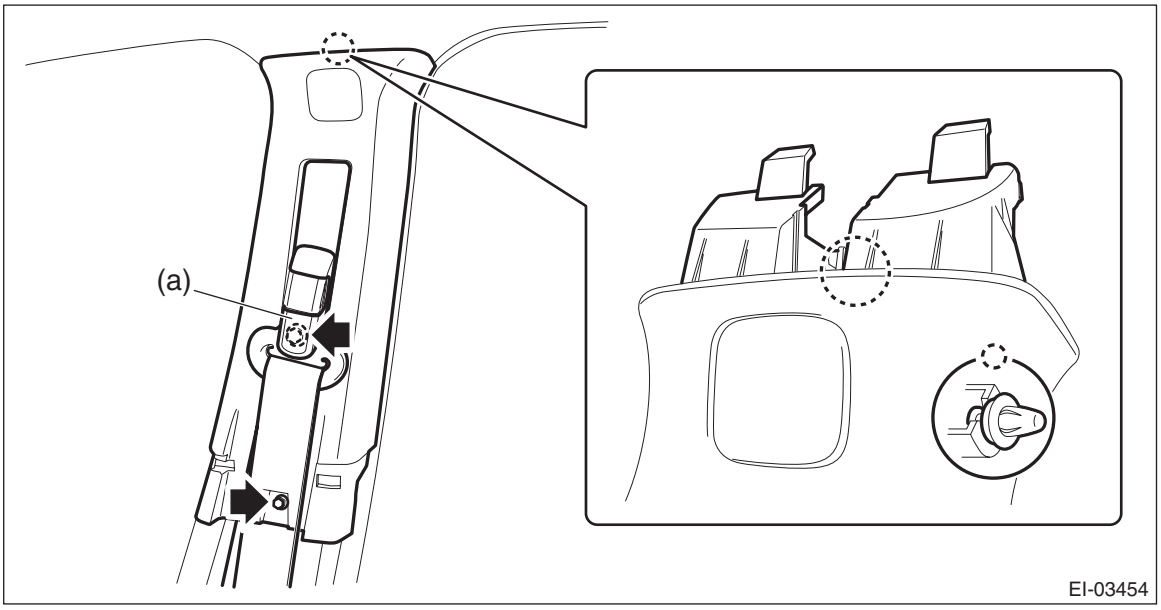


5) Remove the trim panel - center pillar LWR.
(1) Release the clip by pulling the trim panel - center pillar LWR toward you.
(2) Expand the claws of the trim panel - center pillar LWR outward, and remove it from the trim panel - center pillar UPR.

CAUTION:
Do not expand the trim panel - center pillar LWR excessively. Doing so may damage the trim.



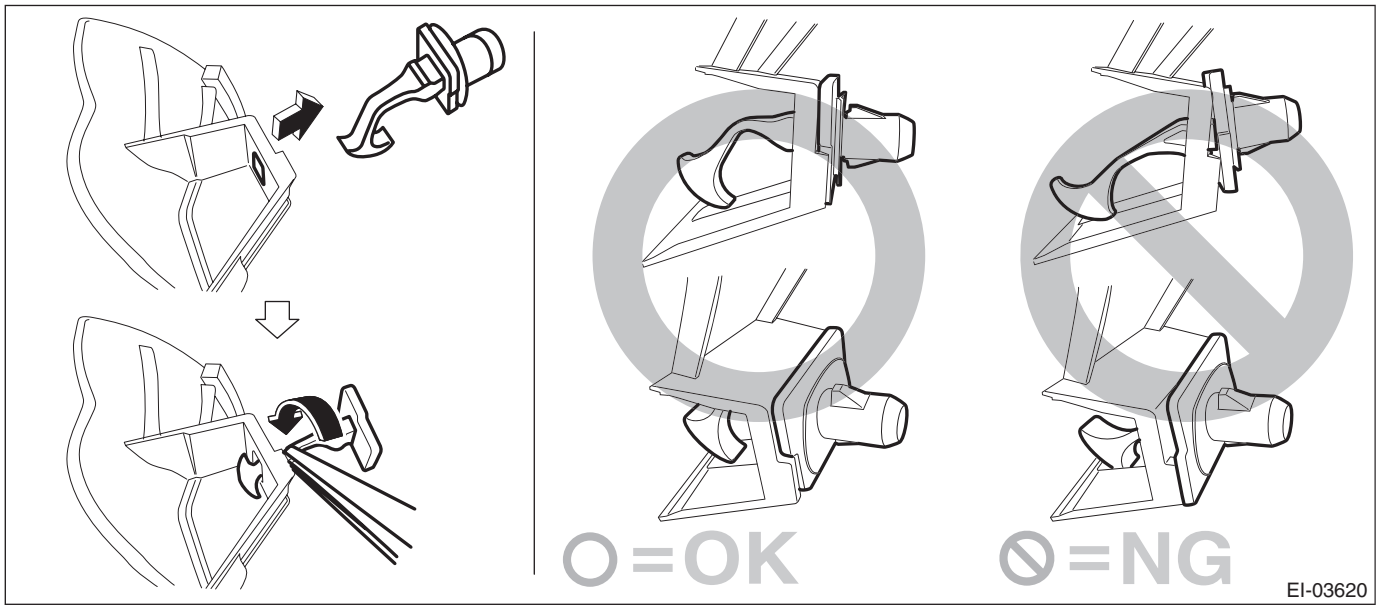
NOTE:
First release the claw located to the front of the vehicle.
6) Remove the trim panel - center pillar UPR.
(1) Remove the cover through (a), and remove the seat belt anchor bolt.
(2) Remove the bolt on the lower side of the trim panel - center pillar UPR.
(3) Remove the clip, and while lowering the entire trim, remove the trim panel - center pillar UPR.



B: INSTALLATION

CAUTION:
• When reusing the tether clip on the upper part of the trim panel - front pillar UPR, check that there is no damage to the tether clip. If the tether clip is damaged, its holding force is reduced and the trim panel - front pillar UPR may come off. Be sure to replace it with a new tether clip.
• Do not reuse the tether clip removed from the upper part of the trim panel - front pillar UPR. Always replace with a new part.
• Check that there is no damage to the clip on the upper part of the trim panel - center pillar UPR. If the clip is damaged, its holding force is reduced. Be sure to replace it with a new clip.
• Before installing the trim panel - front pillar UPR, check the condition of protective non-woven fabric (white) of the curtain airbag. If it is damaged (airbag module cloth is exposed), replace the curtain airbag module assembly with a new part.

1) Remove the remaining tether clips from the vehicle body.
2) Install the trim panel - front pillar UPR.
   (1) Replace the tether clips with new ones and attach them to the trim panel - front pillar UPR.
   (2) Check the installation status of the tether clips and install the trim panel - front pillar UPR.



3) Install each part in the reverse order of removal.

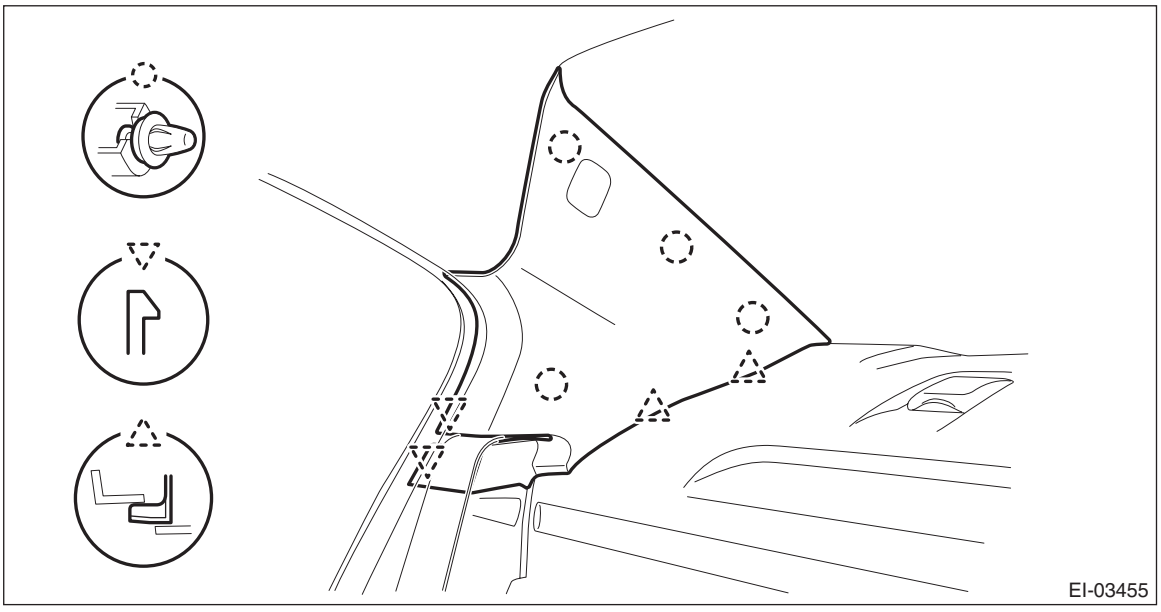
Tightening torque
Front seat belt: <Ref. to SB-2, FRONT SEAT BELT, COMPONENT, General Description.>

20.Rear Quarter Trim

A: REMOVAL

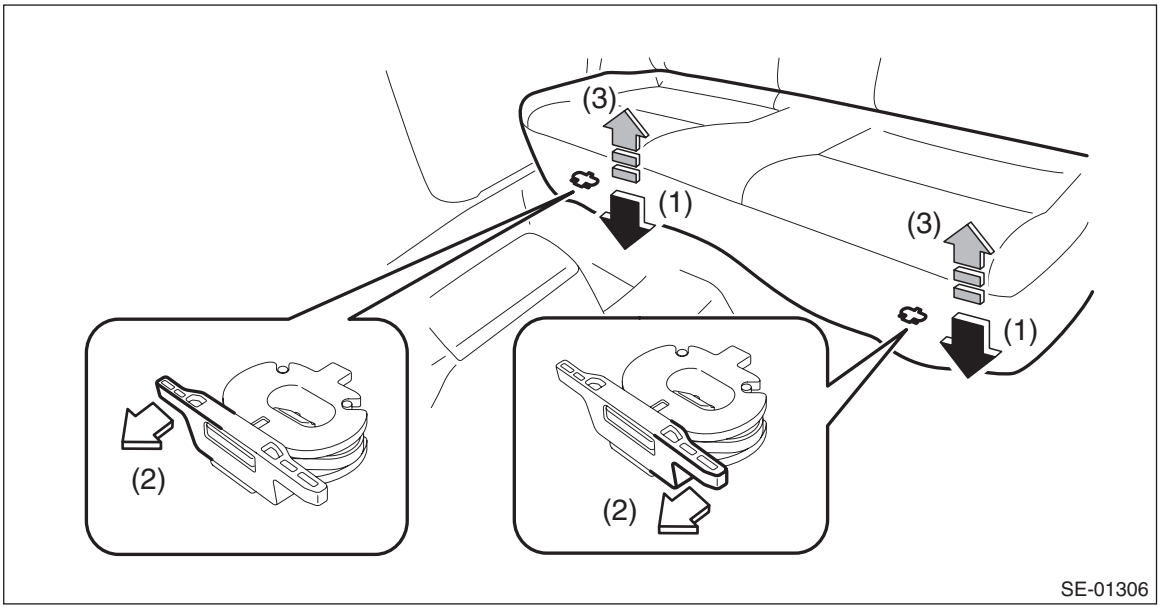
1. 4 DOOR MODEL

CAUTION:
• Airbag system satellite safing sensor is located in the lower of the rear seat cushion center. Before removing the rear seat, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM" section. <Ref. to AB-10, CAUTION, General Description.>
• The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
2) Remove the clips, and remove the trim panel - rear pillar UPR.

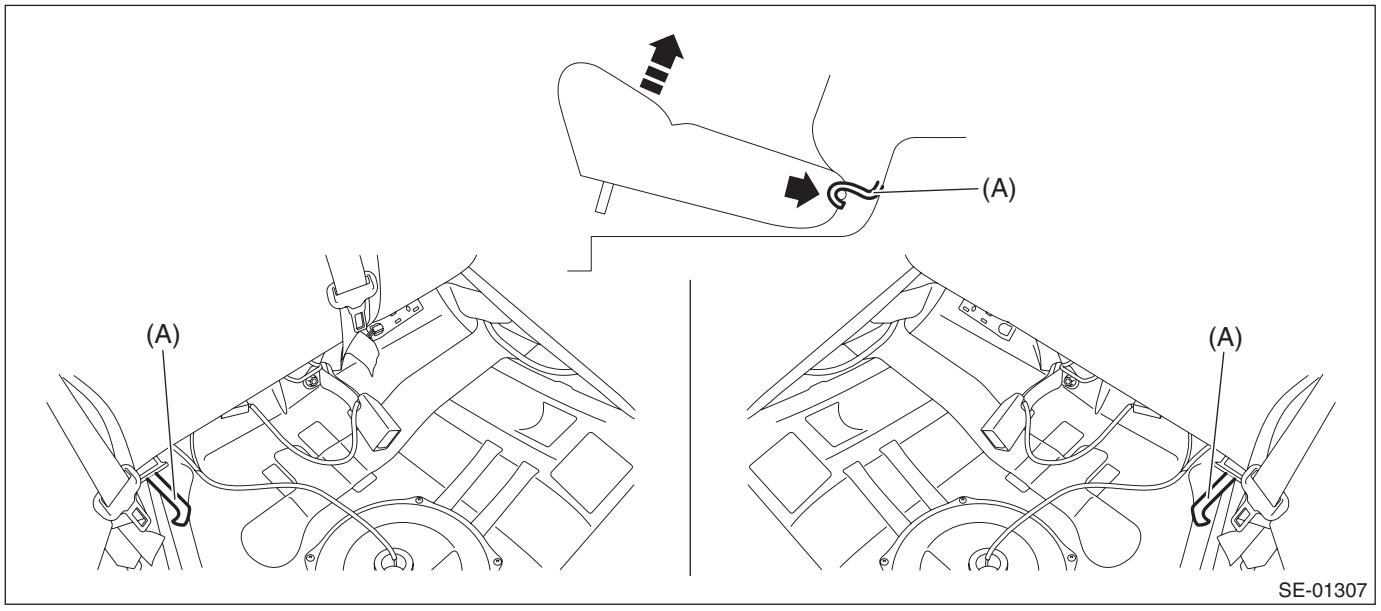


3) Remove the rear seat cushion assembly.
(1) Push the corners of the rear seat cushion from above.
(2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
(3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

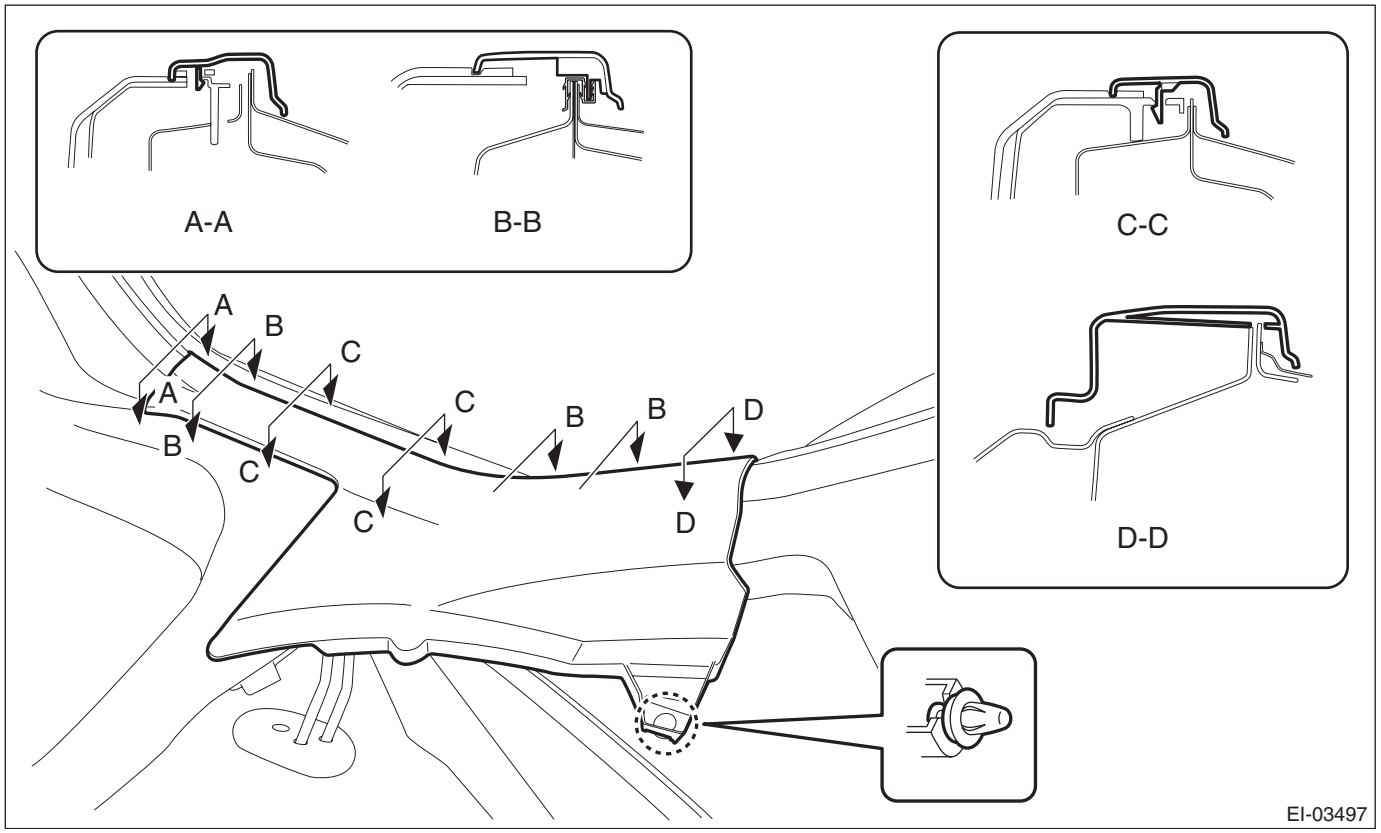


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.

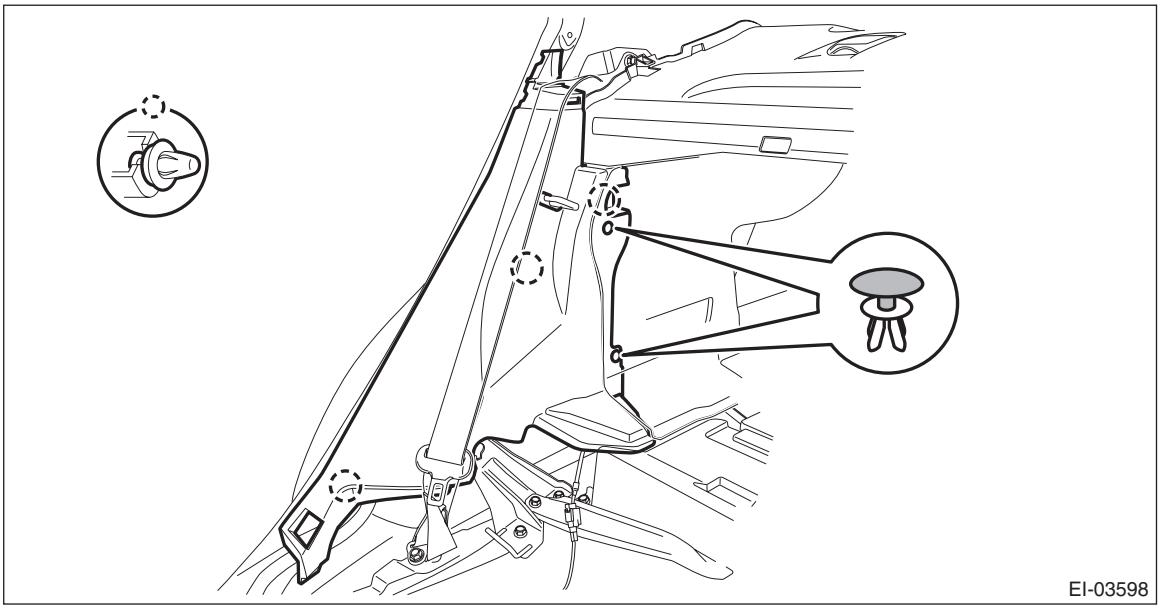


4) Release the clips and claws, and then remove the cover side sill - rear INN.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - rear INN.



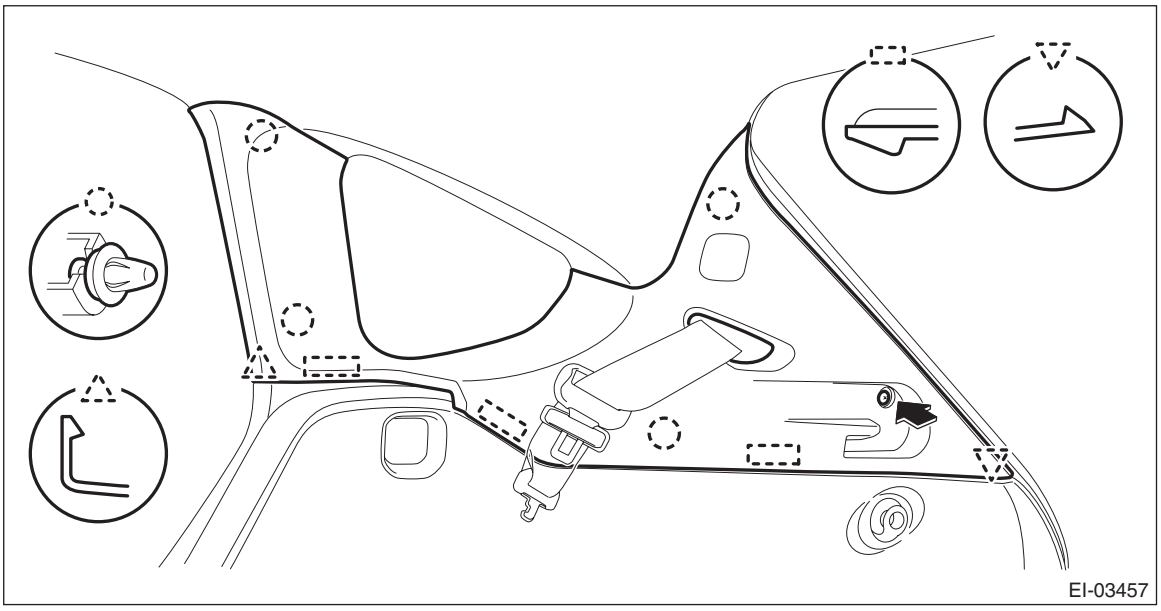
5) Remove the trim panel - rear pillar LWR.
   (1) Remove the clips, and turn over the trim panel - trunk side.
   (2) Remove the clips, and remove the trim panel - rear pillar LWR.



2. 5 DOOR MODEL

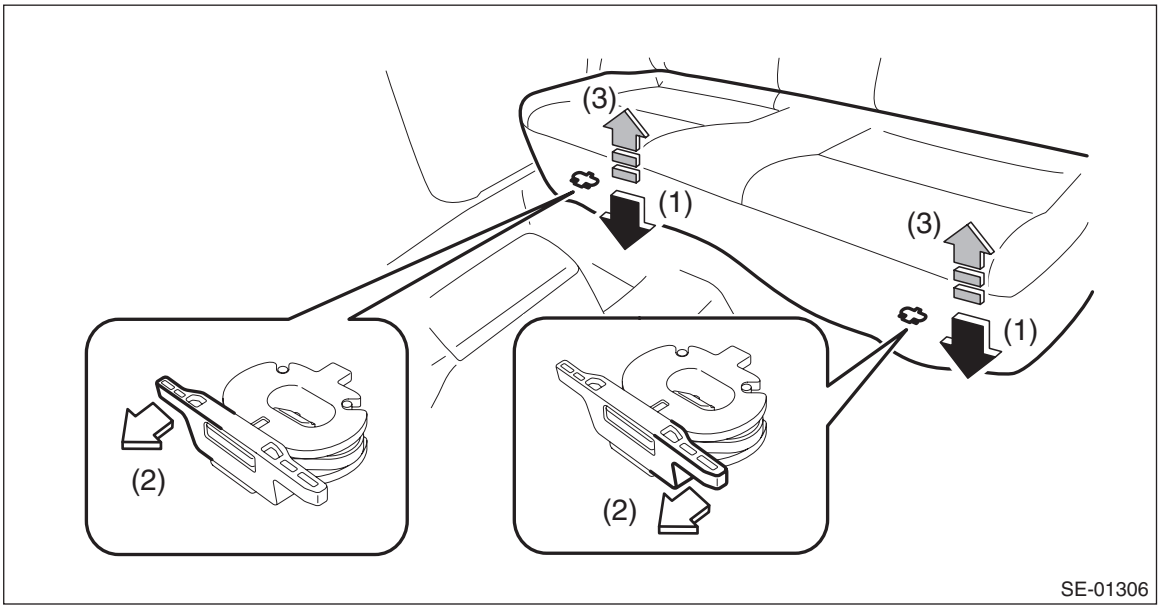
CAUTION:
• Airbag system satellite safing sensor is located in the lower of the rear seat cushion center. Before removing the rear seat, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM" section. <Ref. to AB-10, CAUTION, General Description.>
• The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
2) Remove the screws and clips, and remove the trim panel - rear quarter pillar UPR.


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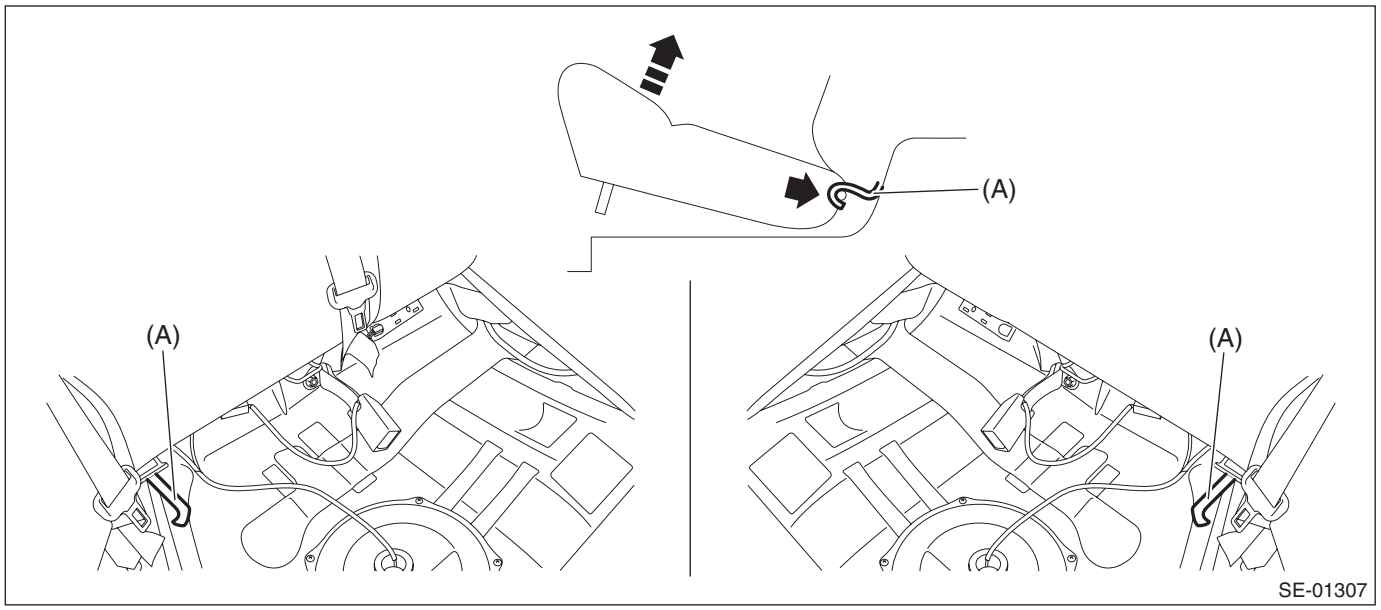
3) Remove the rear seat cushion assembly.
   (1) Push the corners of the rear seat cushion from above.
   (2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
   (3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.



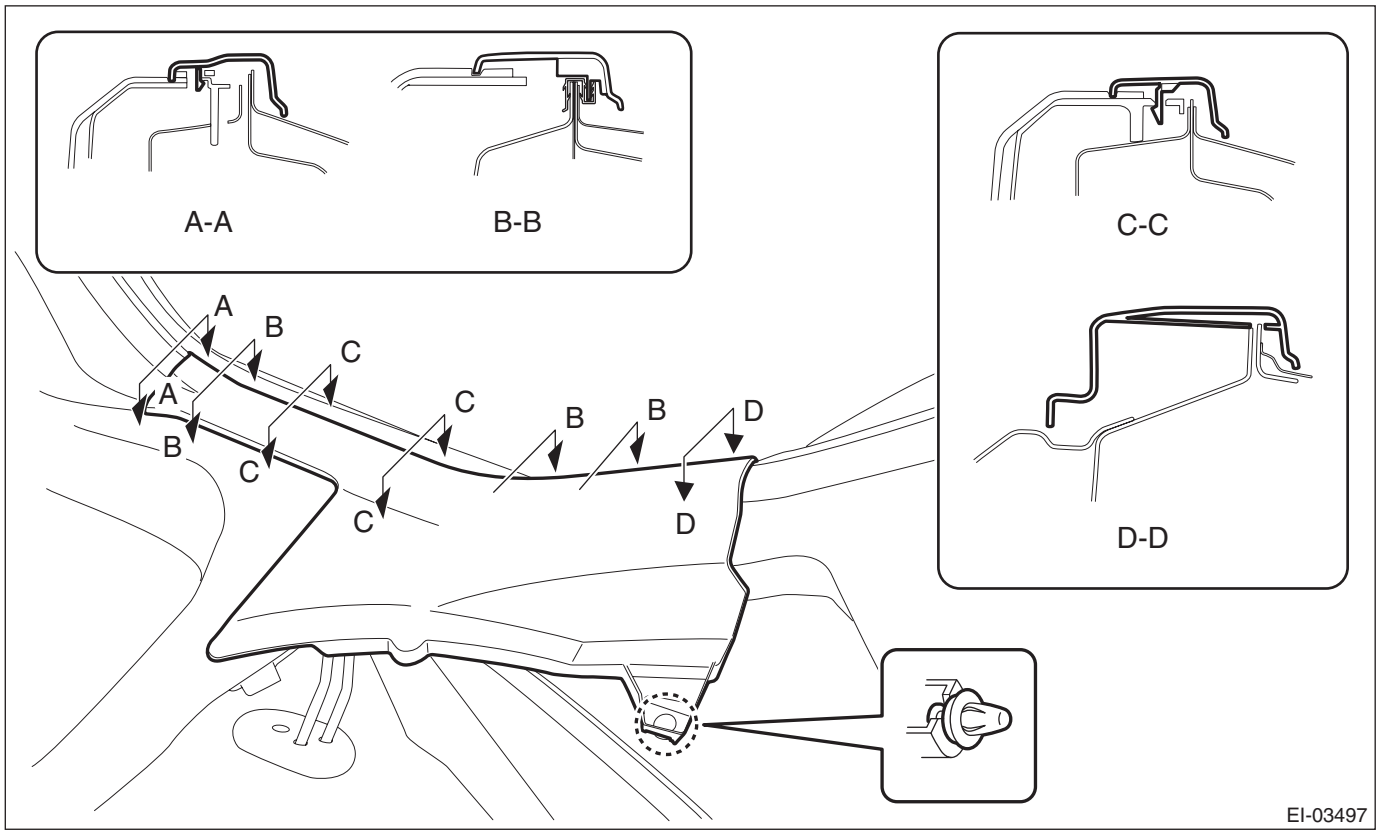
SE-01306

(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.

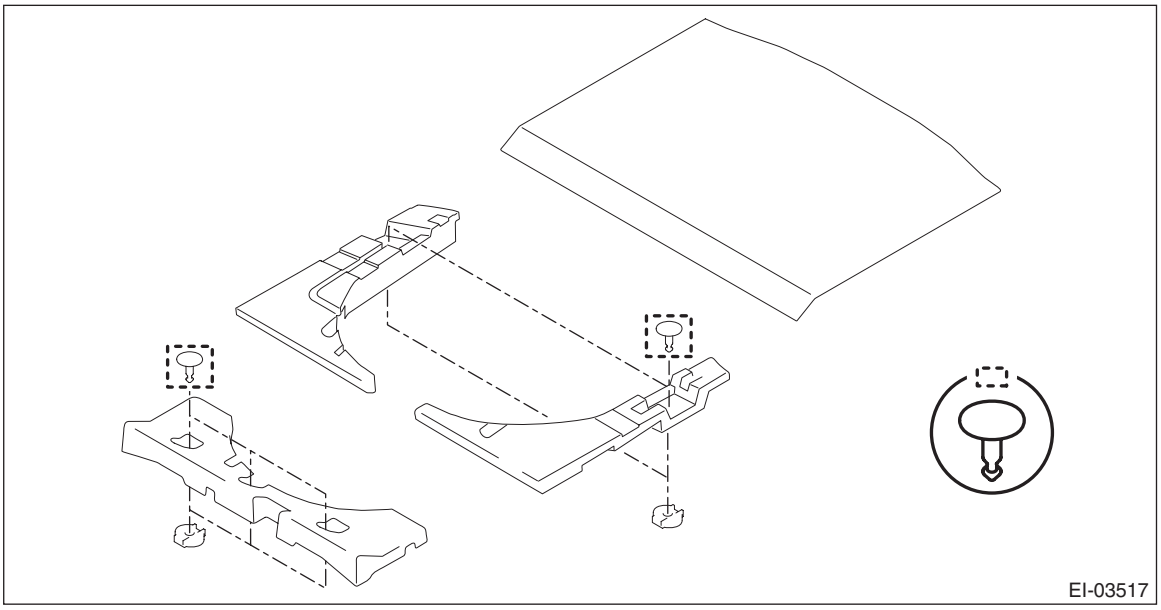


4) Release the clips and claws, and then remove the cover side sill - rear INN.

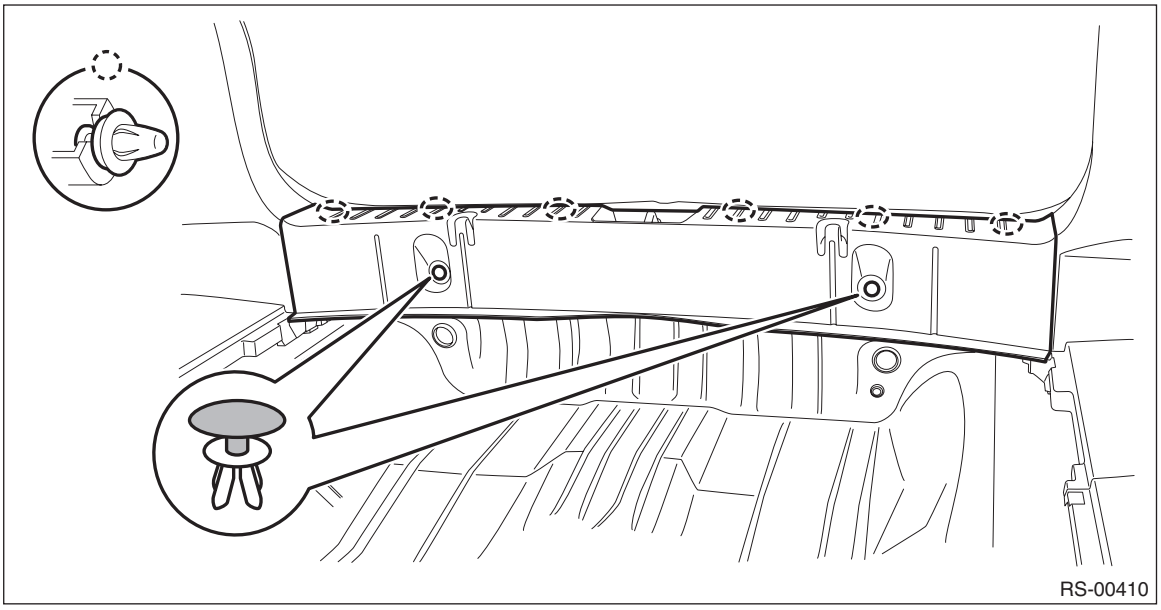
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - rear INN.



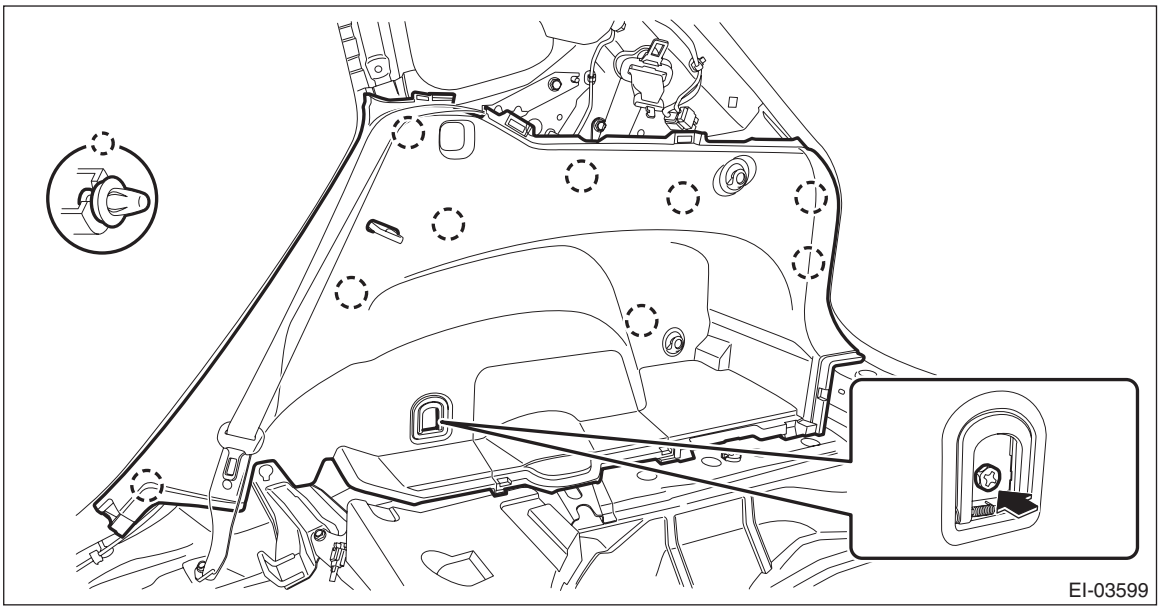
5) Remove the mat - rear floor CTR and the spacer - rear floor side.



6) Remove the clips, and remove the trim panel - rear skirt.



7) Remove the trim panel - rear apron.
   (1) Remove the caps, and then remove the screws.
   (2) Remove the clips, and remove the trim panel - rear apron.



B: INSTALLATION

Install each part in the reverse order of removal.

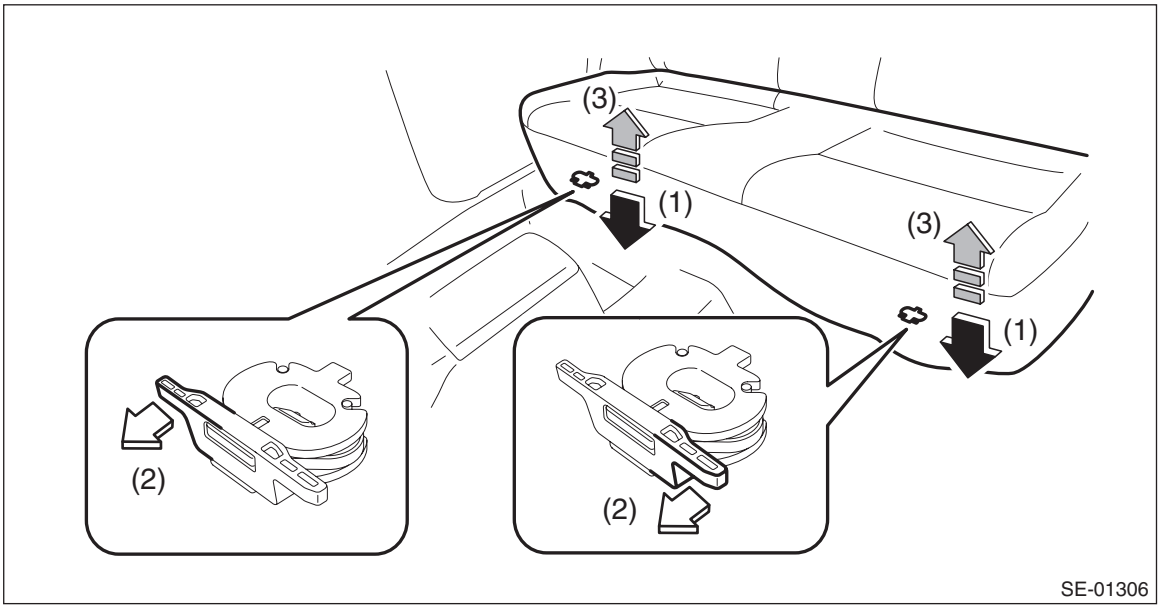
Tightening torque:
Rear seat backrest assembly: <Ref. to SE-5, REAR SEAT, COMPONENT, General Description.>

21.Rear Shelf Trim

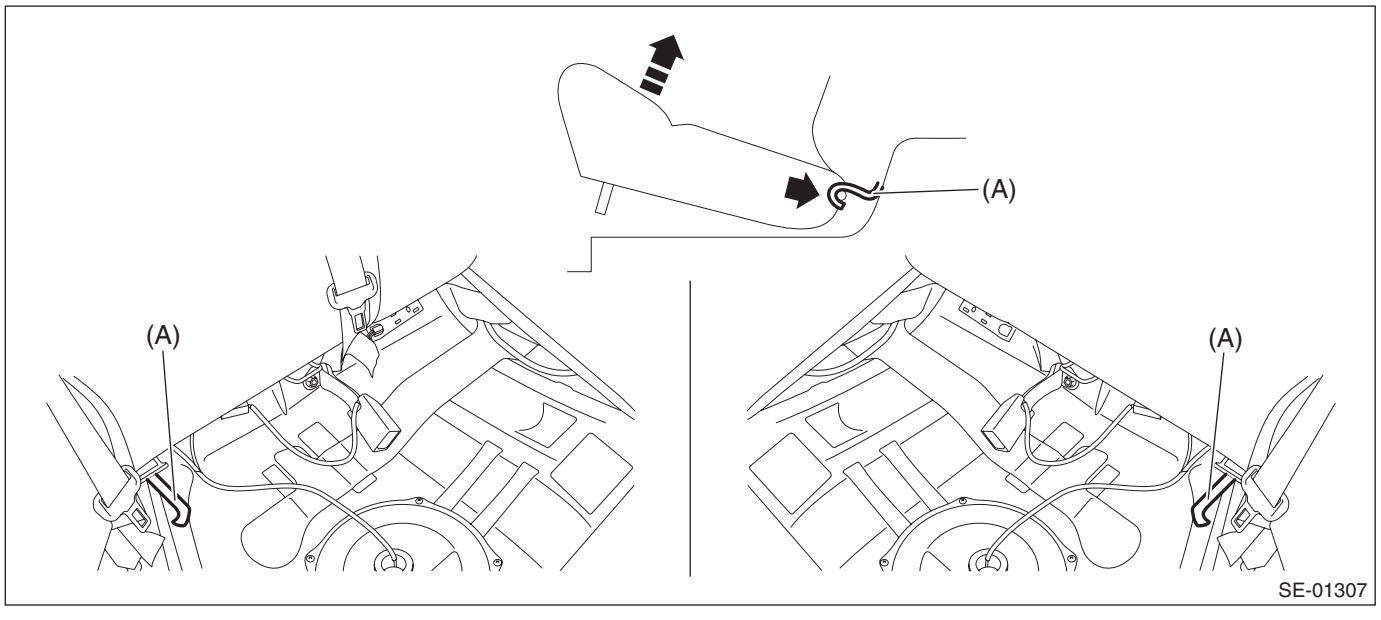
A: REMOVAL

CAUTION:
• Airbag system satellite safing sensor is located in the lower of the rear seat cushion center. Before removing the rear seat, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM" section. <Ref. to AB-10, CAUTION, General Description.>
• The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
2) Remove the rear seat cushion assembly.
   (1) Push the corners of the rear seat cushion from above.
   (2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
   (3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

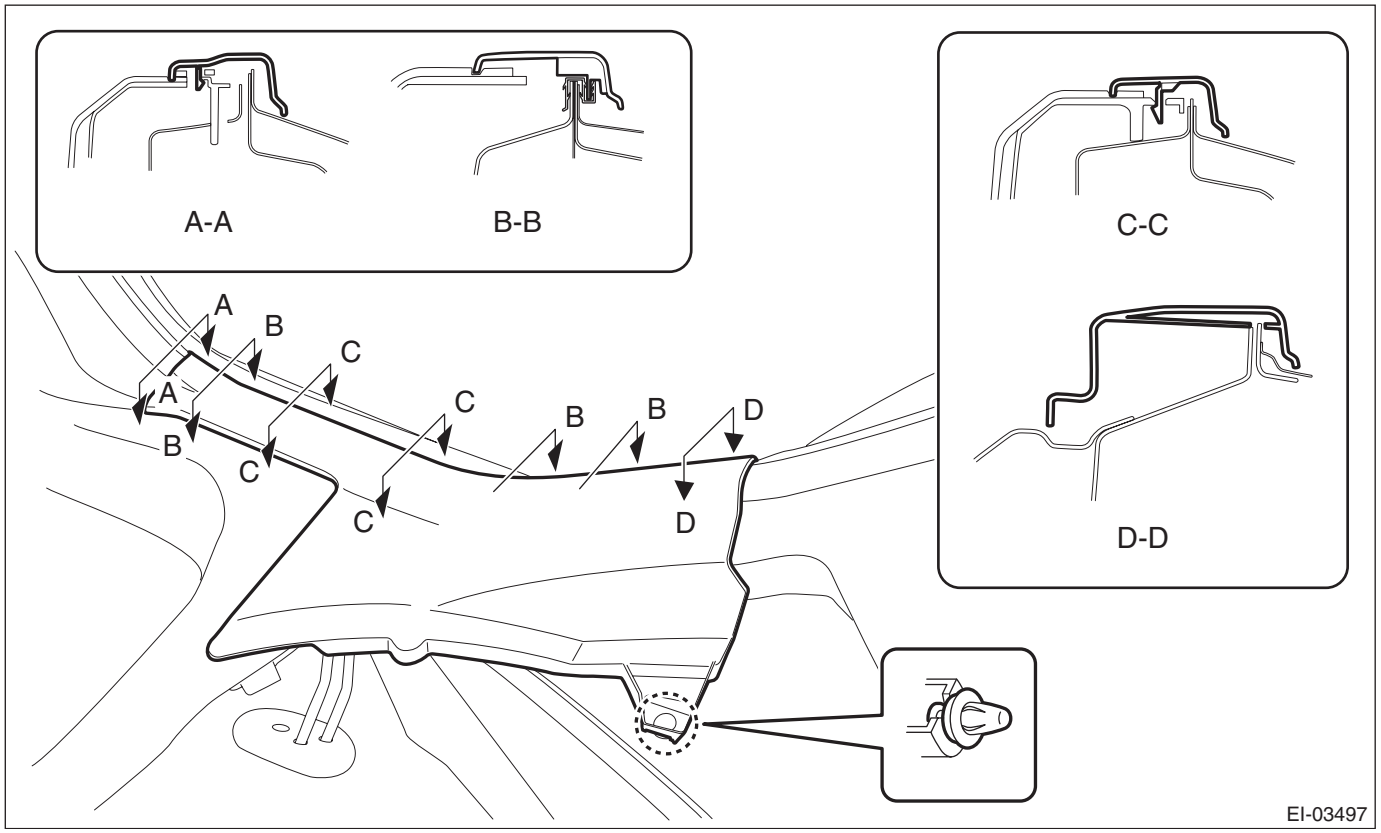


   (4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.

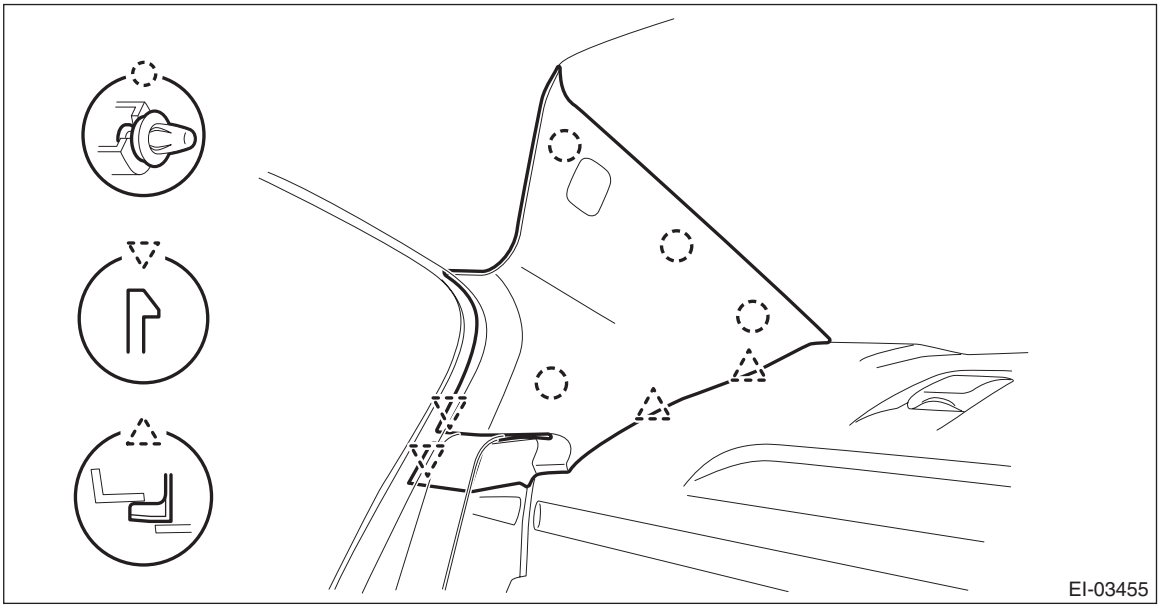


3) Release the clips and claws, and remove the side sill covers - rear INN on the left and right sides.

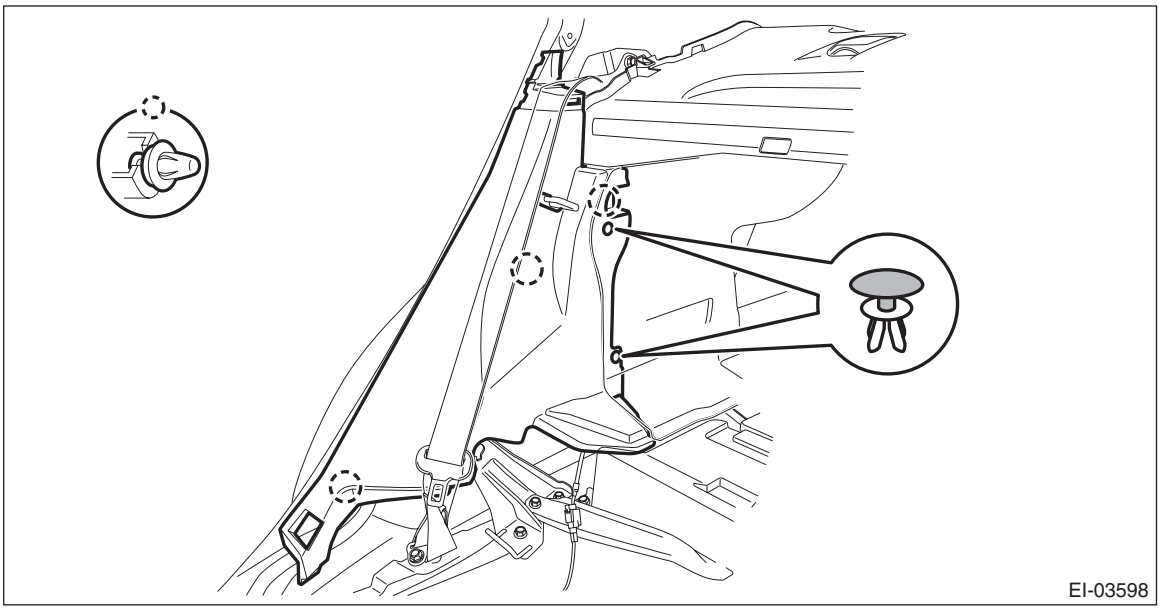
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover - rear INN.



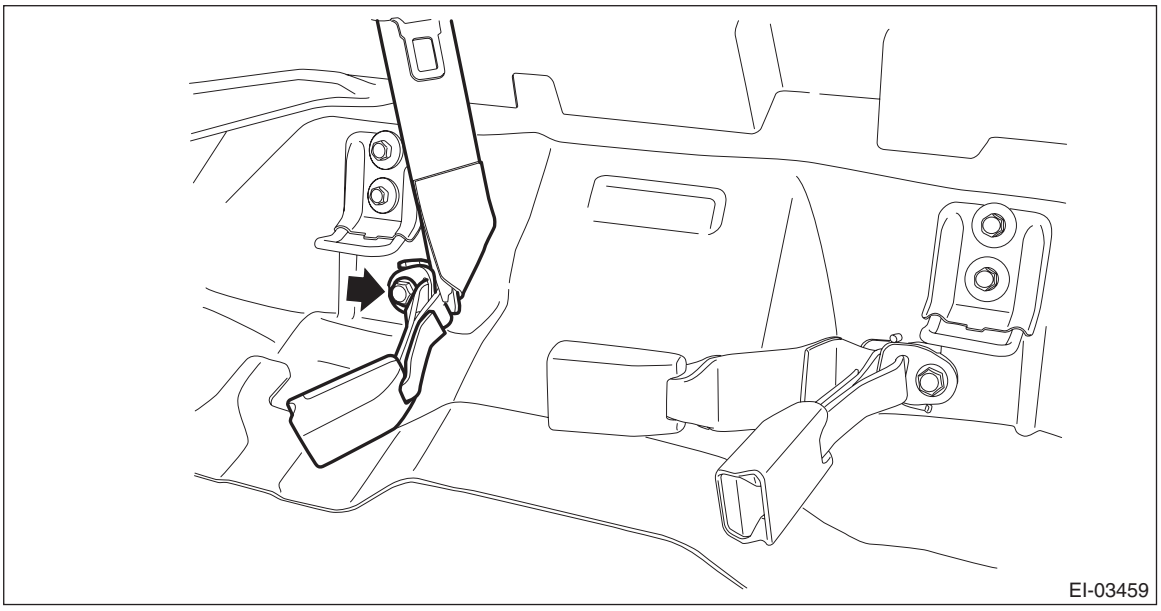
4) Remove the clips, and remove the trim panel - rear pillar UPR on the left and right sides.



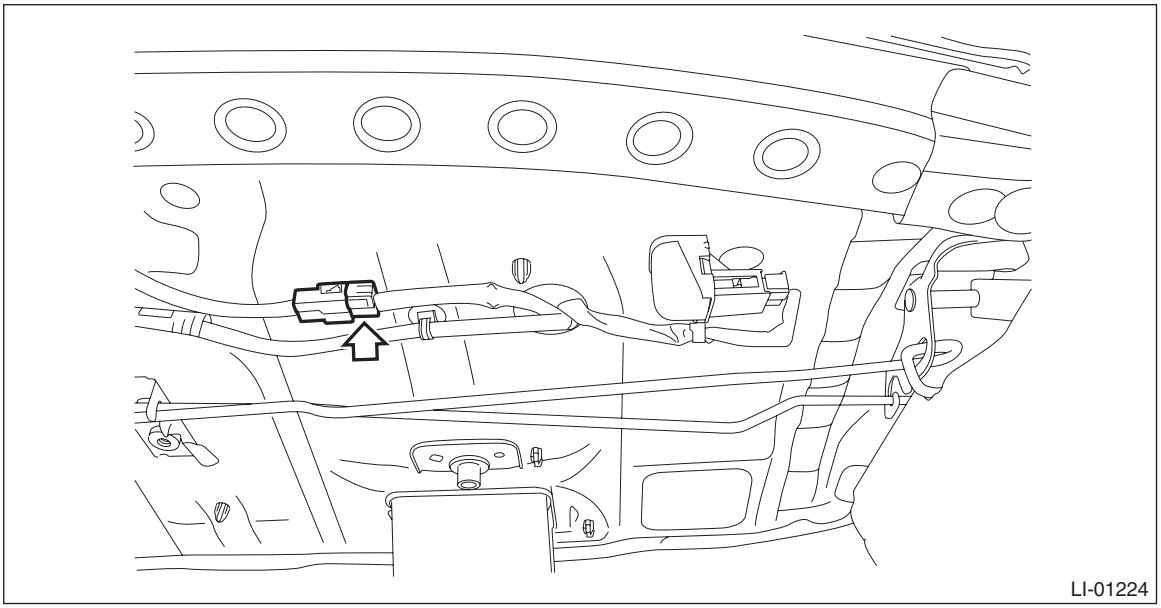
5) Remove the trim panel - rear pillar LWR on the left and right sides.
   (1) Remove the clips, and turn over the trim panel - trunk side.
   (2) Remove the clips, and remove the trim panel - rear pillar LWR.



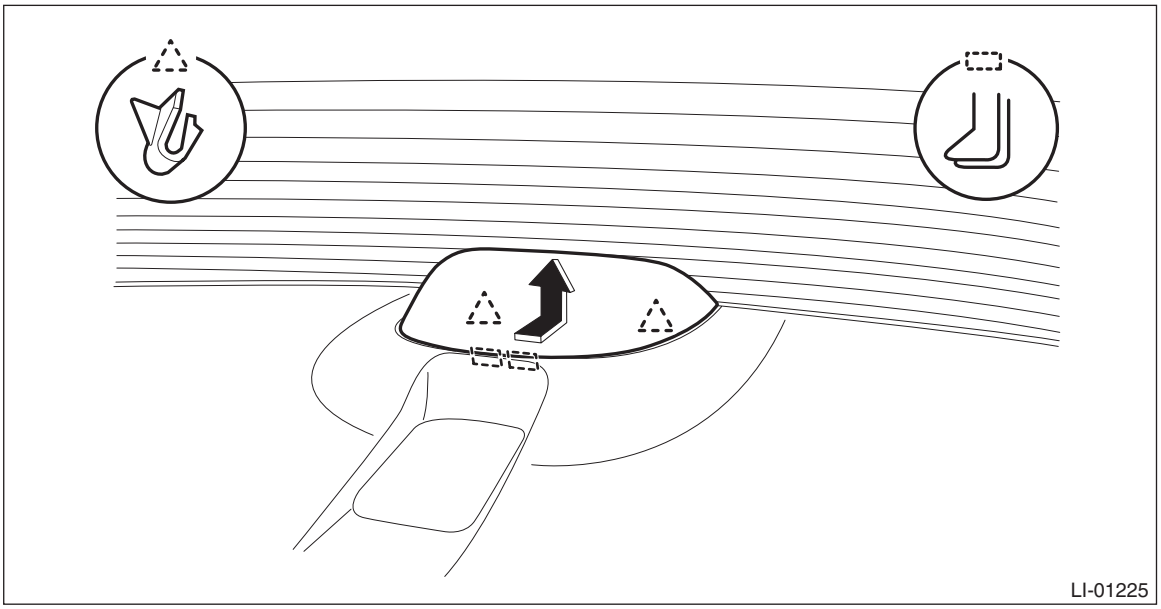
6) Remove the bolts, and remove the lower anchor of the seat belt - rear shoulder CTR.



7) Remove the high-mounted stop light.
(1) Disconnect the connector.

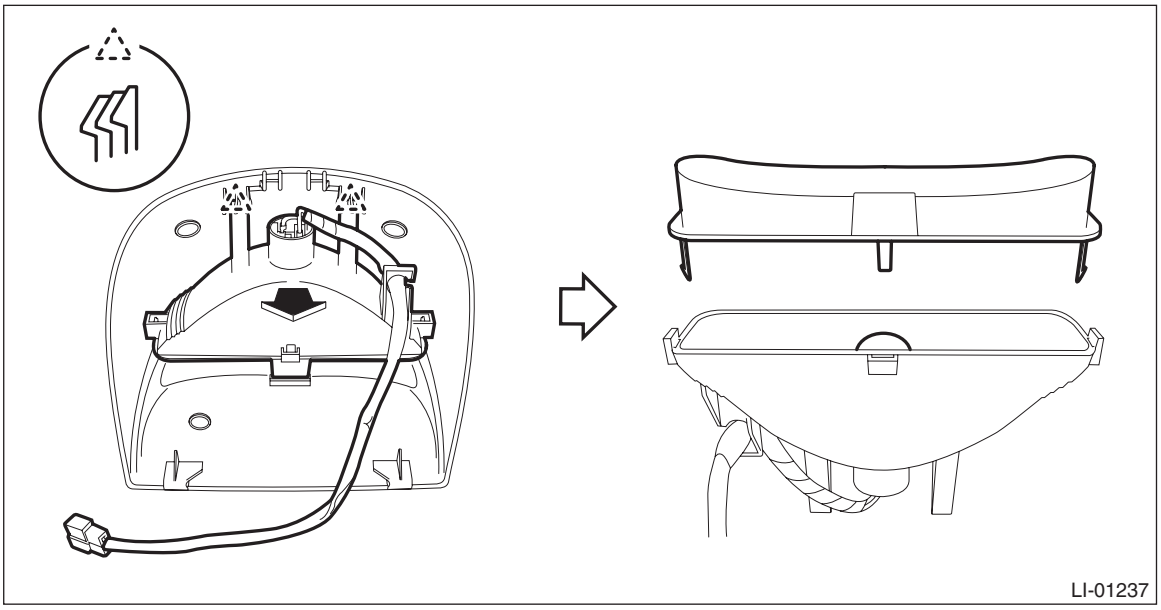


(2) Release the claws, and remove the light assembly - high-mounted.

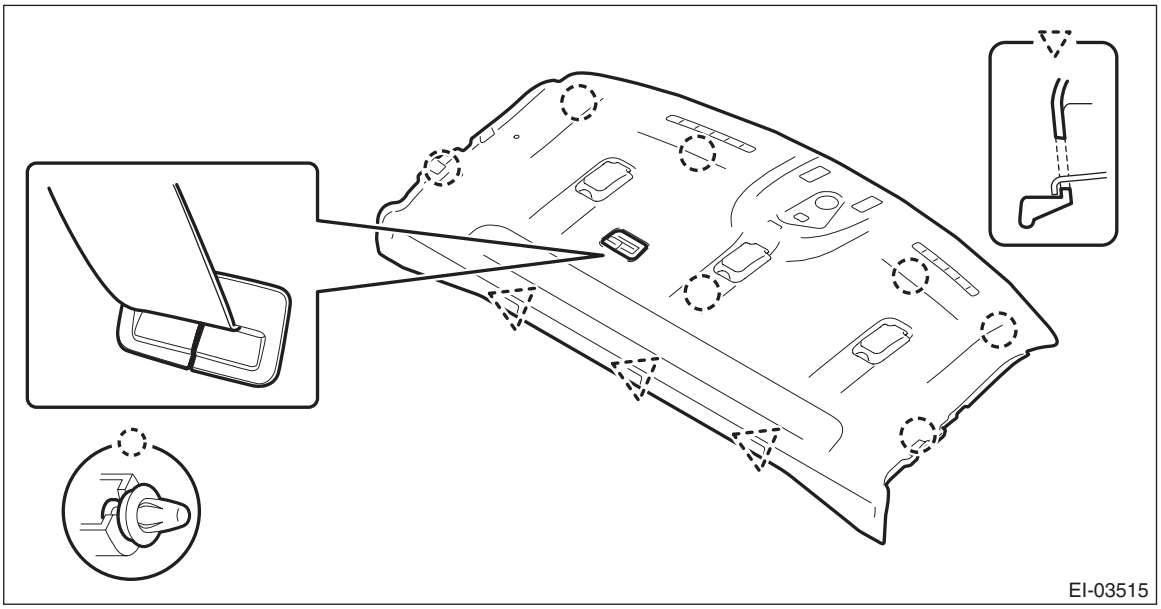


(3) Release the claws and remove the reflector assembly from the light - case.

(4) Remove the lens and remove the bulb.



8) Remove the trim panel assembly - rear shelf.
(1) Release the clips to float the trim panel assembly - rear shelf.
(2) Release the belt guide, and guide the anchor of the seat belt - rear shoulder CTR to behind the trim panel - rear shelf assembly.
(3) Disconnect the connector of high-mounted stop light.
(4) Remove the trim panel assembly - rear shelf.



B: INSTALLATION

CAUTION:
Make sure that the claw behind the light assembly - high-mounted is securely attached to the trim panel assembly - rear shelf.
Install each part in the reverse order of removal.

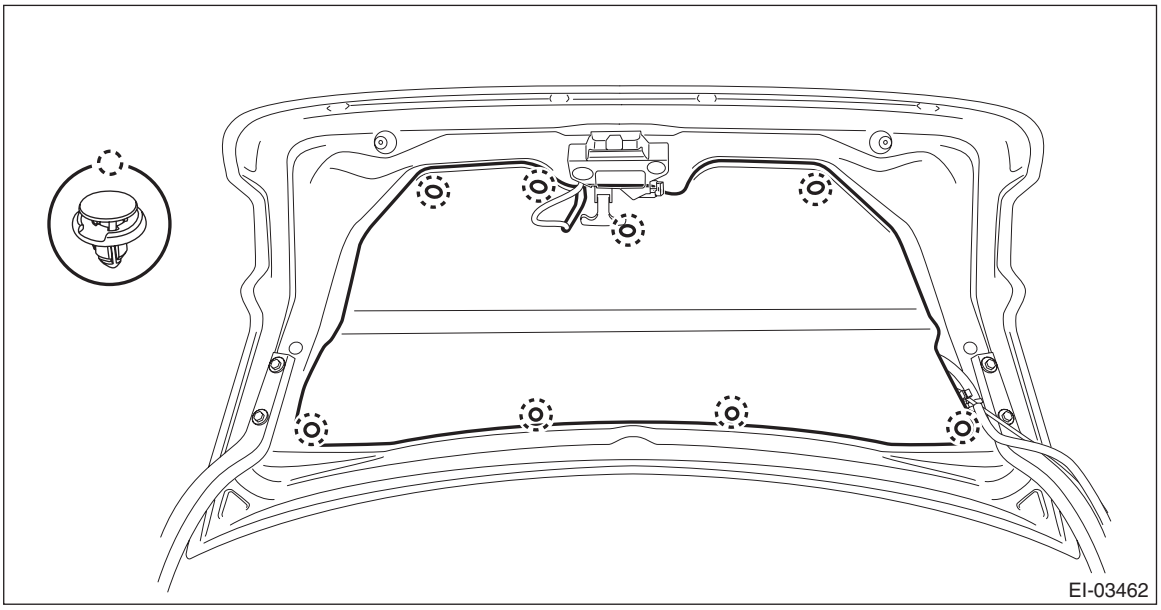
Tightening torque:
Rear seat belt: <Ref. to SB-3, REAR SEAT BELT (4 DOOR MODEL), COMPONENT, General Description.>
Rear seat backrest assembly: <Ref. to SE-5, REAR SEAT, COMPONENT, General Description.>

22.Trunk Room Trim

A: REMOVAL

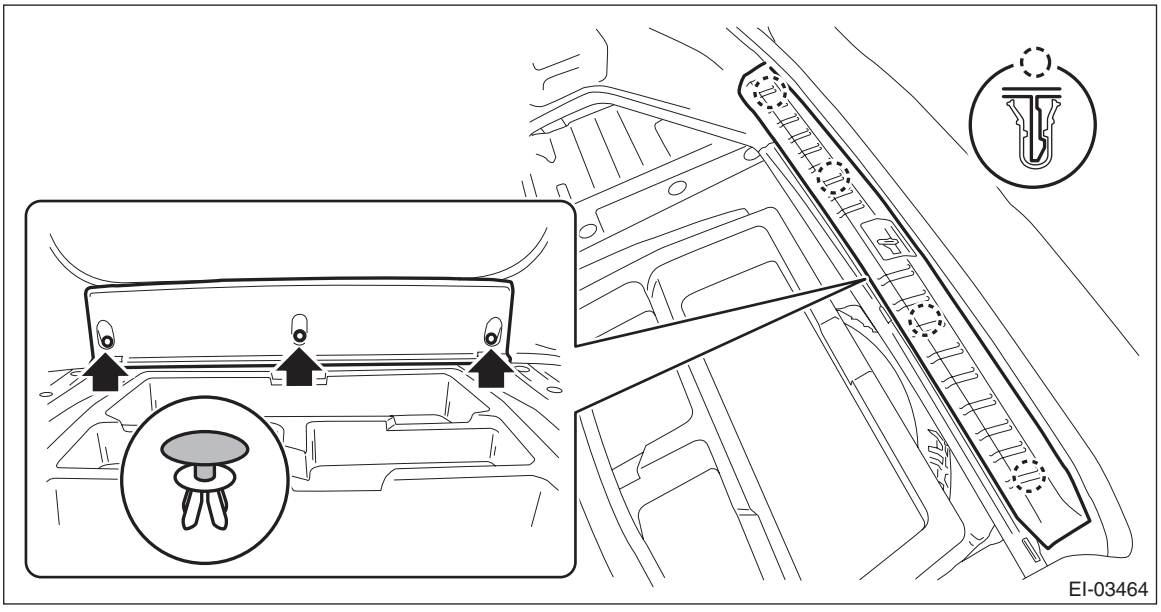
1. TRUNK LID TRIM

1) Open the trunk lid.
2) Remove the clips, and remove the trim panel - trunk lid.

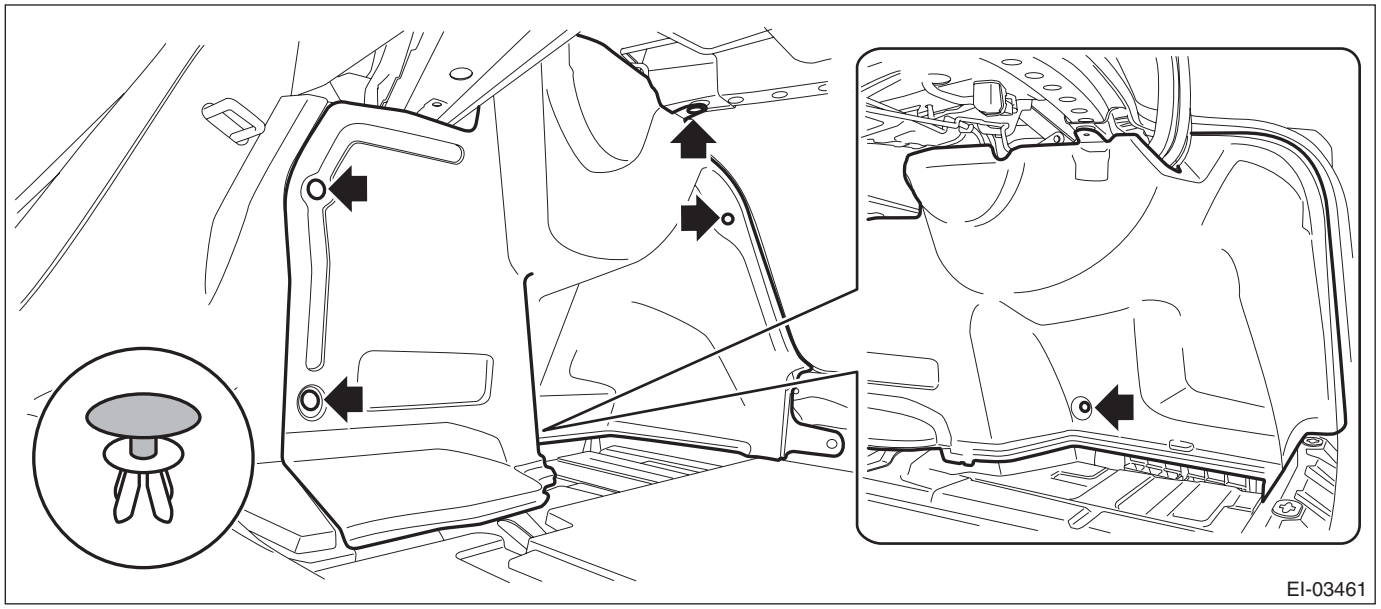


2. TRUNK ROOM TRIM

1) Tilt the backrest assembly forward.
2) Remove the mat - trunk.
3) Remove the trim panel - trunk rear.
   (1) Remove the clip.
   (2) Release the claws, and remove the trim panel - trunk rear.



4) Remove the clips, and remove the trim panel - trunk side.



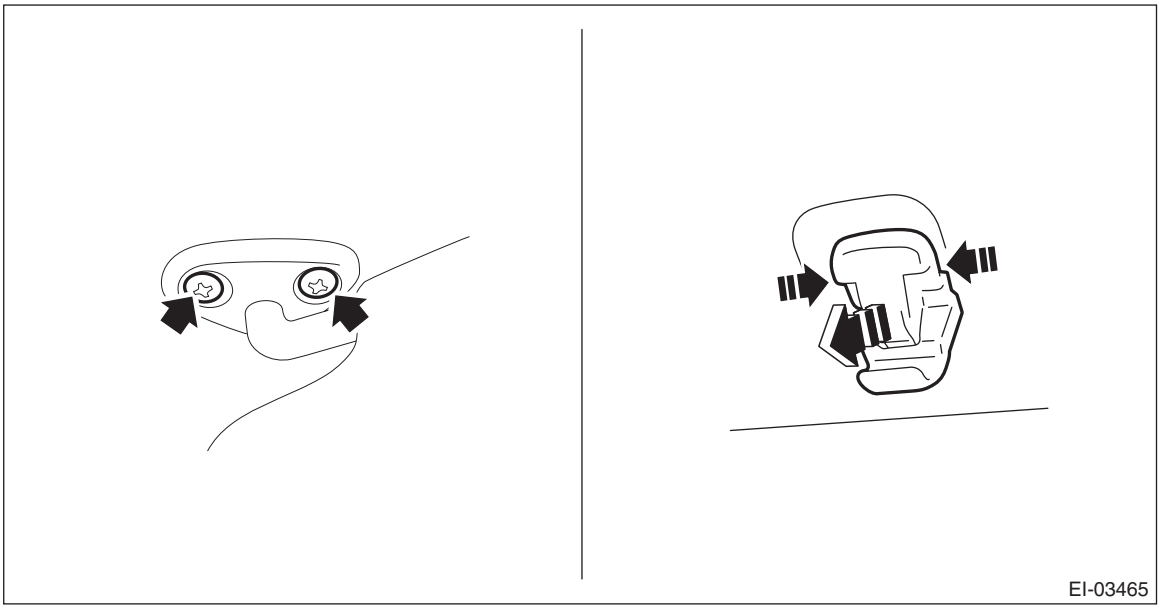
B: INSTALLATION

Install each part in the reverse order of removal.

23.Sun Visor

A: REMOVAL

1) Remove the screws and remove the sun visor assembly.
2) Remove the hook - sun visor.
   (1) Press both sides using a flat tip screwdriver.
   (2) Remove the hook - sun visor by pulling it toward you.



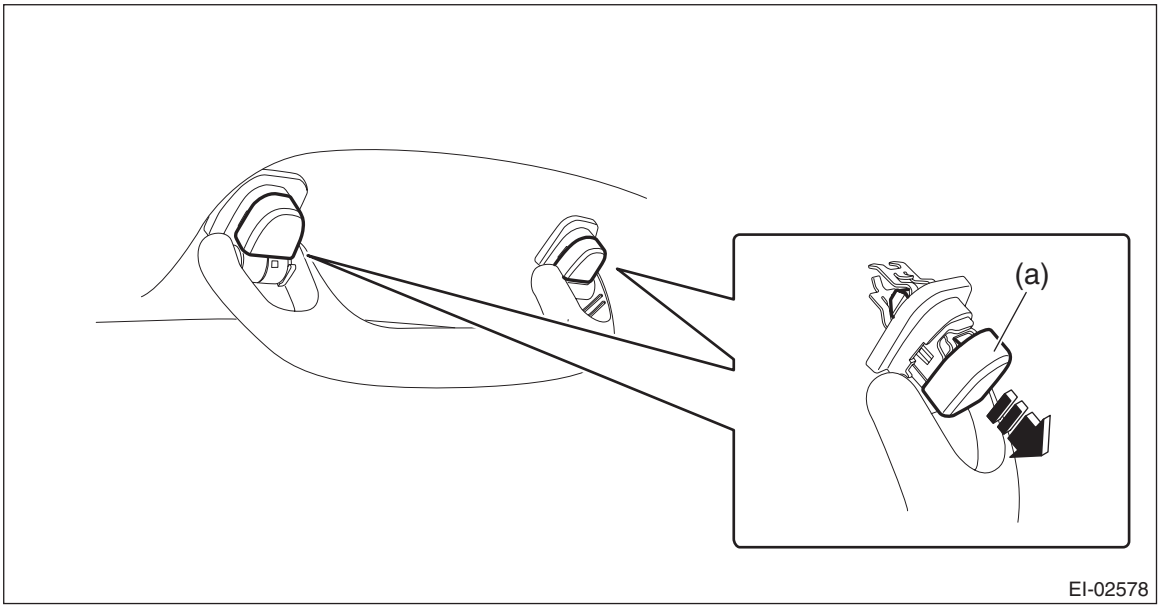
B: INSTALLATION

Install each part in the reverse order of removal.

24.Assist Grip

A: REMOVAL

Remove the assist rail.
1) Remove the cap (a).
2) Pull the assist rail toward you (to the vehicle center) and remove the metal clip from the bracket - assist rail.



B: INSTALLATION

Install each part in the reverse order of removal.

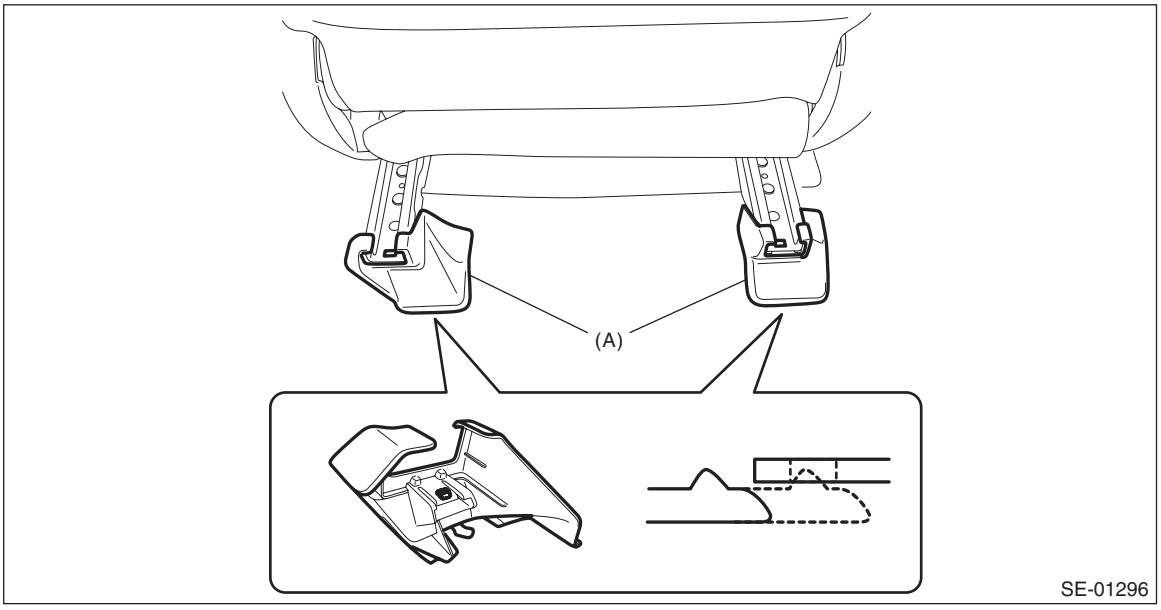
25.Roof Trim

A: REMOVAL

1. 4 DOOR MODEL

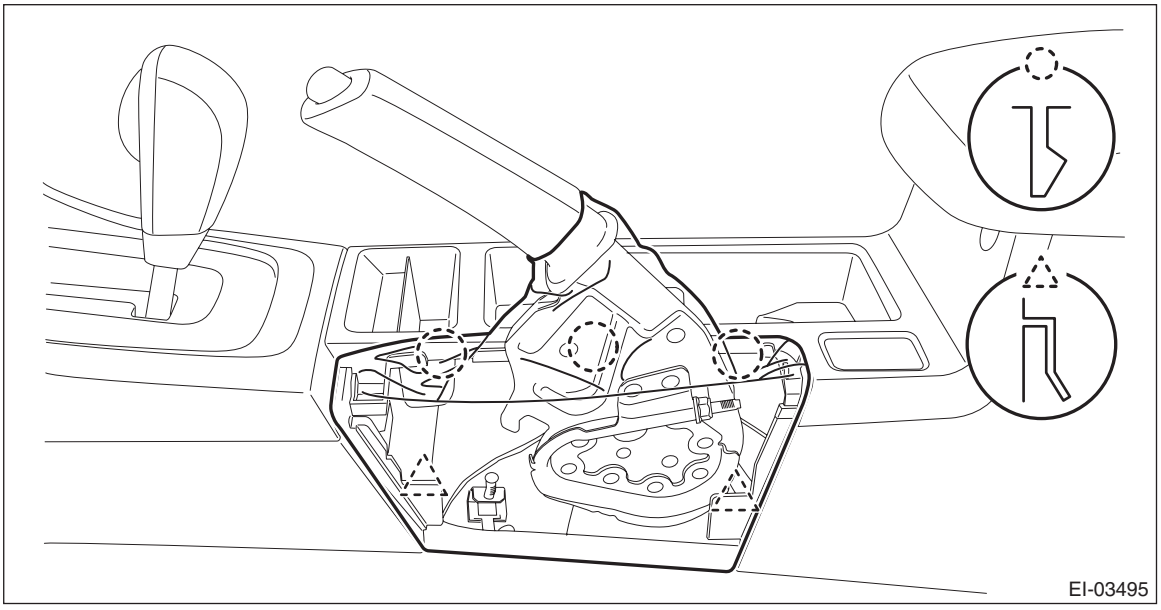
CAUTION:
• Airbag system satellite safing sensor is located in the lower of the rear seat cushion center. Before removing the rear seat, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM" section. <Ref. to AB-10, CAUTION, General Description.>
• The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
2) Remove the driver's seat.
   (1) Tilt the backrest forward and move the seat to the front most position.
   (2) Remove the rear bolt cover (A) and remove the two bolts.
   (3) Move the seat to the rearmost position, and remove the front bolts.

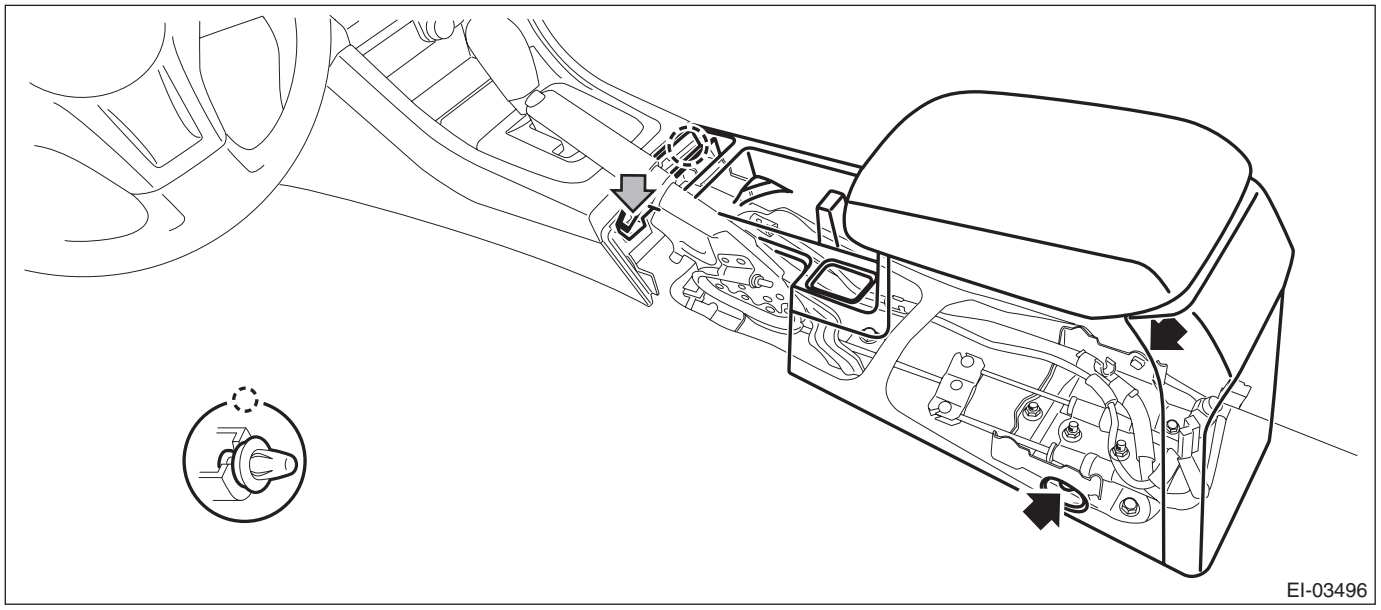


   (4) Disconnect the connector under the front seat.
   • Seat belt warning light connector (driver's seat)
   • Side airbag module connector <Ref. to AB-28, SIDE AIRBAG MODULE, PROCEDURE, Airbag Connector.>
   • Seat heater connector (model with seat heater)
   (5) Remove the headrest and take out the driver's seat from the vehicle.
3) Adjust the passenger's seat position.
   (1) Remove the headrest.
   (2) Move the passenger's seat to the front-most position and tilt the backrest rearward.

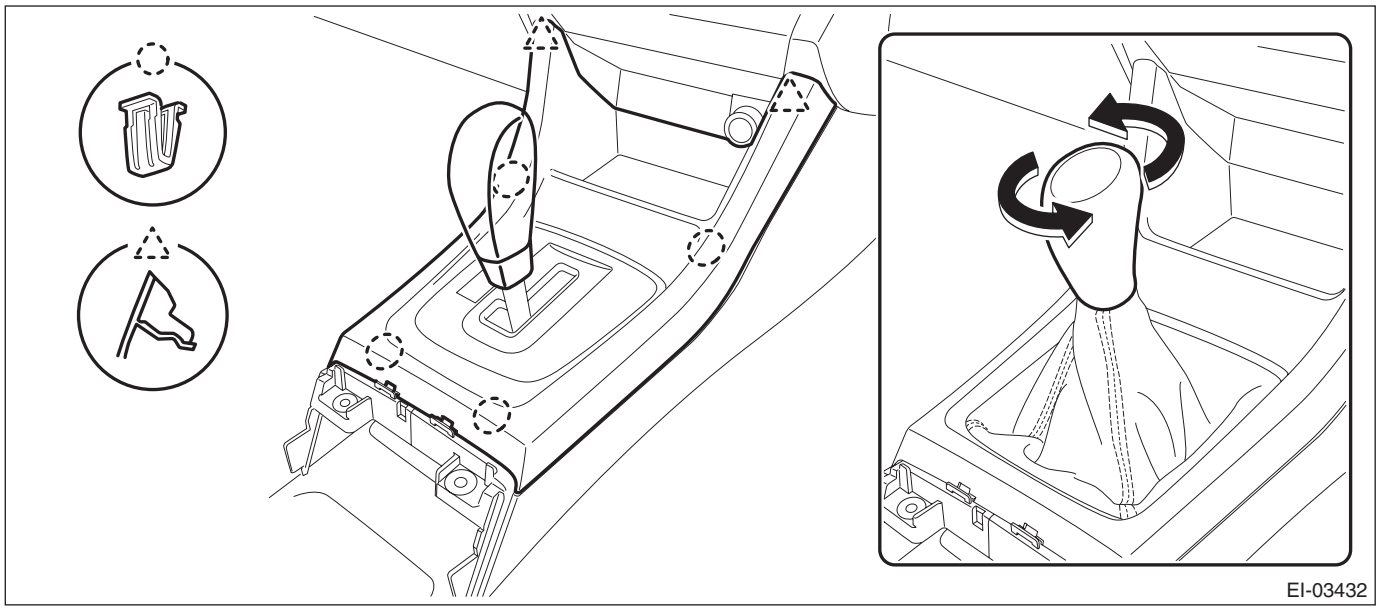
4) Remove the console box assembly.
(1) Release the claws, and then remove the boot - hand brake.



(2) Detach the left and right caps and remove the bolts.
(3) Remove the screws, disconnect the harness connector and remove the console box assembly.



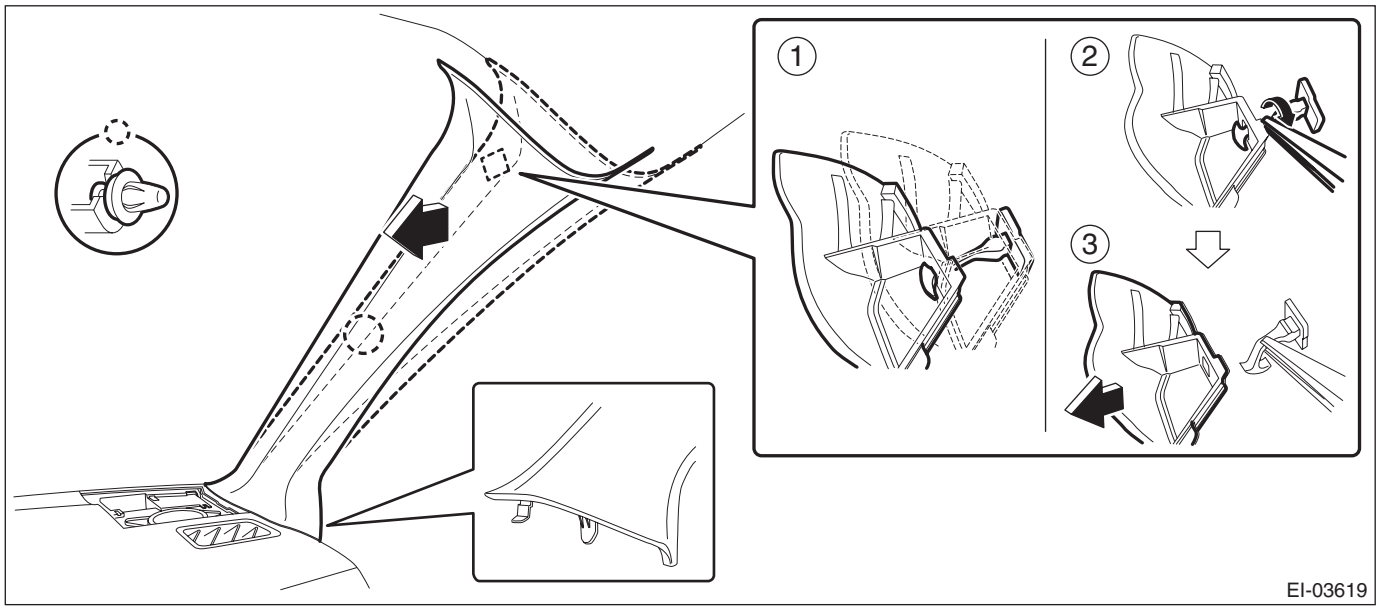
5) Remove the cover - shift lever.
(1) Remove the shift knob. (MT model)
(2) Release the clips and claws, then pull up the cover - shift lever.


EI-03432

6) Cover the following areas to protect from damage.
- Steering wheel surface
- Instrument panel surface
- Glove box surface

7) Remove the trim panel - front pillar UPR on the left and right sides.
(1) Pull the upper part of the trim panel - front pillar UPR towards the center of the vehicle.
(2) Insert long-nose pliers into the top part of the trim, grip the tether clip with the pliers and twist 90° in that position.

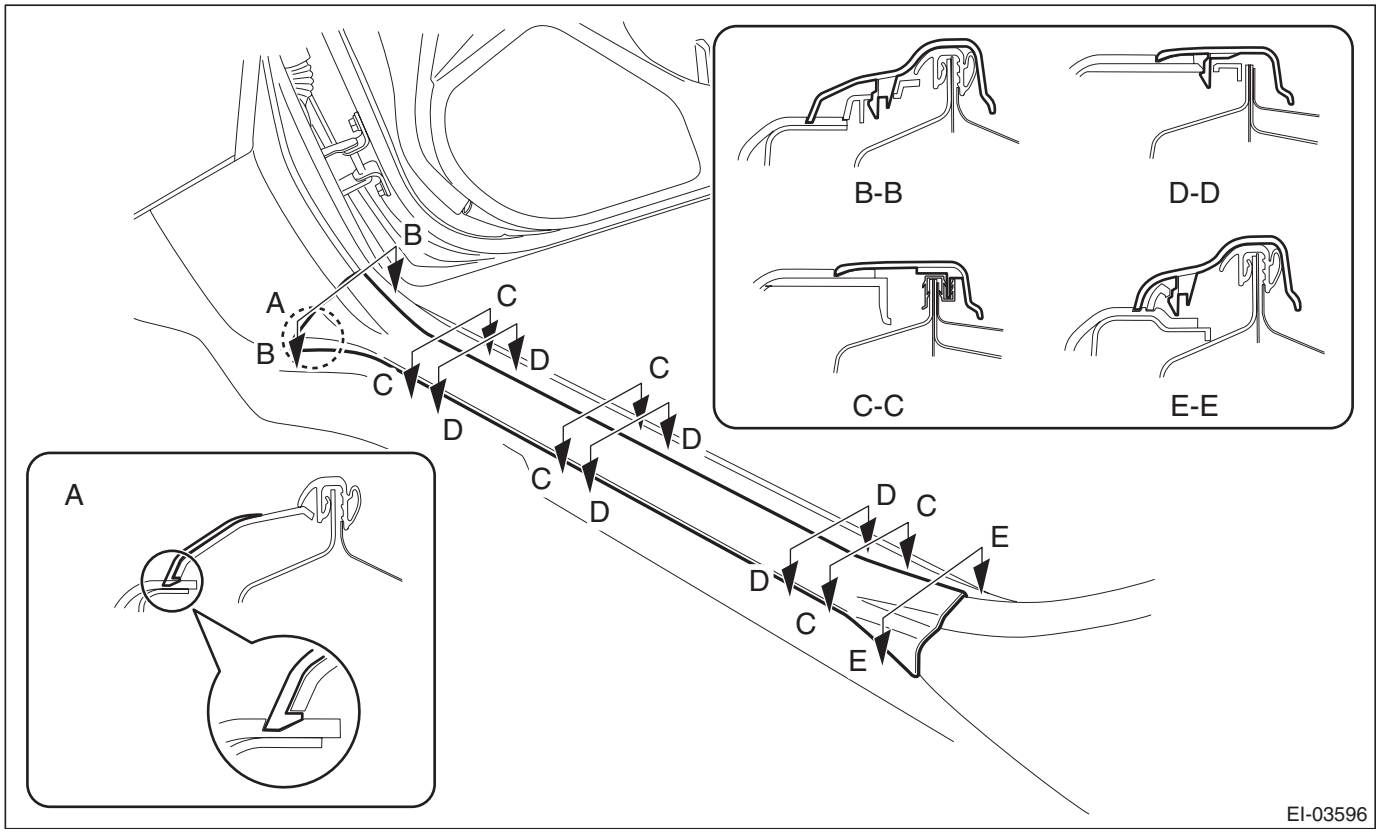
CAUTION:
Be careful not to damage the pillar trim surface and curtain airbag module when inserting the pliers.
(3) Holding the tether clip twisted as in the previous step, remove the trim panel - front pillar UPR from the tether clip.
(4) Remove the clips, and remove the trim panel - front pillar UPR.



EI-03619

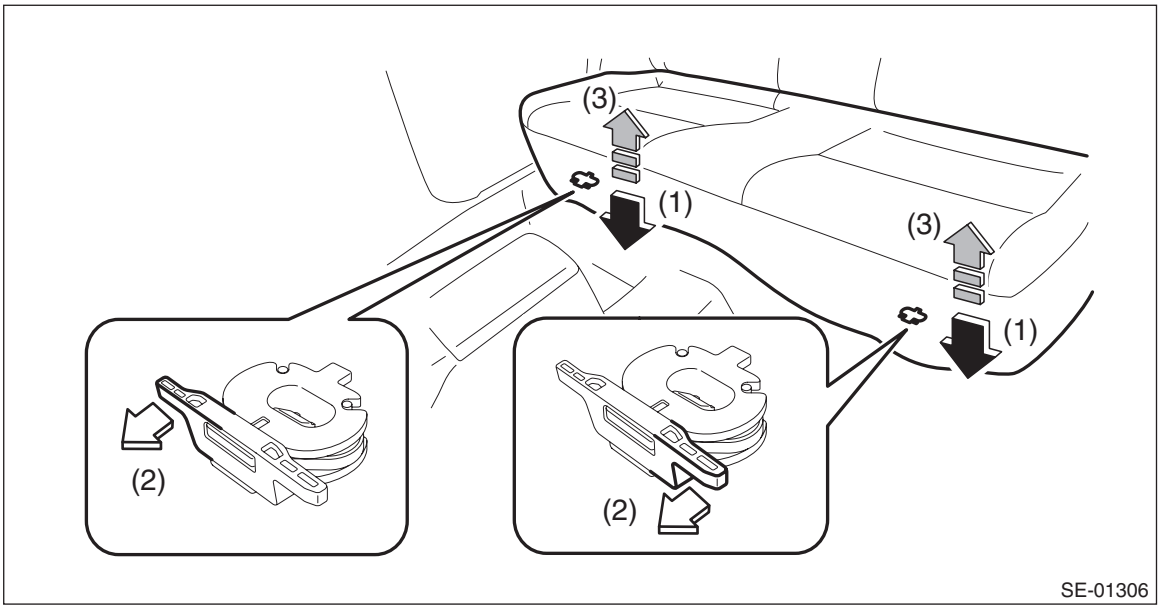
8) Release the claws, and then remove the cover side sill - front INN on LH and RH sides.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - front INN.

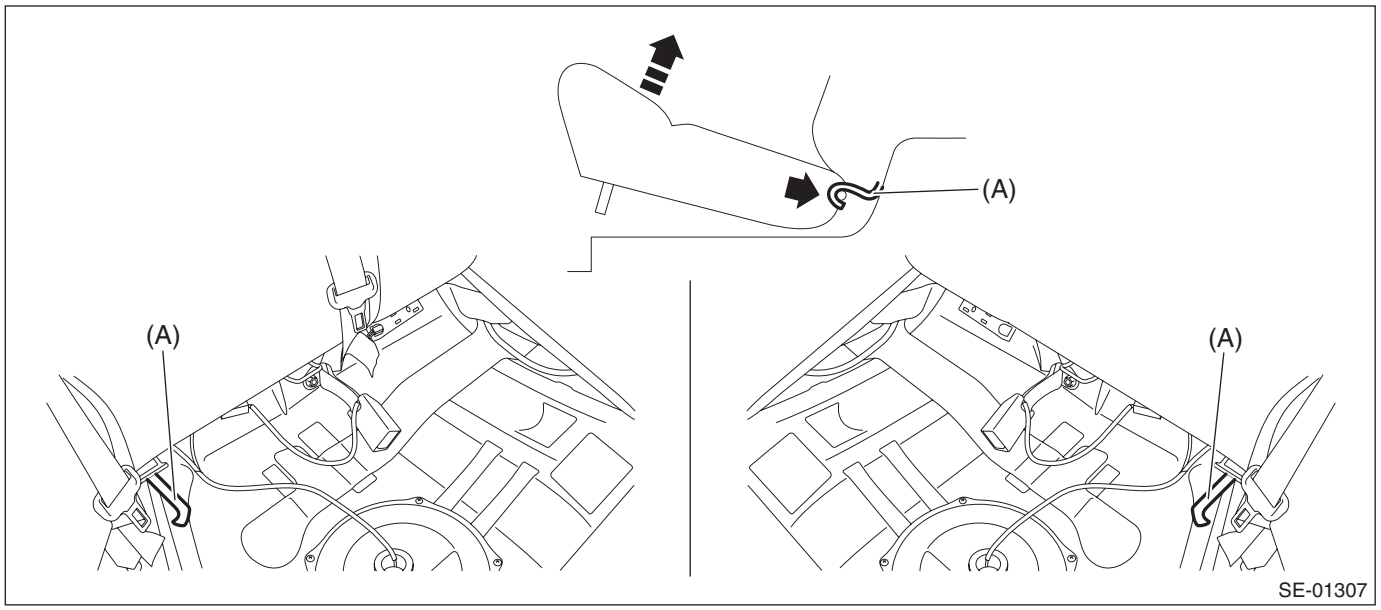


9) Remove the rear seat cushion assembly.
(1) Push the corners of the rear seat cushion from above.
(2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
(3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

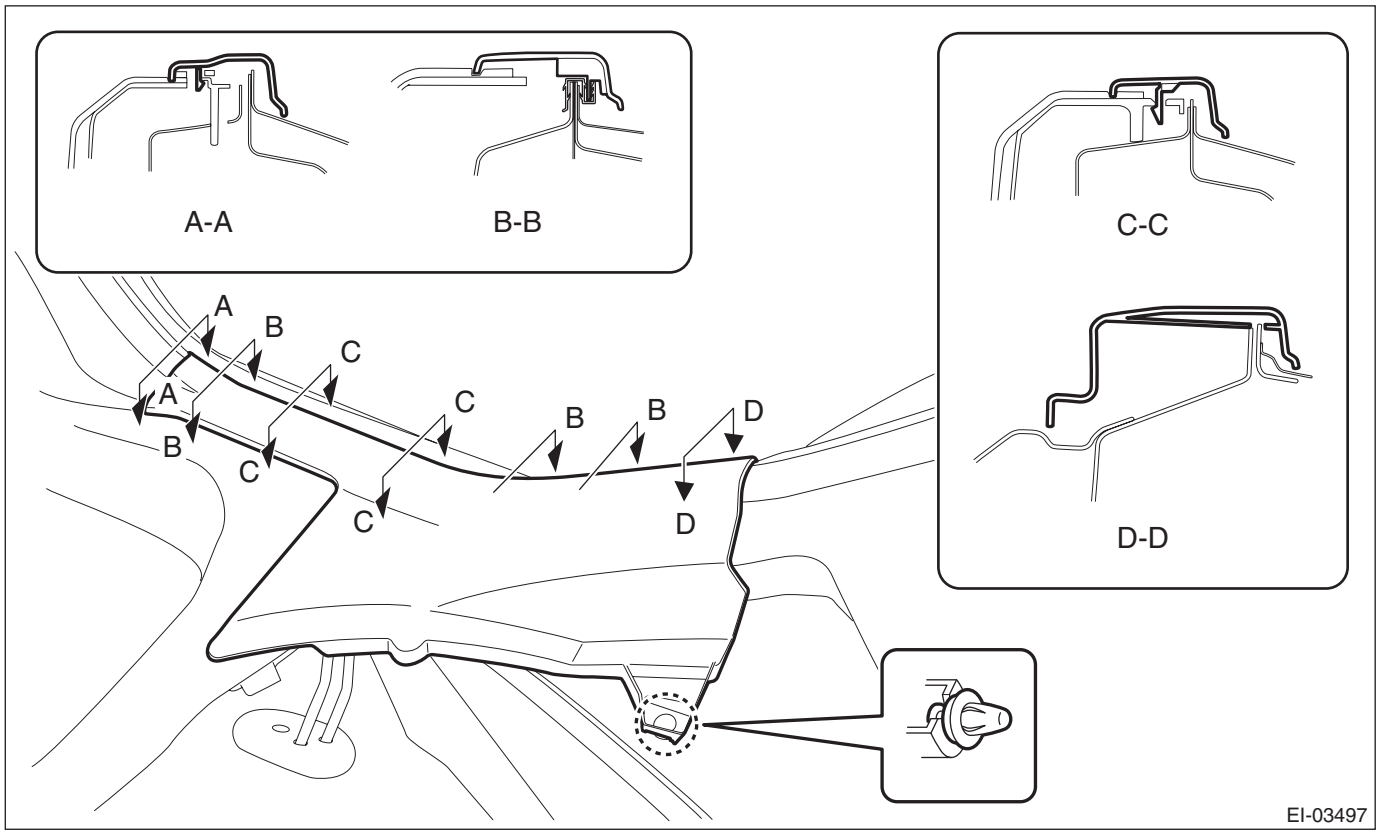


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.



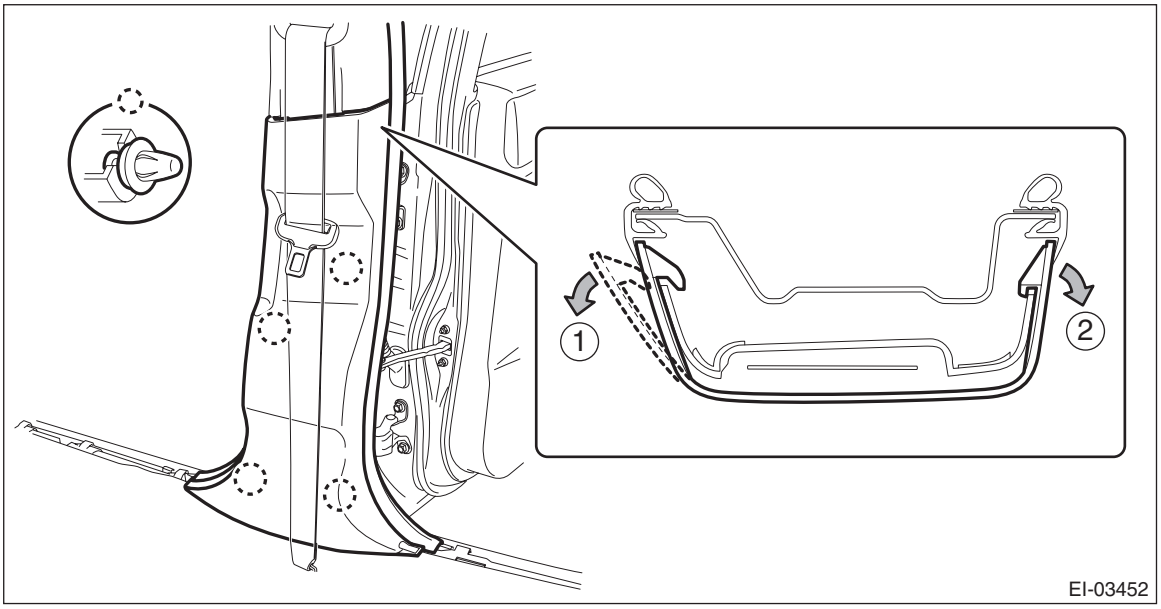
10) Release the clips and claws, and remove the cover side sill - rear INN on LH and RH sides.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - rear INN.

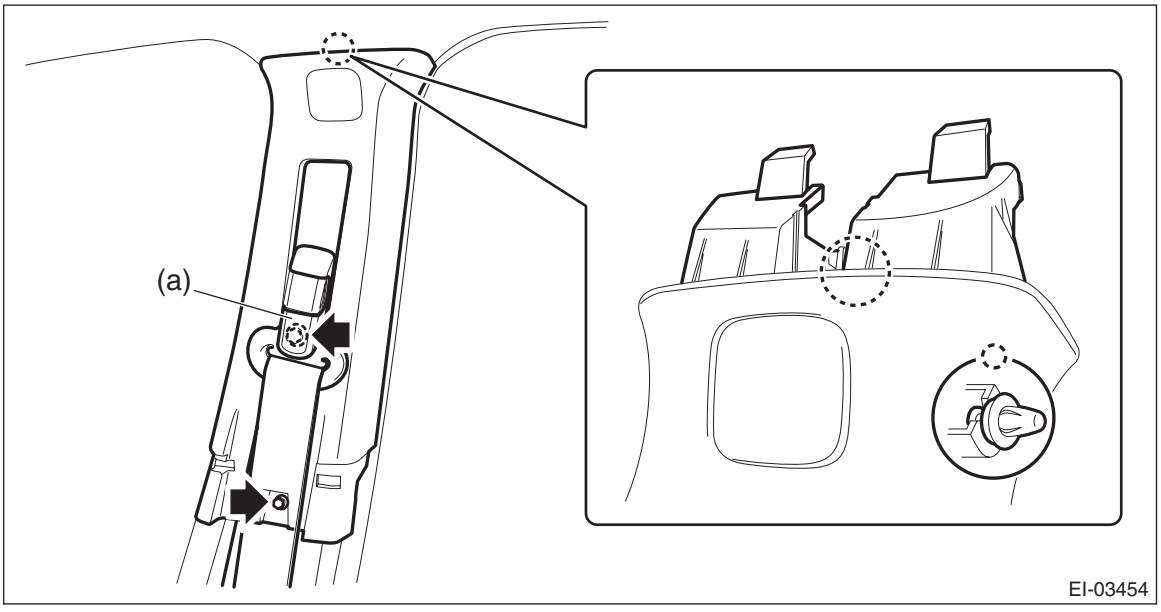


11) Remove the trim panel - center pillar LWR on the left and right sides.
(1) Release the clip by pulling the trim panel - center pillar LWR toward you.
(2) Expand the claws of the trim panel - center pillar LWR outward, and remove it from the trim panel - center pillar UPR.

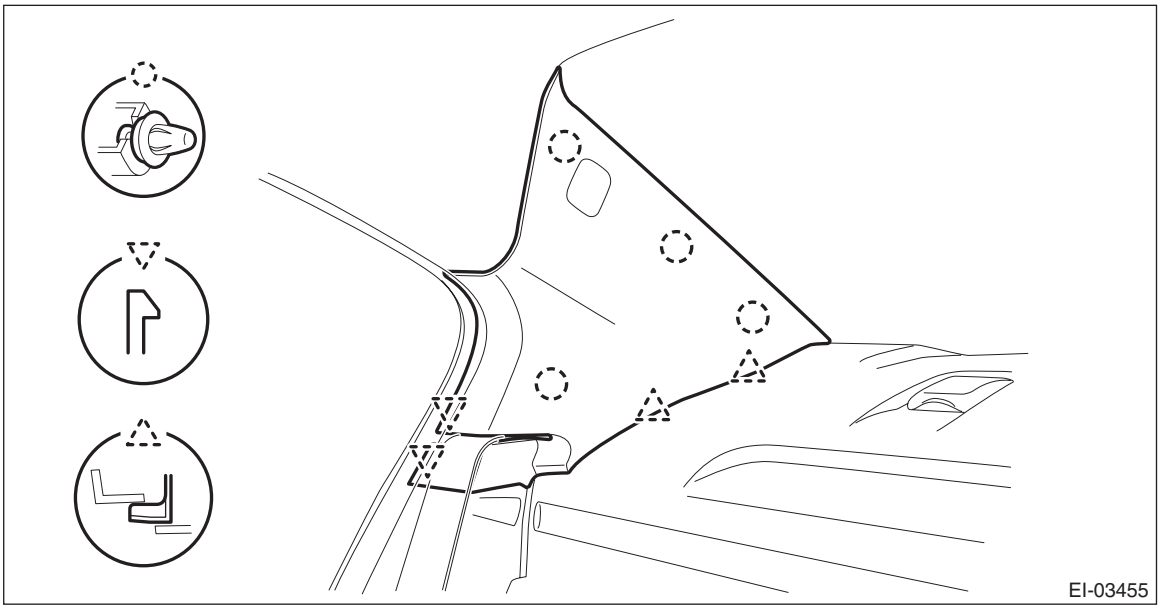
CAUTION:
Do not expand the trim panel - center pillar LWR excessively. Doing so may damage the trim.



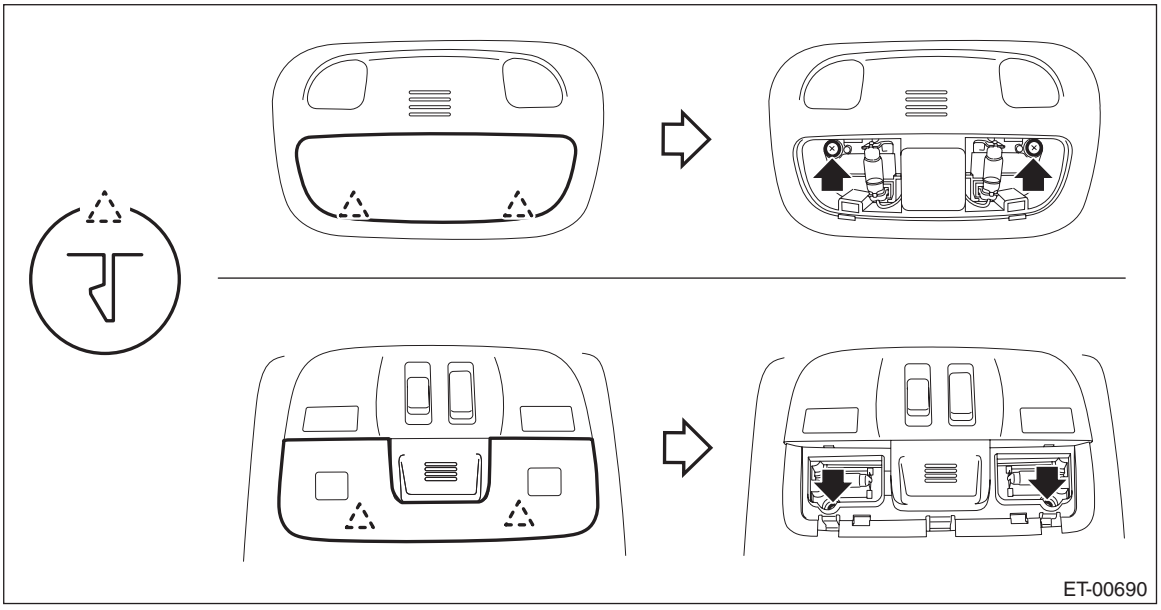
NOTE:
First release the claw located to the front of the vehicle.
12) Remove the trim panel - center pillar UPR on the left and right sides.
(1) Remove the cover through (a), and remove the seat belt anchor bolt.
(2) Remove the bolt on the lower side of the trim panel - center pillar UPR.
(3) Remove the clip, and while lowering the entire trim, remove the trim panel - center pillar UPR.



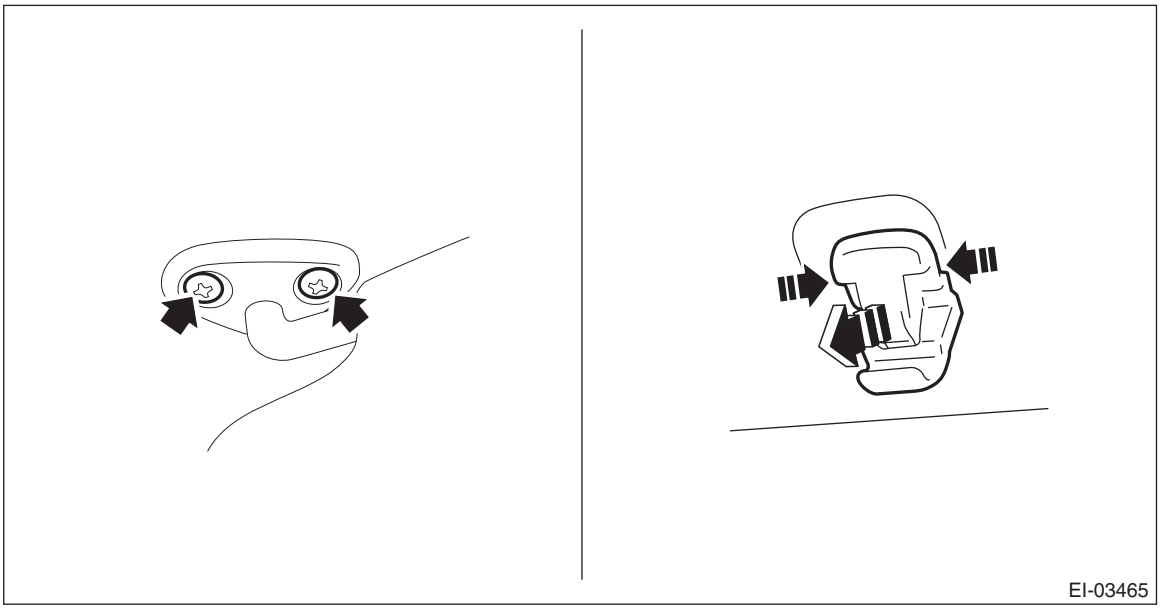
13) Remove the clips, and remove the trim panel - rear pillar UPR on the left and right sides.



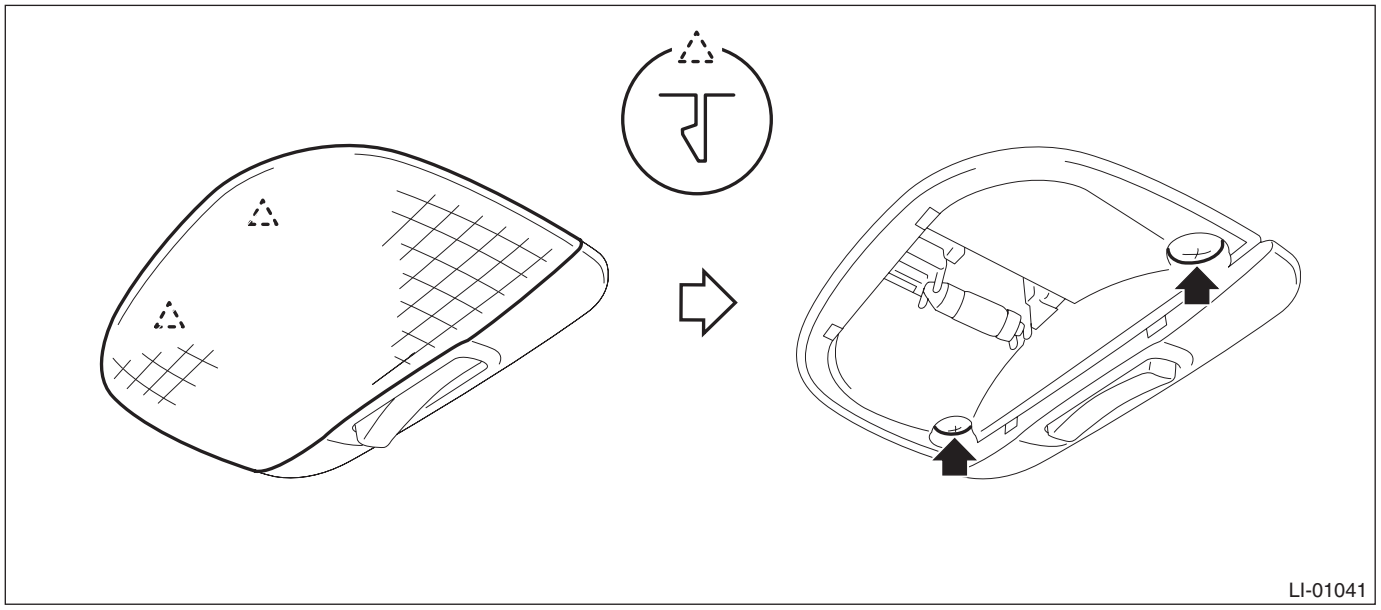
14) Remove the light assembly - map.
(1) Remove the lens and detach the screws.
(2) Disconnect the connector and remove the light assembly - map.



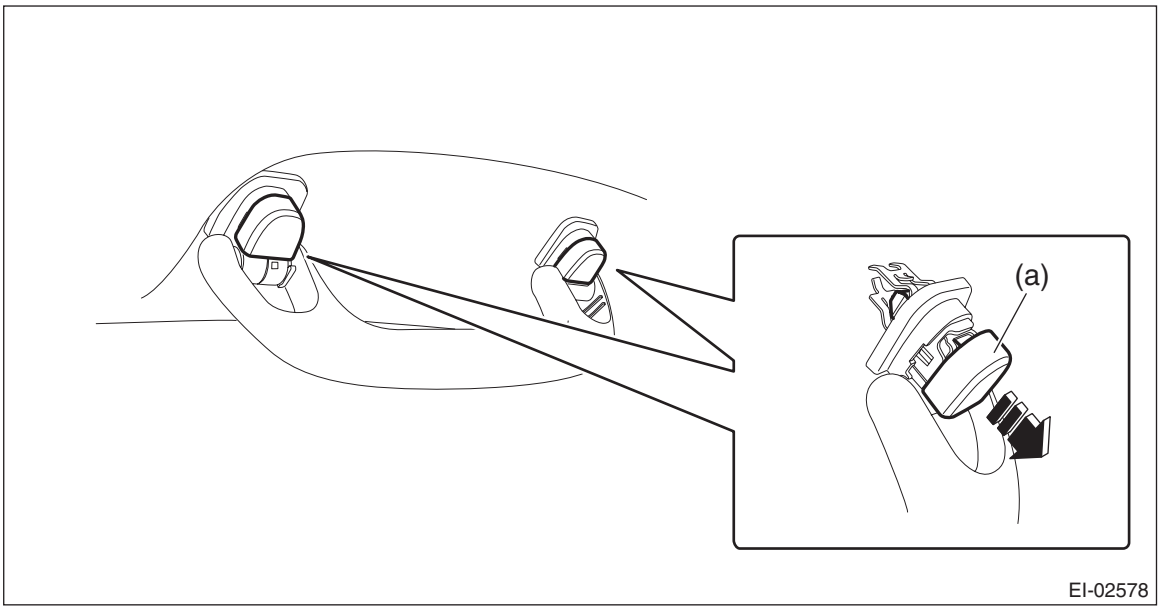
15) Remove the left and right sun visor assembly.
(1) Remove the screws and remove the sun visor assembly.
(2) Press both sides of the hook - sun visor using a flat tip screwdriver.
(3) Remove the hook - sun visor by pulling it toward you.



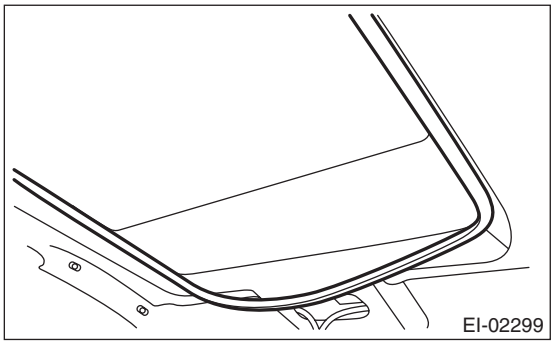
16) Remove the light assembly - room.
(1) Remove the lens and detach the screws.
(2) Disconnect the connector and remove the light assembly - room.



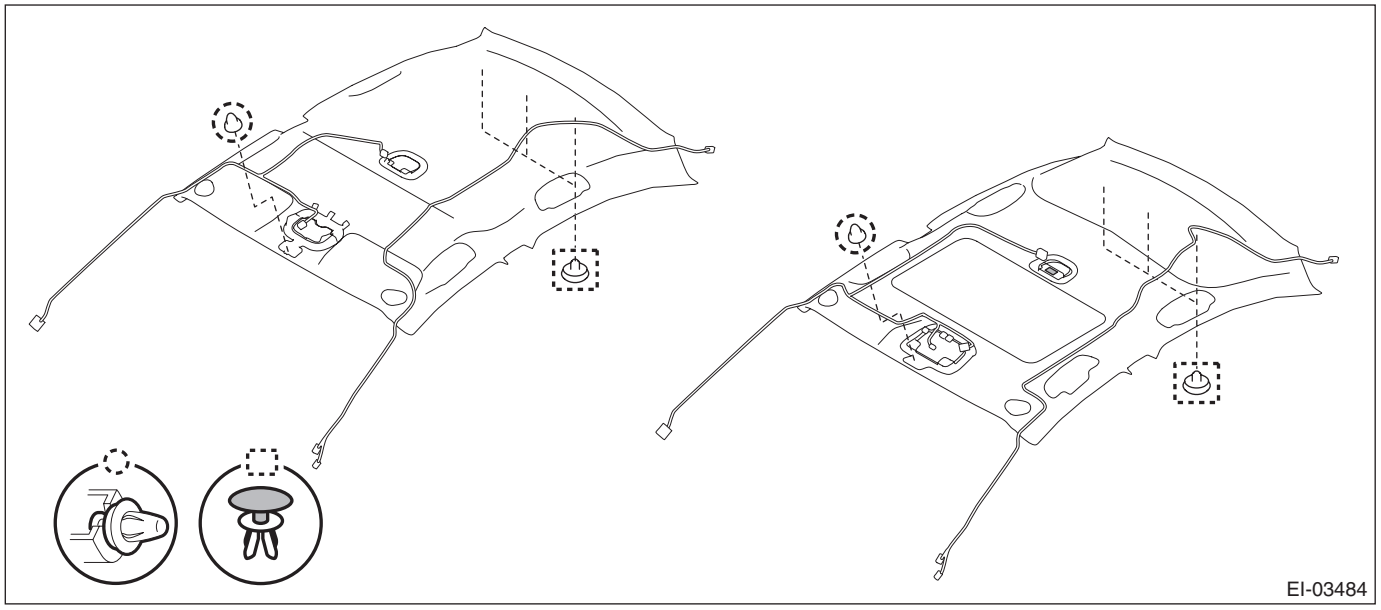
17) Remove all assist rails.
(1) Remove the cap (a).
(2) Pull the assist rail toward you (to the vehicle center) and remove the metal clip from the bracket.



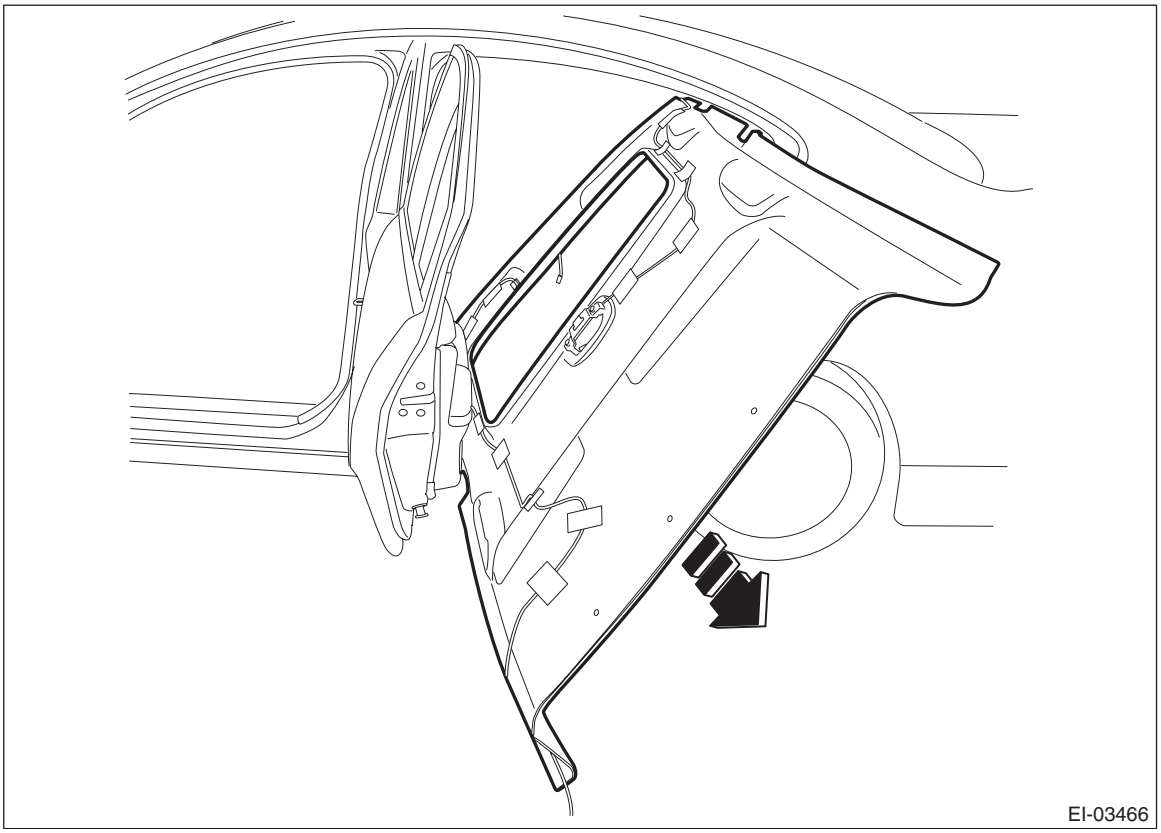
18) Remove the garnish - roof. (model with sunroof)



19) Remove the trim panel - roof assembly.
(1) Remove the harness clamp of the cord assembly - antenna feeder and the cord - roof, and disconnect the connectors.
(2) Remove the clips and the Velcro tape behind the room light.
(3) Remove the weather strip - body side flange from the front/rear and left/right doors, and remove the trim panel - roof assembly.



(4) Take out the trim panel - roof assembly from the vehicle.

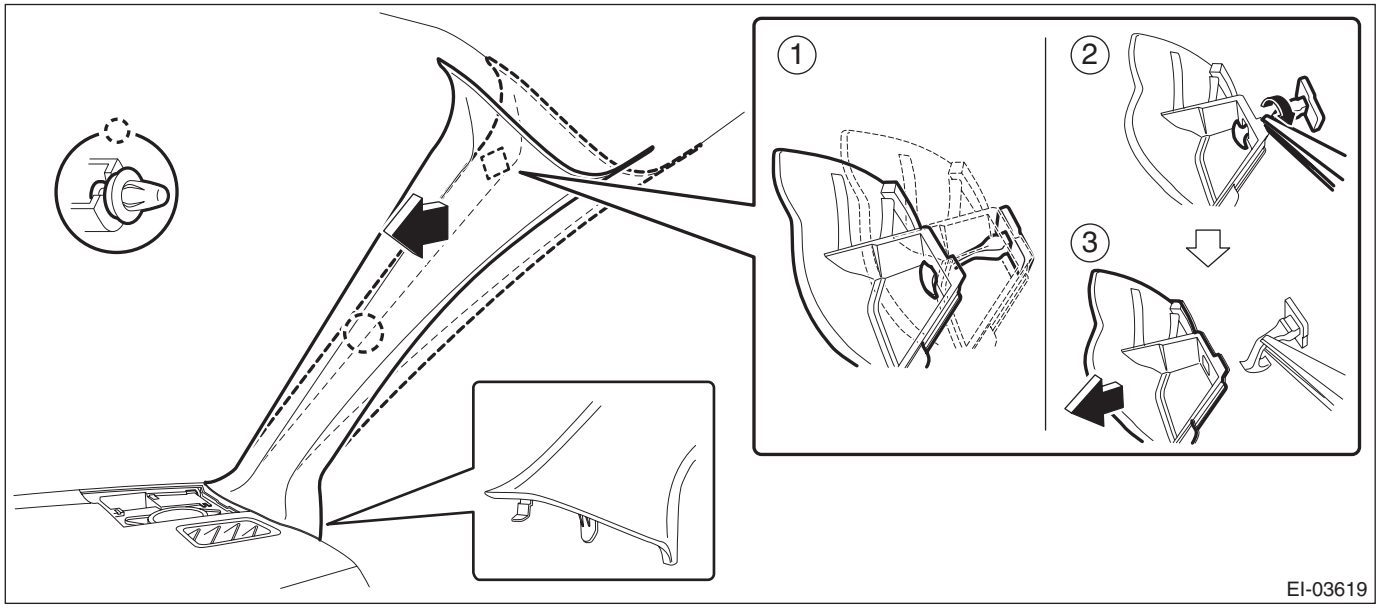


2. 5 DOOR MODEL

CAUTION:
• Airbag system satellite safing sensor is located in the lower of the rear seat cushion center. Before removing the rear seat, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM" section. <Ref. to AB-10, CAUTION, General Description.>
• The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

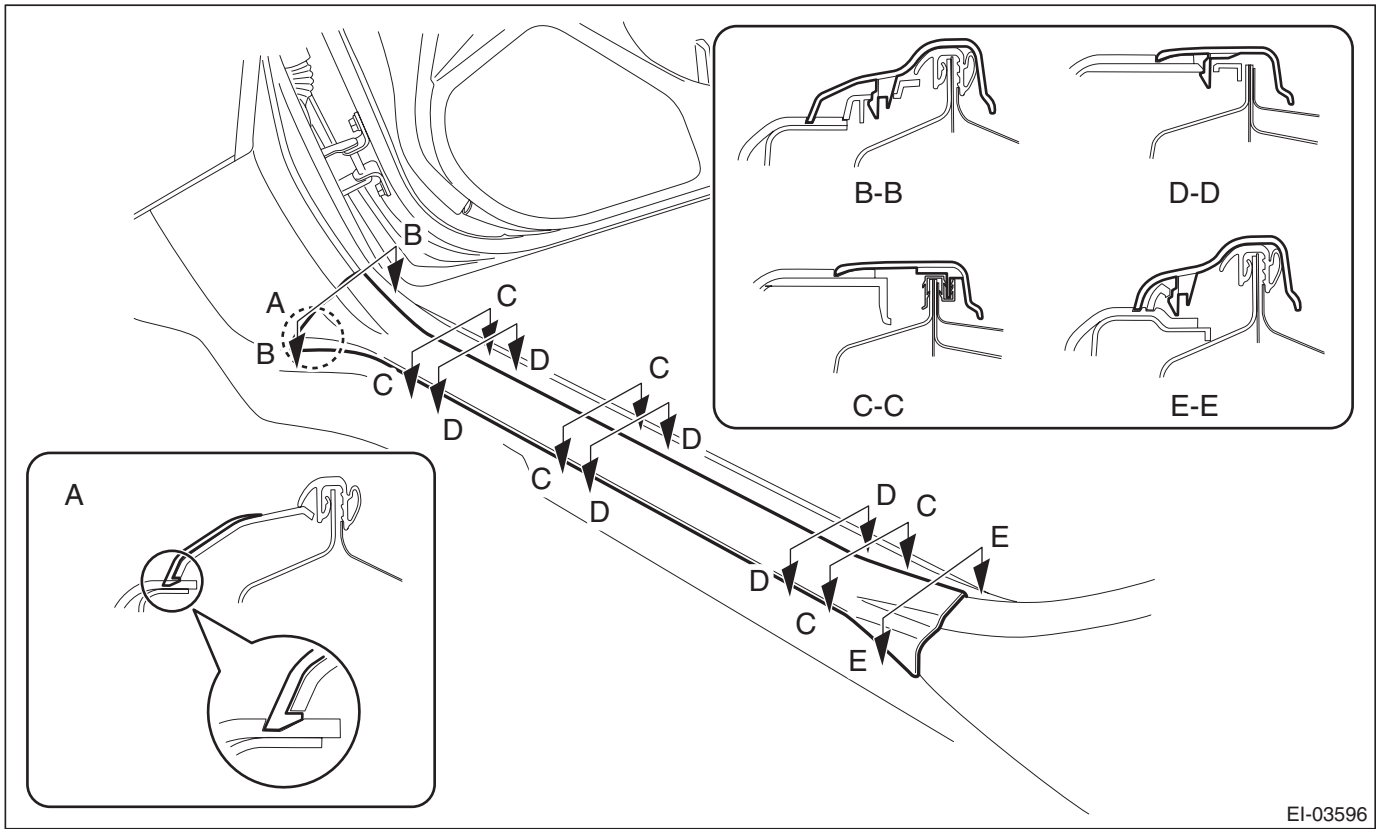
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
2) Adjust the front seat position.
   (1) Remove the headrest.
   (2) Move the seat to the front-most position and tilt the backrest rearward.
3) Remove the trim panel - front pillar UPR on the left and right sides.
   (1) Pull the upper part of the trim panel - front pillar UPR towards the center of the vehicle.
   (2) Insert long-nose pliers into the top part of the trim, grip the tether clip with the pliers and twist 90° in that position.

CAUTION:
Be careful not to damage the pillar trim surface and curtain airbag module when inserting the pliers.
   (3) Holding the tether clip twisted as in the previous step, remove the trim panel - front pillar UPR from the tether clip.
   (4) Remove the clips, and remove the trim panel - front pillar UPR.



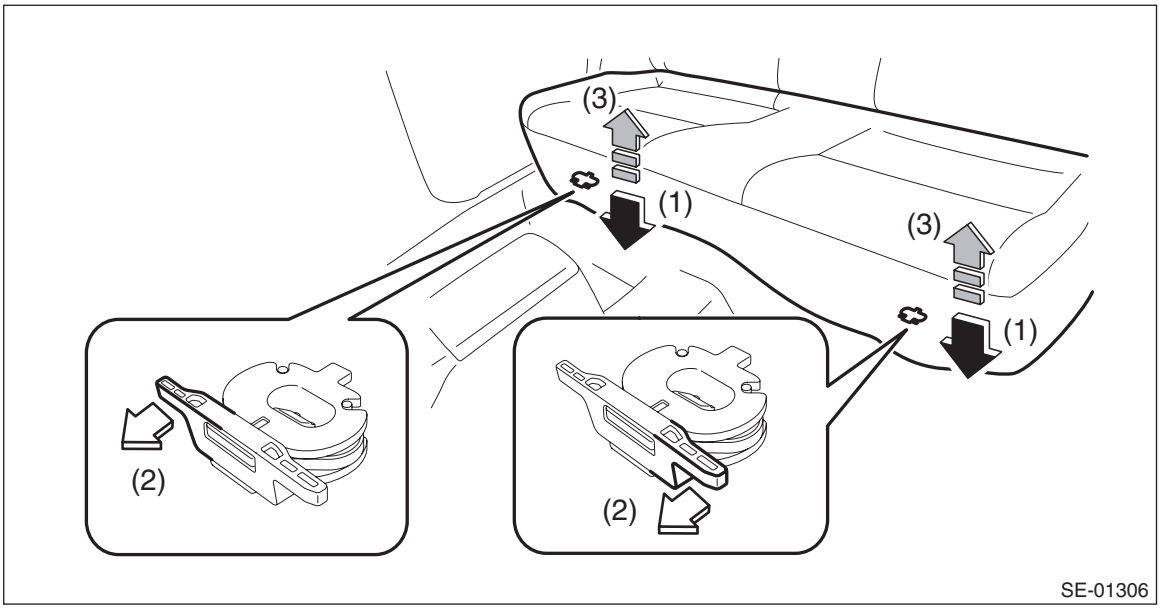
4) Release the claws, and then remove the cover side sill - front INN on LH and RH sides.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - front INN.

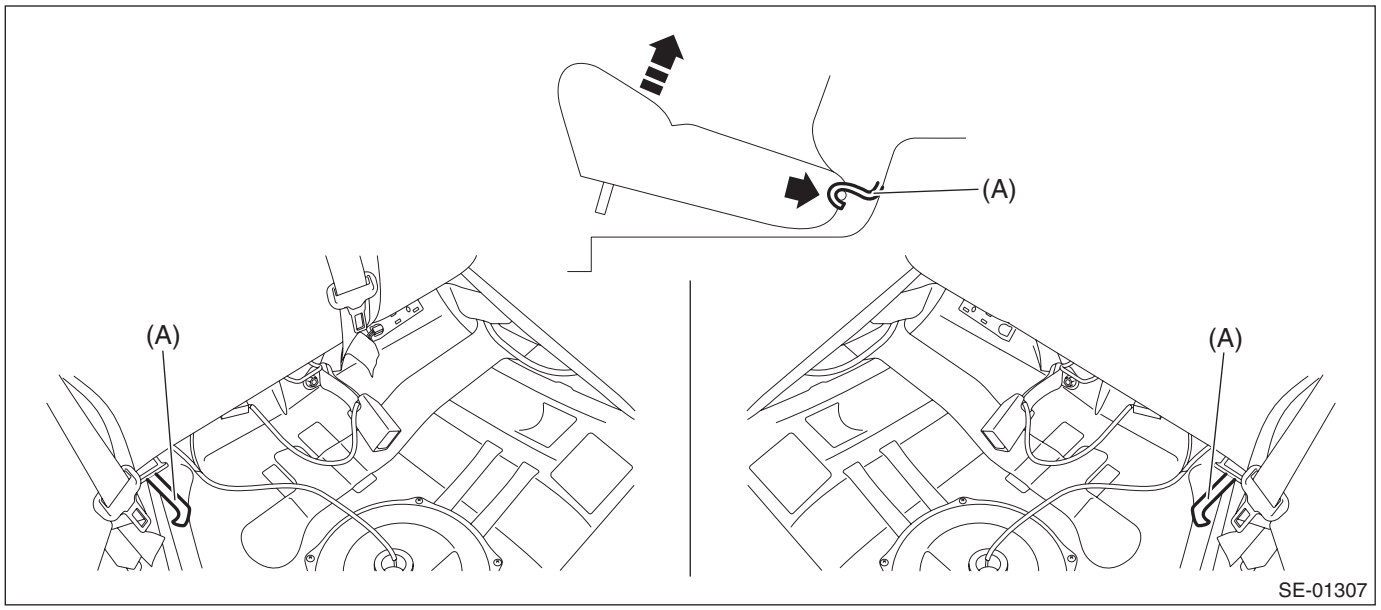


5) Remove the rear seat cushion assembly.
(1) Push the corners of the rear seat cushion from above.
(2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
(3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

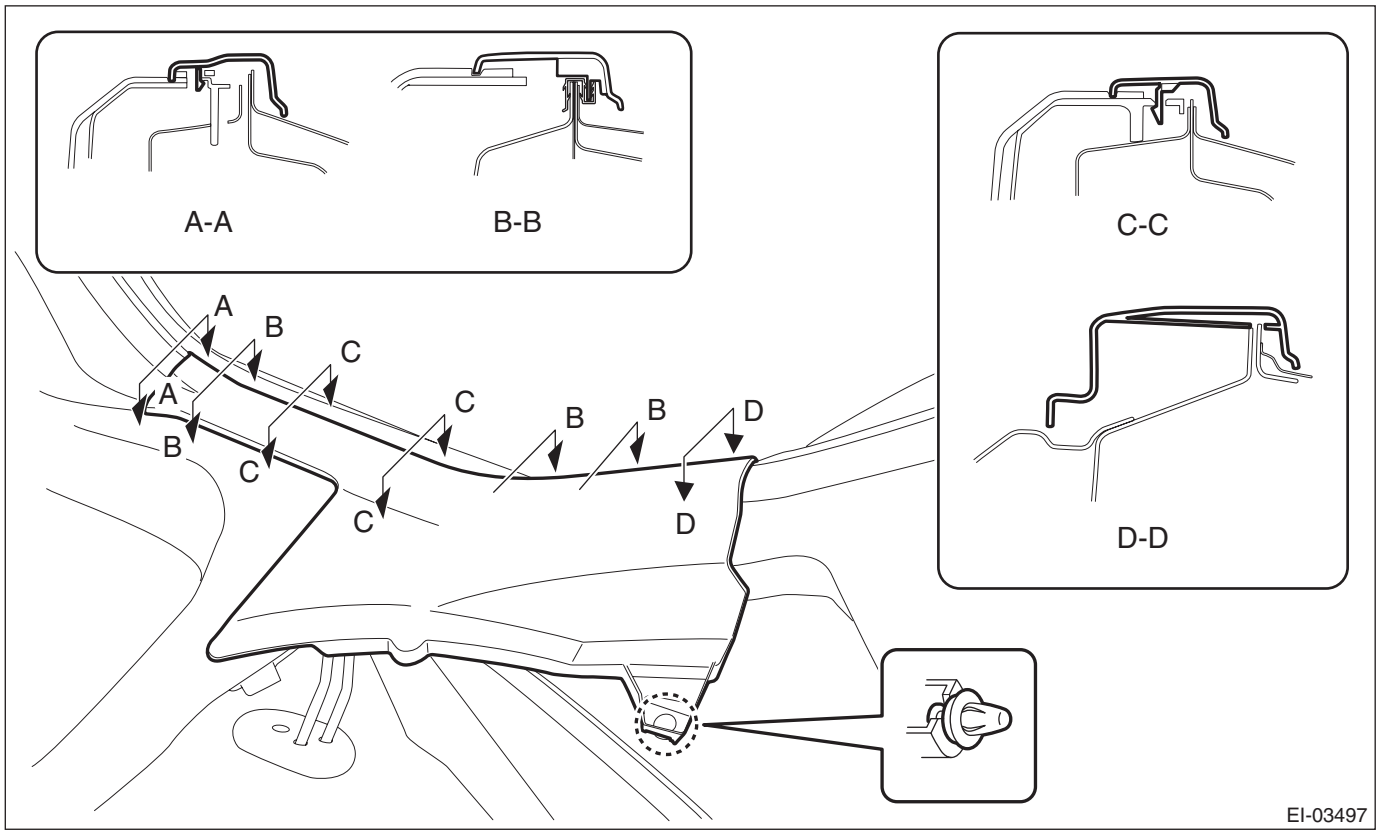


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.



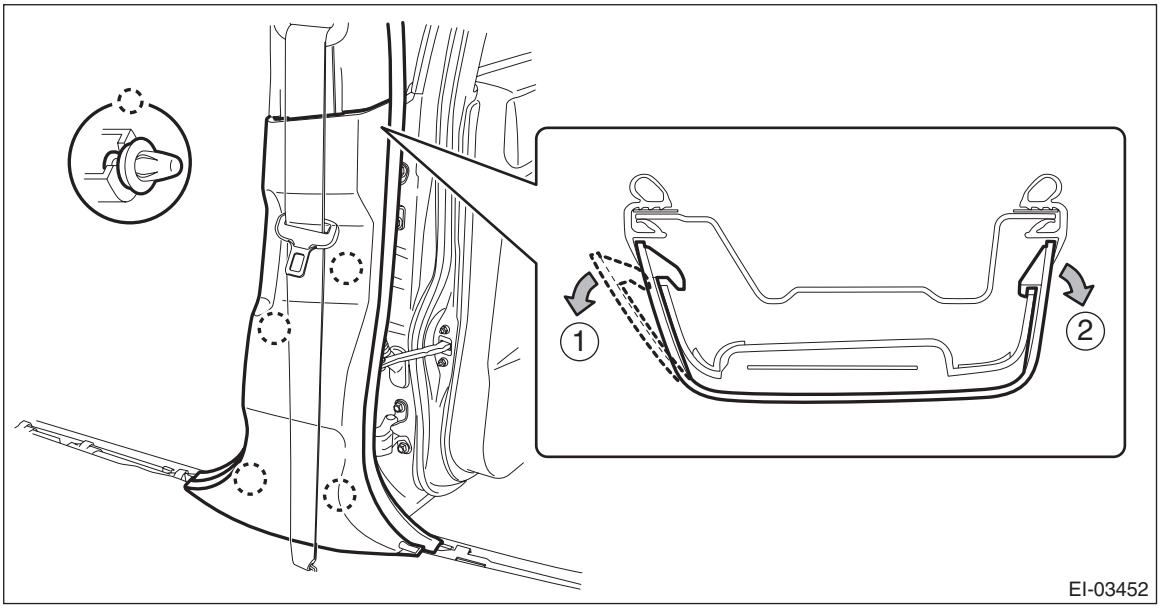
6) Release the clips and claws, and remove the cover side sill - rear INN on LH and RH sides.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - rear INN.

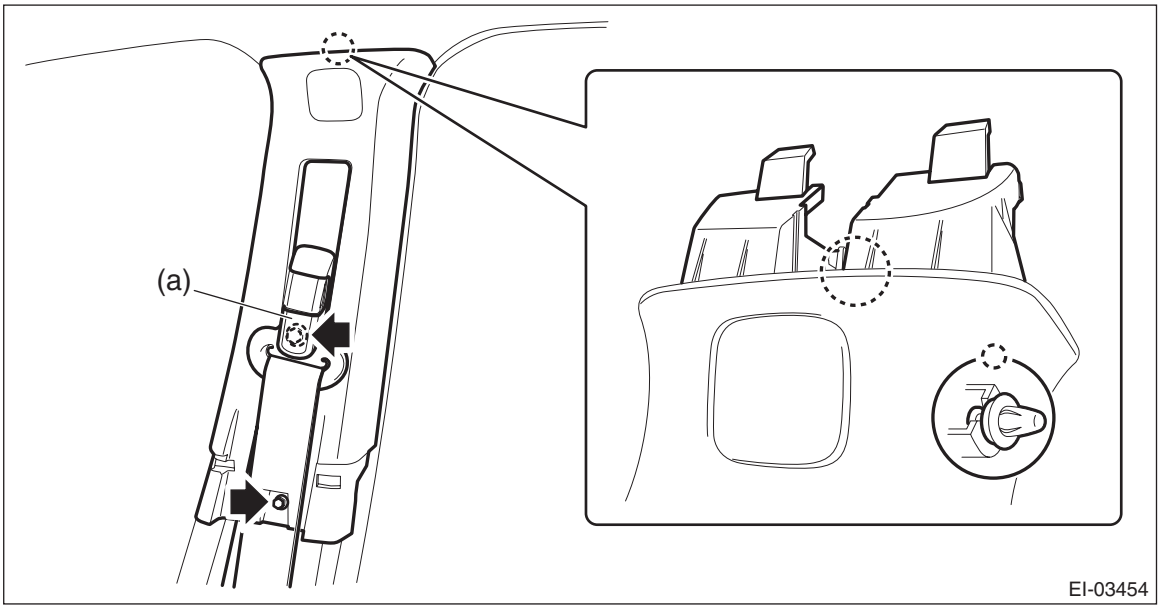


7) Remove the trim panel - center pillar LWR on the left and right sides.
   (1) Release the clip by pulling the trim panel - center pillar LWR toward you.
   (2) Expand the claws of the trim panel - center pillar LWR outward, and remove it from the trim panel - center pillar UPR.

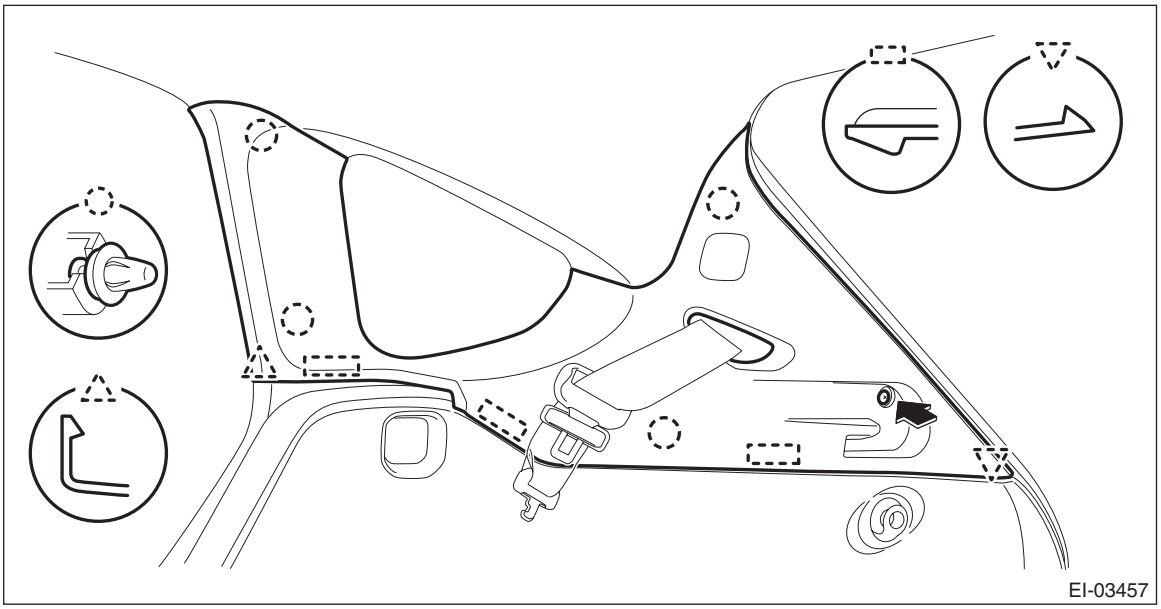
CAUTION:
Do not expand the trim panel - center pillar LWR excessively. Doing so may damage the trim.



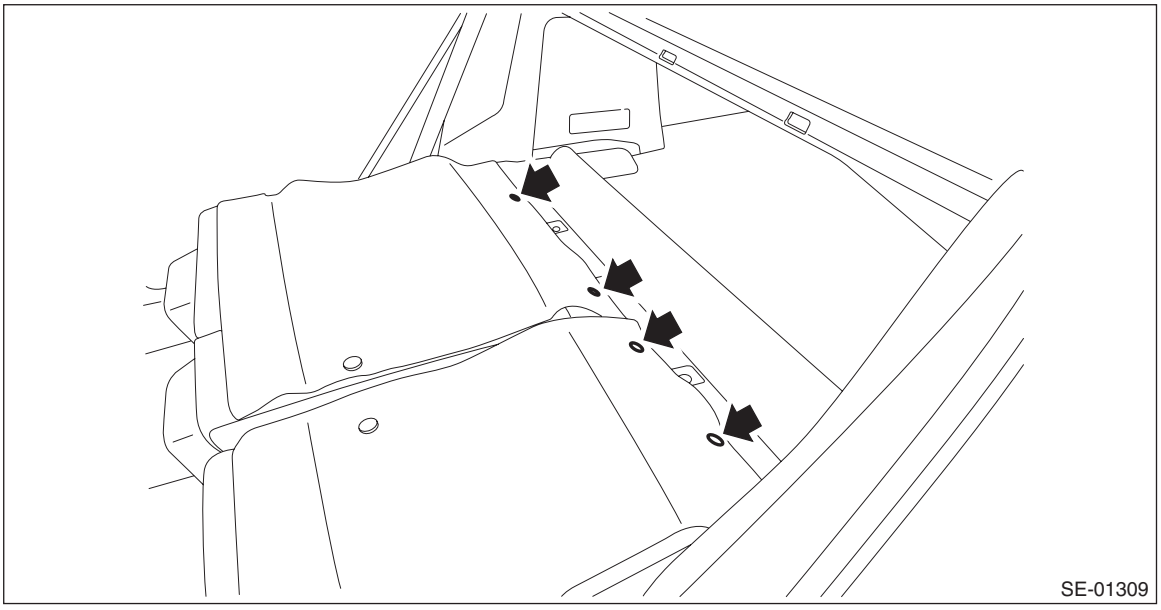
NOTE:
First release the claw located to the front of the vehicle.
8) Remove the trim panel - center pillar UPR on the left and right sides.
   (1) Remove the cover through (a), and remove the seat belt anchor bolt.
   (2) Remove the bolt on the lower side of the trim panel - center pillar UPR.
   (3) Remove the clip, and while lowering the entire trim, remove the trim panel - center pillar UPR.



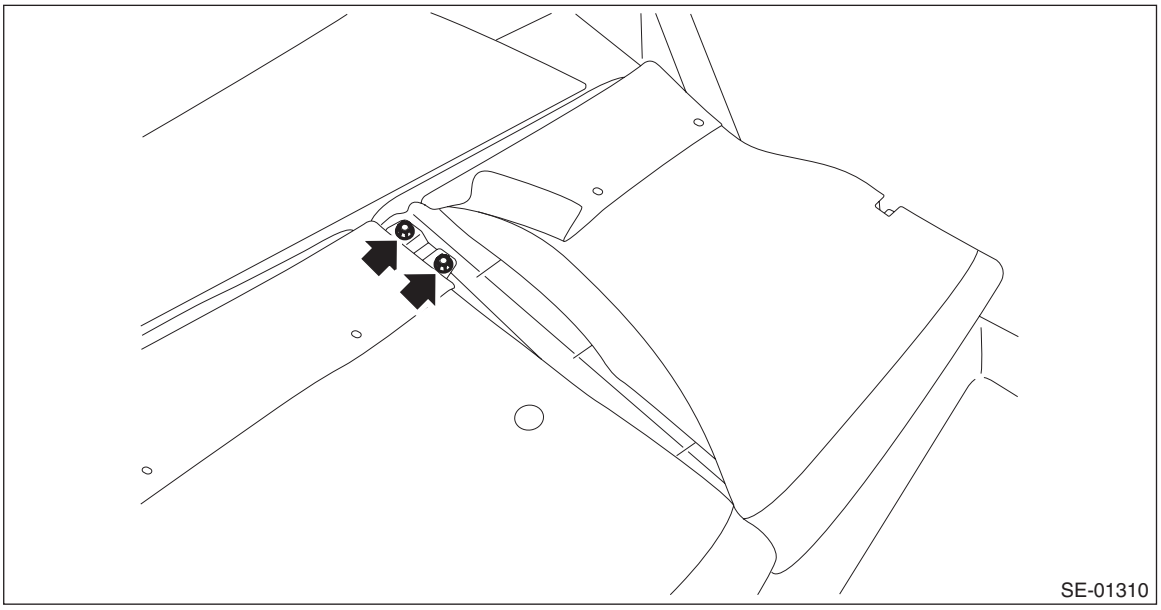
9) Remove the screws and clips, and remove the trim panel - rear quarter pillar UPR on the left and right sides.



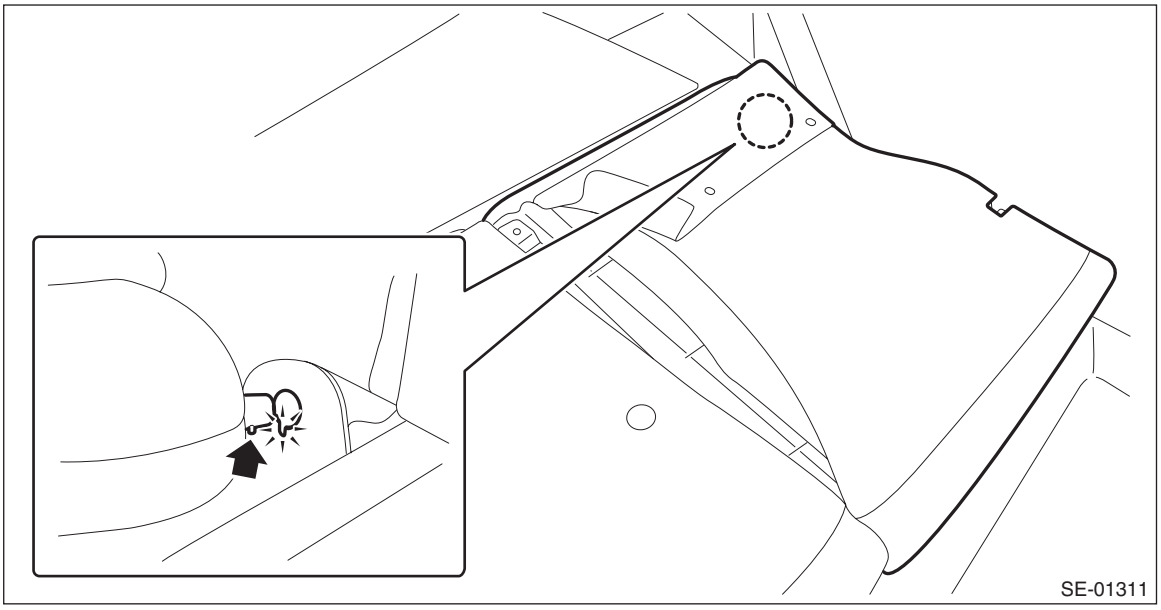
10) Remove the backrest assembly.
(1) Remove the pillow assembly - rear backrest, and tilt the backrest forward.
(2) Remove the clips located at the bottom of the cover COMPL - rear backrest LH and RH of the rear seat back.



(3) Turn over the cover COMPL - rear backrest to remove the bolts.

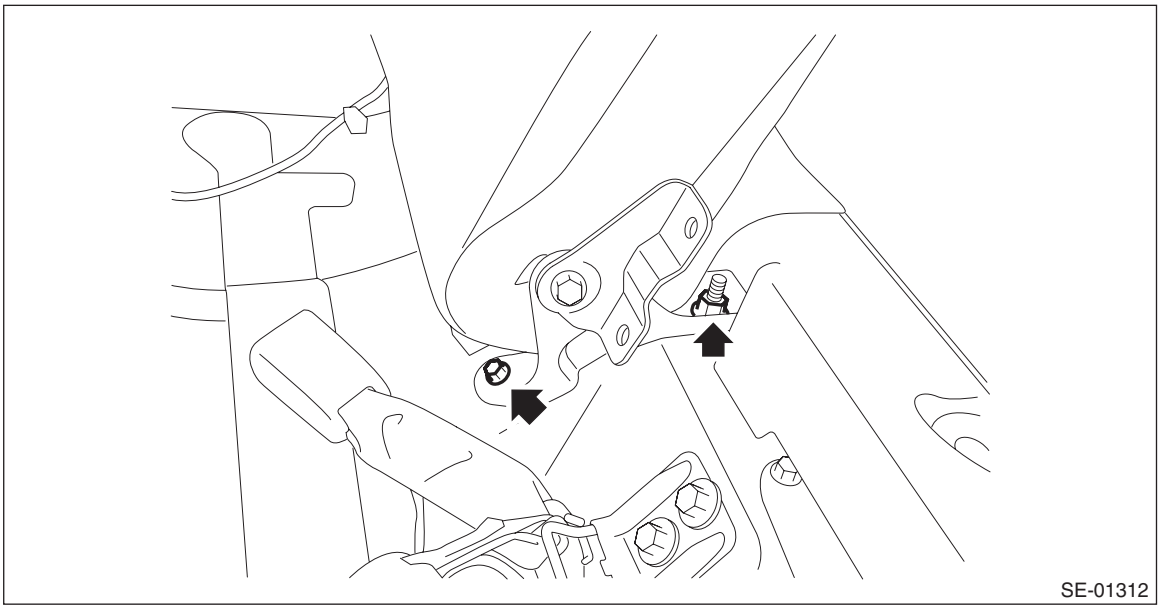


(4) Remove the backrest assembly LH from the hinge assembly.

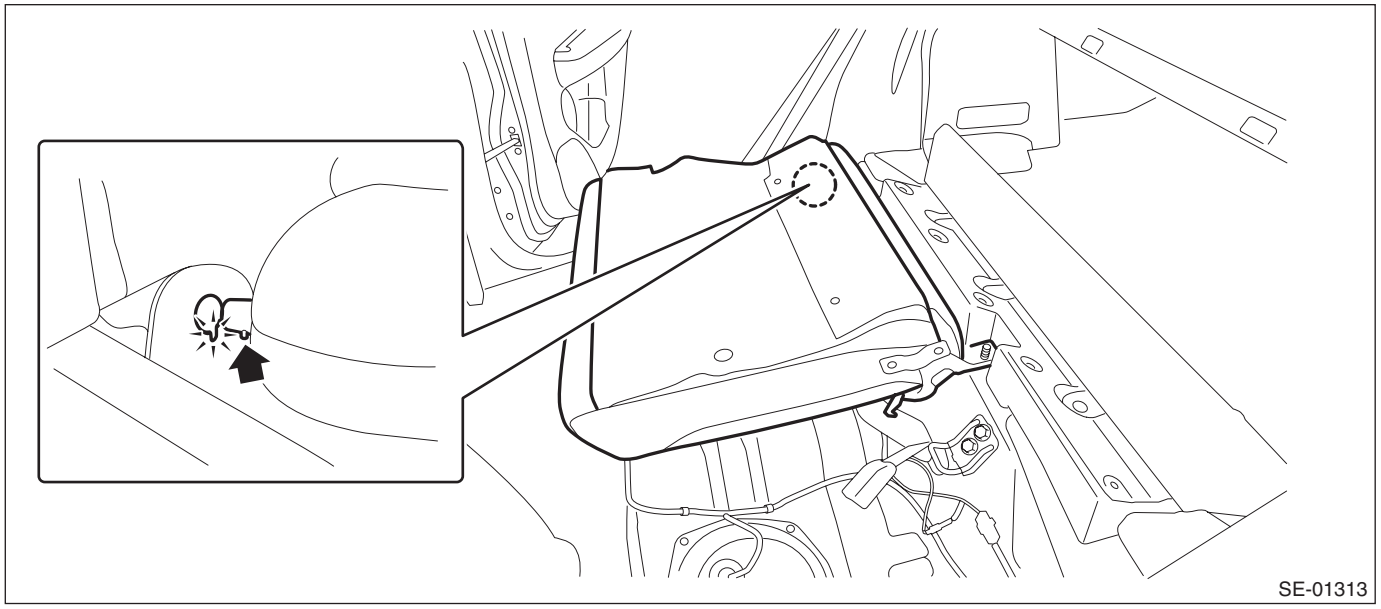


NOTE:
The backrest assembly cannot be removed unless pin positions on the hinge assembly side and backrest assembly side are aligned.

(5) Remove the bolts and nuts, and remove the backrest assembly RH.

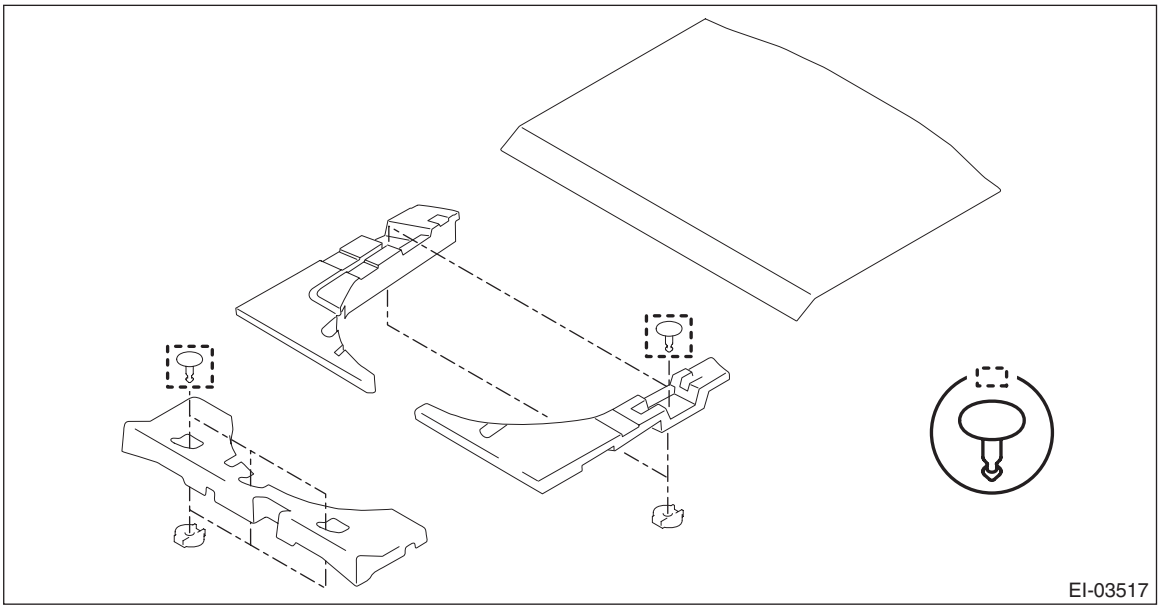


(6) Remove the backrest assembly RH from the hinge assembly.

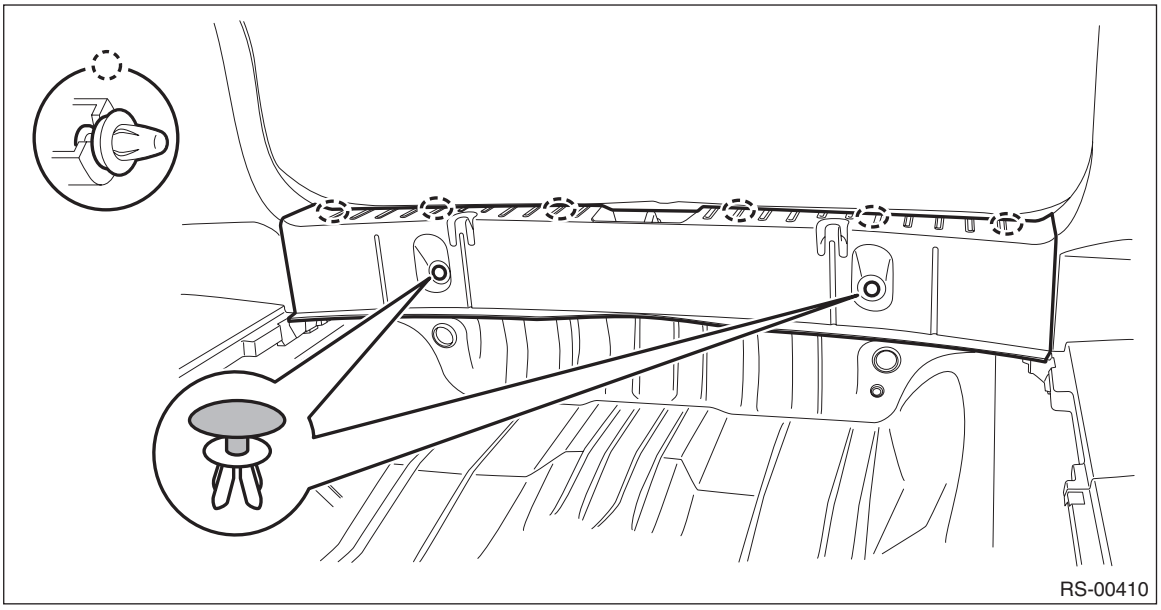


NOTE:
The backrest assembly cannot be removed unless pin positions on the hinge assembly side and backrest assembly side are aligned.

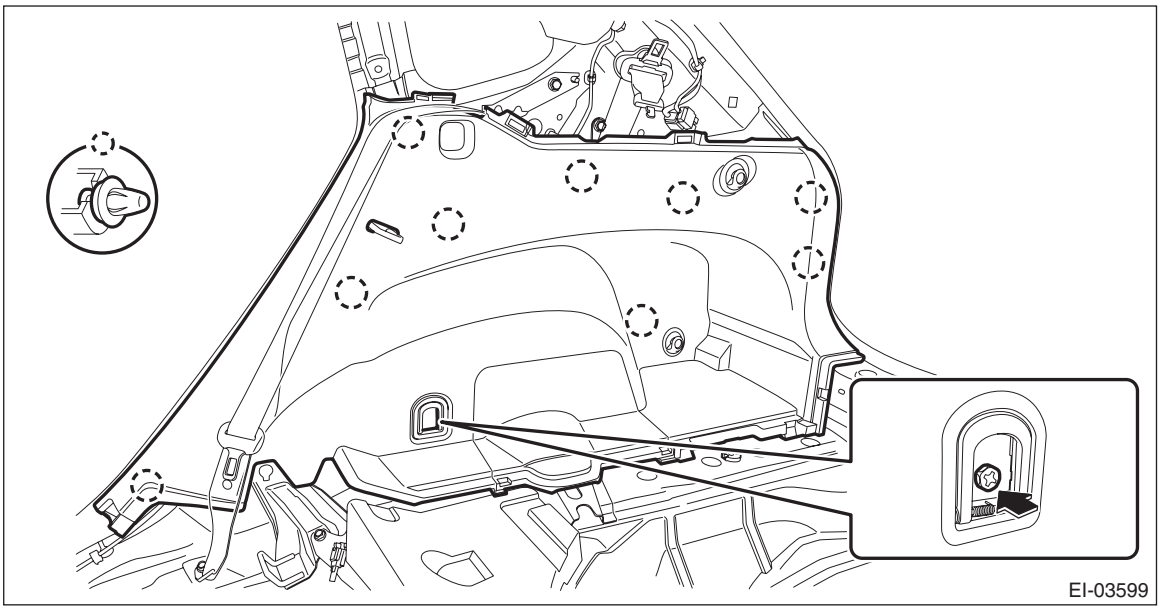
11) Remove the mat - rear floor CTR and the spacer - rear floor side.



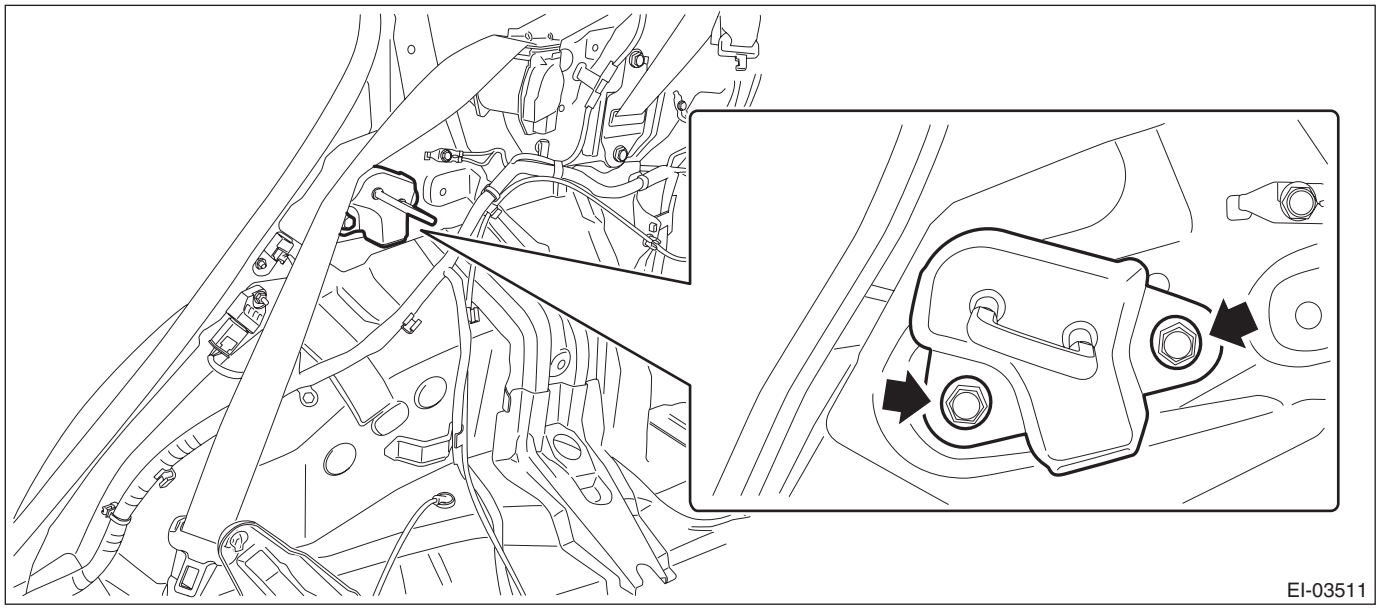
12) Remove the clips, and remove the trim panel - rear skirt.



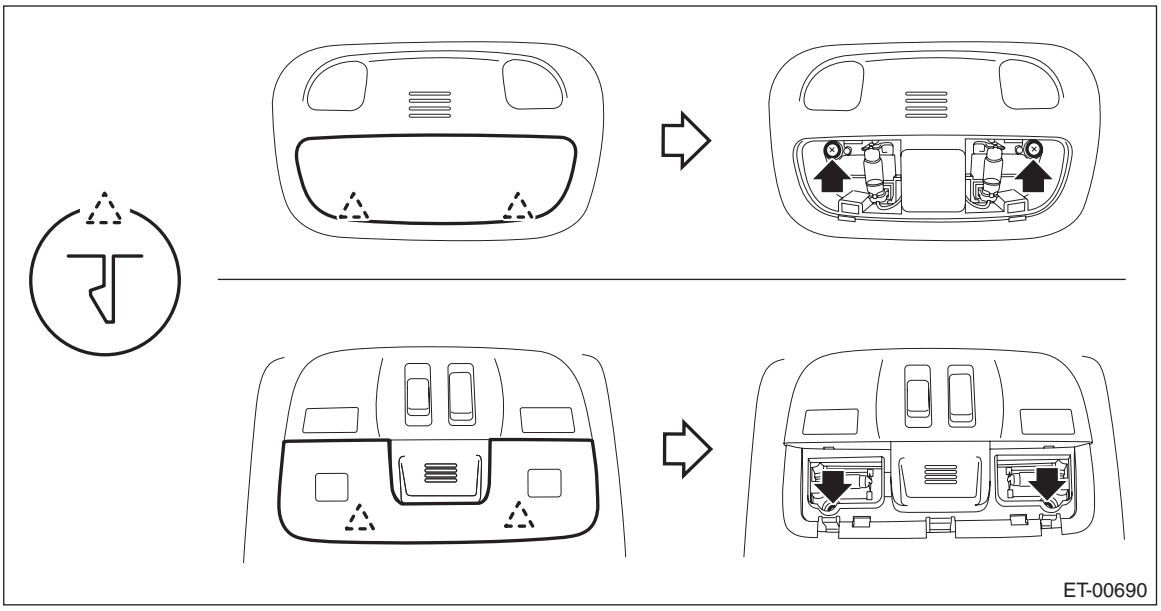
13) Remove the trim panel - rear apron on the left and right sides.
(1) Remove the caps, and then remove the screws.
(2) Remove the clips, and remove the trim panel - rear apron.



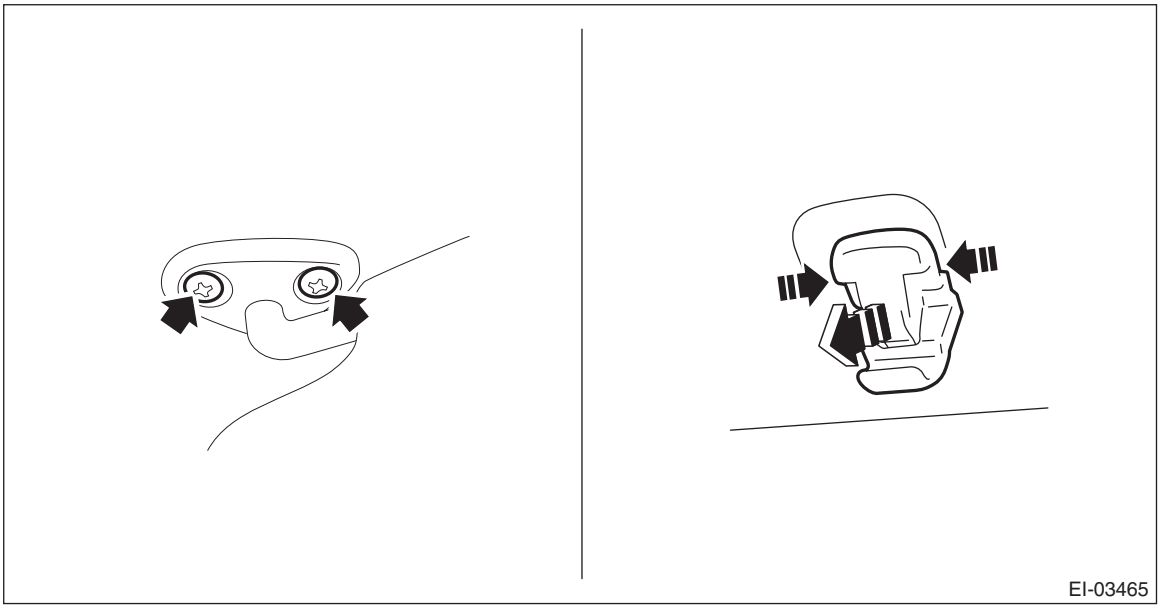
14) Remove the bolts, and remove the striker - backrest rear on the passenger's side.



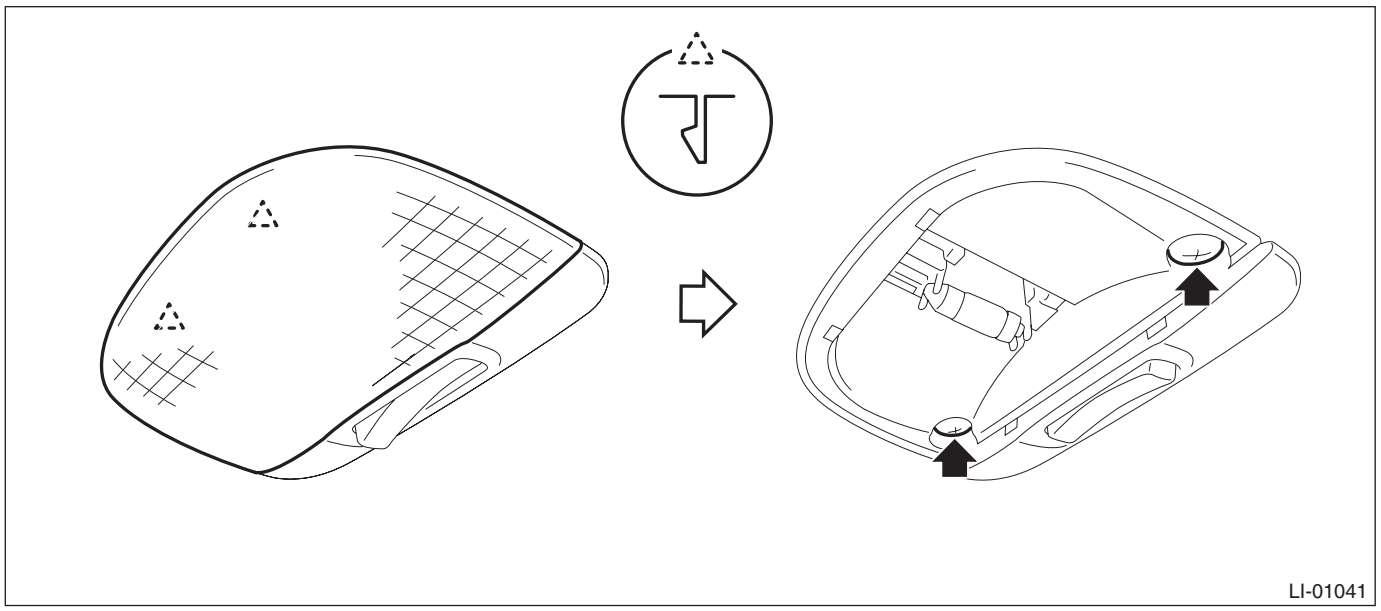
15) Remove the light assembly - map.
(1) Remove the lens and detach the screws.
(2) Disconnect the connector and remove the light assembly - map.



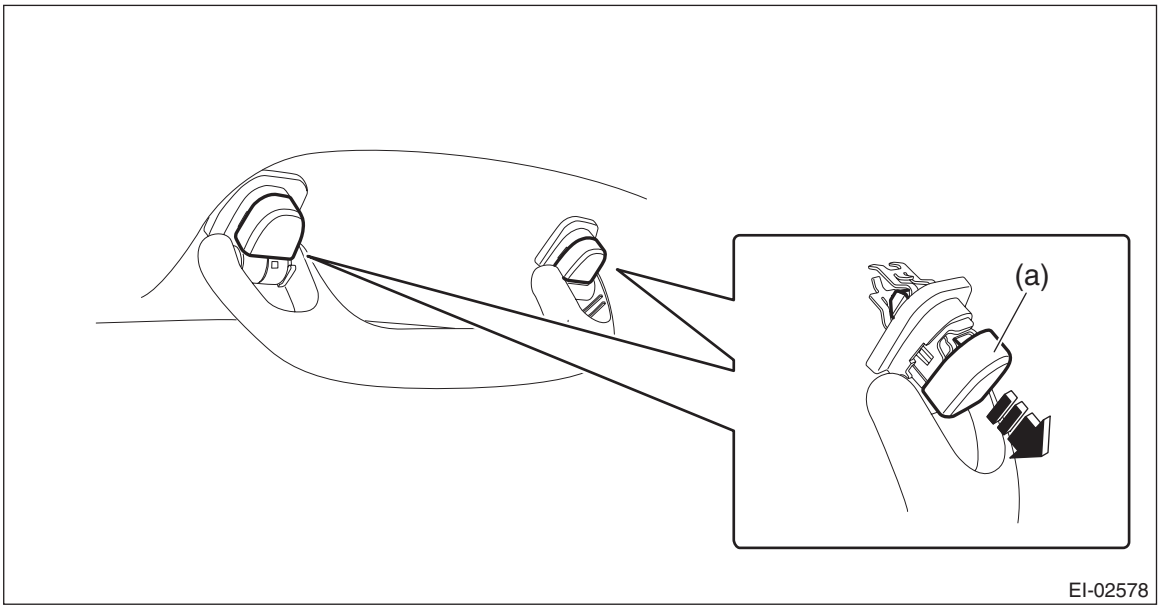
16) Remove the left and right sun visor assembly.
(1) Remove the screws and remove the sun visor assembly.
(2) Press both sides of the hook - sun visor using a flat tip screwdriver.
(3) Remove the hook - sun visor by pulling it toward you.



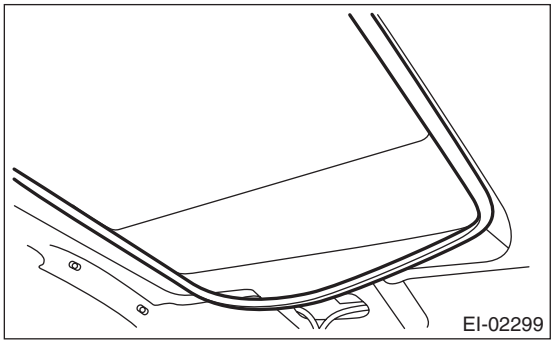
17) Remove the light assembly - room.
(1) Remove the lens and detach the screws.
(2) Disconnect the connector and remove the light assembly - room.



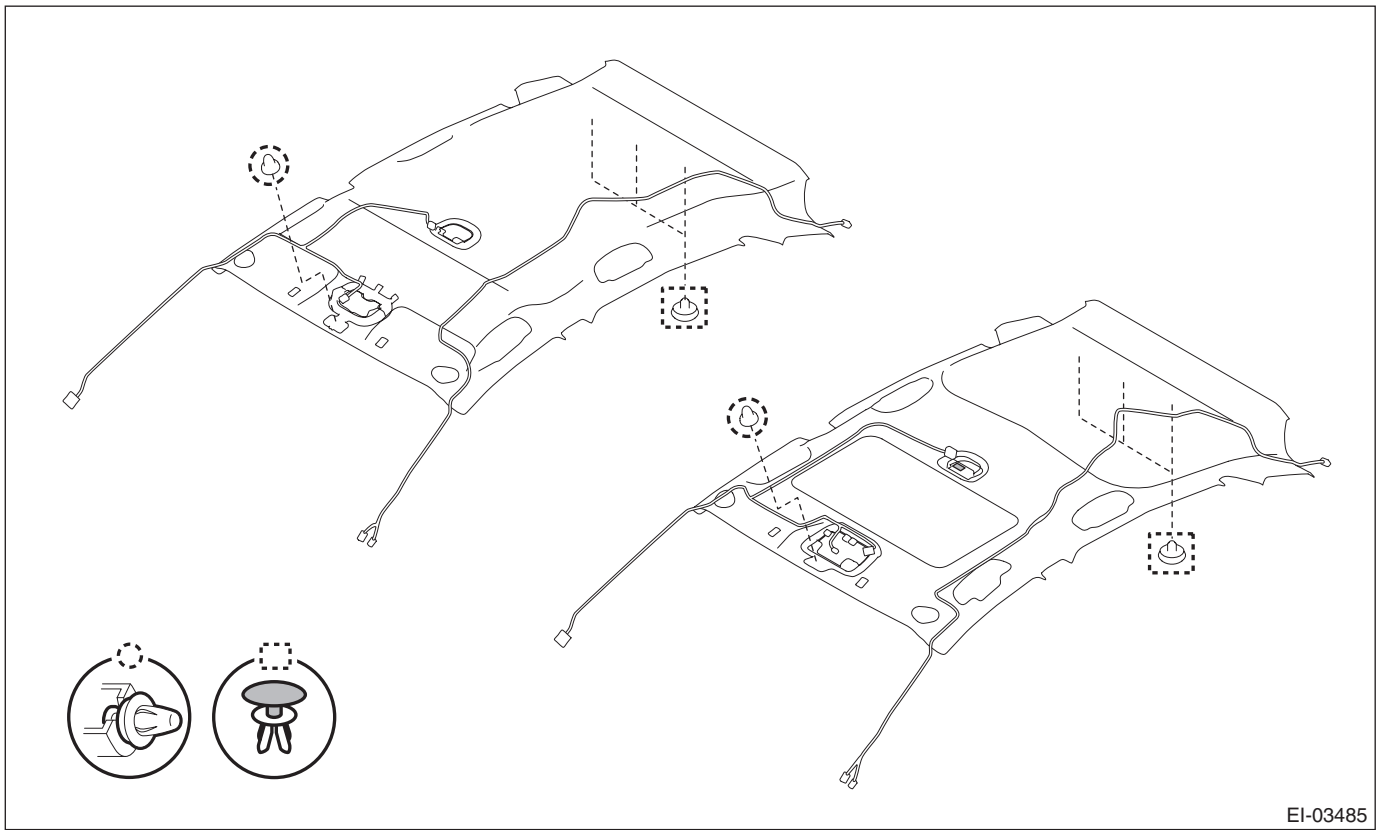
18) Remove all assist rails.
(1) Remove the cap (a).
(2) Pull the assist rail toward you (to the vehicle center) and remove the metal clip from the bracket.



19) Remove the garnish - roof. (model with sunroof)

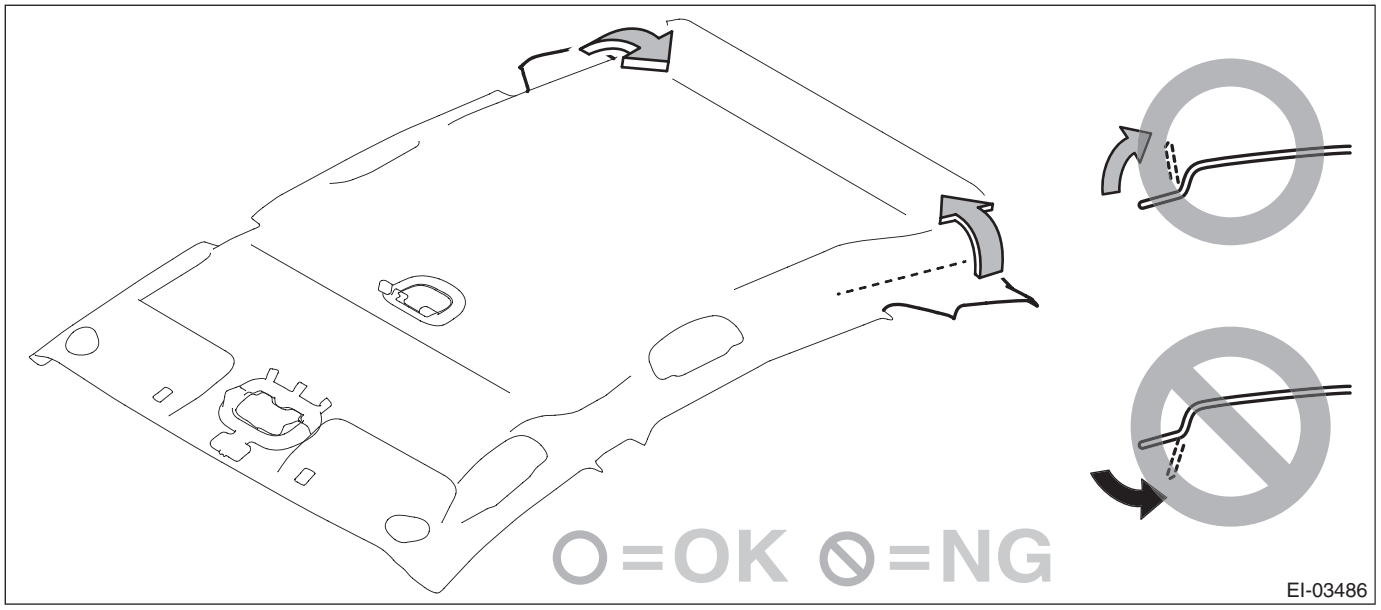


20) Remove the trim panel - roof assembly.
(1) Remove the harness clamp of the cord assembly - antenna feeder and the cord - roof, and disconnect the connectors.
(2) Remove the clips and remove the Velcro tape behind the room light.



(3) Remove the weather strip - body side flange from the front/rear and left/right doors, and remove the trim panel - roof assembly.
(4) Slightly bend the rear end of the trim panel - roof assembly along the character line, and take it out from the rear gate opening.

CAUTION:
Be careful of the bending direction. If the direction is wrong, the trim panel - roof assembly may be wrinkled.



B: INSTALLATION

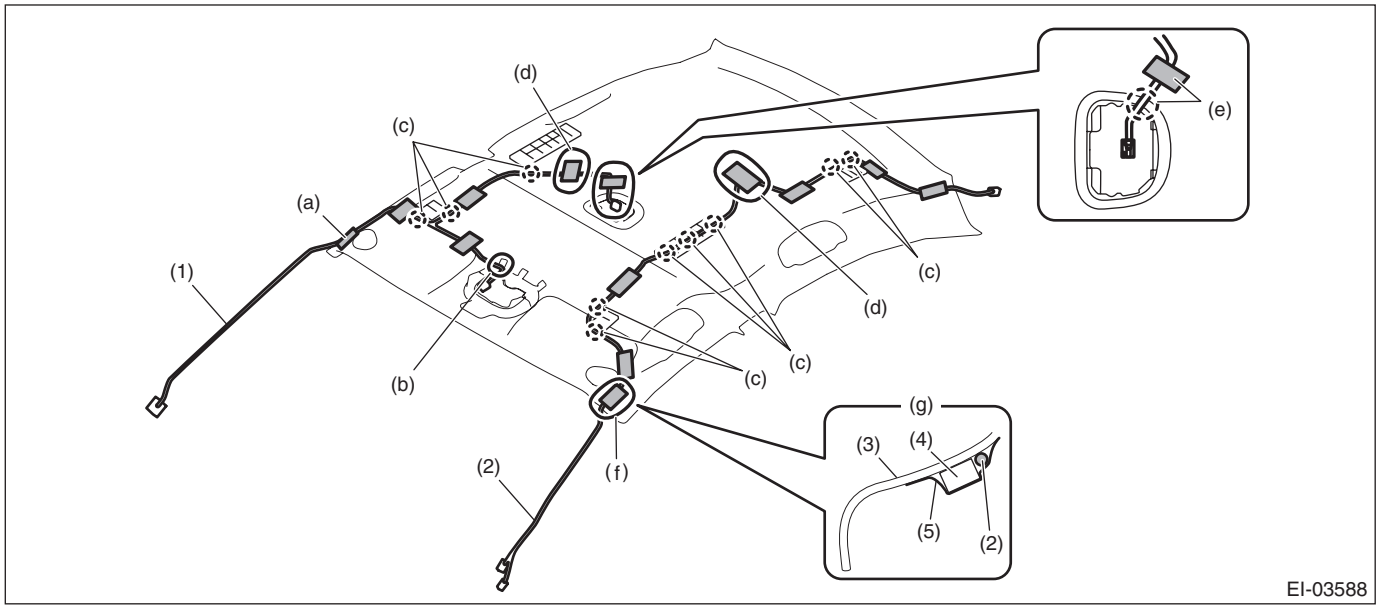
1) Attach the feeder cord and roof cord to the roof trim.

CAUTION:
Route each cord carefully. The cord may interfere, thus preventing normal operation of the curtain airbag when necessary.

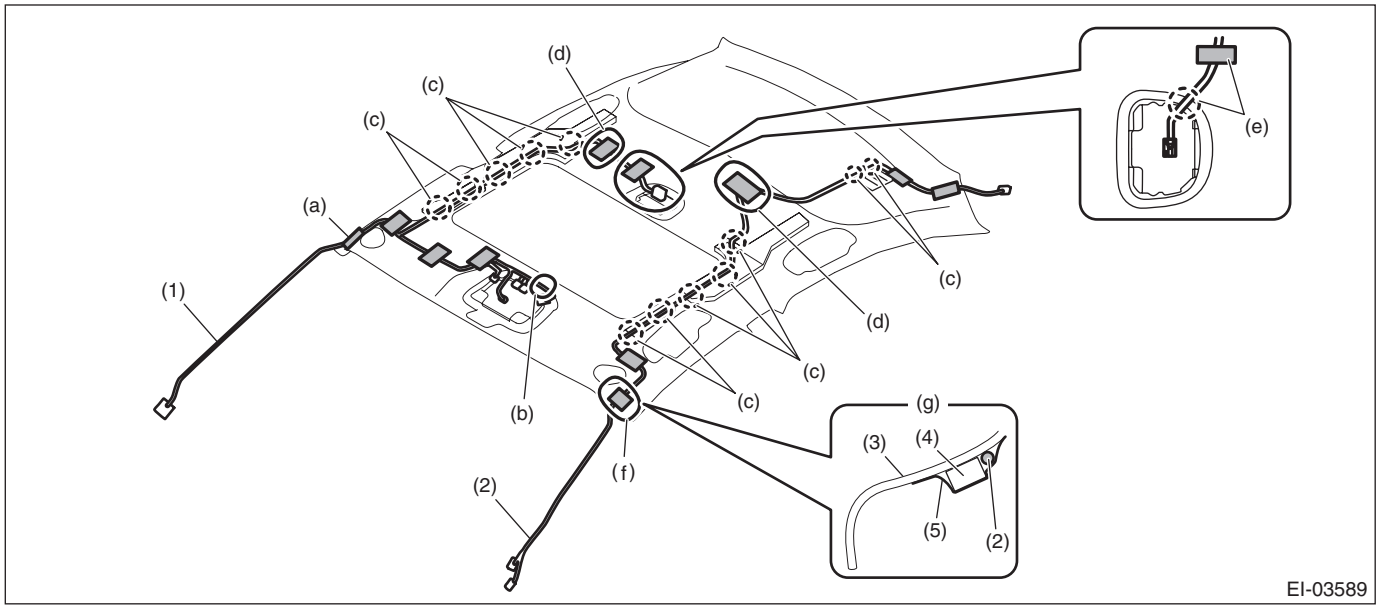
Tape:
Item number: 86359SC000/TAPE

NOTE:
Use the tape (service parts) by cutting into 80 mm × 50 mm (3.2 in × 2.0 in).

- 4 door model



EI-03588

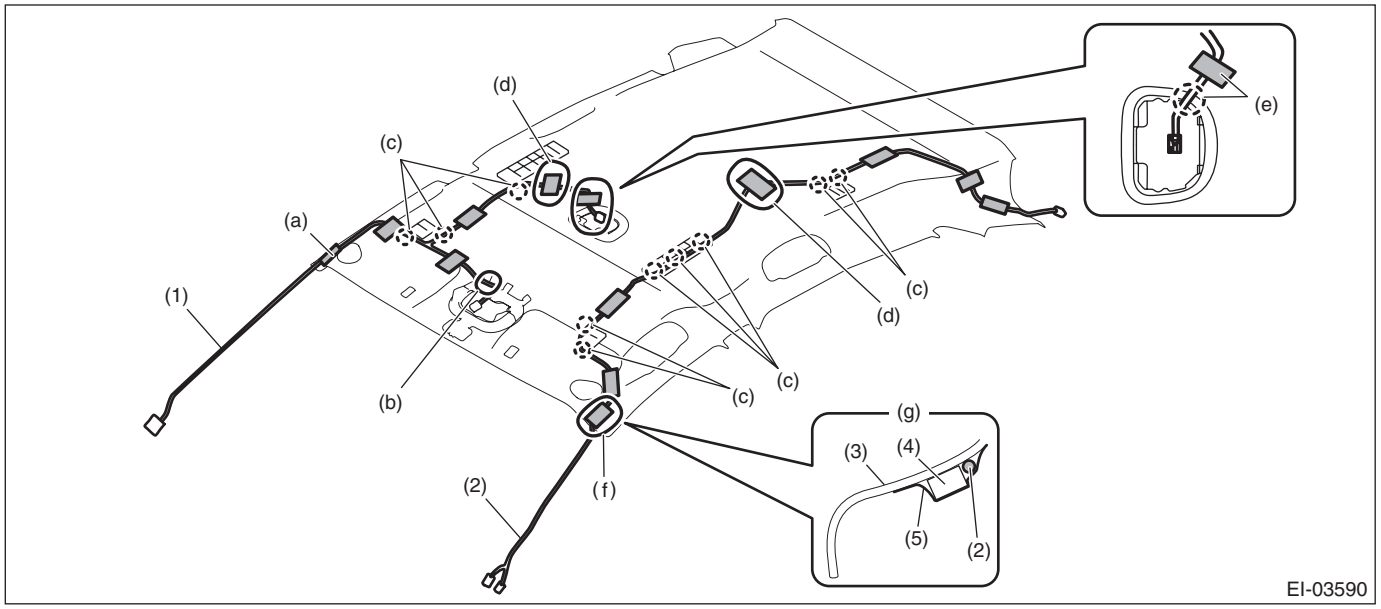


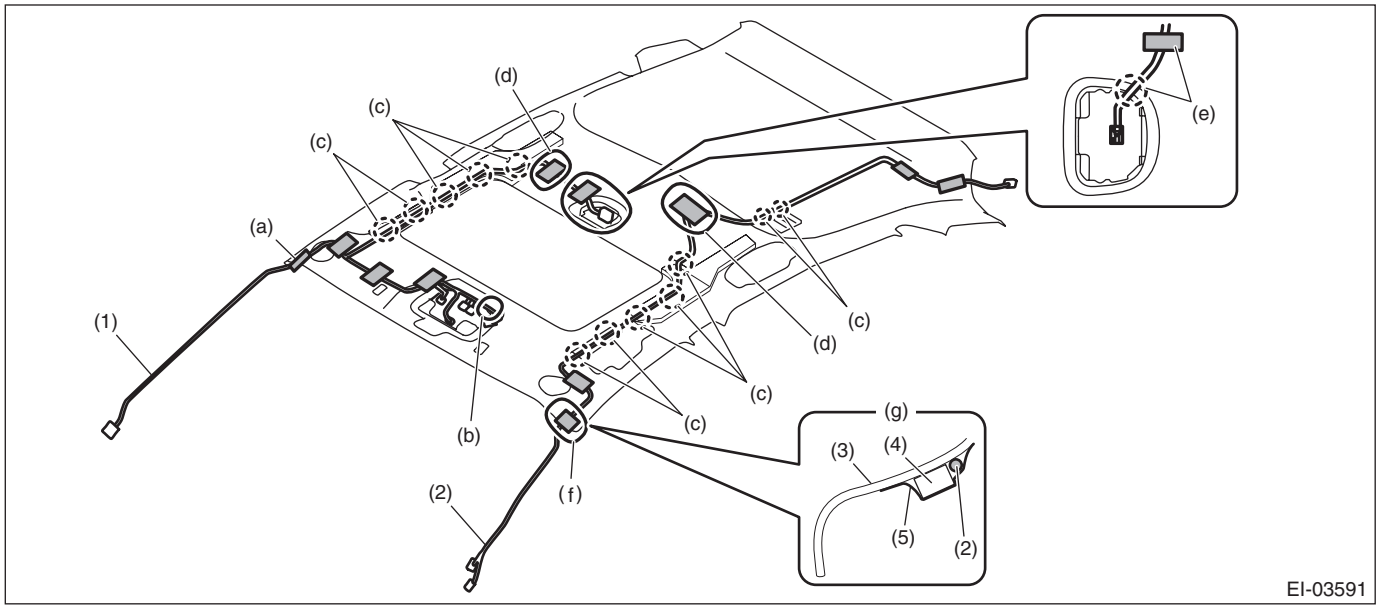
EI-03589

(1) Roof cord
(2) Feeder cord
(3) Trim panel - roof
(4) Cushion
(5) Tape

(a) Align the center of the marking (white tape) on the cord with the trim end, then secure using the tape.
(b) Align the marking (white tape) of the cord with the clamp to secure.
(c) Secure the cord to the roof pad clamp.
(d) Adjust the excess cord at (d) position and secure using the tape.
(e) Secure the marking (white tape) of the cord using the tape so that the marking cannot be viewed from the passenger room.
(f) Align the center of the marking (red tape) on the cord with the roof trim end, then secure using the tape.
(g) Route the cord along inside of the cushion (to the vehicle center) and secure using the tape.

- 5 door model



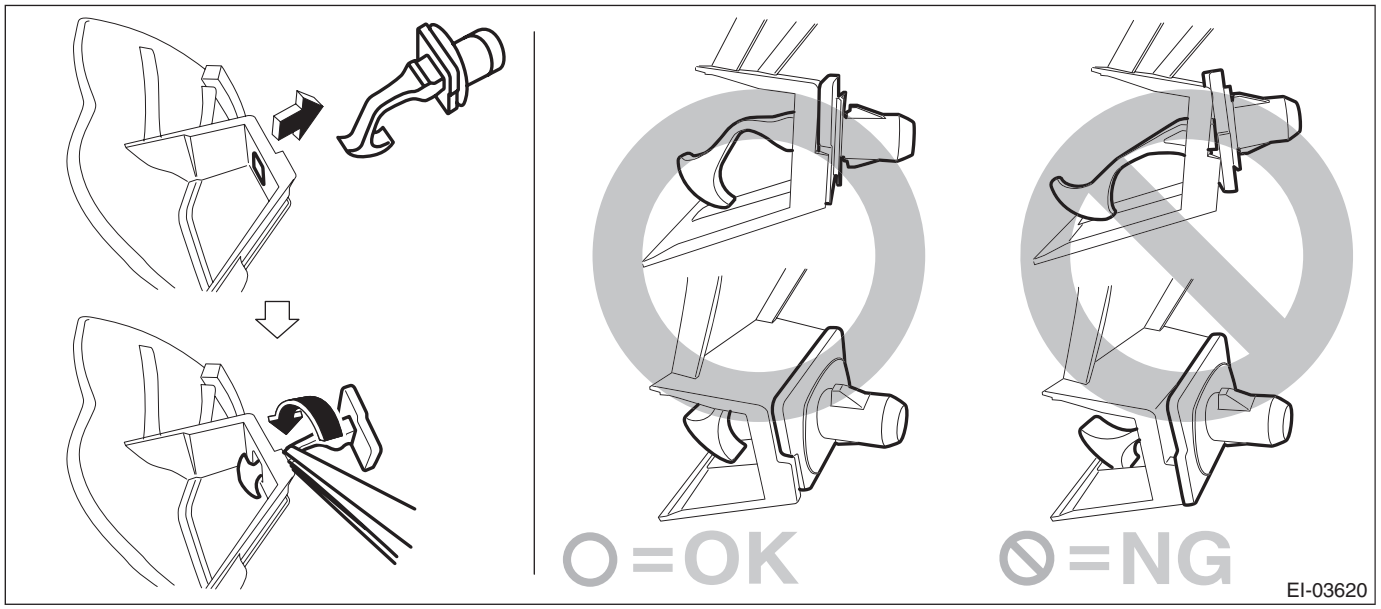


(1) Roof cord
(2) Feeder cord
(3) Trim panel - roof
(4) Cushion
(5) Tape

(a) Align the center of the marking (white tape) on the cord with the trim end, then secure using the tape.
(b) Align the marking (white tape) of the cord with the clamp to secure.
(c) Secure the cord to the roof pad clamp.
(d) Adjust the excess cord at (d) position and secure using the tape.
(e) Secure the marking (white tape) of the cord using the tape so that the marking cannot be viewed from the passenger room.
(f) Align the center of the marking (red tape) on the cord with the roof trim end, then secure using the tape.
(g) Route the cord along inside of the cushion (to the vehicle center) and secure using the tape.

2) Install each part in the reverse order of removal.

CAUTION:
• When reusing the tether clip on the upper part of the trim panel - front pillar UPR, check that there is no damage to the tether clip. If the tether clip is damaged, its holding force is reduced and the trim panel - front pillar UPR may come off. Be sure to replace it with a new tether clip.
• Do not reuse the tether clip removed from the upper part of the trim panel - front pillar UPR. Always replace with a new part.
• Check that there is no damage to the clip on the upper part of the trim panel - center pillar UPR. If the clip is damaged, its holding force is reduced. Be sure to replace it with a new tether clip.
• Before installing the trim panel - front pillar UPR, check the condition of protective non-woven fabric (white) of the curtain airbag. If it is damaged (airbag module cloth is exposed), replace the curtain airbag module assembly with a new part.
• Check the installation status of the tether clips and install the trim panel - front pillar UPR.

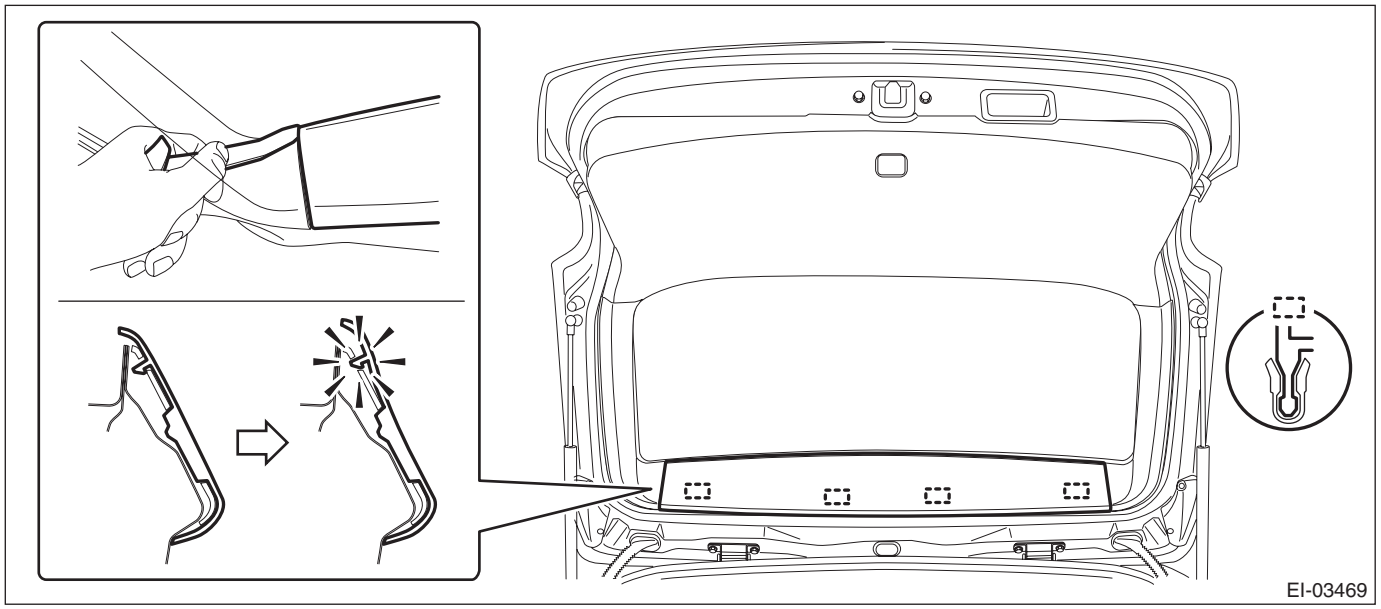


Tightening torque:
Console box assembly: 6.5 N·m (0.66 kgf-m, 4.8 ft-lb)
Rear seat backrest assembly: <Ref. to SE-5, REAR SEAT, COMPONENT, General Description.>

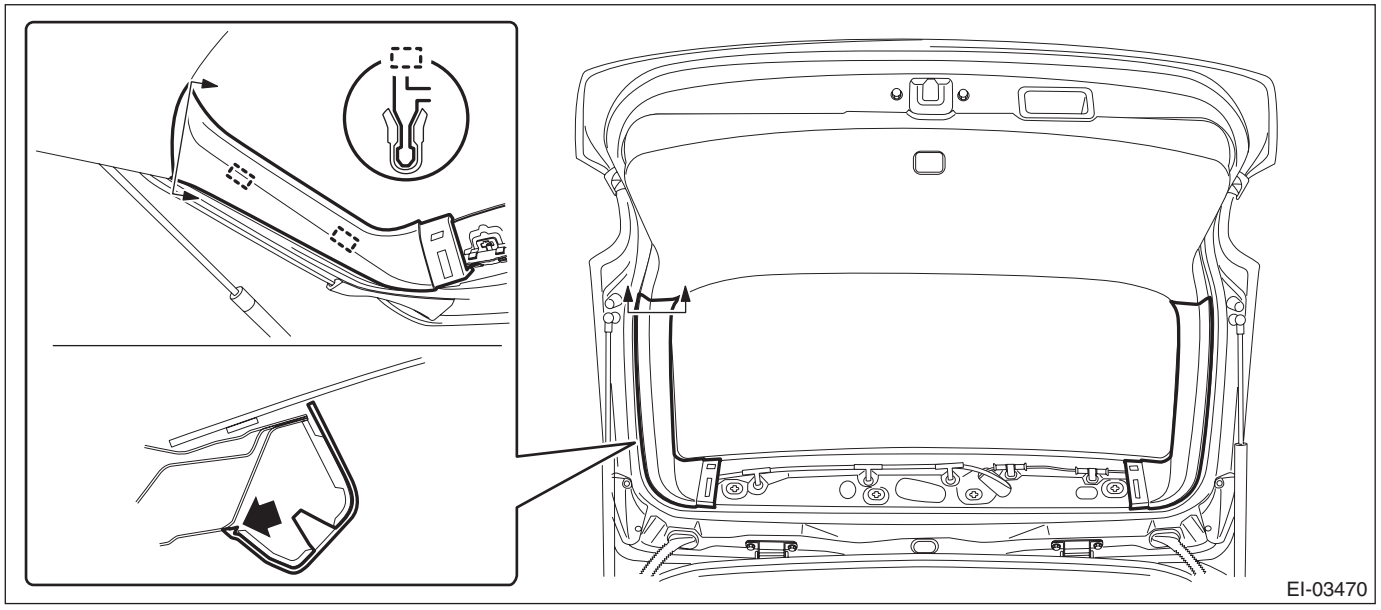
26.Rear Gate Trim

A: REMOVAL

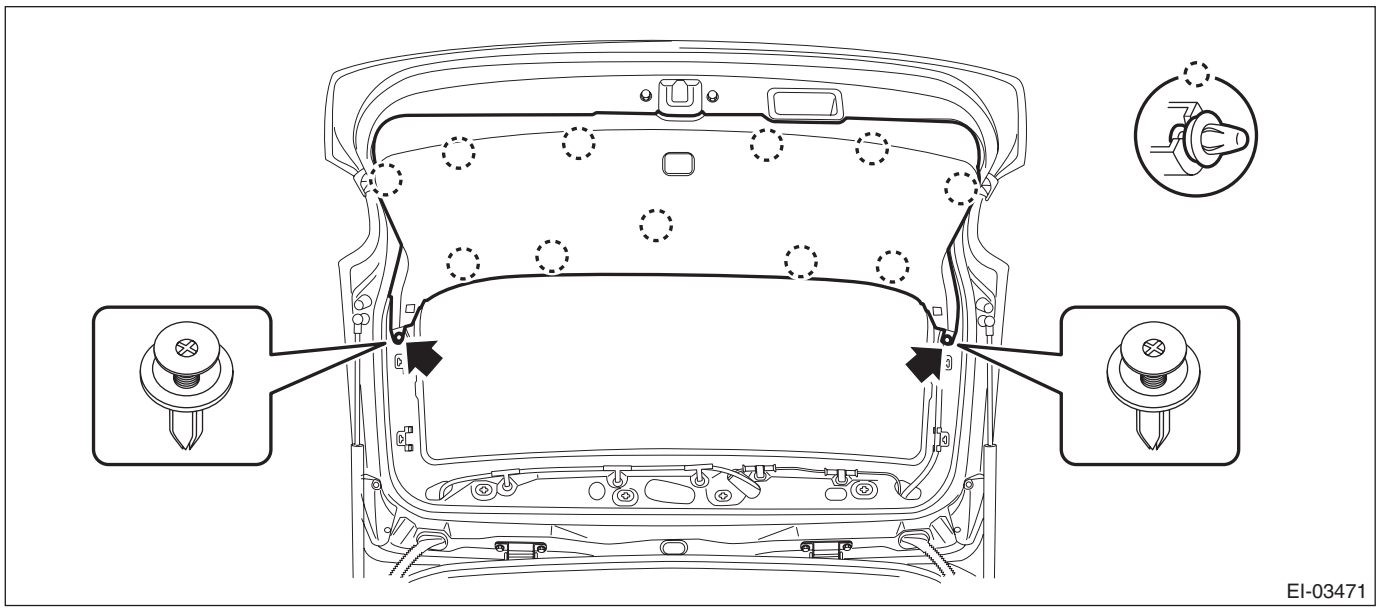
1) Remove the trim panel - rear gate UPR.
   (1) Remove the claws on the trim edge.
   (2) Release the claws in the center of trim, and remove the trim panel - rear gate UPR.



2) Remove the trim panel - rear gate pillar side.
   (1) Release the claws.
   (2) Remove the claws on the bottom of trim, and remove the trim panel - rear gate pillar side.



3) Remove the trim panel - rear gate LWR.
   (1) Remove the clips on both ends.
   (2) Release the clips, and remove the trim panel - rear gate LWR.



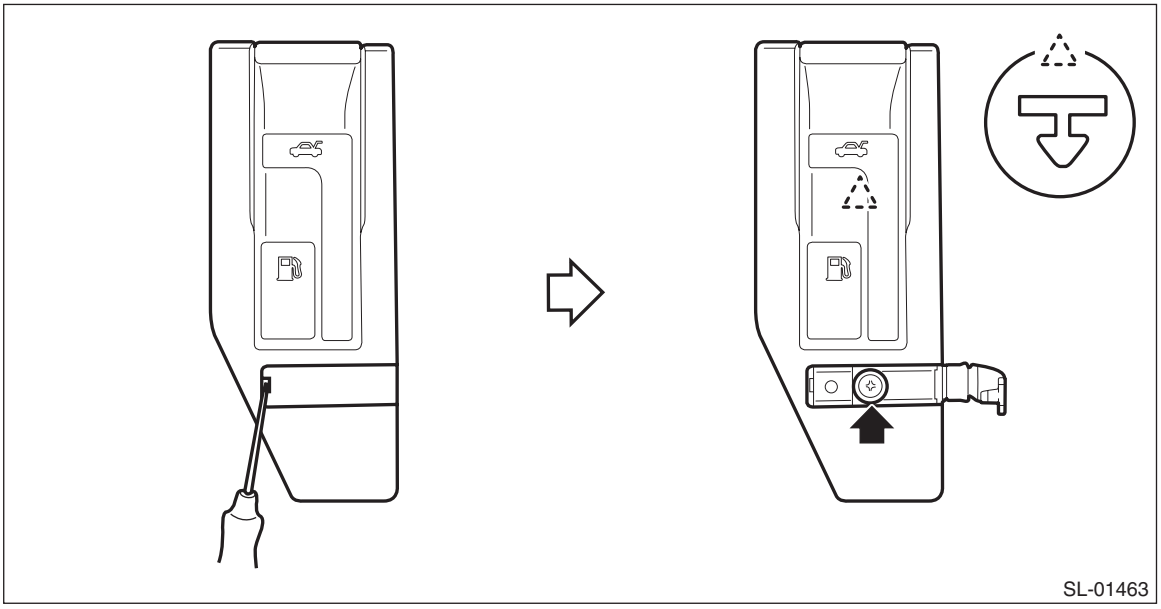
B: INSTALLATION

Install each part in the reverse order of removal.

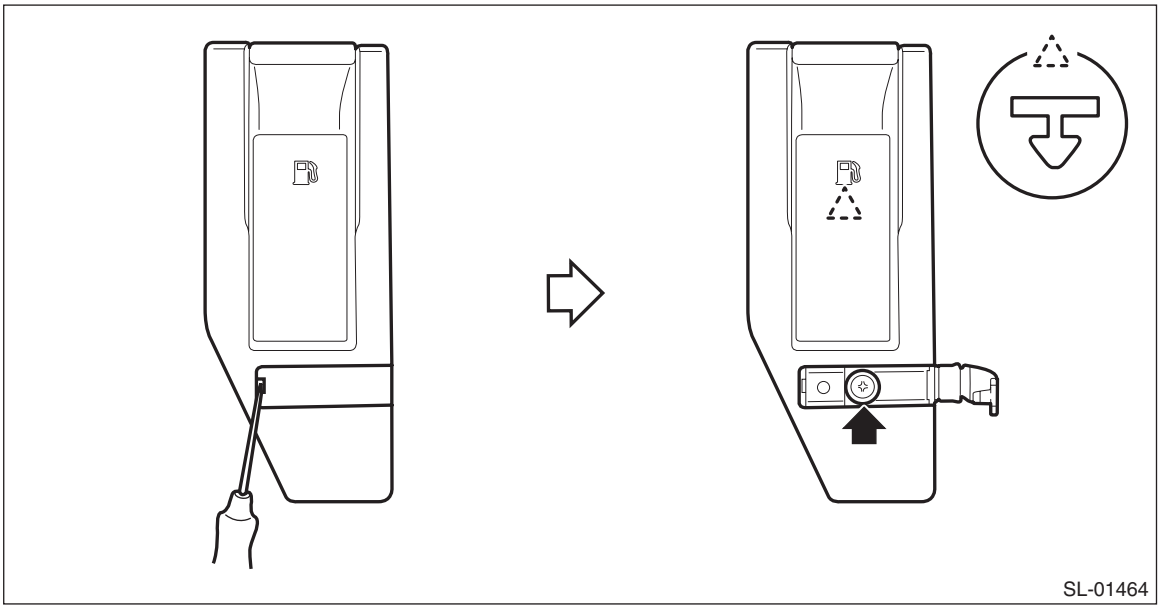
27.Floor Mat

A: REMOVAL

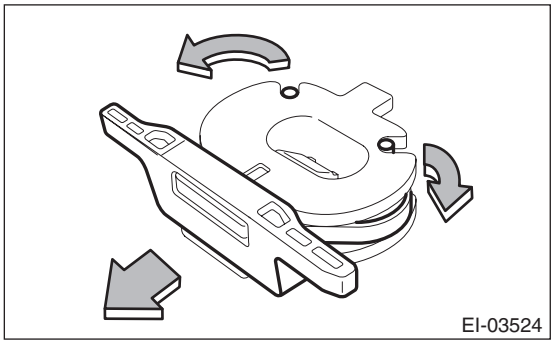
1) Remove the front seat assembly. <Ref. to SE-7, REMOVAL, Front Seat.>
2) Remove the rear seat cushion assembly. <Ref. to SE-22, REMOVAL, Rear Seat.>
3) Remove the console box assembly and panel center LWR. <Ref. to EI-67, REMOVAL, Console Box.>
4) Remove the lower inner trim. <Ref. to EI-90, REMOVAL, Lower Inner Trim.>
5) Remove the pull handle cover.
   (1) Open the cover by using a flat tip screwdriver.
   (2) Remove the screw and remove the pull handle cover.
   - 4 door model


SL-01463

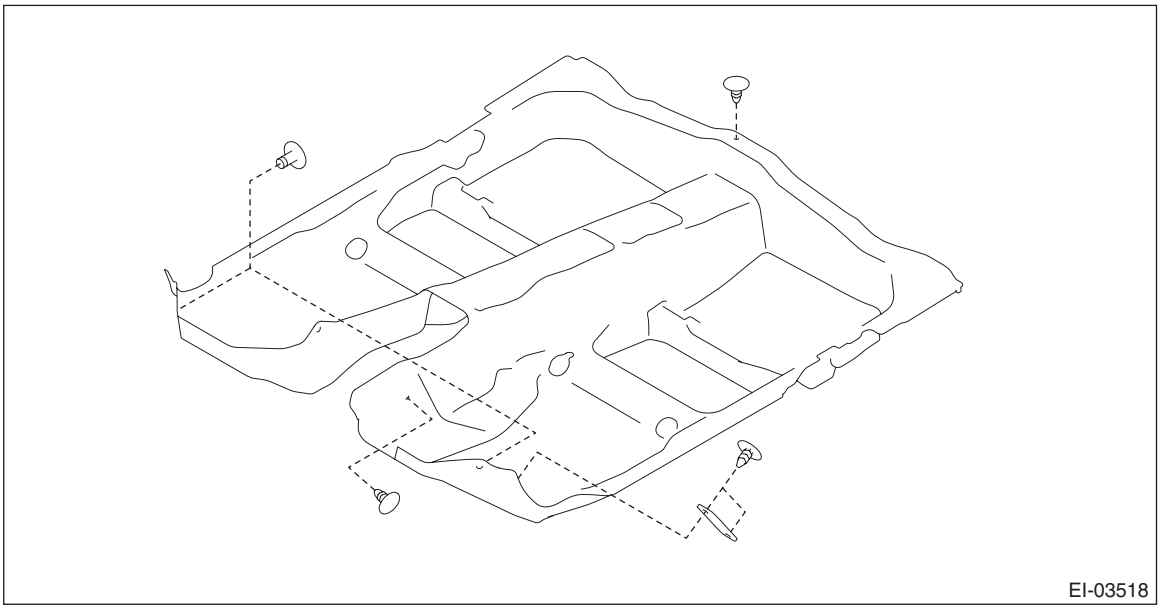
   - 5 door model


SL-01464

6) Remove the knobs of the hook - seat cushion rear.



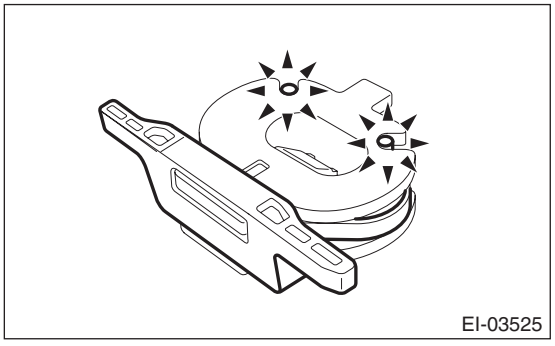
7) Take out the floor mat from the vehicle.
   (1) Remove the clips from the floor mat.
   (2) Remove the mat hook on both sides.
   (3) Take out the floor mat after folding down.



B: INSTALLATION

Install each part in the reverse order of removal.

CAUTION:
Make sure that the knobs of the hook - seat cushion rear are securely installed.

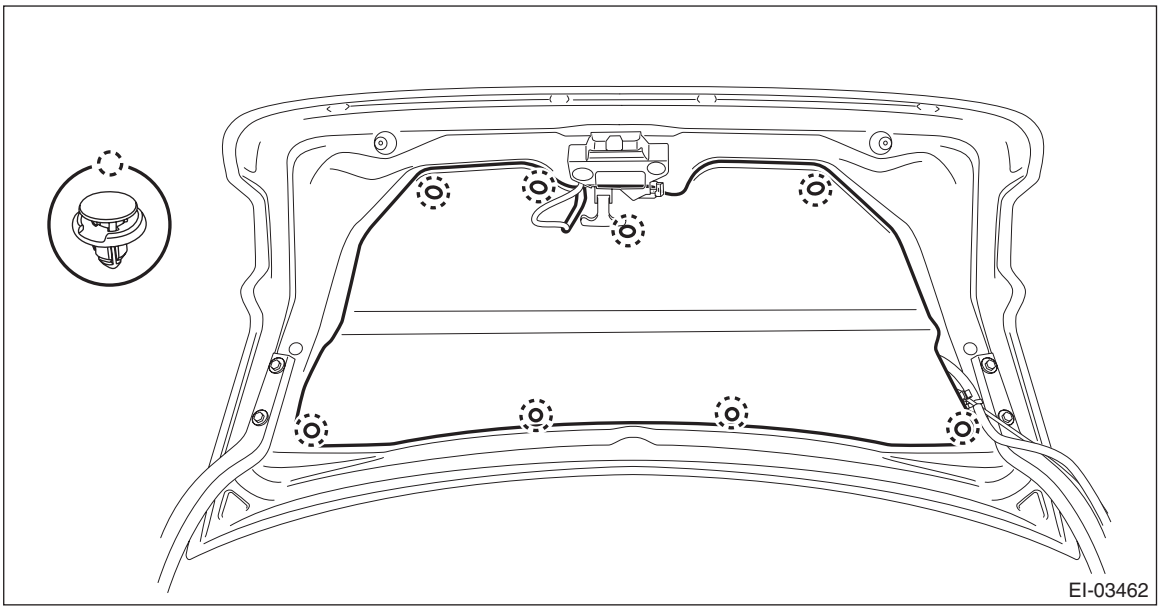


NOTE:
Secure the mat firmly with clips.

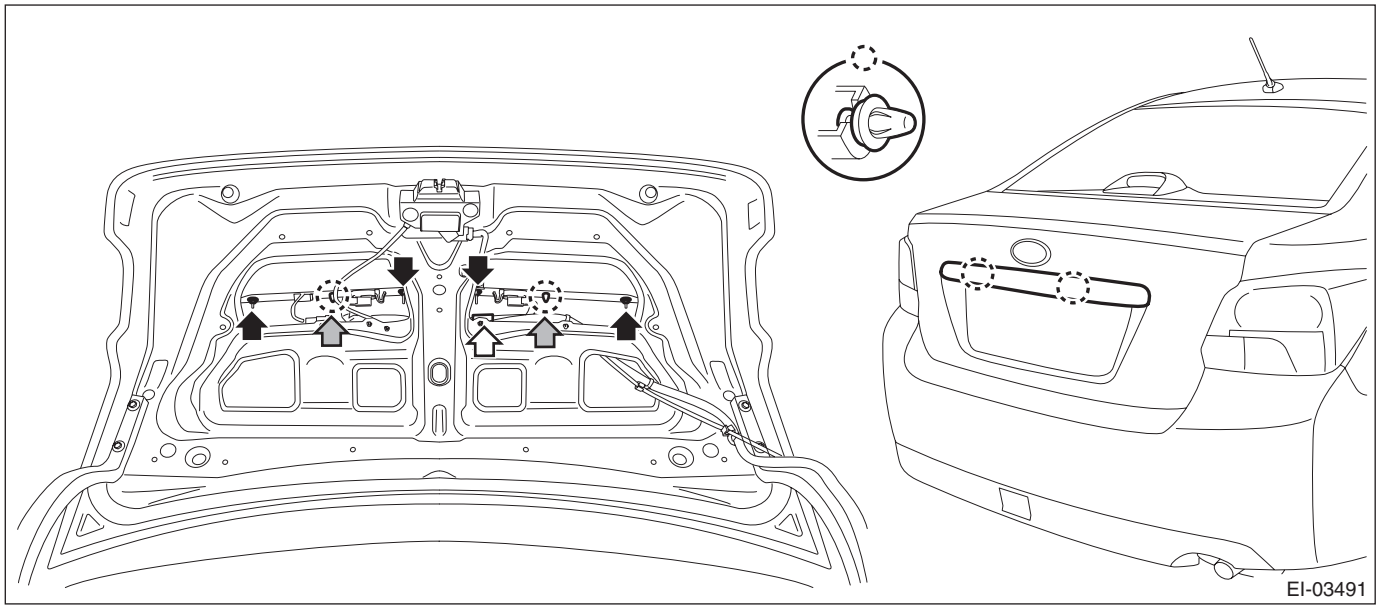
28.Trunk Lid Garnish

A: REMOVAL

1) Remove the clips, and remove the trim panel - trunk lid.



2) Remove the garnish - trunk.
   (1) Remove the nut.
   (2) Remove the clips, and remove the garnish - trunk.



B: INSTALLATION

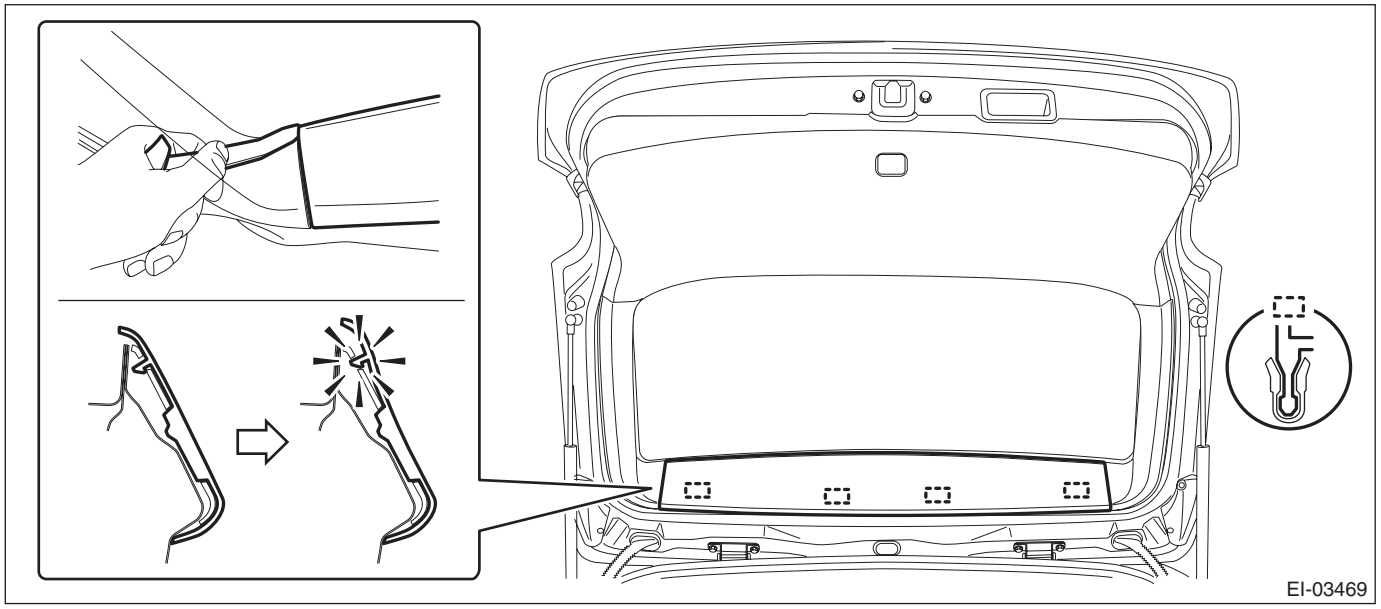
Install each part in the reverse order of removal.

Tightening torque:
4.5 N·m (0.46 kgf-m, 3.3 ft-lb)

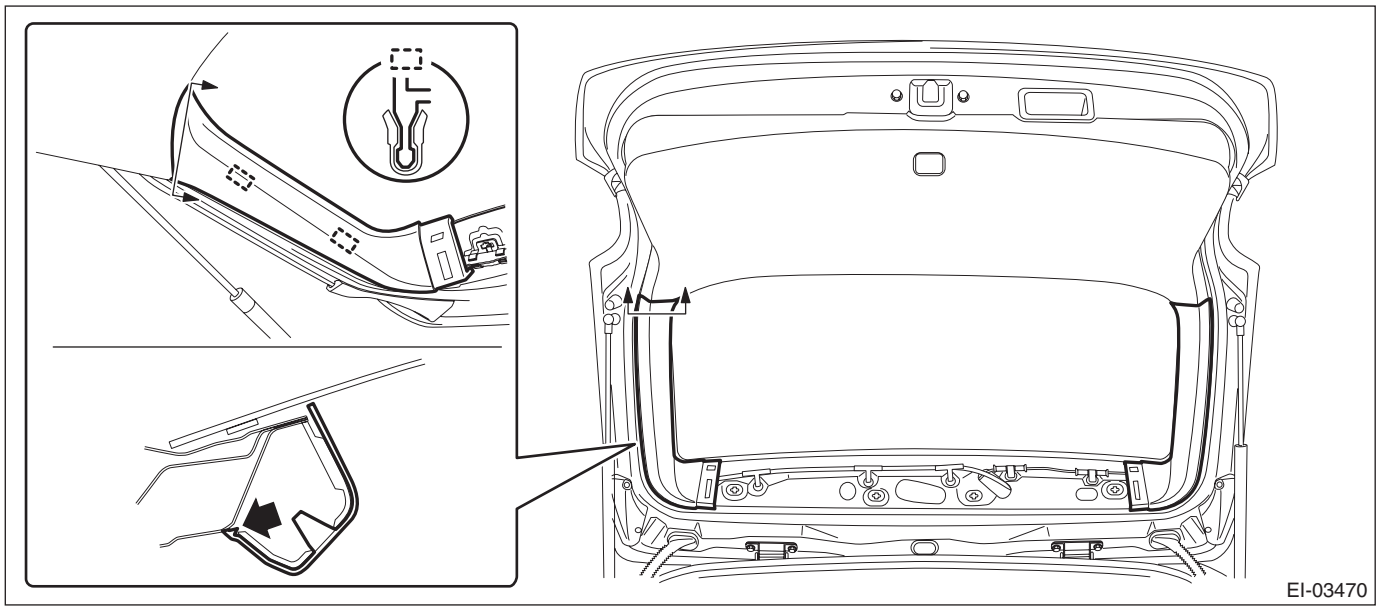
29.Rear Gate Garnish

A: REMOVAL

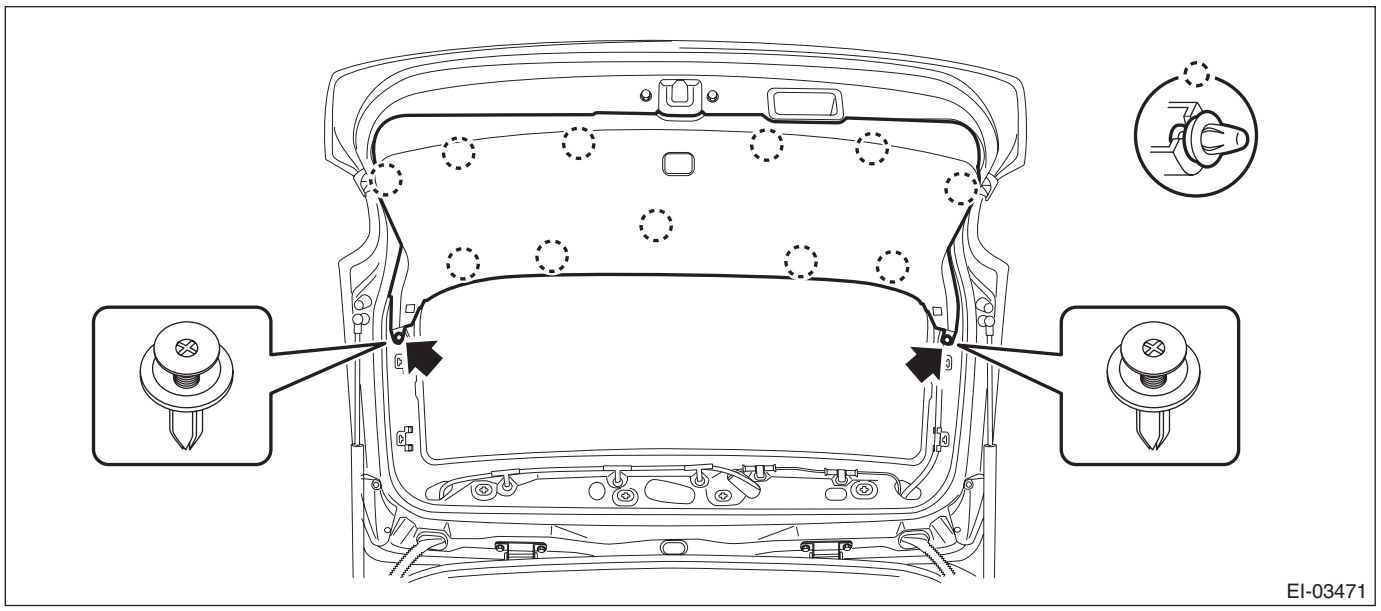
1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear gate UPR.
   (1) Remove the claws on the trim edge.
   (2) Release the claws in the center of trim, and remove the trim panel - rear gate UPR.



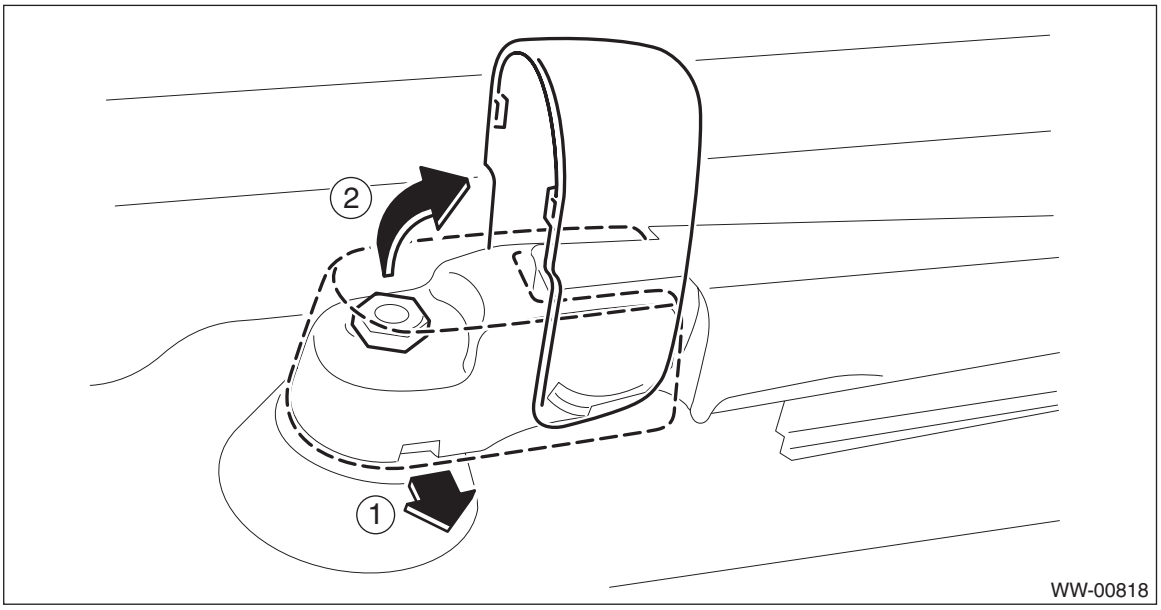
3) Remove the trim panel - rear gate pillar side.
   (1) Release the claws.
   (2) Remove the claws on the bottom of trim, and remove the trim panel - rear gate pillar side.



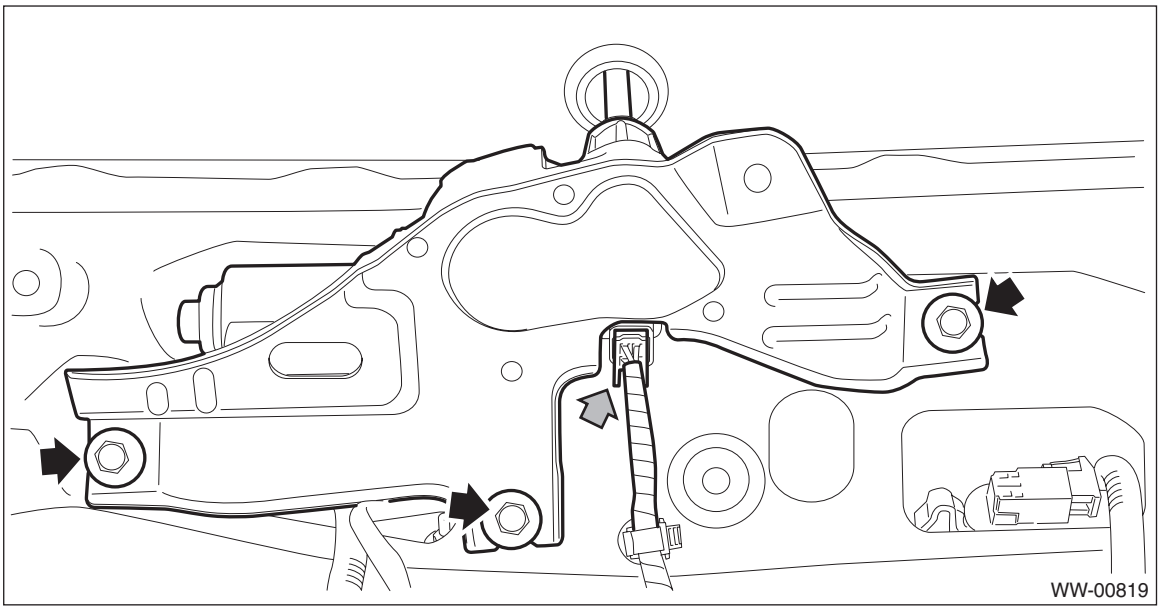
4) Remove the trim panel - rear gate LWR.
   (1) Remove the clips on both ends.
   (2) Release the clips, and remove the trim panel - rear gate LWR.



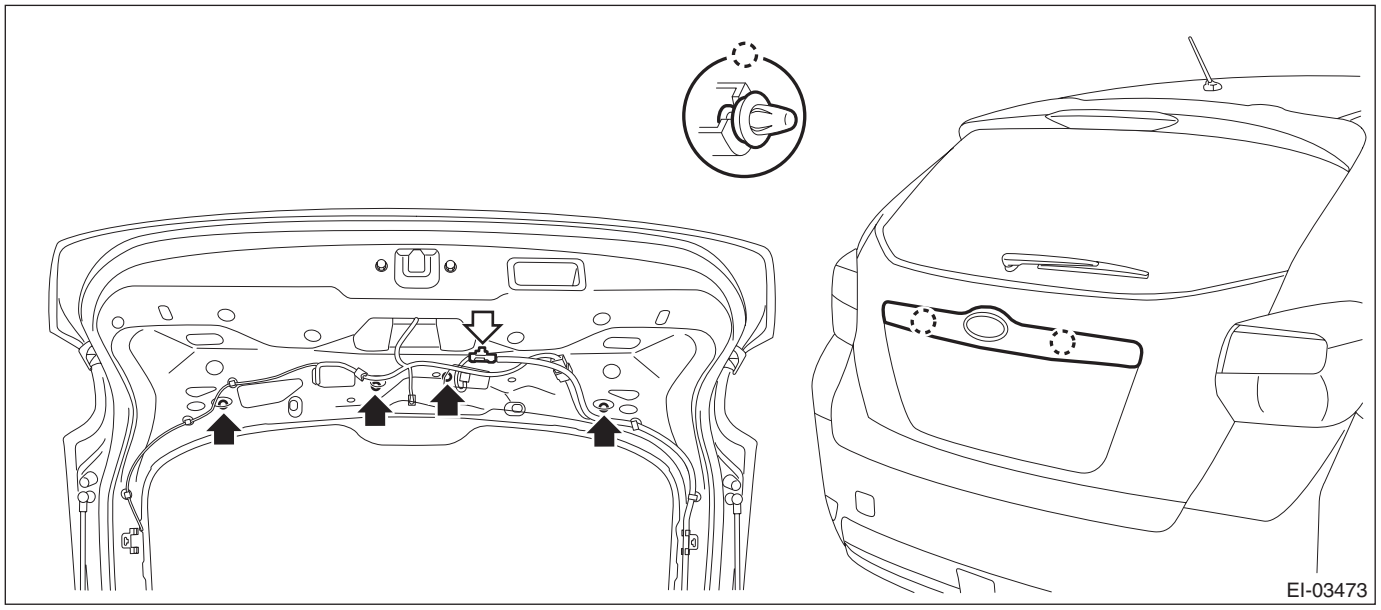
5) Remove the arm assembly - rear wiper.
   (1) Remove the cover - rear wiper arm.
   (2) Remove the nut, and remove the arm assembly - rear wiper.



6) Remove the motor assembly - rear wiper.
   (1) Disconnect the harness connector of the motor assembly - rear wiper.
   (2) Remove the bolts, and remove the motor assembly - rear wiper.



7) Remove the garnish assembly - rear gate.
   (1) Disconnect the harness connector of license plate light assembly.
   (2) Remove the nuts.
   (3) Remove the clips and remove the garnish assembly - rear gate.



B: INSTALLATION

CAUTION:
Make sure that the harness grommet is securely installed.
If not properly installed, this may cause leaks.
Install each part in the reverse order of removal.

Tightening torque
Garnish assembly - rear gate: 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)
Motor assembly - rear wiper: 7 N·m (0.71 kgf-m, 5.2 ft-lb)
Arm assembly - rear wiper: 8 N·m (0.82 kgf-m, 5.9 ft-lb)

30.Heat Shield Cover

A: NOTE

Refer to “EXHAUST” section for removal and installation procedure of the heat shield cover.

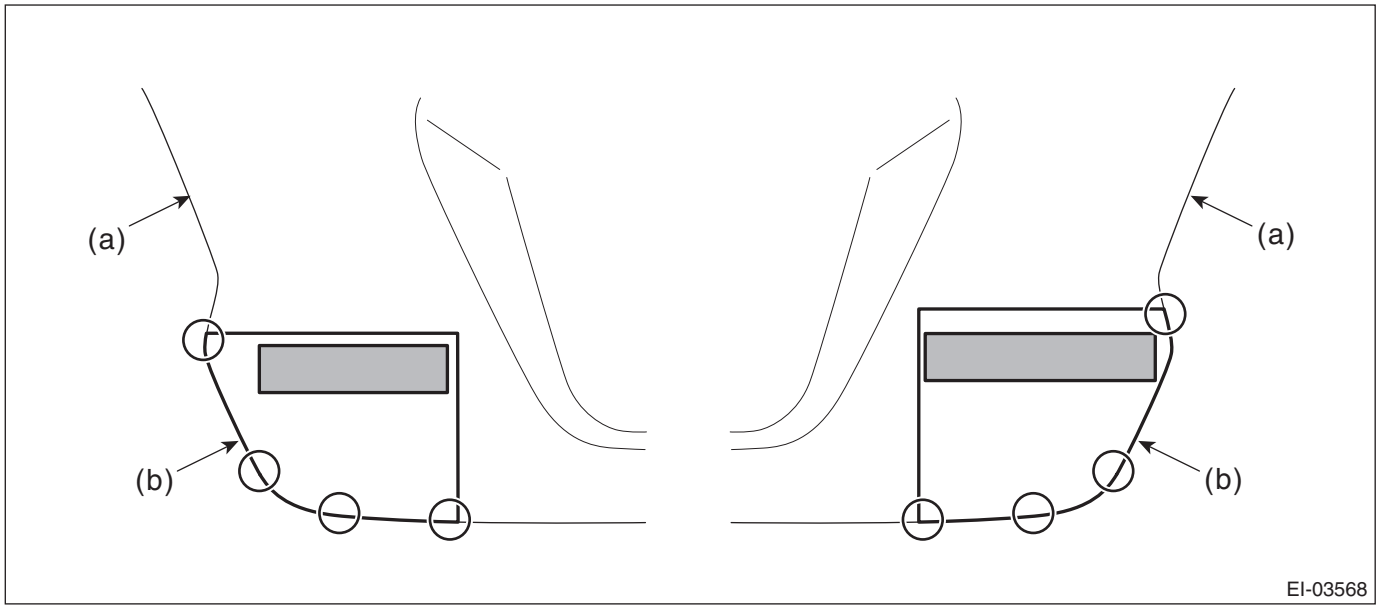
31.Ornament

A: INSTALLATION

1. LETTER MARK

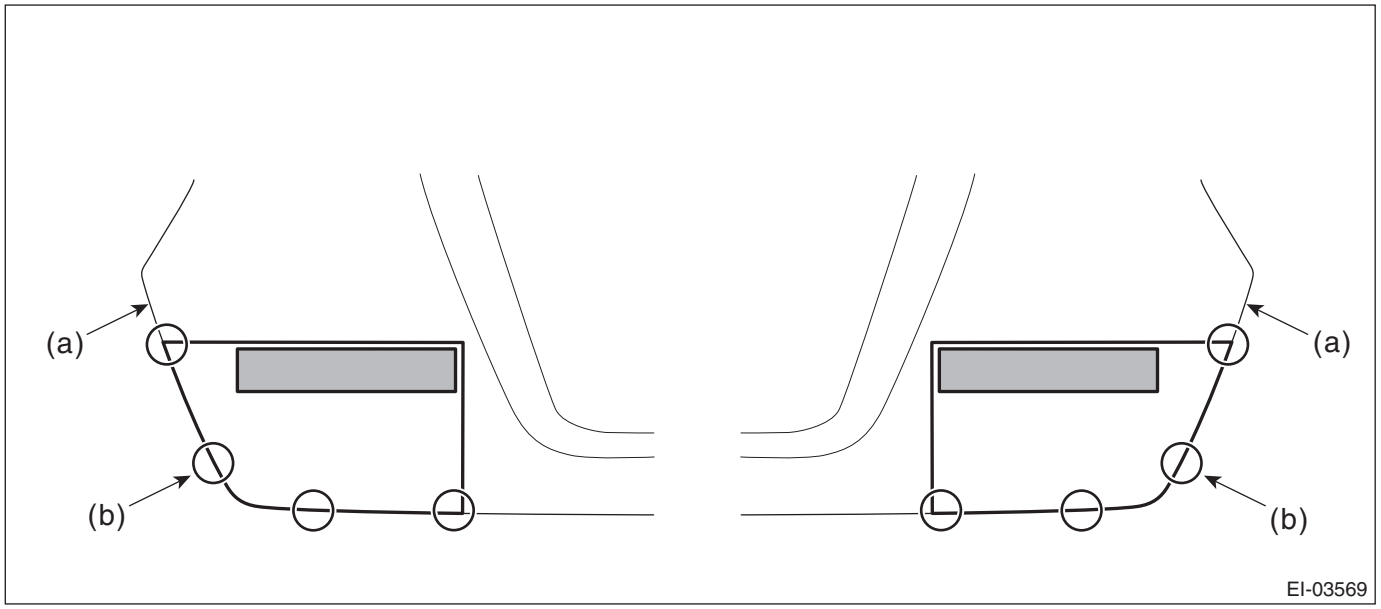
Align the end of application tape with the end of panel, then adhere the letter mark.

- 4 door model



(a) Trunk lid COMPL end (b) Application tape end

- 5 door model



(a) Panel - rear gate end (b) Application tape end

EXTERIOR BODY PANELS

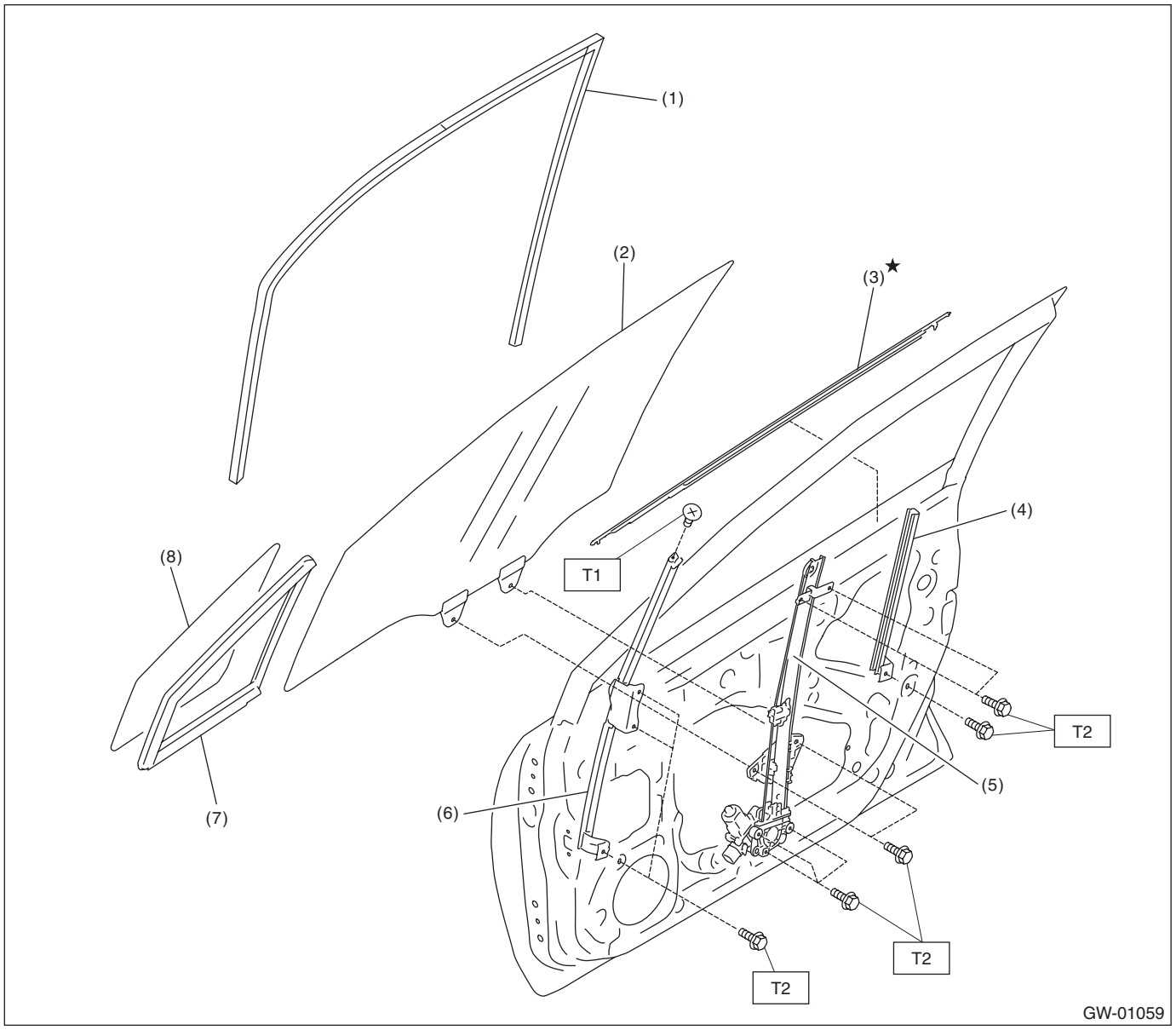
EB

		Page
1.	General Description	2
2.	Front Hood	9
3.	Front Fender	15
4.	Front Door	20
5.	Front Sealing Cover	29
6.	Rear Door	31
7.	Rear Sealing Cover	39
8.	Door Sash Tape	41
9.	Trunk Lid	53
10.	Rear Gate	57
11.	Protector Tape	66

1. General Description

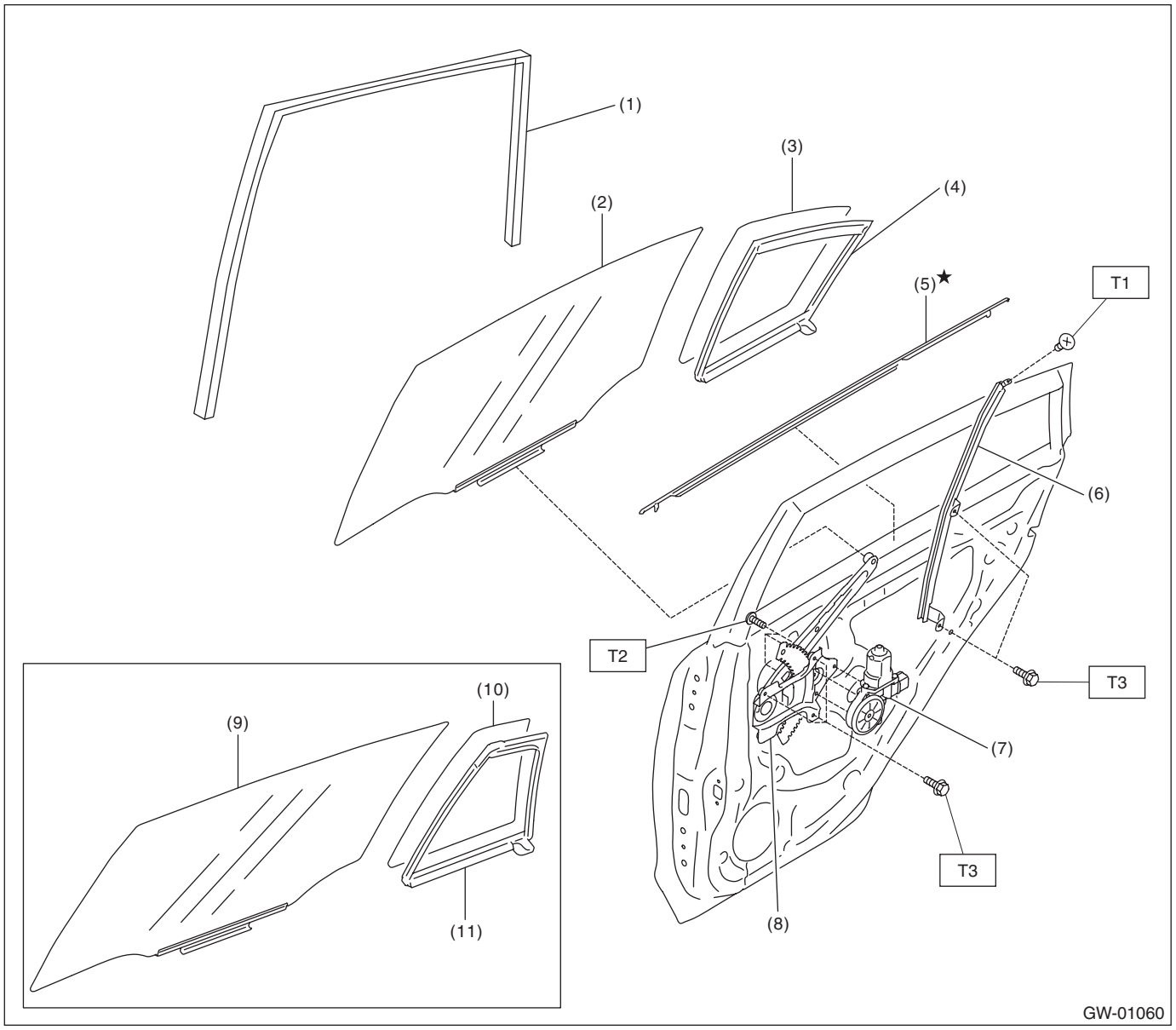
A: COMPONENT

1. FRONT DOOR GLASS



(1)	Running channel - front door	(5)	Regulator & motor ASSY - front	***Tightening torque:N·m (kgf-m, ft-lb)***
(2)	Glass ASSY - front door	(6)	Sash COMPL - partition	***T1: 2.2 (0.22, 1.6)***
(3)	Weather strip outer - front door	(7)	Weather strip - front door partition	***T2: 7.5 (0.76, 5.5)***
(4)	Sash COMPL - lower	(8)	Glass - front door partition	

2. REAR DOOR GLASS



(1)	Running channel - rear door	(7)	Motor - rear
(2)	Glass ASSY - rear door (4 door model)	(8)	Regulator - rear
(3)	Glass - rear door partition (4 door model)	(9)	Glass ASSY - rear door (5 door model)
(4)	Weather strip - front door partition (4 door model)	(10)	Glass - rear door partition (5 door model)
(5)	Weather strip outer - rear door	(11)	Weather strip - rear door partition (5 door model)
(6)	Sash COMPL - rear partition		

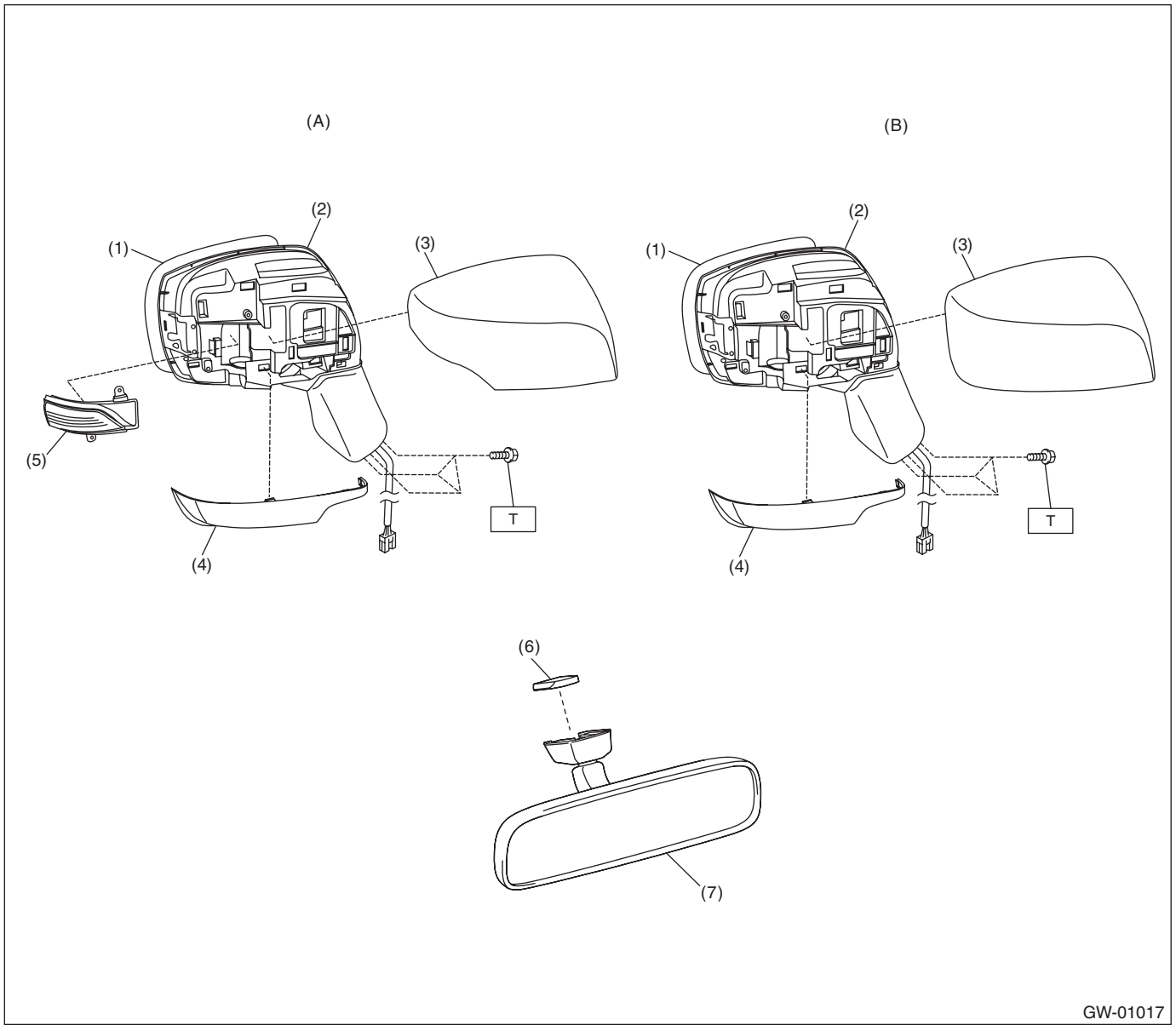
Tightening torque:N·m (kgf-m, ft-lb)

T1: 2.2 (0.22, 1.6)

T2: 5.9 (0.6, 4.4)

T3: 7.5 (0.76, 5.5)

3. MIRROR

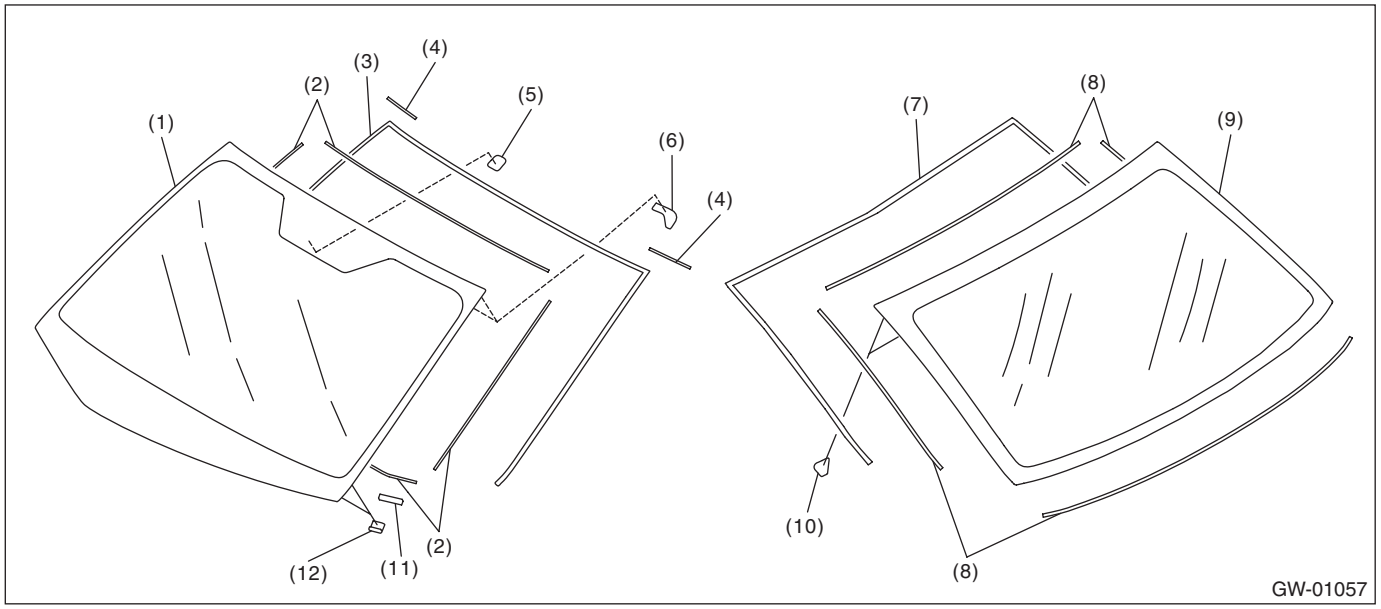


(A) Model with side turn
(B) Model without side turn

(1) Mirror - repair
(2) Mirror unit - door
(3) Cover - cap outer mirror
(4) Cover - cap outer mirror lower
(5) Light ASSY - side turn mirror
(6) Base - inner mirror
(7) Mirror ASSY - inner rearview

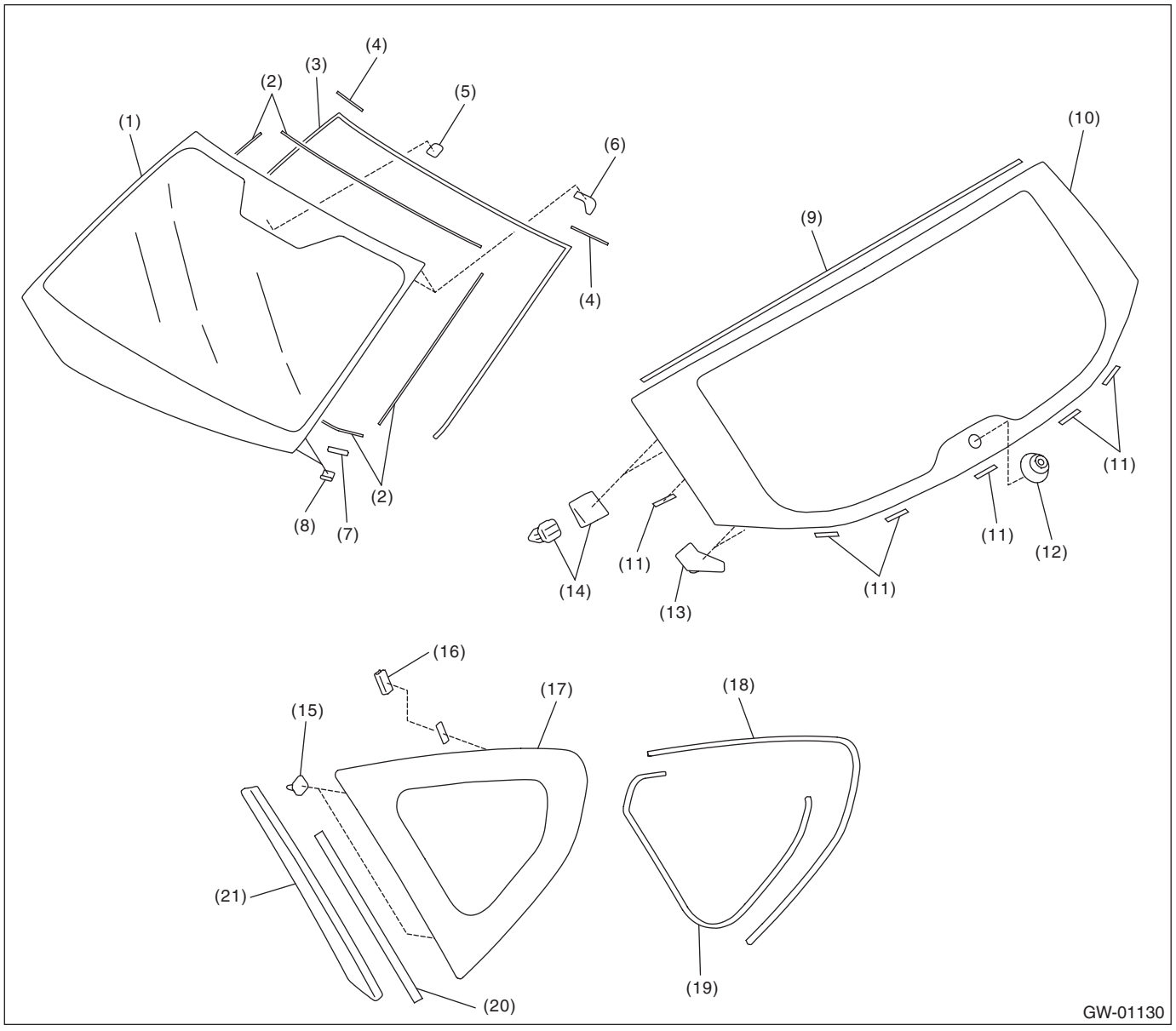
Tightening torque:N·m (kgf-m, ft-lb)
T: 7.5 (0.76, 5.5)

4. FIXED GLASS (4 DOOR MODEL)



(1) Glass - front window
(2) Dam rubber - front
(3) Molding - front window
(4) Seal - upper
(5) Base - inner mirror
(6) Locating pin - front window
(7) Molding - rear window
(8) Dam rubber - rear
(9) Glass - rear window
(10) Locating pin - rear window
(11) Seal - lower VIN
(12) Seal - lower

5. FIXED GLASS (5 DOOR MODEL)



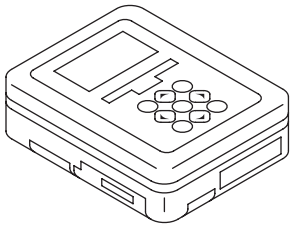
(1) Glass - front window
(2) Dam rubber - front
(3) Molding - front window
(4) Seal - upper
(5) Base - inner mirror
(6) Locating pin - front window
(7) Seal - lower VIN
(8) Seal - lower
(9) Dam rubber - rear gate
(10) Glass - rear gate
(11) Spacer - rear gate
(12) Cap - pivot
(13) Locating pin - rear gate
(14) Holder - rear gate
(15) Locating pin - rear quarter
(16) Fastener - rear quarter
(17) Glass - rear quarter
(18) Dam rubber - rear quarter
(19) Seal - rear quarter
(20) Protective plate
(21) Molding - rear quarter

B: CAUTION

• Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When replacing the audio, control module and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
• Avoid impact and damage to the glass.
• Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
• Connect the connectors securely during reassembly.
• After reassembly, make sure that the each component operates normally.

C: PREPARATION TOOL

1. SPECIAL TOOL

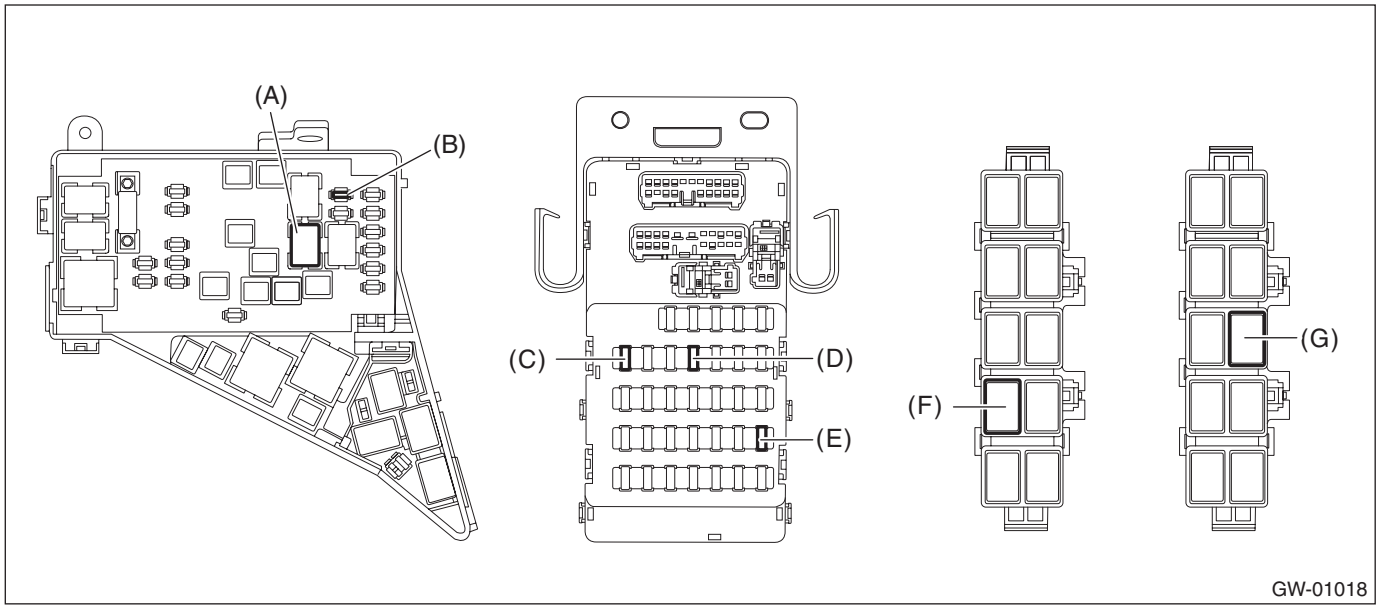
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for setting of each function and trouble-shooting for electrical system.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Piano wire	Used for removing the window glass.
Cutter knife	Used for removing the window glass.
Windshield glass knife	Used for removing the window glass.

2. Relay and Fuse

A: LOCATION



Main fuse box	Rear defogger relay	(A)
	Fuse 25 A (rear defogger)	(B)
Relay & fuse box	Fuse 7.5 A (remote control mirror)	(C)
	Fuse 15 A (wiper deicer)	(D)
	Fuse 7.5 A (power window)	(E)
Relay holder	Power window relay	(F)
	Wiper deicer relay	(G)

NOTE:
For other related fuses, refer to the wiring diagram. <Ref. to WI-15, Power Supply Circuit.>

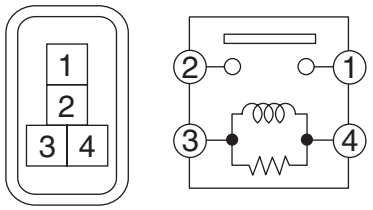
B: INSPECTION

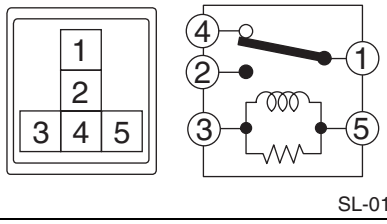
1. CHECK FUSE

1) Remove the fuse and check visually.
2) If the fuse is blown out, replace the fuse.

2. CHECK RELAY

1) Check the resistance between relay terminals.

Terminal No.	Inspection conditions	Specification	Circuit
1 — 2	Always	1 MΩ or more	 SR-00180
1 — 2	Apply battery voltage between 4 — 3 terminals.	Less than 1 Ω	

Terminal No.	Inspection conditions	Specification	Circuit
1 — 2	Always	1 MΩ or more	 SL-01085
1 — 4	Always	Less than 1 Ω	
1 — 2	Apply battery voltage between 3 — 5 terminals.	Less than 1 Ω	

2) Replace the relay if the inspection result is not within the standard value.

3. Power Window System

A: WIRING DIAGRAM

Refer to “Power Window System” in the wiring diagram. <Ref. to WI-118, WIRING DIAGRAM, Power Window System.>

B: INSPECTION

Symptoms	Inspection order
All power windows do not operate.	1. Check the fuse. 2. Check the power window relay. 3. Check the wiring harness.
Particular window does not operate.	1. Check the fuse. 2. Check the switch - power window main. 3. Check the switch - power window sub. 4. Check the power window motor. 5. Check the wiring harness.
“Window Lock” does not operate.	Check the switch - power window main.
Driver’s side window moves slightly (approx. 20 mm (0.79 in)).	1. Check the motor - front. 2. Check the switch - power window main. 3. Check the wiring harness.
Driver’s side window moves slightly (approx. 50 mm (1.97 in)). (This status is not a failure.)	Perform reset operation A. <Ref. to GW-10, RESET OPERATION A, OPERATION, Power Window System.>
Driver’s side window does not close completely. (Using AUTO UP allows the window to fully close first and then move in reverse resulting in slightly opening.)	Perform reset operation B. <Ref. to GW-10, RESET OPERATION B, OPERATION, Power Window System.>

C: OPERATION

1. RESET OPERATION A

1) Sit in the driver’s seat and close the door.
2) Turn the ignition switch to ON.
3) Operate the switch - power window main to open the glass assembly - front door halfway.
4) Operate the switch - power window main in “UP” direction to fully close the glass assembly - front door on the driver’s side.
5) While the glass assembly - front door is fully closed, hold down the switch - power window main in “UP” direction for one second.
6) Operate the switch - power window main in “AUTO DOWN” direction to check whether the window fully opens properly.

NOTE:
If the window does not fully open properly, repeat steps 1) to 6).

2. RESET OPERATION B

1) Sit in the driver’s seat and close the door.
2) Turn the ignition switch to ON.
3) On the glass assembly - front door of the driver’s side, operate the “AUTO UP” function (fully pull up the switch) using the switch - power window main, and perform auto-reverse operations 10 times in a row (after the window fully closes, it slightly opens).
4) Check that the “AUTO UP” function no longer operates.
5) Perform reset operation A.
6) Check that the window operates properly by operating the “AUTO UP” and “AUTO DOWN” switch.

NOTE:
If the window does not fully open/close properly, repeat steps 1) to 6).

D: NOTE

For operation procedures of each component of the power window system, refer to the respective sections.
- Power window control switch: <Ref. to GW-12, Power Window Control Switch.>
- Front door glass: <Ref. to GW-18, Front Door Glass.>
- Front regulator and motor assembly: <Ref. to GW-21, Front Regulator and Motor Assembly.>
- Rear door glass: <Ref. to GW-33, Rear Door Glass.>
- Rear regulator and motor assembly: <Ref. to GW-35, Rear Regulator and Motor Assembly.>

4. Power Window Control Switch

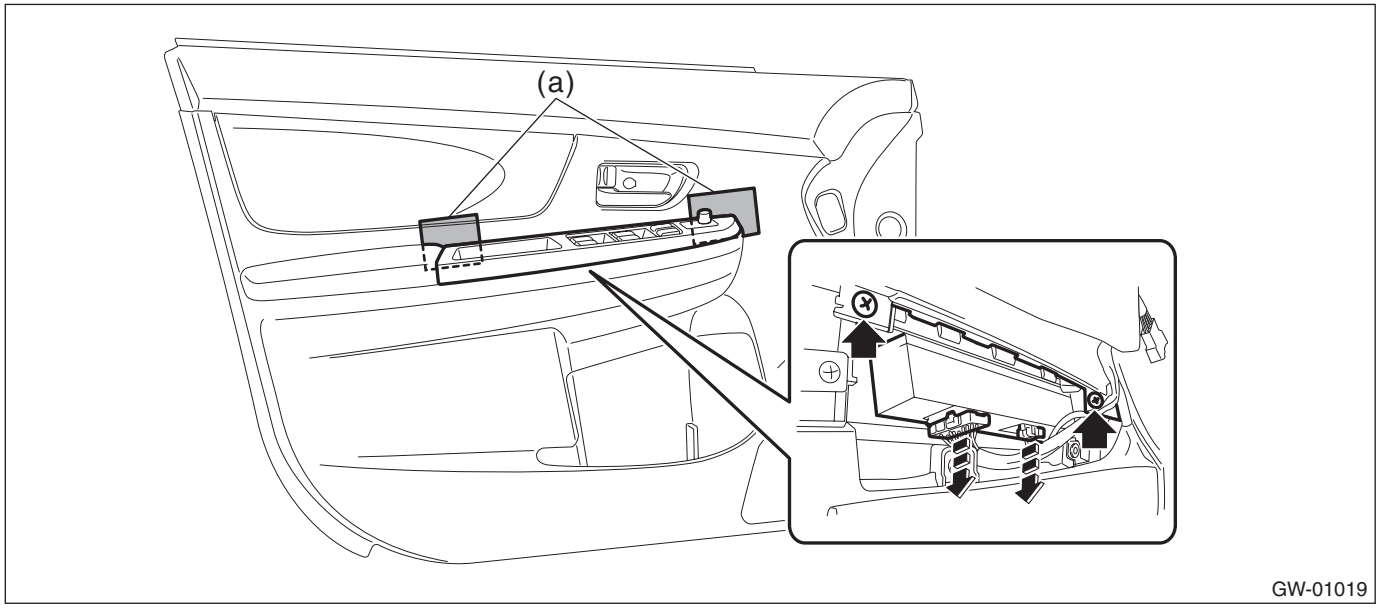
A: REMOVAL

1. MAIN SWITCH

1) Remove the trim panel - front door. <Ref. to EI-58, FRONT DOOR, REMOVAL, Door Trim.>
2) Remove the panel - power window main switch.

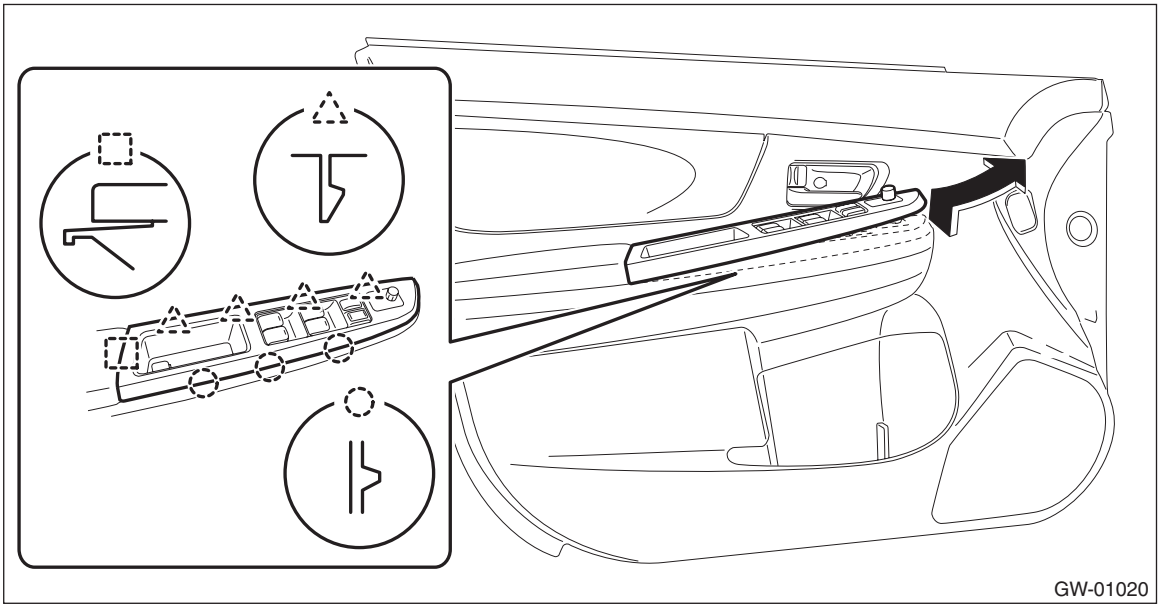
CAUTION:
Be careful not to damage the trim panel - front door with the panel - power window main switch.

(1) Insert a sheet of protective paper (a) between panel - power window main switch and trim panel - front door.
(2) Remove the screws and disconnect the connector.

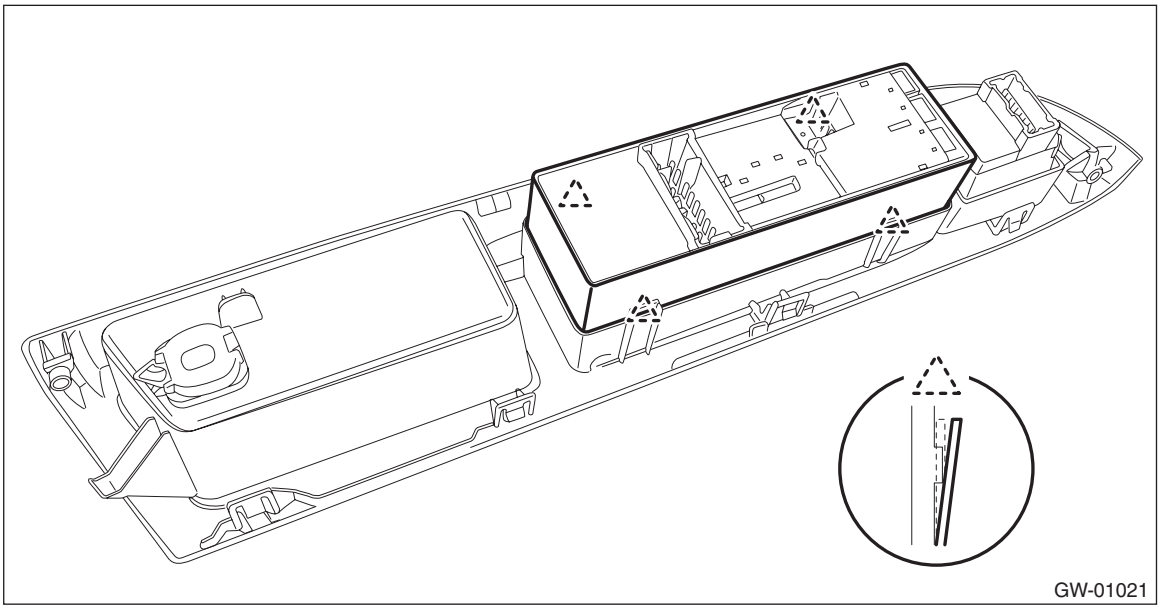


GW-01019

(3) Release the claws, and then remove the panel - power window main switch.


GW-01020

(4) Release the claws, and then remove the switch - power window main.



2. SUB-SWITCH

Switch - power window sub front

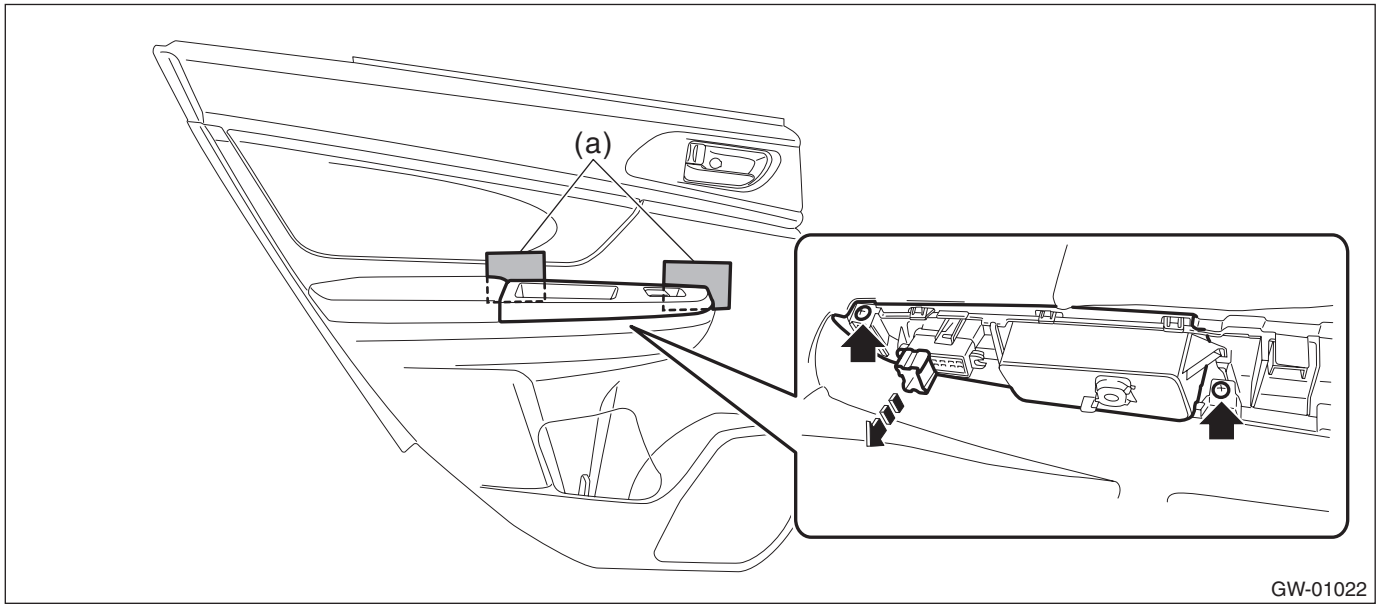
For removal of the switch - power window sub front on the passenger's seat, refer to the removal procedure of the switch - power window main. <Ref. to GW-12, MAIN SWITCH, REMOVAL, Power Window Control Switch.>

Switch - power window sub rear

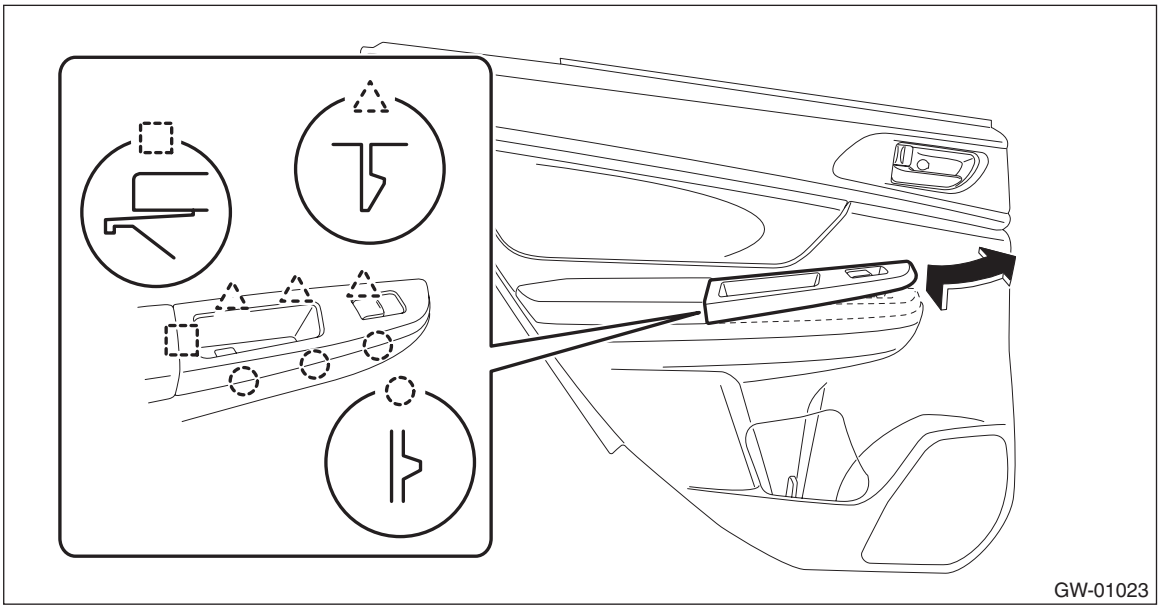
1) Remove the trim panel - rear door. <Ref. to EI-59, REAR DOOR, REMOVAL, Door Trim.>
2) Remove the panel - power window sub switch rear.

CAUTION:
Be careful not to damage the trim panel - rear door with the panel - power window sub switch rear.

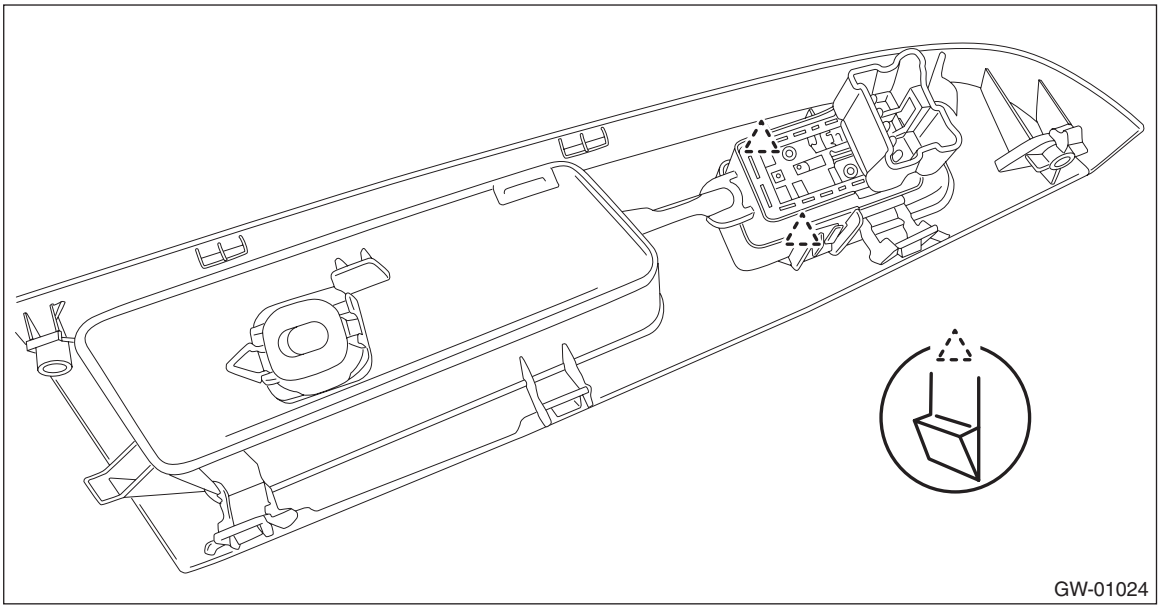
(1) Insert a sheet of protective paper (a) between panel - power window sub switch rear and trim panel - rear door.
(2) Remove the screws and disconnect the connector.



(3) Release the claws, and then remove the panel - power window sub switch rear.



3) Release the claws, and then remove the switch - power window sub rear.



B: INSTALLATION

CAUTION:

- **After installing the switch - power window main, always perform the initial setting.**

Failure to do so may cause the improper activation of auto-reverse operation for pinching hazard prevention.

- **Use protective paper to avoid damage to the trim panel.**

1) Install each part in the reverse order of removal.

2) Perform initial setting operation (reset operation A). <Ref. to GW-10, RESET OPERATION A, OPERATION, Power Window System.>

C: INSPECTION

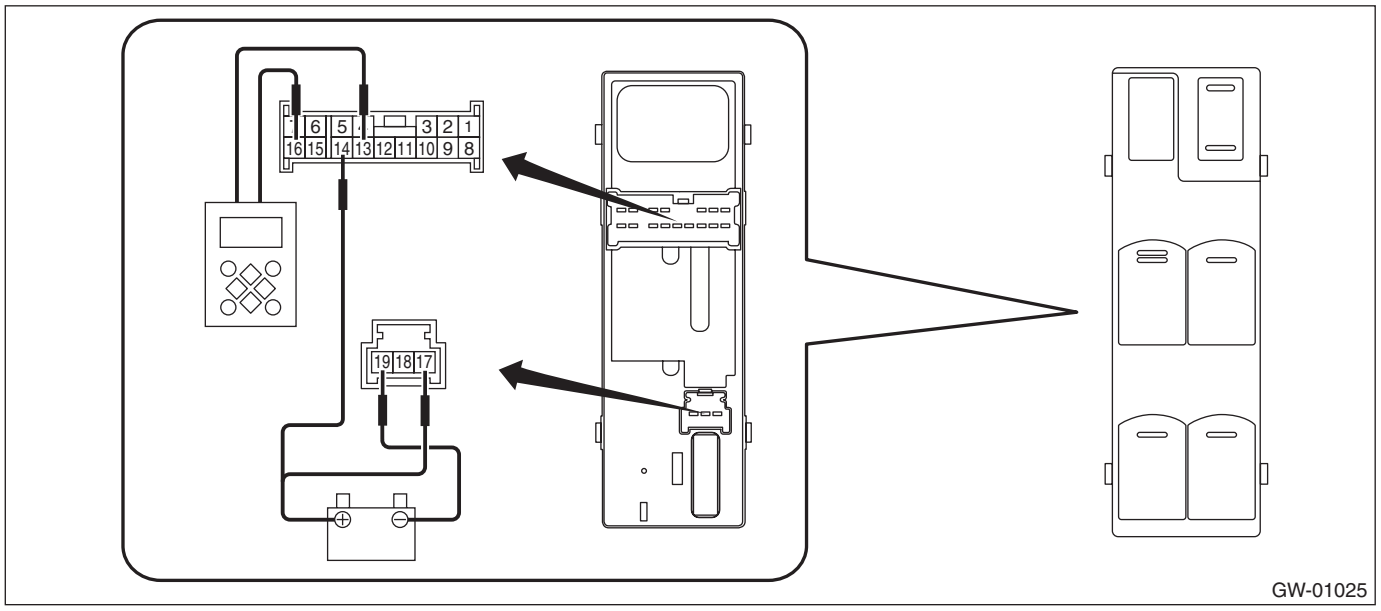
1. MAIN SWITCH

• Driver's seat

CAUTION:
Since the switch - power window main is controlled by CPU, do not check continuity for switch alone with the circuit tester. Performing continuity check with circuit tester can damage the switch - power window main circuit.
Check output from the switch - power window main to the driver's side motor using the oscilloscope function in the Subaru Select Monitor.
1) Remove the switch - power window main.
2) Connect the battery and the Subaru Select Monitor to the switch - power window main terminal.

CAUTION:
Never mix up the terminals when connecting the harness connector of the switch - power window main and the battery. If the connection is wrong, the switch - power window main may be damaged.

NOTE:
• When the battery is connected to the switch - power window main terminal, the letters "AUTO" on the driver's side knob illuminates.
• For detailed procedures, refer to "Subaru Select Monitor Operation Manual".



3) Operate the switch - power window main and check the output.

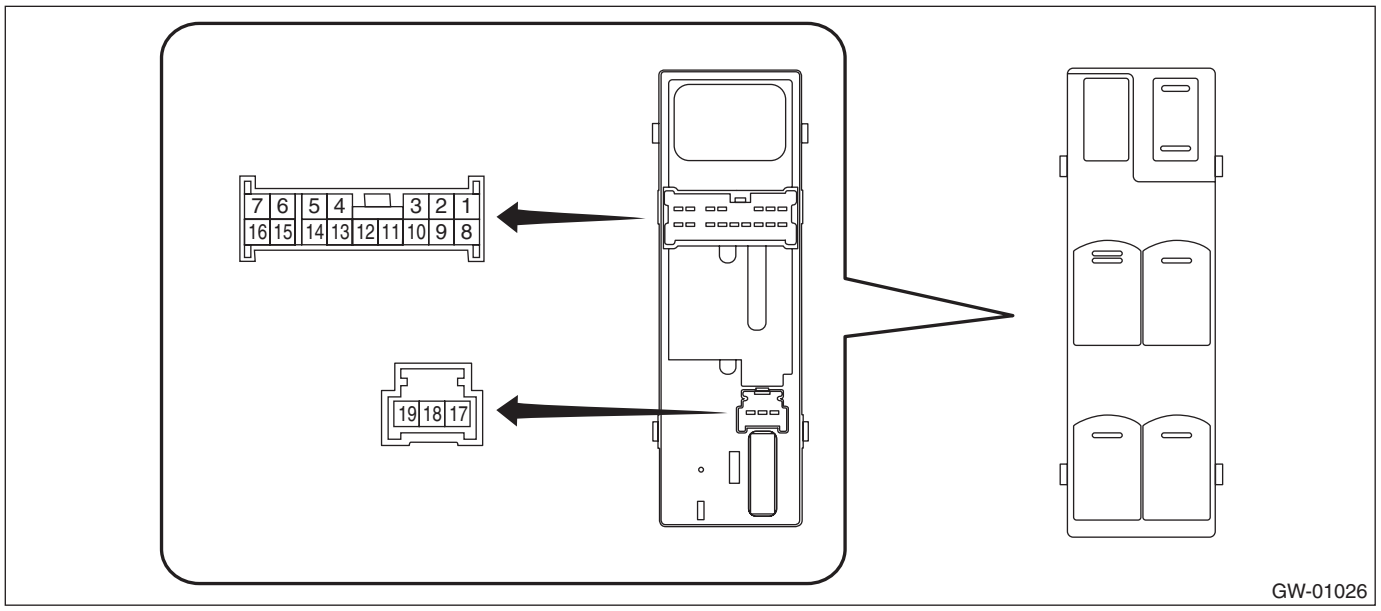
NOTE:
Since output time during window UP operation is extremely short, it cannot be checked without using a measuring instrument such as oscilloscope. Output is constantly produced while the switch is operated for window DOWN operation.

Inspection conditions	Output time	Standard
AUTO UP	Approx. 130 ms	Battery voltage
UP		
OFF	—	0 V
DOWN	During switch operation	Battery voltage
AUTO DOWN	Approx. 300 ms	

4) If the inspection result is not within the standard, replace the switch - power window main.

• Except for driver's seat

1) Check the resistance between terminals of the switch - power window main.

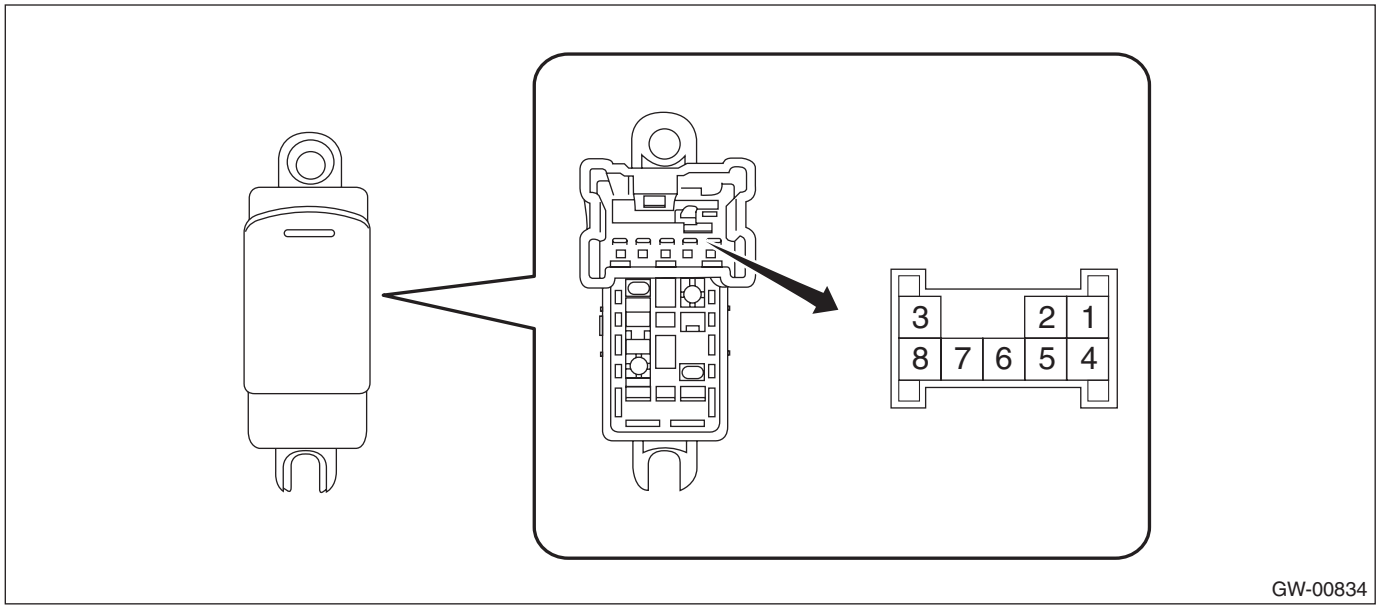


	Terminal No.	Inspection conditions	Standard
Passenger's seat	14 — 8 19 — 12	UP	Less than 1 Ω
	14 — 12 14 — 8	OFF	1 MΩ or more
	19 — 8 19 — 12 8 — 12		Less than 1 Ω
	14 — 12 19 — 8	DOWN	Less than 1 Ω
Rear LH	14 — 7 19 — 5	UP	Less than 1 Ω
	14 — 7 14 — 5	OFF	1 MΩ or more
	19 — 7 19 — 5 7 — 5		Less than 1 Ω
	14 — 5 19 — 7	DOWN	Less than 1 Ω
Rear RH	14 — 1 19 — 3	UP	Less than 1 Ω
	14 — 1 14 — 3	OFF	1 MΩ or more
	19 — 3 19 — 1 3 — 1		Less than 1 Ω
	14 — 3 19 — 1	DOWN	Less than 1 Ω

2) If the inspection result is not within the standard, replace the switch - power window main.

2. SUB-SWITCH

1) Remove the switch - power window sub front.
2) Check the resistance between terminals of the switch - power window sub front.



	Terminal No.	Inspection conditions	Standard
Passenger seat, rear	4 — 5 6 — 7	UP	Less than 1 Ω
	7 — 4 8 — 4	OFF	1 MΩ or more
	5 — 8 6 — 7		Less than 1 Ω
	4 — 6 5 — 8	DOWN	Less than 1 Ω

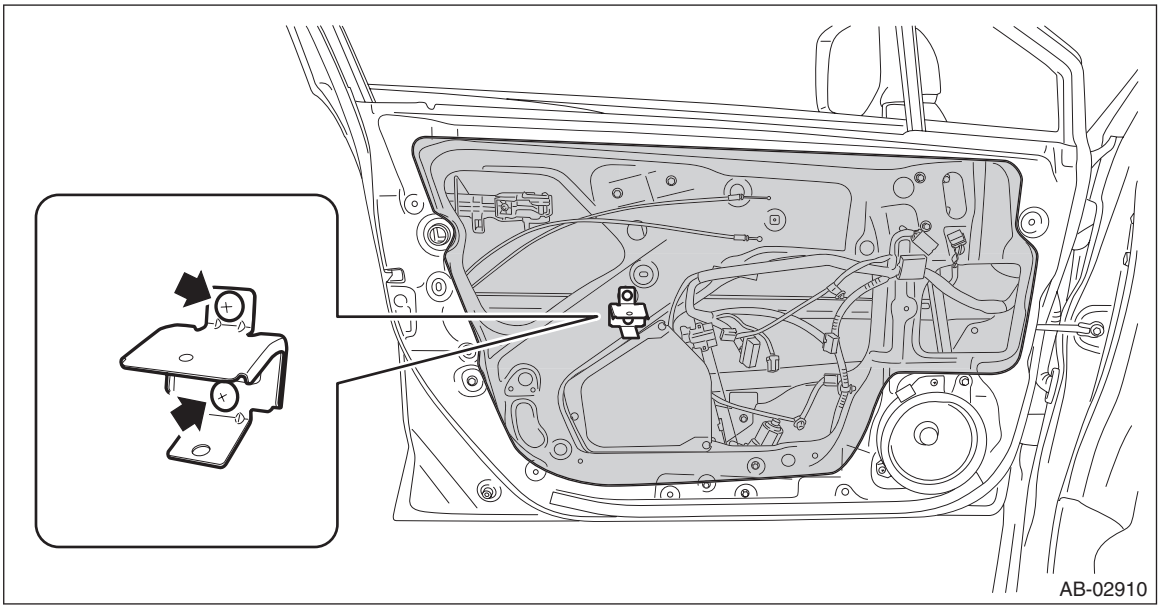
3) If the inspection result is not within the standard, replace the switch - power window sub front.

5. Front Door Glass

A: REMOVAL

1) Remove the trim panel - front door. <Ref. to EI-58, FRONT DOOR, REMOVAL, Door Trim.>
2) Remove the sealing cover - front door.

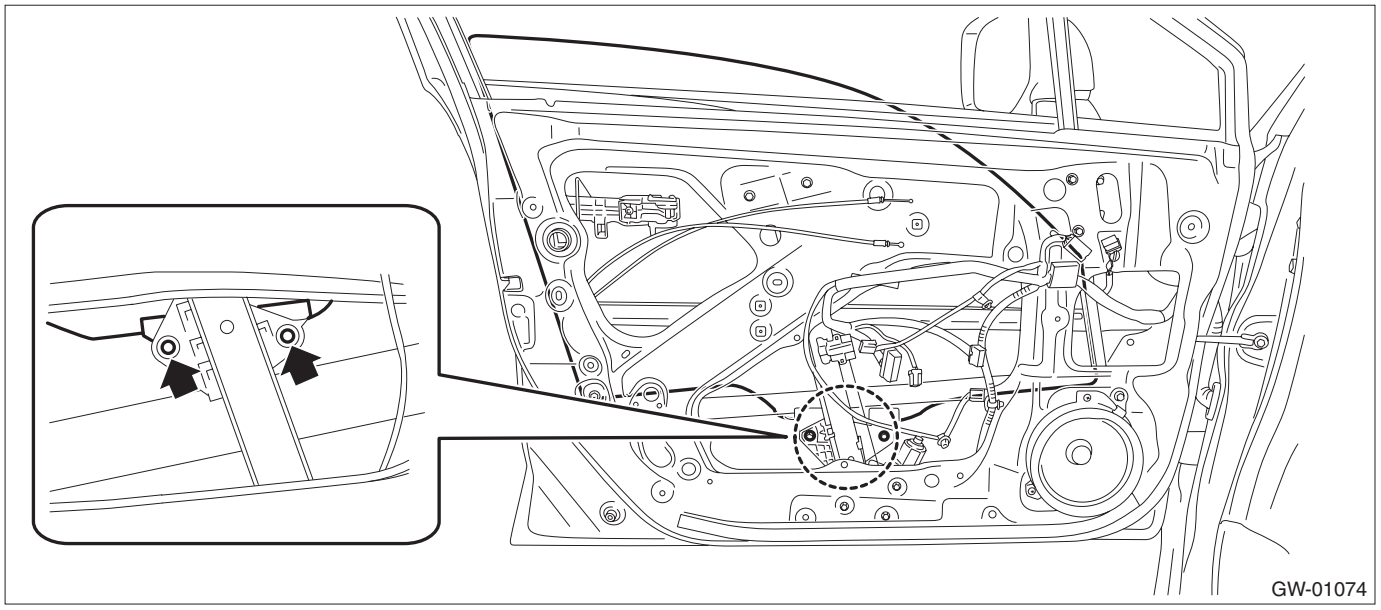
CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the sealing cover - front door.**
- **If the sealing cover - front door gets broken, replace it with a new part.**
  (1) Remove the screw to remove the bracket - door trim front.
  (2) Carefully remove the butyl tape to remove the sealing cover - front door.



3) Remove the front door inner pad.

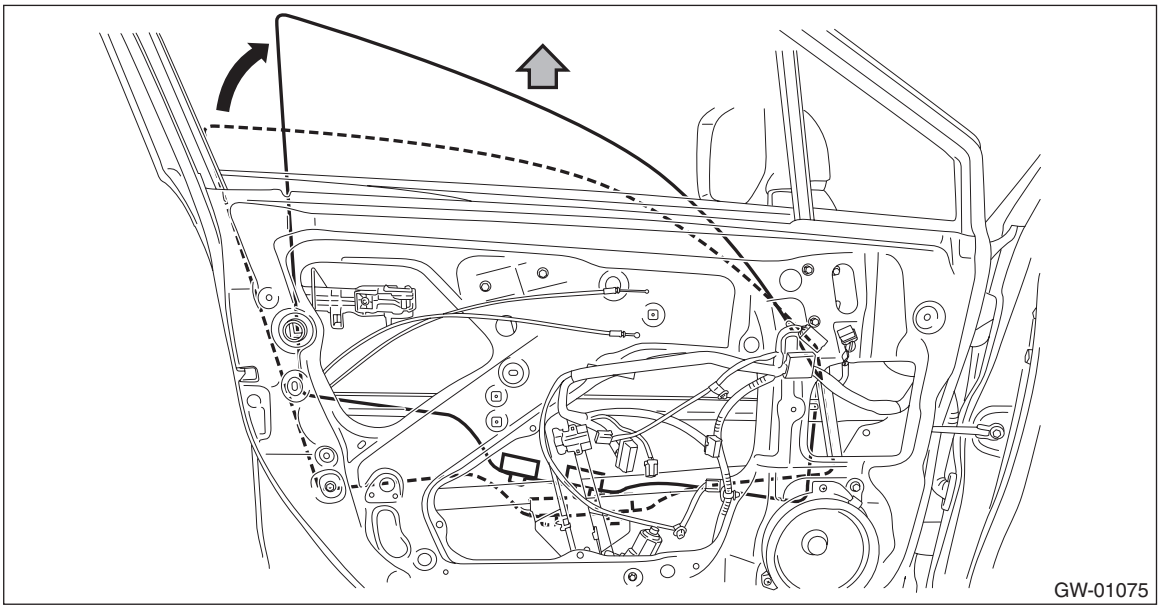
CAUTION:
If the clip is damaged, replace it with a new part because the panel assembly - front door may be deformed.
4) Attach the battery ground cable and the switch - power window, and turn the ignition to ON.

5) Remove the glass assembly - front door.
(1) Operate the switch - power window to move the glass assembly - front door to the position where the mounting bolts can be seen.
(2) Remove the bolt.

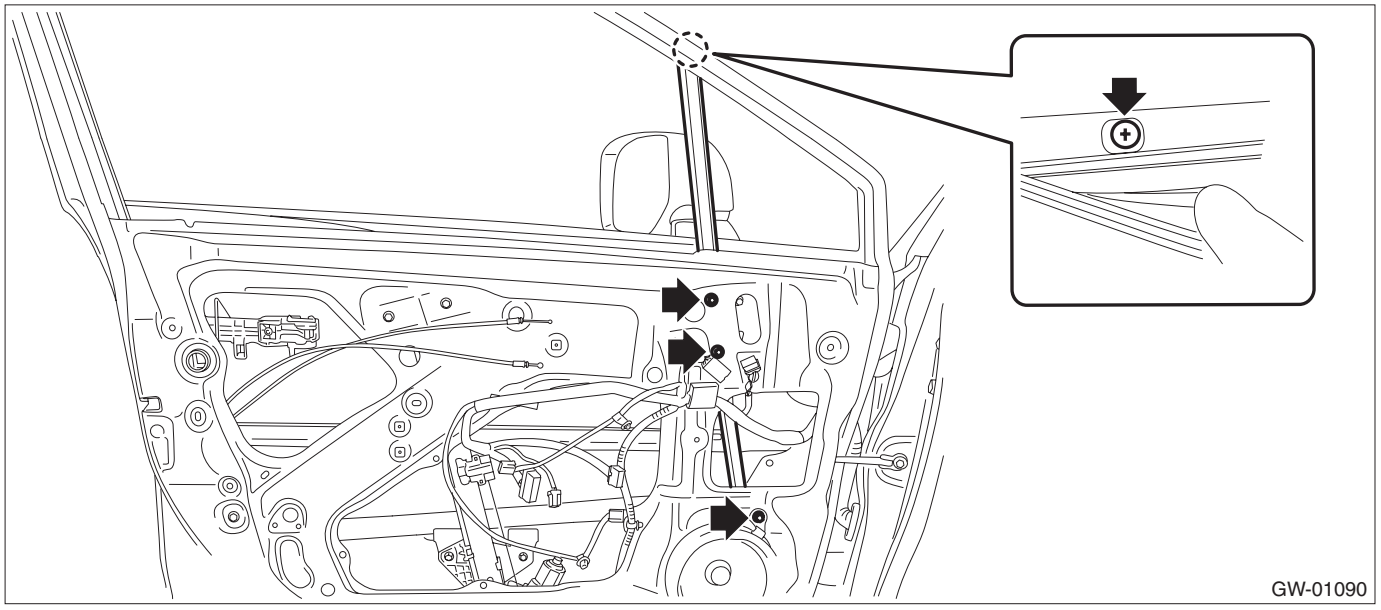


(3) While tilting the glass, remove the glass assembly - front door.

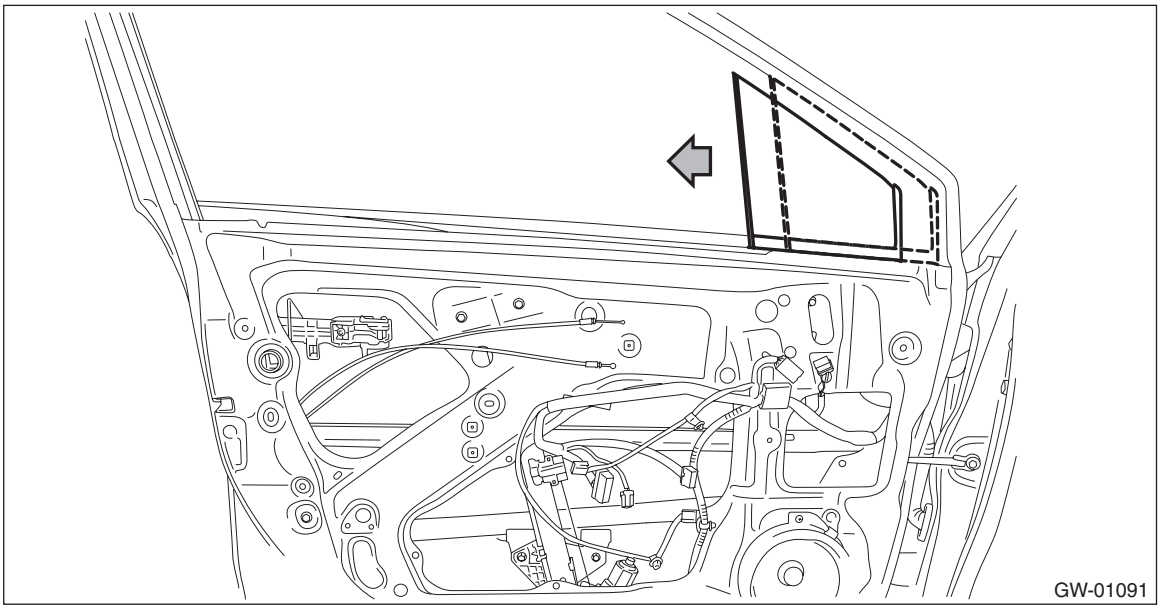
CAUTION:
Avoid impact and damage to the glass assembly - front door.



6) Remove the glass - front door partition.
(1) Remove the bolts and screws, and then remove the sash COMPL - partition.



(2) Remove the glass - front door partition.



B: INSTALLATION

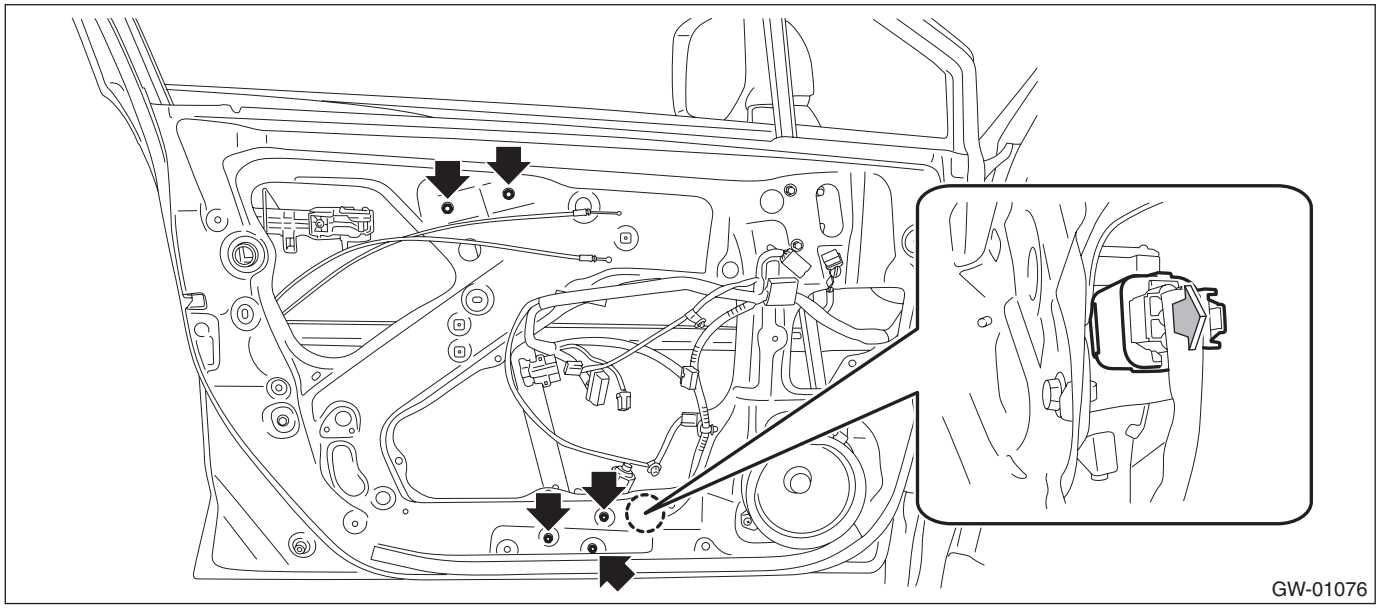
CAUTION:
Check that the running channel - front door is securely fixed to the panel assembly - front door and to the sash COMPL - partition.
Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to GW-2, FRONT DOOR GLASS, COMPONENT, General Description.>

6. Front Regulator and Motor Assembly

A: REMOVAL

1) Remove the glass assembly - front door. <Ref. to GW-18, REMOVAL, Front Door Glass.>
2) Remove the regulator and motor assembly - front.
   (1) Disconnect the motor - front connector.
   (2) Remove the bolts, and then remove the regulator and motor assembly - front.



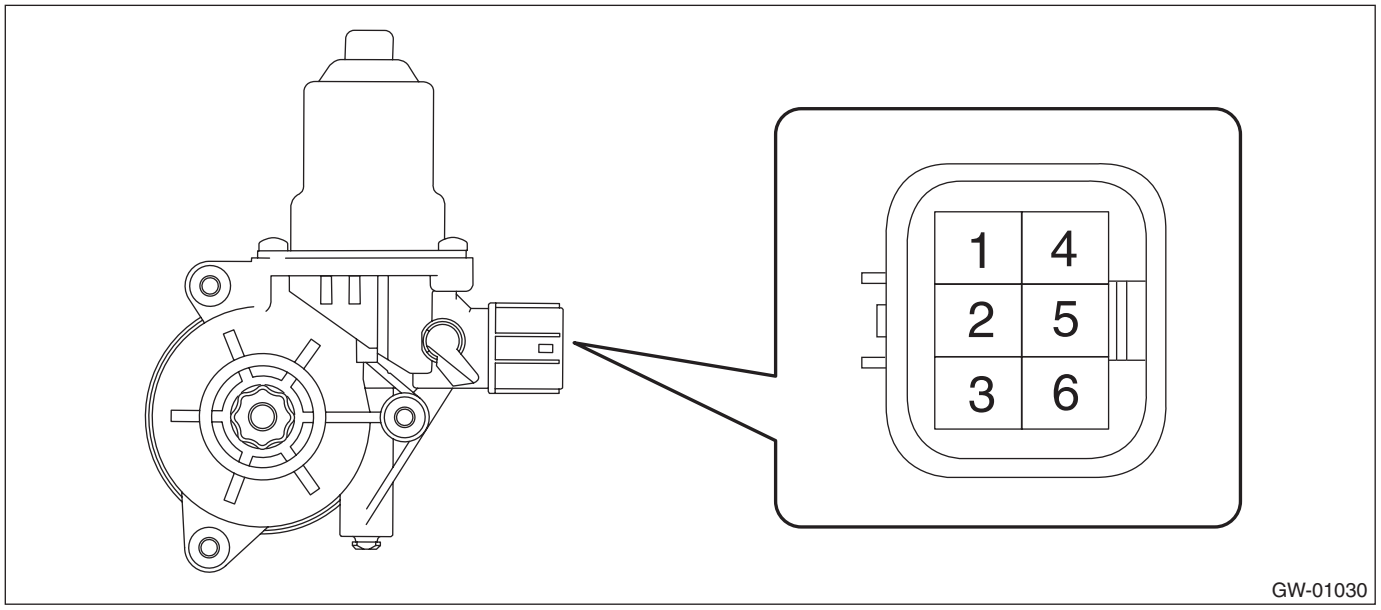
B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to GW-2, FRONT DOOR GLASS, COMPONENT, General Description.>

C: INSPECTION

1) Disconnect the connector of the motor - front.
2) Check the motor operation when battery voltage is applied between terminals of the motor - front connector.



- LH side

Terminal No.	Inspection conditions	Standard
4 (+) — 1 (–)	Apply battery voltage between terminals.	Increase
1 (+) — 4 (–)	Apply battery voltage between terminals.	Decrease

- RH side

Terminal No.	Inspection conditions	Standard
3 (+) — 6 (–)	Apply battery voltage between terminals.	Increase
6 (+) — 3 (–)	Apply battery voltage between terminals.	Decrease

3) If it does not operate properly as a result of inspection, replace the regulator and motor assembly - front.

7. Remote Control Mirror System

A: WIRING DIAGRAM

Refer to “Remote Control Mirror System” in the wiring diagram. <Ref. to WI-128, WIRING DIAGRAM, Remote Control Mirror System.>

B: INSPECTION

1. SYMPTOM CHART

Symptoms	Inspection order
All function does not operate.	1. Check the fuse. 2. Check the remote control mirror switch. 3. Check the wiring harness.
One side of the mirror motor does not operate.	1. Check the remote control mirror switch. 2. Check the mirror motor. 3. Check the wiring harness.
Mirror heater does not operate.	1. Check the rear defogger switch. 2. Check the rear defogger relay. 3. Check the mirror heater. 4. Check the wiring harness. 5. Check body integrated unit.

NOTE:
The mirror heater operates with the rear window defogger at the same time. Refer to “INSPECTION” of “Rear Window Defogger System” for details. <Ref. to GW-51, INSPECTION, Rear Window Defogger System.>

C: NOTE

For operation procedures of each component of the remote control mirror system, refer to the respective sections.

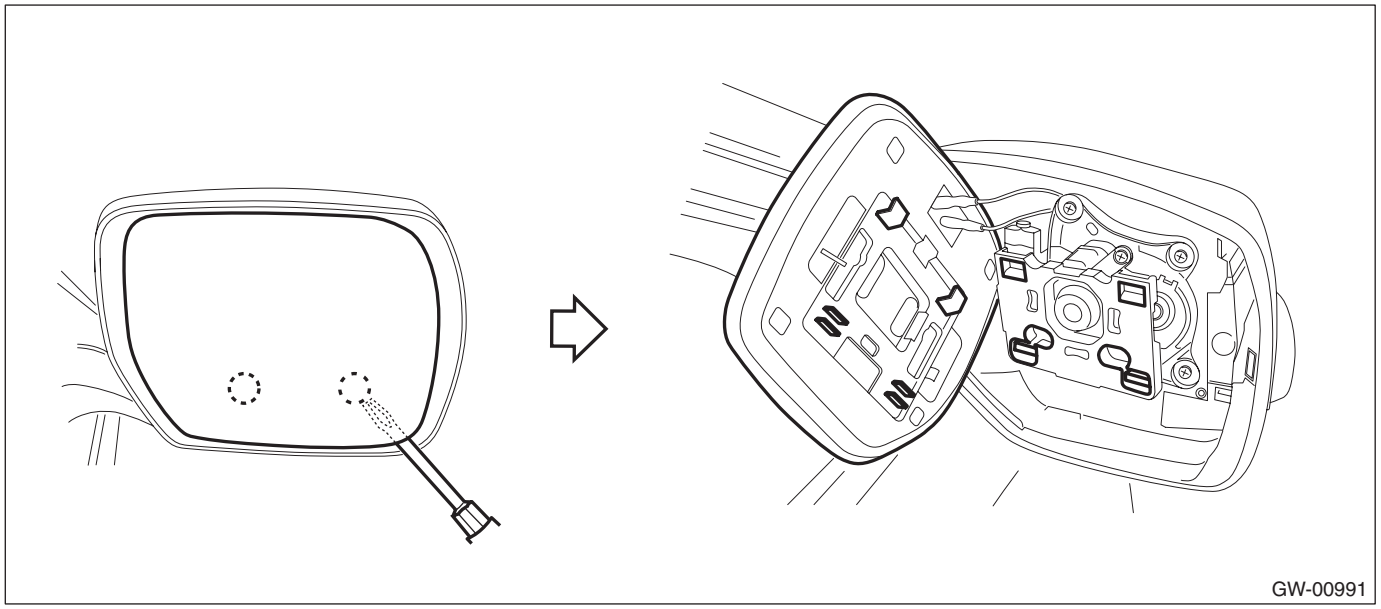
- Scalp cap: <Ref. to GW-24, Scalp Cap.>
- Outer mirror assembly: <Ref. to GW-27, Outer Mirror Assembly.>
- Outer mirror: <Ref. to GW-29, Outer Mirror.>
- Remote control mirror switch: <Ref. to GW-30, Remote Control Mirror Switch.>

8. Scalp Cap

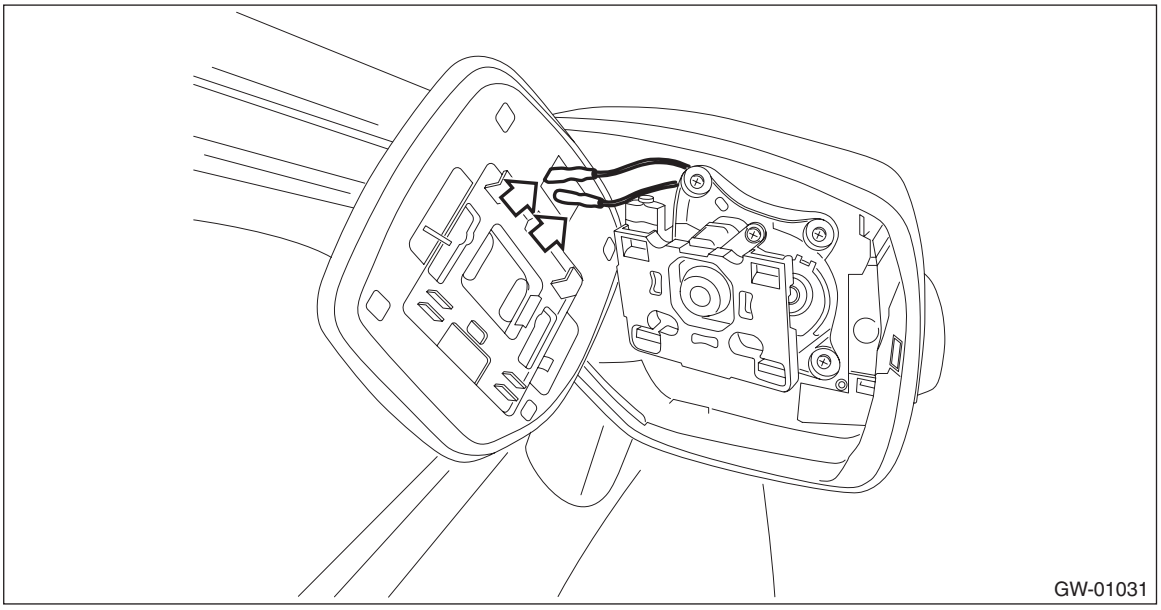
A: REPLACEMENT

CAUTION:
• When removing the mirror - repair, be careful not to damage the back surface of mirror - repair with a flat tip screwdriver.
• When installing the mirror - repair, insert the connector and clip securely.

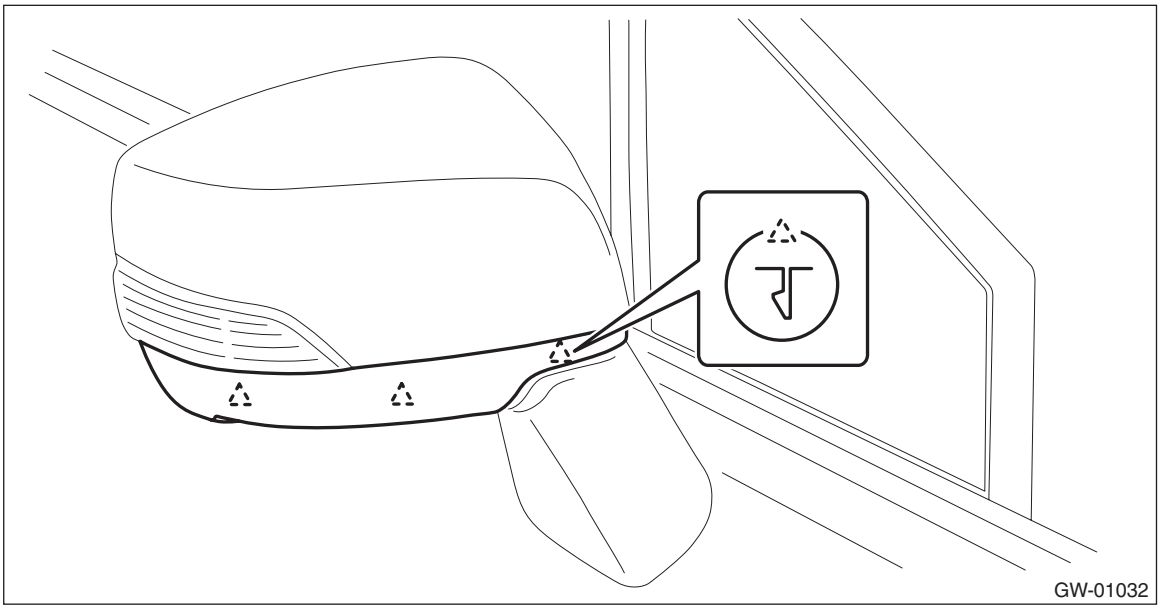
1) Operate the remote control mirror switch to face the mirror - repair upward.
2) Disconnect the ground cable from battery.
3) Remove the mirror - repair.
   (1) Using a flat tip screwdriver, release the clip, and slide the mirror - repair downward to remove.



   (2) Disconnect the mirror heater connector. (Model with mirror heater)

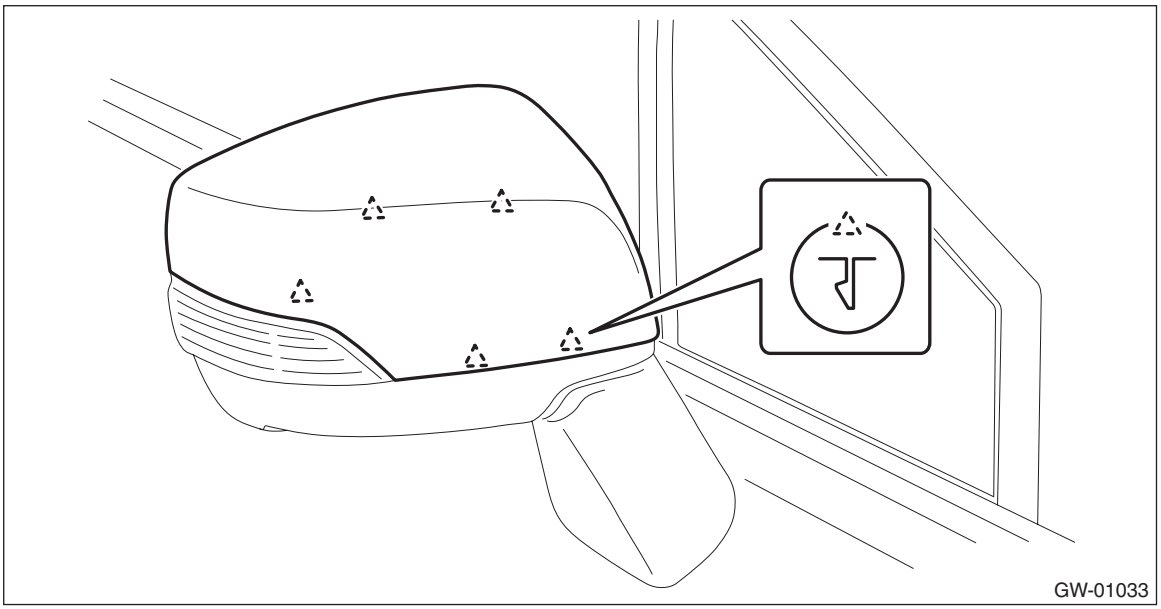


4) Release the claws, and then remove the cover - cap outer mirror lower.

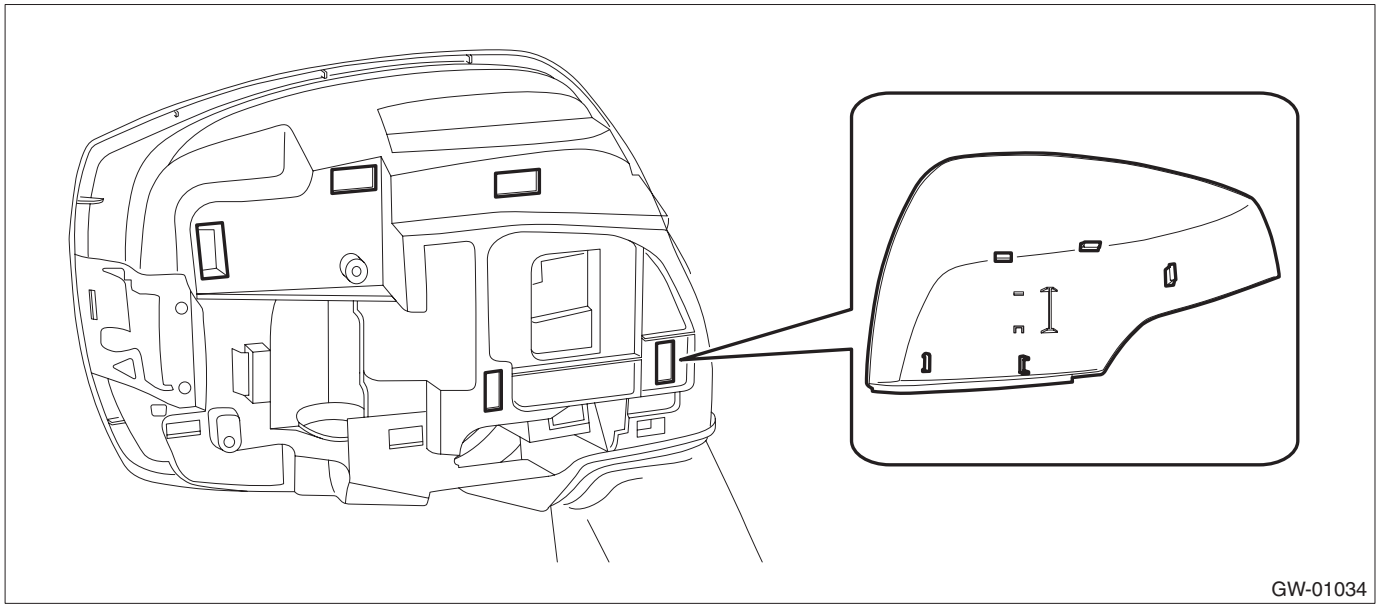


5) Release the claws, and then remove the cover - cap outer mirror.

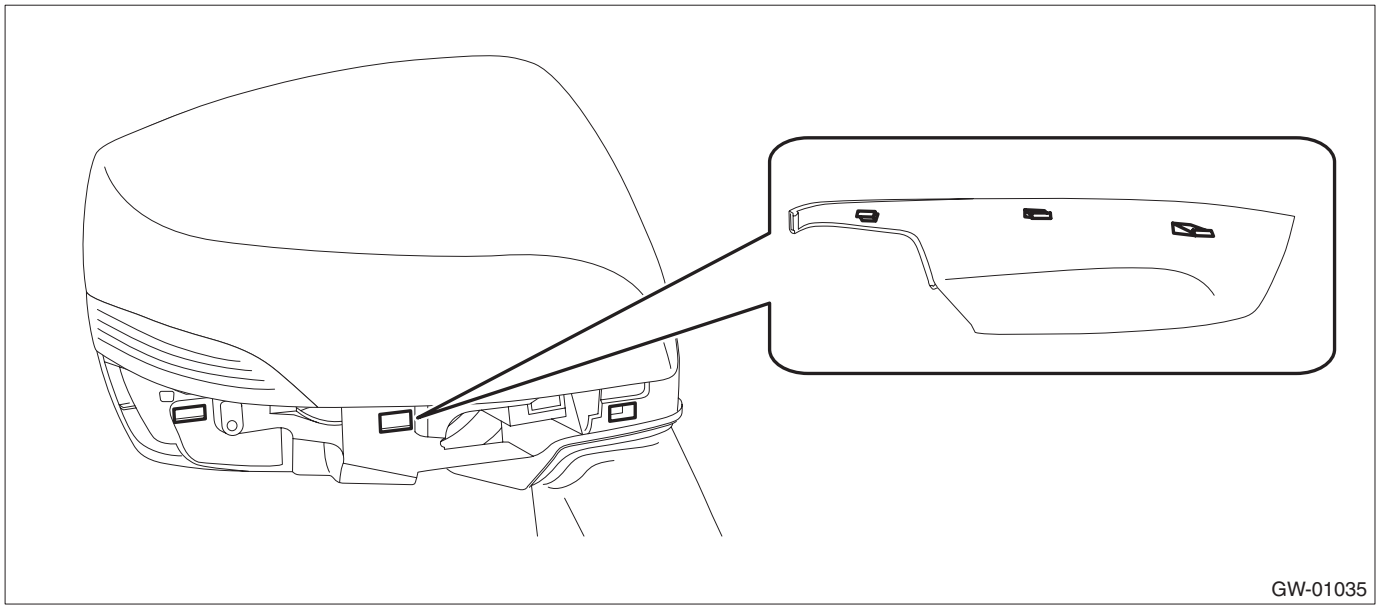
CAUTION:
Be careful not to apply excessive force when removing the cover - cap outer mirror, as the lower hooks may become damaged.



6) Engage the claws into the hole and install the cover - cap outer mirror.



7) Engage the claws into the hole and install the cover - cap outer mirror lower.



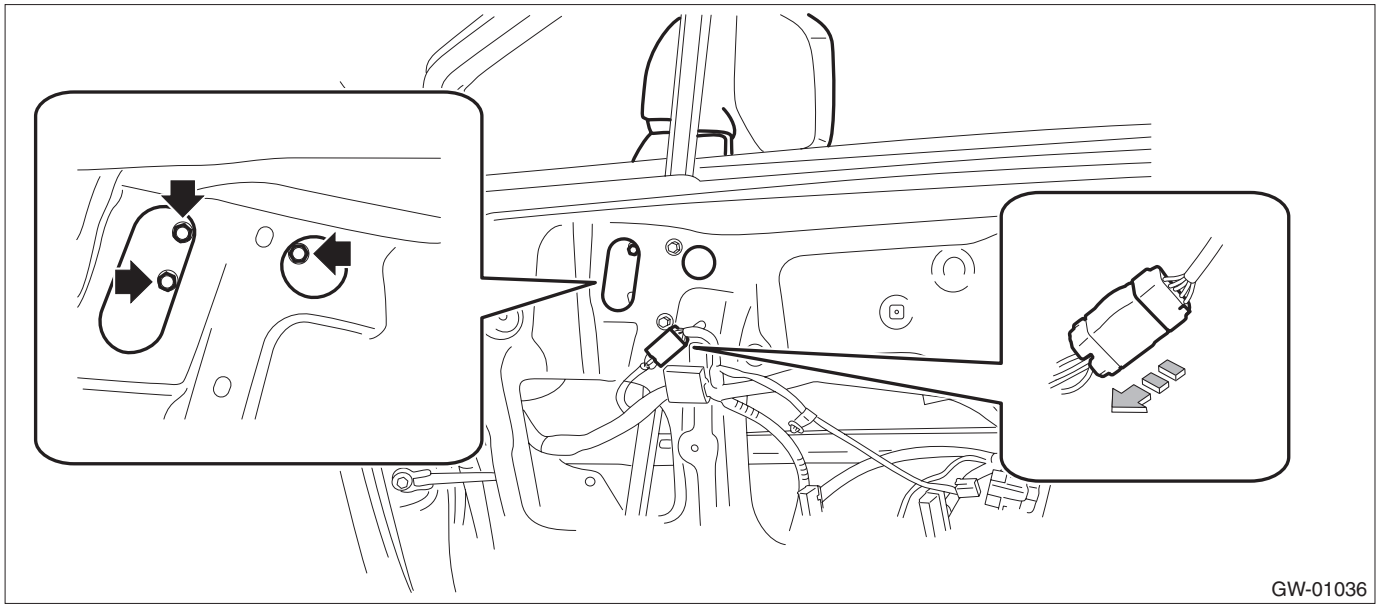
8) Check that all the claws are securely engaged.
9) Install the mirror - repair in the reverse order of removal.

CAUTION:
Be sure to insert the connector and clips securely.

9. Outer Mirror Assembly

A: REMOVAL

1) Remove the trim panel - front door. <Ref. to EI-58, FRONT DOOR, REMOVAL, Door Trim.>
2) Remove the sealing cover - front door.
3) Remove the outer mirror assembly.
   (1) Disconnect the connector.
   (2) Remove the bolts to remove outer mirror assembly.



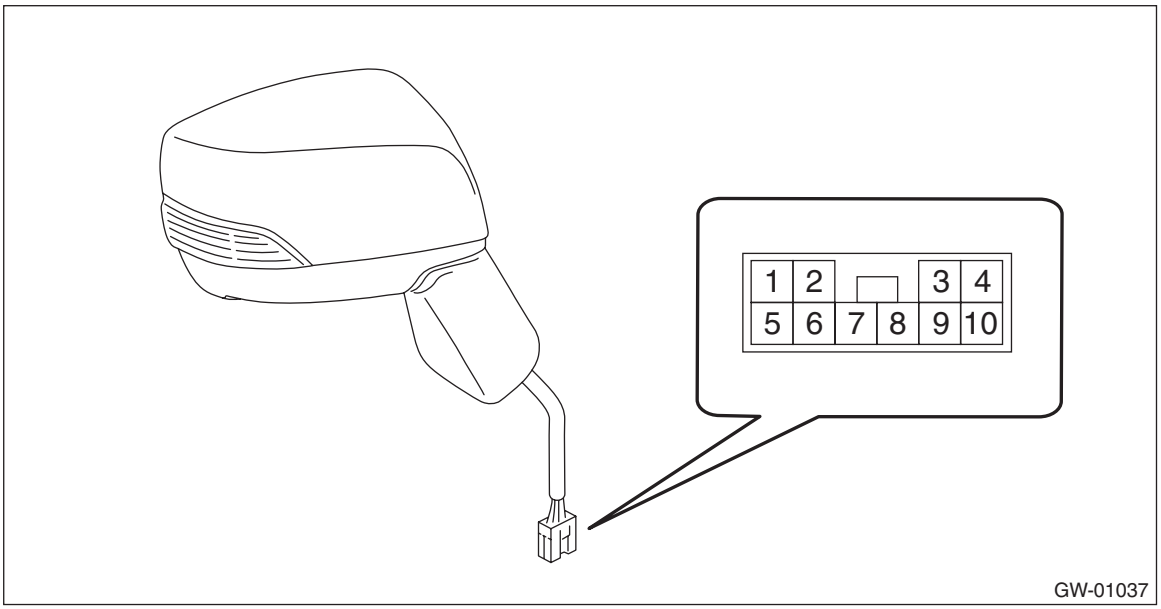
B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Outer mirror assembly: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

C: INSPECTION

1) Disconnect the outer mirror connector.
2) Apply battery voltage between the outer mirror connector terminals and check the mirror operation.



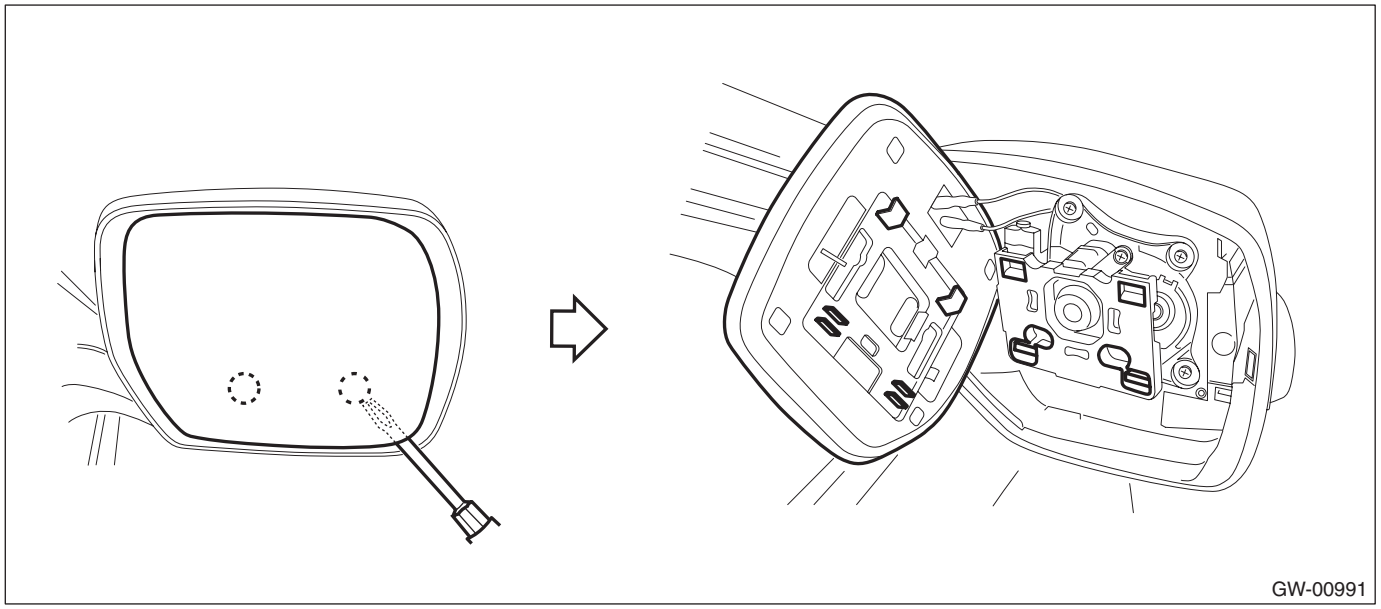
Terminal No.	Inspection conditions	Switch position
—	—	OFF
3 (+) — 8 (–)	Apply battery voltage between terminals.	UP
8 (+) — 3 (–)	Apply battery voltage between terminals.	DOWN
7 (+) — 3 (–)	Apply battery voltage between terminals.	LEFT
3 (+) — 7 (–)	Apply battery voltage between terminals.	RIGHT

3) If it does not operate normally, replace the outer mirror assembly.

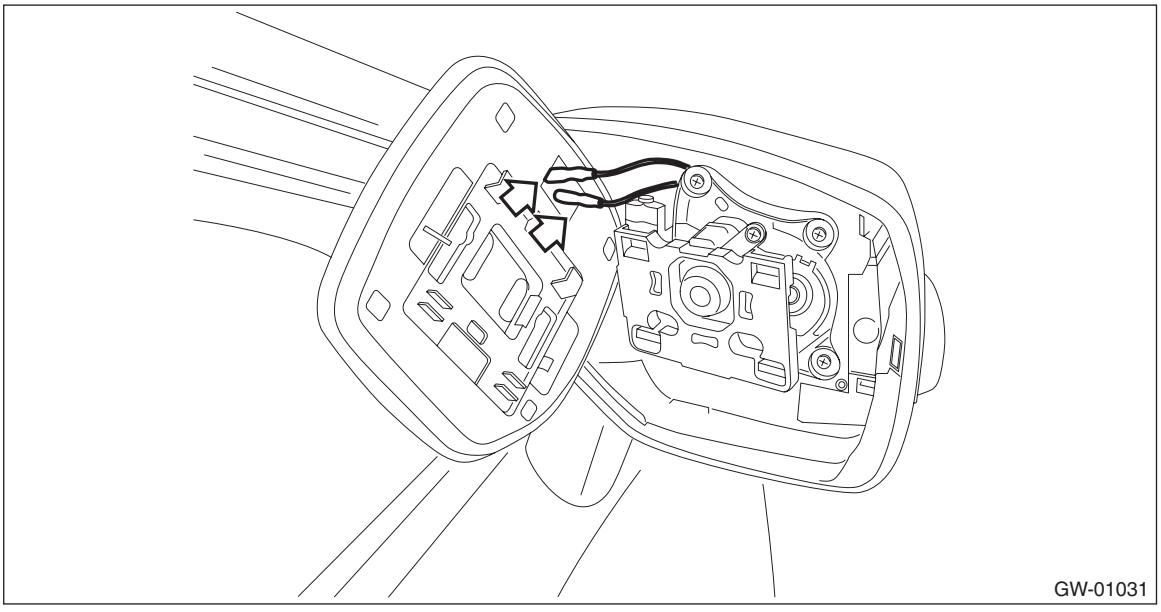
10.Outer Mirror

A: REPLACEMENT

CAUTION:
• When removing the mirror - repair, be careful not to damage the back surface of mirror - repair with a flat tip screwdriver.
• When installing the mirror - repair, insert the connector and clip securely.
1) Operate the remote control mirror switch to face the mirror - repair upward.
2) Disconnect the ground cable from battery.
3) Remove the mirror - repair.
(1) Disconnect the clips using a flat tip screwdriver.


GW-00991

(2) Disconnect the mirror heater connector. (Model with mirror heater)

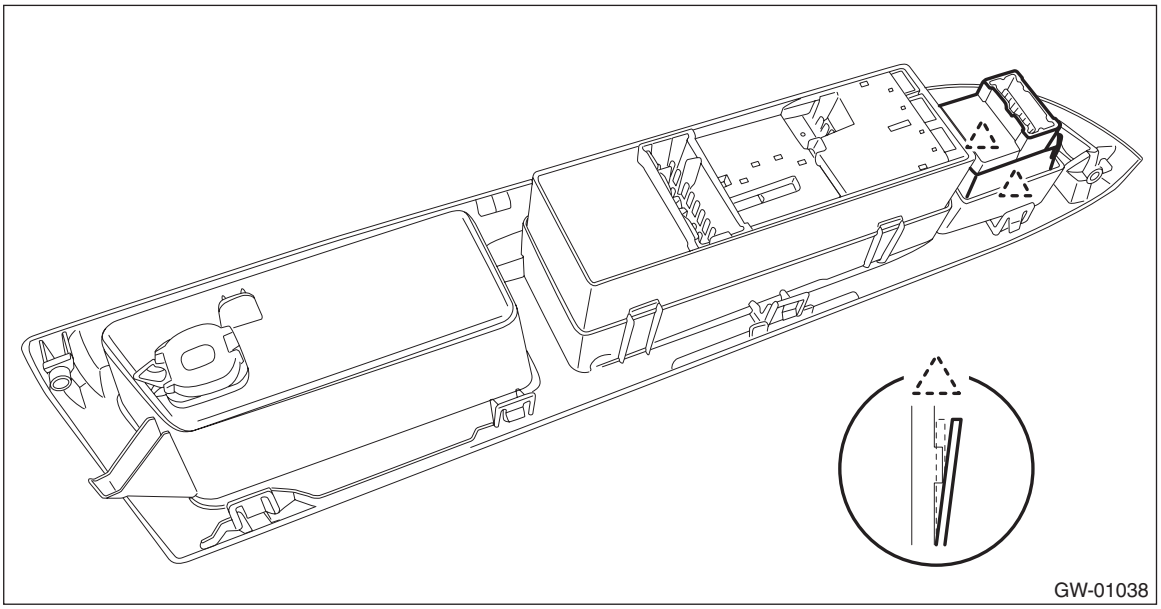

GW-01031

4) Install the mirror - repair in the reverse order of removal.

11.Remote Control Mirror Switch

A: REMOVAL

1) Remove the panel - power window main switch. <Ref. to GW-12, MAIN SWITCH, REMOVAL, Power Window Control Switch.>
2) Release the claws, and then remove the switch - door mirror.



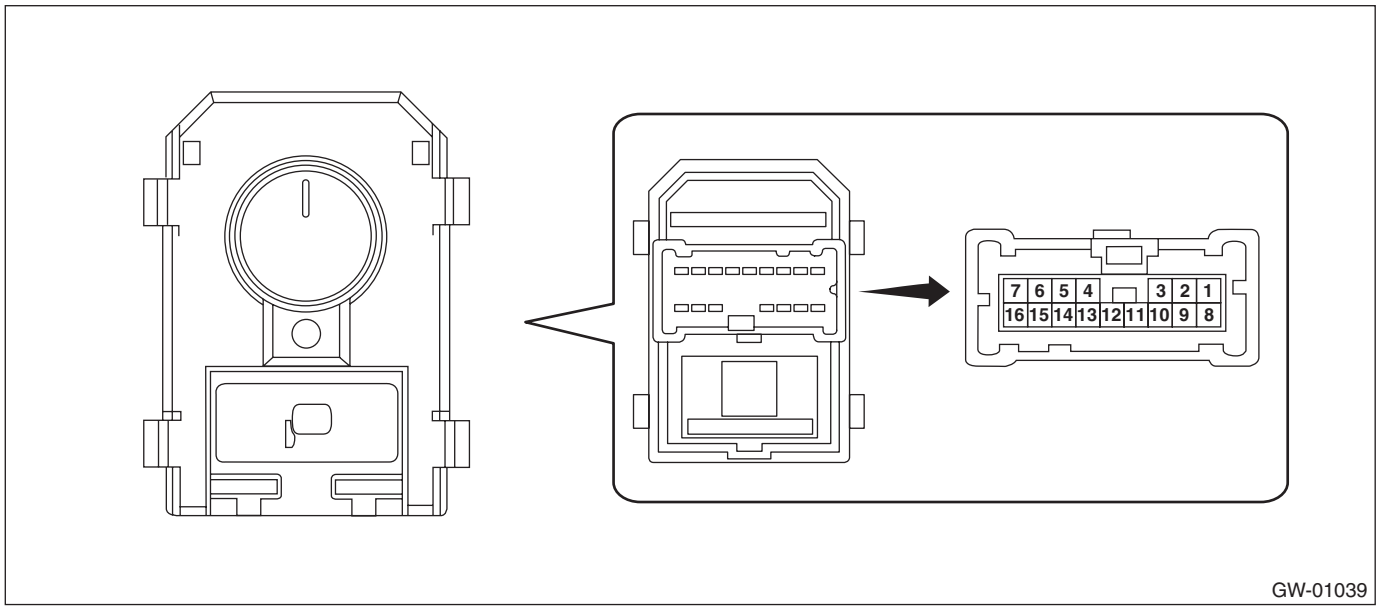
B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1) Disconnect the connector of the switch - door mirror.
2) Check the resistance between switch - door mirror terminals.

PREPARATION TOOL:
Circuit tester



- Changeover switch RH

Terminal No.	Inspection conditions	Standard
—	OFF	1 MΩ or more
1 — 12 9 — 7	UP	Less than 1 Ω
1 — 9 12 — 7	DOWN	Less than 1 Ω
1 — 11 12 — 7	LEFT	Less than 1 Ω
1 — 12 11 — 7	RIGHT	Less than 1 Ω

- Changeover switch LH

Terminal No.	Inspection conditions	Standard
—	OFF	1 MΩ or more
1 — 14 8 — 7	UP	Less than 1 Ω
1 — 8 14 — 7	DOWN	Less than 1 Ω
1 — 10 14 — 7	LEFT	Less than 1 Ω
1 — 14 10 — 7	RIGHT	Less than 1 Ω

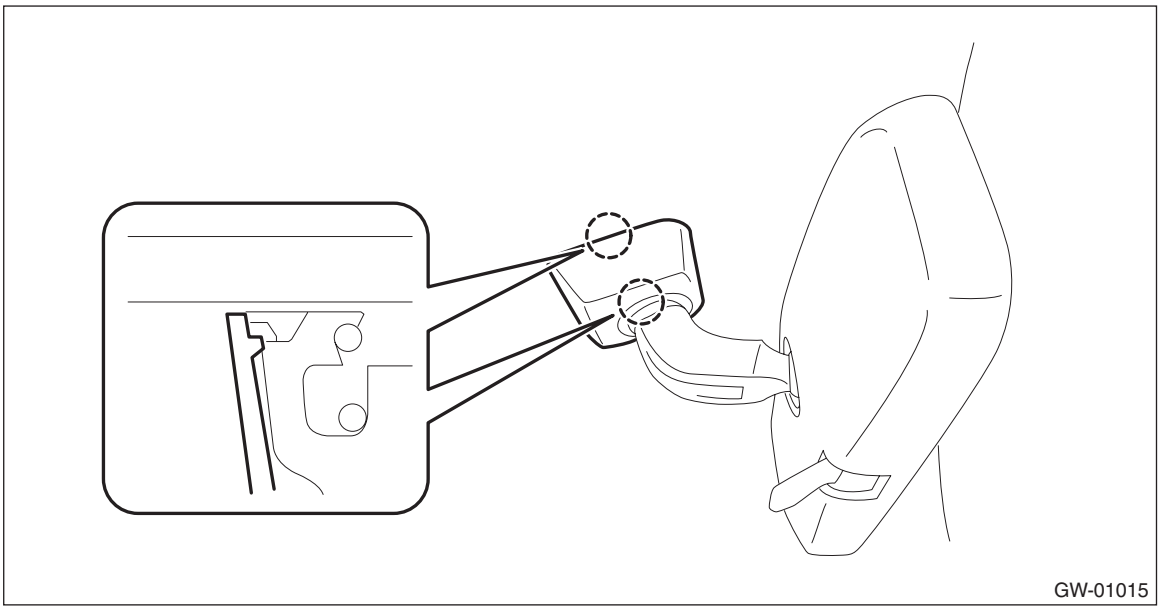
3) If the inspection result is not within the standard, replace the switch - door mirror.

12.Rearview Mirror

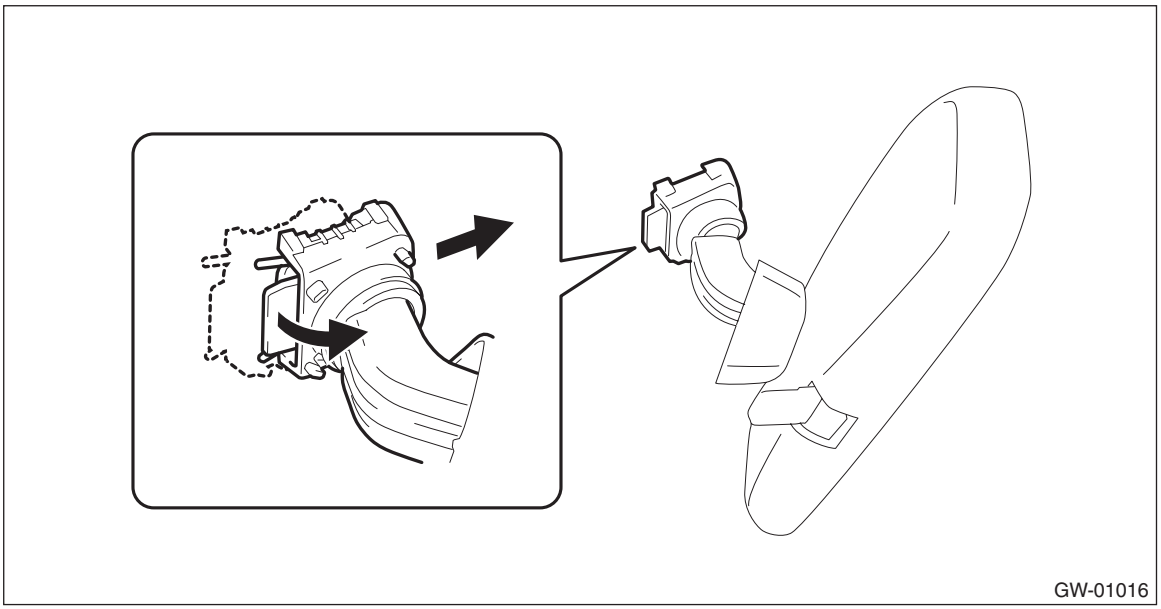
A: REMOVAL

CAUTION:
Be careful not to damage the mirror surface and the glass - front window.

1) Release the claws, and then remove the cover.



2) Release the lock lever, and slide the mirror assembly - inner rearview to remove.



3) When the mirror mount is damaged, use something like piano wire or a spatula to remove.

B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

Check the mirror and mirror mount for damage.

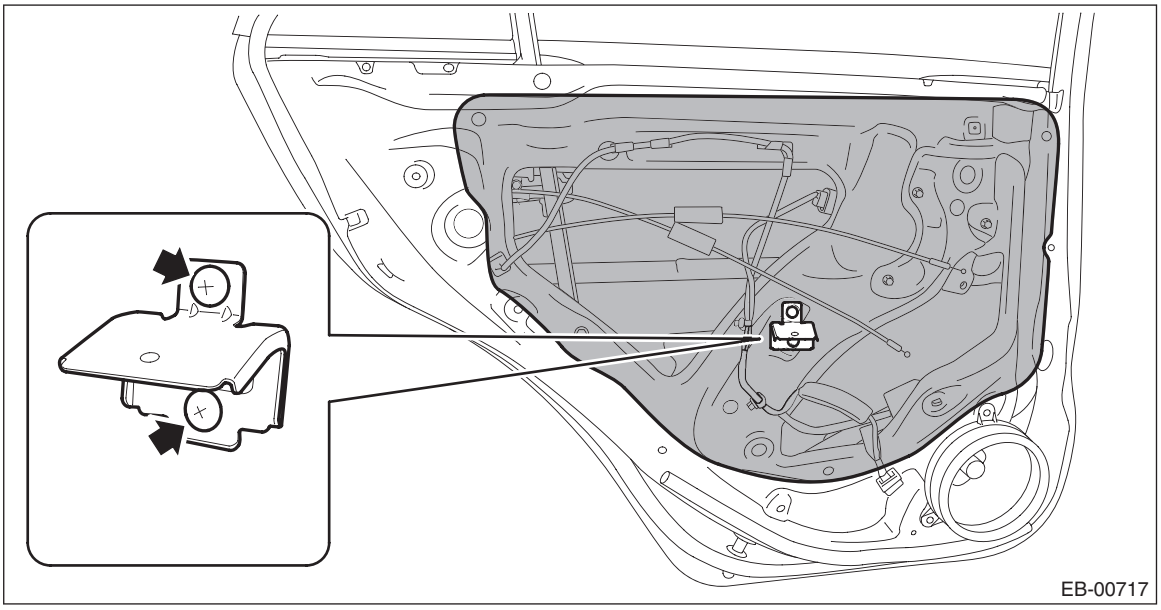
13.Rear Door Glass

A: REMOVAL

1) Remove the trim panel - rear door. <Ref. to EI-59, REAR DOOR, REMOVAL, Door Trim.>
2) Remove the sealing cover - rear door.

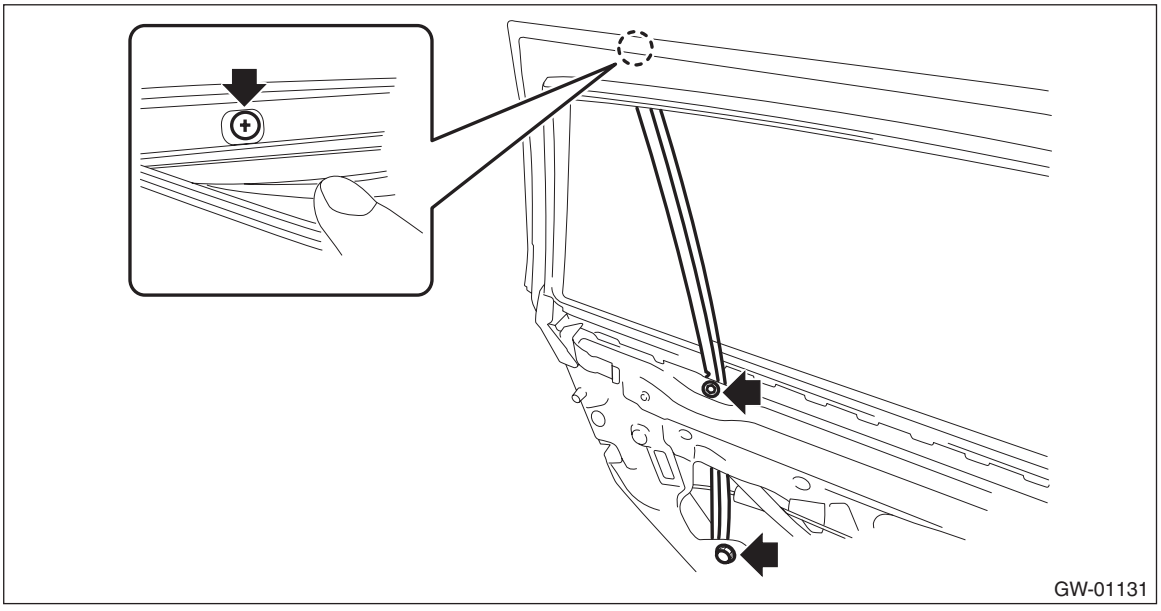
CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the sealing cover - rear door.**
- **If the sealing cover - rear door gets broken, replace it with a new part.**

(1) Remove the screw to remove the bracket - door trim rear.
(2) Carefully remove the butyl tape to remove the sealing cover - rear door.

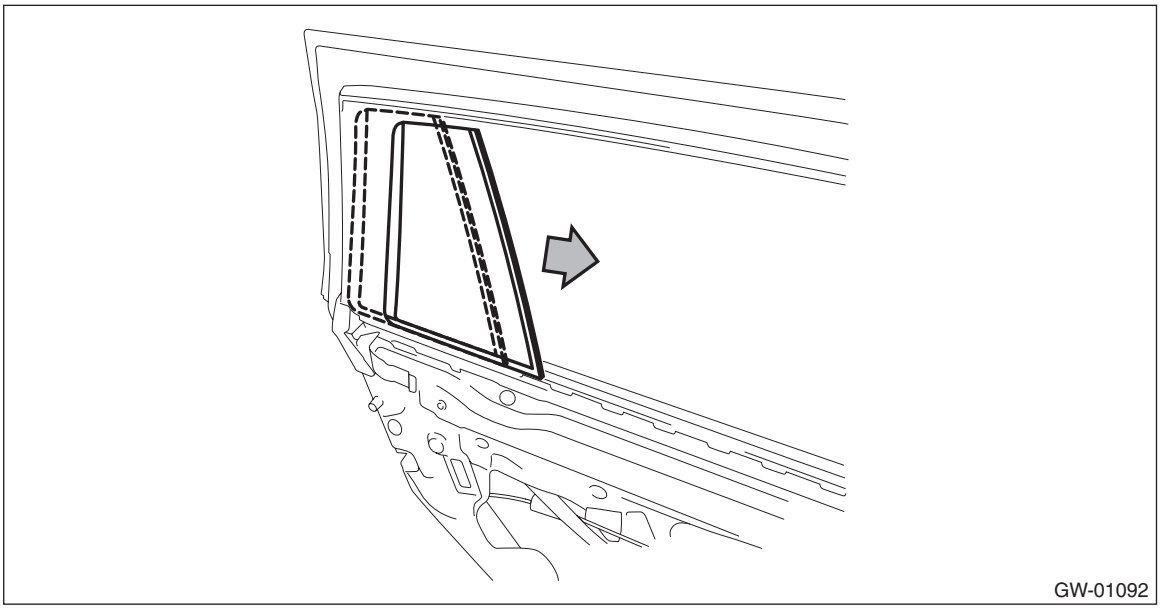


3) Attach the battery ground cable and the switch - power window, and turn the ignition to ON.
4) Remove the glass assembly - rear door.

(1) Operate the switch - power window sub rear to move the glass assembly - rear door to the lowest position.
(2) Remove the screws and bolts, and then remove the sash COMPL - rear partition.

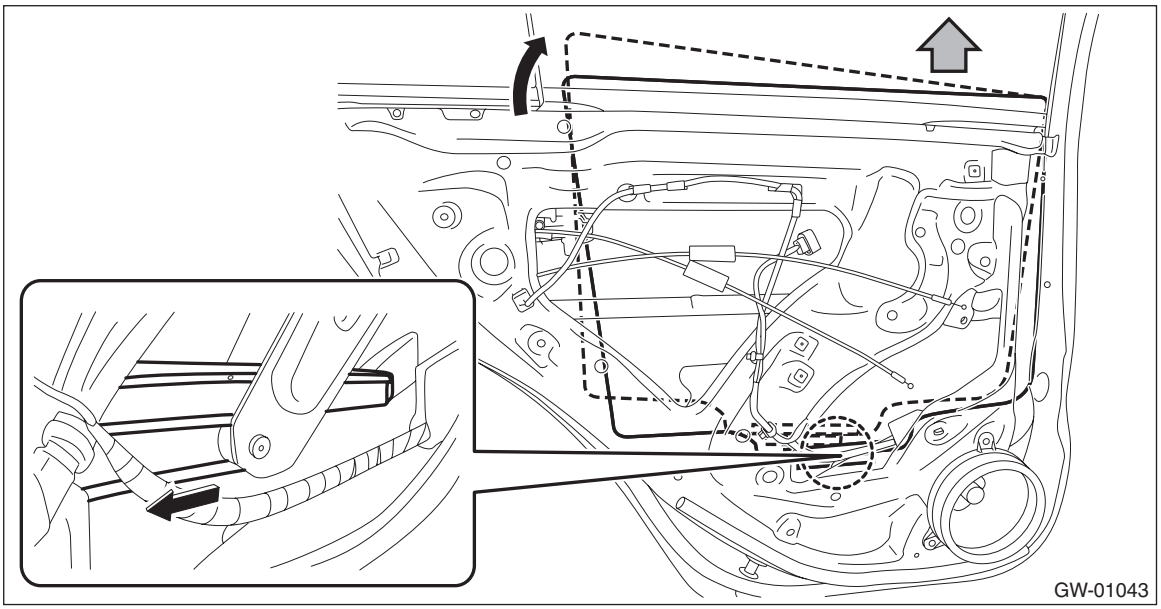


(3) Remove the glass - rear door partition.



(4) While tilting the glass assembly - rear door, remove the guide from the roller of the regulator and motor assembly - rear, then remove the glass assembly - rear door.

CAUTION:
Avoid impact and damage to the glass assembly - rear door.



B: INSTALLATION

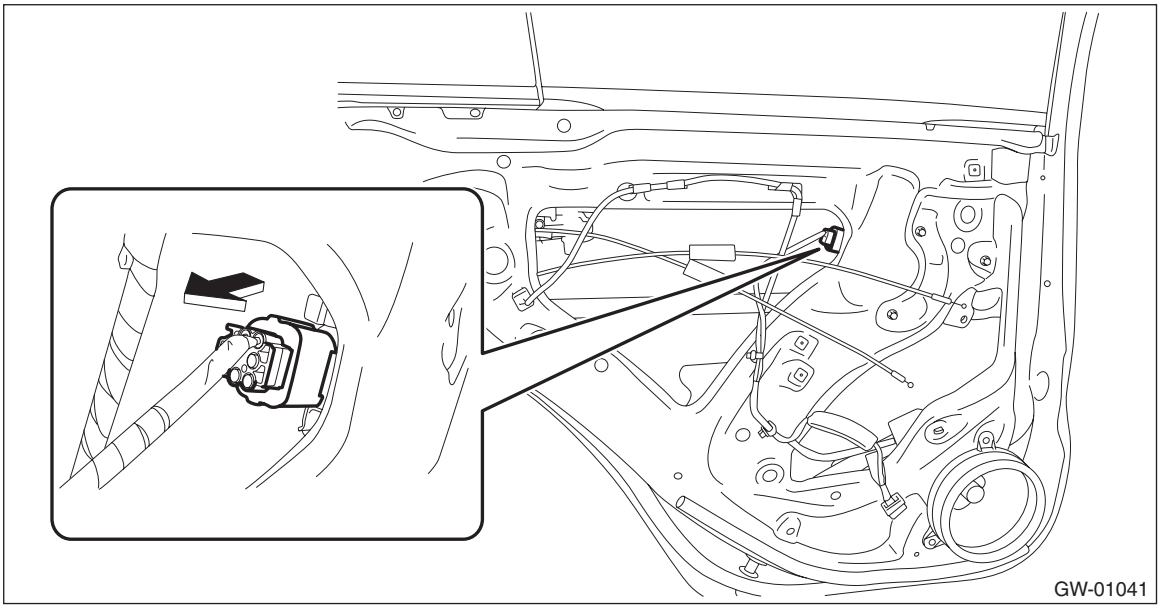
CAUTION:
Check that the running channel - rear door is securely fixed to the panel assembly - rear door and to the sash COMPL - rear partition.
Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to GW-3, REAR DOOR GLASS, COMPONENT, General Description.>

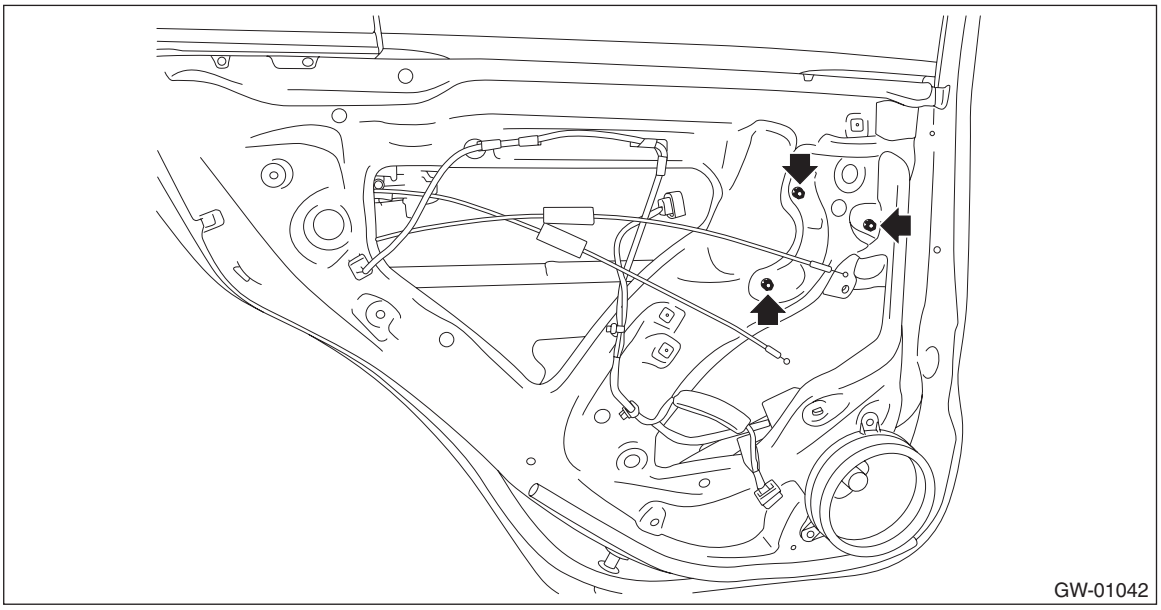
14.Rear Regulator and Motor Assembly

A: REMOVAL

1) Remove the glass assembly - rear door. <Ref. to GW-33, REMOVAL, Rear Door Glass.>
2) Remove the rear regulator and motor assembly.
   (1) Disconnect the motor - rear connector.



   (2) Remove the bolts, and then remove the rear regulator and motor assembly.



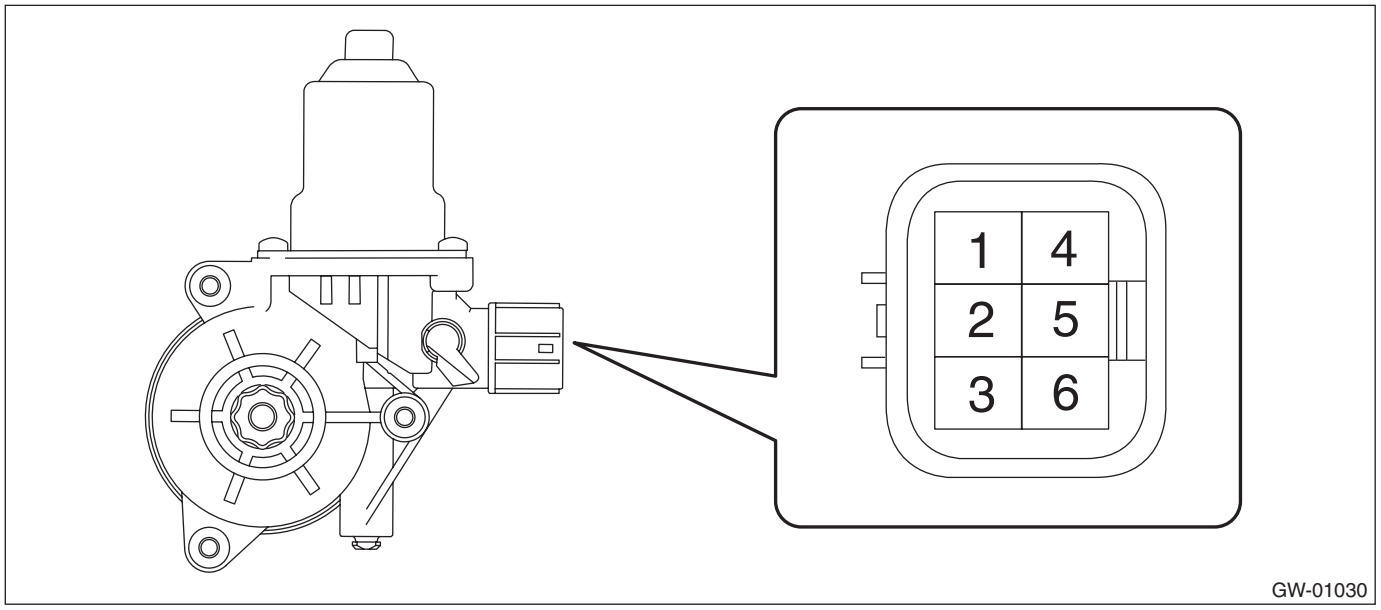
B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to GW-3, REAR DOOR GLASS, COMPONENT, General Description.>

C: INSPECTION

1) Disconnect the connector of the motor - rear.
2) Check the motor operation when battery voltage is applied between terminals of the motor - rear connector.



- LH side

Terminal No.	Inspection conditions	Standard
4 (+) — 1(–)	Apply battery voltage between terminals.	Increase
1 (+) — 4(–)	Apply battery voltage between terminals.	Decrease

- RH side

Terminal No.	Inspection conditions	Standard
3 (+) — 6(–)	Apply battery voltage between terminals.	Increase
6 (+) — 3(–)	Apply battery voltage between terminals.	Decrease

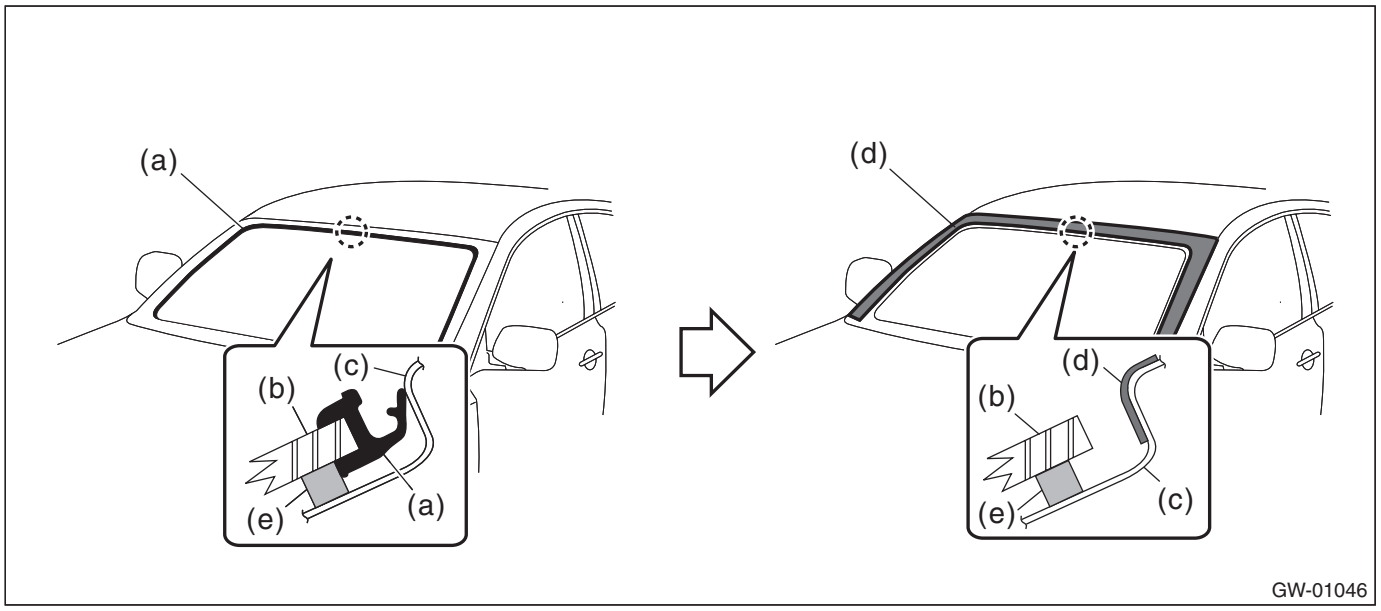
3) If it does not operate properly as a result of inspection, replace the regulator and motor assembly - rear.

15.Windshield Glass

A: REMOVAL

1. USING WINDSHIELD GLASS KNIFE

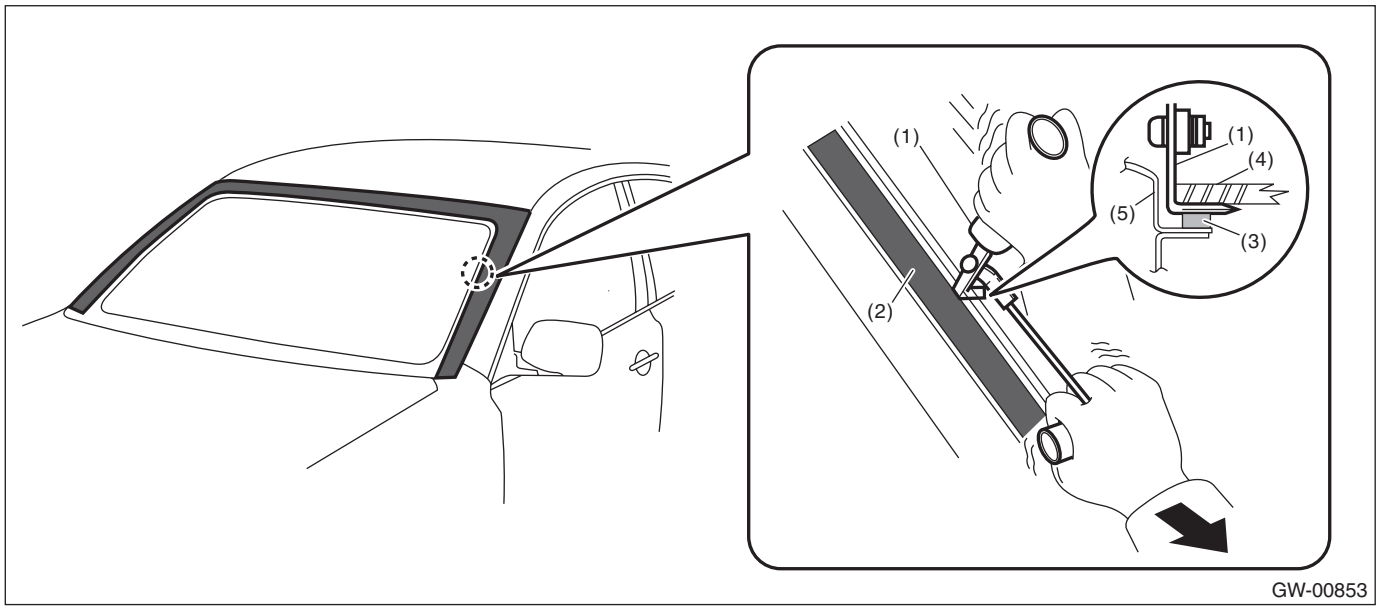
1) Disconnect the ground cable from battery. (Models with wiper deicer)
2) Remove the trim panel - front pillar UPR. <Ref. to EI-95, REMOVAL, Upper Inner Trim.>
3) Remove the cowl panel assembly. <Ref. to EI-50, REMOVAL, Cowl Panel.>
4) Disconnect the wiper deicer connector. (Models with wiper deicer)
5) Remove the molding - front window from the glass - front window, and attach protective tape on the body side of the circumference of the glass - front window.



(a) Molding - front window
(b) Glass - front window
(c) Body panel
(d) Protective tape
(e) Adhesive

6) Remove the glass - front window.
(1) Apply sufficient amount of soapy water to the adhesive part and insert the windshield glass knife.
(2) While holding the edges of the knife and the glass - front window at a right angle, move the windshield glass knife parallel to the edge of the glass - front window, and cut the adhesive along the surface and the edge of the glass - front window.

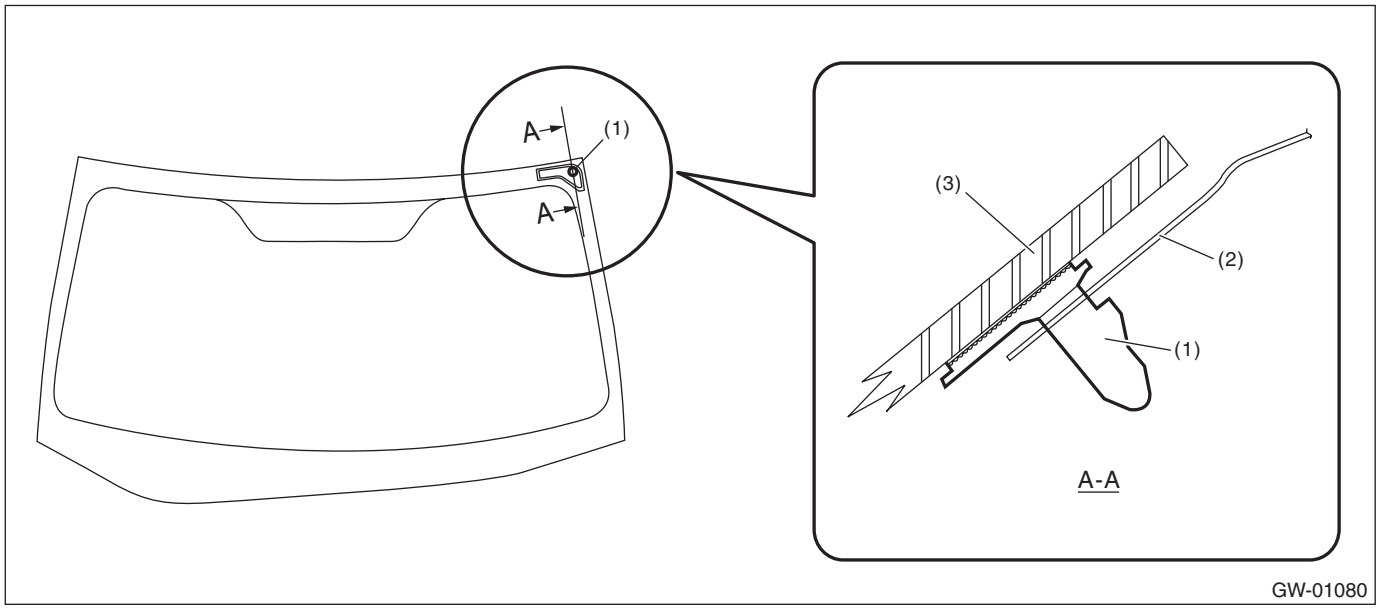
CAUTION:
• Cutting of adhesive part should be started from an area with wider gap between the glass - front window and the body.
• Never twist the windshield glass knife.



(1) Windshield glass knife
(2) Protective tape
(3) Adhesive
(4) Glass - front window
(5) Body panel

(3) Disconnect the locating pin - front window, and remove the glass - front window.

NOTE:
The locating pin - front window are bonded to the corners of the glass - front window. Use piano wire to disconnect the pins.

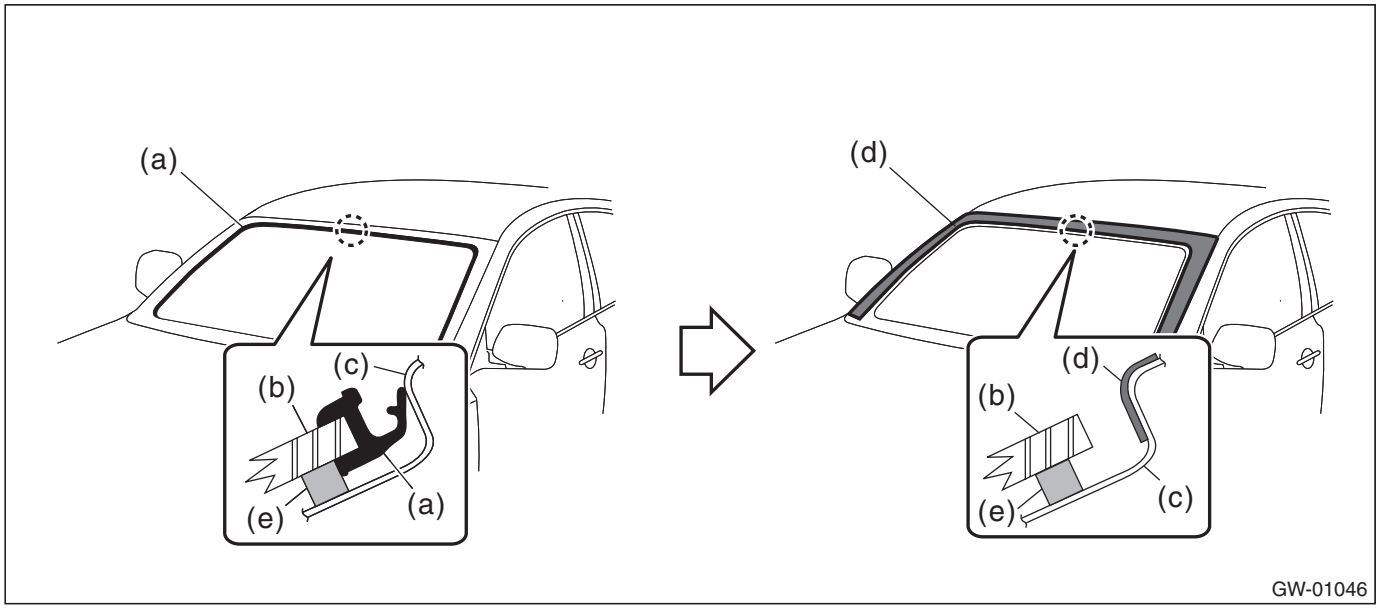


(1) Locating pin - front window
(2) Body panel
(3) Glass - front window

2. USING PIANO WIRE

CAUTION:
- **Do not tightly pull the piano wire against the glass - front window edge.**
- **Apply protective tape, etc, and be careful that the inner and outer components of the vehicle are not damaged.**
- **Do not cross piano wires. Otherwise they may be cut.**

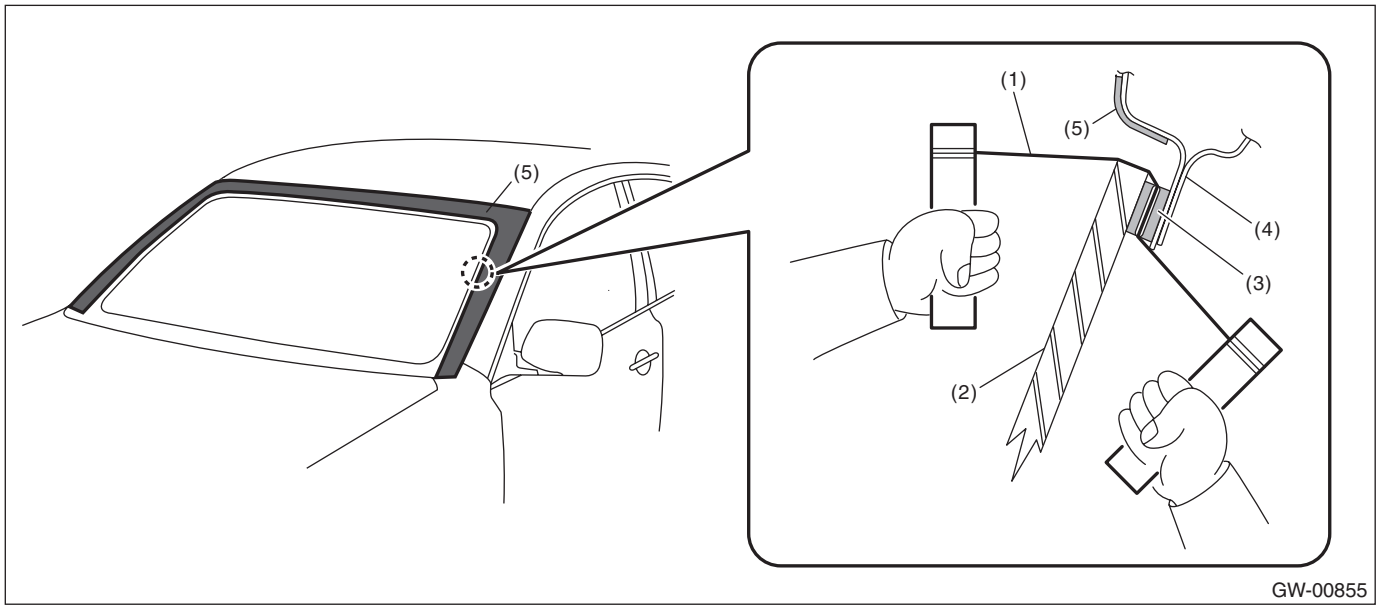
1) Disconnect the ground cable from battery. (Models with wiper deicer)
2) Remove the trim panel - front pillar UPR. <Ref. to EI-95, REMOVAL, Upper Inner Trim.>
3) Remove the cowl panel assembly. <Ref. to EI-50, REMOVAL, Cowl Panel.>
4) Disconnect the wiper deicer connector. (Models with wiper deicer)
5) Remove the molding - front window from the glass - front window, and attach protective tape on the body side of the circumference of the glass - front window.



(a) Molding - front window
(b) Glass - front window
(c) Body panel
(d) Protective tape
(e) Adhesive

6) Remove the glass - front window.
(1) Using a drill, make a hole in the adhesive part.
(2) Pass the piano wire through the hole, and pull the wire ends alternately to cut off the adhesive part and the locating pin - front window.

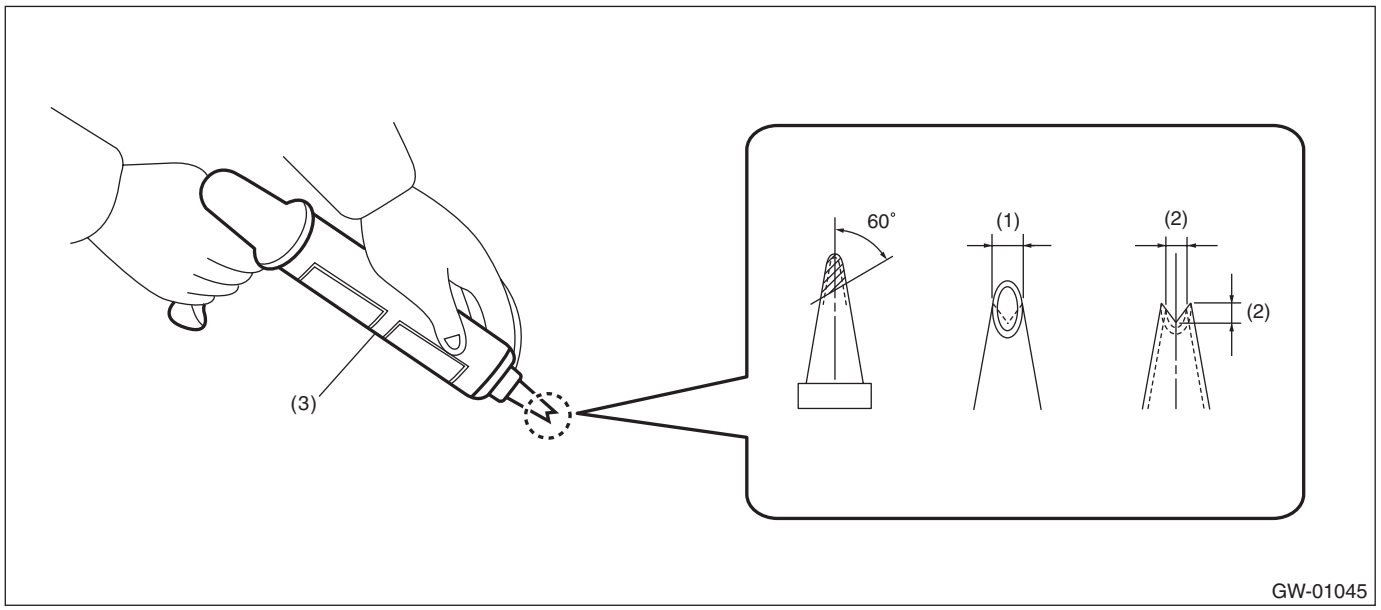
CAUTION:
Attach a piece of wood to both piano wire ends.



(1) Piano wire
(2) Glass - front window
(3) Adhesive
(4) Body panel
(5) Protective tape

B: INSTALLATION

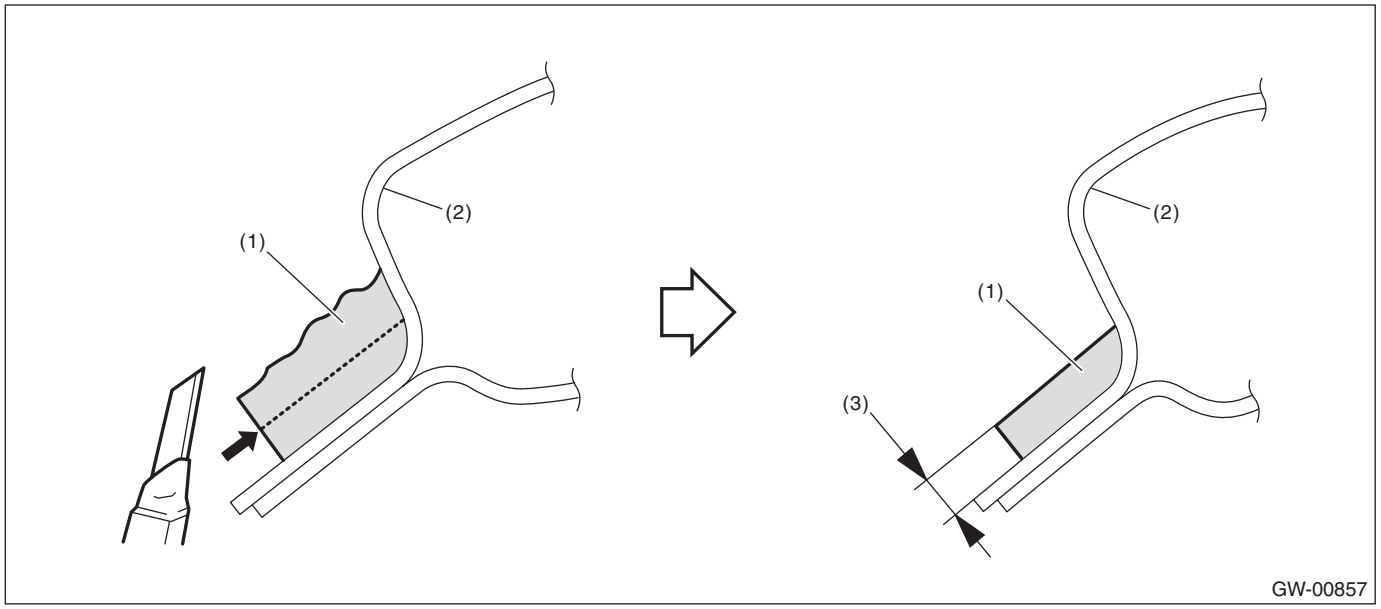
1) Fabricate the cartridge nozzle tip as shown and set the sealant gun with the adhesive.



(1) 10 mm (0.39 in)
(2) 8 mm (0.31 in)
(3) Sealant gun

2) Remove the adhesive layer on the body using cutter knife to obtain smooth face of 2 mm (0.08 in) thick.

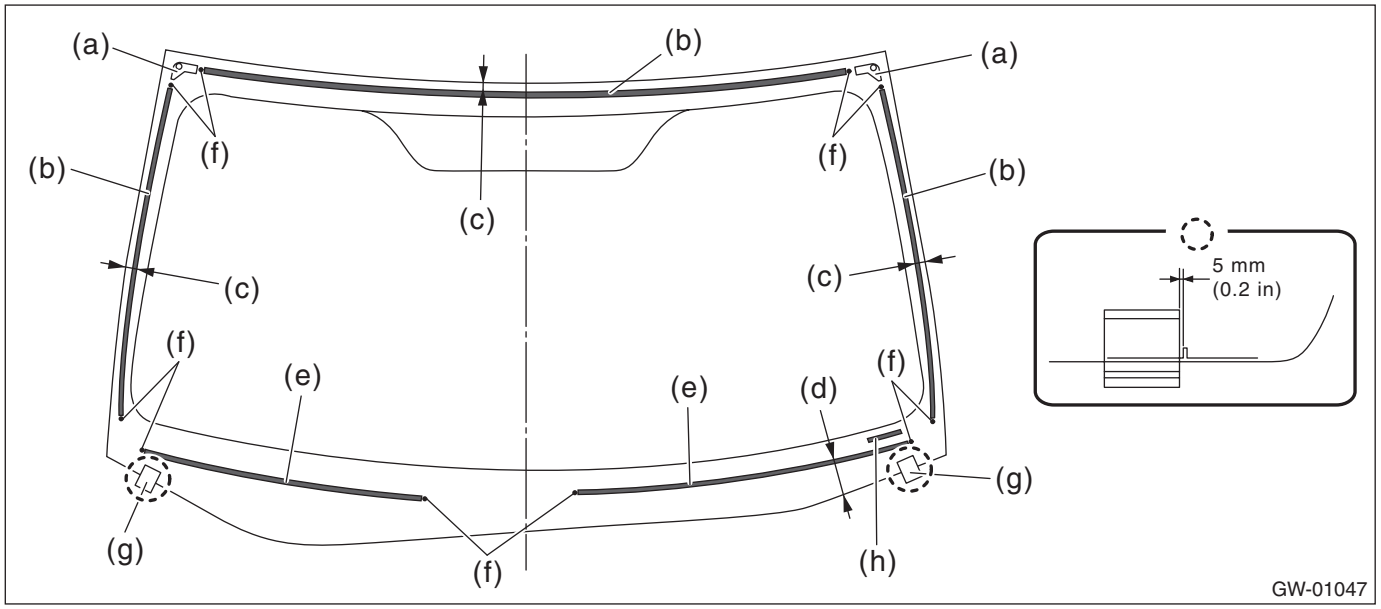
CAUTION:
- **Be careful not to damage the body and paint surface.**
- **Be sure to keep some of old adhesive.**



(1) Adhesive (2) Body panel (3) 2 mm (0.08 in)

3) Clean the glass - front window and the body with alcohol or white gasoline to completely eliminate cutting powder, dust and dirt.
4) Attach the dam rubber - front to the glass - front window.

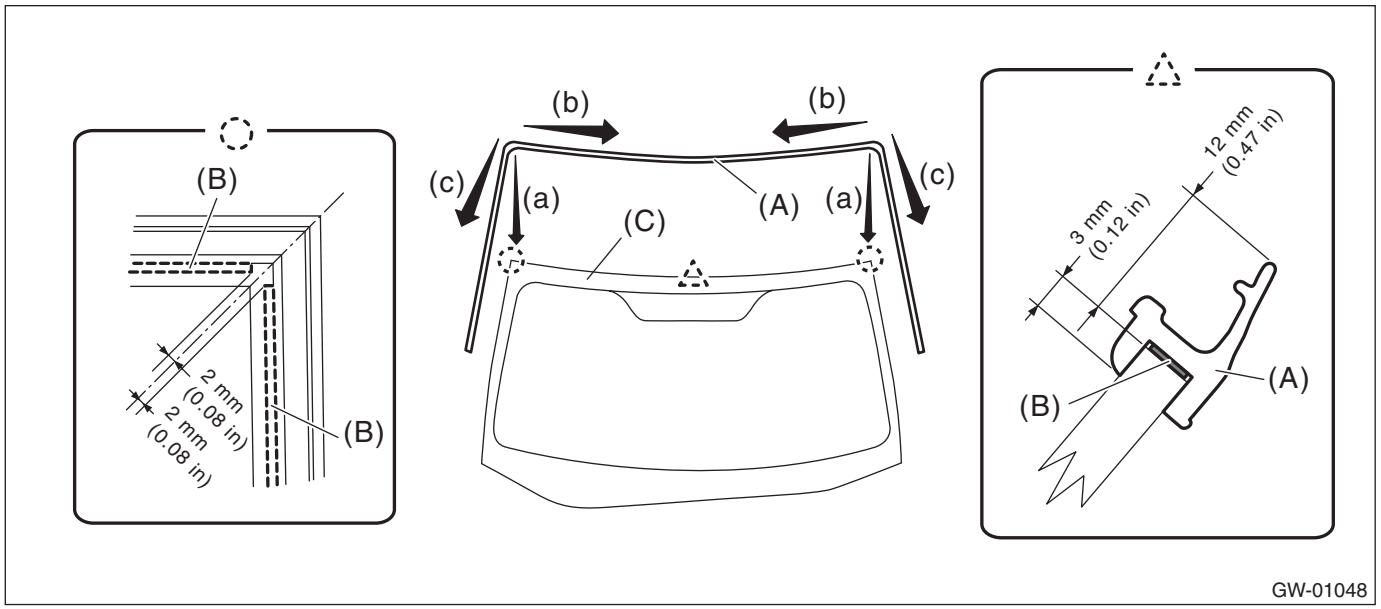
NOTE:
Adhere the dam rubber along with the ceramic print.



(a) Locating pin - front window (d) 14.1 mm (0.56 in) (g) Seal - lower
(b) Dam rubber - front upper (e) Dam rubber - front lower (h) Seal - lower VIN
(c) 16 mm (0.63 in) (f) Ceramic print

5) Attach the molding - front window to the glass - front window.

CAUTION:
Be careful to attach the molding - front window so that the molding has no loose or undulating part.



(1) Align the molding - front window (A) to the upper ends (a) of the glass - front window (C).
(2) Install the molding - front window from both corners of the upper edge toward the center (b).
(3) Install the molding - front window from both corners of the upper edge toward the lower side (c).
(4) Firmly apply the double sided tape (B) of the molding - front window evenly to the surface of the glass - front window.

6) Install the glass - front window.
(1) Apply the primer to the adhesive surface of glass - front window side and body side using sponge.

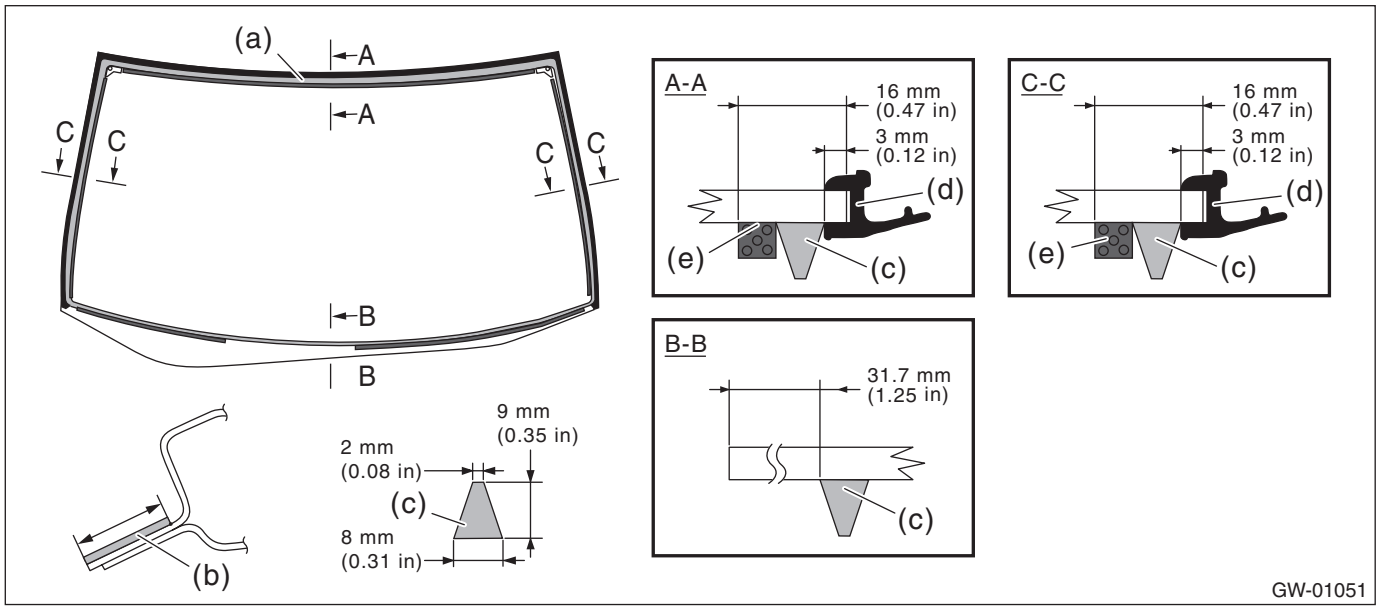
Glass primer:
Dow Automotive's
ESSEX U-401, U-402 or equivalent

Painted surface primer:
Dow Automotive's
ESSEX U-413 or equivalent

NOTE:
• Primer once attached to the painted surface of the body and internal trim is hard to wipe off. Mask the circumference of such area.
• Let primer dry for about ten minutes before installing the glass - front window.
• Do not touch the surface coated with primer.

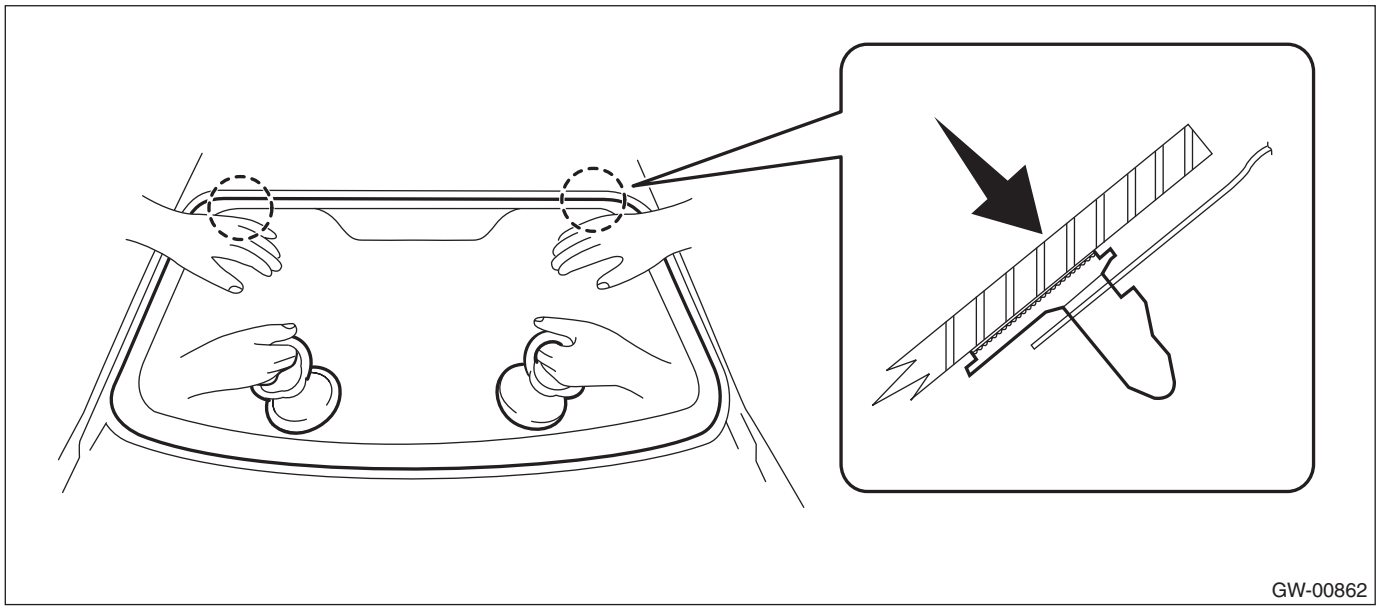
(2) Apply adhesive to the end back surface of the glass - front window.

Adhesive:
Dow Automotive's
ESSEX U-400HV or equivalent



(a) Application of primer (glass side)
(b) Application of primer (body side)
(c) Adhesive
(d) Molding - front window
(e) Dam rubber - front

(3) Fit the locating pins - front window to the vehicle body using suction rubber cups to install the windshield glass.



(4) Lightly press the entire perimeter of the glass - front window for tight fit.
(5) Make flush the adhesive surface jutted out using spatula.

7) After completion of all work, allow the vehicle to stand for about 24 hours.

NOTE:
• When opening/closing the door after the glass - front window was bonded, always lower the glass assembly - door first, and then open/close it carefully.
• Move the vehicle slowly.
• For minimum drying time and vehicle standing time before driving after bonding, follow instructions or instruction manual from the adhesive manufacturer.

8) Connect the wiper deicer connector. (Models with wiper deicer)
9) Install the cowl panel assembly. <Ref. to EI-51, INSTALLATION, Cowl Panel.>
10) Install the trim panel - front pillar UPR. <Ref. to EI-99, INSTALLATION, Upper Inner Trim.>
11) Connect the battery ground terminal. (Models with wiper deicer)
12) After curing of adhesive, pour the water on external surface of vehicle to check that there are no water leaks.

NOTE:
When a vehicle is returned to the user, tell him or her that the vehicle should not be subjected to heavy impact for at least three days.

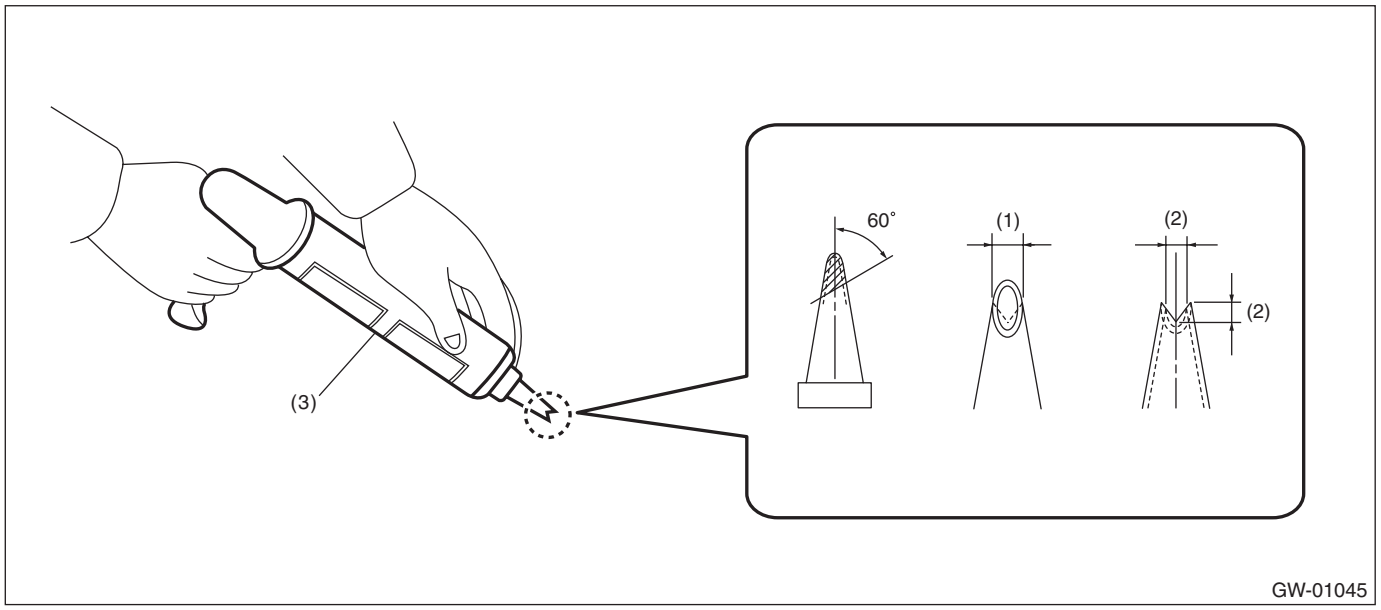
16.Rear Window Glass

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Disconnect the rear defogger connector.
3) Remove the glass - rear window in the same procedure as for the glass - front window. <Ref. to GW-37, REMOVAL, Windshield Glass.>

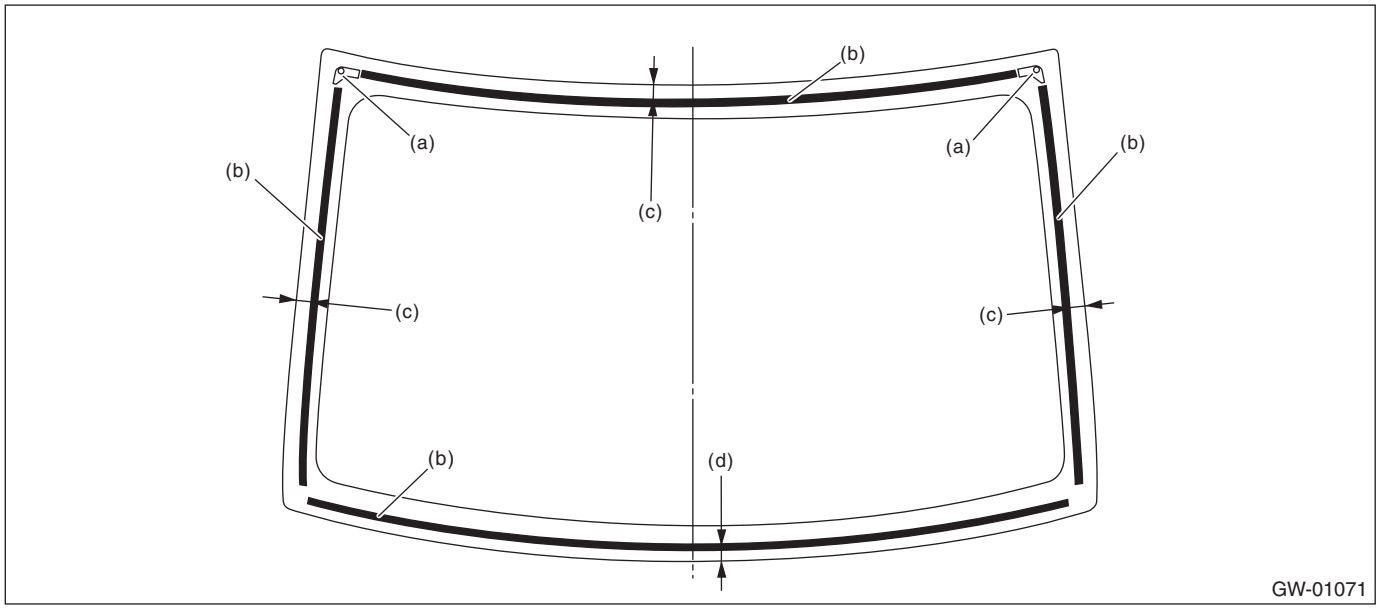
B: INSTALLATION

1) Fabricate the cartridge nozzle tip as shown and set the sealant gun with the adhesive.



(1) 10 mm (0.39 in) (2) 8 mm (0.31 in) (3) Sealant gun

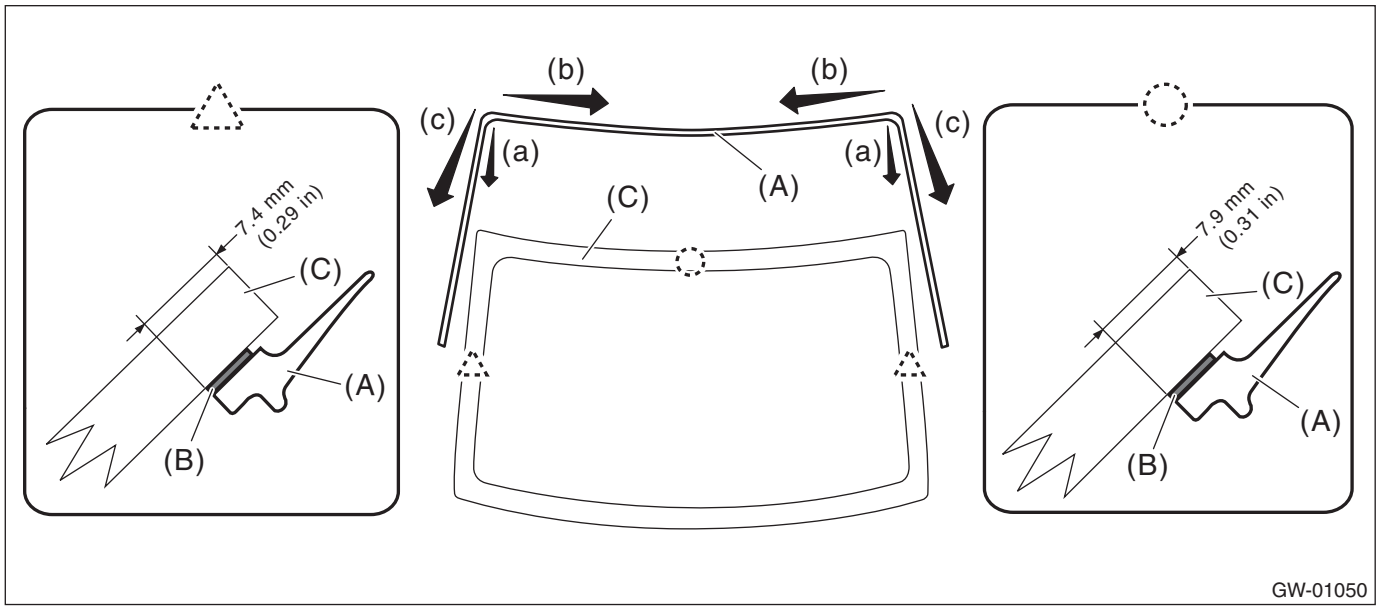
2) Smoothen and clean the adhesive surfaces of the glass - rear window and body using the same procedures as for the glass - front window. <Ref. to GW-40, INSTALLATION, Windshield Glass.>
3) Attach the dam rubber - rear to the glass - rear window.



(a) Locating pin - rear window (c) 20.9 mm (0.82 in) (d) 10.7 mm (0.42 in)
(b) Dam rubber - rear

4) Attach the molding - rear window to the glass - rear window.

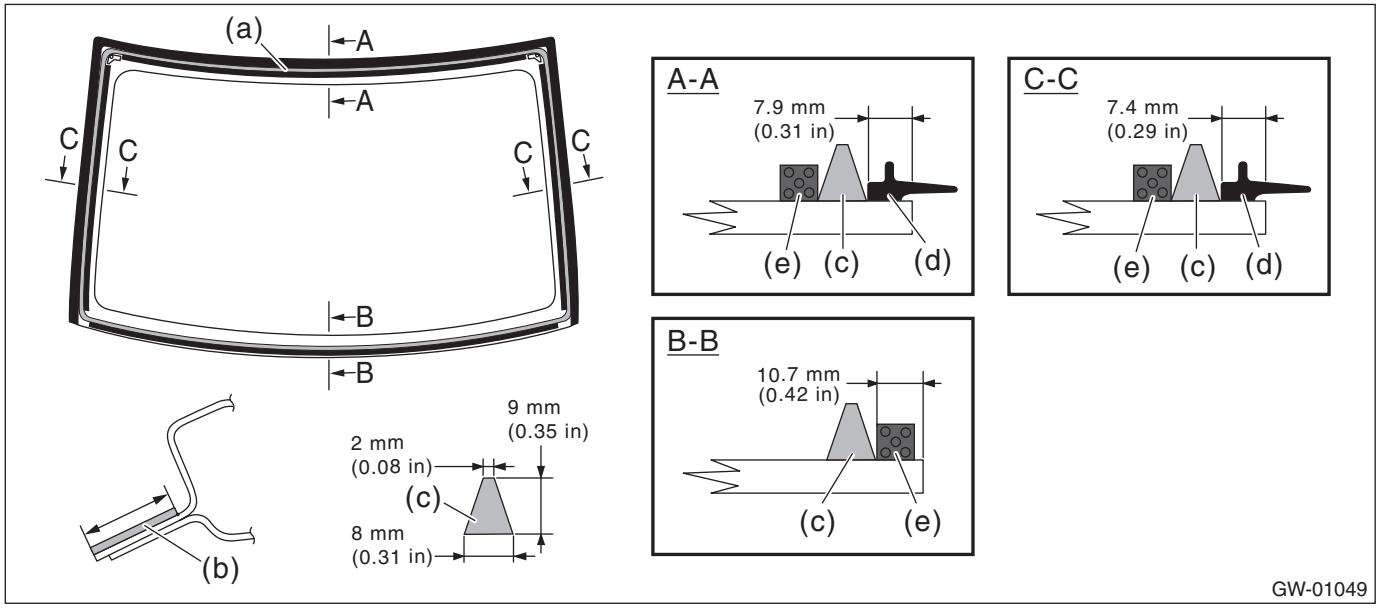
CAUTION:
Be careful to attach the molding - rear window so that the molding has no loose or undulating part.



(1) Align the molding - rear window (A) to the upper ends (a) of the glass - rear window (C).
(2) Install the molding - rear window from both corners of the upper edge toward the center (b).
(3) Install the molding - rear window from both corners of the upper edge toward the lower side (c).
(4) Firmly apply the double sided tape (B) of the molding - rear window evenly to the surface of the glass - rear window.

5) Install the glass - rear window in the same procedure as for the glass - front window. <Ref. to GW-40, INSTALLATION, Windshield Glass.>

(1) Apply the primer to the adhesive surface of glass - rear window side and body side using sponge.
(2) Apply adhesive to the end back surface of the glass - rear window.



(a) Application of primer (glass side)
(b) Application of primer (body side)
(c) Adhesive
(d) Molding - rear window
(e) Dam rubber - rear

(3) Insert the locating pins - rear window into the rear panel holes, and install the glass - rear window.
(4) Lightly press the entire perimeter of the glass - rear window for tight fit.
(5) Make flush the adhesive surface jutted out using spatula.

6) After completion of all work, allow the vehicle to stand for about 24 hours.

NOTE:
• When opening/closing the door after the glass - rear window was bonded, always lower the glass assembly - door first, and then open/close it carefully.
• Move the vehicle slowly.
• For minimum drying time and vehicle standing time before driving after bonding, follow instructions or instruction manual from the adhesive manufacturer.

7) Connect the rear defogger connector.
8) After curing of adhesive, pour the water on external surface of vehicle to check that there are no water leaks.

NOTE:
When a vehicle is returned to the user, tell him or her that the vehicle should not be subjected to heavy impact for at least three days.

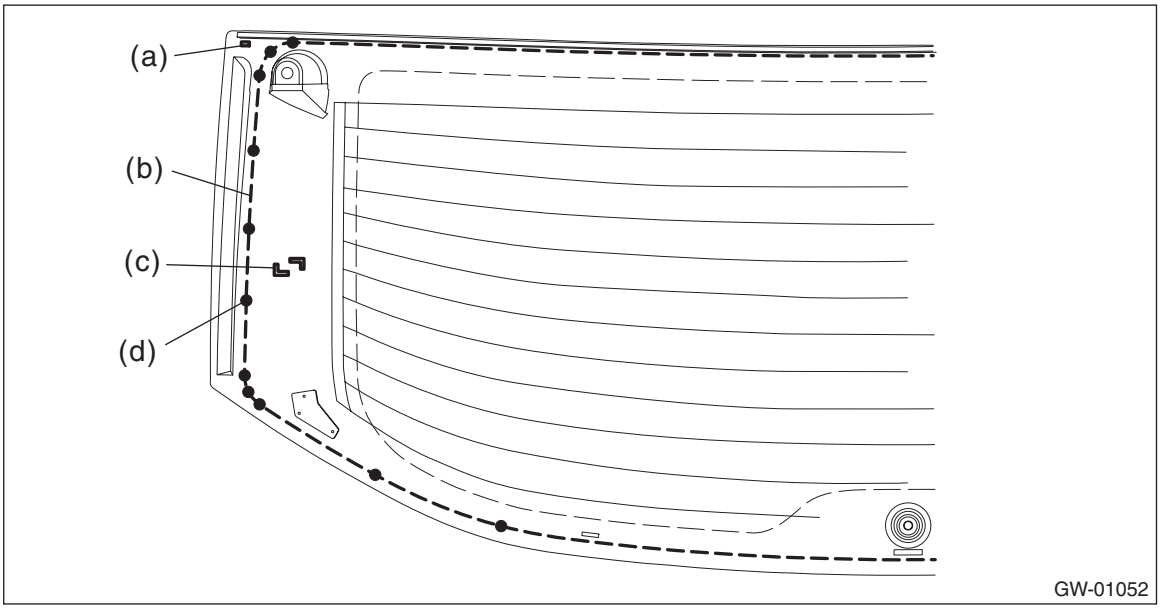
17.Rear Gate Glass

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear gate and the motor assembly - rear wiper. <Ref. to WW-41, REMOVAL, Rear Wiper Motor.>
3) Disconnect the rear defogger connector.
4) Remove the glass - rear gate in the same procedure as for the glass - front window. <Ref. to GW-37, REMOVAL, Windshield Glass.>

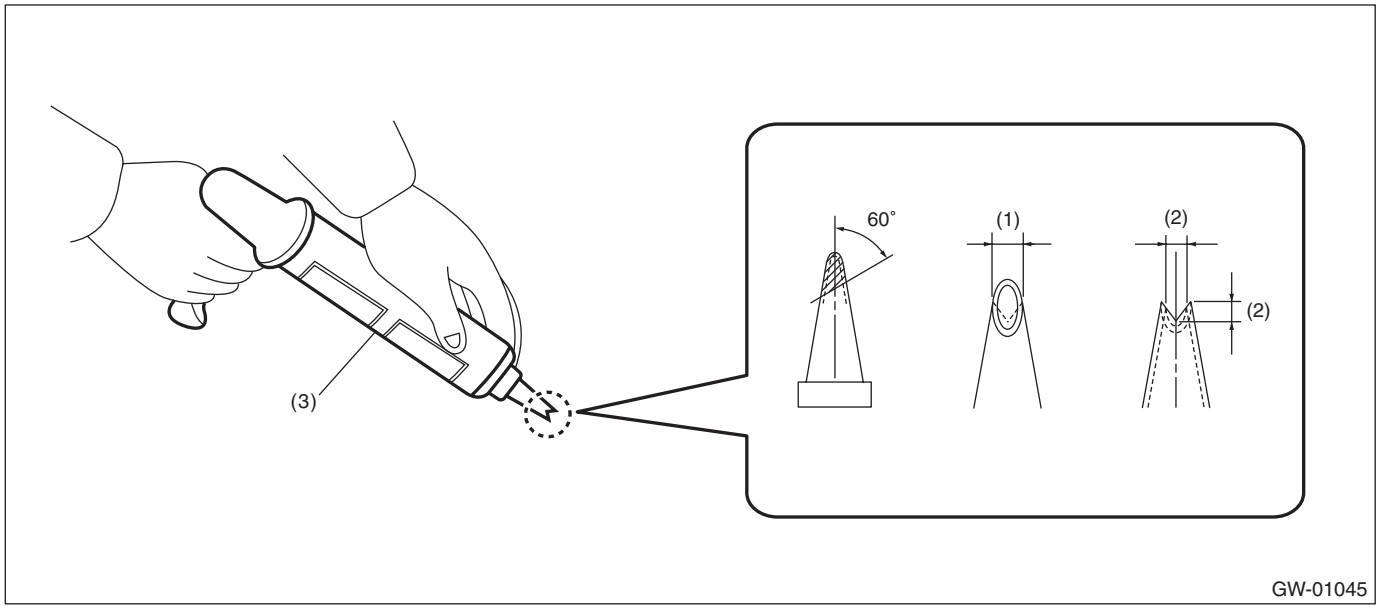
B: INSTALLATION

NOTE:
Use the markings on the glass to apply adhesive and primer, and to install the dam rubber - rear gate and the spacer - rear gate.



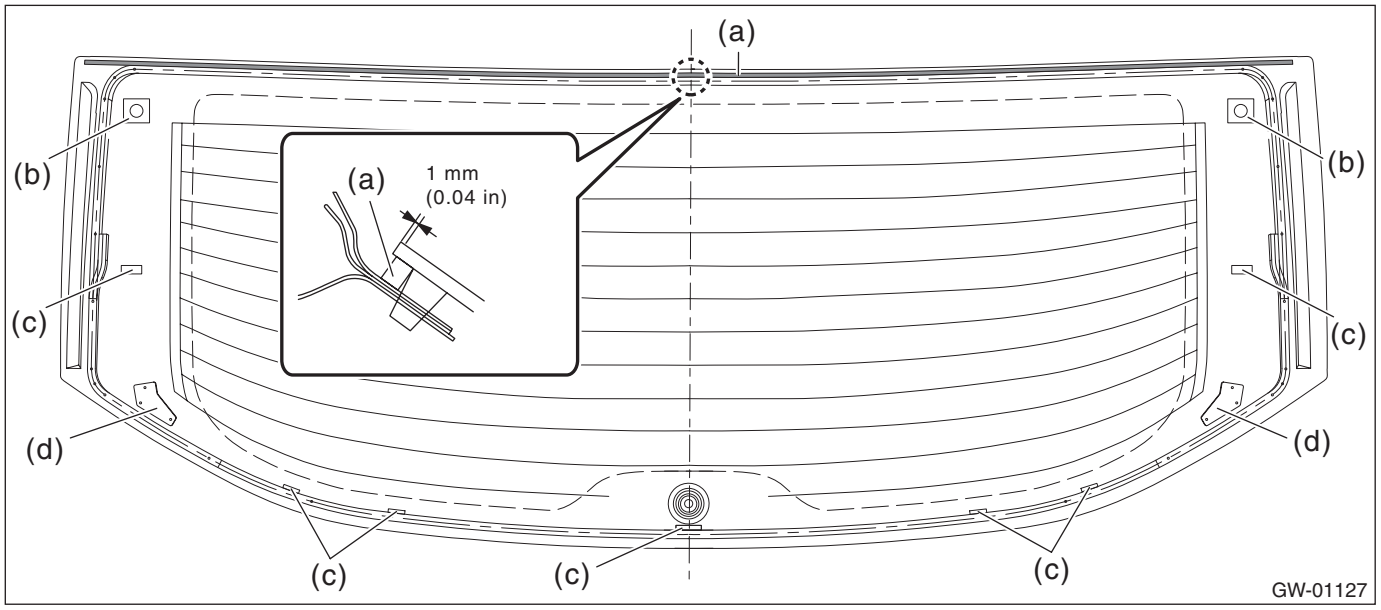
(a) Marking for dam rubber - rear gate application (Ag print)
(b) Center line for adhesive
(c) Marking for spacer - rear gate application (Ag print)
(d) Marking for primer application

1) Fabricate the cartridge nozzle tip as shown and set the sealant gun with the adhesive.



(1) 10 mm (0.39 in) (2) 8 mm (0.31 in) (3) Sealant gun

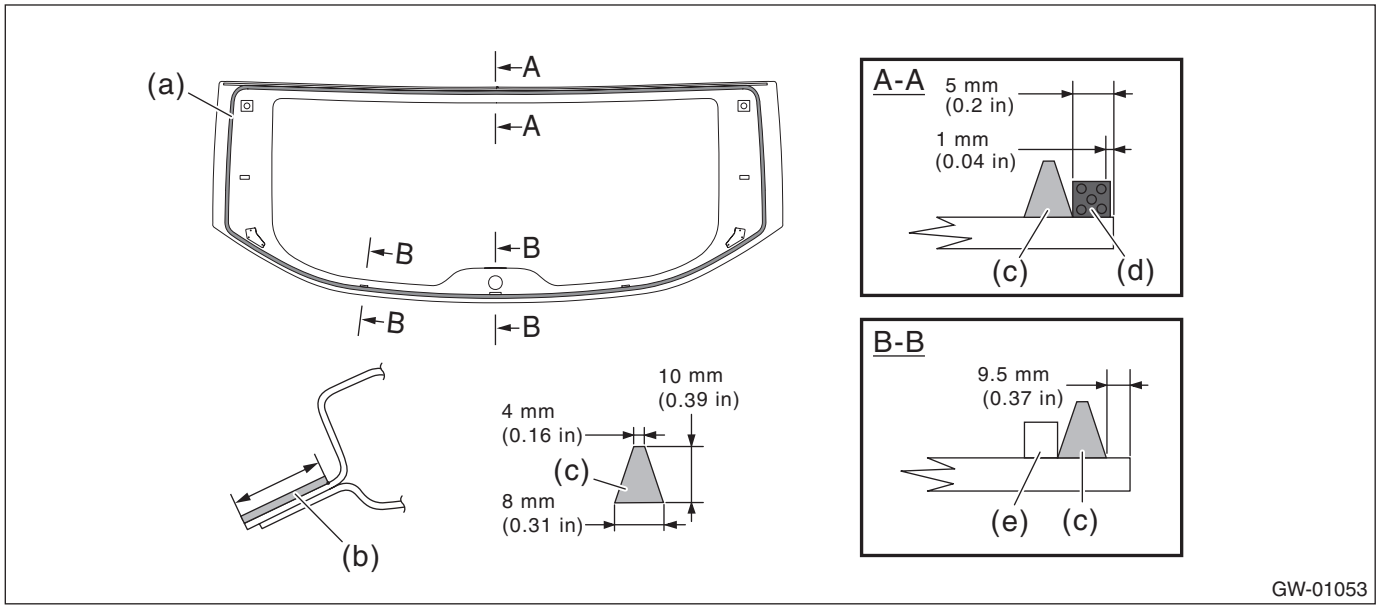
2) Smoothen and clean the adhesive surfaces of the glass - rear gate and body using the same procedures as for the glass - front window. <Ref. to GW-40, INSTALLATION, Windshield Glass.>
3) Attach the dam rubber - rear gate to the glass - rear gate.



(a) Dam rubber - rear gate (c) Spacer - rear gate (d) Locating pin - rear gate
(b) Holder - rear gate

4) Install the glass - rear gate.
(1) Apply the primer to the adhesive surface of glass - rear gate side and body side using sponge.

(2) Apply adhesive to the glass - rear gate end back surface.



(a) Application of primer (glass side)
(b) Application of primer (body side)
(c) Adhesive
(d) Dam rubber - rear gate
(e) Spacer - rear gate

(3) Attach the clip to the holder - rear gate of the glass - rear gate.
(4) Insert the locating pins - rear gate into the rear gate panel holes, and install the glass - rear gate.
(5) Lightly press the entire perimeter of the glass - rear gate for tight fit.
(6) Make flush the adhesive surface jutted out using spatula.

5) After completion of all work, allow the vehicle to stand for about 24 hours.

NOTE:
• When opening/closing the door after the glass - rear gate was bonded, always lower the glass assembly - door first, and then open/close it carefully.
• Move the vehicle slowly.
• For minimum drying time and vehicle standing time before driving after bonding, follow instructions or instruction manual from the adhesive manufacturer.

6) Connect the rear defogger connector.
7) Install the motor assembly - rear wiper and the arm assembly - rear wiper.

Tightening torque:
Motor assembly - rear wiper and arm assembly - rear wiper: <Ref. to WW-3, REAR WIPER, COMPONENT, General Description.>

8) Install the trim panel - rear gate. <Ref. to EI-143, INSTALLATION, Rear Gate Trim.>
9) After curing of adhesive, pour the water on external surface of vehicle to check that there are no water leaks.

NOTE:
When a vehicle is returned to the user, tell him or her that the vehicle should not be subjected to heavy impact for at least three days.

18.Rear Window Defogger System

A: WIRING DIAGRAM

Refer to “Rear Defogger System” in the wiring diagram. <Ref. to WI-124, WIRING DIAGRAM, Rear Defogger System.>

B: INSPECTION

1. CHECK SYSTEM

Symptoms	Inspection order
Rear window defogger does not operate.	1. Check the fuse. 2. Check the rear defogger relay. 3. Check the rear window defogger switch. 4. Check the heat wire. 5. Check the wiring harness. 6. Check body integrated unit.

NOTE:
Rear window defogger system can be customized using the Subaru Select Monitor, when the customize setting {Auto A/C ECU Setting} of the body integrated unit is set to {support}.

System name	Initial setting	Customize setting
Rear defogger operation mode	OFF after 15 min.	Repeat 15 min. operation and 2 min. stop.

2. CHECK WITH SUBARU SELECT MONITOR

CAUTION:
Check whether the Rr Defogger op. mode setting is in initial setting or customize setting before performing inspection.

1) Check the input signal when the rear window defogger switch is operated using Subaru Select Monitor.
   (1) Prepare the Subaru Select Monitor. <Ref. to GW-7, PREPARATION TOOL, General Description.>
   (2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”.
   (3) On «System Selection Menu» display, select {Integ. unit mode}.
   (4) Select {Auto A/C ECU Setting} from Current Data Display & Save.
   (5) Check the vehicle equipment and the settings of body integrated unit.
   • Model with manual A/C: Without auto A/C ECM setting
   • Model with auto A/C: With auto A/C ECM setting
   If correct, go to (6).
   If not correct, go to (8).
   (6) Select the {Rr Defogger output} on {Current Data Display & Save}.
   (7) Check the displayed data (ON/OFF) by operating the rear window defogger switch.
   (8) On the system selection menu display, select the body integrated unit mode. Select customize from work support, then select {Auto A/C ECU Setting}. Match the auto A/C ECM setting to the actual vehicle equipment.
2) Check the operation with rear window defogger switch ON.
• When customize setting is set as “Continuous”, it is normal if the 15-minute operation and 2-minute stop repeats.
• When customize setting is “Normal”, it is normal if the operation lasts for 15 minutes and then turns OFF.
3) When the operation in 2) above fails, replace the body integrated unit.

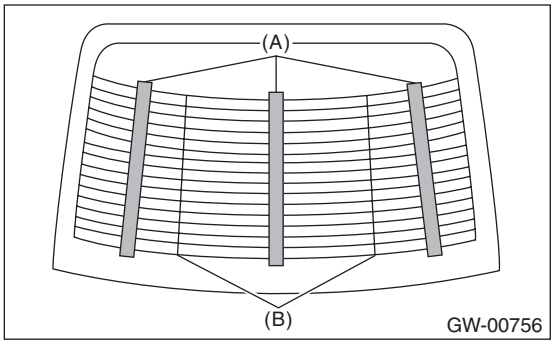
3. HEAT WIRE INSPECTION

CAUTION:
Use a dry soft cloth to wipe off dirt on the glass along the heat wires with care not to damage the heat wires.

1) Prepare the following checking items.
- Liquid crystal thermograph sheet (Approximate Size: 300 × 300 mm (11.8 × 11.8 in) and thermal temperature: 35 — 40°C (95 — 104°F))
- Aluminum foil

2) Turn the ignition switch to ON.
3) Turn the defogger switch to ON.
4) Push the liquid crystal thermograph sheet from the outside of the glass - rear window.

NOTE:
Use the liquid crystal thermograph sheet every range it is separated with the separate line.



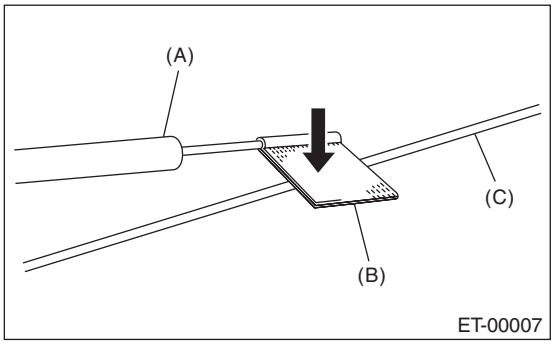
(A) Liquid crystal thermograph sheet
(B) Separate line

5) Determine the faulty heat wire by checking the color of the liquid crystal thermograph sheet.

Liquid crystal thermograph sheet	Criteria
Change occurred (red → blue)	Normal
No change (black)	Open

NOTE:
- Check from the inside of the glass - rear window if the liquid crystal thermograph sheet does not change.
- The time for the color change may differ depends on the surface temperature of the glass.

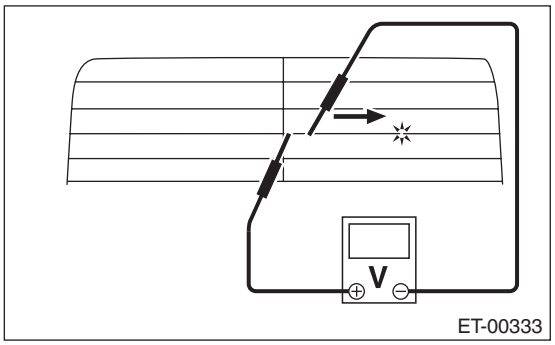
6) Wrap a piece of aluminum foil around the tip of tester probe and press it against the heat wire with your finger.



(A) Tester probe
(B) Aluminum foil
(C) Heat wire

7) To both ends of the section that has been found to include an open in the step 5), apply the tester positive (+) probe and the negative (–) probe.

8) Move the tester probe on the negative (–) side slowly along the heat wire. If voltage changes from zero while moving the tester probe, heat wire is open at the voltage change point.

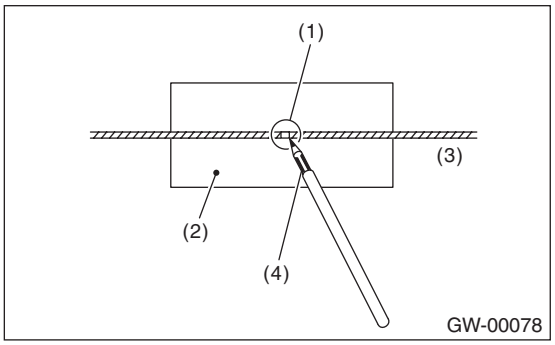


9) Repair the heat wire that determines the place of the open circuit. <Ref. to GW-53, REPAIR, Rear Window Defogger System.>

C: REPAIR

1) Clean the broken portion with alcohol or white gasoline.
2) Mask both side of wire with masking tape.
3) Apply the conductive silver composition to the broken portion.

Conductive silver composition:
by Permatex
QUICK GRID



(1) Broken portion
(2) Masking tape
(3) Broken wire
(4) Conductive silver composition

4) Dry using a dryer after applying the composition.
5) After repair, check the wire.

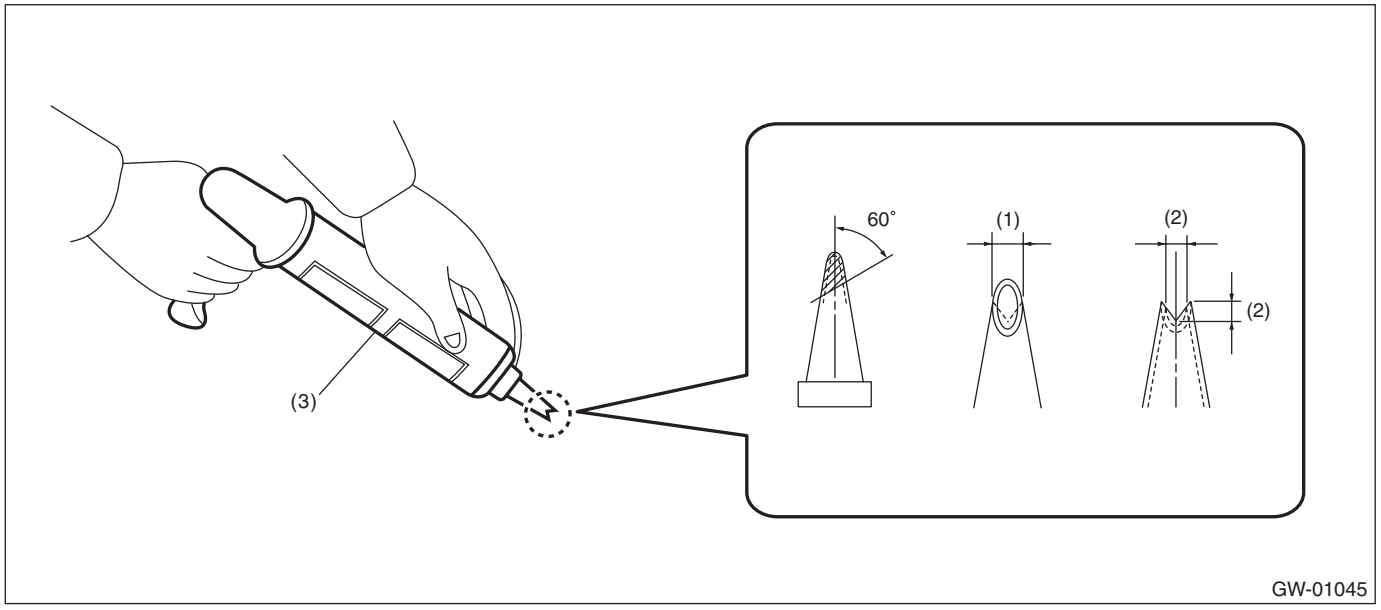
19.Rear Quarter Glass

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear pillar UPR. <Ref. to EI-103, 5 DOOR MODEL, REMOVAL, Rear Quarter Trim.>
3) Remove the glass - rear quarter in the same procedure as for the glass - front window. <Ref. to GW-37, REMOVAL, Windshield Glass.>

B: INSTALLATION

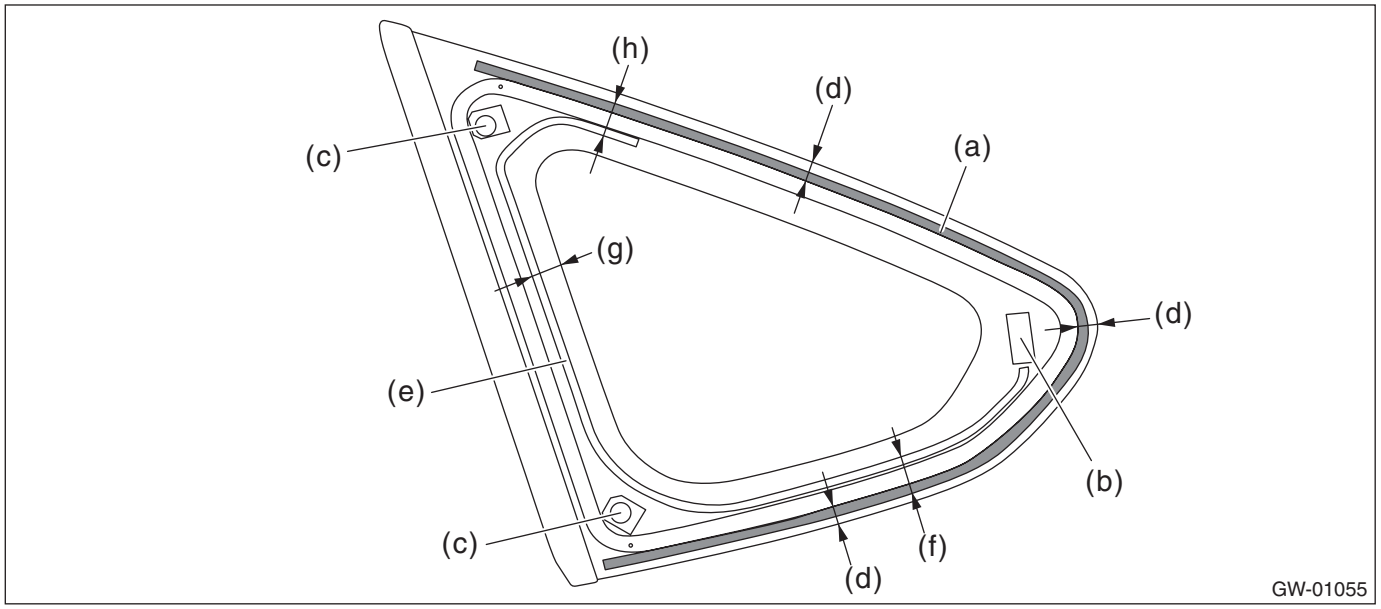
1) Fabricate the cartridge nozzle tip as shown and set the sealant gun with the adhesive.



(1) 10 mm (0.39 in) (2) 8 mm (0.31 in) (3) Sealant gun

2) Smoothen and clean the adhesive surfaces of the glass - rear quarter and body using the same procedures as for the glass - front window. <Ref. to GW-40, INSTALLATION, Windshield Glass.>

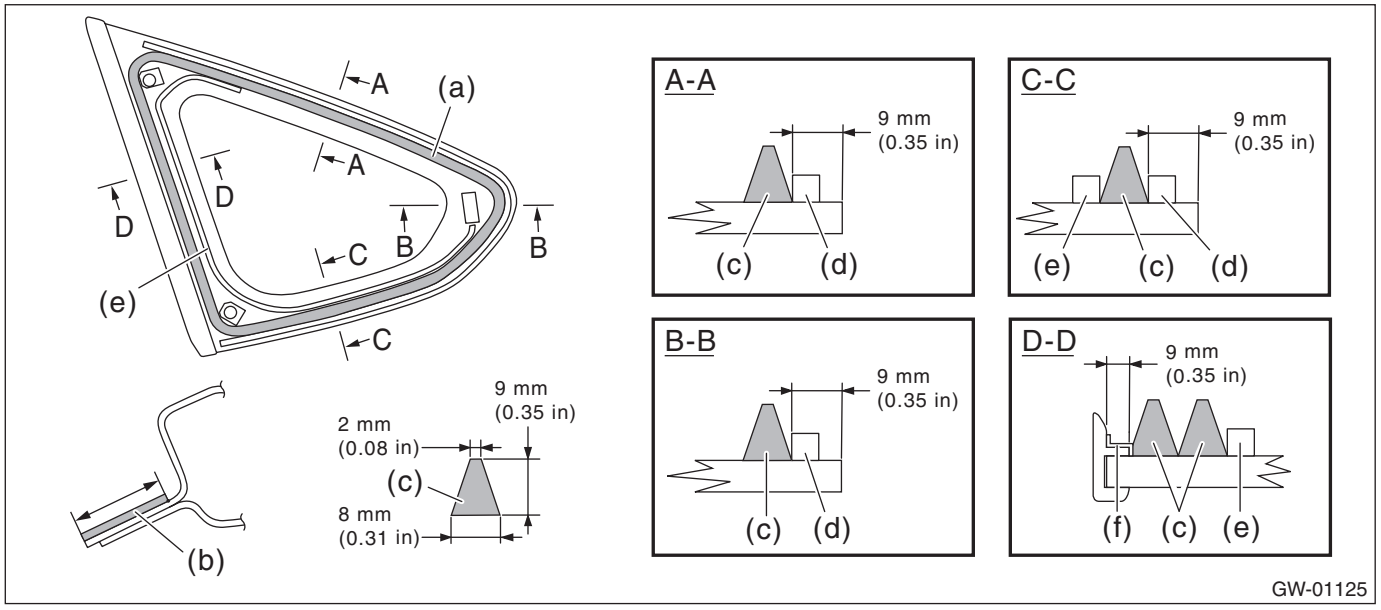
3) Install the dam rubber - rear and the seal - rear quarter to the glass - rear quarter.



(a) Dam rubber - rear quarter
(b) Fastener - rear quarter
(c) Locating pin - rear quarter
(d) 9 mm (0.35 in)
(e) Seal - rear quarter
(f) 23.1 mm (0.91 in)
(g) 11.2 mm (0.44 in)
(h) 22.4 mm (0.88 in)

4) Install the glass - rear quarter in the same procedure as for the glass - front window. <Ref. to GW-40, INSTALLATION, Windshield Glass.>

(1) Apply the primer to the adhesive surface of glass - rear quarter side and body side using sponge.
(2) Apply adhesive to the glass - rear quarter end back surface.



(a) Application of primer (glass side)
(b) Application of primer (body side)
(c) Adhesive
(d) Dam rubber - rear quarter
(e) Seal - rear quarter
(f) Protective plate

(3) Mount the fastener - rear quarter on the vehicle body.
(4) Insert the locating pins - rear quarter into the side panel holes, and install the glass - rear quarter.
(5) Lightly press the entire perimeter of the glass - rear quarter for tight fit.
(6) Make flush the adhesive surface jutted out using spatula.

5) After completion of all work, allow the vehicle to stand for about 24 hours.

NOTE:
- When opening/closing the door after the glass - rear quarter was bonded, always lower the glass assembly - door first, and then open/close it carefully.
- Move the vehicle slowly.
- For minimum drying time and vehicle standing time before driving after bonding, follow instructions or instruction manual from the adhesive manufacturer.

6) Install the trim panel - rear pillar UPR. <Ref. to EI-106, INSTALLATION, Rear Quarter Trim.>

7) After curing of adhesive, pour the water on external surface of vehicle to check that there are no water leaks.

NOTE:
When a vehicle is returned to the user, tell him or her that the vehicle should not be subjected to heavy impact for at least three days.

20.Wiper Deicer System

A: WIRING DIAGRAM

Refer to “Wiper Deicer System” in the wiring diagram. <Ref. to WI-153, Wiper Deicer System.>

B: INSPECTION

1. CHECK SYSTEM

NOTE:
- The wiper deicer does not operate when the ambient temperature becomes 5°C (41°F) or more.
- The wiper deicer operates with the rear window defogger at the same time.
- It is possible to perform a forced operation if you keep holding the rear window defogger switch for 3 seconds or more.

Symptoms	Inspection order
Wiper deicer does not operate.	1. Check the fuse. 2. Check the wiper deicer relay. 3. Check the wiper deicer switch. 4. Check the heat wire. 5. Check the wiring harness. 6. Check body integrated unit.

NOTE:
- Wiper deicer system can be customized using the Subaru Select Monitor, when the customize setting {Auto A/C ECU Setting} of the body integrated unit is set to {support}.
- Set the system using the Rr Defogger op. mode, and setting will be the same as rear defogger system setting.

System name	Initial setting	Customize setting
Rear defogger operation mode	OFF after 15 min.	Continuous operation*

*: When one of the following conditions occurs, continuous operation is suspended and turned off after 15 minutes.
- Ambient temperature at 5°C (41°F) or more continues for 10 seconds.
- Malfunction occurs on ambient sensor.
- Vehicle speed of 15 km/h (9 MPH) or less continues 15 minutes (OFF when conditions are met)
- Malfunction occurs in CAN communication.
- Battery voltage remains at 10 V or less for 30 seconds.
- SI-DRIVE [I] mode driving continues for 10 seconds.

2. CHECK WITH SUBARU SELECT MONITOR

CAUTION:
Before performing the inspection, check the following settings.
- **Wiper deicer setting → “support”. If “no support”, set to “support” using customize setting.**
- **Rr Defogger op. mode setting → Initial setting or customize setting.**

1) Check the input signal when the rear window defogger switch is operated using Subaru Select Monitor.
   (1) Prepare the Subaru Select Monitor. <Ref. to GW-7, PREPARATION TOOL, General Description.>
   (2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”.
   (3) On «System Selection Menu» display, select {Integ. unit mode}.
   (4) Select {Auto A/C ECU Setting} from Current Data Display & Save.
   (5) Check the vehicle equipment and the settings of body integrated unit.
   - Model with manual A/C: Without auto A/C ECM setting
   - Model with auto A/C: With auto A/C ECM setting

   If correct, go to (6).
   If not correct, go to (8).
   (6) Select the {wiper deicer output} on {Current Data Display & Save}.
   (7) Check the displayed data (ON/OFF) by operating the rear window defogger switch.

(8) On the system selection menu display, select the body integrated unit mode. Select customize from work support, then select {Auto A/C ECU Setting}. Match the auto A/C ECM setting to the actual vehicle equipment.

2) Check the operation with rear window defogger switch ON.

- When customize setting is set as “Continuous”, it is normal if the 15-minute operation and 2-minute stop repeats.
- When customize setting is “Normal”, it is normal if the operation lasts for 15 minutes and then turns OFF.

3) When the operation in 2) above fails, replace the body integrated unit.

3. HEAT WIRE INSPECTION

Refer to “HEAT WIRE INSPECTION” of “Rear Window Defogger System”. <Ref. to GW-52, HEAT WIRE INSPECTION, INSPECTION, Rear Window Defogger System.>

NOTE:
Heat wire inspection needs removing/installing procedure of instrument panel assembly.

C: REPAIR

Refer to “REPAIR” of “Rear Window Defogger System”. <Ref. to GW-53, REPAIR, Rear Window Defogger System.>

NOTE:
Heat wire repair needs removing/installing procedure of instrument panel assembly.

BODY STRUCTURE

BS

Page
1. General Description 2

1. Basic Diagnostic Procedure

A: PROCEDURE

NOTE:
When the sunload sensor check is performed indoors or in the shade, it could be diagnosed as having an open circuit of the sensor. Always perform the check in direct sunlight.

	Step	Check	Yes	No
1	**START INSPECTIONS.** 1) Prepare a tool. <Ref. to AC-18, PREPARATION TOOL, General Description.> 2) Perform the pre-inspection. <Ref. to AC(diag)-3, INSPECTION, General Description.>	Is a malfunction found in pre-inspection?	Solve the malfunction found in pre-inspection, and go to the next inspection procedure. Go to step **2**.	Go to step **2**.
2	**PREPARE SUBARU SELECT MONITOR.** Prepare the Subaru Select Monitor.	Is the Subaru Select Monitor prepared?	Go to step **3**.	Go to step **4**.
3	**CHECK DTC.** 1) Leave the vehicle in a troubled condition for one minute or more. 2) Read the DTC using Subaru Select Monitor. NOTE: • If the communication function of the Subaru Select Monitor cannot be executed properly, check the communication circuit. <Ref. to AC(diag)-45, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Diagnostic Procedure for Subaru Select Monitor Communication.> • Record the freeze frame data that is recorded with DTC.	Is DTC displayed?	<Ref. to AC(diag)-47, LIST, List of Diagnostic Trouble Code (DTC).>	Refer to Diagnostics with Phenomenon. <Ref. to AC(diag)-16, INSPECTION, Diagnostics with Phenomenon.>
4	**A/C CONTROL PANEL SELF-DIAGNOSIS.** 1) Leave the vehicle in a troubled condition for one minute or more. 2) Perform the self-diagnosis of A/C control panel. <Ref. to AC(diag)-8, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Is a malfunction detected?	Perform the diagnosis according to the self-diagnosis procedure.	Refer to Diagnostics with Phenomenon. <Ref. to AC(diag)-16, INSPECTION, Diagnostics with Phenomenon.>

2. General Description

A: CAUTION

1) Never connect the battery in reverse polarity.
• Doing so may immediately damage the A/C control panel.
2) Do not disconnect the battery terminals while the engine is running.
• A large counter electromotive force will be generated in the generator, and this voltage may damage electronic parts such as A/C control panel etc.
3) Before disconnecting the connectors of sensors and the A/C control panel, be sure to turn off the ignition switch.
• A/C control panel may be damaged.
4) Every A/C-related part is a precision part. Do not drop them.
5) Airbag system harness is routed near the A/C control panel and junction box.

CAUTION:
• Do not use electrical test equipment on the airbag system harness and connector.
• Be careful not to damage the airbag system harness when servicing the A/C control panel and junction box.

B: INSPECTION

Before performing diagnosis, check the following items which might affect the A/C system problems.

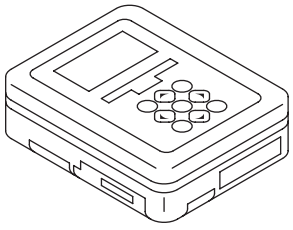
1. BATTERY

Check the battery. <Ref. to SC(H4DO)-56, INSPECTION, Battery.>

NOTE:
If the battery voltage does not reach the specified value, recharge or replace the battery.

C: PREPARATION TOOL

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

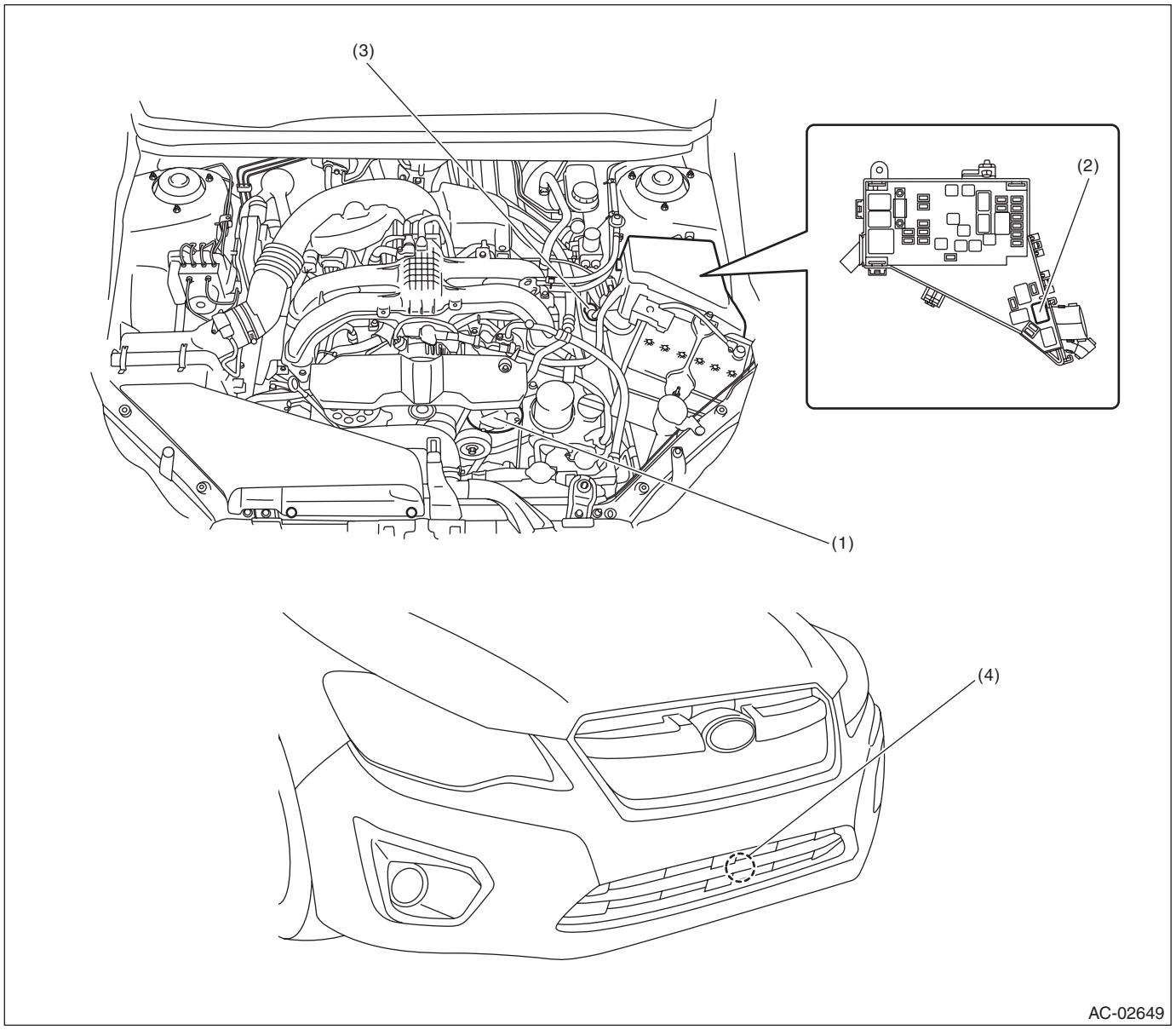
2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.

3. Electrical Component Location

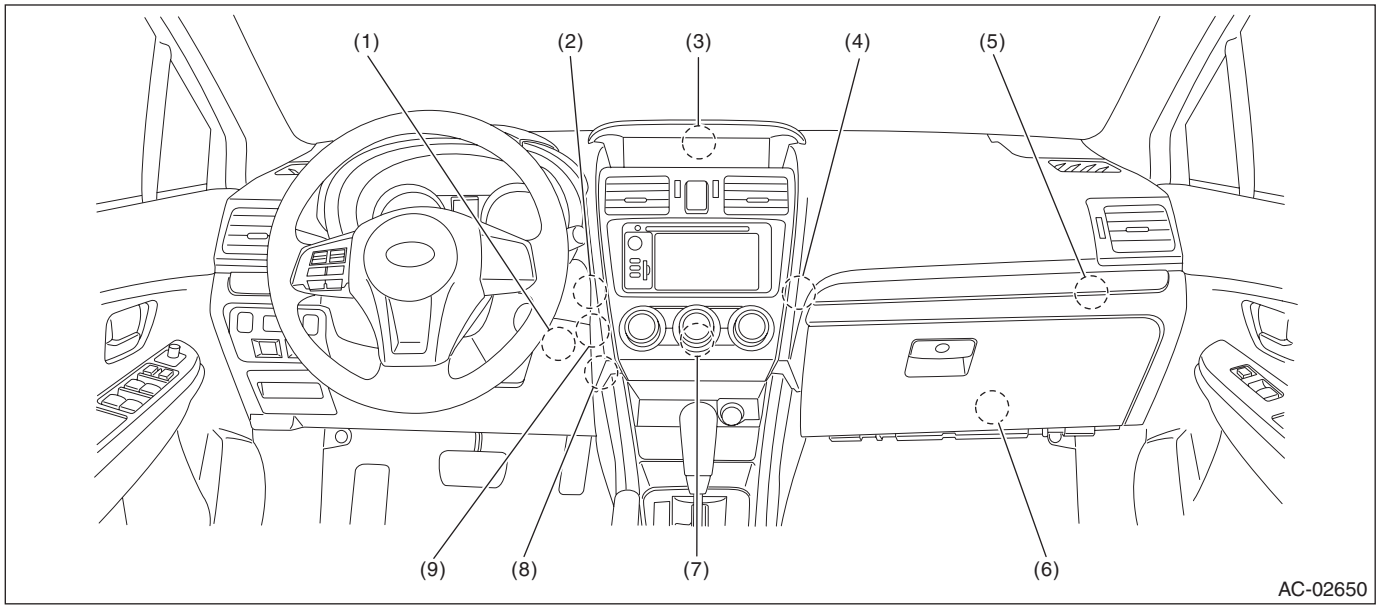
A: LOCATION

1. OUTSIDE VEHICLE



(1) A/C compressor
(2) A/C relay
(3) Pressure switch
(4) Ambient sensor

2. COMPARTMENT

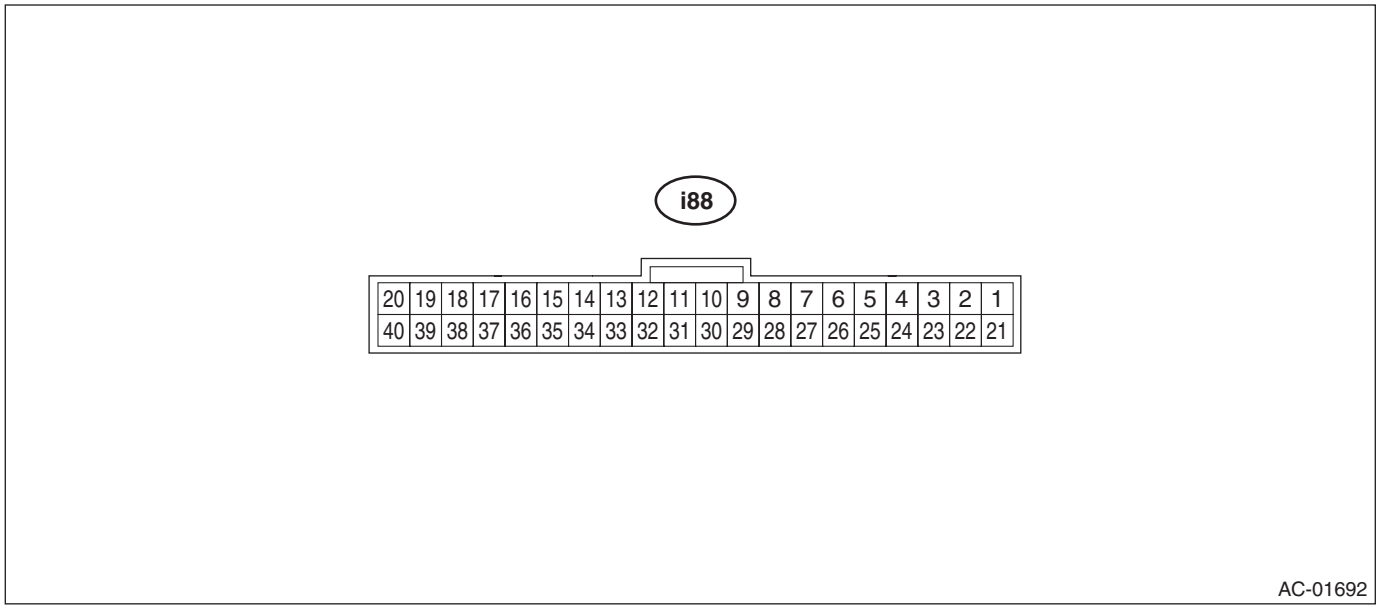


(1)	In-vehicle sensor	(4)	Air mix door actuator *1 or air mix door actuator RH *2	(7)	A/C control panel
(2)	Air mix door actuator LH *2	(5)	Intake door actuator	(8)	Evaporator sensor
(3)	Sunload sensor	(6)	Blower motor	(9)	Mode door actuator

*1: Without left/right independent air conditioning function
*2: With left/right independent air conditioning function

4. Auto A/C Control Module I/O Signal

A: ELECTRICAL SPECIFICATION



Terminal No.	Description	Measuring condition	Standard
1	Mode door actuator #4	Digital signal; can not be measured	—
2	Mode door actuator #3	Digital signal; can not be measured	—
3	Mode door actuator #2	Digital signal; can not be measured	—
4	Mode door actuator #1	Digital signal; can not be measured	—
6	Intake door actuator (FRESH)	FRESH mode	8 V or more
8	Intake door actuator (RECIRC)	RECIRC mode	8 V or more
9	Blower fan ON signal	Blower fan is ON	1 V or less
10	Intake door potentiometer power supply	Ignition switch ON	5 V
11	A/C cut-off signal	A/C is cut off	1 V or less
12	Intake door potentiometer signal	Ignition switch ON	0 — 5 V
14	GND for sensors	Always	1 V or less
15	ACC power supply	ACC ON	Battery voltage
16	Sunload sensor	Sunlight is contacting sensor	1 — 4 V
17	RECIRC sensor	Ignition switch ON	25°C: 2.5 V
18	Post evaporator sensor	Depends on temperature after the evaporator.	1 — 4.5 V
19	CAN Lo	Digital signal; can not be measured	—
20	CAN Hi	Digital signal; can not be measured	—
21	Air mix door actuator LH #4 *2	Digital signal; can not be measured	—
22	Air mix door actuator LH #3 *2	Digital signal; can not be measured	—
23	Air mix door actuator LH #2 *2	Digital signal; can not be measured	—
24	Air mix door actuator LH #1 *2	Digital signal; can not be measured	—
25	Air mix door actuator #4 *1 or air mix door actuator RH #4 *2	Digital signal; can not be measured	—
26	Air mix door actuator #3 *1 or air mix door actuator RH #3 *2	Digital signal; can not be measured	—
27	Air mix door actuator #2 *1 or air mix door actuator RH #2 *2	Digital signal; can not be measured	—
28	Air mix door actuator #1 *1 or air mix door actuator RH #1 *2	Digital signal; can not be measured	—

Terminal No.	Description	Measuring condition		Standard
31	BATT	Always		Battery voltage
32	IGN	Ignition ON		Battery voltage
34	GND	Always		1 V or less
35	ILL–	Illumination ON (measure between 37 — 35)		Battery voltage
37	ILL+			
40	Fan control signal	Ignition switch: ON, Blower switch: ON	1st	Approx. 9 V
			2nd	Approx. 8 V
			3rd	Approx. 7 V
			4th	Approx. 6 V
			5th	Approx. 5 V
			6th	Approx. 3.5 V
			7th	Approx. 0.5 V

*1: Without left/right independent air conditioning function
*2: With left/right independent air conditioning function

B: WIRING DIAGRAM

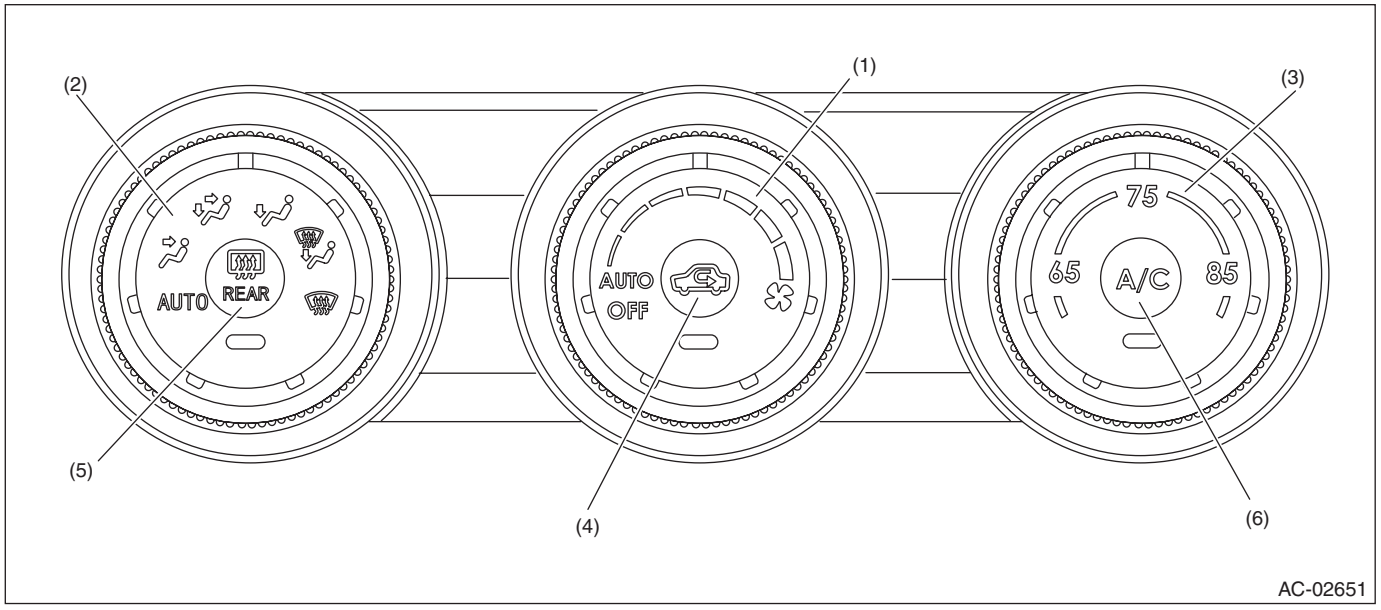
1. AIR CONDITIONER AUTO A/C MODEL

<Ref. to WI-35, WIRING DIAGRAM, Air Conditioning System.>

5. Diagnostic Chart for Self-Diagnosis

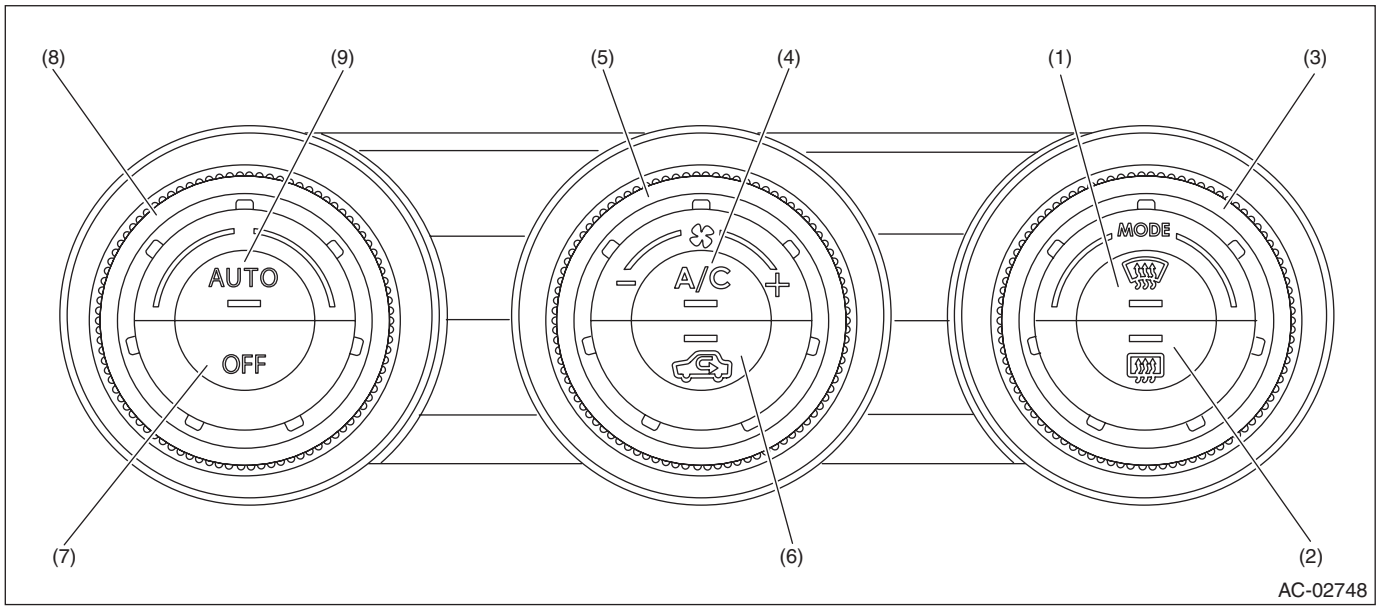
A: OPERATION

- Without left/right independent air conditioning function (without high grade MFD)



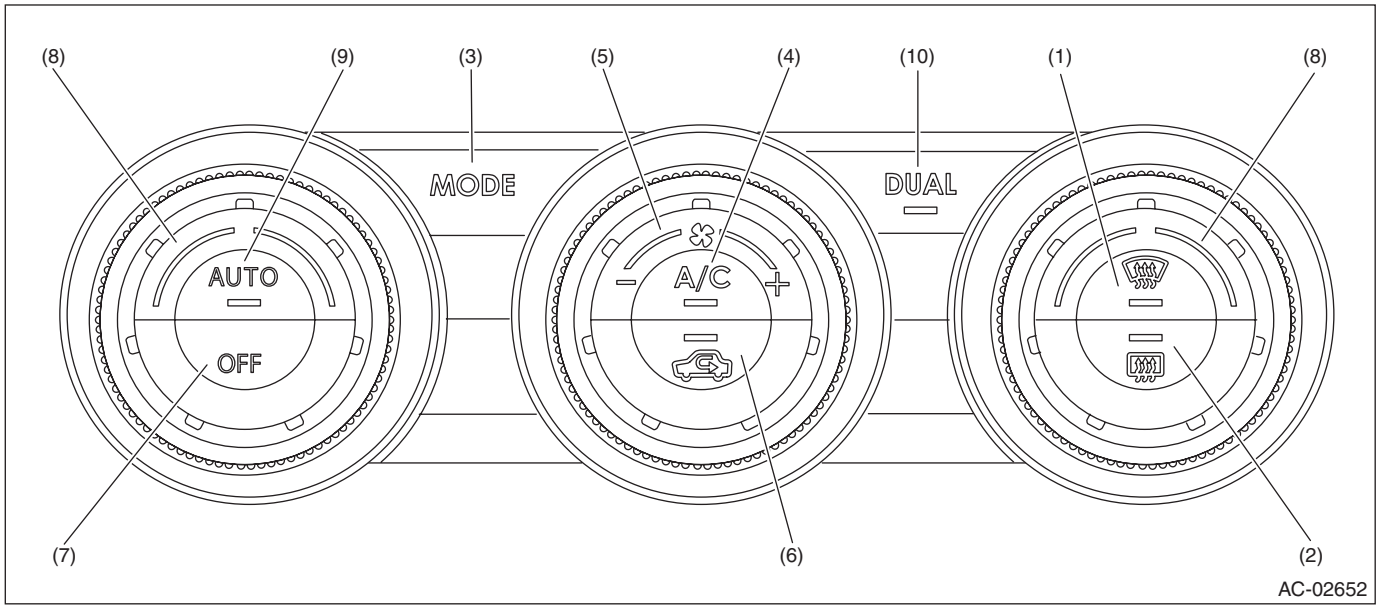
(1) Fan dial
(2) Air flow control dial
(3) Temperature adjustment dial
(4) FRESH/RECIRC switch
(5) Rear window defogger switch
(6) A/C switch

- Without left/right independent air conditioning function (with high grade MFD)



(1) Defroster switch
(2) Rear window defogger switch
(3) Air flow control dial
(4) A/C switch
(5) Fan dial
(6) FRESH/RECIRC switch
(7) OFF switch
(8) Temperature adjustment dial
(9) AUTO switch

- With left/right independent air conditioning function



(1) Defroster switch
(2) Rear window defogger switch
(3) Air flow control switch
(4) A/C switch
(5) Fan dial
(6) FRESH/RECIRC switch
(7) OFF switch
(8) Temperature adjustment dial
(9) AUTO switch
(10) Dual switch

1. A/C CONTROL PANEL SELF-DIAGNOSIS

- Without left/right independent air conditioning function (without high grade MFD)

	Step	Check	Yes	No
1	**SELECT SELF-DIAGNOSIS MODE IN THE CONTROL MODULE.** 1) Set the air flow control dial and fan dial to the AUTO position. 2) Start the engine with the A/C switch and the FRESH/RECIRC switch pressed.	Does the self-diagnosis mode operate?	Go to step **2**.	<Ref. to AC(diag)-17, NOTHING IS DISPLAYED ON THE SCREEN. NO ILLUMINATION APPEARS ON THE INDICATOR., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
2	**CHECK THE LIGHTING OF THE LED.** Make sure that all switch LEDs on the control panel illuminate.	Do all LEDs blink eight times?	Go to step **3**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
3	**CHECK SENSOR MALFUNCTION.** 1) Set the air flow control dial and fan dial to the AUTO position. 2) If the system has trouble for each sensor, the FRESH/RECIRC switch LED blinks or is turned off. 3) If the system has no malfunctions, the FRESH/RECIRC switch LED is illuminated.	Does the FRESH/RECIRC switch LED illuminate?	Go to step **5**.	Go to step **4**.

	Step	Check	Yes	No
4	**CONFIRM MALFUNCTIONING SENSOR.** 1) Set the air flow control dial to AUTO. 2) Turn the fan dial to each mode position, and check each switch LED illumination according to sensor check table. <Ref. to AC(diag)-12, SENSOR CHECK TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.>	When turning the fan dial to each mode position, does the FRESH/RECIRC switch LED go off?	Go to step **5**.	Repair the defective sensor.
5	**CHECK AIR MIX DOOR AND MODE DOOR POSITION OPERATION SIGNALS.** 1) Set the air flow control dial to FACE. 2) Turn the fan dial to AUTO. 3) If there is a system malfunction in the air mix door signal or the mode door position signal, the FRESH/RECIRC switch LED goes off or blinks. 4) If the system has no malfunctions, the FRESH/RECIRC switch LED is illuminated.	Does the FRESH/RECIRC switch LED illuminate?	Go to step **8**.	Go to step **6**.
6	**CHECK AIR MIX DOOR POSITION DRIVE SIGNALS.** 1) Set the air flow control dial to FACE. 2) Place the fan dial in each position and then check each LED illumination conditions. <Ref. to AC(diag)-14, DRIVE SIGNAL CHECK TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Do the LEDs illuminate in accordance with operation signal table?	Go to step **7**.	Check the air mix door actuator circuit.
7	**CHECK MODE DOOR POSITION DRIVE SIGNAL.** 1) Press the A/C switch. 2) Place the fan dial in each position and then check each LED illumination conditions. <Ref. to AC(diag)-14, DRIVE SIGNAL CHECK TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Do the LEDs illuminate in accordance with operation signal table?	Go to step **8**.	Check the mode door actuator circuit.
8	**CHECK OPERATION OF EACH ACTUATOR, BLOWER FAN AND COMPRESSOR CLUTCH.** 1) Set the air flow control dial to B/L. 2) Turn the fan dial from AUTO to 7th, and select operating modes. 3) Check the operation of each mode according to operating mode table. <Ref. to AC(diag)-13, OPERATING MODE TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Does the operation of each mode match to operating mode table?	Turn the fan dial to OFF or the ignition switch to OFF in order to complete self-diagnosis.	Repair the malfunctioning part in accordance with each diagnostic chart.

• Without left/right independent air conditioning function (with high grade MFD), with left/right independent air conditioning function

	Step	Check	Yes	No
1	**SELECT SELF-DIAGNOSIS MODE IN THE CONTROL MODULE.** Start the engine with the A/C switch and the FRESH/RECIRC switch pressed.	Does the self-diagnosis mode operate?	Go to step **2**.	<Ref. to AC(diag)-17, NOTHING IS DISPLAYED ON THE SCREEN. NO ILLUMINATION APPEARS ON THE INDICATOR., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
2	**CHECK INDICATOR BLINKS.** Make sure that all switch indicators on the control panel blink.	Do all indicators blink eight times?	Go to step **3**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
3	**CHECK SENSOR MALFUNCTION.** 1) The inspection mode for sensor is initiated by turning the fan dial one click to the right. (The auto switch indicator blinks two times.) 2) If all sensors have no malfunctions, the A/C switch indicator illuminates. If any sensor has a malfunction, the A/C switch indicator blinks. 3) Identify defective sensors according to the sensor check table. <Ref. to AC(diag)-12, SENSOR CHECK TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Does the A/C switch indicator illuminate?	Go to step **4**.	Repair the defective sensor.
4	**CHECK ACTUATOR DRIVE SIGNAL.** 1) The inspection mode for actuator is initiated by turning the fan dial one click to the right. (The AUTO switch indicator blinks three times.) 2) If all actuators have no malfunctions, the defroster indicator illuminates. If any actuator has a malfunction, the defroster indicator blinks. 3) Identify defective actuator circuit according to the drive signal check table. <Ref. to AC(diag)-14, DRIVE SIGNAL CHECK TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Does the defroster switch indicator illuminate?	Go to step **5**.	Repair the defective actuator circuit.
5	**CHECK OPERATION OF EACH ACTUATOR, BLOWER FAN AND COMPRESSOR CLUTCH.** 1) The inspection mode for blower fan, actuator and compressor is initiated by turning the fan dial one click to the right. (The AUTO switch indicator blinks four times.) 2) The number of blinking of A/C switch indicator changes and the operation mode changes each time the A/C switch is pressed. 3) Check each operation according to the operating mode table. <Ref. to AC(diag)-13, OPERATING MODE TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Does each operation match to operating mode table?	System is normal. Press the OFF switch or turn the ignition switch to OFF in order to complete self-diagnosis.	Repair the defective part in accordance with each diagnostic chart.

2. SENSOR CHECK TABLE

- Without left/right independent air conditioning function (without high grade MFD)

NOTE:

- When the sunload sensor check is performed indoors or in the shade, it could be diagnosed as having an open circuit. Always check the sunload sensor at a location exposed to direct sunlight.
- Past malfunction will illuminate if four malfunctions or more were detected previously.
- To cancel the past malfunction, perform either of the following procedure: Disconnect the negative battery terminal or press and hold the FRESH/RECIRC switch for 5 seconds or more while performing self-diagnosis step 3 — 7.

Air flow control dial position	Fan dial position	Sensor to be checked	No trouble	Short circuit	Open circuit	When currently malfunctioning	When having malfunctioned in the past
AUTO	AUTO	In-vehicle sensor	FRESH/ RECIRC switch LED is turned off	FRESH/ RECIRC switch LED blinks (Illuminates for 0.2 sec. ←→ turns off for 0.2 sec.)	FRESH/ RECIRC switch LED blinks (Illuminates for 1 sec. ←→ turns off for 1 sec.)	Rear window defogger switch LED is turned off	Rear window defogger switch LED illuminates
	1st	Ambient sensor		FRESH/ RECIRC switch LED blinks (Illuminates for 0.2 sec. ←→ turns off for 0.2 sec.)			
	2nd	Evaporator sensor		FRESH/ RECIRC switch LED blinks (Illuminates for 0.2 sec. ←→ turns off for 0.2 sec.)			
	3rd	Engine coolant temperature sensor		—			
	4th	Sunload sensor		FRESH/ RECIRC switch LED blinks (Illuminates for 0.2 sec. ←→ turns off for 0.2 sec.)			
	5th	CAN communication		—			
	6th	FRESH/ RECIRC potentiometer		FRESH/ RECIRC switch LED blinks (Illuminates for 0.2 sec. ←→ turns off for 0.2 sec.)			

- Without left/right independent air conditioning function (with high grade MFD), with left/right independent air conditioning function

NOTE:
- When the sunload sensor check is performed indoors or in the shade, it could be diagnosed as having an open circuit. Always check the sunload sensor at a location exposed to direct sunlight.
- If there are multiple defective sensors, a malfunction is displayed in the sequence of priority (1, 2, 3, etc.). The display changes in the sequence of priority (1, 2, 3, etc.) each time the A/C switch is pressed.
- Past malfunction will illuminate if four malfunctions or more were detected previously.
- To cancel the past malfunction, perform either of the following procedure: Disconnect the negative battery terminal or press and hold the FRESH/RECIRC switch for 5 seconds or more while performing self-diagnosis step 3 — 4.

Sensor	A/C switch indicator	FRESH/RECIRC switch indicator				Rear defroster switch indicator *2	
		Open	Sequence of priority	Short	Sequence of priority	Current malfunction	Past malfunction
In-vehicle sensor	Once	Light OFF	1	Light ON	2	Light OFF	Light ON
Ambient sensor	Twice	Light OFF	3	Light ON	4	Light OFF	Light ON
Evaporator sensor	3 times	Light OFF	5	Light ON	6	Light OFF	Light ON
Engine coolant temperature sensor	4 times	Light OFF			7	Light OFF	Light ON
Sunload sensor	5 times	Light OFF*1	8	Light ON	9	Light OFF	Light ON
CAN communication	6 times	Light OFF	10	—		Light OFF	Light ON
FRESH/RECIRC potentiometer	7 times	Light OFF	11	Light ON	12	Light OFF	Light ON

*1: Displays current malfunction only
*2: If the same diagnostic object contains a current malfunction and a past malfunction, the current malfunctions is displayed.

3. OPERATING MODE TABLE

- Without left/right independent air conditioning function (without high grade MFD)

Operation	Fan dial position							
	AUTO	1st	2nd	3rd	4th	5th	6th	7th
Blower fan	4 V	4 V	4.9 V	5.9 V	7.0 V	8.3 V	9.8 V	14 V
FRESH/RECIRC door	RECIRC	RECIRC	MIX	FRESH	FRESH	FRESH	FRESH	FRESH
Air flow control door	FACE	FACE	FACE	B/L	HEAT	HEAT	D/H	DEF
Air mix door	0%	0%	0%	50%	50%	100%	100%	100%
A/C compressor	OFF	ON	ON	ON	ON	ON	ON	ON

- Without left/right independent air conditioning function (with high grade MFD), with left/right independent air conditioning function

Operation	Number of blinking of A/C switch indicator							
	Once	Twice	3 times	4 times	5 times	6 times	7 times	8 times
Blower fan	4 V	4 V	4.9 V	5.9 V	7.0 V	8.3 V	9.8 V	14 V
FRESH/RECIRC door	RECIRC	RECIRC	MIX	FRESH	FRESH	FRESH	FRESH	FRESH
Air flow control door	FACE	FACE	FACE	B/L	HEAT	HEAT	D/H	DEF
Air mix door *1 or air mix door RH *2	0%	0%	0%	50%	50%	100%	100%	100%
Air mix door LH *2	0%	0%	0%	50%	50%	100%	100%	100%
A/C compressor	OFF	ON	ON	ON	ON	ON	ON	ON

*1: Without left/right independent air conditioning function
*2: With left/right independent air conditioning function

4. DRIVE SIGNAL CHECK TABLE

- Without left/right independent air conditioning function (without high grade MFD)

NOTE:
- Past malfunction will illuminate if four malfunctions or more were detected previously.
- To cancel the past malfunction, perform either of the following procedure: Disconnect the negative battery terminal or press and hold the FRESH/RECIRC switch for 5 seconds or more while performing self-diagnosis step 3 — 7.

<table>
<tr><th>Air flow control dial position</th><th>Fan dial position</th><th>Drive signal to check</th><th>A/C switch LED</th><th>No trouble</th><th>Short circuit</th><th>Open circuit</th><th>When currently malfunctioning</th><th>When having malfunctioned in the past</th></tr>
<tr><td rowspan="10">FACE</td><td>AUTO</td><td>MIX #1</td><td rowspan="5">Blinking (Illuminates for 0.2 sec. ←→ turns off for 0.2 sec.)</td><td rowspan="10">FRESH/ RECIRC switch LED is turned off</td><td rowspan="2">FRESH/ RECIRC switch LED blinks (Illuminates for 0.2 sec. ←→ turns off for 0.2 sec.)</td><td rowspan="2">FRESH/ RECIRC switch LED blinks (Illuminates for 1 sec. ←→ turns off for 1 sec.)</td><td rowspan="2">Rear window defogger switch LED is turned off</td><td rowspan="10">Rear window defogger switch LED illuminates</td></tr>
<tr><td>1st</td><td>MIX #2</td></tr>
<tr><td>2nd</td><td>MIX #3</td><td rowspan="2">FRESH/RECIRC switch LED blinks (Illuminates for 1 sec. ←→ turns off for 1 sec.)</td><td rowspan="2">—</td></tr>
<tr><td>3rd</td><td>MIX #4</td></tr>
<tr><td>4th to 7th</td><td>Intake door actuator lock</td></tr>
<tr><td>AUTO</td><td>MODE #1</td><td rowspan="5">Blinking (Illuminates for 1 sec. ←→ turns off for 1 sec.)</td><td rowspan="2">FRESH/ RECIRC switch LED blinks (Illuminates for 0.2 sec. ←→ turns off for 0.2 sec.)</td><td rowspan="2">FRESH/ RECIRC switch LED blinks (Illuminates for 1 sec. ←→ turns off for 1 sec.)</td><td rowspan="2">Rear window defogger switch LED is turned off</td></tr>
<tr><td>1st</td><td>MODE #2</td></tr>
<tr><td>2nd</td><td>MODE #3</td><td rowspan="2">FRESH/RECIRC switch LED blinks (Illuminates for 1 sec. ←→ turns off for 1 sec.)</td><td rowspan="2">—</td></tr>
<tr><td>3rd</td><td>MODE #4</td></tr>
<tr><td>4th to 7th</td><td>Intake door actuator lock</td></tr>
</table>

- Without left/right independent air conditioning function (with high grade MFD), with left/right independent air conditioning function

NOTE:
- If there are multiple defective sensors, a malfunction is displayed in the sequence of priority (1, 2, 3, etc.). The display changes in the sequence of priority (1, 2, 3, etc.) each time the A/C switch is pressed.
- Past malfunction will illuminate if four malfunctions or more were detected previously.
- To cancel the past malfunction, perform either of the following procedure: Disconnect the negative battery terminal or press and hold the FRESH/RECIRC switch for 5 seconds or more while performing self-diagnosis step 3 — 4.

Drive signal		Defroster indicator	A/C switch indicator	FRESH/RECIRC switch indicator				Rear defogger switch indicator *3	
				Open	Sequence of priority	Short	Sequence of priority	Current malfunction	Past malfunction
Air mix door actuator *1 or air mix door actuator RH *2	#1	Once	Once	Light OFF	1	Light ON	2	Light OFF	Light ON
	#2		Twice	Light OFF	3	Light ON	4	Light OFF	Light ON
	#3		3 times	Light OFF	5	Light ON	6	Light OFF	Light ON
	#4		4 times	Light OFF	7	Light ON	8	Light OFF	Light ON
Air mix door actuator LH *2	#1	Twice	Once	Light OFF	9	Light ON	10	Light OFF	Light ON
	#2		Twice	Light OFF	11	Light ON	12	Light OFF	Light ON
	#3		3 times	Light OFF	13	Light ON	14	Light OFF	Light ON
	#4		4 times	Light OFF	15	Light ON	16	Light OFF	Light ON
Air flow control door actuator	#1	3 times	Once	Light OFF	17	Light ON	18	Light OFF	Light ON
	#2		Twice	Light OFF	19	Light ON	20	Light OFF	Light ON
	#3		3 times	Light OFF	21	Light ON	22	Light OFF	Light ON
	#4		4 times	Light OFF	23	Light ON	24	Light OFF	Light ON
Intake door actuator		4 times	Light ON	Light ON				—	Light ON

*1: Without left/right independent air conditioning function
*2: With left/right independent air conditioning function
*3: If the same diagnostic object contains a current malfunction and a past malfunction, the current malfunctions is displayed.

5. DIAGNOSTIC PROCEDURE IF A/C CONTROL PANEL SELF DIAGNOSIS FAILS TO OPERATE

NOTE:
For the diagnostic procedures, refer to Diagnostics with Phenomenon “Nothing is displayed on the screen. No illumination appears on the indicator.” <Ref. to AC(diag)-17, NOTHING IS DISPLAYED ON THE SCREEN. NO ILLUMINATION APPEARS ON THE INDICATOR., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>

6. Diagnostics with Phenomenon

A: INSPECTION

1. Perform the diagnosis according to the diagnostic procedure of the corresponding symptom that is shown in the symptom list.
2. If there are multiple symptoms, perform the diagnosis in the symptom sequence (1 → 2 →... → 13).

1. SYMPTOM LIST

Symptoms		Diagnostic procedure
1	Nothing is displayed on the screen. No illumination appears on the indicator.	<Ref. to AC(diag)-17, NOTHING IS DISPLAYED ON THE SCREEN. NO ILLUMINATION APPEARS ON THE INDICATOR., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
2	Air conditioner does not stop when pressing the OFF switch.	<Ref. to AC(diag)-19, AIR CONDITIONER DOES NOT STOP WHEN PRESSING THE OFF SWITCH., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
3	Windshield grass does not clear when pressing the DEF switch.	<Ref. to AC(diag)-20, WINDSHIELD GRASS DOES NOT CLEAR WHEN PRESSING THE DEF SWITCH., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
4	Cold air not emitted.	<Ref. to AC(diag)-21, COLD AIR NOT EMITTED, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
5	Warm air not emitted.	<Ref. to AC(diag)-23, WARM AIR NOT EMITTED, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
6	Compartment temperature is lower than setting temperature.	<Ref. to AC(diag)-25, COMPARTMENT TEMPERATURE IS LOWER THAN SETTING TEMPERATURE, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
7	Compartment temperature is higher than setting temperature.	<Ref. to AC(diag)-27, COMPARTMENT TEMPERATURE IS HIGHER THAN SETTING TEMPERATURE, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
8	Air does not come out. Airflow is low. (Blower motor does not rotate.)	<Ref. to AC(diag)-29, AIR DOES NOT COME OUT. AIRFLOW IS LOW., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
9	Airflow cannot be adjusted. (Blower motor turns at a high speed.)	<Ref. to AC(diag)-32, AIR CANNOT BE CONTROLLED., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
10	Cool air does not come out when pressing the A/C switch. Fog cannot be cleared. (Compressor does not operate.)	<Ref. to AC(diag)-34, COOL AIR DOES NOT COME OUT WHEN PRESSING THE A/C SWITCH. FOG CANNOT BE CLEARED. (COMPRESSOR DOES NOT OPERATE.), DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
11	Unable to switch suction vents.	<Ref. to AC(diag)-36, UNABLE TO SWITCH SUCTION VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
12	Unable to switch blow vents.	<Ref. to AC(diag)-37, UNABLE TO SWITCH VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
13	Illumination does not illuminate or cannot be dimmed.	<Ref. to AC(diag)-38, ILLUMINATION DOES NOT ILLUMINATE OR CANNOT BE DIMMED., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>

B: DIAGNOSTIC PROCEDURE WITH PHENOMENON

1. NOTHING IS DISPLAYED ON THE SCREEN. NO ILLUMINATION APPEARS ON THE INDICATOR.

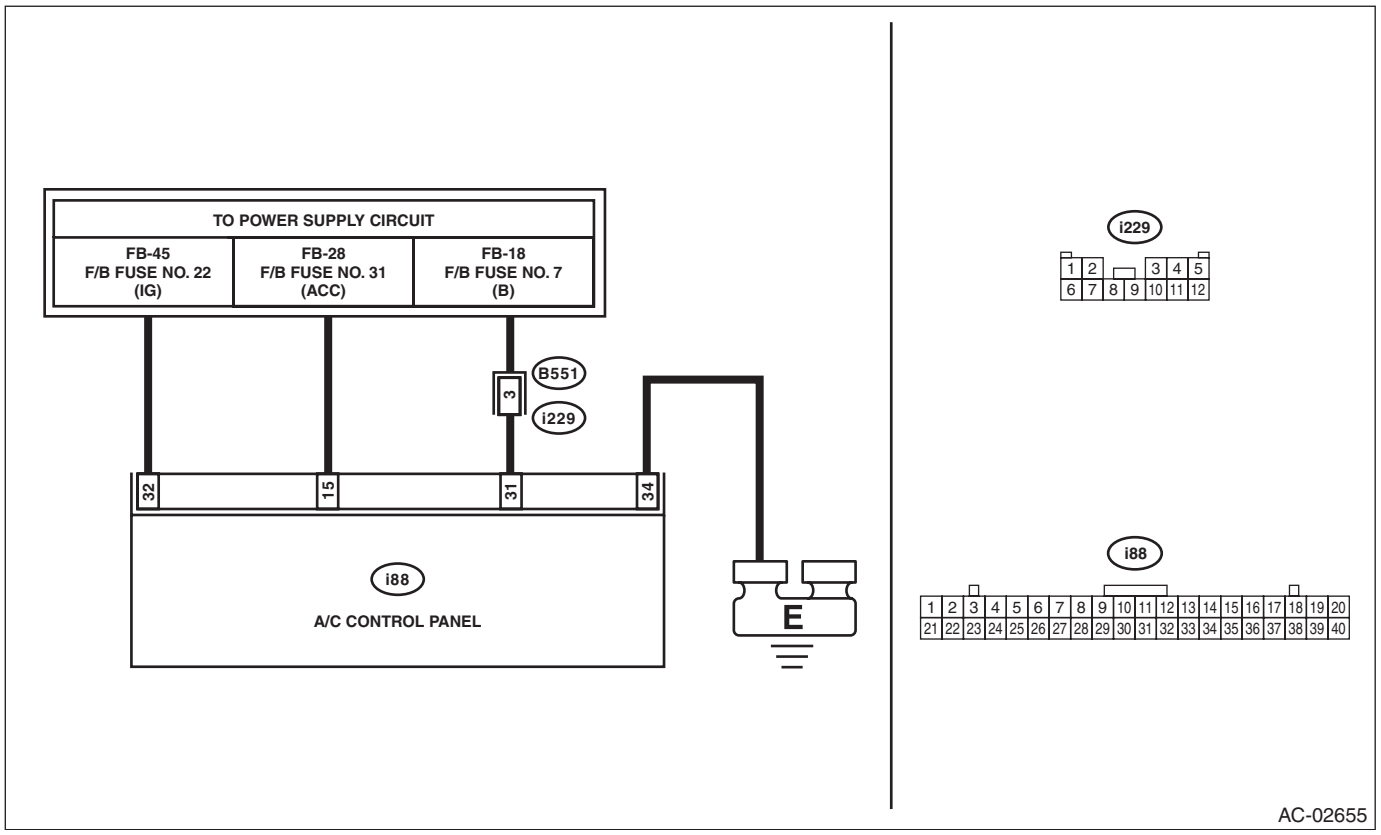
TROUBLE SYMPTOM:

- Nothing is displayed on the screen or no illumination appears on the indicator when pressing the AUTO button while the ignition switch is in ON.
- A/C control panel self-diagnosis fails to operate.

TROUBLE CAUSE:

- A/C control panel power supply circuit failure
- CAN communication failure

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove a fuse from fuse & relay box. 3) Check the condition of fuse.	Is the fuse blown out?	Replace the fuse.	Go to step **2**.
2	**CHECK CONNECTOR.** Check for poor contact of connector.	Is there poor contact of connector?	Repair the connector.	Go to step **3**.
3	**CHECK A/C CONTROL PANEL POWER CIRCUIT.** 1) Remove the A/C control panel. 2) Disconnect the A/C control panel connector. 3) Measure the voltage between A/C control panel connector terminal and chassis ground after turning the ignition switch to ON. ***Connector & terminal*** ***(i88) No. 15 (+) — Chassis ground (–):*** ***(i88) No. 31 (+) — Chassis ground (–):*** ***(i88) No. 32 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **4**.	Check for open or short circuit in the harness between A/C control panel and fuse.

	Step	Check	Yes	No
4	**CHECK A/C CONTROL PANEL GROUND CIRCUIT.** Measure the resistance of harness between A/C control panel and chassis ground after turning the ignition switch to OFF. ***Connector & terminal*** ***(i88) No. 34 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **5**.	Repair the harness for ground line.
5	**CHECK FOR POOR CONTACT.** Check poor contact of A/C control panel connector.	Is there poor contact of connector?	Repair the connector.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

2. AIR CONDITIONER DOES NOT STOP WHEN PRESSING THE OFF SWITCH.

TROUBLE SYMPTOM:

Blower fan does not switch to OFF, inlet opening does not switch to FRESH, and compressor does not switch to OFF, when pressing the OFF switch.

TROUBLE CAUSE:

- CAN communication failure
- A/C control panel failure
- Blower motor failure
- Intake actuator failure
- Compressor failure

	Step	Check	Yes	No
1	**CHECK A/C CONTROL PANEL.** 1) Turn the ignition switch to ON. 2) Press the OFF switch located on the A/C panel. 3) Check the following data in “Read Current Data” using the Subaru Select Monitor. • Blower Fan Level • Fresh/Recircle Air Door Actuator Position Target	Does “Blower Fan Level” indicate 0 and “Fresh/Recircle Air Door Actuator Position Target” indicate 100%?	Go to step **2**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
2	**CHECK BLOWER MOTOR.** Check the blower motor operation with the OFF switch pressed.	Does the blower motor stop?	Go to step **3**.	<Ref. to AC(diag)-32, AIR CANNOT BE CONTROLLED., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
3	**CHECK INTAKE ACTUATOR.** Check the intake door operation with the OFF switch pressed.	Is the intake door FRESH?	Go to step **4**.	<Ref. to AC(diag)-36, UNABLE TO SWITCH SUCTION VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
4	**CHECK COMPRESSOR.** Check the compressor operation with the OFF switch pressed.	Does the compressor stop?	System is normal.	<Ref. to AC(diag)-34, COOL AIR DOES NOT COME OUT WHEN PRESSING THE A/C SWITCH. FOG CANNOT BE CLEARED. (COMPRESSOR DOES NOT OPERATE.), DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>

3. WINDSHIELD GRASS DOES NOT CLEAR WHEN PRESSING THE DEF SWITCH.

TROUBLE SYMPTOM:

Defroster indicator does not illuminate, outlet opening does not switch to DEF, compressor does not switch to ON, and inlet opening does not switch to FRESH, when pressing the DEF switch.

TROUBLE CAUSE:

- CAN communication failure
- A/C control panel failure
- Mode door actuator failure
- Compressor failure
- Intake actuator failure

	Step	Check	Yes	No
1	**CHECK A/C CONTROL PANEL.** 1) Turn the ignition switch to ON. 2) Press the DEF switch located on the A/C panel. 3) Check the following data in “Read Current Data” using the Subaru Select Monitor. • Mode Door Actuator Position Target • Fresh/Recircle Air Door Actuator Position Target	Does “Mode Door Actuator Position Target” indicate 100% and “Fresh/Recircle Air Door Actuator Position Target” indicate 100%?	Go to step **2**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
2	**CHECK MODE DOOR ACTUATOR.** Check the mode door operation with the DEF switch in ON.	Does air come out from the DEF outlet opening?	Go to step **3**.	<Ref. to AC(diag)-37, UNABLE TO SWITCH VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
3	**CHECK INTAKE ACTUATOR.** Check the intake door operation with the DEF switch in ON.	Does the intake door operate normally?	Go to step **4**.	<Ref. to AC(diag)-36, UNABLE TO SWITCH SUCTION VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
4	**CHECK COMPRESSOR.** Check the compressor operation with the DEF switch in ON.	Does the compressor operate?	System is normal.	<Ref. to AC(diag)-34, COOL AIR DOES NOT COME OUT WHEN PRESSING THE A/C SWITCH. FOG CANNOT BE CLEARED. (COMPRESSOR DOES NOT OPERATE.), DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>

4. COLD AIR NOT EMITTED

TROUBLE SYMPTOM:
Cold air not emitted.
TROUBLE CAUSE:
- Airflow failure
- Refrigerant pressure failure
- CAN communication failure
- A/C control panel failure
- Air mix actuator RH failure
- Air mix actuator LH failure (only with left/right independent air conditioning function)
- Intake actuator failure
- Evaporator sensor failure
- RECIRC sensor failure
- FRESH sensor failure
- Sunload sensor failure

	Step	Check	Yes	No
1	**CONFIRM MAX COOL.** Set the A/C control panel dials as follows. Temperature control dial: MAX COOL FRESH/RECIRC switch: RECIRC Mode switch or mode dial: VENT A/C switch: ON	Does cold air not come out?	Go to step **2**.	Go to step **4**.
2	**CHECK AIRFLOW.** Check the airflow. <Ref. to AC(diag)-29, AIR DOES NOT COME OUT. AIRFLOW IS LOW., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>	Is the airflow normal?	Go to step **3**.	Repair according to the inspection procedure.
3	**CHECK AMOUNT OF REFRIGERANT PRESSURE.** Check the refrigerant pressure. <Ref. to AC-22, REFRIGERANT GAS PRESSURE INSPECTION, PROCEDURE, Refrigerant Pressure with Manifold Gauge Set.>	Is the refrigerant pressure normal?	Go to step **4**.	Repair according to refrigerant pressure inspection.
4	**CHECK A/C CONTROL PANEL.** 1) Turn the temperature control dials (driver's side) and (passenger's side) to MAX COOL. 2) Display the following data in "Read Current Data" using the Subaru Select Monitor. • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "60" *1?	Go to step **5**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
5	**CHECK A/C CONTROL PANEL.** 1) Turn the temperature control dials (driver's side) and (passenger's side) to MAX HOT. 2) Display the following data in "Read Current Data" using the Subaru Select Monitor. • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "90" *2?	Go to step **6**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
6	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Turn the temperature control dial at MAX COOL and leave for 16 seconds or more. (If equipped with left/right independent air conditioning function, setting must be performed on both sides.) 3) Read the DTC using Subaru Select Monitor.	Is DTC B14E1, B14E2, B14E3 or B14E4 displayed?	Perform the diagnosis according to DTC.	Go to step **7**.

	Step	Check	Yes	No
7	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Turn the temperature control dial at MAX HOT and leave for 16 seconds or more. (If equipped with left/right independent air conditioning function, setting must be performed on both sides.) 3) Read the DTC using Subaru Select Monitor.	Is DTC B14E1, B14E2, B14E3 or B14E4 displayed?	Perform the diagnosis according to DTC.	Go to step **8**.
8	**CHECK INTAKE ACTUATOR.** Visually check the intake actuator operation.	Is the intake actuator normal?	Go to step **9**.	Perform the inspection of intake actuator. <Ref. to AC(diag)-36, UNABLE TO SWITCH SUCTION VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
9	**CHECK EVAPORATOR SENSOR UNIT.** Perform the inspection of evaporator sensor unit. <Ref. to AC-83, INSPECTION, Evaporator Sensor.>	Is the evaporator sensor normal?	Go to step **10**.	Replace the evaporator sensor. <Ref. to AC-82, REMOVAL, Evaporator Sensor.>
10	**CHECK IN-VEHICLE SENSOR UNIT.** Perform the inspection of in-vehicle sensor. <Ref. to AC-79, INSPECTION, In-Vehicle Sensor (Auto A/C Model).>	Is the in-vehicle sensor normal?	Go to step **11**.	Replace the in-vehicle sensor. <Ref. to AC-78, REMOVAL, In-Vehicle Sensor (Auto A/C Model).>
11	**CHECK AMBIENT SENSOR UNIT.** Perform the inspection of ambient sensor. <Ref. to AC-75, INSPECTION, Ambient Sensor.>	Is the ambient sensor normal?	Go to step **12**.	Replace the ambient sensor. <Ref. to AC-73, REMOVAL, Ambient Sensor.>
12	**CHECK SUNLOAD SENSOR UNIT.** Perform the inspection of sunload sensor unit. <Ref. to AC-77, INSPECTION, Sunload Sensor (Auto A/C Model).>	Is the sunload sensor normal?	System is normal.	Replace the sunload sensor. <Ref. to AC-76, REMOVAL, Sunload Sensor (Auto A/C Model).>

*1: For the 75°F center specification. Note that 18 for 25°F center specification and 15 for 22°F center specification.
*2: For the 75°F center specification. Note that 32 for 25°F center specification and 29 for 22°F center specification.

5. WARM AIR NOT EMITTED

TROUBLE SYMPTOM:
Warm air not emitted.
TROUBLE CAUSE:
- Airflow failure
- Coolant level failure
- CAN communication failure
- A/C control panel failure
- Air mix actuator RH failure
- Air mix actuator LH failure (only with left/right independent air conditioning function)
- Intake actuator failure
- Evaporator sensor failure
- RECIRC sensor failure
- FRESH sensor failure
- Sunload sensor failure

	Step	Check	Yes	No
1	**CONFIRM MAX HOT.** Set the A/C control panel dials as follows. Temperature control dial: MAX HOT FRESH/RECIRC switch: FRESH Mode switch or mode dial: HEAT A/C switch: OFF	Does warm air not come out?	Go to step **2**.	Go to step **4**.
2	**CHECK AIRFLOW.** Check the airflow. <Ref. to AC(diag)-29, AIR DOES NOT COME OUT. AIRFLOW IS LOW., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>	Is the airflow normal?	Go to step **3**.	Repair according to the inspection procedure.
3	**CHECK ENGINE COOLANT.** Check the engine coolant level.	Is the engine coolant level within the specification?	Go to step **4**.	Fill engine coolant. If leakage is detected, repair it according to general malfunctions of engine cooling system. <Ref. to CO(H4DO)-50, Engine Cooling System Trouble in General.>
4	**CHECK A/C CONTROL PANEL.** 1) Turn the temperature control dials (driver's side) and (passenger's side) to MAX COOL. 2) Display the following data in "Read Current Data" using the Subaru Select Monitor. • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "60" *1?	Go to step **5**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
5	**CHECK A/C CONTROL PANEL.** 1) Turn the temperature control dials (driver's side) and (passenger's side) to MAX HOT. 2) Display the following data in "Read Current Data" using the Subaru Select Monitor. • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "90" *2?	Go to step **6**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

	Step	Check	Yes	No
6	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Turn the temperature control dial at MAX COOL and leave for 16 seconds or more. (If equipped with left/right independent air conditioning function, setting must be performed on both sides.) 3) Read the DTC using Subaru Select Monitor.	Is DTC B14E1, B14E2, B14E3 or B14E4 displayed?	Perform the diagnosis according to DTC.	Go to step **7**.
7	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Turn the temperature control dial at MAX HOT and leave for 16 seconds or more. (If equipped with left/right independent air conditioning function, setting must be performed on both sides.) 3) Read the DTC using Subaru Select Monitor.	Is DTC B14E1, B14E2, B14E3 or B14E4 displayed?	Perform the diagnosis according to DTC.	Go to step **8**.
8	**CHECK INTAKE ACTUATOR.** Visually check the intake actuator operation.	Is the intake actuator normal?	Go to step **9**.	Perform the inspection of intake actuator. <Ref. to AC(diag)-36, UNABLE TO SWITCH SUCTION VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
9	**CHECK EVAPORATOR SENSOR UNIT.** Perform the inspection of evaporator sensor unit. <Ref. to AC-83, INSPECTION, Evaporator Sensor.>	Is the evaporator sensor normal?	Go to step **10**.	Replace the evaporator sensor. <Ref. to AC-82, REMOVAL, Evaporator Sensor.>
10	**CHECK IN-VEHICLE SENSOR UNIT.** Perform the inspection of in-vehicle sensor circuit. <Ref. to AC-79, INSPECTION, In-Vehicle Sensor (Auto A/C Model).>	Is the in-vehicle sensor circuit normal?	Go to step **11**.	Replace the in-vehicle sensor. <Ref. to AC-78, REMOVAL, In-Vehicle Sensor (Auto A/C Model).>
11	**CHECK AMBIENT SENSOR UNIT.** Perform the inspection of ambient sensor. <Ref. to AC-75, INSPECTION, Ambient Sensor.>	Is the ambient sensor normal?	Go to step **12**.	Replace the ambient sensor. <Ref. to AC-73, REMOVAL, Ambient Sensor.>
12	**CHECK SUNLOAD SENSOR UNIT.** Perform the inspection of sunload sensor unit. <Ref. to AC-77, INSPECTION, Sunload Sensor (Auto A/C Model).>	Is the sunload sensor normal?	System is normal.	Replace the sunload sensor. <Ref. to AC-76, REMOVAL, Sunload Sensor (Auto A/C Model).>

*1: For the 75°F center specification. Note that 18 for 25°F center specification and 15 for 22°F center specification.
*2: For the 75°F center specification. Note that 32 for 25°F center specification and 29 for 22°F center specification.

6. COMPARTMENT TEMPERATURE IS LOWER THAN SETTING TEMPERATURE

TROUBLE SYMPTOM:
Compartment temperature is lower than setting temperature.
TROUBLE CAUSE:
- Airflow is large.
- Refrigerant pressure failure
- CAN communication failure
- A/C control panel failure
- Air mix actuator RH failure
- Air mix actuator LH failure (only with left/right independent air conditioning function)
- Evaporator sensor failure
- RECIRC sensor failure
- FRESH sensor failure
- Sunload sensor failure

	Step	Check	Yes	No
1	**CHECK AIRFLOW.** Check the airflow. <Ref. to AC(diag)-32, AIR CANNOT BE CONTROLLED., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>	Is the airflow normal?	Go to step **2**.	Repair according to the inspection procedure.
2	**CHECK AMOUNT OF REFRIGERANT PRESSURE.** Check the refrigerant pressure. <Ref. to AC-22, REFRIGERANT GAS PRESSURE INSPECTION, PROCEDURE, Refrigerant Pressure with Manifold Gauge Set.>	Is the refrigerant pressure normal?	Go to step **3**.	Repair according to refrigerant pressure inspection.
3	**CHECK A/C CONTROL PANEL.** 1) Turn the temperature control dials (driver's side) and (passenger's side) to MAX COOL. 2) Display the following data in "Read Current Data" using the Subaru Select Monitor. • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "60" *1?	Go to step **4**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
4	**CHECK A/C CONTROL PANEL.** 1) Turn the temperature control dials (driver's side) and (passenger's side) to MAX HOT. 2) Display the following data in "Read Current Data" using the Subaru Select Monitor. • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "90" *2?	Go to step **5**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
5	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Turn the temperature control dial at MAX COOL and leave for 16 seconds or more. (If equipped with left/right independent air conditioning function, setting must be performed on both sides.) 3) Read the DTC using Subaru Select Monitor.	Is DTC B14E1, B14E2, B14E3 or B14E4 displayed?	Perform the diagnosis according to DTC.	Go to step **6**.
6	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Turn the temperature control dial at MAX HOT and leave for 16 seconds or more. (If equipped with left/right independent air conditioning function, setting must be performed on both sides.) 3) Read the DTC using Subaru Select Monitor.	Is DTC B14E1, B14E2, B14E3 or B14E4 displayed?	Perform the diagnosis according to DTC.	Go to step **7**.

	Step	Check	Yes	No
7	**CHECK EVAPORATOR SENSOR UNIT.** Perform the inspection of evaporator sensor unit. <Ref. to AC-83, INSPECTION, Evaporator Sensor.>	Is the evaporator sensor normal?	Go to step **8**.	Replace the evaporator sensor. <Ref. to AC-82, REMOVAL, Evaporator Sensor.>
8	**CHECK IN-VEHICLE SENSOR UNIT.** Perform the inspection of in-vehicle sensor circuit. <Ref. to AC-79, INSPECTION, In-Vehicle Sensor (Auto A/C Model).>	Is the in-vehicle sensor circuit normal?	Go to step **9**.	Replace the in-vehicle sensor. <Ref. to AC-78, REMOVAL, In-Vehicle Sensor (Auto A/C Model).>
9	**CHECK AMBIENT SENSOR UNIT.** Perform the inspection of ambient sensor. <Ref. to AC-75, INSPECTION, Ambient Sensor.>	Is the ambient sensor normal?	Go to step **10**.	Replace the ambient sensor. <Ref. to AC-73, REMOVAL, Ambient Sensor.>
10	**CHECK SUNLOAD SENSOR UNIT.** Perform the inspection of sunload sensor unit. <Ref. to AC-77, INSPECTION, Sunload Sensor (Auto A/C Model).>	Is the sunload sensor normal?	System is normal.	Replace the sunload sensor. <Ref. to AC-76, REMOVAL, Sunload Sensor (Auto A/C Model).>

*1: For the 75°F center specification. Note that 18 for 25°F center specification and 15 for 22°F center specification.
*2: For the 75°F center specification. Note that 32 for 25°F center specification and 29 for 22°F center specification.

7. COMPARTMENT TEMPERATURE IS HIGHER THAN SETTING TEMPERATURE

TROUBLE SYMPTOM:

Compartment temperature is higher than setting temperature.

TROUBLE CAUSE:

- Airflow is large.
- CAN communication failure
- A/C control panel failure
- Air mix actuator RH failure
- Air mix actuator LH failure (only with left/right independent air conditioning function)
- Intake actuator failure
- Evaporator sensor failure
- RECIRC sensor failure
- FRESH sensor failure
- Sunload sensor failure

	Step	Check	Yes	No
1	**CHECK AIRFLOW.** Check the airflow. <Ref. to AC(diag)-32, AIR CANNOT BE CONTROLLED., DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>	Is the airflow normal?	Go to step **2**.	Repair according to the inspection procedure.
2	**CHECK A/C CONTROL PANEL.** 1) Turn the temperature control dials (driver's side) and (passenger's side) to MAX COOL. 2) Display the following data in "Read Current Data" using the Subaru Select Monitor. • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "60" *1?	Go to step **3**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
3	**CHECK A/C CONTROL PANEL.** 1) Turn the temperature control dials (driver's side) and (passenger's side) to MAX HOT. 2) Display the following data in "Read Current Data" using the Subaru Select Monitor. • Heater Control Panel Setting Value (Driver's) • Heater Control Panel Setting Value (Passenger's)	Do "Heater Control Panel Setting Value (Driver's)" and "Heater Control Panel Setting Value (Passenger's)" indicate "90" *2?	Go to step **4**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
4	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Turn the temperature control dial at MAX COOL and leave for 16 seconds or more. (If equipped with left/right independent air conditioning function, setting must be performed on both sides.) 3) Read the DTC using Subaru Select Monitor.	Is DTC B14E1, B14E2, B14E3 or B14E4 displayed?	Perform the diagnosis according to DTC.	Go to step **5**.
5	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Turn the temperature control dial at MAX HOT and leave for 16 seconds or more. (If equipped with left/right independent air conditioning function, setting must be performed on both sides.) 3) Read the DTC using Subaru Select Monitor.	Is DTC B14E1, B14E2, B14E3 or B14E4 displayed?	Perform the diagnosis according to DTC.	Go to step **6**.

	Step	Check	Yes	No
6	**CHECK INTAKE ACTUATOR.** Visually check the intake actuator operation.	Is the intake actuator normal?	Go to step **7**.	Perform the inspection of intake actuator. <Ref. to AC(diag)-36, UNABLE TO SWITCH SUCTION VENTS, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
7	**CHECK EVAPORATOR SENSOR UNIT.** Perform the inspection of evaporator sensor unit. <Ref. to AC-83, INSPECTION, Evaporator Sensor.>	Is the evaporator sensor normal?	Go to step **8**.	Replace the evaporator sensor. <Ref. to AC-82, REMOVAL, Evaporator Sensor.>
8	**CHECK IN-VEHICLE SENSOR UNIT.** Perform the inspection of in-vehicle sensor circuit. <Ref. to AC-79, INSPECTION, In-Vehicle Sensor (Auto A/C Model).>	Is the in-vehicle sensor circuit normal?	Go to step **9**.	Replace the in-vehicle sensor. <Ref. to AC-78, REMOVAL, In-Vehicle Sensor (Auto A/C Model).>
9	**CHECK AMBIENT SENSOR UNIT.** Check the ambient sensor. <Ref. to AC-75, INSPECTION, Ambient Sensor.>	Is the ambient sensor normal?	Go to step **10**.	Replace the ambient sensor. <Ref. to AC-73, REMOVAL, Ambient Sensor.>
10	**CHECK SUNLOAD SENSOR UNIT.** Perform the inspection of sunload sensor unit. <Ref. to AC-77, INSPECTION, Sunload Sensor (Auto A/C Model).>	Is the sunload sensor normal?	System is normal.	Replace the sunload sensor. <Ref. to AC-76, REMOVAL, Sunload Sensor (Auto A/C Model).>

*1: For the 75°F center specification. Note that 18 for 25°F center specification and 15 for 22°F center specification.
*2: For the 75°F center specification. Note that 32 for 25°F center specification and 29 for 22°F center specification.

8. AIR DOES NOT COME OUT. AIRFLOW IS LOW.

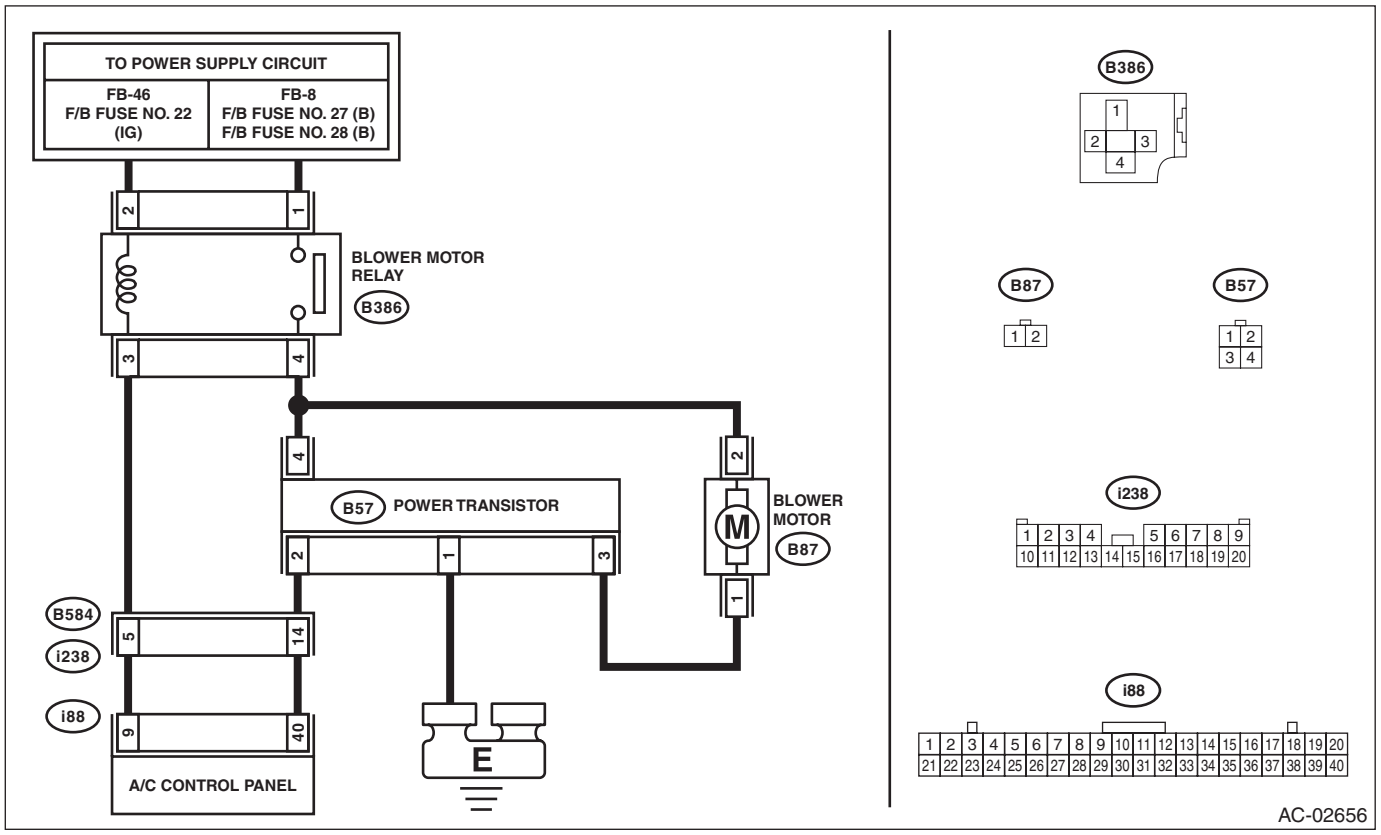
TROUBLE SYMPTOM:

- Airflow is low.
- Air does not come out when operating the fan dial.

TROUBLE CAUSE:

- Airflow failure
- CAN communication failure
- A/C control panel failure
- Blower motor failure

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK A/C CONTROL PANEL.** 1) Display the following data in "Read Current Data" using the Subaru Select Monitor. • Air mix door actuator position (driver's side) • Air mix door actuator position (passenger's side) • Blower Fan Level 2) Turn the temperature control dial at MAX COOL and increase and decrease the A/C control panel fan dial. (If equipped with left/right independent air conditioning function, setting must be performed on both sides.)	Do "Air mix door actuator position (driver's side)" and "Air mix door actuator position (passenger's side)" indicate "0%"? Also, does the value of "Blower Fan Level" increase or decrease in conjunction with the fan dial operation?	Go to step **2**.	Go to step **5**.
2	**CHECK AIRFLOW.** Turn the temperature control dial to LO (both dials for the models equipped with left/right independent air conditioning function), A/C control panel fan dial to MAX and FRESH/RECIRC switch to RECIRC.	Is airflow lower than that of the same model?	Go to step **3**.	System is normal.
3	**CHECK A/C FILTER.** Perform the inspection of A/C filter.	Is the A/C filter normal?	Go to step **4**.	Clean or replace the A/C filter.

	Step	Check	Yes	No
4	**CHECK EACH DUCT.** Check each duct for disconnection or clogging.	Is each duct normal?	Go to step **5**.	Repair the duct.
5	**CHECK A/C CONTROL PANEL.** 1) Turn the ignition switch to ON. 2) Turn the fan dial to the maximum position. 3) Using the Subaru Select Monitor, check "Blower Fan Level" of the current data from Air Conditioning Diagnosis.	Does "Blower Fan Level" indicate "7"?	Go to step **6**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
6	**CHECK A/C CONTROL PANEL.** 1) Turn the fan dial to the minimum position. 2) Using the Subaru Select Monitor, check "Blower Fan Level" of the current data from Air Conditioning Diagnosis.	Does "Blower Fan Level" indicate "1"?	Go to step **7**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
7	**CHECK CONNECTOR.** Check for poor contact of connector.	Is there poor contact of connector?	Repair the connector.	Go to step **8**.
8	**CHECK FUSE.** 1) Remove a fuse in the fuse & relay box. 2) Check the condition of fuse.	Is the fuse blown out?	Replace the fuse.	Go to step **9**.
9	**CHECK BLOWER MOTOR RELAY ON SIGNAL.** 1) Stop the engine. 2) Turn the fan dial OFF. 3) Turn the ignition switch to ON. 4) Using a tester, measure the voltage between the A/C control panel connector (i88) and chassis ground. ***Connector & terminal*** ***(i88) No. 9 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **10**.	• Check for open or short circuit in the harness between fuse and ECM. • Check the connector of blower relay and the relay itself. <Ref. to AC-33, CHECK RELAY, INSPECTION, Relay and Fuse.>
10	**CHECK BLOWER MOTOR RELAY ON SIGNAL.** 1) Start the engine. 2) Turn the fan dial to ON. 3) Using a tester, measure the voltage between the A/C control panel connector (i88) and chassis ground. ***Connector & terminal*** ***(i88) No. 9 (+) — Chassis ground (–):***	Is the voltage 0 V?	Go to step **11**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
11	**CHECK BLOWER MOTOR POWER SUPPLY CIRCUIT.** 1) Turn the ignition switch to ON. 2) Turn the fan dial to ON. 3) Use a tester to measure the voltage between the blower motor connector (B87) and chassis ground. ***Connector & terminal*** ***(B87) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **12**.	• Check the blower motor power supply line harness for open circuit or connector disconnection. • Check the connector of blower relay and the relay itself. <Ref. to AC-33, CHECK RELAY, INSPECTION, Relay and Fuse.>
12	**CHECK BLOWER MOTOR UNIT.** Check the blower motor. <Ref. to AC-37, INSPECTION, Blower Motor.>	Is the blower motor normal?	Go to step **13**.	Replace the blower motor. <Ref. to AC-37, REMOVAL, Blower Motor.>

	Step	Check	Yes	No
13	**CHECK HARNESS.** 1) Disconnect the power transistor and A/C control panel connector. 2) Use a tester to measure the resistance between harness terminals. ***Connector & terminal*** ***(B386) No. 4 — (B57) No. 4:*** ***(B87) No. 1 — (B57) No. 3:*** ***(B57) No. 2 — (i88) No. 40:*** ***(B57) No. 1 — Chassis ground:***	Is the resistance less than 1 Ω?	Go to step **14**.	Repair or replace the open circuit of harness.
14	**CHECK HARNESS.** Use a tester to measure the harness resistance between the power transistor connector and chassis ground. ***Connector & terminal*** ***(B57) No. 2 — Chassis ground:***	Is the resistance less than 1 Ω?	Repair or replace the short circuit of the harness.	Go to step **15**.
15	**CHECK POWER TRANSISTOR.** Replace the power transistor with a new or properly functioning part.	Does the blower motor rotate?	Replace the power transistor. <Ref. to AC-38, REMOVAL, Power Transistor (Auto A/C Model).>	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

9. AIR CANNOT BE CONTROLLED.

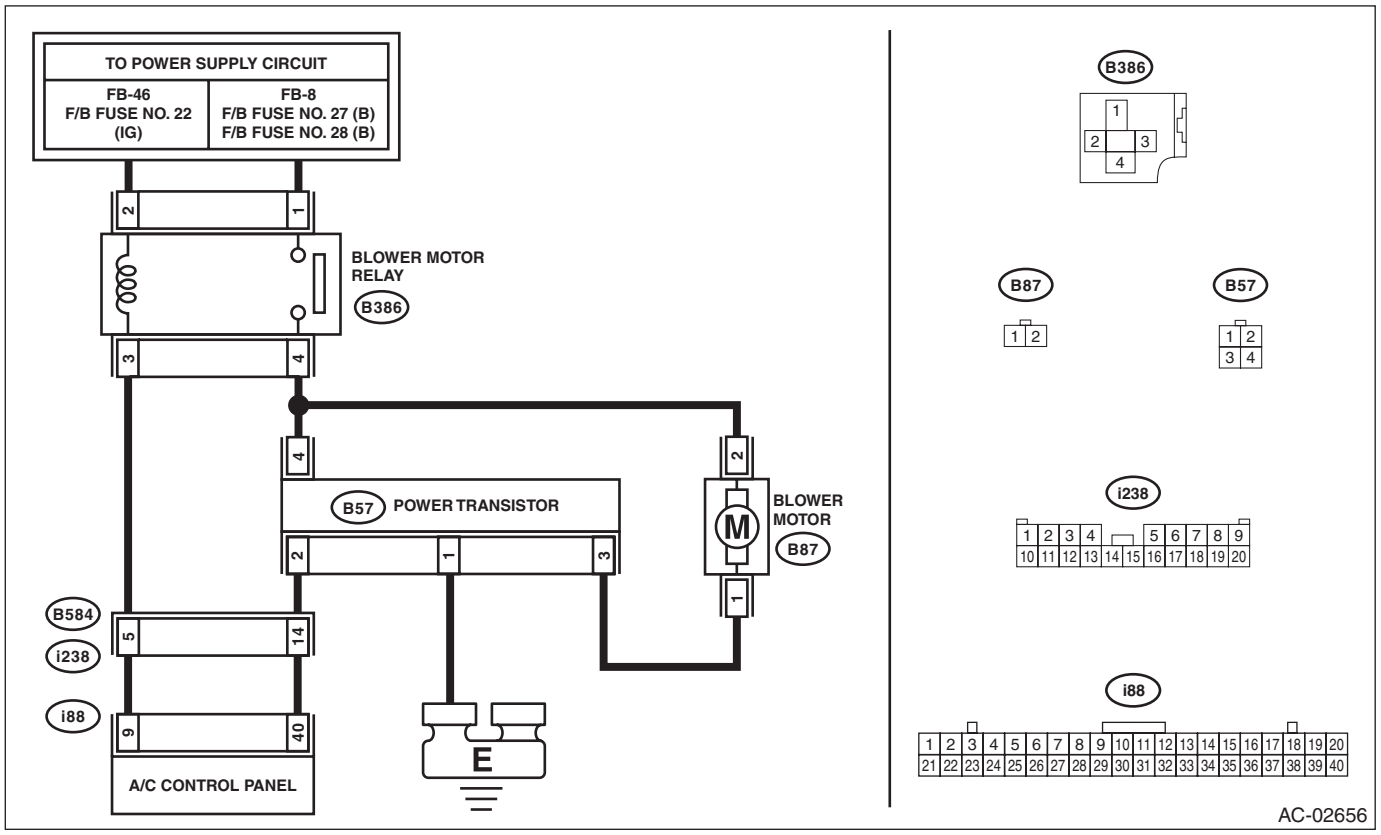
TROUBLE SYMPTOM:

- The blower rotates even though the blower switch is not turned on.
- The blower motor continues to rotate at high speed. (Not adjustable.)

TROUBLE CAUSE:

- Airflow failure
- CAN communication failure
- A/C control panel failure
- Blower motor failure

WIRING DIAGRAM:

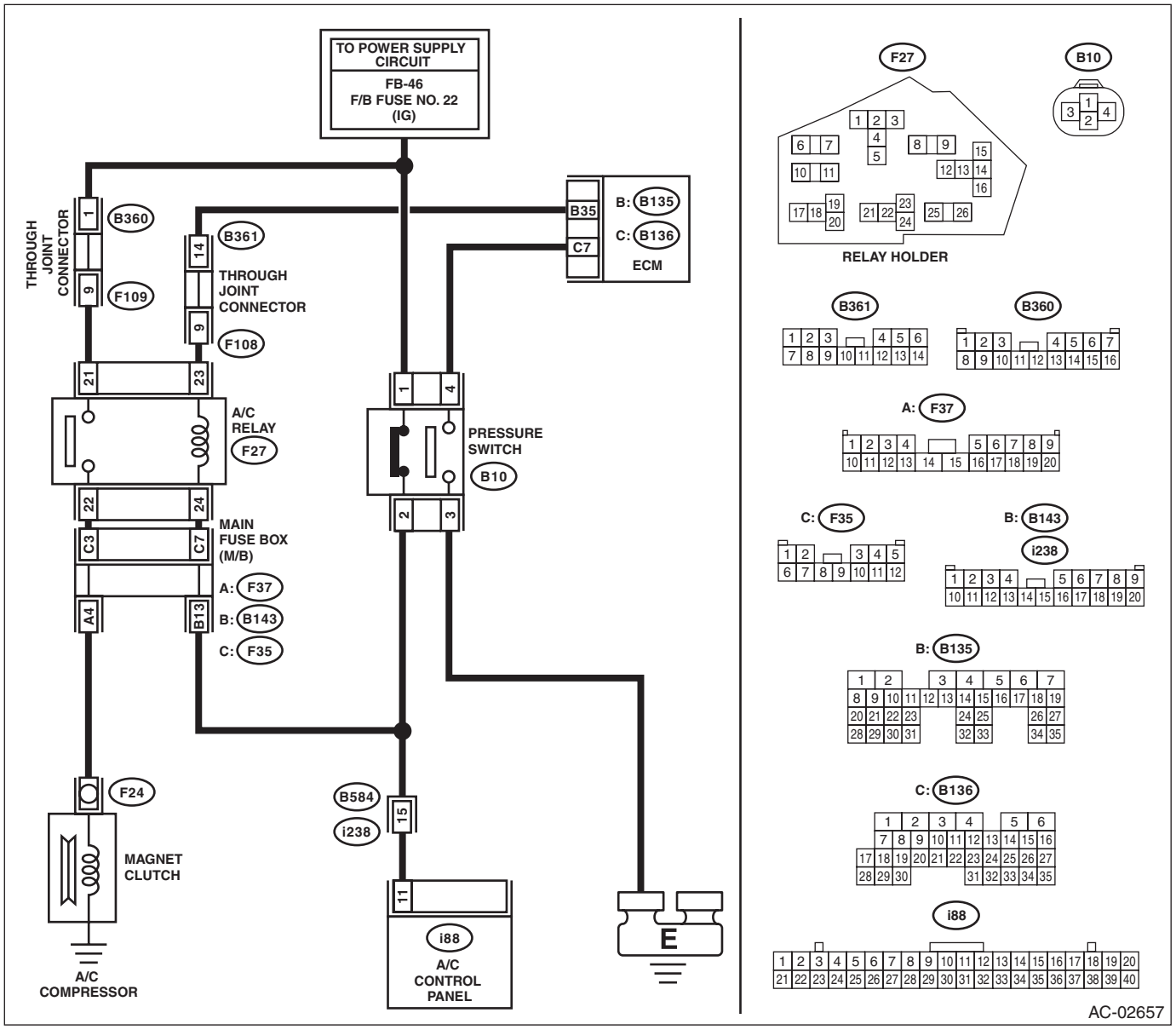


Step		Check	Yes	No
1	**CHECK A/C CONTROL PANEL.** 1) Turn the ignition switch to ON. 2) Turn the fan dial to the maximum position. 3) Using the Subaru Select Monitor, check "Blower Fan Level" of the current data from Air Conditioning Diagnosis.	Does "Blower Fan Level" indicate "7"?	Go to step **2**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
2	**CHECK A/C CONTROL PANEL.** 1) Turn the fan dial to the minimum position. 2) Using the Subaru Select Monitor, check "Blower Fan Level" of the current data from Air Conditioning Diagnosis.	Does "Blower Fan Level" indicate "1"?	Go to step **3**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
3	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the power transistor connector. 3) Use a tester to measure the resistance between the power transistor connector and chassis ground. ***Connector & terminal*** ***(B57) No. 4 — Chassis ground:***	Is the resistance less than 1 Ω?	Repair or replace the short circuit of the harness between blower motor and power transistor.	Go to step **4**.

	Step	Check	Yes	No
4	**CHECK HARNESS.** 1) Remove the A/C control panel. 2) Turn the ignition switch to ON. 3) Use a tester to measure the resistance between the power transistor connector and chassis ground. ***Connector & terminal*** ***(B57) No. 2 — Chassis ground:***	Is the resistance less than 1 Ω?	Repair or replace the short circuit of the harness between A/C control panel and power transistor.	Go to step **5**.
5	**CHECK HARNESS.** 1) Connect the disconnected connectors. 2) Turn the ignition switch to ON. 3) Use a tester to measure the voltage between the power transistor connector and chassis ground. ***Connector & terminal*** ***(B57) No. 2 (+) — Chassis ground (–):***	Is the voltage approx. 10 V when fan dial in 1st, and approx. 1 V when fan dial in 6th?	Replace the power transistor. <Ref. to AC-38, REMOVAL, Power Transistor (Auto A/C Model).>	Go to step **6**.
6	**CHECK A/C CONTROL PANEL.** 1) Turn the fan dial OFF. 2) Disconnect the power transistor connector. 3) Use a tester to measure the resistance between the power transistor connector and chassis ground. ***Connector & terminal*** ***(B57) No. 2 — Chassis ground:***	When the fan dial is OFF and other than OFF, does the resistance change?	Replace the power transistor. <Ref. to AC-38, REMOVAL, Power Transistor (Auto A/C Model).>	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

10.COOL AIR DOES NOT COME OUT WHEN PRESSING THE A/C SWITCH. FOG CANNOT BE CLEARED. (COMPRESSOR DOES NOT OPERATE.)

TROUBLE SYMPTOM:
Compressor does not operate after turning the A/C switch to ON and fan dial between LO and HI.
TROUBLE CAUSE:
Compressor failure
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK A/C CONTROL PANEL.** 1) Place the vehicle in a condition with the outside temperature at 15°C (59°F) or more. 2) Turn the ignition switch to ON. 3) Turn the fan dial to the maximum position. 4) Press the A/C switch.	Does A/C control panel display "A/C"?	Go to step **2**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
2	**CHECK EVAPORATOR SENSOR.** Using the Subaru Select Monitor, check "Evaporator Temp." of the current data from Air Conditioning Diagnosis.	Does the data indicate -0.5°C or more?	Go to step **4**.	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK EVAPORATOR SENSOR.** Perform the inspection of evaporator sensor. <Ref. to AC-83, INSPECTION, Evaporator Sensor.>	Is the sensor normal?	Go to step **4**.	Replace the evaporator sensor. <Ref. to AC-82, REMOVAL, Evaporator Sensor.>
4	**CHECK PRESSURE SWITCH.** Check the connection status of the pressure switch.	Is there an abnormal condition in the connector?	Go to step **5**.	Repair the connector.
5	**CHECK PRESSURE SWITCH.** Using the Subaru Select Monitor, check "Pressure Switch" of the current data from Air Conditioning Diagnosis.	Does the data indicate normal?	Go to step **10**.	Go to step **6**.
6	**CHECK AMOUNT OF REFRIGERANT PRESSURE.** Check the refrigerant pressure. <Ref. to AC-22, REFRIGERANT GAS PRESSURE INSPECTION, PROCEDURE, Refrigerant Pressure with Manifold Gauge Set.>	Is the refrigerant pressure normal?	Go to step **7**.	Repair according to refrigerant pressure inspection.
7	**CHECK CONNECTOR.** Check poor contact of A/C control panel connector.	Is there an abnormal condition in the connector?	Go to step **8**.	Repair the connector.
8	**CHECK FUSE.** 1) Turn the ignition switch to ON. 2) Remove a fuse in the fuse & relay box. 3) Check the fuse.	Is the fuse normal?	Go to step **9**.	Replace the fuse.
9	**CHECK PRESSURE SWITCH SIGNAL.** 1) Turn the ignition switch to OFF. 2) Disconnect the A/C control panel connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between A/C control panel connector terminal and chassis ground. ***Connector & terminal*** ***(i88) No. 11 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>	• Check for open or short circuit in the harness between fuse and A/C control panel. • Check for poor contact of pressure switch connector.
10	**CHECK CAN COMMUNICATION CIRCUIT.** Using the Subaru Select Monitor, check "A/C Switch Signal" of the current data from Air Conditioning Diagnosis.	Does the data indicate ON?	Go to step **12**.	Go to step **11**.
11	**CHECK CAN COMMUNICATION CIRCUIT.** Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>	Is the system normal?	Repair it according to DTC of LAN system.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
12	**CHECK A/C RELAY ON SIGNAL.** 1) Disconnect the ECM connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between ECM connector terminal and chassis ground. ***Connector & terminal*** ***(B135) No. 35 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **13**.	• Check for open or short in the harness between pressure switch and ECM. • Check poor contact of A/C relay connector. • Check the A/C relay. <Ref. to AC-32, INSPECTION, Relay and Fuse.>

	Step	Check	Yes	No
13	**CHECK A/C RELAY ON SIGNAL.** 1) Start the engine. 2) Turn the A/C switch to ON. 3) Turn the temperature control dial at maximum cool position. 4) Measure the voltage between ECM connector terminal and chassis ground. ***Connector & terminal*** ***(B135) No. 35 (+) — Chassis ground (–):***	Is the voltage 0 V?	Go to step **14**.	Replace the ECM.
14	**CHECK MAGNET CLUTCH POWER SUPPLY CIRCUIT.** 1) Stop the engine. 2) Disconnect the magnet clutch connector. 3) Start the engine. 4) Turn the A/C switch to ON. 5) Turn the temperature control dial at maximum cool position. 6) Measure the voltage between magnet clutch connector terminal and chassis ground. ***Connector & terminal*** ***(F24) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Check the magnet clutch.	• Check for open or short circuit in the harness between fuse and magnet clutch. • Check poor contact of A/C relay connector. • Check the A/C relay. <Ref. to AC-32, INSPECTION, Relay and Fuse.>

11.UNABLE TO SWITCH SUCTION VENTS

TROUBLE SYMPTOM:

Inlet opening does not switch RECIRC → FRESH or FRESH → RECIRC each time pressing the FRESH/RECIRC switch.

TROUBLE CAUSE:

Intake actuator failure.

	Step	Check	Yes	No
1	**VISUALLY CHECK INTAKE DOOR OPERATION.** 1) Remove the glove box. <Ref. to EI-63, REMOVAL, Glove Box.> 2) Visually check the intake door operation by operating the FRESH/RECIRC switch.	Does the intake door operate normally? Is the portion between intake door and intake door case sealed completely?	System is normal.	Go to step **2**.
2	**CHECK A/C CONTROL PANEL.** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, check “Fresh/Recircle Air Door Actuator Position Target” of the current data from Air Conditioning Diagnosis. 3) Operate the FRESH/RECIRC switch.	Does “Fresh/Recircle Air Door Actuator Position Target” indicate 0 ← →100?	Go to step **3**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
3	**CHECK DTC.** 1) Turn the FRESH/RECIRC switch to RECIRC, and leave for 16 seconds or more. 2) Read the DTC using Subaru Select Monitor.	Is DTC B14E9, B14EA and B14EB displayed?	Perform the diagnosis according to DTC.	Go to step **4**.
4	**CHECK DTC.** 1) Turn the FRESH/RECIRC switch to FRESH, and leave for 16 seconds or more. 2) Read the DTC using Subaru Select Monitor.	Is DTC B14E9, B14EA and B14EB displayed?	Perform the diagnosis according to DTC.	System is normal.

12.UNABLE TO SWITCH VENTS

TROUBLE SYMPTOM:

- Unable to switch blow vents.
- Outlet opening does not switch in the sequence of FACE → B/L → FOOT → F/D after operating the mode switch or mode dial.

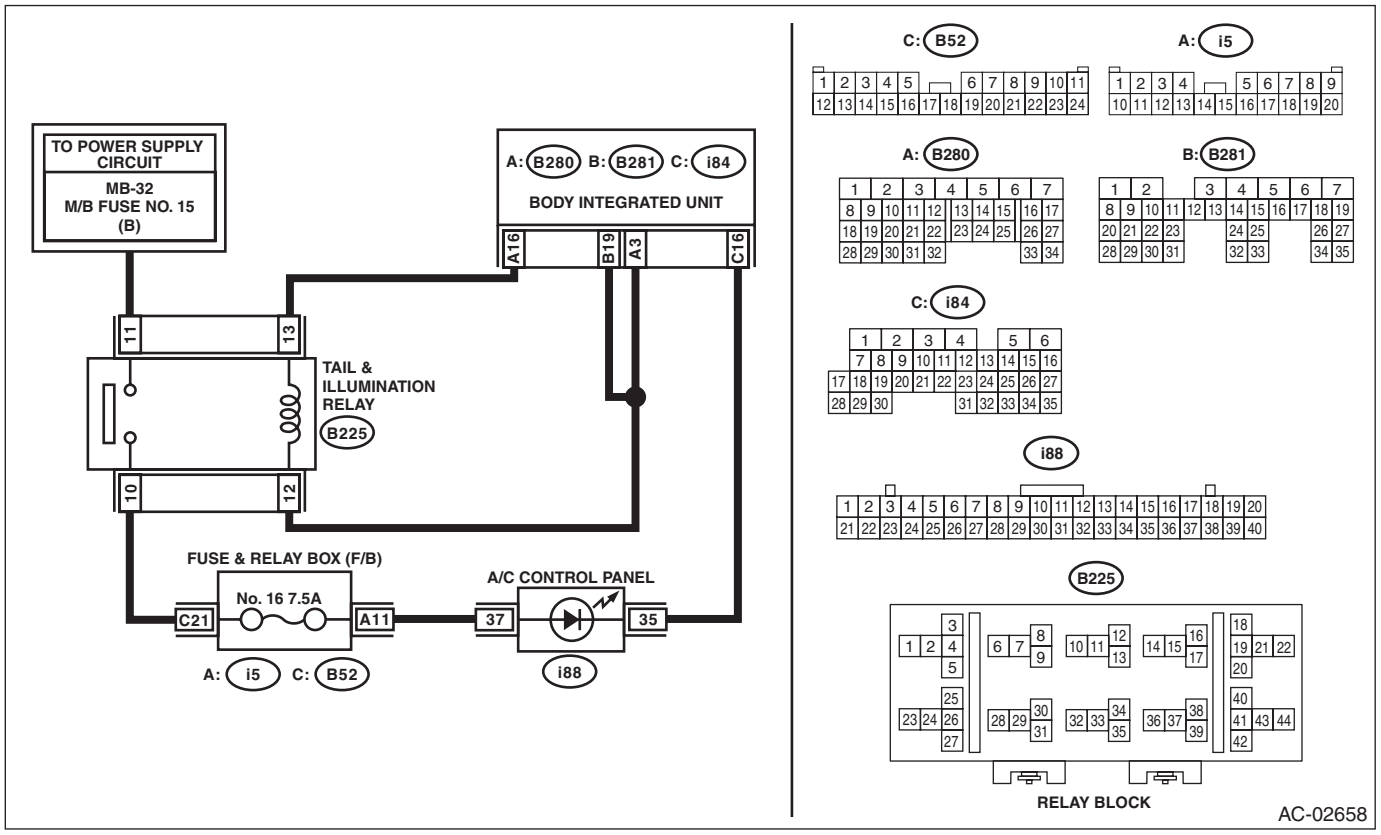
TROUBLE CAUSE:

Mode actuator failure.

	Step	Check	Yes	No
1	**CHECK A/C CONTROL PANEL.** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, check "Mode Door Actuator Position Target" of the current data from Air Conditioning Diagnosis. 3) Operate the air flow control switch.	Does the value of "Mode Door Actuator Position Target" change?	Go to step **2**.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>
2	**CHECK DTC.** 1) Turn the air flow control switch to DEF, and leave for 16 seconds or more. 2) Read the DTC using Subaru Select Monitor.	Is DTC B14E5 and B14E6 displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK DTC.** 1) Turn the air flow control switch to VENT, and leave for 16 seconds or more. 2) Using the Subaru Select Monitor, read DTC of A/C control panel.	Is DTC B14E5 and B14E6 displayed?	Perform the diagnosis according to DTC.	System is normal.

13.ILLUMINATION DOES NOT ILLUMINATE OR CANNOT BE DIMMED.

TROUBLE SYMPTOM:
Illumination does not illuminate after operating the lighting switch. Illumination does not dim after operating the illumination control.
TROUBLE SYMPTOM:
Illumination circuit is open.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK ILLUMINATION.** Make sure that all illuminations except A/C come on.	Do other illuminations come on.	Go to step **2**.	<Ref. to LI-9, INSPECTION, Clearance Light and Illumination Light System.>
2	**CHECK CONNECTOR.** Check for poor contact of connector.	Is there poor contact?	Repair the connector.	Go to step **3**.
3	**CHECK HARNESS.** 1) Turn the lighting switch to ON. 2) Using a tester, measure the voltage between the A/C control panel connector and chassis ground. ***Connector & terminal*** ***(i88) No. 37 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **4**.	Repair or replace the open circuit of harness.
4	**CHECK HARNESS.** 1) Turn the lighting switch to OFF. 2) Measure the resistance between A/C control panel connector and body integrated unit connector. ***Connector & terminal*** ***(i88) No. 35 — (i84) No. 16:***	Is the resistance less than 10 Ω?	Go to step **5**.	Repair or replace the open circuit of harness.

	Step	Check	Yes	No
5	**CHECK A/C CONTROL PANEL UNIT.** Check the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>	Is the A/C control panel normal?	A/C control panel illumination circuit is normal.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

7. Subaru Select Monitor

A: OPERATION

For details of basic operations, refer to “PC application help for Subaru Select Monitor”.

NOTE:
If the communication for initializing of Subaru Select Monitor is impossible, perform the diagnosis using “Diagnostic Procedure for Subaru Select Monitor Communication Error”.

8. Read Diagnostic Trouble Code (DTC)

A: OPERATION

For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

9. Clear Memory Mode

A: OPERATION

For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

10.Read Current Data

A: OPERATION

For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

B: LIST

Items to be displayed	Unit of measure	Remarks	Note
In-vehicle Sensor Temperature	°C (°F)	A/C control panel input value	—
Quantity of Sunload	W/m^2	A/C control panel input value	—
Heater Water Temperature	°C (°F)	Data value received by CAN	—
Heater Control Panel Setting Value (Driver’s)	LO: 18°C (60°F) HI: 32°C (90°F)	Control panel display value	—
Heater Control Panel Setting Value (Passenger’s)	LO: 18°C (60°F) HI: 32°C (90°F)	Control panel display value	For models with left/right independent air conditioning function only
Blower outlet request temperature (Driver’s)	°C (°F)	A/C control panel internal setting value	For models with left/right independent air conditioning function only
Blower outlet request temperature (Passenger’s)	°C (°F)	A/C control panel internal setting value	For models with left/right independent air conditioning function only
Air mix door actuator position (driver’s side)	%	A/C control panel input value	—
Air mix door actuator position (passenger’s side)	%	A/C control panel input value	For models with left/right independent air conditioning function only
Mode Door Actuator Position	%	A/C control panel input value	—
Fresh/Recircle Air Door Actuator Position	%	A/C control panel input value	—
Target air mix door actuator position (driver’s side)	%	A/C control panel input value	—
Target air mix door actuator position (passenger’s side)	%	A/C control panel input value	—
Mode Door Actuator Position Target	%	A/C control panel input value	—
Fresh/Recircle Air Door Actuator Position Target	%	A/C control panel input value	—
Blower Fan Level	Level	A/C control panel internal output value	—
Ambient Air Temperature	°C (°F)	Data value received by CAN	—
Compressor operation status	OFF/AUTO	A/C control panel input value	—
Blower Fan Operating Condition	MANU/AUTO	A/C control panel input value	—
A/C Operating Condition	MANU/AUTO	A/C control panel input value	—
Fresh/Recircle Air Operating Condition	MANU/AUTO	A/C control panel input value	—
Mode Operating Condition	MANU/AUTO	A/C control panel input value	—

Items to be displayed	Unit of measure	Remarks	Note
Rear Defogger	ON/OFF	A/C control panel input value	—
Engine Speed	rpm	Data value received by CAN	—
Vehicle Speed	km/h	Data value received by CAN	—
Evaporator Temperature	°C (°F)	A/C control panel input value	—
Evaporator Temperature Target	°C (°F)	A/C control panel input value	—
Blower outlet Door Request Temperature	°C (°F)	A/C control panel internal setting value	—
PTC permitted number	0 — 3	A/C control panel input value	Not supported
PTC operation steps	0 — 3	A/C control panel input value	Not supported
PTC Heater 3	Inoperative/Operate	A/C control panel input value	Not supported
PTC Heater 2	Inoperative/Operate	A/C control panel input value	Not supported
PTC Heater 1	Inoperative/Operate	A/C control panel input value	Not supported
Request engine speed	0: Without Request 1: Cooler H 2: Heater H 3: Cooler L 4: Heater L	A/C control panel internal output value	—
Heater core Temp.	°C (°F)	A/C control panel input value	—
Active Test Error	—	—	—

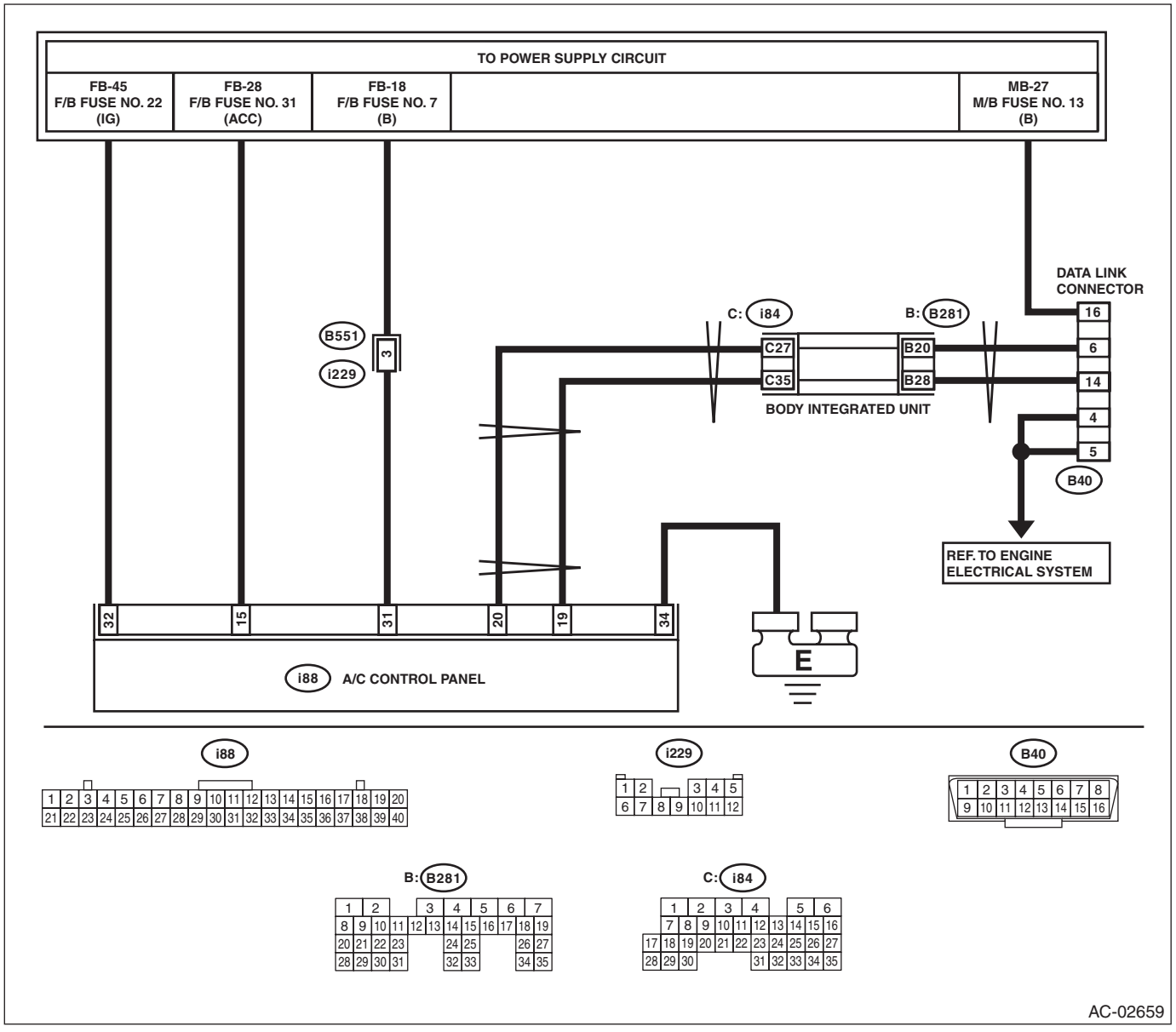
NOTE:
For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

11.Diagnostic Procedure for Subaru Select Monitor Communication

A: COMMUNICATION FOR INITIALIZING IMPOSSIBLE

DIAGNOSIS:
Defective CAN communication circuit
TROUBLE SYMPTOM:
- LAN system is abnormal.
- Communication failure between Subaru Select Monitor and A/C control panel

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POWER SUPPLY CIRCUIT.** Connect SDI (Subaru Diagnosis Interface) to the data link connector.	Is SDI powered on?	Go to step **4**.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK POWER SUPPLY CIRCUIT.** Measure the voltage between data link connector and chassis ground. ***Connector & terminal*** ***(B40) No. 16 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Repair the power supply circuit. NOTE: In this case, repair the following item: • Open or ground short circuit of harness between battery and data link connector • Blown out of fuse (M/B No. 12)
3	**CHECK HARNESS BETWEEN DATA LINK CONNECTOR AND CHASSIS GROUND.** 1) Turn the ignition switch to OFF. 2) Measure the resistance of harness between data link connector and chassis ground. ***Connector & terminal*** ***(B40) No. 4 — Chassis ground:*** ***(B40) No. 5 — Chassis ground:***	Is the resistance less than 5 Ω?	Repair the poor contact of data link connector.	Repair the harness and connector.
4	**CHECK SUBARU SELECT MONITOR.** 1) Connect the Subaru Select Monitor to a normal vehicle. 2) Start the engine and perform communication between the Subaru Select Monitor and vehicle.	Is communication possible?	Go to step **5**.	Use another Subaru Select Monitor because the CAN communication circuit of the Subaru Select Monitor is faulty.
5	**CHECK LAN SYSTEM.** Check the LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>	Is LAN system normal?	Go to step **6**.	Repair it according to the diagnosis for LAN system.
6	**CHECK CONNECTOR.** Check for poor contact of power supply circuit connector.	Is there poor contact of connector?	Repair the connector.	Go to step **7**.
7	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove a fuse from the fuse box. 3) Check the fuse.	Is the fuse blown out?	Replace the fuse.	Go to step **8**.
8	**CHECK A/C CONTROL PANEL POWER CIRCUIT.** 1) Disconnect the A/C control panel connector. 2) Measure the voltage between A/C control panel connector terminal and chassis ground after turning the ignition switch to ON. ***Connector & terminal*** ***(i88) No. 15 (+) — Chassis ground (–):*** ***(i88) No. 31 (+) — Chassis ground (–):*** ***(i88) No. 32 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **9**.	Check for open or short circuit in the harness between A/C control panel and fuse.
9	**CHECK A/C CONTROL PANEL GROUND CIRCUIT.** Measure the resistance of harness between A/C control panel and chassis ground. ***Connector & terminal*** ***(i88) No. 34 — Chassis ground:***	Is the resistance less than 5 Ω?	Check the connection between the data link connector and Subaru Select Monitor.	Repair the harness for ground line.

12.List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Item	Content of diagnosis	Note
B1430	Room Temperature Sensor Circuit Wire Break	In-vehicle air temperature sensor circuit is open.	<Ref. to AC(diag)-50, DTC B1430 ROOM TEMPERATURE SENSOR CIRCUIT WIRE BREAK, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1431	Room Temperature Sensor Circuit Short-Circuit	In-vehicle air temperature sensor circuit is shorted.	<Ref. to AC(diag)-51, DTC B1431 ROOM TEMPERATURE SENSOR CIRCUIT SHORT-CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1432	Outside Air Sensor Circuit Wire Break (Air-Conditioning)	Ambient air temperature sensor circuit is open.	<Ref. to AC(diag)-52, DTC B1432 OUTSIDE AIR SENSOR CIRCUIT WIRE BREAK (AIR-CONDITIONING), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1433	Outside Air Sensor Circuit Short-Circuit (Air-Conditioning)	Ambient air temperature sensor circuit is shorted.	<Ref. to AC(diag)-54, DTC B1433 OUTSIDE AIR SENSOR CIRCUIT SHORT-CIRCUIT (AIR-CONDITIONING), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1434	Ambient Temperature Sensor Circuit Wire Break	Post evaporator sensor circuit is open.	<Ref. to AC(diag)-56, DTC B1434 AMBIENT TEMPERATURE SENSOR CIRCUIT WIRE BREAK, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1435	Evaporator Sensor Circuit Short-Circuit	Post evaporator sensor circuit is shorted.	<Ref. to AC(diag)-57, DTC B1435 EVAPORATOR SENSOR CIRCUIT SHORT-CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B14A1	Sunload Sensor Circuit Open	Sunload sensor circuit is open.	<Ref. to AC(diag)-58, DTC B14A1 SUNLOAD SENSOR CIRCUIT OPEN, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B14A2	Sunload Sensor Circuit Short	Sunload sensor circuit is shorted.	<Ref. to AC(diag)-59, DTC B14A2 SUNLOAD SENSOR CIRCUIT SHORT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B14E1	Air Mix Door Actuator Stepping Motor Circuit Wire Break (Driver's Seat)	Air mix door actuator stepping motor circuit is open.	<Ref. to AC(diag)-60, DTC B14E1 AIR MIX DOOR ACTUATOR STEPPING MOTOR CIRCUIT WIRE BREAK (DRIVER'S SEAT), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B14E2	Air Mix Door Actuator Stepping Motor Circuit Short-Circuit (Driver's Seat)	Air mix door actuator stepping motor circuit is shorted.	<Ref. to AC(diag)-62, DTC B14E2 AIR MIX DOOR ACTUATOR STEPPING MOTOR CIRCUIT SHORT-CIRCUIT (DRIVER'S SEAT), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B14E3	Air Mix Door Actuator Stepping Motor Circuit Wire Break (Passenger's Seat)	Air mix door actuator stepping motor circuit is open.	<Ref. to AC(diag)-64, DTC B14E3 AIR MIX DOOR ACTUATOR STEPPING MOTOR CIRCUIT WIRE BREAK (PASSENGER'S SEAT), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B14E4	Air Mix Door Actuator Stepping Motor Circuit Short-Circuit (Passenger's Seat)	Air mix door actuator stepping motor circuit is shorted.	<Ref. to AC(diag)-66, DTC B14E4 AIR MIX DOOR ACTUATOR STEPPING MOTOR CIRCUIT SHORT-CIRCUIT (PASSENGER'S SEAT), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B14E5	Mode Door Actuator Stepping Motor Circuit Wire Break	Mode door actuator stepping motor circuit is open.	<Ref. to AC(diag)-68, DTC B14E5 MODE DOOR ACTUATOR STEPPING MOTOR CIRCUIT WIRE BREAK, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

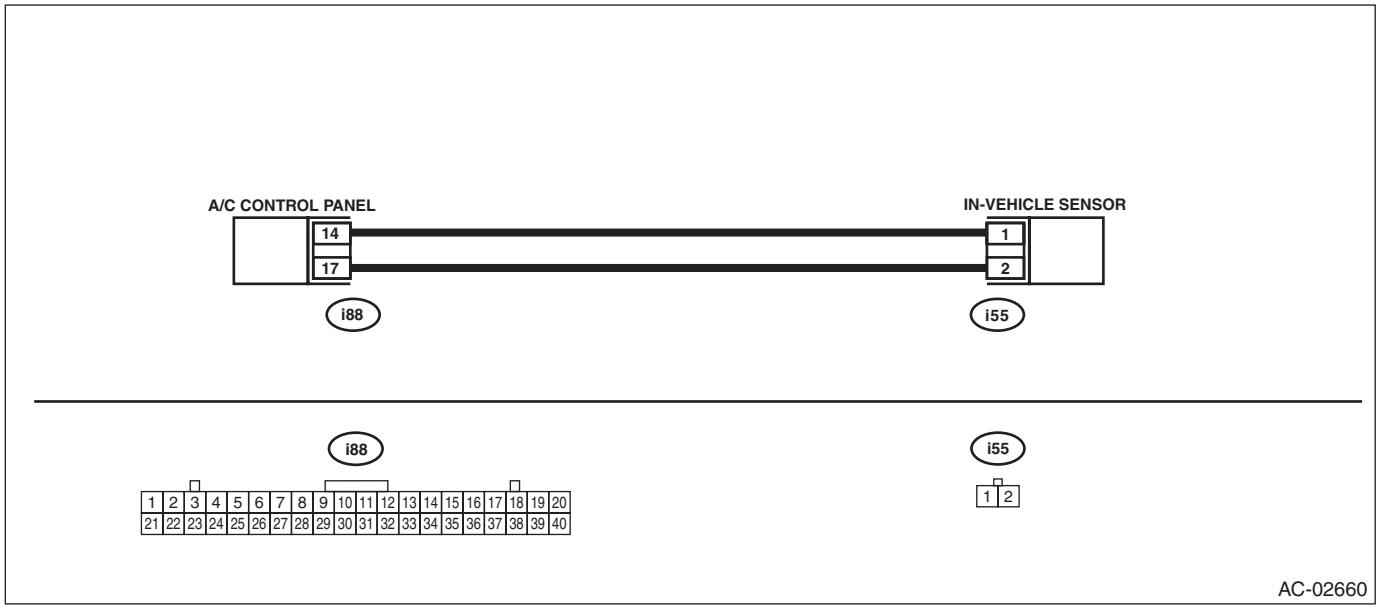
DTC	Item	Content of diagnosis	Note
B14E6	Mode Door Actuator Stepping Motor Circuit Short-Circuit	Mode door actuator stepping motor circuit is shorted.	<Ref. to AC(diag)-70, DTC B14E6 MODE DOOR ACTUATOR STEPPING MOTOR CIRCUIT SHORT-CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B14E7	Heater Core Rear Sensor Circuit Wire Break	Heater core rear sensor circuit is open.	<Ref. to AC(diag)-72, DTC B14E7 HEATER CORE REAR SENSOR CIRCUIT WIRE BREAK, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B14E8	Heater Core Rear Sensor Circuit Short-Circuit	Heater core rear sensor circuit is shorted.	<Ref. to AC(diag)-73, DTC B14E8 HEATER CORE REAR SENSOR CIRCUIT SHORT-CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B14E9	Intake Door Actuator Potentiometer Circuit Wire Break	Intake door actuator potentiometer circuit is open.	<Ref. to AC(diag)-74, DTC B14E9 INTAKE DOOR ACTUATOR POTENTIOMETER CIRCUIT WIRE BREAK, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B14EA	Intake Door Actuator Potentiometer Circuit Short-Circuit	Intake door actuator potentiometer circuit is shorted.	<Ref. to AC(diag)-76, DTC B14EA INTAKE DOOR ACTUATOR POTENTIOMETER CIRCUIT SHORT-CIRCUIT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B14EB	Intake Door Actuator Lock	Intake door actuator is locked.	<Ref. to AC(diag)-78, DTC B14EB INTAKE DOOR ACTUATOR LOCK, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0073	Control Module Communication Bus “A” Off	CAN communication error occurred.	<Ref. to AC(diag)-79, DTC U0073 CONTROL MODULE COMMUNICATION BUS “A” OFF, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0100	Lost Communication With ECM/PCM “A”	ECM data receive error occurred.	<Ref. to AC(diag)-79, DTC U0100 LOST COMMUNICATION WITH ECM/PCM “A”, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0101	Lost Communication With TCM	TCM data receive error occurred.	<Ref. to AC(diag)-79, DTC U0101 LOST COMMUNICATION WITH TCM, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0122	Lost Communication With Vehicle Dynamics Control Module	VDC data receive error occurred.	<Ref. to AC(diag)-79, DTC U0122 LOST COMMUNICATION WITH VEHICLE DYNAMICS CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0140	Lost Communication With Body Control Module	BIU data receive error occurred.	<Ref. to AC(diag)-79, DTC U0140 LOST COMMUNICATION WITH BODY CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0155	Lost Communication With Instrument Panel Cluster (IPC) Control Module	METER data receive error occurred.	<Ref. to AC(diag)-79, DTC U0155 LOST COMMUNICATION WITH INSTRUMENT PANEL CLUSTER (IPC) CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0401	Invalid Data Received From ECM/PCM “A”	An error occurred in ECM data.	<Ref. to AC(diag)-79, DTC U0401 INVALID DATA RECEIVED FROM ECM/PCM “A”, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0402	Invalid Data Received From TCM	An error occurred in TCM data.	<Ref. to AC(diag)-80, DTC U0402 INVALID DATA RECEIVED FROM TCM, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0416	Invalid Data Received From Vehicle Dynamics Control Module	An error occurred in VDC data.	<Ref. to AC(diag)-80, DTC U0416 INVALID DATA RECEIVED FROM VEHICLE DYNAMICS CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

DTC	Item	Content of diagnosis	Note
U0422	Invalid Data Received From Body Control Module	An error occurred in BIU data.	<Ref. to AC(diag)-80, DTC U0422 INVALID DATA RECEIVED FROM BODY CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0423	Invalid Data Received From Instrument Panel Cluster Control Module	An error occurred in METER data.	<Ref. to AC(diag)-80, DTC U0423 INVALID DATA RECEIVED FROM INSTRUMENT PANEL CLUSTER CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

13.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC B1430 ROOM TEMPERATURE SENSOR CIRCUIT WIRE BREAK

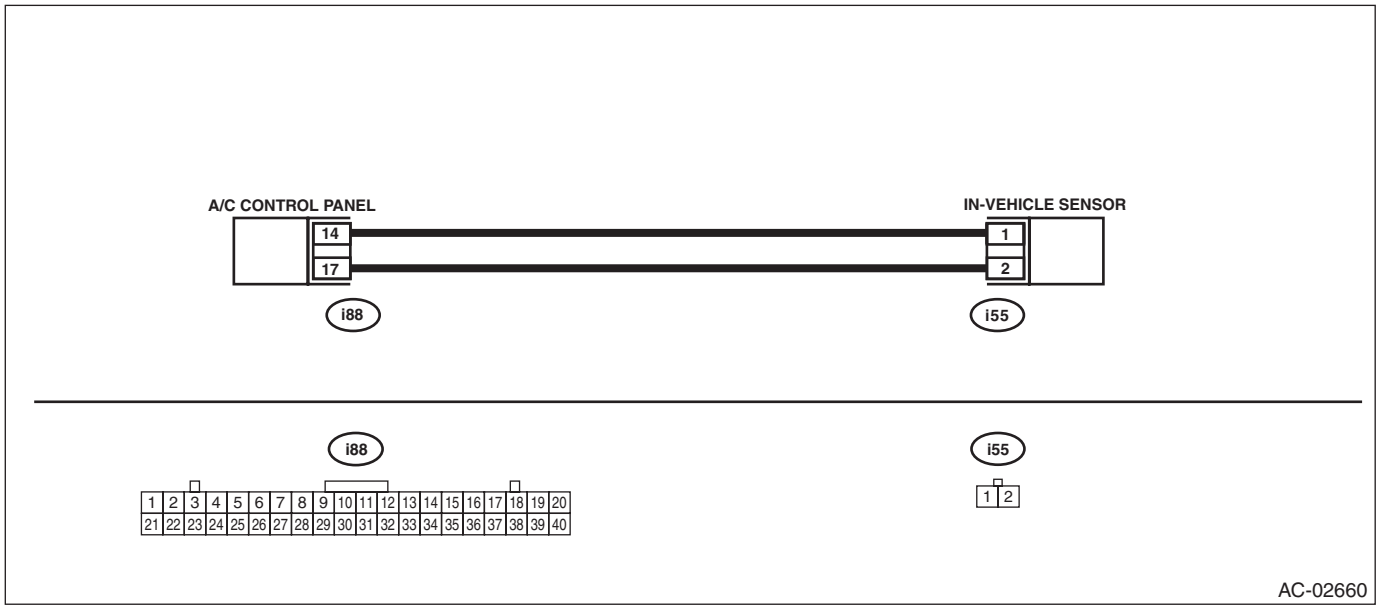
DTC DETECTING CONDITION:
In-vehicle sensor circuit is open.
TROUBLE SYMPTOM:
In-vehicle air temperature is falsely recognized as 25°C (77°F), and the compartment temperature is adjusted.
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B1430 displayed?	Go to step **2**.	Check the connection of the in-vehicle sensor circuit.
2	**CHECK IN-VEHICLE SENSOR.** 1) Disconnect the in-vehicle sensor. 2) Short the connector. 3) Read the DTC relating the ECM using the Subaru Select Monitor.	Is B1431 displayed?	Replace the in-vehicle sensor. <Ref. to AC-78, REMOVAL, In-Vehicle Sensor (Auto A/C Model).>	Go to step **3**.
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i55) No. 2 (+) — No. 1 (–):***	Is the voltage 4.5 — 5.0 V?	Go to step **4**.	Repair or replace the open circuit of harness.
4	**CHECK HARNESS.** 1) Disconnect the connector from the A/C control panel. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i55) No. 1 — (i88) No. 14:*** ***(i55) No. 2 — (i88) No. 17:***	Is there continuity?	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>	Repair or replace the open circuit of harness.

B: DTC B1431 ROOM TEMPERATURE SENSOR CIRCUIT SHORT-CIRCUIT

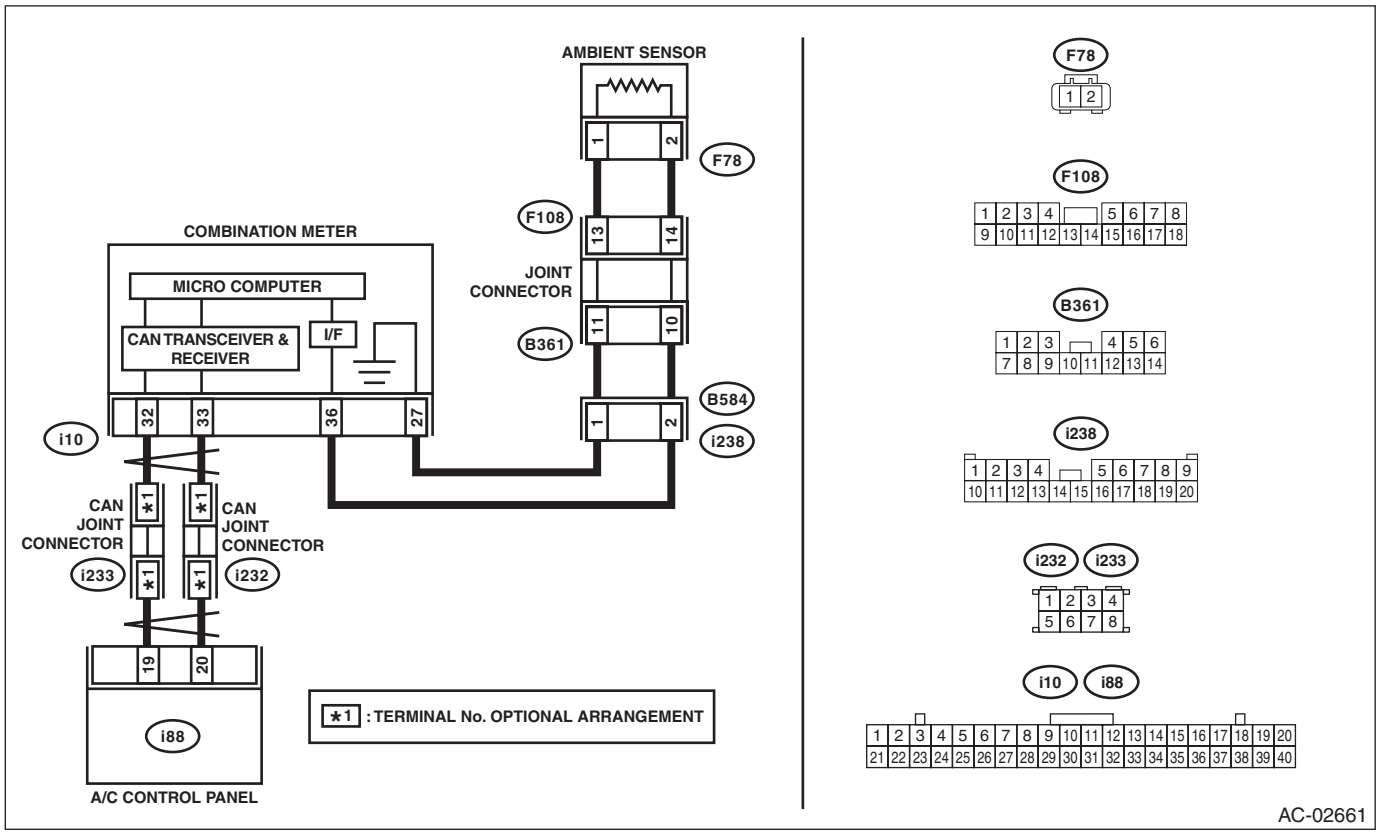
DTC DETECTING CONDITION:
In-vehicle sensor circuit is shorted.
TROUBLE SYMPTOM:
In-vehicle air temperature is falsely recognized as 25°C (77°F), and the compartment temperature is adjusted.
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B1431 displayed?	Go to step **2**.	Check the connection of the in-vehicle sensor circuit.
2	**CHECK IN-VEHICLE SENSOR.** 1) Disconnect the in-vehicle sensor. <Ref. to AC-78, REMOVAL, In-Vehicle Sensor (Auto A/C Model).> 2) Read the DTC using Subaru Select Monitor.	Is B1430 displayed?	Replace the in-vehicle sensor. <Ref. to AC-78, REMOVAL, In-Vehicle Sensor (Auto A/C Model).>	Go to step **3**.
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i55) No. 2 (+) — No. 1 (–):***	Is the voltage 4.5 — 5.0 V?	Check the connection of the in-vehicle sensor circuit.	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the connector from the A/C control panel. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i55) No. 1 — No. 2:***	Is there continuity?	Repair or replace the short circuit of the harness.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

C: DTC B1432 OUTSIDE AIR SENSOR CIRCUIT WIRE BREAK (AIR-CONDITIONING)

DTC DETECTING CONDITION:
Ambient sensor circuit is open.
TROUBLE SYMPTOM:
Ambient temperature is falsely recognized, and the compartment temperature is adjusted.
WIRING DIAGRAM:

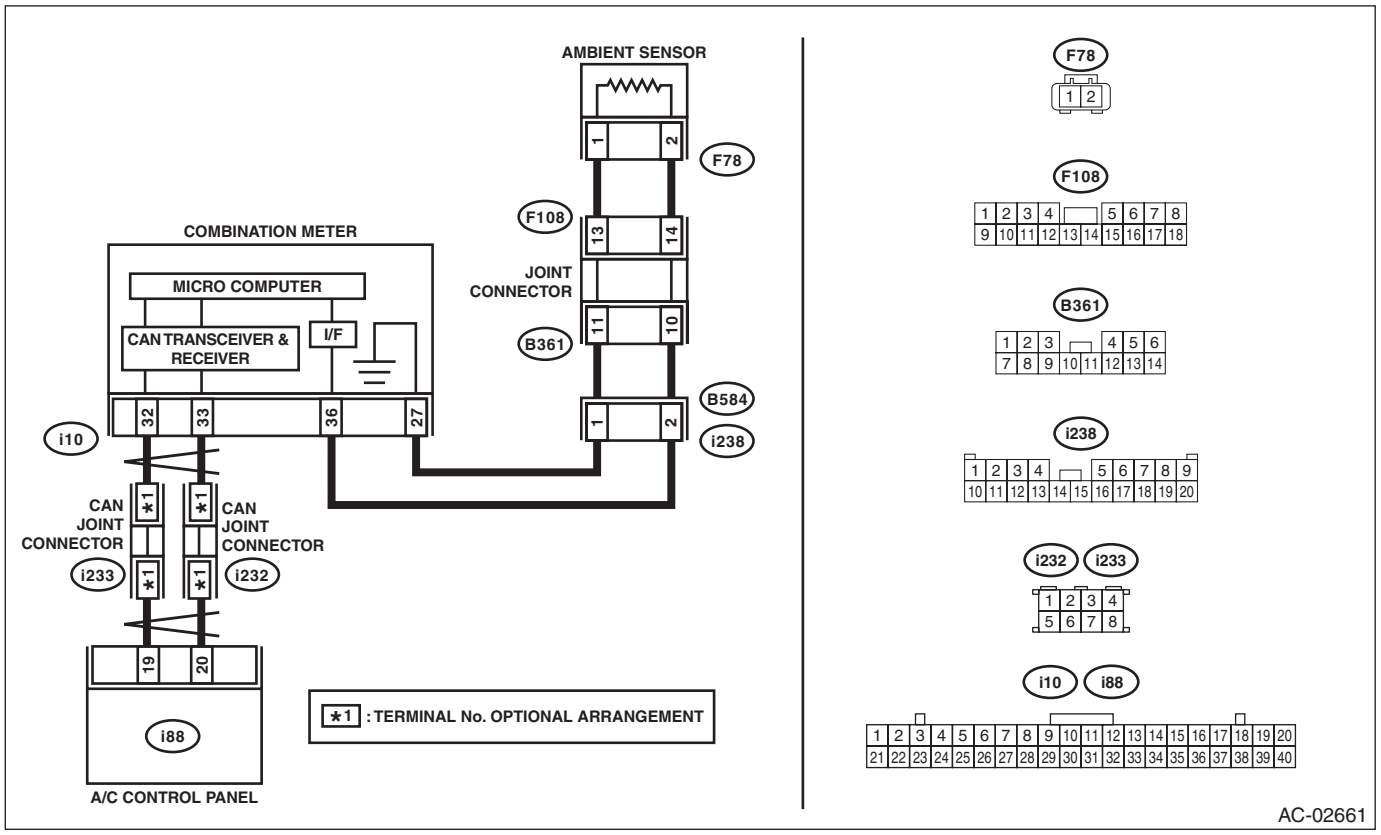


Step		Check	Yes	No
1	**CHECK AMBIENT SENSOR.** Perform the inspection of ambient sensor unit. <Ref. to AC-75, INSPECTION, Ambient Sensor.>	Is the sensor normal?	Go to step **2**.	Replace the ambient sensor. <Ref. to AC-73, REMOVAL, Ambient Sensor.>
2	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(F78) No. 2 (+) — No. 1 (–):***	Is the voltage 4.5 — 5.0 V?	Go to step **5**.	Go to step **3**.
3	**CHECK COMBINATION METER OUTPUT SIGNAL.** 1) Turn the ignition switch to OFF. 2) Pull out the combination meter. 3) Disconnect the connector from the combination meter. 4) Turn the ignition switch to ON. 5) Measure the voltage between the combination meter connector terminals. ***Connector & terminal*** ***(i10) No. 36 (+) — No. 27 (–):***	Is the voltage 4.5 — 5.0 V?	Go to step **4**.	Replace the combination meter. <Ref. to IDI-15, REMOVAL, Combination Meter.>

	Step	Check	Yes	No
4	**CHECK HARNESS.** 1) Disconnect the connector from the A/C control panel. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(F78) No. 1 — (i10) No. 27:*** ***(F78) No. 2 — (i10) No. 36:***	Is there continuity?	Replace the combination meter. <Ref. to IDI-15, REMOVAL, Combination Meter.>	Repair or replace the open circuit of harness.
5	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the combination meter. 3) Disconnect the A/C control panel connector. 4) Measure the resistance of harness between the combination meter and A/C control panel. ***Connector & terminal*** ***(i88) No. 19 — (i10) No. 32:*** ***(i88) No. 20 — (i10) No. 33:***	Is there continuity?	Go to step **6**.	Repair the open circuit of harness between the combination meter and A/C control panel. <Ref. to LAN(diag)-5, LAN SYSTEM, CAUTION, General Description.>
6	**CHECK FOR POOR CONTACT.** Check poor contact of A/C control panel connector.	Is there poor contact of connector?	Repair the connector.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

D: DTC B1433 OUTSIDE AIR SENSOR CIRCUIT SHORT-CIRCUIT (AIR-CONDITIONING)

DTC DETECTING CONDITION:
Ambient sensor circuit is shorted.
TROUBLE SYMPTOM:
Ambient temperature is falsely recognized, and the compartment temperature is adjusted.
WIRING DIAGRAM:

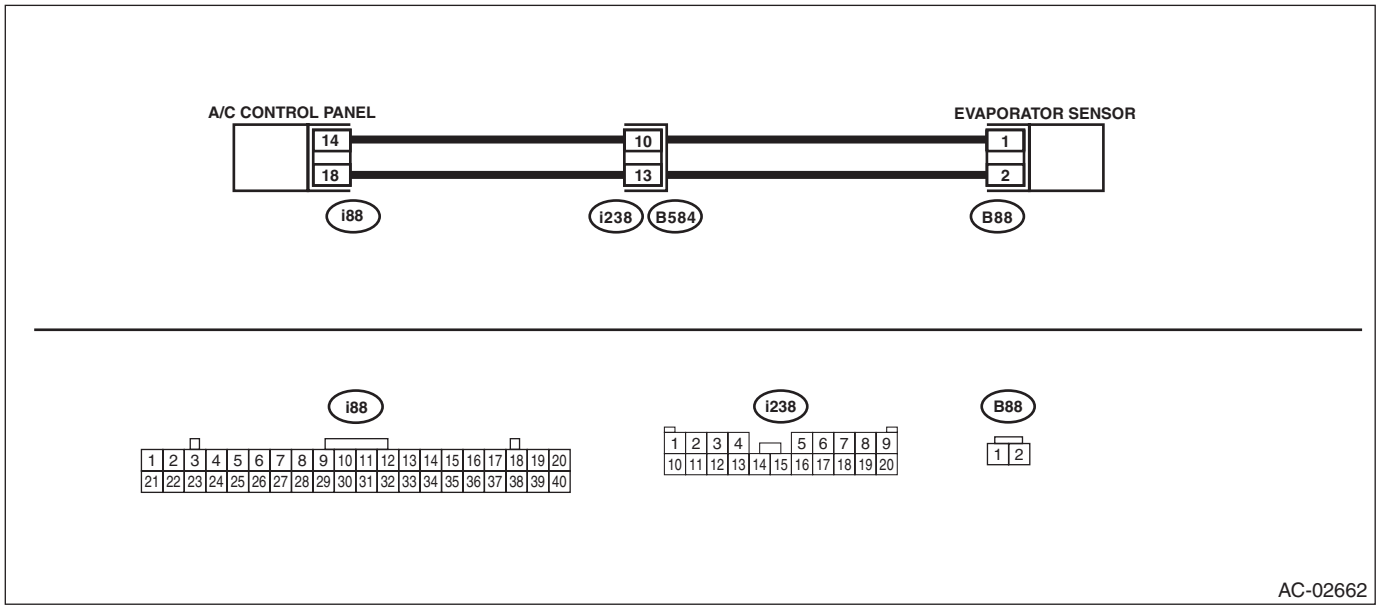


Step		Check	Yes	No
1	**CHECK AMBIENT SENSOR.** Perform the inspection of ambient sensor unit. <Ref. to AC-75, INSPECTION, Ambient Sensor.>	Is the sensor normal?	Go to step **2**.	Replace the ambient sensor. <Ref. to AC-73, REMOVAL, Ambient Sensor.>
2	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(F78) No. 2 (+) — No. 1 (–):***	Is the voltage 4.5 — 5.0 V?	Go to step **5**.	Go to step **3**.
3	**CHECK COMBINATION METER OUTPUT SIGNAL.** 1) Turn the ignition switch to OFF. 2) Pull out the combination meter. 3) Disconnect the connector from the combination meter. 4) Turn the ignition switch to ON. 5) Measure the voltage between the combination meter connector terminals. ***Connector & terminal*** ***(i10) No. 36 (+) — No. 27 (–):***	Is the voltage 4.5 — 5.0 V?	Go to step **4**.	Replace the combination meter. <Ref. to IDI-15, REMOVAL, Combination Meter.>

	Step	Check	Yes	No
4	**CHECK HARNESS.** 1) Disconnect the connector from the A/C control panel. 2) Using a tester, check continuity between terminals. ***Connector & terminal (F78) No. 1 — (F78) No. 2:***	Is there continuity?	Repair or replace the short circuit of the harness.	Replace the combination meter. <Ref. to IDI-15, REMOVAL, Combination Meter.>
5	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the combination meter. 3) Disconnect the A/C control panel connector. 4) Measure the resistance of harness between the combination meter and A/C control panel. ***Connector & terminal (i88) No. 19 — (i88) No. 20:***	Is there continuity?	Repair the short circuit of harness between the combination meter and A/C control panel. <Ref. to LAN(diag)-5, LAN SYSTEM, CAUTION, General Description.>	Go to step **6**.
6	**CHECK FOR POOR CONTACT.** Check poor contact of A/C control panel connector.	Is there poor contact of connector?	Repair the connector.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

E: DTC B1434 AMBIENT TEMPERATURE SENSOR CIRCUIT WIRE BREAK

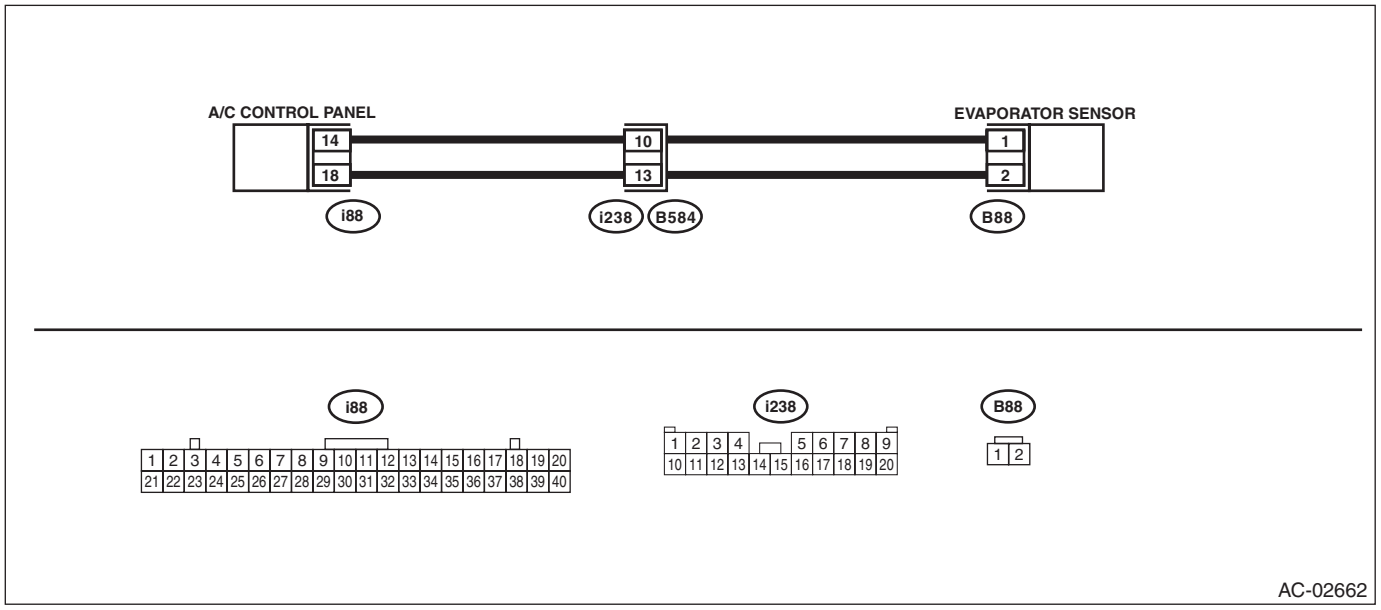
DTC DETECTING CONDITION:
Evaporator sensor circuit is open.
TROUBLE SYMPTOM:
Evaporator temperature is falsely recognized as low, and the compartment temperature is adjusted.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B1434 displayed?	Go to step **2**.	Check the connection of the evaporator sensor circuit.
2	**CHECK EVAPORATOR SENSOR.** 1) Disconnect the evaporator sensor. 2) Short the evaporator sensor connector (B88). 3) Read the DTC using Subaru Select Monitor.	Is B1435 displayed?	Replace the evaporator sensor. <Ref. to AC-63, REMOVAL, Evaporator.>	Go to step **3**.
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B88) No. 2 (+) — No. 1 (–):***	Is the voltage 4.5 — 5.0 V?	Go to step **4**.	Repair or replace the open circuit of harness.
4	**CHECK HARNESS.** 1) Disconnect the connector from the A/C control panel. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B88) No. 1 — (i88) No. 18:*** ***(B88) No. 2 — (i88) No. 14:***	Is there continuity?	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>	Repair or replace the open circuit of harness.

F: DTC B1435 EVAPORATOR SENSOR CIRCUIT SHORT-CIRCUIT

DTC DETECTING CONDITION:
Evaporator sensor circuit is shorted.
TROUBLE SYMPTOM:
Evaporator temperature is falsely recognized as high, and the compartment temperature is adjusted.
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B1435 displayed?	Go to step **2**.	Check the connection of the evaporator sensor circuit.
2	**CHECK EVAPORATOR SENSOR.** 1) Disconnect the evaporator sensor. 2) Read the DTC using Subaru Select Monitor.	Is B1434 displayed?	Replace the evaporator sensor. <Ref. to AC-63, REMOVAL, Evaporator.>	Go to step **3**.
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B88) No. 2 (+) — No. 1 (–):***	Is there continuity?	Check the connection of the evaporator sensor circuit.	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the connector from the A/C control panel. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B88) No. 1 — No. 2:***	Is there continuity?	Repair or replace the short circuit of the harness.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

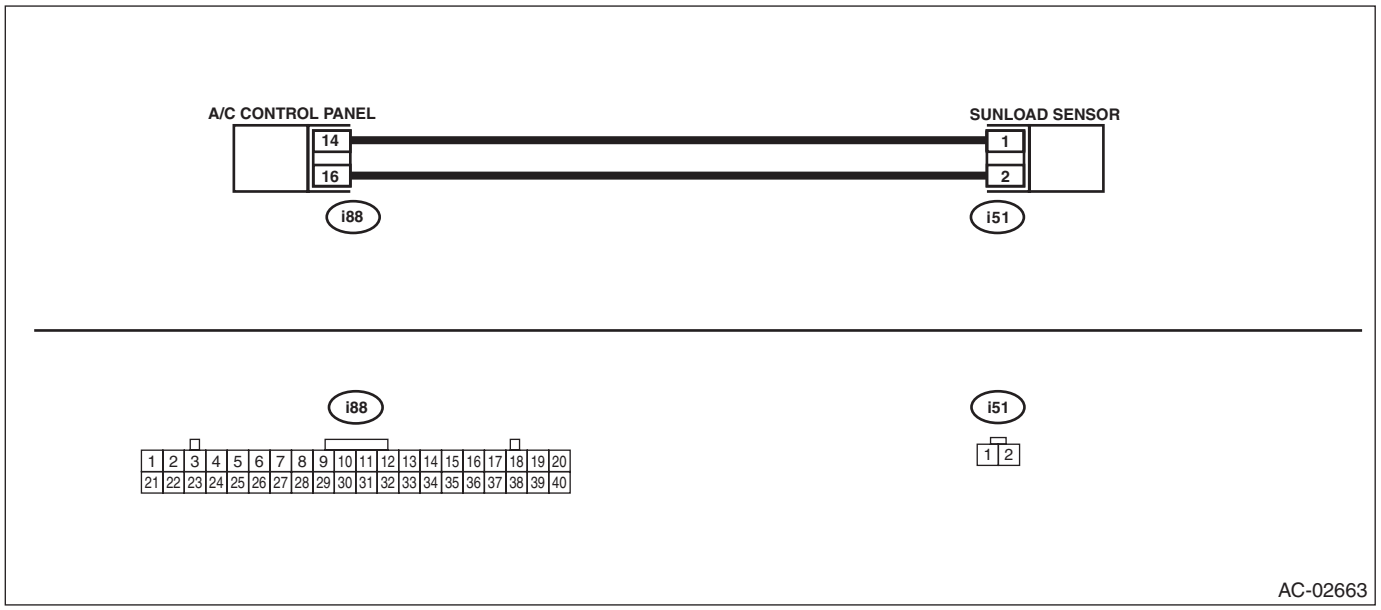
G: DTC B14A1 SUNLOAD SENSOR CIRCUIT OPEN

DTC DETECTING CONDITION:
Sunload sensor circuit is open. (Displayed for current malfunction)

NOTE:
When the sunload sensor check is performed indoors or in the shade, it could be diagnosed as having an open circuit. Always check the sunload sensor in direct sunlight.

TROUBLE SYMPTOM:
Operation is performed as no sunload.

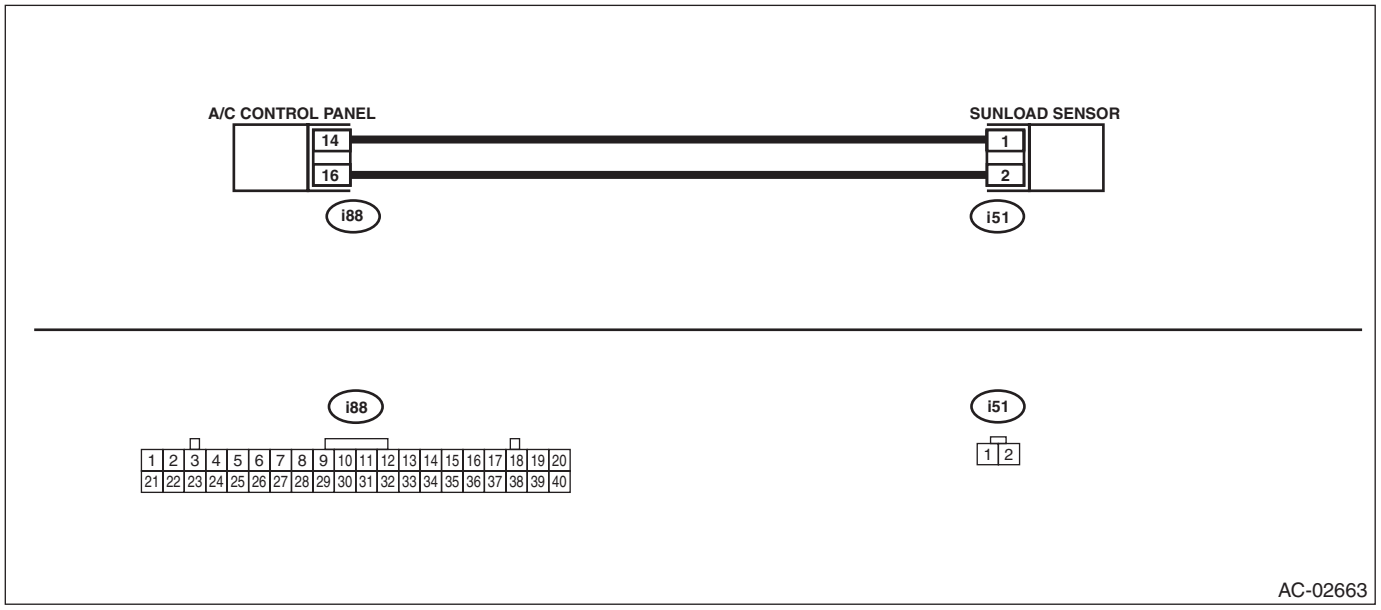
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B14A1 displayed?	Go to step **2**.	Check the connection of the sunload sensor circuit.
2	**CHECK SUNLOAD SENSOR.** 1) Disconnect the sunload sensor. 2) Short the connector. 3) Read the DTC using Subaru Select Monitor.	Is B14A2 displayed?	Replace the sunload sensor. <Ref. to AC-76, REMOVAL, Sunload Sensor (Auto A/C Model).>	Go to step **3**.
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i51) No. 2 (+) — No. 1 (–):***	Is the voltage 4.5 — 5.0 V?	Go to step **4**.	Repair or replace the open circuit of the harness.
4	**CHECK HARNESS.** 1) Disconnect the connector from the A/C control panel. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i51) No. 1 — (i88) No. 14:*** ***(i51) No. 1 — (i88) No. 16:***	Is there continuity?	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>	Repair or replace the short circuit of the harness.

H: DTC B14A2 SUNLOAD SENSOR CIRCUIT SHORT

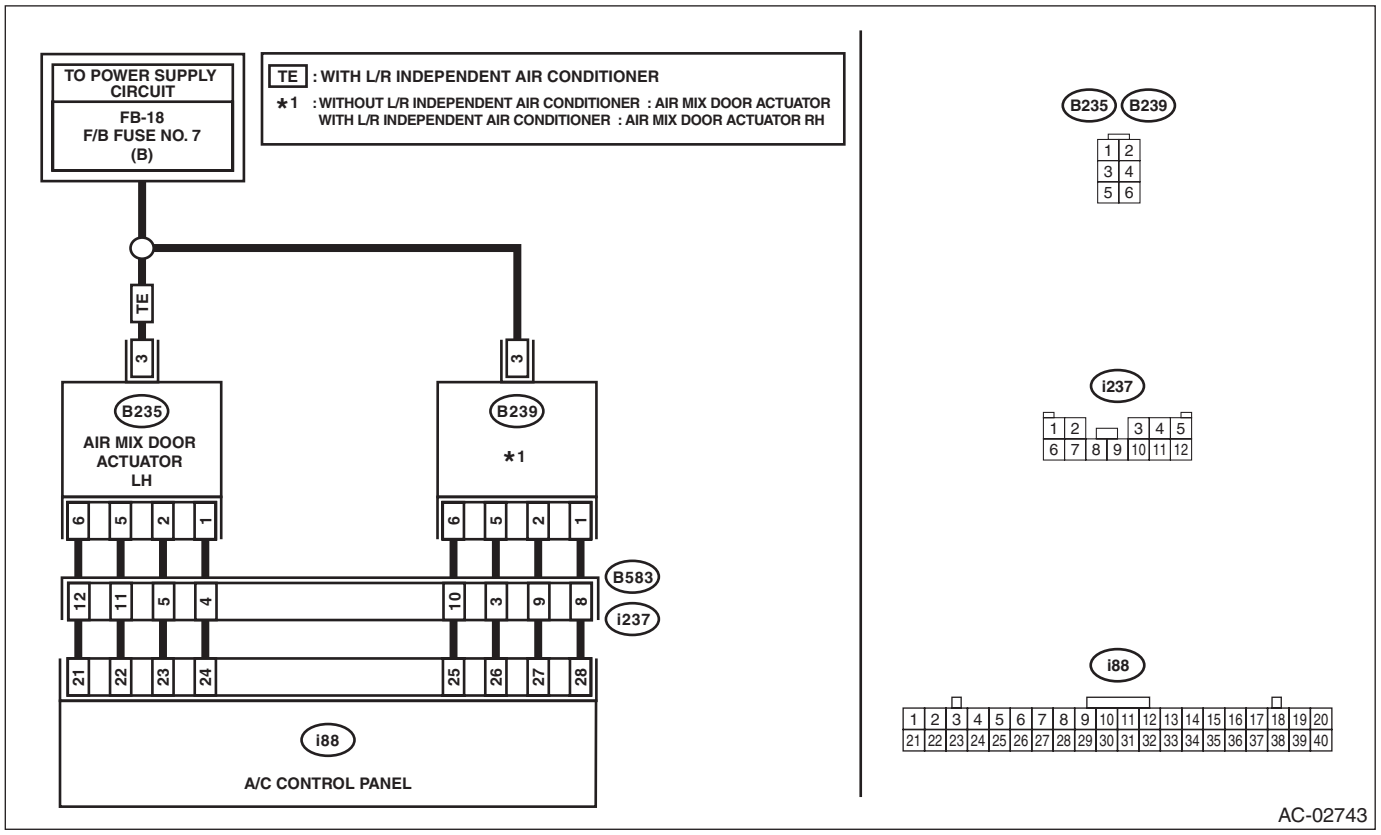
DTC DETECTING CONDITION:
Sunload sensor circuit is shorted.
TROUBLE SYMPTOM:
Operation is performed as no sunload.
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B14A2 displayed?	Go to step **2**.	Check the connection of the sunload sensor circuit.
2	**CHECK SUNLOAD SENSOR.** 1) Disconnect the sunload sensor. 2) Read the DTC using Subaru Select Monitor.	Is B14A1 displayed?	Replace the sunload sensor. <Ref. to AC-76, REMOVAL, Sunload Sensor (Auto A/C Model).>	Go to step **3**.
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i51) No. 2 (+) — No. 1 (–):***	Is the voltage 4.5 — 5.0 V?	Check the connection of the sunload sensor circuit.	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the connector from the A/C control panel. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i51) No. 1 — No. 2:***	Is there continuity?	Repair or replace the short circuit of the harness.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

I: DTC B14E1 AIR MIX DOOR ACTUATOR STEPPING MOTOR CIRCUIT WIRE BREAK (DRIVER'S SEAT)

DTC DETECTING CONDITION:
Air mix door actuator stepping motor circuit is open.
TROUBLE SYMPTOM:
Temperature cannot be adjusted.
WIRING DIAGRAM:

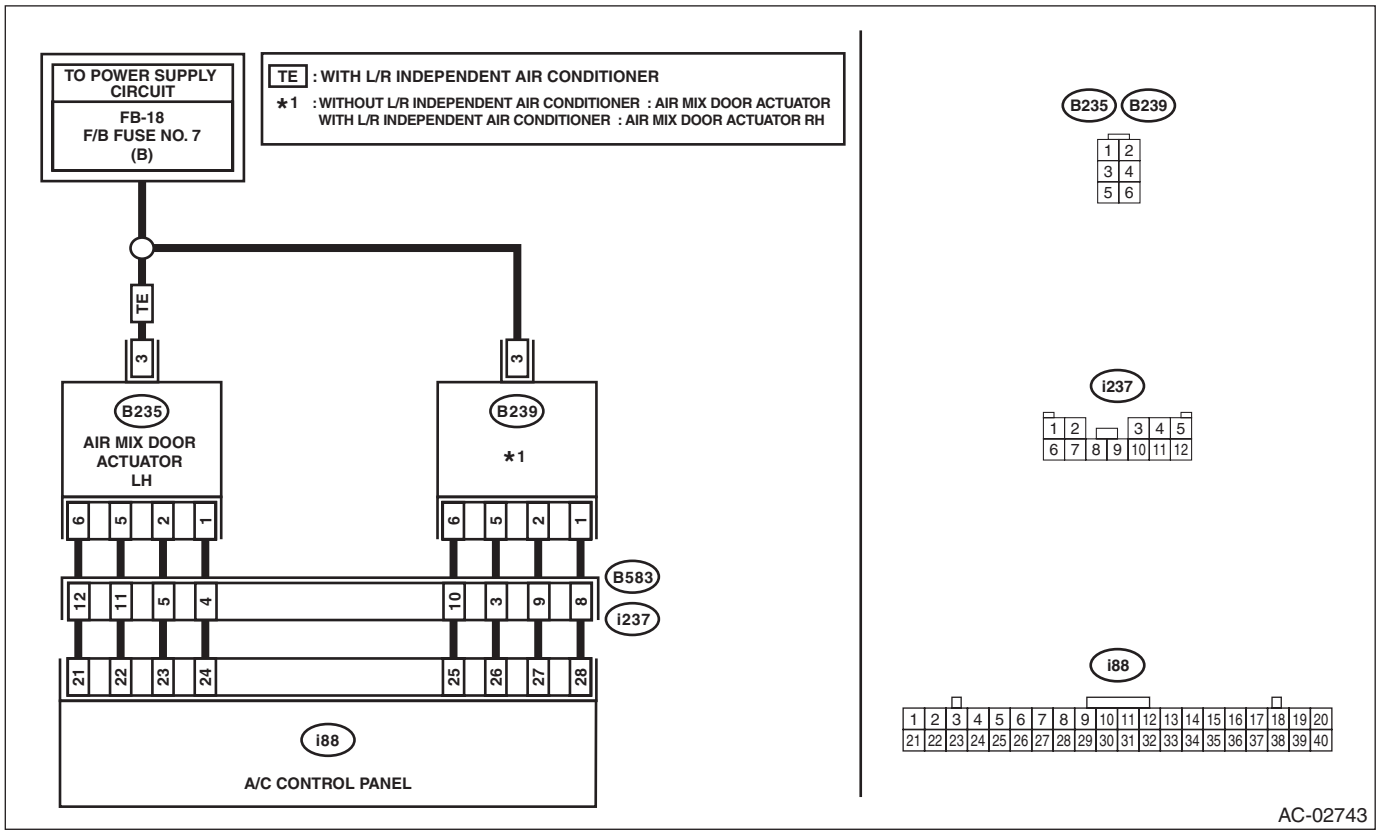


Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B14E1 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the air mix door actuator connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between the air mix door actuator connector terminal and chassis ground. ***Connector & terminal*** ***Without left/right independent air conditioning function*** ***(B239) No. 3 (+) — Chassis ground (–):*** ***With left/right independent air conditioning function*** ***(B235) No. 3 (+) — Chassis ground (–):***	Is the voltage approx. 10 V or more?	Go to step **3**.	Check the DC power supply circuit.

	Step	Check	Yes	No
3	**CHECK AIR MIX DOOR ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between air mix door actuator terminals using a tester. ***Connector & terminal*** ***Without left/right independent air conditioning function*** ***(B239) No. 3 — No. 1:*** ***(B239) No. 3 — No. 2:*** ***(B239) No. 3 — No. 5:*** ***(B239) No. 3 — No. 6:*** ***With left/right independent air conditioning function*** ***(B235) No. 3 — No. 1:*** ***(B235) No. 3 — No. 2:*** ***(B235) No. 3 — No. 5:*** ***(B235) No. 3 — No. 6:***	Is the resistance 80 — 100 Ω?	Go to step **4**.	Replace the actuator. <Ref. to AC-92, REMOVAL, Air Mix Door Actuator.>
4	**CHECK HARNESS BETWEEN A/C CONTROL PANEL AND AIR MIX DOOR ACTUATOR.** 1) Disconnect the A/C control panel connector. 2) Measure the resistance between A/C control panel and air mix door actuator connector. ***Connector & terminal*** ***Without left/right independent air conditioning function*** ***(B239) No. 1 — (i88) No. 28:*** ***(B239) No. 2 — (i88) No. 27:*** ***(B239) No. 5 — (i88) No. 26:*** ***(B239) No. 6 — (i88) No. 25:*** ***With left/right independent air conditioning function*** ***(B235) No. 1 — (i88) No. 24:*** ***(B235) No. 2 — (i88) No. 23:*** ***(B235) No. 5 — (i88) No. 22:*** ***(B235) No. 6 — (i88) No. 21:***	Is there continuity?	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>	Repair or replace the open circuit of harness.

J: DTC B14E2 AIR MIX DOOR ACTUATOR STEPPING MOTOR CIRCUIT SHORT-CIRCUIT (DRIVER'S SEAT)

DTC DETECTING CONDITION:
Air mix door actuator stepping motor circuit is shorted.
TROUBLE SYMPTOM:
Temperature cannot be adjusted.
WIRING DIAGRAM:

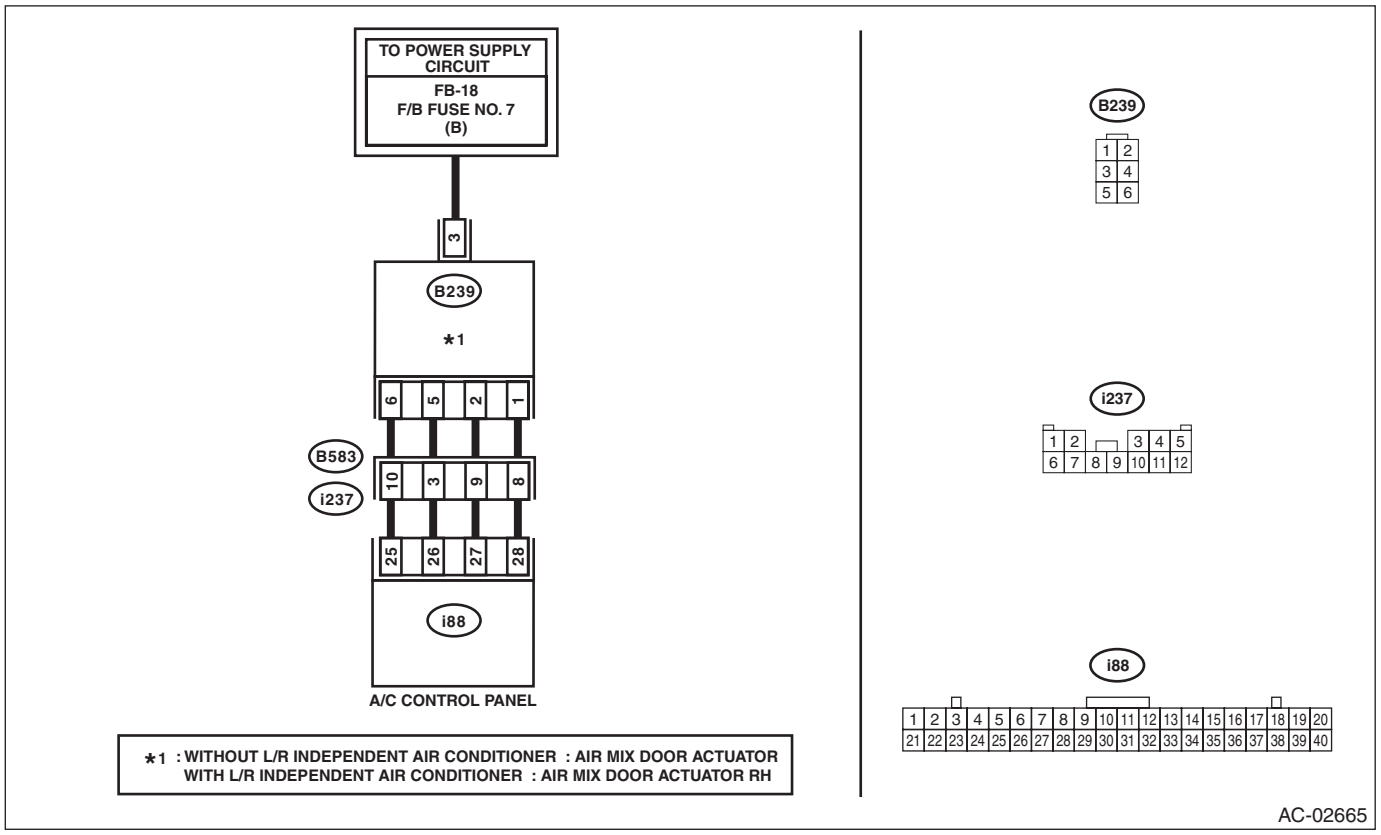


Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B14E2 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK POWER SUPPLY OF AIR MIX DOOR ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the air mix door actuator connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between the air mix door actuator connector terminal and chassis ground. ***Connector & terminal*** ***Without left/right independent air conditioning function*** ***(B239) No. 3 (+) — Chassis ground (–):*** ***With left/right independent air conditioning function*** ***(B235) No. 3 (+) — Chassis ground (–):***	Is the voltage approx. 10 V or more?	Go to step **3**.	Check the DC power supply circuit.

	Step	Check	Yes	No
3	**CHECK AIR MIX DOOR ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between air mix door actuator terminals using a tester. ***Connector & terminal*** ***Without left/right independent air conditioning function*** ***(B239) No. 3 — No. 1:*** ***(B239) No. 3 — No. 2:*** ***(B239) No. 3 — No. 5:*** ***(B239) No. 3 — No. 6:*** ***With left/right independent air conditioning function*** ***(B235) No. 3 — No. 1:*** ***(B235) No. 3 — No. 2:*** ***(B235) No. 3 — No. 5:*** ***(B235) No. 3 — No. 6:***	Is the resistance 80 — 100 Ω?	Go to step **4**.	Replace the actuator. <Ref. to AC-92, REMOVAL, Air Mix Door Actuator.>
4	**CHECK HARNESS BETWEEN A/C CONTROL PANEL AND AIR MIX DOOR ACTUATOR.** 1) Disconnect the A/C control panel connector. 2) Measure the voltage between air mix door actuator connector and chassis ground. ***Connector & terminal*** ***Without left/right independent air conditioning function*** ***(B239) No. 1 (+) — Chassis ground (–):*** ***(B239) No. 2 (+) — Chassis ground (–):*** ***(B239) No. 5 (+) — Chassis ground (–):*** ***(B239) No. 6 (+) — Chassis ground (–):*** ***With left/right independent air conditioning function*** ***(B235) No. 1 (+) — Chassis ground (–):*** ***(B235) No. 2 (+) — Chassis ground (–):*** ***(B235) No. 5 (+) — Chassis ground (–):*** ***(B235) No. 6 (+) — Chassis ground (–):***	Is there any voltage?	Repair or replace the short circuit of the harness.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

K: DTC B14E3 AIR MIX DOOR ACTUATOR STEPPING MOTOR CIRCUIT WIRE BREAK (PASSENGER'S SEAT)

DTC DETECTING CONDITION:
Air mix door actuator stepping motor circuit is open.
TROUBLE SYMPTOM:
Temperature cannot be adjusted.
WIRING DIAGRAM:

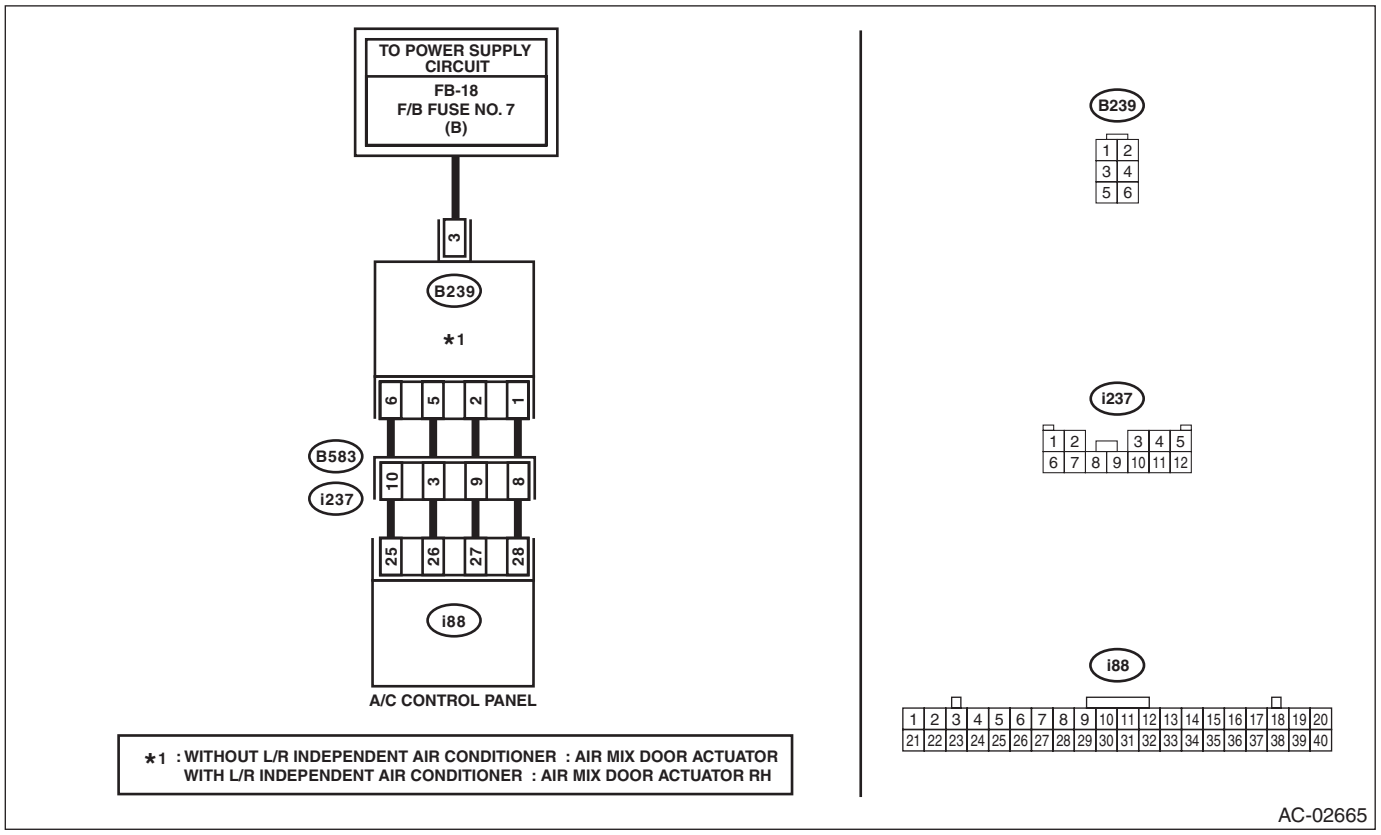


	Step	Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B14E3 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the air mix door actuator connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between the air mix door actuator connector terminal and chassis ground. ***Connector & terminal*** ***(B239) No. 3 (+) — Chassis ground (–):***	Is the voltage approx. 10 V or more?	Go to step **3**.	Check the DC power supply circuit.
3	**CHECK AIR MIX DOOR ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between air mix door actuator terminals using a tester. ***Connector & terminal*** ***(B239) No. 3 — No. 1:*** ***(B239) No. 3 — No. 2:*** ***(B239) No. 3 — No. 5:*** ***(B239) No. 3 — No. 6:***	Is the resistance 80 — 100 Ω?	Go to step **4**.	Replace the actuator. <Ref. to AC-92, REMOVAL, Air Mix Door Actuator.>

	Step	Check	Yes	No
4	**CHECK HARNESS BETWEEN A/C CONTROL PANEL AND AIR MIX DOOR ACTUATOR.** 1) Disconnect the A/C control panel connector. 2) Measure the resistance between A/C control panel and air mix door actuator connector. ***Connector & terminal*** ***(B239) No. 1 — (i88) No. 28:*** ***(B239) No. 2 — (i88) No. 27:*** ***(B239) No. 5 — (i88) No. 26:*** ***(B239) No. 6 — (i88) No. 25:***	Is there continuity?	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>	Repair or replace the open circuit of harness.

L: DTC B14E4 AIR MIX DOOR ACTUATOR STEPPING MOTOR CIRCUIT SHORT-CIRCUIT (PASSENGER'S SEAT)

DTC DETECTING CONDITION:
Air mix door actuator stepping motor circuit is shorted.
TROUBLE SYMPTOM:
Temperature cannot be adjusted.
WIRING DIAGRAM:

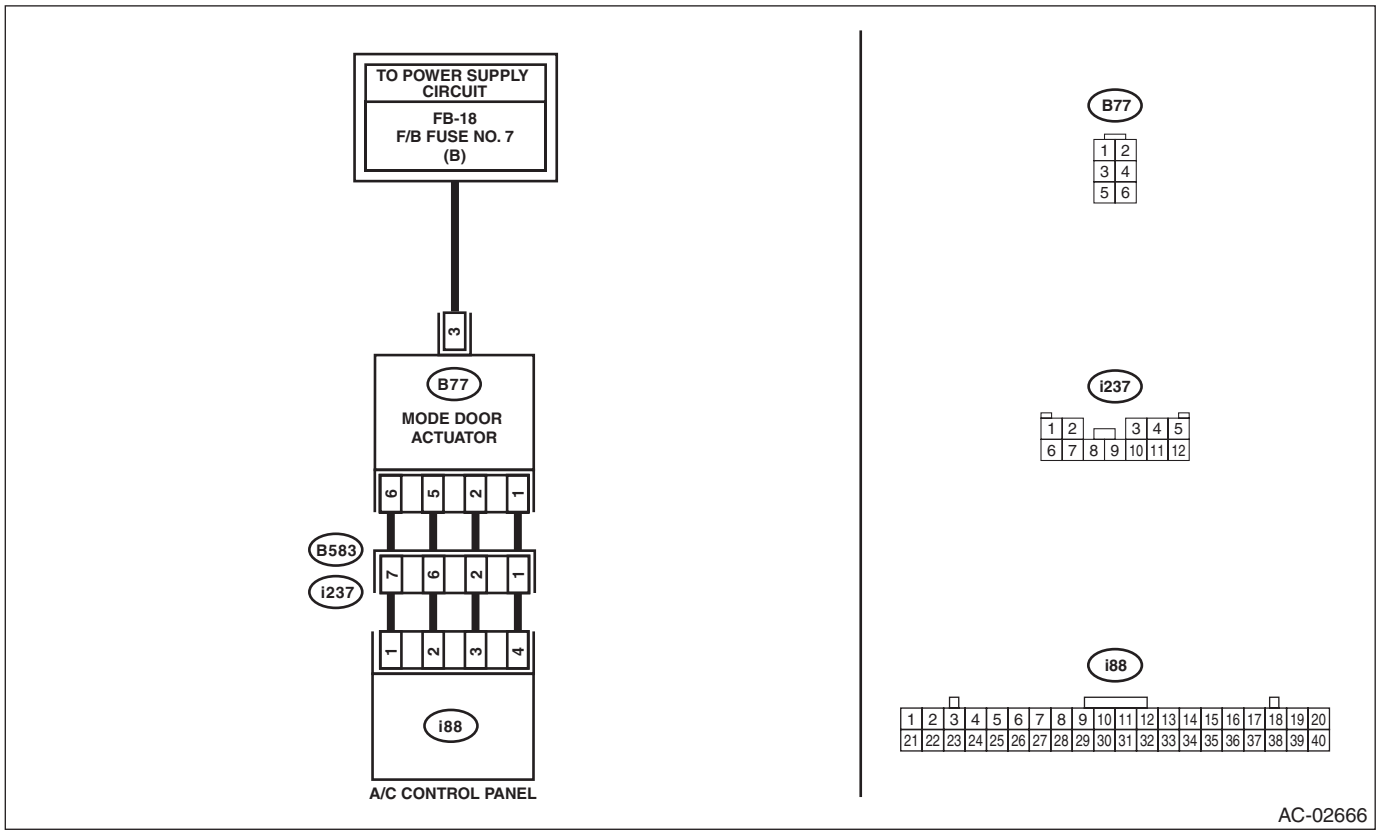


Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B14E4 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK POWER SUPPLY OF AIR MIX DOOR ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the air mix door actuator connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between the air mix door actuator connector terminal and chassis ground. ***Connector & terminal*** ***(B239) No. 3 (+) — Chassis ground (–):***	Is the voltage approx. 10 V or more?	Go to step **3**.	Check the DC power supply circuit.

	Step	Check	Yes	No
3	**CHECK AIR MIX DOOR ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between air mix door actuator terminals using a tester. ***Connector & terminal*** ***(B239) No. 3 — No. 1:*** ***(B239) No. 3 — No. 2:*** ***(B239) No. 3 — No. 5:*** ***(B239) No. 3 — No. 6:***	Is the resistance 80 — 100 Ω?	Go to step **4**.	Replace the actuator. <Ref. to AC-92, REMOVAL, Air Mix Door Actuator.>
4	**CHECK HARNESS BETWEEN A/C CONTROL PANEL AND AIR MIX DOOR ACTUATOR.** 1) Disconnect the A/C control panel connector. 2) Measure the voltage between air mix door actuator connector and chassis ground. ***Connector & terminal*** ***(B239) No. 1 (+) — Chassis ground (–):*** ***(B239) No. 2 (+) — Chassis ground (–):*** ***(B239) No. 5 (+) — Chassis ground (–):*** ***(B239) No. 6 (+) — Chassis ground (–):***	Is there any voltage?	Repair or replace the short circuit of the harness.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

M: DTC B14E5 MODE DOOR ACTUATOR STEPPING MOTOR CIRCUIT WIRE BREAK

DTC DETECTING CONDITION:
Mode door actuator stepping motor circuit is open.
TROUBLE SYMPTOM:
Vent does not change.
WIRING DIAGRAM:

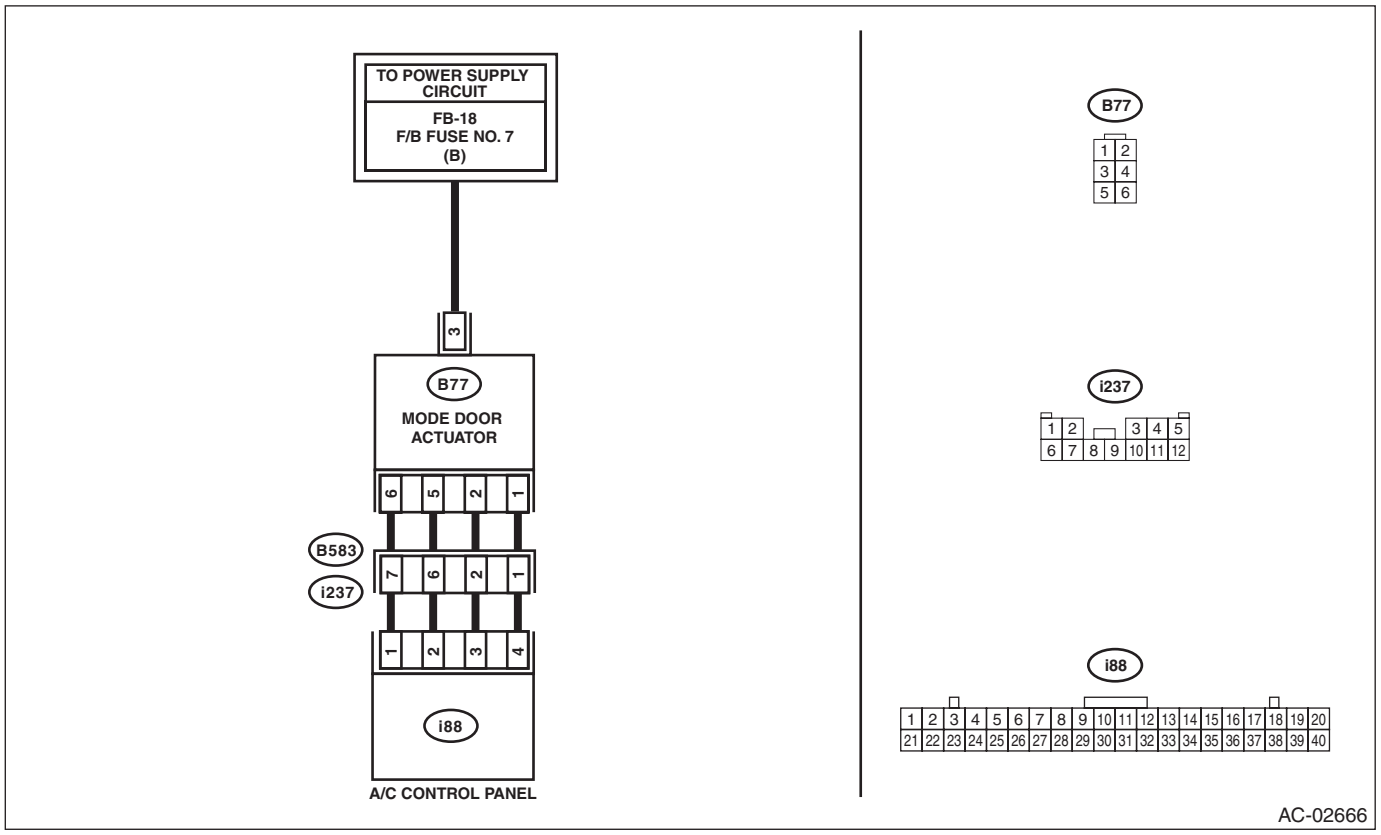


Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B14E5 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the mode door actuator connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between the mode door actuator connector terminal and chassis ground. ***Connector & terminal*** ***(B77) No. 3 (+) — Chassis ground (–):***	Is the voltage approx. 10 V or more?	Go to step **3**.	Check the DC power supply circuit.
3	**CHECK AIR MIX DOOR ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between mode door actuator terminals using a tester. ***Connector & terminal*** ***(B77) No. 3 — No. 1:*** ***(B77) No. 3 — No. 2:*** ***(B77) No. 3 — No. 5:*** ***(B77) No. 3 — No. 6:***	Is the resistance 80 — 100 Ω?	Go to step **4**.	Replace the actuator. <Ref. to AC-90, REMOVAL, Mode Door Actuator.>

	Step	Check	Yes	No
4	**CHECK HARNESS BETWEEN A/C CONTROL PANEL AND MODE DOOR ACTUATOR.** 1) Disconnect the A/C control panel connector. 2) Measure the resistance between A/C control panel and air mix door actuator connector. ***Connector & terminal*** ***(B77) No. 1 — (i88) No. 4:*** ***(B77) No. 2 — (i88) No. 3:*** ***(B77) No. 5 — (i88) No. 2:*** ***(B77) No. 6 — (i88) No. 1:***	Is there continuity?	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>	Repair or replace the open circuit of harness.

N: DTC B14E6 MODE DOOR ACTUATOR STEPPING MOTOR CIRCUIT SHORT-CIRCUIT

DTC DETECTING CONDITION:
Mode door actuator stepping motor circuit is shorted.
TROUBLE SYMPTOM:
Vent does not change.
WIRING DIAGRAM:

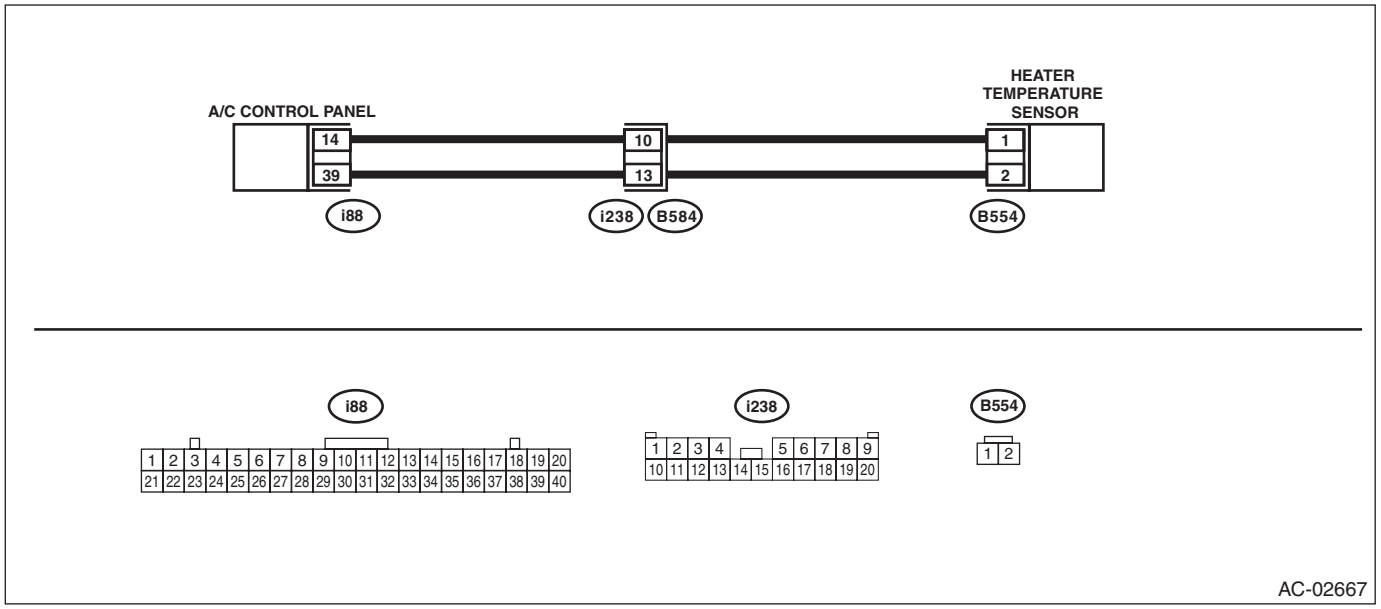


Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B14E6 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK POWER SUPPLY FOR MODE DOOR ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the mode door actuator connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between the mode door actuator connector terminal and chassis ground. ***Connector & terminal*** ***(B77) No. 3 (+) — Chassis ground (–):***	Is the voltage approx. 10 V or more?	Go to step **3**.	Check the DC power supply circuit.

	Step	Check	Yes	No
3	**CHECK MODE DOOR ACTUATOR.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between mode door actuator terminals using a tester. ***Connector & terminal*** ***(B77) No. 3 — No. 1:*** ***(B77) No. 3 — No. 2:*** ***(B77) No. 3 — No. 5:*** ***(B77) No. 3 — No. 6:***	Is the resistance 80 — 100 Ω?	Go to step **4**.	Replace the actuator. <Ref. to AC-90, REMOVAL, Mode Door Actuator.>
4	**CHECK HARNESS BETWEEN A/C CONTROL PANEL AND MODE DOOR ACTUATOR.** 1) Disconnect the A/C control panel connector. 2) Measure the voltage between mode door actuator connector and chassis ground. ***Connector & terminal*** ***(B77) No. 1 (+) — Chassis ground (–):*** ***(B77) No. 2 (+) — Chassis ground (–):*** ***(B77) No. 5 (+) — Chassis ground (–):*** ***(B77) No. 6 (+) — Chassis ground (–):***	Is there any voltage?	Repair or replace the short circuit of the harness.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

O: DTC B14E7 HEATER CORE REAR SENSOR CIRCUIT WIRE BREAK

DTC DETECTING CONDITION:
Heater temperature sensor circuit is open.
TROUBLE SYMPTOM:
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B14E7 displayed?	Go to step **2**.	Check the connection of the heater temperature sensor circuit.
2	**CHECK HEATER TEMPERATURE SENSOR.** 1) Disconnect the heater temperature sensor. 2) Short the heater temperature sensor connector (B554). 3) Read the DTC using Subaru Select Monitor.	Is B14E8 displayed?	Replace the heater temperature sensor.	Go to step **3**.
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B554) No. 2 (+) — No. 1 (–):***	Is the voltage 4.5 — 5.0 V?	Go to step **4**.	Repair or replace the open circuit of harness.
4	**CHECK HARNESS.** 1) Disconnect the connector from the A/C control panel. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B554) No. 2 — (i88) No. 14:*** ***(B554) No. 2 — (i88) No. 39:***	Is there continuity?	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>	Repair or replace the open circuit of harness.

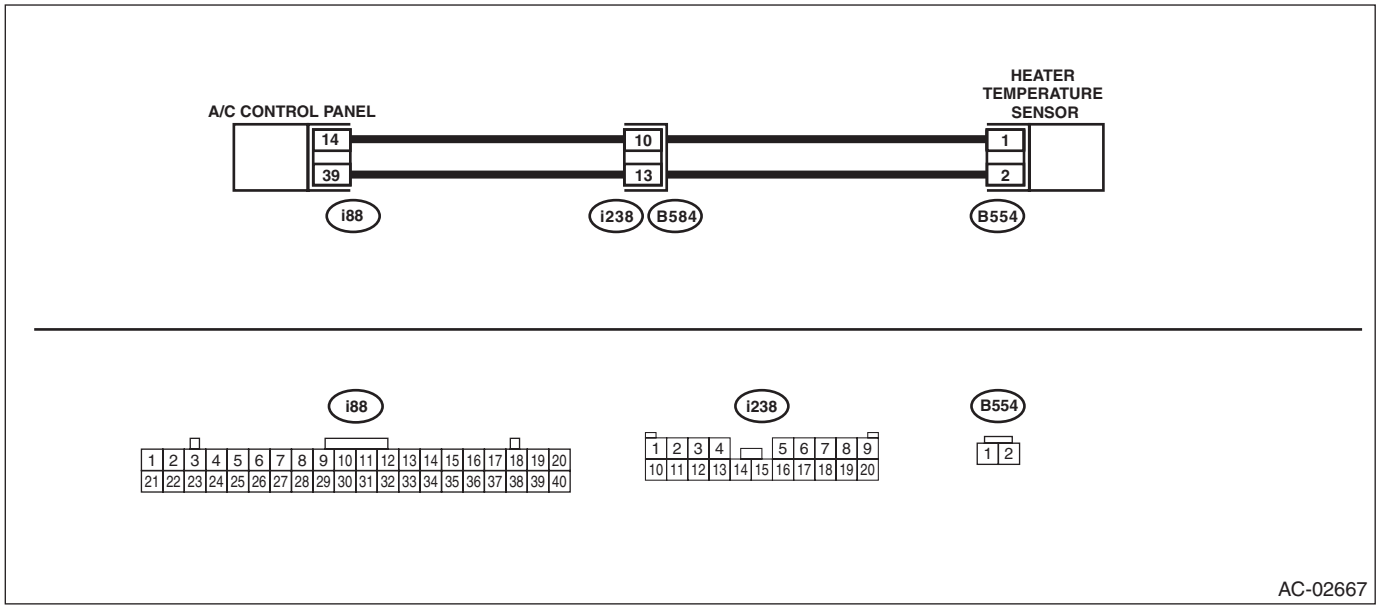
P: DTC B14E8 HEATER CORE REAR SENSOR CIRCUIT SHORT-CIRCUIT

DTC DETECTING CONDITION:

Heater temperature sensor circuit is shorted.

TROUBLE SYMPTOM:

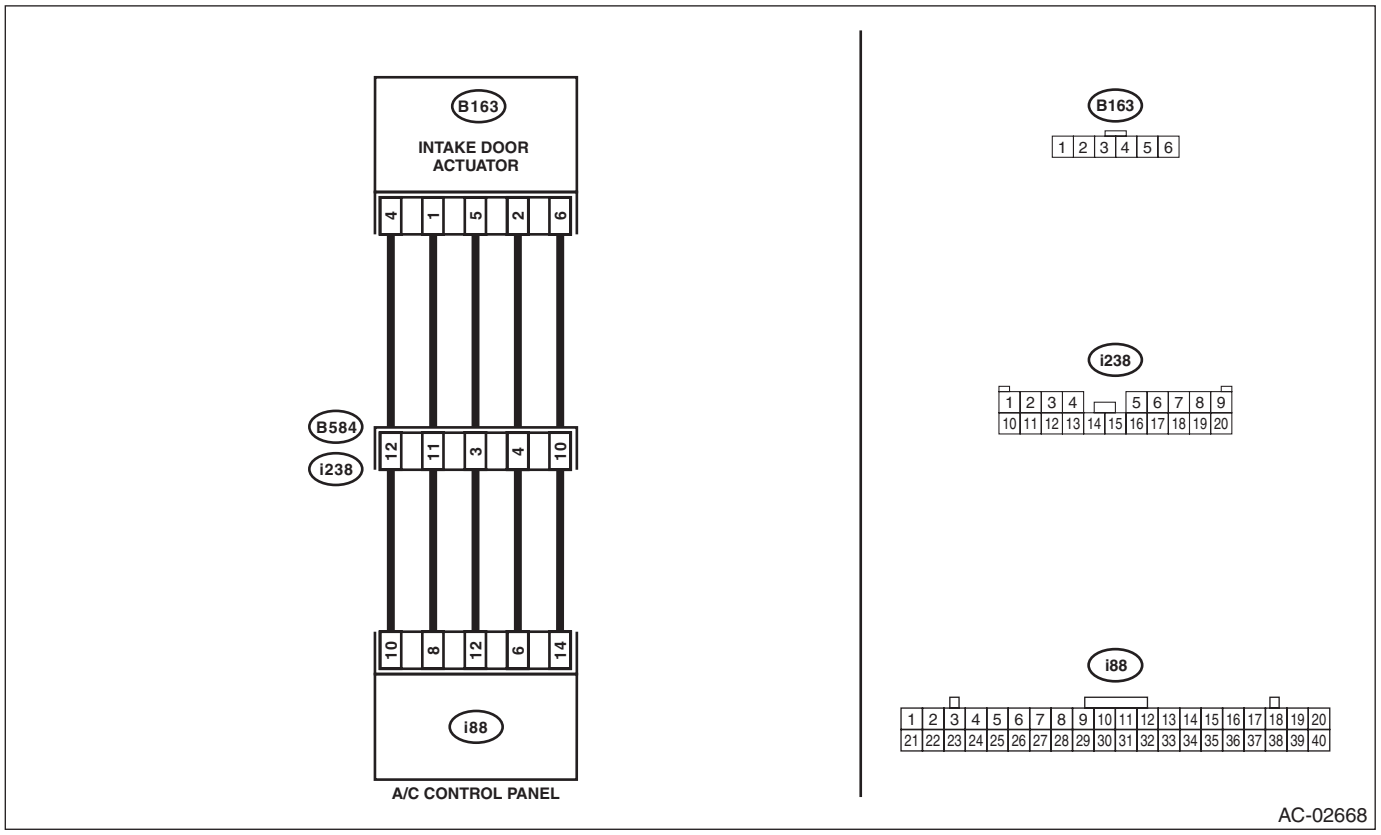
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B14E8 displayed?	Go to step **2**.	Check the connection of the heater temperature sensor circuit.
2	**CHECK HEATER TEMPERATURE SENSOR.** 1) Disconnect the heater temperature sensor. 2) Read the DTC using Subaru Select Monitor.	Is B14E7 displayed?	Replace the heater temperature sensor.	Go to step **3**.
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal (B554) No. 2 (+) — No. 1 (–):***	Is the voltage 4.5 — 5.0 V?	Check the connection of the heater temperature sensor circuit.	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the connector from the A/C control panel. 2) Using a tester, check continuity between terminals. ***Connector & terminal (B554) No. 1 — No. 2:***	Is there continuity?	Repair or replace the short circuit of the harness.	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>

Q: DTC B14E9 INTAKE DOOR ACTUATOR POTENTIOMETER CIRCUIT WIRE BREAK

DTC DETECTING CONDITION:
Intake door actuator potentiometer circuit is open.
TROUBLE SYMPTOM:
FRESH/RECIRC does not operate.
WIRING DIAGRAM:

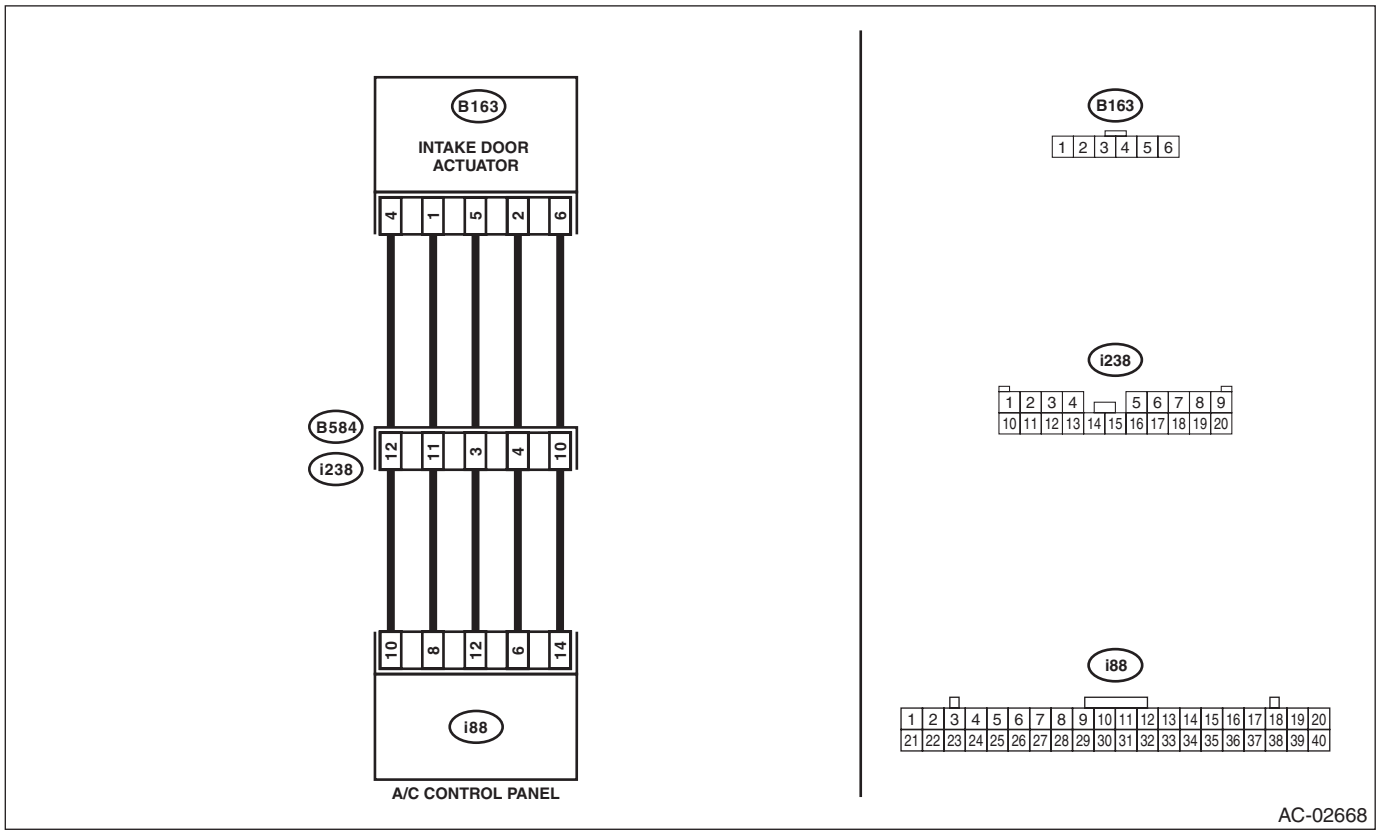


Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B14E9 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B163) No. 4 (+) — No. 6 (–):***	Is the voltage 4.5 — 5.0 V?	Go to step **3**.	Repair or replace the open circuit of harness.
3	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B163) No. 1 — (i88) No. 8:*** ***(B163) No. 2 — (i88) No. 6:*** ***(B163) No. 4 — (i88) No. 10:*** ***(B163) No. 5 — (i88) No. 12:*** ***(B163) No. 6 — (i88) No. 14:***	Is there continuity?	Go to step **4**.	Repair or replace the open circuit of harness.

	Step	Check	Yes	No
4	**CHECK ACTUATOR.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal (B163) No. 5 (+) — No. 6 (–):***	Is the voltage 0.5 — 4.5 V?	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>	Go to step **5**.
5	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal (B163) No. 4 — No. 5:***	Is the resistance less than 1 Ω?	Repair or replace the short circuit of the harness.	Replace the actuator. <Ref. to AC-85, REMOVAL, FRESH/RECIRC Door Actuator.>

R: DTC B14EA INTAKE DOOR ACTUATOR POTENTIOMETER CIRCUIT SHORT-CIRCUIT

DTC DETECTING CONDITION:
Intake door actuator potentiometer circuit is shorted.
TROUBLE SYMPTOM:
FRESH/RECIRC does not operate.
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B14EA displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK ACTUATOR.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B163) No. 4 (+) — No. 6 (–):***	Is the voltage 4.5 — 5.0 V?	Go to step **3**.	Repair or replace the open circuit of harness.
3	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B163) No. 4 — (i88) No. 10:*** ***(B163) No. 5 — (i88) No. 12:*** ***(B163) No. 6 — (i88) No. 14:***	Is there continuity?	Go to step **4**.	Repair or replace the open circuit of harness.

	Step	Check	Yes	No
4	**CHECK ACTUATOR.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B163) No. 5 (+) — No. 6 (–):***	Is the voltage 0.5 — 4.5 V?	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>	Go to step **5**.
5	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B163) No. 5 — No. 6:***	Is the resistance less than 1 Ω?	Repair or replace the short circuit of the harness.	Replace the actuator. <Ref. to AC-85, REMOVAL, FRESH/RECIRC Door Actuator.>

S: DTC B14EB INTAKE DOOR ACTUATOR LOCK

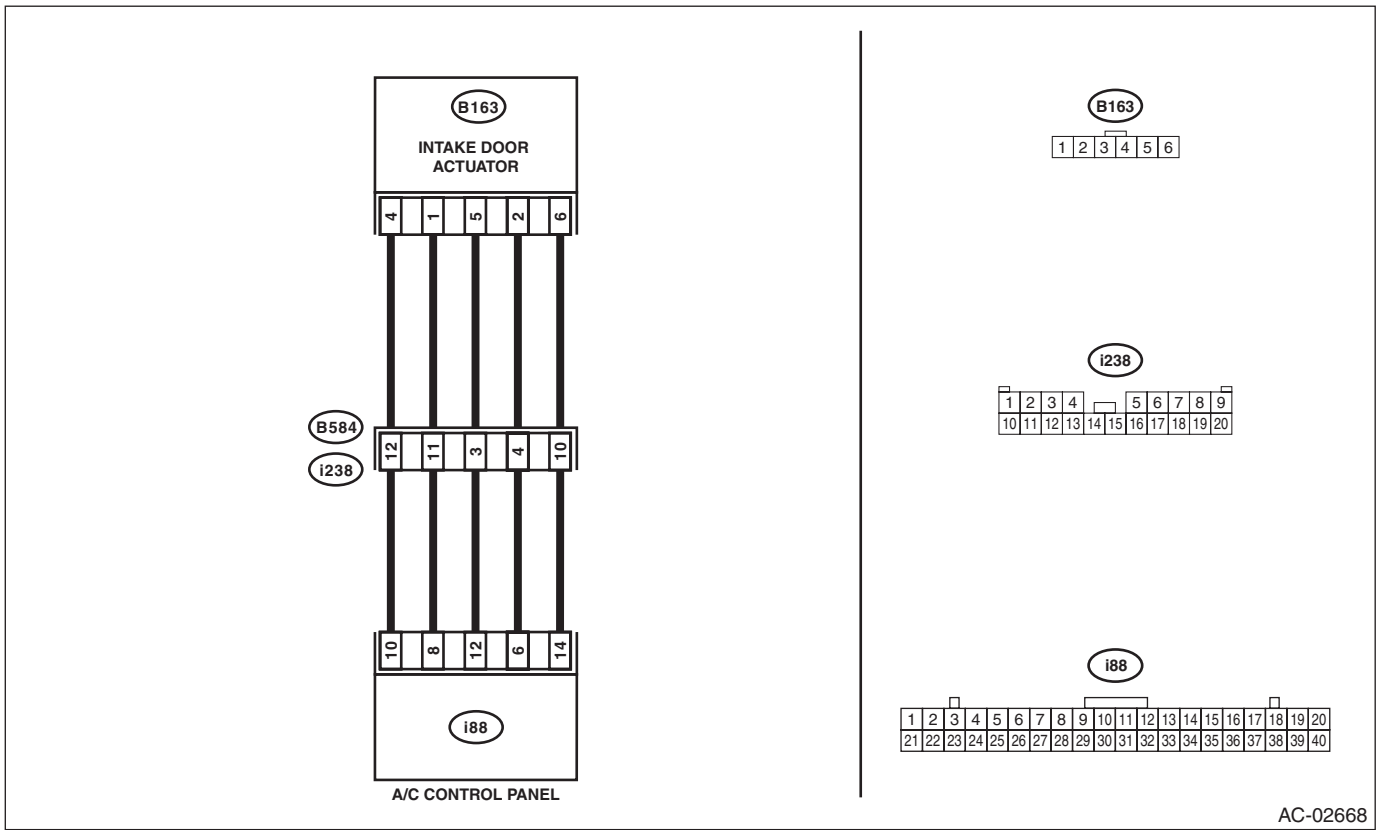
DTC DETECTING CONDITION:

- Intake door actuator is locked.
- The potentiometer value of the actuator does not change.

TROUBLE SYMPTOM:

FRESH/RECIRC does not operate.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC using Subaru Select Monitor.	Is B14EB displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, change the setting of “Fresh/Rec Air Dr Act Trgt Open Angle” from Air Conditioning Diagnosis and perform the active test**.**	Did the actuator move to the specified target opening angle?	Intake door actuator circuit is normal.	Go to step **3**.
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i176) No. 4 (+) — No. 6 (–):***	Is the voltage 4.5 — 5.0 V?	Go to step **4**.	Repair or replace the open circuit of harness.

	Step	Check	Yes	No
4	**CHECK HARNESS.** 1) Disconnect the connector from the A/C control panel. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i163) No. 1 — (i88) No. 8:*** ***(i163) No. 2 — (i88) No. 6:*** ***(i163) No. 4 — (i88) No. 10:*** ***(i163) No. 5 — (i88) No. 12:*** ***(i163) No. 6 — (i88) No. 14:***	Is there continuity?	Go to step **5**.	Repair or replace the open circuit of harness.
5	**CHECK INTAKE DOOR ACTUATOR.** Check the intake door actuator parts.	Is the actuator normal?	Replace the A/C control panel. <Ref. to AC-47, REMOVAL, Control Panel.>	Replace the actuator. <Ref. to AC-85, REMOVAL, FRESH/RECIRC Door Actuator.>

T: DTC U0073 CONTROL MODULE COMMUNICATION BUS “A” OFF

Detected when defective CAN line is detected.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

U: DTC U0100 LOST COMMUNICATION WITH ECM/PCM “A”

Detected when CAN data is not received from engine control module (ECM).

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

V: DTC U0101 LOST COMMUNICATION WITH TCM

Detected when CAN data is not received from TCM.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

W: DTC U0122 LOST COMMUNICATION WITH VEHICLE DYNAMICS CONTROL MODULE

Detected when CAN data is not received from VDC.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

X: DTC U0140 LOST COMMUNICATION WITH BODY CONTROL MODULE

This is detected when CAN signal is not received from BIU.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

Y: DTC U0155 LOST COMMUNICATION WITH INSTRUMENT PANEL CLUSTER (IPC) CONTROL MODULE

This is detected when CAN signal is not received from meter.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

Z: DTC U0401 INVALID DATA RECEIVED FROM ECM/PCM “A”

This is detected when CAN data from engine control module (ECM) is abnormal.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

AA:DTC U0402 INVALID DATA RECEIVED FROM TCM

This is detected when CAN data from TCM is abnormal.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

AB:DTC U0416 INVALID DATA RECEIVED FROM VEHICLE DYNAMICS CONTROL MODULE

This is detected when CAN data from VDC is abnormal.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

AC:DTC U0422 INVALID DATA RECEIVED FROM BODY CONTROL MODULE

This is detected when CAN data from BIU is abnormal.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

AD:DTC U0423 INVALID DATA RECEIVED FROM INSTRUMENT PANEL CLUSTER CONTROL MODULE

This is detected when CAN data from meter is abnormal.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

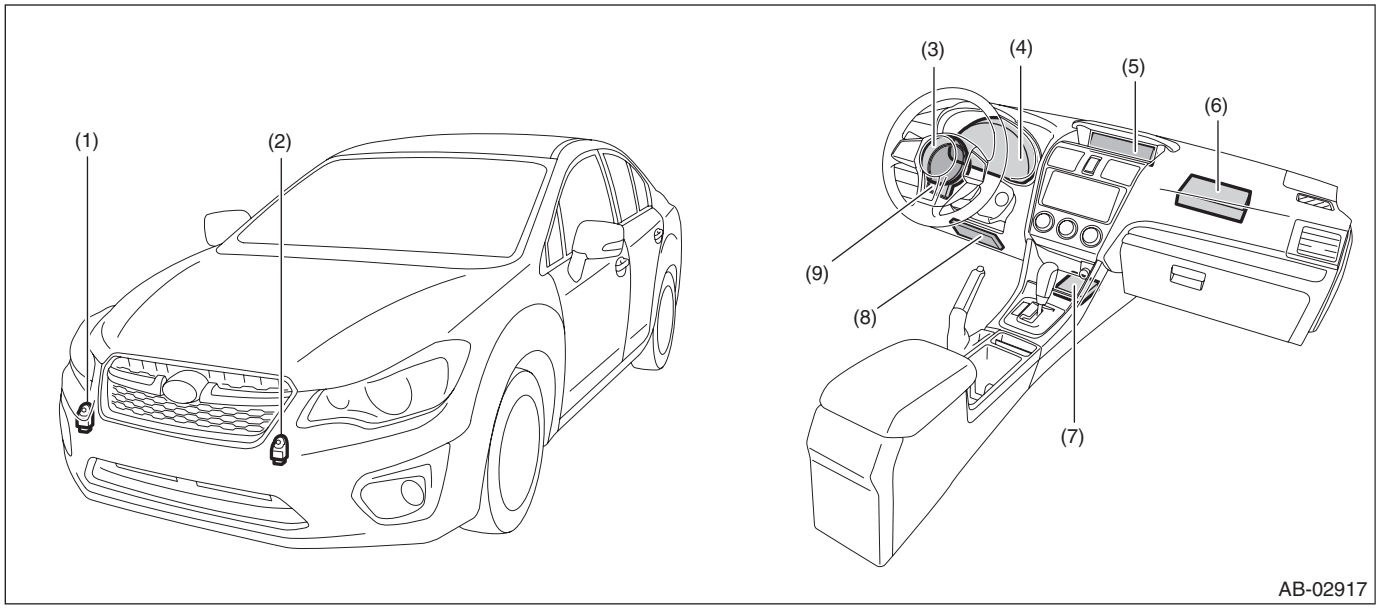
AIRBAG SYSTEM

AB

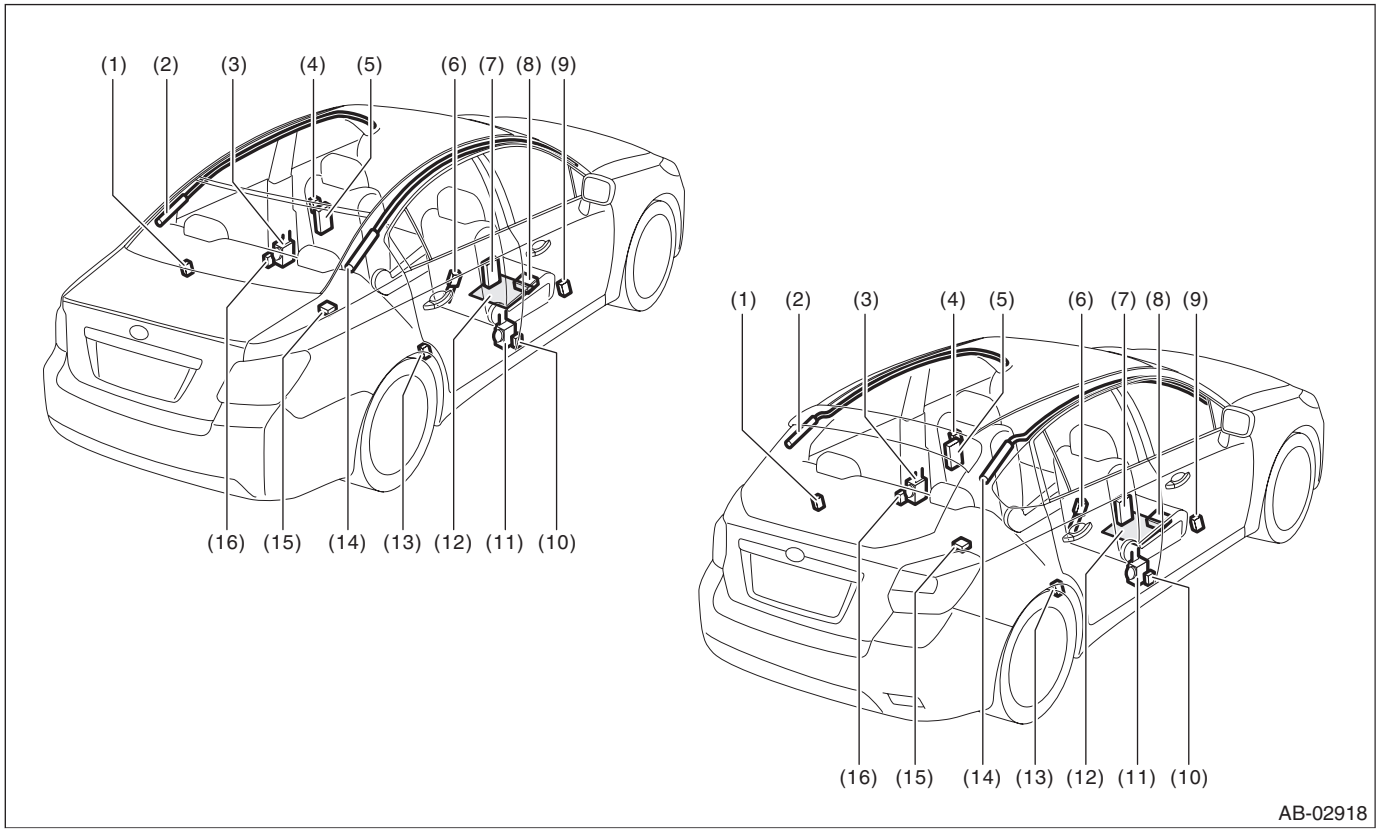
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3.	Inspection Locations after a Collision	32
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15.	Roll Connector	100

1. General Description

A: COMPONENT



(1)	Front sub sensor RH	(4)	Airbag warning light (in combination meter)	(7)	Airbag control module
(2)	Front sub sensor LH	(5)	Airbag ON/OFF indicator light (MFD)	(8)	Knee airbag module
(3)	Driver's airbag module	(6)	Passenger's airbag module	(9)	Steering roll connector



1. General Description

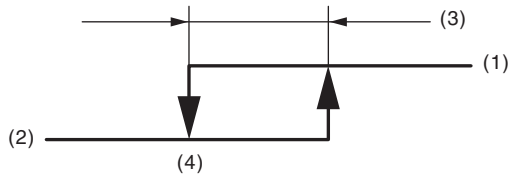
A: SPECIFICATION

1. HEATER SYSTEM

Item		Specifications	Condition
Heating capacity		5.0 kW (4,299 kcal/h, 17,059 BTU/h) or more	• Air flow control dial or switch: FOOT • Temperature control dial: HI (MAX HOT) • Temperature difference between hot water and inlet air: 65°C (149°F) • Hot water flow rate: 360 ℓ (95.1 US gal, 79.2 Imp gal)/h
Air flow rate		290 m^3 (10,243 cu ft)/h	FOOT mode (FRESH), MAX HOT at 12.5 V
Max air flow rate		480 m^3 (16,954 cu ft)/h	• Temperature control dial: LO (MAX COOL) • Fan dial: HI (MAX) Auto A/C model: 7th position Manual A/C model: 4th position • FRESH/RECIRC switch: RECIRC
Heater core	Dimensions (W × H × T)	257.5 × 118.5 × 27 mm (10.1 × 4.67 × 1.06 in)	—
Blower motor	Type	Magnet motor 300 W or less	12 V
	Fan type and size (diameter × width)	Sirocco fan type 150 × 75 mm (5.91 × 2.95 in)	—

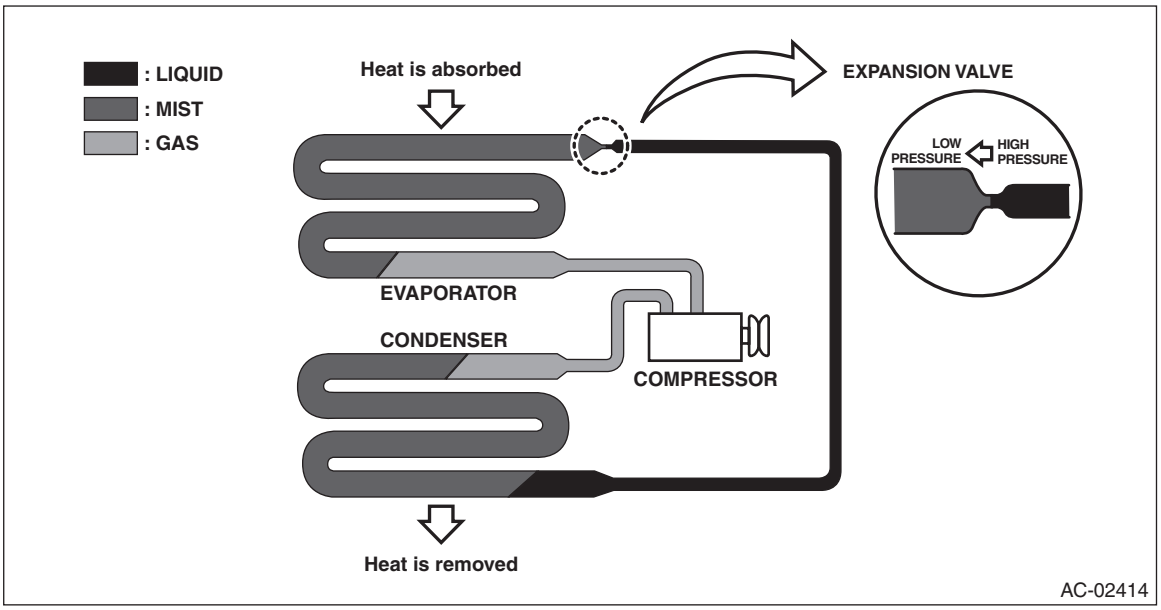
2. A/C SYSTEM

Item		Specifications
Type of air conditioner		Reheat air-mix type
Cooling capacity		5.0 kW (4,299 kcal/h, 17,059 BTU/h)
Refrigerant		HFC-134a (CH_2FCF_3) [0.475±0.025 kg (1.05±0.06 lb)]
Compressor	Type	Rotary fixed capacity (DKV-10Z)
	Discharge	105 cc (6.41 cu in)/rev
	Max. permissible speed	7,700 rpm
Magnet clutch	Type	Dry, single-disc type
	Power consumption	41.2 W
	Type of belt	V-belt 6 PK
	Pulley dia. (effective dia.)	110 mm (4.33 in)
	Pulley ratio	1.3
Condenser	Type	Sub cool type
	Core face area	0.188 m^2 (2.002 sq ft)
	Core thickness	16 mm (0.63 in)
	Radiation area	4.5 m^2 (48.44 sq ft)
Expansion valve	Type	Block
Evaporator	Type	Dual-tank
	Dimensions (W × H × T)	290.1 × 172 × 39 mm (11.42 × 6.77 × 1.54 in)
Blower fan	Fan type	Sirocco fan
	Outer diameter × width	150 × 75 mm (5.91 × 2.95 in)
	Power consumption	280 W
Condenser fan (Sub fan)	Motor type	Magnet
	Power consumption	120 W
	Fan outer diameter	318.5 mm (12.5 in)

Item			Specifications
Radiator fan (Main fan)		Motor type	Magnet
		Power consumption	120 W
		Fan outer diameter	318.5 mm (12.5 in)
Idle speed		No load	650±50 rpm
		A/C ON	800 — 900±50 rpm
Triple switch (Pressure switch)	Low-pressure switch operating pressure	ON → OFF	196±25 kPa (2.00±0.25 kgf/cm^2, 28.4±3.6 psi)
		OFF → ON	225±30 kPa (2.29±0.31 kgf/cm^2, 32.6±4.3 psi)
	High-pressure switch operating pressure	ON → OFF	2,940±200 kPa (29.98±2.04 kgf/cm^2, 426.3±29 psi)
		OFF → ON	2,350±200 kPa (24.00±2.04 kgf/cm^2, 340.7±29.0 psi)
	Middle-pressure switch operating pressure	ON → OFF	1,470±120 kPa (14.99±1.22 kgf/cm^2, 213.15±17.4 psi)
		OFF → ON	1,770±100 kPa (18.05±1.02 kgf/cm^2, 256.65±14.5 psi)
Thermo-control amplifier working temperature			 AC-00601 (1) ON (2) OFF (3) 1.5±0.3°C (34.7±0.5°F) (4) 1.0±0.5°C (33.8±0.9°F)

3. BASIC OPERATION

The cooling system cools down the compartment by using the pipes connecting parts and cycling the evaporable liquid (refrigerant) within the sealed system in a repeated process of “vaporization — liquefaction — re-vaporization”.

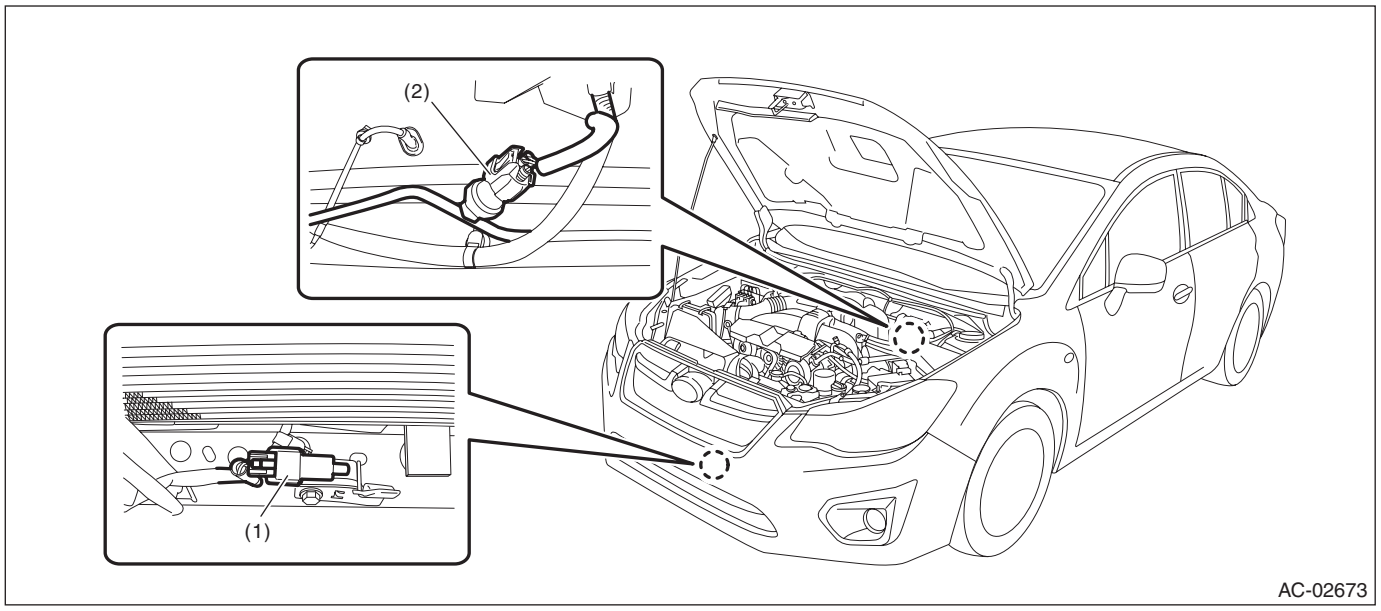


Item	Operation
Compressor	Sucks and pressurizes the low temperature, low pressure refrigerant gas that was vaporized at the evaporator by absorbing heat from the compartment, and sends the high temperature, high pressure refrigerant gas to the condenser.
Condenser	Cools the high temperature, high pressure refrigerant gas sent from the compressor for condense and liquefaction.
Expansion valve	• Sprays the high temperature, high pressure liquid refrigerant from the small hole in order to let the refrigerant expand rapidly to turn it into low temperature, low pressure mist. • The refrigerant amount is adjusted according to the refrigerant vaporization condition in the evaporator.
Evaporator	The evaporator turns into a low temperature condition when the mist refrigerant that was turned into a low temperature, low pressure condition at the expansion valve is vaporized in large quantity in the evaporator. Passing air flow through the low temperature evaporator emits cold air.

B: LOCATION

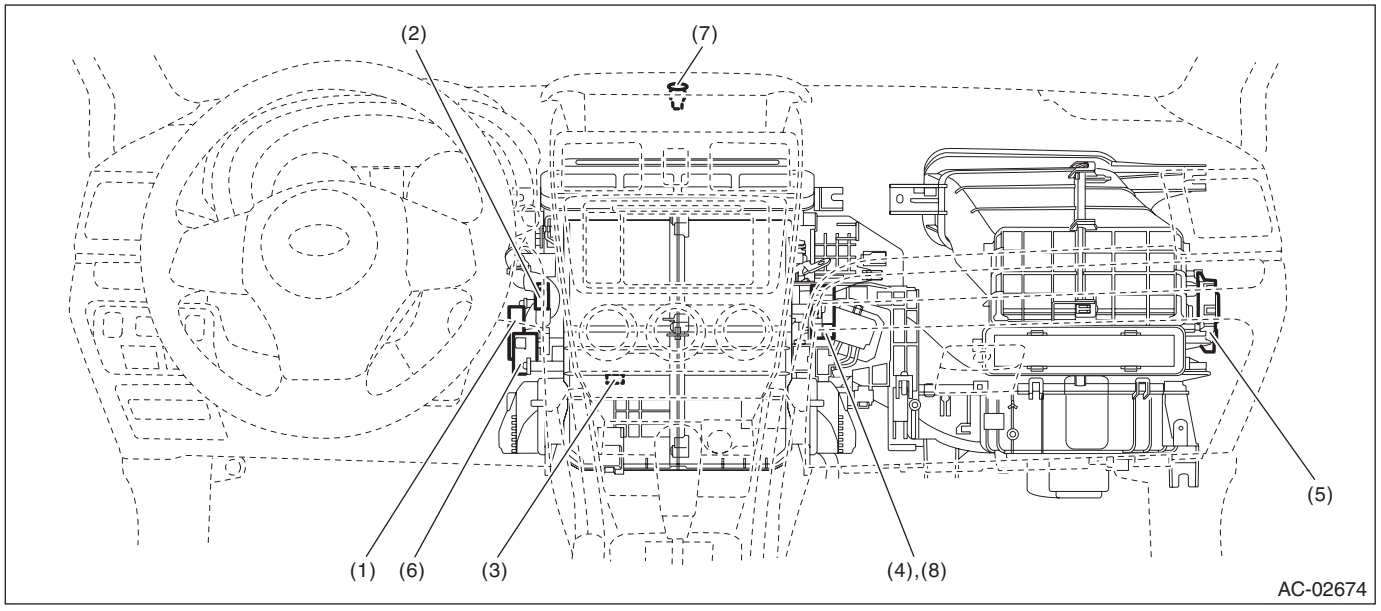
1. ELECTRICAL COMPONENT (ACTUATORS AND SENSORS)

- Engine compartment



(1) Ambient sensor
(2) Pressure switch

- Compartment

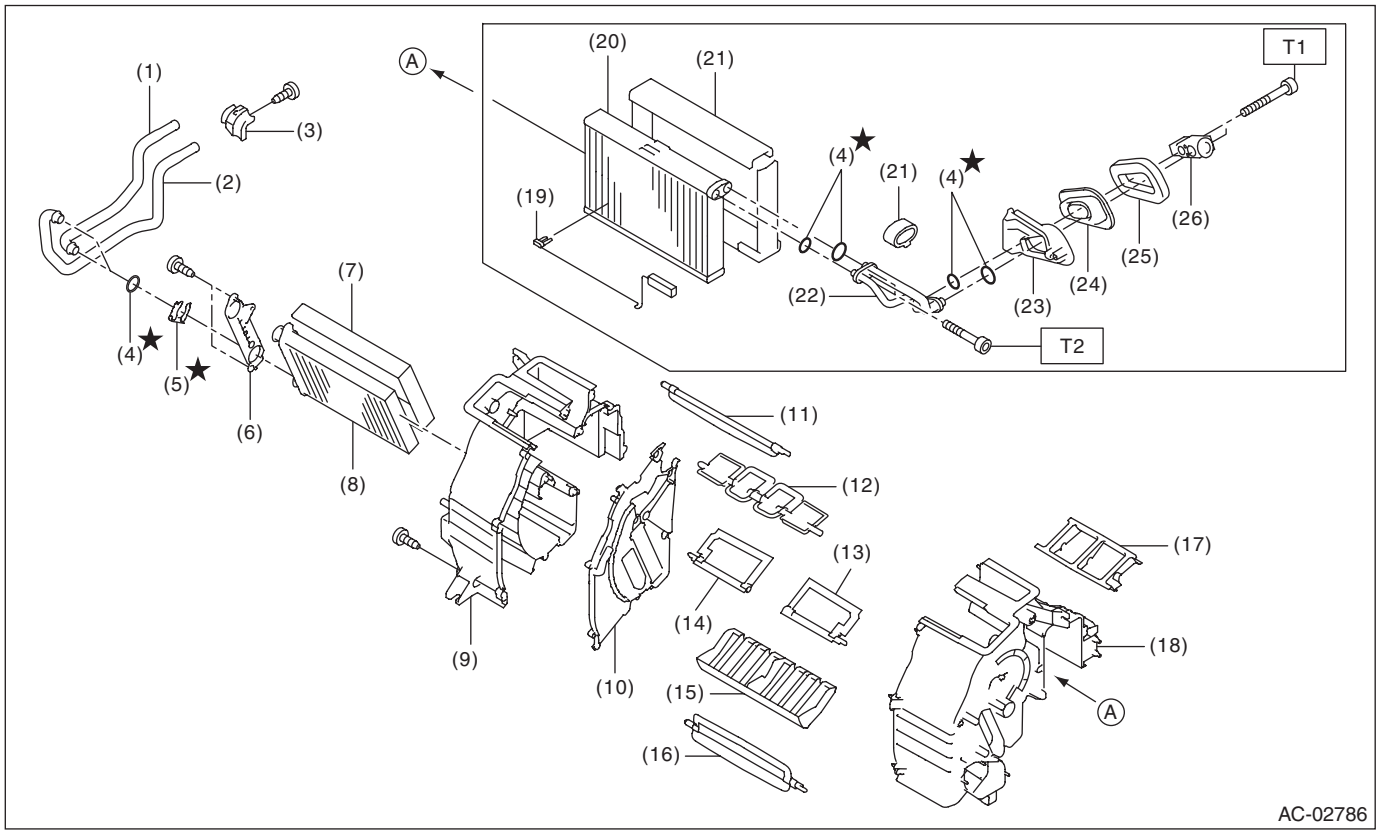


(1) Dual A/C air mix door actuator LH
(2) In-vehicle sensor
(3) Evaporator sensor
(4) Dual A/C air mix door actuator RH
(5) Intake door actuator
(6) Mode door actuator
(7) Sunload sensor
(8) Single A/C air mix door actuator

C: COMPONENT

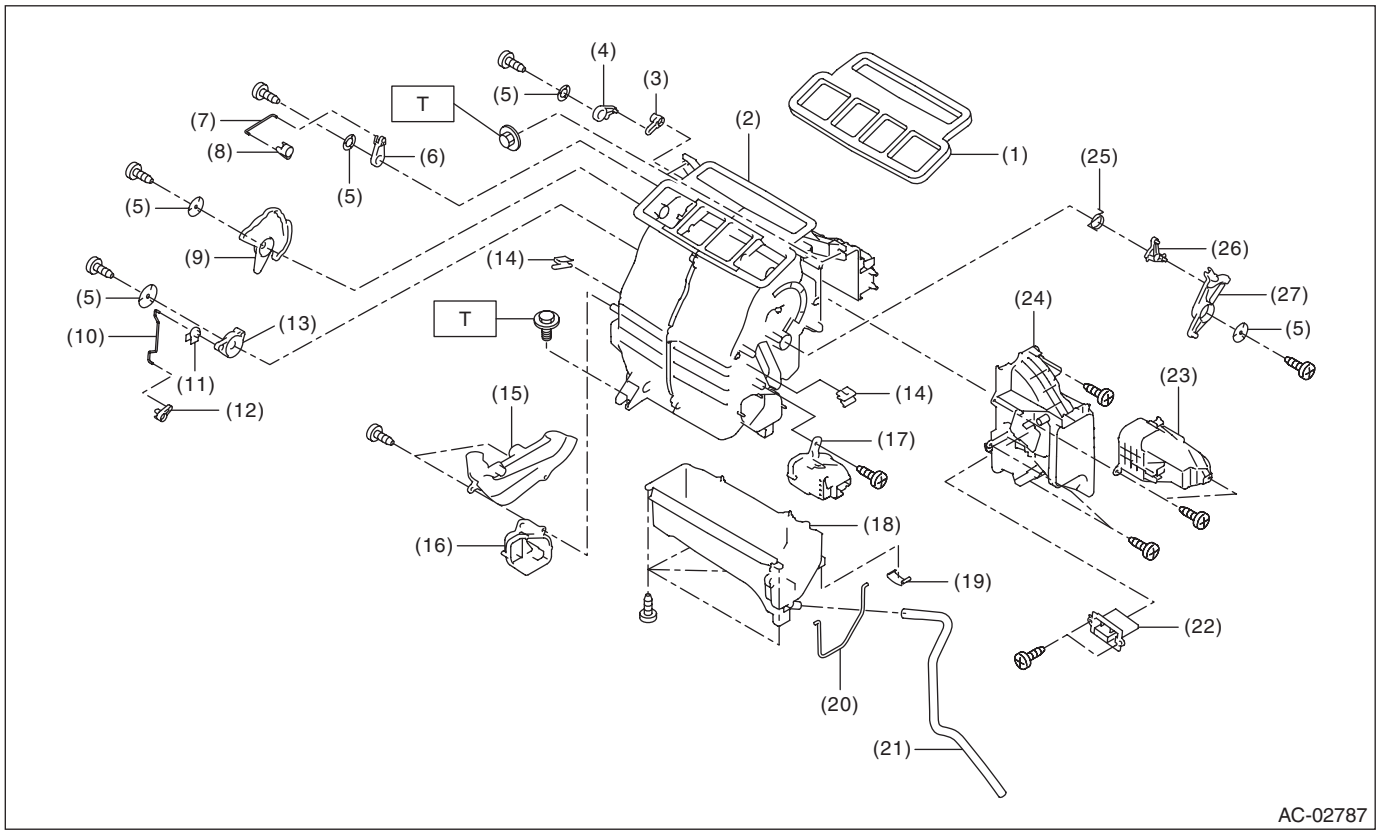
1. HEATER AND COOLING UNIT

- Manual A/C model



(1) Pipe - inlet
(2) Pipe - outlet
(3) Clamp - pipe
(4) Seal O-ring
(5) Clamp
(6) Plate - heater core
(7) Packing - heater core
(8) Heater core
(9) Case - heater unit UPR LH
(10) Plate CTR
(11) Shutter - defroster
(12) Shutter - vent
(13) Shutter - air mix RH
(14) Shutter - air mix LH
(15) Guide - heater unit
(16) Shutter - foot
(17) Case - vent duct
(18) Case - heater unit UPR RH
(19) Thermostat - cooling
(20) Evaporator ASSY - cooling
(21) Packing - evaporator core
(22) Pipe - evaporator core
(23) Case - expansion valve
(24) Seal - cooling
(25) Packing - heater unit
(26) Expansion valve - cooling

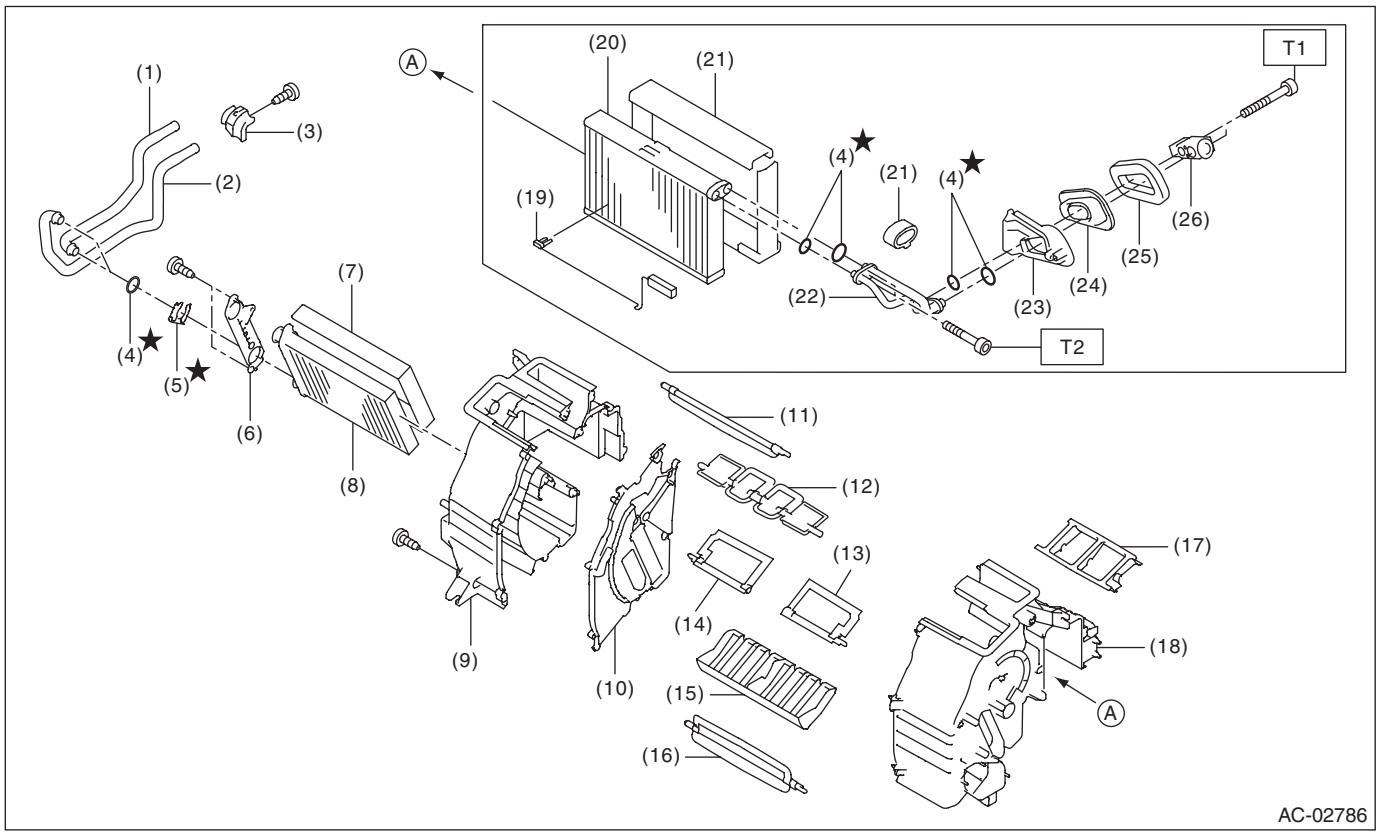
Tightening torque:N·m (kgf-m, ft-lb)
T1: 5.0 (0.51, 3.7)
T2: 6.7 (0.68, 4.9)



(1) Packing - heater unit
(2) Case - heater unit
(3) Lever - defroster
(4) Lever - defroster sub
(5) Washer - heater
(6) Lever - ventilator sub
(7) Rod - ventilator
(8) Lever - ventilator door
(9) Lever - mode
(10) Rod - foot
(11) Clip
(12) Lever - foot
(13) Lever - foot sub
(14) Clamp - cable
(15) Cover - heater pipe
(16) Duct - foot LH
(17) Duct - foot RH
(18) Case - heater LWR
(19) Clip - case
(20) Packing - evaporator cover
(21) Hose - drain
(22) Resistor
(23) Cover
(24) Cover - heater unit
(25) Spring - heater unit
(26) Lever A
(27) Lever B

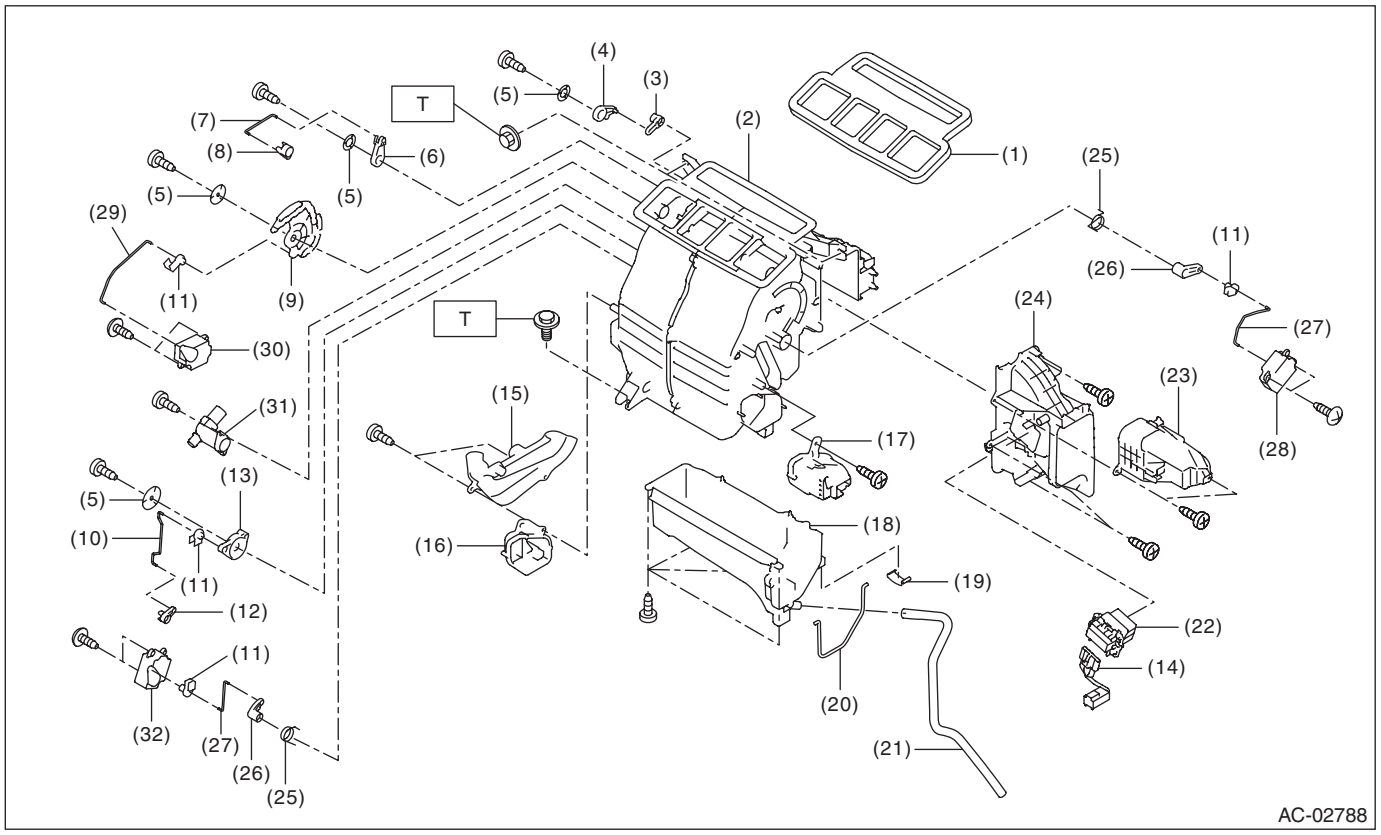
Tightening torque:N·m (kgf-m, ft-lb)
T: 7.5 (0.76, 5.5)

- Auto A/C model



(1) Pipe - inlet
(2) Pipe - outlet
(3) Clamp - pipe
(4) Seal O-ring
(5) Clamp
(6) Plate - heater core
(7) Packing - heater core
(8) Heater core
(9) Case - heater unit UPR LH
(10) Plate CTR
(11) Shutter - defroster
(12) Shutter - vent
(13) Shutter - air mix RH
(14) Shutter - air mix LH
(15) Guide - heater unit
(16) Shutter - foot
(17) Case - vent duct
(18) Case - heater unit UPR RH
(19) Thermostat - cooling
(20) Evaporator ASSY - cooling
(21) Packing - evaporator core
(22) Pipe - evaporator core
(23) Case - expansion valve
(24) Seal - cooling
(25) Packing - heater unit
(26) Expansion valve - cooling

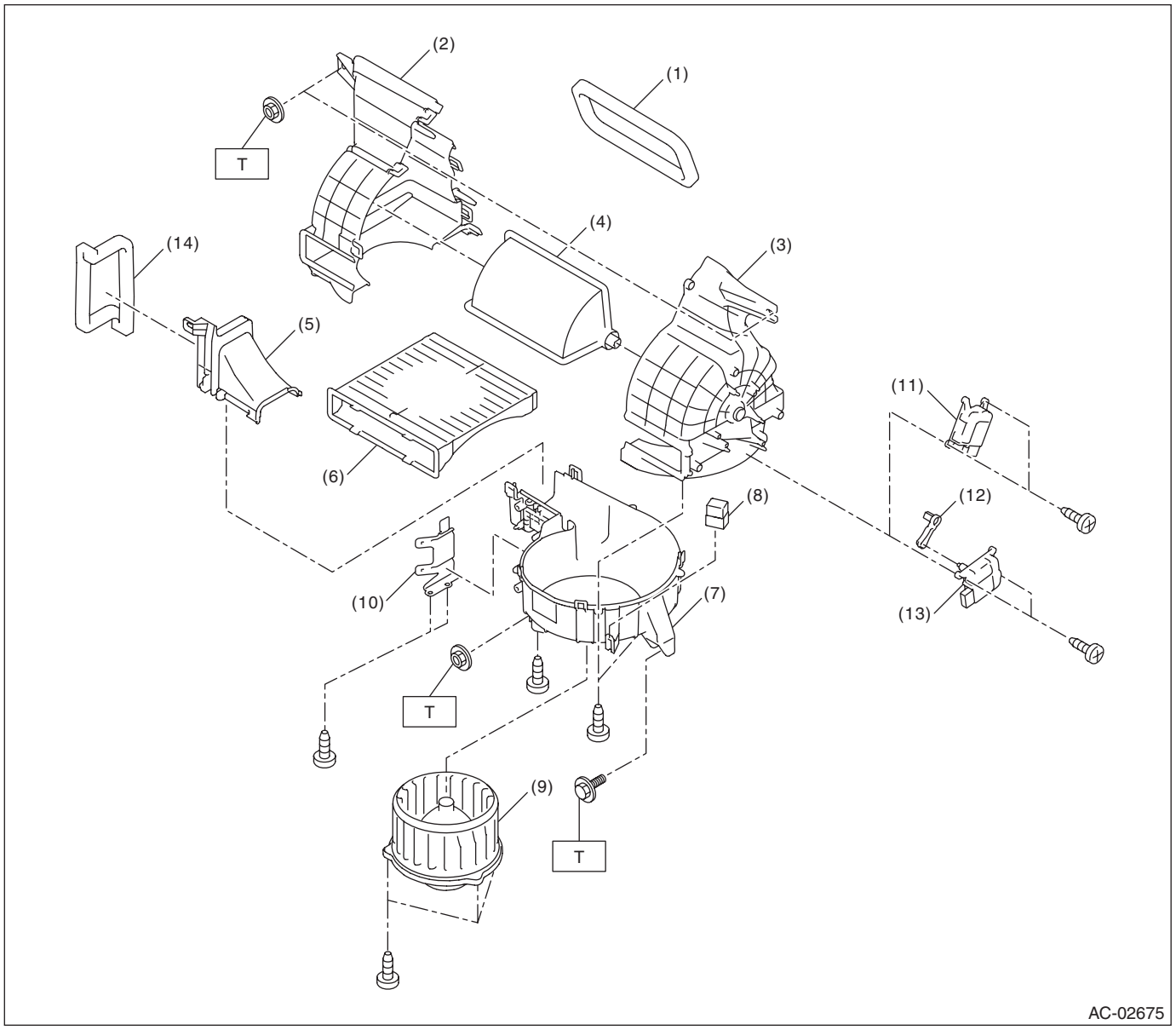
Tightening torque:N·m (kgf-m, ft-lb)
T1: 5.0 (0.51, 3.7)
T2: 6.7 (0.68, 4.9)



(1) Packing - heater unit
(2) Case - heater unit
(3) Lever - defroster
(4) Lever - defroster sub
(5) Washer - heater
(6) Lever - ventilator sub
(7) Rod - ventilator
(8) Lever - ventilator door
(9) Lever - mode
(10) Rod - foot
(11) Clip
(12) Lever - foot
(13) Lever - foot sub
(14) Harness - heater unit
(15) Cover - heater pipe
(16) Duct - foot LH
(17) Duct - foot RH
(18) Case - heater LWR
(19) Clip - case
(20) Packing - evaporator cover
(21) Hose - drain
(22) Power transistor
(23) Cover
(24) Cover - heater unit
(25) Spring - heater unit
(26) Lever - air mix
(27) Rod - air mix
(28) Motor - actuator mix RH
(29) Rod - mode
(30) Motor - actuator mode
(31) Aspirator - heater unit
(32) Motor - actuator mix LH (dual A/C model)

Tightening torque:N·m (kgf-m, ft-lb)
T: 7.5 (0.76, 5.5)

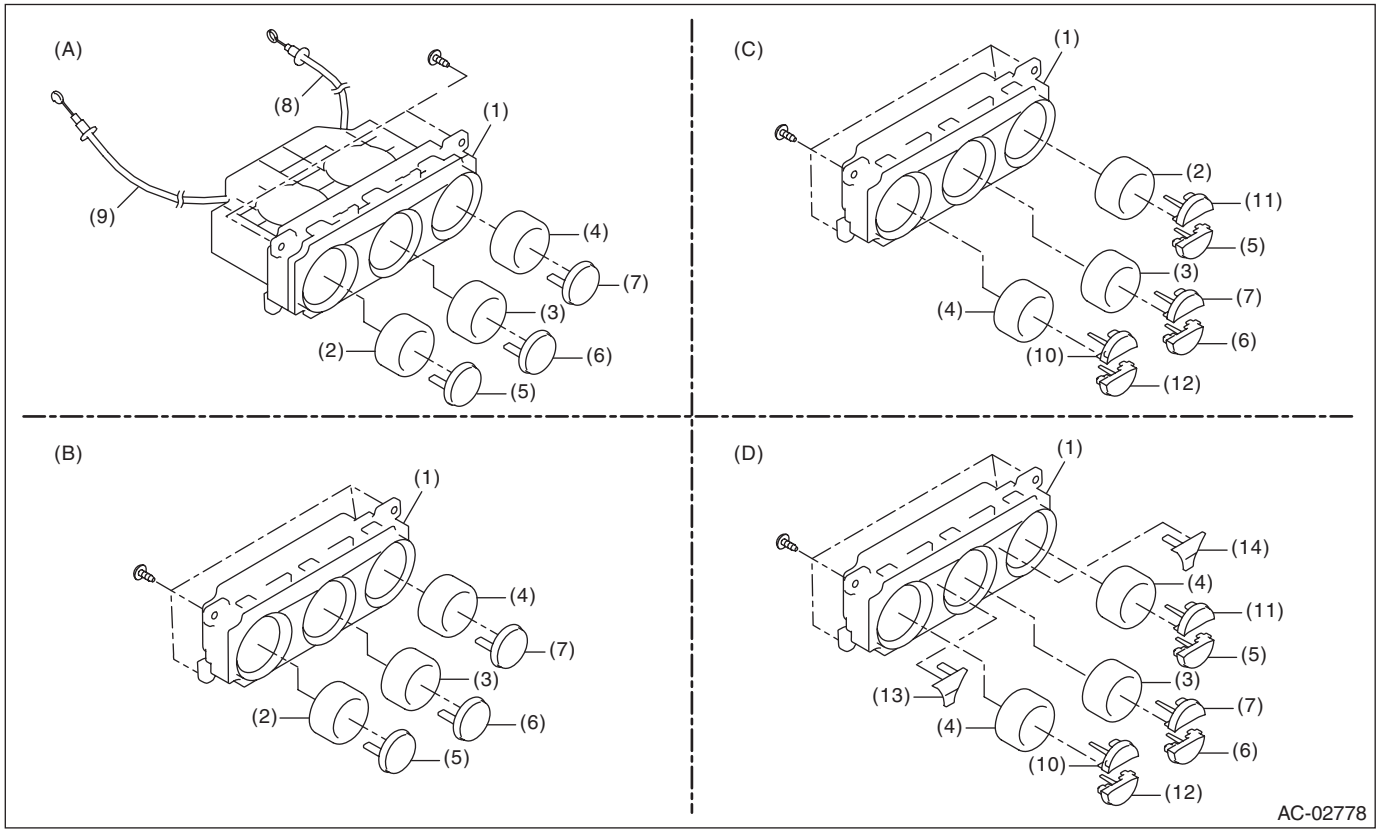
2. BLOWER MOTOR UNIT



(1) Packing - blower
(2) Case - blower intake LH
(3) Case - blower intake RH
(4) Shutter - blower
(5) Case upper - blower
(6) Filter kit
(7) Case lower - blower
(8) Blower motor relay
(9) Blower - motor
(10) Bracket
(11) Motor - actuator blower (auto A/C model)
(12) Lever
(13) Motor - actuator blower (manual A/C model)
(14) Packing

Tightening torque:N·m (kgf-m, ft-lb)
T: 7.5 (0.76, 5.5)

3. CONTROL PANEL



(A) Manual A/C model

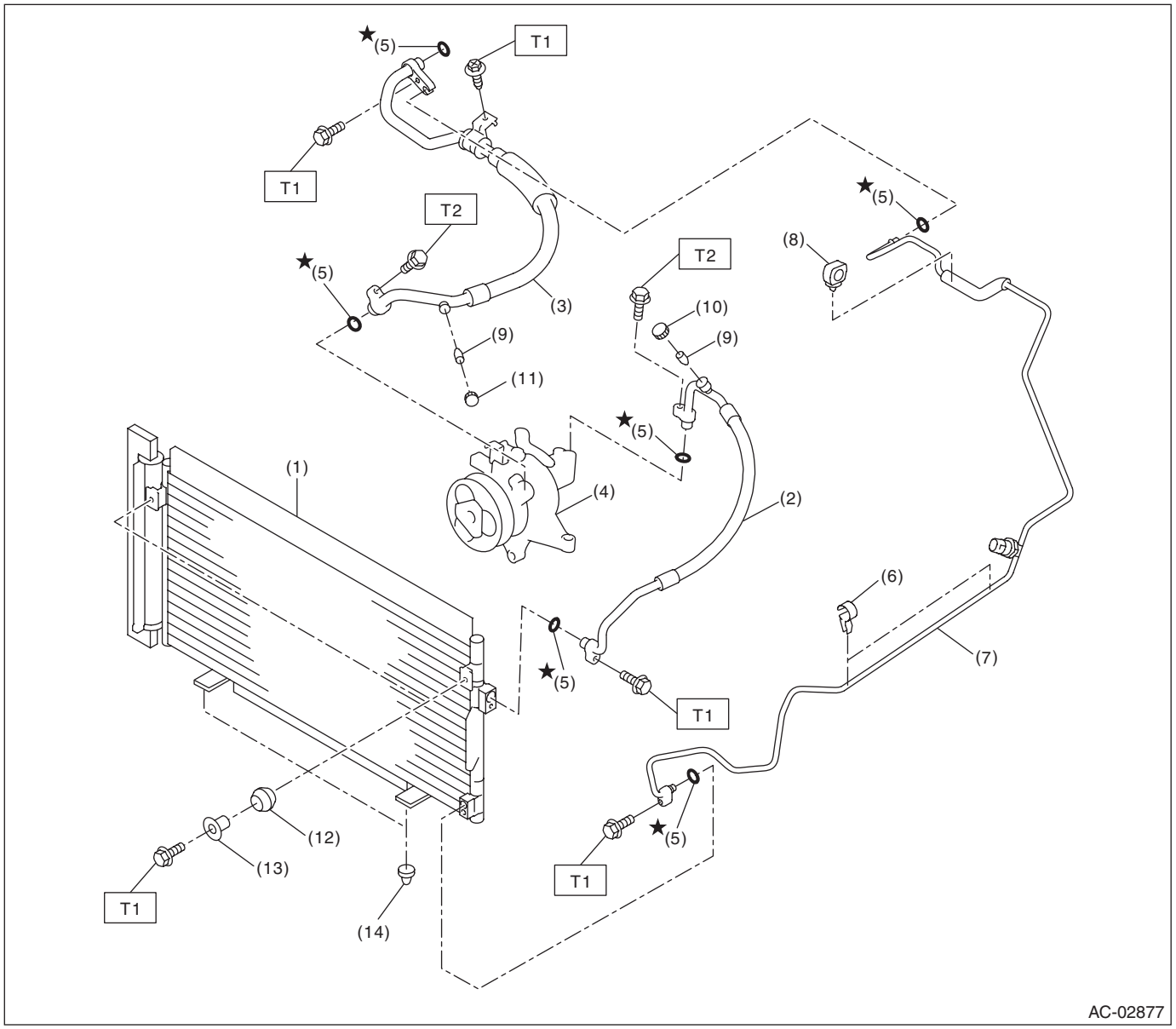
(B) Single auto A/C model (with standard MFD)

(C) Single auto A/C model (with high grade MFD)

(D) Dual auto A/C model

(1) Control case
(2) Air flow control dial
(3) Fan dial
(4) Temperature adjustment dial
(5) Rear window defogger switch
(6) FRESH/RECIRC switch
(7) A/C switch
(8) Temperature control cable
(9) Air flow control cable
(10) AUTO switch
(11) Defroster switch
(12) OFF switch
(13) Air flow control switch
(14) Dual switch

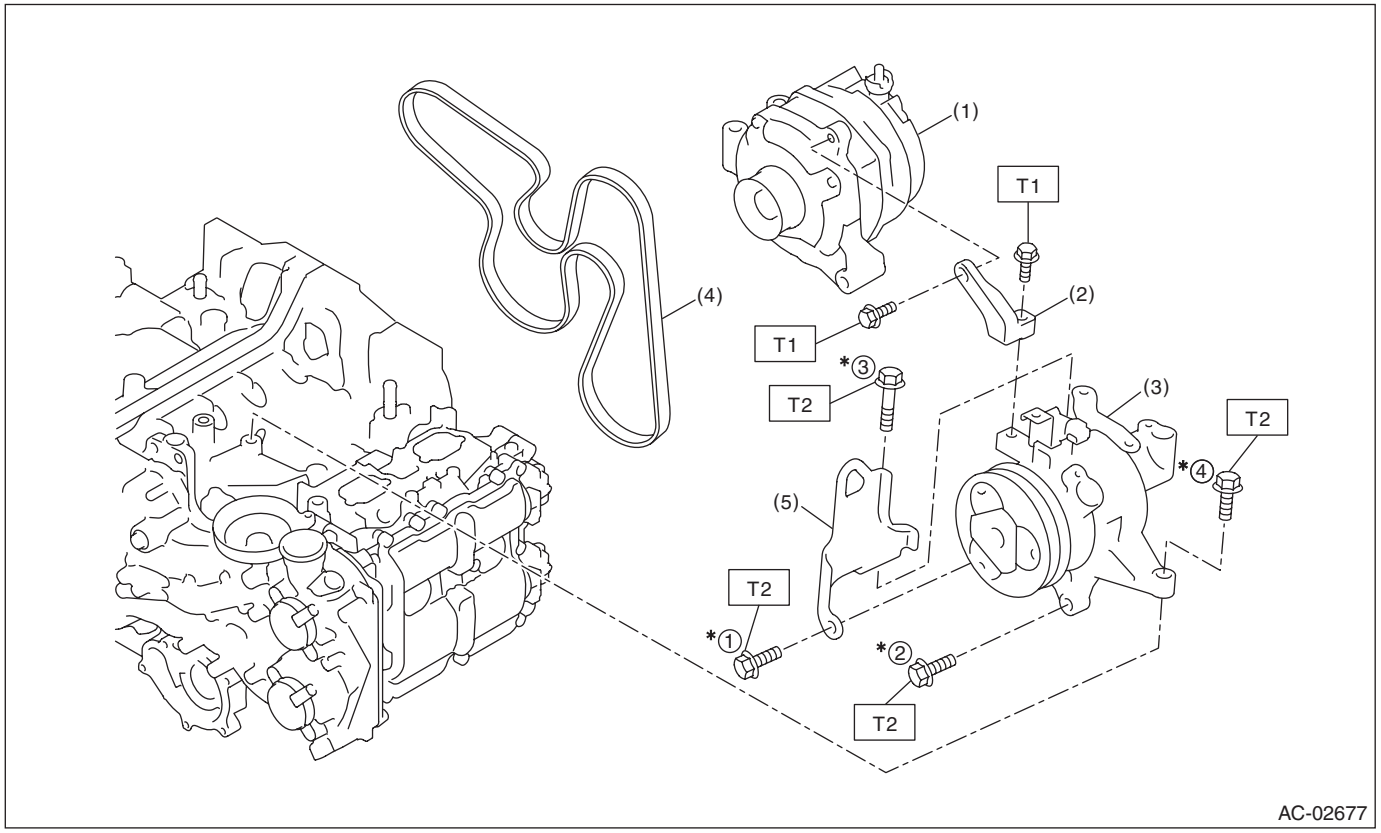
4. AIR CONDITIONING UNIT



(1)	Condenser ASSY - air conditioner	(7)	Pipe - evaporator cooling	(13)	Spacer
(2)	Hose - pressure discharge	(8)	Clip	(14)	Bushing - condenser
(3)	Hose - pressure suction	(9)	Valve - hose pressure		
(4)	Compressor ASSY	(10)	Cap - hose pressure discharge		
(5)	Seal O-ring	(11)	Cap - hose pressure suction		
(6)	Clip - hose	(12)	Grommet		

Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 10 (1.02, 7.4)

5. COMPRESSOR

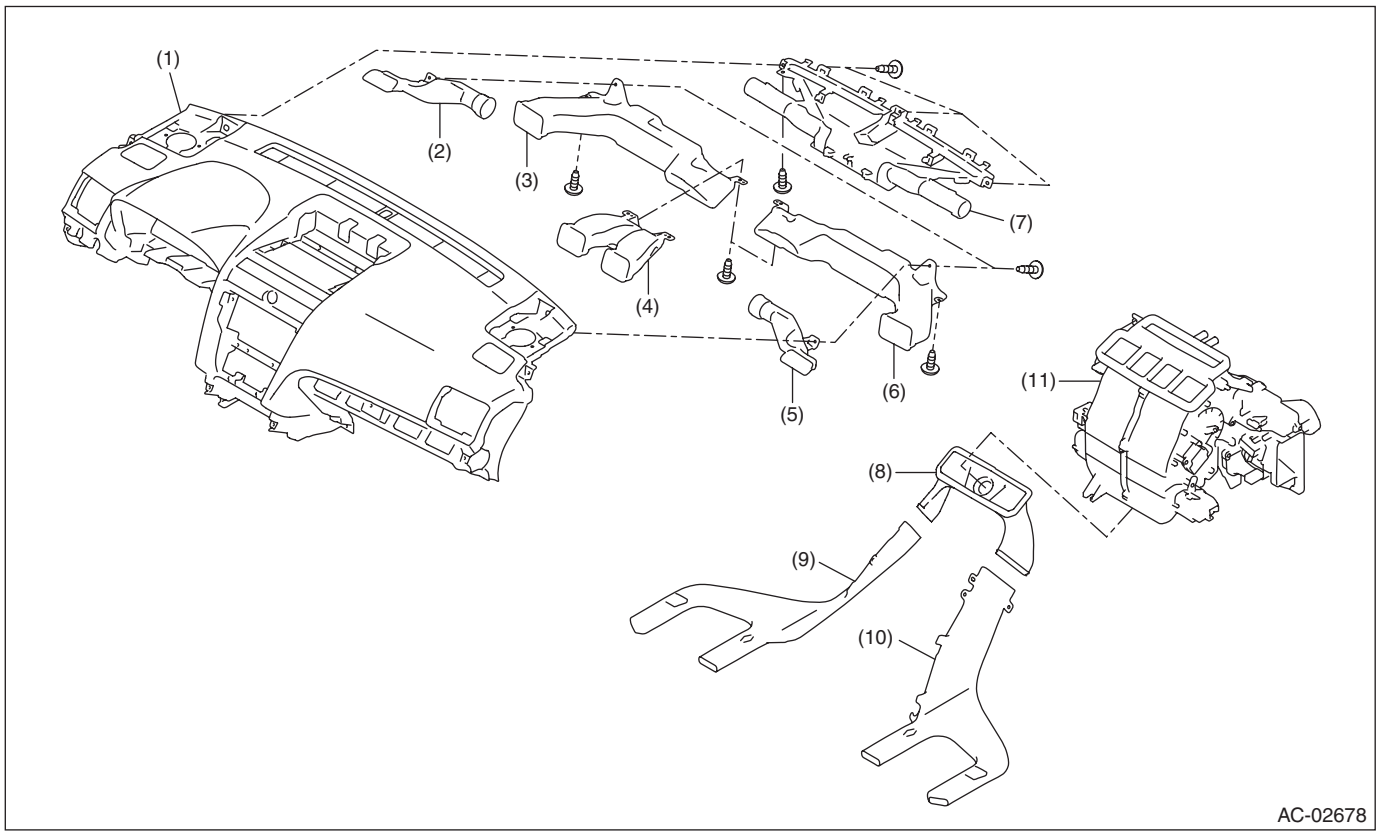


(1) Generator ASSY
(2) Bracket ASSY - compressor
(3) Compressor ASSY
(4) V-belt (6 PK)
(5) Hanger - engine front

* Tighten the compressor in the numerical order as shown in the figure.

Tightening torque:N·m (kgf-m, ft-lb)
T1: 25 (2.55, 18.4)
T2: 36 (3.67, 26.6)

6. HEATER DUCT



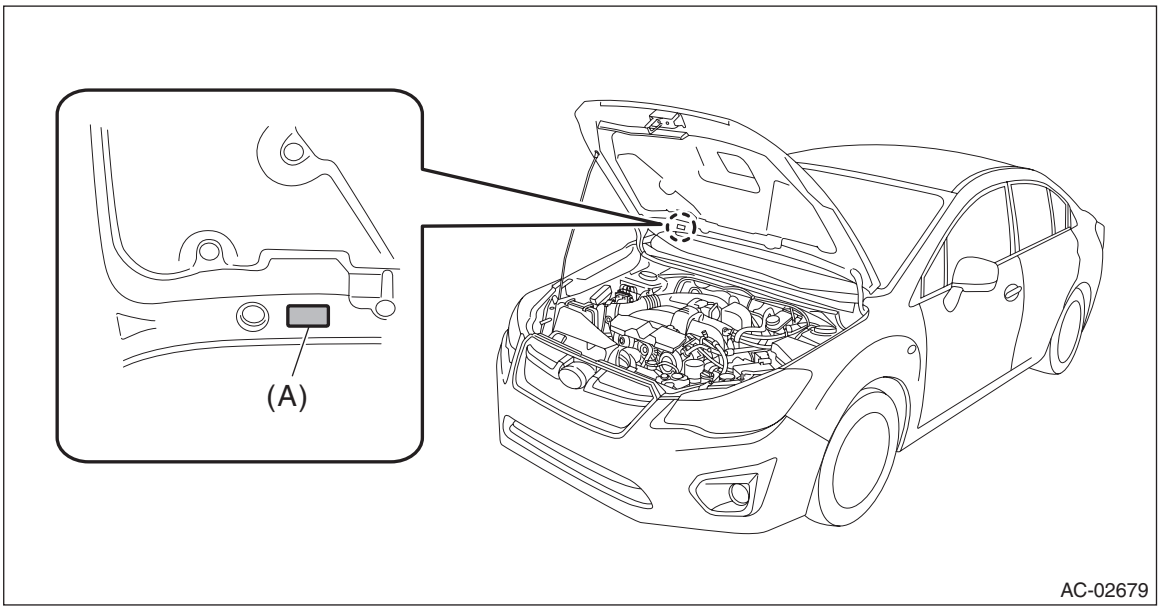
(1) Panel COMPL - instrument
(2) Duct - side defroster LH
(3) Duct - side ventilation LH
(4) Duct - center vent
(5) Duct - side defroster RH
(6) Duct - side ventilation RH
(7) Nozzle - front defroster
(8) Duct - rear heater CTR
(9) Duct - rear heater LH
(10) Duct - rear heater RH
(11) Heater and cooling unit ASSY

D: CAUTION

• Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When replacing the radio, control module, and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
• Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
• Connect the connectors securely during reassembly.
• After reassembly, make sure that each component operates normally.

1. HFC-134A A/C SYSTEM

• The cooling system components for the HFC-134a system such as the refrigerant and compressor oil are different from the conventional CFC-12 system components and they are incompatible with each other.
• Vehicles with the HFC-134a system can be identified by the label (A) attached to the vehicle.
Before maintenance, check A/C system which is installed to the vehicle.



2. COMPRESSOR OIL

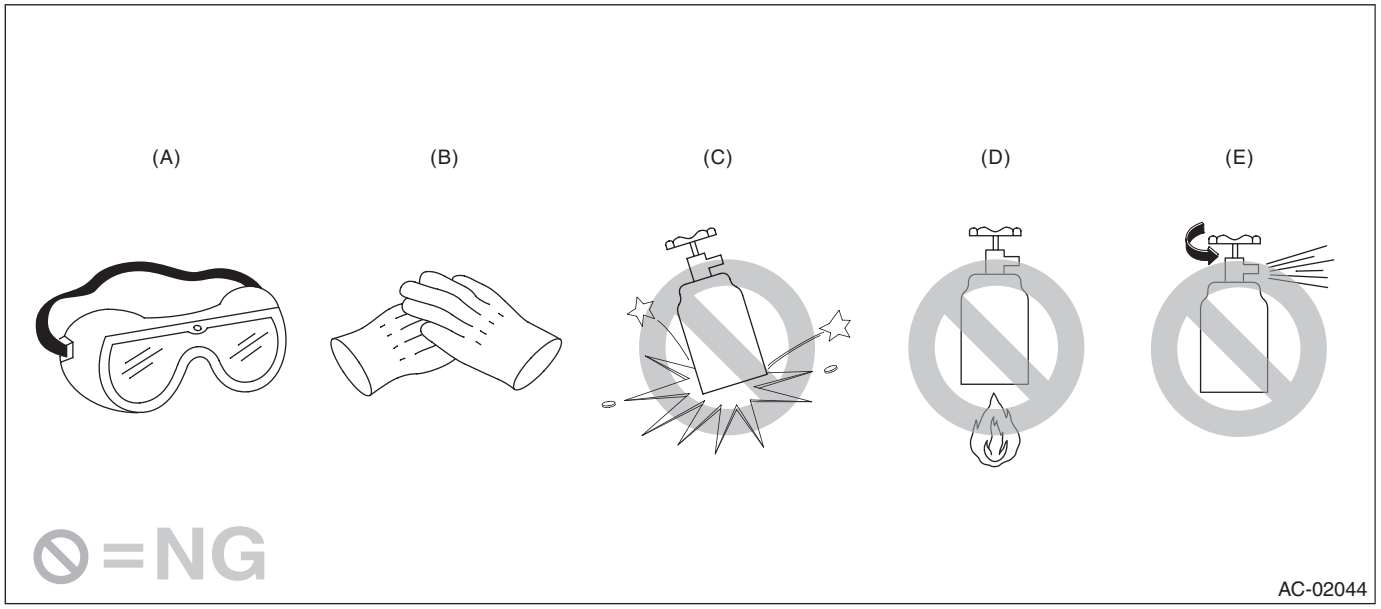
• HFC-134a compressor oil has no compatibility with that of CFC-12 system.
• Use only the manufacturer-authorized compressor oil for the HFC-134a system; only use DH-PR (ZXL200PG).
• Do not mix multiple compressor oils.
If CFC-12 compressor oil is used in the HFC-134a A/C system, the compressor may become stuck due to poor lubrication, or the refrigerant may leak due to swelling of rubber parts.
On the other hand, if HFC-134a compressor oil is used in a CFC-12 A/C system, the durability of the A/C system will be lowered.
• HFC-134a compressor oil is very hygroscopic. When replacing or installing/removing A/C parts, immediately isolate the oil from atmosphere using a plug or tape. In order to avoid moisture, store the oil in a container with its cap tightly closed.

3. REFRIGERANT

• CFC-12 refrigerant cannot be used in a HFC-134a A/C system. HFC-134a refrigerant, also cannot be used in a CFC-12 A/C system.
• If an incorrect or no refrigerant is used, it will result in poor lubrication and the compressor itself may be damaged.

4. HANDLING OF REFRIGERANT

• The refrigerant boils at approx. –30°C (–22°F). When handling it, be sure to wear protective goggles and protective gloves. Direct contact of the refrigerant with skin may cause frostbite.
If the refrigerant gets into your eye, avoid rubbing your eyes with your hands. Wash your eye with plenty of water, and receive medical treatment from an eye doctor.
• Do not heat a service can. If a service can is directly heated, or put into boiling water, the inside pressure will become extremely high. This may cause the can to explode. If a service can must be warmed up, use warm water of 40°C (104°F) or less.
• Do not drop or impact a service can. (Observe the precautions and operation procedure described on the refrigerant can.)
• When the engine is running, do not open the high-pressure valve of manifold gauge. The high-pressure gas will back-flow resulting in an explosion of the can.
• Provide good ventilation and do not work in a closed area.
• In order to prevent global warming, avoid releasing HFC-134a into the atmosphere. Using a refrigerant recovery system, discharge and recycle the gas.

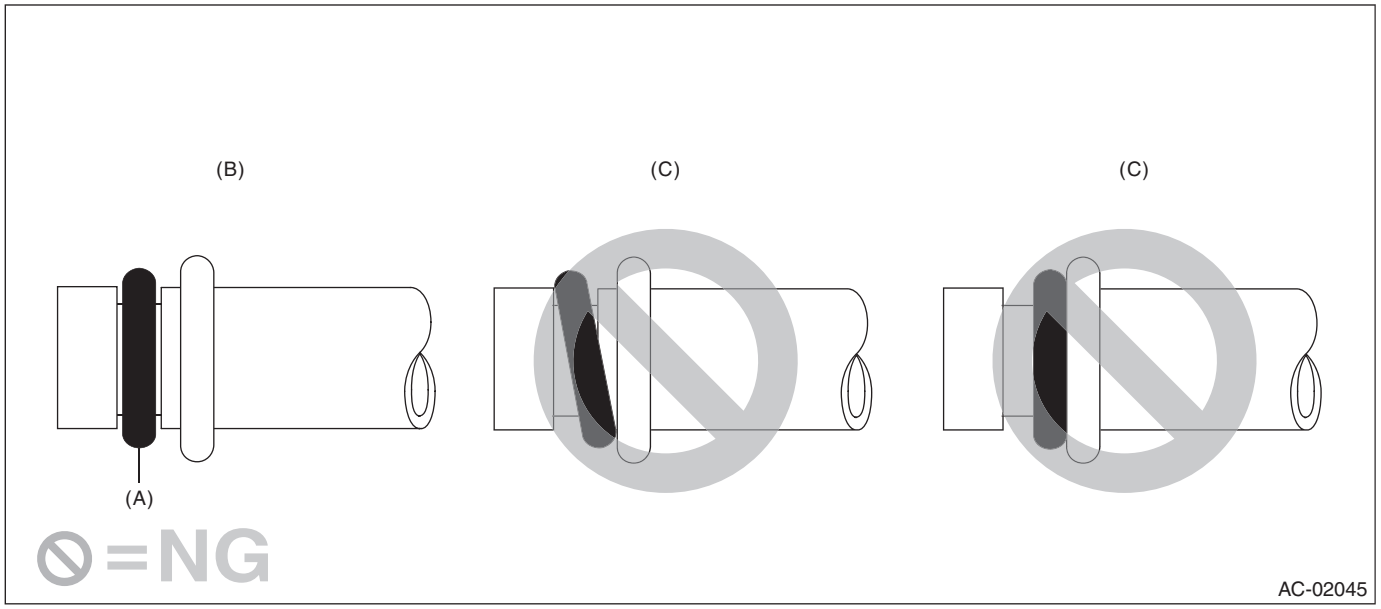


(A) Goggles
(B) Gloves
(C) Do not apply impact.
(D) No direct heat on container
(E) Do not discharge

5. O-RING CONNECTIONS

• Always use a new O-ring.
• In order to keep the O-rings free of lint which will cause a refrigerant gas leak, perform work without using gloves or waste cloths.
• Apply compressor oil to O-rings to avoid sticking, before installation.
• Use a torque wrench to tighten the O-ring fittings. Over-tightening will result in damage of the O-ring and deformation of the pipe end.
• If the work is interrupted before completing pipe connections, recap the pipes, components and fittings with a plug or tape to prevent foreign matter from entering.
• Visually check the surfaces and mating surfaces of O-rings, threads and connecting points. If a failure is found, replace the applicable parts.

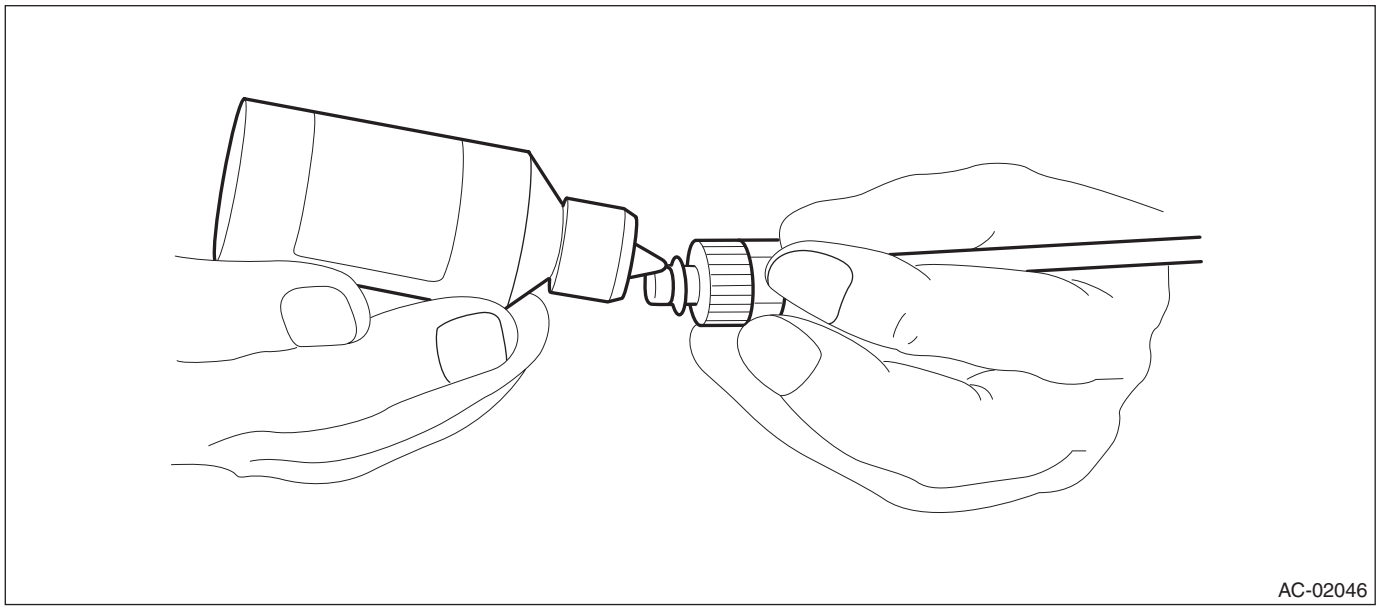
- Install the O-rings straight against the pipe groove.



(A) O-ring (B) OK (C) NG

- Use compressor oil specified in the service manual to lubricate the O-rings.

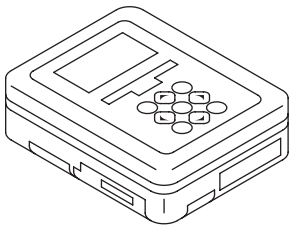
Apply oil to the top and sides of O-rings before installation.
Apply compressor oil to the pipe grooves.



- After tightening, use a clean cloth to remove excess compressor oil from the connections and any oil which may have run on the vehicle body or other parts.
- If any leakage is suspected after tightening, do not tighten the connections further, but disconnect the connections, remove the O-rings, and check the O-rings, threads, and connections.

E: PREPARATION TOOL

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system. NOTE: For detailed operation procedures of SUBARU SELECT MONITOR III KIT, refer to “PC application help for Subaru Select Monitor”.

2. GENERAL TOOL

CAUTION:
When working on vehicles with a HFC-134a system, only use HFC-134a specified tools and parts. Do not mix CFC-12 tools and parts. If HFC-134a and CFC-12 refrigerant or compressor oil is mixed, it will result in poor lubrication and the compressor itself may be damaged.
In order to prevent the mixture of HFC-134a and CFC-12 parts and liquid, the type of tool and screw, and the replacement valves used are different. The gas leak detectors for the HFC-134a and CFC-12 systems must also not be interchanged.

	HFC-134a	CFC-12
Tool & screw type	Millimeter size	Inch size
Valve type	Quick joint type	Screw-in type

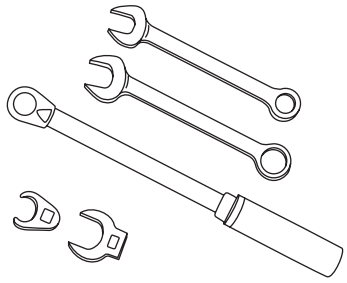
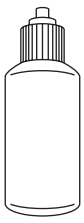
Illustration	Tools and Equipment
 AC-00213	Wrench Various **WRENCHES** will be required to service any A/C system.7 — 40 N·m (0.7 to 4.1 kgf-m, 5 to 30 ft-lb) torque wrench and various crowfoot wrenches will be needed. Open end or flare nut wrenches will be needed to affix the pipe and hose fittings.
 AC-00012	Applicator bottle A small **APPLICATOR BOTTLE** is recommended to apply compressor oil to the various parts. It can be available at a hardware store.

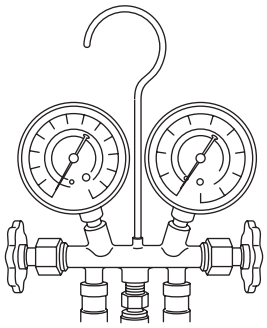
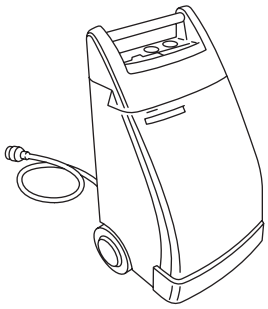
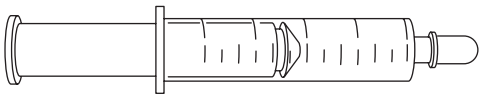
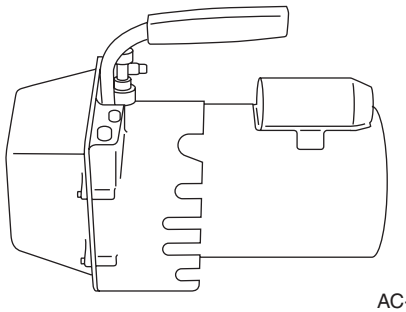
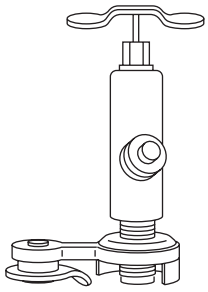
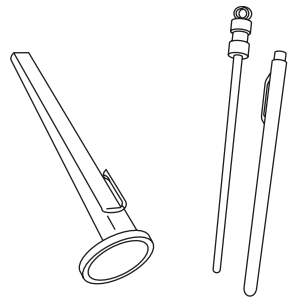
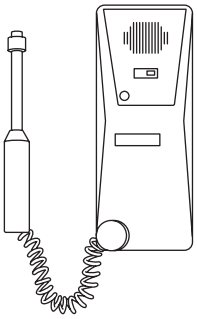
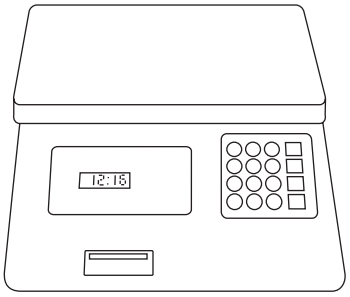
Illustration	Tools and Equipment
 AC-00013	Manifold gauge set A **MANIFOLD GAUGE SET** (with hoses) is available at either a refrigerant supplier or an automotive equipment supplier.
 AC-00014	Refrigerant recovery system A **REFRIGERANT RECOVERY SYSTEM** is used for the recovery and recycling of A/C system refrigerant after contaminants and moisture have been removed from the refrigerant.
 AC-00015	Syringe A graduated plastic **SYRINGE** will be needed to add oil into the system again. A syringe can be available at a pharmacy or drug store.
 AC-00016	Vacuum pump A **VACUUM PUMP** is necessary (for a good working condition), and may be available at either a refrigerant supplier or an automotive equipment supplier.
 AC-00017	Can tap A **CAN TAP** for the 397 g (14 oz.) can is available at an automotive equipment supplier.

Illustration	Tools and Equipment
 AC-00018	Thermometer A Pocket **THERMOMETER** is available at either a industrial hardware store or a refrigerant supplier.
 AC-00019	Electronic leak detector An **ELECTRONIC LEAK DETECTOR** can be available at either a specialty tool supplier or an A/C equipment supplier.
 AC-00020	Weight scale A **WEIGHT SCALE** such as an electronic charging scale or a bathroom scale with digital display will be needed, if a 13.6 kg (30 lb) refrigerant container is used.

2. Air Conditioning System

A: WIRING DIAGRAM

Refer to “Air Conditioning System” in the wiring diagram. <Ref. to WI-35, WIRING DIAGRAM, Air Conditioning System.>

B: ELECTRICAL SPECIFICATION

Refer to “Auto A/C Control Module I/O Signal” of “HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS)” section. <Ref. to AC(diag)-6, ELECTRICAL SPECIFICATION, Auto A/C Control Module I/O Signal.>

C: INSPECTION

Refer to “Basic Diagnostic Procedure” for “HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS)” section. <Ref. to AC(diag)-2, Basic Diagnostic Procedure.>

D: NOTE

For procedure of each component in the air conditioning system, refer to the respective section.

- Blower motor unit assembly: <Ref. to AC-35, Blower Motor Unit Assembly.>
- Blower motor: <Ref. to AC-37, Blower Motor.>
- Power transistor (auto A/C model): <Ref. to AC-38, Power Transistor (Auto A/C Model).>
- Blower resistor (manual A/C model): <Ref. to AC-39, Blower Resistor (Manual A/C Model).>
- Control panel: <Ref. to AC-47, Control Panel.>
- Compressor: <Ref. to AC-51, Compressor.>
- Condenser: <Ref. to AC-55, Condenser.>
- Heater and cooling unit: <Ref. to AC-59, Heater and Cooling Unit.>
- Evaporator: <Ref. to AC-63, Evaporator.>
- Expansion valve: <Ref. to AC-69, Expansion Valve.>
- Hose & pipe: <Ref. to AC-71, Hose and Pipe.>
- Ambient sensor: <Ref. to AC-73, Ambient Sensor.>
- Sunload sensor (auto A/C model): <Ref. to AC-76, Sunload Sensor (Auto A/C Model).>
- In-vehicle sensor (auto A/C model): <Ref. to AC-78, In-Vehicle Sensor (Auto A/C Model).>
- Evaporator sensor: <Ref. to AC-82, Evaporator Sensor.>
- Intake door actuator: <Ref. to AC-85, FRESH/RECIRC Door Actuator.>
- Mode door actuator: <Ref. to AC-90, Mode Door Actuator.>
- Air mix door actuator: <Ref. to AC-92, Air Mix Door Actuator.>

3. Refrigerant Pressure with Manifold Gauge Set

A: PROCEDURE

1. REFRIGERANT GAS PRESSURE INSPECTION

PREPARATION TOOL:
Manifold gauge set
Thermometer

1) Prepare the vehicle.

NOTE:
Check that the ambient temperature is 25 — 40°C (77 — 104°F) and humidity is 30% — 80%.

- Place the vehicle in the shade and windless condition, and open the front hood.
- Open the front windows and close all doors.

2) Connect the manifold gauge set, and then check the refrigerant pressure.
(1) Connect the manifold gauge set, and then start the engine.
(2) Set the vehicle to the following conditions.

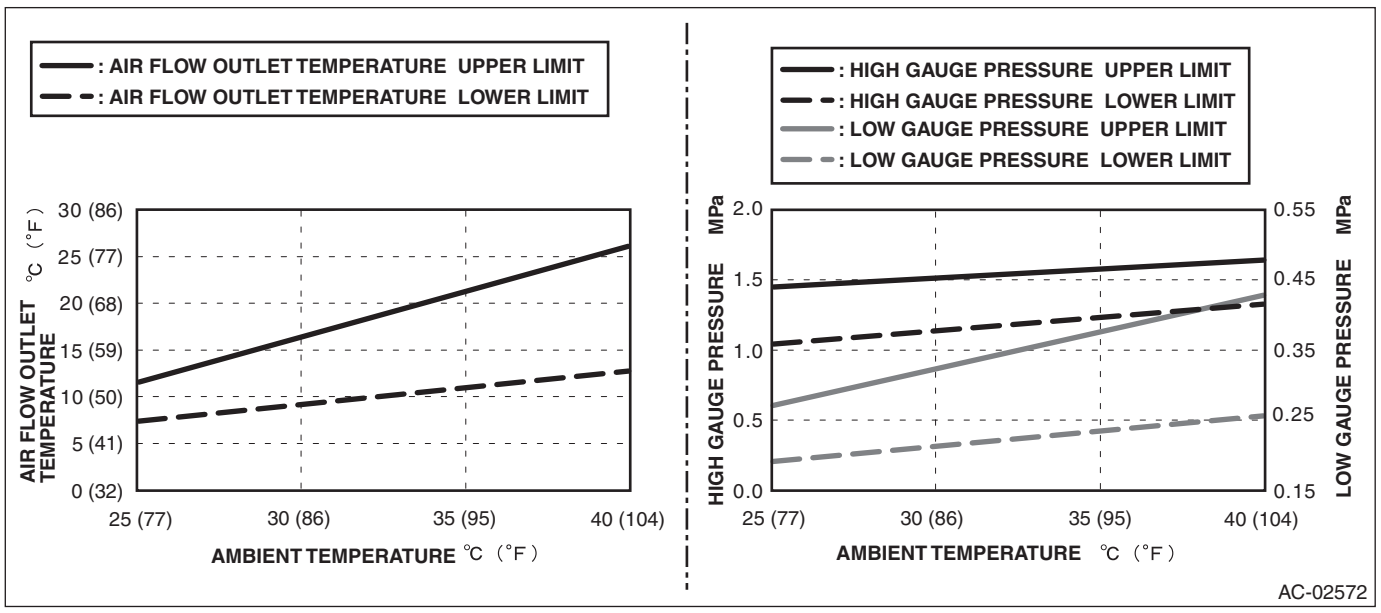
Item	Condition
Engine	Warmed up (Engine coolant temperature indicator light goes off.)
Air vent grille	Shutter: Fully open
A/C switch	ON
Temperature control dial	LO (MAX COOL)
FRESH/RECIRC switch	RECIRC
Air flow control dial or switch	VENT
Fan dial	Auto A/C model: 5/7 level
	Manual A/C model: 3/4 level

(3) With the condition of Step (2), idle the engine for 30 minutes.
(4) Read the gauges for high pressure and low pressure of the manifold gauge.

3) Measure the air flow outlet temperature at the air vent grille, ambient temperature and humidity.

NOTE:
Obtain the air flow outlet temperature by measuring the average temperature of center grille assembly and side grille assembly.

4) High and low pressures and air flow outlet temperature in relation to the ambient temperature and humidity are within the specified range shown in the graph below.



5) Refer to “DIAGNOSIS WITH SYMPTOM” if the inspection result is not within the standard. <Ref. to AC-23, INSPECTION WITH PRESSURE SYMPTOMS, INSPECTION, Refrigerant Pressure with Manifold Gauge Set.>

B: INSPECTION

1. INSPECTION WITH PRESSURE SYMPTOMS

Symptoms	Reference
Both high and low pressure sides are low.	<Ref. to AC-23, BOTH HIGH AND LOW PRESSURE SIDES ARE LOW., INSPECTION, Refrigerant Pressure with Manifold Gauge Set.>
Both high and low pressure sides are high.	<Ref. to AC-23, BOTH HIGH AND LOW PRESSURE SIDES ARE HIGH., INSPECTION, Refrigerant Pressure with Manifold Gauge Set.>
Both high and low pressure sides are equal, or high-pressure side is low.	<Ref. to AC-24, BOTH HIGH AND LOW PRESSURE SIDES ARE EQUAL, OR HIGH-PRESSURE SIDE IS LOW., INSPECTION, Refrigerant Pressure with Manifold Gauge Set.>
High-pressure side is high.	<Ref. to AC-24, HIGH-PRESSURE SIDE IS HIGH., INSPECTION, Refrigerant Pressure with Manifold Gauge Set.>
Low-pressure side is low.	<Ref. to AC-25, LOW-PRESSURE SIDE IS LOW., INSPECTION, Refrigerant Pressure with Manifold Gauge Set.>
Low-pressure side is high.	<Ref. to AC-25, LOW-PRESSURE SIDE IS HIGH., INSPECTION, Refrigerant Pressure with Manifold Gauge Set.>

2. BOTH HIGH AND LOW PRESSURE SIDES ARE LOW.

	Step	Check	Yes	No
1	**CHECK REFRIGERANT LEAKAGE.** Check the refrigerant for leakage. <Ref. to AC-30, INSPECTION, Refrigerant Leak Check.> NOTE: When the pressure on the high-pressure side is less than 0.69 Mpa: Go to Step 2.	Are there any refrigerant leakage?	Repair the refrigerant leakage.	Go to step **2**.
2	**FILL PROPER AMOUNT OF REFRIGERANT.** Drain the refrigerant completely, and then refill the proper amount of refrigerant. • Recovery: <Ref. to AC-26, PROCEDURE, Refrigerant Recovery Procedure.> • Refill: <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>	Is the refrigerant pressure within the specified range?	Refrigerant pressure is normal.	Perform appropriate inspection with pressure symptoms.

3. BOTH HIGH AND LOW PRESSURE SIDES ARE HIGH.

	Step	Check	Yes	No
1	**FILL PROPER AMOUNT OF REFRIGERANT.** Drain the refrigerant completely, and then refill the proper amount of refrigerant. • Recovery: <Ref. to AC-26, PROCEDURE, Refrigerant Recovery Procedure.> • Refill: <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>	Is the refrigerant pressure within the specified range?	Refrigerant pressure is normal.	Perform appropriate inspection with pressure symptoms.

4. BOTH HIGH AND LOW PRESSURE SIDES ARE EQUAL, OR HIGH-PRESSURE SIDE IS LOW.

	Step	Check	Yes	No
1	**CHECK REFRIGERANT LEAKAGE.** Check the refrigerant for leakage. <Ref. to AC-30, INSPECTION, Refrigerant Leak Check.> NOTE: When the pressure on the high-pressure side is less than 0.69 Mpa: Go to Step 2.	Are there any refrigerant leakage?	Repair the refrigerant leakage.	Go to step **2**.
2	**FILL PROPER AMOUNT OF REFRIGERANT.** Drain the refrigerant completely, and then refill the proper amount of refrigerant. • Recovery: <Ref. to AC-26, PROCEDURE, Refrigerant Recovery Procedure.> • Refill: <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>	Is the refrigerant pressure within the specified range?	Refrigerant pressure is normal.	Inspect the compressor. <Ref. to AC(diag)-34, COOL AIR DOES NOT COME OUT WHEN PRESSING THE A/C SWITCH. FOG CANNOT BE CLEARED. (COMPRESSOR DOES NOT OPERATE.), DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>

5. HIGH-PRESSURE SIDE IS HIGH.

	Step	Check	Yes	No
1	**CHECK CONDENSER.** Check the condenser. <Ref. to AC-58, INSPECTION, Condenser.>	Is condenser normal?	Go to step **2**.	Clean or replace the condenser.
2	**CHECK RADIATOR FAN.** Check the radiator fan system. <Ref. to CO(H4DO)-7, Radiator Fan System.>	Is radiator fan system normal?	Go to step **3**.	Repair or replace the faulty parts of the radiator fan system.
3	**FILL PROPER AMOUNT OF REFRIGERANT.** Drain the refrigerant completely, and then refill the proper amount of refrigerant. • Recovery: <Ref. to AC-26, PROCEDURE, Refrigerant Recovery Procedure.> • Refill: <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>	Is the refrigerant pressure within the specified range?	Refrigerant pressure is normal.	Check the high-pressure hose and condenser for deformation or clogging, and replace if defective.

6. LOW-PRESSURE SIDE IS LOW.

	Step	Check	Yes	No
1	**CHECK REFRIGERANT LEAKAGE.** Check the refrigerant for leakage. <Ref. to AC-30, INSPECTION, Refrigerant Leak Check.> NOTE: When the pressure on the high-pressure side is less than 0.69 Mpa: Go to Step 2.	Are there any refrigerant leakage?	Repair the refrigerant leakage.	Go to step **2**.
2	**FILL PROPER AMOUNT OF REFRIGERANT.** Drain the refrigerant completely, and then refill the proper amount of refrigerant. • Recovery: <Ref. to AC-26, PROCEDURE, Refrigerant Recovery Procedure.> • Refill: <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>	Is the refrigerant pressure within the specified range?	Refrigerant pressure is normal.	Go to step **3**.
3	**REPLACE EXPANSION VALVE.** Replace the expansion valve. <Ref. to AC-69, REMOVAL, Expansion Valve.>	Is the refrigerant pressure within the specified range?	Refrigerant pressure is normal.	Inspect the compressor. <Ref. to AC(diag)-34, COOL AIR DOES NOT COME OUT WHEN PRESSING THE A/C SWITCH. FOG CANNOT BE CLEARED. (COMPRESSOR DOES NOT OPERATE.), DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>

7. LOW-PRESSURE SIDE IS HIGH.

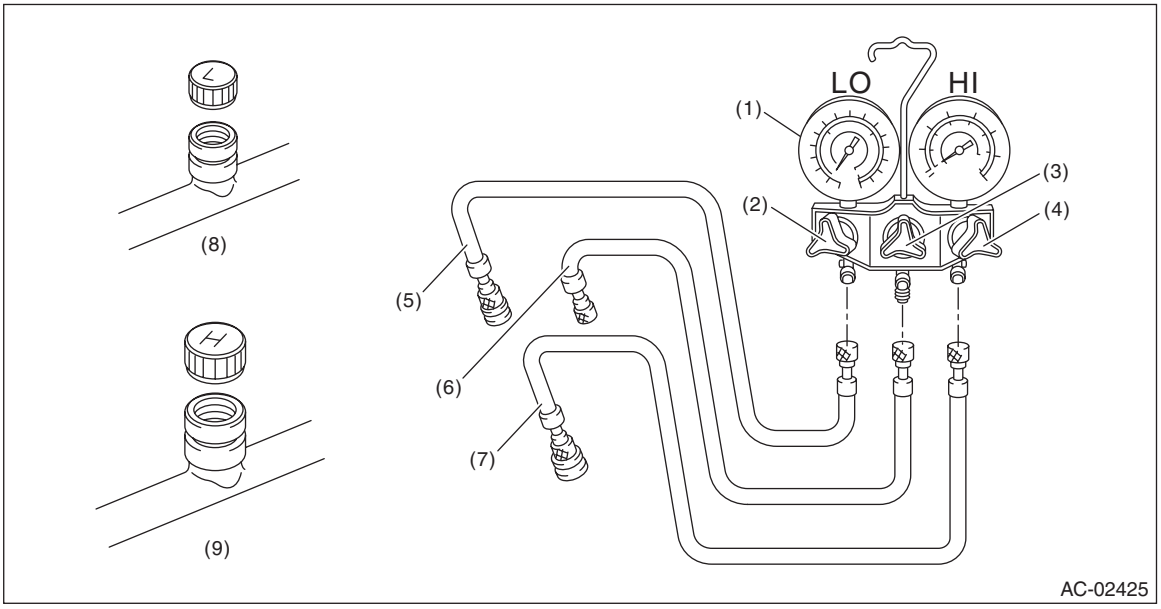
	Step	Check	Yes	No
1	**FILL PROPER AMOUNT OF REFRIGERANT.** Drain the refrigerant completely, and then refill the proper amount of refrigerant. • Recovery: <Ref. to AC-26, PROCEDURE, Refrigerant Recovery Procedure.> • Refill: <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>	Is the refrigerant pressure within the specified range?	Refrigerant pressure is normal.	Go to step **2**.
2	**REPLACE EXPANSION VALVE.** Replace the expansion valve. <Ref. to AC-69, REMOVAL, Expansion Valve.>	Is the refrigerant pressure within the specified range?	Refrigerant pressure is normal.	Replace the evaporator. <Ref. to AC-63, REMOVAL, Evaporator.>

4. Refrigerant Recovery Procedure

A: PROCEDURE

PREPARATION TOOL:
Manifold gauge set
Refrigerant recovery system

CAUTION:
• During operation, be sure to wear protective goggles and protective gloves.
• Connect the refrigerant recovery system with the manifold gauge set to discharge the refrigerant from the A/C system and recycle the gas.
• When recycling the discharged refrigerant, keep service cans on hand. Because the recovery rate with the recovery system is approx. 90%, service cans are necessary to charge the refrigerant.
• Follow the detailed operation procedure described in the operation manual attached to the refrigerant recovery system.



(1)	Manifold gauge	(4)	High pressure valve	(7)	High-pressure hose (high-pressure)
(2)	Low pressure valve	(5)	Low-pressure hose (low-pressure)	(8)	Low-pressure side service port
(3)	Center valve	(6)	Center manifold hose (vacuum pump and charge)	(9)	High-pressure side service port

1) Perform compressor oil return operation. <Ref. to AC-34, PROCEDURE, Compressor Oil.>
2) Stop the engine.
3) Attach the manifold gauge set.
   (1) Confirm that all valves are fully closed.
   (2) Install the low/high pressure hoses to the service ports on the low/high pressure sides of the vehicle respectively.

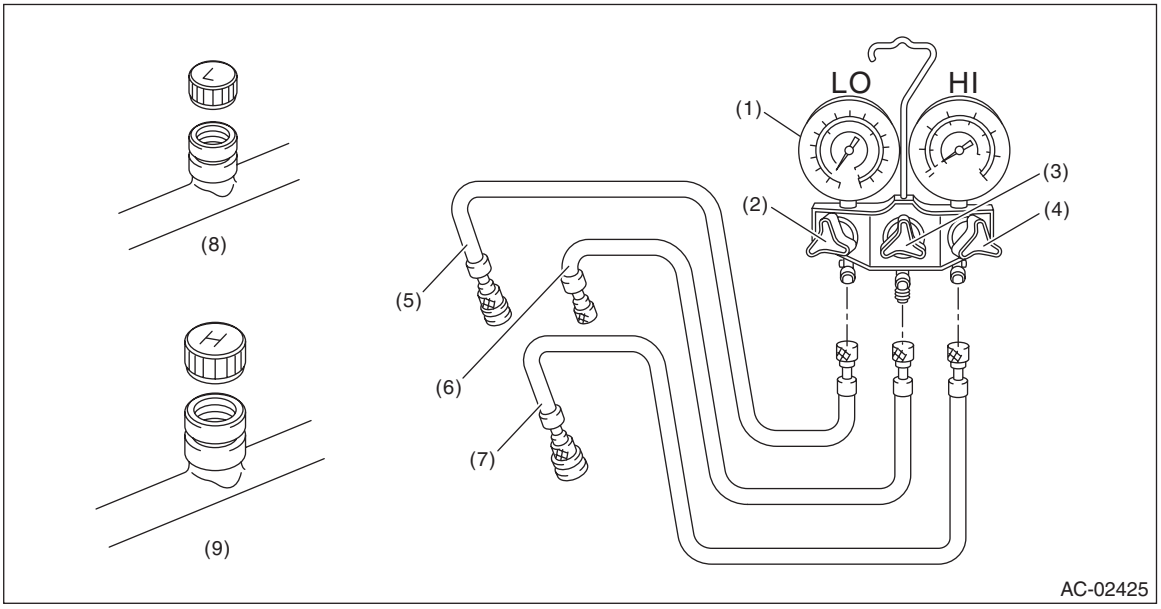
CAUTION:
Confirm that the connections are secure.
   (3) Connect the center hose to the refrigerant recovery system.
4) Follow the operation manual attached to the refrigerant recovery system to recover the refrigerant.

5. Refrigerant Charging Procedure

A: PROCEDURE

PREPARATION TOOL:
Manifold gauge set
Vacuum pump
Can tap
Weight scale

CAUTION:
• While working, be sure to wear protective goggles and protective gloves.
• Air in the cycle can cause insufficient air conditioning, and water in the cycle can cause clogging in the cycle (icing) and rust. To remove this air and water content, use a vacuum pump to perform evacuation before filling with refrigerant. By making the inside of the cycle a vacuum, the water content will evaporate even at normal temperatures, and can be removed.



(1)	Manifold gauge	(4)	High pressure valve	(7)	High-pressure hose (high-pressure)
(2)	Low pressure valve	(5)	Low-pressure hose (low-pressure)	(8)	Low-pressure side service port
(3)	Center valve	(6)	Center manifold hose (vacuum pump and charge)	(9)	High-pressure side service port

1) Attach the manifold gauge set.
(1) Confirm that all valves are fully closed.
(2) Install the low/high pressure hoses to the service ports on the low/high pressure sides of the vehicle respectively.

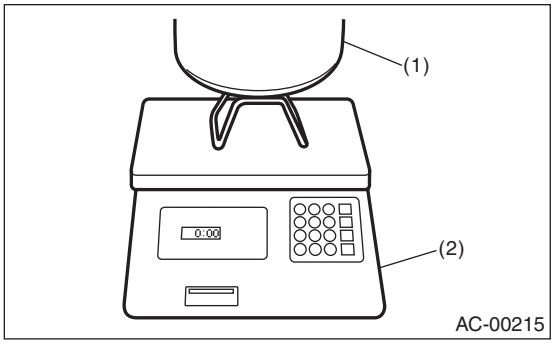
CAUTION:
Confirm that the connections are secure.
(3) Connect the center manifold hose of the manifold gauge to the vacuum pump.
2) Perform evacuation.

CAUTION:
Make sure to perform evacuation using a vacuum pump.
(1) Open the low-pressure, high-pressure and center valves.
(2) Operate the vacuum pump.
(3) Perform evacuation for 5 minutes or more, and when the low pressure gauge needle reaches –0.1 MPa (–1.0 kgf/cm^2, –14 psi), close the center manifold hose valve, and stop the vacuum pump.

(4) Leave alone for 5 to 10 minutes after closing the low pressure side and high pressure side valves, and check whether there is any change in the low pressure gauge needle indication.
If the needle position changes, this indicates a leak. Check the pipe and hose connections, and repair the location with the problem.
After repair, retry charging the refrigerant from the step 1).
(5) If there is no leakage, continue evacuation for additional 20 to 30 minutes, close all valves and stop the vacuum pump.

3) Charge refrigerant.
(1) Follow the can tap operation manual, install to the refrigerant can.
(2) Disconnect the center manifold hose from the vacuum pump, and connect the hose to the tap valve.

NOTE:
When 13.6 kg (30 lb) refrigerant container (1) is used, measure the amount of refrigerant with a refrigerant charging scale (2), and connect with the center manifold hose.



(3) Open the tap valve of the HFC-134a supply container (refrigerant container or refrigerant can).
(4) Loosen the center manifold hose connection on the manifold gauge for a few seconds (if there is a purge valve on the manifold gauge, push this instead) to allow the air in the center manifold hose to be bled by the refrigerant pressure.
(5) Open the low pressure side and high pressure side valves of the manifold gauge to fill with refrigerant.

NOTE:
If the HFC-134a supply container is empty, close all manifold gauge valves and the tap valve of HFC-134a supply container, and replace the empty supply container with a new one. After replacing with a new HFC-134a supply container, perform air purge, and resume the filling operation.
(6) When the low-pressure gauge needle is approximately 0.2 MPa (2.0 kgf/cm^2, 29 psi) or if the refrigerant filling efficiency drops, close the low-pressure side valve and high-pressure side valve.
(7) Confirm that the low-pressure and high-pressure side valves are closed, and turn the A/C switch to OFF and start the engine.

CAUTION:
When filling with the engine running, do not open the high pressure side valve. Always fill from the low pressure side.
(8) To prevent damage to the compressor, push the A/C switch ON-OFF quickly a few times.
(9) Set the vehicle to the following conditions.

Item	Condition
Engine speed	1,500 rpm
A/C switch	ON
Temperature control dial	LO (MAX COOL)
Fan dial	HI (MAX)
FRESH/RECIRC switch	RECIRC
Air flow control dial or switch	VENT
WINDOW	OPEN

(10) Open the low-pressure side valve, check the refrigerant pressure on the manifold gauge and charge the refrigerant to the specified amount. <Ref. to AC-23, INSPECTION WITH PRESSURE SYMPTOMS, INSPECTION, Refrigerant Pressure with Manifold Gauge Set.>

4) Using an electronic leak tester, check for refrigerant leaks in the system. <Ref. to AC-30, INSPECTION, Refrigerant Leak Check.>
5) After charging with refrigerant, close all valves and remove the manifold gauge set.
6) Attach the cap to the low-pressure service port and high-pressure service port.

6. Refrigerant Leak Check

A: INSPECTION

PREPARATION TOOL:
Manifold gauge set
Electronic leak detector

1) Attach the manifold gauge set.
   (1) Confirm that all valves are fully closed.
   (2) Install the low/high pressure hoses to the service ports on the low/high pressure sides of the vehicle respectively.

CAUTION:
Confirm that the connections are secure.

   (3) Start the engine to operate the A/C system for approx. 10 minutes, and check that the high-pressure side shows at least 0.69 MPa (7.0 kgf/cm^2, 100 psi).

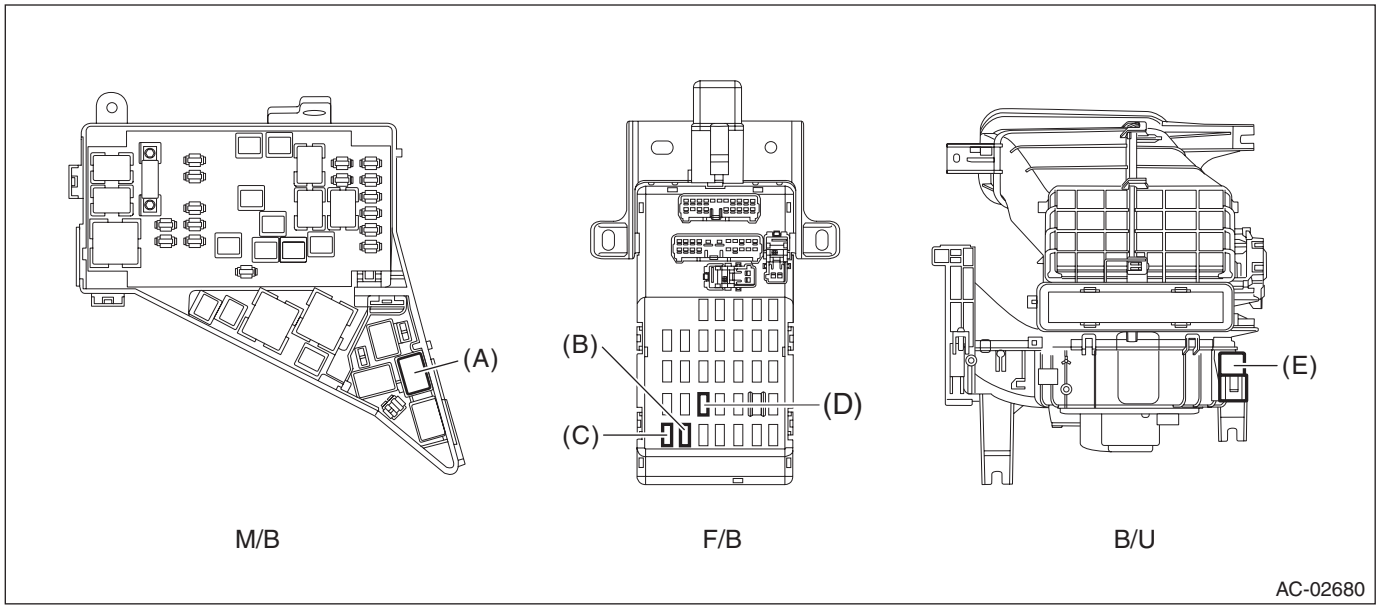
2) Stop the engine to start the leak test.

Inspection parts	Condition	Corrective action
Pipe	Check the connection between pipe and expansion valve.	Check the O-ring and tightening torque on the connection. If necessary, replace each part.
	Check the connection between pressure switch or pressure sensor and high-pressure pipe.	Replace the pressure switch or pressure sensor.
	Check the connection between pipe and condenser.	Check the O-ring and tightening torque on the connection. If necessary, replace each part.
Condenser	Check the welded spot of condenser and the core.	Replace the condenser.
Hose (high-pressure)	Check the connection between hose (high-pressure) and compressor.	Check the O-ring and tightening torque on the connection. If necessary, replace each part.
	Check the connection between hose (high-pressure) and condenser.	Check the O-ring and tightening torque on the connection. If necessary, replace each part.
	Check the rubber part of the flexible hose and the seam between hose and pipe. **CAUTION:** **Carefully check the external surface of flexible hose and pipe at approx. 25 mm (0.98 in) per second.**	Replace the hose (high-pressure).
	Check the valve and cap in the service port.	Check the rubber seal of the valve and cap. If necessary, replace valve or cap.
Compressor	Check the compressor pulley and the vicinity of shaft seal. **CAUTION:** **Some shaft seals will show a slight amount of leakage, about 3 g (0.1 oz) per year. This is not a problem.**	Replace the compressor.

Inspection parts	Condition	Corrective action
Hose (low-pressure)	Check the connection between hose (low-pressure) and expansion valve.	Check the O-ring and tightening torque on the connection. If necessary, replace each part.
	Check the connection between hose (low-pressure) and compressor.	Check the O-ring and tightening torque on the connection. If necessary, replace each part.
	Check the rubber part of the flexible hose and the seam between hose and pipe. **CAUTION:** **Carefully check the external surface of flexible hose and pipe at approx. 25 mm (0.98 in) per second.**	Replace the hose (low-pressure).
	Check the valve and cap in the service port.	Check the rubber seal of the valve and cap. If necessary, replace valve or cap.
Evaporator	Remove the drain hose from the heater case, and check the end portion for 10 seconds or more.	Replace the evaporator.
	Check the air vent grille. NOTE: Turn the ignition switch to ON, and run the blower at high speed for approx. 1 minute. Stop the blower to check the air vent grille on the instrument panel. While moving the tester closer to the grille, run the blower for 1 or 2 seconds, then stop it. Check the grille at that position for at least 10 seconds.	Replace the evaporator.

7. Relay and Fuse

A: LOCATION



Main fuse box	A/C relay	(A)
Relay & fuse box	Fuse 15 A (blower motor relay)	(B)
	Fuse 15 A (blower motor relay)	(C)
	Fuse 10 A (A/C control panel)	(D)
Blower motor unit	Blower motor relay	(E)

NOTE:
For other related fuses, refer to the wiring diagram. <Ref. to WI-15, Power Supply Circuit.>

B: INSPECTION

1. CHECK FUSE

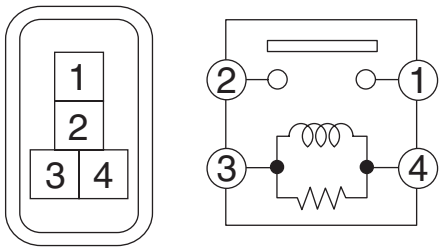
1) Remove the fuse and inspect visually.
2) If the fuse is blown out, replace the fuse.

NOTE:
If the fuse is blown again, check the system wiring harness.

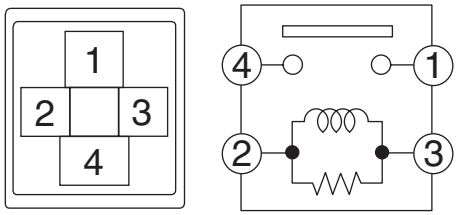
2. CHECK RELAY

1) Check the resistance between relay terminals.

- A/C relay

Terminal No.	Inspection conditions	Standard	Circuit
1 — 2	Always	1 MΩ or more	 LI-01273
1 — 2	Apply battery voltage between terminals 4 and 3.	Less than 1 Ω	

- Blower motor relay

Terminal No.	Inspection conditions	Standard	Circuit
1 — 4	Always	1 MΩ or more	 AC-02796
1 — 4	Apply battery voltage between terminals 2 and 3.	Less than 1 Ω	

2) Replace the relay if the inspection result is not within the standard.

8. Compressor Oil

A: PROCEDURE

NOTE:
Before making repairs, perform the oil return operation to return the compressor oil in circulation with the refrigerant to the compressor assembly.
1) Increase the engine to 1,500 rpm.
2) Turn the A/C switch to ON.
3) Turn the temperature control dial to LO (MAX COOL).
4) Turn the FRESH/RECIRC switch to RECIRC position.
5) Turn the fan dial to HI (MAX).
6) Leave in this condition for 10 minutes.

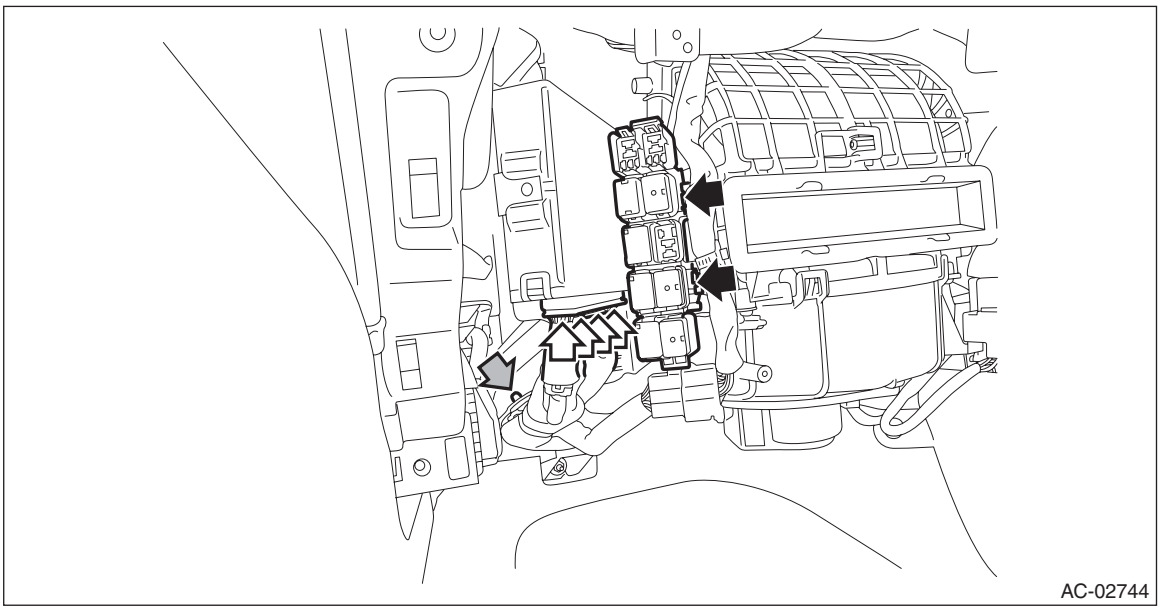
B: REPLACEMENT

NOTE:
• If a component has been replaced, add an appropriate amount of compressor oil (same as the amount of remaining oil in removed component).
• When replacing the compressor assembly, the new compressor assembly will already have the specified amount of oil in it. Adjust the oil amount (so that the amount remains the same as that of the removed compressor assembly) and install the new compressor assembly.
• Since the hygroscopicity of compressor oil is high, perform this series of works quickly.

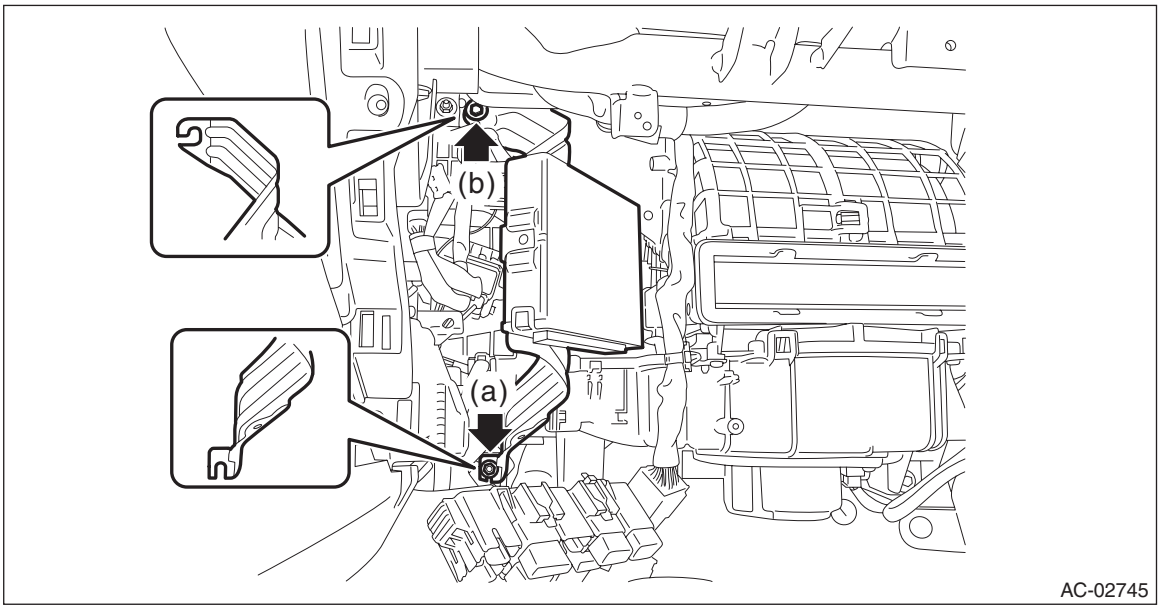
9. Blower Motor Unit Assembly

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the glove box. <Ref. to EI-63, REMOVAL, Glove Box.>
3) Remove the engine control module (ECM).
   (1) Release the lock and remove the relay holder.
   (2) Remove the harness clip, and disconnect the connector.


AC-02744

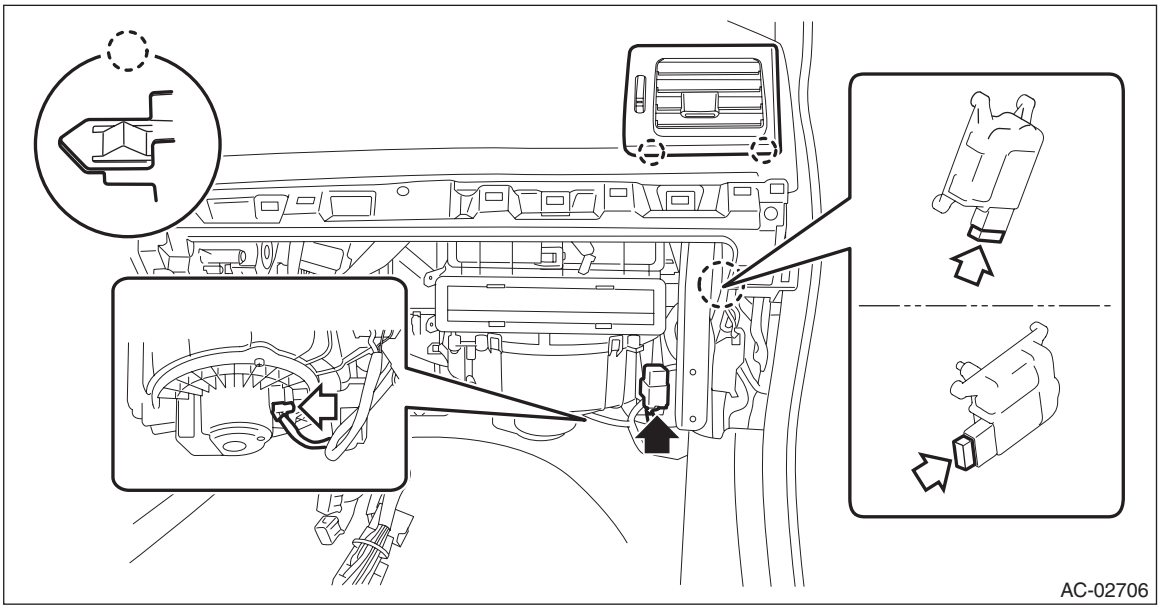
   (3) Remove the nut (a).
   (4) Loosen the bolt (b), and remove the engine control module (ECM).



AC-02745

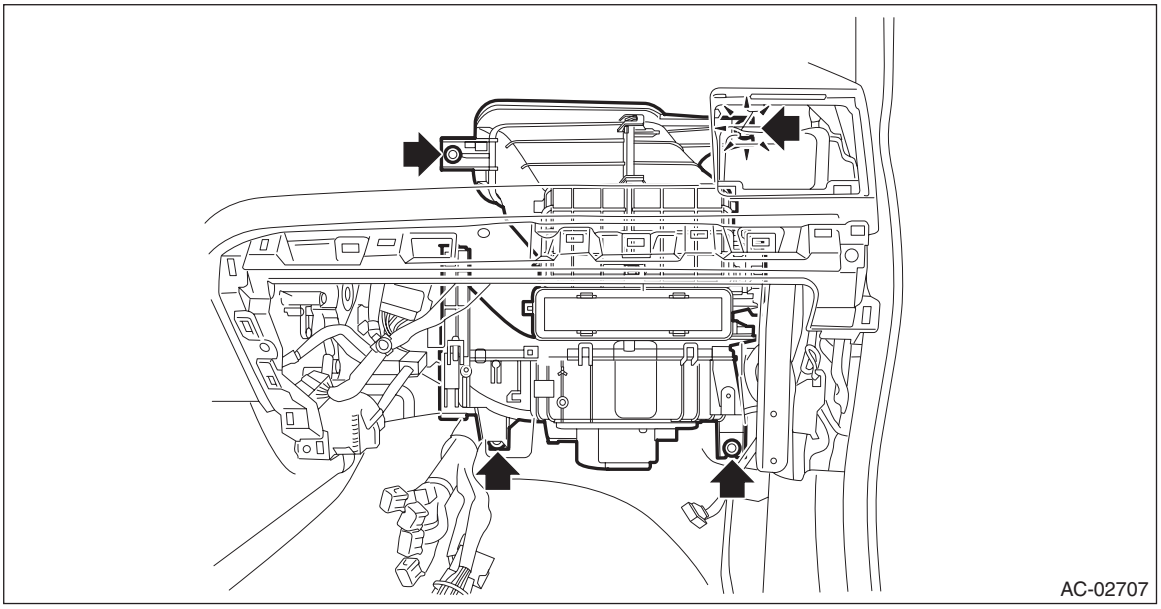
4) Remove the blower motor unit assembly.
   (1) Release the claws, and then remove the grille assembly - ventilation RH.

(2) Disconnect the blower motor relay and each connector.



(3) Remove the bolts and nuts to remove blower motor unit assembly.

NOTE:
Remove the RH upper nut from the mounting portion of the grille assembly - ventilation RH.



B: INSTALLATION

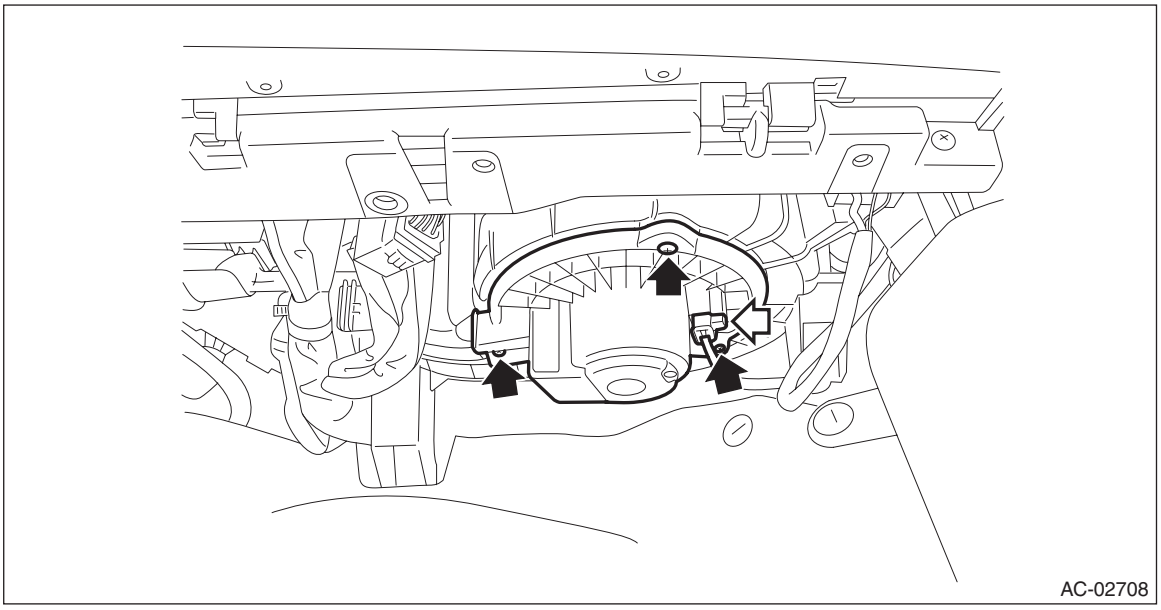
CAUTION:
After installing the grille assembly - ventilation RH, check that the air vent grille of the grille assembly - ventilation RH is inserted correctly into the air vent duct.
Install each part in the reverse order of removal.

Tightening torque:
Blower motor unit: <Ref. to AC-10, BLOWER MOTOR UNIT, COMPONENT, General Description.>
Engine control module (ECM): 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

10.Blower Motor

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the blower - motor.
   (1) Disconnect the connector.
   (2) Remove the screws and detach the blower - motor.



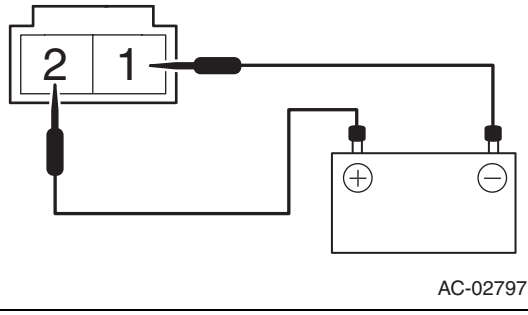
B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

UNIT INSPECTION

1) Check the motor operation when battery voltage is applied between the terminals of motor.

Terminal No.	Inspection conditions	Specification	Connection diagram
2 (+) — 1 (–)	Connect battery to the terminals	Speed	

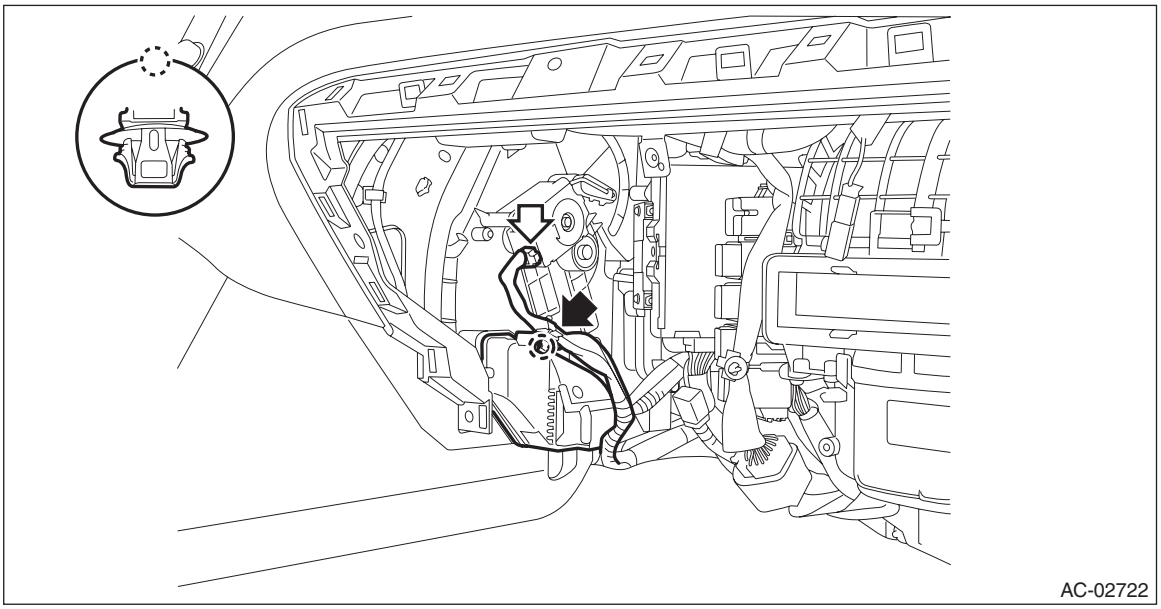
2) If it does not operate normally, replace the blower - motor.

11.Power Transistor (Auto A/C Model)

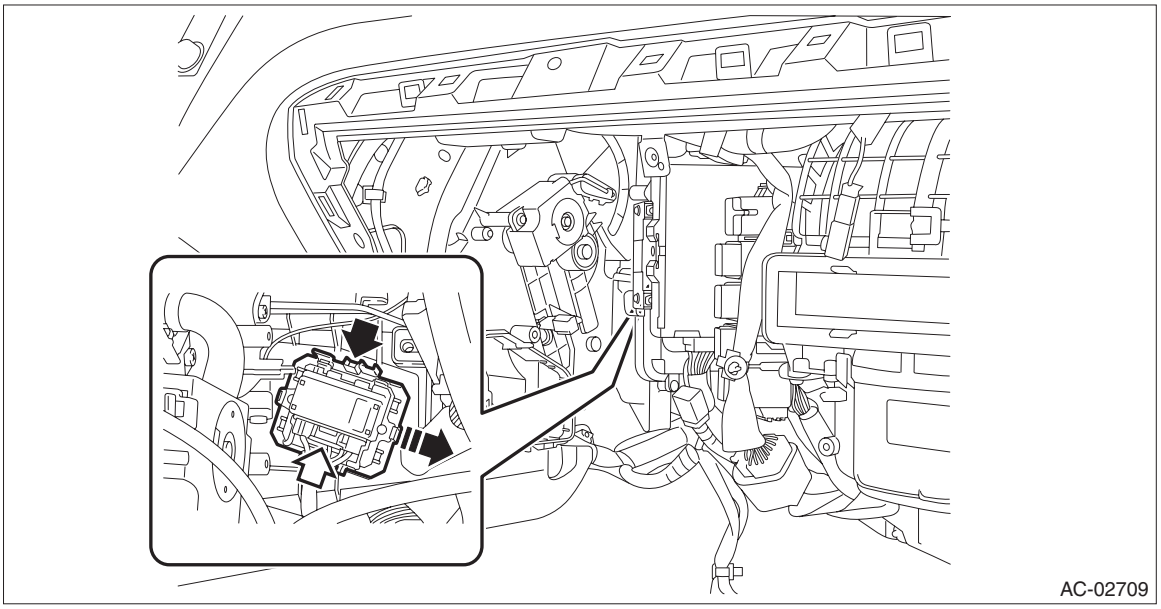
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the glove box. <Ref. to EI-63, REMOVAL, Glove Box.>
3) Remove the screws and remove the duct - foot RH.

NOTE:
Remove the connector and clip of the motor - actuator mix RH, and move the harness aside.



4) Remove the power transistor.
   (1) Disconnect the connector.
   (2) Remove the power transistor while pressing the power transistor body claw part and sliding it.



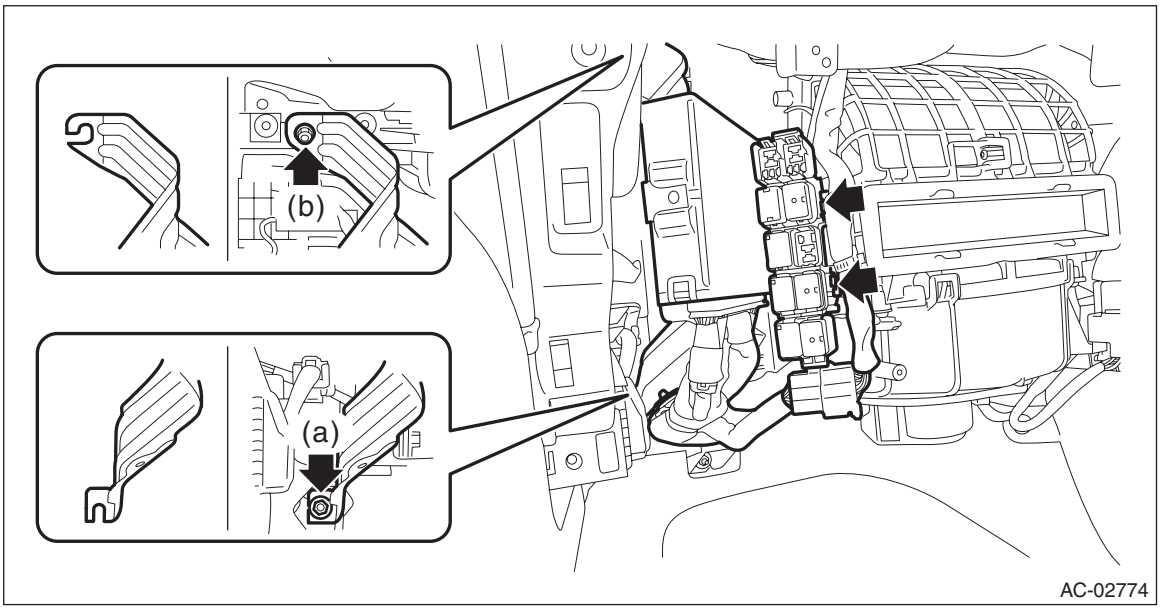
B: INSTALLATION

Install each part in the reverse order of removal.

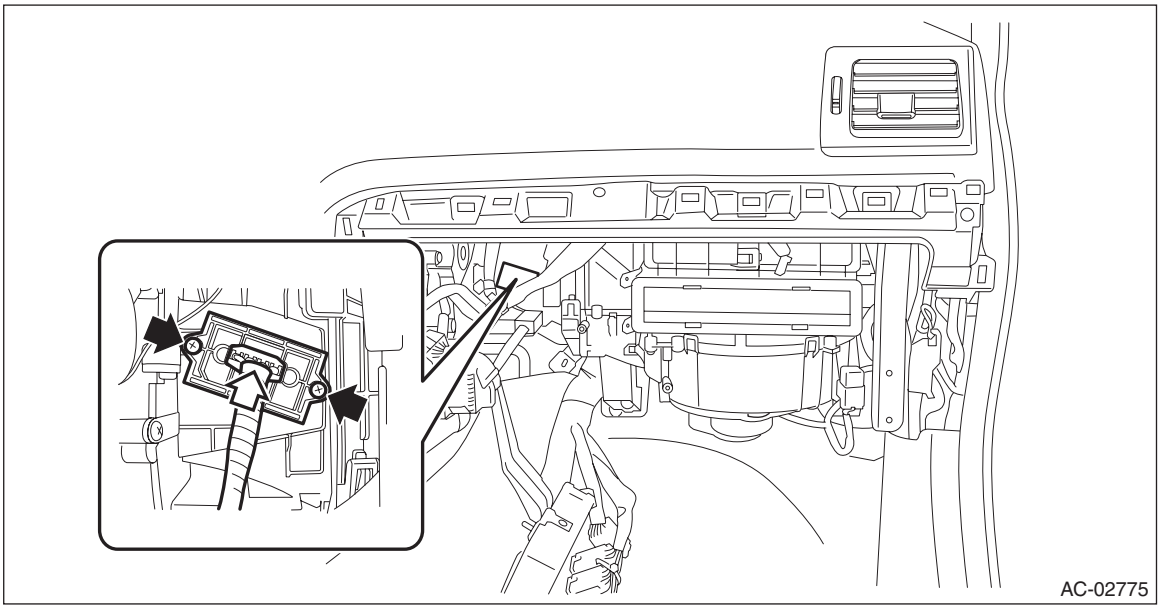
12.Blower Resistor (Manual A/C Model)

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the glove box. <Ref. to EI-63, REMOVAL, Glove Box.>
3) Remove the engine control module (ECM).
   (1) Release the lock and remove the relay holder.
   (2) Remove the nut (a).
   (3) Loosen the bolt (b), and remove the engine control module (ECM).



4) Remove the resistor.
   (1) Disconnect the connector.
   (2) Remove the screw and remove the resistor.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Engine control module (ECM): 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

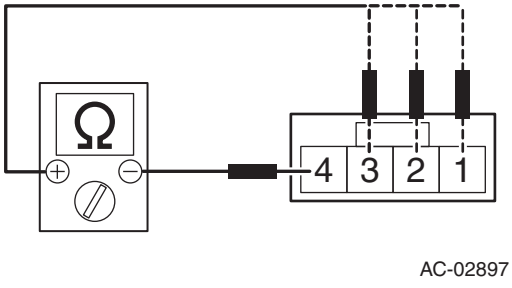
C: INSPECTION

UNIT INSPECTION

PREPARATION TOOL:

Circuit tester

1) Check the resistance between resistor terminals.

Terminal No.	Standard	Connection diagram
4 — 3	Approx. 0.43 Ω	 AC-02897
4 — 2	Approx. 1.03 Ω	
4 — 1	Approx. 3 Ω	

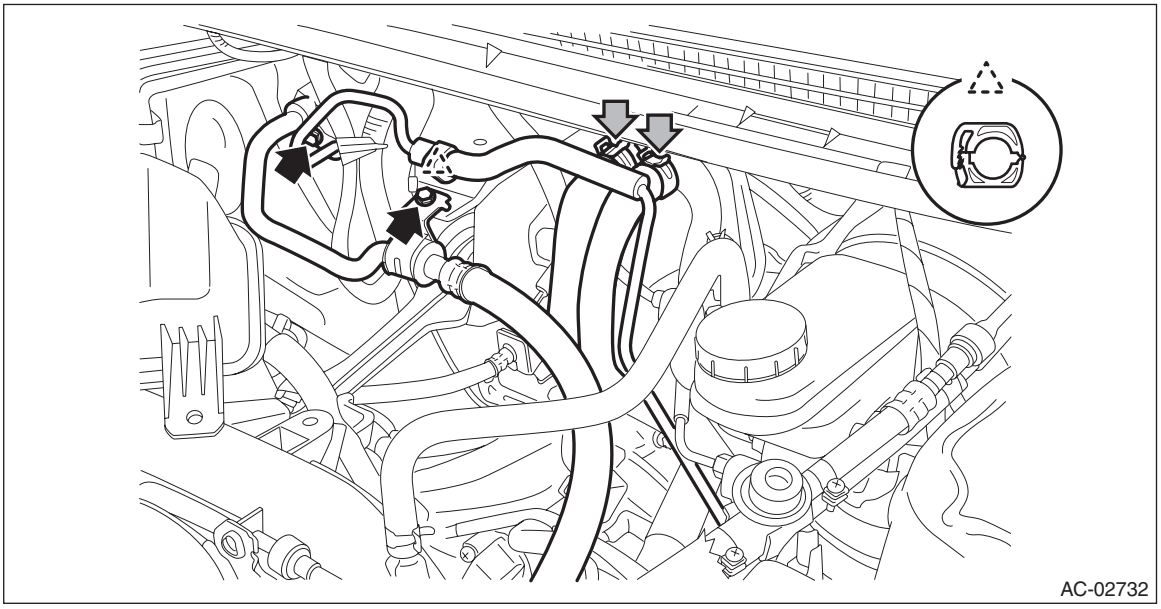
2) Replace the resistor if the inspection result is not within the standard.

13.Heater Core

A: REMOVAL

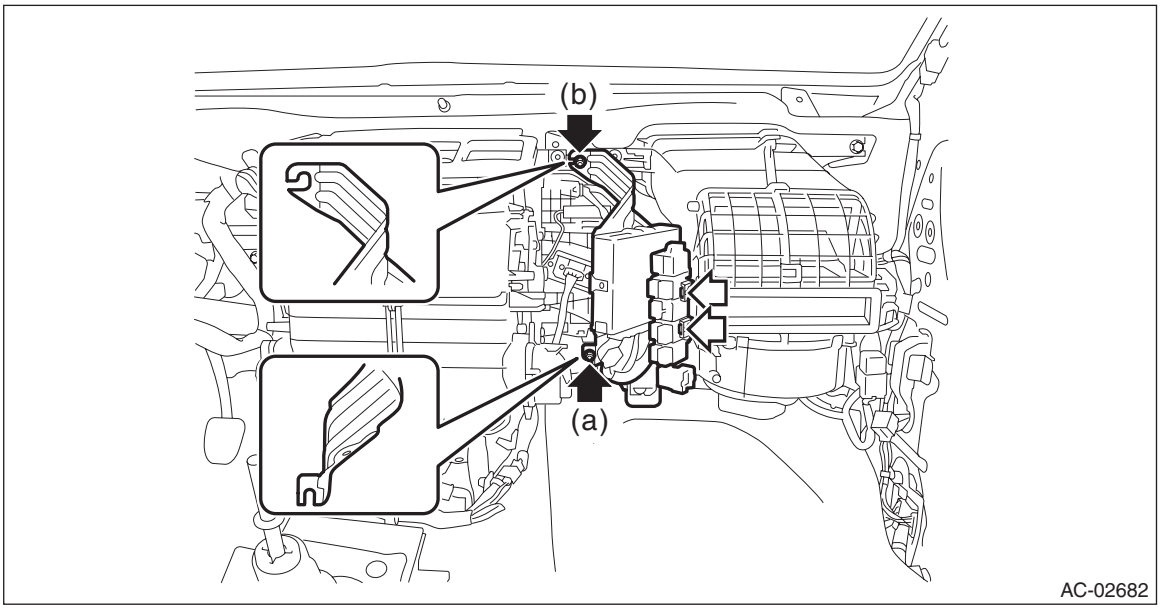
1) Disconnect the ground cable from battery.
2) Using the refrigerant recovery system, discharge refrigerant. <Ref. to AC-26, PROCEDURE, Refrigerant Recovery Procedure.>
3) Drain the coolant from the radiator. <Ref. to CO(H4DO)-13, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
4) Remove the intake boot. <Ref. to IN(H4DO)-12, REMOVAL, Air Intake Boot.>

CAUTION:
Move aside the intake boot to perform the operation without disconnecting the PCV hose.
5) Remove the bolt, and remove the hose - pressure suction and the pipe - evaporator cooling from the expansion valve - cooling.
6) Loosen the heater hose clamps and remove the hoses.

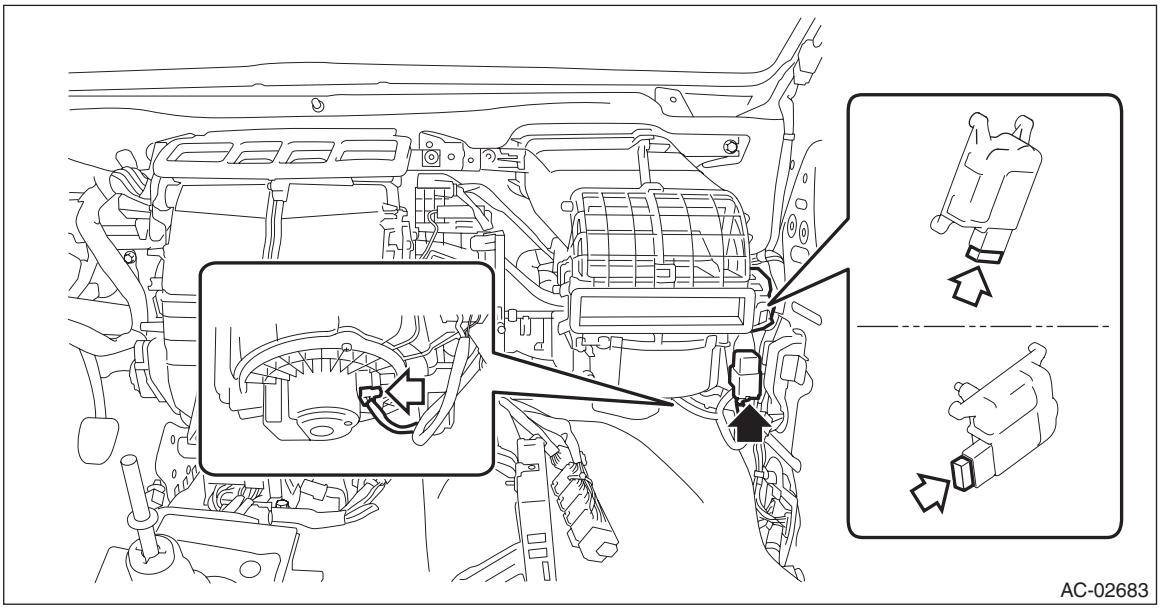


7) Remove the instrument panel assembly. <Ref. to EI-70, REMOVAL, Instrument Panel Assembly.>

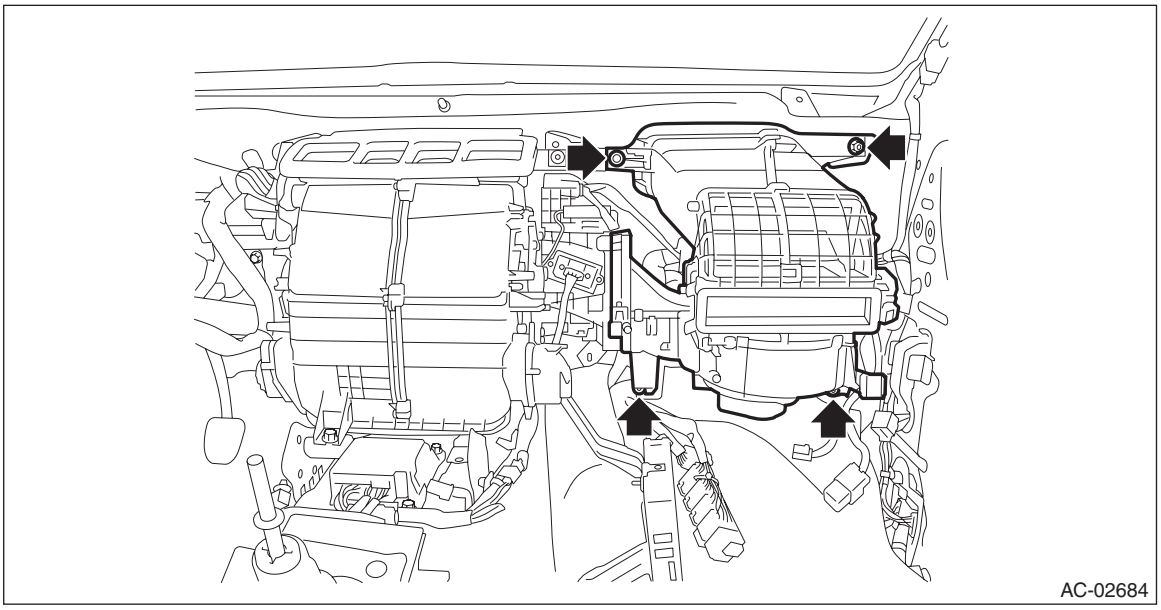
8) Remove the engine control module (ECM).
   (1) Release the lock and remove the relay holder.
   (2) Remove the nut (a).
   (3) Loosen the bolt (b), and remove the engine control module (ECM).



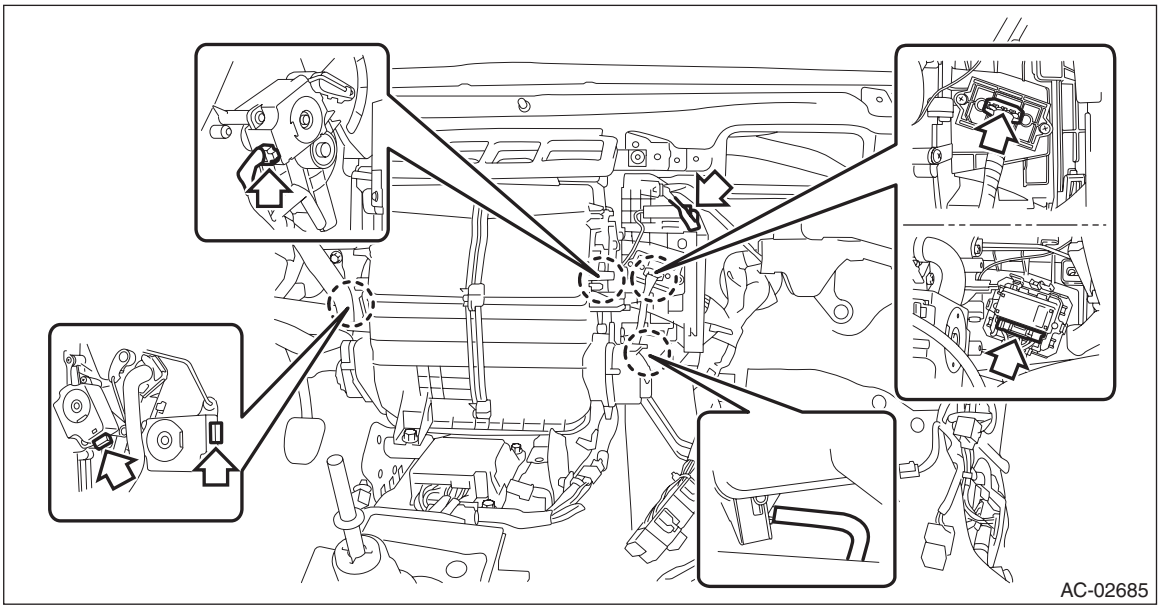
9) Remove the blower motor unit assembly.
   (1) Disconnect the blower motor relay and each connector.



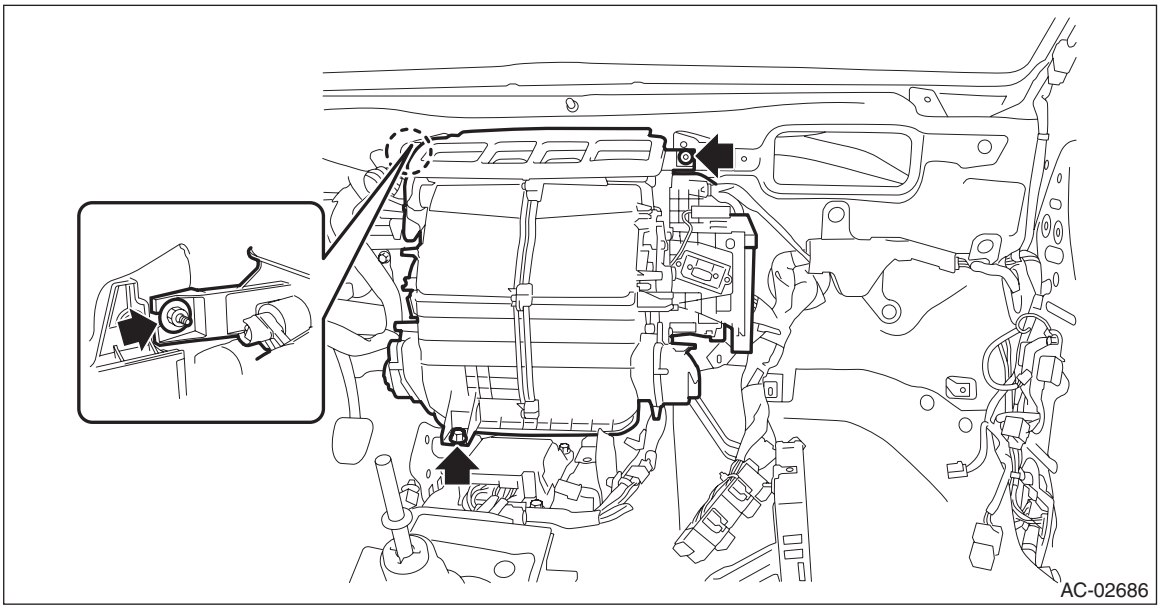
(2) Remove the bolts and nuts to remove blower motor unit assembly.



10) Remove the heater and cooling unit assembly.
(1) Disconnect each connector and the hose - drain.

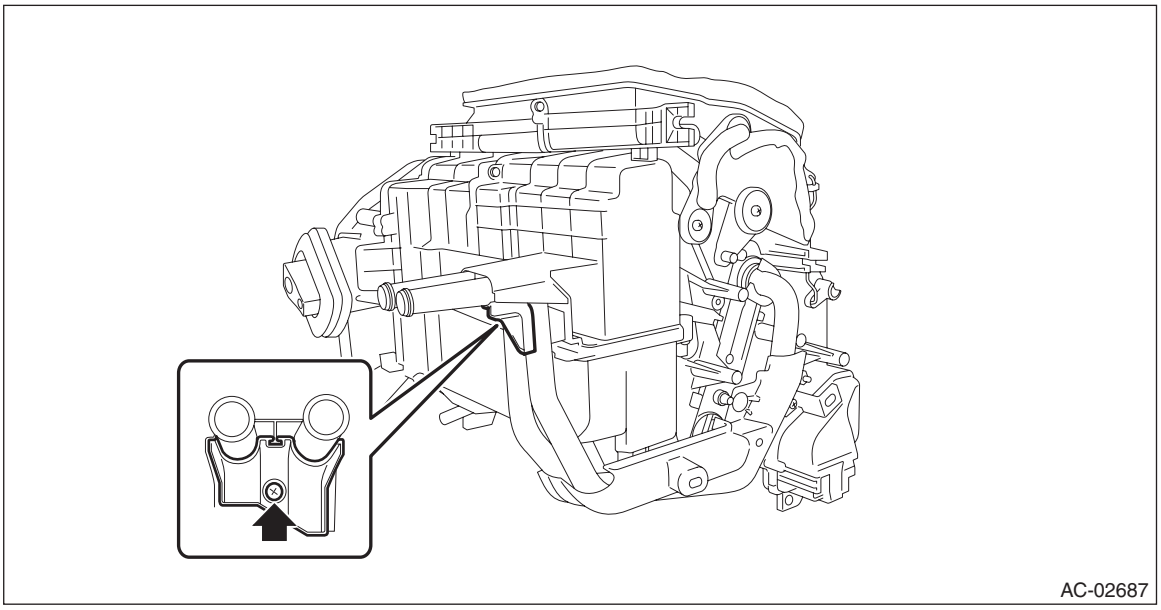


(2) Remove the bolt and nuts, and remove the heater & cooling unit assembly.

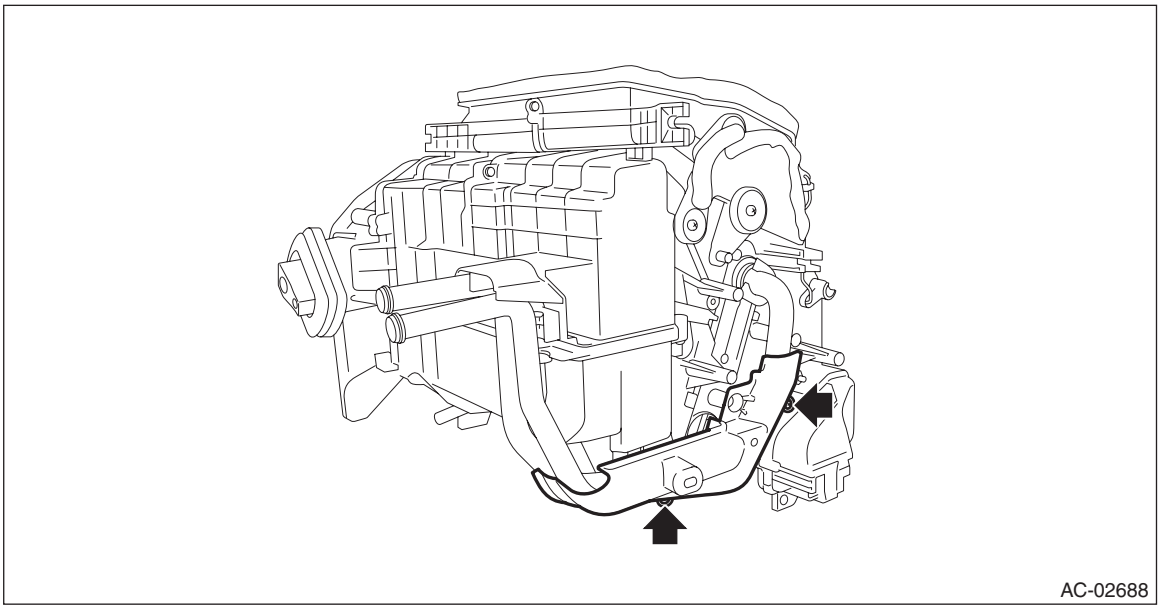


11) Remove the heater core.

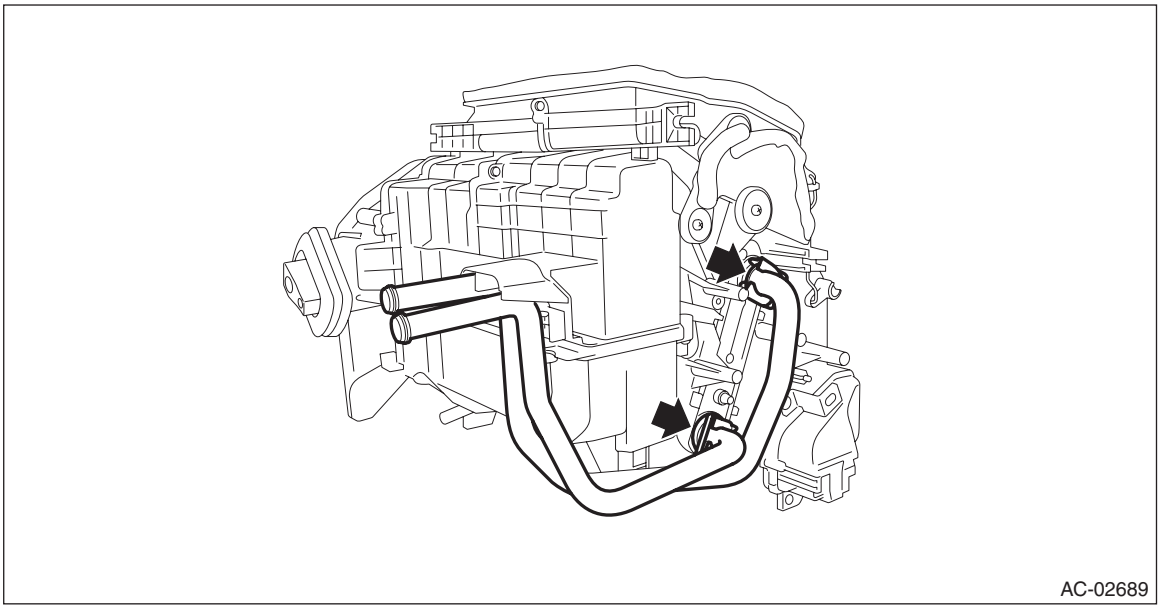
(1) Remove the screw and detach the clamp - pipe.



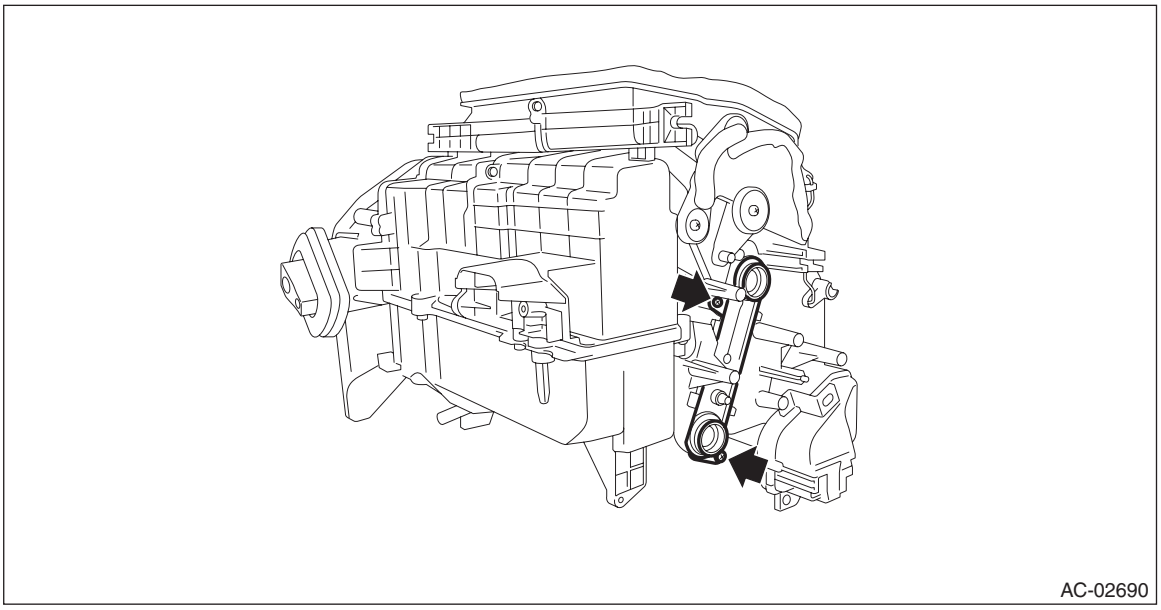
(2) Remove the screws and detach the cover - heater pipe.



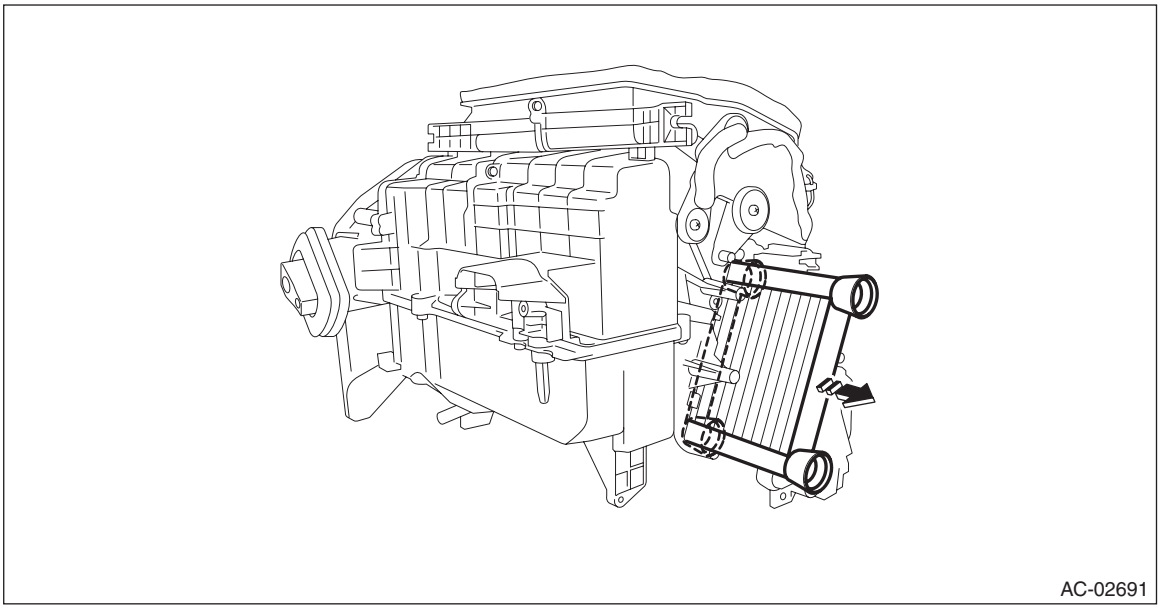
(3) Remove the clamp, and remove the pipe - inlet and outlet.



(4) Remove the screws and detach the plate - heater core.


AC-02690

(5) Pull out the heater core from the case - heater unit.


AC-02691

B: INSTALLATION

CAUTION:
Replace O-rings and clamps with new parts and install securely.
1) Install each part in the reverse order of removal.

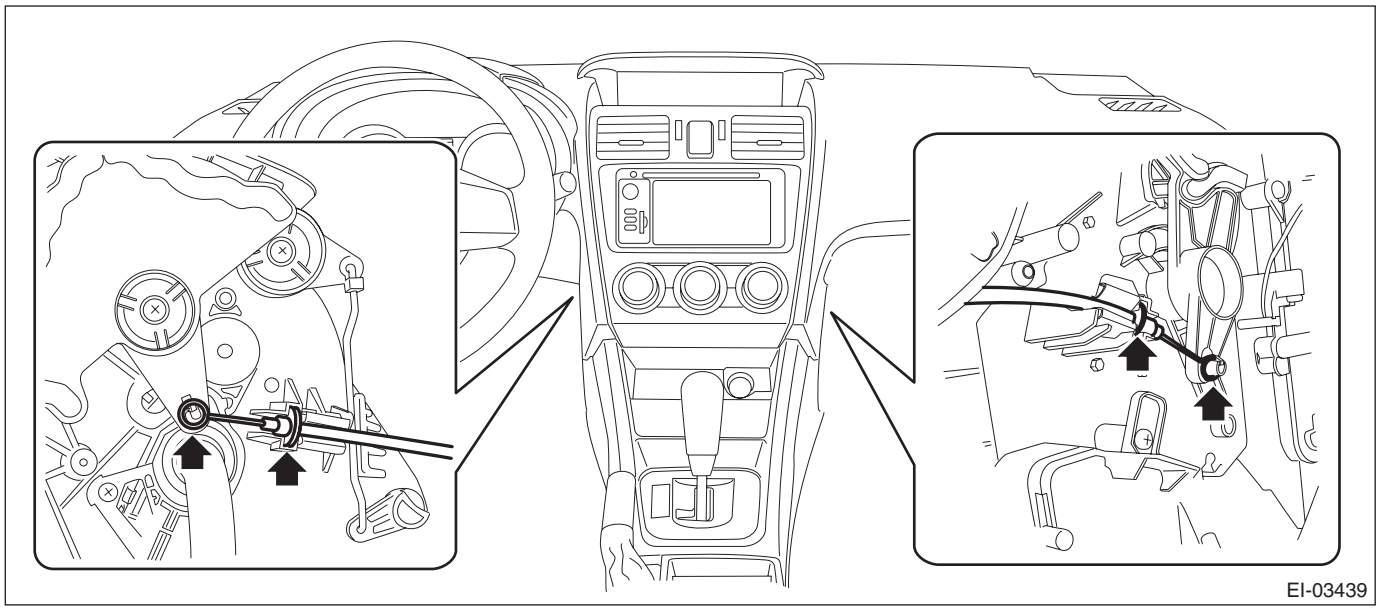
NOTE:
Refer to “INSTALLATION” of “Instrument Panel Assembly”. <Ref. to EI-87, INSTALLATION, Instrument Panel Assembly.>

Tightening torque:
Heater cooling unit: <Ref. to AC-6, HEATER AND COOLING UNIT, COMPONENT, General Description.>
Blower motor unit: <Ref. to AC-10, BLOWER MOTOR UNIT, COMPONENT, General Description.>
Engine control module (ECM): 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)
2) Fill engine coolant. <Ref. to CO(H4DO)-13, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
3) Charge refrigerant. <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>

14.Control Panel

A: REMOVAL

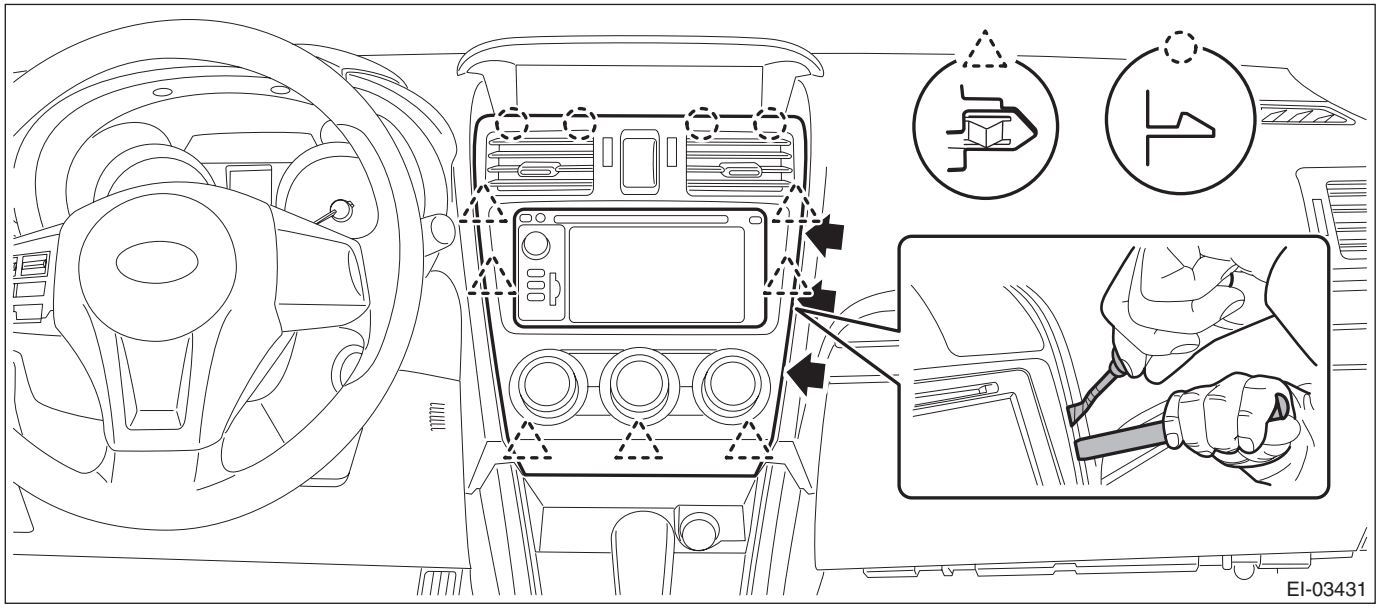
1) Disconnect the ground cable from battery.
2) On manual A/C models, disconnect the control cables from both sides of the heater and cooling unit assembly.



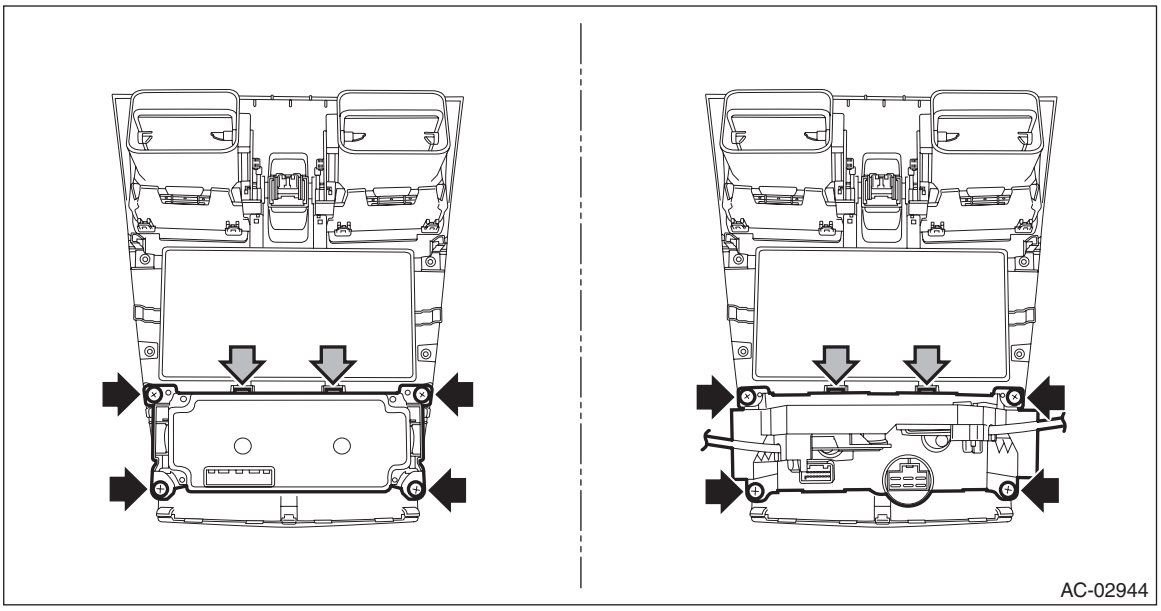
3) Remove the panel center assembly.

CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(1) Insert a plastic remover to the three areas shown by the arrows, and lift up the panel center assembly slightly.
(2) With the panel center assembly lifted up slightly, release the claw by using a clip remover wrapped with protective tape.
(3) Release the rest of the claws, and remove the panel center assembly.



4) Remove the heater control assembly.
   (1) Remove the screws.
   (2) Release the claws, and then remove the heater control assembly from the panel center assembly.



B: INSTALLATION

CAUTION:
After installing the panel center assembly, check that the air vent grille of the panel center assembly is inserted correctly into the air vent duct.
Install each part in the reverse order of removal.

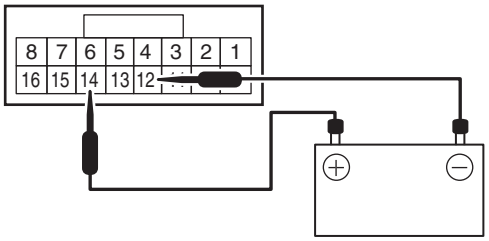
C: INSPECTION

1. CHECK ILLUMINATION

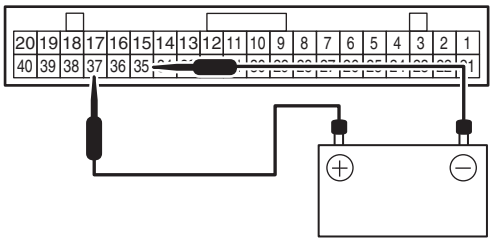
UNIT INSPECTION

1) Check the illumination operation when battery voltage is applied between the terminals of control panel.

- Manual A/C model

Terminal No.	Inspection conditions	Specification	Connection diagram
14 (+) — 12 (–)	Connect battery to the terminals	Light ON	 AC-02733

- Auto A/C model

Terminal No.	Inspection conditions	Specification	Connection diagram
37 (+) — 35 (–)	Connect battery to the terminals	Light ON	 AC-02734

2) If it does not operate normally, replace the heater control assembly.

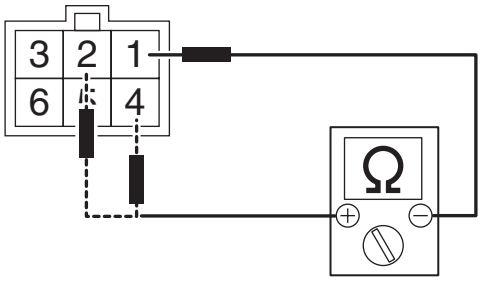
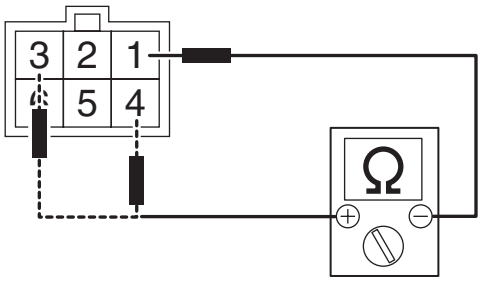
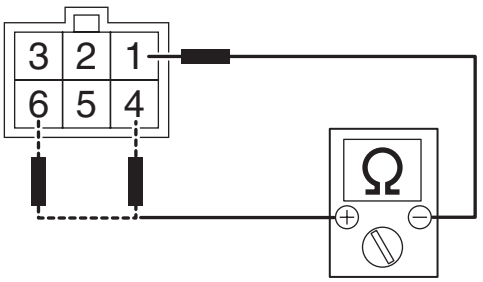
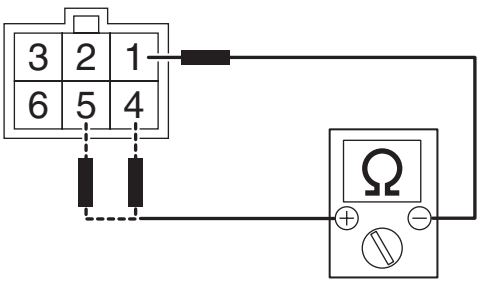
2. BLOWER SWITCH (MANUAL A/C MODEL)

UNIT INSPECTION

PREPARATION TOOL:

Circuit tester

1) Measure the resistance between the control panel terminals.

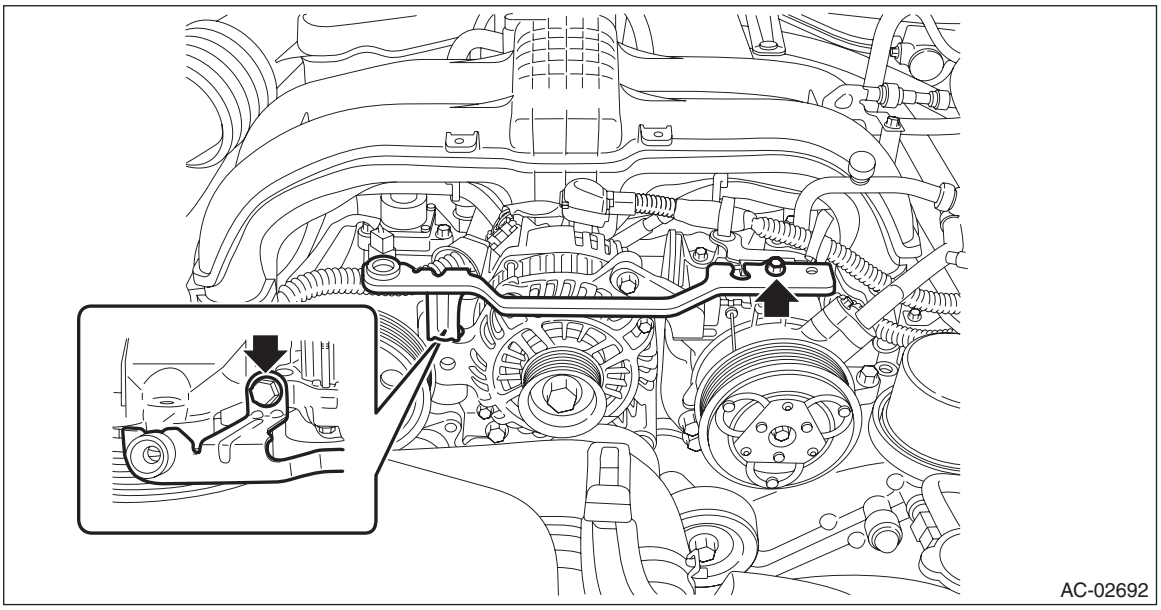
Terminal No.	Inspection conditions	Standard	Connection diagram
—	OFF	—	—
1 — 2, 4	1 (LO)	Less than 1 Ω	 AC-02798
1 — 3, 4	2 (M1)	Less than 1 Ω	 AC-02799
1 — 4, 6	3 (M2)	Less than 1 Ω	 AC-02800
1 — 4, 5	4 (HI)	Less than 1 Ω	 AC-02801

2) Replace the heater control assembly if the inspection result is not within the standard.

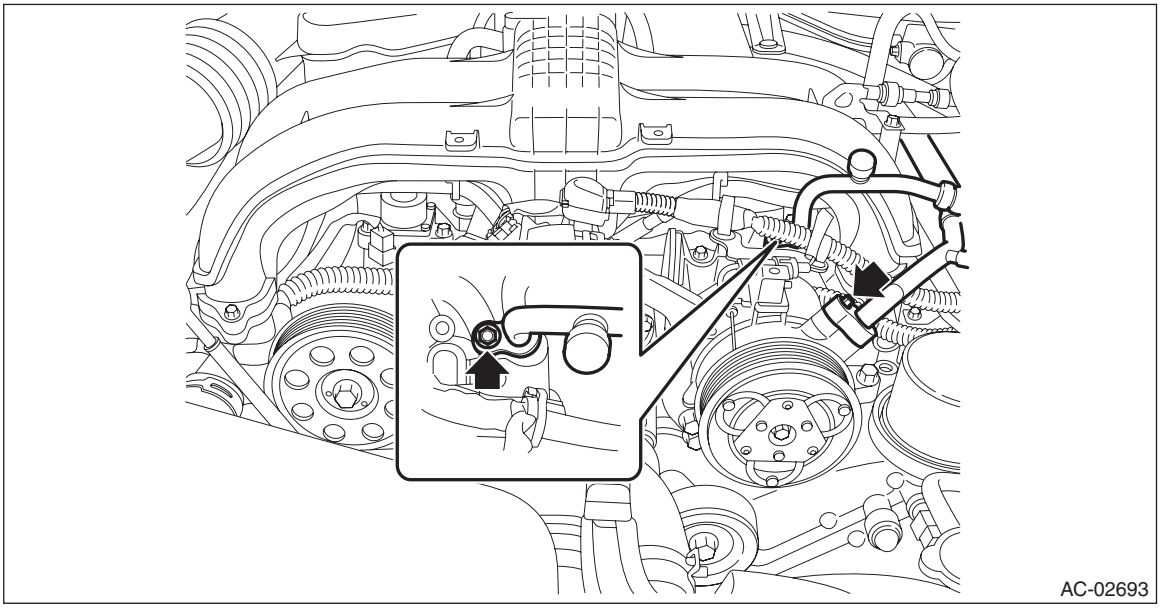
15.Compressor

A: REMOVAL

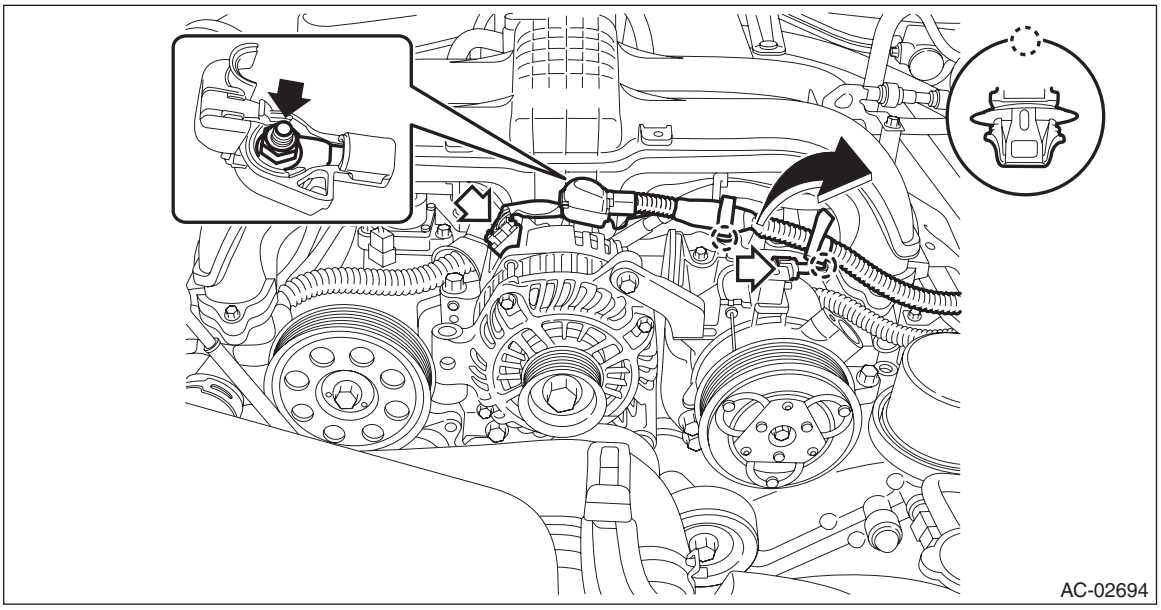
1) Perform compressor oil return operation. <Ref. to AC-34, PROCEDURE, Compressor Oil.>
2) Turn the A/C switch to OFF and stop the engine.
3) Using the refrigerant recovery system, discharge refrigerant. <Ref. to AC-26, PROCEDURE, Refrigerant Recovery Procedure.>
4) Disconnect the ground cable from battery.
5) Remove the V-belts. <Ref. to ME(H4DO)-77, REMOVAL, V-belt.>
6) Remove the bolts and remove the V-belt cover bracket.



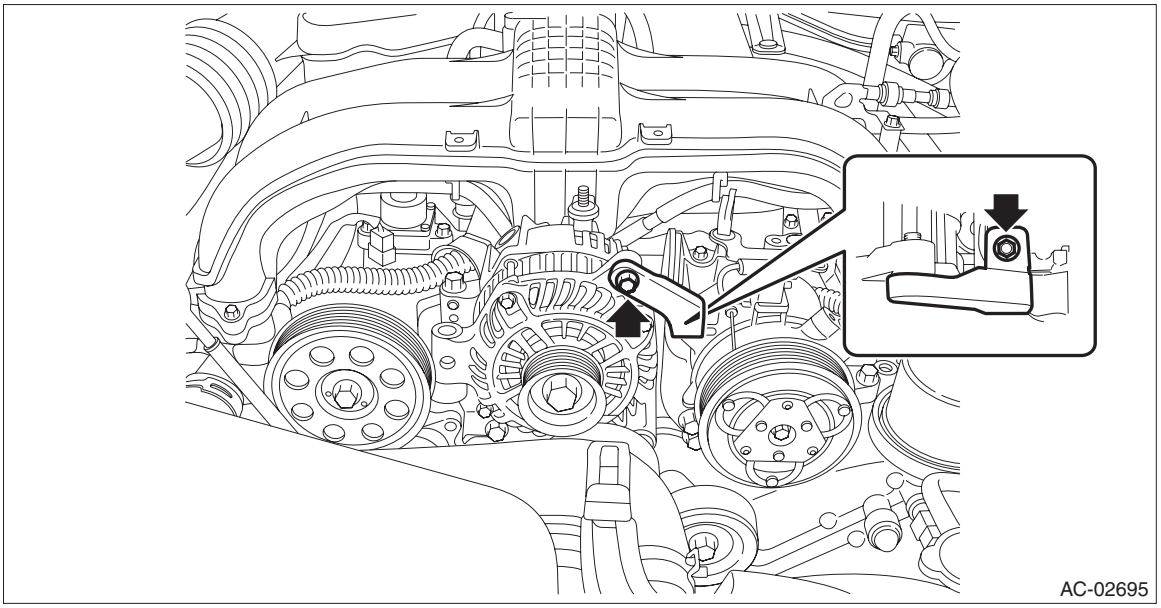
7) Remove the bolt, and detach the hose - pressure suction and the hose - pressure discharge.



8) Disconnect the nut and each connector, and move the generator harness to the right.

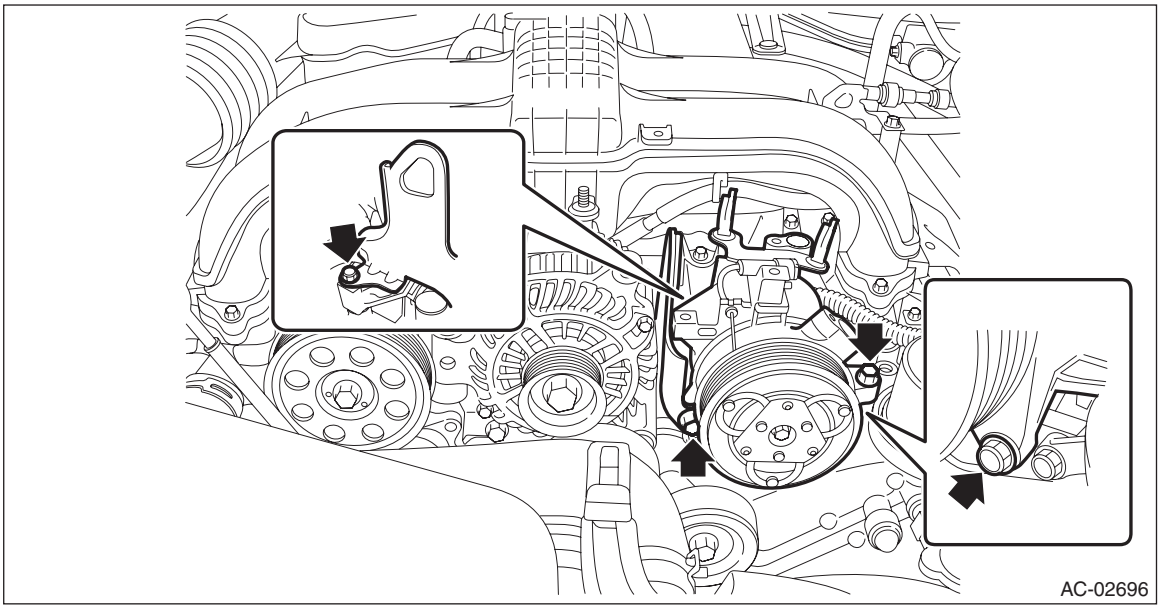


9) Remove the compressor assembly.
   (1) Remove the bolts, and then remove the generator bracket.



(2) Remove the bolts and remove the compressor assembly.

NOTE:
Tighten the engine hanger together with the compressor assembly.



B: INSTALLATION

CAUTION:
• Replace the O-rings on the hose - pressure suction and discharge with new parts, and then apply compressor oil.
• After replacing the compressor assembly, adjust the amount of the compressor oil. <Ref. to AC-34, PROCEDURE, Compressor Oil.>

1) Install each part in the reverse order of removal.

Tightening torque:
Air conditioning unit: <Ref. to AC-12, AIR CONDITIONING UNIT, COMPONENT, General Description.>
Compressor: <Ref. to AC-13, COMPRESSOR, COMPONENT, General Description.>
V-belt cover bracket and generator bracket: <Ref. to SC(H4DO)-5, GENERATOR BRACKET, COMPONENT, General Description.>

2) Charge refrigerant. <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>

C: INSPECTION

1. MAGNET CLUTCH CLEARANCE INSPECTION

1) Check the clearance of entire circumference around the drive plate and pulley.

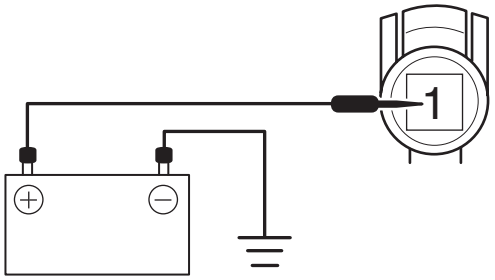
Specification:
0.3 — 0.6 mm (0.0118 — 0.0236 in)

2) Replace the compressor assembly if the inspection result is not within the standard.

2. MAGNET CLUTCH OPERATION INSPECTION

UNIT INSPECTION

1) Check the magnet clutch operation when battery voltage is applied to the compressor terminal.

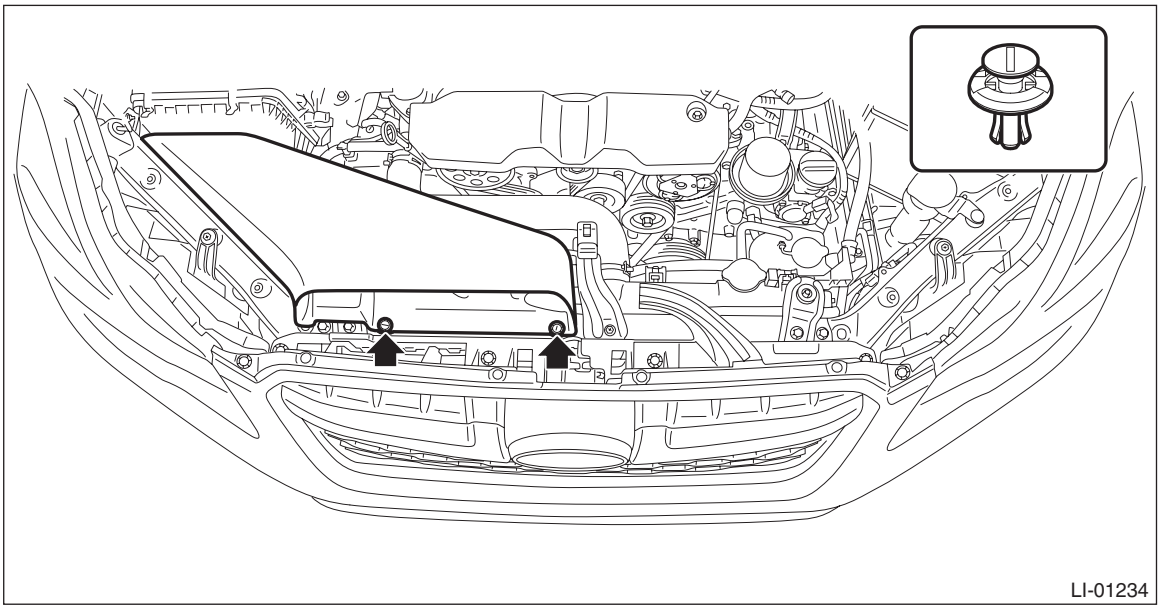
Terminal No.	Inspection conditions	Specification	Connection diagram
1 (+) — chassis ground (–)	Battery connection between compressor terminal and chassis ground	Engagement of magnet clutch	 AC-02772

2) If it does not operate normally, replace the compressor assembly.

16.Condenser

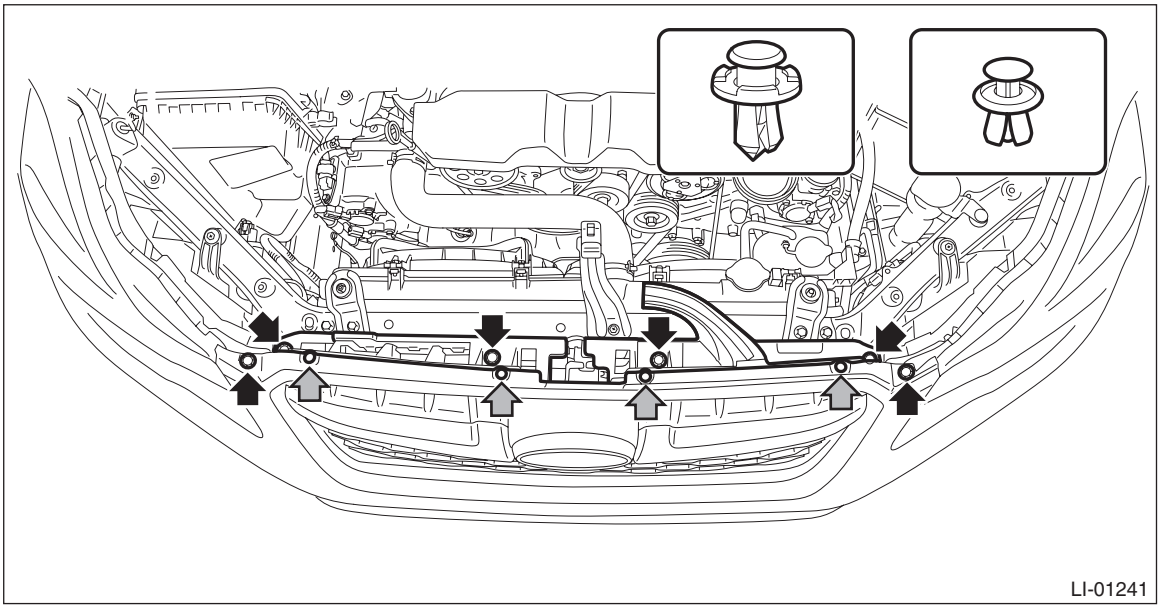
A: REMOVAL

1) Using the refrigerant recovery system, discharge refrigerant. <Ref. to AC-26, PROCEDURE, Refrigerant Recovery Procedure.>
2) Remove the clips and remove the air intake duct.

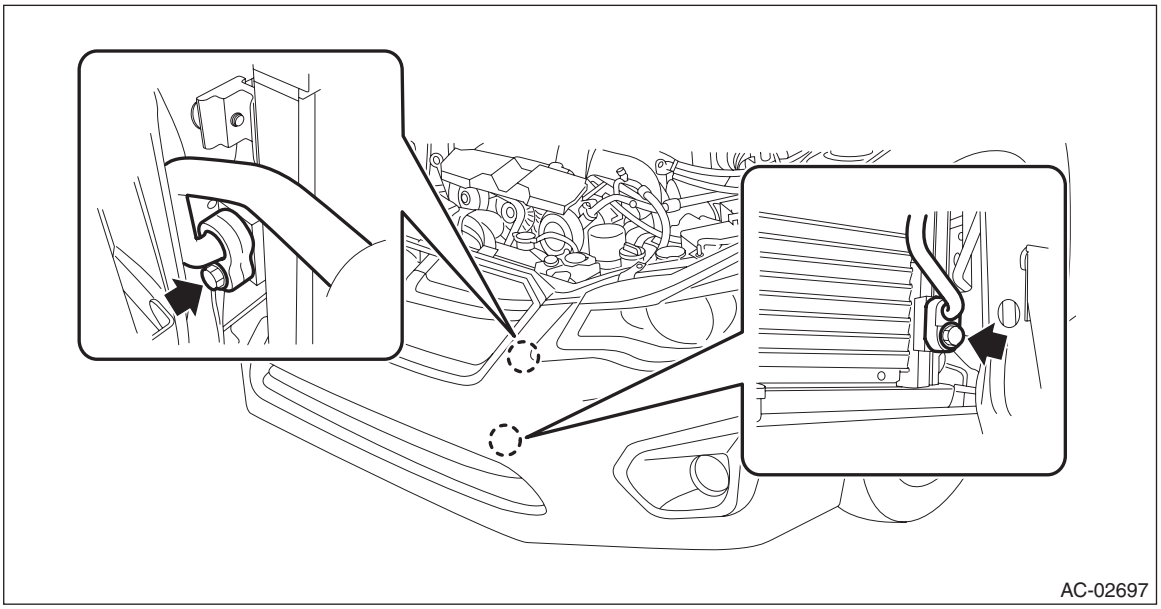


3) Remove the clip, and remove the bracket - grille.

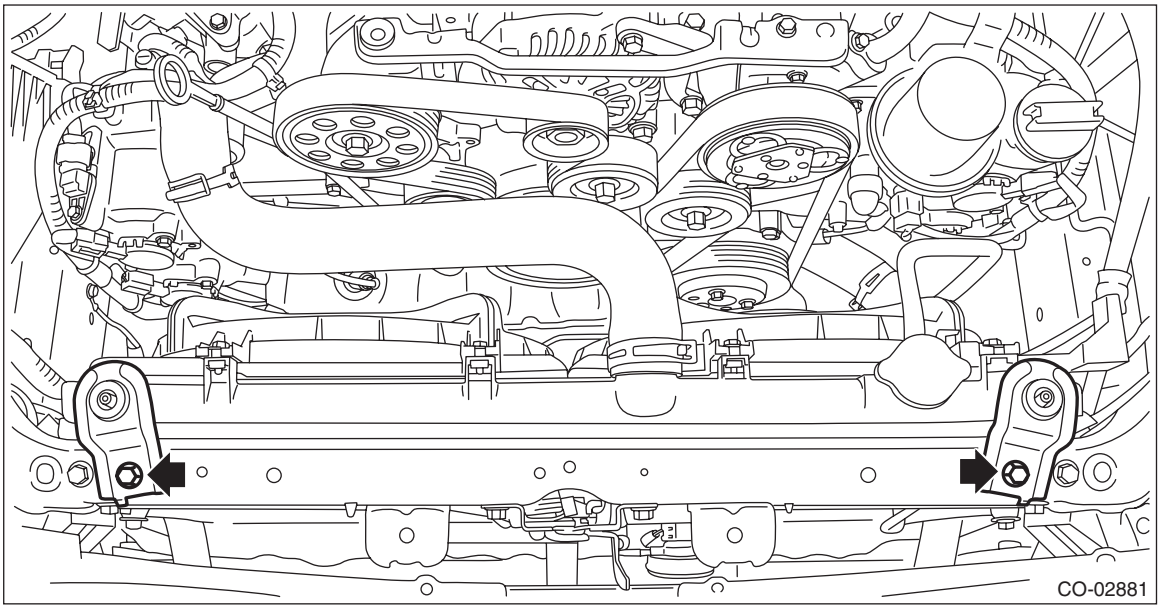
NOTE:
To prevent damage to the bracket - grille, make sure to remove all clips.



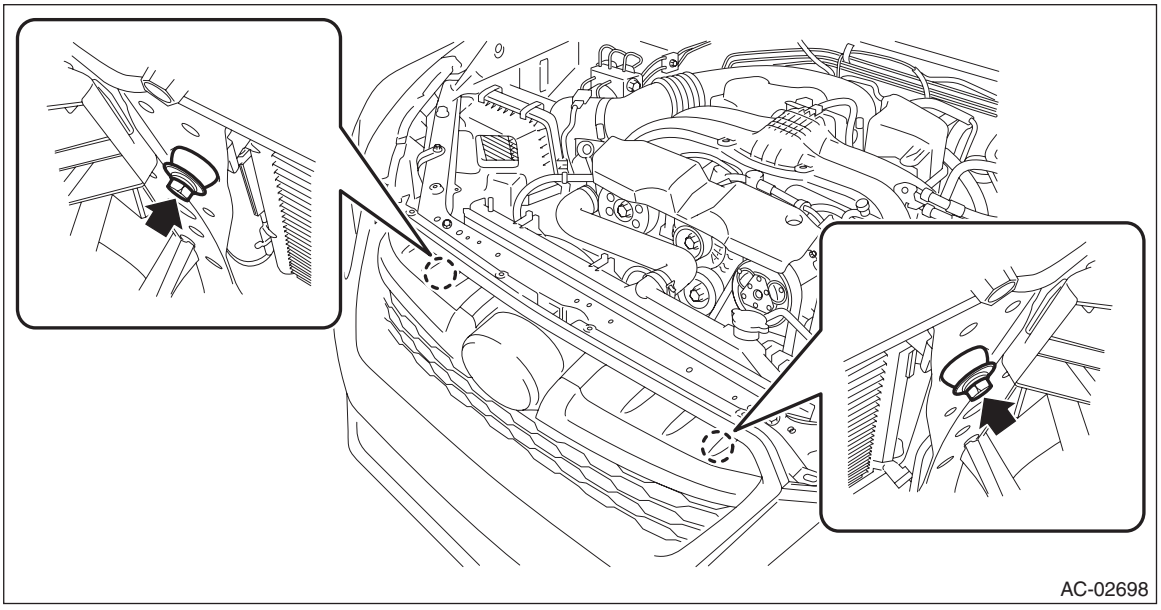
4) Remove the bolt, and disconnect the hose - pressure discharge and the pipe - evaporator cooling from the condenser assembly - air conditioner.



5) Remove the bolts and remove the radiator upper bracket.

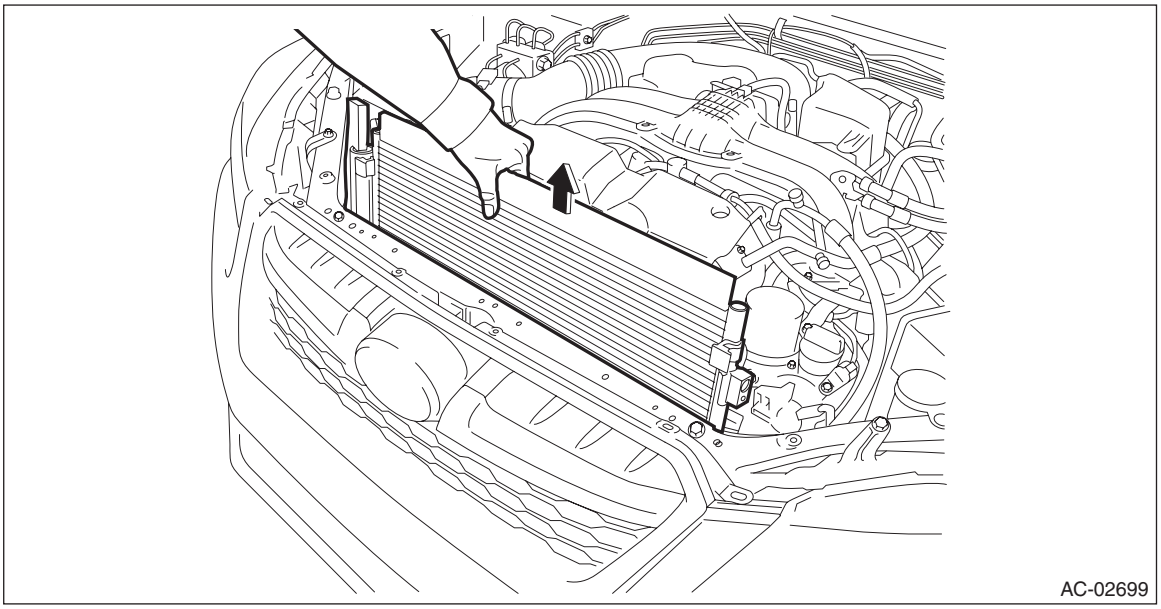


6) Remove the condenser assembly - air conditioner.
(1) Remove the bolt.



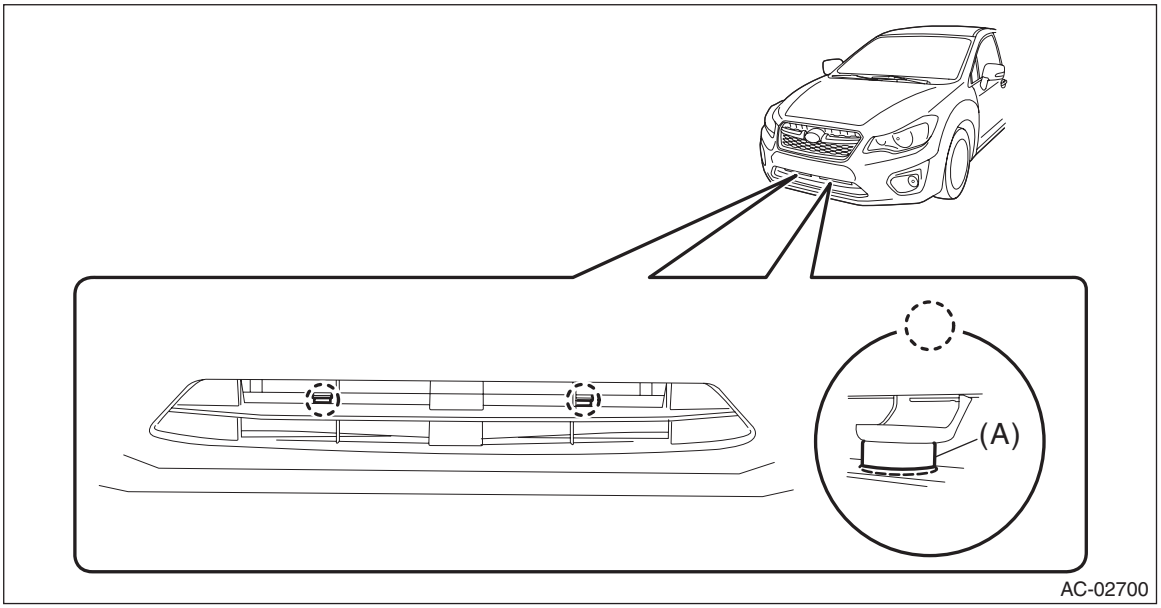
(2) By lifting the condenser assembly - air conditioner, pull it out through the space between the radiator and the radiator panel.

CAUTION:
Be careful not to damage the condenser and radiator fin. If a damaged fin is found, repair it using a thin screwdriver.



B: INSTALLATION

CAUTION:
• If the condenser assembly - air conditioner has been replaced, add an appropriate amount of compressor oil to the compressor assembly. <Ref. to AC-34, REPLACEMENT, Compressor Oil.>
• Replace the O-rings with new parts, and then apply compressor oil.
• Confirm that lower guide (A) of condenser assembly - air conditioner fits into holes on radiator panel.



1) Install each part in the reverse order of removal.

Tightening torque:
Air conditioning unit: <Ref. to AC-12, AIR CONDITIONING UNIT, COMPONENT, General Description.>
Radiator upper bracket: <Ref. to CO(H4DO)-4, RADIATOR & RADIATOR FAN, COMPONENT, General Description.>
2) Charge refrigerant. <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>

C: INSPECTION

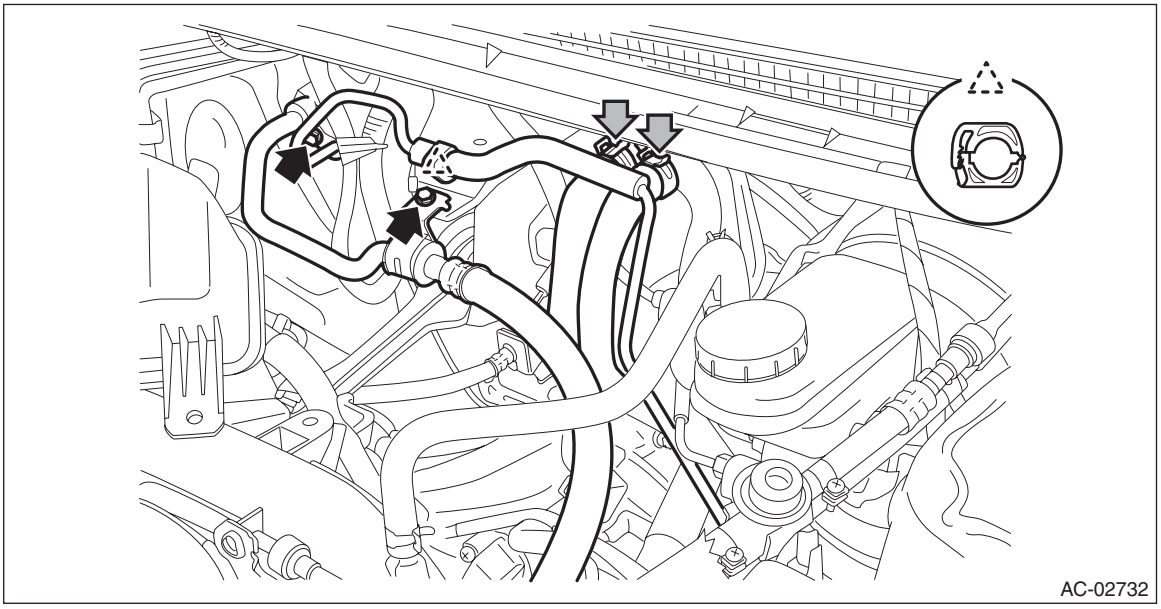
1) Check to see that the condenser fins are not clogged with debris or insects. Blow with compressed air or flush fins with water as needed.
2) If any oil leak is found, replace the condenser assembly - air conditioner.

17.Heater and Cooling Unit

A: REMOVAL

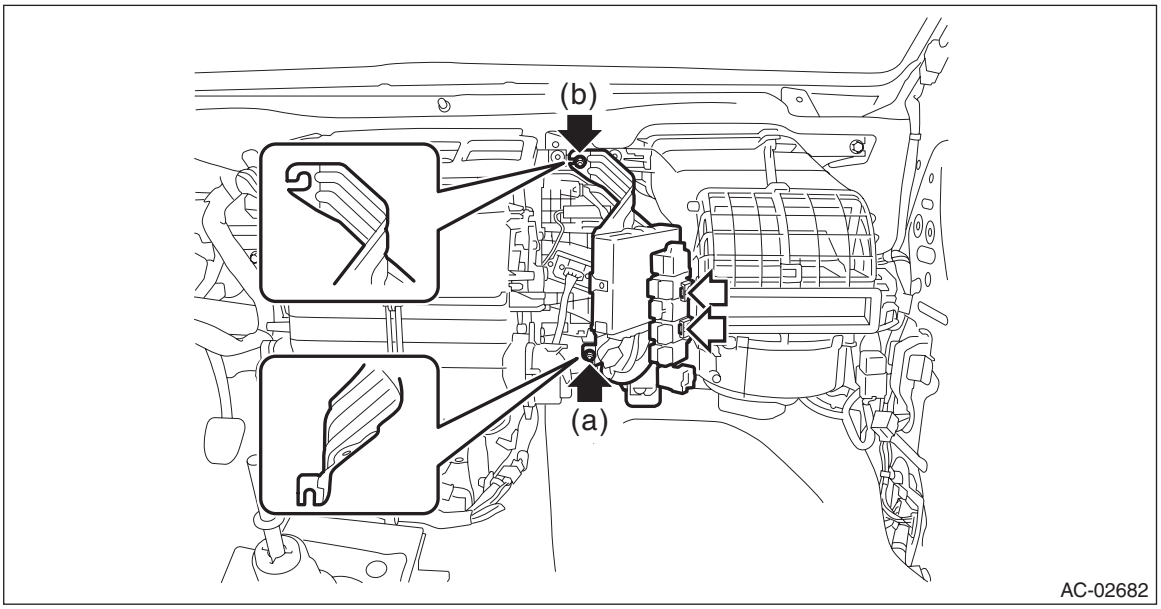
1) Disconnect the ground cable from battery.
2) Using the refrigerant recovery system, discharge refrigerant. <Ref. to AC-26, PROCEDURE, Refrigerant Recovery Procedure.>
3) Drain the coolant from the radiator. <Ref. to CO(H4DO)-13, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
4) Remove the intake boot. <Ref. to IN(H4DO)-12, REMOVAL, Air Intake Boot.>

CAUTION:
Move aside the intake boot to perform the operation without disconnecting the PCV hose.
5) Remove the bolt, and remove the hose - pressure suction and the pipe - evaporator cooling from the expansion valve - cooling.
6) Loosen the heater hose clamps and remove the hoses.

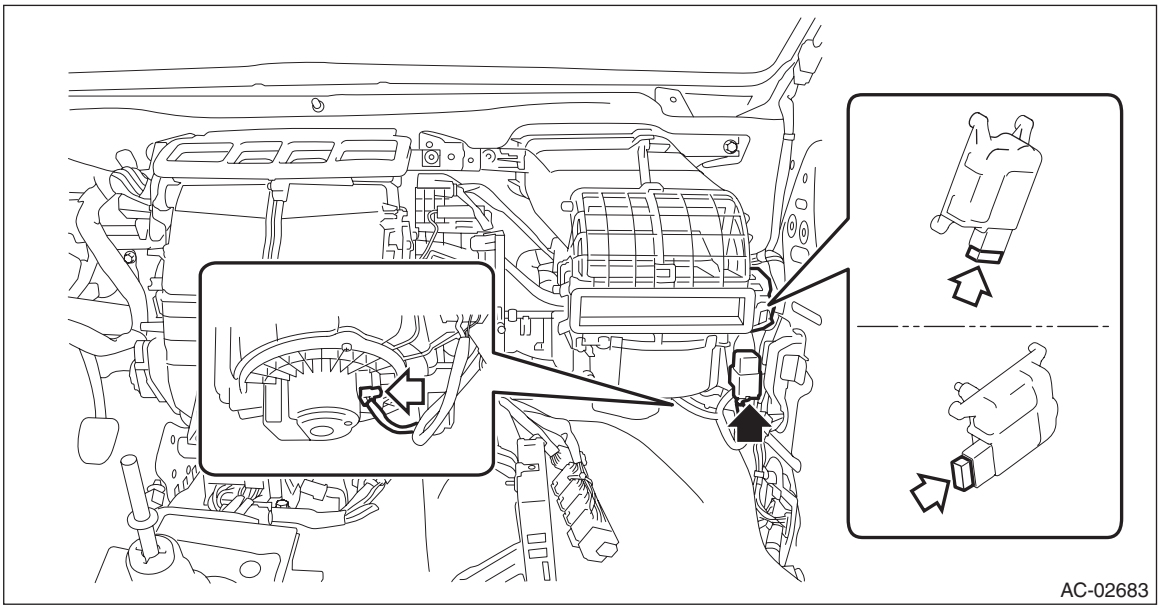


7) Remove the instrument panel assembly. <Ref. to EI-70, REMOVAL, Instrument Panel Assembly.>

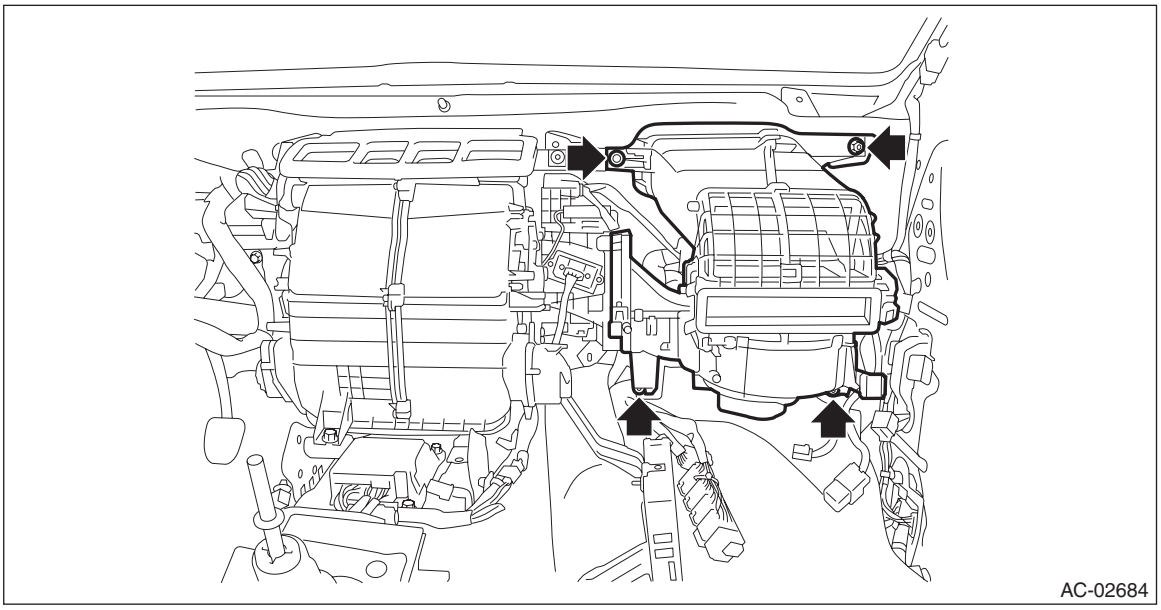
8) Remove the engine control module (ECM).
(1) Release the lock and remove the relay holder.
(2) Remove the nut (a).
(3) Loosen the bolt (b), and remove the engine control module (ECM).



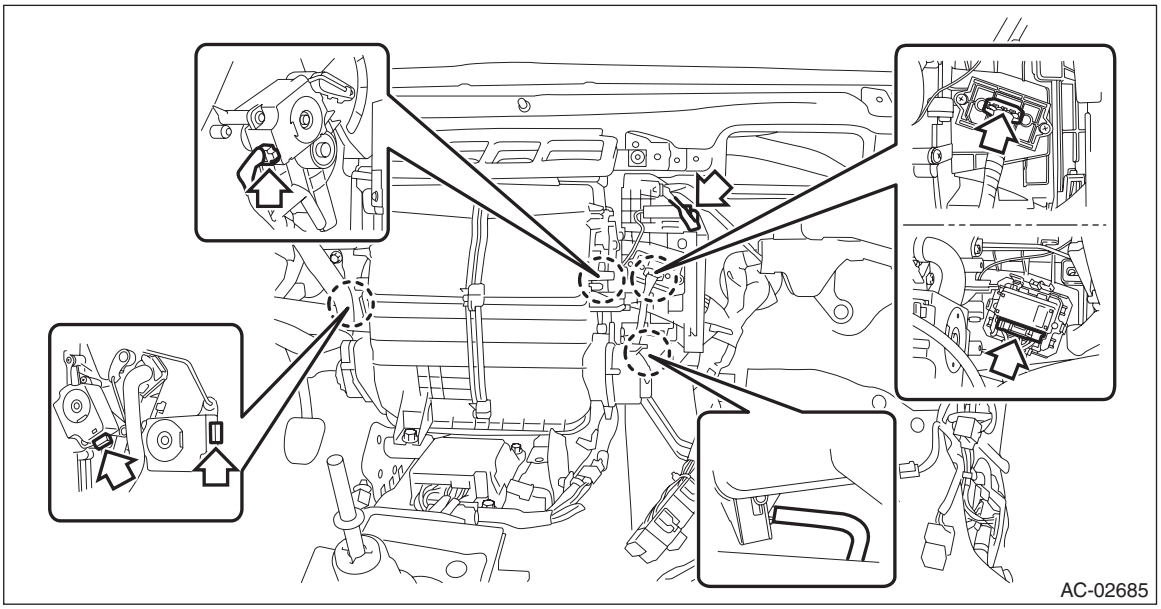
9) Remove the blower motor unit assembly.
(1) Disconnect the blower motor relay and each connector.



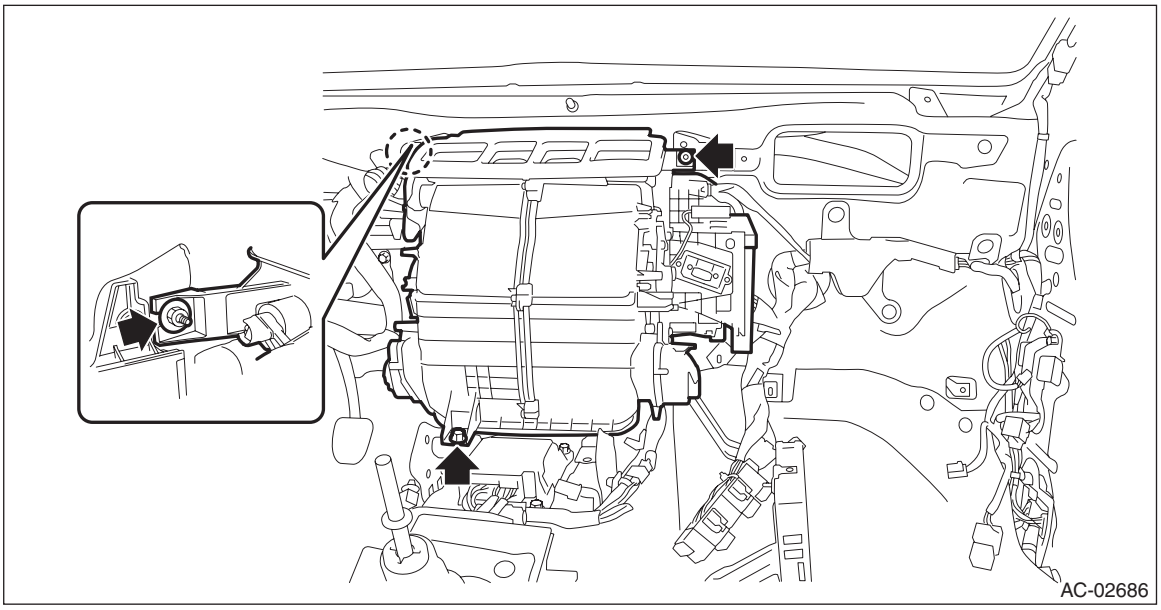
(2) Remove the bolts and nuts to remove blower motor unit assembly.



10) Remove the heater and cooling unit assembly.
(1) Disconnect each connector and the hose - drain.



(2) Remove the bolt and nuts, and remove the heater & cooling unit assembly.



B: INSTALLATION

CAUTION:
Replace O-rings with new parts and install securely.
1) Install each part in the reverse order of removal.

NOTE:
Refer to “INSTALLATION” of “Instrument Panel Assembly”. <Ref. to EI-87, INSTALLATION, Instrument Panel Assembly.>

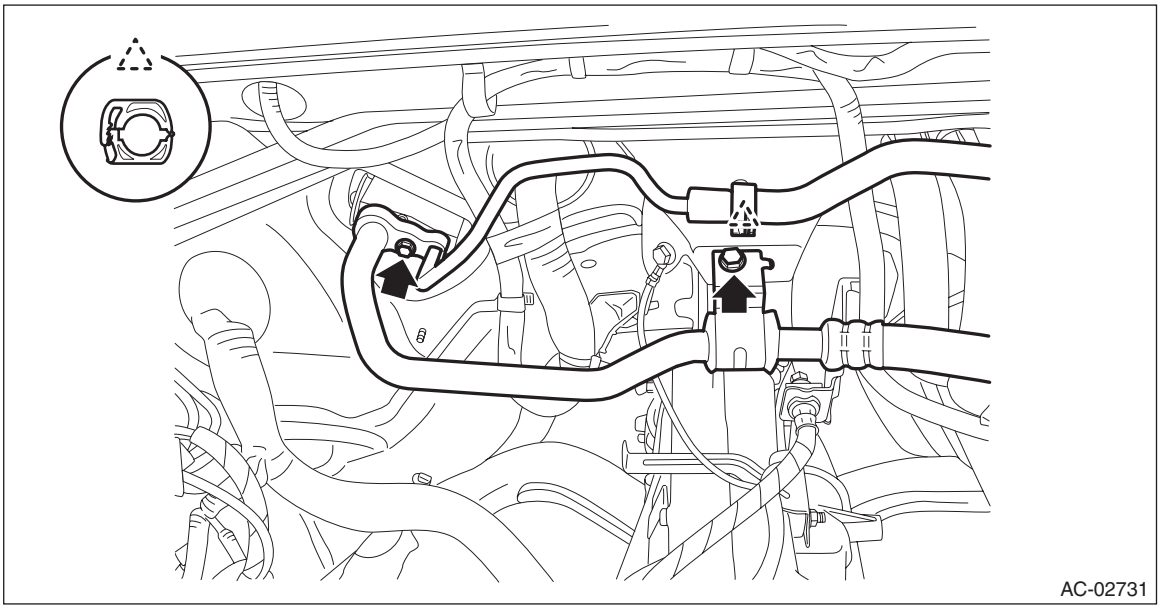
Tightening torque:
Heater cooling unit: <Ref. to AC-6, HEATER AND COOLING UNIT, COMPONENT, General Description.>
Blower motor unit: <Ref. to AC-10, BLOWER MOTOR UNIT, COMPONENT, General Description.>
Engine control module (ECM): 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)
2) Fill engine coolant. <Ref. to CO(H4DO)-13, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
3) Charge refrigerant. <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>

18.Evaporator

A: REMOVAL

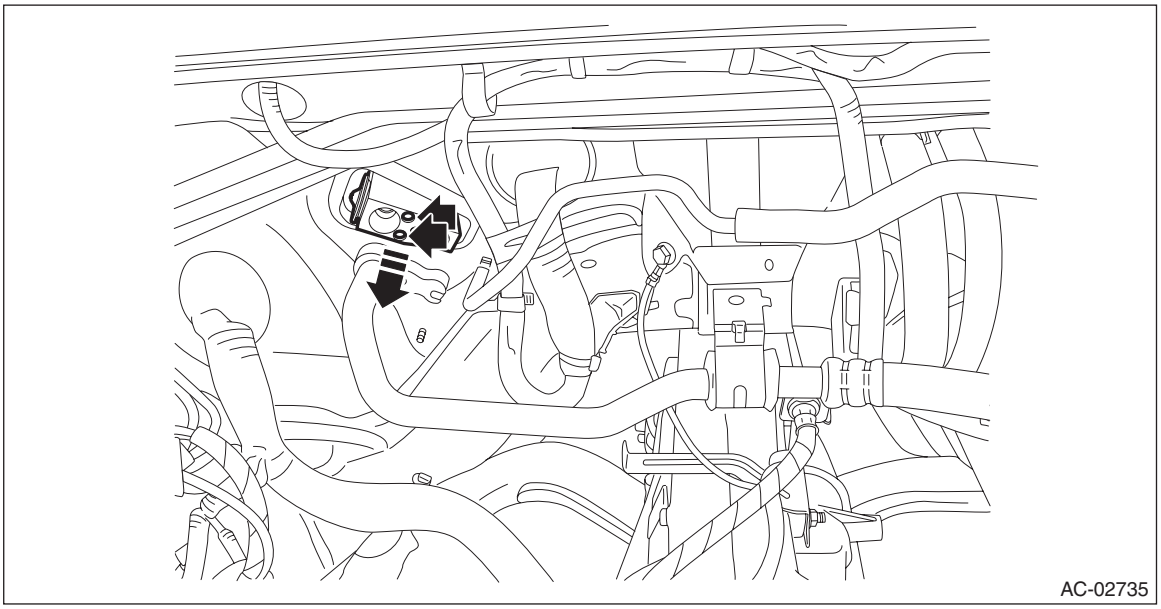
1) Disconnect the ground cable from battery.
2) Using the refrigerant recovery system, discharge refrigerant. <Ref. to AC-26, PROCEDURE, Refrigerant Recovery Procedure.>
3) Remove the intake boot. <Ref. to IN(H4DO)-12, REMOVAL, Air Intake Boot.>

CAUTION:
Move aside the intake boot to perform the operation without disconnecting the PCV hose.
4) Remove the expansion valve - cooling.
(1) Remove the bolt, and detach the hose - pressure suction and the pipe - evaporator cooling.


AC-02731

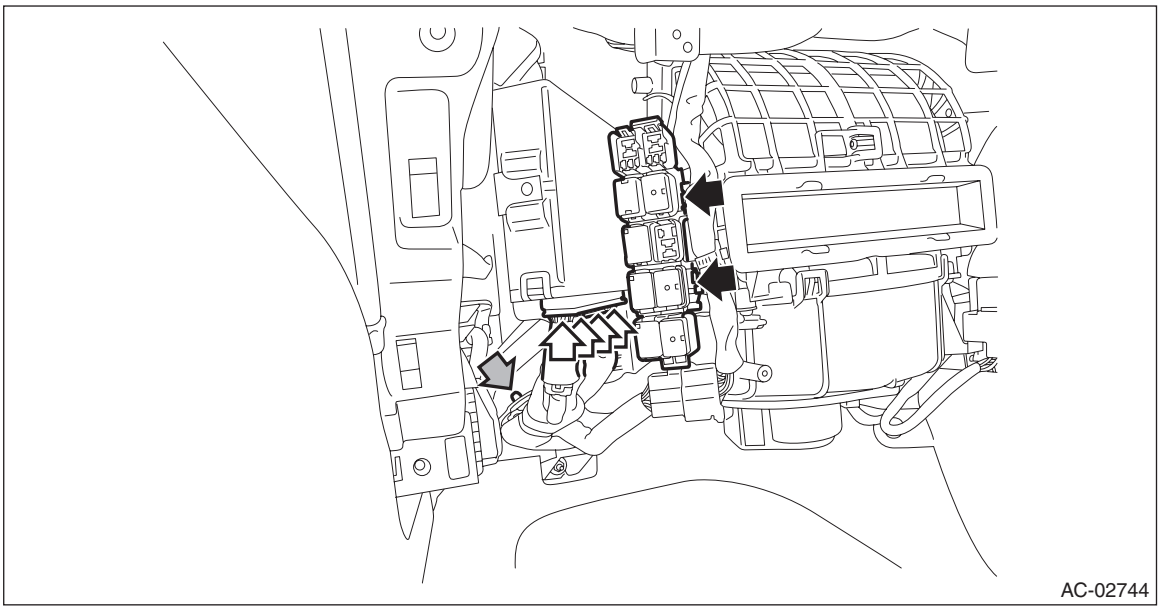
(2) Remove the bolt, and remove the expansion valve - cooling.

PREPARATION TOOL:
Hexagon wrench: 4 mm (0.16 in)

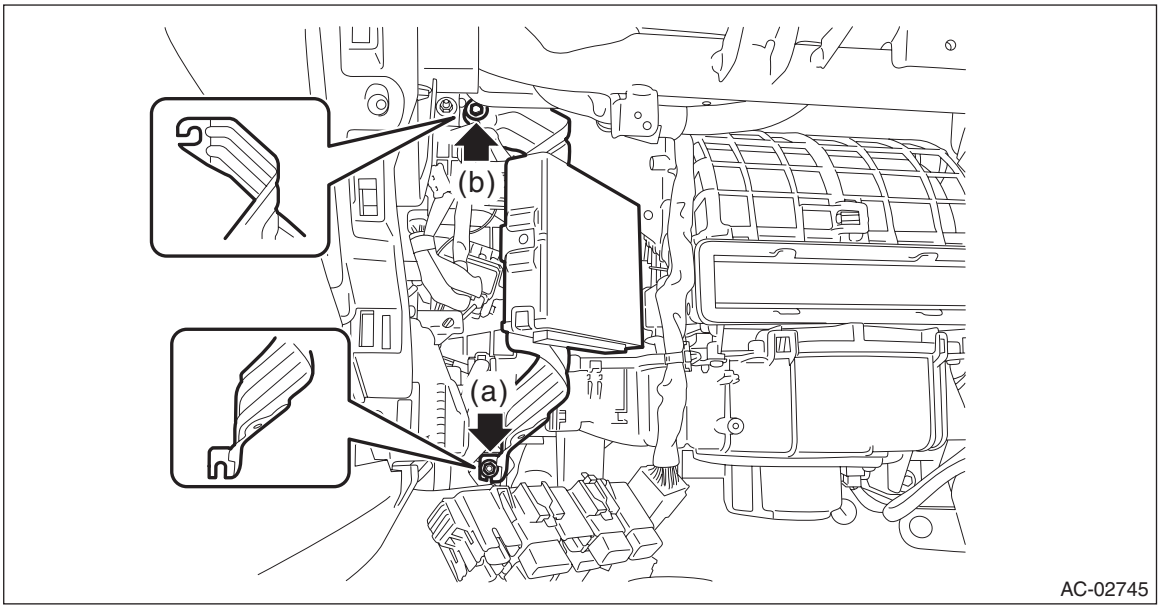

AC-02735

5) Remove the glove box. <Ref. to EI-63, REMOVAL, Glove Box.>

6) Remove the engine control module (ECM).
(1) Release the lock and remove the relay holder.
(2) Remove the harness clip, and disconnect the connector.

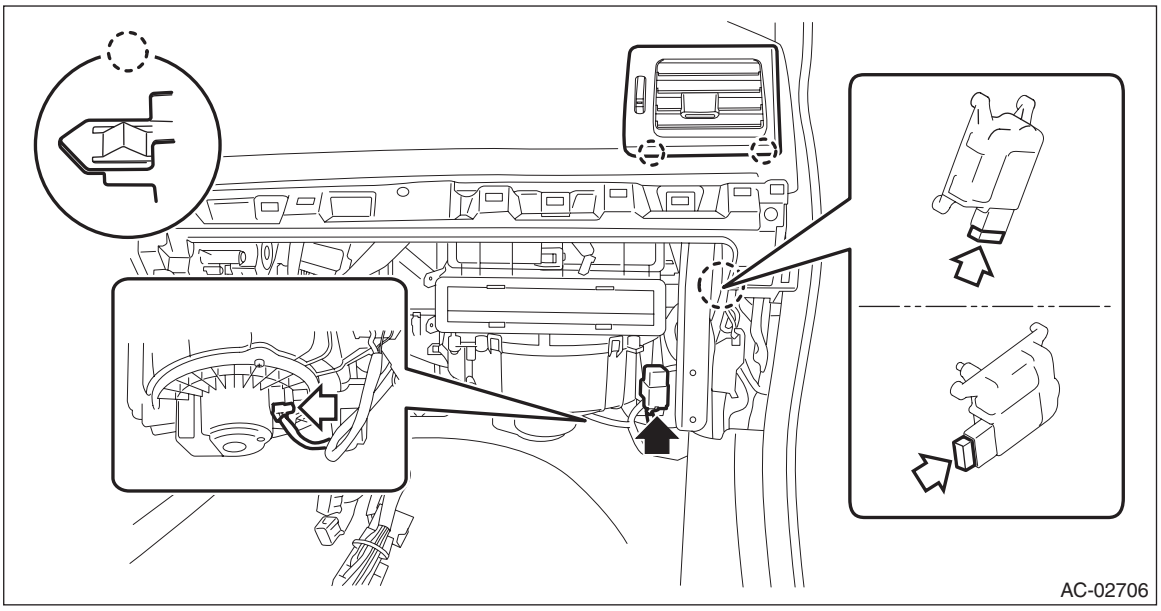

AC-02744

(3) Remove the nut (a).
(4) Loosen the bolt (b), and remove the engine control module (ECM).



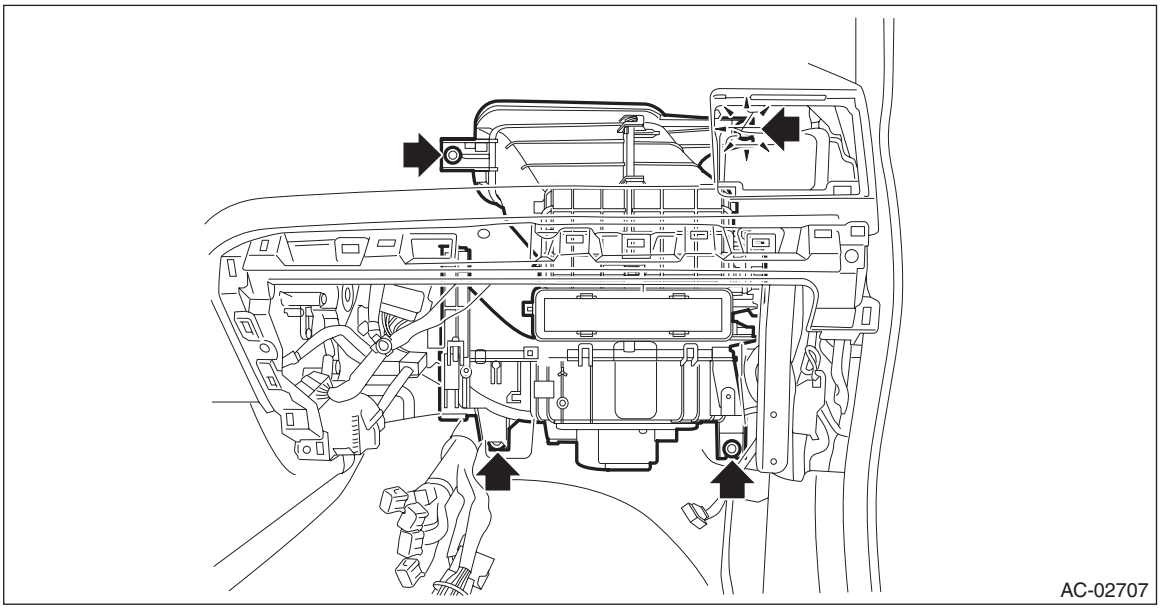
AC-02745

7) Remove the blower motor unit assembly.
(1) Release the claws, and then remove the grille assembly - ventilation RH.
(2) Disconnect the blower motor relay and each connector.

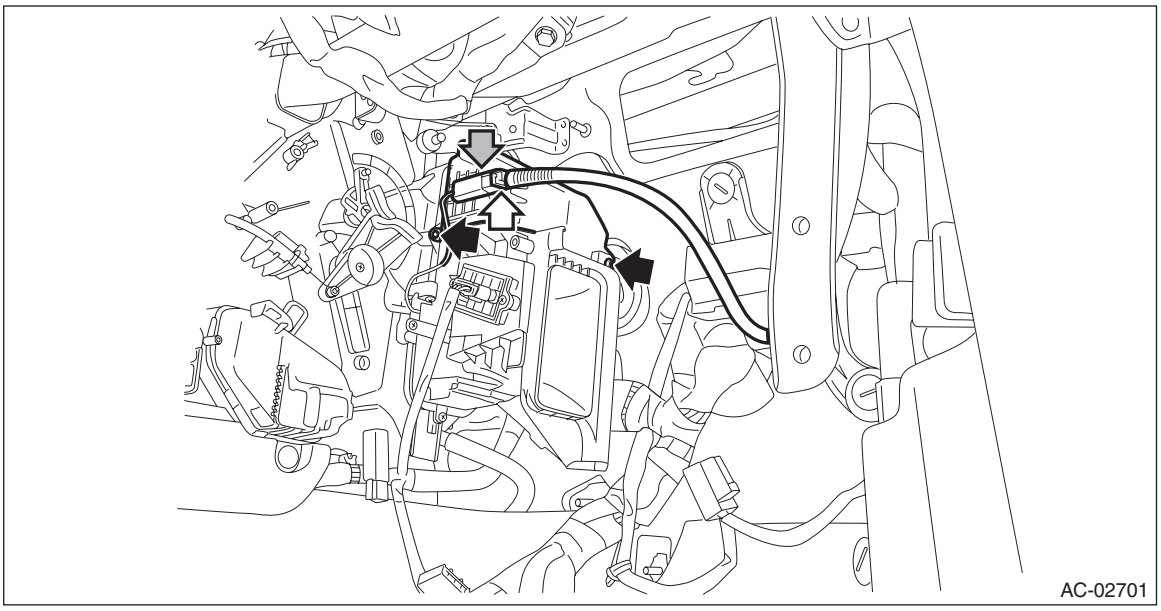


(3) Remove the bolts and nuts to remove blower motor unit assembly.

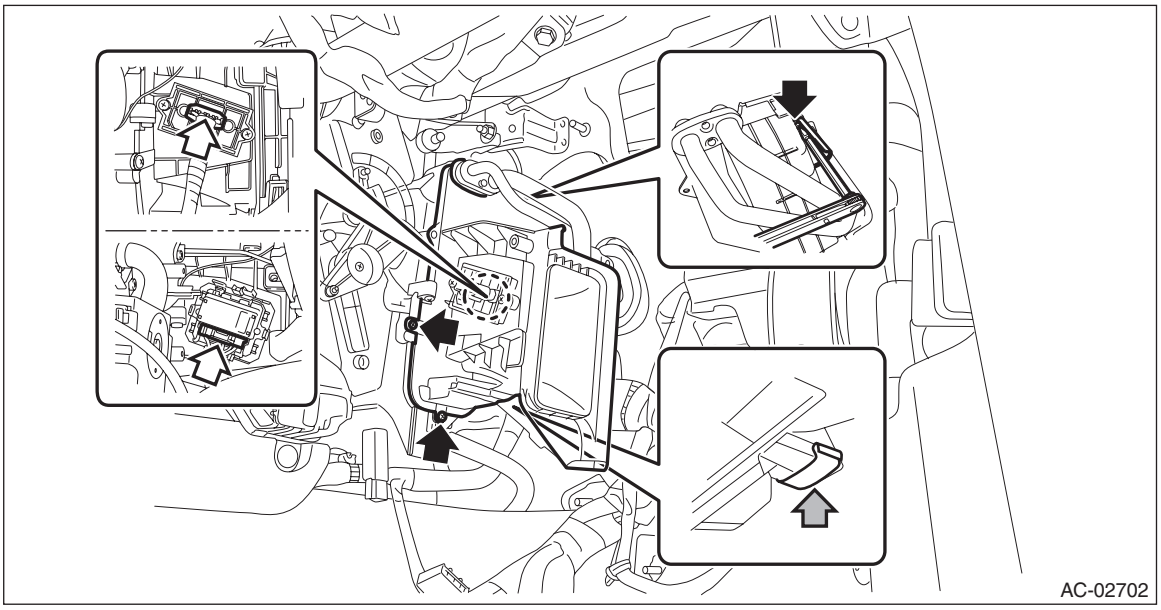
NOTE:
Remove the RH upper nut from the mounting portion of the grille assembly - ventilation RH.



8) Remove the evaporator assembly - cooling.
(1) Disconnect the connector and lock of the thermostat - cooling.
(2) Remove the screws and detach the cover.

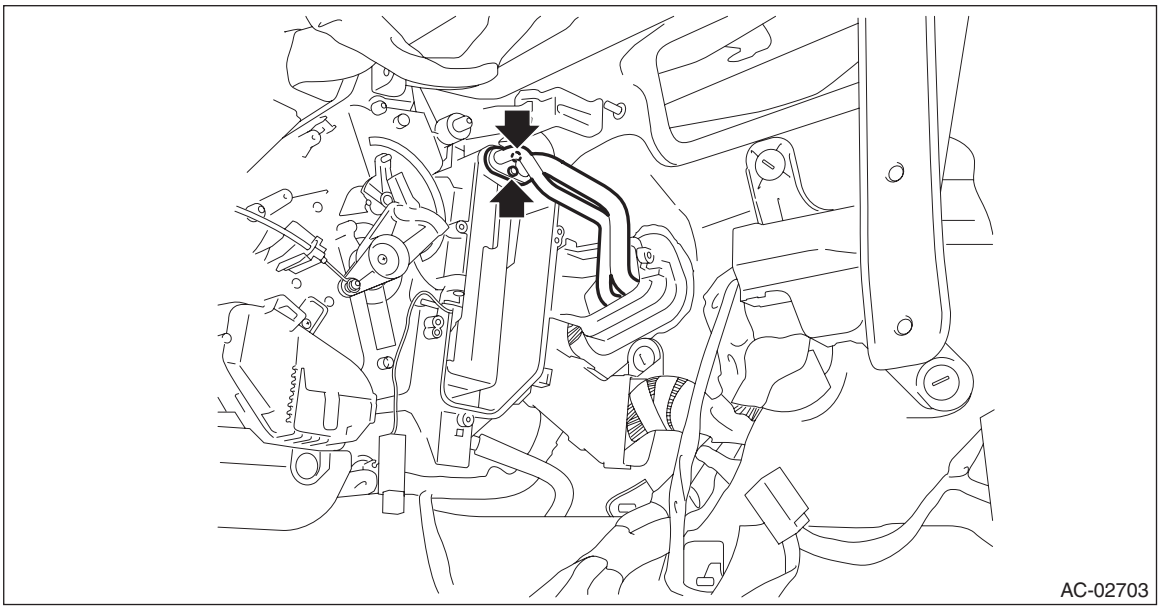


(3) Remove the cover - heater unit.
a) Disconnect the connector for the power transistor or resistor.
b) Remove the screws and clips to remove the cover - heater unit.

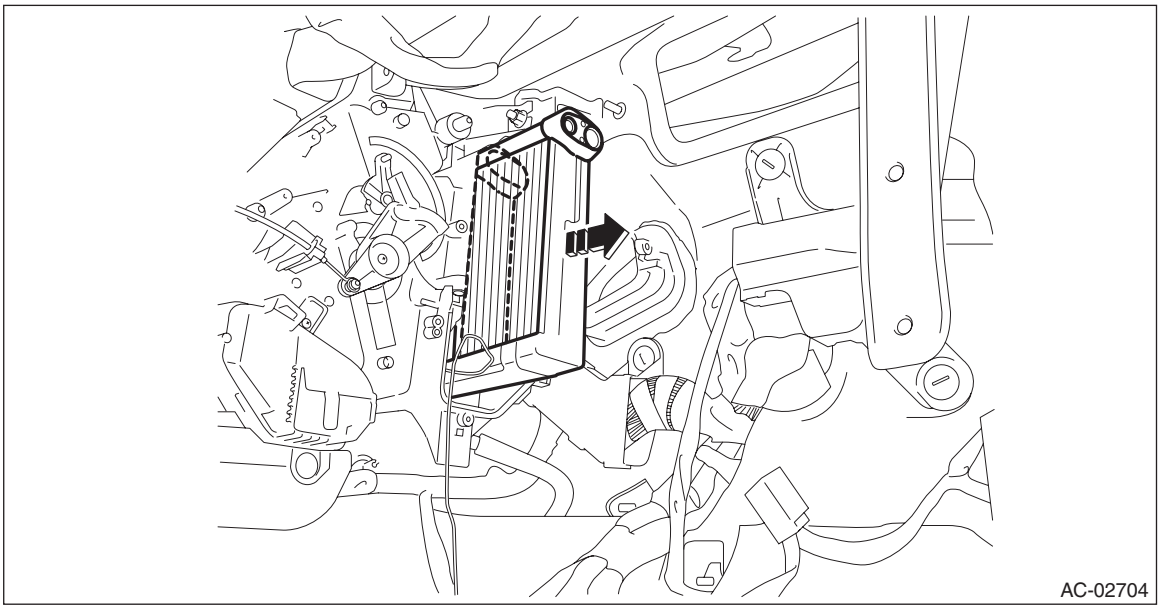


(4) Remove the bolt, and detach the pipe - evaporator core.

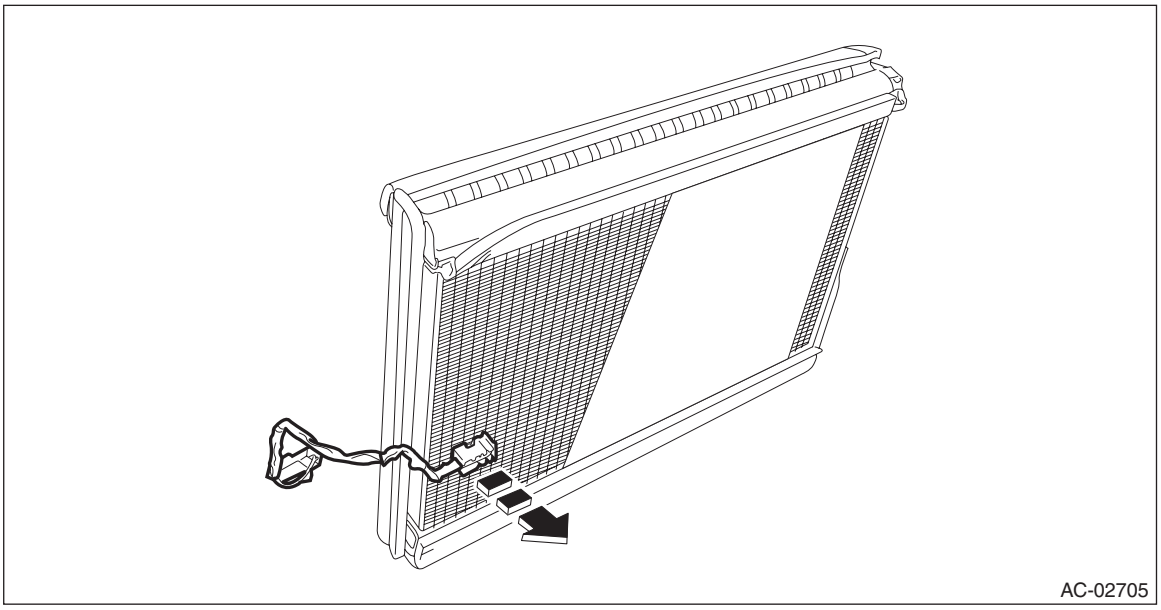
PREPARATION TOOL:
Hexagon wrench: 4 mm (0.16 in)



(5) Pull out the evaporator assembly - cooling from the case - heater unit.



(6) Remove the thermostat - cooling from the evaporator assembly - cooling.



B: INSTALLATION

CAUTION:
• If the evaporator assembly - cooling has been replaced, add an appropriate amount of compressor oil to the evaporator assembly - cooling. <Ref. to AC-34, REPLACEMENT, Compressor Oil.>
• When the evaporator assembly - cooling has been replaced, replace the packing of the expansion valve - cooling with a new one, and then apply compressor oil.
• Make sure that the water seal packing on the cover attachment area is securely attached.
• Replace the O-rings with new parts, and then apply compressor oil.
• After installing the grille assembly - ventilation RH, check that the air vent grille of the grille assembly - ventilation RH is inserted correctly into the air vent duct.

1) Install the thermostat - cooling to the specified position. <Ref. to AC-82, INSTALLATION, Evaporator Sensor.>
2) Install each part in the reverse order of removal.

Tightening torque:
Blower motor unit: <Ref. to AC-10, BLOWER MOTOR UNIT, COMPONENT, General Description.>
Engine control module (ECM): 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

3) Charge refrigerant. <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>

C: INSPECTION

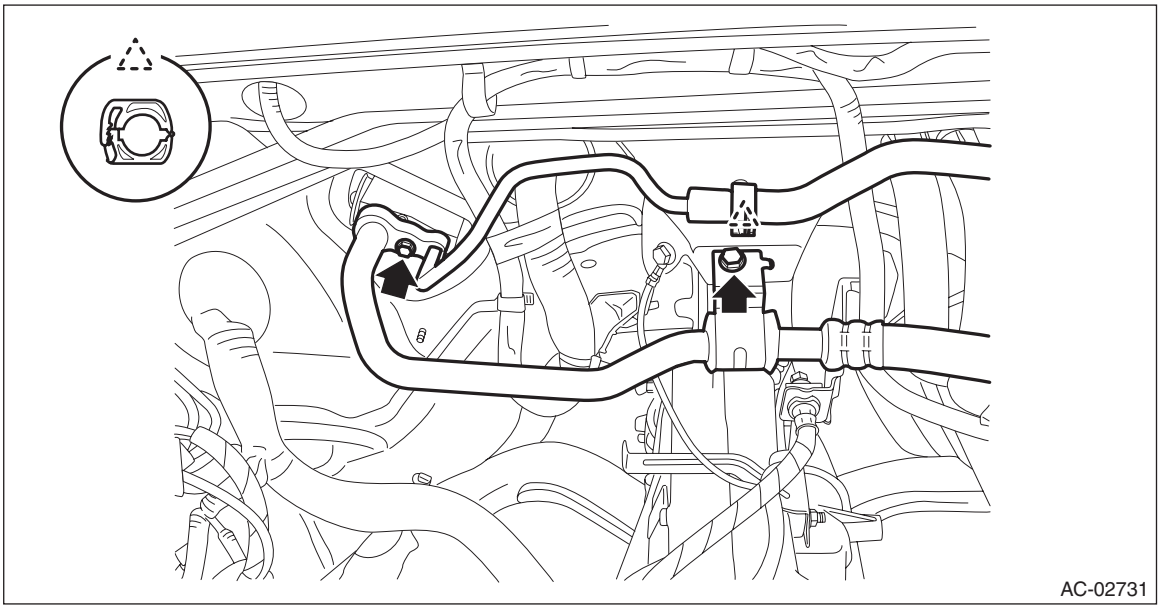
1) Check the evaporator fin for dust. Blow with compressed air or flush fins with water as needed.
2) If any oil leak is found, replace the evaporator assembly - cooling.

19.Expansion Valve

A: REMOVAL

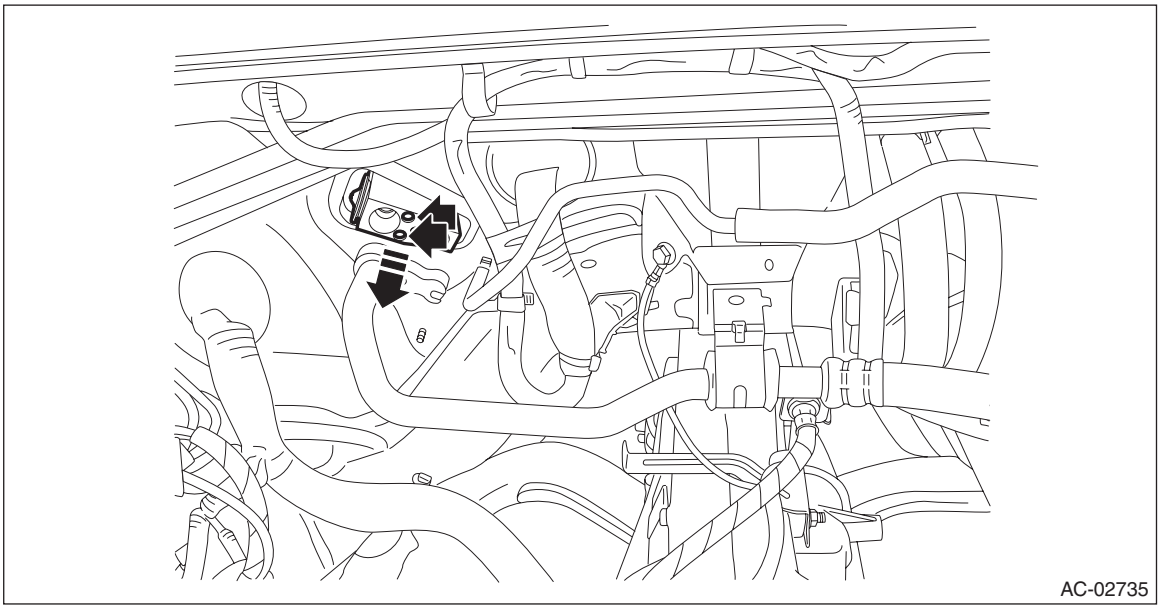
1) Disconnect the ground cable from battery.
2) Using the refrigerant recovery system, discharge refrigerant. <Ref. to AC-26, PROCEDURE, Refrigerant Recovery Procedure.>
3) Remove the intake boot. <Ref. to IN(H4DO)-12, REMOVAL, Air Intake Boot.>

CAUTION:
Move aside the intake boot to perform the operation without disconnecting the PCV hose.
4) Remove the expansion valve - cooling.
(1) Remove the bolt, and detach the hose - pressure suction and the pipe - evaporator cooling.


AC-02731

(2) Remove the bolt, and remove the expansion valve - cooling.

PREPARATION TOOL:
Hexagon wrench: 4 mm (0.16 in)


AC-02735

B: INSTALLATION

CAUTION:
Replace the O-rings with new parts, and then apply compressor oil.
1) Install each part in the reverse order of removal.

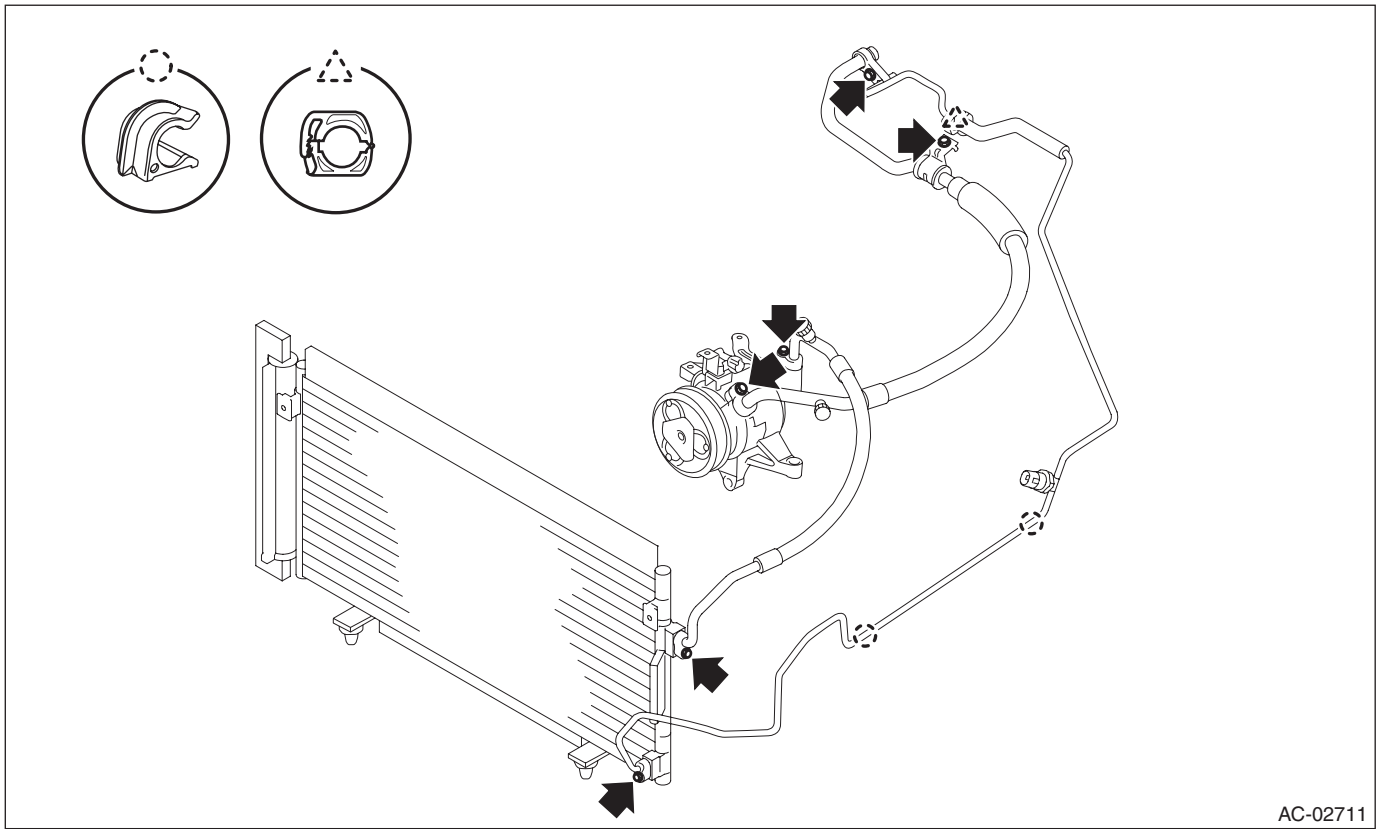
Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to AC-12, AIR CONDITIONING UNIT, COMPONENT, General Description.>
2) Charge refrigerant. <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>

20.Hose and Pipe

A: REMOVAL

CAUTION:
- **When disconnecting hoses, do not apply excessive force.**
- **Seal the disconnected hose with a plug or vinyl tape to prevent foreign matter from entering.**

1) Disconnect the ground cable from battery.
2) Using the refrigerant recovery system, discharge refrigerant. <Ref. to AC-26, PROCEDURE, Refrigerant Recovery Procedure.>
3) Remove the bolt and detach the hoses and pipes.



B: INSTALLATION

CAUTION:
- **Replace the O-rings with new parts, and then apply compressor oil.**
- **When connecting hoses, do not apply an excessive force to them. After installing, check that no torsion or excessive tension applied to the hoses.**

1) Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to AC-12, AIR CONDITIONING UNIT, COMPONENT, General Description.>

2) Charge refrigerant. <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>

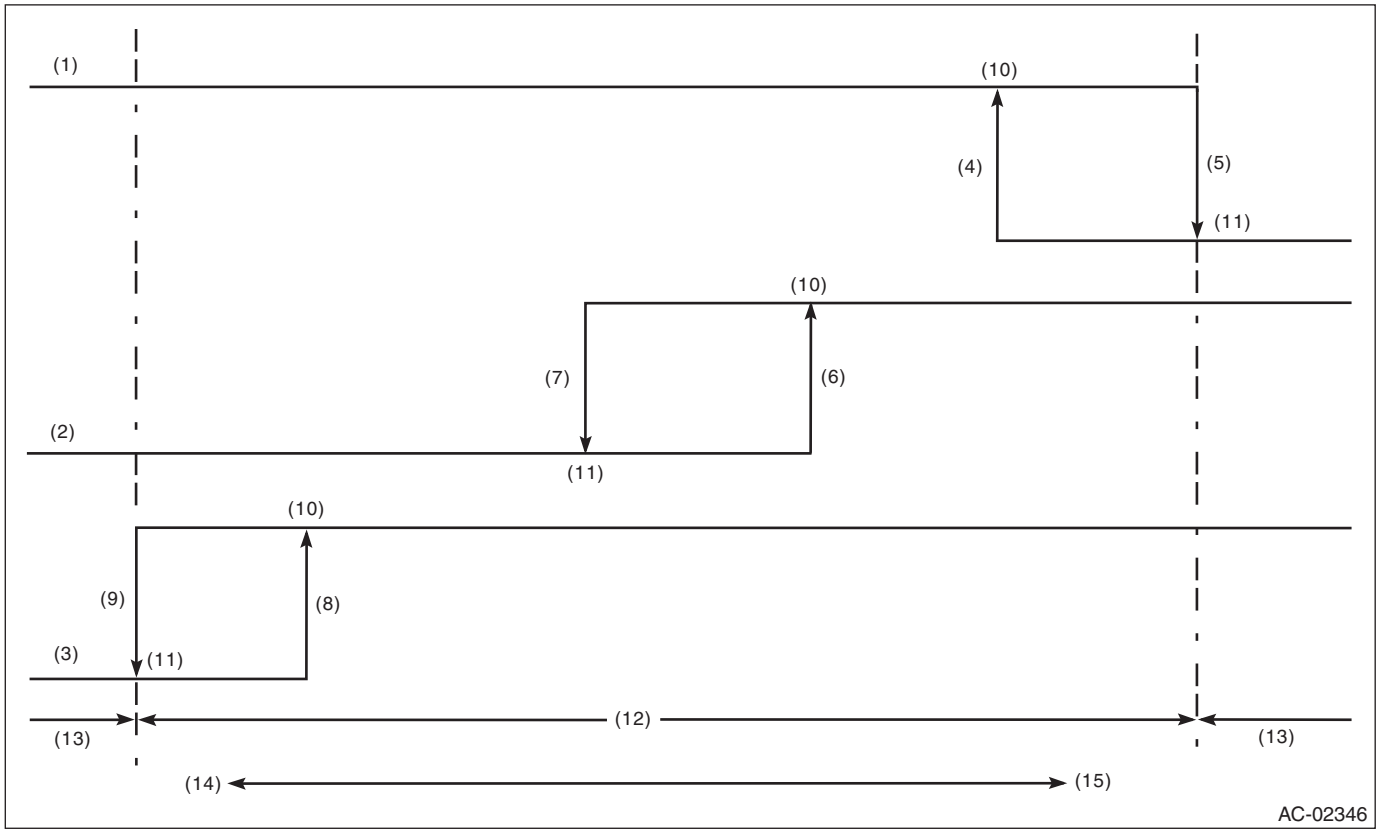
C: INSPECTION

1) Check the hoses for cracks, damage and expansion. Replace the hose if faulty.
2) Check the pipes for crack or damage. Replace the pipe if faulty.

21.Pressure Switch (Triple Pressure Switch)

A: INSPECTION

1) Connect the manifold gauge to the service valve on the high-pressure side.
2) Disconnect the connector.
3) Start the air conditioner, and check the operating pressure of switch by turning the compressor assembly (magnet clutch) to ON/OFF. Operation of each switch is as follows.



(1)	High pressure switch	(6)	1,770±100 kPa (18.05±1.02 kg/cm^2, 256.65±14.5 psi)	(11)	OFF
(2)	Middle pressure switch	(7)	1,470±120 kPa (14.99±1.22 kg/cm^2, 213.15±17.4 psi)	(12)	Operative range of compressor assembly
(3)	Low pressure switch	(8)	225±30 kPa (2.29±0.31 kg/cm^2, 32.6±4.3 psi)	(13)	Inoperative range of compressor assembly
(4)	2,350±200 kPa (24.00±2.04 kg/cm^2, 340.7±29.0 psi)	(9)	196±25 kPa (2.00±0.25 kg/cm^2, 28.4±3.6 psi)	(14)	Low pressure
(5)	2940±200 kPa (29.98±2.04 kg/cm^2, 426.3±29.0 psi)	(10)	ON	(15)	High pressure

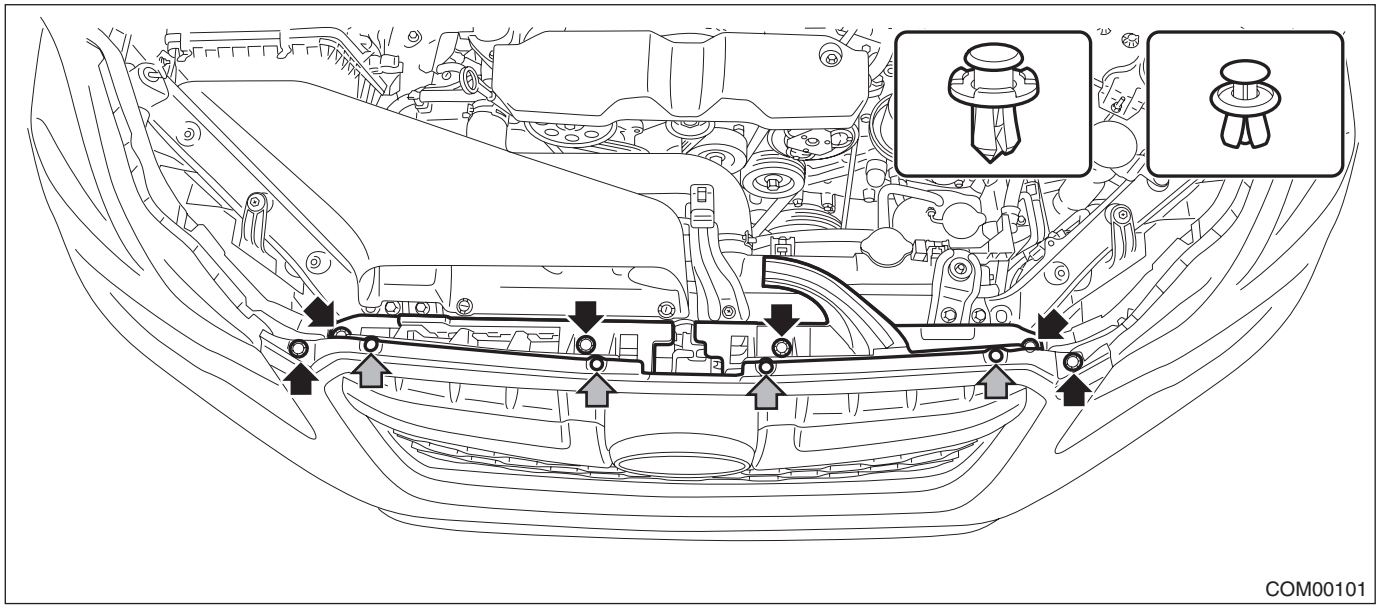
NOTE:
• High pressure switch turns the compressor assembly (magnet clutch) to OFF when the refrigerant pressure becomes extremely high to prevent the evaporator, air conditioner piping and expansion valve from getting damaged or frozen, etc.
• The middle pressure switch is used to effectively control the radiator fan output by judging high load/low load in normal pressure range.
• The low pressure switch detects a refrigerant shortage and deactivates the compressor assembly (magnet clutch) if the refrigerant pressure is abnormally low. (Because any further compressor assembly operation in such a state may lead to compressor seizure)

22.Ambient Sensor

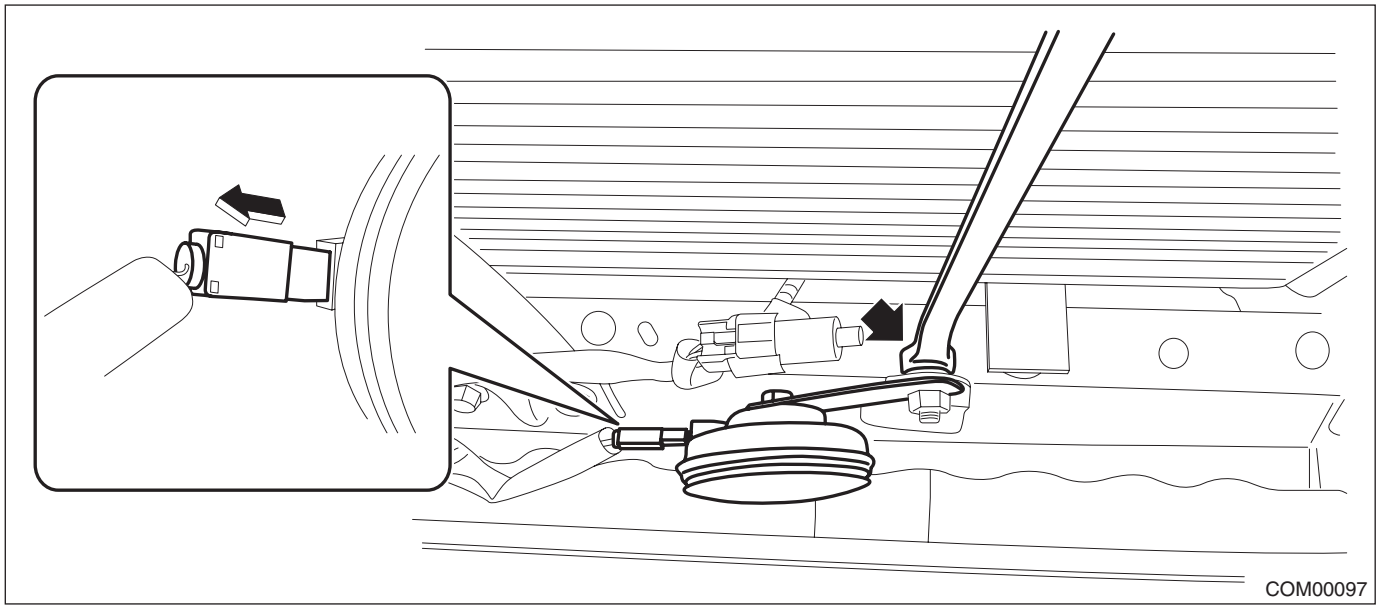
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the clip, and remove the bracket - grille.

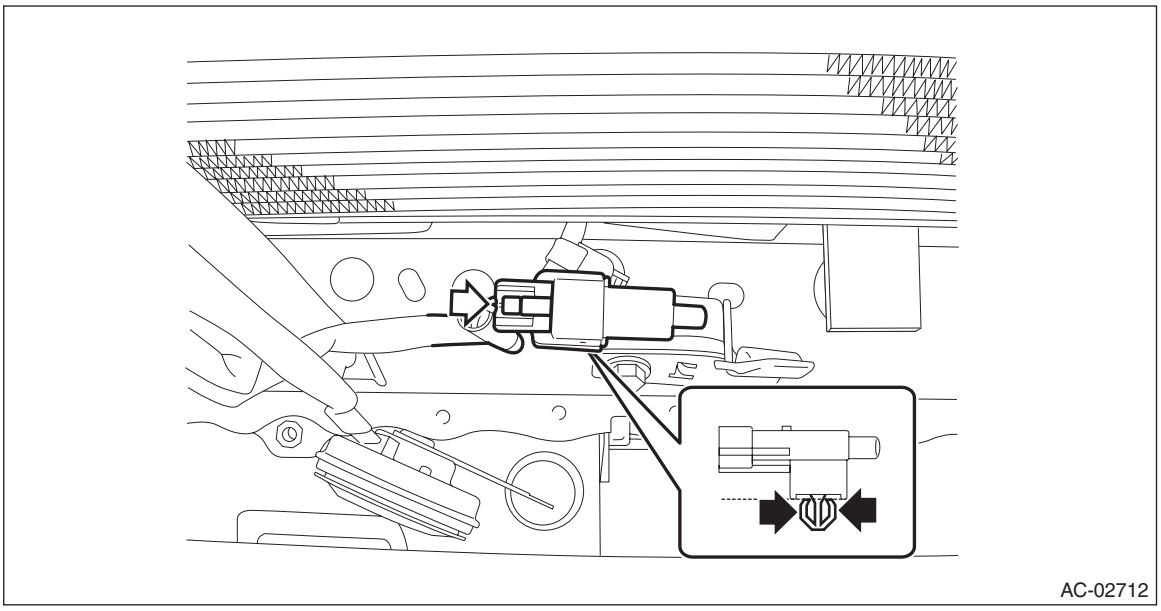
NOTE:
To prevent damage to the bracket - grille, make sure to remove all clips.



3) Remove the horn assembly - Lo.
   (1) Disconnect the connector.
   (2) Remove the horn bracket mounting bolt, and remove the horn assembly - Lo.



4) Remove the ambient sensor.
   (1) Disconnect the connector.
   (2) Release the claws, and then remove the ambient sensor from the horn bracket.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Horn assembly - Lo: 18 N·m (1.84 kgf-m, 13.3 ft-lb)

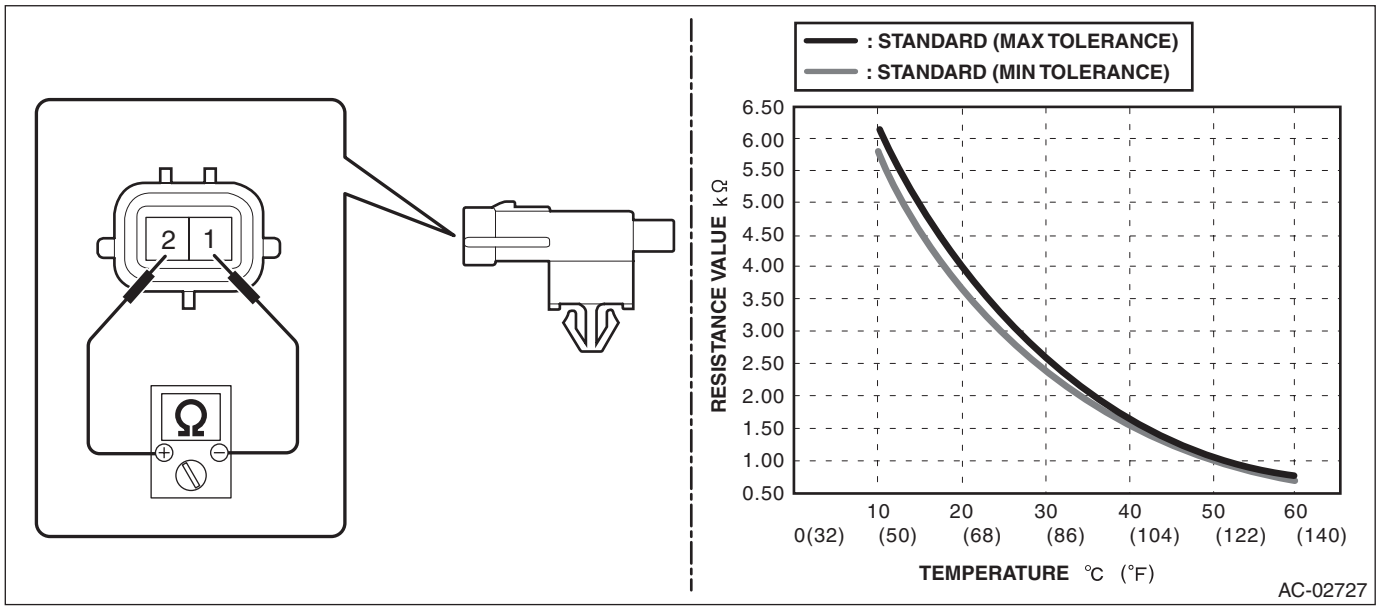
C: INSPECTION

UNIT INSPECTION

PREPARATION TOOL:
Circuit tester

1) Visually check the ambient sensor for dirt or damage, and clean or replace as necessary.
2) Check the resistance between ambient sensor terminals.

CAUTION:
During inspection, be careful not to touch the sensor end in order to avoid misjudgment due to body temperature.



Terminal No.	Inspection conditions	Standard
1 — 2	10°C	5.82 — 6.18 kΩ
	15°C	4.58 — 4.87 kΩ
	20°C	3.64 — 3.86 kΩ
	25°C	2.91 — 3.09 kΩ
	30°C	2.35 — 2.49 kΩ
	35°C	1.9 — 2.02 kΩ
	40°C	1.56 — 1.65 kΩ
	45°C	1.28 — 1.36 kΩ
	50°C	1.06 — 1.12 kΩ
	55°C	0.88 — 0.93 kΩ
	60°C	0.74 — 0.78 kΩ

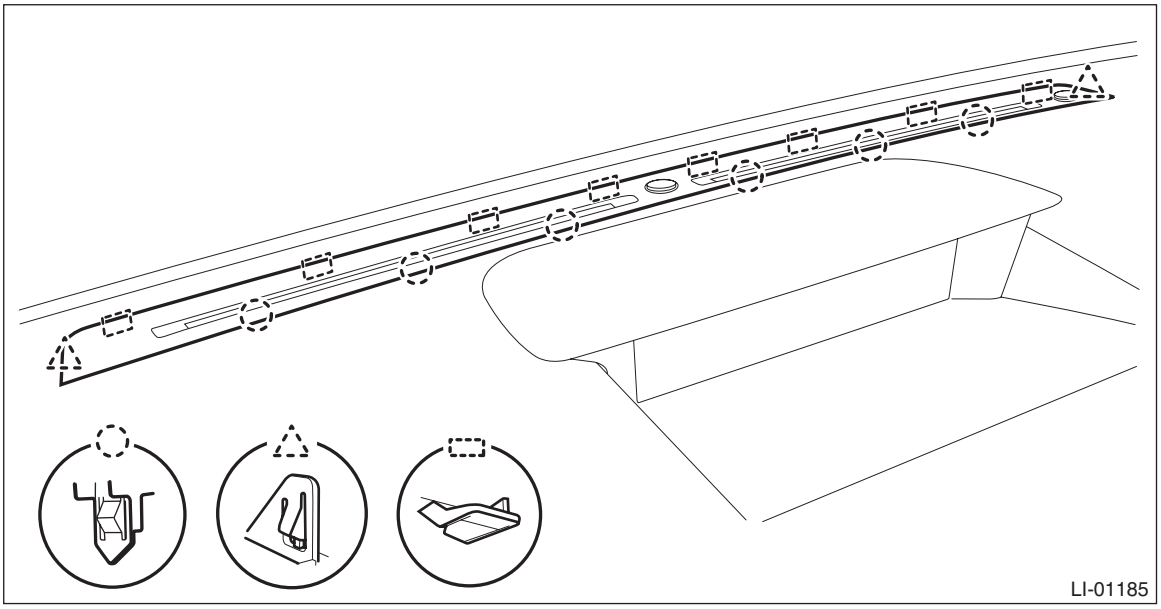
3) Replace the ambient sensor if the inspection result is not within the standard.

23.Sunload Sensor (Auto A/C Model)

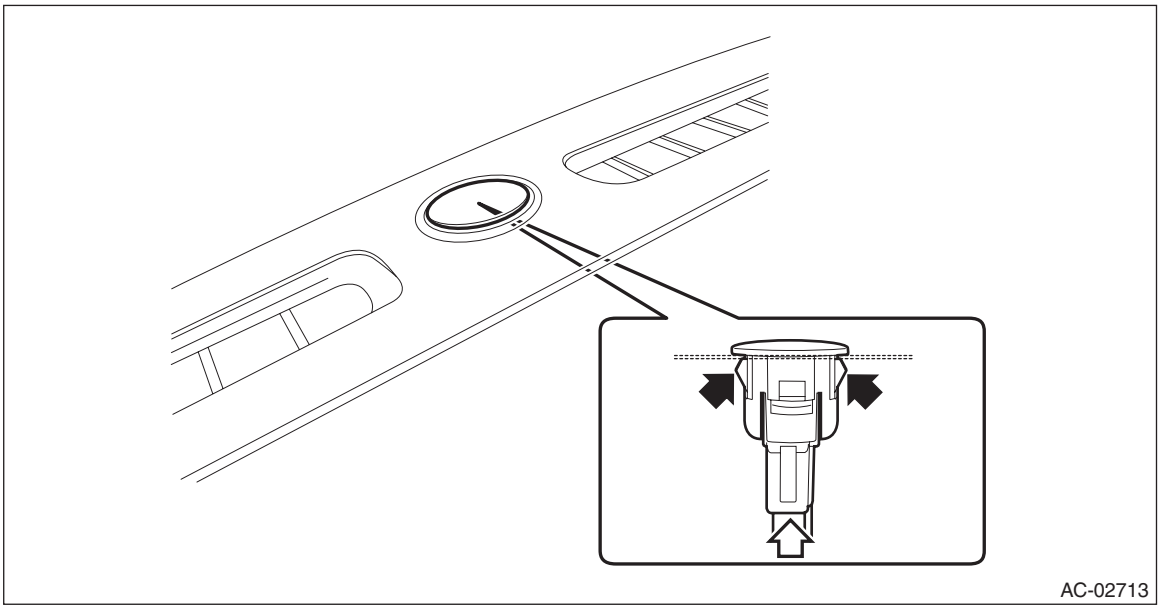
A: REMOVAL

CAUTION:
Be careful not to damage the sensors and interior trims when removing.

1) Disconnect the ground cable from battery.
2) Remove the sensor - sunload.
   (1) Release the connector and claws, and remove the panel COMPL - instrument UPR.



   (2) Press the left and right claws to remove the sensor - sunload from the panel COMPL - instrument UPR.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

On- the vehicle inspection

PREPARATION TOOL:
SUBARU SELECT MONITOR III KIT

1) Check if there is anything that affects sensing, around the sensor - sunload.
   (1) Is there anything placed on the sensor - sunload that disturbs sensing?
   (2) Is there anything on the windshield glass, such as sticker and film, that disturbs sensing?
   - **No** → Go to step 2).
   - **Yes** → Remove everything that affects sensing.

2) Using the Subaru Select Monitor, check «Quantity of Sunload».

NOTE:
For detailed procedures, refer to “PC application help for Subaru Select Monitor”.
   (1) Cover the sensor - sunload with cloth.
   (2) Does the «Quantity of Sunload» indicate 0 W/m^2 when the direct sunlight is shielded?
   - **Yes** → Go to step 3).
   - **No** → Replace the sensor - sunload.

3) From the condition in step 2), expose the sensor - sunload to light.
   (1) Place intense light such as incandescent light at 30 cm or less from the sunload sensor.
   (2) Does «Quantity of Sunload» indicate 2000 W/m^2 or less?

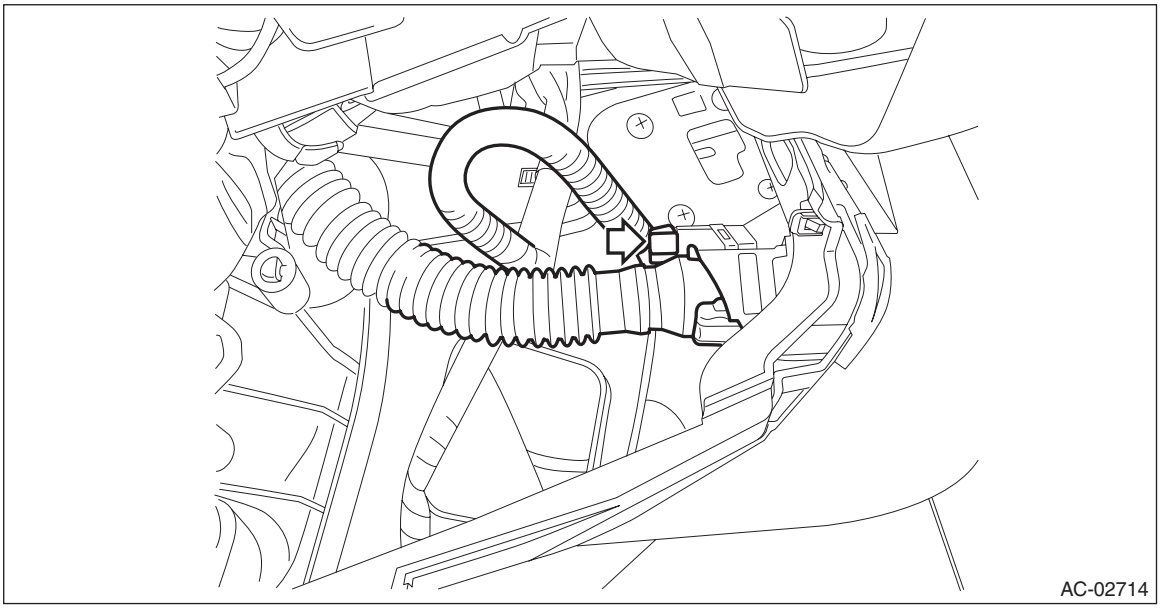
CAUTION:
The value changes depending on the angle of light.
   - **Yes** → The sensor - sunload is normal.
   - **No** → Replace the sensor - sunload.

24.In-Vehicle Sensor (Auto A/C Model)

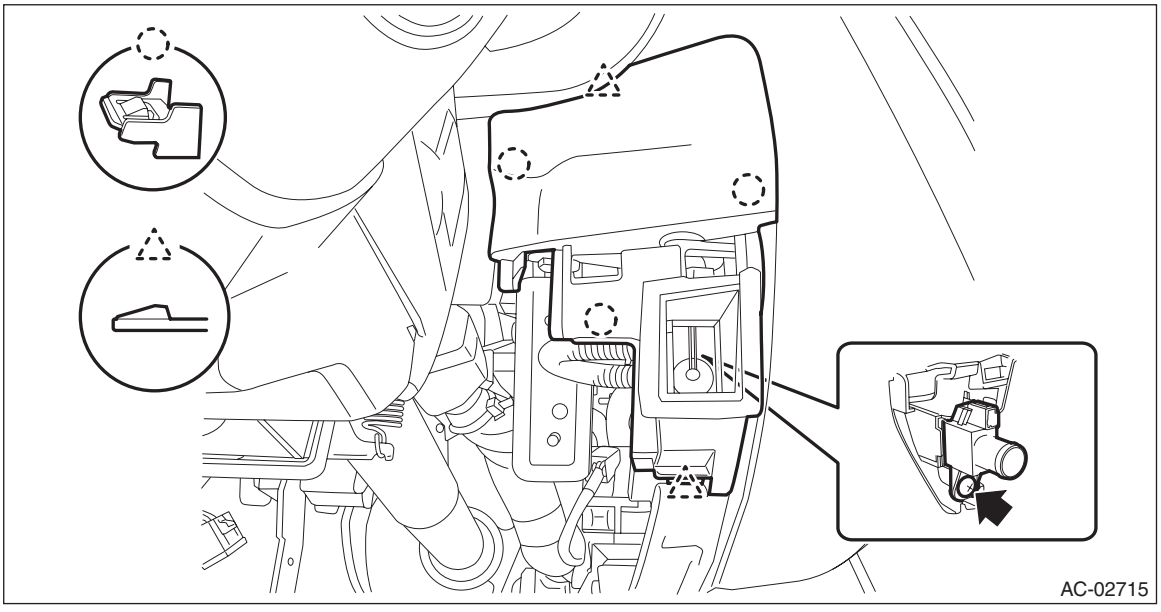
A: REMOVAL

CAUTION:
Be careful not to damage the sensors and interior trims when removing.

1) Remove the knee airbag module. <Ref. to AB-42, REMOVAL, Knee Airbag Module.>
2) Remove the in-vehicle sensor.
   (1) Disconnect the connector, and remove the aspirator hose.



   (2) Release the claws and remove the cover switch - starter.
   (3) Remove the screw and remove the in-vehicle sensor from the cover switch - starter.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:
Refer to “INSTALLATION” of “Knee Airbag Module”. <Ref. to AB-43, INSTALLATION, Knee Airbag Module.>

Tightening torque:
Blower motor unit: <Ref. to AC-10, BLOWER MOTOR UNIT, COMPONENT, General Description.>
Engine control module (ECM): 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

C: INSPECTION

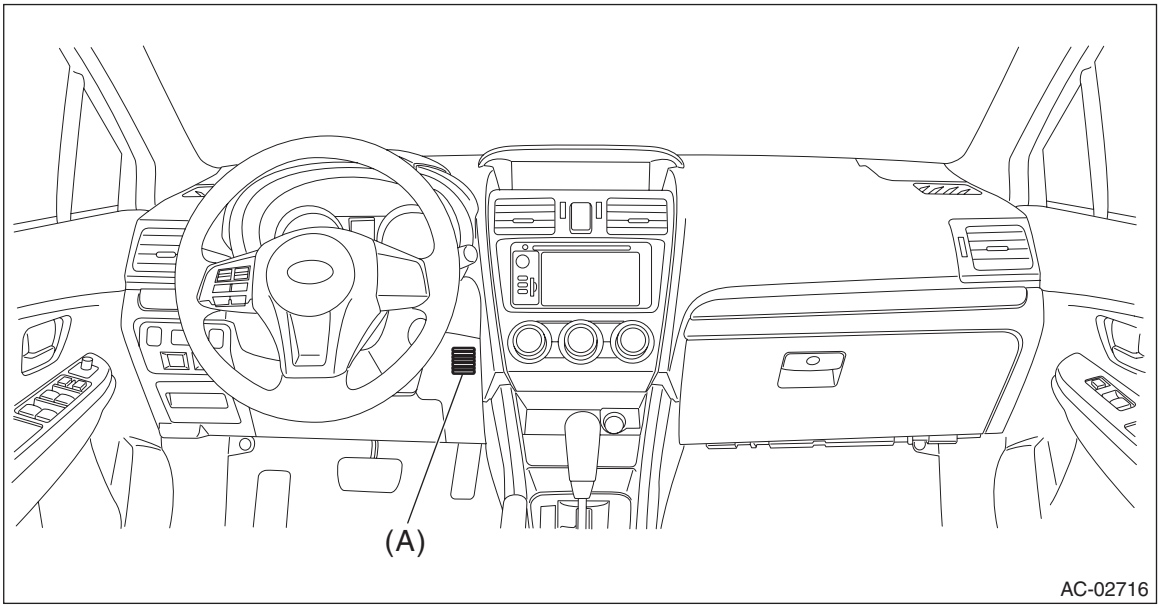
On- the vehicle inspection

PREPARATION TOOL:
Circuit tester

1) Set the vehicle to the following conditions.

Item	Condition
Ignition switch	ON
A/C switch	ON
Temperature control dial	HI (MAX HOT)
Air flow control dial or switch	DEF
Fan dial	HI (MAX)

2) Check the suction port (A) for in-vehicle sensor of the cover assembly - instrument panel LWR driver INN.

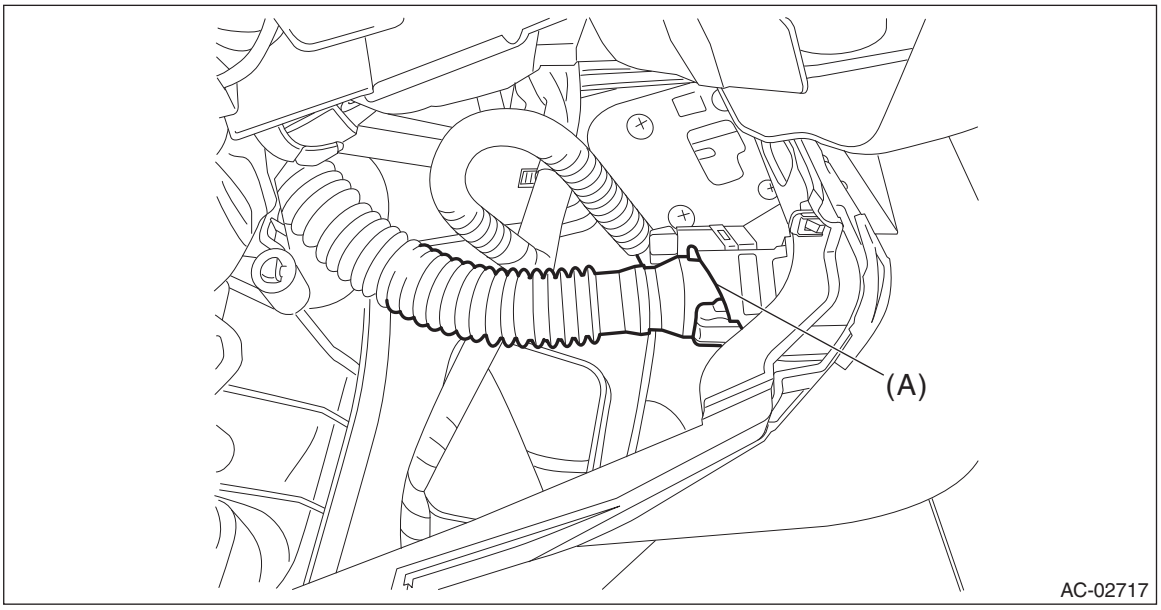


(1) Put a strip of paper close to the front side of suction port (A).
(2) Can you see that the paper moves toward the port and that the air is sucked into the port?

CAUTION:
Be careful not to let the paper get sucked into the port.

- **Yes** → Go to step 5).
- **No** → Go to step 3).

3) Remove the cover assembly - instrument panel LWR driver INN, and check the aspirator hose (A).



(1) Is the aspirator hose on both sides of case and sensor disengaged?
(2) Is the aspirator hose deformed or cracked?

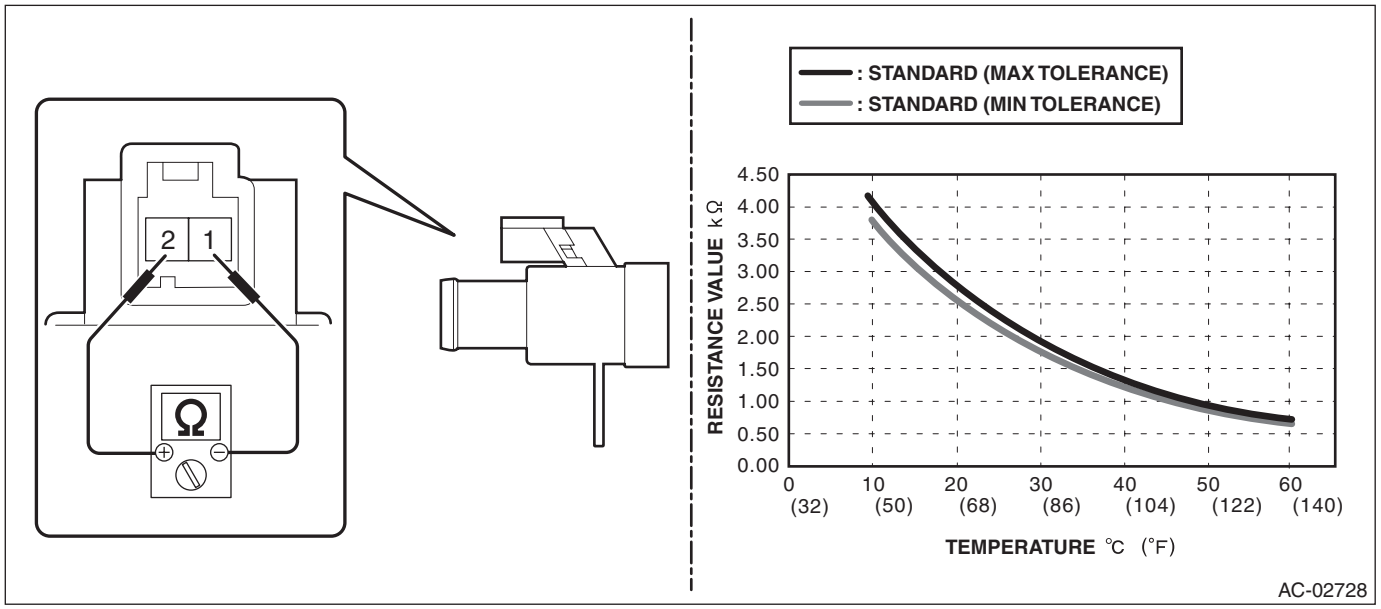
- **No** → Go to step 4).
- **Yes** → Repair or replace the aspirator hose, if necessary.

4) Check if there is anything that affects sensing, around the in-vehicle sensor.
(1) Is the in-vehicle sensor hole blocked?
(2) Is there any part (audio or navigation, etc.) that produces heat around the in-vehicle sensor?

- **No** → Go to step 5).
- **Yes** → Remove everything that affects sensing.

5) Perform a unit inspection of in-vehicle sensor.
(1) Disconnect the in-vehicle sensor connector.
(2) Is the resistance between in-vehicle sensor terminals within the specification?

CAUTION:
During inspection, be careful not to touch the sensor end in order to avoid misjudgment due to body temperature.



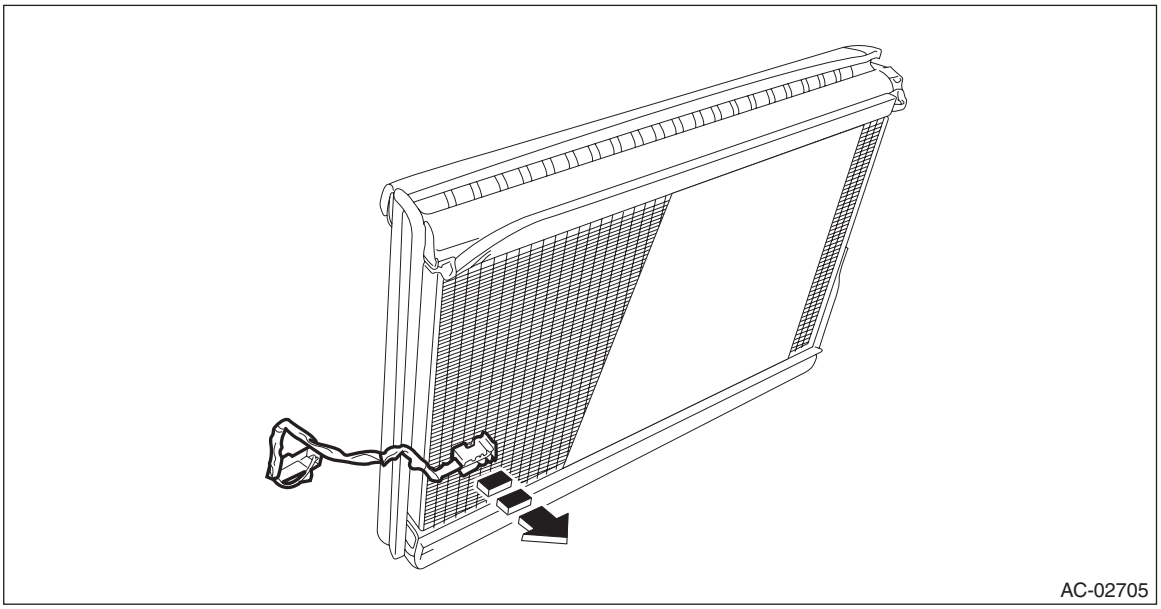
Terminal No.	Inspection conditions	Standard
1 — 2	10°C	3.772 — 4.101 kΩ
	15°C	3.096 — 3.338 kΩ
	20°C	2.556 — 2.734 kΩ
	25°C	2.121 — 2.251 kΩ
	30°C	1.756 — 1.878 kΩ
	35°C	1.462 — 1.574 kΩ
	40°C	1.223 — 1.326 kΩ
	45°C	1.028 — 1.122 kΩ
	50°C	0.868 — 0.9542 kΩ
	55°C	0.7363 — 0.8147 kΩ
	60°C	0.6273 — 0.6984 kΩ

- **Yes** → The in-vehicle sensor is normal.
- **No** → Replace the in-vehicle sensor.

25.Evaporator Sensor

A: REMOVAL

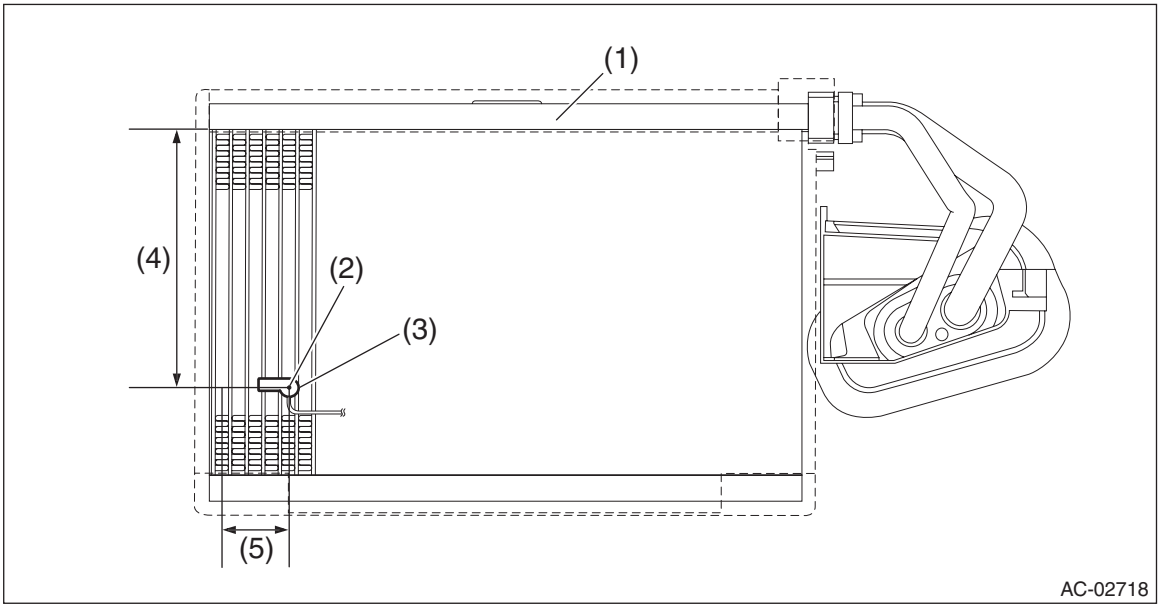
1) Remove the evaporator assembly - cooling. <Ref. to AC-63, REMOVAL, Evaporator.>
2) Remove the thermostat - cooling from the evaporator assembly - cooling.



B: INSTALLATION

CAUTION:
- **Make sure that the water seal packing on the cover attachment area is securely attached.**
- **Replace the O-rings with new parts, and then apply compressor oil.**

1) Install the thermostat - cooling at the position shown in the figure below.



(1) Evaporator ASSY - cooling
(2) Center
(3) Thermostat - cooling
(4) 130 mm (5.12 in) from the upper end of the fins
(5) Fifth row fin from the left end

2) Install each part in the reverse order of removal.

Tightening torque:
Heater cooling unit: <Ref. to AC-6, HEATER AND COOLING UNIT, COMPONENT, General Description.>
Blower motor unit: <Ref. to AC-10, BLOWER MOTOR UNIT, COMPONENT, General Description.>
3) Charge refrigerant. <Ref. to AC-27, PROCEDURE, Refrigerant Charging Procedure.>

C: INSPECTION

On- the vehicle inspection

PREPARATION TOOL:
SUBARU SELECT MONITOR III KIT
Circuit tester
Thermometer
1) Prepare the vehicle.

NOTE:
Check that the ambient temperature is 25 — 40°C (77 — 104°F) and humidity is 30% — 80%.
- Place the vehicle in the enclosed space such as maintenance room or in the shade and windless condition.
- Open all windows.

2) Set the vehicle to the following conditions.

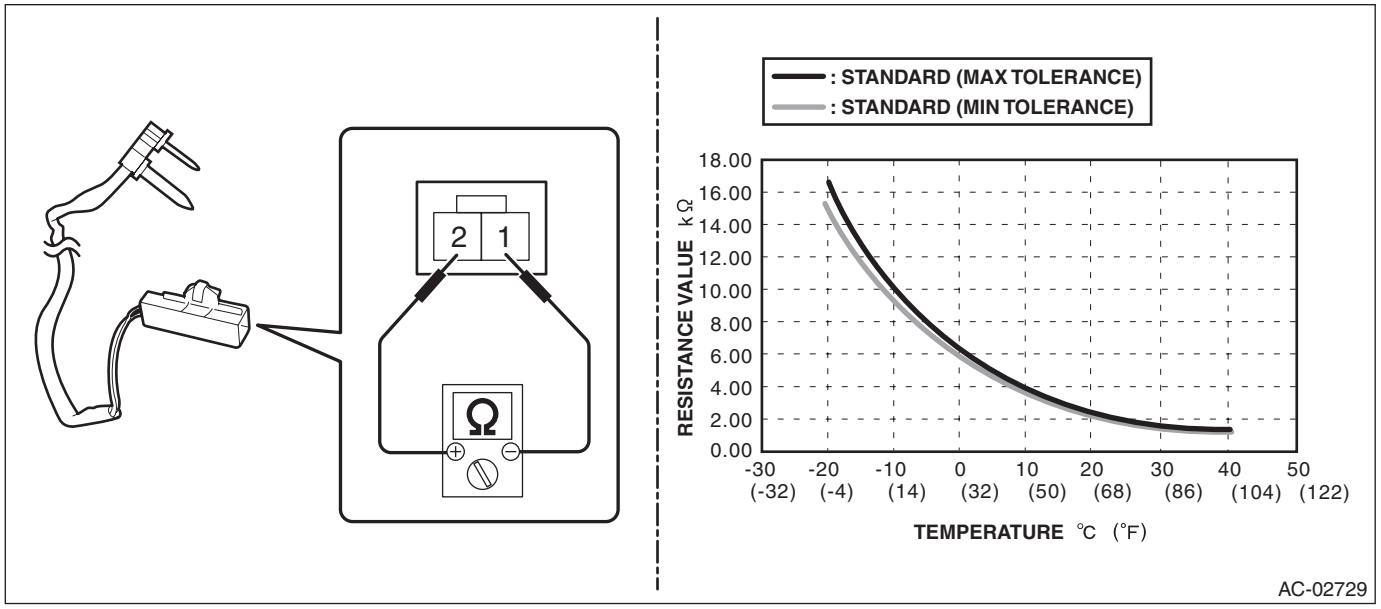
Item	Condition
Engine	Idling
Air vent grille	Shutter: Fully open
A/C switch	OFF
Temperature control dial	LO (MAX COOL)
FRESH/RECIRC switch	CIRC
Air flow control dial or switch	VENT
Fan dial	Auto A/C model: 5/7 level
	Manual A/C model: 3/4 level

3) Using the Subaru Select Monitor, check «Evaporator Temperature».

NOTE:
For detailed procedures, refer to “PC application help for Subaru Select Monitor”.
(1) Idle the engine for 15 minutes, and then compare the air flow outlet temperature with «Evaporator Temperature».

NOTE:
Obtain the air flow outlet temperature by measuring the average temperature of center grille assembly and side grille assembly.
(2) Do the air flow outlet temperature and «Evaporator Temperature» differ by 3°C (5.4°F) or more?
- **Yes** → Go to step 4).
- **No** → Evaporator sensor is normal.

4) Perform the inspection of evaporator sensor.
(1) Disconnect the evaporator sensor connector.
(2) Is the resistance between evaporator sensor terminals within the specification?



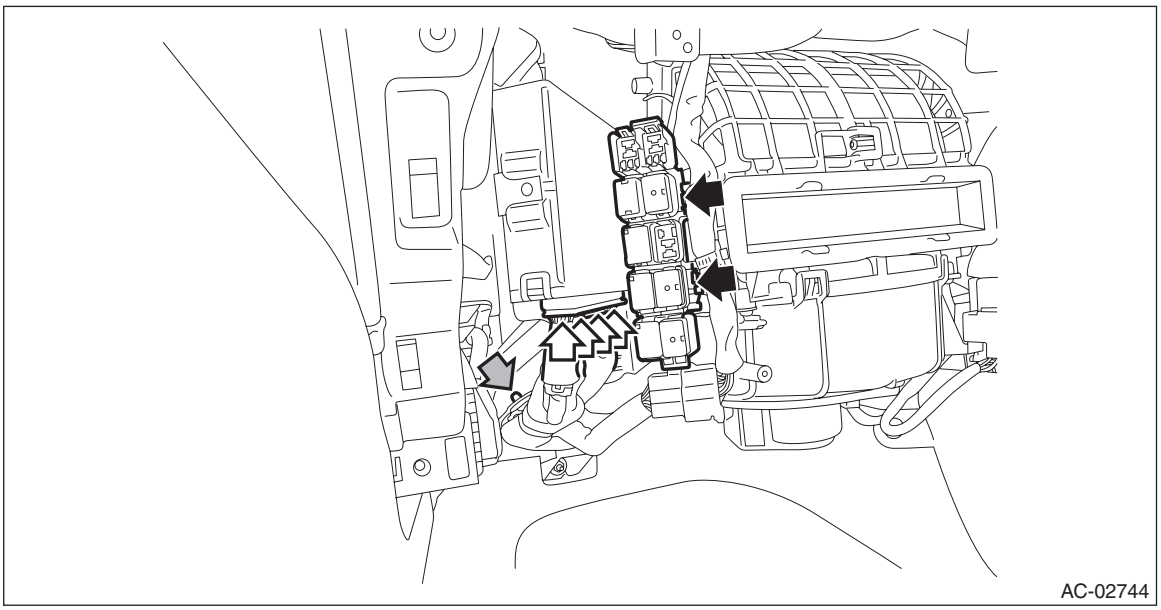
Terminal No.	Inspection conditions	Standard
1 — 2	-20°C	15.37 — 16.62 kΩ
	-15°C	12.09 — 12.87 kΩ
	-10°C	9.576 — 10.05 kΩ
	-5°C	7.636 — 7.899 kΩ
	0°C	6.132 — 6.256 kΩ
	5°C	4.891 — 5.057 kΩ
	10°C	3.928 — 4.113 kΩ
	15°C	3.174 — 3.366 kΩ
	20°C	2.581 — 2.77 kΩ
	25°C	2.111 — 2.292 kΩ
	30°C	1.737 — 1.907 kΩ
	35°C	1.437 — 1.595 kΩ
	40°C	1.195 — 1.34 kΩ

- **Yes** → Evaporator sensor is normal.
- **No** → Replace the evaporator sensor.

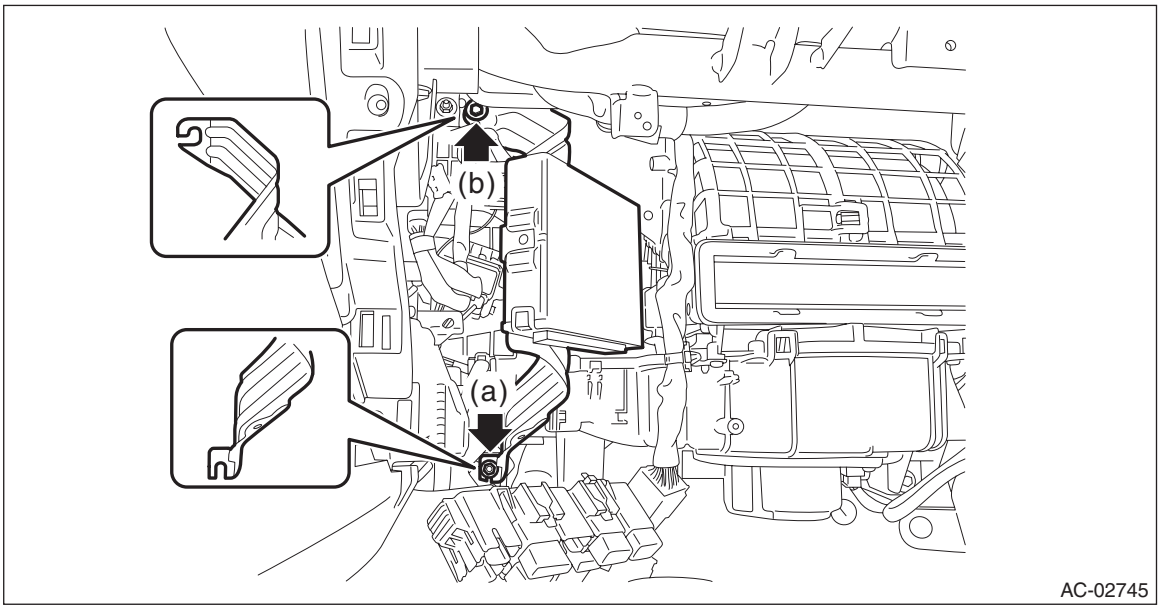
26.FRESH/RECIRC Door Actuator

A: REMOVAL

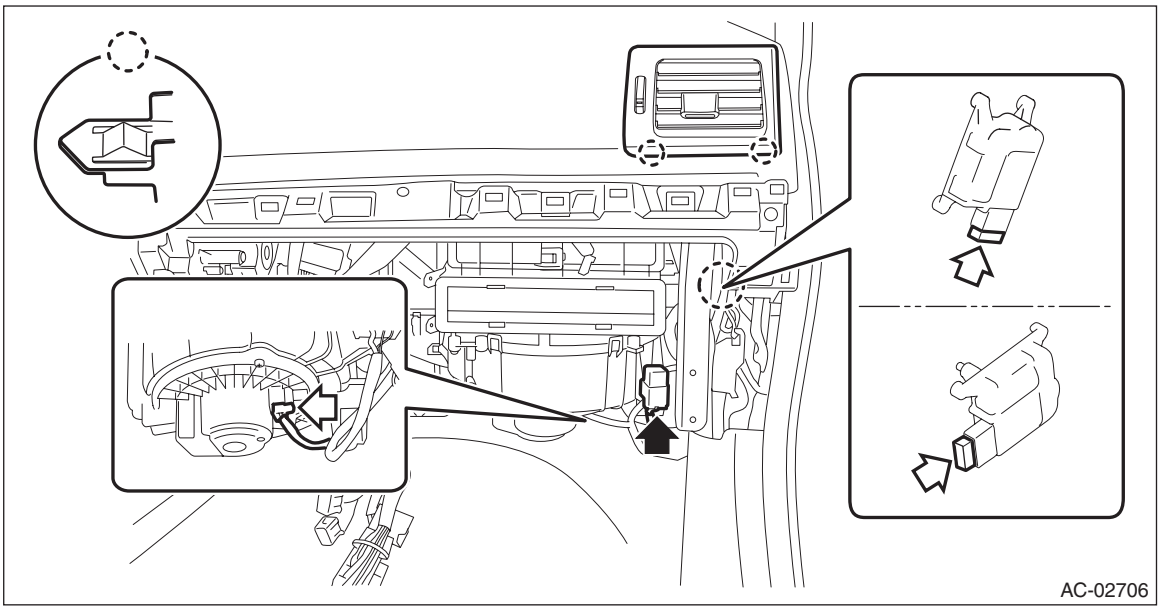
1) Disconnect the ground cable from battery.
2) Remove the glove box. <Ref. to EI-63, REMOVAL, Glove Box.>
3) Remove the engine control module (ECM).
   (1) Release the lock and remove the relay holder.
   (2) Remove the harness clip, and disconnect the connector.



   (3) Remove the nut (a).
   (4) Loosen the bolt (b), and remove the engine control module (ECM).

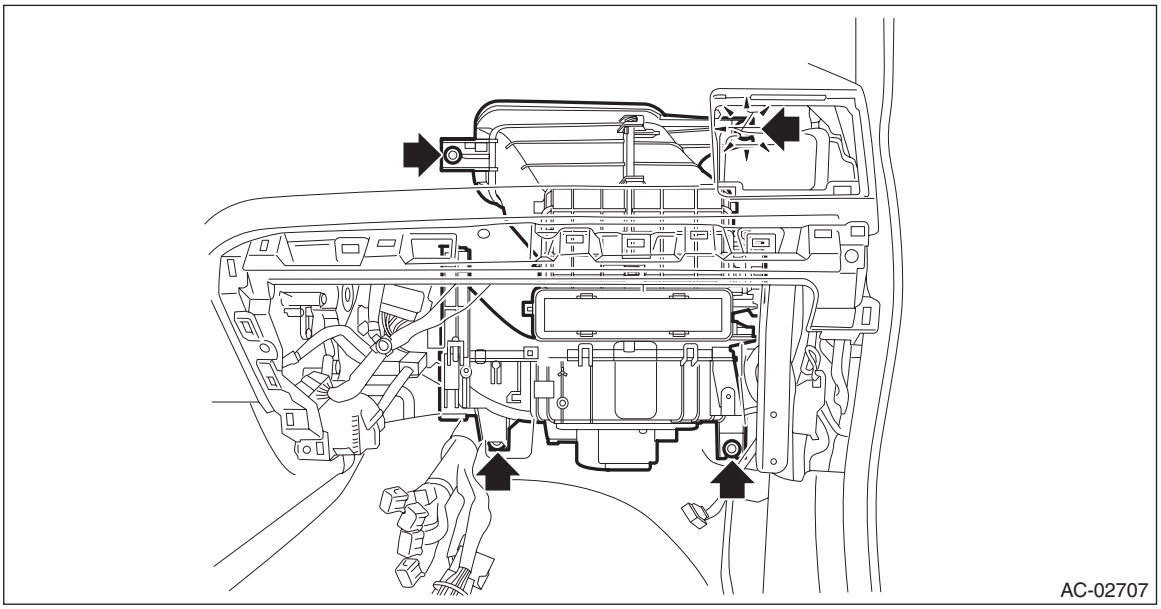


4) Remove the blower motor unit assembly.
(1) Release the claws, and then remove the grille assembly - ventilation RH.
(2) Disconnect the blower motor relay and each connector.



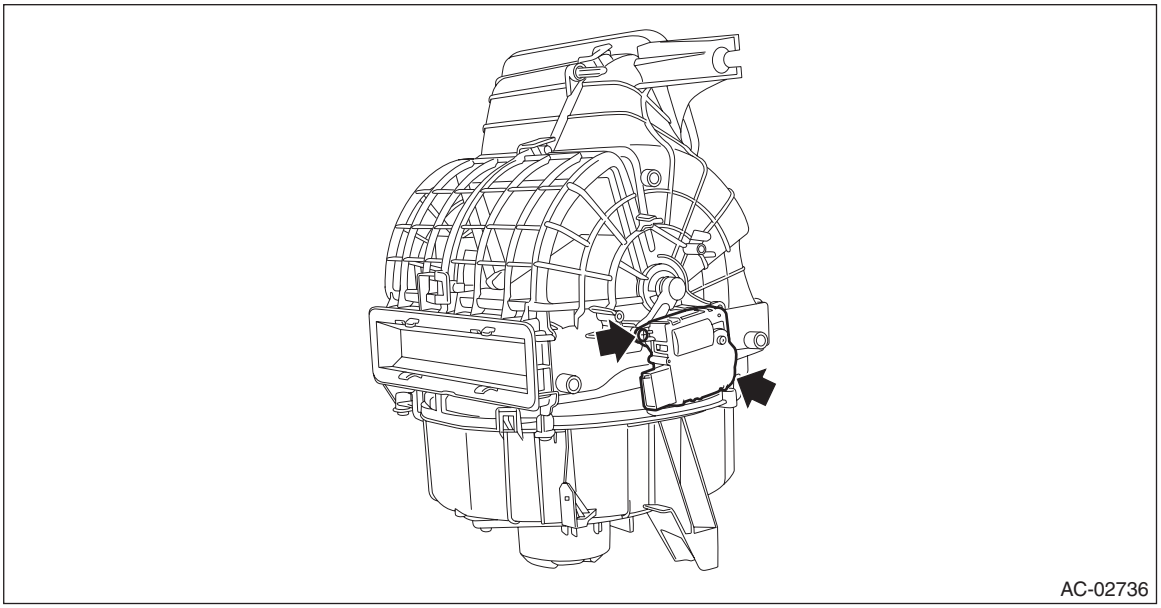
(3) Remove the bolts and nuts to remove blower motor unit assembly.

NOTE:
Remove the RH upper nut from the mounting portion of the grille assembly - ventilation RH.

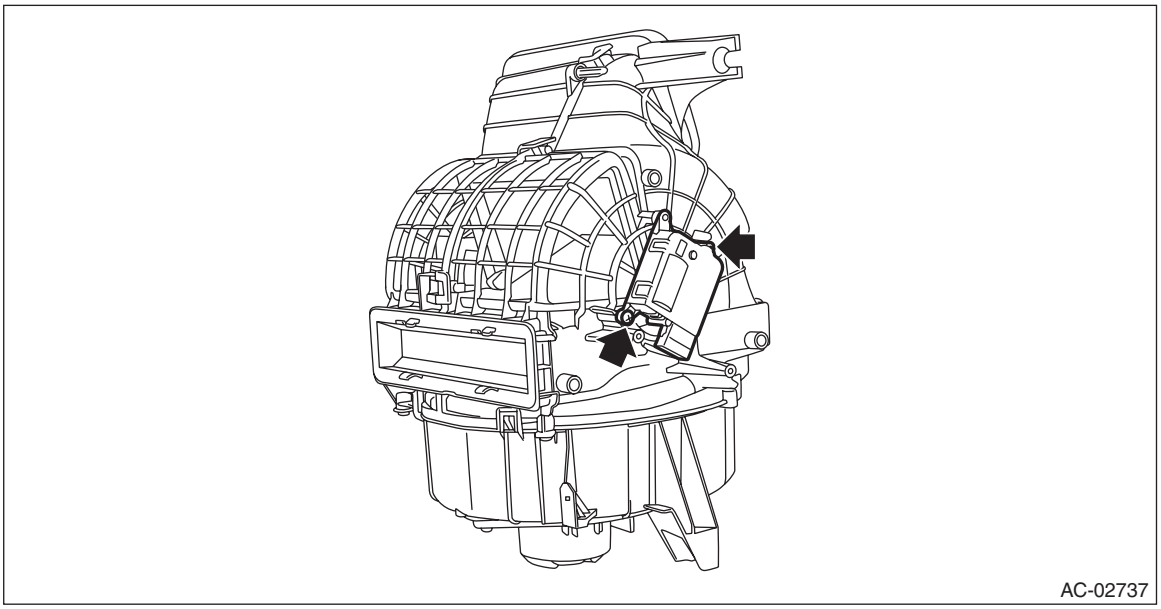


5) Remove the screws and detach the motor - actuator blower.

- Manual A/C model


AC-02736

- Auto A/C model


AC-02737

B: INSTALLATION

CAUTION:
After installing the grille assembly - ventilation RH, check that the air vent grille of the grille assembly - ventilation RH is inserted correctly into the air vent duct.
Install each part in the reverse order of removal.

NOTE:
Refer to “INSTALLATION” of “Instrument Panel Assembly”. <Ref. to EI-87, INSTALLATION, Instrument Panel Assembly.>

Tightening torque:
Blower motor unit: <Ref. to AC-10, BLOWER MOTOR UNIT, COMPONENT, General Description.>
Engine control module (ECM): 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

C: INSPECTION

1. CHECK LINK

1) Visually check the operation range of the link, and remove the foreign material if any.
2) Operate the FRESH/RECIRC switch to check that the link operates normally.
3) If it does not operate normally as the result of inspection, check the motor - actuator blower.

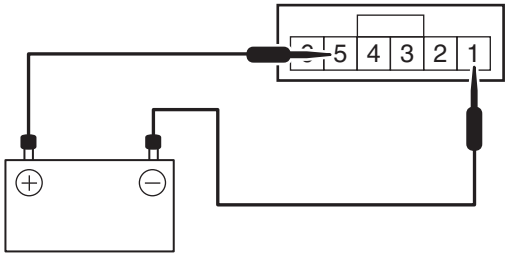
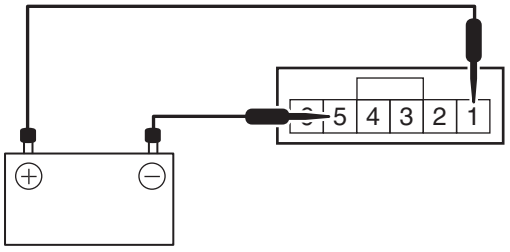
2. CHECK ACTUATOR

UNIT INSPECTION

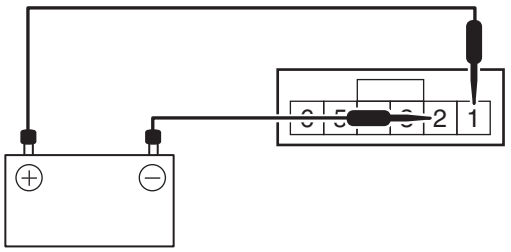
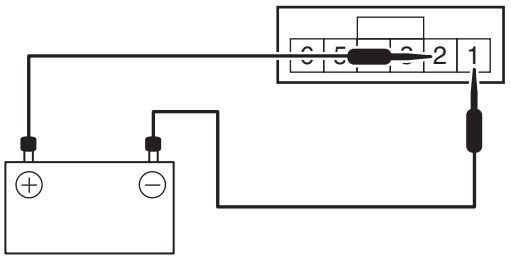
1) Check the actuator operation when battery voltage is applied between the terminals of actuator.

CAUTION:
Remove the battery immediately once the actuator stops operating. Otherwise, damage to the motor can occur.

- Manual A/C model

Terminal No.	Inspection conditions	Position	Connection diagram
5 (+) — 1 (–)	Connect battery to the terminals	RECIRC	 AC-02738
1 (+) — 5 (–)		FRESH	 AC-02739

- Auto A/C model

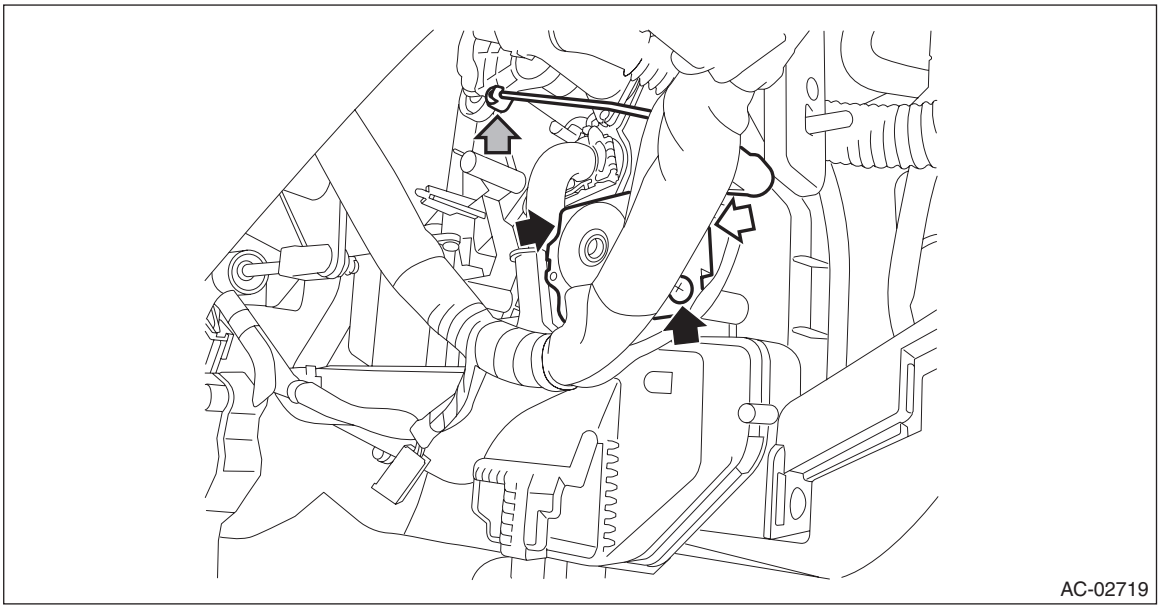
Terminal No.	Inspection conditions	Position	Connection diagram
1 (+) — 2 (–)	Connect battery to the terminals	RECIRC	 AC-02742
2 (+) — 1 (–)		FRESH	 AC-02741

2) If it does not operate normally as the result of inspection, replace the motor - actuator blower.

27.Mode Door Actuator

A: REMOVAL

1) Remove the knee airbag module. <Ref. to AB-42, REMOVAL, Knee Airbag Module.>
2) Remove the motor - actuator mode.
   (1) Disconnect the connector, and remove the rod from the rod clamp.
   (2) Remove the screws and detach the motor - actuator mode.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:
Refer to “INSTALLATION” of “Knee Airbag Module”. <Ref. to AB-43, INSTALLATION, Knee Airbag Module.>

C: INSPECTION

1. CHECK LINK

1) Visually check the operation range of the link, and remove the foreign material if any.
2) Operate the air flow control dial or switch to check that the link operates normally.
3) If it does not operate normally as the result of inspection, check the motor - actuator mode.

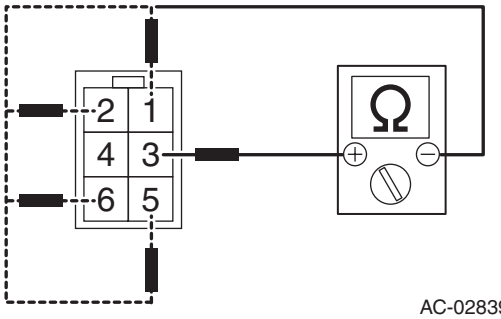
2. CHECK ACTUATOR

UNIT INSPECTION

PREPARATION TOOL:

Circuit tester

1) Check the resistance between actuator terminals.

Terminal No.	Inspection conditions	Standard	Connector sketch
3 — 1	Always	80 — 100 Ω	
3 — 2			
3 — 5			
3 — 6			

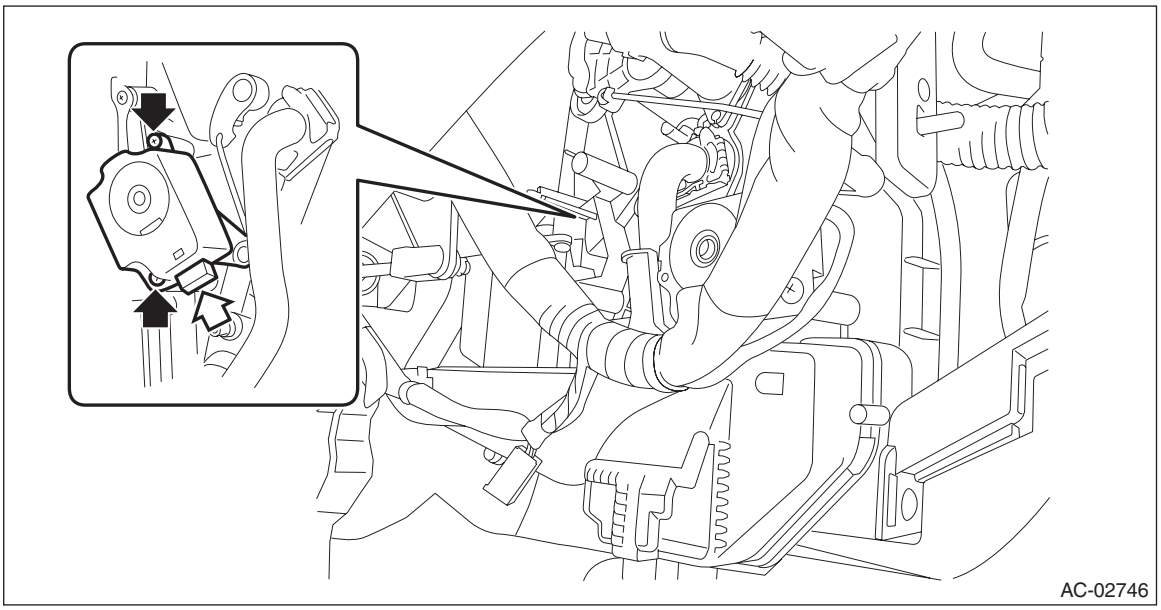
2) Replace the motor - actuator mode if it is found defective as a result of inspection.

28.Air Mix Door Actuator

A: REMOVAL

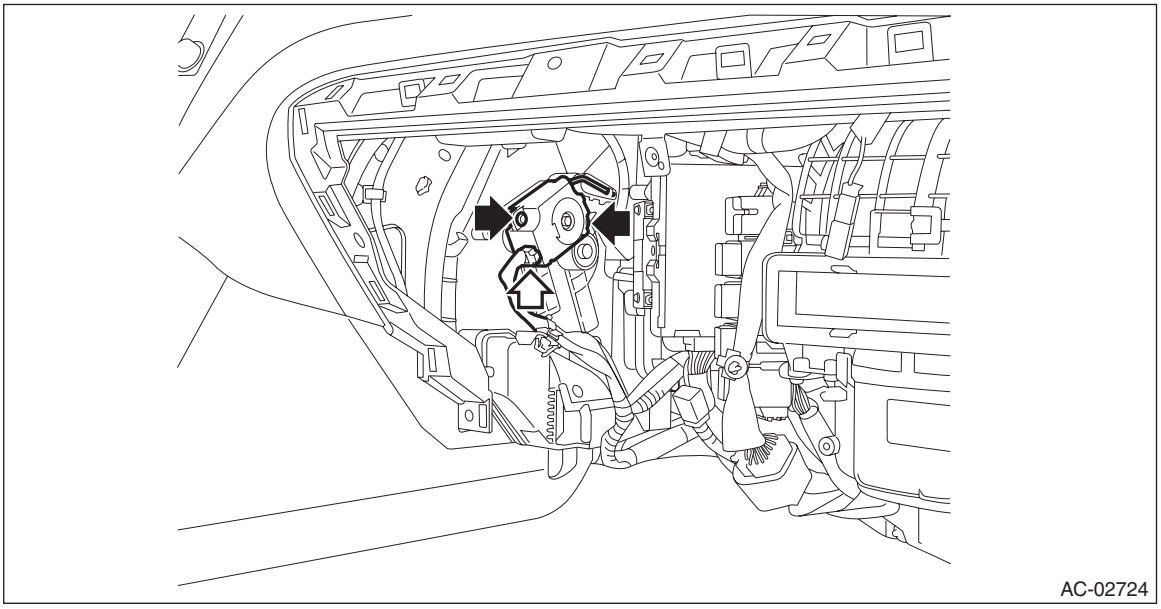
1. LH

1) Remove the knee airbag module. <Ref. to AB-42, REMOVAL, Knee Airbag Module.>
2) Remove the motor - actuator mix.
   (1) Disconnect the connector, and remove the rod from the rod clamp.
   (2) Remove the screws and detach the motor - actuator mix.



2. RH

1) Remove the glove box. <Ref. to EI-63, REMOVAL, Glove Box.>
2) Remove the motor - actuator mix.
   (1) Disconnect the connector, and remove the rod from the rod clamp.
   (2) Remove the screws and detach the motor - actuator mix.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:
Refer to “INSTALLATION” of “Knee Airbag Module”. <Ref. to AB-43, INSTALLATION, Knee Airbag Module.>

C: INSPECTION

1. CHECK LINK

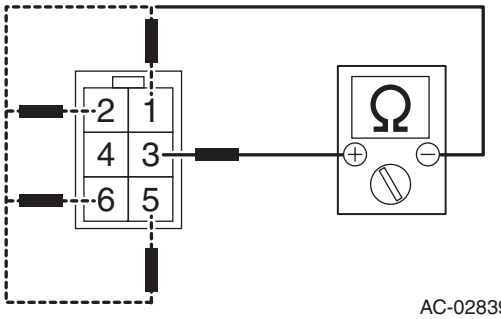
1) Visually check the operation range of the link, and remove the foreign material if any.
2) Operate the temperature control dial to check that the link operates normally.
3) If it does not operate normally as the result of inspection, check the motor - actuator mix.

2. CHECK ACTUATOR

UNIT INSPECTION

PREPARATION TOOL:
Circuit tester

1) Check the resistance between actuator terminals.

Terminal No.	Inspection conditions	Standard	Connector sketch
3 — 1	Always	80 — 100 Ω	
3 — 2			
3 — 5			
3 — 6			

2) Replace the motor - actuator mix if it is found defective as a result of inspection.

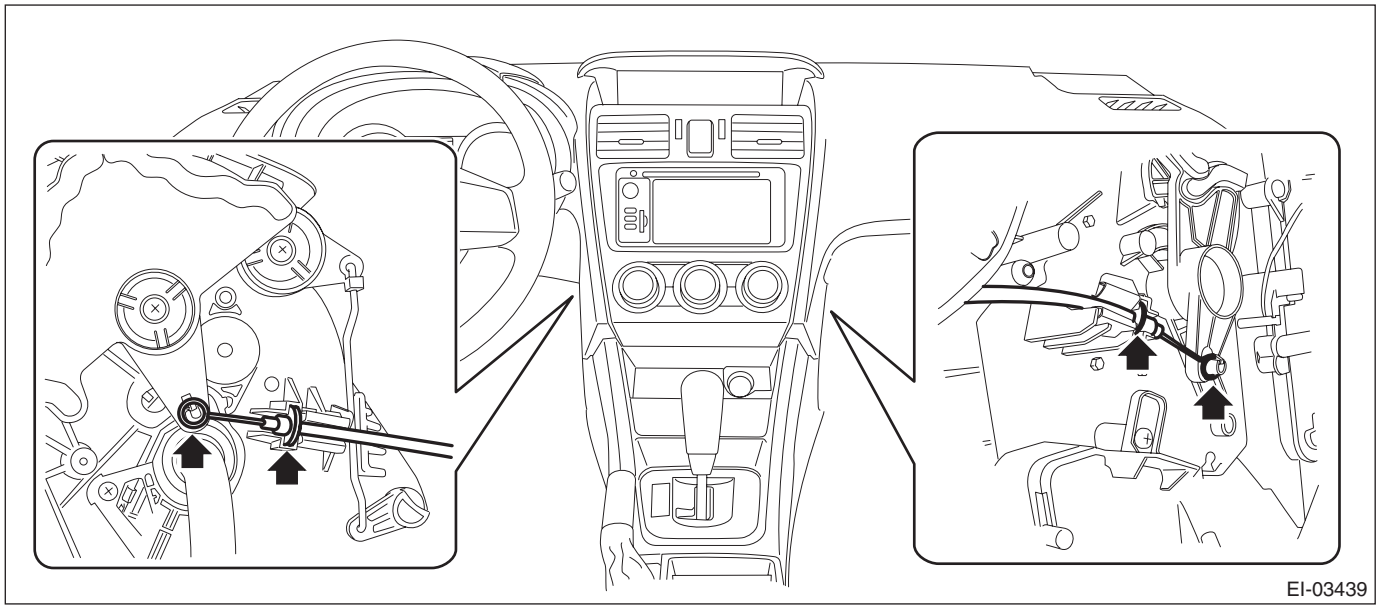
29.Air Vent Grille

A: REMOVAL

1. CENTER GRILLE ASSEMBLY

CAUTION:
Be careful not to damage the interior trims when removing.

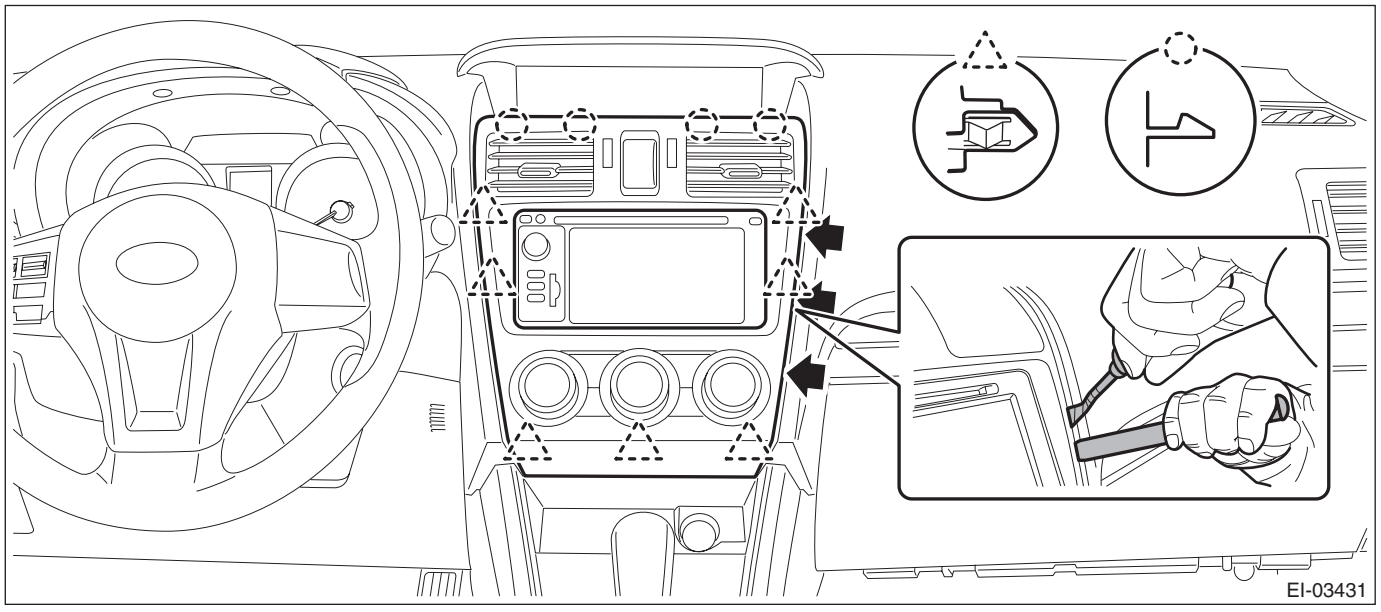
1) Disconnect the ground cable from battery.
2) On manual A/C models, disconnect the control cables from both sides of the heater and cooling unit assembly.



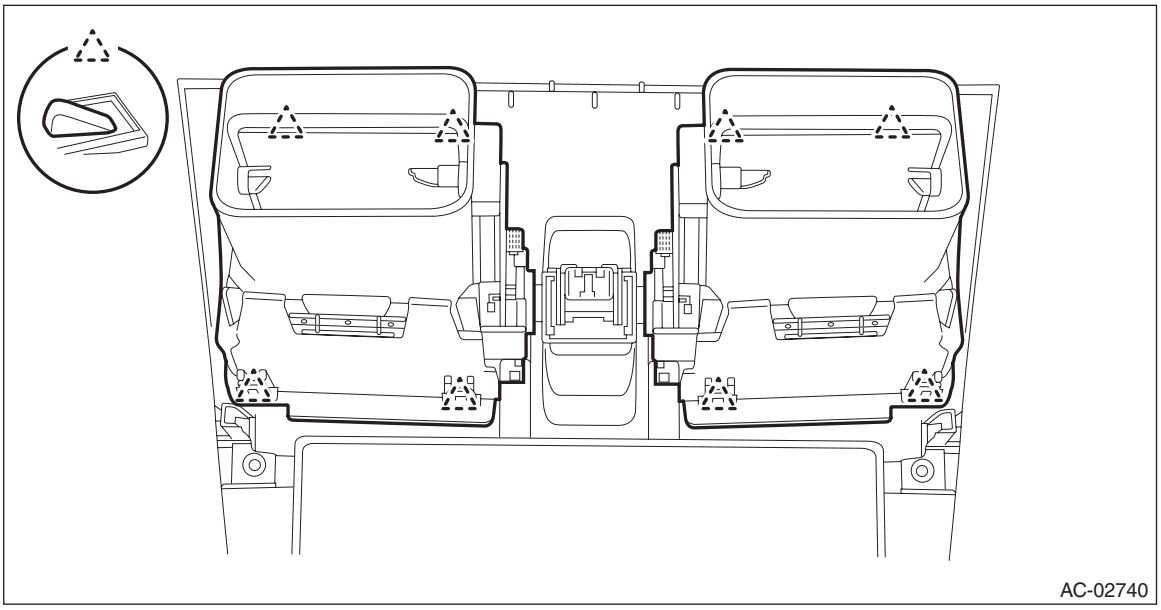
3) Remove the panel center assembly.

CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(1) Insert a plastic remover to the three areas shown by the arrows, and lift up the panel center assembly slightly.
(2) With the panel center assembly lifted up slightly, release the claw by using a clip remover wrapped with protective tape.
(3) Release the rest of the claws, and remove the panel center assembly.



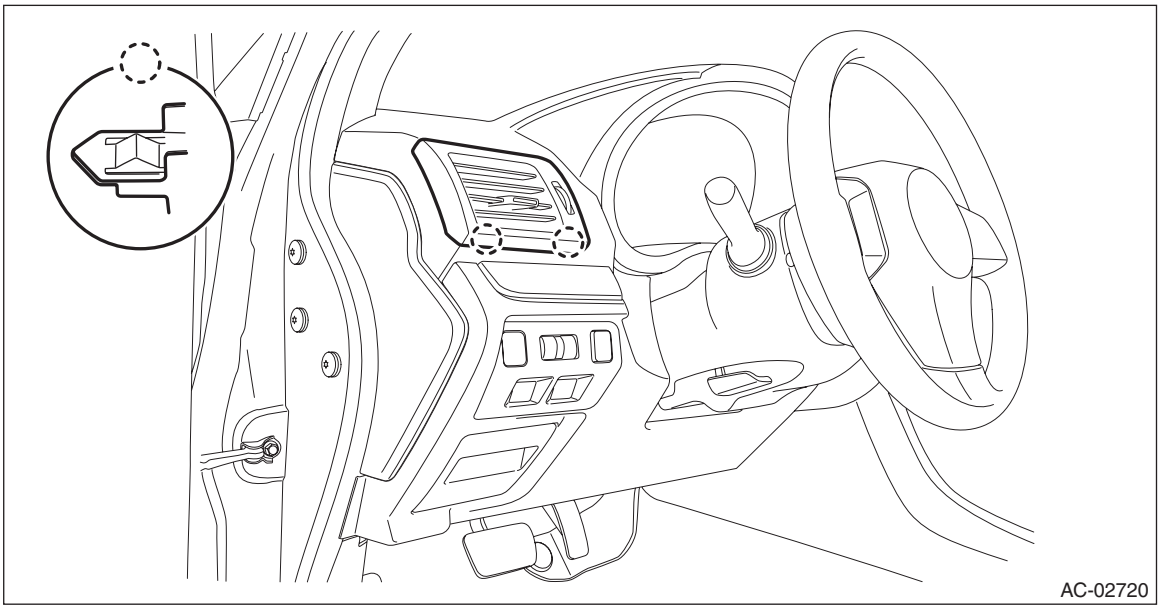
4) Release the claws, and then remove the grille assembly - CTR ventilation from the panel center assembly.



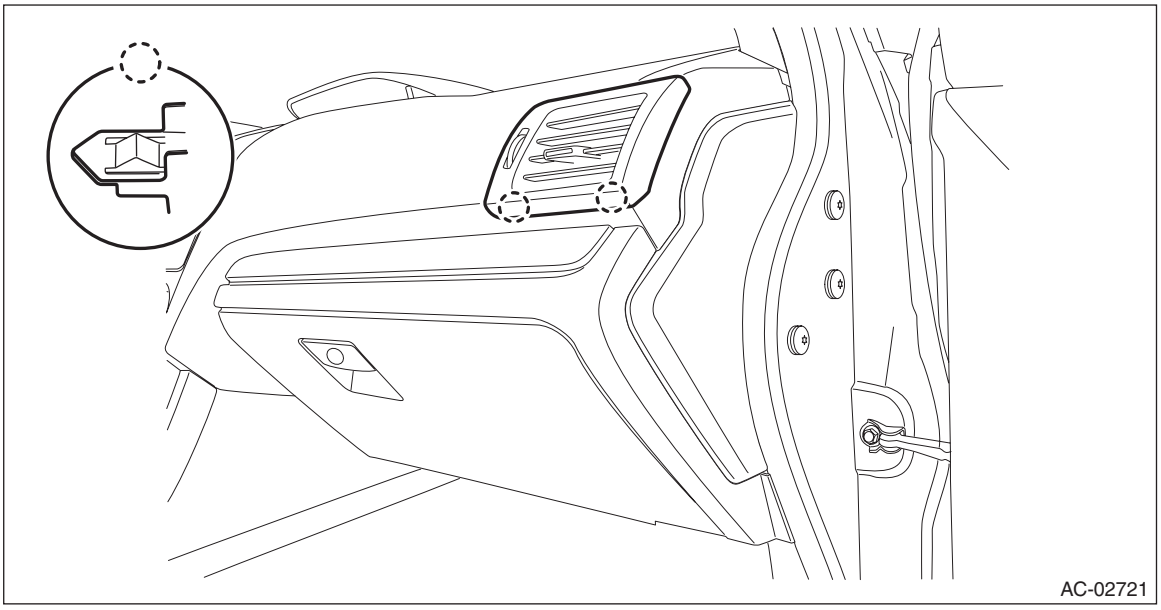
2. SIDE GRILLE ASSEMBLY

Release the claws, and then remove the grille assembly - ventilation RH.

- LH



- RH



B: INSTALLATION

CAUTION:
After installing the panel center assembly or grille assembly - ventilation, check that the air vent grille is inserted correctly into the air vent duct.
Install each part in the reverse order of removal.

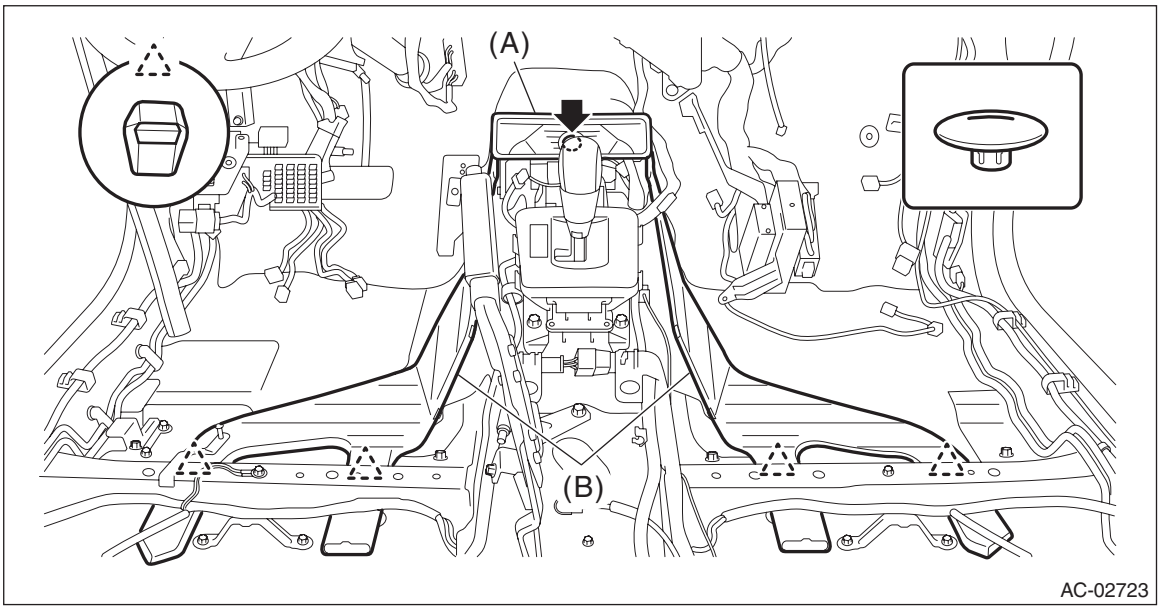
C: INSPECTION

1) Check that the direction and amount of air can be adjusted smoothly. Replace the grille assembly - ventilation if faulty.
2) Check that the adjustment can be maintained in each position. Replace the grille assembly - ventilation if faulty.

30.Heater Duct

A: REMOVAL

1) Remove the front seats. <Ref. to SE-7, REMOVAL, Front Seat.>
2) Remove the instrument panel assembly. <Ref. to EI-70, REMOVAL, Instrument Panel Assembly.>
3) Remove the duct - rear heater.
   (1) Lift the floor carpet.
   (2) Remove the clips, and remove the duct - rear heater CTR (A).
   (3) Release the claws, and remove the duct - rear heater (B) on LH and RH sides.



B: INSTALLATION

Install each part in the reverse order of removal.

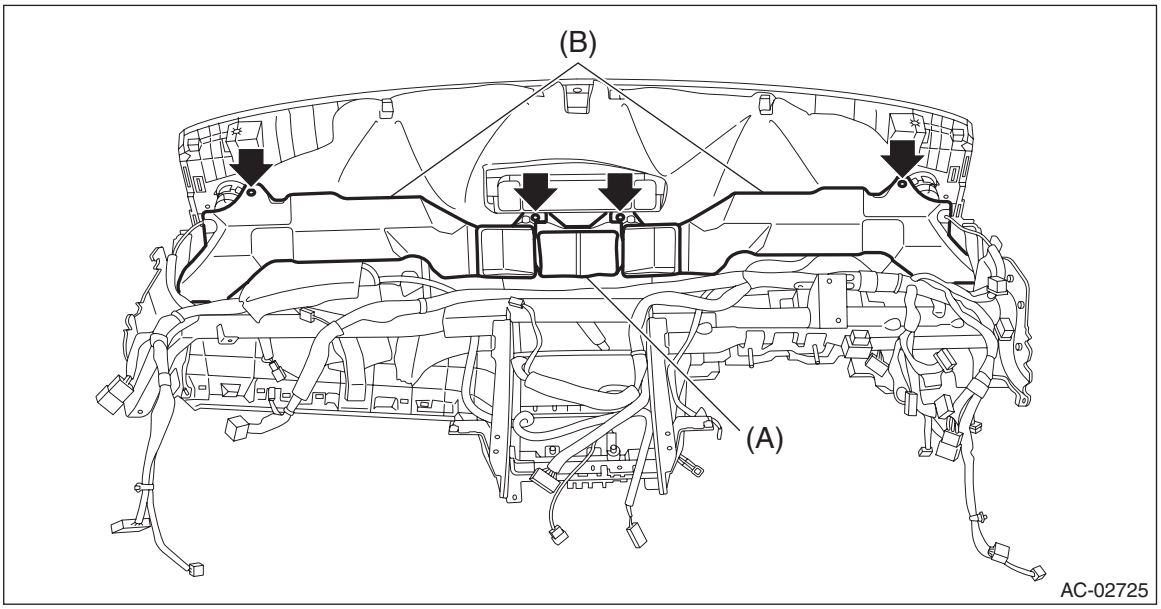
NOTE:
Refer to “INSTALLATION” of “Front Seat” and “Instrument Panel Assembly”.

- Front seat: <Ref. to SE-8, INSTALLATION, Front Seat.>
- Instrument panel assembly: <Ref. to EI-87, INSTALLATION, Instrument Panel Assembly.>

31.Heater Vent Duct

A: REMOVAL

1) Remove the instrument panel assembly. <Ref. to EI-70, REMOVAL, Instrument Panel Assembly.>
2) Remove the screws and remove the duct - center vent (A) and the duct - side ventilation (B) on LH and RH sides.



B: INSTALLATION

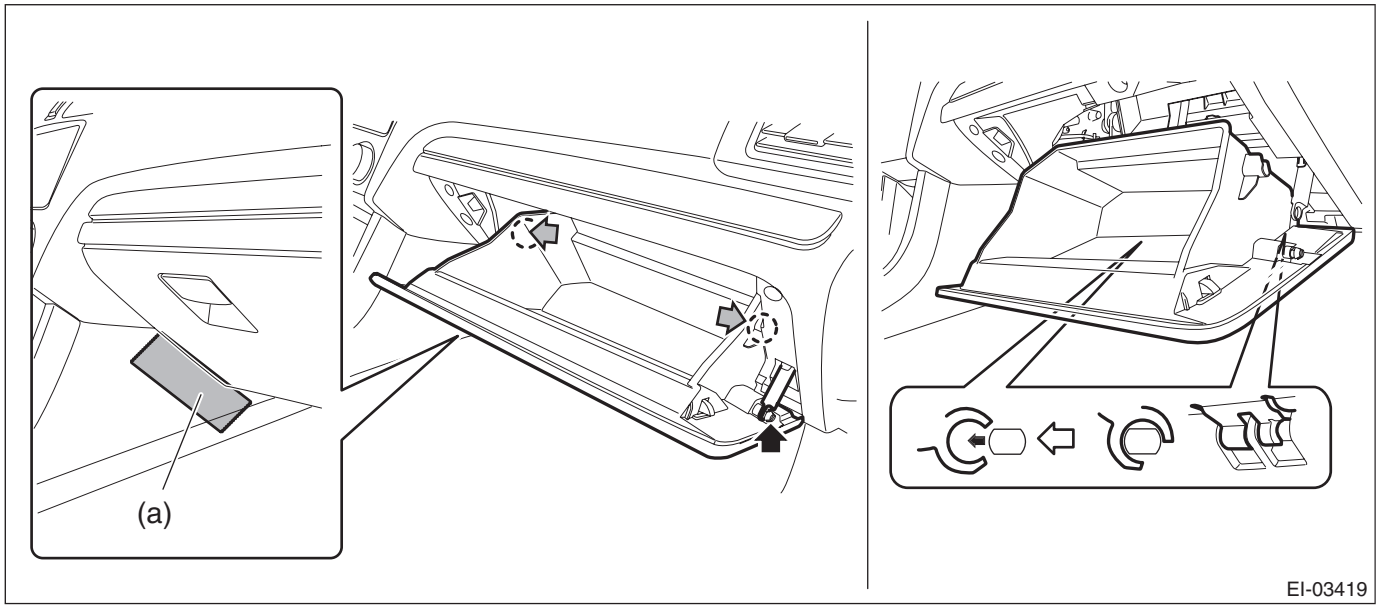
Install each part in the reverse order of removal.

NOTE:
Refer to “INSTALLATION” of “Instrument Panel Assembly”. <Ref. to EI-87, INSTALLATION, Instrument Panel Assembly.>

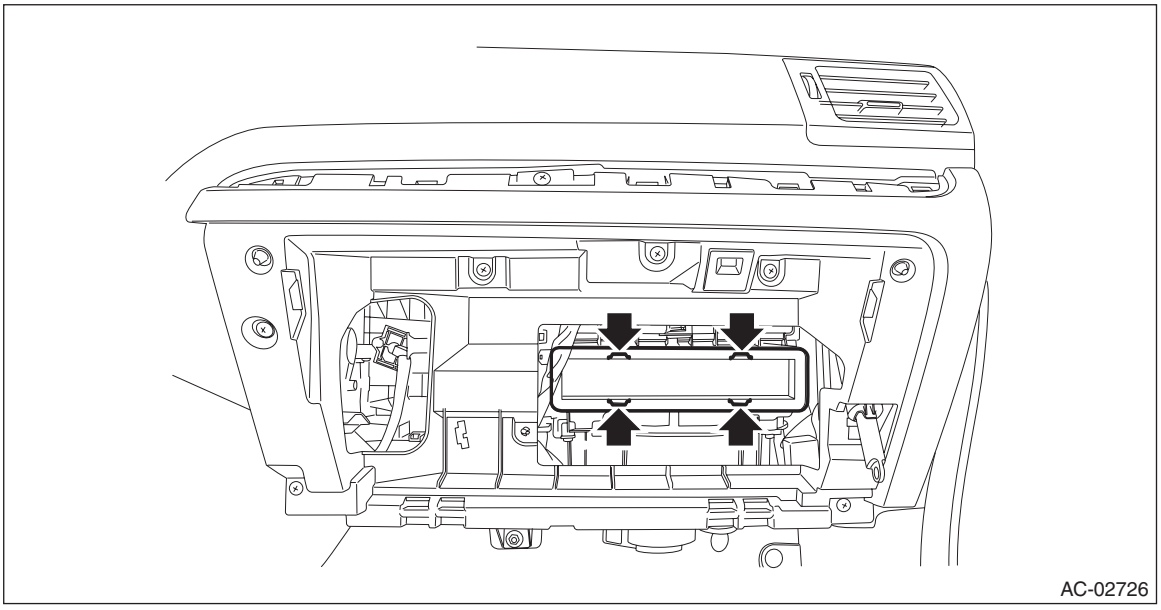
32.A/C Filter

A: REPLACEMENT

1) Remove the pocket assembly.
   (1) Attach the protective tape (a) to the panel center LWR.
   (2) Remove the damper COMPL - pocket.
   (3) Release the stoppers and remove the pocket assembly by pulling it toward you.



2) Pinch the tabs to release the lock, and remove the filter kit.



3) Install each part in the reverse order of removal.

33.Diagnostics with Phenomenon

A: INSPECTION

Refer to “Diagnostics with Phenomenon” for “HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS)” section. <Ref. to AC(diag)-16, Diagnostics with Phenomenon.>

HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS)

AC(diag)

		Page
1.	Basic Diagnostic Procedure	2
2.	General Description	3
3.	Electrical Component Location	4
4.	Auto A/C Control Module I/O Signal	6
5.	Diagnostic Chart for Self-Diagnosis	8
6.	Diagnostics with Phenomenon	16
7.	Subaru Select Monitor	40
8.	Read Diagnostic Trouble Code (DTC)	41
9.	Clear Memory Mode	42
10.	Read Current Data	43
11.	Diagnostic Procedure for Subaru Select Monitor Communication	45
12.	List of Diagnostic Trouble Code (DTC)	47
13.	Diagnostic Procedure with Diagnostic Trouble Code (DTC)	50

1. Basic Diagnostic Procedure

A: PROCEDURE

CAUTION:
When the body integrated unit is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

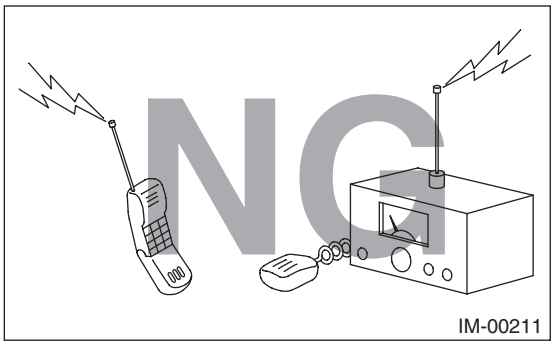
	Step	Check	Yes	No
1	**CONFIRM NUMBER OF REGISTERED IMMOBILIZER KEY.** Confirm the number of registered immobilizer key. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is the number of registration 0?	Register the immobilizer system.	Go to step **2**.
2	**CHECK SECURITY INDICATOR LIGHT.** 1) Remove the ignition key from ignition switch. 2) Wait at least 60 seconds.	Does the security indicator light blink?	Go to step **3**.	Check the security indicator light circuit. <Ref. to IM(diag)-11, CHECK SECURITY INDICATOR LIGHT CIRCUIT, INSPECTION, Diagnostics Chart for Security Indicator Light.>
3	**CHECK KEY SWITCH.** Insert the ignition key in the ignition switch. (OFF or ACC)	Does the security indicator light remain blinking?	Check the key switch circuit. <Ref. to IM(diag)-13, CHECK KEY SWITCH CIRCUIT, INSPECTION, Diagnostics Chart for Security Indicator Light.>	Go to step **4**.
4	**CHECK SECURITY INDICATOR LIGHT.** Check the security indicator light status in the condition of step 3.	Does the security indicator light go off?	Go to step **7**.	Go to step **5**.
5	**CHECK SECURITY INDICATOR LIGHT.** Turn the ignition switch to ON.	Does the security indicator light go off?	Go to step **7**.	Go to step **6**.
6	**CHECK ENGINE START.** Turn the ignition switch to START.	Does the starter operate?	Check the LAN communication system. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Go to step **8**.
7	**CHECK ENGINE START.** Turn the ignition switch to START.	Does the engine start?	Immobilizer system is normal.	Go to step **9**.
8	**CHECK DTC.** Read the DTC of body integrated unit and ECM using Subaru Select Monitor.	Is the DTC displayed on screen?	Go to step **10**.	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>
9	**CHECK DTC.** Read the DTC of body integrated unit and ECM using Subaru Select Monitor.	Is the DTC displayed on screen?	Go to step **10**.	Perform the diagnosis for engine system. <Ref. to EN(H4DO)(diag)-64, PROCEDURE, Diagnostics for Engine Starting Failure.>

Step		Check	Yes	No
10	**CHECK FREEZE FRAME DATA.** Using the Subaru Select Monitor, check the Freeze Frame Data.	Are the data recorded?	Record the data. Go to step **11**.	Go to step **11**.
11	**PERFORM DIAGNOSIS.** 1) Inspect using the “Diagnostic Procedure with Diagnostic Trouble Code (DTC)”. <Ref. to IM(diag)-16, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> 2) Repair the trouble cause. 3) Perform the Clear Memory Mode. 4) Read DTCs again.	Is the DTC displayed on screen?	Inspect using the “Diagnostic Procedure with Diagnostic Trouble Code (DTC)”. <Ref. to IM(diag)-16, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

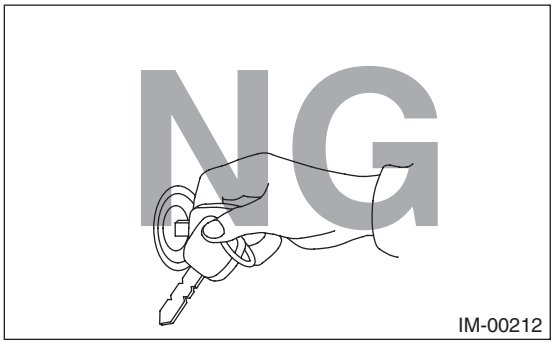
2. General Description

A: CAUTION

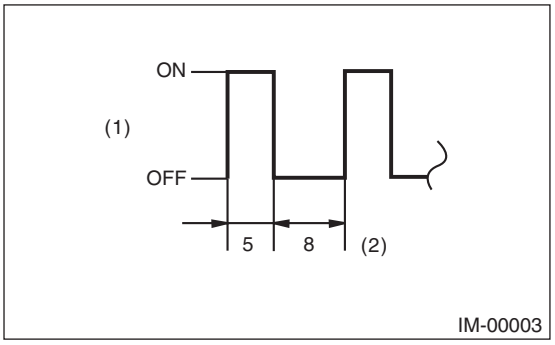
CAUTION:
• Do not use the electrical test equipment on the airbag system wiring harnesses and connector circuits.
• Be careful not to damage the airbag system wiring harness.
• While diagnostic items are being checked, do not operate radios, portable telephones, etc. which emit electromagnetic waves near or inside the vehicle.



• When turning the ignition switch to ON or OFF while diagnostic items are being checked, do not allow keys with different ID codes close to the ignition switch. If the ignition key is on a key holder, remove it from the key holder before performing diagnoses.



• When repeatedly turning the ignition switch to ON or OFF while diagnostic items are being checked, it should be switched in cycles of "ON" for at least 5 seconds → "OFF" for at least 8 seconds.

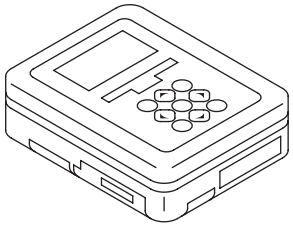


(1) Ignition switch position
(2) Sec.

• If the engine fails to start with a registered ignition key, detach the ignition key from ignition switch and wait for approx. 1 second until security indicator light begins to flash. And then start the engine again.
• Before performing the diagnostics, obtain all keys for the vehicle from the owner.
• Do not register a body integrated unit already registered to another vehicle to diagnose failures or inspect functions.

B: PREPARATION TOOL

1. SPECIAL TOOL

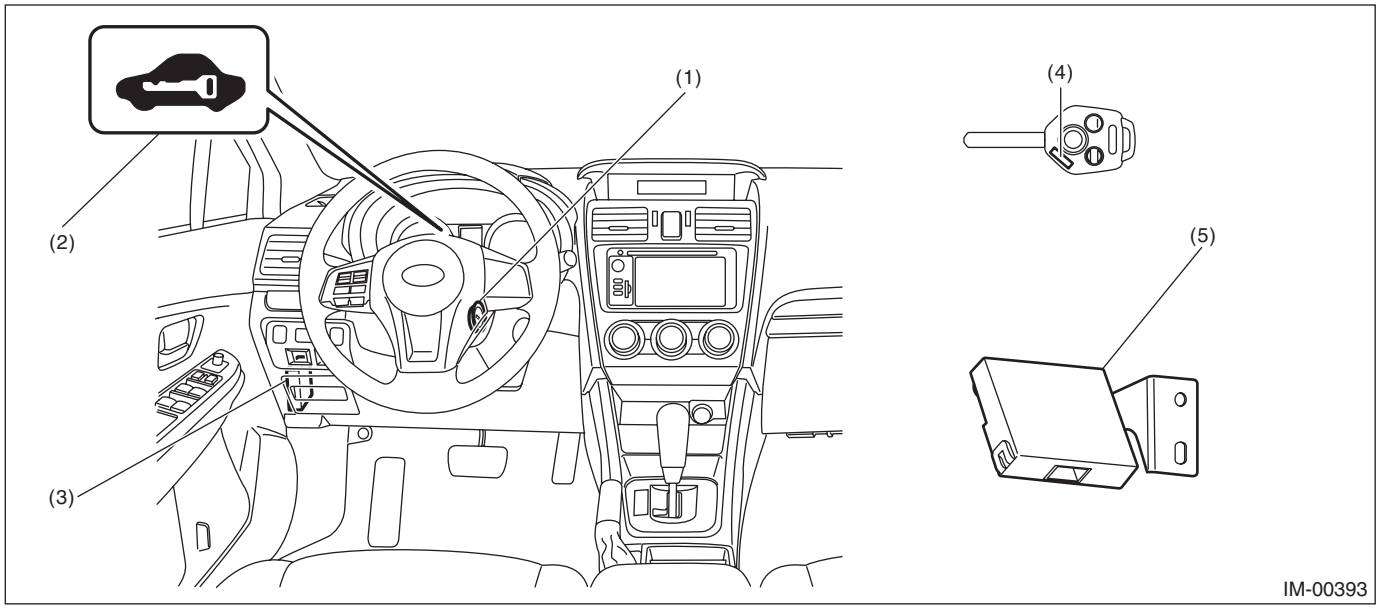
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.

3. Electrical Component Location

A: LOCATION



(1) Antenna
(2) Security indicator light (LED bulb)
(3) Body integrated unit
(4) Transponder
(5) Security control module (only for Canada models)

4. Immobilizer Control Module I/O Signal

A: WIRING DIAGRAM

1. IMMOBILIZER

<Ref. to WI-102, WIRING DIAGRAM, Immobilizer System.>

5. Subaru Select Monitor

A: OPERATION

1. HOW TO USE THE SUBARU SELECT MONITOR

For the operation procedure, refer to the “PC application help for Subaru Select Monitor”.

2. READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE AND BODY INTEGRATED UNIT

Refer to “Read Diagnostic Trouble Code” for information about how to indicate DTC. <Ref. to IM(diag)-9, Read Diagnostic Trouble Code (DTC).>

NOTE:
If a problem is detected, repair the trouble cause. <Ref. to IM(diag)-20, DTC P1572 IMM CIRCUIT FAILURE (EXCEPT ANTENNA CIRCUIT), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

6. Read Diagnostic Trouble Code (DTC)

A: OPERATION

1. ECM

For the operation procedure, refer to the “PC application help for Subaru Select Monitor”.

NOTE:
For detailed concerning DTC, refer to the List of Diagnostic Trouble Codes (DTC). <Ref. to IM(diag)-14, LIST, List of Diagnostic Trouble Code (DTC).>

2. BODY INTEGRATED UNIT

For the operation procedure, refer to the “PC application help for Subaru Select Monitor”.

NOTE:
For detailed concerning DTC, refer to the List of Diagnostic Trouble Codes (DTC). <Ref. to IM(diag)-14, LIST, List of Diagnostic Trouble Code (DTC).>

7. Clear Memory Mode

A: OPERATION

1. ECM

For the operation procedure, refer to the “PC application help for Subaru Select Monitor”.

NOTE:
Initial diagnosis of electronic throttle control is performed after memory clearance. Wait for 10 seconds or more after turning the ignition switch to ON, and then start the engine.

2. BODY INTEGRATED UNIT

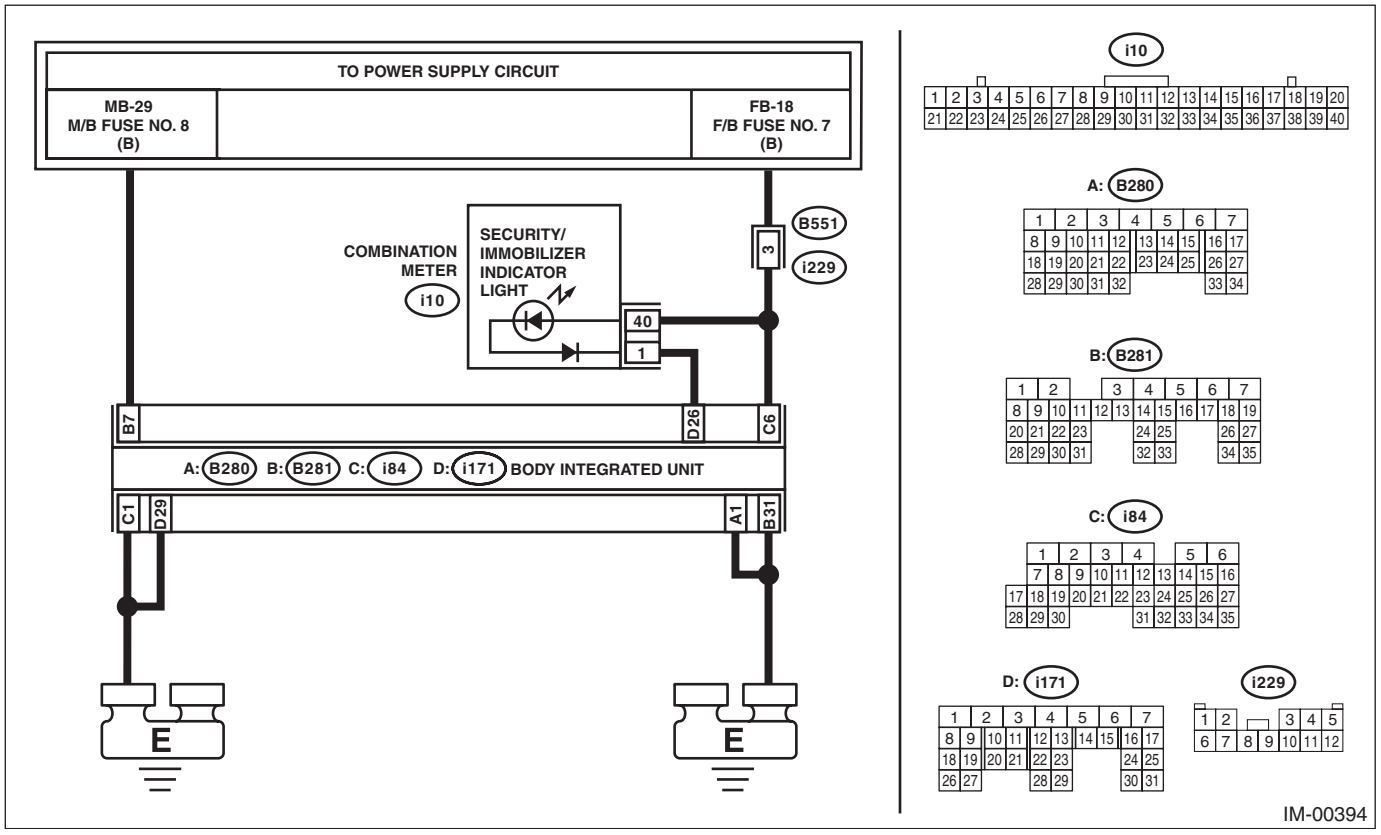
For the operation procedure, refer to the “PC application help for Subaru Select Monitor”.

8. Diagnostics Chart for Security Indicator Light

A: INSPECTION

1. CHECK SECURITY INDICATOR LIGHT CIRCUIT

CAUTION:
When the body integrated unit is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".
WIRING DIAGRAM:



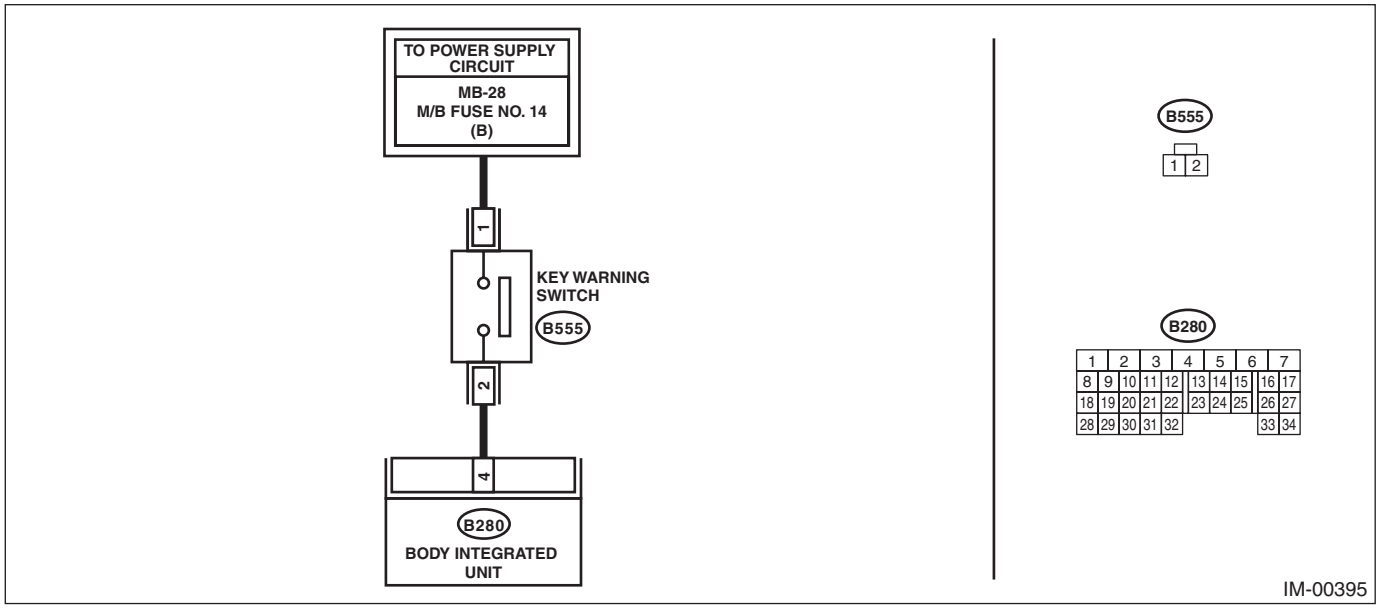
Step		Check	Yes	No
1	**CHECK FUSE.** 1) Remove the ignition key from ignition switch. 2) Check the fuse (M/B No. 8).	Is the fuse OK?	Go to step **2**.	Replace the fuse. If the replaced fuse blows out easily, repair the short circuit in the harness between the fuse and body integrated unit.
2	**CHECK SECURITY INDICATOR LIGHT.** 1) Disconnect the connector from body integrated unit. 2) Connect the resistor (100 Ω) between the body integrated unit connector terminal (i171) No. 26 and chassis ground.	Does the security indicator light illuminate?	Go to step **3**.	Go to step **5**.

Diagnostics Chart for Security Indicator Light

	Step	Check	Yes	No
3	**CHECK BODY INTEGRATED UNIT GROUND CIRCUIT.** Measure the resistance between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(B280) No. 1 — Chassis ground:*** ***(B281) No. 31 — Chassis ground:*** ***(i84) No. 1 — Chassis ground:*** ***(i171) No. 29 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair the open circuit of the body integrated unit ground circuit.
4	**CHECK BODY INTEGRATED UNIT POWER SUPPLY CIRCUIT.** Measure the voltage between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(B281) No. 7 (+) — Chassis ground (–):*** ***(i84) No. 6 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Check the harness for open or short circuit between body integrated unit and fuse.
5	**CHECK COMBINATION METER CIRCUIT.** 1) Remove the combination meter. <Ref. to IDI-15, Combination Meter.> 2) Measure the voltage between combination meter connector terminal and chassis ground. ***Connector & terminal*** ***(i10) No. 40 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **6**.	Check for an open or short circuit in the harness between the combination meter and fuse.
6	**CHECK COMBINATION METER CIRCUIT.** Measure the resistance between the body integrated unit connector terminal and combination meter connector terminal. ***Connector & terminal*** ***(i171) No. 26 — (i10) No. 1:***	Is the resistance less than 10 Ω?	LED bulb is defective. Replace the combination meter case assembly. <Ref. to IDI-17, DISASSEMBLY, Combination Meter.>	Repair the harness or connector.

2. CHECK KEY SWITCH CIRCUIT

CAUTION:
When the body integrated unit is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POWER SUPPLY CIRCUIT.** 1) Disconnect the connector from key warning switch. 2) Measure the voltage between key warning switch connector terminal and chassis ground. ***Connector & terminal*** ***(B555) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **2**.	Check the harness for an open or short between the key warning switch and fuse.
2	**CHECK KEY WARNING SWITCH.** 1) Insert the ignition key in the ignition switch. (OFF or ACC) 2) Measure the resistance between key warning switch connector terminals. ***Connector & terminal*** ***No. 1 — No. 2:***	Is the resistance less than 1 Ω?	Go to step **3**.	Replace the key warning switch.
3	**CHECK KEY WARNING SWITCH.** 1) Remove the ignition key from ignition switch. 2) Measure the resistance between key warning switch connector terminals. ***Connector & terminal*** ***No. 1 — No. 2:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the key warning switch.
4	**CHECK HARNESS BETWEEN KEY WARNING SWITCH AND BODY INTEGRATED UNIT.** 1) Disconnect the connector from body integrated unit. 2) Measure the resistance between key warning switch connector terminal and body integrated unit connector terminal. ***Connector & terminal*** ***(B555) No. 2 — (B280) No. 4:***	Is the resistance less than 10 Ω?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Repair the harness between key warning switch and body integrated unit.

9. List of Diagnostic Trouble Code (DTC)

A: LIST

1. ECM

DTC	Item	Contents of diagnosis	Index No.
P0513	Incorrect Immobilizer Key	Incorrect immobilizer key (Use of unregistered key in body integrated unit)	<Ref. to IM(diag)-16, DTC P0513 INCORRECT IMMOBILIZER KEY, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1570	Antenna	Faulty antenna	<Ref. to IM(diag)-17, DTC P1570 ANTENNA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1571	Reference Code Incompatibility	Reference code incompatibility between body integrated unit and ECM	<Ref. to IM(diag)-19, DTC P1571 REFERENCE CODE INCOMPATIBILITY, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1572	IMM Circuit Failure (Except Antenna Circuit)	Communication failure between body integrated unit and ECM	<Ref. to IM(diag)-20, DTC P1572 IMM CIRCUIT FAILURE (EXCEPT ANTENNA CIRCUIT), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1574	Key Communication Failure	Communication failure between key and body integrated unit	<Ref. to IM(diag)-22, DTC P1574 KEY COMMUNICATION FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1576	EGI Control Module EEPROM	ECM malfunctioning	<Ref. to IM(diag)-22, DTC P1576 EGI CONTROL MODULE EEPROM, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1577	IMM Control Module EEPROM	Body integrated unit malfunctioning	<Ref. to IM(diag)-23, DTC P1577 IMM CONTROL MODULE EEPROM, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1578	Meter Failure (Except for model for Canada)	• Reference code incompatibility between combination meter and body integrated unit • Communication failure between body integrated unit and ECM	<Ref. to IM(diag)-23, DTC P1578 METER FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
	Meter Failure (Model for Canada)	• Reference code incompatibility between body integrated unit and security control module • Communication failure between body integrated unit and ECM	

NOTE:
Perform diagnosis of engine DTC when a DTC other than an immobilizer DTC is detected. <Ref. to EN(H4DO)(diag)-79, List of Diagnostic Trouble Code (DTC).>

2. BODY INTEGRATED UNIT

DTC	Item	Contents of diagnosis	Index No.	Relation between ECM and DTC
B1401	M Collation NG	Reference code incompatibility between combination meter and body integrated unit	<Ref. to IM(diag)-24, DTC B1401 M COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	P1578
B1402	Immobilizer Key Collation NG	• Incorrect immobilizer key (Use of unregistered key in body integrated unit) • Faulty antenna • Communication failure between key and body integrated unit	<Ref. to IM(diag)-24, DTC B1402 IMMOBILIZER KEY COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	• P0513 • P1570 • P1574
B1405	SCU Collation NG	Reference code incompatibility between body integrated unit and security control module	<Ref. to IM(diag)-25, DTC B1405 SCU COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	P1578
B1406	SCU_EEPROM_NG	Malfunction of security control module	<Ref. to IM(diag)-25, DTC B1406 SCU_EEPROM_NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	P1578
B1407	M Communication Abnormal	Communication failure between body integrated unit and combination meter	<Ref. to IM(diag)-25, DTC B1407 M COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	P1578
B1408	Meter EEPROM Abnormal	Combination meter malfunction	<Ref. to IM(diag)-26, DTC B1408 METER EEPROM ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	P1578
B1409	SCU Communication Abnormal	Communication failure between body integrated unit and security control module	<Ref. to IM(diag)-27, DTC B1409 SCU COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	P1578
B1410	Transponder Communication Abnormal	Communication failure between key and body integrated unit	<Ref. to IM(diag)-29, DTC B1410 TRANSPONDER COMMUNICATION ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	P1574
B1411	Immobilizer Antenna Abnormal	Faulty antenna	<Ref. to IM(diag)-29, DTC B1411 IMMOBILIZER ANTENNA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	P1570

NOTE:
The starter relay control is performed in immobilizer system. When the body integrated unit detects a nonconformity of reference code, it immediately outputs a starter relay cut signal to ECM, and then ECM stops the starter relay operation. In this case, engine does not start, and DTC is not recorded in ECM. Check that the engine does not start on the DTC of body integrated unit.

10.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC P0513 INCORRECT IMMOBILIZER KEY

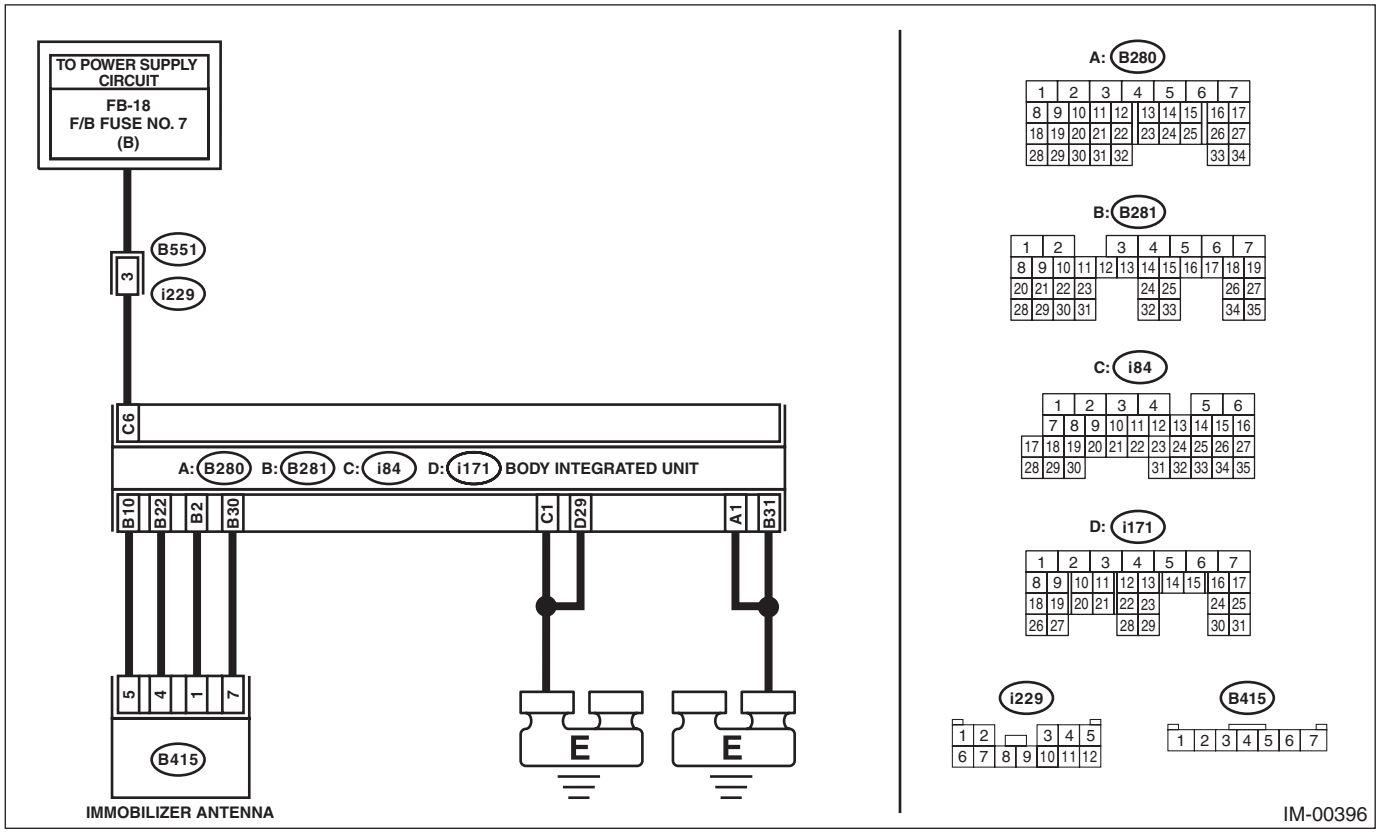
CAUTION:
When the body integrated unit is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".
DTC DETECTING CONDITION:
Incorrect immobilizer key (Use of unregistered key in body integrated unit)

	Step	Check	Yes	No
1	**PERFORM IGNITION KEY REGISTRATION.** Perform key registration. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is key registration complete?	Finish the diagnosis.	Replace ignition keys (including transponder) which cannot be registered. Go to step **2**.
2	**PERFORM IGNITION KEY REGISTRATION.** Perform key registration. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is key registration complete?	Finish the diagnosis.	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>

B: DTC P1570 ANTENNA

DTC DETECTING CONDITION:
Faulty antenna

CAUTION:
When the body integrated unit is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK BODY INTEGRATED UNIT POWER SUPPLY CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from body integrated unit. 3) Measure the voltage between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(i84) No. 6 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **2**.	Check the harness for open or short circuit between body integrated unit and fuse.
2	**CHECK BODY INTEGRATED UNIT GROUND CIRCUIT.** Measure the resistance between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(B280) No. 1 — Chassis ground:*** ***(B281) No. 31 — Chassis ground:*** ***(i84) No. 1 — Chassis ground:*** ***(i171) No. 29 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **3**.	Repair the open circuit of the body integrated unit ground circuit.

	Step	Check	Yes	No
3	**CHECK ANTENNA POWER SUPPLY CIRCUIT.** 1) Connect the connector to body integrated unit. 2) Disconnect the connector from the antenna. 3) Insert the ignition key into the key cylinder, then measure the voltage between the antenna connector terminal and the chassis ground. ***Connector & terminal*** ***(B415) No. 1 (+) — Chassis ground (–):***	Is the voltage 5 V ±0.5 V approx. 200 ms after inserting the ignition key into the key cylinder? And then, does the voltage return to 0 V within 2 s?	Go to step **5**.	Go to step **4**.
4	**CHECK ANTENNA POWER SUPPLY CIRCUIT.** 1) Disconnect the connector from body integrated unit. 2) Measure the resistance of body integrated unit connector terminal and antenna connector terminal. ***Connector & terminal*** ***(B281) No. 2 — (B415) No. 1:***	Is the resistance less than 10 Ω?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Repair the harness or connector between body integrated unit and antenna.
5	**CHECK ANTENNA GROUND CIRCUIT.** Measure the resistance between antenna connector terminal and chassis ground. ***Connector & terminal*** ***(B417) No. 7 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **7**.	Go to step **6**.
6	**CHECK ANTENNA GROUND CIRCUIT.** 1) Disconnect the connector from body integrated unit. 2) Measure the resistance between antenna connector terminal and chassis ground. ***Connector & terminal*** ***(B281) No. 30 — (B415) No. 7:***	Is the resistance less than 10 Ω?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Repair the harness or connector between body integrated unit and antenna.
7	**CHECK ANTENNA COMMUNICATION CIRCUIT.** Measure the resistance of body integrated unit connector terminal and antenna connector terminal. ***Connector & terminal*** ***(B281) No. 10 — (B415) No. 5:*** ***(B281) No. 22 — (B415) No. 4:***	Is the resistance less than 10 Ω?	Go to step **8**.	Repair the harness or connector between body integrated unit and antenna.
8	**CHECK ANTENNA.** 1) Replace the immobilizer antenna. 2) Insert the ignition key in the ignition switch. (OFF or ACC) 3) Check DTC of body integrated unit.	Is DTC B1411 detected?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Antenna has a failure.

C: DTC P1571 REFERENCE CODE INCOMPATIBILITY

DTC DETECTING CONDITION:
Reference code incompatibility between body integrated unit and ECM

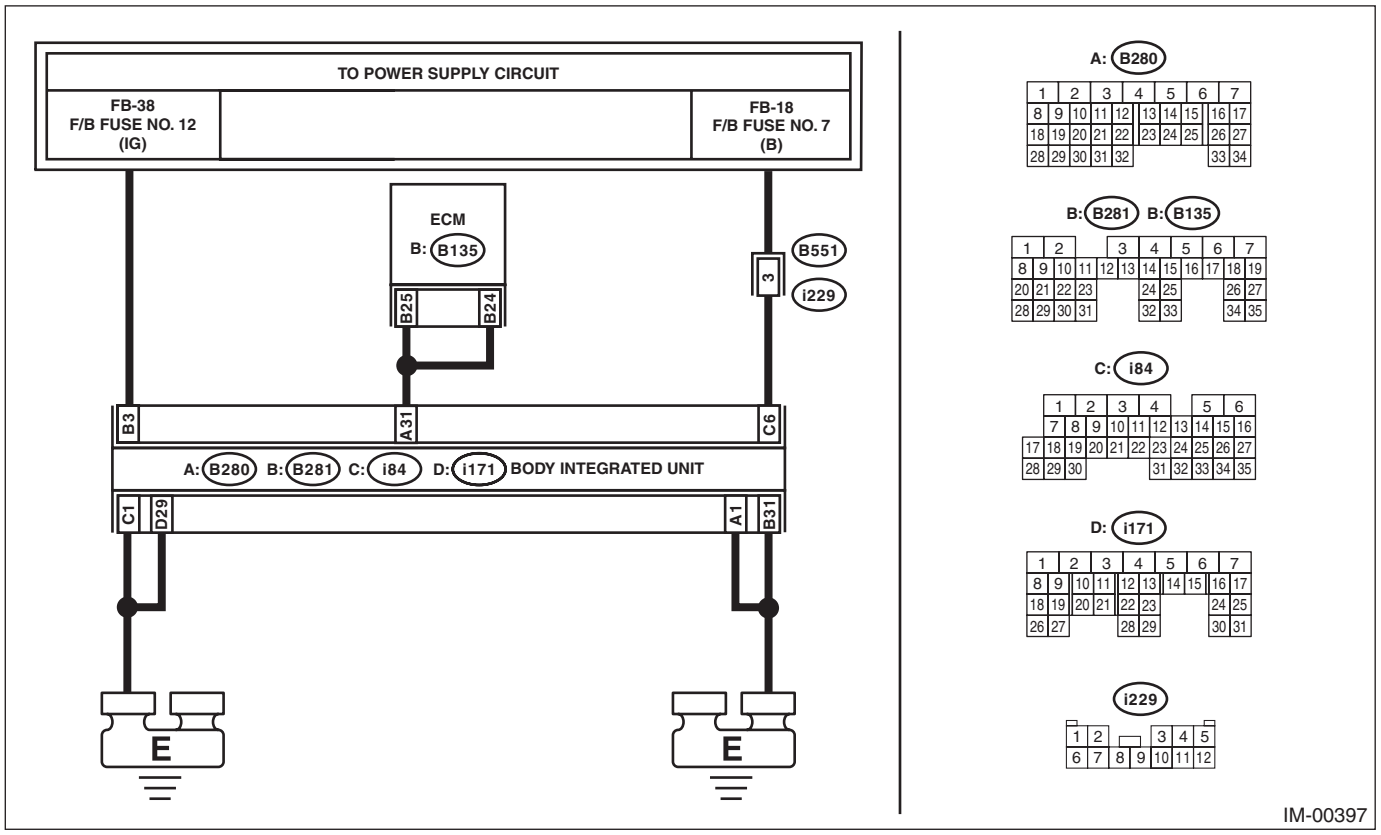
CAUTION:
When the body integrated unit is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

	Step	Check	Yes	No
1	**CONFIRM NUMBER OF REGISTERED IMMOBILIZER KEY.** Confirm the number of registered immobilizer key. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is the number of registration 0?	Go to step **2**.	Go to step **3**.
2	**PERFORM IMMOBILIZER SYSTEM REGISTRATION.** Register the immobilizer system. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is registration complete?	Finish the diagnosis.	Go to step **4**.
3	**PERFORM ECM REGISTRATION.** Perform ECM registration. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is registration complete?	Finish the diagnosis.	Go to step **4**.
4	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Perform the diagnosis according to DTC.	Go to step **5**.
5	**PERFORM ECM REGISTRATION.** 1) Replace the ECM. 2) Perform ECM registration. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is registration complete?	Finish the diagnosis.	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>

D: DTC P1572 IMM CIRCUIT FAILURE (EXCEPT ANTENNA CIRCUIT)

DTC DETECTING CONDITION:
Communication failure between body integrated unit and ECM

CAUTION:
When the body integrated unit is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK BODY INTEGRATED UNIT POWER SUPPLY CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from body integrated unit. 3) Measure the voltage between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(i84) No. 6 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **2**.	Check the harness for open or short circuit between body integrated unit and fuse.
2	**CHECK BODY INTEGRATED UNIT POWER SUPPLY CIRCUIT.** 1) Turn the ignition switch to ON. 2) Measure the voltage between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(B281) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Check the harness for open or short circuit between the body integrated unit and ignition switch.

	Step	Check	Yes	No
3	**CHECK BODY INTEGRATED UNIT GROUND CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(B280) No. 1 — Chassis ground:*** ***(B281) No. 31 — Chassis ground:*** ***(i84) No. 1 — Chassis ground:*** ***(i171) No. 29 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair the open circuit of the body integrated unit ground circuit.
4	**CHECK GROUND CIRCUIT FOR ECM.** Measure the resistance between the ECM ground terminal and engine ground.	Is the resistance less than 10 Ω?	Go to step **5**.	Repair the ECM ground circuit.
5	**CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND ECM.** 1) Disconnect the connector from ECM. 2) Measure the resistance between body integrated unit connector terminal and ECM connector terminal. ***Connector & terminal*** ***(B280) No. 31 — (B135) No. 25:*** ***(B280) No. 31 — (B135) No. 24:***	Is the resistance less than 10 Ω?	Go to step **6**.	Repair the open circuit of the harness between the body integrated unit and ECM.
6	**CHECK COMMUNICATION CIRCUIT HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(B280) No. 31 (+) — Chassis ground (–):***	Is the voltage 6 V or more?	Repair the harness between body integrated unit and ECM.	Go to step **7**.
7	**CHECK COMMUNICATION CIRCUIT HARNESS.** Measure the voltage between ECM connector terminal and engine ground. ***Connector & terminal*** ***(B135) No. 25 (+) — Engine ground (–):*** ***(B135) No. 24 (+) — Engine ground (–):***	Is the voltage 6 V or more?	Repair the harness between body integrated unit and ECM.	Go to step **8**.
8	**CHECK COMMUNICATION CIRCUIT HARNESS.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(B280) No. 31 — Chassis ground:***	Is the resistance less than 10 Ω?	Repair the harness between body integrated unit and ECM.	Go to step **9**.
9	**CHECK COMMUNICATION CIRCUIT HARNESS.** Measure the resistance between ECM connector terminal and engine ground. ***Connector & terminal*** ***(B135) No. 25 — Engine ground:*** ***(B135) No. 24 — Engine ground:***	Is the resistance less than 10 Ω?	Repair the harness between body integrated unit and ECM.	Go to step **10**.
10	**CHECK ECM.** 1) Replace the ECM. (Do not perform ECM registration.) 2) Turn the ignition switch to ON. 3) Wait for 5 seconds. 4) Read the DTC relating the ECM using the Subaru Select Monitor.	Is DTC P1572 detected?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	ECM has a failure. Perform ECM registration. Refer to the “REGISTRATION MANUAL FOR IMMOBILIZER”.

E: DTC P1574 KEY COMMUNICATION FAILURE

DTC DETECTING CONDITION:
Communication failure between key and body integrated unit

CAUTION:
When the body integrated unit is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

	Step	Check	Yes	No
1	**CHECK IGNITION KEY.** 1) Remove the ignition key from the ignition switch. 2) Insert the ignition key into the ignition switch, and then turn the ignition switch to ON. 3) Read the DTC of body integrated unit using Subaru Select Monitor.	Is DTC B1410 detected?	Go to step **2**.	Finish the diagnosis.
2	**CHECK IGNITION KEY.** 1) Prepare another ignition key. 2) Insert the ignition key into the ignition switch, and then turn the ignition switch to ON. 3) Read the DTC of body integrated unit using Subaru Select Monitor.	Is DTC B1410 detected?	Go to step **3**.	Ignition key unit was defective.
3	**CHECK IMMOBILIZER ANTENNA.** 1) Replace the immobilizer antenna. 2) Insert the ignition key into the ignition switch, and then turn the ignition switch to ON. 3) Read the DTC of body integrated unit using Subaru Select Monitor.	Is DTC B1410 detected?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Immobilizer antenna was defective.

F: DTC P1576 EGI CONTROL MODULE EEPROM

DTC DETECTING CONDITION:
- ECM malfunctioning
- Inaccessible ROM in ECM during key registration.

CAUTION:
When the ECM is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

	Step	Check	Yes	No
1	**PERFORM ECM REGISTRATION.** Perform ECM registration. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is registration complete?	Finish the diagnosis.	Go to step **2**.
2	**PERFORM ECM REGISTRATION.** Perform ECM registration. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is registration complete?	Finish the diagnosis.	Go to step **3**.
3	**PERFORM ECM REGISTRATION.** Perform ECM registration. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is registration complete?	Finish the diagnosis.	Replace the ECM. <Ref. to FU(H4DO)-101, Engine Control Module (ECM).>

G: DTC P1577 IMM CONTROL MODULE EEPROM

DTC DETECTING CONDITION:

- Body integrated unit malfunctioning
- Failed to access ROM inside the body integrated unit.

CAUTION:
When the body integrated unit is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

	Step	Check	Yes	No
1	**PERFORM ECM REGISTRATION.** Perform ECM registration. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is registration complete?	Finish the diagnosis.	Go to step **2**.
2	**PERFORM ECM REGISTRATION.** Perform ECM registration. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is registration complete?	Finish the diagnosis.	Go to step **3**.
3	**PERFORM ECM REGISTRATION.** Perform ECM registration. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is registration complete?	Finish the diagnosis.	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>

H: DTC P1578 METER FAILURE

DTC DETECTING CONDITION:

- Except Canada models

Reference code incompatibility between combination meter and body integrated unit or communication failure between body integrated unit and ECM

- Canada models

Reference code incompatibility between security control module and body integrated unit or communication failure between body integrated unit and ECM

	Step	Check	Yes	No
1	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is any of DTC B1401, B1405, B1406, B1407, B1408 or B1409 detected?	Perform the diagnosis according to the DTC.	<Ref. to IM(diag)-20, DTC P1572 IMM CIRCUIT FAILURE (EXCEPT ANTENNA CIRCUIT), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

I: DTC B1401 M COLLATION NG

DTC DETECTING CONDITION:
Reference code incompatibility between combination meter and body integrated unit

CAUTION:
When the combination meter is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

	Step	Check	Yes	No
1	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is any of DTC B1407 or B1408 detected?	Perform the diagnosis according to the DTC.	Go to step **2**.
2	**CHECK COMBINATION METER REGISTRATION.** Perform registration of combination meter. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is registration complete?	Finish the diagnosis.	Go to step **3**.
3	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is any of DTC B1407 or B1408 detected?	Perform the diagnosis according to the DTC.	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>

J: DTC B1402 IMMOBILIZER KEY COLLATION NG

DTC DETECTING CONDITION:
- Incorrect immobilizer key (Use of unregistered key in body integrated unit)
- Faulty antenna

	Step	Check	Yes	No
1	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is any of DTC B1410 or B1411 detected?	Perform the diagnosis according to the DTC.	<Ref. to IM(diag)-16, DTC P0513 INCORRECT IMMOBILIZER KEY, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

K: DTC B1405 SCU COLLATION NG

DTC DETECTING CONDITION:
Reference code incompatibility between security control module and body integrated unit

CAUTION:
When the security control module is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

	Step	Check	Yes	No
1	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is any of DTC B1406 or B1409 detected?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**PERFORM SECURITY CONTROL MODULE REGISTRATION.** Perform security control module registration. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".	Is registration complete?	Finish the diagnosis.	Go to step **3**.
3	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is any of DTC B1406 or B1409 detected?	Perform the diagnosis according to DTC.	Replace the security control module.]<Ref. to SL-70, Security Control Module.>

L: DTC B1406 SCU_EEPROM_NG

DTC DETECTING CONDITION:
- Defective security control module
- ROM of security control module cannot be accessed

CAUTION:
When the security control module is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

	Step	Check	Yes	No
1	**PERFORM SECURITY CONTROL MODULE REGISTRATION.** 1) Perform security control module registration. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER". 2) Read the DTC of body integrated unit using Subaru Select Monitor.	Is DTC B1406 detected?	Replace the security control module. <Ref. to SL-70, Security Control Module.>	Finish the diagnosis.

M: DTC B1407 M COMMUNICATION ABNORMAL

DTC DETECTING CONDITION:
Communication failure between body integrated unit and combination meter

CAUTION:
When the combination meter is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

	Step	Check	Yes	No
1	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is DTC of the body integrated unit except for DTC B1407 displayed?	Perform the diagnosis according to the DTC.	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>

N: DTC B1408 METER EEPROM ABNORMAL

DTC DETECTING CONDITION:
Defective combination meter

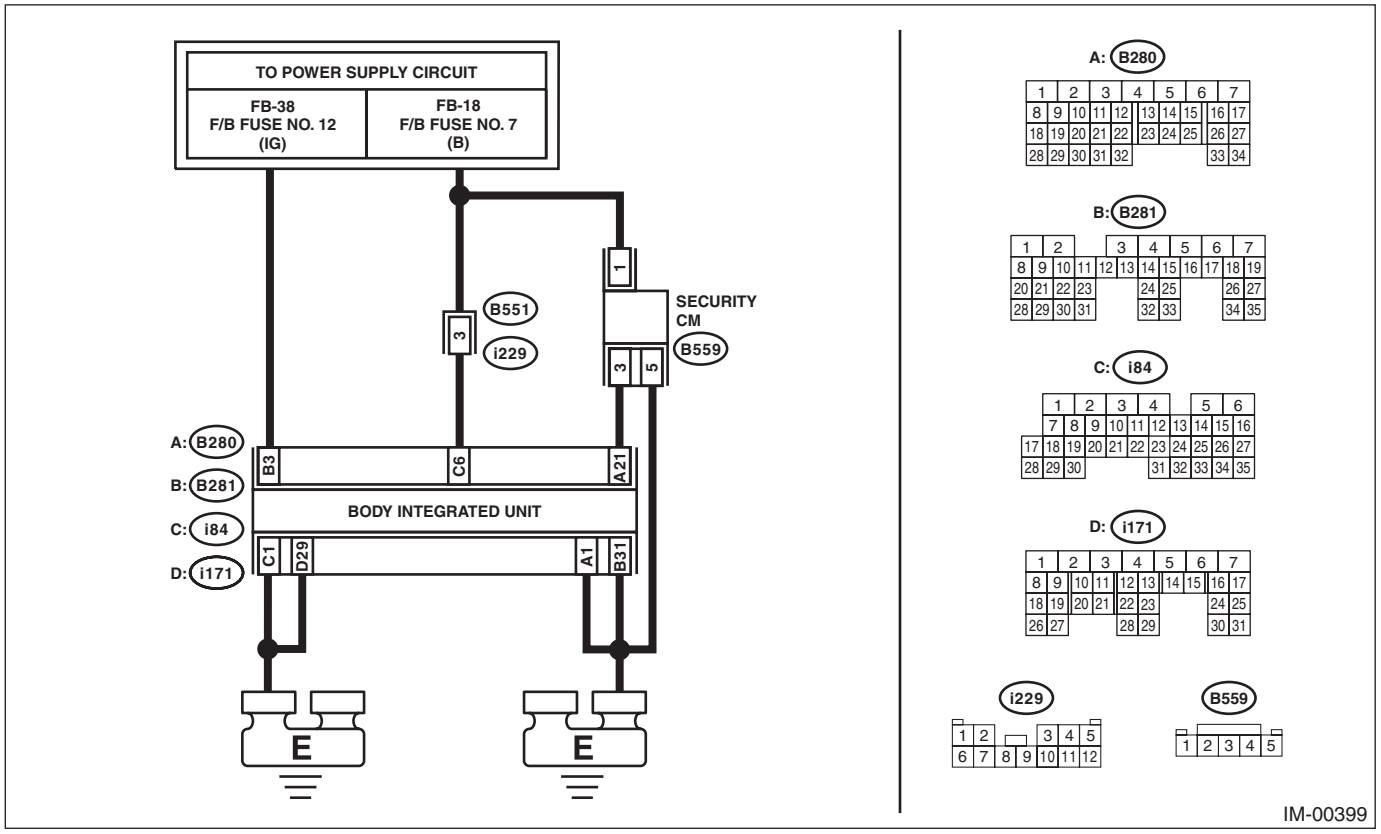
CAUTION:
When the combination meter is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

	Step	Check	Yes	No
1	**CHECK COMBINATION METER REGISTRATION.** 1) Perform registration of combination meter. Refer to the "REGISTRATION MANUAL FOR IMMOBILIZER". 2) Read the DTC of body integrated unit using Subaru Select Monitor.	Is DTC B1408 detected?	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>	Finish the diagnosis.

O: DTC B1409 SCU COMMUNICATION ABNORMAL

DTC DETECTING CONDITION:
Communication failure between body integrated unit and security control module

CAUTION:
When the body integrated unit is replaced, registration of the immobilizer system is required. For details, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK BODY INTEGRATED UNIT POWER SUPPLY CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from body integrated unit. 3) Measure the voltage between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(i84) No. 6 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **2**.	Check the harness for open or short circuit between body integrated unit and fuse.
2	**CHECK BODY INTEGRATED UNIT POWER SUPPLY CIRCUIT.** 1) Turn the ignition switch to ON. 2) Measure the voltage between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(B281) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Check the harness for open or short circuit between the body integrated unit and ignition switch.

	Step	Check	Yes	No
3	**CHECK BODY INTEGRATED UNIT GROUND CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(B280) No. 1 — Chassis ground:*** ***(B281) No. 31 — Chassis ground:*** ***(i84) No. 1 — Chassis ground:*** ***(i171) No. 29 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair the open circuit of the body integrated unit ground circuit.
4	**CHECK SECURITY CONTROL MODULE POWER SUPPLY CIRCUIT.** 1) Disconnect the connector from the security control module. 2) Measure the power supply between security control module connector terminal and chassis ground. ***Connector & terminal*** ***(B559) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **5**.	Check for an open or short circuit in the harness between security control module and fuse.
5	**CHECK SECURITY CONTROL MODULE GROUND CIRCUIT.** Measure the resistance between security control module connector terminal and chassis ground. ***Connector & terminal*** ***(B559) No. 5 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **6**.	Repair the open circuit of the security control module ground circuit.
6	**CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND SECURITY CONTROL MODULE.** Measure the resistance between the body integrated unit connector terminal and security control module connector terminal. ***Connector & terminal*** ***(B280) No. 21 — (B559) No. 3:***	Is the resistance less than 10 Ω?	Go to step **7**.	Repair the harness between body integrated unit and security control module.
7	**CHECK COMMUNICATION CIRCUIT HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between security control module connector terminal and chassis ground. ***Connector & terminal*** ***(B559) No. 3 (+) — Chassis ground (–):***	Is the voltage 6 V or more?	Repair the harness between body integrated unit and security control module.	Go to step **8**.
8	**CHECK COMMUNICATION CIRCUIT HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(B280) No. 21 (+) — Chassis ground (–):***	Is the voltage 6 V or more?	Repair the harness between body integrated unit and security control module.	Go to step **9**.
9	**CHECK COMMUNICATION CIRCUIT HARNESS.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between security control module connector terminal and chassis ground. ***Connector & terminal*** ***(B559) No. 3 — Chassis ground:***	Is the resistance less than 10 Ω?	Repair the harness between body integrated unit and ECM.	Go to step **10**.

	Step	Check	Yes	No
10	**CHECK COMMUNICATION CIRCUIT HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the resistance between the body integrated unit connector terminal and chassis ground. ***Connector & terminal*** ***(B280) No. 21 — Chassis ground:***	Is the resistance less than 10 Ω?	Repair the harness between body integrated unit and security control module.	Go to step **11**.
11	**CHECK SECURITY CONTROL MODULE.** 1) Replace the security control module. (Do not perform security control module registration.) 2) Turn the ignition switch to ON. 3) Read the DTC of body integrated unit using Subaru Select Monitor.	Is DTC B1409 detected?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Security control module was defective. Perform security control module registration. Refer to the “REGISTRATION MANUAL FOR IMMOBILIZER”.

P: DTC B1410 TRANSPONDER COMMUNICATION ABNORMAL

NOTE:
Refer to DTC P1574 for diagnostic procedure. <Ref. to IM(diag)-22, DTC P1574 KEY COMMUNICATION FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

Q: DTC B1411 IMMOBILIZER ANTENNA ABNORMAL

NOTE:
Refer to DTC P1570 for diagnostic procedure. <Ref. to IM(diag)-17, DTC P1570 ANTENNA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

LAN SYSTEM (DIAGNOSTICS)

LAN(diag)

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1. Basic Diagnostic Procedure

A: PROCEDURE

	Step	Check	Yes	No
1	**PERFORM CUSTOMER INTERVIEW.** Using the Check List for Interview, ask the customer the condition of how trouble occurs. <Ref. to IDI(diag)-3, CHECK, Check List for Interview.>	Did you interview the customer?	Go to step **2**.	Interview the customer. <Ref. to IDI(diag)-3, CHECK, Check List for Interview.>
2	**CHECK CAN COMMUNICATION.** Read the DTC of the CAN system using the Subaru Select Monitor. <Ref. to LAN(diag)-19, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed?	Perform the diagnosis according to DTC. <Ref. to LAN(diag)-43, LIST, List of Diagnostic Trouble Code (DTC).>	Go to step **3**.
3	**CHECK COMBINATION METER.** Using the Subaru Select Monitor, read DTC of combination meter. <Ref. to BC(diag)-9, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed?	Perform the diagnosis according to DTC. <Ref. to BC(diag)-21, LIST, List of Diagnostic Trouble Code (DTC).>	Go to step **4**.
4	**CHECK MFD.** Read the DTC relating the MFD using the Subaru Select Monitor. <Ref. to BC(diag)-9, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed?	Perform the diagnosis according to DTC. <Ref. to BC(diag)-21, LIST, List of Diagnostic Trouble Code (DTC).>	Go to step **5**.
5	**CHECK COMBINATION METER.** Check the operation of combination meter. <Ref. to IDI(diag)-16, System Operation Check Mode.>	Is it operating normally?	Go to step **6**.	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>
6	**CHECK MFD.** Check the MFD display using the system operation check mode of combination meter. <Ref. to IDI(diag)-16, System Operation Check Mode.>	Is the display normal?	System is normal.	Replace the MFD. <Ref. to IDI-22, Multi-function Display (MFD).>

2. Check List for Interview

A: CHECK

- Inspect the following items regarding the vehicle's state.
- Print out this page for interviewing customers.

<table>
<tr><td colspan="2">Combination Meter / MFD Check List for Interview</td><td colspan="2">Date the Vehicle is Received Year Month Day</td></tr>
<tr><td colspan="2" rowspan="2">Customer's name</td><td>Registration No.</td><td>Initial year of registration
Year Month Date</td></tr>
<tr><td>Vehicle model</td><td>Frame number</td></tr>
<tr><td>Interviewer</td><td>Inspector</td><td>Engine type</td><td>Odometer reading</td></tr>
<tr><td colspan="4">Customer specified content
•
•
•</td></tr>
<tr><td>Date and time when the trouble occurred</td><td></td><td>Frequency of trouble occurrence</td><td>Always occurs
Sometimes occurs (times per day, times per month)</td></tr>
<tr><td rowspan="2">Condition of trouble occurrence
(How the trouble occurs)</td><td rowspan="2"></td><td>Weather</td><td>Fine • Cloudy • Rainy • Snowy • Others
( )</td></tr>
<tr><td>Temperature</td><td>°C (°F) — °C (°F)</td></tr>
<tr><td>Road conditions</td><td></td><td>Occurrence location</td><td></td></tr>
<tr><td>Accessory installation condition</td><td colspan="3"></td></tr>
<tr><td colspan="4">Confirmation of trouble condition</td></tr>
<tr><td rowspan="3">❑ Combination meter</td><td colspan="3"></td></tr>
<tr><td colspan="3"></td></tr>
<tr><td colspan="3"></td></tr>
<tr><td rowspan="3">❑ MFD</td><td colspan="3"></td></tr>
<tr><td colspan="3"></td></tr>
<tr><td colspan="3"></td></tr>
<tr><td>❑ Diagnostic code</td><td colspan="3"></td></tr>
</table>

3. General Description

A: CAUTION

1. AIRBAG SYSTEM

CAUTION:
• Do not use the electrical test equipment on the airbag system wiring harnesses and connector circuits.
• Be careful not to damage the airbag system wiring harness.

B: INSPECTION

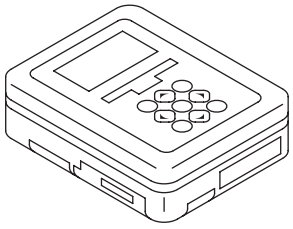
Before performing the diagnosis, check the following items which may cause problems relating the wiper or light.
1) Measure the battery voltage and check electrolyte.

Standard voltage: 12 V or more

Specific gravity: 1.260 or more
2) Check the fuse condition.
3) Check the connecting condition of harness and harness connector.

C: PREPARATION TOOL

1. SPECIAL TOOL

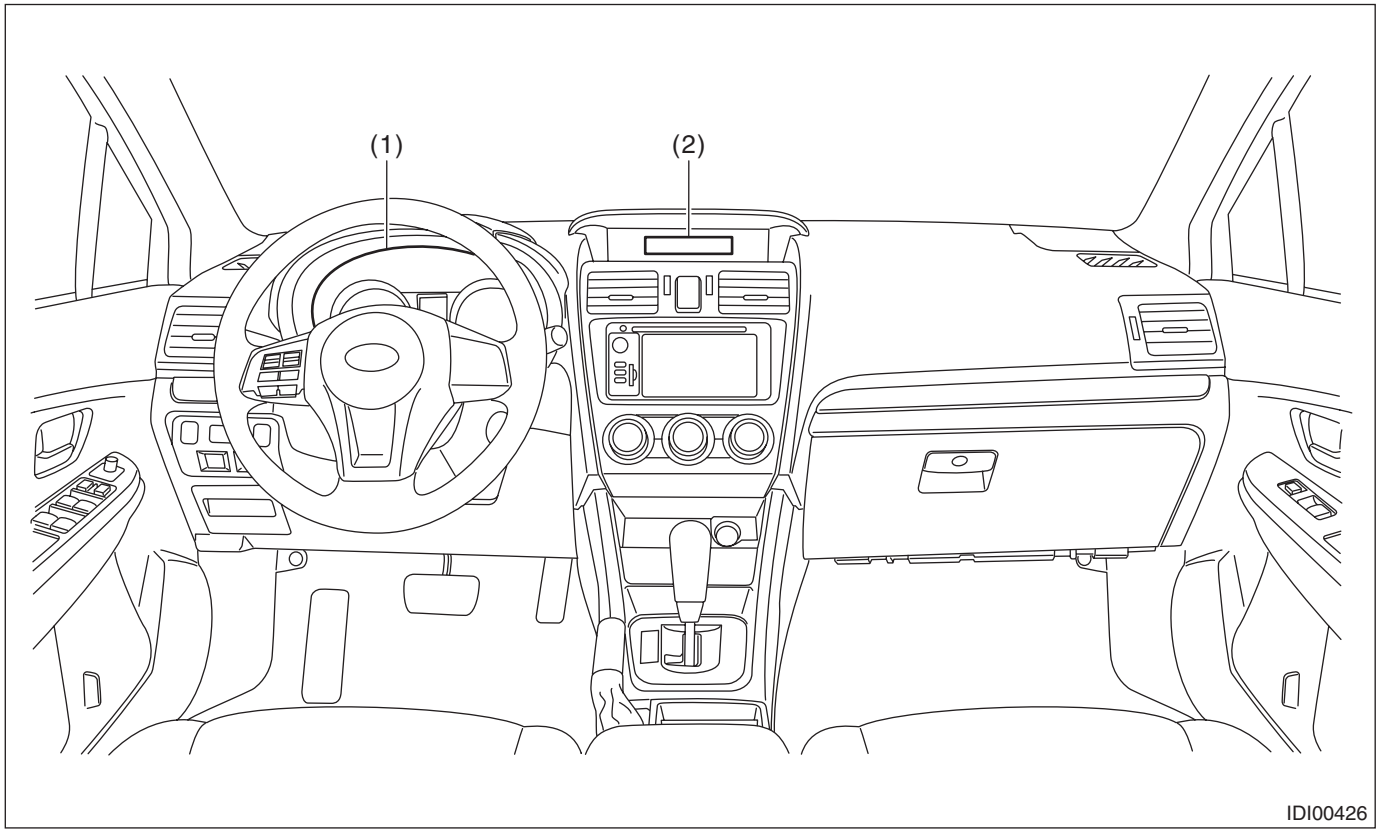
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.

4. Electrical Component Location

A: LOCATION

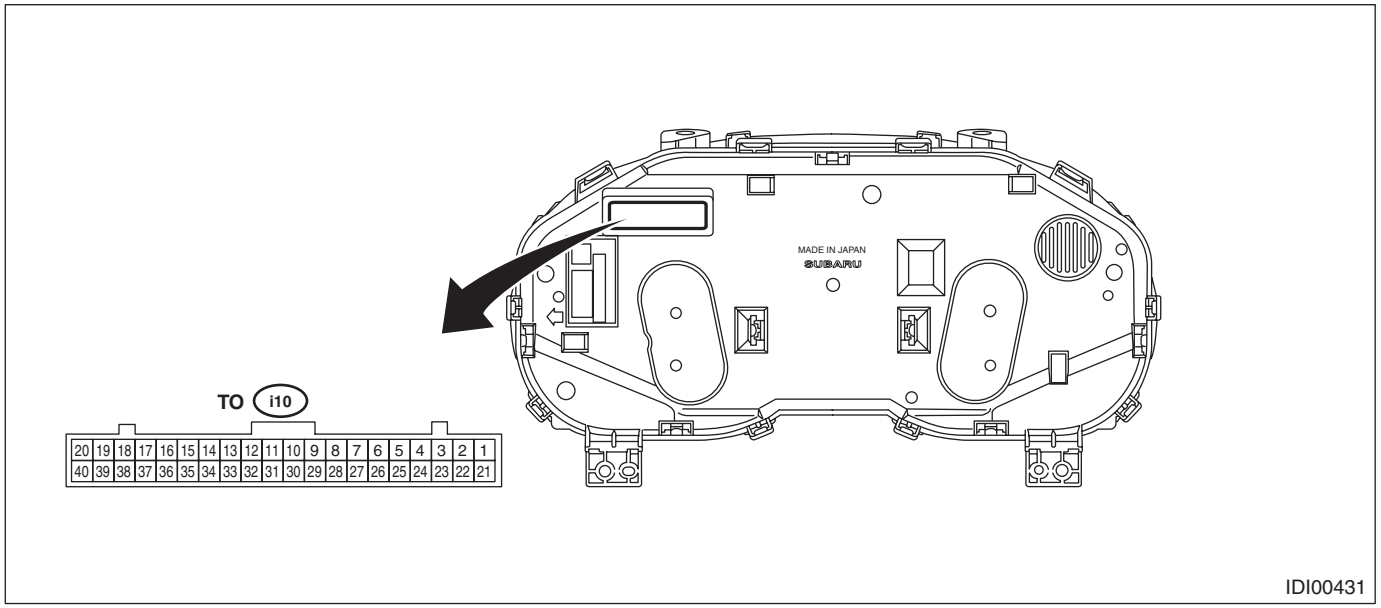


(1) Combination meter
(2) MFD

5. Control Module I/O Signal

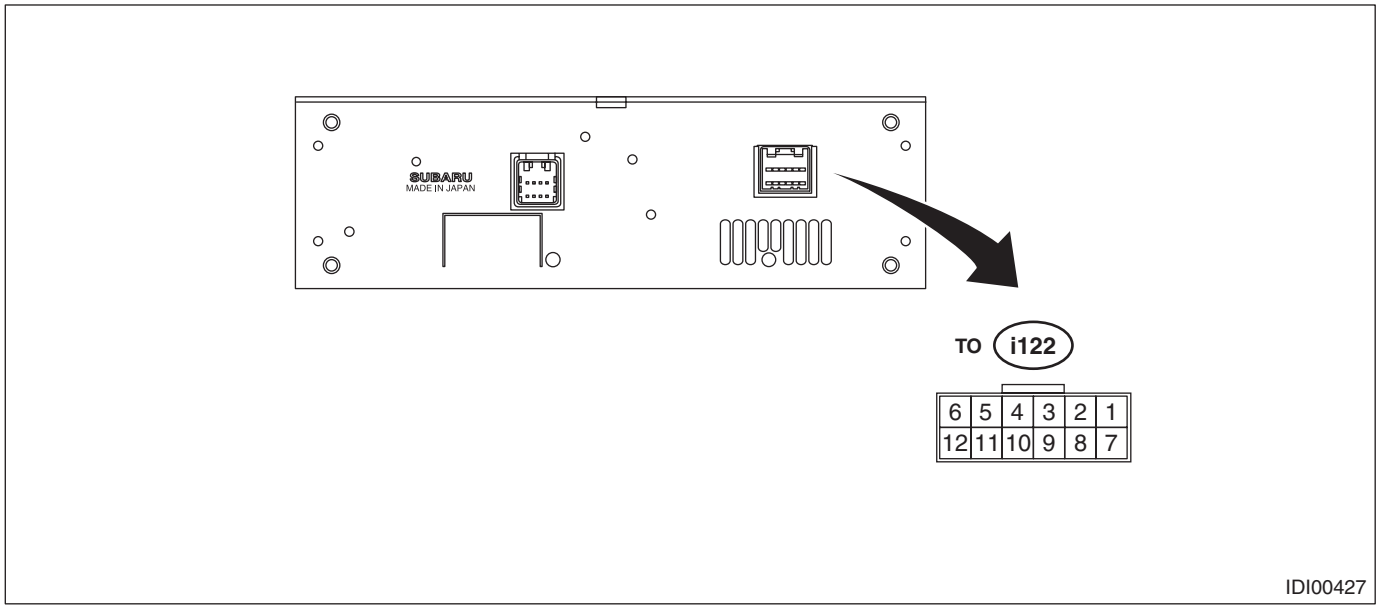
A: ELECTRICAL SPECIFICATION

- Combination meter



Terminal No.	Item	Measuring condition	Standard
1 ←→ Chassis ground	Voltage	Security/immobilizer indicator light off → on	0 V → 10 — 14 V
2 ←→ Chassis ground	Voltage	Charge warning light off → on	0 V → 10 — 14 V
3 ←→ Chassis ground	Voltage	Oil pressure warning light off → on	0 V → 10 — 14 V
4 ←→ Chassis ground	Voltage	RH turn indicator off → on	0 V → 10 — 14 V
6 ←→ Chassis ground	Voltage	LH turn indicator off → on	0 V → 10 — 14 V
8 ←→ Chassis ground	Voltage	Auto headlight beam leveler warning light off → on	0 V → 10 — 14 V
15 ←→ Chassis ground	Resistance	Driver's seat belt switch ON	Less than 1 Ω
16 ←→ Chassis ground	Resistance	Passenger's seat belt switch ON	Less than 1 Ω
20 ←→ Chassis ground	Voltage	IG OFF → ON	0 V → 10 — 14 V
21 ←→ Chassis ground	—	Washer fluid level sensor	—
23 ←→ Chassis ground	—	Brake fluid level switch	—
25 ← →37	Resistance	Fuel level sensor	10 — 600 Ω
27 ← →36	Resistance	Ambient sensor	1 — 35 kΩ
28 (UART) ←→ Chassis ground	—	Cannot be measured	—
32 (CAN–) ←→ Chassis ground	—	Cannot be measured	—
33 (CAN+) ←→ Chassis ground	—	Cannot be measured	—
34 ←→ Chassis ground	Resistance	Always	Less than 1 Ω
35 ←→ Chassis ground	Resistance	Always	Less than 1 Ω
36 ←→ Chassis ground	Resistance	Always	Less than 1 Ω
37 ←→ Chassis ground	Resistance	Always	Less than 1 Ω
38 ←→ Chassis ground	Resistance	Always	Less than 1 Ω
39 ←→ Chassis ground	Resistance	Always	Less than 1 Ω
40 ←→ Chassis ground	Voltage	Always	10 — 14V

- MFD



Terminal No.	Item	Measuring condition	Standard
1 (+B) ←→ chassis ground	Voltage	Always	10 — 14 V
2 (GND) ←→ Chassis ground	Resistance	Always	Less than 1 Ω
3 (IGN) ←→ Chassis ground	Voltage	IG OFF → ON	0 V → 10 — 14 V
4 (STR-) ←→ Chassis ground	—	Cannot be measured (steering switch communication line)	—
5 (CAN-) ←→ Chassis ground	—	Cannot be measured (CAN communication line)	—
6 (CAN+) ←→ chassis ground	—	Cannot be measured (CAN communication line)	—
9 (UART) ←→ Chassis ground	—	Cannot be measured (meter communication line)	—
10 ←→ Chassis ground	Voltage	Passenger's airbag ON indicator (when illuminating)	Less than 1 V
11 ←→ Chassis ground	Voltage	Passenger's airbag OFF indicator (when illuminating)	Less than 1 V
12 (STR+) ←→ Chassis ground	—	Cannot be measured (steering switch communication line)	—

6. Subaru Select Monitor

A: OPERATION

- For operation procedures, refer to the “PC application help for Subaru Select Monitor”.
- If the combination meter or MFD can not communicate with Subaru Select Monitor, perform the “Communication for Initializing Impossible”. <Ref. to IDI(diag)-9, INSPECTION, Subaru Select Monitor.>

If the DTCs related to the LAN system are not displayed, perform the inspection by connecting the Subaru Select Monitor to another vehicle which is operating properly and by establishing the communication.

B: INSPECTION

1. COMMUNICATION FOR INITIALIZING IMPOSSIBLE (COMBINATION METER)

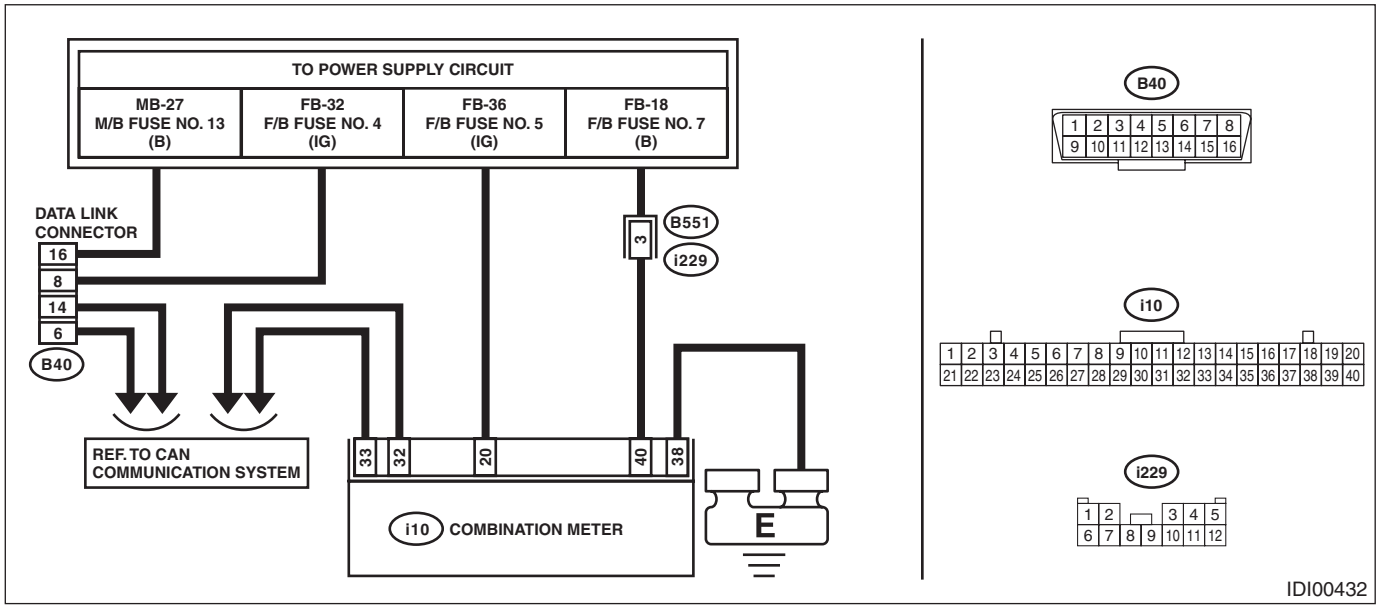
DETECTING CONDITION:

- Defective harness connector
- Power supply circuit malfunction
- Defective combination meter
- Defective CAN communication circuit
- Defective Subaru Select Monitor

TROUBLE SYMPTOM:

Communication is impossible between combination meter and Subaru Select Monitor.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK OTHER COMMUNICATION.** Communicate with the system other than the combination meter using the Subaru Select Monitor.	Is the communication to other control module possible?	Go to step **2**.	Perform the "Communication for Initializing Impossible" of LAN system. <Ref. to LAN(diag)-9, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Subaru Select Monitor.>
2	**CHECK DTC.** Read the DTC of the LAN system using the Subaru Select Monitor. <Ref. to LAN(diag)-19, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC detected?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector of combination meter. 3) Connect the disconnected connectors. 4) Communicate with the combination meter using the Subaru Select Monitor.	Is communication possible?	It is possible that temporary poor communication occurs.	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>

2. COMMUNICATION FOR INITIALIZING IMPOSSIBLE (MFD)

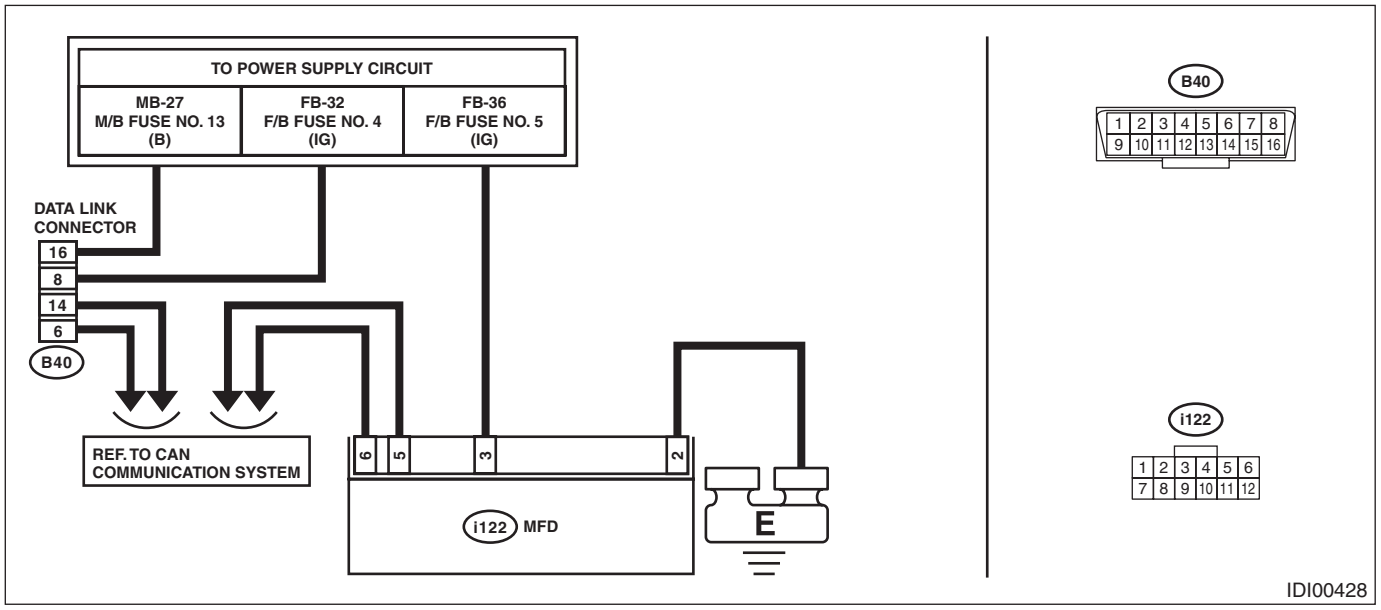
DETECTING CONDITION:

- Defective harness connector
- Power supply circuit malfunction
- Defective MFD
- Defective CAN communication circuit
- Defective Subaru Select Monitor

TROUBLE SYMPTOM:

Communication is impossible between MFD and Subaru Select Monitor.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK OTHER COMMUNICATION.** Communicate with the system other than the MFD using the Subaru Select Monitor.	Is the communication to other control module possible?	Go to step **2**.	Perform the "Communication for Initializing Impossible" of LAN system. <Ref. to LAN(diag)-9, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Subaru Select Monitor.>
2	**CHECK DTC.** Read the DTC of the LAN system using the Subaru Select Monitor. <Ref. to LAN(diag)-19, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC detected?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK MFD.** 1) Turn the ignition switch to OFF. 2) Disconnect the MFD connector. 3) Connect the disconnected connectors. 4) Communicate with the MFD using the Subaru Select Monitor.	Is communication possible?	It is possible that temporary poor communication occurs.	Replace the MFD. <Ref. to IDI-22, Multi-function Display (MFD).>

7. Read Diagnostic Trouble Code (DTC)

A: OPERATION

- For operation procedures, refer to the “PC application help for Subaru Select Monitor”.
- For detailed concerning DTC, refer to the List of Diagnostic Trouble Codes (DTC). <Ref. to IDI(diag)-20, LIST, List of Diagnostic Trouble Code (DTC).>

8. Clear Memory Mode

A: OPERATION

For operation procedures, refer to the “PC application help for Subaru Select Monitor”.

9. Read Current Data

A: OPERATION

For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

B: LIST

- Combination meter

Items to be displayed	Unit of measure	Remarks	Note
Power on trip number	times	Information of timestamp	—
Power on supply system	—	Information of timestamp	—
Past time after power on	ms	Information of timestamp	—
Fuel sensing value	Ω	Fuel sensor value display	—
External air temperature sensing value	°C (°F)	External temperature sensor value display	—

- MFD

Items to be displayed	Unit of measure	Remarks	Note
MFD hardware fail flag	Normal/MFD Fail	MFD abnormal status	—
MFD U-ART communication error flag	Normal/MFD U-ART Fail		—
MFD CAN communication error flag	Normal/MFD CAN Fail		—
MFD destination abnormal flag	Normal/MFD destination error		—
MFD failure information	No error High-speed CAN error counter abnormal High-speed CAN bus OFF detection High-speed CAN data abnormal High-speed CAN data not received UART data abnormal UART data not received IGN line wire break System microcomputer abnormal GERDA abnormal		—
Birthday1 setting M	—	Birthday setting value	—
Birthday1 setting D	—		—
Birthday2 setting M	—	Birthday setting value	—
Birthday2 setting D	—		—
Anniversary1 setting M	—	Anniversary setting value	—
Anniversary1 setting D	—		—
Anniversary2 setting M	—	Anniversary setting value	—
Anniversary2setting D	—		—
Driving record1 setting Yard	—	Driving record 1 setting value	—
Driving record1 setting Time	—		—
Driving record1setting fuel cons. Ave.	—		—
Driving record1 setting M	—		—
Driving record1 setting D	—		—

Items to be displayed	Unit of measure	Remarks	Note
Driving record2 setting DIS	—	Driving record 2 setting value	—
Driving record2 setting Time	—		—
Driving record2setting fuel cons. Ave.	—		—
Driving record2 setting M	—		—
Driving record2 setting D	—		—
Clock/OFF setting	OFF External air temperature + analog clock External air temperature + digital clock	Clock display setting	—
Engine oil maintenance setting Y	—	Oil maintenance setting value	—
Engine oil maintenance setting M	—		—
Engine oil maintenance setting D	—		—
Engine oil maintenance setting meter	—		—
Oil filter maintenance setting Y	—	Oil filter maintenance setting value	—
Oil filter maintenance setting M	—		—
Oil filter maintenance setting D	—		—
Oil filter maintenance setting meter	—		—
Tire maintenance setting Y	—	Tire maintenance setting value	—
Tire maintenance setting M	—		—
Tire maintenance setting D	—		—
Tire maintenance setting meter	—		—
Engine oil maintenance setting Y	—	Periodic inspection setting value	—
Engine oil maintenance setting M	—		—
Engine oil maintenance setting D	—		—
Engine oil maintenance setting meter	—		—
Sub-meter(left) setting NO1	Indication OFF AVG speed ODO fuel efficiency ECVT Fluid Temp. Accel. Opening Angle Section time Section distance Section fuel efficiency	Meter display setting	—
Sub-meter(left) setting NO2	Analog display Digital display	Meter display setting	—
Sub-meter(center) setting NO1	Indication OFF AVG speed ODO fuel efficiency ECVT Fluid Temp. Accel. Opening Angle Section time Section distance Section fuel efficiency	Meter display setting	—
Sub-meter(center) setting NO2	Analog display Digital display	Meter display setting	—
Sub-meter(right) setting NO1	Indication OFF AVG speed ODO fuel efficiency ECVT Fluid Temp. Accel. Opening Angle Section time Section distance Section fuel efficiency	Meter display setting	—

Items to be displayed	Unit of measure	Remarks	Note
Sub-meter(right) setting NO2	Analog display Digital display	Meter display setting	—
MFD brightness setting NO1	-5 — +5	MFD setting	—
MFD brightness setting NO2	-5 — +5	MFD setting	—
MFD contrast setting NO1	-5 — +5	MFD setting	—
MFD contrast setting NO2	-5 — +5	MFD setting	—
ECO evaluation ON-OFF setting	OFF/ON	MFD setting	—
Info area setting	OFF AVG CONS FUEL CONS Range	MFD setting	—
Menu language setting	(Corresponding languages)	MFD setting	—
Buzzer volume setting	OFF Small Big	MFD setting	—
Fuel cons. Setting	00/OFF	MFD setting	—
Auto Start Stop interrupt display setting	OFF/ON	MFD setting	Not applicable
Welcome display ON-OFF setting	OFF/ON	MFD setting	—
Self check ON-OFF setting	OFF/ON	MFD setting	—

NOTE:
For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

10.System Operation Check Mode

A: OPERATION

For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

NOTE:
If not equipped (based on area or condition), process will not go on.

CAUTION:
After executing the system operation check mode, execute the Clear Memory Mode. <Ref. to IDI(diag)-12, OPERATION, Clear Memory Mode.>

B: LIST

- Combination meter

Check item	Item 1	Item 2	Note
Pointer operation check	Speedometer	Speedometer 0 km/h (MPH) indication	—
		Speedometer 40 km/h (MPH) indication	—
		Speedometer 80 km/h (MPH) indication	—
		Speedometer 120 km/h (MPH) indication	—
		Speedometer 160 km/h (MPH) indication	—
		Speedometer 200 km/h (MPH) indication	—
		Speedometer 240 km/h (MPH) indication	—
		Speedometer 280 km/h (MPH) indication	—
	Tachometer	Tachometer 0 rpm indication	—
		Tachometer 1000 rpm indication	—
		Tachometer 2000 rpm indication	—
		Tachometer 3000 rpm indication	—
		Tachometer 4000 rpm indication	—
		Tachometer 5000 rpm indication	—
		Tachometer 6000 rpm indication	—
		Tachometer 7000 rpm indication	—
	Economy gauge	Fuel efficiency gauge (ECO gauge) MIN scale command	—
		Fuel efficiency gauge (ECO gauge) 1/4 scale command	—
		Fuel efficiency gauge (ECO gauge) 1/2 scale command	—
		Fuel efficiency gauge (ECO gauge) 3/4 scale command	—
		Fuel efficiency gauge (ECO gauge) MAX scale command	—

Check item	Item 1	Item 2	Note
Segment of liquid crystal display check	LCD display all lighted		—
	AT shift (For CVT only)	P range display	—
		R range display	—
		N range display	—
		L range display	—
		△ display	—
		▽ display	—
		8 range display	—
		7 range display	—
		6 range display	—
		5 range display	—
		4 range display	—
		3 range display	—
		2 range display	—
		1 range display	—
	Odometer	Odometer numerical device display 0	—
		Odometer numerical device display 1	—
		Odometer numerical device display 2	—
		Odometer numerical device display 3	—
		Odometer numerical device display 4	—
		Odometer numerical device display 5	—
		Odometer numerical device display 6	—
		Odometer numerical device display 7	—
		Odometer numerical device display 8	—
		Odometer numerical device display 9	—
	Trip meter	Trip meter numerical device display 0	—
		Trip meter numerical device display 1	—
		Trip meter numerical device display 2	—
		Trip meter numerical device display 3	—
		Trip meter numerical device display 4	—
		Trip meter numerical device display 5	—
		Trip meter numerical device display 6	—
		Trip meter numerical device display 7	—
		Trip meter numerical device display 8	—
		Trip meter numerical device display 9	—
	Fuel gauge bar display	Fuel sender E-point command	—
		Meter E scale command	—
		Fuel warning lit position command (fuel warning also lights)	—
		Meter 1/4 scale command	—
		Meter 1/2 scale command	—
		Meter 3/4 scale command	—
		Meter F-scale command	—
		Fuel sender F-point command	—
	SPORT indicator (For AT model only)		—
	Shift-up indicator (For MT model only)		—
	CRUISE indicator		—
	SET indicator		—

Check item	Item 1	Item 2	Note
Lamp check	All lamps lighted		—
	Indicator drive	High-beam indicator	—
		Position light indicator (For high-class meter targeted at Canada only)	—
		Front fog light indicator	—
		Water temperature (COOL) indicator	—
		VDC OFF indicator	—
		VDC operation/failure indicator	—
		Hill start assist OFF/failure indicator	—
	Warning drive	Driver side seat belt warning	—
		Airbag warning	—
		TPMS warning (For US only)	—
		All seats door warning	—
		Water temperature (HOT) warning	—
		E/G remaining oil warning	—
		AT (CVT) oil temperature warning (For CVT only)	—
		ABS warning	—
		BRAKE warning	—
		AWD warning (For CVT only)	—
		Remaining washer fluid washer	—
		Remaining fuel warning	—
		EPS warning	—
		Check E/G warning	—
MFD output check	Passenger side seat belt warning		—
	Momentary fuel efficiency display value		—
	Mean fuel efficiency A display value		—
	Mean fuel efficiency B display value		—
	Remaining fuel cruising distance display value		—
	External air temperature indication value		—
	Mean vehicle speed display value		—
Buzzer output	Sounding output ON/OFF		—
Illumination check	Brightness check		—

11.User Customizing

A: OPERATION

For operation procedures, refer to the “PC application help for Subaru Select Monitor”.

B: LIST

- Combination meter

Items to be displayed	Initial setting value	Customize setting	Note
External air temperature compensation value	±0°C	-5°C — +5°C	The temperature is compensated only for every 1°C (The change of 1°C corresponds to 1.8°F).
Mean fuel consumption compensation value	±0%	-10% — +10%	—

12.List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Item	Content of diagnosis	Reference
U0073	Control Module Communication Bus “A” Off	Detected when CAN line abnormality is detected.	<Ref. to IDI(diag)-22, DTC U0073 CONTROL MODULE COMMUNICATION BUS “A” OFF, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0100	Lost Communication With ECM/PCM “A”	Detected when CAN data from the engine control module (ECM) does not arrive.	<Ref. to IDI(diag)-22, DTC U0100 LOST COMMUNICATION WITH ECM/PCM “A”, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0101	Lost Communication With TCM	Detected when CAN data from TCM does not arrive.	<Ref. to IDI(diag)-22, DTC U0101 LOST COMMUNICATION WITH TCM, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0122	Lost Communication With Vehicle Dynamics Control Module	Detected when CAN data from VDC does not arrive.	<Ref. to IDI(diag)-22, DTC U0122 LOST COMMUNICATION WITH VEHICLE DYNAMICS CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0131	Lost Communication With Power Steering Control Module	Detected when CAN data from electric power steering CM does not arrive.	<Ref. to IDI(diag)-22, DTC U0131 LOST COMMUNICATION WITH POWER STEERING CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0140	Lost Communication With Body Control Module	Detected when CAN data from body integrated unit does not arrive.	<Ref. to IDI(diag)-22, DTC U0140 LOST COMMUNICATION WITH BODY CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0151	Lost Communication With Restraints Control Module	Detected when CAN data from airbag CM does not arrive.	<Ref. to IDI(diag)-22, DTC U0151 LOST COMMUNICATION WITH RESTRAINTS CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0164	Lost Communication With HVAC Control Module	Detected when CAN data from A/C CM does not arrive.	<Ref. to IDI(diag)-22, DTC U0164 LOST COMMUNICATION WITH HVAC CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1201	CAN-HS Counter Abnormal	Detected when CAN data is abnormal.	<Ref. to IDI(diag)-22, DTC U1201 CAN-HS COUNTER ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1650	Invalid Data Received From Meter (UART)	UART data from the combination meter is abnormal.	<Ref. to IDI(diag)-23, DTC U1650 INVALID DATA RECEIVED FROM METER (UART), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1651	Lost Communication With Meter (UART)	UART data from the combination meter has not arrived.	<Ref. to IDI(diag)-24, DTC U1651 LOST COMMUNICATION WITH METER (UART), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B2220	Break The Wire of Ign	Voltage malfunction caused by poor contact of IGN power supply circuits.	<Ref. to IDI(diag)-26, DTC B2220 BREAK THE WIRE OF IGN, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B2222	System Microcomputer Fail	When microcomputer froze.	<Ref. to IDI(diag)-27, DTC B2222 SYSTEM MICROCOMPUTER FAIL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B2223	GERDA Fail	When transmitting and receiving of data cannot be done normally between system microcomputer and image microcomputer.	<Ref. to IDI(diag)-27, DTC B2223 GERDA FAIL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1500	Fuel Sender Open/ Short-Circuit Detection	Fuel gauge circuit is open or shorted.	<Ref. to IDI(diag)-28, DTC B1500 FUEL SENDER OPEN/SHORT-CIRCUIT DETECTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

DTC	Item	Content of diagnosis	Reference
B1501	Power Supply System Error Detection	Combination meter power supply circuit is open or shorted.	<Ref. to IDI(diag)-30, DTC B1501 POWER SUPPLY SYSTEM ERROR DETECTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1507	External Air Temperature Open/Short-Circuit Detection	External air temperature sensor circuit is open or shorted.	<Ref. to IDI(diag)-31, DTC B1507 EXTERNAL AIR TEMPERATURE OPEN/SHORT-CIRCUIT DETECTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

13.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC U0073 CONTROL MODULE COMMUNICATION BUS “A” OFF

Detected when defective CAN line is detected.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

B: DTC U0100 LOST COMMUNICATION WITH ECM/PCM “A”

Detected when CAN data is not received from engine control module (ECM).

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

C: DTC U0101 LOST COMMUNICATION WITH TCM

Detected when CAN data is not received from TCM.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

D: DTC U0122 LOST COMMUNICATION WITH VEHICLE DYNAMICS CONTROL MODULE

Detected when CAN data is not received from VDC.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

E: DTC U0131 LOST COMMUNICATION WITH POWER STEERING CONTROL MODULE

Detected when CAN data is not received from electric power steering CM.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

F: DTC U0140 LOST COMMUNICATION WITH BODY CONTROL MODULE

Detected when CAN data is not received from body integrated unit.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

G: DTC U0151 LOST COMMUNICATION WITH RESTRAINTS CONTROL MODULE

Detected when CAN data is not received from airbag CM.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

H: DTC U0164 LOST COMMUNICATION WITH HVAC CONTROL MODULE

Detected when CAN data is not received from A/C CM.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

I: DTC U1201 CAN-HS COUNTER ABNORMAL

Detected when CAN data is abnormal.

NOTE:
Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

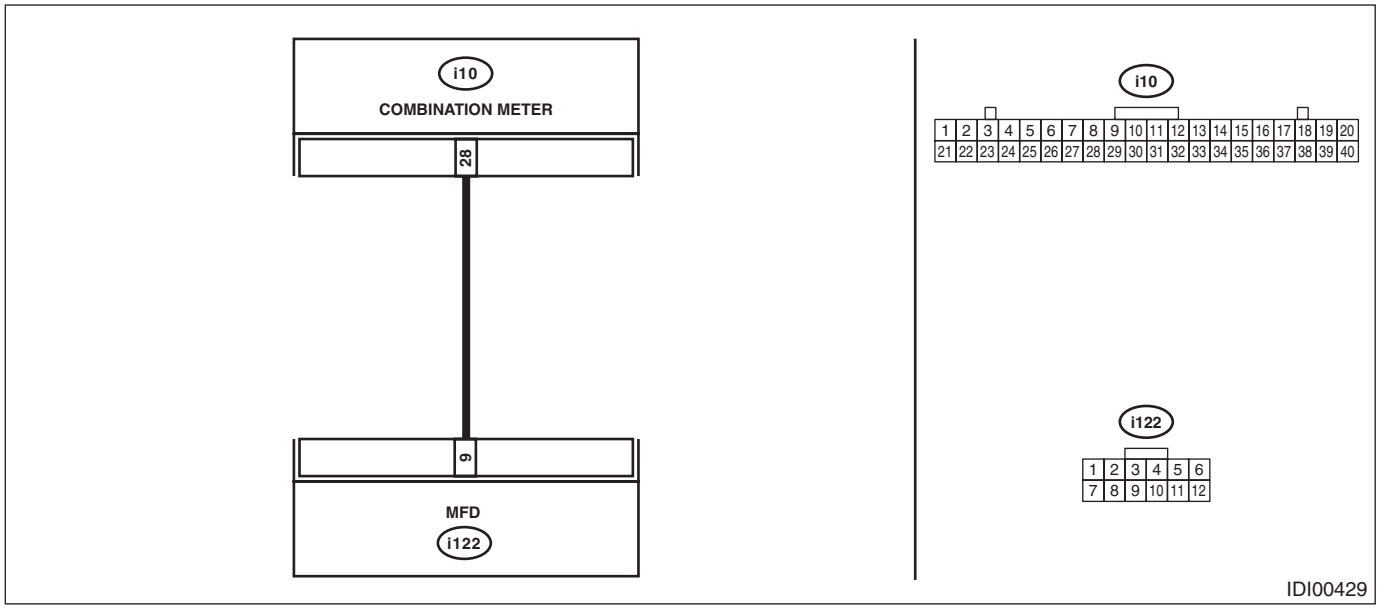
J: DTC U1650 INVALID DATA RECEIVED FROM METER (UART)

DTC DETECTING CONDITION:
There is an abnormality in UART data from combination meter.
TROUBLE SYMPTOM:
LCD is not displayed.

	Step	Check	Yes	No
1	**CHECK LAN SYSTEM.** Read the DTC of the body integrated unit and the LAN system using the Subaru Select Monitor. <Ref. to LAN(diag)-19, OPERATION, Read Diagnostic Trouble Code (DTC).> <Ref. to BC(diag)-9, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK CONNECTOR.** 1) Disconnect the MFD connector and meter connector. 2) Connect the disconnected connectors. 3) Read the DTC of the MFD using the Subaru Select Monitor.	Is DTC U1650 a current malfunction?	Go to step **3**.	There was poor contact of connector.
3	**CHECK COMBINATION METER.** 1) Replace the combination meter. <Ref. to IDI-15, Combination Meter.> 2) Read the DTC of the MFD using the Subaru Select Monitor.	Is DTC U1650 a current malfunction?	Replace the MFD. <Ref. to IDI-22, Multi-function Display (MFD).>	There was something wrong with the meter.

K: DTC U1651 LOST COMMUNICATION WITH METER (UART)

DTC DETECTING CONDITION:
UART data from combination meter is not received.
TROUBLE SYMPTOM:
LCD is not displayed.

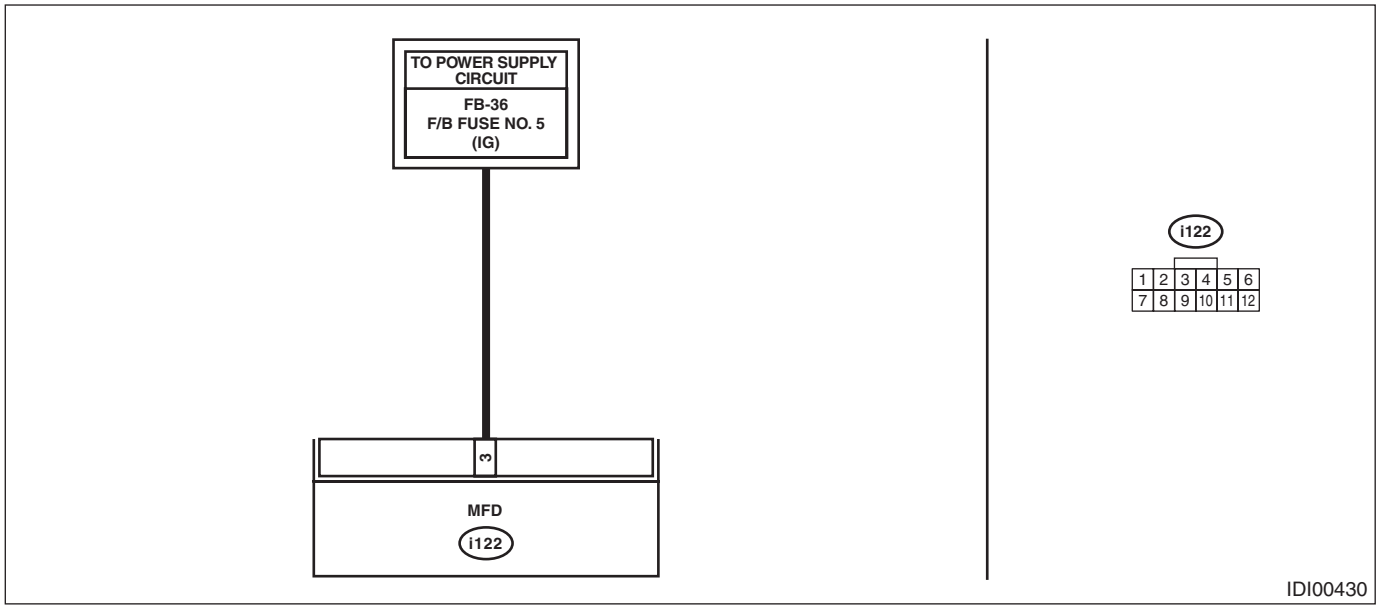


	Step	Check	Yes	No
1	**CHECK LAN SYSTEM.** Read the DTC of the LAN system using the Subaru Select Monitor. <Ref. to LAN(diag)-19, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK CONNECTOR.** 1) Disconnect the MFD connector and meter connector. 2) Connect the disconnected connectors. 3) Read the DTC of the MFD using the Subaru Select Monitor.	Is DTC U1651 a current malfunction?	Go to step **3**.	There was poor contact of connector.
3	**CHECK HARNESS.** 1) Disconnect the MFD connector and meter connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i10) No. 28 — (i122) No. 9:***	Is the resistance 10 Ω or less?	Go to step **4**.	Repair the open circuit of harness or replace harness.
4	**CHECK HARNESS.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i122) No. 9 — Chassis ground:***	Is the resistance 10 Ω or less?	Repair the short circuit of harness or replace harness.	Go to step **5**.
5	**CHECK COMBINATION METER.** 1) Replace the combination meter. <Ref. to IDI-15, Combination Meter.> 2) Read the DTC of the MFD using the Subaru Select Monitor.	Is DTC U1651 a current malfunction?	Go to step **6**.	There was something wrong with the meter.

	Step	Check	Yes	No
6	**CHECK COMBINATION METER.** 1) Replace the current combination meter with the original combination meter. 2) Replace the MFD. <Ref. to IDI-22, Multi-function Display (MFD).> 3) Read the DTC of the MFD using the Subaru Select Monitor.	Is DTC U1651 a current malfunction?	Replace the meter. <Ref. to IDI-15, Combination Meter.>	There was an abnormality in MFD.

L: DTC B2220 BREAK THE WIRE OF IGN

DTC DETECTING CONDITION:
There was voltage malfunction caused by poor contact of IGN power supply circuits.
TROUBLE SYMPTOM:
Airbag indicator does not illuminate.



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC of the MFD using the Subaru Select Monitor.	Is DTC B2220 a current malfunction?	Go to step **2**.	Go to step **5**.
2	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the MFD connector and reconnect it. 3) Turn the ignition switch to ON. 4) Read the DTC relating the MFD using the Subaru Select Monitor.	Is DTC B2220 a current malfunction?	Go to step **3**.	Go to step **5**.
3	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Check the fuse.	Is the fuse OK?	Go to step **4**.	Replace the defective fuse.
4	**CHECK HARNESS.** 1) Disconnect the MFD connector. 2) Turn the ignition switch to ON. 3) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i122) No. 3 (+) — Chassis ground (–):***	Is the voltage 8.5 — 16.5 V?	Replace the MFD. <Ref. to IDI-22, Multi-function Display (MFD).>	Repair the harness between MFD and fuse.
5	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the MFD connector.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

M: DTC B2222 SYSTEM MICROCOMPUTER FAIL

DTC DETECTING CONDITION:
When the microcomputer froze.
TROUBLE SYMPTOM:
MFD does not operate.

NOTE:
Reset the MFD. If it does not return to the normal operation, replace the MFD. <Ref. to IDI-22, Multi-function Display (MFD).>

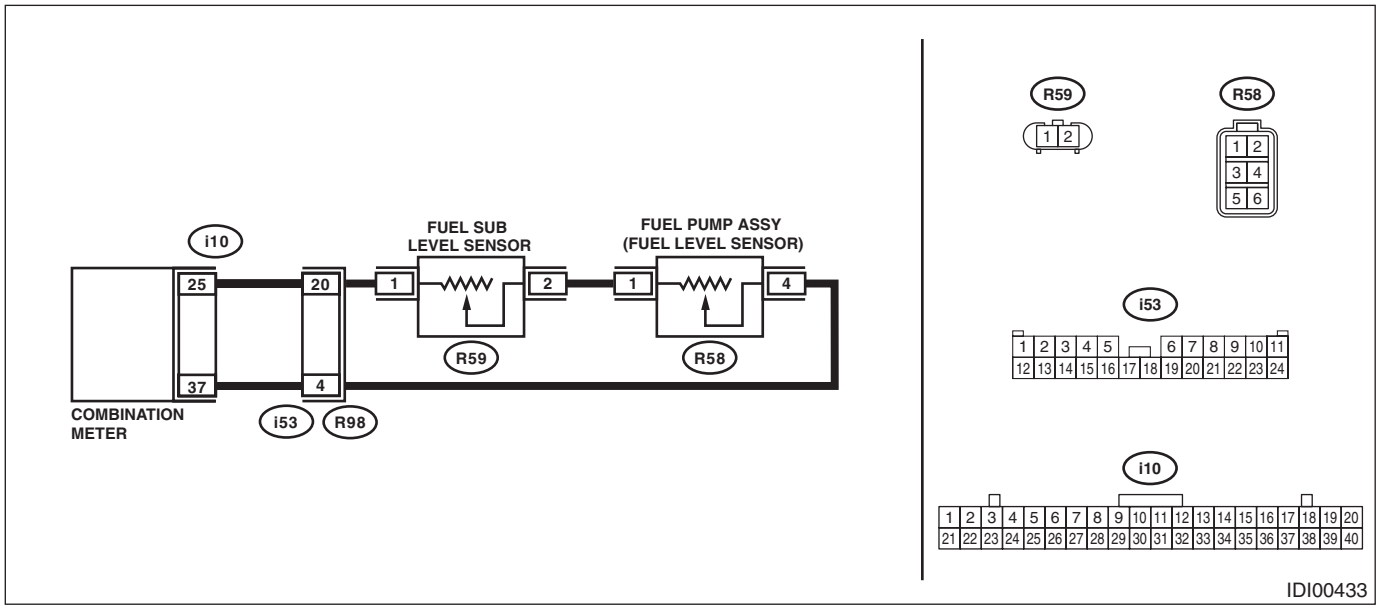
N: DTC B2223 GERDA FAIL

DTC DETECTING CONDITION:
When the system microcomputer can not send/receive the data with the image microcomputer normally.
TROUBLE SYMPTOM:
There is no display on the TFT. Operation is normal.

NOTE:
Replace the MFD. <Ref. to IDI-22, Multi-function Display (MFD).>

O: DTC B1500 FUEL SENDER OPEN/SHORT-CIRCUIT DETECTION

DTC DETECTING CONDITION:
The fuel gauge circuit is open or shorted.
TROUBLE SYMPTOM:
- Defective fuel gauge.
- Fuel level warning light blinks.

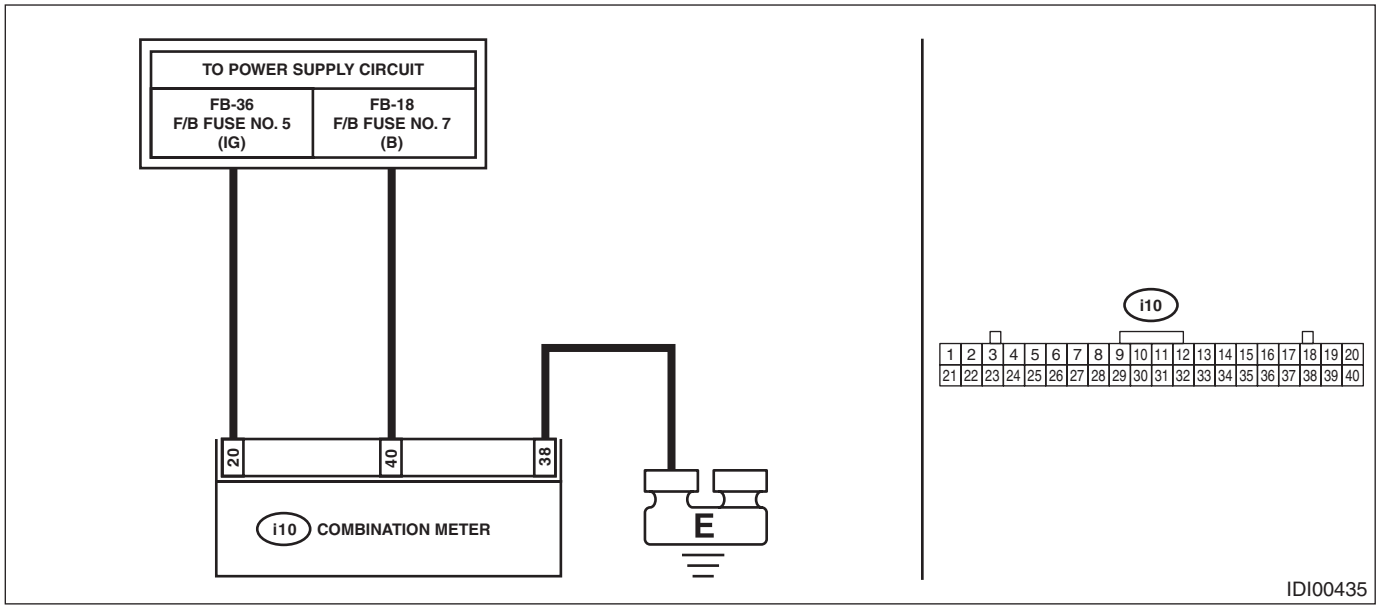


Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC of the meter using the Subaru Select Monitor.	Is DTC B1500 a current malfunction?	Go to step **2**.	Go to step **7**.
2	**CHECK COMBINATION METER.** 1) Check the operation of combination meter using Subaru Select Monitor. 2) From the {System Operation Check Mode}, select the «Fuel Meter Operation» and «Remaining fuel warning».	Is the operation of combination meter OK?	Go to step **3**.	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>
3	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the meter connector and the fuel sub level sensor connector and the fuel level sensor connector. 3) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i10) No. 25 — (R59) No. 1:*** ***(i10) No. 37 — (R58) No. 4:***	Is the resistance 10 Ω or less?	Go to step **4**.	Repair the open circuit of harness or replace harness.
4	**CHECK HARNESS.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i10) No. 25 — Chassis ground:*** ***(i10) No. 37 — Chassis ground:***	Is the resistance 10 Ω or less?	Repair the short circuit of harness or replace harness.	Go to step **5**.
5	**CHECK FUEL SUB LEVEL SENSOR.** Check the fuel sub level sensor as a single part. <Ref. to FU(H4DO)-157, INSPECTION, Fuel Sub Level Sensor.>	Is the sensor normal?	Go to step **6**.	Replace the sensor.

	Step	Check	Yes	No
6	**CHECK FUEL LEVEL SENSOR.** Check the fuel level sensor as a single part. <Ref. to FU(H4DO)-151, INSPECTION, Fuel Level Sensor.>	Is the sensor normal?	Go to step **7**.	Replace the sensor.
7	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect connectors.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.
8	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display the «Fuel sensing value» from {Read Current Data}.	Does the data display 10 — 570 Ω?	System is normal.	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>

P: DTC B1501 POWER SUPPLY SYSTEM ERROR DETECTION

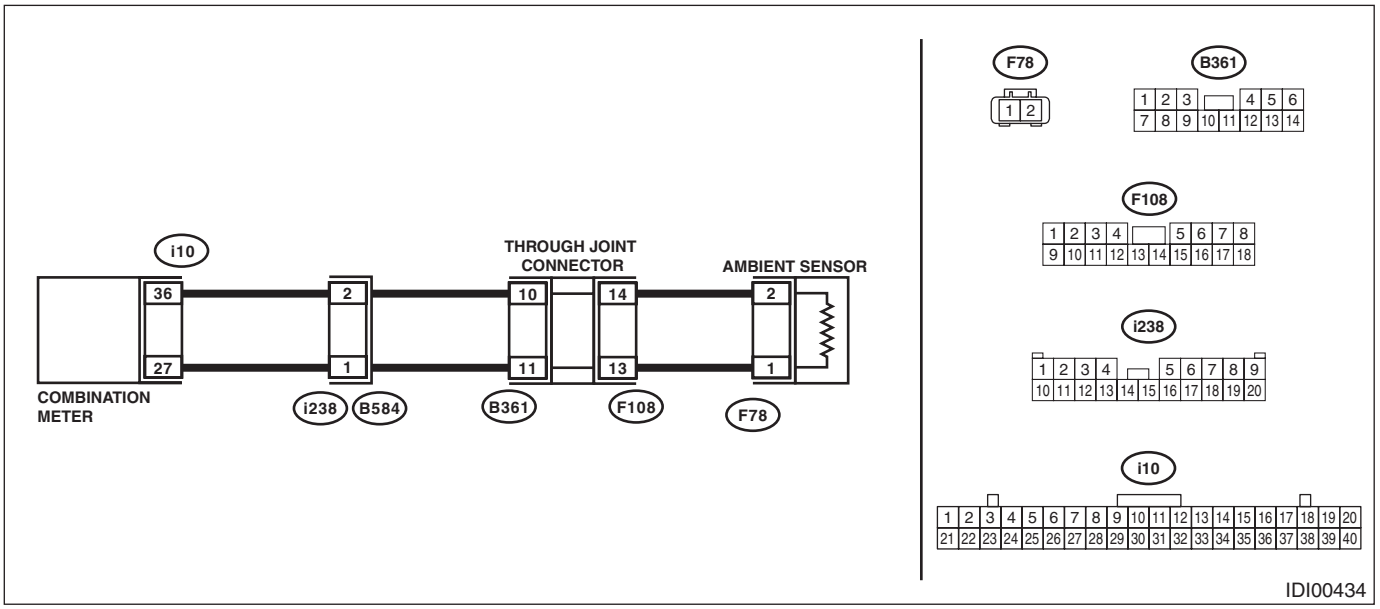
DTC DETECTING CONDITION:
Open or short in combination meter power supply circuit
TROUBLE SYMPTOM:
Defective operation of combination meter



	Step	Check	Yes	No
1	**CHECK POWER SUPPLY CIRCUIT.** Turn the ignition switch to ON, and confirm that the illumination of combination meter lights.	Does the illumination light?	Go to step **2**.	Go to step **3**.
2	**CHECK DTC.** Read the DTC of the meter using the Subaru Select Monitor.	Is DTC B1501 a current malfunction?	Go to step **3**.	Go to step **5**.
3	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Check the fuse.	Is the fuse OK?	Go to step **4**.	Replace the defective fuse.
4	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the meter connector. 3) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i10) No. 20 (+) — Chassis ground (–):*** ***(i10) No. 40 (+) — Chassis ground (–):***	Is the voltage 8.5 — 16.5 V?	Go to step **5**.	Repair the open circuit of harness or replace harness.
5	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect connectors.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

Q: DTC B1507 EXTERNAL AIR TEMPERATURE OPEN/SHORT-CIRCUIT DETECTION

DTC DETECTING CONDITION:
Open or short circuit in ambient sensor.
TROUBLE SYMPTOM:
- Defective ambient temperature display
- Defective air conditioner operation



	Step	Check	Yes	No
1	**CHECK DTC.** Read the DTC of the meter using the Subaru Select Monitor.	Is DTC B1507 a current malfunction?	Go to step **2**.	Go to step **6**.
2	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display the «External air temperature sensing value» from {Read Current Data}.	Is data displayed?	System is normal.	Go to step **3**.
3	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the meter connector and ambient sensor connector. 3) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i10) No. 36 — (F78) No. 2:*** ***(i10) No. 27 — (F78) No. 1:***	Is the resistance 10 Ω or less?	Go to step **4**.	Repair the open circuit of harness or replace harness.
4	**CHECK HARNESS.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i10) No. 36 — Chassis ground:*** ***(i10) No. 27 — Chassis ground:***	Is the resistance 10 Ω or less?	Repair the short circuit of harness or replace harness.	Go to step **5**.
5	**CHECK AMBIENT SENSOR.** Perform the inspection of ambient sensor unit. <Ref. to AC-75, INSPECTION, Ambient Sensor.>	Is the sensor normal?	Go to step **6**.	Replace the sensor.
6	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect connectors.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

SEATS

SE

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1. General Description 2
2. Front Seat 7
3. Rear Seat 22
4. Seat Heater System 34

1. General Description

A: SPECIFICATION

1. COMBINATION METER ASSEMBLY

Meter, display	Operation method, display method	Drive control	When checking the indicator needle operation/ needle reading operation
Speedometer	Stepping motor type	Combination meter	—
Tachometer			
ECO gauge			
ABS warning light	LED	Combination meter	On/Off
STEERING warning light			
AT oil temperature warning light			
Driver's seat belt warning light			
Door warning light			
Tire pressure warning light (U.S. model)			
AWD warning light (AT model)			
Hill start assist warning light (MT model)			
VDC warning light / VDC operation indicator light			
VDC OFF indicator light			
High beam indicator light			
Front fog light indicator light			
Lighting indicator light			
Fuel level warning light			
Malfunction indicator light			
Airbag warning light			
Engine oil level warning light			
Washer fluid level warning light			
Meter illumination back light			Light ON
LCD back light			Light ON
Engine coolant temperature warning light (red)			On (red)/Off
Engine coolant temperature indicator light (blue)			Off/On (blue)
Oil pressure warning light		Oil pressure switch	Turns on or off according to module control
Charge warning light		Generator	
Turn signal indicator light		Turn signal and hazard unit	
Security/immobilizer indicator light		Body integrated unit	
Auto leveler warning light (model with HID)		Auto headlight beam leveler CM	
Parking brake/brake fluid level warning light		Combination meter/ brake fluid level switch	On/Turns on or off according to module control
Odo indicator	LCD	Combination meter	—
Trip indicator			
Shift indicator			
AT select lever position indicator			
FUEL meter			
CRUISE indicator			
CRUISE SET indicator			
SPORT indicator			

2. MULTI-FUNCTION DISPLAY

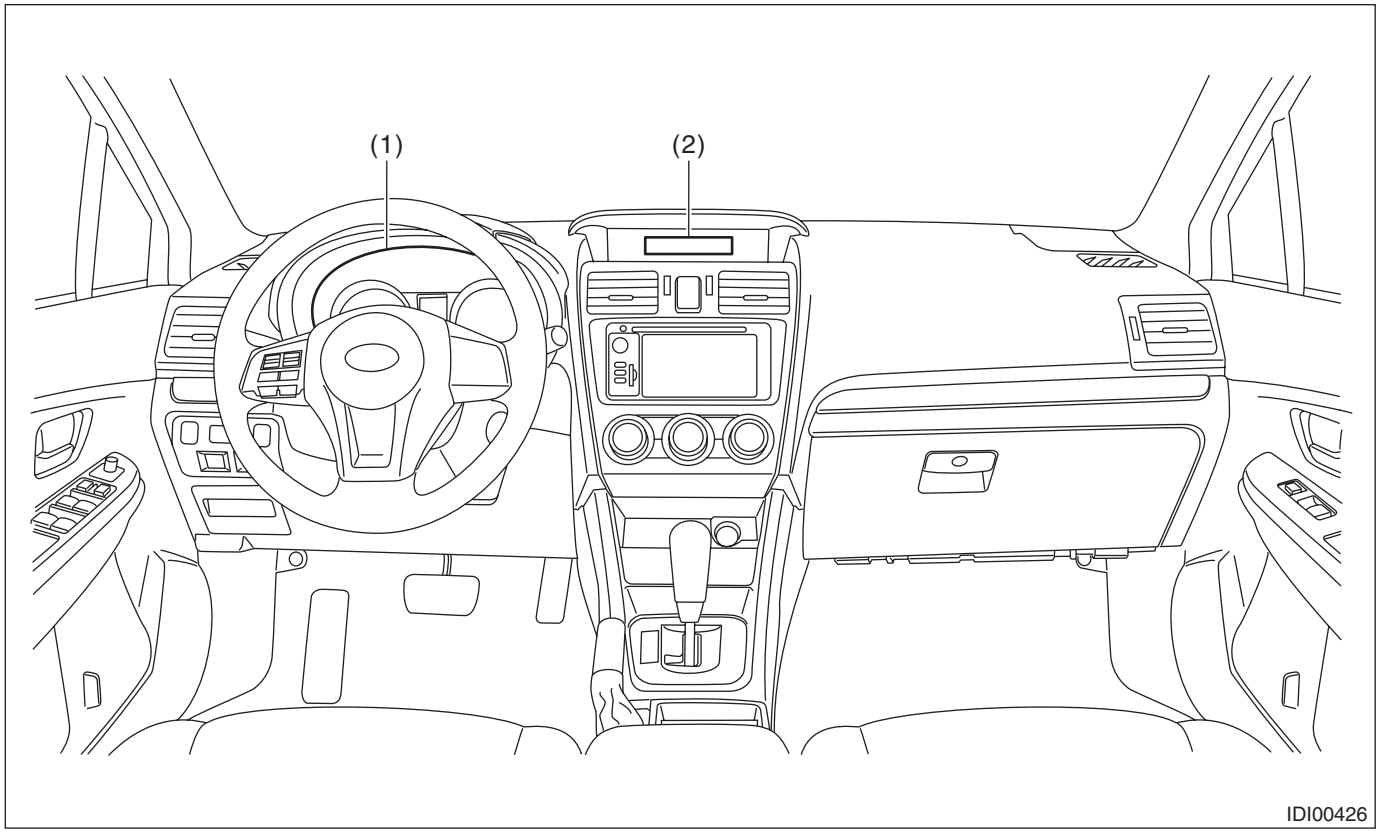
- Standard type

Display	Display method
Average/instantaneous fuel economy, cruising distance, ambient temperature, current time, continuous driving time, average vehicle speed	LCD
Passenger's seat airbag indicator light	LED
Passenger's airbag ON indicator light	
Passenger's airbag OFF indicator light	
Passenger's seat belt warning light	

- High grade type

Display	Display method
Fuel economy screen, ecology evaluation screen, preventive safety screen, clock/ ambient temperature, self-check screen, information screen	TFT
Air conditioner display	LCD
Passenger's seat airbag indicator light	LED
Passenger's airbag ON indicator light	
Passenger's airbag OFF indicator light	
Passenger's seat belt warning light	

B: LOCATION



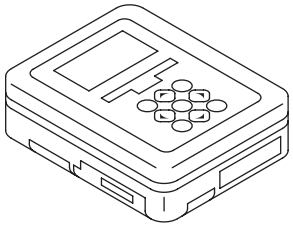
(1) Combination meter ASSY (2) Multi-function display

C: CAUTION

• Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When replacing the audio, control module and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
• Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
• Use gloves to avoid damage and getting fingerprints on the glass surface and meter surfaces.
• Do not apply an excessive force on the printed circuit.
• Do not drop or otherwise apply impact.
• Connect the connectors securely during reassembly.
• After reassembly, make sure that each component operates normally.
• When the combination meter assembly has been replaced, be sure to perform the registration of immobilizer.
• If the steering wheel and steering angle sensor (steering roll connector) are removed, perform “VDC sensor midpoint setting mode” of the VDC. <Ref. to VDC-18, VDC SENSOR MIDPOINT SETTING MODE, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>

D: PREPARATION TOOL

1. SPECIAL TOOL

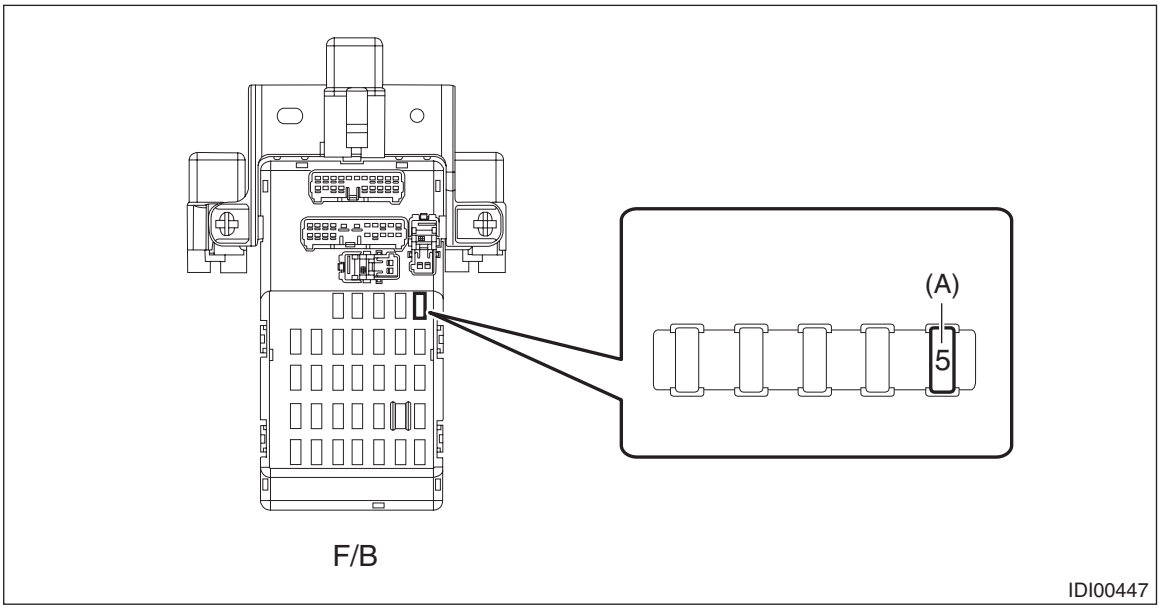
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for setting of each function and trouble-shooting for electrical system. NOTE: For detailed operation procedures of SUBARU SELECT MONITOR III KIT, refer to “PC application help for Subaru Select Monitor”.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Steering wheel puller	Used for removing the steering wheel.

2. Relay and Fuse

A: LOCATION



Relay & fuse box	Fuse 10 A (combination meter, MFD)	(A)

NOTE:
For other related fuses, refer to the wiring diagram. <Ref. to WI-15, Power Supply Circuit.>

B: INSPECTION

1. CHECK FUSE

1) Remove the fuse and inspect visually.
2) If the fuse is blown out, replace the fuse.

NOTE:
If the fuse is blown again, check the system wiring harness.

3. Combination Meter System

A: WIRING DIAGRAM

Refer to “Combination Meter System” in the wiring diagram. <Ref. to WI-56, WIRING DIAGRAM, Combination Meter System.>

B: ELECTRICAL SPECIFICATION

1. COMBINATION METER ASSEMBLY

Refer to “Control Module I/O Signal” of “INSTRUMENTATION/DRIVER INFO (DIAGNOSTICS)” section. <Ref. to IDI(diag)-6, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

C: OPERATION

1. SELF-DIAGNOSIS DISPLAY MODE

The self-diagnosis (checking of each meter, warning light, indicator light, illumination, LCD) of combination meter can be performed in the following procedure.

CAUTION:
Perform the steps described in 1) through 4) within 10 seconds.
1) Unfasten → fasten the driver’s seat belt within 3 seconds after the ignition switch is turned to ON.
2) With the driver’s seat belt fastened, press the trip meter knob three times.
3) Unfasten the driver’s seat belt, and then press the trip meter knob three times.
4) Fasten the driver’s seat belt again, and then press the trip meter knob three times.

NOTE:
• When the self-diagnosis function operates, the warning light, indicator light, and LCD display checks are performed. After this, the buzzer will sound for 0.5 seconds every time the trip meter knob is pressed, and operation checks are performed in the order of meter indicator needle operation, meter indicator needle indication, and LCD. Turn the ignition switch to OFF to cancel the self-diagnosis function.
• When the engine starts during diagnosis, the self-diagnosis function is not cancelled, however, once the vehicle starts driving, the self-diagnosis function is deactivated automatically.
5) Go to “Check meter indicator operation”.
Check meter operation, warning light, indicator light, illumination and LCD.

NOTE:
• After “_S_1” is displayed on the LCD, the meter indicator operation check mode is initiated.
• Each of the meter indicator operation display and LCD display switches every 6 seconds.

Meter indicator	LCD display, illumination	Warning light/ indicator light
MIN indication ↓ MAX indication	ILL1 (Min. brightness) ↓*4 ILL6 (Max. brightness)	*1, *2, *3
MAX indication ↓ MIN indication	ILL6 (Max. brightness) ↓*4 ILL1 (Min. brightness)	

*1: Warning lights and indicator lights controlled by the meter drive circuit are illuminated. <Ref. to IDI-2, SPECIFICATION, General Description.>
*2: Warning lights and indicator lights controlled by other module are turned on/off according to the module control. <Ref. to IDI-2, SPECIFICATION, General Description.>
*3: Engine coolant temperature warning light illuminates in red.
*4: Display for one second for each level
6) Press the trip meter knob once.

7) Go to “Meter Indicator Needle Indication Check”.
Check meter operation, warning light, indicator light, and LCD.

NOTE:
• Meter indicator switches every 1.5 seconds for each indication.
• ILL indication illuminates at the same brightness as when entering “Meter Indicator Needle Indication Check”.
• During operation, “_S_2” is displayed on the LCD trip display.

Speedometer (km/h)	Tachometer (rpm)	ECO gauge	Warning light/ indicator light
0	0	Lowest point	*1, *2, *3
0	0	–Max	
40	1000	0	
100	4000	+Max	
40	1000	0	
0	0	–Max	

*1: Warning lights and indicator lights controlled by the meter drive circuit go off. <Ref. to IDI-2, SPECIFICATION, General Description.>
*2: Warning lights and indicator lights controlled by other module are turned on/off according to the module control. <Ref. to IDI-2, SPECIFICATION, General Description.>
*3: Engine coolant temperature indicator light illuminates in blue.
8) Press the trip meter knob once.
9) Go to “Check LCD display”.
Check the LCD display.

NOTE:
• After “_S_3” is displayed on the LCD, the LCD display check mode is initiated.
• LCD display switches every 1 second.
• Warning lights and indicator lights controlled by the meter drive circuit go off. <Ref. to IDI-2, SPECIFICATION, General Description.>
• Warning lights and indicator lights controlled by other module are turned on/off according to the module control. <Ref. to IDI-2, SPECIFICATION, General Description.>
• The meter indication remains at the same level as “Meter Indicator Needle Indication Check”.
• ILL indication illuminates at ILL6 level (max. brightness).

- After No. 14 is displayed in the illumination order, display is repeated from No. 1 again.

ORDER	AT/SS	SPORT/SHIFT UP CRUISE/SET	TRIP/ODO S/I/S#	FUEL METER	LFW
1	▲ ▼	SPORT CRUISE △ SET	A B 8 8 8 . 8 8 8 8 8 8 8 [S] [I] S#	E F	OFF
2		OFF	1 1 1 . 1 1 1 1 1 1	E F	ON
3	▲	SPORT	A 2 2 2 . 2 2 2 2 2 2 2 [S]	E F	ON
4		OFF	3 3 3 . 3 3 3 3 3 3	E F	OFF
5	▼	△	B 4 4 4 . 4 4 4 4 4 4 [I]	E F	OFF
6		OFF	5 5 5 . 5 5 5 5 5 5	E F	OFF
7	▲	CRUISE	A 6 6 6 . 6 6 6 6 6 6 S#	E F	OFF
8		OFF	7 7 7 . 7 7 7 7 7 7	E F	OFF
9	▼	SET	B 8 8 8 . 8 8 8 8 8 8 [S]	E F	OFF
10		OFF	9 9 9 . 9 9 9 9 9 9	E F	OFF
11	▲	SPORT △	A 0 0 0 . 0 0 0 0 0 0 [I]	E F	OFF
12		OFF	8 8 8 . 8 8 8 8 8 8	E F	OFF
13	▼	CRUISE SET	B 8 8 8 . 8 8 8 8 8 8 S#	E F	ON
14		OFF	8 8 8 . 8 8 8 8 8 8		OFF

IDI00374

D: INSPECTION

Refer to “Basic Diagnostic Procedure” of “INSTRUMENTATION/DRIVER INFO (DIAGNOSTICS)” section. <Ref. to IDI(diag)-2, Basic Diagnostic Procedure.>

E: NOTE

For procedure of each component in the combination meter system, refer to the respective section.

- Combination meter assembly: <Ref. to IDI-15, Combination Meter.>
- Speedometer: <Ref. to IDI-18, Speedometer.>
- Tachometer: <Ref. to IDI-19, Tachometer.>
- FUEL meter: <Ref. to IDI-20, Fuel Gauge.>
- ECO gauge: <Ref. to IDI-21, ECO Gauge.>

4. Multi-function Display (MFD) System

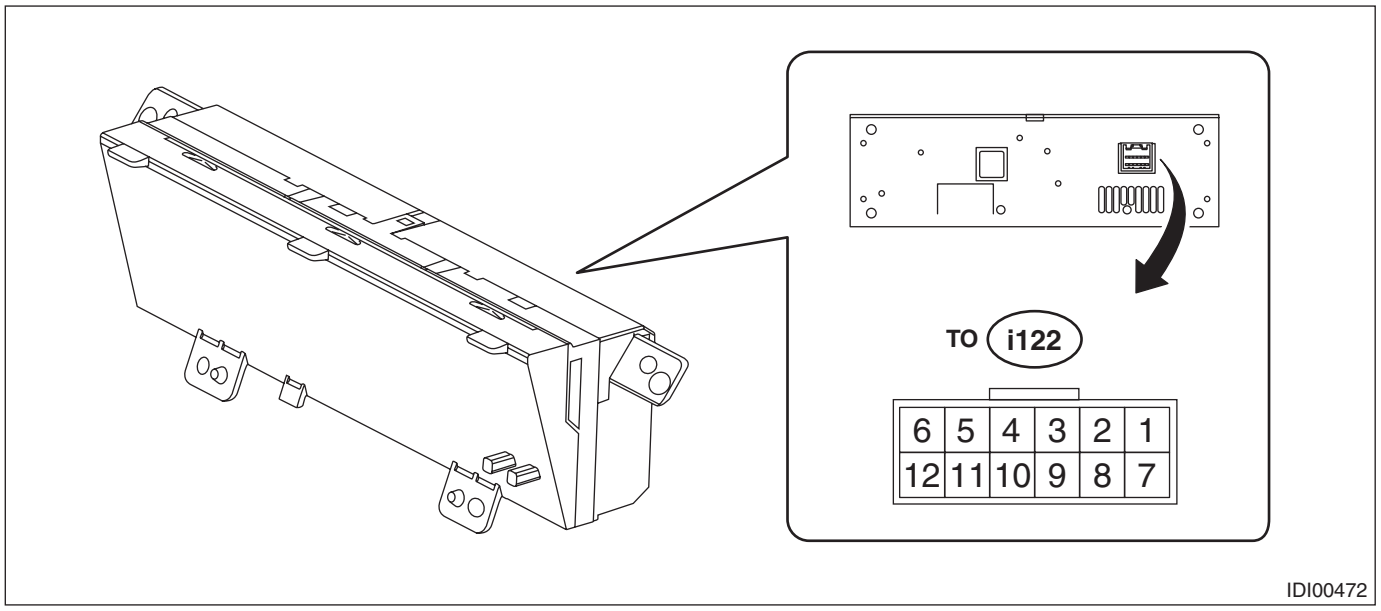
A: WIRING DIAGRAM

Refer to “Multi-function Display (MFD) System” in WI section. <Ref. to WI-110, WIRING DIAGRAM, Multi-function Display (MFD) System.>

B: ELECTRICAL SPECIFICATION

1. MULTI FUNCTION DISPLAY

- Standard type



Terminal No.	Item	Measuring condition	Standard
1 (+B) ←→ Chassis ground	Voltage	Always	10 — 14 V
2 (GND) ←→ Chassis ground	Resistance	Always	Less than 1 Ω
3 (IG) ←→ Chassis ground	Voltage	IG OFF → ON	0 V → 10 — 14 V
9 (U-ART com.)	—	Cannot be measured	—
10 ←→ Chassis ground	Voltage	Passenger’s airbag ON indicator light OFF → ON	0 V → 1.5 V
11 ←→ Chassis ground	Voltage	Passenger’s airbag OFF indicator light OFF → ON	0 V → 1.5 V

- High grade type

Refer to “Control Module I/O Signal” of “INSTRUMENTATION/DRIVER INFO (DIAGNOSTICS)” section. <Ref. to IDI(diag)-6, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

C: OPERATION

1. DIAGNOSTIC MODE (HIGH GRADE TYPE ONLY)

The settings of the multi-function display can be changed by performing the following procedures to display the diagnostic mode.

CAUTION:
- **Perform the work with IG-ON while charging the battery.**
- **While performing the work, close the front hood and all doors, and do not operate any electrical parts.**
- **Display can not be switched to diagnostic mode if the illumination control dial is set to the position for the dimming cancel function (maximum brightness).**

1) Procedure

CAUTION:
Perform the steps described in (2) through (4) within 10 seconds.

(1) Within 3 seconds after turning the IG-ON, turn the lighting switch to Switch 1 (TAIL) or Switch 2 (HEAD).
(2) While keeping the lighting switch to Switch 1 (TAIL) or Switch 2 (HEAD) position, press the i/SET switch three times.
(3) Turn the lighting switch to OFF, and press the i/SET switch three times.
(4) Turn the lighting switch to Switch 1 (TAIL) or Switch 2 (HEAD) position again, press the i/SET switch three times.

NOTE:
• Except for the demonstration display setting of the diagnostic mode, the display will terminate with IG-OFF or by selecting “Back” from the menu screen.
• The demonstration display setting of the diagnostic mode will terminate by starting the engine or removing the battery. Even if it becomes IG-OFF then IG-ON again, the diagnostic mode will not terminate.
• To select other menus from the demonstration display setting, terminate the diagnostic mode by starting the engine or removing the battery, then access to the diagnostic mode again.

2) Display menu
Change the display and settings from each menu.

Menu	Item	Contents
Demonstration display setting	—	Shows demonstration display.
Vehicle status confirmation	• CAN communication	Displays the connection status of input signals.
	• U-ART communication	
	• Camera connection	
Rear camera settings	• Guide line adjustment	Adjust the guide line in the order of up/down, left/right and rotate, then select “Set” to determine.
	• Guide line display	Select “ON” or “OFF”, then select “Set” to determine.
	• Guide line reset	Select “Yes” or “No” to determine whether to restore to the default settings.
Customize	• Key operation sound	Select “ON” or “OFF”, then select “Set” to determine.
	• Correction of lifetime fuel economy value*	Adjust the fuel economy value within the range of -10 — +10 km/l, then determine the value with i/SET switch.
Back	—	Finish the diagnostic mode.

*: Correction of lifetime fuel economy value is used only when the multi-function display has been replaced. This function is provided as a compensation feature to bring the current lifetime fuel economy value to the one before the replacement of multi-function display.

D: INSPECTION

• Standard type

Refer to the following inspection steps. <Ref. to IDI-12, SYMPTOM CHART, INSPECTION, Multi-function Display (MFD) System.>

• High grade type

Refer to “Basic Diagnostic Procedure” of “INSTRUMENTATION/DRIVER INFO (DIAGNOSTICS)” section. <Ref. to IDI(diag)-2, Basic Diagnostic Procedure.>

1. SYMPTOM CHART

Symptoms	Repair order	Note
No display is shown.	1. Power supply 2. Ground circuit 3. Communication circuit harness 4. MFD	<Ref. to IDI-12, CHECK POWER SUPPLY AND GROUND CIRCUIT AND COMMUNICATION CIRCUIT, INSPECTION, Multi-function Display (MFD) System.>
Ambient air temperature/fuel economy displays do not appear.	1. Power supply 2. Ground circuit 3. Communication circuit harness 4. MFD	<Ref. to IDI-13, CHECK CLOCK SYSTEM COMMUNICATION CIRCUIT., INSPECTION, Multi-function Display (MFD) System.>
Only ambient air temperature display is not displayed.	1. Power supply 2. Harness 3. Ambient sensor 4. Communication circuit 5. MFD	<Ref. to IDI-13, CHECK AMBIENT TEMPERATURE METER SYSTEM COMMUNICATION CIRCUIT., INSPECTION, Multi-function Display (MFD) System.>
Only fuel economy display is not displayed.	1. Setting 2. Communication circuit 3. MFD	<Ref. to IDI-14, CHECK COMMUNICATION CIRCUIT OF FUEL ECONOMY SYSTEM, INSPECTION, Multi-function Display (MFD) System.>

2. CHECK POWER SUPPLY AND GROUND CIRCUIT AND COMMUNICATION CIRCUIT

	Step	Check	Yes	No
1	**CHECK POWER SUPPLY.** 1) Disconnect the MFD connector. 2) Measure the voltage between MFD connector and chassis ground. ***Connector & terminal*** ***(i122) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **2**.	Check the harness for open or short between the fuse and MFD.
2	**CHECK GROUND CIRCUIT.** Measure the resistance between MFD connector and chassis ground. ***Connector & terminal*** ***(i122) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **3**.	Repair or replace the harness.
3	**CHECK HARNESS BETWEEN MFD AND COMBINATION METER ASSEMBLY.** 1) Disconnect the connector of combination meter assembly. 2) Check harness between MFD and combination meter assembly. ***Connector & terminal*** ***(i122) No. 9 — (i10) No. 28:***	Is harness normal?	Go to step **4**.	Repair or replace the harness.
4	**CHECK MFD.** 1) Remove the MFD. 2) Attach the clock to another vehicle on which the clock display operates normally, and check its operation.	Is the MFD normal?	Replace the meter - main assembly.	Replace the MFD.

3. CHECK CLOCK SYSTEM COMMUNICATION CIRCUIT

	Step	Check	Yes	No
1	**CHECK POWER SUPPLY.** 1) Disconnect the MFD connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between MFD connector and chassis ground. ***Connector & terminal*** ***(i122) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **2**.	Repair or replace the harness.
2	**CHECK GROUND CIRCUIT.** Measure the resistance between MFD connector and chassis ground. ***Connector & terminal*** ***(i122) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **3**.	Repair or replace the harness.
3	**CHECK HARNESS BETWEEN MFD AND COMBINATION METER ASSEMBLY.** 1) Disconnect the connector of combination meter assembly. 2) Check harness between MFD and combination meter assembly. ***Connector & terminal*** ***(i122) No. 9 — (i10) No. 28:***	Is harness normal?	Go to step **4**.	Repair or replace the harness.
4	**CHECK MFD.** 1) Remove the MFD. 2) Attach the clock to another vehicle on which the clock display operates normally, and check its operation.	Is the MFD normal?	Replace the meter - main assembly.	Replace the MFD.

4. CHECK AMBIENT TEMPERATURE METER SYSTEM COMMUNICATION CIRCUIT

	Step	Check	Yes	No
1	**CHECK AMBIENT SENSOR POWER SUPPLY.** 1) Disconnect the ambient sensor connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between the ambient sensor connector and chassis ground. ***Connector & terminal*** ***(F78) No. 1 (+) — Chassis ground (–):***	Is the voltage 4 V or more?	Go to step **2**.	Check the harness for open or short between the fuse and MFD.
2	**CHECK HARNESS BETWEEN AMBIENT SENSOR AND COMBINATION METER ASSEMBLY.** 1) Disconnect the connector of combination meter assembly. 2) Check harness between ambient sensor and combination meter assembly. ***Connector & terminal*** ***(F78) No. 1 — (i10) No. 27:*** ***(F78) No. 2 — (i10) No. 36:***	Is harness normal?	Go to step **3**.	Repair or replace the harness.
3	**CHECK AMBIENT SENSOR.** Check the ambient sensor. <Ref. to AC-75, INSPECTION, Ambient Sensor.>	Is the ambient sensor operating properly?	Go to step **4**.	Replace the ambient sensor.

	Step	Check	Yes	No
4	**CHECK AMBIENT TEMPERATURE DISPLAY.** 1) Connect the combination meter assembly connector. 2) Install the 3 kΩ resistance between connector terminals of the ambient sensor. 3) Turn the ignition switch to ON. ***Connector & terminal (F78) No. 1 — No. 2:***	Does the ambient temperature display 25°C (77°F)?	Repair the poor contact between the ambient sensor and harness connector.	Go to step **5**.
5	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display the data of «Ambient Air Temperature». NOTE: For detailed procedures, refer to "PC application help for Subaru Select Monitor".	Is the ambient temperature of 25°C (77°F) output?	Go to step **6**.	Replace the meter - main assembly. <Ref. to IDI-15, Combination Meter.>
6	**CHECK MFD.** 1) Remove the MFD. 2) Attach the ambient temperature display to another vehicle on which the ambient temperature display operates normally to check its operation.	Does the ambient temperature display 25°C (77°F)?	Replace the MFD.	Replace the meter - main assembly. <Ref. to IDI-15, Combination Meter.>

5. CHECK COMMUNICATION CIRCUIT OF FUEL ECONOMY SYSTEM

	Step	Check	Yes	No
1	**CHECK FUEL ECONOMY DISPLAY OFF MODE.** Check that the mode display changes when the MFD changeover knob is operated. (Display changes in the following order: cruising distance → average fuel economy → instantaneous fuel economy → continuous driving time → average vehicle speed → blank display)	Is fuel economy displayed?	MFD is normal.	Go to step **2**.
2	**CHECK BODY INTEGRATED UNIT.** Read the DTC using Subaru Select Monitor. NOTE: For detailed procedures, refer to "PC application help for Subaru Select Monitor".	Is DTC detected?	Go to step **3**.	Replace the meter - main assembly. <Ref. to IDI-15, Combination Meter.>
3	**CHECK MFD.** 1) Remove the MFD. 2) Attach the fuel economy display to another vehicle on which the fuel economy display operates normally to check its operation.	Is the fuel economy display correct?	Replace the MFD.	Replace the meter - main assembly. <Ref. to IDI-15, Combination Meter.>

E: NOTE

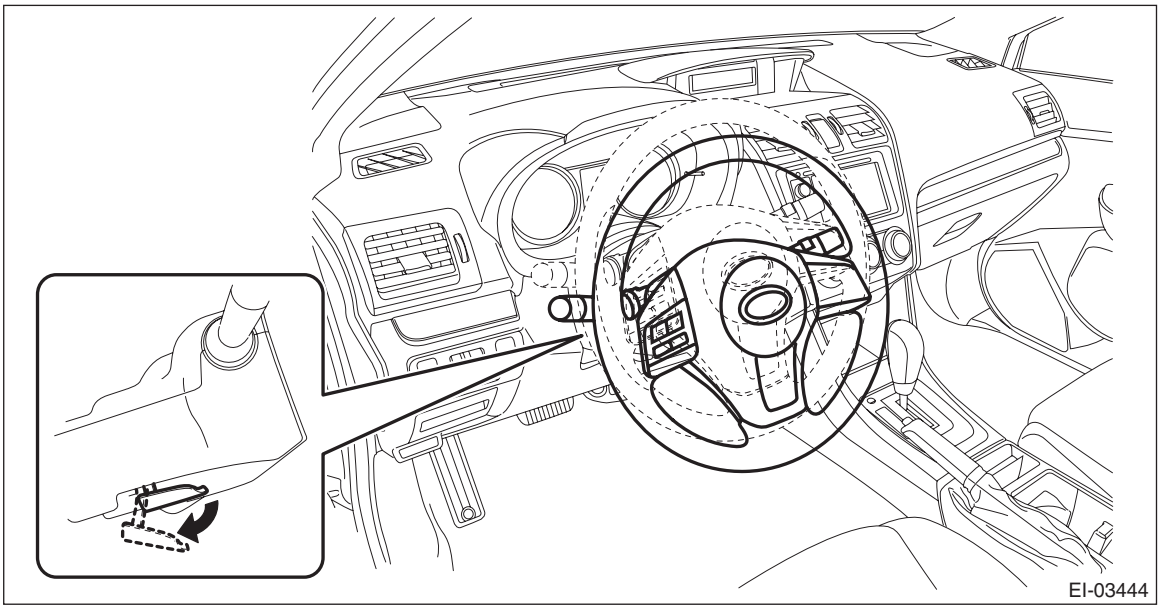
For procedure of each component in the clock system, refer to the respective section.

- Multi-function display: <Ref. to IDI-22, Multi-function Display (MFD).>

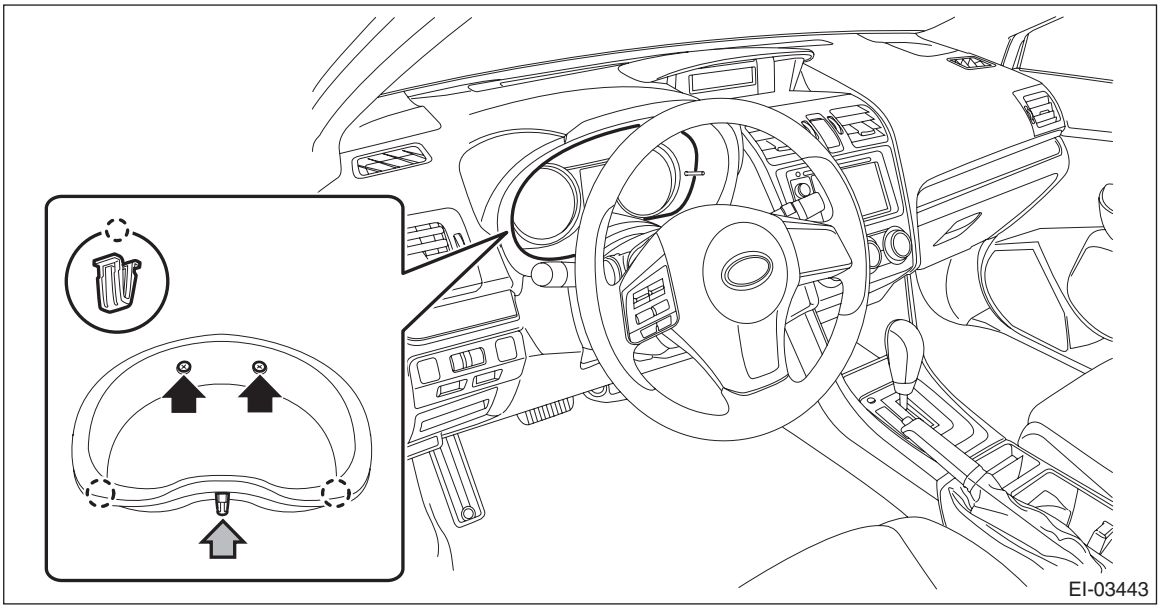
5. Combination Meter

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Release the lock, tilt the steering column to the lowest end and fully extend the column by the telescopic system.



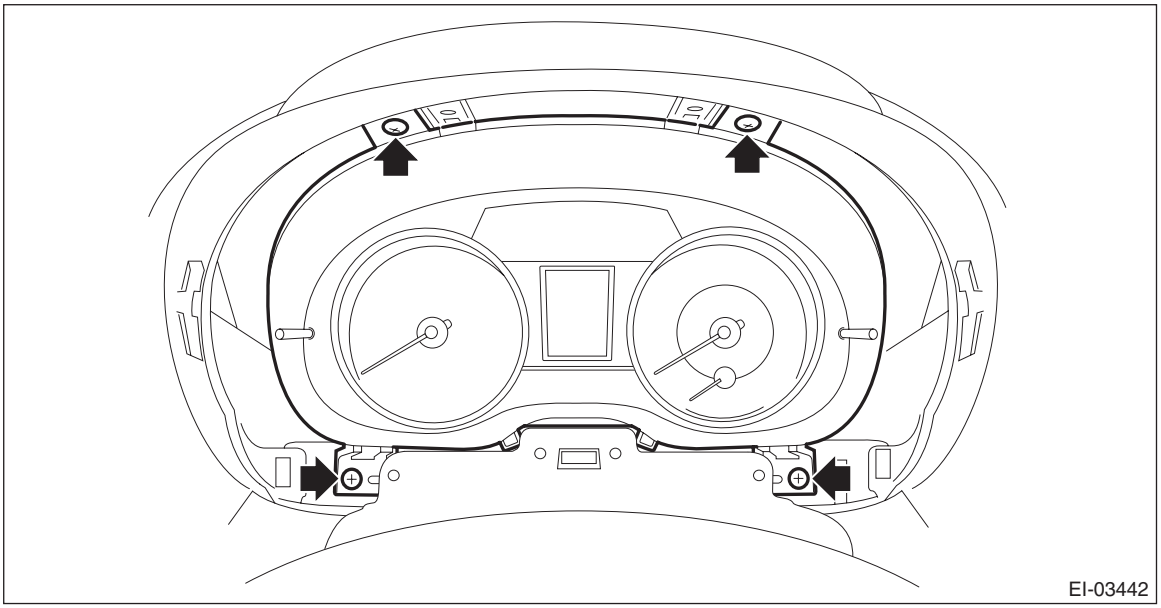
3) Release the screws, clips and claws, and remove the visor - combination meter.



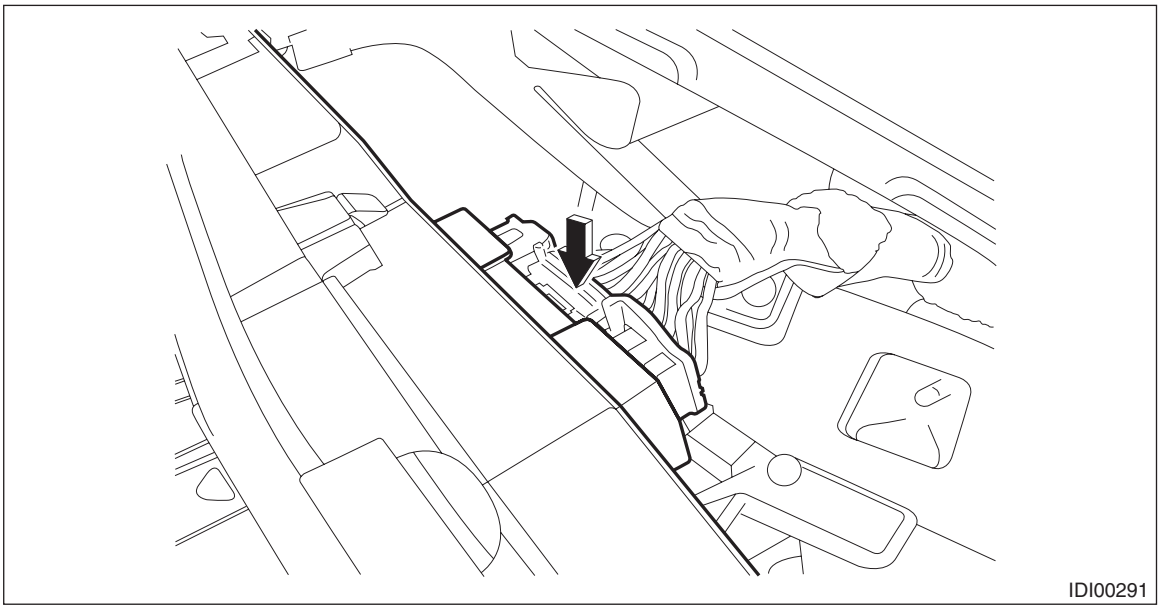
4) Remove the combination meter assembly.

CAUTION:
- **Be careful not to damage the meter or instrument panel.**
- **Pay particular attention to avoid damaging the meter glass.**

(1) Remove the screws.



(2) Pull the combination meter assembly toward you and disconnect the connector.



B: INSTALLATION

CAUTION:
- **Make sure the electrical connector is connected securely.**
- **Make sure that each meter operates normally.**
- **When the combination meter assembly has been replaced, be sure to perform the registration of immobilizer.**

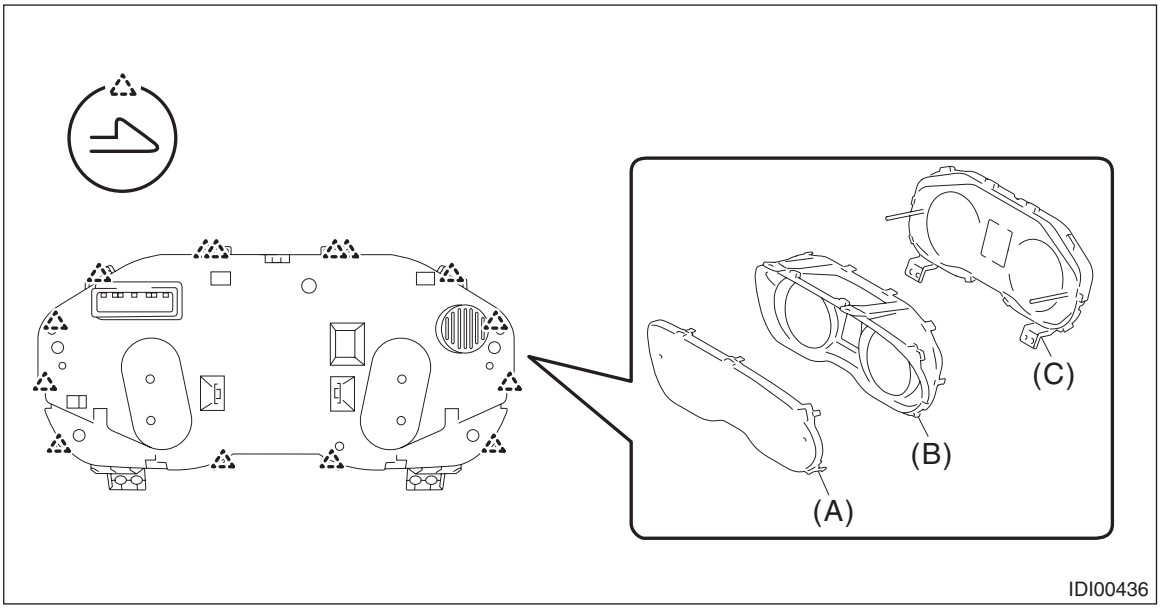
Install each part in the reverse order of removal.

C: DISASSEMBLY

1. DISASSEMBLY OF COMBINATION METER ASSEMBLY

CAUTION:
- **Use gloves to avoid damage and getting fingerprints on the glass surface and meter surfaces.**
- **Be careful not to apply excessive force to the trip knob.**
- **Be sure not to touch the meter indicator needle.**

Release the claw, and remove the glass - combination meter (A) and visor - combination meter (B) from the meter - main assembly (C).



2. BULB REPLACEMENT

Because LEDs are used for all of warning lights and indicator lights of combination meters, replace the meter - main assembly if faulty.

D: ASSEMBLY

Assemble each part in the reverse order of disassembly.

6. Speedometer

A: SPECIFICATION

Since the meter - main assembly cannot be disassembled, do not remove or inspect the speedometer alone. (Do not remove the cover on the back surface.)

7. Tachometer

A: SPECIFICATION

Since the meter - main assembly cannot be disassembled, do not remove or inspect the tachometer alone. (Do not remove the cover on the back surface.)

8. Fuel Gauge

A: SPECIFICATION

Since the meter - main assembly cannot be disassembled, do not remove or inspect the fuel gauge alone. (Do not remove the cover on the back surface.)

9. ECO Gauge

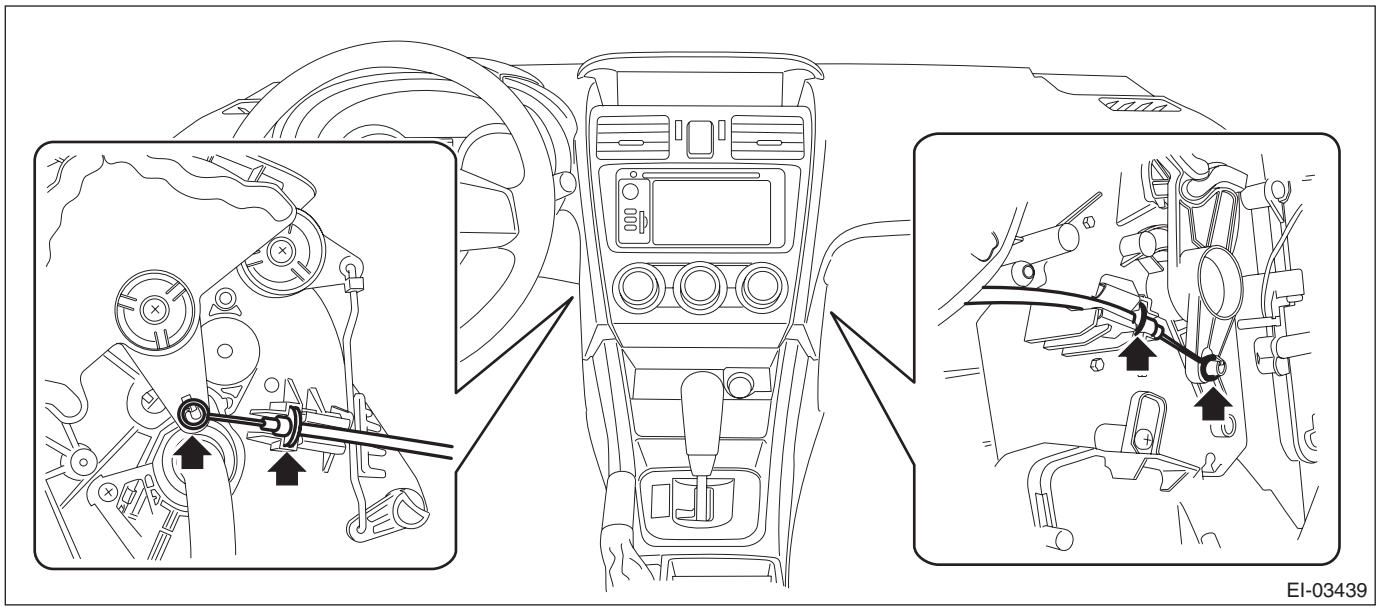
A: SPECIFICATION

Since the meter - main assembly cannot be disassembled, do not remove or inspect the ECO gauge alone. (Do not remove the cover on the back surface.)

10.Multi-function Display (MFD)

A: REMOVAL

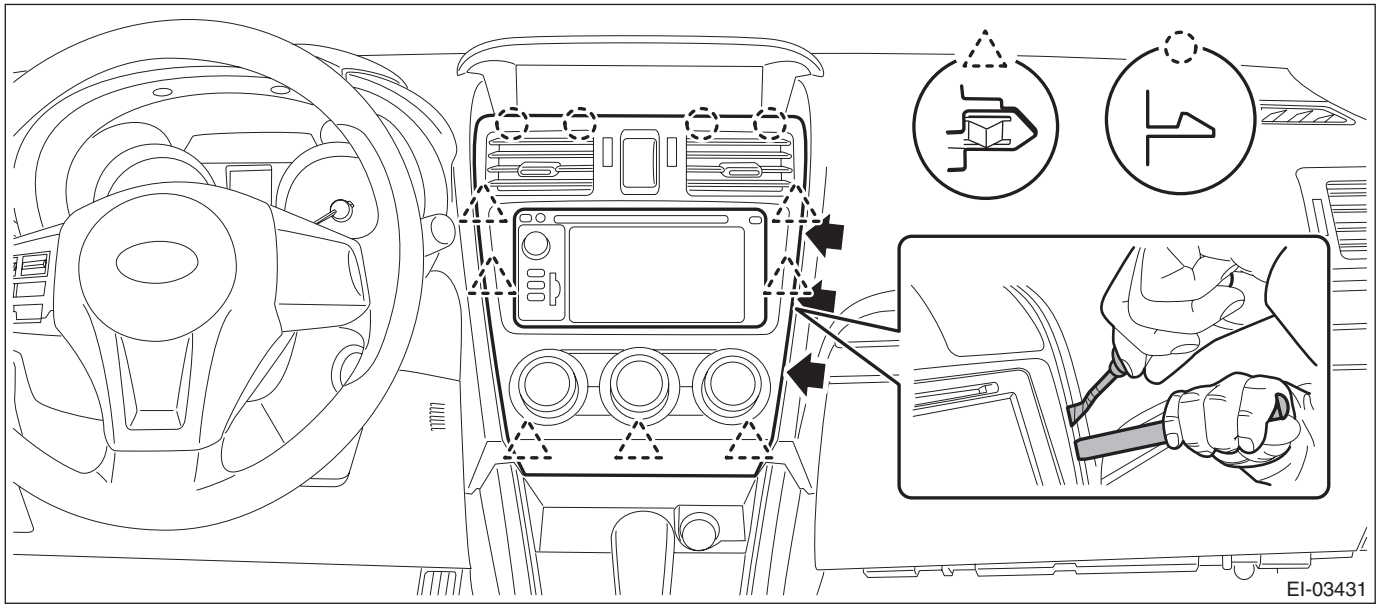
1) Disconnect the ground cable from battery.
2) On manual A/C models, disconnect the control cables from both sides of the heater and cooling unit assembly.



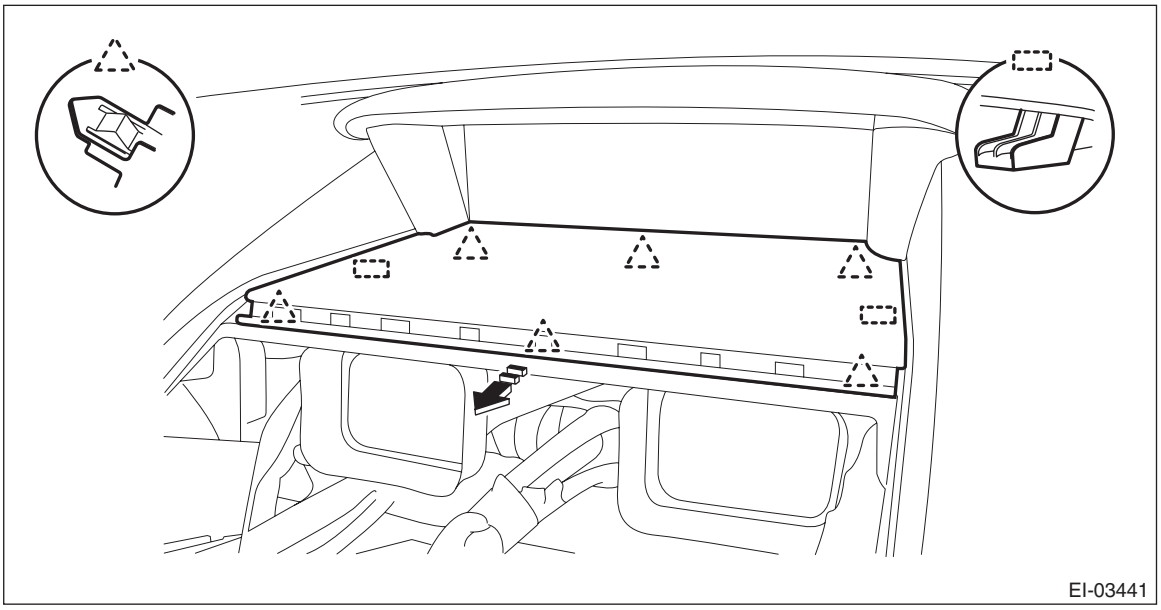
3) Remove the panel center assembly.

CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(1) Insert a plastic remover to the three areas shown by the arrows, and lift up the panel center assembly slightly.
(2) With the panel center assembly lifted up slightly, release the claw by using a clip remover wrapped with protective tape.
(3) Release the rest of the claws, disconnect the connector, and then remove the panel center assembly.



4) Release the claw and hook, and then remove the cover center UPR.

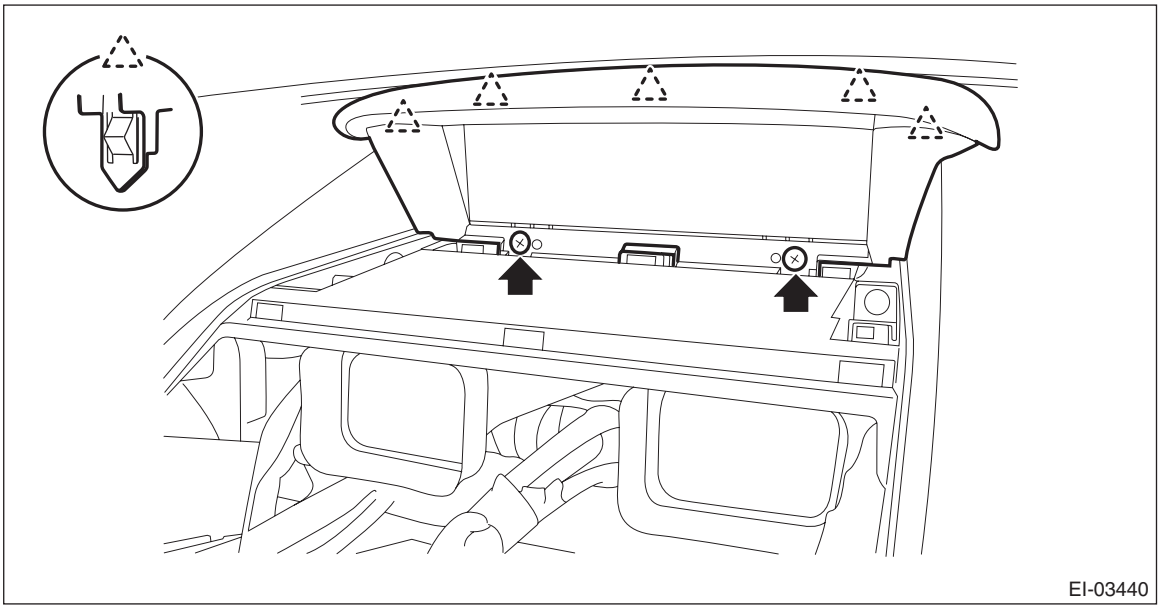


NOTE:
Lightly push up the back of the cover center UPR, hook the finger to the end portion and pull it toward you to remove it.

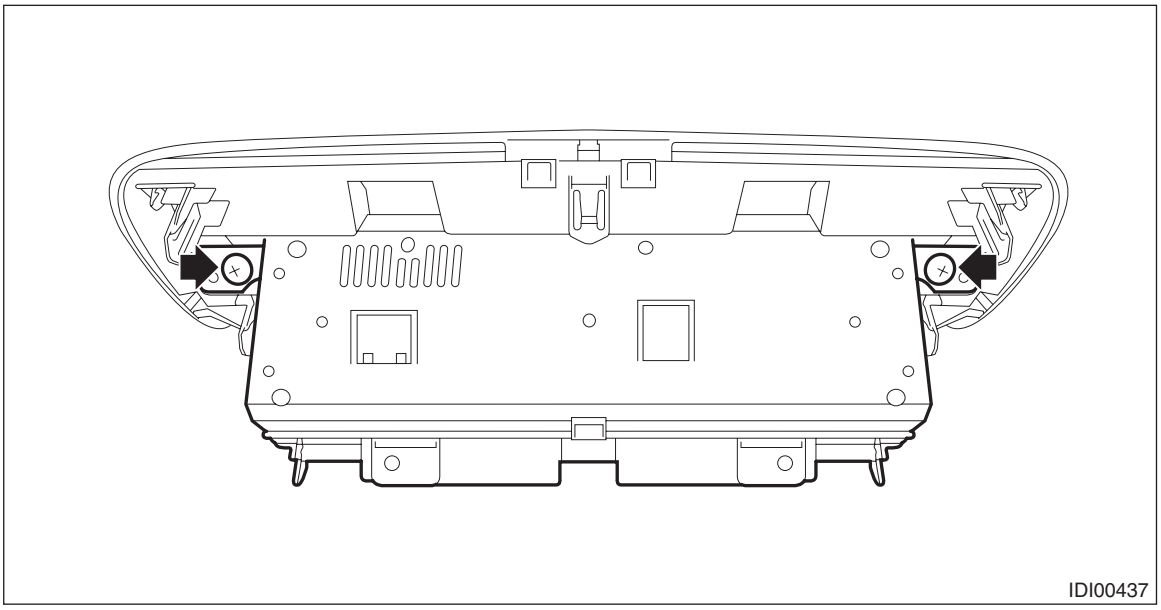
5) Remove the multi-function display.

CAUTION:
Be careful not to damage the multi-function display or instrument panel.

(1) Release the screws and claws.
(2) Pull the multi-function display assembly toward you, and disconnect the connector.



(3) Remove the screw, and remove the multi-function display from the panel - display.



B: INSTALLATION

CAUTION:
- **Make sure the electrical connector is connected securely.**
- **Make sure that the multi-function display operates normally.**
- **After installing the panel center assembly, check that the air vent grille of the panel center assembly is inserted correctly into the air vent duct.**

Install each part in the reverse order of removal.

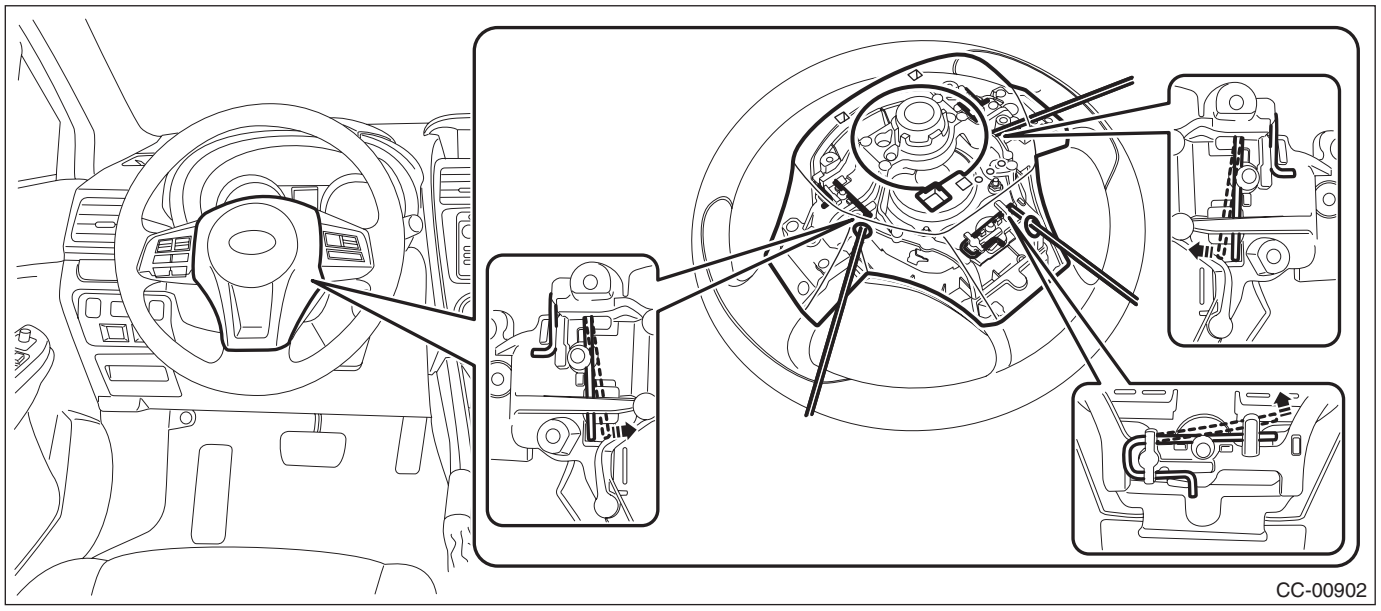
11.Steering Switch

A: REMOVAL

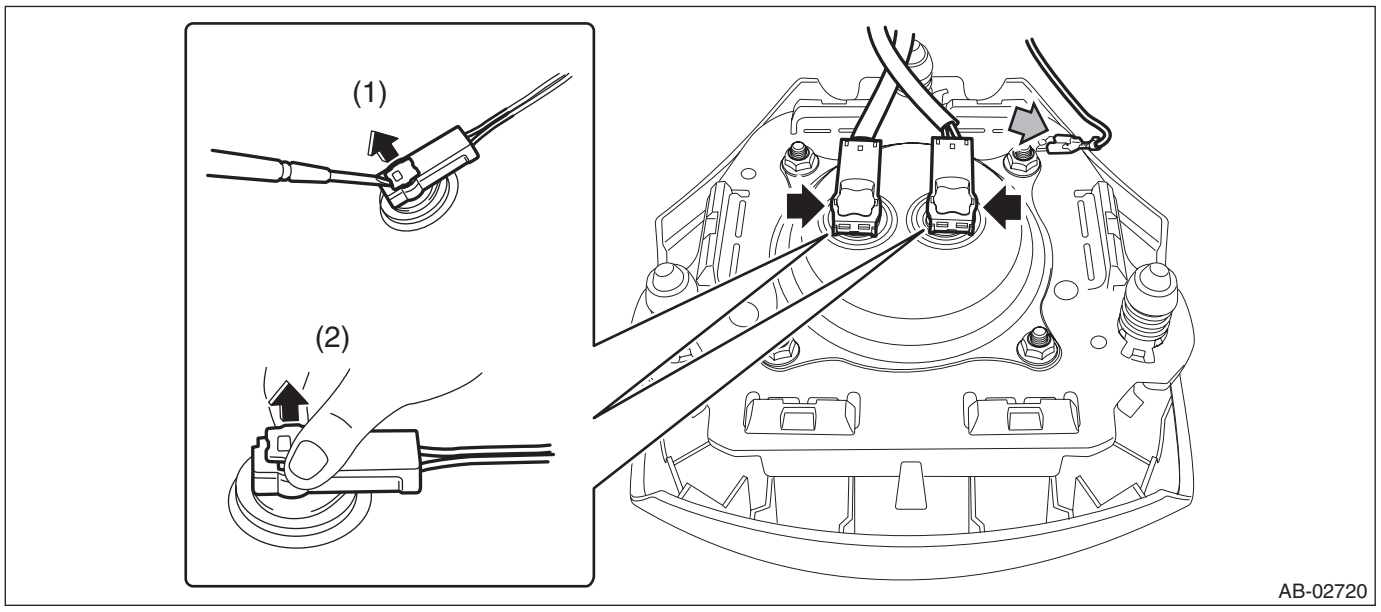
1) Position the front wheels straight ahead. (After moving a vehicle 5 m (16 ft) or more with front wheels positioned straight ahead, make sure that the vehicle moves straight ahead.)
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
4) Remove the driver's airbag module.

CAUTION:
Before handling the airbag module, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". <Ref. to AB-10, CAUTION, General Description.>

(1) Using a hexagon wrench wrapped with protective tape, push in the snap pins to disengage the locks (3 places).



(2) Disconnect the horn harness and airbag connector, and remove the driver's airbag module. <Ref. to AB-19, PROCEDURE, Airbag Connector.>

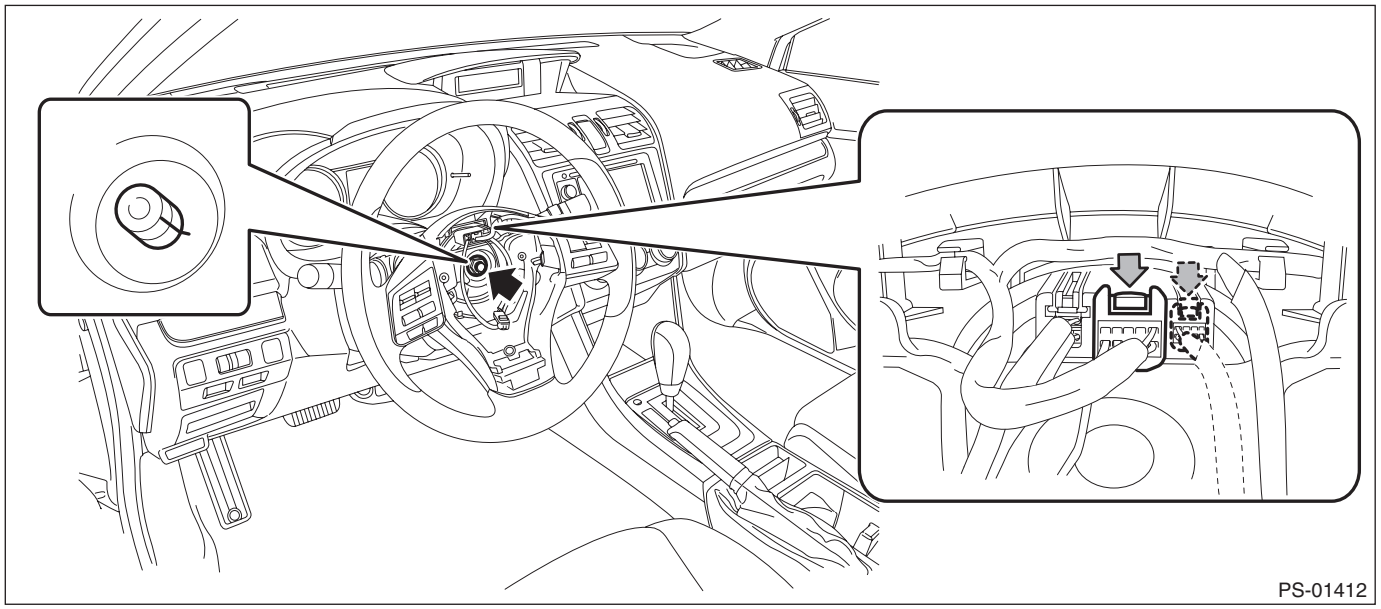


5) Remove the steering wheel.

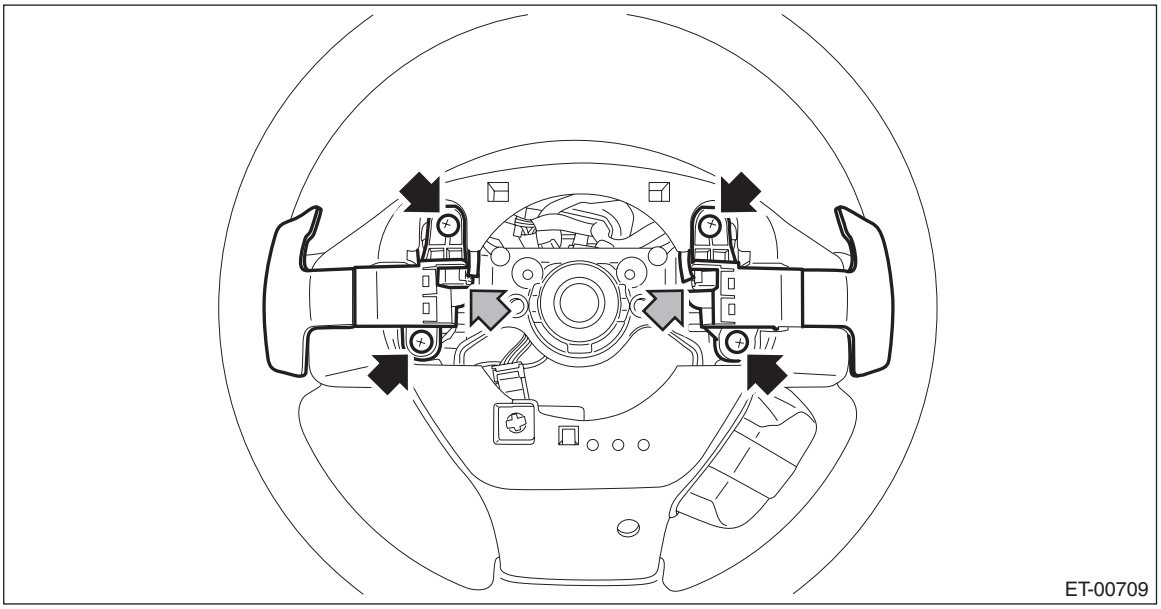
CAUTION:
- **Always use the steering wheel puller for removal to avoid deforming the steering wheel.**
- **If the steering wheel has been removed, make sure that the roll connector is not turned from the original position.**

(1) Disconnect the connector and remove the nut.
(2) Put alignment marks and remove the steering wheel using a steering wheel puller.

Preparation tool:
Steering wheel puller

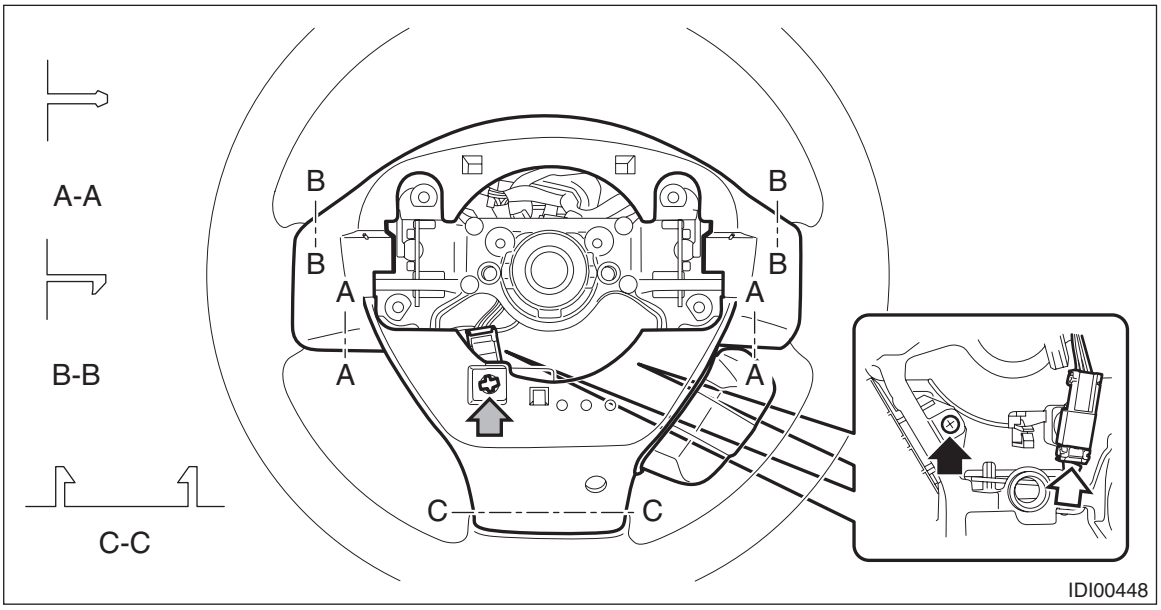


6) Remove the switch assembly - steering.
(1) Remove the screw, disconnect the connector and remove the paddle shift switch. (Model with paddle shift)

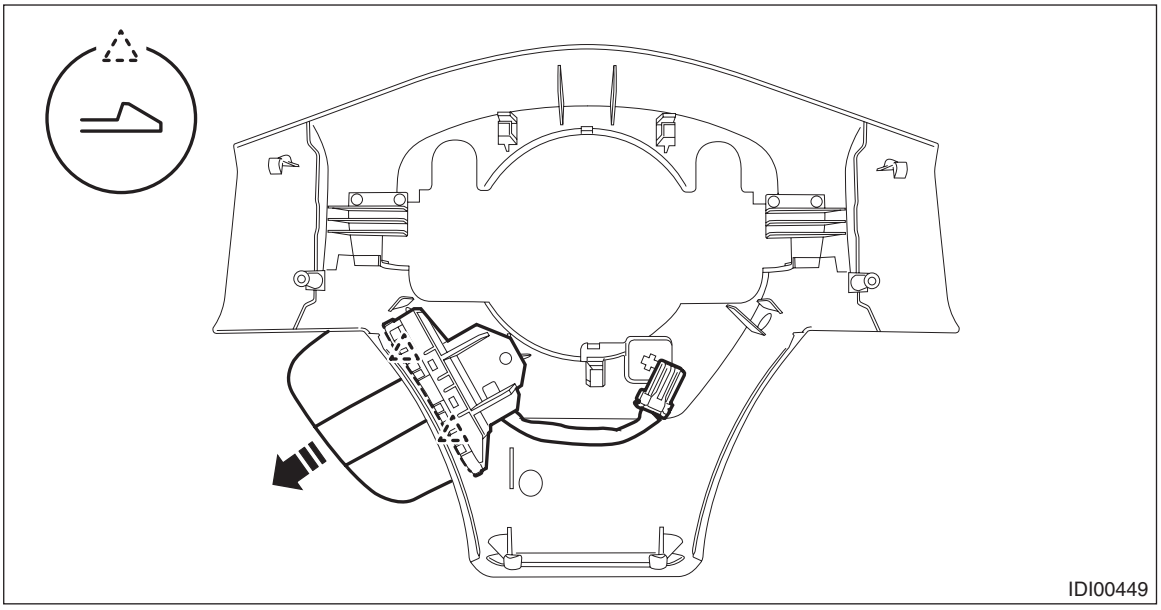


(2) Remove the connector and screw.

(3) Release the claws and clips, and remove the cover - steering wheel LWR.



(4) Remove the switch assembly - steering from the cover - steering wheel LWR.



B: INSTALLATION

CAUTION:
• Before handling the airbag module, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". <Ref. to AB-10, CAUTION, General Description.>
• Do not allow harness and connectors to interfere or get tangled up with other parts.
• If the steering wheel and steering angle sensor (steering roll connector) are removed, perform "VDC sensor midpoint setting mode" of the VDC. <Ref. to VDC-18, VDC SENSOR MIDPOINT SETTING MODE, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>
1) Before installing steering wheel, be sure to adjust the direction of steering roll connector with steering wheel. <Ref. to AB-105, ADJUSTMENT, Roll Connector.>
2) Install each part in the reverse order of removal.

NOTE:
Align the alignment marks on the steering wheel and the column assembly - steering.

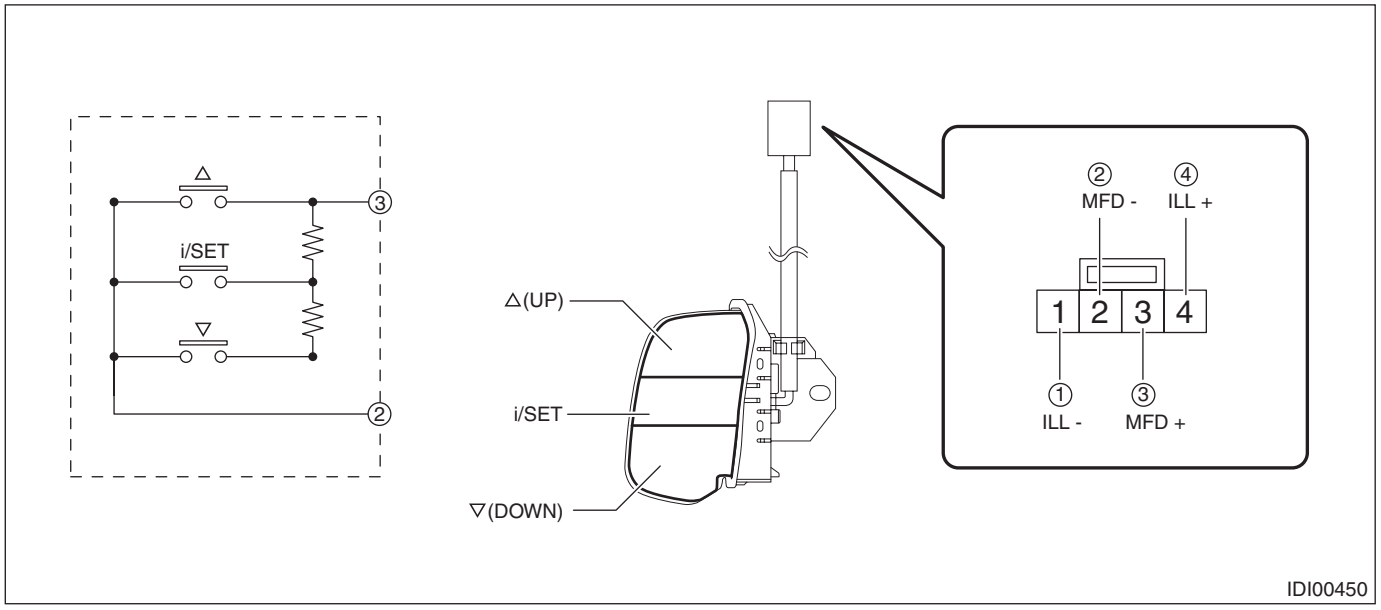
Tightening torque:
Steering wheel: 39 N·m (3.98 kgf-m, 28.8 ft-lb)

Clearance:
Between cover assembly - column and steering wheel: 4 — 6 mm (0.16 — 0.24 in)

C: INSPECTION

UNIT INSPECTION

PREPARATION TOOL:
Circuit tester
1) Check the resistance between switch terminals.



Terminal No.	Inspection conditions		Standard
3 — 2	△ (UP) i/SET ▽ (DOWN)	All OFF	Approx. 3670 Ω
3 — 2	△ (UP)	ON	Less than 1 Ω
3 — 2	i/SET	ON	Approx. 1000 Ω
3 — 2	▽ (DOWN)	ON	Approx. 2670 Ω

2) Replace the switch assembly - steering if the inspection result is not within the standard.

INSTRUMENTATION/DRIVER INFO (DIAGNOSTICS)

IDI(diag)

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1. Basic Diagnostic Procedure

A: PROCEDURE

CAUTION:
• Subaru Select Monitor is required for reading DTC, performing diagnosis, reading current data, customizing and active test (compulsory drive).
• Remove foreign matter (dust, water, oil, etc.) from each control module connector during removal and installation.
• For model with immobilizer, registration of immobilizer may be needed after the replacement of controller etc. For detailed procedure, refer to the REGISTRATION MANUAL FOR IMMOBILIZER.

NOTE:
• To check harness for open or short circuits, shake the suspected trouble spot or connector.
• Check List for Interview <Ref. to LAN(diag)-4, Check List for Interview.>

	Step	Check	Yes	No
1	**CHECK PRE-INSPECTION.** Ask the customer when and how the trouble occurred using the interview check list. <Ref. to LAN(diag)-4, Check List for Interview.>	Did you interview the customer?	Go to step **2**.	Interview the customer.
2	**BASIC INSPECTION (CAN DIAGNOSTIC IS NOT USED).** Check components which might affect CAN communication problem. <Ref. to LAN(diag)-5, INSPECTION WITHOUT USING CAN DIAGNOSTIC, INSPECTION, General Description.>	Is the component that might affect CAN communication problem normal?	Go to step **3**.	Repair or replace each component.
3	**CHECK COMMUNICATION FOR INITIALIZING.** Communicate with the all systems by connecting the Subaru Select Monitor.	Is the communication for initializing finished for all modules?	Go to step **4**.	Check the error of communication for initializing. <Ref. to LAN(diag)-9, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Subaru Select Monitor.>
4	**BASIC INSPECTION (CAN DIAGNOSTIC IS USED).** Check components which might affect CAN communication problem. <Ref. to LAN(diag)-5, INSPECTION USING CAN DIAGNOSTIC, INSPECTION, General Description.>	Is the component that might affect CAN communication problem normal?	Go to step **5**.	Repair or replace each component.
5	**CHECK DTC.** 1) Start the engine and read all DTCs. NOTE: • When the engine does not start, perform the diagnosis for the engine start malfunction. <Ref. to EN(H4DO)(diag)-64, Diagnostics for Engine Starting Failure.> 2) Record all DTCs and freeze frame data.	Is DTC U**** displayed on Subaru Select Monitor?	Go to step **6**.	Go to step **7**.
6	**CHECK DTC.** 1) Perform the inspection using the DTC check sheet. <Ref. to LAN(diag)-45, CHECK USING THE DTC CHECK SHEET, LIST, List of Diagnostic Trouble Code (DTC).> 2) Using the Subaru Select Monitor, read all DTCs.	Is DTC U**** displayed on Subaru Select Monitor?	Go to step **8**.	Go to step **7**.

Step		Check	Yes	No
7	**PERFORM GENERAL DIAGNOSTICS.** Inspect using the “General Diagnostics Table”. <Ref. to LAN(diag)-115, General Diagnostic Table.>	Is result of inspection OK?	LAN system is normal.	Go to step **8**.
8	**PERFORM DIAGNOSIS.** 1) Correct the cause of trouble. 2) Perform the Clear Memory Mode. <Ref. to LAN(diag)-20, OPERATION, Clear Memory Mode.> 3) Read the DTC. <Ref. to LAN(diag)-19, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed on Subaru Select Monitor?	Repeat step 8 until DTC is not shown.	Finish the diagnosis.

2. Check List for Interview

A: CHECK

Inspect the following item about the vehicle's state.

1. DISPLAY STATUS IN THE COMBINATION METER

Display status in the combination meter	Engine coolant temperature gauge display	❑ OK / ❑ NG
	Fuel gauge display	❑ OK / ❑ NG
	Tachometer display	❑ OK / ❑ NG (0 rpm at idling etc.)
Display of other indicators	Malfunction indicator light	❑ ON / ❑ Blink / ❑ OFF
	Sport indicator light (AT warning light)	❑ ON / ❑ Blink / ❑ OFF
	ABS warning light	❑ ON / ❑ Blink / ❑ OFF
	VDC warning light	❑ ON / ❑ Blink / ❑ OFF
	Immobilizer indicator light	❑ ON / ❑ Blink / ❑ OFF
	AT OIL TEMP warning light	❑ ON / ❑ Blink / ❑ OFF
	Tire pressure warning light	❑ ON / ❑ Blink / ❑ OFF
	Engine coolant temperature warning light	❑ Blue light ON / ❑ Red light ON / ❑ Red light blinks / ❑ Blue and red lights blink
	CRUISE indicator	❑ ON / ❑ Blink / ❑ OFF
	Shift indicator	❑ OK / ❑ NG
	Fuel level warning light	❑ ON / ❑ Blink / ❑ OFF
	Airbag warning light	❑ ON / ❑ OFF
	VDC OFF indicator	❑ ON / ❑ OFF
	Brake warning light	❑ ON / ❑ OFF

2. CONDITIONS UNDER WHICH TROUBLE OCCURS

Driving condition	❑ At standstill (While idling)				
	❑ When the vehicle is running	Vehicle speed km/h (MPH)			
	❑ While accelerating	Acceleration	km/h (MPH) to		km/h (MPH)
	❑ Decelerating (With braking)	Deceleration	km/h (MPH) to		km/h (MPH)
	❑ Decelerating (Without braking)	Deceleration	km/h (MPH) to		km/h (MPH)
	❑ Flat road ❑ Uphill ❑ Downhill ❑ Gravel road ❑ Bumpy road ❑ Snowy road				
	Does it occur when operating any part? Operated part: **TROUBLE SYMPTOM:**				
	Are there any other troubles occurred? From where: **TROUBLE SYMPTOM:**				

3. General Description

A: CAUTION

1. SUPPLEMENTAL RESTRAINT SYSTEM "AIRBAG"

Airbag system wiring harness is routed near the body integrated unit and twisted pair line.

CAUTION:

• Do not use the electrical test equipment on all airbag system wiring harnesses and connectors.

• Be careful not to damage the airbag system wiring harness when servicing the body integrated unit and LAN system.

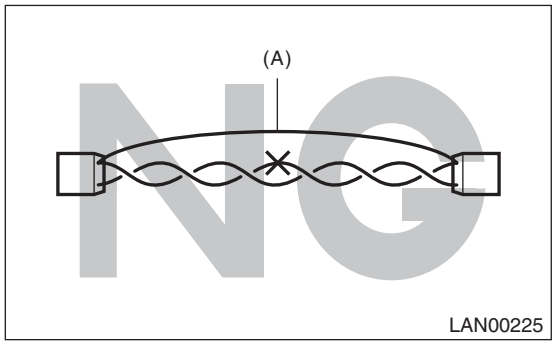
2. LAN SYSTEM

• Bus line of LAN system is twisted pair line. Be careful not to by-pass or partly unbind the twisted pair line.

• Do not make clearance between bus lines (CAN High, CAN Low).

• Difference of bus line length should be within 10 cm (3.94 in).

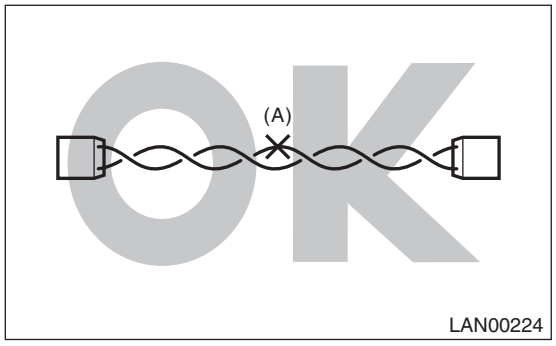
• Fray near the connector should be within 8 cm (3.14 in).



(A) Bypass wire connection

• If the characteristics of the twisted pair line are changed, it may extremely weaken against noise.

• When repairing the harness, connect the wires using soldering and protect it with insulating tape etc.



(A) Soldering and protection with insulating tape

B: INSPECTION

1. INSPECTION WITHOUT USING CAN DIAGNOSTIC

Before performing diagnostics, check the following item which might affect body integrated unit malfunctions.

1) Measure the battery voltage and check electrolyte.

Standard voltage: 12 V or more

Specific gravity: 1.260 or more

2) Check the fuse condition.

Make sure that ampere of the fuse is setting value, and it is not blown out.

3) Check the connecting condition of harness and harness connector.

4) Confirm key illumination does not blink with ignition switch turned to ON.

2. INSPECTION USING CAN DIAGNOSTIC

Before performing diagnostics, check the following item which might affect body integrated unit malfunctions.

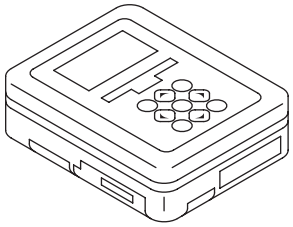
1) Confirm settings of body integrated unit are corresponded to vehicle equipment. <Ref. to BC(diag)-16, OPERATION, Registration Body Integrated Unit.>

2) Make sure that the User Customizing of the body integrated unit matches the vehicle equipment. <Ref. to BC(diag)-14, OPERATION, User Customizing.>

3) Confirm "Factory initial setting" of body integrated unit registrations is set to "Market".

C: PREPARATION TOOL

1. SPECIAL TOOL

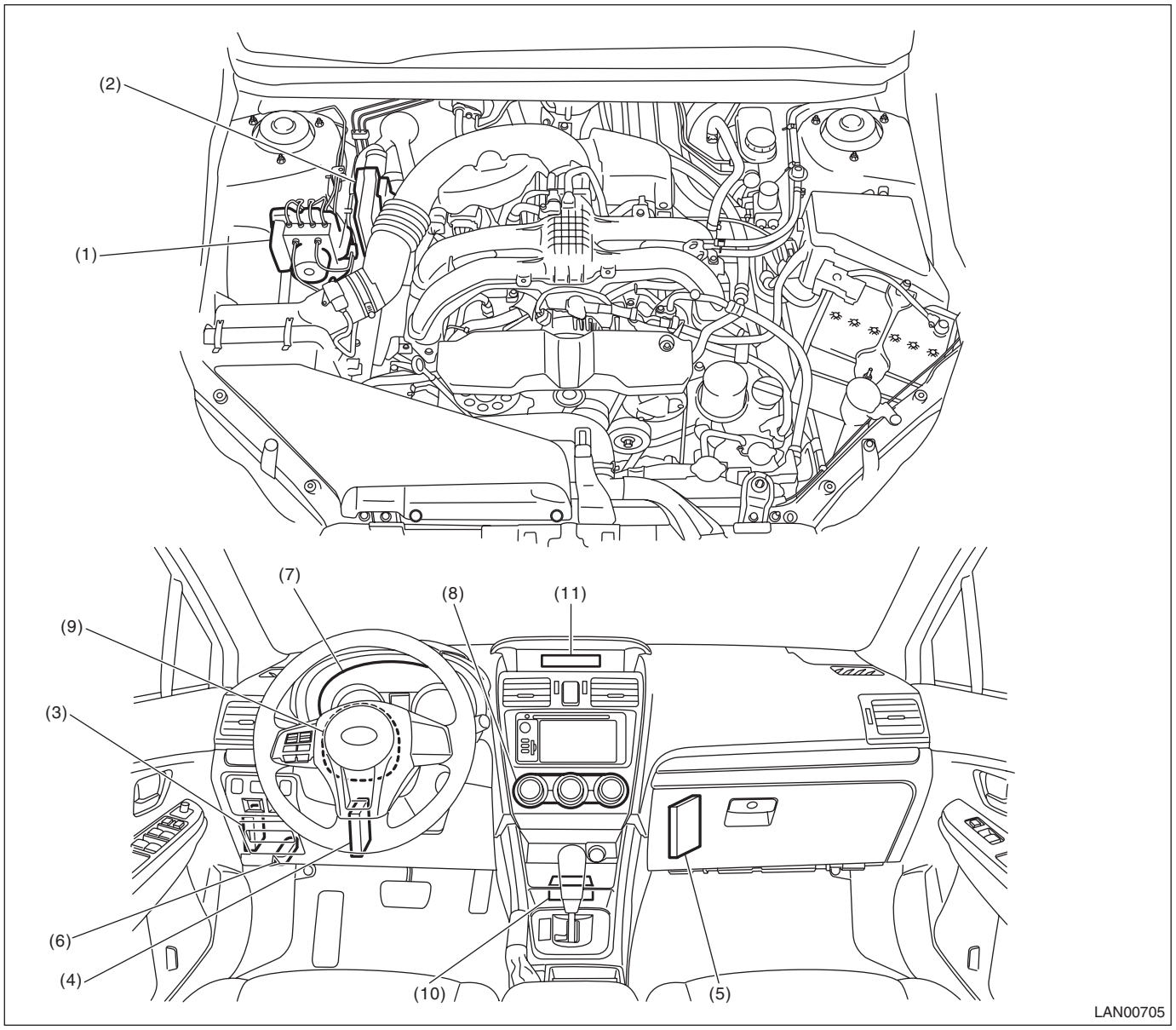
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.

4. Electrical Component Location

A: LOCATION



(1) VDC CM
(2) Power steering CM
(3) Body integrated unit
(4) TCM
(5) ECM
(6) Data link connector
(7) Combination meter
(8) A/C control panel
(9) Steering angle sensor
(10) Airbag CM
(11) MFD

5. Control Module I/O Signal

A: ELECTRICAL SPECIFICATION

- Body integrated unit

For I/O signals of the body integrated unit, refer to BODY CONTROL SYSTEM (DIAGNOSTICS). <Ref. to BC(diag)-6, Control Module I/O Signal.>

- Engine control module

For I/O signals of ECM, refer to ENGINE (DIAGNOSTICS). <Ref. to EN(H4DO)(diag)-19, Engine Control Module (ECM) I/O Signal.>

- Transmission control module

For I/O signals of TCM, refer to AUTOMATIC TRANSMISSION (DIAGNOSTICS). <Ref. to CVT(diag)-11, Transmission Control Module (TCM) I/O Signal.>

- VDC control module

For I/O signals of VDC CM, refer to VEHICLE DYNAMICS CONTROL (VDC) (DIAGNOSTICS). <Ref. to VDC(diag)-12, Control Module I/O Signal.>

- Power steering CM

For unit I/O signals of power steering CM, refer to POWER ASSISTED SYSTEM (POWER STEERING) (DIAGNOSTICS). <Ref. to PS(diag)-10, Control Module I/O Signal.>

- A/C control panel

For unit I/O signals of A/C control panel, refer to HVAC SYSTEM (DIAGNOSTICS). <Ref. to AC(diag)-6, Auto A/C Control Module I/O Signal.>

- Combination meter

For I/O signals of combination meter, refer to INSTRUMENTATION/DRIVER INFO (DIAGNOSTICS). <Ref. to IDI(diag)-6, Control Module I/O Signal.>

- Airbag control module

For I/O signals of the airbag control module, refer to AIRBAG SYSTEM (DIAGNOSTICS). <Ref. to AB(diag)-19, Airbag Control Module I/O Signal.>

- High grade MFD

For I/O signals of high grade MFD, refer to INSTRUMENTATION/DRIVER INFO (DIAGNOSTICS). <Ref. to IDI(diag)-6, Control Module I/O Signal.>

- Data link connector

For I/O signals of data link connector, refer to ENGINE (DIAGNOSTICS). <Ref. to EN(H4DO)(diag)-30, Data Link Connector.>

* CAN sleep state:

Hold on for approx. one minute with ignition OFF and the doors, trunk, rear gate all closed.

B: WIRING DIAGRAM

<Ref. to WI-48, WIRING DIAGRAM, CAN Communication System.>

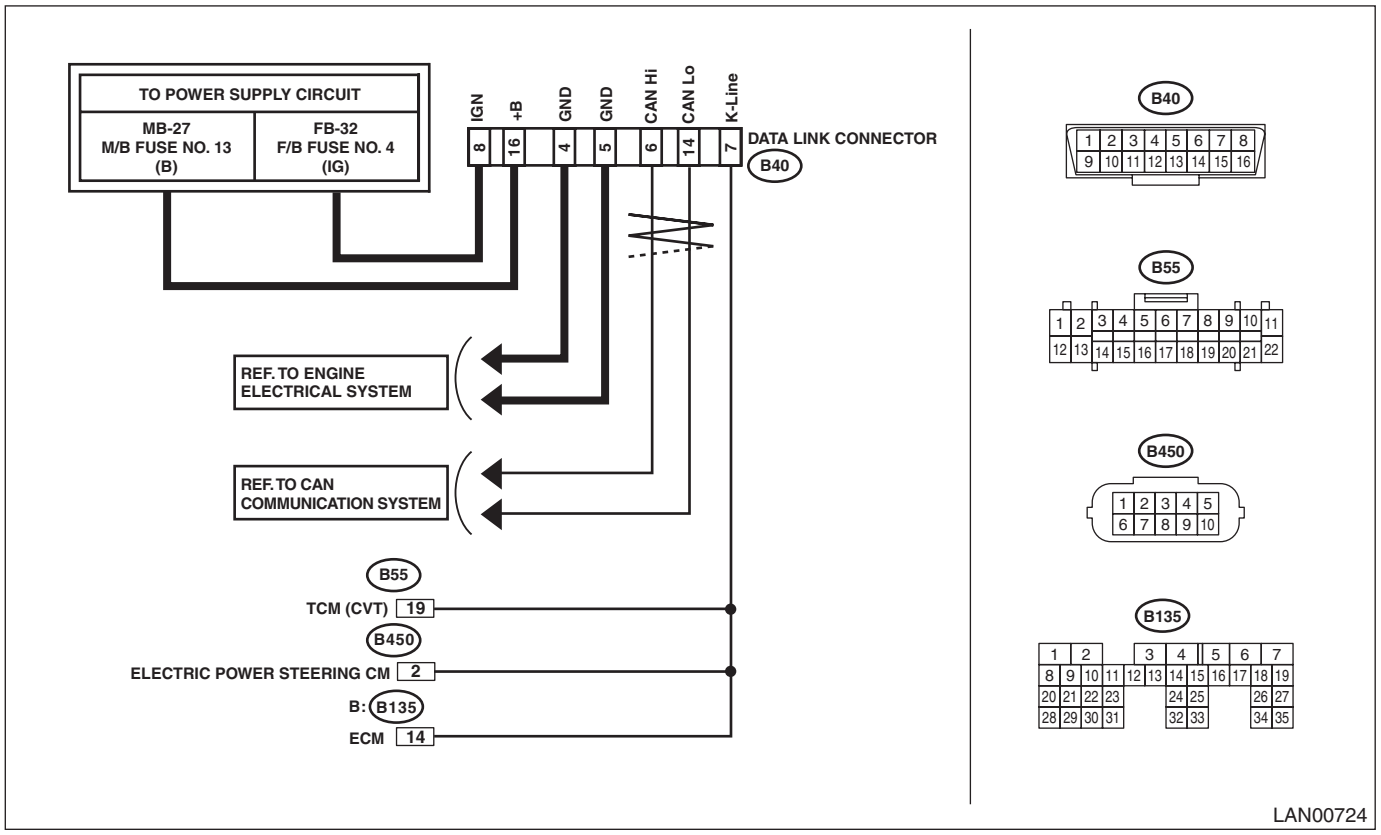
6. Subaru Select Monitor

A: OPERATION

For details of basic operations, refer to “PC application help for Subaru Select Monitor”.

B: COMMUNICATION FOR INITIALIZING IMPOSSIBLE

DIAGNOSIS:
Subaru Select Monitor communication line is open or shorted.
TROUBLE SYMPTOM:
Not communicable with Subaru Select Monitor.
WIRING DIAGRAM:

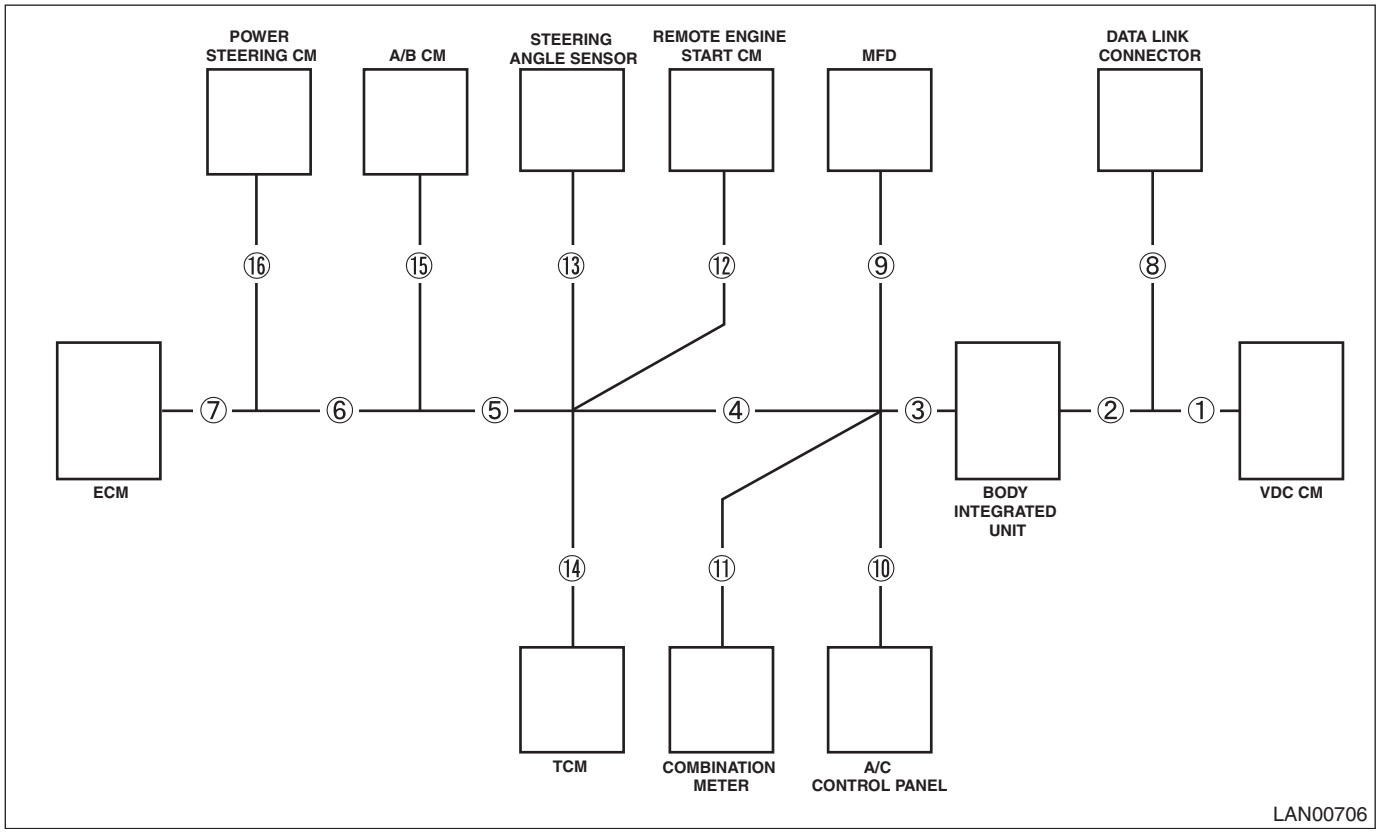


Step		Check	Yes	No
1	**CHECK SUBARU SELECT MONITOR.** 1) Connect the Subaru Select Monitor to another vehicle. 2) Check communication condition between Subaru Select Monitor and vehicle.	Is communication performed normally?	Go to step **2**.	Subaru Select Monitor unit or diagnosis cable is faulty. Or check the fuse on the vehicle side.

	Step	Check	Yes	No
2	**CHECK COMMUNICATION FOR INITIALIZING ERROR.** Perform the communication for initializing with the following modules by connecting the Subaru Select Monitor. • VDC • Body integrated unit • Meter • High grade MFD (C0 model only) • A/C • A/B	Is the communication possible with all modules?	Go to step **3**.	Perform the inspection using the check sheet of communication for initializing. <Ref. to LAN(diag)-11, CHECK USING THE CHECK SHEET OF COMMUNICATION FOR INITIALIZING, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Subaru Select Monitor.>
3	**CHECK K-LINE.** 1) Establish the communication between Select Monitor and K-Line communication module. 2) Using a tester, check continuity between the modules that did not communicate with Select Monitor. ***Connector & terminal*** ***(B40) No. 7 — (B55) No. 19 (CVT):*** ***(B40) No. 7 — (B135) No. 14 (ECM):*** ***(B40) No. 7 — (B450) No. 2 (electric power steering):***	Is there continuity?	Go to step **4**.	Repair or replace the open circuit.
4	**CHECK K-LINE.** Using a tester, check continuity between K-line and chassis ground. ***Connector & terminal*** ***(B40) No. 7 — Chassis ground:***	Is there continuity?	Repair or replace the short circuit portion.	Go to step **5**.
5	**CHECK K-LINE.** Using a tester, check voltage between K-line and chassis ground. ***Connector & terminal*** ***(B40) No. 7 (+) — Chassis ground (–):***	Is the voltage 5 V or more with IG ON?	Repair or replace the short circuit portion.	Go to step **6**.
6	**CHECK K-LINE.** Use a tester to check for continuity in the ground circuit. ***Connector & terminal*** ***(B40) No. 4 — Chassis ground:*** ***(B40) No. 5 — Chassis ground:***	Is there continuity?	Go to step **8**.	Go to step **7**.
7	**CHECK K-LINE.** 1) Disconnect the ECM connector. 2) Use a tester to check for continuity in the ground circuit. ***Connector & terminal*** ***(B40) No. 4 — (B137) No. 3:*** ***(B40) No. 5 — (B136) No. 4:***	Is there continuity?	Check ECM ground.	Repair or replace the open circuit.
8	**CHECK K-LINE.** 1) Turn the ignition switch to ON. 2) Using a tester, check the power supply of data link connector. ***Connector & terminal*** ***(B40) No. 8 (+) — Chassis ground (–):*** ***(B40) No. 16 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	K-Line is normal. Check the power supply circuit of each module.	Check the power supply circuits to the data link connector.

1. CHECK USING THE CHECK SHEET OF COMMUNICATION FOR INITIALIZING

- **Network diagram**



- **Check sheet of communication for initializing**

	(A)	(B)		(E)															
				①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
		(C)	(D)						—	—					—	—	—		—
VDC		—			—	—	—	—	—	—		—	—	—	—	—	—	—	—
BIU		—		—		—	—	—	—	—		—	—	—	—	—	—	—	—
MFD		—		—			—	—	—	—			—	—	—	—	—	—	—
A/C		—		—			—	—	—	—		—		—	—	—	—	—	—
MET		—		—			—	—	—	—		—	—		—	—	—	—	—
RST		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/B		—		—					—	—		—	—	—	—	—	—		—
EPS			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EGI			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LAN00707

(A) Installation check
(B) Communication initialization
(C) K-Line
(D) CAN
(E) Wiring location

VDC: VDC CM
BIU: Body integrated unit
MFD: High grade MFD
A/C: A/C control panel
MET: Combination meter
RST: Remote engine starter CM
STR: Steering angle sensor
TCM: TCM
A/B: AB CM
EPS: Power steering CM
EGI: ECM

1) Module installation check
   (1) Write "-" marks in the field for Installation Check if the vehicle to be inspected does not have relevant module.
   (2) Write "-" marks in all blank fields on the same row that the "-" mark has filled in.

NOTE:
Example of writing <Ref. to LAN(diag)-13, EXAMPLE OF WRITING FOR THE CHECK SHEET OF COMMUNICATION FOR INITIALIZING, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Subaru Select Monitor.>

2) SSM communication initialization check
   (1) Write "○" marks in the field for Communication Initialization if the module succeeded in the communication for initializing with Select Monitor.
   If the communication with all modules is not possible, go to 3).
   (2) Write "○" marks in all blank fields on the same row that the "○" mark has filled in.
   (3) When at least one field in a column of Wiring Location is filled with the "○" mark, then the wiring for that location is normal, Write "○" marks in all blank fields on the same column that the "○" mark has filled in under the circled number.
   (4) Check the open circuit of the modules which have no "○" mark in their columns of the Wiring location in ascending order. (only for installed modules)
   (5) If the communication is not possible after checking all harnesses, check the module power supply line.
   (6) Replace the module if the power supply line is normal.

NOTE:
• Example of writing <Ref. to LAN(diag)-13, EXAMPLE OF WRITING FOR THE CHECK SHEET OF COMMUNICATION FOR INITIALIZING, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Subaru Select Monitor.>
• Inspection using the communication for initializing of Subaru Select Monitor cannot be used to diagnose the wiring location marked with "-". Example of DTC data not received <Ref. to LAN(diag)-46, EXAMPLE OF DTC DATA NOT RECEIVED, LIST, List of Diagnostic Trouble Code (DTC).> and DTC matrix <Ref. to LAN(diag)-49, DTC MATRIX, LIST, List of Diagnostic Trouble Code (DTC).> should be used to identify the faulty portion.

3) SSM communication initialization check (impossible to communicate with all modules)

NOTE:
If at least one module becomes possible to communicate, return to 2).

(1) Check for the short circuit to ground. <Ref. to LAN(diag)-24, GROUND SHORT INSPECTION, INSPECTION, CAN Communication Circuit Check.> If it is normal, go to the next.
(2) Check for the short circuit to battery. <Ref. to LAN(diag)-26, BATTERY SHORT INSPECTION, INSPECTION, CAN Communication Circuit Check.> If it is normal, go to the next.
(3) Perform the inspection for the resistance of 52 Ω or less (short between wires). <Ref. to LAN(diag)-30, 52 Ω OR LESS, INSPECTION, CAN Communication Circuit Check.> If it is normal, go to the next.
(4) Check for the open circuit of network diagram No. 8 (data link connector).

2. EXAMPLE OF WRITING FOR THE CHECK SHEET OF COMMUNICATION FOR INITIALIZING

When ① is open

	(A)	(B)		(E)															
				①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
		(C)	(D)		○	○	○	○	—	—	○	○	○	○	—	—	—	○	—
VDC	○	—	×		—	—	—	—	—	—	○	—	—	—	—	—	—	—	—
BIU	○	—	○	—	○	—	—	—	—	—	○	—	—	—	—	—	—	—	—
MFD	○	—	○	—	○	○	—	—	—	—	○	○	—	—	—	—	—	—	—
A/C	○	—	○	—	○	○	—	—	—	—	○	—	○	—	—	—	—	—	—
MET	○	—	○	—	○	○	—	—	—	—	○	—	—	○	—	—	—	—	—
RST	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/B	○	—	○	—	○	○	○	○	—	—	○	—	—	—	—	—	—	○	—
EPS	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EGI	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LAN00709

When ② is open

	(A)	(B)		(E)															
				①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
		(C)	(D)	○					—	—	○				—	—	—		—
VDC	○	—	○	○	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—
BIU	○	—	×	—		—	—	—	—	—	○	—	—	—	—	—	—	—	—
MFD	○	—	×	—			—	—	—	—	○		—	—	—	—	—	—	—
A/C	○	—	×	—			—	—	—	—	○	—		—	—	—	—	—	—
MET	○	—	×	—			—	—	—	—	○	—	—		—	—	—	—	—
RST	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/B	○	—	×	—					—	—	○	—	—	—	—	—	—		—
EPS	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EGI	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LAN00710

When ③ is open

	(A)	(B)		(E)															
				①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
		(C)	(D)	○	○				—	—	○				—	—	—		—
VDC	○	—	○	○	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—
BIU	○	—	○	—	○	—	—	—	—	—	○	—	—	—	—	—	—	—	—
MFD	○	—	×	—	○		—	—	—	—	○		—	—	—	—	—	—	—
A/C	○	—	×	—	○		—	—	—	—	○	—		—	—	—	—	—	—
MET	○	—	×	—	○		—	—	—	—	○	—	—		—	—	—	—	—
RST	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/B	○	—	×	—	○				—	—	○	—	—	—	—	—	—		—
EPS	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EGI	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LAN00711

When either one of ④, ⑤ or ⑮ is open

NOTE:
Each module can be distinguished from the others depending on the difference of no-receive conditions between modules. <Ref. to LAN(diag)-49, DTC MATRIX, LIST, List of Diagnostic Trouble Code (DTC).>

	(A)	(B)		(E)															
				①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
		(C)	(D)	○	○	○			—	—	○	○	○	○	—	—	—		—
VDC	○	—	○	○	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—
BIU	○	—	○	—	○	—	—	—	—	—	○	—	—	—	—	—	—	—	—
MFD	○	—	○	—	○	○	—	—	—	—	○	○	—	—	—	—	—	—	—
A/C	○	—	○	—	○	○	—	—	—	—	○	—	○	—	—	—	—	—	—
MET	○	—	○	—	○	○	—	—	—	—	○	—	—	○	—	—	—	—	—
RST	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/B	○	—	×	—	○	○			—	—	○	—	—	—	—	—	—		—
EPS	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EGI	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LAN00712

When either one of⑥, ⑦, ⑫, ⑬, ⑭ or ⑯ is open

NOTE:
Each module can be distinguished from the others depending on the difference of no-receive conditions between modules. <Ref. to LAN(diag)-46, EXAMPLE OF DTC DATA NOT RECEIVED, LIST, List of Diagnostic Trouble Code (DTC).> <Ref. to LAN(diag)-49, DTC MATRIX, LIST, List of Diagnostic Trouble Code (DTC).>

	(A)	(B)		(E)															
				①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
		(C)	(D)	○	○	○	○	○	—	—	○	○	○	○	—	—	—	○	—
VDC	○	—	○	○	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—
BIU	○	—	○	—	○	—	—	—	—	—	○	—	—	—	—	—	—	—	—
MFD	○	—	○	—	○	○	—	—	—	—	○	○	—	—	—	—	—	—	—
A/C	○	—	○	—	○	○	—	—	—	—	○	—	○	—	—	—	—	—	—
MET	○	—	○	—	○	○	—	—	—	—	○	—	—	○	—	—	—	—	—
RST	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/B	○	—	○	—	○	○	○	○	—	—	○	—	—	—	—	—	—	○	—
EPS	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EGI	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LAN00713

When ⑧ is open

	(A)	(B)		(E)															
				①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
		(C)	(D)						—	—					—	—	—		—
VDC	○	—	×		—	—	—	—	—	—		—	—	—	—	—	—	—	—
BIU	○	—	×	—		—	—	—	—	—		—	—	—	—	—	—	—	—
MFD	○	—	×	—			—	—	—	—			—	—	—	—	—	—	—
A/C	○	—	×	—			—	—	—	—		—		—	—	—	—	—	—
MET	○	—	×	—			—	—	—	—		—	—		—	—	—	—	—
RST	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/B	○	—	×	—					—	—		—	—	—	—	—	—		—
EPS	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EGI	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LAN00714

When ⑨ is open

	(A)	(B)		(E)															
				①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
		(C)	(D)	○	○	○	○	○	—	—	○		○	○	—	—	—	○	—
VDC	○	—	○	○	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—
BIU	○	—	○	—	○	—	—	—	—	—	○	—	—	—	—	—	—	—	—
MFD	○	—	×	—	○	○	—	—	—	—	○		—	—	—	—	—	—	—
A/C	○	—	○	—	○	○	—	—	—	—	○	—	○	—	—	—	—	—	—
MET	○	—	○	—	○	○	—	—	—	—	○	—	—	○	—	—	—	—	—
RST	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/B	○	—	○	—	○	○	○	○	—	—	○	—	—	—	—	—	—	○	—
EPS	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EGI	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LAN00716

When ⑩ is open

	(A)	(B)		(E)															
				①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
		(C)	(D)	○	○	○	○	○	—	—	○	○		○	—	—	—	○	—
VDC	○	—	○	○	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—
BIU	○	—	○	—	○	—	—	—	—	—	○	—	—	—	—	—	—	—	—
MFD	○	—	○	—	○	○	—	—	—	—	○	○	—	—	—	—	—	—	—
A/C	○	—	×	—	○	○	—	—	—	—	○	—		—	—	—	—	—	—
MET	○	—	○	—	○	○	—	—	—	—	○	—	—	○	—	—	—	—	—
RST	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/B	○	—	○	—	○	○	○	○	—	—	○	—	—	—	—	—	—	○	—
EPS	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EGI	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LAN00717

When ⑪ is open

	(A)	(B)		(E)															
				①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	⑯
		(C)	(D)	○	○	○	○	○	—	—	○	○	○		—	—	—	○	—
VDC	○	—	○	○	—	—	—	—	—	—	○	—	—	—	—	—	—	—	—
BIU	○	—	○	—	○	—	—	—	—	—	○	—	—	—	—	—	—	—	—
MFD	○	—	○	—	○	○	—	—	—	—	○	○	—	—	—	—	—	—	—
A/C	○	—	○	—	○	○	—	—	—	—	○	—	○	—	—	—	—	—	—
MET	○	—	×	—	○	○	—	—	—	—	○	—	—		—	—	—	—	—
RST	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/B	○	—	○	—	○	○	○	○	—	—	○	—	—	—	—	—	—	○	—
EPS	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EGI	○	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LAN00718

7. Read Diagnostic Trouble Code (DTC)

A: OPERATION

For details of operation procedures, refer to “PC application help for Subaru Select Monitor”.

8. Clear Memory Mode

A: OPERATION

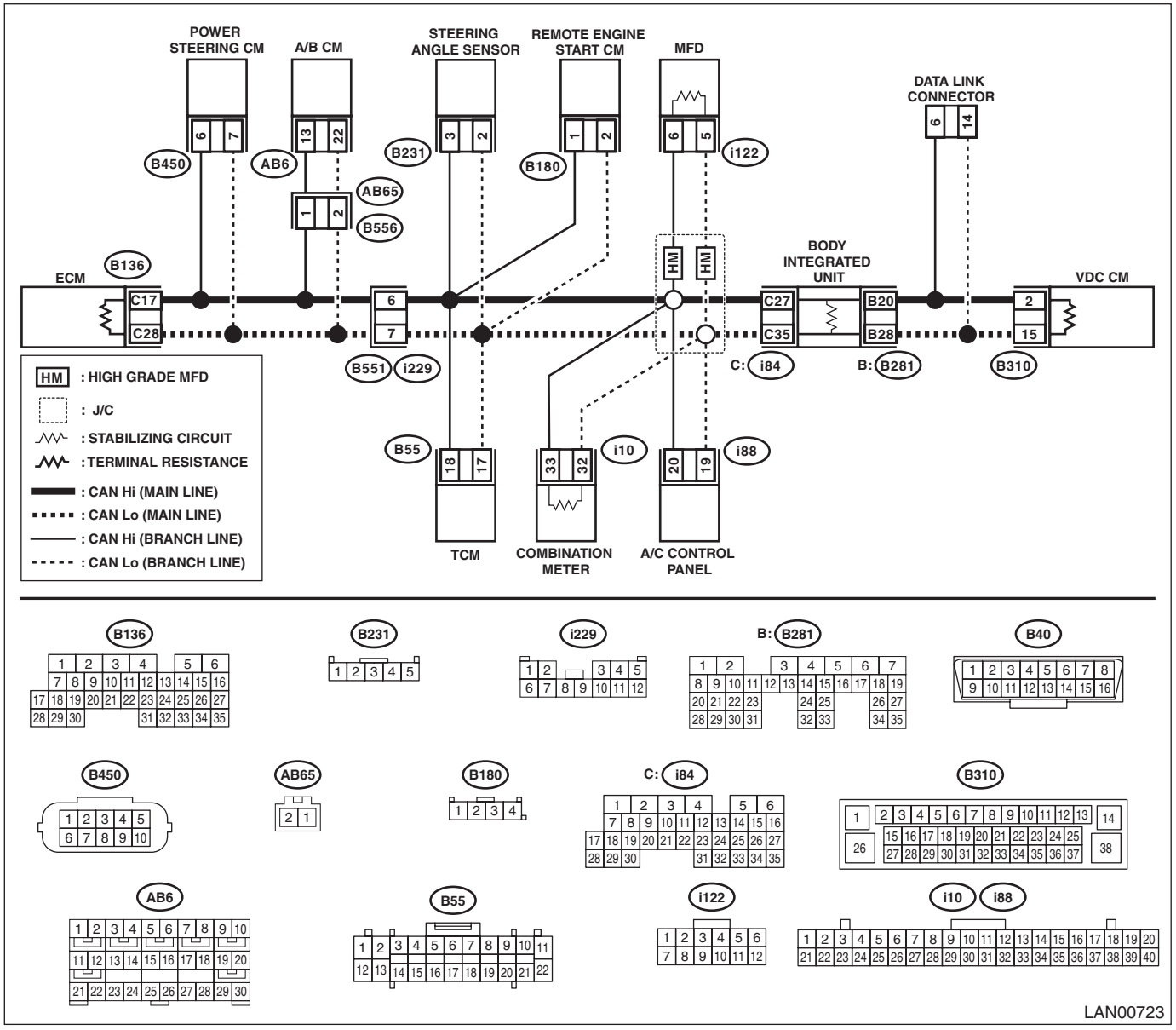
For details of operation procedures, refer to “PC application help for Subaru Select Monitor”.

9. CAN Communication Circuit Check

A: PROCEDURE

NOTE:
When measuring the resistance of CAN communication circuit, measure it in sleep status.
To be in the sleep status, turn the ignition switch OFF, stop the key and switch operations, keep all the doors, trunk and rear gate closed, and then left them untouched for one minute or more.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK FROM DATA LINK CONNECTOR.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Is the resistance 10 Ω or less?	Check for ground short. <Ref. to LAN(diag)-24, GROUND SHORT INSPECTION, INSPECTION, CAN Communication Circuit Check.>	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK FROM DATA LINK CONNECTOR.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Is the voltage 5 V or less?	Go to step **3**.	Check for battery short. <Ref. to LAN(diag)-26, BATTERY SHORT INSPECTION, INSPECTION, CAN Communication Circuit Check.>
3	**CHECK FROM DATA LINK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B40) No. 6 — No. 14:***	Is the resistance 52 Ω or less?	Perform the inspection for the resistance of 52 Ω or less. <Ref. to LAN(diag)-30, 52 Ω OR LESS, INSPECTION, CAN Communication Circuit Check.>	Go to step **4**.
4	**CHECK FROM DATA LINK CONNECTOR.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B40) No. 6 — No. 14:***	Is the resistance 62 Ω or more?	Perform the inspection for the resistance of 62 Ω or more. <Ref. to LAN(diag)-33, 62 Ω OR MORE, INSPECTION, CAN Communication Circuit Check.>	A related line may be open. Perform the inspection for the resistance of 53 — 61 Ω relevant to the detected DTC. <Ref. to LAN(diag)-23, LIST, CAN Communication Circuit Check.>

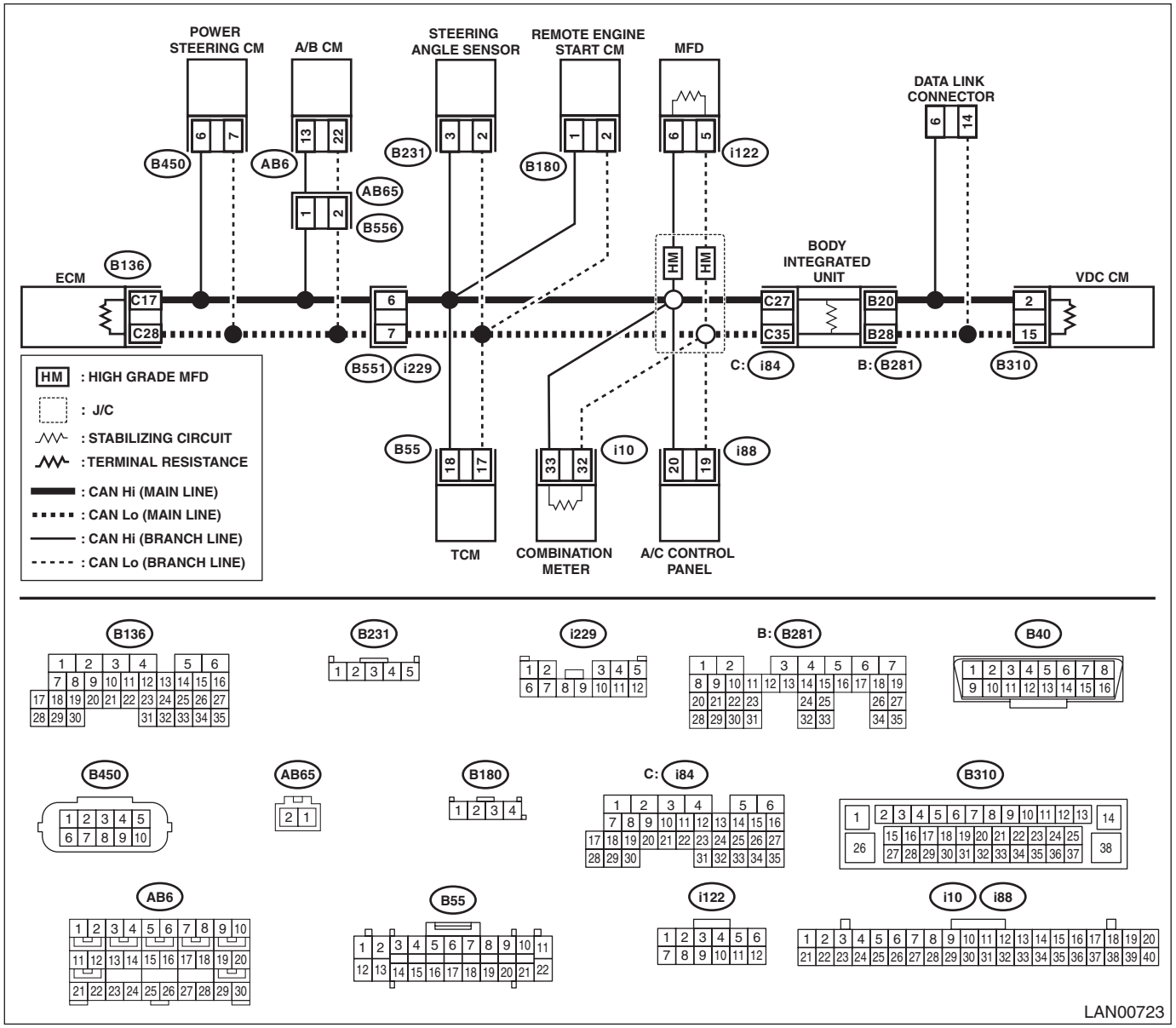
B: LIST

Resistance value between CAN Hi and Lo	Contents of inspection	Remarks
Ground short inspection	<Ref. to LAN(diag)-24, GROUND SHORT INSPECTION, INSPECTION, CAN Communication Circuit Check.>	Shorted to ground in the communication circuit or control module.
Battery short inspection	<Ref. to LAN(diag)-26, BATTERY SHORT INSPECTION, INSPECTION, CAN Communication Circuit Check.>	Shorted to battery power supply in the communication circuit or control module.
53 — 61 Ω	<Ref. to LAN(diag)-28, 53 — 61 Ω, INSPECTION, CAN Communication Circuit Check.>	Combined resistance of end resistance does not have malfunction; short to ground or +B short of the CAN communication circuit is possible, however.
52 Ω or less	<Ref. to LAN(diag)-30, 52 Ω OR LESS, INSPECTION, CAN Communication Circuit Check.>	Resistance is lower than combined resistance of end resistance. Short to CAN Hi and CAN Lo on the CAN communication circuit is possible.
62 Ω or more	<Ref. to LAN(diag)-33, 62 Ω OR MORE, INSPECTION, CAN Communication Circuit Check.>	Resistance is higher than combined resistance of end resistance. Open circuit of CAN communication circuit is possible.
Related lines 53 — 61 Ω (TCM)	<Ref. to LAN(diag)-35, RELATED LINES 53 — 61 Ω (TCM), INSPECTION, CAN Communication Circuit Check.>	No TCM data is received. Perform inspection when faulty is detected.
Related lines 53 — 61 Ω (steering angle sensor)	<Ref. to LAN(diag)-37, RELATED LINES 53 — 61 Ω (STEERING ANGLE SENSOR), INSPECTION, CAN Communication Circuit Check.>	No steering angle sensor data is received. Perform inspection when faulty is detected.
Related line 53 — 61 Ω (A/C control panel)	<Ref. to LAN(diag)-38, RELATED LINE 53 — 61 Ω (A/C CONTROL PANEL), INSPECTION, CAN Communication Circuit Check.>	No A/C data is received. Perform inspection when faulty is detected.
Related lines 53 — 61 Ω (electric power steering CM)	<Ref. to LAN(diag)-39, RELATED LINES 53 — 61 Ω (ELECTRIC POWER STEERING CM), INSPECTION, CAN Communication Circuit Check.>	No electric power steering data is received. Perform inspection when faulty is detected.
Related lines 53 — 61 Ω (combination meter)	<Ref. to LAN(diag)-40, RELATED LINES 53 — 61 Ω (COMBINATION METER), INSPECTION, CAN Communication Circuit Check.>	No meter data is received. Perform inspection when faulty is detected.
Related lines 53 — 61 Ω (MFD)	<Ref. to LAN(diag)-41, RELATED LINES 53 — 61 Ω (MFD), INSPECTION, CAN Communication Circuit Check.>	No MFD data is received. Perform inspection when faulty is detected.
Related lines 53 — 61 Ω (airbags)	<Ref. to LAN(diag)-42, RELATED LINES 53 — 61 Ω (A/B CM), INSPECTION, CAN Communication Circuit Check.>	No airbag data is received. Perform inspection when faulty is detected.

C: INSPECTION

1. GROUND SHORT INSPECTION

WIRING DIAGRAM:



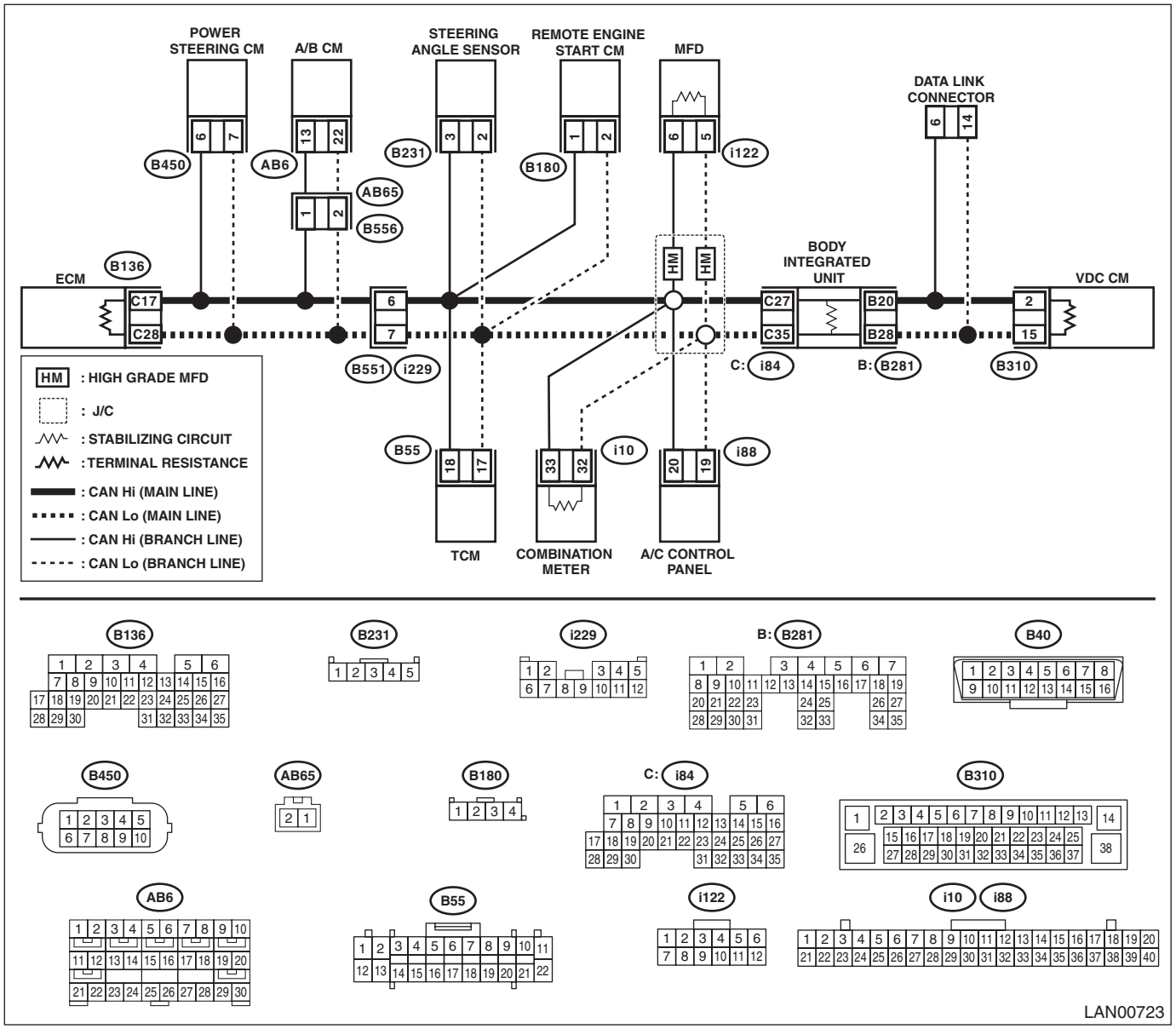
NOTE:
Main wiring harness or related lines may be shorted to ground, or shorted to ground in one of the control modules.

Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Is the resistance 10 Ω or less?	Go to step **2**.	Currently, it is normal.

	Step	Check	Yes	No
2	**CHECK CONTROL MODULE.** With the tester connected, disconnect control module. NOTE: Disconnect the body integrated unit at the end. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Did the resistance change to 10 Ω or more?	Replace the control module whose resistance has changed. When the value changed at disconnecting the body integrated unit, Go to step **3**.	Repair or replace the short circuit of the main wiring harness and related lines between body integrated unit and VDC CM.
3	**CHECK BETWEEN MAIN WIRING HARNESSES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i84) No. 27 — Chassis ground:*** ***(i84) No. 35 — Chassis ground:***	Is the resistance 10 Ω or less?	Repair or replace the short circuit of the main wiring harness and related lines between ECM and body integrated unit.	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>

2. BATTERY SHORT INSPECTION

WIRING DIAGRAM:



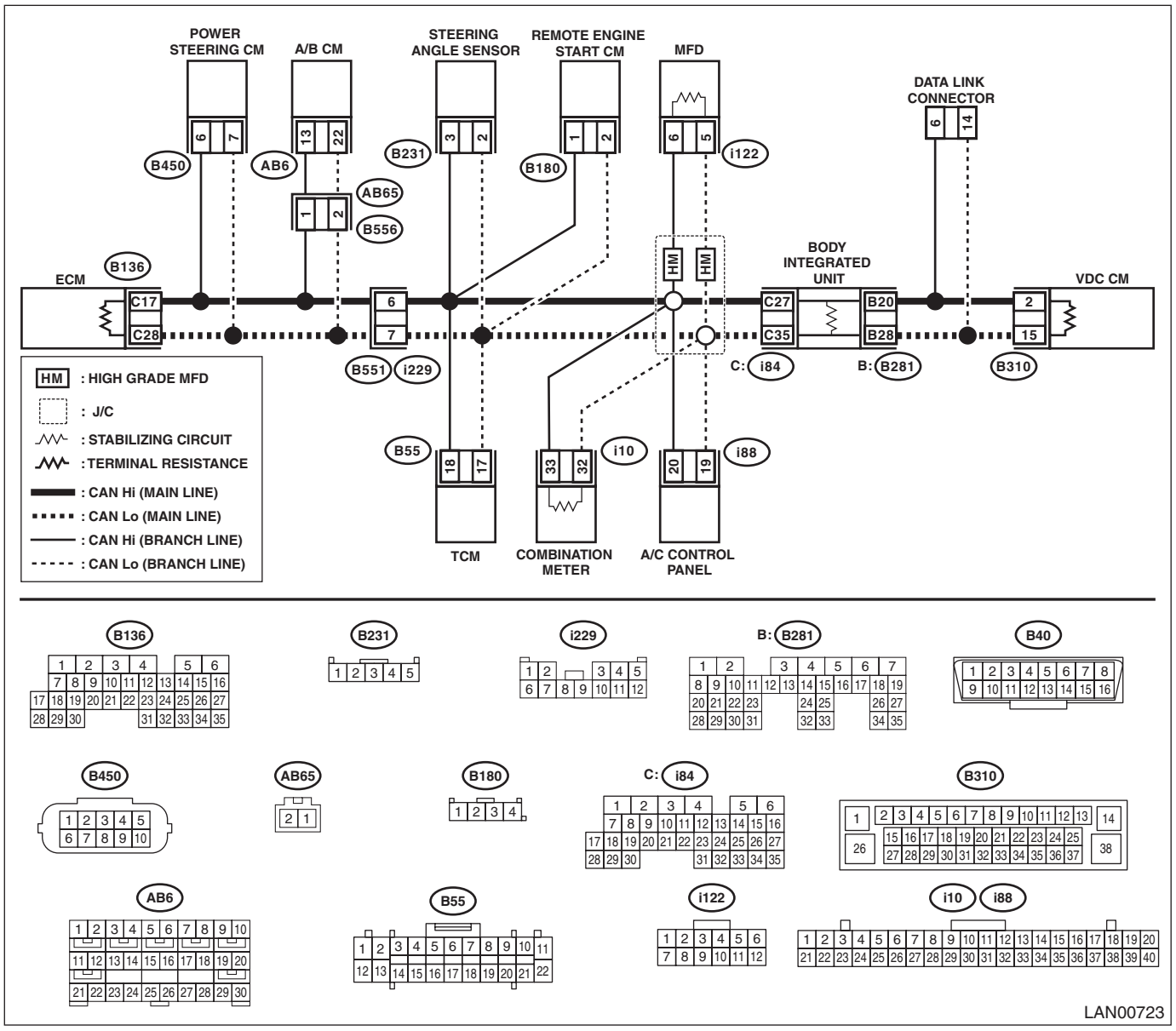
NOTE:
Main wiring harness or related lines may be shorted to battery circuit, or shorted to battery circuit in one of the control modules.

	Step	Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Is the voltage 5 V or less?	Currently, it is normal.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK CONTROL MODULE.** With the tester connected, disconnect control module. NOTE: Disconnect the body integrated unit at the end. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Did the voltage change to 5 V or less?	Replace the control module whose voltage has changed. When the value changed at disconnecting the body integrated unit, Go to step **3**.	Repair or replace the short circuit of the harness between body integrated unit and VDC CM.
3	**CHECK BETWEEN MAIN WIRING HARNESSES.** Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i84) No. 27 — Chassis ground:*** ***(i84) No. 35 — Chassis ground:***	Is the voltage 1 V or less?	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>	Repair or replace the short circuit of the harness between ECM and body integrated unit.

3. 53 — 61 Ω

WIRING DIAGRAM:



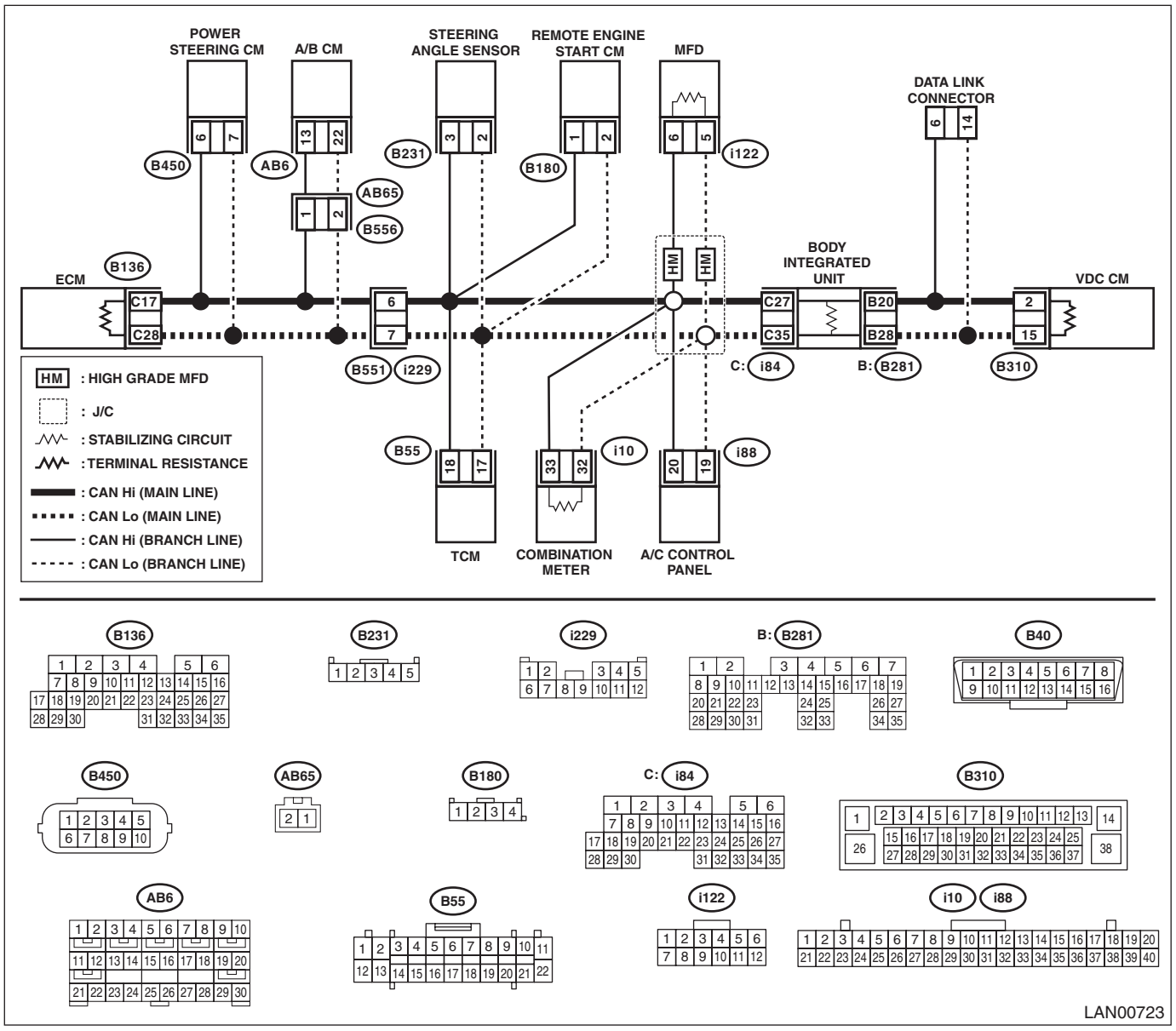
NOTE:
When the measured resistance value is 53 — 61 Ω, main wiring harness or related lines may be shorted to ground, or shorted to power supply line, or related line may be open.

Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Is the resistance 10 Ω or less?	Go to step **2**.	Go to step **4**.

	Step	Check	Yes	No
2	**CHECK CONTROL MODULE.** With the tester connected, disconnect control module. NOTE: Disconnect the body integrated unit at the end. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Did the resistance change to 10 Ω or more?	Replace the control module whose resistance has changed. When the value changed at disconnecting the body integrated unit, Go to step **3**.	Repair or replace the short circuit of the harness between body integrated unit and VDC CM.
3	**CHECK MAIN WIRING HARNESS AND RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i84) No. 27 — Chassis ground:*** ***(i84) No. 35 — Chassis ground:***	Is the resistance 10 Ω or less?	Repair or replace the short circuit of the harness between ECM and body integrated unit.	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>
4	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Is the voltage 5 V or less?	CAN communication circuit is normal.	Go to step **5**.
5	**CHECK CONTROL MODULE.** With the tester connected, disconnect control module. NOTE: Disconnect the body integrated unit at the end. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Did the voltage change to 5 V or less?	Replace the control module whose voltage has changed. When the value changed at disconnecting the body integrated unit, Go to step **6**.	Repair or replace the short circuit of the harness between body integrated unit and VDC CM.
6	**CHECK HARNESS.** Using a tester, measure the voltage between terminals and chassis ground. ***Connector & terminal*** ***(i84) No. 27 — Chassis ground:*** ***(i84) No. 35 — Chassis ground:***	Is the voltage 5 V or less?	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>	Repair or replace the short circuit of the harness between ECM and body integrated unit.

4. 52 Ω OR LESS

WIRING DIAGRAM:



NOTE:
When the bus line is measured, combined resistance of end resistance (120 Ω) in ECM and end resistance (120 Ω) in VDC CM can be measured. The combined resistance is approximately 53 — 61 Ω with the stabilizing circuit included. When the measured resistance value is 52 Ω or less, main wiring harness or related lines may be shorted, or combined resistance may have changed because resistance other than end resistance is created on the circuit.

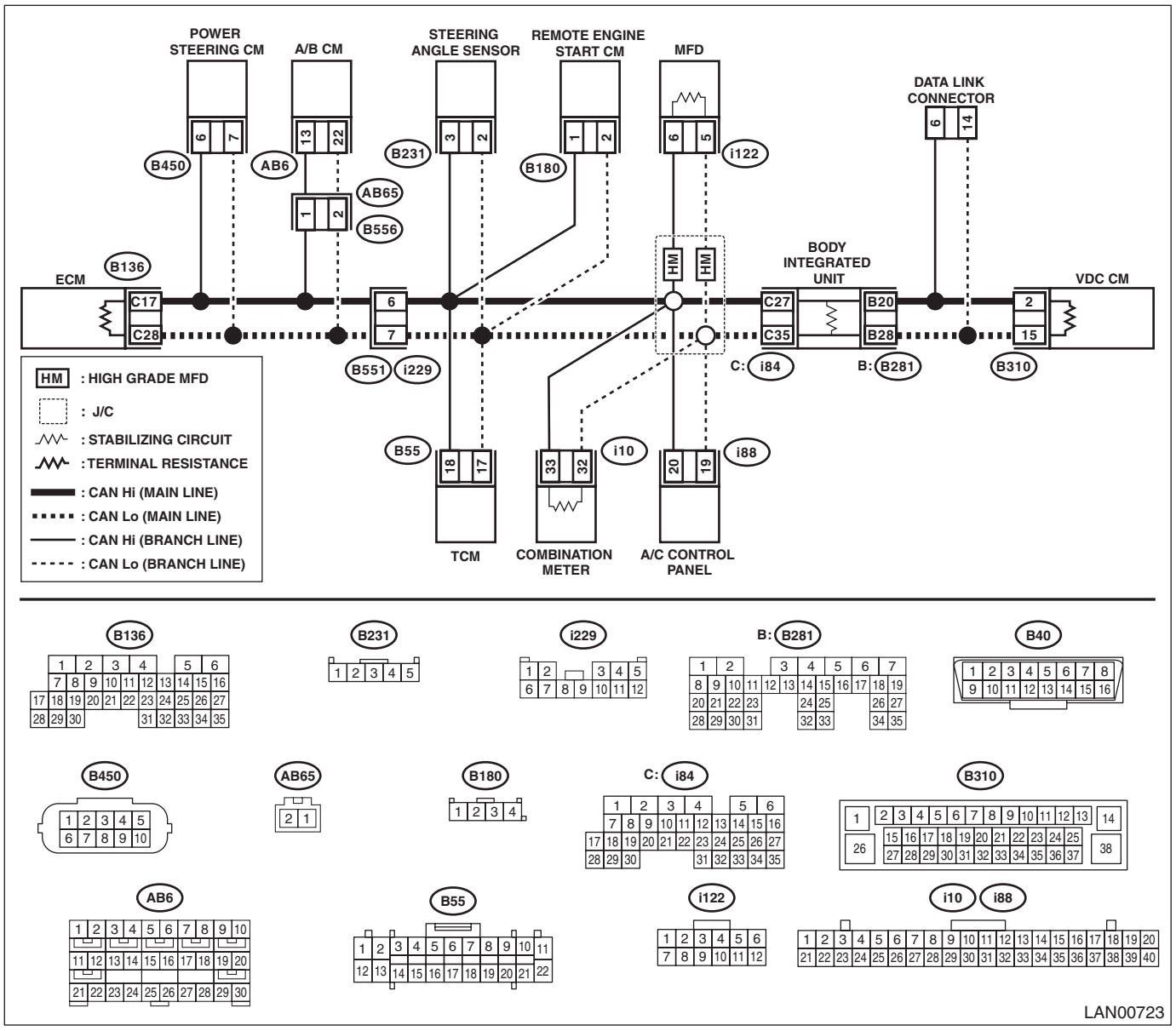
Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** Using the tester, measure the resistance between terminals. ***Connector & terminal (B40) No. 6 — No. 14:***	Is the resistance 10 Ω or less?	Go to step **2**.	Go to step **4**.

	Step	Check	Yes	No
2	**CHECK MAIN WIRING HARNESS AND RELATED LINES.** With a tester connected, disconnect control module connectors in order. NOTE: Disconnect the body integrated unit at the end. ***Connector & terminal*** ***(B40) No. 6 — No. 14:***	Is there any control module whose condition has changed from short state?	Replace the control module whose resistance has changed. When the value changed at disconnecting the body integrated unit, Go to step **3**.	Repair or replace the short circuit of the harness between body integrated unit and VDC CM.
3	**CHECK BETWEEN MAIN WIRING HARNESSES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i84) No. 27 — No. 35:***	Is the resistance 10 Ω or less?	Repair or replace the short circuit of the harness between ECM and body integrated unit.	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>
4	**CHECK CONTROL MODULE.** 1) Disconnect ECM and VDC CM connectors. 2) Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(B136) No. 17 — No. 28:*** ***(B310) No. 2 — No. 15:***	Is the resistance 114 — 126 Ω?	Go to step **5**.	Replace the control module whose end resistance value is out of the specified range.
5	**CHECK CONTROL MODULE.** 1) Disconnect the connector of body integrated unit. 2) Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(B281) No. 28 — (i84) No. 27:*** ***(B281) No. 20 — (i84) No. 35:***	Is the resistance 2850 — 3150 Ω?	Go to step **6**.	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>
6	**CHECK CONTROL MODULE.** Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(B281) No. 28 — (i84) No. 35:*** ***(B281) No. 20 — (i84) No. 27:***	Is the resistance less than 1 Ω?	Go to step **7**.	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>
7	**CHECK CONTROL MODULE.** 1) Disconnect the combination meter connector. 2) Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(i10) No. 32 — No. 33:***	Is the resistance 2850 — 3150 Ω?	Go to step **8**.	Replace the combination meter.
8	**CHECK CONTROL MODULE (ONLY FOR MODELS WITH HIGH GRADE MFD).** 1) Disconnect the MFD connector. 2) Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(i122) No. 5 — No. 6:***	Is the resistance 2850 — 3150 Ω?	Go to step **9**.	Replace the MFD.
9	**CHECK HARNESS.** Using the tester, check the short circuit portion of each harness. ***Connector & terminal*** ***(B281) No. 28 — No. 20:***	Is the resistance 1 MΩ or more?	Go to step **11**.	Go to step **10**.

Step		Check	Yes	No
10	**CHECK CONTROL MODULE.** With a tester connected, disconnect control modules in order. ***Connector & terminal (B281) No. 28 — No. 20:***	Are there any control modules whose resistance changed to 1 MΩ or more?	Replace the control module that has changed.	Repair or replace the harness part which has resistance component.
11	**CHECK CONTROL MODULE.** With a tester connected, disconnect control modules in order. ***Connector & terminal (i84) No. 27 — No. 35:***	Is there any control module whose resistance has changed to 1 MΩ or more?	Replace the control module that has changed.	Repair or replace the harness part which has resistance component.

5. 62 Ω OR MORE

WIRING DIAGRAM:



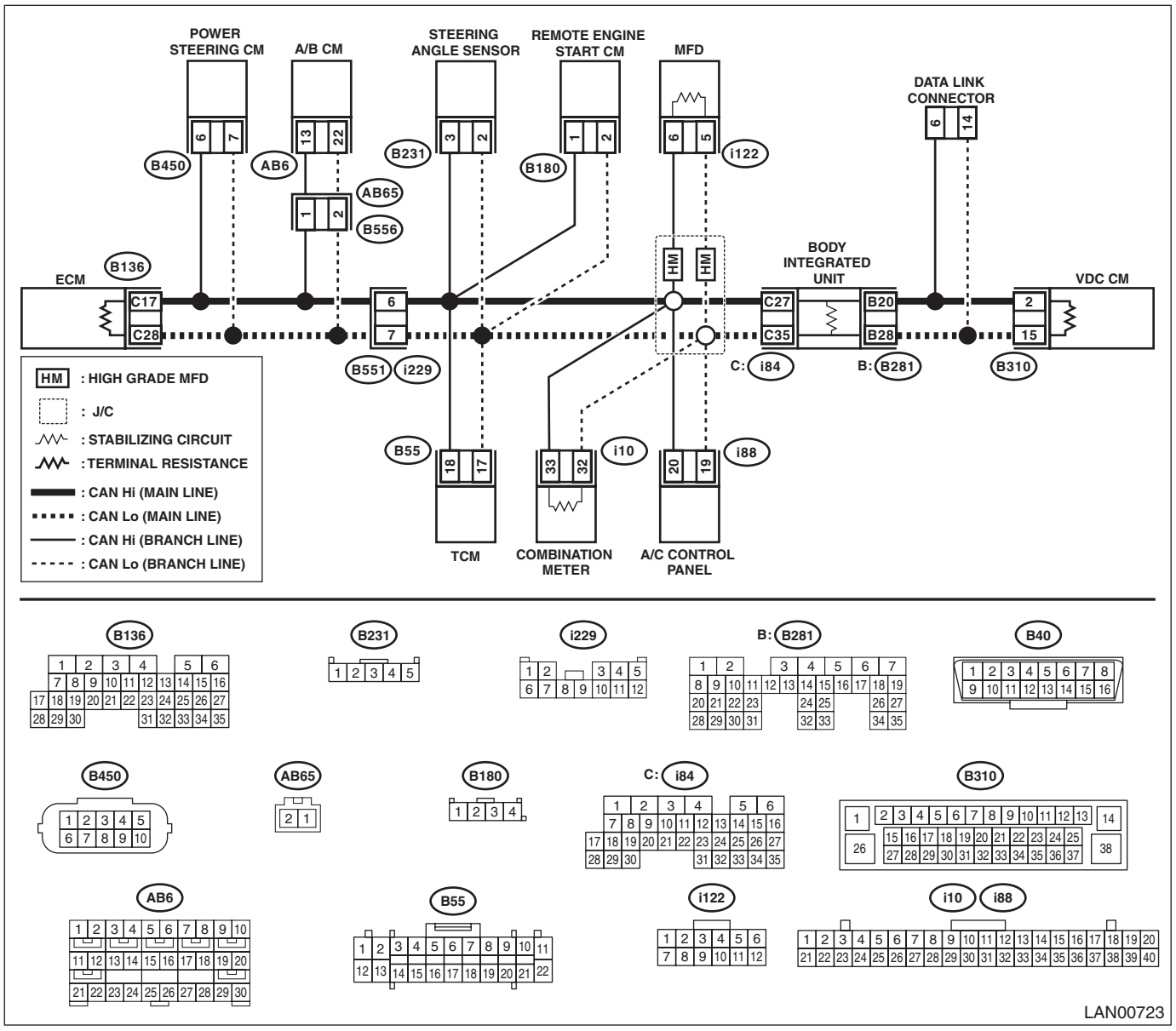
NOTE:
When CAN communication circuit is measured, combined resistance of end resistance (120 Ω) in ECM and end resistance (120 Ω) in VDC CM can be measured. The combined resistance is approximately 53 — 61 Ω with the stabilizing circuit included. When the measured resistance value is 62 Ω or more, either one of the end resistances, or stabilizing circuit, or main wiring harness may have malfunction such as open circuit.

Step		Check	Yes	No
1	**CHECK CONTROL MODULE.** 1) Disconnect ECM and VDC CM connectors. 2) Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(B136) No. 17 — No. 28:*** ***(B310) No. 2 — No. 15:***	Is the resistance 114 — 126 Ω or more?	Go to step **2**.	Replace the control module whose value is out of the specification.

	Step	Check	Yes	No
2	**CHECK CONTROL MODULE.** 1) Disconnect the connector of body control module. 2) Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(B281) No. 28 — (i84) No. 27:*** ***(B281) No. 20 — (i84) No. 35:***	Is the resistance 2850 — 3150 Ω?	Go to step **3**.	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>
3	**CHECK CONTROL MODULE.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B281) No. 28 — (i84) No. 35:*** ***(B281) No. 20 — (i84) No. 27:***	Is the resistance less than 1 Ω?	Go to step **4**.	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>
4	**CHECK CONTROL MODULE.** 1) Disconnect the combination meter connector. 2) Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(i10) No. 32 — No. 33:***	Is the resistance 2850 — 3150 Ω?	Go to step **5**.	Replace the combination meter.
5	**CHECK CONTROL MODULE (ONLY FOR MODELS WITH HIGH GRADE MFD).** 1) Disconnect the MFD connector. 2) Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(i122) No. 5 — No. 6:***	Is the resistance 2850 — 3150 Ω?	Go to step **6**.	Replace the MFD.
6	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B40) No. 6 — (B310) No. 2:*** ***(B40) No. 14 — (B310) No. 15:*** ***(B40) No. 6 — (B281) No. 20:*** ***(B40) No. 14 — (B281) No. 28:***	Is there continuity?	Go to step **7**.	Repair or replace the open circuit of harness.
7	**CHECK HARNESS.** 1) Disconnect the ECM connector. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B40) No. 6 — (B136) No. 17:*** ***(B40) No. 14 — (B136) No. 28:***	Is there continuity?	It is possible that temporary poor communication occurs.	Repair or replace the open circuit of harness.

6. RELATED LINES 53 — 61 Ω (TCM)

WIRING DIAGRAM:



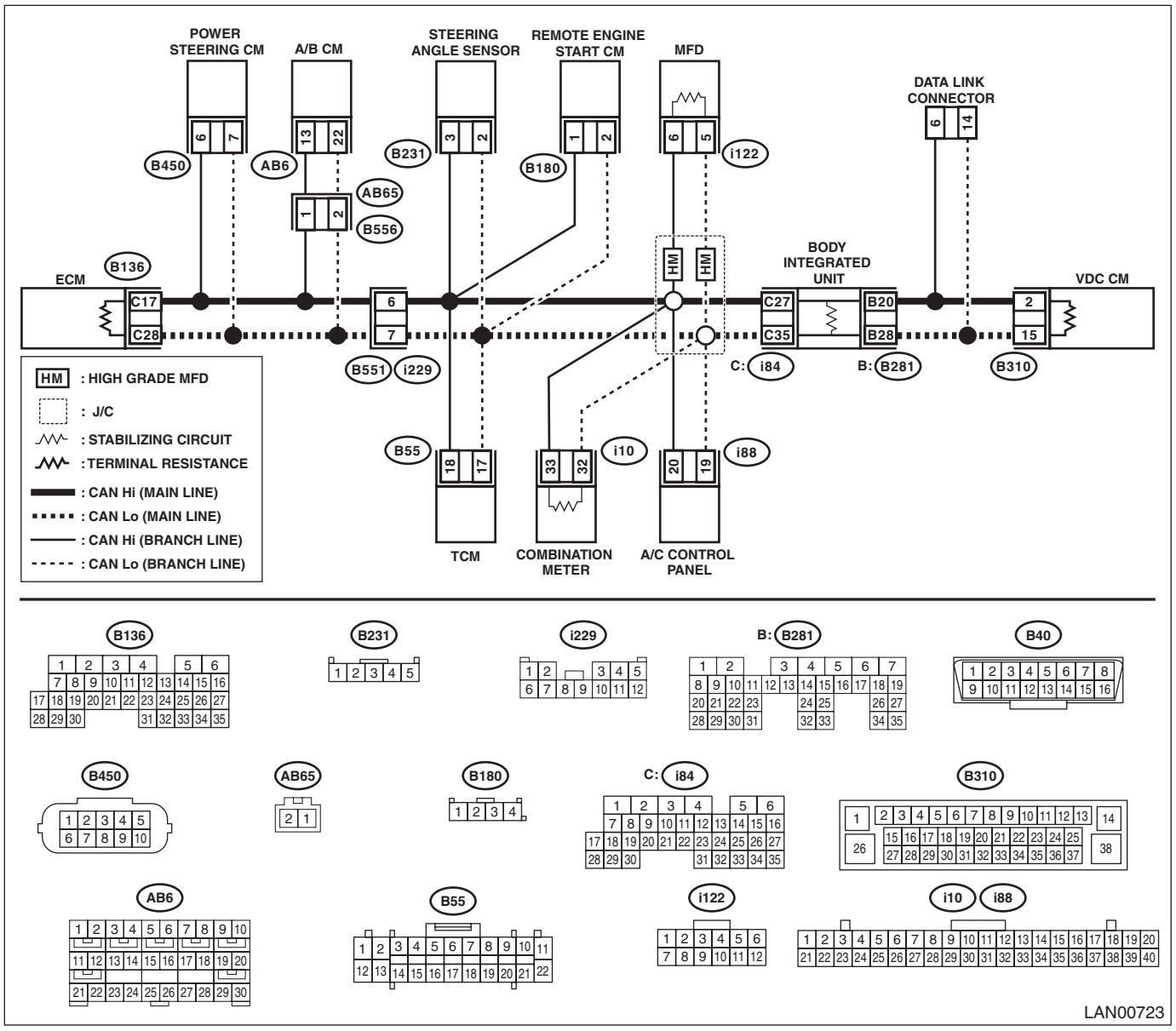
NOTE:
Perform inspection when no data is received, or faulty is detected. This is different from power supply shorted or ground shorted.

Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Disconnect the TCM connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal (B55) No. 17 — No. 18:***	Is the resistance 400 Ω or more?	Related lines between TCM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step **2**.

Step		Check	Yes	No
2	**CHECK RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B55) No. 17 — (B40) No. 14:*** ***(B55) No. 18 — (B40) No. 6:***	Is the resistance 10 Ω or more?	Repair or replace the open circuit portion of TCM related lines.	Check DTC of TCM. <Ref. to CVT(diag)-17, OPERATION, Read Diagnostic Trouble Code (DTC).>

7. RELATED LINES 53 — 61 Ω (STEERING ANGLE SENSOR)

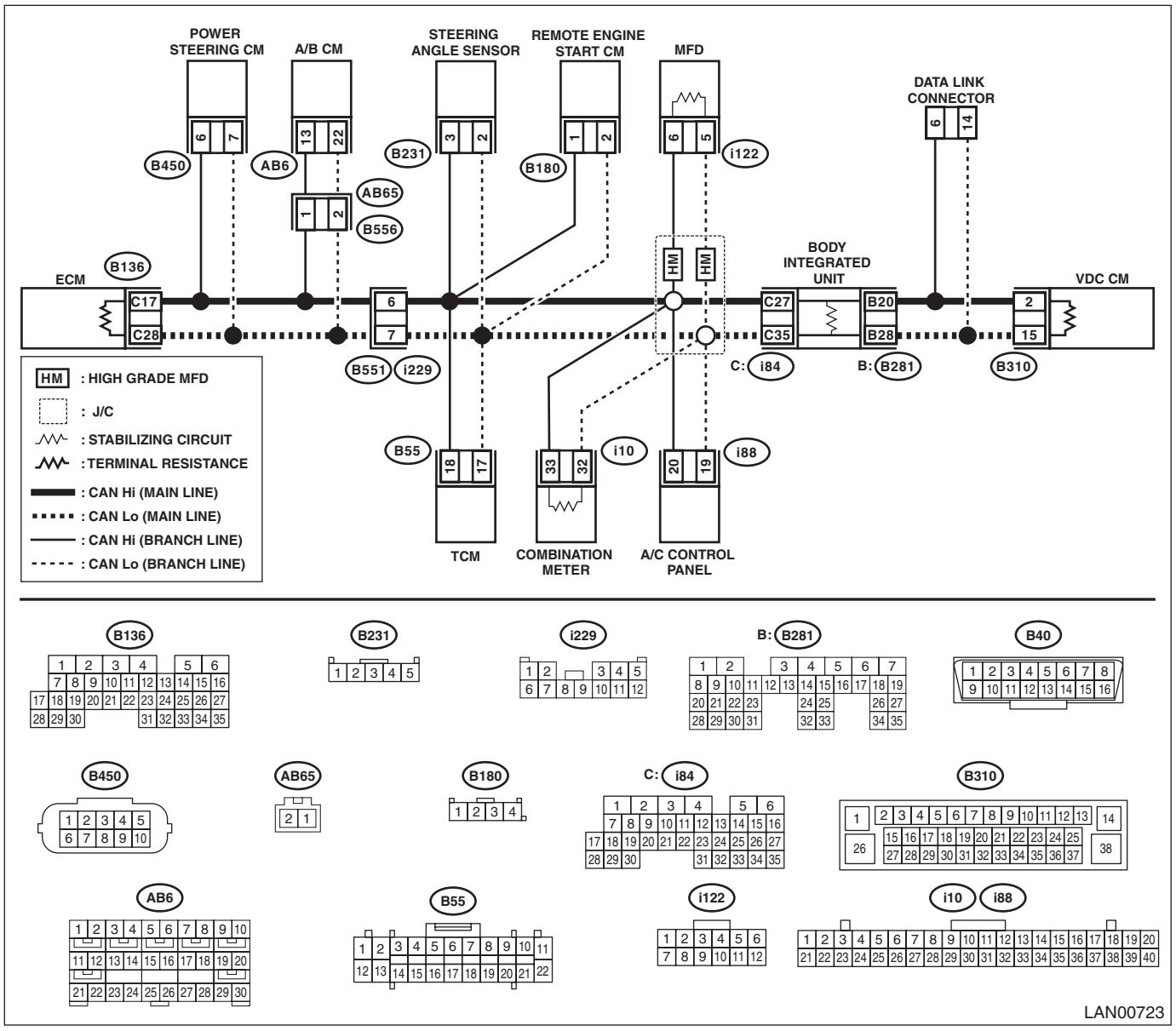
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Disconnect the steering angle sensor connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B231) No. 2 — No. 3:***	Is the resistance 400 Ω or more?	Related lines between steering angle sensor and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step **2**.
2	**CHECK RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B231) No. 2 — (B40) No. 14:*** ***(B231) No. 3 — (B40) No. 6:***	Is the resistance 10 Ω or more?	Repair or replace the open circuit portion of steering angle sensor related lines.	Check DTC of VDC CM. <Ref. to VDC(diag)-22, OPERATION, Read Diagnostic Trouble Code (DTC).>

8. RELATED LINE 53 — 61 Ω (A/C CONTROL PANEL)

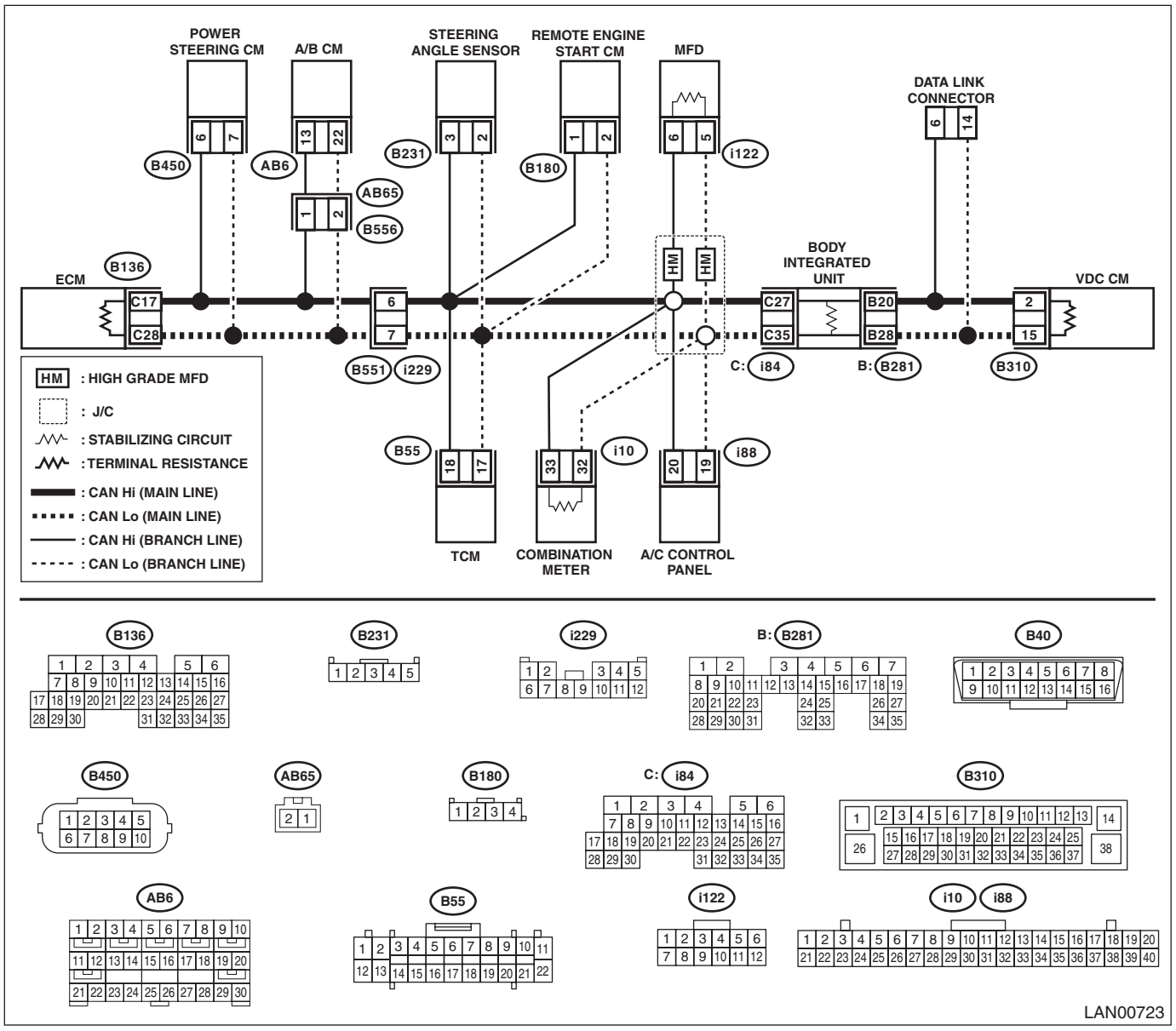
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Disconnect the A/C control panel connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i88) No. 19 — No. 20:***	Is the resistance 400 Ω or more?	Related lines between A/C control panel and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step **2**.
2	**CHECK RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i88) No. 19 — (B40) No. 14:*** ***(i88) No. 20 — (B40) No. 6:***	Is the resistance 10 Ω or more?	Repair or replace the open circuit of A/C control panel related lines.	Check the DTC of A/C control panel. <Ref. to AC(diag)-41, Read Diagnostic Trouble Code (DTC).>

9. RELATED LINES 53 — 61 Ω (ELECTRIC POWER STEERING CM)

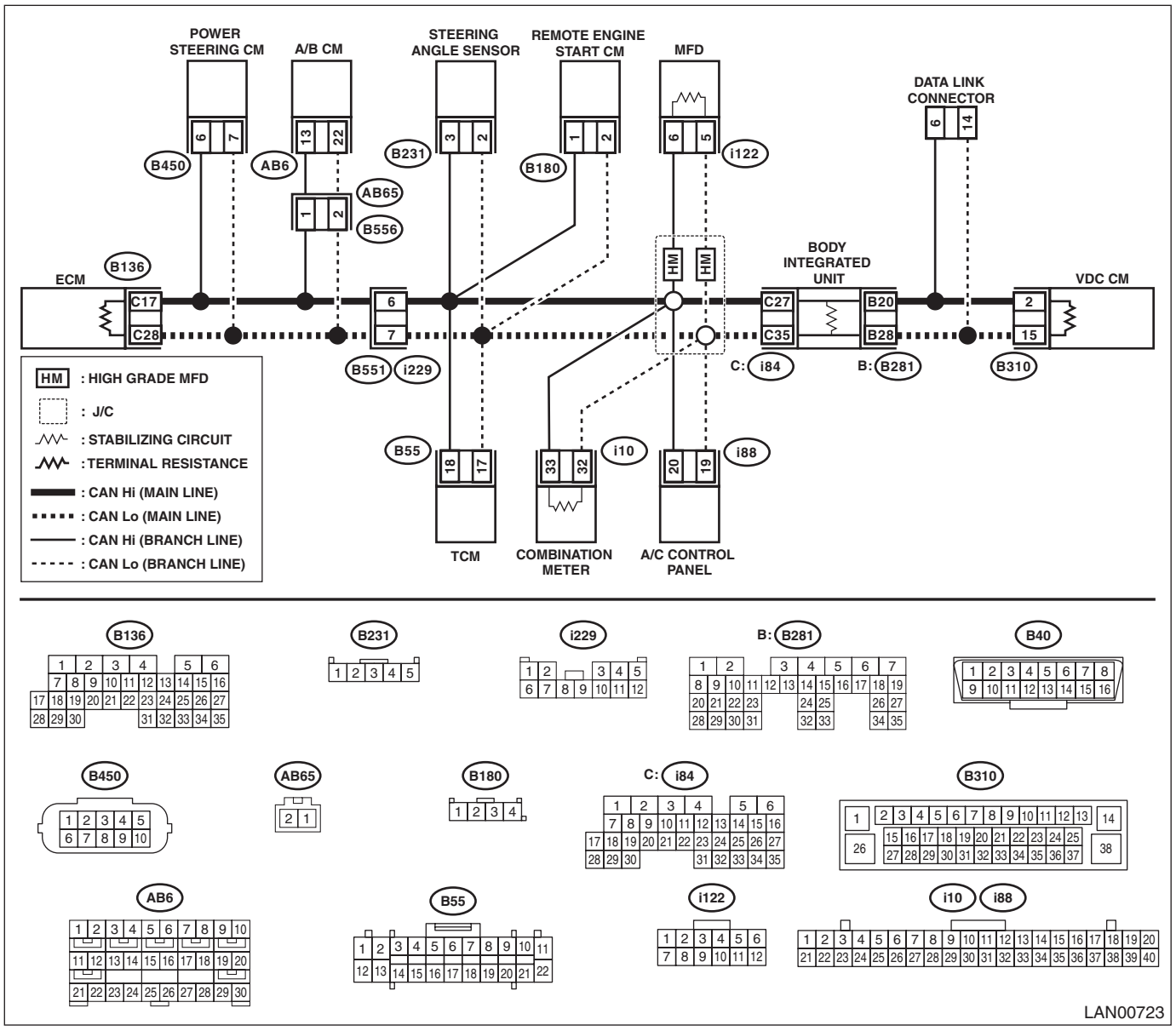
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Disconnect the electric power steering CM connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B450) No. 6 — No. 7:***	Is the resistance 400 Ω or more?	Related lines or main wiring harness between electric power steering CM and main wiring harness is open at two places or more.	Go to step **2**.
2	**CHECK RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B450) No. 6 — (B40) No. 6:*** ***(B450) No. 7 — (B40) No. 14:***	Is the resistance 10 Ω or more?	Repair or replace the open circuit portion of electric power steering CM related lines.	Check DTC of electric power steering CM. <Ref. to PS(diag)-17, OPERATION, Read Diagnostic Trouble Code (DTC).>

10.RELATED LINES 53 — 61 Ω (COMBINATION METER)

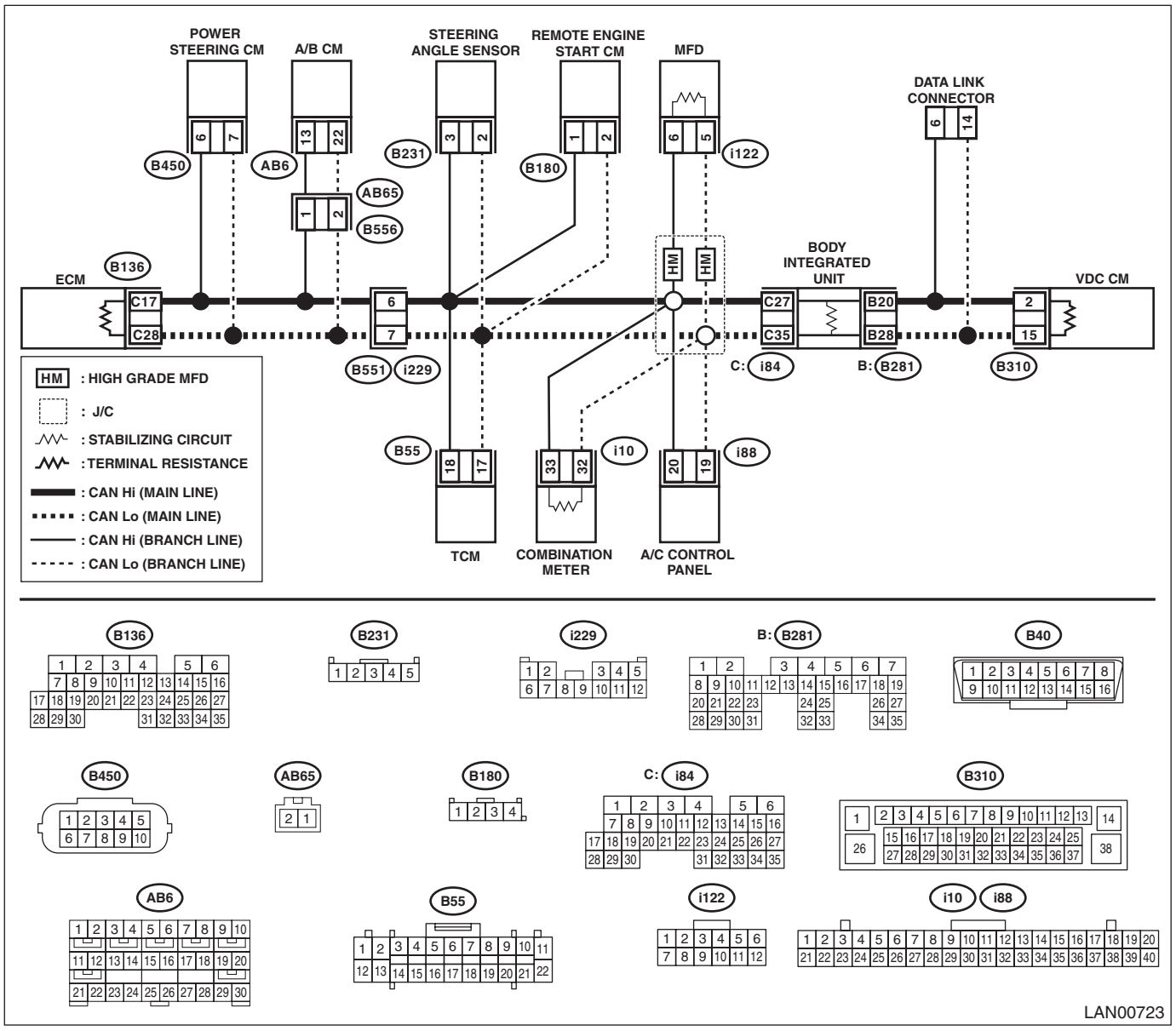
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Disconnect the combination meter connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i10) No. 32 — No. 33:***	Is the resistance 400 Ω or more?	Related lines between combination meter and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step **2**.
2	**CHECK RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i10) No. 32 — (B40) No. 14:*** ***(i10) No. 33 — (B40) No. 6:***	Is the resistance 10 Ω or more?	Repair or replace the open circuit portion of combination meter related lines.	Check DTC of combination meter.

11.RELATED LINES 53 — 61 Ω (MFD)

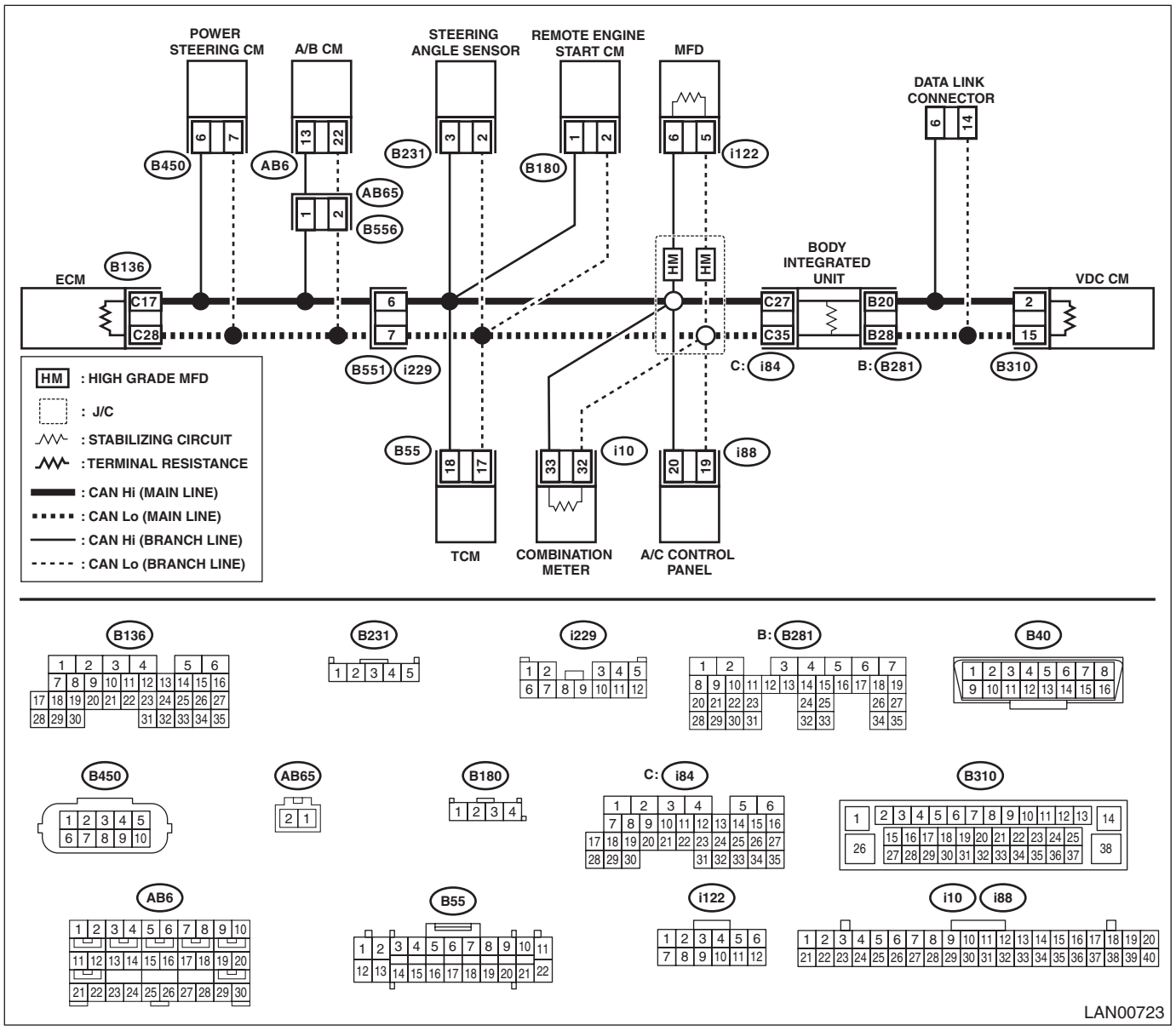
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Disconnect the MFD connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i122) No. 5 — No. 6:***	Is the resistance 400 Ω or more?	Related lines between MFD and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step **2**.
2	**CHECK RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i122) No. 5 — (B40) No. 14:*** ***(i122) No. 6 — (B40) No. 6:***	Is the resistance 10 Ω or more?	Repair or replace the open circuit of MFD related lines.	Check DTC of MFD.

12.RELATED LINES 53 — 61 Ω (A/B CM)

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Disconnect the A/B CM connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(AB6) No. 13 — No. 22:***	Is the resistance 400 Ω or more?	Related lines between A/B CM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step **2**.
2	**CHECK RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(AB6) No. 22 — (B40) No. 14:*** ***(AB6) No. 13 — (B40) No. 6:***	Is the resistance 10 Ω or more?	Repair or replace the open circuit of A/B CM related lines.	Check DTC of A/B CM.

10.List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Item	Content of diagnosis	Note
U1201	CAN-HS Counter Abnormal	High speed CAN communication error	<Ref. to LAN(diag)-74, DTC U1201 CAN-HS COUNTER ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0073	Control Module Communication Bus “A” Off	Communication of some module is shut down.	<Ref. to LAN(diag)-76, DTC U0073 CONTROL MODULE COMMUNICATION BUS “A” OFF, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0401	Invalid Data Received From ECM/PCM “A”	Error data is received from ECM.	<Ref. to LAN(diag)-78, DTC U0401 INVALID DATA RECEIVED FROM ECM/PCM “A”, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0402	Invalid Data Received From TCM	Error data is received from TCM.	<Ref. to LAN(diag)-80, DTC U0402 INVALID DATA RECEIVED FROM TCM, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0416	Invalid Data Received From Vehicle Dynamics Control Module	Error data is received from VDC module.	<Ref. to LAN(diag)-82, DTC U0416 INVALID DATA RECEIVED FROM VEHICLE DYNAMICS CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0420	Invalid Data Received From Power Steering Control Module	Error data is received from EPS module.	<Ref. to LAN(diag)-84, DTC U0420 INVALID DATA RECEIVED FROM POWER STEERING CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0422	Invalid Data Received From Body Control Module	Error data is received from body integrated unit.	<Ref. to LAN(diag)-86, DTC U0422 INVALID DATA RECEIVED FROM BODY CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0423	Invalid Data Received From Instrument Panel Cluster Control Module	Error data is received from meter.	<Ref. to LAN(diag)-88, DTC U0423 INVALID DATA RECEIVED FROM INSTRUMENT PANEL CLUSTER CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0424	Invalid Data Received From HVAC Control Module	Error data is received from A/C control panel.	<Ref. to LAN(diag)-90, DTC U0424 INVALID DATA RECEIVED FROM HVAC CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0428	Invalid Data Received From Steering Angle Sensor Module	Error data is received from steering angle sensor.	<Ref. to LAN(diag)-92, DTC U0428 INVALID DATA RECEIVED FROM STEERING ANGLE SENSOR MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0452	Invalid Data Received From Restraints Control Module	Error data is received from airbag module.	<Ref. to LAN(diag)-94, DTC U0452 INVALID DATA RECEIVED FROM RESTRAINTS CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0100	Lost Communication With ECM/PCM “A”	Data does not arrive from ECM.	<Ref. to LAN(diag)-96, DTC U0100 LOST COMMUNICATION WITH ECM/PCM “A”, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0101	Lost Communication With TCM	Data does not arrive from TCM.	<Ref. to LAN(diag)-98, DTC U0101 LOST COMMUNICATION WITH TCM, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0122	Lost Communication With Vehicle Dynamics Control Module	Data does not arrive from VDC module.	<Ref. to LAN(diag)-100, DTC U0122 LOST COMMUNICATION WITH VEHICLE DYNAMICS CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

DTC	Item	Content of diagnosis	Note
U0126	Lost Communication With Steering Angle Sensor Module	Data does not arrive from steering angle sensor.	<Ref. to LAN(diag)-102, DTC U0126 LOST COMMUNICATION WITH STEERING ANGLE SENSOR MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0131	Lost Communication With Power Steering Control Module	Data does not arrive from EPS module.	<Ref. to LAN(diag)-104, DTC U0131 LOST COMMUNICATION WITH POWER STEERING CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0140	Lost Communication With Body Control Module	Data does not arrive from body integrated unit.	<Ref. to LAN(diag)-106, DTC U0140 LOST COMMUNICATION WITH BODY CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0151	Lost Communication With Restraints Control Module	Data does not arrive from airbag module.	<Ref. to LAN(diag)-108, DTC U0151 LOST COMMUNICATION WITH RESTRAINTS CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0155	Lost Communication With Instrument Panel Cluster (IPC) Control Module	Data does not arrive from meter.	<Ref. to LAN(diag)-110, DTC U0155 LOST COMMUNICATION WITH INSTRUMENT PANEL CLUSTER (IPC) CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0164	Lost Communication With HVAC Control Module	Data does not arrive from A/C control panel.	<Ref. to LAN(diag)-112, DTC U0164 LOST COMMUNICATION WITH HVAC CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1120	Lost Communication With Autostart Stop Control Module	Data does not arrive from combination meter.	<Ref. to LAN(diag)-114, DTC U1120 LOST COMMUNICATION WITH AUTOSTART STOP CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

1. CHECK USING THE DTC CHECK SHEET

DTC check sheet

	(A)	(B)	(C)											(D)										
			VDC	BIU	MFD	A/C	MET	RST	STR	TCM	A/B	EPS	EGI	VDC	BIU	MFD	A/C	MET	RST	STR	TCM	A/B	EPS	EGI
		U0073	U0122	U0140	U0156	U0164	U0155	—	U0126	U0101	U0151	U0131	U0100	U0416	U0422	U0457	U0424	U0423	—	U0428	U0402	U0452	U0420	U0401
VDC			—		—	—	—	—			—	—		—		—	—	—	—			—	—	
BIU				—	—			—	—			—			—	—			—	—			—	
MFD			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/C					—	—		—	—		—	—				—	—		—	—		—	—	
MET					—		—	—	—					—	—	—	—	—	—	—	—	—	—	—
RST		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM					—	—		—	—	—	—	—				—	—		—	—	—	—	—	
A/B			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EPS				—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—	—
EGI				—	—	—		—	—		—	—	—		—	—	—		—	—		—	—	—

LAN00708

(A) Installation check
(B) Bus off detection
(C) Data no-receive detection
(D) Data abnormal detection

VDC: VDC CM
BIU: Body integrated unit
MFD: High grade MFD
A/C: A/C control panel
MET: Combination meter
RST: Remote engine starter CM
STR: Steering angle sensor
TCM: TCM
A/B: AB CM
EPS: Power steering CM
EGI: ECM

1) Module installation check
   (1) Write “-” marks in the field for Installation Check if the vehicle to be inspected does not have relevant module.
   (2) Write “-” marks in all blank fields on the same row that the “-” mark has filled in.
2) Buss off detection / data not received

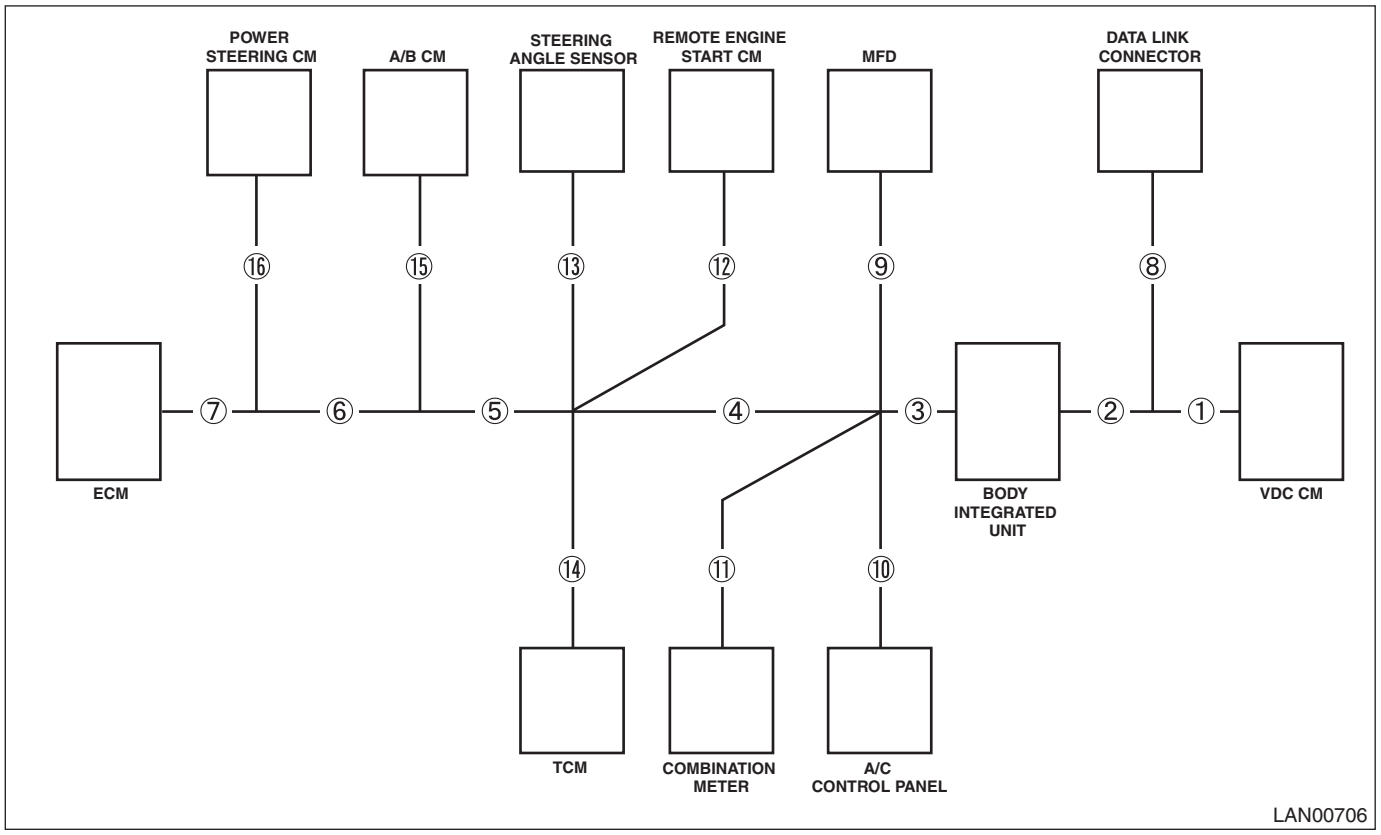
NOTE:
It becomes impossible for CAN diagnostic module to read DTC, if there is a current malfunction of open harness (data not received). If this occurs, perform the “Check using the check sheet of communication for initializing” <Ref. to LAN(diag)-11, CHECK USING THE CHECK SHEET OF COMMUNICATION FOR INITIALIZING, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Subaru Select Monitor.>, and use this sheet to confirm that the corresponding part becomes the past malfunction.
   (1) Mark “X” in the field corresponding to the DTCs that has been detected by each module in the check sheet.
   (2) Identify and repair the faulty part by referring to the example of DTC data not received and the DTC matrix. <Ref. to LAN(diag)-46, EXAMPLE OF DTC DATA NOT RECEIVED, LIST, List of Diagnostic Trouble Code (DTC).> <Ref. to LAN(diag)-49, DTC MATRIX, LIST, List of Diagnostic Trouble Code (DTC).>

3) Data abnormal detection

NOTE:
If the buss off occurs or data is not received, perform the diagnosis for these problems first.

(1) If several modules detect the DTC for the same module, replace the detected module.
(2) If one module detects the DTC, replace the module of the detected side.
(3) If it does not return to the normal operation, re-install the module which has been replaced, and replace the module of the detected side.
(4) If it does not return to the normal operation, replace both modules.

2. EXAMPLE OF DTC DATA NOT RECEIVED



When ⑦ (ECM vicinity) is open

NOTE:
If bus off occurs, ECM displays only the DTC that indicates bus off.

	(A)	(B)	(C)											(D)										
			VDC	BIU	MFD	A/C	MET	RST	STR	TCM	A/B	EPS	EGI	VDC	BIU	MFD	A/C	MET	RST	STR	TCM	A/B	EPS	EGI
		U0073	U0122	U0140	U0156	U0164	U0155	—	U0126	U0101	U0151	U0131	U0100	U0416	U0422	U0457	U0424	U0423	—	U0428	U0402	U0452	U0420	U0401
VDC			—		—	—	—	—			—	—	×	—		—	—	—	—			—	—	
BIU				—	—			—	—			—	×		—	—			—	—			—	
MFD			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/C					—	—		—	—		—	—	×			—	—		—	—		—	—	
MET					—		—	—	—				×	—	—	—	—	—	—	—	—	—	—	—
RST		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM					—	—		—	—	—	—	—	×			—	—		—	—	—	—	—	
A/B			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EPS				—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—	—
EGI		×		—	—	—		—	—		—	—	—		—	—	—		—	—		—	—	—

LAN00715

When ⑬ (STR vicinity) is open

	(A)	(B)	(C)											(D)										
			VDC	BIU	MFD	A/C	MET	RST	STR	TCM	A/B	EPS	EGI	VDC	BIU	MFD	A/C	MET	RST	STR	TCM	A/B	EPS	EGI
		U0073	U0122	U0140	U0156	U0164	U0155	—	U0126	U0101	U0151	U0131	U0100	U0416	U0422	U0457	U0424	U0423	—	U0428	U0402	U0452	U0420	U0401
VDC			—		—	—	—	—	×		—	—		—		—	—	—	—			—	—	
BIU				—	—			—	—			—			—	—			—	—			—	
MFD			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/C					—	—		—	—		—	—				—	—		—	—		—	—	
MET					—		—	—	—					—	—	—	—	—	—	—	—	—	—	—
RST		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM					—	—		—	—	—	—	—				—	—		—	—	—	—	—	
A/B			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EPS				—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—	—
EGI				—	—	—		—	—		—	—	—		—	—	—		—	—		—	—	—

LAN00721

When ⑭ (TCM vicinity) is open

	(A)	(B)	(C)											(D)										
			VDC	BIU	MFD	A/C	MET	RST	STR	TCM	A/B	EPS	EGI	VDC	BIU	MFD	A/C	MET	RST	STR	TCM	A/B	EPS	EGI
		U0073	U0122	U0140	U0156	U0164	U0155	—	U0126	U0101	U0151	U0131	U0100	U0416	U0422	U0457	U0424	U0423	—	U0428	U0402	U0452	U0420	U0401
VDC			—		—	—	—	—		×	—	—		—		—	—	—	—			—	—	
BIU				—	—			—	—	×		—			—	—			—	—			—	
MFD			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/C					—	—		—	—	×	—	—				—	—		—	—		—	—	
MET					—		—	—	—	×				—	—	—	—	—	—	—	—	—	—	—
RST		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM			×	×	—	—	×	—	—	—	—	—	×			—	—		—	—	—	—	—	
A/B			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EPS				—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—	—
EGI				—	—	—		—	—	×	—	—	—		—	—	—		—	—		—	—	—

LAN00722

When ⑯ (EPS vicinity) is open

NOTE:
Power steering CM may display U1120 (AUTO START STOP COMMUNICATION LOST).

	(A)	(B)	(C)											(D)										
			VDC	BIU	MFD	A/C	MET	RST	STR	TCM	A/B	EPS	EGI	VDC	BIU	MFD	A/C	MET	RST	STR	TCM	A/B	EPS	EGI
		U0073	U0122	U0140	U0156	U0164	U0155	—	U0126	U0101	U0151	U0131	U0100	U0416	U0422	U0457	U0424	U0423	—	U0428	U0402	U0452	U0420	U0401
VDC			—		—	—	—	—			—	—		—		—	—	—	—			—	—	
BIU				—	—			—	—			—			—	—			—	—			—	
MFD			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
A/C					—	—		—	—		—	—				—	—		—	—		—	—	
MET					—		—	—	—			×		—	—	—	—	—	—	—	—	—	—	—
RST		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
STR		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TCM					—	—		—	—	—	—	—				—	—		—	—	—	—	—	
A/B			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
EPS			×	—	—	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—	—
EGI				—	—	—		—	—		—	—	—		—	—	—		—	—		—	—	—

LAN00733

3. DTC MATRIX

NOTE:
Perform the following procedure when using this chart in which the detailed trouble mode corresponds to the trouble status.
1. Search the trouble mode that corresponds to the vehicle status from the chart.
2. Perform the repair that corresponds to the trouble mode.

Control module (which module vicinity)		Trouble mode 1	Trouble mode 2	Trouble mode 3	Trouble mode 4	Trouble mode 5	...	...	Trouble mode n
Detailed location (which location)									
Detailed trouble mode (What kind)									
Trouble status (trouble exists/trouble existed)									
DTC reading result from each module using Subaru Select Monitor	VDC CM	Vehicle status 1	Vehicle status 2	Vehicle status 3	Vehicle status 4	Vehicle status 5	...	...	Vehicle status n
	Body integrated unit								
	Combination meter								
	MFD								
	A/C control panel								
	TCM								
	...								
	...								
	ECM								
Indicators illuminate/blink.									

1. Hi-side circuit of CAN communication circuit is open.

NOTE:
- If the module has a limit of DTC memory and the number of DTC occurrence exceeds the limit, older DTCs are preferentially stored.
- When there is no description in Current, it is referred to as “None”.
- When DTCs is in parentheses, it is referred to as “Not always occur”.
- “Trouble exists” is referred to as the status before performing inspection and repair. “Trouble existed” is referred to as the status before performing DTC clear after repair.

Control module		VDC CM vicinity	VDC CM vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (EGI side) vicinity	Body integrated unit (EGI side) vicinity	Combination meter vicinity	Combination meter vicinity
Detailed location		Hi side	Hi side	Hi side	Hi side	Hi side	Hi side	Hi side	Hi side
Detailed trouble mode		Open	Open	Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	VDC CM[*1*8]	Communication failure	Current C1431 Past C1431 U0073 U0100 U0101 U0126 (Below are items for MT model.) U0140	Current U0073 U0100 U0101 U0126 (Below are items for MT model.) U0140 Past Same as above	Current C1431 Past C1431 U0073 U0100 U0101 U0126 (Below are items for MT model.) U0140	Current U0100 U0101 U0126 Past Same as above	Current C1431 Past C1431 U0100 U0101 U0126	Current None Past None	Current None Past None
	Body integrated unit[*2]	Current U0122 Past Same as above	Past U0122	Communication failure	Past U0122	Current U0100 U0101 U0151 U0155 U0164 U1201 Past Same as above	Past U0100 U0101 U0151 U0155 U0164 U1201	Current U0155 Past Same as above	Past U0155
	Combination meter[*3]	Current U0122 Past Same as above	Past U0122	Communication failure	Past U0122	Communication failure	Past U0122 U0140	Communication failure	Past U0073 U0100 U0101 U0122 U0131 U0140 U0151 U0164 Any 5 item from above
	MFD[*4]	Current None Past None	Current None Past None	Communication failure	Current None Past None	Communication failure	Past U1650	Current None Past None	Current None Past None

List of Diagnostic Trouble Code (DTC)

Control module		VDC CM vicinity	VDC CM vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (EGI side) vicinity	Body integrated unit (EGI side) vicinity	Combination meter vicinity	Combination meter vicinity
Detailed location		Hi side	Hi side	Hi side	Hi side	Hi side	Hi side	Hi side	Hi side
Detailed trouble mode		Open	Open	Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	A/C control panel[*5]	Current U0122 Past Same as above	Past U0122	Communication failure	Past U0122	Communication failure	Past U0122 U0140	Current U0155 Past Same as above	Past U0155
	TCM[*1]	Current U0122 Past Same as above	Past U0122	Current U0122 Past Same as above	Past U0122	Current U0122 U0140 Past Same as above	Past U0122 U0140	Current U0155 Past Same as above	Past U0155
	A/B CM[*6]	Current None Past None	Current None Past None	Communication failure	Current None Past None	Communication failure	Current None Past None	Current None Past None	Current None Past None
	Electric power steering CM[*7]	Current U0122 Latest Same as above	Current None Latest U0122	Current U0122 Latest Same as above	Latest U0122	Current U0122 Latest Same as above	Latest U0122	Current None Latest None	Current None Latest None
	ECM[*1]	Current P0700 U0122 Past Same as above	Past P0700 U0122	Current P0700 U0122 Past Same as above	Past P0700 U0122	Current U0122 Past Same as above	Past U0122	Current U0155 Past Same as above	Past U0155

List of Diagnostic Trouble Code (DTC)

Control module	VDC CM vicinity	VDC CM vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (EGI side) vicinity	Body integrated unit (EGI side) vicinity	Combination meter vicinity	Combination meter vicinity
Detailed location	Hi side	Hi side	Hi side	Hi side	Hi side	Hi side	Hi side	Hi side
Detailed trouble mode	Open	Open	Open	Open	Open	Open	Open	Open
Trouble status	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
Indicators illuminate/ blink.	CHECK ENGINE, VDC, VDC off, ABS, BRAKE illuminate. AT OIL TEMP, CRUISE blink.	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink	CHECK ENGINE, VDC, ABS, VDC off, BRAKE illuminate. AT OIL TEMP, CRUISE blink.	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink	CHECK ENGINE, VDC, VDC off, ABS, BRAKE illuminate. SPORTS illuminates. TPMS blinks → illuminates. AT OIL TEMP, CRUISE blink.	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink	CHECK ENGINE, VDC, A/B illuminate. Below are the items that illuminate intermittently. (Cycles are erratic.) VDC Off, ABS, EMPTY, BRAKE Below are the items that blink intermittently. Engine coolant temperature gauge (blue/red) blinks, AT OIL TEMP, CRUISE, Fuel gauge	CHECK ENGINE, VDC illuminate. CRUISE blink

*1: When U0073 occurs, other U-codes are not stored. (Judge timing affects the storing order.)
*2: The number of DTC memory is limited to 8 items. (Older items are preferentially stored.)
*3: The number of DTC memory is limited to 5 items. (Older items are preferentially stored.)
*4: The number of DTC memory is limited to 2 items. (Older items are preferentially stored.)
*5: All types of DTCs can be simultaneously stored. When U0073 occurs, other U-codes are not displayed.
*6: All types of DTCs can be simultaneously stored.
*7: The number of DTC memory is limited to 1 item for Current and 3 items for Latest.
*8: If C1431 contains a current malfunction after repair, perform IGN OFF → ON. (It remains immediately after repair.)

Control module		MFD vicinity	MFD vicinity	A/C control panel vicinity	A/C control panel vicinity	Steering angle sensor vicinity	Steering angle sensor vicinity	AT CM vicinity	AT CM vicinity
Detailed location		Hi side	Hi side	Hi side	Hi side	Hi side	Hi side	Hi side	Hi side
Detailed trouble mode		Open	Open	Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	VDC CM[*1*8]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0126 Past Same as above	Past U0126	Current U0101 Past Same as above	Current C1431 Past C1431 U0101
	Body integrated unit[*2]	Current None Past None	Current None Past None	Current U0164 Past Same as above	Past U0164	Current None Past None	Current None Past None	Current U0101 Past Same as above	Past U0101
	Combination meter[*3]	Current None Past None	Current None Past None	Current U0164 Past None	Past U0164	Current None Past None	Current None Past None	Current U0101 Past Same as above	Past U0101
	MFD[*4]	Communi-cation fail-ure	Past U1201 U0073	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None
	A/C control panel[*5]	Current None Past None	Current None Past None	Communi-cation fail-ure	Past U0100 U0155	Current None Past None	Current None Past None	Current U0101 Past Same as above	Past U0101
	TCM[*1]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0100 U0122 U0140 U0155 Past Same as above	Past U0100 U0122 U0140 U0155
	A/B CM[*6]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None

List of Diagnostic Trouble Code (DTC)

Control module		MFD vicinity	MFD vicinity	A/C control panel vicinity	A/C control panel vicinity	Steering angle sensor vicinity	Steering angle sensor vicinity	AT CM vicinity	AT CM vicinity
Detailed location		Hi side	Hi side	Hi side	Hi side	Hi side	Hi side	Hi side	Hi side
Detailed trouble mode		Open	Open	Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	Electric power steering CM[*7]	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None
	ECM[*1]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0101 Past Same as above	Past U0101
Indicators illuminate/ blink.		No change No change in MFD	No change No change in MFD	No change	No change	VDC, ABS illuminate.	No change	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink Shift indicator goes off.	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink

*1: When U0073 occurs, other U-codes are not stored. (Judge timing affects the storing order.)
*2: The number of DTC memory is limited to 8 items. (Older items are preferentially stored.)
*3: The number of DTC memory is limited to 5 items. (Older items are preferentially stored.)
*4: The number of DTC memory is limited to 2 items. (Older items are preferentially stored.)
*5: All types of DTCs can be simultaneously stored. When U0073 occurs, other U-codes are not displayed.
*6: All types of DTCs can be simultaneously stored.
*7: The number of DTC memory is limited to 1 item for Current and 3 items for Latest.
*8: If C1431 contains a current malfunction after repair, perform IGN OFF → ON. (It remains immediately after repair.)

Control module		A/B CM vicinity	A/B CM vicinity	Electric power steering CM vicinity	Electric power steering CM vicinity	ECM vicinity	ECM vicinity
Detailed location		Hi side	Hi side	Hi side	Hi side	Hi side	Hi side
Detailed trouble mode		Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	VDC CM[*1*8]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current C1431 U0100 Past Same as above	Current C1431 Past C1431 U0100
	Body integrated unit[*2]	Current U0151 Past Same as above	Past U0151	Current None Past None	Current None Past None	Current U0100 (U1201) Past Same as above	Past U0100 (U1201)
	Combination meter[*3]	Current U0151 Past Same as above	Past U0151	Current U0131 Past Same as above	Past U0131	Current U0100 (U0073) Past Same as above	Past U0100 (U0073)
	MFD[*4]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None
	A/C control panel[*5]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0100 Past Same as above	Past U0100
	TCM[*1]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0100 Past Same as above	Past U0100
	A/B CM[*6]	Communica-tion failure	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None

List of Diagnostic Trouble Code (DTC)

Control module		A/B CM vicinity	A/B CM vicinity	Electric power steering CM vicinity	Electric power steering CM vicinity	ECM vicinity	ECM vicinity
Detailed location		Hi side	Hi side	Hi side	Hi side	Hi side	Hi side
Detailed trouble mode		Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	Electric power steering CM[*7]	Current None Latest None	Current None Latest None	Current U1120[*9] U0122 C2543 Any 1 item from above Latest U0122 C2543 (U1120[*9])	Latest U0122 C2543 (U1120[*9])	Current C2543 U0073 None or any 1 item from above Latest C2543 U0073	Latest C2543 U0073
	ECM[*1]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0073 Past Same as above	Past U0073
Indicators illuminate/blink.		A/B illuminates.	No change	No change	No change	VDC, ABS, CHECK ENGINE, EMPTY illuminate. AT OIL TEMP blinks. Engine coolant temperature gauge (blue/red) blinks. Fuel gauge goes off. Tachometer: 0 rpm	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink

*1: When U0073 occurs, other U-codes are not stored. (Judge timing affects the storing order.)
*2: The number of DTC memory is limited to 8 items. (Older items are preferentially stored.)
*3: The number of DTC memory is limited to 5 items. (Older items are preferentially stored.)
*4: The number of DTC memory is limited to 2 items. (Older items are preferentially stored.)
*5: All types of DTCs can be simultaneously stored. When U0073 occurs, other U-codes are not displayed.
*6: All types of DTCs can be simultaneously stored.
*7: The number of DTC memory is limited to 1 item for Current and 3 items for Latest.
*8: If C1431 contains a current malfunction after repair, perform IGN OFF → ON. (It remains immediately after repair.)
*9: When this code is displayed, perform the diagnosis as COMMUNICATION MALFUNCTION (METER ECU) (U0155). DTC that occurs in “Current” is displayed in top of the “Latest” list.

2. Lo-side circuit of CAN communication circuit is open.

NOTE:
- If the module has a limit of DTC memory and the number of DTC occurrence exceeds the limit, older DTCs are preferentially stored.
- When there is no description in Current, it is referred to as “None”.
- When DTCs is in parentheses, it is referred to as “Not always occur”.
- “Trouble exists” is referred to as the status before performing inspection and repair. “Trouble existed” is referred to as the status before performing DTC clear after repair.

Control module		VDC CM vicinity	VDC CM vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (EGI side) vicinity	Body integrated unit (EGI side) vicinity	Combination meter vicinity	Combination meter vicinity
Detailed location		Lo side	Lo side	Lo side	Lo side	Lo side	Lo side	Lo side	Lo side
Detailed trouble mode		Open	Open	Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	VDC CM[*1*8]	Communication failure	Current C1431 Past C1431 U0073 U0100 U0101 U0126 (Below are items for MT model.) U0140	Current U0073 U0100 U0101 U0126 (Below are items for MT model.) U0140 Past Same as above	Current C1431 Past C1431 U0073 U0100 U0101 U0126 (Below are items for MT model.) U0140	Current U0100 U0101 U0126 Past Same as above	Current C1431 Past C1431 U0100 U0101 U0126	Current None Past None	Current None Past None
	Body integrated unit[*2]	Current U0122 Past Same as above	Past U0122	Communication failure	Past U0122	Current U0100 U0101 U0151 U0155 U0164 (U1201) Past Same as above	Past U0100 U0101 U0151 U0155 U0164 (U1201)	Current U0155 Past Same as above	Past U0155
	Combination meter[*3]	Current U0122 Past Same as above	Past U0122	Communication failure	Past U0122	Communication failure	Past U0122 U0140	Communication failure	Past U0073 U0100 U0101 U0122 U0131 U0140 U0151 U0164 Any 5 item from above

List of Diagnostic Trouble Code (DTC)

Control module		VDC CM vicinity	VDC CM vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (EGI side) vicinity	Body integrated unit (EGI side) vicinity	Combination meter vicinity	Combination meter vicinity
Detailed location		Lo side	Lo side	Lo side	Lo side	Lo side	Lo side	Lo side	Lo side
Detailed trouble mode		Open	Open	Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	MFD[*4]	Current None Past None	Current None Past None	Communication failure	Current None Past None	Communication failure	Past U1650	Current (U1650) (U1201) Past Same as above	Past (U1650) (U1201)
	A/C control panel[*5]	Current U0122 Past Same as above	Past U0122	Communication failure	Past U0122	Communication failure	Past U0122 U0140	Current U0155 Past Same as above	Past U0155
	TCM[*1]	Current U0122 Past Same as above	Past U0122	Current U0122 Past Same as above	Past U0122	Current U0122 U0140 Past Same as above	Past U0122 U0140	Current U0155 Past Same as above	Past U0155
	A/B CM[*6]	Current None Past None	Current None Past None	Communication failure	Current None Past None	Communication failure	Current None Past None	Current None Past None	Current None Past None
	Electric power steering CM[*7]	Current U0122 Latest Same as above	Current None Latest U0122	Current U0122 Latest Same as above	Latest U0122	Current U0122 Latest Same as above	Latest U0122	Current (C2543) Latest Same as above	Current (C2544) Latest (C2543) (C2544)
	ECM[*1]	Current P0700 U0122 Past Same as above	Past P0700 U0122	Current P0700 U0122 Past Same as above	Past P0700 U0122	Current U0122 Past Same as above	Past U0122	Current U0155 Past Same as above	Past U0155

Control module	VDC CM vicinity	VDC CM vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (EGI side) vicinity	Body integrated unit (EGI side) vicinity	Combination meter vicinity	Combination meter vicinity
Detailed location	Lo side	Lo side	Lo side	Lo side	Lo side	Lo side	Lo side	Lo side
Detailed trouble mode	Open	Open	Open	Open	Open	Open	Open	Open
Trouble status	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
Indicators illuminate/ blink.	CHECK ENGINE, VDC, VDC off, ABS, BRAKE illuminate. AT OIL TEMP, CRUISE blink.	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink	CHECK ENGINE, VDC, ABS, VDC off, BRAKE illuminate. AT OIL TEMP, CRUISE blink.	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink	CHECK ENGINE, VDC, VDC off, ABS, BRAKE illuminate. SPORTS illuminates. TPMS blinks → illuminates. AT OIL TEMP, CRUISE blink.	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink	CHECK ENGINE, A/B, BRAKE, VDC, EMPTY, VDC OFF, ABS illuminate. Engine coolant temperature gauge (blue/red) blinks. TPMS blinks → illuminates. Shift indicator goes off. Fuel level warning indicator goes off. Tachometer: 0 rpm	CHECK ENGINE, VDC illuminate. CRUISE blink

*1: When U0073 occurs, other U-codes are not stored. (Judge timing affects the storing order.)
*2: The number of DTC memory is limited to 8 items. (Older items are preferentially stored.)
*3: The number of DTC memory is limited to 5 items. (Older items are preferentially stored.)
*4: The number of DTC memory is limited to 2 items. (Older items are preferentially stored.)
*5: All types of DTCs can be simultaneously stored. When U0073 occurs, other U-codes are not displayed.
*6: All types of DTCs can be simultaneously stored.
*7: The number of DTC memory is limited to 1 item for Current and 3 items for Latest.
*8: If C1431 contains a current malfunction after repair, perform IGN OFF → ON. (It remains immediately after repair.)

Control module		MFD vicinity	MFD vicinity	A/C control panel vicinity	A/C control panel vicinity	Steering angle sensor vicinity	Steering angle sensor vicinity	AT CM vicinity	AT CM vicinity
Detailed location		Lo side	Lo side	Lo side	Lo side	Lo side	Lo side	Lo side	Lo side
Detailed trouble mode		Open	Open	Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	VDC CM[*1*8]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0126 Past Same as above	Past U0126	Current U0101 Past Same as above	Current C1431 Past C1431 U0101
	Body integrated unit[*2]	Current None Past None	Current None Past None	Current U0164 Past Same as above	Past U0164	Current None Past None	Current None Past None	Current U0101 Past Same as above	Past U0101
	Combination meter[*3]	Current None Past None	Current None Past None	Current U0164 Past None	Past U0164	Current None Past None	Current None Past None	Current U0101 Past Same as above	Past U0101
	MFD[*4]	Communi-cation fail-ure	Past U1201 U0073	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None
	A/C control panel[*5]	Current None Past None	Current None Past None	Communi-cation fail-ure	Past U0100 U0155	Current None Past None	Current None Past None	Current U0101 Past Same as above	Past U0101
	TCM[*1]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0100 U0122 U0140 U0155 Past Same as above	Past U0100 U0122 U0140 U0155
	A/B CM[*6]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None

List of Diagnostic Trouble Code (DTC)

Control module		MFD vicinity	MFD vicinity	A/C control panel vicinity	A/C control panel vicinity	Steering angle sensor vicinity	Steering angle sensor vicinity	AT CM vicinity	AT CM vicinity
Detailed location		Lo side	Lo side	Lo side	Lo side	Lo side	Lo side	Lo side	Lo side
Detailed trouble mode		Open	Open	Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	Electric power steering CM[*7]	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None
	ECM[*1]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0101 Past Same as above	Past U0101
Indicators illuminate/ blink.		No change No change in MFD	No change No change in MFD	No change	No change	VDC, ABS illuminate.	No change	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink Shift indicator goes off.	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink

*1: When U0073 occurs, other U-codes are not stored. (Judge timing affects the storing order.)
*2: The number of DTC memory is limited to 8 items. (Older items are preferentially stored.)
*3: The number of DTC memory is limited to 5 items. (Older items are preferentially stored.)
*4: The number of DTC memory is limited to 2 items. (Older items are preferentially stored.)
*5: All types of DTCs can be simultaneously stored. When U0073 occurs, other U-codes are not displayed.
*6: All types of DTCs can be simultaneously stored.
*7: The number of DTC memory is limited to 1 item for Current and 3 items for Latest.
*8: If C1431 contains a current malfunction after repair, perform IGN OFF → ON. (It remains immediately after repair.)

Control module		A/B CM vicinity	A/B CM vicinity	Electric power steering CM vicinity	Electric power steering CM vicinity	ECM vicinity	ECM vicinity
Detailed location		Lo side	Lo side	Lo side	Lo side	Lo side	Lo side
Detailed trouble mode		Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	VDC CM*1*8	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current C1431 U0100 Past Same as above	Current C1431 Past C1431 U0100
	Body integrated unit*2	Current U0151 Past Same as above	Past U0151	Current None Past None	Current None Past None	Current U0100 (U1201) Past Same as above	Past U0100 (U1201)
	Combination meter*3	Current U0151 Past Same as above	Past U0151	Current U0131 Past Same as above	Past U0131	Current U0100 (U0073) Past Same as above	Past U0100 (U0073)
	MFD*4	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None
	A/C control panel*5	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0100 Past Same as above	Past U0100
	TCM*1	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0100 Past Same as above	Past U0100
	A/B CM*6	Communica-tion failure	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None

Control module		A/B CM vicinity	A/B CM vicinity	Electric power steering CM vicinity	Electric power steering CM vicinity	ECM vicinity	ECM vicinity
Detailed location		Lo side	Lo side	Lo side	Lo side	Lo side	Lo side
Detailed trouble mode		Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	Electric power steering CM[*7]	Current None Latest None	Current None Latest None	Current U1120[*9] U0122 C2543 Any 1 item from above Latest U0122 C2543 (U1120[*9])	Latest U0122 C2543 (U1120[*9])	Current C2543 U0073 None or any 1 item from above Latest C2543 U0073	Latest C2543 U0073
	ECM[*1]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0073 Past Same as above	Past U0073
Indicators illuminate/blink.		A/B illuminates.	No change	No change	No change	VDC, ABS, CHECK ENGINE, EMPTY illuminate. AT OIL TEMP blinks. Engine coolant temperature gauge (blue/red) blinks. Fuel gauge goes off. Tachometer: 0 rpm	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink

*1: When U0073 occurs, other U-codes are not stored. (Judge timing affects the storing order.)
*2: The number of DTC memory is limited to 8 items. (Older items are preferentially stored.)
*3: The number of DTC memory is limited to 5 items. (Older items are preferentially stored.)
*4: The number of DTC memory is limited to 2 items. (Older items are preferentially stored.)
*5: All types of DTCs can be simultaneously stored. When U0073 occurs, other U-codes are not displayed.
*6: All types of DTCs can be simultaneously stored.
*7: The number of DTC memory is limited to 1 item for Current and 3 items for Latest.
*8: If C1431 contains a current malfunction after repair, perform IGN OFF → ON. (It remains immediately after repair.)
*9: When this code is displayed, perform the diagnosis as COMMUNICATION MALFUNCTION (METER ECU) (U0155). DTC that occurs in “Current” is displayed in top of the “Latest” list.

3. Hi/Lo-side circuit of CAN communication circuit is open.

NOTE:
- If the module has a limit of DTC memory and the number of DTC occurrence exceeds the limit, older DTCs are preferentially stored.
- When there is no description in Current, it is referred to as “None”.
- When DTCs is in parentheses, it is referred to as “Not always occur”.
- “Trouble exists” is referred to as the status before performing inspection and repair. “Trouble existed” is referred to as the status before performing DTC clear after repair.

Control module		VDC CM vicinity	VDC CM vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (EGI side) vicinity	Body integrated unit (EGI side) vicinity	Combination meter vicinity	Combination meter vicinity
Detailed location		Both sides	Both sides	Both sides	Both sides	Both sides	Both sides	Both sides	Both sides
Detailed trouble mode		Open	Open	Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	VDC CM[*1*8]	Communication failure	Current C1431 Past C1431 U0073 U0100 U0101 U0126 (Below are items for MT model.) U0140	Current U0073 U0100 U0101 U0126 (Below are items for MT model.) U0140 Past Same as above	Current C1431 Past C1431 U0073 U0100 U0101 U0126 (Below are items for MT model.) U0140	Current U0100 U0101 U0126 Past Same as above	Current C1431 Past C1431 U0100 U0101 U0126	Current None Past None	Current None Past None
	Body integrated unit[*2]	Current U0122 Past Same as above	Past U0122	Communication failure	Past U0122	Current U0100 U0101 U0151 U0155 U0164 Past Same as above	Past U0100 U0101 U0151 U0155 U0164	Current U0155 Past Same as above	Past U0155
	Combination meter[*3]	Current U0122 Past Same as above	Past U0122	Communication failure	Past U0122	Communication failure	Past U0122 U0140	Communication failure	Past U0073 U0100 U0101 U0122 U0131 U0140 U0151 U0164 Any 5 item from above
	MFD[*4]	Current None Past None	Current None Past None	Communication failure	Current None Past None	Communication failure	Past U1650	Current U1650 Past Same as above	Past U1650

Control module		VDC CM vicinity	VDC CM vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (EGI side) vicinity	Body integrated unit (EGI side) vicinity	Combination meter vicinity	Combination meter vicinity
Detailed location		Both sides	Both sides	Both sides	Both sides	Both sides	Both sides	Both sides	Both sides
Detailed trouble mode		Open	Open	Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	A/C control panel[*5]	Current U0122 Past Same as above	Past U0122	Communication failure	Past U0122	Communication failure	Past U0122 U0140	Current U0155 Past Same as above	Past U0155
	TCM[*1]	Current U0122 Past Same as above	Past U0122	Current U0122 Past Same as above	Past U0122	Current U0122 U0140 Past Same as above	Past U0122 U0140	Current U0155 Past Same as above	Past U0155
	A/B CM[*6]	Current None Past None	Current None Past None	Communication failure	Current None Past None	Communication failure	Current None Past None	Current None Past None	Current None Past None
	Electric power steering CM[*7]	Current U0122 Latest Same as above	Current None Latest U0122	Current U0122 Latest Same as above	Latest U0122	Current U0122 Latest Same as above	Latest U0122	Current None Latest None	Current None Latest None
	ECM[*1]	Current P0700 U0122 Past Same as above	Past P0700 U0122	Current P0700 U0122 Past Same as above	Past P0700 U0122	Current U0122 Past Same as above	Past U0122	Current U0155 Past Same as above	Past U0155

List of Diagnostic Trouble Code (DTC)

Control module	VDC CM vicinity	VDC CM vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (VDC side) vicinity	Body integrated unit (EGI side) vicinity	Body integrated unit (EGI side) vicinity	Combination meter vicinity	Combination meter vicinity
Detailed location	Both sides	Both sides	Both sides	Both sides	Both sides	Both sides	Both sides	Both sides
Detailed trouble mode	Open	Open	Open	Open	Open	Open	Open	Open
Trouble status	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
Indicators illuminate/ blink.	CHECK ENGINE, VDC, VDC off, ABS, BRAKE illuminate. AT OIL TEMP, CRUISE blink.	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink	CHECK ENGINE, VDC, ABS, VDC off, BRAKE illuminate. AT OIL TEMP, CRUISE blink.	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink	CHECK ENGINE, VDC, VDC off, ABS, BRAKE illuminate. SPORTS illuminates. TPMS blinks → illuminates. AT OIL TEMP, CRUISE blink.	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink	CHECK ENGINE, A/B, BRAKE, VDC, EMPTY, VDC OFF, ABS illuminate. Engine coolant temperature gauge (blue/red) alternately blinks. TPMS blinks → illuminates. Shift indicator goes off. Fuel level warning indicator goes off. Tachometer: 0 rpm	CHECK ENGINE, VDC illuminate. CRUISE blink

*1: When U0073 occurs, other U-codes are not stored. (Judge timing affects the storing order.)
*2: The number of DTC memory is limited to 8 items. (Older items are preferentially stored.)
*3: The number of DTC memory is limited to 5 items. (Older items are preferentially stored.)
*4: The number of DTC memory is limited to 2 items. (Older items are preferentially stored.)
*5: All types of DTCs can be simultaneously stored. When U0073 occurs, other U-codes are not displayed.
*6: All types of DTCs can be simultaneously stored.
*7: The number of DTC memory is limited to 1 item for Current and 3 items for Latest.
*8: If C1431 contains a current malfunction after repair, perform IGN OFF → ON. (It remains immediately after repair.)

Control module		MFD vicinity	MFD vicinity	A/C control panel vicinity	A/C control panel vicinity	Steering angle sensor vicinity	Steering angle sensor vicinity	AT CM vicinity	AT CM vicinity
Detailed location		Both sides	Both sides	Both sides	Both sides	Both sides	Both sides	Both sides	Both sides
Detailed trouble mode		Open	Open	Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	VDC CM[*1*8]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0126 Past Same as above	Past U0126	Current U0101 Past Same as above	Current C1431 Past C1431 U0101
	Body integrated unit[*2]	Current None Past None	Current None Past None	Current U0164 Past Same as above	Past U0164	Current None Past None	Current None Past None	Current U0101 Past Same as above	Past U0101
	Combination meter[*3]	Current None Past None	Current None Past None	Current U0164 Past None	Past U0164	Current None Past None	Current None Past None	Current U0101 Past Same as above	Past U0101
	MFD[*4]	Communi-cation fail-ure	Past U1201 (U0073)	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None
	A/C control panel[*5]	Current None Past None	Current None Past None	Communi-cation failure	Past U0100 U0155	Current None Past None	Current None Past None	Current U0101 Past Same as above	Past U0101
	TCM[*1]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0100 U0122 U0140 U0155 Past Same as above	Past U0100 U0122 U0140 U0155
	A/B CM[*6]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None
	Electric power steering CM[*7]	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None	Current None Latest None

List of Diagnostic Trouble Code (DTC)

Control module		MFD vicinity	MFD vicinity	A/C control panel vicinity	A/C control panel vicinity	Steering angle sensor vicinity	Steering angle sensor vicinity	AT CM vicinity	AT CM vicinity
Detailed location		Both sides	Both sides	Both sides	Both sides	Both sides	Both sides	Both sides	Both sides
Detailed trouble mode		Open	Open	Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	ECM*1	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0101 Past Same as above	Past U0101
Indicators illuminate/ blink.		No change No change in MFD	No change No change in MFD	No change	No change	VDC, ABS illuminate.	No change	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink Shift indicator goes off.	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink

*1: When U0073 occurs, other U-codes are not stored. (Judge timing affects the storing order.)
*2: The number of DTC memory is limited to 8 items. (Older items are preferentially stored.)
*3: The number of DTC memory is limited to 5 items. (Older items are preferentially stored.)
*4: The number of DTC memory is limited to 2 items. (Older items are preferentially stored.)
*5: All types of DTCs can be simultaneously stored. When U0073 occurs, other U-codes are not displayed.
*6: All types of DTCs can be simultaneously stored.
*7: The number of DTC memory is limited to 1 item for Current and 3 items for Latest.
*8: If C1431 contains a current malfunction after repair, perform IGN OFF → ON. (It remains immediately after repair.)

Control module		A/B CM vicinity	A/B CM vicinity	Electric power steering CM vicinity	Electric power steering CM vicinity	ECM vicinity	ECM vicinity
Detailed location		Both sides	Both sides	Both sides	Both sides	Both sides	Both sides
Detailed trouble mode		Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	VDC CM[*1*8]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current C1431 U0100 Past Same as above	Current C1431 Past C1431 U0100
	Body integrated unit[*2]	Current U0151 Past Same as above	Past U0151	Current None Past None	Current None Past None	Current U0100 (U1201) Past Same as above	Past U0100 (U1201)
	Combination meter[*3]	Current U0151 Past Same as above	Past U0151	Current U0131 Past Same as above	Past U0131	Current U0100 Past Same as above	Past U0100
	MFD[*4]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None
	A/C control panel[*5]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0100 Past Same as above	Past U0100
	TCM[*1]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0100 Past Same as above	Past U0100
	A/B CM[*6]	Communica-tion failure	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current None Past None

List of Diagnostic Trouble Code (DTC)

Control module		A/B CM vicinity	A/B CM vicinity	Electric power steering CM vicinity	Electric power steering CM vicinity	ECM vicinity	ECM vicinity
Detailed location		Both sides	Both sides	Both sides	Both sides	Both sides	Both sides
Detailed trouble mode		Open	Open	Open	Open	Open	Open
Trouble status		Trouble exists	Trouble existed	Trouble exists	Trouble existed	Trouble exists	Trouble existed
DTC reading result from each module using Subaru Select Monitor	Electric power steering CM[*7]	Current None Latest None	Current None Latest None	Current U1120[*9] U0122 C2543 Any 1 item from above Latest U0122 C2543 (U1120[*9])	Latest U0122 C2543 (U1120[*9])	Current C2543 U0073 None or any 1 item from above Latest C2543 U0073	Latest C2543 U0073
	ECM[*1]	Current None Past None	Current None Past None	Current None Past None	Current None Past None	Current U0073 Past Same as above	Past U0073
Indicators illuminate/blink.		A/B illuminates.	No change	No change	No change	VDC, ABS, CHECK ENGINE, EMPTY illuminate. AT OIL TEMP blinks. Engine coolant temperature gauge (blue/red) blinks. Fuel gauge goes off. Tachometer: 0 rpm	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink

*1: When U0073 occurs, other U-codes are not stored. (Judge timing affects the storing order.)
*2: The number of DTC memory is limited to 8 items. (Older items are preferentially stored.)
*3: The number of DTC memory is limited to 5 items. (Older items are preferentially stored.)
*4: The number of DTC memory is limited to 2 items. (Older items are preferentially stored.)
*5: All types of DTCs can be simultaneously stored. When U0073 occurs, other U-codes are not displayed.
*6: All types of DTCs can be simultaneously stored.
*7: The number of DTC memory is limited to 1 item for Current and 3 items for Latest.
*8: If C1431 contains a current malfunction after repair, perform IGN OFF → ON. (It remains immediately after repair.)
*9: When this code is displayed, perform the diagnosis as COMMUNICATION MALFUNCTION (METER ECU) (U0155). DTC that occurs in “Current” is displayed in top of the “Latest” list.

4. Power supply-output short, GND-output short and short circuit in CAN communication circuit

NOTE:
- If the module has a limit of DTC memory and the number of DTC occurrence exceeds the limit, older DTCs are preferentially stored.
- When there is no description in Current, it is referred to as “None”.
- When DTCs is in parentheses, it is referred to as “Not always occur”.
- “Trouble exists” is referred to as the status before performing inspection and repair. “Trouble existed” is referred to as the status before performing DTC clear after repair.

Control module[*10]		Option	Option	Option	Option	Option	Option	Option	Option
Detailed location		Hi side	Lo side	Hi to Low	Hi side	Lo side	Hi to Low	Lo side	Hi side
Detailed trouble mode		GND-output short	Power supply-output short	Short circuit	GND-output short	Power supply-output short	Short circuit	GND-output short[*9]	Power supply-output short[*9]
Trouble status		Trouble exists	←	←	Trouble existed	←	←	Trouble exists/ Trouble existed	←
DTC reading result from each module using Subaru Select Monitor	VDC CM[*1*8]	Communication failure	←	←	Current C1431 Any 0 to 1 item from above Past U0073 C1431 (U0126)	←	←	Current None Past None	←
	Body integrated unit[*2]	Communication failure	←	←	Past U0073 U0100 U0101 U0122 U0151 U0155 U0164 U1201	←	←	Current None Past None	←
	Combination meter[*3]	Communication failure	←	←	Past U0073 U0100 U0101 U0122 U0131 U0140 U0151 U0164 Any 5 item from above	←	←	Current None Past None	←
	MFD[*4]	Communication failure	←	←	Past U0073 U1201 U1650 Any 1 to 2 items from above	←	←	Current None Past None	←

Control module[*10]		Option	Option	Option	Option	Option	Option	Option	Option
Detailed location		Hi side	Lo side	Hi to Low	Hi side	Lo side	Hi to Low	Lo side	Hi side
Detailed trouble mode		GND-output short	Power supply-output short	Short circuit	GND-output short	Power supply-output short	Short circuit	GND-output short[*9]	Power supply-output short[*9]
Trouble status		Trouble exists	←	←	Trouble existed	←	←	Trouble exists/ Trouble existed	←
DTC reading result from each module using Subaru Select Monitor	A/C control panel[*5]	Communication failure	←	←	Past U0073	←	←	Current None Past None	←
	TCM[*1]	Current U0073 and add any 3 to 4 items from below U0100 U0122 U0140 U0155 Past All items above	←	←	Past U0073 U0100 U0122 U0140 U0155	←	←	Current None Past None	←
	A/B CM[*6]	Communication failure	←	←	Past U0073	←	←	Current None Past None	←
	Electric power steering CM[*7]	Current U0073 U0122 C2543 Any 1 item from above Latest All items above	←	←	Latest U0073 U0122 C2543	←	←	Current None Latest None	←
	ECM[*1]	Current U0073 U0122 U0155 Any 0 to 4 items from above Past Same as above	←	←	Past U0073 U0101 U0122 U0155 Any 0 to 4 items from above	←	←	Current None Past None	←

Control module*10	Option	Option	Option	Option	Option	Option	Option	Option
Detailed location	Hi side	Lo side	Hi to Low	Hi side	Lo side	Hi to Low	Lo side	Hi side
Detailed trouble mode	GND-output short	Power supply-output short	Short circuit	GND-output short	Power supply-output short	Short circuit	GND-output short*9	Power supply-output short*9
Trouble status	Trouble exists	←	←	Trouble existed	←	←	Trouble exists/ Trouble existed	←
Indicators illuminate/ blink.	CHECK ENGINE, A/B, BRAKE, VDC, EMPTY, VDC OFF, ABS illuminate. Engine coolant temperature gauge (blue/red) alternately blinks. TPMS blinks → illuminates. Shift indicator goes off. Fuel level warning indicator goes off. Tachometer: 0 rpm	←	←	CHECK ENGINE, VDC, ABS illuminate. CRUISE blink	←	←	No change	←

*1: When U0073 occurs, other U-codes are not stored. (Judge timing affects the storing order.)
*2: The number of DTC memory is limited to 8 items. (Older items are preferentially stored.)
*3: The number of DTC memory is limited to 5 items. (Older items are preferentially stored.)
*4: The number of DTC memory is limited to 2 items. (Older items are preferentially stored.)
*5: All types of DTCs can be simultaneously stored. When U0073 occurs, other U-codes are not displayed.
*6: All types of DTCs can be simultaneously stored.
*7: The number of DTC memory is limited to 1 item for Current and 3 items for Latest.
*8: If C1431 contains a current malfunction after repair, perform IGN OFF → ON. (It remains immediately after repair.)
*9: This can only be detected by inspection using a tester.
*10: In this trouble mode, a faulty portion can only be identified by inspection using a tester.

11.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC U1201 CAN-HS COUNTER ABNORMAL

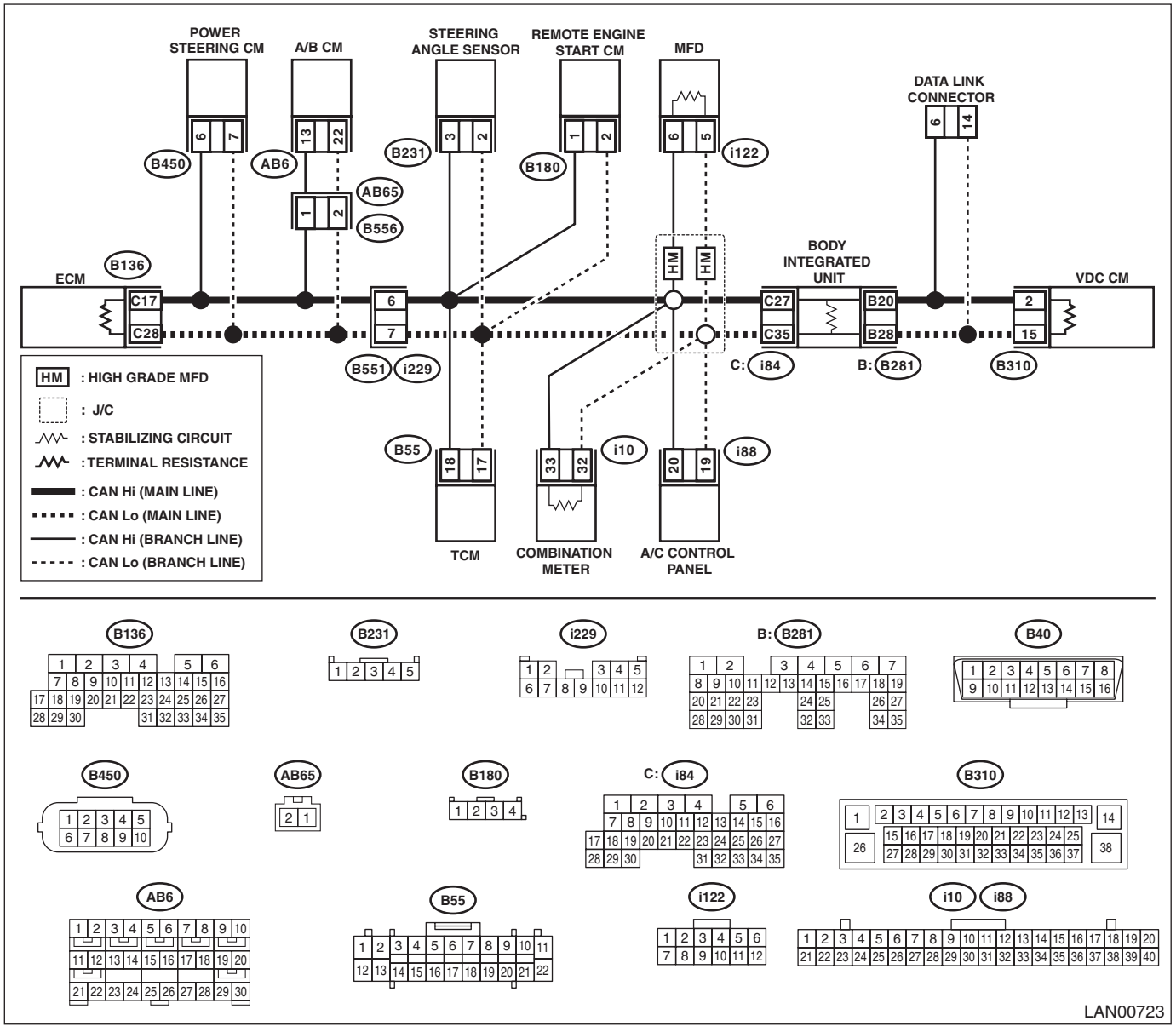
DTC DETECTING CONDITION:

Communication is unstable because of high speed CAN communication error.

TROUBLE SYMPTOM:

- Display of combination meter indicates faulty.
- Control faulty may occur due to CAN communication error.

WIRING DIAGRAM:

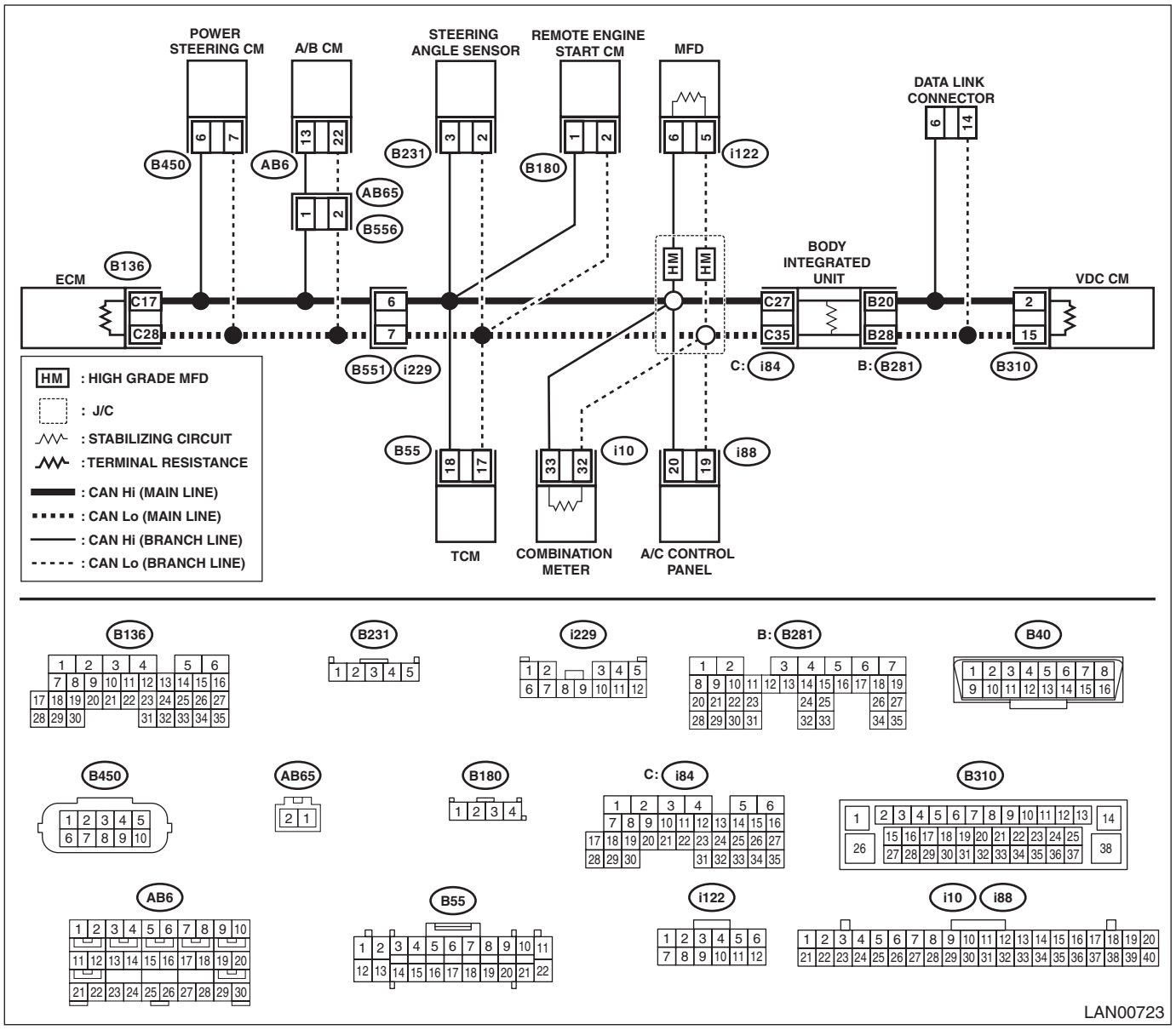


Step		Check	Yes	No
1	**CHECK CAN COMMUNICATION CIRCUIT.** Check CAN communication circuit. <Ref. to LAN(diag)-21, PROCEDURE, CAN Communication Circuit Check.>	Is CAN communication circuit faulty?	Repair the faulty portion, following the diagnosis procedure.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK DTC.** 1) Start the engine. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U0073 a current malfunction?	Perform the diagnosis of U0073. <Ref. to LAN(diag)-76, DTC U0073 CONTROL MODULE COMMUNICATION BUS “A” OFF, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	Go to step **3**.
3	**CHECK DTC.** Check the displayed DTC.	Is U1201 a current malfunction?	Go to step **4**.	It is possible that temporary poor communication occurs. Perform the clear memory.
4	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1201 a current malfunction?	Go to step **5**.	It is possible that temporary poor communication occurs. Perform the clear memory.
5	**CHECK CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Disconnect the control modules other than body integrated unit in order. NOTE: When disconnecting ECM or VDC CM, connect resistance of 120 Ω between CAN Hi and CAN Lo as an alternative of end resistance. 3) Turn the ignition switch to ON. 4) Using the Subaru Select Monitor, read DTC of CAN system.	Is there any control module that U1201 is not detected as current malfunction?	Replace the control module.	Repeat 1) to 4) in step 5 until U1201 is not detected.

B: DTC U0073 CONTROL MODULE COMMUNICATION BUS “A” OFF

DTC DETECTING CONDITION:
Integrated unit communication is shut down because of high speed CAN error.
TROUBLE SYMPTOM:
CAN communication is not normal.
WIRING DIAGRAM:



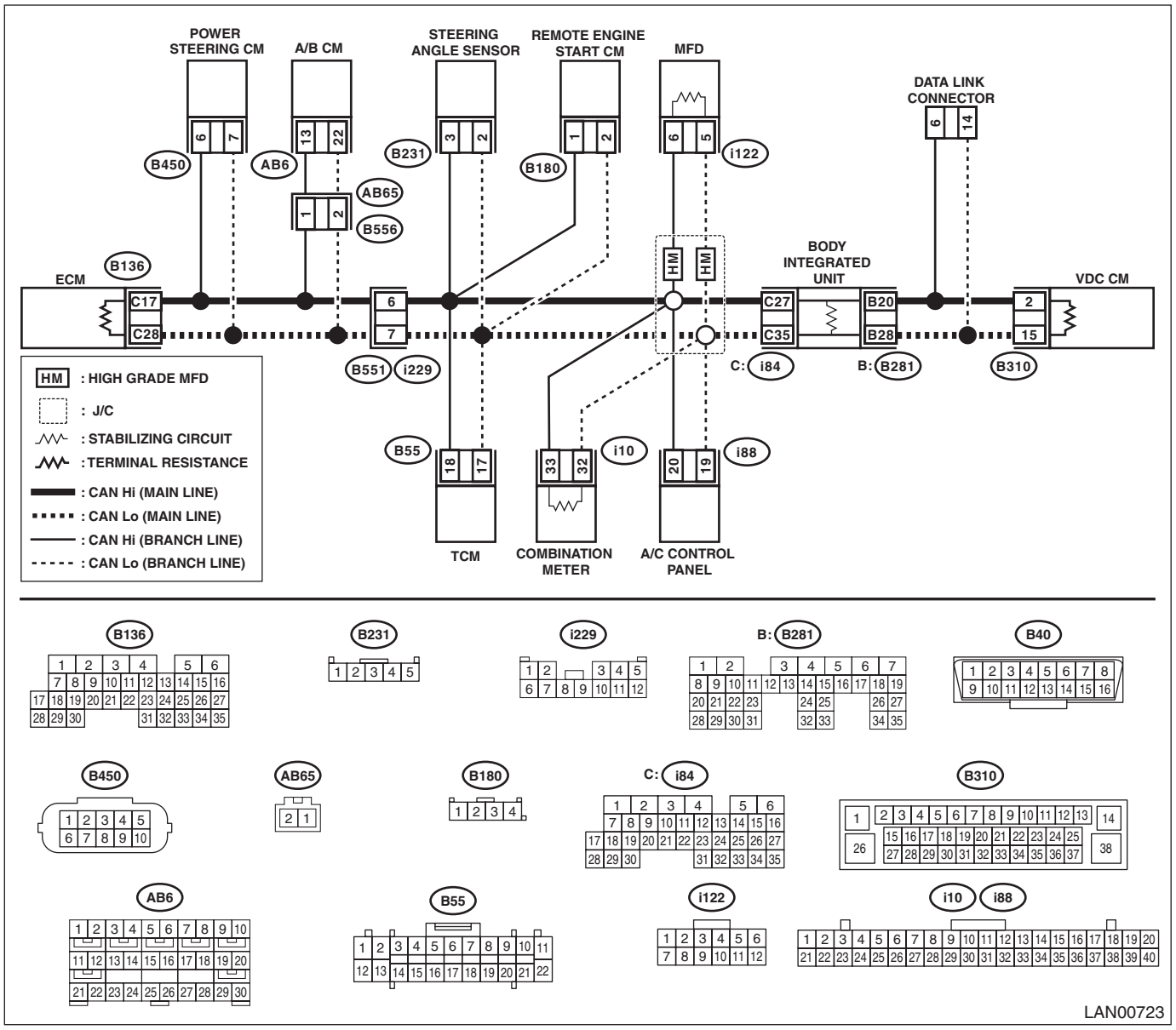
LAN00723

Step		Check	Yes	No
1	**CHECK DTC.** 1) Start the engine. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U0073 a current malfunction?	Go to step **2**.	It may be a temporary poor contact. Perform the clear memory.
2	**CHECK CAN COMMUNICATION CIRCUIT.** Check CAN communication circuit. <Ref. to LAN(diag)-21, PROCEDURE, CAN Communication Circuit Check.>	Is CAN communication circuit faulty?	Repair the faulty portion, following the diagnosis procedure.	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK DTC.** 1) Perform the inspection using the DTC check sheet. <Ref. to LAN(diag)-45, CHECK USING THE DTC CHECK SHEET, LIST, List of Diagnostic Trouble Code (DTC).> 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U0073 a current malfunction?	Go to step **4**.	System is normal.
4	**CHECK CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Disconnect the control modules other than body integrated unit in order. NOTE: When disconnecting ECM or VDC CM, connect resistance of 120 Ω between CAN Hi and CAN Lo as an alternative of end resistance. 3) Turn the ignition switch to ON. 4) Using the Subaru Select Monitor, read DTC of CAN system.	Is there any control module that U0073 is not detected as current malfunction?	Replace the control module.	Repeat 1) to 4) in step 3 until U0073 is not detected.

C: DTC U0401 INVALID DATA RECEIVED FROM ECM/PCM "A"

DTC DETECTING CONDITION:
Defective data from ECM.
TROUBLE SYMPTOM:
Defective data on CAN communication occurs.
WIRING DIAGRAM:

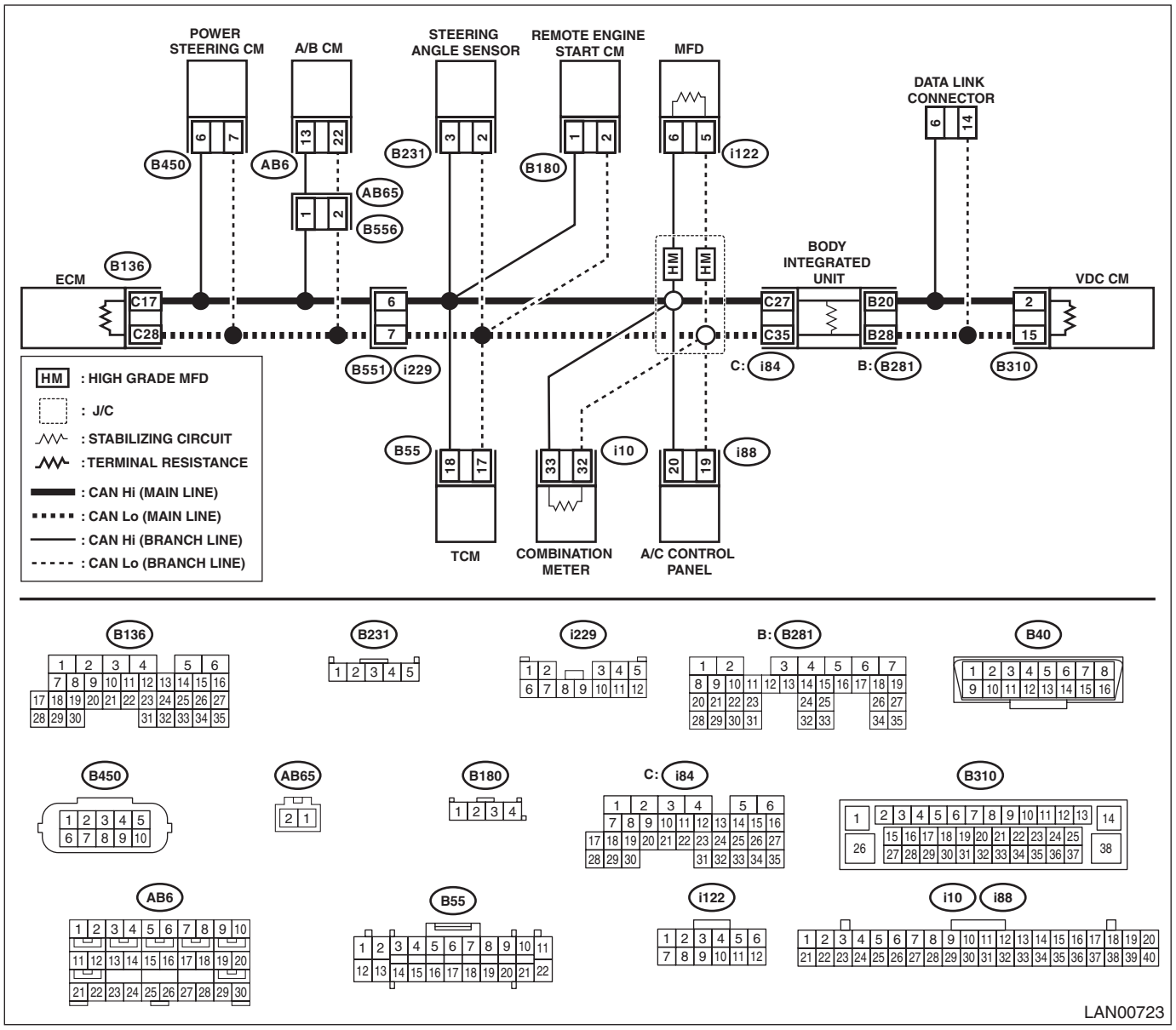


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is DTC for the buss off or the data no-receive displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK DTC.** Check the displayed DTC.	Is U0401 a current malfunction?	Go to step **4**.	Go to step **8**.

	Step	Check	Yes	No
4	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the ECM connector. 3) Connect the disconnected connectors. 4) Read the DTC using Subaru Select Monitor.	Is U0401 a current malfunction?	Go to step **5**.	Go to step **8**.
5	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the engine data abnormal detected in several modules?	Replace the ECM. <Ref. to FU(H4DO)-101, Engine Control Module (ECM).>	Go to step **6**.
6	**REPLACE MODULE.** 1) Replace the ECM. 2) Read the DTC using Subaru Select Monitor.	Is U0401 a current malfunction?	Go to step **7**.	System is normal.
7	**CHECK MODULE.** 1) Reinstall the ECM. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0401 a current malfunction?	Replace the ECM. <Ref. to FU(H4DO)-101, Engine Control Module (ECM).>	System is normal.
8	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U0401 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **9**.
9	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

D: DTC U0402 INVALID DATA RECEIVED FROM TCM

DTC DETECTING CONDITION:
Received error data from TCM.
TROUBLE SYMPTOM:
Sport indicator light blinks.
WIRING DIAGRAM:

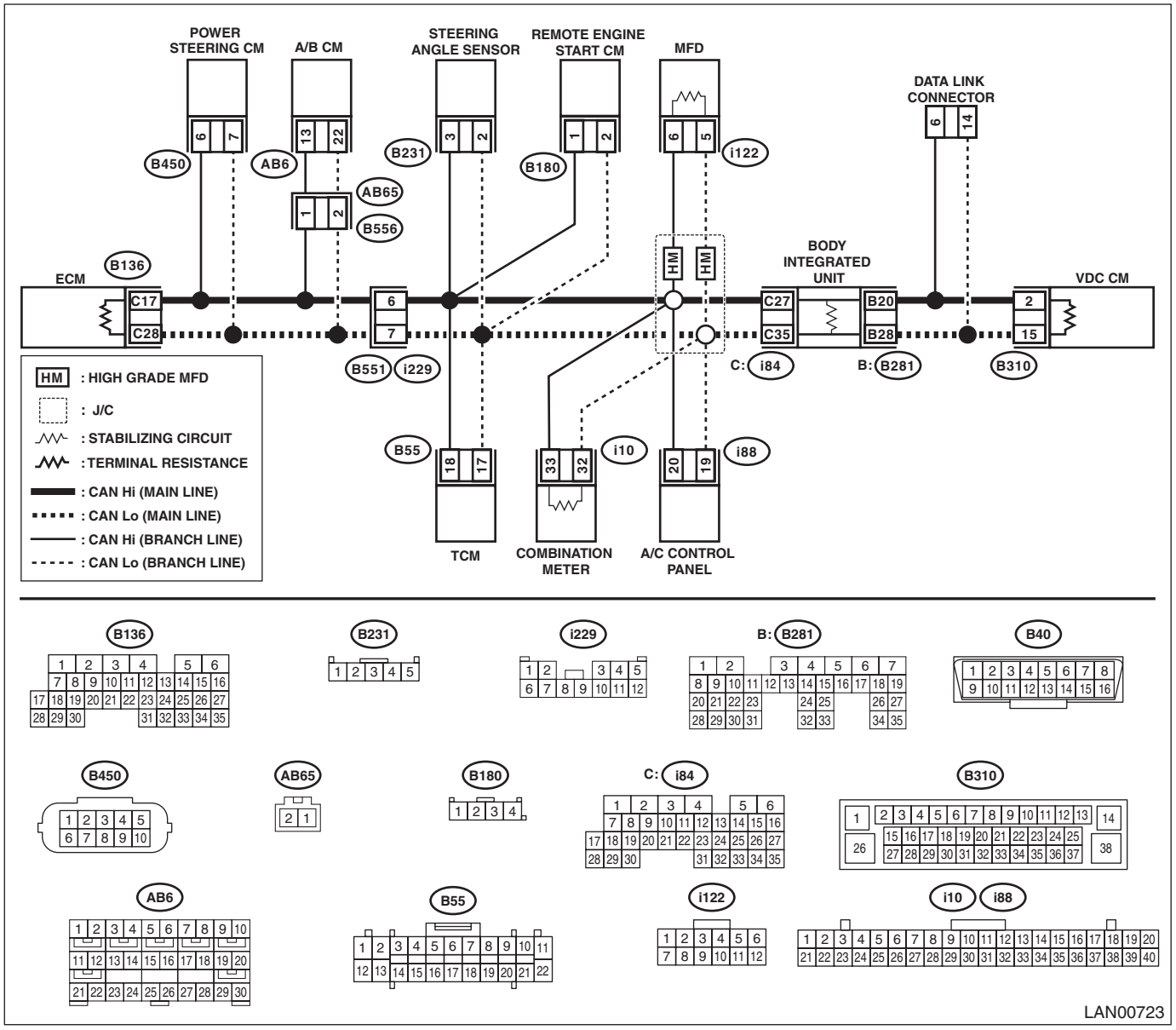


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is DTC for the buss off or the data no-receive displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK DTC.** Check the displayed DTC.	Is U0402 a current malfunction?	Go to step **4**.	Go to step **8**.

	Step	Check	Yes	No
4	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM connector. 3) Connect the disconnected connectors. 4) Read the DTC using Subaru Select Monitor.	Is U0402 a current malfunction?	Go to step **5**.	Go to step **8**.
5	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the transmission data abnormal detected in several modules?	Replace the TCM. <Ref. to CVT-136, Transmission Control Module (TCM).>	Go to step **6**.
6	**REPLACE MODULE.** 1) Replace the TCM. 2) Read the DTC using Subaru Select Monitor.	Is U0402 a current malfunction?	Go to step **7**.	System is normal.
7	**CHECK MODULE.** 1) Reinstall the TCM. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0402 a current malfunction?	Replace the TCM. <Ref. to CVT-136, Transmission Control Module (TCM).>	System is normal.
8	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U0402 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **9**.
9	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

E: DTC U0416 INVALID DATA RECEIVED FROM VEHICLE DYNAMICS CONTROL MODULE

DTC DETECTING CONDITION:
Data from VDCCM is faulty.
TROUBLE SYMPTOM:
ABS warning light and VDC warning light illuminate.
WIRING DIAGRAM:

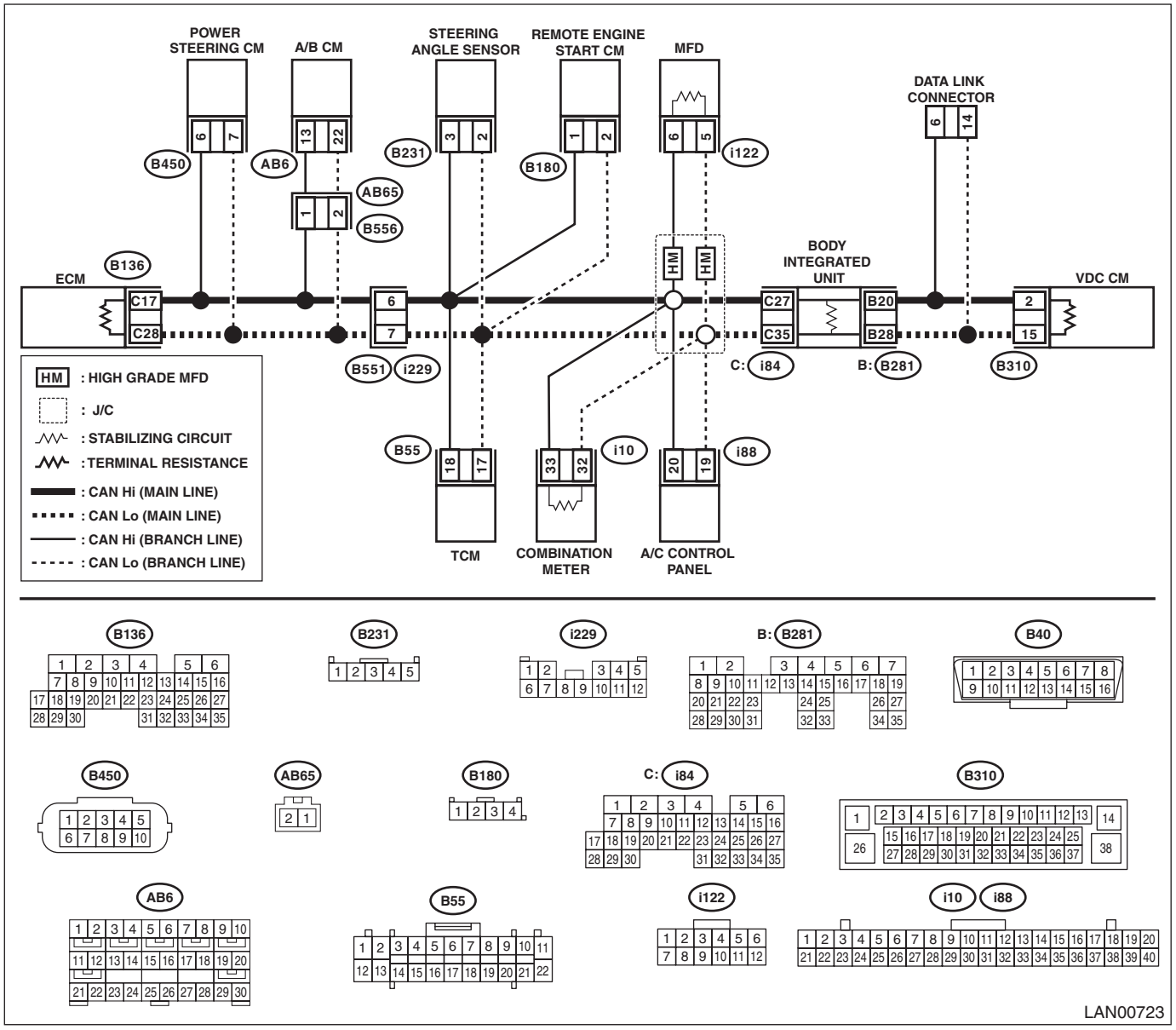


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is DTC for the buss off or the data no-receive displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK DTC.** Check the displayed DTC.	Is U0416 a current malfunction?	Go to step **4**.	Go to step **8**.

	Step	Check	Yes	No
4	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the VDC CM connector. 3) Connect the disconnected connectors. 4) Read the DTC using Subaru Select Monitor.	Is U0416 a current malfunction?	Go to step **5**.	Go to step **8**.
5	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the VDC data abnormal detected in several modules?	Replace the VDC CM. <Ref. to VDC-8, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>	Go to step **6**.
6	**REPLACE MODULE.** 1) Replace the VDC CM. 2) Read the DTC using Subaru Select Monitor.	Is U0416 a current malfunction?	Go to step **7**.	System is normal.
7	**CHECK MODULE.** 1) Reinstall the VDC CM. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0416 a current malfunction?	Replace the VDC CM. <Ref. to VDC-8, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>	System is normal.
8	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U0416 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **9**.
9	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

F: DTC U0420 INVALID DATA RECEIVED FROM POWER STEERING CONTROL MODULE

DTC DETECTING CONDITION:
Defective data was transmitted from EPS CM.
TROUBLE SYMPTOM:
Cooperation control with EPS CM does not operate properly.
WIRING DIAGRAM:

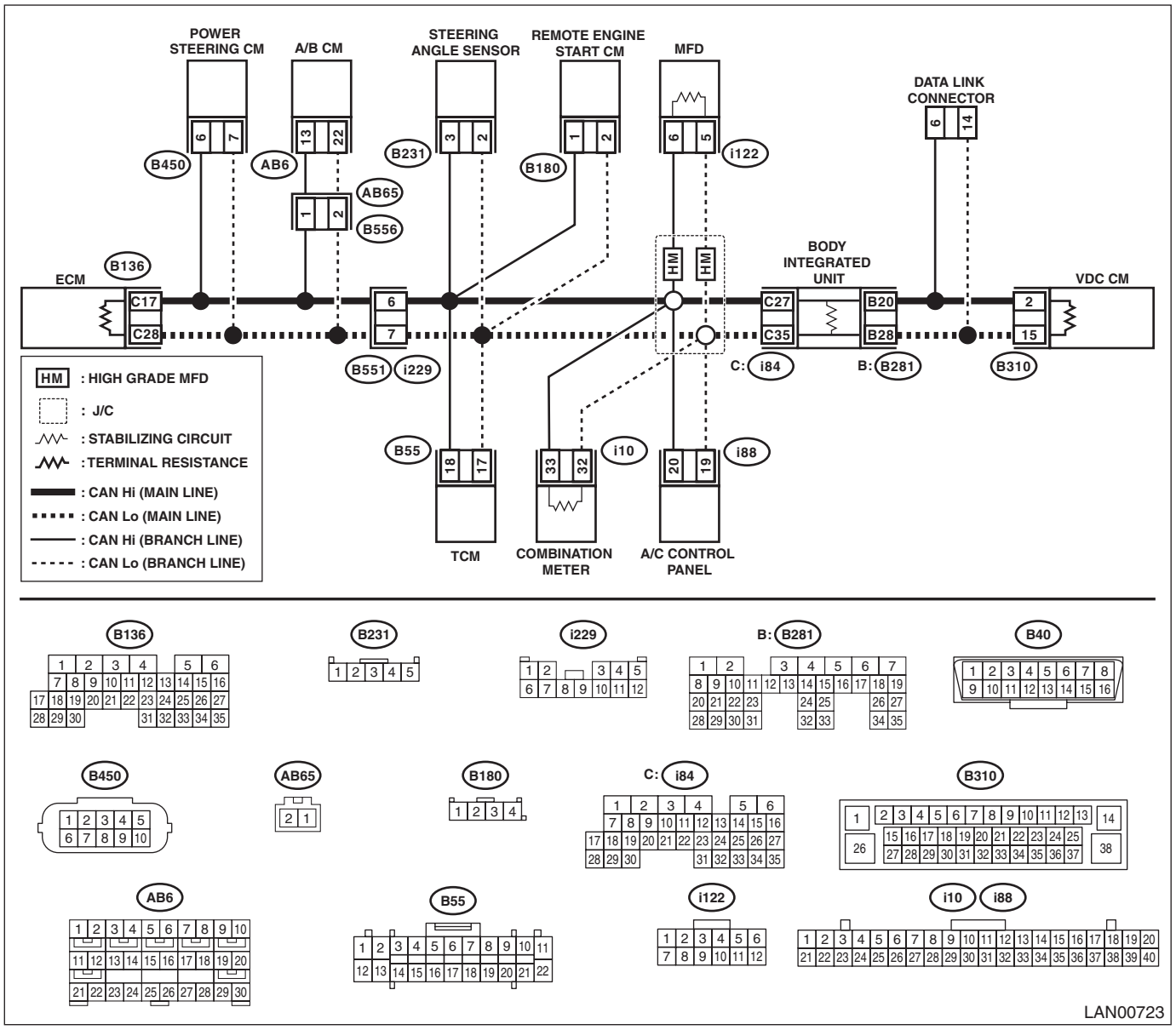


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is DTC for the buss off or the data no-receive displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK DTC.** Check the displayed DTC.	Is U0420 a current malfunction?	Go to step **4**.	Go to step **8**.

	Step	Check	Yes	No
4	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the power steering CM connector. 3) Connect the disconnected connectors. 4) Read the DTC using Subaru Select Monitor.	Is U0420 a current malfunction?	Go to step **5**.	Go to step **8**.
5	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the electric power steering data abnormal detected in several modules?	Replace the power steering CM. <Ref. to PS-41, Power Steering Control Module.>	Go to step **6**.
6	**REPLACE MODULE.** 1) Replace the power steering CM. 2) Read the DTC using Subaru Select Monitor.	Is U0420 a current malfunction?	Go to step **7**.	System is normal.
7	**CHECK MODULE.** 1) Reinstall the power steering CM. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0420 a current malfunction?	Replace the power steering CM. <Ref. to PS-41, Power Steering Control Module.>	System is normal.
8	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U0420 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **9**.
9	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

G: DTC U0422 INVALID DATA RECEIVED FROM BODY CONTROL MODULE

DTC DETECTING CONDITION:
Defective data was transmitted from body integrated unit.
TROUBLE SYMPTOM:
Cooperation control with body integrated unit does not operate properly.
WIRING DIAGRAM:

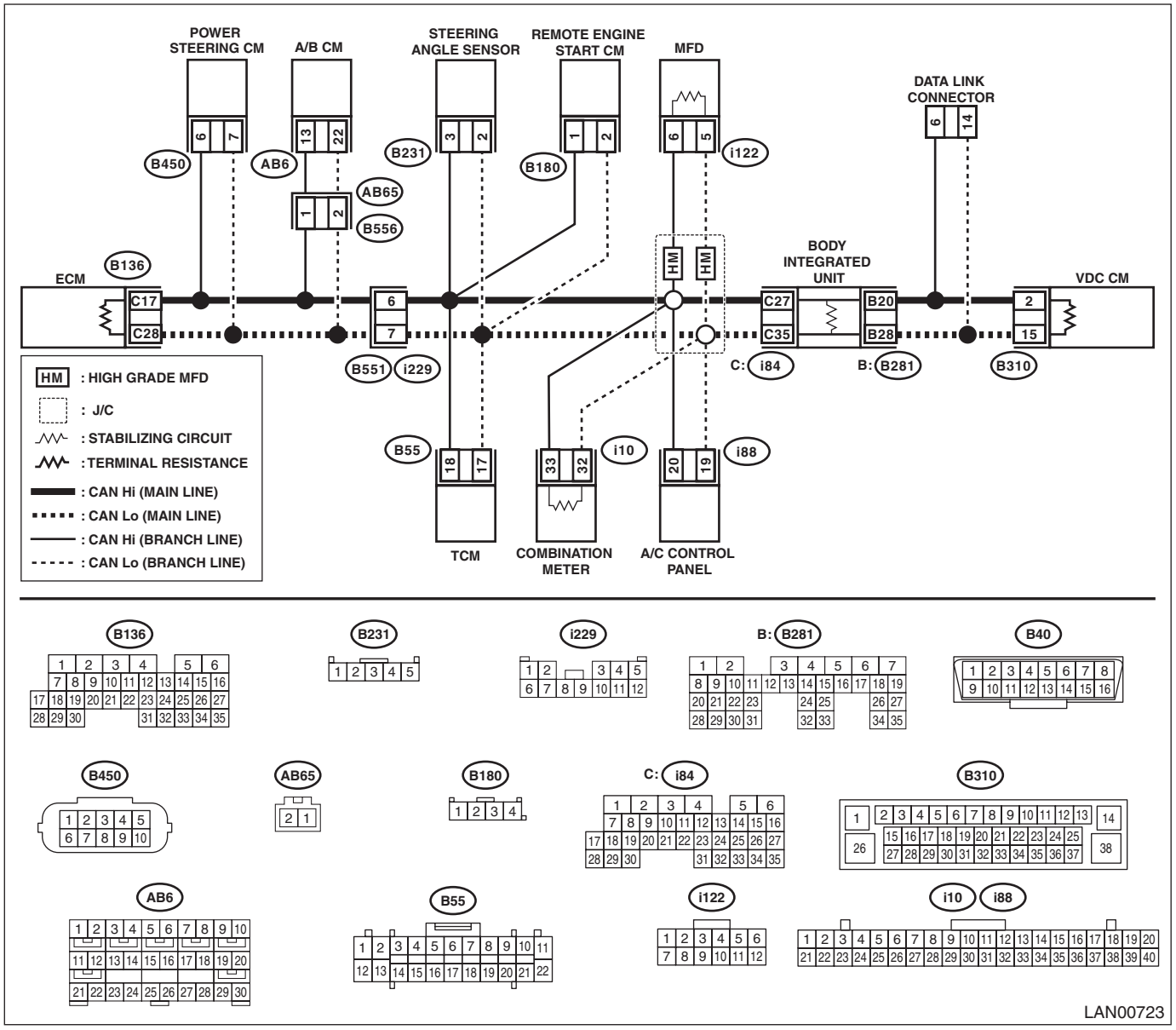


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is DTC for the buss off or the data no-receive displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK DTC.** Check the displayed DTC.	Is U0422 a current malfunction?	Go to step **4**.	Go to step **8**.

	Step	Check	Yes	No
4	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector. 3) Connect the disconnected connectors. 4) Read the DTC using Subaru Select Monitor.	Is U0422 a current malfunction?	Go to step **5**.	Go to step **8**.
5	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the body integrated data abnormal detected in several modules?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Go to step **6**.
6	**REPLACE MODULE.** 1) Replace the body integrated unit. 2) Read the DTC using Subaru Select Monitor.	Is U0422 a current malfunction?	Go to step **7**.	System is normal.
7	**CHECK MODULE.** 1) Reinstall the body integrated unit. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0422 a current malfunction?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	System is normal.
8	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U0422 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **9**.
9	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

H: DTC U0423 INVALID DATA RECEIVED FROM INSTRUMENT PANEL CLUSTER CONTROL MODULE

DTC DETECTING CONDITION:
Defective data was transmitted from combination meter.
TROUBLE SYMPTOM:
Display of combination meter does not operate properly.
WIRING DIAGRAM:



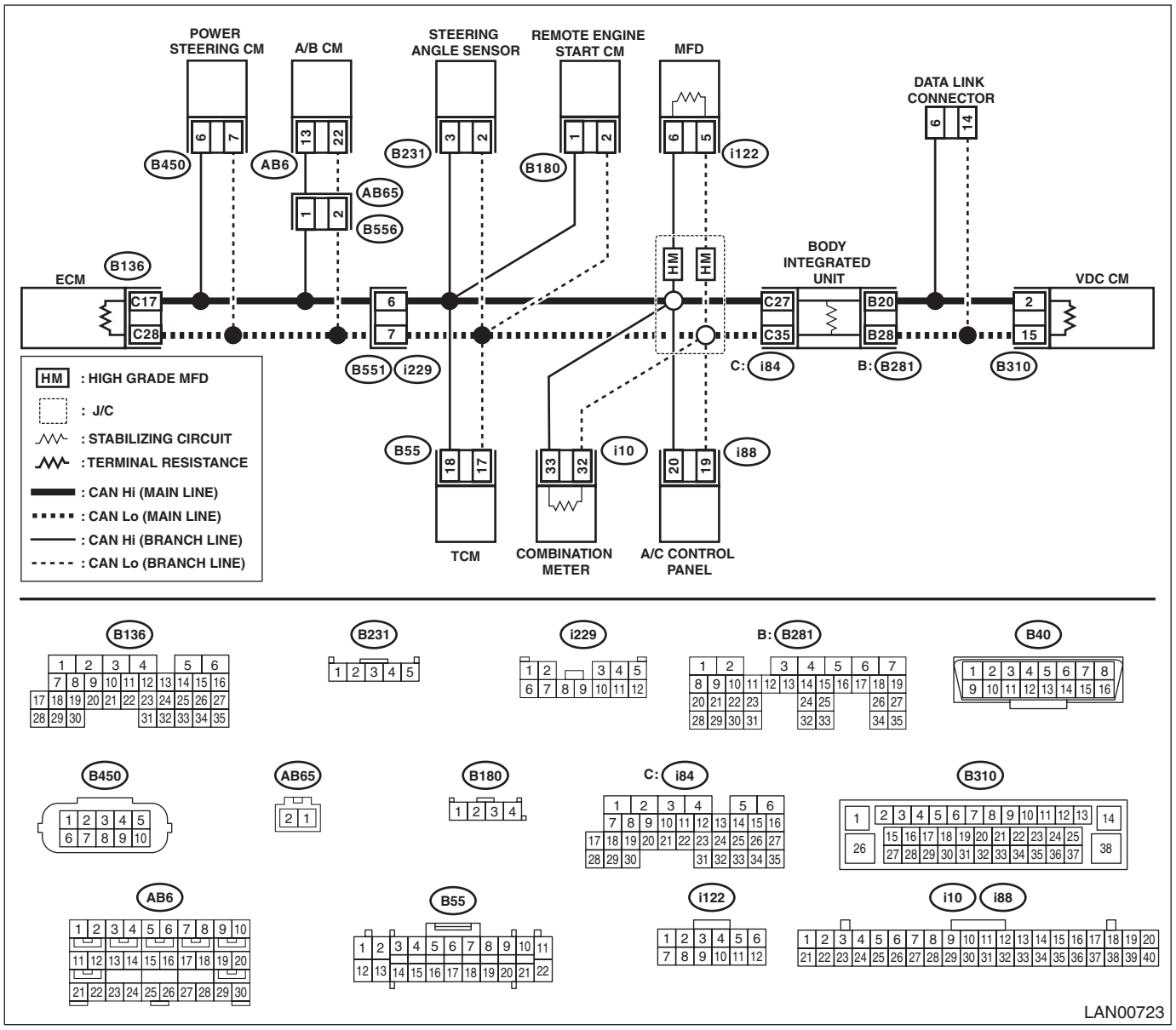
LAN00723

Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is DTC for the buss off or the data no-receive displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK DTC.** Check the displayed DTC.	Is U0423 a current malfunction?	Go to step **4**.	Go to step **8**.

	Step	Check	Yes	No
4	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the combination meter connector. 3) Connect the disconnected connectors. 4) Read the DTC using Subaru Select Monitor.	Is U0423 a current malfunction?	Go to step **5**.	Go to step **8**.
5	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the meter data abnormal detected in several modules?	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>	Go to step **6**.
6	**REPLACE MODULE.** 1) Replace the combination meter. 2) Read the DTC using Subaru Select Monitor.	Is U0423 a current malfunction?	Go to step **7**.	System is normal.
7	**CHECK MODULE.** 1) Replace the current combination meter with the original combination meter. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0423 a current malfunction?	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>	System is normal.
8	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U0423 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **9**.
9	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

I: DTC U0424 INVALID DATA RECEIVED FROM HVAC CONTROL MODULE

DTC DETECTING CONDITION:
Defective data was transmitted from A/C control panel.
TROUBLE SYMPTOM:
Cooperation control of air conditioner does not operate properly.
WIRING DIAGRAM:

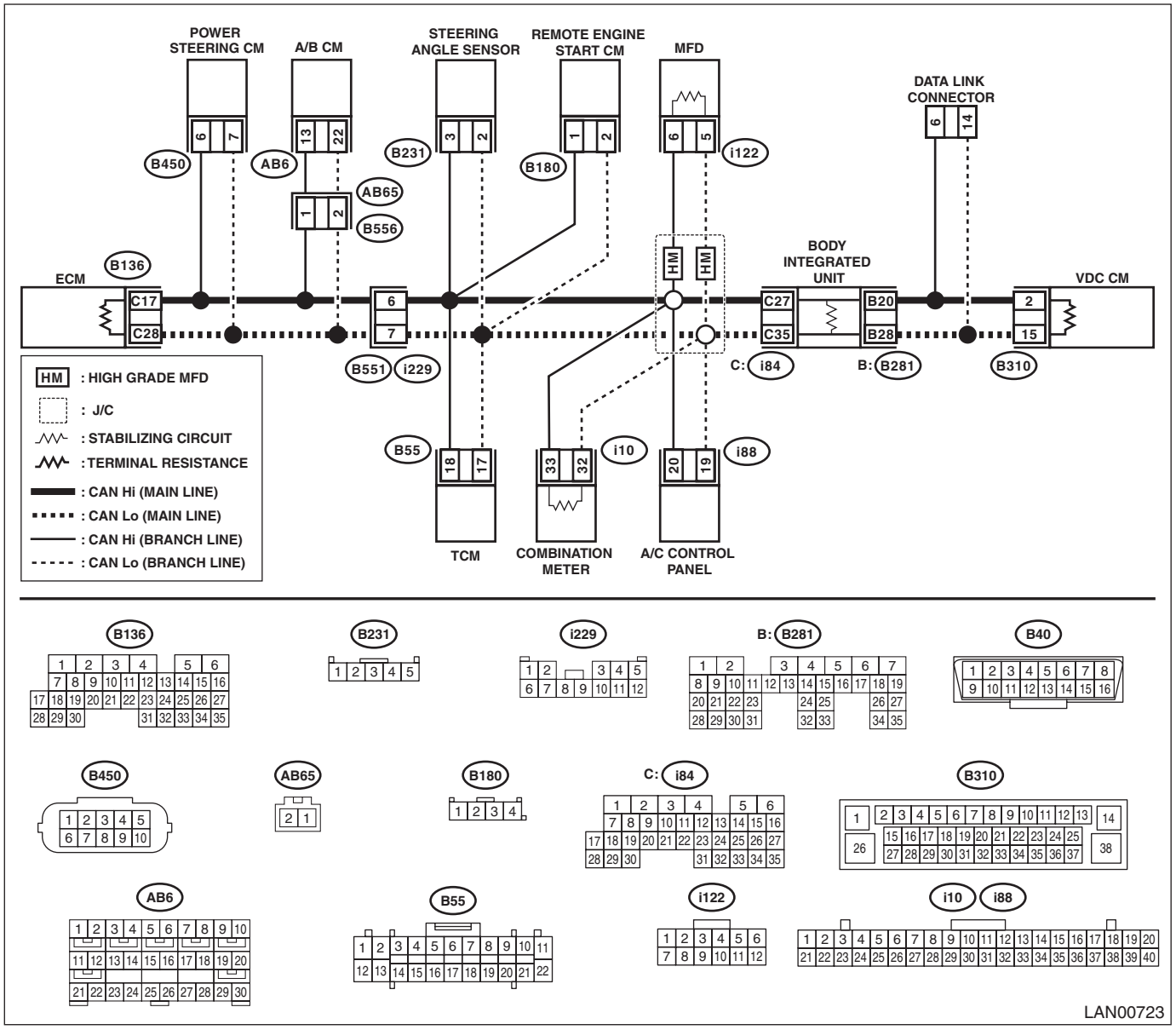


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is DTC for the buss off or the data no-receive displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK DTC.** Check the displayed DTC.	Is U0424 a current malfunction?	Go to step **4**.	Go to step **8**.

	Step	Check	Yes	No
4	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the A/C control panel connector. 3) Connect the disconnected connectors. 4) Read the DTC using Subaru Select Monitor.	Is U0424 a current malfunction?	Go to step **5**.	Go to step **8**.
5	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the air conditioner data abnormal detected in several modules?	Replace the A/C control panel.	Go to step **6**.
6	**REPLACE MODULE.** 1) Replace the A/C control panel. 2) Read the DTC using Subaru Select Monitor.	Is U0424 a current malfunction?	Go to step **7**.	System is normal.
7	**CHECK MODULE.** 1) Restore the A/C control panel. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0424 a current malfunction?	Replace the A/C control panel.	System is normal.
8	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Read the DTC using Subaru Select Monitor.	Is U0424 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **9**.
9	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

J: DTC U0428 INVALID DATA RECEIVED FROM STEERING ANGLE SENSOR MODULE

DTC DETECTING CONDITION:
Defective data was transmitted from steering angle sensor.
TROUBLE SYMPTOM:
VDC CM does not operate normally.
WIRING DIAGRAM:

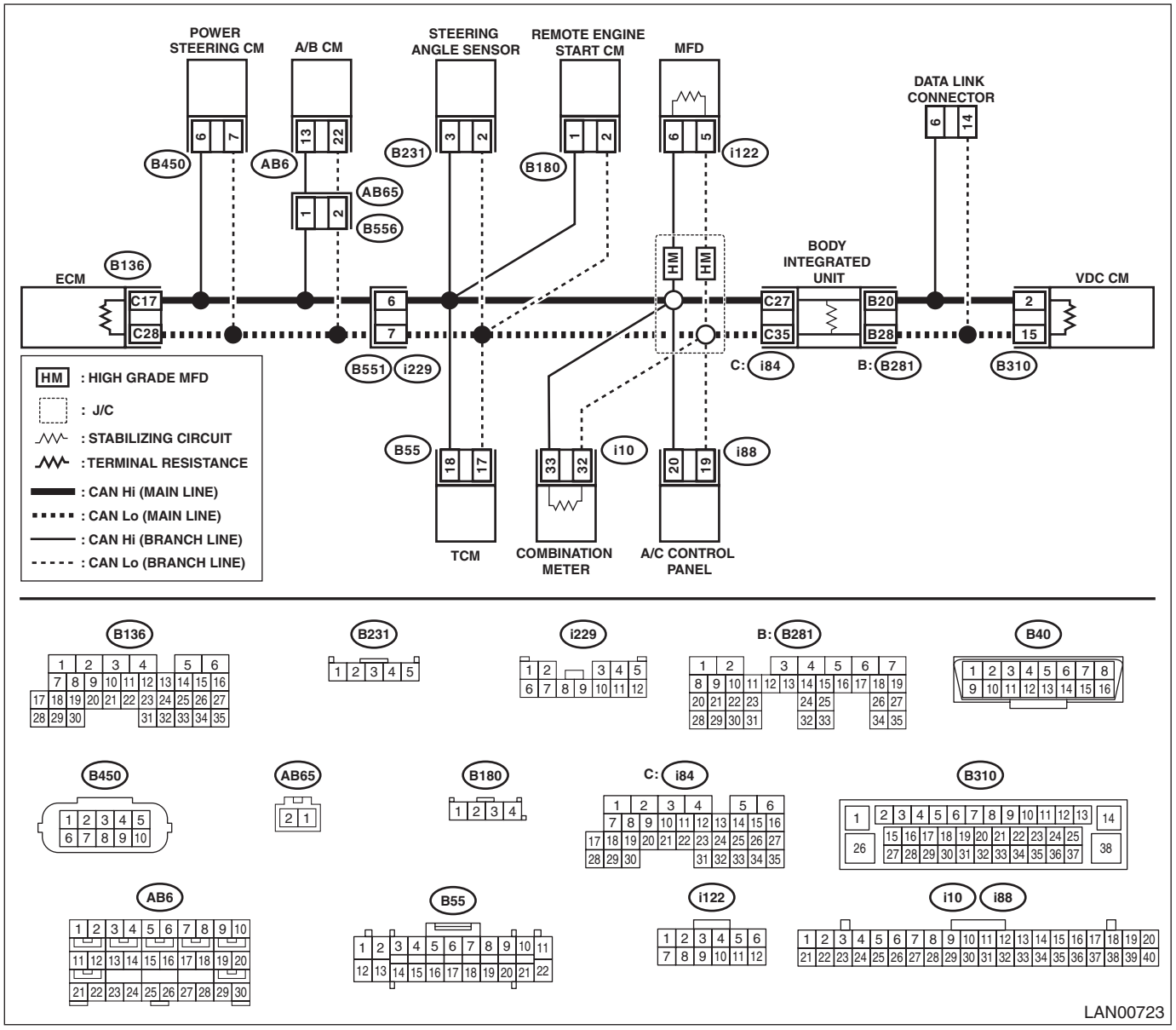


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is DTC for the buss off or the data no-receive displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK DTC.** Check the displayed DTC.	Is U0428 a current malfunction?	Go to step **4**.	Go to step **8**.

	Step	Check	Yes	No
4	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the steering angle sensor connector. 3) Connect the disconnected connectors. 4) Read the DTC using Subaru Select Monitor.	Is U0428 a current malfunction?	Go to step **5**.	Go to step **8**.
5	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the steering angle sensor data abnormal detected in several modules?	Replace the steering angle sensor. <Ref. to VDC-26, Steering Angle Sensor.>	Go to step **6**.
6	**REPLACE MODULE.** 1) Replace the steering angle sensor. 2) Read the DTC using Subaru Select Monitor.	Is U0428 a current malfunction?	Go to step **7**.	System is normal.
7	**CHECK MODULE.** 1) Reinstall the steering angle sensor. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0428 a current malfunction?	Replace the steering angle sensor. <Ref. to VDC-26, Steering Angle Sensor.>	System is normal.
8	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U0428 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **9**.
9	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

K: DTC U0452 INVALID DATA RECEIVED FROM RESTRAINTS CONTROL MODULE

DTC DETECTING CONDITION:
Defective data was transmitted from A/B CM.
TROUBLE SYMPTOM:
Cooperation control with airbag does not operate properly.
WIRING DIAGRAM:

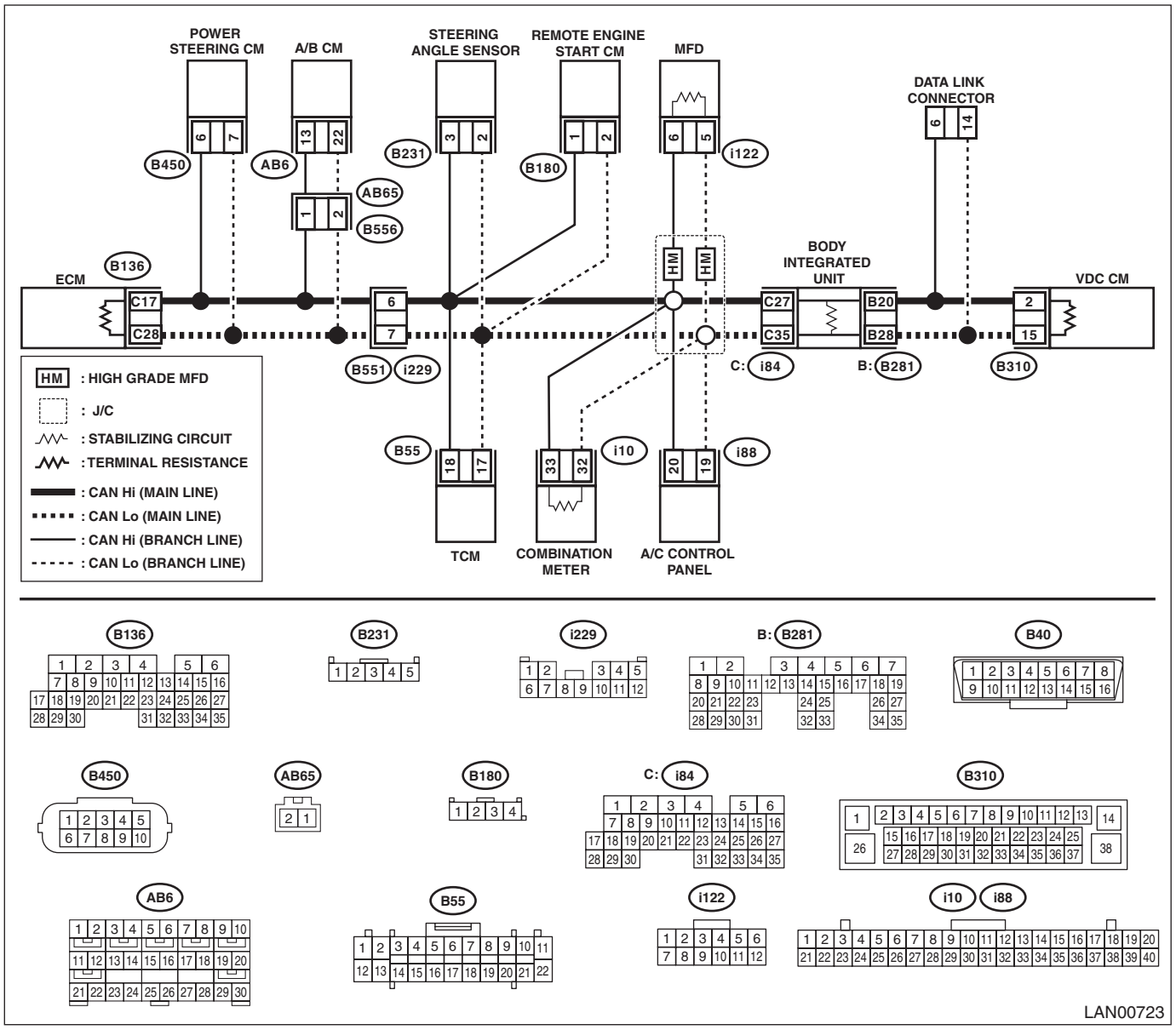


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is DTC for the buss off or the data no-receive displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK DTC.** Check the displayed DTC.	Is U0452 a current malfunction?	Go to step **4**.	Go to step **8**.

	Step	Check	Yes	No
4	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the A/B CM connector. 3) Connect the disconnected connectors. 4) Read the DTC using Subaru Select Monitor.	Is U0452 a current malfunction?	Go to step **5**.	Go to step **8**.
5	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the airbag data abnormal detected in several modules?	Replace the A/B CM. <Ref. to AB-73, Airbag Control Module.>	Go to step **6**.
6	**REPLACE MODULE.** 1) Replace the A/B CM. 2) Read the DTC using Subaru Select Monitor.	Is U0452 a current malfunction?	Go to step **7**.	System is normal.
7	**CHECK MODULE.** 1) Reinstall the A/B CM. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0452 a current malfunction?	Replace the A/B CM. <Ref. to AB-73, Airbag Control Module.>	System is normal.
8	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U0452 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **9**.
9	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

L: DTC U0100 LOST COMMUNICATION WITH ECM/PCM "A"

DTC DETECTING CONDITION:
Not received data from ECM.
TROUBLE SYMPTOM:
Cooperation control of transmission may not operate properly.
WIRING DIAGRAM:

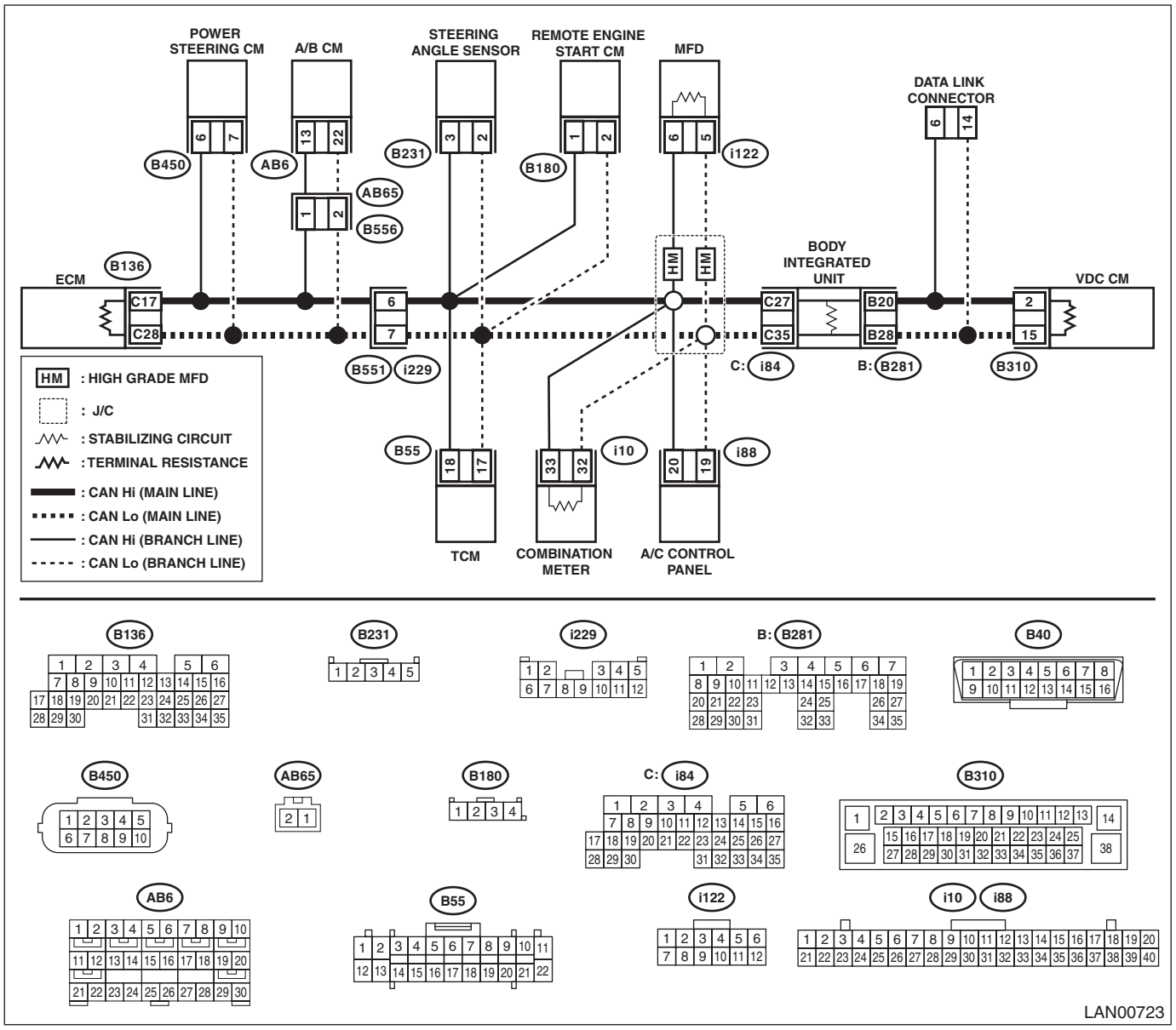


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is U0100 a current malfunction?	Go to step **3**.	Go to step **7**.
3	**CHECK DTC.** 1) Check CAN communication circuit. <Ref. to LAN(diag)-21, CAN Communication Circuit Check.> 2) Read the DTC using Subaru Select Monitor.	Is U0100 a current malfunction?	Go to step **4**.	Go to step **7**.

	Step	Check	Yes	No
4	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the engine data no-receive detected in several modules?	Replace the ECM. <Ref. to FU(H4DO)-101, Engine Control Module (ECM).>	Go to step **5**.
5	**REPLACE MODULE.** 1) Replace the ECM. 2) Read the DTC using Subaru Select Monitor.	Is U0100 a current malfunction?	Go to step **6**.	System is normal.
6	**CHECK MODULE.** 1) Reinstall the ECM. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0100 a current malfunction?	Replace the ECM. <Ref. to FU(H4DO)-101, Engine Control Module (ECM).>	System is normal.
7	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Read the DTC using Subaru Select Monitor.	Is U0100 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **8**.
8	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

M: DTC U0101 LOST COMMUNICATION WITH TCM

DTC DETECTING CONDITION:
Not received data from TCM.
TROUBLE SYMPTOM:
Cooperation control with transmission is not performed.
WIRING DIAGRAM:

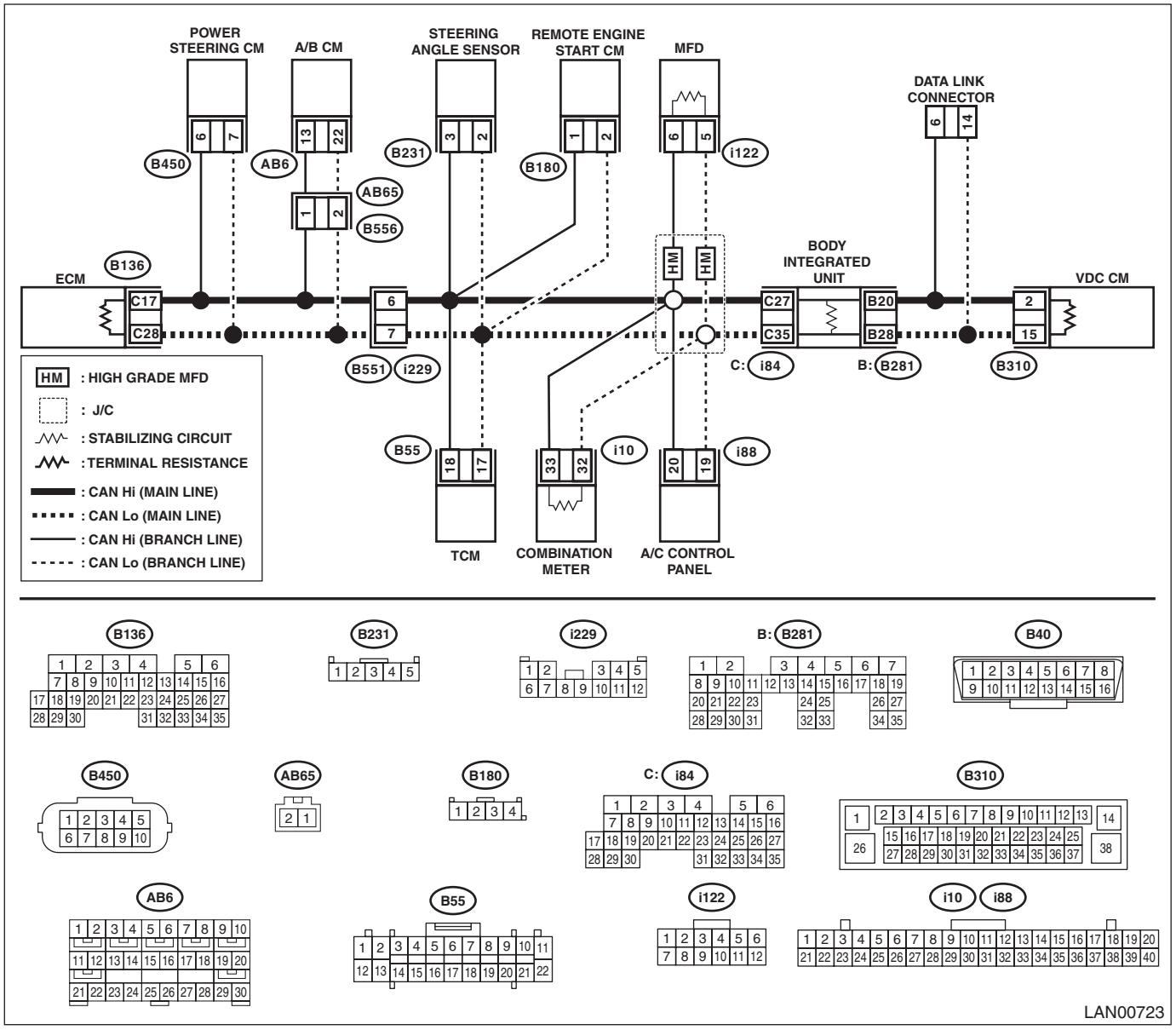


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is U0101 a current malfunction?	Go to step **3**.	Go to step **7**.
3	**CHECK DTC.** 1) Check CAN communication circuit. <Ref. to LAN(diag)-21, CAN Communication Circuit Check.> 2) Read the DTC using Subaru Select Monitor.	Is U0101 a current malfunction?	Go to step **4**.	Go to step **7**.

	Step	Check	Yes	No
4	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the transmission data no-receive detected in several modules?	Replace the TCM. <Ref. to CVT-136, Transmission Control Module (TCM).>	Go to step **5**.
5	**REPLACE MODULE.** 1) Replace the TCM. 2) Read the DTC using Subaru Select Monitor.	Is U0101 a current malfunction?	Go to step **6**.	System is normal.
6	**CHECK MODULE.** 1) Reinstall the TCM. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0101 a current malfunction?	Replace the TCM. <Ref. to CVT-136, Transmission Control Module (TCM).>	System is normal.
7	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Read the DTC using Subaru Select Monitor.	Is U0101 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **8**.
8	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

N: DTC U0122 LOST COMMUNICATION WITH VEHICLE DYNAMICS CONTROL MODULE

DTC DETECTING CONDITION:
No data from VDCCM is received.
TROUBLE SYMPTOM:
ABS warning light and VDC warning light illuminate.
WIRING DIAGRAM:



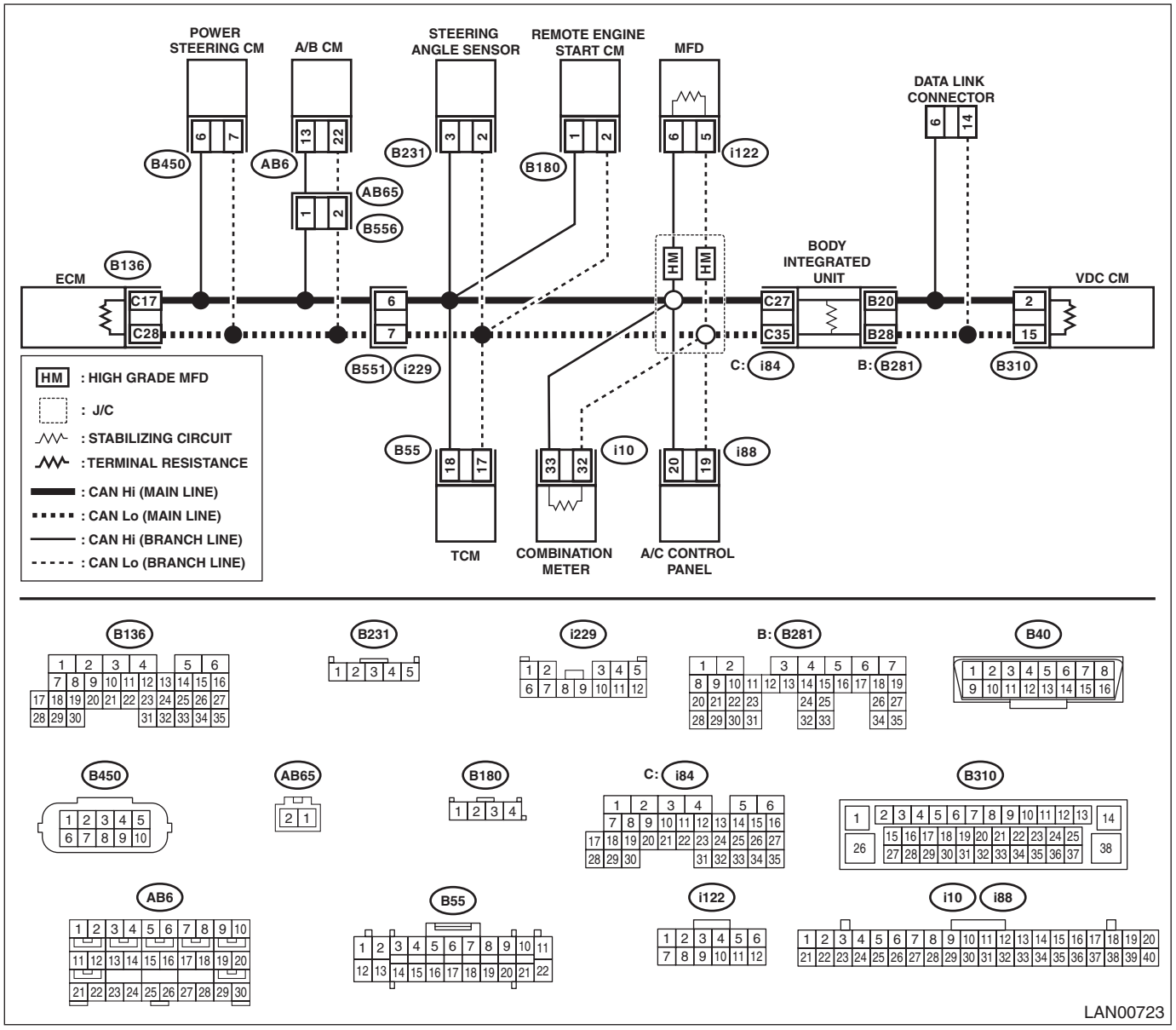
LAN00723

Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is U0122 a current malfunction?	Go to step **3**.	Go to step **7**.
3	**CHECK DTC.** 1) Check CAN communication circuit. <Ref. to LAN(diag)-21, CAN Communication Circuit Check.> 2) Read the DTC using Subaru Select Monitor.	Is U0122 a current malfunction?	Go to step **4**.	Go to step **7**.

	Step	Check	Yes	No
4	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the VDC data no-receive detected in several modules?	Replace the VDC CM. <Ref. to VDC-8, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>	Go to step **5**.
5	**REPLACE MODULE.** 1) Replace the VDC CM. 2) Read the DTC using Subaru Select Monitor.	Is U0122 a current malfunction?	Go to step **6**.	System is normal.
6	**CHECK MODULE.** 1) Reinstall the VDC CM. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0122 a current malfunction?	Replace the VDC CM. <Ref. to VDC-8, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>	System is normal.
7	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Read the DTC using Subaru Select Monitor.	Is U0122 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **8**.
8	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

O: DTC U0126 LOST COMMUNICATION WITH STEERING ANGLE SENSOR MODULE

DTC DETECTING CONDITION:
No data is received from steering angle sensor.
TROUBLE SYMPTOM:
VDC CM does not operate normally.
WIRING DIAGRAM:



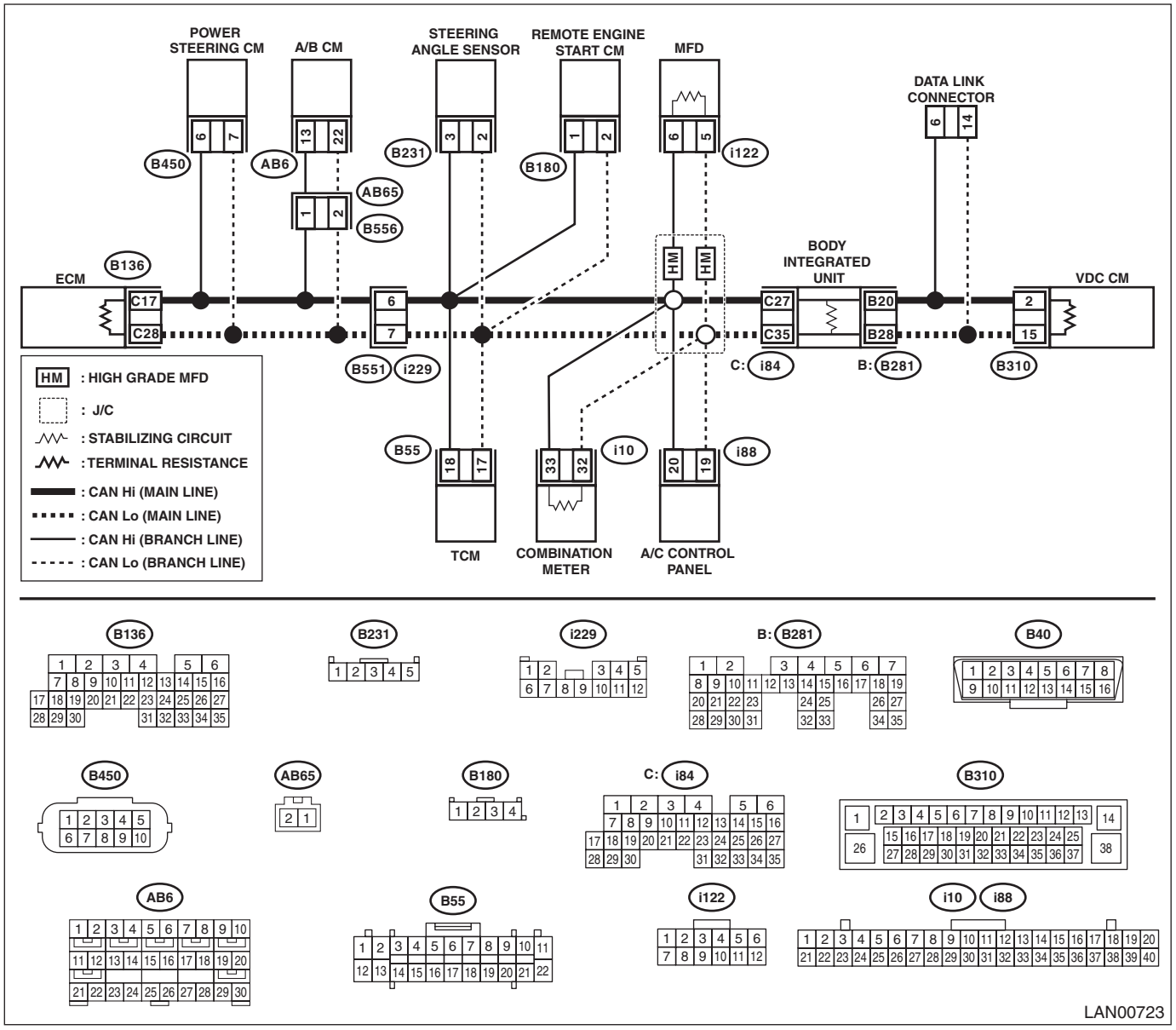
LAN00723

Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is U0126 a current malfunction?	Go to step **3**.	Go to step **7**.
3	**CHECK DTC.** 1) Check CAN communication circuit. <Ref. to LAN(diag)-21, CAN Communication Circuit Check.> 2) Read the DTC using Subaru Select Monitor.	Is U0126 a current malfunction?	Go to step **4**.	Go to step **7**.

	Step	Check	Yes	No
4	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the steering angle sensor data no-receive detected in several modules?	Replace the steering angle sensor. <Ref. to VDC-26, Steering Angle Sensor.>	Go to step **5**.
5	**REPLACE MODULE.** 1) Replace the steering angle sensor. 2) Read the DTC using Subaru Select Monitor.	Is U0126 a current malfunction?	Go to step **6**.	System is normal.
6	**CHECK MODULE.** 1) Reinstall the steering angle sensor. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0126 a current malfunction?	Replace the steering angle sensor. <Ref. to VDC-26, Steering Angle Sensor.>	System is normal.
7	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Read the DTC using Subaru Select Monitor.	Is U0126 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **8**.
8	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

P: DTC U0131 LOST COMMUNICATION WITH POWER STEERING CONTROL MODULE

DTC DETECTING CONDITION:
No data is received from power steering CM.
TROUBLE SYMPTOM:
Cooperation control with power steering CM does not operate properly.
WIRING DIAGRAM:

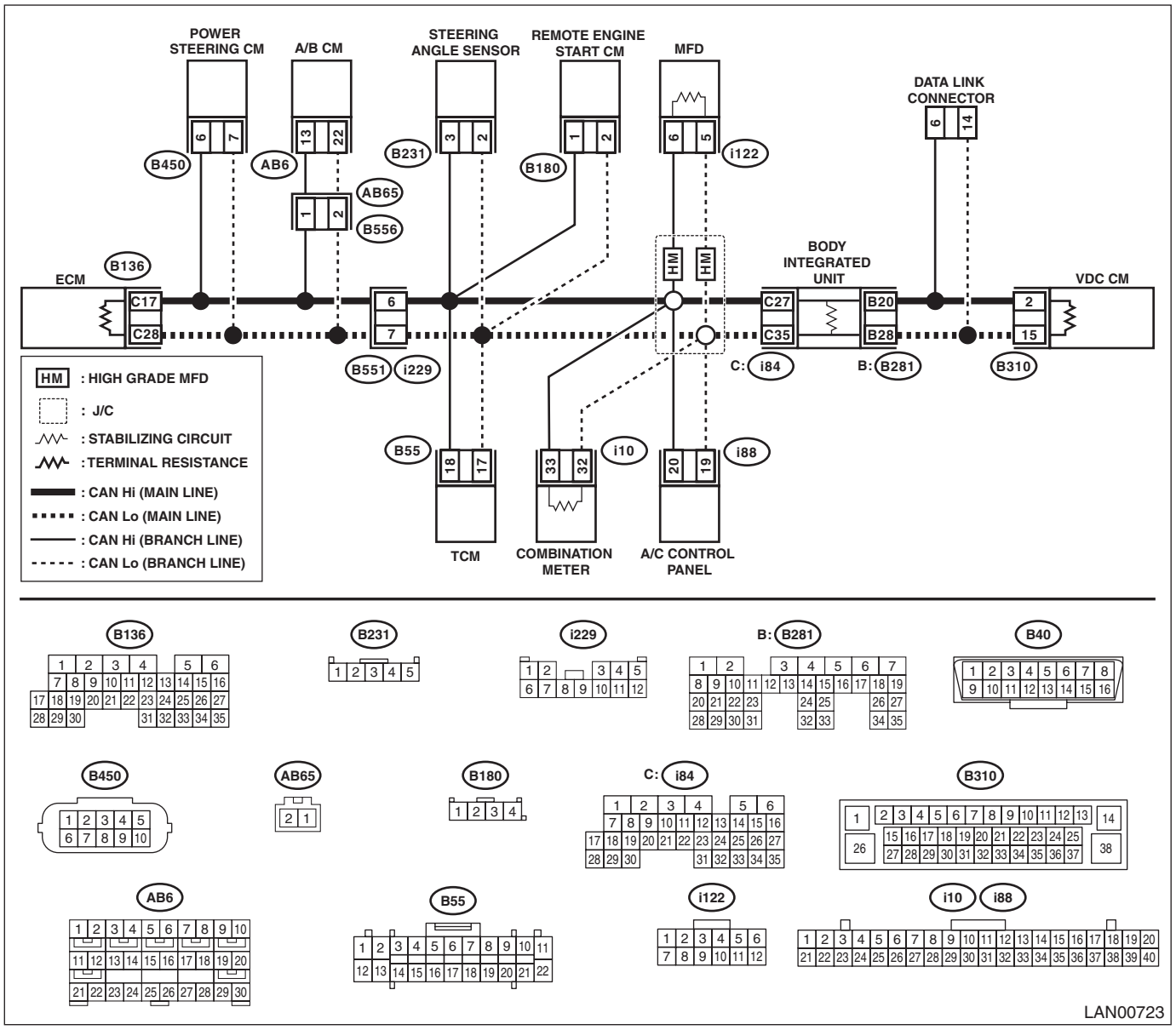


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is U0131 a current malfunction?	Go to step **3**.	Go to step **7**.
3	**CHECK DTC.** 1) Check CAN communication circuit. <Ref. to LAN(diag)-21, CAN Communication Circuit Check.> 2) Read the DTC using Subaru Select Monitor.	Is U0131 a current malfunction?	Go to step **4**.	Go to step **7**.

	Step	Check	Yes	No
4	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the electric power steering data no-receive detected in several modules?	Replace the power steering CM. <Ref. to PS-41, Power Steering Control Module.>	Go to step **5**.
5	**REPLACE MODULE.** 1) Replace the power steering CM. 2) Read the DTC using Subaru Select Monitor.	Is U0131 a current malfunction?	Go to step **6**.	System is normal.
6	**CHECK MODULE.** 1) Reinstall the power steering CM. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0131 a current malfunction?	Replace the power steering CM. <Ref. to PS-41, Power Steering Control Module.>	System is normal.
7	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Read the DTC using Subaru Select Monitor.	Is U0131 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **8**.
8	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

Q: DTC U0140 LOST COMMUNICATION WITH BODY CONTROL MODULE

DTC DETECTING CONDITION:
No data is received from body integrated unit.
TROUBLE SYMPTOM:
Cooperation control with body integrated unit does not operate properly.
WIRING DIAGRAM:

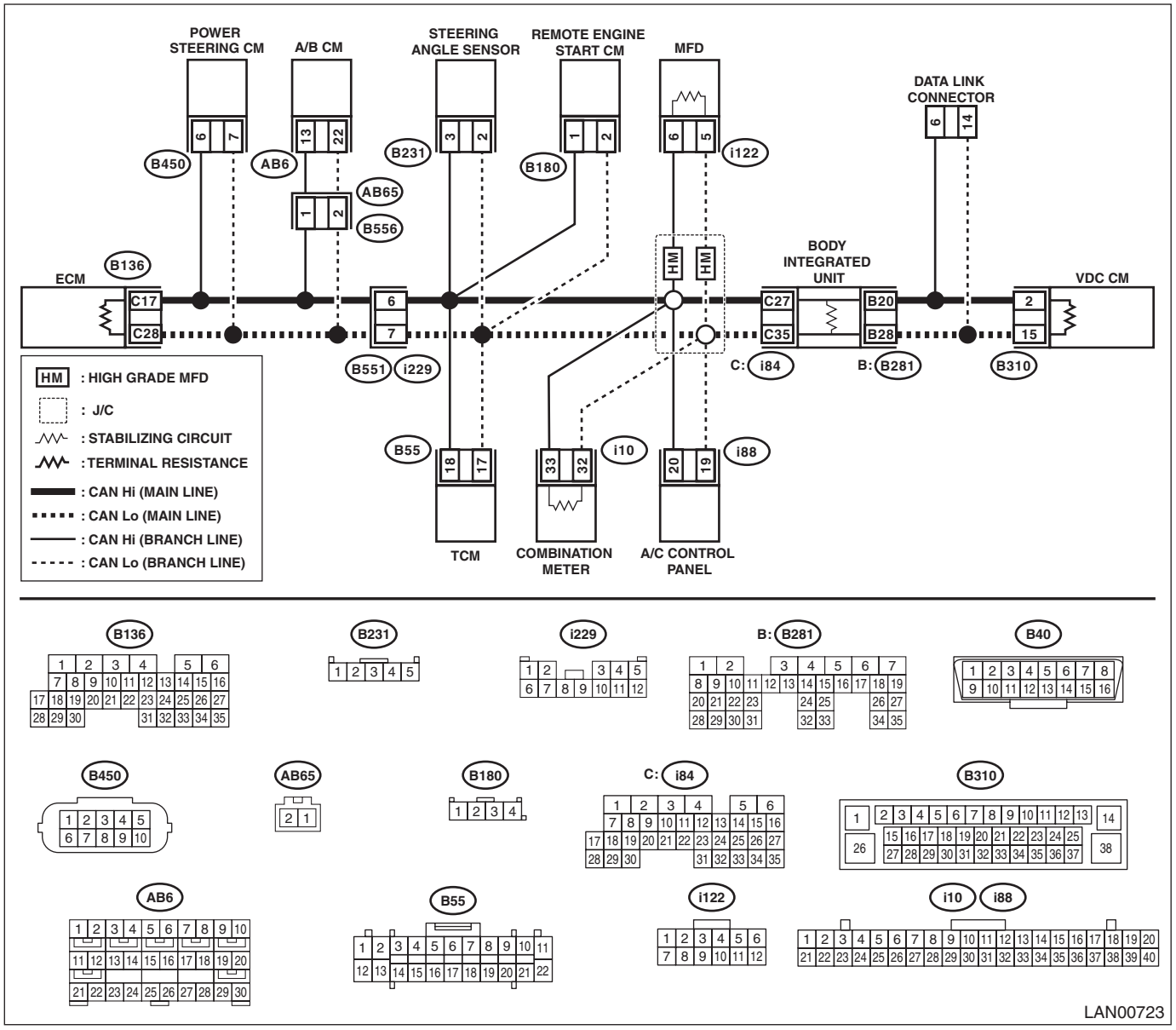


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is U0140 a current malfunction?	Go to step **3**.	Go to step **7**.
3	**CHECK DTC.** 1) Check CAN communication circuit. <Ref. to LAN(diag)-21, CAN Communication Circuit Check.> 2) Read the DTC using Subaru Select Monitor.	Is U0140 a current malfunction?	Go to step **4**.	Go to step **7**.

	Step	Check	Yes	No
4	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the body integrated data no-receive detected in several modules?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Go to step **5**.
5	**REPLACE MODULE.** 1) Replace the body integrated unit. 2) Read the DTC using Subaru Select Monitor.	Is U0140 a current malfunction?	Go to step **6**.	System is normal.
6	**CHECK MODULE.** 1) Reinstall the body integrated unit. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0140 a current malfunction?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	System is normal.
7	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Read the DTC using Subaru Select Monitor.	Is U0140 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **8**.
8	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

R: DTC U0151 LOST COMMUNICATION WITH RESTRAINTS CONTROL MODULE

DTC DETECTING CONDITION:
No data is received from A/B CM.
TROUBLE SYMPTOM:
Cooperation control with A/B CM does not operate properly.
WIRING DIAGRAM:

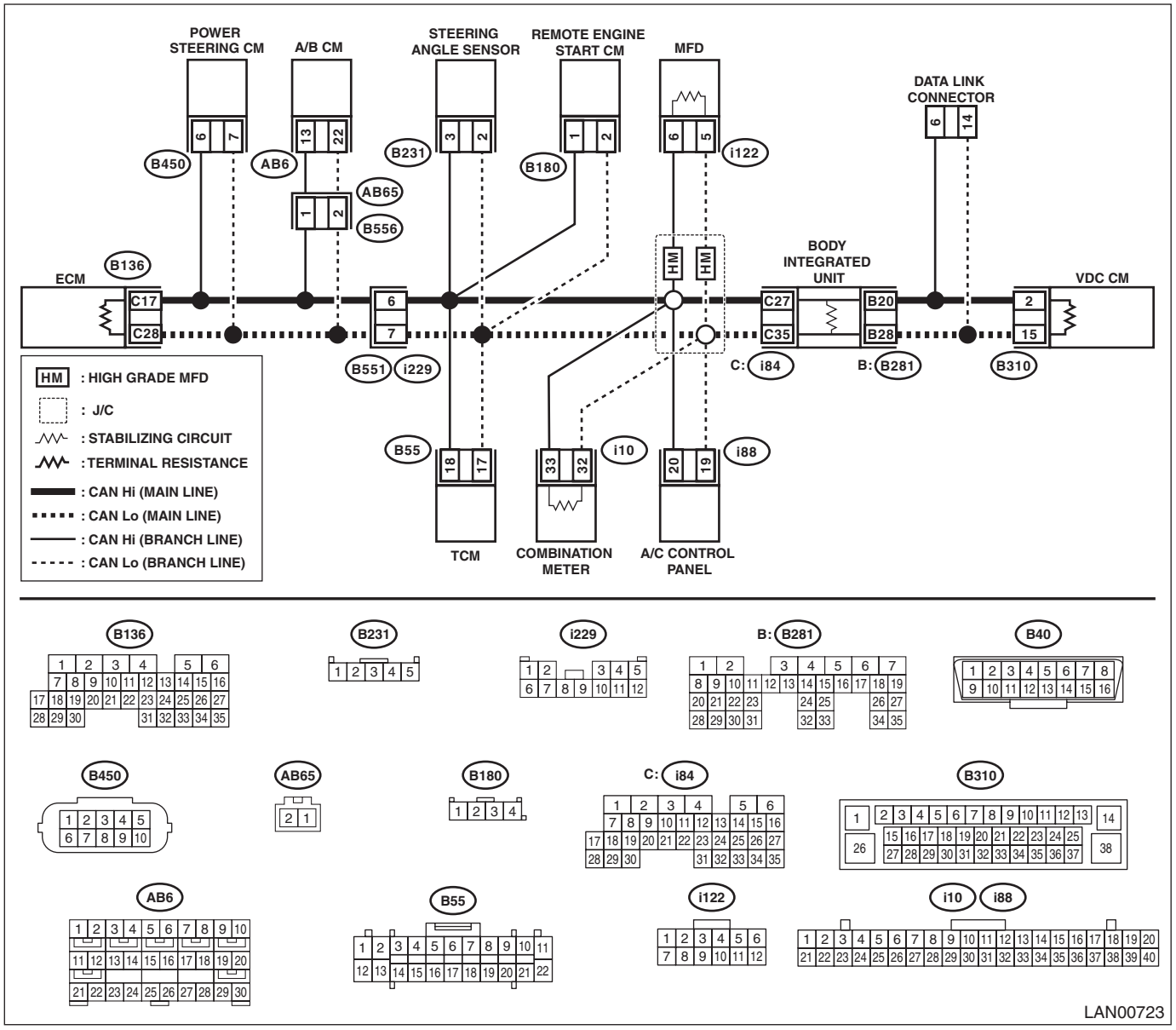


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is U0151 a current malfunction?	Go to step **3**.	Go to step **7**.
3	**CHECK DTC.** 1) Check CAN communication circuit. <Ref. to LAN(diag)-21, CAN Communication Circuit Check.> 2) Read the DTC using Subaru Select Monitor.	Is U0151 a current malfunction?	Go to step **4**.	Go to step **7**.

	Step	Check	Yes	No
4	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the airbag data no-receive detected in several modules?	Replace the A/B CM. <Ref. to AB-73, Airbag Control Module.>	Go to step **5**.
5	**REPLACE MODULE.** 1) Replace the A/B CM. 2) Read the DTC using Subaru Select Monitor.	Is U0151 a current malfunction?	Go to step **6**.	System is normal.
6	**CHECK MODULE.** 1) Reinstall the A/B CM. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0151 a current malfunction?	Replace the A/B CM. <Ref. to AB-73, Airbag Control Module.>	System is normal.
7	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Read the DTC using Subaru Select Monitor.	Is U0151 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **8**.
8	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

S: DTC U0155 LOST COMMUNICATION WITH INSTRUMENT PANEL CLUSTER (IPC) CONTROL MODULE

DTC DETECTING CONDITION:
No data received from combination meter.
TROUBLE SYMPTOM:
Display of combination meter does not operate properly.
WIRING DIAGRAM:

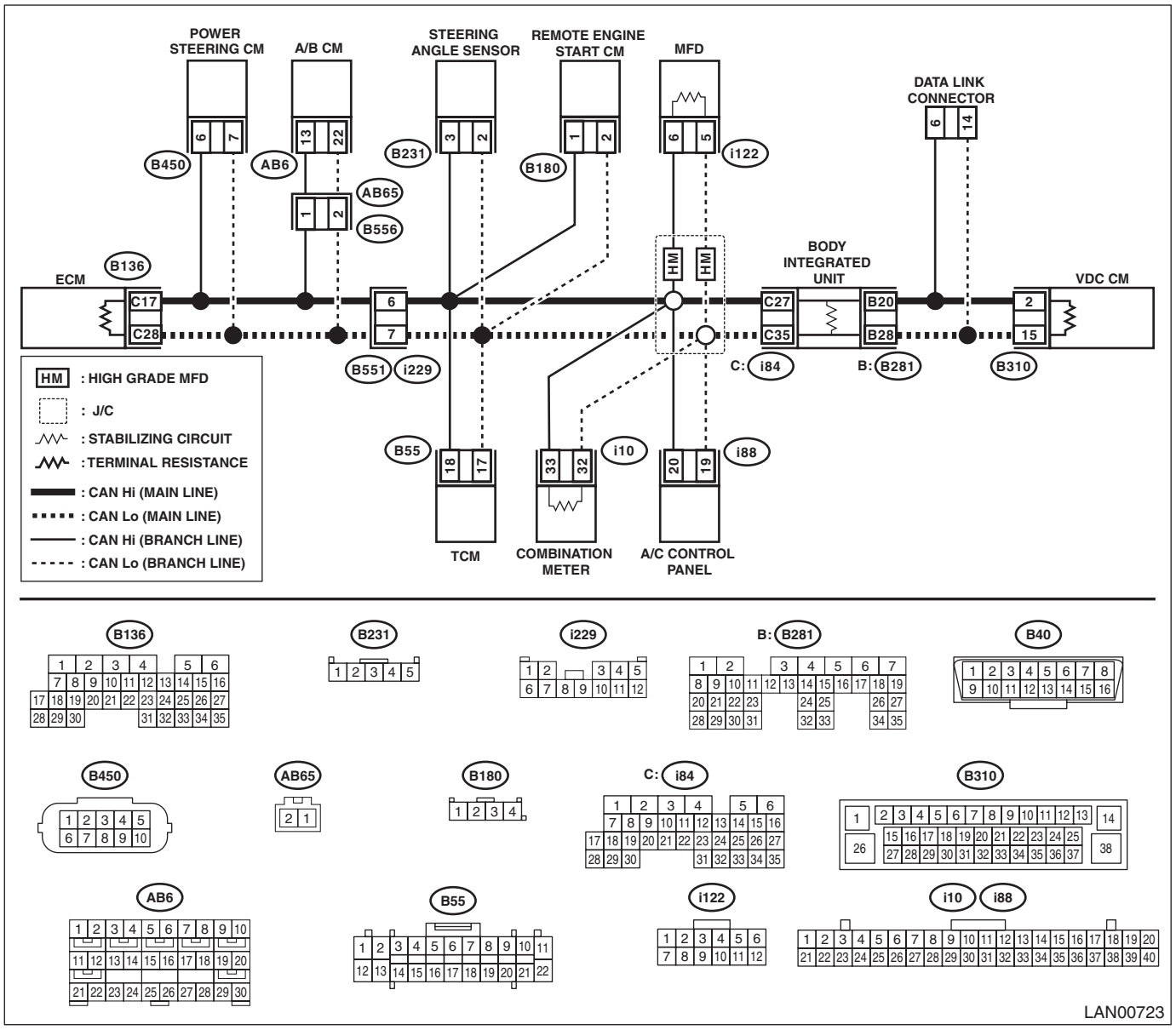


Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is U0155 a current malfunction?	Go to step **3**.	Go to step **7**.
3	**CHECK DTC.** 1) Check CAN communication circuit. <Ref. to LAN(diag)-21, CAN Communication Circuit Check.> 2) Read the DTC using Subaru Select Monitor.	Is U0155 a current malfunction?	Go to step **4**.	Go to step **7**.

	Step	Check	Yes	No
4	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the meter data no-receive detected in several modules?	Replace the meter. <Ref. to IDI-15, Combination Meter.>	Go to step **5**.
5	**REPLACE MODULE.** 1) Replace the combination meter. 2) Read the DTC using Subaru Select Monitor.	Is U0155 a current malfunction?	Go to step **6**.	System is normal.
6	**CHECK MODULE.** 1) Replace the current combination meter with the original combination meter. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0155 a current malfunction?	Replace the combination meter. <Ref. to IDI-15, Combination Meter.>	System is normal.
7	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Read the DTC using Subaru Select Monitor.	Is U0155 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **8**.
8	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

T: DTC U0164 LOST COMMUNICATION WITH HVAC CONTROL MODULE

DTC DETECTING CONDITION:
No data is received from A/C control panel.
TROUBLE SYMPTOM:
Cooperation control of air conditioner does not operate properly.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** Check the displayed DTC.	Are DTCs other than U*** displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK DTC.** Check the displayed DTC.	Is U0164 a current malfunction?	Go to step **3**.	Go to step **7**.
3	**CHECK DTC.** 1) Check CAN communication circuit. <Ref. to LAN(diag)-21, CAN Communication Circuit Check.> 2) Read the DTC using Subaru Select Monitor.	Is U0164 a current malfunction?	Go to step **4**.	Go to step **7**.

	Step	Check	Yes	No
4	**CHECK DTC.** Using the Subaru Select Monitor, read DTC of all the systems.	Is the air conditioner data no-receive detected in several modules?	Replace the A/C control panel.	Go to step **5**.
5	**REPLACE MODULE.** 1) Replace the A/C control panel. 2) Read the DTC using Subaru Select Monitor.	Is U0164 a current malfunction?	Go to step **6**.	System is normal.
6	**CHECK MODULE.** 1) Restore the A/C control panel. 2) Replace the module that the DTC has been detected. 3) Read the DTC using Subaru Select Monitor.	Is U0164 a current malfunction?	Replace the A/C control panel.	System is normal.
7	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Read the DTC using Subaru Select Monitor.	Is U0164 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **8**.
8	**CHECK CONNECTOR.** Check the connector used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It is possible that temporary poor communication occurs. Delete the DTC.

U: DTC U1120 LOST COMMUNICATION WITH AUTOSTART STOP CONTROL MODULE

NOTE:
The electric power steering CM identifies whether the auto start stop function is provided or not using information from the combination meter. Therefore, this DTC may be detected if lost communication with the combination meter occurs.
For the diagnostic procedure, refer to DTC U0155 LOST COMMUNICATION WITH INSTRUMENT PANEL CLUSTER (IPC) CONTROL MODULE. <Ref. to LAN(diag)-110, DTC U0155 LOST COMMUNICATION WITH INSTRUMENT PANEL CLUSTER (IPC) CONTROL MODULE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

12.General Diagnostic Table

A: INSPECTION

Item	Operation	Specifications		Note
		YES	NO	
Diagnostic code	DTC is displayed when inspecting all DTCs.	Perform the diagnosis according to DTC.	System is normal.	—
Speedometer	Faster vehicle speed than the actual speed is displayed.	VDC CM data may not be received.	System is normal.	Also, check vehicle speed pulse circuit.
Fuel gauge	Fuel is present, but displayed less than actual amount.	Communication error may be present.	System is normal.	Also, check the fuel gauge.
Fuel level warning light	Fuel is present, but the light illuminates.	Communication error may be present.	System is normal.	Also, check the fuel gauge.
Engine coolant temperature light	Engine coolant temperature light blinks in red and blue alternately.	Communication error may be present.	System is normal.	Check the engine coolant light related items.
[S], [I] or [S#] indicator	Blinking.	Communication error may be present.	System is normal.	Check the intelligent switch.
VDC indicator	Illuminating.	Communication error may be present.	System is normal.	Check that VDC is not operating.
VDC OFF indicator	Illuminating.	Communication error may be present.	System is normal.	Check that VDC is not OFF.
Brake warning, etc.	Illuminating.	Brake fluid may be low in amount, or communication error may be present.	System is normal.	Check brake related items.
Shift position	Not displayed.	Communication error may be present.	System is normal.	Also, check AT system.
AT temperature light	Blinking.	Communication error may be present.	System is normal.	Also, check AT system.
Door indicator	Not displayed.	Communication error may be present.	System is normal.	Check the door switch.
Clearance indicator	Not illuminating.	Communication error may be present.	System is normal.	Check the combination switch.
Hi beam indicator	Not illuminating.	Communication error may be present.	System is normal.	Check the combination switch.
Front fog indicator	Not illuminating.	Communication error may be present.	System is normal.	Check the combination switch.
Illumination	Illuminating at the maximum brightness.	Communication error may be present.	System is normal.	Also, check the illumination switch.
Cruise control indicator	Not illuminating.	Communication error may be present.	System is normal.	Check the cruise control system.

Item	Operation	Specifications		Note
		YES	NO	
AWD indicator	Not illuminating.	Communication error may be present.	System is normal.	Check TCM.
Hill hold indicator	Not illuminating.	Communication error may be present.	System is normal.	Also, check VDC CM.

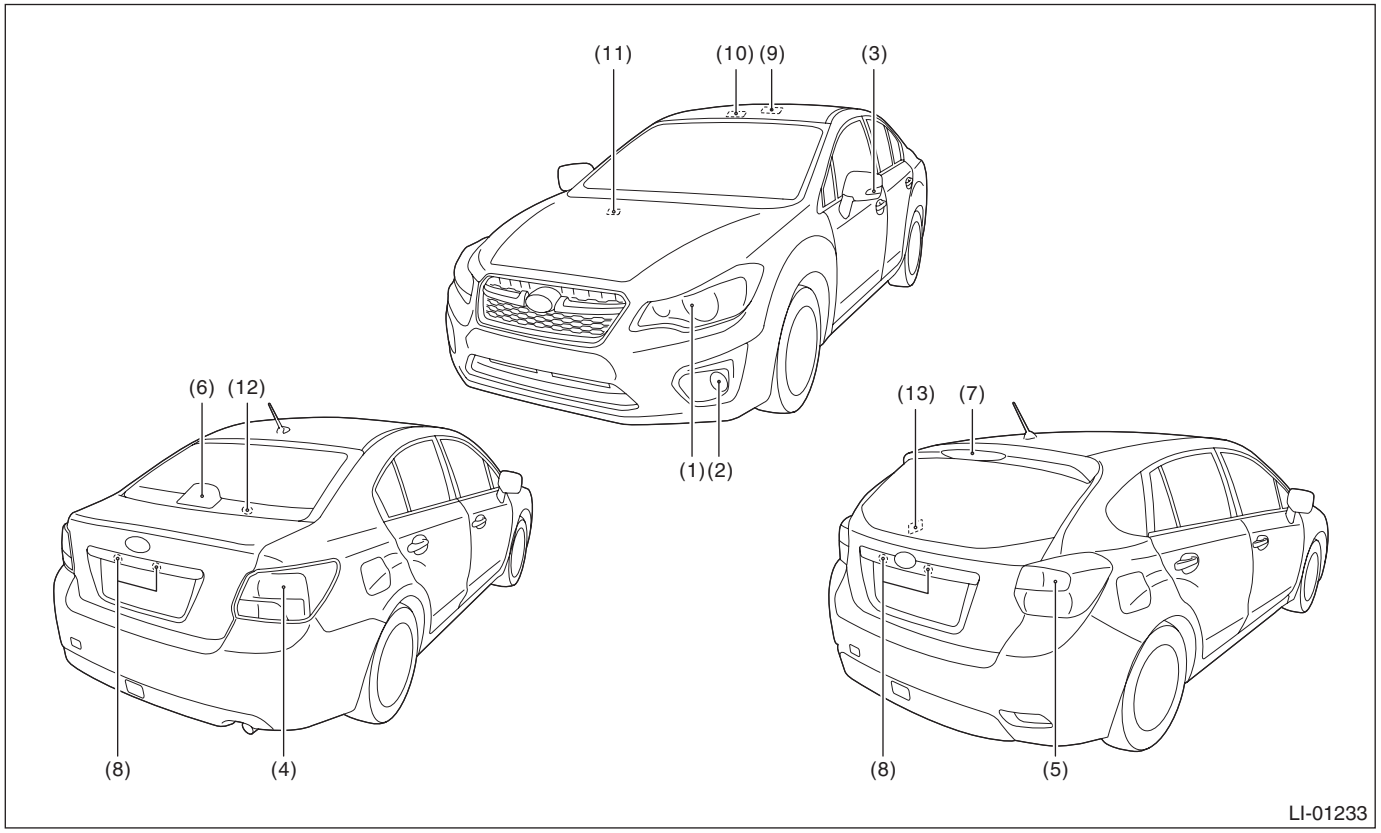
BODY CONTROL SYSTEM (DIAGNOSTICS)

BC(diag)

		Page
1.	Basic Diagnostic Procedure	2
2.	Check List for Interview	3
3.	General Description	4
4.	Electrical Component Location	5
5.	Control Module I/O Signal	6
6.	Read Diagnostic Trouble Code (DTC)	9
7.	Clear Memory Mode	10
8.	Read Current Data	11
9.	User Customizing	14
10.	Registration Body Integrated Unit	16
11.	Function Check	20
12.	List of Diagnostic Trouble Code (DTC)	21
13.	Diagnostic Procedure with Diagnostic Trouble Code (DTC)	23
14.	General Diagnostic Table	39

1. General Description

A: SPECIFICATION



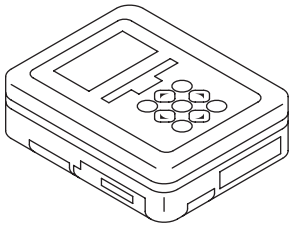
(1)	Headlight	Low beam (Halogen type)	12 V — 55 W
		Low beam (HID type)	12 V — 35 W
		High beam	12 V — 60 W
		Front turn signal light	12 V — 21 W
		Parking light	12 V — 5 W
		Side marker light	12 V — 5 W
(2)	Front fog light		12 V — 24 W
(3)	Side turn signal light		12 V — 1.1 W (LED)
(4)	Rear combination light (4 door model)	Tail/stop light	12 V — 5 / 21 W
		Turn signal light	12 V — 21 W
		Back-up light	12 V — 16 W
(5)	Rear combination light (5 door model)	Tail/stop light	12 V — 5 / 21 W
		Back-up light	12 V — 16 W
		Turn signal light	12 V — 21 W
		Side marker light	12 V — 5 W
(6)	High-mounted stop light (4 door model)		12 V — 21 W
(7)	High-mounted stop light (5 door model)		12 V — 2.1 W (LED)
(8)	License plate light		12 V — 5 W
(9)	Room light		12 V — 8 W
(10)	Spot map light		12 V — 8 W
(11)	Glove box light		12 V — 1.4 W
(12)	Trunk room light (4 door model)		12 V — 5 W
(13)	Luggage room light (5 door model)		12 V — 5 W

B: CAUTION

• Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When replacing the audio, control module and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
• Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
• Connect the connectors securely during reassembly.
• After reassembly, make sure that the each component operates normally.
• Yellow connectors and harnesses with yellow tapes around them are the connectors and harnesses for the airbag system. Using a tester above such circuits may cause malfunction of airbag system. Follow the cautions for “AIRBAG SYSTEM” in this case. <Ref. to AB-10, CAUTION, General Description.>
• Be careful not to damage the airbag system wiring harness when servicing electrical parts and switches.
• If the steering wheel and steering angle sensor (steering roll connector) are removed, perform “VDC sensor midpoint setting mode” of the VDC. <Ref. to VDC-18, VDC SENSOR MIDPOINT SETTING MODE, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>

C: PREPARATION TOOL

1. SPECIAL TOOL

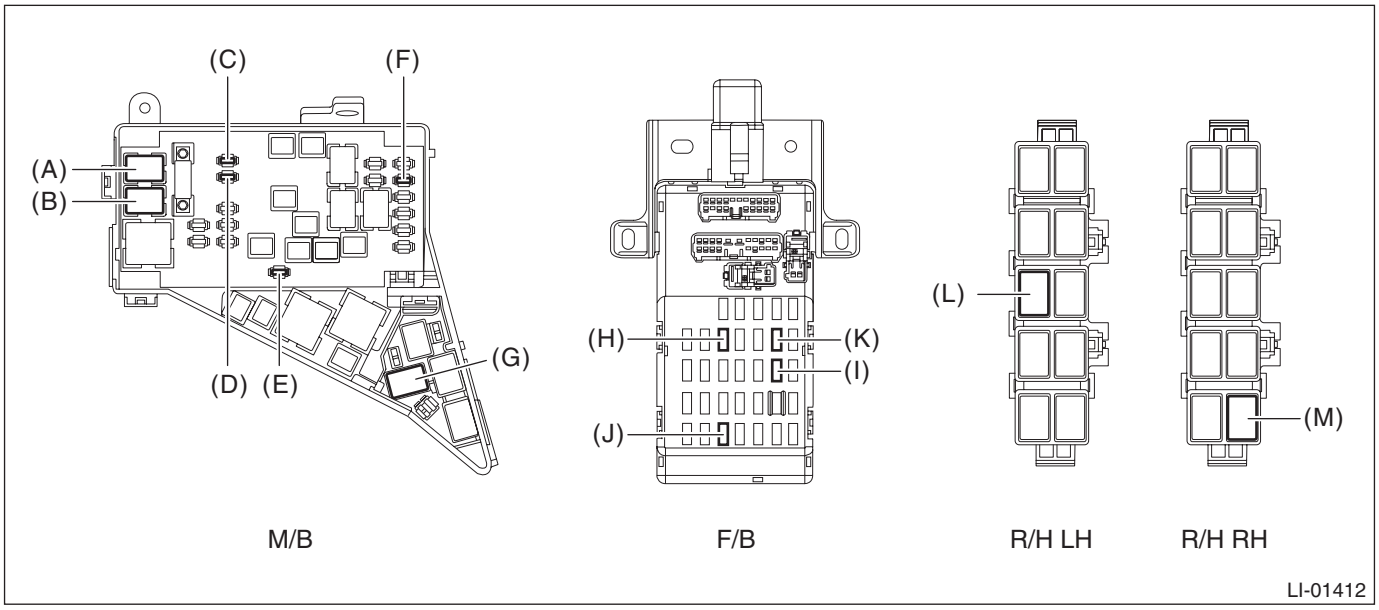
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for setting of each function and troubleshooting for electrical system. NOTE: For detailed operation procedures of SUBARU SELECT MONITOR III KIT, refer to “PC application help for Subaru Select Monitor”.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Steering wheel puller	Used for removing the steering wheel.

2. Relay and Fuse

A: LOCATION



Main fuse box	Headlight relay (HI)	(A)
	Headlight relay (LO)	(B)
	Fuse 15A (daytime running light relay)	(C)
	Fuse 15A (front fog light relay, headlight LH / RH (LO))	(D)
	Fuse 20A (spot map light, room light, ignition switch illumination)	(E)
	Fuse 15A (tail and illumination relay, daytime running light relay)	(F)
	Daytime running light relay	(G)
Relay & fuse box	Fuse 20A (stop light and brake switch)	(H)
	Fuse 10A (inhibitor switch, back-up light switch, auto headlight beam leveler CM)	(I)
	Fuse 15A (front fog light relay)	(J)
	Fuse 7.5A (turn signal & hazard unit)	(K)
Relay holder LH	Tail & Illumination relay	(L)
Relay holder RH	Front fog light relay	(M)

NOTE:
For other related fuses, refer to the wiring diagram. <Ref. to WI-15, Power Supply Circuit.>

B: INSPECTION

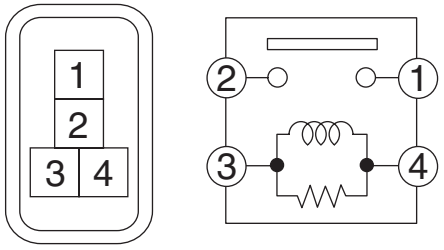
1. CHECK FUSE

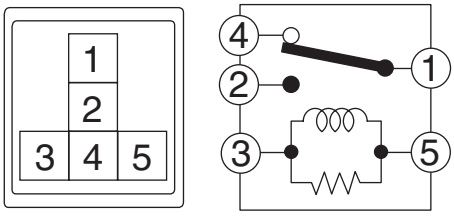
1) Remove the fuse and inspect visually.
2) If the fuse is blown out, replace the fuse.

NOTE:
If the fuse is blown again, check the system wiring harness.

2. CHECK RELAY

1) Check the resistance between relay terminals.

Terminal No.	Inspection conditions	Standard	Circuit
1 — 2	Always	1 MΩ or more	 LI-01273
1 — 2	Apply battery voltage between terminals 4 and 3.	Less than 1 Ω	

Terminal No.	Inspection conditions	Standard	Circuit
1 — 2	Always	1 MΩ or more	 LI-01274
1 — 4	Always	Less than 1 Ω	
1 — 2	Apply battery voltage between terminals 3 and 5.	Less than 1 Ω	

2) Replace the relay if the inspection result is not within the standard value.

3. Headlight System

A: WIRING DIAGRAM

Refer to “Headlight System” in the wiring diagram. <Ref. to WI-97, WIRING DIAGRAM, Headlight System.>

B: INSPECTION

1. AUTO HEADLIGHT SYSTEM CHECK

	Step	Check	Yes	No
1	**CHECK HEADLIGHT ILLUMINATION.** Set the lighting switch to the switch 1 (TAIL) and switch 2 (HEAD).	Do the tail and headlight illuminate?	Go to step **2**.	Check the combination switch (light) and headlight bulb.
2	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display the data of «Lighting AUTO input». NOTE: For detailed procedures, refer to “PC application help for Subaru Select Monitor”.	Does the display switch between OFF ←→ ON when the lighting switch is moved to AUTO position?	Go to step **3**.	Go to step **8**.
3	**CHECK CURRENT DATA.** 1) Using the Subaru Select Monitor, display the data of «Illumination Sensor Output». 2) Measure the voltage when the area around the light control sensor, which was dark, becomes bright. ***Illumination sensor output*** ***Dark condition: Approx. 0.6 V or less*** ***Bright condition: Approx. 3.0 V or more***	Is the voltage output according to the brightness?	Check and replace the body integrated unit. • Inspection: <Ref. to BC(diag)-2, Basic Diagnostic Procedure.> • Replacement: <Ref. to SL-76, Body Integrated Unit.>	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the connectors from body integrated unit and light control sensor. 2) Check the harness between body integrated unit and light control sensor. ***Connector & terminal*** ***(B280) No. 19 — (i226) No. 2:*** ***(B280) No. 29 — (i226) No. 1:*** ***(B281) No. 1 — (i226) No. 3:***	Is harness normal?	Go to step **5**.	Repair or replace the harness.
5	**CHECK HARNESS.** 1) Connect the connector of body integrated unit. 2) Turn the ignition switch to ON. 3) Measure the voltage between light control sensor connector and chassis ground. ***Connector & terminal*** ***(i226) No. 3 (+) — Chassis ground (–):***	Is the voltage 4.5 — 5.5 V?	Go to step **6**.	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>
6	**CHECK BODY INTEGRATED UNIT.** Measure the resistance between the body integrated unit and chassis ground. ***Connector & terminal*** ***(B280) No. 29 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **7**.	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>
7	**CHECK LIGHT CONTROL SENSOR.** 1) Connect the light control sensor connector. 2) Check the light control sensor. <Ref. to LI-27, INSPECTION, Light Control Sensor.>	Is the light control sensor normal?	Go to step **8**.	Replace the light control sensor.
8	**CHECK COMBINATION SWITCH (LIGHT).** Check the combination switch (light). <Ref. to LI-24, INSPECTION, Combination Switch (Light).>	Is the combination switch (light) normal?	Go to step **9**.	Replace the combination switch (light).

Step		Check	Yes	No
9	**CHECK HARNESS.** 1) Disconnect the connectors of body integrated unit and combination switch (light). 2) Check the harness between body integrated unit and combination switch (light). ***Connector & terminal*** ***(B71) No. 19 — (B281) No. 16:***	Is harness normal?	Check and replace the body integrated unit. • Inspection: <Ref. to BC(diag)-2, Basic Diagnostic Procedure.> • Replacement: <Ref. to SL-76, Body Integrated Unit.>	Repair or replace the harness.

2. CHECK LIGHTING SWITCH

Refer to the “INSPECTION” of the “Combination Switch (Light)”. <Ref. to LI-24, INSPECTION, Combination Switch (Light).>

3. CHECK DIMMER & PASSING SWITCH

Refer to the “INSPECTION” of the “Combination Switch (Light)”. <Ref. to LI-24, INSPECTION, Combination Switch (Light).>

C: NOTE

For operation procedures of each component of the headlight system, refer to the respective section.
- Headlight Assembly: <Ref. to LI-28, Headlight Assembly.>
- Headlight bulb: <Ref. to LI-37, Headlight Bulb.>
- Combination switch (light): <Ref. to LI-20, Combination Switch (Light).>
- Light control sensor: <Ref. to LI-26, Light Control Sensor.>

4. Day Time Running Light System

A: WIRING DIAGRAM

Refer to “Headlight System” in the wiring diagram. <Ref. to WI-97, WIRING DIAGRAM, Headlight System.>

B: INSPECTION

1. DAYTIME RUNNING LIGHT SYSTEM CHECK

	Step	Check	Yes	No
1	**CHECK BODY INTEGRATED UNIT.** Read the DTC using Subaru Select Monitor. NOTE: For detailed procedures, refer to “PC application help for Subaru Select Monitor”.	Is DTC displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK CURRENT DATA.** Display the following items using Subaru Select Monitor. • «Parking Brake Switch Input» • «Shift position» • «Lighting II Switch Input»	Is the input signal normal?	Go to step **3**.	Check the defective part.
3	**CHECK RELAY.** Check the daytime running light relay. <Ref. to LI-5, CHECK RELAY, INSPECTION, Relay and Fuse.>	Is the relay OK?	Go to step **4**.	Replace the relay.
4	**CHECK HARNESS.** Check each harness.	Is harness normal?	Replace the body integrated unit. <Ref. to SL-76, REMOVAL, Body Integrated Unit.>	Repair or replace the harness.

C: NOTE

For operation procedures of each component of the daytime running light system, refer to the respective section.

- Headlight Assembly: <Ref. to LI-94, Day Time Running Resistor.>
- Headlight bulb: <Ref. to LI-37, Headlight Bulb.>
- Combination switch (light): <Ref. to LI-20, Combination Switch (Light).>
- Daytime running resistor: <Ref. to LI-94, Day Time Running Resistor.>

5. Clearance Light and Illumination Light System

A: WIRING DIAGRAM

Refer to “Clearance Light and Illumination Light System” in the wiring diagram. <Ref. to WI-51, WIRING DIAGRAM, Clearance Light and Illumination Light System.>

B: INSPECTION

1. CHECK LIGHTING SWITCH

Refer to the “INSPECTION” of the “Combination Switch (Light)”. <Ref. to LI-24, INSPECTION, Combination Switch (Light).>

C: NOTE

For operation procedures of each component of the clearance light & illumination light system, refer to the respective sections.

- Combination switch (light): <Ref. to LI-20, Combination Switch (Light).>
- Parking light bulb: <Ref. to LI-52, Clearance/Parking Light Bulb.>
- Front side marker light bulb: <Ref. to LI-53, Front Side Marker Light Bulb.>
- Rear combination light assembly: <Ref. to LI-59, Rear Combination Light Assembly.>
- Tail light/stop light bulb: <Ref. to LI-62, Tail/Stop Light Bulb.>
- Rear side marker light bulb: <Ref. to LI-68, Rear Side Marker Light Bulb.>
- License plate light: <Ref. to LI-73, License Plate Light.>
- Ignition switch illumination: <Ref. to LI-88, Ignition Switch Illumination.>

6. Front Fog Light System

A: WIRING DIAGRAM

Refer to “Front Fog Light System” in the wiring diagram. <Ref. to WI-91, WIRING DIAGRAM, Front Fog Light System.>

B: INSPECTION

1. CHECK FRONT FOG LIGHT SWITCH

Refer to the “INSPECTION” of the “Combination Switch (Light)”. <Ref. to LI-24, INSPECTION, Combination Switch (Light).>

C: NOTE

For operation procedures of each component of the front fog light system, refer to the respective section.

- Combination switch (light): <Ref. to LI-20, Combination Switch (Light).>
- Front fog light assembly: <Ref. to LI-54, Front Fog Light Assembly.>
- Front fog light bulb: <Ref. to LI-57, Front Fog Light Bulb.>

7. Turn Signal Light and Hazard Light System

A: WIRING DIAGRAM

Refer to “Turn Signal Light and Hazard Light System” in the wiring diagram. <Ref. to WI-145, WIRING DIAGRAM, Turn Signal Light and Hazard Light System.>

B: INSPECTION

1. CHECK TURN SIGNAL SWITCH

Refer to the “INSPECTION” of the “Combination Switch (Light)”. <Ref. to LI-24, INSPECTION, Combination Switch (Light).>

2. CHECK HAZARD SWITCH

Refer to the “INSPECTION” of the “Hazard Switch”. <Ref. to LI-48, INSPECTION, Hazard Switch.>

3. CHECK TURN SIGNAL AND HAZARD MODULE

Refer to “INSPECTION” of the “Turn Signal Light and Hazard Light System”. <Ref. to LI-49, INSPECTION, Turn Signal Light & Hazard Light Module.>

C: NOTE

For operation procedures of each component of the turn signal and hazard light system, refer to the respective sections.

- Combination switch (light): <Ref. to LI-20, Combination Switch (Light).>
- Front turn signal light bulb: <Ref. to LI-51, Front Turn Signal Light Bulb.>
- Side turn signal light assembly: <Ref. to LI-58, Side Turn Signal Light Assembly.>
- Rear combination light assembly: <Ref. to LI-59, Rear Combination Light Assembly.>
- Rear turn signal light bulb: <Ref. to LI-65, Rear Turn Signal Light Bulb.>
- Hazard switch: <Ref. to LI-47, Hazard Switch.>
- Turn signal and hazard module: <Ref. to LI-49, Turn Signal Light & Hazard Light Module.>

8. Back-up Light System

A: WIRING DIAGRAM

Refer to “Back-up Light System” in the wiring diagram. <Ref. to WI-47, WIRING DIAGRAM, Back-up Light System.>

B: INSPECTION

1. CHECK BACK-UP LIGHT SWITCH (MT MODEL)

Refer to “INSPECTION” of the “Switches and Harness” in “MANUAL TRANSMISSION AND DIFFERENTIAL” section. <Ref. to 5MT-35, BACK-UP LIGHT SWITCH, INSPECTION, Switches and Harness.>

2. CHECK INHIBITOR SWITCH (CVT MODEL)

Refer to “INSPECTION” of the “Inhibitor Switch” in “CONTINUOUSLY VARIABLE TRANSMISSION” section. <Ref. to CVT-92, INSPECTION, Inhibitor Switch.>

C: NOTE

For operation procedures of each component of the back-up light system, refer to the respective section.

- Rear combination light assembly: <Ref. to LI-59, Rear Combination Light Assembly.>
- Back-up light bulb: <Ref. to LI-70, Back-up Light Bulb.>

9. Stop Light System

A: WIRING DIAGRAM

Refer to “Stop Light System” in the wiring diagram. <Ref. to WI-141, WIRING DIAGRAM, Stop Light System.>

B: INSPECTION

1. CHECK STOP LIGHT SWITCH

Refer to “INSPECTION” of the “Stop Light Switch” in “BRAKE” section. <Ref. to BR-72, INSPECTION, Stop Light Switch.>

C: NOTE

For operation procedures of each component of the stop light system, refer to the respective section.

- Rear combination light assembly: <Ref. to LI-59, Rear Combination Light Assembly.>
- Tail light/stop light bulb: <Ref. to LI-62, Tail/Stop Light Bulb.>
- High-mounted stop light: <Ref. to LI-75, High-mounted Stop Light.>

10.Interior Light System

A: WIRING DIAGRAM

Refer to “Interior Light System” in the wiring diagram. <Ref. to WI-103, WIRING DIAGRAM, Interior Light System.>

B: INSPECTION

1. CHECK DOOR SWITCH.

Refer to the “INSPECTION” of the “Door Switch”. <Ref. to LI-96, INSPECTION, Door Switch.>

2. CHECK REAR GATE LATCH SWITCH

Refer to “INSPECTION” of the “Rear Gate Latch and Actuator Assembly” in “SECURITY AND LOCKS” section. <Ref. to SL-47, ACTUATOR, INSPECTION, Rear Gate Latch and Actuator Assembly.>

3. CHECK TRUNK LID LATCH SWITCH

Refer to “INSPECTION” of the “Trunk Lid Latch and Actuator Assembly” in “SECURITY AND LOCKS” section. <Ref. to SL-49, ACTUATOR, INSPECTION, Trunk Lid Latch and Actuator Assembly.>

C: NOTE

For operation procedures of each component of the interior light system, refer to the respective section.

- Spot map light: <Ref. to LI-79, Spot Map Light.>
- Room light: <Ref. to LI-81, Room Light.>
- Luggage room light: <Ref. to LI-83, Luggage Room Light.>
- Trunk room light: <Ref. to LI-85, Trunk Room Light.>
- Glove box light: <Ref. to LI-86, Glove Box Light.>
- Door switch: <Ref. to LI-96, Door Switch.>

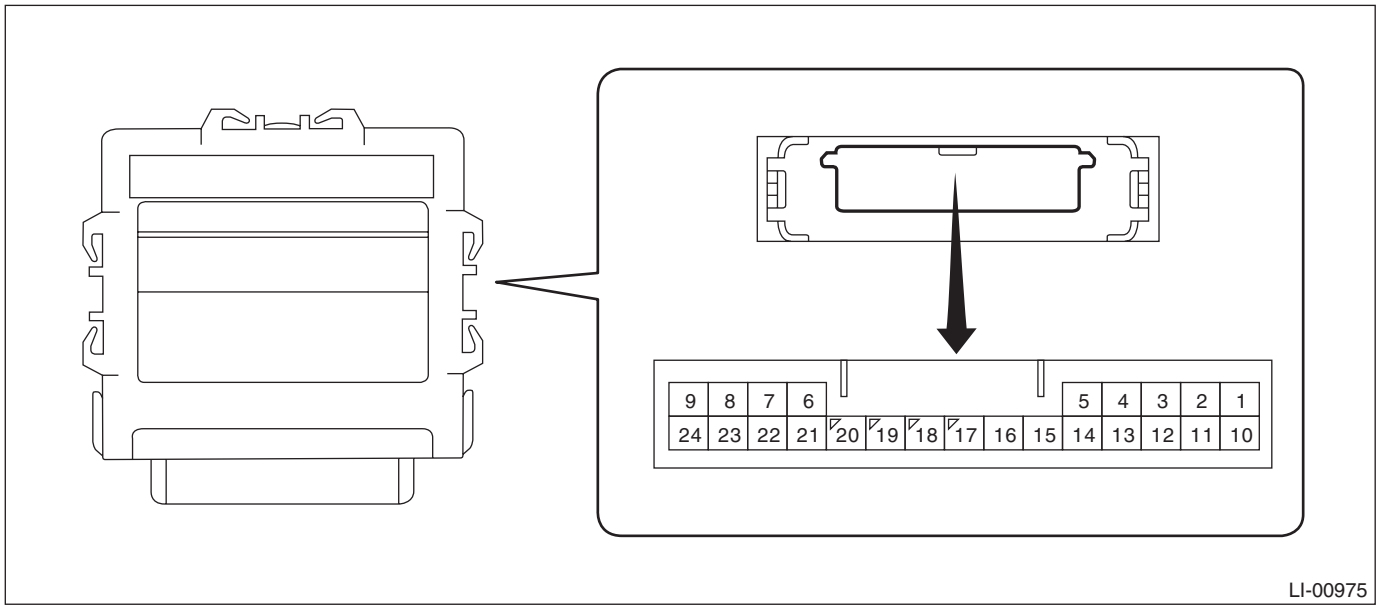
11.Auto Headlight Beam Leveler System

A: WIRING DIAGRAM

Refer to “Headlight Beam Leveler System” in the wiring diagram. <Ref. to WI-95, WIRING DIAGRAM, Headlight Beam Leveler System.>

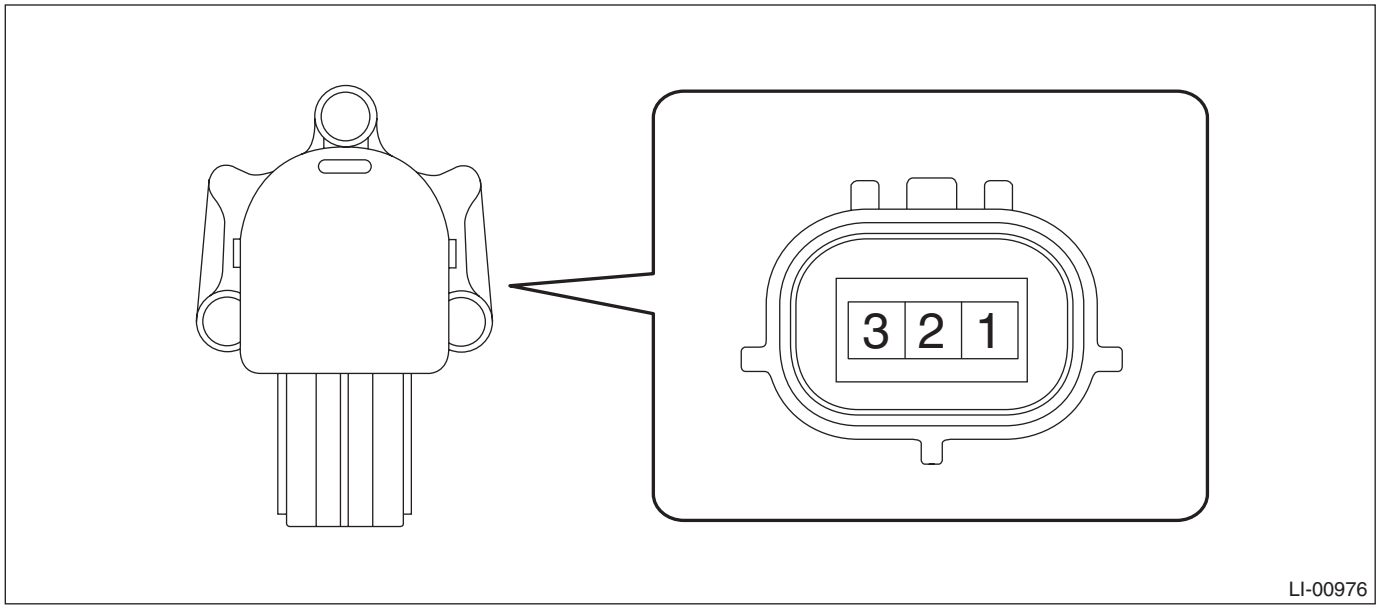
B: SPECIFICATION

1. TERMINAL ARRANGEMENT OF AUTO HEADLIGHT BEAM LEVELER CM



(1)	IG power supply	(9)	GND	(17)	Actuator control signal output
(2)	Not used	(10)	Actuator power supply	(18)	Not used
(3)	Headlights ON signal	(11)	Not used	(19)	Rear sensor input
(4)	Not used	(12)	Rear sensor power supply	(20)	Not used
(5)	Not used	(13)	Not used	(21)	Rear sensor GND
(6)	Indicator output	(14)	Not used	(22)	Not used
(7)	Not used	(15)	Not used	(23)	Actuator GND
(8)	Not used	(16)	Vehicle speed pulse input	(24)	Not used

2. TERMINAL LAYOUT OF VEHICLE HEIGHT SENSOR



(1) GND (2) Output (3) Power supply

C: INSPECTION

1. SYMPTOM CHART

Beam level control does not function

	Step	Check	Yes	No
1	**CHECK INDICATOR OUTPUT.** Turn the ignition switch to ON.	Does the warning indicator turn on for three seconds?	Go to step **2**.	Go to step **5**.
2	**CHECK INDICATOR OUTPUT.** Leave the ignition switch to ON for 10 seconds.	Does the warning indicator light go off?	Go to step **10**.	Go to step **3**.
3	**CHECK OUTPUT VOLTAGE BETWEEN AUTO HEADLIGHT BEAM LEVELER CM AND VEHICLE HEIGHT SENSOR.** 1) Disconnect the vehicle height sensor connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between the vehicle height sensor connector and chassis ground. ***Connector & terminal*** ***(R29) No. 3 (+) — Chassis ground (–):***	Is the voltage 5 V ±0.25 V?	Go to step **8**.	Go to step **4**.
4	**CHECK HARNESS BETWEEN AUTO HEADLIGHT BEAM LEVELER CM AND VEHICLE HEIGHT SENSOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the auto headlight beam leveler CM connector. 3) Measure the continuity between the auto headlight beam leveler CM and the vehicle height sensor. ***Connector & terminal*** ***(B150) No. 21 — (R29) No. 1:*** ***(B150) No. 19 — (R29) No. 2:*** ***(B150) No. 12 — (R29) No. 3:***	Is there continuity?	Replace the auto headlight beam leveler CM.	Repair the open circuit and poor contact of the connector in the harness between the auto headlight beam leveler CM and vehicle height sensor.

	Step	Check	Yes	No
5	**CHECK HARNESS BETWEEN BATTERY — INDICATOR BULB — AUTO HEADLIGHT BEAM LEVELER CM.** 1) Disconnect the auto headlight beam leveler CM connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between the auto headlight beam leveler CM (indicator bulb) connector and chassis ground. ***Connector & terminal*** ***(B150) No. 6 (+) — Chassis ground (–):***	Is the voltage 12 V?	Replace the auto headlight beam leveler CM.	Go to step **6**.
6	**CHECK INDICATOR BULB.** 1) Disconnect the connector of combination meter. 2) Measure the continuity between combination meter terminals. <Ref. to IDI(diag)-6, ELECTRICAL SPECIFICATION, Control Module I/O Signal.> ***Terminals*** ***No. 20 — No. 8:***	Is there continuity?	Go to step **7**.	Replace the meter case assembly.
7	**CHECK HARNESS BETWEEN AUTO HEADLIGHT BEAM LEVELER CM AND INDICATOR BULB.** 1) Turn the ignition switch to OFF. 2) Measure the continuity between the auto headlight beam leveler CM and the combination meter. ***Connector & terminal*** ***(B150) No. 6 — (i10) No. 8:***	Is there continuity?	Replace the auto headlight beam leveler CM.	Repair the open circuit and poor contact of the connector in the harness between the auto headlight beam leveler CM and indicator.
8	**CHECK VEHICLE HEIGHT SENSOR OUTPUT SIGNAL.** Check the vehicle height sensor. <Ref. to LI-93, INSPECTION, Rear Height Sensor.>	Is the vehicle height sensor normal?	Go to step **9**.	Replace the vehicle height sensor.
9	**CHECK HARNESS BETWEEN AUTO HEADLIGHT BEAM LEVELER CM AND VEHICLE HEIGHT SENSOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the auto headlight beam leveler CM connector. 3) Measure the continuity between the auto headlight beam leveler CM and the vehicle height sensor. ***Connector & terminal*** ***(B150) No. 21 — (R29) No. 1:*** ***(B150) No. 19 — (R29) No. 2:*** ***(B150) No. 12 — (R29) No. 3:***	Is there continuity?	Replace the auto headlight beam leveler CM.	Repair the open circuit and poor contact of the connector in the harness between the auto headlight beam leveler CM and vehicle height sensor.
10	**CHECK HEADLIGHT ON SIGNAL.** 1) Disconnect the auto headlight beam leveler CM connector. 2) Turn the ignition switch to ON. 3) Turn the headlight switch to OFF. 4) Measure the voltage between the auto headlight beam leveler CM (headlight relay) connector and chassis ground. ***Connector & terminal*** ***(B150) No. 3 (+) — Chassis ground (–):***	Is the voltage 12 V?	Go to step **11**.	Repair the open circuit or poor contact of the connector in the harness between headlight relay and auto headlight beam leveler CM.

	Step	Check	Yes	No
11	**CHECK HEADLIGHT ASSEMBLY (LEVELER ACTUATOR) DRIVE.** 1) Connect the auto headlight beam leveler CM connector. 2) Turn the ignition switch to ON, and within 10 seconds, repeat the OFF → switch 2 (HEAD) operation of headlight switch 5 times. 3) Check that the headlight beam drops once, then returns to normal. 4) Then, after waiting for 30 seconds or more with the ignition ON, turn the ignition switch to OFF.	Does the headlight beam drop down once, and then return?	Replace the auto headlight beam leveler CM. <Ref. to LI-90, Auto Headlight Beam Leveler Control Module.>	Go to step **12**.
12	**CHECK OUTPUT VOLTAGE BETWEEN HEADLIGHT ASSEMBLY (LEVELER ACTUATOR).** 1) Disconnect the auto headlight beam leveler CM connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between the auto headlight beam leveler CM connector and chassis ground. ***Connector & terminal*** ***(B150) No. 10 (+) — Chassis ground (–):***	Is the voltage 12 V?	Replace the headlight assembly.	Go to step **13**.
13	**CHECK HARNESS BETWEEN AUTO HEADLIGHT BEAM LEVELER CM AND HEADLIGHT ASSEMBLY (LEVELER ACTUATOR).** 1) Disconnect the connector of headlight assembly. 2) Measure the continuity between the auto headlight beam leveler CM and headlight assembly (leveler actuator). ***Connector & terminal*** ***• Headlight beam leveler RH*** ***(B150) No. 10 — (F126) No. 6:*** ***(B150) No. 17 — (F126) No. 8:*** ***(B150) No. 23 — (F126) No. 7:*** ***• Headlight beam leveler LH*** ***(B150) No. 10 — (F125) No. 6:*** ***(B150) No. 17 — (F125) No. 8:*** ***(B150) No. 23 — (F125) No. 7:***	Is there continuity?	Replace the auto headlight beam leveler CM.	Repair the open circuit or poor contact of the connector in the harness between headlight assembly and auto headlight beam leveler CM.

D: PROCEDURE

When parts related to the auto headlight beam leveler system are removed or replaced, perform the following procedures to initialize or reinitialize.

NOTE:
Before performing initialization or reinitialization, check the following:
- Vehicle is parked on a level surface.
- The inflation pressure of tires is correct.
- Unload any cargo from the vehicle.
- Vehicle's fuel tank is fully filled.
- Refer to the following chart to determine whether to initialize or reinitialize.

Initialization	When the auto headlight beam leveler CM was replaced with a new module.
Reinitialization	• When the auto headlight beam leveler CM was replaced with a part from another vehicle. • When suspension parts have been removed or replaced. (Crossmember, front arm, sub frame, lateral link, housing, strut etc.) • When the vehicle height sensor has been replaced or removed.

CAUTION:
If the indicator does not flash three times or the headlight beam does not operate, it can be assumed that there is an open circuit or faulty wiring in the harness of the auto headlight beam leveler CM, vehicle height sensors or headlight assembly. Perform inspection and repair according to the inspection results, then perform initialization/reinitialization again.
- **Initialization: <Ref. to LI-19, INITIALIZATION, PROCEDURE, Auto Headlight Beam Leveler System.>**
- **Reinitialization: <Ref. to LI-19, REINITIALIZATION, PROCEDURE, Auto Headlight Beam Leveler System.>**

1. INITIALIZATION

1) Check that the indicator in the meter is flashing twice repeatedly.
2) Bounce the vehicle several times to normalize the suspension.
3) Make certain that someone is seated in the driver's seat.
4) Turn the ignition switch to ON, and within 1.5 — 20 seconds, turn the headlight switch OFF → ON for three successive times.
5) Make sure that the indicator in the meter flashes three times and then turns OFF, indicating that initialization has been successfully completed. (At this time, the headlight beam drops once, and then returns to the original position.)
6) Perform beam adjustment for the headlight. <Ref. to LI-35, ADJUSTMENT, Headlight Assembly.>

2. REINITIALIZATION

1) Bounce the vehicle several times to normalize the suspension.
2) Make certain that someone is seated in the driver's seat.
3) Turn the ignition switch to ON, and, within 1.5 — 10 seconds, turn the headlight switch OFF → ON five or more successive times.
4) Check that the headlight beam drops once, then returns to normal.
5) After confirming 4), turn the ignition switch to OFF within 30 seconds.
6) Turn the ignition switch to ON again, and, within 1.5 — 10 seconds, turn the headlight switch OFF → ON five or more successive times.
7) Make sure that the indicator in the meter flashes three times and then turns OFF, indicating that reinitialization has been successfully completed. (At this time, the headlight beam drops once, and then returns to the original position.)
8) Perform beam adjustment for the headlight. <Ref. to LI-35, ADJUSTMENT, Headlight Assembly.>

E: NOTE

For operation procedures of each component of the auto headlight beam leveler system, refer to the respective section.
- Auto headlight beam leveler CM: <Ref. to LI-90, Auto Headlight Beam Leveler Control Module.>
- Vehicle height sensor: <Ref. to LI-92, Rear Height Sensor.>

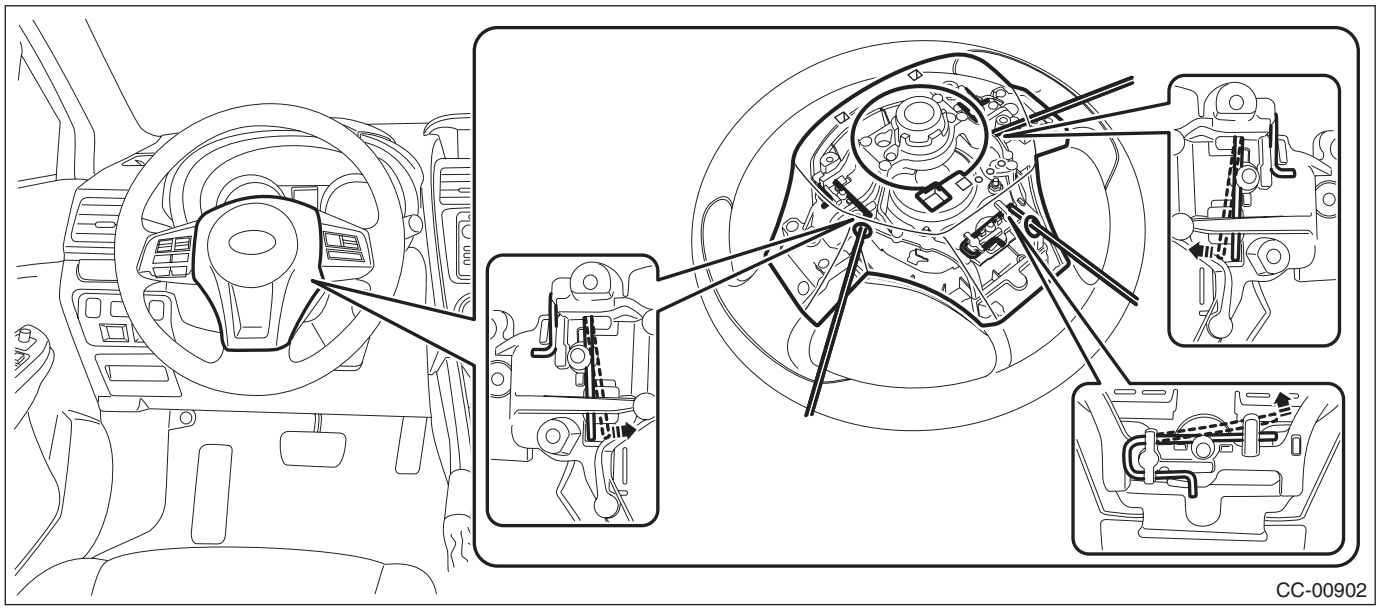
12.Combination Switch (Light)

A: REMOVAL

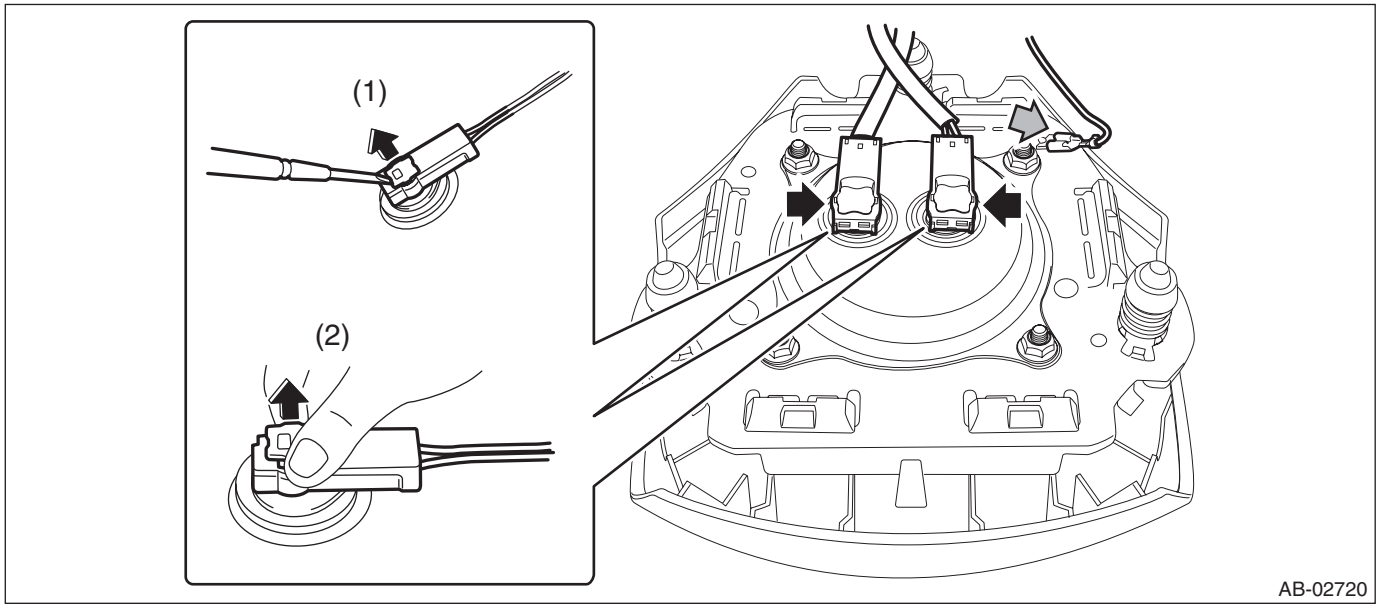
1) Position the front wheels straight ahead. (After moving a vehicle 5 m (16 ft) or more with front wheels positioned straight ahead, make sure that the vehicle moves straight ahead.)
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
4) Remove the driver's airbag module.

CAUTION:
Before handling the airbag module, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". <Ref. to AB-10, CAUTION, General Description.>

(1) Using a hexagon wrench wrapped with protective tape, push in the snap pins to disengage the locks (3 places).


CC-00902

(2) Disconnect the horn harness and airbag connector, and remove the driver's airbag module. <Ref. to AB-22, DRIVER'S AIRBAG MODULE, CURTAIN AIRBAG MODULE & PRETENSIONER, PROCEDURE, Airbag Connector.>



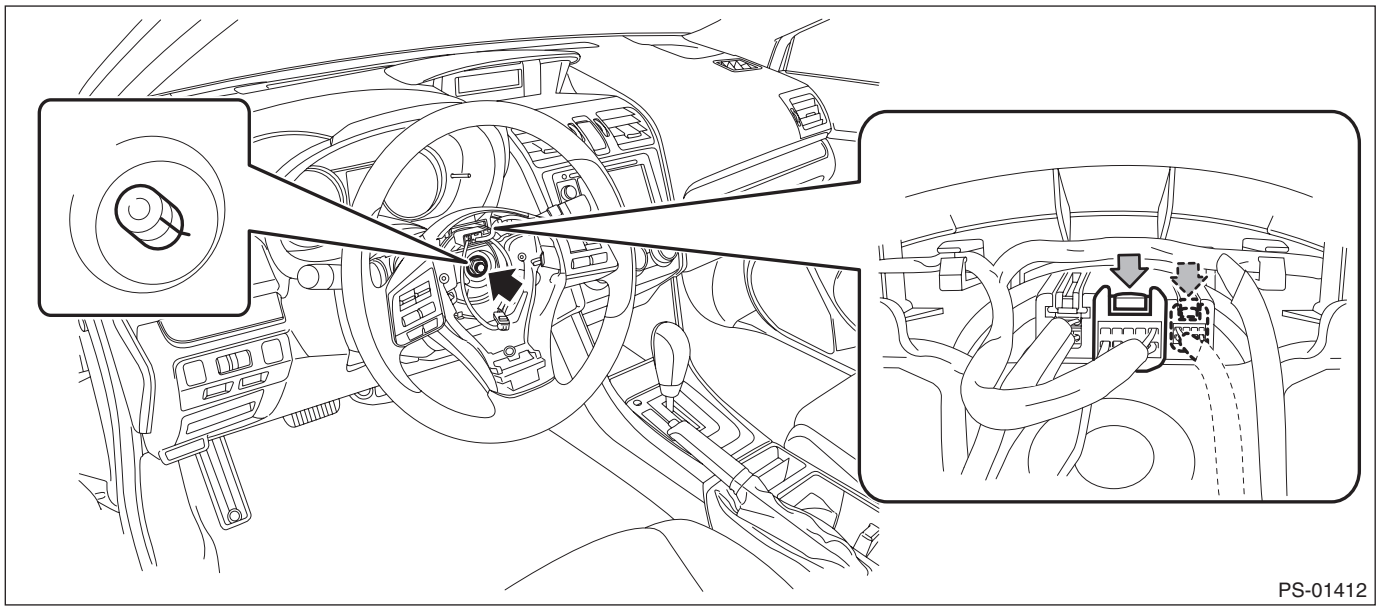
AB-02720

5) Remove the steering wheel.

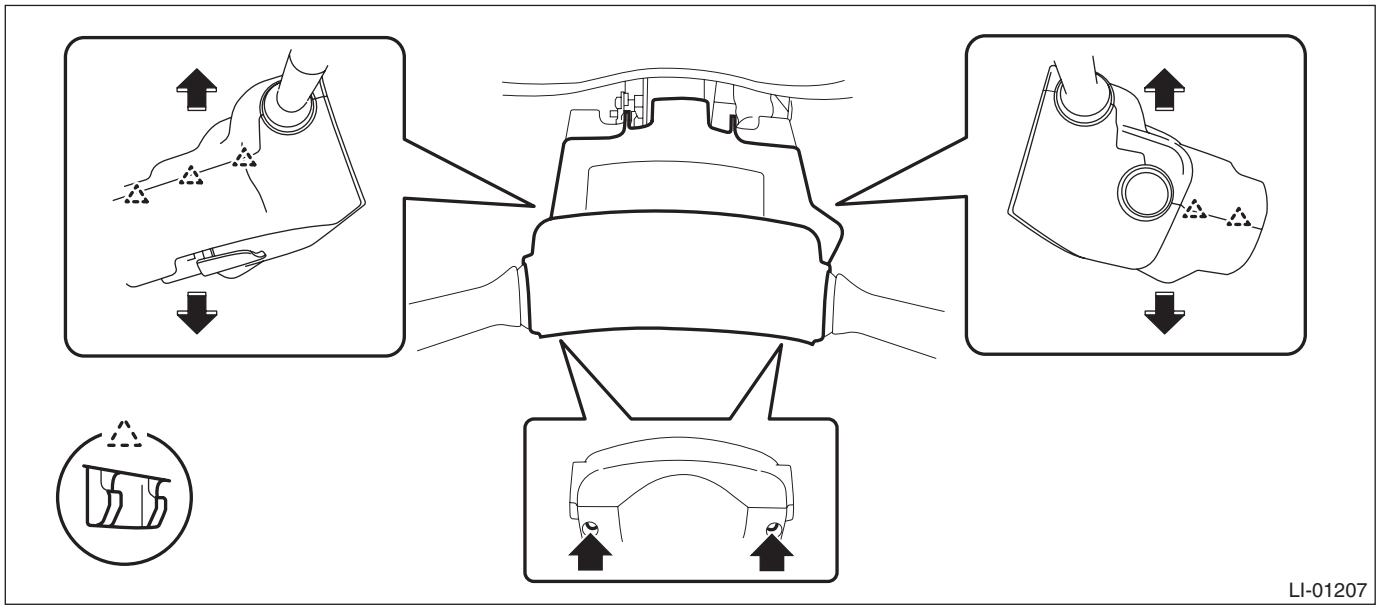
CAUTION:
- **Always use the steering wheel puller for removal to avoid deforming the steering wheel.**
- **If the steering wheel has been removed, make sure that the steering roll connector is not turned from the original position.**

(1) Disconnect the connector and remove the nut.
(2) Put alignment marks and remove the steering wheel using a steering wheel puller.

Preparation tool:
Steering wheel puller


PS-01412

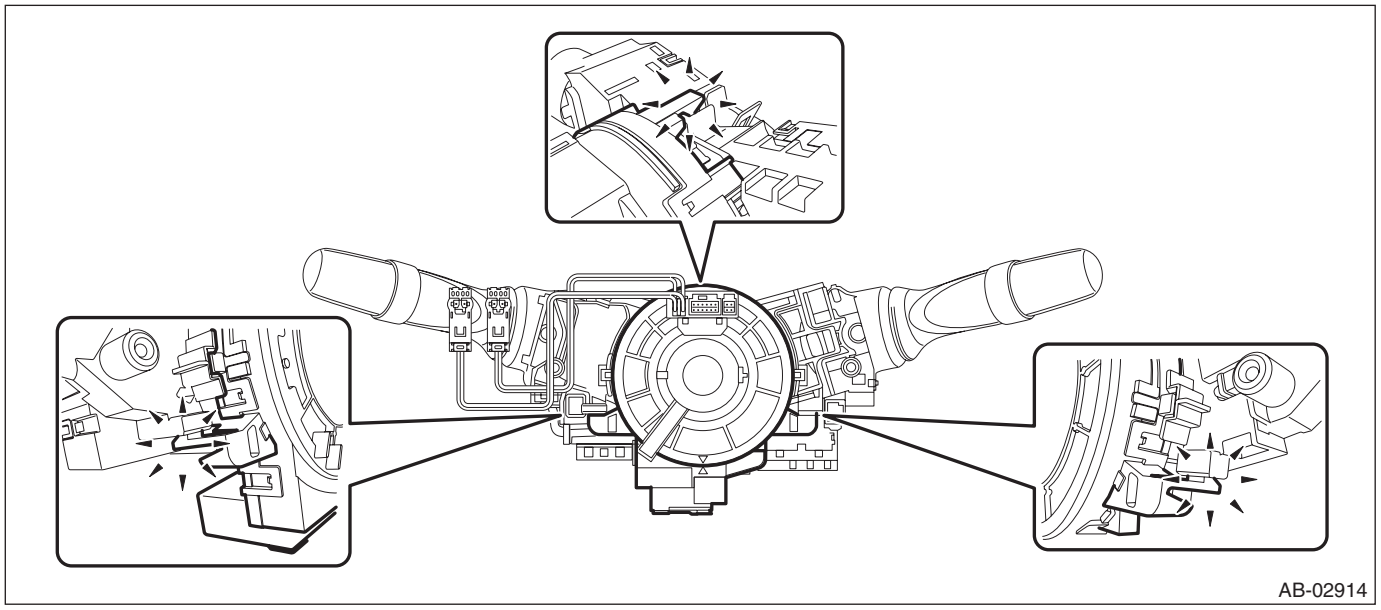
6) Remove the cover assembly - column.
(1) Remove the screws.
(2) Release the claw, and remove the cover assembly - column UPR and the cover assembly - column LWR.


LI-01207

7) Remove the steering roll connector.

CAUTION:
Make sure that the steering roll connector is not turned from the original position.

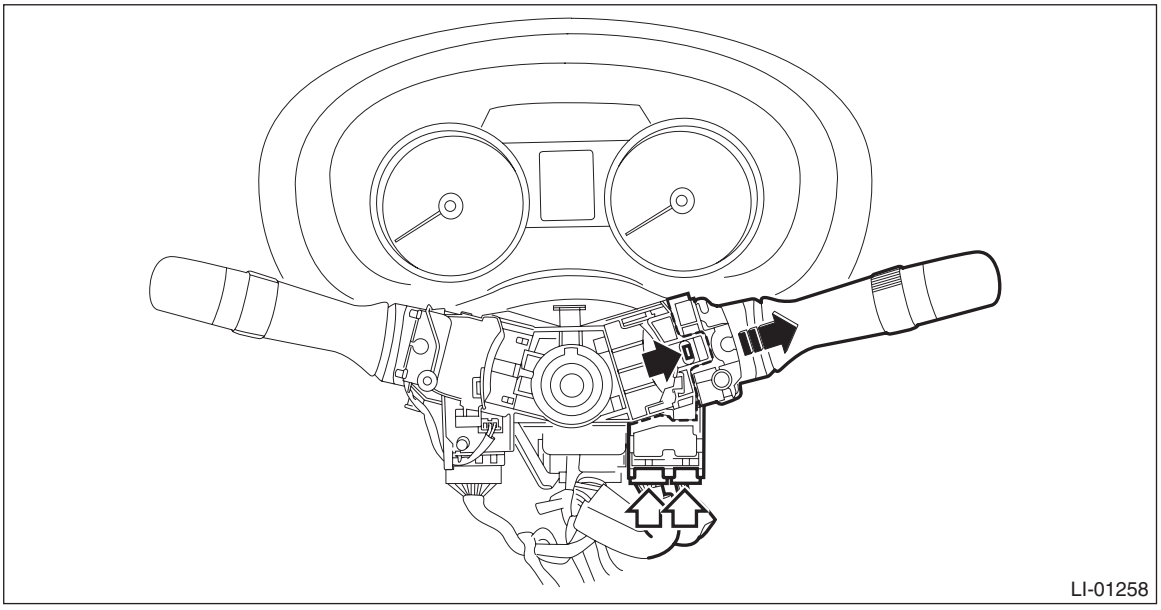
(1) Disconnect the connector under the steering roll connector.
(2) Release the claws and remove the steering roll connector.



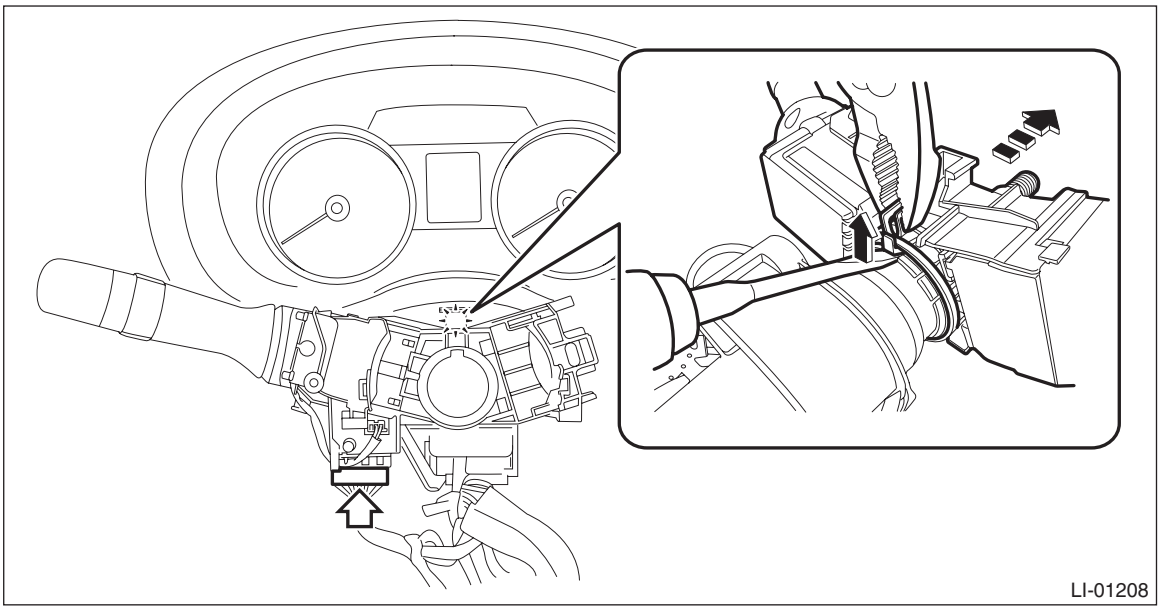
8) Remove the switch assembly - combination wiper select.

(1) Disconnect the connector.
(2) Release the claws, and pull out the switch assembly - combination wiper select.

CAUTION:
Do not press the claws with excessive force. They may be damaged.



9) Remove the switch assembly - combination turn dimmer.
(1) Disconnect the connector, and loosen the clamp to release the claws.
(2) Pull out the switch assembly - combination turn dimmer from the column assembly - steering.



B: INSTALLATION

CAUTION:
• Before handling the airbag module, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". <Ref. to AB-10, CAUTION, General Description.>
• Do not allow harness and connectors to interfere or get tangled up with other parts.
• If the steering wheel and steering angle sensor (steering roll connector) are removed, perform "VDC sensor midpoint setting mode" of the VDC. <Ref. to VDC-18, VDC SENSOR MIDPOINT SETTING MODE, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>
1) Before installing steering wheel, be sure to adjust the direction of steering roll connector with steering wheel. <Ref. to AB-105, ADJUSTMENT, Roll Connector.>
2) Install each part in the reverse order of removal.

NOTE:
Align the alignment marks on the steering wheel and the column assembly - steering.

Tightening torque:
Steering wheel: 39 N·m (3.98 kgf-m, 28.8 ft-lb)

Clearance:
Between cover assembly - column and steering wheel: 4 — 6 mm (0.16 — 0.24 in)

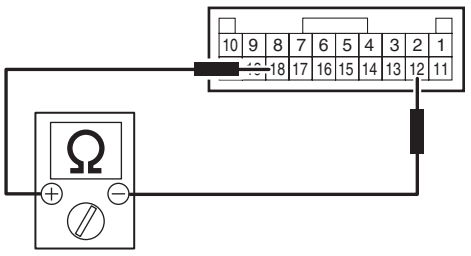
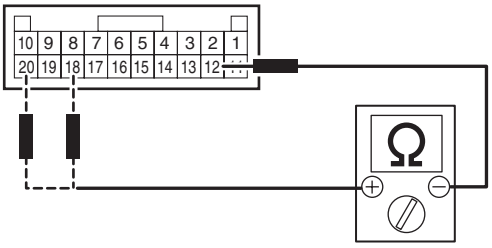
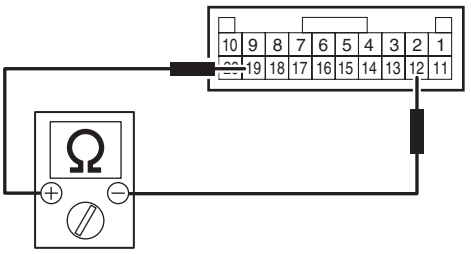
C: INSPECTION

Unit inspection

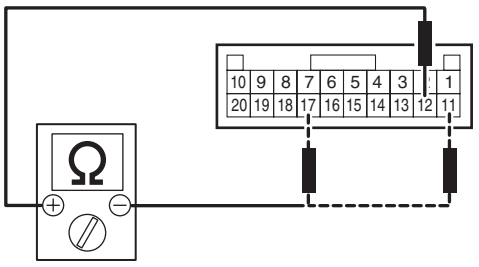
Preparation tool:
Circuit tester

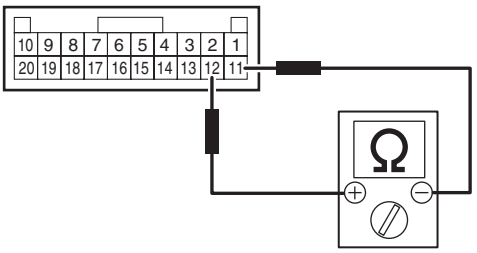
1) Check the resistance between switch terminals.

- Lighting switch

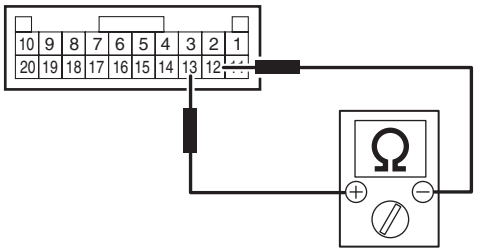
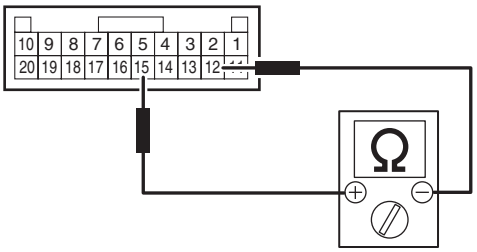
Terminal No.	Inspection conditions	Standard	Connection diagram
—	Switch OFF	1 MΩ or more	—
18 — 12	Switch 1 (TAIL)	Less than 1 Ω	 LI-01244
20, 18 — 12	Switch 2 (HEAD)	Less than 1 Ω	 LI-01245
19 — 12	Switch AUTO	Less than 1 Ω	 LI-01246

- Dimmer & passing switch

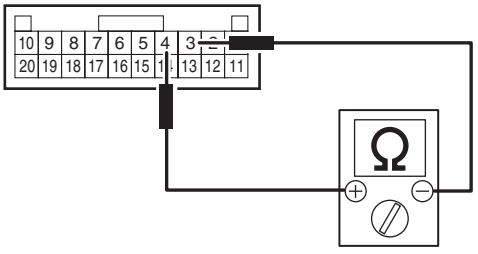
Terminal No.	Inspection conditions	Standard	Connection diagram
11, 17 — 12	Switch PASS	Less than 1 Ω	 LI-01247

Terminal No.	Inspection conditions	Standard	Connection diagram
11 — 12	Switch UP	Less than 1 Ω	 LI-01248

- Turn signal switch

Terminal No.	Inspection conditions	Standard	Connection diagram
13 — 12	Switch TURN (RH)	Less than 1 Ω	 LI-01249
15 — 12	Switch TURN (LH)	Less than 1 Ω	 LI-01250

- Front fog light switch

Terminal No.	Inspection conditions	Standard	Connection diagram
4 — 3	Switch OFF	1 MΩ or more	 LI-01251
	Switch ON	Less than 1 Ω	

2) Replace the switch assembly - combination turn dimmer if the inspection result is not within the standard value.

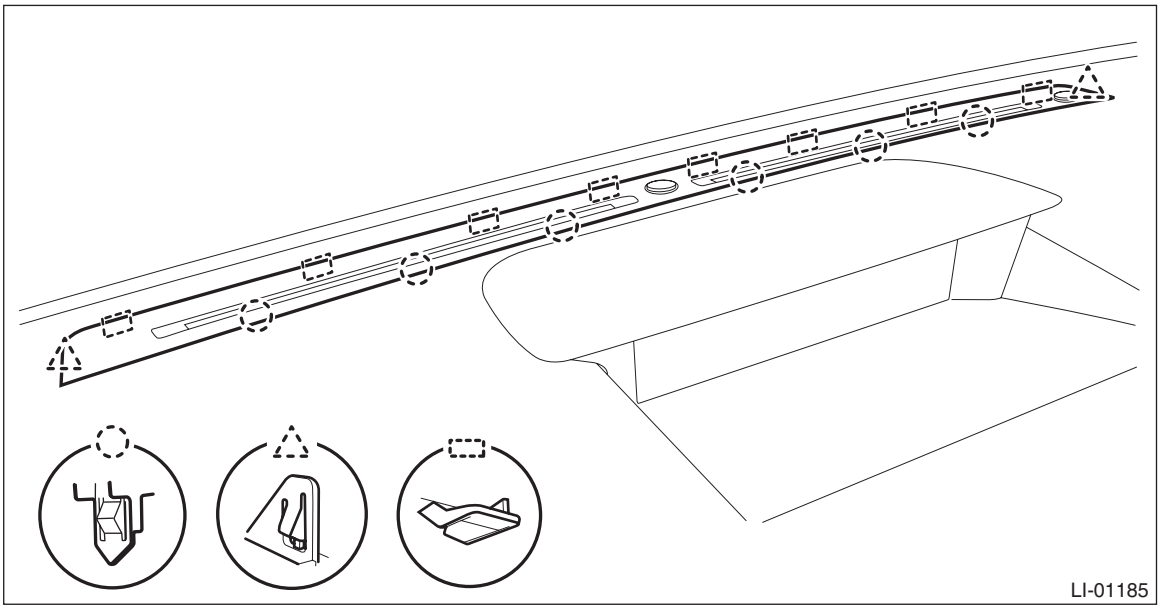
13.Light Control Sensor

A: REMOVAL

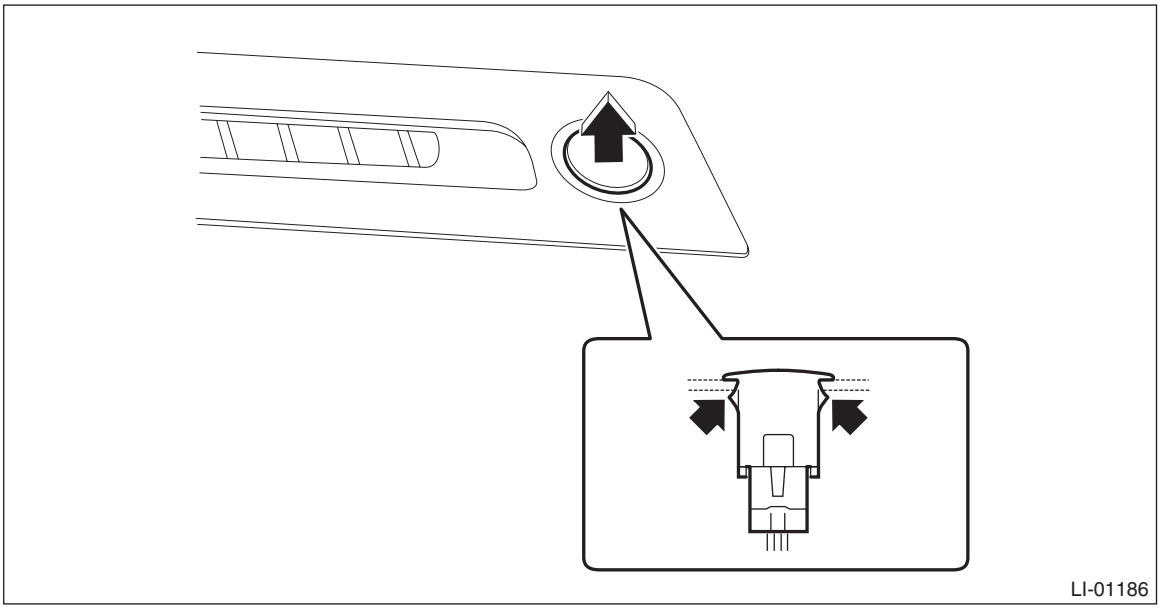
1) Disconnect the ground cable from battery.
2) Remove the sensor - automatic light.

CAUTION:
Be careful not to damage the sensors and interior trims when removing.

(1) Release the connector and claws, and remove the panel COMPL - instrument UPR.



(2) Release the claws, and remove the sensor - automatic light from the panel COMPL - instrument UPR.



B: INSTALLATION

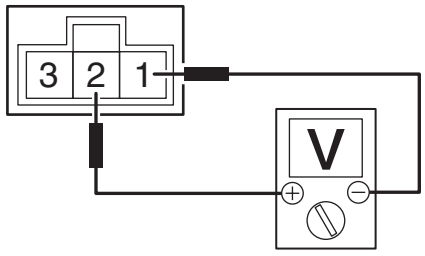
Install each part in the reverse order of removal.

C: INSPECTION

Unit inspection

Preparation tool:
Circuit tester

1) Turn the ignition switch to ON.
2) Set the lighting switch to AUTO position.
3) Check the voltage between the sensor terminals.

Terminal No.	Inspection conditions	Standard	Connection diagram
2 (+) — 1 (–)	Measure the voltage when the area around the sensor - automatic light, which was dark, becomes bright.	Dark condition: Approx. 0.6 V or less Bright condition: Approx. 3.0 V or more	 LI-01280

4) Replace the sensor - automatic light if the inspection result is not within the standard value.

14.Headlight Assembly

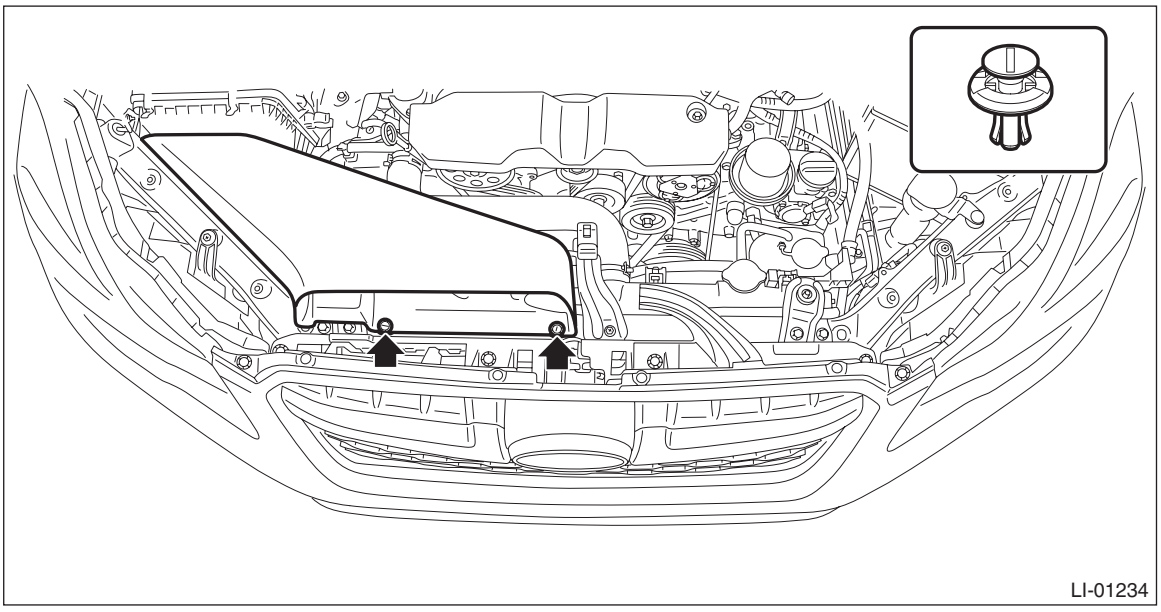
A: REMOVAL

1. WHEN REMOVING RH SIDE

WARNING:
Because the headlight system uses high voltage, be careful not to perform work with wet hands. There is a possibility of electrical shock.

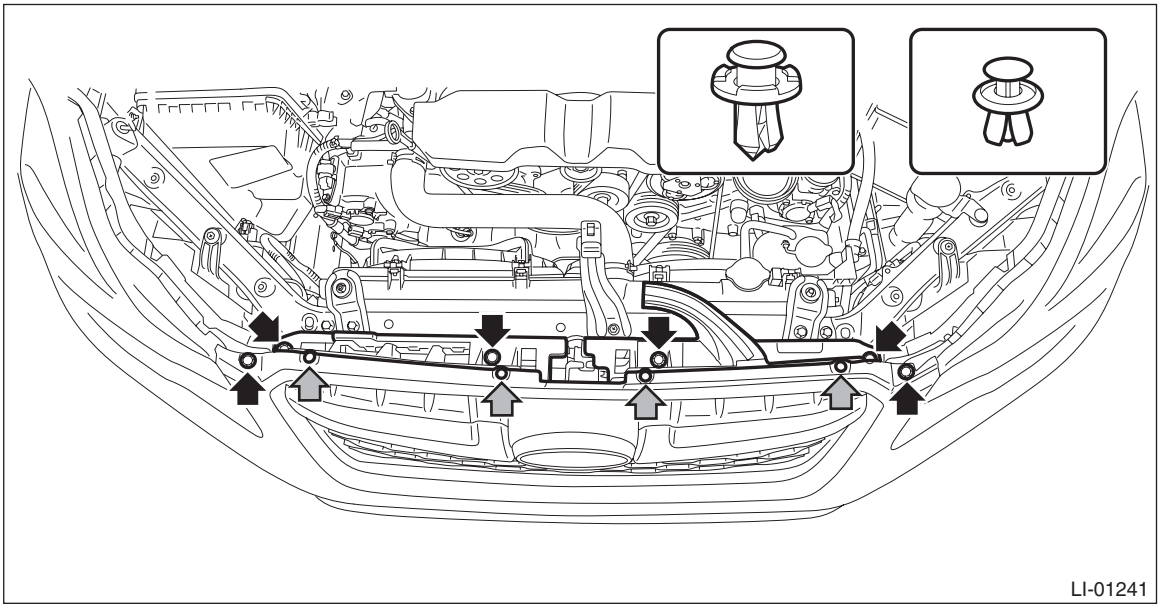
CAUTION:
The HID type uses very high voltages for the lighting circuit. Make sure that the power supply is turned OFF before working.

1) Disconnect the ground cable from battery.
2) Remove the clips and remove the air intake duct.



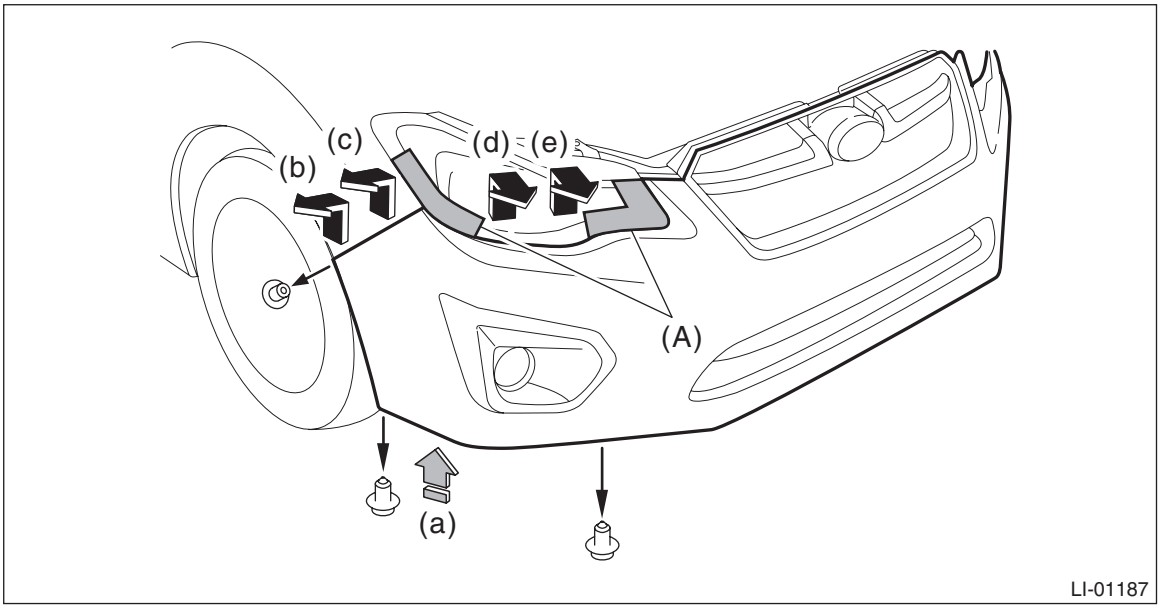
3) Remove the clip, and remove the bracket - grille.

CAUTION:
To prevent damage to the bracket - grille, make sure to remove all clips.



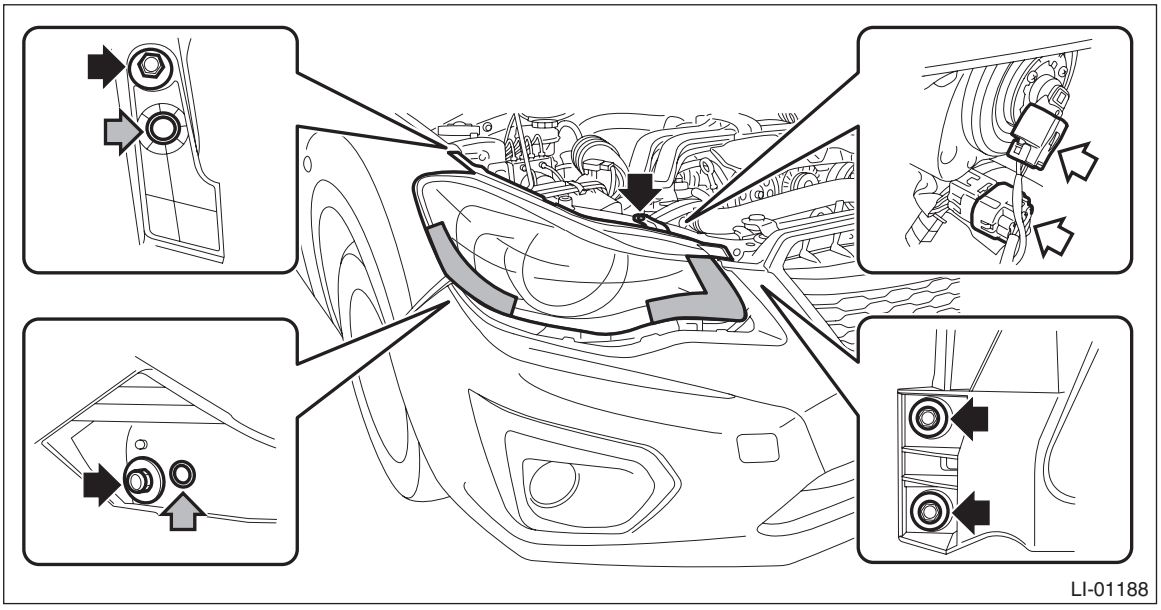
4) Detach the flange section on the right side of the bumper face - front.
(1) Apply protective tape (A) to the light assembly - head.
(2) Release the clips, and while pushing up the lower side (a) of the bumper face - front, remove from (b) to (e).

CAUTION:
Do not pull forcibly. It may damage the flange sections of the bumper face - front.



5) Remove the light assembly - head.

CAUTION:
Be careful not to damage the light assembly - head, fender COMPL - front, and bumper face - front.
(1) Disconnect connectors.
(2) Remove the bolts and clips, and remove the light assembly - head.



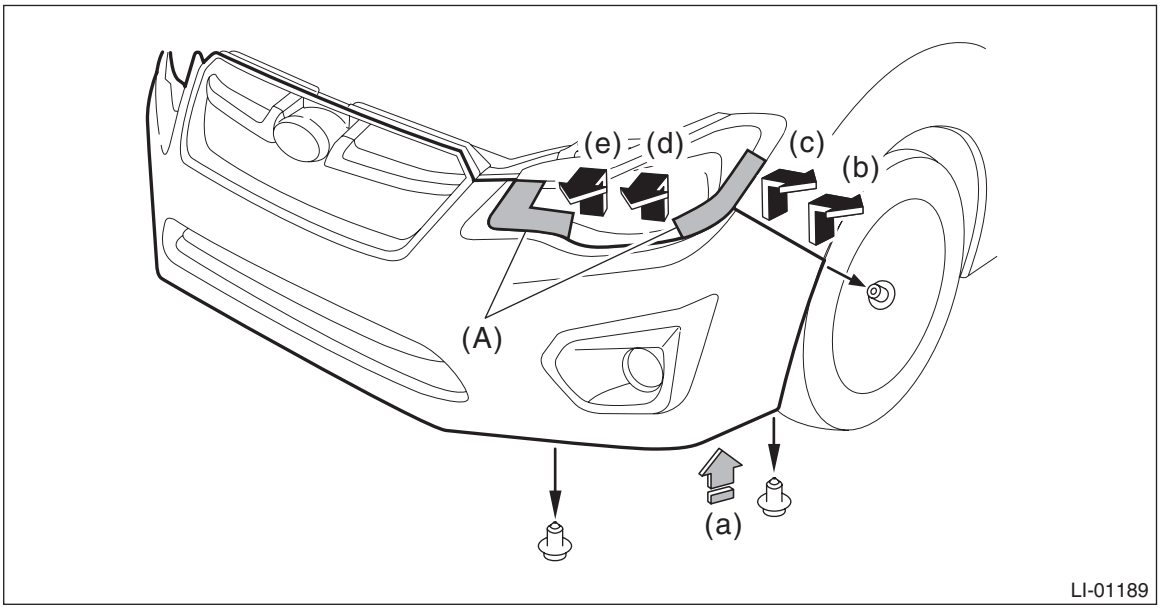
2. WHEN REMOVING LH SIDE

WARNING:
Because the headlight system uses high voltage, be careful not to perform work with wet hands. There is a possibility of electrical shock.

CAUTION:
The HID type uses very high voltages for the lighting circuit. Make sure that the power supply is turned OFF before working.

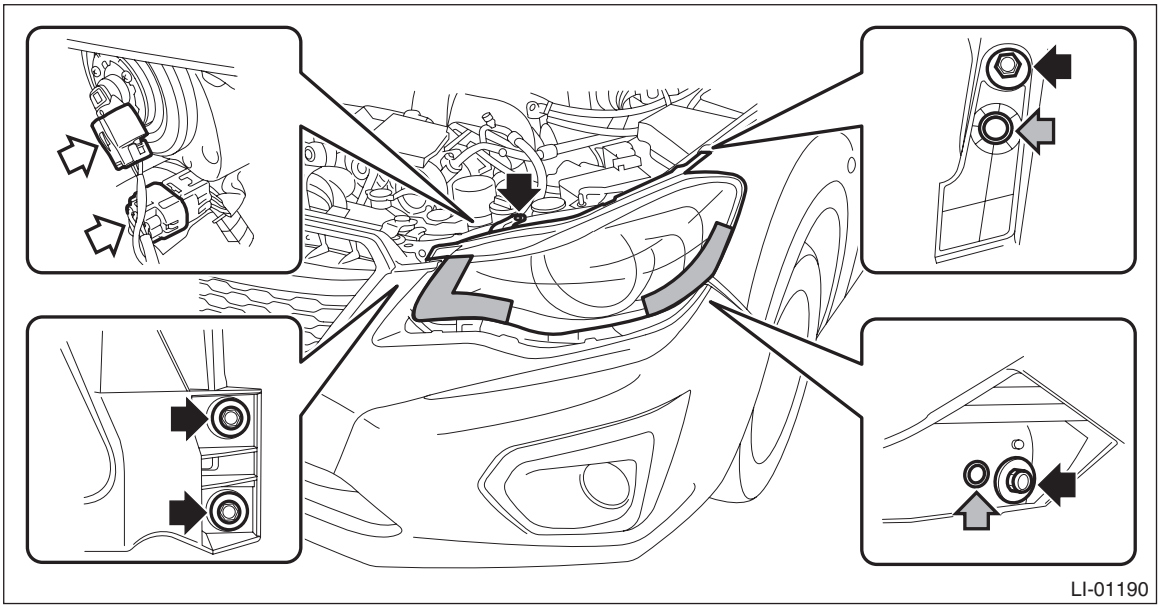
1) Disconnect the ground cable from battery.
2) Detach the flange section on the bumper face - front left side.
   (1) Apply protective tape (A) to the light assembly - head.
   (2) Release the clips, and while pushing up the lower side (a) of the bumper face - front, remove in the order from (b) to (e).

CAUTION:
Do not pull forcibly. It may damage the flange sections of the bumper face - front.



3) Remove the light assembly - head.

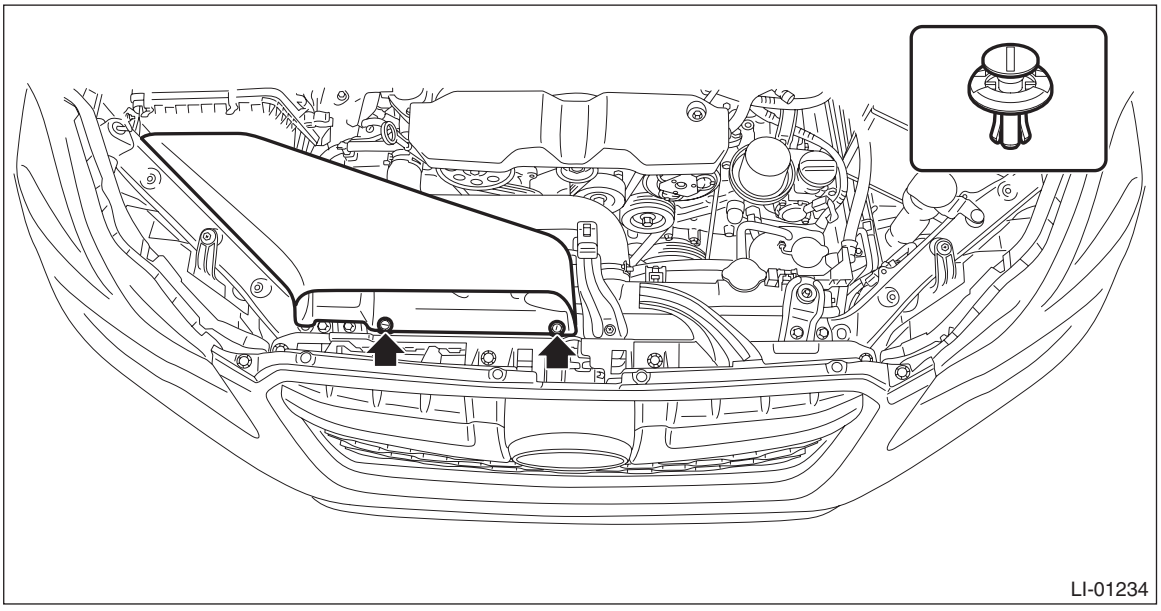
CAUTION:
Be careful not to damage the light assembly - head, fender COMPL - front, and bumper face - front.
(1) Disconnect connectors.
(2) Remove the bolts and clips, and remove the light assembly - head.



3. WHEN REMOVING BOTH SIDE

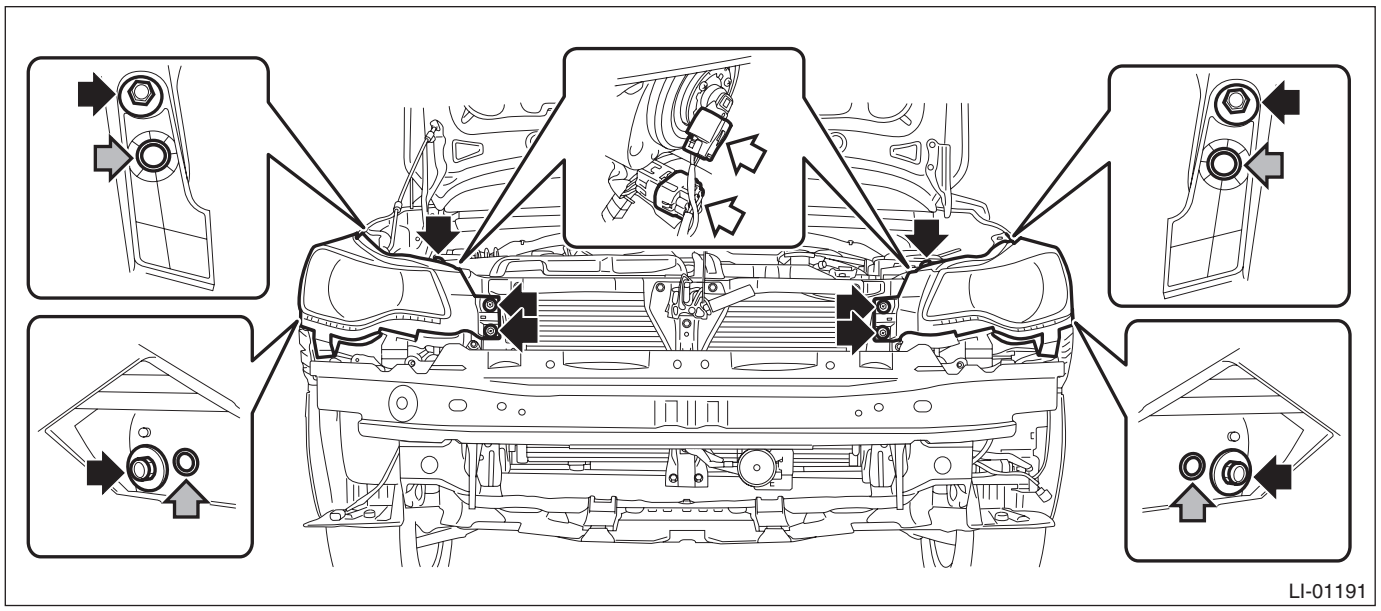
WARNING:
Because the headlight system uses high voltage, be careful not to perform work with wet hands. There is a possibility of electrical shock.

CAUTION:
The HID type uses very high voltages for the lighting circuit. Make sure that the power supply is turned OFF before working.
1) Disconnect the ground cable from battery.
2) Remove the clips and remove the air intake duct.



3) Remove the bumper face - front. <Ref. to EI-31, REMOVAL, Front Bumper.>

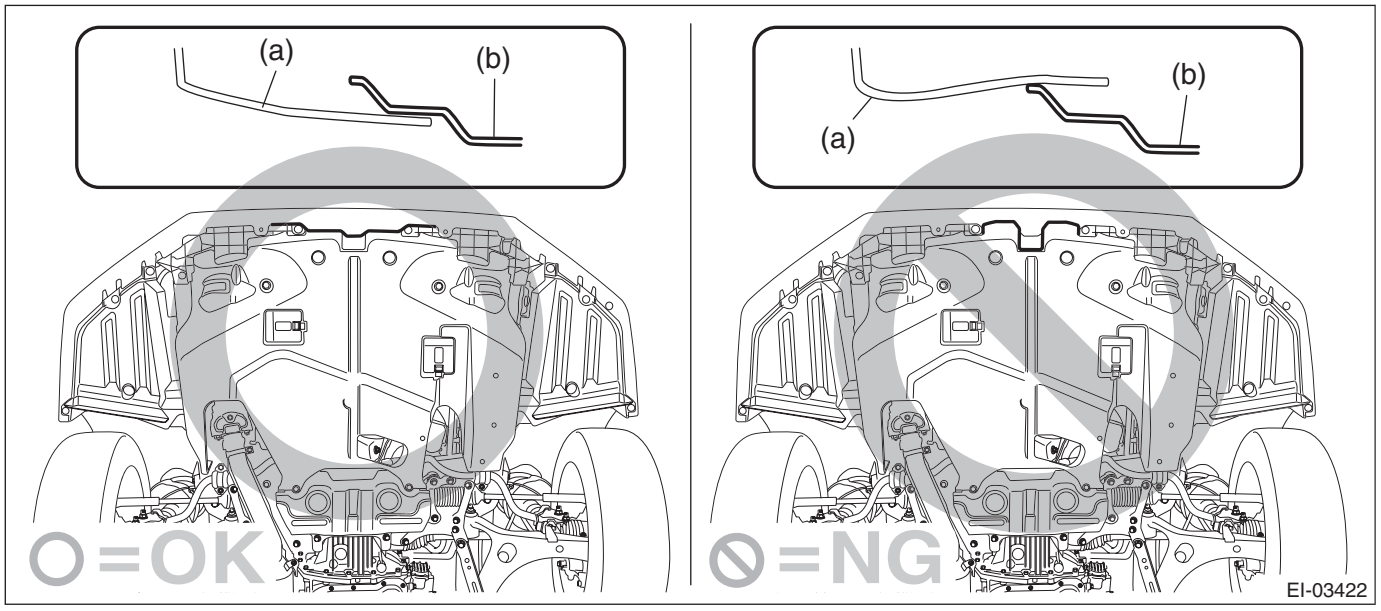
4) Remove the light assembly - head.
(1) Disconnect connectors.
(2) Remove the bolts and clips, and remove the light assembly - head.



B: INSTALLATION

1) Install each part in the reverse order of removal.
2) Secure the flange section of the bumper face - front to the bracket - front bumper side.

CAUTION:
Install the bumper face - front so that the front end of the under cover (b) comes inside the bumper face - front (a).



Tightening torque:
Light assembly - head: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

3) Adjust the headlight beam and fog light beam.
• Adjust the headlight beam. <Ref. to LI-35, HEADLIGHT BEAM ADJUSTMENT, ADJUSTMENT, Headlight Assembly.>
• Adjust the fog light beam. (Model with fog light) <Ref. to LI-55, FOG LIGHT AIMING, ADJUSTMENT, Front Fog Light Assembly.>

C: DISASSEMBLY

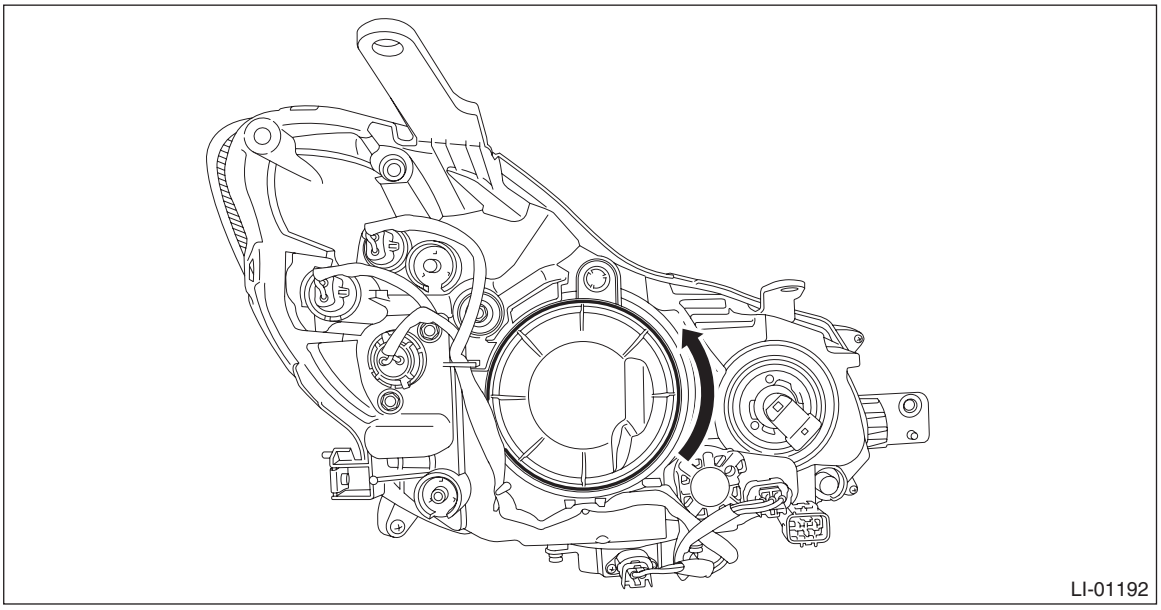
1. HID HEADLIGHT BALLAST

WARNING:
Because the headlight system uses high voltage, be careful not to perform work with wet hands. There is a possibility of electrical shock.

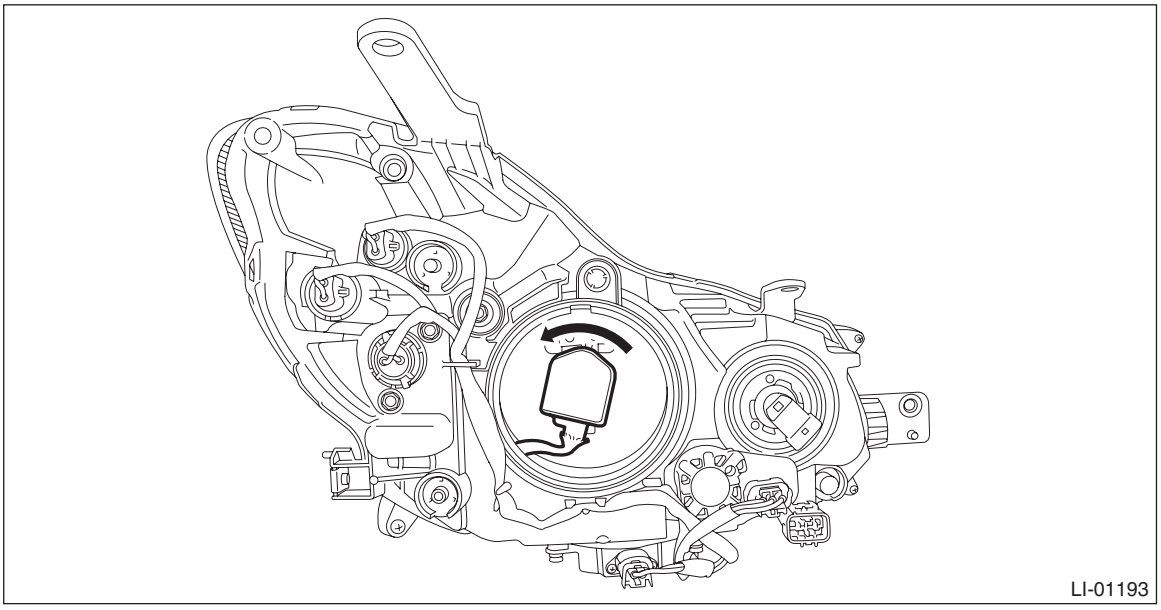
CAUTION:
• The HID type uses very high voltages for the lighting circuit. Make sure that the power supply is turned OFF before working.
• Do not leave the light assembly - head without the ballast - headlight for a long time. Dust, moisture, etc. entering the light assembly - head may affect its performance.

1) Disconnect the ground cable from battery.
2) Remove the light assembly - head.
- RH side: <Ref. to LI-28, WHEN REMOVING RH SIDE, REMOVAL, Headlight Assembly.>
- LH side: <Ref. to LI-30, WHEN REMOVING LH SIDE, REMOVAL, Headlight Assembly.>
- Both sides: <Ref. to LI-31, WHEN REMOVING BOTH SIDE, REMOVAL, Headlight Assembly.>

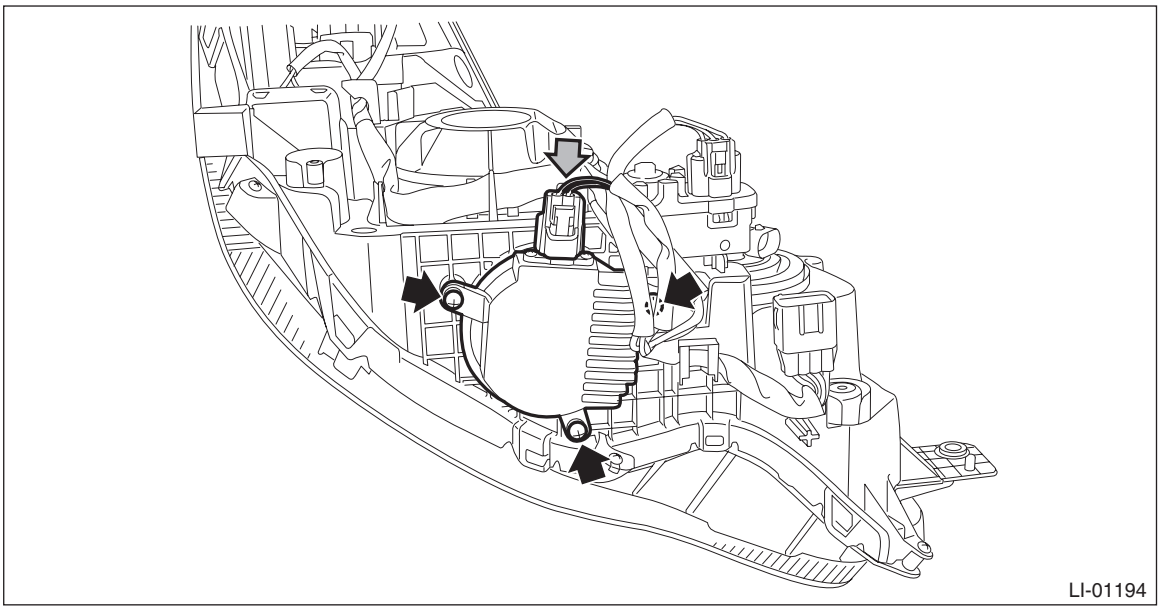
3) Remove the cover - headlight.


LI-01192

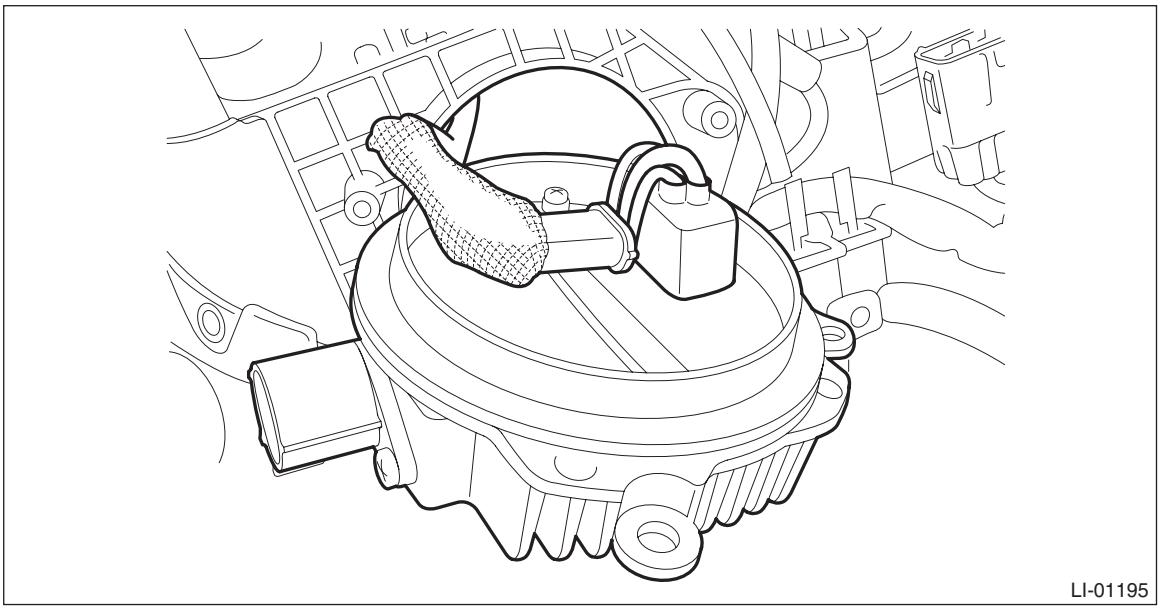
4) Disconnect the bulb socket.


LI-01193

5) Remove the ballast - headlight.
(1) Disconnect the connector.
(2) Remove the screws and remove the ballast - headlight.


LI-01194

(3) Guiding the bulb socket through the gap between housing and reflector, pull out the ballast - headlight.


LI-01195

D: ASSEMBLY

1. HID HEADLIGHT BALLAST

CAUTION:
- **When installing the ballast - headlight, be sure to install the gasket.**
- **After installing the ballast to the vehicle, be sure to perform beam adjustment.**

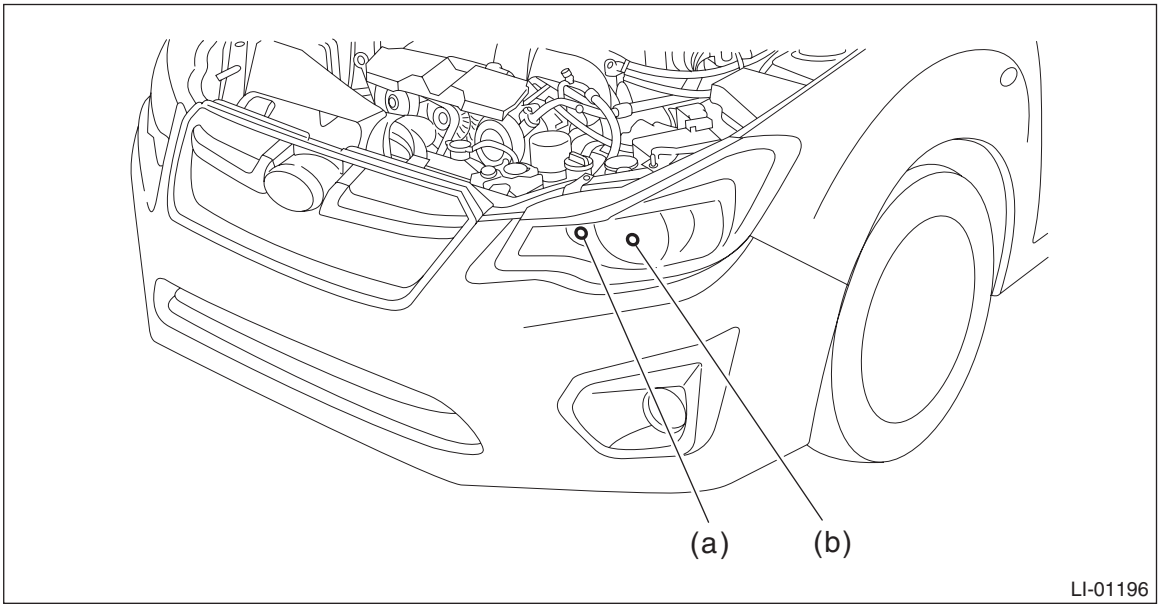
Assemble each part in the reverse order of disassembly.

Tightening torque:
Light assembly - head: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

E: ADJUSTMENT

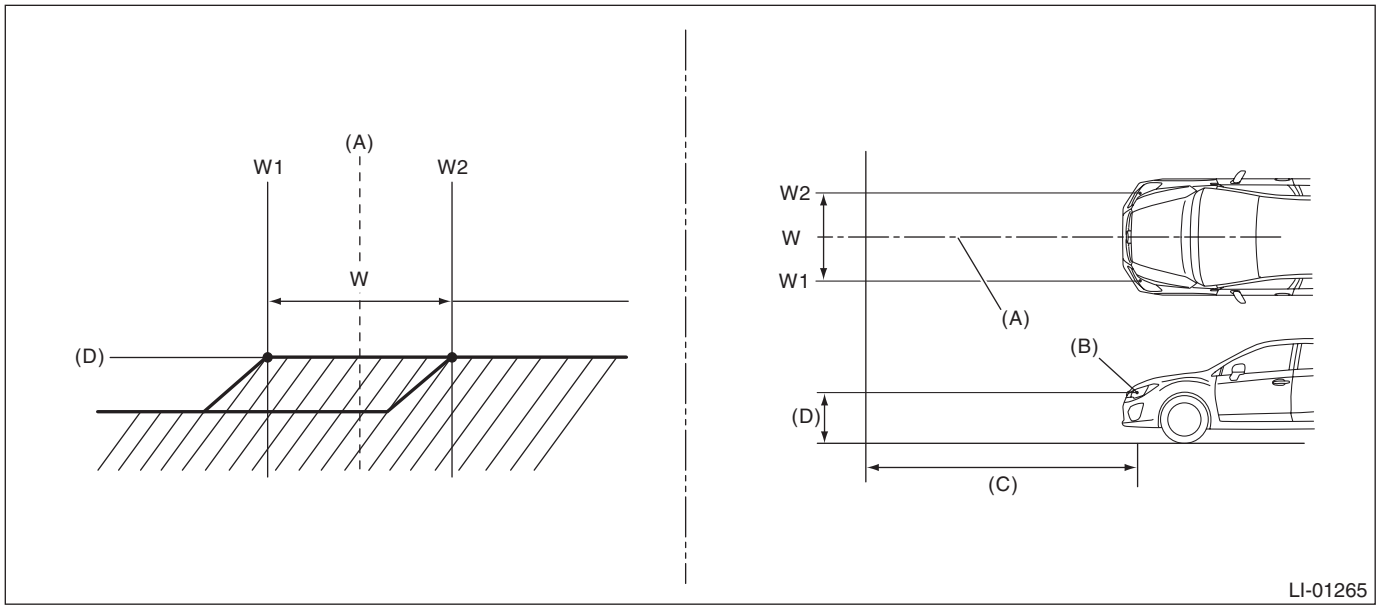
1. HEADLIGHT BEAM ADJUSTMENT

CAUTION:
• Turn off the light before adjusting the beam level of the light assembly - head. If it is necessary to inspect the beam level, do not keep the light on for two minutes or more.
• When blocking the light that come from outside, use a closure plate or the like.
Do not apply tape to the lens or cover it with a cloth. It may raise the temperature in the light and cause deformation/bubble formations of the plastic lens.
1) Before checking the beam level of the light assembly - head, be sure of the following:
• The area around the light assembly - head has not sustained any scratches, damage or other type of deformation.
• Vehicle is parked on a level surface.
• The inflation pressure of tires is correct.
• Vehicle's fuel tank is fully filled.
2) Bounce the vehicle several times to normalize the suspension.
3) Make certain that someone is seated in the driver's seat.
4) Measure the distance between the low beam bulb centers and the height of the bulb center.



(a) High beam (b) Low beam

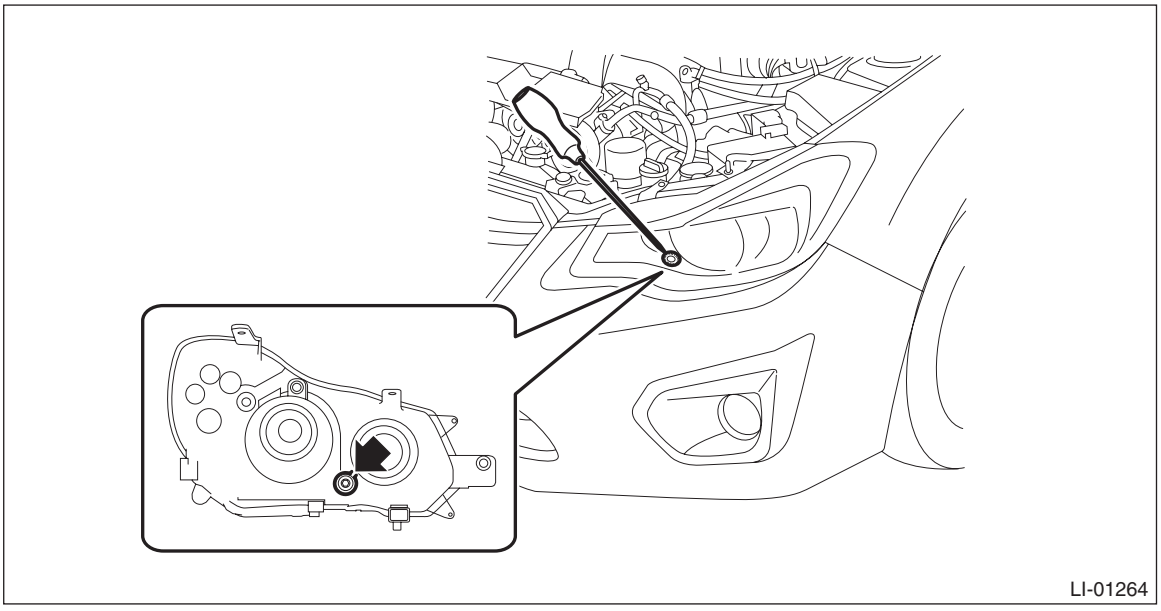
5) Adjust the beam level of the light assembly - head.
(1) Place the vehicle with the front end facing to the measurement panel, then illuminate the low beam.



(A) Vehicle center
(B) Bulb center marking
(C) 3 m (10 ft)
(D) Height of headlight center

W mm (in)
1,281 (50.44)

(2) Adjust the low beam by turning the aiming screw.



15.Headlight Bulb

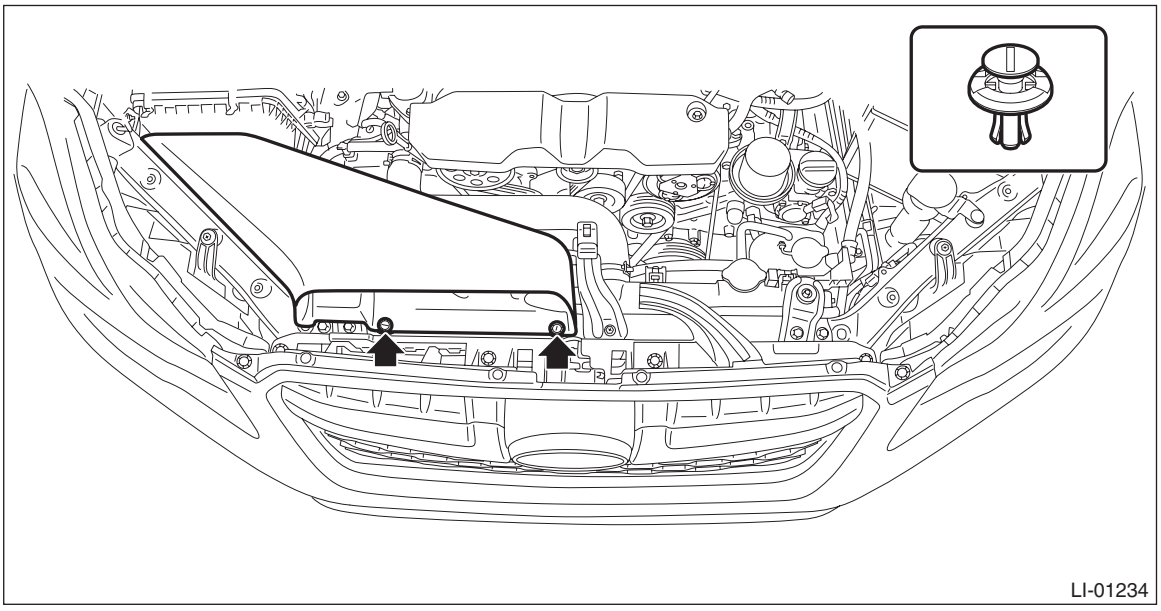
A: REMOVAL

1. HIGH BEAM

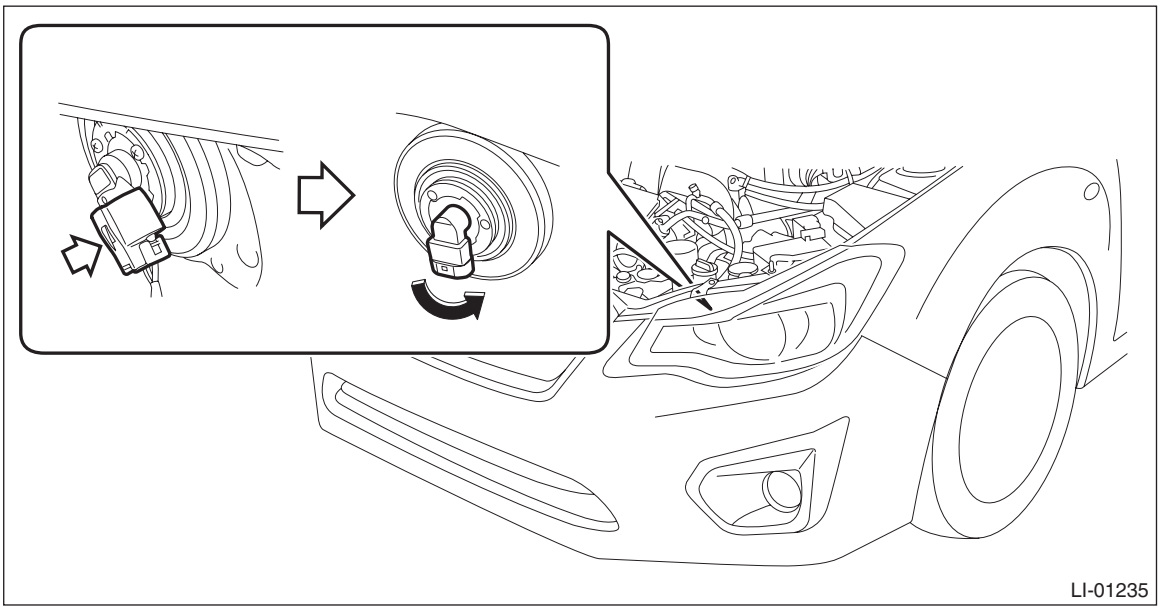
WARNING:
Because the headlight system uses high voltage, be careful not to perform work with wet hands. There is a possibility of electrical shock.

CAUTION:
• Because the halogen bulb operates at a high temperature, dirt and oil on the bulb surface reduces the bulb's service life. Hold the flange portion when replacing the bulb. Never touch the glass portion.
• Do not leave the light assembly - head without the bulb for a long time. Dust, moisture, etc. entering the light may affect its performance.

1) Disconnect the ground cable from battery.
2) Remove the clips and remove the air intake duct. (When removing the high beam bulb RH)



3) Disconnect the connector and remove the high beam bulb.

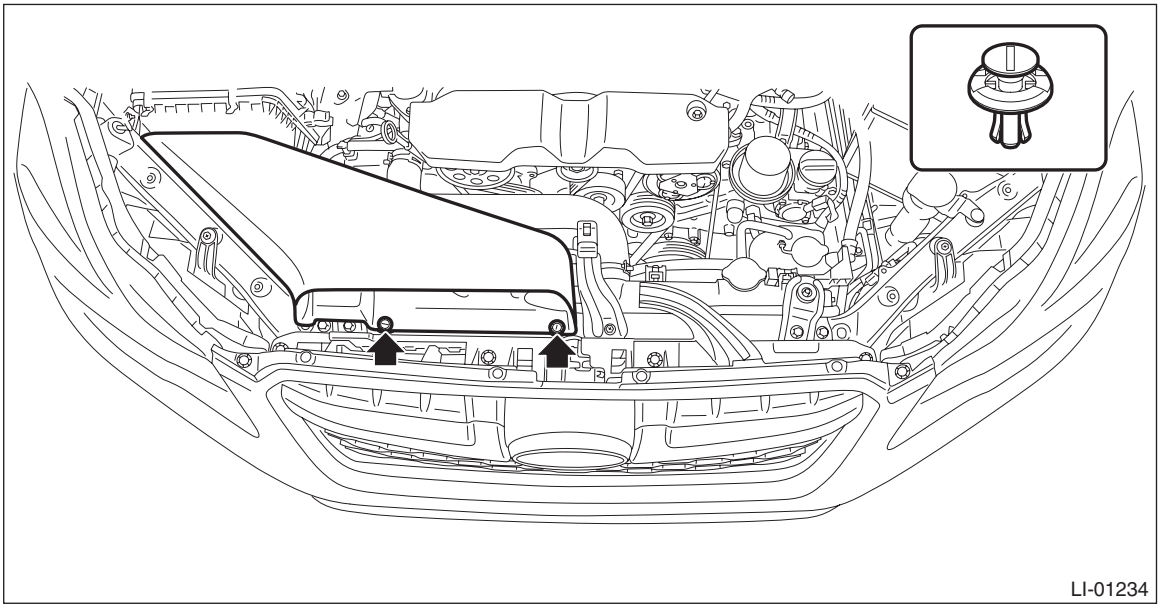


2. HALOGEN TYPE LOW BEAM

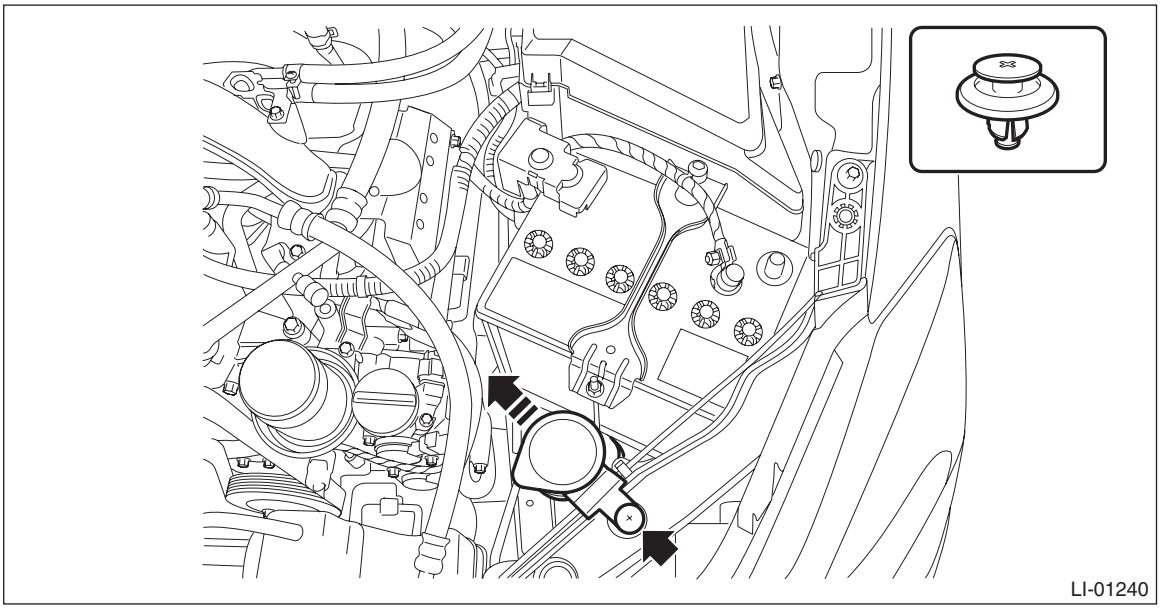
WARNING:
Because the headlight system uses high voltage, be careful not to perform work with wet hands. There is a possibility of electrical shock.

CAUTION:
• Because the halogen bulb operates at a high temperature, dirt and oil on the bulb surface reduces the bulb's service life. Hold the flange portion when replacing the bulb. Never touch the glass portion.
• Do not leave the light assembly - head without the bulb for a long time. Dust, moisture, etc. entering the light may affect its performance.

1) Disconnect the ground cable from battery.
2) Remove the clips and remove the air intake duct. (When removing the low beam bulb RH)

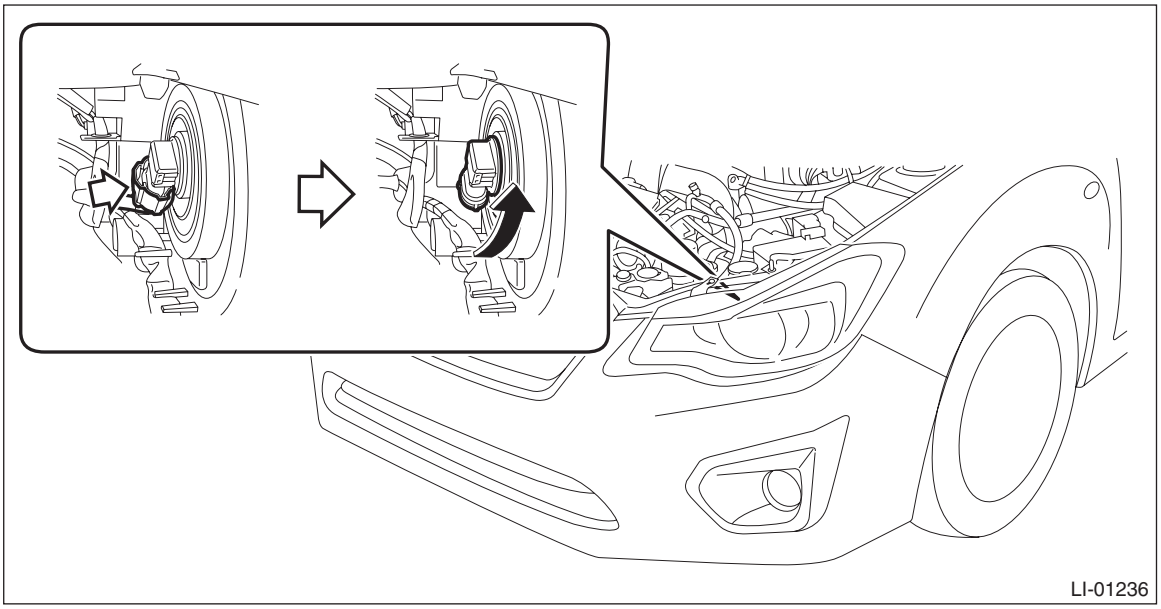


3) Tilt the filler neck of the tank - washer front. (When removing the low beam bulb LH)



4) Disconnect the connector and remove the low beam bulb.

CAUTION:
Make sure to check if any bulb O-ring is remained on the housing side as this may sometimes happen.



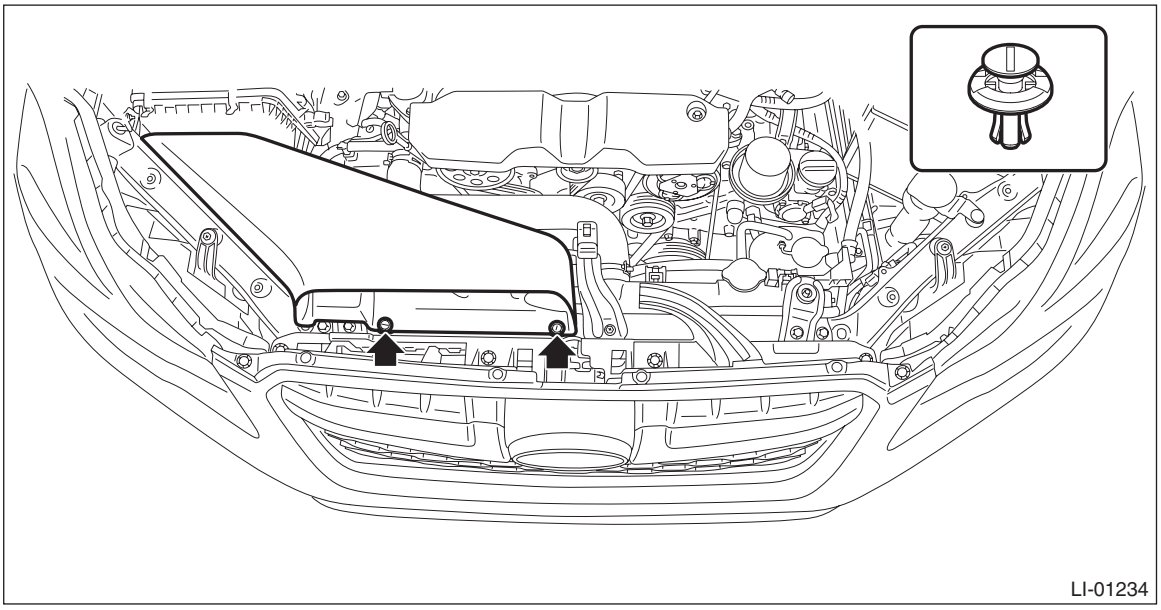
3. HID TYPE LOW BEAM

When removing RH side

WARNING:
Because the headlight system uses high voltage, be careful not to perform work with wet hands. There is a possibility of electrical shock.

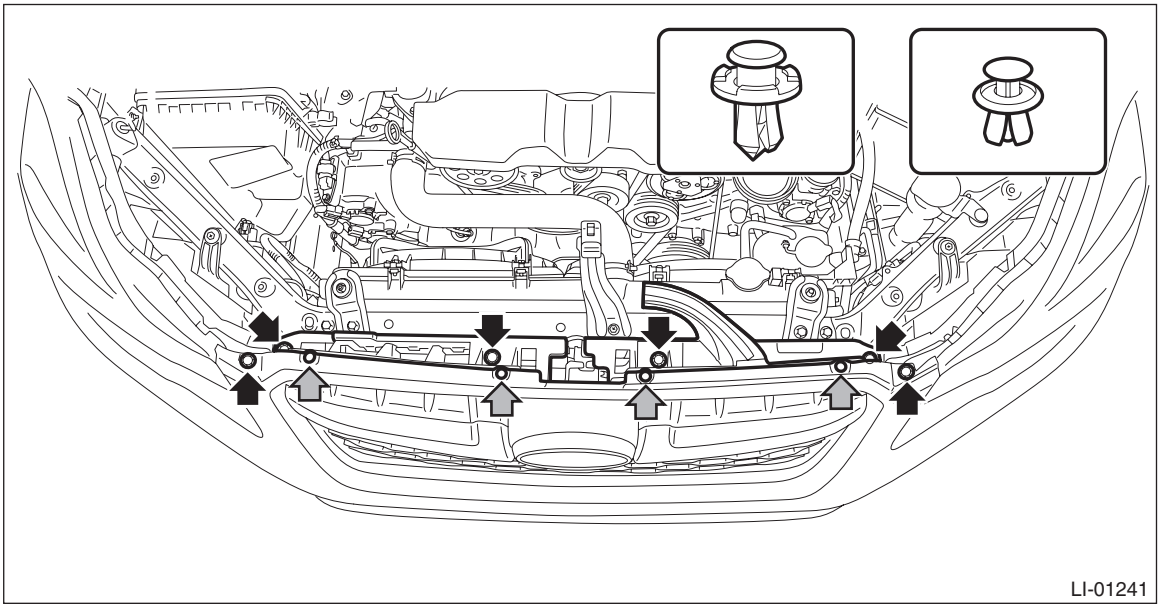
CAUTION:
• Because the lighting circuit uses high voltage, be sure to confirm that the power supply is turned off before operation.
• When replacing bulb, hold the flange area. Be careful not to touch the glass area.
• Do not leave the light assembly - head without the bulb and cover - headlight for a long time. Dust, moisture, etc. entering the light may affect its performance.

1) Disconnect the ground cable from battery.
2) Remove the clips and remove the air intake duct.



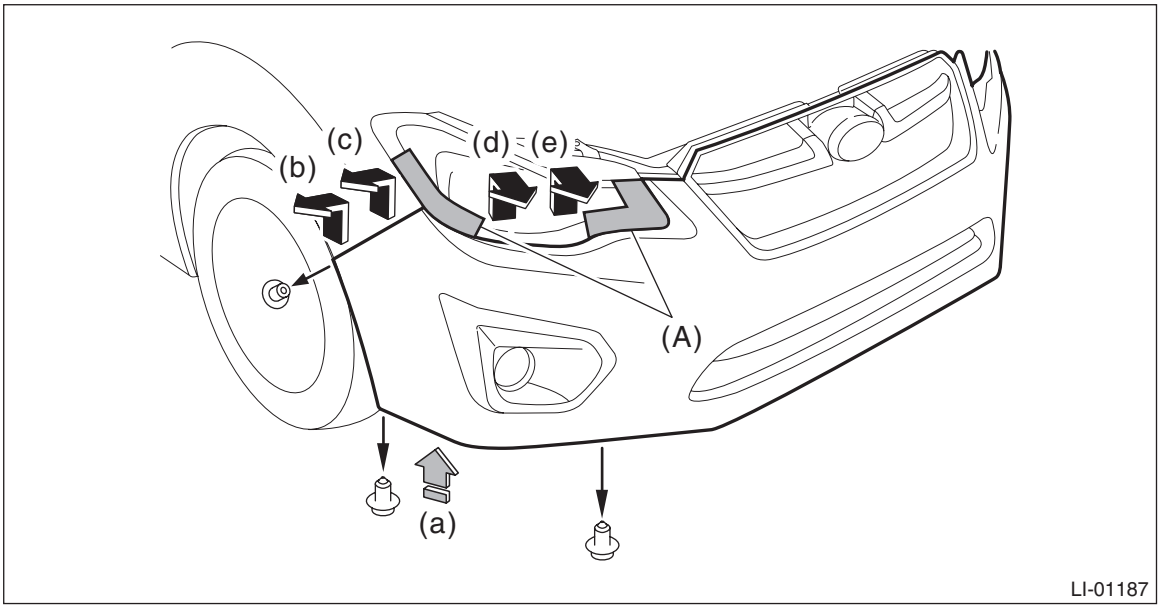
3) Remove the clip, and remove the bracket - grille.

CAUTION:
To prevent damage to the bracket - grille, make sure to remove all clips.



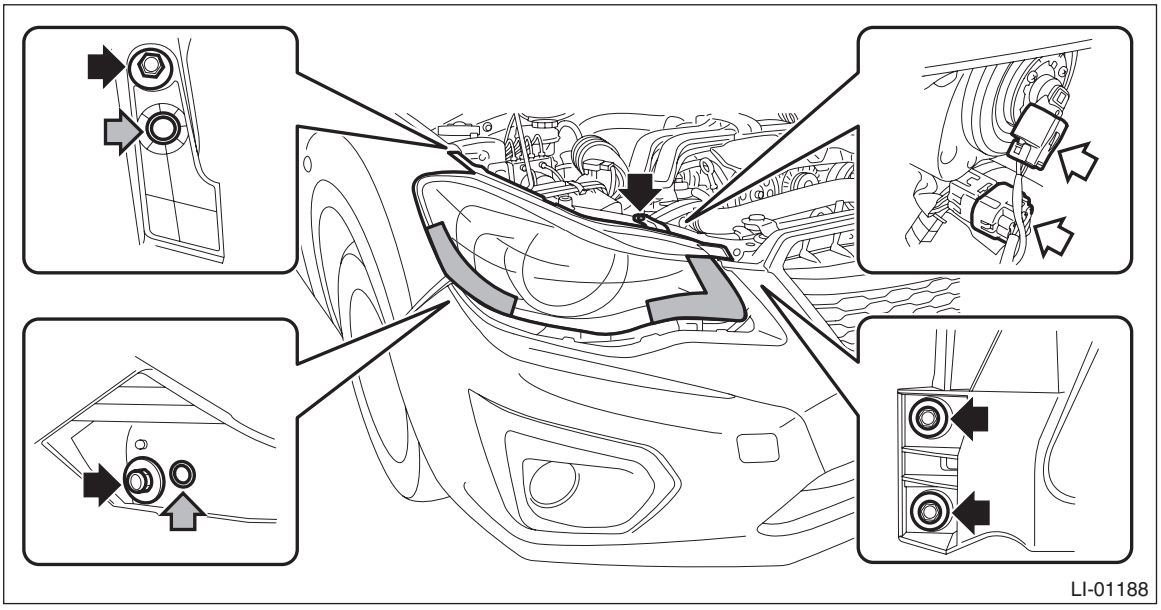
4) Detach the flange section on the right side of the bumper face - front.
(1) Apply protective tape (A) to the light assembly - head.
(2) Release the clips, and while pushing up the lower side (a) of the bumper face - front, remove from (b) to (e).

CAUTION:
Do not pull forcibly. It may damage the flange sections of the bumper face - front.

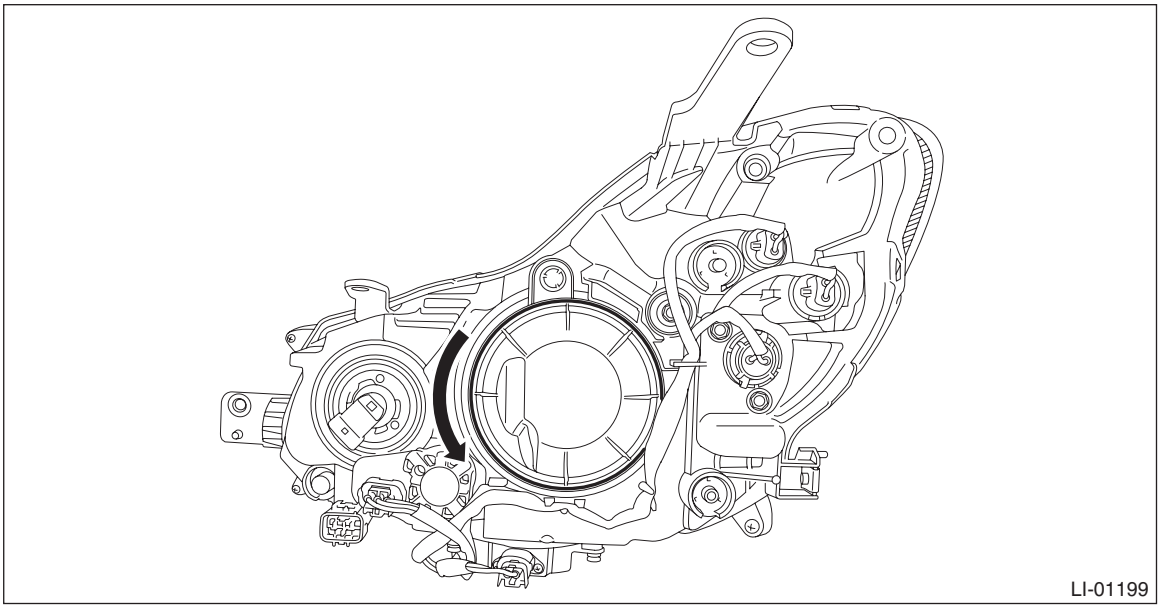


5) Remove the light assembly - head.

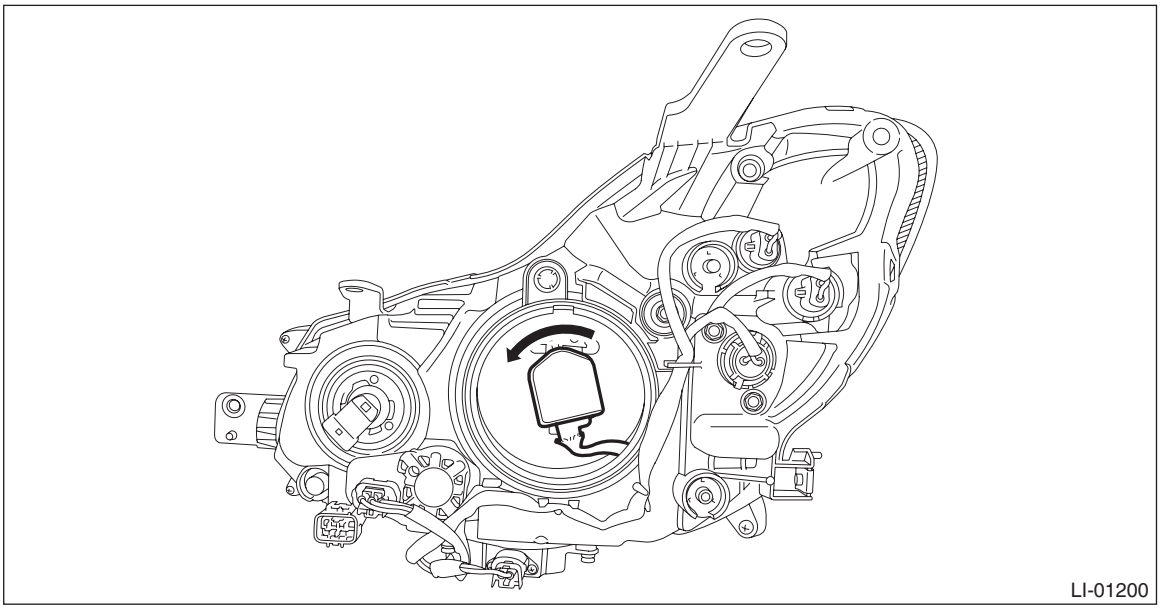
CAUTION:
Be careful not to damage the light assembly - head, fender COMPL - front, and bumper face - front.
(1) Disconnect connectors.
(2) Remove the bolts and clips, and remove the light assembly - head.



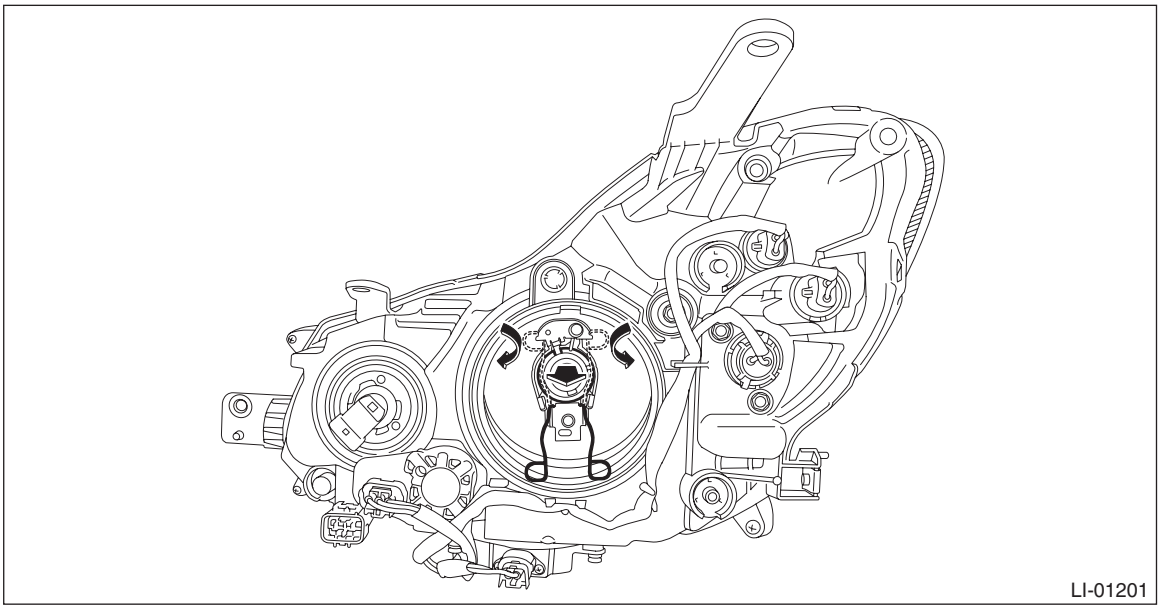
6) Remove the low beam bulb.
(1) Remove the cover - headlight.


LI-01199

(2) Remove the valve socket.


LI-01200

(3) Unlock the bulb spring, and remove the low beam bulb.

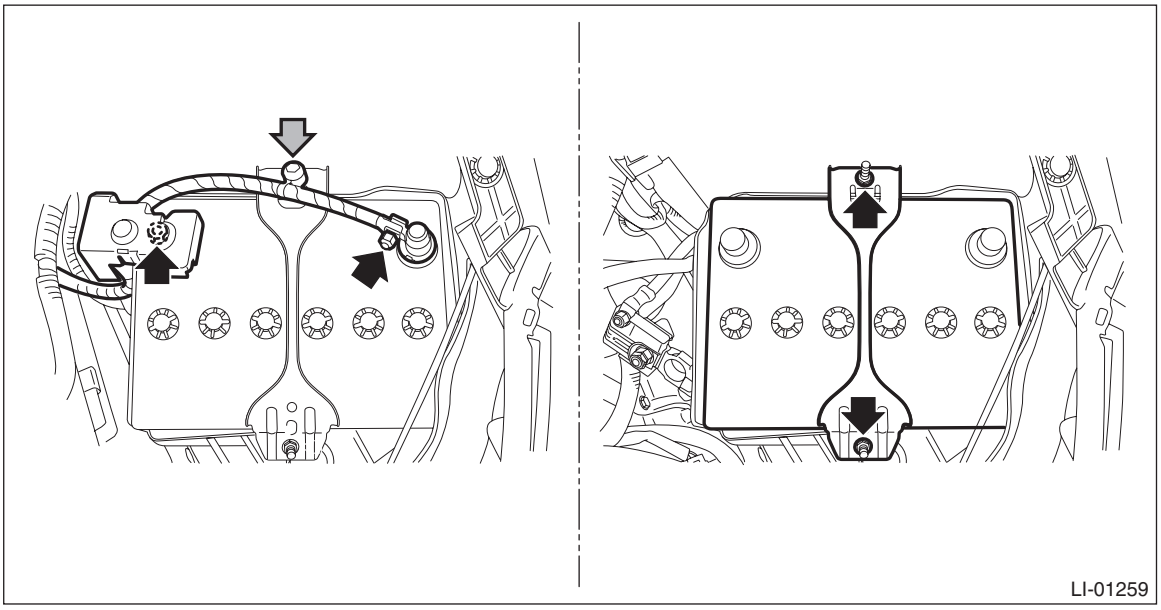


When removing LH side

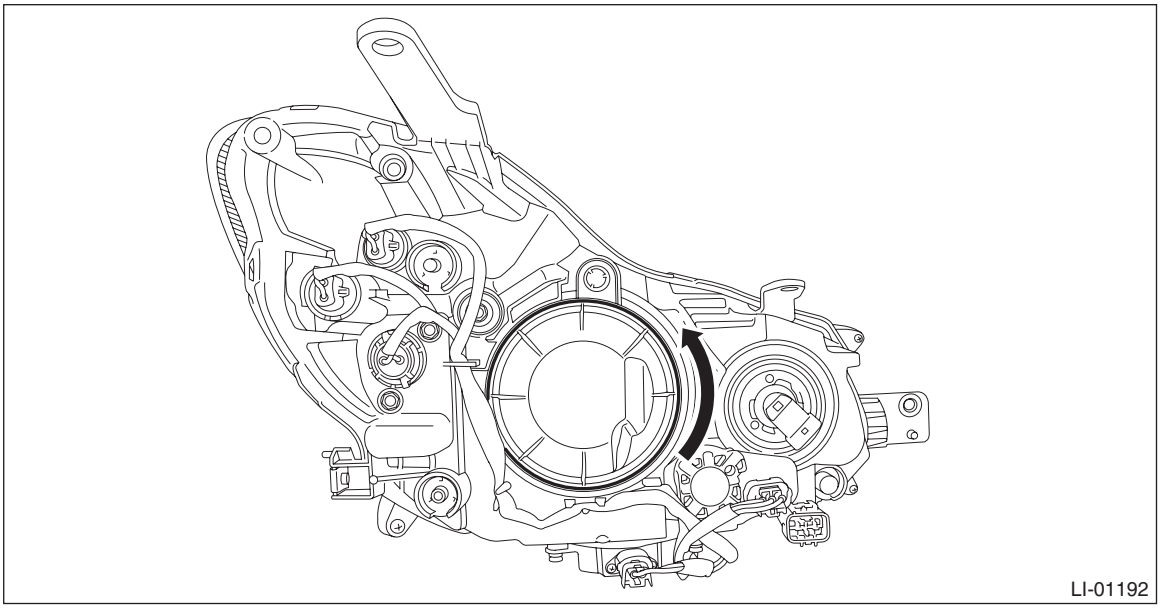
WARNING:
Because the headlight system uses high voltage, be careful not to perform work with wet hands. There is a possibility of electrical shock.

CAUTION:
• Because the lighting circuit uses high voltage, be sure to confirm that the power supply is turned off before operation.
• When replacing bulb, hold the flange area. Be careful not to touch the glass area.
• Do not leave the light assembly - head without the bulb and cover - headlight for a long time. Dust, moisture, etc. entering the light may affect its performance.

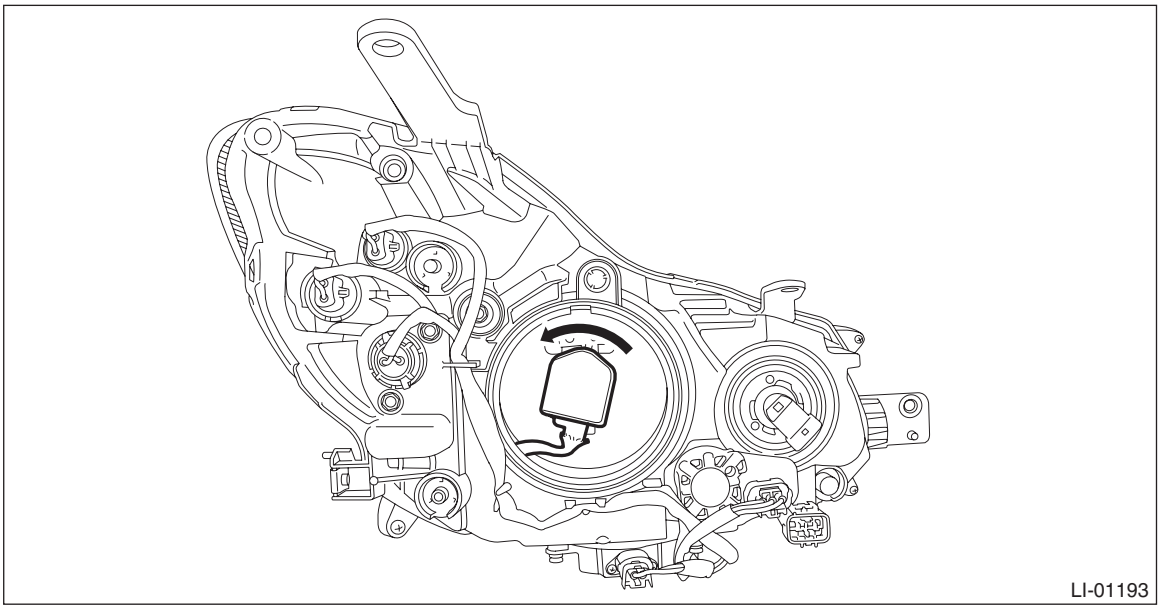
1) Remove the battery.
(1) Disconnect the negative terminal of battery, and then the positive terminal, and remove the battery cable holder from the battery rod.
(2) Remove the flange nut from battery rod and remove battery holder.



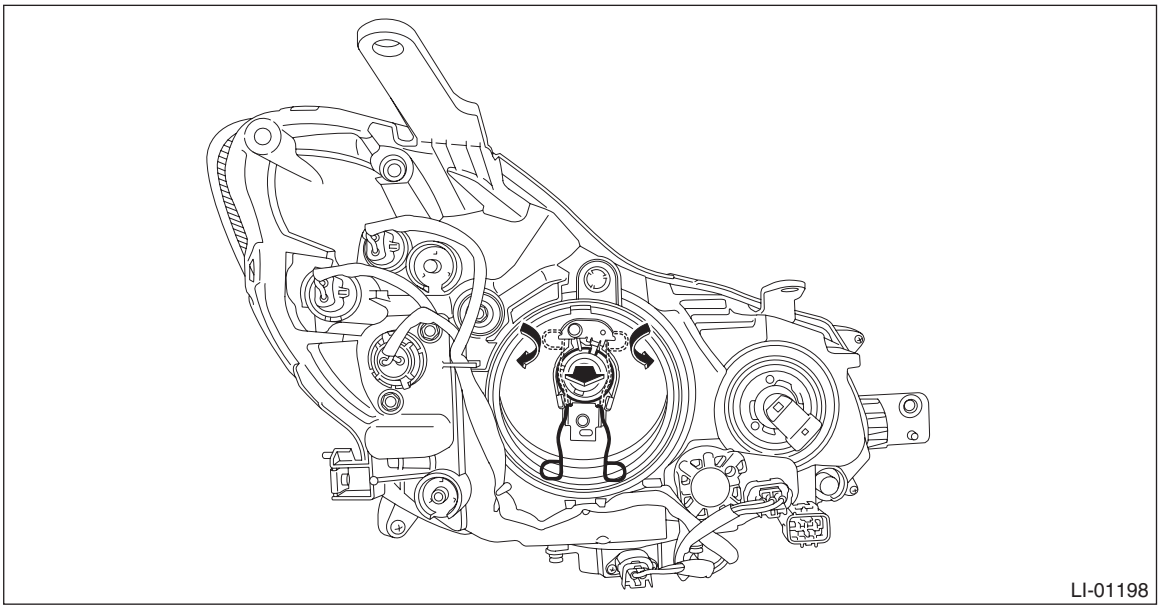
2) Remove the low beam bulb.
(1) Remove the cover - headlight.


LI-01192

(2) Remove the valve socket.


LI-01193

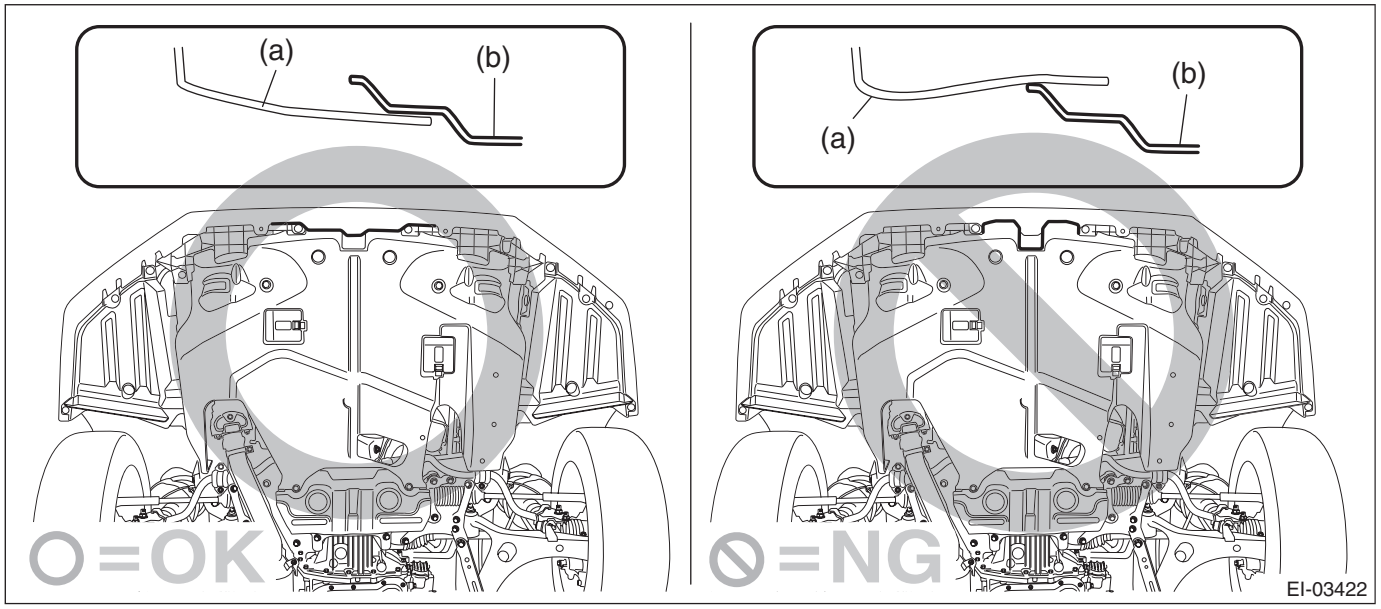
(3) Unlock the bulb spring, and remove the low beam bulb.



B: INSTALLATION

1) Install each part in the reverse order of removal.
2) When performing the work of HID type low beam RH, secure the flange section of the bumper face - front to the bracket - front bumper side.

CAUTION:
Install the bumper face - front so that the front end of the under cover (b) comes inside the bumper face - front (a).



Tightening torque:
Light assembly - head: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)
Battery holder: 3.5 N·m (0.36 kgf-m, 2.6 ft-lb)

3) When performing the work of HID type low beam RH, adjust the fog light beam. (Model with fog light) <Ref. to LI-55, FOG LIGHT AIMING, ADJUSTMENT, Front Fog Light Assembly.>

C: INSPECTION

1. HALOGEN TYPE

WARNING:
Because the headlight system uses high voltage, be careful not to perform work with wet hands. There is a possibility of electrical shock.

CAUTION:
• Because the halogen bulb operates at a high temperature, dirt and oil on the bulb surface reduces the bulb's service life. Hold the flange portion when replacing the bulb. Never touch the glass portion.
• Do not leave the light assembly - head without the bulb and cover - headlight for a long time. Dust, moisture, etc. entering the headlight may affect its performance.
1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

2. HID TYPE

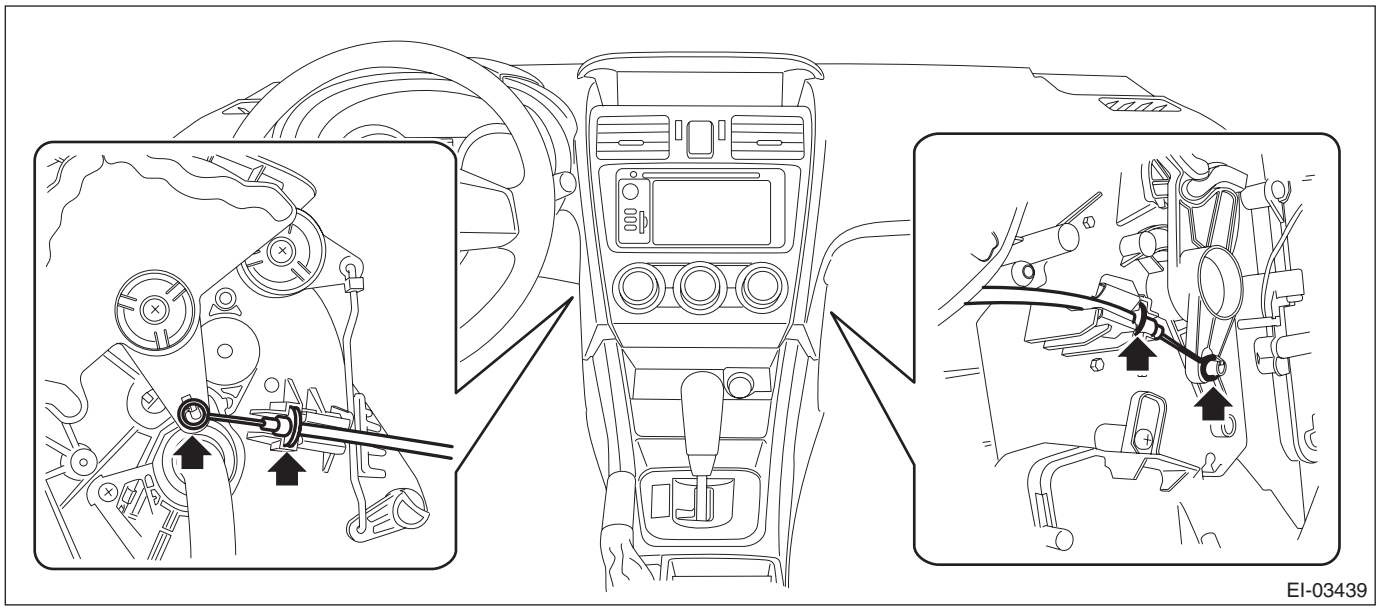
WARNING:
Because the headlight system uses high voltage, be careful not to perform work with wet hands. There is a possibility of electrical shock.

CAUTION:
• Do not leave the light assembly - head without the bulb and cover - headlight for a long time. Dust, moisture, etc. entering the headlight may affect its performance.
• When lit (lighting switch is ON), do not touch the harness, light internals, or metal parts of the light.
• When performing a lighting test, make sure that the headlight is mounted on the vehicle, and the power supply is connected to the connector on the vehicle's side.
1) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
2) Install the factory HID bulb to check whether it lights properly.
3) If it does not light properly, replace with a new bulb.
4) Inspect the HID ballast.
Inspect the ballast in the following manner, and determine whether or not to reuse.
   (1) Perform cold starts (light the headlight after turning off for 10 minutes or more), and hot starts (light the headlight for 15 minutes or more, then turn off for 1 minute and relight) several times, to make sure that the headlight lights properly.
   (2) Monitor the lighting condition right after a cold start up to a stable state (approx. 5 min.), to see if there are any unstable conditions such as flickering.
   (3) Install bulbs with the same number of operating hours on both headlights, and light for approximately 30 minutes. Check for whether there is a difference in brightness on the right and left sides.
5) Replace the ballast if it is found defective.

16.Hazard Switch

A: REMOVAL

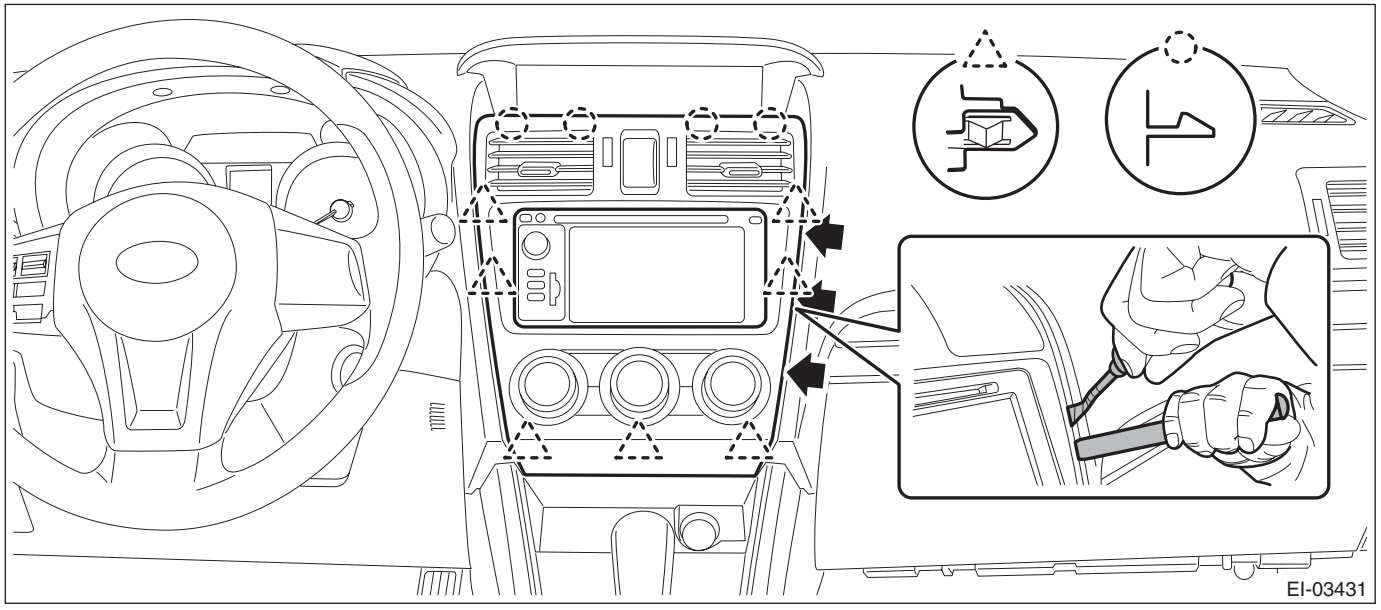
1) Disconnect the ground cable from battery.
2) On manual A/C models, disconnect the control cables from both sides of the heater and cooling unit assembly.



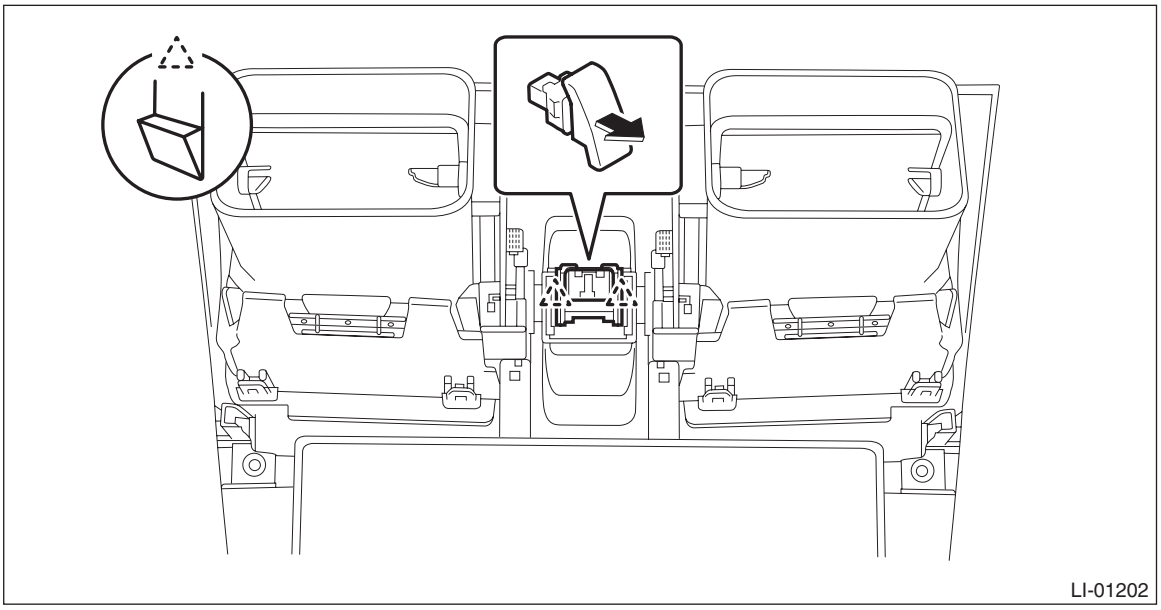
3) Remove the panel center assembly.

CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(1) Insert a plastic remover to the three areas shown by the arrows, and lift up the panel center assembly slightly.
(2) With the panel center assembly lifted up slightly, release the claw by using a clip remover wrapped with protective tape.
(3) Release the rest of the claws, and remove the panel center assembly.



4) Release the claws, and remove the switch - hazard from the panel center assembly.



B: INSTALLATION

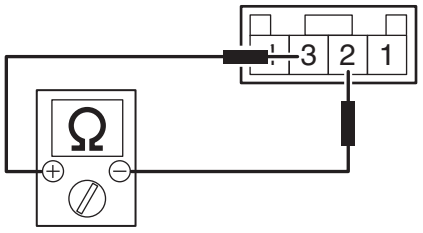
CAUTION:
After installing the panel center assembly, check that the air vent grille of the panel center assembly is inserted correctly into the air vent duct.
Install each part in the reverse order of removal.

C: INSPECTION

Unit inspection

Preparation tool:
Circuit tester

1) Check the resistance between switch terminals.

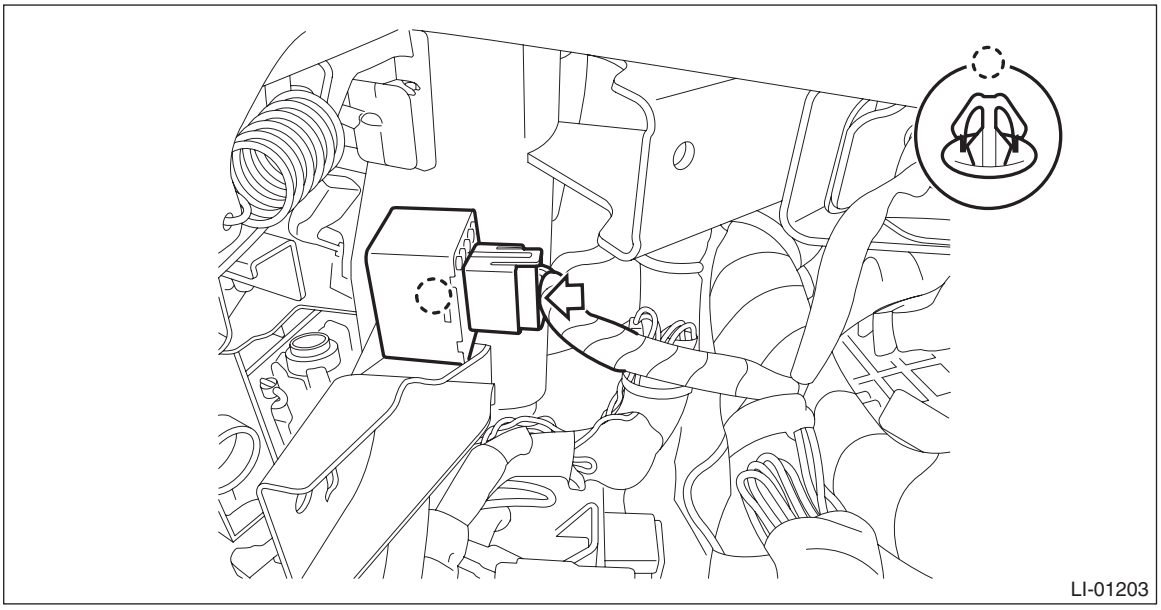
Terminal No.	Inspection conditions	Standard	Connection diagram
2 — 3	Switch OFF	1 MΩ or more	
	Switch ON	Less than 1 Ω	

2) Replace the switch - hazard if the inspection result is not within the standard value.

17.Turn Signal Light & Hazard Light Module

A: REMOVAL

1) Remove the knee airbag module. <Ref. to AB-42, REMOVAL, Knee Airbag Module.>
2) Remove the turn signal and hazard module.
   (1) Disconnect the connector.
   (2) Release the claws and remove the turn signal & hazard module from the beam COMPL - steering.



B: INSTALLATION

Install each part in the reverse order of removal.

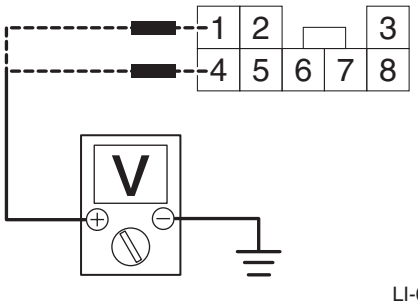
NOTE:
Refer to “INSTALLATION” of “Knee Airbag Module”. <Ref. to AB-43, INSTALLATION, Knee Airbag Module.>

C: INSPECTION

On- the vehicle inspection

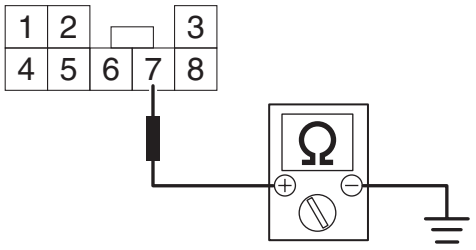
Preparation tool:
Circuit tester

1) Disconnect the turn signal and hazard module connector.
2) Measure the voltage between the turn signal & hazard module connector and the chassis ground.

Terminal No.	Inspection conditions	Standard	Connection diagram
4 (+) — Chassis ground (–)	Always	10 — 14 V	
1 (+) — Chassis ground (–)	IG OFF → ON	Less than 1 V → 10 — 14 V	

Repair or replace the harness if the inspection result is not within the standard value.

3) Measure the resistance between the turn signal & hazard module connector and the chassis ground.

Terminal No.	Inspection conditions	Standard	Connection diagram
7 — Chassis ground	Always	Less than 1 Ω	 LI-01282

Repair or replace the harness if the inspection result is not within the standard value.
4) Connect the turn signal and hazard module connector.
5) Measure the voltage between the turn signal & hazard module and the chassis ground.

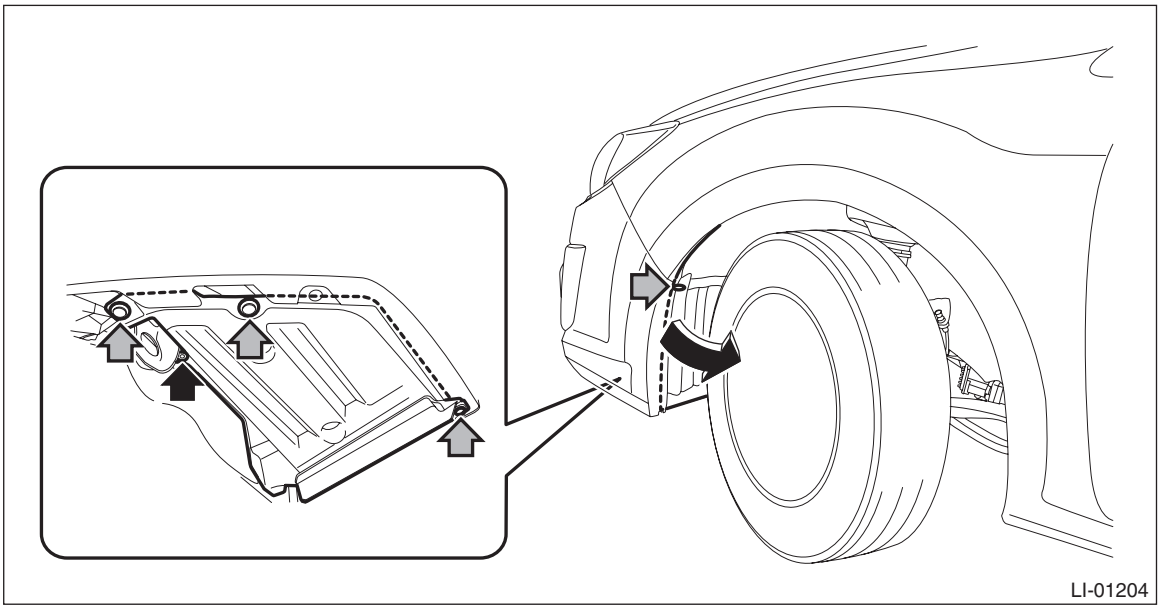
Terminal No.	Input/ Output	Inspection conditions	Standard
6 (+) — Chassis ground (–)	Input	Turn signal switch (Right) OFF → ON	Less than 1 V → 9 V or more
5 (+) — Chassis ground (–)	Input	Turn signal switch (Left) OFF → ON	Less than 1 V → 9 V or more
8 (+) — Chassis ground (–)	Input	Hazard switch OFF → ON	Less than 1 V → 9 V or more
2 (+) — Chassis ground (–)	Output	Turn signal switch (Right) OFF → ON	Repeat less than 1 V → less than 1 V ←→ more than 9 V at 60 to 120 times per minute.
3 (+) — Chassis ground (–)	Output	Turn signal switch (Left) OFF → ON	Repeat less than 1 V → less than 1 V ←→ more than 9 V at 60 to 120 times per minute.
2 (+) — Chassis ground (–)	Output	Hazard switch OFF → ON	Repeat less than 1 V → less than 1 V ←→ more than 9 V at 60 to 120 times per minute.
3 (+) — Chassis ground (–)	Output	Hazard switch OFF → ON	Repeat less than 1 V → less than 1 V ←→ more than 9 V at 60 to 120 times per minute.

Replace the turn signal and hazard module if the inspection result is not within the standard value.

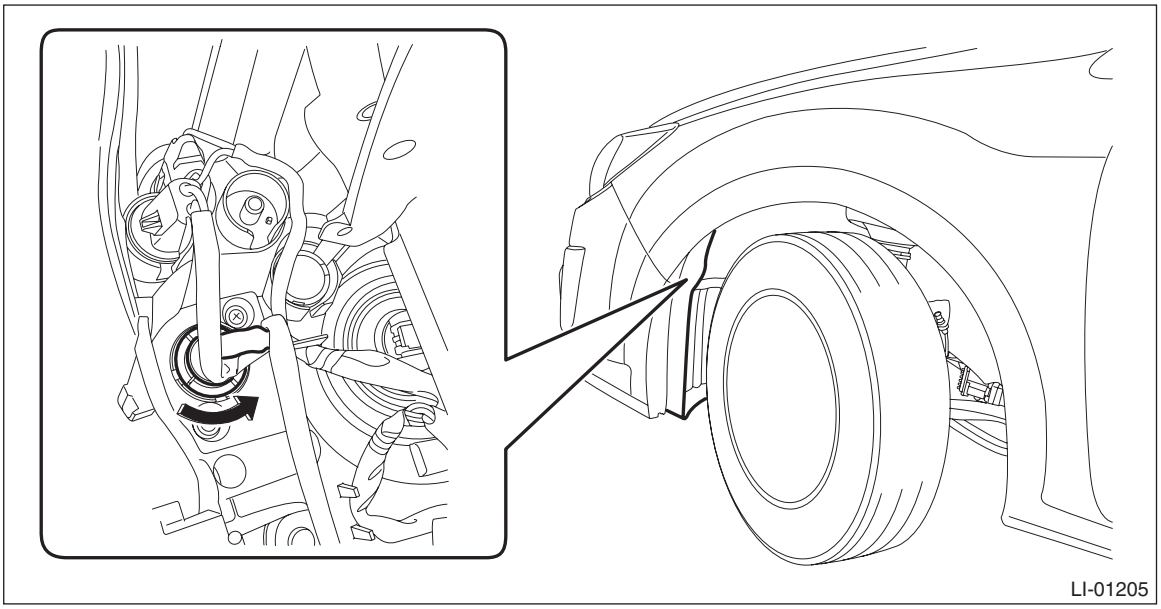
18.Front Turn Signal Light Bulb

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Turn the steering wheel in the opposite direction from the parts to be removed. Then remove the screws and clips, and turn over the mud guard - front.



3) Remove the bulb socket and front turn signal light bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

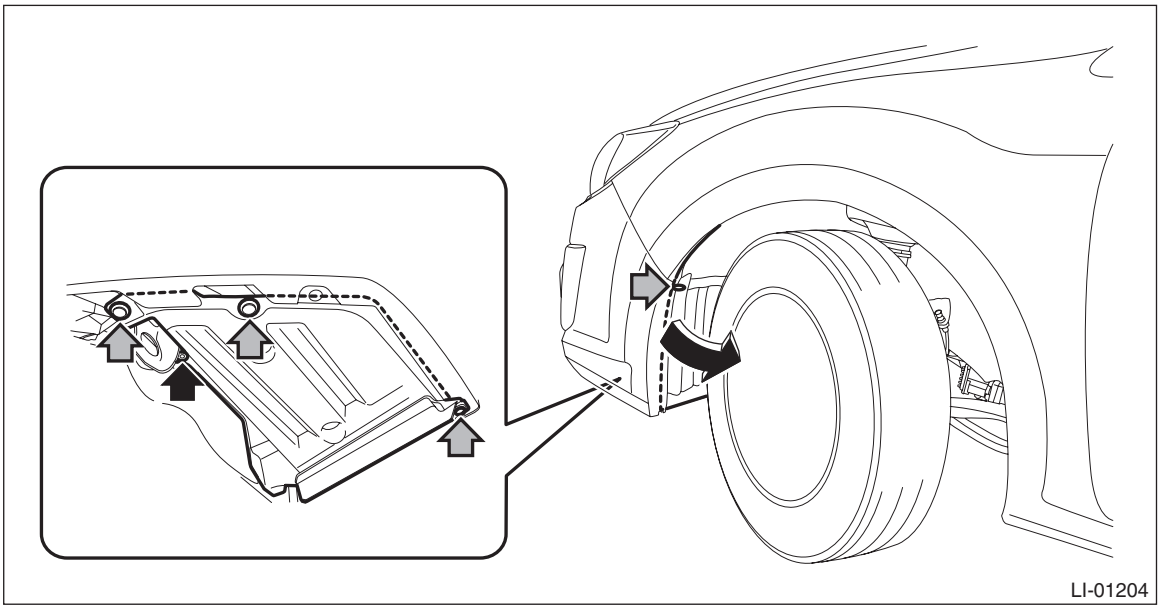
C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

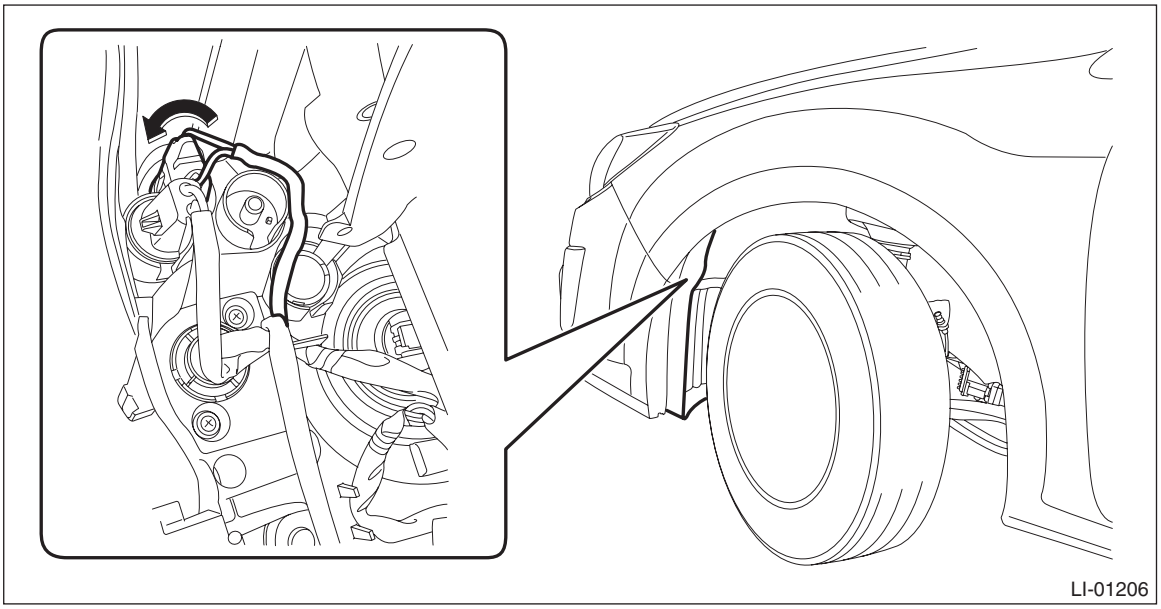
19.Clearance/Parking Light Bulb

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Turn the steering wheel in the opposite direction from the parts to be removed. Then remove the screws and clips, and turn over the mud guard - front.



3) Remove the bulb socket and the parking light bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

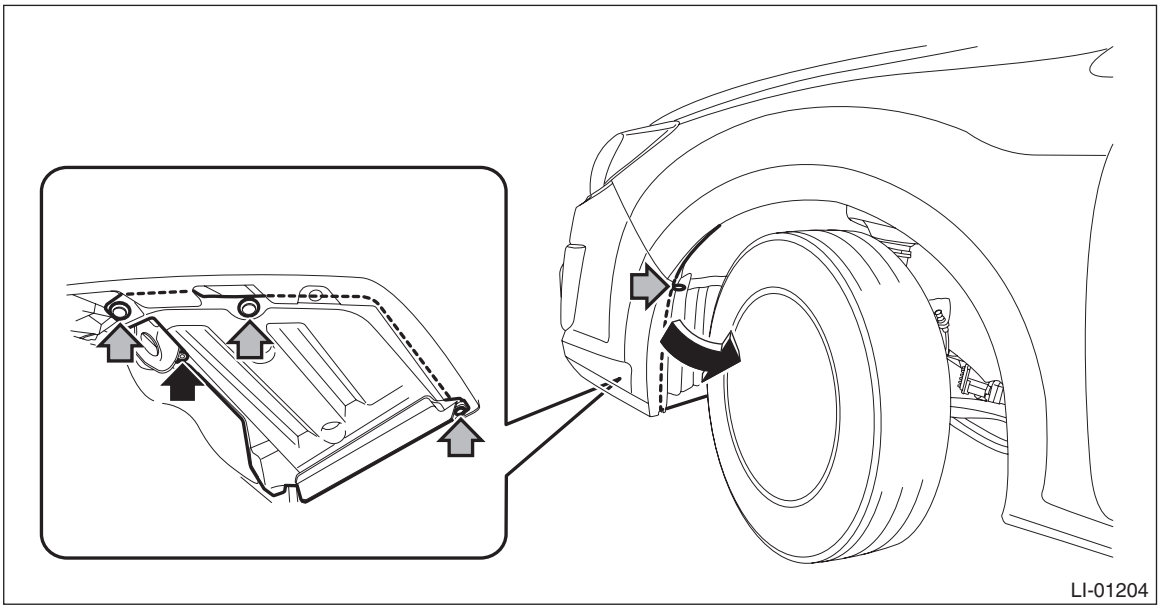
C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

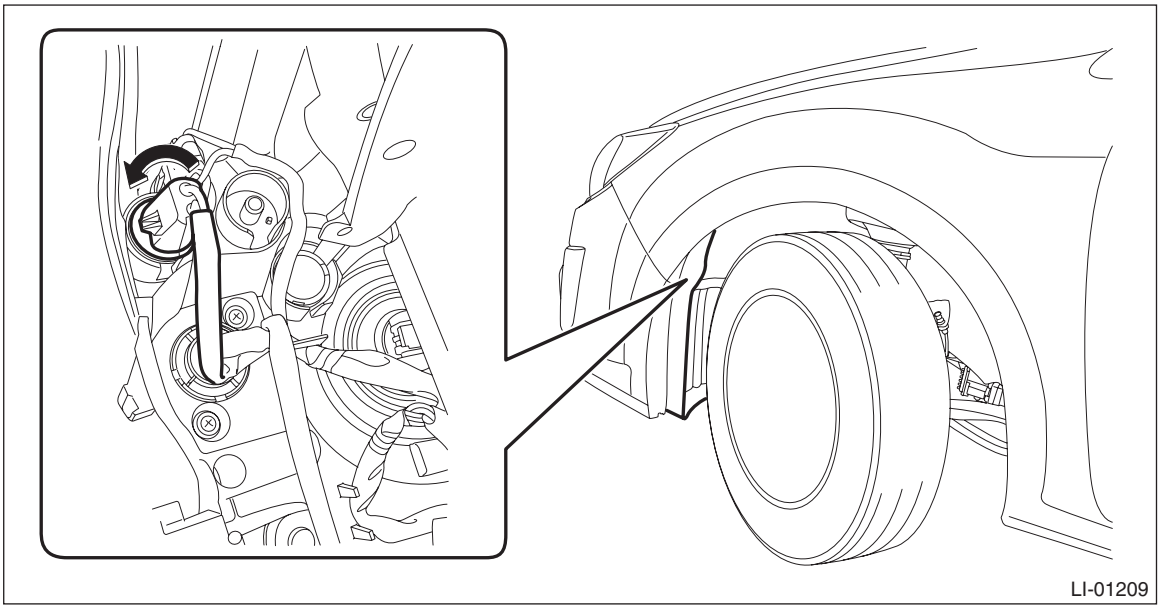
20.Front Side Marker Light Bulb

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Turn the steering wheel in the opposite direction from the parts to be removed. Then remove the screws and clips, and turn over the mud guard - front.



3) Remove the bulb socket and front side marker light bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

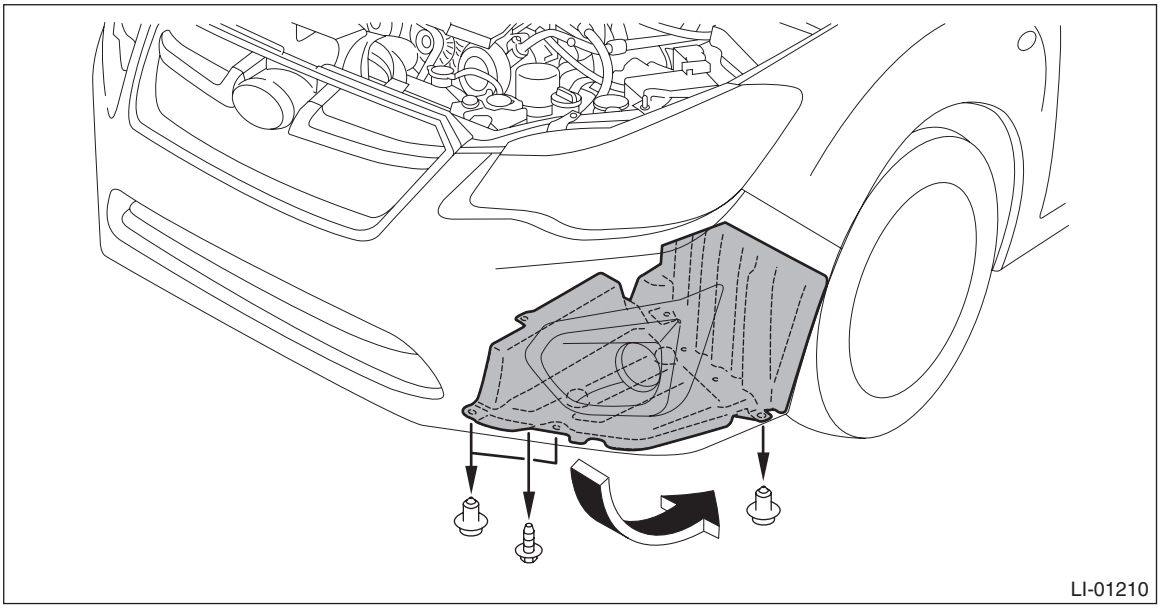
C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

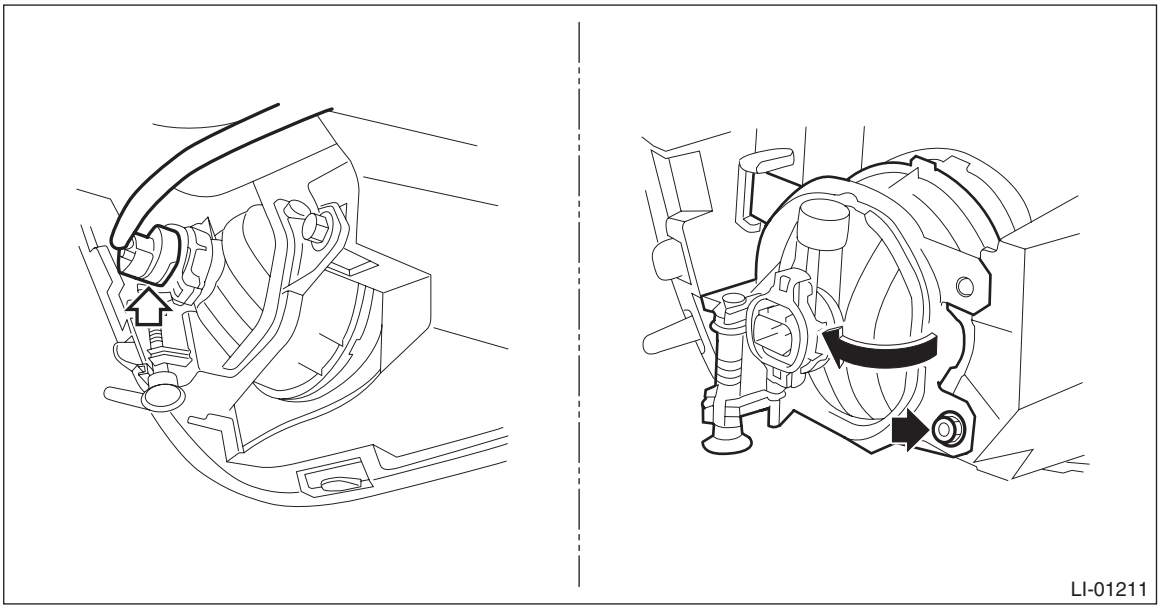
21.Front Fog Light Assembly

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Lift up the vehicle.
3) Remove the screw and clips, and turn over the front side of the mud guard - front.



4) From the bottom of the bumper face - front, remove the fog light assembly - front.
   (1) Disconnect the connector.
   (2) Remove the bolts, then remove the fog light assembly - front.



B: INSTALLATION

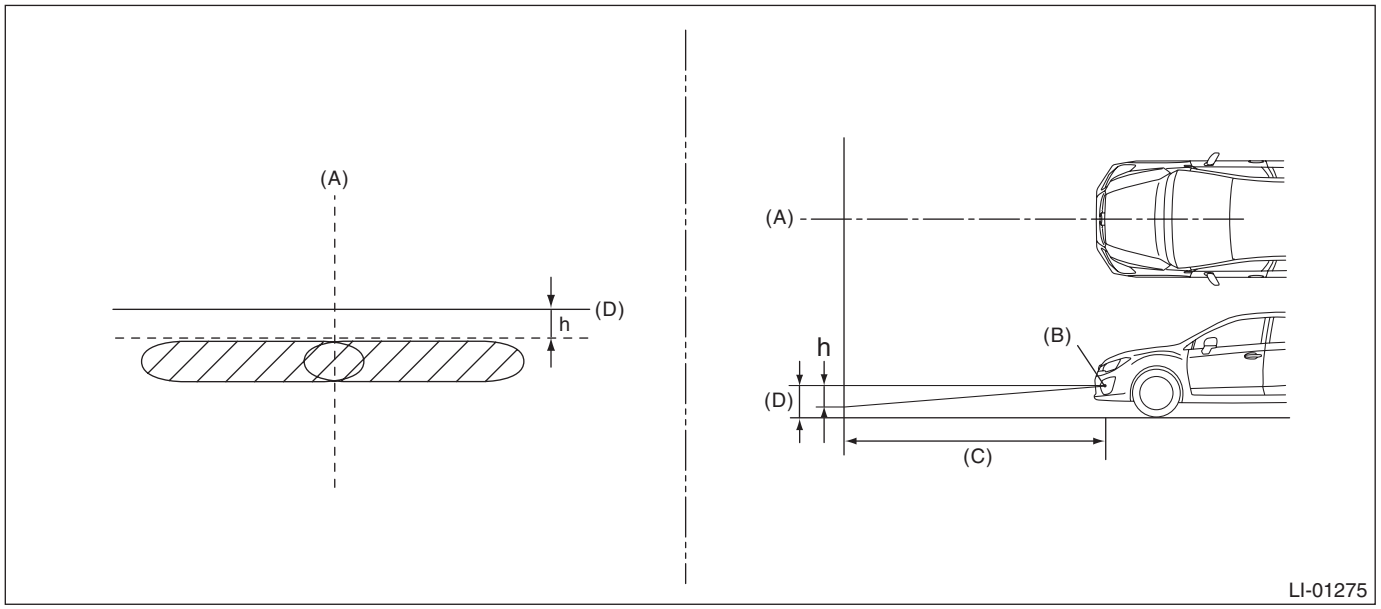
1) Install each part in the reverse order of removal.

Tightening torque:
Fog light assembly - front: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)
2) Adjust the fog light beam. <Ref. to LI-55, FOG LIGHT AIMING, ADJUSTMENT, Front Fog Light Assembly.>

C: ADJUSTMENT

1. FOG LIGHT AIMING

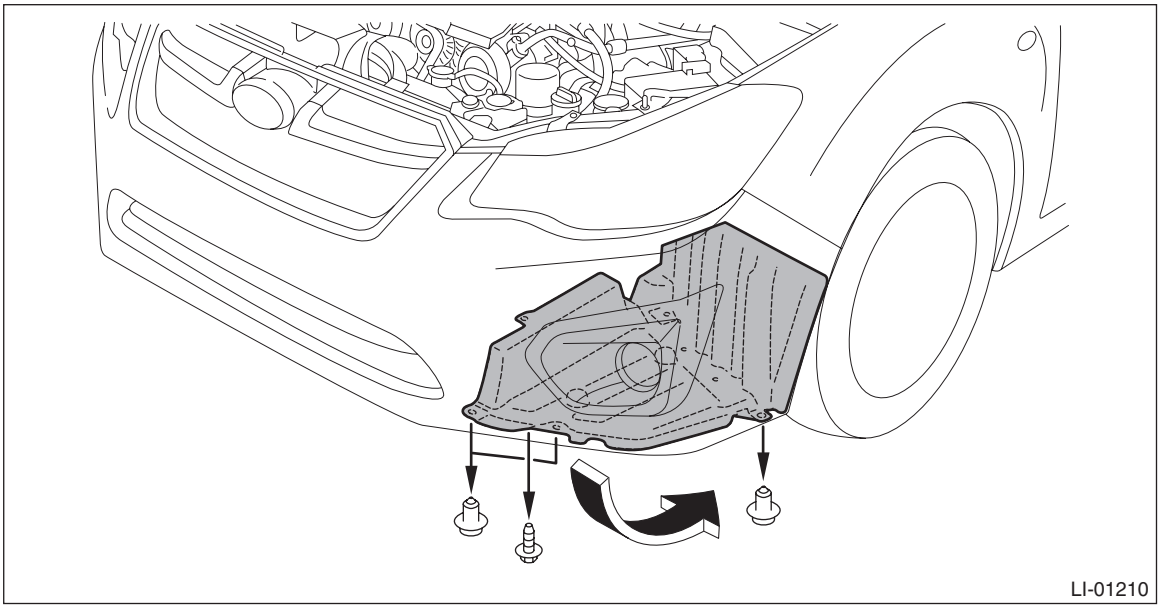
1) Before checking the fog light assembly - front beam level, be sure of the following:
• The area around the fog light assembly - front has not sustained any scratches, damage or other type of deformation.
• Vehicle is parked on a level surface.
• The inflation pressure of tires is correct.
• Vehicle's fuel tank is fully filled.
2) Bounce the vehicle several times to normalize the suspension.
3) Make certain that someone is seated in the driver's seat.
4) Place the vehicle with the front end facing to the measurement panel.



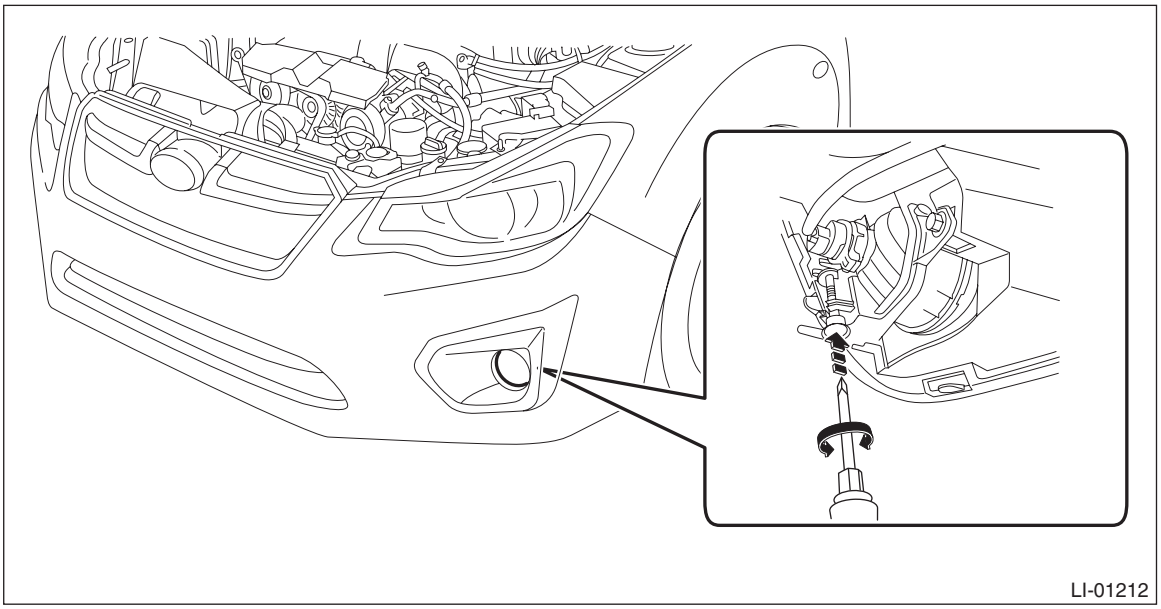
(A) Vehicle center
(B) Bulb center marking
(C) 3 m (10 ft)
(D) Height of fog light center

h mm (in) at 3 m (10 ft)
40 (1.58)

5) Adjust the fog light assembly - front beam.
(1) Remove the screw and clips, and turn over the front side of the mud guard - front.



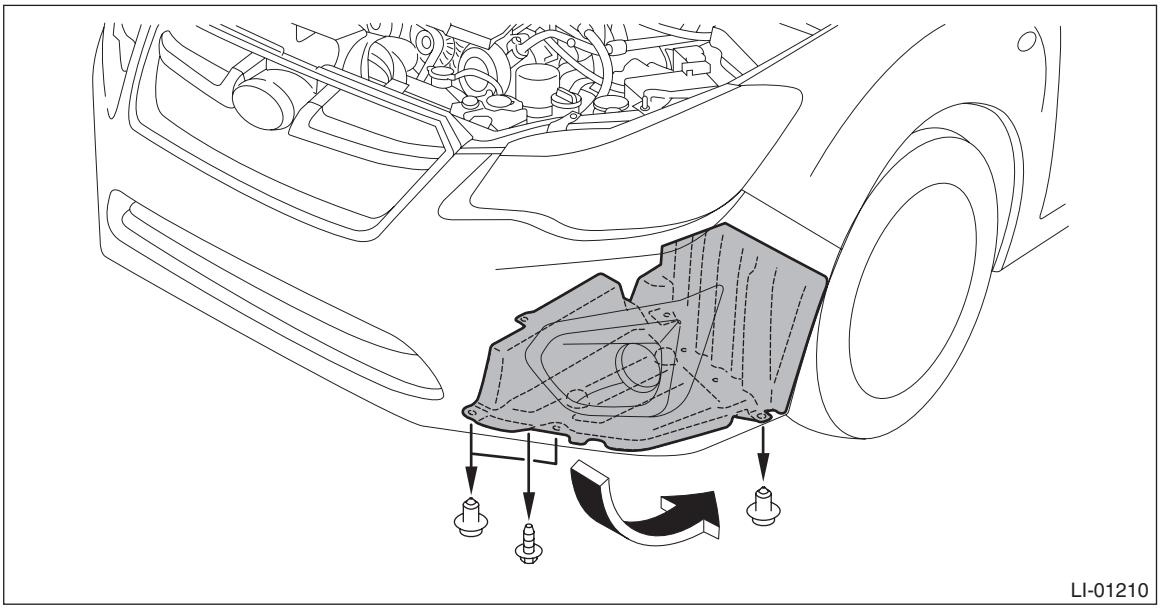
(2) Adjust the beam direction by turning the aiming screw from the bottom of the bumper face - front.



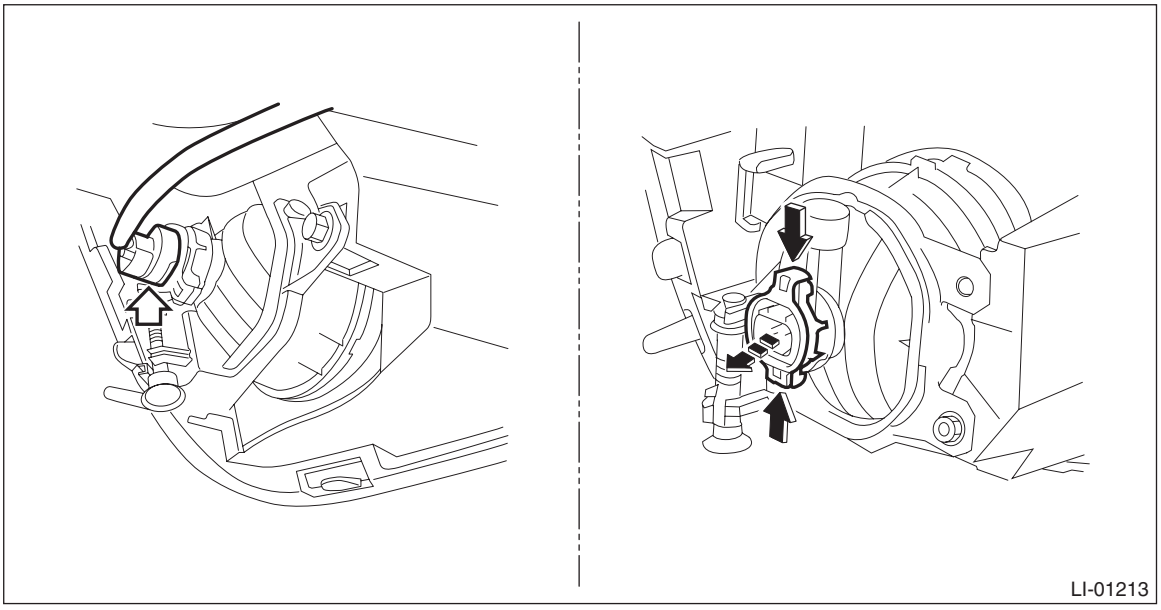
22.Front Fog Light Bulb

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the screw and clips, and turn over the front side of the mud guard - front.



3) From the bottom of the bumper face - front, remove the front fog light bulb.
   (1) Disconnect the connector.
   (2) Remove the bulb.



B: INSTALLATION

CAUTION:
After connecting the connector, make sure that the bulb is locked securely.
Install each part in the reverse order of removal.

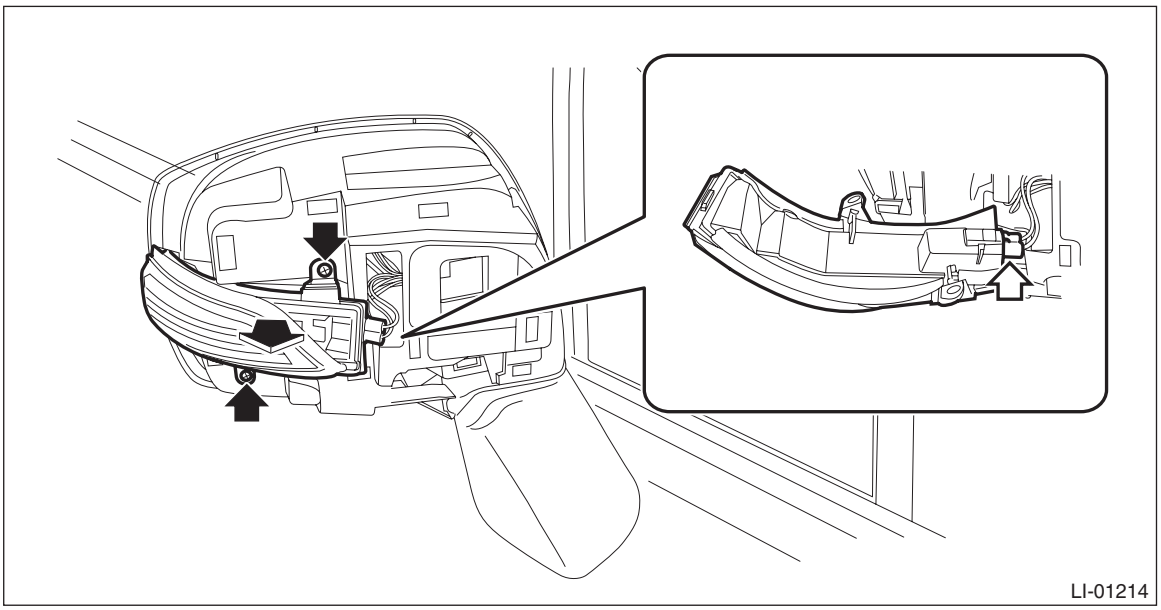
C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

23.Side Turn Signal Light Assembly

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the cover - cap outer mirror. <Ref. to GW-24, REPLACEMENT, Scalp Cap.>
3) Remove the light assembly - side turn mirror.
   (1) Remove the screws and pull out the light assembly - side turn mirror to the front of the vehicle.
   (2) Disconnect the connector and remove the light assembly - side turn mirror.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1) Install the light to check if it blinks normally.
2) If it fails to blink normally, replace the light assembly - side turn mirror with a new part.

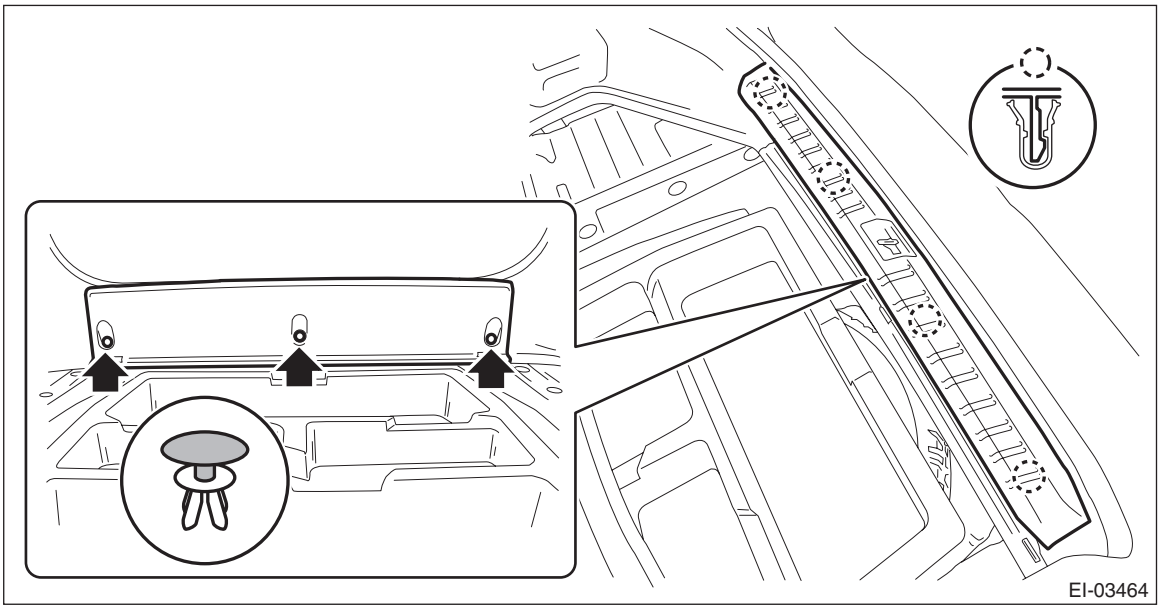
NOTE:
Since LED (Light Emitting Diode) is used for the light, replace the light assembly - side turn mirror if the LED burns out.

24.Rear Combination Light Assembly

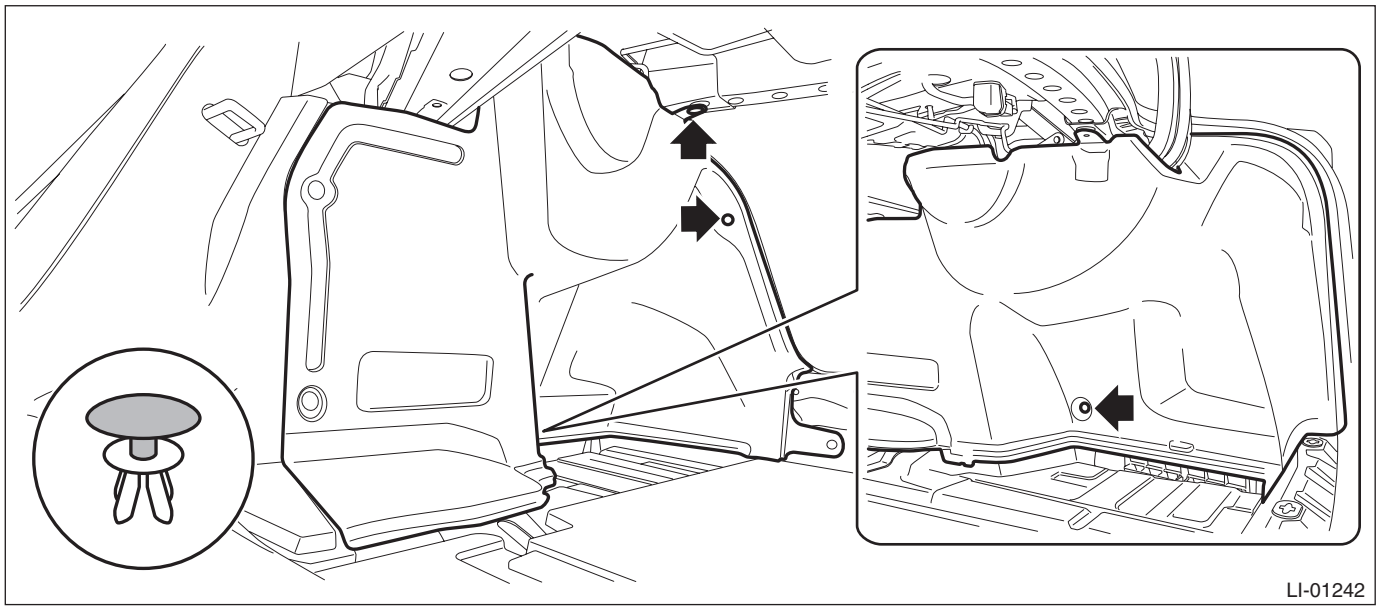
A: REMOVAL

1. 4 DOOR MODEL

1) Disconnect the ground cable from battery.
2) Remove the mat - trunk.
3) Remove the trim panel - trunk rear.
   (1) Remove the clip.
   (2) Release the claws, and remove the trim panel - trunk rear.

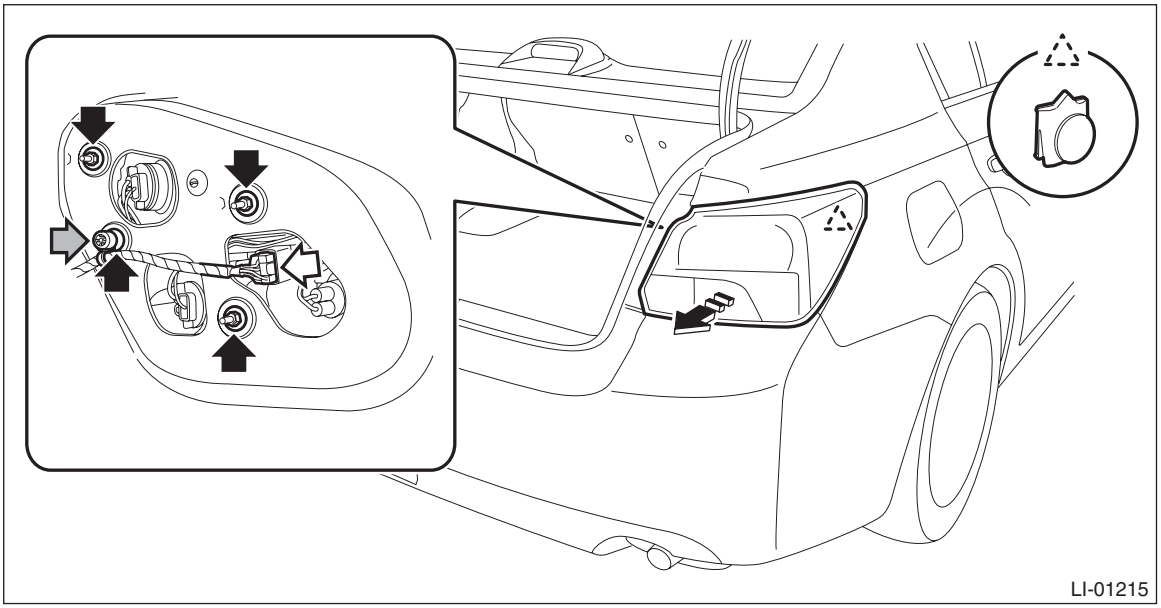


4) Remove the clips, and turn over the trim panel - trunk side.



5) Remove the light assembly - rear combination.
(1) Remove the harness clip and connector.
(2) Release the nuts and clips, then remove the light assembly - rear combination.

CAUTION:
Be careful not to damage the clips.

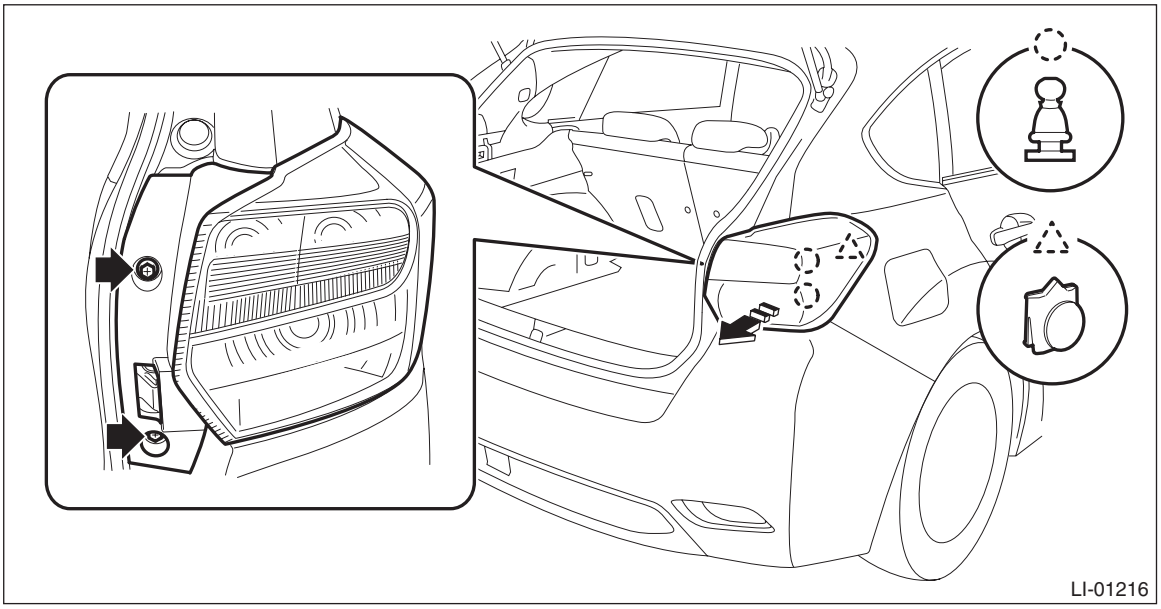


2. 5 DOOR MODEL

1) Disconnect the ground cable from battery.
2) Remove the light assembly - rear combination.

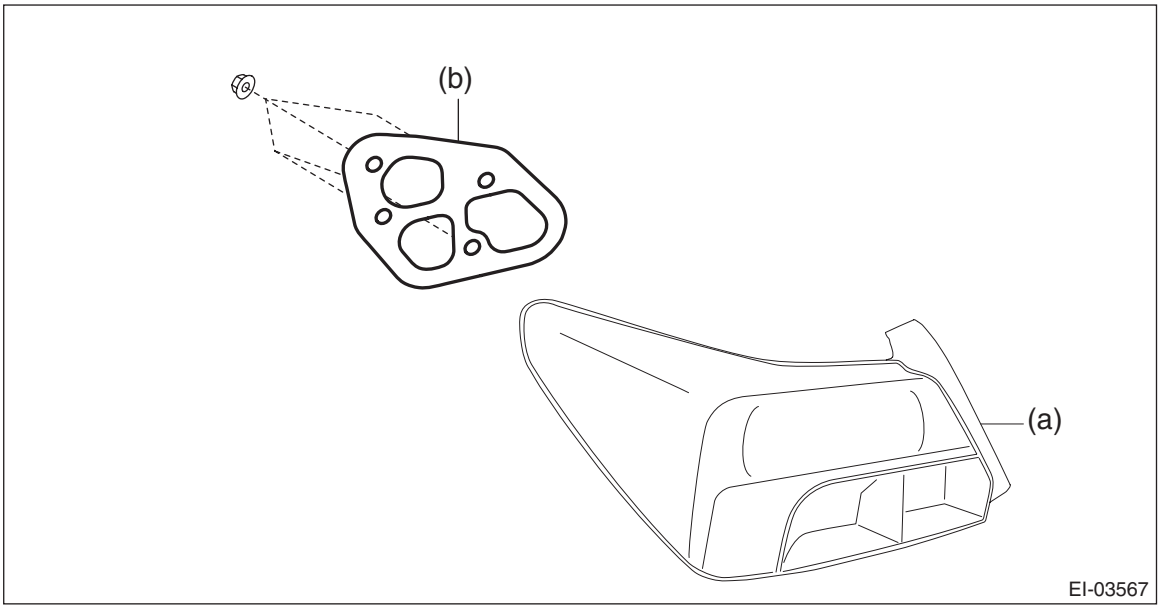
CAUTION:
Be careful not to damage the clips.

(1) Release the bolts and clips, then pull out the light assembly - rear combination to the vehicle rear.
(2) Disconnect the connector and remove the light assembly - rear combination.



B: INSTALLATION

CAUTION:
For 4 door model, replace the gasket - rear combination (b) of the light assembly - rear combination (a) with a new part. If the gasket - rear combination is reused, water may come inside of the vehicle.



Install each part in the reverse order of removal.

Tightening torque:
Light assembly - rear combination: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

C: INSPECTION

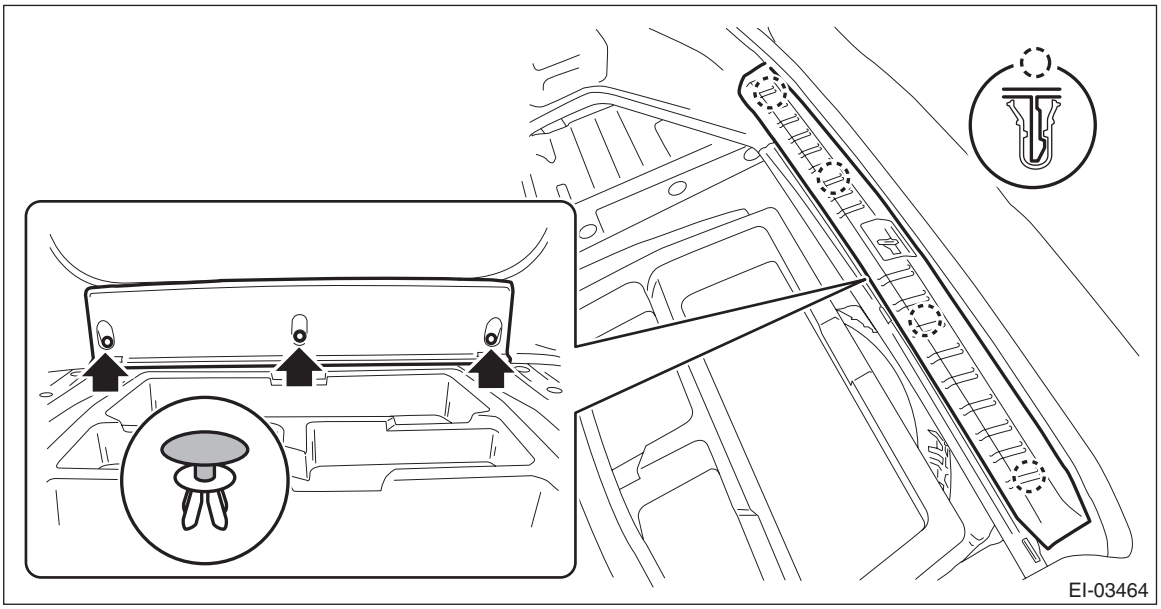
1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

25.Tail/Stop Light Bulb

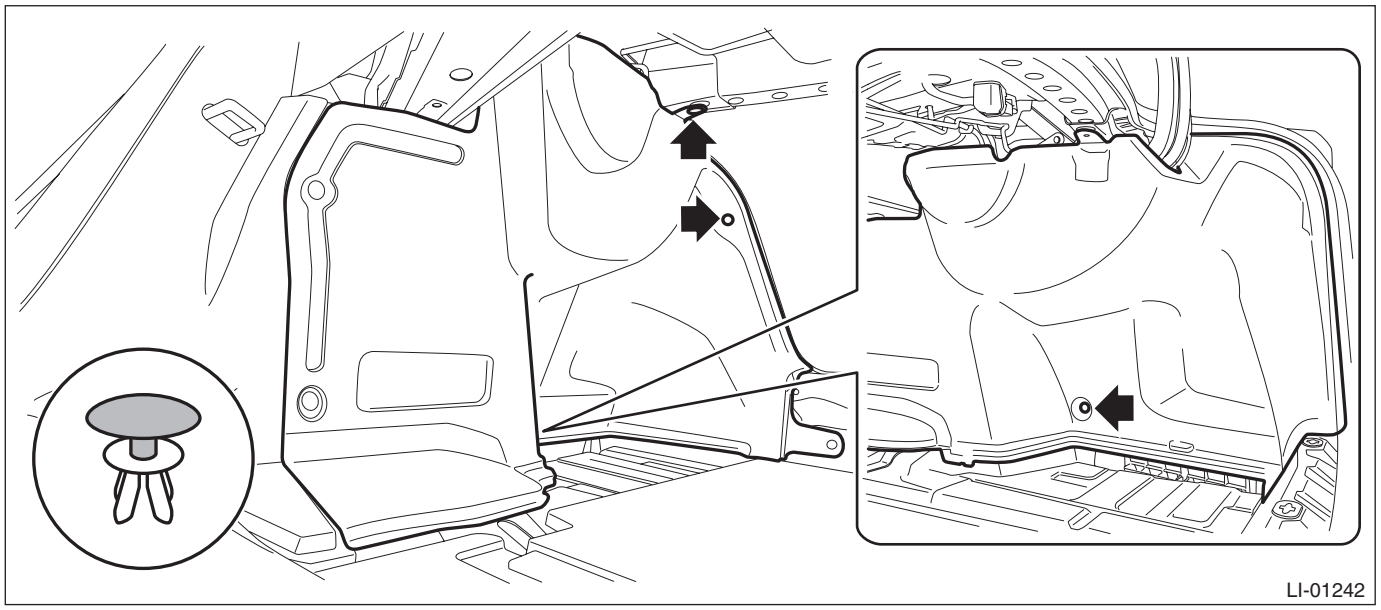
A: REMOVAL

1. 4 DOOR MODEL

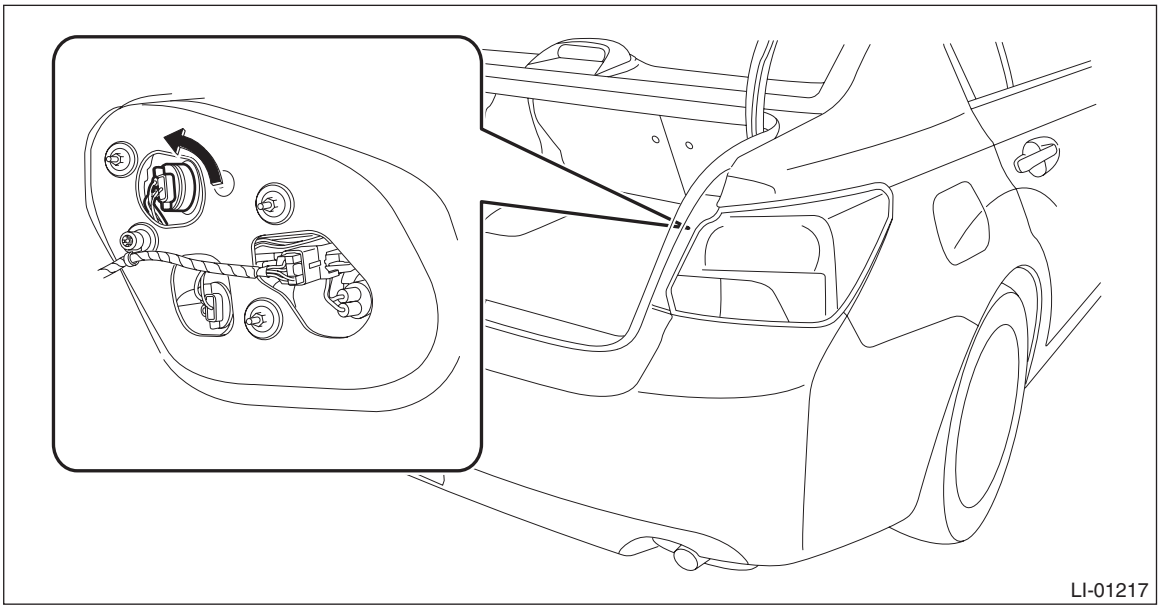
1) Disconnect the ground cable from battery.
2) Remove the mat - trunk.
3) Remove the trim panel - trunk rear.
   (1) Remove the clip.
   (2) Release the claws, and remove the trim panel - trunk rear.



4) Remove the clips, and turn over the trim panel - trunk side.



5) Remove the bulb socket and tail light/stop light bulb.

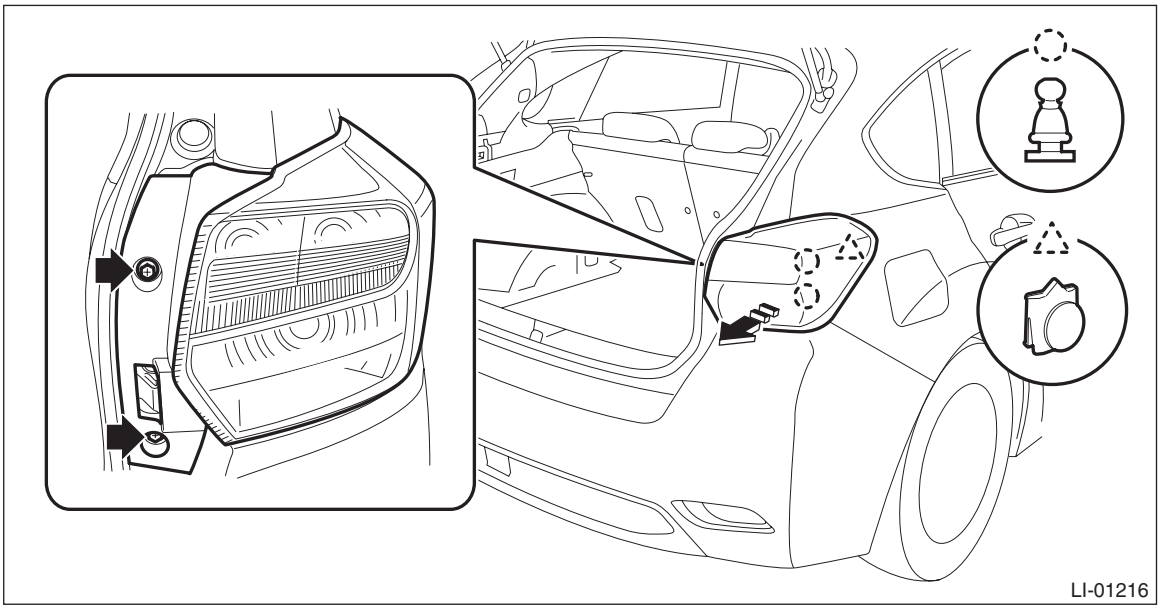


2. 5 DOOR MODEL

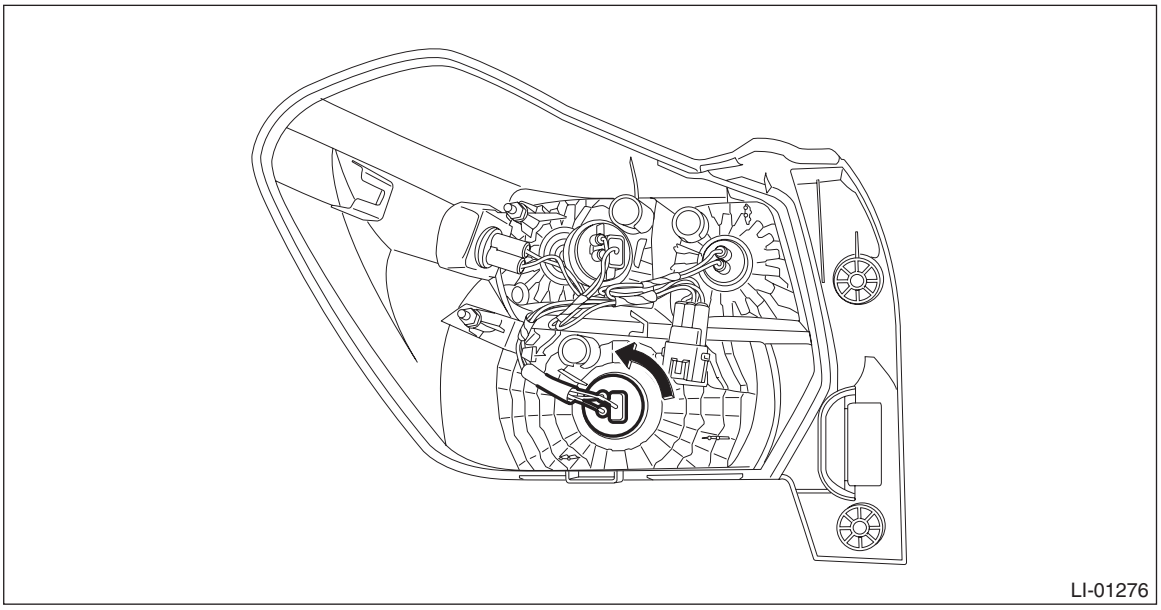
1) Disconnect the ground cable from battery.
2) Remove the light assembly - rear combination.

CAUTION:
Be careful not to damage the clips.

(1) Release the bolts and clips, then pull out the light assembly - rear combination to the vehicle rear.
(2) Disconnect the connector and remove the light assembly - rear combination.



3) Remove the bulb socket and tail light/stop light bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Light assembly - rear combination (5 door model): 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

C: INSPECTION

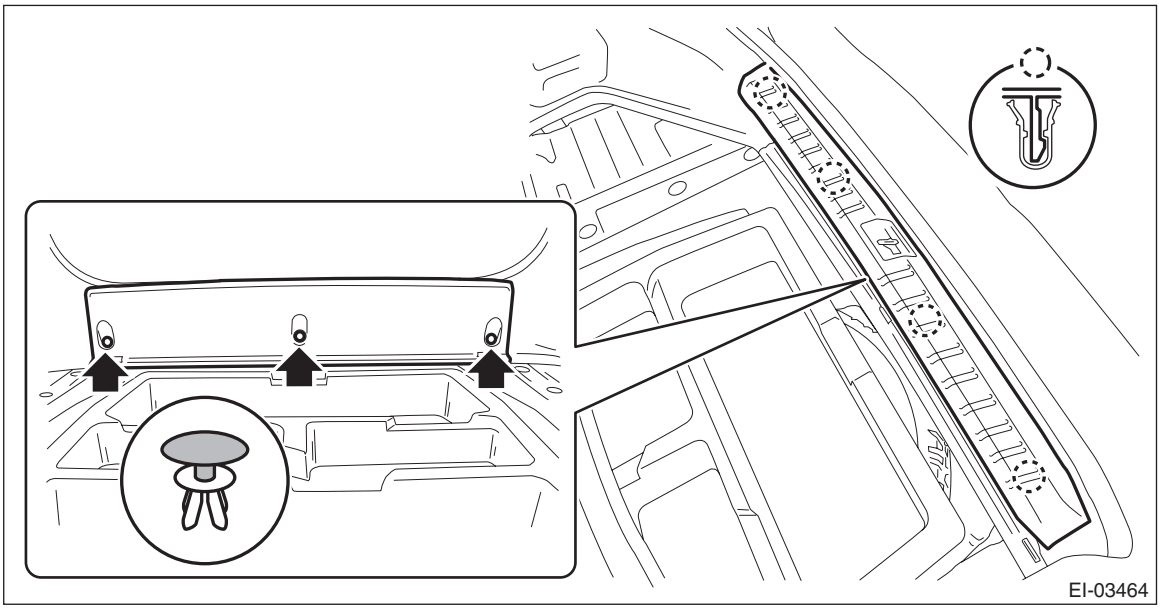
1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

26.Rear Turn Signal Light Bulb

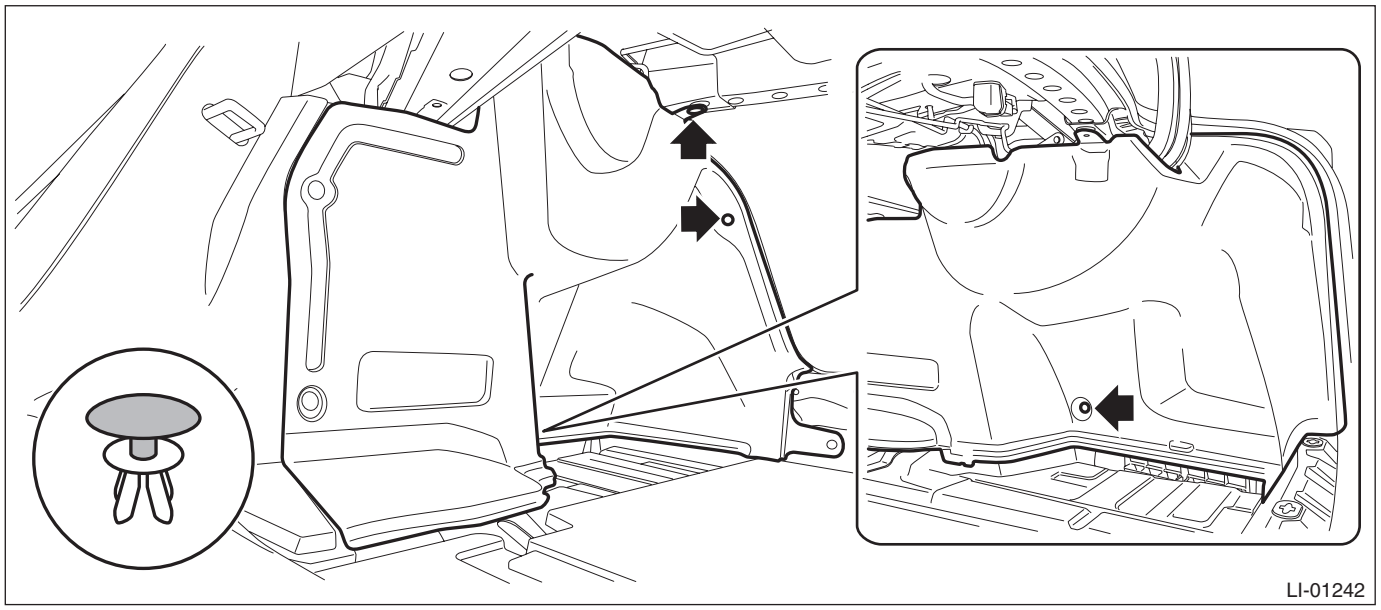
A: REMOVAL

1. 4 DOOR MODEL

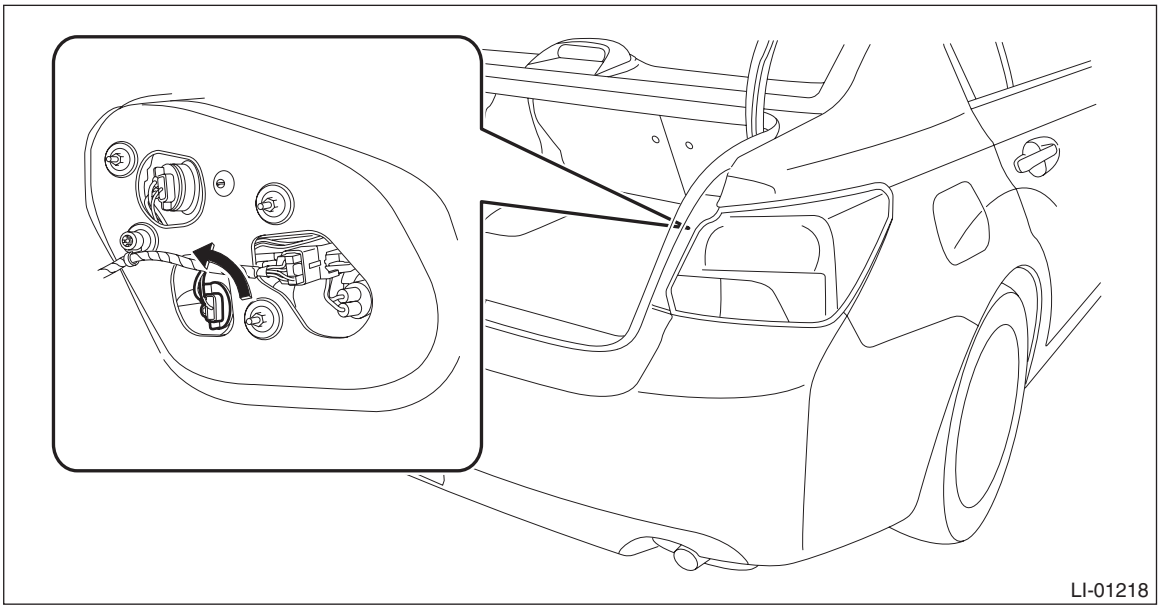
1) Disconnect the ground cable from battery.
2) Remove the mat - trunk.
3) Remove the trim panel - trunk rear.
   (1) Remove the clip.
   (2) Release the claws, and remove the trim panel - trunk rear.



4) Remove the clips, and turn over the trim panel - trunk side.



5) Remove the bulb socket and rear turn signal light bulb.

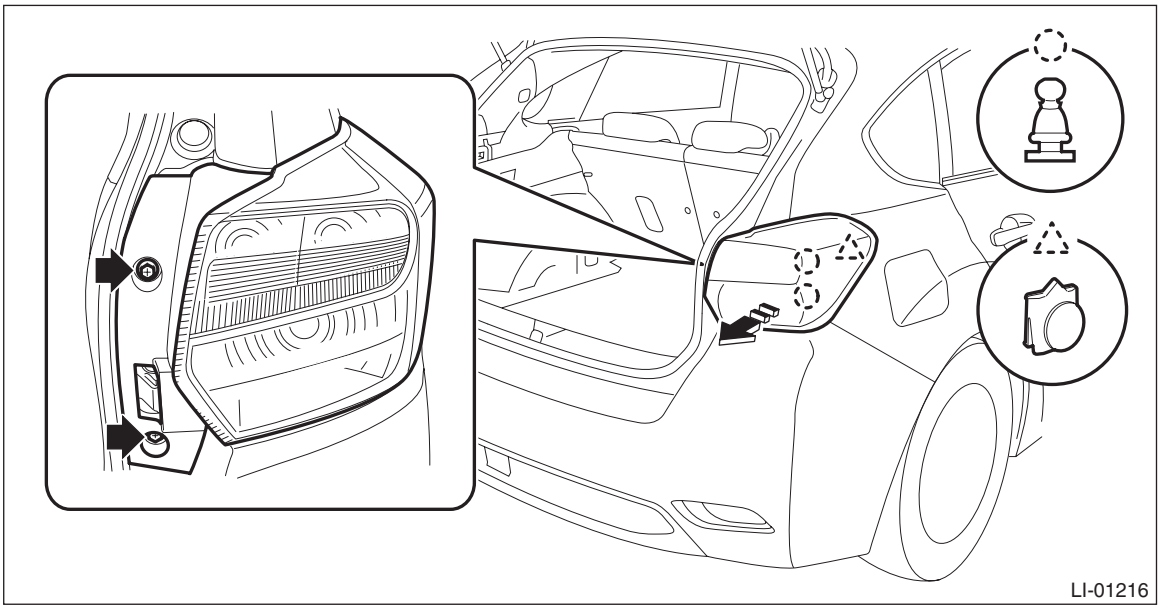


2. 5 DOOR MODEL

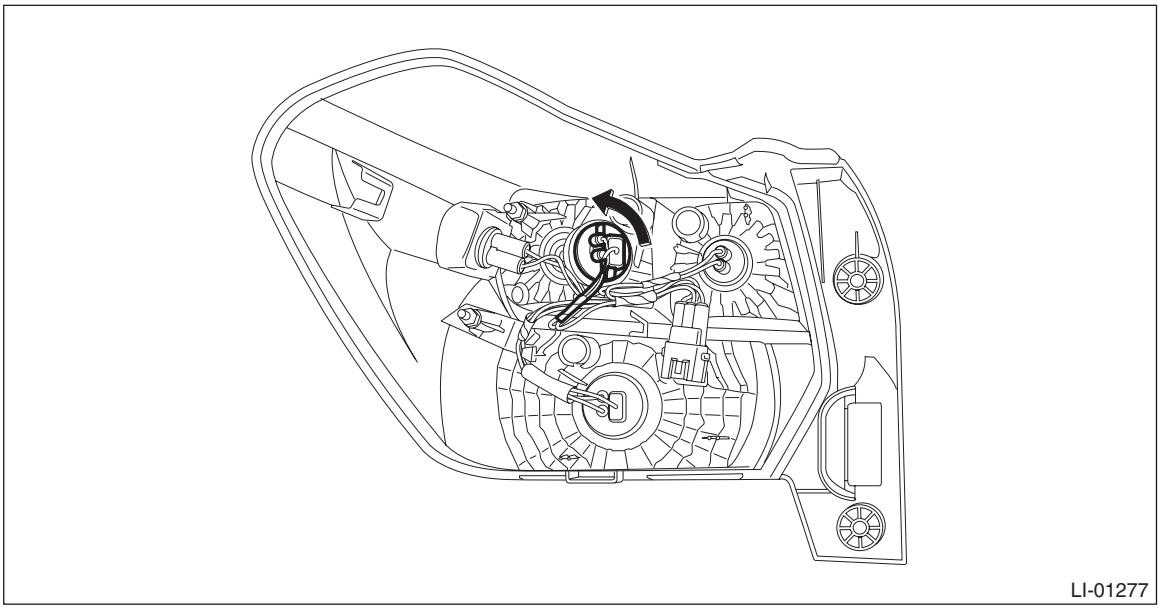
1) Disconnect the ground cable from battery.
2) Remove the light assembly - rear combination.

CAUTION:
Be careful not to damage the clips.

(1) Release the bolts and clips, then pull out the light assembly - rear combination to the vehicle rear.
(2) Disconnect the connector and remove the light assembly - rear combination.



3) Remove the bulb socket and rear turn signal light bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Light assembly - rear combination (5 door model): 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

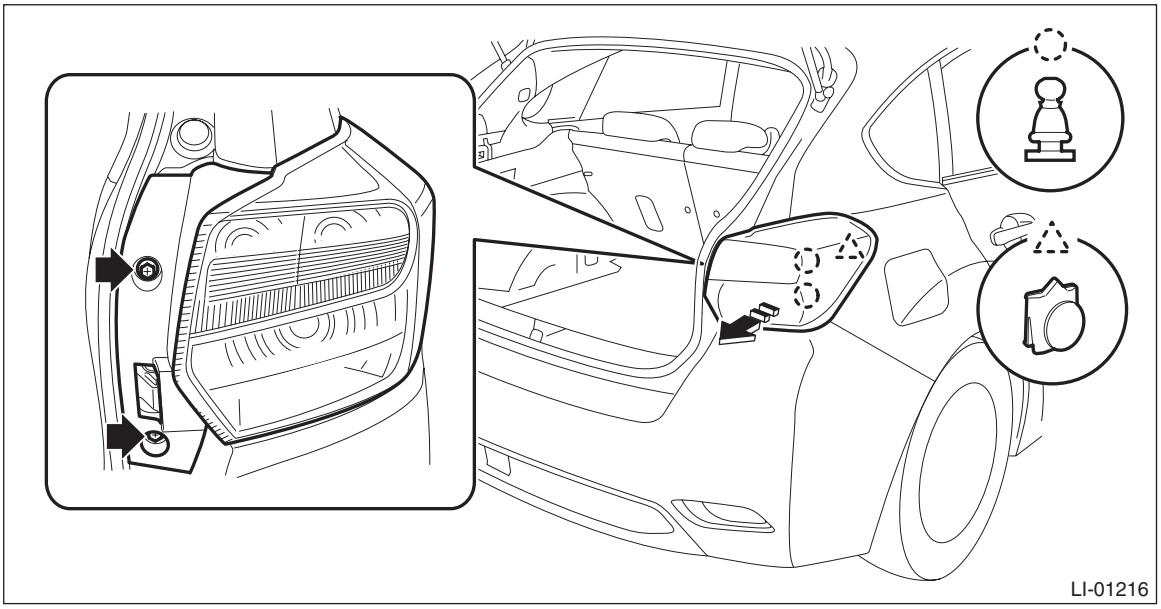
27.Rear Side Marker Light Bulb

A: REMOVAL

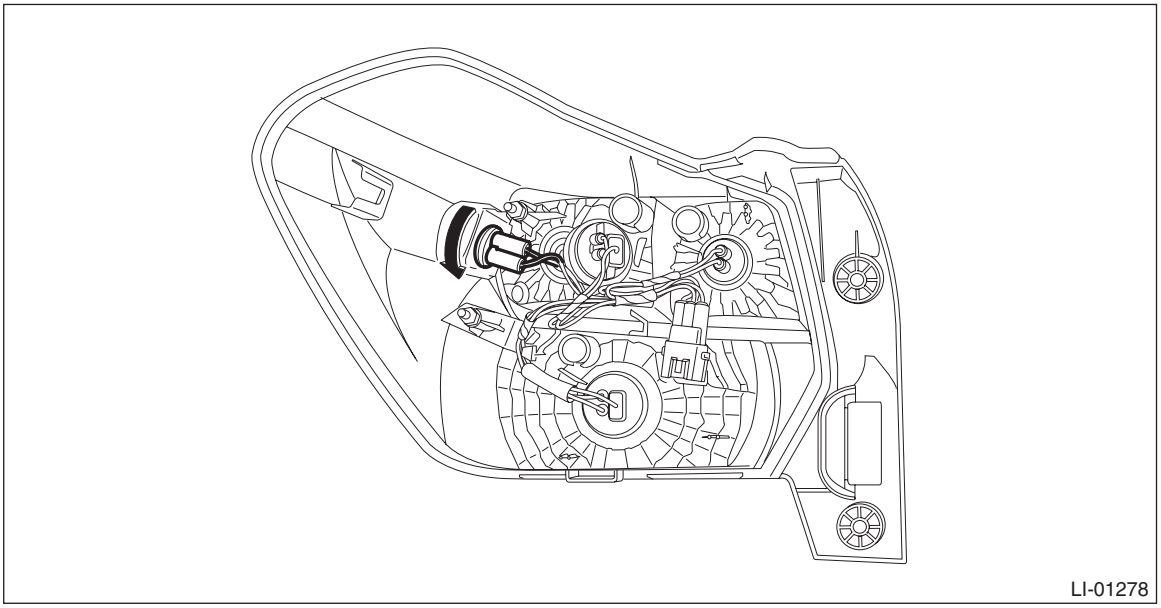
NOTE:
It is installed to 5 door model only.
1) Disconnect the ground cable from battery.
2) Remove the light assembly - rear combination.

CAUTION:
Be careful not to damage the clips.

(1) Release the bolts and clips, then pull out the light assembly - rear combination to the vehicle rear.
(2) Disconnect the connector and remove the light assembly - rear combination.



3) Remove the bulb socket and rear side marker light bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Light assembly - rear combination: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

C: INSPECTION

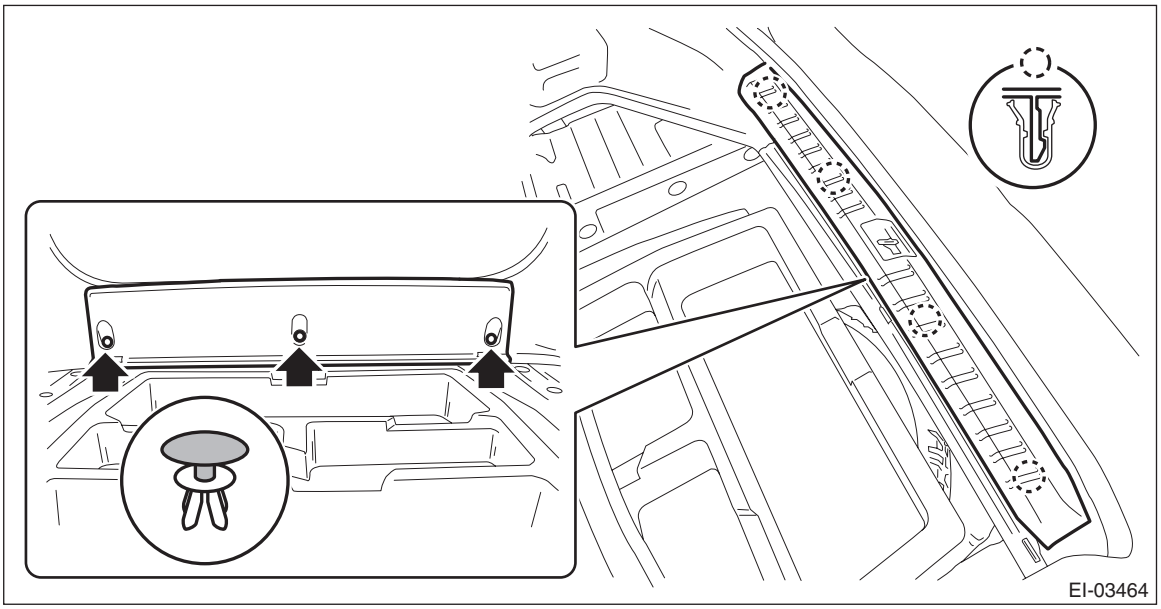
1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

28.Back-up Light Bulb

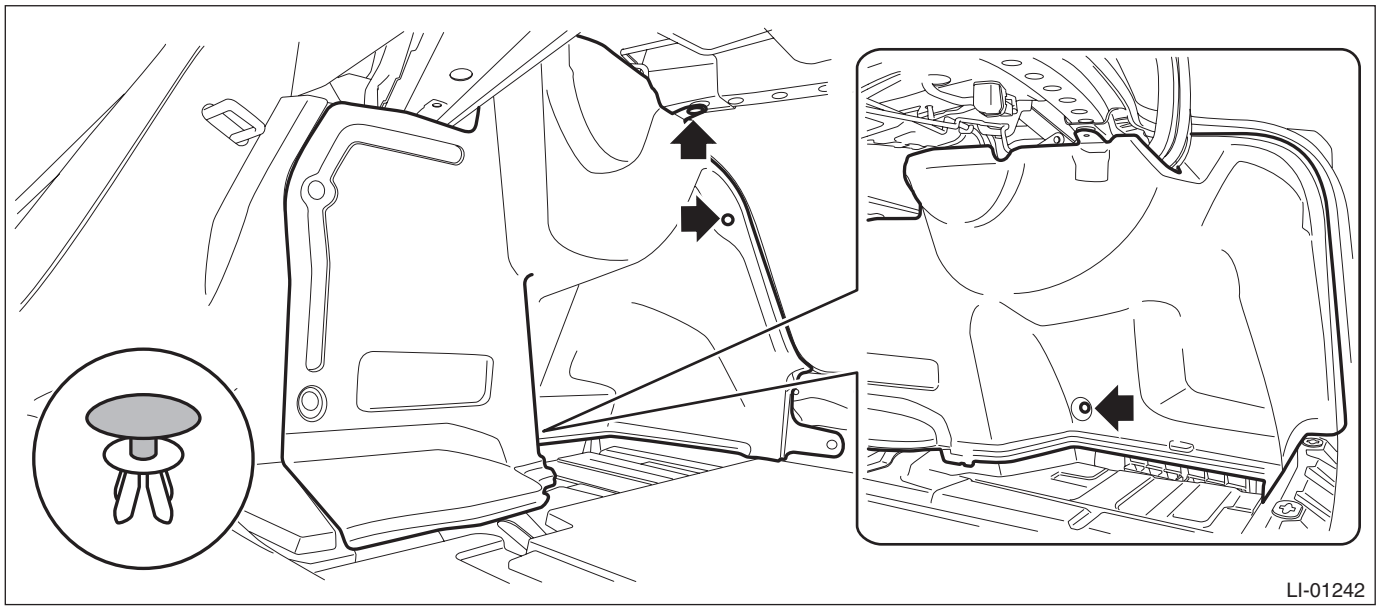
A: REMOVAL

1. 4 DOOR MODEL

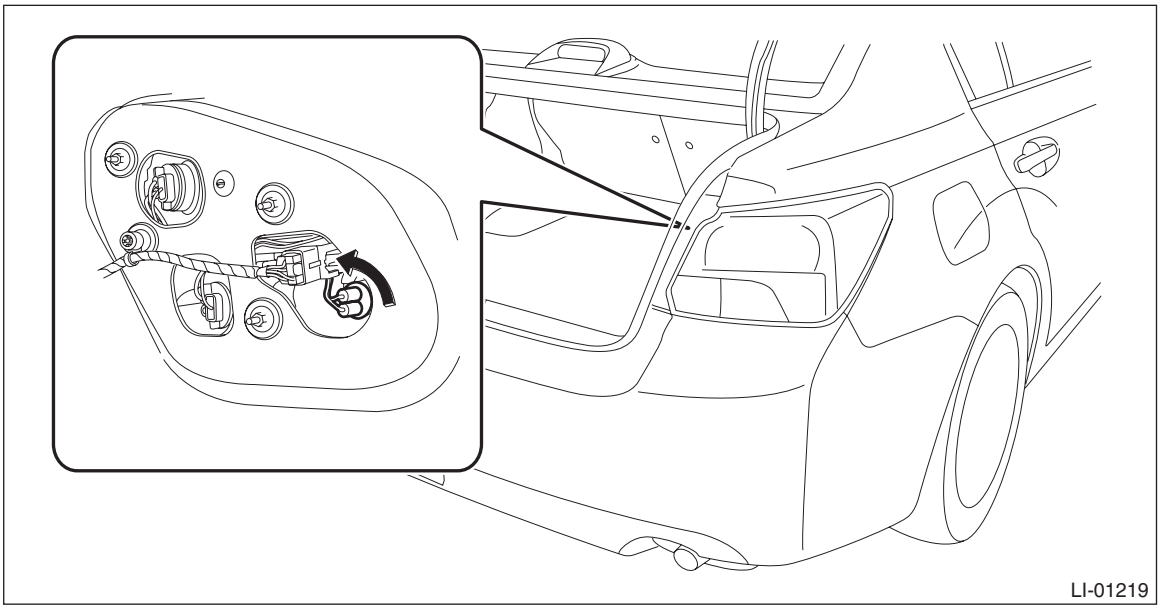
1) Disconnect the ground cable from battery.
2) Remove the mat - trunk.
3) Remove the trim panel - trunk rear.
   (1) Remove the clip.
   (2) Release the claws, and remove the trim panel - trunk rear.



4) Remove the clips, and turn over the trim panel - trunk side.



5) Remove the bulb socket and back-up light bulb.

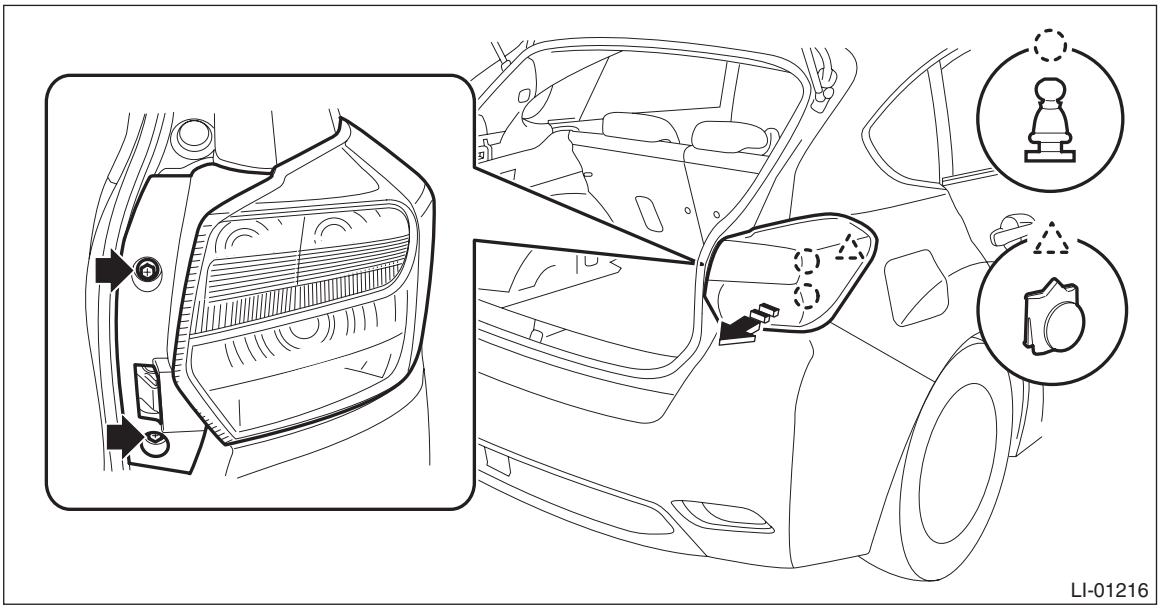


2. 5 DOOR MODEL

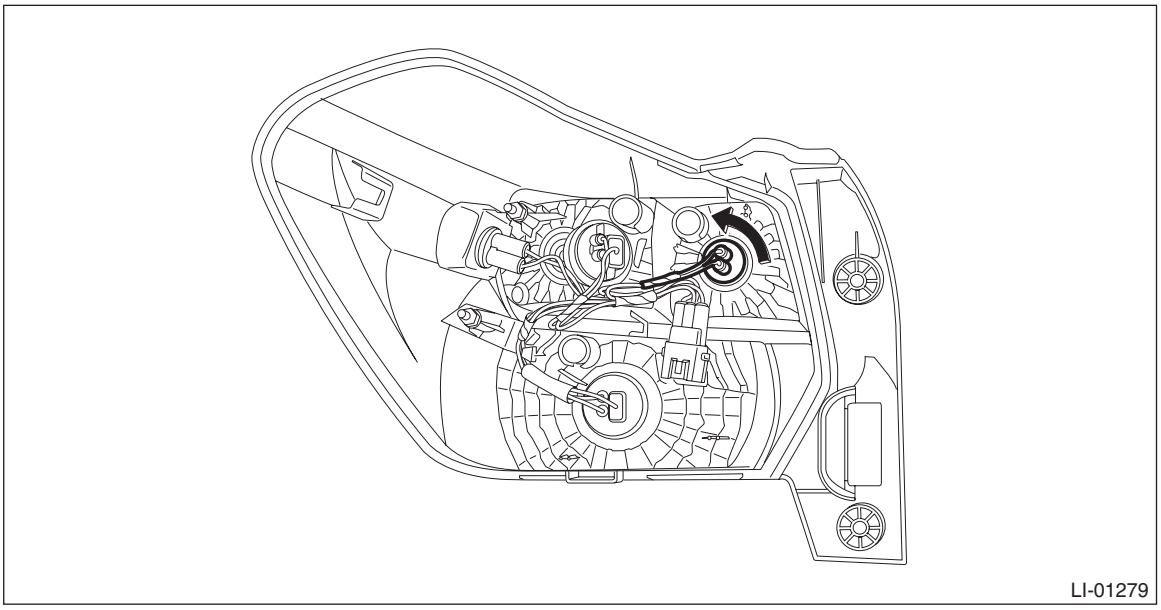
1) Disconnect the ground cable from battery.
2) Remove the light assembly - rear combination.

CAUTION:
Be careful not to damage the clips.

(1) Release the bolts and clips, then pull out the light assembly - rear combination to the vehicle rear.
(2) Disconnect the connector and remove the light assembly - rear combination.



3) Remove the bulb socket and rear turn signal light bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Light assembly - rear combination (5 door model): 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

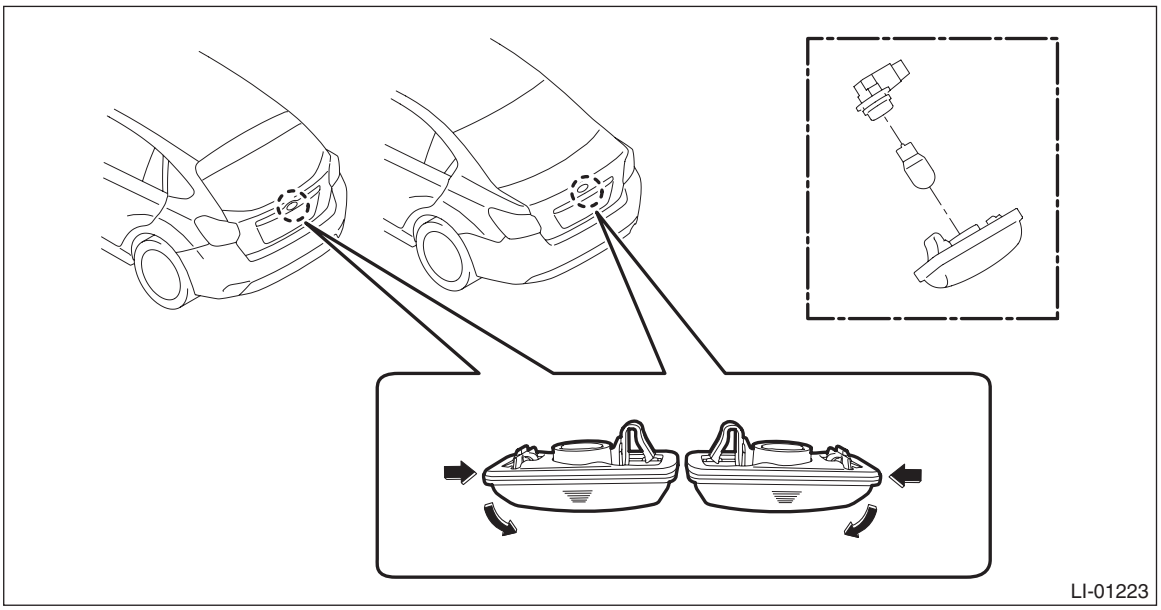
C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

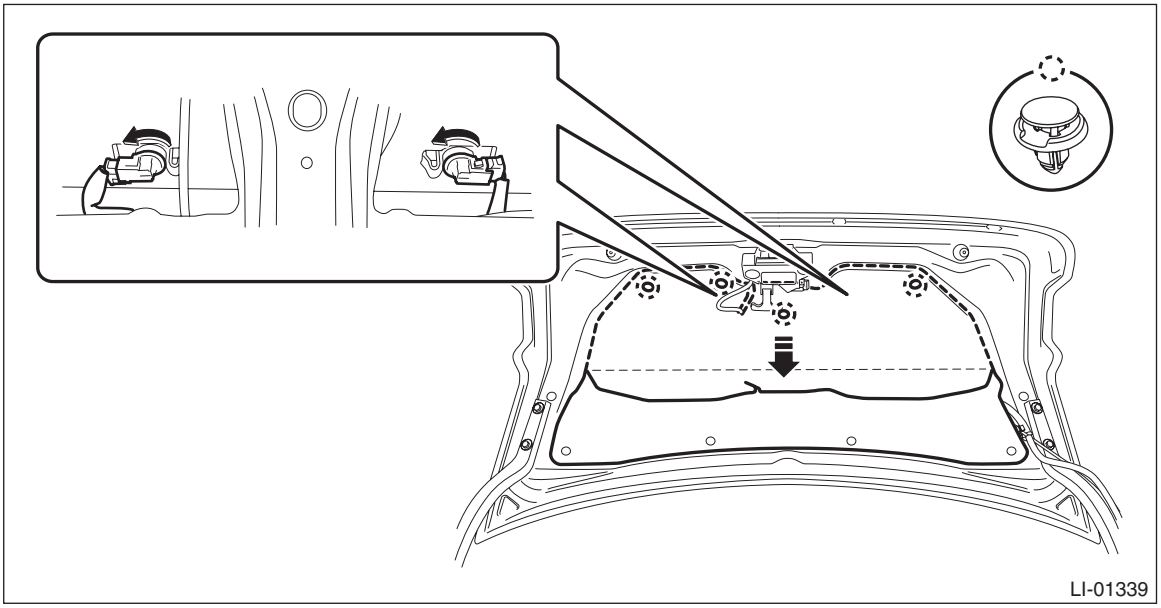
29.License Plate Light

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the garnish - trunk. (4 door model) <Ref. to EI-146, REMOVAL, Trunk Lid Garnish.>
3) Remove the license plate light.
   (1) Release the claws and pull out the license plate light.
   (2) Disconnect the connector and remove the bulb socket and bulb from the license plate light.



NOTE:
For 4 door model, when removing the bulb only, remove the trim panel - trunk lid halfway, then remove the bulb socket and the bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

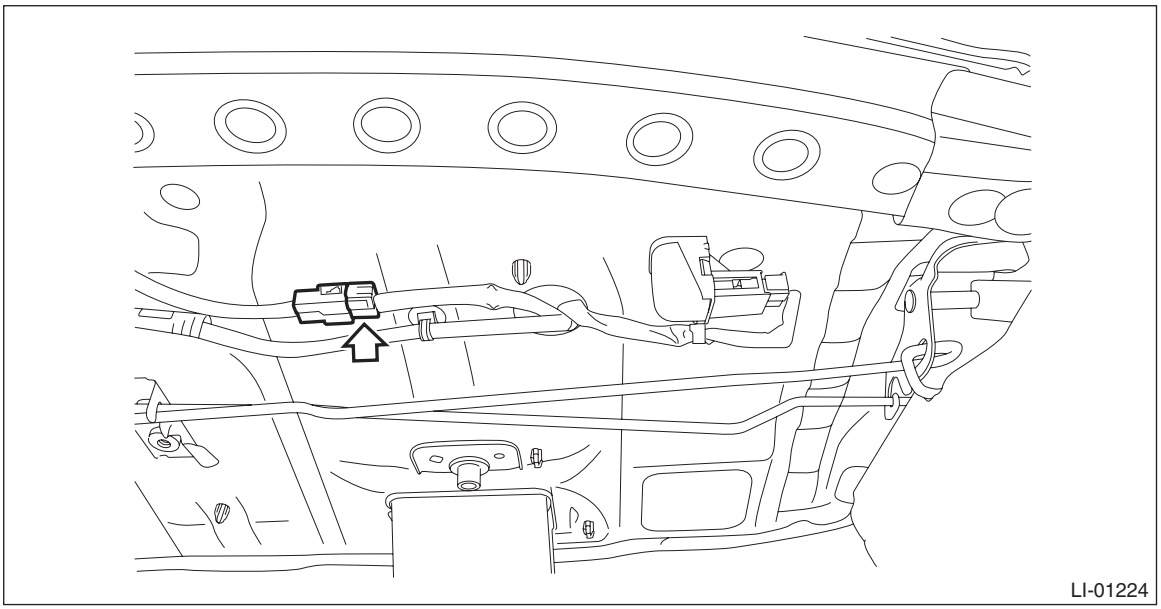
1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

30.High-mounted Stop Light

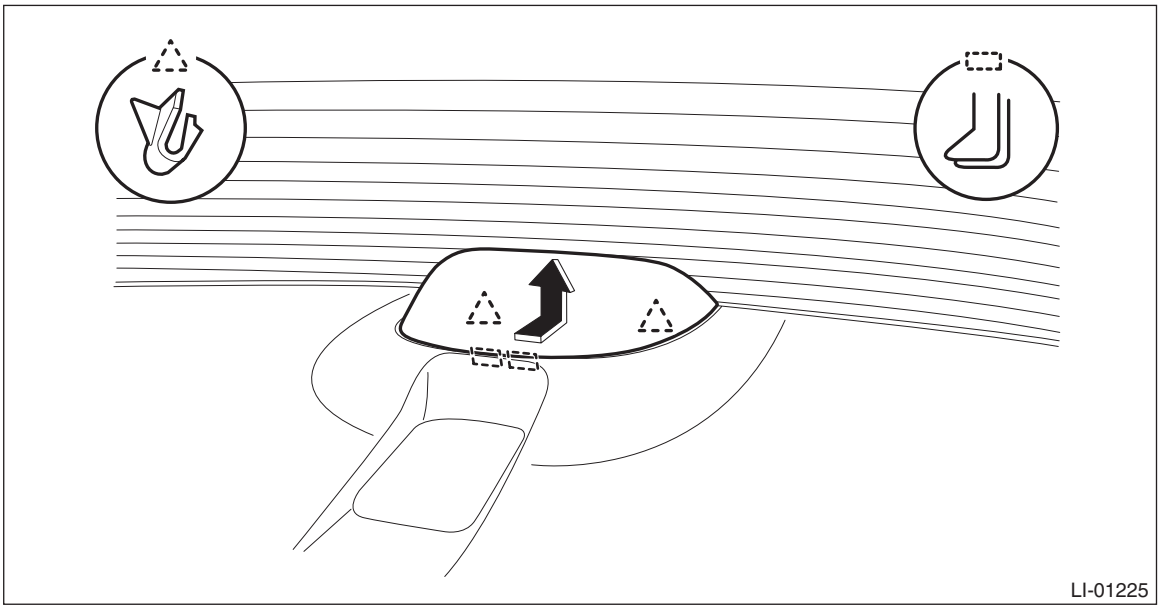
A: REMOVAL

1. 4 DOOR MODEL

1) Disconnect the ground cable from battery.
2) Remove the light assembly - high-mounted.
   (1) Disconnect the connector.

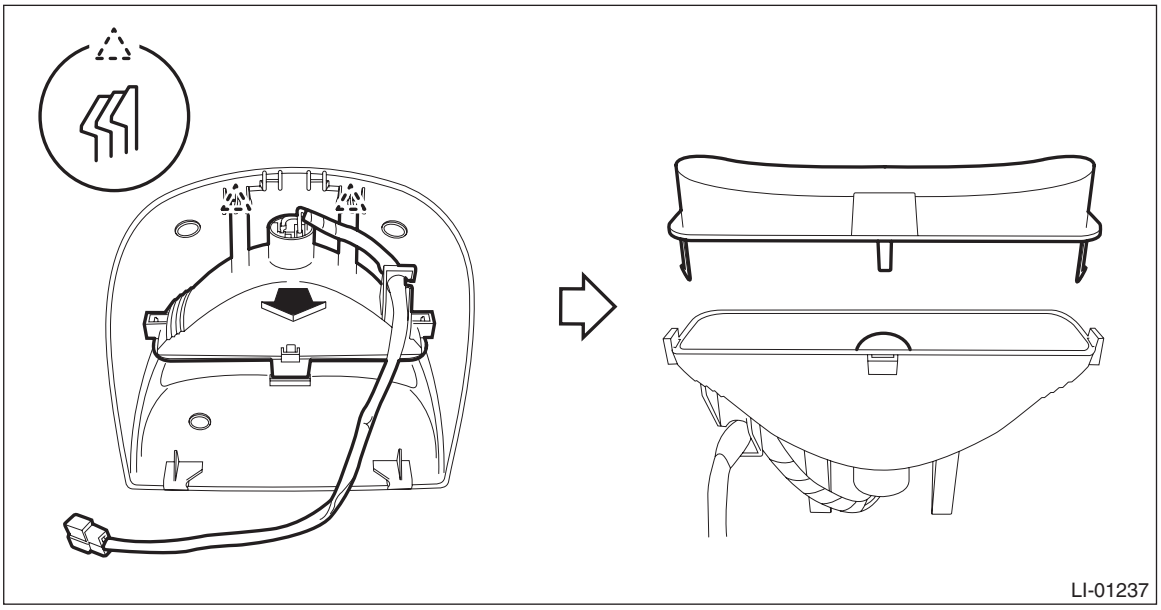


   (2) Release the claws, and remove the light assembly - high-mounted.



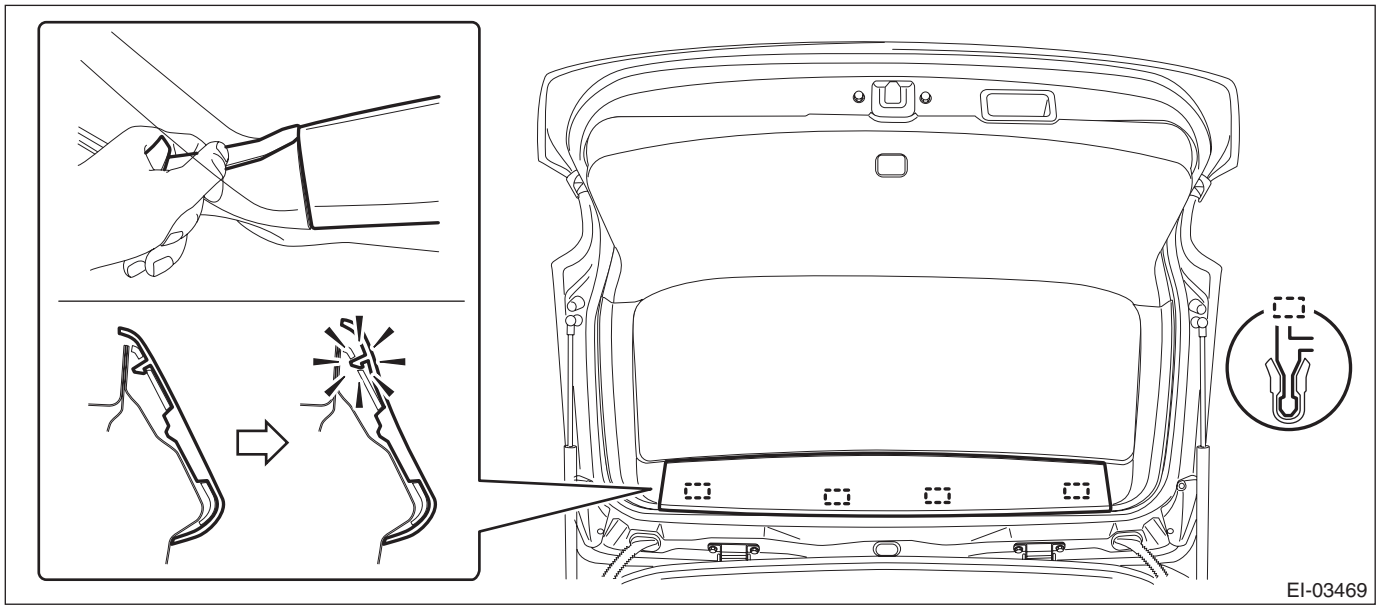
   (3) Release the claws and remove the reflector assembly from the light - case.

(4) Remove the lens and remove the bulb.

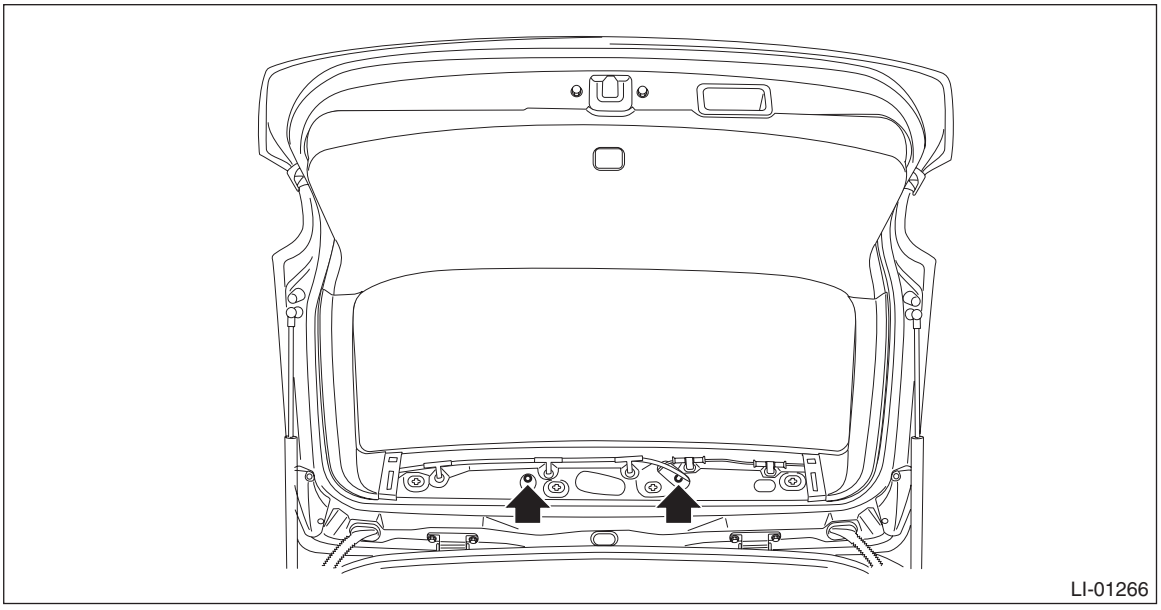


2. 5 DOOR MODEL

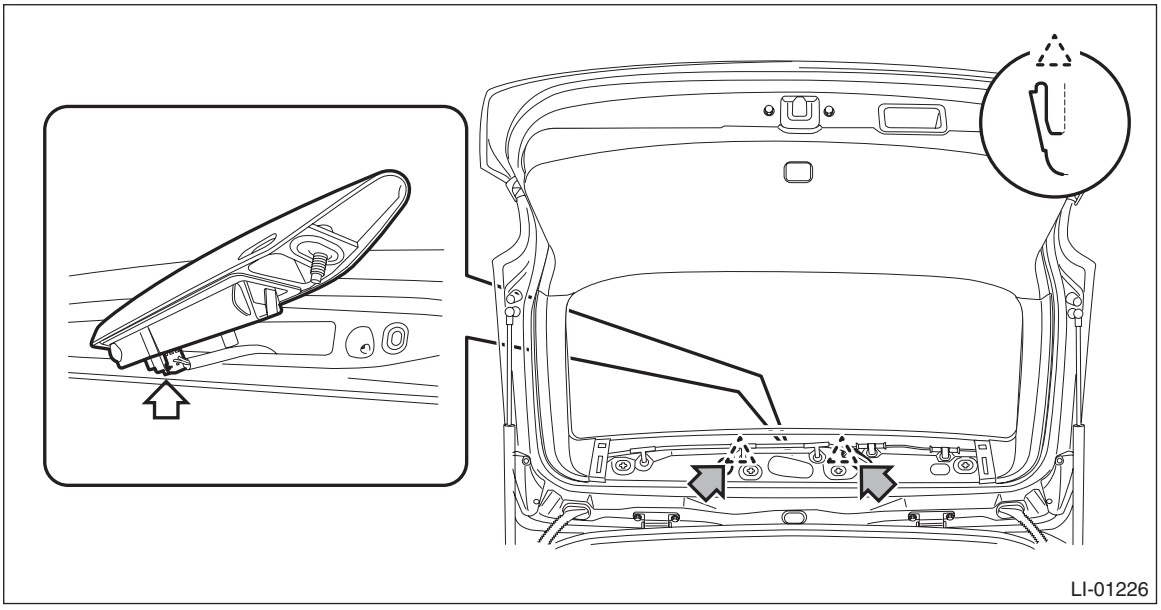
1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear gate UPR.
   (1) Remove the claws on the trim edge.
   (2) Release the claws in the center of trim, and remove the trim panel - rear gate UPR.



3) Remove the light assembly - high-mounted.
(1) Remove the nut.


LI-01266

(2) From the inside of the rear gate, push the claws on both side of the light assembly - high-mounted to take it out toward vehicle rear.
(3) Disconnect the connector and remove the light assembly - high-mounted.


LI-01226

B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Light assembly - high-mounted (5 door model): 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)

C: INSPECTION

1. 4 DOOR MODEL

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

2. 5 DOOR MODEL

1) Install the light to test if it illuminates normally.
2) If it fails to illuminate normally, replace the light assembly - high-mounted with a new part.

NOTE:
Since LED (Light Emitting Diode) is used for the light, replace the light assembly - high-mounted if the LED burns out.

31.Spot Map Light

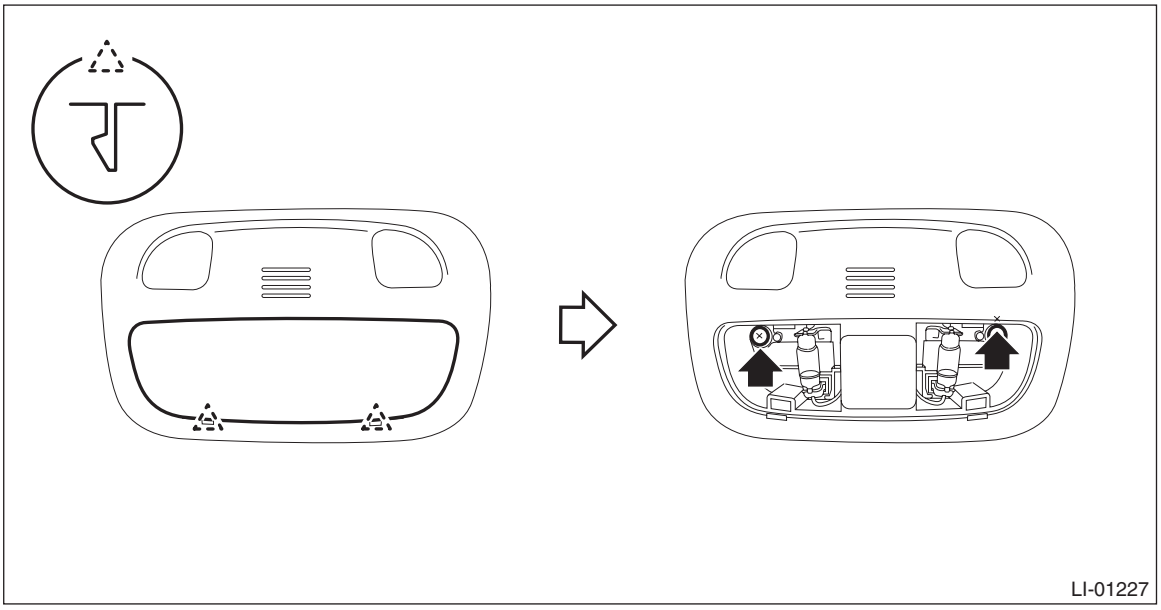
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the light assembly - map.

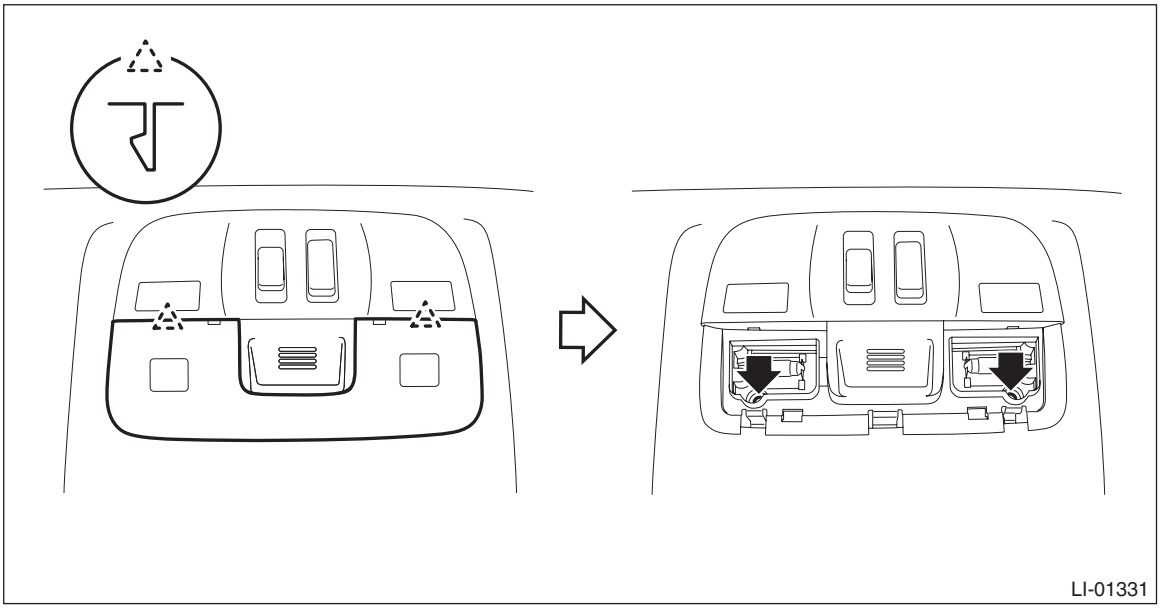
CAUTION:
When using a flat tip screwdriver, apply protective tape or cloth and be careful not to cause damage.

(1) Release the claws and remove the lens.
(2) Remove the screws and pull out the light assembly - map.

- Model without sunroof



- Model with sunroof



(3) Disconnect the connector and remove the light assembly - map and the bulb.

B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1. SPOT MAP LIGHT BULB

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

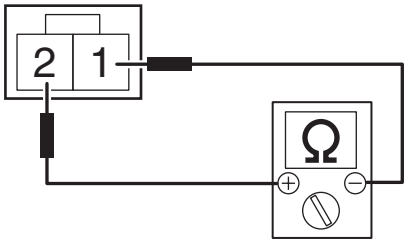
2. SPOT MAP LIGHT SWITCH

Unit inspection

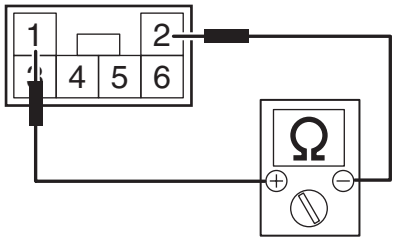
Preparation tool:
Circuit tester

1) Check the resistance between switch terminals.

- Model without sunroof

Terminal No.	Inspection conditions	Standard	Connection diagram
1 — 2	Switch OFF	1 MΩ or more	 LI-01253
	Switch ON	Approx. 18 Ω	

- Model with sunroof

Terminal No.	Inspection conditions	Standard	Connection diagram
1 — 2	Switch OFF	1 MΩ or more	 LI-01332
	Switch ON	Approx. 18 Ω	

2) Replace the light assembly - map if the inspection result is not within the standard value.

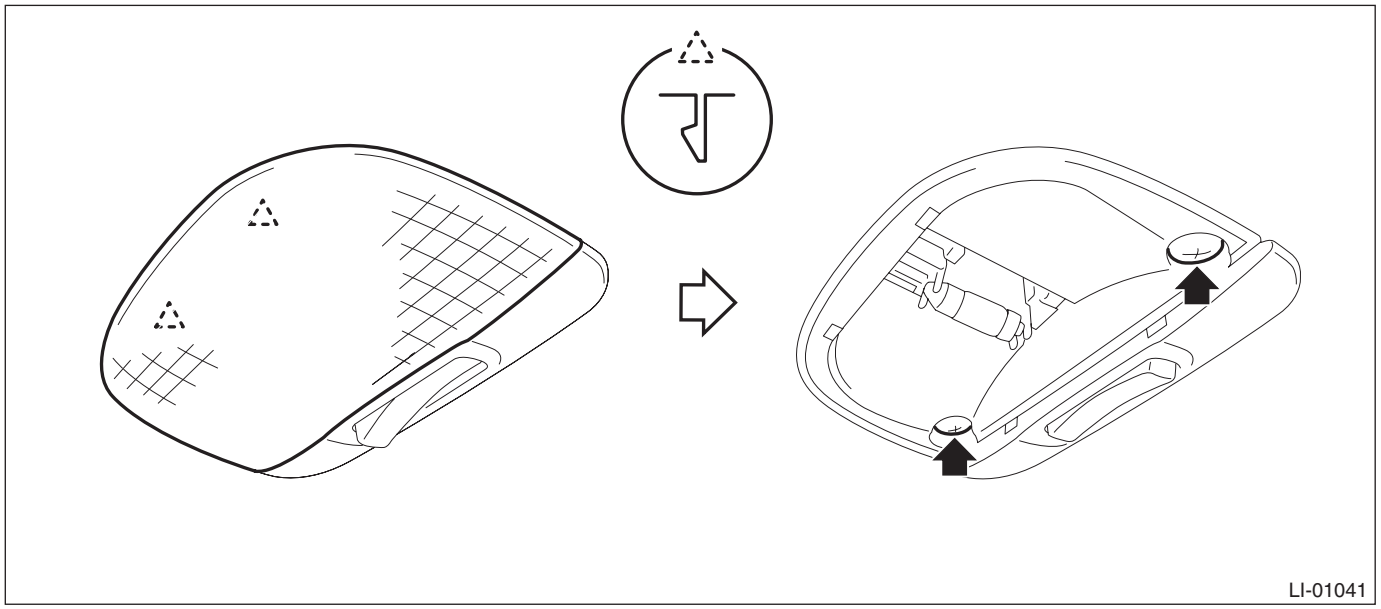
32.Room Light

A: REMOVAL

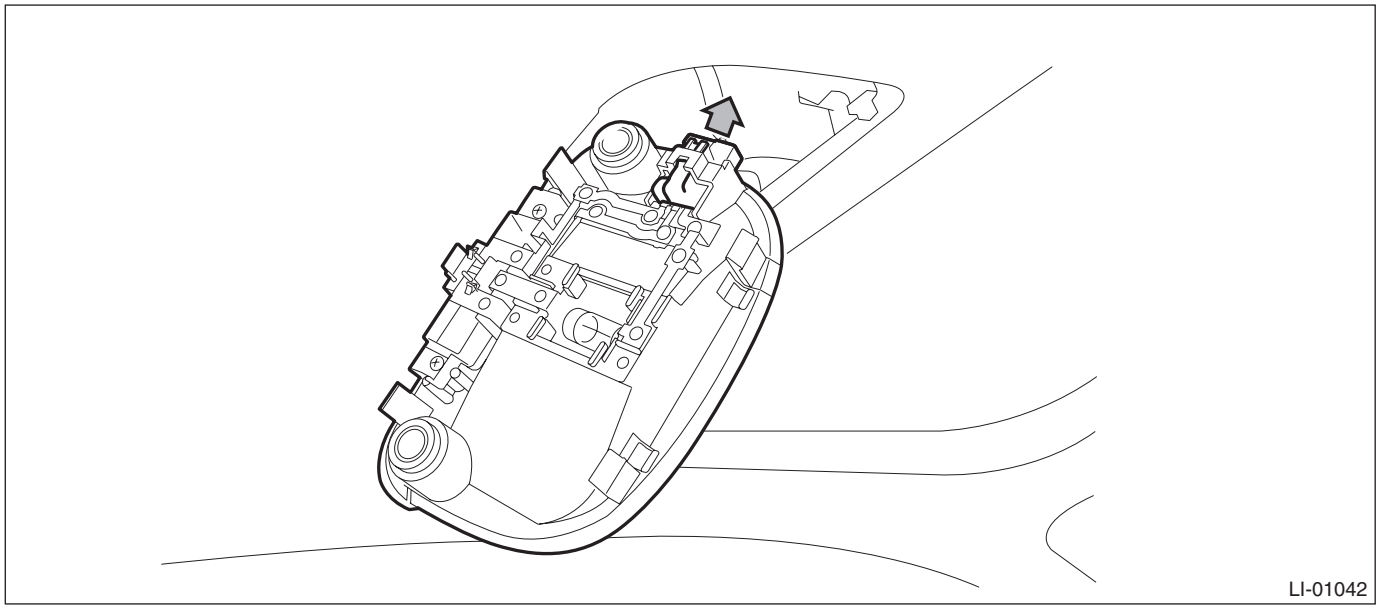
1) Disconnect the ground cable from battery.
2) Remove the light assembly - room.

CAUTION:
When using a flat tip screwdriver, apply protective tape or cloth and be careful not to cause damage.

(1) Release the claws and remove the lens.
(2) Remove the screws and pull out the light assembly - room.



(3) Disconnect the connector and remove the light assembly - room and the bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1. ROOM LIGHT BULB

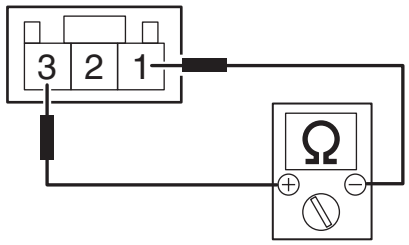
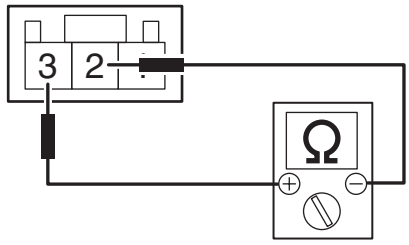
1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

2. ROOM LIGHT SWITCH

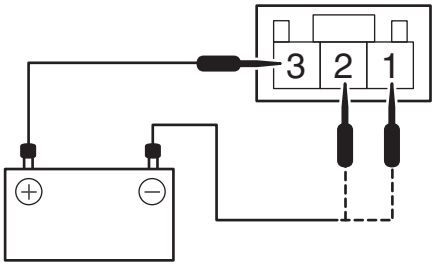
Unit inspection

Preparation tool:
Circuit tester

1) Check the resistance between switch terminals.

Terminal No.	Inspection conditions	Standard	Connection diagram
—	Switch OFF	1 MΩ or more	 LI-01254
1 — 3	Switch ON	Less than 1 Ω	
2 — 3	Switch door	Less than 1 Ω	 LI-01255

2) Apply battery voltage to check the lighting condition of the light.

Terminal No.	Inspection conditions	Specification	Connection diagram
3 (+) — 1, 2 (–)	Switch OFF	Light OFF	 LI-01256
	Switch ON	Light ON	
	Switch door	Light ON	

3) Replace the light assembly - room if the inspection result is not within the standard value.

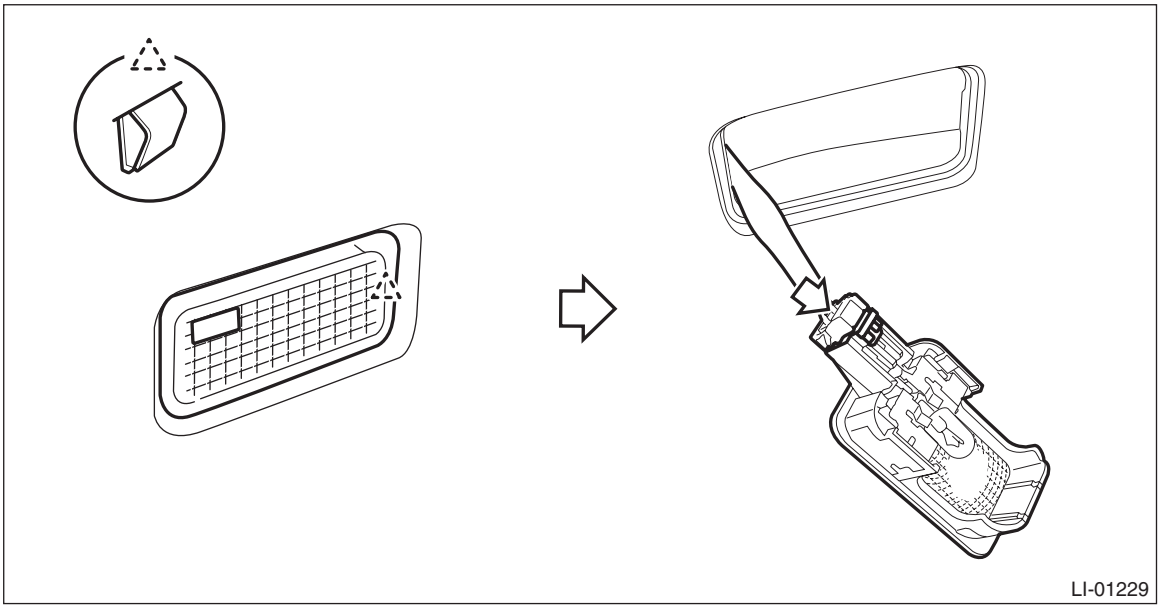
33.Luggage Room Light

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the light assembly - luggage room.

CAUTION:
When using a flat tip screwdriver, apply protective tape or cloth and be careful not to cause damage.

(1) Release the claws and remove the main body of the light assembly - luggage room.
(2) Disconnect the connector and remove the light assembly - luggage room and the bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1. LUGGAGE ROOM LIGHT BULB

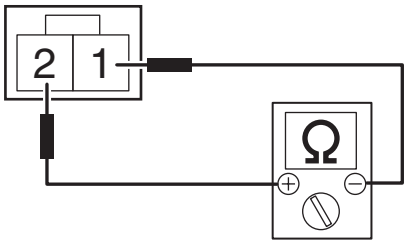
1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

2. LUGGAGE ROOM LIGHT SWITCH

Unit inspection

Preparation tool:
Circuit tester

1) Check the resistance between switch terminals.

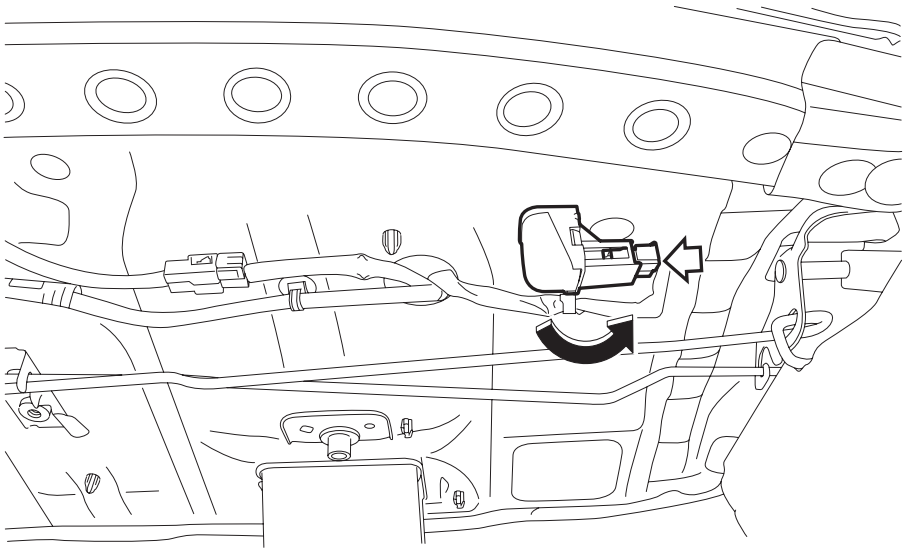
Terminal No.	Inspection conditions	Specification	Connection diagram
1 — 2	Switch OFF	1 MΩ or more	 LI-01253
	Switch ON	Less than 1 Ω	

2) Replace the light assembly - luggage room if the inspection result is not within the standard value.

34.Trunk Room Light

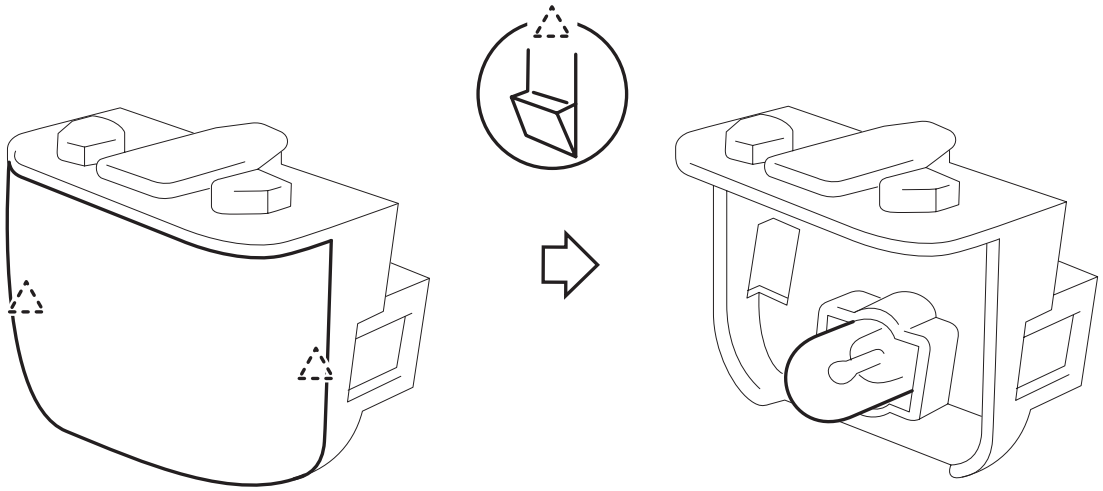
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the light assembly - trunk room.
   (1) Disconnect the connector.
   (2) Turn the light assembly - trunk room counterclockwise to 60° and remove the light.



LI-01230

3) Release the claws, and detach the lens and bulb.



LI-01048

B: INSTALLATION

Install each part in the reverse order of removal.

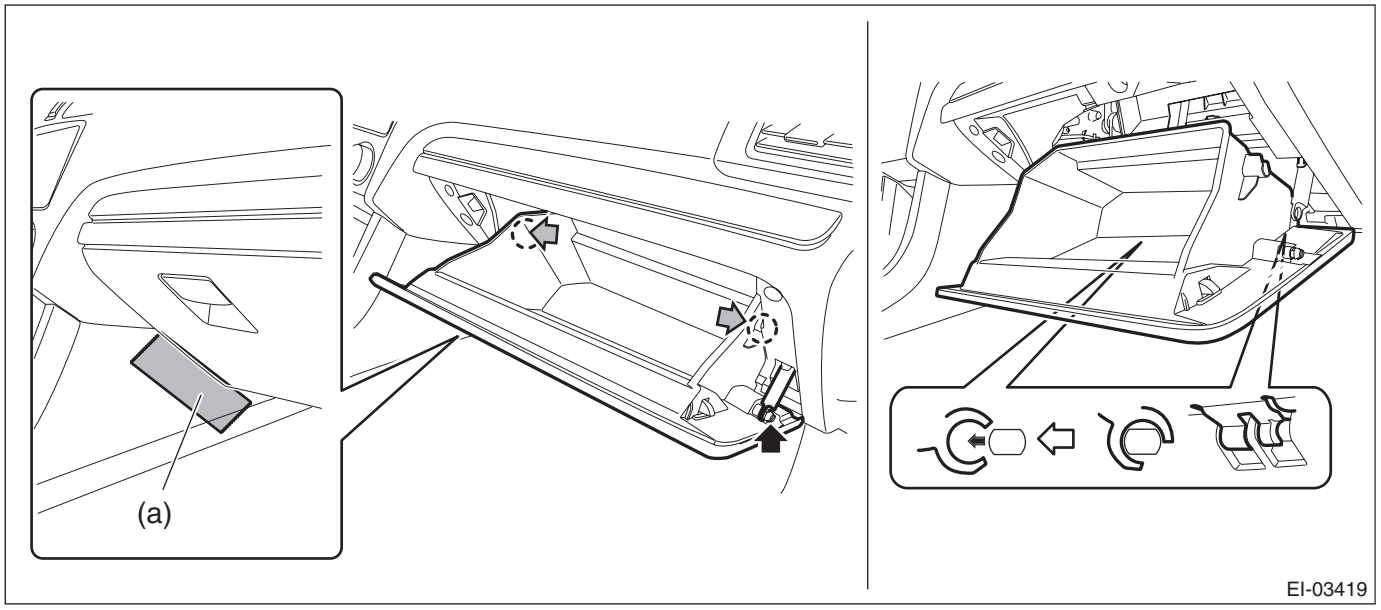
C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

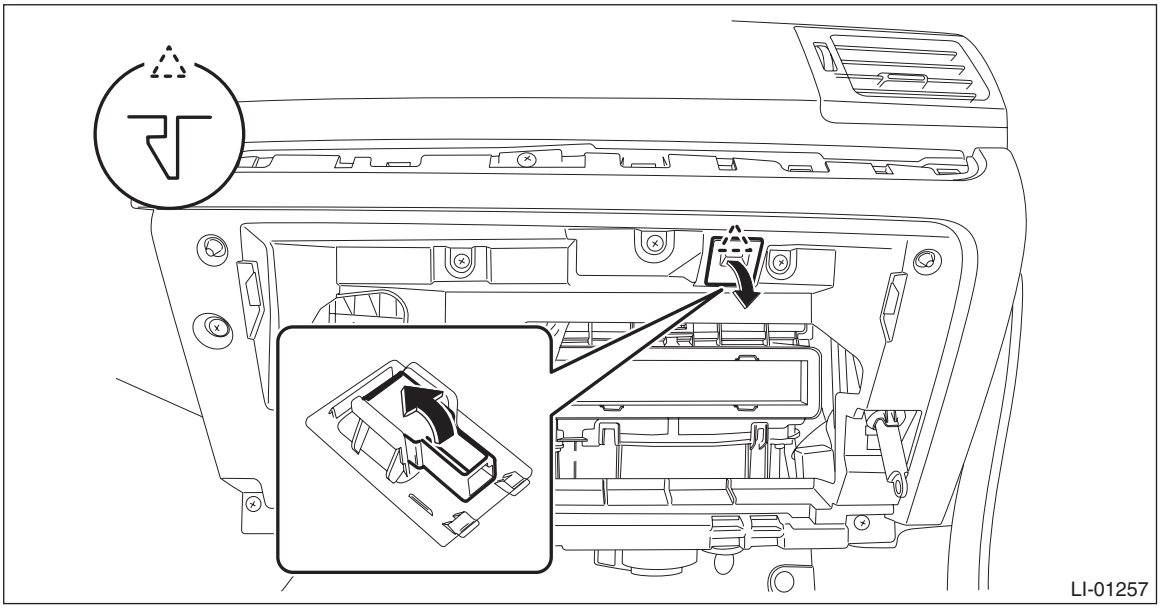
35.Glove Box Light

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the pocket assembly.
   (1) Attach the protective tape (a) to the panel center LWR.
   (2) Remove the damper COMPL - pocket.
   (3) Release the stoppers and remove the pocket assembly by pulling it toward you.



3) Remove the light - pocket.
   (1) Release the claws and remove the light - pocket cover from the back panel - pocket.
   (2) Disconnect the connector and remove the light - pocket from the cover.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

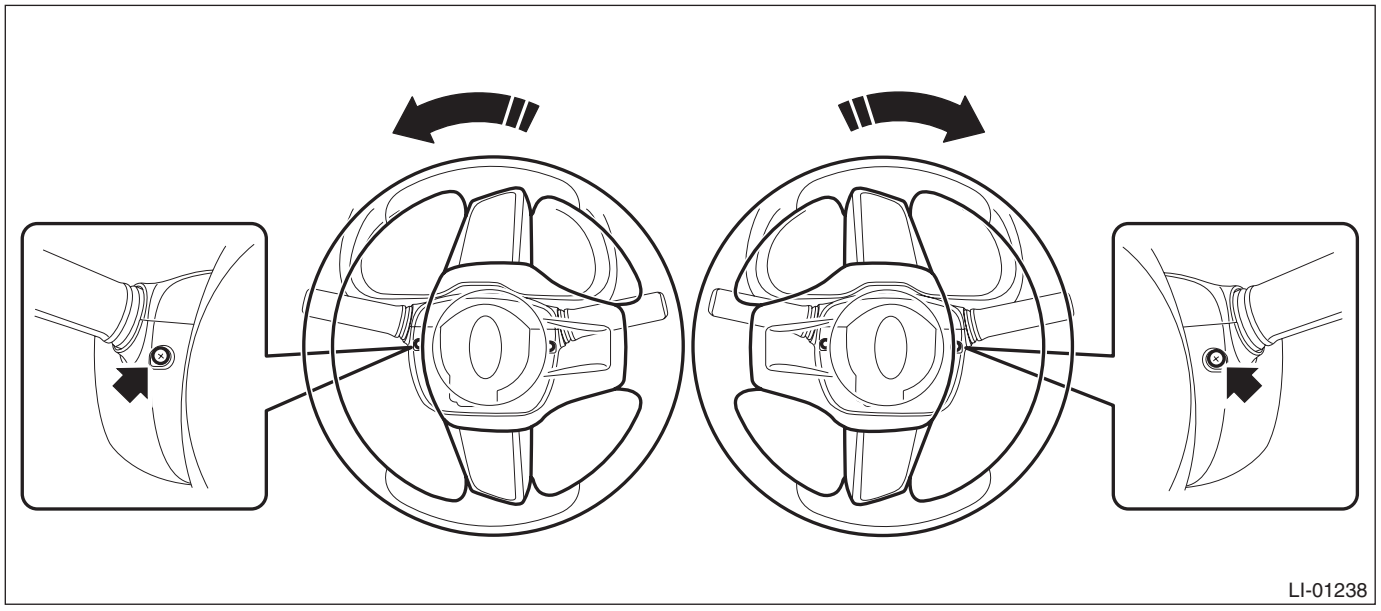
1) Install the light to test if it illuminates normally.
2) If it fails to illuminate normally, replace the light - pocket with a new part.

NOTE:
Since LED (Light Emitting Diode) is used for the light, replace the light - pocket if the LED burns out.

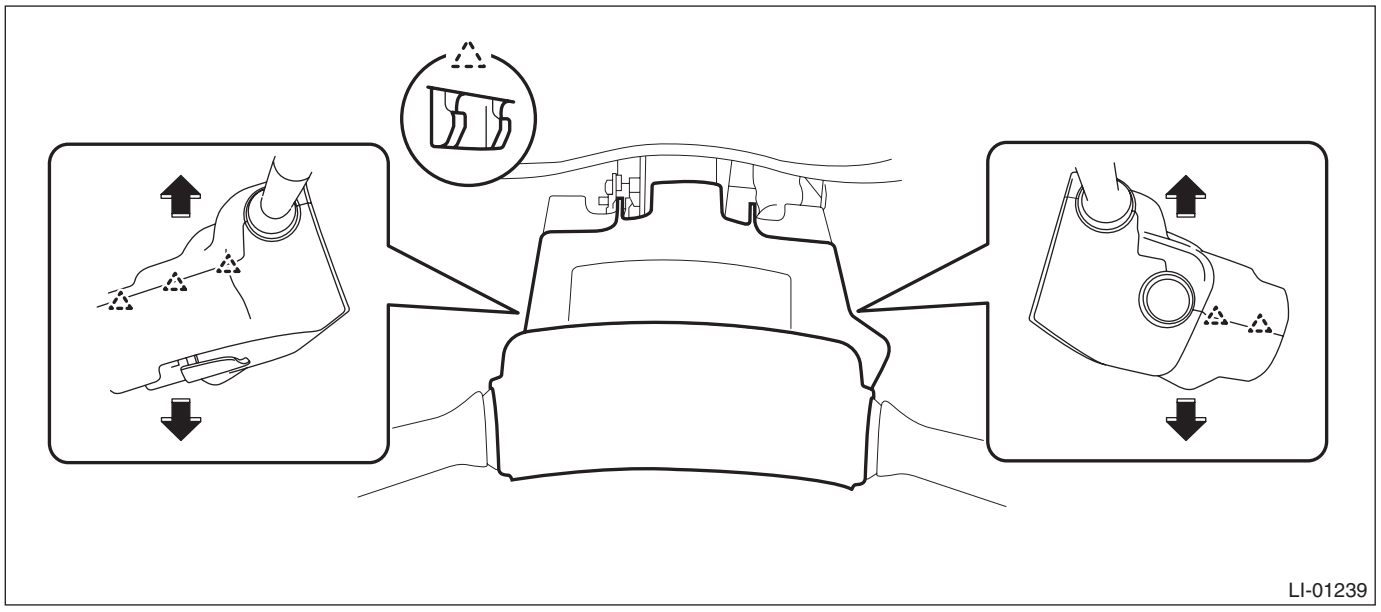
36.Ignition Switch Illumination

A: REMOVAL

NOTE:
The ignition switch illumination is integrated into the immobilizer antenna assembly.
1) Disconnect the ground cable from battery.
2) Remove the cover assembly - column.
(1) Remove the screws by turning the steering wheel to right and left.

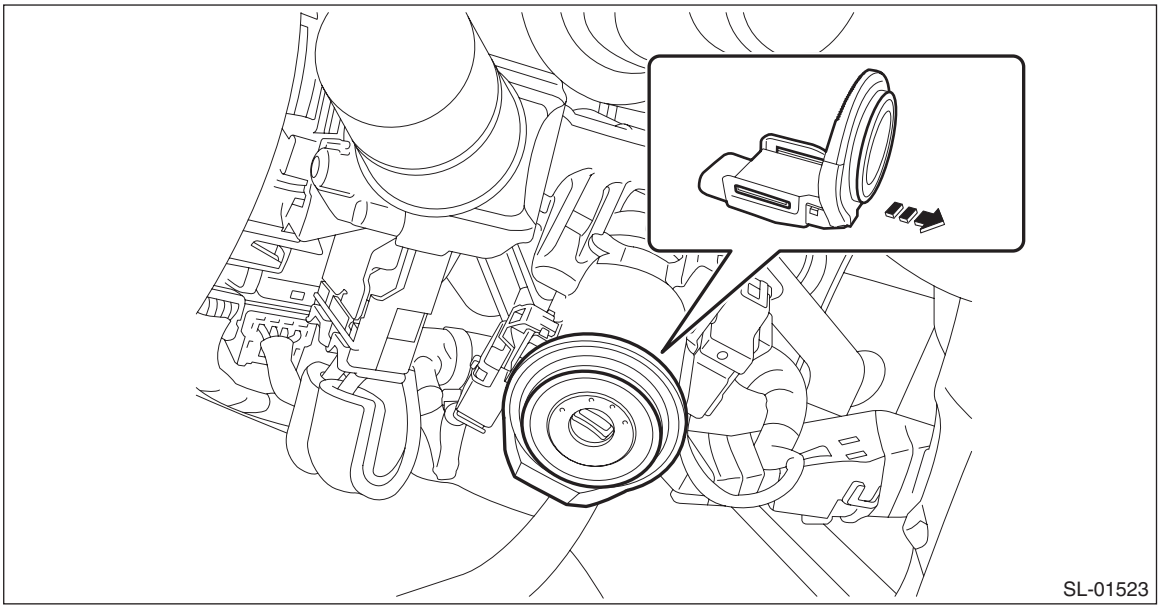

LI-01238

(2) Release the claw, and remove the cover assembly - column UPR and the cover assembly - column LWR.


LI-01239

3) Disconnect the connector and remove the ignition switch illumination.

CAUTION:
Do not apply excessive force to remove the ignition switch illumination lock. Otherwise they may be broken because those parts are the products made of a plastic.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

On- the vehicle inspection

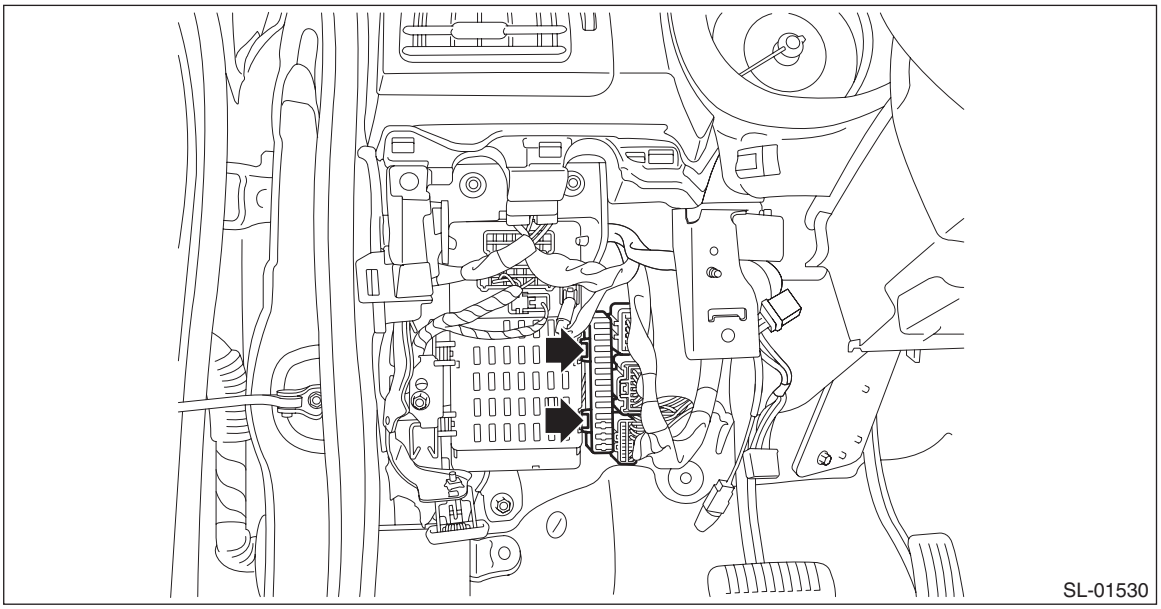
Preparation tool:
Circuit tester

Step		Check	Yes	No
1	**CHECK THE IGNITION SWITCH ILLUMINATION.** Make sure the ignition switch illumination illuminates when driver's side door is open.	Does the ignition switch illumination illuminate?	Ignition switch illumination is normal.	Go to step **2**.
2	**CHECK THE IGNITION SWITCH ILLUMINATION.** Make sure the ignition switch illumination blinks when the ignition switch is turned to ON.	Does the ignition switch illumination blink?	Check the function setting of body integrated unit. <Ref. to BC(diag)-2, Basic Diagnostic Procedure.>	Check the ignition switch illumination circuit. <Ref. to SL-25, CHECK IGNITION SWITCH ILLUMINATION, INSPECTION, Keyless Entry System.>

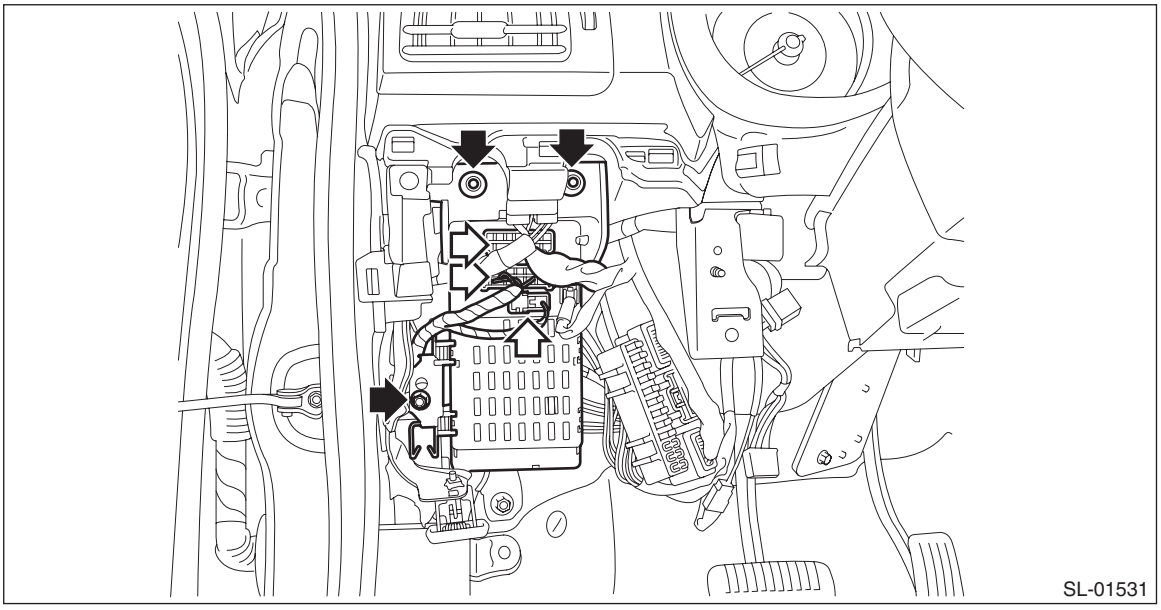
37.Auto Headlight Beam Leveler Control Module

A: REMOVAL

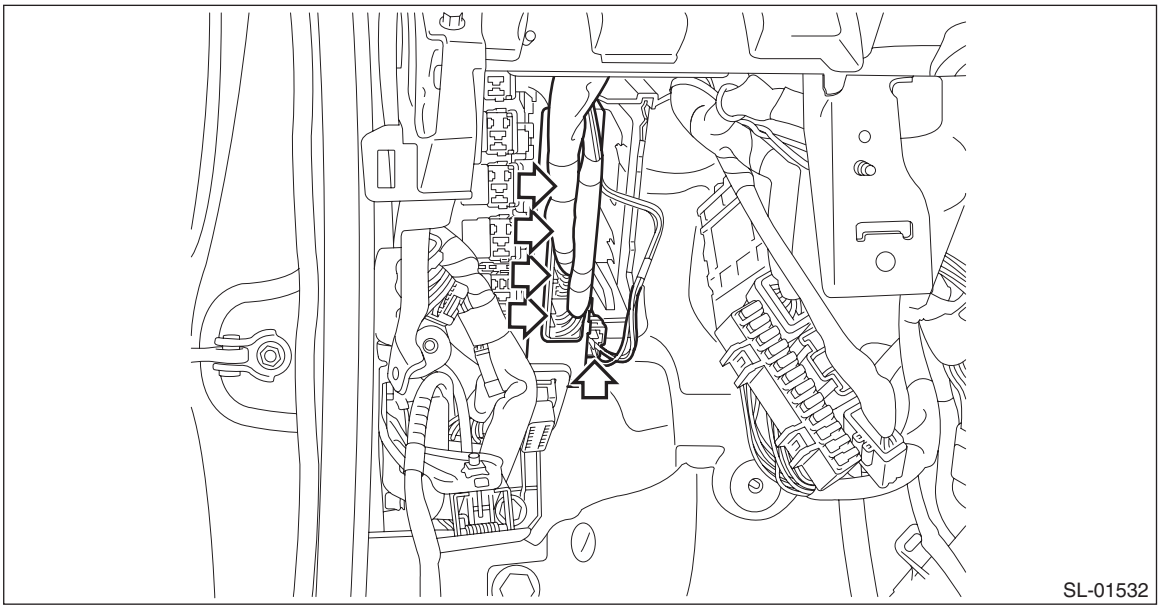
1) Remove the knee airbag module. <Ref. to AB-42, REMOVAL, Knee Airbag Module.>
2) Release the lock and remove the fuse holder.



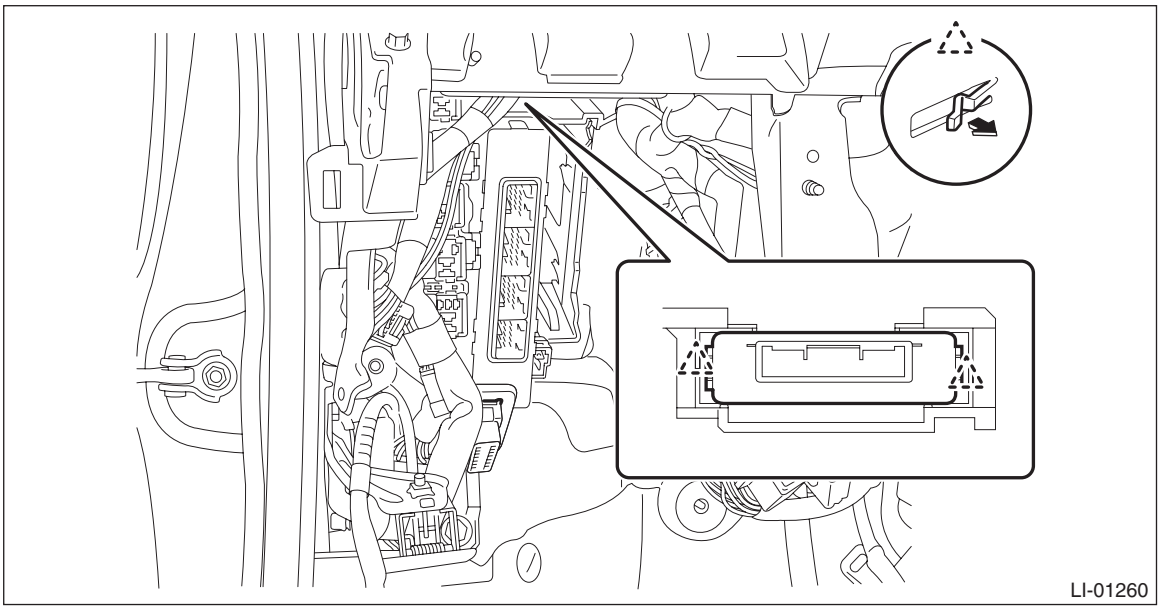
3) Remove the relay & fuse box.
   (1) Disconnect the connector.
   (2) Remove the bolts and nuts, and remove the relay & fuse box.



4) Disconnect the connector of body integrated unit.



5) Remove the auto headlight beam leveler CM.
   (1) Disconnect the connector.
   (2) Release the claws and pull out the auto headlight beam leveler CM.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:
Refer to “INSTALLATION” of “Knee Airbag Module”. <Ref. to AB-43, INSTALLATION, Knee Airbag Module.>

Tightening torque:
Relay & fuse box: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

NOTE:
When the auto headlight beam leveler CM is removed, perform initialization or reinitialization. <Ref. to LI-19, PROCEDURE, Auto Headlight Beam Leveler System.>

38.Rear Height Sensor

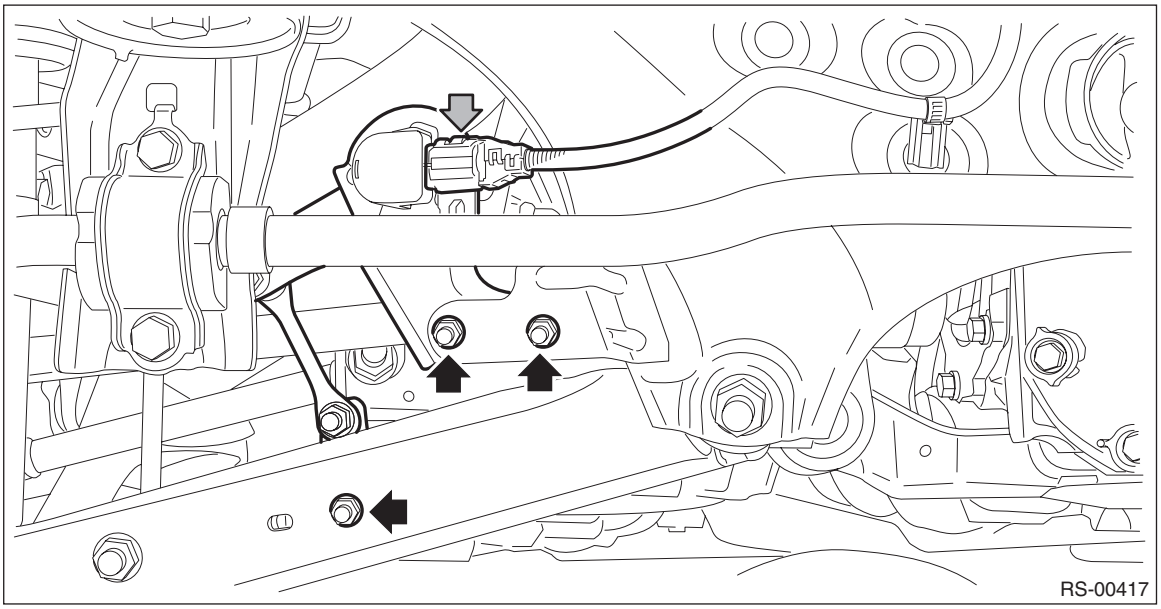
A: REMOVAL

CAUTION:
Always remove the sensor assembly - headlight beam leveler before removing any parts related to the suspension.

1) Disconnect the ground cable from battery.
2) Lift up the vehicle body, and remove the left rear wheel.
3) Remove the sensor assembly - headlight beam leveler.

CAUTION:
Do not disassemble the sensor and lever.

(1) Disconnect the connector.
(2) Remove the nuts, and remove the sensor assembly - headlight beam leveler.



B: INSTALLATION

1) Install each part in the reverse order of removal.

Tightening torque:
Sensor assembly - headlight beam leveler: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)
Rear wheel: 120 N·m (12.24 kgf-m, 88.5 ft-lb)

2) Perform reinitialization of the sensor assembly - headlight beam leveler. <Ref. to LI-19, REINITIALIZATION, PROCEDURE, Auto Headlight Beam Leveler System.>

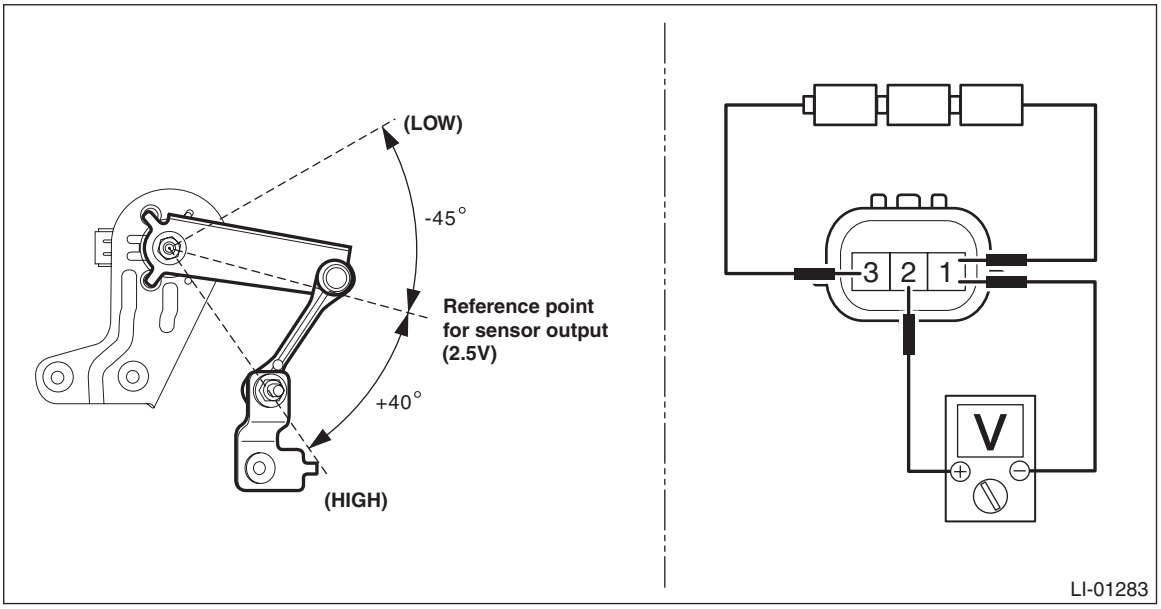
NOTE:
When replacing the sensor assembly - headlight beam leveler with a new part, perform the initialization. <Ref. to LI-19, INITIALIZATION, PROCEDURE, Auto Headlight Beam Leveler System.>

C: INSPECTION

Unit inspection

Preparation tool:
Circuit tester

1) Connect three dry cell batteries (1.5 V) in series.
2) Connect the (+) side of the battery to terminal No. 3 of the sensor, and the (–) side of the battery to terminal No. 1, and apply a voltage of 4.5 V between terminals No. 3 — No. 1.
3) With voltage applied, check the voltage between terminals when the sensor link is moved slowly up and down.



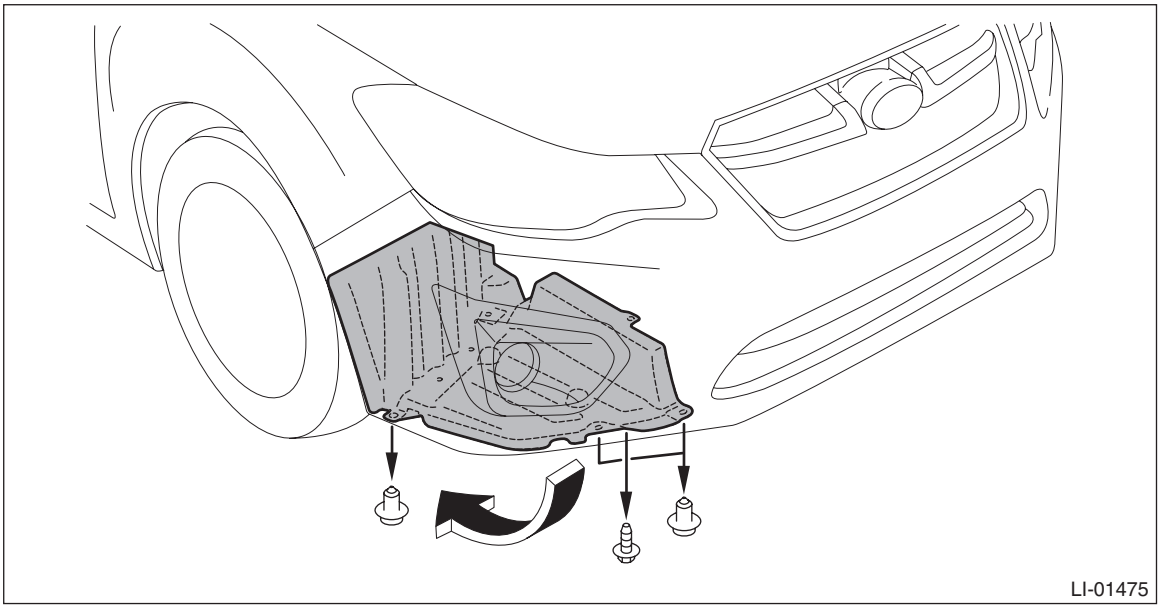
Terminal No.	Inspection conditions	Standard
2 (+) — 1 (–)	Move the link within the operation range.	0.5 — 4.1V

4) Replace the sensor assembly - headlight beam leveler if the inspection result is not within the standard value.

39.Day Time Running Resistor

A: REMOVAL

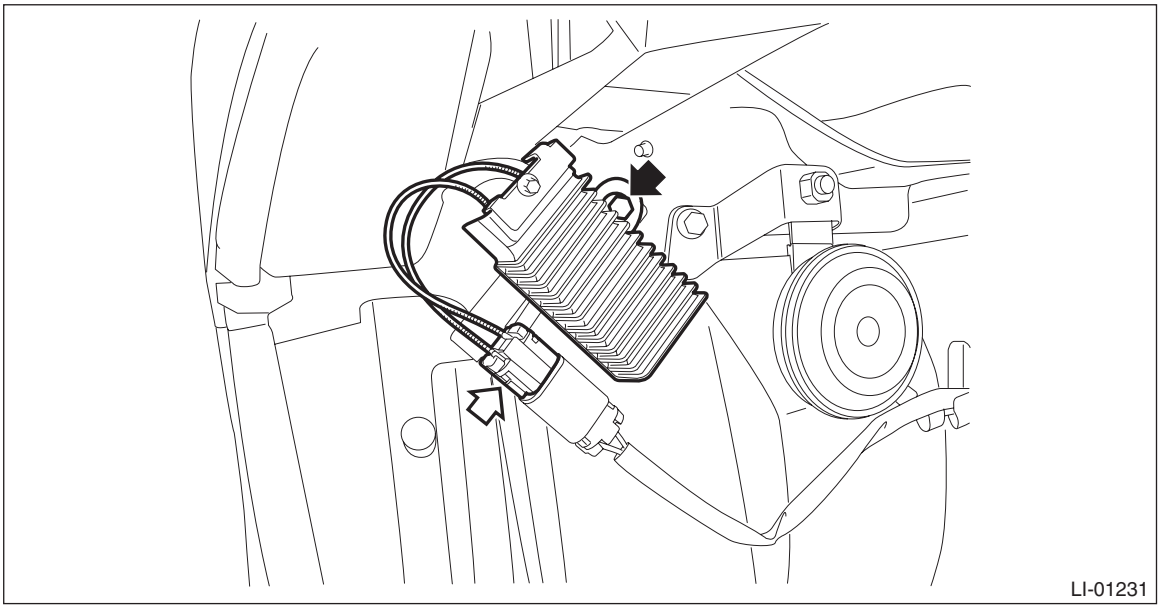
1) Disconnect the ground cable from battery.
2) Lift up the vehicle.
3) Remove the screw and clips, and turn over the front side of the mud guard - front.



4) Remove the resistor assembly - daytime running light.

CAUTION:
The resistor may become hot. Be careful not to burn yourself when removing it.

(1) Disconnect the connector.
(2) Remove the bolts, then remove the resistor assembly - daytime running light.



B: INSTALLATION

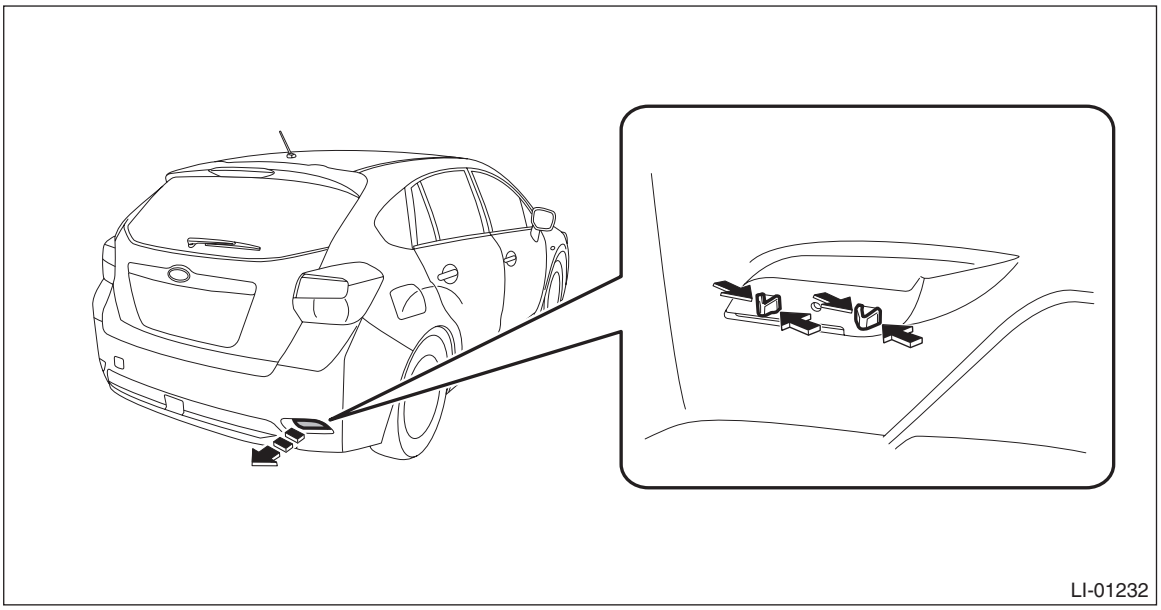
Install each part in the reverse order of removal.

Tightening torque:
Resistor assembly - daytime running light: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

40.Reflex Reflector

A: REMOVAL

From behind the bumper face - rear, release the claws and remove the reflex reflector assembly.



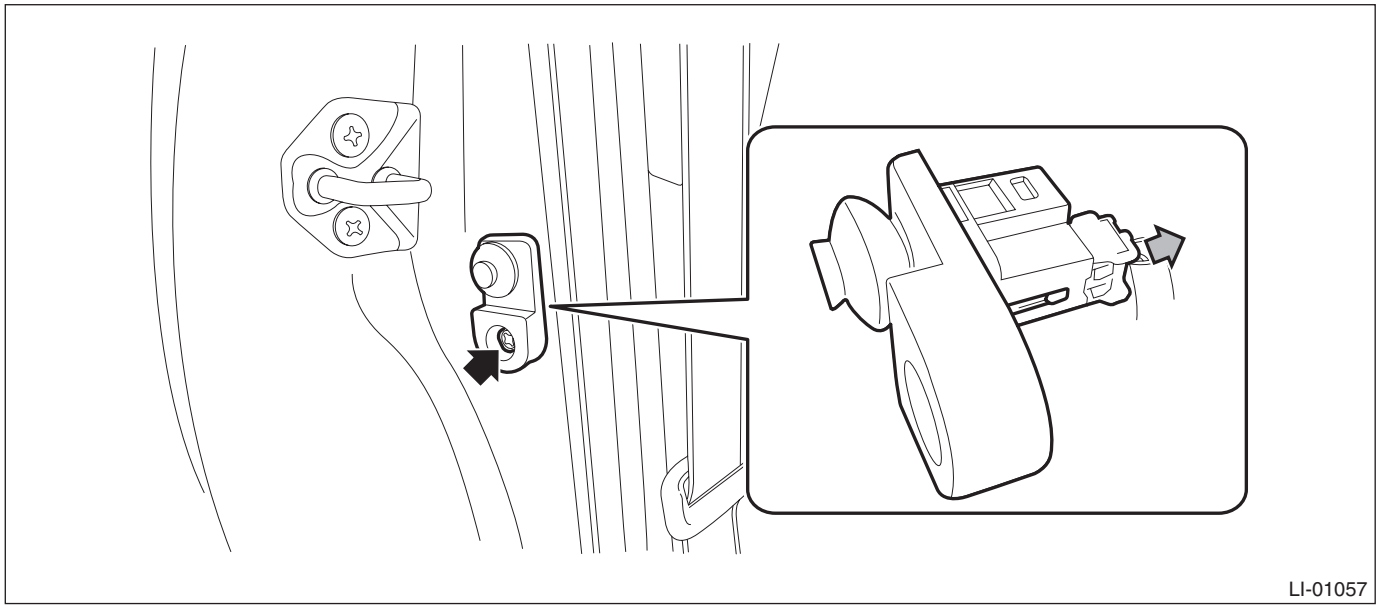
B: INSTALLATION

Install each part in the reverse order of removal.

41.Door Switch

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the switch assembly - door.
   (1) Remove the screws, and pull out the switch assembly - door toward you.
   (2) Disconnect the connector and remove the switch assembly - door.



B: INSTALLATION

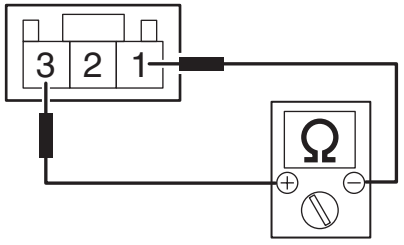
Install each part in the reverse order of removal.

C: INSPECTION

Unit inspection

Preparation tool:
Circuit tester

1) Check the resistance between switch terminals.

Terminal No.	Inspection conditions	Standard	Connection diagram
1 — 3	When door is opened	Less than 1 Ω	
	When door is closed	1 MΩ or more	

2) Replace the switch assembly - door if the inspection result is not within the standard value.

WIPER AND WASHER SYSTEMS

WW

		Page
1.	General Description	2
2.	Relay and Fuse	7
3.	Wiper and Washer System	9
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5.	Wiper Blade	17
6.	Washer Tank and Motor	21
7.	Front Wiper Arm	28
8.	Front Wiper Motor and Link	30
9.	Front Washer Nozzle	34
10.	Rear Wiper Arm	39
11.	Rear Wiper Motor	41
12.	Rear Washer	45

1. Basic Diagnostic Procedure

A: PROCEDURE

	Step	Check	Yes	No
1	**CHECK WARNING LIGHT.** Check whether the airbag warning light in the combination meter is lit.	Does the airbag warning light illuminate?	Go to step **2**.	Perform the diagnosis according to phenomenon of the problem.
2	**READ DTC.** 1) Turn the ignition switch to OFF. 2) Connect the Subaru Select Monitor to data link connector. 3) Turn the ignition switch to ON and run the Subaru Select Monitor. 4) Read the DTC. <Ref. to OD(diag)-12, OPERATION, Read Diagnostic Trouble Code (DTC).> NOTE: If the communication function of the Subaru Select Monitor cannot be executed properly, check the communication circuit. <Ref. to OD(diag)-11, INSPECTION, Subaru Select Monitor.> 5) Record all DTCs and freeze frame data.	Is DTC displayed?	Go to step **3**.	Go to "Airbag Warning Light Failure" <Ref. to AB(diag)-30, Airbag Warning Light Failure.>.
3	**PERFORM DIAGNOSIS.** 1) Determine the possible cause from "List of Diagnostic Trouble Code (DTC)" <Ref. to OD(diag)-18, List of Diagnostic Trouble Code (DTC).>. 2) Inspect the DTC using "List of Diagnostic Trouble Code (DTC)". 3) Repair the trouble cause. 4) Perform the Clear Memory Mode. <Ref. to OD(diag)-14, Clear Memory Mode.> 5) Perform the Inspection Mode. <Ref. to OD(diag)-13, Inspection Mode.> 6) Read any other DTCs displayed.	Is DTC displayed?	Perform the procedure 1) to 5) in step 3.	Finish the diagnosis.

2. Check List for Interview

A: CHECK

Customer's name		Inspector's name	
Date vehicle brought in	/ /	Registration No.	
Odometer reading	km miles	V.I.N.	
Date problem occurred	/ /	Registration year	/ /
Weather	❑ Fine ❑ Cloudy ❑ Rainy ❑ Snowy ❑ Others :		
Temperature	°C (°F)		
Road condition	❑ Flat road ❑ Uphill ❑ Downhill ❑ Gravel road ❑ Others :		
Vehicle operation	❑ Starting ❑ Idling ❑ Driving ❑ Constant speed ❑ Accelerating ❑ Decelerating ❑ Turning ❑ Others :		
Details of problem			
Airbag warning light operation	❑ Normal (After turning the ignition switch to ON, illuminates for 6 seconds then goes off.) ❑ Remains ON ❑ Remains OFF		
Passenger's airbag ON/OFF indicator does not operate.	❑ Normal (After turning the ignition switch to ON, illuminates for 6 seconds then goes off for 2 seconds; Lights ON (adult) or OFF (children/unoccupied).) ❑ Both remain ON ❑ Both remain OFF		
DTC output	❑ OK code ❑ DTC: (Code:)		

3. General Description

A: CAUTION

1) The occupant detection system (passenger seat only) control module and the occupant detection sensor are fixed to the seat cushion frame. Never remove the occupant detection control module or the occupant detection sensor from the seat cushion frame.
2) Do not replace the seat cushion pad by itself. Always replace the seat cushion pad and frame assembly as a set. The seat cushion pad and cushion frame are adjusted as a set at the time of manufacture. If cushion pads and cushion frames are combined from those of other vehicles or other sets, the occupant detection system may not operate properly.
3) If the seat cushion cover is removed, make sure to replace the hang wire on the seat cushion side with a new wire.
4) Never connect the battery in reverse polarity. Occupant detection system may be destroyed instantly.
5) Do not disconnect the battery terminals while the engine is running. A large counter electromotive force will be generated in the generator, and this voltage may damage electronic parts such as occupant detection control module.
6) Before disconnecting the connectors of each sensor and control module, be sure to turn the ignition switch to OFF and wait for 60 seconds or more. Occupant detection control module may be damaged.
7) Every occupant detection system-related part is a precision part. Do not drop them.

CAUTION:
• Do not use electrical test equipment on wiring harness and connector circuits of the airbag system.
• Be careful not to damage the airbag system wiring harness when servicing the occupant detection system.
• Refer to CAUTION in Airbag System when repairing the occupant detection system. <Ref. to AB-10, CAUTION, General Description.>

B: INSPECTION

Measure the battery voltage and check electrolyte.

Standard voltage:
12 V

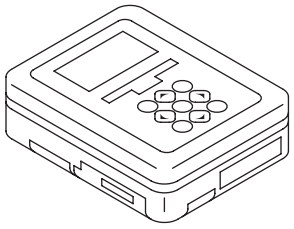
Specific gravity:
1.260 or more

Fluid level:
Between the upper level and lower level

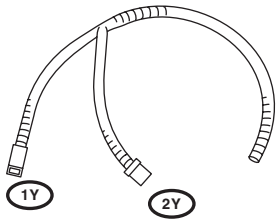
C: PREPARATION TOOL

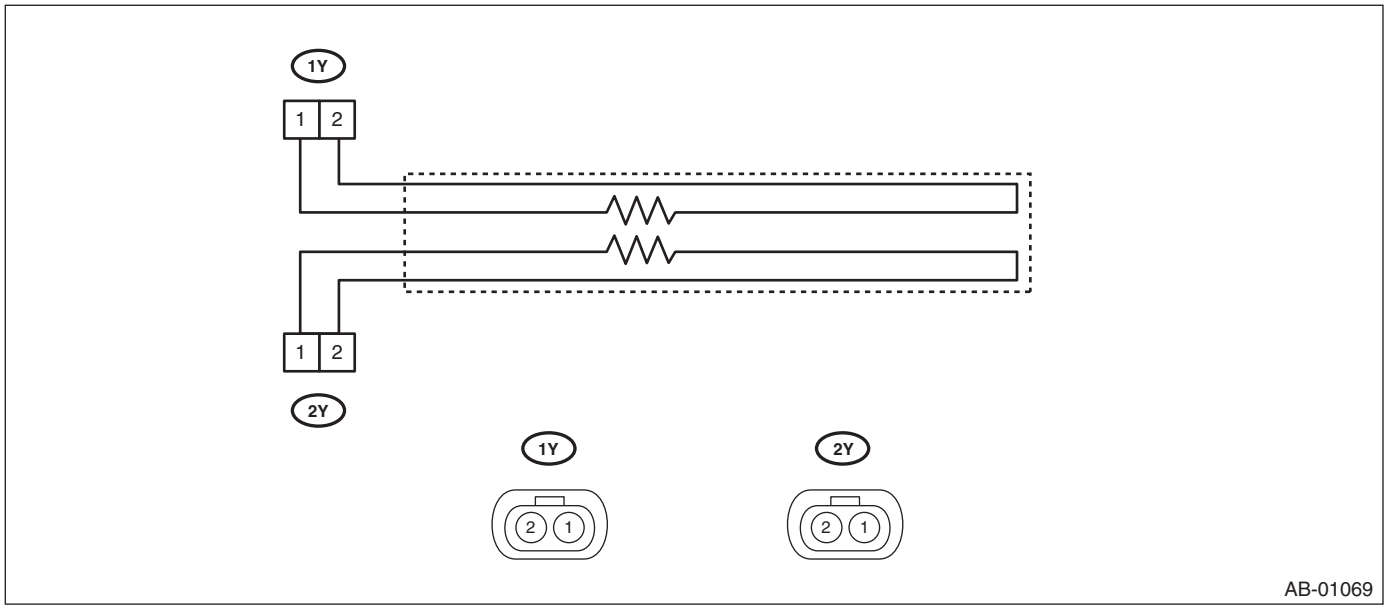
CAUTION:
To measure the voltage and resistance of airbag system and occupant detection system components, be sure to use the specified test harness.

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

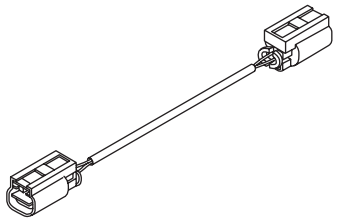
- TEST HARNESS Y

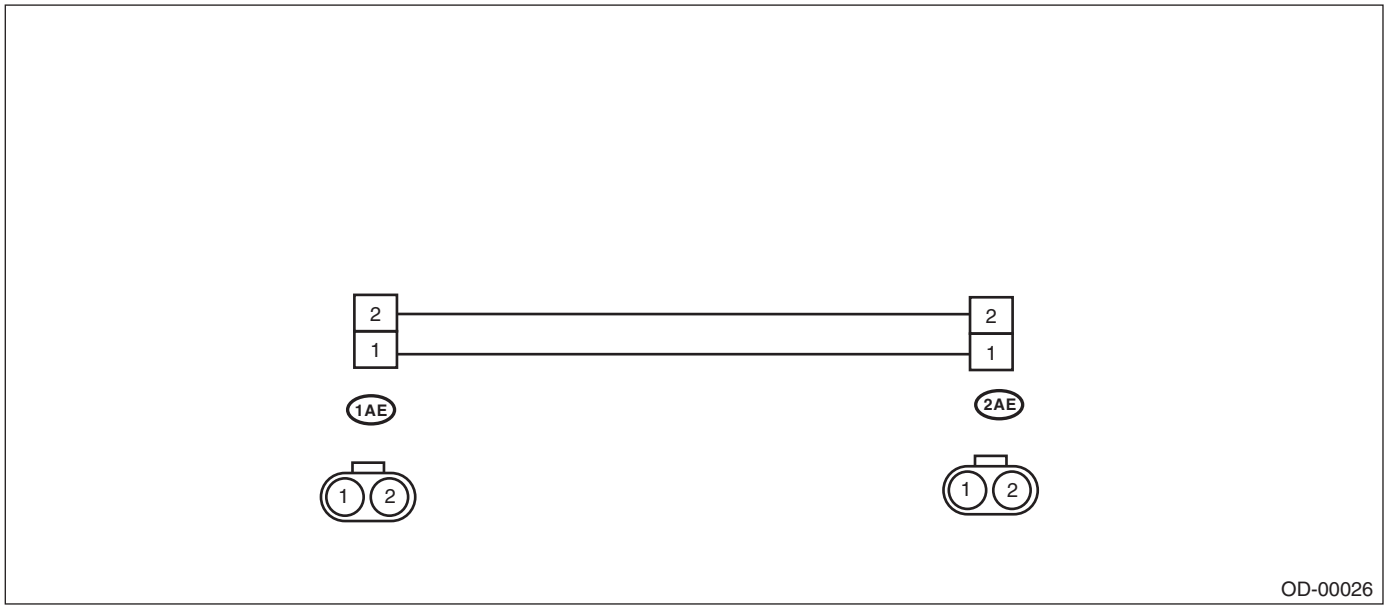
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299AG040	98299AG040	TEST HARNESS Y	Used for troubleshooting seat belt buckle switch.



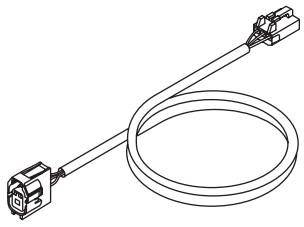
AB-01069

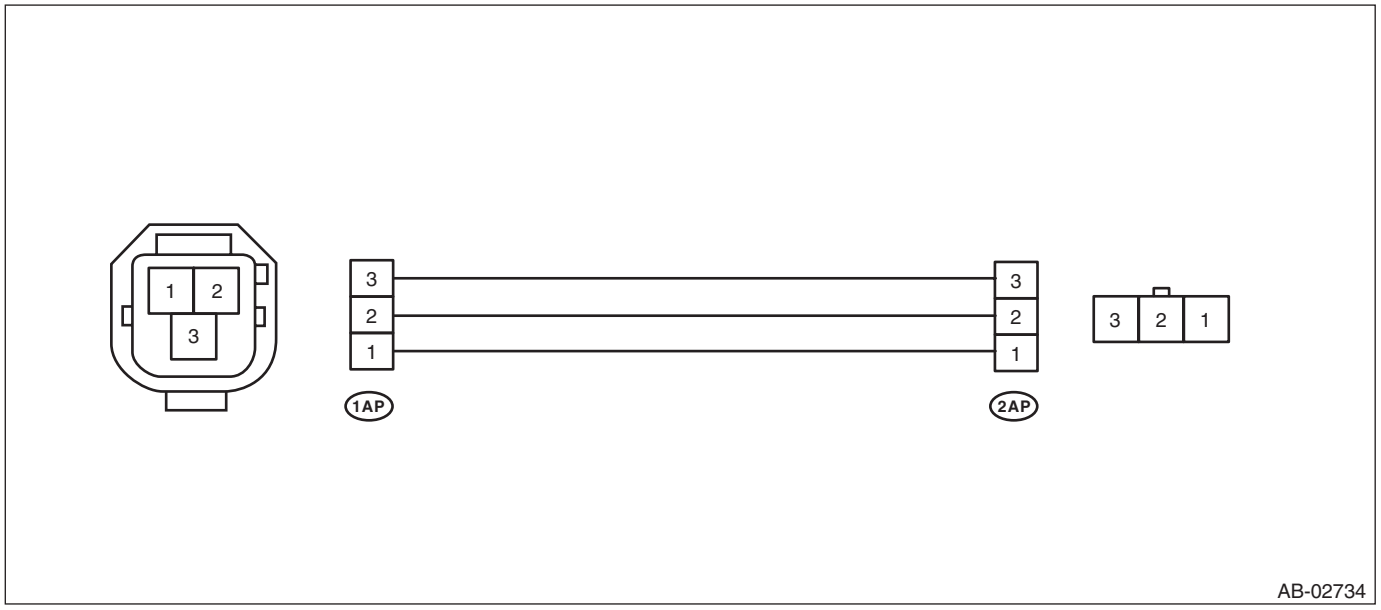
- TEST HARNESS AE

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299XA030	98299XA030	TEST HARNESS AE	TEST HARNESS Y adapter harness Used for troubleshooting seat belt buckle switch.



- TEST HARNESS AP

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299FJ030	98299FJ030	TEST HARNESS AP	Used when measuring voltage and resistance of occupant detection system.



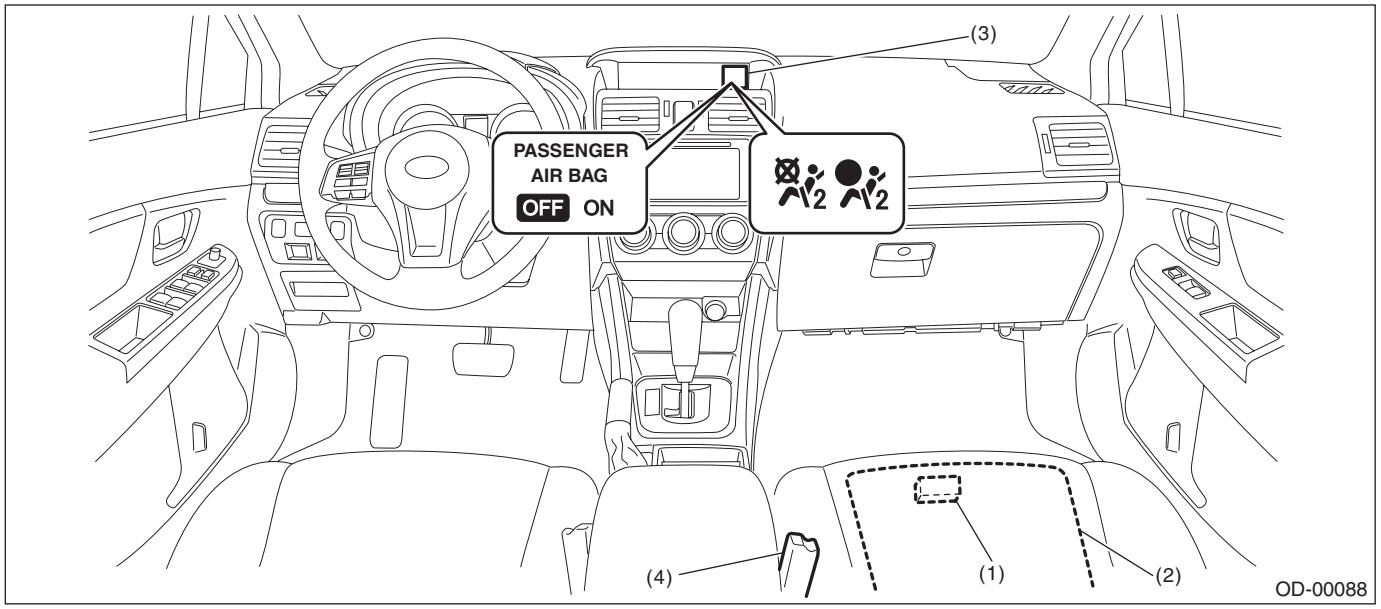
AB-02734

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.

4. Electrical Component Location

A: LOCATION



(1) Occupant detection control module
(2) Occupant detection sensor
(3) Airbag ON/OFF indicator light
(4) Buckle switch (Passenger's seat)

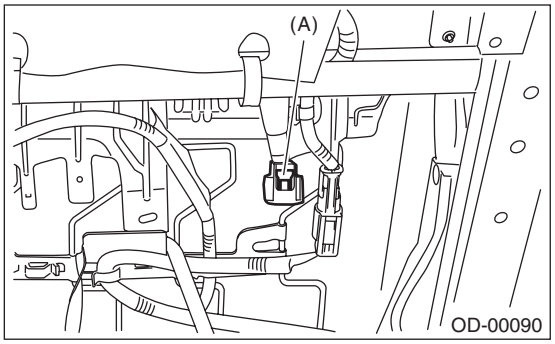
5. Airbag Connector

A: PROCEDURE

1. OCCUPANT DETECTION SYSTEM (BETWEEN AIRBAG REAR HARNESS AND SEAT HARNESS)

1) How to disconnect:
Press the lock arm (A) and disconnect the connector.

CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.



2) How to connect:
Holding the connector, push it in securely until a clicking sound is heard.

CAUTION:
Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.

2. AIRBAG CONTROL MODULE

Refer to Airbag System section. <Ref. to AB-20, AIRBAG CONTROL MODULE, PROCEDURE, Airbag Connector.>

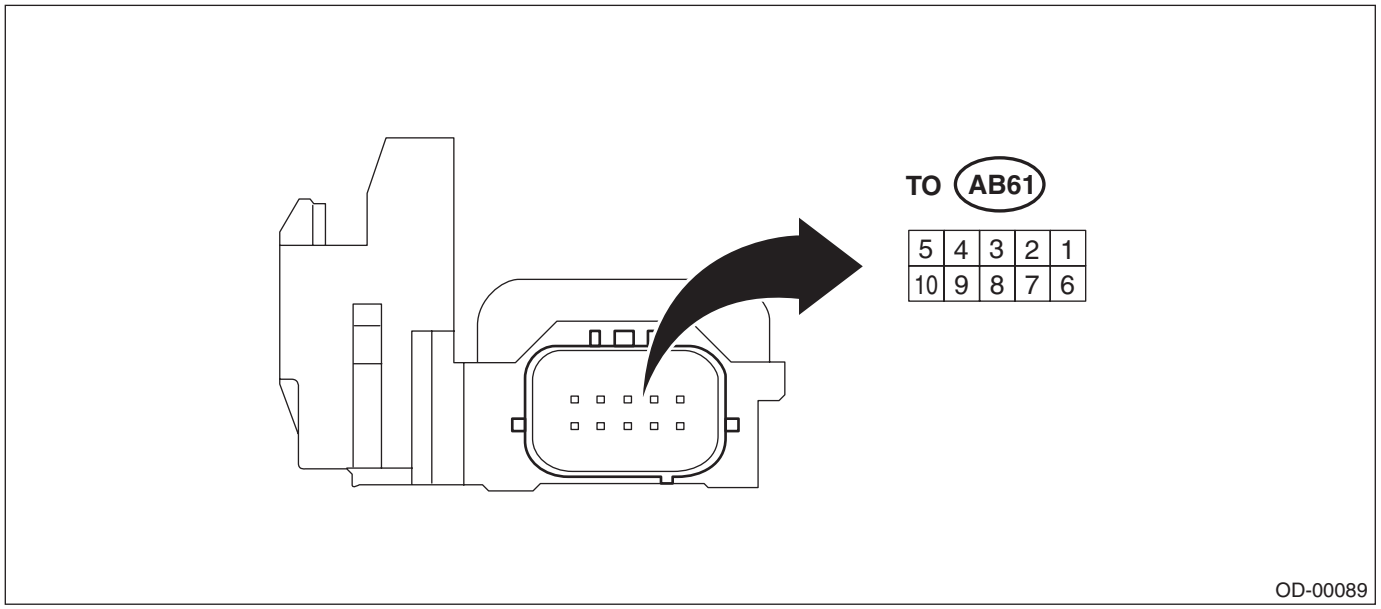
3. BUCKLE SWITCH RH

Refer to Airbag System section. <Ref. to AB-29, BUCKLE SWITCH RH, PROCEDURE, Airbag Connector.>

6. Control Module I/O Signal

A: ELECTRICAL SPECIFICATION

CAUTION:
Never remove the occupant detection control module, occupant detection sensor or seat frame because they are integrated into one unit.



Terminal No.	Terminal name	Input/Output value	Note
1	Airbag CM communication (FSR+)	—	Communication line
2	Not used	—	—
3	Not used	—	—
4	Buckle switch– (BER–)	0 V	Switch ground
5	Not used	—	—
6	IG power supply (IG)	8 — 16 V	When ignition SW is ON
7	Not used	—	—
8	Buckle switch+	0 — IG voltage	Ignition voltage when the switch is ON
9	Airbag CM communication (FSR–)	0V	GND
10	Not used	—	—

B: WIRING DIAGRAM

Refer to the electrical wiring diagram. <Ref. to WI-115, WIRING DIAGRAM, Occupant Detection System.>

7. Subaru Select Monitor

A: OPERATION

For detailed operation procedures, refer to the “PC application help for Subaru Select Monitor”.

B: INSPECTION

1. COMMUNICATION FOR INITIALIZING THE AIRBAG SYSTEM IS IMPOSSIBLE

DETECTING CONDITION:
Defective harness connector
TROUBLE SYMPTOM:
Communication is impossible between the airbag control module and the Subaru Select Monitor.

NOTE:
Refer to “COMMUNICATION FOR INITIALIZING IMPOSSIBLE” in AIRBAG SYSTEM (DIAGNOSTICS). <Ref. to AB(diag)-21, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, INSPECTION, Subaru Select Monitor.>

2. COMMUNICATION FOR INITIALIZING ONLY THE OCCUPANT DETECTION SYSTEM IS IMPOSSIBLE

NOTE:
The occupant detection system communicates with the Subaru Select Monitor via the airbag control module.
DETECTING CONDITION:
Defective harness connector between airbag control module and occupant detection control module
TROUBLE SYMPTOM:
Communication is impossible between the airbag control module and the occupant detection control module.
Perform the diagnosis from Step 2 in “DTC B1650 OCCUPANT CLASSIFICATION SYSTEM MALFUNCTION”. <Ref. to OD(diag)-19, DTC B1650 OCCUPANT CLASSIFICATION SYSTEM MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

8. Read Diagnostic Trouble Code (DTC)

A: OPERATION

Read out DTCs stored in the airbag control module and the occupant detection control module. For operation procedures, refer to the “PC application help for Subaru Select Monitor”.

NOTE:
For details concerning DTCs, refer to the List of Diagnostic Trouble Code (Airbag system, Occupant detection system). <Ref. to AB(diag)-31, List of Diagnostic Trouble Code (DTC).> <Ref. to OD(diag)-18, List of Diagnostic Trouble Code (DTC).>

9. Inspection Mode

A: PROCEDURE

Recreate the circumstance by referring to the conditions described in the checklist.

10.Clear Memory Mode

A: OPERATION

For operation procedures, refer to the “PC application help for Subaru Select Monitor”.

NOTE:
After repairing the occupant detection system, clear the DTCs stored in the airbag control module and the occupant detection control module.

11.Display of Status Information

A: OPERATION

Check the operating condition of each sensor, in the event of malfunction in the seat belt buckle switch or when the seat belt buckle switch has been replaced.
1) On «Main Menu» display, select {Each System Check}.
2) On «System Selection Menu» display, select {Airbag System}.
3) On «Airbag System» display, select {Current Data Display & Save}.
The following table is for support data.

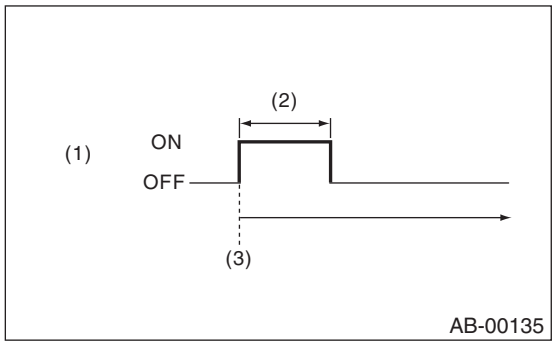
Item	Display	Note
Trip Count	—	—
Count	—	—
Time Count	—	—
Belt Buckle Switch RH	Unbelted/Belted	“Belted” when passenger’s seat belt is fastened “Unbelted” when passenger’s seat belt is not fastened
Passenger Occupant Status	Occupied/Empty or CRS	“Occupied” when the occupant is present “Empty or CRS” when the seat is unoccupied or when child restraint seat is installed
Passenger Airbag Status	ON/OFF	“ON” when the passenger occupant status is “Occupied” “OFF” when the status is “Empty or CRS”

NOTE:
For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

12.Airbag Warning Light Illumination Pattern

A: INSPECTION

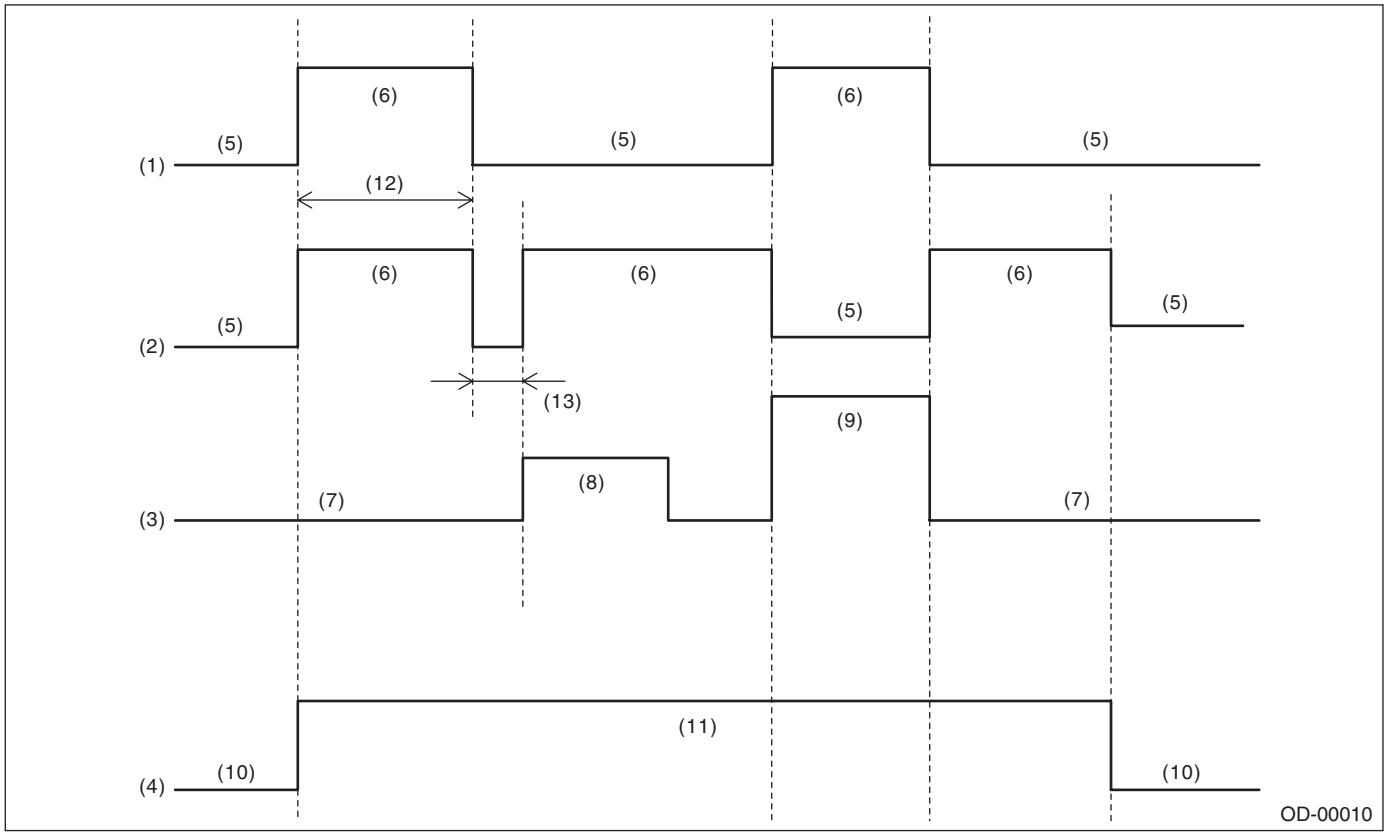
Turn the ignition switch to ON, and confirm that the airbag warning light remains on for approx. 6 seconds and then goes off afterwards.



(1) Airbag warning light
(2) Approx. 6 sec.
(3) Ignition switch ON

13.Passenger's Airbag ON/OFF Indicator Light Illumination Pattern

A: INSPECTION



(1)	Passenger's airbag ON indicator light	(6)	Light ON	(10)	OFF
(2)	Passenger's airbag OFF indicator light	(7)	Empty	(11)	ON
(3)	Occupant seating	(8)	Child	(12)	Approx. 6 sec.
(4)	Ignition switch	(9)	Adult	(13)	Approx. 2 sec.
(5)	Light OFF				

14.List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Item	Content of diagnosis	Reference
B1650	Occupant Classification System Malfunction	• Occupant detection sensor is faulty. • Occupant detection control module is faulty. • Occupant detection harness is faulty. • Fuse No. 25 is blown.	<Ref. to OD(diag)-19, DTC B1650 OCCUPANT CLASSIFICATION SYSTEM MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1655	Front Buckle Switch RH Failure	• Passenger's buckle switch circuit is open, shorted or shorted to ground. • Occupant detection system is faulty. • Occupant detection harness is faulty.	<Ref. to OD(diag)-21, DTC B1655 FRONT BUCKLE SWITCH RH FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1760	Sensor mat abnormal	• Occupant detection sensor is faulty. • Occupant detection sensor is open, shorted between terminals, shorted to power supply or shorted to ground. • Seat heater is open. • Occupant detection control module is faulty.	<Ref. to OD(diag)-22, DTC B1760 SENSOR MAT ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1761	Sensor mat liquid coating abnormal	• Detected that the occupant detection sensor is spattered with fluid. • Occupant detection sensor is faulty. • Occupant detection control module is faulty.	<Ref. to OD(diag)-22, DTC B1761 SENSOR MAT LIQUID COATING ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1771	Buckle switch abnormal	• Passenger's buckle switch is faulty. • Passenger's buckle switch circuit is open, shorted or shorted to ground. • Occupant detection system is faulty. • Occupant detection harness is faulty.	<Ref. to OD(diag)-22, DTC B1771 BUCKLE SWITCH ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1795	ECU internal circuit fault	Occupant detection control module is faulty.	<Ref. to OD(diag)-22, DTC B1795 ECU INTERNAL CIRCUIT FAULT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

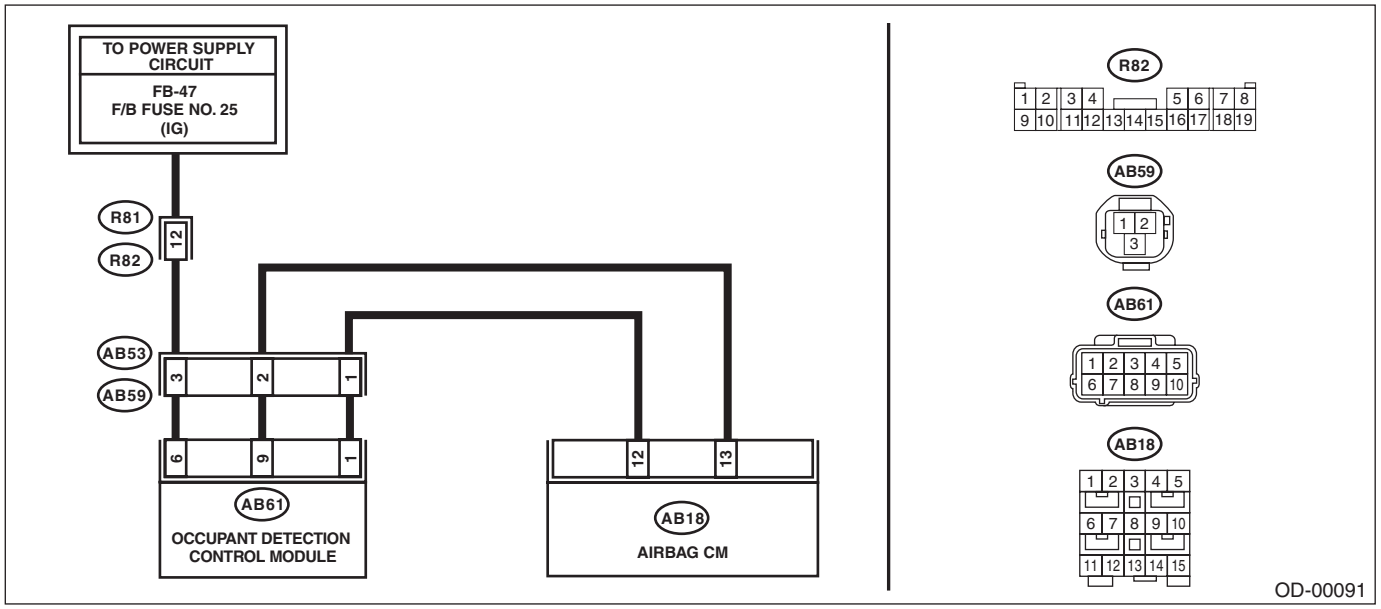
15.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC B1650 OCCUPANT CLASSIFICATION SYSTEM MALFUNCTION

DTC DETECTING CONDITION:

- Occupant detection sensor is faulty.
- Occupant detection control module is faulty.
- Occupant detection harness is faulty.
- Rear airbag harness is faulty.

CAUTION:
Before performing diagnosis, refer to "CAUTION" in "General Description". <Ref. to AB(diag)-4, CAUTION, General Description.>
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC of the occupant detection system.	Is any of DTC B1760, B1761, B1771 and B1795 detected?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the occupant detection control module and airbag control module.	Is there poor contact?	Reconnect the connector. If defective is not improved, replace the airbag rear harness along with the body harness or the occupant detection harness (seat harness).	Go to step **3**.

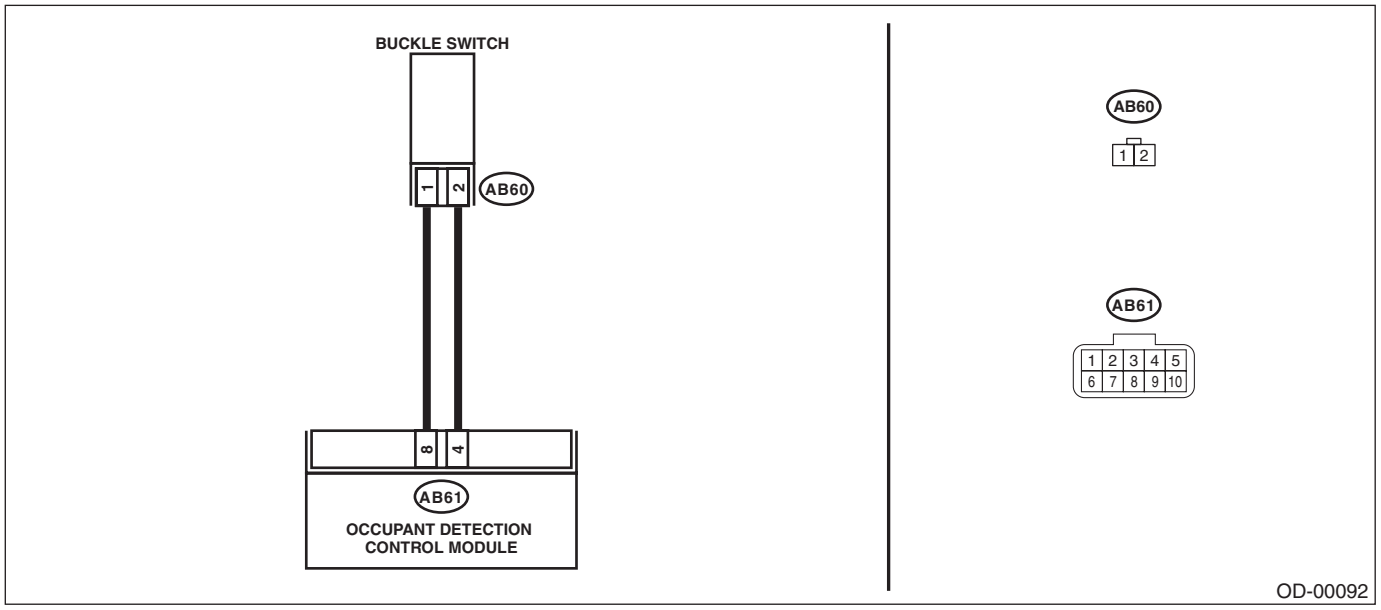
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB59) and (AB53) under the passenger's seat. 3) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AH) in the test harness AH. 4) Connect the connector (2AH) in the test harness AH and the connector (1AG) in the test harness AG. 5) Connect the connector (1AP) in the test harness AP to the connector (AB53). 6) Measure the resistance between connector (5AG) in the test harness AG and connector (2AP) in the test harness AP. ***Connector & terminal*** ***(5AG) No. 5 — (2AP) No. 2:*** ***(5AG) No. 16 — (2AP) No. 1:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG REAR HARNESS.** Measure the resistance between connector (5AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(5AG) No. 5 — Chassis ground:*** ***(5AG) No. 16 — Chassis ground:*** ***(5AG) No. 5 — (5AG) No. 16:***	Is the resistance 1 MΩ or more?	Go to step **5**.	Replace the airbag rear harness along with body harness.
5	**CHECK OCCUPANT DETECTION HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between connector (2AB) in the test harness AB and chassis ground. ***Connector & terminal*** ***(2AP) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Replace the occupant detection harness (seat harness). If defective is not improved, replace the occupant detection system (seat cushion & frame assembly), and then the airbag control module in this order. <Ref. to SE-16, PASSENGER'S SEAT, DISASSEMBLY, Front Seat.>	Check the battery voltage and fuse. If there is no fault, replace the airbag rear harness together with body harness.

B: DTC B1655 FRONT BUCKLE SWITCH RH FAILURE

DTC DETECTING CONDITION:

- Passenger's buckle switch circuit is open, shorted or shorted to ground.
- Seat harness circuit is open, shorted or shorted to ground.
- Occupant detection control module is faulty.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC of the occupant detection system.	Is any of DTC B1760, B1761, B1771 and B1795 detected?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the occupant detection control module and buckle switch.	Is there poor contact?	Reconnect the connector. If the fault is not fixed, replace the airbag harness.	Go to step **3**.
3	**CHECK BUCKLE SWITCH.** 1) Turn the ignition switch to OFF, disconnect the battery ground terminal, and wait for 60 seconds. 2) Disconnect the buckle switch connector (AB60). 3) Connect the test harness AE and test harness connector Y to buckle switch connector (AB60). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the buckle switch. <Ref. to SB-15, SEAT BELT OUTER - FRONT, REMOVAL, Front Seat Belt.>	Check the seat harness, and if any fault is found, replace the seat harness. If the fault is not fixed, replace the occupant detection system. <Ref. to SE-16, PASSENGER'S SEAT, DISASSEMBLY, Front Seat.>

C: DTC B1760 SENSOR MAT ABNORMAL

DTC DETECTING CONDITION:

- Occupant detection sensor circuit is open, shorted between terminals, shorted to power supply or shorted to ground.
- Seat heater circuit is open.
- Occupant detection control module is faulty.

	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of connectors between the occupant detection control module and the occupant detection sensor.	Is there poor contact of connector?	Reconnect the connector. If the fault is not fixed, replace the occupant detection harness or replace the occupant detection system (passenger's & frame assembly).	Replace the occupant detection system (passenger's & frame assembly). <Ref. to SE-16, PASSENGER'S SEAT, DISASSEMBLY, Front Seat.>

D: DTC B1761 SENSOR MAT LIQUID COATING ABNORMAL

DTC DETECTING CONDITION:

- Occupant detection sensor is spattered with fluid.
- Occupant detection sensor is faulty.
- Occupant detection control module is faulty.

	Step	Check	Yes	No
1	**DRY THE SEAT.** 1) Open the vehicle windows in a well-ventilated place indoors and dry the seat for 24 hours. 2) Read the DTC of the occupant detection system.	Is DTC B1761 detected?	Replace the occupant detection system (passenger's & frame assembly). <Ref. to SE-16, PASSENGER'S SEAT, DISASSEMBLY, Front Seat.>	Clear the memory.

E: DTC B1771 BUCKLE SWITCH ABNORMAL

DTC DETECTING CONDITION:

- Passenger's seat buckle switch is faulty.
- Passenger's buckle switch circuit is open, shorted or shorted to ground.
- Occupant detection system is faulty.
- Occupant detection harness is faulty.

Perform the diagnosis from Step 2 in "DTC B1655 FRONT BUCKLE SWITCH RH FAILURE". <Ref. to OD(diag)-21, DTC B1655 FRONT BUCKLE SWITCH RH FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

F: DTC B1795 ECU INTERNAL CIRCUIT FAULT

DTC DETECTING CONDITION:

Occupant detection control module is faulty.

When "DTC B1795 ECU INTERNAL CIRCUIT FAULT" is displayed, the occupant detection control module is faulty. Replace the occupant detection system (passenger's & frame assembly). <Ref. to SE-16, PASSENGER'S SEAT, DISASSEMBLY, Front Seat.>

SEAT BELT SYSTEM

SB

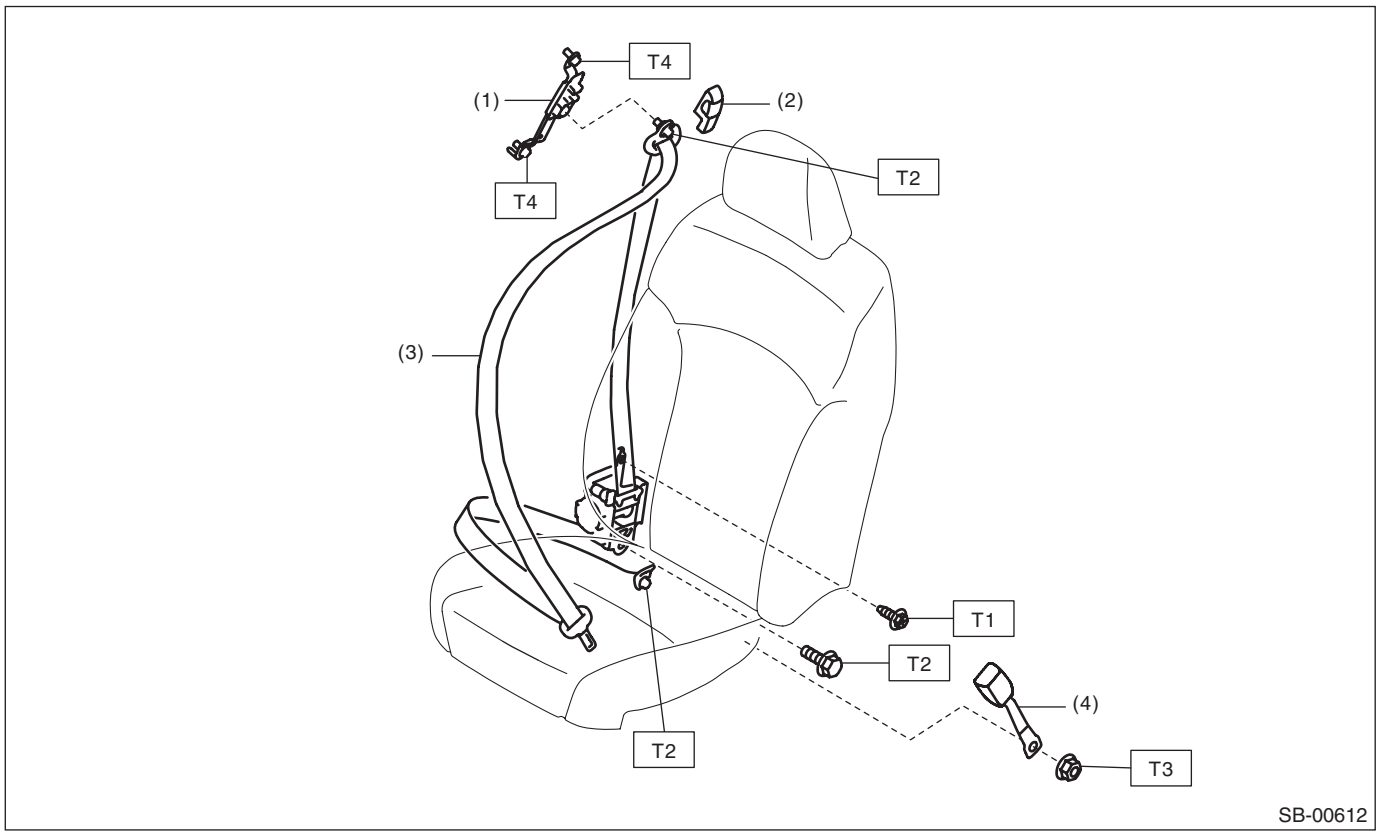
Page

1. General Description 2
2. Pretensioner Connector 10
3. Inspection Locations after a Collision 11
4. Seat Belt Warning System 12
5. Front Seat Belt 15
6. Rear Seat Belt 29

1. General Description

A: COMPONENT

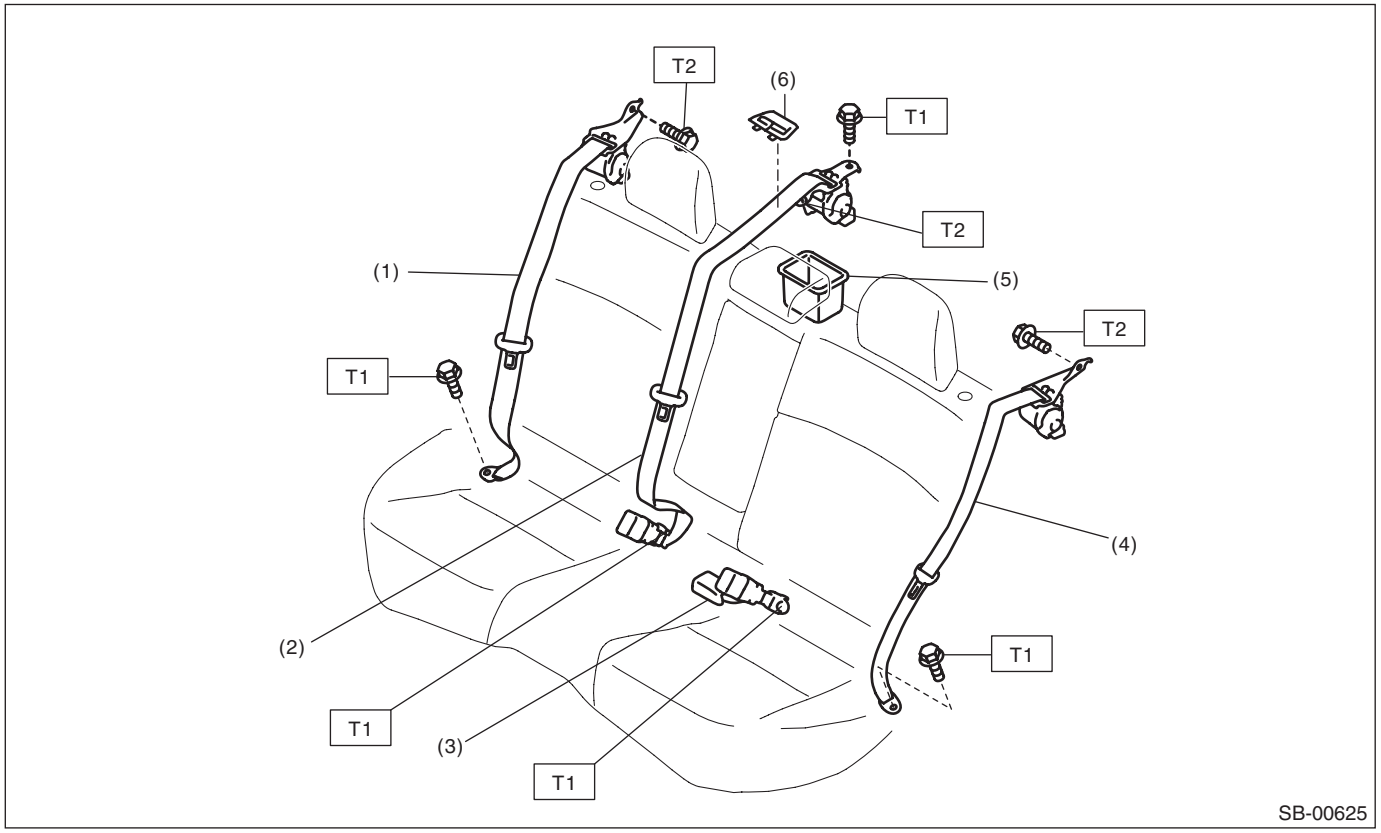
1. FRONT SEAT BELT



(1) Adjuster assembly - seat belt
(2) Cover through
(3) Seat belt outer - front
(4) Seat belt inner - front

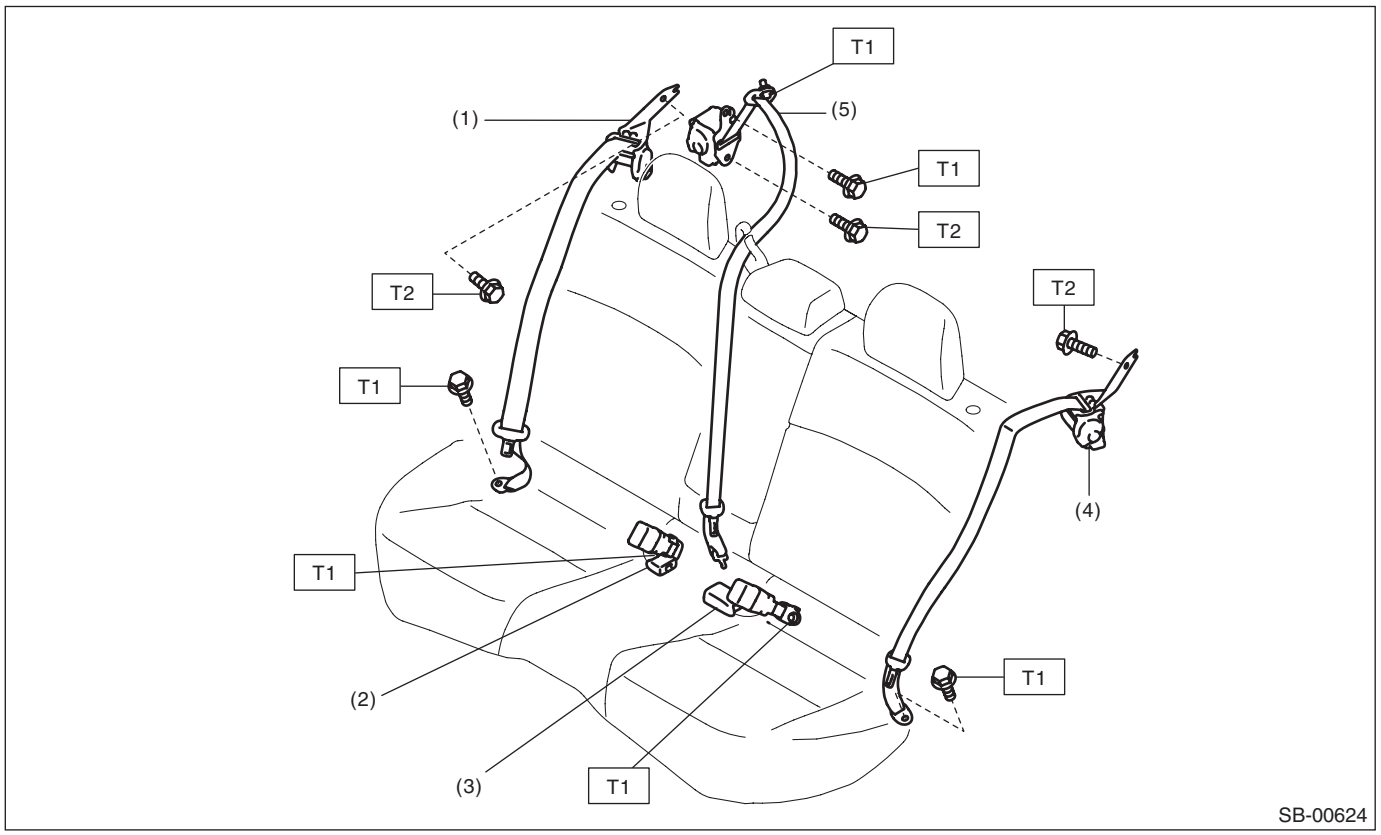
Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 30 (3.06, 22.1)
T3: 38 (3.87, 28.0)
T4: 53 (5.40, 39.1)

2. REAR SEAT BELT (4 DOOR MODEL)



(1)	Seat belt outer - rear RH	(4)	Seat belt outer - rear LH	***Tightening torque:N·m (kgf-m, ft-lb)***
(2)	Seat belt - rear shoulder CTR	(5)	Cover - ELR	***T1: 30 (3.06, 22.1)***
(3)	Seat belt - CTR LH	(6)	Cover - belt rear	***T2: 53 (5.40, 39.1)***

3. REAR SEAT BELT (5 DOOR MODEL)



(1) Seat belt outer - rear RH
(2) Seat belt - CTR RH
(3) Seat belt - CTR LH
(4) Seat belt outer - rear LH
(5) Seat belt - rear shoulder CTR

Tightening torque:N·m (kgf-m, ft-lb)
T1: 30 (3.06, 22.1)
T2: 53 (5.40, 39.1)

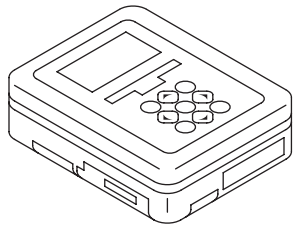
B: CAUTION

- Before starting the work, turn the ignition switch to OFF, disconnect the battery ground cable and wait for 60 seconds or more.
- The pretensioner system is fitted with a backup power supply. After disconnecting the battery ground cable, the pretensioner may operate if you do not wait for 60 seconds or more before starting pretensioner system servicing.
- Do not drop or apply any impact to the pretensioner.
- If oil, grease or water gets on the pretensioner, wipe it off immediately with a dry cloth.
- Do not expose the pretensioner to high temperature or flame.
- Do not allow current to flow through or voltage to reach the pretensioner. Do not use a circuit tester to check resistance of the pretensioner.
- Do not disassemble or attempt to repair the pretensioner. If it is dented, cracked or deformed, replace it with a new genuine part.
- Do not use the airbag or pretensioner parts from other vehicles. Always use a new genuine part for replacement.
- When handling a seat belt with deployed pretensioner, wear gloves and goggles. Wash your hands afterwards.
- Do not reuse a seat belt with deployed pretensioner.
- Before disposal, make sure to perform an operation process to the pretensioners.
- If material from the pretensioner enters the eyes or contacts skin during operation process, wash it away with clean water, and then consult a doctor.

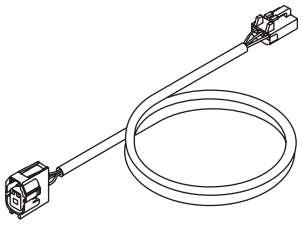
C: PREPARATION TOOL

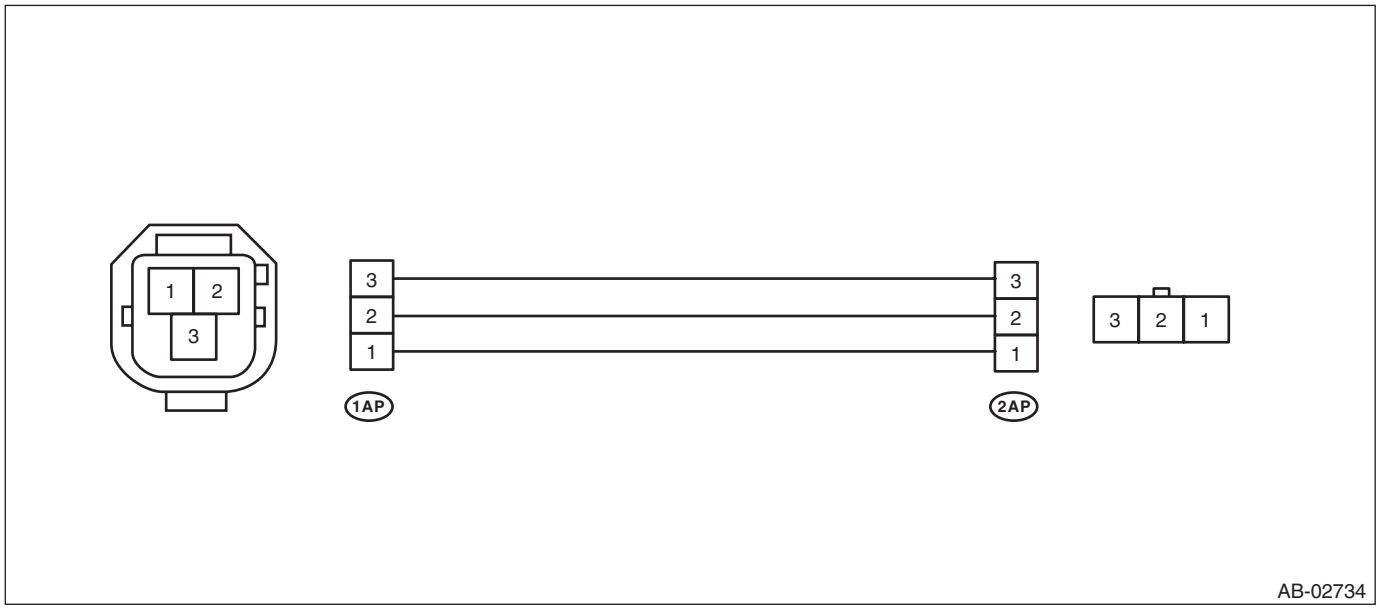
1. SPECIAL TOOL

- Subaru Select Monitor

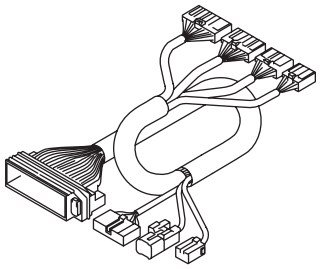
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for setting of each function and trouble-shooting for electrical system.

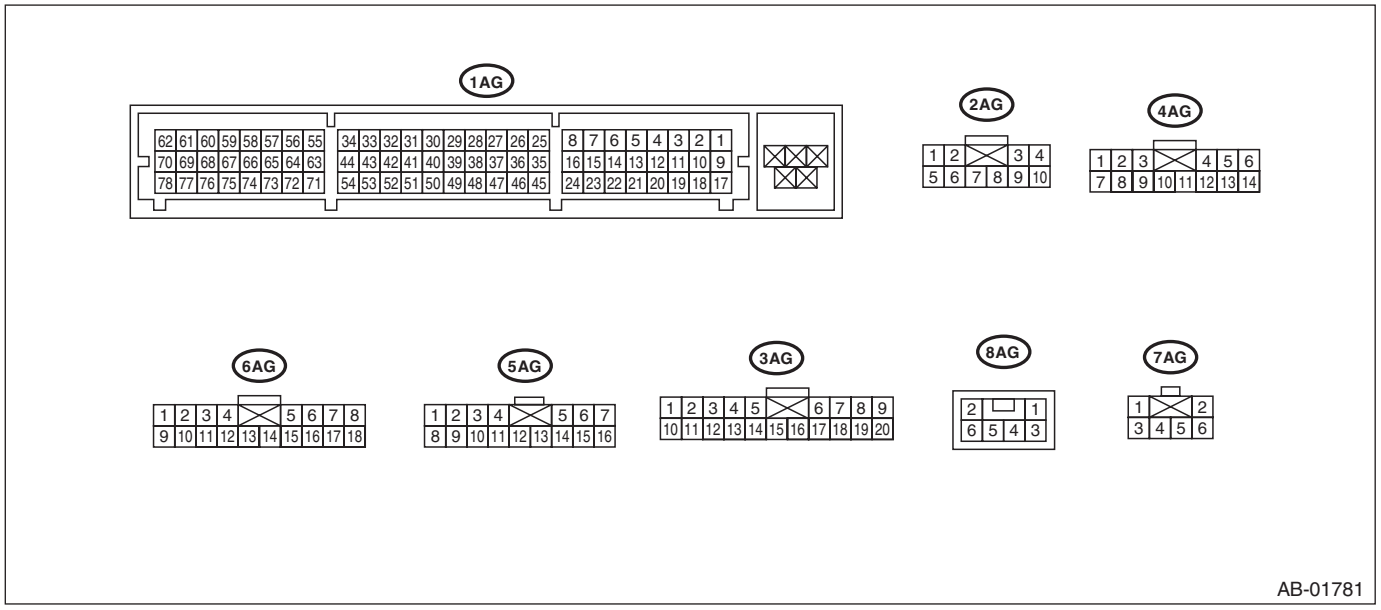
- TEST HARNESS AP

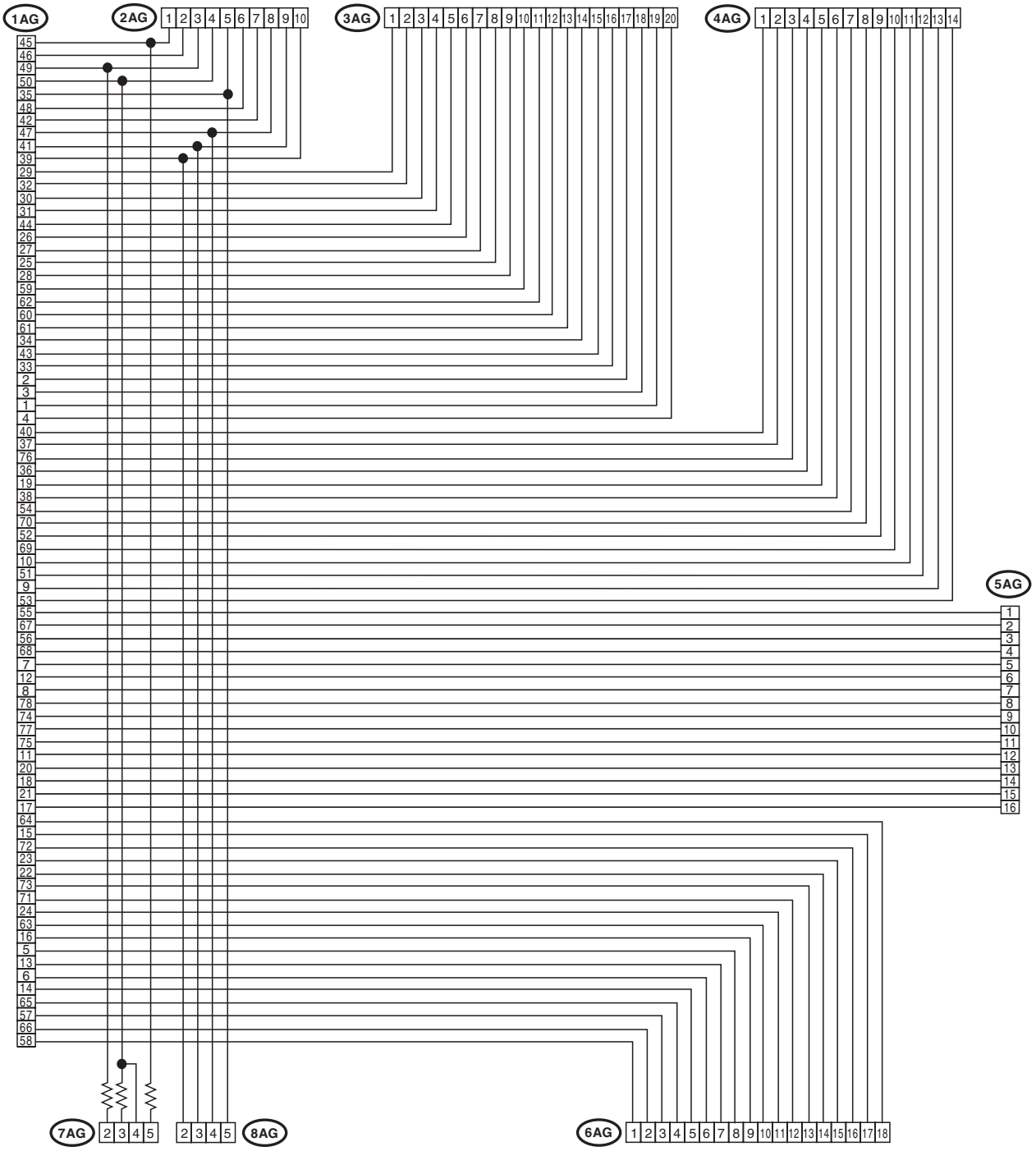
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299FJ030	98299FJ030	TEST HARNESS AP	Used when measuring voltage and resistance of occupant detection system.



- TEST HARNESS AG

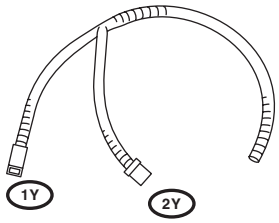
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299AG070	98299AG070	TEST HARNESS AG	Used when measuring voltage and resistance of airbag control module.

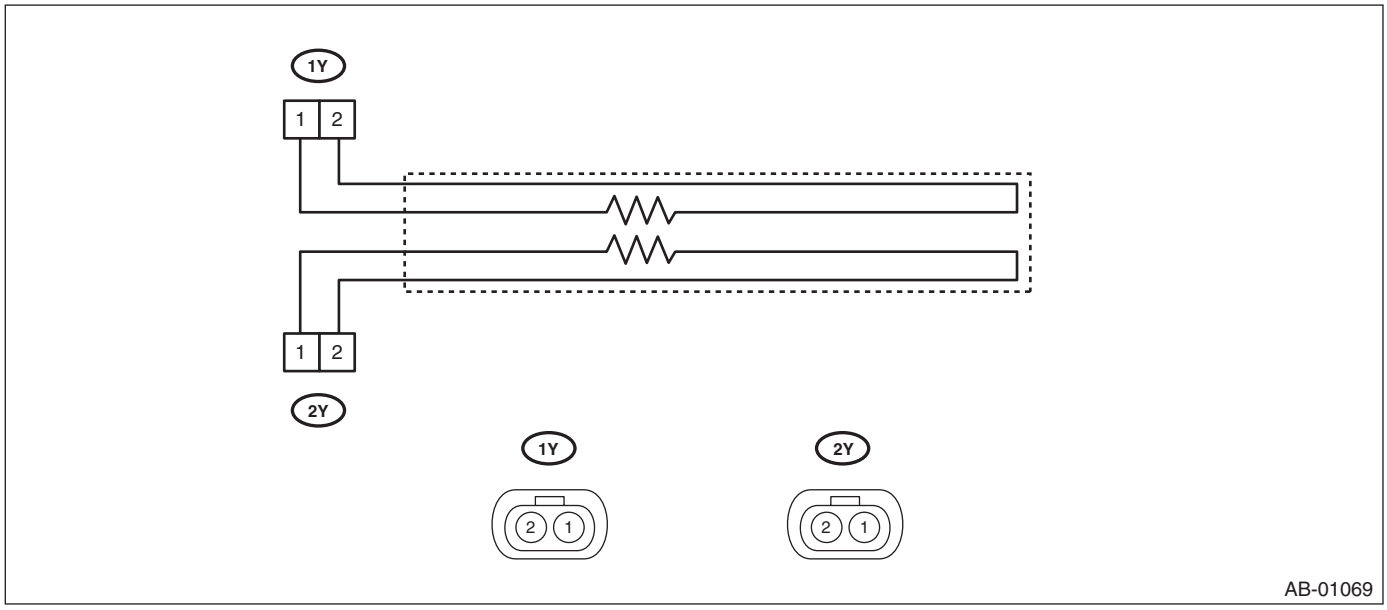




AB-01902

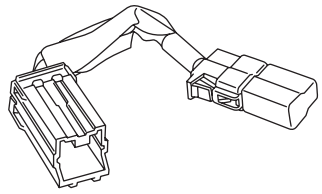
- TEST HARNESS Y

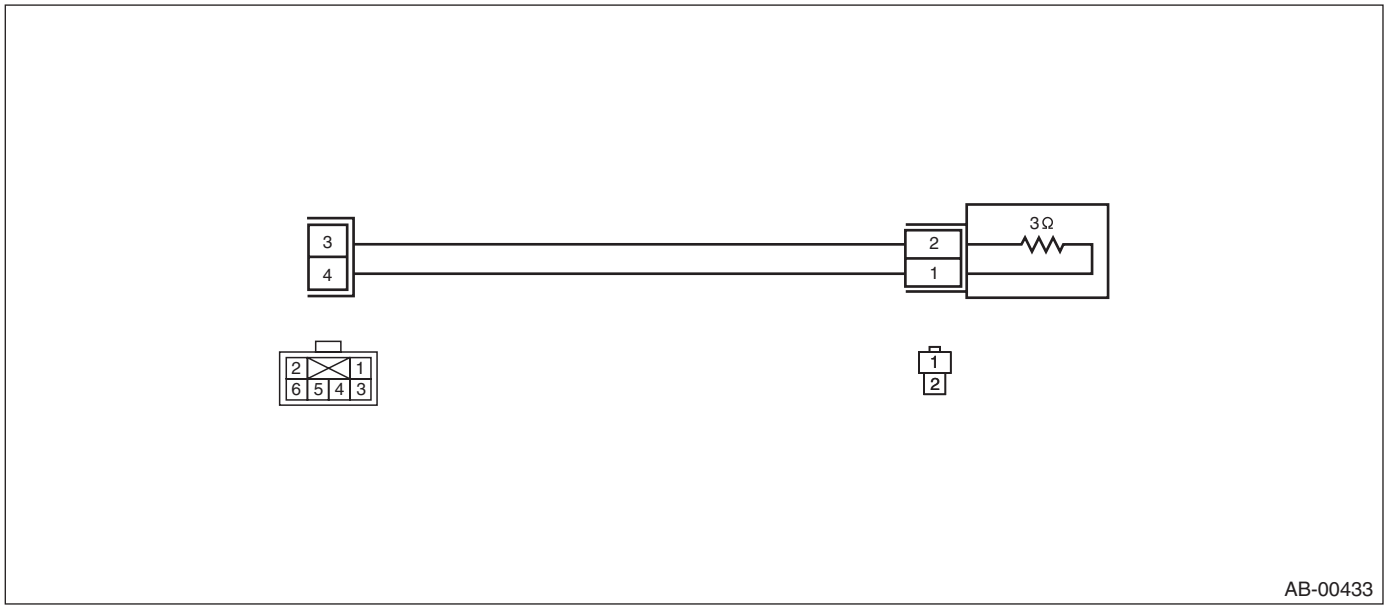
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299AG040	98299AG040	TEST HARNESS Y	Used for troubleshooting seat belt buckle switch.



AB-01069

- AIRBAG RESISTOR

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299PA040	98299PA040	AIRBAG RESISTOR	Used in replacement of airbag module for which resistance value is same as airbag module.



2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.

2. Pretensioner Connector

A: PROCEDURE

For connectors of seat belt pretensioner and buckle switch RH, refer to “Airbag Connector” of “AIRBAG SYSTEM” section or “OCCUPANT DETECTION SYSTEM” section.

- Airbag system: <Ref. to AB-19, PROCEDURE, Airbag Connector.>
- Occupant detection system: <Ref. to OD(diag)-9, PROCEDURE, Airbag Connector.>

3. Inspection Locations after a Collision

A: INSPECTION

Refer to “Inspection Locations after a Collision” of “AIRBAG SYSTEM” section. <Ref. to AB-32, Inspection Locations after a Collision.>

4. Seat Belt Warning System

A: WIRING DIAGRAM

Refer to “Seat Belt Warning System” in the wiring diagram. <Ref. to WI-132, WIRING DIAGRAM, Seat Belt Warning System.>

B: INSPECTION

CAUTION:
• Before diagnosing the seat belt warning system and airbag system, always turn the ignition switch to OFF, disconnect the battery ground cable, and then wait for 60 seconds or more.
• When inspecting the airbag main harness, disconnect the connectors of the driver’s airbag module, passenger’s airbag module and knee airbag module for safety reasons.
• When inspecting the airbag rear harness, disconnect the side airbag module connector, curtain airbag module connector and seat belt pretensioner connector for safety reasons.

	Step	Check	Yes	No
1	**CHECK FUNCTION.** 1) Sit on the driver’s seat and passenger’s seat and disconnect the seat belts of the both. 2) Turn the ignition switch to ON (engine OFF). 3) Check the illumination of the driver’s seat belt warning light in the combination meter, and the passenger’s seat belt warning light in the clock, and the sounding of the buzzer.	Do the driver’s warning light and passenger’s warning light blink and the buzzer sound while blinking?	Go to step **2**.	Go to step **12**.
2	**CHECK FUNCTION.** 1) Wait until the buzzer sound stops in step 1. (for approximately six seconds after starting sounding) 2) Connect and disconnect the seat belts of the driver’s and passenger’s. 3) Check the illumination of the driver’s seat belt warning light in the combination meter and the passenger’s seat belt warning light in the MFD.	Do the seat belts warning light illuminate ←→ go off according to the operation?	Go to step **3**.	Go to step **8**.
3	**CHECK FUNCTION.** 1) Wait until the buzzer sound stops in step 2. (for approximately six seconds after starting sounding) 2) Start the engine, and set the vehicle speed at 20 km/h (12 MPH) or more. 3) Check the seat belt warning lights of the driver’s and the passenger’s, and if the warning buzzer sounds.	Do the driver’s warning light and passenger’s warning light blink and the buzzer sound while blinking?	Go to step **4**.	Go to step **14**.
4	**CHECK HARNESS.** 1) Disconnect the negative terminal from the battery, and wait for 60 seconds or more. 2) Disconnect the connectors of the combination meter and the seat belt buckle switch LH. 3) Check for short circuit to battery, open circuit and short circuit to ground between the combination meter and the seat belt buckle switch LH. ***Connector & terminal*** ***(i10) No. 15 — (R107) No. 2:***	Is the harness normal?	Go to step **5**.	Repair or replace the harness.
5	**CHECK HARNESS.** Measure the resistance between the seat belt buckle switch LH and chassis ground. ***Connector & terminal*** ***(R107) No. 1 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **6**.	Repair or replace the harness.

	Step	Check	Yes	No
6	**CHECK SEAT BELT BUCKLE SWITCH LH.** Measure the resistance between the connector terminals of the driver's seat belt switch when the driver's seat belt is fastened and detached. ***Connector & terminal*** ***(R107) No. 2 — (R107) No. 1:***	Is the resistance when the belt is fastened 1 MΩ or more, and less than 10 Ω when the belt is detached?	Go to step **7**.	Replace the seat belt inner - front LH. <Ref. to SB-15, SEAT BELT OUTER - FRONT, REMOVAL, Front Seat Belt.>
7	**CHECK COMBINATION METER.** Perform the self-diagnosis of combination meter. <Ref. to IDI-6, SELF-DIAGNOSIS DISPLAY MODE, OPERATION, Combination Meter System.>	At the start of combination meter self diagnosis, did the buzzer sound and the seat belt warning light illuminate?	Replace the body integrated unit or the combination meter. Or replace both. It may be due to the transmission failure of the body integrated unit or the reception failure of the combination meter.	Replace the combination meter. <Ref. to IDI-15, REMOVAL, Combination Meter.>
8	**CHECK CURRENT DATA.** 1) Sit in the passenger's seat. 2) Select "Current Data Display" and display the data of "P seat belt SW input". 3) Fasten and detach the passenger's side seat belt buckle, and read the data of the seat belt switch. <Ref. to BC(diag)-11, OPERATION, Read Current Data.>	Does the seat belt switch display turn ON ←→ OFF according to the operation of the seat belt buckle?	Go to step **12**.	Go to step **9**.
9	**CHECK AIRBAG SYSTEM AND OCCUPANT DETECTION SYSTEM.** Perform the check in accordance with the diagnostic procedure DTC B1650 of the airbag system. <Ref. to OD(diag)-19, DTC B1650 OCCUPANT CLASSIFICATION SYSTEM MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	Is there any problem on the inspection result?	Go to step **10**.	Repair or replace with new parts according to DTC B1650.
10	**CHECK BUCKLE SWITCH RH.** Perform the check in accordance with the diagnostic procedure DTC B1655 of the occupant detection system. <Ref. to OD(diag)-21, DTC B1655 FRONT BUCKLE SWITCH RH FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	Is there any problem on the inspection result?	Go to step **11**.	Repair or replace with new parts according to DTC B1655.
11	**CHECK AIRBAG CONTROL MODULE AND COMBINATION METER.** Check the airbag control module, occupant detection sensor and seat belt buckle switch RH. Perform the check in accordance with the diagnostic procedure DTC B16F1 of the airbag system. <Ref. to AB(diag)-91, DTC B16F1 PASSENGER'S SEAT BELT WARNING FAILURE, Diagnostic Chart with Trouble Code.>	Is there any problem on the inspection result?	Replace the combination meter. <Ref. to IDI-15, REMOVAL, Combination Meter.>	Repair or replace with new parts according to DTC B16F1.
12	**CHECK MFD POWER SUPPLY VOLTAGE.** 1) Disconnect the MFD connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between the ignition power supply and the MFD. ***Connector & terminal*** ***(i122) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **13**.	Check the harness for open or short between the fuse and MFD.

	Step	Check	Yes	No
13	**CHECK MFD GROUND CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between MFD and chassis ground. ***Connector & terminal*** ***(i122) No. 6 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **14**.	Repair or replace the harness.
14	**CHECK HARNESS BETWEEN MFD AND COMBINATION METER.** 1) Disconnect the harness of the MFD and the combination meter. 2) Measure the resistance between MFD and combination meter. ***Connector & terminal*** ***(i122) No. 9 — (i10) No. 28:***	Is the resistance less than 10 Ω?	Go to step **15**.	Repair or replace the harness.
15	**CHECK COMMUNICATION STATUS BETWEEN MFD AND COMBINATION METER.** 1) Remove the MFD, and install a properly operating MFD (new MFD). 2) Connect the connector and then turn the ignition switch to ON. ***Connector & terminal*** ***(i122) No. 9 — (i10) No. 28:***	Is the MFD properly displayed?	Replace the MFD.	Replace the combination meter case assembly.

5. Front Seat Belt

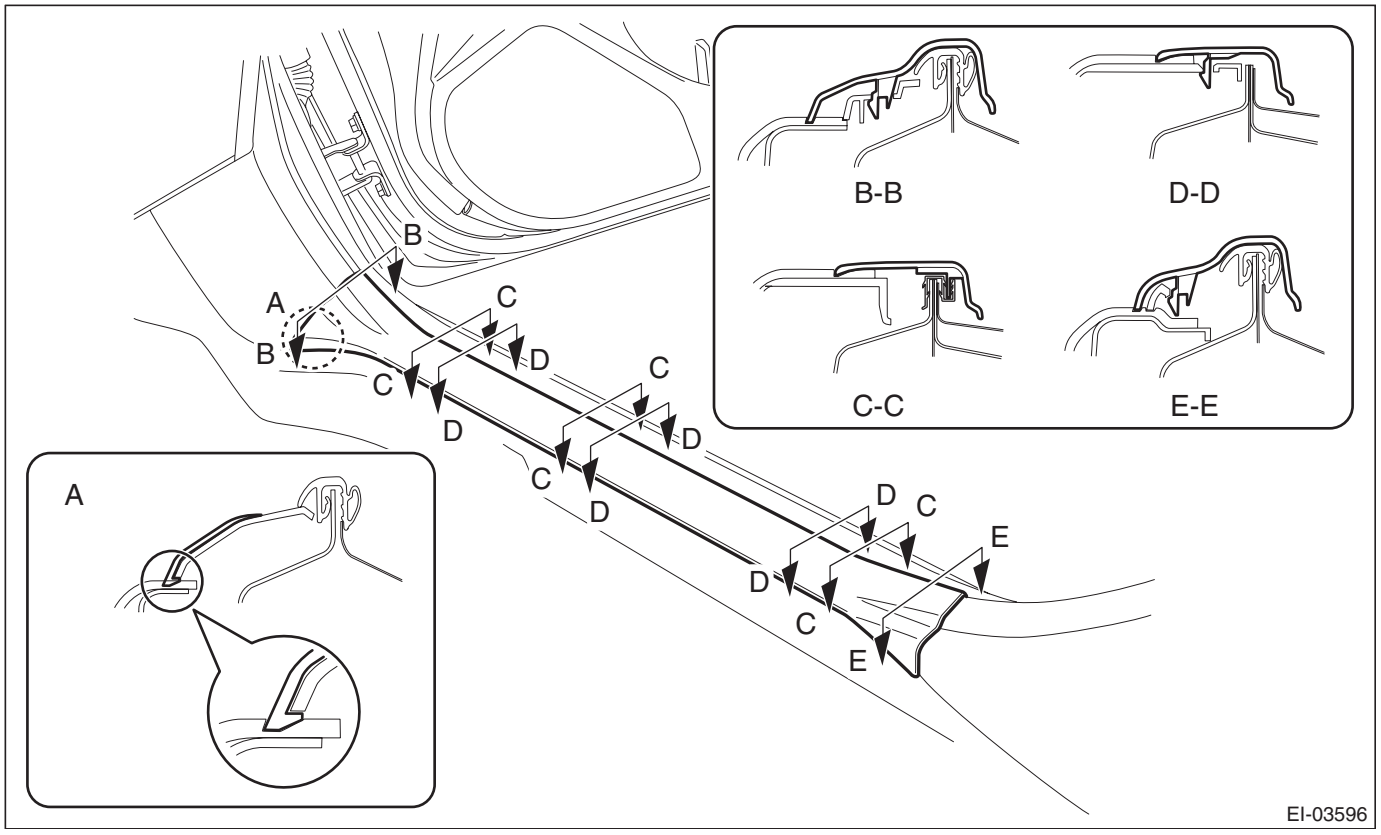
A: REMOVAL

1. SEAT BELT OUTER - FRONT

CAUTION:
• The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.
• Do not drop or subject the pretensioner to any impact.
• Since the pretensioner and bracket are integrated as a unit, do not disassemble them.

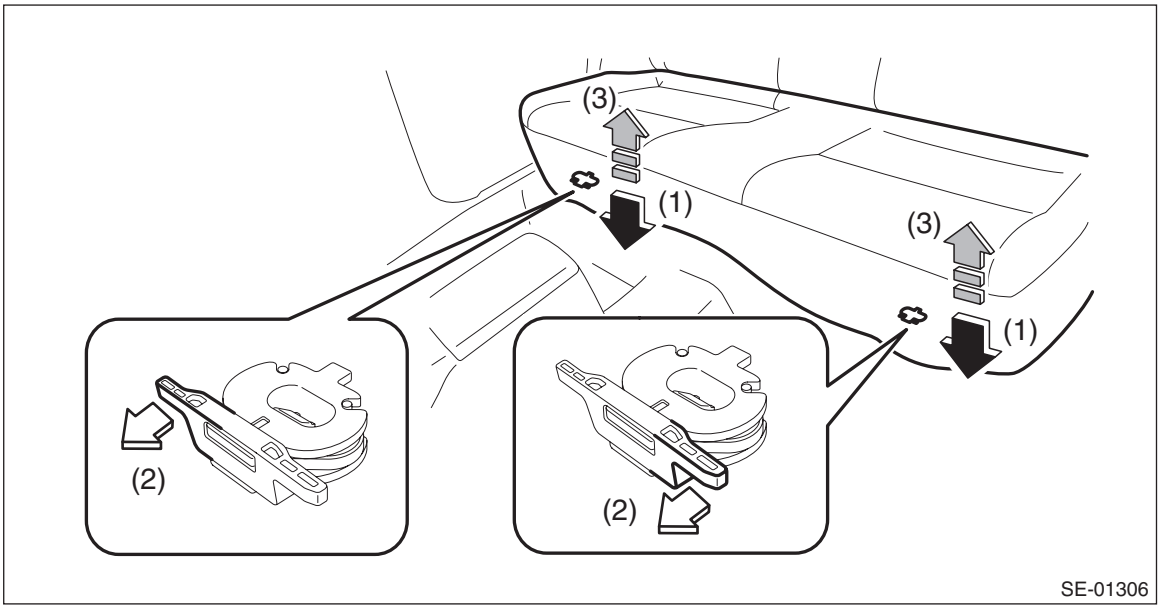
1) Before working, turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more.
2) Tilt the front seat backrest assembly forward, and move the front seat all the way forward.
3) Release the claws, and then remove the cover side sill - front INN. (On the side where seat belt assembly is removed)

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - front INN.

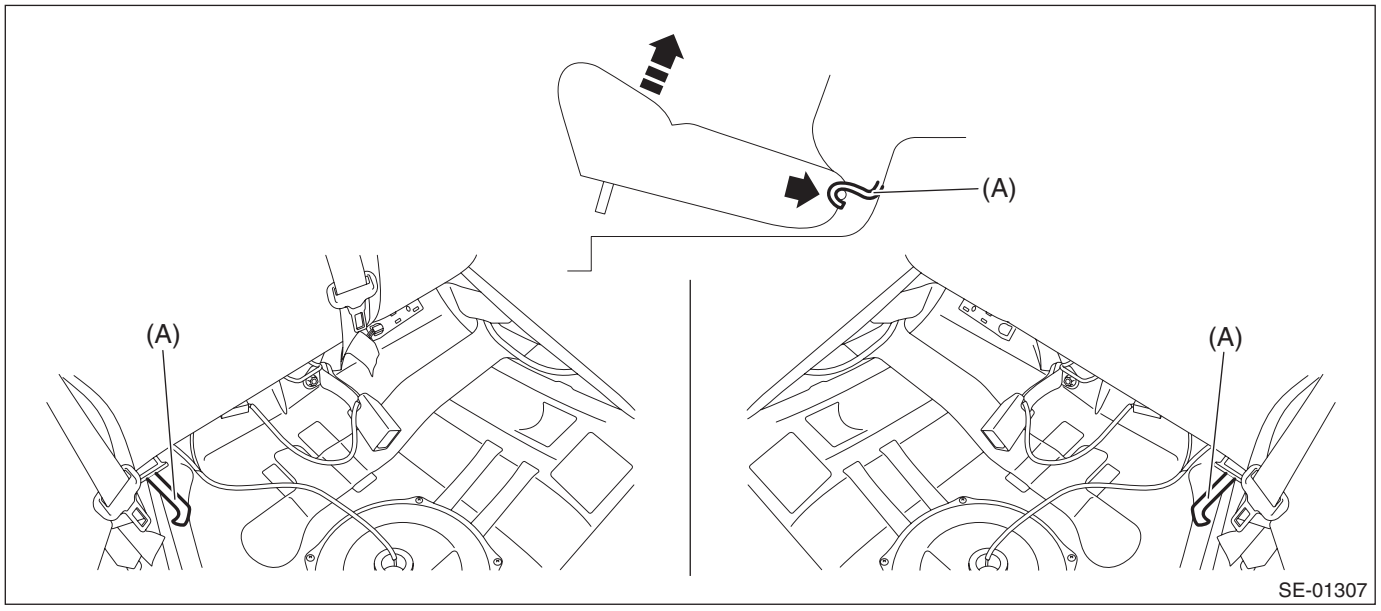


4) Remove the rear seat cushion assembly.
(1) Push the corners of the seat cushion from above.
(2) While pushing the corners of the seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
(3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

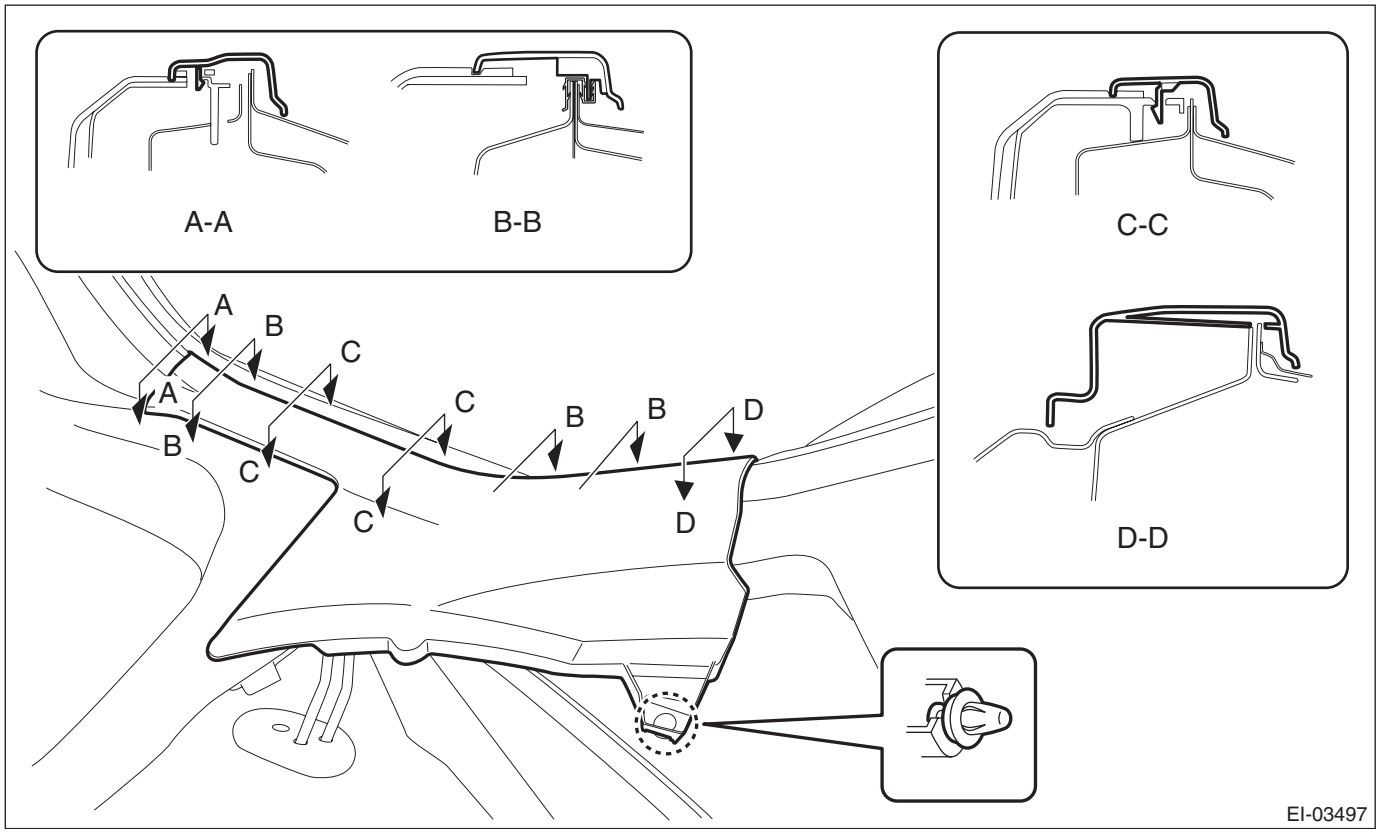


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.



5) Release the clips and claws, and then remove the cover side sill - rear INN. (On the side where seat belt assembly is removed)

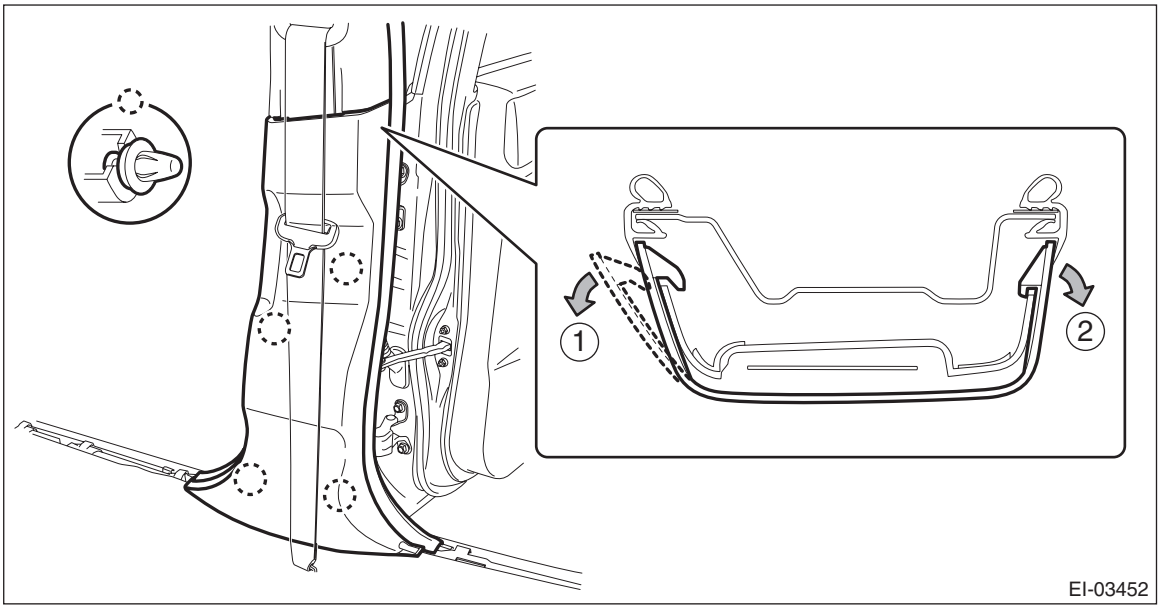
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - rear INN.



6) Remove the trim panel - center pillar LWR. (On the side where seat belt assembly is removed)
(1) Release the clip by pulling the trim panel - center pillar LWR toward you.

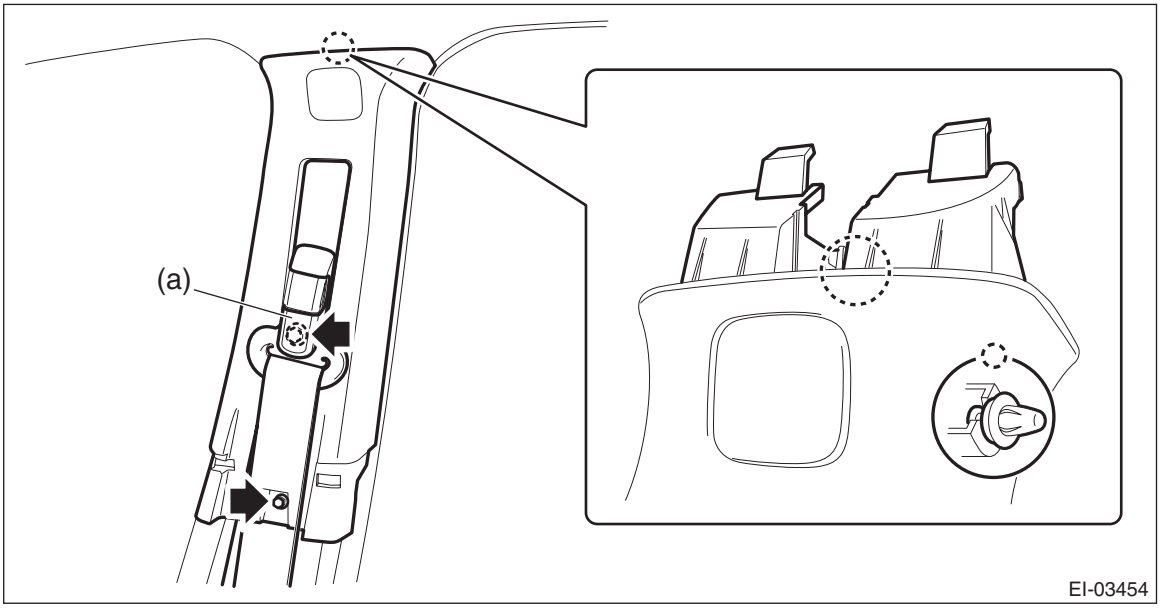
(2) Expand the claws of the trim panel - center pillar LWR outward, and remove it from the trim panel - center pillar UPR.

CAUTION:
Do not expand the trim panel - center pillar LWR excessively. Doing so may damage the trim.



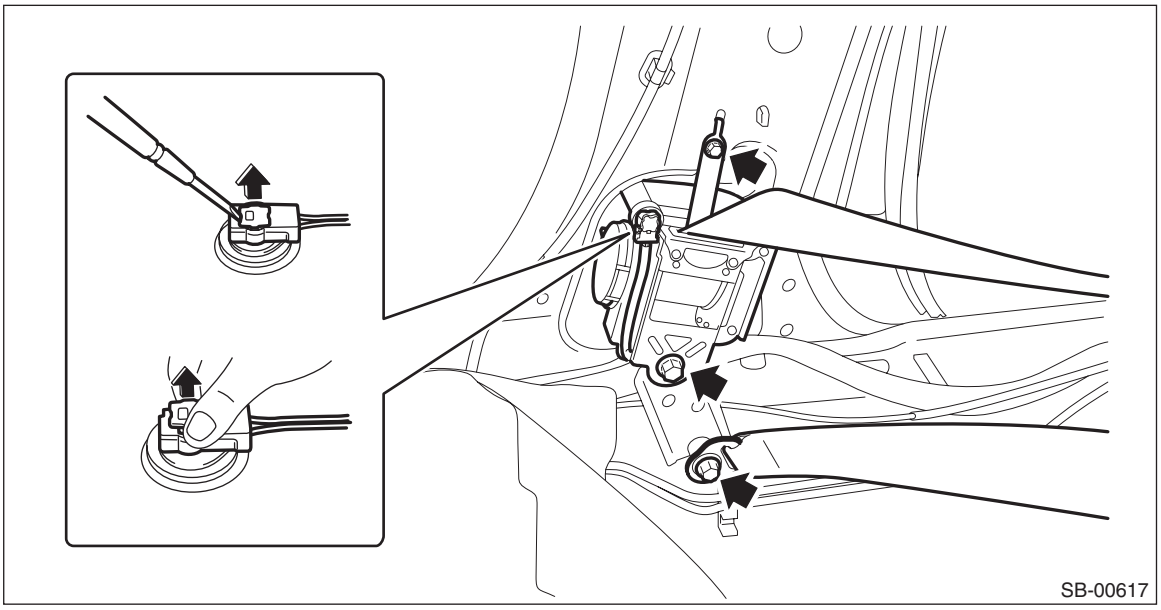
NOTE:
First release the claw located to the front of the vehicle.

7) Remove the trim panel - center pillar UPR. (On the side where seat belt assembly is removed)
(1) Remove the cover through (a), and remove the seat belt anchor bolt.
(2) Remove the bolt on the lower side of the trim panel - center pillar UPR.
(3) Remove the clip, and while lowering the entire trim, remove the trim panel - center pillar UPR.



8) Remove the seat belt outer - front.
(1) Turn over the floor mat to disconnect the belt tension sensor connector. <Ref. to AB-22, DRIVER'S AIRBAG MODULE, CURTAIN AIRBAG MODULE & PRETENSIONER, PROCEDURE, Airbag Connector.>
(2) Remove the bolt to remove the seat belt retractor.

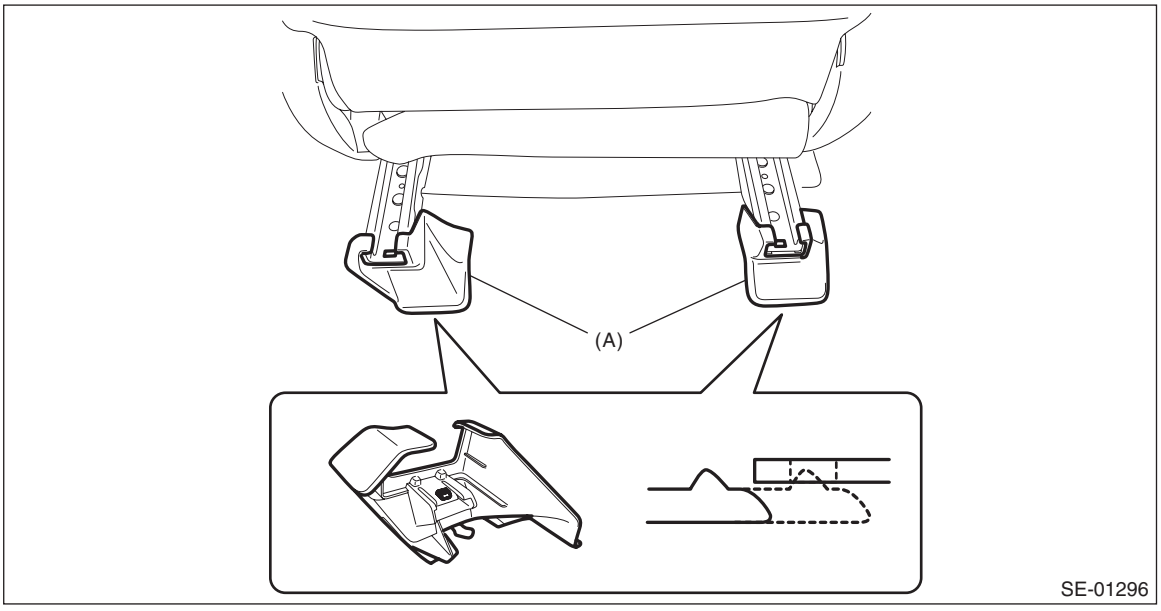
(3) Remove the lower anchor bolt, and remove the seat belt outer - front.



2. SEAT BELT INNER - FRONT

CAUTION:
The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

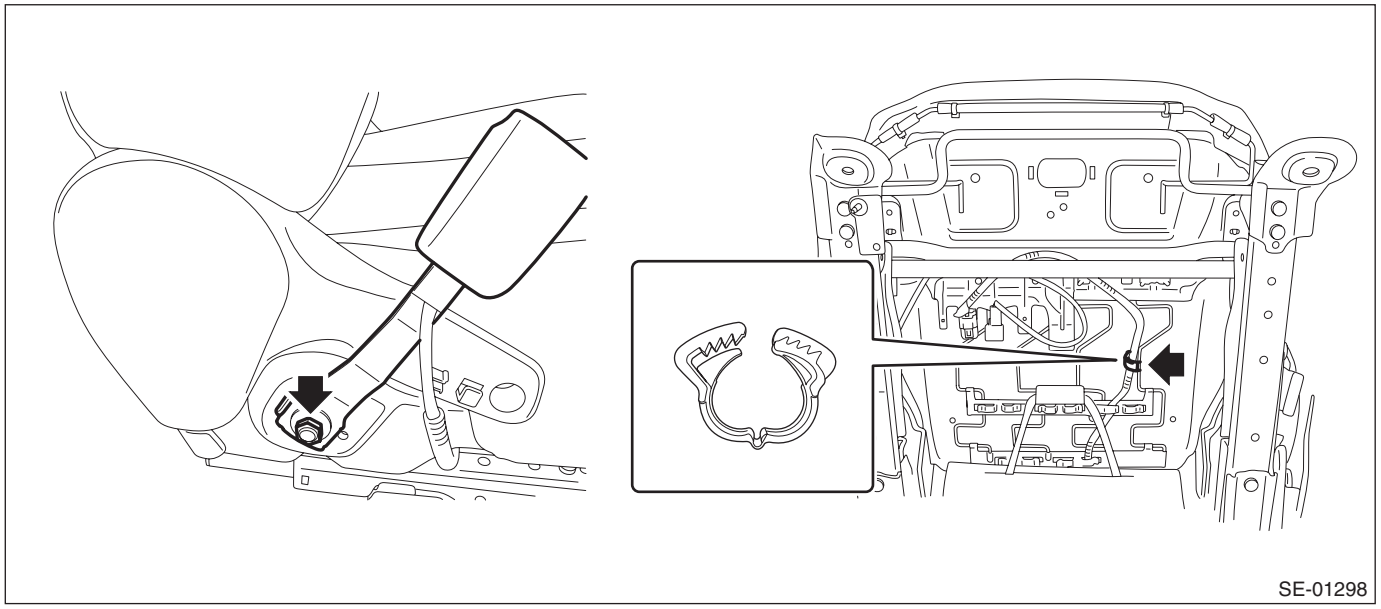
1) Turn the ignition switch to OFF.
2) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
3) Remove the front seats.
   (1) Tilt the backrest assembly forward and move the front seat to the front most position.
   (2) Remove the cover - bolt rear (A) and remove the bolts.



(3) Move the front seat to the rearmost position, and remove the bolts.

(4) Disconnect the connector under the front seat.
- Seat belt warning light connector (driver's seat)
- Occupant detection system harness connector (passenger's seat) <Ref. to OD(diag)-9, OCCUPANT DETECTION SYSTEM (BETWEEN AIRBAG REAR HARNESS AND SEAT HARNESS), PROCEDURE, Airbag Connector.>
- Side airbag connector <Ref. to AB-28, SIDE AIRBAG MODULE, PROCEDURE, Airbag Connector.>
- Seat heater connector (model with seat heater)
- Buckle switch RH connector (passenger's seat) <Ref. to AB-29, BUCKLE SWITCH RH, PROCEDURE, Airbag Connector.>

4) Remove the seat belt inner - front.
(1) Remove the nut, and remove the seat belt inner - front.
(2) Remove the clip for the inner seat belt harness located under the seat cushion.



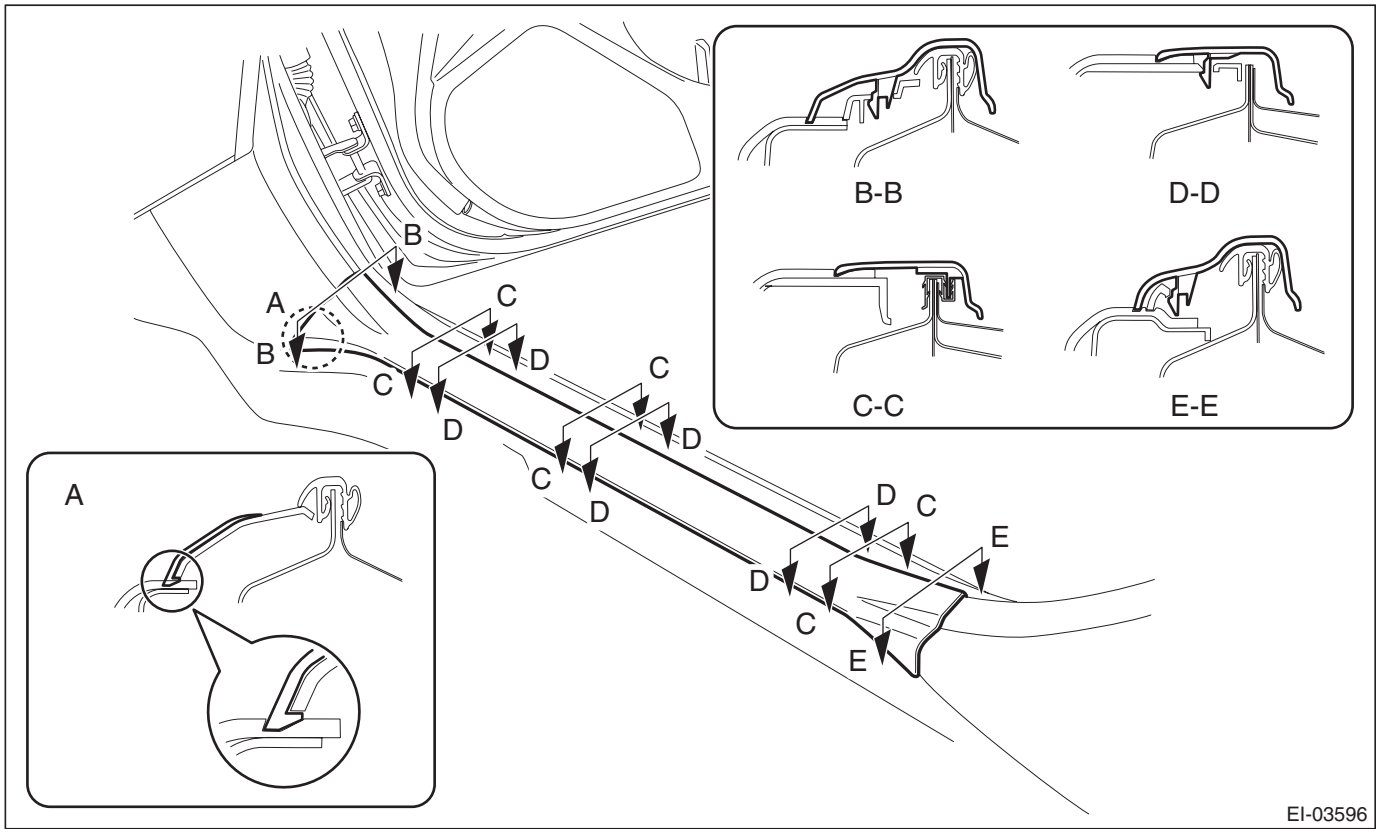
3. ADJUSTER ASSEMBLY - SEAT BELT

CAUTION:
- **The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.**
- **Do not drop or subject the pretensioner to any impact.**
- **Since the pretensioner and bracket are integrated as a unit, do not disassemble them.**

1) Before working, turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more.
2) Tilt the backrest assembly forward and move the front seat to the front most position.

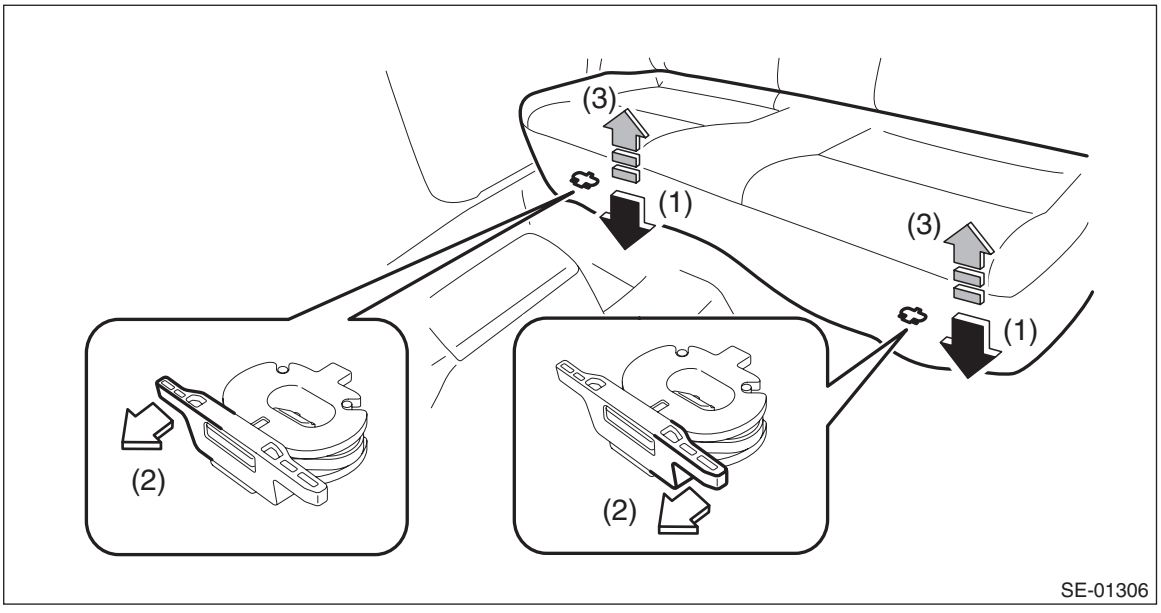
3) Release the claws, and then remove the cover side sill - front INN.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - front INN.

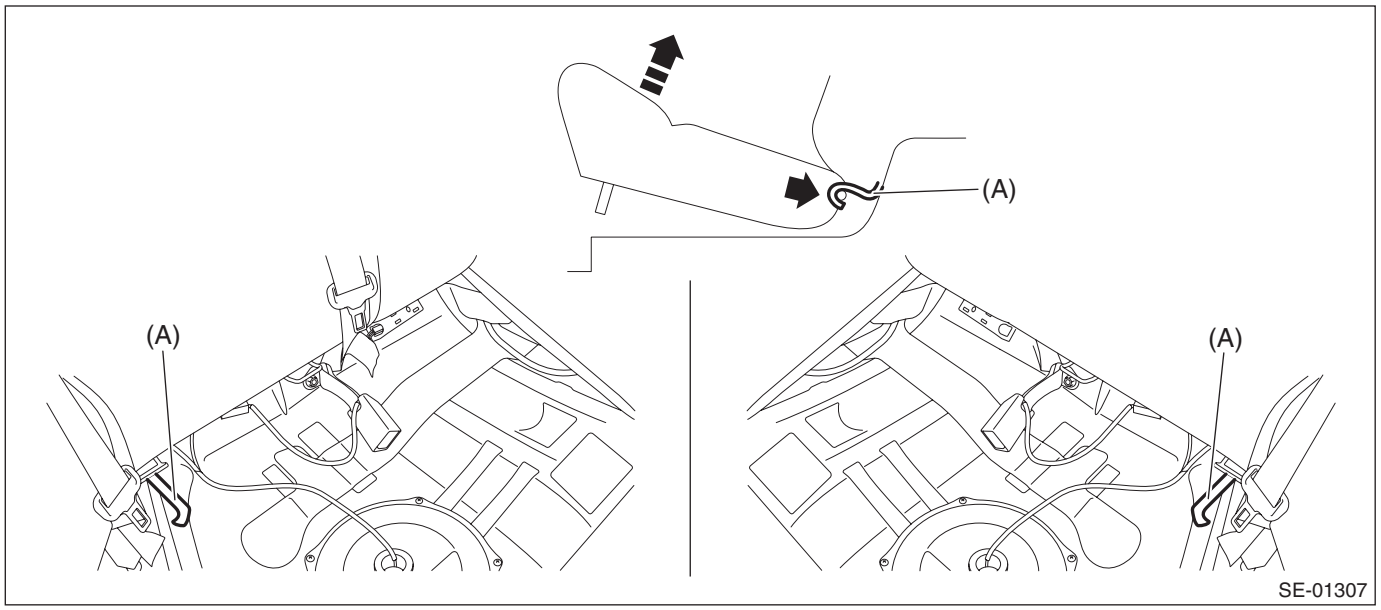


4) Remove the rear seat cushion assembly.
(1) Push the corners of the rear seat cushion from above.
(2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
(3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

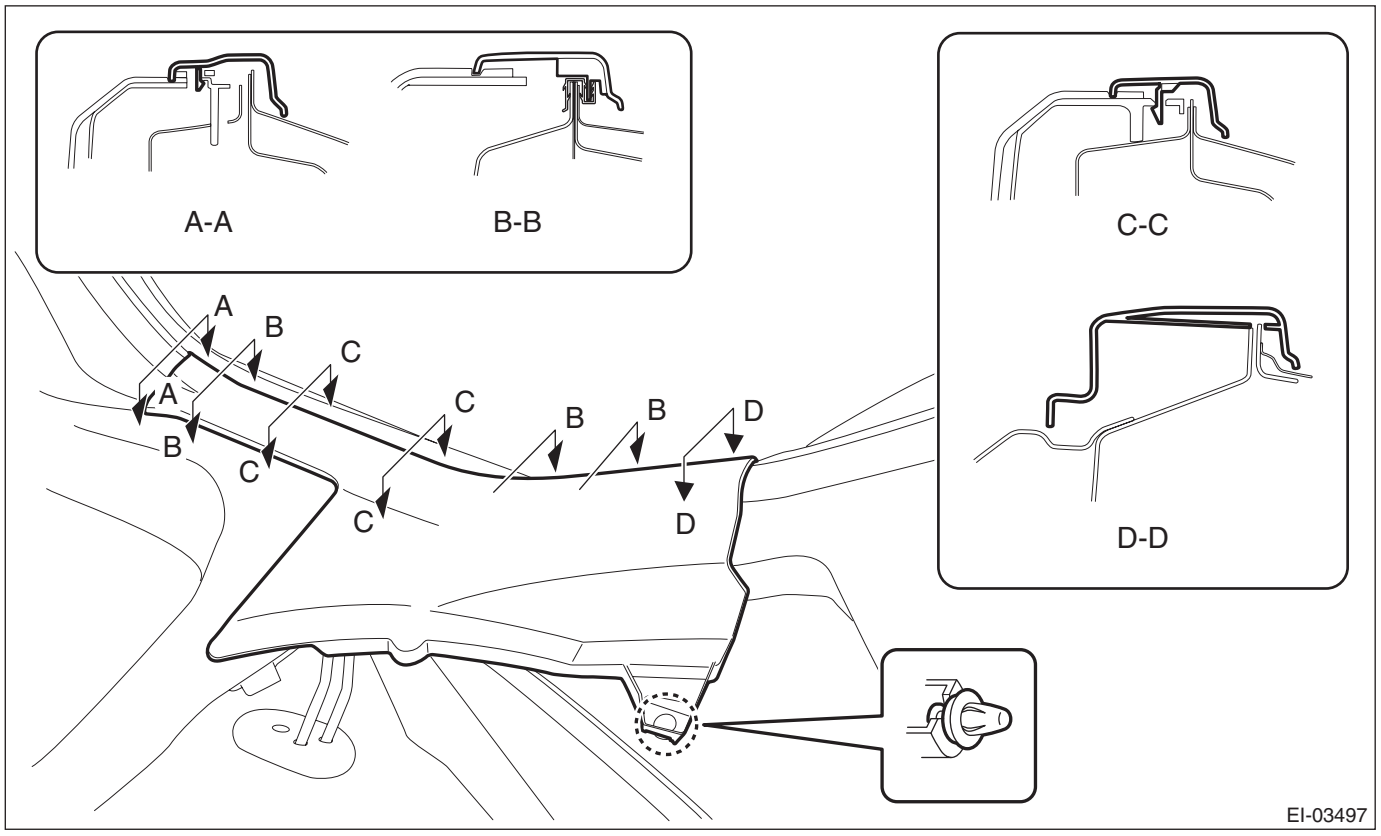


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.



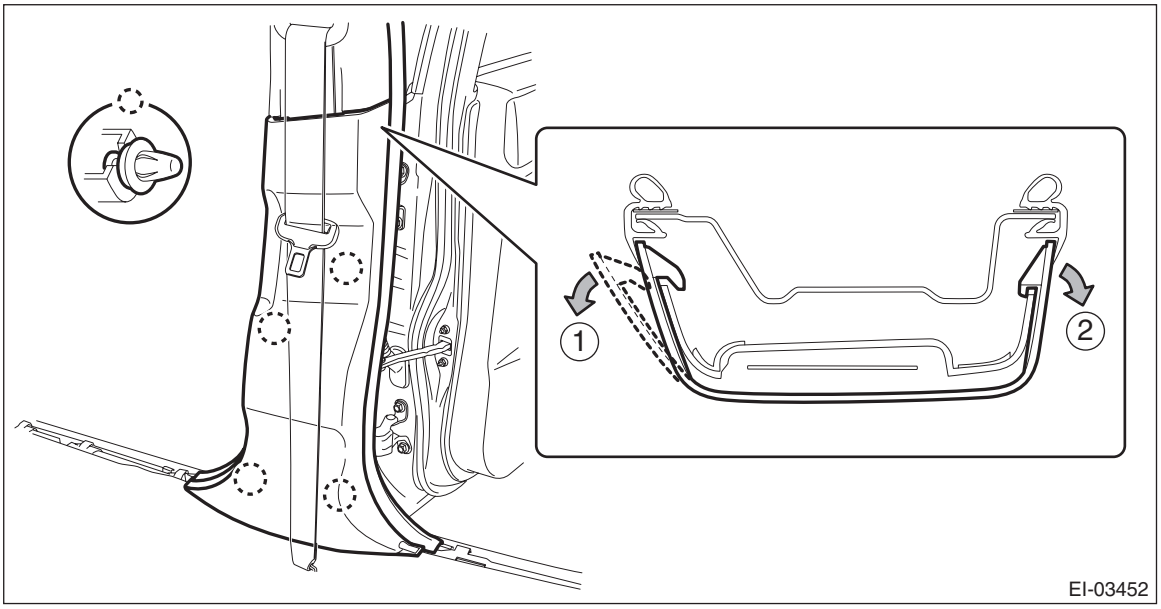
5) Release the clips and claws, and then remove the cover side sill - rear INN.

CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - rear INN.

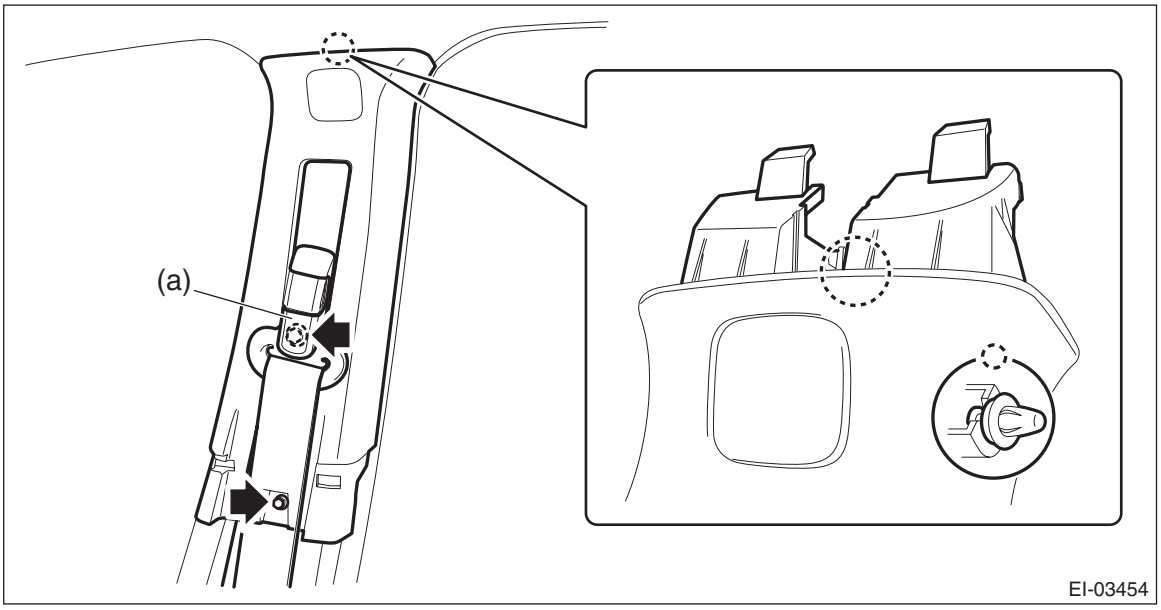


6) Remove the trim panel - center pillar LWR.
(1) Release the clip by pulling the trim panel - center pillar LWR toward you.
(2) Expand the claws of the trim panel - center pillar LWR outward, and remove it from the trim panel - center pillar UPR.

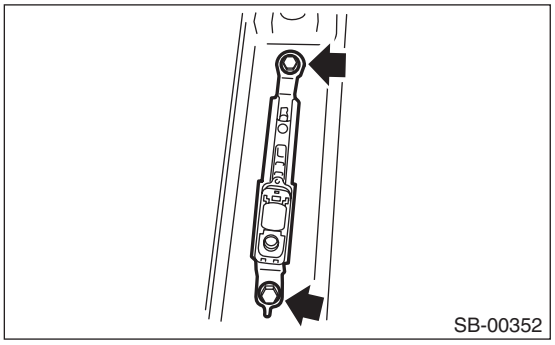
CAUTION:
Do not expand the trim panel - center pillar LWR excessively. Doing so may damage the trim.



NOTE:
First release the claw located to the front of the vehicle.
7) Remove the trim panel - center pillar UPR.
(1) Remove the cover through (a), and remove the seat belt anchor bolt.
(2) Remove the bolt on the lower side of the trim panel - center pillar UPR.
(3) Remove the clip, and while lowering the entire trim, remove the trim panel - center pillar UPR.



8) Remove the bolts, and then remove the adjuster assembly - seat belt.



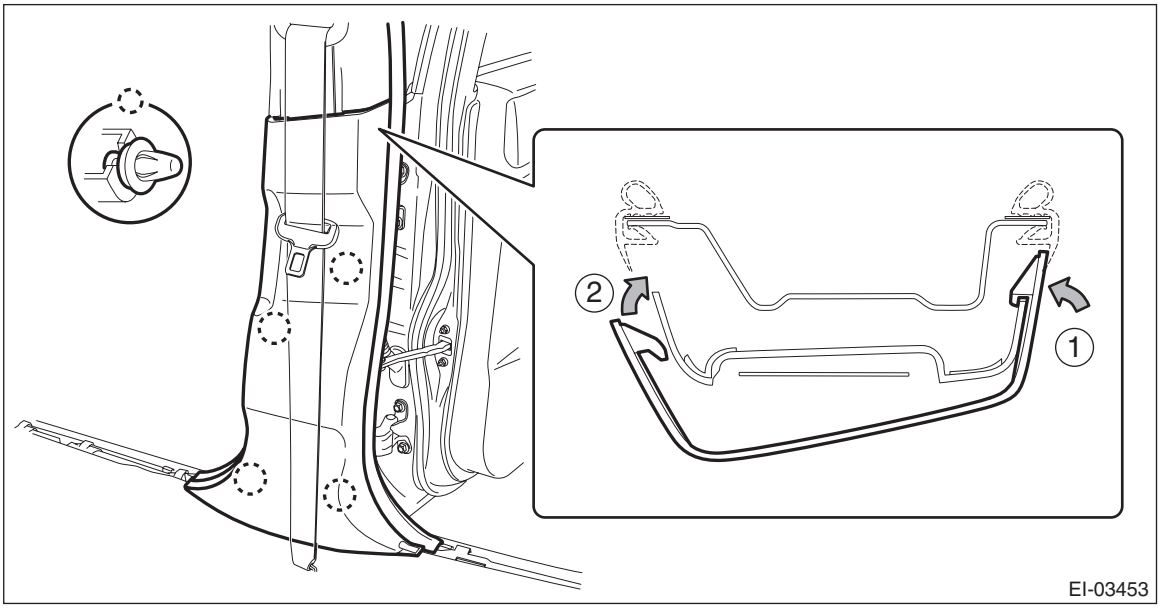
B: INSTALLATION

1. SEAT BELT OUTER - FRONT

CAUTION:
• The parts of the driver and passenger sides are not the same. Before installation, make sure that the correct part is used.
• During installation, make sure that the seat belts are not twisted.
• After installation, make sure that the seat belt can be pulled out and retracted smoothly.
• Make sure that the seat belt harness is not caught anywhere. Wrong harness rooting may cause the harness short from pinch.
• Check that there is no damage to the clip on the upper part of the trim panel - center pillar UPR. If the clip is damaged, its holding force is reduced. Be sure to replace it with a new clip.
1) Before installation, perform a unit inspection of retractor. <Ref. to SB-26, INSPECTION, Front Seat Belt.>
2) Install the seat belt outer - front.

Tightening torque:
Front seat belt: <Ref. to SB-2, FRONT SEAT BELT, COMPONENT, General Description.>
3) Install the remaining parts in the reverse order of removal.

NOTE:
Assemble the trim panel - center pillar LWR to the trim panel - center pillar UPR securely.



4) After installation, check the following points.
- The seat belt is not twisted.
- The seat belt can be pulled out and retracted smoothly.
- The adjuster assembly - seat belt can be moved smoothly.
- Check that the airbag warning light lights up for approximately 6 seconds and then turns off when connecting the battery ground cable and turning the ignition switch to ON.

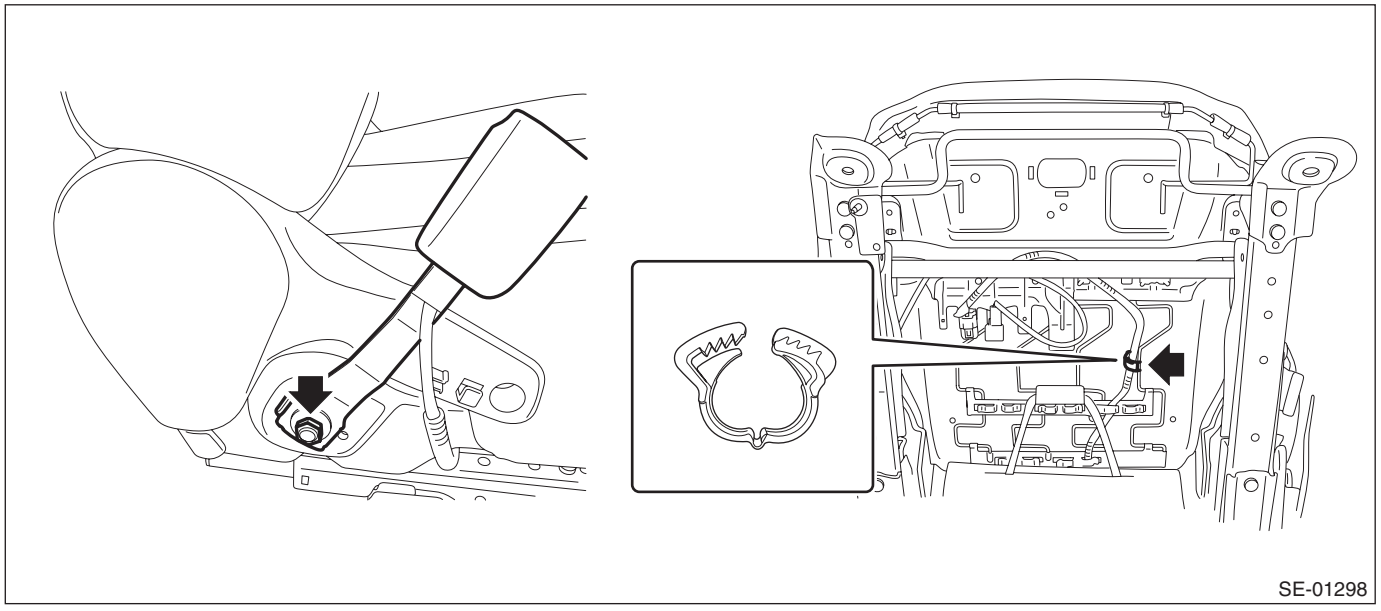
2. SEAT BELT INNER - FRONT

CAUTION:
- **Before installation, make sure that the correct part is used.**
- **During installation, make sure that the seat belts are not twisted.**
- **Check that there is no pinching of the seat belt harness. Wrong harness rooting may cause the harness short from pinch.**

1) Install the seat belt inner - front.

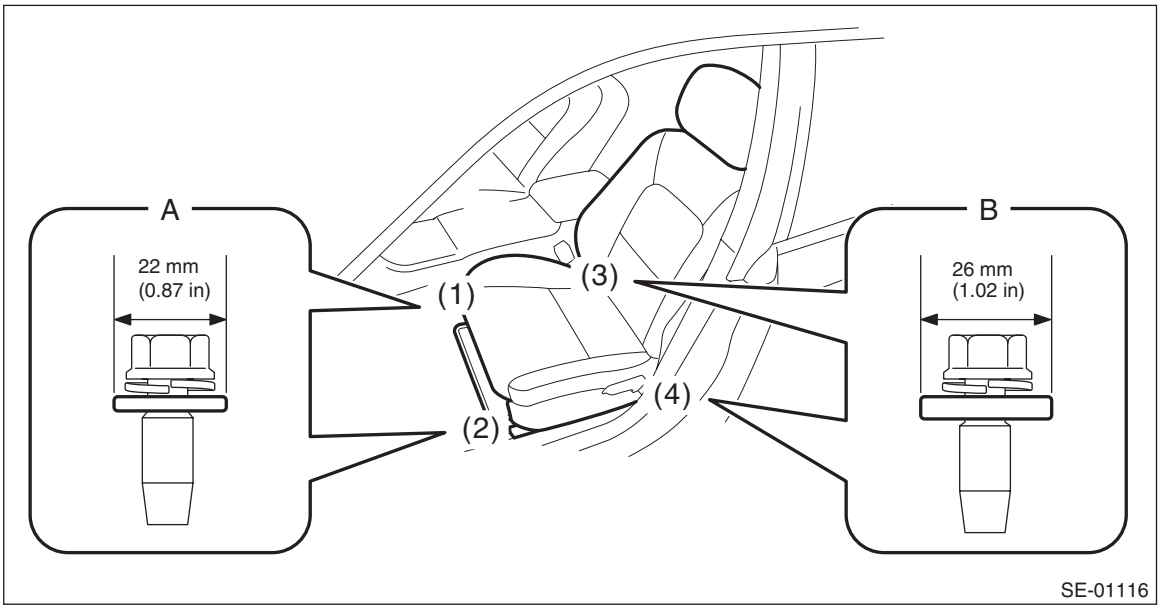
Tightening torque:
Front seat belt: <Ref. to SB-2, FRONT SEAT BELT, COMPONENT, General Description.>

2) Locate the seat belt harness and retain it with a harness clip.



3) Install the seat assembly to the body.

CAUTION:
• The seat mounting bolts differ between the front mounting points and the rear mounting points. Make sure that you are using correct bolts at correct positions.
• Tighten the slide rail installing bolts in the order as shown in the figure, in several steps by gradually increasing the torque until they reach the specified torque.



- **Front (bolt A): Washer diameter 22 mm (0.87 in)**
- **Rear (bolt B): Washer diameter 26 mm (1.02 in)**

Tightening torque:
Front seat assembly: 53 N·m (5.40 kgf-m, 39.1 ft-lb)

4) Check that no harness is caught by sliding the seat back and forth.

3. ADJUSTABLE ANCHOR ASSY

Referring to the installation procedure for seat belt outer - front, install the parts in the reverse order of removal.

Tightening torque:
Front seat belt: <Ref. to SB-2, FRONT SEAT BELT, COMPONENT, General Description.>

C: INSPECTION

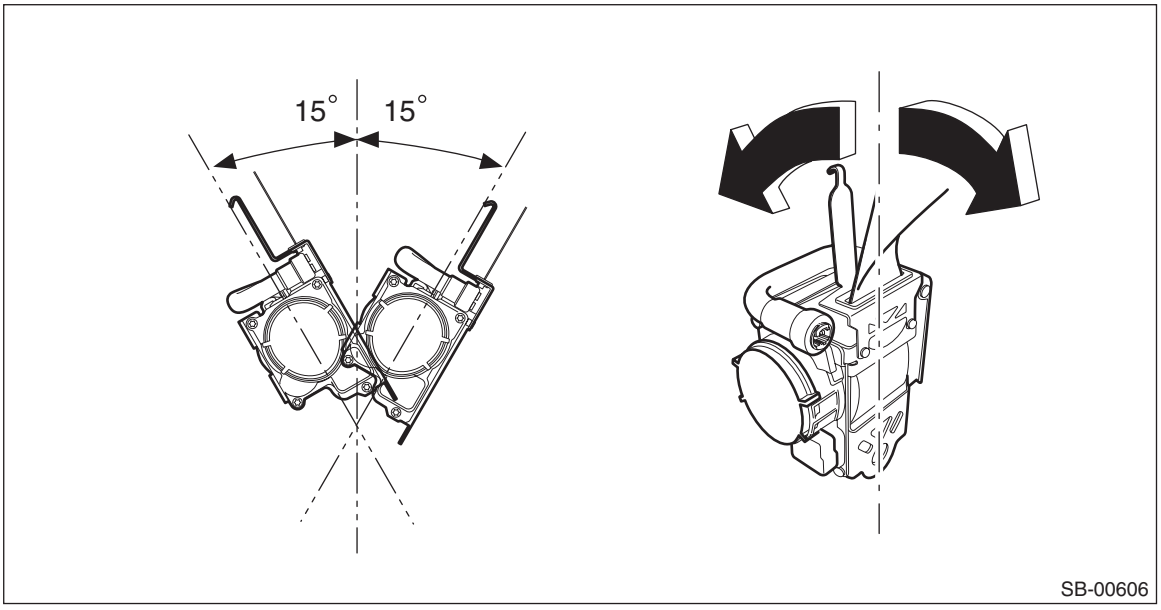
1. VISUAL INSPECTION

Check for the following, and replace with new parts if necessary.
- Pretensioner is cracked or deformed.
- Adjuster assembly - seat belt is cracked or deformed.
- Seat belt is slackened, bent or worn.
- Seat belt is abnormally wound or extended.
- Seat belt inner - front is deformed or damaged.
- Seat belt buckle cannot be engaged properly.

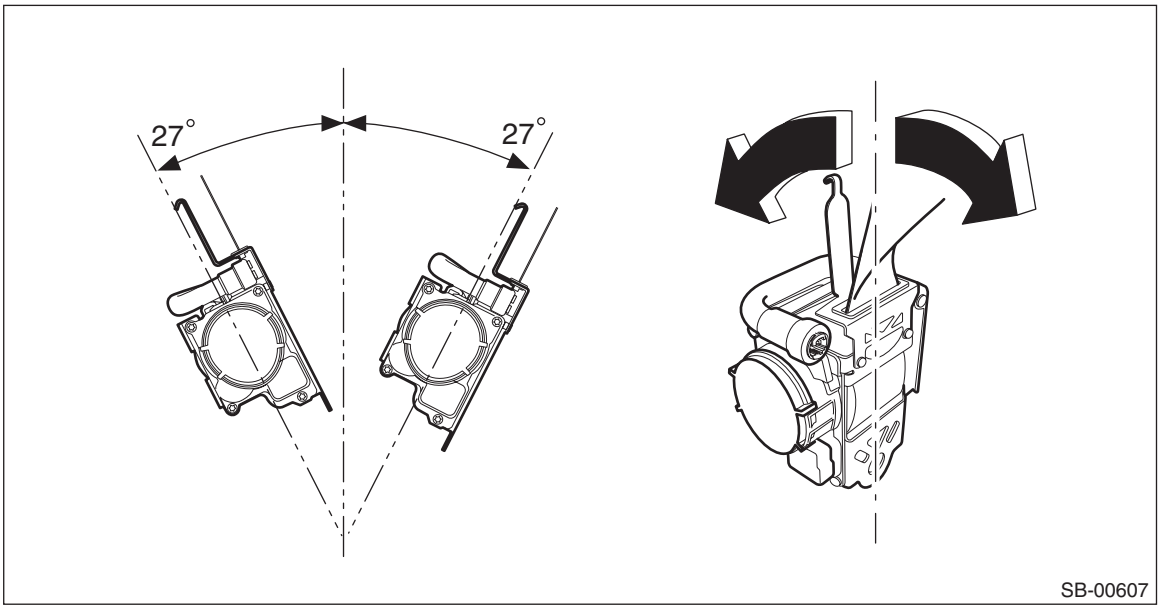
2. ELR LOCK MECHANISM INSPECTION

1) Hold the retractor upright (as installed in the vehicle) and check the ELR lock mechanism.
2) Tilt the retractor from the upright posture and check the following points.

- It does not lock if the inclination angle is 15° or less.



- It remains locked if the inclination angle is 27° or more.



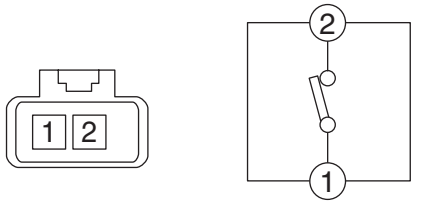
3) If the ELR lock mechanism does not operate properly, replace the seat belt outer - front with a new part.

3. SEAT BELT SWITCH INSPECTION

Preparation tool: Circuit tester

- Driver's seat

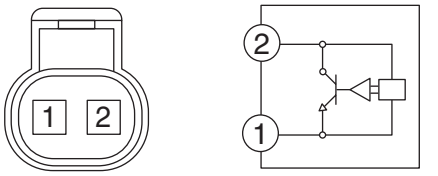
Check the resistance between the terminals when the seat belt inner - front is in each of the following operation conditions.

Terminal No.	Inspection conditions	Standard	Circuit
2 — 1	Tongue plate inserted	Less than 1 Ω	 SB-00609
2 — 1	Tongue plate detached	10 kΩ or more	

Replace the seat belt inner - front if the inspection result is not within the standard.

- Passenger's seat

Check the current between the terminals when the seat belt inner - front is in each of the following operation conditions.

Terminal No.	Inspection conditions	Standard	Circuit
1 — 2	Tongue plate inserted	12 — 18 mA	 SB-00608
1 — 2	Tongue plate detached	4 — 7 mA	

Replace the seat belt inner - front if the inspection result is not within the standard.

6. Rear Seat Belt

A: REMOVAL

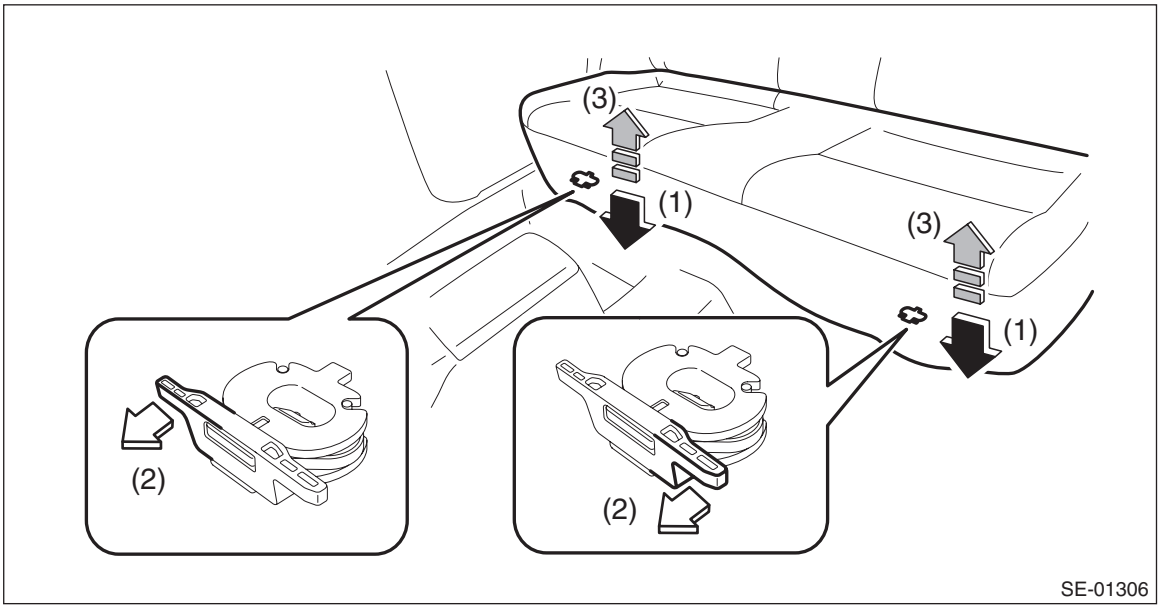
1. SEAT BELT OUTER - REAR RH AND LH (4 DOOR MODEL)

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

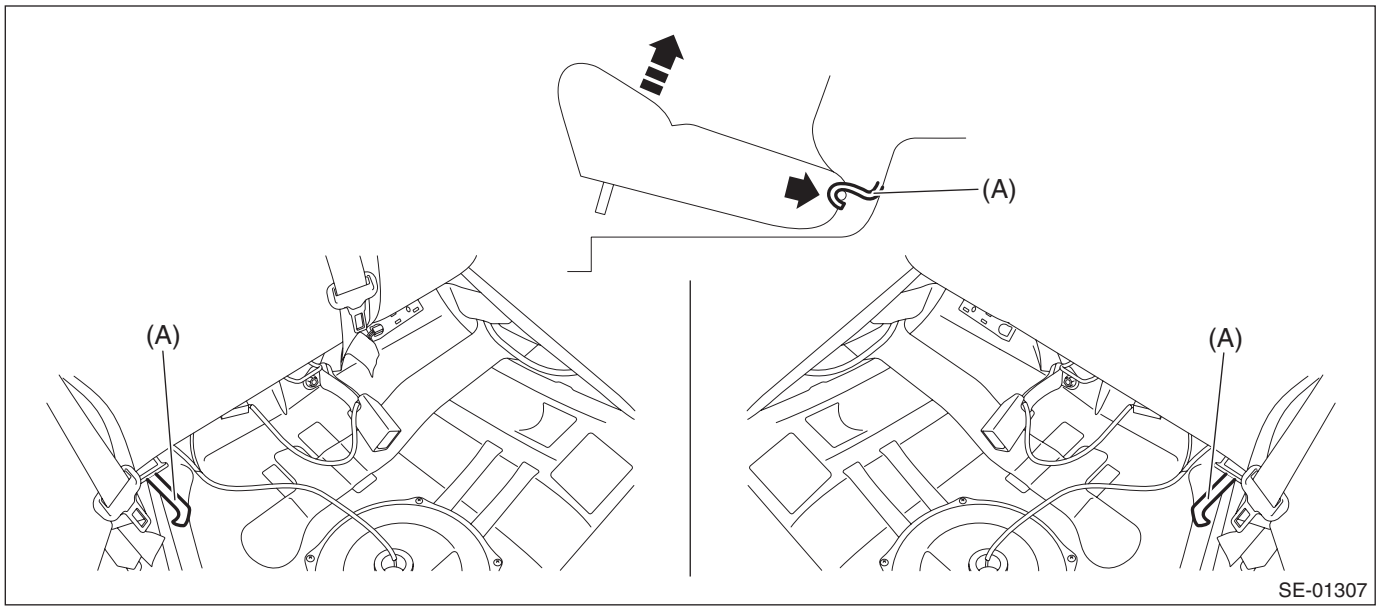
CAUTION:
The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

2) Remove the rear seat cushion assembly.
   (1) Push the corners of the rear seat cushion from above.
   (2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
   (3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

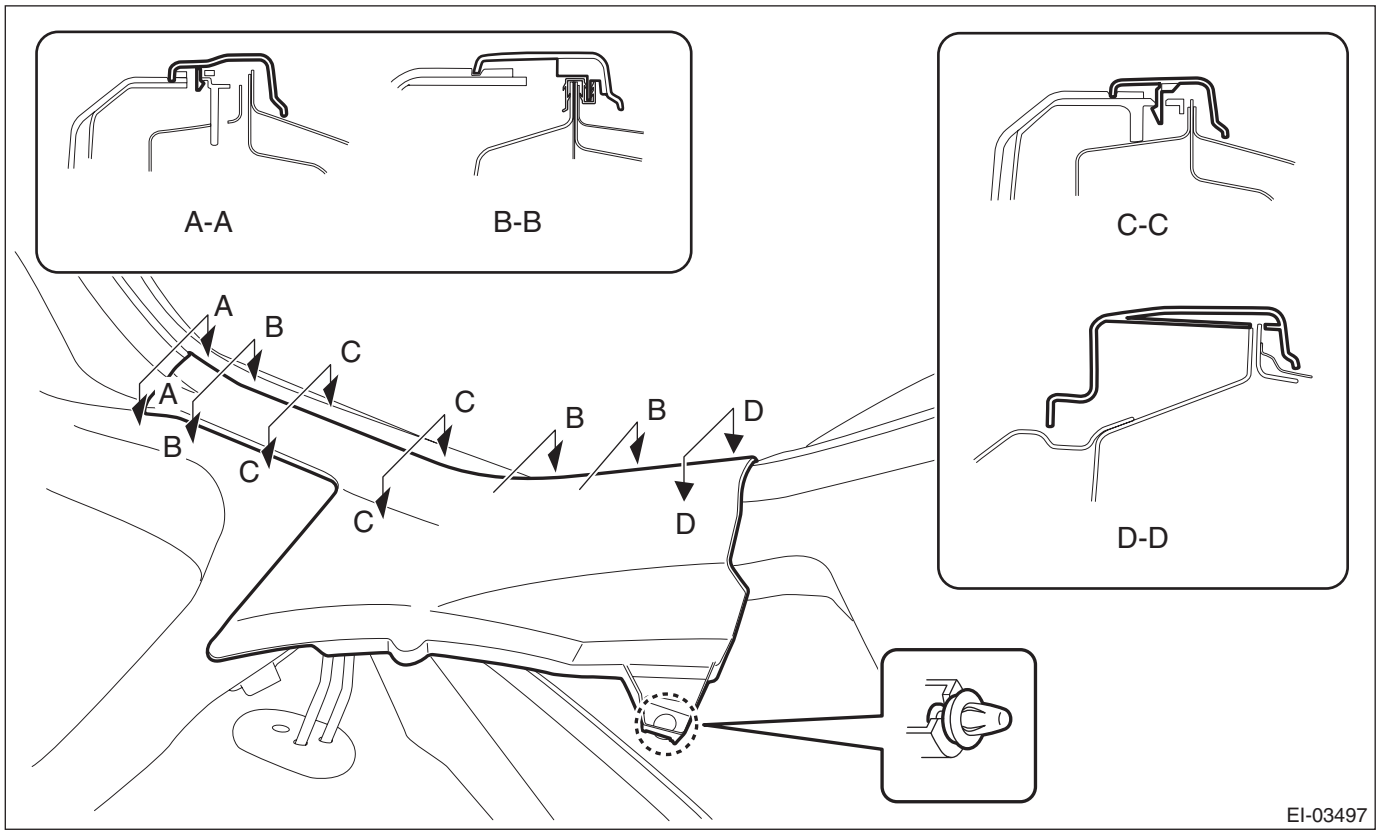


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.

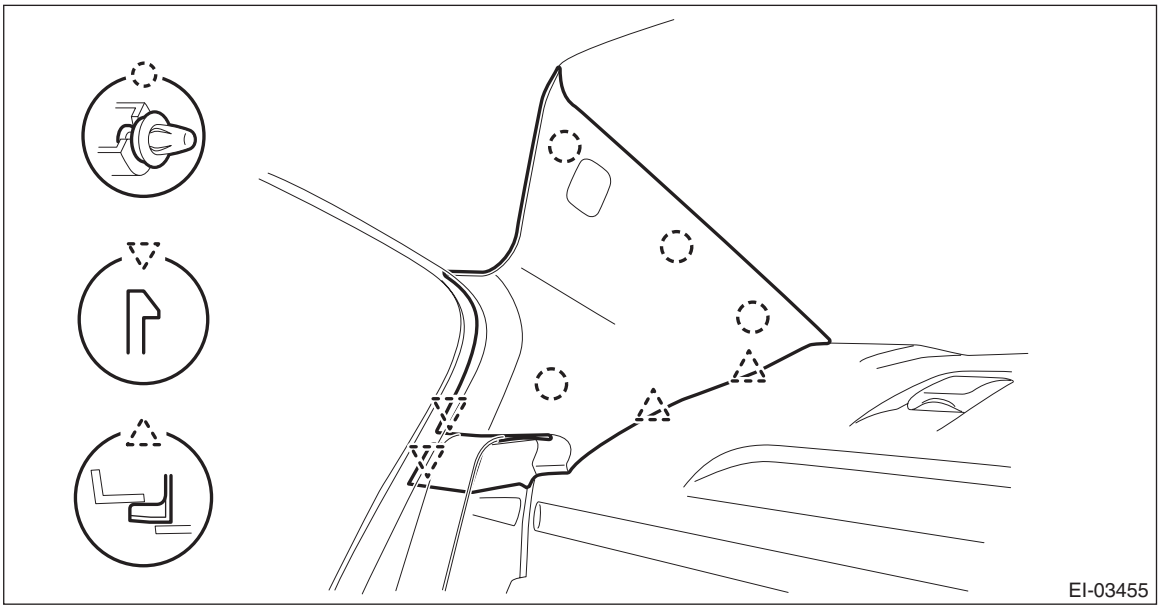


3) Release the clips and claws, and then remove the cover side sill - rear INN. (On the side where seat belt assembly is removed)

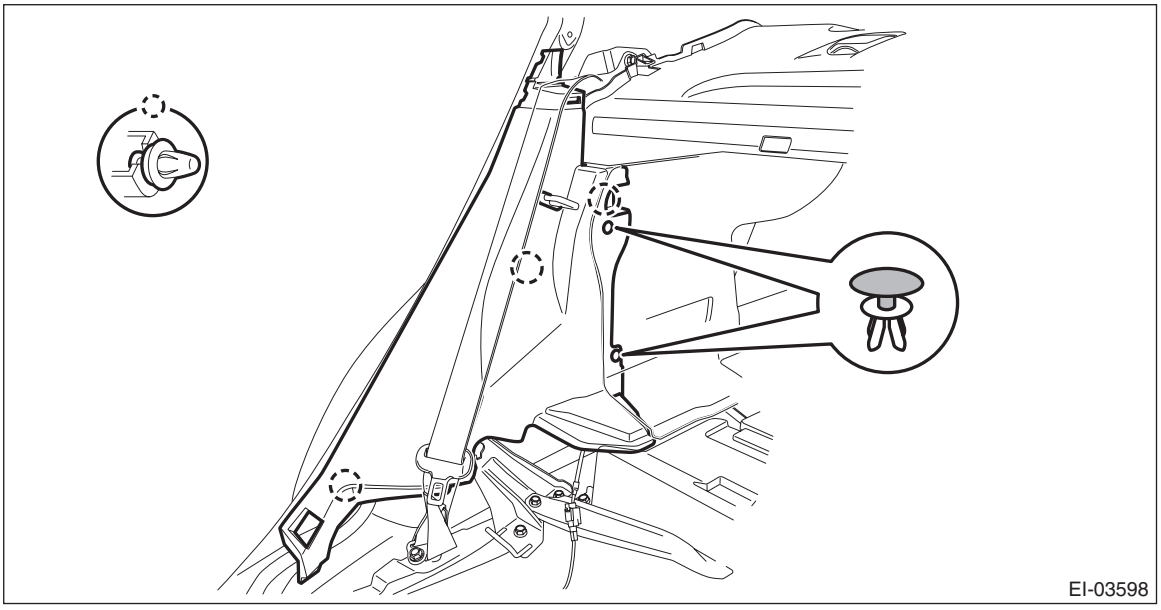
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - rear INN.



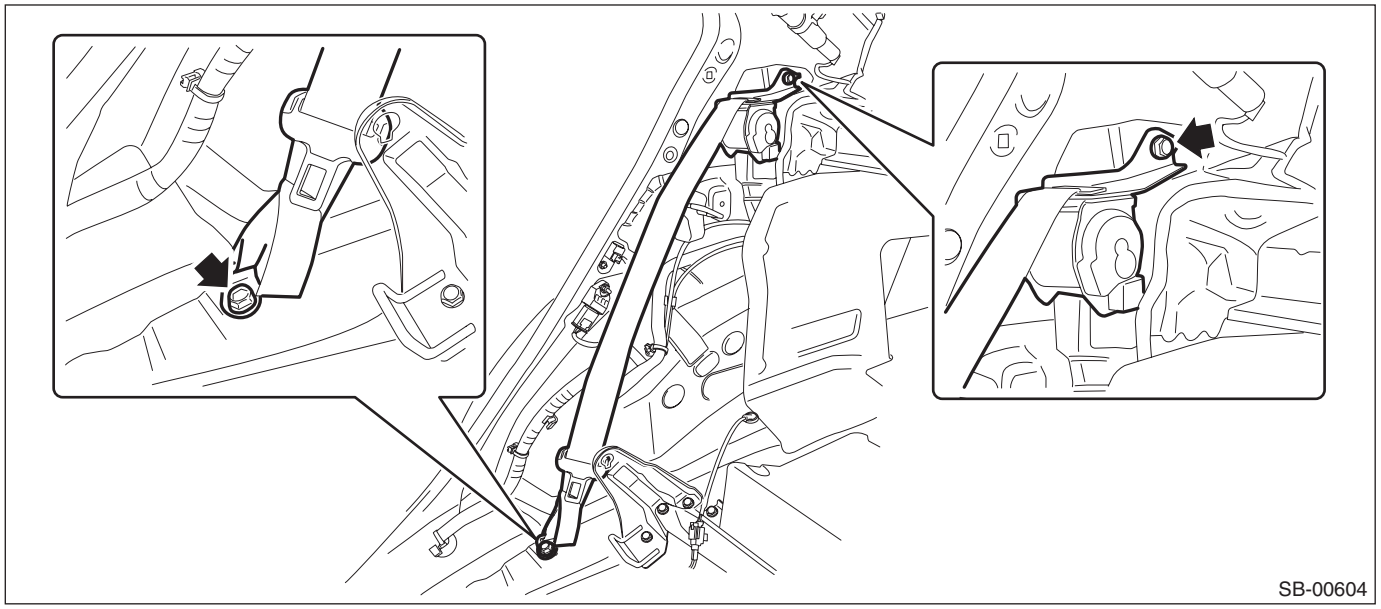
4) Remove the clips, and remove the trim panel - rear pillar UPR. (On the side where seat belt assembly is removed)



5) Remove the trim panel - rear pillar LWR. (On the side where seat belt assembly is removed)
   (1) Remove the clips, and turn over the trim panel - trunk side.
   (2) Remove the clips, and remove the trim panel - rear pillar LWR.



6) Remove the bolts, and remove the seat belt outer - rear.



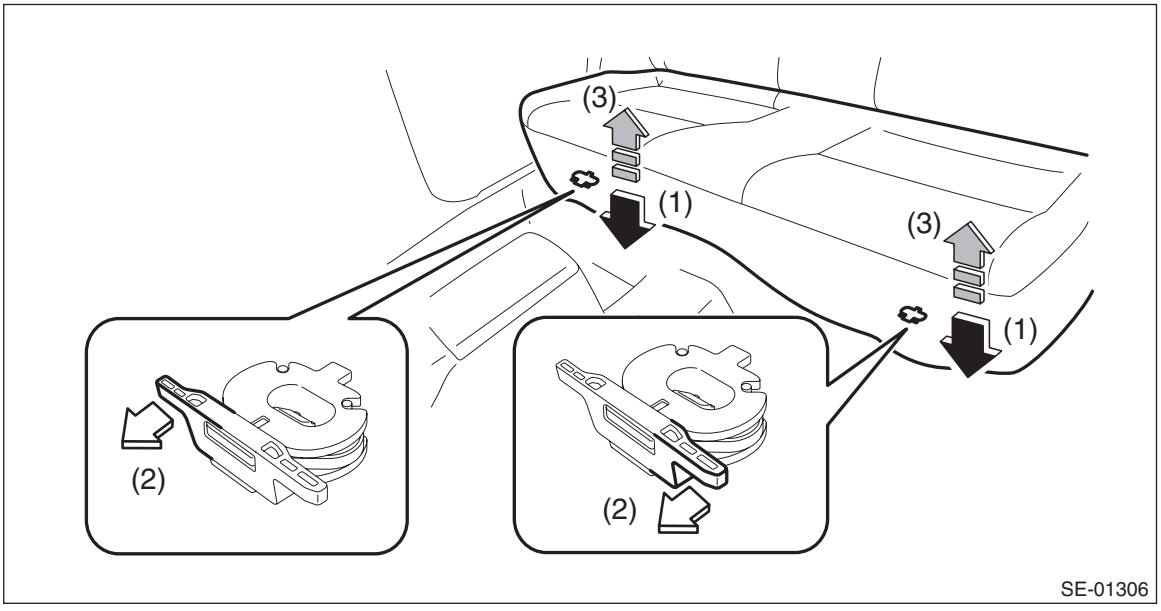
2. SEAT BELT OUTER - REAR RH AND LH (5 DOOR MODEL)

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

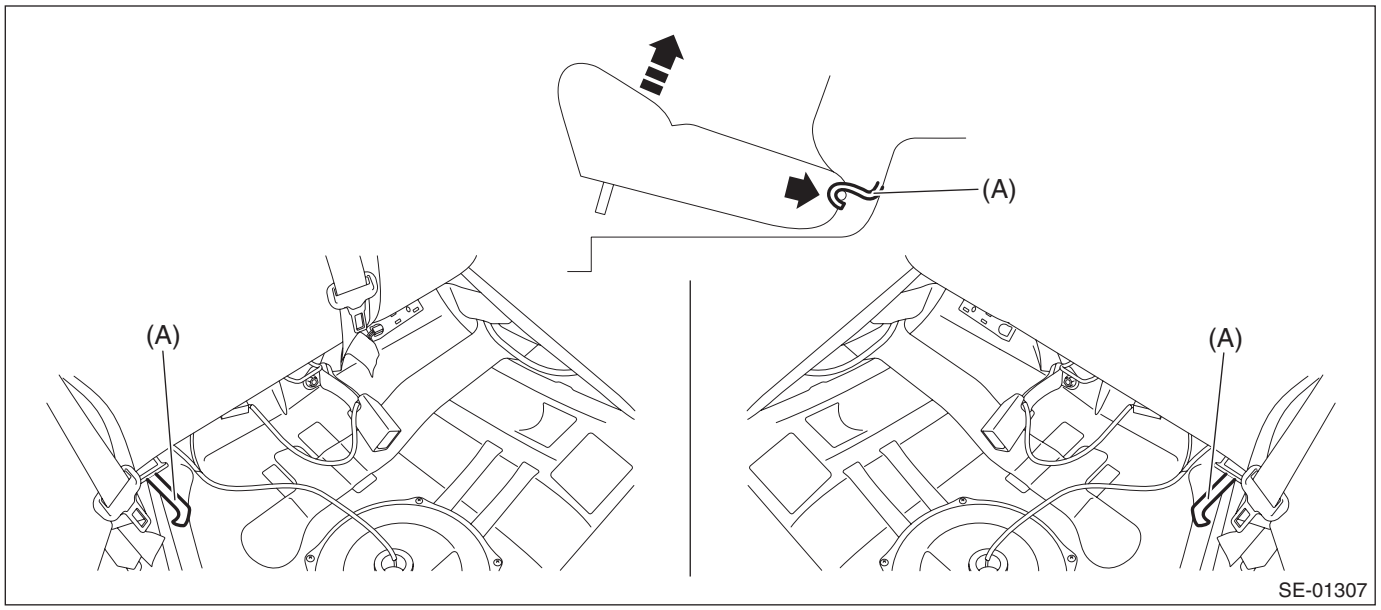
CAUTION:
The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

2) Remove the rear seat cushion assembly.
   (1) Push the corners of the rear seat cushion from above.
   (2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
   (3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

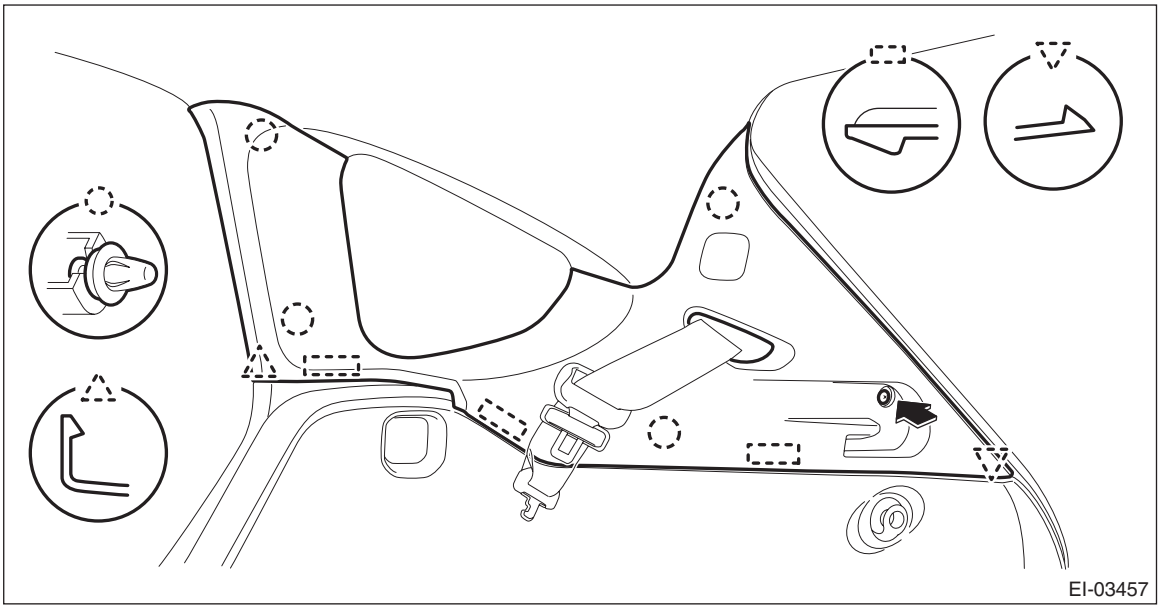
NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.



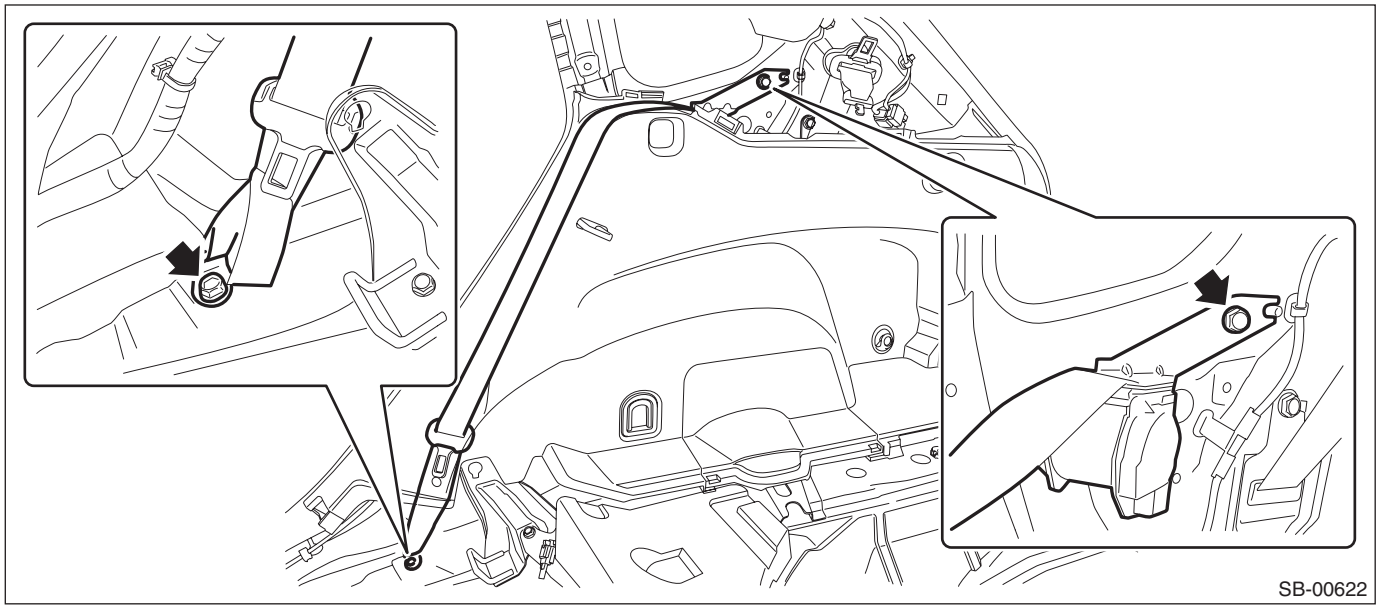
(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.



3) Remove the screws and clips, and remove the trim panel - rear quarter pillar UPR. (On the side where seat belt assembly is removed)



4) Remove the bolts, and remove the seat belt outer - rear.



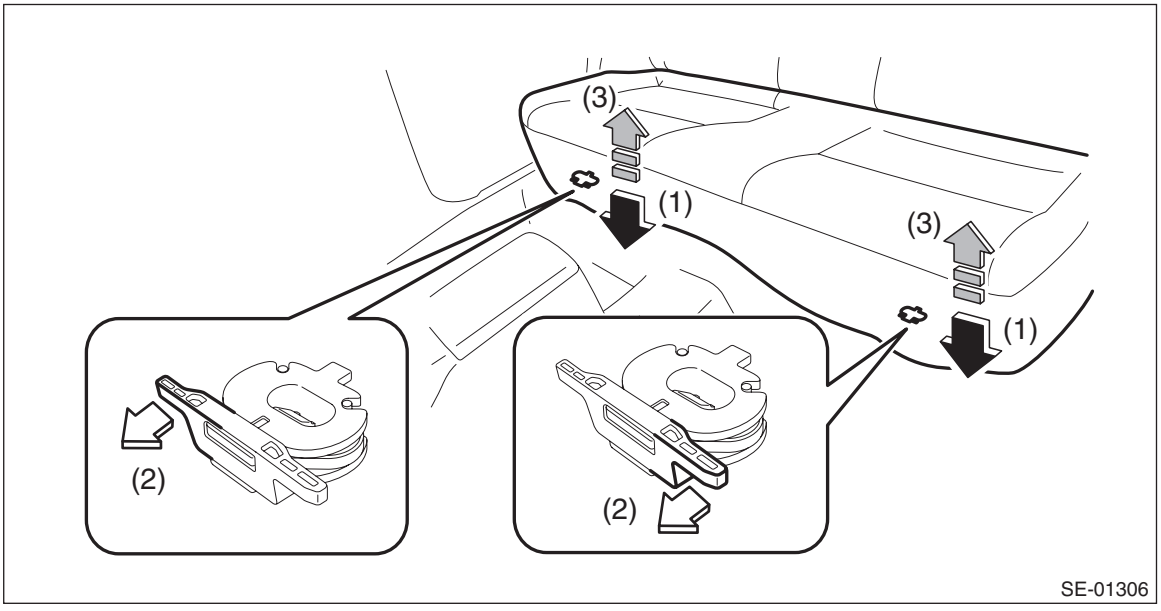
3. SEAT BELT - REAR SHOULDER CTR (4 DOOR MODEL)

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

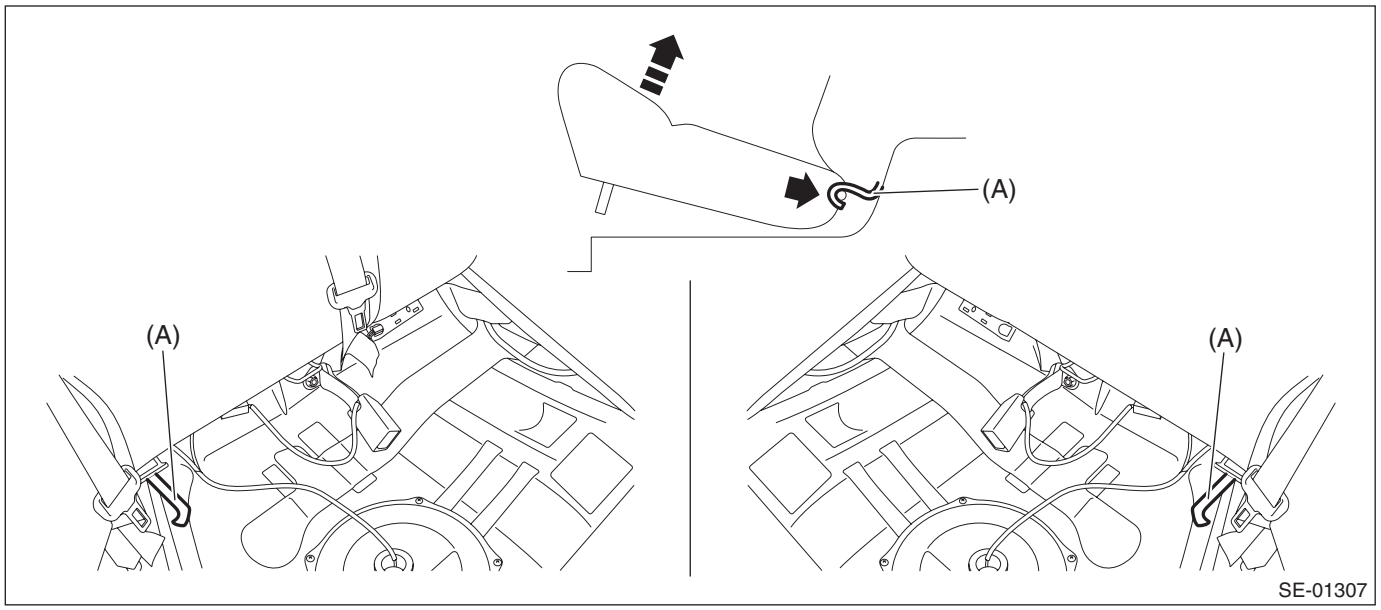
CAUTION:
The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

2) Remove the rear seat cushion assembly.
   (1) Push the corners of the rear seat cushion from above.
   (2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
   (3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

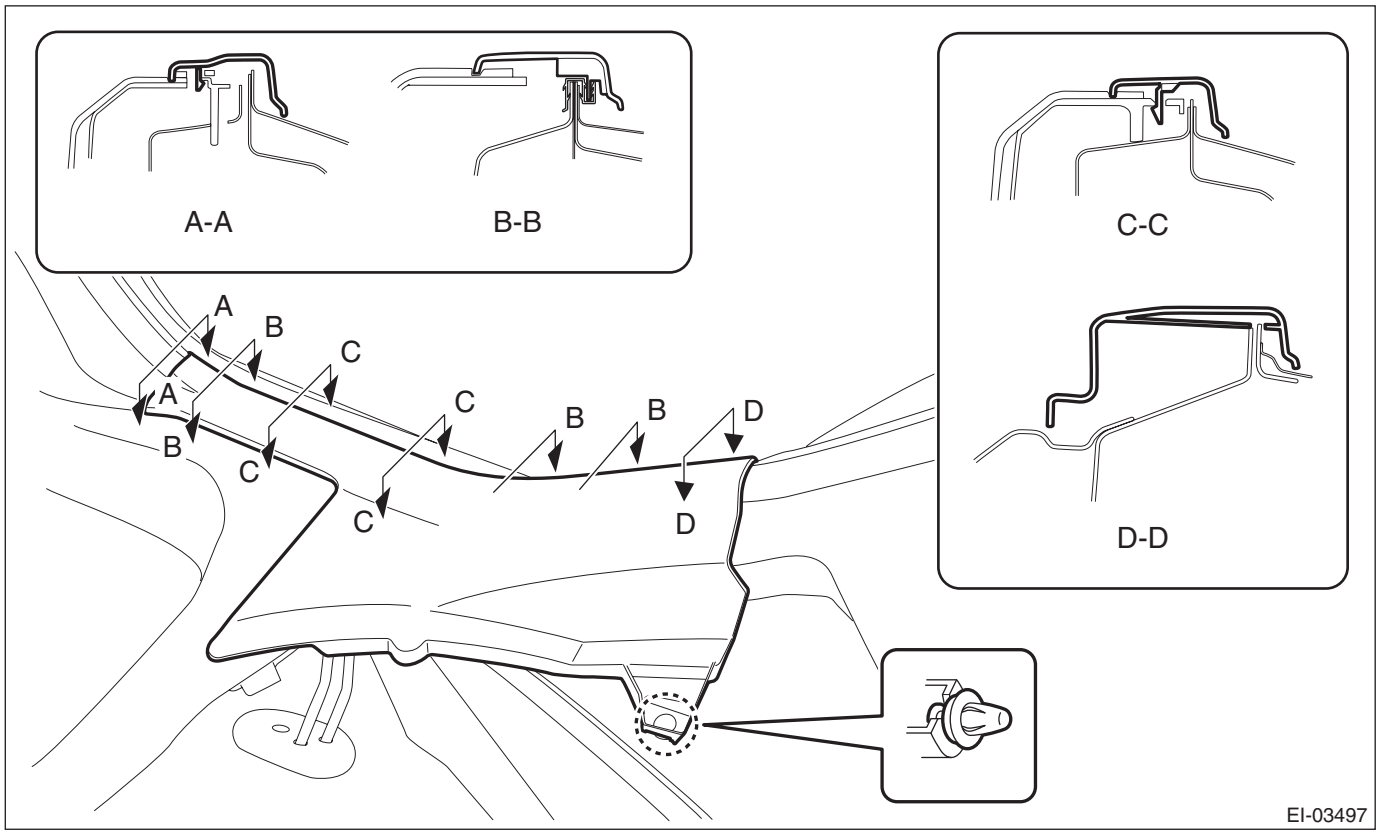


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.

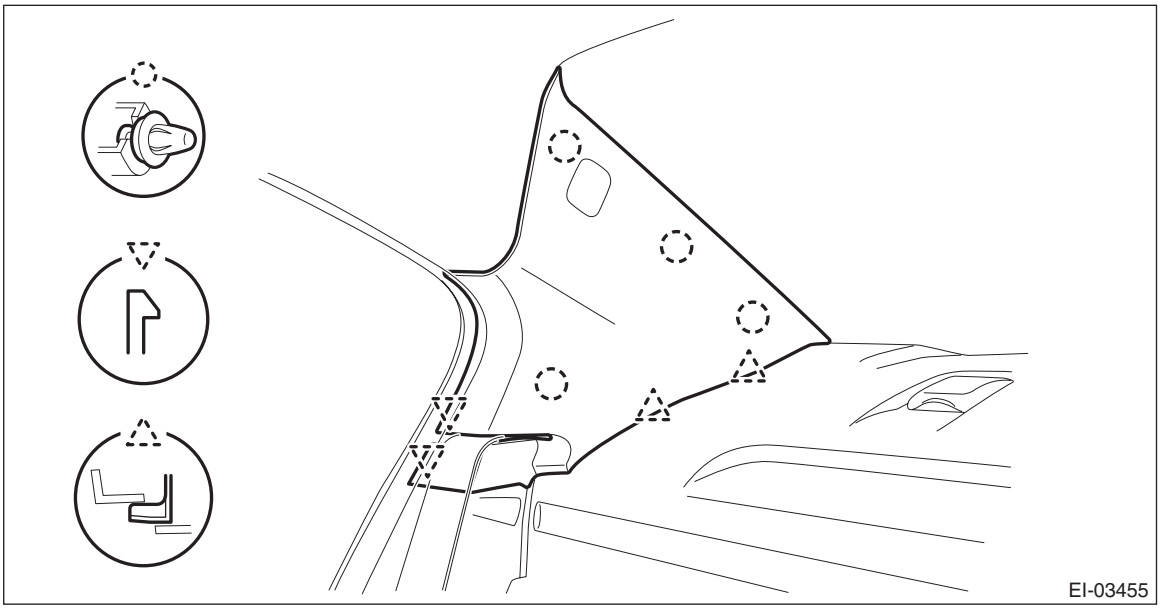


3) Release the clips and claws, and remove the side sill covers - rear INN on the left and right sides.

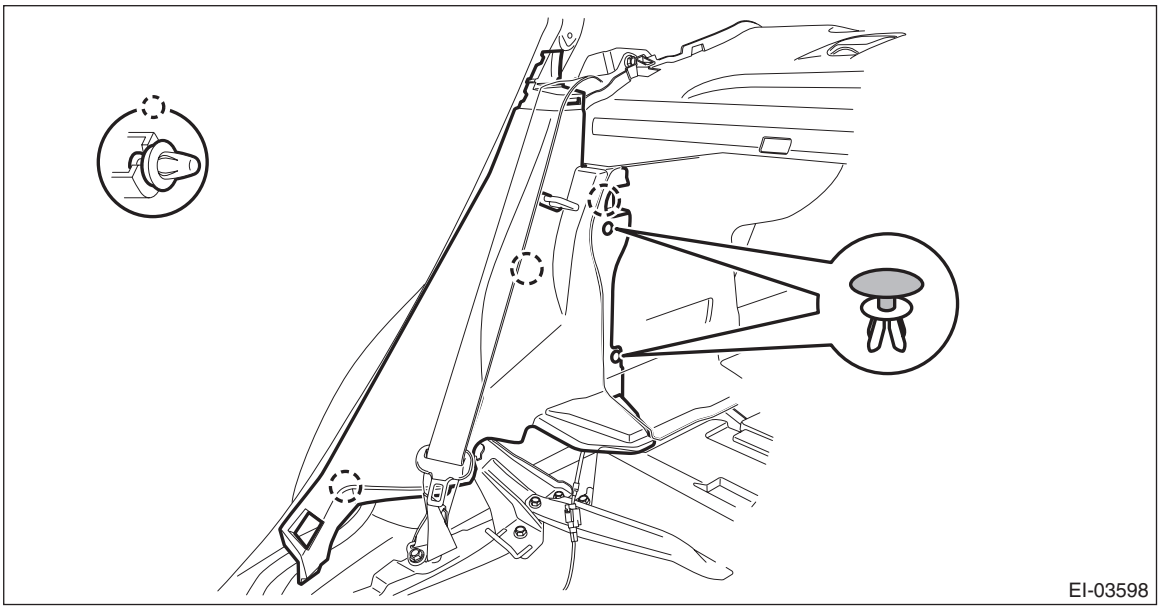
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover - rear INN.



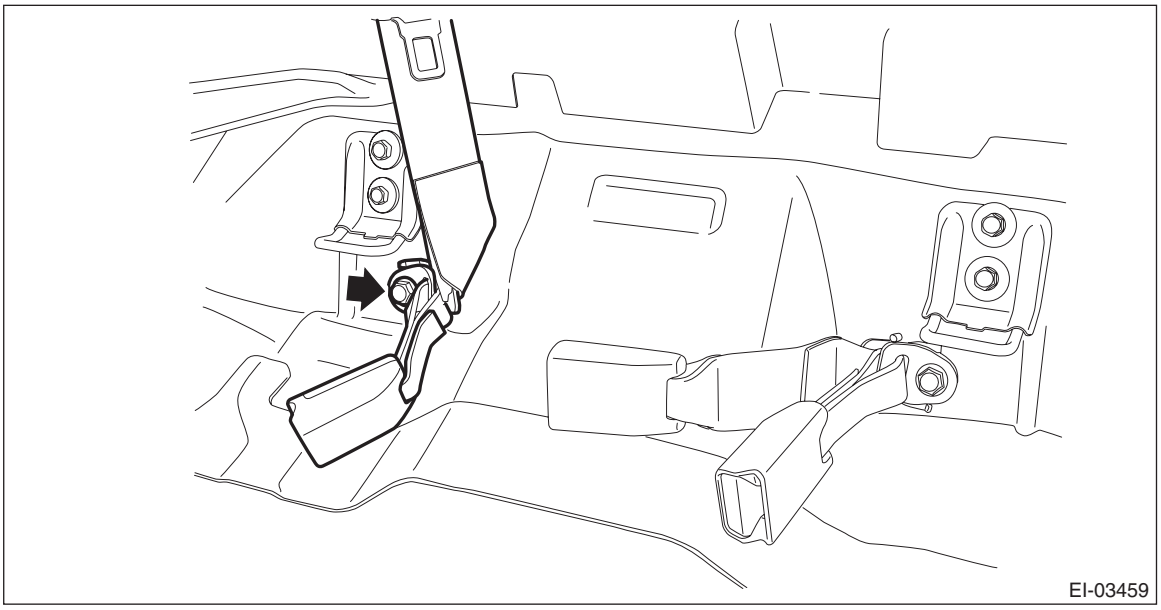
4) Remove the clips, and remove the trim panel - rear pillar UPR on the left and right sides.



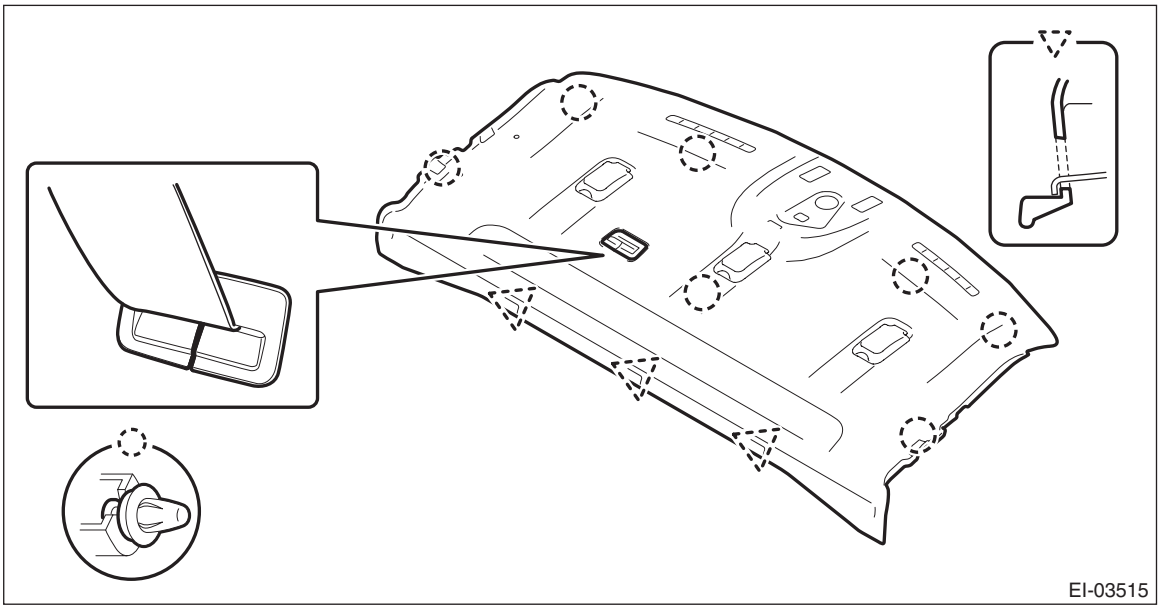
5) Remove the trim panel - rear pillar LWR on the left and right sides.
   (1) Remove the clips, and turn over the trim panel - trunk side.
   (2) Remove the clips, and remove the trim panel - rear pillar LWR.



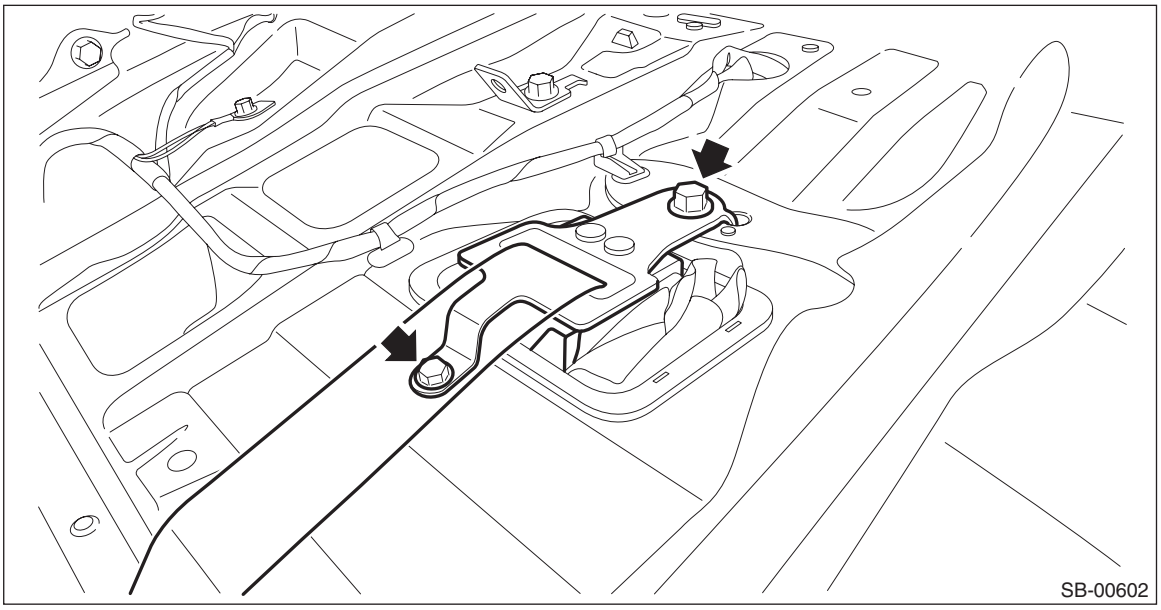
6) Remove the bolts, and remove the lower anchor of the seat belt - rear shoulder CTR.



7) Remove the trim panel - rear shelf assembly.
   (1) Release the clips to float the trim panel assembly - rear shelf.
   (2) Release the belt guide, and guide the anchor of the seat belt - rear shoulder CTR to behind the trim panel - rear shelf assembly.
   (3) Disconnect the connector of high-mounted stop light.
   (4) Remove the trim panel assembly - rear shelf.



8) Remove the bolts, and remove the seat belt - rear shoulder CTR.

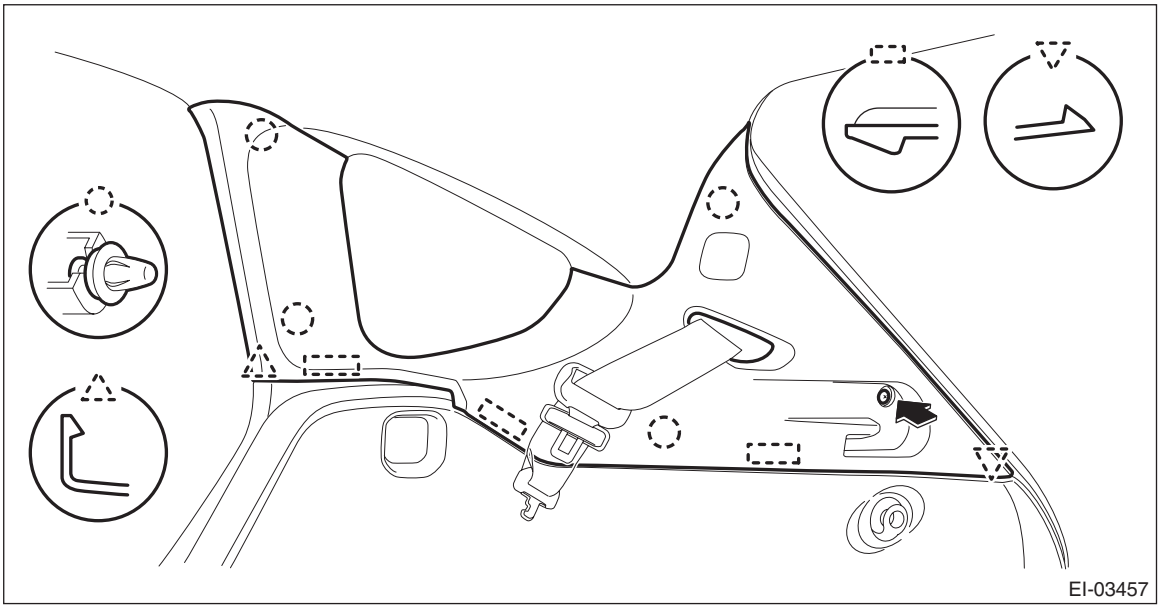


4. SEAT BELT - REAR SHOULDER CTR (5 DOOR MODEL)

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

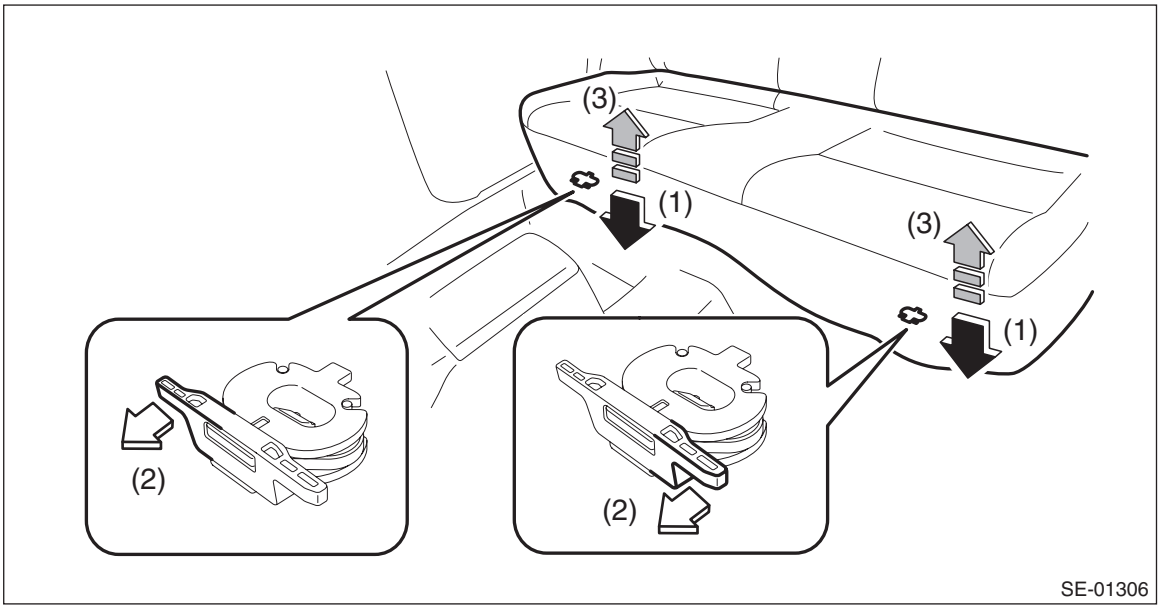
CAUTION:
The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

2) Remove the screws and clips, and remove the trim panel - rear quarter pillar UPR RH.

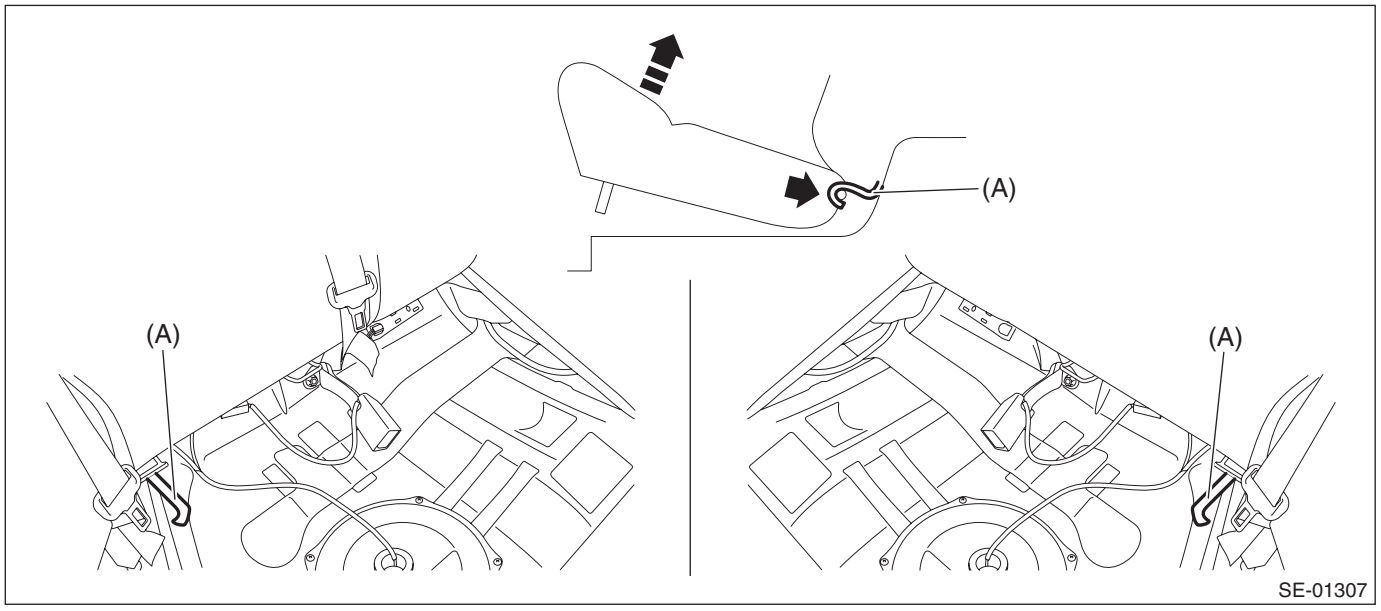


3) Remove the rear seat cushion assembly.
(1) Push the corners of the rear seat cushion from above.
(2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
(3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

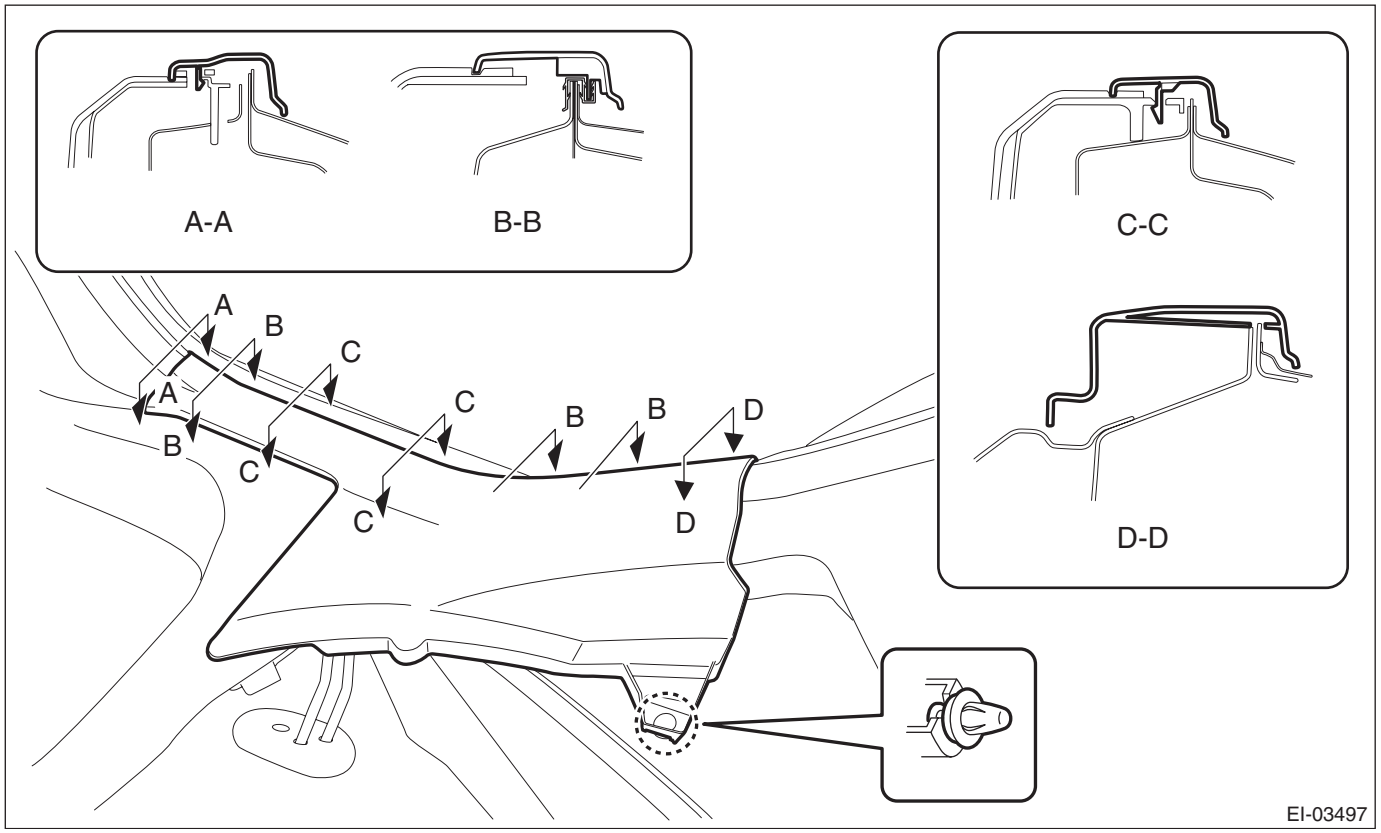


(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.

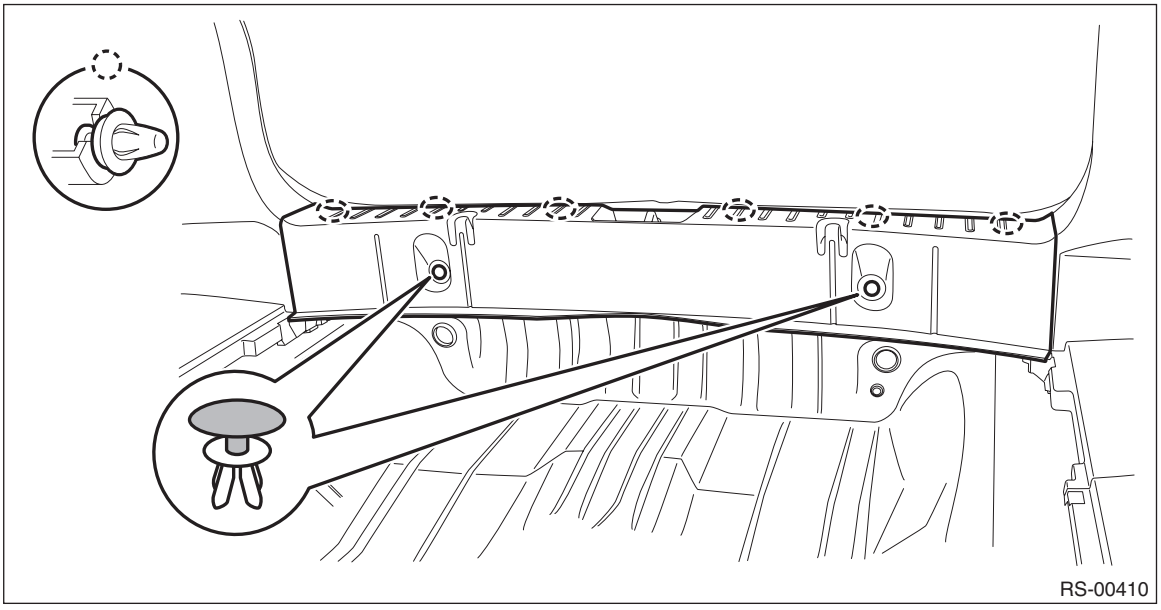


4) Release the clips and claws, and then remove the cover side sill - rear INN RH.

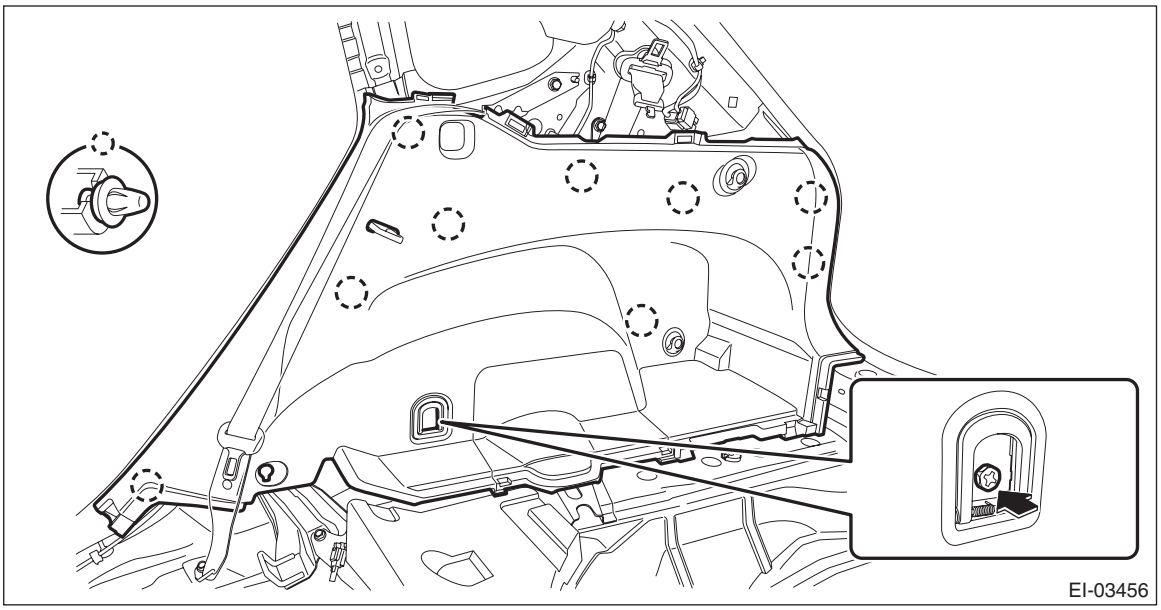
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the cover side sill - rear INN.



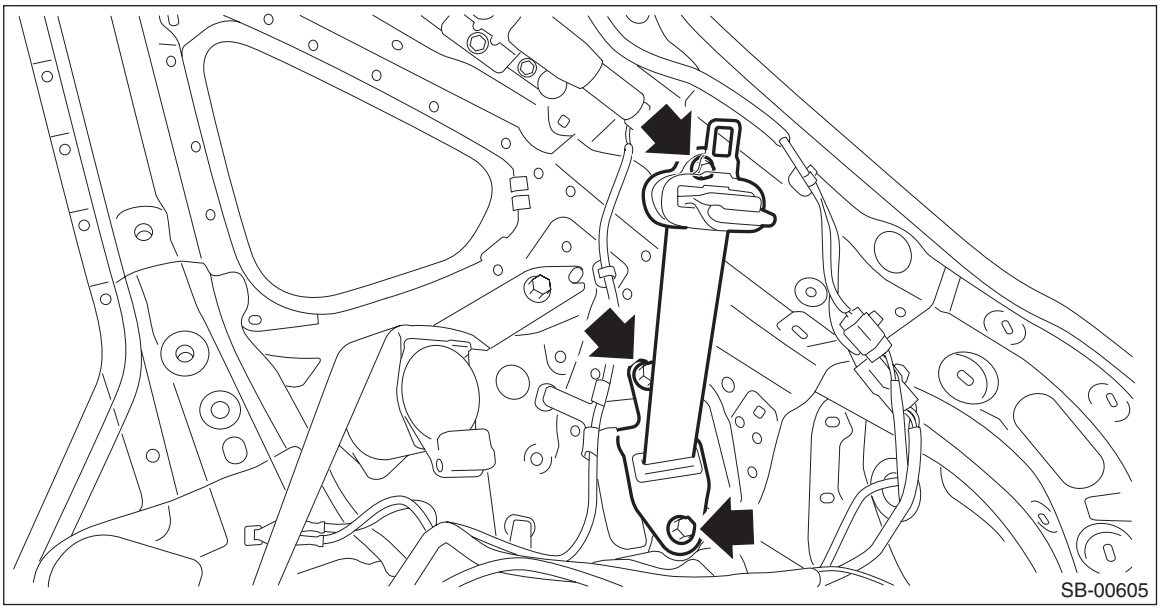
5) Remove the clips, and remove the trim panel - rear skirt.



6) Remove the trim panel - rear apron RH.
(1) Remove the caps, and then remove the screws.
(2) Remove the clips, and remove the trim panel - rear apron RH.



7) Remove the bolts, and remove the seat belt - rear shoulder CTR.



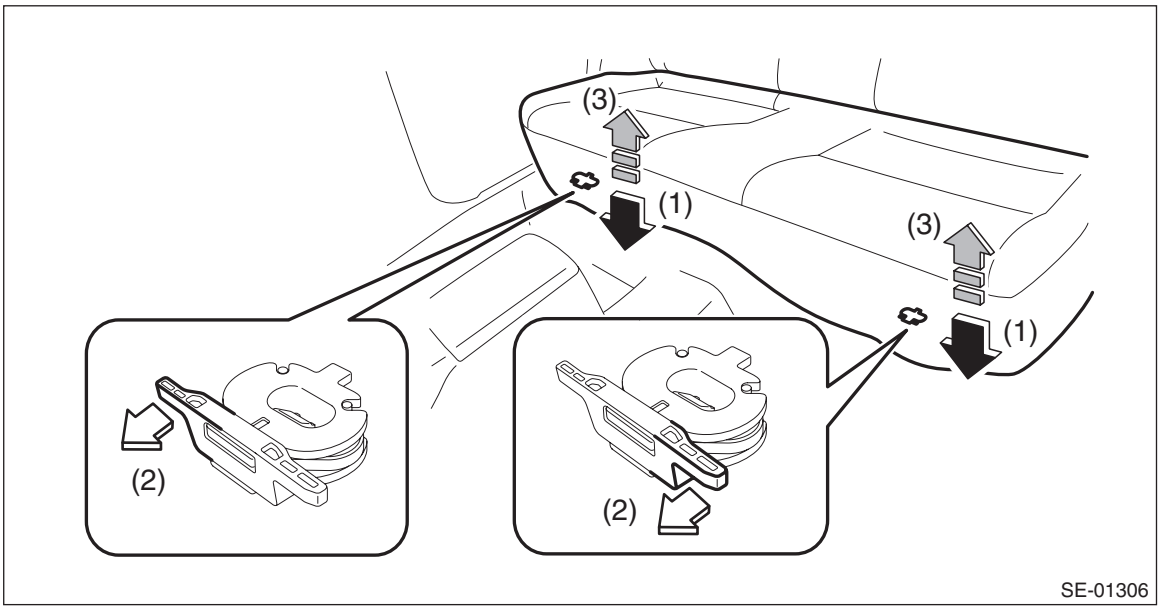
5. SEAT BELT - CTR RH AND LH

1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

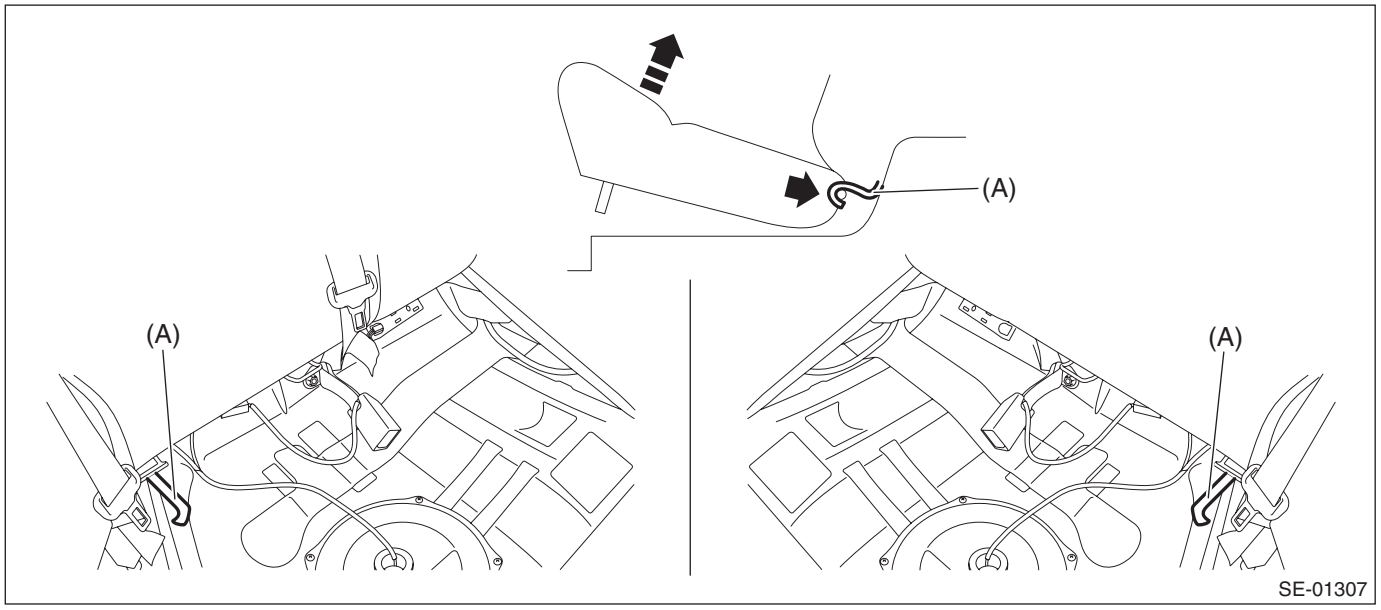
CAUTION:
The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

2) Remove the rear seat cushion assembly.
   (1) Push the corners of the rear seat cushion from above.
   (2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
   (3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.

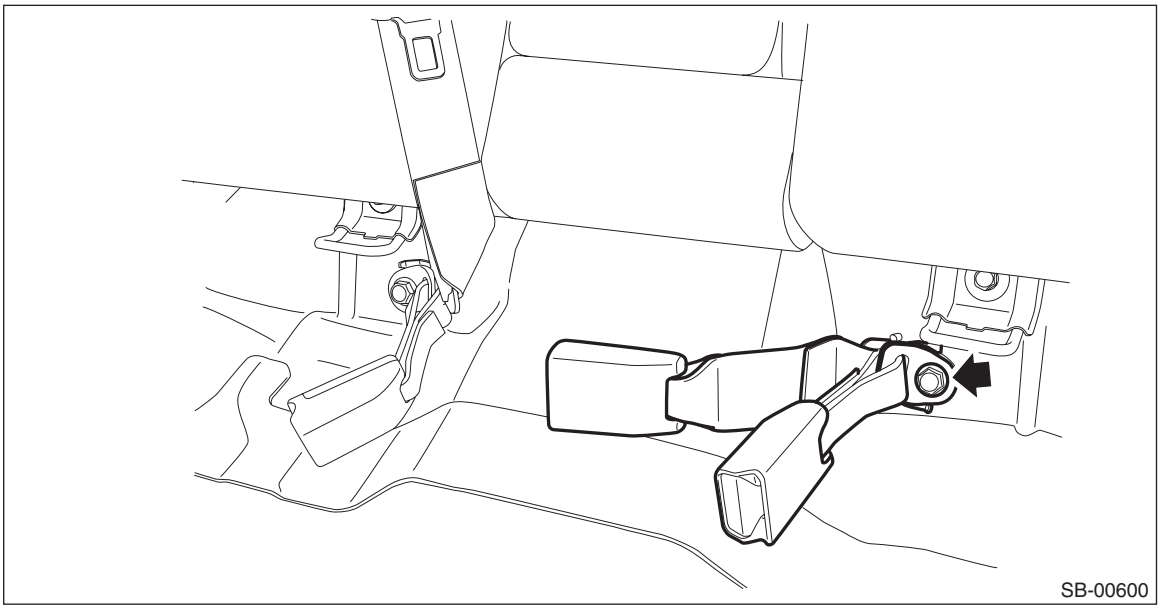


   (4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.

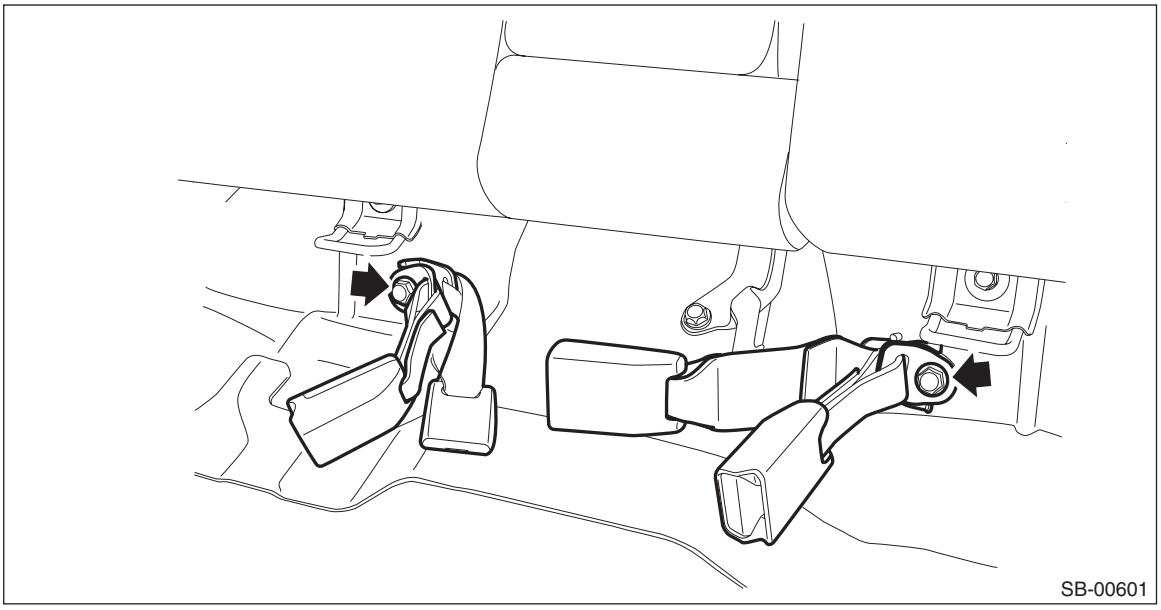


3) Remove the bolts, and remove the seat belt - CTR RH and LH.

- 4 door model: Seat belt - CTR LH



- 5 door model: Seat belt - CTR RH and LH



B: INSTALLATION

1. SEAT BELT OUTER - REAR RH AND LH (4 DOOR MODEL)

1) Before installation, perform a unit inspection of retractor. <Ref. to SB-45, INSPECTION, Rear Seat Belt.>
2) Install the seat belt outer - rear.

CAUTION:
- **During installation, make sure that the seat belts are not twisted.**
- **After installation, make sure that the seat belts are smoothly extended and wound.**

Tightening torque:
Rear seat belt (4 door model): <Ref. to SB-3, REAR SEAT BELT (4 DOOR MODEL), COMPONENT, General Description.>

3) Install the remaining parts in the reverse order of removal.
4) After installation, check the following points.
- The seat belt is not twisted.
- The seat belt can be pulled out and retracted smoothly.

2. SEAT BELT OUTER - REAR RH AND LH (5 DOOR MODEL)

1) Before installation, perform a unit inspection of retractor. <Ref. to SB-45, INSPECTION, Rear Seat Belt.>
2) Install the seat belt outer - rear.

CAUTION:
- **During installation, make sure that the seat belts are not twisted.**
- **After installation, make sure that the seat belts are smoothly extended and wound.**

Tightening torque:
Rear seat belt (5 door model): <Ref. to SB-4, REAR SEAT BELT (5 DOOR MODEL), COMPONENT, General Description.>

3) Install the trim panel - rear quarter trim UPR.
4) Install the remaining parts in the reverse order of removal.
5) After installation, check the following points.
- The seat belt is not twisted.
- The seat belt can be pulled out and retracted smoothly.

3. SEAT BELT - REAR SHOULDER CTR (4 DOOR MODEL)

1) Install the retractor of seat belt - rear shoulder CTR.

Tightening torque:
Rear seat belt (4 door model): <Ref. to SB-3, REAR SEAT BELT (4 DOOR MODEL), COMPONENT, General Description.>

2) Install the trim panel assembly - rear shelf.
3) Install the lower anchor of seat belt - rear shoulder CTR.

CAUTION:
- **During installation, make sure that the seat belts are not twisted.**
- **After installation, make sure that the seat belts are smoothly extended and wound.**

Tightening torque:
Rear seat belt (4 door model): <Ref. to SB-3, REAR SEAT BELT (4 DOOR MODEL), COMPONENT, General Description.>

4) Install the remaining parts in the reverse order of removal.
5) After installation, check the following points.
- The seat belt is not twisted.
- The seat belt can be pulled out and retracted smoothly.

4. SEAT BELT - REAR SHOULDER CTR (5 DOOR MODEL)

1) Install the seat belt - rear shoulder CTR.

Tightening torque:
Rear seat belt (5 door model): <Ref. to SB-4, REAR SEAT BELT (5 DOOR MODEL), COMPONENT, General Description.>

2) Install the remaining parts in the reverse order of removal.
3) After installation, check the following points.
- The seat belt is not twisted.
- The seat belt can be pulled out and retracted smoothly.

5. SEAT BELT - CTR RH AND LH

1) Install the seat belt - CTR RH/LH.

Tightening torque:
Rear seat belt (4 door model): <Ref. to SB-3, REAR SEAT BELT (4 DOOR MODEL), COMPONENT, General Description.>
Rear seat belt (5 door model): <Ref. to SB-4, REAR SEAT BELT (5 DOOR MODEL), COMPONENT, General Description.>

2) Install the rear seat cushion.
3) Install the remaining parts in the reverse order of removal.
4) After installation, check the following points.
- The seat belt is not twisted.
- Check that the airbag warning light lights up for approximately 6 seconds and then turns off when connecting the battery ground cable and turning the ignition switch to ON.

C: INSPECTION

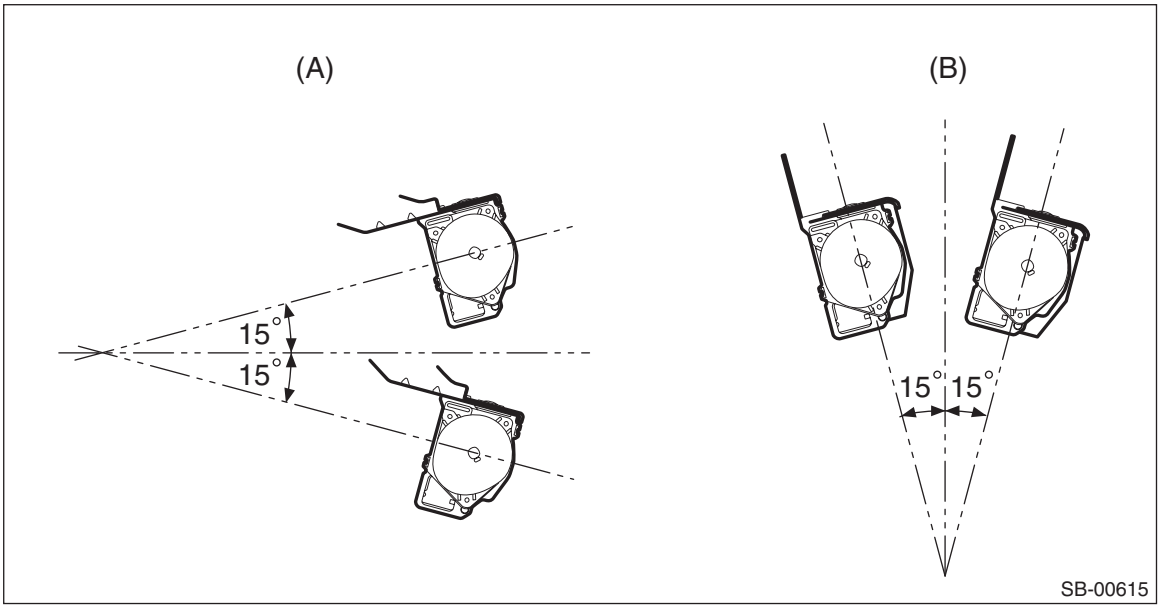
1. VISUAL INSPECTION

Check for the following, and replace with new parts if necessary.
- Seat belt is slackened, bent or worn.
- Seat belt is abnormally wound or extended.
- Seat belt inner - rear is deformed or damaged.
- Seat belt buckle cannot be engaged properly.

2. ELR LOCK MECHANISM INSPECTION

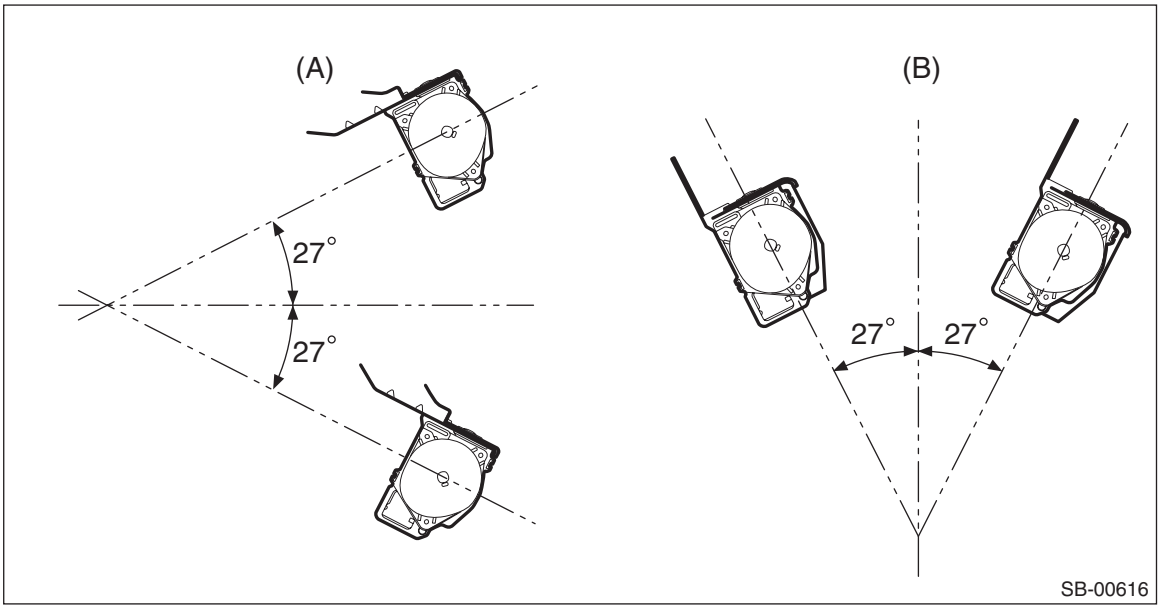
1) Hold the retractor upright (as installed in the vehicle) and check the ELR lock mechanism.
2) Tilt the retractor from the upright posture and check the following points.

- It does not lock if the inclination angle is 15° or less.



(A) Seat belt - rear shoulder CTR (except for 5 door model)
(B) Seat belt - rear shoulder CTR (5 door model)

- It remains locked if the inclination angle is 27° or more.



(A) Seat belt - rear shoulder CTR (except for 5 door model)
(B) Seat belt - rear shoulder CTR (5 door model)

3) If the ELR lock mechanism does not operate properly, replace the seat belt outer - rear with a new part.

LIGHTING SYSTEM

LI

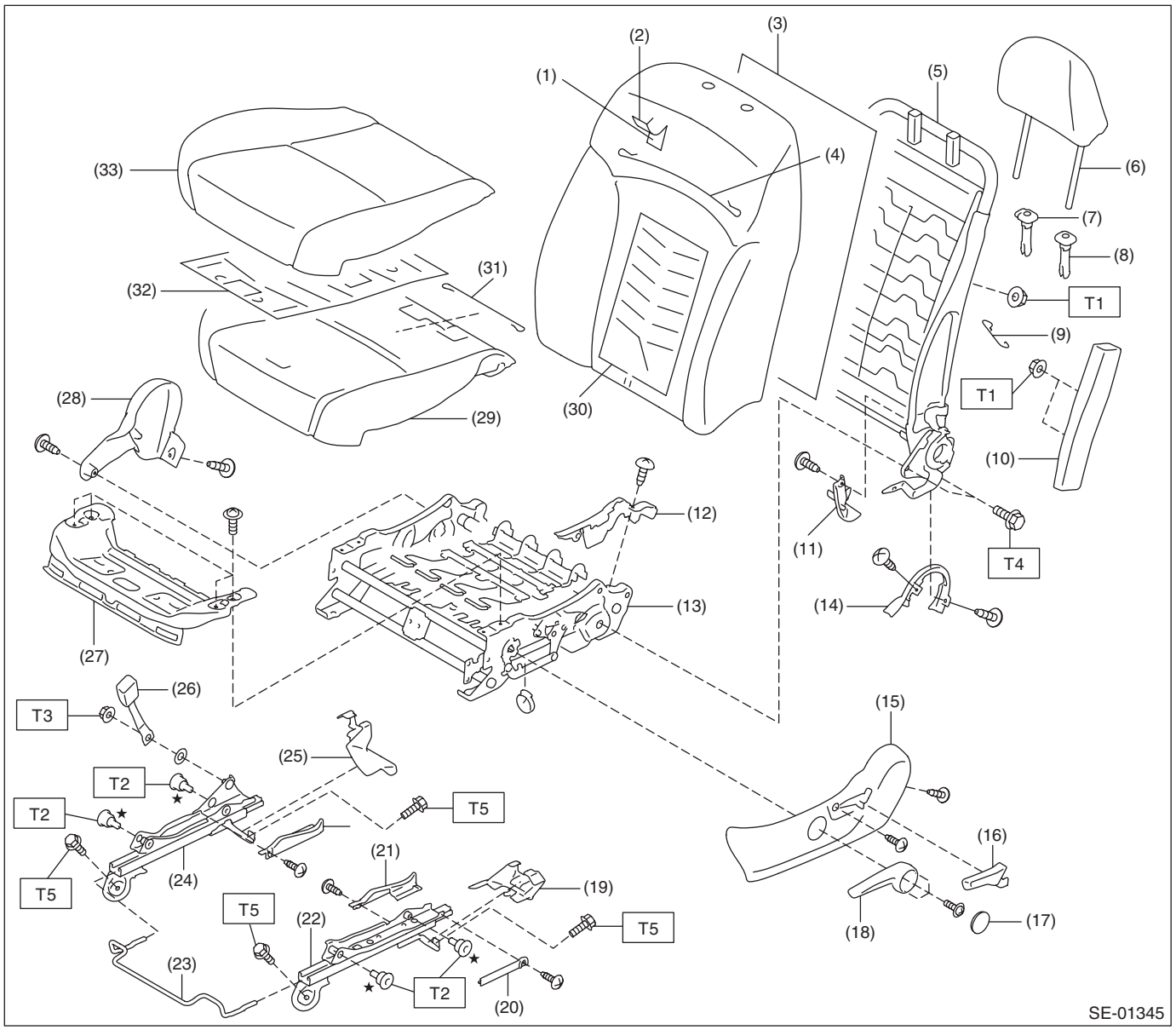
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5.	Clearance Light and Illumination Light System	9
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1. General Description

A: COMPONENT

1. FRONT SEAT

- Manual seat LH

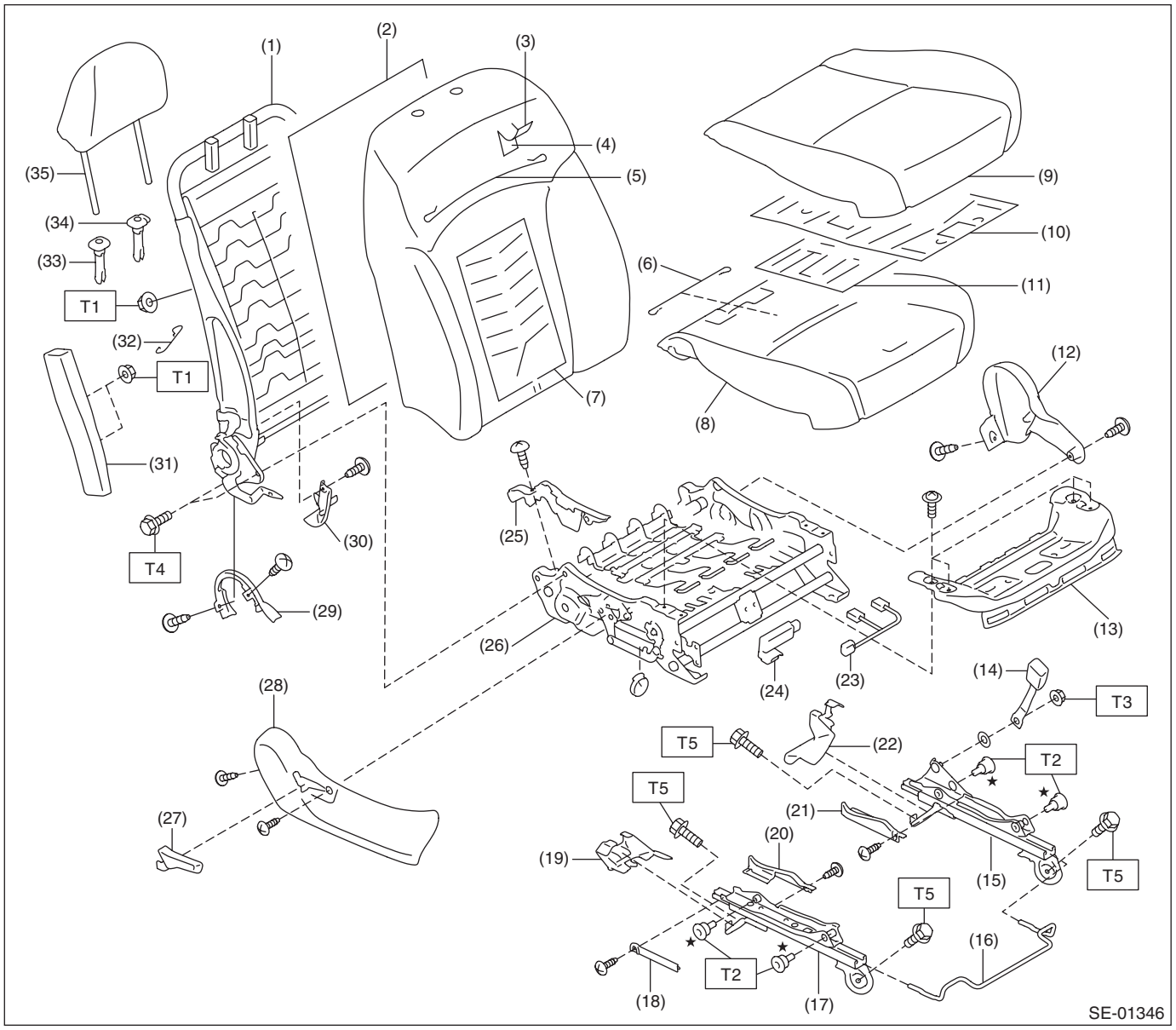


(1) Pad ASSY - front seat backrest
(2) Cover COMPL - front backrest
(3) Cover - silencer front seat backrest
(4) Wire set - front seat backrest
(5) Frame ASSY - front backrest
(6) Headrest ASSY - front
(7) Bushing - lock headrest
(8) Bushing - free headrest
(9) Hook - backrest front
(10) Side airbag module LH
(11) Cover - inner front
(12) Cover - frame front cushion
(13) Frame ASSY - front cushion
(14) Cover - hinge base front seat
(15) Cover - hinge front seat OUT
(16) Lever - reclining
(17) Cap - lifter lever
(18) Knob - lifter
(19) Cover - bolt rear OUT
(20) Cover - slide rail OUT
(21) Cover - slide rail OUT
(22) Slide rail ASSY - OUT
(23) Lever - towel bar
(24) Slide rail ASSY - INN
(25) Cover - bolt rear INN
(26) Seat belt inner - front
(27) Panel - front seat
(28) Cover - hinge front seat INN
(29) Pad ASSY - front seat cushion
(30) Heater unit - front seat backrest
(31) Wire set - front seat cushion
(32) Heater unit - front seat cushion
(33) Cover - front cushion

Tightening torque:N·m (kgf-m, ft-lb)

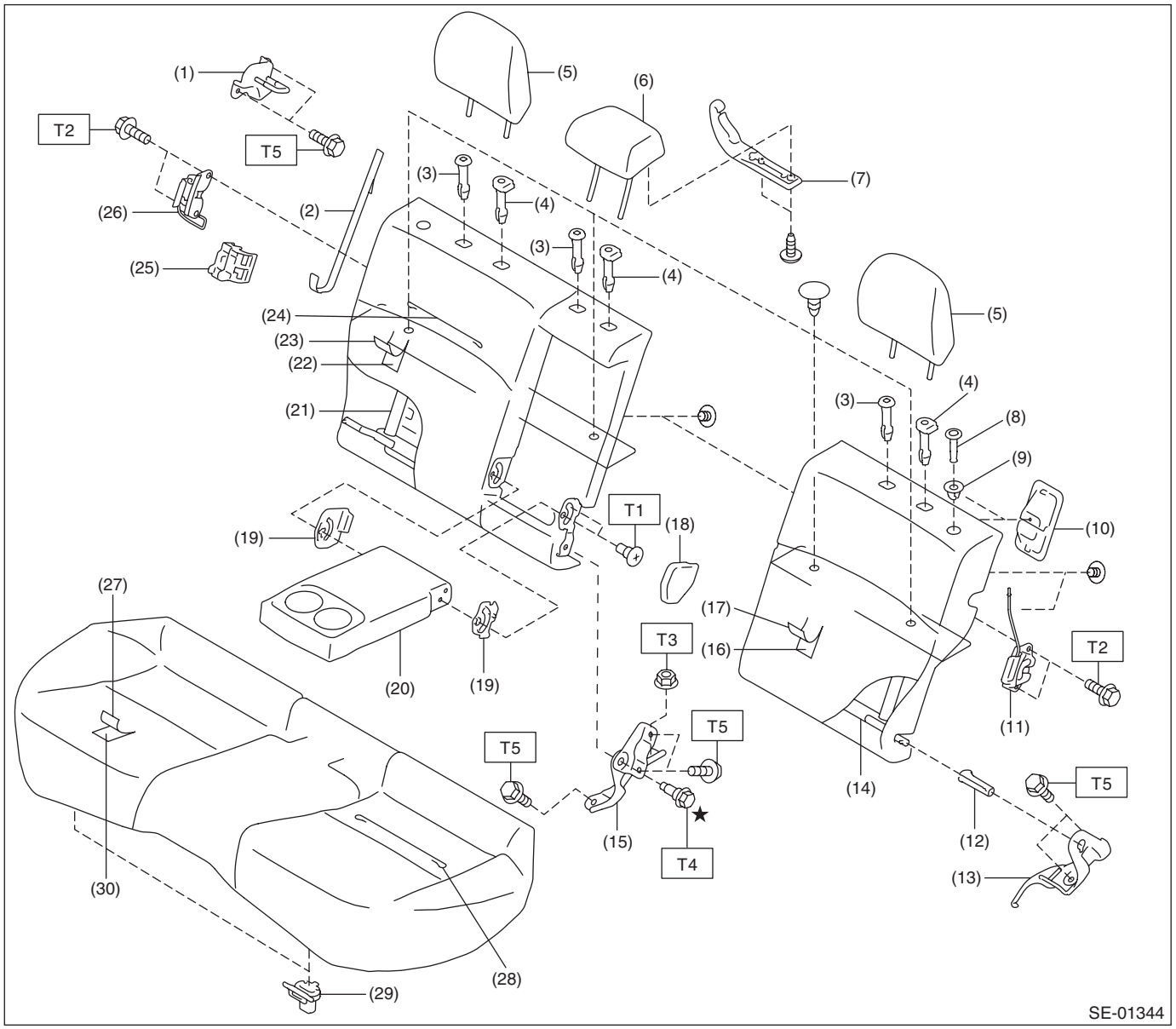
T1: 6 (0.61, 4.4)
T2: 18 (1.84, 13.3)
T3: 38 (3.87, 28.0)
T4: 52 (5.30, 38.4)
T5: 53 (5.40, 39.1)

- Manual seat RH



(1)	Frame ASSY - front backrest	(15)	Slide rail ASSY - INN	(29)	Cover - hinge base front seat
(2)	Cover - silencer front seat backrest	(16)	Lever - towel bar	(30)	Cover - inner front
(3)	Cover COMPL - front backrest	(17)	Slide rail ASSY - OUT	(31)	Side airbag module RH
(4)	Pad ASSY - front seat backrest	(18)	Cover - slide rail OUT	(32)	Hook - backrest front
(5)	Wire set - front seat backrest	(19)	Cover - bolt rear OUT	(33)	Bushing - lock headrest
(6)	Wire set - front seat cushion	(20)	Cover - slide rail OUT	(34)	Bushing - free headrest
(7)	Heater unit - front seat backrest	(21)	Cover - slide rail INN	(35)	Headrest ASSY - front
(8)	Pad ASSY - front seat cushion	(22)	Cover - bolt rear INN		
(9)	Cover - front cushion	(23)	Harness - occupant detection sensor	***Tightening torque:N·m (kgf-m, ft-lb)***	
(10)	Heater unit - front cushion	(24)	Control unit - occupant detection sensor	***T1:***	***6 (0.61, 4.4)***
(11)	Occupant detection sensor	(25)	Cover - frame front seat cushion	***T2:***	***18 (1.84, 13.3)***
(12)	Cover - hinge front seat INN	(26)	Frame ASSY - front seat cushion	***T3:***	***38 (3.87, 28.0)***
(13)	Panel - front seat	(27)	Lever - reclining	***T4:***	***52 (5.30, 38.4)***
(14)	Seat belt inner - front	(28)	Cover - hinge front seat OUT	***T5:***	***53 (5.40, 39.1)***

2. REAR SEAT



(1) Striker - backrest rear RH
(2) Knob - strap (4 door model)
(3) Bushing - headrest
(4) Bushing - lock ASSY
(5) Pillow ASSY - rear backrest
(6) Pillow ASSY - rear center
(7) Belt guide - rear seat (5 door model)
(8) Knob - backrest rear
(9) Knob - guide
(10) Tether anchor cover
(11) Lock ASSY - backrest rear LH
(12) Bushing - backrest hinge
(13) Hinge ASSY - rear backrest
(14) Frame ASSY - rear backrest LH
(15) Hinge ASSY - backrest center
(16) Pad ASSY - rear seat backrest LH
(17) Cover COMPL - rear backrest LH
(18) Cover - armrest
(19) Bushing - rear armrest
(20) Armrest ASSY - rear center
(21) Frame ASSY - rear backrest RH
(22) Pad ASSY - rear seat backrest RH
(23) Cover COMPL - rear backrest RH
(24) Wire set - rear backrest
(25) Knob - strap guide (4 door model)
(26) Lock ASSY - backrest rear RH
(27) Cover - rear cushion
(28) Wire set - rear cushion
(29) Hook - seat cushion rear
(30) Pad and frame ASSY - rear cushion

Tightening torque:N·m (kgf-m, ft-lb)

T1: 14.7 (1.5, 10.8)
T2: 22.5 (2.3, 16.6)
T3: 24.5 (2.5, 18.1)
T4: 28.9 (2.9, 21.3)
T5: 33 (3.4, 24.3)

B: CAUTION

When removing the front seat from the vehicle, refer to “CAUTION” of “General Description” in “AIRBAG SYSTEM” section. <Ref. to AB-10, CAUTION, General Description.>

C: PREPARATION TOOL

1. GENERAL TOOL

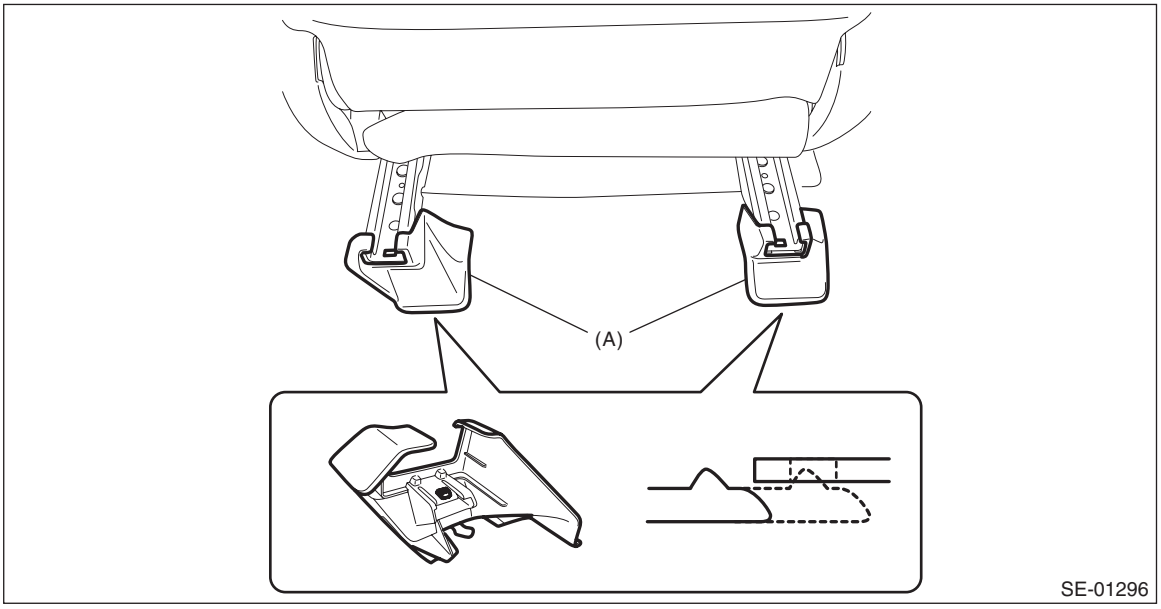
TOOL NAME	REMARKS
Long nose plier	Used for removing the hog ring.
Hog ring pliers	Used for installing the hog ring.
Circuit tester	Used for measuring resistance and voltage.

2. Front Seat

A: REMOVAL

CAUTION:
The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

1) Remove the headrest assembly - front.
2) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
3) Remove the slide rail assembly installing bolt.
   (1) Tilt the backrest assembly forward and move the front seat to the front most position.
   (2) Remove the cover - bolt rear (A) and remove the bolts.



   (3) Move the front seat to the rearmost position, and remove the bolts.
4) Disconnect the connector under the front seat.
- Seat belt warning light connector (driver's seat)
- Occupant detection system harness connector (passenger's seat) <Ref. to OD(diag)-9, OCCUPANT DETECTION SYSTEM (BETWEEN AIRBAG REAR HARNESS AND SEAT HARNESS), PROCEDURE, Airbag Connector.>
- Side airbag connector <Ref. to AB-28, SIDE AIRBAG MODULE, PROCEDURE, Airbag Connector.>
- Seat heater connector (model with seat heater)
- Buckle switch RH connector (passenger's seat) <Ref. to AB-29, BUCKLE SWITCH RH, PROCEDURE, Airbag Connector.>

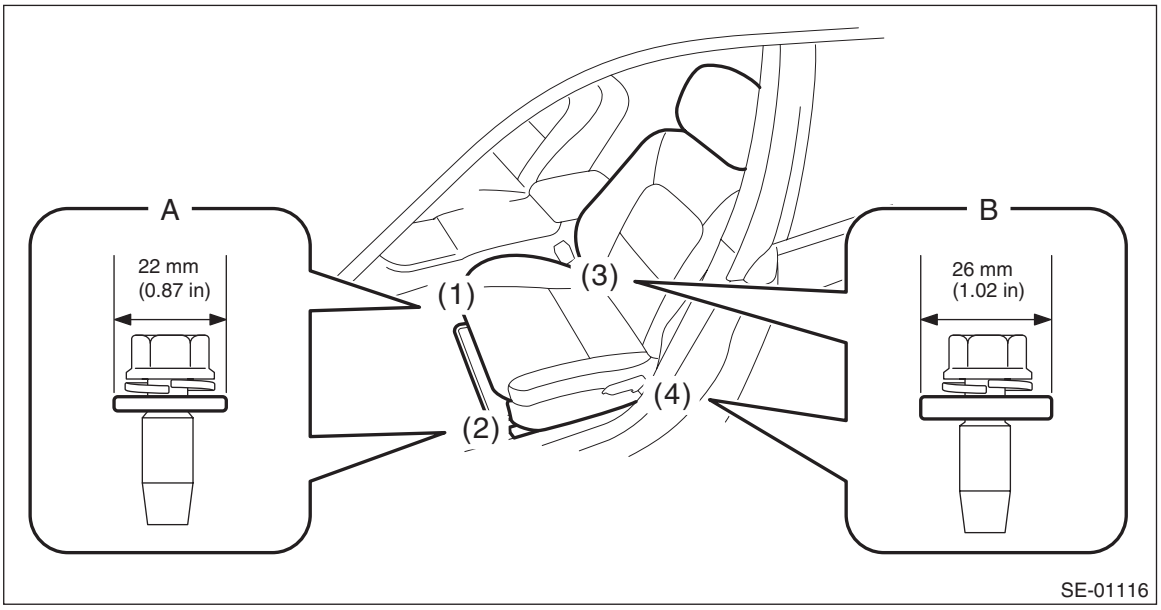
5) Take out the front seat from the vehicle.

CAUTION:
Be careful not to damage the body.

B: INSTALLATION

Install each part in the reverse order of removal.

CAUTION:
• The front seat mounting bolts differ between the front mounting points and the rear mounting points. When installing the front seat, make sure that you are using correct bolts at correct positions.
• Tighten the slide rail assembly installing bolts in the order as shown in the figure, in several steps by gradually increasing the torque until they reach the specified torque.



- **Front (bolt A): Washer diameter 22 mm (0.87 in)**
- **Rear (bolt B): Washer diameter 26 mm (1.02 in)**

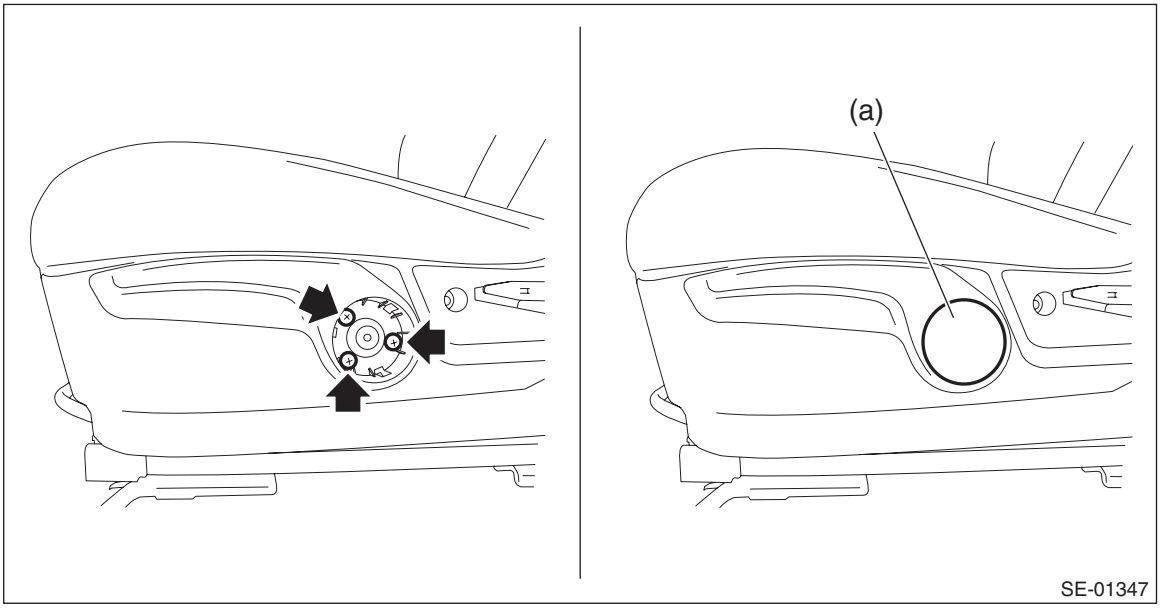
Tightening torque:
Front seat assembly: 53 N·m (5.40 kgf-m, 39.1 ft-lb)

C: DISASSEMBLY

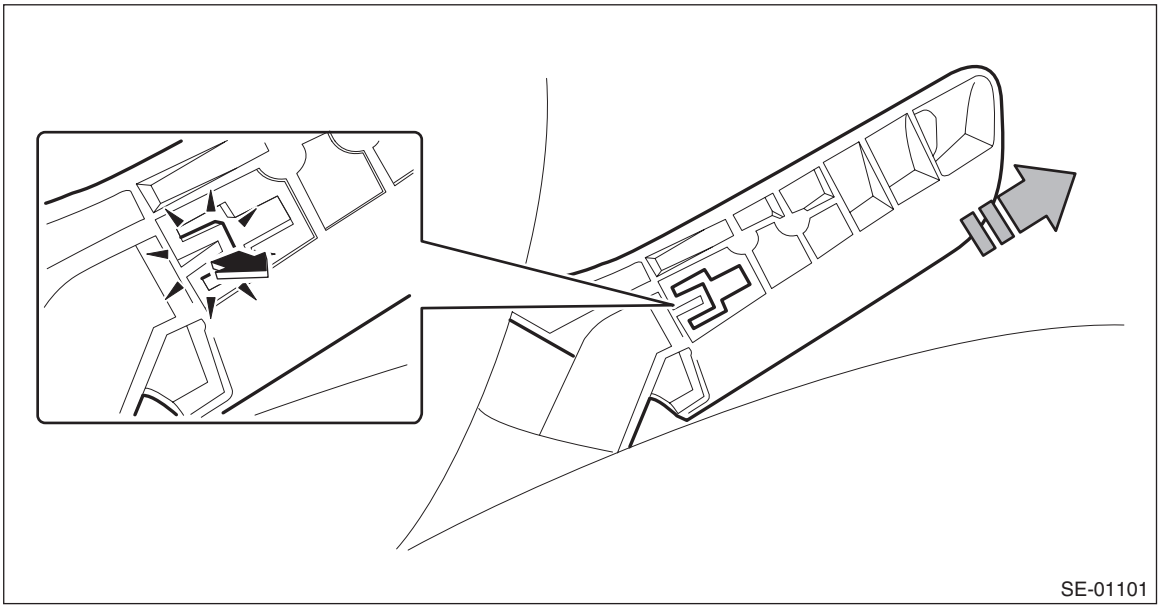
1. DRIVER'S SEAT

CAUTION:
Before assembling, make sure how the harnesses such as the side airbag harness and the seat belt inner - front harness are routed in order to avoid misarranging. Assembling with harnesses improperly routed may cause the harness to get caught and short out.

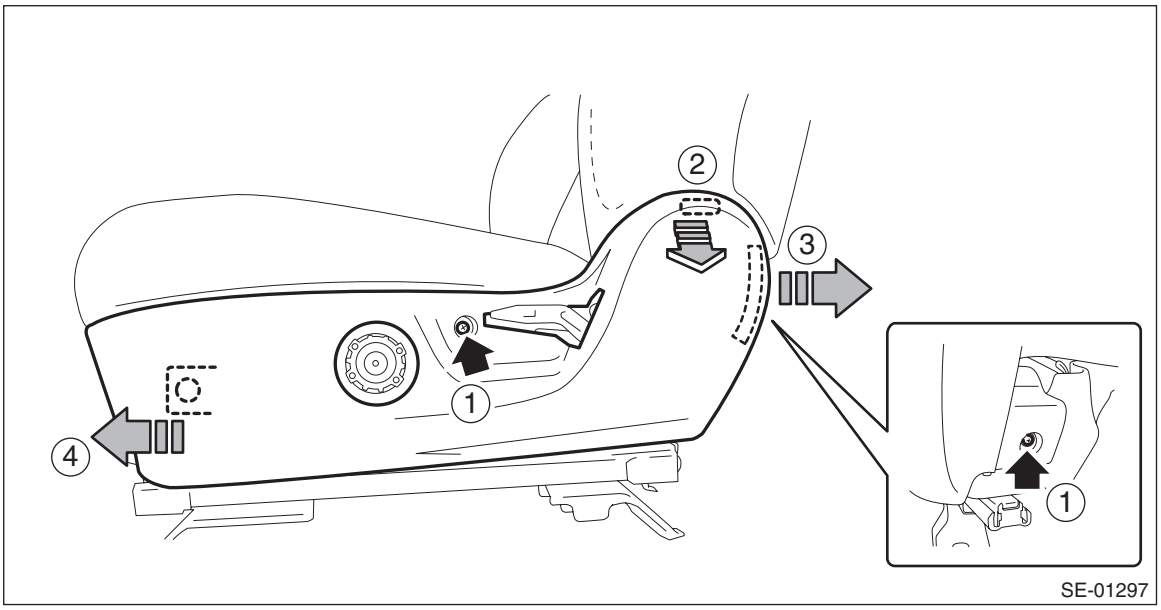
1) Remove the front seat from vehicle. <Ref. to SE-7, REMOVAL, Front Seat.>
2) Remove the knob - lifter.
   (1) Using a flat tip screwdriver, remove the cap - lifter lever (a).
   (2) Remove the screws and remove the knob - lifter.



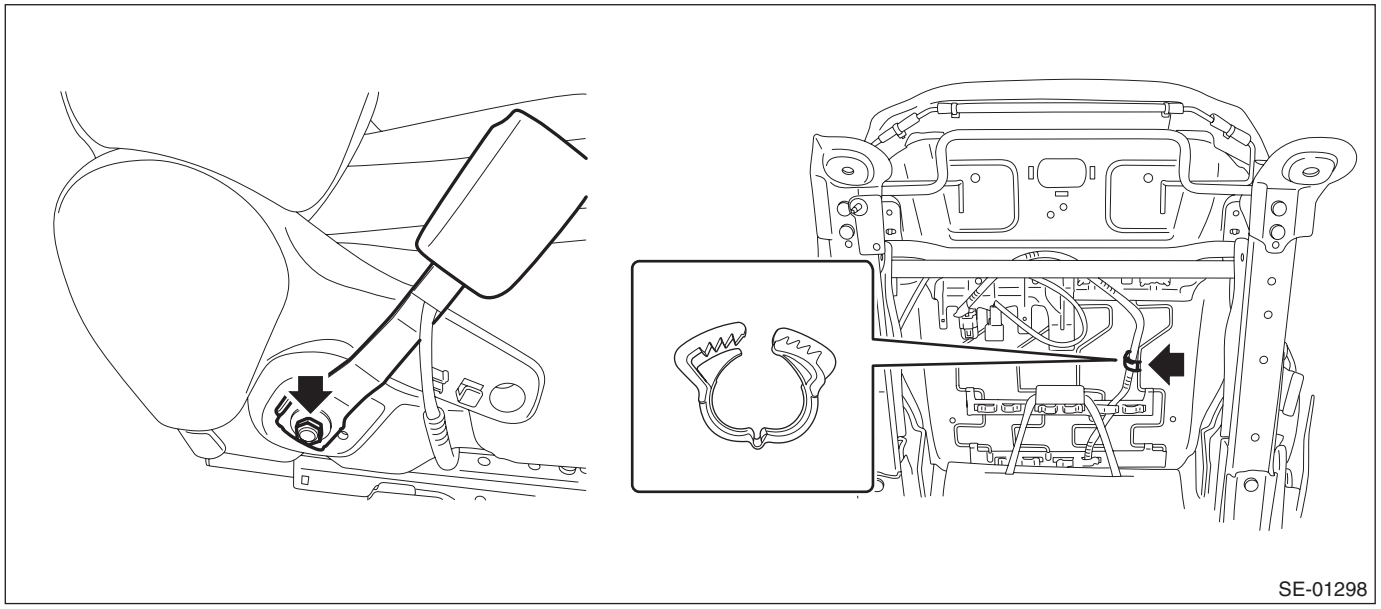
3) Remove the lever - reclining.
   (1) Pull up the lever - reclining and release the claws on the back.
   (2) Pull out the lever - reclining.



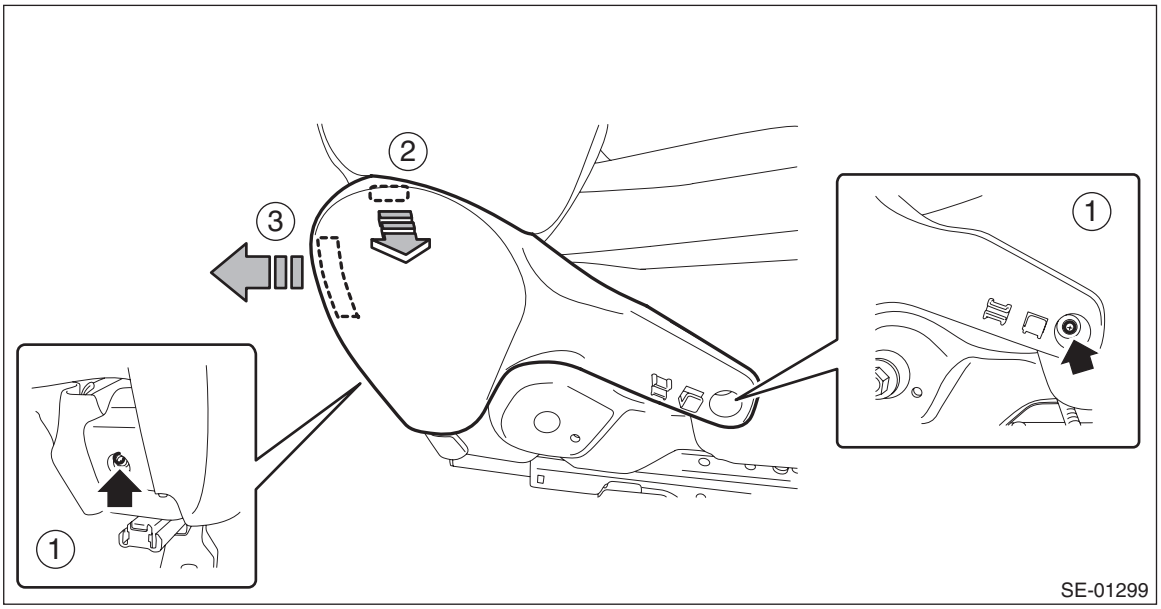
4) Remove the cover - hinge front seat OUT.
(1) Remove the screws.
(2) Release the claw in the upper section of the cover - hinge front seat OUT.
(3) Release the claw in the rear section of the cover - hinge front seat OUT.
(4) Release the claw in the front section of the cover - hinge front seat OUT, then remove the cover - hinge front seat OUT.



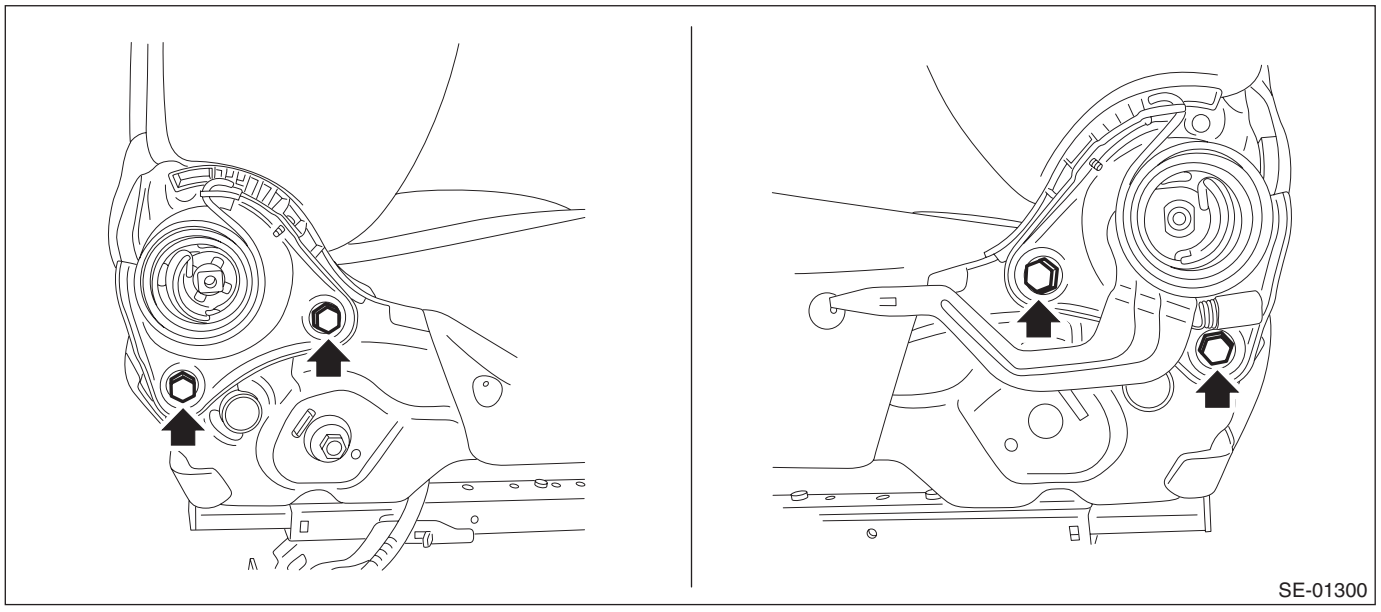
5) Remove the seat belt inner - front.
(1) Remove the nut, and remove the seat belt inner - front.
(2) Remove the clip for the seat belt inner - front located under the seat cushion assembly.



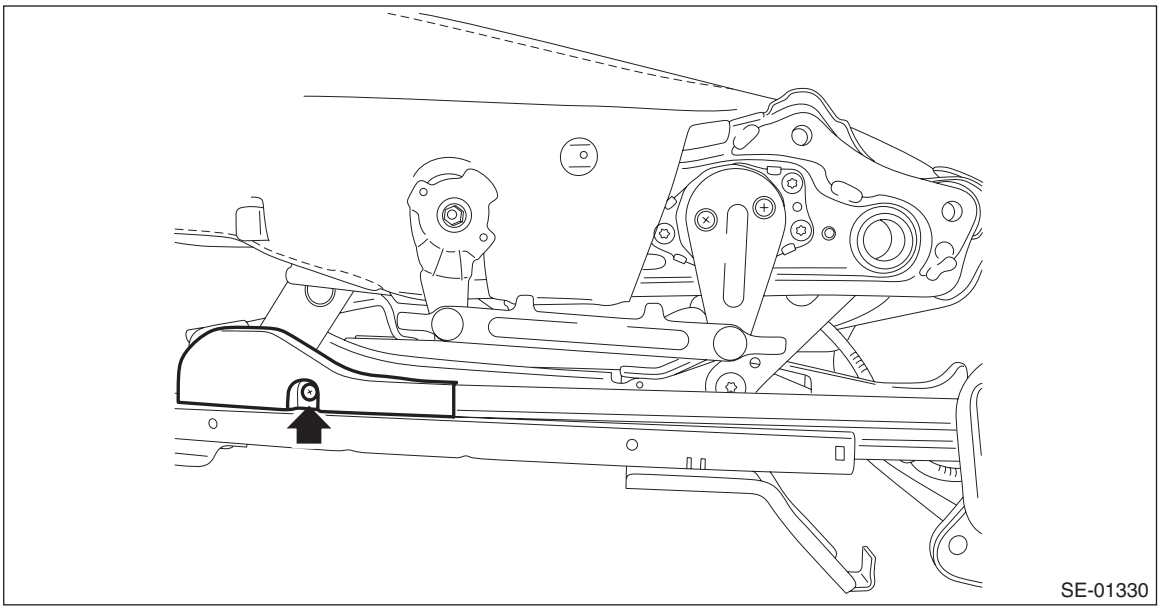
6) Remove the cover - hinge front seat INN.
(1) Remove the screws.
(2) Release the claw in the upper section of the cover - hinge front seat INN.
(3) Release the claw in the rear section of the cover - hinge front seat INN, then remove the cover - hinge front seat INN.



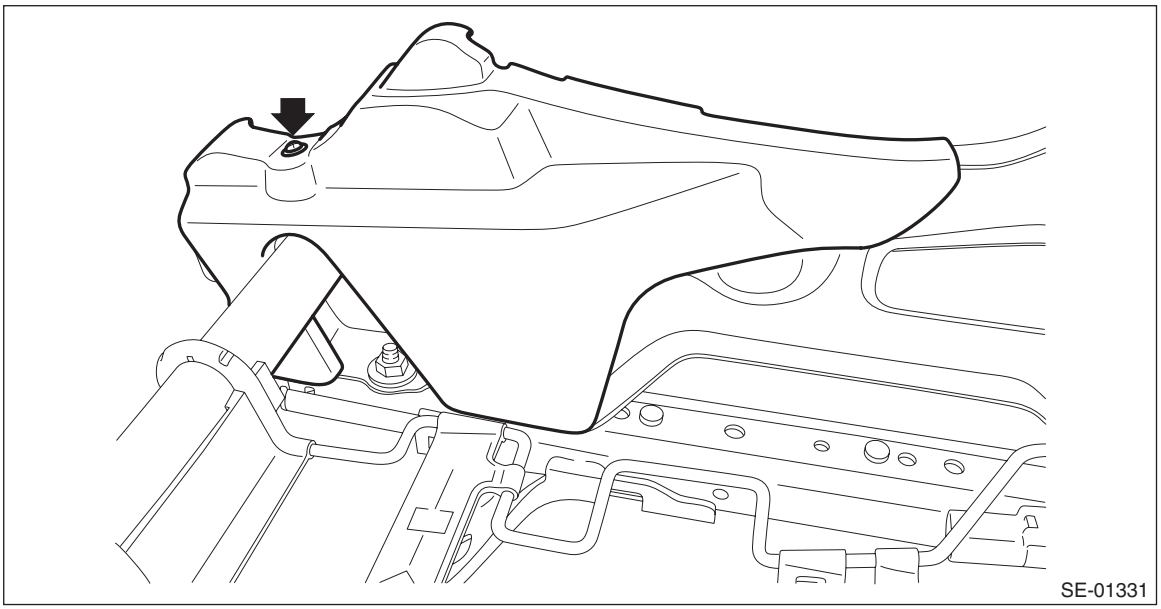
7) Separate the backrest assembly and the seat cushion assembly.
(1) Remove the clip for the side airbag harness located under the seat cushion assembly. (seat with side airbag)
(2) Remove the bolts from reclining hinge of both sides.
(3) While taking care not to damage the airbag harness, separate the backrest assembly and the seat cushion assembly.



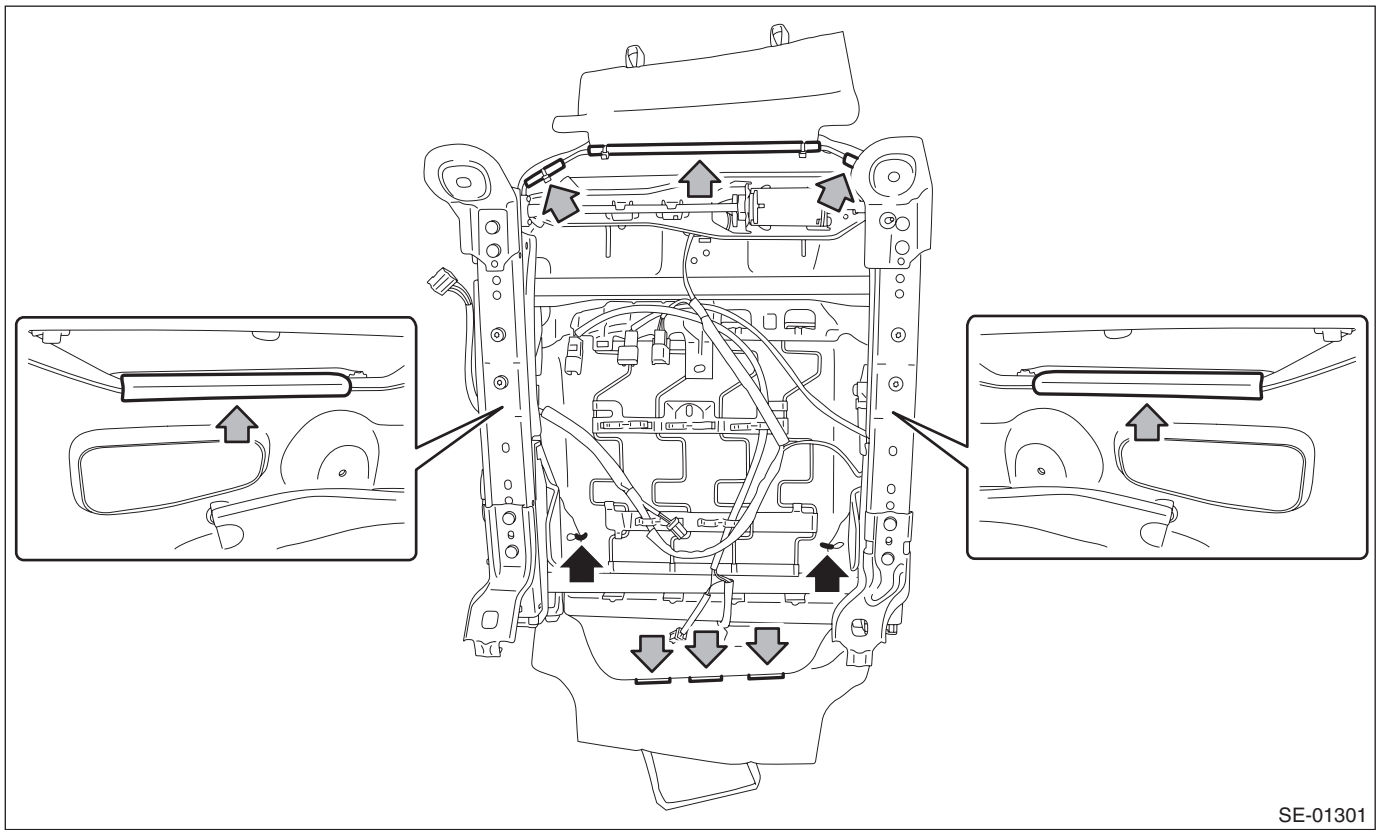
8) Remove the cover - slide rail OUT.
   (1) Remove the clip.
   (2) Remove the hook, and detach the cover - slide rail OUT.


SE-01330

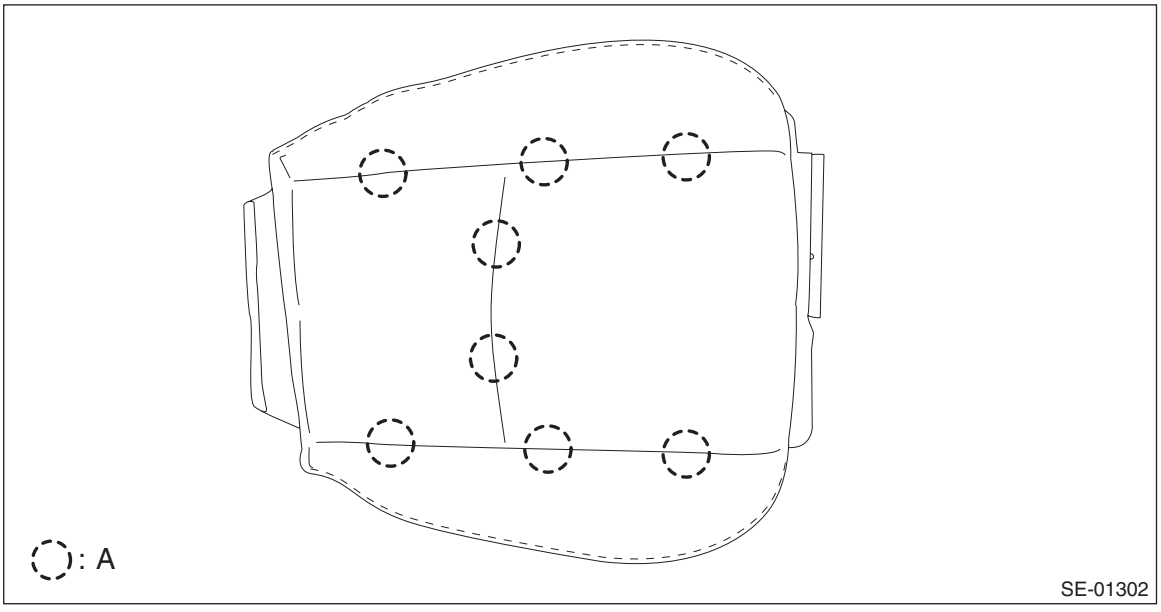
9) Remove the screws and detach the cover - slide rail INN.


SE-01331

10) Remove the pad assembly - front seat cushion and the cover - front cushion.
(1) Remove the hooks and hog rings.
(2) Remove the pad assembly - front seat cushion and the cover - front cushion from the seat cushion assembly.

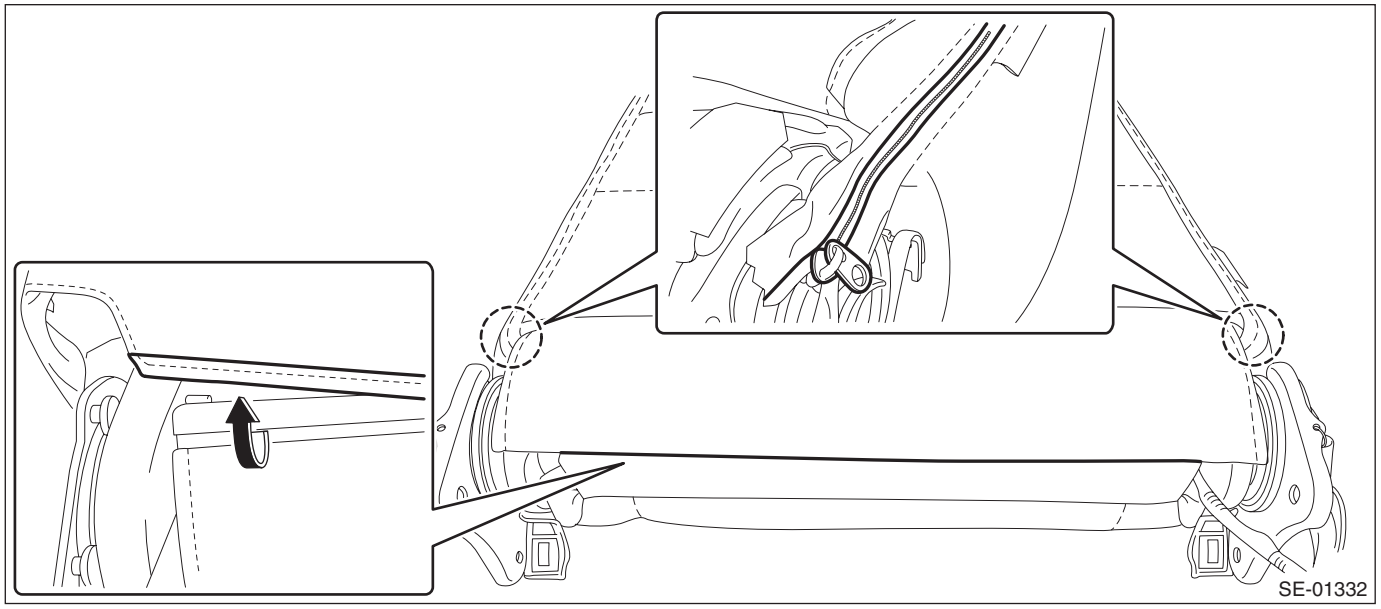


11) Remove the cover - front cushion.
(1) Remove the hog ring (A).

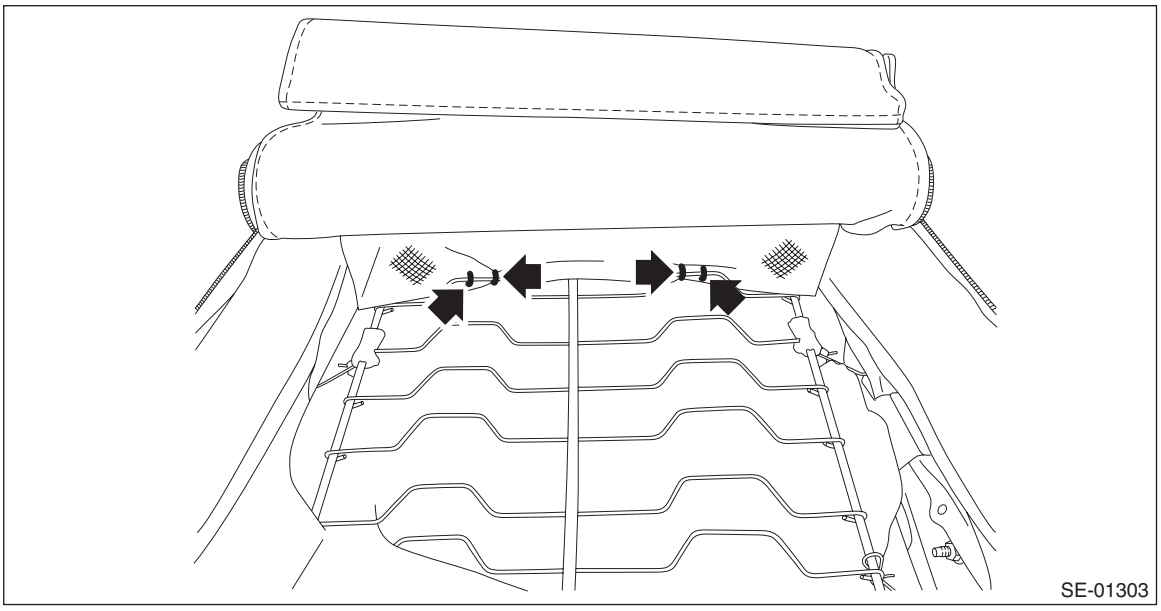


(2) Pull out the pad assembly - front seat cushion from the cover - front cushion.

12) Remove the pad assembly - front seat backrest and the cover COMPL - front backrest.
(1) Remove the plastic fastener at the back side (bottom) of backrest assembly.
(2) Open the fastener at the rear side of backrest assembly.



(3) Remove the hog ring.

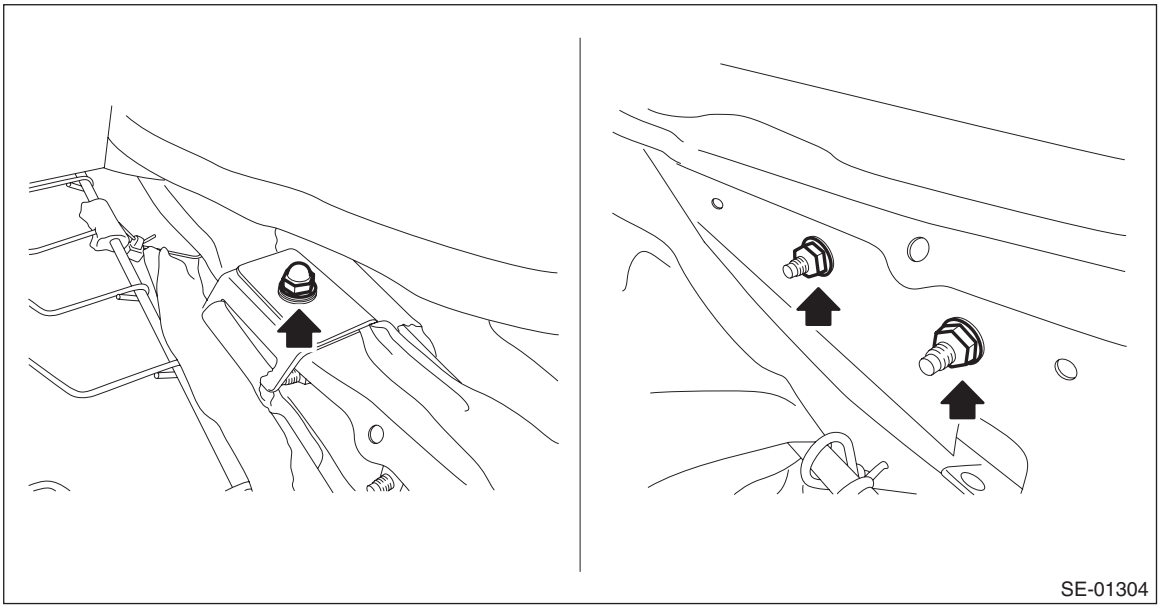


(4) Remove the pad assembly - front seat backrest and the cover COMPL - front backrest from the backrest assembly.

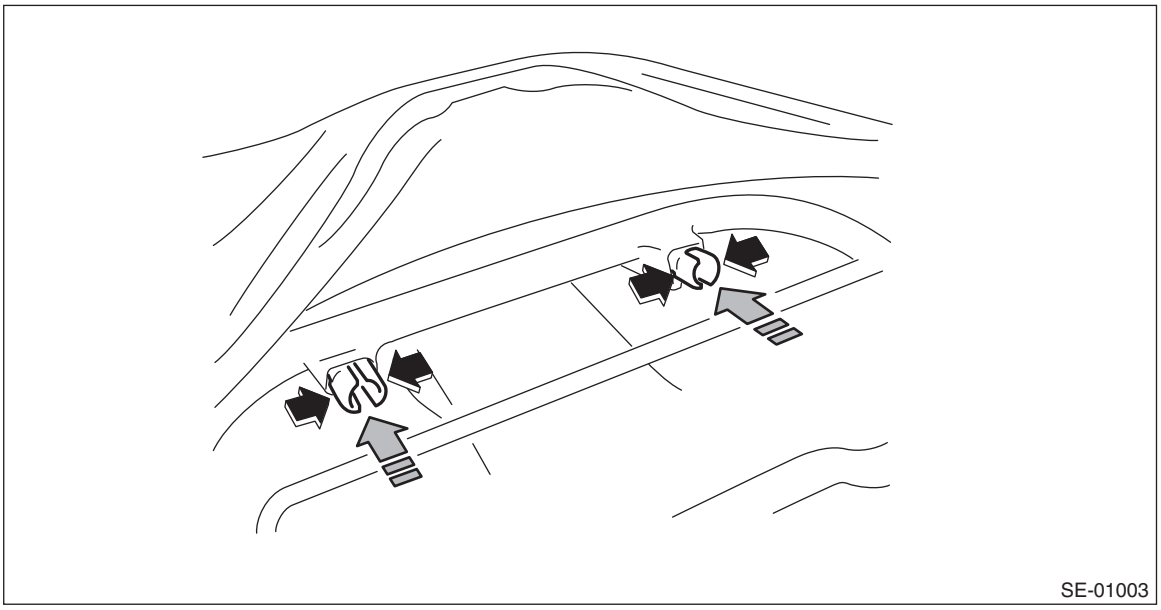
13) Remove the side airbag module.

CAUTION:
Do not open the protective cover of the side airbag. If any damage is present in the protective cover or the cloth of side airbag module comes out from the protective cover slit, replace the side airbag module with a new part.

(1) Remove the hexagon cap nut and nuts.
(2) While taking care not to damage the airbag protective cover, remove the side airbag module.

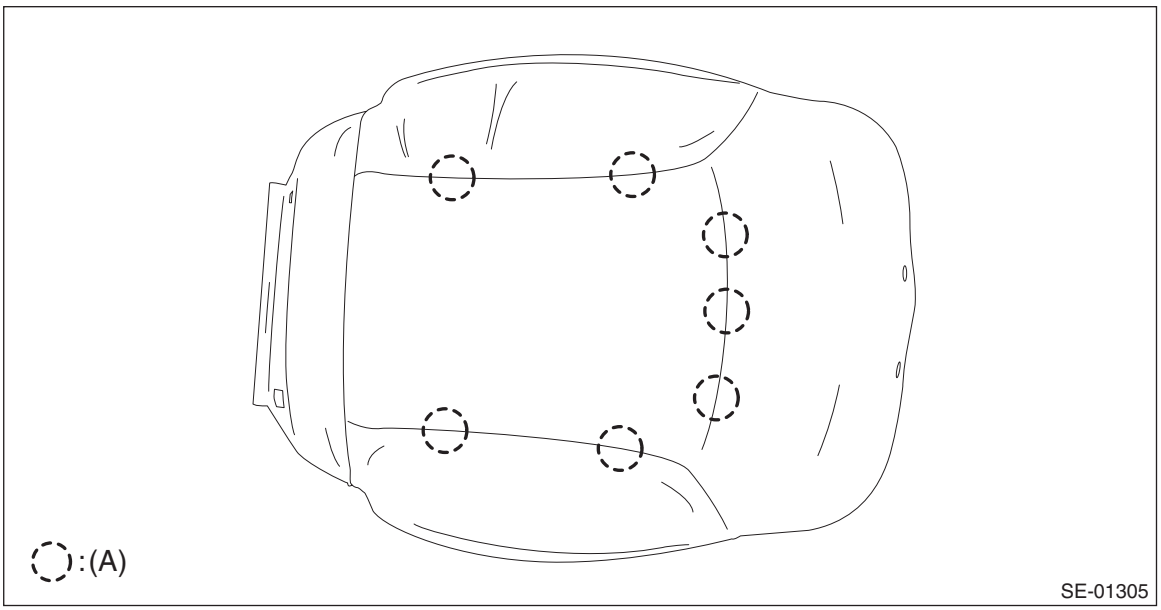

SE-01304

14) Remove the bushing - headrest.


SE-01003

NOTE:
Catch the tip of the bushing - headrest with pliers and push it outward from the inside of seat to remove it.
15) Pull out the frame assembly - front backrest.

16) Remove the cover COMPL - front backrest.
(1) Remove the hog ring (A).



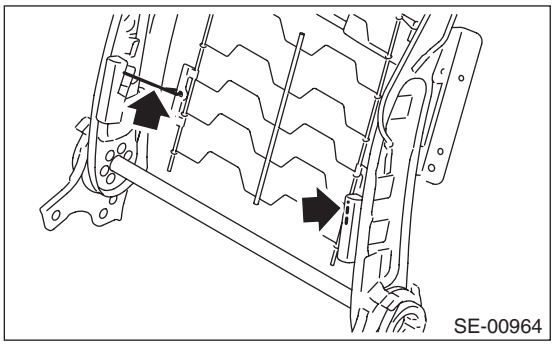
(2) Pull out the pad assembly - front seat backrest from the cover COMPL - front backrest.

2. PASSENGER'S SEAT

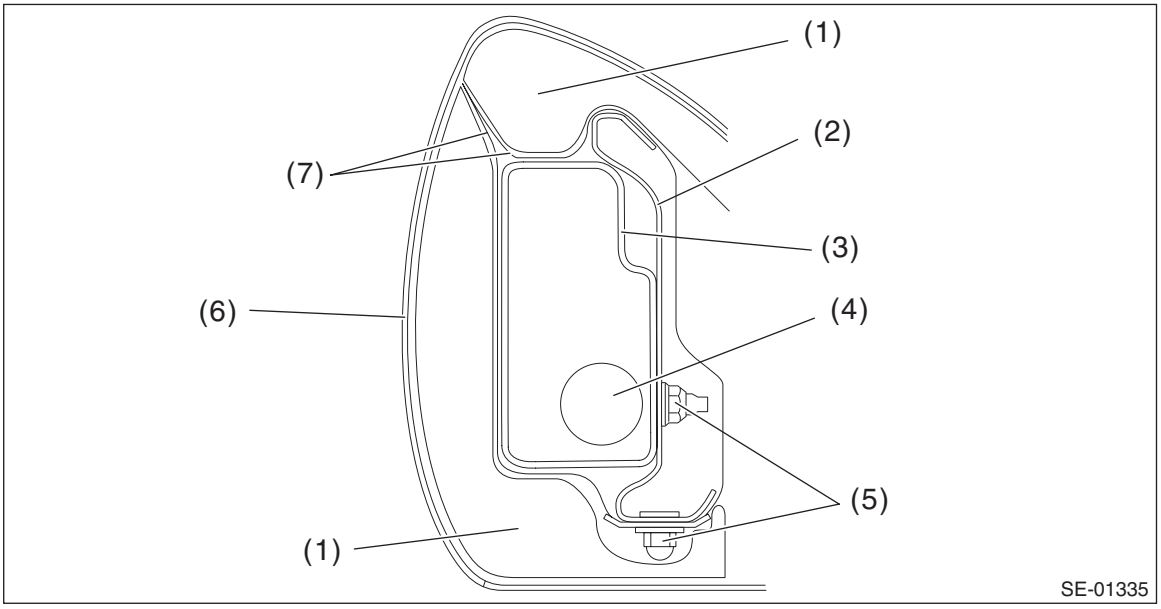
CAUTION:
• The occupant detection system (passenger's seat only) control module, the occupant detection sensor, the pad assembly - front seat cushion and the frame assembly - front cushion are considered as a single seat cushion pad & frame assembly. Never remove the occupant detection control module or the occupant detection sensor from the frame assembly - front cushion.
• If the cover - front cushion is removed, make sure to replace the hang wire on the cover - front cushion side with a new wire.
• Never remove the occupant detection sensor connector from the occupant detection control module.
• When replacing the seat cover, be careful not to damage the occupant detection sensor while installing the hog ring.
• When removing or replacing the seat cover, perform "Occupant Detection System Inspection" after installing the seat to check if the occupant detection system operates normally. <Ref. to PI-14, SEAT, PRE-DELIVERY INSPECTION (PDI) PROCEDURE, Pre-delivery Inspection.>
1) Remove the front seat (passenger's side) from vehicle. <Ref. to SE-7, REMOVAL, Front Seat.>
2) Refer to the disassembly procedures for the driver's seat. <Ref. to SE-9, DRIVER'S SEAT, DISASSEMBLY, Front Seat.>

D: ASSEMBLY

CAUTION:
• Do not confuse the harness routing of the side airbag harness and the seat belt inner - front harness, etc. Assembling with harnesses improperly routed may cause the harness to get caught and short out.
• If the flat mat hook of the frame assembly - front backrest is deformed or comes off due to the deformation, replace the hook with a new part.



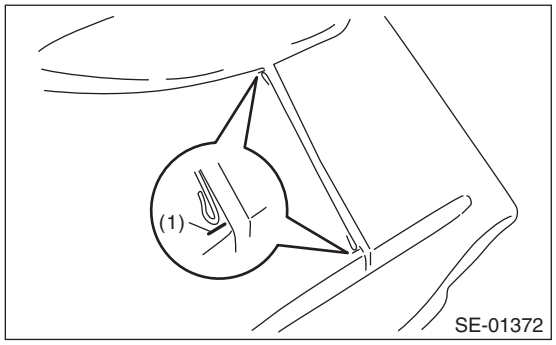
• Make sure that the side airbag module is installed as shown in the figure.



(1) Pad ASSY - front seat backrest
(2) Frame ASSY - front backrest
(3) Side airbag module protective cover
(4) Side airbag module inflator
(5) Nut
(6) Cover COMPL - front backrest
(7) Side airbag guide cloth

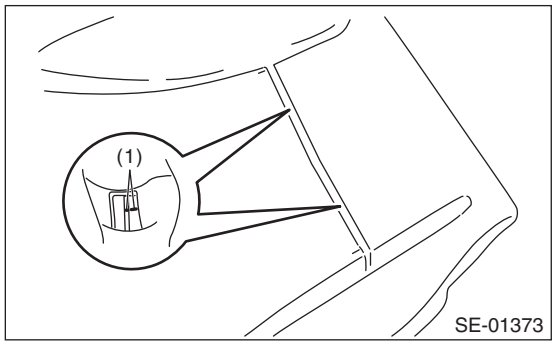
Besides, if the cover COMPL - front backrest is not installed securely, the side airbag may not be activated properly, therefore keep strictly to the following procedures.
• Be careful not to stain or damage the cover COMPL - front backrest during assembly.
• Do not reuse hog rings.
• Secure the hog ring using hog ring pliers.
• Install the hog rings to the specified points securely and make sure that there is no wrinkle or twisting on the cover COMPL - front backrest.
1) Make sure that there is no foreign matter on side airbag module.

2) Assemble the seat cover.
(1) Adjust so that the left and right clearances between wire and seat pad become equal, and mark the seat pad.



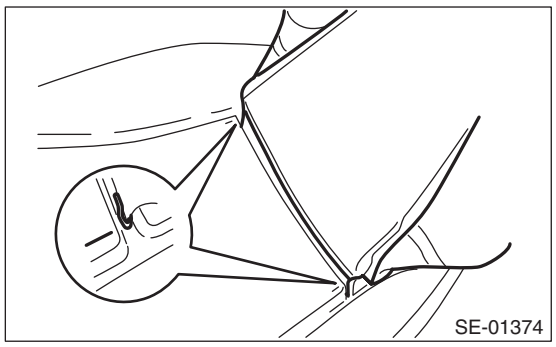
(1) Marking

(2) Mark the center of the wire on the pad side to which the hog ring is attached.

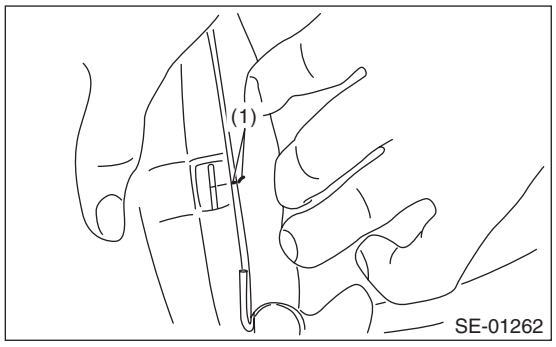


(1) Marking

(3) Insert the wire into the seat cover, and align the wire with the position marked in Step 1).

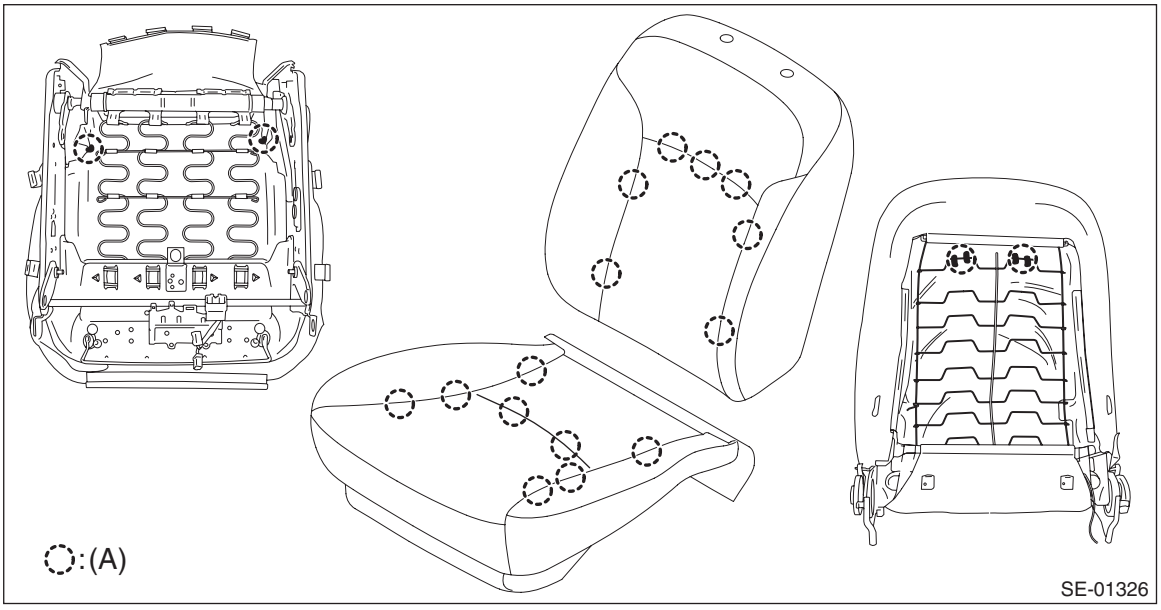


(4) Mark the wire on the seat cover side according to the markings on the seat pad.



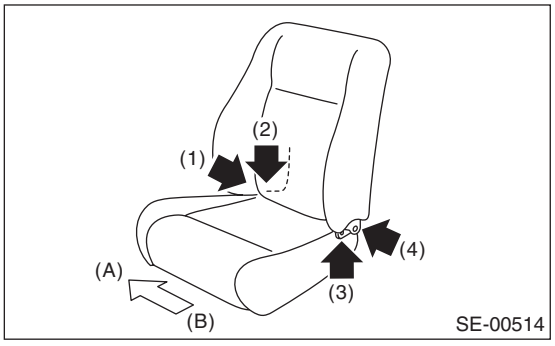
(1) Marking

(5) Perform Steps 1) — 4) to all sections to which the hog rings are attached.
(6) Make sure that all hog rings (A) are attached securely.



3) Assemble remaining parts in the reverse order of disassemble.

NOTE:
• When installing the seat belt inner - front, follow the procedures described in the seat belt section. <Ref. to SB-24, INSTALLATION, Front Seat Belt.>
• Install the backrest assembly and seat cushion assembly in the following procedure.
1. Temporarily tighten the four reclining hinge bolts.
2. Place the backrest in the most upright position.
3. Tighten the reclining hinge bolts in order from (1) to (4) two or three times, until they reach the specified torque.



(A) Vehicle inside
(B) Vehicle outside

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SE-2, FRONT SEAT, COMPONENT, General Description.>

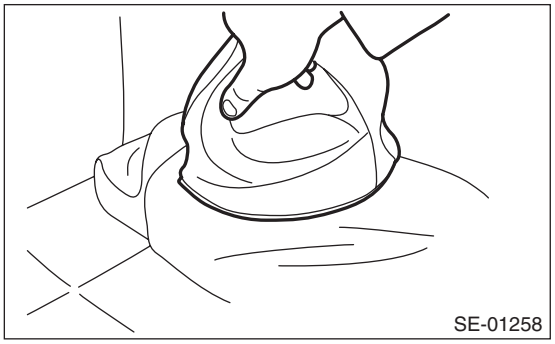
4) If any wrinkles are found after the assembly of the seat cover, finish the seat cover with iron.
(1) Place the wet towel on wrinkles.



(2) Touch up with warm iron.

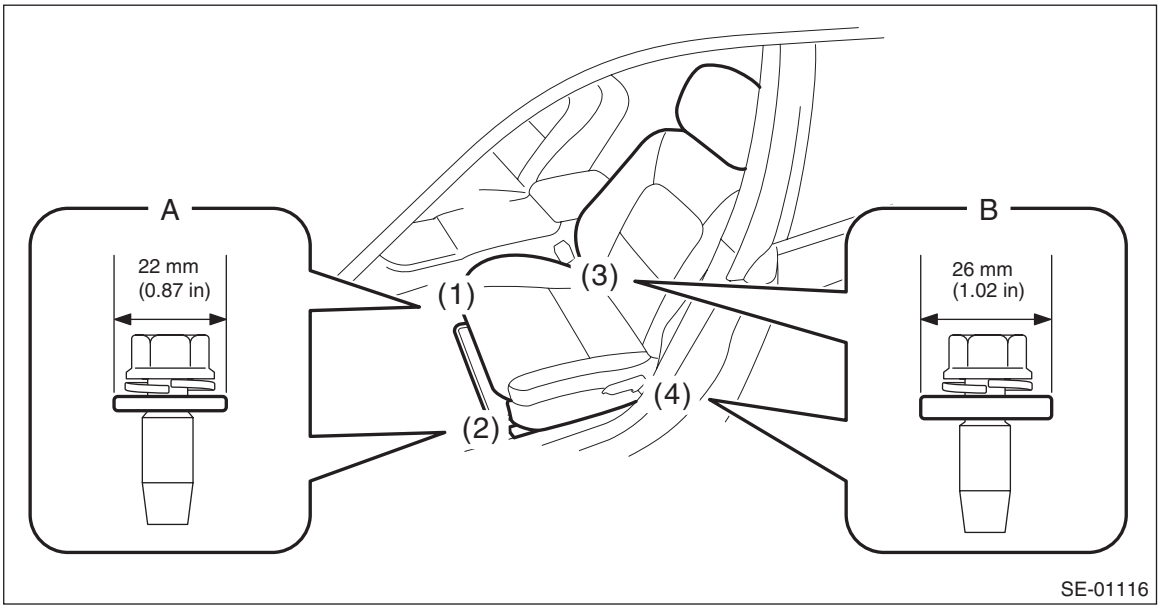
CAUTION:
Keep moving the iron, otherwise the seat cover surface can be damaged.

NOTE:
This method is available for genuine leather, synthetic leather, cloth, etc.



5) Install the seat assembly.

CAUTION:
• The seat mounting bolts differ between the front mounting points and the rear mounting points. Make sure that you are using correct bolts at correct positions.
• Tighten the slide rail installing bolts in the order as shown in the figure, in several steps by gradually increasing the torque until they reach the specified torque.



- **Front (bolt A): Washer diameter 22 mm (0.87 in)**
- **Rear (bolt B): Washer diameter 26 mm (1.02 in)**

Tightening torque: 53 N·m (5.40 kgf-m, 39.1 ft-lb)

E: INSPECTION

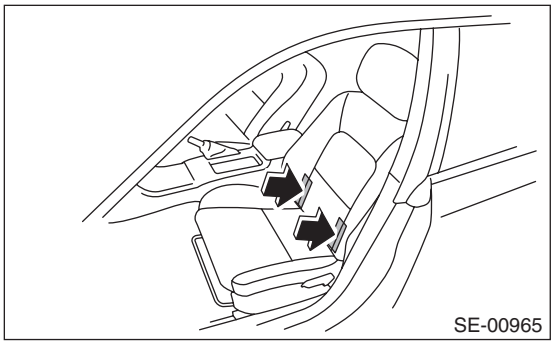
1. SEAT COVER

Check that there is no tear or fray on the cover COMPL - front backrest and the cover - front cushion.

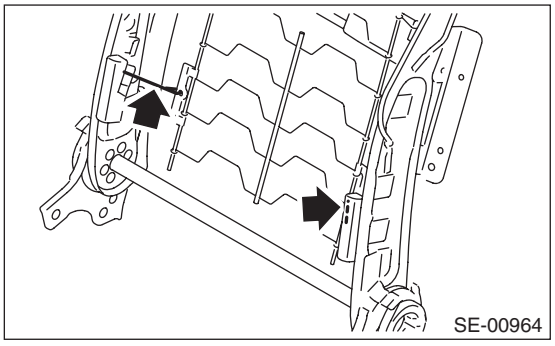
NOTE:
For model with side airbag, if the door side of the cover COMPL - front backrest is torn or frayed, the side airbag may not be deployed properly. In this case, replace the cover COMPL - front backrest with a new part.

2. FLAT MAT HOOK

Check the flat mat hook by applying weight to the backrest assembly.



NOTE:
If the appropriate stiffness is not obtained by applying weight to the backrest assembly, the hook may be disengaged.
If it is due to the deformation of the hook, replace the hook with a new part.

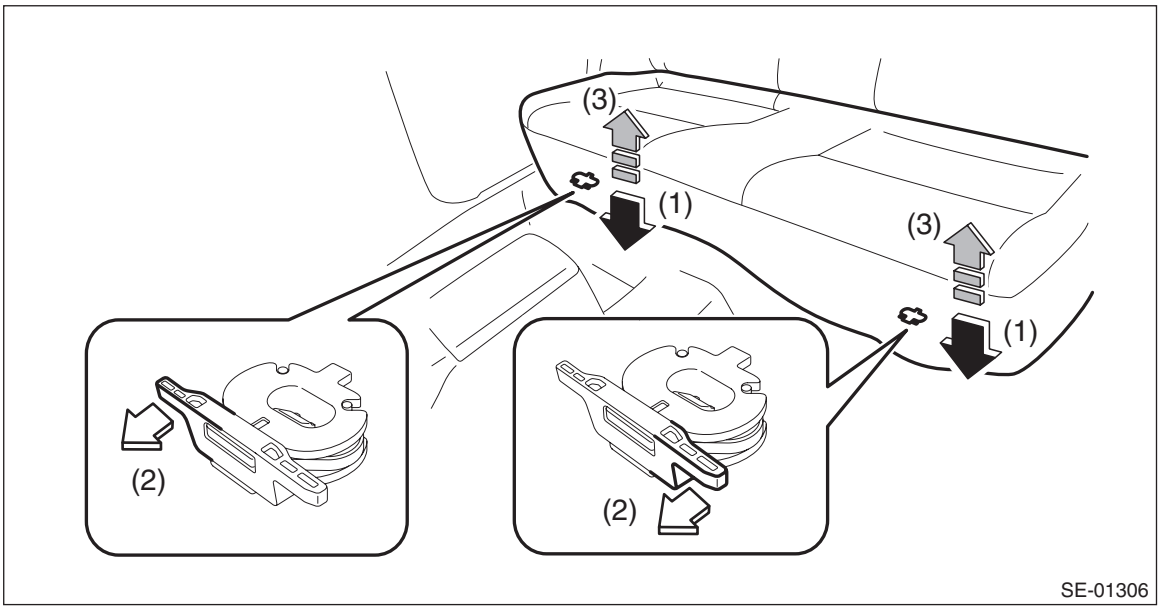


3. Rear Seat

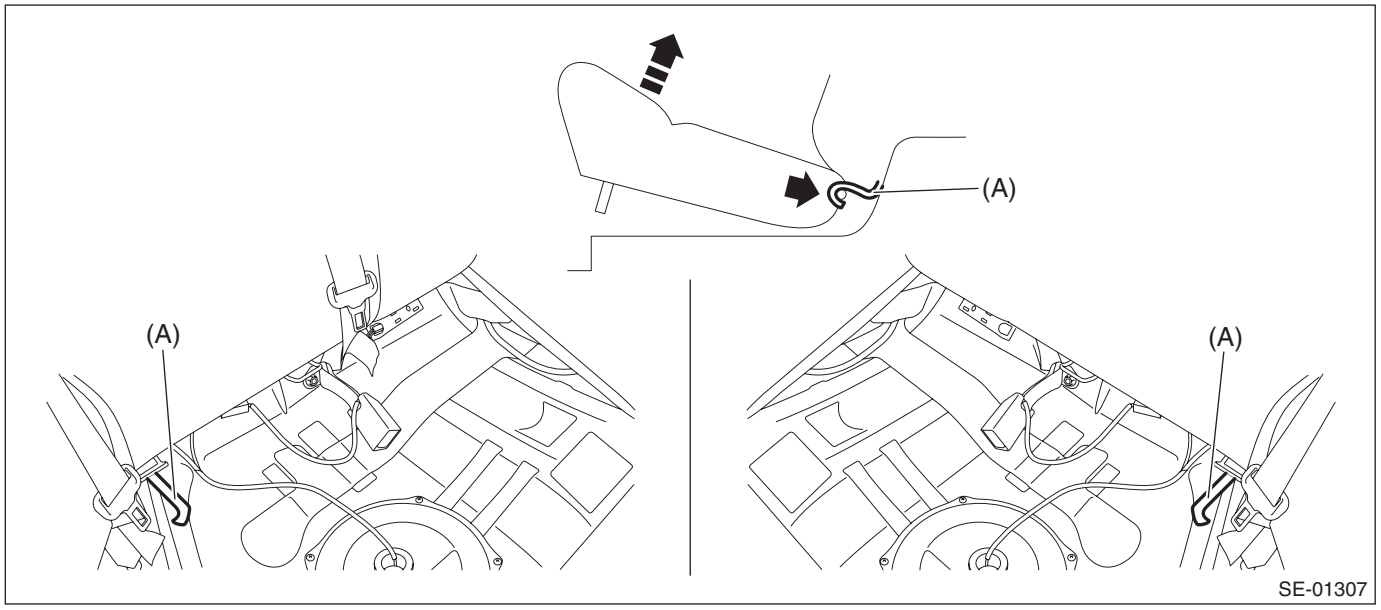
A: REMOVAL

1) Remove the rear seat cushion assembly.
   (1) Push the corners of the rear seat cushion from above.
   (2) While pushing the corners of the rear seat cushion from above, pull the knob of the hook - seat cushion rear towards yourself.
   (3) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.

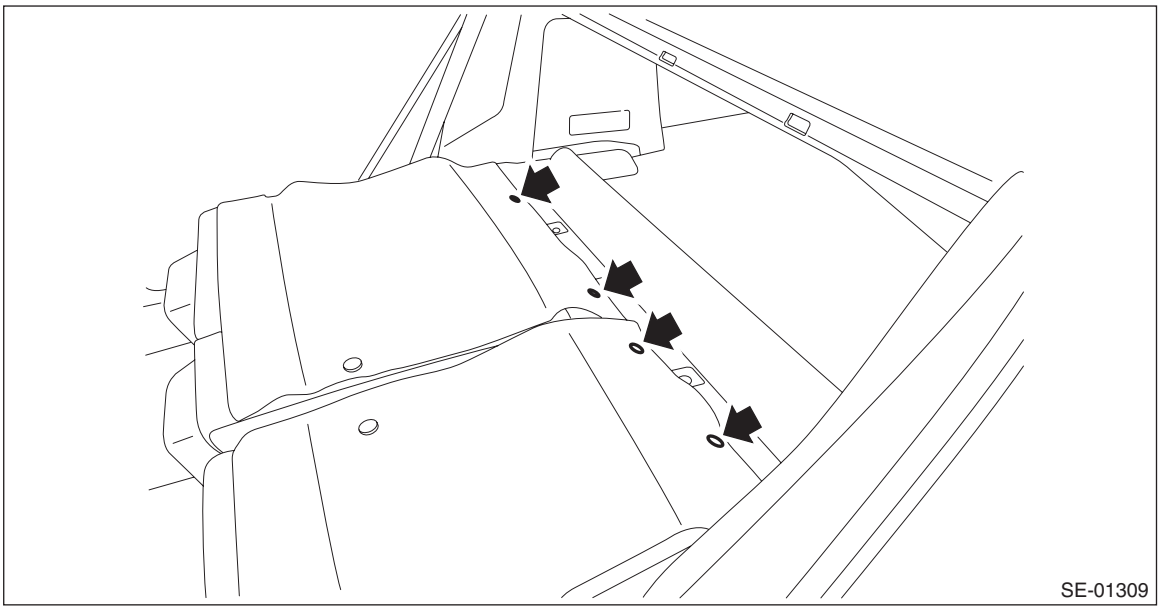
NOTE:
Pull the left side of the knob to disconnect the LH side hook, and pull the right side of the knob to disconnect the RH side hook.



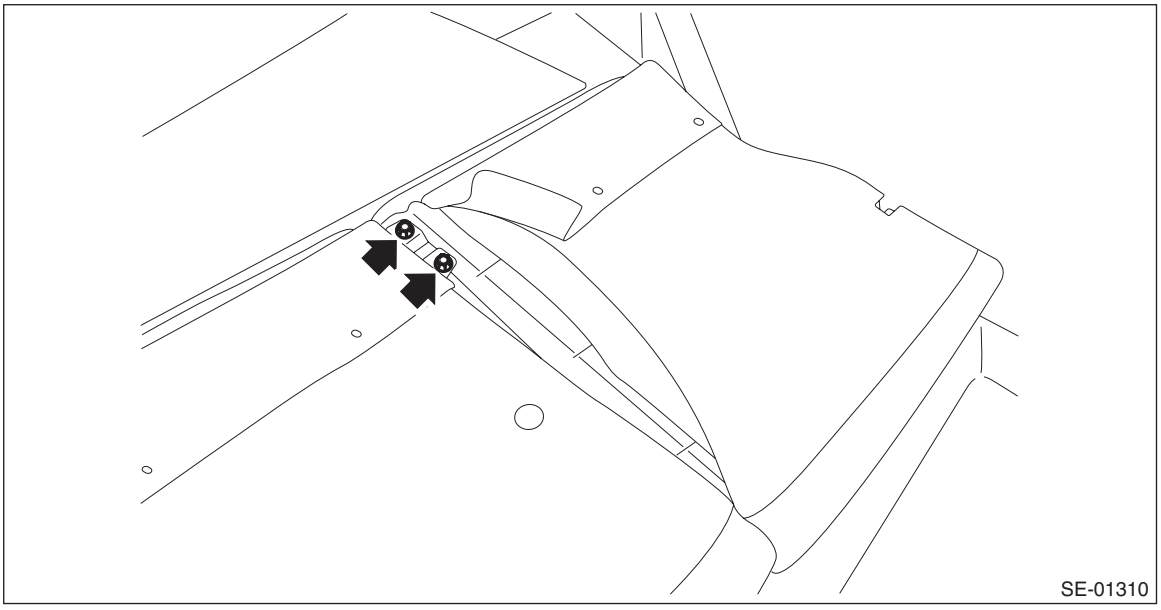
(4) Remove the hook (A) by pushing it back while lifting the front side of the rear seat cushion, and remove the rear seat cushion.



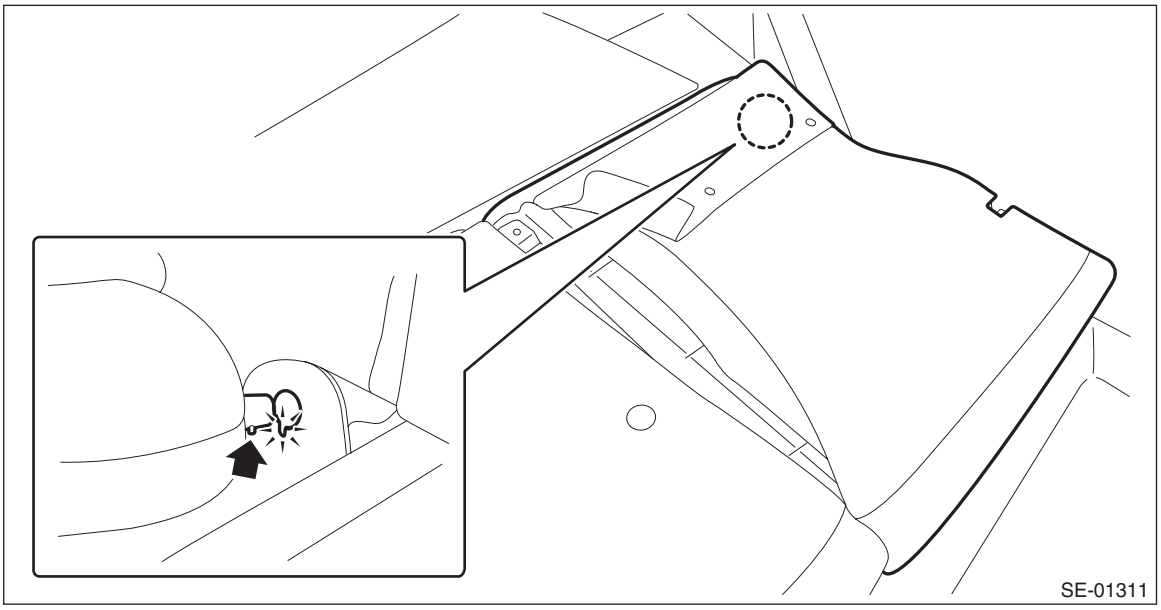
2) Remove the backrest assembly LH.
(1) Remove the pillow assembly - rear backrest and tilt the backrest assembly LH forward.
(2) Remove the clips located at the bottom of the cover COMPL - rear backrest LH and RH of the rear seat back.



(3) Turn over the cover COMPL - rear backrest LH to remove the bolts.



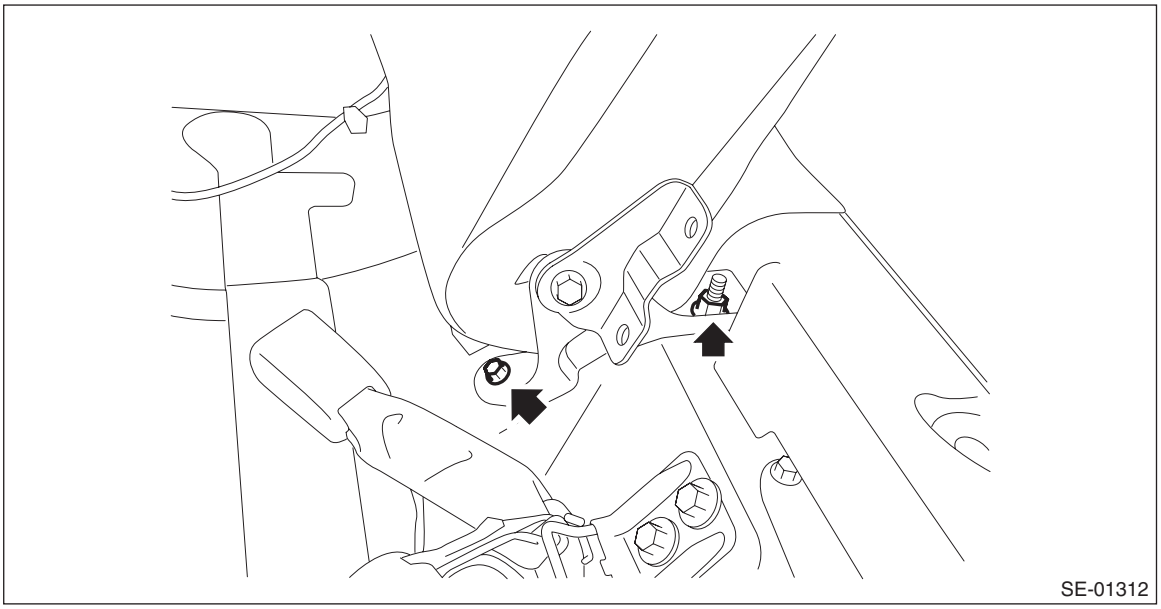
(4) Remove the backrest assembly LH from the hinge assembly.



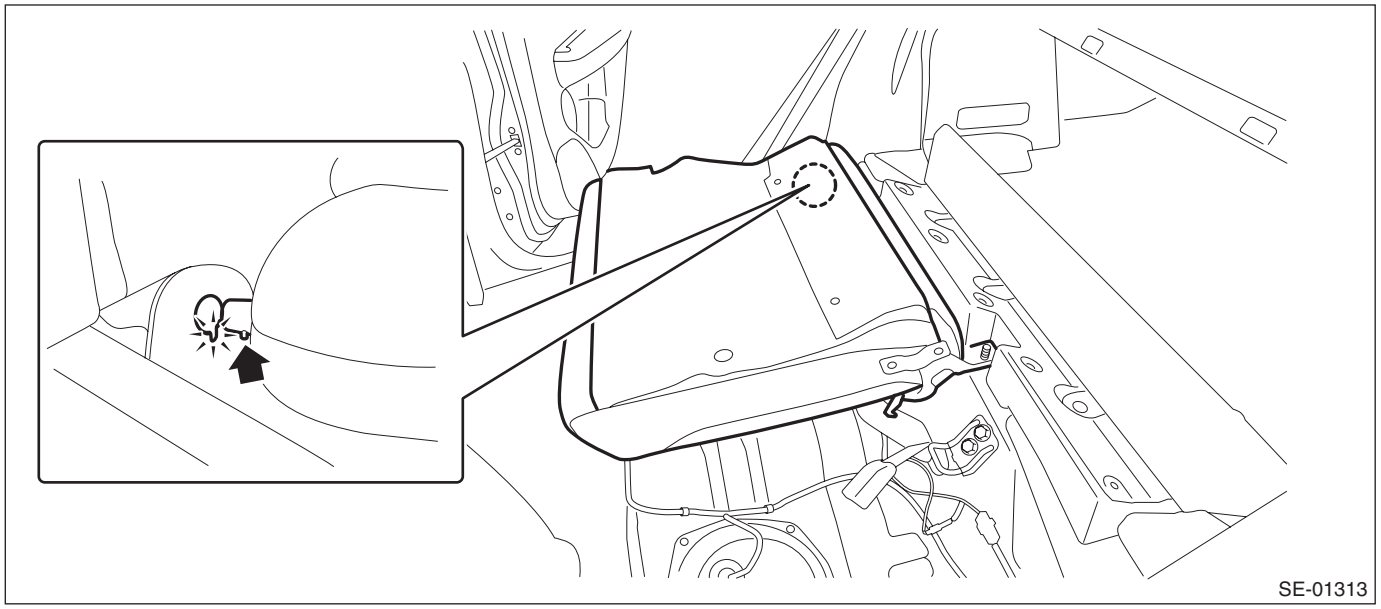
NOTE:
The backrest assembly cannot be removed unless pin positions on the hinge assembly side and backrest assembly side are aligned.

3) Remove the backrest assembly RH.

(1) Remove the bolts and nuts.



(2) Remove the backrest assembly RH from the hinge assembly.



NOTE:
The backrest assembly cannot be removed unless pin positions on the hinge assembly side and backrest assembly side are aligned.

B: INSTALLATION

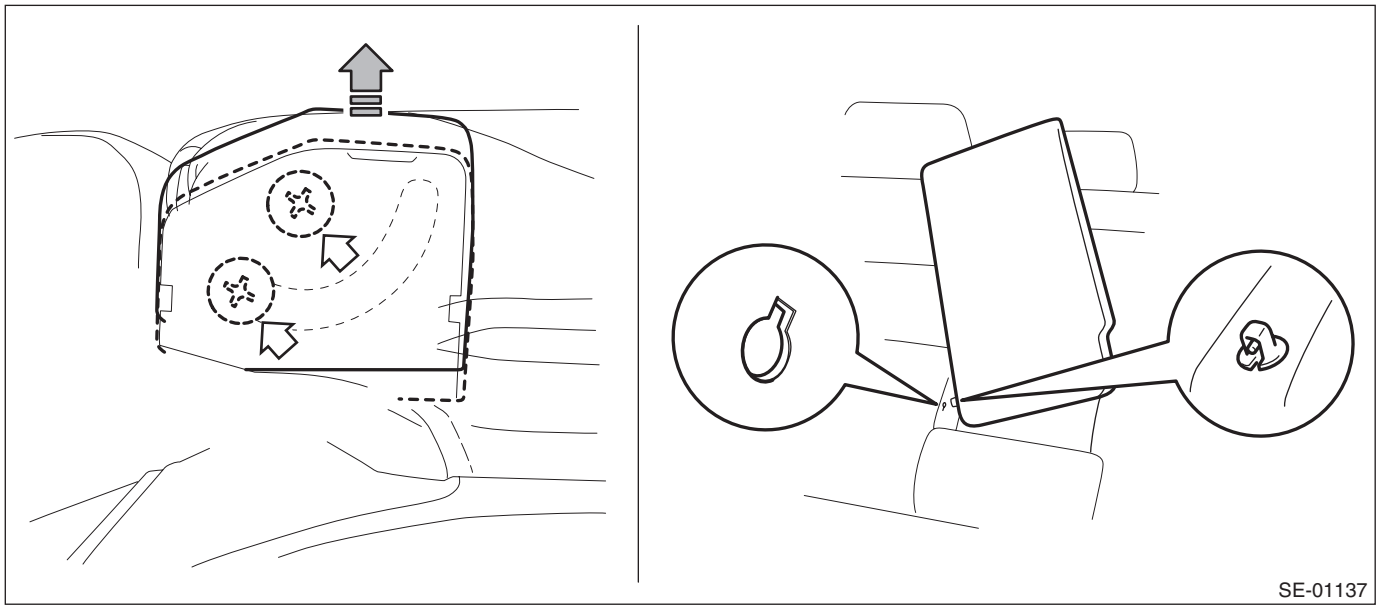
Install each part in the reverse order of removal.

NOTE:
- After installing the backrest assembly, make sure that each seat belt operates normally.
- Make sure that they are properly secured on each hook on the vehicle side.

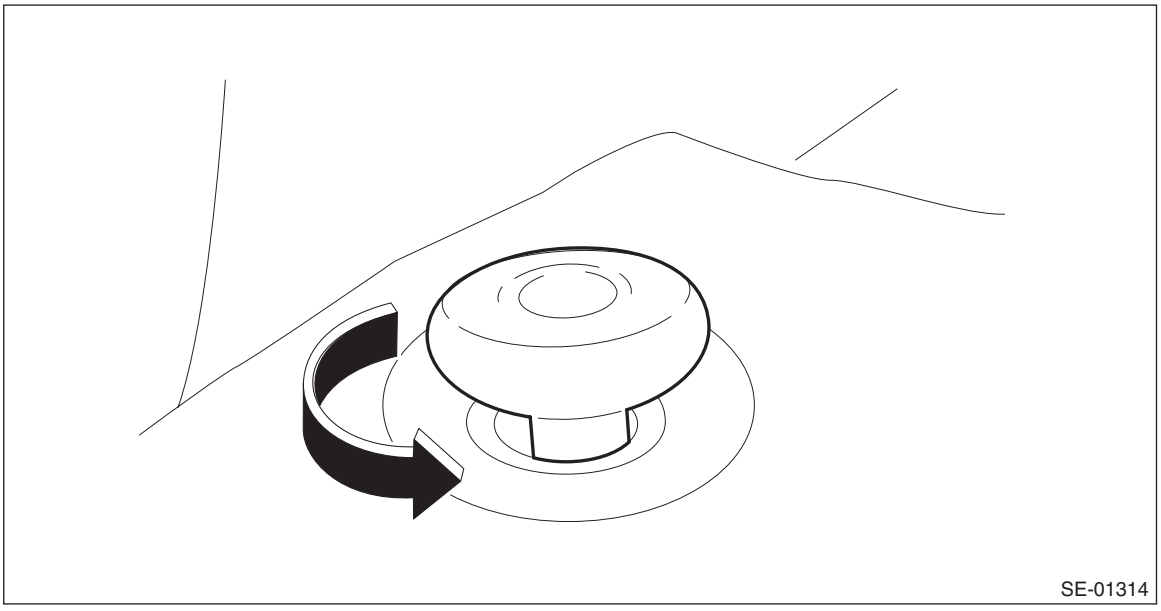
Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SE-5, REAR SEAT, COMPONENT, General Description.>

C: DISASSEMBLY

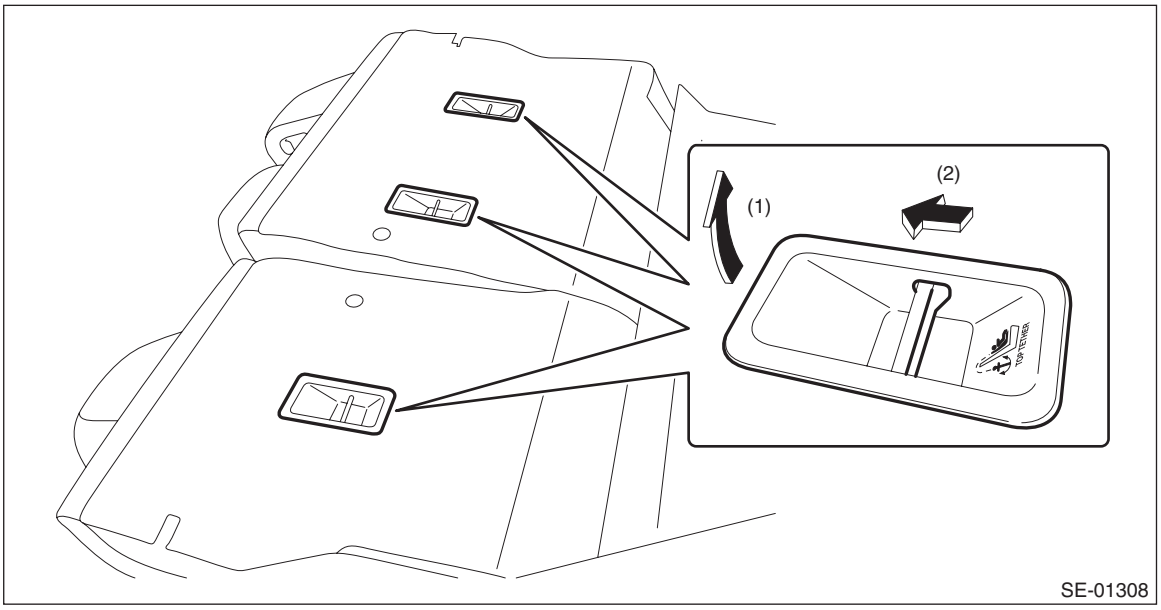
1) Remove the rear seat. <Ref. to SE-22, REMOVAL, Rear Seat.>
2) Remove the pillow assembly - rear backrest.
3) Remove the armrest assembly - rear center. (model with armrest assembly - rear center)
   (1) Remove the cover - armrest by pulling it in the direction of the arrow (black).
   (2) Remove the screws and remove the armrest assembly - rear center.



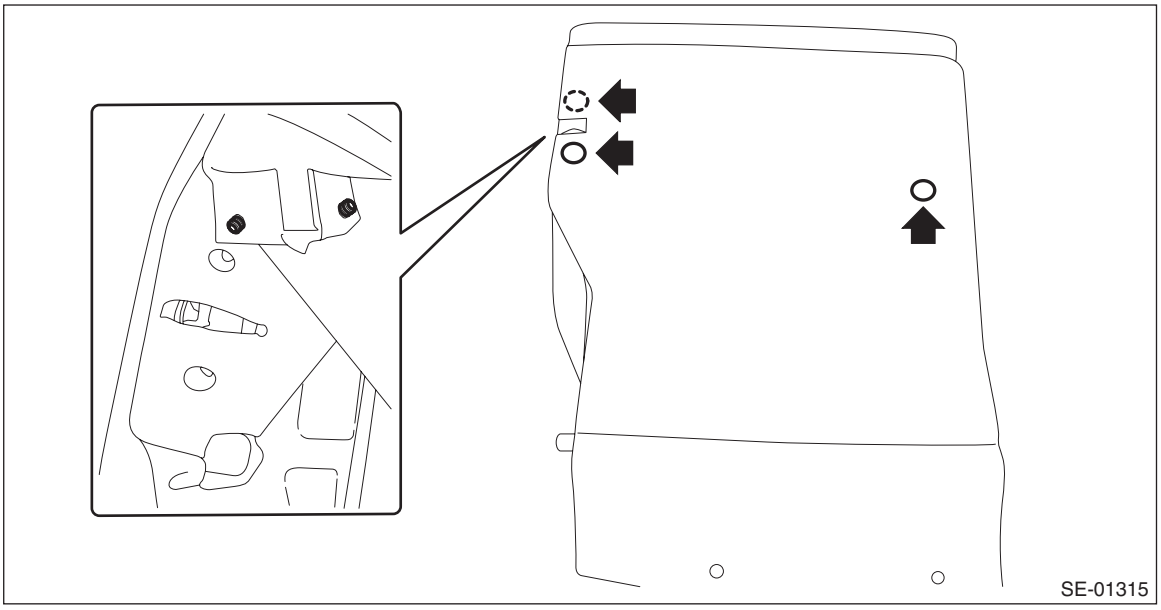
NOTE:
The armrest assembly - rear center cannot be detached unless pin positions on the RH side of the backrest assembly and on the center side of the armrest assembly - rear are aligned.
4) Remove the knob - backrest. (Screw-in type)



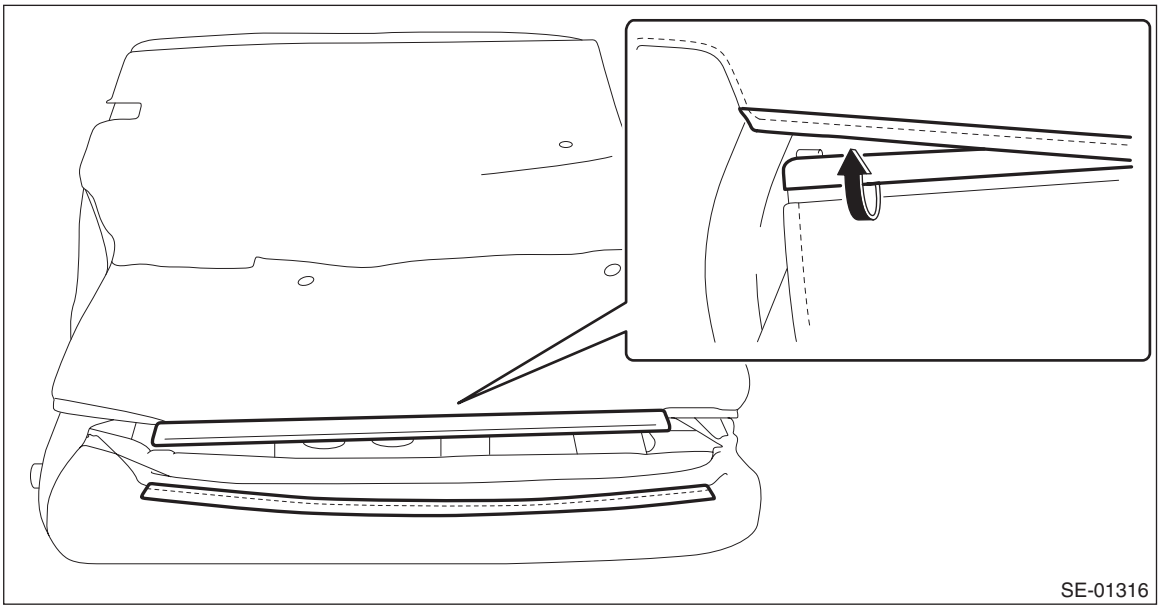
5) Remove the tether anchor cover.



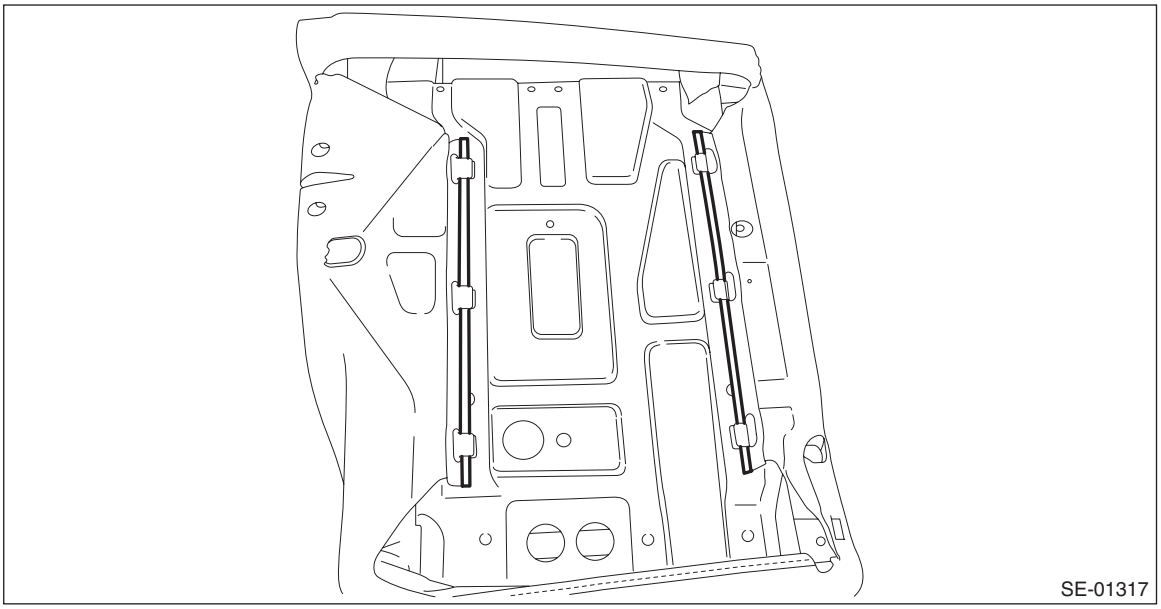
6) Remove the clips on the backside of the cover COMPL - rear backrest LH.



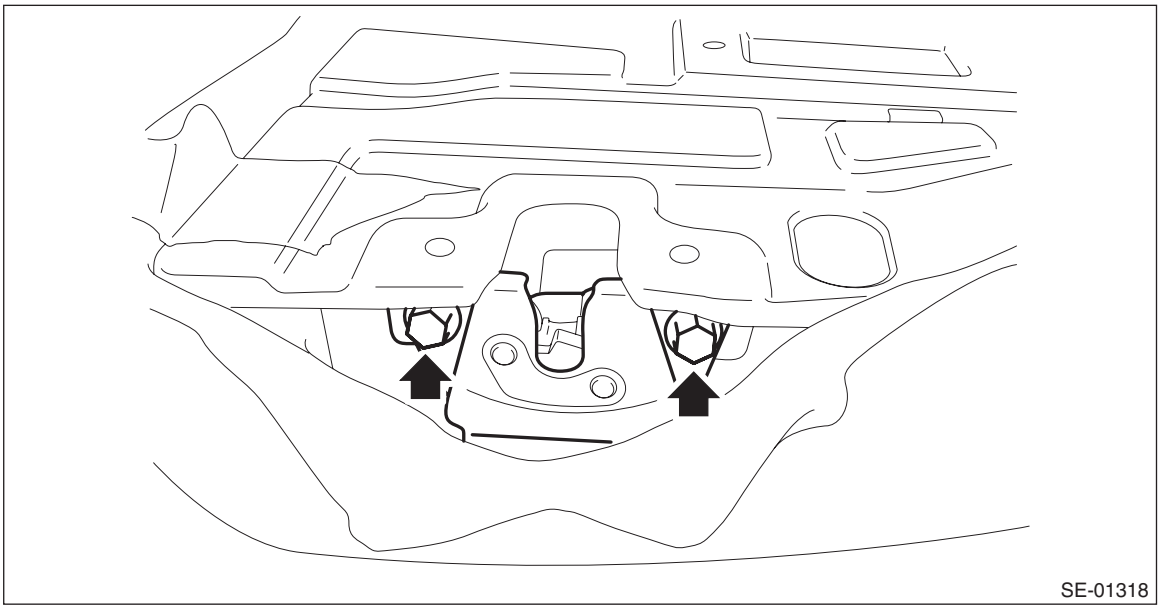
7) Detach the plastic fastener at the bottom of backrest assembly LH and turn over the cover COMPL - rear backrest LH.



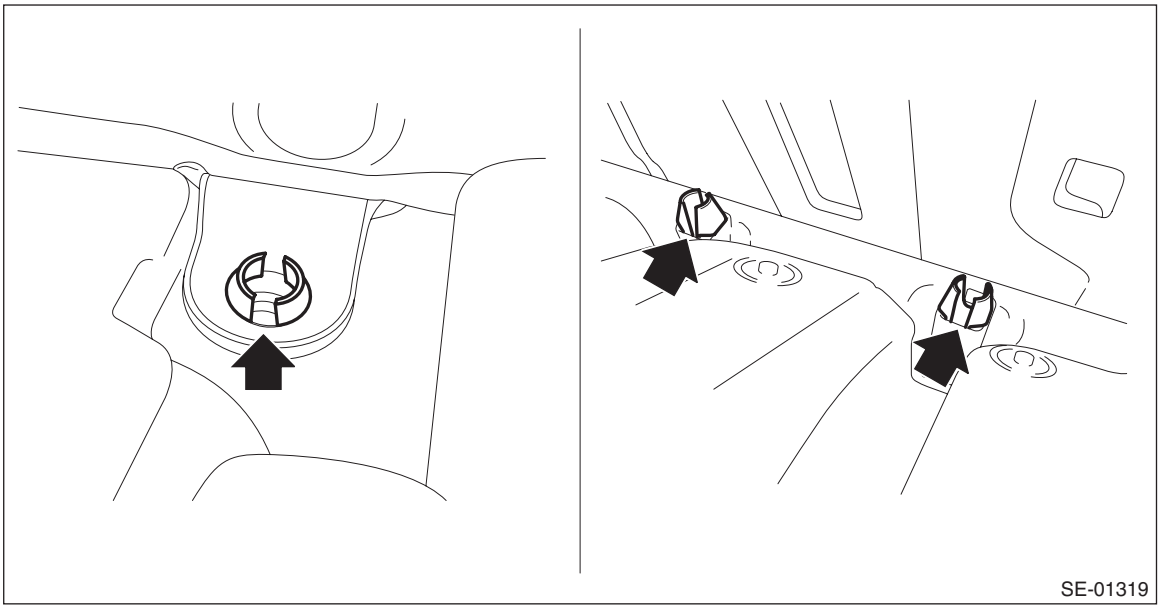
8) Remove the plastic hooks on the back side of the backrest assembly LH.



9) Remove the lock assembly - rear backrest rear LH.

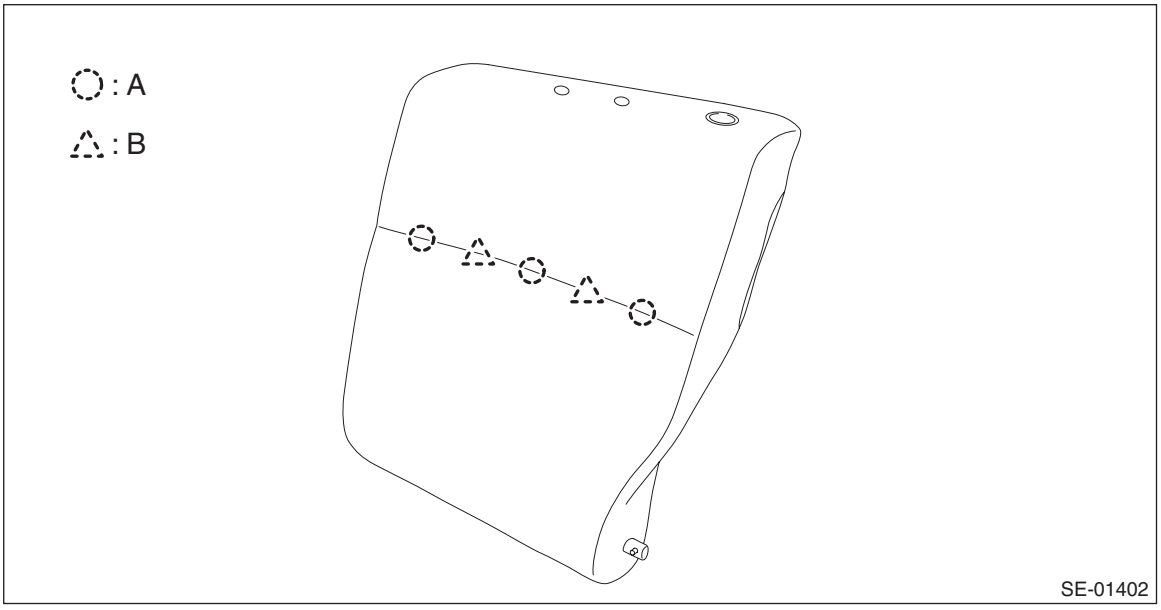


10) Detach the bushing - headrest and the bushing - lock assembly, and remove the frame assembly - rear backrest LH from the pad assembly - main LH.

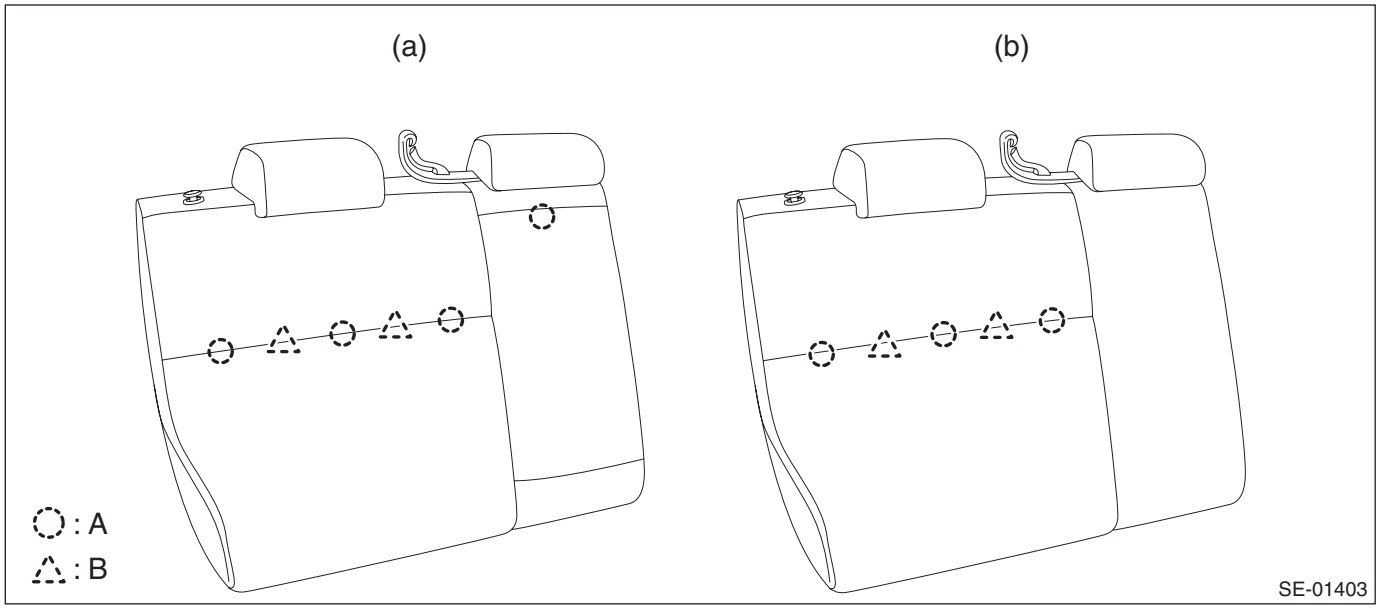


11) Remove the hog rings (A) and wire clips (B), then remove the cover COMPL - rear backrest LH.

- LH side



- RH side

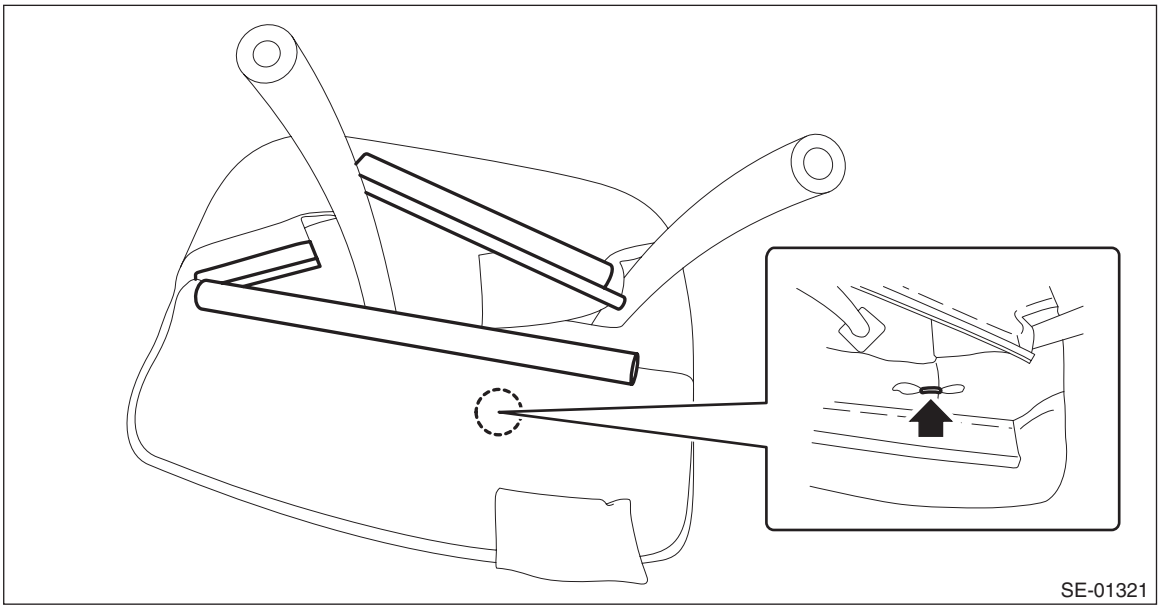


(a) Model with armrest assembly - rear center

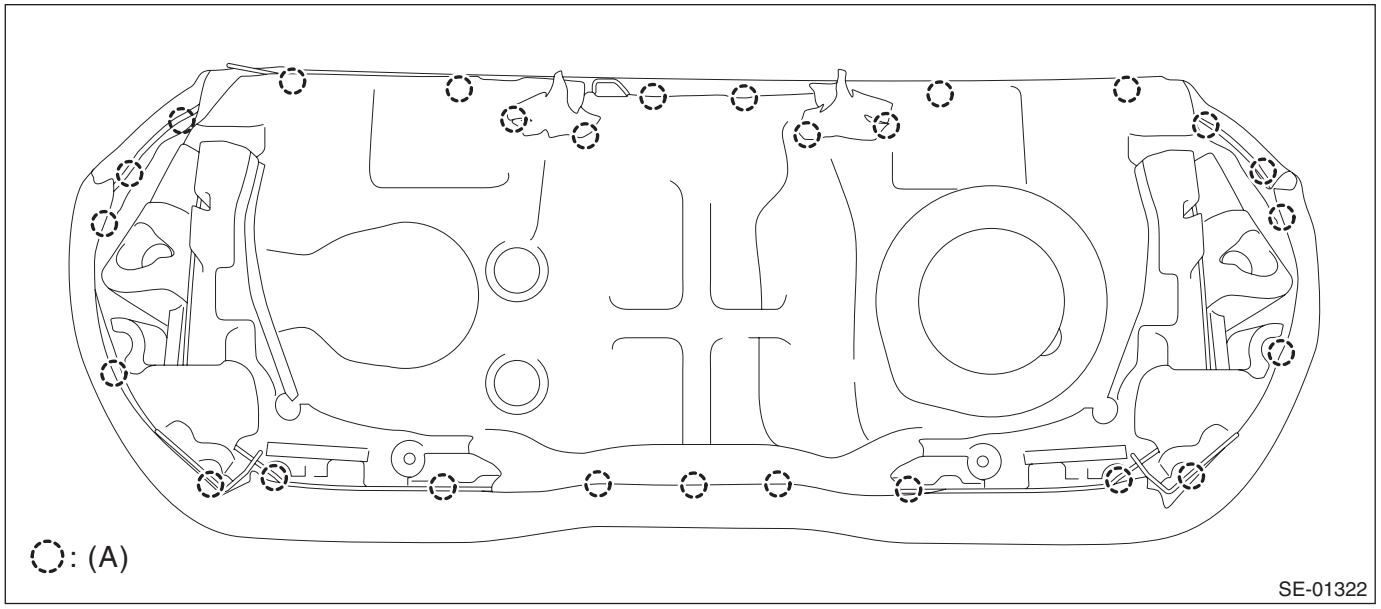
(b) Model without armrest assembly - rear center

12) Referring to the above steps, disassemble the backrest assembly RH.

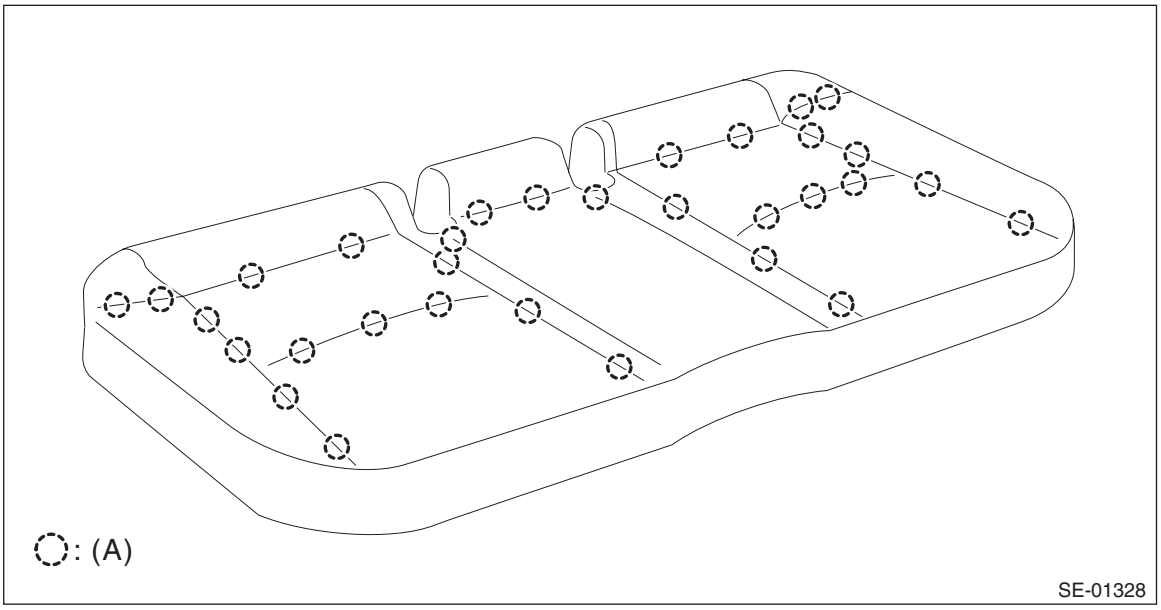
13) Detach the plastic fastener and hog ring, and then remove the headrest cover.



14) Remove the hog rings (A) on the back side of the rear seat cushion assembly.



15) Remove the hog rings (A), then remove the cover - rear cushion.

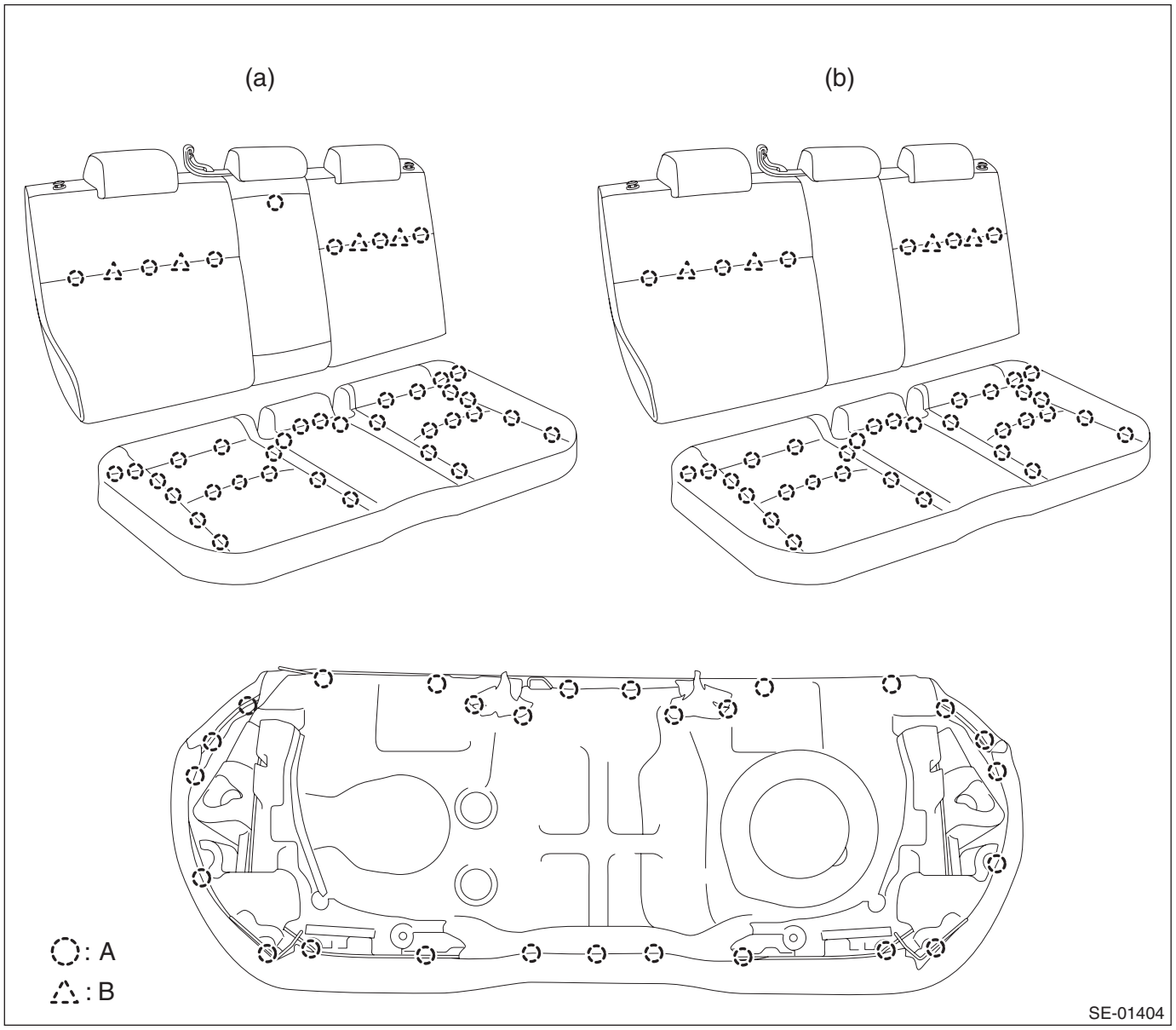


D: ASSEMBLY

CAUTION:
- **Do not reuse hog rings.**
- **Secure the hog ring using hog ring pliers.**
- **Install the hog rings to the specified points securely and make sure that there is no wrinkle or twisting on the cover COMPL - rear backrest.**

1) Assemble the cover COMPL - rear backrest and the cover - rear cushion in the same manner as for the front seat. <Ref. to SE-17, ASSEMBLY, Front Seat.>

2) Make sure that all hog rings (A) are attached securely.



(a) Model with armrest assembly - rear center
(b) Model without armrest assembly - rear center

3) Assemble each part in the reverse order of disassembly.

NOTE:
- Do not contaminate or damage the cover COMPL - rear backrest and the cover - rear cushion.
- While installing the hog rings, prevent the cover COMPL - rear backrest and the cover - rear cushion from getting wrinkled.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SE-5, REAR SEAT, COMPONENT, General Description.>

4) Before installation, check the following items.
- No tear and fray on the cover COMPL - rear backrest and the cover - rear cushion.
- No fray or deformation on each wire cable.

5) Install each part in the reverse order of removal.

4. Seat Heater System

A: REMOVAL

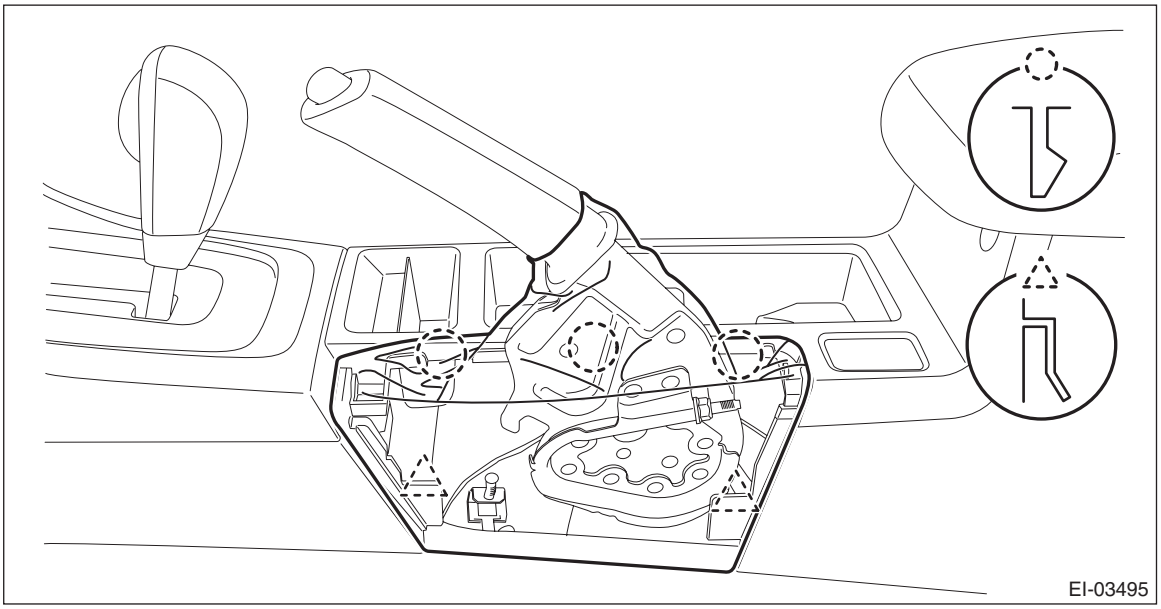
1. SEAT HEATER UNIT

1) Remove the front seats. <Ref. to SE-7, REMOVAL, Front Seat.>
2) Remove the backrest cover of front seat and seat cushion cover. <Ref. to SE-9, DISASSEMBLY, Front Seat.>
3) Remove the seat heater unit.

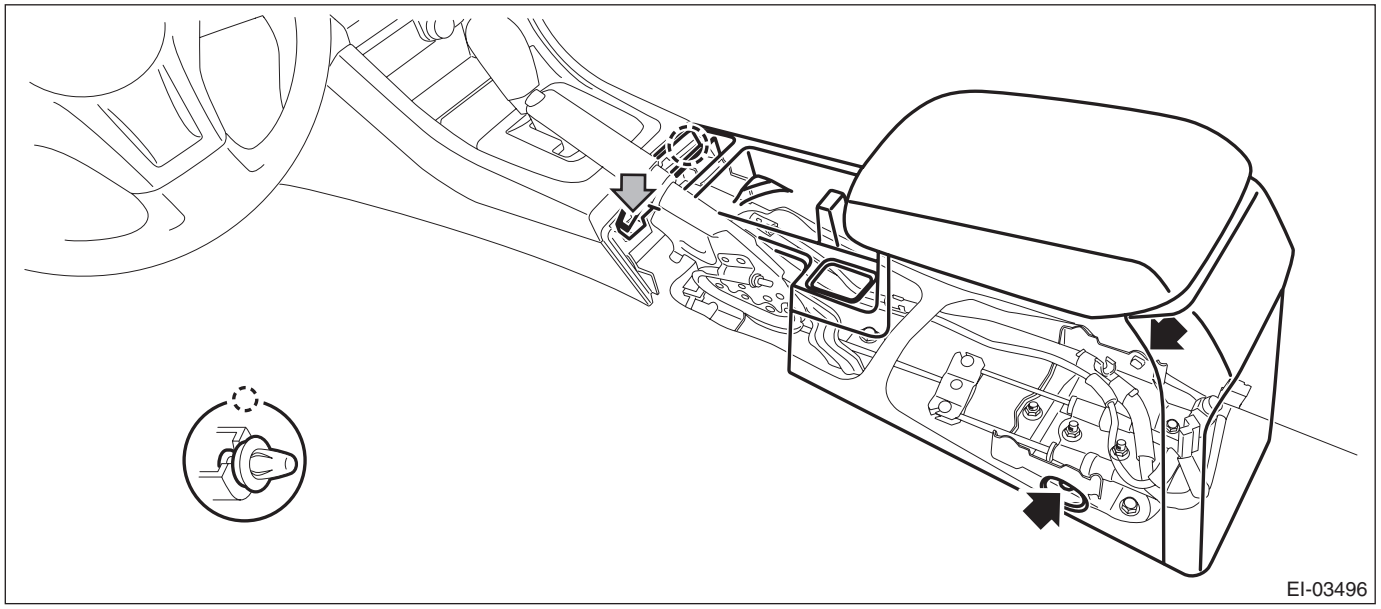
2. SEAT HEATER SWITCH

1) Disconnect the ground cable from battery.

NOTE:
On CVT models, shift the select lever into D before disconnecting the battery ground cable.
2) Remove the console box assembly.
(1) Release the claws, and then remove the boot - hand brake.



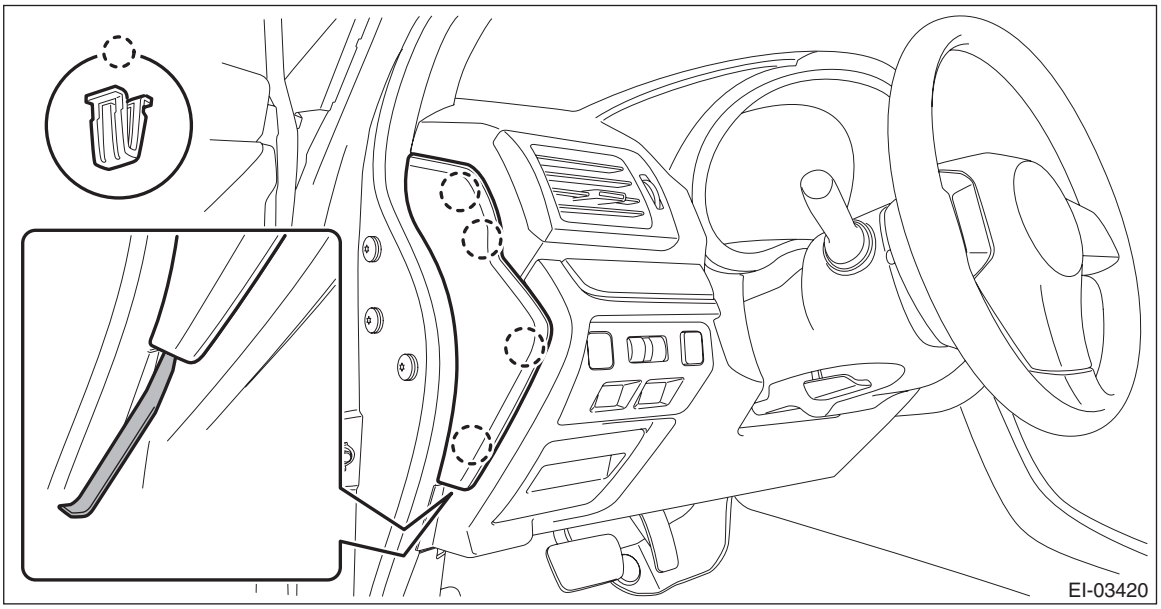
(2) Move the seat forward, and remove the bolts after detaching the left and right caps.
(3) Remove the screws, disconnect the harness connector and remove the console box assembly.



3) Remove the screws and remove the seat heater switch from the backside of the console box assembly.

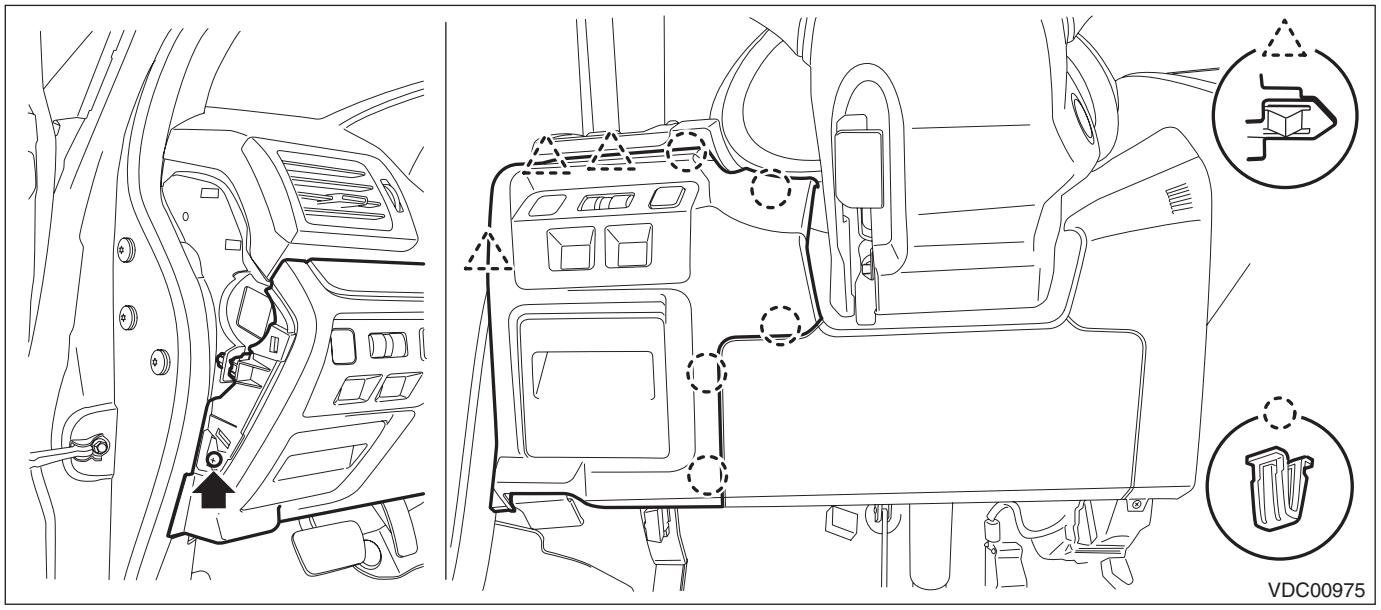
3. SEAT HEATER RELAY AND FUSE

1) Disconnect the ground cable from battery.
2) Remove the cover assembly - instrument panel LWR driver.
   (1) Remove the clips, and remove the cover - instrument panel side LH.



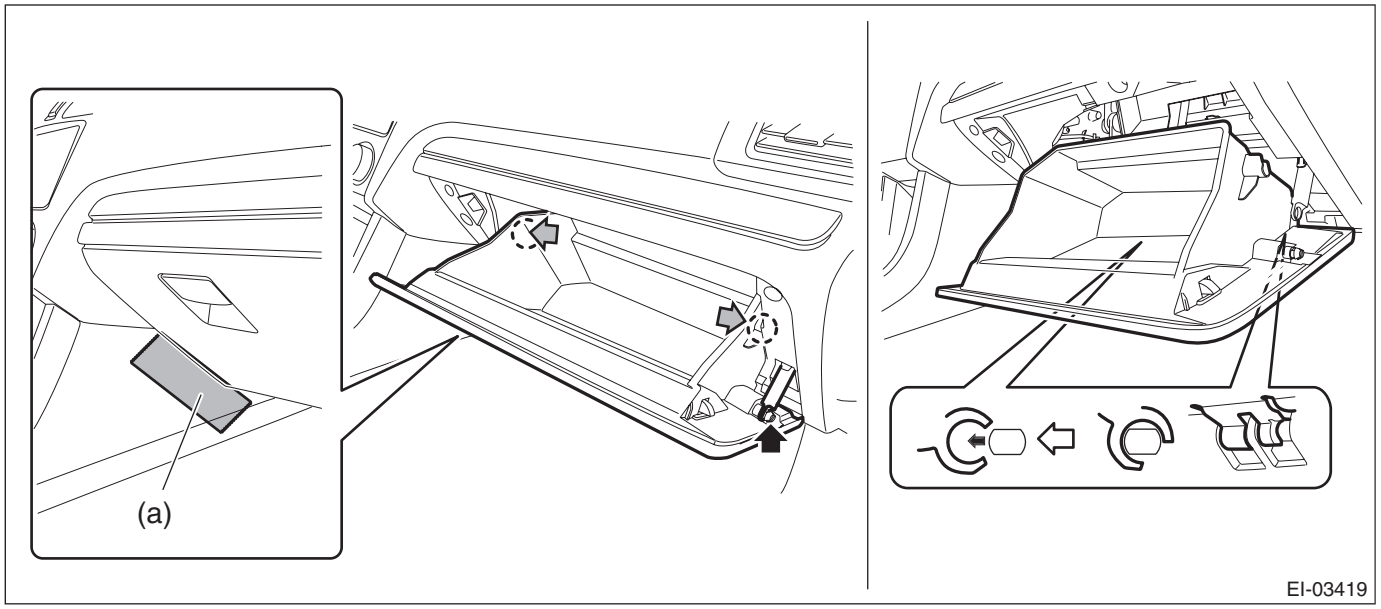
NOTE:
Using a plastic remover, open the cover - instrument panel side LH.

   (2) Remove the screws and release the clips and claws.
   (3) Disconnect the harness connectors, and remove the cover assembly - instrument panel LWR driver OUT.



3) Remove the pocket assembly.
   (1) Attach the protective tape (a) to the panel center LWR.
   (2) Remove the damper COMPL - pocket.

(3) Release the stoppers and remove the pocket assembly by pulling it toward you.

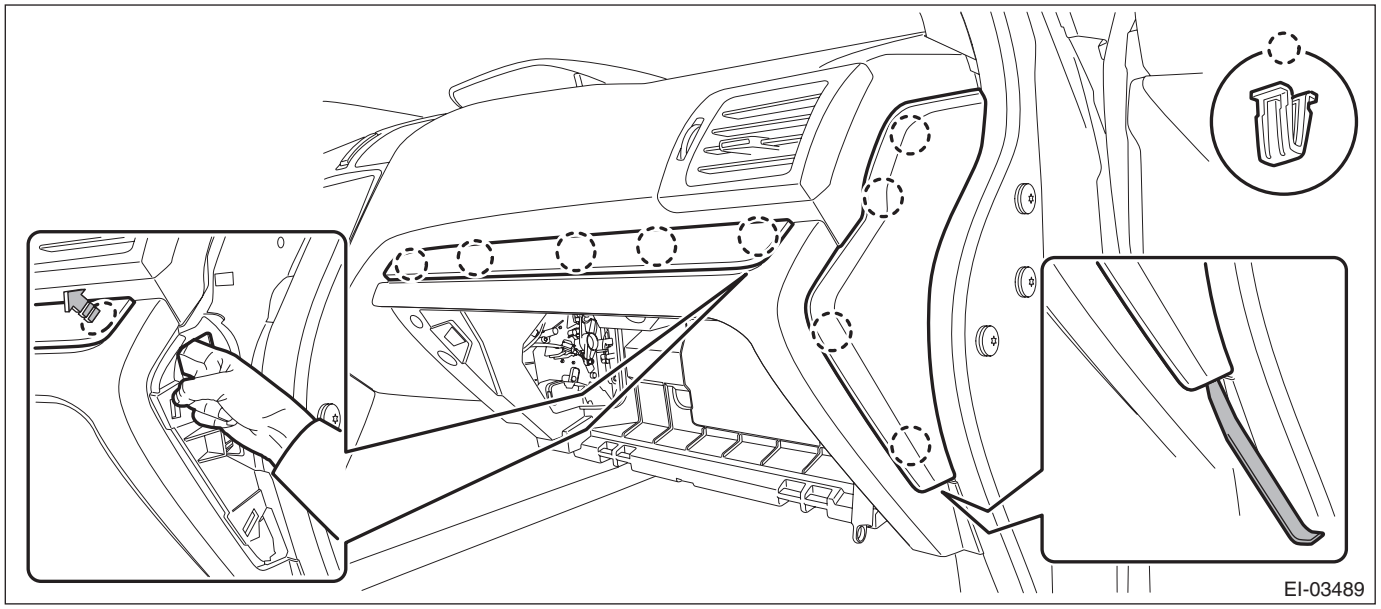


4) Remove the back panel - pocket.

(1) Remove the clips, and remove the cover - instrument panel side RH.

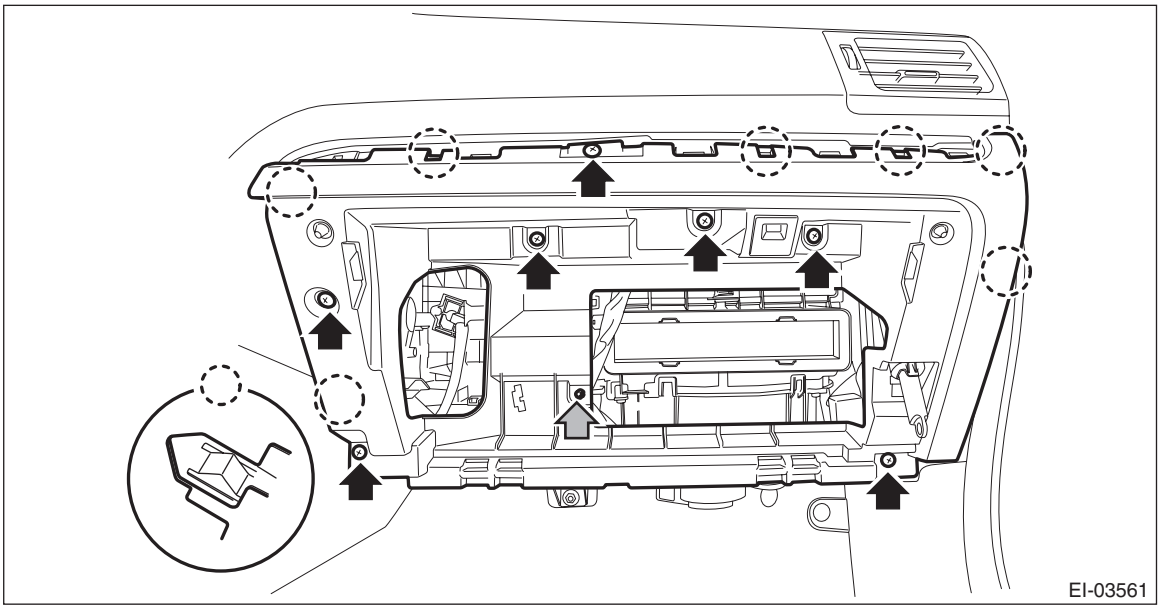
NOTE:
Remove the cover - instrument panel side RH by using a plastic remover.

(2) Release the clips, and remove the ornament - panel assembly passenger.



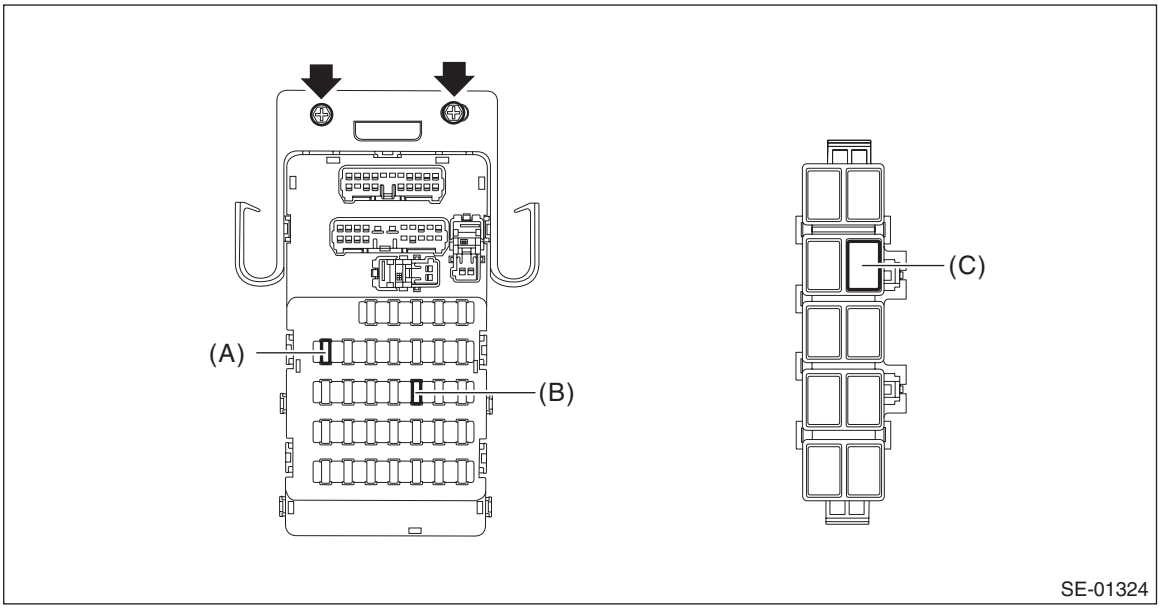
NOTE:
To facilitate the removal, push the clip of the ornament - panel assembly passenger from the backside.

(3) Release the claws and remove the screws, then remove the back panel - pocket.



(4) Disconnect the glove box light LED connector.

5) Remove the seat heater relay and fuse.
(1) Remove the relay & fuse box bolts.
(2) Remove the seat heater relay from the relay holder.



Relay & fuse box	Fuse 7.5 A (remote control mirror)	(A)
	Fuse 15 A (seat heater)	(B)
Relay holder	Seat heater relay	(C)

B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1. WIRING DIAGRAM

Refer to “Seat Heater System” in the wiring diagram. <Ref. to WI-133, WIRING DIAGRAM, Seat Heater System.>

2. DIAGNOSTIC CHART

Symptoms	Repair order
Seat heater does not operate.	1. Check the fuse. <Ref. to SE-38, CHECK SEAT HEATER FUSE, INSPECTION, Seat Heater System.>
	2. Check the seat heater relay. <Ref. to SE-38, CHECK SEAT HEATER RELAY, INSPECTION, Seat Heater System.>
	3. Check the seat heater system power supply and ground circuit. <Ref. to SE-39, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Seat Heater System.>
	4. Check the seat heater module. <Ref. to SE-39, SEAT HEATER UNIT, INSPECTION, Seat Heater System.>
	5. Check the seat heater switch circuit. <Ref. to SE-40, SEAT HEATER SWITCH, INSPECTION, Seat Heater System.>

3. CHECK SEAT HEATER FUSE

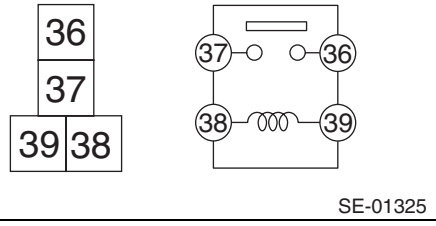
Remove the seat heater fuse and inspect visually.
Is the fuse blown out?

- **Yes** → Replace the fuse.
- **No** → Check the power supply and ground circuits.

4. CHECK SEAT HEATER RELAY

1) Remove the seat heater relay from the relay holder.
2) Measure the resistance between seat heater relay terminals.

Preparation tool: Circuit tester

Terminal No.	Inspection conditions	Standard	Circuit
36 — 37	Always	1 MΩ or more	
36 — 37	Apply battery voltage between terminals 38 — 39.	Less than 1 Ω	

3) Replace the seat heater relay if the inspection result is not within the standard.

5. CHECK POWER SUPPLY AND GROUND CIRCUIT

1) Check power supply circuit
(1) Disconnect the harness connector of seat heater switch.
(2) Turn the ignition switch to ON.
(3) Measure the voltage between harness connector terminal and chassis ground.

Connector & terminal
(R43) No. 7 (+) — Chassis ground (–):
Is the voltage 12 V or more?
- **Yes** → Go to step 2.
- **No** → Check the harness between the seat heater switch and fuse.

2) Check ground circuit
Measure the resistance between harness connector terminal and chassis ground.

Connector & terminal
(R43) No. 2 — Chassis ground:
Is the resistance less than 10 Ω?
- **Yes** → Go to step 3.
- **No** → Repair the harness.

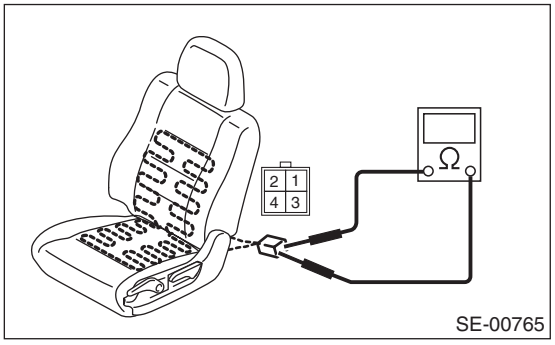
3) Check ground circuit
Measure the resistance between seat heater switch terminals.

Connector & terminal
(R43) No. 7 — (R43) No. 2:
Is the resistance less than 10 Ω?
- **Yes** → The power supply and ground circuits are normal.
- **No** → Replace the seat heater switch.

6. SEAT HEATER UNIT

1) Disconnect the seat heater unit connector, and check the continuity between terminals of connector.

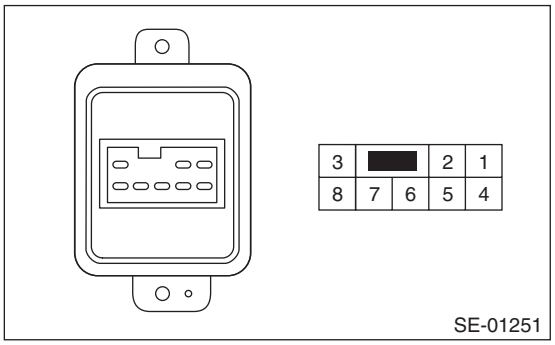
Connector & terminal
HI
No. 1 — No. 3:
No. 3 — No. 4:
LOW
No. 1 — No. 4:



2) If no continuity exists, replace the seat heater module with a new part.

7. SEAT HEATER SWITCH

1) Inspect the continuity between the seat heater switch terminals.



Connector & terminal

HI

No. 7 — No. 2:

No. 7 — No. 4:

No. 7 — No. 8:

LOW

No. 7 — No. 1:

No. 7 — No. 2:

No. 7 — No. 3:

2) If no continuity exists, replace the seat heater switch with a new part.

SECURITY AND LOCKS

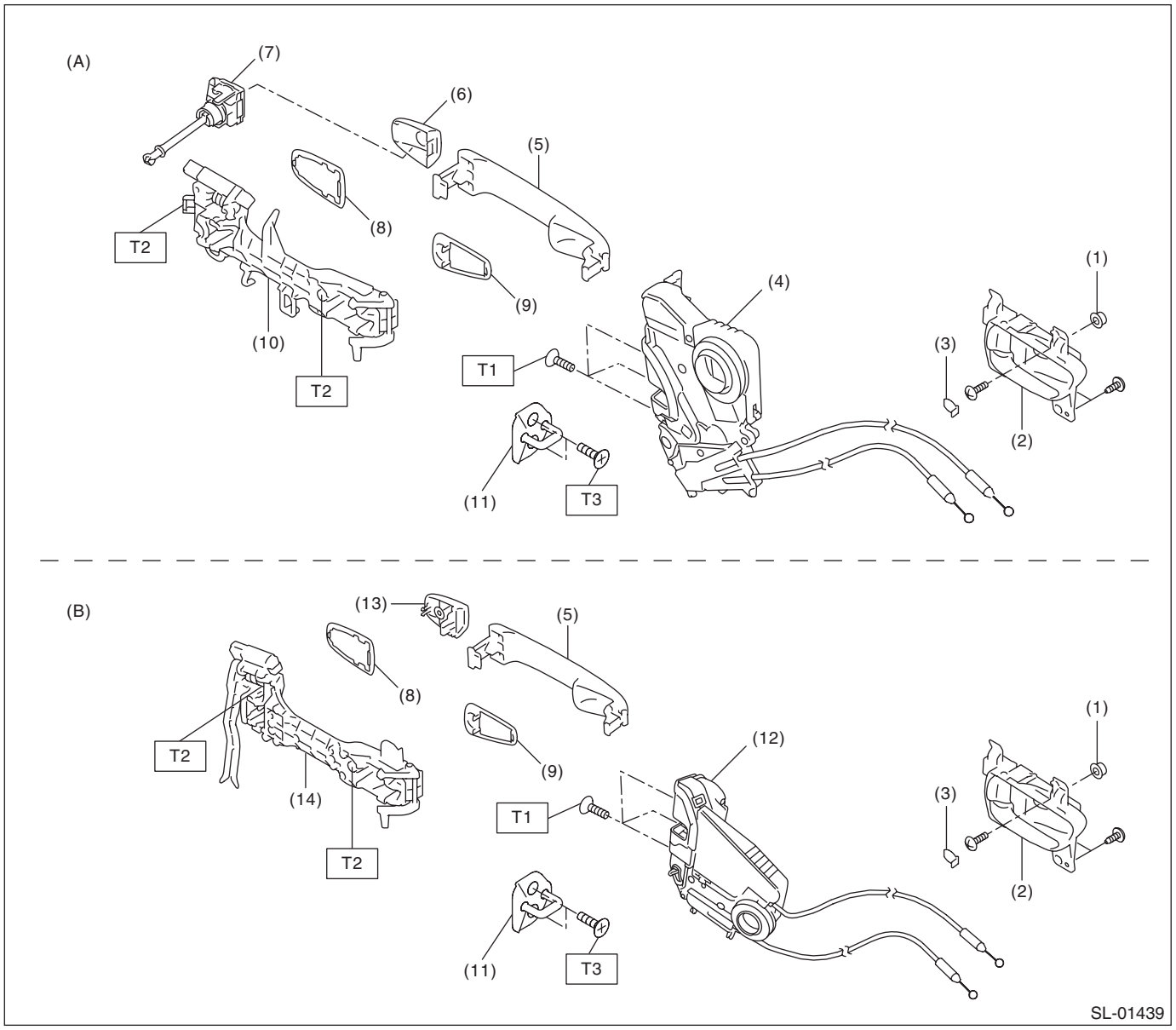
SL

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1. General Description

A: COMPONENT

1. DOOR LOCK ASSEMBLY

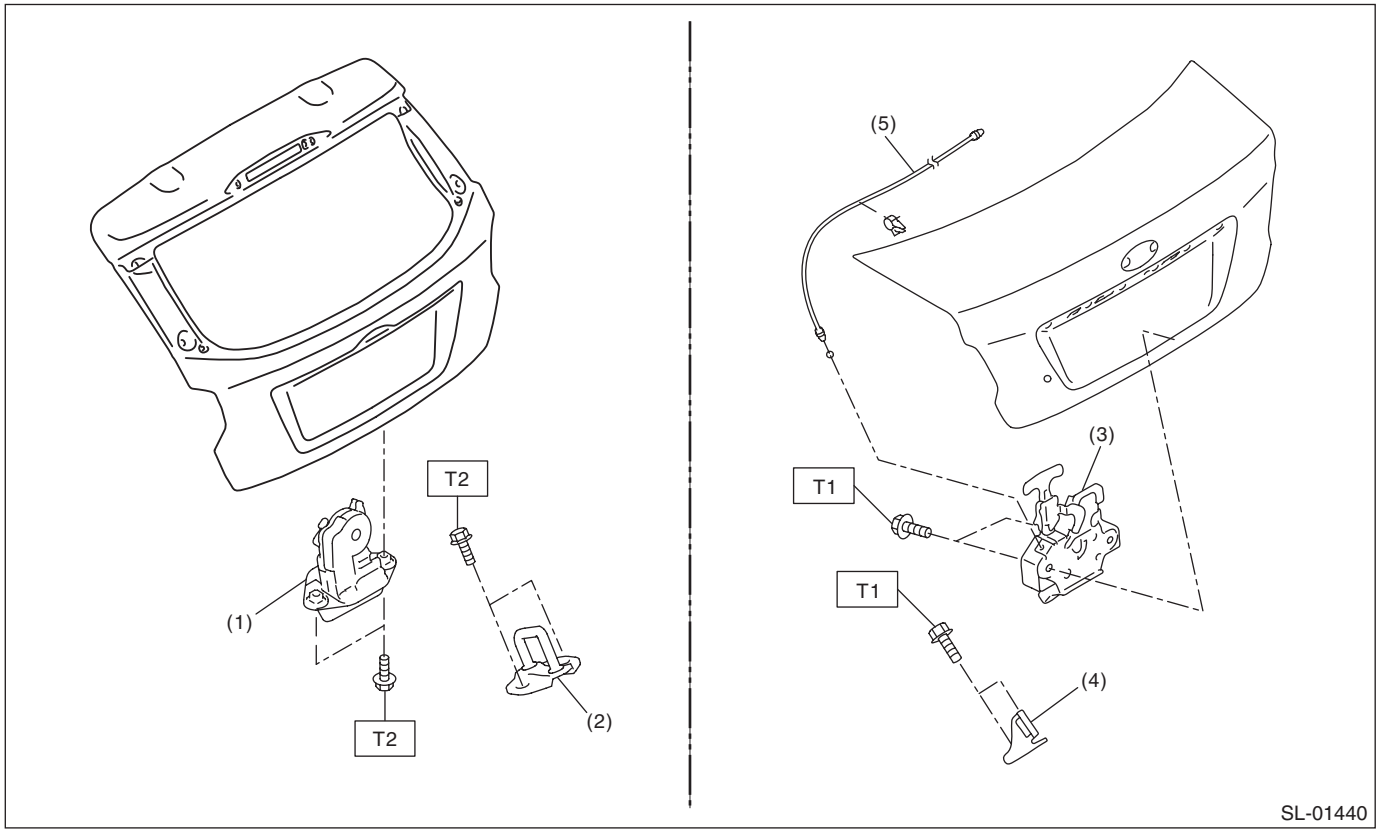


(A) Front
(B) Rear

(1) Grommet - screw
(2) Remote ASSY - door
(3) Cap remote
(4) Latch & actuator ASSY - front
(5) Handle - door outer
(6) Cover - handle front outer
(7) Key lock - door (driver's seat only)
(8) Spacer - door handle outer B
(9) Spacer - door handle outer A
(10) Frame ASSY - front door outer
(11) Striker - door
(12) Latch & actuator ASSY - rear
(13) Cover - handle rear outer
(14) Frame ASSY - rear door outer

Tightening torque:N·m (kgf-m, ft-lb)
T1: 6.5 (0.66, 4.8)
T2: 7.5 (0.76, 5.5)
T3: 18 (1.84, 13.3)

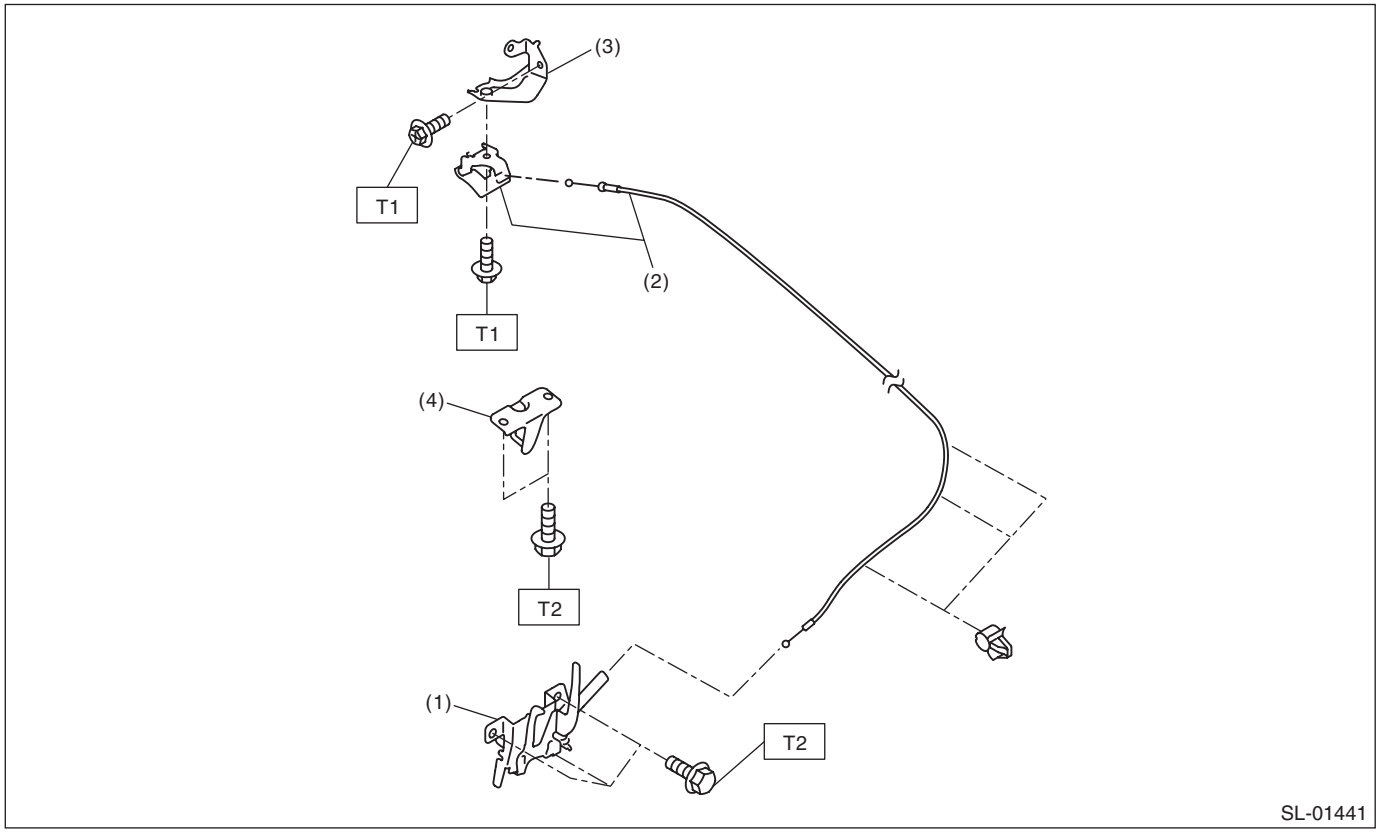
2. REAR GATE LOCK AND TRUNK LID LOCK



(1) Latch & actuator - rear gate
(2) Striker - rear gate
(3) Lock ASSY - trunk lid
(4) Striker - trunk lid
(5) Cable ASSY - trunk lid

Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 25 (2.55, 18.4)

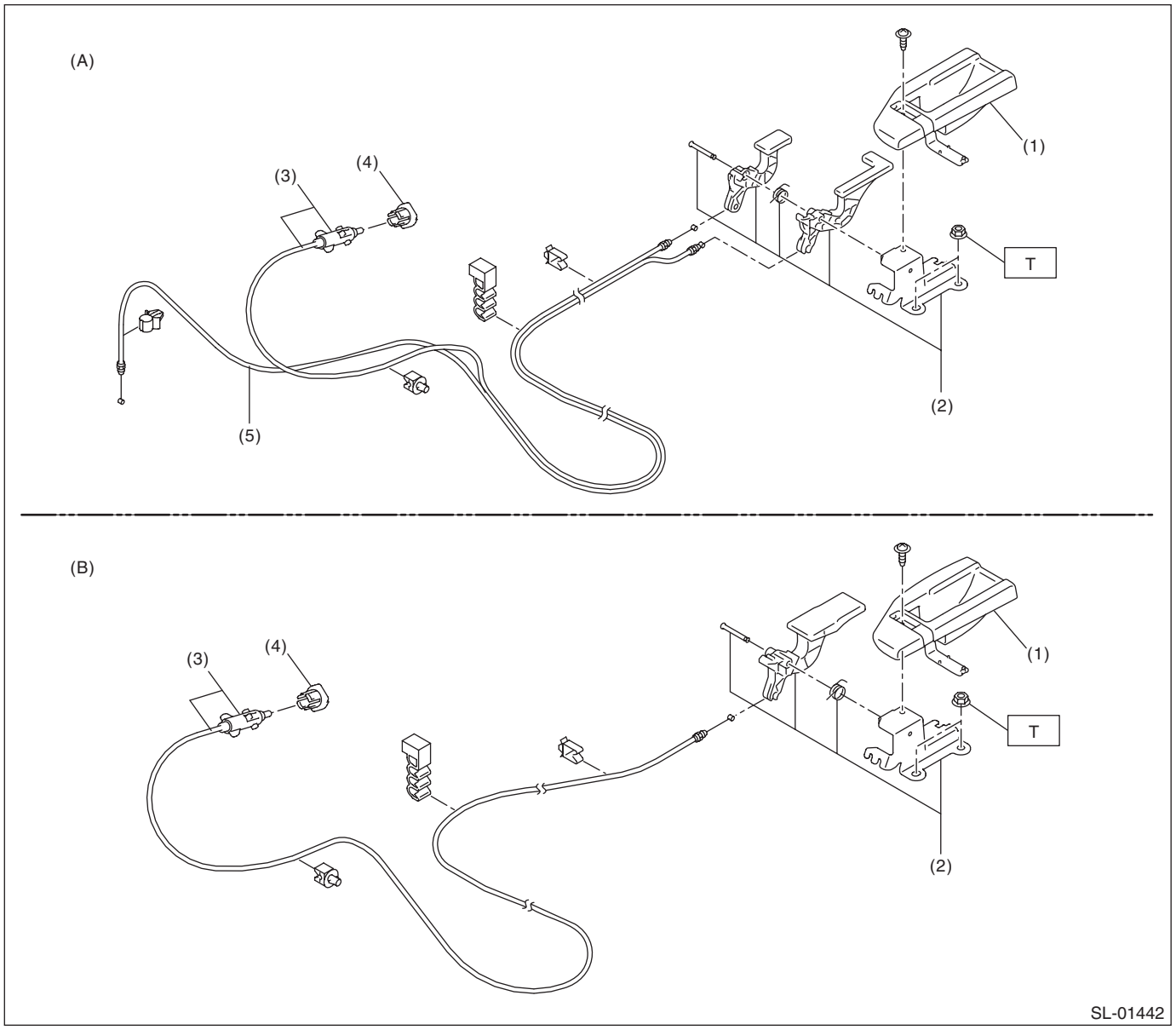
3. FRONT HOOD LOCK



(1) Lock ASSY - front hood
(2) Cable - front hood
(3) Bracket - opener handle
(4) Striker - front hood

Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 33 (3.36, 24.3)

4. REMOTE OPENER

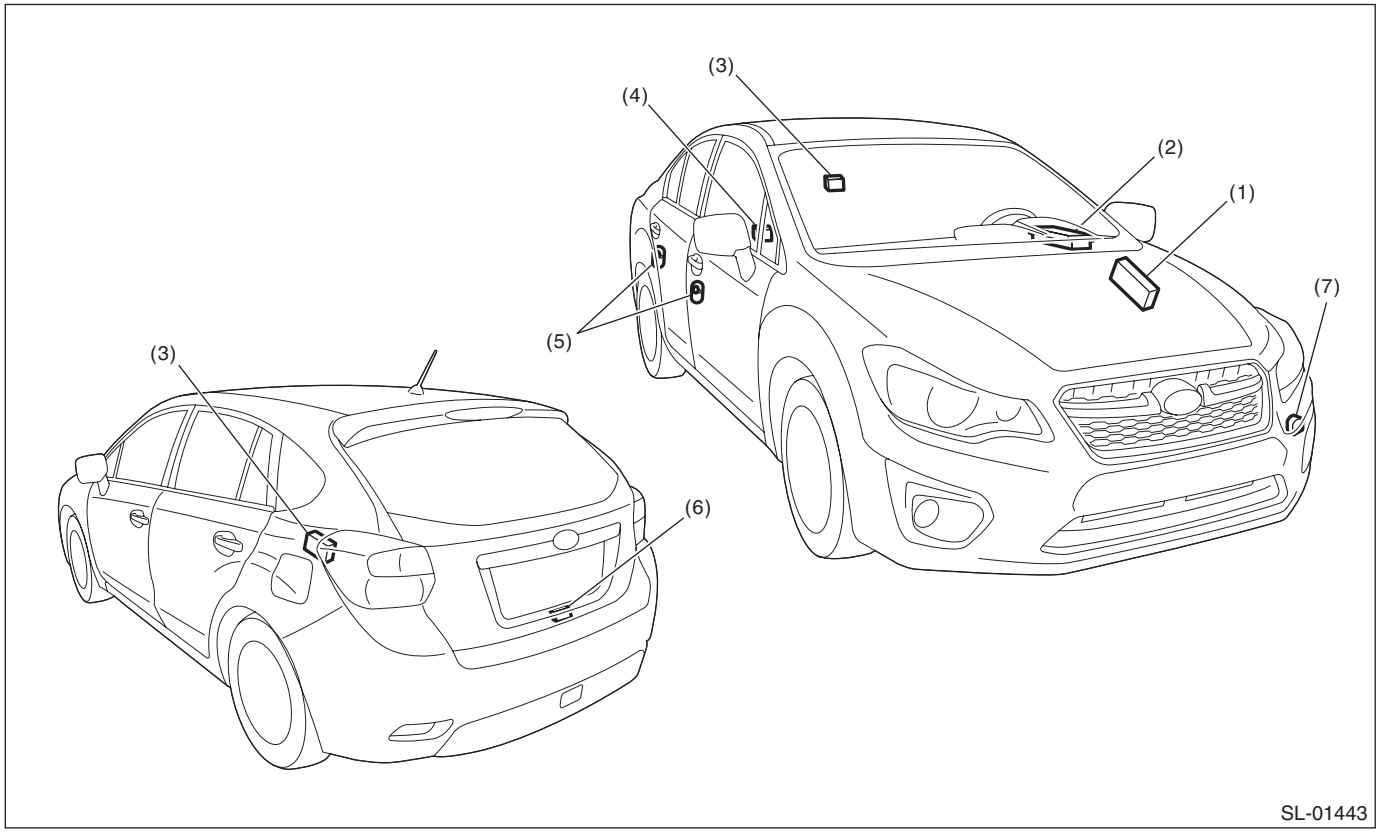


(A) 4 door model
(B) 5 door model

(1) Cover - handle
(2) Pull handle - opener
(3) Cable ASSY - fuel
(4) Holder
(5) Cable ASSY - trunk lid

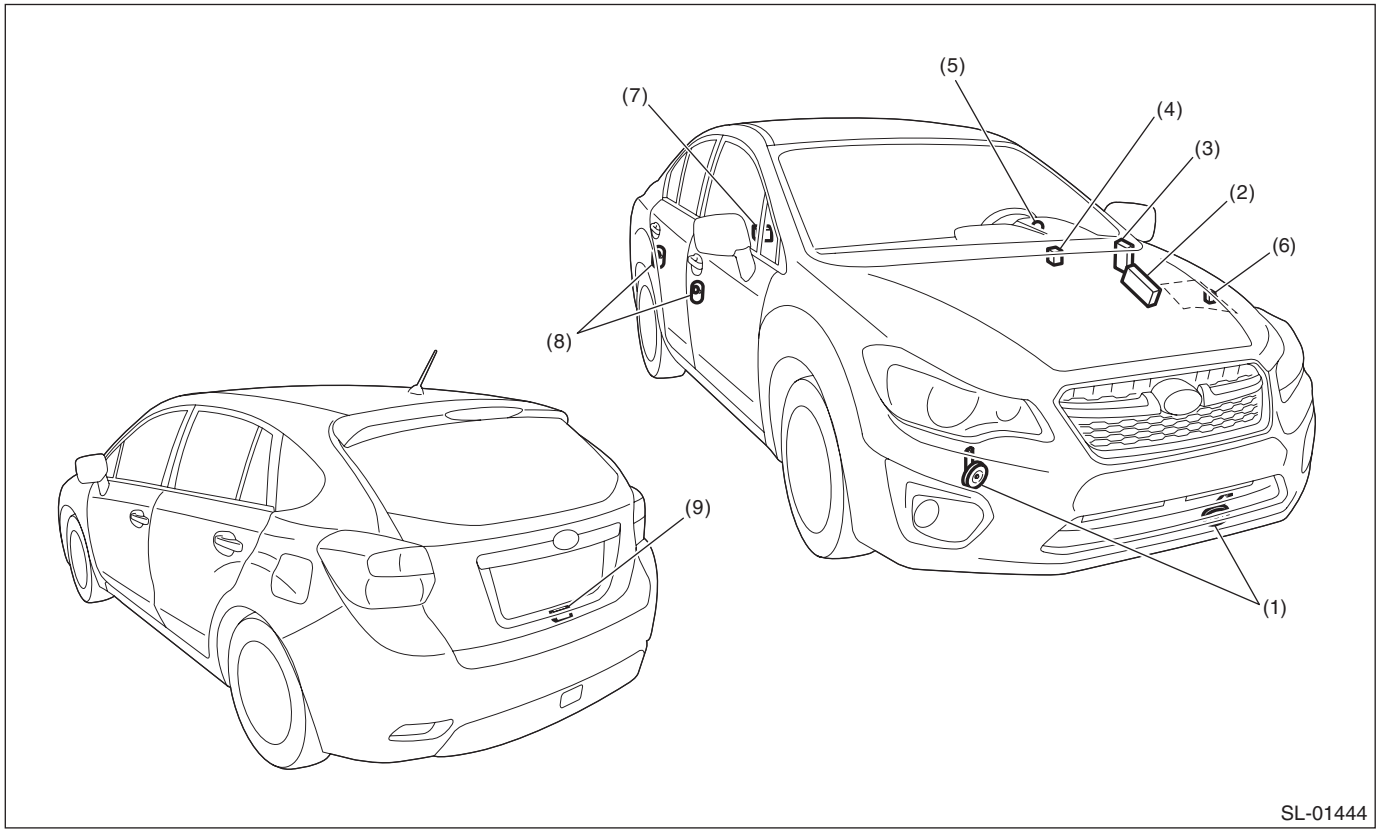
Tightening torque:N·m (kgf-m, ft-lb)
T: 7.5 (0.76, 5.5)

5. KEYLESS ENTRY SYSTEM



(1) Body integrated unit
(2) Power window main switch
(3) Keyless entry control module
(4) Trunk lid latch switch (4 door model)
(5) Door switch
(6) Rear gate latch switch (5 door model)
(7) Keyless buzzer

6. SECURITY SYSTEM



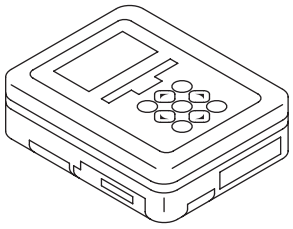
(1)	Horn	(4)	Turn signal and hazard module	(7)	Trunk lid latch switch (4 door model)
(2)	Body integrated unit	(5)	Security indicator light (in combination meter)	(8)	Door switch
(3)	Impact sensor (driver's seat instrument panel side) (dealer option)	(6)	Horn relay (in main fuse box)	(9)	Rear gate latch switch (5 door model)

B: CAUTION

• Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When replacing the audio, control module and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
• Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
• Connect the connectors securely during reassembly.
• After reassembly, make sure that the each component operates normally.
• If any immobilizer related part has been replaced, make sure to register the immobilizer.
• Do not use any electrical test equipment on the airbag system wiring harnesses and connector circuits.
• Be careful not to damage the airbag system wiring harness when servicing the ignition key cylinder.
• If the steering wheel and steering angle sensor (steering roll connector) are removed, perform “VDC sensor midpoint setting mode” of the VDC. <Ref. to VDC-18, VDC SENSOR MIDPOINT SETTING MODE, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>

C: PREPARATION TOOL

1. SPECIAL TOOL

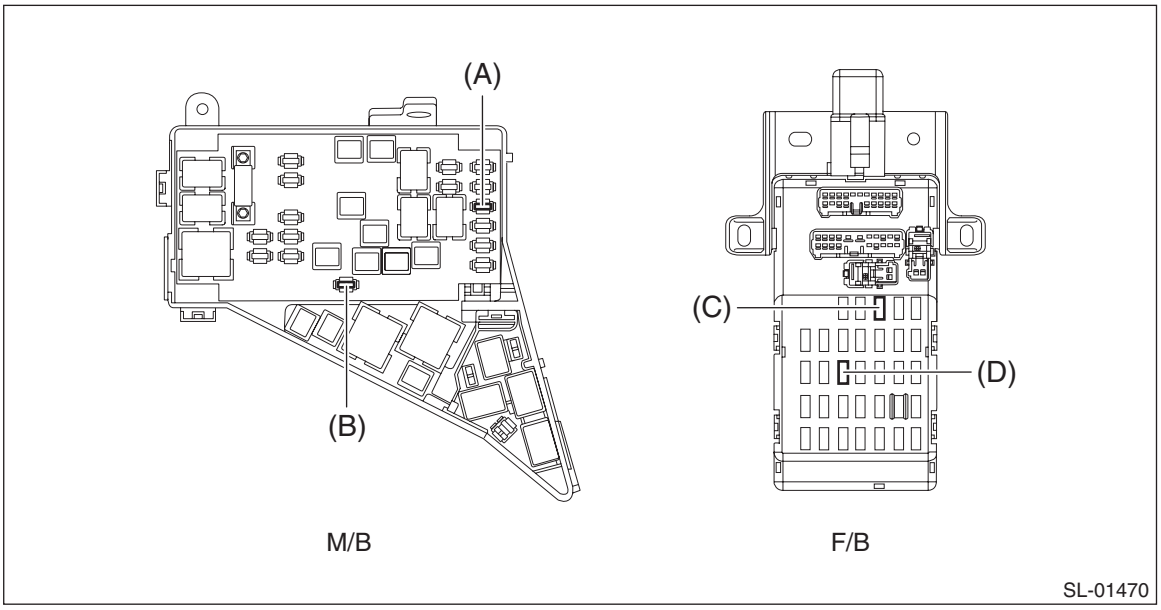
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system. NOTE: For detailed operation procedures of SUBARU SELECT MONITOR III KIT, refer to “PC application help for Subaru Select Monitor”.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Drill	Used for replacing ignition key lock.
Reverse tap	Used for replacing ignition key lock.
TORX® T30	Used for removing and installing door outer handle cover and frame assembly.
Clip remover	Used for removing trim clip.

2. Relay and Fuse

A: LOCATION



Main fuse box	Fuse 15A (K/L)	(A)
	Fuse 20A (K/L, SEC)	(B)
Relay & fuse box	Fuse 15A (K/L)	(C)
	Fuse 10A (K/L)	(D)

NOTE:
For other related fuses, refer to the wiring diagram. <Ref. to WI-15, Power Supply Circuit.>

B: INSPECTION

1. CHECK FUSE

1) Remove the fuse and inspect visually.
2) If the fuse is blown out, replace the fuse.

NOTE:
If the fuse is blown again, check the system wiring harness.

3. Door Lock Control System

A: WIRING DIAGRAM

Refer to “Keyless Entry System” in the wiring diagram. <Ref. to WI-106, WIRING DIAGRAM, Keyless Entry System.>

B: ELECTRICAL SPECIFICATION

1. BODY INTEGRATED UNIT

Refer to “Control Module I/O Signal” of “BODY CONTROL SYSTEM (DIAGNOSTICS)” section. <Ref. to BC(diag)-6, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

C: INSPECTION

1. SYMPTOM CHART

Symptoms	Repair order	Reference
The door lock control system does not operate.	1. Remove and visually inspect the following fuses. • No. 3 (in fuse & relay box) • No. 7 (in fuse & relay box) • No. 8 (in main fuse box)	If the fuse is blown out, replace the fuse with a new part. When there is no defective with the fuse, check the power supply and ground circuit. <Ref. to SL-11, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>
	2. Check the power supply and ground circuit for body integrated unit.	<Ref. to SL-11, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>
	3. Check the door lock switch and the circuit.	<Ref. to SL-11, CHECK DOOR LOCK SWITCH, INSPECTION, Door Lock Control System.>
	4. Check the rear gate opener button and the circuit.	<Ref. to SL-12, CHECK REAR GATE OPENER BUTTON CIRCUIT, INSPECTION, Door Lock Control System.>
	5. Check the door lock actuator and the circuit.	<Ref. to SL-13, CHECK DOOR LOCK ACTUATOR AND CIRCUIT., INSPECTION, Door Lock Control System.>
A specific door lock actuator does not operate.	Check the door lock actuator and circuit.	<Ref. to SL-13, CHECK DOOR LOCK ACTUATOR AND CIRCUIT., INSPECTION, Door Lock Control System.>

2. CHECK POWER SUPPLY AND GROUND CIRCUIT

	Step	Check	Yes	No
1	**CHECK POWER SUPPLY.** 1) Disconnect the connector of body integrated unit. 2) Measure the voltage between the body integrated unit connector and chassis ground. ***Connector & terminal*** ***(i84) No. 6 (+) — Chassis ground (–):*** ***(i171) No. 1 (+) — Chassis ground (–):*** ***(B281) No. 7 (+) — Chassis ground (–):***	Is the voltage 9 V or more?	Go to step **2**.	Check the harness for open or short circuit between body integrated unit and fuse.
2	**CHECK GROUND CIRCUIT.** Measure the resistance between the body integrated unit connector and chassis ground. ***Connector & terminal*** ***(i84) No. 1 — Chassis ground:*** ***(i171) No. 29 — Chassis ground:*** ***(B280) No. 1 — Chassis ground:*** ***(B281) No. 31 — Chassis ground:***	Is the resistance less than 10 Ω?	The power supply and ground circuit are OK.	Repair or replace the harness.

3. CHECK DOOR LOCK SWITCH

	Step	Check	Yes	No
1	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display the data of «Manual lock SW input». NOTE: For detailed procedures, refer to “PC application help for Subaru Select Monitor”.	Does the display switch between OFF ←→ ON when each door lock switch is moved to LOCK?	Go to step **2**.	Go to step **3**.
2	**CHECK DOOR LOCK SWITCH.** From the condition in step 1), operate each door lock switch (driver’s and passenger’s) in the UNLOCK direction.	Does the display switch between OFF ←→ ON?	The door lock switch is OK.	Go to step **4**.
3	**CHECK DOOR LOCK SWITCH.** 1) Disconnect the door lock switch connector. 2) Measure the continuity between terminals when moving the door lock switch in LOCK direction. ***Terminals*** ***Driver’s side*** ***No. A10 — No. B3:*** ***Passenger’s side*** ***No. 4 — No. 5:***	Did the indicator change from “No continuity” (1 MΩ or more) to “Continuity exists” (less than 10 Ω)?	Go to step **4**.	Replace the power window main switch or door lock switch.
4	**CHECK DOOR LOCK SWITCH.** Measure the continuity between terminals when moving the door lock switch in UNLOCK direction. ***Terminals*** ***Driver’s side*** ***No. A2 — No. B3:*** ***Passenger’s side*** ***No. 2 — No. 5:***	Did the indicator change from “No continuity” (1 MΩ or more) to “Continuity exists” (less than 10 Ω)?	Go to step **5**.	Replace the power window main switch or door lock switch.

	Step	Check	Yes	No
5	**CHECK HARNESS.** Measure the resistance between the door lock switch connector and chassis ground. ***Connector & terminal*** ***Driver's side*** ***(D102) No. 3 — Chassis ground:*** ***Passenger's side*** ***(D125) No. 5 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **6**.	Repair or replace the harness.
6	**CHECK HARNESS.** Check the harness between body integrated unit and door lock switch. ***Connector & terminal*** ***Driver's side*** ***(D7) No. 10 — (i84) No. 9:*** ***(D7) No. 2 — (i84) No. 20:*** ***Passenger's side*** ***(D125) No. 4 — (i84) No. 9:*** ***(D125) No. 2 — (i84) No. 20:***	Is harness normal?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Repair or replace the harness.

4. CHECK REAR GATE OPENER BUTTON CIRCUIT

	Step	Check	Yes	No
1	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display the data of «R Gate Release SW input». NOTE: For detailed procedures, refer to "PC application help for Subaru Select Monitor".	Does the display change to OFF ←→ ON, when the rear gate opener button is operated?	Rear gate opener button is normal.	Go to step **2**.
2	**CHECK HARNESS.** 1) Disconnect the connectors of body integrated unit and rear gate opener button. 2) Check the harness between the body integrated unit and rear gate opener button. ***Connector & terminal*** ***(i84) No. 10 — (D47) No. 1:***	Is harness normal?	Go to step **3**.	Repair or replace the harness.
3	**CHECK HARNESS.** Measure the resistance between the rear gate opener button connector and chassis ground. ***Connector & terminal*** ***(D47) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the harness.
4	**CHECK REAR GATE OPENER BUTTON.** Measure the resistance between terminals both when the rear gate opener button is pressed and when not pressed. ***Terminals*** ***No. 1 — No. 2:***	Is the resistance less than 10 Ω when the switch is pressed and 1 MΩ or more when not pressed?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Replace the rear gate opener button.

5. CHECK DOOR LOCK ACTUATOR AND CIRCUIT

	Step	Check	Yes	No
1	**CHECK HARNESS (DOOR LOCK).** 1) Disconnect the body integrated unit and each door lock actuator connector. 2) Check the harness between body integrated unit and each door lock actuator. ***Connector & terminal*** ***Front door LH*** ***(i171) No. 2 — (D72) No. 4:*** ***Front door RH*** ***(i171) No. 2 — (D18) No. 4:*** ***Rear door LH*** ***(i171) No. 2 — (D26) No. 4:*** ***Rear door RH*** ***(i171) No. 2 — (D32) No. 4:***	Is harness normal?	Go to step **2**.	Repair or replace the harness.
2	**CHECK HARNESS (DOOR UNLOCK).** Check the harness between body integrated unit and each door lock actuator. ***Connector & terminal*** ***Front door LH*** ***(i171) No. 4 — (D72) No. 1:*** ***Front door RH*** ***(i171) No. 3 — (D18) No. 1:*** ***Rear door LH*** ***(i171) No. 3 — (D26) No. 1:*** ***Rear door RH*** ***(i171) No. 3 — (D32) No. 1:***	Is harness normal?	4 door model: Go to step **5**. 5 door model: Go to step **3**.	Repair or replace the harness.
3	**CHECK HARNESS (REAR GATE UNLOCK).** Check the harness between the body integrated unit and rear gate lock actuator. ***Connector & terminal*** ***(i171) No. 7 — (D46) No. 1:***	Is harness normal?	Go to step **4**.	Repair or replace the harness.
4	**CHECK HARNESS (REAR GATE UNLOCK).** Measure the resistance between the rear gate lock actuator connector and chassis ground. ***Connector & terminal*** ***(D46) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **7**.	Repair or replace the harness.
5	**CHECK HARNESS (TRUNK UNLOCK).** Check the harness between the body integrated unit and trunk lid lock actuator. ***Connector & terminal*** ***(i171) No. 7 — (R186) No. 1:***	Is harness normal?	Go to step **6**.	Repair or replace the harness.
6	**CHECK HARNESS (TRUNK UNLOCK).** Measure the resistance between the trunk lid lock actuator connector and chassis ground. ***Connector & terminal*** ***(R186) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **7**.	Repair or replace the harness.
7	**CHECK BODY INTEGRATED UNIT OUTPUT SIGNAL.** 1) Connect the body integrated unit connector. 2) Measure the voltage between terminals of the body integrated unit when operating the door lock switch to LOCK direction. ***Connector & terminal*** ***Except for front door LH*** ***(i171) No. 2 (+) — (i171) No. 3 (–):*** ***Front door LH*** ***(i171) No. 2 (+) — (i171) No. 4 (–):***	Does the voltage change from less than 1 V → 9 V or more? (During lock output)	Go to step **8**.	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>

	Step	Check	Yes	No
8	**CHECK BODY INTEGRATED UNIT OUTPUT SIGNAL.** Measure the voltage between terminals of the body integrated unit when operating the door lock switch to UNLOCK direction. ***Connector & terminal*** ***Except for front door LH*** ***(i171) No. 3 (+) — (i171) No. 2 (–):*** ***Front door LH*** ***(i171) No. 4 (+) — (i171) No. 2 (–):***	Does the voltage change from less than 1 V → 9 V or more? (During unlock output)	Go to step **9**.	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>
9	**CHECK BODY INTEGRATED UNIT OUTPUT SIGNAL.** Measure the voltage between body integrated unit and chassis ground when operating the rear gate opener button. ***Connector & terminal*** ***(i171) No. 7 (+) — Chassis ground (–):***	Does the voltage change from less than 1 V → 9 V or more? (During unlock output)	Go to step **10**.	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>
10	**CHECK DOOR LOCK ACTUATOR.** Check the door lock actuator. • Front door lock actuator: <Ref. to SL-37, INSPECTION, Front Door Latch and Door Lock Actuator Assembly.> • Rear door lock actuator: <Ref. to SL-44, INSPECTION, Rear Door Latch and Door Lock Actuator Assembly.>	Is the door lock actuator OK?	• 4 door model: Go to step **12**. • 5 door model: Go to step **11**.	Replace the door latch and door lock actuator assembly.
11	**CHECK REAR GATE LOCK ACTUATOR.** Check the rear gate lock actuator. <Ref. to SL-46, Rear Gate Latch and Actuator Assembly.>	Is the rear gate lock actuator normal?	Check the connection status of the harness and connector that may have a temporary poor contact.	Replace the rear gate latch and actuator assembly.
12	**CHECK TRUNK LID LOCK ACTUATOR.** Check the trunk lid lock actuator. <Ref. to SL-48, Trunk Lid Latch and Actuator Assembly.>	Is trunk lid lock actuator normal?	Check the connection status of the harness and connector that may have a temporary poor contact.	Replace the trunk lid latch & actuator assembly.

4. Keyless Entry System

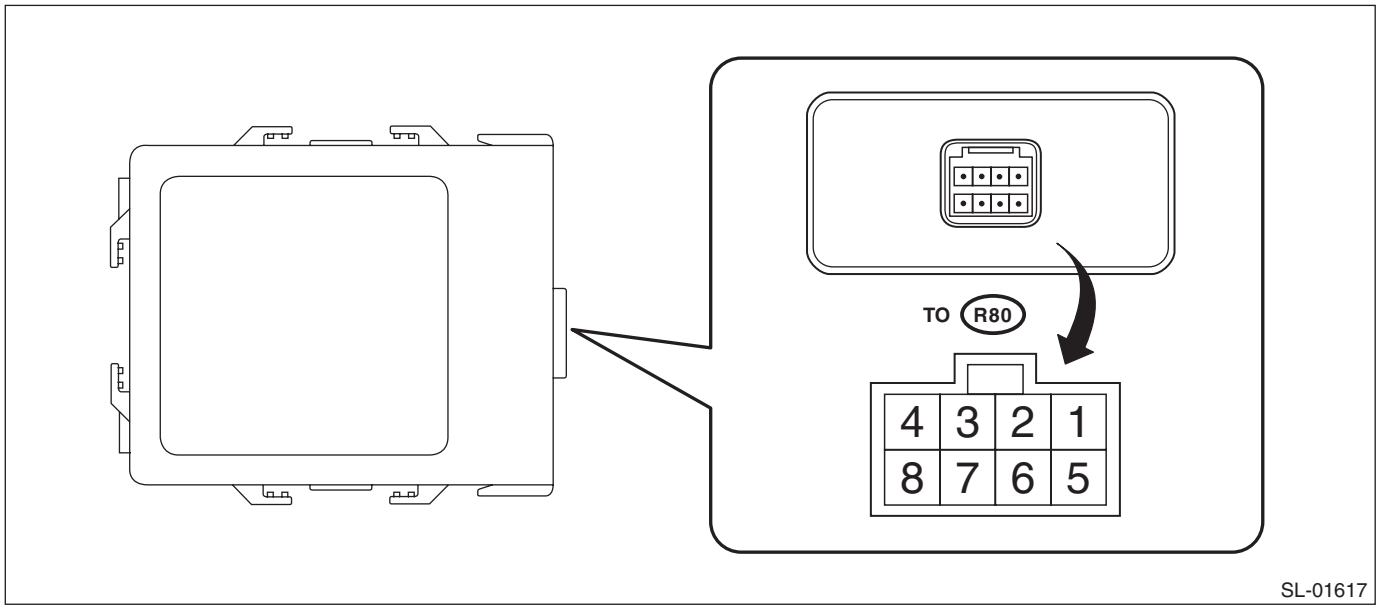
A: WIRING DIAGRAM

Refer to “Keyless Entry System” in the wiring diagram. <Ref. to WI-106, WIRING DIAGRAM, Keyless Entry System.>

B: ELECTRICAL SPECIFICATION

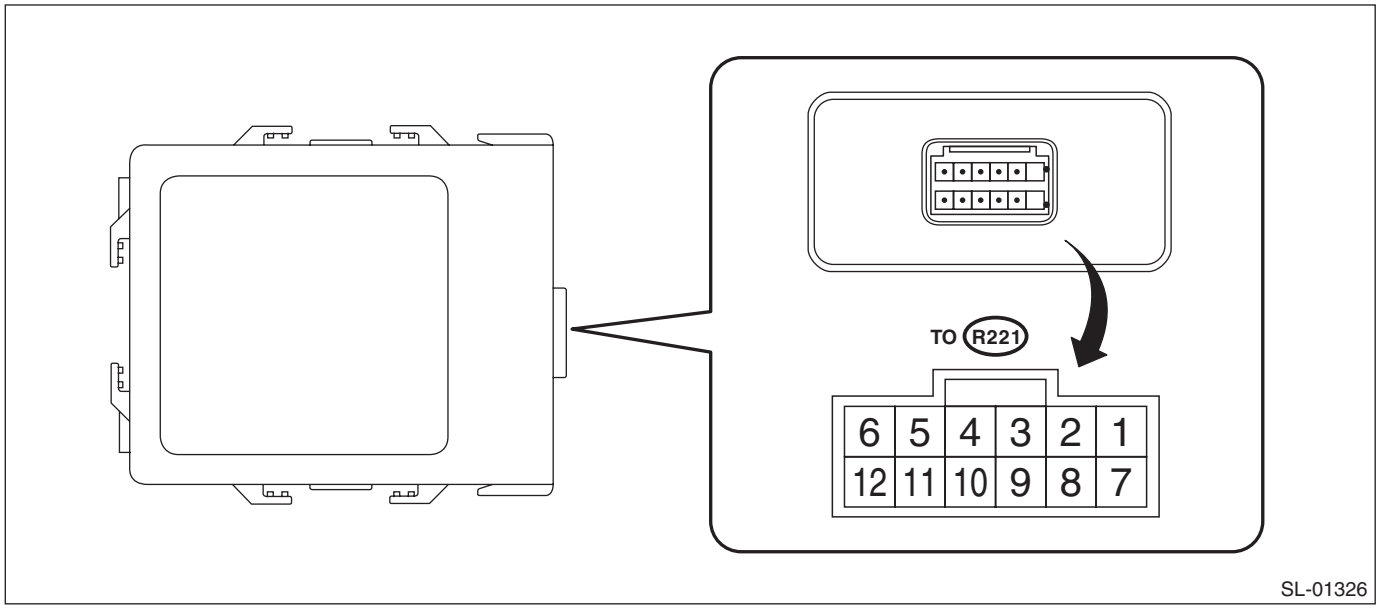
1. KEYLESS ENTRY CONTROL MODULE

- Model without tire pressure monitoring system



Terminal No.	Item	Measuring condition	Standard
3 (U-ART com.)	—	Cannot be measured	—
4 (+B) ←→ Chassis ground	Voltage	Always	10 — 14 V
7 (GND) ←→ Chassis ground	Resistance	Always	Less than 1 Ω

- Model with tire pressure monitoring system



Terminal No.	Item	Measuring condition	Standard
4 (IG) ←→ Chassis ground	Resistance	IG OFF → ON	0 V → 10 — 14 V
5 (GND) ←→ Chassis ground	Resistance	Always	Less than 1 Ω
6 (+B) ←→ Chassis ground	Voltage	Always	10 — 14 V
11 (U-ART com.)	—	Cannot be measured	—

2. BODY INTEGRATED UNIT

Refer to “Control Module I/O Signal” of “BODY CONTROL SYSTEM (DIAGNOSTICS)” section. <Ref. to BC(diag)-6, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

C: INSPECTION

1. SYMPTOM CHART

Symptoms	Repair order	Reference
None of the functions of the keyless entry system operate.	1. Check the keyless transmitter battery.	<Ref. to SL-18, CHECK KEYLESS TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Remove and visually inspect the following fuses. • No. 3 (in fuse & relay box) • No. 7 (in fuse & relay box) • No. 8 (in main fuse box)	If the fuse is blown out, replace the fuse with a new part. When there is no defective with the fuse, check the power supply and ground circuit. <Ref. to SL-11, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>
	3. Check the keyless entry control module.	<Ref. to SL-19, CHECK KEYLESS ENTRY CONTROL MODULE, INSPECTION, Keyless Entry System.>
	4. Check the power supply and ground circuit for body integrated unit.	<Ref. to SL-19, CHECK BODY INTEGRATED UNIT POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Keyless Entry System.>
	5. Check the key warning switch.	<Ref. to SL-21, CHECK KEY WARNING SWITCH., INSPECTION, Keyless Entry System.>
	6. Check the door switch signal.	<Ref. to SL-20, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	7. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>
The keyless transmitter cannot be registered.	1. Check the keyless transmitter battery.	<Ref. to SL-18, CHECK KEYLESS TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the key warning switch.	<Ref. to SL-21, CHECK KEY WARNING SWITCH., INSPECTION, Keyless Entry System.>
	3. Check the keyless entry control module.	<Ref. to SL-19, CHECK KEYLESS ENTRY CONTROL MODULE, INSPECTION, Keyless Entry System.>
	4. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>
Door lock or unlock does not operate. NOTE: If the door lock control system does not operate when using the door lock switch, check the door lock control system. <Ref. to SL-10, INSPECTION, Door Lock Control System.>	1. Check the keyless transmitter battery.	<Ref. to SL-18, CHECK KEYLESS TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the key warning switch.	<Ref. to SL-21, CHECK KEY WARNING SWITCH., INSPECTION, Keyless Entry System.>
	3. Check the keyless entry control module.	<Ref. to SL-19, CHECK KEYLESS ENTRY CONTROL MODULE, INSPECTION, Keyless Entry System.>
	4. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>

Symptoms	Repair order	Reference
The keyless buzzer and hazard light do not operate.	1. Check the keyless buzzer operation.	<Ref. to SL-23, CHECK KEYLESS BUZZER, INSPECTION, Keyless Entry System.>
	2. Check the hazard light operation.	<Ref. to SL-23, CHECK HAZARD LIGHT OPERATION, INSPECTION, Keyless Entry System.>
	3. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>
Room light does not operate.	1. Check the room light operation.	<Ref. to SL-22, CHECK ROOM LIGHT OPERATION, INSPECTION, Keyless Entry System.>
	2. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>
Ignition switch illumination does not operate.	1. Check the ignition switch illumination.	<Ref. to SL-25, CHECK IGNITION SWITCH ILLUMINATION, INSPECTION, Keyless Entry System.>
	2. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>

2. CHECK KEYLESS TRANSMITTER BATTERY AND FUNCTION

CAUTION:
Be sure to reset keyless transmitter of other vehicles registered to the inspection target vehicle, and vehicles to which keyless transmitters were registered for inspection, to the condition before performing the inspection. (Re-register the keyless transmitters.)

	Step	Check	Yes	No
1	**CHECK KEYLESS TRANSMITTER BATTERY.** 1) Remove the battery from the keyless transmitter. <Ref. to SL-79, REMOVAL, Keyless Transmitter.> 2) Check the battery voltage. <Ref. to SL-80, INSPECTION, Keyless Transmitter.>	Is the voltage 2.5 V or more?	Go to step **2**.	Replace the keyless transmitter battery.
2	**CHECK KEYLESS TRANSMITTER.** Register the keyless transmitter which operates normally on other vehicles to the inspection target vehicle. <Ref. to SL-80, REGISTRATION OF KEYLESS TRANSMITTER WITH SUBARU SELECT MONITOR, REPLACEMENT, Keyless Transmitter.> 1) Close all the doors and rear gate (5 door model) or trunk lid (4 door model) of the inspection target vehicle. 2) Using the keyless transmitter, lock and unlock the doors and rear gate of vehicle. For the 4 door model, unlock the trunk lid.	Can lock, unlock of doors and unlock of the trunk lid be performed properly on the inspection target vehicle?	Go to step **3**.	Due to vehicle malfunction, continue the keyless entry system diagnosis.
3	**CHECK KEYLESS TRANSMITTER.** Register the keyless transmitter of the inspected vehicle to another vehicle whose keyless system operates normally. <Ref. to SL-80, REGISTRATION OF KEYLESS TRANSMITTER WITH SUBARU SELECT MONITOR, REPLACEMENT, Keyless Transmitter.>	Is the keyless transmitter registered correctly?	Go to step **4**.	Replace the keyless transmitter and perform registration.

	Step	Check	Yes	No
4	**CHECK KEYLESS TRANSMITTER.** Check the registered keyless transmitter. 1) Close all the doors and rear gate (5 door model) or trunk lid (4 door model) of the vehicle on which the keyless system works normally. 2) Using the keyless transmitter, lock and unlock the doors and rear gate of vehicle. For the 4 door model, unlock the trunk lid.	Can lock, unlock of doors and unlock of the trunk lid be performed properly on the vehicle?	Keyless transmitter is OK.	Replace the keyless transmitter and perform registration.

3. CHECK KEYLESS ENTRY CONTROL MODULE

	Step	Check	Yes	No
1	**CHECK BODY INTEGRATED UNIT.** Read the DTC using Subaru Select Monitor. NOTE: For detailed procedures, refer to "PC application help for Subaru Select Monitor".	Is DTC B1500 "Keyless UART com. Malfunction" displayed?	Go to step **2**.	Keyless entry control module is normal.
2	**CHECK POWER SUPPLY.** 1) Disconnect the keyless entry control module connector. 2) Measure the voltage between keyless entry control module connector and chassis ground. ***Connector & terminal*** ***Model without tire pressure monitoring system*** ***(R80) No. 4 (+) — Chassis ground (–):*** ***Model with tire pressure monitoring system*** ***(R221) No. 6 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Check the harness for open or short circuits between the keyless entry control module and the fuse.
3	**CHECK GROUND CIRCUIT.** Measure the resistance between keyless entry control module connector and chassis ground. ***Connector & terminal*** ***Model without tire pressure monitoring system*** ***(R80) No. 7 — Chassis ground:*** ***Model with tire pressure monitoring system*** ***(R221) No. 5 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the harness.
4	**CHECK KEYLESS ENTRY CONTROL MODULE CIRCUIT.** 1) Disconnect the body integrated unit connector. 2) Check the harness between keyless entry control module and body integrated unit. ***Connector & terminal*** ***Model without tire pressure monitoring system*** ***(i171) No. 11 — (R80) No. 3:*** ***Model with tire pressure monitoring system*** ***(i171) No. 11 — (R221) No. 11:***	Is harness normal?	Replace the keyless entry control module.	Repair or replace the harness.

4. CHECK BODY INTEGRATED UNIT POWER SUPPLY AND GROUND CIRCUIT

Refer to the "INSPECTION of POWER SUPPLY AND GROUND CIRCUIT" of "Door Lock Control System" for detailed procedures. <Ref. to SL-11, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>

5. CHECK DOOR SWITCH

	Step	Check	Yes	No
1	**CHECK CURRENT DATA.** Display the following items using Subaru Select Monitor. • «Driver's door SW input» • «P-door SW input» • «Rear right door SW input» • «Rear left door SW input» • «R Gate SW input» NOTE: For detailed procedures, refer to "PC application help for Subaru Select Monitor".	Does the display switch between OFF ←→ ON when each door, rear gate, or trunk lid is opened/closed?	The door switches, trunk lid latch switch or rear gate latch switch are normal.	Go to step **2**.
2	**CHECK HARNESS.** 1) Disconnect the connector of body integrated unit. 2) Disconnect the connector of the door switch, trunk lid latch switch or rear gate latch switch that the display does not change. 3) Check the harness between body integrated unit and defective switch. ***Connector & terminal*** ***Front door LH*** ***(i84) No. 14 — (R9) No. 1:*** ***Front door RH*** ***(i84) No. 13 — (R12) No. 1:*** ***Rear door LH*** ***(i84) No. 24 — (R22) No. 1:*** ***Rear door RH*** ***(i84) No. 25 — (R16) No. 1:*** ***Trunk lid*** ***(i84) No. 33 — (R186) No. 3:*** ***Rear gate*** ***(i84) No. 33 — (D46) No. 3:***	Is harness normal?	Go to step **3**.	Repair or replace the harness.
3	**CHECK HARNESS.** Measure the resistance between the faulty switch connector and chassis ground. ***Connector & terminal*** ***Front door LH*** ***(R9) No. 3 — Chassis ground:*** ***Front door RH*** ***(R12) No. 3 — Chassis ground:*** ***Rear door LH*** ***(R22) No. 3 — Chassis ground:*** ***Rear door RH*** ***(R16) No. 3 — Chassis ground:*** ***Trunk lid*** ***(R186) No. 2 — Chassis ground:*** ***Rear gate*** ***(D46) No. 4 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the harness.

	Step	Check	Yes	No
4	**CHECK DOOR SWITCH.** Measure the resistance between faulty switch terminals. ***Terminals*** ***Front LH door switch*** ***No. 1 — No. 3:*** ***Front RH door switch*** ***No. 1 — No. 3:*** ***Rear LH door switch*** ***No. 1 — No. 3:*** ***Rear RH door switch*** ***No. 1 — No. 3:*** ***Trunk lid latch switch*** ***No. 3 — No. 2:*** ***Rear gate latch switch*** ***No. 3 — No. 4:***	Is the resistance 1 MΩ or more when the door switch is pushed, or the trunk lid or rear gate is closed?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Replace the faulty parts. • Door switches • Trunk lid latch and actuator ASSY • Rear gate latch and actuator ASSY

6. CHECK KEY WARNING SWITCH

	Step	Check	Yes	No
1	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, display the data of «key-lock warning SW». NOTE: For detailed procedures, refer to “PC application help for Subaru Select Monitor”.	Is the normal input signal displayed when the key is inserted in/removed from the ignition switch?	The key warning switch is OK.	Go to step **2**.
2	**CHECK FUSE.** Remove and visually check fuse No. 14 (in the main fuse box).	Is the fuse blown out?	Replace the fuse with a new part.	Go to step **3**.
3	**CHECK KEY WARNING SWITCH CIRCUIT.** 1) Disconnect the connector of body integrated unit. 2) Insert the key into ignition switch. (LOCK position) 3) Measure the voltage between the body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 4 (+) — Chassis ground (–):***	Is the voltage 9 V or more?	Go to step **4**.	Go to step **5**.
4	**CHECK KEY WARNING SWITCH CIRCUIT.** 1) Remove the key from ignition switch. 2) Measure the voltage between the body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 4 (+) — Chassis ground (–):***	Is the voltage less than 1.5 V?	The key warning switch is OK.	Go to step **5**.
5	**CHECK KEY WARNING SWITCH.** 1) Disconnect the connector of key warning switch. 2) Insert the key into ignition switch. (LOCK position) 3) Measure the resistance between key warning switch terminals. ***Terminals*** ***No. 1 — No. 2:***	Is the resistance less than 1 Ω?	Go to step **6**.	Replace the key warning switch.

	Step	Check	Yes	No
6	**CHECK KEY WARNING SWITCH.** 1) Remove the key from ignition switch. 2) Measure the resistance between key warning switch terminals. ***Terminals*** ***No. 1 — No. 2:***	Is the resistance 1 MΩ or more?	Check the following: • Harness for open circuits and shorts between the key warning switch and fuse. • Harness for open or short between the body integrated unit and key warning switch	Replace the key warning switch.

7. CHECK ROOM LIGHT OPERATION

	Step	Check	Yes	No
1	**CHECK ROOM LIGHT OPERATION.** Make sure the room light illuminates when the room light switch is ON, and goes off when the switch is OFF.	Does the room light illuminate or go off?	Go to step **2**.	Check the room light circuit. <Ref. to LI-82, INSPECTION, Room Light.>
2	**CHECK ROOM LIGHT OPERATION.** 1) Turn the room light switch to the "DOOR" position. 2) Open and close any door.	Does the room light illuminate ←→ go off (including off delay) when the door is opened and closed?	Go to step **3**.	Go to step **4**.
3	**CHECK KEYLESS ENTRY OPERATION.** Press the LOCK/UNLOCK button of the keyless transmitter.	Does it operate properly?	Room light is normal.	Check keyless entry system. <Ref. to SL-17, SYMPTOM CHART, INSPECTION, Keyless Entry System.>
4	**CHECK ROOM LIGHT.** Check the room light. <Ref. to LI-82, INSPECTION, Room Light.>	Is room light normal?	Go to step **5**.	Replace the bulb or room light assembly.
5	**CHECK HARNESS.** 1) Disconnect the connectors of body integrated unit and room light. 2) Check the harness between body integrated unit and room light. ***Connector & terminal*** ***(i84) No. 4 — (R52) No. 2:***	Is harness normal?	Go to step **6**.	Repair or replace the harness.
6	**CHECK HARNESS.** Measure the voltage between the room light connector and chassis ground. ***Connector & terminal*** ***(R52) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Repair or replace the harness.

8. CHECK HAZARD LIGHT OPERATION

	Step	Check	Yes	No
1	**CHECK HAZARD LIGHT OPERATION.** Make sure the hazard light blinks when hazard switch is turned to ON.	Does the hazard light blink?	Go to step **2**.	Check the hazard light circuit.
2	**CHECK BODY INTEGRATED UNIT SETTING.** Display the data of «Abnormal warning lamp flashing setting» using Subaru Select Monitor. NOTE: For detailed procedures, refer to “PC application help for Subaru Select Monitor”.	Is the setting ON?	Go to step **3**.	Turn the setting to ON.
3	**CHECK CURRENT DATA.** Display the data of «Hazard Output» using Subaru Select Monitor.	Is output signal present when operating the transmitter LOCK/UNLOCK button?	Go to step **4**.	Go to step **5**.
4	**CHECK KEYLESS ENTRY OPERATION.** Press the LOCK/UNLOCK button of the keyless transmitter.	Does it operate properly?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Check keyless entry system. <Ref. to SL-17, SYMPTOM CHART, INSPECTION, Keyless Entry System.>
5	**CHECK HAZARD LIGHT CIRCUIT.** 1) Disconnect the connectors of the body integrated unit and turn signal & hazard unit. 2) Check the harness between body integrated unit and turn signal & hazard unit. ***Connector & terminal*** ***(i171) No. 18 — (B32) No. 8:***	Is harness normal?	Check body integrated unit. <Ref. to BC(diag)-2, Basic Diagnostic Procedure.>	Repair or replace the harness.

9. CHECK KEYLESS BUZZER

	Step	Check	Yes	No
1	**CHECK BODY INTEGRATED UNIT SETTING.** Display the data of «Answer-back buzzer setup» using Subaru Select Monitor. NOTE: For detailed procedures, refer to “PC application help for Subaru Select Monitor”.	Is the setting ON?	Go to step **2**.	Turn the setting to ON.
2	**CHECK BODY INTEGRATED UNIT.** Select and perform the «Keyless Buzzer Output» using Subaru Select Monitor.	Does the keyless buzzer sound?	Check the keyless control module.	Go to step **3**.
3	**CHECK KEYLESS BUZZER CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors of the body integrated unit and keyless buzzer. 3) Check the harness between body integrated unit and keyless buzzer. ***Connector & terminal*** ***(B280) No. 20 — (B164) No. 1:***	Is harness normal?	Go to step **4**.	Repair or replace the harness.
4	**CHECK KEYLESS BUZZER CIRCUIT.** Measure the resistance between the keyless buzzer connector and chassis ground. ***Connector & terminal*** ***(B164) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **5**.	Repair or replace the harness.

	Step	Check	Yes	No
5	**CHECK KEYLESS BUZZER.** 1) Remove the keyless buzzer. 2) Connect the battery positive (+) terminal to terminal No. 1 of the keyless buzzer, and the negative (–) terminal to terminal No. 2, and check whether or not the buzzer will sound.	Does the keyless buzzer sound?	Go to step **6**.	Replace the keyless buzzer.
6	**CHECK BODY INTEGRATED UNIT.** 1) Select and perform the «Keyless Buzzer Output» using Subaru Select Monitor. 2) Measure the voltage between the body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 20 (+) — Chassis ground (–):***	Is the voltage 9 V or more?	Go to step **7**.	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>
7	**CHECK OUTPUT OF BODY INTEGRATED UNIT.** From the condition in step 6), operate the LOCK/UNLOCK button.	Is output signal present when operating?	System is normal.	Inspect the keyless entry system. If there are no problems, replace the body integrated unit. • Inspection: <Ref. to SL-17, SYMPTOM CHART, INSPECTION, Keyless Entry System.> • Replacement: <Ref. to SL-76, Body Integrated Unit.>

10.CHECK DOOR LOCK SWITCH

For operation procedures, refer to the “INSPECTION OF DOOR LOCK SWITCH” of the “Door Lock Control System”. <Ref. to SL-11, CHECK DOOR LOCK SWITCH, INSPECTION, Door Lock Control System.>

11.CHECK IGNITION SWITCH ILLUMINATION

	Step	Check	Yes	No
1	**CHECK IGNITION CIRCUIT.** Check the ignition circuit. <Ref. to SL-29, CHECK IGNITION SWITCH CIRCUIT, INSPECTION, Security System.>	Is the switch circuit normal?	Go to step **2**.	Repair or replace.
2	**CHECK DOOR SWITCH CIRCUIT.** Inspect door switch circuit. <Ref. to SL-20, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>	Is the switch circuit normal?	Go to step **3**.	Repair or replace.
3	**CHECK FUSE.** Remove and visually check fuse No. 14 (in the main fuse box).	Is the fuse blown out?	Replace the fuse with a new part.	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the ignition switch illumination connector. NOTE: The ignition switch illumination is integrated into the immobilizer antenna. 2) Measure the voltage between ignition switch illumination connector and chassis ground. ***Connector & terminal*** ***(B415) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **5**.	Check the harness for open or short circuits between the ignition switch illumination and fuse.
5	**CHECK IGNITION SWITCH ILLUMINATION CIRCUIT.** 1) Disconnect the connector of body integrated unit. 2) Check the harness between body integrated unit and ignition switch illumination. ***Connector & terminal*** ***(B280) No. 25 — (B415) No. 6:***	Is harness normal?	Go to step **6**.	Check the harness for open circuits and shorts between the body integrated unit and ignition switch illumination.
6	**CHECK IGNITION SWITCH ILLUMINATION BULB.** Apply battery voltage between terminals of the bulb. ***Terminals*** ***No. 2 (+) — No. 6 (–):***	Does the bulb illuminate?	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>	Replace the immobilizer antenna. <Ref. to SL-83, REMOVAL, Immobilizer Antenna.>

5. Security System

A: WIRING DIAGRAM

Refer to “Security System” in the wiring diagram. <Ref. to WI-134, WIRING DIAGRAM, Security System.>

B: ELECTRICAL SPECIFICATION

Refer to “Control Module I/O Signal” of “BODY CONTROL SYSTEM (DIAGNOSTICS)” section. <Ref. to BC(diag)-6, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

C: INSPECTION

1. BASIC DIAGNOSTIC PROCEDURE

	Step	Check	Yes	No
1	**INITIAL CHECK.** Check keyless entry system.	Does the keyless entry system operate normally?	Go to step **2**.	Check keyless entry system. <Ref. to SL-17, INSPECTION, Keyless Entry System.>
2	**CHECK SECURITY ON/OFF SETTING.** 1) Remove the key from ignition switch, and then close all doors. 2) Check the status of security indicator light. 3) Press the LOCK button of the keyless transmitter. 4) Check the status of security indicator light.	Is the security indicator light blinking patterns as follows? • Before pressing the LOCK button: Blinks once within 3 seconds • After pressing the LOCK button: When monitoring lag is set to 0 second, flashes twice within 0.5 seconds in 2 second intervals / When monitoring lag is set to 30 seconds, flashes once within 0.4 seconds in 30 seconds.	Go to step **4**.	Go to step **3**.
3	**CHANGE SETTING OF SECURITY SYSTEM.** Change the setting of security system to ON using Subaru Select Monitor. <Ref. to SL-28, SECURITY SYSTEM ON/OFF SETTING, INSPECTION, Security System.>	Is setting change completed correctly?	Go to step **4**.	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>
4	**CHECK SECURITY SYSTEM OPERATION.** 1) Remove the key from ignition switch, and then close all doors. 2) Press the LOCK button of keyless transmitter, and wait for 30 seconds. 3) Check the security indicator light blinking patterns.	Does the security indicator light blink twice within 0.5 seconds in 2 second intervals?	Go to step **5**.	Check the security indicator light. <Ref. to SL-28, CHECK SECURITY INDICATOR LIGHT CIRCUIT, INSPECTION, Security System.>
5	**CHECK SECURITY ALARM OPERATION.** 1) Operate the driver’s door lock switch to the UNLOCK side. 2) Open any door, trunk lid or rear gate.	Does the security alarm operate when opening any door, trunk lid, or rear gate?	Go to step **6**.	Check the following parts. <Ref. to SL-20, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.> • Door switches • Trunk lid latch switch • Rear gate latch switch

	Step	Check	Yes	No
6	**CHECK SECURITY ALARM OPERATION.** Check the security alarm operation status.	During the operation, does the horn keep sounding and the hazard light blink?	Go to step **7**.	• Check the following parts. • Horn: <Ref. to SL-29, CHECK HORN, INSPECTION, Security System.> • Hazard light: <Ref. to SL-29, CHECK HAZARD LIGHT OPERATION, INSPECTION, Security System.>
7	**CHECK SECURITY ALARM CANCEL OPERATION.** Press any button of transmitter while the security alarm is operating.	Do the horn sound and the blinking of the hazard light stop?	Go to step **8**.	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>
8	**CHECK IMPACT SENSOR (DEALER OPTION).** Check the sensibility of impact sensor. <Ref. to SL-71, CHECK IMPACT SENSOR, ADJUSTMENT, Impact Sensor.>	Is the sensibility set properly?	Go to step **9**.	Adjust the sensitivity. <Ref. to SL-72, IMPACT SENSITIVITY ADJUSTMENT, ADJUSTMENT, Impact Sensor.>
9	**CHECK SECURITY SYSTEM CONDITION MEMORY.** 1) Remove the key from ignition switch, and then close all doors. 2) Open the front hood. 3) Press the LOCK button of keyless transmitter, and wait for 30 seconds. 4) Disconnect the ground cable from battery. 5) Connect the ground cable to battery. 6) Check the status of security indicator light.	Does the security indicator light blinks twice within 0.5 seconds at 2 second intervals?	Go to step **10**.	Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>
10	**CHECK SECURITY SYSTEM MANUAL ON/OFF SETTING.** 1) Press the UNLOCK button of the keyless transmitter. 2) Change the setting of security system. <Ref. to SL-28, SECURITY SYSTEM ON/OFF SETTING, INSPECTION, Security System.>	Is setting change completed correctly?	Restore the security system settings to those before the diagnosis and finish the diagnosis.	• Check the following parts. • Ignition switch circuit: <Ref. to SL-63, INSPECTION, Ignition Key Lock.> • Door lock switch circuit: <Ref. to SL-11, CHECK DOOR LOCK SWITCH, INSPECTION, Door Lock Control System.>

NOTE:
If the horn sounds when setting the security to ON (monitoring condition) using the keyless transmitter, check the function setting of body integrated unit. As a cause, it is possible that the impact sensor present (ON) / not present (OFF) setting is set to ON in the customization function though there is no impact sensor. <Ref. to BC(diag)-14, User Customizing.>

2. CHECK SECURITY SYSTEM CONDITION MEMORY

1) Pull out the key from the ignition switch, or turn the ignition to OFF.
2) Close all the doors, trunk lid and rear gate.
3) Open the front hood.
4) Press the LOCK button of the keyless transmitter.

NOTE:
Wait until the security indicator light blinks twice within 0.5 seconds at 2 second intervals.
If the 30 second monitoring lag has been set, wait for 30 seconds.
5) Disconnect the ground cable from battery.
6) Connect the battery ground terminal.
7) Check that the security indicator light blinks twice within 0.5 seconds at 2 second intervals. When it does not blink, replace the body integrated unit.

3. SECURITY SYSTEM ON/OFF SETTING

NOTE:
It can be set by «Security Alarm Setup» in unit customizing using Subaru Select Monitor.
For detailed procedures, refer to “PC application help for Subaru Select Monitor”.
1) Close all doors, trunk lid and rear gate, and sit down on the driver seat. Press the UNLOCK button of the keyless transmitter.
2) Turn the ignition switch to ON.
3) Press the central door unlock switch and open the driver’s door simultaneously. (Keep the central door unlock switch pressed down.)
4) When the condition in step 3) continues for 10 seconds, the system switches to a mode reverse to the current mode.

Setting	Horn activation	Meter display
ON → OFF	Twice	[AL_OF]
OFF → ON	Once	[AL_ON]

4. CHECK DOOR SWITCH

For operation procedure, refer to “CHECK DOOR SWITCH” of “Keyless Entry System”. <Ref. to SL-20, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>

5. CHECK SECURITY INDICATOR LIGHT CIRCUIT

For operation procedures, refer to “CHECK SECURITY INDICATOR LIGHT CIRCUIT” of “IMMOBILIZER (DIAGNOSTICS)” section. <Ref. to IM(diag)-11, CHECK SECURITY INDICATOR LIGHT CIRCUIT, INSPECTION, Diagnostics Chart for Security Indicator Light.>

6. CHECK HORN

	Step	Check	Yes	No
1	**CHECK HORN OPERATION.** Check the horn sounds when the horn switch is pushed.	Does the horn sound?	Go to step **2**.	Check the horn circuit.
2	**CHECK BODY INTEGRATED UNIT.** Select and perform the «Horn Output» using Subaru Select Monitor. NOTE: For detailed procedures, refer to “PC application help for Subaru Select Monitor”.	Does the horn sound?	Horn circuit is OK.	Go to step **3**.
3	**CHECK HORN RELAY CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector of body integrated unit. 3) Remove the horn relay. 4) Check the harness between body integrated unit and horn relay. ***Connector & terminal*** ***(B280) No. 24 — Horn relay No. 4:***	Is harness normal?	Check body integrated unit. <Ref. to BC(diag)-2, Basic Diagnostic Procedure.>	Repair or replace the harness.

7. CHECK HAZARD LIGHT OPERATION

For operation procedure, refer to “CHECK HAZARD LIGHT OPERATION” of “Keyless Entry System”. <Ref. to SL-23, CHECK HAZARD LIGHT OPERATION, INSPECTION, Keyless Entry System.>

8. CHECK IGNITION SWITCH CIRCUIT

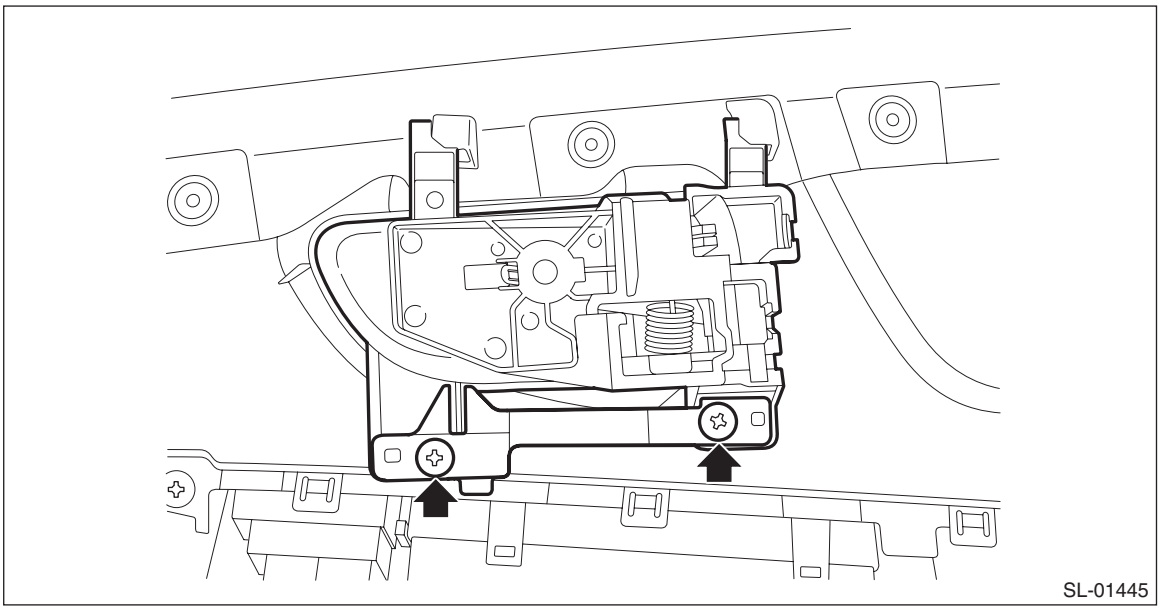
	Step	Check	Yes	No
1	**CHECK CURRENT DATA.** Display the data of «BATT voltage» and «IG power supply voltage» using the Subaru Select Monitor. NOTE: For detailed procedures, refer to “PC application help for Subaru Select Monitor”.	Does the «IG power supply voltage» indicate 0 V when the ignition is OFF, and fall within a range of ±1 V from the «BATT voltage» when the ignition is ON?	The ignition switch input circuit is OK.	Go to step **2**.
2	**CHECK IGNITION SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector of body integrated unit. 3) Turn the ignition switch to ON. 4) Measure the voltage between the body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B281) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Check body integrated unit. <Ref. to BC(diag)-2, Basic Diagnostic Procedure.>	Check the harness for open or short circuit between body integrated unit and fuse.

6. Front Inner Remote

A: REMOVAL

1) Remove the trim panel - front door. <Ref. to EI-58, FRONT DOOR, REMOVAL, Door Trim.>
2) Remove the screw, and remove the remote assembly - door.

CAUTION:
The remote assembly - door is tightened with the plate. Be careful not to drop or damage the part.



B: INSTALLATION

1) Before installation, check the following items.
- Cable is free from deformation such as fray.
- Grease is applied sufficiently to cable joints.

If grease is insufficient, add it as necessary before assembling the cable.
2) Install each part in the reverse order of removal.

CAUTION:
Securely install the plate.

C: INSPECTION

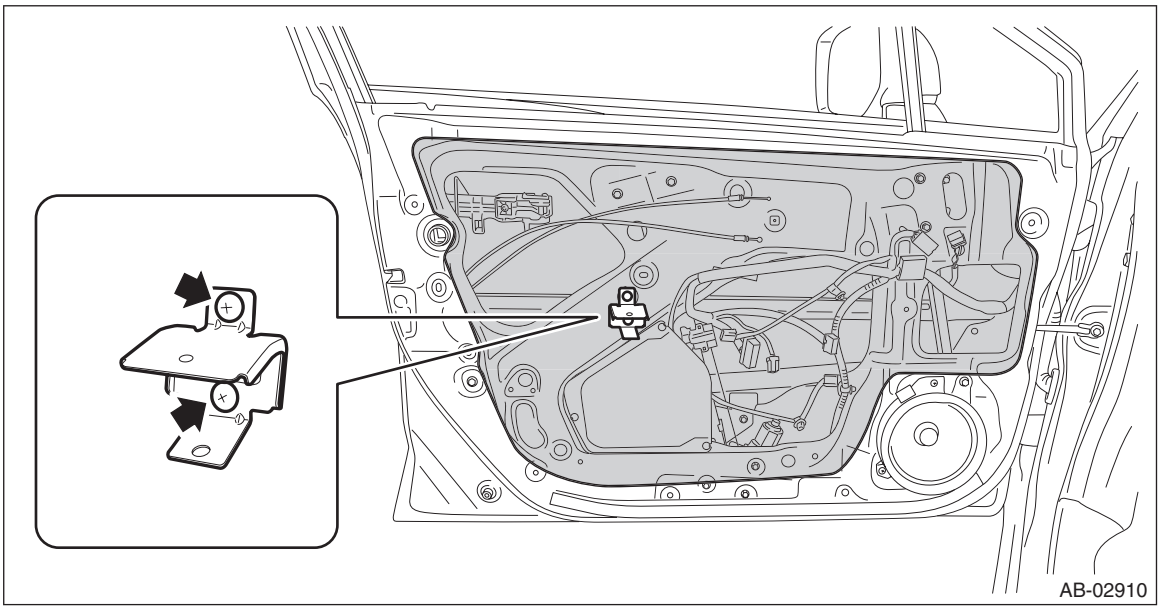
Check if the remote handle operates normally.
- If the lever is faulty, replace the remote handle.
- If the cable is deformed, replace the latch & actuator assembly - front.

7. Front Outer Handle

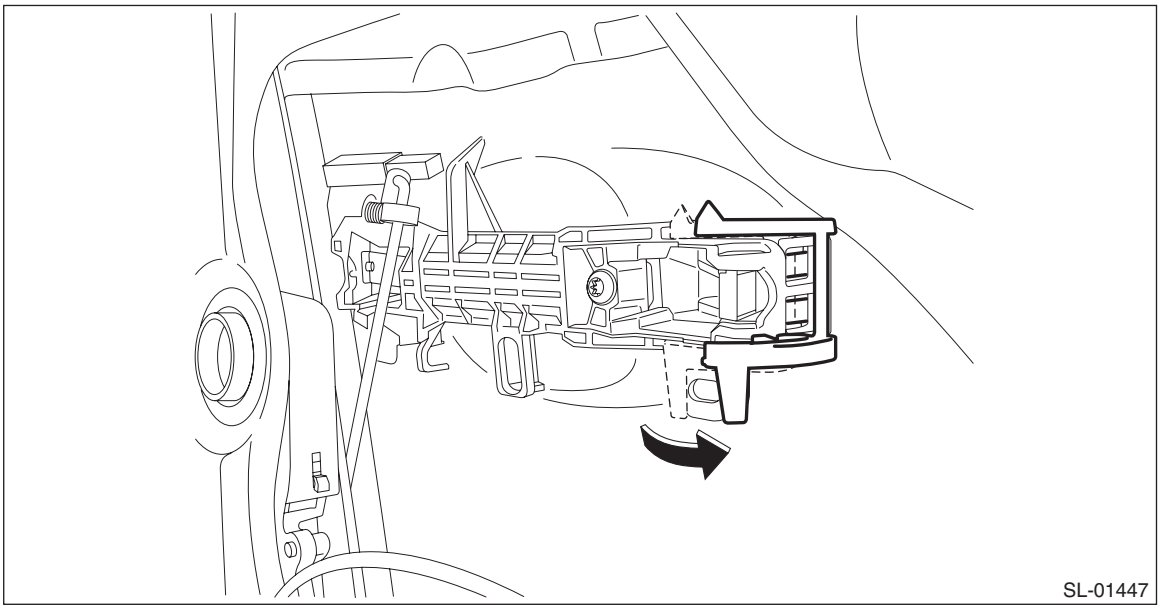
A: REMOVAL

1) Raise the glass assembly - front door to the top position.
2) Remove the trim panel - front door. <Ref. to EI-58, FRONT DOOR, REMOVAL, Door Trim.>
3) Remove the sealing cover - front door.

CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the sealing cover - front door.**
- **If the sealing cover - front door gets broken, replace it with a new part.**
  (1) Remove the screw to remove the bracket - door trim front.
  (2) Disconnect connectors.
  (3) Carefully remove the butyl tape to remove the sealing cover - front door.



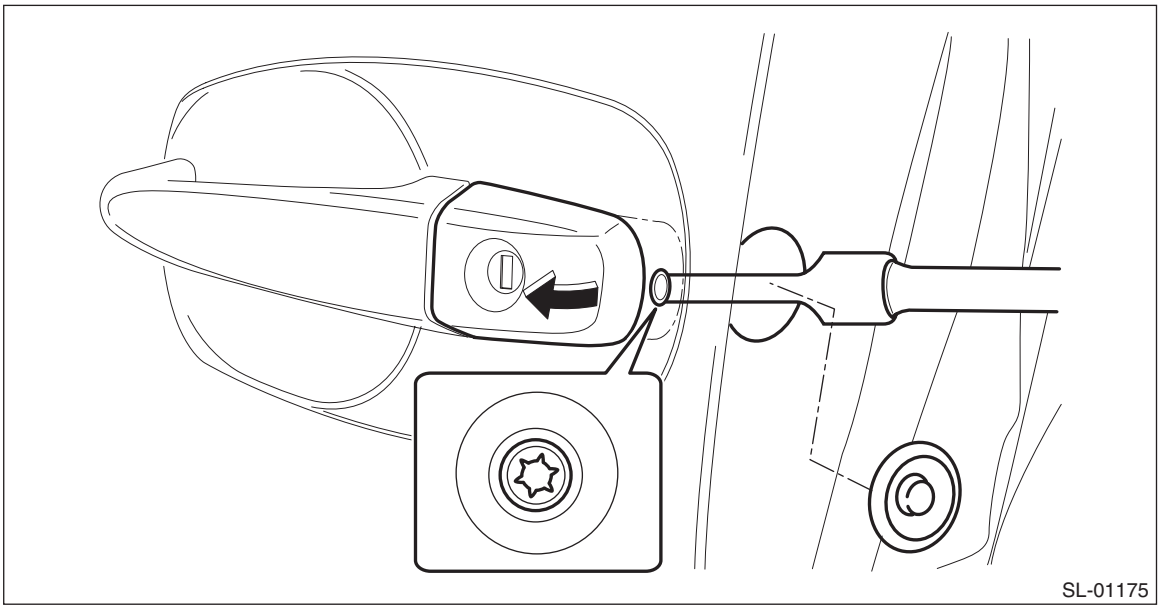
4) Remove the holder of the frame assembly - front door outer.



5) Remove the cover - handle front outer.

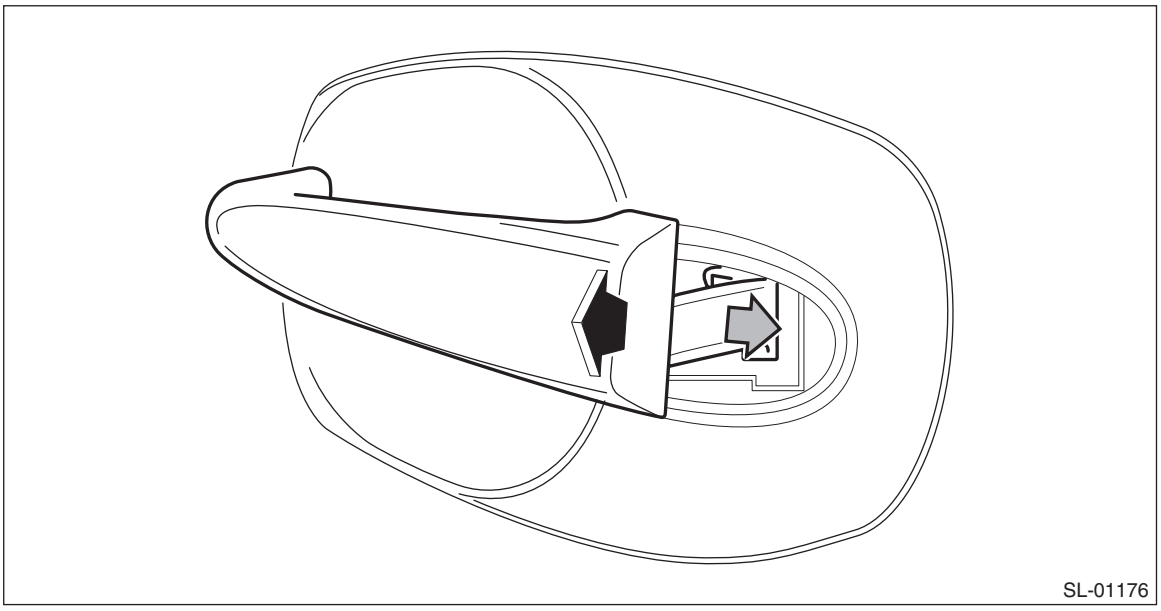
PREPARATION TOOL:
TORX® T30

(1) Remove the plug at the rear end of the panel assembly - front door.
(2) Loosen the TORX® bolt and remove the cover - handle front outer.


SL-01175

6) Remove the handle - door outer by moving it rearward.

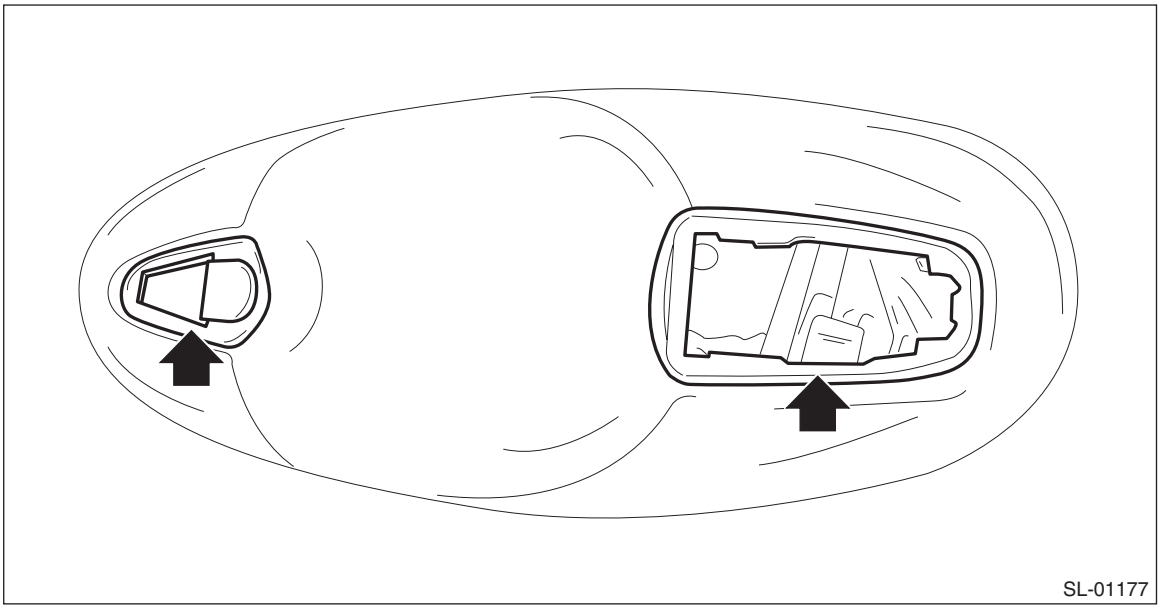
CAUTION:
Do not apply excessive force to remove the handle - door outer from the panel assembly - front door. The panel assembly - front door may be deformed.


SL-01176

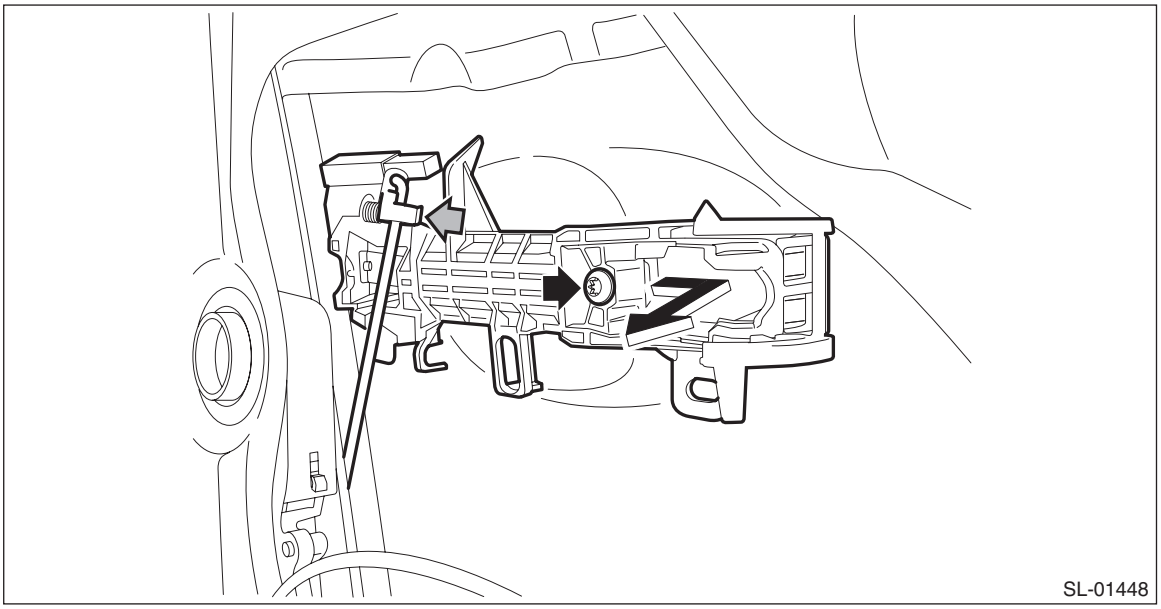
7) Remove the frame assembly - front door outer.

PREPARATION TOOL:
TORX® T30

(1) Remove the spacer - door handle outer.



(2) Remove the rod from the rod clamp of the frame assembly - front door outer.
(3) Loosen the TORX® bolt and remove the frame assembly - front door outer from inside the panel assembly - front door.



B: INSTALLATION

1) Before installation, check the following items.
- Rod is free from deformation.
- Grease is applied sufficiently to rod joints.

If grease is insufficient, add it as necessary before assembling the rod.
2) Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

C: INSPECTION

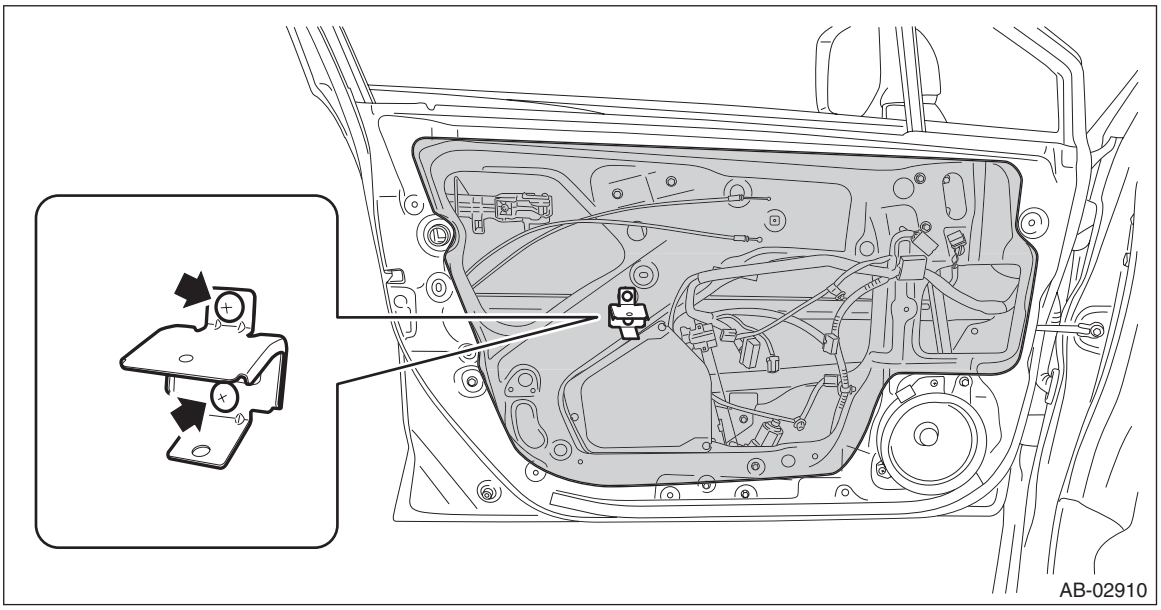
Check if the outer handle operates normally.
- If the lever is faulty, replace the handle - door outer.
- If the rod is deformed, replace the latch & actuator assembly - front.

8. Front Door Latch and Door Lock Actuator Assembly

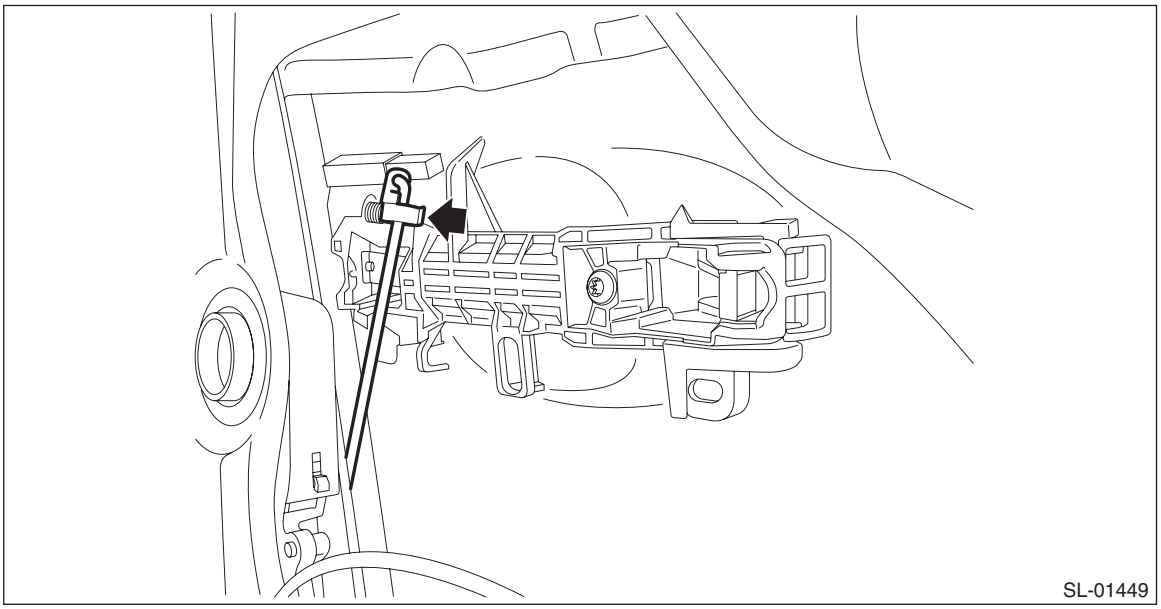
A: REMOVAL

1) Raise the glass assembly - front door to the top position.
2) Remove the trim panel - front door. <Ref. to EI-58, FRONT DOOR, REMOVAL, Door Trim.>
3) Remove the sealing cover - front door.

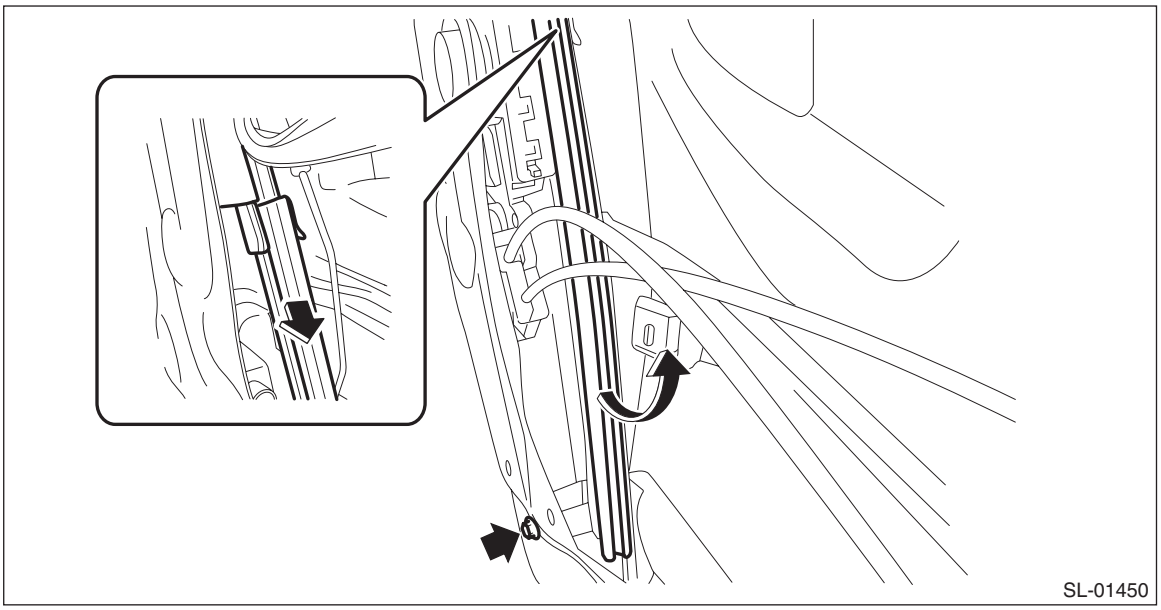
CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the sealing cover - front door.**
- **If the sealing cover - front door gets broken, replace it with a new part.**
  (1) Remove the screw to remove the bracket - door trim front.
  (2) Disconnect connectors.
  (3) Carefully remove the butyl tape to remove the sealing cover - front door.



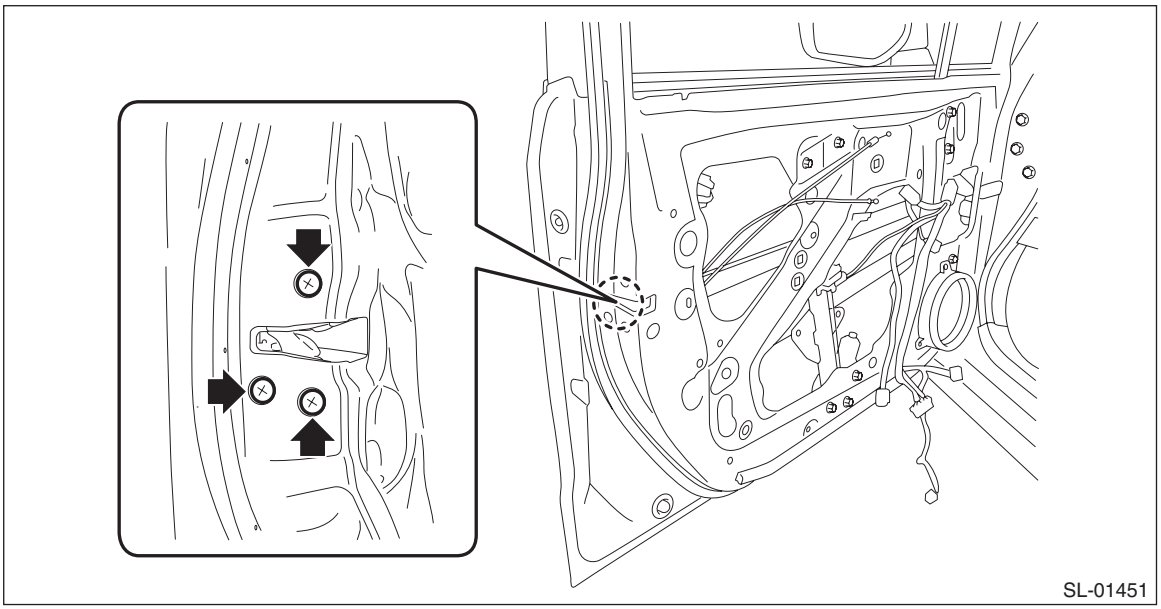
4) Remove the rod from the rod clamp of the frame assembly - front door outer.



5) Remove the sash COMPL - lower.
(1) Remove the lower side of the running channel - front door.
(2) Remove the bolts, and remove the sash COMPL - lower.



6) Remove the screws to remove the latch & actuator assembly - front.



B: INSTALLATION

1) Before installation, check the following items.
- Cable and rod are free from deformation.
- Grease is applied sufficiently to rod joints.

If grease is insufficient, add it as necessary before assembling the rod.
2) Install each part in the reverse order of removal.

Tightening torque:
Door lock assembly: <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>
Sash COMPL - D3: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

C: INSPECTION

1. LATCH

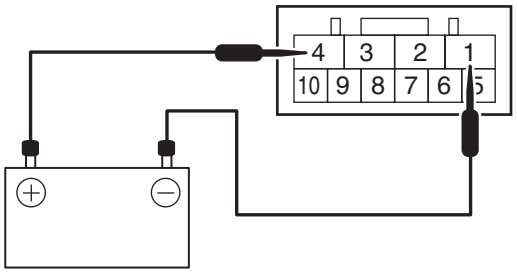
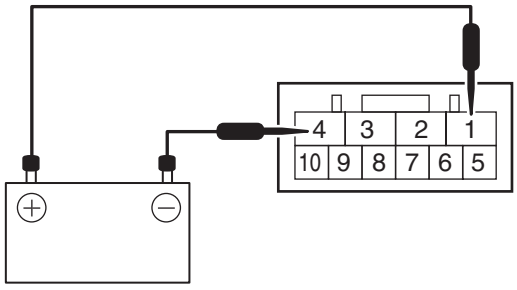
Check if the latch operates normally.
If the cable or rod is faulty, replace the latch & actuator assembly - front.

2. LOCK ACTUATOR

UNIT INSPECTION

PREPARATION TOOL:
Circuit tester

1) Check door lock operation
Check the door lock operation when battery voltage is applied between the terminals of actuator.

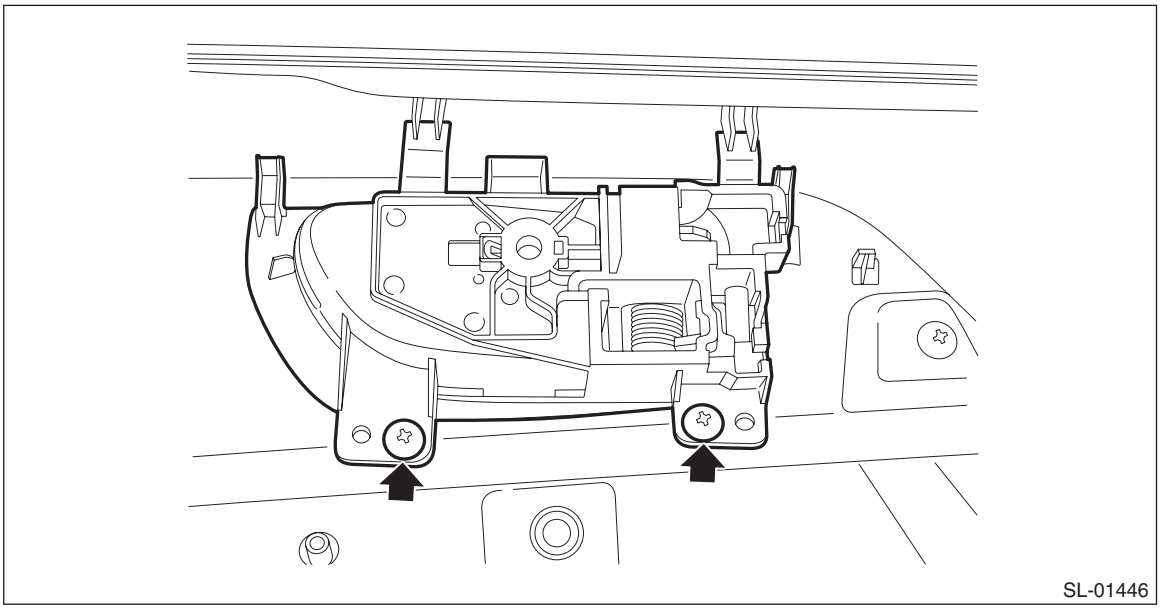
Terminal No.	Inspection conditions	Specification	Connection diagram
4 (+) — 1 (–)	Apply battery voltage.	LOCK	 SL-01474
1 (+) — 4 (–)		UNLOCK	 SL-01473

2) Replace the latch & actuator assembly - front if it is found defective.

9. Rear Inner Remote

A: REMOVAL

1) Remove the trim panel - rear door. <Ref. to EI-59, REAR DOOR, REMOVAL, Door Trim.>
2) Remove the screw, and remove the remote assembly - door.



B: INSTALLATION

1) Before installation, check the following items.
- Cable is free from deformation such as fray.
- Grease is applied sufficiently to cable joints.

If grease is insufficient, add it as necessary before assembling the cable.
2) Install each part in the reverse order of removal.

C: INSPECTION

Check if the remote handle operates normally.
- If the lever is faulty, replace the remote handle.
- If the cable is deformed, replace the latch & actuator assembly - rear.

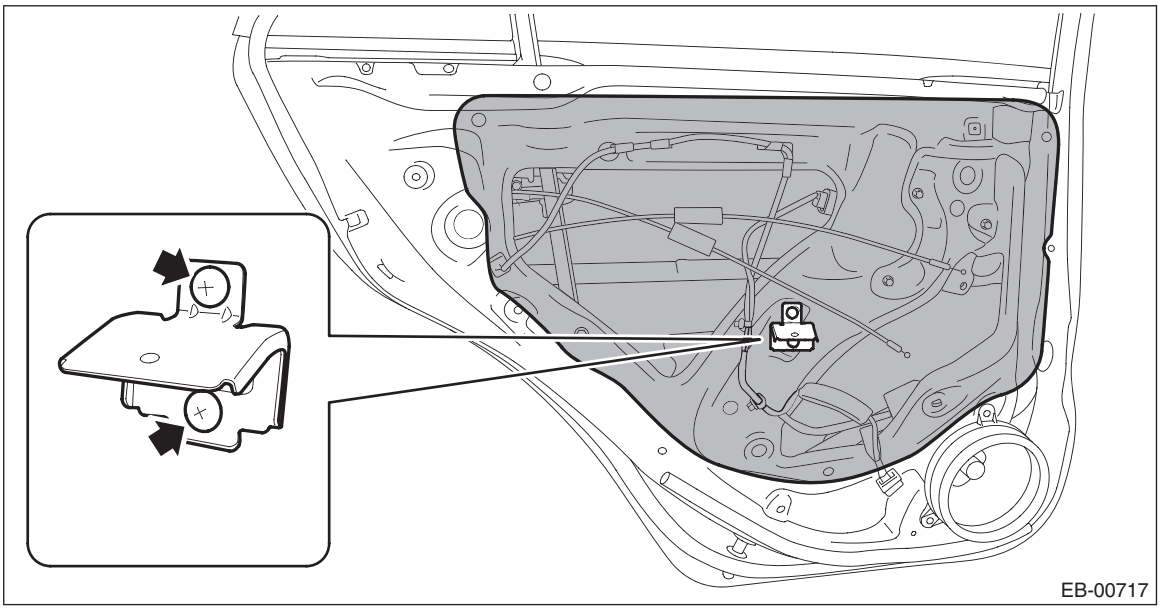
10.Rear Outer Handle

A: REMOVAL

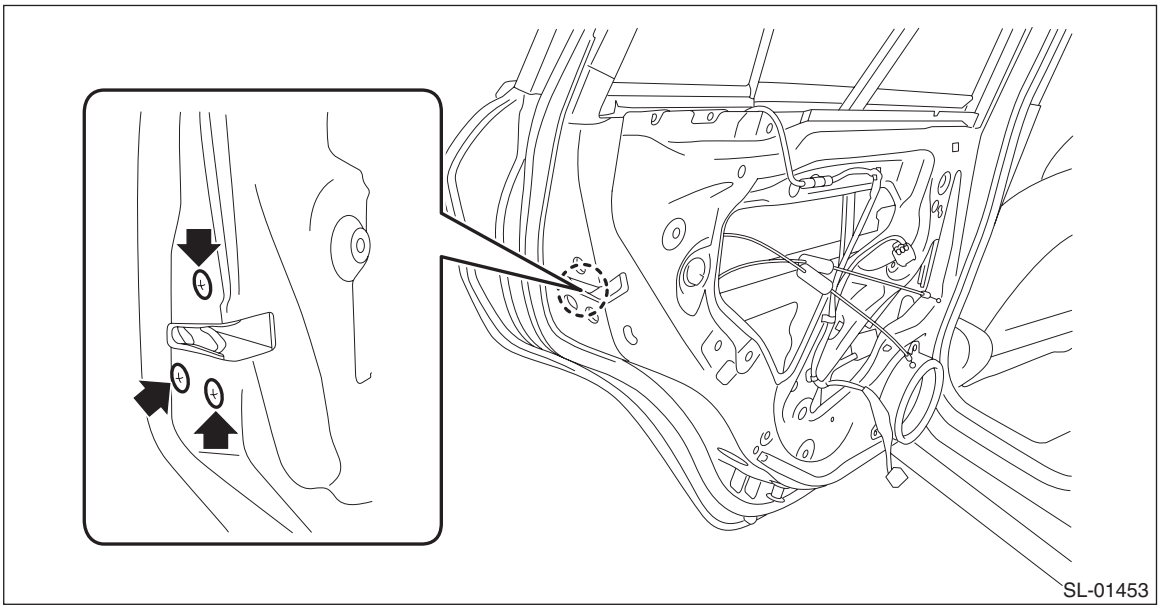
1) Raise the glass assembly - rear door to the top position.
2) Remove the trim panel - rear door. <Ref. to EI-59, REAR DOOR, REMOVAL, Door Trim.>
3) Remove the sealing cover - rear door.

CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the sealing cover - rear door.**
- **If the sealing cover - rear door gets broken, replace it with a new part.**

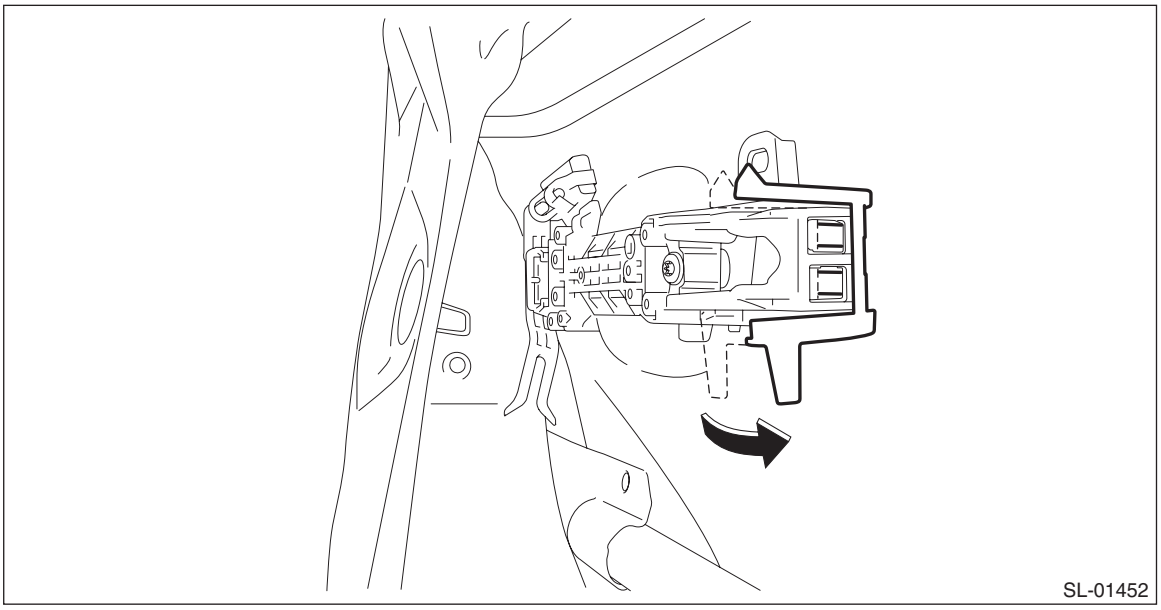
(1) Remove the screw to remove the bracket - door trim rear.
(2) Disconnect connectors.
(3) Carefully remove the butyl tape to remove the sealing cover - rear door.



4) Remove the screws and move downward the latch & actuator assembly - rear.



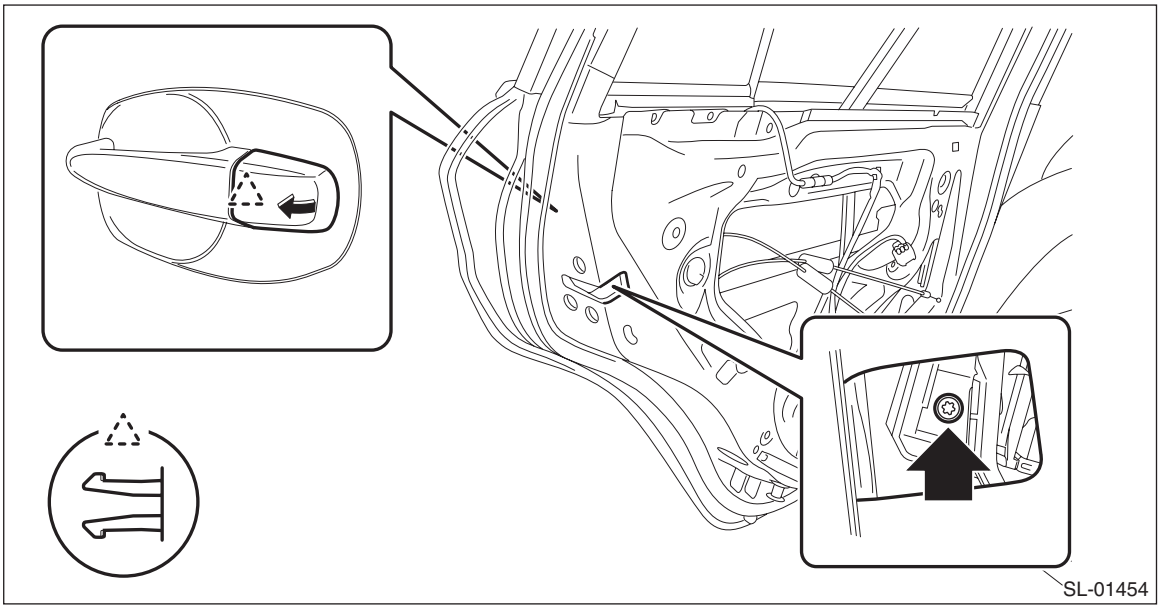
5) Remove the holder of the frame assembly - rear door outer.



6) Remove the cover - handle rear outer.

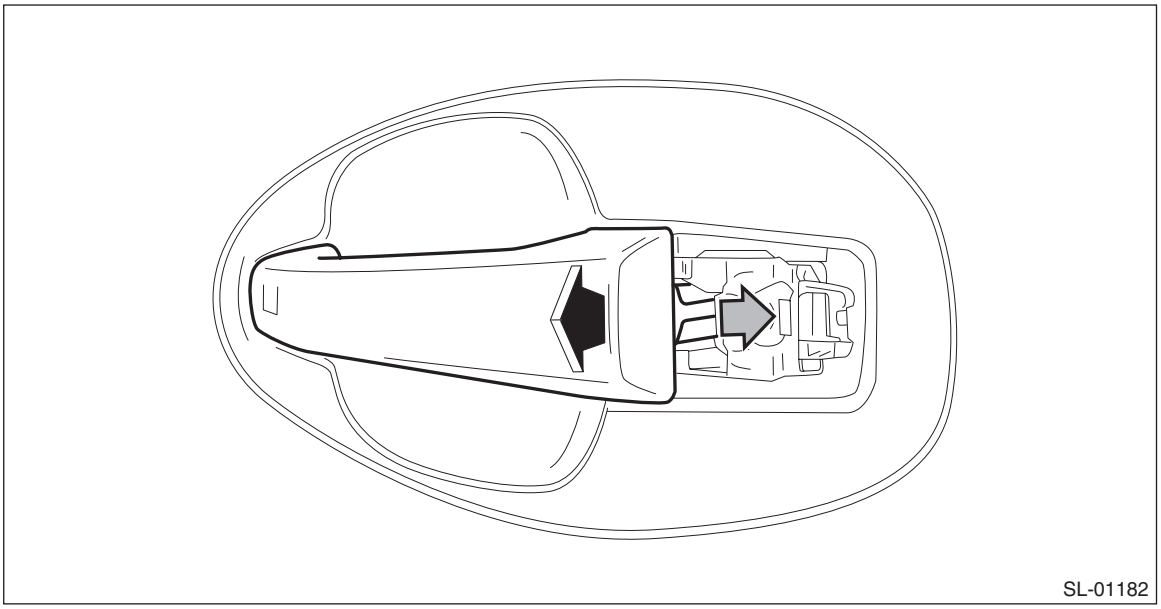
PREPARATION TOOL:
TORX® T30

(1) Loosen the TORX® bolt.
(2) Release the claws, and then remove the cover - handle rear outer.



7) Remove the handle - door outer by moving it rearward.

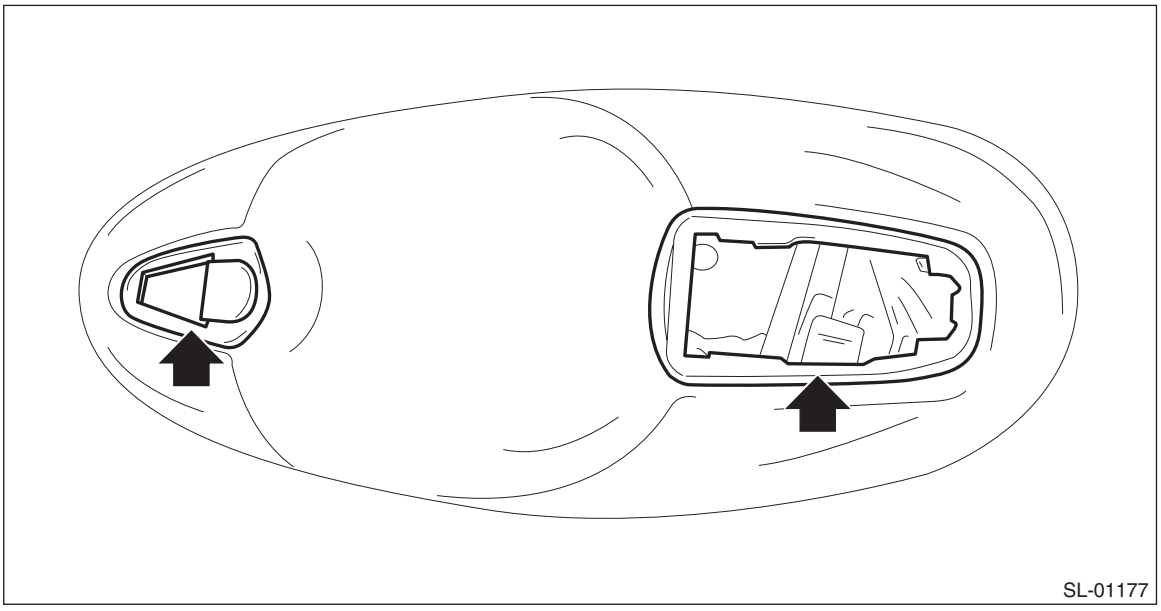
CAUTION:
Do not apply excessive force to remove the handle - door outer from the panel assembly - rear door. The panel assembly - rear door may be deformed.



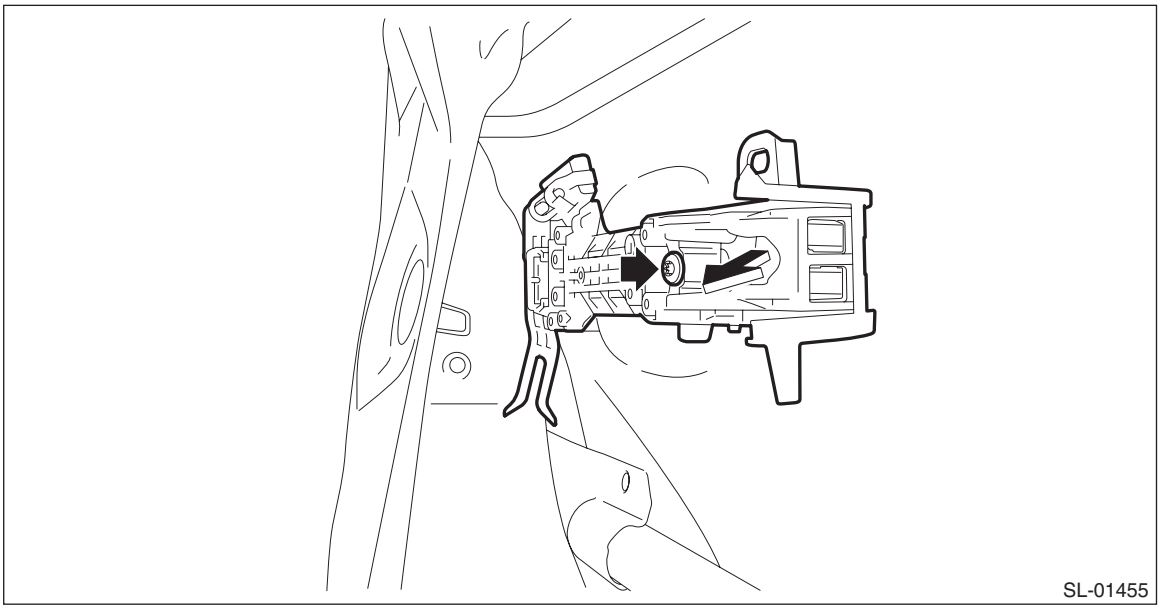
8) Remove the frame assembly - rear door outer.

PREPARATION TOOL:
TORX® T30

(1) Remove the spacer - door handle outer.



(2) Loosen the TORX® bolt and remove the frame assembly - rear door outer from inside the panel assembly - rear door.



B: INSTALLATION

1) Before installation, check the following items.
- Lever is free from deformation.
- Grease is applied sufficiently to lever joints.

If grease is insufficient, add it as necessary before assembling.
2) Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

C: INSPECTION

Check if the outer handle operates normally.
If the lever is faulty, replace the handle - door outer.

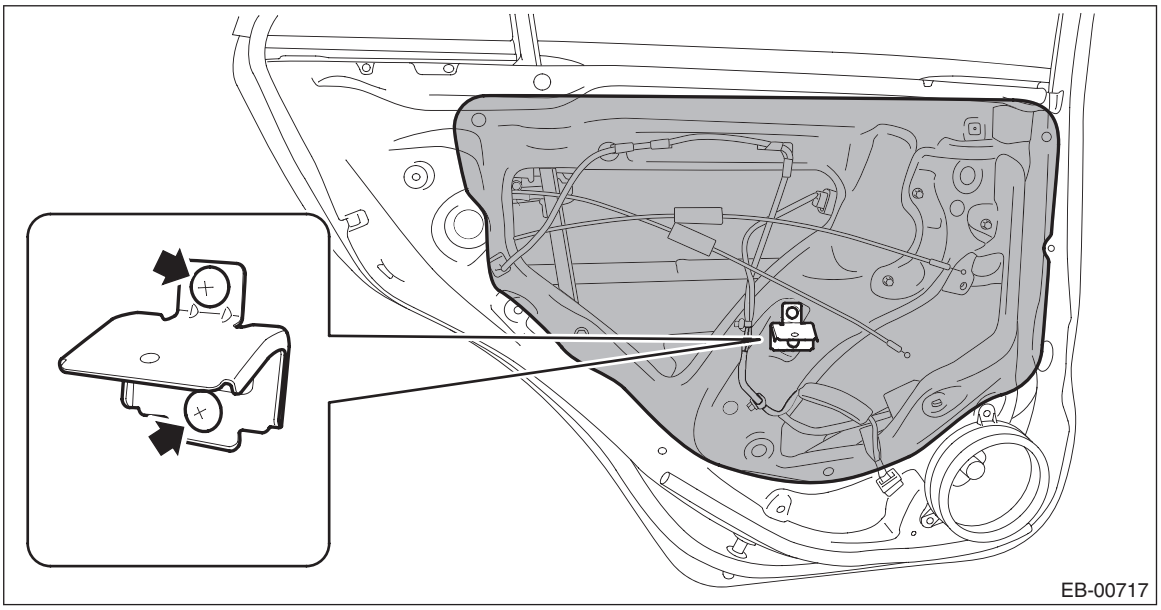
11.Rear Door Latch and Door Lock Actuator Assembly

A: REMOVAL

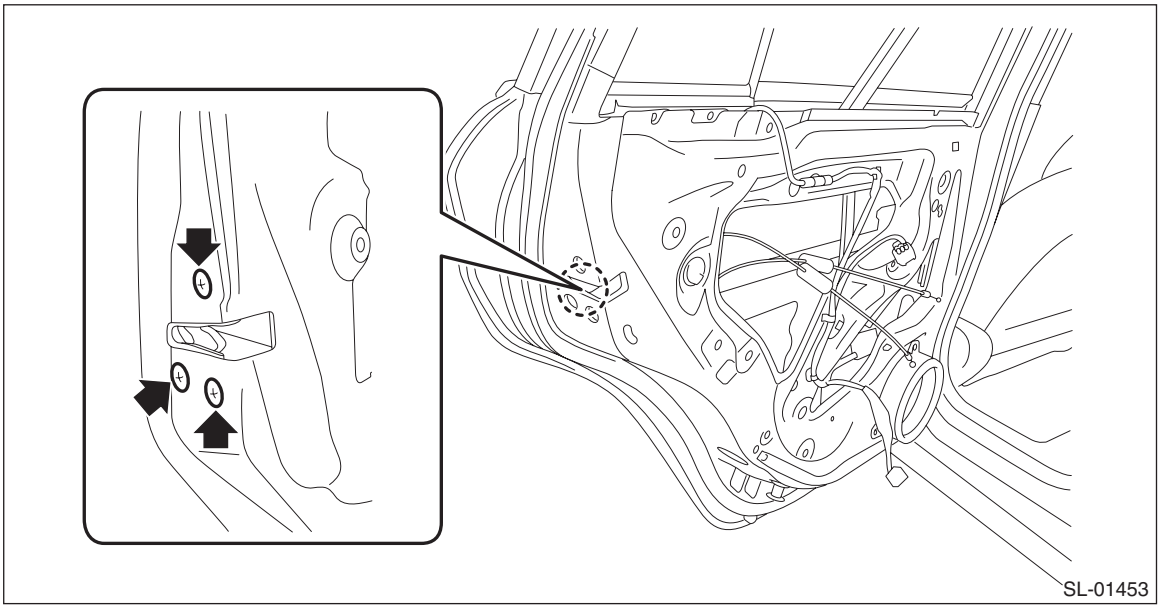
1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear door. <Ref. to EI-59, REAR DOOR, REMOVAL, Door Trim.>
3) Remove the sealing cover - rear door.

CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the sealing cover - rear door.**
- **If the sealing cover - rear door gets broken, replace it with a new part.**

(1) Remove the screw to remove the bracket - door trim rear.
(2) Disconnect connectors.
(3) Carefully remove the butyl tape to remove the sealing cover - rear door.



4) Remove the glass assembly - rear door. <Ref. to GW-33, REMOVAL, Rear Door Glass.>
5) Remove the screws to remove the latch & actuator assembly - rear.



B: INSTALLATION

1) Before installation, check the following items.
- Cable is free from deformation.
- Grease is applied sufficiently to lever joints.

If grease is insufficient, add it as necessary before assembling.
2) Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

NOTE:
Make sure the child safety lock works correctly after installation.

C: INSPECTION

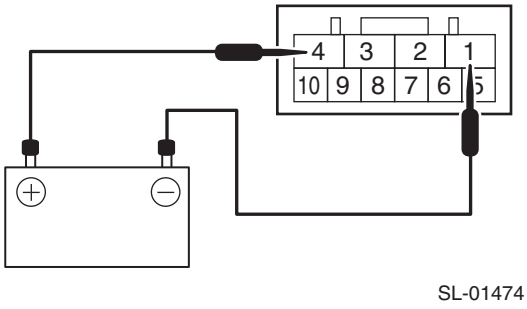
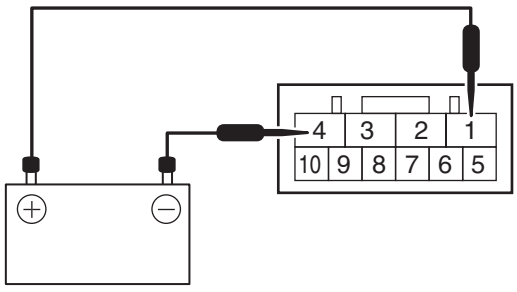
1. LATCH

Check if the latch operates normally.
If the cable is faulty, replace the latch & actuator assembly - rear.

2. ACTUATOR

UNIT INSPECTION

1) Check door lock operation
Check the door lock operation when battery voltage is applied between the terminals of actuator.

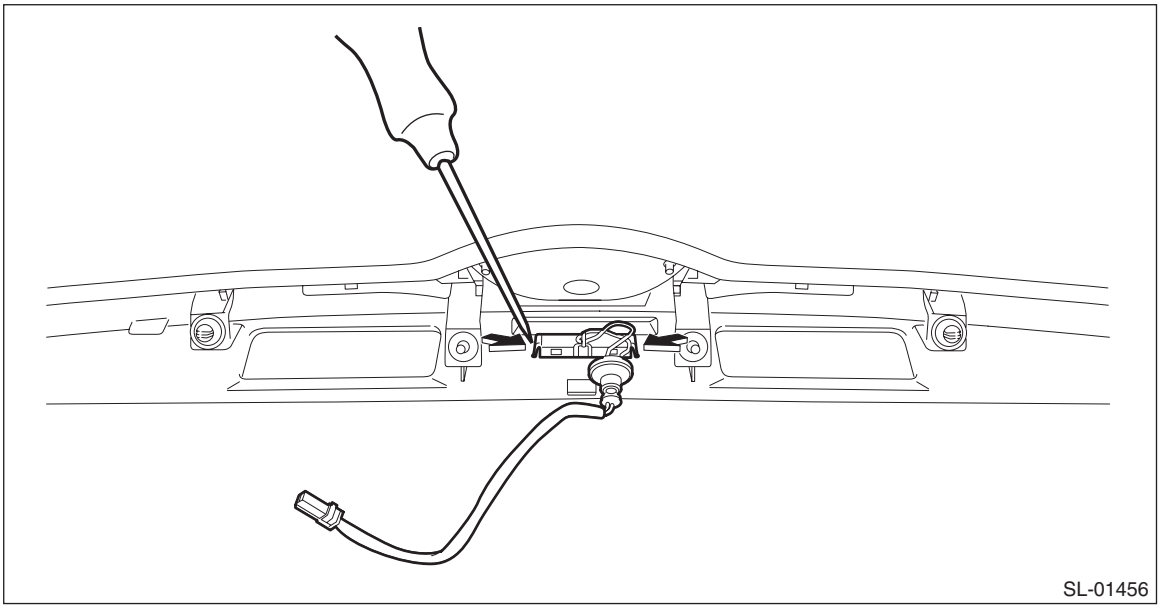
Terminal No.	Inspection conditions	Specification	Connection diagram
4 (+) — 1 (–)	Apply battery voltage.	LOCK	 SL-01474
1 (+) — 4 (–)		UNLOCK	 SL-01473

2) If it does not operate properly as a result of inspection, replace the latch & actuator assembly - rear.

12.Rear Gate Opener Button

A: REMOVAL

1) Remove the trim panel - rear gate. <Ref. to EI-142, REMOVAL, Rear Gate Trim.>
2) Remove the garnish assembly - rear gate. <Ref. to EI-147, REMOVAL, Rear Gate Garnish.>
3) Release the locks at both ends of the button - opener rear gate by pushing them with a flat tip screwdriver, and remove the button - opener rear gate.



B: INSTALLATION

CAUTION:
Make sure that the harness grommet is securely installed.
If not properly installed, this may cause leaks.
Install each part in the reverse order of removal.

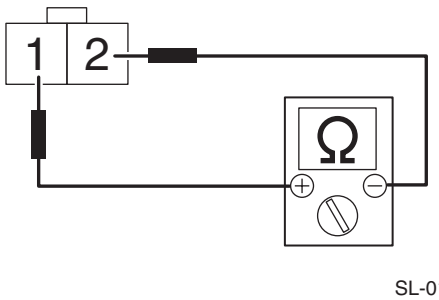
NOTE:
Refer to “INSTALLATION” of “Rear Gate Garnish”. <Ref. to EI-149, INSTALLATION, Rear Gate Garnish.>

C: INSPECTION

UNIT INSPECTION

PREPARATION TOOL:
Circuit tester

1) Check the resistance between switch terminals.

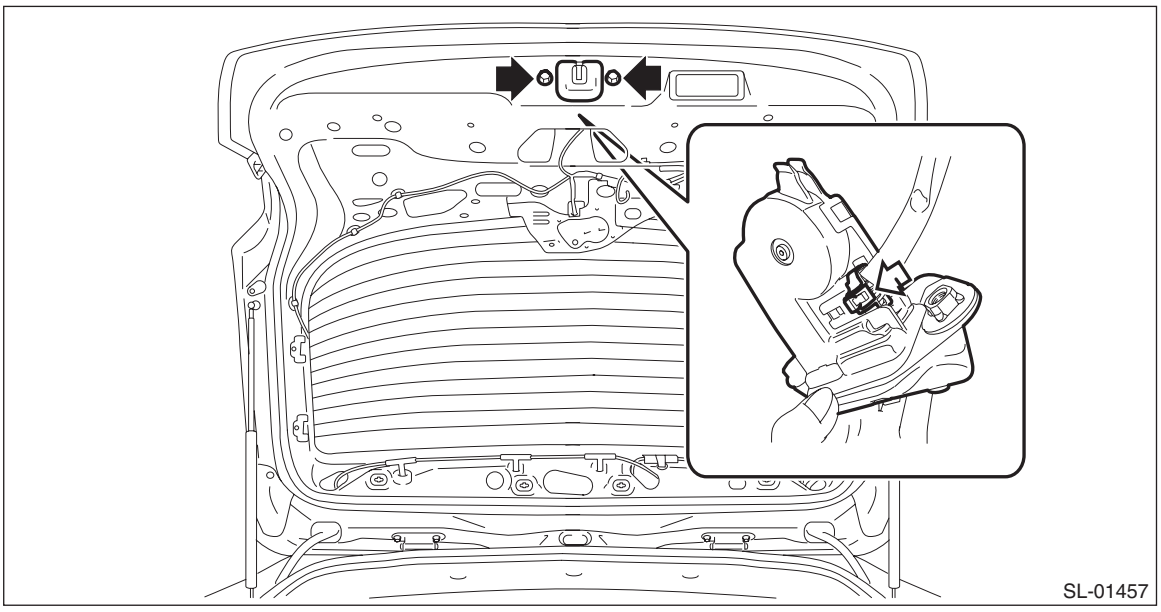
Terminal No.	Inspection conditions	Standard	Connection diagram
1 — 2	OPEN	Less than 5 Ω	
	CLOSE	1 MΩ or more	

2) If the inspection result is not within the standard, replace the button - opener rear gate.

13.Rear Gate Latch and Actuator Assembly

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear gate. <Ref. to EI-142, REMOVAL, Rear Gate Trim.>
3) Remove the latch and actuator - rear gate.
   (1) Disconnect the connector.
   (2) Remove the bolts, and remove the latch and actuator - rear gate.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-3, REAR GATE LOCK AND TRUNK LID LOCK, COMPONENT, General Description.>

C: INSPECTION

1. LATCH

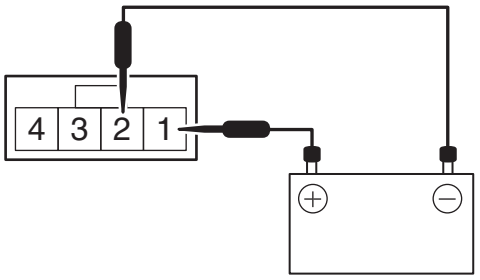
Check if the latch operates normally.
If latch deformation, abnormal wear, or unsmooth lock operation is observed, replace the latch and actuator - rear gate.

2. ACTUATOR

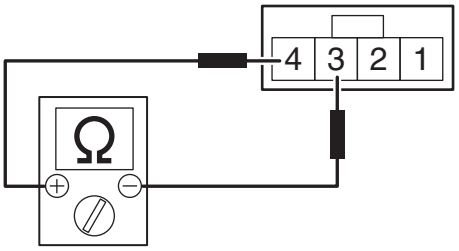
UNIT INSPECTION

PREPARATION TOOL:
Circuit tester

1) Check door lock operation
Check the door lock operation when battery voltage is applied between the terminals of actuator.

Terminal No.	Inspection conditions	Specification	Connection diagram
1 (+) — 2 (–)	Connect battery to the terminals	OPEN	 SL-01477

2) Check switch
Check the resistance between actuator terminals.

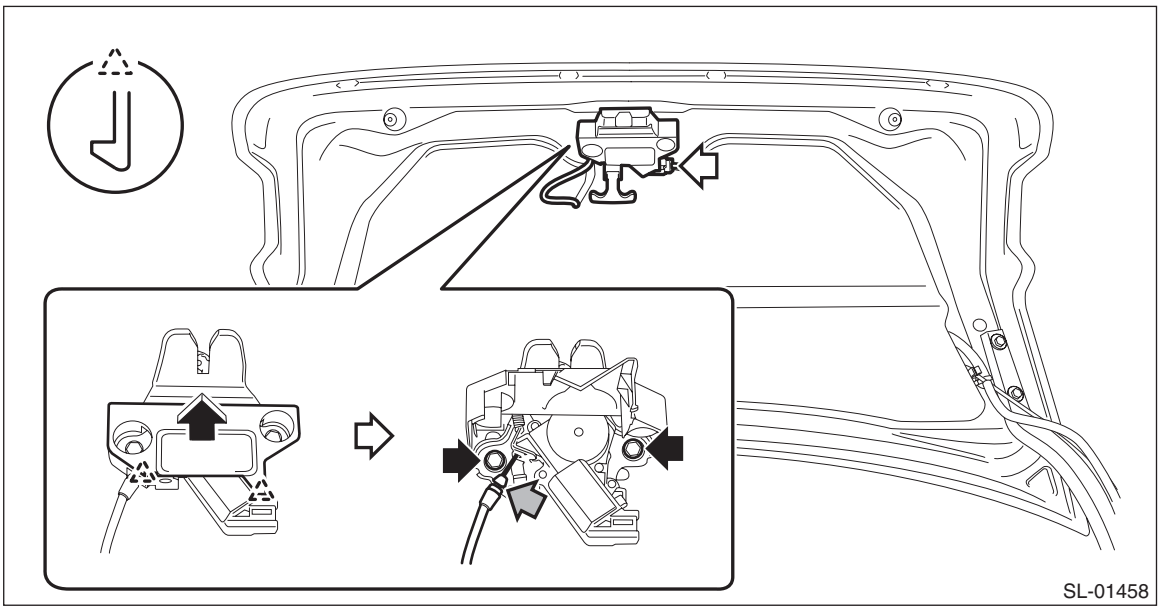
Terminal No.	Inspection conditions	Specification	Connection diagram
3 — 4	OPEN	Less than 1.5 Ω	 SL-01478
	CLOSE	1 MΩ or more	

3) If it does not operate properly as a result of inspection, replace the latch and actuator - rear gate.

14.Trunk Lid Latch and Actuator Assembly

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the lock assembly - trunk lid.
   (1) Disconnect the connector.
   (2) Release the claws, and open the lock cover.
   (3) Remove the bolts, and disconnect the release cable, and then remove the lock assembly - trunk lid.



NOTE:
When disconnecting the release cable, refer to “TRUNK LID OPENER” of “Remote Openers”. <Ref. to SL-54, TRUNK LID OPENER, REMOVAL, Remote Openers.>

B: INSTALLATION

1) Before installation, check the following items.
- Is the cable deformed?
- Grease is applied sufficiently to cable joints.

If grease is insufficient, add it as necessary before assembling the cable.
2) Install each part in the reverse order of removal.

Tightening torque:
Refer to “COMPONENT” of “General Description”. <Ref. to SL-3, REAR GATE LOCK AND TRUNK LID LOCK, COMPONENT, General Description.>

C: INSPECTION

1. LATCH

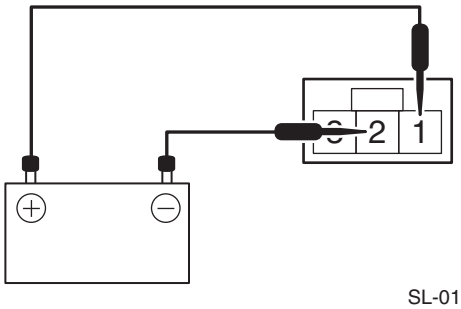
Check if the latch operates normally.
If latch deformation, abnormal wear, or unsmooth lock operation is observed, replace the lock assembly - trunk lid.

2. ACTUATOR

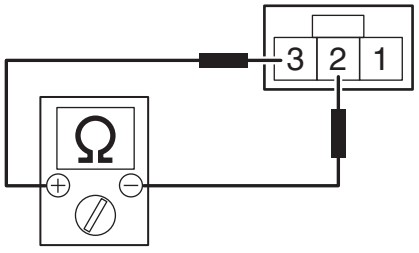
UNIT INSPECTION

PREPARATION TOOL:
Circuit tester

1) Check door lock operation
Check the door lock operation when battery voltage is applied between the terminals of actuator.

Terminal No.	Inspection conditions	Specification	Connection diagram
1 (+) — 2 (–)	Connect battery to the terminals	LOCK → UNLOCK	 SL-01517

2) CHECK SWITCH.
Check the resistance between actuator terminals.

Terminal No.	Inspection conditions	Specification	Connection diagram
2 — 3	LOCK	1 MΩ or more	 SL-01518
	UNLOCK	Less than 1 Ω	

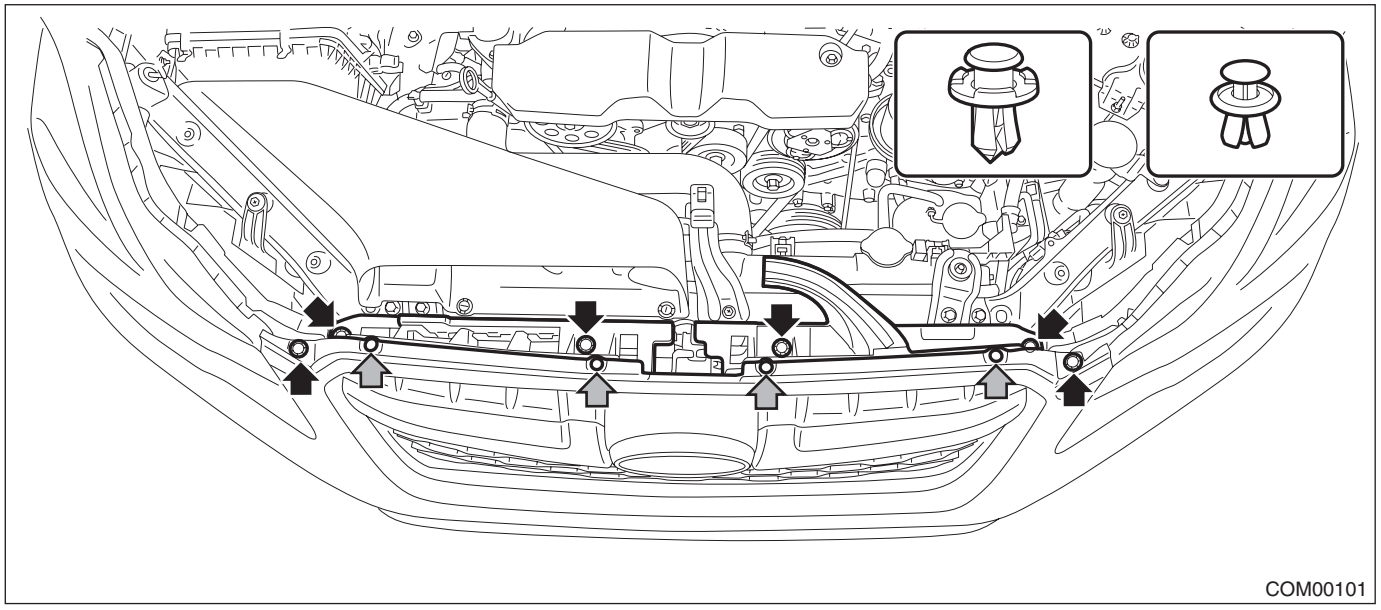
3) If it does not operate normally, replace the lock assembly - trunk lid.

15.Front Hood Lock Assembly

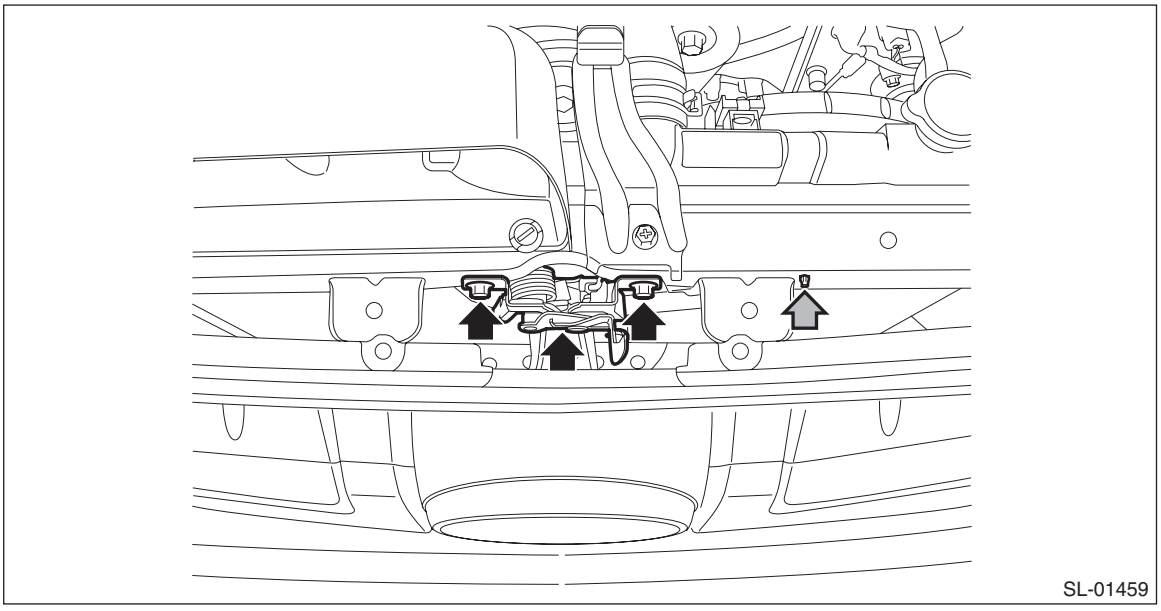
A: REMOVAL

1) Open the front hood.
2) Remove the clip, and remove the bracket - grille.

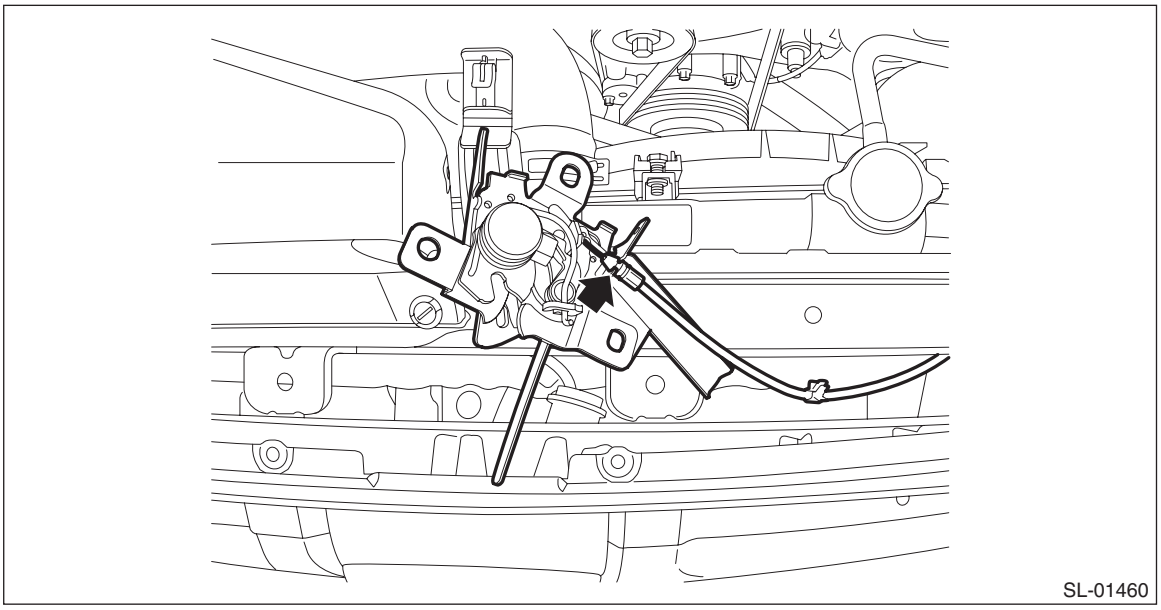
NOTE:
To prevent damage to the bracket - grille, make sure to remove all clips.



3) Remove the lock assembly - front hood.
   (1) Remove the bolt and clip.



(2) Disconnect the release cable, and detach the lock assembly - front hood.



NOTE:
When disconnecting the release cable, refer to “FRONT HOOD OPENER” of “Remote Openers”. <Ref. to SL-53, FRONT HOOD OPENER, REMOVAL, Remote Openers.>

B: INSTALLATION

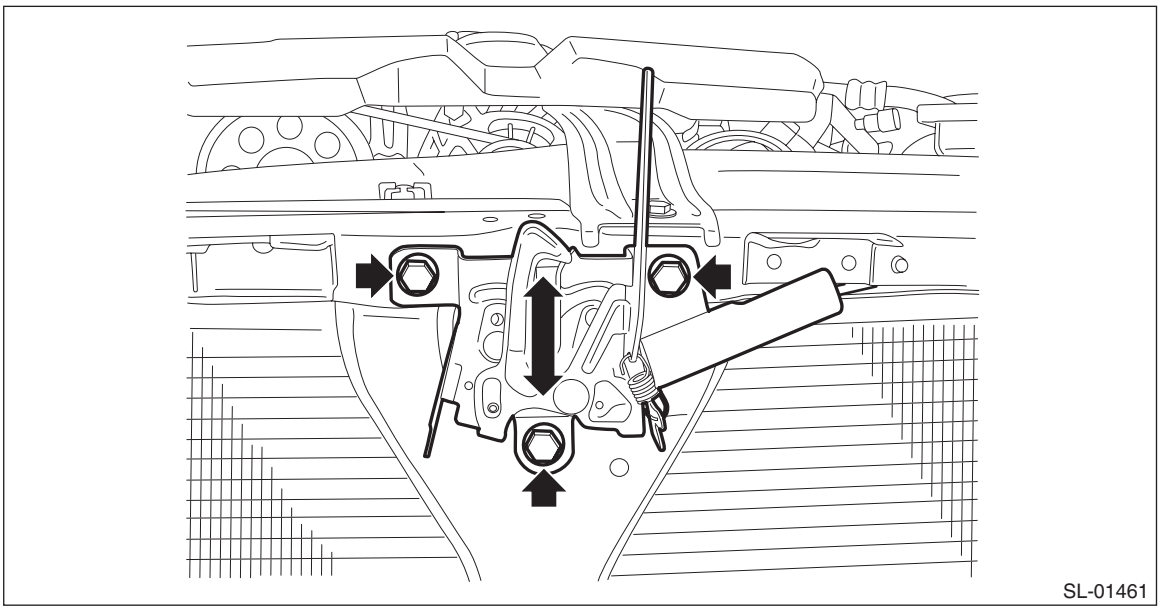
1) Before installation, check the following items.
- Is the cable deformed?
- Grease is applied sufficiently to cable joints.

If grease is insufficient, add it as necessary before assembling the cable.
2) Install each part in the reverse order of removal.

Tightening torque:
Refer to “COMPONENT” of “General Description”. <Ref. to SL-4, FRONT HOOD LOCK, COMPONENT, General Description.>

C: ADJUSTMENT

1) Loosen the bolt, and adjust the lock assembly - front hood while moving it up and down.



2) After adjustment, tighten the bolts securely.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-4, FRONT HOOD LOCK, COMPONENT, General Description.>

D: INSPECTION

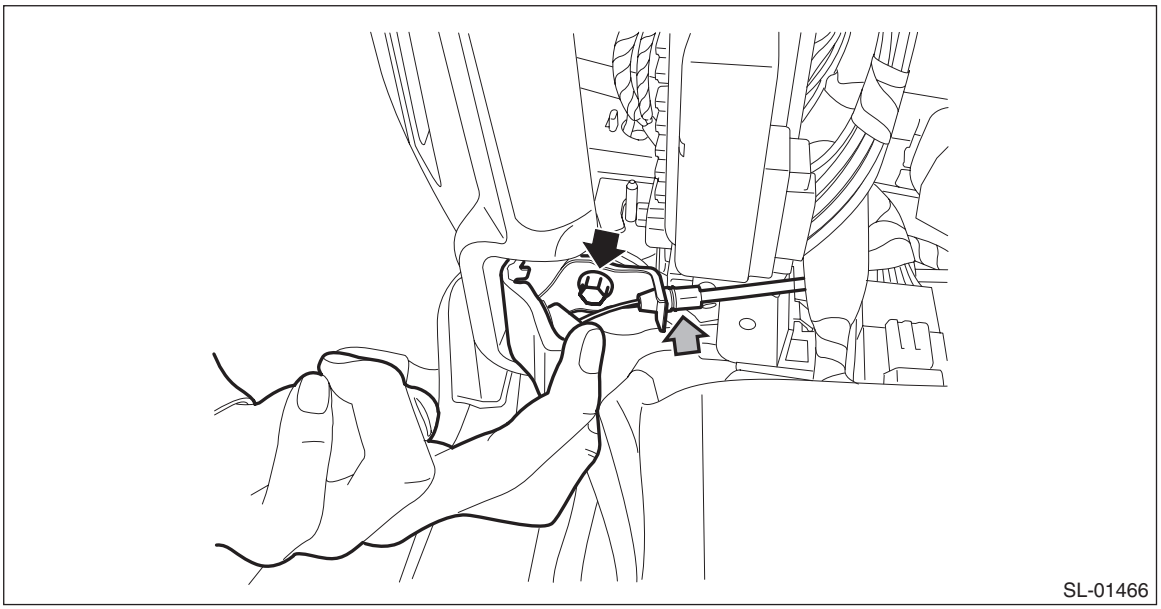
Check if the lock assembly operates normally.
If lever deformation, abnormal wear, or unsmooth lock operation is observed, replace the lock assembly - front hood.

16.Remote Openers

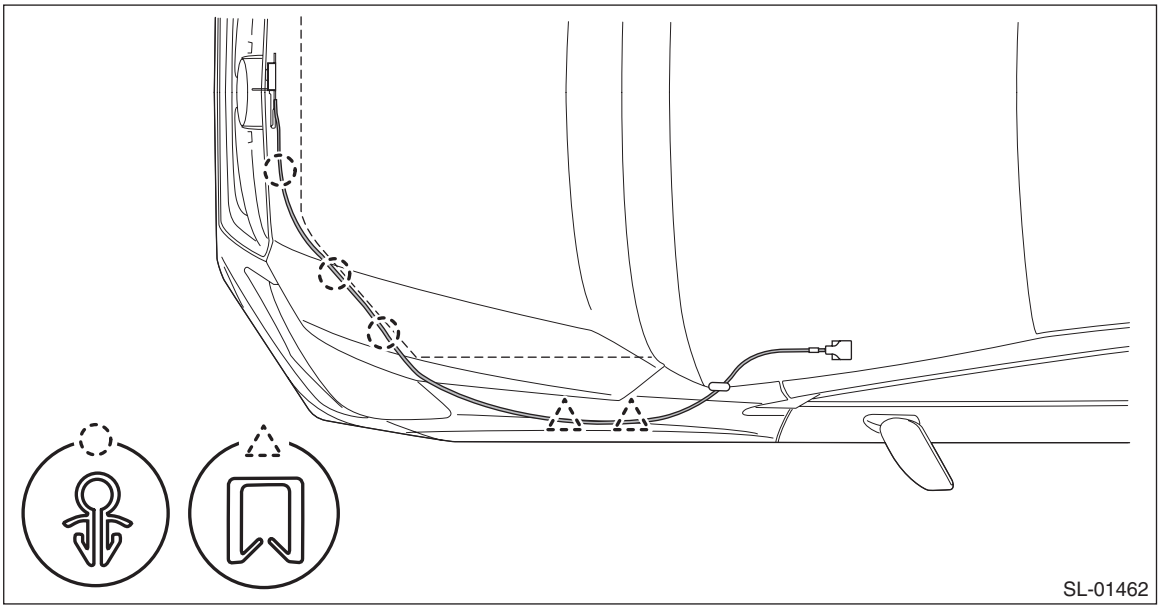
A: REMOVAL

1. FRONT HOOD OPENER

1) Remove the opener handle.
   (1) Remove the cable.
   (2) Remove the bolt, and remove the opener handle.

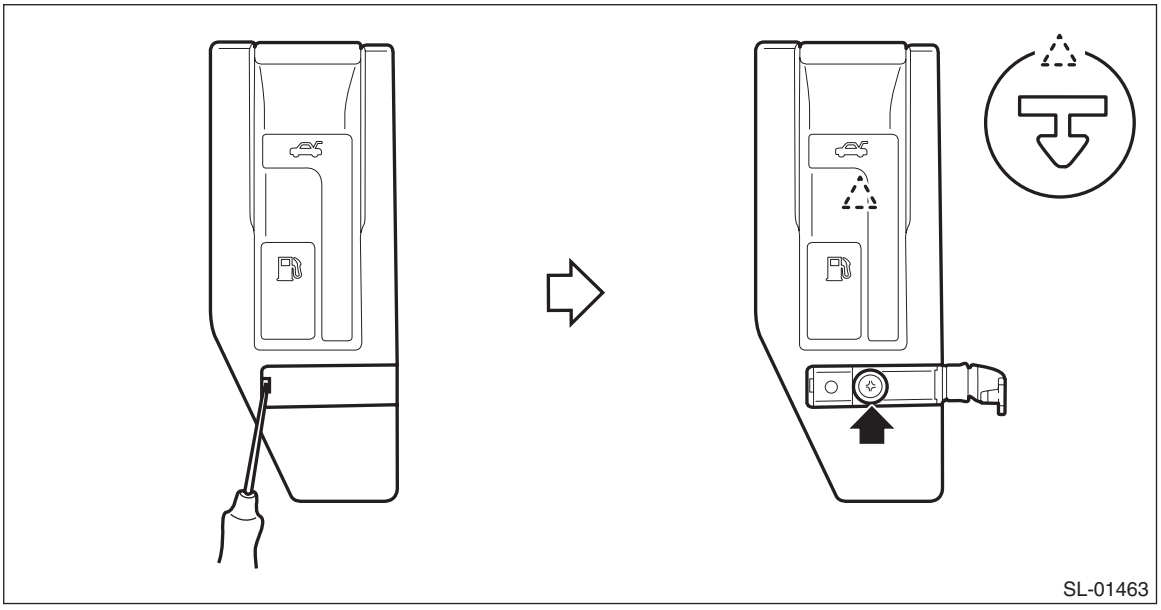


2) Remove the following parts and remove the cable clip and cable.
- Lock assembly - front hood: <Ref. to SL-50, REMOVAL, Front Hood Lock Assembly.>
- Cover assembly - instrument panel LWR driver: <Ref. to EI-62, REMOVAL, Instrument Panel Lower Cover.>

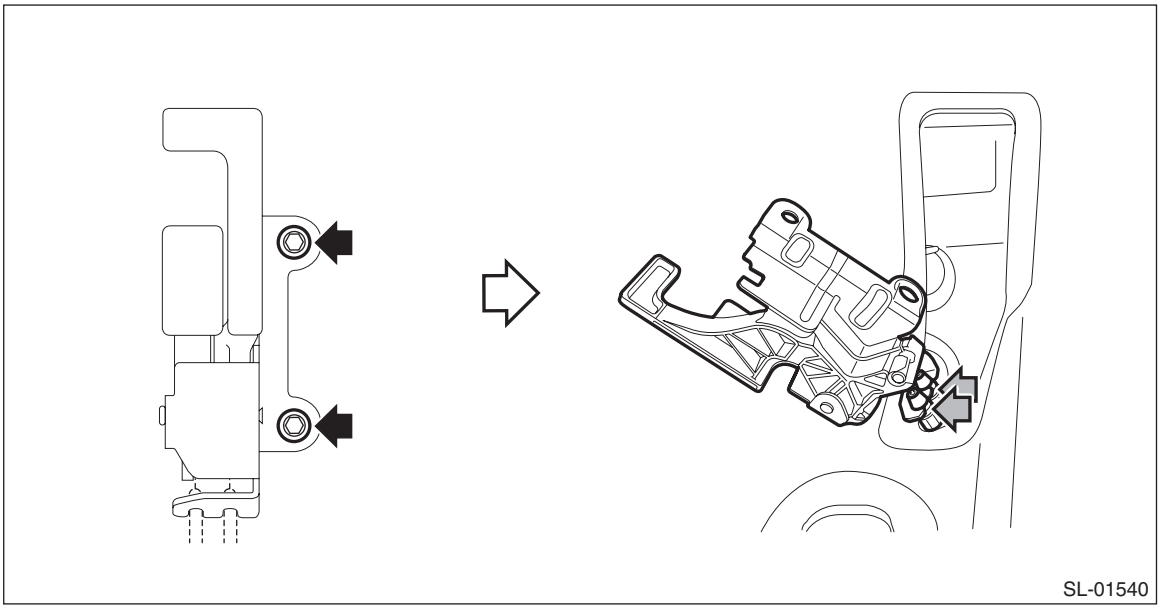


2. TRUNK LID OPENER

1) Remove the cover - handle.
   (1) Open the cover by using a flat tip screwdriver.
   (2) Remove the screws and detach the cover - handle.

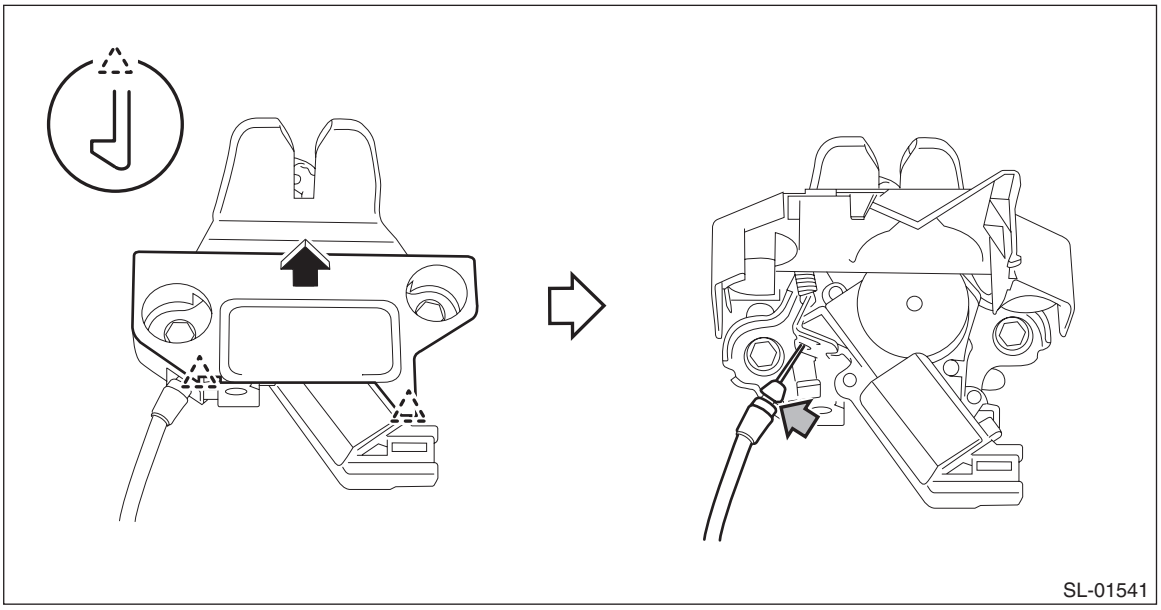


2) Remove the pull handle - opener.
   (1) Remove the nut.
   (2) Remove the cable from pull handle - opener.

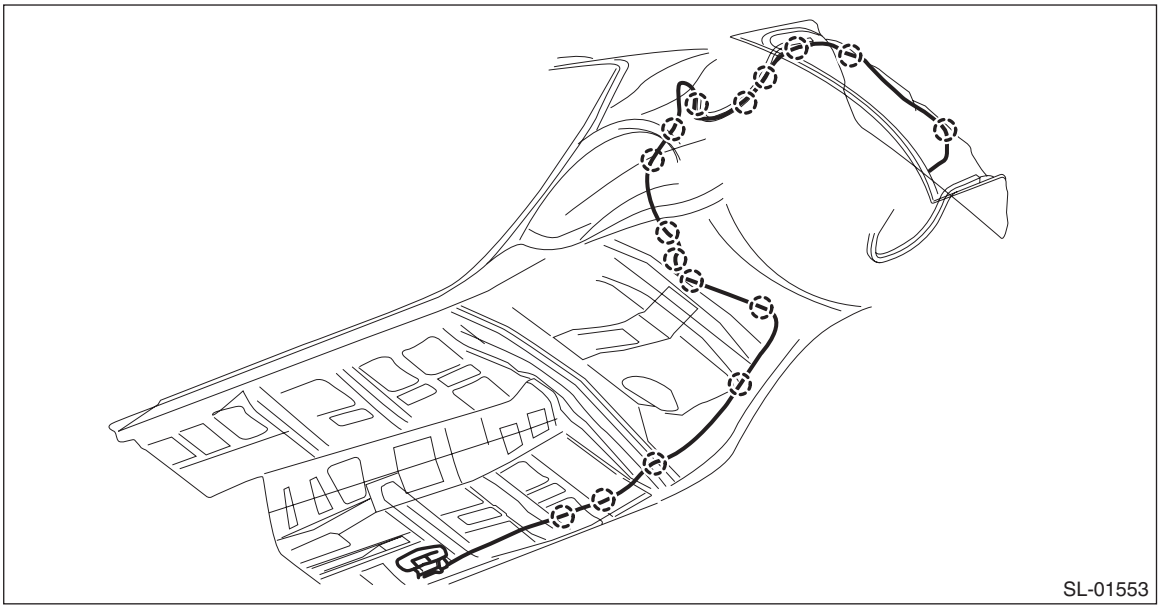


3) Remove the trim panel - trunk side RH. <Ref. to EI-112, TRUNK ROOM TRIM, REMOVAL, Trunk Room Trim.>
4) Remove the lower inner trim. <Ref. to EI-90, REMOVAL, Lower Inner Trim.>
5) Remove the trim panel - trunk lid. <Ref. to EI-112, TRUNK LID TRIM, REMOVAL, Trunk Room Trim.>

6) Disconnect the cable from the lock assembly - trunk lid.

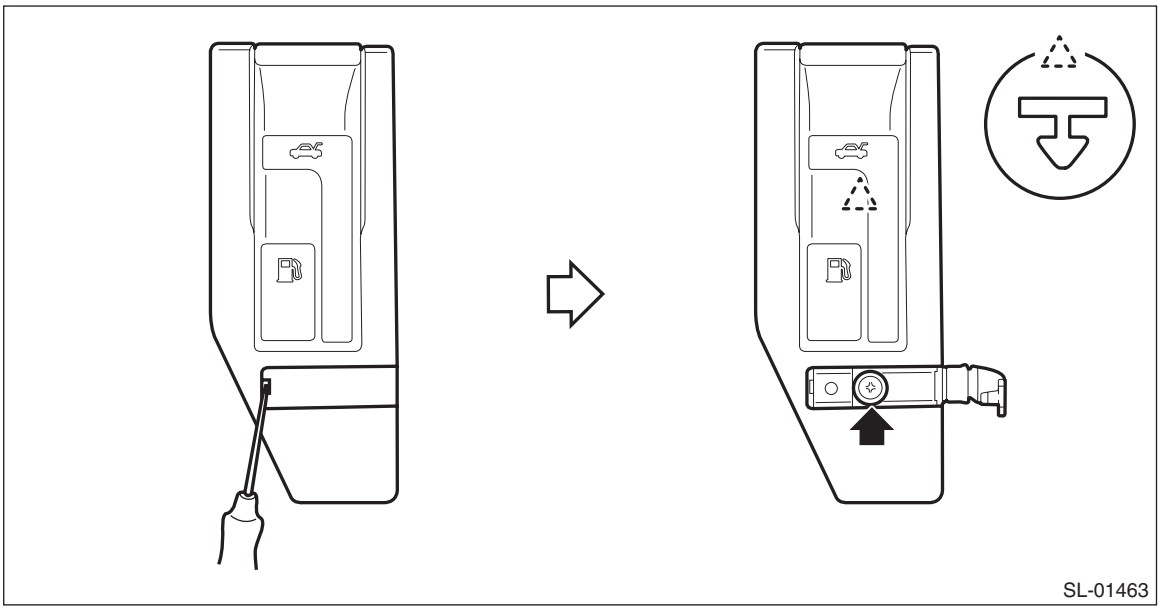


7) Remove the cable clip, and remove the cable.

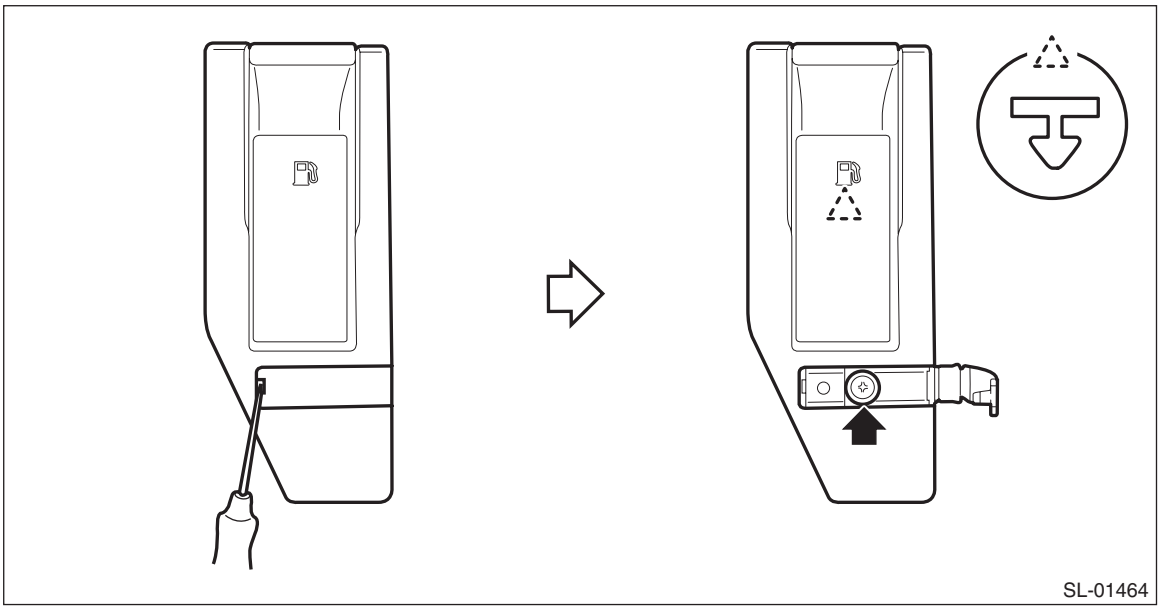


3. FUEL FLAP OPENER

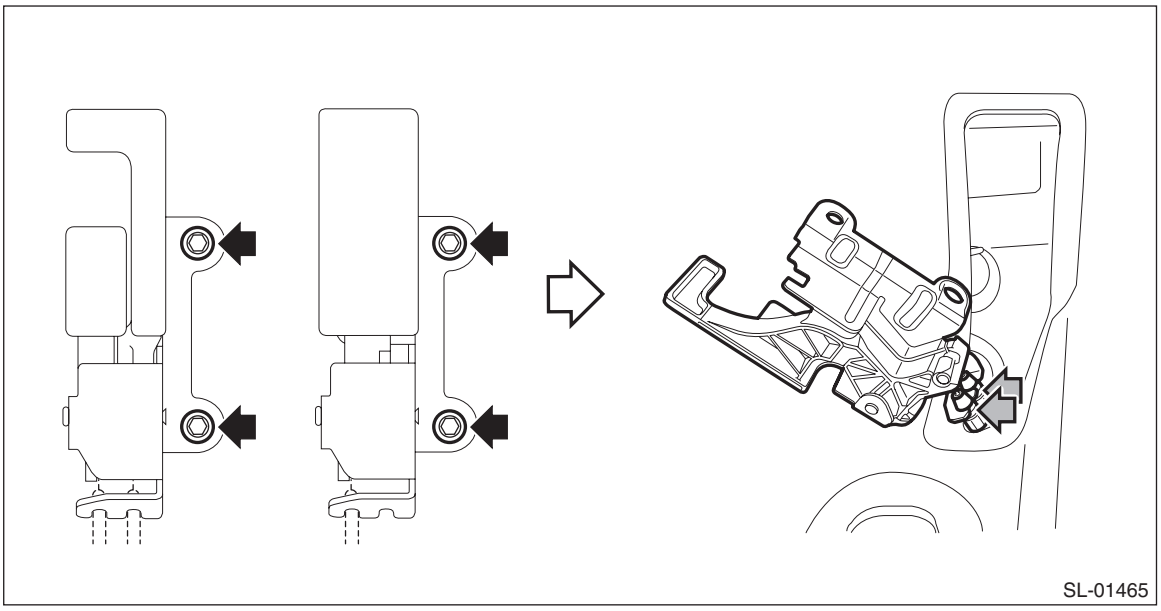
1) Remove the cover - handle.
   (1) Open the cover by using a flat tip screwdriver.
   (2) Remove the screws and detach the cover - handle.
   - 4 door model



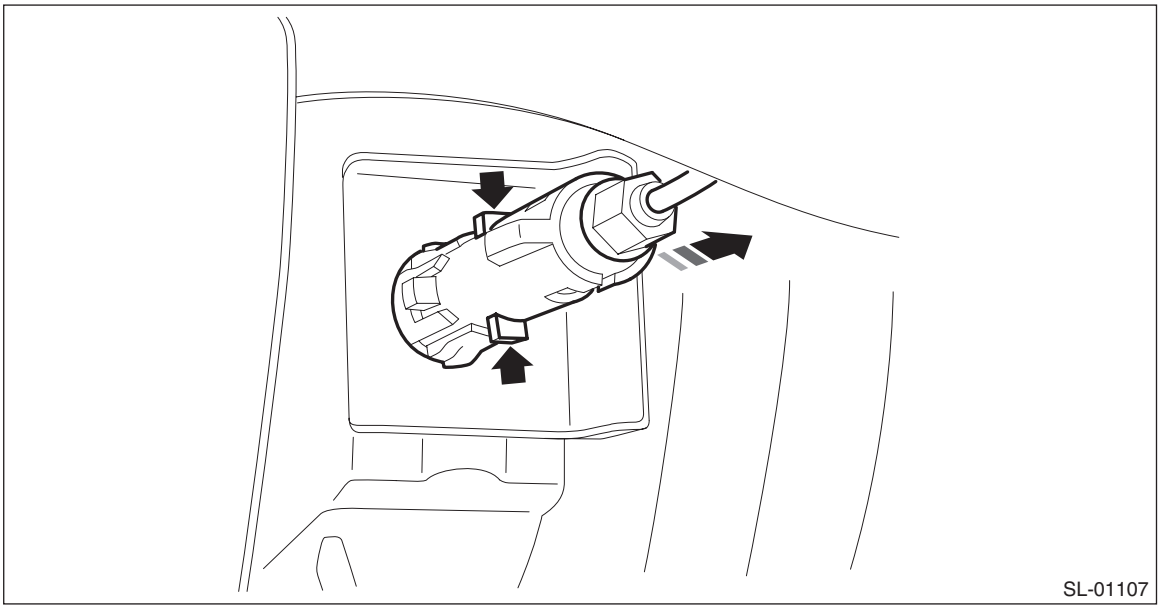
   - 5 door model



2) Remove the pull handle - opener.
(1) Remove the nut.
(2) Remove the cable from pull handle - opener.

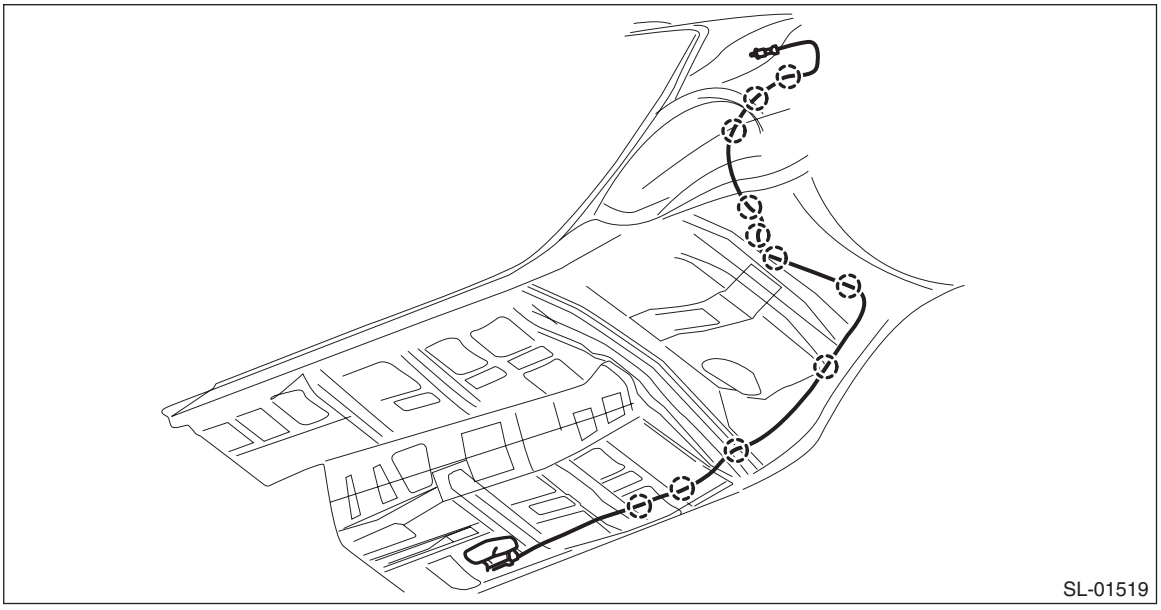


3) Remove the trim panel - trunk side RH. (4 door model) <Ref. to EI-112, TRUNK ROOM TRIM, REMOVAL, Trunk Room Trim.>
4) Remove the trim panel - rear apron RH. (5 door model) <Ref. to EI-103, 5 DOOR MODEL, REMOVAL, Rear Quarter Trim.>
5) Remove the fuel lock inside the quarter panel.
(1) Press the claws of the fuel lock.
(2) While keeping the condition in step (1), pull the fuel lock to the rearward of the vehicle.

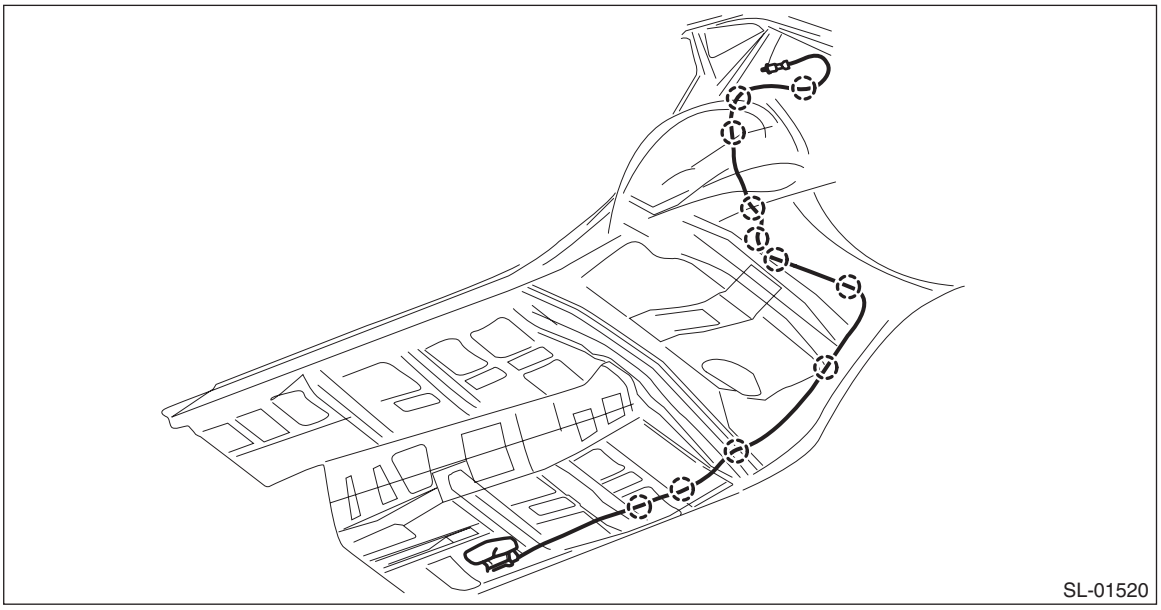


6) Remove the lower inner trim. <Ref. to EI-90, REMOVAL, Lower Inner Trim.>

7) Remove the cable clip, and remove the cable.
- 4 door model



- 5 door model



B: INSTALLATION

1) Before installation, check the following items.
- Cable is free from deformation such as fray.

2) Install each part in the reverse order of removal.

Tightening torque:
Front hood lock: <Ref. to SL-4, FRONT HOOD LOCK, COMPONENT, General Description.>
Remote opener: <Ref. to SL-5, REMOTE OPENER, COMPONENT, General Description.>

C: INSPECTION

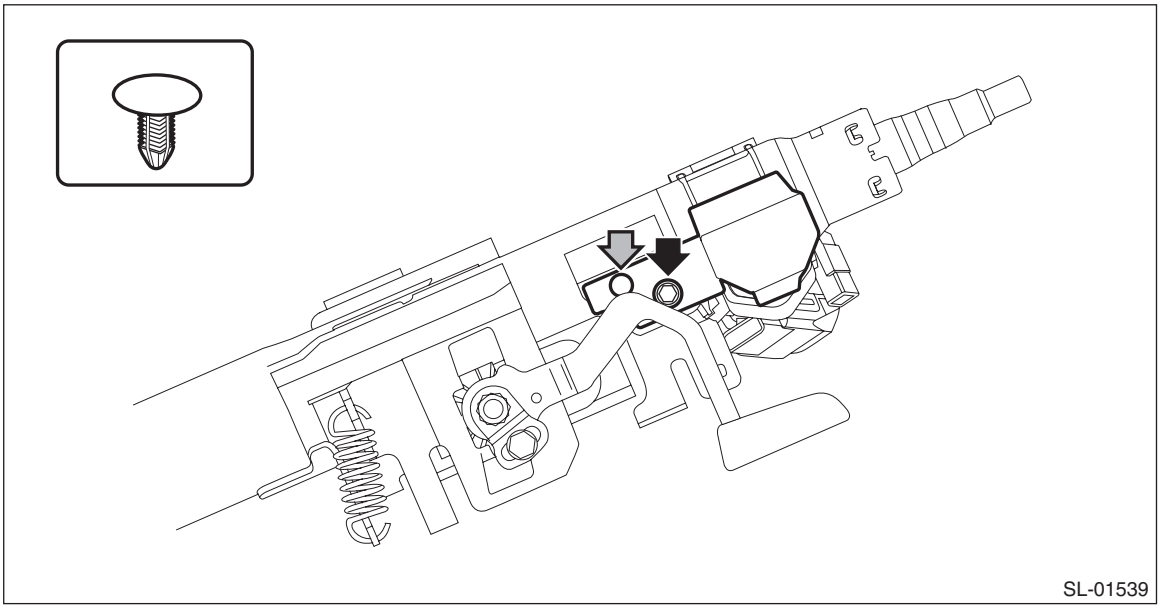
Check if the front hood and fuel flap operate normally.

17.Ignition Key Lock

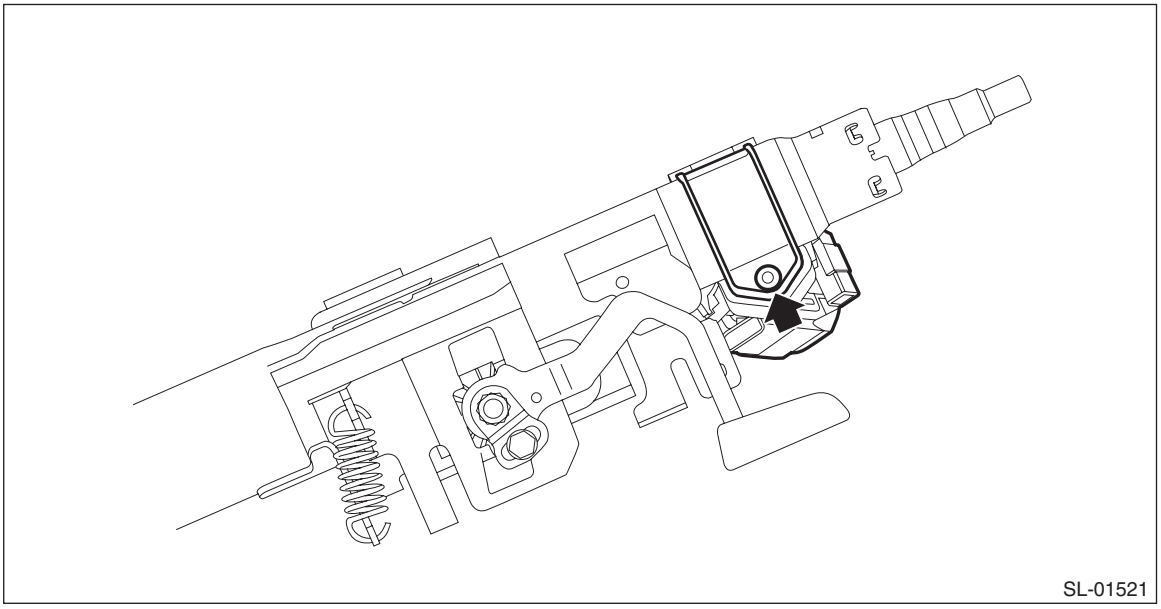
A: REPLACEMENT

CAUTION:
• Before handling the airbag module, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". <Ref. to AB-10, CAUTION, General Description.>
• If the steering wheel and steering angle sensor (steering roll connector) are removed, perform "VDC sensor midpoint setting mode" of the VDC. <Ref. to VDC-18, VDC SENSOR MIDPOINT SETTING MODE, ADJUSTMENT, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>

1) Disconnect the ground cable from battery.
2) Remove the column assembly - steering. <Ref. to PS-18, REMOVAL, Steering Column.>
3) Remove the ignition key lock.
   (1) Secure the column assembly - steering in a vise.
   (2) Remove the bolts and clips, and remove the dynamic damper.



   (3) Use the reverse tap or drill to remove the set bolt and remove the ignition key lock.

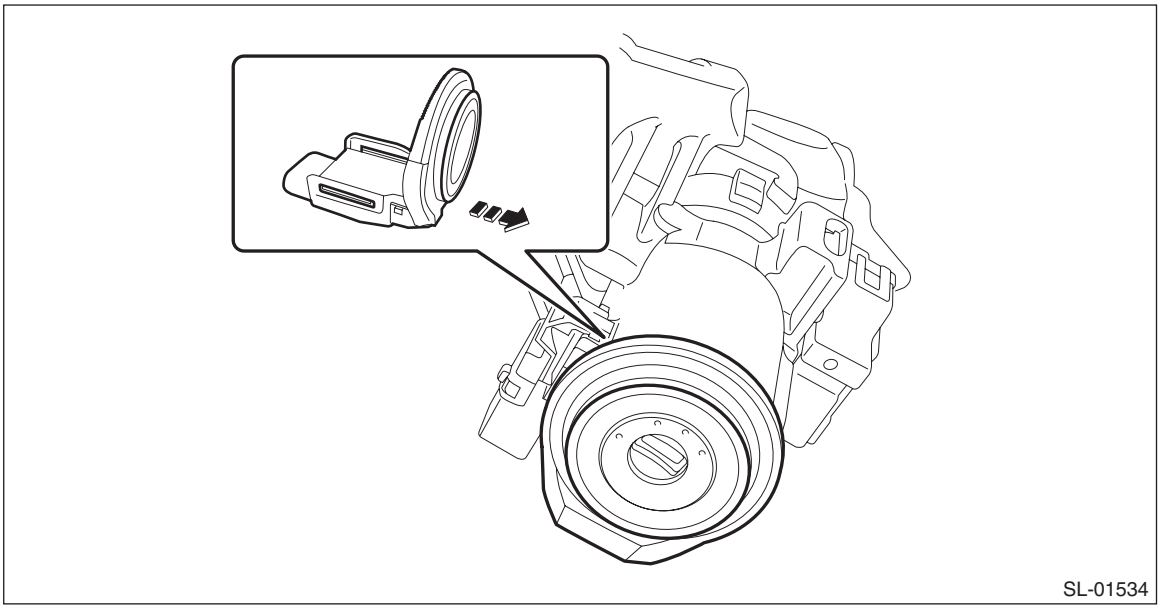


4) Install the ignition key lock.
   (1) Secure the ignition key lock to the column assembly - steering.
   (2) Use new set bolts. Tighten the bolt until the bolt head is broken (bolt head wrenched off).

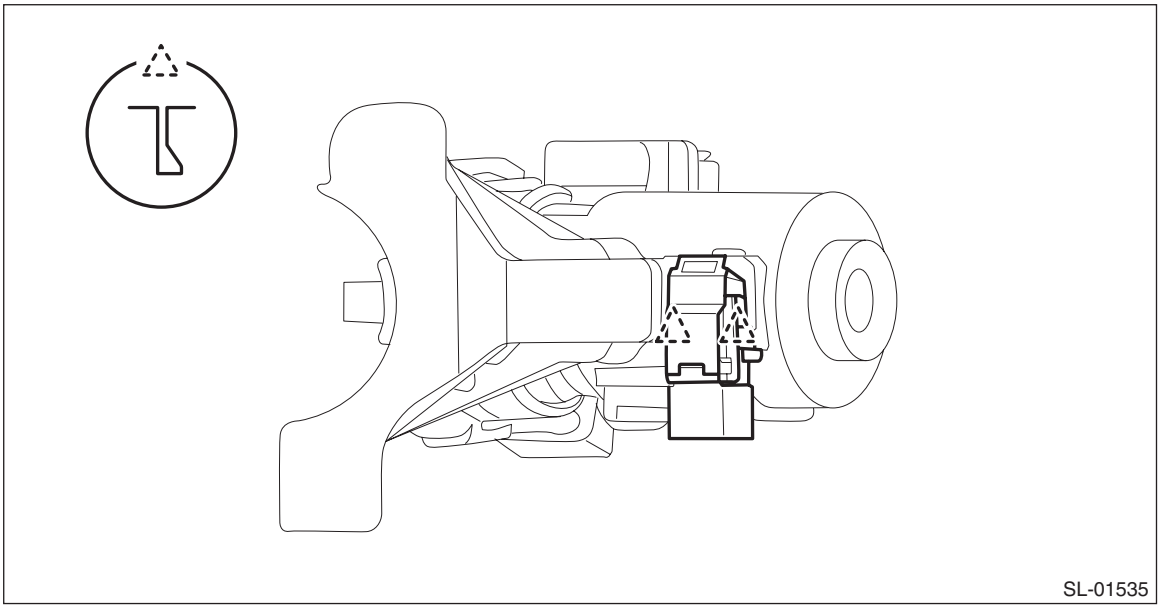
B: DISASSEMBLY

1) Remove the immobilizer antenna assembly.

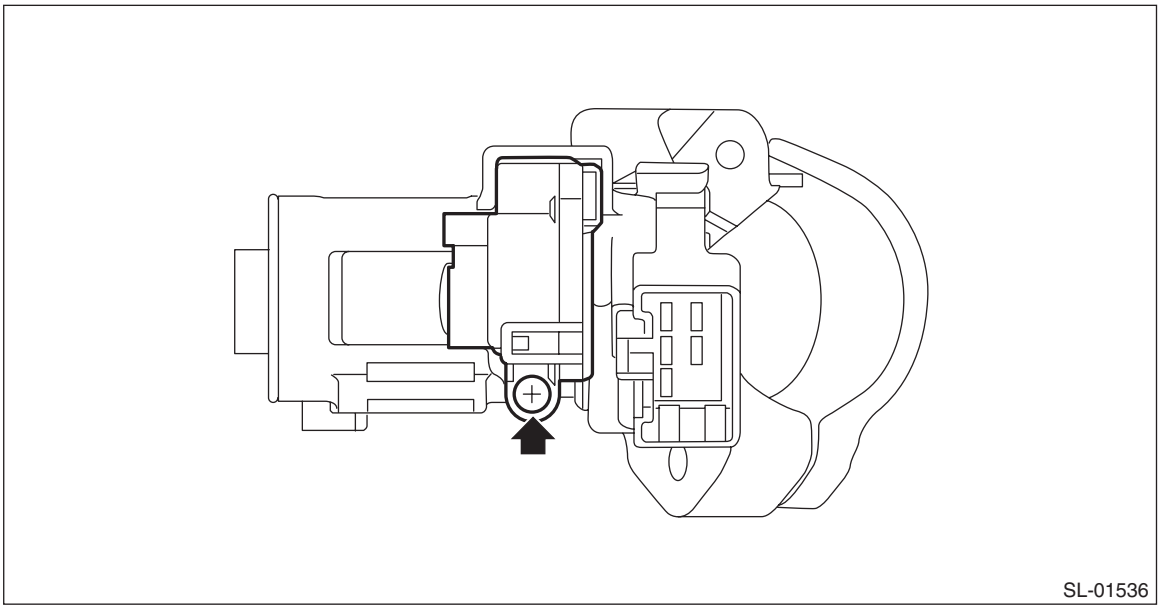
CAUTION:
Do not apply excessive force to remove the immobilizer antenna and lock. Otherwise they may be broken because those parts are the products made of a plastic.


SL-01534

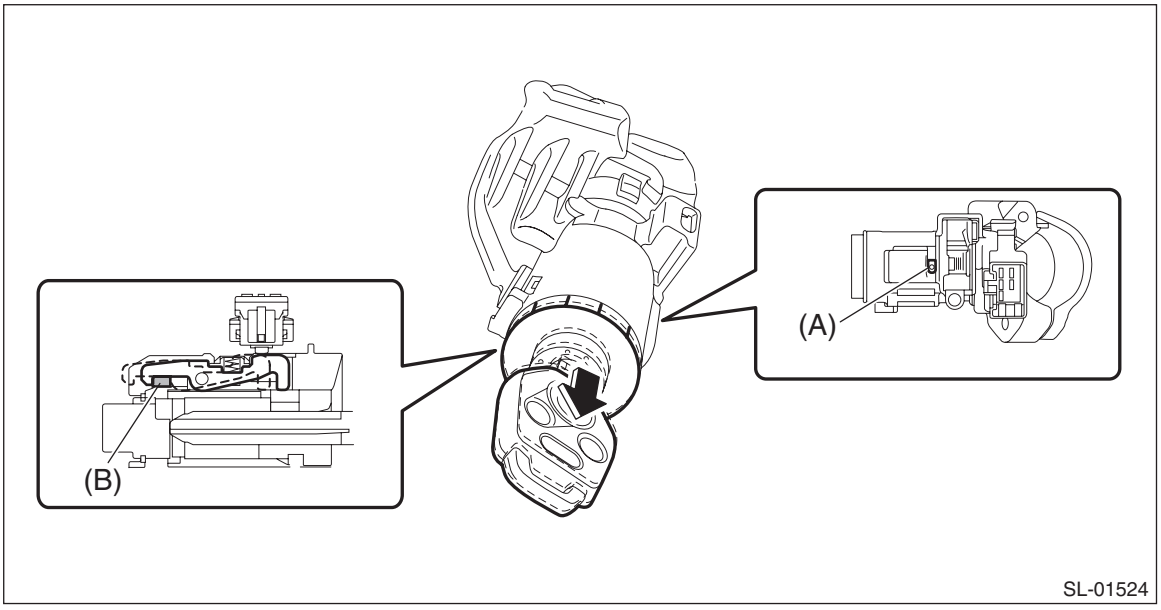
2) Release the claws, and pull the key warning switch downwards to remove.


SL-01535

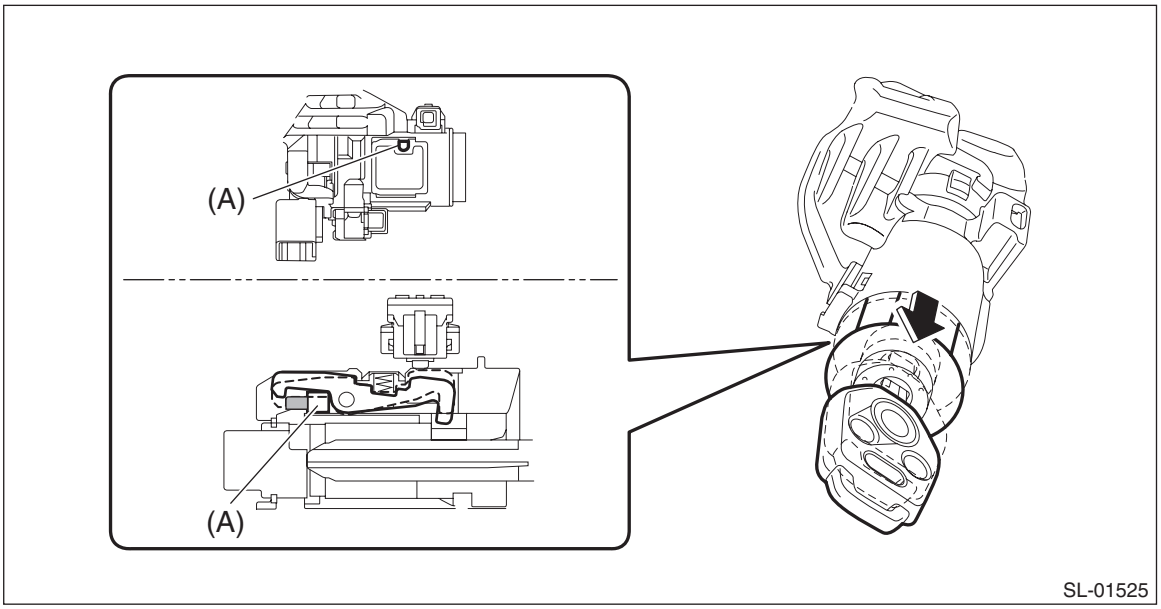
3) Remove the screws and remove the key lock solenoid.



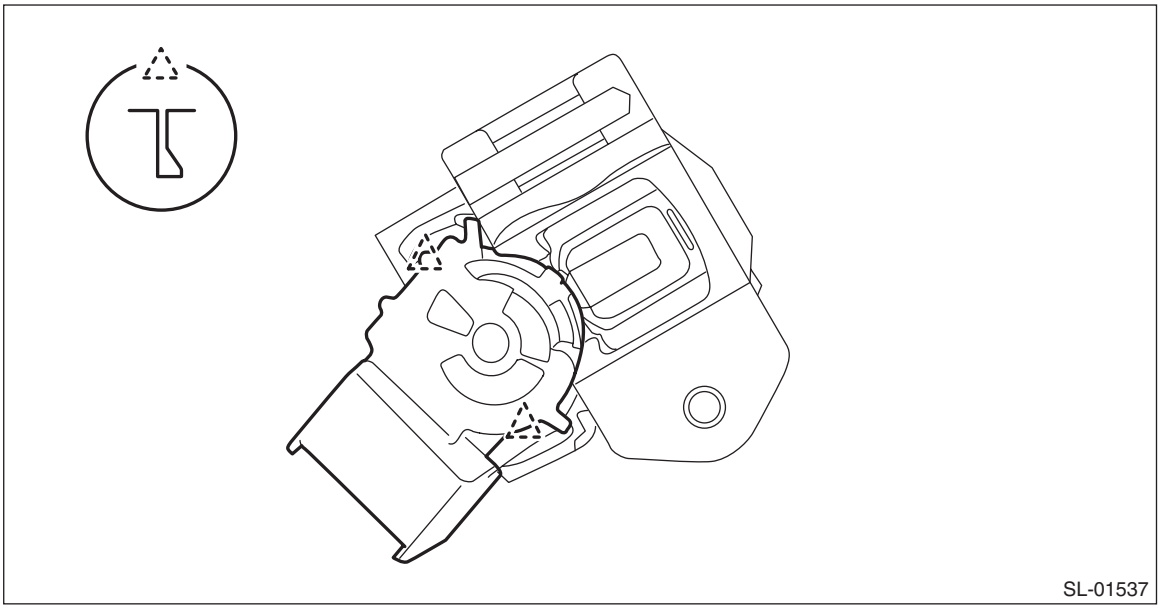
4) Replace the key cylinder.
   (1) Insert the key into the key cylinder, and turn the key to the ACC position.
   (2) Insert a flat tip screwdriver from the steering lock frame hole (A), and pull the key cylinder until the key cylinder claws touch the steering lock frame stopper (B).



(3) Insert a flat tip screwdriver from the steering lock frame hole (A), and release the claws to pull out the key cylinder.



5) Release the claws and remove the ignition switch assembly.

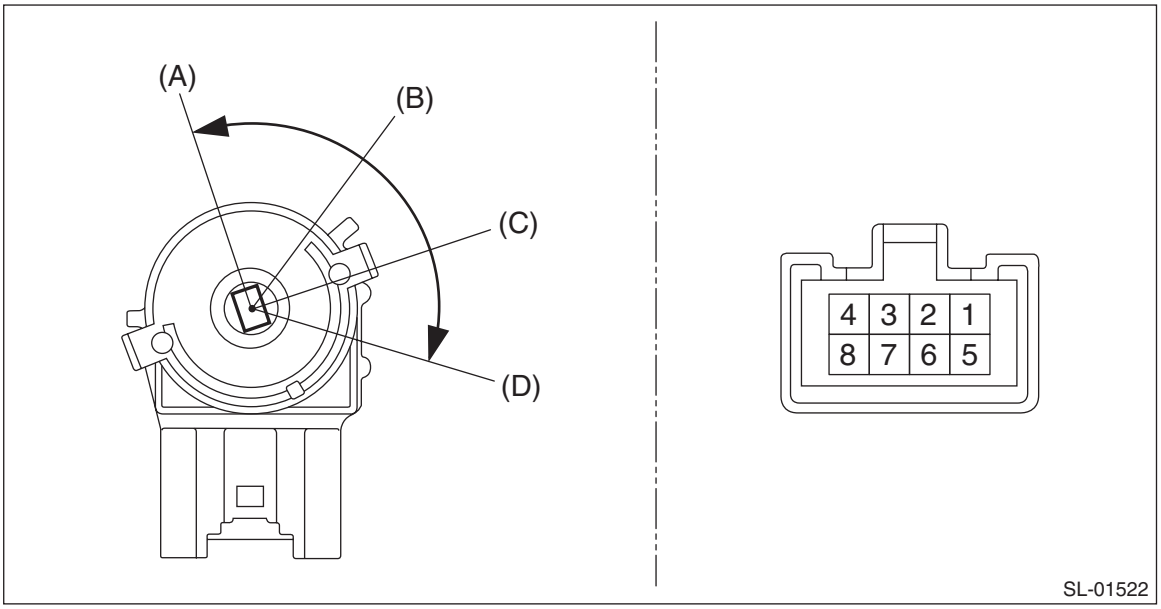


C: INSPECTION

UNIT INSPECTION

PREPARATION TOOL:
Circuit tester

1) Check the resistance between switch terminals.



Terminal No.	Inspection conditions		Standard
Between all terminals	(A)	LOCK	1 MΩ or more
2 — 4	(B)	ACC	Less than 1 Ω
1 — 2 — 4 5 — 6	(C)	ON	Less than 1 Ω
1 — 3 — 4 5 — 6 — 7	(D)	ST	Less than 1 Ω

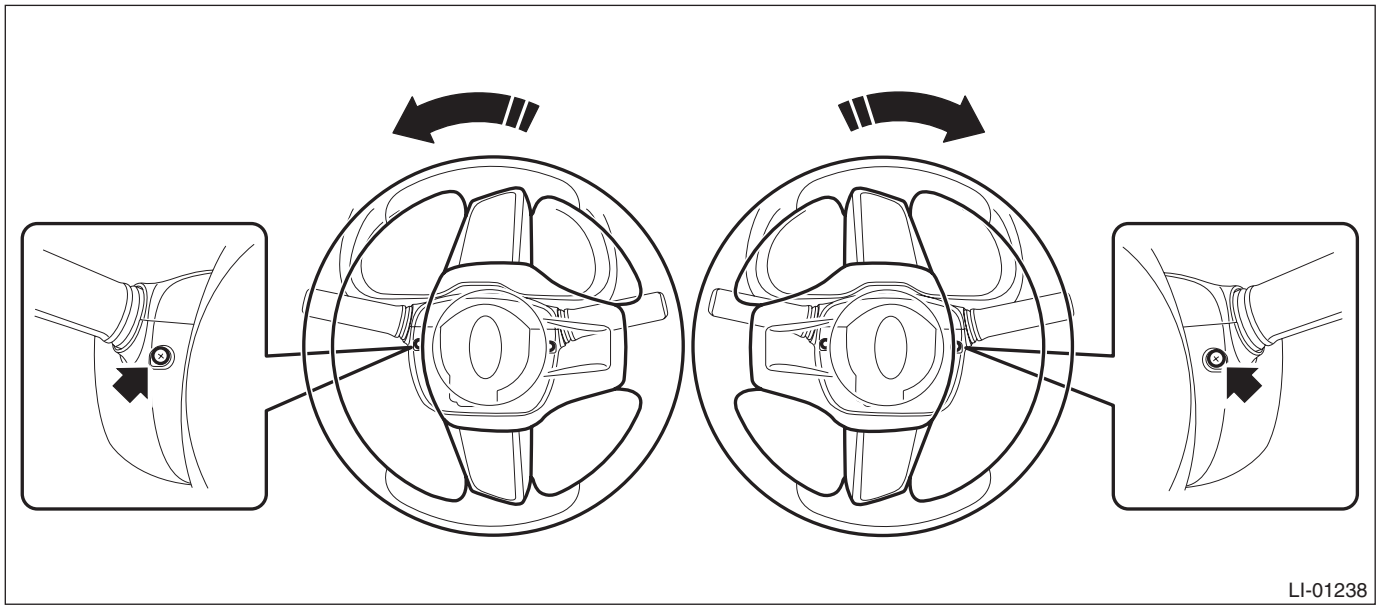
2) Replace the ignition switch assembly if the inspection result is not within the standard.

18.Key Lock Cylinders

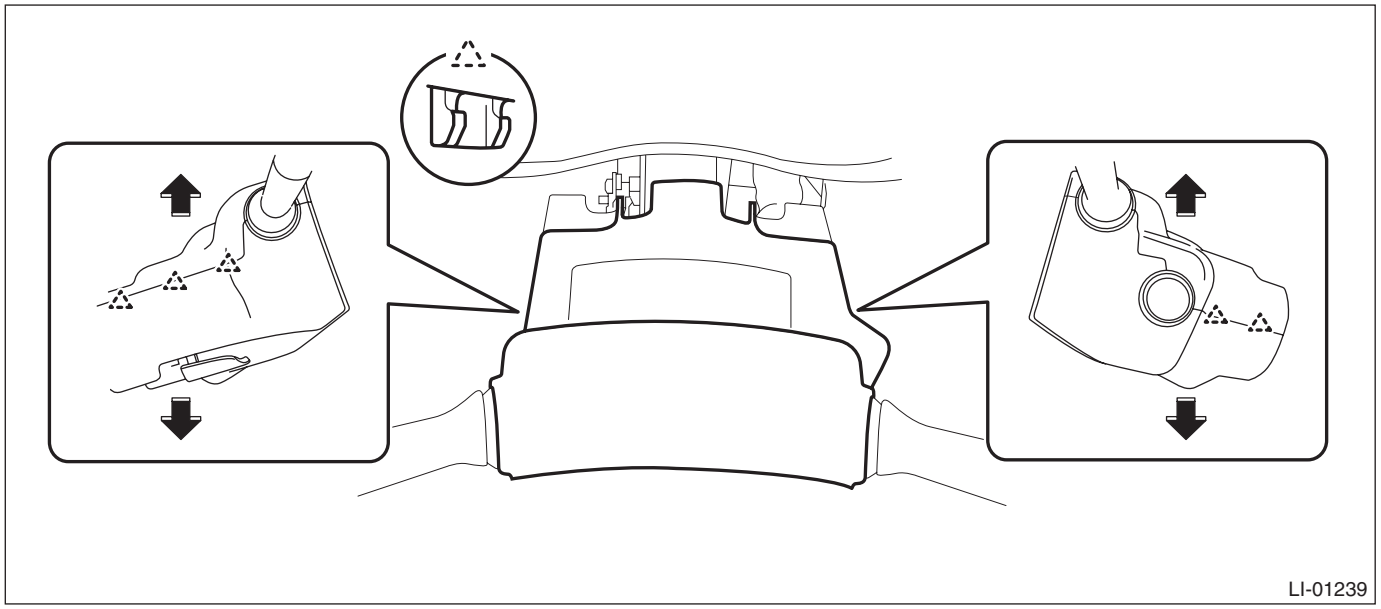
A: REPLACEMENT

1. STEERING LOCK

1) Disconnect the ground cable from battery.
2) Remove the cover assembly - column.
   (1) Remove the screws by turning the steering wheel to right and left.

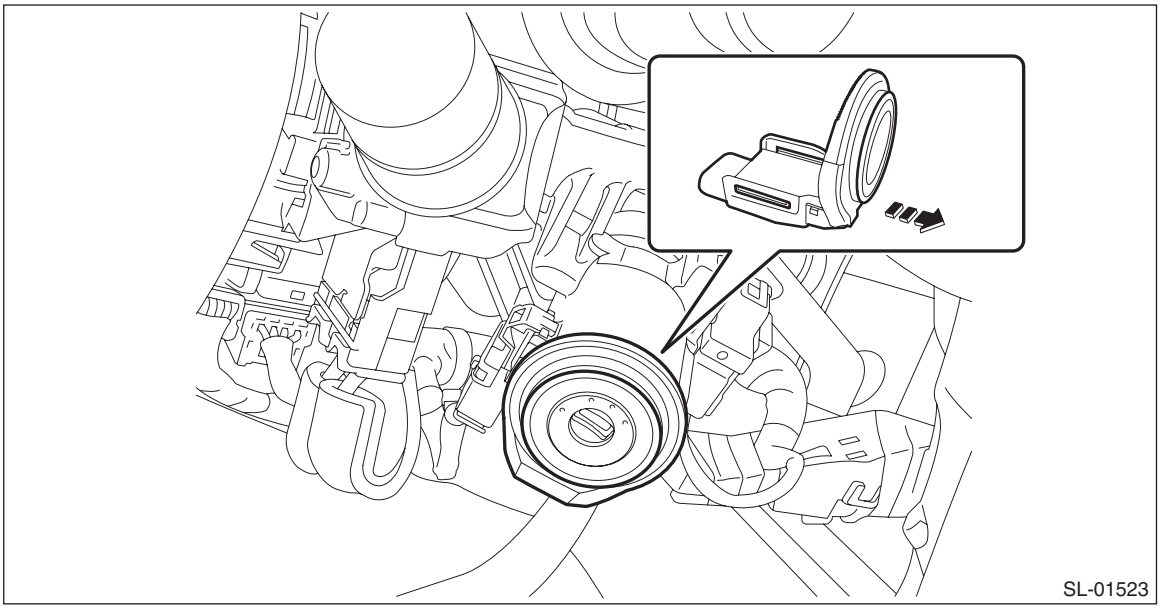


   (2) Release the claw, and remove the cover assembly - column UPR and the cover assembly - column LWR.

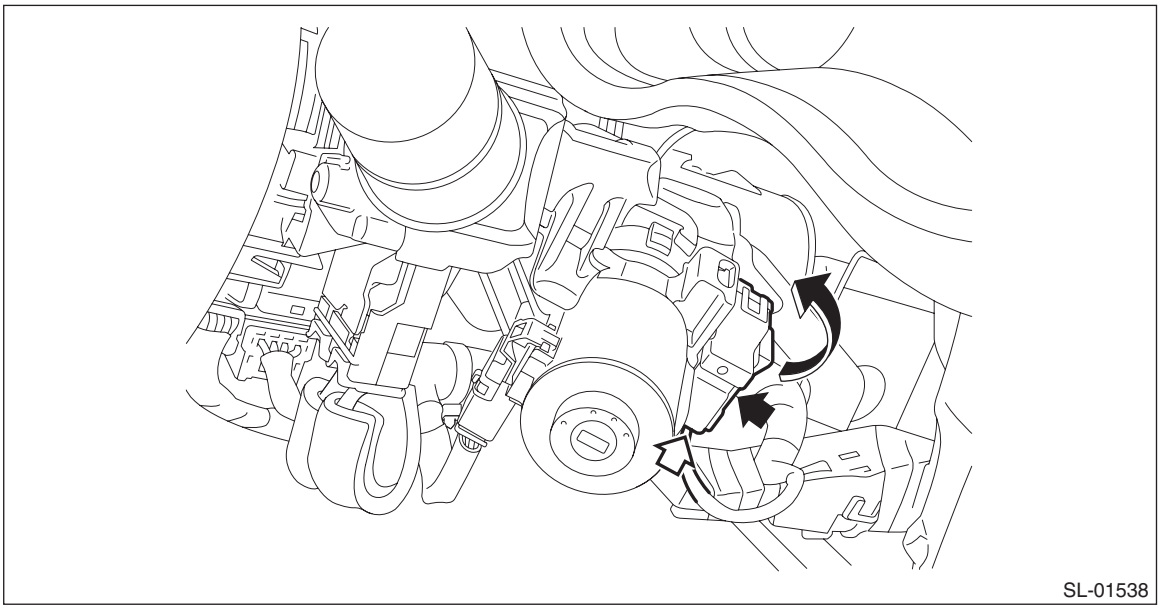


3) Disconnect the connector and remove the immobilizer antenna assembly.

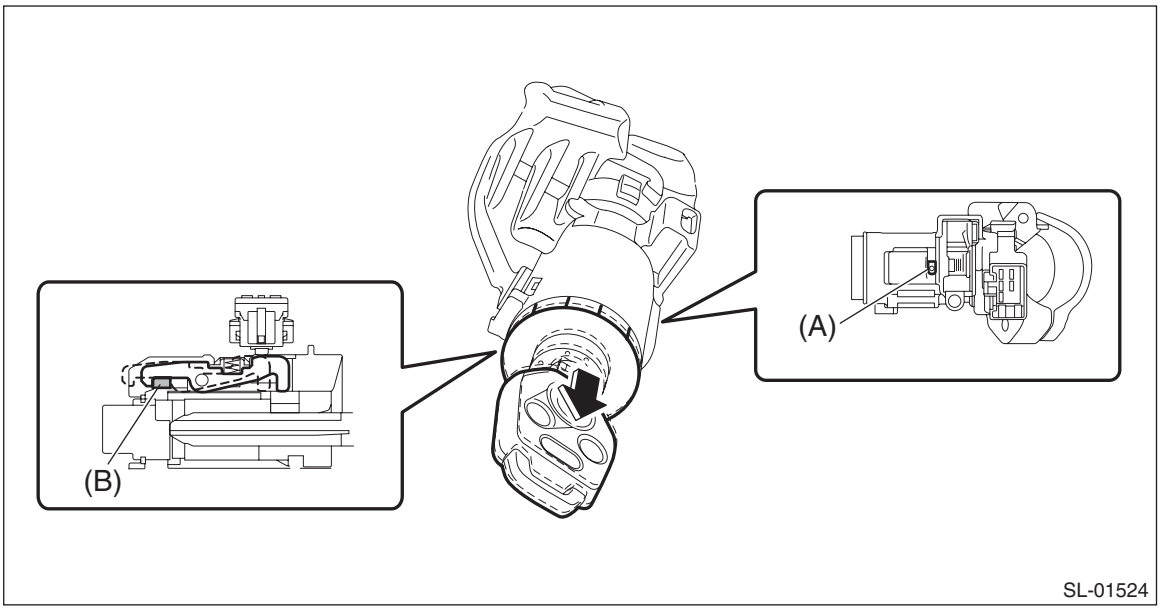
CAUTION:
Do not apply excessive force to remove the immobilizer antenna and lock. Otherwise they may be broken because those parts are the products made of a plastic.


SL-01523

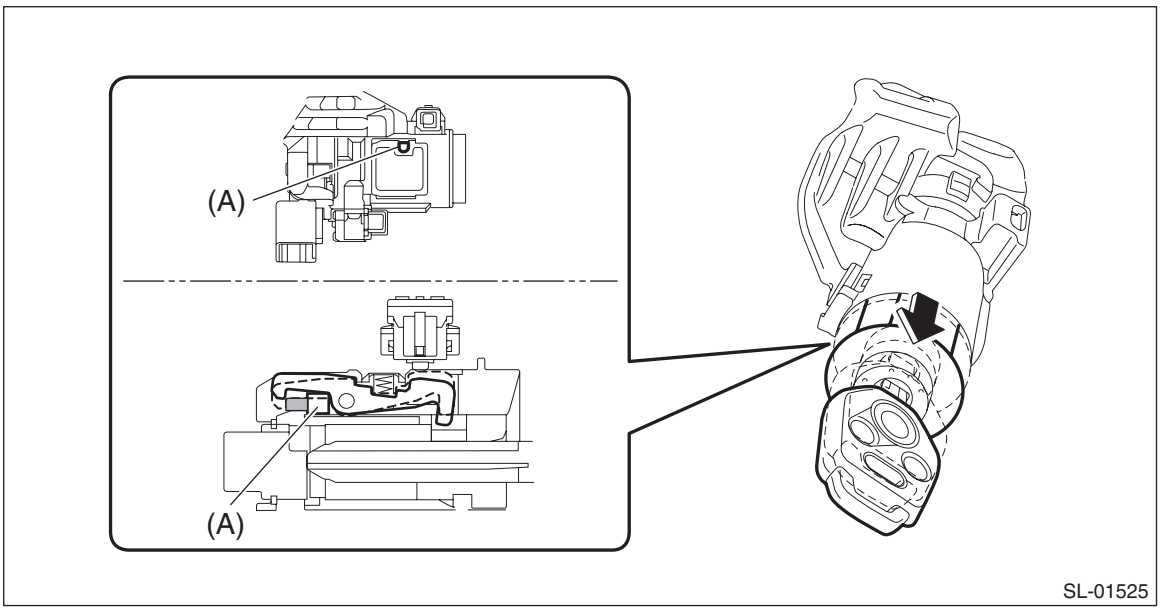
4) Remove the key lock solenoid.
(1) Disconnect the connector.
(2) Remove the screws and remove the key lock solenoid.


SL-01538

5) Replace the key cylinder.
(1) Insert the key into the key cylinder, and turn the key to the ACC position.
(2) Insert a flat tip screwdriver from the steering lock frame hole (A), and pull the key cylinder until the key cylinder claws touch the steering lock frame stopper (B).



(3) Insert a flat tip screwdriver from the steering lock frame hole (A), and release the claws to pull out the key cylinder.



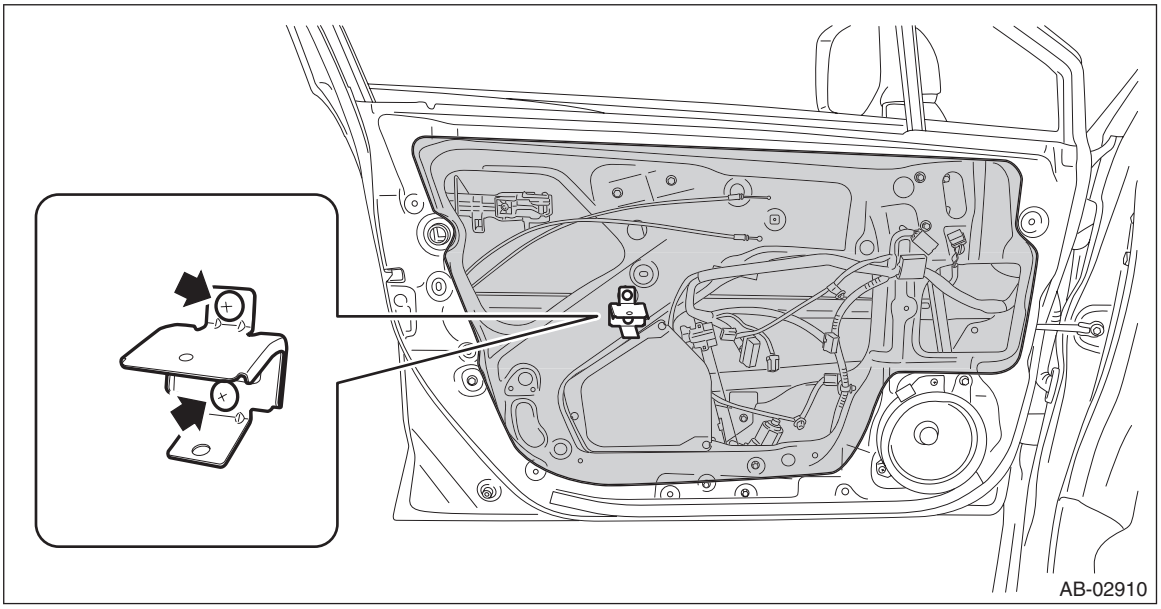
6) Install each part in the reverse order of removal.

2. FRONT DOOR

1) Raise the glass assembly - front door to the top position.
2) Remove the trim panel - front door. <Ref. to EI-58, FRONT DOOR, REMOVAL, Door Trim.>
3) Remove the sealing cover - front door.

CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the sealing cover - front door.**
- **If the sealing cover - front door gets broken, replace it with a new part.**

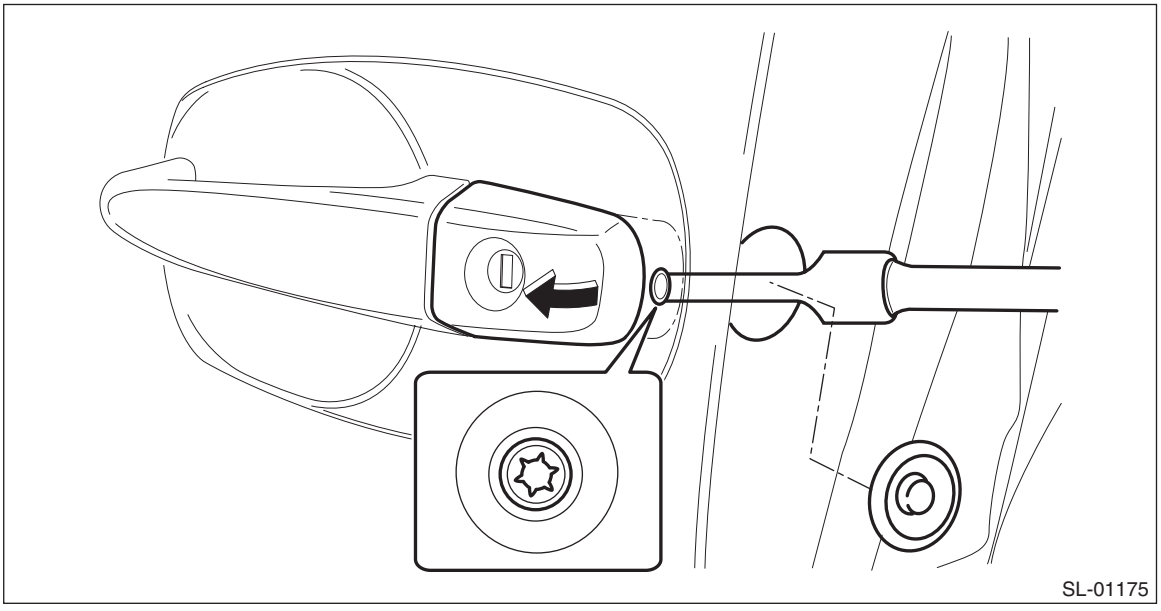
(1) Remove the screw to remove the bracket - door trim front.
(2) Disconnect connectors.
(3) Carefully remove the butyl tape to remove the sealing cover - front door.



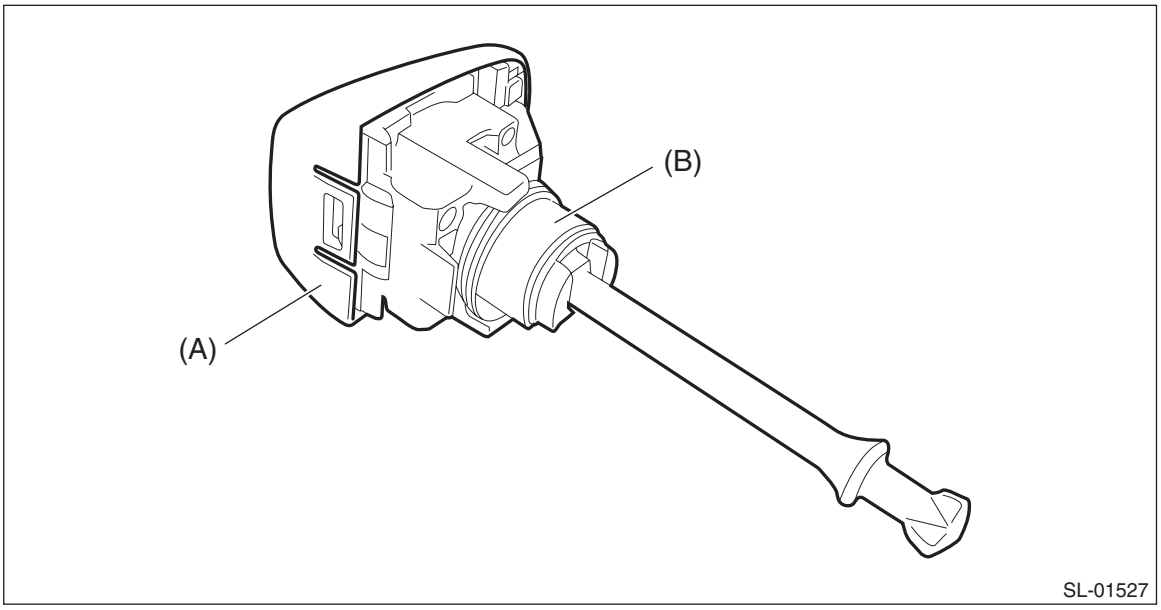
4) Remove the cover - handle front outer.

PREPARATION TOOL:
TORX® T30

(1) Remove the plug at the rear end of the panel assembly - front door.
(2) Loosen the TORX® bolt and remove the cover - handle front outer.



5) Remove the key cylinder (B) from the cover - handle front outer (A), and replace the key cylinder.

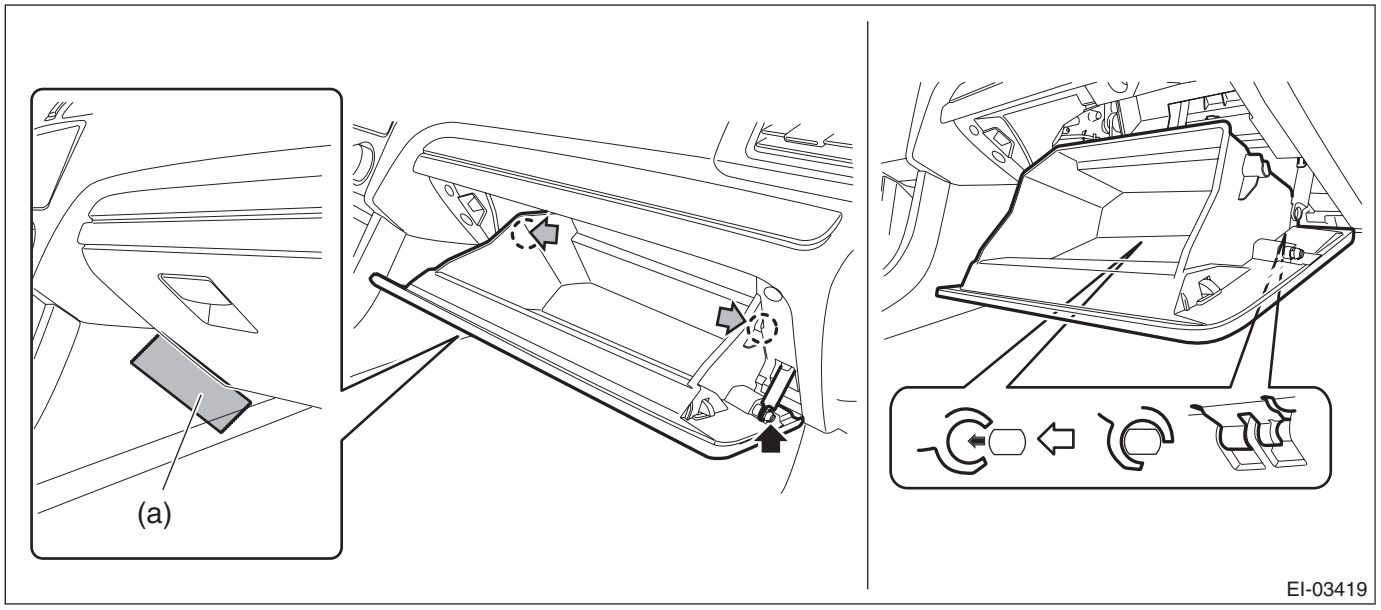


6) Install each part in the reverse order of removal.

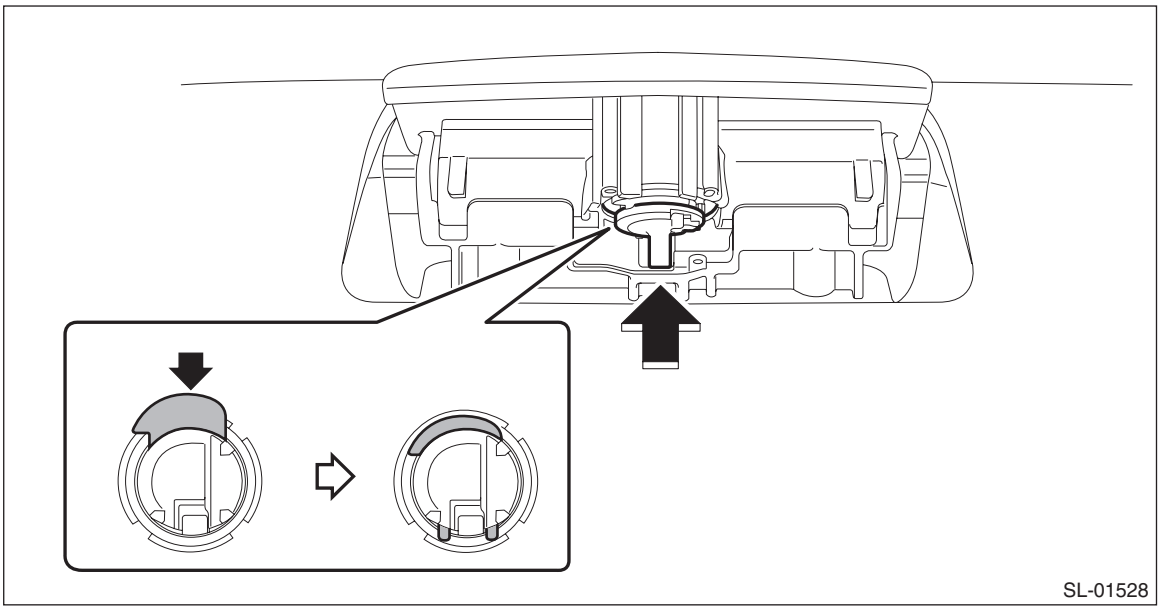
Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

3. GLOVE BOX LID

1) Remove the pocket assembly.
   (1) Attach the protective tape (a) to the panel center LWR.
   (2) Remove the damper COMPL - pocket.
   (3) Release the stoppers and remove the pocket assembly by pulling it toward you.



2) Replace the key cylinder.
   (1) Pull up the lock knob.
   (2) Push out the key cylinder from the pocket assembly while pressing in the metal plate.

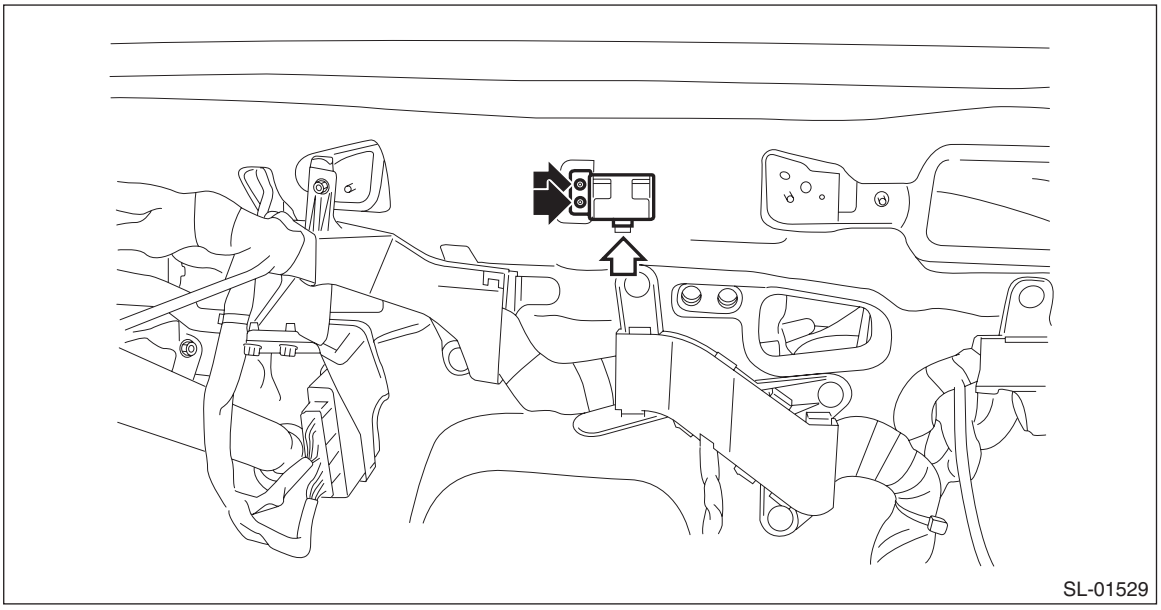


3) Install each part in the reverse order of removal.

19.Security Control Module

A: REMOVAL

1) Remove the heater and cooling unit assembly. <Ref. to AC-59, REMOVAL, Heater and Cooling Unit.>
2) Remove the security control module.
   (1) Disconnect the connector.
   (2) Remove the nuts, and remove the security control module.



B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:
Refer to “INSTALLATION” of “Heater and Cooling Unit”. <Ref. to AC-62, INSTALLATION, Heater and Cooling Unit.>

Tightening torque:
Security control module: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

20.Impact Sensor

A: REMOVAL

1) Remove the key from ignition switch.
2) Close all the doors and rear gate.
3) Press the UNLOCK button of the keyless transmitter.
4) Disconnect the ground cable from battery.
5) Remove the impact sensor.
6) Change the impact sensor setting using the Subaru Select Monitor.

B: INSTALLATION

1) Remove the key from ignition switch.
2) Close all the doors and rear gate.
3) Press the UNLOCK button of the keyless transmitter.
4) Disconnect the ground cable from battery.
5) Install the impact sensor.
6) Change the impact sensor setting using the Subaru Select Monitor.

C: OPERATION

1. IMPACT SENSOR SETTING USING SUBARU SELECT MONITOR

1) Prepare the Subaru Select Monitor kit.
2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”.
3) On «System Selection Menu» display, select {Integ. unit mode}.
4) Select {Unit customizing} from {Work Support}.
5) Make a impact monitor setting.
- When installing: ON
- When removing: OFF

6) Make a impact monitor ON/OFF setting.
- When installing: ON
- When removing: OFF

7) Turn the ignition switch to OFF, and then remove the Subaru Select Monitor.

D: ADJUSTMENT

1. CHECK IMPACT SENSOR

1) Remove the key from ignition switch.
2) Close all the windows.
3) Close all the doors and rear gate. Leave open the front hood.
4) Press the LOCK button of the keyless transmitter from outside of vehicle.
5) Check that the security indicator light blinks twice within 0.5 seconds in 2 second cycles after 30 seconds.
6) Hit all windows with the palm with force repeatedly, to check for whether the security alarm operates. Lift up the front hood approx. 12 cm (4.7 in) or more, and then drop it off to check the operation of security alarm.
7) If NG, adjust the impact sensitivity.

2. IMPACT SENSITIVITY ADJUSTMENT

1) Prepare the Subaru Select Monitor kit.
2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”.
3) On the «System Selection Menu», select the {Impact Sensor}.
4) Make a {Sensitivity Adjustment Mode}.
- Sensitivity can be adjusted in 11 levels (0 to 10).
- Initial setting is 5.
- Smaller number means more sensitive.
- Larger number means less sensitive.

5) Turn the ignition switch to OFF, and then remove the Subaru Select Monitor.

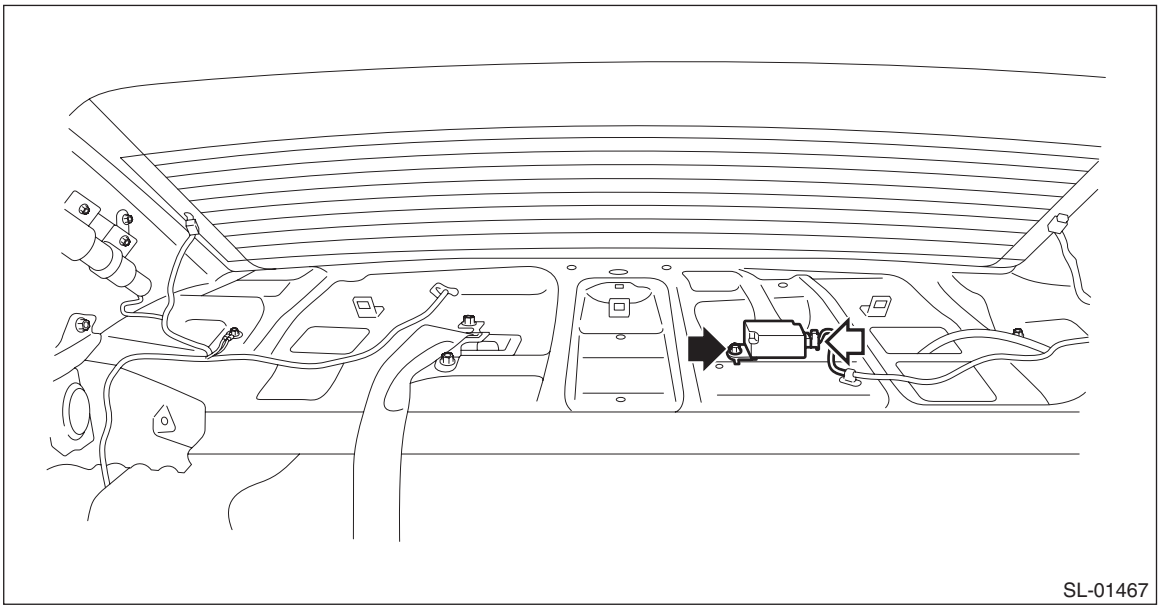
NOTE:
- Set the sensor so that it is not triggered by normal vibrations (someone reclining on the door, hit by a ball, etc.).
- Set the sensor to operate the alarm when the windshield glass or door is hit hard repeatedly, etc, where it can be assumed that there is an attempt to damage the car by a burglar, etc.
- Even if there is no burglary attempt, if there is vibration (road construction, elevated parking lots, passage of trains or boarding of ferries), the alarm can be triggered. Because of this, ask the customer about their parking conditions, and set an appropriate sensitivity level after discussion.
- If the sensitivity setting was not performed properly, a buzzer will sound four times. In this case, check that there is no error in CAN communication.

21.Keyless Entry Control Module

A: REMOVAL

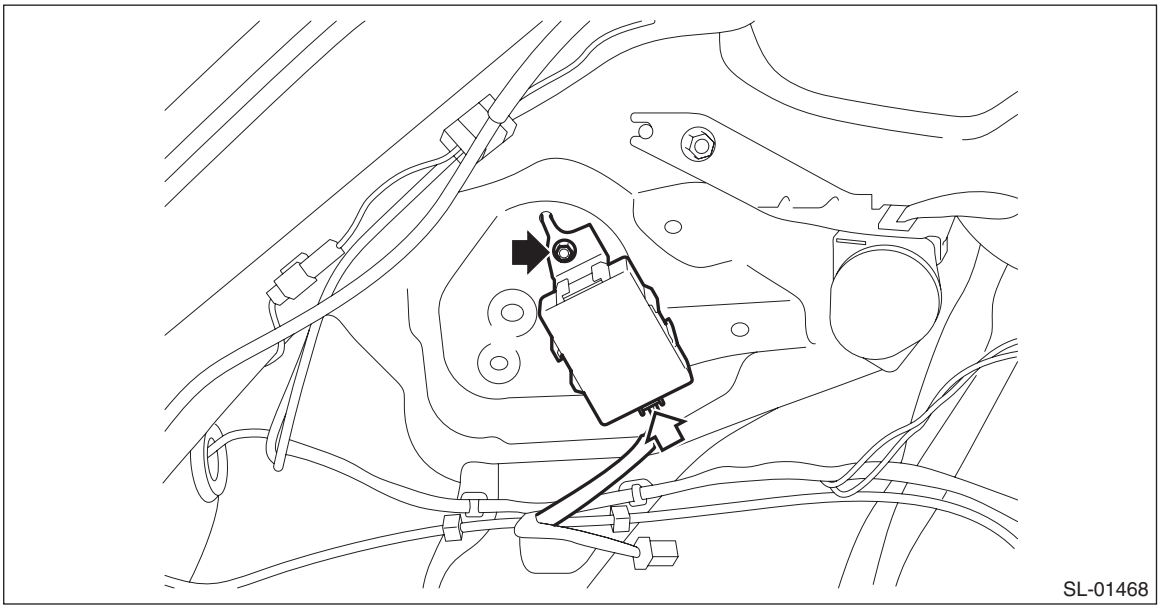
1. 4 DOOR MODEL

1) Disconnect the ground cable from battery.
2) Remove the trim panel assembly - rear shelf. <Ref. to EI-107, REMOVAL, Rear Shelf Trim.>
3) Remove the keyless entry control module.
   (1) Disconnect the connector.
   (2) Remove the bolt and then remove the keyless entry control module.


SL-01467

2. 5 DOOR MODEL

1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear apron LH. <Ref. to EI-100, REMOVAL, Rear Quarter Trim.>
3) Remove the keyless entry control module.
   (1) Disconnect the connector.
   (2) Remove the bolt and then remove the keyless entry control module.


SL-01468

B: INSTALLATION

Install each part in the reverse order of removal.

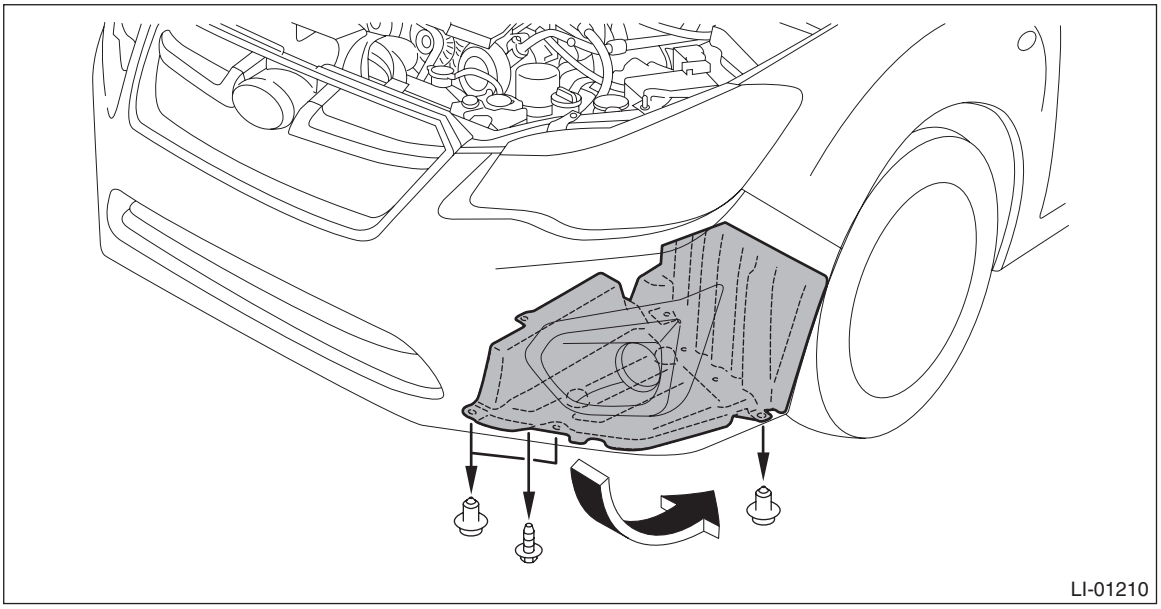
NOTE:
Refer to “INSTALLATION” of “Rear Shelf Trim” or “Rear Quarter Trim”.
- Rear shelf trim: <Ref. to EI-111, INSTALLATION, Rear Shelf Trim.>
- Rear quarter trim: <Ref. to EI-106, INSTALLATION, Rear Quarter Trim.>

Tightening torque:
Keyless entry control module: 13 N·m (1.33 kgf-m, 9.6 ft-lb)

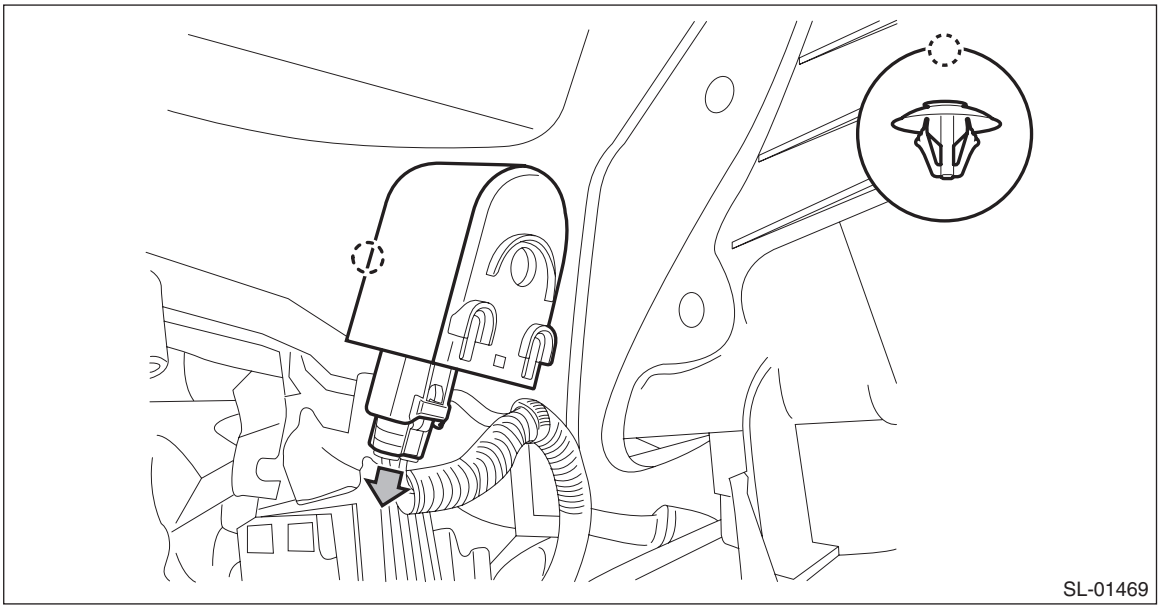
22.Keyless Buzzer

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Lift up the vehicle.
3) Remove the clips, and turn over the front side of the mud guard - front.



4) Remove the keyless buzzer.
   (1) Disconnect the connector.
   (2) Remove the clip and detach the keyless buzzer.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

Using the Subaru Select Monitor, perform forced operation of the keyless buzzer. <Ref. to BC(diag)-14, OPERATION, User Customizing.>
If the buzzer does not sound, replace the keyless buzzer.

23.Body Integrated Unit

A: NOTE

1. WHEN REPLACING THE BODY INTEGRATED UNIT

1) Check and record the current setting. <Ref. to BC(diag)-16, CONFIRM CURRENT SETTING., OPERATION, Registration Body Integrated Unit.>
2) Prepare all immobilizer keys already registered.

NOTE:
If some of the registered immobilizer keys are missing, the following parts must be replaced.
- Except for C0 and C5 models: Combination meter
- C0 and C5 models: Security control module

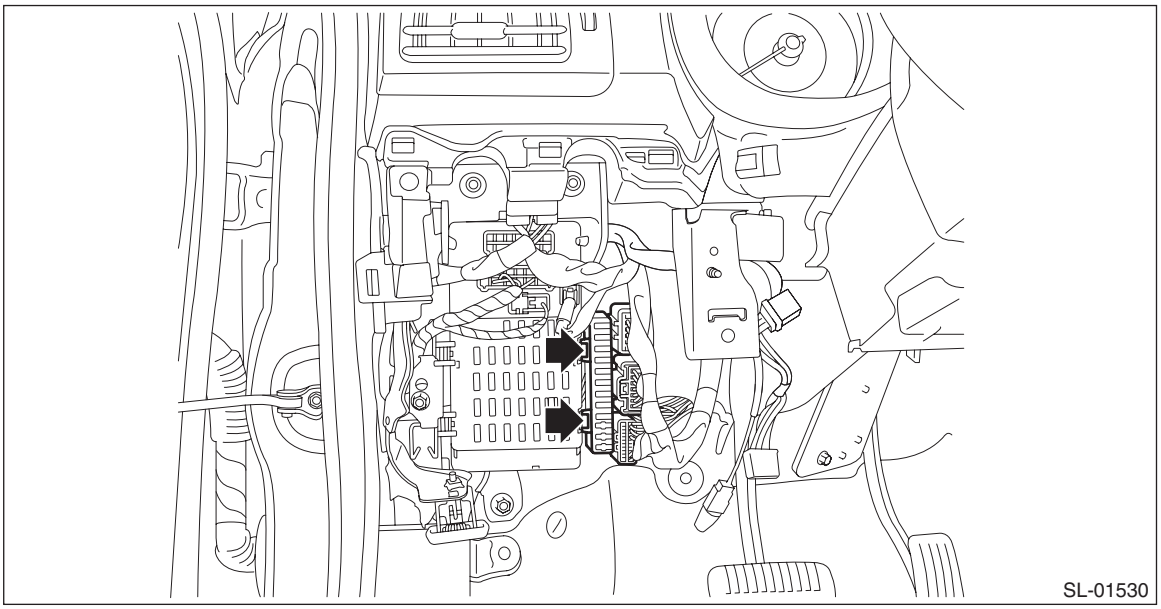
2. AFTER REPLACING THE BODY INTEGRATED UNIT

1) Register the immobilizer.

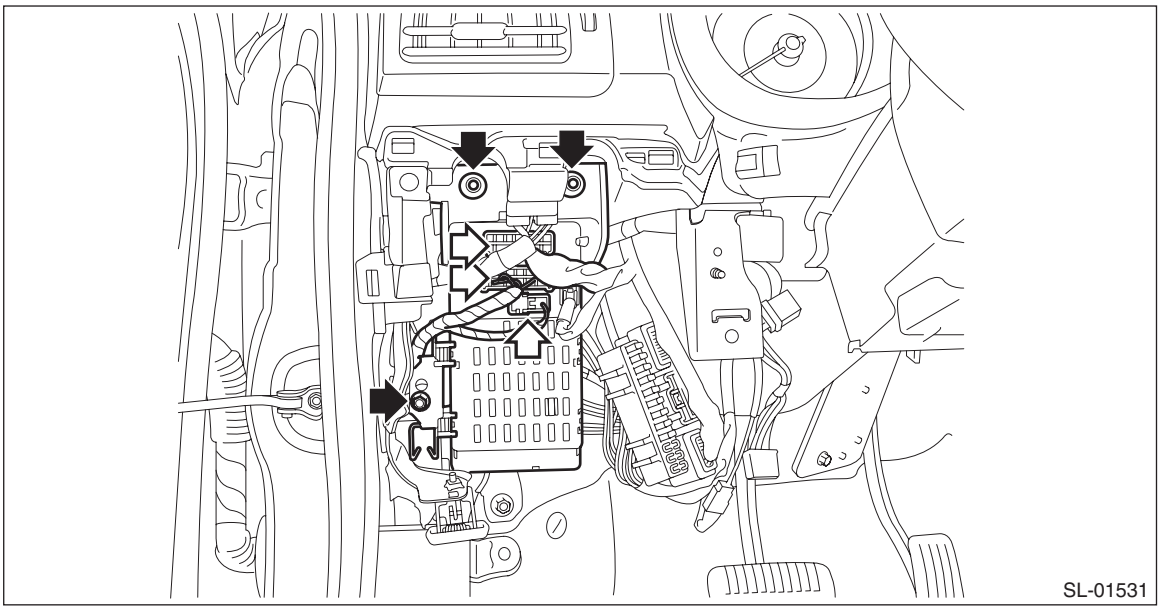
NOTE:
For detailed operation procedure, refer to the “REGISTRATION MANUAL FOR IMMOBILIZER”.
2) Set the current settings as recorded.

B: REMOVAL

1) Remove the knee airbag module. <Ref. to AB-42, REMOVAL, Knee Airbag Module.>
2) Release the lock and remove the fuse holder.

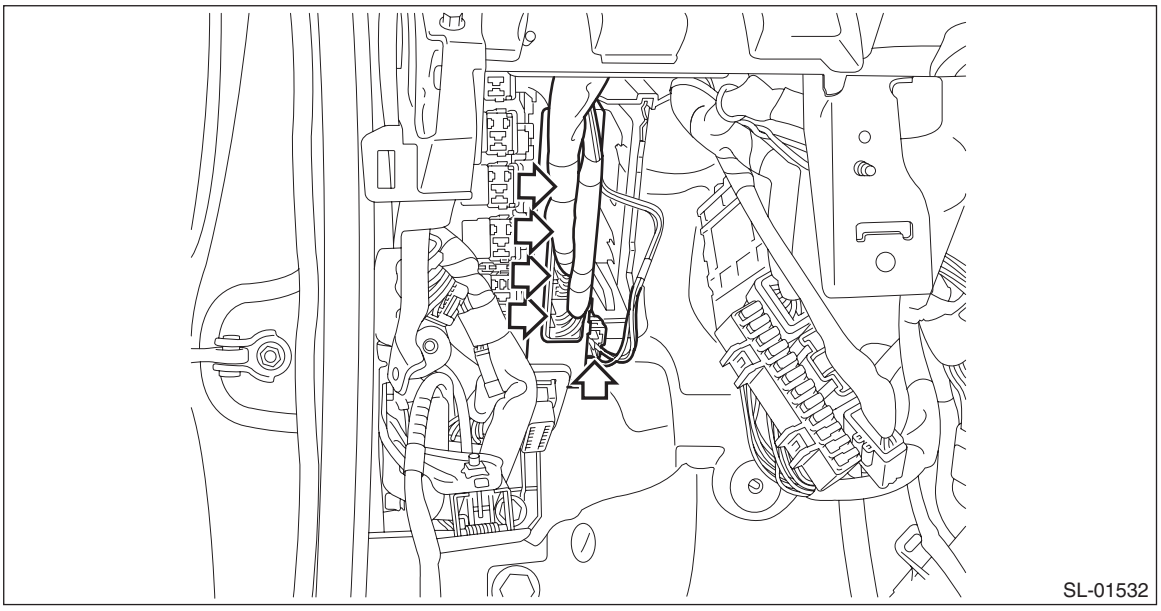


3) Remove the relay & fuse box.
(1) Disconnect the connector.
(2) Remove the bolts and nuts, and remove the relay & fuse box.

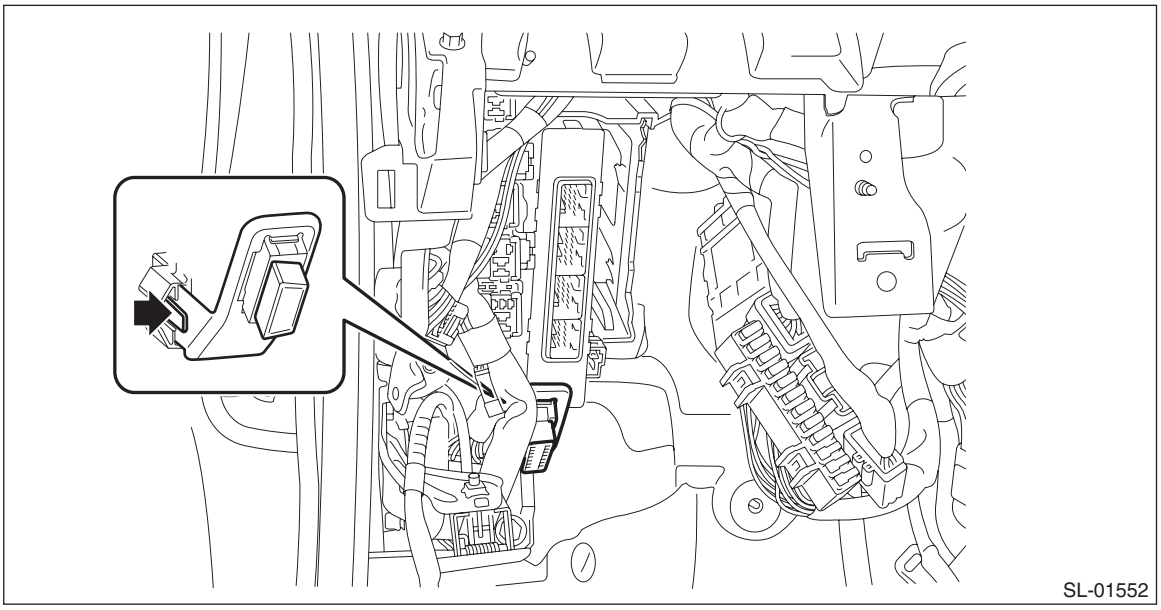

SL-01531

4) Remove the body integrated unit.

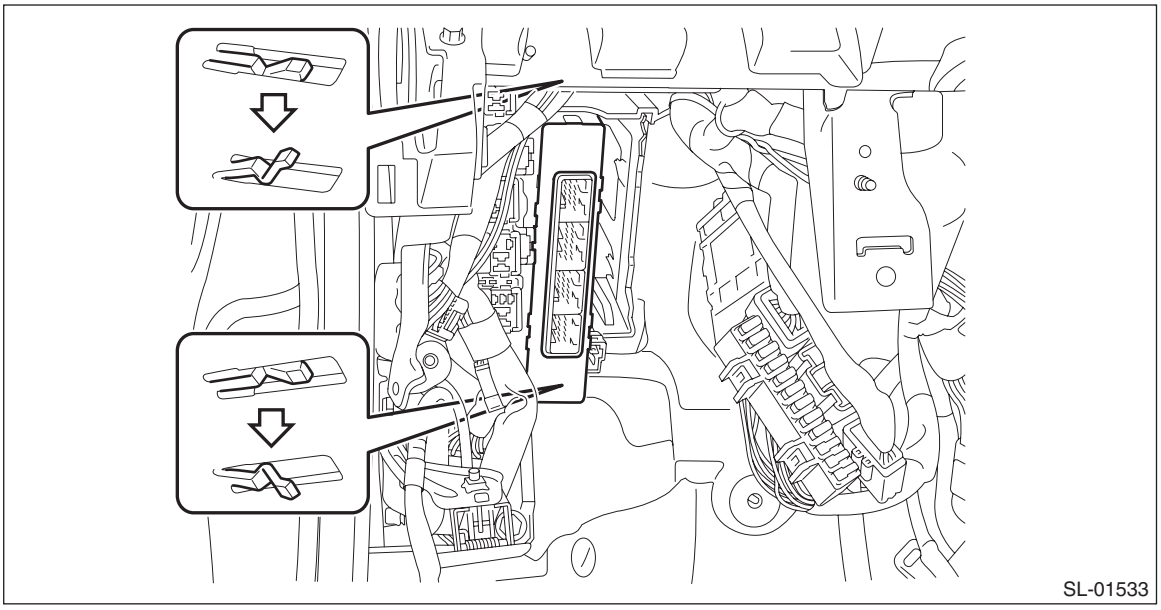
CAUTION:
Be careful to keep water and other foreign materials away from body integrated unit.
(1) Disconnect the connector.


SL-01532

(2) Release the lock, and remove the data link connector bracket from the bracket.



(3) Release the claws, and pull out the body integrated unit from the bracket.



C: INSTALLATION

CAUTION:
- **Before handling the airbag module, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". <Ref. to AB-10, CAUTION, General Description.>**
- **Do not allow harness and connectors to interfere or get tangled up with other parts.**

Install each part in the reverse order of removal.

NOTE:
Refer to "INSTALLATION" of "Knee Airbag Module". <Ref. to AB-43, INSTALLATION, Knee Airbag Module.>

Tightening torque:
Relay & fuse box: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

NOTE:
Make sure that there are no differences from the contents of the current settings after installation. <Ref. to BC(diag)-11, LIST, Read Current Data.>

24.Keyless Transmitter

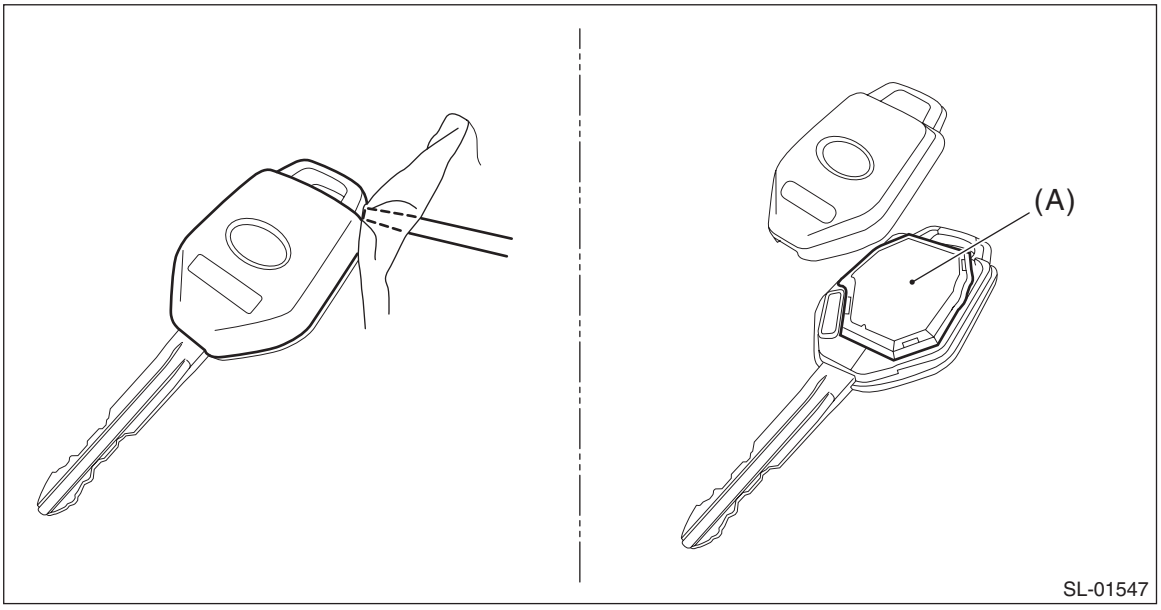
A: REMOVAL

1. KEYLESS TRANSMITTER BATTERY

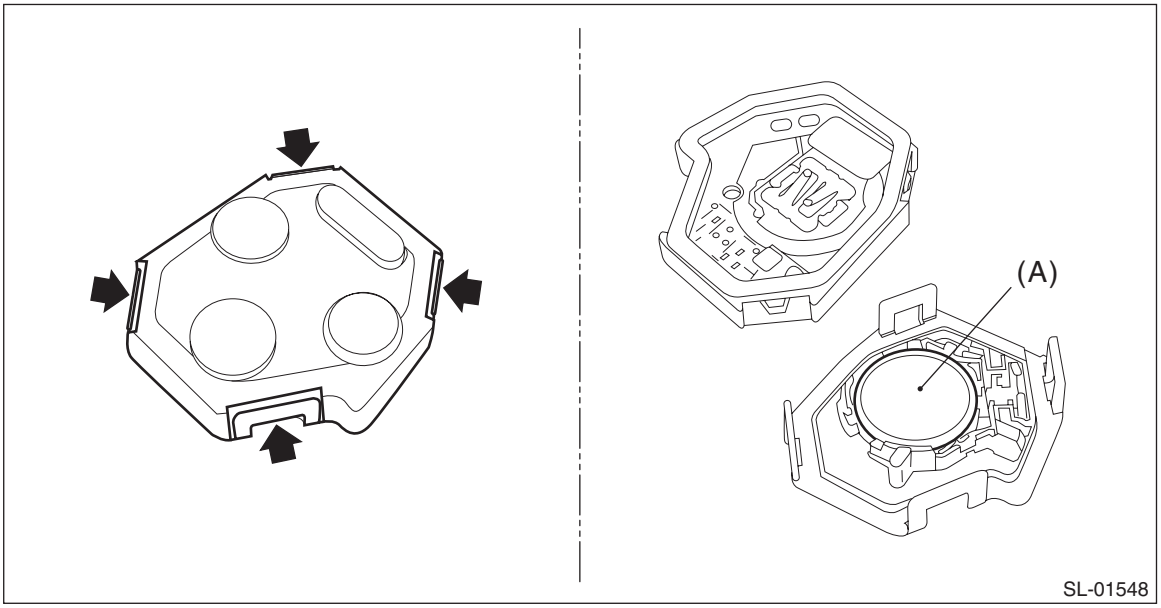
CAUTION:
To prevent static electricity damage to the keyless transmitter printed circuit board, touch the steel area of building with hand to discharge static electricity carried on body or clothes before disassembling the keyless transmitter.

1) Remove the keyless transmitter cover, and take out the transmitter case (A).

NOTE:
Use a flat tip screwdriver with protective tape or cloth in order not to damage the components.



2) Release the claws to open the transmitter case, then remove the battery (A).



B: INSTALLATION

1. KEYLESS TRANSMITTER BATTERY

Install each part in the reverse order of removal.

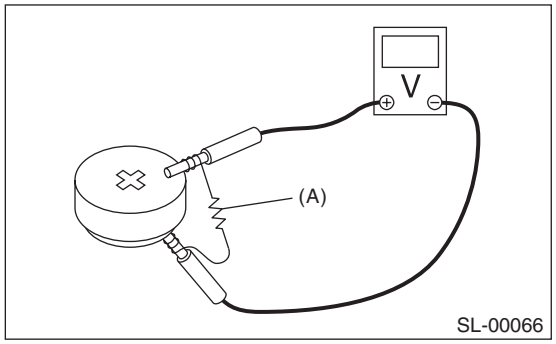
C: INSPECTION

1. KEYLESS TRANSMITTER BATTERY

1) Check the keyless transmitter battery voltage.

PREPARATION TOOL:
Circuit tester

NOTE:
Complete the measurement within 5 seconds because the battery discharges during measurement.



Battery terminal	Inspection Conditions	Standard
(+) — (–)	Connect resistor (A) 47 Ω	2.5 — 3.0 V

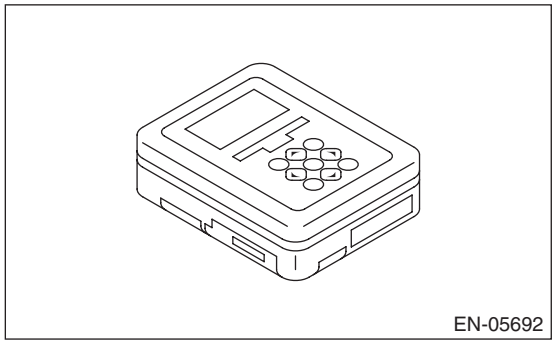
2) Replace the battery if the inspection result is not within the standard. (Use CR1620 or equivalent.)

D: REPLACEMENT

1. REGISTRATION OF KEYLESS TRANSMITTER WITH SUBARU SELECT MONITOR

NOTE:
- A maximum of four keyless transmitter can be registered for each individual vehicle.
- When replacing or adding the keyless transmitter, new registration of transmitter is necessary.

1) Prepare the Subaru Select Monitor kit. <Ref. to SL-8, SPECIAL TOOL, PREPARATION TOOL, General Description.>

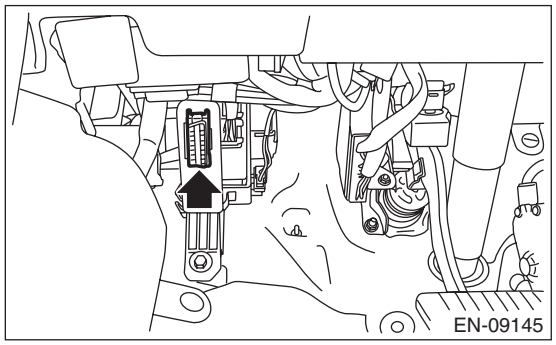


2) Prepare PC with Subaru Select Monitor installed.
3) Connect the USB cable to SDI (Subaru Diagnosis Interface) and USB port on the personal computer (dedicated port for the Subaru Select Monitor).

NOTE:
The dedicated port for the Subaru Select Monitor means the USB port which was used to install the Subaru Select Monitor.
4) Connect the diagnosis cable to SDI.

5) Connect SDI to data link connector located in the lower portion of the instrument panel (on the driver's side).

CAUTION:
Do not connect scan tools other than the Subaru Select Monitor.



6) Start the PC.
7) Turn the ignition switch to OFF and run the "PC application for Subaru Select Monitor".
8) On the «Main Menu» of the Subaru Select Monitor, select {Each System Check} → {Integ. unit mode} → {Work Support} → {Keyless ID registration}.
9) According to the directions on the screen, press the button of the transmitter to be registered in the LOCK → UNLOCK order. «When registration completed, external buzzer sound once.» Repeat the registration as many times as desired.
10) Press the [Exit] button to finish the operations.

NOTE:
When attempting to register a key that has already been registered, the external buzzer sounds twice.

25.Immobilizer Control Module

A: NOTE

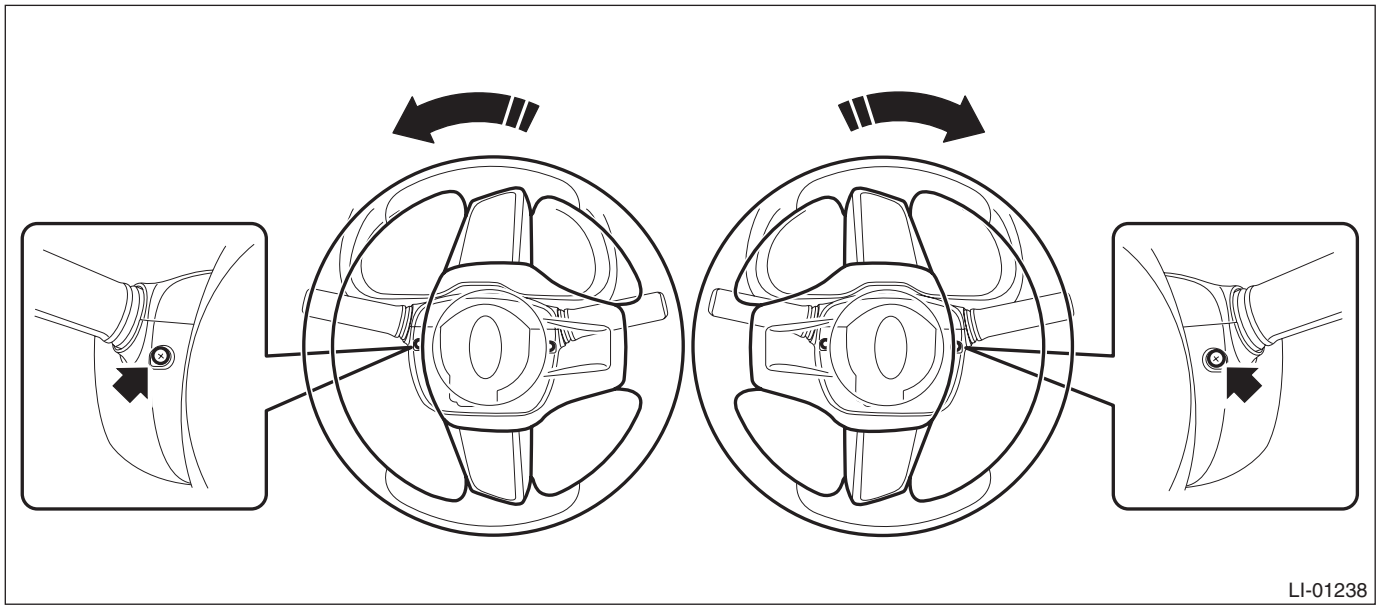
The control of immobilizer system is carried out in body integrated unit. For the detailed procedure, refer to the section of body integrated unit.

- Removal: <Ref. to SL-76, REMOVAL, Body Integrated Unit.>
- Installation: <Ref. to SL-78, INSTALLATION, Body Integrated Unit.>

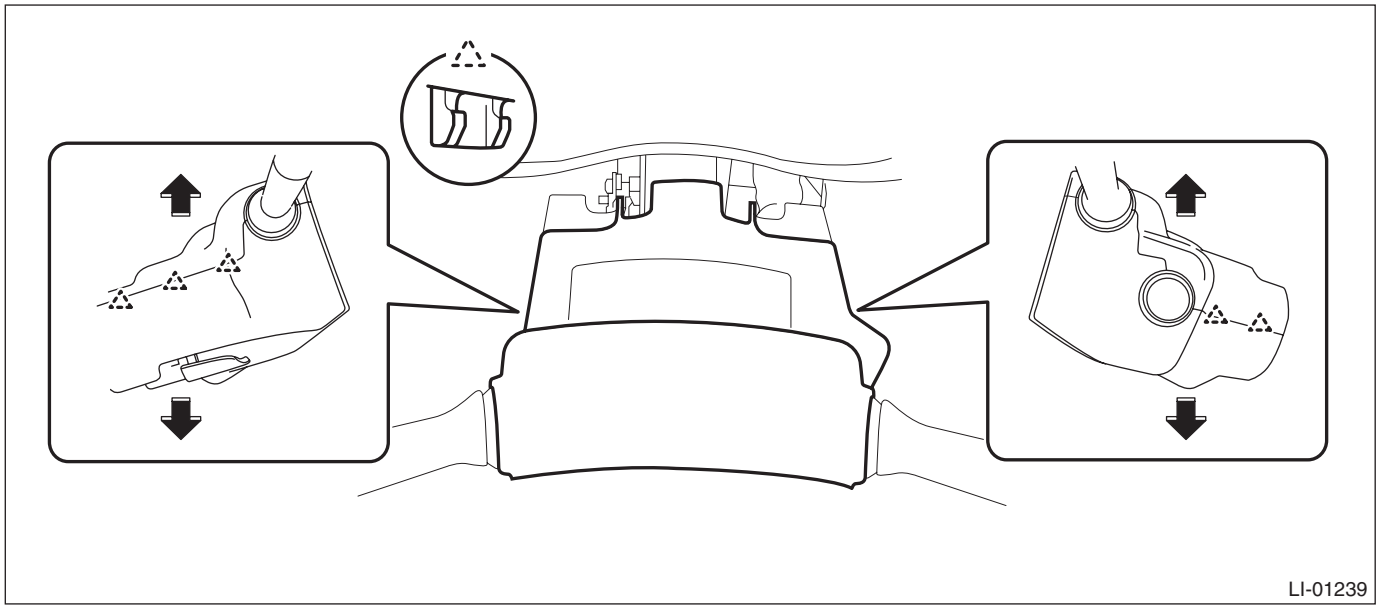
26.Immobilizer Antenna

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the cover assembly - column.
   (1) Remove the screws by turning the steering wheel to right and left.

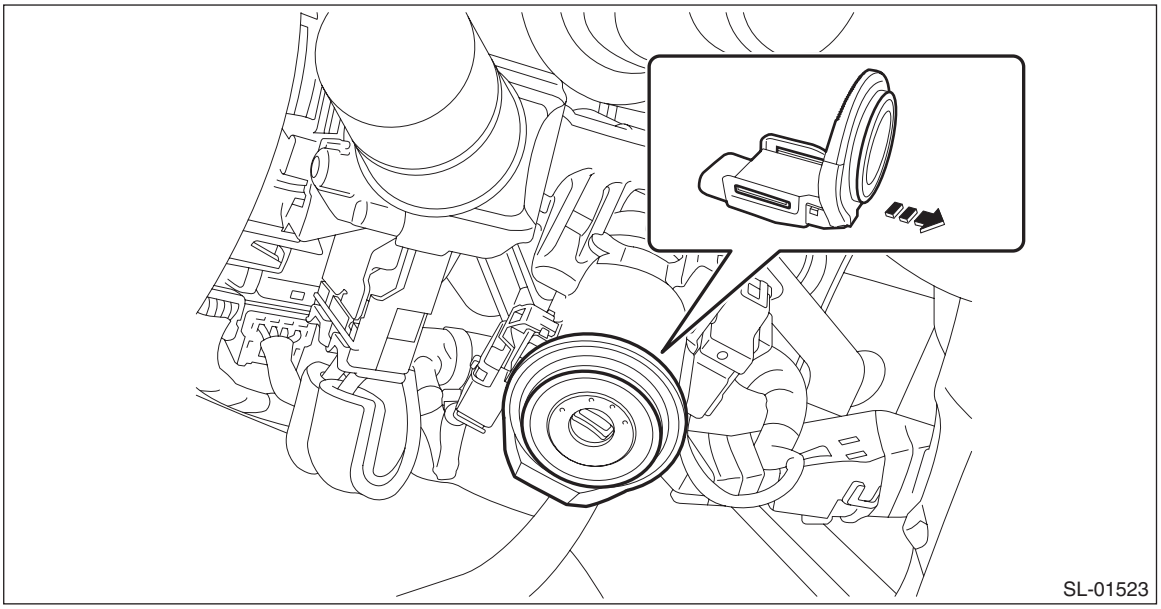


   (2) Release the claw, and remove the cover assembly - column UPR and the cover assembly - column LWR.



3) Disconnect the connector and remove the immobilizer antenna assembly.

CAUTION:
Do not apply excessive force to remove the immobilizer antenna and lock. Otherwise they may be broken because those parts are the products made of a plastic.



B: INSTALLATION

Install each part in the reverse order of removal.

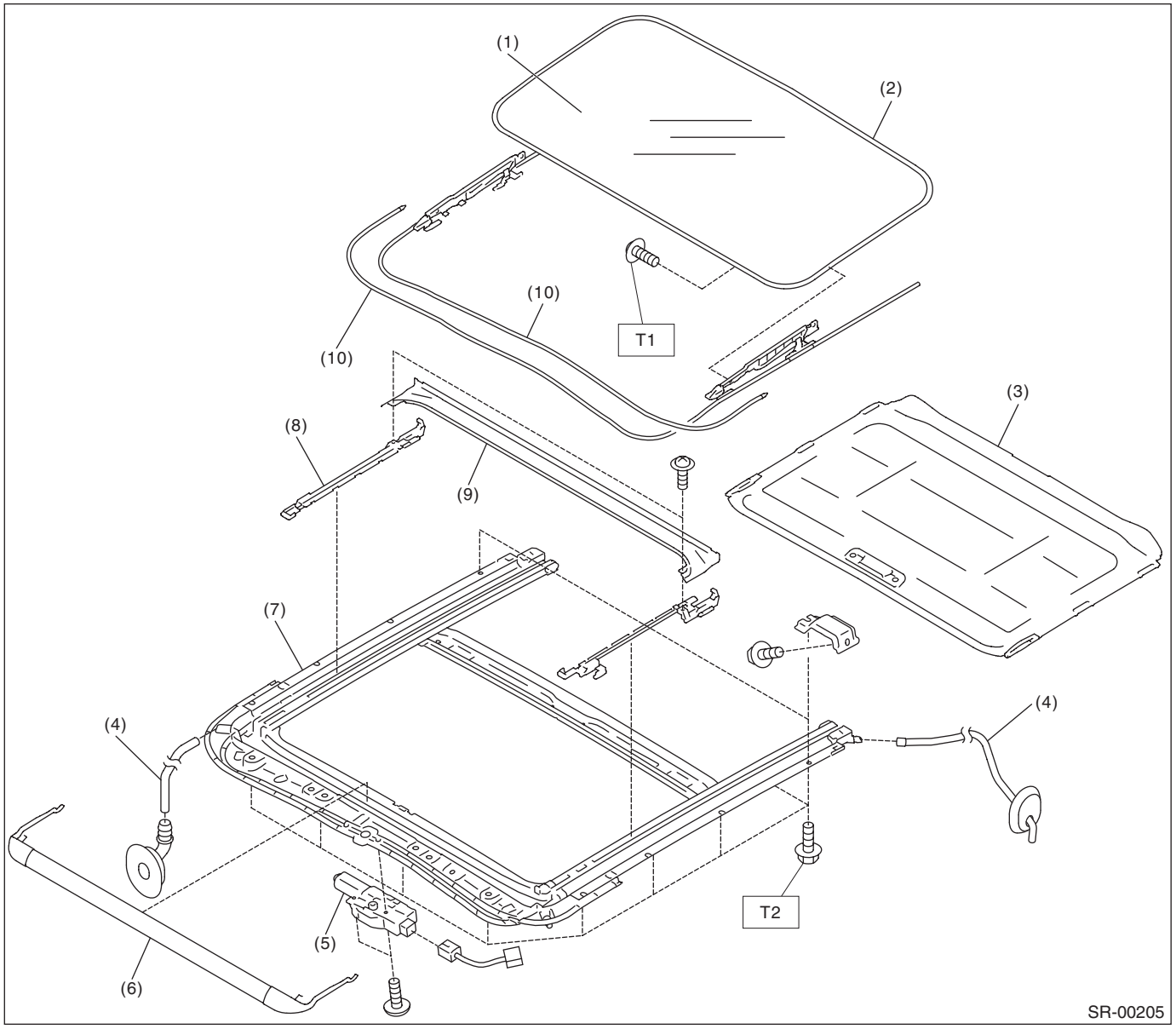
SUNROOF/T-TOP/CONVERTIBLE TOP (SUNROOF)

SR

		Page
1.	General Description	2
2.	Relay and Fuse	4
3.	Sunroof Control System	5
4.	Glass Lid	7
5.	Sunroof Assembly	11
6.	Sunroof Motor	17
7.	Sunroof Switch	19
8.	Sunshade	22

1. General Description

A: COMPONENT



(1) Lid ASSY - sunroof
(2) Weather strip
(3) Sunshade ASSY
(4) Drain tube - sunroof
(5) Motor ASSY - sunroof
(6) Deflector ASSY - sunroof
(7) Rail ASSY - sunroof
(8) Link - drain sunroof
(9) Drain ASSY - sunroof
(10) Cable ASSY

Tightening torque:N·m (kgf-m, ft-lb)
T1: 4.5 (0.46, 3.3)
T2: 6.0 (0.61, 4.4)

B: CAUTION

• Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When replacing the audio, control module and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
• Reassemble the parts in the reverse order of disassembly unless otherwise indicated.
• Adjust parts to the given specifications.
• Connect the connectors securely during reassembly.
• After reassembly, make sure that the each component operates normally.

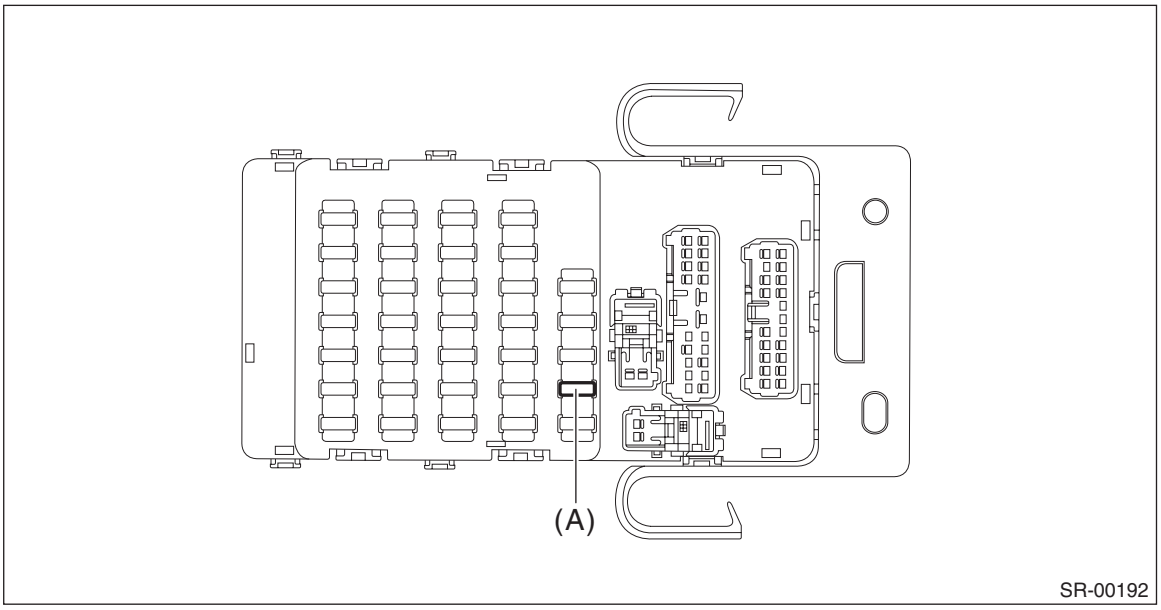
C: PREPARATION TOOL

1. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Hexagon wrench	Used for forcibly driving the motor assembly - sunroof. Width across flat 4 mm (0.16 in)
TORX® T25	Used for removing and installing the lid assembly - sunroof.

2. Relay and Fuse

A: LOCATION



Relay & fuse box	Fuse 10A (IG 2)	(A)

NOTE:
For other related fuses, refer to the wiring diagram. <Ref. to WI-15, Power Supply Circuit.>

B: INSPECTION

1. CHECK FUSE

1) Remove the fuse and check visually.
2) If the fuse is blown out, replace the fuse.

3. Sunroof Control System

A: WIRING DIAGRAM

Refer to “Sunroof Control System” in the wiring diagram. <Ref. to WI-143, WIRING DIAGRAM, Sunroof Control System.>

B: INSPECTION

Symptoms	Inspection steps
Water leakage	1. Check the roof panel and the lid assembly - sunroof for improper or poor sealing. 2. Check the drain tube - sunroof for clogging. 3. Check the joints of the rail assembly - sunroof for improper sealing and for proper installation to the body.
Booming noise, wind noise and other noise	1. Check the lid assembly - sunroof and the roof panel for improper clearance. 2. Check the sunshade assembly and the trim panel - roof assembly for improper clearance.
Abnormal motor noise	1. Check installing part of motor for looseness. 2. Check gears and bearings for wear. 3. Check cable assembly for wear. 4. Check cable pipe for deformities.
Failure of sunroof (Motor operates properly.)	1. Check guide rail for foreign particles. 2. Check guide rail for improper installation. 3. Check parts for mutual interference. 4. Check cable slider for improper clinching. 5. Check cable assembly for improper installation.
Motor does not rotate or rotate improperly.	1. Check fuse for blown out. 2. Check switch for improper function. 3. Check motor assembly for incorrect terminal voltage. 4. Check the relay for improper operation. 5. Check harness for open or short and terminals for poor connections.
Incorrect reverse operation of the lid assembly - sunroof	Check guide rail for foreign particles.

- Incorrect reverse operation of the lid assembly - sunroof while driving on rough road

The lid assembly - sunroof has auto-reverse function. When a force that exceeds a certain amount of load is applied to the lid assembly - sunroof, the glass lid moves in the reverse direction and then stops.
Therefore, if you operate (open or close) the lid assembly - sunroof while driving on rough road, the vibration may be judged as a force and the lid may incorrectly move in the reverse direction.
When the incorrect reverse operation is occurred repeatedly, perform inspection around the sunroof frame. If there are no problems, perform the initialization operation with following procedure.

C: OPERATION

1. INITIALIZE OPERATION

CAUTION:
During initialization, perform the position learning and the sliding learning. Sliding learning mode can not be initiated unless the position learning is performed.

NOTE:
When initialize operation is performed, it is necessary to press the switch repeatedly as it operates for only at the moment when the switch is pressed, even when the switch is held down.

- Position learning

1) Position the lid assembly - sunroof at the full open position, and press and hold the tilt up switch for ten seconds.
2) The motion of the glass lid shifts to inching operation until it reaches the full close position. After that, it returns to the full open position and then stops.
3) Release the tilt up switch to finish the position learning.

- Sliding learning

4) Within six seconds after the position learning is finished, press and hold the tilt up switch again.
5) The lid assembly - sunroof moves to the full close position, full open position, and the full close position successively, and stops at the full close position.
6) Release the tilt up switch and turn the IG to OFF to finish the initializing.

D: NOTE

For operation procedures of each component of the sunroof control system, refer to the respective section.

- Glass lid: <Ref. to SR-7, Glass Lid.>
- Sunroof assembly: <Ref. to SR-11, Sunroof Assembly.>
- Sunroof motor: <Ref. to SR-17, Sunroof Motor.>
- Sunroof switch: <Ref. to SR-19, Sunroof Switch.>
- Sunshade: <Ref. to SR-22, Sunshade.>

4. Glass Lid

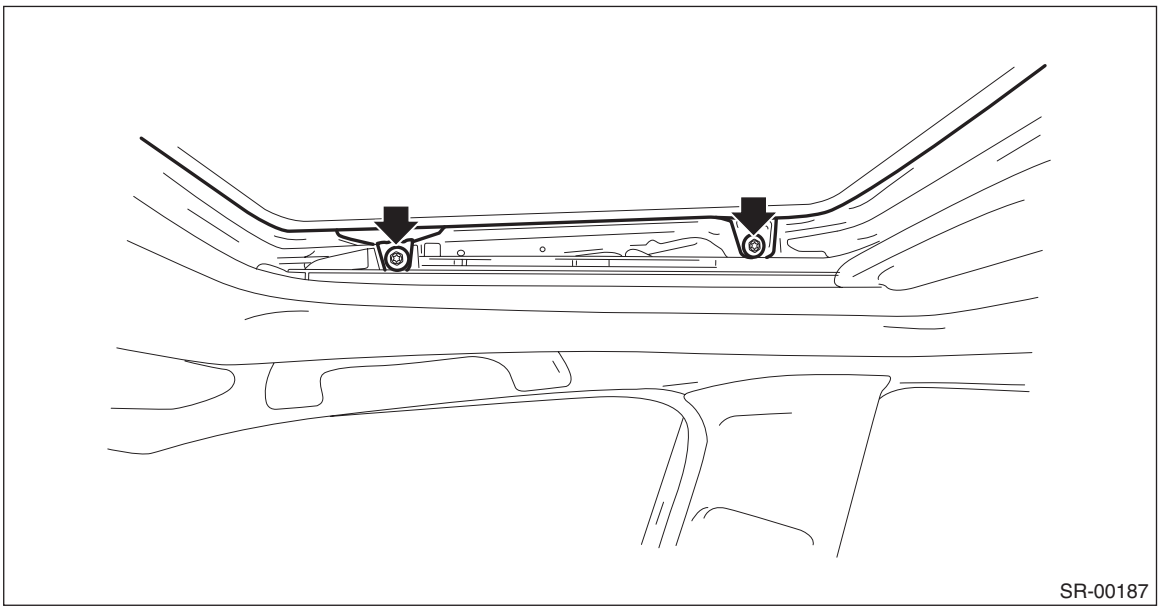
A: REMOVAL

1. GLASS LID

1) Completely close the lid assembly - sunroof, and open the sunshade assembly.
2) Remove the TORX® bolt, and then remove the lid assembly - sunroof.

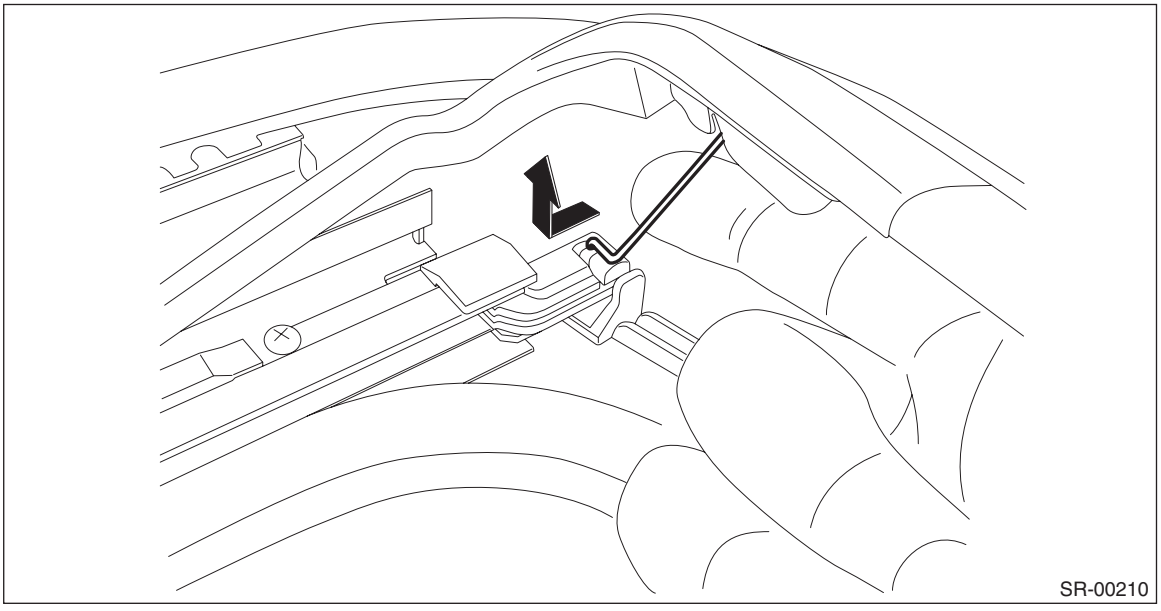
CAUTION:
Be careful not to damage the lid assembly - sunroof.

PREPARATION TOOL:
TORX® T25

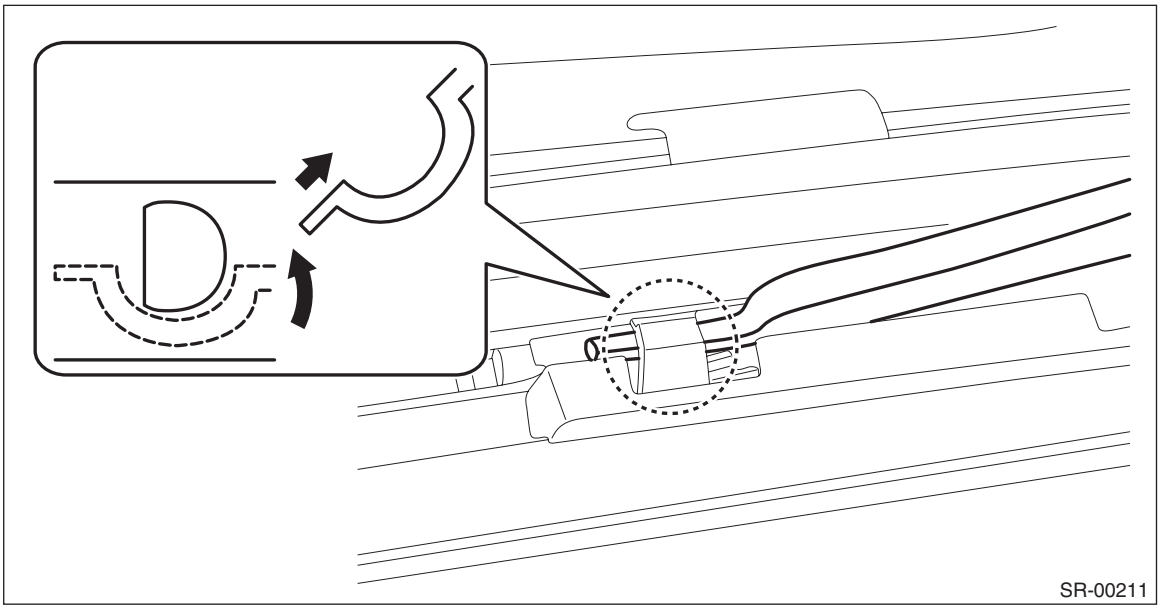


2. DEFLECTOR ASSEMBLY

1) Open the lid assembly - sunroof and the sunshade assembly.
2) Remove the deflector assembly - sunroof.
   (1) Remove the spring from the rail assembly - sunroof.



(2) While lifting up the deflector assembly - sunroof, remove the deflector assembly - sunroof from the hook on the rail assembly - sunroof.



B: INSTALLATION

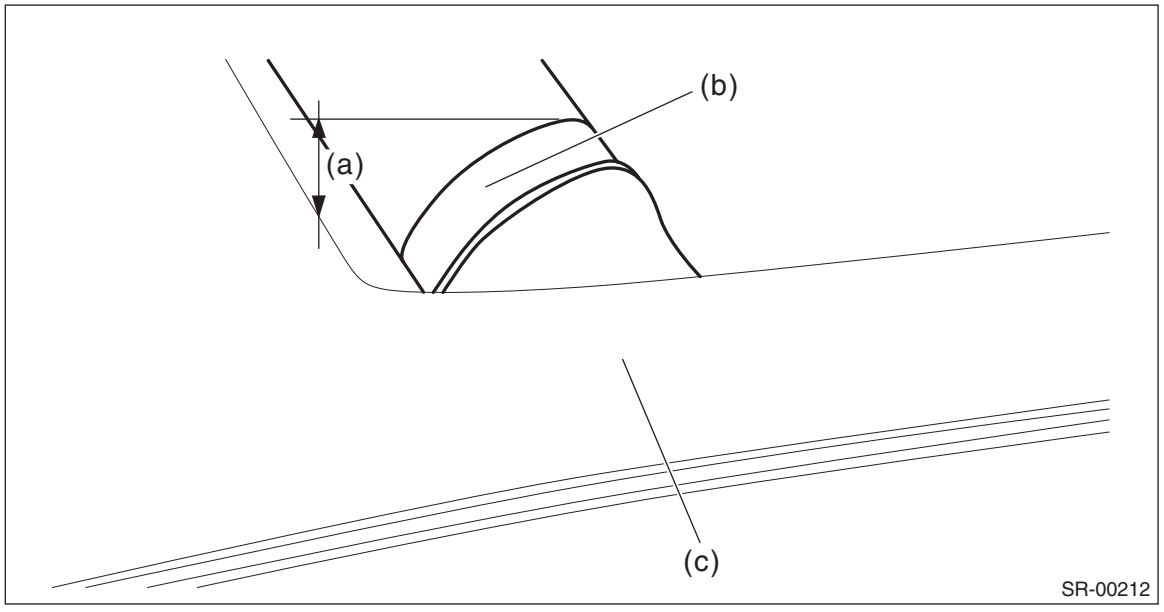
1. GLASS LID

Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SR-2, COMPONENT, General Description.>

2. DEFLECTOR ASSEMBLY

1) Install each part in the reverse order of removal.
2) After installation, measure the height from the roof panel when deflector assembly - sunroof is activated.



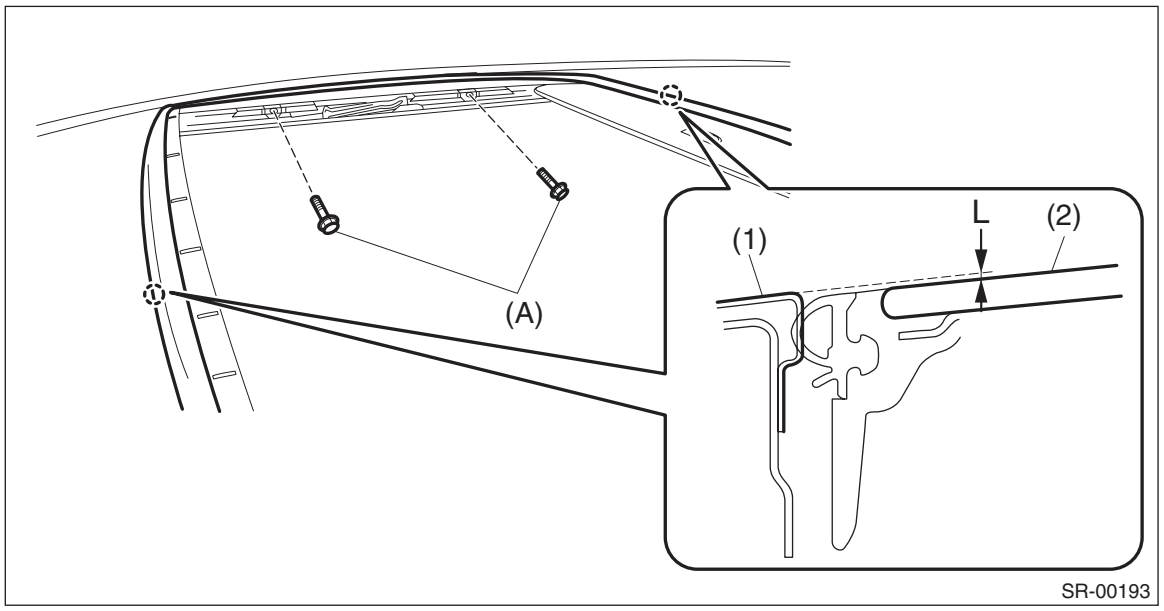
(a) 14 mm (0.55 in) (b) Deflector ASSY - sunroof (c) Roof panel

C: ADJUSTMENT

Adjust the height of the lid assembly - sunroof and the roof panel.

- Loosen the lid assembly - sunroof mounting bolts (A), and then adjust the height by moving the lid assembly - sunroof side.

Lid assembly - sunroof height difference L:
Lid assembly - sunroof to Roof panel: 0.7±1.0 mm (0.03±0.04 in)



(1) Roof panel
(2) Lid ASSY - sunroof

D: FORCED DRIVE

If the lid assembly - sunroof does not operate or the motor assembly is not supplied with power, move the lid assembly - sunroof using the hexagon wrench.

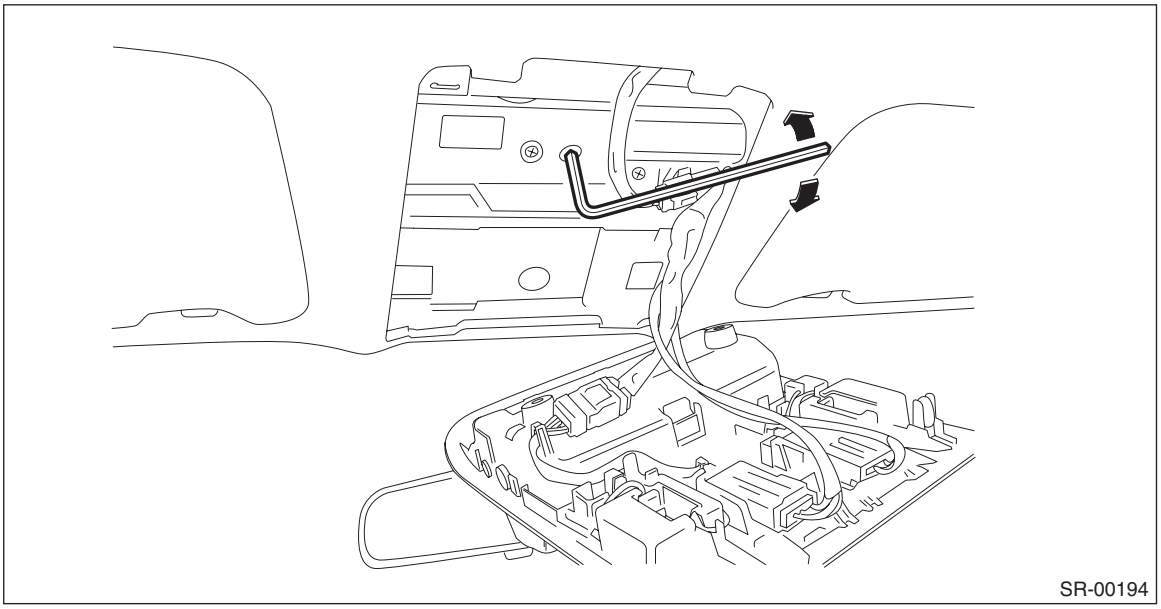
PREPARATION TOOL:
Hexagon wrench: width across flat 4 mm (0.16 in)

CAUTION:
After a forced operation, make sure to perform an initialize operation. <Ref. to SR-6, INITIALIZE OPERATION, OPERATION, Sunroof Control System.>

1) Remove the light assembly - map. <Ref. to LI-79, REMOVAL, Spot Map Light.>
2) Insert the hexagon wrench securely until it touches the motor shaft end.
3) Turn the hexagon wrench, and move the lid assembly - sunroof.

- Turning right, the lid assembly - sunroof opens.
- Turning left, the lid assembly - sunroof closes.

CAUTION:
Be careful not to damage the adjacent parts with the rod end when moving the lid assembly - sunroof with the hexagon wrench.


SR-00194

5. Sunroof Assembly

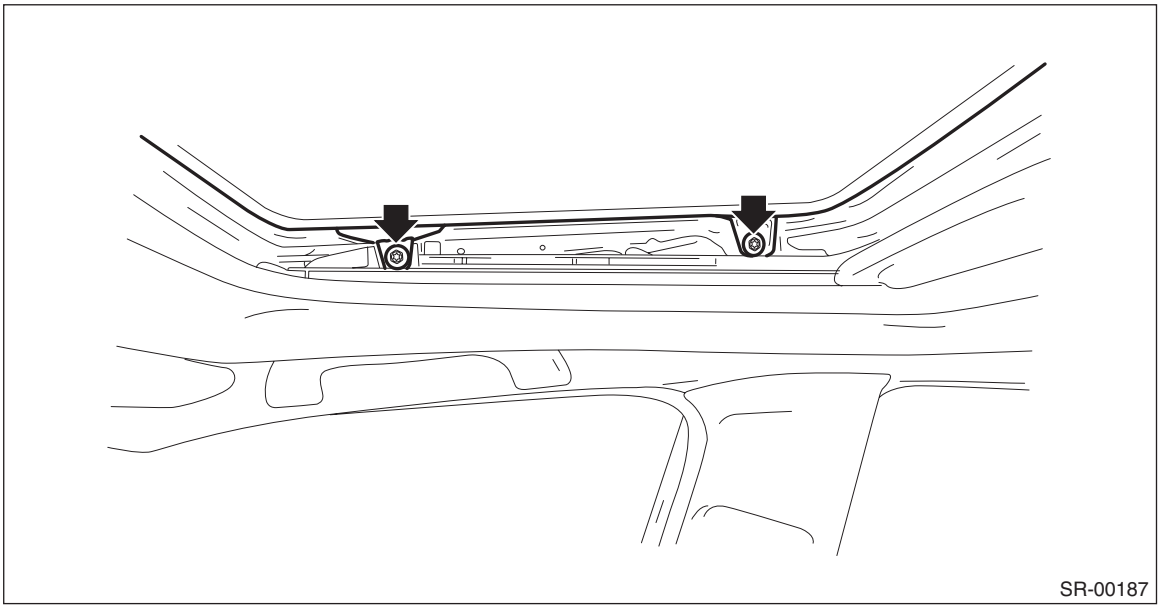
A: REMOVAL

CAUTION:
When removing the clip, use great care not to damage the trim panel - roof assembly.

1) Remove the lid assembly - sunroof.
   (1) Completely close the lid assembly - sunroof, and open the sunshade assembly.
   (2) Remove the TORX® bolt, and then remove the lid assembly - sunroof.

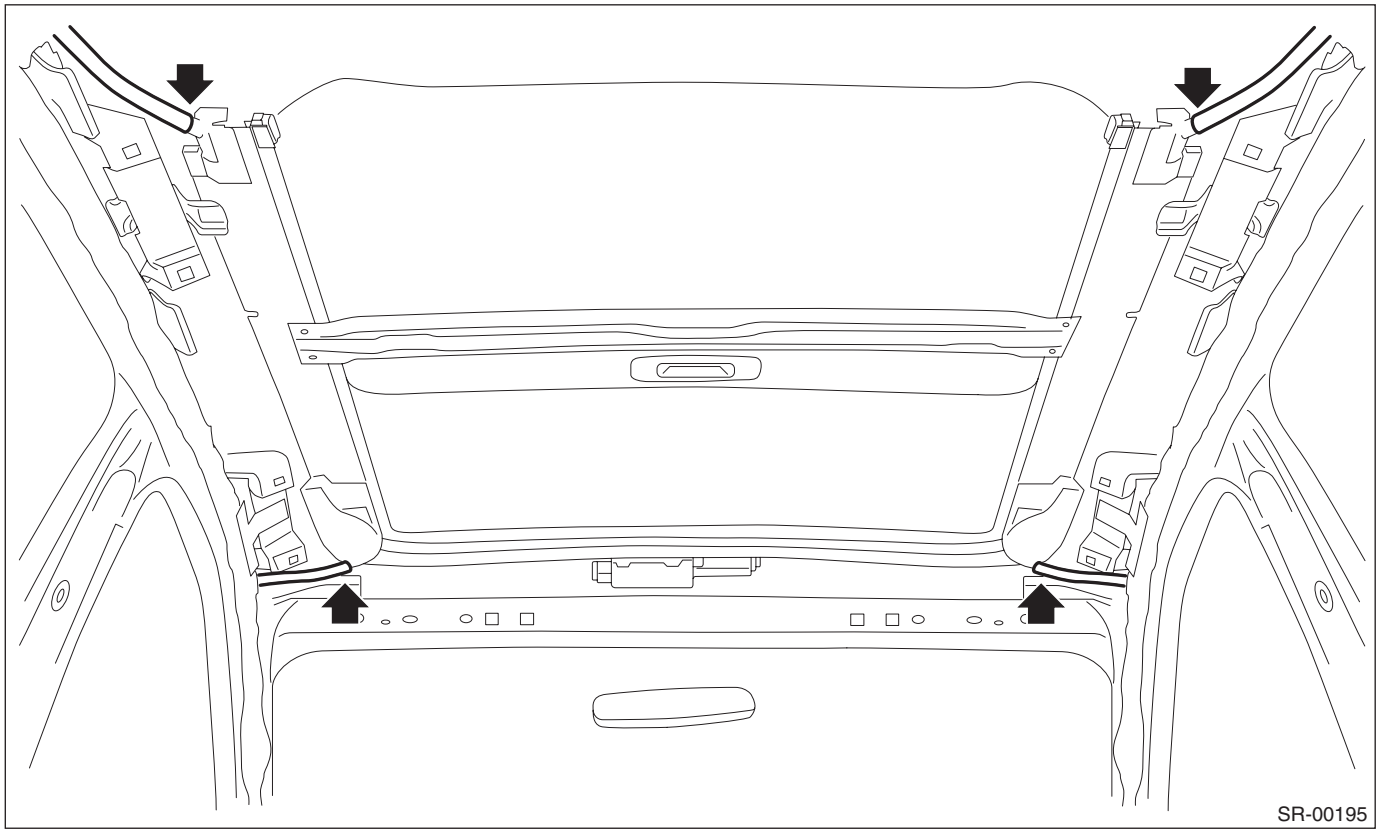
CAUTION:
Be careful not to damage the lid assembly - sunroof.

PREPARATION TOOL:
TORX® T25

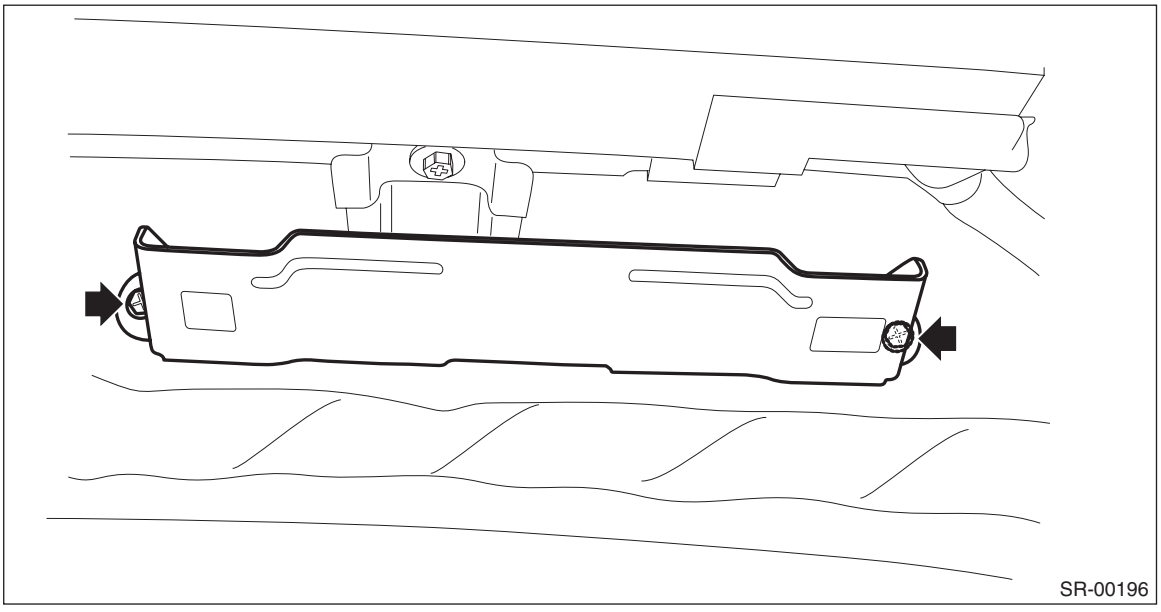


2) Remove the trim panel - roof assembly. <Ref. to EI-116, REMOVAL, Roof Trim.>
3) Disconnect the harness connector of the motor assembly.

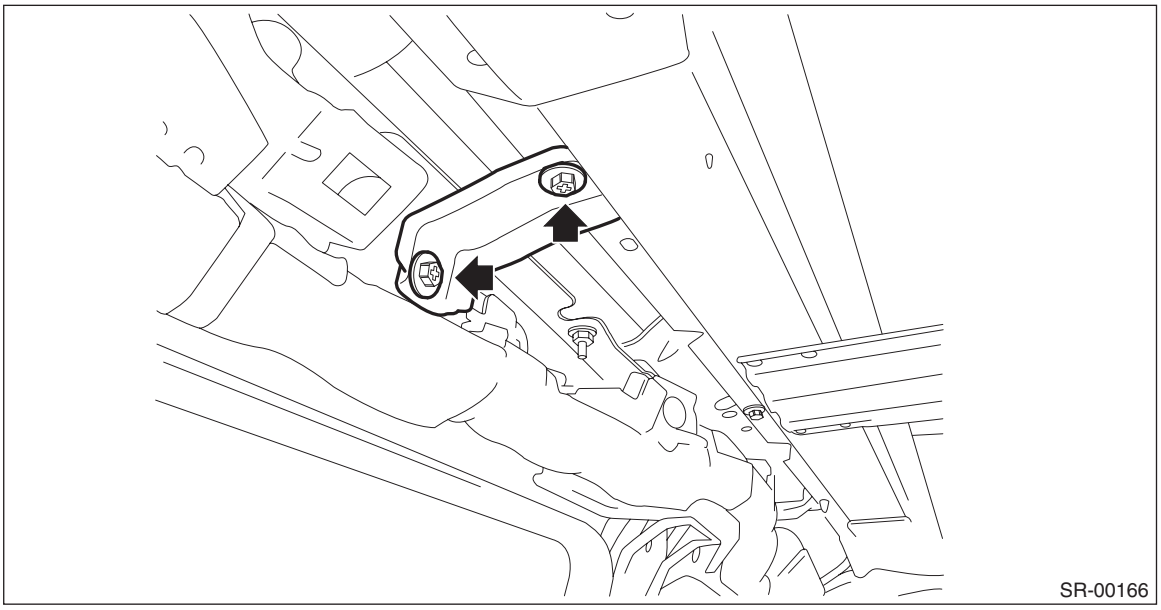
4) Remove the rail assembly.
(1) Remove the drain tube - sunroof.



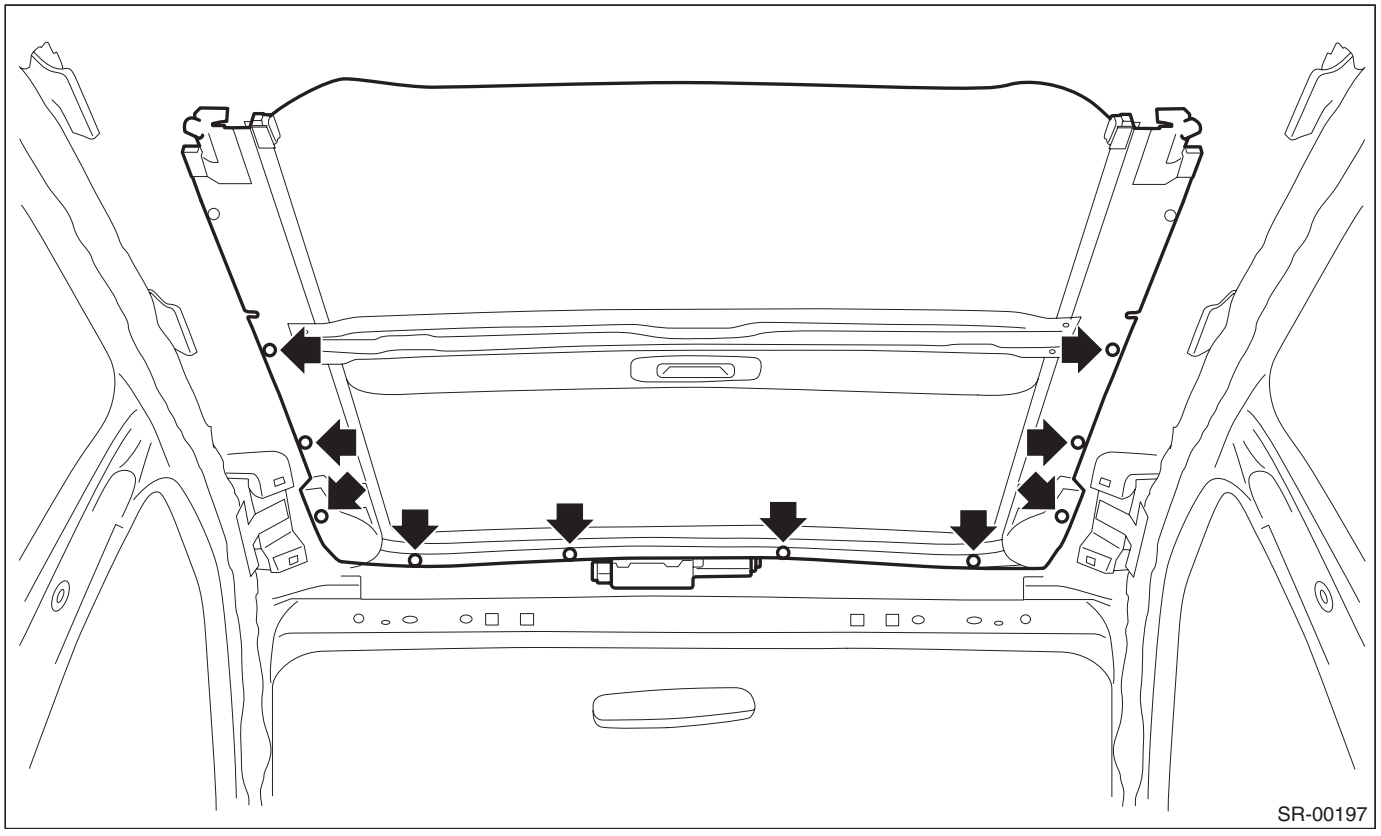
(2) Remove the bracket - assist rail.



(3) Remove the bolts and then remove the sunroof bracket.



(4) Remove the bolts, then remove the rail assembly.



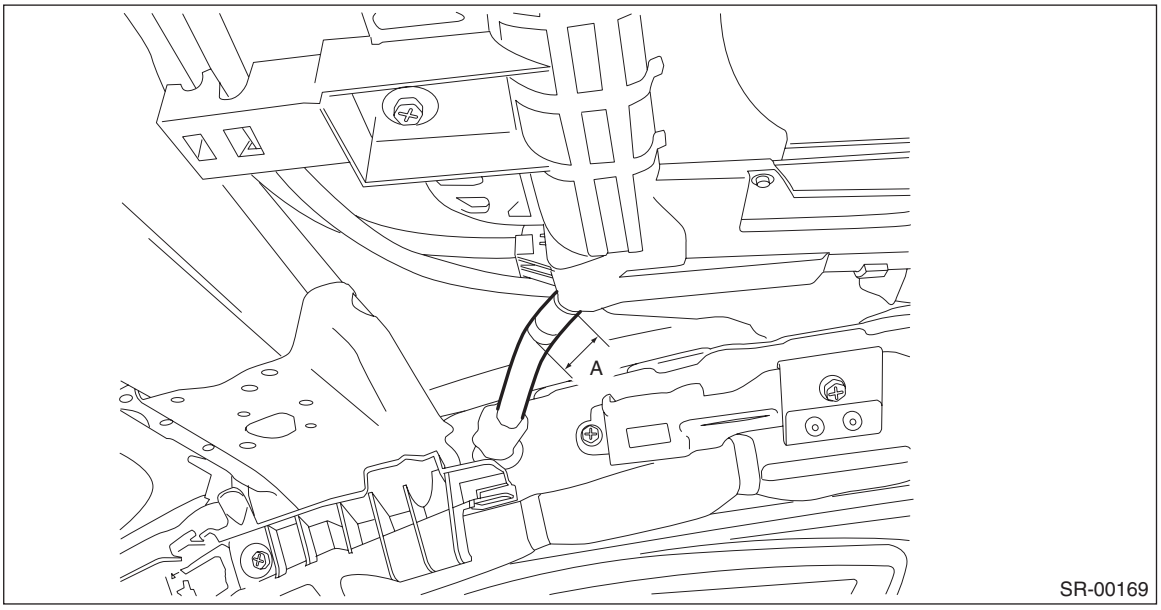
B: INSTALLATION

CAUTION:
Be careful not to snag the harness.
Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SR-2, COMPONENT, General Description.>

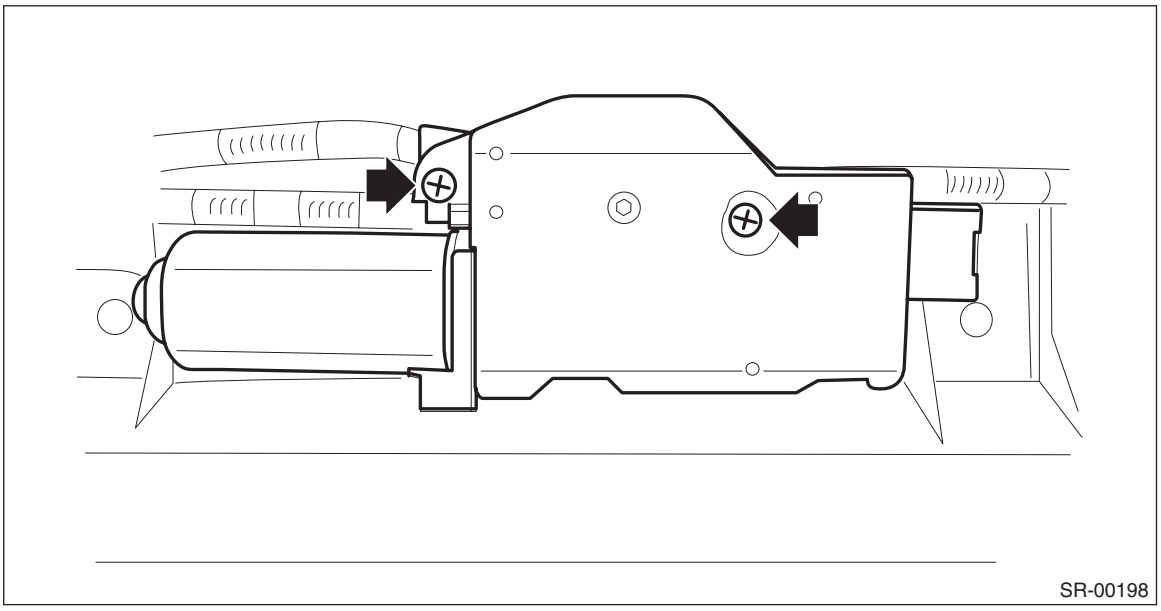
NOTE:
- Be sure to connect the harness connector.
- When installing the drain tube - sunroof, insert it securely into drain pipe.

Length A:
15 mm (0.59 in) or more

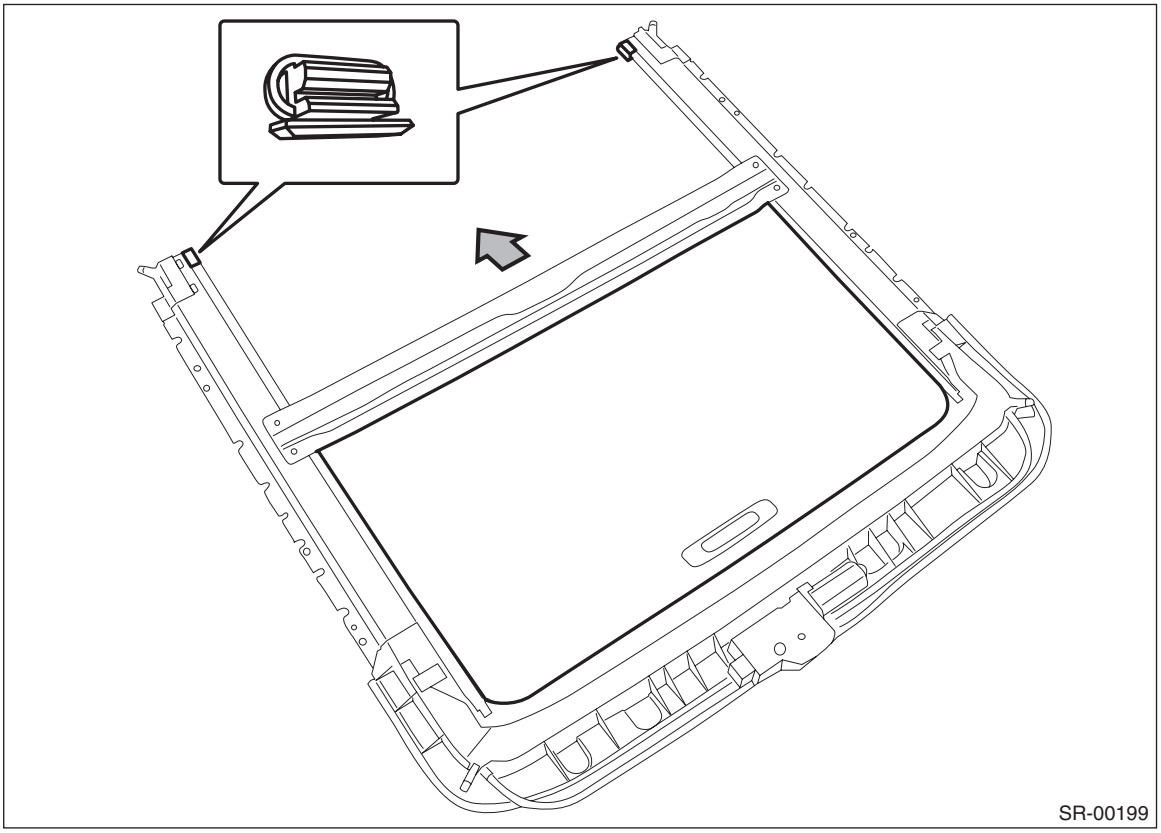


C: DISASSEMBLY

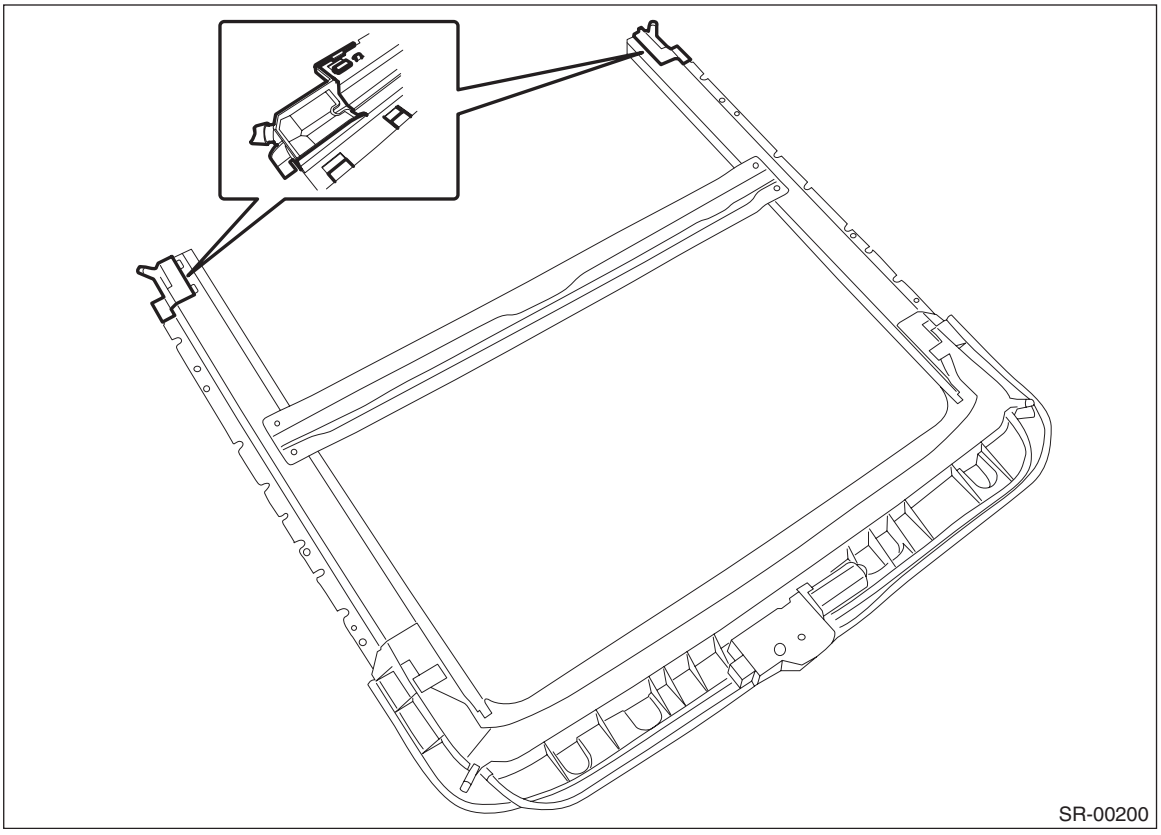
1) Remove the screw and remove the sunroof motor.



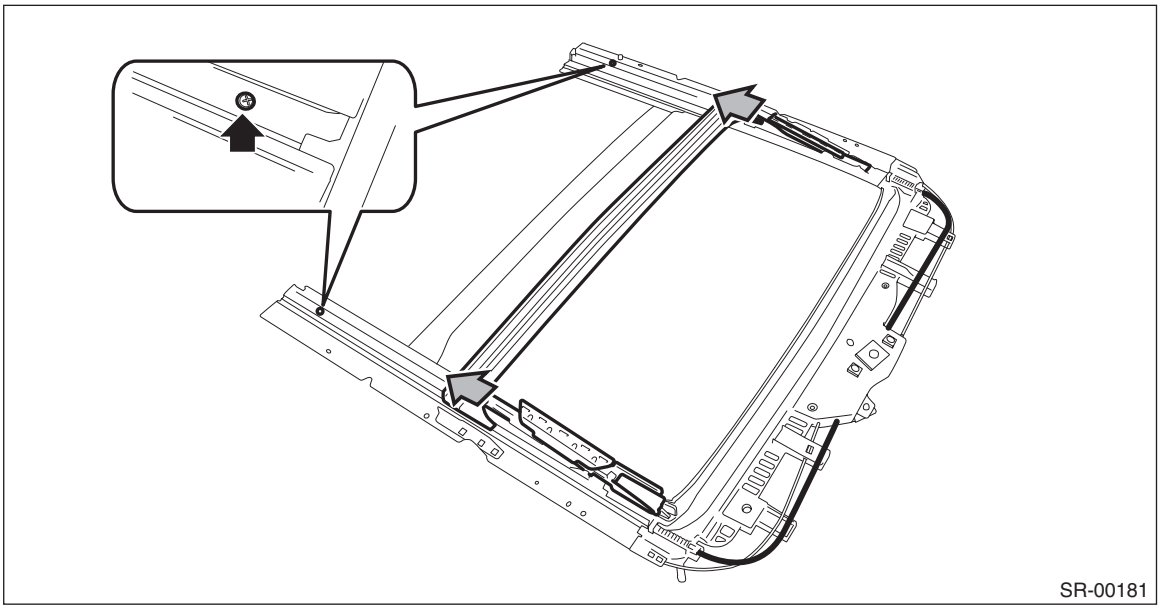
2) Remove the stopper rubber and pull out the sunshade assembly from the rail assembly - sunroof.



3) Disconnect the claws and then remove the drain holder.



4) Remove the screw and pull out the cable assembly from the rail assembly - sunroof.



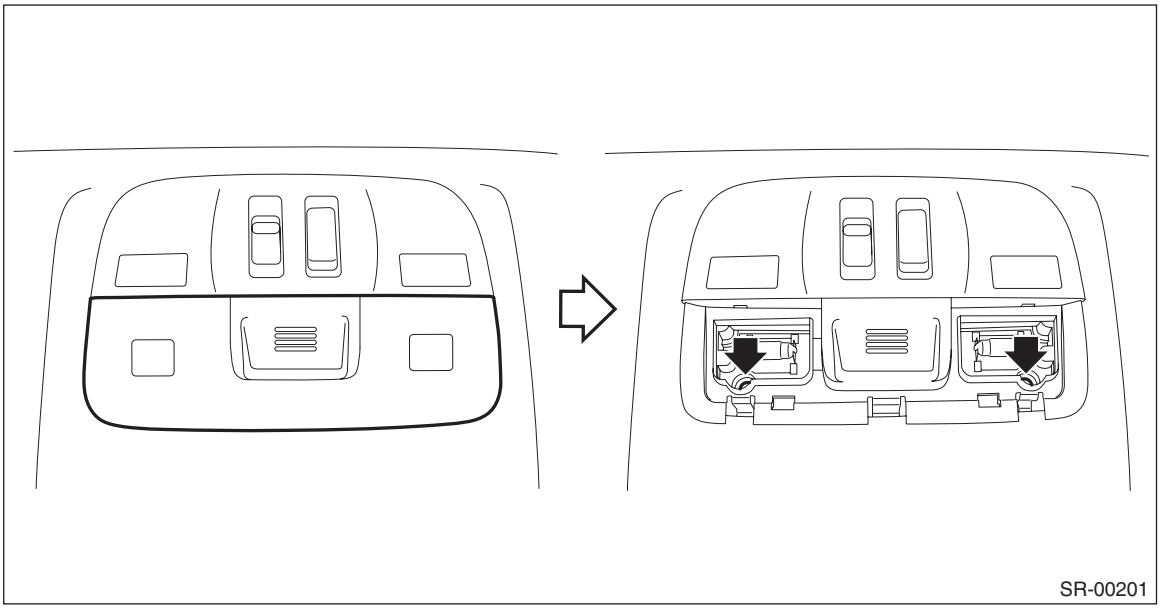
D: ASSEMBLY

Install each part in the reverse order of removal.

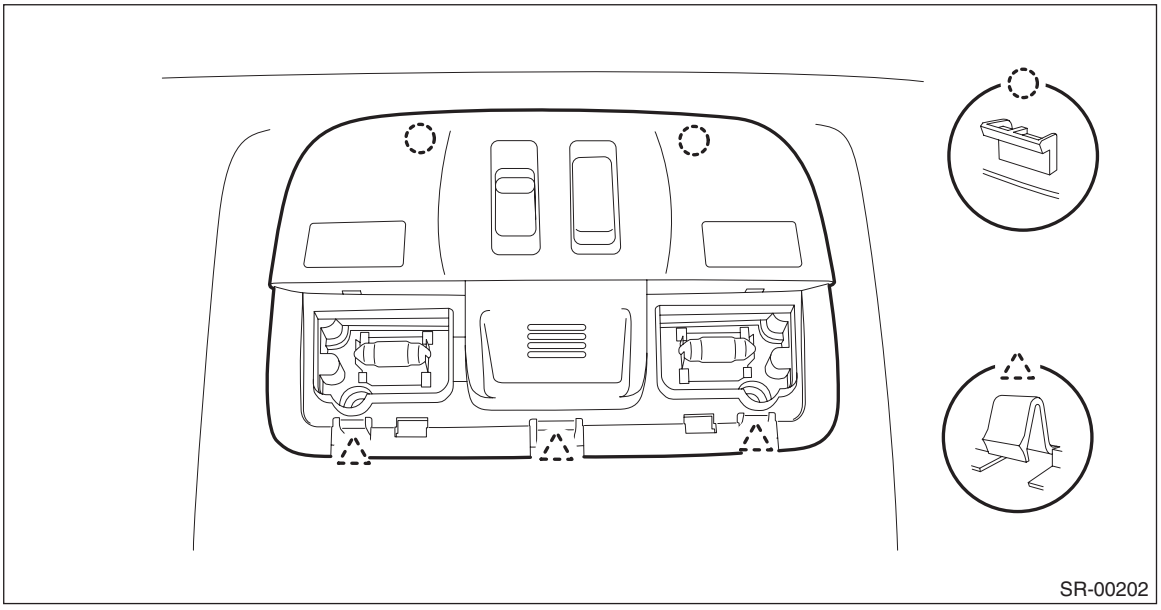
6. Sunroof Motor

A: REMOVAL

1) Completely close the lid assembly - sunroof.
2) Disconnect the ground cable from battery.
3) Remove the light assembly - map.
   (1) Remove the lens and detach the screws.

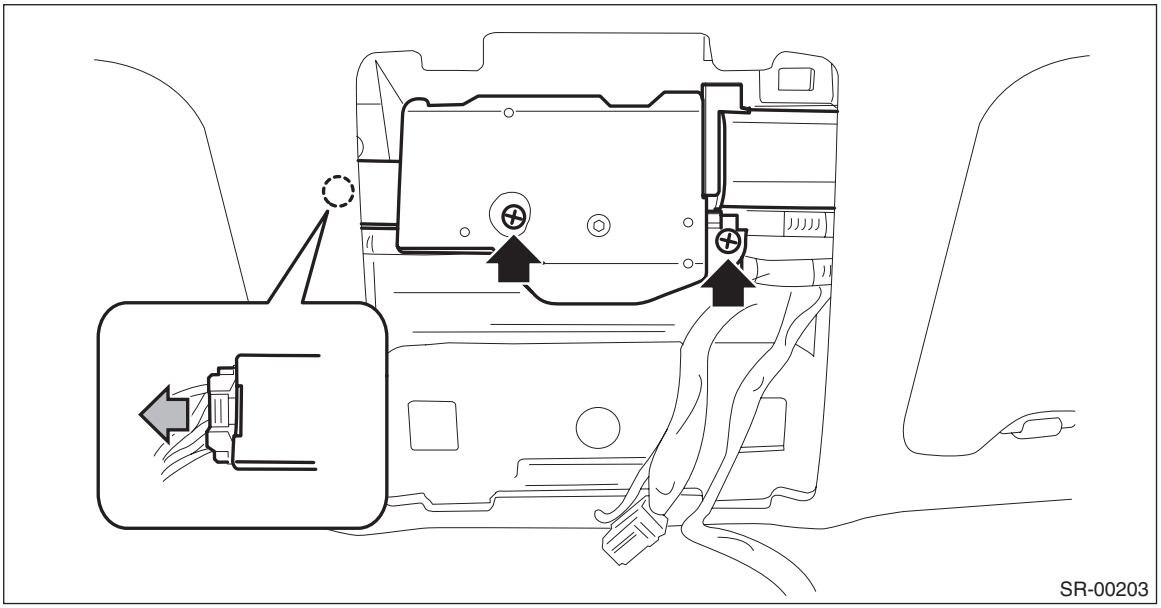


   (2) Release the clips and pull out the light assembly - map to disconnect the connectors.



4) Remove the motor assembly - sunroof.
   (1) Disconnect the harness connector.
   (2) Remove the screws and remove the motor assembly - sunroof.

CAUTION:
When removing the motor assembly - sunroof, secure the cable assembly so that it does not move.



B: INSTALLATION

CAUTION:
When installing the motor assembly - sunroof, be careful not to move the cable assembly.
1) Install the motor assembly - sunroof.
2) Install the light assembly - map, and connect the ground cable to the battery.
3) Perform the initialize operation. <Ref. to SR-6, INITIALIZE OPERATION, OPERATION, Sunroof Control System.>
4) Check the operation of sunroof with following table below.

Operation	Switch position
(1) Lid assembly - sunroof closes completely.	Close
(2) Lid assembly - sunroof is tilted up to the top position.	Tilt up
(3) Lid assembly - sunroof closes completely.	Tilt down
(4) Lid assembly - sunroof opens 295 mm (11.61 in) away from completely closed position.	Open
(5) Lid assembly - sunroof opens completely.	Open
(6) Lid assembly - sunroof closes completely.	Close

C: INSPECTION

Check the auto-reverse mechanism.

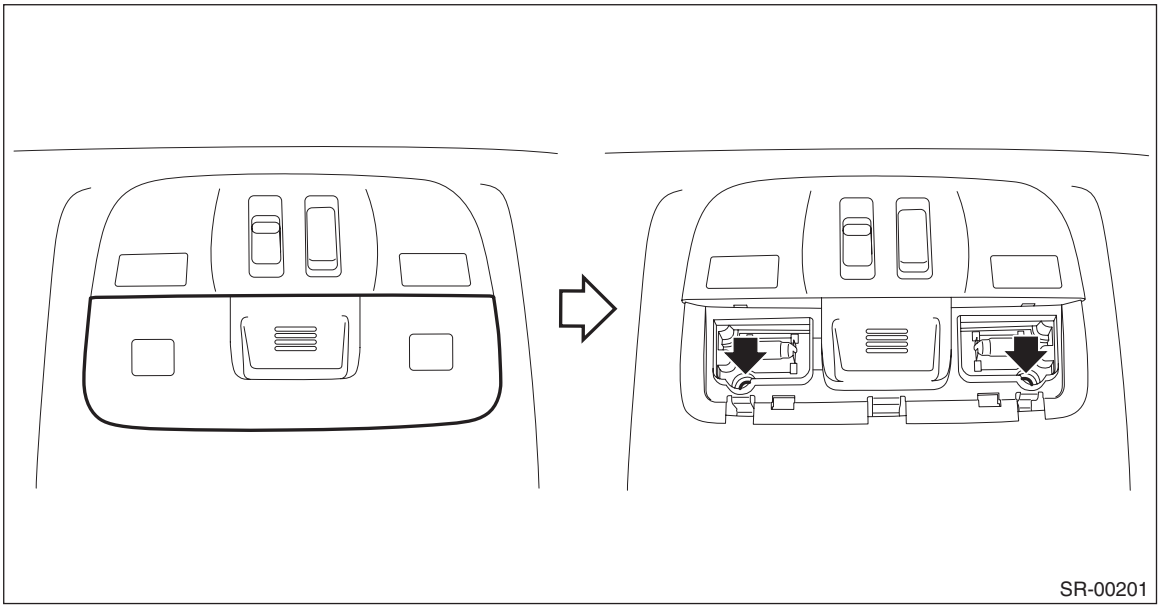
CAUTION:
Do not place objects in the way to check the auto-reverse mechanism.
1) Open the lid assembly - sunroof.
2) Forcefully push the lid assembly - sunroof in the opening direction during auto-closing, and check if the window auto-reverse mechanism operates properly.

NOTE:
If the auto function is cancelled, perform the initialize operation. <Ref. to SR-6, INITIALIZE OPERATION, OPERATION, Sunroof Control System.>

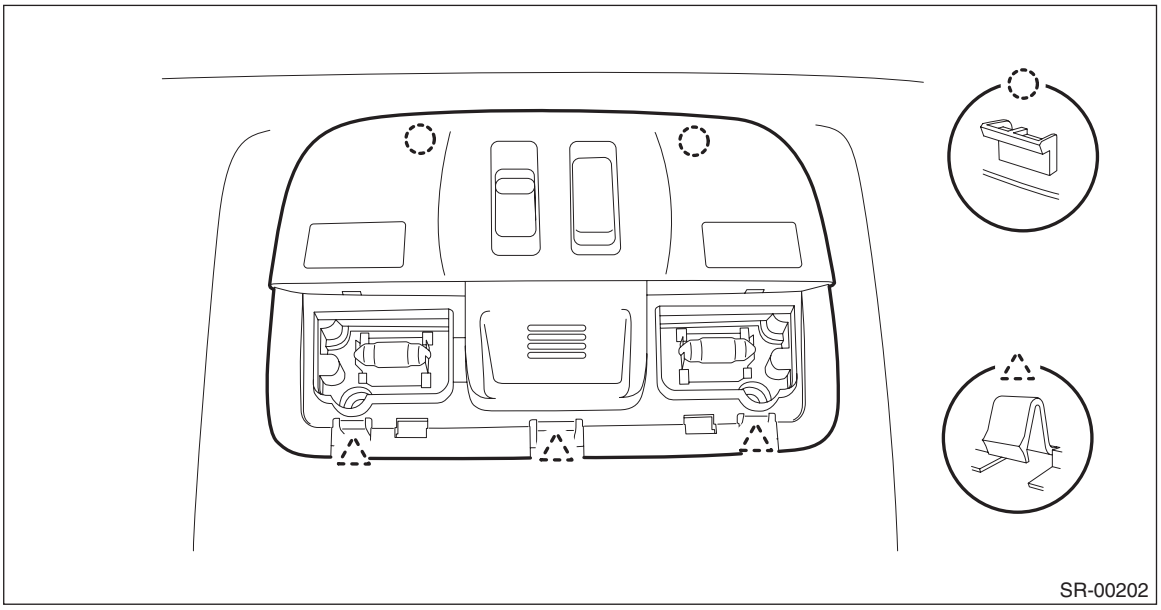
7. Sunroof Switch

A: REMOVAL

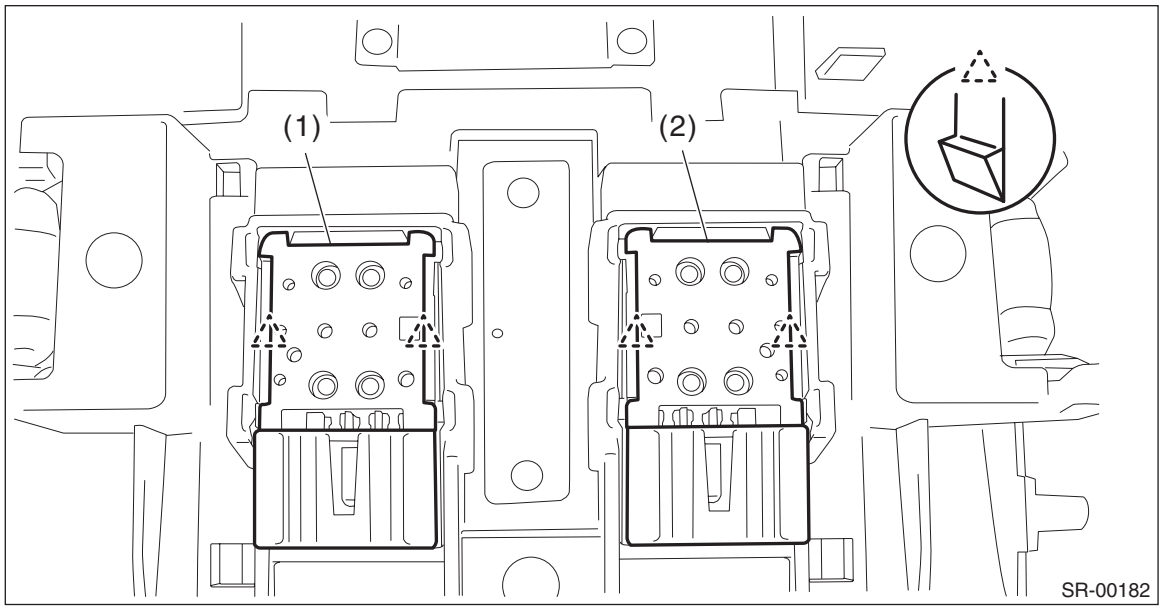
1) Disconnect the ground cable from battery.
2) Remove the light assembly - map.
   (1) Remove the lens and detach the screws.



   (2) Release the clips and pull out the light assembly - map to disconnect the connectors.



3) Release the claws and remove the sunroof switch from the light assembly - map.



(1) Sunroof switch (tilt)
(2) Sunroof switch (slide)

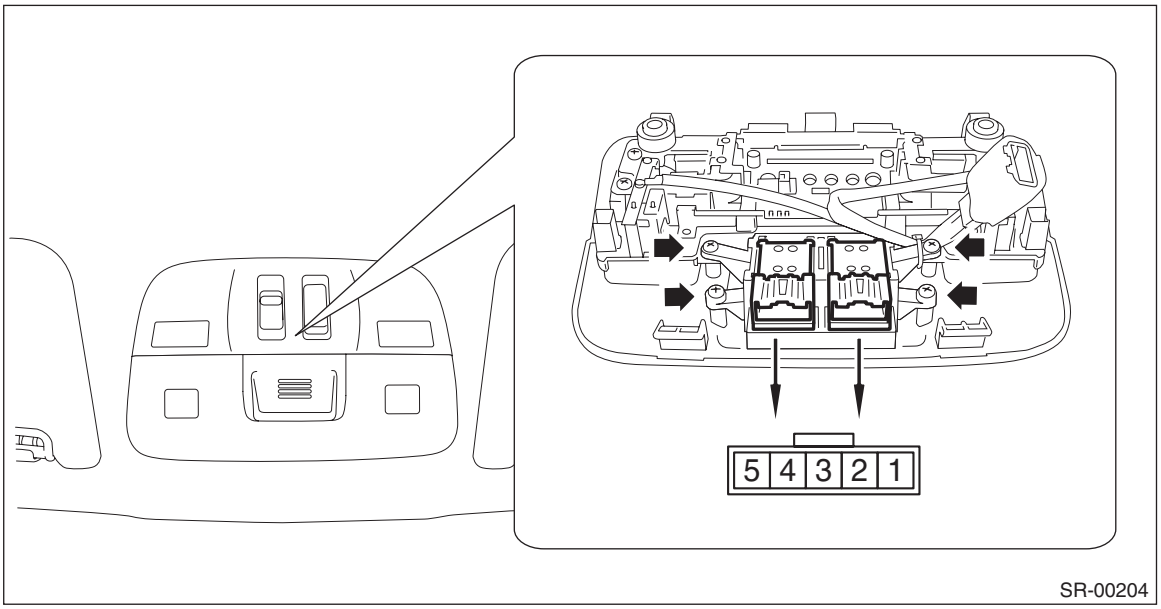
B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1) Remove the light assembly - map.
2) Disconnect the harness connector of sunroof switch.
3) Check the resistance between sunroof switch terminals.

PREPARATION TOOL:
Circuit tester



Terminal No.	Inspection conditions	Standard	Connector No.
1 — 3	Open	Less than 1 Ω	R128
4 — 3	Close	Less than 1 Ω	
1 — 3	Tilt up	Less than 1 Ω	R187
4 — 3	Tilt down	Less than 1 Ω	

4) Replace the sunroof switch if the inspection result is not within the standard.

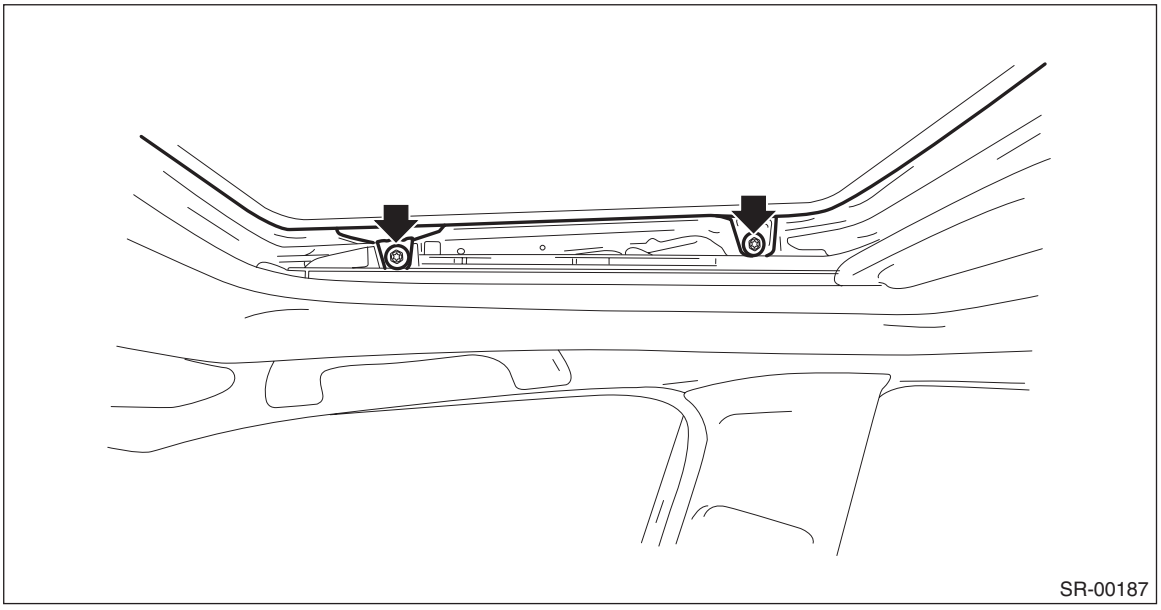
8. Sunshade

A: REMOVAL

1) Remove the lid assembly - sunroof.
   (1) Completely close the lid assembly - sunroof, and open the sunshade assembly.
   (2) Remove the TORX® bolt, and then remove the lid assembly - sunroof.

CAUTION:
Be careful not to damage the lid assembly - sunroof.

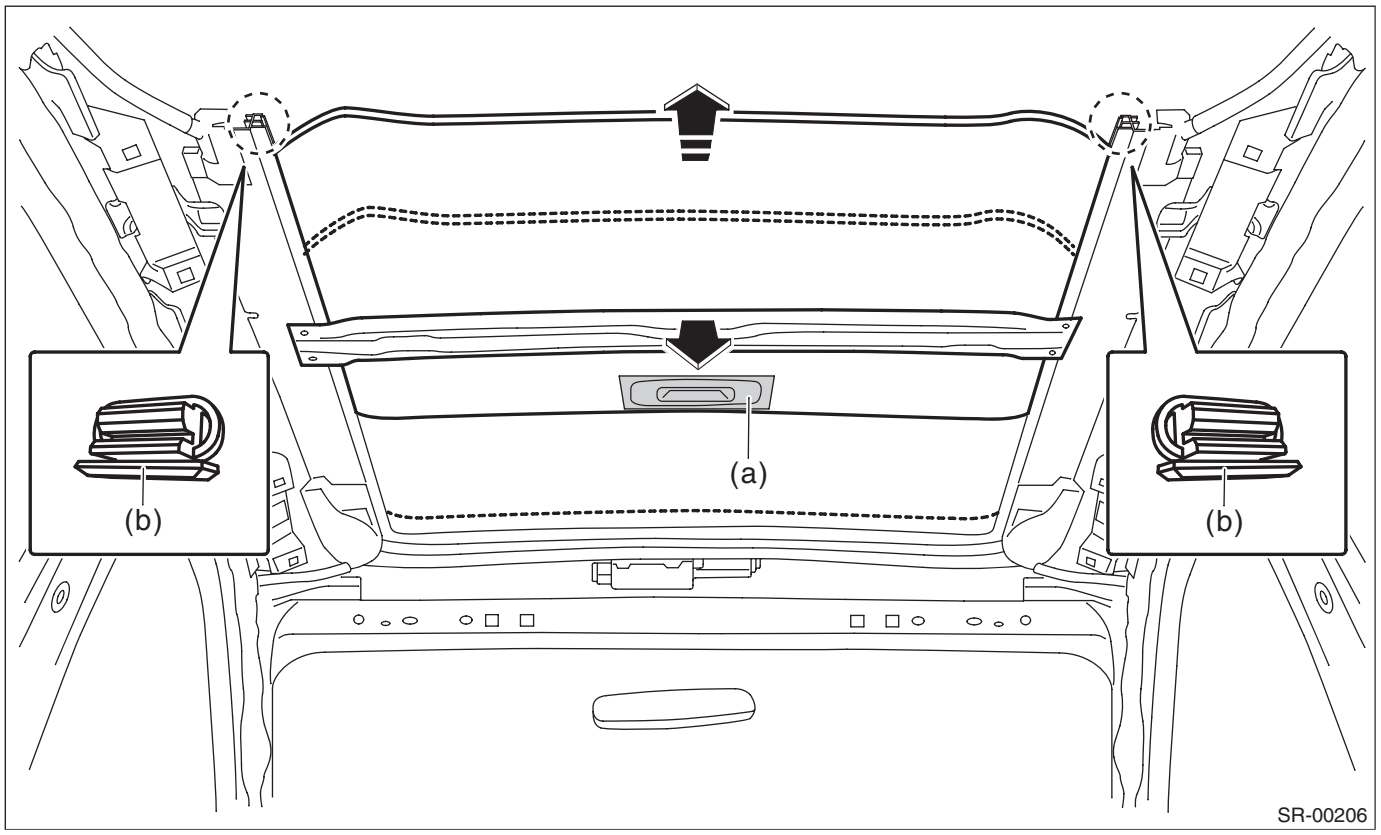
PREPARATION TOOL:
TORX® T25



2) Remove the trim panel - roof assembly. <Ref. to EI-116, REMOVAL, Roof Trim.>

3) Remove the sunshade assembly.
   (1) Attach protective tape (a) on the handle of sunshade assembly.
   (2) Remove the left and right stoppers (b).
   (3) Remove the sunshade assembly while pulling the center of the brace downward.

CAUTION:
Be careful not to damage the sunshade assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

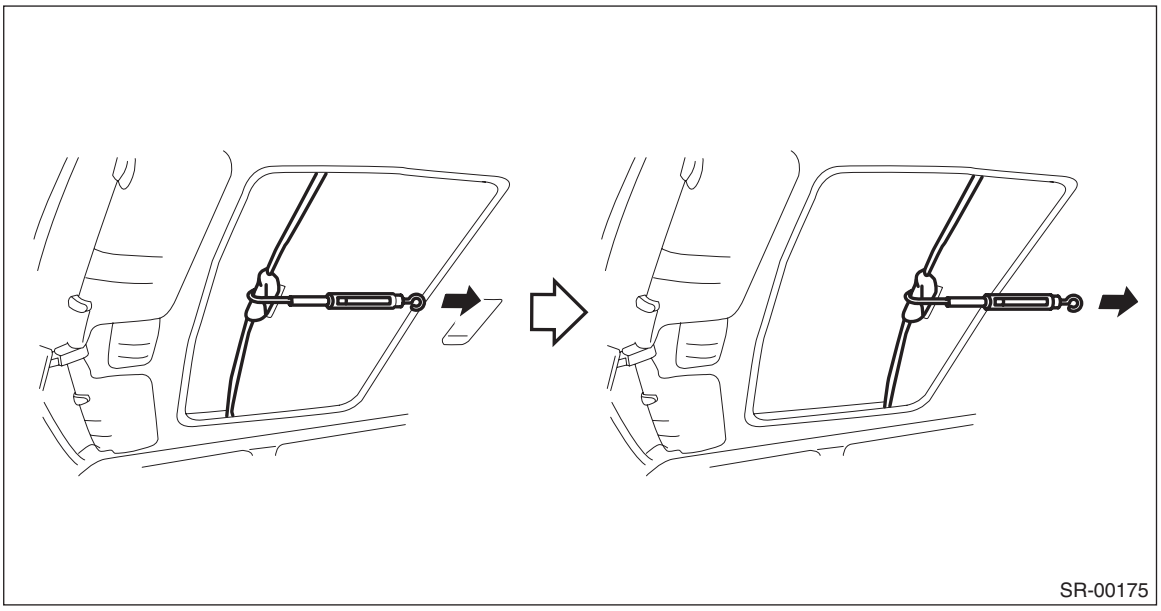
Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SR-2, COMPONENT, General Description.>

C: INSPECTION

1. MOVING LOAD OF SUNSHADE ASSEMBLY

1) Attach a spring scale together with a cloth to the edge of sunshade assembly.
2) Pull the spring scale to check the moving load of the sunshade assembly.

Moving load of sunshade assembly:
14±6 N (1.43 kgf, 3.1 lbf±0.61 kgf, 1.3 lbf)



NOTE:
Moving load is larger at the beginning of pulling a spring scale, so take a spring scale reading while the sunshade assembly is sliding smoothly.
3) If the inspection result exceeds the standard, check the sunshade assembly or the rail assembly - sunroof for improper installation, and replace if necessary.

EXTERIOR/INTERIOR TRIM

EI

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1.	General Description	2
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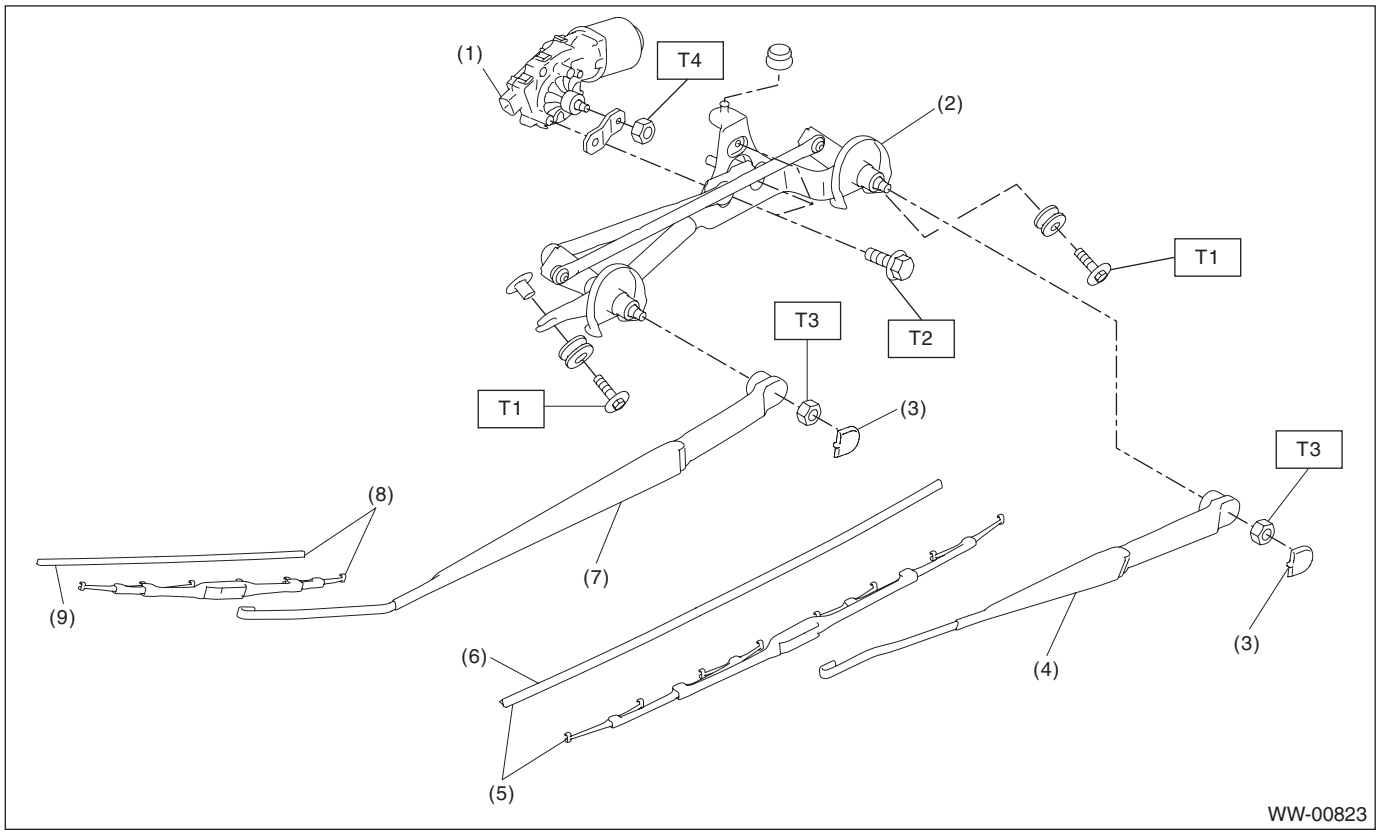
1. General Description

A: SPECIFICATION

Front wiper motor	Input	12 V — 72 W or less
Rear wiper motor	Input	12 V — 42 W or less
Front washer motor	Pump type	Centrifugal
	Input	12 V — 60 W or less
Rear washer motor	Pump type	Centrifugal
	Input	12 V — 36 W or less

B: COMPONENT

1. FRONT WIPER

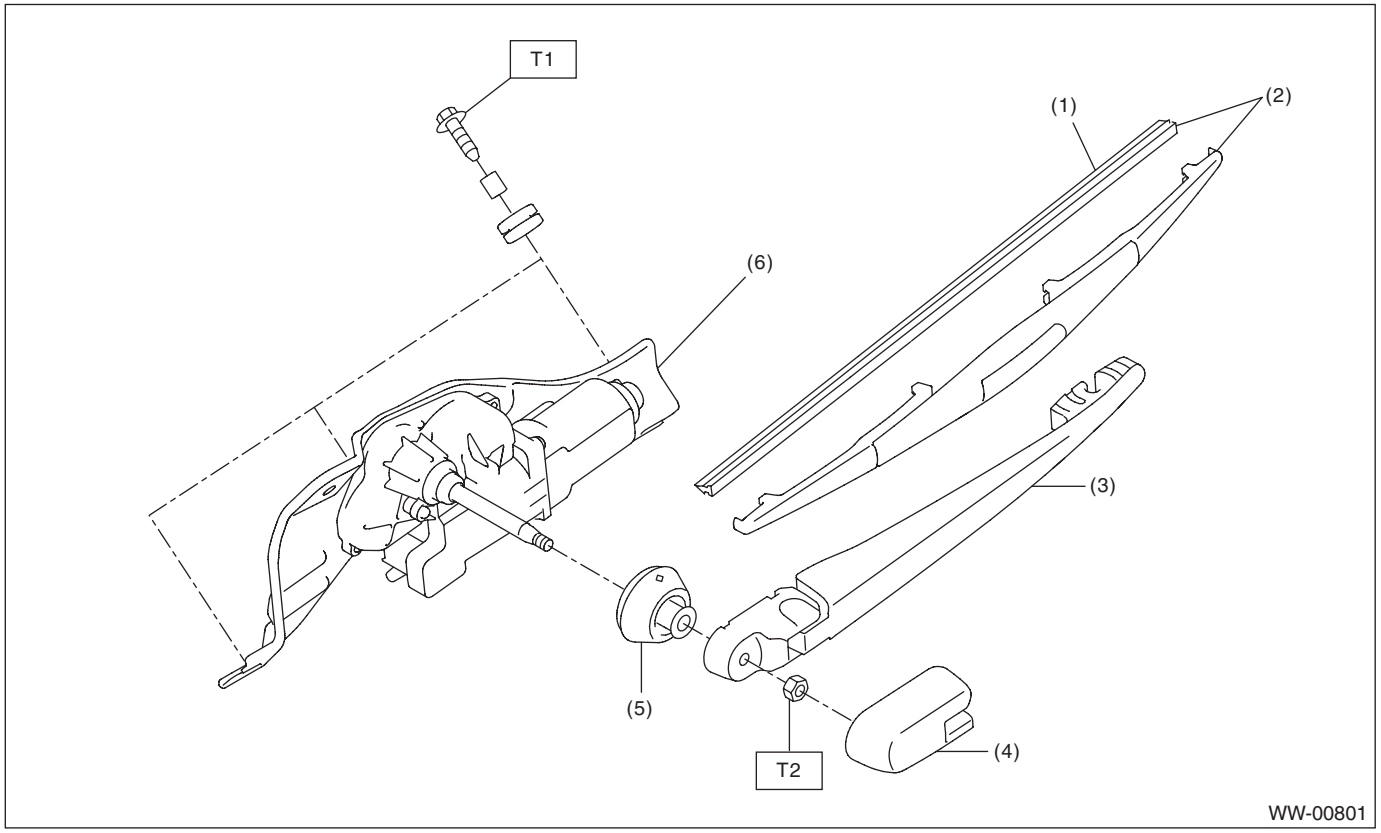


(1) Motor ASSY - windshield wiper
(2) Link ASSY - windshield wiper
(3) Cover - windshield wiper arm
(4) Arm ASSY - windshield wiper driver
(5) Blade ASSY - windshield wiper driver
(6) Rubber ASSY - windshield wiper driver
(7) Arm ASSY - windshield wiper assistor
(8) Blade ASSY - windshield wiper assistor
(9) Rubber ASSY - windshield wiper assistor

Tightening torque:N·m (kgf-m, ft-lb)

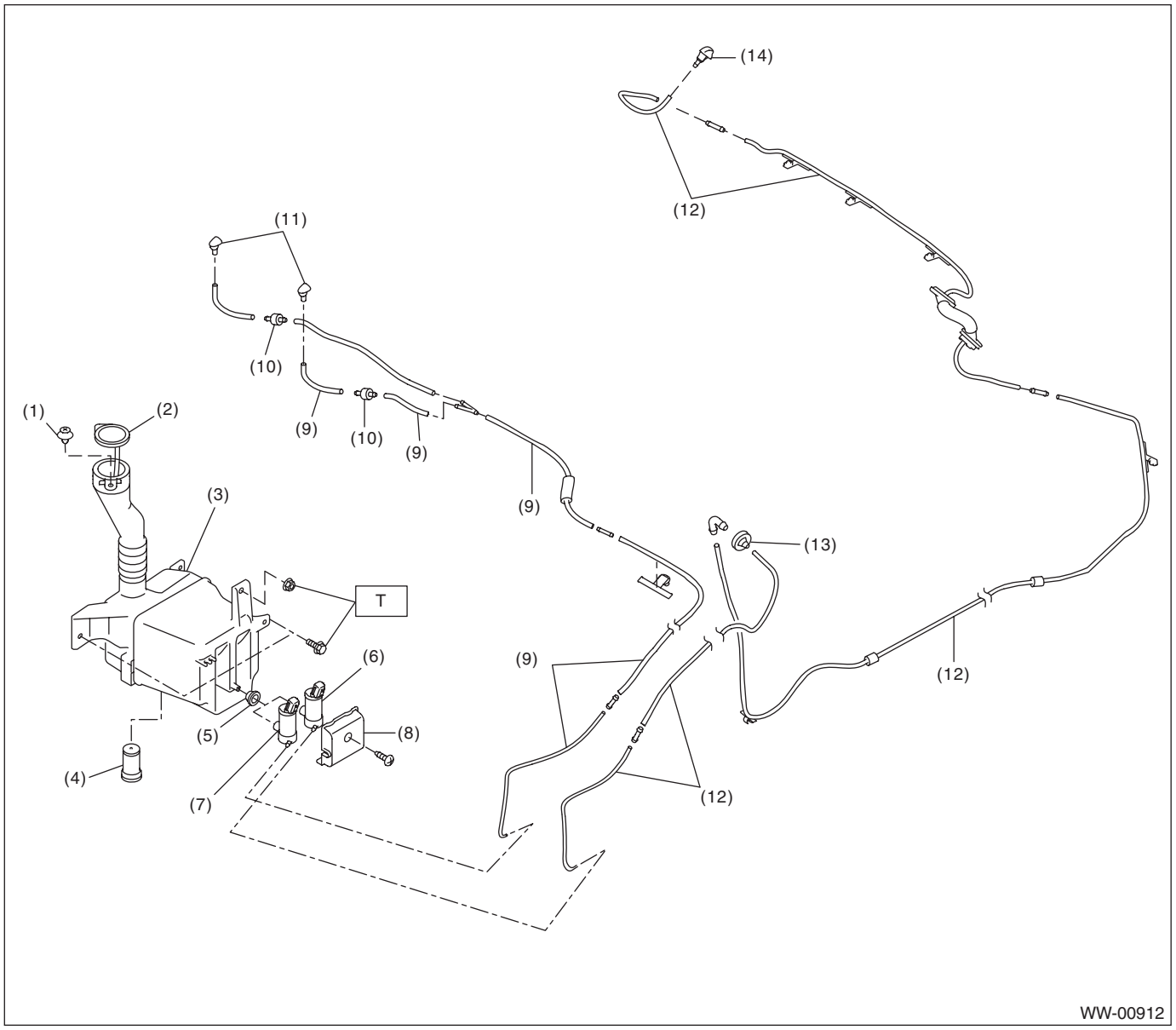
T1: 6 (0.61, 4.4)
T2: 5.5 (0.56, 4.1)
T3: 22 (2.24, 16.2)
T4: <Ref. to WW-32, INSTALLATION, Front Wiper Motor and Link.>

2. REAR WIPER



(1)	Rubber ASSY - rear wiper	(4)	Cover - rear wiper arm	***Tightening torque: N·m (kgf-m, ft-lb)***
(2)	Blade ASSY - rear wiper	(5)	Cap - pivot wiper	***T1: 6 (0.61, 4.4)***
(3)	Arm ASSY - rear wiper	(6)	Motor ASSY - rear wiper	***T2: 8 (0.82, 5.9)***

3. WASHER TANK



(1) Clip
(2) Holder - windshield washer tank
(3) Tank - washer
(4) Sensor - washer tank
(5) Packing - washer motor
(6) Motor pump ASSY - washer rear (5 door model only)
(7) Motor pump ASSY - washer front
(8) Cover - pump
(9) Hose - windshield washer
(10) Valve - windshield washer
(11) Nozzle - windshield washer
(12) Hose ASSY - rear washer (5 door model)
(13) Grommet - washer hose
(14) Nozzle - rear washer (5 door model only)

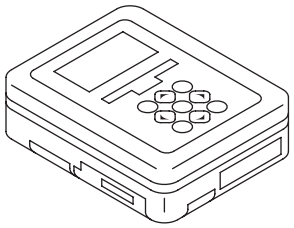
Tightening torque: N·m (kgf-m, ft-lb)
T: 6 (0.61, 4.4)

C: CAUTION

- Connect the connectors and hoses securely during reassembly.
- After reassembly, make sure that the each component or each function operates normally.
- Be careful with the airbag system wiring harness which passes near electrical parts and switches.
- Yellow connectors and harnesses with yellow tapes around them are the connectors and harnesses for the airbag system. Using a tester above such circuits may cause malfunction of airbag system. Follow the cautions of “AIRBAG SYSTEM” in this case. <Ref. to AB-10, CAUTION, General Description.>
- When connecting the pipe hoses, be careful not to cause bend or blockage.
- If even a small amount of silicon oil or grease enters the tank - washer and the washer fluid passages, an oil film will be formed on the glass and will cause the wiper to chatter and judder. Make sure that no oil comes into contact with the system.

D: PREPARATION TOOL

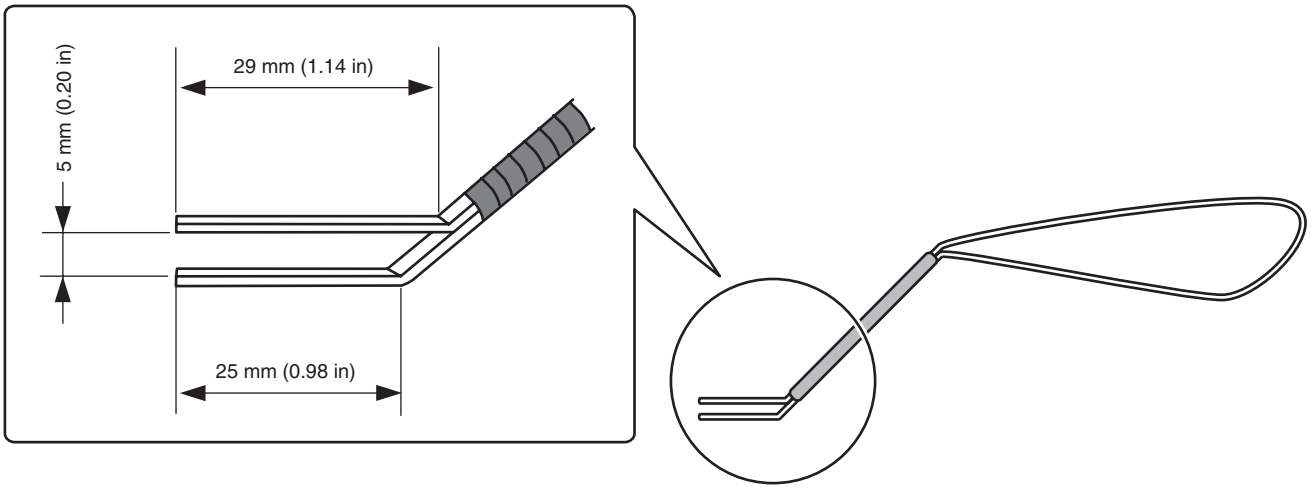
1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for setting of each function and trouble-shooting for electrical system.

2. GENERAL TOOL

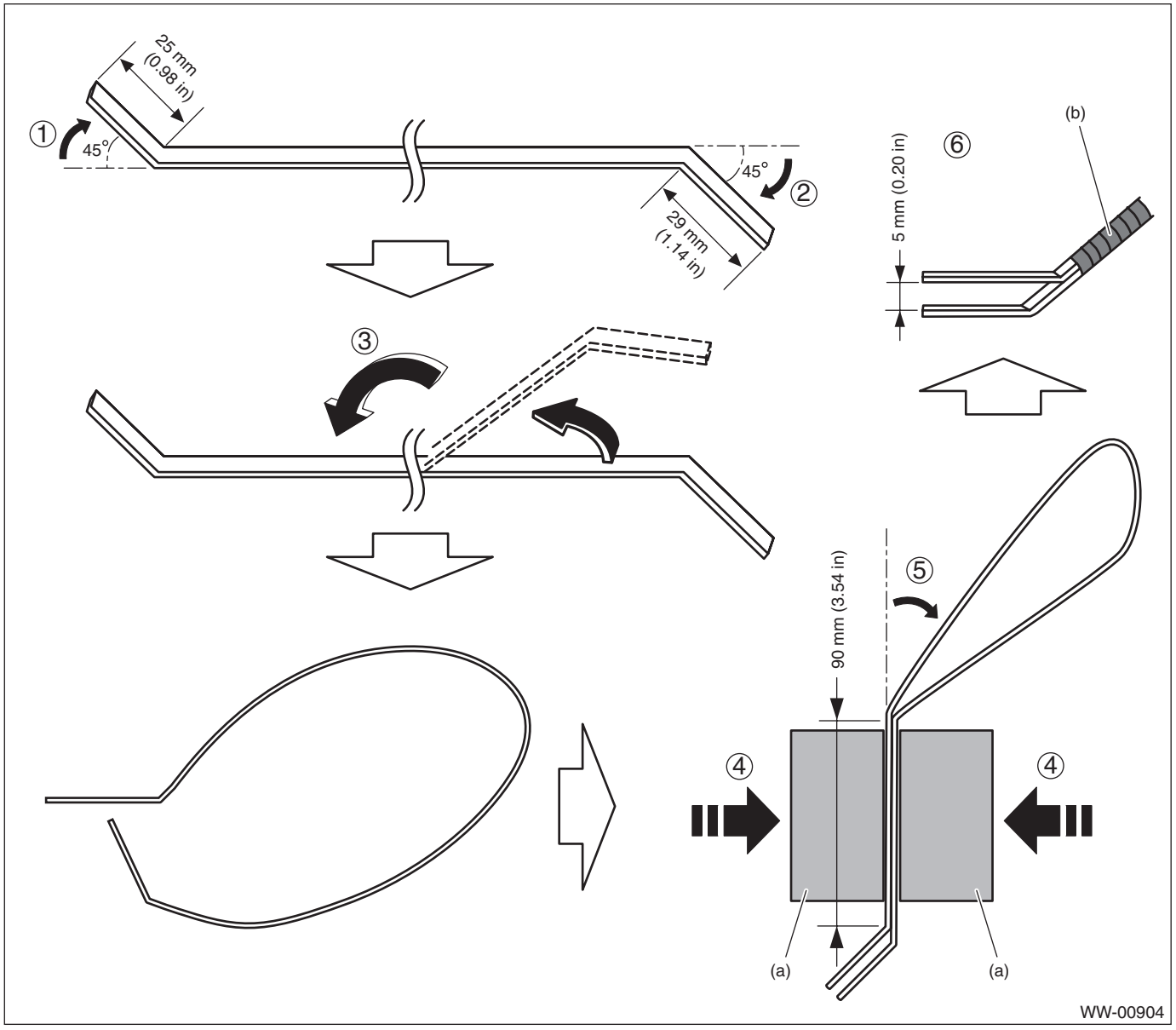
TOOL NAME	REMARKS
Circuit tester	Used for checking voltage and continuity.

NOTE:
Referring to the data described below, prepare the materials to make a nozzle - windshield washer adjustment tool.



Materials
- Vertebra of wiper blade which is to be discarded
- Vinyl tape

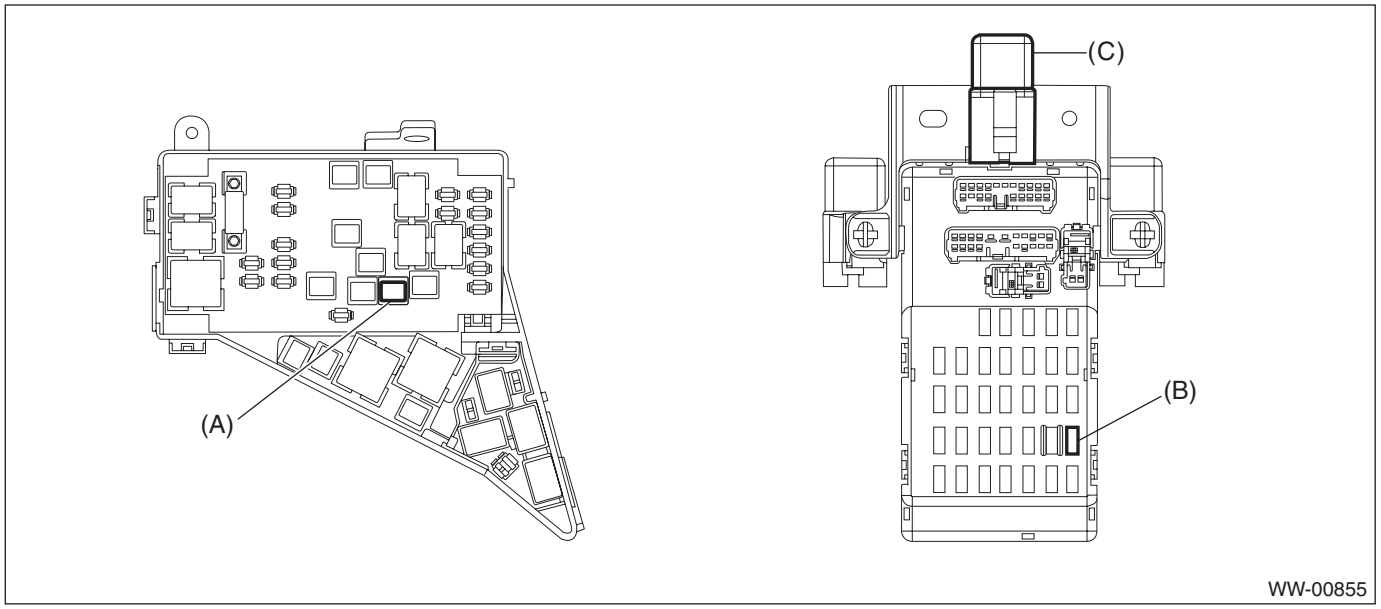
Steps of making a front washer nozzle adjustment tool



1. Bend the vertebra at the position 25 mm (0.98 in) away from its end by 45°.
2. Bend the vertebra at the position 29 mm (1.14 in) away from the other end by 45°.
3. Double up the vertebra so that the longer end (29 mm (1.14 in)) comes upward.
4. Secure the vertebra with a vise (a) so that the tip clearance becomes 5 mm (0.20 in).
5. Bend the vertebra at the position approximately 90 mm (3.54 in) away from the bending point for the longer end.
6. Check that the tip clearance is 5 mm (0.20 in), and secure the vertebra with vinyl tape (b).

2. Relay and Fuse

A: LOCATION



Main fuse box	Fuse 50 A (wiper)	(A)
Relay & fuse box	Fuse 7.5 A (wiper)	(B)
Relay holder	Wiper relay	(C)

NOTE:
For other related fuses, refer to the wiring diagram. <Ref. to WI-15, Power Supply Circuit.>

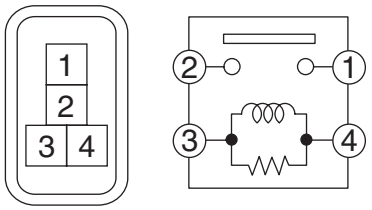
B: INSPECTION

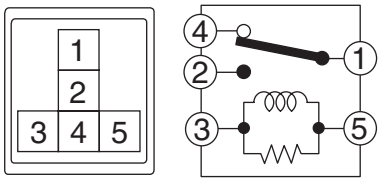
1. CHECK FUSE

1) Remove the fuse and inspect visually.
2) If the fuse is blown out, replace the fuse.

2. CHECK RELAY

1) Check the resistance between relay terminals.

Terminal No.	Inspection conditions	Standard	Circuit
1 — 2	Always	1 MΩ or more	 SR-00180
1 — 2	Apply battery voltage between terminals 4 and 3.	Less than 1 Ω	

Terminal No.	Inspection conditions	Standard	Circuit
1 — 2	Always	1 MΩ or more	 SL-01085
1 — 4	Always	Less than 1 Ω	
1 — 2	Apply battery voltage between terminals 3 and 5.	Less than 1 Ω	

2) Replace the relay if the inspection result is not within the standard.

3. Wiper and Washer System

A: WIRING DIAGRAM

1. WIPER AND WASHER (FRONT)

Refer to “Front Wiper and Washer System” in the wiring diagram. <Ref. to WI-92, WIRING DIAGRAM, Front Wiper and Washer System.>

2. WIPER AND WASHER (REAR)

Refer to “Rear Wiper and Washer System” in the wiring diagram. <Ref. to WI-126, WIRING DIAGRAM, Rear Wiper and Washer System.>

B: INSPECTION

Symptoms	Repair order
Wiper and washers do not operate.	1. Wiper fuse (F/B No. 14, 15) 2. Combination switch 3. Motor assembly - wiper 4. Wiring harness
Wipers do not operate in LO or HI.	1. Combination switch 2. Motor assembly - wiper 3. Wiring harness
Wipers do not operate in INT.	1. Combination switch 2. Motor assembly - wiper 3. Wiring harness
Washer motor does not operate.	1. Combination switch 2. Motor pump assembly - washer 3. Wiring harness
Wipers do not operate when washer switch is ON.	1. Motor assembly - wiper 2. Wiring harness
Washer fluid spray does not operate properly.	1. Motor pump assembly - washer 2. Hose assembly - washer 3. Nozzle - washer

C: NOTE

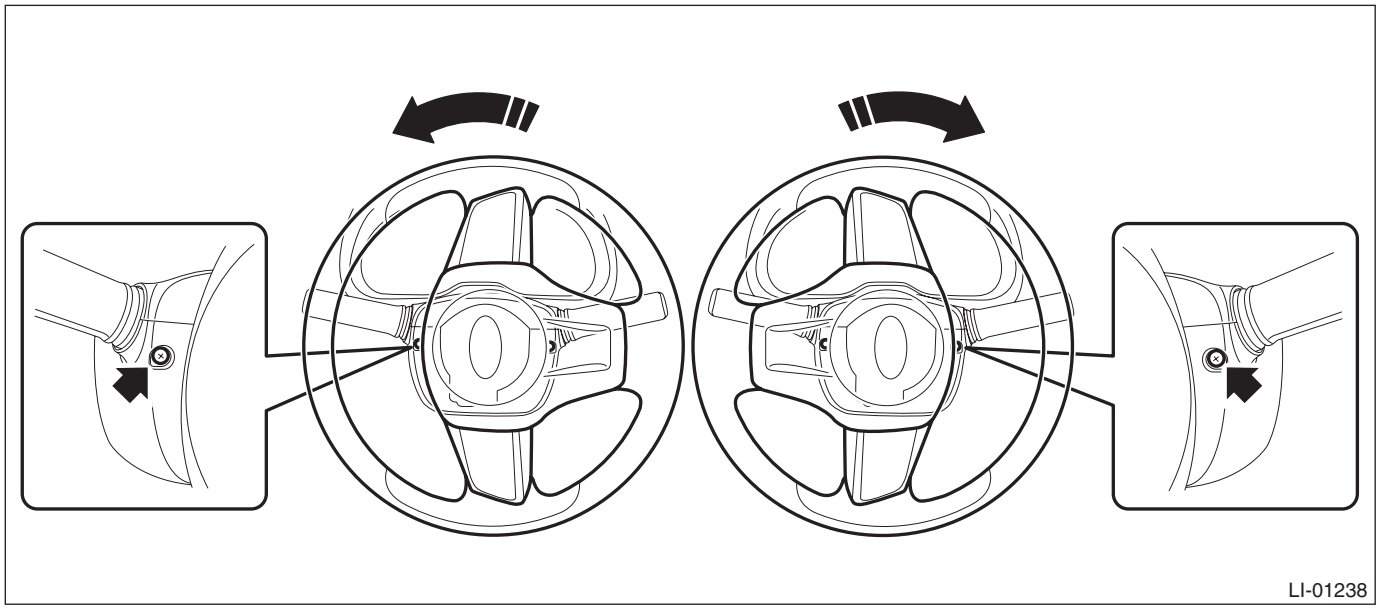
For operation procedures of each component of the wiper and washer system, refer to the respective sections.

- Combination switch (Wiper): <Ref. to WW-10, Combination Switch (Wiper).>
- Wiper blade: <Ref. to WW-17, Wiper Blade.>
- Front wiper arm: <Ref. to WW-28, Front Wiper Arm.>
- Front wiper motor and link: <Ref. to WW-30, Front Wiper Motor and Link.>
- Rear wiper arm: <Ref. to WW-39, Rear Wiper Arm.>
- Rear wiper motor: <Ref. to WW-41, Rear Wiper Motor.>
- Washer tank and motor: <Ref. to WW-21, Washer Tank and Motor.>
- Front washer nozzle: <Ref. to WW-34, Front Washer Nozzle.>
- Rear washer nozzle: <Ref. to WW-45, Rear Washer.>

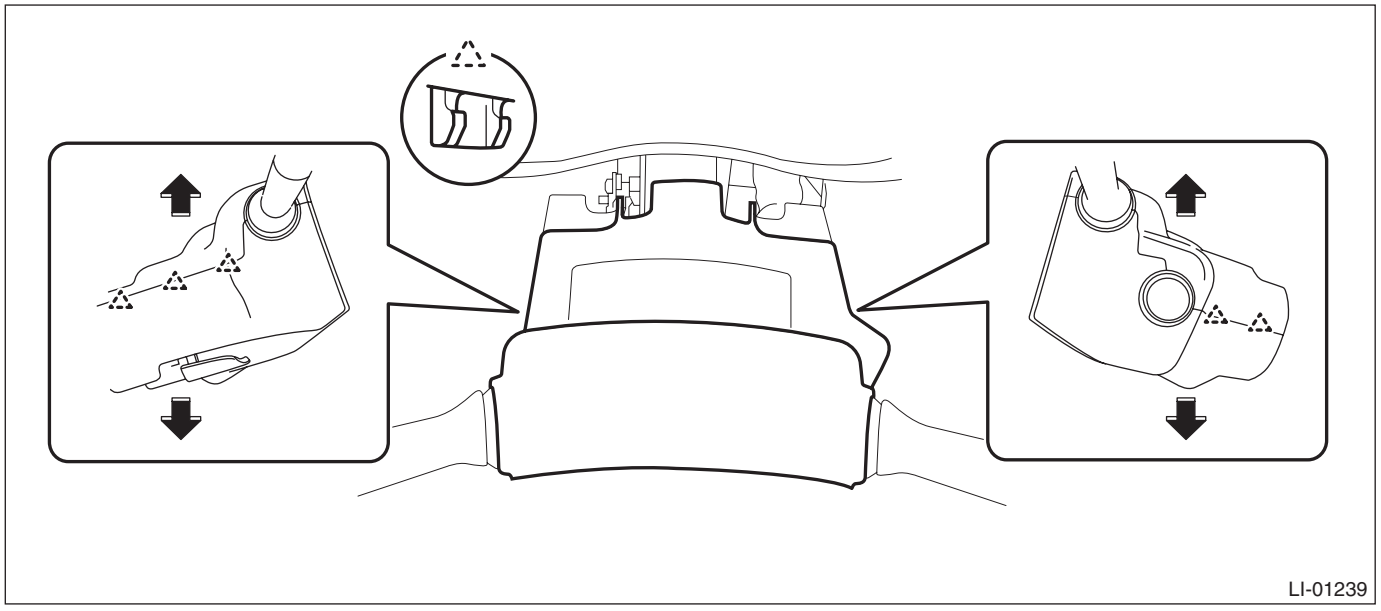
4. Combination Switch (Wiper)

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the cover assembly - column.
   (1) Remove the screws by turning the steering wheel to right and left.

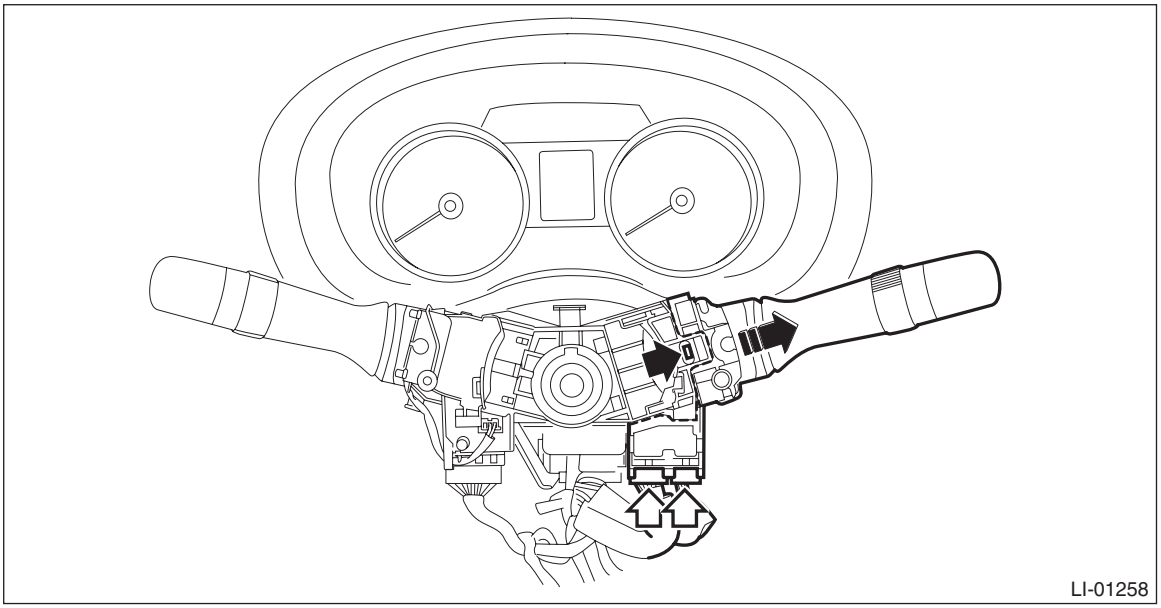


   (2) Release the claw, and remove the cover assembly - column UPR and the cover assembly - column LWR.



3) Remove the switch assembly - combination wiper select.
   (1) Disconnect the connector.
   (2) Release the claws, and pull out the switch assembly - combination wiper select.

CAUTION:
Do not press the claws with excessive force. They may be damaged.



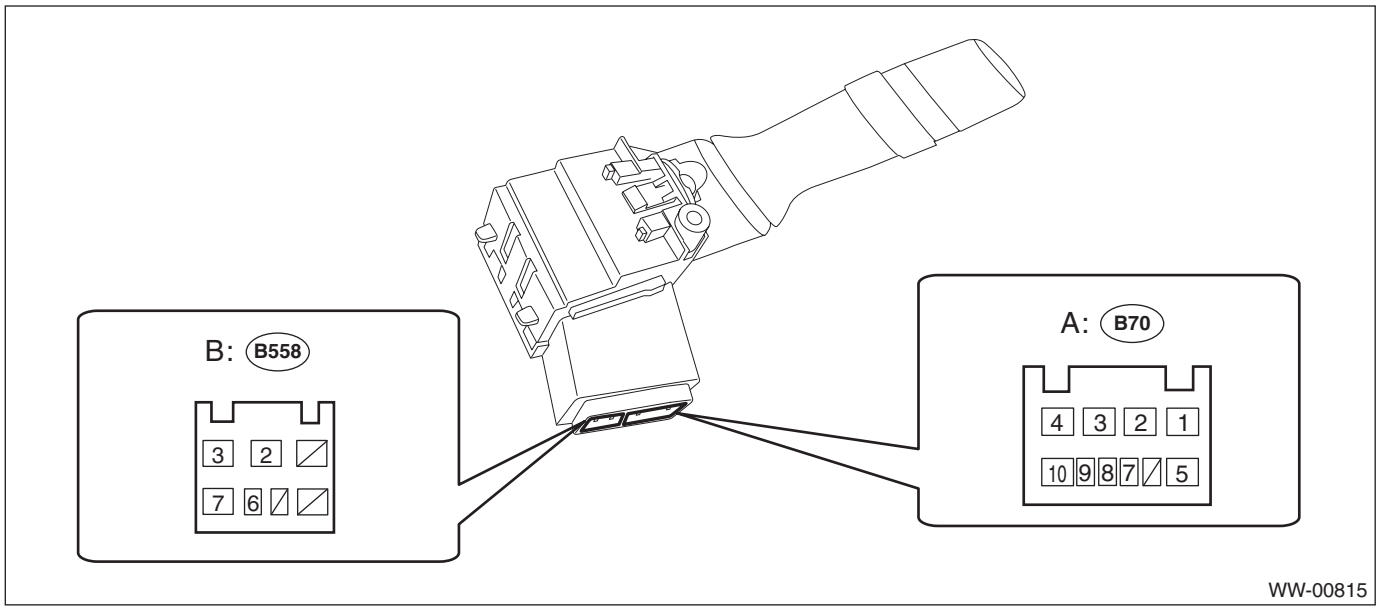
B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1. INSPECTION OF SWITCH UNIT

1) Operate the switches to check the continuity between terminals.



	Switch position	Terminal No.	Standard
Front	OFF	A1 and A3	Less than 1 Ω
	INT	A1 and A3	Less than 1 Ω
	LO	A2 and A3	Less than 1 Ω
	HI	A2 and A4	Less than 1 Ω
	Washer ON	B2 and B3	Less than 1 Ω
Rear	OFF	A5 and B2 B6 and B2 B7 and B2	1 MΩ or more
	LO	B6 and B2	Less than 1 Ω
	HI	B7 and B2	Less than 1 Ω
	Washer ON	A5 and B2	Less than 1 Ω

2) Replace the switch if the inspection result is not within the standard.

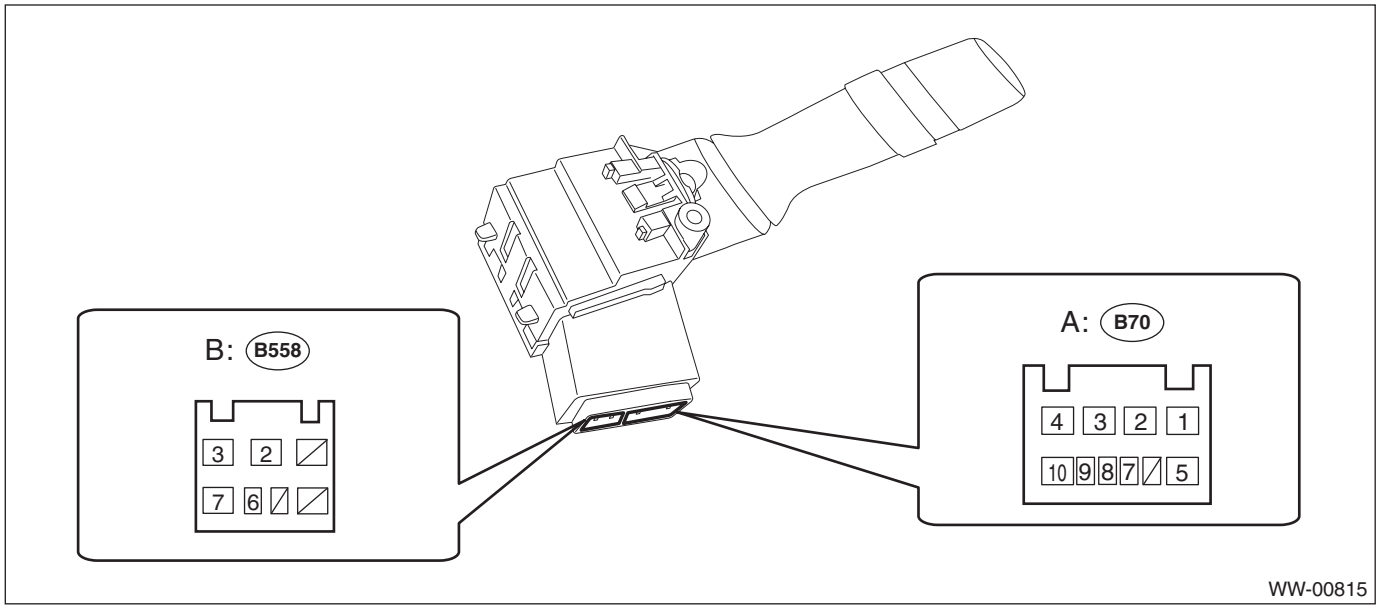
2. FRONT WIPER

1) Check with Subaru Select Monitor
   (1) Check the input signal when the switch assembly - combination wiper select is turned to LO or HI, using the current data display.
   (2) Does the input signal change corresponding to the switch operation?
   - **Yes** → Finish the diagnosis.
   - **No** →
     1. Check the harness.
     2. Check the input voltage of body integrated unit.

Connector & terminal
(B280) No. 2 (+) — Chassis ground (–):
(B281) No. 2 (+) — Chassis ground (–):

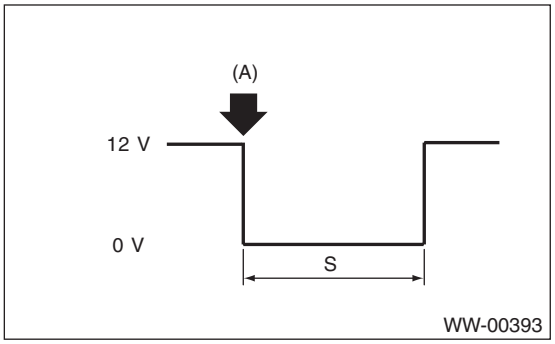
3. Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>

2) Check the intermittent operation (inspection of the wiper switch alone)



(1) Set the voltmeter between terminals No. A2 (+) and No. B2 (–).
(2) Connect the battery to connector. (Terminal No. A2 (+), terminal No. B2 & A3 (–))
(3) Turn the switch assembly - combination wiper select to INT.
(4) Connect the battery (+) to the terminal No. A2 for 5 seconds.
(5) Connect the battery (–) to the terminal No. B2, and check the voltage between terminals No. A2 and No. A3 during intermittent operation.
(6) Perform step (1) to (5) above when intermittent control switch is in MIN or MAX, and replace the switch if the operation is not as specified.

Intermittent stationary time
MIN: Approx. 2 seconds
MAX: Approx. 16 seconds

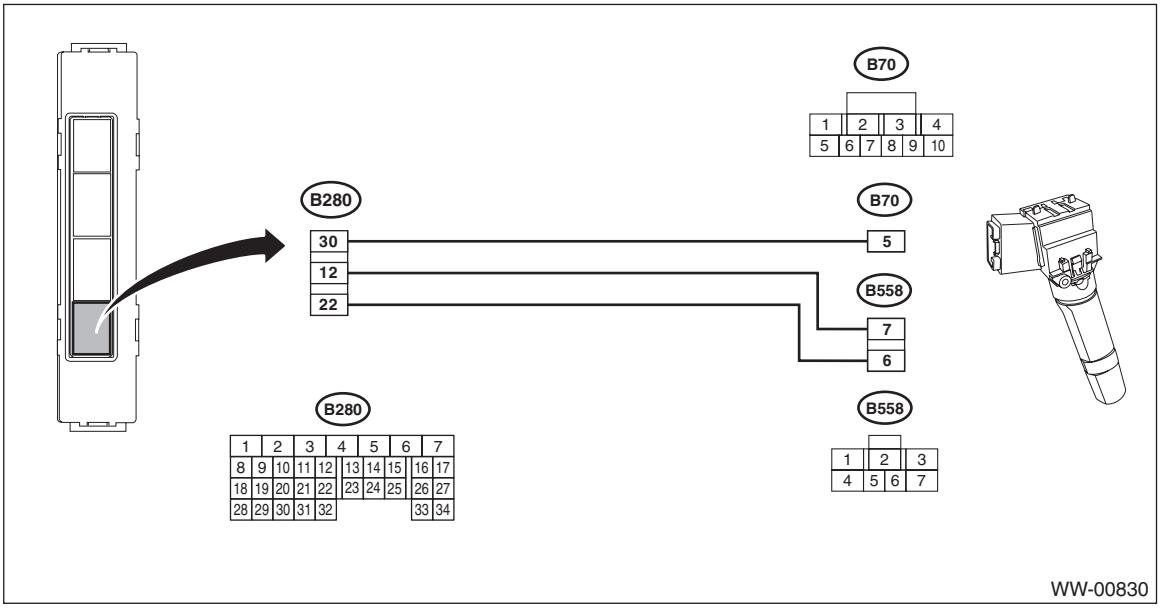


(A): Connect the battery (–) to the terminal No. B2.
S: Intermittent downtime (sec.)

3. REAR WIPER

1) Check input of body integrated unit
Check the input signal when the rear wiper switch is operated using Subaru Select Monitor.
(1) Turn the ignition switch to ON.
(2) Operate the rear wiper switch to each position of ON, INT and Washer ON.
(3) Does the input signal change corresponding to the switch operation?
- **Yes** → Go to step 4.
- **No** → Go to step 2.

2) Check harness
(1) Turn the ignition switch to OFF, disconnect the ground cable from battery.
(2) Disconnect the connector of body integrated unit and wiper switch.
(3) Measure the resistance between body integrated unit and wiper switch.



Connector & terminal
(B280) No. 30 — (B70) No. 5:
(B280) No. 22 — (B558) No. 6:
(B280) No. 12 — (B558) No. 7:
(4) Is the resistance less than 10 Ω?
- **Yes** → Go to step 3.
- **No** → Repair the harness between the body integrated unit and wiper switch.

3) Check input voltage of body integrated unit
(1) Connect the ground cable to battery.
(2) Turn the ignition switch to ON and check the input voltage of body integrated unit.

Connector & terminal
(i84) No. 6 (+) — Chassis ground (–):
(B281) No. 3 (+) — Chassis ground (–):
(3) Is the voltage 10 V or more?
- **Yes** → Go to step 4.
- **No** → Check the harness and fuse.

4) Check output of body integrated unit
Check the output signal when the rear wiper switch is operated using Subaru Select Monitor.
(1) Turn the ignition switch to ON.
(2) Operate the rear wiper switch to ON and Washer ON.
(3) When the operation in step (2) is performed, check the output signal of body integrated unit to rear wiper motor.
(4) When the rear wiper switch is set to ON, is ON output continuous? Also, when the washer is set to ON, is ON output?
- **Yes** → Go to step 5.
- **No** → Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>

5) Check output of body integrated unit
Check the output signal when the rear wiper switch is operated using Subaru Select Monitor.
(1) Turn the ignition switch to ON.
(2) Set the rear wiper switch to INT.
(3) When the operation in step (2) is performed, check the output signal of body integrated unit.
(4) When the rear wiper switch is set to INT, is ON/OFF output repeated? (INT OFF time (when vehicle parked): 12 seconds)
- **Yes** → Go to step 8.
- **No** → Go to step 6.

6) Check harness between body integrated unit and rear wiper motor
(1) Turn the ignition switch to OFF, disconnect the ground cable from battery.
(2) Disconnect the connector of body integrated unit and wiper switch.
(3) Measure the resistance between the harness connector terminals of the body integrated unit and rear wiper motor.

Connector & terminal
(B280) No. 6 — (B97) No. 11:
(4) Is the resistance less than 10 Ω?
- **Yes** → Go to step 7.
- **No** → Repair the open circuit of the harness between body integrated unit and rear wiper motor.

7) Check stop position circuit of the rear wiper motor
(1) Disconnect the harness connector of the motor assembly - rear wiper.
(2) Check the continuity of the circuit of rear wiper motor stop position.

Connector & terminal
(D43) No. 1 (+) — (D43) No. 4 (–):
(3) Is there continuity between terminals?
- **Yes** → Go to step 8.
- **No** → Replace the motor assembly - rear wiper.

8) Check power supply circuit of the rear wiper motor
(1) Disconnect the harness connector of the motor assembly - rear wiper.
(2) Turn the ignition switch to ON.
(3) Measure the voltage between the rear wiper motor harness connector terminal and chassis ground.

Connector & terminal
(D43) No. 3 (+) — Chassis ground (–):
(4) Is the voltage 10 V or more?
- **Yes** → Go to step 9.
- **No** → Check the fuse (No. 27 in main fuse box).

9) Check ground circuit of rear wiper motor
(1) Turn the ignition switch to OFF.
(2) Measure the resistance between the rear wiper motor harness connector terminal and chassis ground.

Connector & terminal
(D43) No. 4 — Chassis ground:
(3) Is the resistance less than 10 Ω?
- **Yes** → Go to step 10.
- **No** → Repair the open circuit of the rear wiper motor ground circuit.

10) Check harness between body integrated unit and rear wiper motor
(1) Turn the ignition switch to OFF.
(2) Disconnect the harness connector of body integrated unit.
(3) Disconnect the harness connector of the motor assembly - rear wiper.
(4) Measure the resistance between the harness connector terminals of the body integrated unit and rear wiper motor.

Connector & terminal
(B280) No. 7 — (D43) No. 2:
(5) Is the resistance less than 10 Ω?
- **Yes** → Go to step 11.
- **No** → Repair the open circuit of the harness between body integrated unit and rear wiper motor.

11) Check output of body integrated unit
(1) Connect the harness connector of body integrated unit.
(2) Disconnect the connector of the motor assembly - rear wiper.
(3) Turn the ignition switch to ON.
(4) Measure the voltage between rear wiper motor connector and chassis ground.

Connector & terminal
(D43) No. 2 (+) — Chassis ground (–):
(5) Is the voltage less than 1.5 V when rear wiper switch is OFF, and is the voltage 10 V or more when rear wiper switch is ON?
- **Yes** → Go to step 12.
- **No** → Replace the body integrated unit. <Ref. to SL-76, Body Integrated Unit.>

12) Check operation of rear wiper motor
(1) Remove the motor assembly - rear wiper.
(2) Check the rear wiper motor. <Ref. to WW-44, INSPECTION, Rear Wiper Motor.>
(3) Does the rear wiper motor rotate normally?
- **Yes** → Finished.
- **No** → Replace the motor assembly - rear wiper.

NOTE:
Rear wiper intermittent time

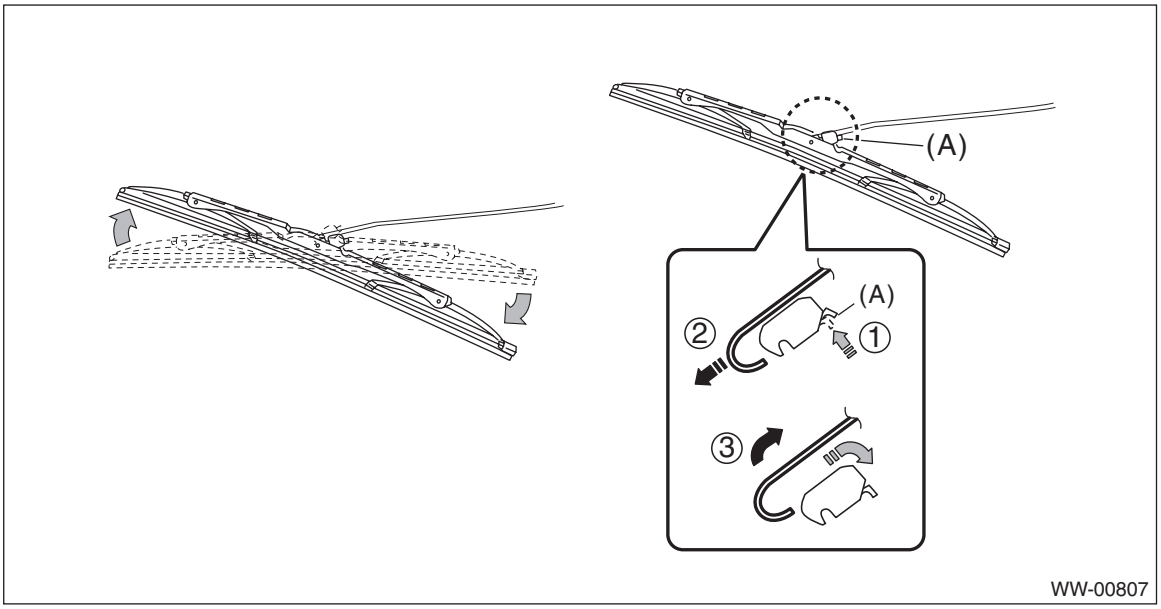
Select lever position	Vehicle speed (km/h (MPH))	Intermittent stopping time (sec.)
		5 door model
Rev.	—	Continuous operation
Except for reverse mode	80 — (50 —)	3
	50 — 80 (31 — 50)	6
	20 — 50 (12 — 31)	9
	0 — 20 (0 — 12)	12

5. Wiper Blade

A: REMOVAL

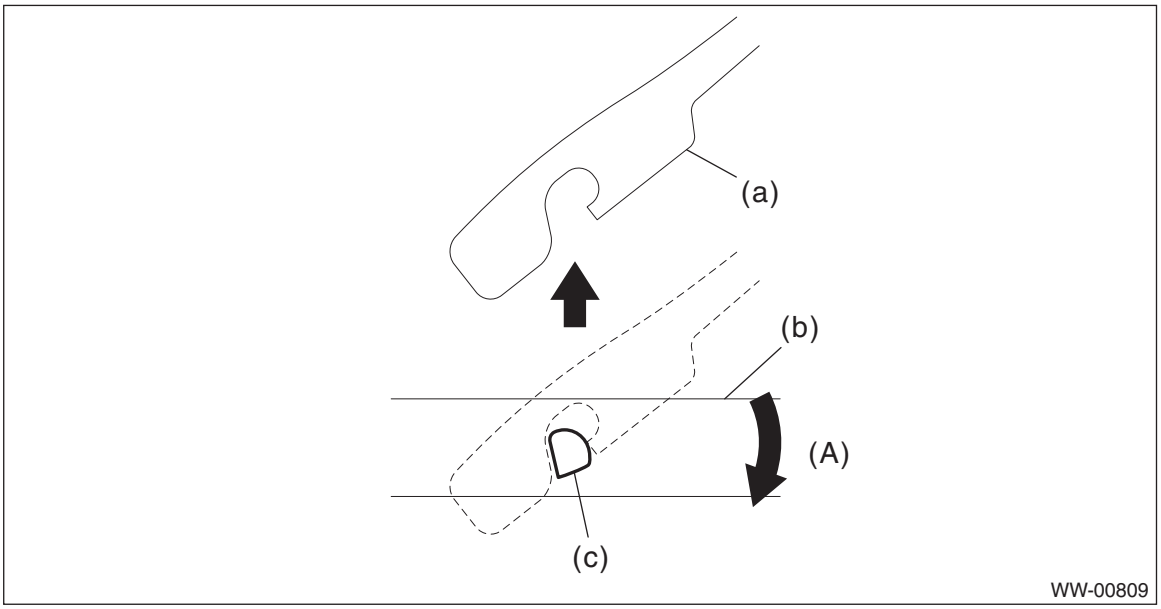
1. FRONT

While pushing the locking clip (A) up, pull out the blade assembly - windshield wiper in the direction of the arrow, and remove it from the arm assembly - windshield wiper.



2. REAR

Turn the blade assembly - rear wiper in the direction of arrow (A) and remove it from the arm assembly - rear wiper.



(A) Turn the wiper blade.

(a) Arm ASSY - rear wiper (b) Blade ASSY - rear wiper (c) Wiper blade attachment section

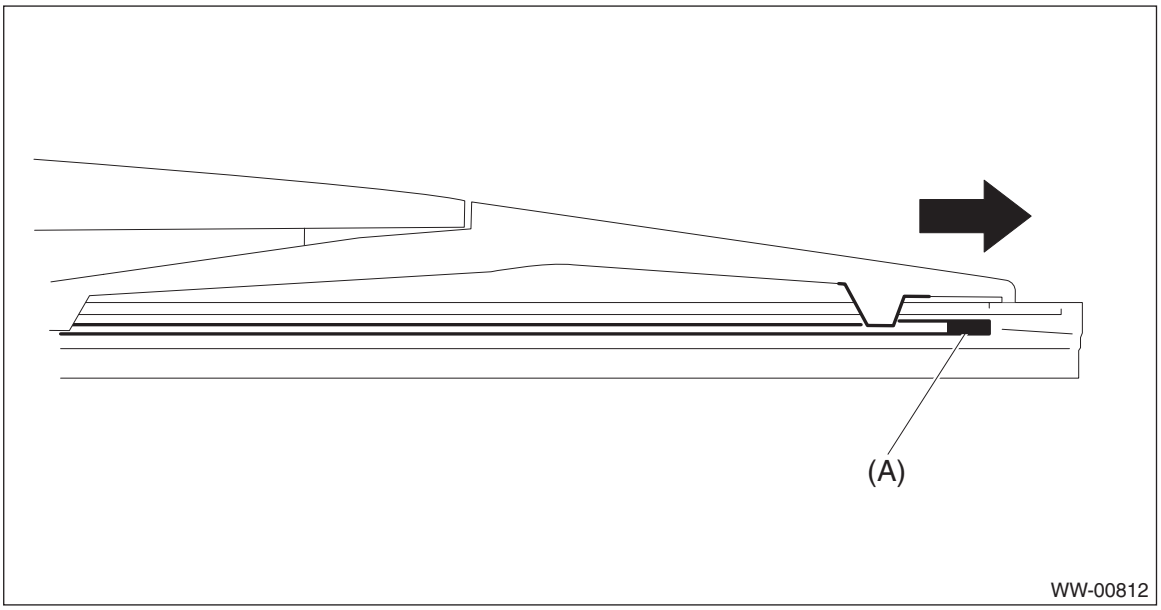
B: INSTALLATION

1) Install each part in the reverse order of removal.
2) Confirm that the clip is locked securely.

C: DISASSEMBLY

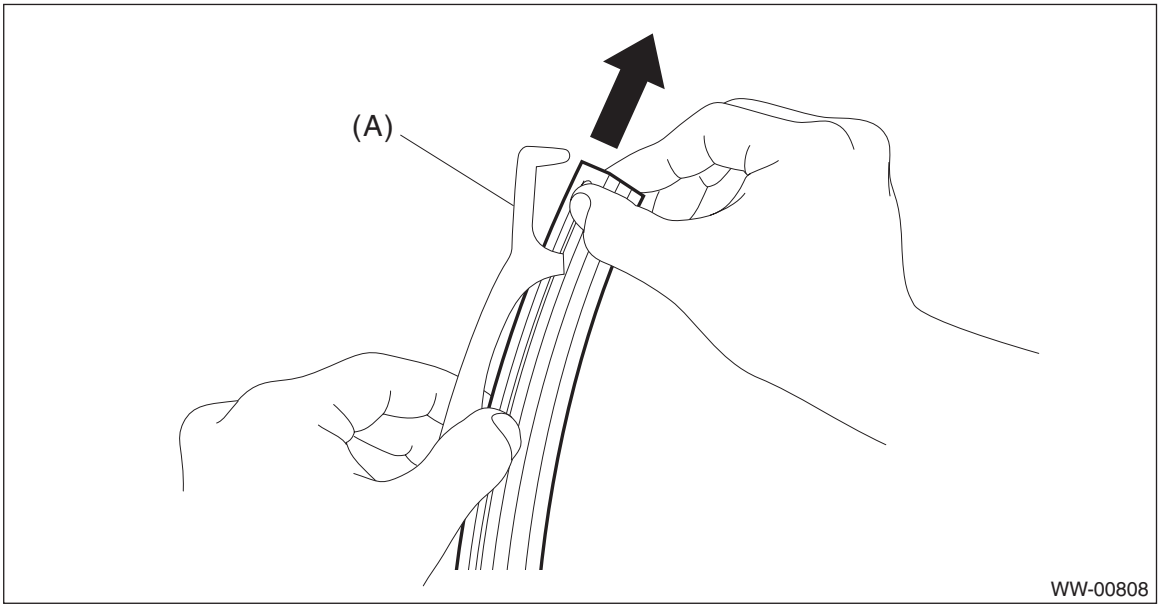
1. FRONT

Pull side (A) of the wiper rubber stopper, and remove the rubber assembly - windshield wiper from the blade assembly - windshield wiper.



2. REAR

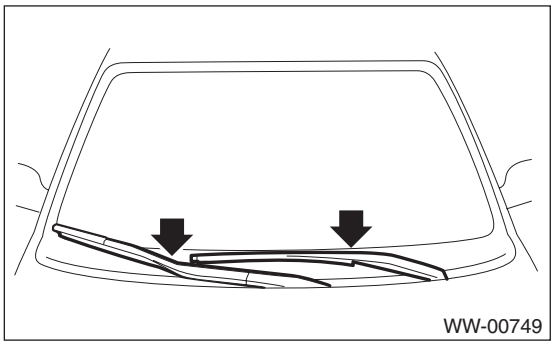
Slightly pull the top of the rubber assembly - rear wiper from the stopper (A), and pull out completely.



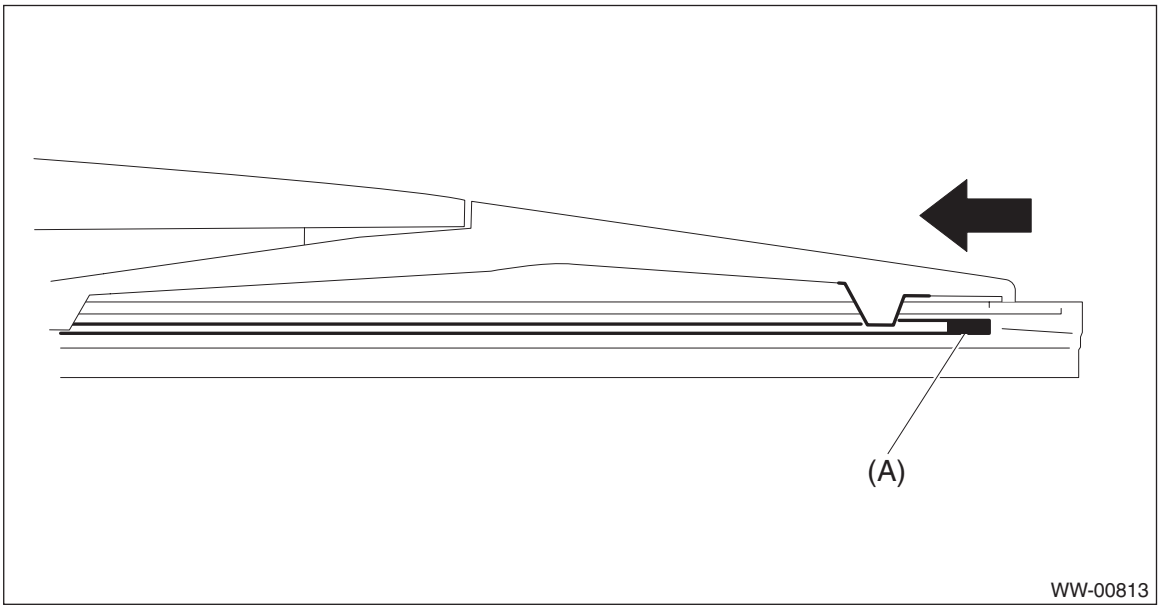
D: ASSEMBLY

1. FRONT

1) Insert the rubber assembly - windshield wiper onto the blade - windshield wiper so that the stopper is in the position shown in the figure.

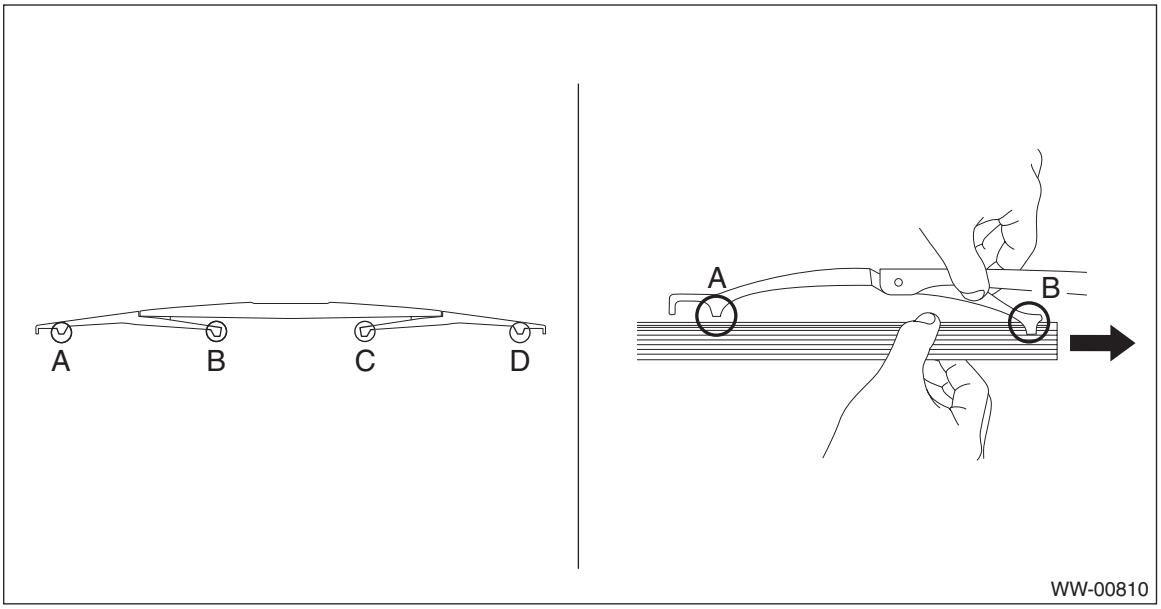


2) Make sure the rubber assembly - windshield wiper is securely fastened to the pull stopper (A).

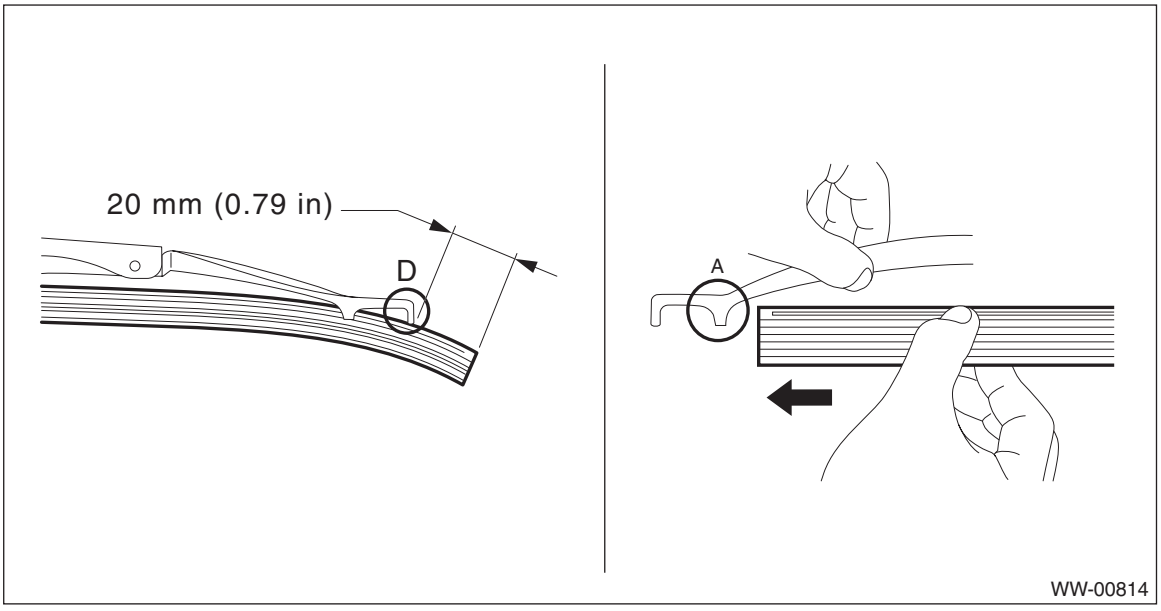


2. REAR

1) Insert the rubber assembly - rear wiper into claw (B).



2) Insert the rubber assembly - rear wiper until its top end protrudes approx. 20 mm (0.79 in) from stopper (D).
3) Insert the rubber assembly - rear wiper into claw (A).



E: INSPECTION

1) When the wiper does not operate properly, inspect the following item.
- Make sure the movable part of the blade assembly - rear wiper moves smoothly.
- Check that the rubber assembly - rear wiper rubber is not deformed or damaged.

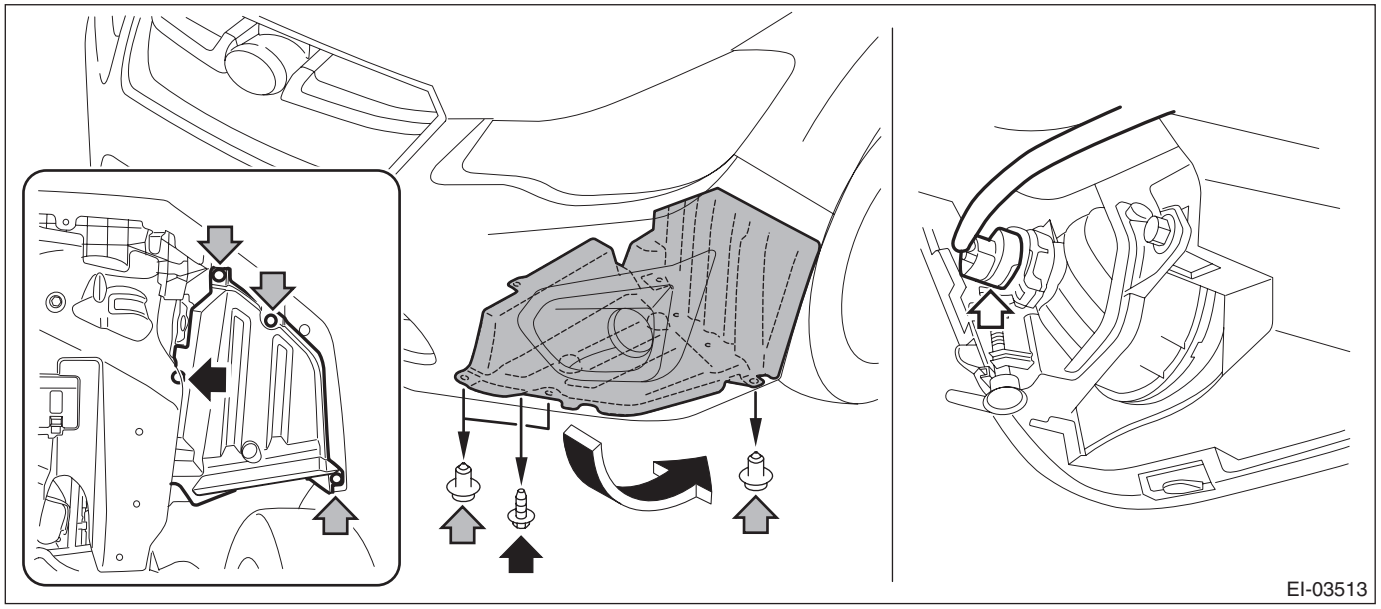
2) Replace with a new part if damage is found.

6. Washer Tank and Motor

A: REMOVAL

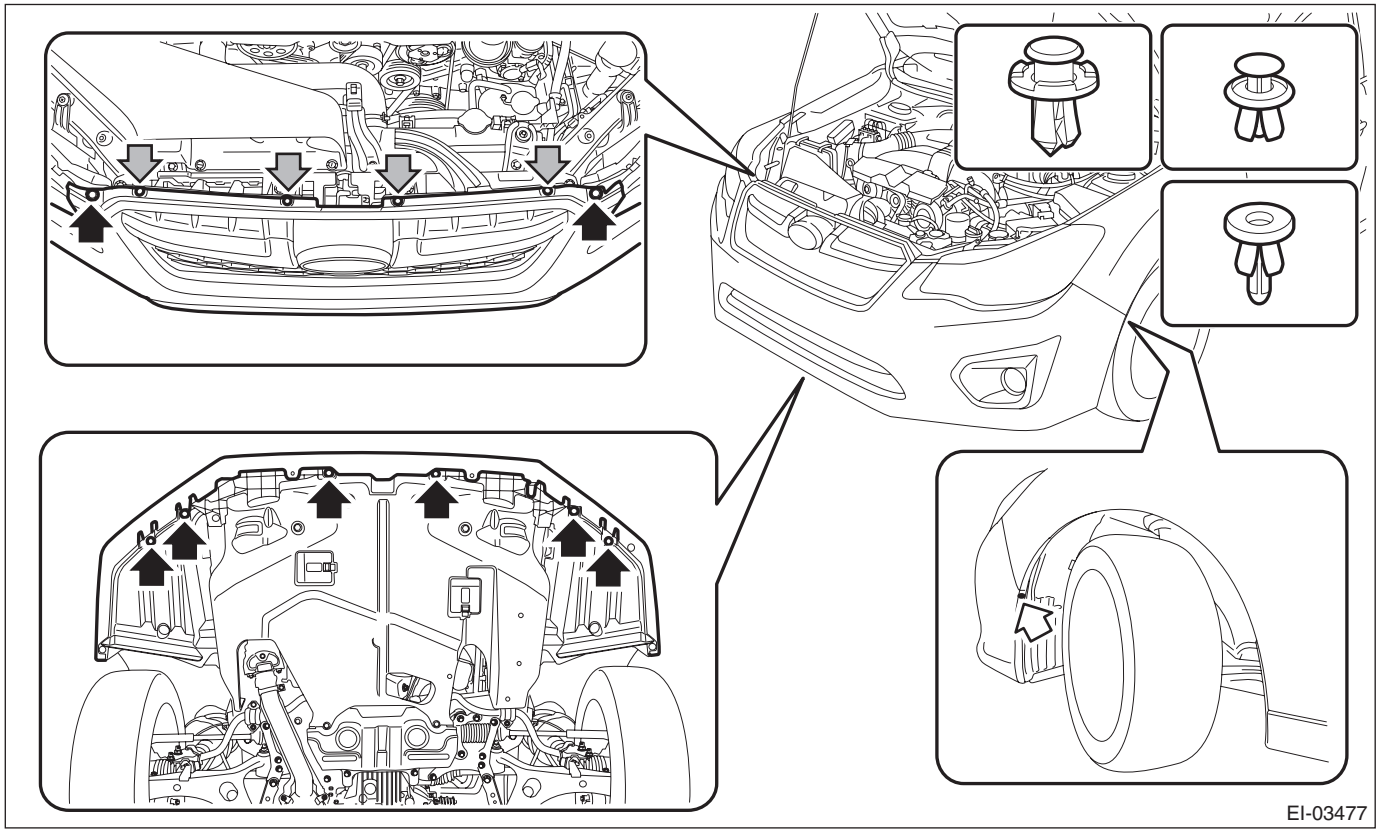
1. WASHER TANK

1) Open the hood COMPL - front.
2) Disconnect the ground cable from battery.
3) Remove the bumper face - front.
   (1) Remove the clips and screws, and turn over the mud guard - front, and then disconnect the connectors of the fog light assembly - front on the LH and RH sides. (Model with fog light)



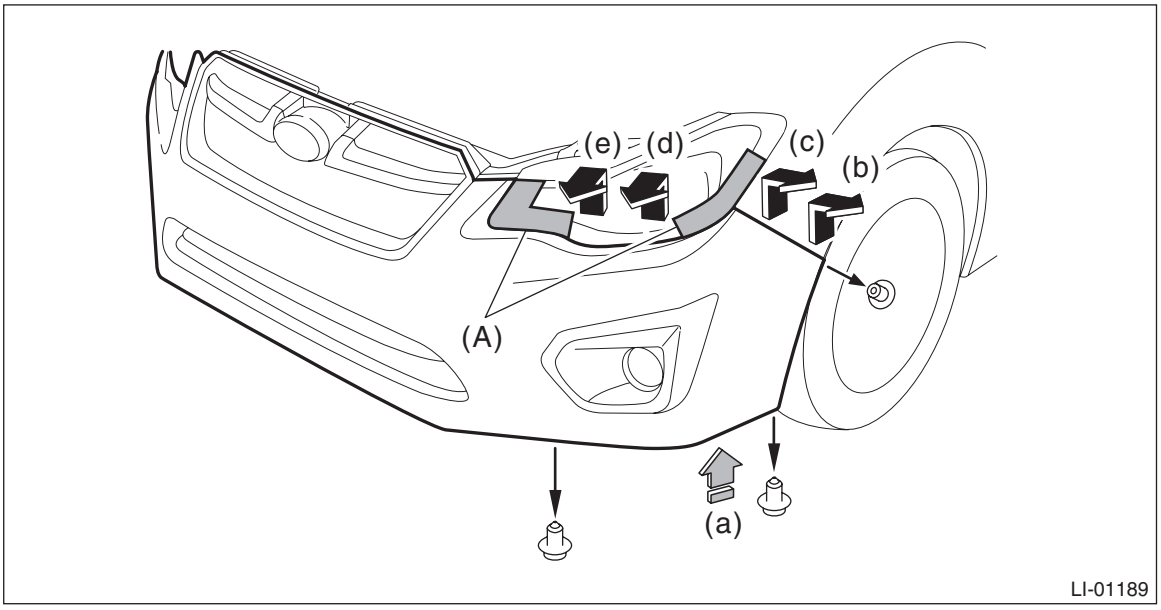
   (2) Remove the clips at the upper side of the bumper.
   (3) Remove the clips from the fender.

(4) Remove the clips at the lower side of bumper.



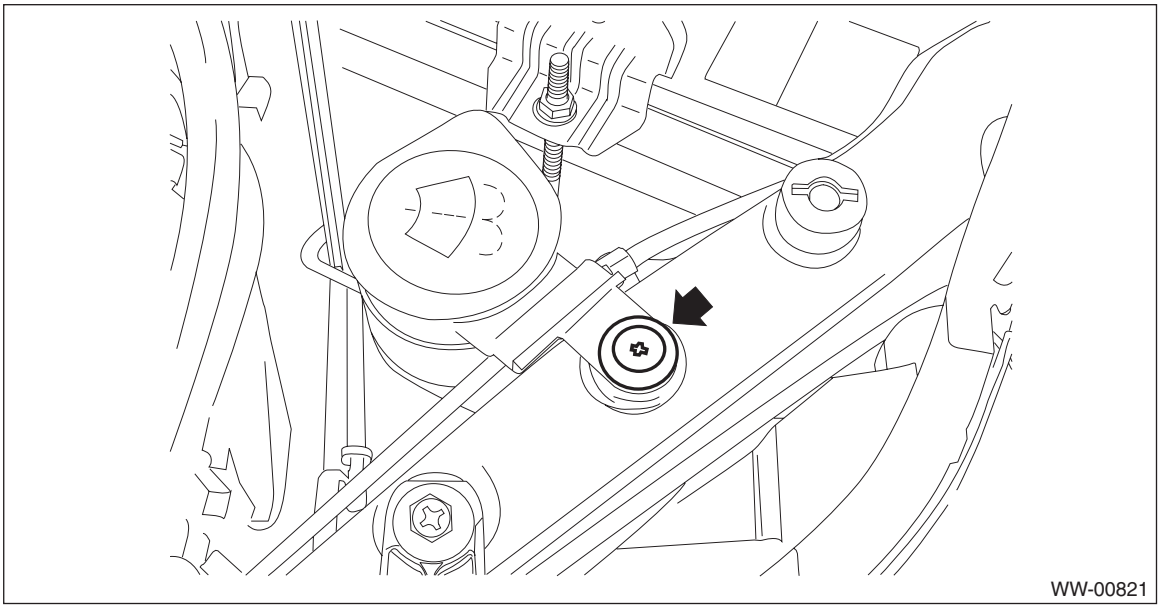
(5) Apply protective tape (A) to the light assembly - head.
(6) Release the clips, and while pushing up the lower side (a) of the bumper face - front, remove in the order from (b) to (e).

CAUTION:
Do not pull forcibly. It may damage the flange sections of the bumper face - front.

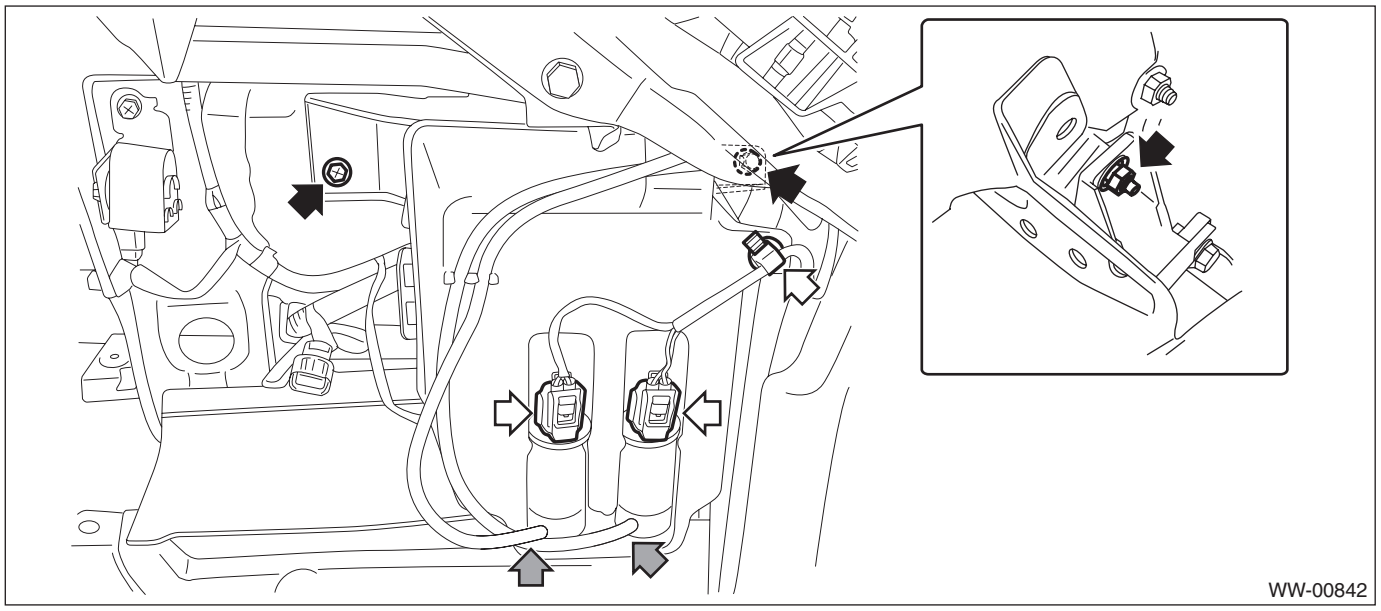


NOTE:
Detach the opposite side in the same manner.

4) Remove the tank - washer assembly.
(1) Remove the clip of the holder - windshield washer tank.

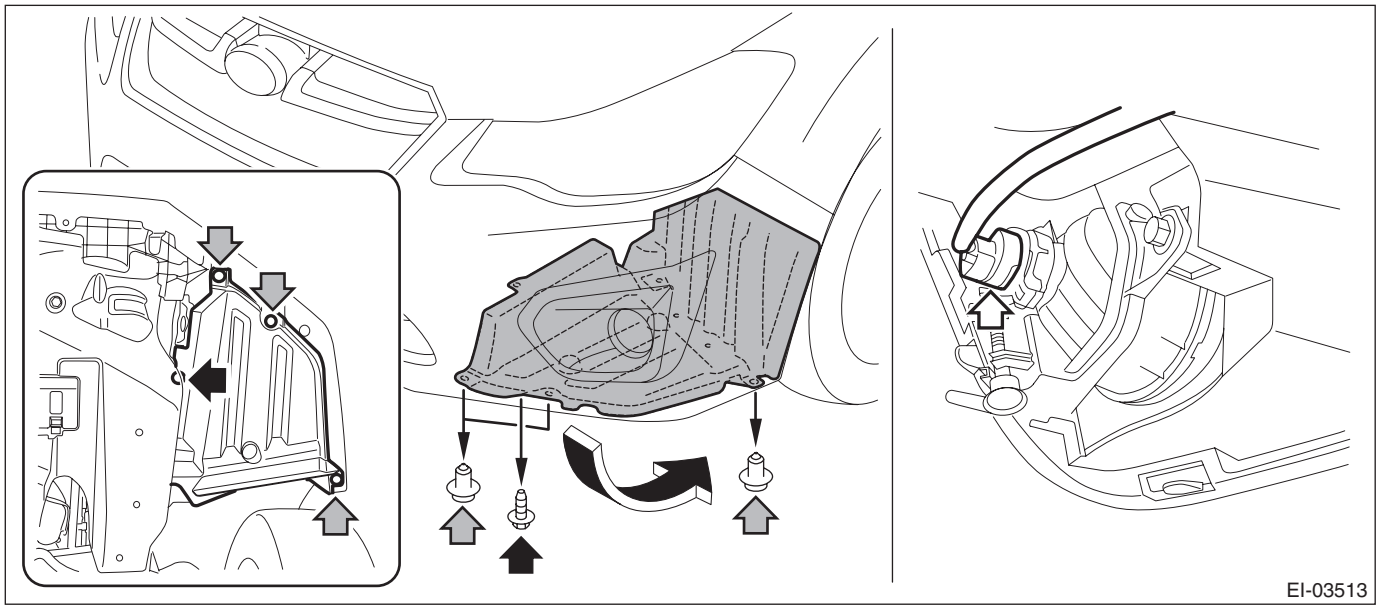


(2) Disconnect the connector from the motor pump assembly - washer and the sensor - washer tank, and then remove the harness clip.
(3) Remove the cover - pump from the tank - washer.
(4) Prepare a container before disconnecting the hose - washer, and drain all washer fluid in the tank - washer.
(5) Remove the bolt and nuts and remove the tank - washer assembly.

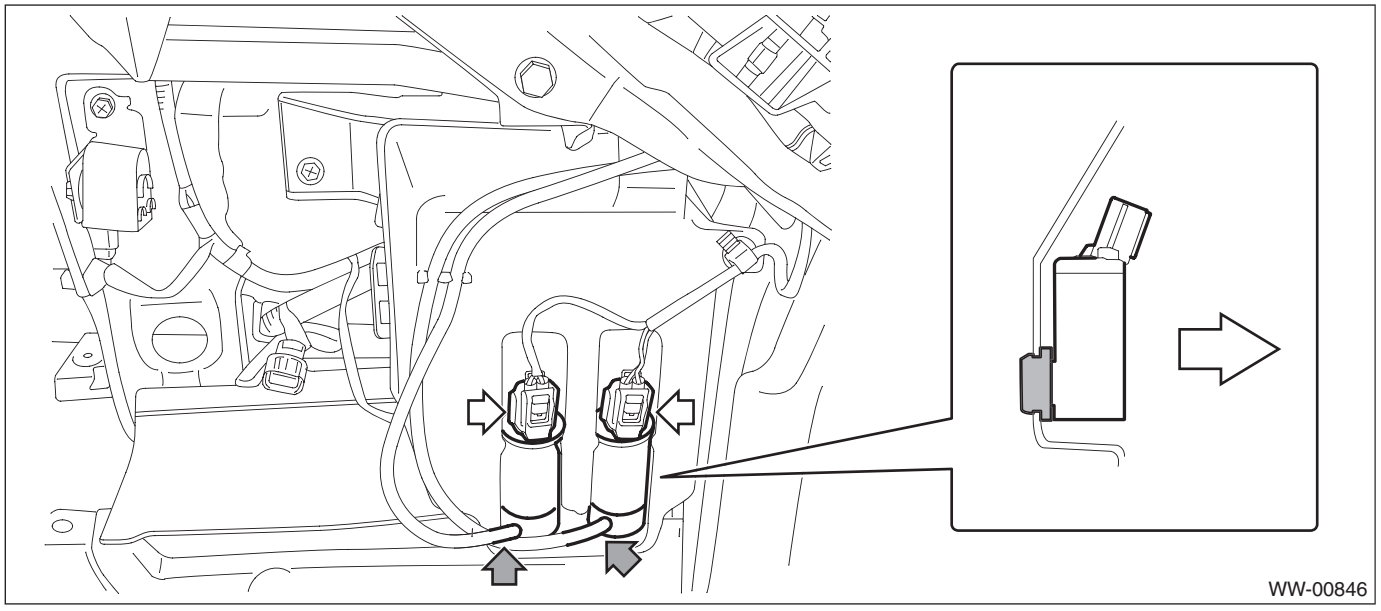


2. WASHER MOTOR

1) Open the hood COMPL - front.
2) Disconnect the ground cable from battery.
3) Remove the clips and screws, turn over the mud guard - front LH, and disconnect the connector of the fog light assembly - front. (Model with fog light)

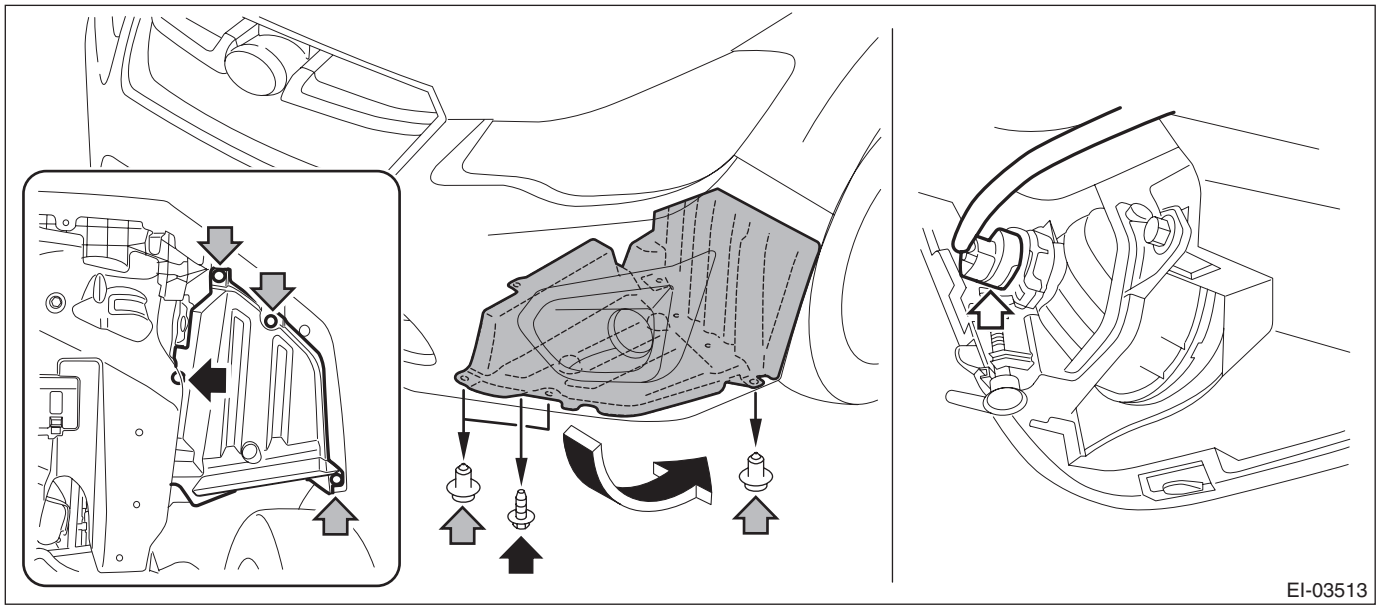


4) Disconnect the connector from the motor pump assembly - washer and remove the harness clip.
5) Remove the cover - pump from the tank - washer.
6) Prepare a container before disconnecting the hose - washer, and drain all washer fluid in the tank - washer.
7) Remove the motor pump assembly - washer from the tank - washer.

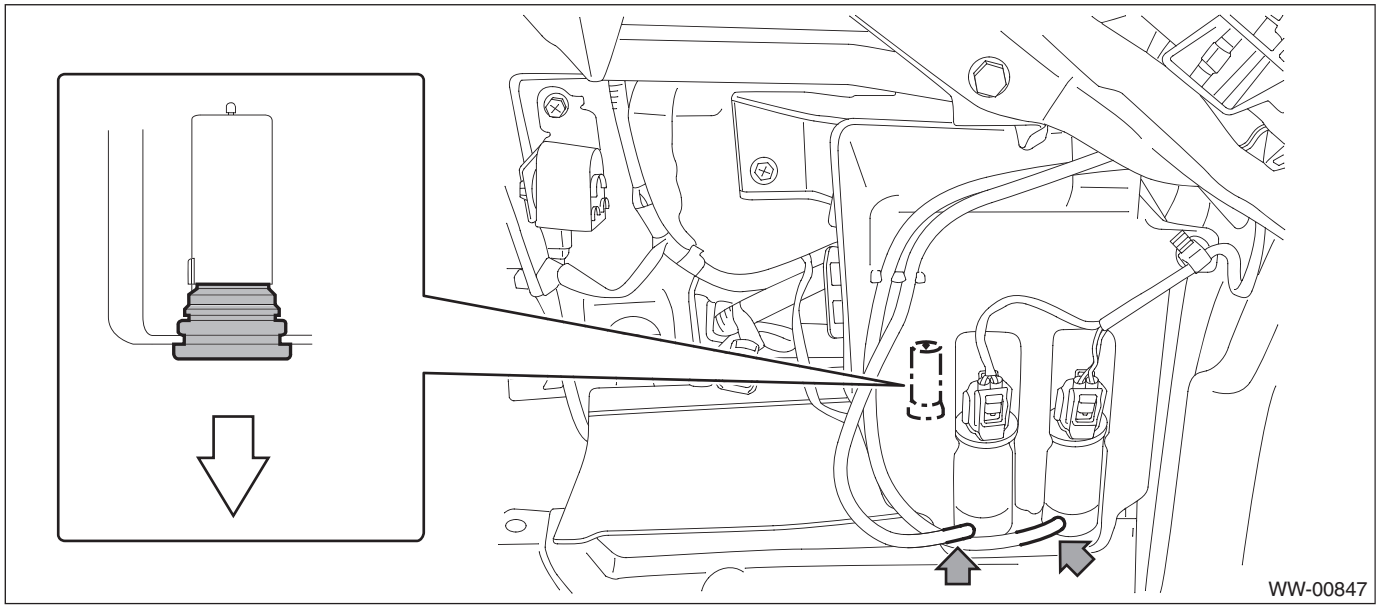


3. WASHER FLUID LEVEL SENSOR

1) Open the hood COMPL - front.
2) Disconnect the ground cable from battery.
3) Remove the clips and screws, turn over the mud guard - front LH, and disconnect the connector of the fog light assembly - front. (Model with fog light)



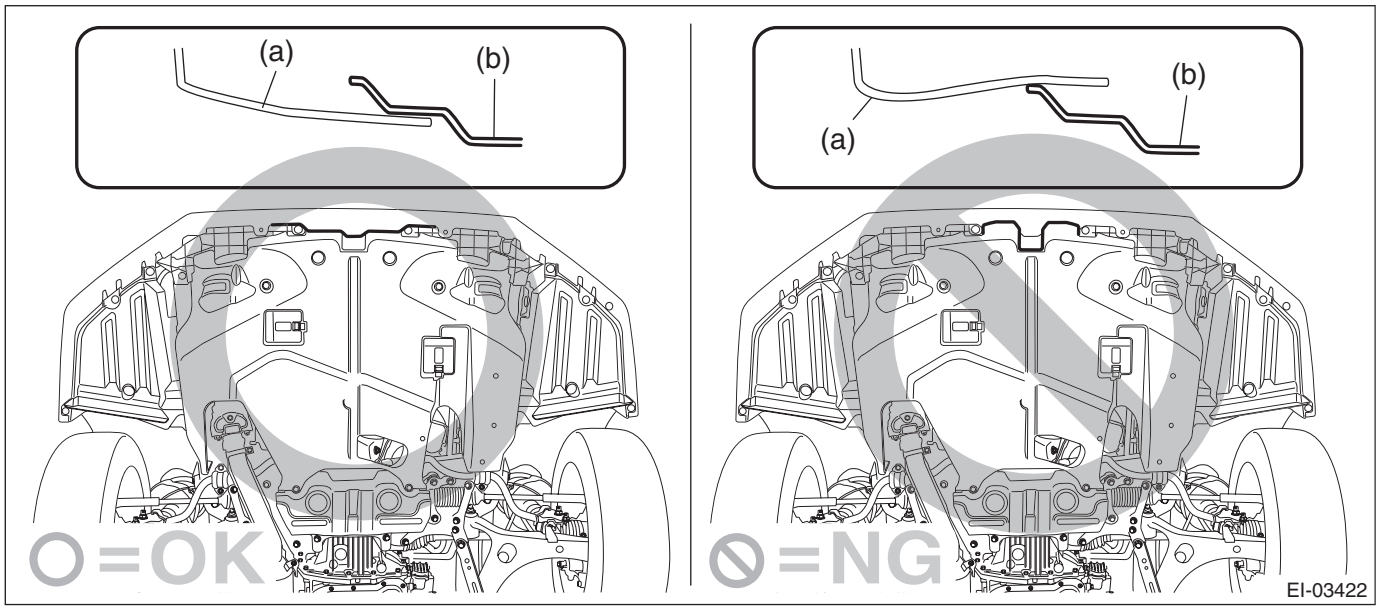
4) Remove the cover - pump from the tank - washer.
5) Prepare a container before disconnecting the hose - washer, and drain all washer fluid in the tank - washer.
6) Disconnect the connector from the sensor - washer tank, and remove the sensor - washer tank from the tank - washer.



B: INSTALLATION

1) Install each part in the reverse order of removal.

CAUTION:
Install the bumper face - front so that the front end of the under cover (b) comes inside the bumper face - front (a).



Tightening torque:
6 N·m (0.61 kgf-m, 4.4 ft-lb)

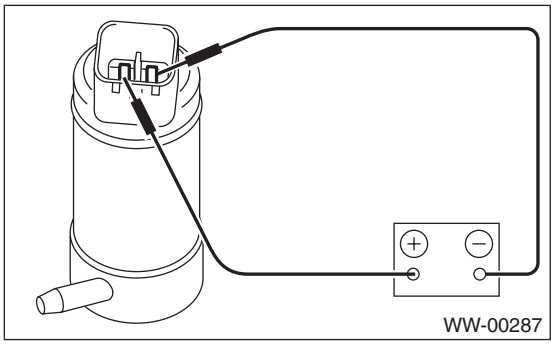
2) Add new washer fluid.

3) Adjust the fog light beam. (Model with fog light) <Ref. to LI-55, FOG LIGHT AIMING, ADJUSTMENT, Front Fog Light Assembly.>

C: INSPECTION

1. WASHER PUMP

Apply battery voltage to the connector terminal of the motor pump assembly - washer, and make sure that the motor operates.



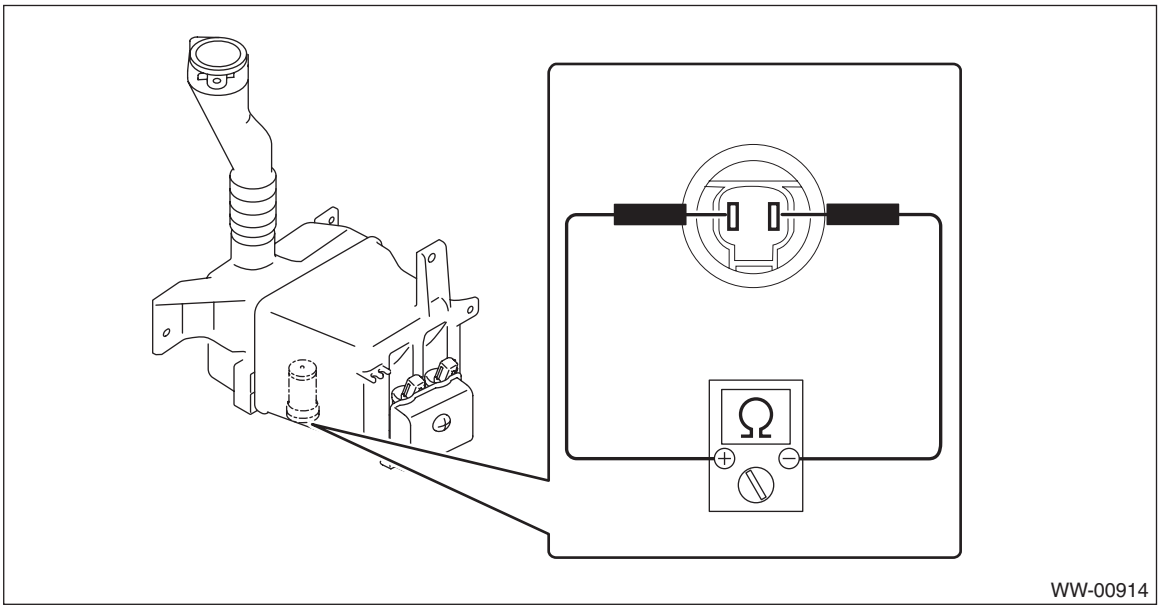
2. WASHER FLUID LEVEL SENSOR

1) Check the connection status of washer fluid level sensor connector.
2) Does the low washer fluid warning light illuminate after draining the washer fluid? And does the low washer fluid warning light go off after refilling the washer fluid?
- **Yes → Normal operation.**
- **No → Perform step 3.**

3) Using a tester, measure the voltage of the washer fluid level sensor connector.
   (1) Is the voltage approx. 8.5 V or more?
   - **Yes → Perform step 4.**
   - **No → Check harness, meter and integrated unit, and replace if necessary.**

4) Does the meter indicator illuminate if you short the washer fluid level sensor connector?
- **Yes → Perform step 5.**
- **No → Check meter and integrated unit, and replace if necessary.**

5) Using a tester, measure the resistance of the washer fluid level sensor.
   (1) Turn over the mud guard.
   (2) Measure the resistance of the washer fluid level sensor.



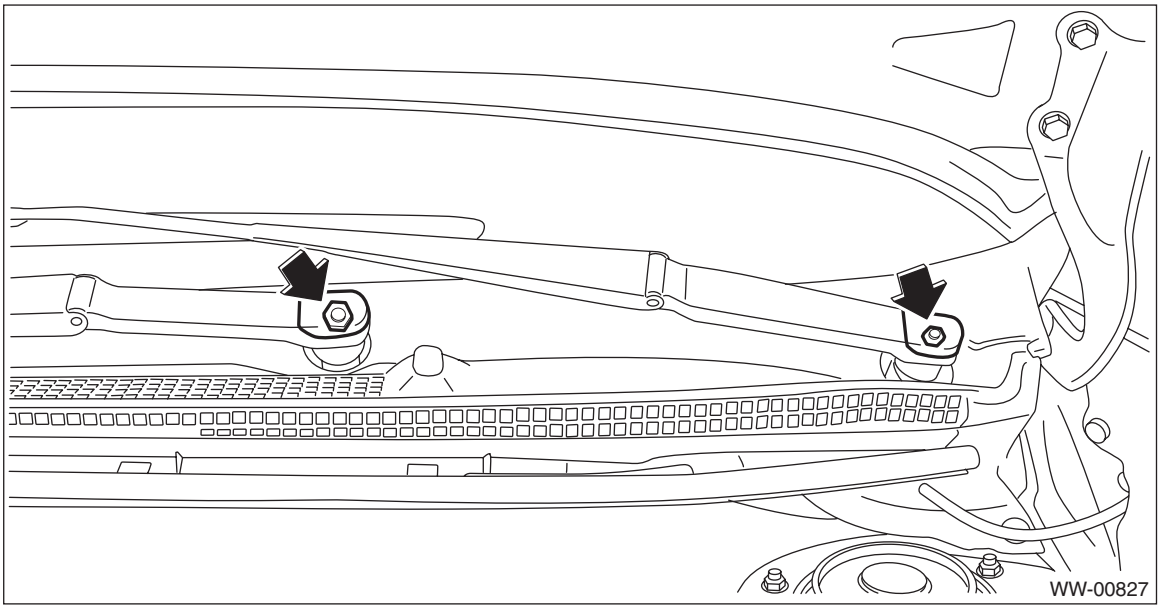
Amount of washer fluid in the tank	Standard
No remaining quantity (ON)	Less than 10 Ω
There is remaining quantity (OFF)	1 MΩ or more

   (3) Is the resistance within the standard?
   - **Yes → Normal operation.**
   - **No → Replace the washer fluid level sensor along with the washer tank.**

7. Front Wiper Arm

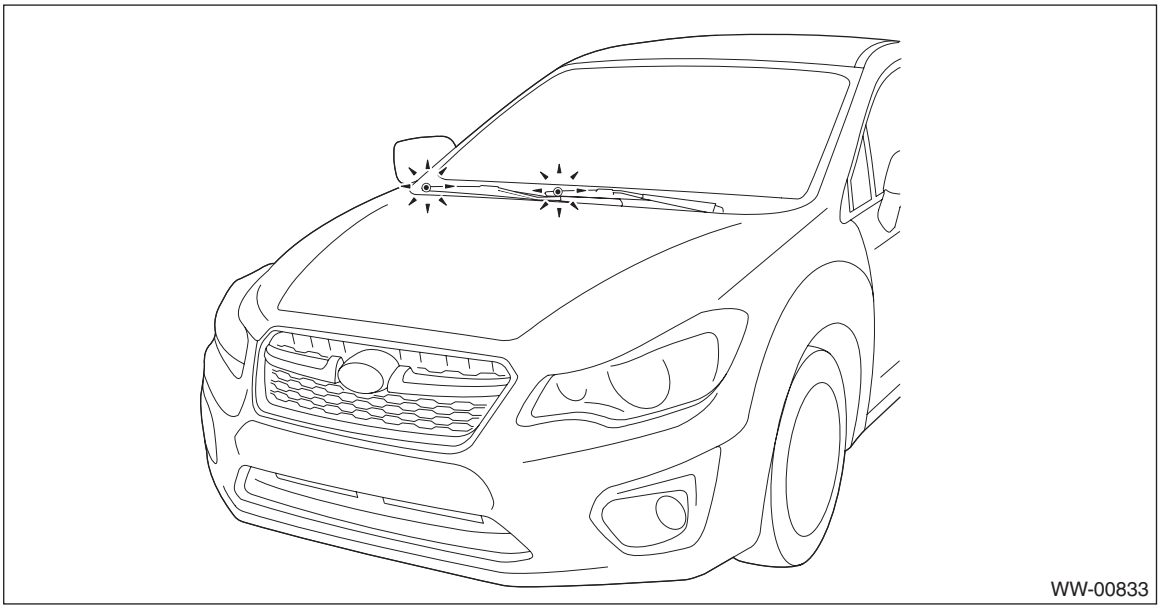
A: REMOVAL

1) Open the hood COMPL - front.
2) Remove the arm assembly - windshield wiper.
   (1) Remove the cover - windshield wiper arm.
   (2) Remove the nuts, and remove the arm assembly - windshield wiper.



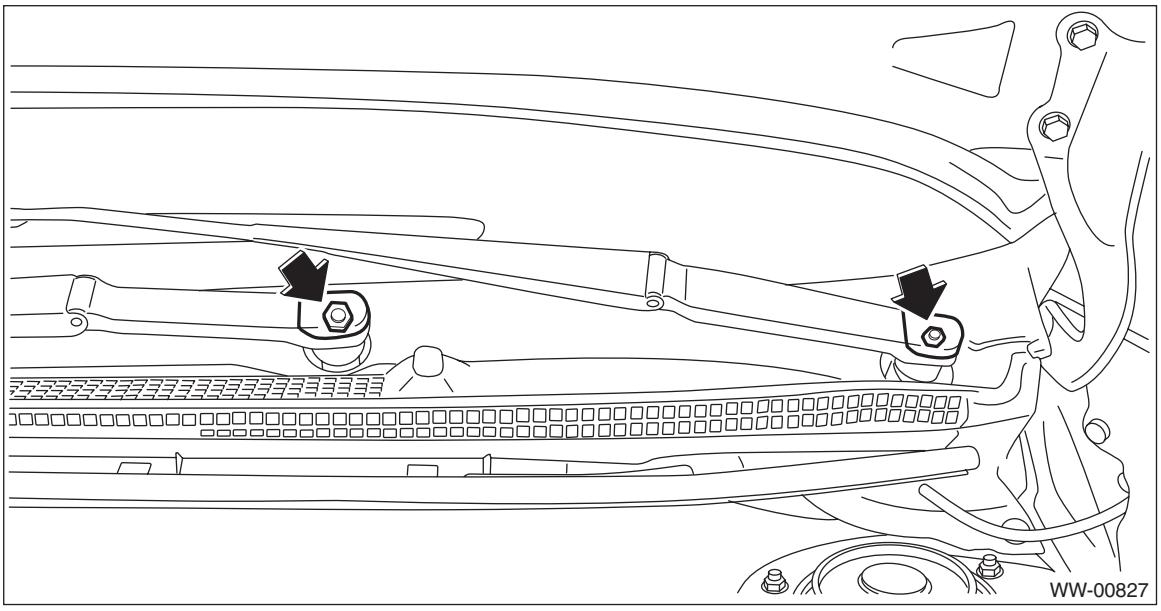
B: INSTALLATION

1) Install the arm assembly - windshield wiper.
   (1) Assemble the arm assembly - windshield wiper so that the blade assembly - windshield wiper is aligned to the ceramic print point mark of the windshield glass.



(2) Tighten the arm assembly - windshield wiper to specified torque and install the cap.

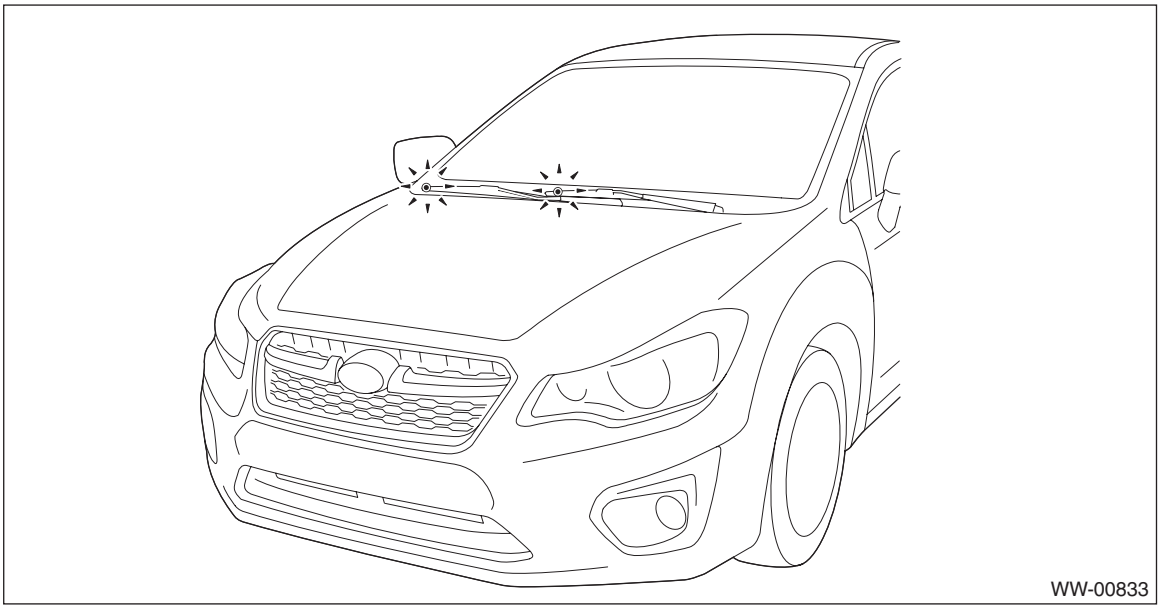
Tightening torque:
22 N·m (2.24 kgf-m, 16.2 ft-lb)



2) Check the position of windshield wiper. <Ref. to WW-29, ADJUSTMENT, Front Wiper Arm.>

C: ADJUSTMENT

1) Operate the windshield wiper once.
2) Check that the wiper blade is aligned with the point mark.

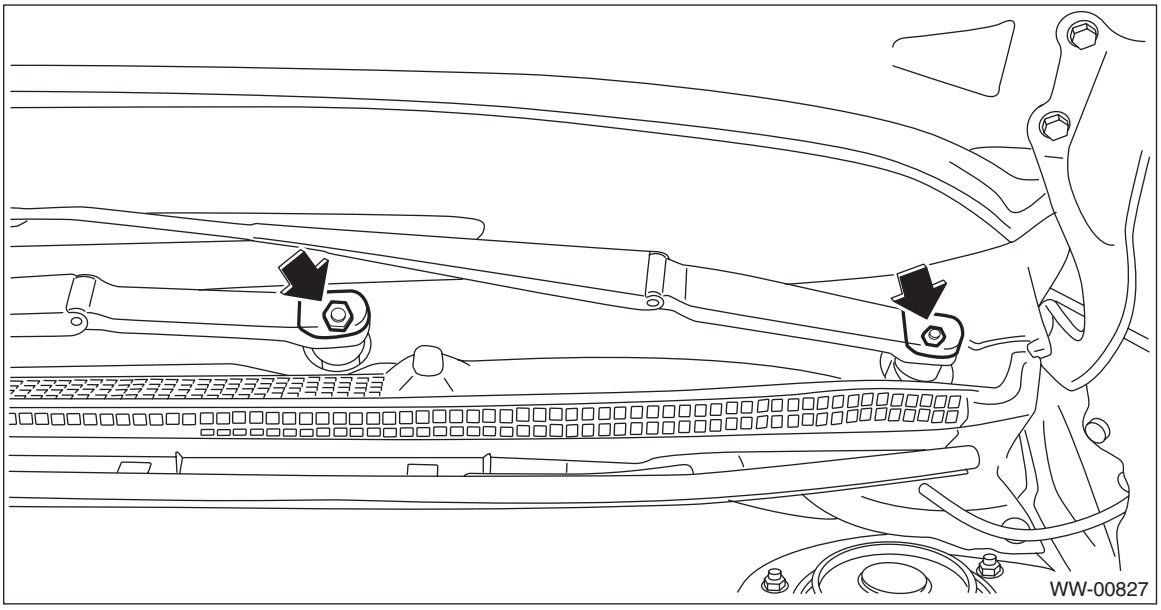


3) If the wiper blade is not aligned with the point mark, perform the removal and installation of the windshield wiper. <Ref. to WW-28, REMOVAL, Front Wiper Arm.>

8. Front Wiper Motor and Link

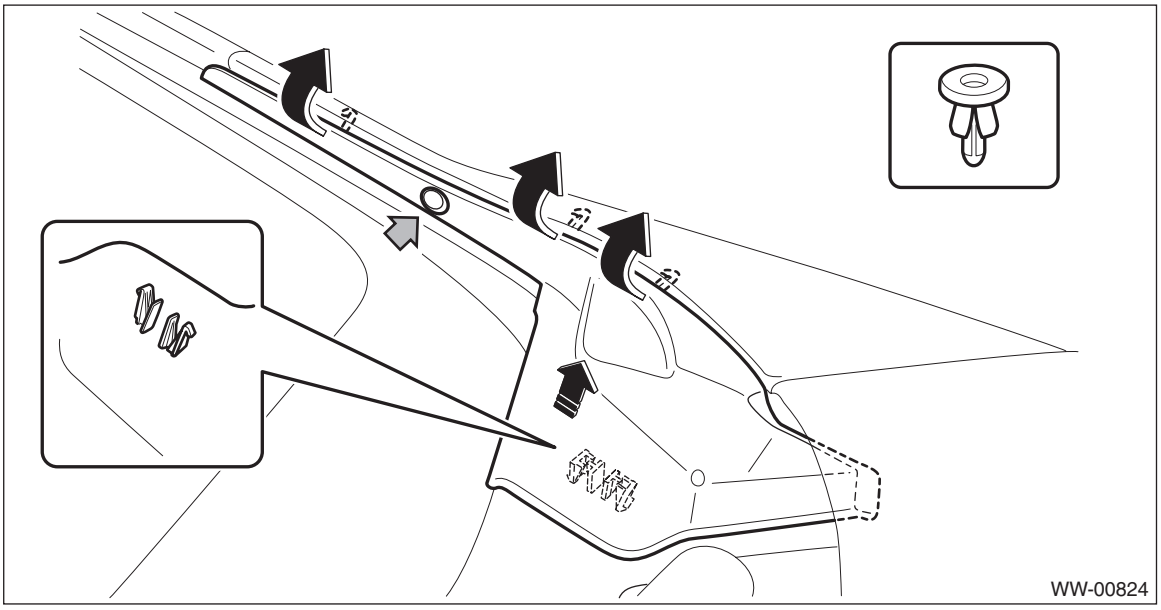
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the arm assembly - windshield wiper.
   (1) Remove the cover - windshield wiper arm.
   (2) Remove the nuts, and remove the arm assembly - windshield wiper.



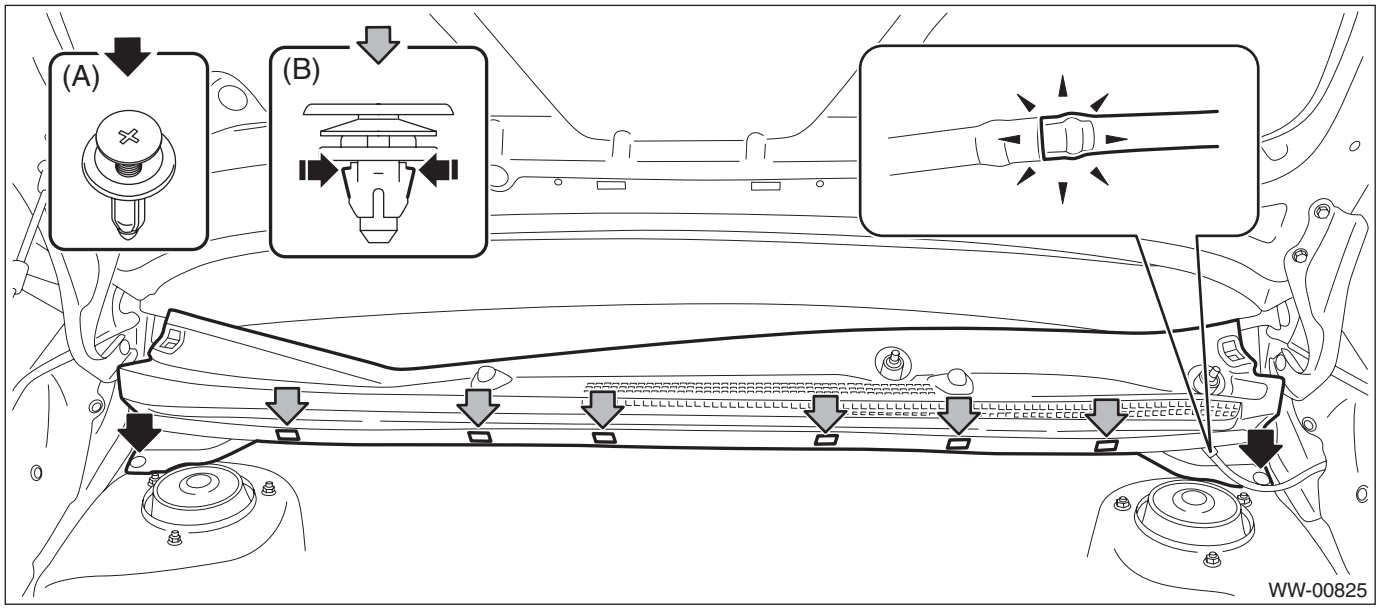
3) Remove the cowl panel - side.
   (1) Remove the clips.
   (2) Release the claws, and then remove the cowl panel - side.

CAUTION:
Pulling with excessive force may damage the cowl panel - side. If it is difficult to remove, use a plastic remover or equivalent tool.

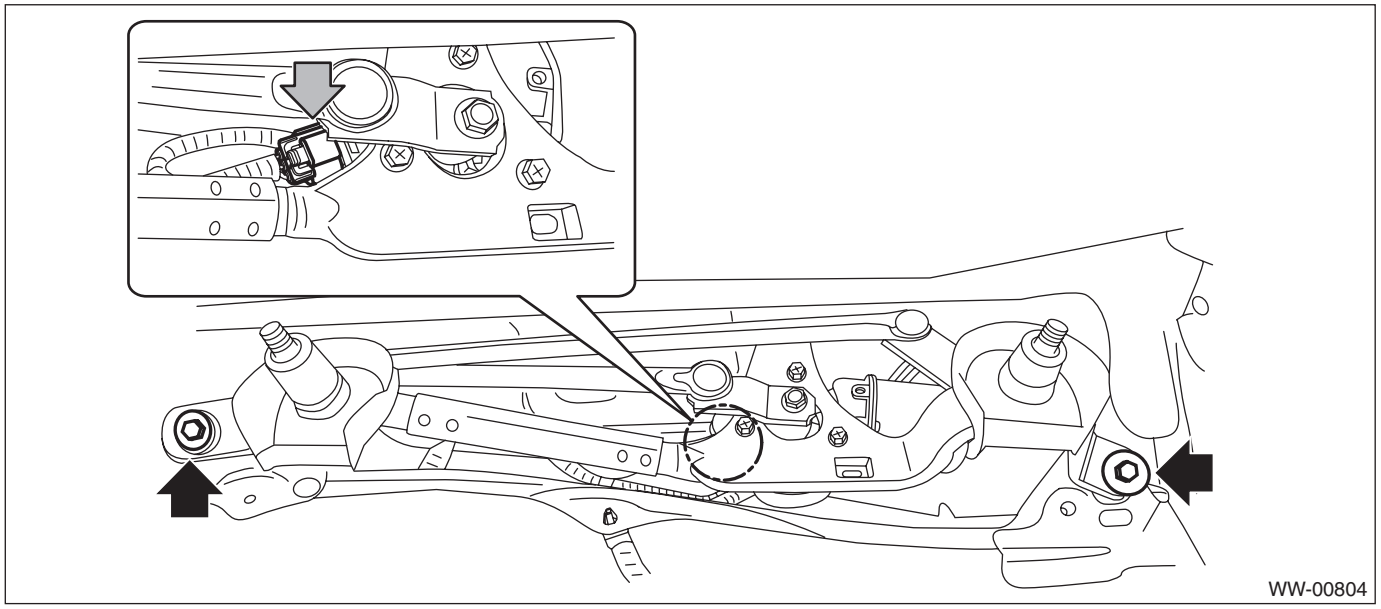


4) Remove the cowl panel assembly.
(1) Disconnect the hose - windshield washer.
(2) Remove clips (A).
(3) Check the direction of the clip (B), and push the claws from both sides to remove it.

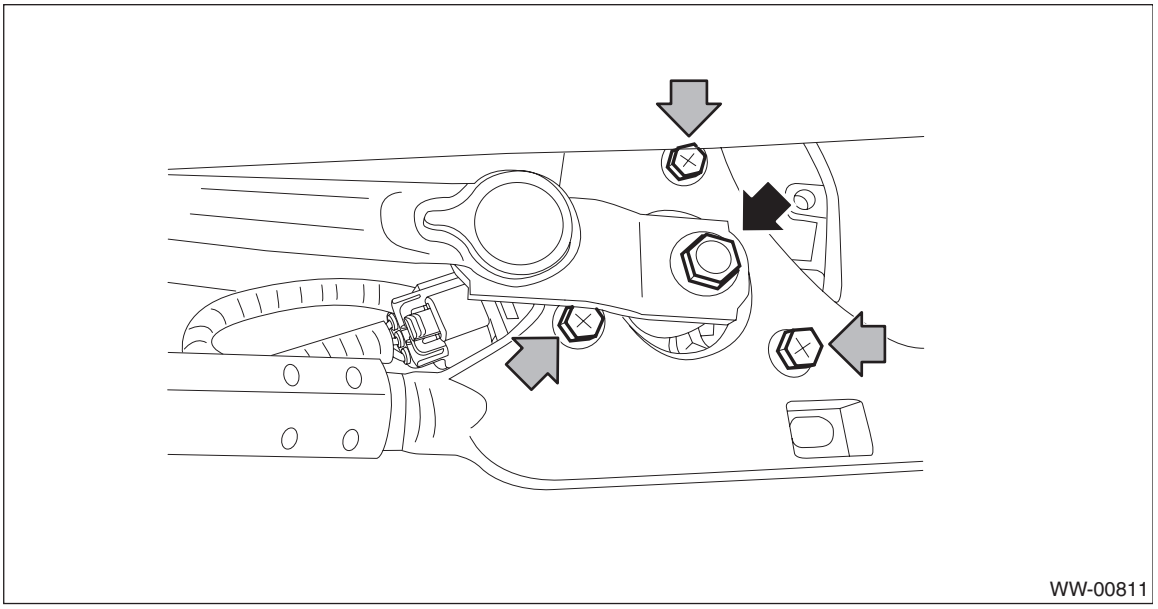
CAUTION:
When removing the clip (B), push the claw of the clip from both sides.
Be careful because the clips (B) can be damaged if you pull unnecessarily hard on them.
(4) Remove the cowl panel assembly by pulling it out towards the front of the vehicle.



5) Remove the link assembly - windshield wiper.
(1) Disconnect the connector of the motor assembly - windshield wiper.
(2) Remove the bolts and harness clips, and remove the link assembly - windshield wiper.



6) Remove the motor assembly - windshield wiper.
(1) Remove the nuts on the link plate and the motor assembly - windshield wiper, and disconnect from the link assembly - windshield wiper.
(2) Remove the bolts, and remove the motor assembly - windshield wiper.

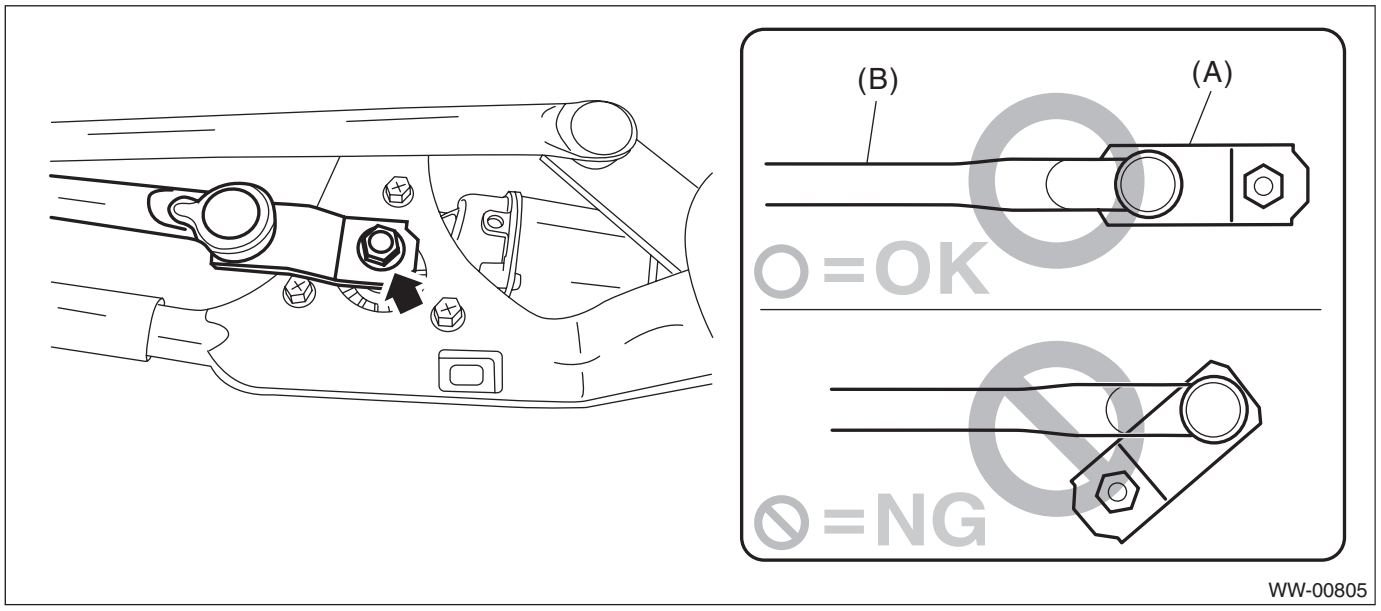


B: INSTALLATION

1) Connect the battery ground terminal.
2) To confirm that the motor assembly - windshield wiper is at the auto stop position, connect the harness to the motor and turn the wiper switch to ON/OFF once.

CAUTION:
During motor operation, do not touch the movable part.
3) Disconnect the ground cable from battery.
4) Install the motor assembly - windshield wiper.

CAUTION:
Tighten the nut where rod (B) and link plate (A) is aligned in a straight line.



Tightening torque:
Tighten to 8.5 N·m (0.87 kgf-m, 6.3 ft-lb) by 115°.

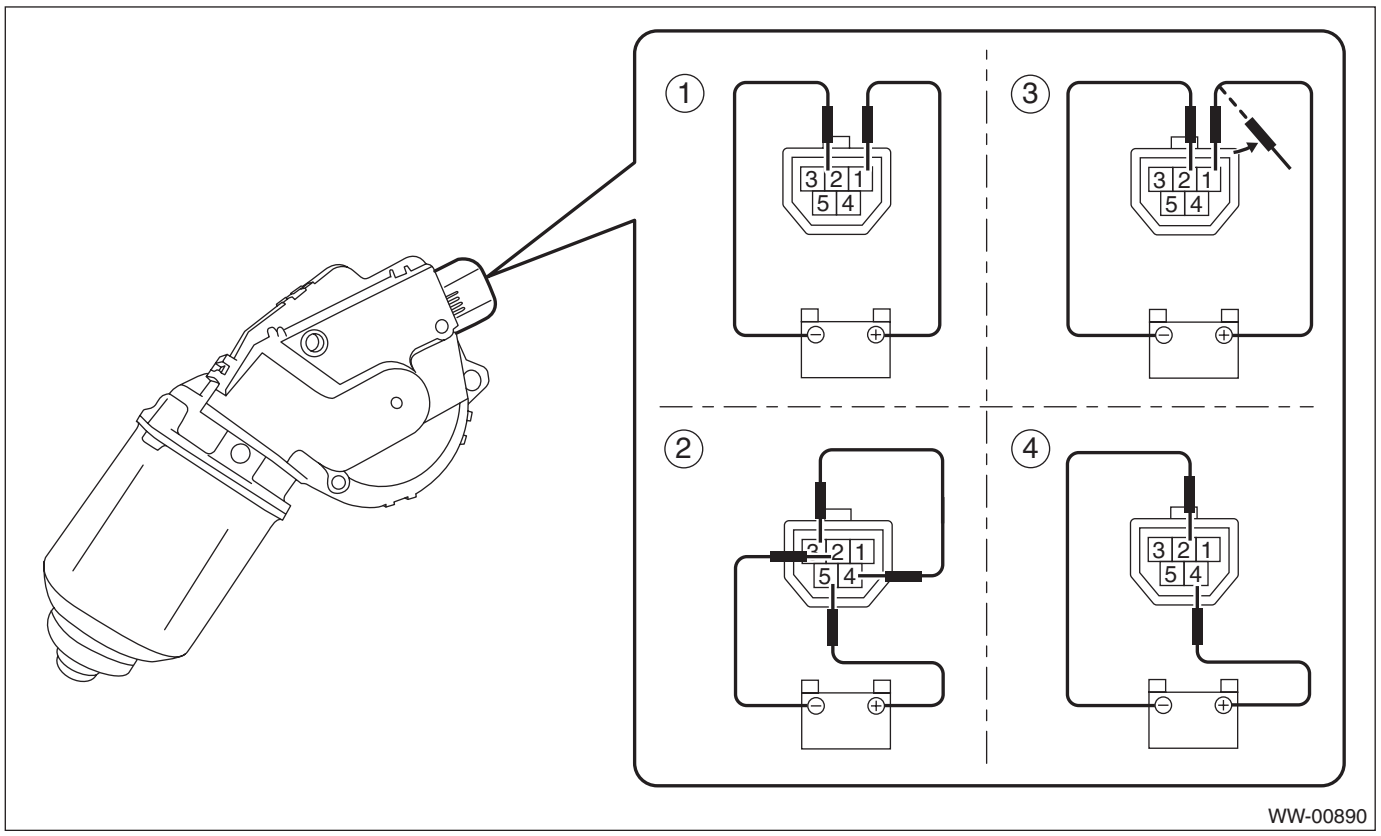
5) Install the link assembly - windshield wiper and cowl panel in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to WW-2, FRONT WIPER, COMPONENT, General Description.>

C: INSPECTION

1) When the battery is connected to the terminal of connectors, confirm that the motor operates at low speed.
2) When the battery is connected to the terminal of connectors, confirm that the motor operates at high speed.
3) Connect the battery to terminals of the connector, and remove the terminal connection with motor rotating at low speed, and stop the motor assembly - windshield wiper in mid-operation.
4) Connect the battery and check that the motor stops at the automatic stop position after the motor operates at low speed again.

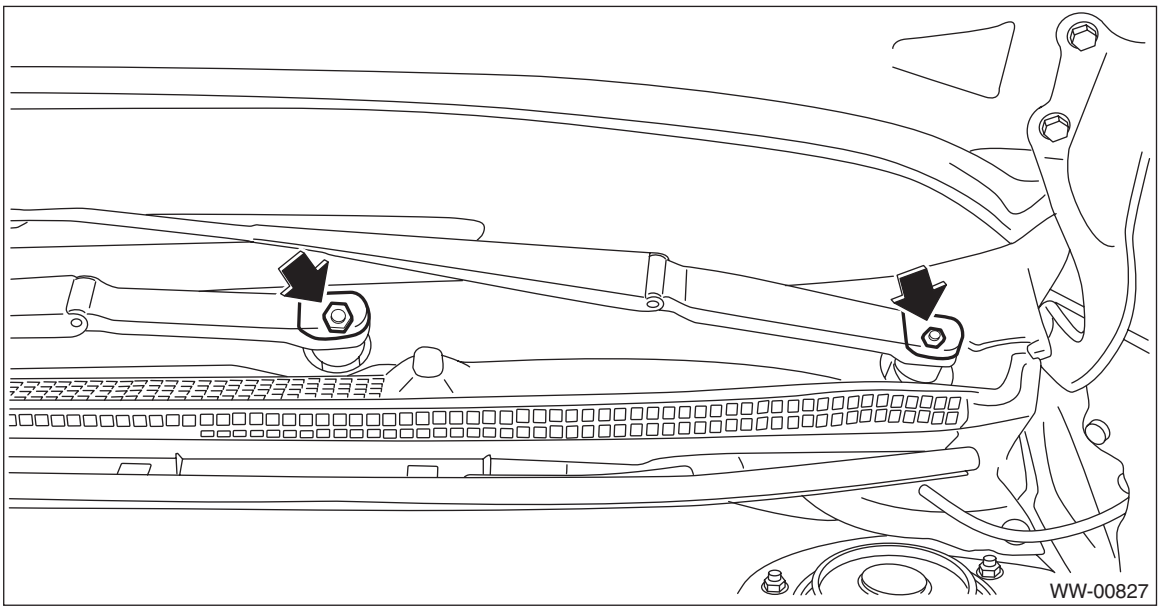
CAUTION:
Fix the motor to prevent the motor from being shorted by moving during operation.



9. Front Washer Nozzle

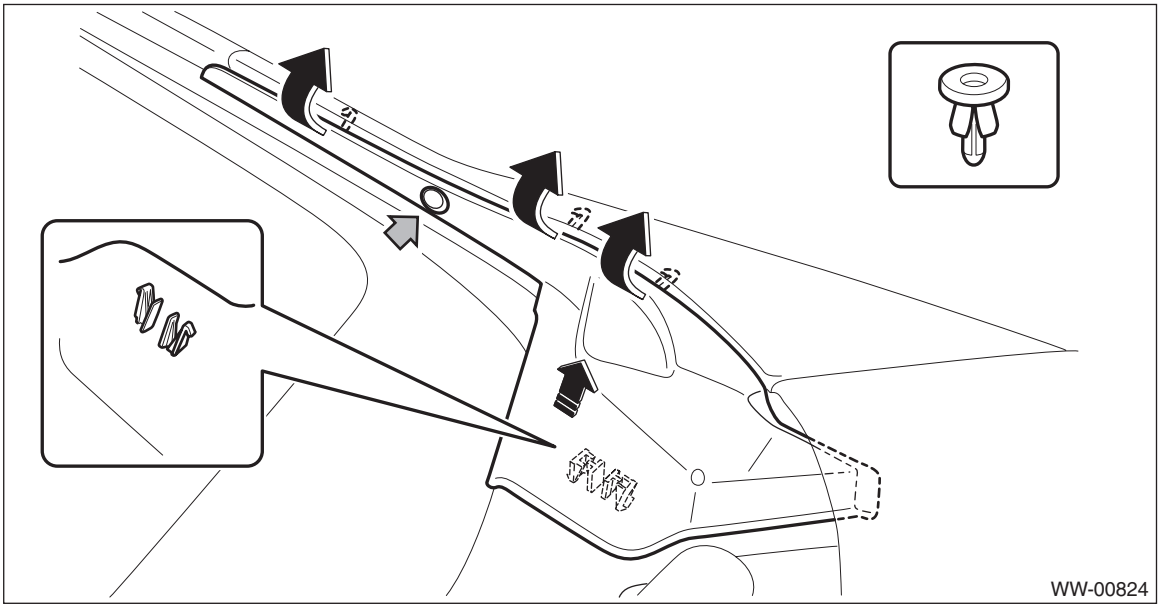
A: REMOVAL

1) Open the hood COMPL - front.
2) Disconnect the ground cable from battery.
3) Remove the arm assembly - windshield wiper.
   (1) Remove the cover - windshield wiper arm.
   (2) Remove the nuts, and remove the arm assembly - windshield wiper.



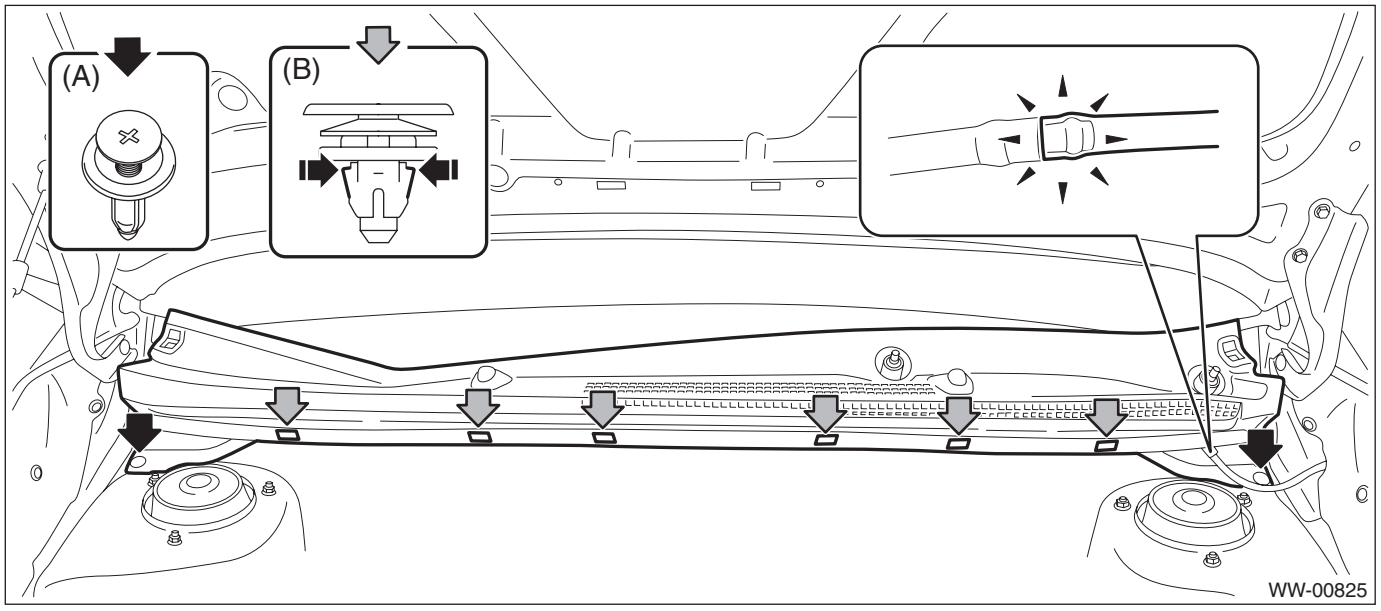
4) Remove the cowl panel - side.
   (1) Remove the clips.
   (2) Release the claws, and then remove the cowl panel - side.

CAUTION:
Pulling with excessive force may damage the cowl panel - side. If it is difficult to remove, use a plastic remover or equivalent tool.

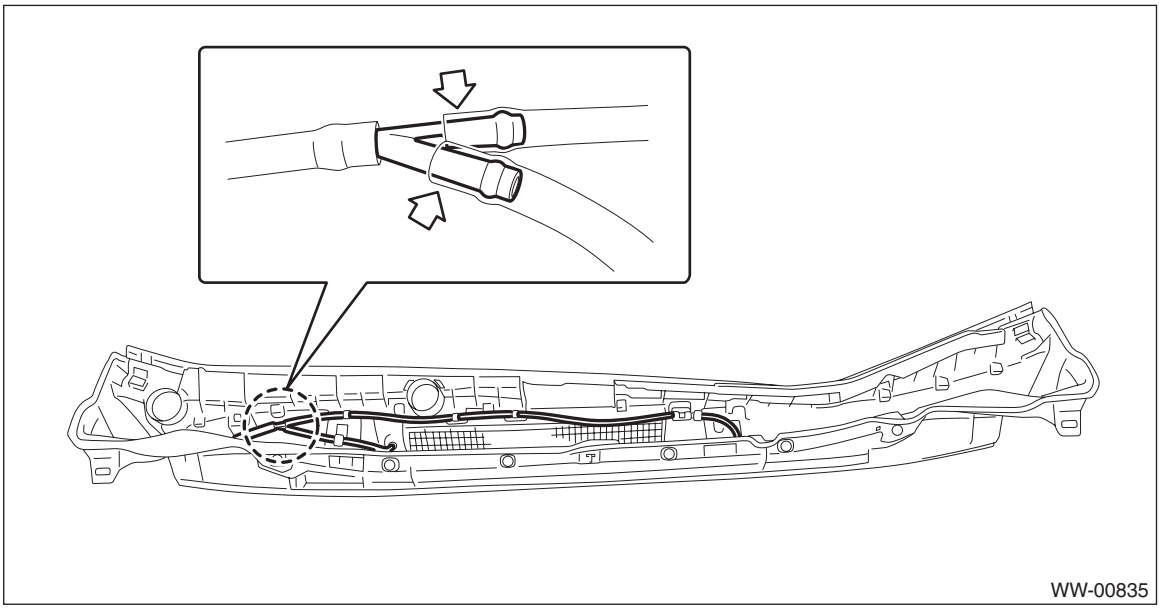


5) Remove the cowl panel assembly.
(1) Disconnect the hose - windshield washer.
(2) Remove clips (A).
(3) Check the direction of the clip (B), and push the claws from both sides to remove it.

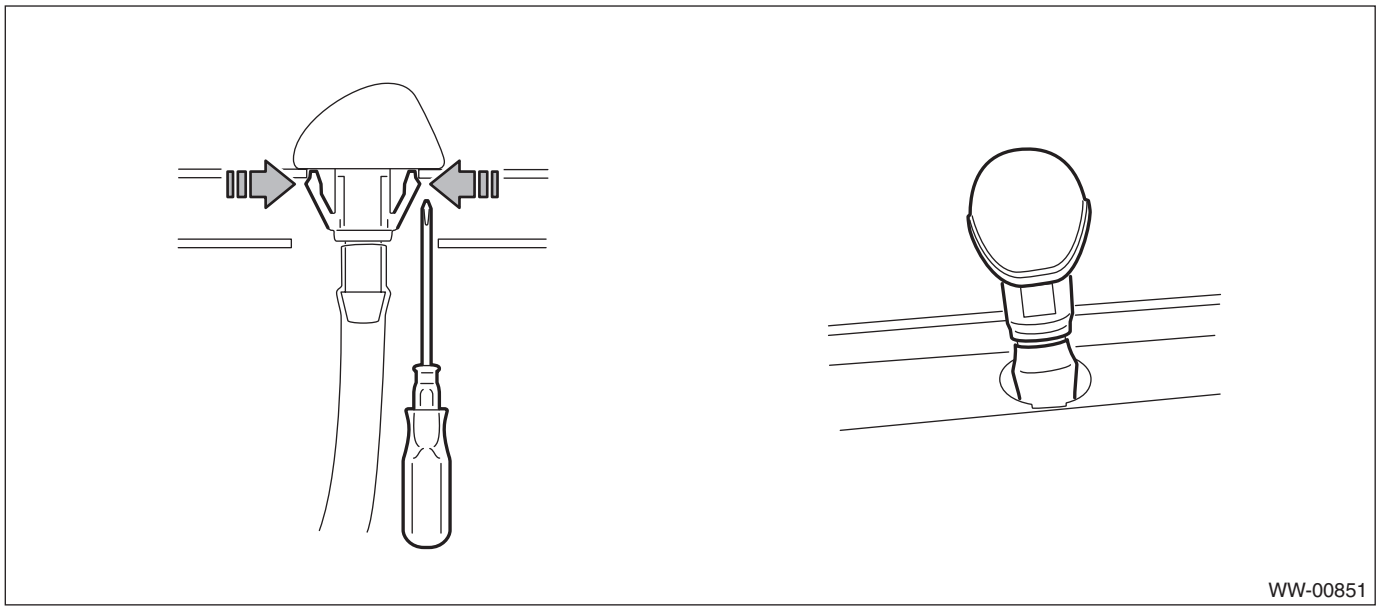
CAUTION:
When removing the clip (B), push the claw of the clip from both sides.
Be careful because the clips (B) can be damaged if you pull unnecessarily hard on them.
(4) Remove the cowl panel assembly by pulling it out towards the front of the vehicle.



6) Disconnect the hose - windshield washer.



7) Remove the nozzle - windshield washer.
(1) Push the claw using a flat tip screwdriver, etc.
(2) When the nozzle - windshield washer lifts up, pull out the nozzle - windshield washer using a clip remover, etc.
(3) Disconnect the hose - windshield washer, and remove the nozzle - windshield washer.



B: INSTALLATION

1) Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to WW-2, FRONT WIPER, COMPONENT, General Description.>

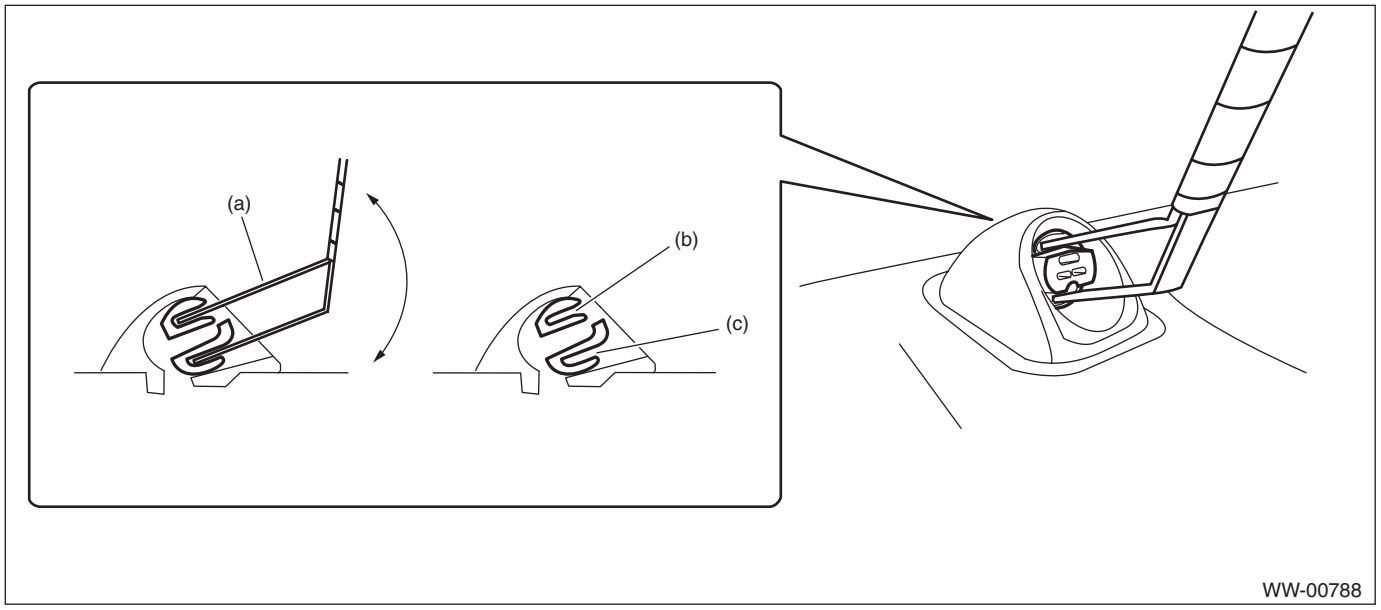
2) Adjust the position of the nozzle - windshield washer. <Ref. to WW-37, ADJUSTMENT, Front Washer Nozzle.>

C: INSPECTION

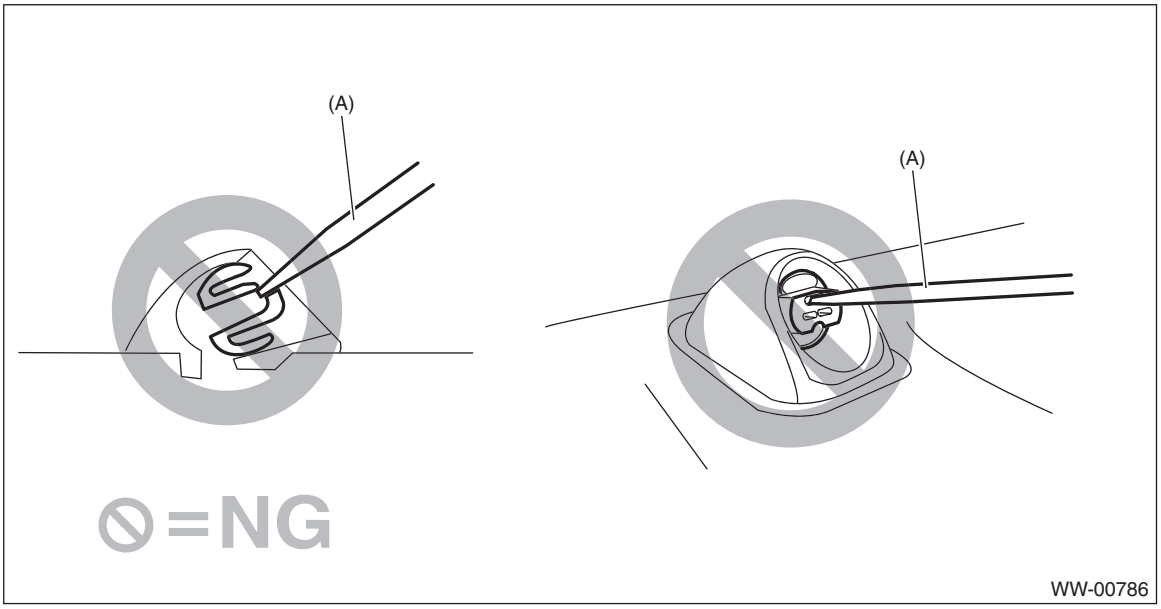
- Make sure the nozzle - windshield washer and the hose - windshield washer are not clogged.
- Make sure the hose - windshield washer is not bent.

D: ADJUSTMENT

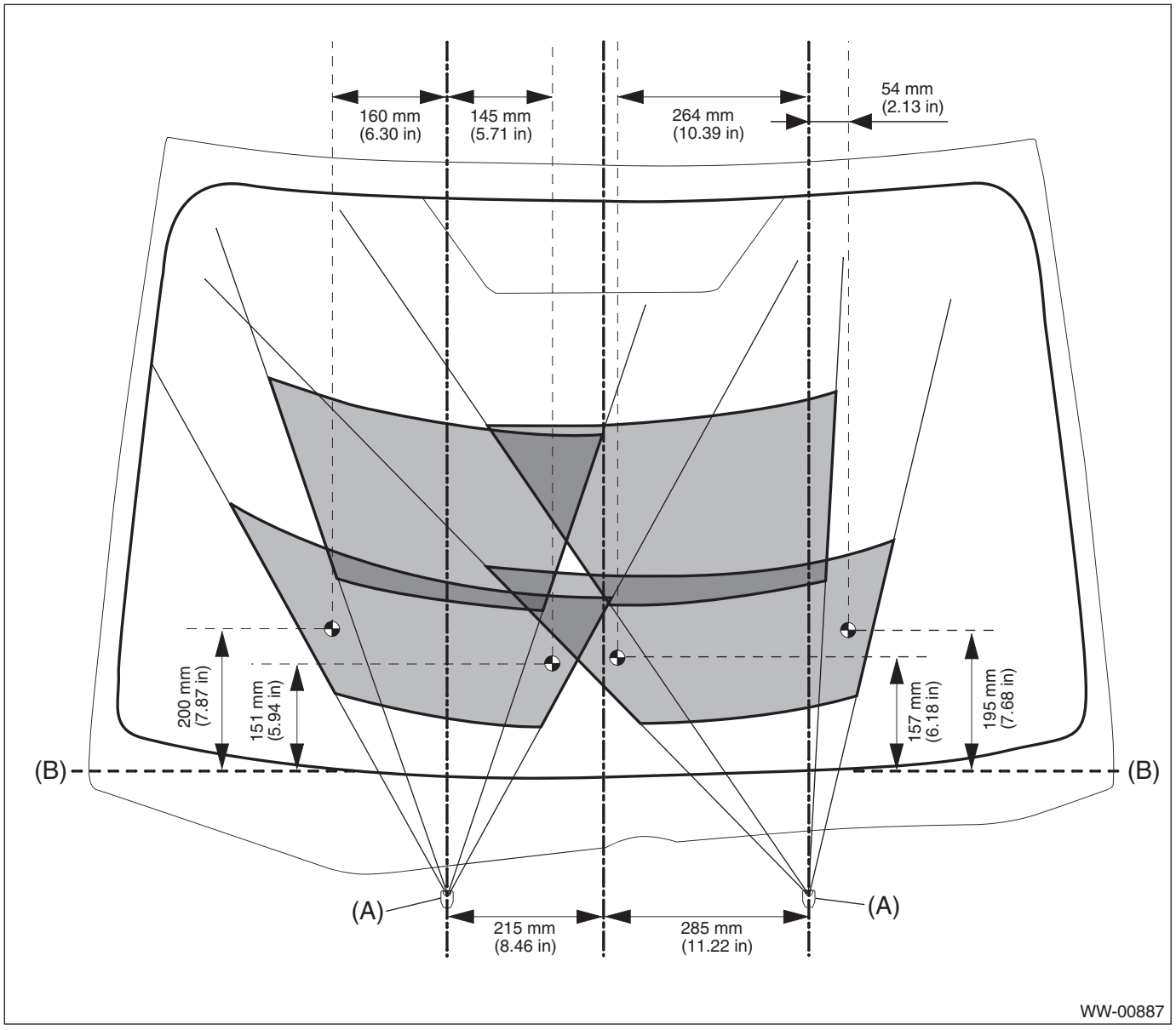
1) Turn the wiper switch to OFF position.
2) While the vehicle is at a standstill, insert the washer nozzle adjustment tool (a) into upper side (b) and lower side (c) of the nozzle - windshield washer to perform necessary adjustment.



CAUTION:
The nozzle - windshield washer is made of resin. If precision screwdriver (A) or equivalent is inserted into discharge port for adjustment, the discharge port can be deformed, and washer fluid cannot be sprayed.



3) Adjust the washer injection position as shown in the figure.

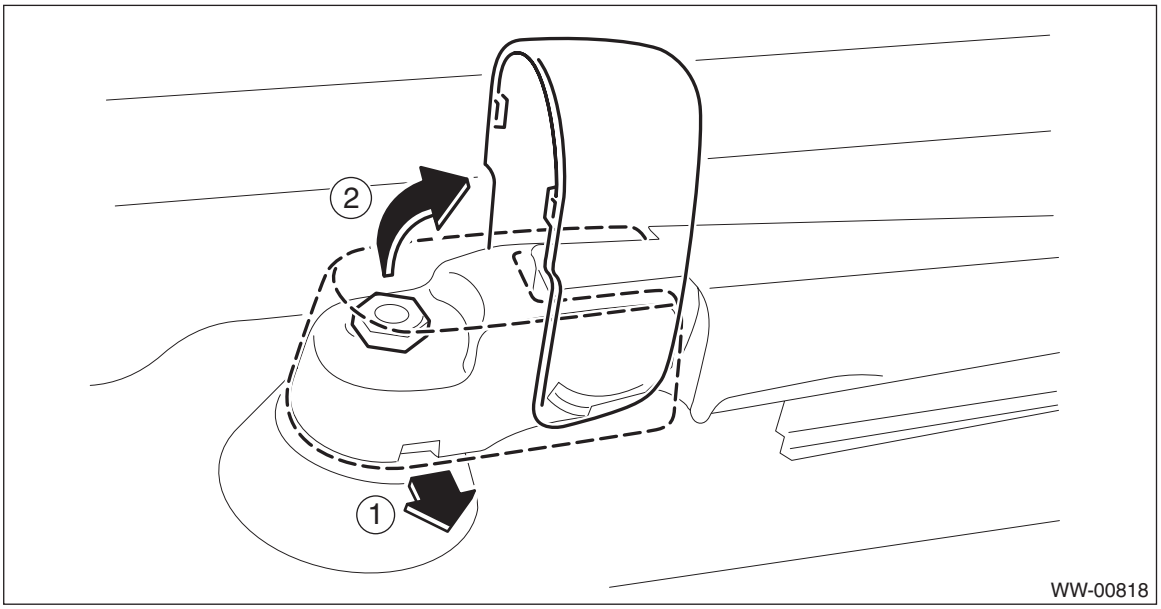


(A) Nozzle - windshield washer (B) Ceramic line

10.Rear Wiper Arm

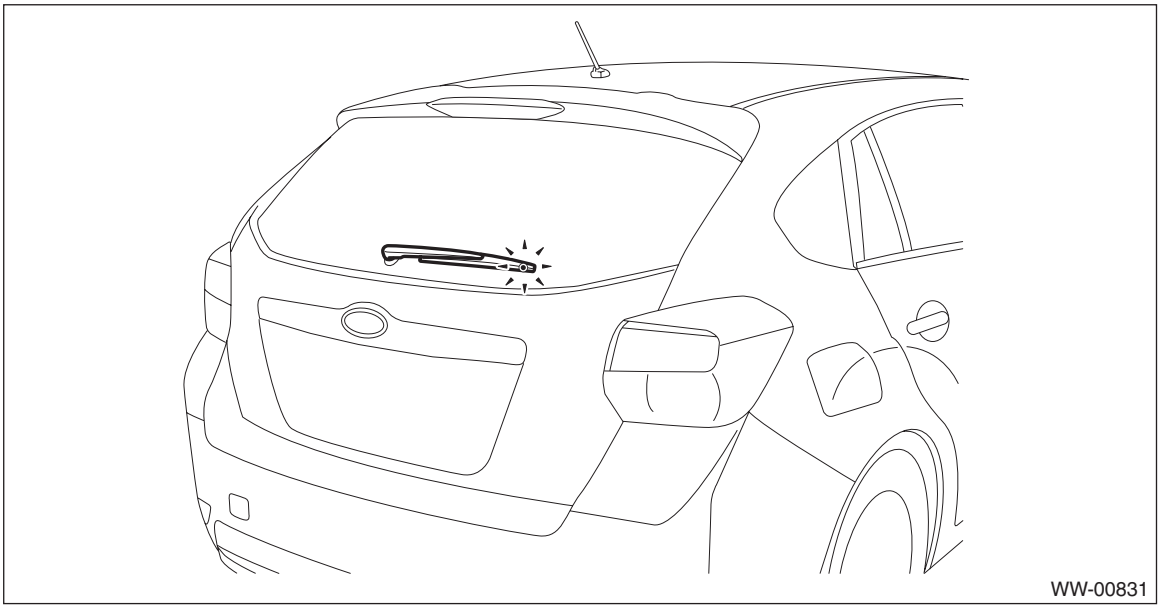
A: REMOVAL

1) Pull up the cover - rear wiper arm.
2) Remove the nut, and remove the arm assembly - rear wiper.



B: INSTALLATION

1) Install in the reverse order of removal.
2) Operate the rear wiper once.
3) Align the blade assembly - rear wiper with the marking on the glass, and then tighten the nut to the specified torque.

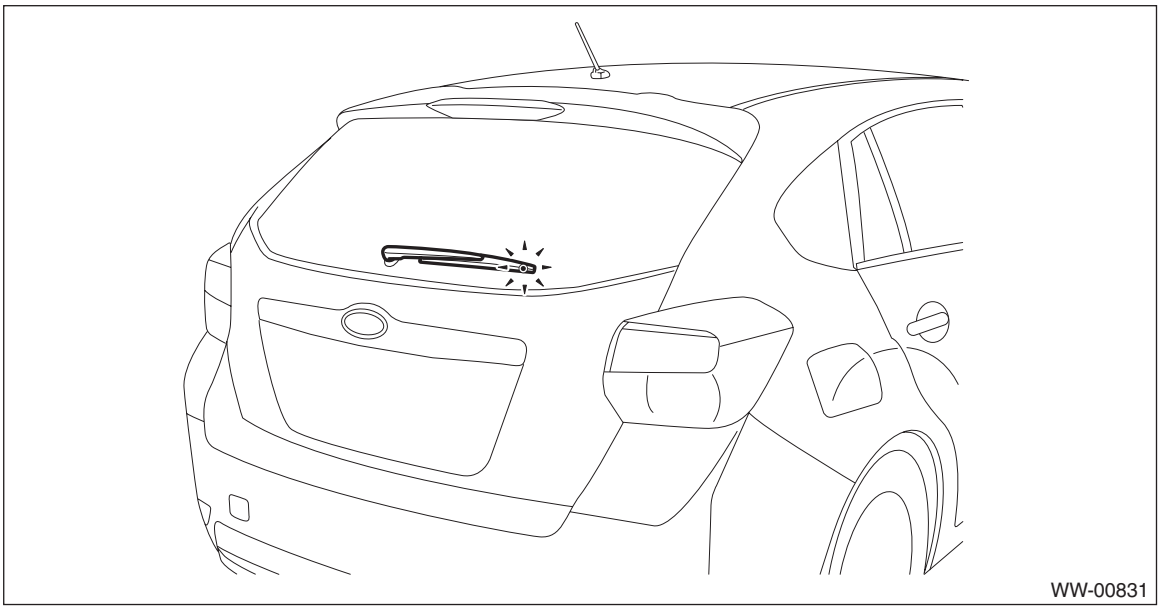


Tightening torque:
8 N·m (0.82 kgf-m, 5.9 ft-lb)

4) Operate the wiper to check whether the wiper blade aligns with the point mark. If not, perform installation over again.

C: ADJUSTMENT

1) Operate the rear wiper once.
2) Align the blade assembly - rear wiper with the marking on the glass.

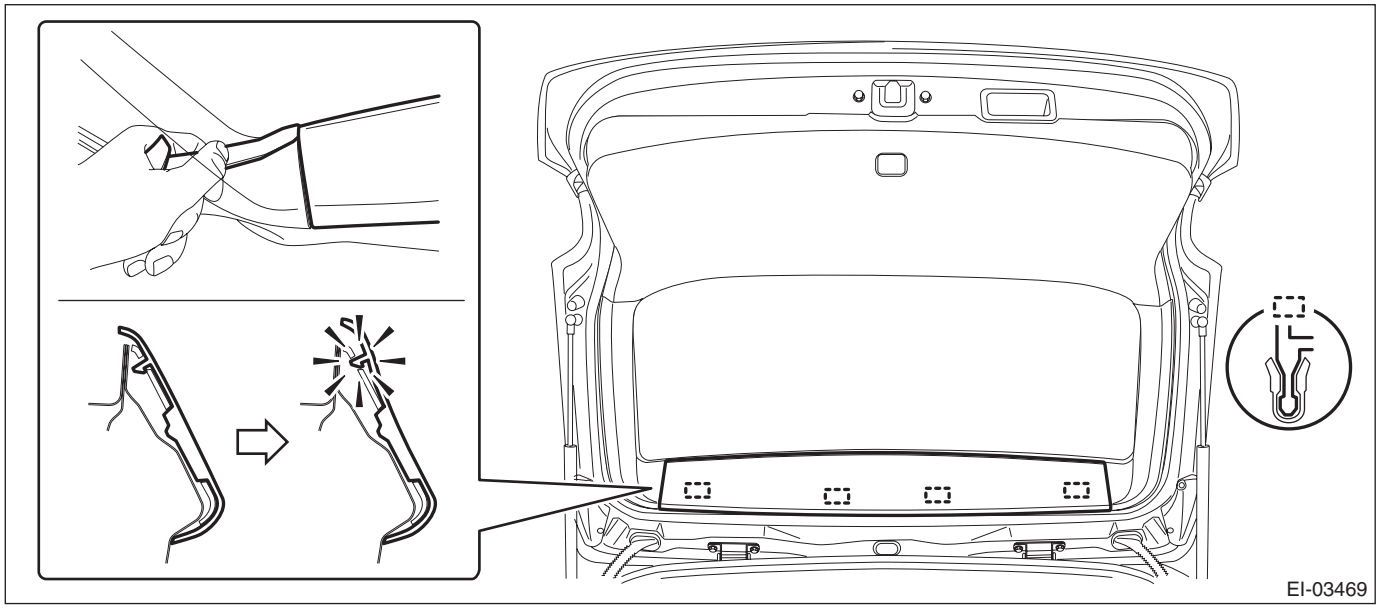


3) If the wiper blade is not aligned with the point mark, perform the removal of the rear wiper arm to align with the marking. <Ref. to WW-39, REMOVAL, Rear Wiper Arm.>

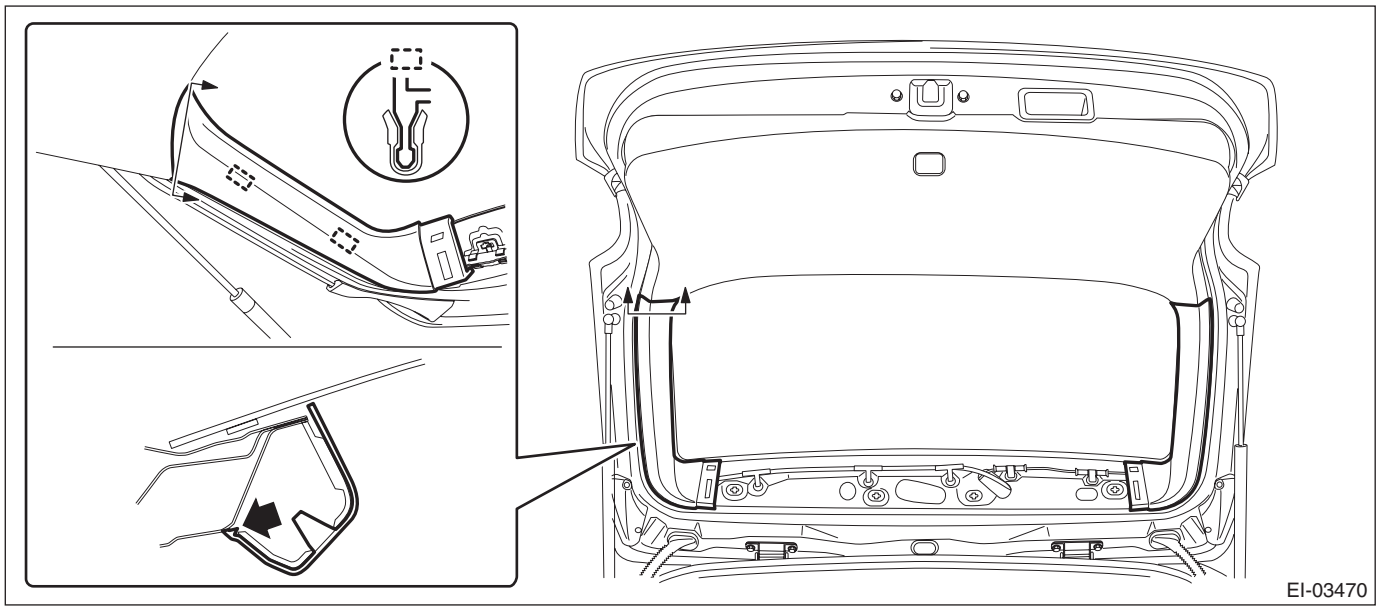
11.Rear Wiper Motor

A: REMOVAL

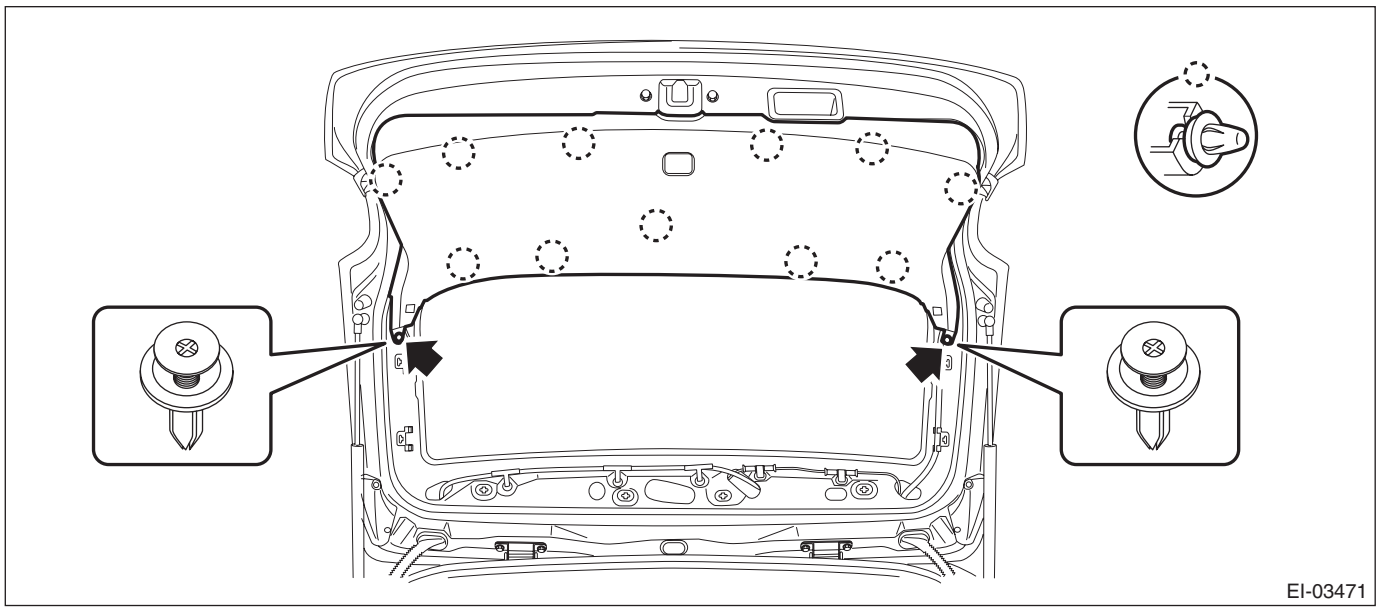
1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear gate UPR.
   (1) Remove the claws on the trim edge.
   (2) Release the claws in the center of trim, and remove the trim panel - rear gate UPR.



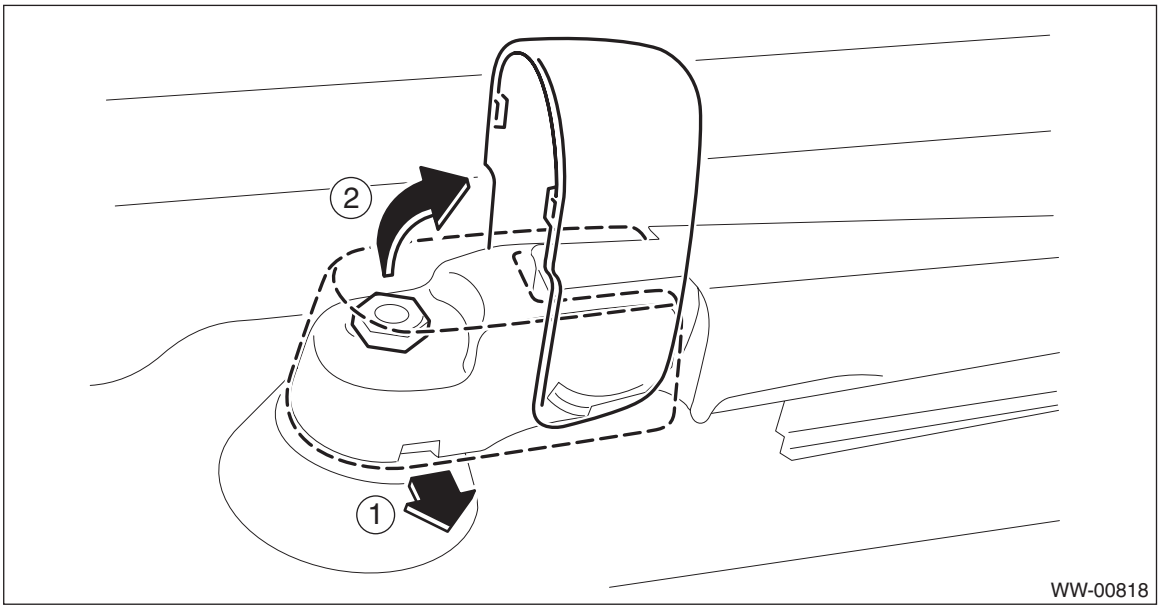
3) Remove the trim panel - rear gate pillar side.
   (1) Release the claws.
   (2) Remove the claws on the bottom of trim, and remove the trim panel - rear gate pillar side.



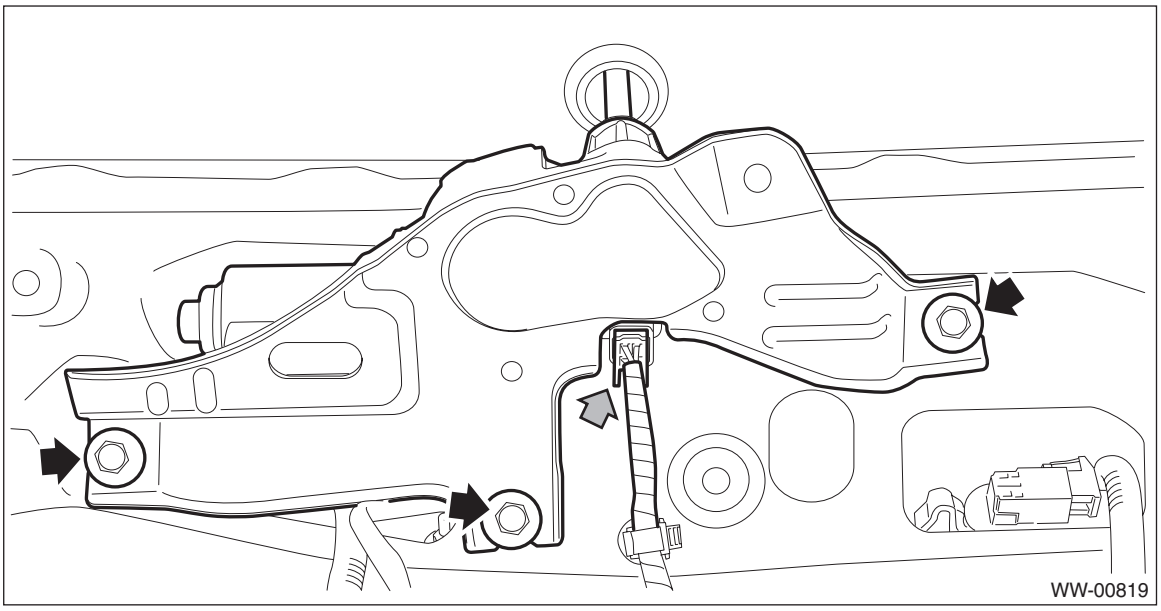
4) Remove the trim panel - rear gate LWR.
   (1) Remove the clips on both ends.
   (2) Release the clips, and remove the trim panel - rear gate LWR.



5) Remove the arm assembly - rear wiper.
   (1) Remove the cover - rear wiper arm.
   (2) Remove the nut, and remove the arm assembly - rear wiper.

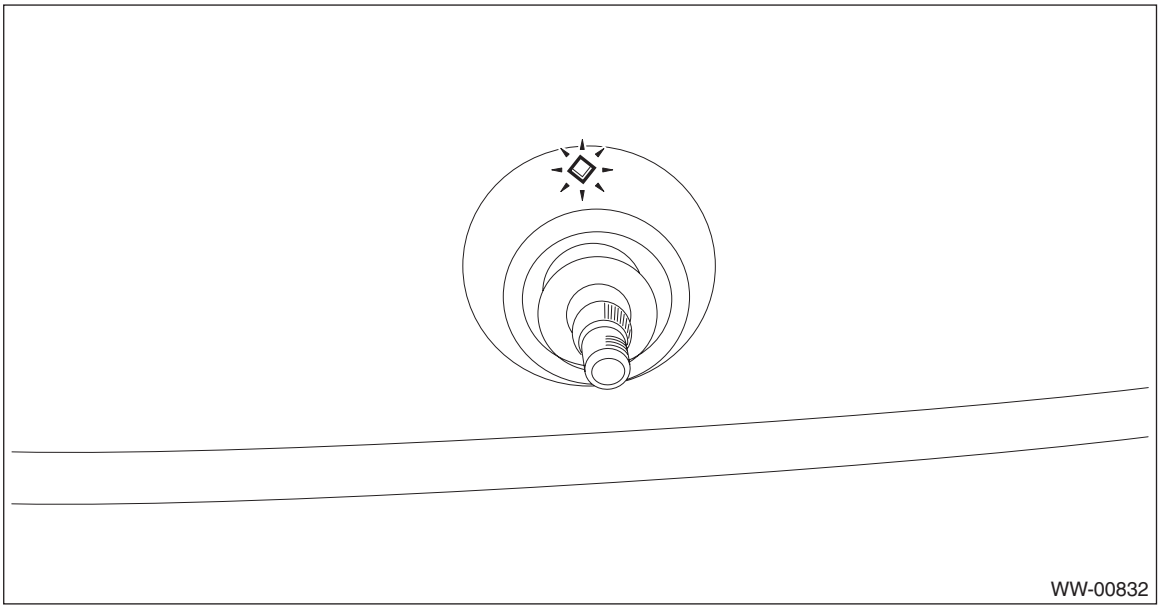


6) Remove the motor assembly - rear wiper.
   (1) Disconnect the harness connector of the motor assembly - rear wiper.
   (2) Remove the bolts, and remove the motor assembly - rear wiper.



B: INSTALLATION

1) Install each part in the reverse order of removal.
2) Check that the mark on the cap - pivot wiper faces up, as shown in the figure.

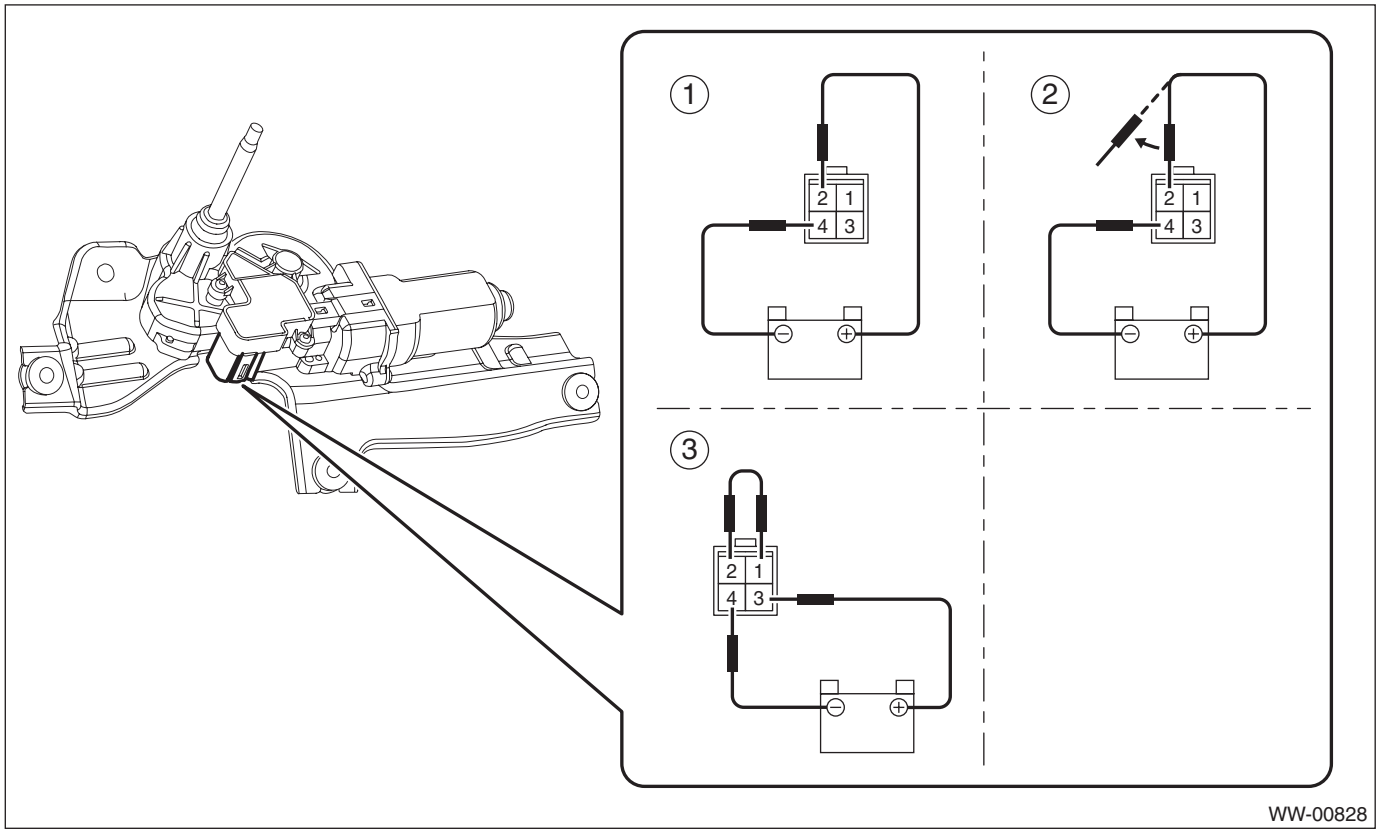


Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to WW-3, REAR WIPER, COMPONENT, General Description.>

C: INSPECTION

1) Connect the battery to the rear wiper motor connector, and check that the motor assembly - rear wiper operates.
2) Connect the battery to terminals of the connector, and remove the terminal connection with motor rotating, and stop the motor assembly - rear wiper in mid-operation.
3) Connect the battery and check that the motor stops at the automatic stop position after the motor operates at low speed again.

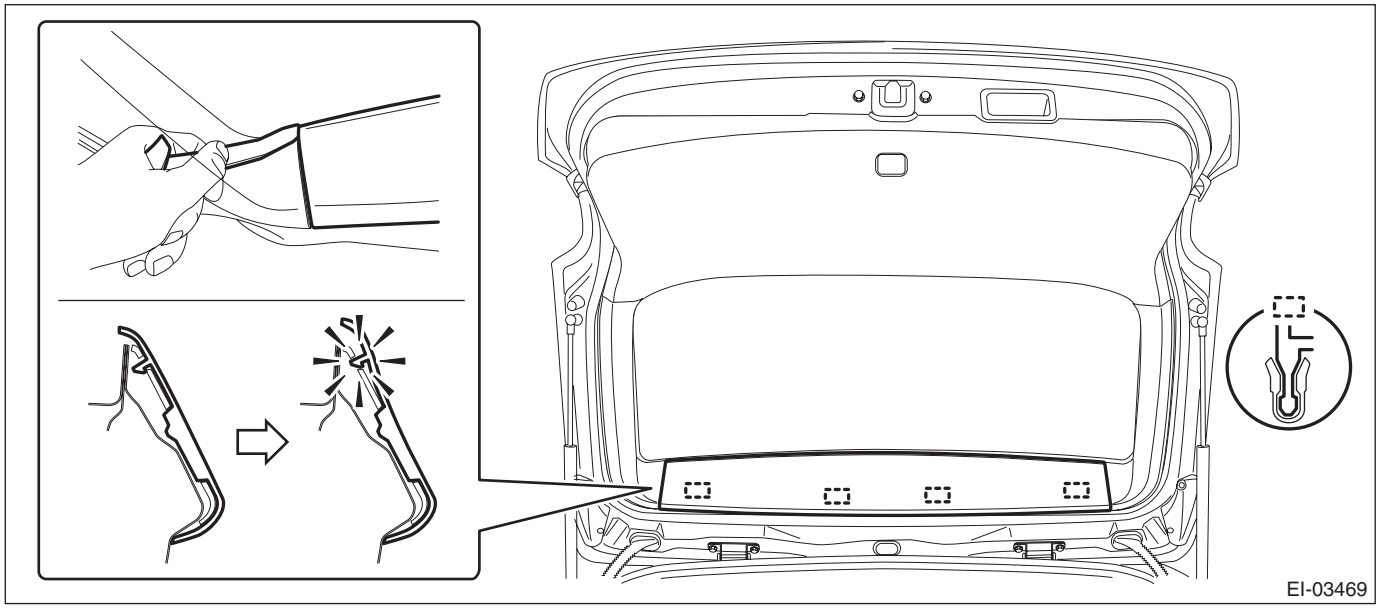
CAUTION:
Fix the motor to prevent the motor from being shorted by moving during operation.



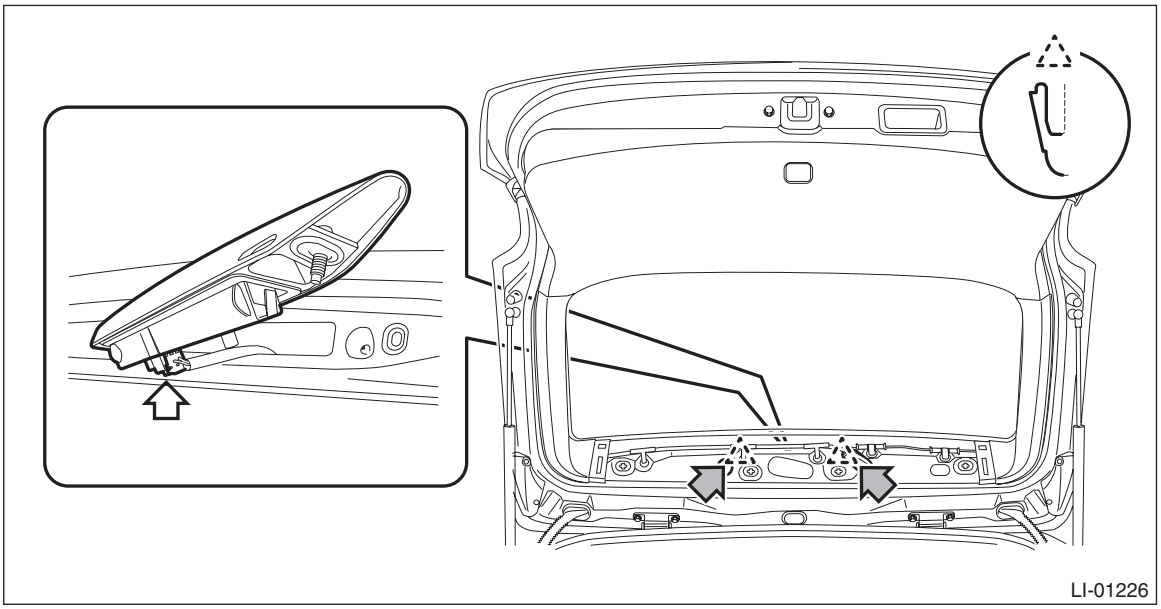
12.Rear Washer

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the trim panel - rear gate UPR.
   (1) Remove the claws on the trim edge.
   (2) Release the claws in the center of trim, and remove the trim panel - rear gate UPR.



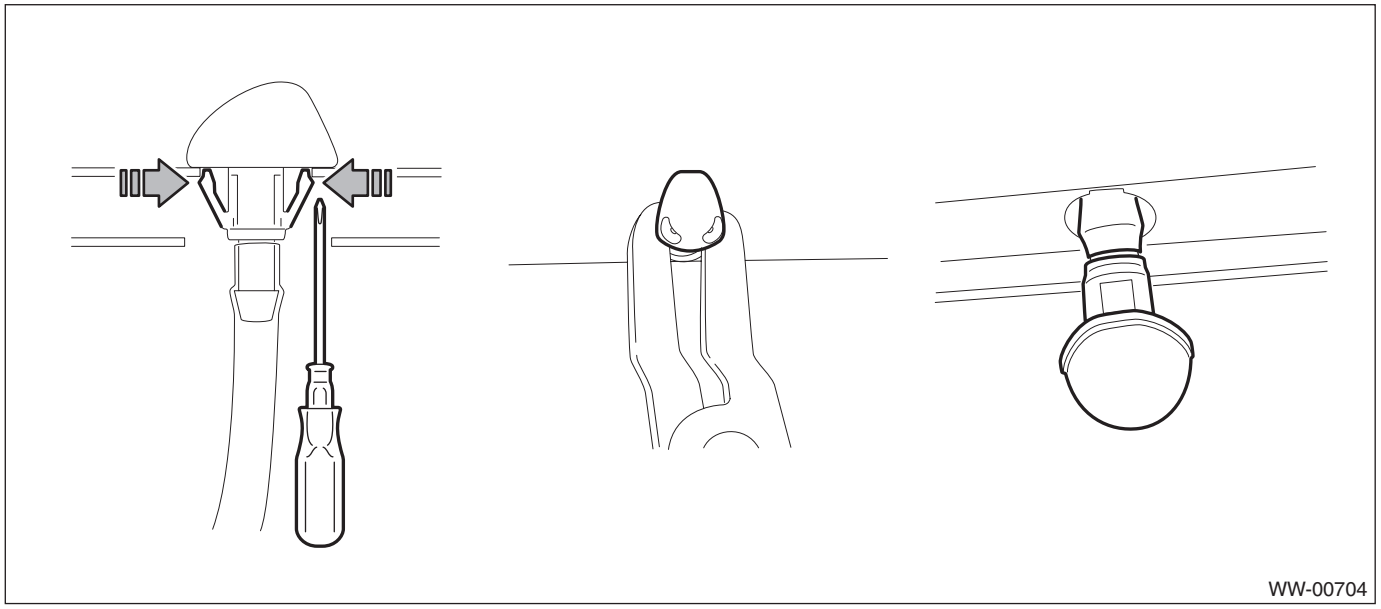
3) Remove the light assembly - high-mounted.
   (1) Remove the nut.
   (2) Disconnect the connector and remove the light assembly - high-mounted.



4) Remove the nozzle - rear washer.

CAUTION:
Before removing, apply protective tape to the body panel and used tools not to damage the panel - rear gate.

(1) Push the claw using a flat tip screwdriver, etc.
(2) When the nozzle - rear washer lifts up, pull out the nozzle - rear washer using a clip remover, etc.
(3) Disconnect the hose - rear washer, and remove the nozzle - rear washer.



B: INSTALLATION

1) Install each part in the reverse order of removal.

Tightening torque:
Light assembly - high-mounted: 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)

2) Check the nozzle - rear washer position. <Ref. to WW-47, VISUAL INSPECTION, INSPECTION, Rear Washer.>

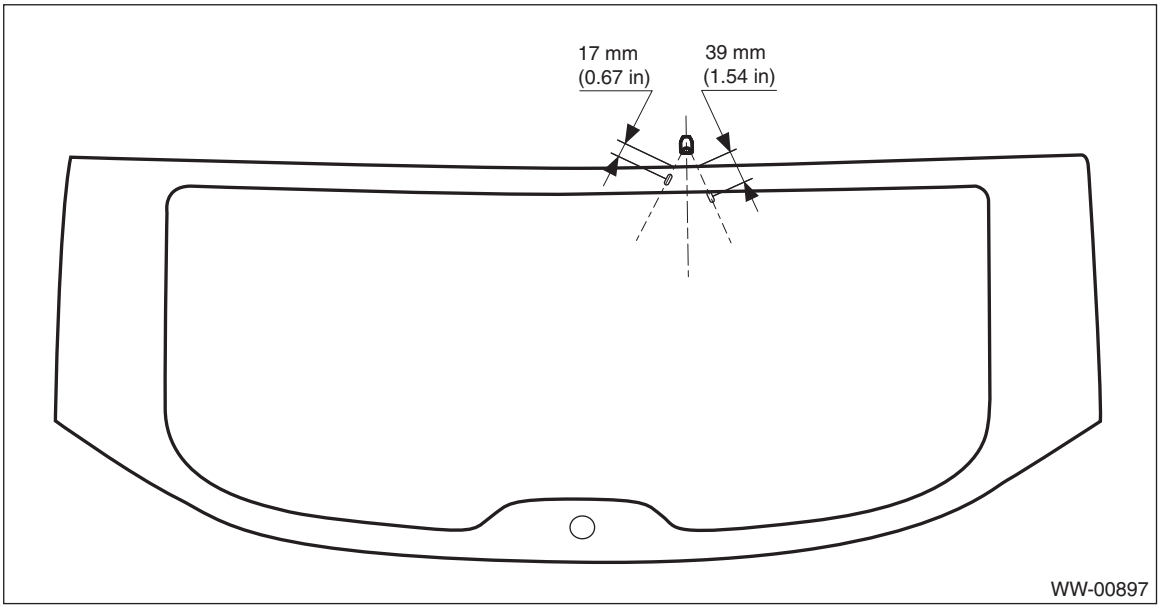
C: INSPECTION

1. VISUAL INSPECTION

Check for the following items, and if any malfunction is found, replace the corresponding part.
- Make sure the nozzle - rear washer and the hose - rear washer are not clogged.
- Make sure the hose - rear washer is not bent.

2. INSPECTING THE SPRAY POSITION

1) Turn the wiper switch to OFF position.
2) While the vehicle is stopped, check that the washer spray position is as shown in the figure.
3) After inspection, if the spray position is significantly out of the specified range, replace the nozzle - rear washer with a new part.



ENTERTAINMENT

ET

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