LIGHTING SYSTEM

LI

1. General Description
2. Relay and Fuse
3. Headlight System
4. High Beam Assist System
5. Day Time Running Light System
6. Clearance Light and Illumination Light System
7. Front Fog Light System
8. Turn Signal Light and Hazard Light System
9. Back-up Light System
10. Stop Light System
11. Interior Light System
12. Auto Headlight Beam Leveler System
13. Combination Switch (Light)
14. Light Control Sensor
15. Headlight Assembly
16. Clearance/Parking Light Bulb
17. Front Turn Signal Light Bulb
18. Front Side Marker Light Bulb
19. Hazard Switch
20. Front Fog Light Assembly
21. Side Turn Signal Light Assembly
22. Rear Combination Light Assembly
23. License Plate Light
24. License Plate Light Bulb
25. High-mounted Stop Light
26. Spot Map Light
27. Room Light
28. Trunk Room Light
29. LED Illumination Light
30. Vanity Mirror Light
31. Ignition Switch Illumination
32. Auto Headlight Beam Leveler Control Module
33. Reflex Reflector
34. Door Switch

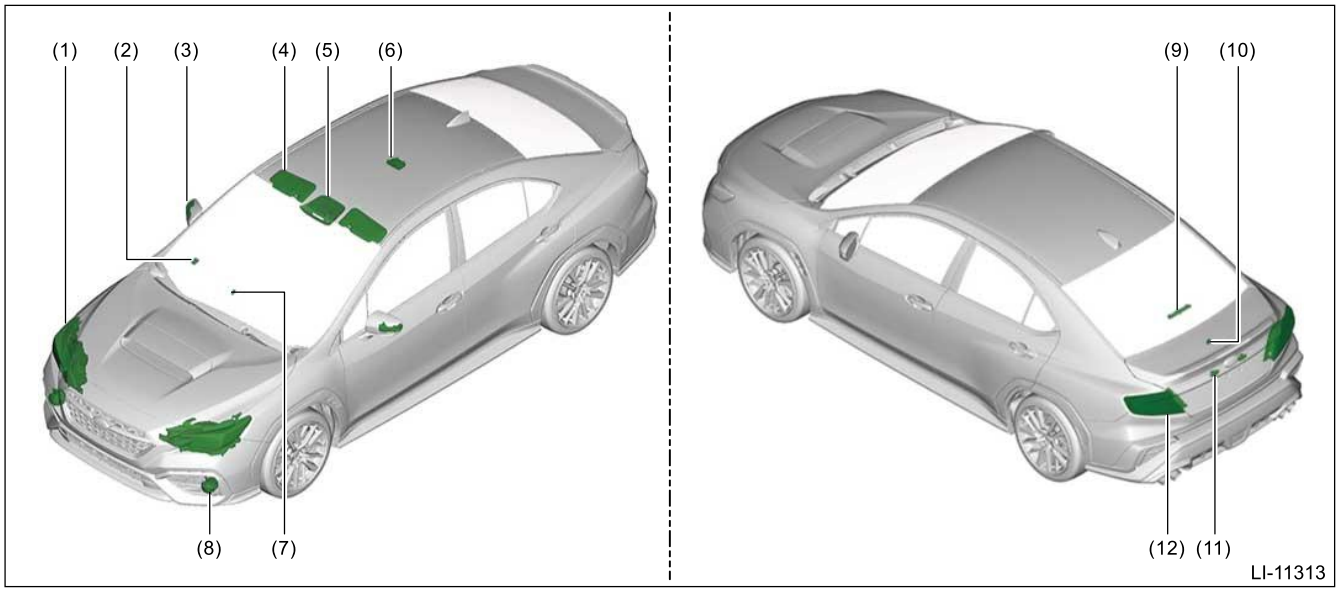
LIGHTING SYSTEM > General Description

CAUTION

- When performing service operation, refer to "Repair Contents" in "General Description". Ref. to REPAIR CONTENTS>Repair Contents.
- When performing work on the sensors or modules, be careful of the following.
  - Before disconnecting electrical connectors, be sure to disconnect the ground terminal from the battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
  - Do not apply any impact. If the parts are accidentally dropped, replace with a new part.
  - Do not expose to high-temperature and humidity.
- When replacing the parts provided with memory functions, record the memory contents before disconnecting the ground terminal from the battery sensor.
- Refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM" section. Ref. to AIRBAG SYSTEM>General Description.
- Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.
- Always replace with a bulb that is the same model and wattage as those of the old one.

LIGHTING SYSTEM > General Description

SPECIFICATION



No.	Description		Capacity and wattage	Type
(1)	Headlight (model without SRH)	Daytime running light / low beam / high beam	12 V — 7/20/25 W (LED)	*
		Parking light / front turn signal light	12 V — 8/28 W	7444NA
		Front side marker lights	12 V — 5 W	W5W
(1)	Headlight (model with SRH)	Low beam / high beam	12 V — 21/26 W (LED)	*
		Front turn signal light	12 V — 6.2 W (LED)	*

No.	Description		Capacity and wattage	Type
		Parking light / accessory light / daytime running light	12 V — 0.4/0.6/4.6 W (LED)	*
		Front side marker lights	12 V — 0.5 W (LED)	*
(2)	Glove box light		12 V (LED)	*
(3)	Side turn signal light		12 V — 0.4 W (LED)	*
(4)	Vanity mirror light		12 V — 2 W	—
(5)	Spot map light		12 V — 8 W	—
(6)	Room light		12 V — 8 W	—
(7)	Pocket light		12 V (LED)	*
(8)	Front fog light		12 V — 5.4 W (LED)	*
(9)	High-mounted stop light		13.5 V — 1.5 W (LED)	*
(10)	Trunk room light		12 V — 3.8 W	SAE#194
(11)	License plate light		12 V — 5 W	W5W
(12)	Rear combination light	Tail light / stop light	12 V — 2.0/3.2 W (LED)	*
		Rear turn signal light	12 V — 21 W	WY21W
		Back-up light	12 V — 2.4 W (LED)	*
		Rear side marker light	12 V — 1.8 W (LED)	*

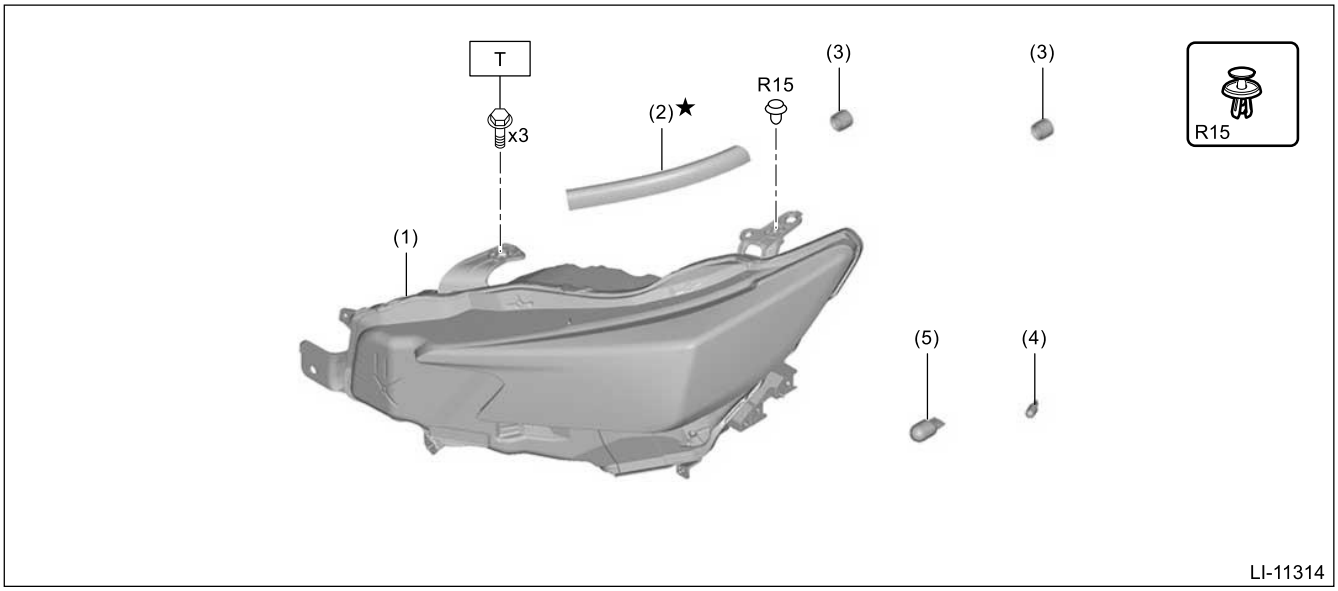
*: Non-disassembly type

LIGHTING SYSTEM > General Description

COMPONENT

1. HEADLIGHT

- **MODEL WITHOUT SRH**

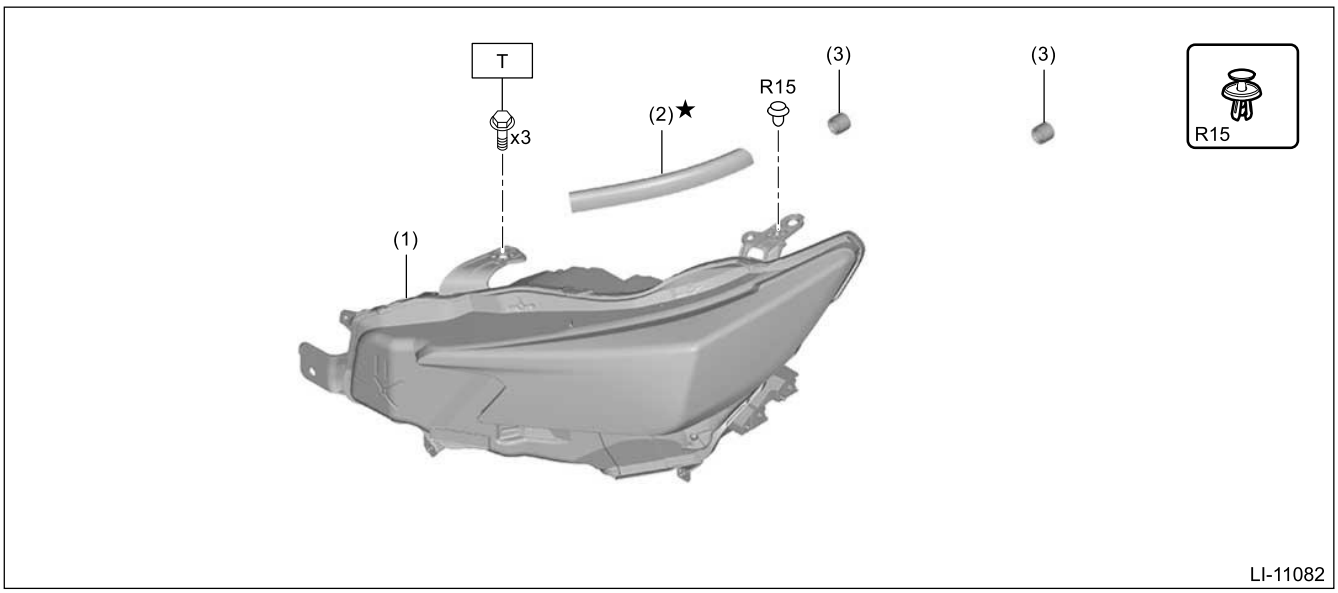


(1) Light ASSY head
(2) Hood seal rubber
(3) Cap
(4) Front side marker light bulb
(5) Parking & front turn signal light bulb

Tightening torque: N·m (kgf-m, ft-lb)

T: 7.5 (0.8, 5.5)

• MODEL WITH SRH

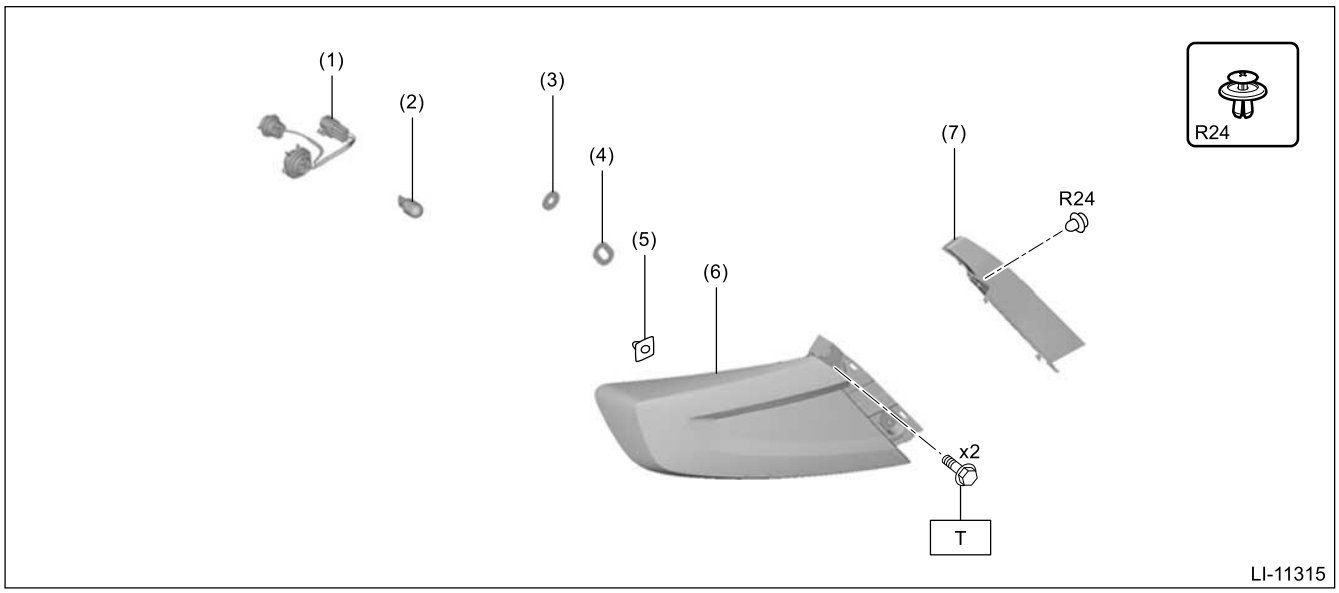


(1) Light ASSY head
(2) Hood seal rubber
(3) Cap

Tightening torque: N·m (kgf-m, ft-lb)

T: 7.5 (0.8, 5.5)

2. REAR COMBINATION LIGHT



(1) Cord ASSY
(2) Turn signal light bulb
(3) Gasket
(4) Gasket
(5) Grommet
(6) Light ASSY rear combination
(7) Cover ASSY rear combination

Tightening torque: N·m (kgf-m, ft-lb)

T: 7.5 (0.8, 5.5)

LIGHTING SYSTEM > General Description

PREPARATION TOOL

1. SUBARU SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 STSSM4	—	SUBARU SELECT MONITOR 4	Used for setting of each function and troubleshooting for electrical system. **Note:** • **For detailed operation procedures, refer to "Help" of application.** • **Used together with interface for Subaru Select Monitor (such as DST-i and DST-010).**

2. OTHER

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

LOCATION

For the location, refer to "FUSE AND RELAY" in the wiring diagram. Ref. to WIRING SYSTEM>Fuse And Relay>LOCATION.

Note:
For details of relay and fuse, refer to "DC POWER SUPPLY CIRCUIT". Ref. to WIRING SYSTEM>Power Supply Circuit>WIRING DIAGRAM.

INSPECTION

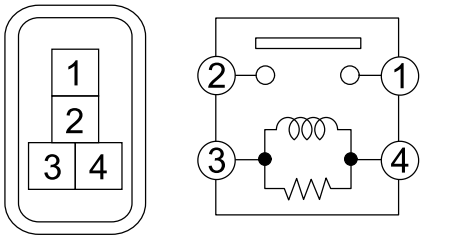
1. CHECK FUSE

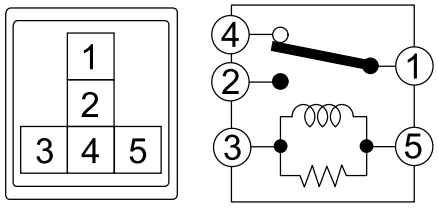
1. Remove the fuse and inspect visually.
2. If the fuse is blown out, replace the fuse.

Note:
If the fuse is blown again, check the system wiring harness.

2. CHECK RELAY

1. Measure 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	 SL-01566
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.

WIRING DIAGRAM

For the wiring diagram, refer to “Headlight System” in the wiring diagram. Ref. to WIRING SYSTEM>Headlight System>WIRING DIAGRAM.

INSPECTION

1. BASIC INSPECTION

For inspection, refer to “Basic Diagnostic Procedure” of “HEADLIGHT / FOGLIGHT (DIAGNOSTICS)” section. Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS)>Basic Diagnostic Procedure.

2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to “System Block Diagram” in “HEADLIGHT / FOGLIGHT (DIAGNOSTICS)” section. Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS)>General Description>SYSTEM BLOCK DIAGRAM.

3. MODULE I/O SIGNAL

For the specification (electrical component), refer to “Control Module I/O Signal” of “HEADLIGHT / FOGLIGHT (DIAGNOSTICS)” section. Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS)>Control Module I/O Signal.

4. TROUBLE SYMPTOM

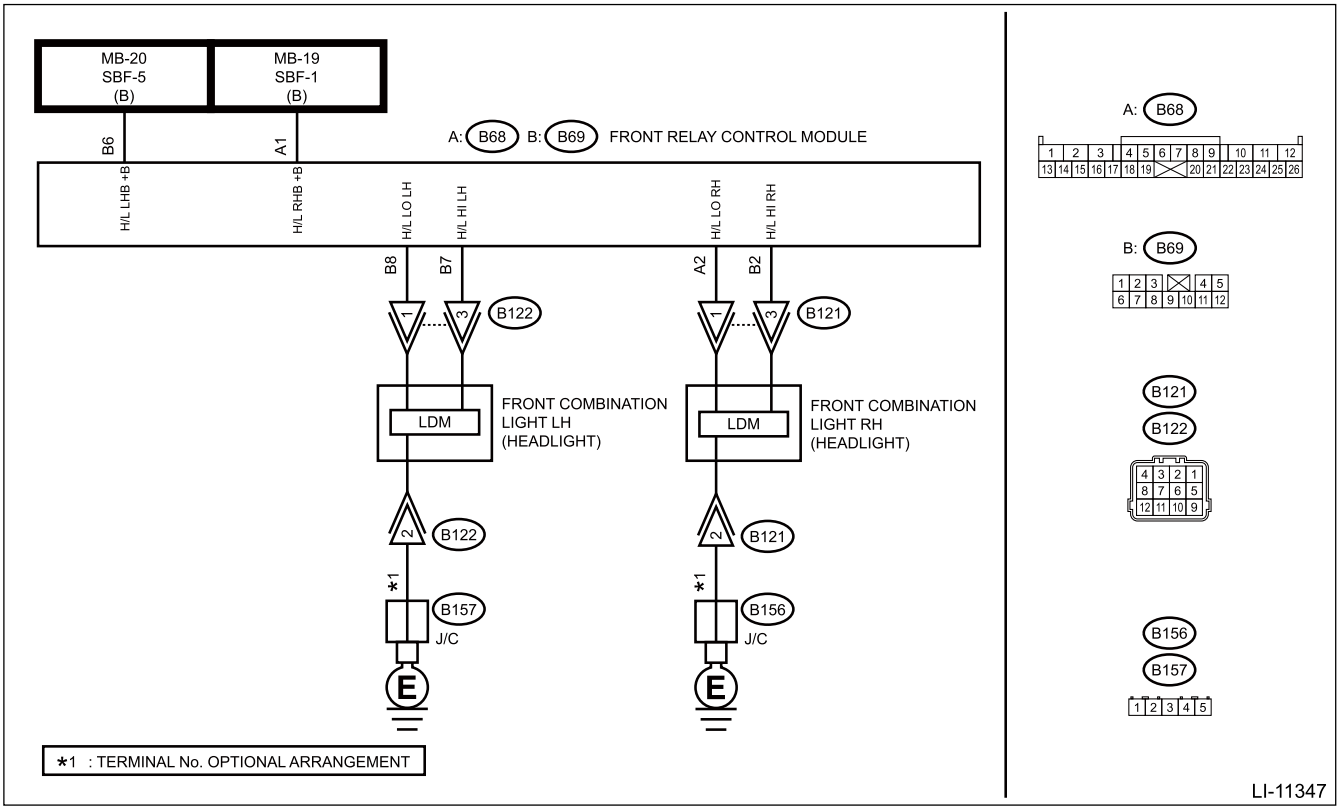
Symptoms	Reference
Headlight does not illuminate, or headlight is weak.	Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > CHECK HEADLIGHT SYSTEM.
Light does not illuminate though the surrounding is dark, or it remains illuminating though the surrounding becomes brighter. (Everything except auto headlight operates normally.)	Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > AUTO HEADLIGHT SYSTEM CHECK.
Welcome lighting does not illuminate.	Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > CHECK OF WELCOME LIGHTING SYSTEM (IF IT DOES NOT ILLUMINATE).
Welcome lighting does not go off.	Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > CHECK OF WELCOME LIGHTING SYSTEM (IF IT DOES NOT GO OFF).
The wiper interlocked headlight does not operate.	Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > CHECK WIPER INTERLOCK HEADLIGHT SYSTEM.

5. CHECK HEADLIGHT SYSTEM

- **MODEL WITHOUT SRH**

Wiring diagram:

Headlight system Ref. to WIRING SYSTEM>Headlight System>WIRING DIAGRAM.



1. CHECK HEADLIGHT ILLUMINATION.

1. Turn the ignition switch to ON.
2. Turn the lighting switch to the switch 2 (HEAD) position and switch UP (HI) position.

Does the headlight (low beam and high beam) come on?

Yes	The headlight system is normal.
No	Go to 2.

2. CHECK DTC.

1. Turn the ignition switch to ON.
2. Turn the lighting switch to the switch 2 (HEAD) position and switch UP (HI) position.
3. Read the DTC of [Front Relay Control Module] using the Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

Are any DTCs displayed?

Yes	Perform the diagnosis for the displayed DTCs. Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
No	Go to 3.

3. CHECK POWER SUPPLY.

Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Front Relay Control Module]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [BATT Voltage (Control)]
- [BATT Voltage (BACKUP)]
- [IGN Voltage]

Is the voltage 9 — 16 V?

Yes	Go to 4.
No	Check the front relay control module and replace it if defective. • Inspection: Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Basic Diagnostic Procedure. • Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.

4. PERFORM ACTIVE TEST.

Using the Subaru Select Monitor, check the following items in the [Active Test] of [Front Relay Control Module]. Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Active Test.

Note:
Check the items where illumination did not occur in step 1.

- [Lighting Low RH Output]
- [Lighting Low LH Output]
- [Lighting High RH Output]
- [Lighting High LH Output]

Does the light illuminate?

Yes — Go to 9.

No — Go to 5.

5. CHECK HEADLIGHT POWER SUPPLY CIRCUIT.

1. Turn the ignition switch to OFF.
2. Disconnect the front relay control module connector.
3. Measure the voltage between front relay control module connector and chassis ground.
   Connector & terminal
   Headlight RH
   (B68) No. 1 (+) — Chassis ground (−):
   Headlight LH
   (B69) No. 6 (+) — Chassis ground (−):

Is the voltage 9 — 16 V?

Yes — Go to 6.

No — Check the harness of the fuse, connector and power supply circuit. If there are no problems, replace the front relay control module. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.

6. CHECK HARNESS.

1. Disconnect the connector of the light which did not illuminate.
2. Check the harness between the front relay control module and the headlight.

Connector & terminal

Headlight RH (low beam)

(B68) No. 2 — (B121) No. 1:

Headlight RH (high beam)

(B69) No. 2 — (B121) No. 3:

Headlight LH (low beam)

(B69) No. 8 — (B122) No. 1:

Headlight LH (high beam)

(B69) No. 7 — (B122) No. 3:

Is harness normal?

Yes	Go to 7.
No	Repair or replace the defective part.

7. CHECK HEADLIGHT.

Apply battery voltage between headlight unit connector terminals.

Caution:

- **Make sure that the high beam illuminates because the high beam shares the same lighting body with the low beam and they are alternatively lit by switching.**
- **When applying battery voltage, do not mix up the positive (+) side and the negative (−) side. Incorrect polarity connection may cause internal LED damage.**

Connector & terminal

•If the low beam does not illuminate

Headlight RH

(B121) No. 1 (+) — (B121) No. 2 (−):

Headlight LH

(B122) No. 1 (+) — (B122) No. 2 (−):

•If the high beam does not illuminate

Headlight RH

(B121) No. 3 — (B121) No. 2 (−):

Headlight LH

(B122) No. 3 — (B122) No. 2 (−):

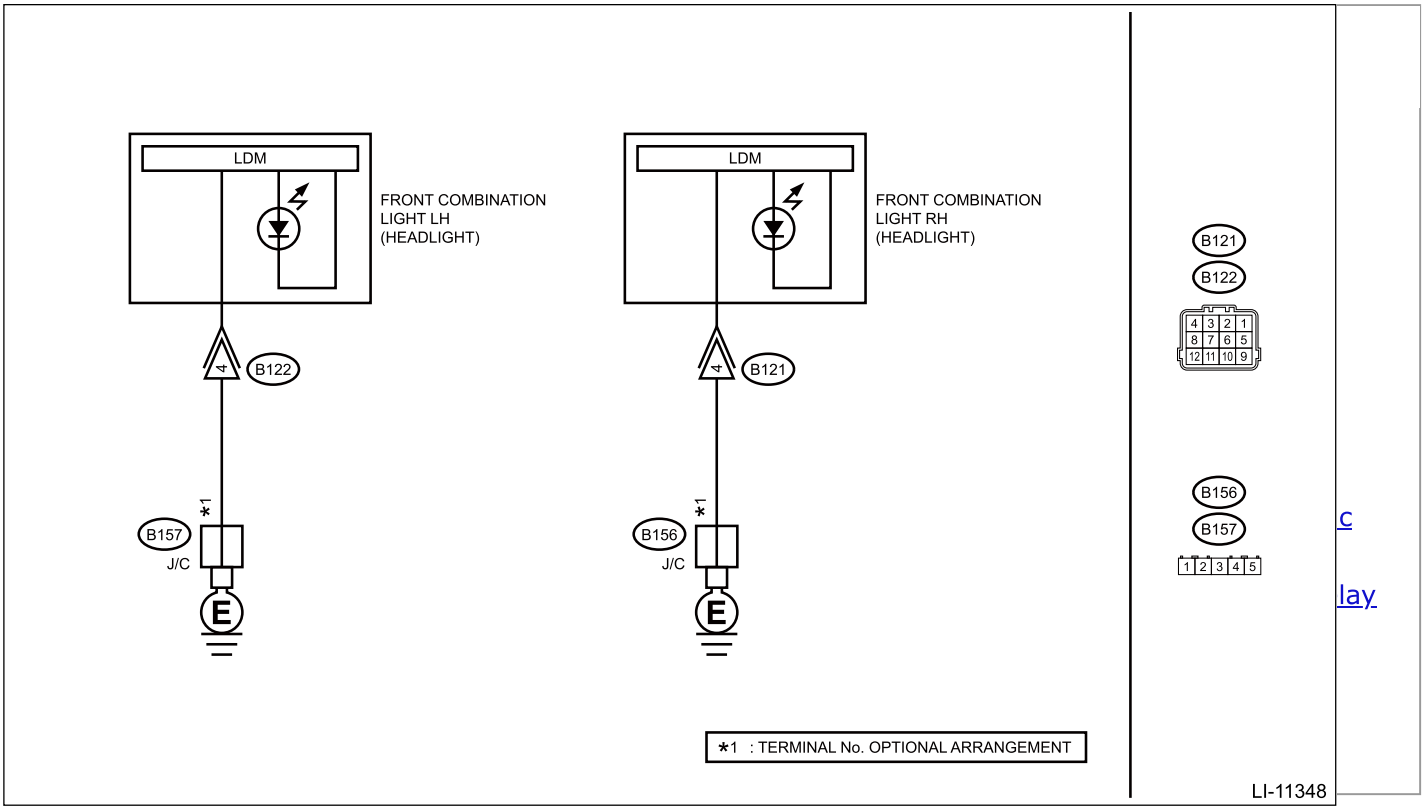
Does the headlight (low beam and high beam) come on at normal brightness?

Yes	Go to 8.
No	Replace the headlight assembly. Ref. to LIGHTING SYSTEM>Headlight Assembly.

- **MODEL WITH SRH**

Wiring diagram:

Headlight system Ref. to WIRING SYSTEM>Headlight System>WIRING DIAGRAM.



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9. CHECK CURRENT DATA.
1. CHECK HEADLIGHT ILLUMINATION.

1. Turn the ignition switch to ON.
2. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
   - [Lighting II Switch Input]
   - [Dimmer HI Switch Input]
3. Turn the lighting switch to the switch 2 (HEAD) position.
4. Turn the dimmer & passing switch to the switch UP position.

Does the display change between [OFF] <--> [ON] when the lighting switch is moved to the switch 2 (HEAD) and switch UP (HI) positions?

Yes	The headlight system is normal. Go to 10.
No	Go to 2. Check the combination switch or harness for open circuit.

2. CHECK CURRENT DATA.

1. Turn the ignition switch to ON.and wait for at least 10 seconds.
2. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Front Relay Control Module]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
   - [Lighting Low Request]
   - [Lighting High Request]

Is DTC displayed?

Yes	Perform the diagnosis when the displayed DTC is detected. Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
No	Go to 3.

3. CHECK POWER SUPPLY.

Does the display change to [ON] when turning the lighting switch 2 (HEAD) position and switch UP position?

Yes	Replace the front relay control module. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.
No	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [BATT voltage (control)]
- [BATT voltage (BACKUP)]
- [IGN voltage]

Is the voltage 9 — 16 V?

Yes	Go to 4.
No	Check the body integrated unit and replace it if defective. • Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure. • Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

4. CHECK CURRENT DATA.

1. Turn the ignition switch to ON.
2. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
   - [Lighting II Switch Input]
   - [Dimmer Hi Switch Input]

Does the display change between [OFF] ←→ [ON] when the lighting switch is moved to the switch 2 (HEAD) and switch UP (HI) positions?

Yes	Go to 5.
No	Check the combination switch or harness for open circuit.

6. AUTO HEADLIGHT SYSTEM CHECK

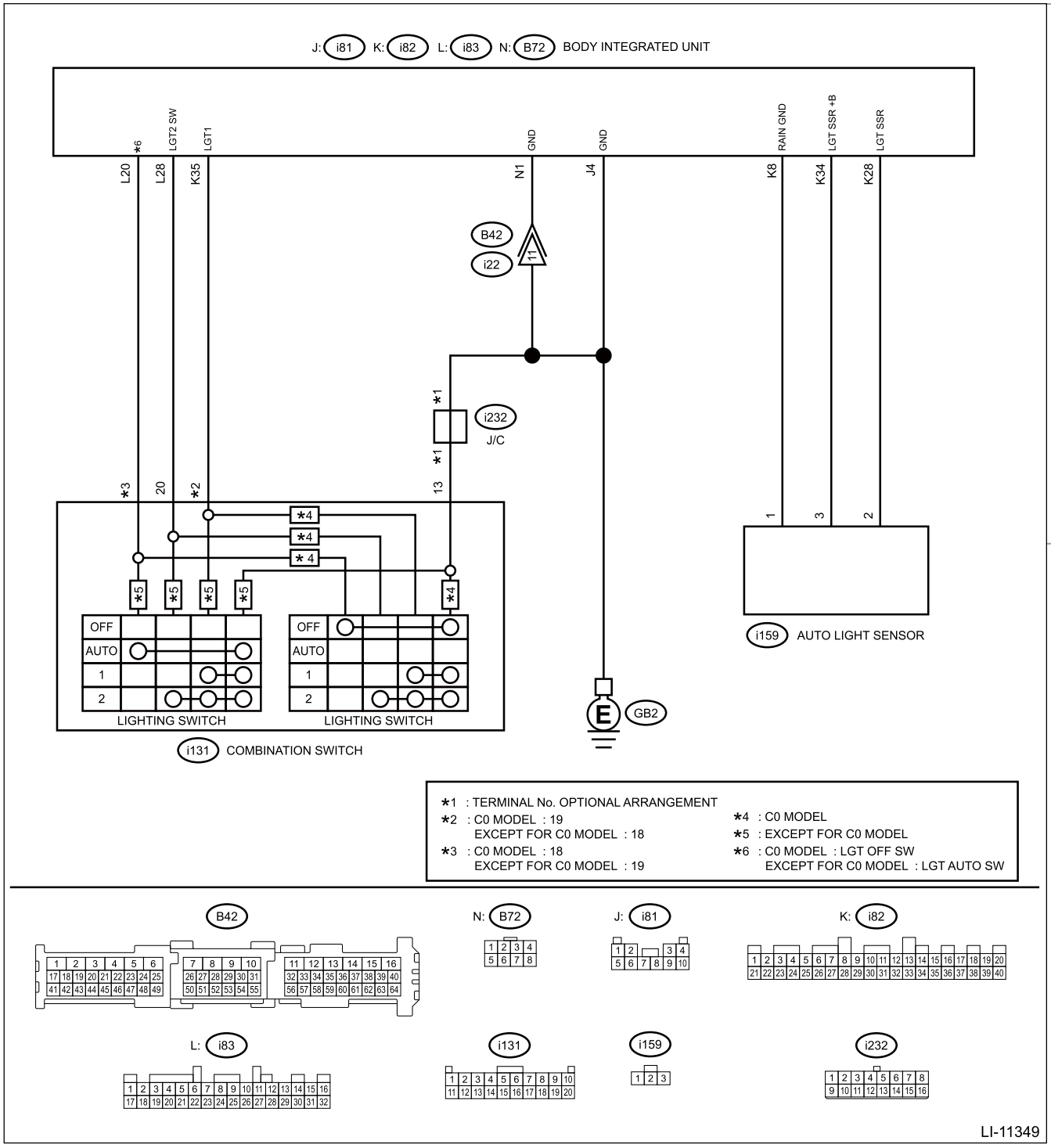
Wiring diagram:
Headlight system Ref. to WIRING SYSTEM>Headlight System>WIRING DIAGRAM.

5. CHECK CURRENT DATA.

1. Turn the ignition switch to ON.
2. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
   - [Lighting II Lamp Output]
   - [Lighting Hi Lamp Output]

Does the display change to [ON] when turning the lighting switch to the switch 2 (HEAD) position and switch UP (HI) position?

Yes	Go to 6.
No	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.


J: i81 K: i82 L: i83 N: B72 BODY INTEGRATED UNIT
*6
LGT2 SW
LGT1
GND
GND
RAIN GND
LGT SSR +B
LGT SSR
L20
L28
K35
N1
J4
K8
K34
K28
B42
i22
11
*1
i232
J/C
*1
13
*3
20
*2
*4
*4
*4
*5
*5
*5
*5
*4
OFF
AUTO
1
2
LIGHTING SWITCH
OFF
AUTO
1
2
LIGHTING SWITCH
i131 COMBINATION SWITCH
1
3
2
i159 AUTO LIGHT SENSOR
E
GB2
*1 : TERMINAL No. OPTIONAL ARRANGEMENT
*2 : C0 MODEL : 19
EXCEPT FOR C0 MODEL : 18
*3 : C0 MODEL : 18
EXCEPT FOR C0 MODEL : 19
*4 : C0 MODEL
*5 : EXCEPT FOR C0 MODEL
*6 : C0 MODEL : LGT OFF SW
EXCEPT FOR C0 MODEL : LGT AUTO SW
B42
N: B72
J: i81
K: i82
L: i83
i131
i159
i232

LI-11349

1. CHECK HEADLIGHT AND TAIL LIGHT ILLUMINATION.

1. Turn the ignition switch to ON.
2. Make the light control sensor vicinity dark.
3. Set the lighting switch to AUTO position.
4. Make the light control sensor vicinity bright.
5. Turn the lighting switch to the OFF position and turn to the AUTO position again.

Do the parking light, headlight and tail light illuminate by way of step 3 and go off by step 5?

Yes — The auto headlight system is normal.

No — Go to 2.

2. CHECK BODY INTEGRATED UNIT SETTING.

Using Subaru Select Monitor, display data of [Illumination Sensor Setting] in [Customize] of [Body Control]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is the setting in the [Support]?

Yes — Go to 3.

No — Turn the setting to [Support].

3. CHECK CURRENT DATA.

1. Using Subaru Select Monitor, display data of [Illumination Sensor Output] in [Data Monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
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 V or more

Is the voltage output according to the brightness?

Yes — Go to 6.

No — Go to 4.

4. CHECK LIGHT CONTROL SENSOR.

Check the light control sensor. Ref. to LIGHTING SYSTEM>Light Control Sensor>INSPECTION.

Is the light control sensor normal?

Yes	Go to 5.
No	Replace the light control sensor. Ref. to LIGHTING SYSTEM>Light Control Sensor.

5. 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

(i82) No. 8 — (i159) No. 1:
(i82) No. 28 — (i159) No. 2:
(i82) No. 34 — (i159) No. 3:

Is harness normal?

Yes	Check the body integrated unit and replace it if defective. • Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure. • Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Repair or replace the defective part.

6. CHECK CURRENT DATA.

1. Set the lighting switch to AUTO position.
2. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
   - Other than for C0
   - [Writing AUTO SW input]
   - For C0
   - [Lighting I Switch Input]
   - [Lighting II Switch Input]
   - [Lighting OFF Switch Input]

- Is [Writing AUTO SW input] set to [ON]? (Except for C0)
- Are [Lighting I Switch Input], [Lighting II Switch Input] and [Lighting OFF Switch Input] set to [OFF]? (For C0)

Yes

Check the body integrated unit and replace it if defective.
- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

No

Go to 7.

7. CHECK COMBINATION SWITCH (LIGHT).

1. Turn the ignition switch to OFF.
2. Check the combination switch (light). Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION.

Is the combination switch (light) normal?

Yes

Go to 8.

No

Replace the combination switch (light). Ref. to LIGHTING SYSTEM>Combination Switch (Light).

8. 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

Other than for C0

(i82) No. 35 — (i131) No. 18:
(i83) No. 20 — (i131) No. 19:
(i83) No. 28 — (i131) No. 20:

For C0

(i82) No. 35 — (i131) No. 19:
(i83) No. 20 — (i131) No. 18:
(i83) No. 28 — (i131) No. 20:

Is harness normal?

Yes	Go to 9.
No	Repair or replace the defective part.

9. CHECK HARNESS.

Check the harness between the combination switch (light) connector and the chassis ground.

Connector & terminal

(i131) No. 13 — Chassis ground:

Is the resistance less than 10 Ω?

Yes	Check the body integrated unit and replace it if defective. • Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure. • Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Repair or replace the defective part.

7. CHECK OF WELCOME LIGHTING SYSTEM (IF IT DOES NOT ILLUMINATE)

1. CHECK BODY INTEGRATED UNIT SETTING.

1. Turn the ignition switch to ON.
2. Using Subaru Select Monitor, display the data of [Welcome Light Off Delay Time(Approaching)] or [Welcome Light Off Delay Time(Exiting)] in [Customize] of [Body Control]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is the setting other than [OFF]?

Yes	Go to 2.
No	Turn the setting to other than [OFF].

2. CHECK BODY INTEGRATED UNIT SETTING.

Using Subaru Select Monitor, display data of [Illumination Sensor Setting] in [Customize] of [Body Control]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is the setting in the [Exist]?

Yes	Go to 3.
No	Turn the setting to [Support].

3. CHECK AUTO HEADLIGHT.

1. Set the lighting switch to AUTO position.
2. Make the light control sensor vicinity dark.
3. Turn the ignition switch to ON.

Do the parking light, tail light and headlight illuminate?

Yes	Go to 4.
No	Check the auto headlight system. Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > BASIC INSPECTION.

4. CHECK DOOR LOCK.

Operate the door lock using the access key.

Do the lock and unlock operate properly?

Yes	Go to 5.
No	Check the keyless access with push button start system. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Basic Diagnostic Procedure.

5. CHECK BODY INTEGRATED UNIT.

1. Turn the ignition switch to ON.
2. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
   - [IGN voltage]
   - [BATT voltage (BACKUP)]

Is the voltage 10 — 15 V?

Yes	Check the body integrated unit and replace it if defective. • Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure. • Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Repair or replace the defective part.

8. CHECK OF WELCOME LIGHTING SYSTEM (IF IT DOES NOT GO OFF)

1. CHECK BODY INTEGRATED UNIT SETTING.

1. Turn the ignition switch to ON.
2. Using Subaru Select Monitor, display the data of [Welcome Light Off Delay Time(Approaching)] or [Welcome Light Off Delay Time(Exiting)] in [Customize] of [Body Control]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is the illumination time setting correct?

Yes	Go to 2.
No	Set the illumination time.

2. CHECK THE LIGHTS.

Check if the lights illuminate or go out.

- Does the headlight illuminate when the lighting switch is moved to the switch 2 (HEAD) position?
- Do the parking light, tail light, and headlight go out when the lighting switch is moved to the switch OFF position?

Yes	Go to 3.
No	Check the combination switch (light) and each light circuit.

3. CHECK BODY INTEGRATED UNIT.

1. Turn the ignition switch to ON.
2. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
   - [IGN voltage]
   - [BATT voltage (BACKUP)]

Is the voltage 10 — 15 V?

Yes	Go to 4.
No	Repair or replace the defective part.

4. CHECK BODY INTEGRATED UNIT.

Using Subaru Select Monitor, display [Driver's door SW input] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display switch between [OFF] ←→ [ON] when driver's door is opened/closed?

Yes	Go to 5.
No	Check the door switch. Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK DOOR SWITCH.

5. CHECK DOOR LOCK.

Operate the door lock using the access key.

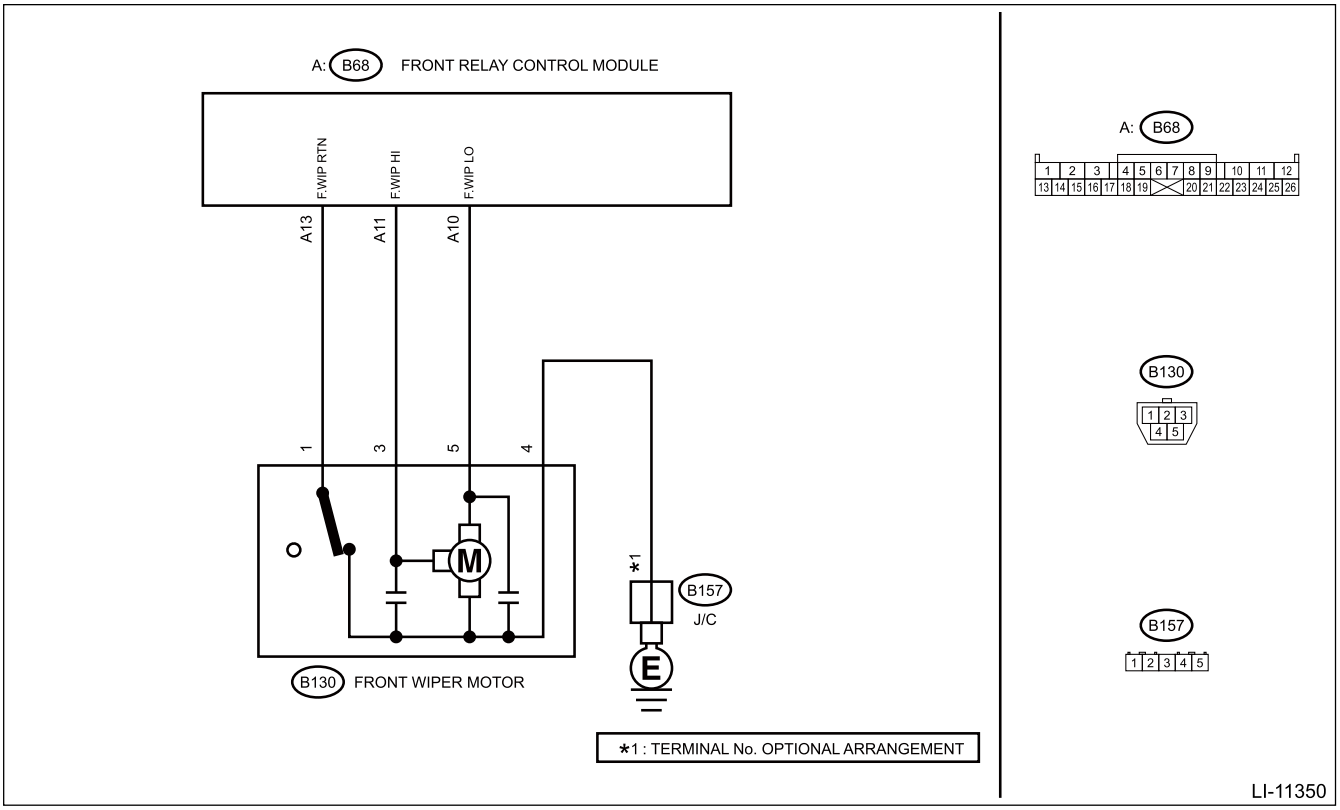
Do the lock and unlock operate properly?

Yes	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Check the keyless access with push button start system. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Basic Diagnostic Procedure.

9. CHECK WIPER INTERLOCK HEADLIGHT SYSTEM

Wiring diagram:

Front wiper and washer system Ref. to WIRING SYSTEM>Front Wiper and Washer System>WIRING DIAGRAM.



1. AUTO HEADLIGHT SYSTEM CHECK.

1. Turn the ignition switch to ON.
2. Check the operation of auto headlight system.

Is the system normal?

Yes	Go to 2.
No	Check and repair the auto headlight system. Ref. to LIGHTING SYSTEM>Headlight System>INSPECTION > CHECK HEADLIGHT SYSTEM.

2. CHECK LIGHT CONTROL SENSOR.

Using Subaru Select Monitor, display data of [Wiper Link Auto Light Setup] in [Customize] of [Body Control]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is the setting [ON]?

Yes	Go to 3.
No	Turn the setting to [ON].

3. CHECK DIAGNOSTIC TROUBLE CODE (DTC).

1. Turn the ignition switch to ON and wait for at least 10 seconds.
2. Read DTCs of the following items using the Subaru Select Monitor. Ref. to LAN SYSTEM (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).
   - [Body Control]
   - [Front Relay Control Module]

Is DTC displayed?

Yes	Perform the diagnosis for the displayed DTCs. • [Body Control]: Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST. • [Front Relay Control Module]: Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
No	Go to 4.

4. CHECK FRONT RELAY CONTROL MODULE.

Using Subaru Select Monitor, display data of [F Wiper(RTN) Input] in [Data Monitor] of [Front Relay Control Module]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display switch between [OFF] ←→ [ON] when the combination switch (wiper) is operated OFF ←→ INT/LO/HI?

Yes	Go to 5.
No	Go to 6.

5. CHECK BODY INTEGRATED UNIT.

Using Subaru Select Monitor, display data of [Fr wiper input] in [Data Monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display switch between [OFF] ←→ [ON] when the combination switch (wiper) is operated OFF ←→ INT/LO/HI?

Yes — Check the light control sensor, and then repair or replace it if defective. Ref. to LIGHTING SYSTEM>Light Control Sensor.

No — Check the body integrated unit and replace it if defective.
- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

6. CHECK FRONT RELAY CONTROL MODULE.

Measure the voltage between front relay control module connector and chassis ground.

Connector & terminal

(B68) No. 13 (+) — Chassis ground (−):

Does the voltage switch between OFF (less than 1 V) ←→ ON (9 — 16 V) when the combination switch (wiper) is operated OFF ←→ INT/LO/HI?

Yes — Check the front relay control module and replace it if defective.
- Inspection: Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.

No — Go to 7.

7. CHECK HARNESS.

1. Turn the ignition switch to OFF.
2. Disconnect the connectors of front wiper motor and front relay control module.
3. Check the harness between the front wiper motor and the front relay control module.
   Connector & terminal
   (B130) No. 1 — (B68) No. 13:

Is the resistance less than 10 Ω?

Yes — Go to 8.

No — Repair or replace the defective part.

8. CHECK HARNESS.

Check the harness between the front wiper motor connector and the chassis ground.
Connector & terminal
(B130) No. 4 — Chassis ground:

Is the resistance less than 10 Ω?

Yes — Go to 9.

No — Repair or replace the defective part.

9. CHECK FRONT WIPER MOTOR.

Check the continuity between front wiper motor terminals.

Connector & terminal

(B130) No. 1 — (B130) No. 5:

Is there continuity?

Yes	Check the front relay control module and replace it if defective. • Inspection: Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Basic Diagnostic Procedure. • Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.
No	Replace the front wiper motor. Ref. to WIPER AND WASHER SYSTEMS>Front Wiper Motor and Link.

10. CHECK STEERING RESPONSIVE HEADLIGHT SYSTEM

For inspection procedures in the steering responsive headlight system, refer to "Basic Diagnostic Procedure" of "HEADLIGHT / FOGLIGHT (DIAGNOSTICS)" section. Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS)>Basic Diagnostic Procedure.

11. CHECK LIGHTING SWITCH

For the lighting switch inspection, refer to "Combination Switch (Light)". Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION.

12. CHECK DIMMER & PASSING SWITCH

For the dimmer and housing switch inspection, refer to "Combination Switch (Light)". Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION.

LIGHTING SYSTEM > Headlight System

NOTE

For operation procedures of components of the headlight system, refer to the following sections.

- Headlight assembly: Ref. to LIGHTING SYSTEM>Headlight Assembly.
- Combination switch (light): Ref. to LIGHTING SYSTEM>Combination Switch (Light).
- Body integrated unit: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
- Front relay control module: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.
- Light control sensor: Ref. to LIGHTING SYSTEM>Light Control Sensor.

LIGHTING SYSTEM > High Beam Assist System

WIRING DIAGRAM

For the wiring diagram, refer to “Headlight System” in the wiring diagram. Ref. to WIRING SYSTEM>Headlight System>WIRING DIAGRAM.

LIGHTING SYSTEM > High Beam Assist System

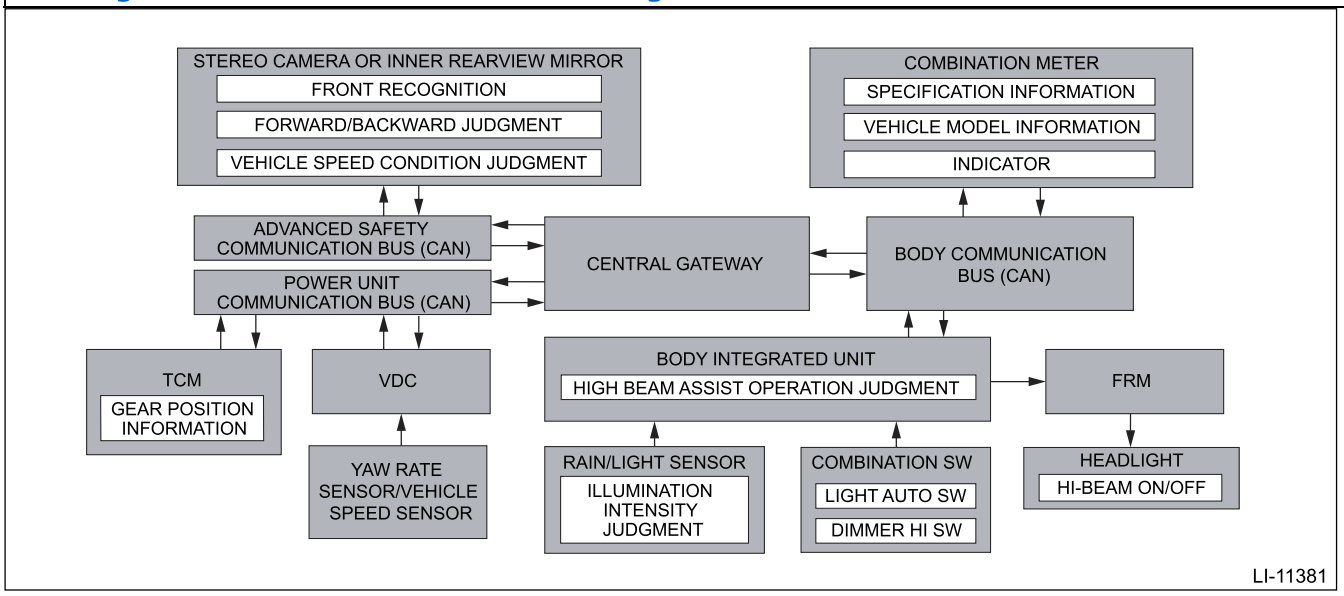
INSPECTION

1. BASIC INSPECTION

For inspection, refer to the “BODY CONTROL (DIAGNOSTICS)” section. Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostics with Phenomenon.

2. SYSTEM BLOCK DIAGRAM

Note:
The high beam assist system uses the stereo cameras of the EyeSight system or the inner rearview mirror to recognize the conditions in front of the vehicle, and automatically switches the high beam and low beam of the headlight.



LIGHTING SYSTEM > High Beam Assist System

NOTE

For operation procedures of components in the high beam assist system, refer to the following sections.

- Headlight assembly: Ref. to LIGHTING SYSTEM>Headlight Assembly.
- Combination switch (light): Ref. to LIGHTING SYSTEM>Combination Switch (Light).
- Body integrated unit: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
- Stereo camera: Ref. to EyeSight>Stereo Camera.
- Light control sensor: Ref. to LIGHTING SYSTEM>Light Control Sensor.
- Inner rearview mirror: Ref. to GLASS/WINDOWS/MIRRORS>Rearview Mirror.

WIRING DIAGRAM

For the wiring diagram, refer to "Daytime Running Light System" in the wiring diagram. Ref. to WIRING SYSTEM>Daytime Running Light System>WIRING DIAGRAM.

INSPECTION

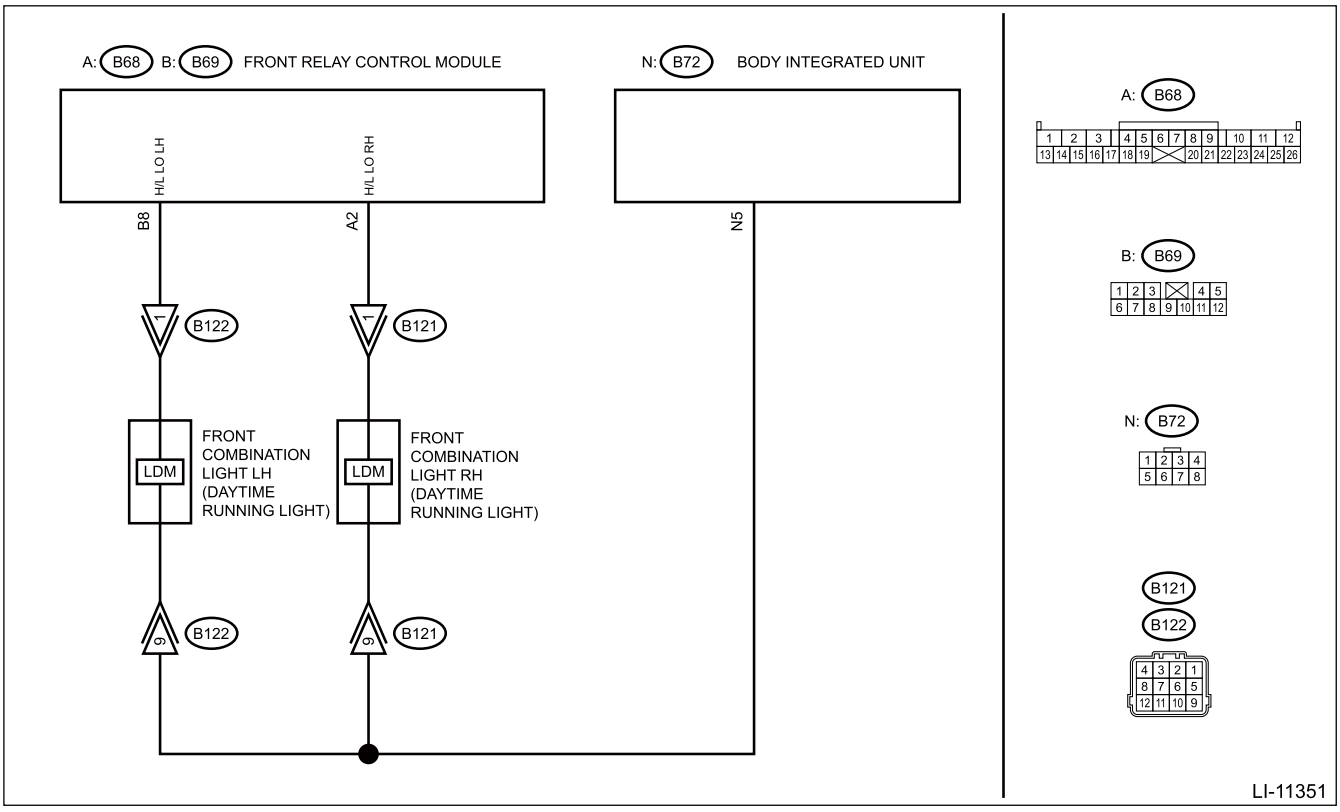
1. TROUBLE SYMPTOM

Daytime running light does not illuminate.

Wiring diagram:

Daytime running light system Ref. to WIRING SYSTEM>Daytime Running Light System>WIRING DIAGRAM.

- **MODEL WITHOUT SRH**



Note:

Operate the appropriate switch according to the inspection condition.

1. CHECK DTC.

1. Turn the ignition switch to ON.
2. Read DTCs of the following items using the Subaru Select Monitor. Ref. to LAN SYSTEM (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).
   - [Body Control]
   - [Front Relay Control Module]

Is DTC displayed?

Yes

Perform the diagnosis for the displayed DTCs.
- [Body Control]: Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
- [Front Relay Control Module]: Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.

No

Go to 2.

2. CHECK DATA MONITOR.

Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
- [IGN voltage]
- [Shift Position]
- [EPB operating status]
- [P SW]
- [Lighting II Switch Input]

Is the input signal normal?

Yes

Go to 3.

No

Check the defective part.

3. CHECK DAYTIME RUNNING LIGHT.

1. Start the engine.
2. Turn the lighting switch to the OFF position.
3. Release the parking brake.

Does the daytime running light illuminate/go off when the parking brake is operated [ON] ←→ [OFF]?

Yes	Check the headlight assembly and replace it if defective.
No	Go to 4.

4. CHECK HARNESS.

1. Turn the ignition switch to OFF.
2. Disconnect the front relay control module and headlight connector.
3. Check the harness between the front relay control module and the headlight.

Connector & terminal

Headlight RH

(B68) No. 2 (+) — (B121) No. 1 (−):

Headlight LH

(B69) No. 8 (+) — (B122) No. 1 (−):

Is harness normal?

Yes	Go to 5.
No	Repair or replace the defective part.

5. CHECK HARNESS.

1. Disconnect the body integrated unit and headlight connector.
2. Check the harness between the body integrated unit and headlight.

Connector & terminal

Headlight RH

(B121) No. 9 (+) — (B72) No. 5 (−):

Headlight LH

(B122) No. 9 (+) — (B72) No. 5 (−):

- **MODEL WITH SRH**

Is harness normal?

Yes	Go to 6.
No	Repair or replace the defective part.

1. CHECK DTC.

1. Turn the ignition switch to ON.
2. Read DTCs of the following items using the Subaru Select Monitor. Ref. to LAN SYSTEM (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).
   - [Body Control]
   - [Front Relay Control Module]

Is DTC displayed?

Yes	Perform the diagnosis for the displayed DTCs. • [Body Control]: Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST. • [Front Relay Control Module]: Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
No	Go to 2.

6. CHECK DAYTIME RUNNING LIGHT ILLUMINATION.

1. Disconnect the headlight connector.
2. Apply battery voltage to the DRL terminal input of the headlight unit.

Caution:

When applying battery voltage, do not mix up the positive (+) side and the negative (−) side. Incorrect polarity connection may cause internal circuit damage.

Connector & terminal

Headlight RH

(B121) No. 1 (+) — (B122) No. 9 (−):

Headlight LH

(B122) No. 1 (+) — (B122) No. 9 (−):

Does the daytime running light illuminate?

Yes	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Replace the headlight. Ref. to LIGHTING SYSTEM>Headlight Assembly.

2. CHECK DATA MONITOR.

Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [IGN voltage]
- [Shift Position]
- [EPB operating status]
- [P SW]
- [Lighting II Switch Input]

Is the input signal normal?

Yes	Go to 3.
No	Check the defective part.

3. CHECK DATA MONITOR.

1. Start the engine.
2. Release the parking brake.
3. Using Subaru Select Monitor, display [Daytime Running Light(Alternate System) Output] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display of [Daytime Running Light(Alternate System) Output] switch between [OFF] ←→ [ON] when the lighting switch is switched from the OFF position to the 2 (HEAD) position?

Yes	Check the headlight assembly and replace it if defective.
No	Check the body integrated unit and replace it if defective. • Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure. • Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

NOTE

For operation procedures of components of the daytime running light system, refer to the following sections.

- Headlight assembly: Ref. to LIGHTING SYSTEM>Headlight Assembly.
- Combination switch (light): Ref. to LIGHTING SYSTEM>Combination Switch (Light).
- Body integrated unit: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
- Front relay control module: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.

WIRING DIAGRAM

For the wiring diagram, refer to “Clearance Light and Illumination Light System” in the wiring diagram. Ref. to WIRING SYSTEM>Clearance Light and Illumination Light System>WIRING DIAGRAM.

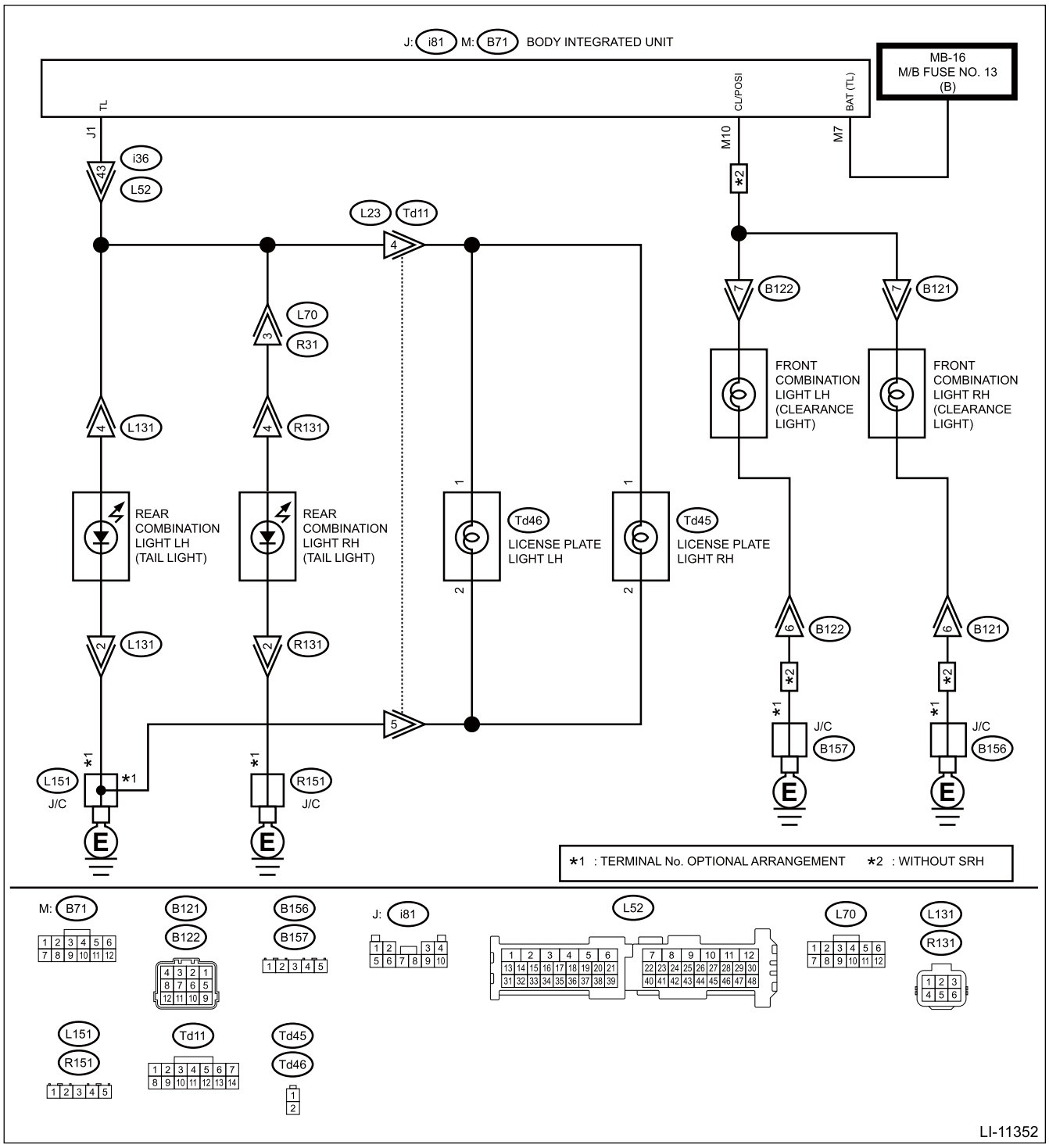
INSPECTION

1. TROUBLE SYMPTOM

Parking light and tail light do not illuminate or lights are weak

Wiring diagram:

Clearance light and illumination light system Ref. to WIRING SYSTEM>Clearance Light and Illumination Light System>WIRING DIAGRAM.



Note:

Perform unit inspection of the combination switch (light) and illumination light to check that there are no problems.

1. CHECK ILLUMINATION LIGHT SYSTEM.

1. Turn the ignition switch to ON.
2. Turn the lighting switch to the switch 1 (TAIL) position.

Does the illumination light come on?

Yes	Illumination light is normal.
No	Go to 2.

2. CHECK BODY INTEGRATED UNIT.

Read the DTC of [Body Control] using the Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

Is DTC displayed?

Yes	Perform the diagnosis for the displayed DTCs. Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
No	Go to 3.

3. CHECK POWER SUPPLY.

Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [BATT voltage (control)]
- [BATT voltage (BACKUP)]
- [IGN voltage]

Is the voltage 9 — 16 V?

Yes	Go to 4.
No	Check the body integrated unit and replace it if defective. • Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure. • Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

4. CHECK CLEARANCE LIGHT POWER SUPPLY CIRCUIT.

1. Turn the ignition switch to OFF.
2. Disconnect the connector of body integrated unit.
3. Measure the voltage between the body integrated unit connector and chassis ground.
   Terminals
   (B71) No. 7 (+) — Chassis ground (−):

Is the voltage 9 — 16 V?

Yes	Go to 5.
No	Check the body integrated unit and replace it if defective. • Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure. • Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

5. CHECK HARNESS.

1. Disconnect the connector of the light which did not illuminate.
2. Check the harness between body integrated unit and each light.
   Connector & terminal
   Headlight RH (model without SRH)
   (B71) No. 10 — (B121) No. 7:
   Headlight LH (model without SRH)
   (B71) No. 10 — (B122) No. 7:
   Rear combination light RH
   (i81) No. 1 — (R131) No. 4:
   Rear combination light LH
   (i81) No. 1 — (L131) No. 4:
   License plate light RH
   (i81) No. 1 — (Td45) No. 1:
   License plate light LH
   (i81) No. 1 — (Td46) No. 1:

Is harness normal?

Yes	Go to 6.
No	Repair or replace the defective part.

6. CHECK THE LIGHTS.

Apply battery voltage between light connector terminals.

Caution:
When applying battery voltage, do not mix up the positive (+) side and the negative (−) side. Incorrect polarity connection may cause internal LED damage.

Connector & terminal

Headlight RH (model without SRH)
(B121) No. 7 (+) — (B121) No. 6 (−):

Headlight LH (model without SRH)
(B121) No. 7 (+) — (B122) No. 6 (−):

Rear combination light RH
(R131) No. 4 (+) — (R131) No. 2 (−):

Rear combination light LH
(L131) No. 4 (+) — (L131) No. 2 (−):

License plate light RH
(Td45) No. 1 (+) — (Td45) No. 2 (−):

License plate light LH
(Td46) No. 1 (+) — (Td46) No. 2 (−):

Does it illuminate?

Yes	Go to 7.
No	Repair or replace the defective part.

7. CHECK HARNESS.

Check the harness between each light connector and the chassis ground.

Connector & terminal

Rear combination light RH

(R131) No. 2 — Chassis ground:

Rear combination light LH

(L131) No. 2 — Chassis ground:

License plate light RH

(Td45) No. 2 — Chassis ground:

License plate light LH

(Td46) No. 2 — Chassis ground:

Is the resistance less than 10 Ω?

Yes	Check the body integrated unit and replace it if defective. • Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure. • Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Repair or replace the defective part.

2. CHECK LIGHTING SWITCH

For the lighting switch inspection, refer to “Combination Switch (Light)”. Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION.

LIGHTING SYSTEM > Clearance Light and Illumination Light System

NOTE

For operation procedures of components of the clearance light and illumination light system, refer to the following sections.

- Headlight assembly: Ref. to LIGHTING SYSTEM>Headlight Assembly.
- Combination switch (light): Ref. to LIGHTING SYSTEM>Combination Switch (Light).
- Rear combination light assembly: Ref. to LIGHTING SYSTEM>Rear Combination Light Assembly.
- License plate light: Ref. to LIGHTING SYSTEM>License Plate Light.
- LED illumination light: Ref. to LIGHTING SYSTEM>LED Illumination Light.

WIRING DIAGRAM

For the wiring diagram, refer to "Front Fog Light System" in the wiring diagram. Ref. to WIRING SYSTEM>Front Fog Light System>WIRING DIAGRAM.

INSPECTION

1. TROUBLE SYMPTOM

Fog light does not illuminate.

Note:
Operate the appropriate switch according to the inspection condition.

1. CHECK DTC.

1. Turn the ignition switch to ON.
2. Turn the lighting switch to the switch 2 (HEAD) position.
3. Turn the front fog light switch of the lighting switch to ON.
4. Read DTCs of the following items using the Subaru Select Monitor. Ref. to LAN SYSTEM (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).
   - [Body Control]
   - [Front Relay Control Module]

Is DTC displayed?

Yes

Perform the diagnosis for the displayed DTCs.
- [Body Control]: Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
- [Front Relay Control Module]: Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.

No

Go to 2.

2. CHECK POWER SUPPLY.

Display data of the following items using Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [Body Control]
  - [BATT voltage (control)]
  - [BATT voltage (BACKUP)]
  - [IGN voltage]
- [Front Relay Control Module]
  - [BATT Voltage (Control)]
  - [BATT Voltage (BACKUP)]
  - [IGN Voltage]

Is the voltage 9 — 16 V?

Yes — Go to 3.

No — Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

Check the front relay control module and replace it if defective.

- Inspection: Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.

3. PERFORM ACTIVE TEST.

Using the Subaru Select Monitor, select [F Fog Light Output] in [Active Test] of [Front Relay Control Module] to turn on the front fog light. Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Active Test.

Does it illuminate?

Yes — Go to 4.

No — Check the harness of the relay and output circuit. If there are no problems, replace the front relay control module. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.

4. CHECK CURRENT DATA.

1. Turn the ignition switch to ON.
2. Using Subaru Select Monitor, display [Front Fog Light SW input] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display change from [OFF] ←→ [ON] when the front fog light switch of the lighting switch is operated?

Yes	Go to 5.
No	Check the harnesses of the combination switch, connector and input circuit. If there are no problems, replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

5. CHECK CURRENT DATA.

1. Turn the ignition switch to ON.
2. Using Subaru Select Monitor, display [F Fog Light Request] in [Data monitor] of [Front Relay Control Module]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display change from [OFF] ←→ [ON] when the front fog light switch of the lighting switch is operated?

Yes	Replace the front relay control module. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.
No	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

2. CHECK FRONT FOG LIGHT SWITCH

For the front fog light switch inspection, refer to "Combination Switch (Light)". Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION.

LIGHTING SYSTEM > Front Fog Light System

NOTE

For operation procedures of components of the front fog light system, refer to the following sections.

- Combination switch (light): Ref. to LIGHTING SYSTEM>Combination Switch (Light).
- Front fog light assembly: Ref. to LIGHTING SYSTEM>Front Fog Light Assembly.
- Body integrated unit: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
- Front relay control module: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.

WIRING DIAGRAM

For the wiring diagram, refer to “Turn Signal and Hazard Light System” in the wiring diagram. Ref. to WIRING SYSTEM>Turn Signal Light and Hazard Light System>WIRING DIAGRAM.

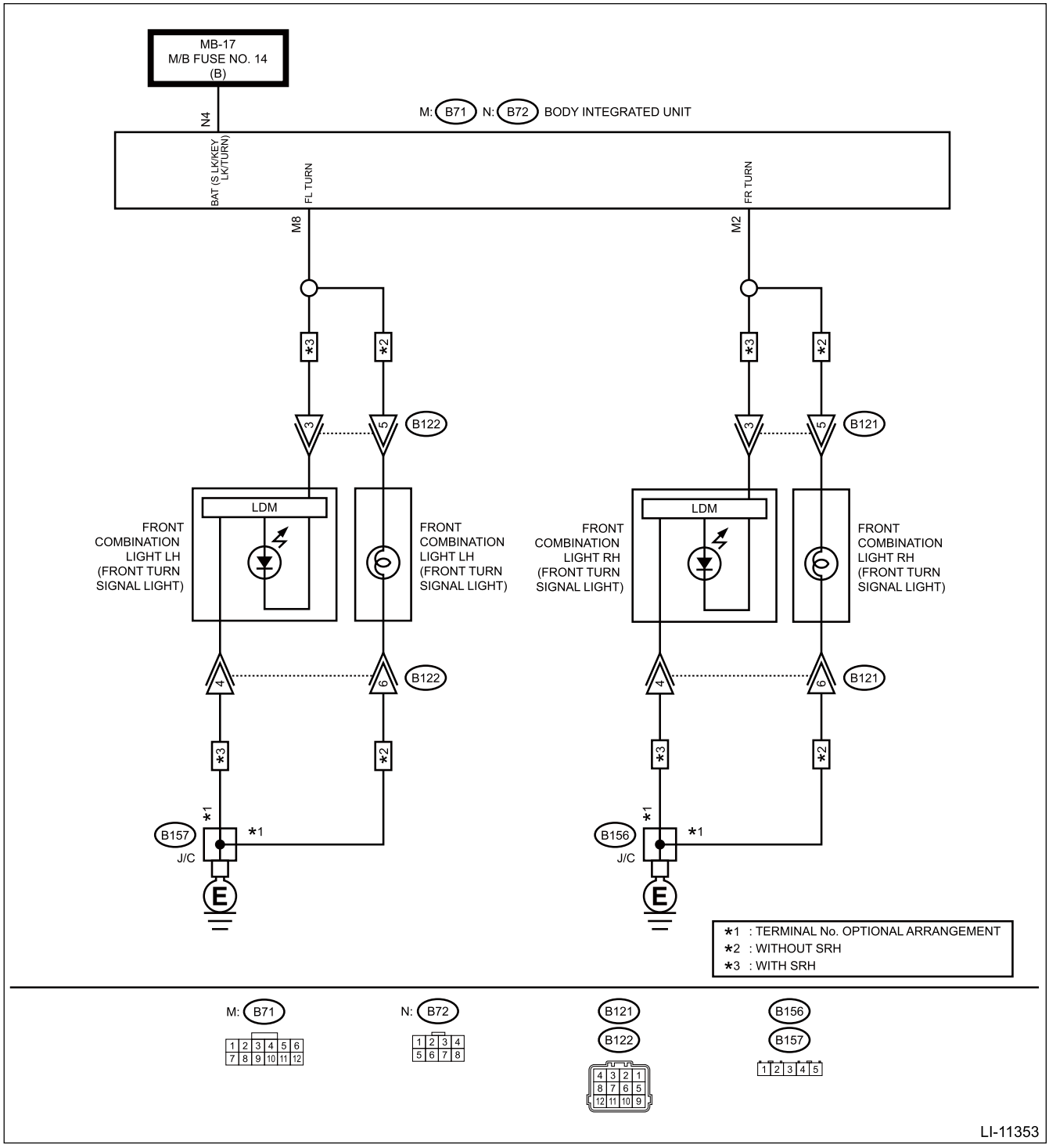
INSPECTION

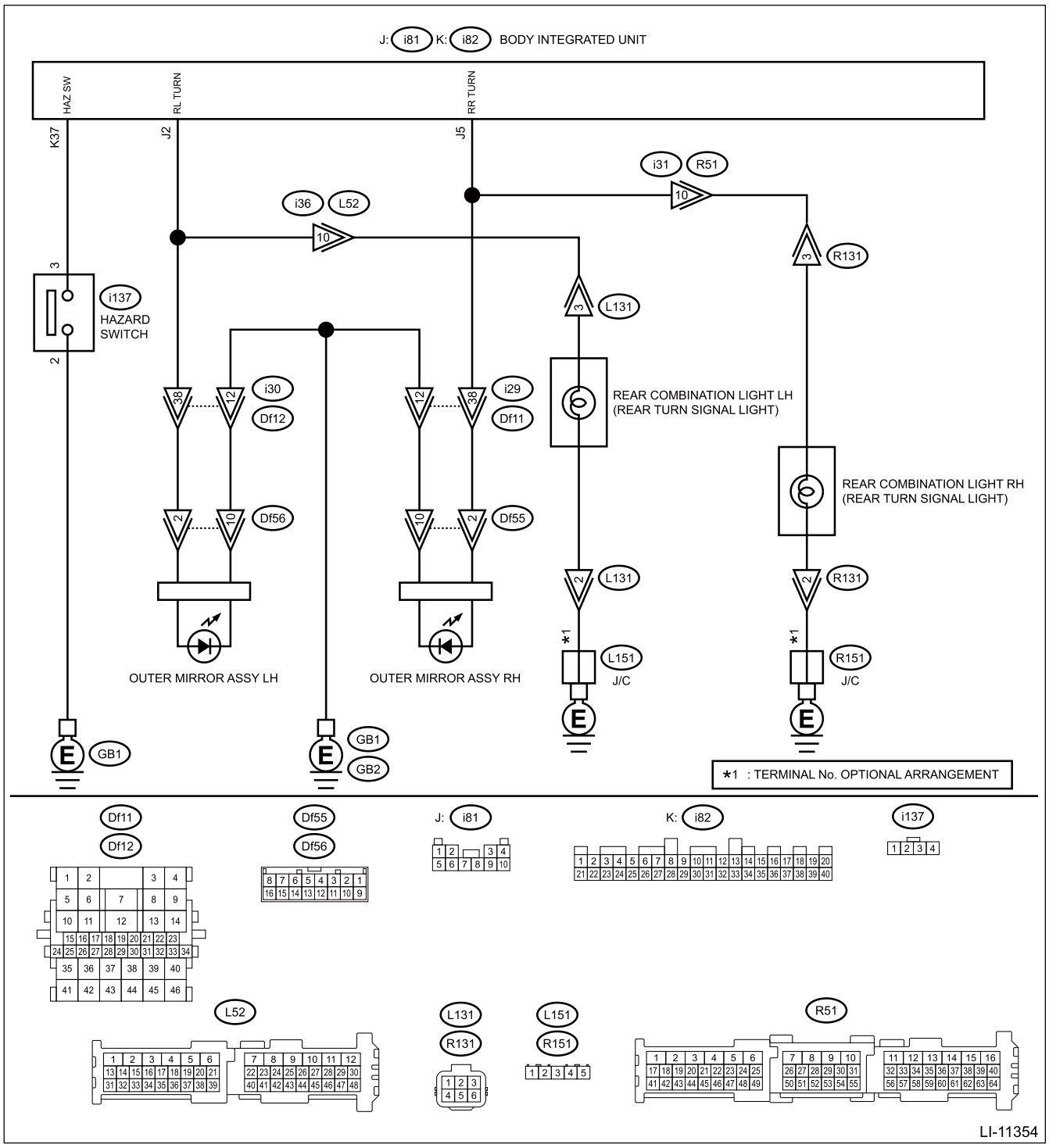
1. TROUBLE SYMPTOM

Symptoms	Reference
The hazard light does not operate.	Ref. to LIGHTING SYSTEM>Turn Signal Light and Hazard Light System>INSPECTION > CHECK HAZARD LIGHT OPERATION.
The turn signal light does not operate.	Ref. to LIGHTING SYSTEM>Turn Signal Light and Hazard Light System>INSPECTION > CHECK TURN SIGNAL LIGHT SYSTEM.
The lane change signal function of the turn signal indicator does not operate.	Ref. to LIGHTING SYSTEM>Turn Signal Light and Hazard Light System>INSPECTION > CHECK LANE CHANGE SIGNAL FUNCTION.

2. CHECK HAZARD LIGHT OPERATION

Wiring diagram:
Turn signal and hazard light system Ref. to WIRING SYSTEM>Turn Signal Light and Hazard Light System>WIRING DIAGRAM.


MB-17
M/B FUSE NO. 14
(B)
N4
M: B71 N: B72 BODY INTEGRATED UNIT
BAT (S LK/KEY LK/TURN)
FL TURN
FR TURN
M8
M2
*3
*2
3
5
B122
B121
LDM
FRONT COMBINATION LIGHT LH (FRONT TURN SIGNAL LIGHT)
FRONT COMBINATION LIGHT RH (FRONT TURN SIGNAL LIGHT)
4
6
*1
B157
B156
J/C
E
*1 : TERMINAL No. OPTIONAL ARRANGEMENT
*2 : WITHOUT SRH
*3 : WITH SRH
M: B71
N: B72
B121
B122
B156
B157
LI-11353



Note:

Operate the appropriate switch according to the inspection condition.

1. CHECK HAZARD LIGHT OPERATION.

1. Turn the hazard switch to ON.
2. Check that the hazard light operates properly.

Does the hazard light blink?

Yes	The hazard light system is normal.
No	Go to 2.

2. CHECK BULB.

Check the hazard (turn signal) light bulb.

Is the bulb normal?

Yes	Go to 3.
No	Replace the hazard (turn signal) light bulb.

3. CHECK DTC.

1. Turn the ignition switch to ON and wait for at least 10 seconds.
2. Read the DTC of [Body Control] using the Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

Is DTC displayed?

Yes	Perform the diagnosis for the displayed DTCs. Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
No	Go to 4.

4. CHECK CURRENT DATA.

Using Subaru Select Monitor, display [Hazard switch Input] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display change as [OFF] ←→ [ON], when the hazard switch is turned from OFF to ON?

Yes — Go to 8.

No — Go to 5.

5. CHECK HAZARD SWITCH.

1. Turn the ignition switch to OFF.
2. Check the hazard switch. Ref. to LIGHTING SYSTEM>Hazard Switch>INSPECTION.

Is the hazard switch normal?

Yes — Go to 6.

No — Replace the hazard switch. Ref. to LIGHTING SYSTEM>Hazard Switch.

6. CHECK HARNESS.

1. Disconnect the connectors of body integrated unit and hazard switch.
2. Check the harness between body integrated unit and hazard switch.
   Connector & terminal
   (i82) No. 37 — (i137) No. 3:

Is harness normal?

Yes — Go to 7.

No — Repair or replace the defective part.

7. CHECK HARNESS.

Check the harness between the hazard switch connector and the chassis ground.

Connector & terminal

(i137) No. 2 — Chassis ground:

Is the resistance less than 10 Ω?

Yes

Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

No

Repair or replace the defective part.

8. CHECK CURRENT DATA.

Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control].
Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [Left turn signal output]
- [Right turn signal output]

Does the display change as [OFF] ←→ [ON], when the hazard switch is turned from OFF to ON?

Yes

Go to 9.

No

Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

9. CHECK POWER SUPPLY.

1. Turn the ignition switch to OFF.
2. Disconnect the connector of body integrated unit.
3. Measure the voltage between the body integrated unit connector and chassis ground.
   Connector & terminal
   (B72) No. 4 (+) — Chassis ground (−):

Is the voltage 9 — 16 V?

Yes — Go to 10.

No — Check the power supply circuit. Ref. to BODY CONTROL(DIAGNOSTICS)>General Description>INSPECTION.

10. CHECK HARNESS.

1. Disconnect the connectors of body integrated unit and each turn signal light.
2. Check the harness between body integrated unit and each turn signal light.
   Connector & terminal
   Front turn signal light RH (model without SRH)
   (B71) No. 2 — (B121) No. 5:
   Front turn signal light LH (model without SRH)
   (B71) No. 8 — (B122) No. 5:
   Front turn signal light RH (model with SRH)
   (B71) No. 2 — (B121) No. 3:
   Front turn signal light LH (model with SRH)
   (B71) No. 8 — (B122) No. 3:
   Side turn signal light RH
   (i81) No. 5 — (Df55) No. 2:
   Side turn signal light LH
   (i81) No. 2 — (Df56) No. 2:
   Rear turn signal light RH
   (i81) No. 5 — (R131) No. 3:
   Rear turn signal light LH
   (i81) No. 2 — (L131) No. 3:

Is harness normal?

Yes — Go to 11.

No — Repair or replace the defective part.

11. CHECK HARNESS.

Check the harness between each turn light connector and the chassis ground.

Connector & terminal

Front turn signal light RH (model without SRH)

(B121) No. 6 — Chassis ground:

Front turn signal light LH (model without SRH)

(B122) No. 6 — Chassis ground:

Front turn signal light RH (model with SRH)

(B121) No. 4 — Chassis ground:

Front turn signal light LH (model with SRH)

(B122) No. 4 — Chassis ground:

Side turn signal light RH

(Df55) No. 10 — Chassis ground:

Side turn signal light LH

(Df56) No. 10 — Chassis ground:

Rear turn signal light RH

(R131) No. 2 — Chassis ground:

Rear turn signal light LH

(L131) No. 2 — Chassis ground:

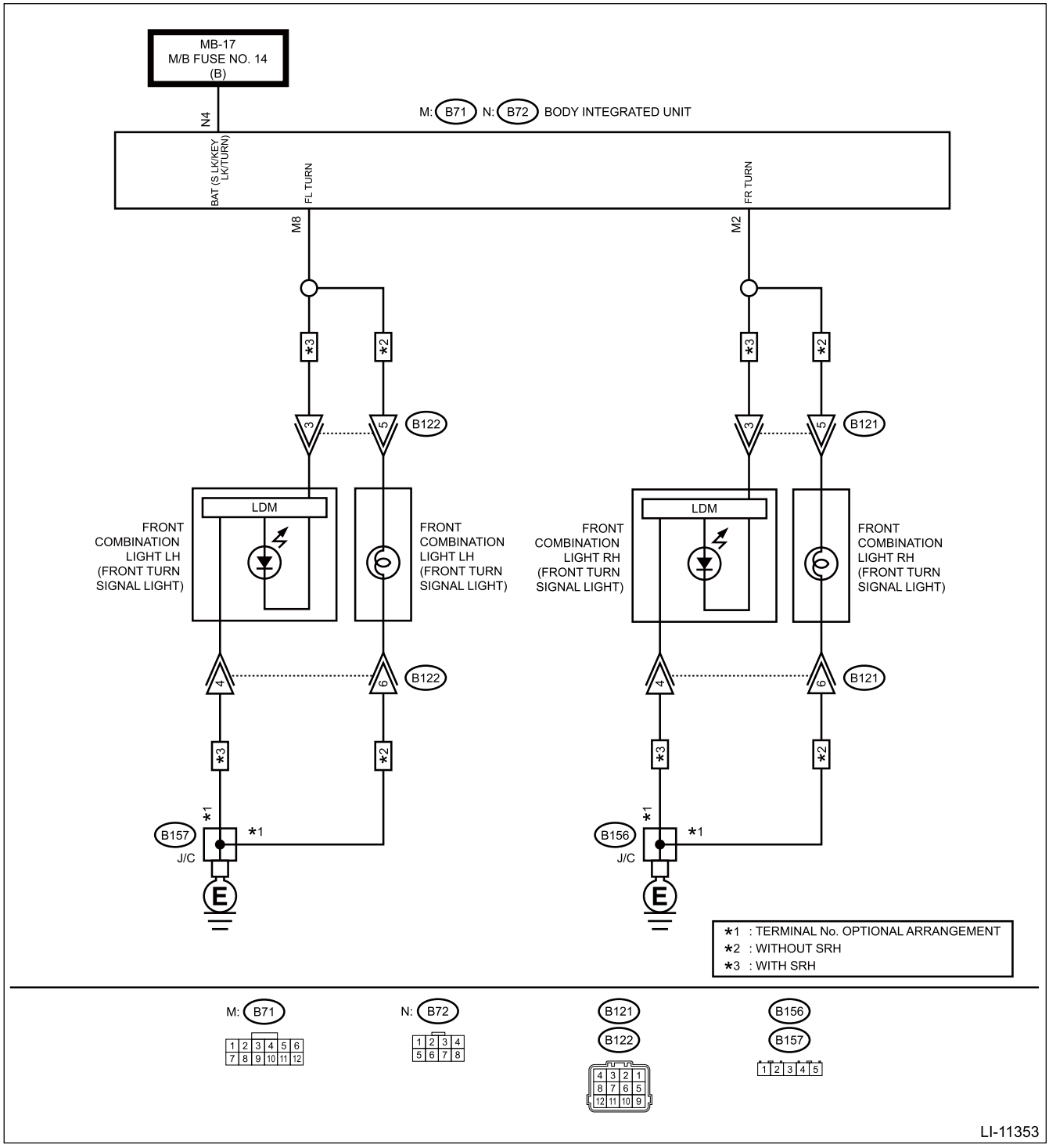
Is the resistance less than 10 Ω?

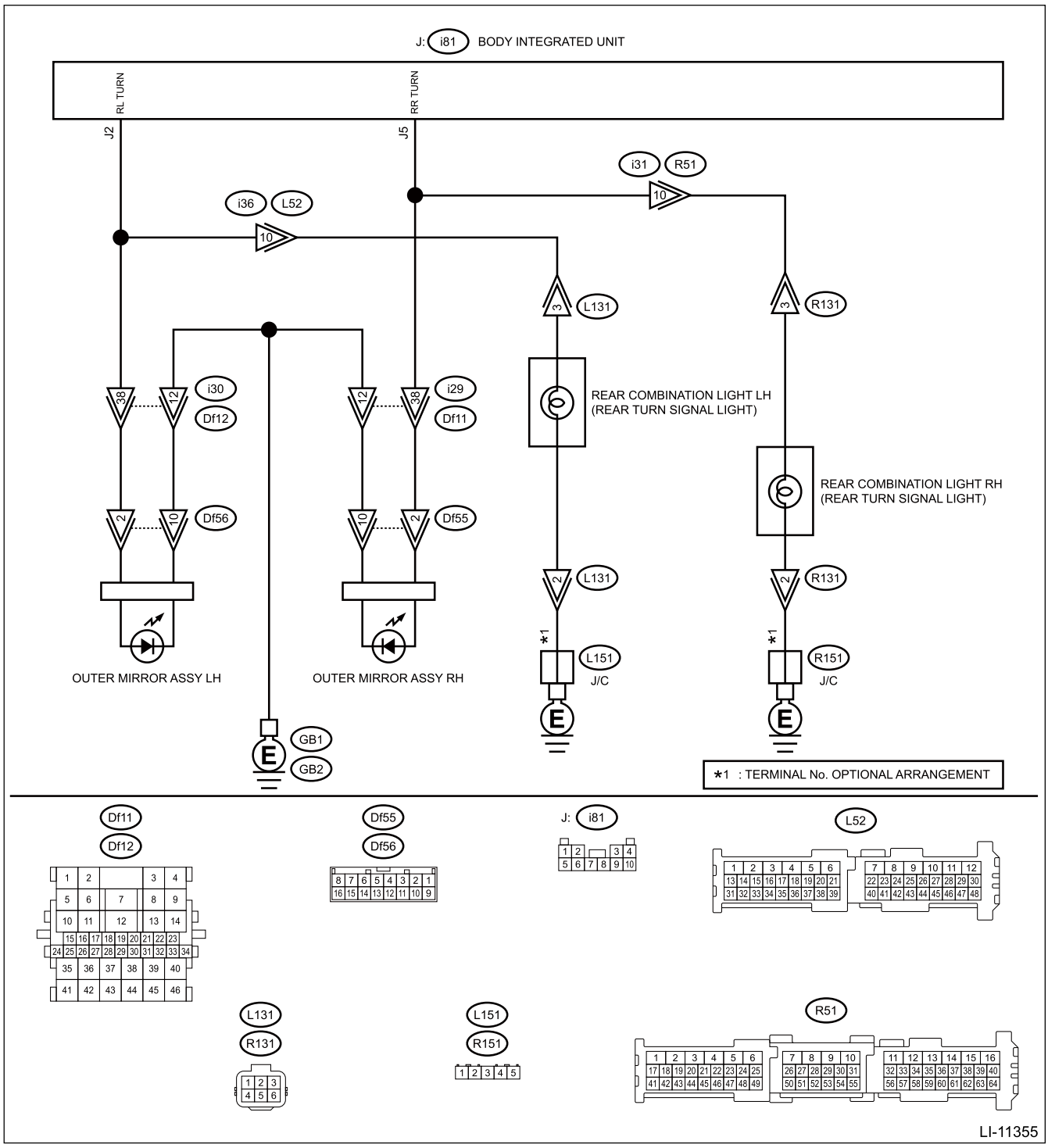
Yes	Check the body integrated unit and replace it if defective. • Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure. • Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Repair or replace the defective part.

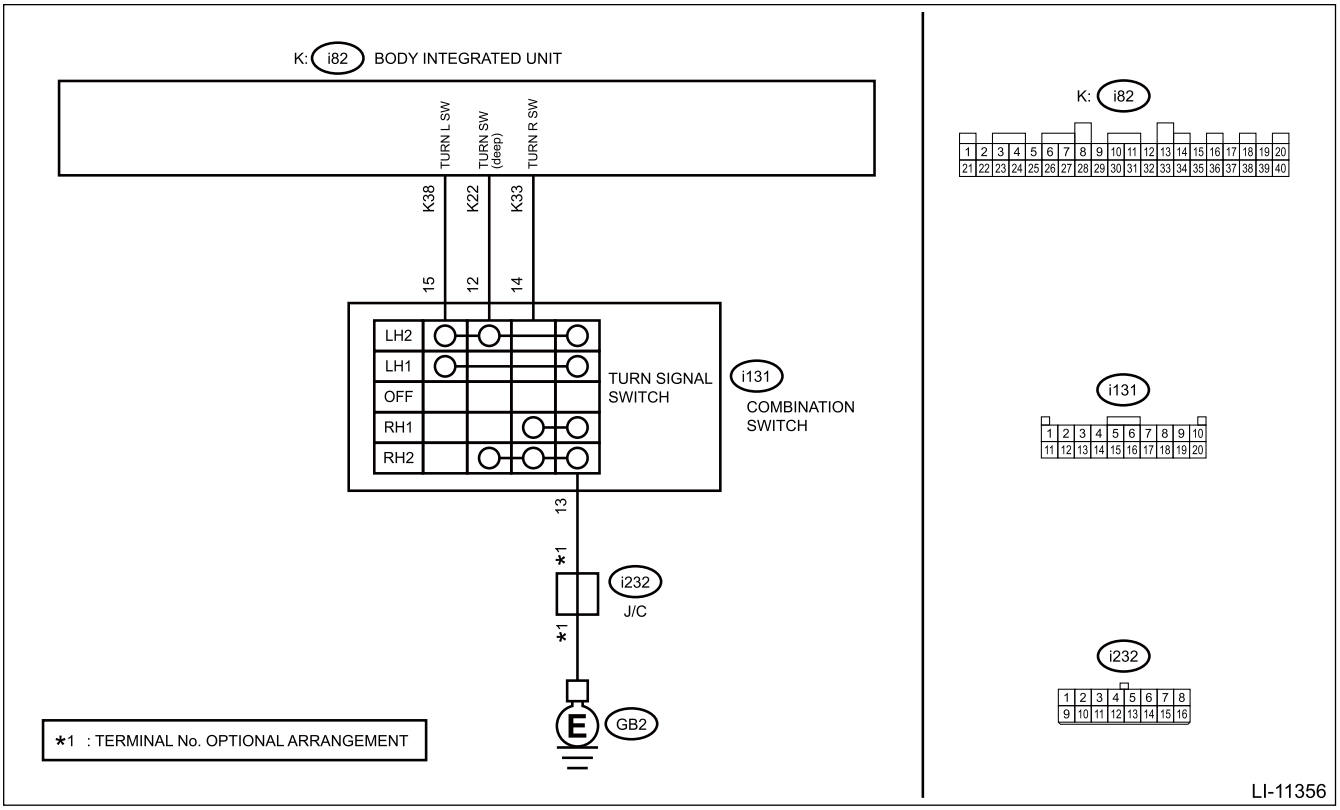
3. CHECK TURN SIGNAL LIGHT SYSTEM

Wiring diagram:

Turn signal and hazard light system Ref. to WIRING SYSTEM>Turn Signal Light and Hazard Light System>WIRING DIAGRAM.


MB-17
M/B FUSE NO. 14
(B)
N4
M: B71 N: B72 BODY INTEGRATED UNIT
BAT (S LK/KEY LK/TURN)
FL TURN
FR TURN
M8
M2
*3
*2
3
5
B122
B121
LDM
FRONT COMBINATION LIGHT LH (FRONT TURN SIGNAL LIGHT)
FRONT COMBINATION LIGHT RH (FRONT TURN SIGNAL LIGHT)
4
6
*1
B157
B156
J/C
E
*1 : TERMINAL No. OPTIONAL ARRANGEMENT
*2 : WITHOUT SRH
*3 : WITH SRH
M: B71
N: B72
B121
B122
B156
B157
LI-11353


J: i81 BODY INTEGRATED UNIT
RL TURN
RR TURN
J2
J5
i31
R51
i36
L52
L131
R131
i30
Df12
i29
Df11
REAR COMBINATION LIGHT LH
(REAR TURN SIGNAL LIGHT)
REAR COMBINATION LIGHT RH
(REAR TURN SIGNAL LIGHT)
Df56
Df55
L131
R131
*1
L151
R151
J/C
OUTER MIRROR ASSY LH
OUTER MIRROR ASSY RH
GB1
GB2
*1 : TERMINAL No. OPTIONAL ARRANGEMENT
Df11
Df12
Df55
Df56
J: i81
L52
L131
R131
L151
R151
R51
LI-11355



Note:

Operate the appropriate switch according to the inspection condition.

1. CHECK TURN SIGNAL LIGHT OPERATION.

1. Turn the ignition switch to ON.
2. Turn the turn signal light switch LH and RH to ON.

Does the turn signal light blink?

Yes	The turn signal light system is normal.
No	Go to 2.

2. CHECK BULB.

Check the hazard (turn signal) light bulb.

Is the bulb normal?

Yes	Go to 3.
No	Replace the hazard (turn signal) light bulb.

3. CHECK POWER SUPPLY.

Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [BATT voltage (control)]
- [BATT voltage (BACKUP)]
- [IGN voltage]

Is the voltage 9 — 16 V?

Yes	Go to 4.
No	Check the body integrated unit and replace it if defective. • Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure. • Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

4. CHECK DTC.

1. Turn the ignition switch to ON and wait for at least 10 seconds.
2. Read the DTC of [Body Control] using the Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

Is DTC displayed?

Yes	Perform the diagnosis for the displayed DTCs. Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
No	Go to 5.

5. CHECK CURRENT DATA.

Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control].
Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [Left turn signal input]
- [Right turn signal input]
- [Turn Signal Deep Push Input]

Does the display change as [OFF] ←→ [ON], when the turn signal switch is turned from OFF to ON?

Yes — Go to 6.

No — Go to 7.

6. CHECK HARNESS.

1. Disconnect the connectors of body integrated unit and each turn signal light.
2. Check the harness between body integrated unit and each turn signal light.

Connector & terminal

Front turn signal light RH (model without SRH)
(B71) No. 2 — (B121) No. 5:

Front turn signal light LH (model without SRH)
(B71) No. 8 — (B122) No. 5:

Front turn signal light RH (model with SRH)
(B71) No. 2 — (B121) No. 3:

Front turn signal light LH (model with SRH)
(B71) No. 8 — (B122) No. 3:

Side turn signal light RH
(i81) No. 5 — (Df55) No. 2:

Side turn signal light LH
(i81) No. 2 — (Df56) No. 2:

Rear turn signal light RH
(i81) No. 5 — (R131) No. 3:

Rear turn signal light LH
(i81) No. 2 — (L131) No. 3:

Is harness normal?

Yes — Go to 7.

No — Repair or replace the defective part.

7. CHECK TURN SIGNAL SWITCH.

Check the turn signal switch. Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION.

Is the turn signal switch OK?

Yes	Go to 8.
No	Replace the combination switch (light). Ref. to LIGHTING SYSTEM>Combination Switch (Light).

8. CHECK HARNESS.

1. Turn the ignition switch to OFF.
2. Disconnect the connectors of body integrated unit and combination switch (light).
3. Check the harness between body integrated unit and combination switch (light).

Connector & terminal

(i82) No. 33 — (i131) No. 14:
(i82) No. 38 — (i131) No. 15:
(i82) No. 22 — (i131) No. 12:

Is harness normal?

Yes	Go to 9.
No	Repair or replace the defective part.

9. CHECK HARNESS.

Check the harness between the combination switch (light) connector and the chassis ground.

Connector & terminal

(i131) No. 13 — Chassis ground:

Is the resistance less than 10 Ω?

Yes

Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

No

Repair or replace the defective part.

4. CHECK LANE CHANGE SIGNAL FUNCTION

Note:

Operate the appropriate switch according to the inspection condition.

1. CHECK HAZARD LIGHT SYSTEM.

Check the hazard light system. Ref. to LIGHTING SYSTEM>Turn Signal Light and Hazard Light System>INSPECTION > CHECK HAZARD LIGHT OPERATION.

Is the hazard light system normal?

Yes

Go to 2.

No

Repair the hazard light system.

2. CHECK TURN SIGNAL LIGHT SYSTEM.

Check the turn signal light system. Ref. to LIGHTING SYSTEM>Turn Signal Light and Hazard Light System>INSPECTION > CHECK TURN SIGNAL LIGHT SYSTEM.

Is the turn signal light system normal?

Yes

Go to 3.

No

Repair the turn signal light system.

3. CHECK BODY INTEGRATED UNIT SETTING.

Using Subaru Select Monitor, display data of [Lane change signal setting] in [Customize] of [Body Control]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is the setting in the [Support]?

Yes

Check the body integrated unit and replace it if defective.

- Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
- Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

No

Turn the setting to [Support].

5. CHECK TURN SIGNAL SWITCH

For the turn signal switch inspection, refer to "Combination Switch (Light)". Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION.

6. CHECK HAZARD SWITCH

For the hazard switch inspection, refer to "Hazard Switch". Ref. to LIGHTING SYSTEM>Hazard Switch>INSPECTION.

LIGHTING SYSTEM > Turn Signal Light and Hazard Light System

NOTE

For operation procedures of components of the turn signal and hazard light system, refer to the following sections.

- Headlight assembly: Ref. to LIGHTING SYSTEM>Headlight Assembly.
- Front turn signal light bulb: Ref. to LIGHTING SYSTEM>Front Turn Signal Light Bulb.
- Combination switch (light): Ref. to LIGHTING SYSTEM>Combination Switch (Light).
- Side turn signal light assembly: Ref. to LIGHTING SYSTEM>Side Turn Signal Light Assembly.
- Rear combination light assembly: Ref. to LIGHTING SYSTEM>Rear Combination Light Assembly.
- Rear turn signal light bulb: Ref. to LIGHTING SYSTEM>Rear Combination Light Assembly>DISASSEMBLY.
- Hazard switch: Ref. to LIGHTING SYSTEM>Hazard Switch.

LIGHTING SYSTEM > Back-up Light System

WIRING DIAGRAM

For the wiring diagram, refer to “Back-up Light System” in the wiring diagram. Ref. to WIRING SYSTEM>Back-up Light System>WIRING DIAGRAM.

LIGHTING SYSTEM > Back-up Light System

INSPECTION

1. CHECK BACK-UP LIGHT SWITCH (MT model)

For the back-up light switch inspection, refer to “Back-up Light Switch” in the “MANUAL TRANSMISSION & DIFFERENTIAL” section. Ref. to MANUAL TRANSMISSION AND DIFFERENTIAL(TY75)>Switches and Harness>INSPECTION > BACK-UP LIGHT SWITCH.

2. CHECK INHIBITOR SWITCH (CVT MODEL)

For the inhibitor switch inspection, refer to “Inhibitor Switch” in “CONTINUOUSLY VARIABLE TRANSMISSION” section. Ref. to CONTINUOUSLY VARIABLE TRANSMISSION(TR690)>Inhibitor Switch>INSPECTION.

LIGHTING SYSTEM > Back-up Light System

NOTE

For operation procedures of components of the back-up light system, refer to “Rear Combination Light Assembly”. Ref. to LIGHTING SYSTEM>Rear Combination Light Assembly.

LIGHTING SYSTEM > Stop Light System

WIRING DIAGRAM

For the wiring diagram, refer to “Stop Light System” in the wiring diagram. Ref. to WIRING SYSTEM>Stop Light System>WIRING DIAGRAM.

LIGHTING SYSTEM > Stop Light System

INSPECTION

1. CHECK STOP LIGHT SWITCH

For the stop light switch inspection, refer to “Stop Light Switch” in the “BRAKE” section. Ref. to BRAKE>Stop Light Switch>INSPECTION.

2. STOP LIGHT CHECK

For the stop light inspection, refer to the following sections.

- Rear combination light assembly: Ref. to LIGHTING SYSTEM>Rear Combination Light Assembly>INSPECTION.
- High-mounted stop light: Ref. to LIGHTING SYSTEM>High-mounted Stop Light>INSPECTION.

LIGHTING SYSTEM > Stop Light System

NOTE

For operation procedures of components of the stop light system, refer to the following sections.

- Rear combination light assembly: Ref. to LIGHTING SYSTEM>Rear Combination Light Assembly.
- High-mounted stop light: Ref. to LIGHTING SYSTEM>High-mounted Stop Light.
- Stop light switch: Ref. to BRAKE>Stop Light Switch.

WIRING DIAGRAM

For the wiring diagram, refer to “Interior Light System” in the wiring diagram. Ref. to WIRING SYSTEM>Interior Light System>WIRING DIAGRAM.

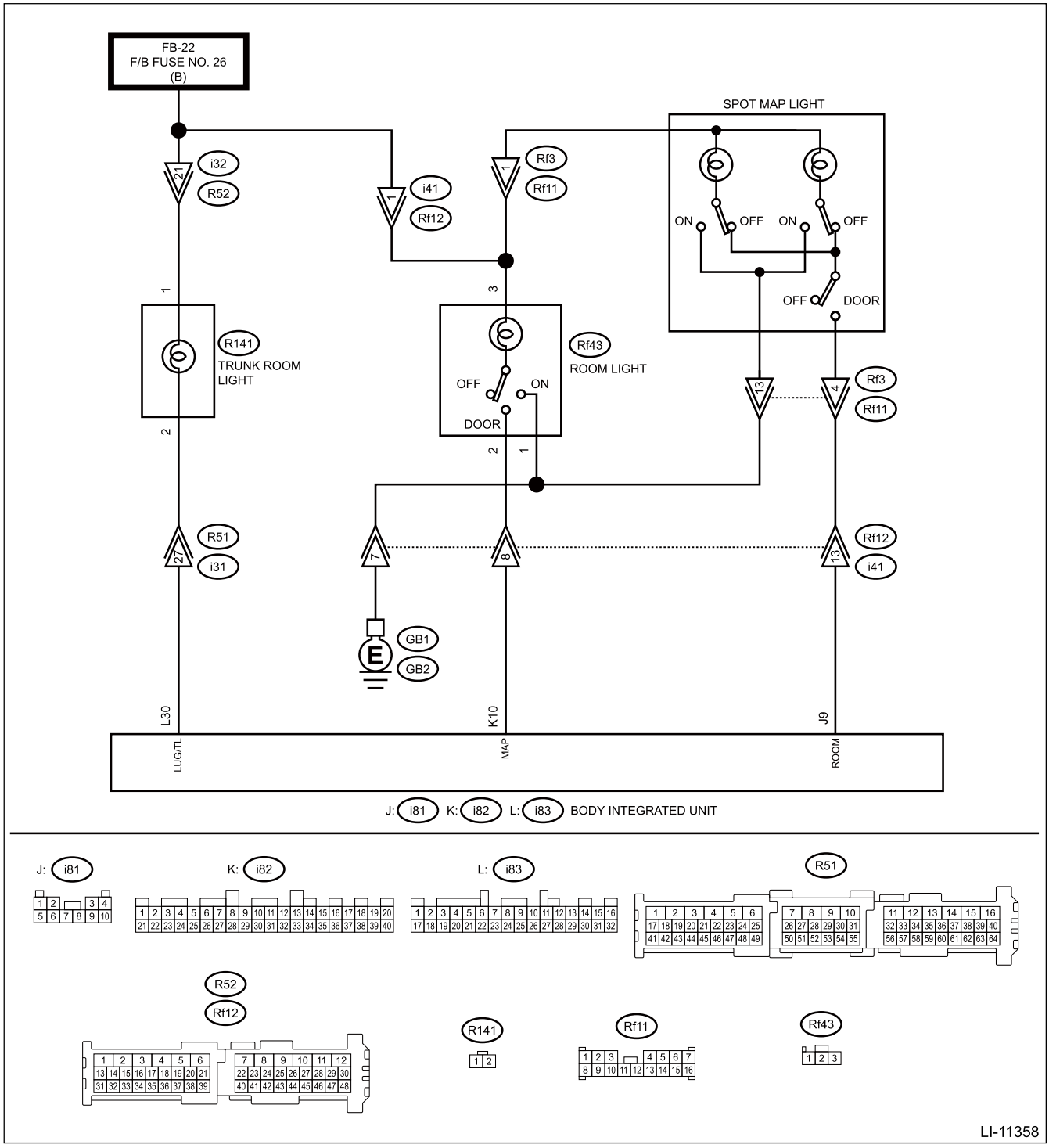
INSPECTION

1. TROUBLE SYMPTOM

The spot map light, room light or trunk room light does not illuminate.

Wiring diagram:

Interior light system Ref. to WIRING SYSTEM>Interior Light System>WIRING DIAGRAM.



Note:

Operate the appropriate switch according to the inspection condition.

1. CHECK INTERIOR LIGHT ILLUMINATION.

Note:
Perform the check from step 2 since there is no ON position for the trunk room light.

1. Turn the interior light switch to ON.
2. Check that the interior light operates properly.

Does the interior light illuminate?

Yes	Go to 7.
No	Go to 2.

2. CHECK THE LIGHTS.

1. Disconnect the connector of the light which did not illuminate.
2. Check between the connector terminals of the light (ON position).
   Connector & terminal
   Spot map light
   (Rf3) No. 1 — (Rf3) No. 13:
   Room light
   (Rf43) No. 3 — (Rf43) No. 1:
3. Check between the connector terminals of light (door position).
   Connector & terminal
   Spot map light
   (Rf3) No. 1 — (Rf3) No. 4:
   Room light
   (Rf43) No. 3 — (Rf43) No. 2:
4. Check between the connector terminals of trunk room light.
   Connector & terminal
   (R141) No. 1 — (R141) No. 2:

- Is the resistance less than 1 Ω? (Except for spot map light)
- Is the resistance approximately 18 Ω? (Spot map light)

Yes	Go to 3.
No	Repair or replace the light.

3. CHECK FUSE.

Check the F/B fuse No. 26. Ref. to LIGHTING SYSTEM>Relay and Fuse>INSPECTION > CHECK FUSE.

Is the fuse OK?

Yes	Go to 4.
No	Replace the fuse.

4. CHECK CONNECTOR.

Check the connecting condition of connector.

Is the connector firmly installed?

Yes	Go to 5.
No	Repair or replace the defective part.

5. CHECK HARNESS.

1. Disconnect the connector of the light which did not illuminate.
2. Check the harnesses between light (ON position) connector and chassis ground.

Connector & terminal

Spot map light

(Rf11) No. 13 — Chassis ground:

Room light

(Rf43) No. 1 — Chassis ground:

Is the resistance less than 10 Ω?

Yes	Go to 6.
No	Repair or replace the defective part.

6. CHECK HARNESS.

Check the harness between the F/B fuse No. 26 (downstream side) and the light.

Connector & terminal

Spot map light

F/B fuse No. 26 (downstream side) — (Rf11) No. 1:

Room light

F/B fuse No. 26 (downstream side) — (Rf43) No. 3:

Trunk room light

F/B fuse No. 26 (downstream side) — (R141) No. 1:

Is harness normal?

Yes	The interior light system is normal. (Except for trunk room light) For trunk room light, check the operation. Go to 7.
No	Repair or replace the defective part.

7. CHECK OPERATION.

1. Turn the interior light switch to the DOOR position.

   Note:
   The trunk room light is not provided with a switch.

2. Open a door or trunk lid.
   - Check the spot map light or interior light: Open any door.
   - Check the trunk room light: Open the trunk lid.

Does the interior light illuminate?

Yes	The interior light system is normal.
No	Go to 8.

8. CHECK HARNESS.

Check the harnesses between light connector and body integrated unit.

Connector & terminal

Spot map light

(Rf11) No. 4 — (i81) No. 9:

Room light

(Rf43) No. 2 — (i82) No. 10:

Trunk room light

(R141) No. 2 — (i83) No. 30:

Is harness normal?

Yes	Go to 9.
No	Repair or replace the defective part.

9. CHECK CURRENT DATA.

Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [Driver's door SW input]
- [P-door SW input]
- [Rear right door SW input]
- [Rear left door SW input]
- [R Gate SW input]

Does the display switch between [OFF] ←→ [ON] when a door or trunk lid is opened/closed?

Yes	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Check the door switch and harness.

2. CHECK DOOR SWITCH

For the door switch inspection, refer to “Door Switch”. Ref. to LIGHTING SYSTEM>Door Switch>INSPECTION.

3. CHECK TRUNK LID LATCH SWITCH

For the inspection of the trunk lid latch switch, refer to “Trunk Lid Latch and Actuator Assembly” in the “SECURITY AND LOCKS” section. Ref. to SECURITY AND LOCKS>Trunk Lid Latch and Actuator Assembly>INSPECTION.

NOTE

For operation procedures of components of the interior light system, refer to the following sections.

- Spot map light: Ref. to LIGHTING SYSTEM>Spot Map Light.
- Room light: Ref. to LIGHTING SYSTEM>Room Light.
- Trunk room light: Ref. to LIGHTING SYSTEM>Trunk Room Light.
- LED illumination light: Ref. to LIGHTING SYSTEM>LED Illumination Light.
- Vanity mirror light: Ref. to LIGHTING SYSTEM>Vanity Mirror Light.
- Door switch: Ref. to LIGHTING SYSTEM>Door Switch.
- Trunk lid: Ref. to EXTERIOR BODY PANELS>Trunk Lid.

LIGHTING SYSTEM > Auto Headlight Beam Leveler System

WIRING DIAGRAM

For the wiring diagram, refer to “Headlight Beam Leveler System” in the wiring diagram. Ref. to WIRING SYSTEM>Headlight Beam Leveler System>WIRING DIAGRAM.

LIGHTING SYSTEM > Auto Headlight Beam Leveler System

INSPECTION

1. BASIC INSPECTION

For basic inspection, refer to “Basic Diagnostic Procedure” in “HEADLIGHT / FOGLIGHT (DIAGNOSTICS)”.
Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS)>Basic Diagnostic Procedure.

2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to “System Block Diagram” in “HEADLIGHT / FOGLIGHT (DIAGNOSTICS)”.
Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS)>General Description>SYSTEM BLOCK DIAGRAM.

3. MODULE I/O SIGNAL

For the specification (electrical component), refer to “Control Module I/O Signal” in “HEADLIGHT / FOGLIGHT (DIAGNOSTICS)”. Ref. to HEADLIGHT / FOGLIGHT(DIAGNOSTICS)>Control Module I/O Signal>ELECTRICAL SPECIFICATION.

PROCEDURE

Caution:

If any of the following conditions is met, the headlight beam may deviate. Perform reinitialization or fuse resetting before adjusting the beam level using the aiming screw.

- **Difference has occurred to the angle of road surface between when the ignition switch is turned to OFF and when the ignition switch is turned to ON.**
- **Difference has occurred to the angle of road surface when the ignition switch is ON and the vehicle speed is 0 km/h (0 MPH).**

Note:

If the indicator does not flash 3 times or the headlight beam does not operate even if initialization or reinitialization is performed, it can be assumed that there is an open circuit or faulty wiring in the harness of the auto headlight beam leveler CM, or headlight assembly. Perform inspection and repairs according to the inspection results. Ref. to LIGHTING SYSTEM>Auto Headlight Beam Leveler System>INSPECTION.

Before performing initialization or reinitialization, check the following:

- The vehicle is parked on a level surface.
- The inflation pressure of tires is correct.
- The vehicle does not have load.
- Vehicle's fuel tank is fully filled.

Perform each work in the following cases.

Operation	Condition	Reference
Initialization	When the auto headlight beam leveler CM was replaced with a new module.	Ref. to LIGHTING SYSTEM>Auto Headlight Beam Leveler System>PROCEDURE > INITIALIZATION.
Reinitialization	• When the auto headlight beam leveler CM has been removed and installed. • When rectifying beam level deviation and before adjusting the beam level using the aiming screw.	Ref. to LIGHTING SYSTEM>Auto Headlight Beam Leveler System>PROCEDURE > REINITIALIZATION.
Fuse reset	When rectifying beam level deviation and before adjusting the beam level using the aiming screw.	Ref. to LIGHTING SYSTEM>Auto Headlight Beam Leveler System>PROCEDURE > FUSE RESET.

1. INITIALIZATION

1. Install the delivery mode fuse. Ref. to PRE-DELIVERY INSPECTION>PRE-DELIVERY INSPECTION (PDI) PROCEDURE > DELIVERY MODE.
2. Turn the ignition switch to ON and check that the indicator in the meter is flashing twice repeatedly.
3. Turn the ignition switch to OFF.
4. Bounce the vehicle several times to normalize the suspension.
5. Make certain that someone is seated in the driver's seat.

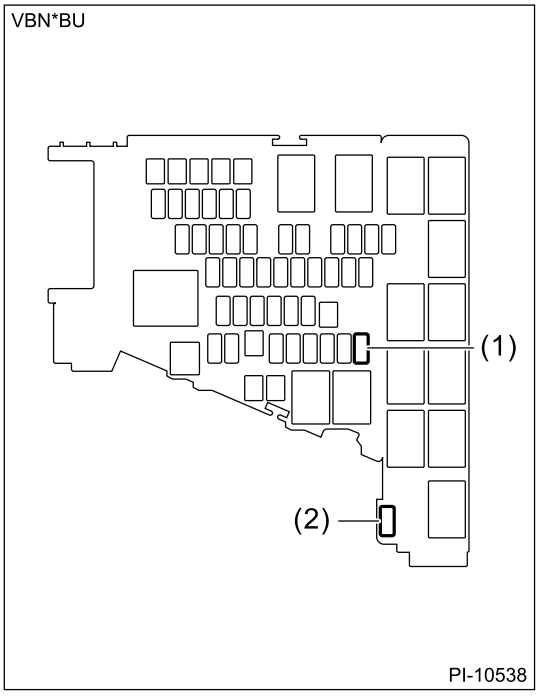
6. Turn the ignition switch to ON, and within 1.5 to 20 seconds, turn the headlight switch OFF → ON three times.
7. Make sure that the indicator in the meter flashes three times and then turns OFF, indicating that initialization has been successfully completed. (At this time, the headlight beam drops once, and then returns to the original position.)
8. Remove the delivery mode fuse.
9. Perform beam adjustment for the headlight. Ref. to LIGHTING SYSTEM>Headlight Assembly>ADJUSTMENT.

2. REINITIALIZATION

1. Install the delivery mode fuse. Ref. to PRE-DELIVERY INSPECTION>PRE-DELIVERY INSPECTION (PDI) PROCEDURE > DELIVERY MODE.
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 to 10 seconds, turn the headlight switch OFF → ON five or more successive times.
5. Check that the headlight beam drops once, then returns to normal.
6. After confirming 5), turn the ignition switch to OFF (ACC OFF) within 30 seconds.
7. Turn the ignition switch to ON again, and within 1.5 to 10 seconds, turn the headlight switch OFF → ON five or more successive times.
8. 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.)
9. Remove the delivery mode fuse.
10. Perform beam adjustment for the headlight. Ref. to LIGHTING SYSTEM>Headlight Assembly>ADJUSTMENT.

3. FUSE RESET

1. Park the vehicle on a level ground.
2. Turn the ignition switch to OFF and remove the delivery mode fuse from the position (1).
3. Install the delivery mode fuse in the position (2) and then turn the ignition switch to ON.
4. Turn the ignition switch to OFF, install the delivery mode fuse in the position (1), and start the engine.



(1) Delivery mode fuse inlet

(2) Delivery mode fuse holder

LIGHTING SYSTEM > Auto Headlight Beam Leveler System

NOTE

For operation procedures of components of the auto headlight beam leveler system, refer to the sections below.

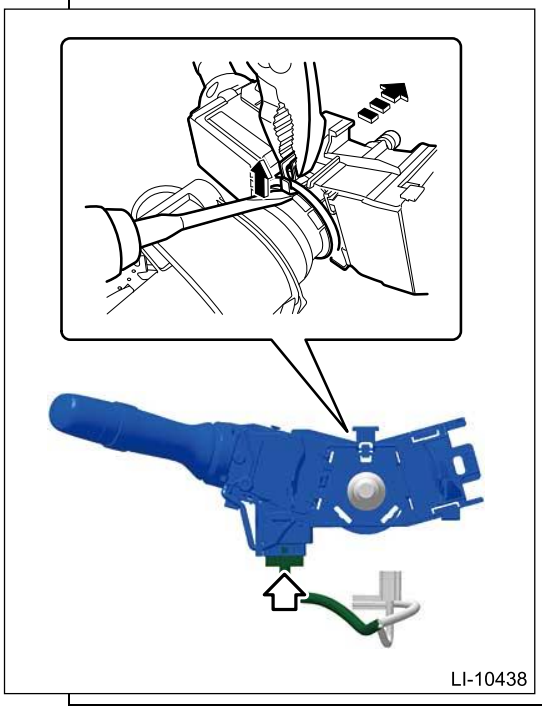
- Headlight assembly: Ref. to LIGHTING SYSTEM>Headlight Assembly.
- Auto headlight beam leveler CM: Ref. to LIGHTING SYSTEM>Auto Headlight Beam Leveler Control Module.

REMOVAL

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Set the steering wheel to the straight-ahead position.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module>REMOVAL.
4. Remove the steering wheel assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>REMOVAL.
5. Remove the column cover assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Column>REMOVAL.
6. Remove the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector>REMOVAL.
7. Remove the switch assembly combination wiper. Ref. to WIPER AND WASHER SYSTEMS>Combination Switch (Wiper)>REMOVAL.
8. Remove the switch assembly combination turn dimmer.
   (1) Disconnect the connector.
   (2) Using pliers, loosen the clamp.
   (3) With the clamp loosened, release the claw using a flat tip screwdriver wrapped with protective tape, and remove the switch assembly combination turn dimmer.

Caution:
Do not pry off forcibly. Otherwise, the claws may be damaged.



INSTALLATION

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Do not allow harness and connectors to interfere or get tangled up with other parts.**
- **If the steering wheel has been removed, make sure that the steering roll connector is not turned from the original position.**

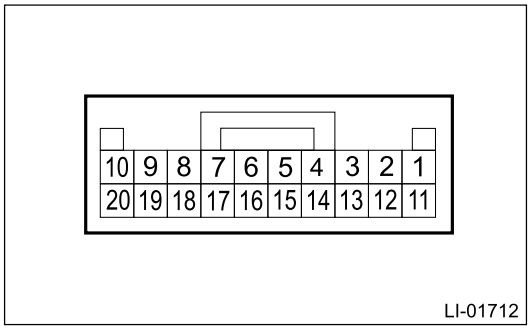
1. Install the switch assembly combination turn dimmer.
   (1) Using pliers, loosen the clamp.
   (2) With the clamp loosened, insert so that the cutout of the column assembly steering and the claw of the switch assembly combination turn dimmer are aligned, and then engage them.
   (3) Install the clamp, and connect the connector.

   Note:
   When replacing with a new part, engage the claw first, and then pull out the securing pin of the clamp.
2. Install the switch assembly combination wiper. Ref. to WIPER AND WASHER SYSTEMS>Combination Switch (Wiper)>INSTALLATION.
3. Align the center position of the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector>ADJUSTMENT.
4. Install the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector>INSTALLATION.
5. Install the column cover assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Column>INSTALLATION.
6. Install the steering wheel assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>INSTALLATION.
7. Install the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module>INSTALLATION.
8. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
9. Perform "VDC sensor midpoint setting mode". Ref. to VEHICLE DYNAMICS CONTROL (VDC)>VDC Control Module and Hydraulic Control Unit (VDCCM&H/U)>ADJUSTMENT > VDC SENSOR MIDPOINT SETTING MODE.

LIGHTING SYSTEM > Combination Switch (Light)

INSPECTION

Measure the resistance between connector terminals. If it is not within the standard value, replace the switch assembly combination turn dimmer.



1. LIGHTING SWITCH

- Other than for C0

Terminal No.	Inspection conditions	Standard
18 — 13 19 — 13 20 — 13	Switch OFF	1 MΩ or more
19 — 13	Switch AUTO	Less than 1 Ω
18 — 13	Switch 1 (TAIL)	Less than 1 Ω
18 — 13 20 — 13	Switch 2 (HEAD)	Less than 1 Ω

- For C0

Terminal No.	Inspection conditions	Standard
18 — 13	Switch OFF	Less than 1 Ω
18 — 13 19 — 13 20 — 13	Switch AUTO	1 MΩ or more
19 — 13	Switch 1 (TAIL)	Less than 1 Ω
19 — 13 20 — 13	Switch 2 (HEAD)	Less than 1 Ω

2. DIMMER & PASSING SWITCH

Terminal No.	Inspection conditions	Standard
17 — 13	Switch PASS	Less than 1 Ω
16 — 13	Switch UP	Less than 1 Ω

3. TURN SIGNAL SWITCH

Terminal No.	Inspection conditions	Standard
14 — 13	Switch TURN RH1	Less than 1 Ω
12 — 13 14 — 13	Switch TURN RH2	Less than 1 Ω
15 — 13	Switch TURN LH1	Less than 1 Ω
12 — 13 15 — 13	Switch TURN LH2	Less than 1 Ω

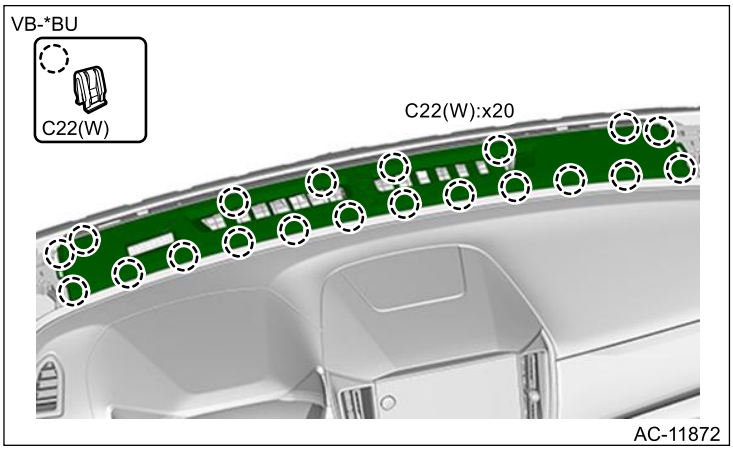
4. FRONT FOG LIGHT SWITCH

Terminal No.	Inspection conditions	Standard
4 — 3	Switch OFF	1 MΩ or more
	Switch ON	Less than 1 Ω

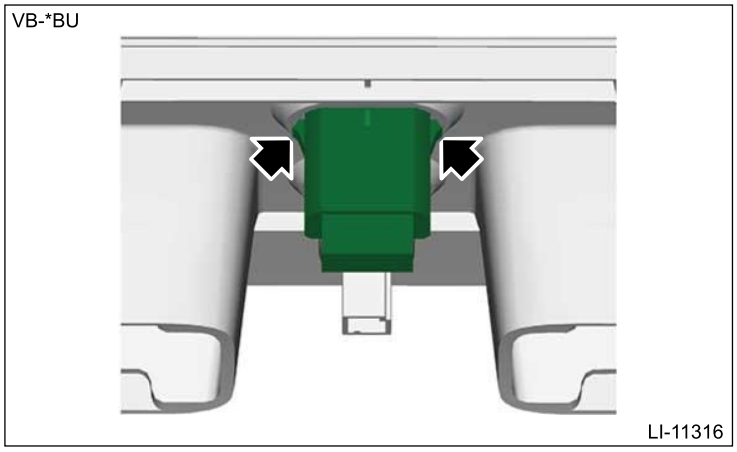
LIGHTING SYSTEM > Light Control Sensor

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the grille speaker side. Ref. to ENTERTAINMENT & MONITORING>Front Speaker>REMOVAL > TWEETER.
3. Remove the grille front defroster.
   (1) Release the clips.



   (2) Disconnect the connector and remove the grille front defroster.
4. Disconnect the claws and then remove the auto light sensor.



LIGHTING SYSTEM > Light Control Sensor

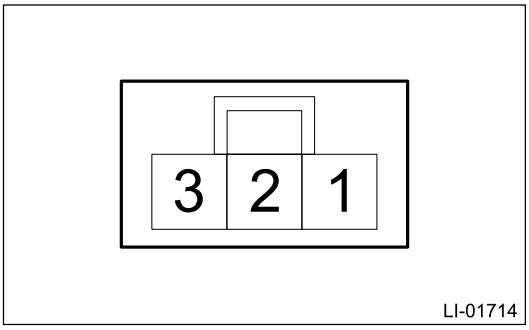
INSTALLATION

1. Install the auto light sensor.
2. Connect the connector, and install the grille front defroster.
3. Install the grille speaker side. Ref. to ENTERTAINMENT & MONITORING>Front Speaker>INSTALLATION > TWEETER.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

LIGHTING SYSTEM > Light Control Sensor

INSPECTION

1. Connect the connector.
2. Turn the ignition switch to ON, and set the lighting switch to the AUTO position.
3. Measure the voltage between connector terminals.



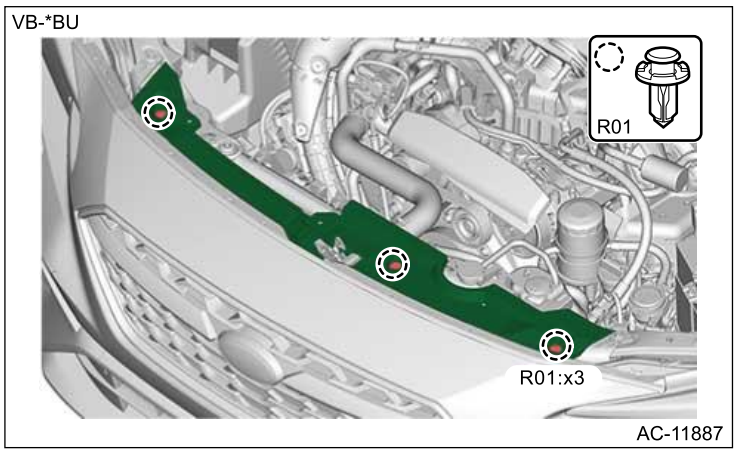
Terminal No.	Inspection conditions	Standard
2 (+) — 1 (−)	Measure the voltage when the area around the auto light sensor, which was dark, becomes bright.	Dark condition: Approx. 0.6 V or less
		Bright condition: Approx. 3 V or more

4. Replace the auto light sensor if the inspection result is not within the standard value.

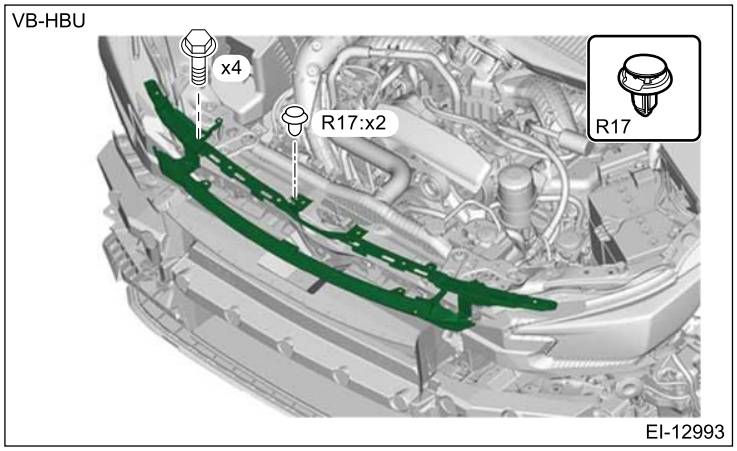
REMOVAL

Caution:
- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Do not perform work with wet hands, because there is a possibility of electrical shock.**

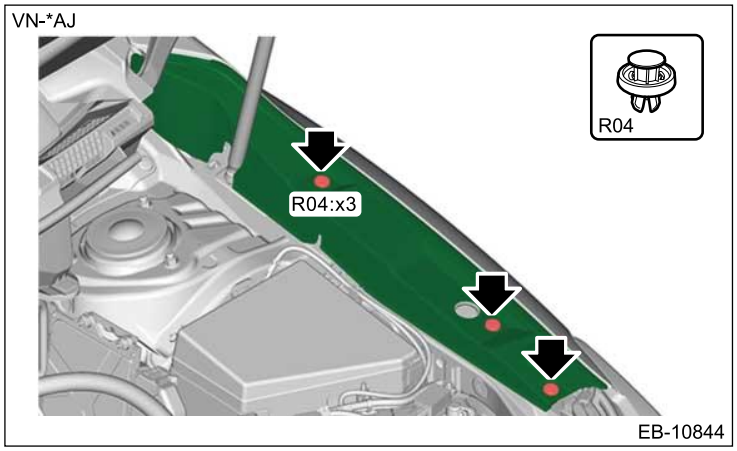
1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the air intake duct. Ref. to INTAKE (INDUCTION)(H4DOTC)>Air Intake Duct>REMOVAL.
3. Remove the clips, and remove the cover UPR front.



4. Remove the bumper face front. Ref. to EXTERIOR/INTERIOR TRIM>Front Bumper>REMOVAL.
5. Remove the bolts and clips, and remove the energy absorber plate UPR.

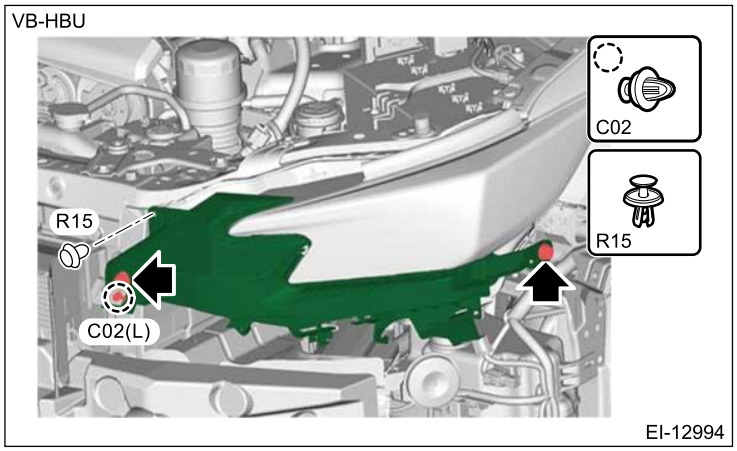


6. Remove the clip, and remove the cover fender UPR.



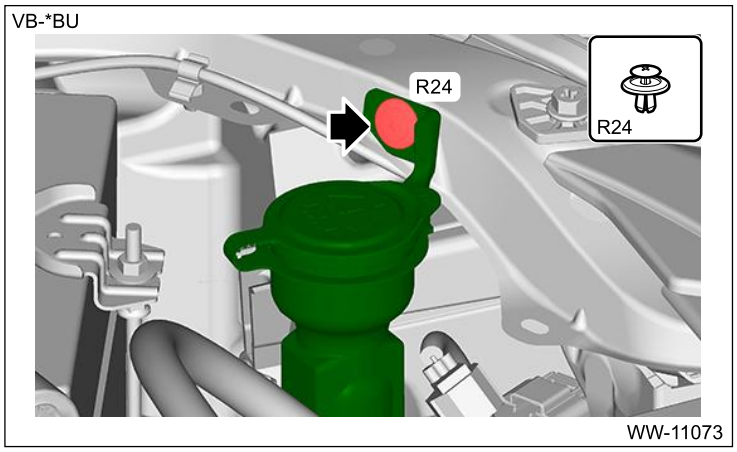
7. Remove the access buzzer. (When the light assembly head on the left side is removed) Ref. to SECURITY AND LOCKS>Access Buzzer>REMOVAL.

8. Remove the bolts and clips, and remove the bracket corner front.



9. Remove the clip of the washer tank hose. (When the light assembly head on the left side is removed)

Note:
In order to make it easier to access the light assembly head connector, place the washer tank hose aside so that it does not interfere with work.

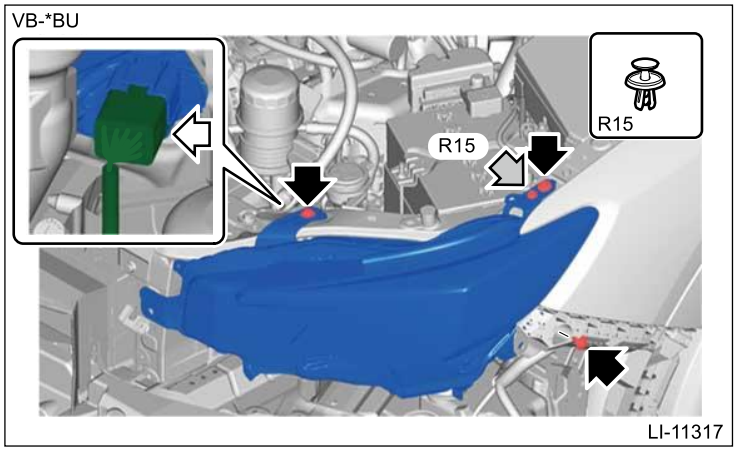


10. Remove the light assembly head.

Caution:
Be careful not to damage the headlight assembly and the fender COMPL front.

(1) Disconnect the connector.

(2) Remove the bolts and clips, and remove the light assembly head.



LIGHTING SYSTEM > Headlight Assembly

INSTALLATION

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Before installing the headlight assembly, check the condition of seal rubber and cap. If any damage is found, replace the seal rubber and cap with new parts. Ref. to LIGHTING SYSTEM>Headlight Assembly>REPLACEMENT.**

1. Install the light assembly head, and then connect the connector.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
2. Install the bracket corner front.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
3. Install the washer tank hose. (When the light assembly head on the left side is removed)
4. Install the access buzzer. (When the light assembly head on the left side is removed) Ref. to SECURITY AND LOCKS>Access Buzzer>INSTALLATION.
5. Install the cover fender UPR.
6. Install the energy absorber plate UPR.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
7. Install the bumper face front. Ref. to EXTERIOR/INTERIOR TRIM>Front Bumper>INSTALLATION.
8. Install the cover UPR front.
9. Install the air intake duct. Ref. to INTAKE (INDUCTION)(H4DOTC)>Air Intake Duct>INSTALLATION.
10. Check and adjust the clearance between the hood COMPL front and the light assembly head. Ref. to EXTERIOR BODY PANELS>Front Hood>ADJUSTMENT.
11. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
12. Adjust the headlight beam and fog light beam.
    - Adjust the headlight beam. Ref. to LIGHTING SYSTEM>Headlight Assembly>ADJUSTMENT > HEADLIGHT BEAM ADJUSTMENT.
    - Adjust the fog light beam. Ref. to LIGHTING SYSTEM>Front Fog Light Assembly>ADJUSTMENT > FOG LIGHT AIMING.

REPLACEMENT

1. SEAL RUBBER

1. Remove the hood seal rubber while pulling the rubber. Be careful not to tear the rubber.

Caution:
- **Be careful not to damage the surface of headlight assembly during operation.**
- **Do not reuse hood seal rubber.**

2. Remove the double-sided tape remaining on the headlight assembly side, then clean the adhesive surface.

Caution:
Do not use any solvents that may damage the headlight assembly lenses.

Note:
If even a slight amount of double-sided tape remains on the adhesive surface, it may lead to improper adhesion.

3. Degrease the mounting surface of the hood seal rubber.
4. Attach the hood seal rubber.

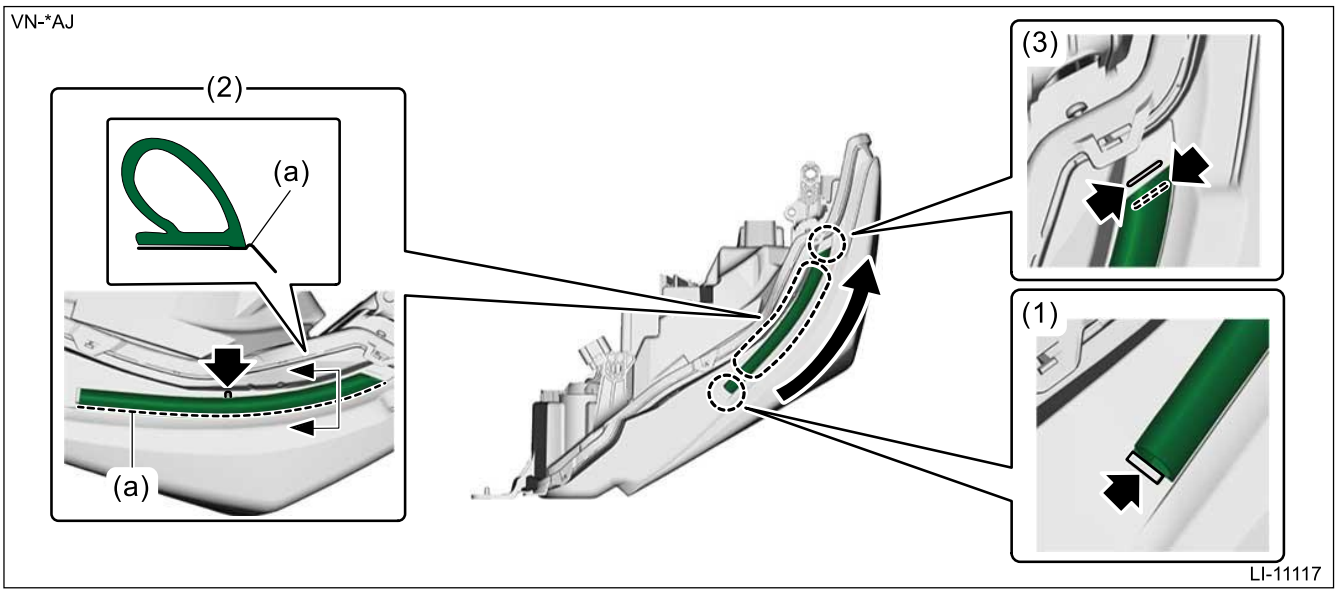
Note:
Attach the hood seal rubber so that the double-sided tape does not detach from the headlight assembly.

(1) Make the hood seal rubber come into contact with the ribs.

(2) When attaching the hood seal rubber, make sure that the ribs fit in the cutout portions.

Note:
- **Attach it in the arrow direction.**
- **Make sure that the hood seal rubber does not ride on the corner (a) of the attaching surface.**

(3) Attach the hood seal rubber so that it comes in between the two ribs.



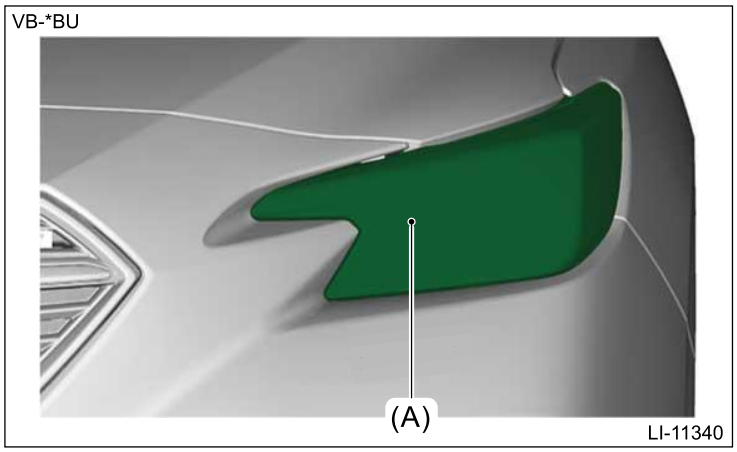
ADJUSTMENT

1. HEADLIGHT BEAM ADJUSTMENT

Caution:

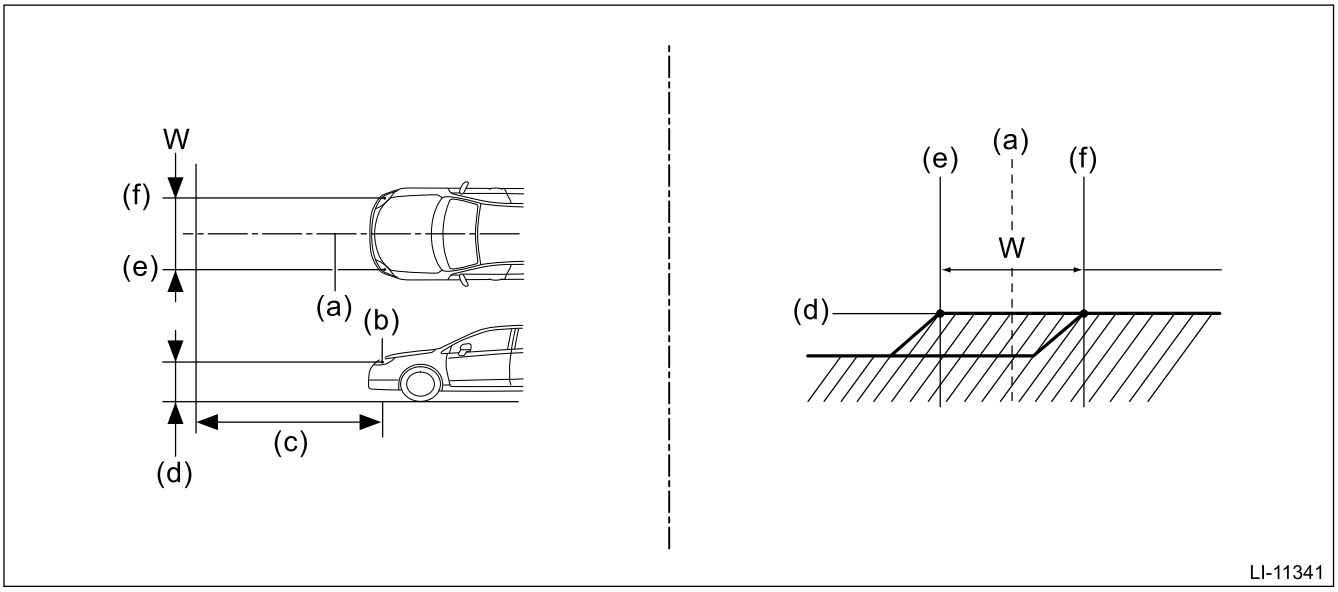
- **Turn off the light before adjusting the headlight beam level. If it is necessary to inspect the beam level, do not keep the light on for two minutes or more.**
- **When blocking the light emitted from the headlight, use a light shield or equivalent. Do not apply the tape on the lens or place the cloth over it. It may raise the temperature in the light and cause deformation/bubble formations of the plastic lens.**
- **If any of the following conditions is met, the headlight beam may deviate. Perform reinitialization or fuse resetting before adjusting the beam level using the aiming screw.** **Ref. to LIGHTING SYSTEM>Auto Headlight Beam Leveler System>PROCEDURE.**
  - **– Difference has occurred to the angle of road surface between when the ignition switch is turned to OFF and when the ignition switch is turned to ON.**
  - **– Difference has occurred to the angle of road surface when the ignition switch is ON and the vehicle speed is 0 km/h (0 MPH).**

1. Before checking the headlight beam level, be sure of the following:
   - Check the area around the headlight for any scratches, damage or other type of deformation.
   - The vehicle is parked on a level surface.
   - The inflation pressure of tires is correct.
   - The vehicle does not have load.
   - 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 of the light source centers and the height of the light source centers for the low beam.



(A) Light source center

5. Adjust the headlight beam.
   (1) Place the vehicle with the front end facing to the measurement panel, then illuminate the low beam.



(a) Vehicle center
(c) 3 m (10 ft)
(e) Light source center of headlight LH
(b) Light source center
(d) Height of light source center
(f) Light source center of headlight RH

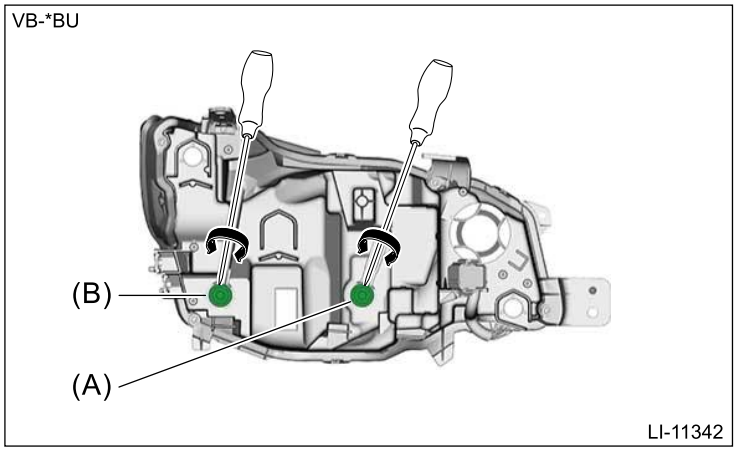
- Model without SRH

W mm (in)
1,354 (53.31)

- Model with SRH

W mm (in)
1,370 (53.94)

(2) Adjust the beam level by turning the aiming screws (A) and (B) in the same direction and by the same number of rotations.



LIGHTING SYSTEM > Clearance/Parking Light Bulb

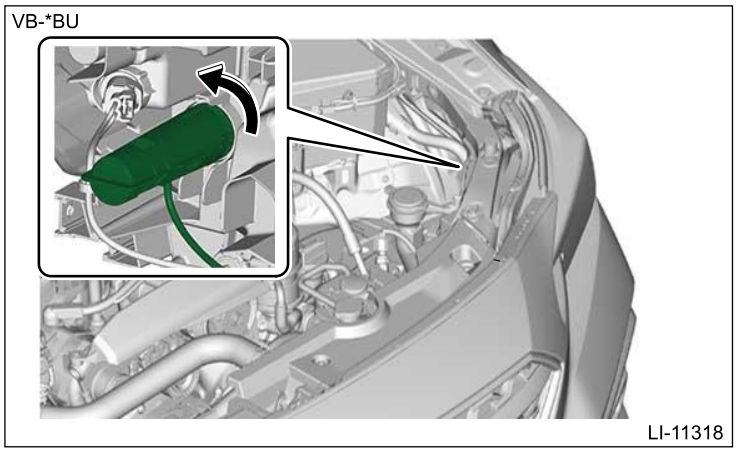
REMOVAL

Caution:
- **Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.**
- **Do not leave the light assembly head without the bulb for a long time. Dust, moisture, etc. entering the light may affect its performance.**

Note:
The illustration shows the LH side.

1. HALOGEN TYPE

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the battery. (When removing the LH side bulb) Ref. to STARTING/CHARGING SYSTEMS(H4DOTC)>Battery>REMOVAL.
3. Remove the air intake duct. (When removing the RH side bulb) Ref. to INTAKE (INDUCTION)(H4DOTC)>Air Intake Duct>REMOVAL.
4. Remove the air cleaner case. (When removing the RH side bulb) Ref. to INTAKE (INDUCTION)(H4DOTC)>Air Cleaner Case>REMOVAL.
5. Rotate in the direction of arrow shown in the figure to remove the bulb socket.



6. Remove the parking light bulb.

2. LED TYPE

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly head if faulty.

LIGHTING SYSTEM > Clearance/Parking Light Bulb

INSTALLATION

Caution:
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

1. HALOGEN TYPE

1. Install the parking light bulb.
2. Install the air cleaner case. (When the RH side bulb has been removed) Ref. to INTAKE (INDUCTION)(H4DOTC)>Air Cleaner Case>INSTALLATION.

3. Install the air intake duct. (When the RH side bulb has been removed) Ref. to INTAKE (INDUCTION) (H4DOTC)>Air Intake Duct>INSTALLATION.
4. Install the battery. (When the LH side bulb has been removed) Ref. to STARTING/CHARGING SYSTEMS(H4DOTC)>Battery>INSTALLATION.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. LED TYPE

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly head if faulty.

NOTE

1. HALOGEN TYPE

The front turn signal light bulb is integrated with the parking light.
Replace the parking light bulb if faulty. Ref. to LIGHTING SYSTEM>Clearance/Parking Light Bulb.

2. LED TYPE

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly head if faulty.

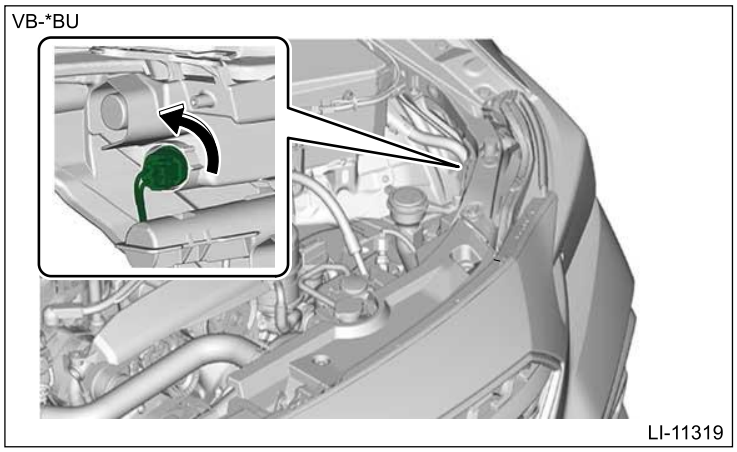
REMOVAL

Caution:
- **Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.**
- **Do not leave the light assembly head without the bulb for a long time. Dust, moisture, etc. entering the light may affect its performance.**

Note:
The illustration shows the LH side.

1. HALOGEN TYPE

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the battery. (When removing the LH side bulb) Ref. to STARTING/CHARGING SYSTEMS(H4DOTC)>Battery>REMOVAL.
3. Remove the air intake duct. (When removing the RH side bulb) Ref. to INTAKE (INDUCTION)(H4DOTC)>Air Intake Duct>REMOVAL.
4. Remove the air cleaner case. (When removing the RH side bulb) Ref. to INTAKE (INDUCTION)(H4DOTC)>Air Cleaner Case>REMOVAL.
5. Rotate in the direction of arrow shown in the figure to remove the bulb socket.



6. Remove the front side marker light bulb.

2. LED TYPE

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly head if faulty.

INSTALLATION

Caution:
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

1. HALOGEN TYPE

1. Install the front side marker light bulb.
2. Install the air cleaner case. (When the RH side bulb has been removed) Ref. to INTAKE (INDUCTION)(H4DOTC)>Air Cleaner Case>INSTALLATION.

3. Install the air intake duct. (When the RH side bulb has been removed) Ref. to INTAKE (INDUCTION) (H4DOTC)>Air Intake Duct>INSTALLATION.
4. Install the battery. (When the LH side bulb has been removed) Ref. to STARTING/CHARGING SYSTEMS(H4DOTC)>Battery>INSTALLATION.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

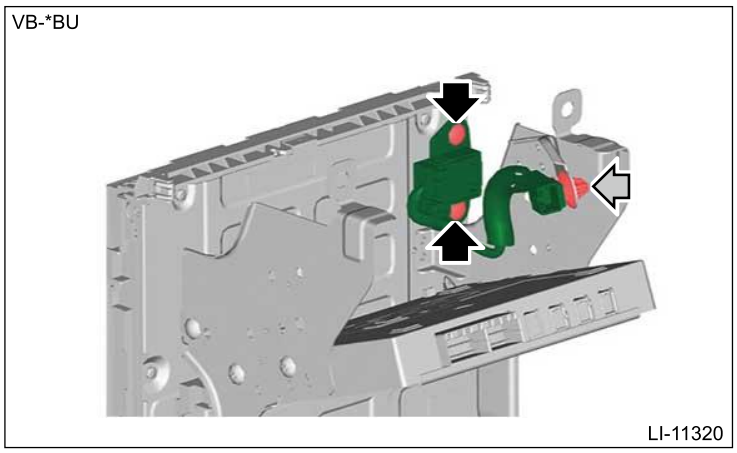
2. LED TYPE

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly head if faulty.

LIGHTING SYSTEM > Hazard Switch

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the ornament panel mid passenger and panel assembly center. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>REMOVAL.
3. Remove the center information display assembly. Ref. to ENTERTAINMENT & MONITORING>Cockpit Display>REMOVAL.
4. Remove the screws and harness clip and remove the switch hazard.



LIGHTING SYSTEM > Hazard Switch

INSTALLATION

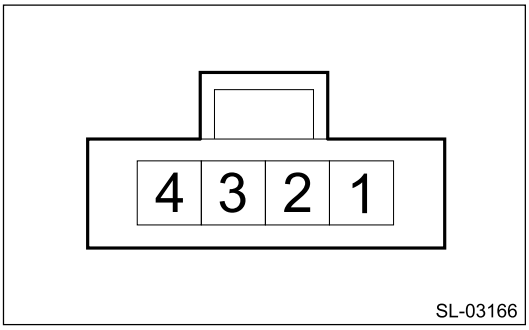
Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the switch hazard.
2. Install the center information display assembly. Ref. to ENTERTAINMENT & MONITORING>Cockpit Display>INSTALLATION.
3. Install the panel assembly center and the ornament panel mid passenger. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>INSTALLATION.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

LIGHTING SYSTEM > Hazard Switch

INSPECTION

1. Measure the resistance between connector terminals.



Terminal No.	Inspection conditions	Standard
3 — 2	Switch OFF	1 MΩ or more
	Switch ON	Less than 1 Ω

2. Apply battery voltage between the connector terminals to check lighting condition of illumination inside the switch.

Caution:
When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.
Incorrect polarity connection may cause LED damage inside the switch.

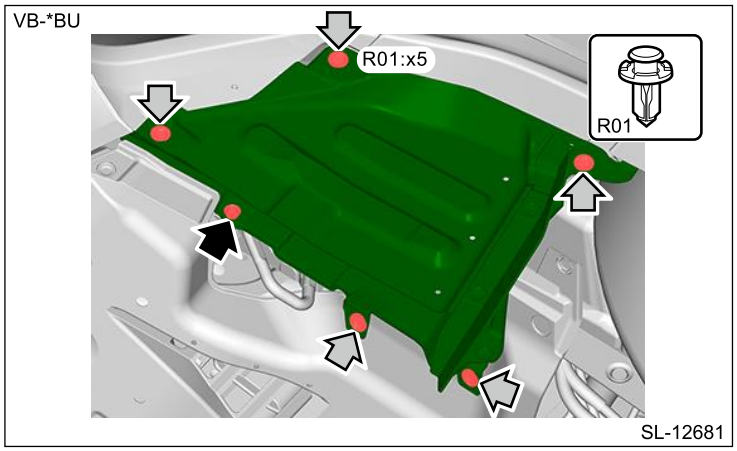
Terminal No.	Inspection conditions	Specification
4 (+) — 1 (−)	Apply battery voltage.	Light ON

3. Replace the switch hazard if it is found defective.

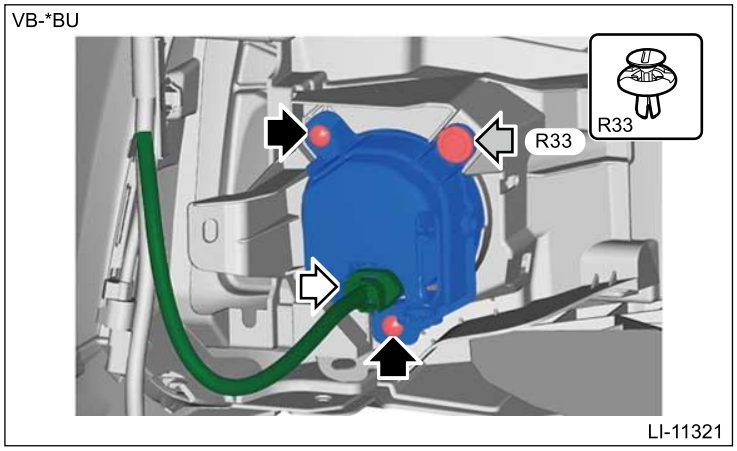
LIGHTING SYSTEM > Front Fog Light Assembly

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Lift up the vehicle.
3. Remove the screw and clips, and turn over the mud guard front.



4. Remove the fog light assembly front.
   (1) Disconnect the connector.
   (2) Remove the screws and clips, and remove the fog light assembly front.



LIGHTING SYSTEM > Front Fog Light Assembly

INSTALLATION

1. Install the fog light assembly front.
   Tightening torque:
   2 N·m (0.2 kgf-m, 1.5 ft-lb)
2. Lower the vehicle.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
4. Adjust the fog light beam. Ref. to LIGHTING SYSTEM>Front Fog Light Assembly>ADJUSTMENT > FOG LIGHT AIMING.

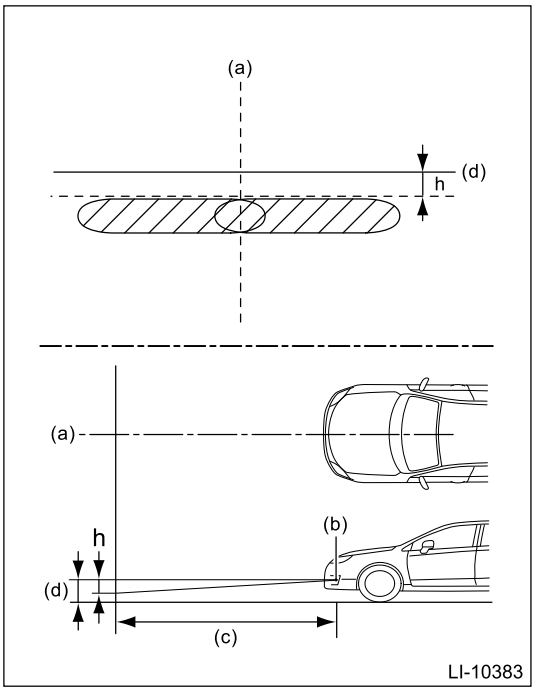
5. Install the mud guard front. Ref. to EXTERIOR/INTERIOR TRIM>Mud Guard>INSTALLATION.

LIGHTING SYSTEM > Front Fog Light Assembly

ADJUSTMENT

1. FOG LIGHT AIMING

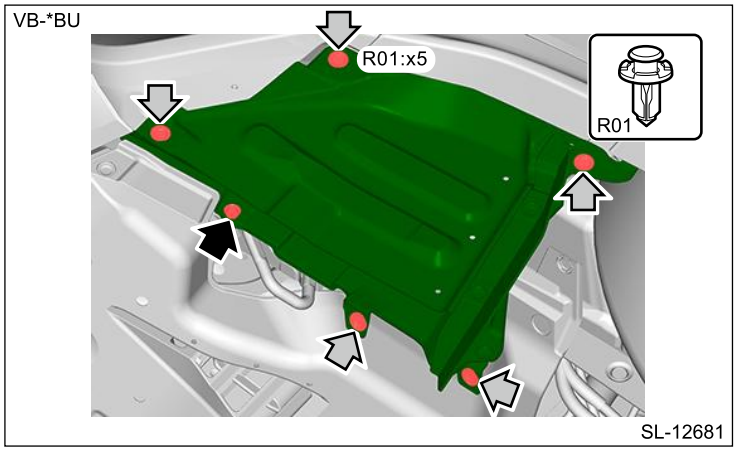
1. Before checking the fog light beam level, be sure of the following:
   - Check the area around the fog light for any scratches, damage or other type of deformation.
   - The vehicle is parked on a level surface.
   - The inflation pressure of tires is correct.
   - The vehicle does not have load.
   - 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.



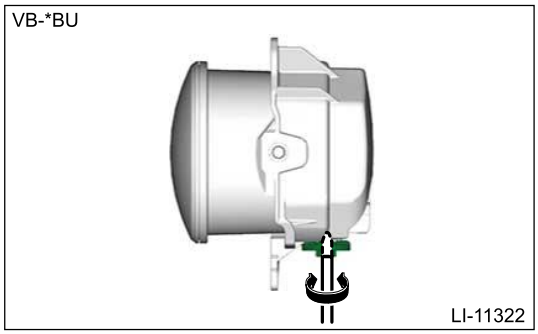
(a) Vehicle center
(b) Bulb center marking
(c) 3 m (10 ft)
(d) Height of fog light center

h mm (in) at 3 m (10 ft)
45 (1.77)

5. Adjust the fog light beam.
   (1) Remove the screw and clips, and turn over the mud guard front.



(2) Adjust the beam level by turning the aiming screw.



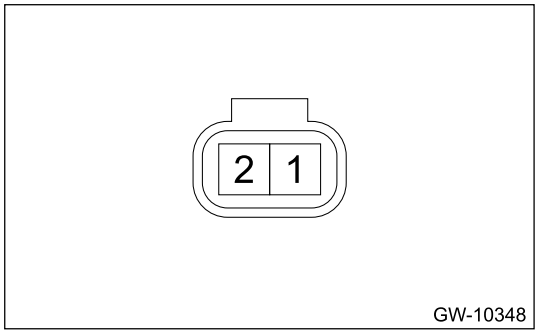
(3) Install the mud guard front. Ref. to EXTERIOR/INTERIOR TRIM>Mud Guard>INSTALLATION.

LIGHTING SYSTEM > Front Fog Light Assembly

INSPECTION

1. Apply battery voltage between the connector terminals to check the lighting condition of the light.

Caution:
When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.
Incorrect polarity connection may cause internal LED damage.



Terminal No.	Inspection conditions	Specification
2 (+) — 1 (−)	Apply battery voltage.	Light ON

2. Replace the fog light assembly front if faulty is found in the inspection.

Note:

Since LED is used for the light, replace the fog light assembly front if the light does not illuminate.

LIGHTING SYSTEM > Side Turn Signal Light Assembly

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the light assembly side turn mirror. Ref. to GLASS/WINDOWS/MIRRORS>Outer Mirror Assembly>DISASSEMBLY.

LIGHTING SYSTEM > Side Turn Signal Light Assembly

INSTALLATION

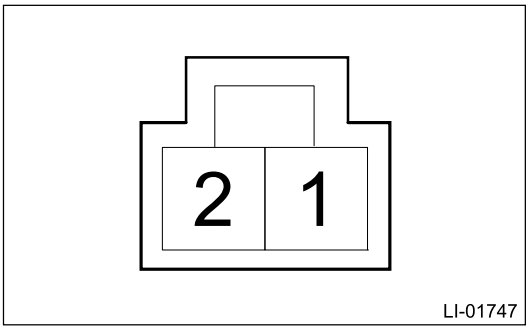
1. Install the light assembly side turn mirror. Ref. to GLASS/WINDOWS/MIRRORS>Outer Mirror Assembly>ASSEMBLY.
2. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

LIGHTING SYSTEM > Side Turn Signal Light Assembly

INSPECTION

1. Apply battery voltage between the connector terminals to check the lighting condition of the light.

Caution:
When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.
Incorrect polarity connection may cause internal LED damage.



Terminal No.	Inspection conditions	Specification
1 (+) — 2 (−)	Apply battery voltage.	Light ON

2. Replace the light assembly side turn mirror if faulty is found in the inspection.

Note:
Since LED is used for the light, replace the light assembly side turn mirror if the light does not illuminate.

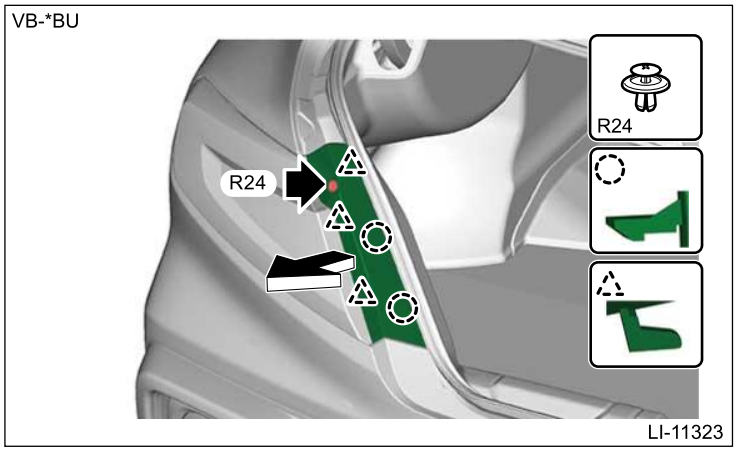
LIGHTING SYSTEM > Rear Combination Light Assembly

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Release the clips and claws, and then remove the cover assembly rear combination light.

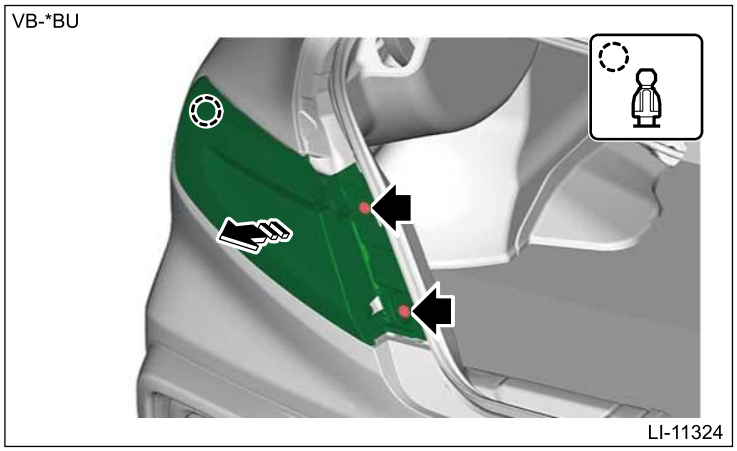
Caution:
Do not remove the cover forcibly if the cover is not unhooked. Doing so may result in damage of the cover claw or the light assembly rear combination.

Note:
When using a flat tip screwdriver, use an appropriate sized tool for the insertion opening, apply protective tape or cloth around the tool, and be careful not to cause damage.



3. Remove the light assembly rear combination.
   (1) Release the bolts and clips, then pull out the light assembly rear combination toward the rear of the vehicle at an angle as shown in the figure.

Caution:
Be careful not to damage the clips.



   (2) Disconnect the connector and remove the light assembly rear combination.

LIGHTING SYSTEM > Rear Combination Light Assembly

INSTALLATION

1. Connect the connector, and install the light assembly rear combination.

Caution:

- **Be careful not to catch the harness in between the parts.**
- **Make sure that gaskets are attached on the combination light assembly. If a gasket is not attached, water leakage may occur.**

Tightening torque:

7.5 N·m (0.8 kgf-m, 5.5 ft-lb)

2. Install the cover assembly rear combination light.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

LIGHTING SYSTEM > Rear Combination Light Assembly

DISASSEMBLY

1. TAIL LIGHT BULB

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly rear combination if defective.

2. STOP LIGHT BULB

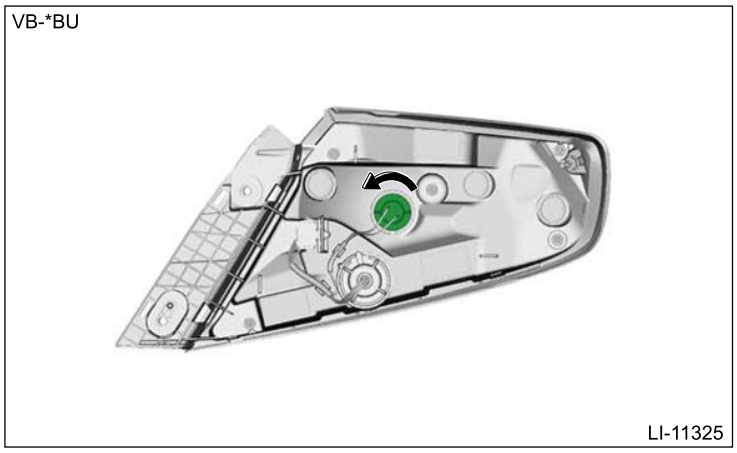
Since it is a non-disassembled part, it cannot be removed. Replace the light assembly rear combination if defective.

3. TURN SIGNAL LIGHT BULB

Caution:

- **Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.**
- **Do not leave the light assembly rear combination without the bulb for a long time. Dust, moisture, etc. entering the light may affect its performance.**

1. Rotate in the direction of arrow shown in the figure to remove the bulb socket.



2. Remove the turn signal light bulb.

4. BACK-UP LIGHT BULB

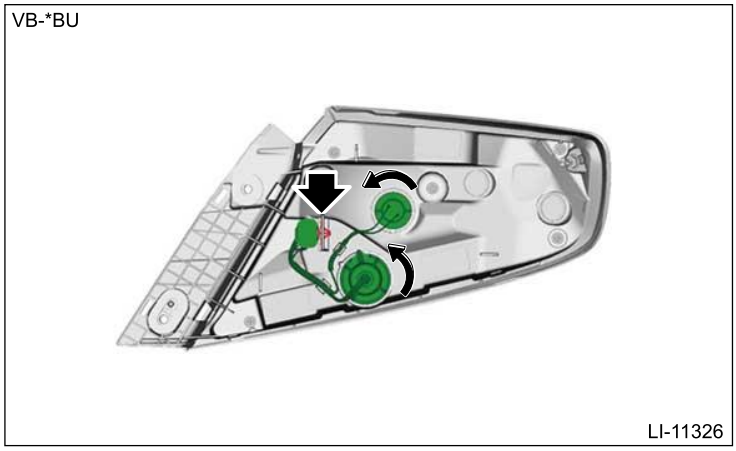
Since it is a non-disassembled part, it cannot be removed. Replace the light assembly rear combination if defective.

5. REAR SIDE MARKER LIGHT BULB

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly rear combination if defective.

6. CORD ASSEMBLY

1. Remove the connector clip.
2. Turn the cover in the arrow direction to remove it and disconnect the internal connector.
3. Remove the bulb socket and remove the cord assembly.



LIGHTING SYSTEM > Rear Combination Light Assembly

ASSEMBLY

1. TAIL LIGHT

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly rear combination if defective.

2. STOP LIGHT BULB

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly rear combination if defective.

3. TURN SIGNAL LIGHT BULB

Caution:
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

1. Install the turn signal light bulb.
2. Install the bulb socket.

4. BACK-UP LIGHT BULB

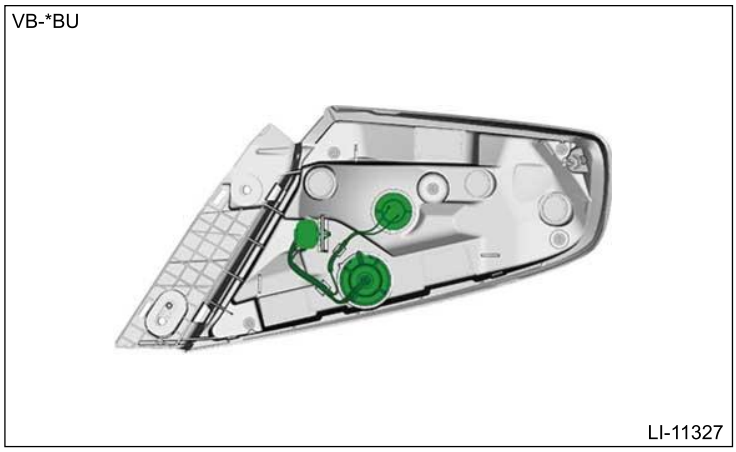
Since it is a non-disassembled part, it cannot be removed. Replace the light assembly rear combination if defective.

5. REAR SIDE MARKER LIGHT BULB

Since it is a non-disassembled part, it cannot be removed. Replace the light assembly rear combination if defective.

6. CORD ASSEMBLY

1. Install the cord assembly as shown in the figure.

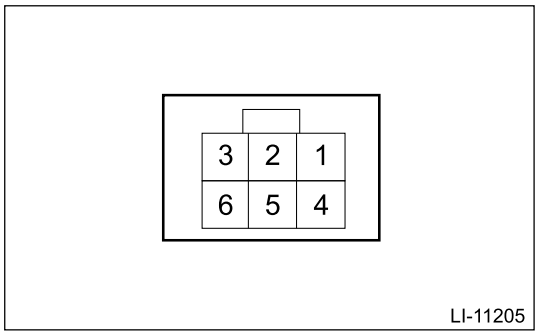


LIGHTING SYSTEM > Rear Combination Light Assembly

INSPECTION

1. Apply battery voltage between the connector terminals to check the lighting condition of the light.

Caution:
When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.
Incorrect polarity connection may cause internal LED damage.



Terminal No.	Inspection conditions	Specification
6 (+) — 2 (−)	Apply battery voltage.	Stop light on
4 (+) — 2 (−)		Tail lights and rear side marker lights on
3 (+) — 2 (−)		Turn signal light on
1 (+) — 2 (−)		Back-up light on

2. Carry out the following procedure if you find any defects.
   - Turn signal light: Check the harness and bulb.
   - Since LED is used for the following lights, replace the combination light assembly if the light does not illuminate.
     - Stop light
     - Tail light
     - Rear side marker light

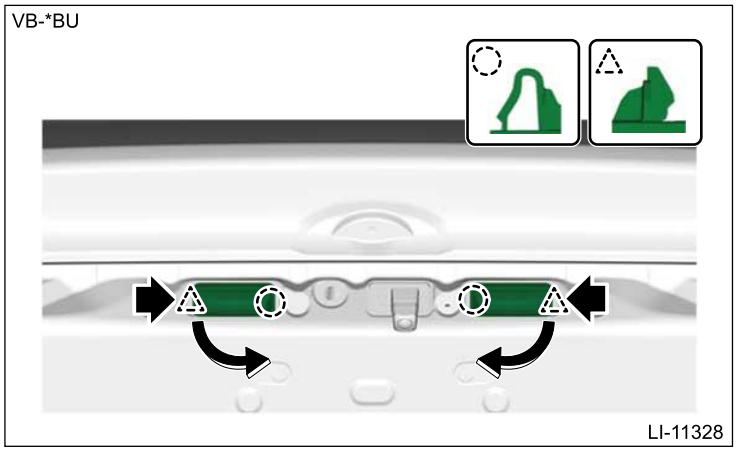
– Back-up light

REMOVAL

Caution:
- **Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.**
- **Do not leave the license plate light assembly without the bulb for a long time. Dust, moisture, etc. entering the light may affect its performance.**

Note:
Do not remove the license plate light assembly when removing the bulb only.

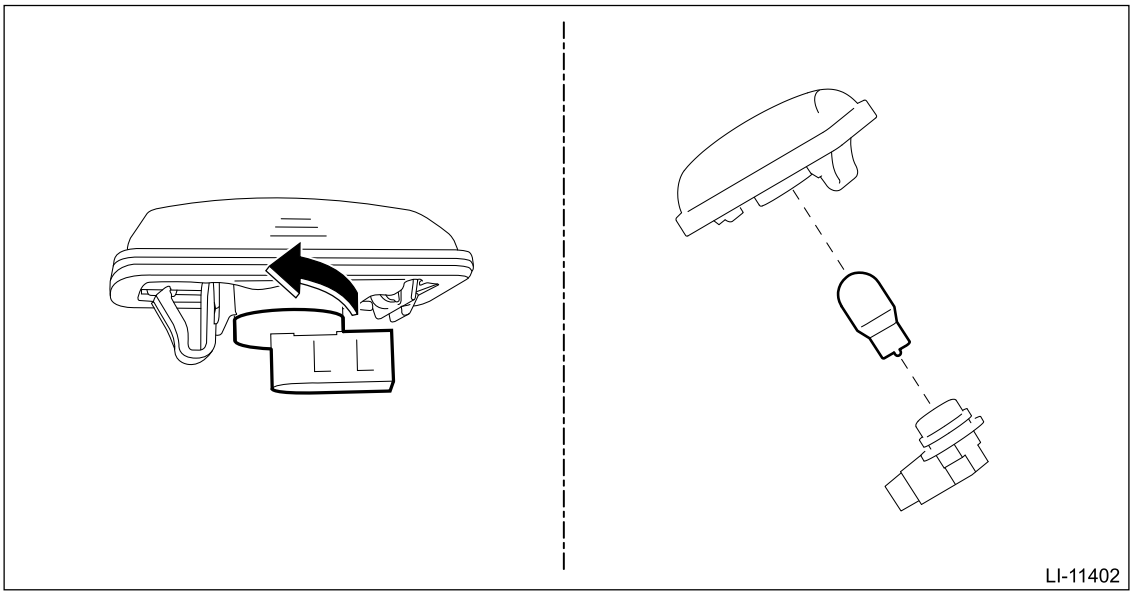
1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the trim panel trunk lid. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>REMOVAL.
3. Remove the garnish assembly trunk. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Lid Garnish>REMOVAL.
4. Remove the license plate light assembly.
   (1) Release the claws and pull out the license plate light assembly.
   (2) Disconnect the connector, and remove the license plate light assembly.



5. Remove the license plate light bulb.

Note:
Perform this procedure only when required.

(1) Rotate in the direction of arrow shown in the figure to remove the bulb socket.
(2) Remove the license plate light bulb.



LIGHTING SYSTEM > License Plate Light

INSTALLATION

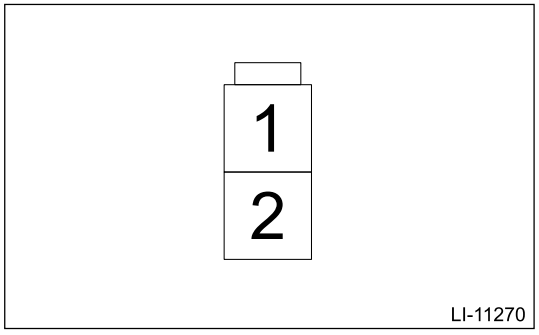
Caution:
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

1. Install the license plate light bulb.
2. Connect the connector, and install the license plate light assembly.
3. Install the garnish assembly trunk. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Lid Garnish>INSTALLATION.
4. Install the trim panel trunk lid. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>INSTALLATION.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

LIGHTING SYSTEM > License Plate Light

INSPECTION

1. Apply battery voltage between the connector terminals to check the lighting condition of the light.



Terminal No.	Inspection conditions	Specification
1 (+) — 2 (−)	Apply battery voltage.	Light ON

2. Replace the harness and bulb if it is found defective.

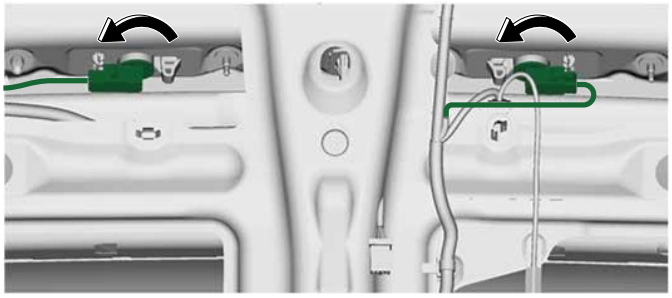
LIGHTING SYSTEM > License Plate Light Bulb

REMOVAL

Caution:
- **Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.**
- **Do not leave the license plate light without the bulb for a long time. Dust, moisture, etc. entering the light may affect its performance.**

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the trim panel trunk lid. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>REMOVAL.
3. Remove the license plate light bulb.
   (1) Rotate in the direction of arrow shown in the figure to remove the bulb socket.

VB-*BU



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   (2) Remove the license plate light bulb.

LIGHTING SYSTEM > License Plate Light Bulb

INSTALLATION

Caution:
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

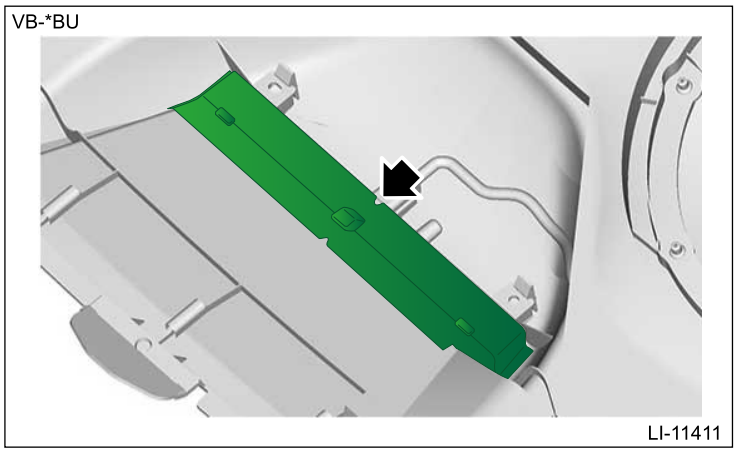
1. Install the license plate light bulb.
2. Install the bulb socket.
3. Install the trim panel trunk lid. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>INSTALLATION.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

REMOVAL

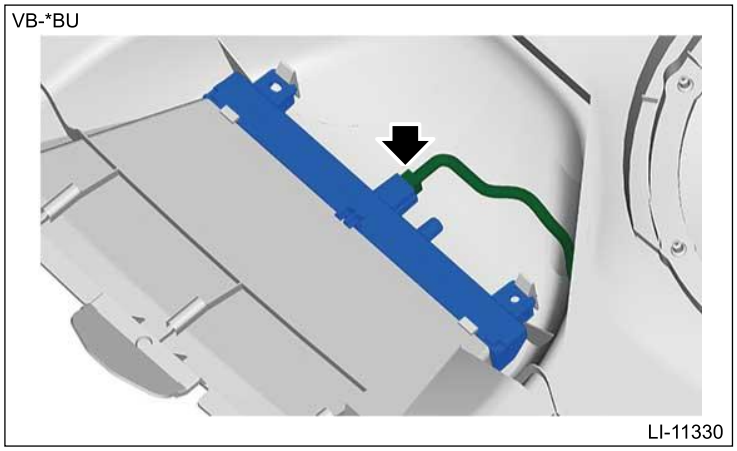
Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the rear seat cushion assembly and the backrest assembly. Ref. to SEATS>Rear Seat>REMOVAL.
3. Remove the trim panel assembly C pillar LWR and the trim panel assembly C pillar. Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>REMOVAL.
4. Remove the trim panel assembly rear shelf. Ref. to EXTERIOR/INTERIOR TRIM>Rear Shelf Trim>REMOVAL.
5. Remove the cover tape.



6. Remove the light assembly high-mounted.
   (1) Release the claws.
   (2) Disconnect the connector and remove the light assembly high-mounted.



LIGHTING SYSTEM > High-mounted Stop Light

INSTALLATION

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

1. Connect the connector, and install the light assembly high-mounted.
2. Apply a new cover tape.
3. Install the trim panel assembly rear shelf. Ref. to EXTERIOR/INTERIOR TRIM>Rear Shelf Trim>INSTALLATION.
4. Install the trim panel assembly C pillar and the trim panel assembly C pillar LWR. Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>INSTALLATION.
5. Install the backrest assembly and rear seat cushion assembly. Ref. to SEATS>Rear Seat>INSTALLATION.
6. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

LIGHTING SYSTEM > High-mounted Stop Light

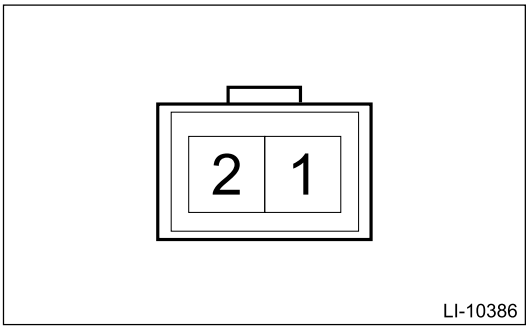
INSPECTION

1. Apply battery voltage between the connector terminals to check the lighting condition of the light.

Caution:

When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.

Incorrect polarity connection may cause internal LED damage.



Terminal No.	Inspection conditions	Specification
1 (+) — 2 (−)	Apply battery voltage.	Light ON

2. Replace the light assembly high-mounted if faulty is found in the inspection.

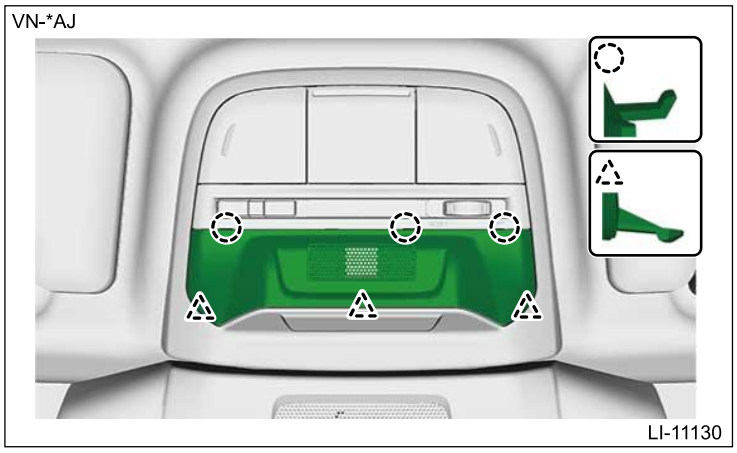
Note:

Since LED is used for the high-mounted stop light, replace the light assembly high-mounted if the light does not illuminate.

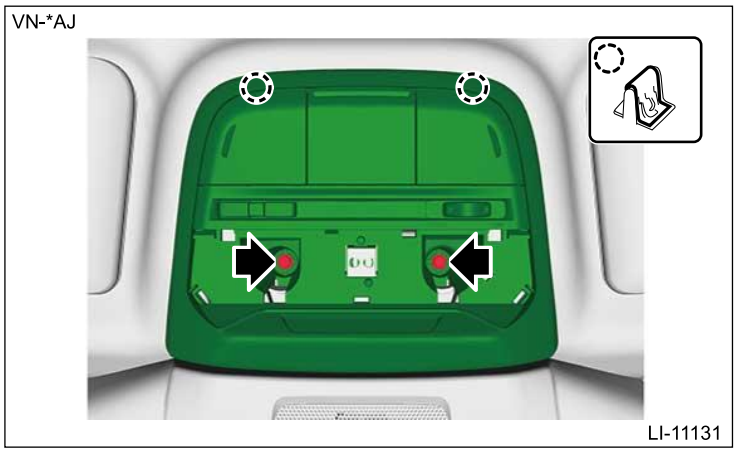
REMOVAL

Note:
Do not remove the light assembly map if removing the bulb only.

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Release the claws, and then remove the cover assembly map light.



3. Remove the light assembly map.
   (1) Remove the screws and clips.

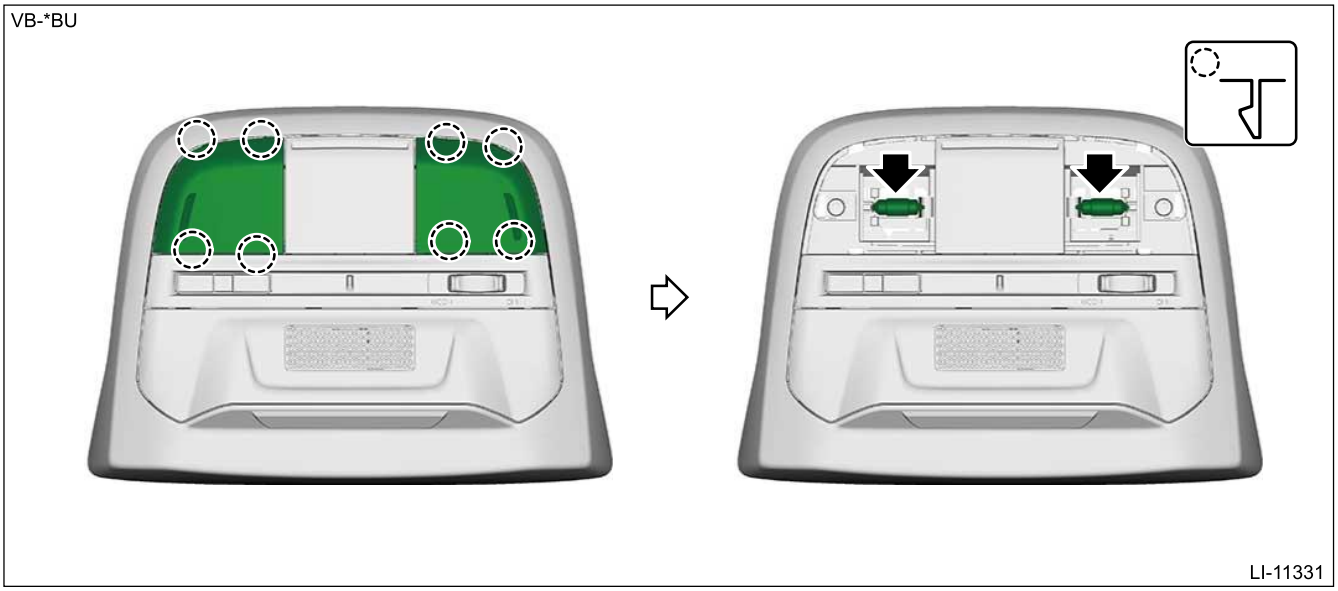


   (2) Disconnect the connector, and remove the light assembly map.
4. Remove the map light bulb.

Caution:
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

Note:
- **Perform this procedure only when required.**
- **When using a flat tip screwdriver, use an appropriate sized tool for the insertion opening, apply protective tape or cloth around the tool, and be careful not to cause damage.**

   (1) Release the claws and remove the lens.
   (2) Remove the map light bulb.



LIGHTING SYSTEM > Spot Map Light

INSTALLATION

1. Install the map light bulb and lens.

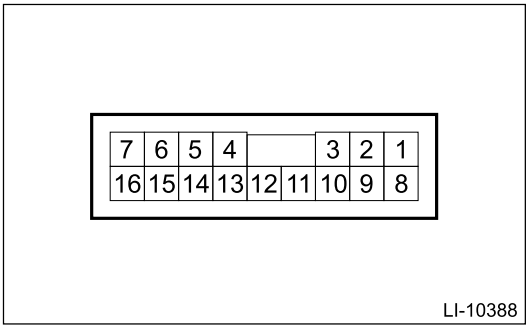
Caution:
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

2. Connect the connector, and install the light assembly map.
3. Install the cover assembly map light.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

LIGHTING SYSTEM > Spot Map Light

INSPECTION

1. Measure the resistance between connector terminals.



- Light switch

Terminal No.	Inspection conditions	Standard
1 — 13	Switch OFF	1 MΩ or more
	Switch ON	Approx. 18 Ω

- Door switch

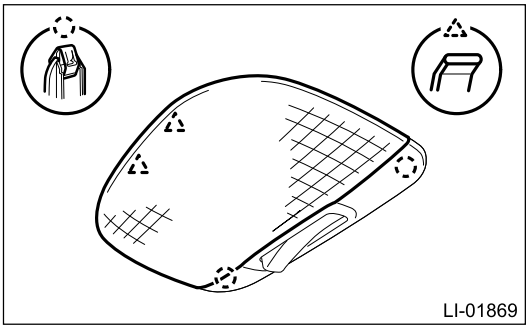
Terminal No.	Inspection conditions	Specification
1 — 4	Switch door	Continuity exists

2. Replace the harness and bulb if it is found defective.

REMOVAL

Note:
Do not remove the light assembly roof when removing the bulb only.

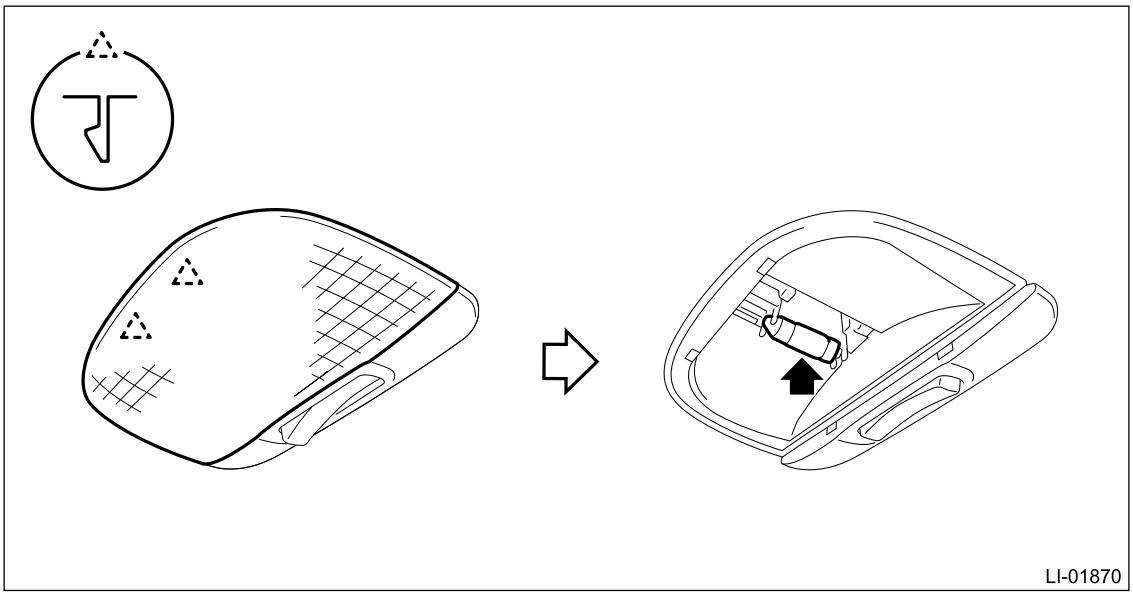
1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the light assembly roof.
   (1) Remove the clips, and then remove the hook.



   (2) Disconnect the connector and remove the light assembly roof.
3. Release the claws and remove the lens and room light bulb.

Caution:
- **Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.**
- **When using a flat tip screwdriver, use an appropriate sized tool for the insertion opening, apply protective tape or cloth around the tool, and be careful not to cause damage.**

Note:
Perform this procedure only when required.



INSTALLATION

1. Install the room light bulb and lens.

Caution:
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

2. Connect the connector, and install the light assembly roof.

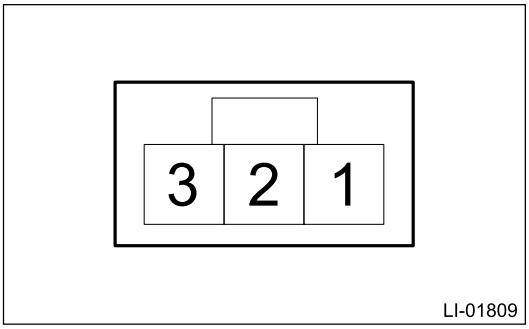
Note:
Hang the hook first, and then insert the clip.

3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

LIGHTING SYSTEM > Room Light

INSPECTION

1. Measure the resistance between connector terminals.



Terminal No.	Inspection conditions	Standard
1 — 3	Switch OFF	1 MΩ or more
	Switch ON	Less than 1 Ω
2 — 3	Switch door	Less than 1 Ω

2. Apply battery voltage between the connector terminals to check the lighting condition of the light.

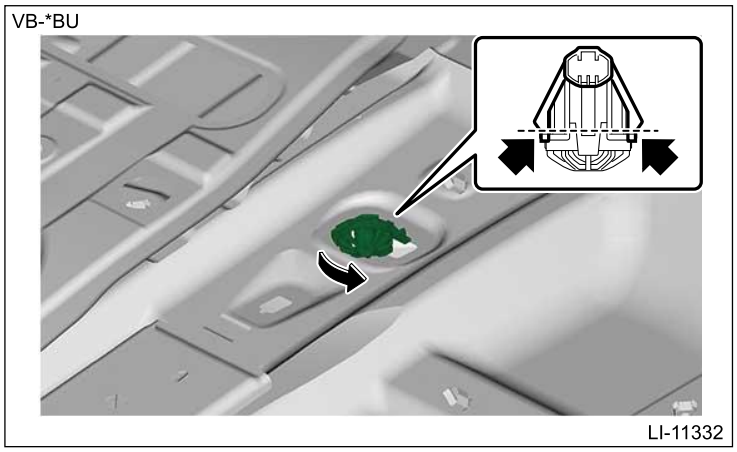
Terminal No.	Inspection conditions	Specification
3 (+) — 1 (−) 3 (+) — 2 (−)	Switch OFF	Light OFF
	Switch ON	Light ON
	Switch door	Light ON

3. Replace the light assembly roof if faulty is found in the inspection.

REMOVAL

Note:
Do not remove the trunk room light if removing the bulb only.

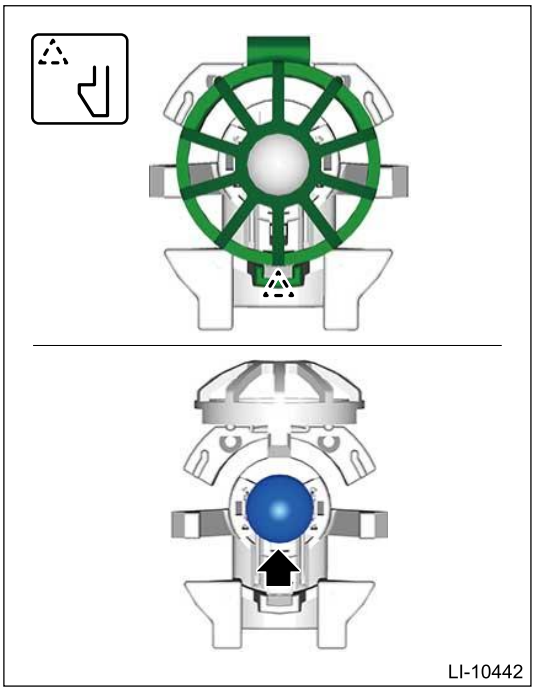
1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the light assembly trunk room.
   (1) Release the claws.
   (2) Disconnect the connector and remove the light assembly trunk room.



3. Release the claws to open the bulb cover, then remove the bulb.

Caution:
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

Note:
- **Perform this procedure only when required.**
- **When using a flat tip screwdriver, use an appropriate sized tool for the insertion opening, apply protective tape or cloth around the tool, and be careful not to cause damage.**



INSTALLATION

1. Install the bulb and bulb cover.

   Caution:

   Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

2. Connect the connector, and install the light assembly trunk room.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

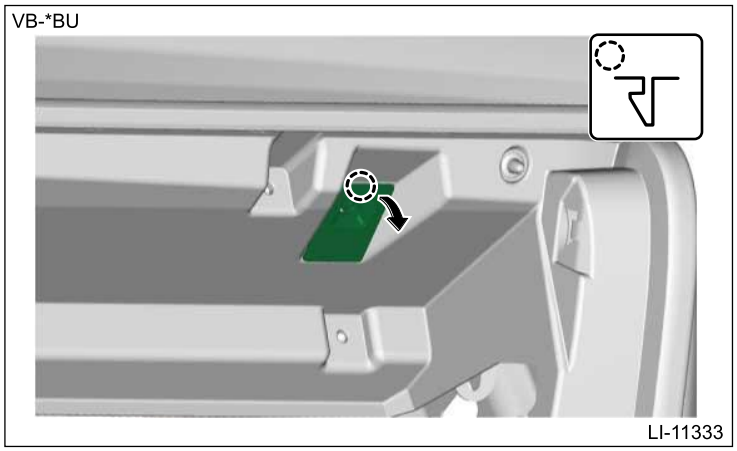
REMOVAL

1. GLOVE BOX LIGHT

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the pocket COMPL. Ref. to EXTERIOR/INTERIOR TRIM>Glove Box>REMOVAL > GLOVE BOX LID.
3. Remove the light pocket cover.

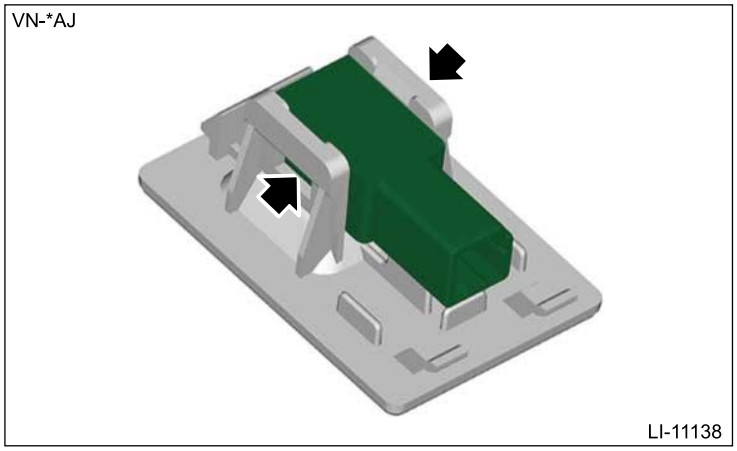
Note:
When using a flat tip screwdriver, use an appropriate sized tool for the insertion opening, apply protective tape or cloth around the tool, and be careful not to cause damage.

(1) Release the claws.



(2) Disconnect the connector, and remove the light pocket cover.

4. Release the claws, and remove the light pocket.



2. POCKET LIGHT

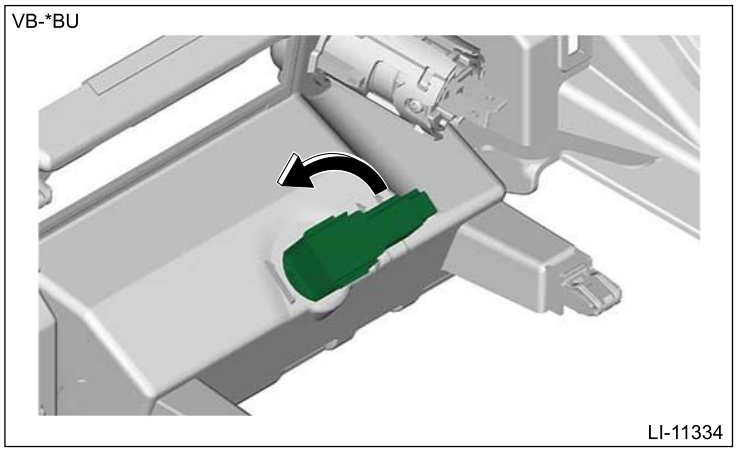
Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. Remove the ornament panel mid passenger and panel assembly center. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>REMOVAL.
3. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
4. Remove the panel starter switch. (Model with push button ignition starter) Ref. to SECURITY AND LOCKS>Push Button Ignition Switch>REMOVAL.

Note:
For the models without push button ignition starter, remove the cover starter switch.

5. Remove the console box assembly. Ref. to EXTERIOR/INTERIOR TRIM>Console Box.
6. Remove the cover center side. Ref. to EXTERIOR/INTERIOR TRIM>Center Console>REMOVAL.
7. Remove the tray center UPR and the AUX unit assembly. Ref. to ENTERTAINMENT & MONITORING>External Connection Terminal>REMOVAL > FRONT.
8. Rotate in the direction of arrow shown in the figure to remove the light pocket.



LIGHTING SYSTEM > LED Illumination Light

INSTALLATION

1. GLOVE BOX LIGHT

1. Install the light pocket.
2. Connect the connector and install the light pocket cover.
3. Install the pocket COMPL. Ref. to EXTERIOR/INTERIOR TRIM>Glove Box>INSTALLATION.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. POCKET LIGHT

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the light pocket.
2. Install the AUX unit assembly and the tray center UPR. Ref. to ENTERTAINMENT & MONITORING>External Connection Terminal>INSTALLATION > FRONT.
3. Install the cover center side. Ref. to EXTERIOR/INTERIOR TRIM>Center Console>INSTALLATION.
4. Install the console box assembly. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>INSTALLATION.

5. Install the panel starter switch. (Model with push button ignition starter) Ref. to SECURITY AND LOCKS>Push Button Ignition Switch>INSTALLATION.

Note:
For the models without push button ignition starter, install the cover starter switch.

6. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
7. Install the panel assembly center and the ornament panel mid passenger. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>INSTALLATION.
8. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

LIGHTING SYSTEM > Vanity Mirror Light

REMOVAL

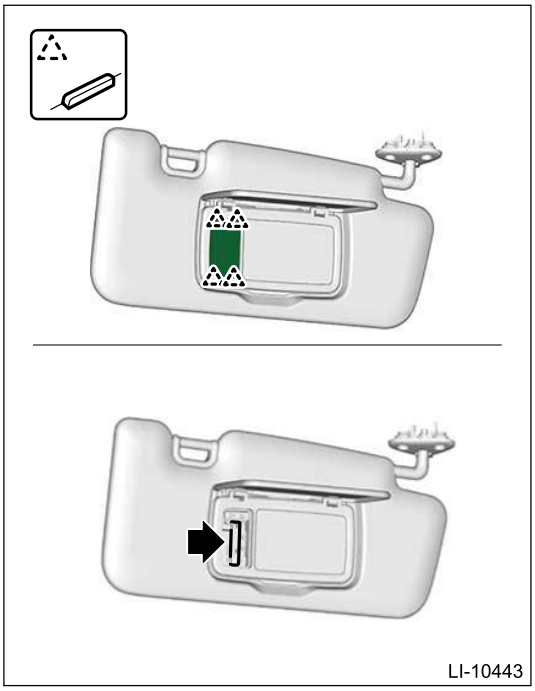
Note:
- **The vanity mirror light is integrated into the sun visor assembly. Replace the sun visor assembly if faulty. Ref. to EXTERIOR/INTERIOR TRIM>Sun Visor>REMOVAL.**
- **Do not remove the sun visor assembly if removing the bulb only.**

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the sun visor assembly. Ref. to EXTERIOR/INTERIOR TRIM>Sun Visor>REMOVAL.
3. Remove the vanity mirror light bulb.

Caution:
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

Note:
When using a flat tip screwdriver, use an appropriate sized tool for the insertion opening, apply protective tape or cloth around the tool, and be careful not to cause damage.

(1) Release the claws and remove the lens.



(2) Remove the vanity mirror light bulb.

LIGHTING SYSTEM > Vanity Mirror Light

INSTALLATION

1. Install the vanity mirror light bulb and lens.

Caution:
Use a dry clean cloth so that no grease or water adheres to the glass portion of the bulb.

2. Install the sun visor assembly. Ref. to EXTERIOR/INTERIOR TRIM>Sun Visor>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

LIGHTING SYSTEM > Ignition Switch Illumination

NOTE

The ignition switch illumination is integrated into the immobilizer antenna assembly.
For the operation procedure of the ignition switch illumination, refer to “Immobilizer Antenna” in the “SECURITY & LOCKS” section. Ref. to SECURITY AND LOCKS>Immobilizer Antenna.

LIGHTING SYSTEM > Ignition Switch Illumination

INSPECTION

1. CHECK IGNITION SWITCH ILLUMINATION.

1. Turn the ignition switch to ON.
2. Check the lighting condition of the ignition switch illumination.

Does the ignition switch illumination blink?

Yes	Check the function setting of body integrated unit. Ref. to BODY CONTROL(DIAGNOSTICS)>Registration Body Integrated Unit.
No	Go to 2.

2. CHECK IGNITION SWITCH ILLUMINATION OPERATION.

1. Turn the ignition switch to OFF.
2. Open and close the driver’s side door.

When door is opened/closed, does the ignition switch illumination switch between ON ←→ OFF?

Yes	Ignition switch illumination is normal.
No	Go to 3.

3. CHECK CURRENT DATA.

Using Subaru Select Monitor, display data of [Driver's door SW input] in [Data Monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display change to [ON] ←→ [OFF], when the door is opened/closed?

Yes	Go to 4.
No	Check the door switch circuit. Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK DOOR SWITCH.

4. CHECK CURRENT DATA.

Using Subaru Select Monitor, display data of [key illumination lamp o/p] in [Data Monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display change to [ON] ←→ [OFF], when the door is opened/closed?

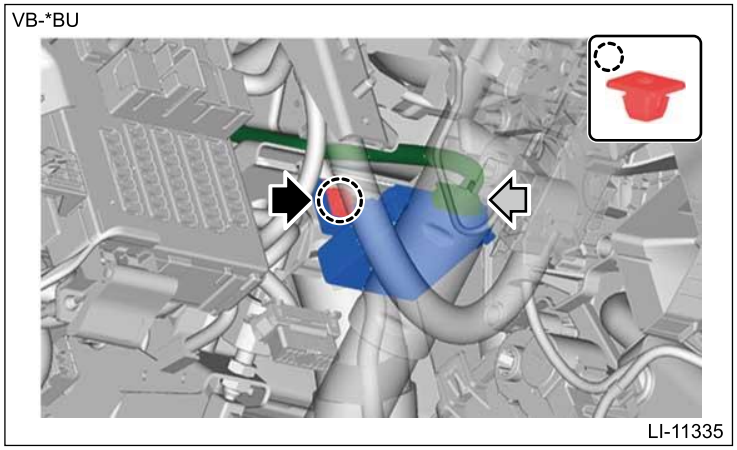
Yes	Check the ignition switch illumination circuit, and repair or replace the harness.
No	Check the body integrated unit and replace it if defective. • Inspection: Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure. • Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

LIGHTING SYSTEM > Auto Headlight Beam Leveler Control Module

REMOVAL

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
3. Remove the knee airbag module. Ref. to AIRBAG SYSTEM>Knee Airbag Module>REMOVAL.
4. Remove the duct foot driver. Ref. to AIR CONDITIONER>Air Vent Duct>REMOVAL > FOOT DUCT.
5. Remove the auto headlight beam leveler CM.
   (1) Remove the connectors and screws.
   (2) Remove the clips, and remove the auto headlight beam leveler CM.



LIGHTING SYSTEM > Auto Headlight Beam Leveler Control Module

INSTALLATION

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

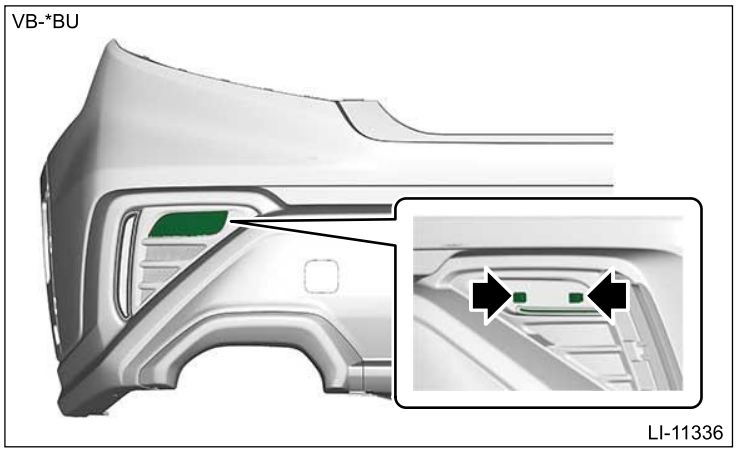
1. Install the auto headlight beam leveler CM, and connect the connector.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
2. Install the duct foot driver. Ref. to AIR CONDITIONER>Air Vent Duct>INSTALLATION > FOOT DUCT.
3. Install the knee airbag module. Ref. to AIRBAG SYSTEM>Knee Airbag Module>INSTALLATION.
4. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
6. Perform auto headlight beam leveler system initialization/reinitialization. Ref. to LIGHTING SYSTEM>Auto Headlight Beam Leveler System>PROCEDURE.

REMOVAL

1. REAR REFLEX REFLECTOR

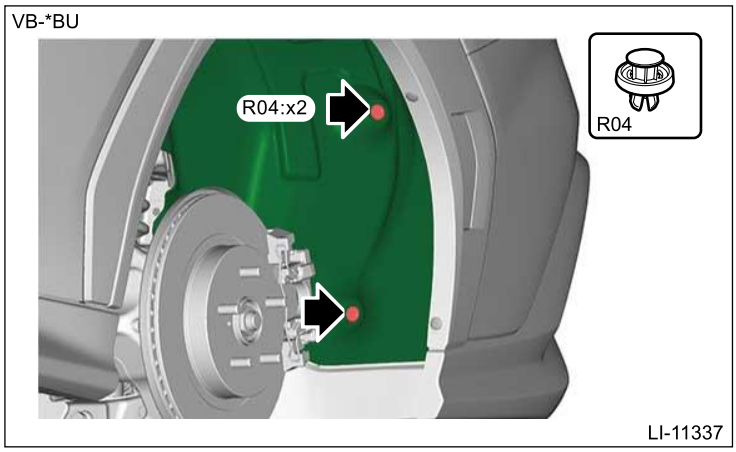
Caution:
The muffler is extremely hot immediately after driving. Be wary of receiving burns from heated parts.

1. Release the claws and then remove the reflex reflector.

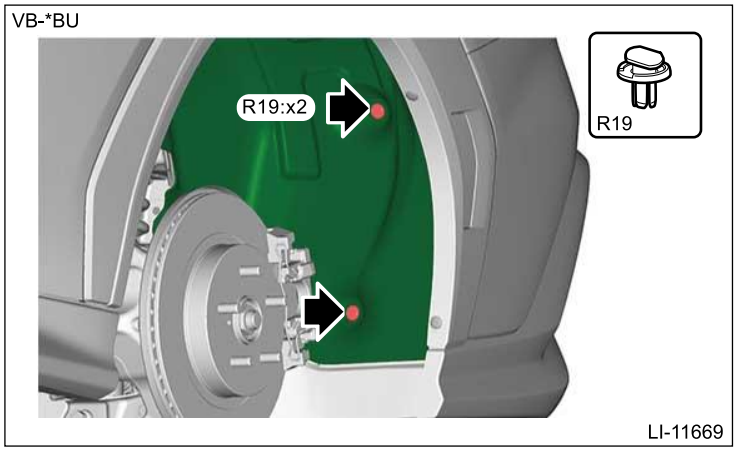


2. REAR SIDE REFLEX REFLECTOR

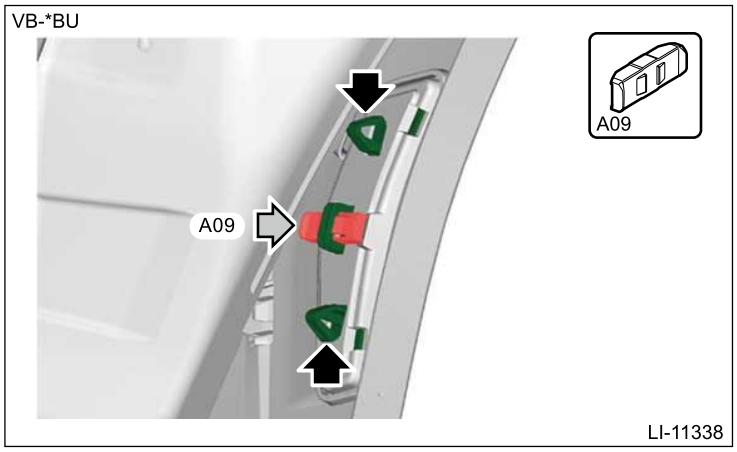
1. Remove the rear wheels. Ref. to WHEEL AND TIRE SYSTEM>Tire and Wheel>REMOVAL.
2. Remove the clips and turn over the mud guard rear.
   - Type A



   - Type B



3. Release the clip and claw, then remove the rear side reflex reflector.



LIGHTING SYSTEM > Reflex Reflector

INSTALLATION

1. REAR REFLEX REFLECTOR

1. Install the reflex reflector.

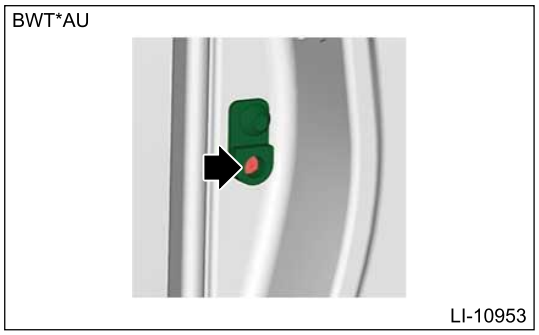
2. REAR SIDE REFLEX REFLECTOR

1. Install the rear side reflex reflector.
2. Install the mud guard rear. Ref. to EXTERIOR/INTERIOR TRIM>Mud Guard>INSTALLATION.
3. Install the rear wheels. Ref. to WHEEL AND TIRE SYSTEM>Tire and Wheel>INSTALLATION.

LIGHTING SYSTEM > Door Switch

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the door switch assembly.
   (1) Remove the bolts, and pull out the door switch assembly toward you.



   (2) Disconnect the connector and remove the door switch assembly.

LIGHTING SYSTEM > Door Switch

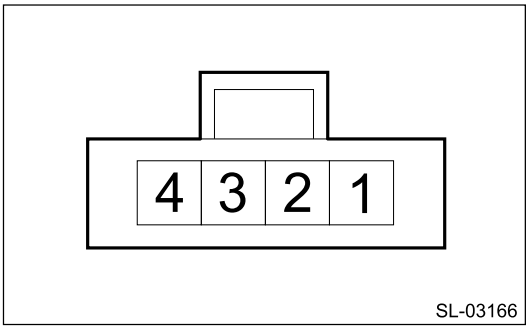
INSTALLATION

1. Connect the connector and install the door switch assembly.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
2. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

LIGHTING SYSTEM > Door Switch

INSPECTION

1. Measure the resistance between connector terminals.



- Front

Terminal No.	Inspection conditions	Standard
2 — 1	When the switch is not pressed	Less than 1 Ω
	When the switch is pressed	1 MΩ or more

- Rear

Terminal No.	Inspection conditions	Standard
2 — 1	When the switch is not pressed	Less than 1 Ω

Terminal No.	Inspection conditions	Standard
	When the switch is pressed	1 MΩ or more

2. Replace the door switch assembly if the inspection result is not within the standard value.

WIPER AND WASHER SYSTEMS

WW

1. General Description
2. Relay and Fuse
3. Wiper and Washer System
4. Combination Switch (Wiper)
5. Washer Tank and Motor
6. Wiper Blade
7. Front Wiper Arm
8. Front Wiper Motor and Link
9. Front Washer

WIPER AND WASHER SYSTEMS > General Description

CAUTION

- When performing service operation, refer to “Repair Contents” in “General Description”. Ref. to REPAIR CONTENTS>Repair Contents.
- When performing work on the sensors or modules, be careful of the following.
  – Before disconnecting connectors, be sure to disconnect the ground terminal from the battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
  – Do not apply any impact. If the parts are accidentally dropped, replace with a new part.
  – Do not expose to high-temperature and humidity.
- When replacing the parts provided with memory functions, record the memory contents before disconnecting the ground terminal from the battery sensor.
- Refer to “CAUTION” of “General Description” in “AIRBAG SYSTEM” section. Ref. to AIRBAG SYSTEM>General Description>CAUTION.
- When connecting the washer hoses, be careful not to cause bend or blockage.
- Do not let oil and grease adhere to the washer tank and washer fluid passage. Even a small amount of adherence will form an oil film on the glass, causing the wiper to chatter and judder.

WIPER AND WASHER SYSTEMS > General Description

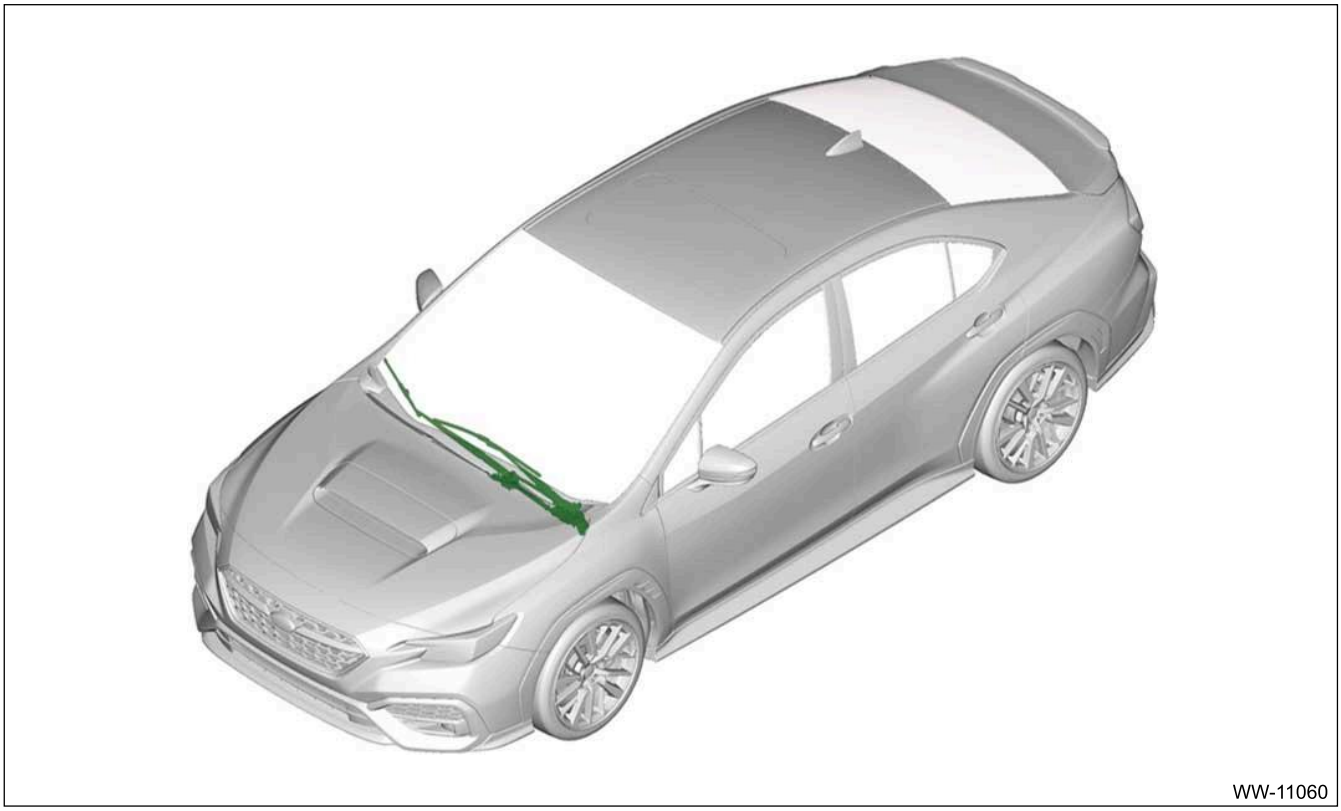
SPECIFICATION

Front wiper motor	Motor type	Magnet type
	Input	12 V — 72 W or less
Front washer motor	Pump type	Centrifugal
	Input	12 V — 72 W or less

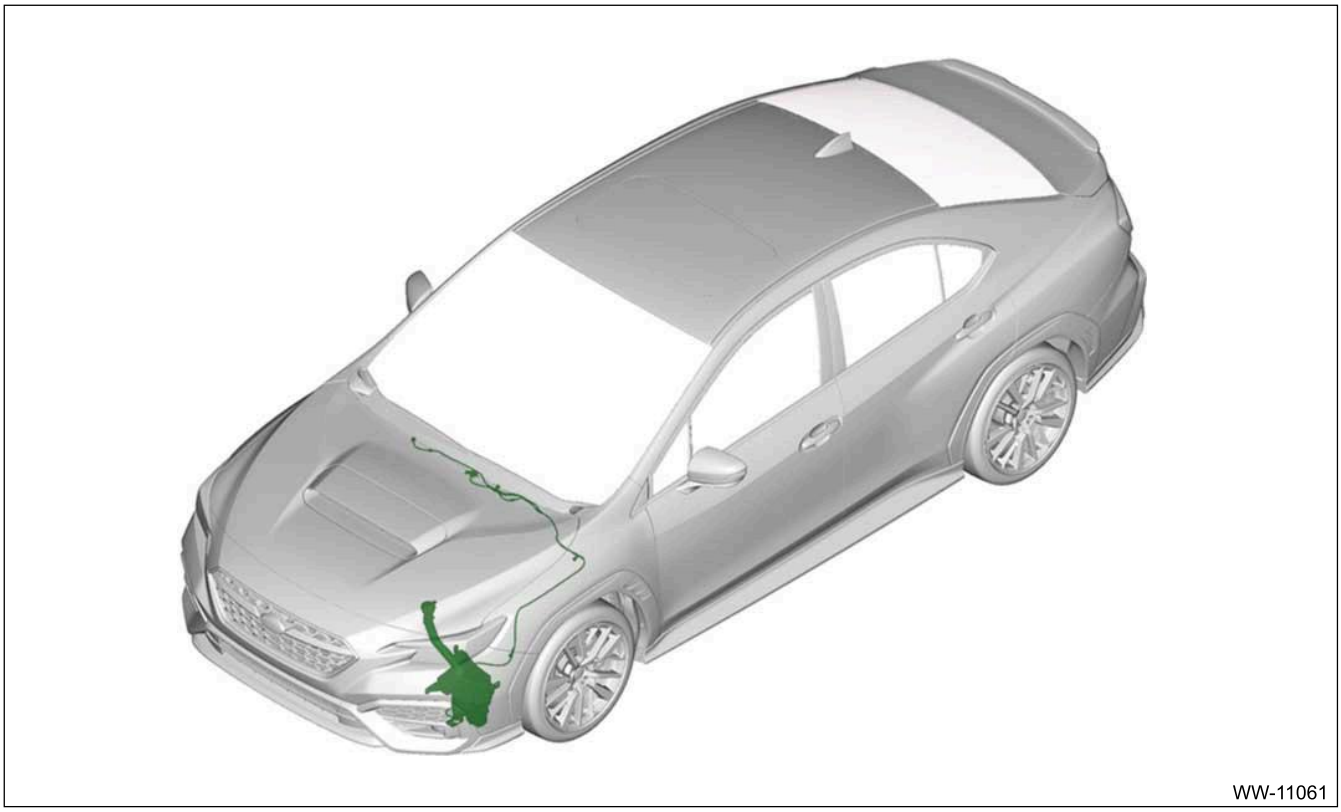
WIPER AND WASHER SYSTEMS > General Description

LOCATION

1. WIPER SYSTEM



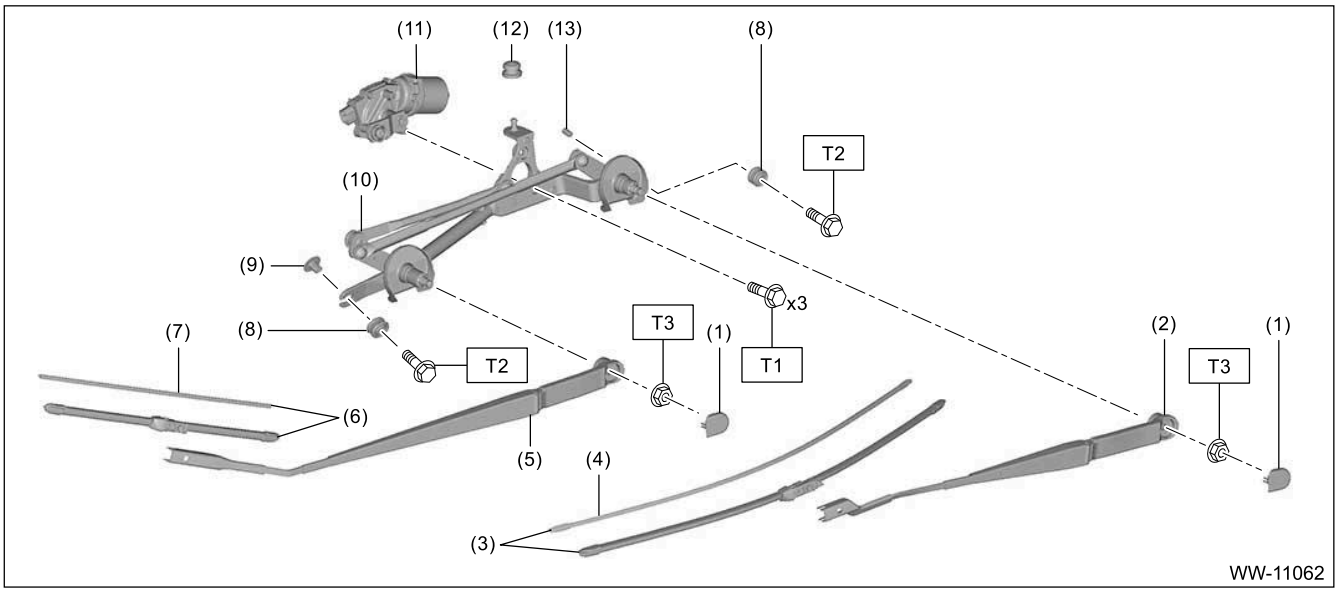
2. WASHER SYSTEM



COMPONENT

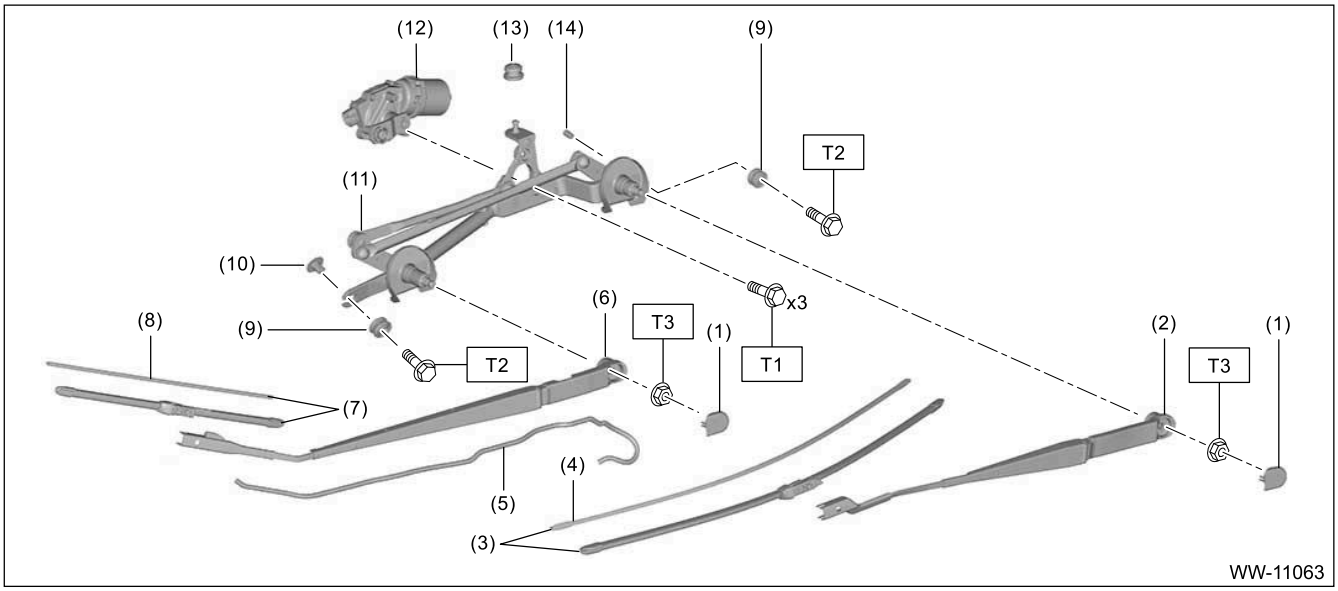
1. FRONT WIPER

- **MODEL WITHOUT WIPER ARM WASHER**



(1)	Cover windshield wiper arm	(7)	Rubber ASSY windshield wiper assistor	(13)	Collar LH
(2)	Arm ASSY windshield wiper driver	(8)	Rubber		
(3)	Blade ASSY windshield wiper driver	(9)	Collar RH	***Tightening torque: N·m (kgf-m, ft-lb)***	
(4)	Rubber ASSY windshield wiper driver	(10)	Link ASSY windshield wiper	***T1: 5.4 (0.6, 4.0)***	
(5)	Arm ASSY windshield wiper assistor	(11)	Motor ASSY windshield wiper	***T2: 6 (0.6, 4.4)***	
(6)	Blade ASSY windshield wiper assistor	(12)	Cushion windshield wiper	***T3: 22 (2.2, 16.2)***	

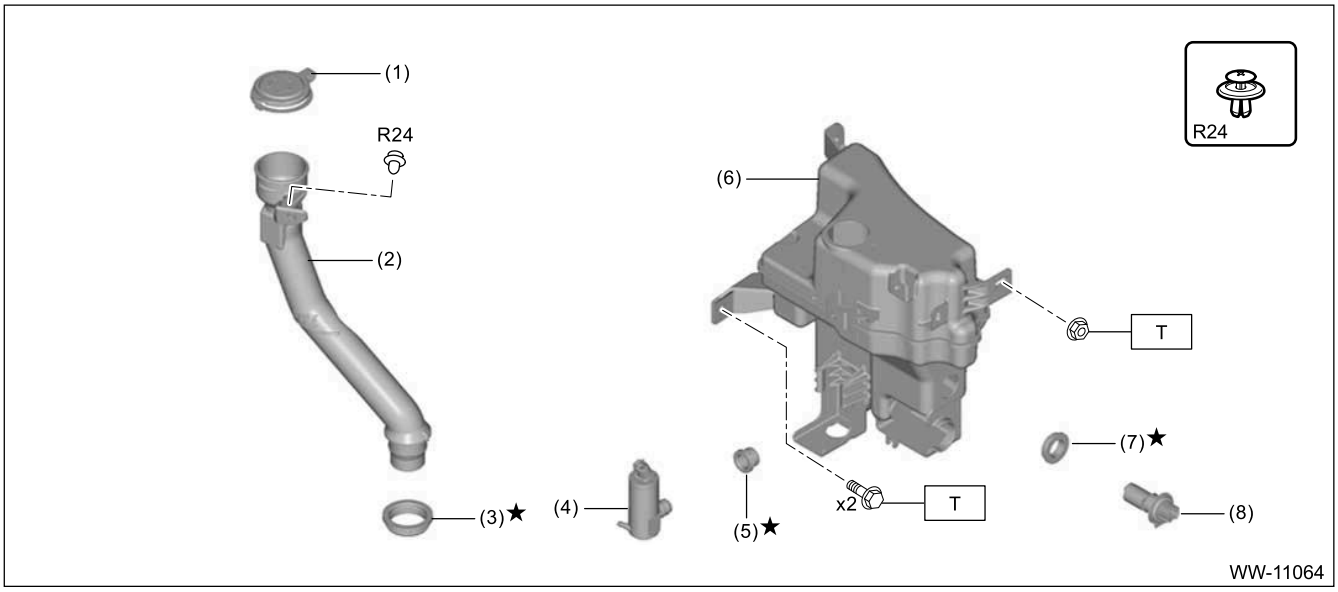
- **MODEL WITH WIPER ARM WASHER**



(1)	Cover windshield wiper arm	(8)	Rubber ASSY windshield wiper assistor	***Tightening torque: N·m (kgf-m, ft-lb)***
(2)	Arm ASSY windshield wiper driver	(9)	Rubber	***T1: 5.4 (0.6, 4.0)***
(3)	Blade ASSY windshield wiper driver	(10)	Collar RH	***T2: 6 (0.6, 4.4)***
(4)	Rubber ASSY windshield wiper driver	(11)	Link ASSY windshield wiper	***T3: 22 (2.2, 16.2)***
(5)	Hose wiper arm washer	(12)	Motor ASSY windshield wiper	
(6)	Arm ASSY windshield wiper assistor	(13)	Cushion windshield wiper	
(7)	Blade ASSY windshield wiper assistor	(14)	Collar LH	

2. WASHER TANK & HOSE

- **WASHER TANK**

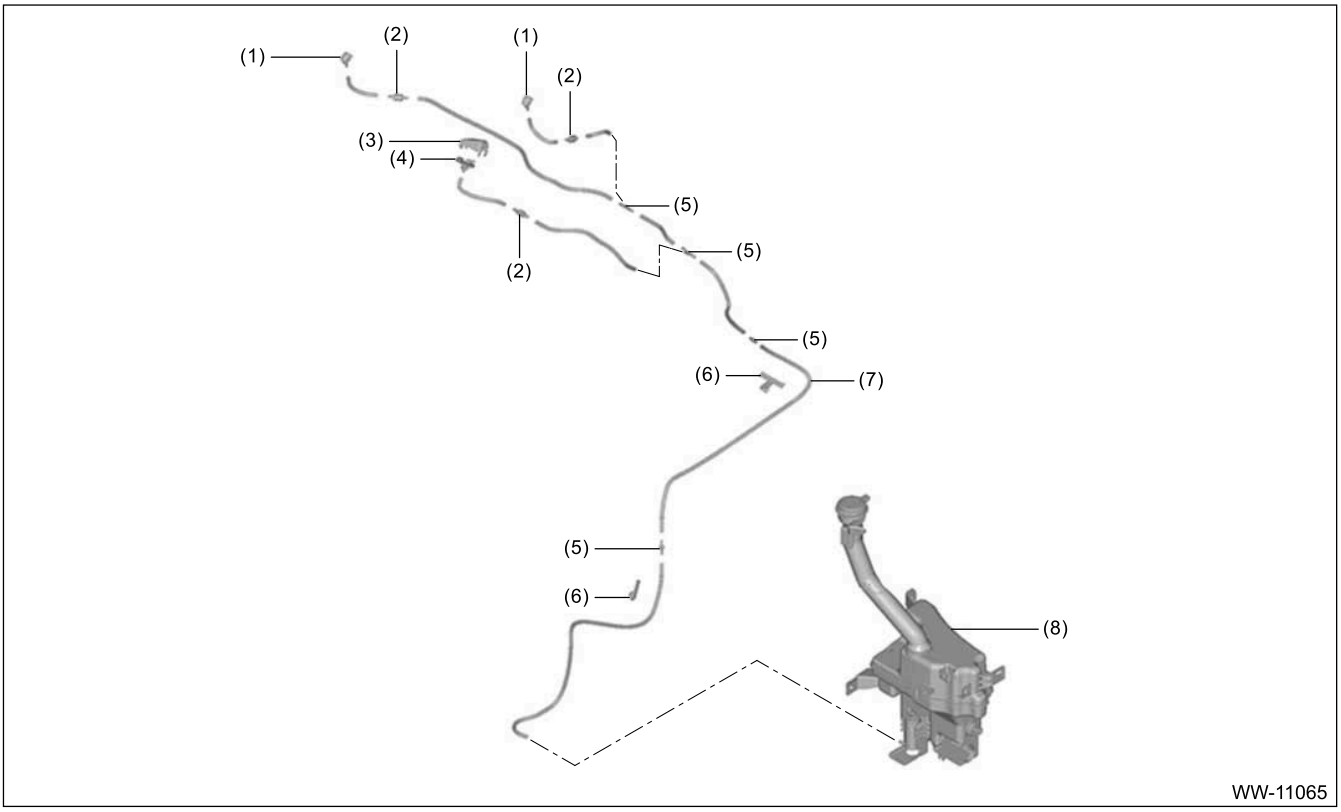


(1) Cap washer tank
(2) Hose inlet
(3) Packing inlet
(4) Motor pump ASSY washer
(5) Packing
(6) Tank washer
(7) Packing
(8) Sensor washer fluid level

Tightening torque: N·m (kgf-m, ft-lb)

T: 6 (0.6, 4.4)

• FRONT WASHER HOSE



(1) Nozzle windshield washer
(4) Joint washer hose (model with wiper arm washer)
(7) Hose ASSY windshield washer

(2) Check valve windshield washer
(3) Cover joint (model with wiper arm washer)
(5) Joint
(6) Clip
(8) Washer tank ASSY

WIPER AND WASHER SYSTEMS > General Description

PREPARATION TOOL

1. SUBARU SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 STSSM4	—	SUBARU SELECT MONITOR 4	Used for setting of each function and troubleshooting for electrical system. **Note:** • **For detailed operation procedures, refer to "Help" of application.** • **Used together with interface for Subaru Select Monitor (such as DST-i and DST-010).**

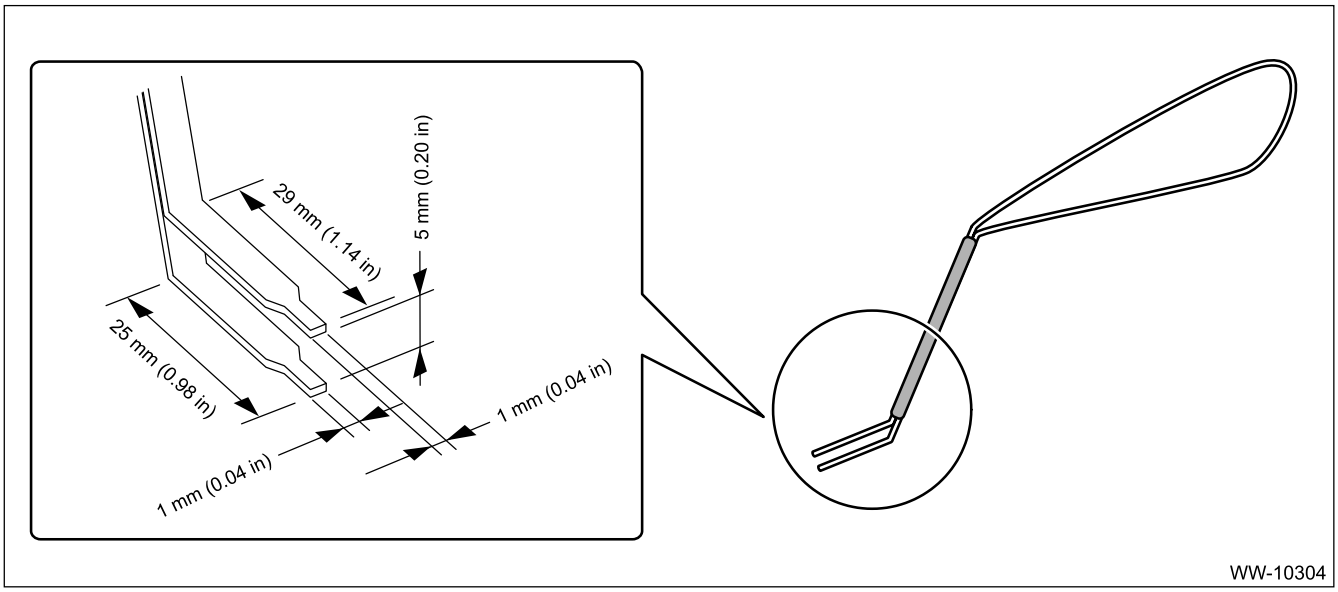
2. OTHER

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

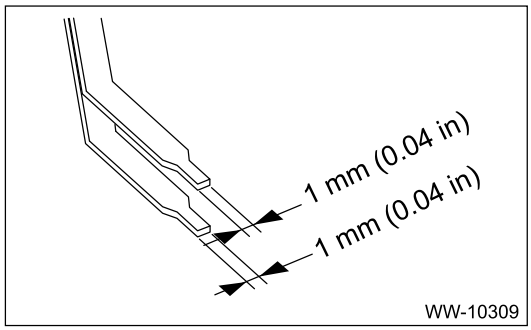
3. HANDMADE TOOL

- **WASHER NOZZLE ADJUSTMENT JIG**

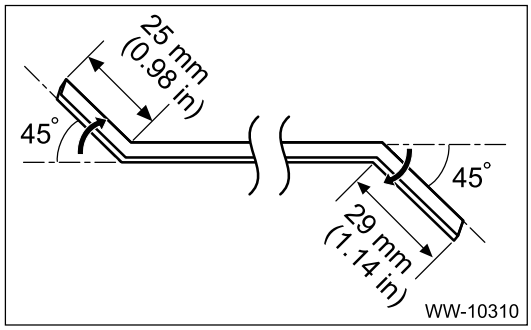
Note:
Refer to the data described below, prepare the materials to make a washer nozzle adjustment tool.



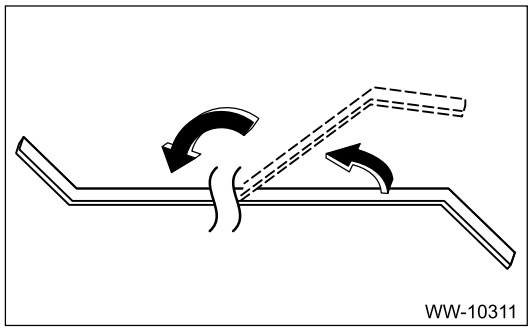
1. Prepare the vertebra of wiper blade which is to be discarded and vinyl tape.
2. Grind the vertebra edge until the width becomes 1 mm (0.04 in).

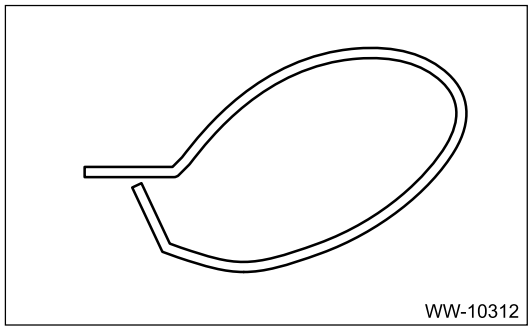


3. Bend the vertebra at the position 25 mm (0.98 in) away from its end by 45°.
4. Bend the vertebra at the position 29 mm (1.14 in) away from the other end by 45°.

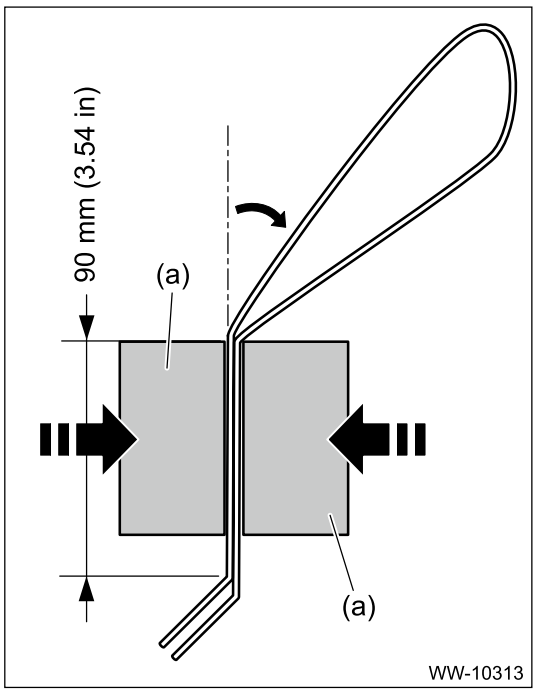


5. Double up the vertebra so that the longer end (29 mm (1.14 in)) comes upward.

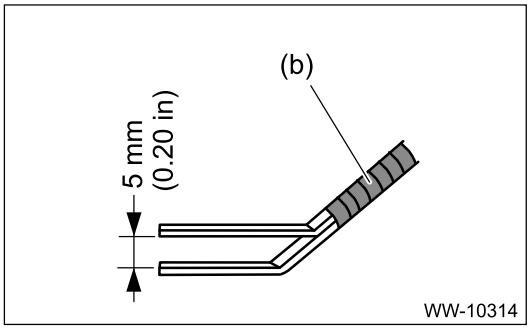




6. Secure the vertebra with a vise (a) so that the tip clearance between upper and lower becomes 5 mm (0.2 in).
7. Bend the vertebra at the position approximately 90 mm (3.54 in) away from the bending point for the longer end.



8. Check that the tip clearance between upper and lower is 5 mm (0.2 in), and secure the vertebra with vinyl tape (b).



LOCATION

For the location, refer to “FUSE AND RELAY” in the wiring diagram. Ref. to WIRING SYSTEM>Fuse And Relay.

Note:

For details of relay and fuse, refer to “DC POWER SUPPLY CIRCUIT”. Ref. to WIRING SYSTEM>Power Supply Circuit.

INSPECTION

1. CHECK FUSE

1. Remove the fuse and inspect visually.
2. If the fuse is blown out, replace the fuse.

WIPER AND WASHER SYSTEMS > Wiper and Washer System

WIRING DIAGRAM

For the wiring diagram, refer to "Front Wiper and Washer System" in the wiring diagram. Ref. to WIRING SYSTEM>Front Wiper and Washer System>WIRING DIAGRAM.

WIPER AND WASHER SYSTEMS > Wiper and Washer System

INSPECTION

1. TROUBLE SYMPTOM

Symptoms	Repair order
Wiper and washers do not operate	1. Wiper fuse 2. Combination switch (wiper) 3. Motor assembly wiper 4. Wiring harness
Wipers do not operate in LO or HI	1. Combination switch (wiper) 2. Motor assembly wiper 3. Wiring harness
Wipers do not operate in INT	1. Combination switch (wiper) 2. Motor assembly wiper 3. Wiring harness
Washer motor does not operate	1. Combination switch (wiper) 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
Wiper chatters or judders during operation	1. Oil film and dirt on the glass 2. Arm assembly wiper 3. Motor assembly wiper

WIPER AND WASHER SYSTEMS > Wiper and Washer System

NOTE

For procedure of components of the wiper and washer system, refer to the sections below.

- Combination switch (wiper): Ref. to WIPER AND WASHER SYSTEMS>Combination Switch (Wiper).
- Wiper blade: Ref. to WIPER AND WASHER SYSTEMS>Wiper Blade.
- Front wiper arm: Ref. to WIPER AND WASHER SYSTEMS>Front Wiper Arm.
- Front wiper motor and link: Ref. to WIPER AND WASHER SYSTEMS>Front Wiper Motor and Link.
- Washer tank and motor pump: Ref. to WIPER AND WASHER SYSTEMS>Washer Tank and Motor.
- Front washer: Ref. to WIPER AND WASHER SYSTEMS>Front Washer.
- Front relay control module: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.

- Body integrated unit: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

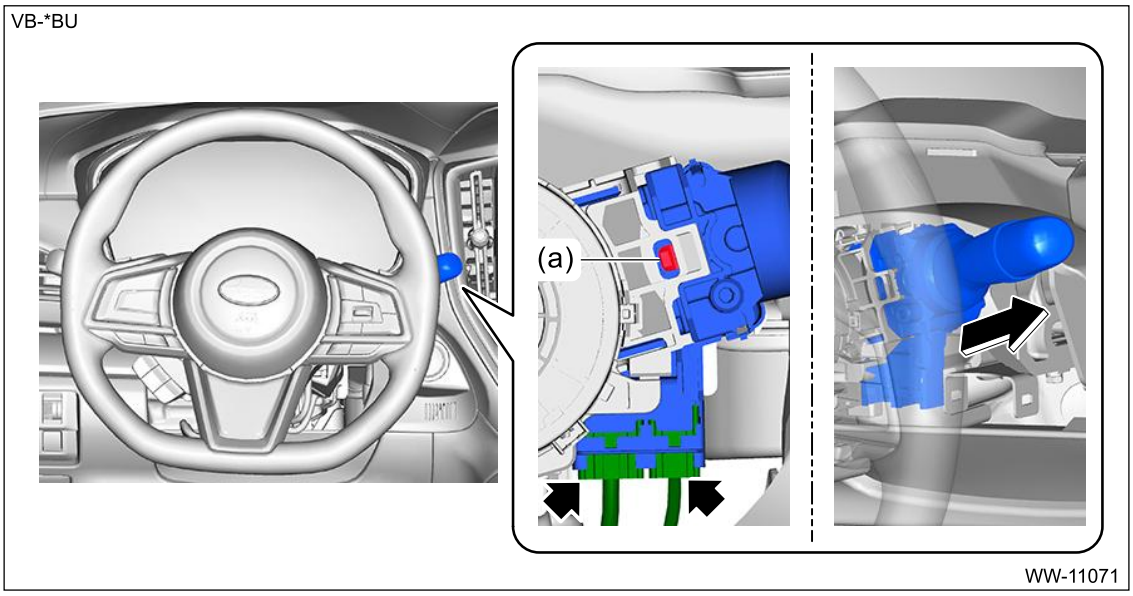
WIPER AND WASHER SYSTEMS > Combination Switch (Wiper)

REMOVAL

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Turn the steering wheel assembly to right and left, remove the screws, and remove the column cover assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Column>REMOVAL.
3. Remove the switch assembly combination wiper.
   (1) Disconnect connectors.
   (2) Press the claw (a), and remove the switch assembly combination wiper.

   Caution:
   Do not press the claws with excessive force. They may be damaged.



WIPER AND WASHER SYSTEMS > Combination Switch (Wiper)

INSTALLATION

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

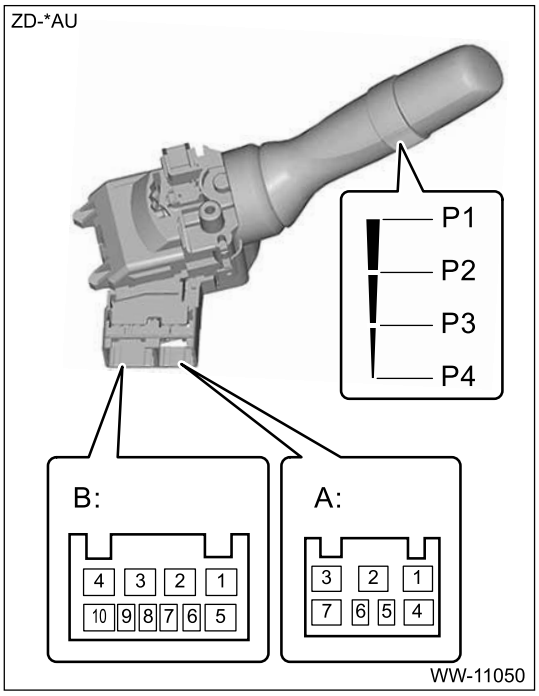
1. Install the switch assembly combination wiper, and connect each connector.
2. Install the column cover assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Column>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

WIPER AND WASHER SYSTEMS > Combination Switch (Wiper)

INSPECTION

1. INSPECTION OF SWITCH UNIT

1. Measure the resistance between connector terminals.



- Front switch

Terminal No.	Inspection conditions	Standard
B2 — B3	MIST	Less than 1 Ω
B2 — B4		Less than 1 MΩ
B1 — B3	OFF	Less than 1 Ω
B1 — B3	INT	Less than 1 Ω
B9 — B10		
B2 — B3	LO	Less than 1 Ω
B2 — B4	HI	Less than 1 Ω

- Washer switch

Terminal No.	Inspection conditions	Standard
A2 — A3	ON	Less than 1 Ω

- INT volume switch

Terminal No.	Inspection conditions	Standard
B7 — B8	P1	Less than 1 Ω
	P2	Approx. 2 kΩ
	P3	Approx. 4 kΩ
	P4	Approx. 6 kΩ

2. Replace the switch assembly combination wiper if the inspection result is not within the standard value.

2. CHECK INTERMITTENT OPERATION OF SWITCH

1. Turn the ignition switch to ON.

2. Operate the combination switch (wiper) to the INT position.
3. Check the stop duration during intermittent operation when intermittent control switch is in FAST and SLOW.

   Intermittent stationary time

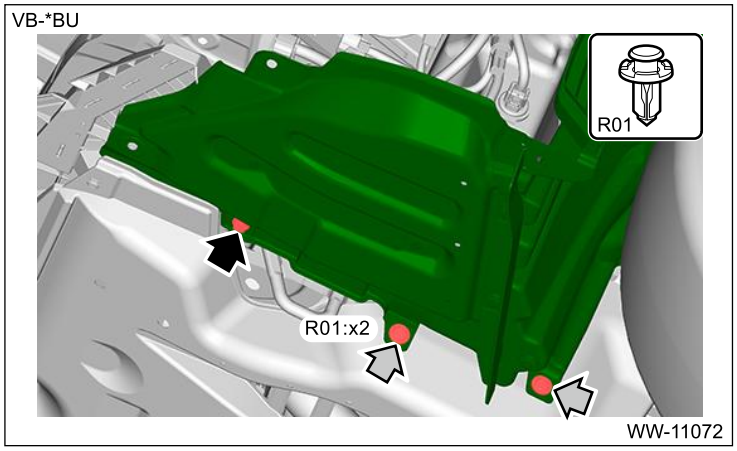
   FAST: Approx. 2 seconds

   SLOW: Approx. 16 seconds
4. Replace the switch assembly combination wiper if the inspection result is not within the standard value.

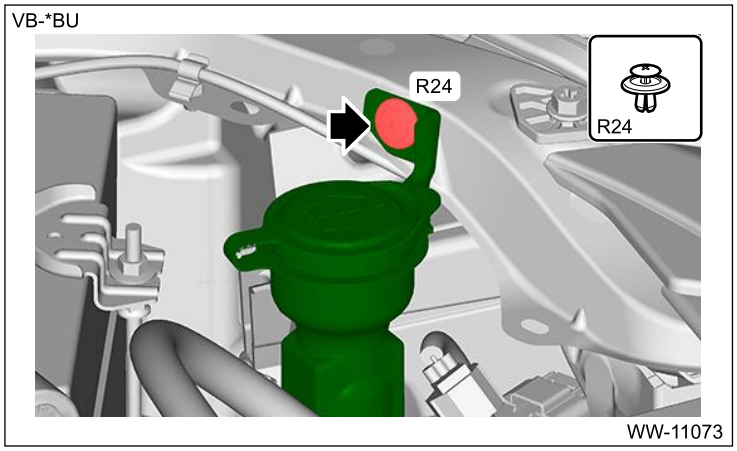
REMOVAL

1. WASHER TANK

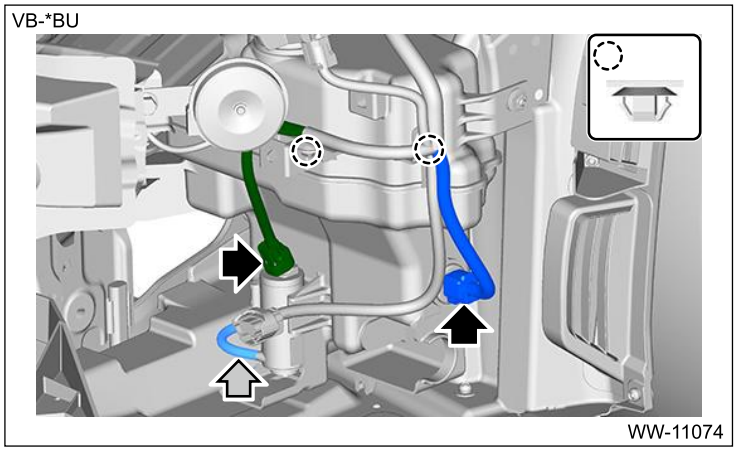
1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the bumper face front. Ref. to EXTERIOR/INTERIOR TRIM>Front Bumper>REMOVAL.
3. Remove the screw and clips, and turn over the mud guard front LH.



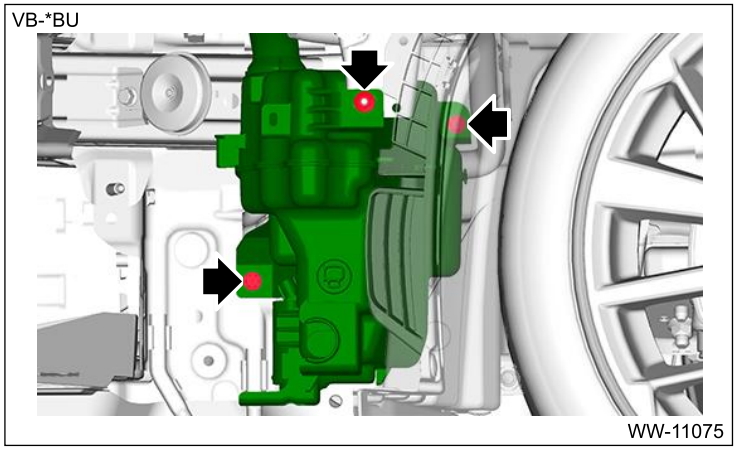
4. Remove the washer tank assembly.
   (1) Remove the clip.



   (2) Disconnect the connector from the motor pump assembly washer and the sensor washer fluid level, and then remove the harness clip.
   (3) Prepare a container before disconnecting the hose assembly windshield washer, and drain all the washer fluid.



(4) Disconnect the hose washer from the tank washer hose clamp.
(5) Remove the bolt and nuts and remove the washer tank assembly.



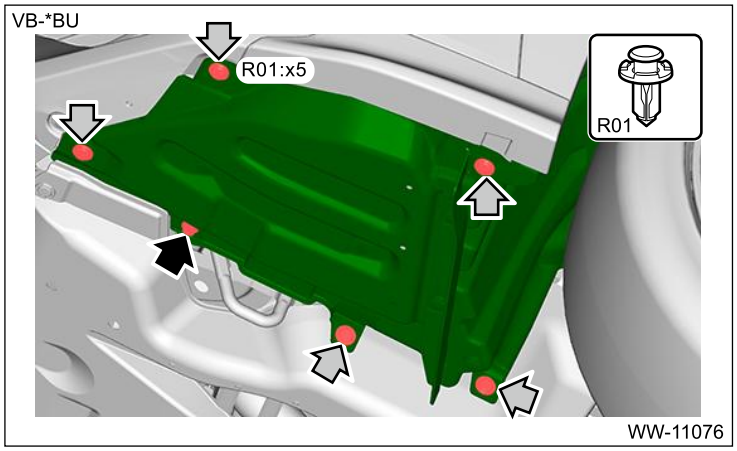
5. Remove the motor pump assembly washer and the sensor washer fluid level.

Note:
Perform this procedure only when required.

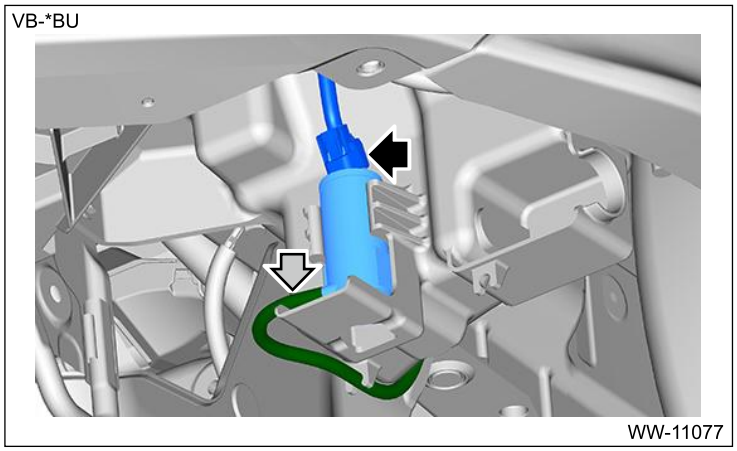
- Motor pump assembly washer: Ref. to WIPER AND WASHER SYSTEMS>Washer Tank and Motor>REMOVAL > WASHER MOTOR PUMP.
- Sensor washer fluid level: Ref. to WIPER AND WASHER SYSTEMS>Washer Tank and Motor>REMOVAL > WASHER FLUID LEVEL SENSOR.

2. WASHER MOTOR PUMP

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the screw and clips, and turn over the mud guard front LH.

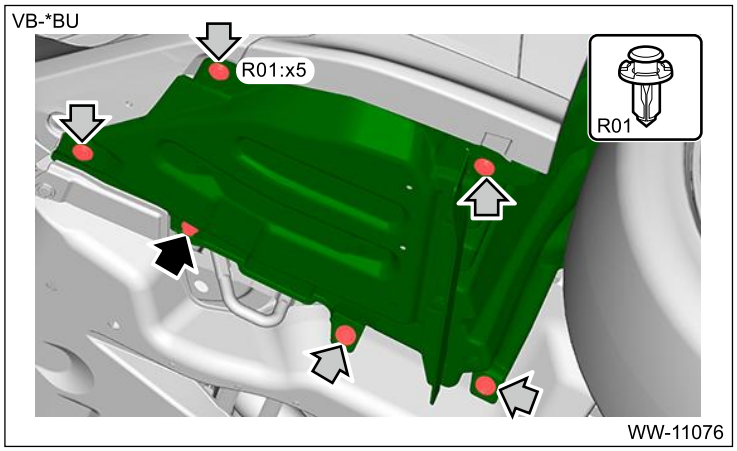


3. Remove the motor pump assembly washer.
   (1) Prepare a container before disconnecting the hose assembly windshield washer, and drain all the washer fluid.
   (2) Disconnect the connector, and remove the motor pump assembly washer.



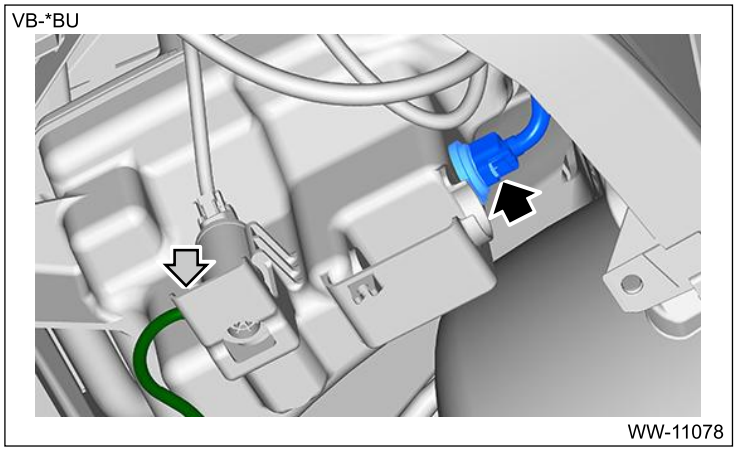
3. WASHER FLUID LEVEL SENSOR

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the screw and clips, and turn over the mud guard front LH.



3. Remove the sensor washer fluid level.
   (1) Prepare a container before disconnecting the hose assembly windshield washer, and drain all the washer fluid.

(2) Disconnect the connector, and remove the sensor washer fluid level with a thick towel or the like.



WIPER AND WASHER SYSTEMS > Washer Tank and Motor

INSTALLATION

1. WASHER TANK

Caution:
When the hose inlet assembly is removed, do not reuse the packing inlet. Align the alignment marks on the hose inlet and the tank washer before installation.

1. Install the motor pump assembly washer and the sensor washer fluid level.
   - Motor pump assembly washer: Ref. to WIPER AND WASHER SYSTEMS>Washer Tank and Motor>INSTALLATION > WASHER MOTOR PUMP.
   - Sensor washer fluid level: Ref. to WIPER AND WASHER SYSTEMS>Washer Tank and Motor>INSTALLATION > WASHER FLUID LEVEL SENSOR.
2. Install the washer tank assembly.
   Tightening torque:
   6 N·m (0.6 kgf-m, 4.4 ft-lb)
3. Connect the hose assembly windshield washer.
4. Connect each connector and install the harness clip.
5. Add new washer fluid.
6. Install the mud guard front LH. Ref. to EXTERIOR/INTERIOR TRIM>Mud Guard>INSTALLATION.
7. Install the bumper face front. Ref. to EXTERIOR/INTERIOR TRIM>Front Bumper>INSTALLATION.
8. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

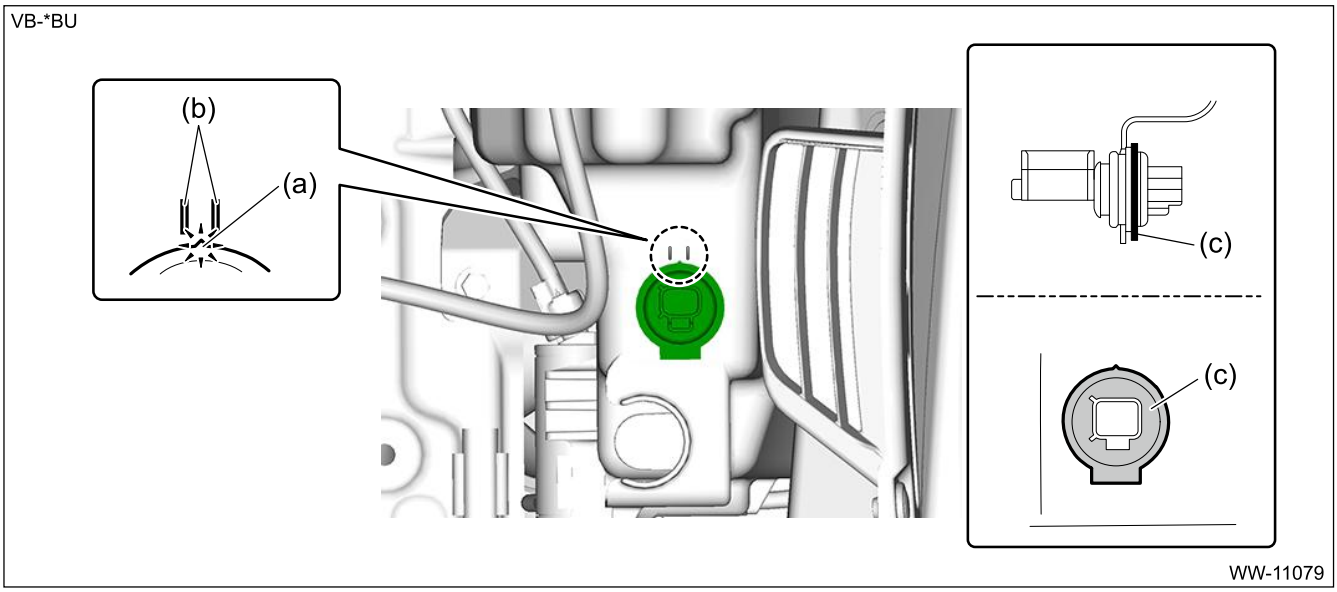
2. WASHER MOTOR PUMP

1. Using new packing, install the motor pump assembly washer.
2. Connect the hose assembly windshield washer.
3. Connect the connector.
4. Add new washer fluid.
5. Install the mud guard front LH. Ref. to EXTERIOR/INTERIOR TRIM>Mud Guard>INSTALLATION.
6. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

3. WASHER FLUID LEVEL SENSOR

1. Install the sensor washer fluid level.
   (1) Using new packing, align the protrusion (a) of the sensor washer fluid level with a center position of double line marks (b) on the tank washer side, and push the flat surface (c) to install.

Caution:
- **Do not hit or apply any impact to the sensor washer fluid level when it is reused, because it has a poor resistance to impact.**
- **When the installation is difficult, apply washer fluid to the packing. Do not use silicone oil.**



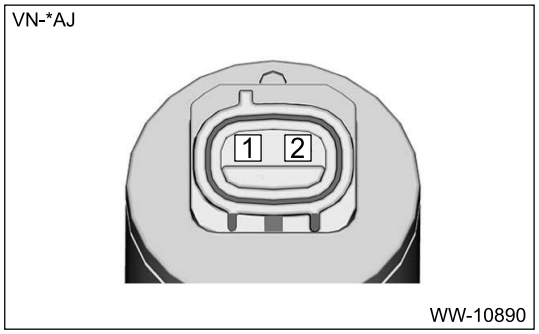
   (2) After installing the sensor washer fluid level, perform the following confirmations.
   - There is no gap between the tank washer and the packing.
   - There is no gap between the packing and the sensor washer fluid level.
   - There is no turn over to the packing and its peripheral area.
2. Connect the hose assembly windshield washer.
3. Connect the connector.
4. Add new washer fluid.
5. Install the mud guard front LH. Ref. to EXTERIOR/INTERIOR TRIM>Mud Guard>INSTALLATION.
6. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

WIPER AND WASHER SYSTEMS > Washer Tank and Motor

INSPECTION

1. WASHER MOTOR PUMP

1. Check the motor operation when battery voltage is applied between the connector terminals.



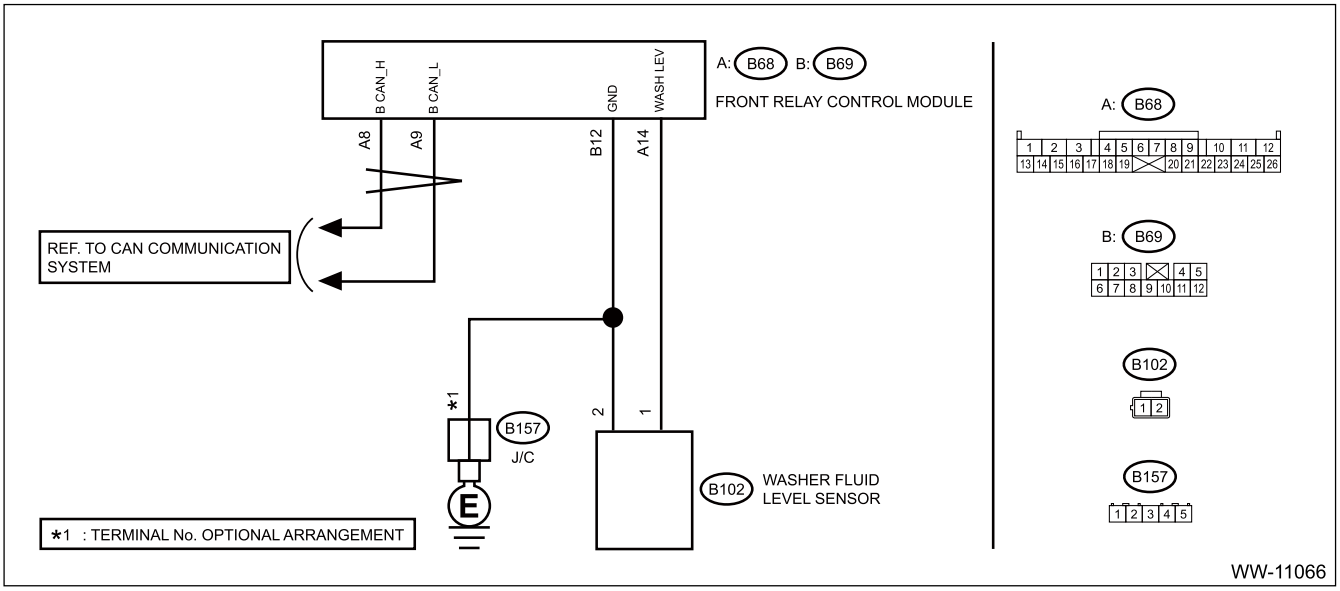
Terminal No.	Inspection conditions	Specification
1 (+) — 2 (−)	Apply battery voltage.	Rotation

2. If it does not operate normally, replace the motor pump assembly washer.

2. WASHER FLUID LEVEL SENSOR

Wiring diagram:

Front wiper and washer system Ref. to WIRING SYSTEM>Front Wiper and Washer System>WIRING DIAGRAM.



1. CHECK CONNECTION STATUS.

1. Turn over the mud guard front LH.
2. Check the connection status of the washer fluid level sensor connector.

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	Washer fluid level sensor is normal.
No	Go to 2.

2. CHECK INPUT VOLTAGE.

1. Disconnect the washer fluid level sensor connector.
2. Measure the voltage between the washer fluid level sensor connector and chassis ground.
   Connector & terminal
   (B102) No. 1 (+) — Chassis ground (−):

Is the voltage approx. 8.5 V or more?

Yes	Go to 3.
No	Check the harness, combination meter, and front relay control module, and repair or replace the defective parts.

3. CHECK WARNING LIGHT.

Short the washer fluid level sensor connector, and check the combination meter display.

Does the low warning light illuminate?

Yes	Go to 4.
No	Check the combination meter and front relay control module, and repair or replace the defective parts.

4. CHECK WASHER FLUID LEVEL SENSOR.

Measure the resistance between the washer fluid level sensor terminals.

Terminals

No. 1 — No. 2:

Is the resistance within the following standard?

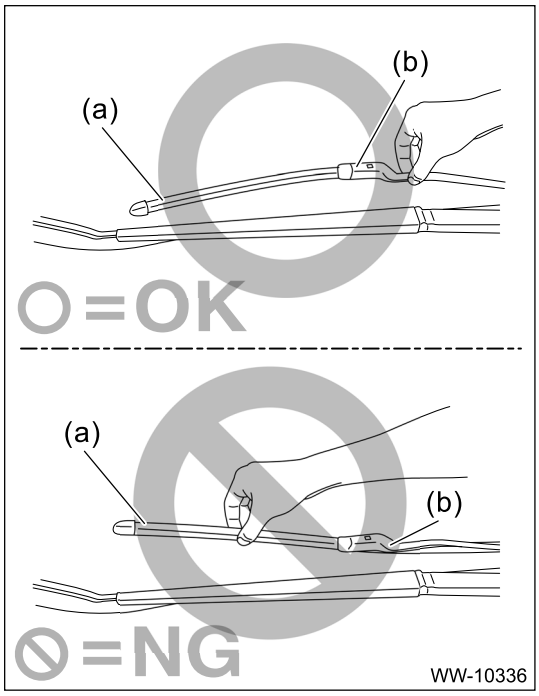
- No remaining amount of washer fluid in the tank (ON): Less than 10 Ω
- There is remaining amount of washer fluid in the tank (OFF): 1 MΩ or more

Yes	Check the connection status of the harness and connector that may have a temporary poor contact.
No	Replace the washer level sensor. Ref. to WIPER AND WASHER SYSTEMS>Washer Tank and Motor>REMOVAL > WASHER FLUID LEVEL SENSOR.

REMOVAL

Caution:

When standing up the arm assembly windshield wiper, make sure to hold the arm portion. Holding the blade portion may cause the blade deformation due to warpage.



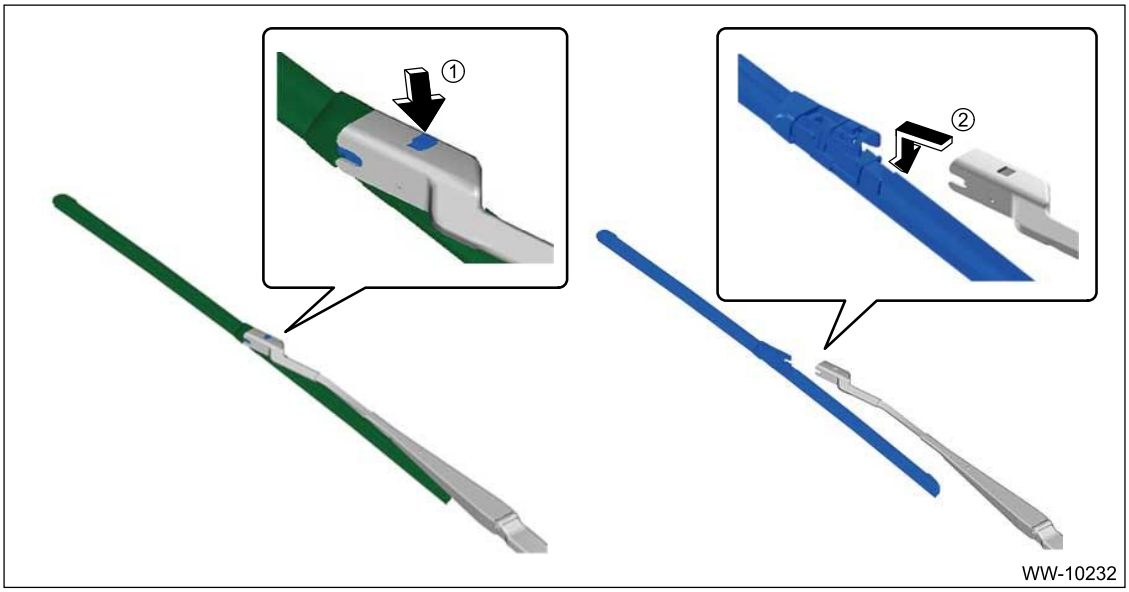
(a) Blade ASSY windshield wiper

(b) Arm ASSY windshield wiper

Note:

When standing up the arm assembly windshield wiper, perform the driver's side first in order not to interfere the arms with each other.

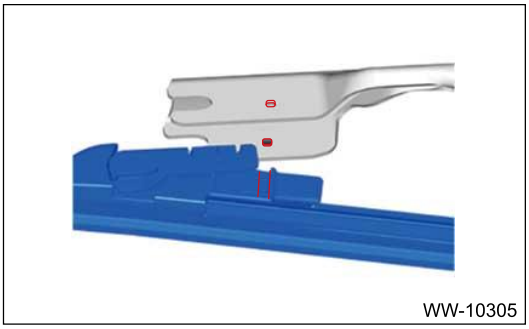
1. Press the lock button ①.
2. Pull the blade assembly windshield wiper in the arrow direction ② to remove the arm assembly windshield wiper.



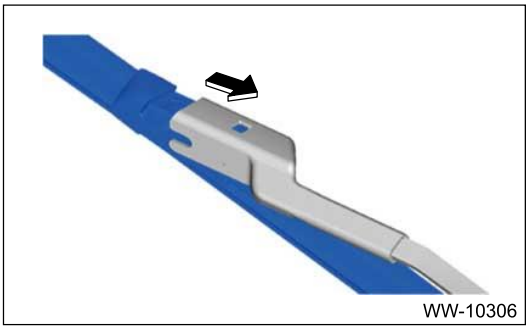
WIPER AND WASHER SYSTEMS > Wiper Blade

INSTALLATION

1. Align the protrusion section of arm inner and the groove on the blade side.



2. Slide until the lock button is locked and install the blade assembly windshield wiper.

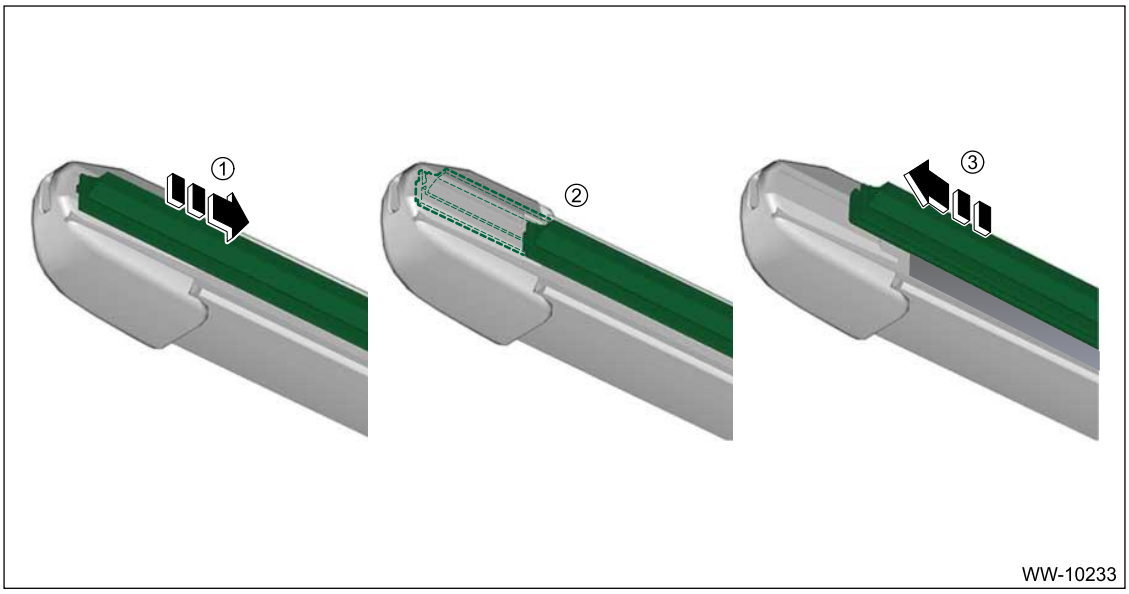


WIPER AND WASHER SYSTEMS > Wiper Blade

DISASSEMBLY

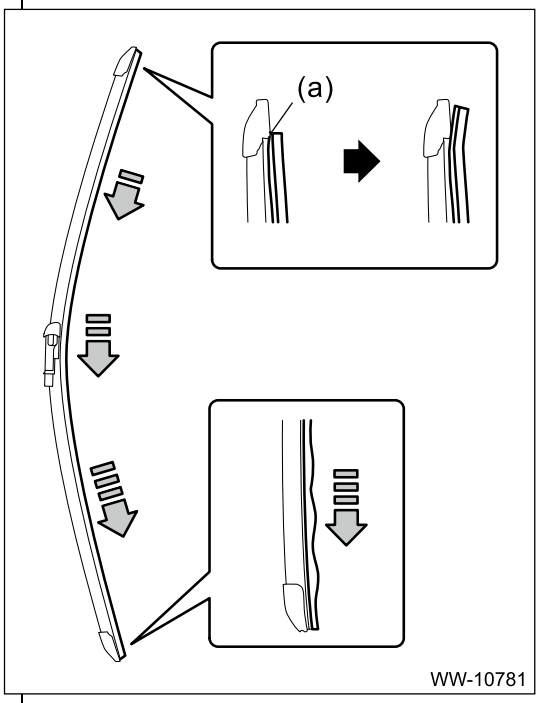
1. Hold the rubber assembly windshield wiper, and pull it in the arrow ① direction to the slit position ② of the blade assembly windshield.

2. Pull out the rubber assembly windshield wiper from the slit of the blade assembly windshield as shown in ③.



Note:

Shorten the entire rubber assembly windshield wiper in the arrow direction at three or four places.



(a) Slit of blade ASSY windshield

WIPER AND WASHER SYSTEMS > Wiper Blade

ASSEMBLY

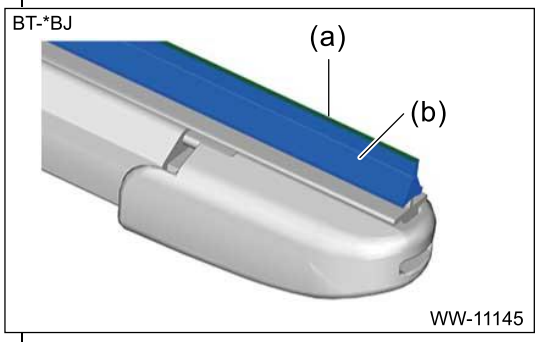
Install the rubber assembly windshield wiper in the reverse order.

INSPECTION

1. Check and clean the rubber assembly windshield wiper.

Caution:

- **Do not use organic solvent-based cleaner when cleaning rubber parts in order to avoid rubber part deterioration.**
- **Do not use the cleaner that includes silicone oil. Failure to do so can cause chattering sound.**
- **Clean rubber edge (a) using a soft cloth or a sponge dampened with washer fluid or mild synthetic detergent that is diluted two times or more. Wiping rubber lip (b) results in peeling of the black coating component, causing wiper chattering.**



- **Check that the rubber is firmly attached after cleaning.**

Replace the rubber assembly windshield wiper if rubber part hardening, deformation or damage is found.

2. Operate the washer system to check if a chattering sound or insufficient wiping occurs.
3. If a chattering sound or insufficient wiping occurs, perform the following procedures.
   (1) Make sure that the blade assembly windshield wiper is not deformed and the movable part moves smoothly.
   (2) Remove oil film and dirt from the glass.

Caution:

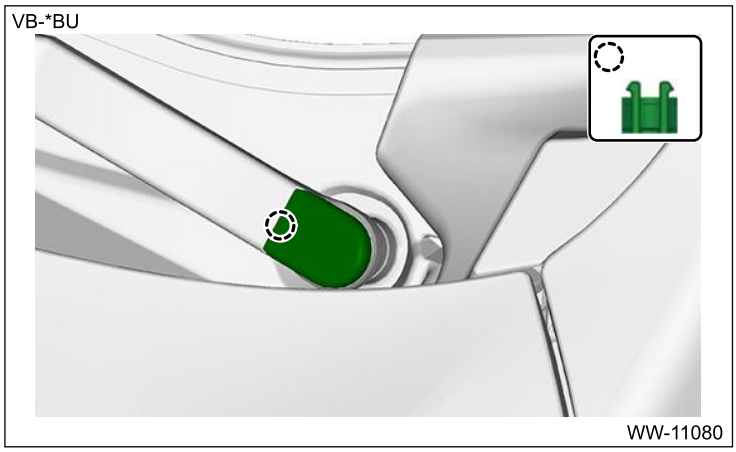
- **When powder-type glass cleaner is used, use after having been dissolved in water sufficiently. If it is used in less water, the glass surface may be damaged.**
- **Clean the glass surface using a soft cloth or sponge with glass cleaner.**

   (3) Operate the wiper again. If a chattering sound or insufficient wiping occurs, perform the procedures again.
4. If defective is not improved after performing step 1 without replacing the rubber assembly windshield wiper, replace the rubber assembly windshield wiper with a new part.
5. If defective is still not improved after operating the washer system again, replace the blade assembly windshield wiper with a new part.

REMOVAL

1. MODEL WITHOUT WASHER NOZZLE

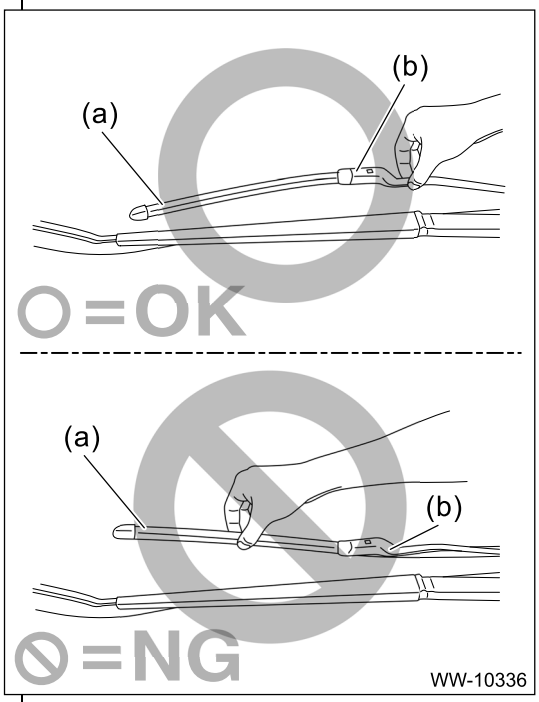
1. Release the claw and remove the cover windshield wiper arm.



2. Remove the nuts, and remove the arm assembly windshield wiper.

Caution:

When standing up the arm assembly windshield wiper, make sure to hold the arm portion. Holding the blade portion may cause the blade deformation.

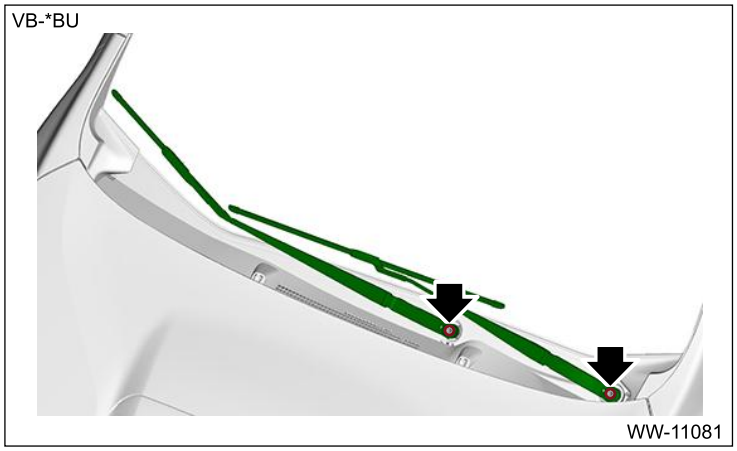


(a) Blade ASSY windshield wiper

(b) Arm ASSY windshield wiper

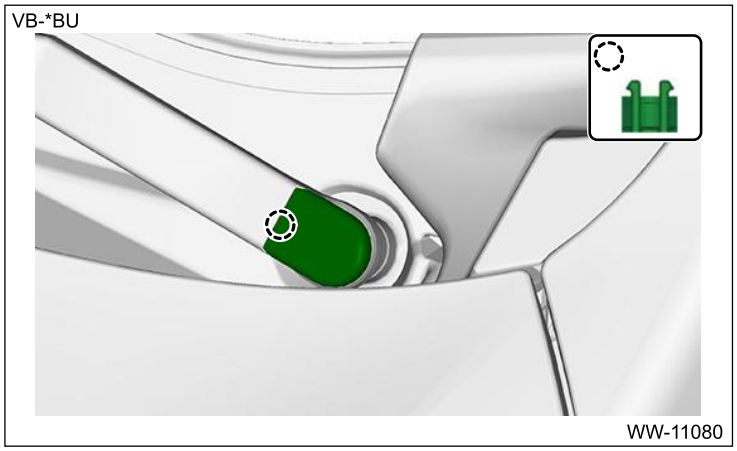
Note:

When standing up the arm assembly windshield wiper, perform the driver's side first in order not to interfere the arms with each other.



2. MODEL WITH WASHER NOZZLE

1. Release the claw and remove the cover windshield wiper arm.

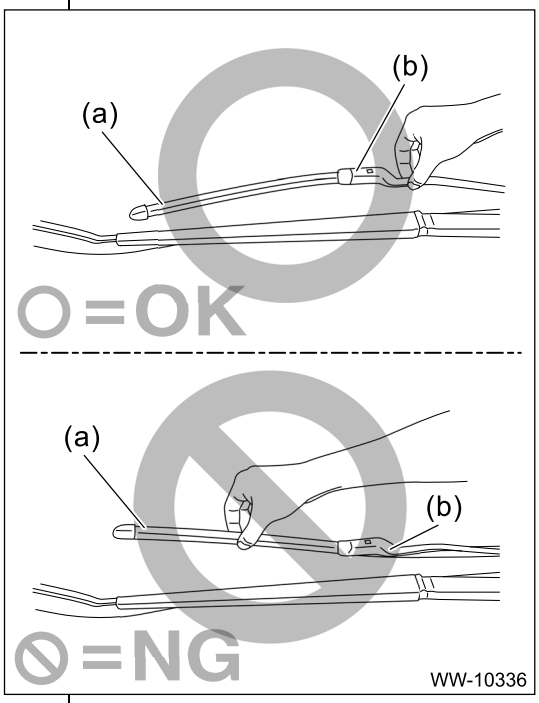


2. Remove the arm assembly windshield wiper.

(1) Remove the nuts, and remove the arm assembly windshield wiper.

Caution:

- **Do not disconnect the hose wiper arm washer from the joint washer hose.**
- **When standing up the arm assembly windshield wiper, make sure to hold the arm portion. Holding the blade portion may cause the blade deformation.**



(a) Blade ASSY windshield wiper

(b) Arm ASSY windshield wiper

Note:

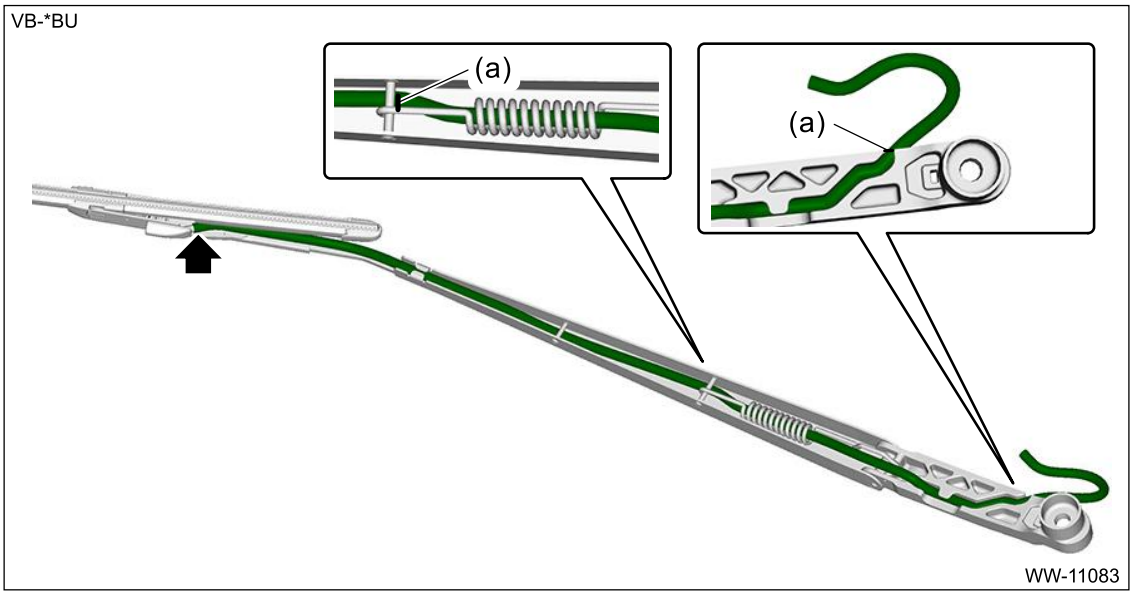
When standing up the arm assembly windshield wiper, perform the driver's side first in order not to interfere the arms with each other.



(2) Put alignment marks (a) at two places on the arm assembly windshield wiper assistor and disconnect the hose wiper arm washer from the nozzle.

Caution:

Do not remove the nozzle from the arm assembly windshield wiper assistor. If nozzle replacement is required, replace the arm assembly windshield wiper assistor as a unit.



(3) Pull out the hose wiper arm washer from the arm assembly windshield wiper assistor.

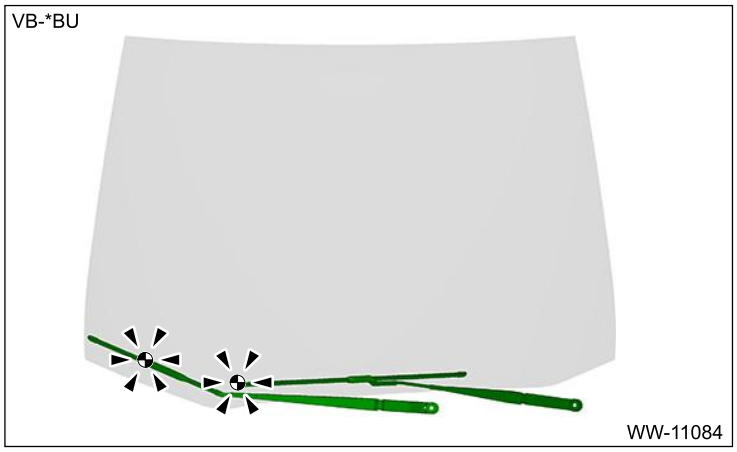
WIPER AND WASHER SYSTEMS > Front Wiper Arm

INSTALLATION

1. MODEL WITHOUT WASHER NOZZLE

Note:
Since the arm assembly windshield wiper on the left and right sides can interfere with each other, install the passenger's side first.

1. Align the blade assembly windshield wiper with the wiper set mark of the windshield glass to install the arm assembly windshield wiper.
   Tightening torque:
   22 N·m (2.2 kgf-m, 16.2 ft-lb)

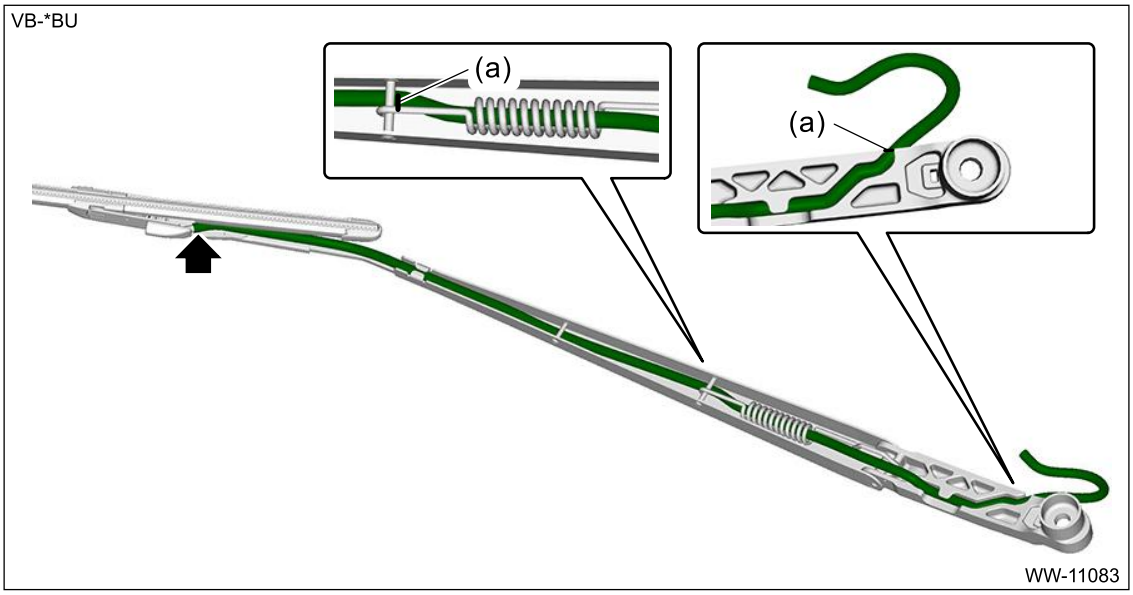


2. Install the cover windshield wiper arm.
3. Operate the windshield wiper once to check that the stop position is aligned with the wiper set mark.

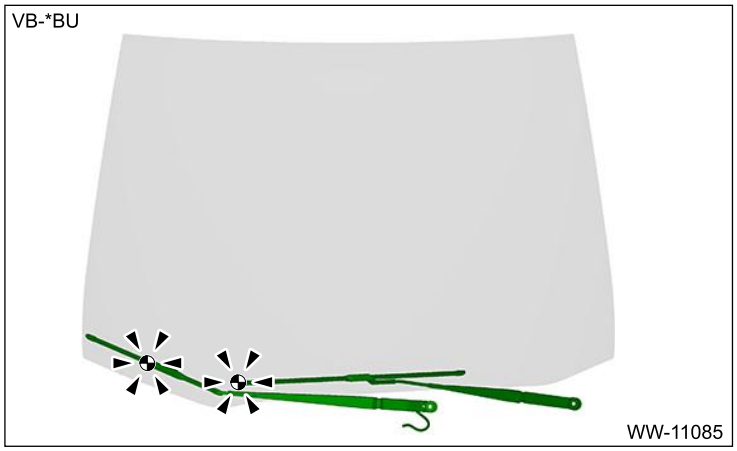
2. MODEL WITH WASHER NOZZLE

Note:
Since the arm assembly windshield wiper on the left and right sides can interfere with each other, install the passenger's side first.

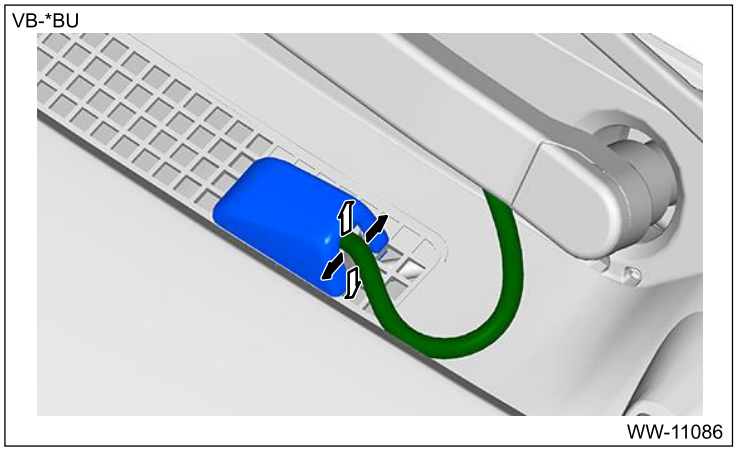
1. When the hose wiper arm washer is removed from the joint washer hose, refer to "INSTALLATION" of "Front Washer". Ref. to WIPER AND WASHER SYSTEMS>Front Washer>INSTALLATION > WIPER ARM WASHER NOZZLE.
2. Install the arm assembly windshield wiper.
   (1) Align the alignment marks (a), and install the hose wiper arm washer to the arm assembly windshield wiper assistor.



   (2) Align the blade assembly windshield wiper with the wiper set mark of the windshield glass to install the arm assembly windshield wiper.
   Tightening torque:
   22 N·m (2.2 kgf-m, 16.2 ft-lb)



3. Install the cover windshield wiper arm.
4. Operate the windshield wiper once to check that the stop position is aligned with the wiper set mark.
5. Make sure that the hose wiper arm washer and the cover joint do not interfere during windshield wiper operation.



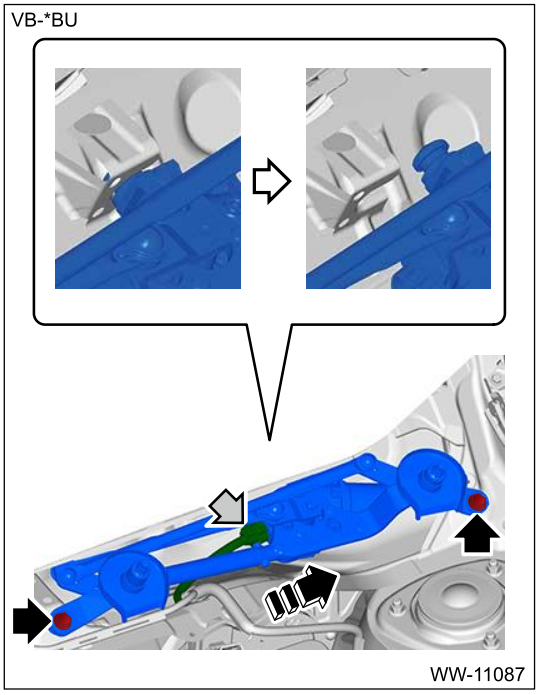
WIPER AND WASHER SYSTEMS > Front Wiper Arm

ADJUSTMENT

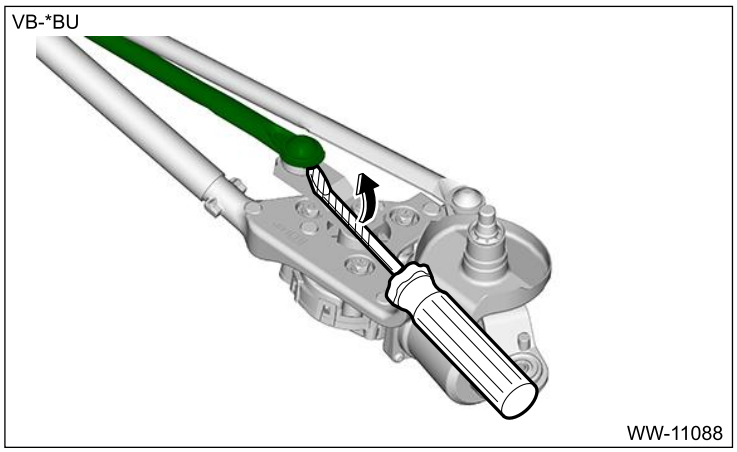
1. Operate the windshield wiper once.
2. If the stop position is not aligning with the wiper set mark, remove the arm assembly windshield wiper, and install by aligning with the wiper set mark. Ref. to WIPER AND WASHER SYSTEMS>Front Wiper Arm.

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the arm assembly windshield wiper. Ref. to WIPER AND WASHER SYSTEMS>Front Wiper Arm>REMOVAL.
3. Remove the cowl panel assembly. Ref. to EXTERIOR/INTERIOR TRIM>Cowl Panel>REMOVAL.
4. Remove the link assembly windshield wiper.
   (1) Remove the bolt.
   (2) Slide the link assembly windshield wiper in the arrow direction to release the cushion windshield wiper and the body bracket.
   (3) Disconnect the connector, and remove the link assembly windshield wiper.

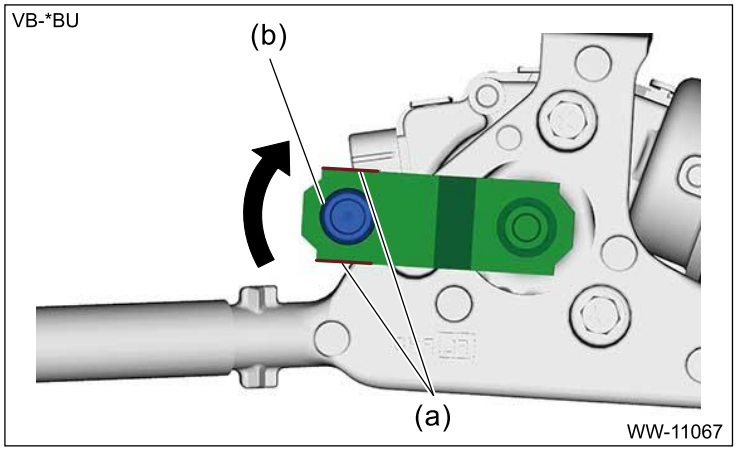


5. Remove the motor assembly windshield wiper.
   (1) Using a crowbar wrapped with protective tape, disconnect the rod of the link assembly windshield wiper from the link plate.

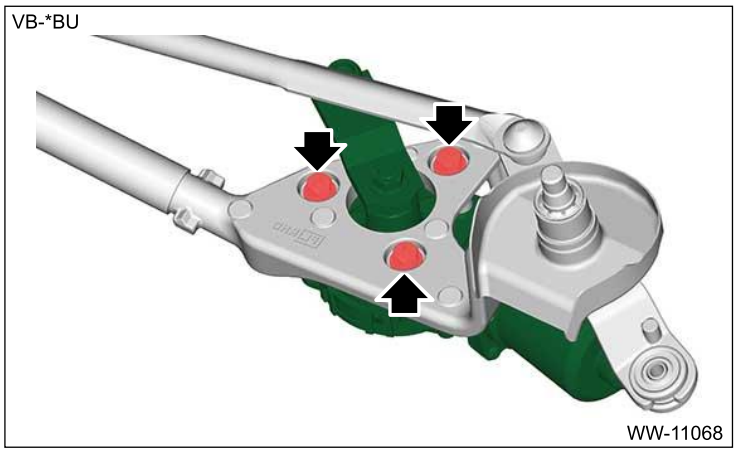


   (2) Using pliers, etc. wrapped with protection tape, pinch the link plate at the tool holding position (a), and turn the link plate clockwise until the installation bolt is seen.

Caution:
When turning the link plate, be careful not to let the tool contact the fixing portion (b) of the link plate.



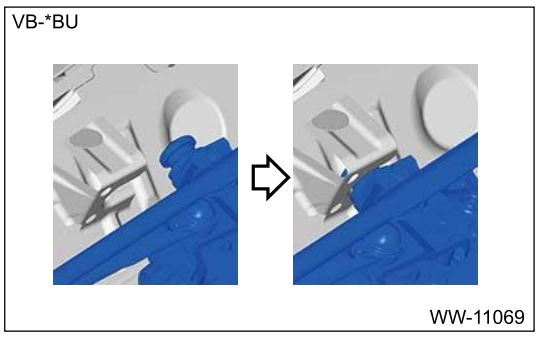
(3) Remove the bolts, and remove the motor assembly windshield wiper.



WIPER AND WASHER SYSTEMS > Front Wiper Motor and Link

INSTALLATION

1. Install the link assembly windshield wiper.
   (1) Check the link plate position of the motor assembly windshield wiper. When the bolts cannot be installed, adjust the position by turning the link plate clockwise using pliers, etc. wrapped with protection tape.
   (2) Install the motor assembly windshield wiper.
   Tightening torque:
   5.4 N·m (0.6 kgf-m, 4.0 ft-lb)
   (3) Install the link assembly windshield wiper rod to the link plate.
   (4) Connect the connector, and engage the cushion windshield wiper with the body bracket to install the link assembly windshield wiper.
   Tightening torque:
   6 N·m (0.6 kgf-m, 4.4 ft-lb)



2. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Operate the front wiper switch of the switch assembly combination wiper once, and stop the motor assembly windshield wiper at the automatic stop position.
4. Install the cowl panel assembly. Ref. to EXTERIOR/INTERIOR TRIM>Cowl Panel>INSTALLATION.
5. Install the arm assembly windshield wiper. Ref. to WIPER AND WASHER SYSTEMS>Front Wiper Arm>INSTALLATION.

WIPER AND WASHER SYSTEMS > Front Wiper Motor and Link

INSPECTION

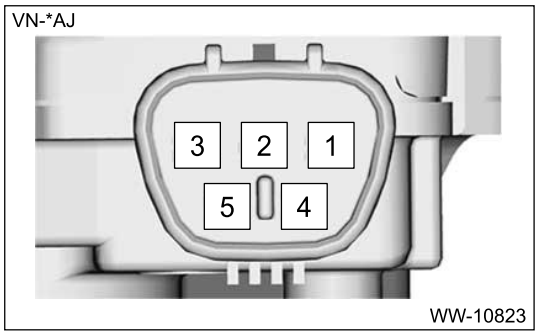
1. CHECK MOTOR OPERATION

1. Turn the front wiper switch of the switch assembly combination wiper to ON.
2. Turn the front wiper switch of the switch assembly combination wiper to OFF, and check that the motor stops at the automatic stop position.
3. Check or replace the front relay control module if it is found defective.
   - Inspection: Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Basic Diagnostic Procedure.
   - Replacement: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.

2. CHECK MOTOR UNIT

1. Check the motor operation when battery voltage is applied between the connector terminals.

Caution:
Fix the motor to prevent the motor from being shorted by moving during operation.



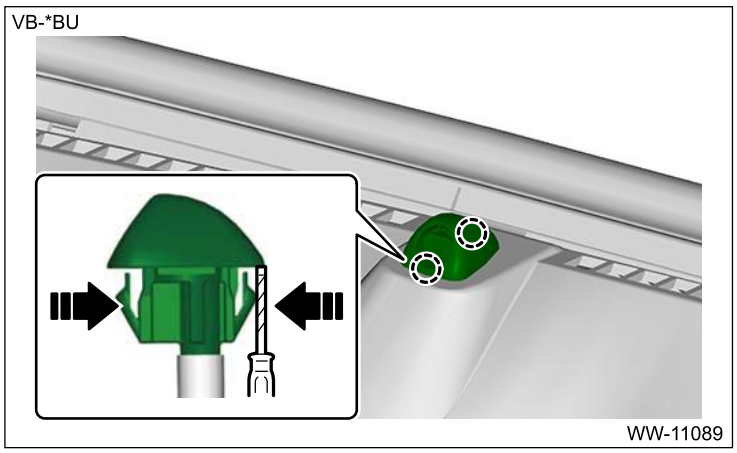
Terminal No.	Inspection conditions	Specification
5 (+) — 4 (−)	Apply battery voltage.	At low speed
3 (+) — 4 (−)		At high speed

2. If it does not operate normally, replace the motor assembly windshield wiper.

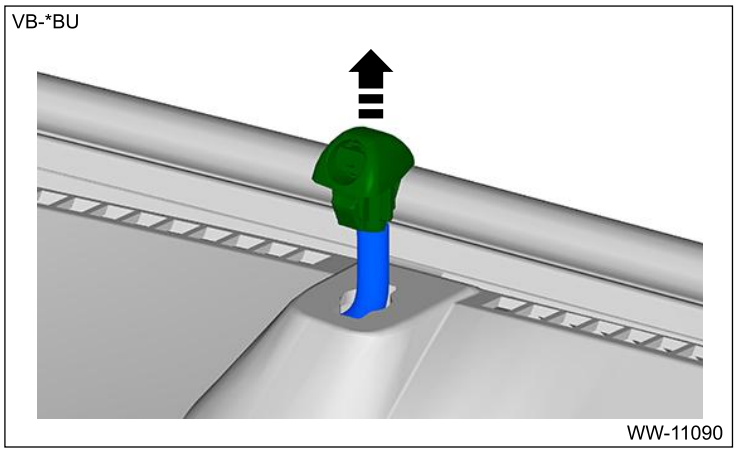
REMOVAL

1. WINDSHIELD WASHER NOZZLE

1. Remove the arm assembly windshield wiper. Ref. to WIPER AND WASHER SYSTEMS>Front Wiper Arm>REMOVAL > MODEL WITHOUT WASHER NOZZLE.
2. Remove the cowl panel assembly. Ref. to EXTERIOR/INTERIOR TRIM>Cowl Panel>REMOVAL.
3. Remove the nozzle windshield washer.
   (1) Release the claws as shown in the figure, using a flat tip screwdriver or similar tool wrapped with protection tape.

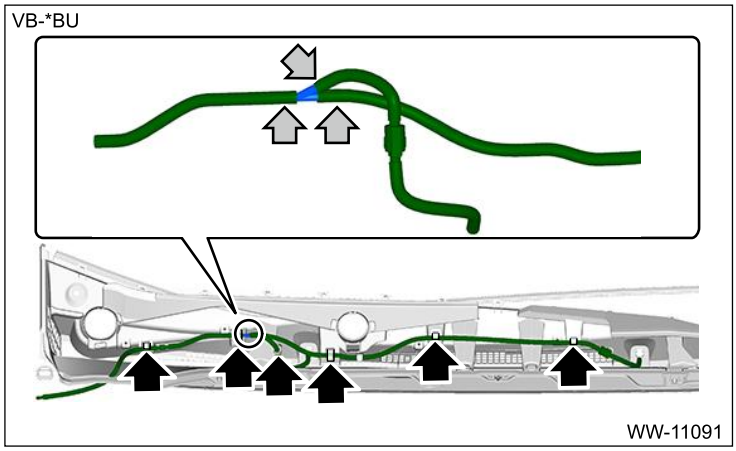


   (2) Pull out the nozzle windshield washer.
   (3) Remove the nozzle windshield washer from the hose assembly windshield washer.



4. Remove the hose assembly windshield washer from the cowl panel assembly clamps, and disconnect it. Ref. to WIPER AND WASHER SYSTEMS>General Description>LOCATION > WASHER SYSTEM.

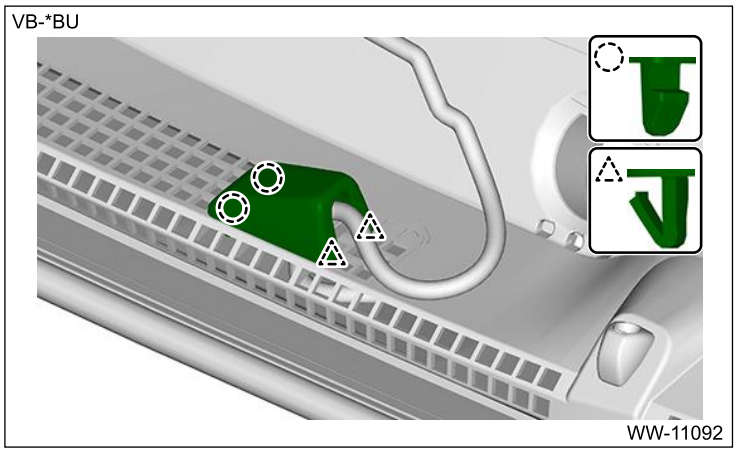
Note:
Perform this procedure only when required.



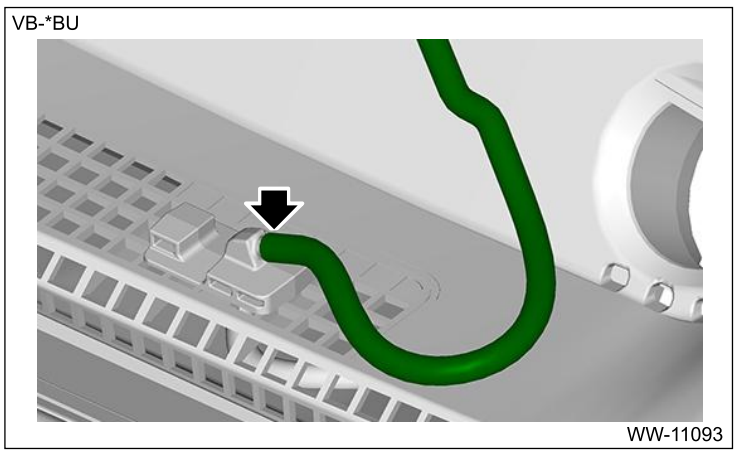
2. WIPER ARM WASHER NOZZLE

Caution:
Do not remove the nozzle from the arm assembly windshield wiper assistor. If nozzle replacement is required, replace the arm assembly windshield wiper assistor as a unit.

1. Remove the arm assembly windshield wiper. Ref. to WIPER AND WASHER SYSTEMS>Front Wiper Arm>REMOVAL > MODEL WITH WASHER NOZZLE.
2. Remove the cowl panel assembly. Ref. to EXTERIOR/INTERIOR TRIM>Cowl Panel>REMOVAL.
3. Release the claws, and then remove the cover joint.

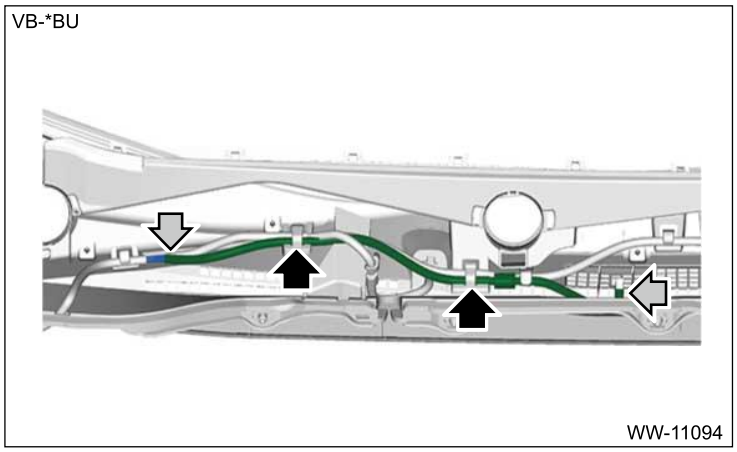


4. Remove the hose wiper arm washer from the joint washer hose.



5. Remove the hose assembly windshield washer from the cowl panel assembly clamps, and disconnect it. Ref. to WIPER AND WASHER SYSTEMS>General Description>LOCATION > WASHER SYSTEM.

Note:
Perform this procedure only when required.



WIPER AND WASHER SYSTEMS > Front Washer

INSTALLATION

1. WINDSHIELD WASHER NOZZLE

1. Install the hose assembly windshield washer. Ref. to WIPER AND WASHER SYSTEMS>General Description>LOCATION > WASHER SYSTEM.
2. Install the nozzle windshield washer.
   (1) Connect the nozzle windshield washer to the hose assembly windshield washer.
   (2) Install the nozzle windshield washer to the cowl panel assembly.
3. Install the cowl panel assembly. Ref. to EXTERIOR/INTERIOR TRIM>Cowl Panel>INSTALLATION.
4. Install the arm assembly windshield wiper. Ref. to WIPER AND WASHER SYSTEMS>Front Wiper Arm>INSTALLATION > MODEL WITHOUT WASHER NOZZLE.
5. Check the position of the nozzle windshield washer. Ref. to WIPER AND WASHER SYSTEMS>Front Washer>INSPECTION > INSPECTING THE SPRAY POSITION.

2. WIPER ARM WASHER NOZZLE

1. Install the hose assembly windshield washer. Ref. to WIPER AND WASHER SYSTEMS>General Description>LOCATION > WASHER SYSTEM.
2. Install the hose wiper arm washer.
3. Install the cover joint.
4. Install the cowl panel assembly. Ref. to EXTERIOR/INTERIOR TRIM>Cowl Panel>INSTALLATION.
5. Install the arm assembly windshield wiper. Ref. to WIPER AND WASHER SYSTEMS>Front Wiper Arm>INSTALLATION > MODEL WITH WASHER NOZZLE.
6. Check the position of the nozzle windshield washer. Ref. to WIPER AND WASHER SYSTEMS>Front Washer>INSPECTION > INSPECTING THE SPRAY POSITION.

WIPER AND WASHER SYSTEMS > Front Washer

INSPECTION

1. VISUAL INSPECTION

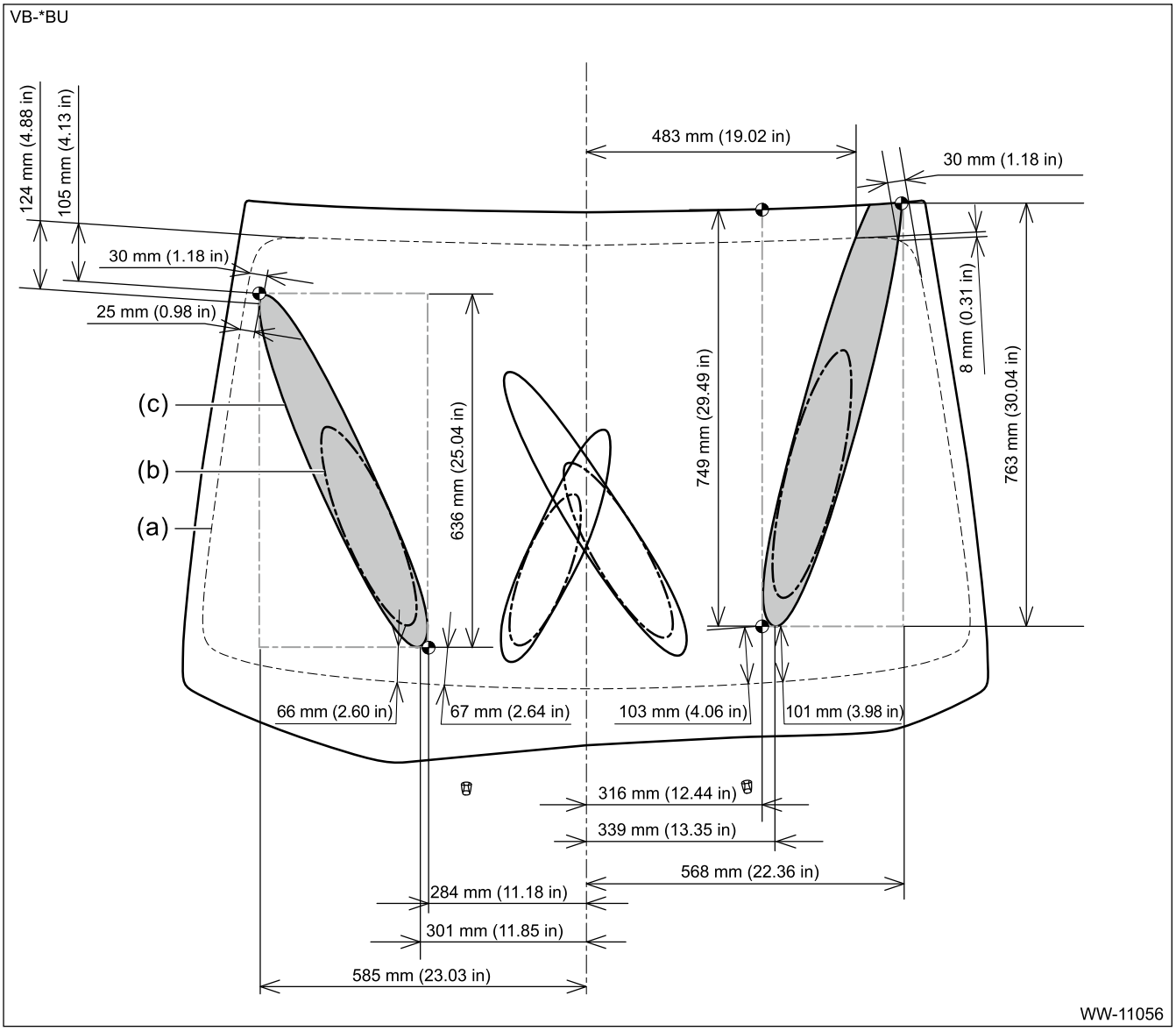
Check for the following items, and if any malfunction is found, replace the corresponding part.

- Make sure the nozzle windshield washer, hose assembly windshield washer and hose wiper arm washer are not clogged.
- Make sure the hose assembly windshield washer and hose wiper arm washer are not bent.

2. INSPECTING THE SPRAY POSITION

- **WINDSHIELD WASHER NOZZLE**

1. Turn the front wiper switch of the switch assembly combination wiper to the OFF position.
2. While the vehicle is running, check that the washer spray position is as shown in the figure.
   (1) Route a piece of string or similar from the outside of the glass so that it passes through the center of the inner mirror mounting portion and the center of the sunload sensor, and then fix it on the glass with adhesive tape.
   (2) Make adjustment marks shown in the figure using a water-based pen.
   (3) Remove the string or similar, then spray washer fluid.

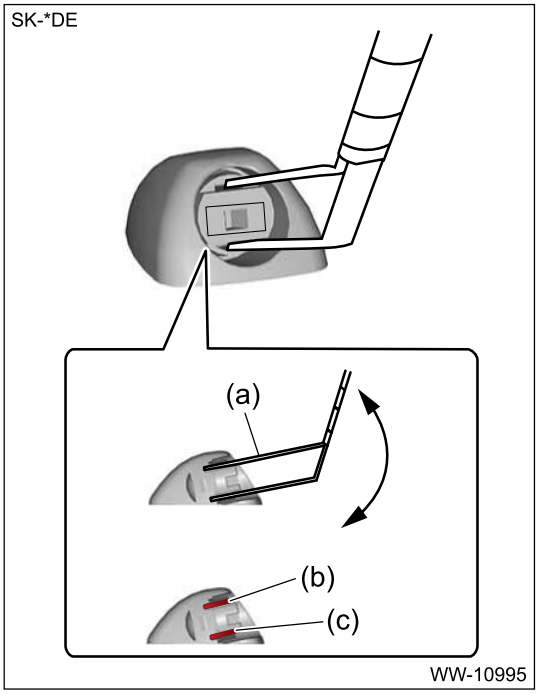


(a) Ceramic line (b) Standard range (c) Spray area

3. After inspection, if the spray position is significantly out of the specified range, adjust the nozzle windshield washer.

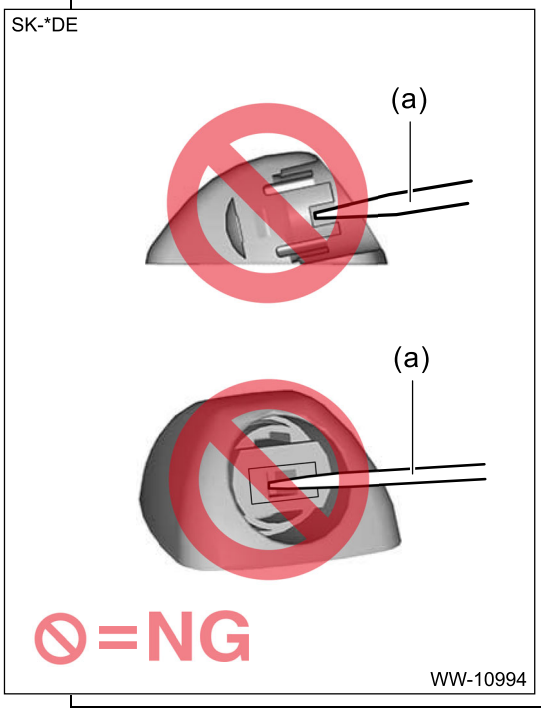
(1) Create the washer nozzle adjustment tool. Ref. to WIPER AND WASHER SYSTEMS>General Description>PREPARATION TOOL > HANDMADE TOOL.

(2) Insert the washer nozzle adjustment tool (a) into the upper side (b) and lower side (c) of the nozzle windshield washer, and adjust the spray position.



Caution:

Washer nozzle is made of resin. Do not insert the precision screwdriver (a) or equivalent into the discharge port. If it is inserted, the discharge port can be deformed, and washer fluid cannot be sprayed.



(3) When the spray position cannot be adjusted, replace the nozzle windshield washer.

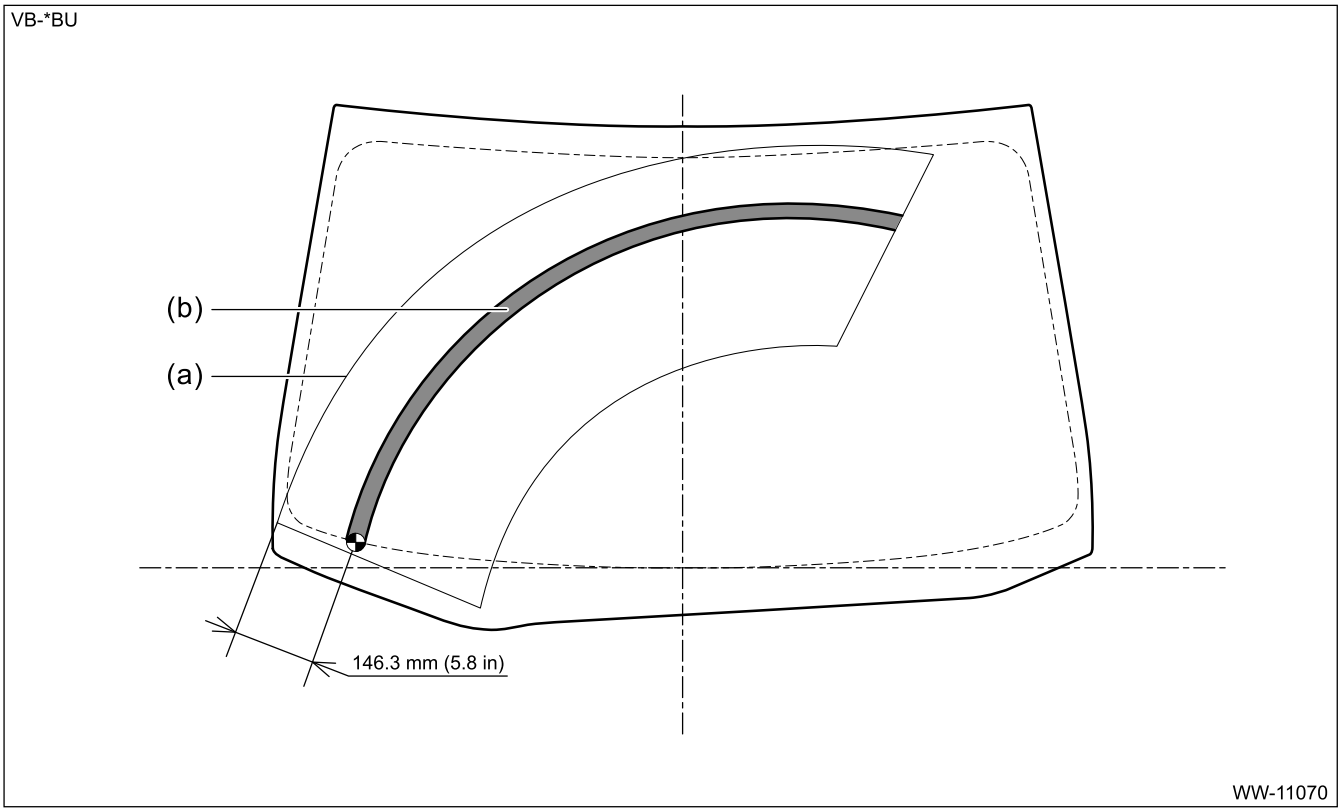
4. When adjustment is completed, thoroughly clean the glass.

- **WIPER ARM WASHER NOZZLE**

1. Turn the front wiper switch of the switch assembly combination wiper to the OFF position.
2. While the vehicle is running, check that the washer spray position is as shown in the figure.

Caution:

Check the spray position of the washer nozzle at the position where the wiper arm stops.



(a) Wiping area of arm ASSY windshield wiper assistor

(b) Spray area

3. After inspection, if the spray position is really out of the specified range, replace the arm assembly windshield wiper assistor.
4. When adjustment is completed, thoroughly clean the glass.

HORN

1. General Description
2. Relay and Fuse
3. Horn System
4. Horn
5. Horn Switch

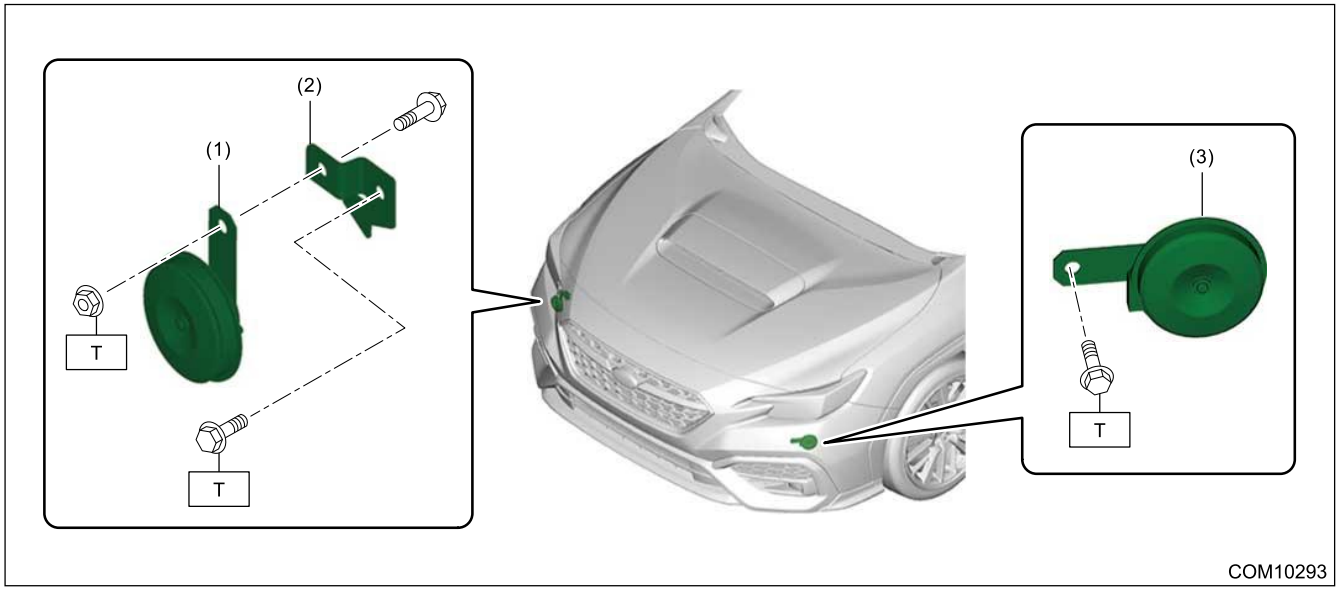
HORN > General Description

CAUTION

- When performing service operation, refer to “Repair Contents” in “General Description”. Ref. to REPAIR CONTENTS>Repair Contents.
- When performing work on the sensors or modules, be careful of the following.
  - Before disconnecting electrical connectors, be sure to disconnect the ground terminal from the battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
  - Do not apply any impact. If the parts are accidentally dropped, replace with a new part.
  - Do not expose to high-temperature and humidity.
- Refer to “CAUTION” of “General Description” in “AIRBAG SYSTEM” section. Ref. to AIRBAG SYSTEM>General Description.

HORN > General Description

COMPONENT



(1) Horn ASSY Lo
(2) Horn bracket
(3) Horn ASSY Hi

Tightening torque: N·m (kgf-m, ft-lb)

T: 18 (1.8, 13.3)

HORN > General Description

PREPARATION TOOL

1. SUBARU SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 STSSM4	—	SUBARU SELECT MONITOR 4	Used for setting of each function and troubleshooting for electrical system. **Note:** • **For detailed operation procedures, refer to "Help" of application.** • **Used together with interface for Subaru Select Monitor (such as DST-i and DST-010).**

2. OTHER

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

HORN > Relay and Fuse

LOCATION

For the location, refer to “FUSE AND RELAY” in the wiring diagram. Ref. to WIRING SYSTEM>Fuse And Relay.

Note:
For details of relay and fuse, refer to “DC POWER SUPPLY CIRCUIT”. Ref. to WIRING SYSTEM>Power Supply Circuit.

HORN > Relay and Fuse

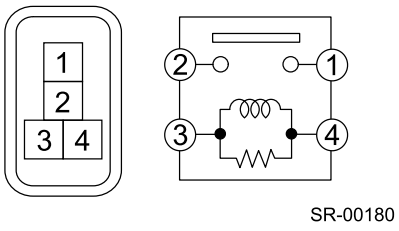
INSPECTION

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	
1 — 2	Apply battery voltage between terminals 4 and 3.	Less than 1 Ω	

2. Replace the relay if the inspection result is not within the standard value.

HORN > Horn System

WIRING DIAGRAM

For the wiring diagram, refer to “Horn System” in the wiring diagram. Ref. to WIRING SYSTEM>Horn System>WIRING DIAGRAM.

HORN > Horn System

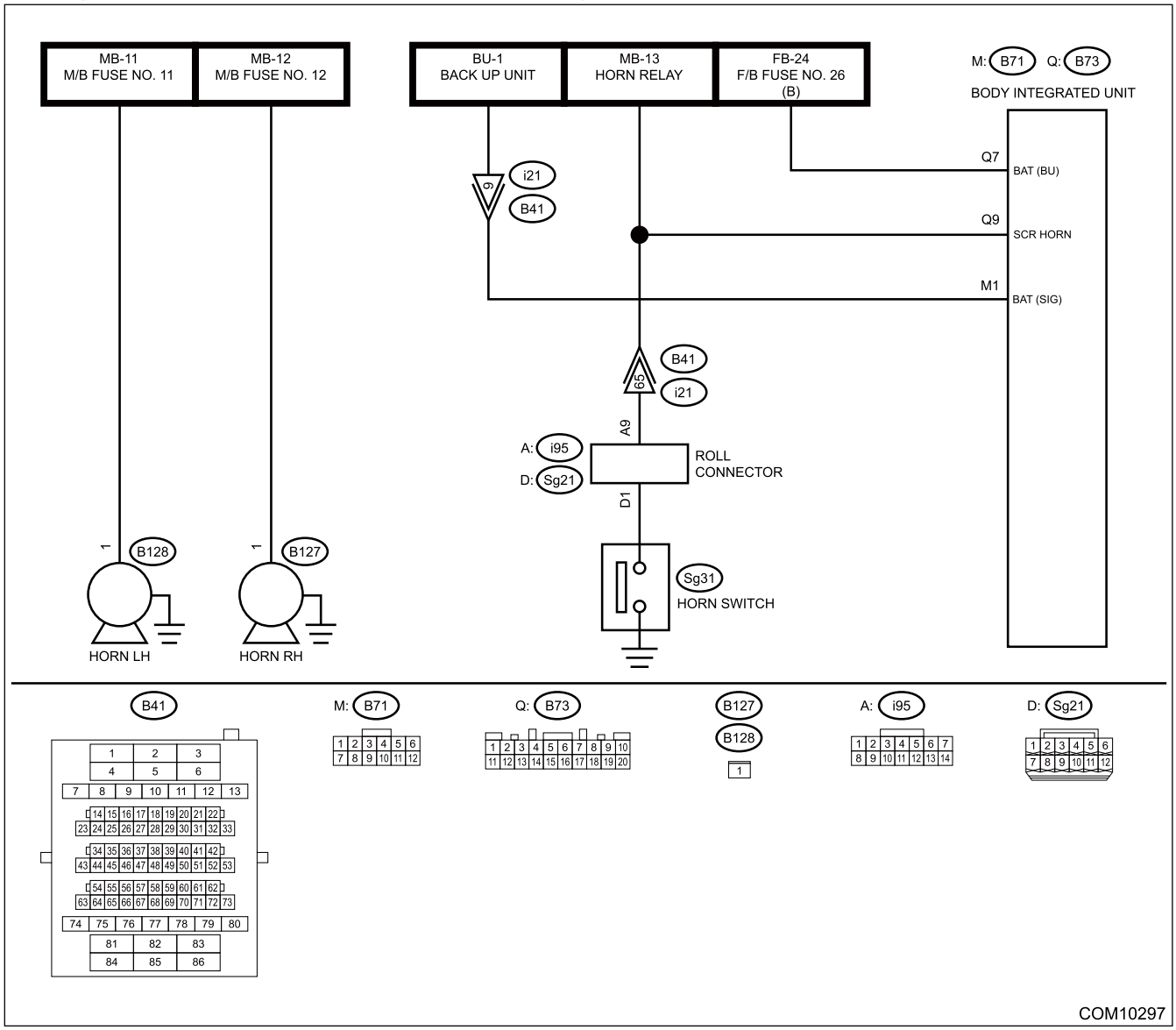
INSPECTION

1. TROUBLE SYMPTOM

Horn does not sound

Wiring diagram:

Horn system Ref. to WIRING SYSTEM>Horn System>WIRING DIAGRAM.



1. CHECK FUSE.

Check the horn fuse inside the fuse box. Ref. to HORN>Relay and Fuse>INSPECTION > CHECK FUSE.

Is the fuse blown out?

Yes	Replace the appropriate fuse.
No	Go to 2.

2. CHECK HORN RELAY.

Check the relay inside the fuse box. Ref. to HORN>Relay and Fuse>INSPECTION > CHECK RELAY.

Is the relay OK?

Yes	Go to 3.
No	Replace the horn relay.

3. CHECK STEERING ROLL CONNECTOR.

Check the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector>INSPECTION>UNIT INSPECTION>STEERING ROLL CONNECTOR CIRCUIT (EXCEPT FOR AIRBAG CIRCUIT).

Is the steering roll connector OK?

Yes	Go to 4.
No	Replace the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector.

4. CHECK HORN SWITCH.

Check the horn switch. Ref. to HORN>Horn Switch>INSPECTION > CHECK HORN SWITCH.

Is the horn switch normal?

Yes	Go to 5.
No	Replace the satellite switch assembly or the driver's airbag module. • Satellite switch assembly: Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel. • Driver's airbag module: Ref. to AIRBAG SYSTEM>Driver's Airbag Module.

5. CHECK HORN.

1. Turn the ignition switch to ON.
2. Using the Subaru Select Monitor, perform [Active Test] in [Body Control], and check the horn sound. Ref. to BODY CONTROL(DIAGNOSTICS)>Active Test.

Does the horn operate properly?

Yes	Go to 6.
No	Go to 7.

6. CHECK HORN.

1. Turn the ignition switch to OFF.
2. Check the horn assembly. Ref. to HORN>Horn>INSPECTION.

Is the horn normal?

Yes	Check the harness and body integrated unit.
No	Replace the horn assembly. Ref. to HORN>Horn.

7. CHECK HARNESS.

1. Remove the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector>REMOVAL.
2. Measure the resistance between the horn relay and steering roll connector.
   Connector & terminal
   (B128) No. 1 — Fuse No. 11:
   (B127) No. 1 — Fuse No. 12:

Is the resistance less than 10 Ω?

Yes	Check body integrated unit. Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.
No	Repair or replace the defective part.

HORN > Horn System

NOTE

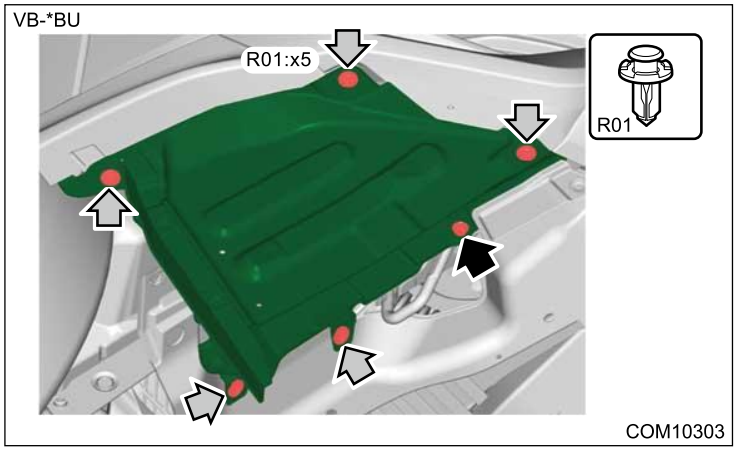
For operation procedures of components of the horn system, refer to the following sections.

- Horn assembly: Ref. to HORN>Horn.
- Horn switch: Ref. to HORN>Horn Switch.

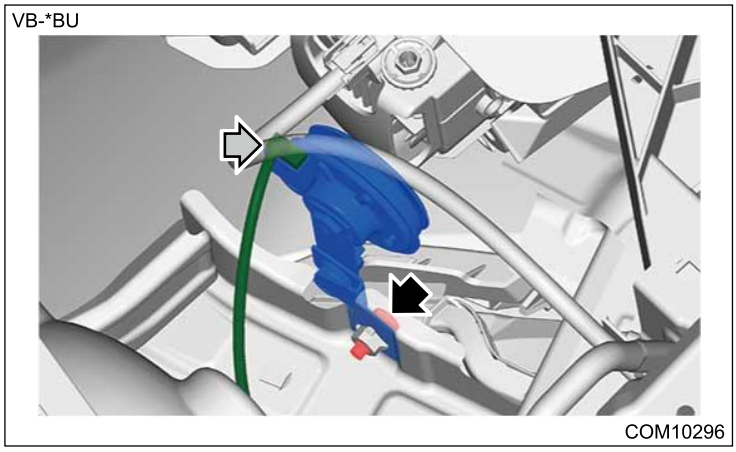
REMOVAL

1. HORN ASSEMBLY LO

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Lift up the vehicle.
3. Remove the screw and clips, and turn over the mud guard front RH.

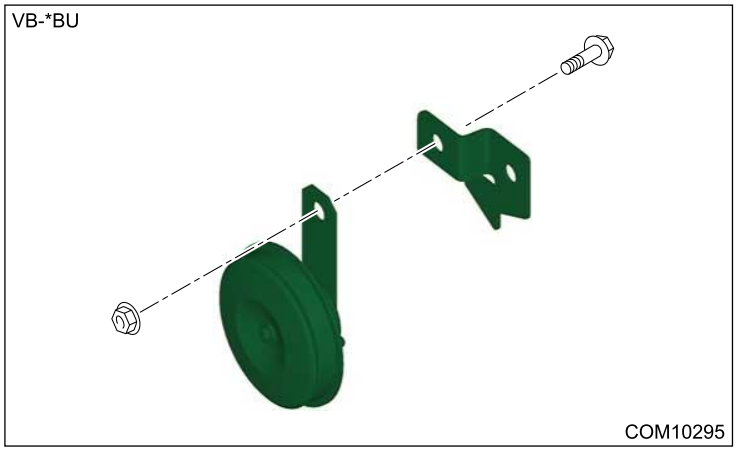


4. Remove the horn sub assembly Lo.
   (1) Disconnect the connector.
   (2) Remove the bolt, and remove the horn sub assembly Lo.



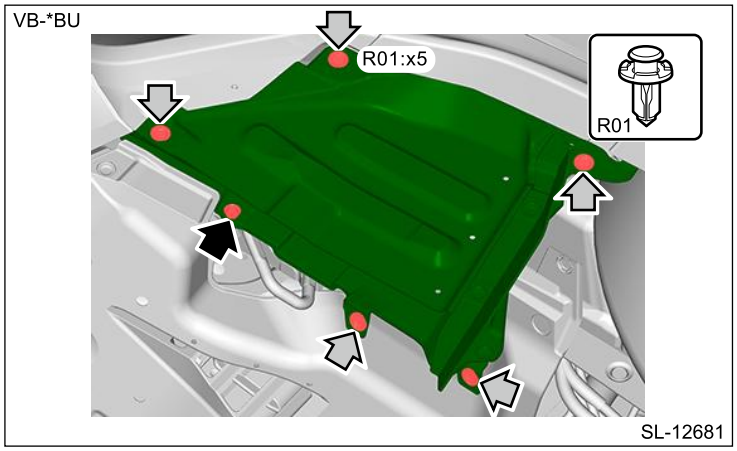
5. Remove the bolt and nut, and then remove the horn assembly Lo from the horn bracket.

Note:
Perform this procedure only when required.

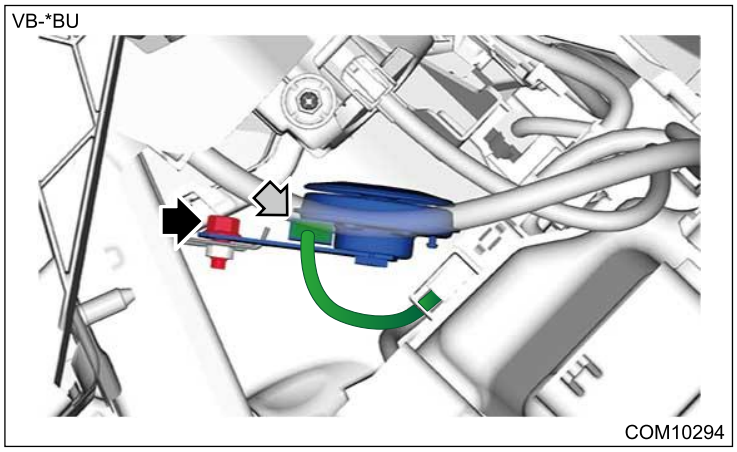


2. HORN ASSEMBLY HI

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Lift up the vehicle.
3. Remove the screw and clips, and turn over the mud guard front LH.



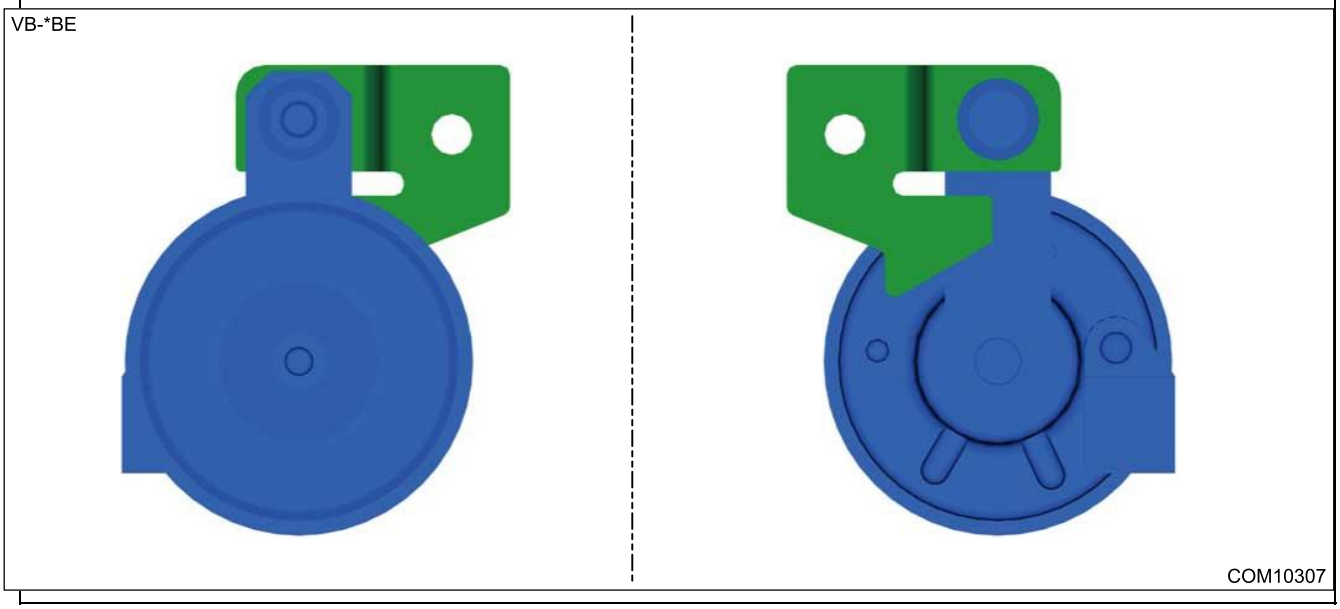
4. Remove the horn assembly Hi.
   (1) Disconnect the connector.
   (2) Remove the bolt, and remove the horn assembly Hi.



INSTALLATION

1. Install the horn assembly Lo to the horn bracket. (Horn assembly Lo)

Note:
Install the horn assembly Lo and the horn bracket as shown in the figure.



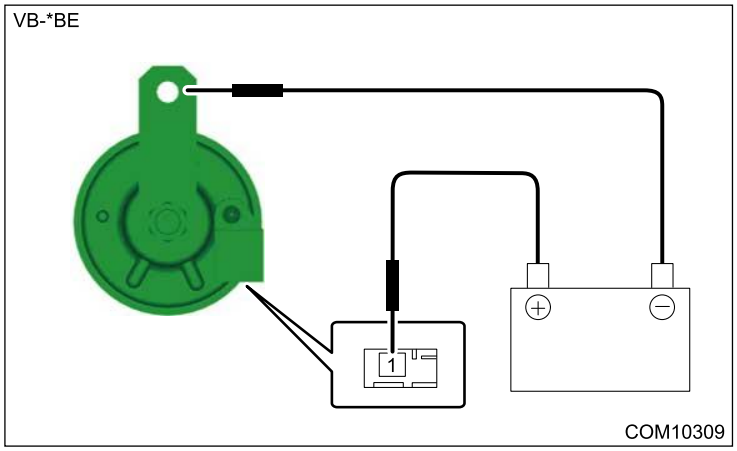
Tightening torque:
18 N·m (1.8 kgf-m, 13.3 ft-lb)

2. Install the horn assembly, and connect the connector.
Tightening torque:
18 N·m (1.8 kgf-m, 13.3 ft-lb)
3. Install the mud guard front. Ref. to EXTERIOR/INTERIOR TRIM>Mud Guard>INSTALLATION.
4. Lower the vehicle.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

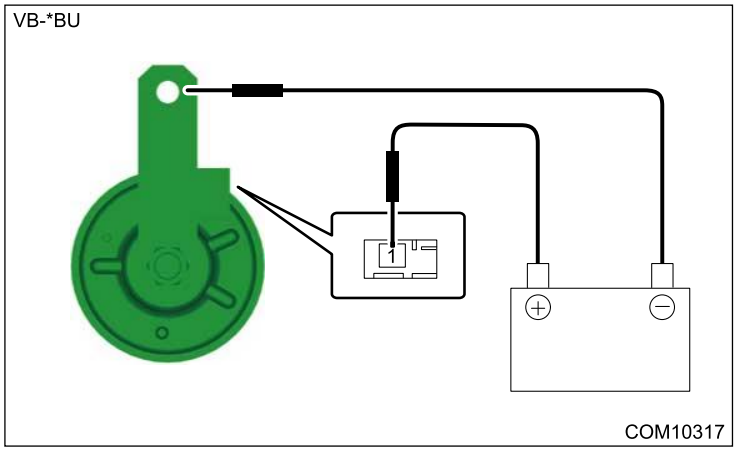
HORN > Horn

INSPECTION

1. Check the horn sounds when applying the battery voltage to the horn assembly.
   - Horn assembly Lo side



   - Horn assembly Hi side



Terminal No.	Inspection conditions	Specification
1 (+) — Horn case (−)	Apply battery voltage.	Sounds

2. If it does not operate normally, replace the horn assembly.

HORN > Horn Switch

NOTE

Horn switch is a unit with the driver's airbag module.
For the horn switch operation procedure, refer to "Driver's Airbag Module" in the "AIRBAG SYSTEM" section.
Ref. to AIRBAG SYSTEM>Driver's Airbag Module.

HORN > Horn Switch

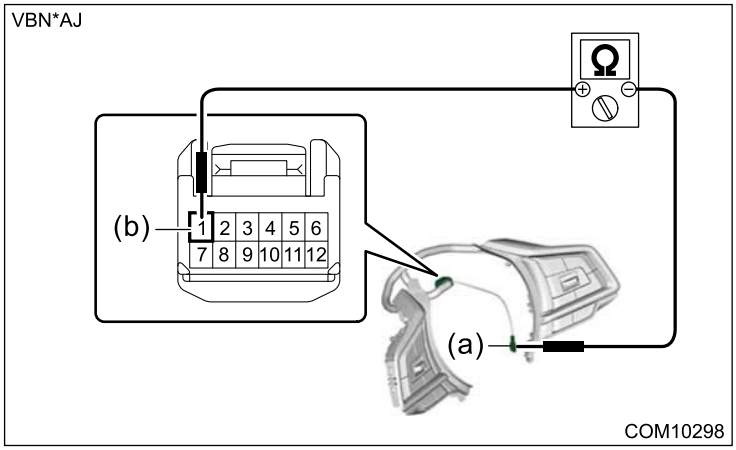
INSPECTION

1. CHECK HORN SWITCH

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". **Ref. to AIRBAG SYSTEM>General Description>CAUTION.**

1. CHECK HORN SWITCH TERMINAL.

1. Turn the ignition switch to OFF.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module>REMOVAL.
4. Check the connecting condition of horn switch connector.
5. Measure the resistance between connectors.



(a) Ground terminal

(b) Horn switch terminal

Terminals	Standard
Horn switch terminal — ground terminal	Less than 1 Ω

Is the measured value within the standard value?

Yes — Go to 2.

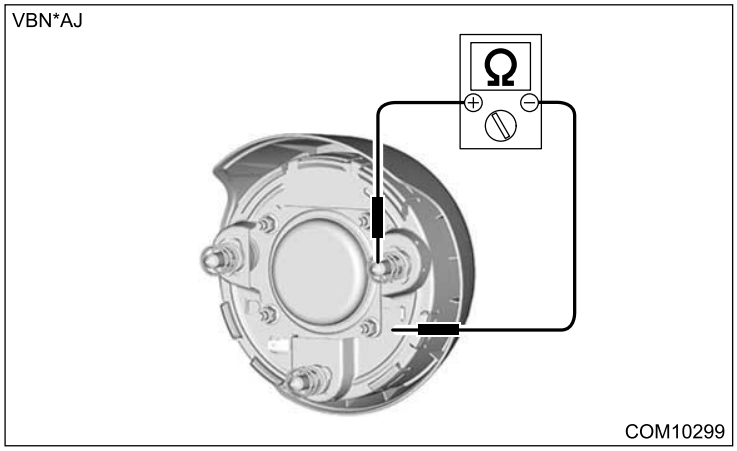
No — It is possible that there is an open circuit between horn switch terminal and ground terminal. Replace the satellite switch assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel.

2. CHECK DRIVER'S AIRBAG MODULE.

Measure the resistance between horn plate and snap pin hook.

Caution:

Measure the resistance while lifting the snap pin hook so that it does not come in contact with the horn plate.



Terminals	Standard
Horn plate — Snap pin hook	1 MΩ or more

Is the measured value within the standard value?

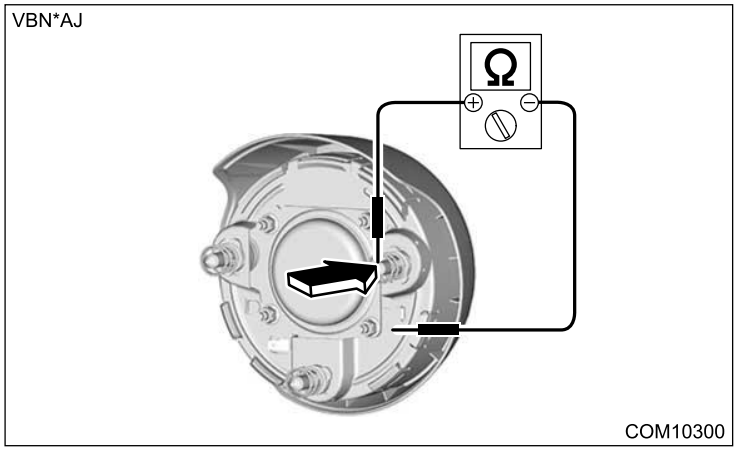
Yes — Go to 3.

No — Replace the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module.

3. CHECK DRIVER'S AIRBAG MODULE.

Measure the resistance between horn plate and snap pin hook with the snap pin hook in contact with the horn plate.

Caution:
Measure at all three positions of the snap pin hook.



Terminals	Standard
Horn plate — Snap pin hook	Less than 1 Ω

Is the measured value within the standard value?

Yes	Driver's airbag module is normal.
No	Replace the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module.

ENTERTAINMENT & MONITORING

ETM

1. General Description
2. Relay and Fuse
3. Cockpit Display System
4. Cockpit Display
5. Front Speaker
6. Rear Speaker
7. Woofer
8. Power Amplifier
9. Antenna
10. Switches and Harness
11. Microphone
12. Telematics System
13. Data Communication Module
14. Camera
15. Accessory Power Supply Socket
16. External Connection Terminal
17. Diagnostics with Phenomenon
18. Service Diagnostics Mode

CAUTION

- When performing service operation, refer to “Repair Contents” in “General Description”. Ref. to REPAIR CONTENTS>Repair Contents.
- When performing work on the sensors or modules, be careful of the following.
  – Before disconnecting connectors, be sure to disconnect the ground terminal from the battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
  – Do not apply any impact. If the parts are accidentally dropped, replace with a new part.
  – Do not expose to high-temperature and humidity.
- When replacing the parts provided with memory functions, record the memory contents before disconnecting the ground terminal from the battery sensor.
- Refer to “CAUTION” of “General Description” in “AIRBAG SYSTEM” section. Ref. to AIRBAG SYSTEM>General Description>CAUTION.
- If any immobilizer related part has been replaced, make sure to register the immobilizer.

LOCATION

1. COCKPIT DISPLAY SYSTEM

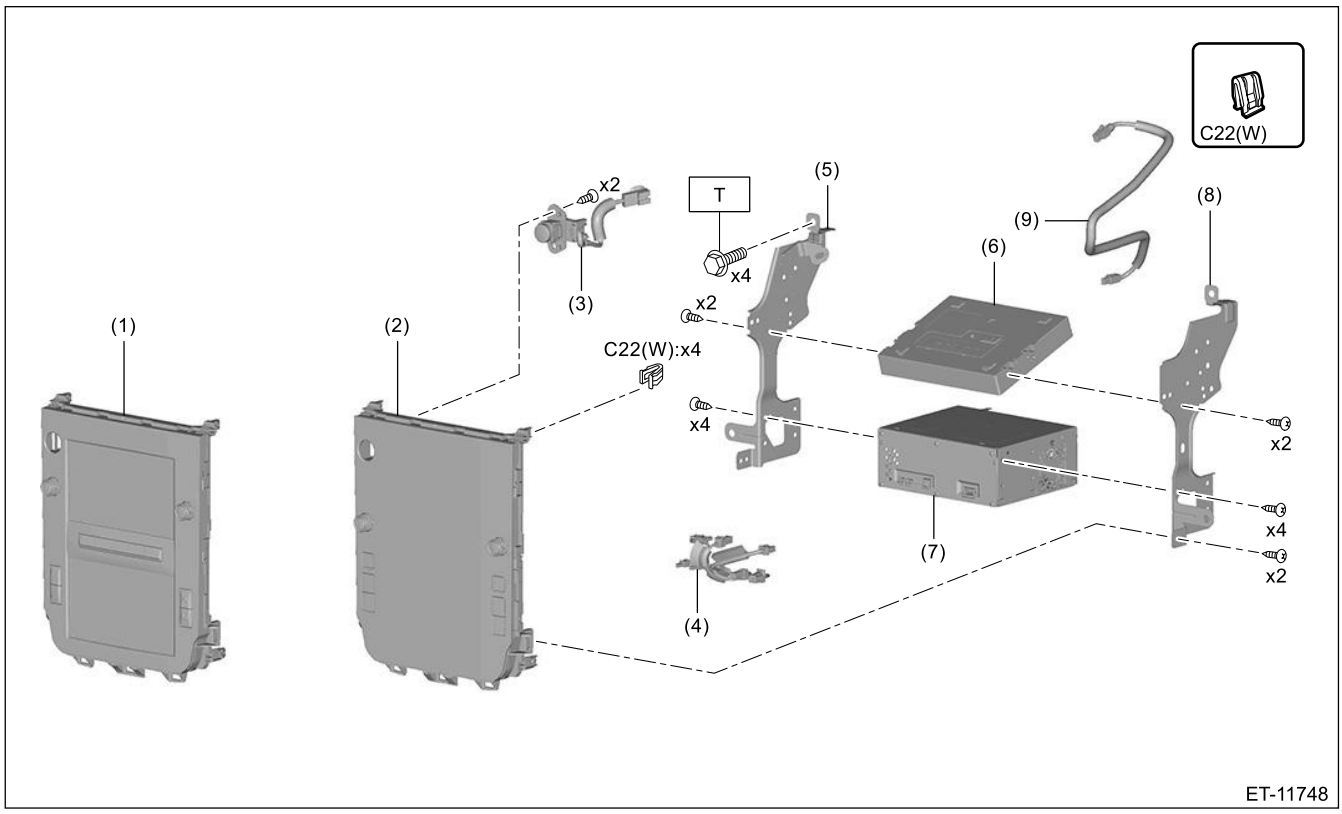
For location, refer to “Electrical Component Location” in the “COCKPIT CONTROL (DIAGNOSTICS)” section. Ref. to COCKPIT CONTROL (DIAGNOSTICS)>Electrical Component Location.

2. TELEMATICS SYSTEM

For locations, refer to “Electrical Component Location” of “TELEMATICS (DIAGNOSTICS)” section. Ref. to TELEMATICS SYSTEM (DIAGNOSTICS)>Electrical Component Location.

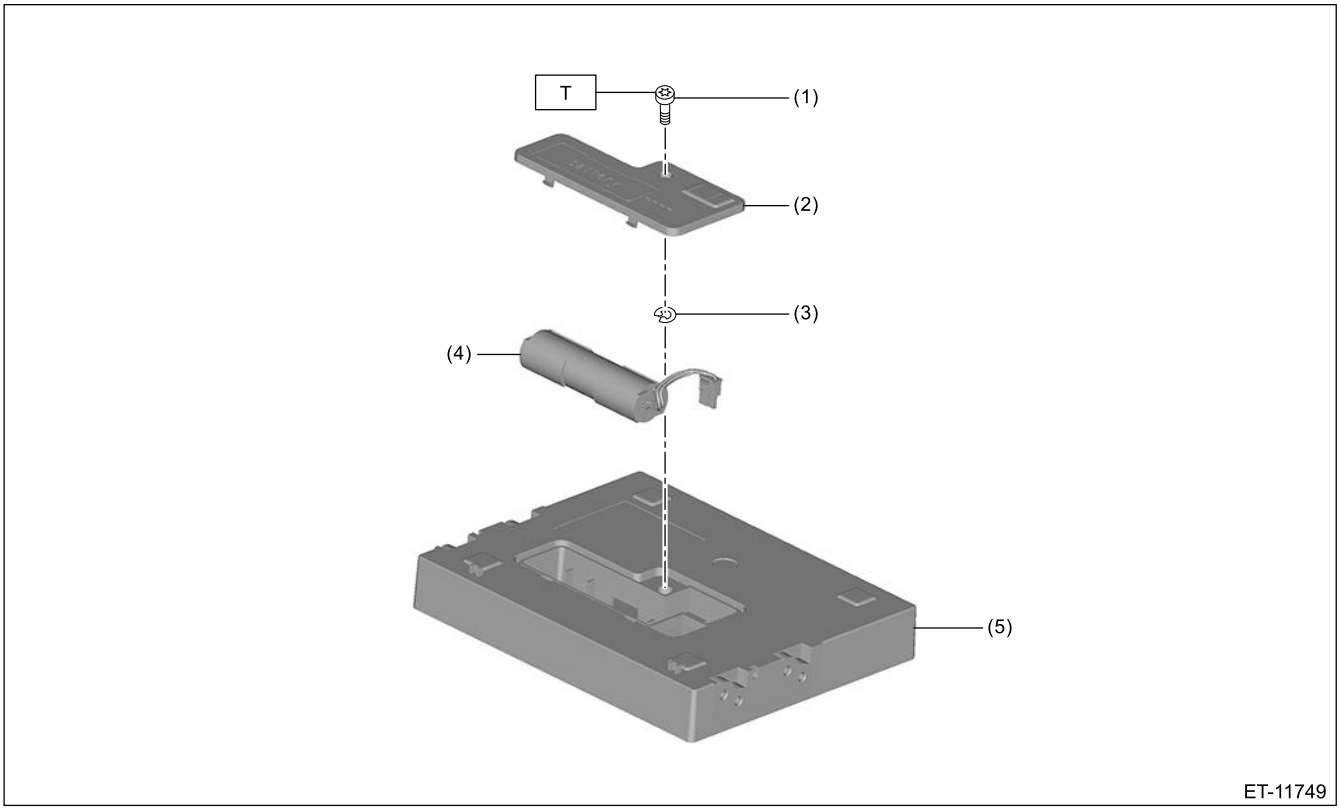
COMPONENT

1. CENTER INFORMATION DISPLAY ASSEMBLY



(1) Center information display (model with dual 7.0-inch display)	(5) Unit bracket LH	(9) Cable CCM
(2) Center information display (model with 11.6-inch display)	(6) Data communication module	
(3) Switch hazard	(7) Cockpit control module	***Tightening torque: N·m (kgf-m, ft-lb)***
(4) Cord ASSY CCM	(8) Unit bracket RH	***T: 7.5 (0.8, 5.5)***

2. DATA COMMUNICATION MODULE



(1) Cap screw

(2) Battery cover

(3) Circlip

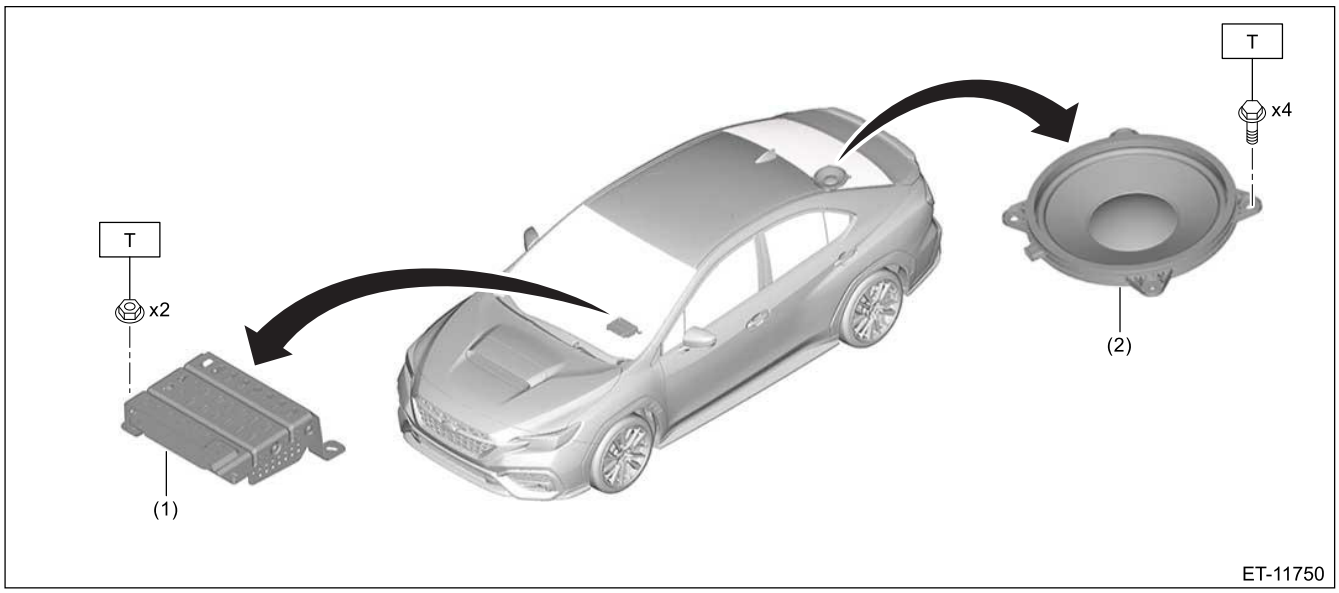
(4) Backup battery

(5) Data communication module body

Tightening torque: N·m (kgf-m, ft-lb)

T: 0.3 (0.03, 0.2)

3. POWER AMPLIFIER & WOOFER

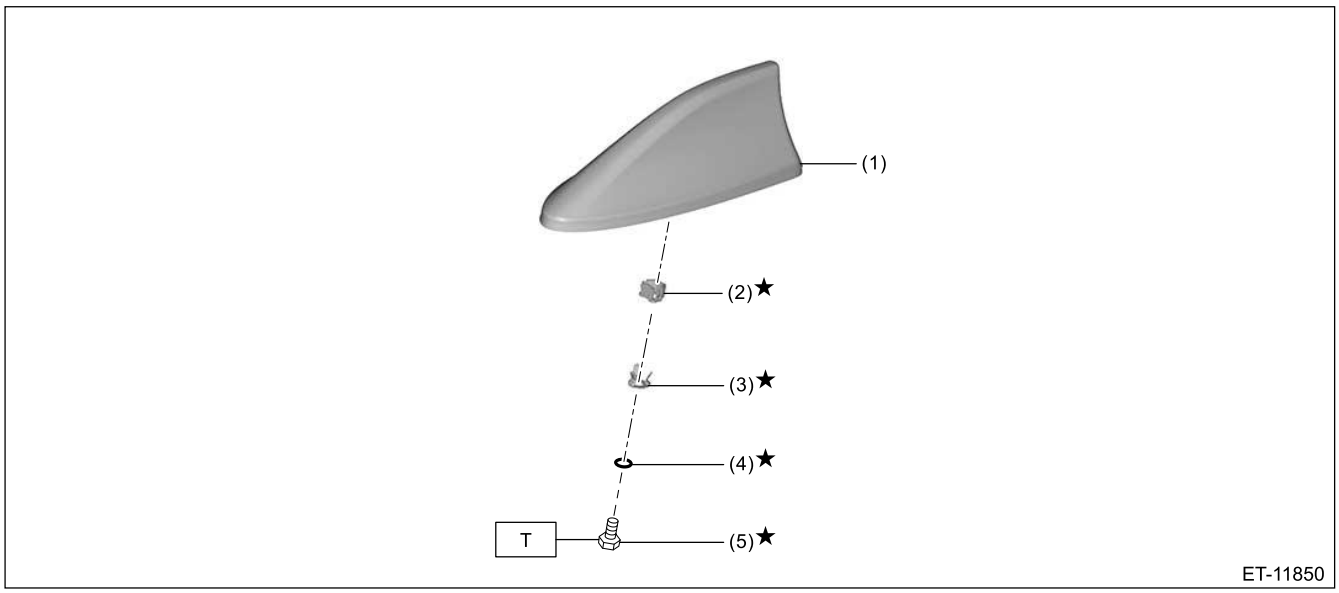


(1) Power amplifier ASSY
(2) Speaker ASSY woofer

Tightening torque: N·m (kgf-m, ft-lb)

T: 7.5 (0.8, 5.5)

4. ROOF ANTENNA



(1) Antenna ASSY roof
(2) Clip
(3) Spring
(4) Washer
(5) Bolt

Tightening torque: N·m (kgf-m, ft-lb)

T: 4.5 ±1 (0.5±0.1, 3.3±0.7)

ENTERTAINMENT & MONITORING > General Description

PREPARATION TOOL

1. SUBARU SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 STSSM4	—	SUBARU SELECT MONITOR 4	Used for setting of each function and troubleshooting for electrical system. **Note:** • **For detailed operation procedures, refer to "Help" of application.** • **Used together with interface for Subaru Select Monitor (such as DST-i and DST-010).**

2. OTHER

	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.
TORX® T10	Used for removing and installing the backup battery.

LOCATION

For the location, refer to “FUSE AND RELAY” in the wiring diagram. Ref. to WIRING SYSTEM>Fuse And Relay>LOCATION.

Note:
For details of relay and fuse, refer to “DC POWER SUPPLY CIRCUIT”. Ref. to WIRING SYSTEM>Power Supply Circuit>WIRING DIAGRAM.

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.

ENTERTAINMENT & MONITORING > Cockpit Display System

WIRING DIAGRAM

For the wiring diagram, refer to "Audio and Navigation System" in the wiring diagram. Ref. to WIRING SYSTEM>Audio and Navigation System>WIRING DIAGRAM.

ENTERTAINMENT & MONITORING > Cockpit Display System

INSPECTION

1. BASIC INSPECTION

For the basic inspection, refer to "Basic Diagnostic Procedure" of "COCKPIT CONTROL (DIAGNOSTICS)". Ref. to COCKPIT CONTROL (DIAGNOSTICS)>Basic Diagnostic Procedure.

2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to "System Block Diagram" in "COCKPIT CONTROL (DIAGNOSTICS)". Ref. to COCKPIT CONTROL (DIAGNOSTICS)>General Description>SYSTEM BLOCK DIAGRAM.

3. MODULE I/O SIGNAL

For the electrical specification, refer to "Control Module I/O Signal" of "COCKPIT CONTROL (DIAGNOSTICS)". Ref. to COCKPIT CONTROL (DIAGNOSTICS)>Control Module I/O Signal>ELECTRICAL SPECIFICATION.

ENTERTAINMENT & MONITORING > Cockpit Display System

NOTE

For operation procedures of components of the cockpit display system, refer to the following sections.

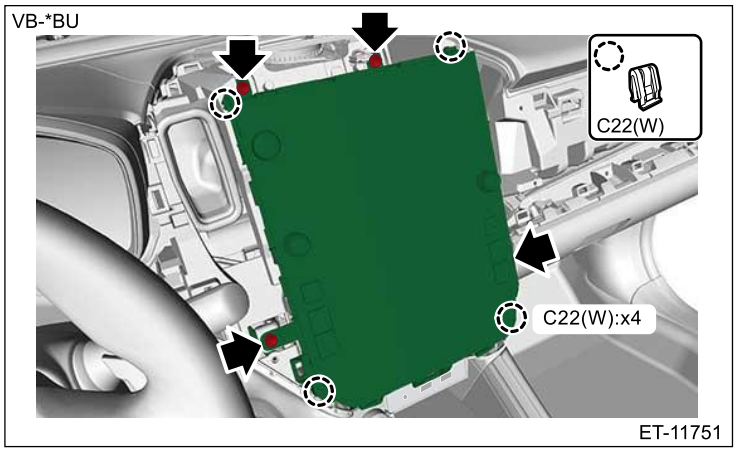
Note:
For the CAN communication system, refer to the LAN system. Ref. to LAN SYSTEM (DIAGNOSTICS)>Electrical Component Location.

- Cockpit display: Ref. to ENTERTAINMENT & MONITORING>Cockpit Display.
- Front speaker: Ref. to ENTERTAINMENT & MONITORING>Front Speaker.
- Rear speaker: Ref. to ENTERTAINMENT & MONITORING>Rear Speaker.
- Woofer: Ref. to ENTERTAINMENT & MONITORING>Woofer.
- Power amplifier: Ref. to ENTERTAINMENT & MONITORING>Power Amplifier.
- Antenna: Ref. to ENTERTAINMENT & MONITORING>Antenna.
- Audio steering switch: Ref. to ENTERTAINMENT & MONITORING>Switches and Harness.
- External connection terminal: Ref. to ENTERTAINMENT & MONITORING>External Connection Terminal.
- Microphone: Ref. to ENTERTAINMENT & MONITORING>Microphone.

ENTERTAINMENT & MONITORING > Cockpit Display

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the ornament panel mid passenger and panel assembly center. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>REMOVAL.
3. Remove the center information display assembly.
   (1) Remove the bolt and release the clip.



   (2) Disconnect the connectors, and then remove the center information display assembly.
4. Remove the data communication module. (Model with telematics) Ref. to ENTERTAINMENT & MONITORING>Data Communication Module>REMOVAL > DATA COMMUNICATION MODULE.
5. Remove the cockpit control module. Ref. to ENTERTAINMENT & MONITORING>Cockpit Display>DISASSEMBLY.

ENTERTAINMENT & MONITORING > Cockpit Display

INSTALLATION

1. Install the cockpit control module. Ref. to ENTERTAINMENT & MONITORING>Cockpit Display>ASSEMBLY.
2. Install the data communication module. (Model with telematics) Ref. to ENTERTAINMENT & MONITORING>Data Communication Module>INSTALLATION > DATA COMMUNICATION MODULE.
3. Connect each connector, and install the center information display assembly.

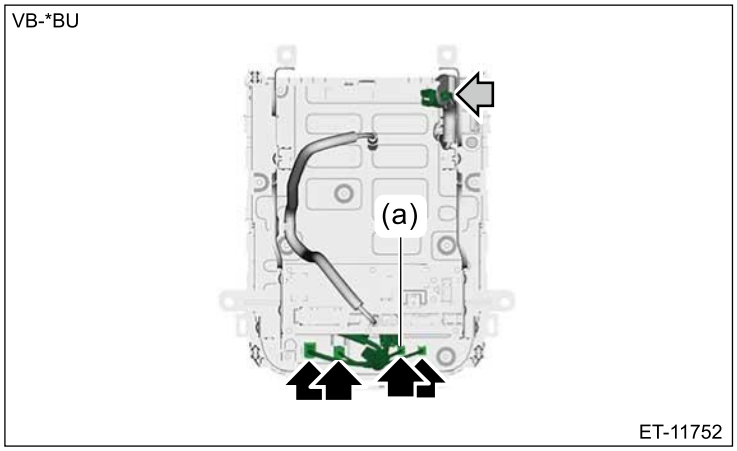
   Caution:
   Do not allow the harnesses and cords to interfere with or get caught by other parts.

   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
4. Install the panel assembly center and the ornament panel mid passenger. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>INSTALLATION.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

ENTERTAINMENT & MONITORING > Cockpit Display

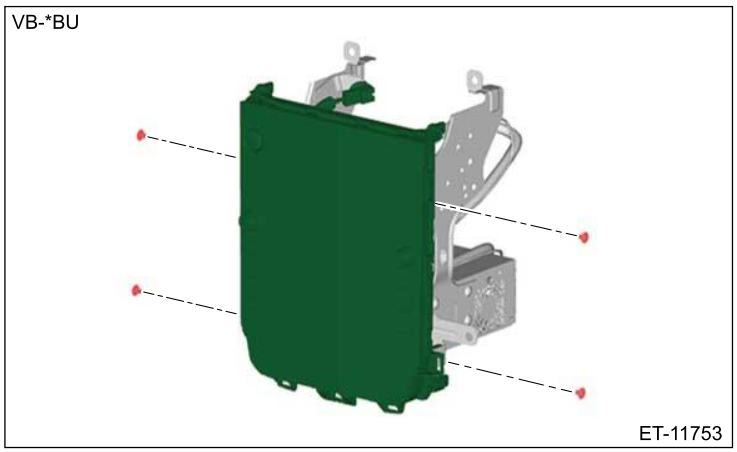
DISASSEMBLY

1. Remove the center information display.
   (1) Remove the connector clips, and disconnect each connector.

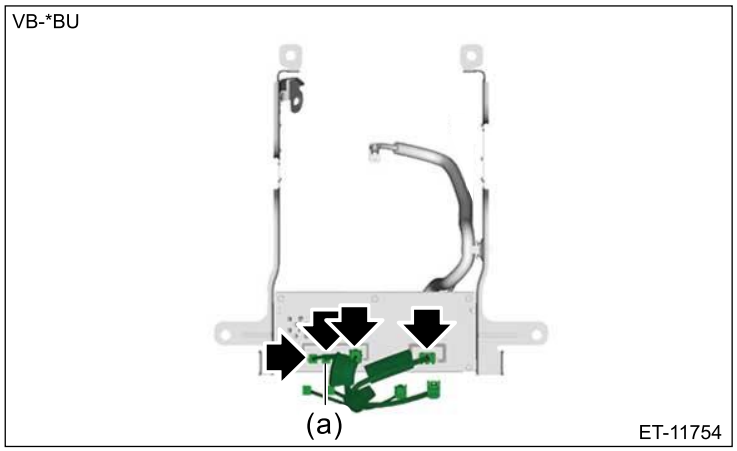


(a) Model with 11.6-inch display

(2) Remove the screws and remove the center information display.

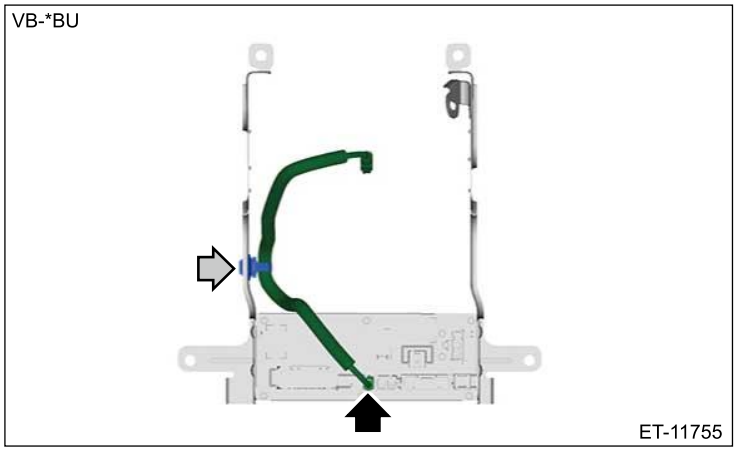


2. Remove the switch hazard. Ref. to LIGHTING SYSTEM>Hazard Switch>REMOVAL.
3. Disconnect the connectors, and remove the cord assembly CCM.

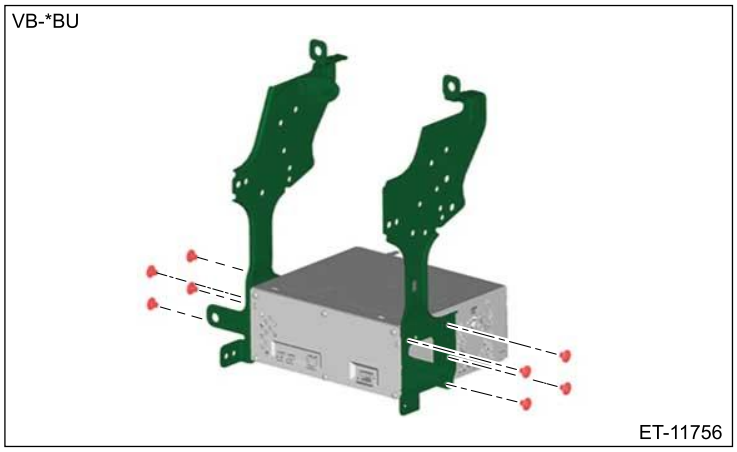


(a) Model with 11.6-inch display

4. Remove the connector and cable clip and remove the cable CCM.



5. Remove the screws and remove the unit bracket from the cockpit control module.



ENTERTAINMENT & MONITORING > Cockpit Display

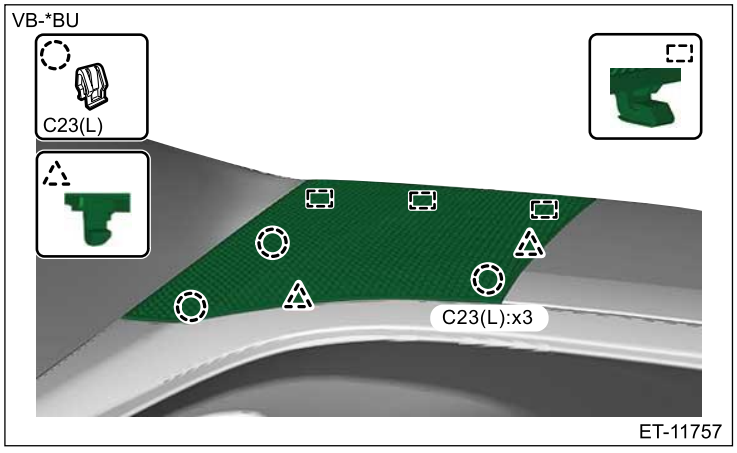
ASSEMBLY

1. Install the unit bracket to the cockpit control module.
2. Connect the connector, and install the cable CCM.
3. Connect each connector, and install the cord assembly CCM.
4. Install the switch hazard. Ref. to LIGHTING SYSTEM>Hazard Switch>INSTALLATION.
5. Install the center information display and connect each connector.

REMOVAL

1. TWEETER

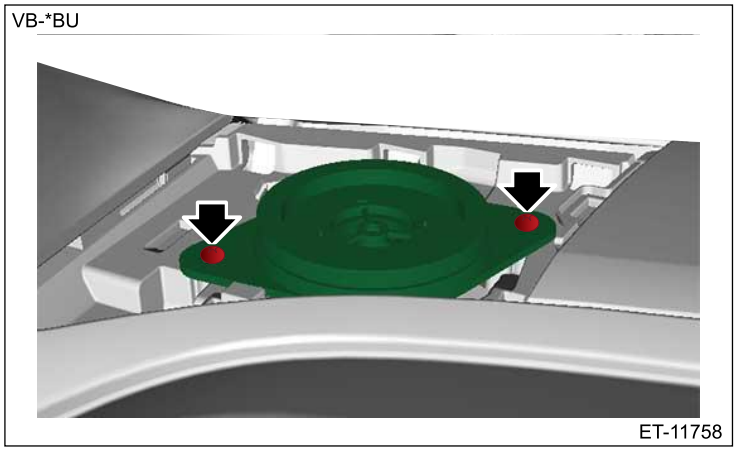
1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Release the clips and claws, then detach the grille speaker side.



3. Remove the speaker assembly tweeter.

Caution:
Do not touch the cone.

(1) Remove the screws.



(2) Disconnect the connector and remove the speaker assembly tweeter.

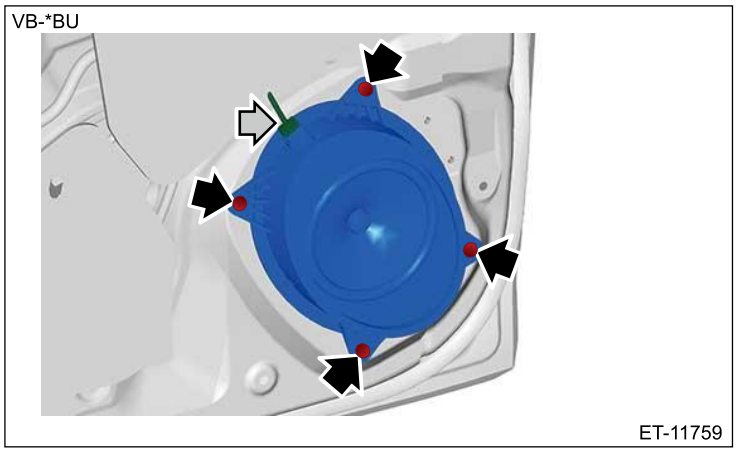
2. DOOR

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > FRONT DOOR.
3. Remove the speaker assembly front.

Caution:
Do not touch the cone.

(1) Disconnect the connector.
(2) Remove the screws and remove the speaker assembly front.



ENTERTAINMENT & MONITORING > Front Speaker

INSTALLATION

1. TWEETER

1. Connect the connector, and install the speaker assembly tweeter.

Caution:
Do not touch the cone.

2. Install the grille speaker side.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. DOOR

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the speaker assembly front, and connect the connector.

Caution:
Do not touch the cone.

Note:
If the threaded portion of grommet is faulty, replace the grommet with a new part.

2. Install the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

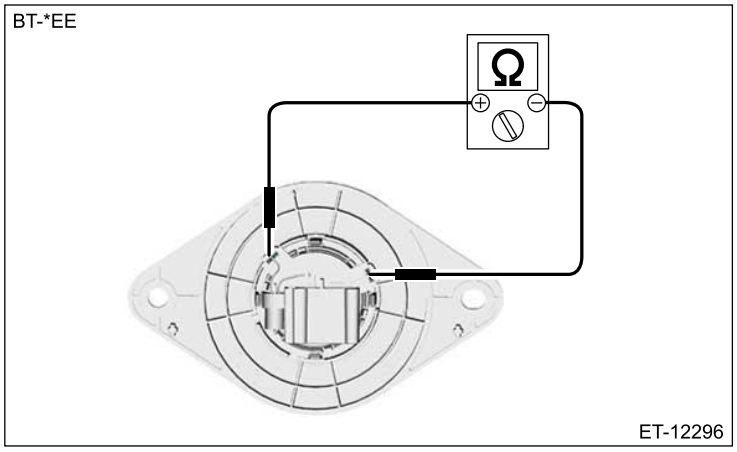
ENTERTAINMENT & MONITORING > Front Speaker

INSPECTION

1. TWEETER

- **MODEL WITHOUT POWER AMPLIFIER**

1. Check that no foreign matter has entered the speaker and that the speaker cone is not torn, deformed, or otherwise damaged.
2. Measure the resistance between the speaker terminals.



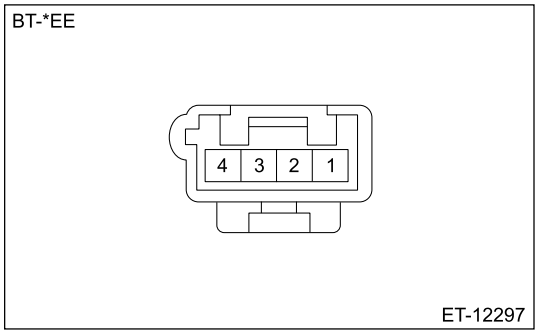
Specification:

3.15 — 3.85 Ω

3. Replace the speaker assembly tweeter if fault is found in the inspection.

- **MODEL WITH POWER AMPLIFIER**

1. Check that no foreign matter has entered the speaker and that the speaker cone is not torn, deformed, or otherwise damaged.
2. Measure the resistance between the speaker terminals.

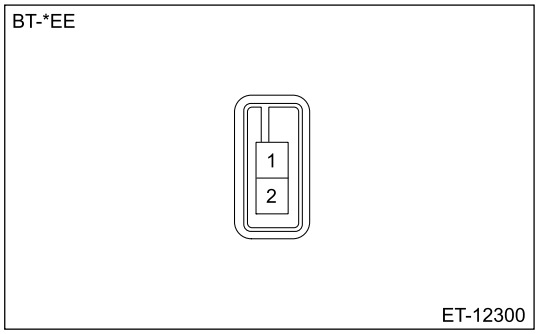


Terminal No.	Inspection conditions	Standard
4 — 3	Always	3.05 — 4.65 Ω

3. Replace the speaker assembly tweeter if fault is found in the inspection.

2. DOOR

1. Check that no foreign matter has entered the speaker and that the speaker cone is not torn, deformed, or otherwise damaged.
2. Measure the resistance between connector terminals.



- Model without power amplifier

Terminal No.	Inspection conditions	Standard
1 — 2	Always	2.97 — 3.63 Ω

- Model with power amplifier

Terminal No.	Inspection conditions	Standard
1 — 2	Always	4.0 — 6.0 Ω

3. Replace the speaker assembly front if fault is found in the inspection.

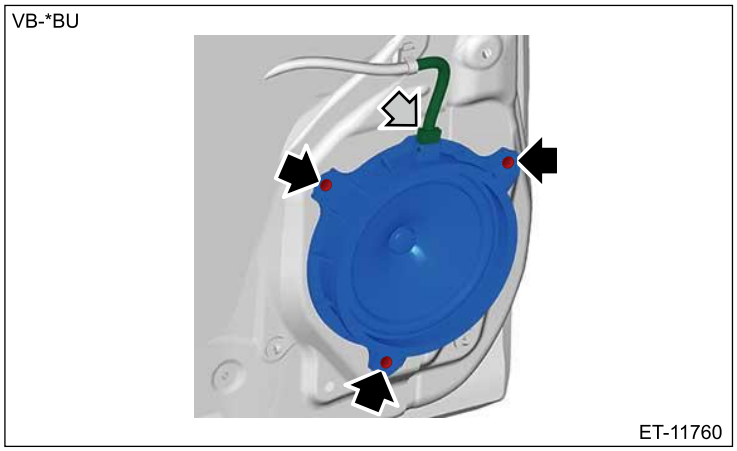
ENTERTAINMENT & MONITORING > Rear Speaker

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > REAR DOOR.
3. Remove the speaker assembly rear.

Caution:
Do not touch the cone.

(1) Disconnect the connector.
(2) Remove the screws and remove the speaker assembly rear.



ENTERTAINMENT & MONITORING > Rear Speaker

INSTALLATION

1. Install the speaker assembly rear, and connect the connector.

Caution:
Do not touch the cone.

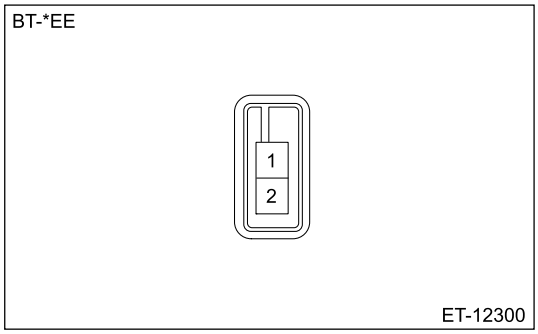
Note:
If the threaded portion of grommet is faulty, replace the grommet with a new part.

2. Install the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

ENTERTAINMENT & MONITORING > Rear Speaker

INSPECTION

1. Check that no foreign matter has entered the speaker and that the speaker cone is not torn, deformed, or otherwise damaged.
2. Measure the resistance between the speaker terminals.



- Model without power amplifier

Terminal No.	Inspection conditions	Standard
1 — 2	Always	2.97 — 3.63 Ω

- Model with power amplifier

Terminal No.	Inspection conditions	Standard
1 — 2	Always	2.6 — 4.4 Ω

3. Replace the speaker assembly rear if fault is found in the inspection.

ENTERTAINMENT & MONITORING > Woofer

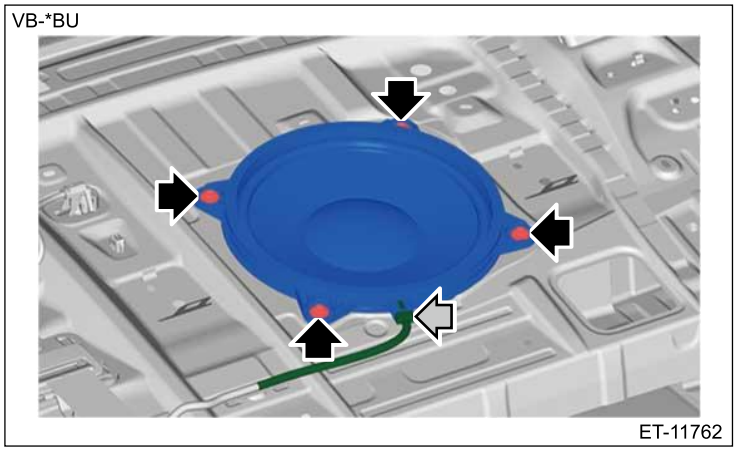
REMOVAL

Caution:
- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the rear seat cushion assembly and the backrest assembly. Ref. to SEATS>Rear Seat>REMOVAL.
3. Remove the trim panel assembly C pillar LWR and the trim panel assembly C pillar. Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>REMOVAL.
4. Remove the trim panel assembly rear shelf. Ref. to EXTERIOR/INTERIOR TRIM>Rear Shelf Trim>REMOVAL.
5. Remove the speaker assembly woofer.

   Caution:
   Do not touch the cone.

   (1) Disconnect the connector.
   (2) Remove the bolts and remove the speaker assembly woofer.



ENTERTAINMENT & MONITORING > Woofer

INSTALLATION

Caution:
- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

1. Install the speaker assembly woofer, and connect the connector.

Caution:
Do not touch the cone.

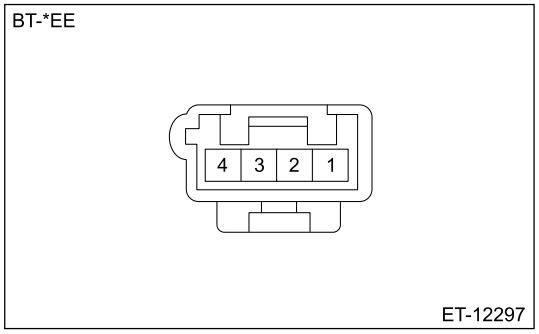
Tightening torque:
7.5 N·m (0.8 kgf-m, 5.5 ft-lb)

2. Install the trim panel assembly rear shelf. Ref. to EXTERIOR/INTERIOR TRIM>Rear Shelf Trim>INSTALLATION.
3. Install the trim panel assembly C pillar and the trim panel assembly C pillar LWR. Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>INSTALLATION.
4. Install the backrest assembly and rear seat cushion assembly. Ref. to SEATS>Rear Seat>INSTALLATION.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

ENTERTAINMENT & MONITORING > Woofer

INSPECTION

1. Check that no foreign matter has entered the speaker and that the speaker cone is not torn, deformed, or otherwise damaged.
2. Measure the resistance between the speaker terminals.



Terminal No.	Inspection conditions	Standard
4 — 3	Always	3.4 — 5.2 Ω
2 — 1	Always	3.4 — 5.2 Ω

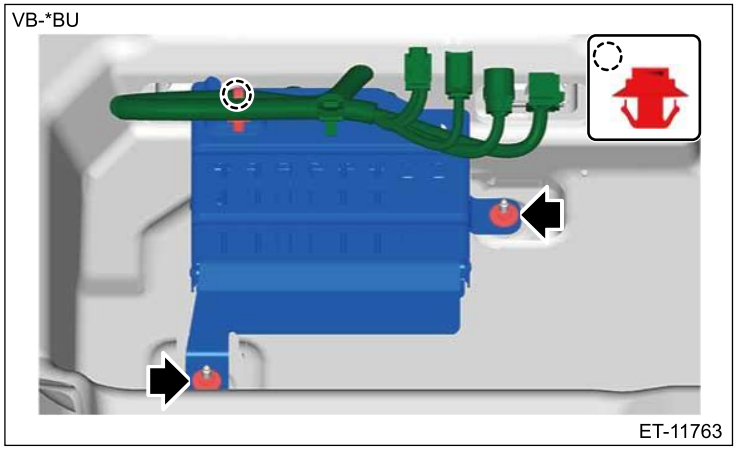
3. Replace the speaker assembly woofer if fault is found in the inspection.

REMOVAL

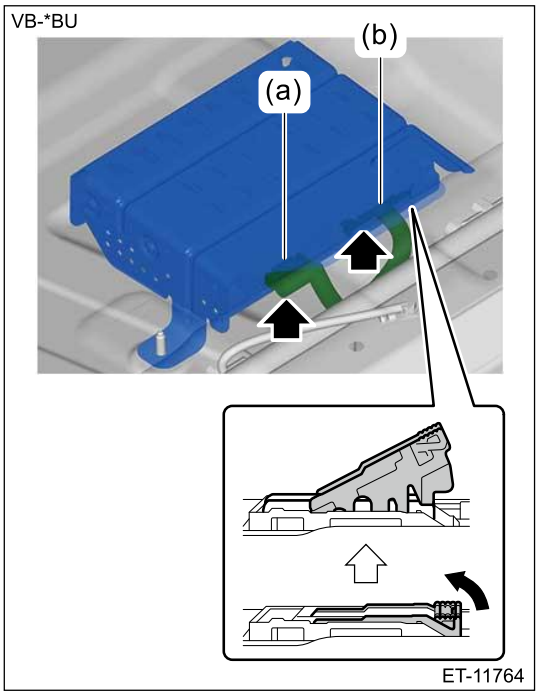
Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

Note:
The power amplifier assembly is installed under the front seat RH. Remove the power amplifier assembly after sliding the front seat RH back and forth as necessary.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the power amplifier assembly.
   (1) Remove the nut and harness clip.



   (2) Disconnect the connector (a).
   (3) Move the lock lever in the arrow direction as shown in the figure and disconnect the connector (b) and remove the power amplifier assembly.



INSTALLATION

Caution:

Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

Note:

The power amplifier assembly is installed under the front seat RH. Install the power amplifier assembly after sliding the front seat RH back and forth as necessary.

1. Connect each connector, and install the power amplifier assembly.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
2. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

REMOVAL

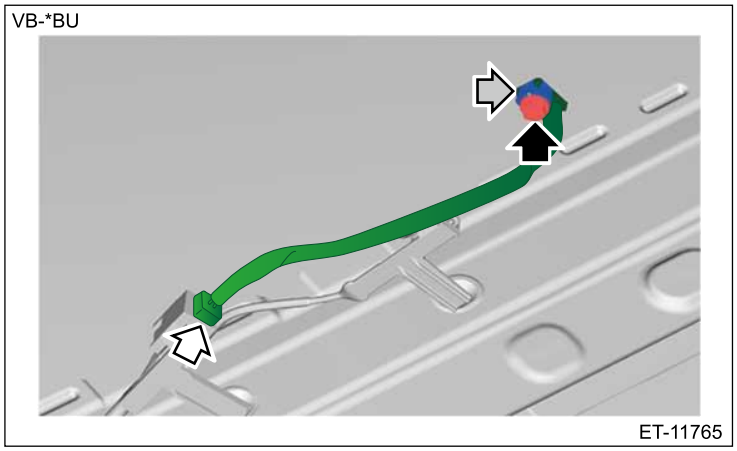
1. ROOF ANTENNA (SXM/TELEMATICS)

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Lower the trim panel roof assembly. Ref. to EXTERIOR/INTERIOR TRIM>Roof Trim>REMOVAL.

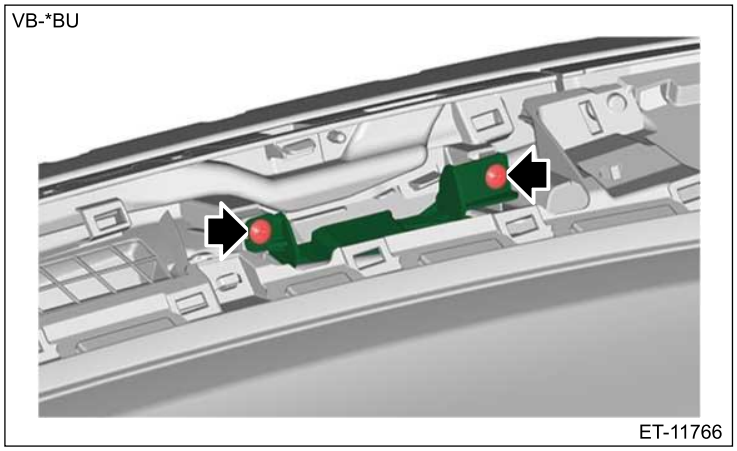
   Note:
   Procedures for the roof trim is performed inside the vehicle.
3. Remove the antenna assembly roof.
   (1) Disconnect the connector.

   Note:
   For models with telematics, disconnect the telematics antenna connector.
   (2) Remove the bolts and washers.
   (3) Remove the spring and clip, and then remove the antenna assembly roof.



2. GPS ANTENNA

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the grille speaker side. Ref. to ENTERTAINMENT & MONITORING>Front Speaker>REMOVAL > TWEETER.
3. Remove the grille front defroster. Ref. to AIR CONDITIONER>Sunload Sensor (Auto A/C Model)>REMOVAL.
4. Remove the GPS antenna assembly.
   (1) Remove the screws.



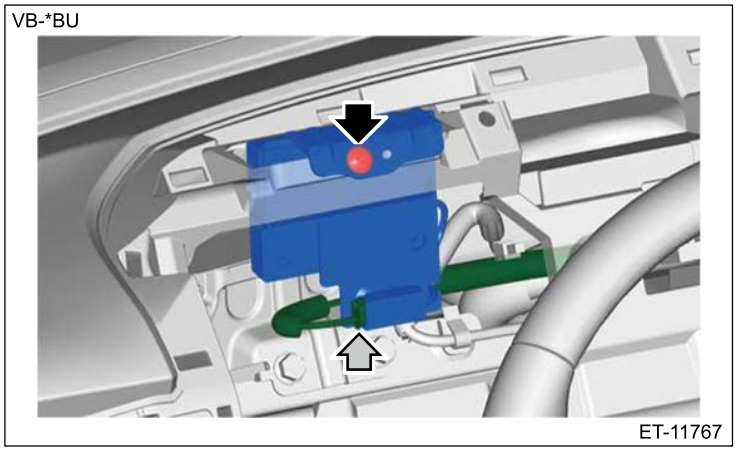
(2) Disconnect the connector and remove the GPS antenna assembly.

3. TELEMATICS SUB ANTENNA

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the cover assembly instrument panel side LH and the ornament panel mid driver. Ref. to AIR CONDITIONER>Air Vent Grille>REMOVAL > SIDE GRILLE.
3. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
4. Remove the ornament panel mid passenger and panel assembly center. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>REMOVAL.
5. Remove the panel starter switch. (Model with push button ignition starter) Ref. to SECURITY AND LOCKS>Push Button Ignition Switch>REMOVAL.

   Note:
   For the models without push button ignition starter, remove the cover starter switch.
6. Remove the combination meter assembly. Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter>REMOVAL.
7. Remove the telematics sub antenna assembly.
   (1) Disconnect the connector.
   (2) Remove the screws and then remove the telematics sub antenna assembly.

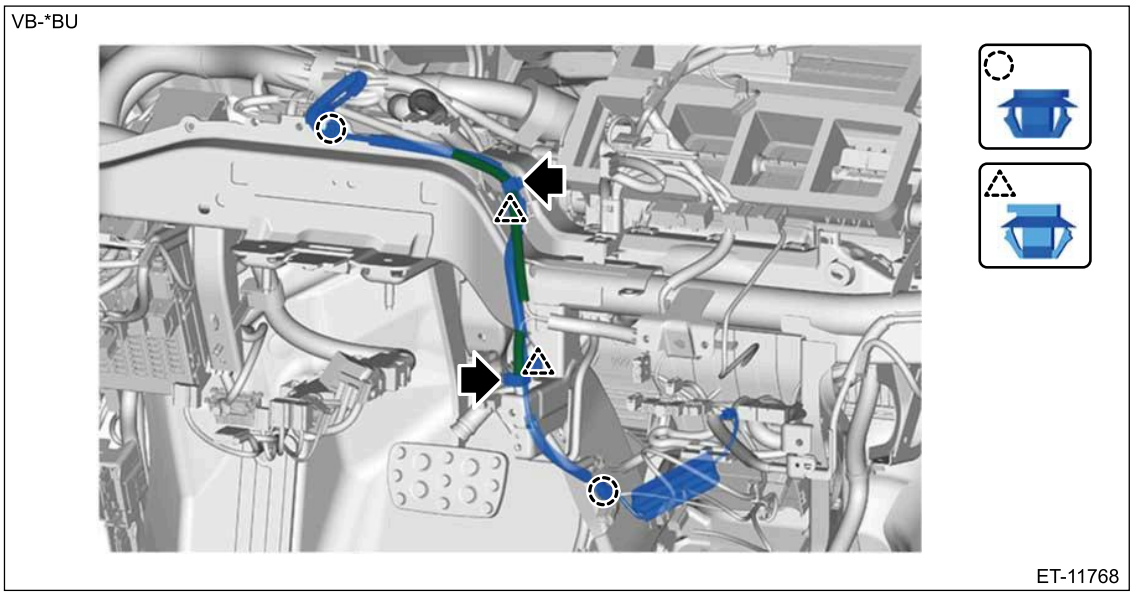


4. FEEDER CORD

- **STEERING BEAM**
  - **Combination meter**

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

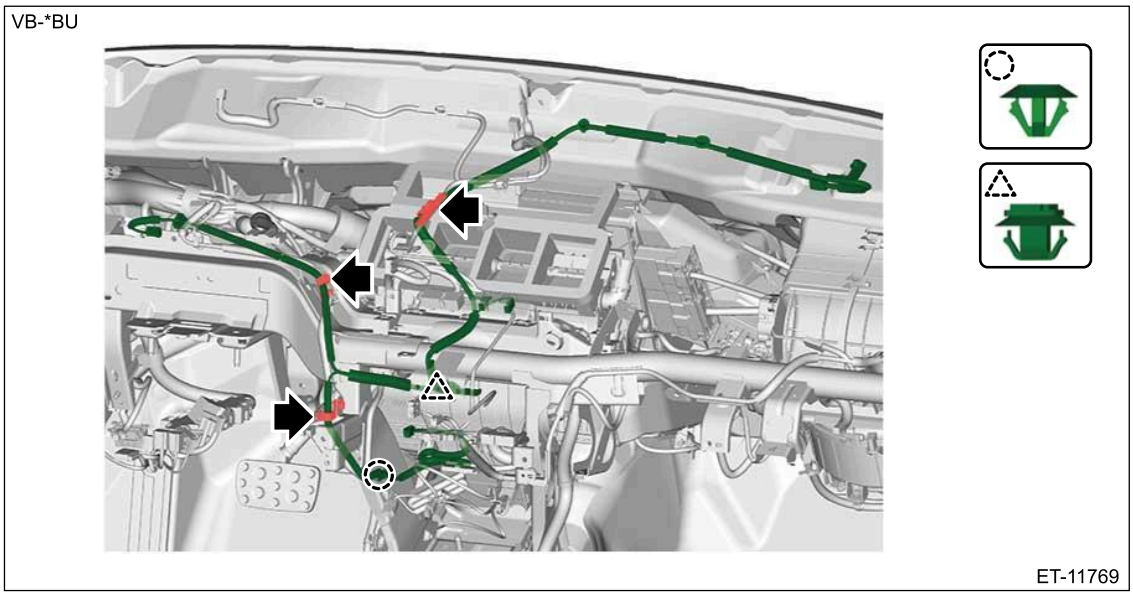
1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the panel COMPL instrument. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Assembly>REMOVAL.
3. Disconnect the GPS assembly cord from the cord clamp.
4. Remove the cord clip, and remove the cord assembly meter.



  - **GPS & telematics sub antenna**

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

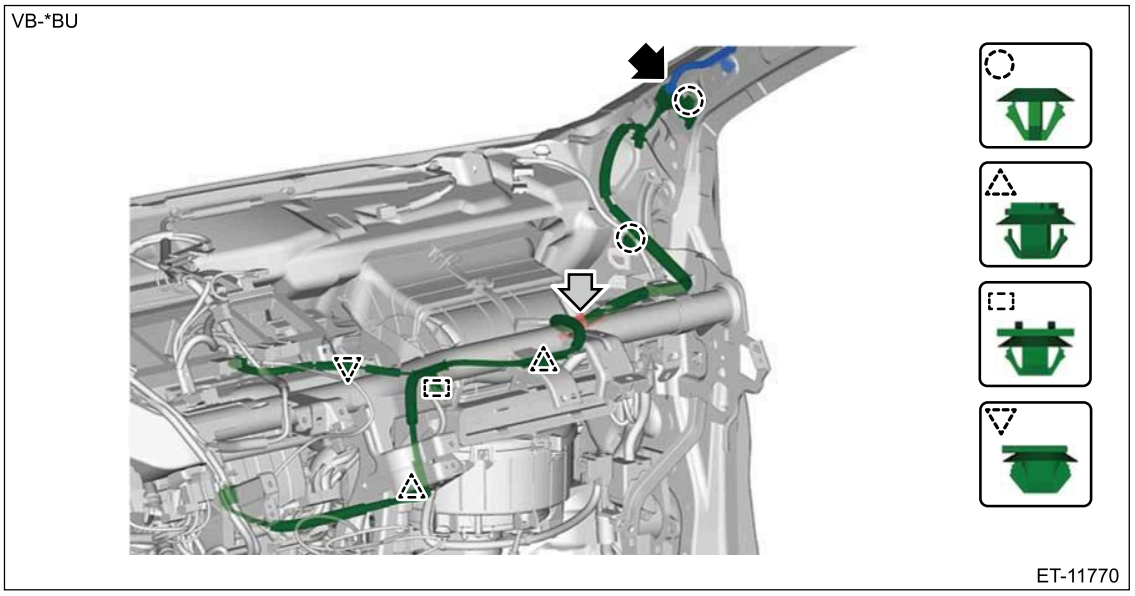
1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the panel COMPL instrument. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Assembly>REMOVAL.
3. Disconnect the GPS assembly cord from the cord clamp of the cord assembly meter and instrument panel harness.
4. Remove the cord clips and remove the GPS assembly cord.



– **Roof antenna**

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the panel COMPL instrument. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Assembly>REMOVAL.
3. Disconnect the feeder assembly cord from the cord clamp of the instrument panel harness.
4. Remove the connectors and cord clips, and then remove the feeder assembly cord.



- **ROOF TRIM**
  For work procedures for the cord assembly antenna and cord assembly roof, refer to "Roof Trim" of the "EXTERIOR/INTERIOR TRIM" section. Ref. to EXTERIOR/INTERIOR TRIM>Roof Trim>REMOVAL.

ENTERTAINMENT & MONITORING > Antenna

INSTALLATION

1. ROOF ANTENNA (SXM/TELEMATICS)

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Using new clips, springs, washers and bolts, install the antenna assembly roof and connect the connector.
   Tightening torque:
   4.5 ±1 N·m (0.5±0.1 kgf-m, 3.3±0.7 ft-lb)
2. Install the trim panel roof assembly. Ref. to EXTERIOR/INTERIOR TRIM>Roof Trim>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. GPS ANTENNA

1. Connect the connector, and install the GPS antenna assembly.
2. Install the grille front defroster. Ref. to AIR CONDITIONER>Sunload Sensor (Auto A/C Model)>INSTALLATION.
3. Install the grille speaker side. Ref. to ENTERTAINMENT & MONITORING>Front Speaker>INSTALLATION > TWEETER.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

3. TELEMATICS SUB ANTENNA

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the telematics sub antenna assembly and connect the connector.
2. Install the combination meter assembly. Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter>INSTALLATION.
3. Install the panel starter switch. (Model with push button ignition starter) Ref. to SECURITY AND LOCKS>Push Button Ignition Switch>INSTALLATION.

   Note:
   For the models without push button ignition starter, install the cover starter switch.
4. Install the panel assembly center and the ornament panel mid passenger. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>INSTALLATION.
5. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
6. Install the ornament panel mid driver and cover assembly instrument panel side LH. Ref. to AIR CONDITIONER>Air Vent Grille>INSTALLATION > SIDE GRILLE.
7. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

4. FEEDER CORD

- **STEERING BEAM**
  - **Combination meter**

    Caution:
    Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

    1. Install the cord assembly meter.
    2. Install the GPS assembly cord.
    3. Install the panel COMPL instrument. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Assembly>INSTALLATION.
    4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
  - **GPS & telematics sub antenna**

    Caution:
    Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

    1. Install the GPS assembly cord.
    2. Install the panel COMPL instrument. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Assembly>INSTALLATION.
    3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
  - **Roof antenna**

    Caution:
    Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

    1. Install the feeder assembly cord and connect the connector.

2. Install the panel COMPL instrument. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Assembly>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

- **ROOF TRIM**

  For work procedures for the cord assembly antenna and cord assembly roof, refer to “Roof Trim” of the “EXTERIOR/INTERIOR TRIM” section. Ref. to EXTERIOR/INTERIOR TRIM>Roof Trim>INSTALLATION.

REMOVAL

1. AUDIO STEERING SWITCH

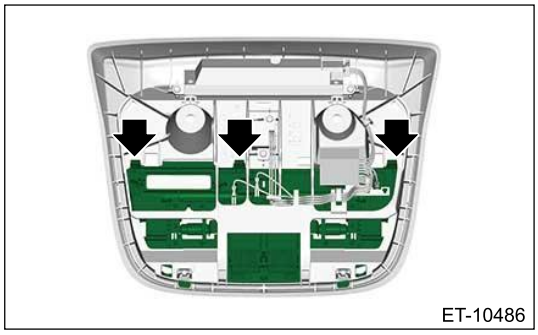
Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Set the steering wheel to the straight-ahead position.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module>REMOVAL.
4. Remove the steering wheel assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>REMOVAL.
5. Remove the audio steering switch. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>DISASSEMBLY.

2. TELEMATICS BUTTON

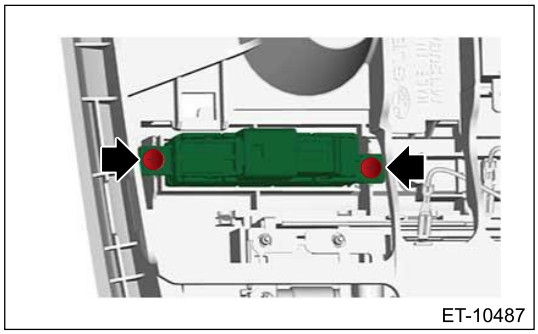
1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the light assembly map. Ref. to LIGHTING SYSTEM>Spot Map Light>REMOVAL.
3. Remove the telematics button.
   (1) Release the claws and remove the front side of the frame.

Caution:
Be careful not to pull the harness.


ET-10486

Note:
The frame cannot be removed.

(2) Remove the screws from the frame clearance, and remove the telematics button.


ET-10487

INSTALLATION

1. AUDIO STEERING SWITCH

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the audio steering switch. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>ASSEMBLY.
2. Align the center position of the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector>ADJUSTMENT.
3. Install the steering wheel assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>INSTALLATION.
4. Install the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module>INSTALLATION.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

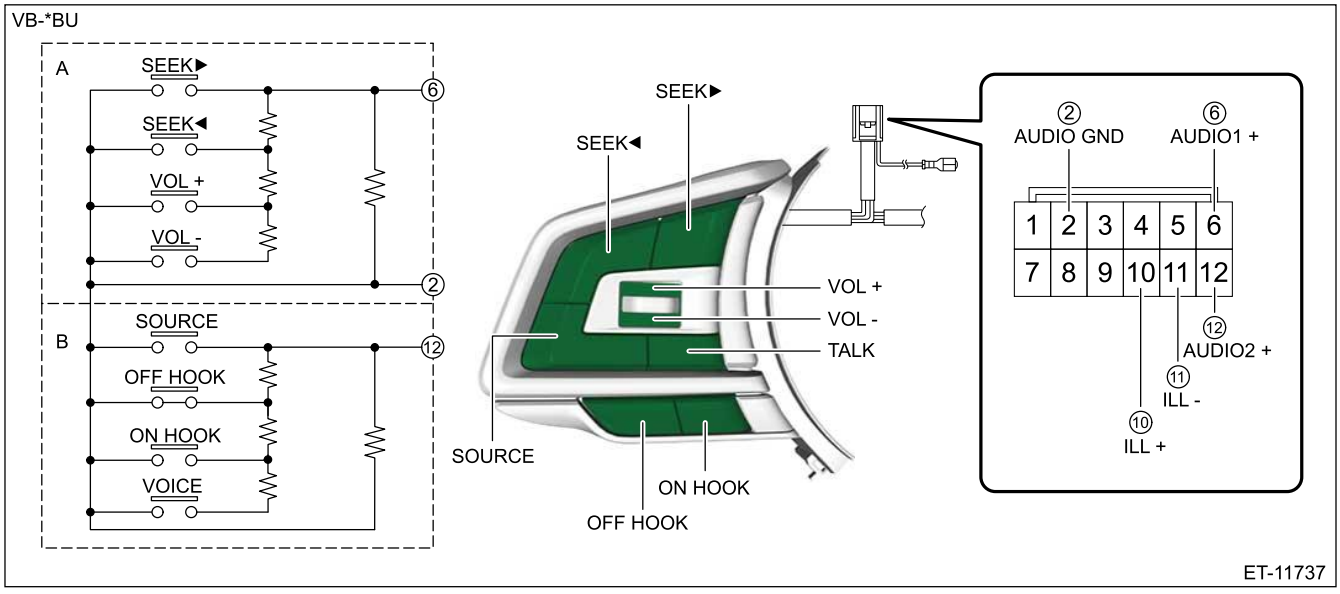
2. TELEMATICS BUTTON

1. Install the telematics button.
2. Install the light assembly map. Ref. to LIGHTING SYSTEM>Spot Map Light>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

INSPECTION

1. AUDIO STEERING SWITCH

1. Measure the resistance between connector terminals.



Terminal No.	Inspection conditions		Standard
6 — 2	SEEK (›) SEEK (‹)	A circuit is all OFF.	Approx. 100 kΩ

Terminal No.	Inspection conditions		Standard
	VOL (+) VOL (−)		
	SEEK (›)	ON	Less than 1 Ω
	SEEK (‹)	ON	Approx. 330 Ω
	VOL (+)	ON	Approx. 1,000 Ω
	VOL (−)	ON	Approx. 3,110 Ω
12 — 2	SOURCE OFF HOOK ON HOOK TALK	B circuit is all OFF.	Approx. 100 kΩ
	SOURCE	ON	Less than 1 Ω
	OFF HOOK	ON	Approx. 330 Ω
	ON HOOK	ON	Approx. 1,000 Ω
	TALK	ON	Approx. 3,110 Ω

2. Apply battery voltage between the connector terminals to check lighting condition of illumination inside the switch.

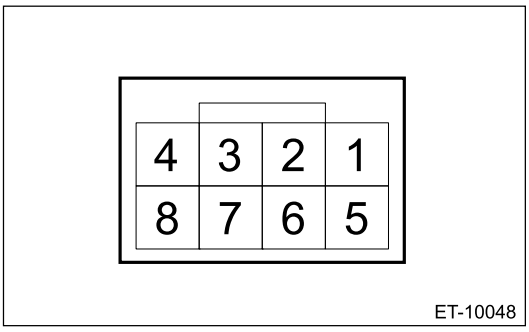
Caution:
When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.
Incorrect polarity connection may cause LED damage inside the switch.

Terminal No.	Inspection conditions	Specification
10 (+) — 11 (−)	Apply battery voltage.	Light On

3. Replace the audio steering switch if it is found defective as a result of the measurement.

2. TELEMATICS BUTTON

1. Check the button.
(1) Measure the resistance between connector terminals.



- SOS button

Terminal No.	Inspection conditions	Standard
6 — 1	OFF	Approx. 1.6 kΩ
	ON	Less than 1 Ω

- i-button

Terminal No.	Inspection conditions	Standard
3 — 1	OFF	Approx. 1.6 kΩ
	ON	Less than 1 Ω

(2) Apply battery voltage between the connector terminals to check lighting condition of illumination inside the switch.

Caution:
When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.
Incorrect polarity connection may cause LED damage inside the switch.

Terminal No.	Inspection conditions	Specification
8 (+) — 2 (−)	Apply battery voltage.	Light On

2. Check the indicator.

(1) Apply battery voltage between the connector terminals to check the lighting condition of the indicator.

Caution:
When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.
Incorrect polarity connection may cause LED damage inside the switch.

Terminal No.	Inspection conditions	Specification
4 (+) — 1 (−)	Apply battery voltage.	Illuminating in green
7 (+) — 1 (−)		Illuminating in red
4 (+) — 1 (−) and 8 (+) — 2 (−)	Apply battery voltage simultaneously.	Indicator turns on in dimmed condition at one level.
7 (+) — 1 (−) and 8 (+) — 2 (−)		

3. Replace the telematics button if it is found defective.

NOTE

The microphone is integrated into the light assembly map.
For operation procedures for the microphone, refer to “Spot Map Light” in the “LIGHTING SYSTEM” section.
Ref. to LIGHTING SYSTEM>Spot Map Light.

WIRING DIAGRAM

For the wiring diagram, refer to "Telematics System" in the wiring diagram. Ref. to WIRING SYSTEM>Telematics System>WIRING DIAGRAM.

INSPECTION

1. BASIC INSPECTION

For basic inspection, refer to "Basic Diagnostic Procedure" in "TELEMATICS SYSTEM (DIAGNOSTICS)". Ref. to TELEMATICS SYSTEM (DIAGNOSTICS)>Basic Diagnostic Procedure.

2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to "System Block Diagram" in "TELEMATICS SYSTEM (DIAGNOSTICS)". Ref. to TELEMATICS SYSTEM (DIAGNOSTICS)>General Description>SYSTEM BLOCK DIAGRAM.

3. MODULE I/O SIGNAL

For the specification (electrical component), refer to "Control Module I/O Signal" in "TELEMATICS SYSTEM (DIAGNOSTICS)". Ref. to TELEMATICS SYSTEM (DIAGNOSTICS)>Control Module I/O Signal>SPECIFICATION.

OPERATION

1. REGISTRATION (COMM CHECK)

Caution:
Do not press and hold the i-button for more than two seconds during communication check, or settings will return to factory mode in poor radio wave environment. If the settings has returned to factory mode, perform the communication check again. To check the mode status, see "Subscription Status" in the current data display on Subaru Select Monitor.

1. Replace the data communication module with a new part.
2. Check that the LED of the telematics button illuminates green.
3. Register the immobilizer. For detailed operation procedure, refer to "Type H" described in "REGISTRATION MANUAL FOR IMMOBILIZER".
4. Press and hold the i-button for 2 seconds or more.

Note:
When the subscription is completed, the telematics system will automatically activate.

NOTE

For operation procedures of components in the telematics system, refer to the following sections.

Note:

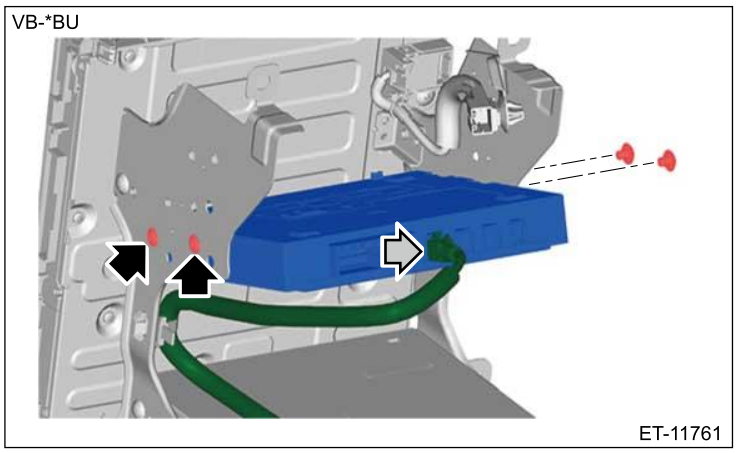
For the CAN communication system, refer to the LAN system. Ref. to LAN SYSTEM (DIAGNOSTICS)>Electrical Component Location.

- Data communication module: Ref. to ENTERTAINMENT & MONITORING>Data Communication Module.
- Antenna: Ref. to ENTERTAINMENT & MONITORING>Antenna.
- Telematics button: Ref. to ENTERTAINMENT & MONITORING>Switches and Harness.
- Front speaker: Ref. to ENTERTAINMENT & MONITORING>Front Speaker.

REMOVAL

1. DATA COMMUNICATION MODULE

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the ornament panel mid passenger and panel assembly center. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>REMOVAL.
3. Remove the center information display assembly. Ref. to ENTERTAINMENT & MONITORING>Cockpit Display>REMOVAL.
4. Remove the data communication module.
   (1) Disconnect the cable CCM connector.
   (2) Remove the screws and remove the data communication module.

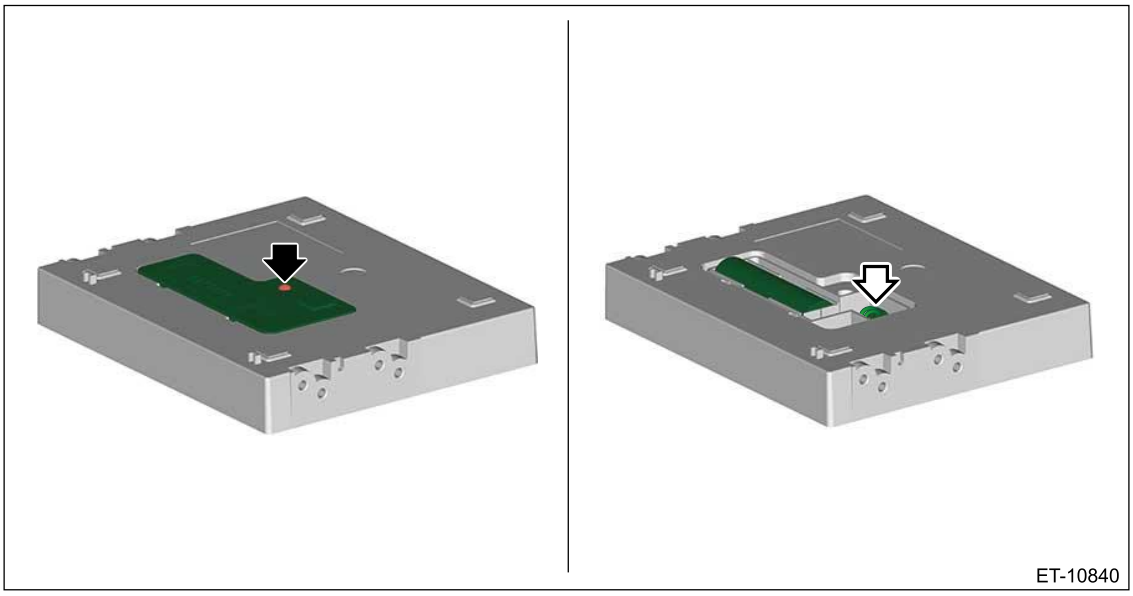


   (3) Remove the backup battery. Ref. to ENTERTAINMENT & MONITORING>Data Communication Module>REMOVAL > BACKUP BATTERY.

Note:
Perform this procedure only when required.

2. BACKUP BATTERY

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the data communication module. Ref. to ENTERTAINMENT & MONITORING>Data Communication Module>REMOVAL > DATA COMMUNICATION MODULE.
3. Remove the backup battery.
   (1) Using TORX® T10, remove the cap screw, and then remove the battery cover.
   (2) Disconnect the connector and remove the backup battery.



ENTERTAINMENT & MONITORING > Data Communication Module

INSTALLATION

1. DATA COMMUNICATION MODULE

1. Install the backup battery. Ref. to ENTERTAINMENT & MONITORING>Data Communication Module>INSTALLATION > BACKUP BATTERY.
2. Install the data communication module and connect the cable CCM connector.

   Caution:
   Never install a data communication module from another vehicle. It may disable recognition of vehicle information and cause communication error.
3. Install the center information display assembly. Ref. to ENTERTAINMENT & MONITORING>Cockpit Display>INSTALLATION.
4. Install the panel assembly center and the ornament panel mid passenger. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>INSTALLATION.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
6. Perform the registration if the data communication module is replaced with a new part. Ref. to ENTERTAINMENT & MONITORING>Telematics System>OPERATION.
7. Check the LED illumination status of the telematics button. Ref. to TELEMATICS SYSTEM (DIAGNOSTICS)>Check List for Interview>CHECK > LED ILLUMINATION STATUS LIST.

2. BACKUP BATTERY

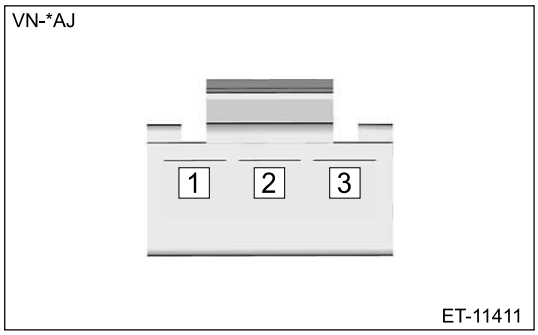
1. Install the backup battery, and connect the connector.
2. Install the battery cover using TORX® T10.

   Tightening torque:
   0.3 N·m (0.03 kgf-m, 0.2 ft-lb)
3. Install the data communication module. Ref. to ENTERTAINMENT & MONITORING>Data Communication Module>INSTALLATION > DATA COMMUNICATION MODULE.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

INSPECTION

1. BACKUP BATTERY

1. Measure the voltage between connector terminals.



Terminal No.	Standard
1 (+) — 3 (−)	2 V or more

2. Replace the backup battery if the inspection result is not within the standard value.

ENTERTAINMENT & MONITORING > Camera

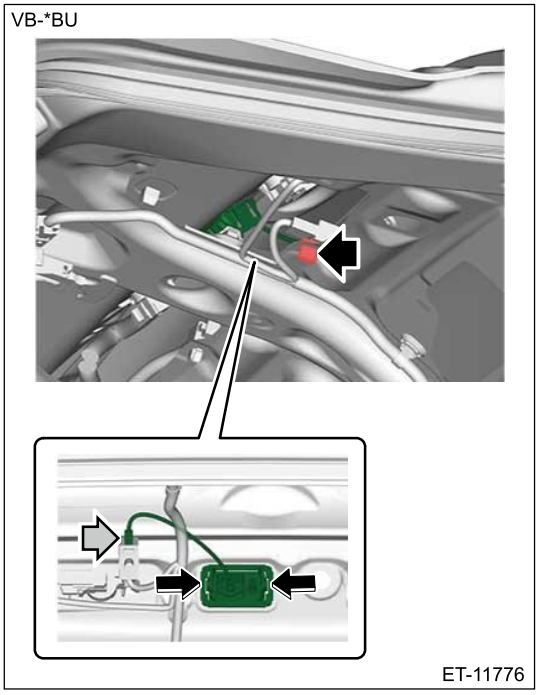
WIRING DIAGRAM

For the wiring diagram, refer to “Rearview Camera System” in the wiring diagram. Ref. to WIRING SYSTEM>Rearview Camera System>WIRING DIAGRAM.

ENTERTAINMENT & MONITORING > Camera

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the trim panel trunk lid. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>REMOVAL.
3. Remove the garnish assembly trunk. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Lid Garnish>REMOVAL.
4. Remove the rearview camera assembly.
   (1) Remove the connector clip, and disconnect the connector.
   (2) Disconnect the claws and then remove the rearview camera assembly.



ENTERTAINMENT & MONITORING > Camera

INSTALLATION

1. Install the rearview camera assembly and connect the connector.
2. Install the garnish assembly trunk. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Lid Garnish>INSTALLATION.
3. Install the trim panel trunk lid. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>INSTALLATION.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
5. Confirm the display and the guide line position, and adjust them as necessary. Ref. to COCKPIT CONTROL (DIAGNOSTICS)>Customize.

WIRING DIAGRAM

1. FRONT ACCESSORY POWER SUPPLY SOCKET

For the wiring diagram, refer to "Front Accessory Power Supply Socket System" in the wiring diagram. Ref. to WIRING SYSTEM>Front Accessory Power Supply Socket System>WIRING DIAGRAM.

2. REAR ACCESSORY POWER SUPPLY SOCKET

For the wiring diagram, refer to "Rear Accessory Power Supply Socket System" in the wiring diagram. Ref. to WIRING SYSTEM>Rear Accessory Power Supply Socket System>WIRING DIAGRAM.

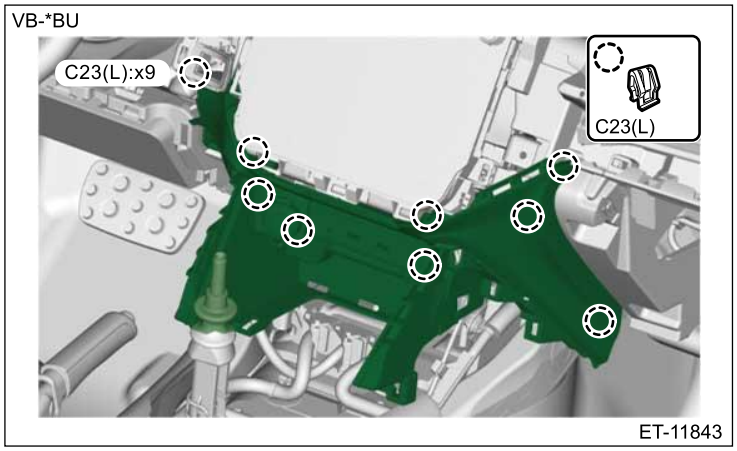
REMOVAL

1. FRONT

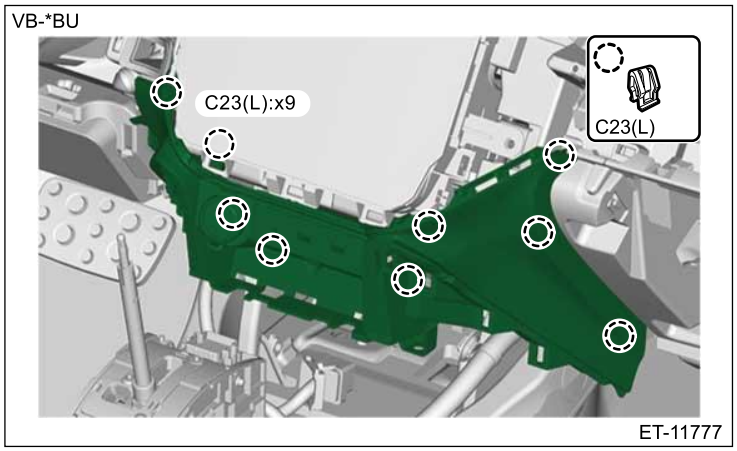
Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the ornament panel mid passenger and panel assembly center. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>REMOVAL.
3. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
4. Remove the panel starter switch. (Model with push button ignition starter) Ref. to SECURITY AND LOCKS>Push Button Ignition Switch>REMOVAL.

   Note:
   For the models without push button ignition starter, remove the cover starter switch.
5. Remove the console box assembly. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>REMOVAL.
6. Remove the cover center side. Ref. to EXTERIOR/INTERIOR TRIM>Center Console>REMOVAL.
7. Remove the tray center UPR.
   (1) Release the clips.
   - MT model

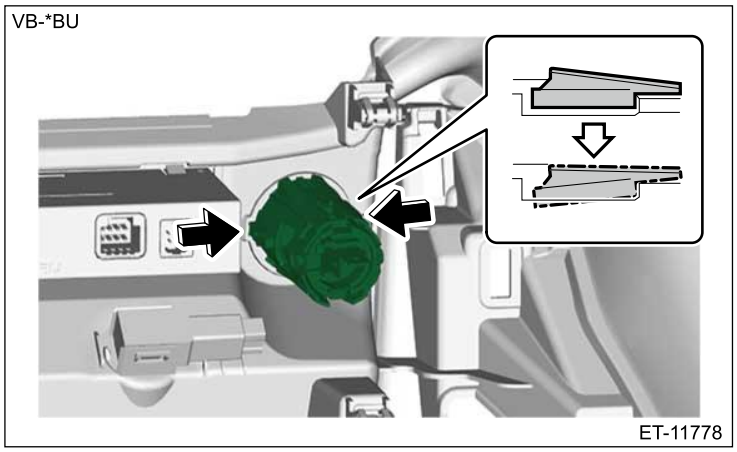


- CVT model



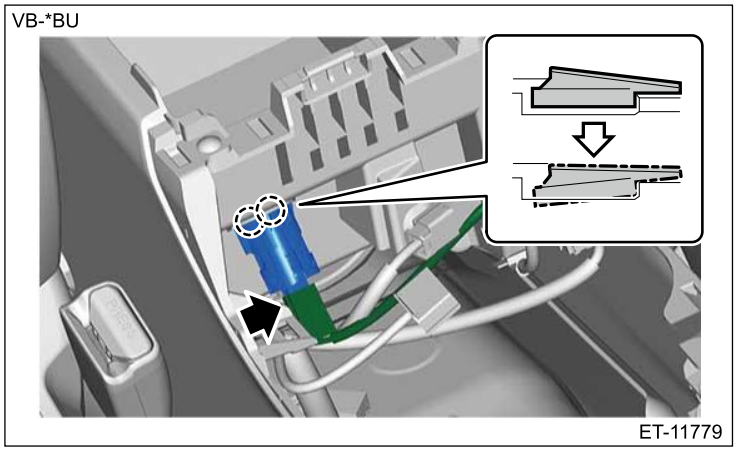
(2) Disconnect each connector and remove the tray center UPR.

8. While releasing the claw, press it in from the rear to remove the socket assembly.



2. REAR

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the cover assembly front. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>REMOVAL.
3. Remove the socket assembly.
   (1) Disconnect the connector.
   (2) While releasing the claw, press it in from the rear to remove the socket assembly.



ENTERTAINMENT & MONITORING > Accessory Power Supply Socket

INSTALLATION

1. FRONT

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Align the claw of the socket assembly with the groove of the tray center UPR, and install the socket assembly.
2. Connect each connector and install the tray center UPR.
3. Install the cover center side. Ref. to EXTERIOR/INTERIOR TRIM>Center Console>INSTALLATION.
4. Install the console box assembly. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>INSTALLATION.
5. Install the panel starter switch. (Model with push button ignition starter) Ref. to SECURITY AND LOCKS>Push Button Ignition Switch>INSTALLATION.

   Note:
   For the models without push button ignition starter, install the cover starter switch.
6. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
7. Install the panel assembly center and the ornament panel mid passenger. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>INSTALLATION.
8. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. REAR

1. Install the socket assembly.
   (1) Align the claw of the socket assembly with the groove of the console box assembly.
   (2) Install the socket assembly and connect the connector.
2. Install the cover assembly front. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

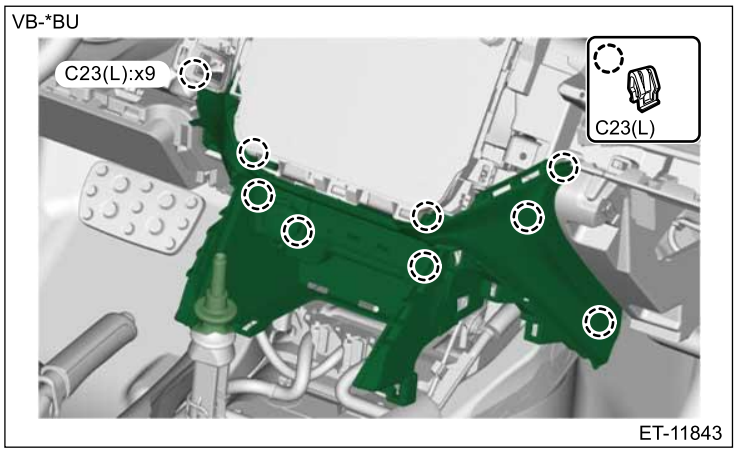
REMOVAL

1. FRONT

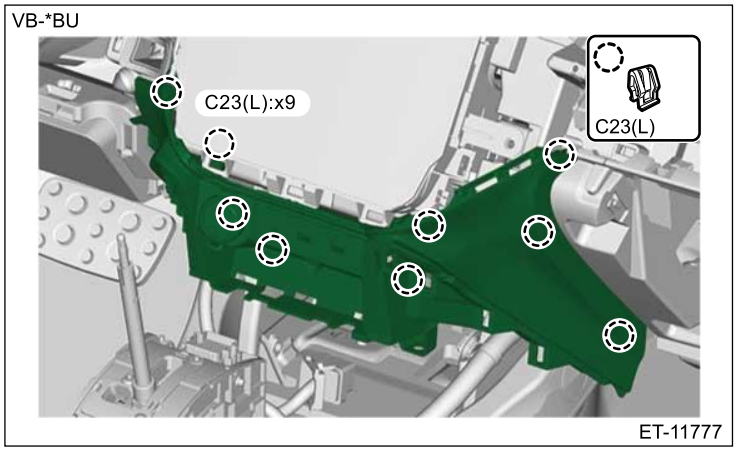
Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the ornament panel mid passenger and panel assembly center. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>REMOVAL.
3. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
4. Remove the panel starter switch. (Model with push button ignition starter) Ref. to SECURITY AND LOCKS>Push Button Ignition Switch>REMOVAL.

   Note:
   For the models without push button ignition starter, remove the cover starter switch.
5. Remove the console box assembly. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>REMOVAL.
6. Remove the cover center side. Ref. to EXTERIOR/INTERIOR TRIM>Center Console>REMOVAL.
7. Remove the tray center UPR.
   (1) Release the clips.
   - MT model

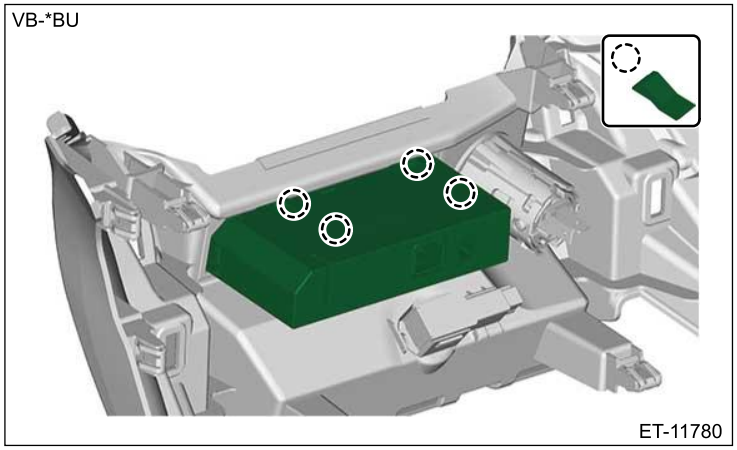


   - CVT model



(2) Disconnect each connector and remove the tray center UPR.

8. While removing the claw, press it in from the rear to remove the AUX unit assembly.



2. REAR

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the console box assembly. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>REMOVAL.
3. Remove the AUX unit assembly power. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>DISASSEMBLY.

ENTERTAINMENT & MONITORING > External Connection Terminal

INSTALLATION

1. FRONT

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the AUX unit assembly.
2. Connect each connector and install the tray center UPR.
3. Install the cover center side. Ref. to EXTERIOR/INTERIOR TRIM>Center Console>INSTALLATION.
4. Install the console box assembly. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>INSTALLATION.

5. Install the panel starter switch. (Model with push button ignition starter) Ref. to SECURITY AND LOCKS>Push Button Ignition Switch>INSTALLATION.

Note:
For the models without push button ignition starter, install the cover starter switch.

6. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
7. Install the panel assembly center and the ornament panel mid passenger. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>INSTALLATION.
8. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. REAR

1. Install the AUX unit assembly power. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>ASSEMBLY.
2. Install the console box assembly. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

INSPECTION

For the diagnostics with phenomenon, refer to “Diagnostics with Phenomenon” in the “COCKPIT CONTROL (DIAGNOSTICS)” section. Ref. to COCKPIT CONTROL (DIAGNOSTICS)>Diagnostics with Phenomenon.

NOTE

For the service diagnostic mode, refer to “Service Diagnostic Mode” in the “COCKPIT CONTROL (DIAGNOSTICS)” section. Ref. to COCKPIT CONTROL (DIAGNOSTICS)>Service Diagnostics Mode.

GLASS/WINDOWS/MIRRORS

GW

1. General Description
2. Relay and Fuse
3. Power Window System
4. Power Window Control Switch
5. Front Door Glass
6. Front Regulator and Motor Assembly
7. Remote Control Mirror System
8. Outer Mirror Assembly
9. Remote Control Mirror Switch
10. Rearview Mirror
11. Rear Door Glass
12. Rear Regulator and Motor Assembly
13. Windshield Glass
14. Rear Window Glass
15. Rear Window Defogger System
16. Wiper Deicer System

GLASS/WINDOWS/MIRRORS > General Description

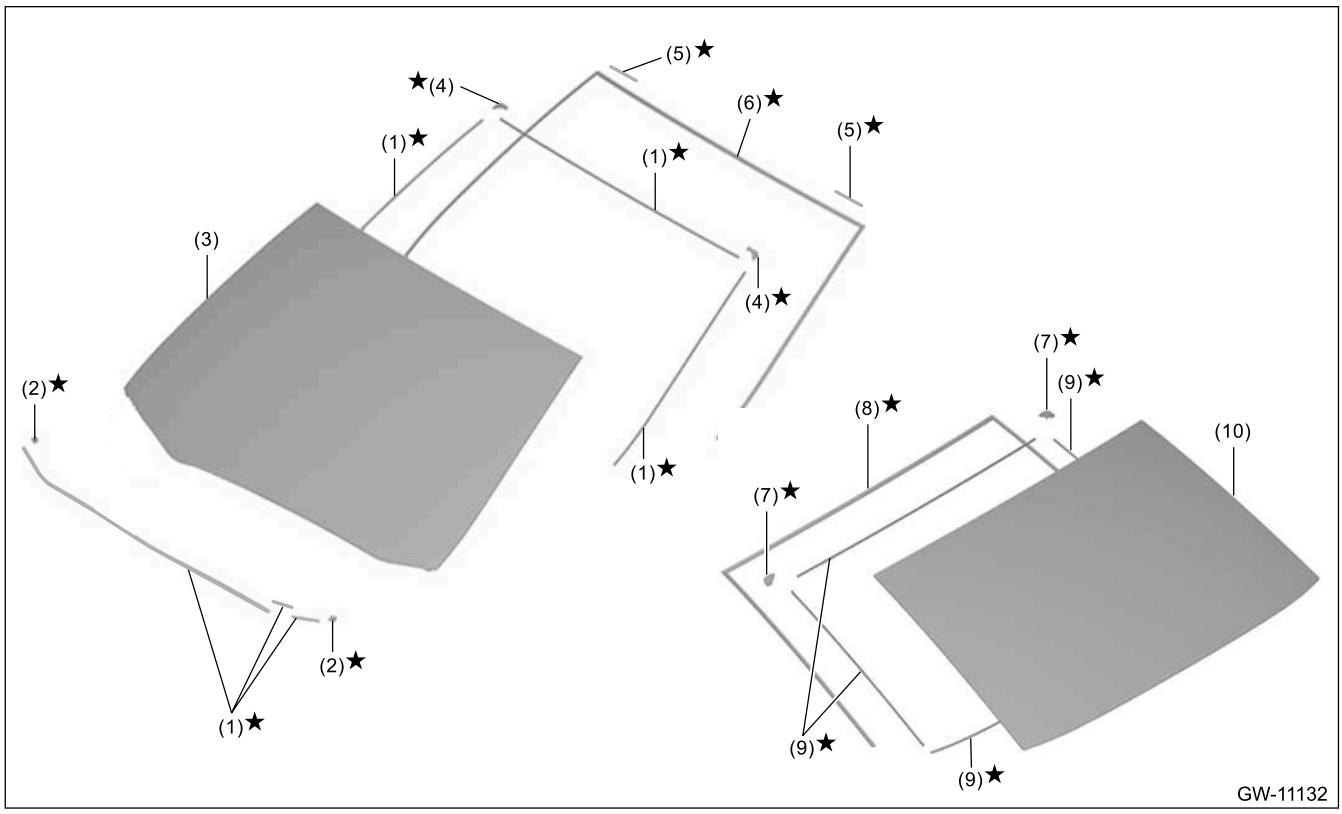
CAUTION

- When performing service operation, refer to “Repair Contents” in “General Description”. Ref. to REPAIR CONTENTS>Repair Contents.
- Refer to “CAUTION” of “General Description” in “AIRBAG SYSTEM” section. Ref. to AIRBAG SYSTEM>General Description>CAUTION.
- When performing work on the sensors or modules, be careful of the following.
  - Before disconnecting electrical connectors, be sure to disconnect the ground terminal from the battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
  - Do not apply any impact. If the parts are accidentally dropped, replace with a new part.
  - Do not expose to high-temperature and humidity.
- When replacing the parts provided with memory functions, record the memory contents before disconnecting the ground terminal from the battery sensor.
- Apply grease onto sliding or revolving surfaces before installation.
- Avoid impact and damage to the glass.

GLASS/WINDOWS/MIRRORS > General Description

COMPONENT

1. FIXED GLASS

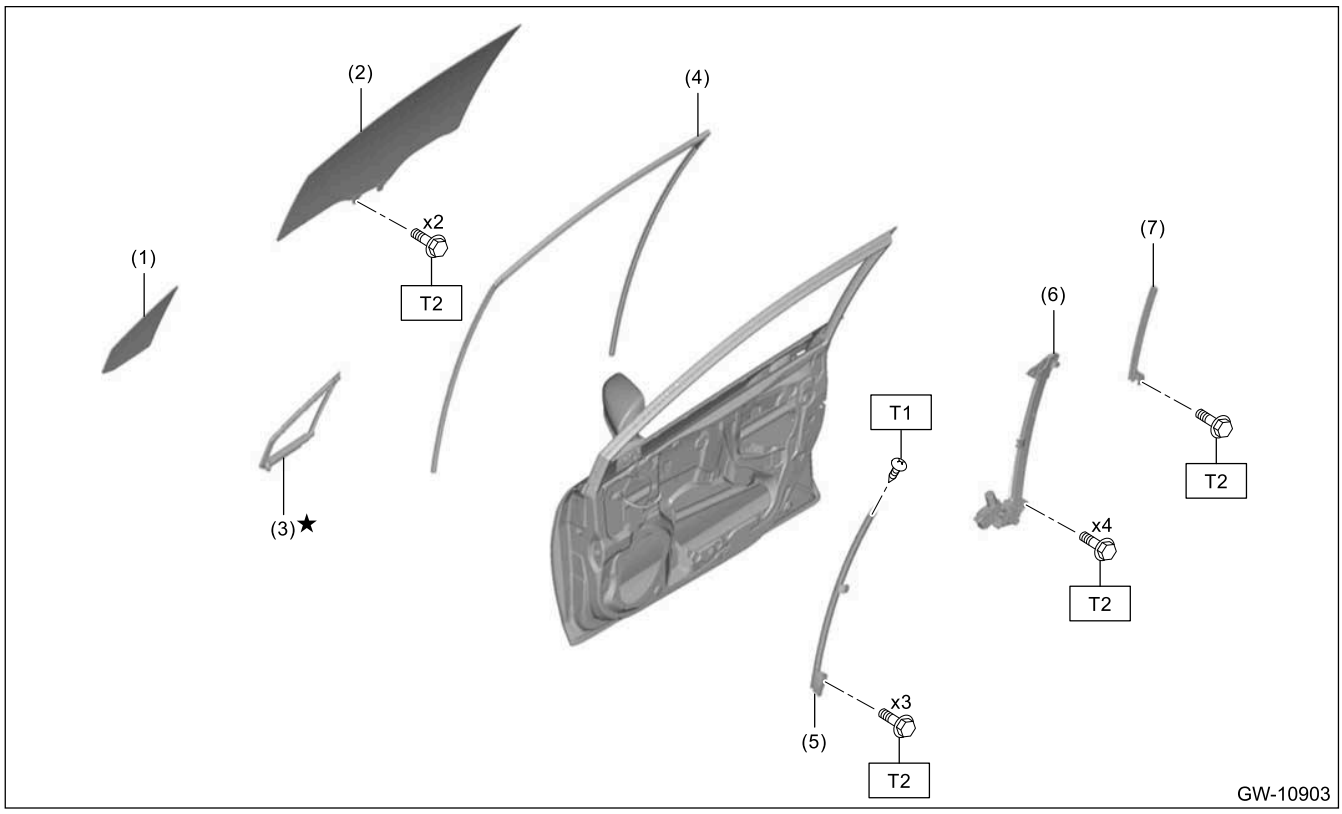


(1) Dam rubber windshield
(2) Seal lower
(3) Glass windshield
(4) Locating pin windshield
(5) Seal upper
(6) Molding windshield
(7) Locating pin rear window
(8) Molding rear window
(9) Dam rubber rear window
(10) Glass rear window

Note:

Inner mirror base cannot be removed from the windshield glass.

2. FRONT DOOR GLASS



(1) Glass front door partition

(2) Glass ASSY front door

(3) Weather strip front door partition

(4) Running channel front door

(5) Sash ASSY partition

(6) Regulator & motor ASSY front

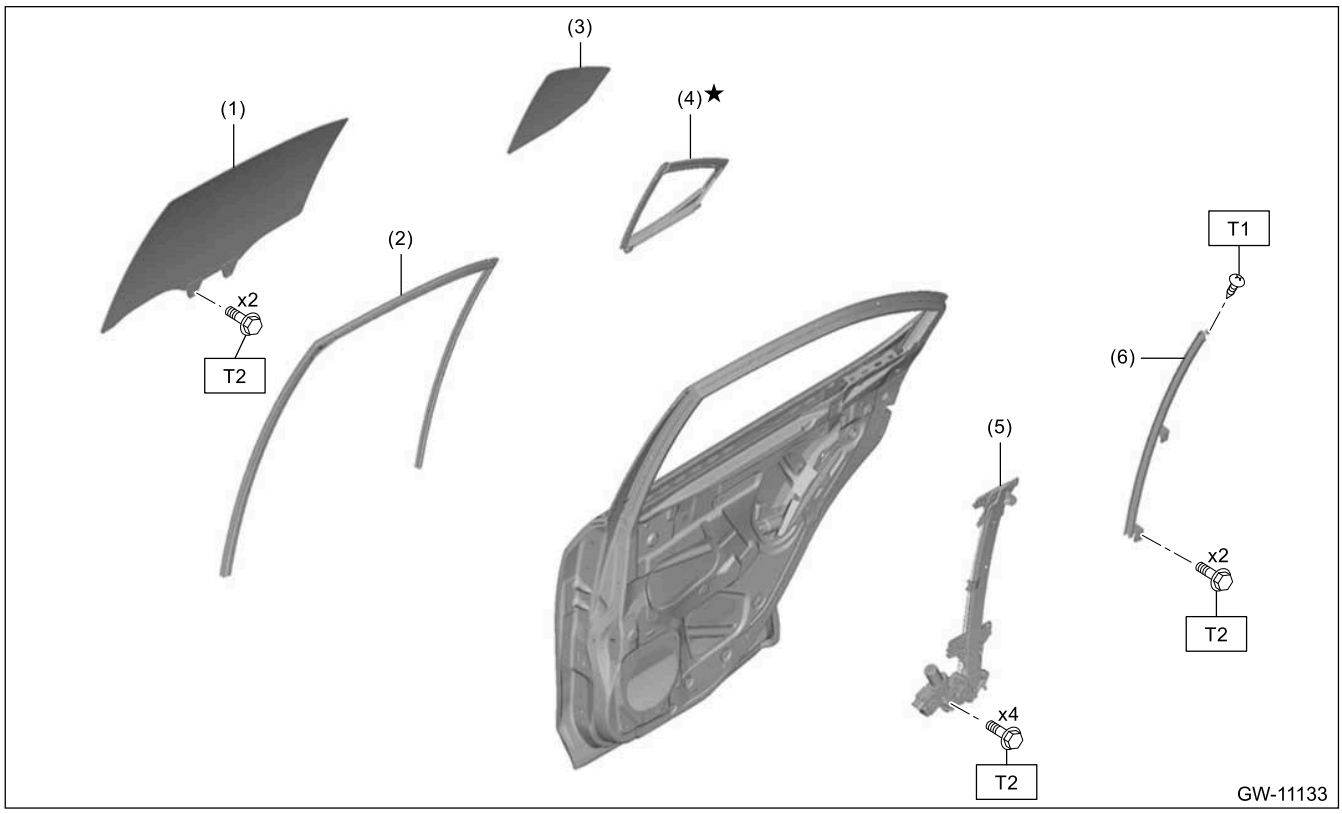
(7) Sash ASSY front door LWR

Tightening torque: N·m (kgf-m, ft-lb)

T1: 2.2 (0.2, 1.6)

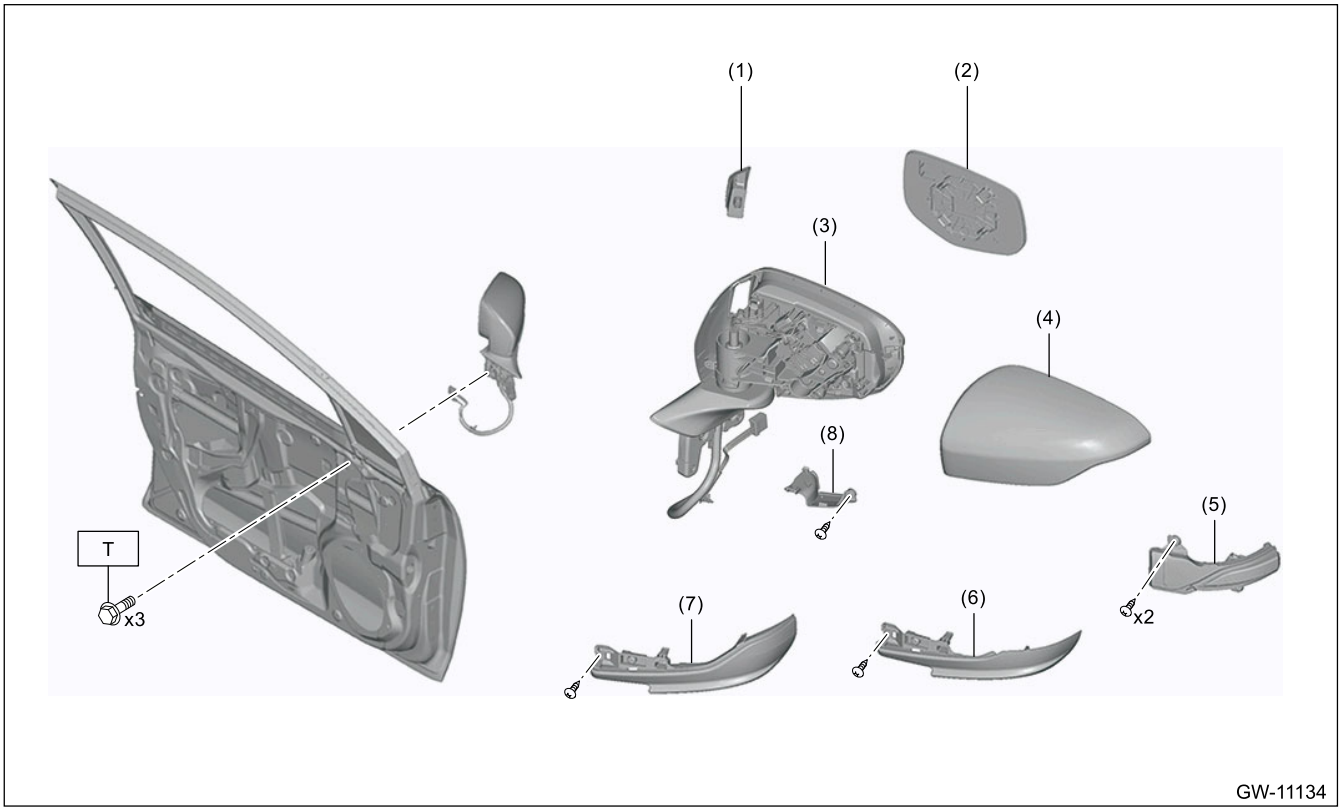
T2: 7.5 (0.8, 5.5)

3. REAR DOOR GLASS



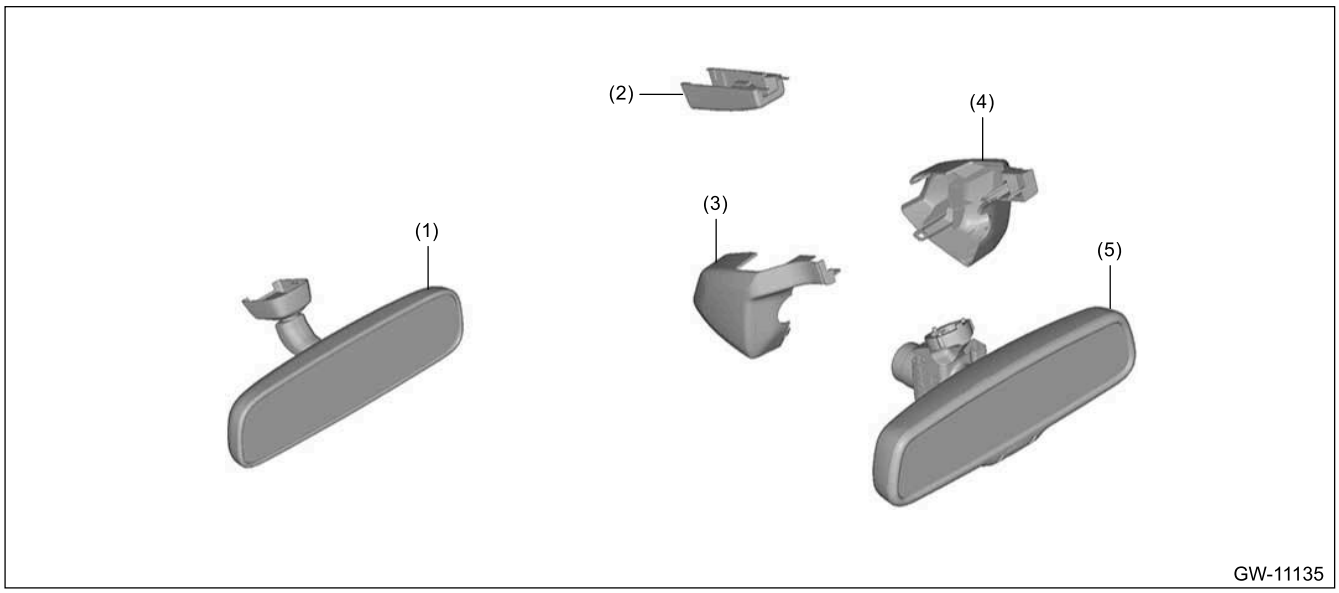
(1)	Glass ASSY rear door	(4)	Weather strip rear door partition	***Tightening torque: N·m (kgf-m, ft-lb)***	
(2)	Running channel rear door	(5)	Regulator & motor ASSY rear	***T1: 2.2 (0.2, 1.6)***	
(3)	Glass rear door partition	(6)	Sash ASSY rear door partition	***T2: 7.5 (0.8, 5.5)***	

4. OUTER MIRROR



(1)	Blind Spot Detection/Rear Cross Traffic Alert system indicator (model with Blind Spot Detection/Rear Cross Traffic Alert system)	(5)	Light ASSY side turn mirror (model with side turn light)	***Tightening torque: N·m (kgf-m, ft-lb)***
(2)	Mirror repair	(6)	Cover cap outer mirror LWR (model with side turn light)	***T: 7.5 (0.8, 5.5)***
(3)	Mirror unit door	(7)	Cover cap outer mirror LWR (model without side turn light)	
(4)	Cover cap outer mirror	(8)	Cover mirror body	

5. REAR VIEW MIRROR



(1) Mirror ASSY inner rearview
(2) Harness cover
(3) Cover mount LH
(4) Cover mount RH
(5) Mirror ASSY inner rearview HBA

GLASS/WINDOWS/MIRRORS > General Description

PREPARATION TOOL

1. SUBARU SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 STSSM4	—	SUBARU SELECT MONITOR 4	Used for setting of each function and troubleshooting for electrical system. **Note:** • **For detailed operation procedures, refer to "Help" of application.** • **Used together with interface for Subaru Select Monitor (such as DST-i and DST-010).**

2. OTHER

	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.
Piano wire	Used for removing the fixed glass.
Cutter knife	Used for removing the fixed glass.
Windshield glass knife	Used for removing the fixed glass.

GLASS/WINDOWS/MIRRORS > Relay and Fuse

LOCATION

For the location, refer to "FUSE AND RELAY" in the wiring diagram. Ref. to WIRING SYSTEM>Fuse And Relay.

Note:
For details of relay and fuse, refer to "DC POWER SUPPLY CIRCUIT". Ref. to WIRING SYSTEM>Power Supply Circuit.

GLASS/WINDOWS/MIRRORS > Relay and Fuse

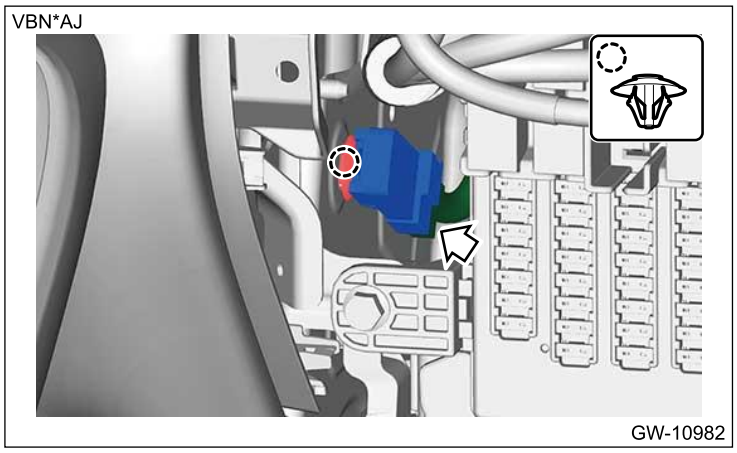
REMOVAL

1. CIRCUIT BREAKER

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
3. Remove the circuit breaker.
   (1) Disconnect the connector.
   (2) Release the clip, and remove the circuit breaker.

Caution:
Be careful not to apply excessive force when pulling the clip, as the clip may become damaged.



GLASS/WINDOWS/MIRRORS > Relay and Fuse

INSTALLATION

1. CIRCUIT BREAKER

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the circuit breaker and connect the connector.
2. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

GLASS/WINDOWS/MIRRORS > Relay and Fuse

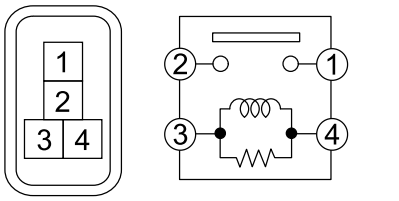
INSPECTION

1. CHECK FUSE

1. Remove the fuse and inspect visually.
2. If the fuse is blown out, replace the fuse.

2. CHECK RELAY

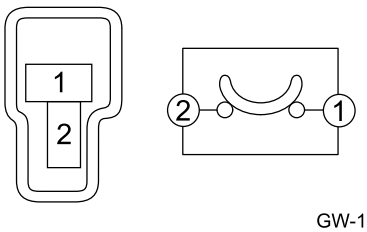
1. Check the resistance between relay terminals.

Terminal No.	Inspection conditions	Standard	Circuit
1 — 2	Always	1 MΩ or more	
1 — 2	Apply battery voltage between terminals 4 and 3.	Less than 1 Ω	

2. Replace the relay if the inspection result is not within the standard value.

3. CHECK CIRCUIT BREAKER

1. Check the continuity between the circuit breaker terminals.

Terminal No.	Inspection conditions	Specification	Circuit
1 — 2	Always	Continuity exists	

2. Replace the circuit breaker if it is found defective.

GLASS/WINDOWS/MIRRORS > Power Window System

WIRING DIAGRAM

For the wiring diagram, refer to "Power Window System" in the wiring diagram. Ref. to WIRING SYSTEM>Power Window System>WIRING DIAGRAM.

GLASS/WINDOWS/MIRRORS > Power Window System

INSPECTION

1. BASIC INSPECTION

For basic inspection, refer to "Basic Diagnostic Procedure" of "POWER WINDOW (DIAGNOSTICS)" section.
Ref. to POWER WINDOW(DIAGNOSTICS) >Basic Diagnostic Procedure.

2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to "System Block Diagram" in "POWER WINDOW (DIAGNOSTICS)" section.
Ref. to POWER WINDOW(DIAGNOSTICS) >General Description>SYSTEM BLOCK DIAGRAM.

3. MODULE I/O SIGNAL

For the specification (electrical component), refer to "Control Module I/O Signal" of "POWER WINDOW (DIAGNOSTICS)" section. Ref. to POWER WINDOW(DIAGNOSTICS) >Control Module I/O Signal.

GLASS/WINDOWS/MIRRORS > Power Window System

OPERATION

1. INITIAL SETTING

This procedure performs settings of the following data.

- Top dead position
- Bottom dead position
- Sliding resistance value

Note:

- **Always perform the initialization with the vehicle parked. (Initialization cannot be operated during driving)**
- **Perform initialization for one seat at a time.**
- **Do not hit or apply impact or vibration to the glass, since the sliding resistance of door glass is being learned during the initialization.**
- **Do not perform the ignition operation during the initialization.**
- **The initialization is not required for the rear seats if the auto function is unavailable.**

Perform the initialization according to the procedures by items below.

Item	Procedure
When the regulator and motor assembly is replaced with a new part	A
When the motor power supply is lost due to removing and installing of the battery terminals and the regulator & motor assembly connector during the power window operation	A
When the power window system was initialized by the Subaru Select Monitor	A

Item	Procedure
When a power window related part such as glass and running channel was replaced	B
When the phenomenon that the door glass does not close fully (incorrect reverse operation) occurred	B
When the phenomenon that the door glass does not open fully (incorrect stop operation) occurred	B

- **PROCEDURE A**
  1. Turn the ignition switch to ON.
  2. Operate the driver's side, passenger's side, rear right or rear left power window switch and hold the manual down operation, or hold the automatic down operation to fully open the relevant window. Continuously from that point, hold the switch for longer than one second.

     Note:
     - **Wherever the glass is at any position, operate the switch in "DOWN" direction.**
     - **For initialization for other than driver's seat, this can be done with the driver's side power window switch, or power window switch of each seat.**
  3. Operate the driver's side, passenger's side, rear right or rear left power window switch and hold the automatic up operation to fully close the relevant window. Continuously from that point, hold the switch for longer than one second.

     Note:
     - **At this time, do not move the vehicle.**
     - **For initialization for other than driver's seat, this can be done with the driver's side power window switch, or power window switch of each seat.**
  4. Perform the automatic down operation with the driver's side, passenger's side, rear right or rear left power window switch to check whether the window fully opens properly. Also, perform the automatic up operation to check whether the window fully closes properly.

     Note:
     - **If the window does not fully open/close properly, repeat steps 1 to 4.**
     - **For initialization for other than driver's seat, this can be done with the driver's side power window switch, or power window switch of each seat.**
- **PROCEDURE B**
  1. Turn the ignition switch to ON.
  2. Perform the system initialization using the Subaru Select Monitor. Ref. to POWER WINDOW(DIAGNOSTICS) >Work Support>OPERATION > SYSTEM INITIALIZATION.
  3. Operate the driver's side, passenger's side, rear right or rear left power window switch and hold the manual down operation, or hold the automatic down operation to fully open the relevant window. Continuously from that point, hold the switch for longer than one second.

     Note:
     - **Wherever the glass is at any position, operate the switch in "DOWN" direction.**
     - **For initialization for other than driver's seat, this can be done with the driver's side power window switch, or power window switch of each seat.**
  4. Operate the driver's side, passenger's side, rear right or rear left power window switch and hold the automatic up operation to fully close the relevant window. Continuously from that point, hold the switch for longer than one second.

Note:
- **At this time, do not move the vehicle.**
- **For initialization for other than driver's seat, this can be done with the driver's side power window switch, or power window switch of each seat.**

5. Perform the automatic down operation with the driver's side, passenger's side, rear right or rear left power window switch to check whether the window fully opens properly. Also, perform the automatic up operation to check whether the window fully closes properly.

Note:
- **If the window does not fully open/close properly, repeat steps 1 to 4.**
- **For initialization for other than driver's seat, this can be done with the driver's side power window switch, or power window switch of each seat.**

GLASS/WINDOWS/MIRRORS > Power Window System

NOTE

For procedure of the components in the power window system, refer to the sections below.

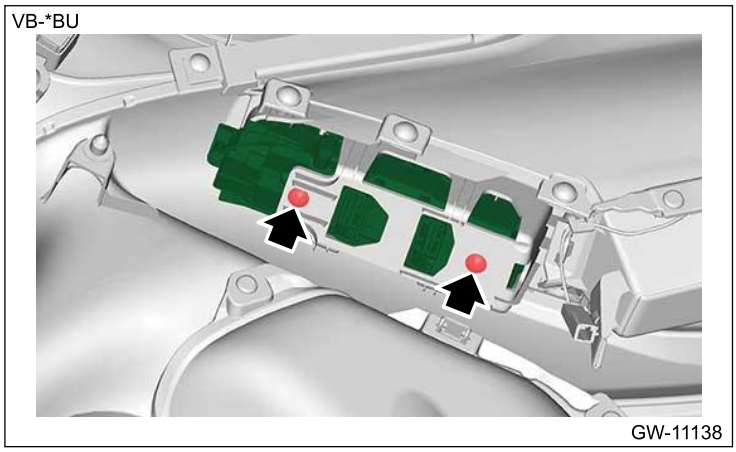
- Power window control switch: Ref. to GLASS/WINDOWS/MIRRORS>Power Window Control Switch.
- Front door glass: Ref. to GLASS/WINDOWS/MIRRORS>Front Door Glass.
- Front regulator and motor assembly: Ref. to GLASS/WINDOWS/MIRRORS>Front Regulator and Motor Assembly.
- Rear door glass: Ref. to GLASS/WINDOWS/MIRRORS>Rear Door Glass.
- Rear regulator and motor assembly: Ref. to GLASS/WINDOWS/MIRRORS>Rear Regulator and Motor Assembly.

REMOVAL

1. MAIN SWITCH

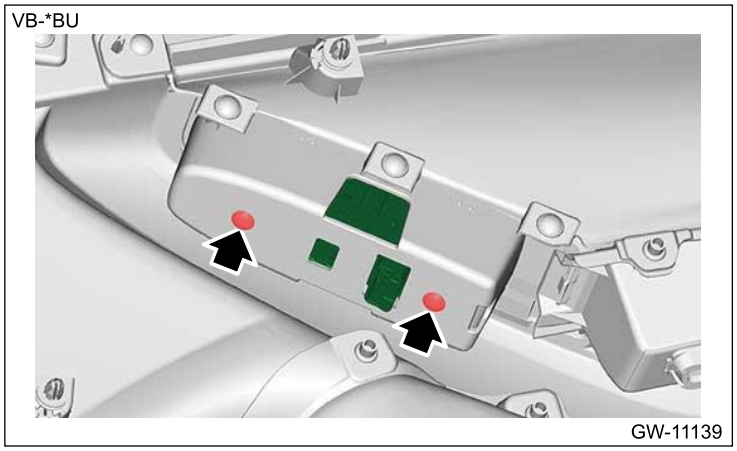
Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > FRONT DOOR.
3. Remove the screws and 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 GLASS/WINDOWS/MIRRORS>Power Window Control Switch>REMOVAL > MAIN SWITCH.
- **SWITCH POWER WINDOW SUB REAR**
  1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
  2. Remove the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > REAR DOOR.
  3. Remove the screws and remove the switch power window sub rear.



GLASS/WINDOWS/MIRRORS > Power Window Control Switch

INSTALLATION

1. MAIN SWITCH

Caution:
- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Use protective paper to avoid damage to the trim panel.**

1. Install the switch power window main to the trim panel front door.
2. Install the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION > FRONT DOOR.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
4. Perform the initial setting of the power window system. Ref. to GLASS/WINDOWS/MIRRORS>Power Window System>OPERATION.

2. SUB-SWITCH

Caution:
Use protective paper to avoid damage to the trim panel.

- **SWITCH POWER WINDOW SUB FRONT**
  For installation of the switch power window sub front on the passenger's seat, refer to the installation procedure of the switch power window main. Ref. to GLASS/WINDOWS/MIRRORS>Power Window Control Switch>INSTALLATION > MAIN SWITCH.
- **SWITCH POWER WINDOW SUB REAR**
  1. Install the switch power window sub rear to the trim panel rear door.
  2. Install the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION > REAR DOOR.
  3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
  4. Perform the initial setting of the power window system. Ref. to GLASS/WINDOWS/MIRRORS>Power Window System>OPERATION.

GLASS/WINDOWS/MIRRORS > Power Window Control Switch

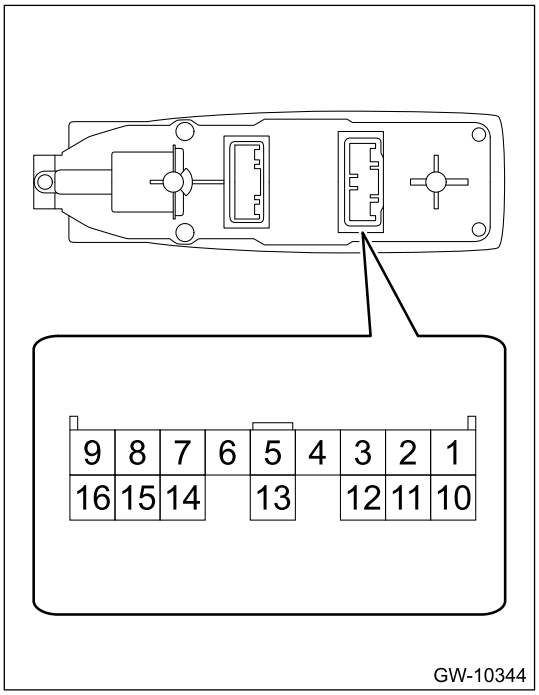
INSPECTION

Caution:
Since the power window switch is controlled by CPU, do not check continuity for switch alone with the circuit tester, except for the specified terminals. Performing continuity check with circuit tester may damage the power window switch circuit.

For power window system inspection, refer to "Basic Diagnostic Procedure" of "POWER WINDOW (DIAGNOSTICS)" section. Ref. to POWER WINDOW(DIAGNOSTICS) >Basic Diagnostic Procedure.

1. MAIN SWITCH

1. Measure the resistance between terminals of the switch power window main.



- Front seats auto specification
  – Driver's seat main

Terminal No.	Inspection conditions	Standard
11 — 12	OFF	Less than 1 Ω
7 — 11 7 — 12		1 MΩ or more
7 — 12	Manual up	Less than 1 Ω
7 — 11 11 — 12		1 MΩ or more
7 — 11	Manual down	Less than 1 Ω
7 — 12 11 — 12		1 MΩ or more

  – Rear seat remote right (window lock OFF)

Terminal No.	Inspection conditions	Standard
1 — 7 2 — 7	OFF	Less than 1 Ω

Terminal No.	Inspection conditions	Standard
7 — 16		1 MΩ or more
1 — 16 2 — 7	Manual up	Less than 1 Ω
1 — 2		1 MΩ or more
2 — 16 1 — 7	Manual down	Less than 1 Ω
1 — 2		1 MΩ or more

– Rear seat remote right (window lock ON)

Terminal No.	Inspection conditions	Standard
1 — 2	OFF	Less than 1 Ω
7 — 16		1 MΩ or more
1 — 16	Manual up	Less than 1 Ω
1 — 2 2 — 7		1 MΩ or more
2 — 16	Manual down	Less than 1 Ω
1 — 2 1 — 7		1 MΩ or more

– Rear seat remote left (window lock OFF)

Terminal No.	Inspection conditions	Standard
9 — 7 8 — 7	OFF	Less than 1 Ω
16 — 7		1 MΩ or more
16 — 9 8 — 7	Manual up	Less than 1 Ω
8 — 9		1 MΩ or more
16 — 8 9 — 7	Manual down	Less than 1 Ω
8 — 9		1 MΩ or more

– Rear seat remote left (window lock ON)

Terminal No.	Inspection conditions	Standard
9 — 8	OFF	Less than 1 Ω
16 — 7		1 MΩ or more
16 — 9	Manual up	Less than 1 Ω
8 — 7 9 — 8		1 MΩ or more
16 — 8	Manual down	Less than 1 Ω
9 — 8 9 — 7		1 MΩ or more

- All seats auto specification
  – Driver’s seat main

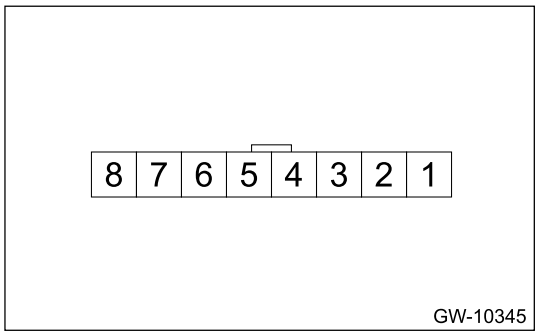
Terminal No.	Inspection conditions	Standard
12 — 11	OFF	Less than 1 Ω
7 — 11 7 — 12		1 MΩ or more
12 — 7	Manual up	Less than 1 Ω
7 — 11 12 — 11		1 MΩ or more
11 — 7	Manual down	Less than 1 Ω
7 — 12 11 — 12		1 MΩ or more

2. If the inspection result is not within the standard, replace the switch power window main.

2. SUB-SWITCH

SWITCH POWER WINDOW SUB FRONT

1. Measure the resistance between terminals of the switch power window sub front.



Terminal No.	Inspection conditions	Standard
6 — 5	OFF	Less than 1 Ω
2 — 1 2 — 5 2 — 6		1 MΩ or more
2 — 6	Manual up	Less than 1 Ω
5 — 6 2 — 5 1 — 2		1 MΩ or more
2 — 6 1 — 2	Auto up	Less than 1 Ω
5 — 6 2 — 5		1 MΩ or more
2 — 5	Manual down	Less than 1 Ω
5 — 6 2 — 6 1 — 2		1 MΩ or more
2 — 5 1 — 2	Auto down	Less than 1 Ω
5 — 6		1 MΩ or more

Terminal No.	Inspection conditions	Standard
2 — 6		

2. Apply battery voltage between the switch power window sub front terminals to check lighting condition of illumination inside the switch.

Caution:
When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.
Incorrect polarity connection may cause LED damage inside the switch.

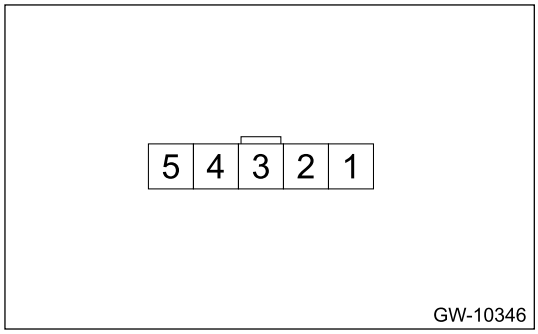
Terminal No.	Inspection conditions	Standard
7 (+) — 2 (−)	Apply battery voltage.	Light ON

3. Replace the switch power window sub front if it is found defective from the inspection result.

SWITCH POWER WINDOW SUB REAR

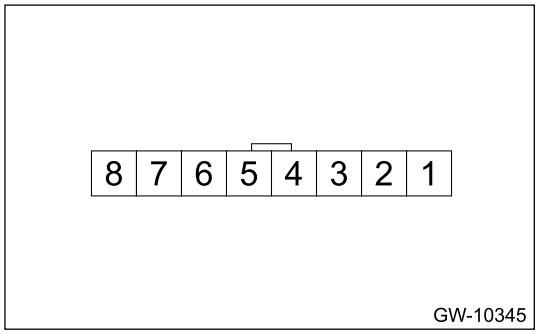
1. Measure the resistance between terminals of the switch power window sub rear.

- Front seats auto specification



Terminal No.	Inspection conditions	Standard
1 — 4 5 — 2	OFF	Less than 1 Ω
2 — 3 3 — 4 1 — 3 3 — 5		1 MΩ or more
3 — 4 5 — 2	Manual up	Less than 1 Ω
1 — 4		1 MΩ or more
1 — 4 3 — 2	Manual down	Less than 1 Ω
5 — 2		1 MΩ or more

- All seats auto specification



Terminal No.	Inspection conditions	Standard
6 — 5	OFF	Less than 1 Ω
2 — 1 2 — 5 2 — 6		1 MΩ or more
2 — 6	Manual up	Less than 1 Ω
5 — 6 2 — 5 1 — 2		1 MΩ or more
2 — 6 1 — 2	Auto up	Less than 1 Ω
5 — 6 2 — 5		1 MΩ or more
2 — 5	Manual down	Less than 1 Ω
5 — 6 2 — 6 1 — 2		1 MΩ or more
2 — 5 1 — 2	Auto down	Less than 1 Ω
5 — 6 2 — 6		1 MΩ or more

2. Apply battery voltage between the switch power window sub rear terminals to check lighting condition of illumination inside the switch. (All seats auto specification)

Caution:

When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.

Incorrect polarity connection may cause LED damage inside the switch.

Terminal No.	Inspection conditions	Standard
7 (+) — 2 (−)	Apply battery voltage.	Light ON

3. Replace the switch power window sub rear if it is found defective from the inspection result.

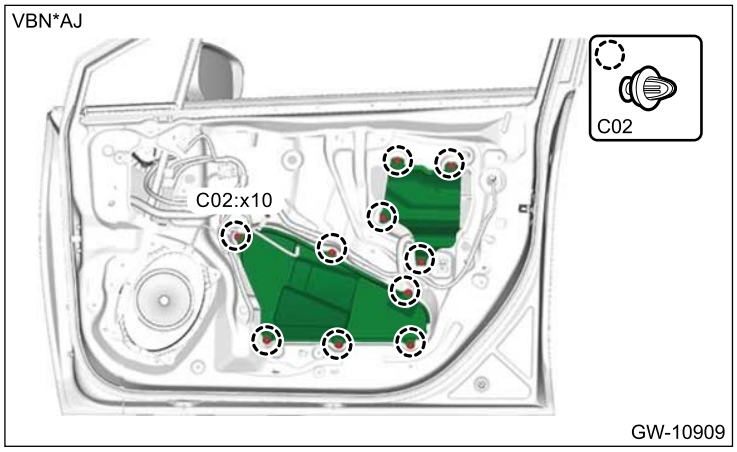
REMOVAL

1. FRONT DOOR GLASS

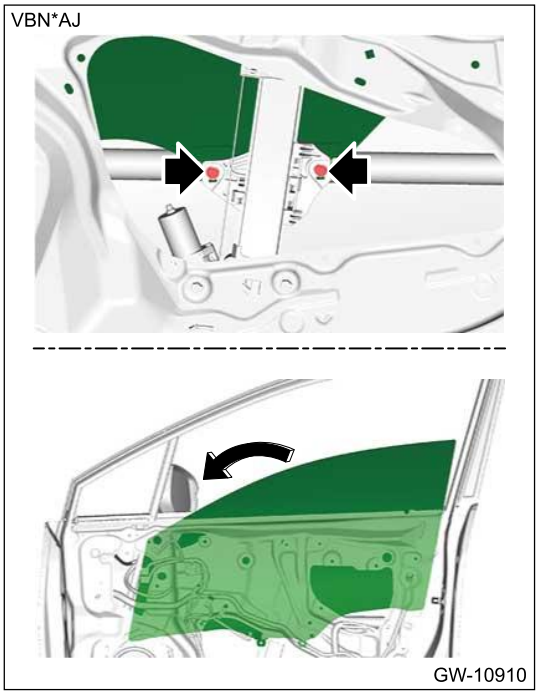
Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Operate the switch power window to move the glass assembly front door to the lowest position.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > FRONT DOOR.
4. Remove the sealing cover door front. Ref. to EXTERIOR BODY PANELS>Sealing Cover>REMOVAL > FRONT SEALING COVER.
5. Release the clips, and remove the plate door and the pad front door inner.

   Caution:
   If it is removed with an excessive force, the door panel assembly may be deformed. Also, if the clip is damaged, replace it with a new clip.



6. Remove the glass assembly front door.
   (1) Remove the mounting bolts from the glass assembly front door.
   (2) While tilting the glass, remove the glass assembly front door.



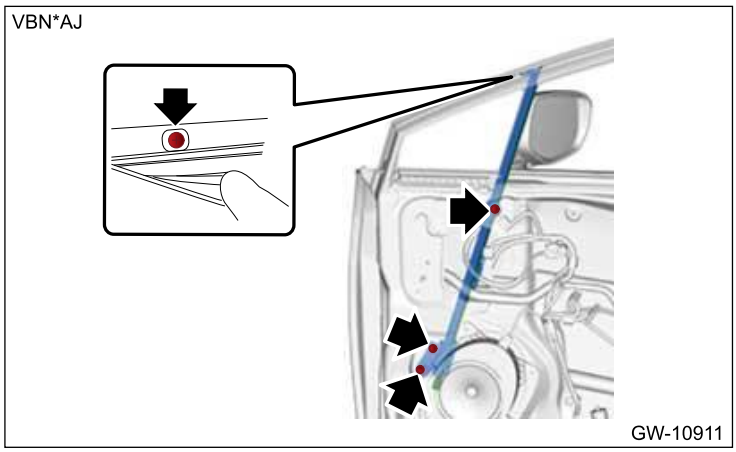
2. FRONT DOOR PARTITION GLASS

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

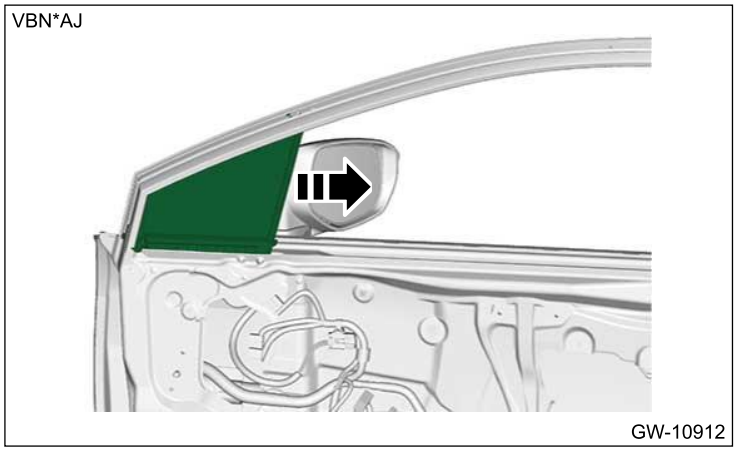
1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the glass assembly front door. Ref. to GLASS/WINDOWS/MIRRORS>Front Door Glass>REMOVAL > FRONT DOOR GLASS.
3. Remove the glass front door partition.

Caution:
Do not damage the sash or the sash molding while removing.

(1) Remove the bolts and screws, and then remove the running channel front door and the sash assembly partition.



(2) Remove the glass front door partition.



GLASS/WINDOWS/MIRRORS > Front Door Glass

INSTALLATION

1. FRONT DOOR GLASS

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the glass assembly front door.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
2. Install the plate door and the pad front door inner.
3. Install the sealing cover door front. Ref. to EXTERIOR BODY PANELS>Sealing Cover>INSTALLATION > FRONT SEALING COVER.
4. Install the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION > FRONT DOOR.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
6. Perform the initial setting of the power window system. Ref. to GLASS/WINDOWS/MIRRORS>Power Window System>OPERATION.

2. FRONT DOOR PARTITION GLASS

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the glass front door partition.
2. Install the running channel front door and the sash assembly partition.

   Note:
   Check that the running channel is securely fixed to the door panel assembly and to the sash assembly.

   Tightening torque:
   Refer to "COMPONENT" of "General Description" for the tightening torque. Ref. to GLASS/WINDOWS/MIRRORS>General Description>COMPONENT > FRONT DOOR GLASS.

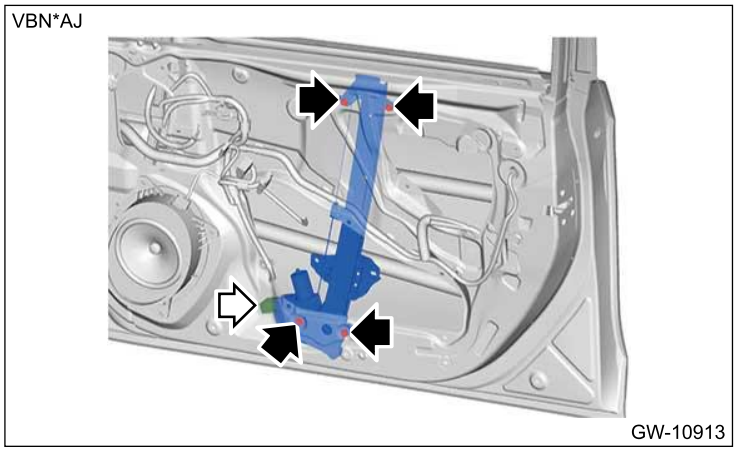
3. Install the glass assembly front door. Ref. to GLASS/WINDOWS/MIRRORS>Front Door Glass>INSTALLATION > FRONT DOOR GLASS.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
5. Perform the initial setting of the power window system. Ref. to GLASS/WINDOWS/MIRRORS>Power Window System>OPERATION.

GLASS/WINDOWS/MIRRORS > Front Regulator and Motor Assembly

REMOVAL

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Operate the switch power window to move the glass assembly front door to the lowest position.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > FRONT DOOR.
4. Remove the sealing cover door front. Ref. to EXTERIOR BODY PANELS>Sealing Cover>REMOVAL > FRONT SEALING COVER.
5. Remove the glass assembly front door. Ref. to GLASS/WINDOWS/MIRRORS>Front Door Glass>REMOVAL > FRONT DOOR GLASS.
6. Remove the regulator & motor assembly front.
   (1) Disconnect the connector.
   (2) Remove the bolts, and then remove the regulator & motor assembly front.



GLASS/WINDOWS/MIRRORS > Front Regulator and Motor Assembly

INSTALLATION

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the regulator & motor assembly front, and connect the connector.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
2. Install the glass assembly front door. Ref. to GLASS/WINDOWS/MIRRORS>Front Door Glass>INSTALLATION > FRONT DOOR GLASS.
3. Install the sealing cover door front. Ref. to EXTERIOR BODY PANELS>Sealing Cover>INSTALLATION > FRONT SEALING COVER.

4. Install the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION > FRONT DOOR.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
6. Perform the initial setting of the power window system. Ref. to GLASS/WINDOWS/MIRRORS>Power Window System>OPERATION.

GLASS/WINDOWS/MIRRORS > Front Regulator and Motor Assembly

INSPECTION

For inspection of regulator & motor assembly front, refer to “Active Test” of “POWER WINDOW (DIAGNOSTICS)” section. Ref. to POWER WINDOW(DIAGNOSTICS) >Active Test.

WIRING DIAGRAM

For the wiring diagram, refer to "Remote Control Mirror System" in the wiring diagram. Ref. to WIRING SYSTEM>Remote Control Mirror System.

INSPECTION

1. TROUBLE SYMPTOM

Note:
The mirror heater operates with the rear window defogger at the same time. Refer to "INSPECTION" of "Rear Window Defogger System" for inspection. Ref. to GLASS/WINDOWS/MIRRORS>Rear Window Defogger System>INSPECTION.

Symptoms	Inspection order
All functions do 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

For procedure of components in the remote control mirror system, refer to the sections below.

- Outer mirror assembly: Ref. to GLASS/WINDOWS/MIRRORS>Outer Mirror Assembly.
- Remote control mirror switch: Ref. to GLASS/WINDOWS/MIRRORS>Remote Control Mirror Switch.

REMOVAL

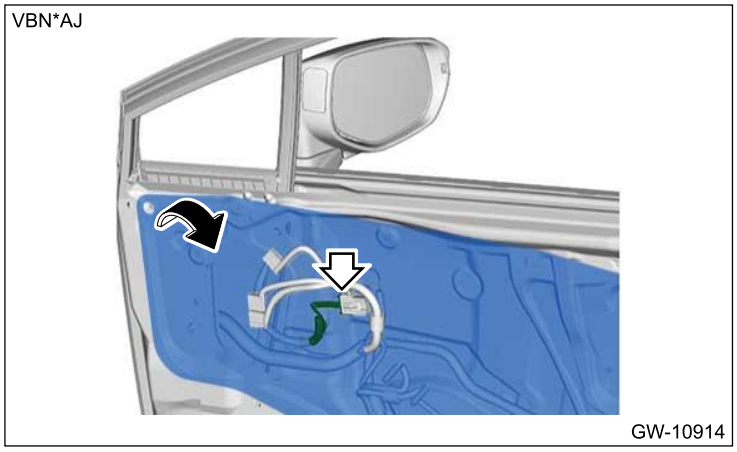
Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

Note:
Refer to "DISASSEMBLY" for removal procedures of outer mirror cover and mirror face. Ref. to GLASS/WINDOWS/MIRRORS>Outer Mirror Assembly>DISASSEMBLY.

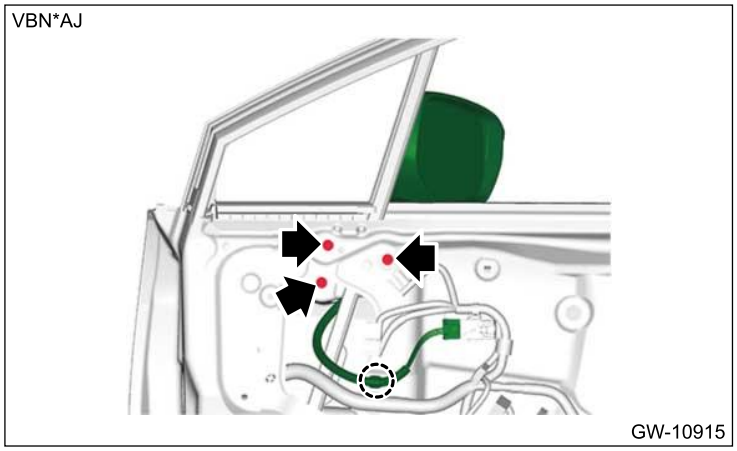
1. Operate the switch power window to move the glass assembly front door to the lowest position.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > FRONT DOOR.
4. Turn over the sealing cover door front.

Caution:
- **Carefully remove the butyl tape. Excessive force will easily break the front sealing cover.**
- **If the front sealing cover gets broken, replace it with a new part.**
- **Be careful not to allow the butyl tape to contact any trims and seats because the butyl tape, which has a strong adhesive force, is difficult to remove once it adhered.**

(1) Disconnect the outer mirror assembly connector.
(2) Carefully remove and turn over the sealing cover door front within the area where the operation can be performed.



5. Remove the outer mirror assembly.
(1) Remove the harness clip.
(2) Remove the bolts to remove outer mirror assembly.



GLASS/WINDOWS/MIRRORS > Outer Mirror Assembly

INSTALLATION

Caution:
- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Be careful not to catch the harness in between the parts.**

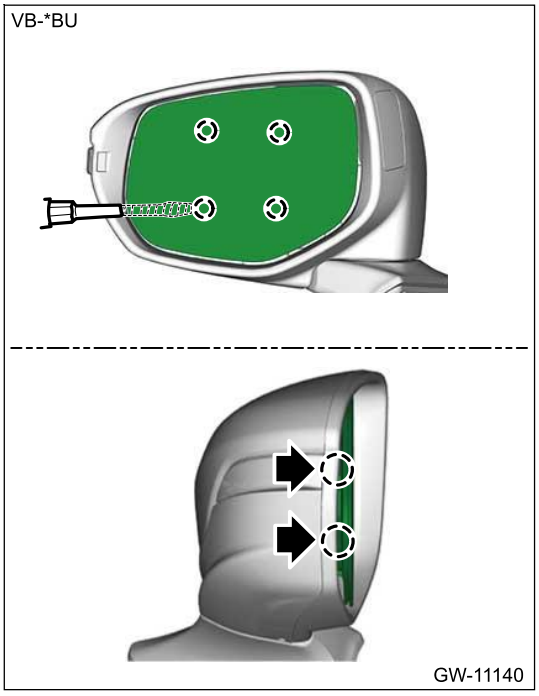
1. Install the outer mirror assembly, and connect the connector.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
2. Install the sealing cover door front. Ref. to EXTERIOR BODY PANELS>Sealing Cover>INSTALLATION > FRONT SEALING COVER.
3. Install the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION > FRONT DOOR.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

GLASS/WINDOWS/MIRRORS > Outer Mirror Assembly

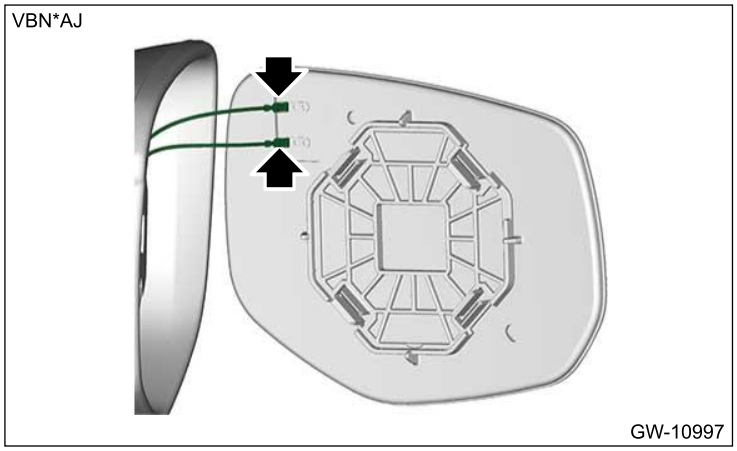
DISASSEMBLY

1. Perform the following procedures to remove the cover mirror body.
   - Store the outer mirror assembly.
   - Lower the glass assembly front door to the lowest position.
2. Operate the remote control mirror switch to face the mirror repair inside.
3. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
4. Remove the mirror repair.
   (1) Insert a flat tip screwdriver or similar tool wrapped with protection tape into the tool insertion opening shown in the figure, release the engagement and take the mirror repair outward to remove.

   Caution:
   When removing the repair mirror, be careful not to damage the back surface of repair mirror with a flat tip screwdriver.



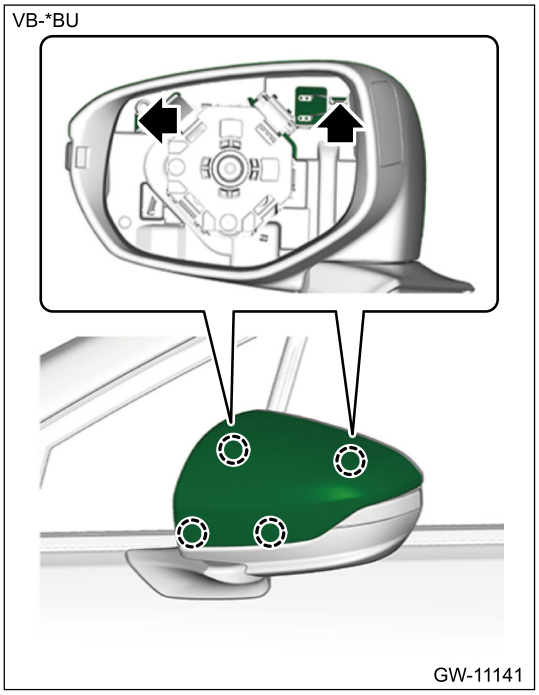
(2) Disconnect the connector. (Model with mirror heater)



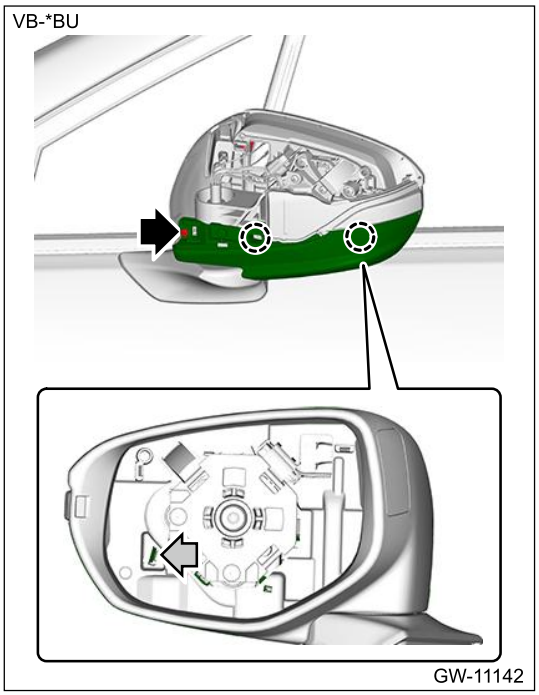
5. Release the claws, and then remove the cover cap outer mirror.

Caution:

Be careful not to apply excessive force when removing the outer mirror cover, as the lower hooks may become damaged.



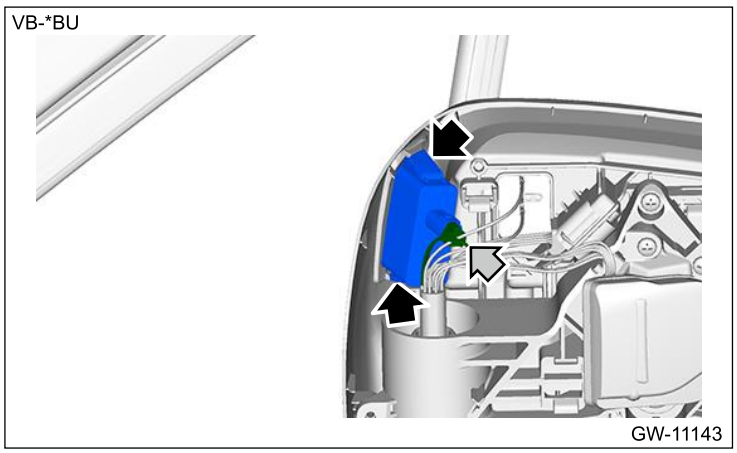
6. Remove the screws and release the claws, and then remove the cover cap outer mirror LWR.



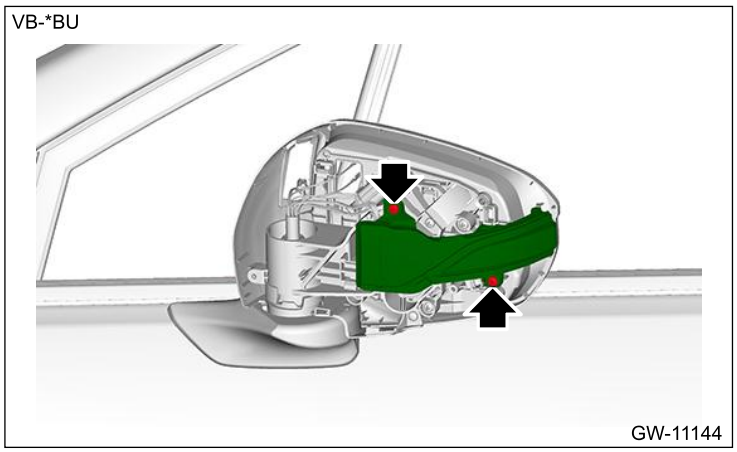
7. Remove the Blind Spot Detection/Rear Cross Traffic Alert system indicator. (Model with Blind Spot Detection/Rear Cross Traffic Alert system)

(1) Disconnect the connector.

(2) Release the claws and then remove the Blind Spot Detection/Rear Cross Traffic Alert system indicator.

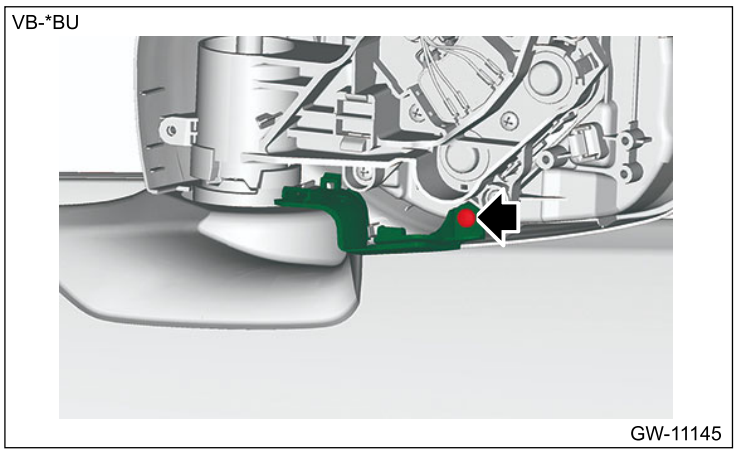


8. Remove the light assembly side turn mirror. (Model with side turn signal light)
(1) Release the screws and claws.



(2) Disconnect the connector and remove the light assembly side turn mirror.

9. Remove the screw and detach the cover mirror body.



GLASS/WINDOWS/MIRRORS > Outer Mirror Assembly

ASSEMBLY

Caution:
Be careful not to catch the harness in between the parts.

1. Install the cover mirror body.
2. Connect the connector, and install the light assembly side turn mirror. (Model with side turn signal light)
3. Install the Blind Spot Detection/Rear Cross Traffic Alert system indicator and connect the connector. (Model with Blind Spot Detection/Rear Cross Traffic Alert system)
4. Install the cover cap outer mirror LWR.
5. Install the cover cap outer mirror.
6. Install the mirror repair.

Note:
Make sure that the connector and clips are inserted securely.

(1) Connect the connector. (Model with mirror heater)
(2) Install the mirror repair.

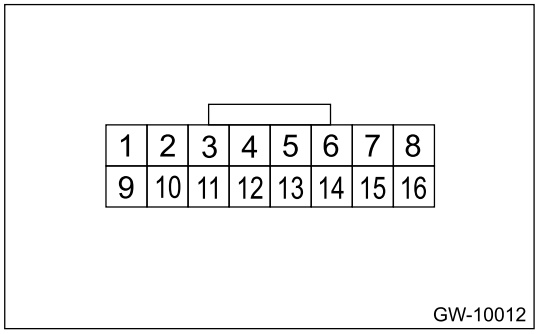
7. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
8. For models with Blind Spot Detection/Rear Cross Traffic Alert system, perform operation check of Blind Spot Detection/Rear Cross Traffic Alert system. Ref. to Blind Spot Detection/Rear Cross Traffic Alert (DIAGNOSTICS)>Basic Diagnostic Procedure.

GLASS/WINDOWS/MIRRORS > Outer Mirror Assembly

INSPECTION

1. CHECK MOTOR OPERATION

1. Apply battery voltage between the outer mirror connector terminals and check the mirror operation.



Terminal No.	Inspection conditions	Operating position
—	—	OFF
13 (+) — 12 (−)	Apply battery voltage between terminals.	UP
12 (+) — 13 (−)	Apply battery voltage between terminals.	DOWN
11 (+) — 13 (−)	Apply battery voltage between terminals.	LEFT
13 (+) — 11 (−)	Apply battery voltage between terminals.	RIGHT

2. CHECK OPERATION OF Blind Spot Detection/Rear Cross Traffic Alert INDICATOR

1. Check the Blind Spot Detection/Rear Cross Traffic Alert system. Ref. to Blind Spot Detection/Rear Cross Traffic Alert (DIAGNOSTICS)>Basic Diagnostic Procedure.
2. Check the outer mirror assembly.
   (1) Check that the Blind Spot Detection/Rear Cross Traffic Alert system indicator of the outer mirror assembly illuminates normally when the BSD/RCTA is turned ON while it is installed to the vehicle.
   (2) If it does not illuminate normally, replace the Blind Spot Detection/Rear Cross Traffic Alert system indicator.
   (3) Check that it illuminates normally again. If it does not illuminate normally, replace the outer mirror assembly.

GLASS/WINDOWS/MIRRORS > Remote Control Mirror Switch

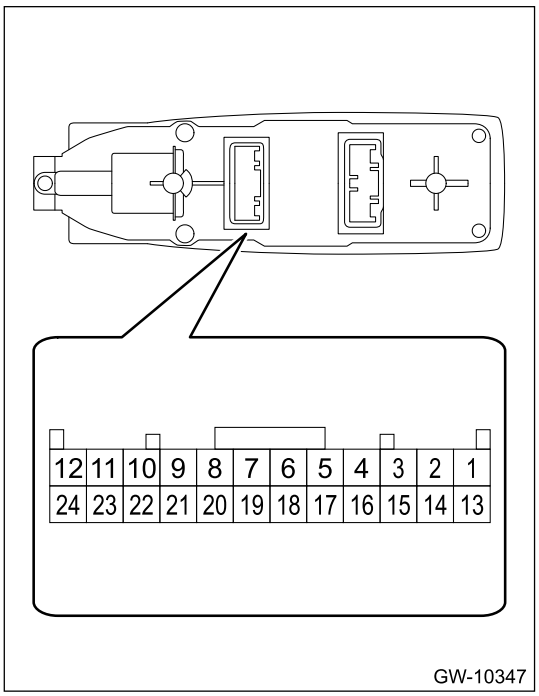
NOTE

The remote control mirror switch is integrated into the power window control switch.
For the operation procedures for the remote control mirror switch, refer to “Power Window Control Switch”.
Ref. to GLASS/WINDOWS/MIRRORS>Power Window Control Switch>REMOVAL > MAIN SWITCH.

GLASS/WINDOWS/MIRRORS > Remote Control Mirror Switch

INSPECTION

1. Check the resistance between switch door mirror terminals.



- Changeover switch RH

Terminal No.	Inspection conditions	Standard
12 — 1 12 — 18	OFF	1 MΩ or more
12 — 18 17 — 1	UP	Less than 1 Ω
12 — 17 18 — 1	DOWN	Less than 1 Ω
12 — 16 18 — 1	LEFT	Less than 1 Ω
12 — 18 16 — 1	RIGHT	Less than 1 Ω

- Changeover switch LH

Terminal No.	Inspection conditions	Standard
12 — 1 12 — 21	OFF	1 MΩ or more

Terminal No.	Inspection conditions	Standard
12 — 20 21 — 1	DOWN	Less than 1 Ω
12 — 21 20 — 1	UP	Less than 1 Ω
12 — 19 21 — 1	LEFT	Less than 1 Ω
12 — 21 19 — 1	RIGHT	Less than 1 Ω

2. Apply battery voltage between the switch door mirror terminals to check lighting condition of illumination inside the switch.

Caution:

When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.

Incorrect polarity connection may cause LED damage inside the switch.

Terminal No.	Inspection conditions	Standard
24 (+) — 13 (−)	Apply battery voltage.	Light ON

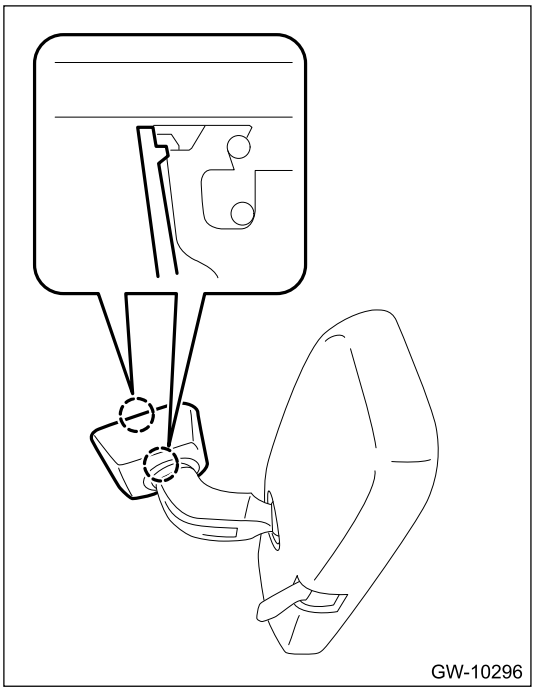
3. Replace the switch power window main if it is found defective from the inspection result.

REMOVAL

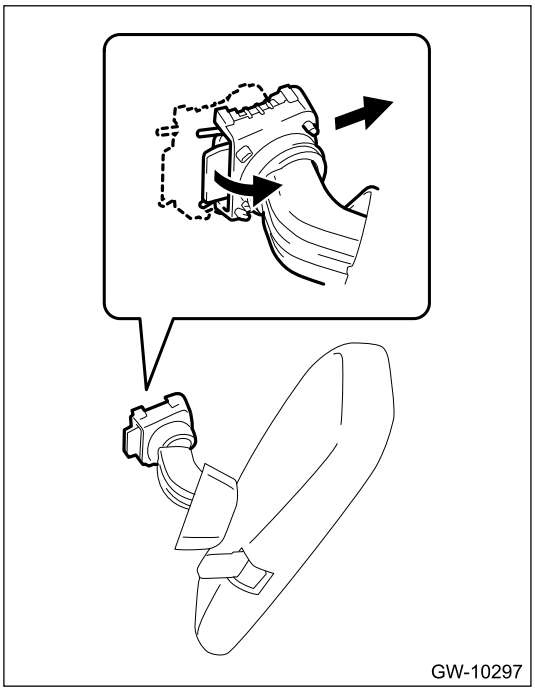
1. ANTI-GLARE MIRROR

Caution:
Be careful not to damage the mirror surface and the glass windshield.

1. Remove the mirror assembly inner rearview.
(1) Release the claws and remove the mount section cover.



(2) Pull the lock lever in the arrow direction, and slide the mirror assembly inner rearview to remove.

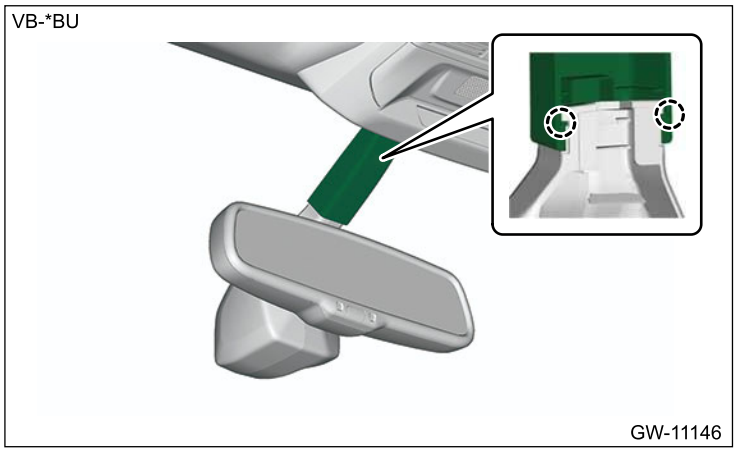


2. Replace the glass windshield if the base inner mirror is damaged.

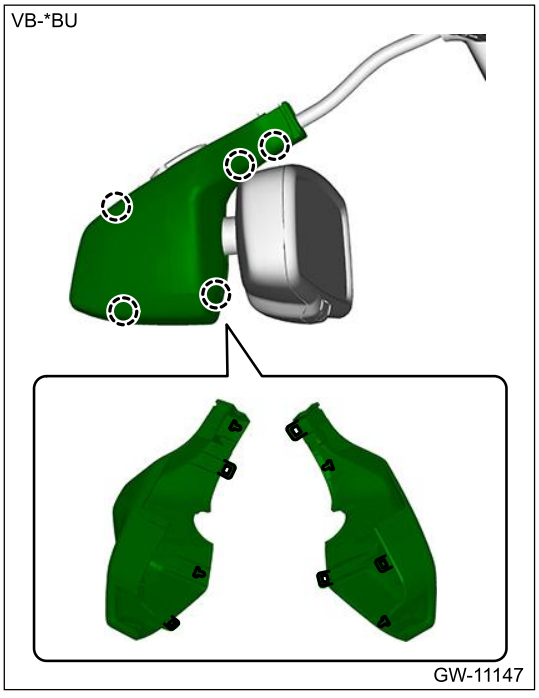
2. AUTOMATIC ANTI-GLARE MIRROR

Caution:
Be careful not to damage the mirror surface and the glass windshield.

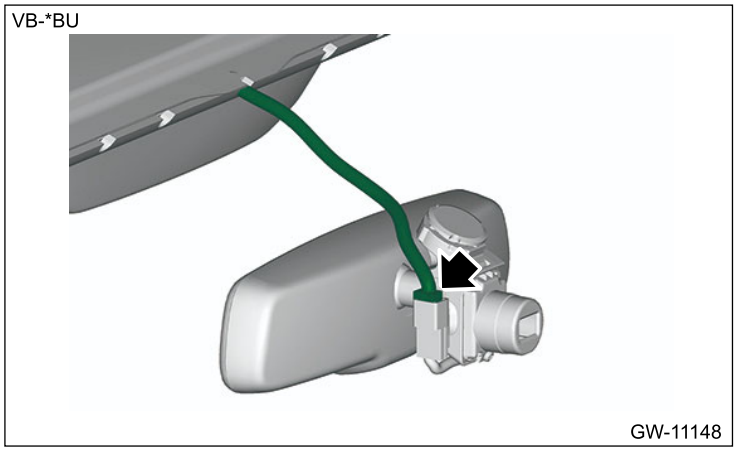
1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Release the claws, and then remove the harness cover.



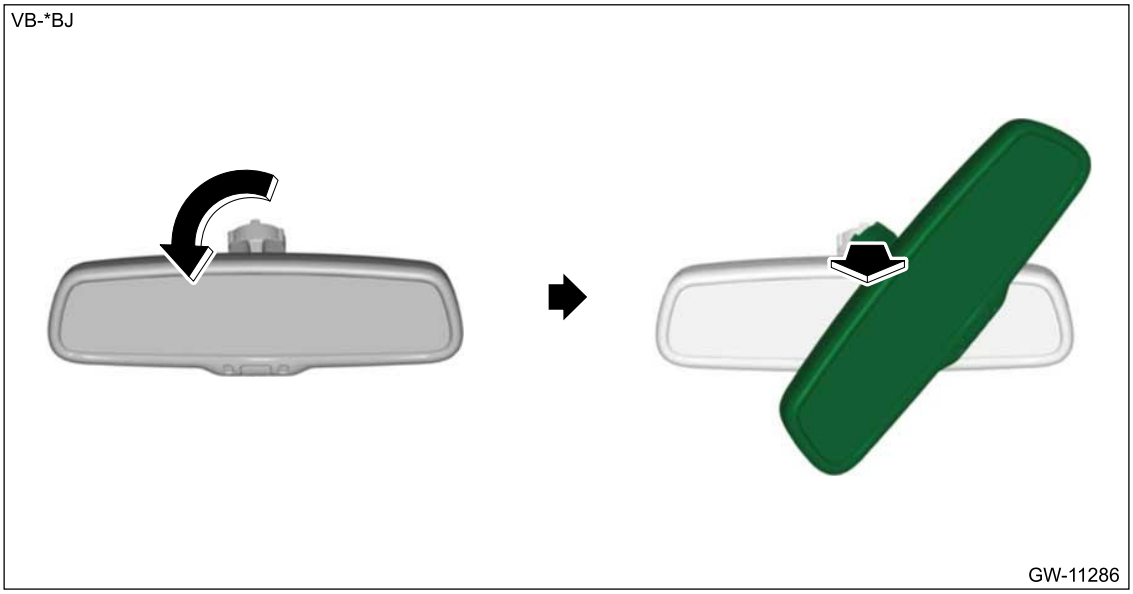
3. Release the claws, and remove the cover mount LH and cover mount RH.



4. Remove the mirror assembly inner rearview HBA.
   (1) Disconnect the connector.



(2) Tilt the mirror surface so that the mirror assembly inner rearview HBA does not come in contact with peripheral parts.
(3) Turn the mirror assembly inner rearview HBA by 60° in the direction of the arrow to remove.



5. Replace the glass windshield if the base inner mirror is damaged.

GLASS/WINDOWS/MIRRORS > Rearview Mirror

INSTALLATION

1. ANTI-GLARE MIRROR

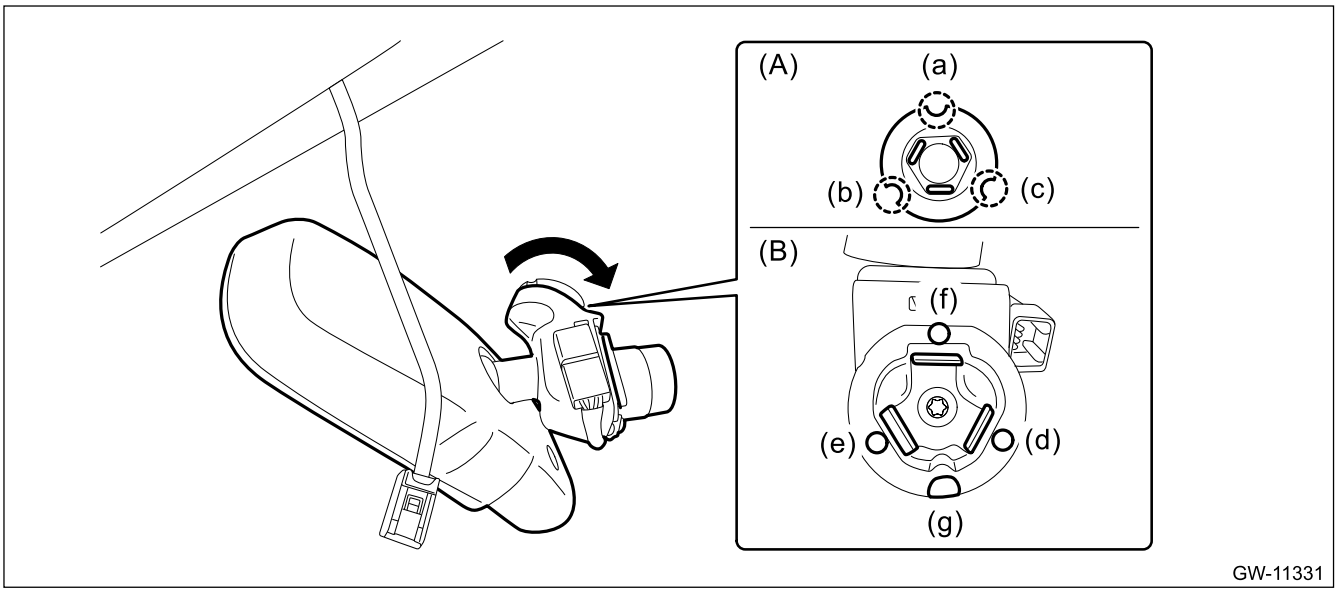
Caution:
Be careful not to damage the mirror surface and the glass windshield.

1. Install the mirror assembly inner rearview.
(1) Slide the mirror assembly inner rearview to install.
(2) Install the mount section cover.

2. AUTOMATIC ANTI-GLARE MIRROR

Caution:
Be careful not to damage the mirror surface and the glass windshield.

1. Install the mirror assembly inner rearview HBA.
   (1) Align the cutouts (A-a), (A-b) and (A-c) of the base inner mirror HBA with the round projections (B-d), (B-e) and (B-f) of the mirror assembly inner rearview HBA.
   (2) Turn the mirror assembly inner HBA to align the square projection (B-g) of the mirror assembly inner rearview HBA with the groove (A-a) of the base inner mirror HBA.



   (3) Connect the connector.
2. Install the cover mount LH and cover mount RH.
3. Attach the harness cover.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

GLASS/WINDOWS/MIRRORS > Rearview Mirror

INSPECTION

1. VISUAL INSPECTION

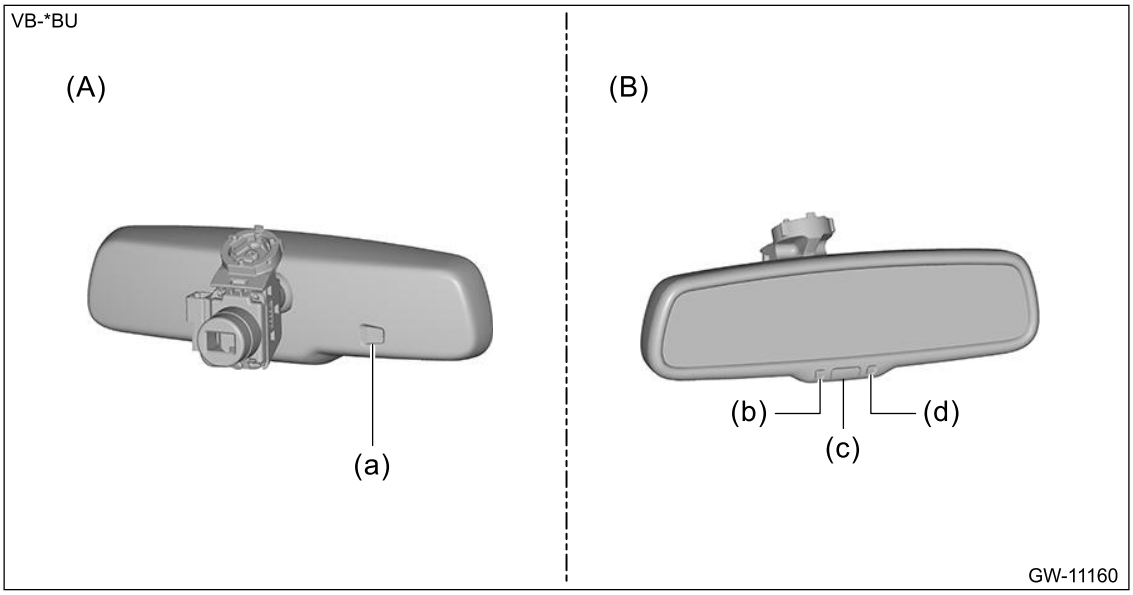
Check that the mirror assembly inner rearview and base inner mirror for damage.

2. CHECK OPERATION (AUTOMATIC ANTI-GLARE MIRROR)

Caution:
- **Perform the inspection indoors.**
- **Depending on the mirror surface direction or surrounding circumstances, mirror surface reflection may not be switched. Therefore, perform the inspection several times by changing the mirror surface direction or surrounding circumstances.**

1. Check mirror assembly inner rearview HBA operation.
   (1) Turn the ignition switch to ON, and check that the indicator light illuminates and the mirror surface is bright.
   (2) Check that the power supply of the mirror assembly inner rearview HBA can be switched ON and OFF.

(3) Cover the front light sensor (a) with hand, and check that the mirror surface will switch from the bright state to the dark state by exposing the rear light sensor (d) to fluorescent light.
(4) Take your hand off the front light sensor (a), and check that the mirror surface will switch from the dark state to the bright state.



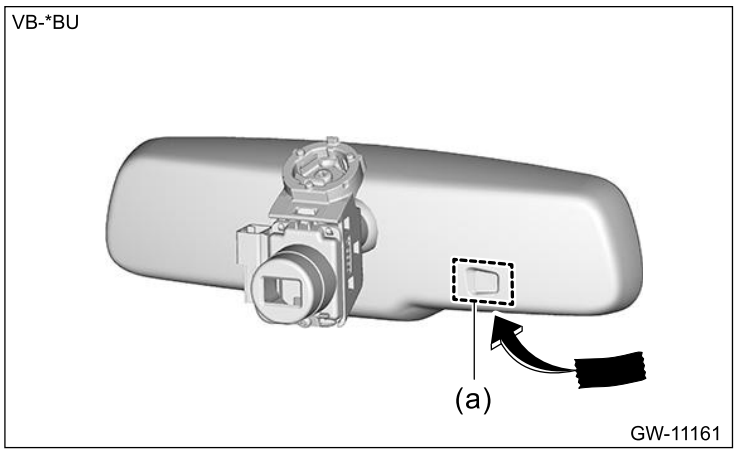
(A) Body reverse side
(B) Mirror surface side
(a) Front light sensor
(b) Indicator light
(c) Power supply switch
(d) Rear light sensor

(5) Check the list of "Diagnostics with Phenomenon", and perform diagnosis. Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostics with Phenomenon>LIST > HIGH BEAM ASSIST SYSTEM.

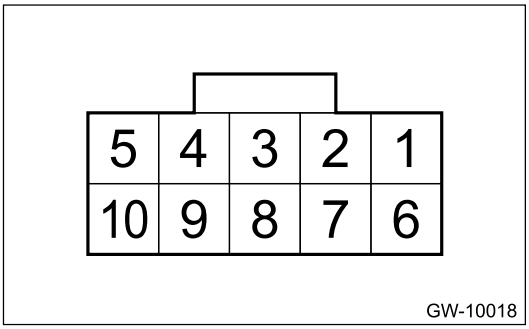
2. Replace the mirror assembly inner rearview HBA if it is found defective.

3. UNIT INSPECTION (AUTOMATIC ANTI-GLARE MIRROR)

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the mirror assembly inner rearview HBA. Ref. to GLASS/WINDOWS/MIRRORS>Rearview Mirror>REMOVAL.
3. Apply black vinyl tape to the sensor (a) of the mirror assembly inner rearview HBA removed.



4. Check the operation when battery voltage is applied to the connector terminal.



Terminal No.	Light condition of fluorescent light	Mirror surface condition
8 (+) — 2 (−)	Mirror surface is not exposed to light.	No change
8 (+) — 2 (−)	Mirror surface is exposed to light.	Mirror surface becomes dark.

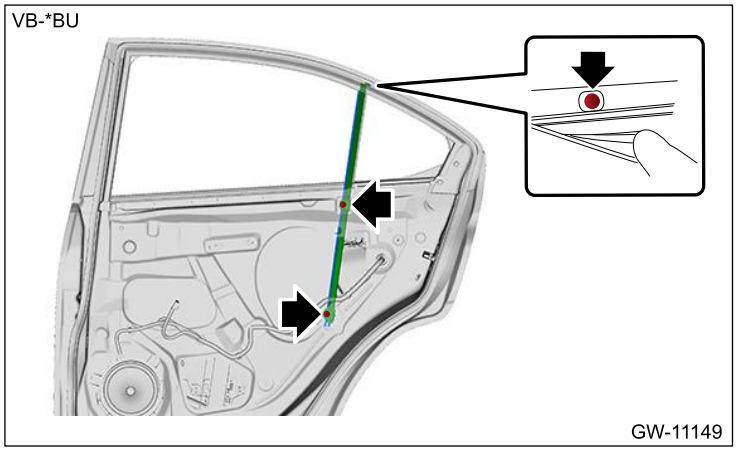
5. Replace the mirror assembly inner rearview HBA if it is found defective.

REMOVAL

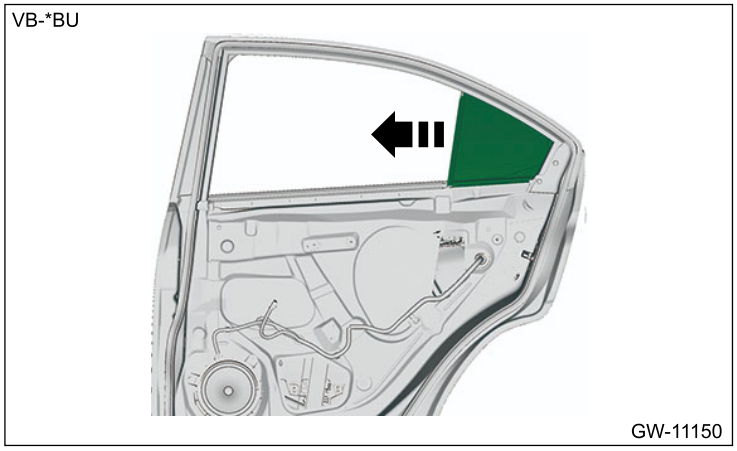
1. Operate the switch power window to move the glass assembly rear door to the lowest position.
2. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > REAR DOOR.
4. Remove the sealing cover door rear. Ref. to EXTERIOR BODY PANELS>Sealing Cover>REMOVAL > REAR SEALING COVER.
5. Remove the glass assembly rear door.

Caution:
Do not damage the sash or the sash molding while removing.

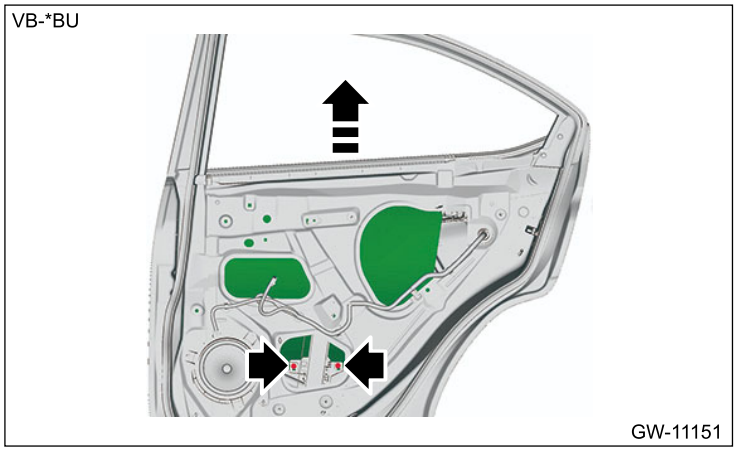
(1) Remove the bolts and screws, and then remove the running channel rear door and the sash assembly rear door partition.



(2) Remove the glass rear door partition.



(3) Remove the bolts, and remove the glass assembly rear door.

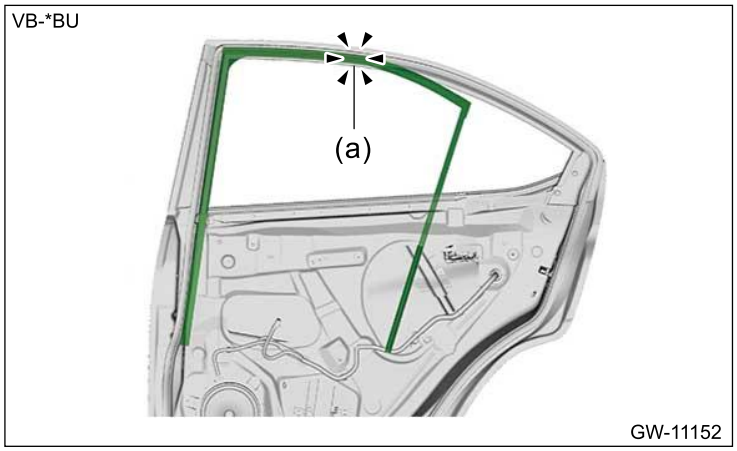


GLASS/WINDOWS/MIRRORS > Rear Door Glass

INSTALLATION

1. Install the running channel rear door up to the roof center position (a) of the panel COMPL door rear.

Caution:
Check that the running channel is securely fixed to the door panel COMPL.



2. Install the glass assembly rear door.

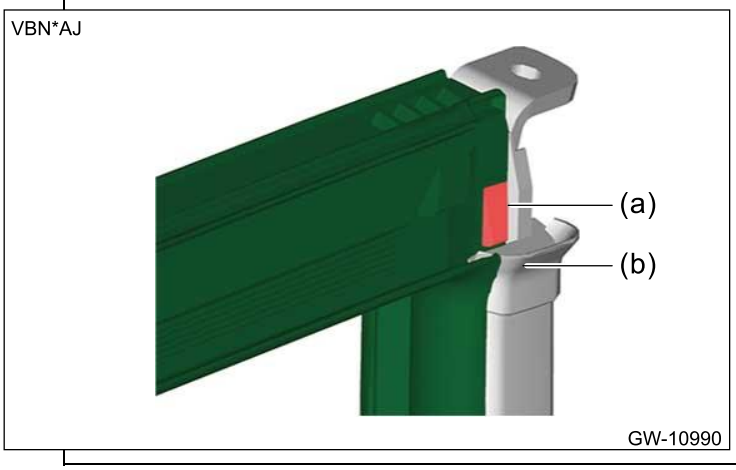
Caution:
Avoid impact and damage to the door glass assembly.

Tightening torque:
7.5 N·m (0.8 kgf-m, 5.5 ft-lb)

3. Install the glass rear door partition.
4. Install the sash assembly rear door partition.
   (1) Install the running channel rear door to the sash assembly rear door partition.

Caution:

Align the rib (a) of the running channel with the sash assembly upper end (b).



(2) Install the sash assembly rear door partition.

Tightening torque:

Refer to "COMPONENT" of "General Description" for the tightening torque. Ref. to GLASS/WINDOWS/MIRRORS>General Description>COMPONENT > REAR DOOR GLASS.

5. Install the rest of the running channel rear door.

Note:

After installation, check that there is no warpage, gap or scratch.

6. Install the sealing cover door rear. Ref. to EXTERIOR BODY PANELS>Sealing Cover>INSTALLATION > REAR SEALING COVER.

7. Install the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION > REAR DOOR.

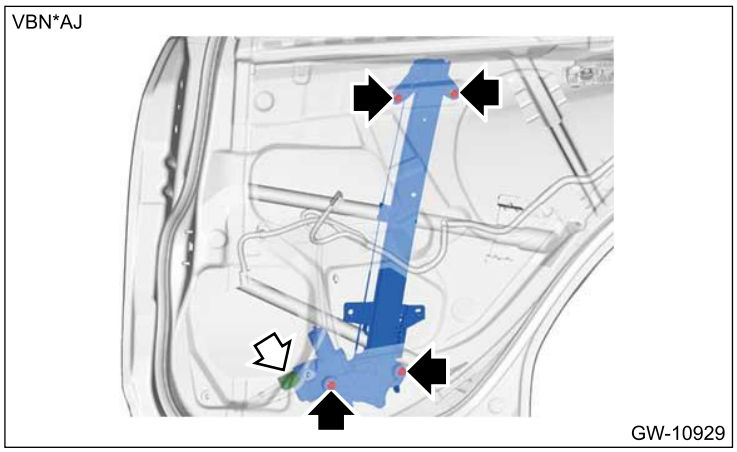
8. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

9. Perform the initial setting of the power window system. Ref. to GLASS/WINDOWS/MIRRORS>Power Window System>OPERATION.

GLASS/WINDOWS/MIRRORS > Rear Regulator and Motor Assembly

REMOVAL

1. Operate the switch power window to move the glass assembly rear door to the lowest position.
2. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > REAR DOOR.
4. Remove the sealing cover door rear. Ref. to EXTERIOR BODY PANELS>Sealing Cover>REMOVAL > REAR SEALING COVER.
5. Remove the speaker assembly rear. Ref. to ENTERTAINMENT & MONITORING>Rear Speaker>REMOVAL.
6. Remove the glass assembly rear door. Ref. to GLASS/WINDOWS/MIRRORS>Rear Door Glass>REMOVAL.
7. Remove the regulator and motor assembly rear.
   (1) Disconnect the connector.
   (2) Remove the bolts, and then remove the regulator and motor assembly rear.



GLASS/WINDOWS/MIRRORS > Rear Regulator and Motor Assembly

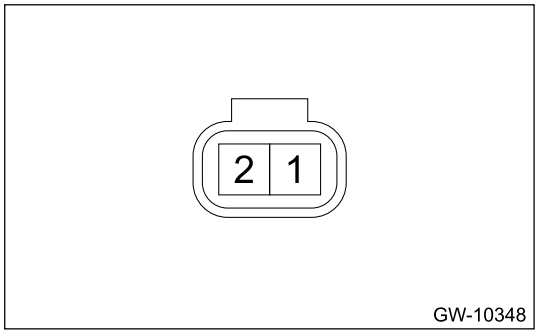
INSTALLATION

1. Install the regulator & motor assembly rear, and connect the connector.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
2. Install the glass assembly rear door. Ref. to GLASS/WINDOWS/MIRRORS>Rear Door Glass>INSTALLATION.
3. Install the speaker assembly rear. Ref. to ENTERTAINMENT & MONITORING>Rear Speaker>INSTALLATION.
4. Install the sealing cover door rear. Ref. to EXTERIOR BODY PANELS>Sealing Cover>INSTALLATION > REAR SEALING COVER.
5. Install the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION > REAR DOOR.
6. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
7. Perform the initial setting of the power window system. Ref. to GLASS/WINDOWS/MIRRORS>Power Window System>OPERATION.

INSPECTION

1. FRONT SEATS AUTO SPECIFICATION

1. Check the motor operation when battery voltage is applied between terminals of the regulator & motor assembly rear connector.



- LH side

Terminal No.	Inspection conditions	Specification
2 (+) — 1 (−)	Apply battery voltage between terminals.	Increase
1 (+) — 2 (−)	Apply battery voltage between terminals.	Decrease

- RH side

Terminal No.	Inspection conditions	Specification
2 (+) — 1 (−)	Apply battery voltage between terminals.	Increase
1 (+) — 2 (−)	Apply battery voltage between terminals.	Decrease

2. If the regulator and motor do not operate properly as a result of inspection, replace the regulator and motor assembly rear.

2. ALL SEATS AUTO SPECIFICATION

For inspection of regulator & motor assembly rear, refer to “Active Test” of “POWER WINDOW (DIAGNOSTICS)” section. Ref. to POWER WINDOW(DIAGNOSTICS) >Active Test.

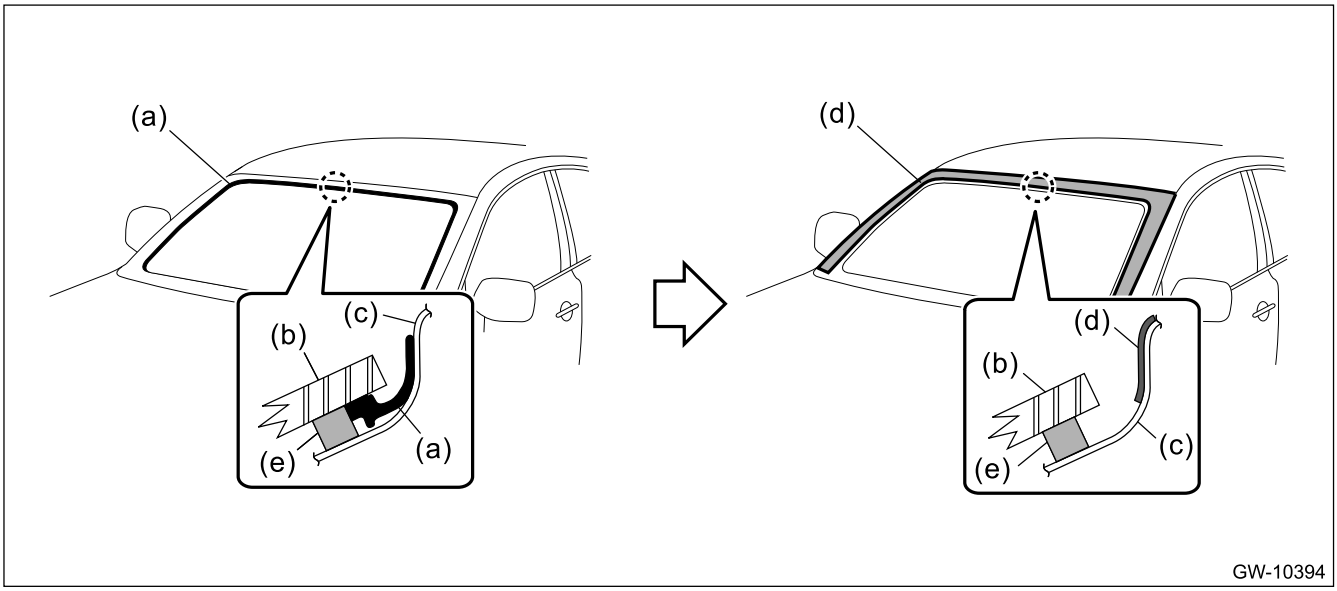
REMOVAL

1. WHEN USING WINDSHIELD GLASS KNIFE

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Use the Subaru genuine windshield glass specially designed for EyeSight. (If the windshield glass other than the glass specially designed for EyeSight is used, the visibility of the camera is blocked or the distortion of the glass prevents the correct measurement of the object, resulting in the EyeSight abnormal operation.)**
- **If the windshield glass is installed after removal or replaced, perform the "Inspection" and "Adjustment and check" of the stereo camera.**
  Inspection: Ref. to EyeSight (DIAGNOSTICS)>General Description>INSPECTION.
  Adjustment and check: Ref. to EyeSight>Camera Adjustment, Inspection.
- **If the damage is found in the glass repair prohibited area, always replace the glass. Damage, dirt, aftermarket part installation or sticker attachment in the prohibited area can affect the recognition of each camera, and thereby the EyeSight and high beam assist functions may not operate properly. Ref. to CAUTION > CHECK WINDSHIELD GLASS INCLUDING PROHIBITED AREA FOR MODEL WITH EyeSight.**

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the trim panel assembly A pillar. Ref. to EXTERIOR/INTERIOR TRIM>Upper Inner Trim>REMOVAL > A PILLAR TRIM.
3. Remove the arm assembly windshield wiper. Ref. to WIPER AND WASHER SYSTEMS>Front Wiper Arm>REMOVAL.
4. Remove the cowl panel assembly. Ref. to EXTERIOR/INTERIOR TRIM>Cowl Panel>REMOVAL.
5. Disconnect the wiper deicer connector. (Models with wiper deicer)
6. Remove the mirror assembly inner rearview. Ref. to GLASS/WINDOWS/MIRRORS>Rearview Mirror>REMOVAL.
7. Remove the light assembly map. (Models with EyeSight) Ref. to LIGHTING SYSTEM>Spot Map Light>REMOVAL.
8. Remove the stereo camera. (Models with EyeSight) Ref. to EyeSight>Stereo Camera>REMOVAL.
9. Remove the lens hood. (Models with EyeSight) Ref. to EyeSight>Lens Hood>REMOVAL.
10. Remove the molding windshield from the glass windshield, and attach protective tape on the body side of the circumference of the glass windshield.



(a) Molding windshield
(b) Glass windshield
(c) Body panel
(d) Protective tape
(e) Adhesive

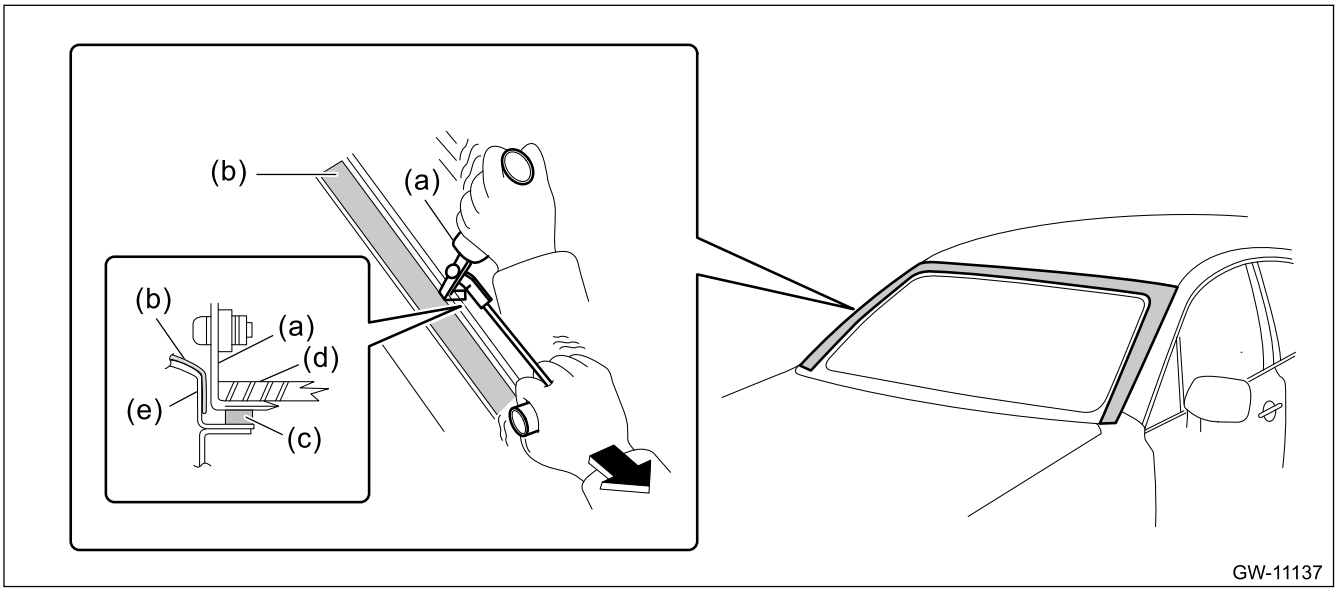
11. Remove the glass windshield.

(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 windshield at a right angle, move the windshield glass knife parallel to the edge of the glass windshield, and cut the adhesive along the surface and the edge of the glass windshield.

Caution:

- **Cutting of adhesive part should be started from an area with wider gap between the windshield glass and the body.**
- **Never twist the windshield glass knife.**

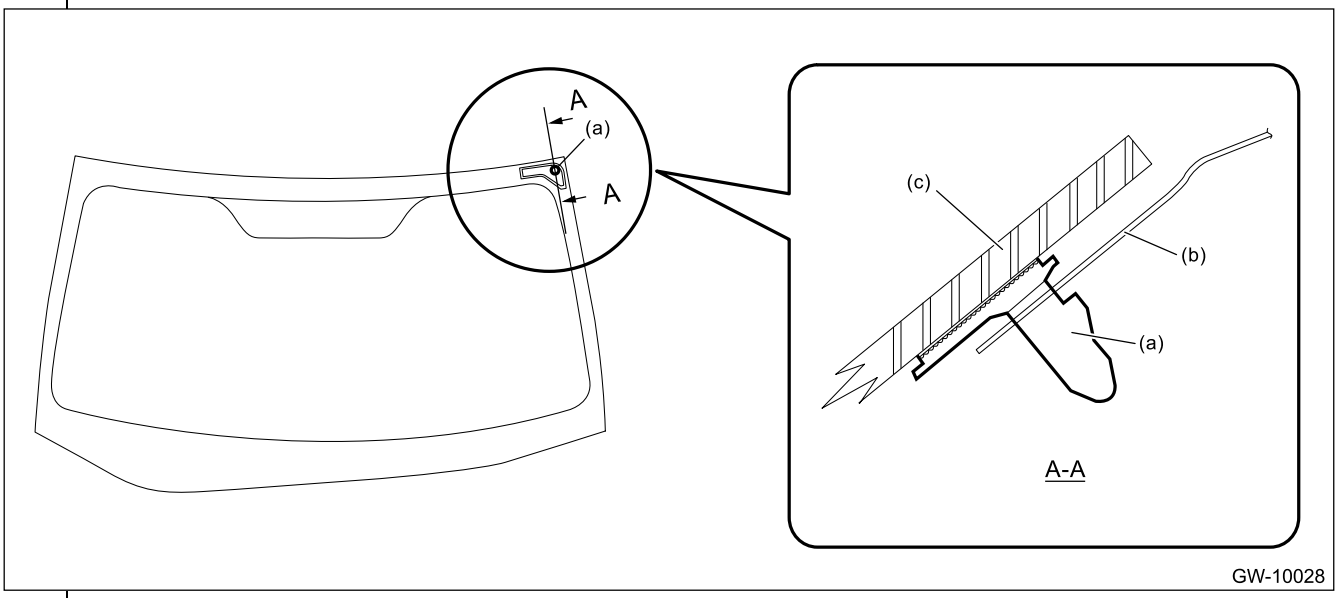


(a) Windshield glass knife
(b) Protective tape
(c) Adhesive
(d) Glass windshield
(e) Body panel

(3) Disconnect the locating pin windshield and remove the glass windshield.

Note:

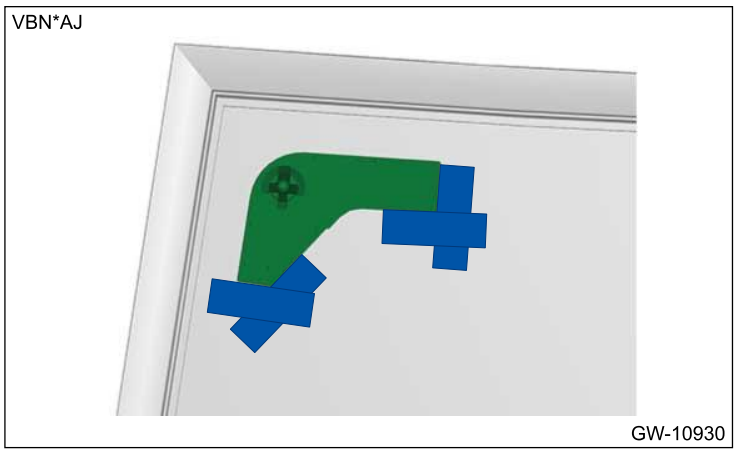
The locating pin windshield is bonded to the corners of glass windshield. Use piano wire to disconnect the pins.



(a) Locating pin windshield (b) Body panel (c) Glass windshield

12. Remove the locating pin windshield. (When reusing the glass)

(1) Attach tape to the locating pin windshield outer surface to identify the installation position.



(2) Using a scraper, etc., remove locating pin windshield (two places).

Note:

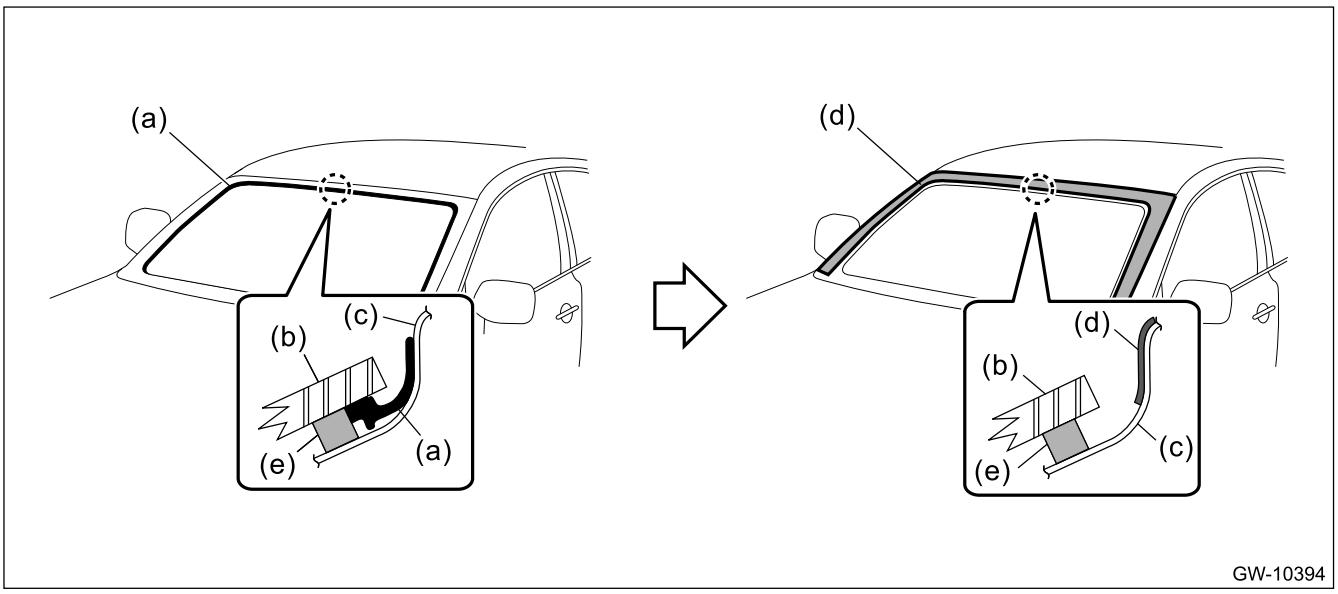
Do not remove the tape because it is used to refer to the installation position.

2. WHEN USING PIANO WIRE

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Use the Subaru genuine windshield glass specially designed for EyeSight. (If the windshield glass other than the glass specially designed for EyeSight is used, the visibility of the camera is blocked or the distortion of the glass prevents the correct measurement of the object, resulting in the EyeSight abnormal operation.)**
- **If the windshield glass is installed after removal or replaced, perform the "Inspection" and "Adjustment and check" of the stereo camera.**
  Inspection: Ref. to EyeSight (DIAGNOSTICS)>General Description>INSPECTION.
  Adjustment and check: Ref. to EyeSight>Camera Adjustment, Inspection.
- **If the damage is found in the glass repair prohibited area, always replace the glass. Damage, dirt, aftermarket part installation or sticker attachment in the prohibited area can affect the recognition of each camera, and thereby the EyeSight and high beam assist functions may not operate properly. Ref. to CAUTION > CHECK WINDSHIELD GLASS INCLUDING PROHIBITED AREA FOR MODEL WITH EyeSight.**
- **Do not tightly pull the piano wire against the windshield glass edge.**
- **Do not cross piano wires. Otherwise they may be cut.**

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the trim panel assembly A pillar. Ref. to EXTERIOR/INTERIOR TRIM>Upper Inner Trim>REMOVAL > A PILLAR TRIM.
3. Remove the arm assembly windshield wiper. Ref. to WIPER AND WASHER SYSTEMS>Front Wiper Arm>REMOVAL.
4. Remove the cowl panel assembly. Ref. to EXTERIOR/INTERIOR TRIM>Cowl Panel>REMOVAL.
5. Disconnect the wiper deicer connector. (Models with wiper deicer)
6. Remove the mirror assembly inner rearview. Ref. to GLASS/WINDOWS/MIRRORS>Rearview Mirror>REMOVAL.
7. Remove the light assembly map. (Models with EyeSight) Ref. to LIGHTING SYSTEM>Spot Map Light>REMOVAL.
8. Remove the stereo camera. (Models with EyeSight) Ref. to EyeSight>Stereo Camera>REMOVAL.
9. Remove the lens hood. (Models with EyeSight) Ref. to EyeSight>Lens Hood>REMOVAL.
10. Remove the molding windshield from the glass windshield, and attach protective tape on the body side of the circumference of the glass windshield.



(a) Molding windshield
(b) Glass windshield
(c) Body panel
(d) Protective tape
(e) Adhesive

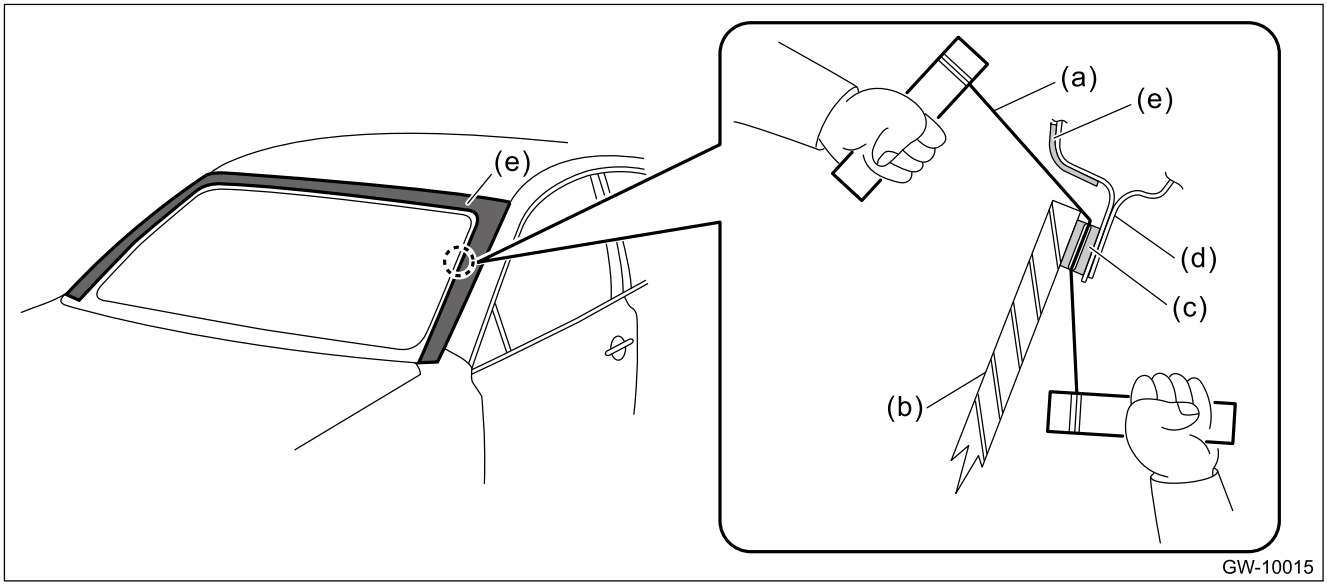
11. Remove the glass windshield.

(1) Pass a piano wire through the adhesive part.

(2) Pull the piano wire ends alternately to cut off the adhesive part and locating pin windshield.

Caution:

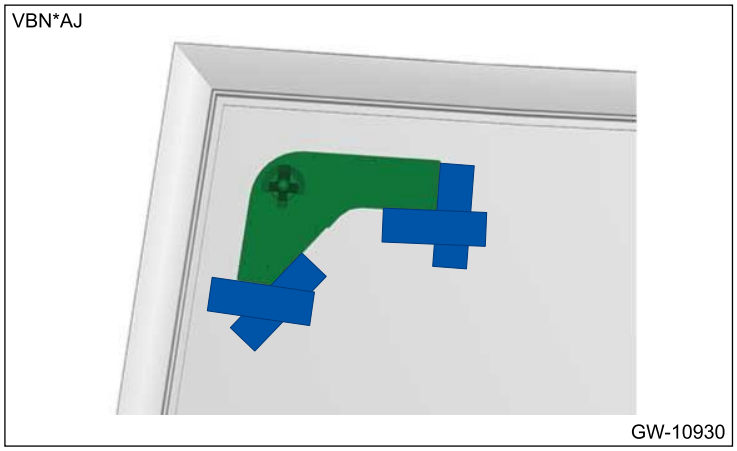
Attach a piece of wood to both piano wire ends.



(a) Piano wire
(b) Glass windshield
(c) Adhesive
(d) Body panel
(e) Protective tape

12. Remove the locating pin windshield. (When reusing the glass)

(1) Attach tape to the locating pin windshield outer surface to identify the installation position.



(2) Using a scraper, etc., remove locating pin windshield (two places).

Note:
Do not remove the tape because it is used to refer to the installation position.

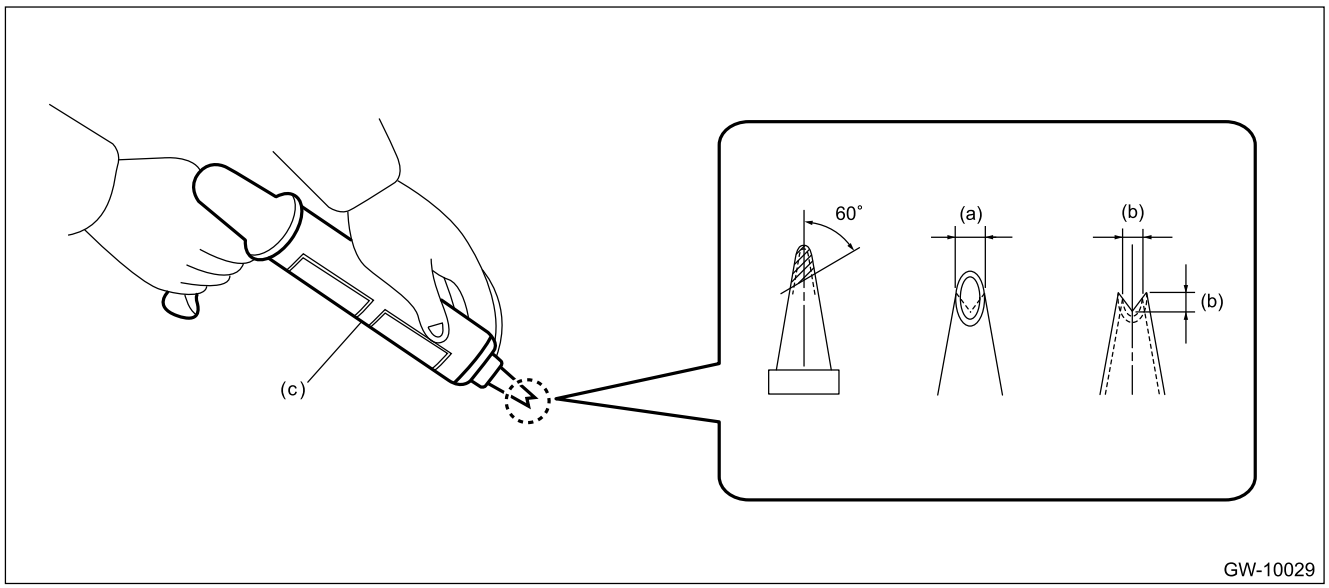
GLASS/WINDOWS/MIRRORS > Windshield Glass

INSTALLATION

Caution:

- **Always use the Subaru genuine windshield glass specially designed for EyeSight. (If the windshield glass other than the glass specially designed for EyeSight is used, the visibility of the camera is blocked or the distortion of the glass prevents the correct measurement of the object, resulting in the EyeSight abnormal operation.)**
- **For installation of the stereo camera, refer to "INSTALLATION", "Stereo Camera" in the "EyeSight" section and observe the precautions for installation. Ref. to EyeSight>Stereo Camera>INSTALLATION.**
- **If the damage is found in the glass repair prohibited area, always replace the glass. Damage, dirt, aftermarket part installation or sticker attachment in the prohibited area can affect the recognition of each camera, and thereby the EyeSight and high beam assist functions may not operate properly. Ref. to CAUTION > CHECK WINDSHIELD GLASS INCLUDING PROHIBITED AREA FOR MODEL WITH EyeSight.**

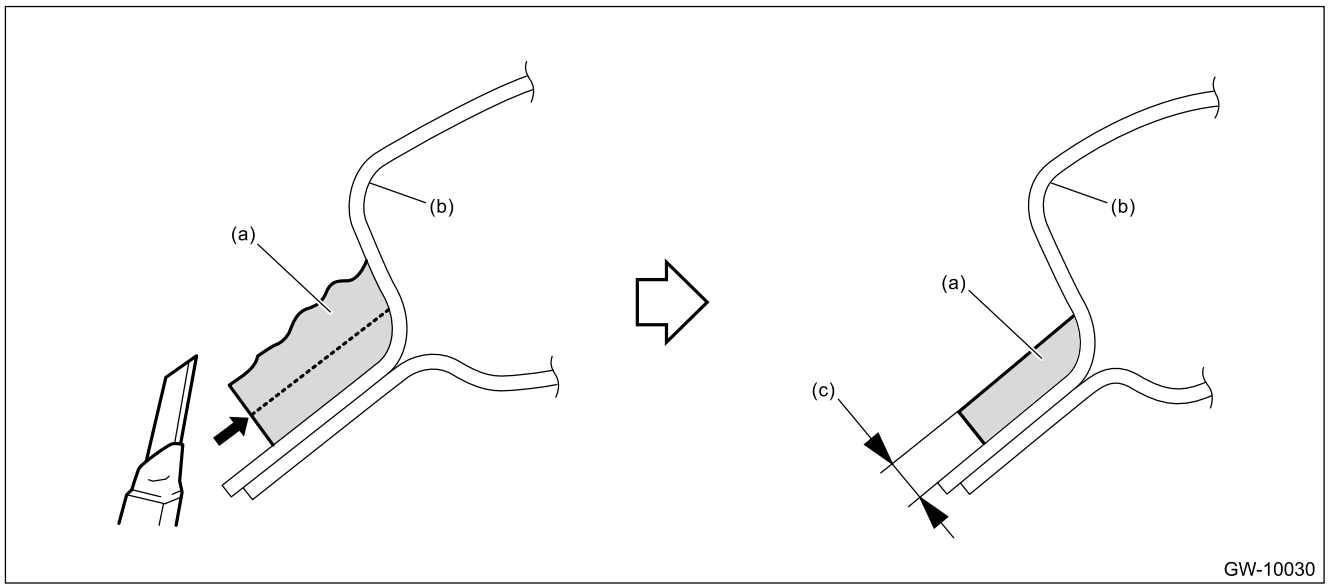
1. Fabricate the cartridge nozzle tip as shown and set the sealant gun with the adhesive.



(a) 10 mm (0.39 in) (b) 8 mm (0.31 in) (c) 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 amount of old adhesive.**



(a) Adhesive (b) Body panel (c) 2 mm (0.08 in)

3. Clean the glass windshield and body.
(1) Using a scraper, remove adhesive and double-sided tape left on the glass windshield.
(2) Clean the glass windshield and the body with alcohol or appropriate cleaning solvent to completely eliminate cutting powder, dust and dirt.

4. Install a new locating pin windshield. (When reusing the glass)
(1) Using a sponge, apply primer to the locating pin windshield installation position on the glass windshield.

Note:

- **Let primer dry for about one hour before installing the locating pin windshield.**
- **Do not touch the surface coated with primer.**

Preparation items

Glass primer: Dow Automotive ESSEX U-401, U402 or equivalent

(2) Apply adhesive to the locating pin windshield adhesive surface.

Preparation items:

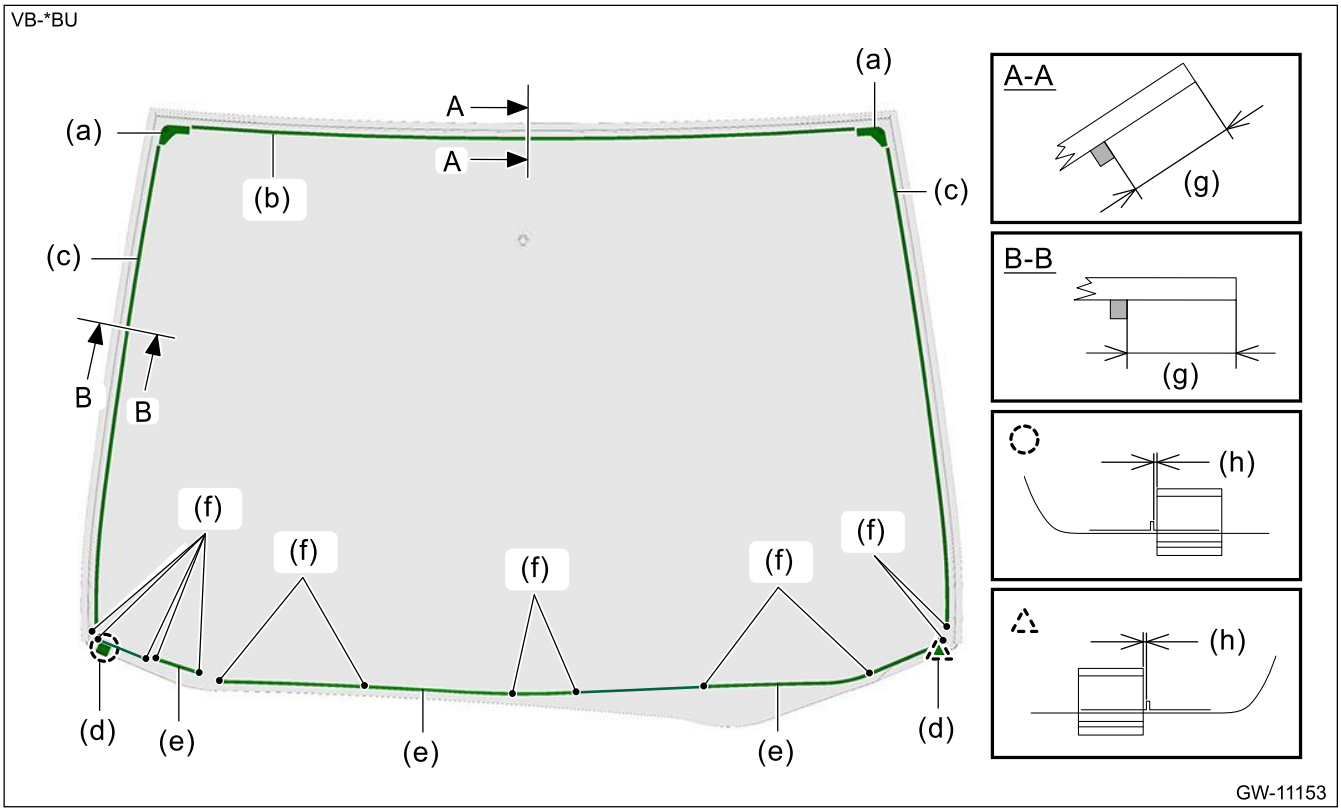
Adhesive: Dow Automotive ESSEX U-400HV or equivalent

(3) Install a new locating pin windshield to the positions marked with tapes (two places), and remove the tapes.

5. Attach a new dam rubber front to the glass windshield.

Note:

Attach the dam rubber straight between the dam rubber set marks while aligning with the dam rubber set mark.



(a) Locating pin windshield
(b) Dam rubber front upper
(c) Dam rubber front side
(d) Seal lower
(e) Dam rubber front lower
(f) Dam rubber set mark
(g) 14.8 mm (0.58 in)
(h) 0+0.5 mm (0+0.02 in)

6. Install a new molding windshield to the glass windshield.

Caution:

Be careful to attach the windshield molding so that the molding has no loose or undulating part.

(1) Using a sponge, apply primer to the molding installation surface in the glass windshield side.

Note:

- **Let primer dry for about ten minutes before installing the windshield molding.**
- **Do not touch the surface coated with primer.**

Preparation items

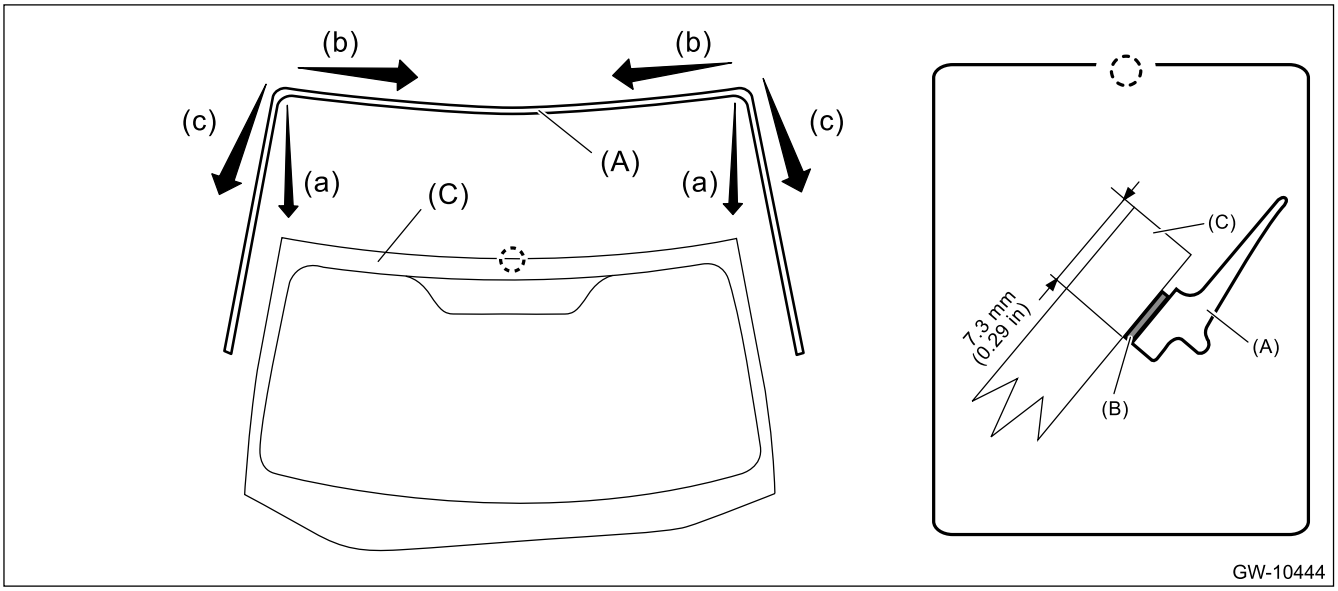
Glass primer: Dow Automotive ESSEX U401, U402 or equivalent

(2) Align the molding windshield (A) with both ends of the upper edge (a) of the glass windshield (C).

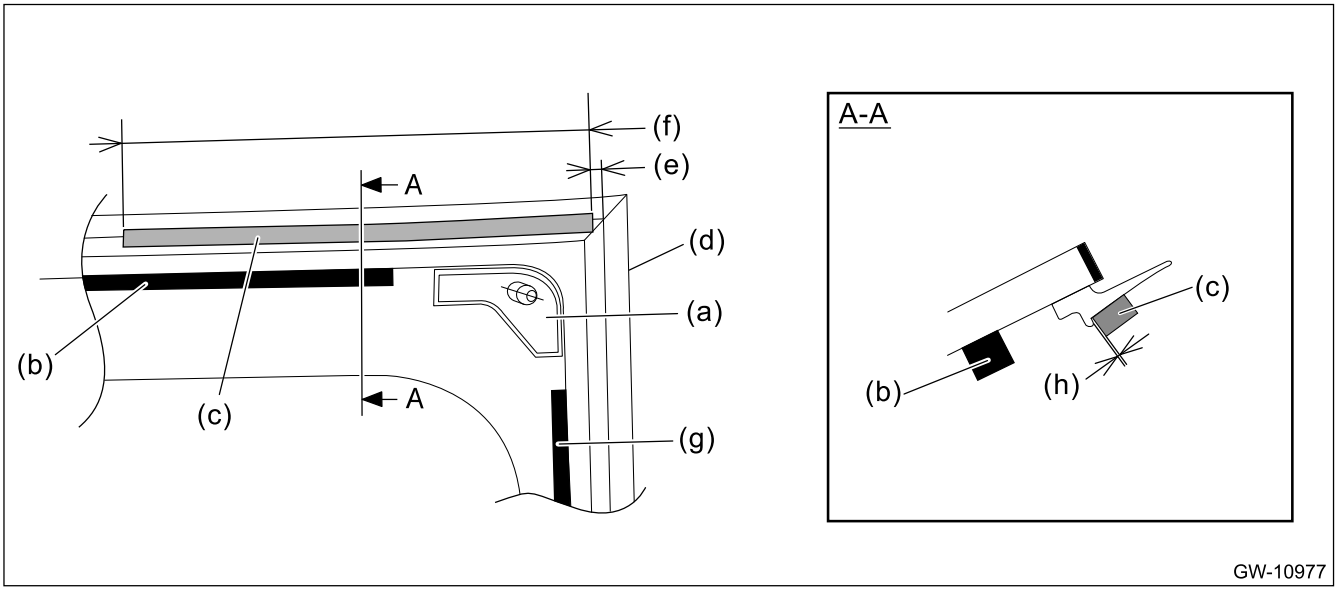
(3) Install the molding windshield from both corners of the upper edge toward the center (b).

(4) Install the molding windshield from both corners of the upper edge toward the lower side (c).

(5) Firmly apply the double sided tape (B) of the molding windshield evenly to the glass windshield surface.



7. Attach the seal upper to the molding windshield.



(a) Locating pin windshield
(b) Dam rubber front upper
(c) Seal upper
(d) Molding windshield
(e) 0+5 mm (0+0.2 in)
(f) 165 mm (6.5 in)
(g) Dam rubber front side
(h) 0+0.5 mm (0+0.02 in)

8. Install the glass windshield.

(1) Using a sponge, apply primer to the adhesive surfaces of glass windshield side and the body side.

Caution:
Do not apply primer to adhesive remaining on the body side.

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 windshield.**
- **Do not touch the surface coated with primer.**

Preparation items:

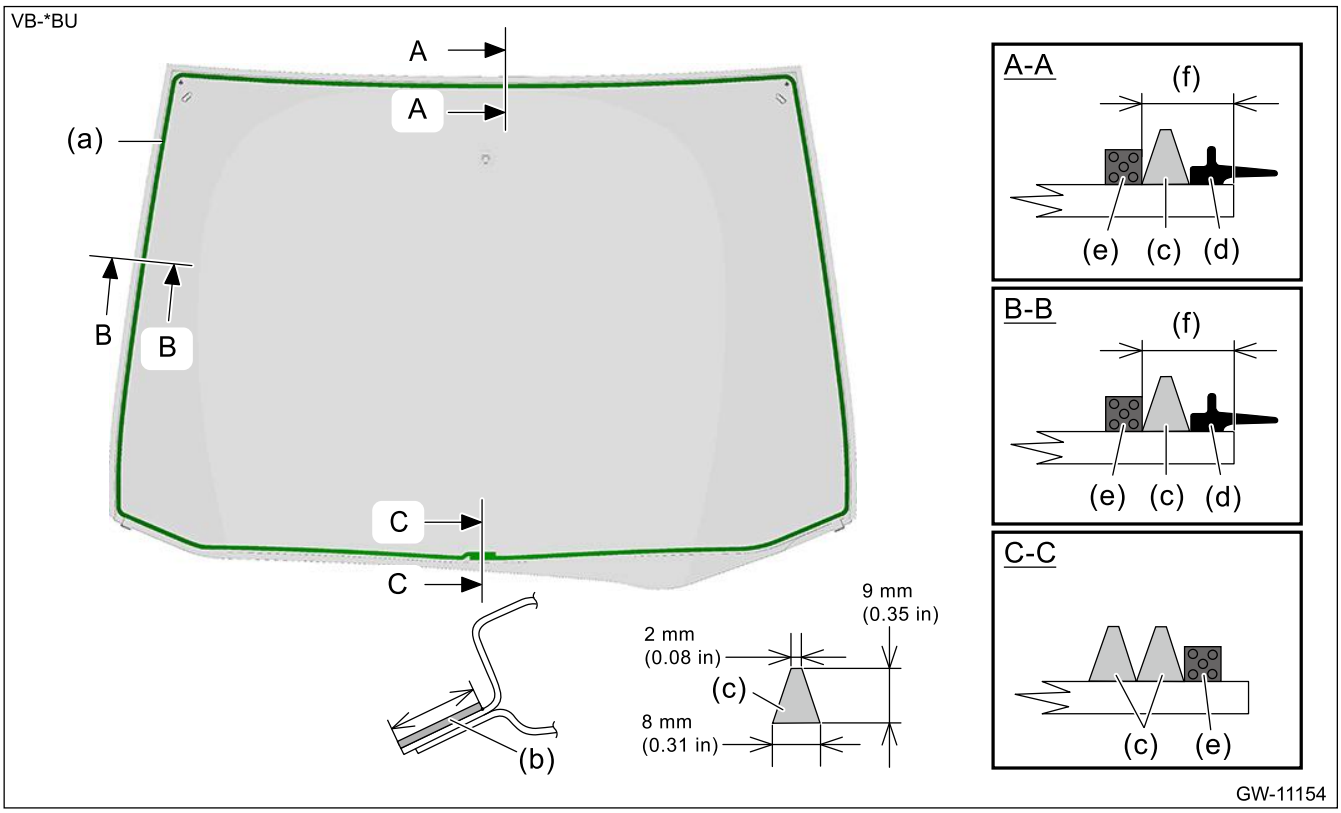
Glass primer: Dow Automotive ESSEX U-401, U-402 or equivalent

Painted surface primer: Dow Automotive ESSEX U-413 or equivalent

(2) Apply adhesive to the glass windshield end back surface along to the dam rubber.

Preparation items:

Adhesive: Dow Automotive ESSEX U-400HV or equivalent



(a) Application of primer (glass side)

(b) Application of primer (body side)

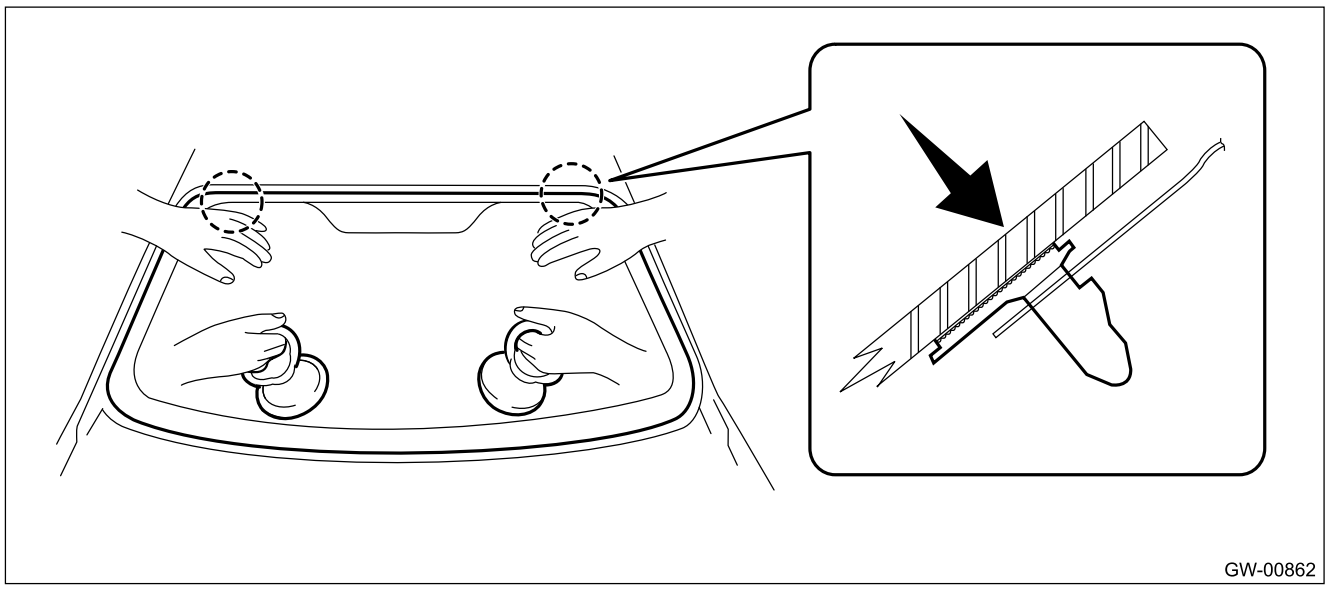
(c) Adhesive

(d) Molding windshield

(e) Dam rubber front

(f) 14.8 mm (0.58 in)

(3) Fit the locating pin windshield to the vehicle body using suction rubber cups, and install the glass windshield.



(4) Lightly press the entire perimeter of the glass windshield for tight fit.
(5) Make flush the adhesive surface jutted out using spatula.

9. After completion of all work, allow the vehicle to stand for about 24 hours.

Note:
- **When opening/closing the door after the windshield glass was bonded, always lower the door glass assembly 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.**

10. Install the lens hood. (Models with EyeSight) Ref. to EyeSight>Lens Hood>INSTALLATION.
11. Install the stereo camera. (Models with EyeSight) Ref. to EyeSight>Stereo Camera>INSTALLATION.
12. Install the light assembly map. (Models with EyeSight) Ref. to LIGHTING SYSTEM>Spot Map Light>INSTALLATION.
13. Install the mirror assembly inner rearview. Ref. to GLASS/WINDOWS/MIRRORS>Rearview Mirror>INSTALLATION.
14. Connect the wiper deicer connector. (Models with wiper deicer)
15. Install the cowl panel assembly. Ref. to EXTERIOR/INTERIOR TRIM>Cowl Panel>INSTALLATION.
16. Install the arm assembly windshield wiper. Ref. to WIPER AND WASHER SYSTEMS>Front Wiper Arm>INSTALLATION.
17. Install the trim panel assembly A pillar. Ref. to EXTERIOR/INTERIOR TRIM>Upper Inner Trim>INSTALLATION > A PILLAR TRIM.
18. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
19. After curing of adhesive, pour the water on external surface of vehicle to check that there are no water leaks.

Caution:
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. Perform the inspection, and adjustment and check of the stereo camera. (Models with EyeSight)
    - Inspection: Ref. to EyeSight (DIAGNOSTICS)>General Description>INSPECTION.
    - Adjustment and check: Ref. to EyeSight>Camera Adjustment, Inspection.

GLASS/WINDOWS/MIRRORS > Rear Window Glass

REMOVAL



Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the rear seat cushion assembly and the backrest assembly. Ref. to SEATS>Rear Seat>REMOVAL.
3. Remove the trim panel assembly C pillar LWR and the trim panel assembly C pillar. Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>REMOVAL.
4. Remove the trim panel assembly rear shelf. Ref. to EXTERIOR/INTERIOR TRIM>Rear Shelf Trim>REMOVAL.
5. Disconnect the rear defogger connector and the antenna connector.
6. Remove the glass rear window in the same procedure as for the glass windshield. Ref. to GLASS/WINDOWS/MIRRORS>Windshield Glass>REMOVAL.

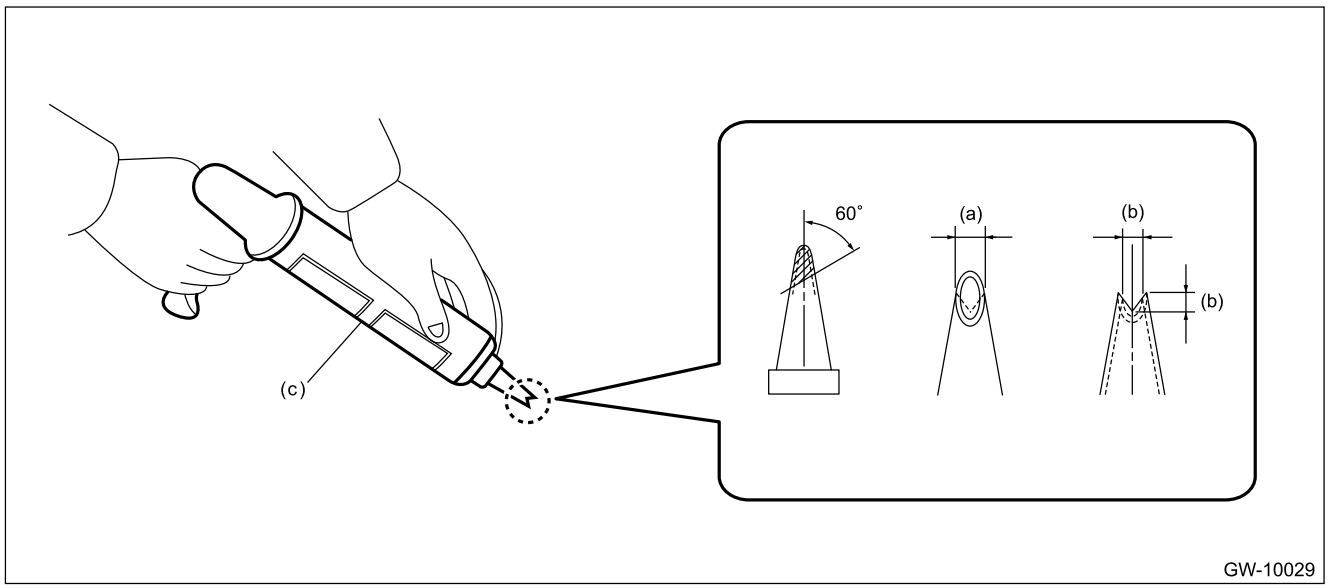
GLASS/WINDOWS/MIRRORS > Rear Window Glass

INSTALLATION

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

1. Fabricate the cartridge nozzle tip as shown and set the sealant gun with the adhesive.



(a) 10 mm (0.39 in) (b) 8 mm (0.31 in) (c) Sealant gun

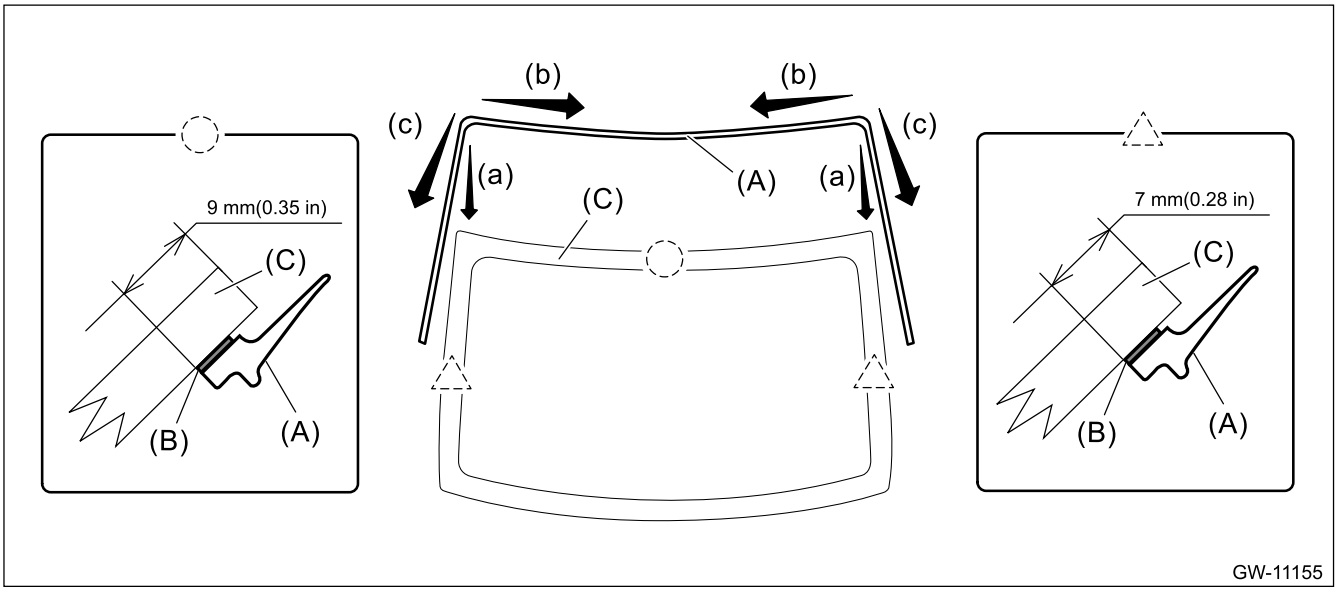
2. Smoothen and clean the adhesive surfaces of the glass rear gate side and the body side, with the same procedures as for the glass windshield. Ref. to GLASS/WINDOWS/MIRRORS>Windshield Glass>INSTALLATION.

Caution:
Use a new locating pin rear window.

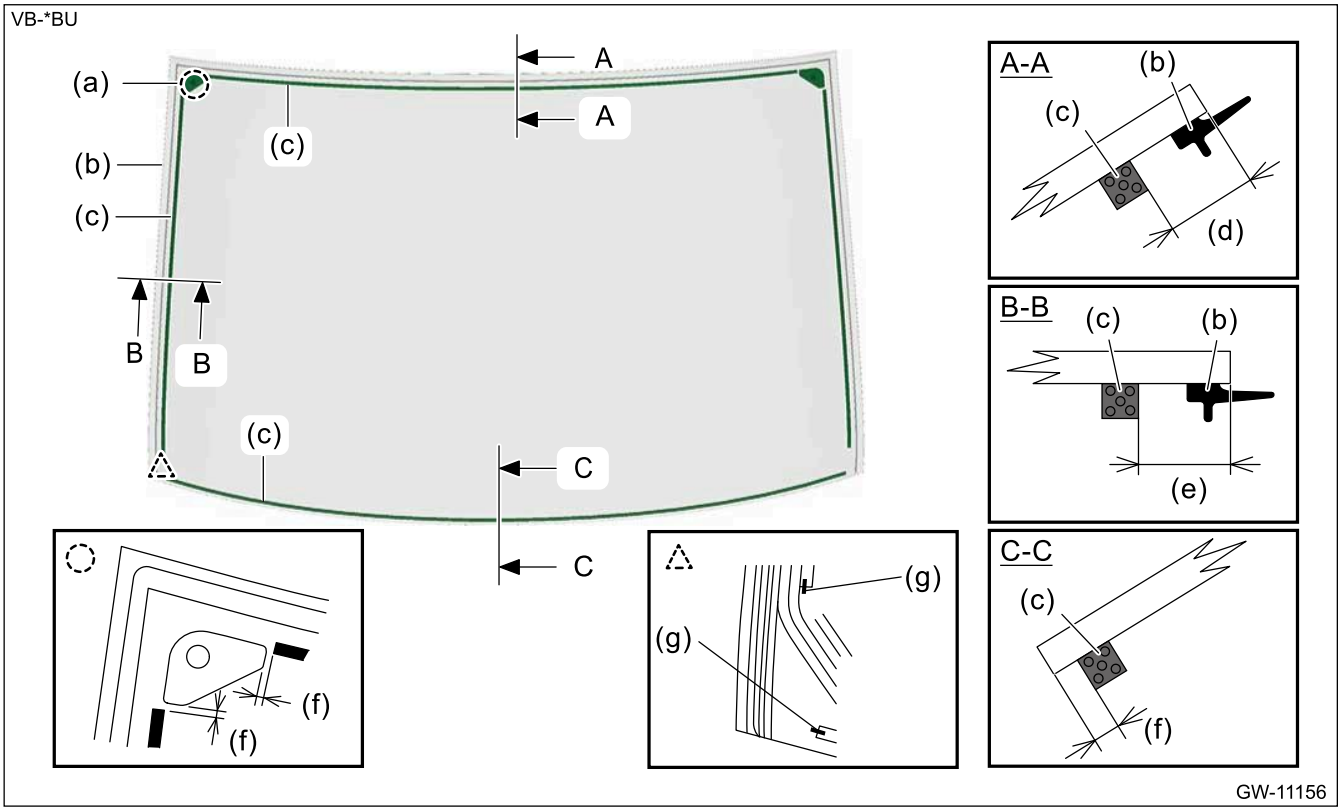
3. Install a new molding rear window to the glass rear window.

Caution:
Be careful to attach the rear window molding so that the molding has no loose or undulating part.

(1) Align the molding rear window (A) with both ends of the upper edge (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.



4. Install a new dam rubber rear to the glass rear window.



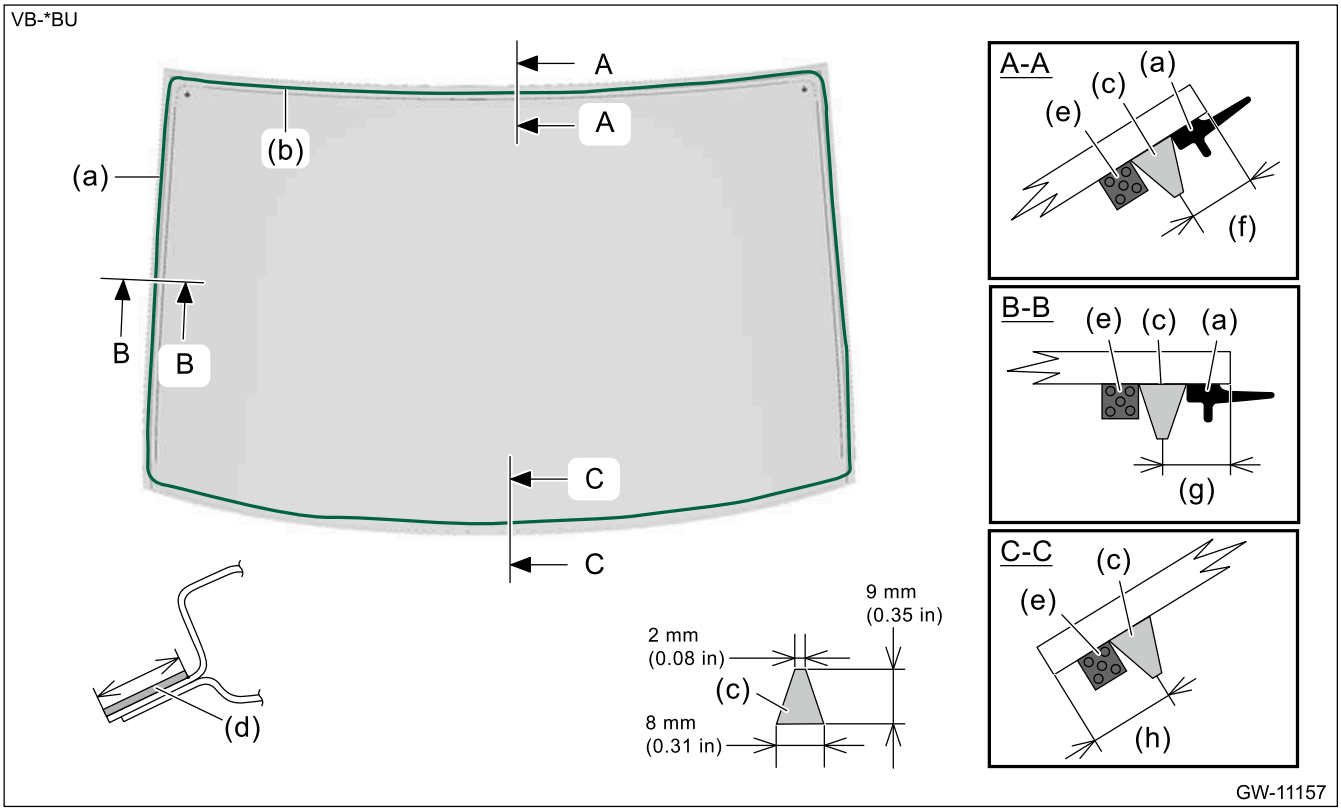
(a) Locating pin rear window
(b) Molding rear window
(c) Dam rubber rear window
(d) 17 mm (0.67 in)
(e) 15 mm (0.59 in)
(f) 3 mm (0.12 in)
(g) Dam rubber set mark

5. Install the glass rear window in the same procedure as for the glass windshield. Ref. to GLASS/WINDOWS/MIRRORS>Windshield Glass>INSTALLATION.

(1) Apply the primer to the adhesive surface of glass rear window side and body side using sponge.

Caution:
Do not apply primer to adhesive remaining on the body side.

(2) Apply adhesive to the end back surface of the glass rear window.



(a)	Molding rear window	(d)	Application of primer (body side)	(g)	11 mm (0.43 in)
(b)	Application of primer (glass side)	(e)	Dam rubber rear window	(h)	12 mm (0.47 in)
(c)	Adhesive	(f)	13 mm (0.51 in)		

(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 windshield glass was bonded, always lower the door glass assembly 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 and the antenna connector.

8. Install the trim panel assembly rear shelf. Ref. to EXTERIOR/INTERIOR TRIM>Rear Shelf Trim>INSTALLATION.

9. Install the trim panel assembly C pillar and the trim panel assembly C pillar LWR. Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>INSTALLATION.

10. Install the backrest assembly and rear seat cushion assembly. Ref. to SEATS>Rear Seat>INSTALLATION.

11. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

12. After curing of adhesive, pour the water on external surface of vehicle to check that there are no water leaks.

Caution:

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.

WIRING DIAGRAM

For the wiring diagram, refer to "Rear Defogger System" in the wiring diagram. Ref. to WIRING SYSTEM>Rear Defogger System>WIRING DIAGRAM.

INSPECTION

Note:

System name	Initial setting	Customize setting
Rr Defogger op. mode	Normal	Continuous*

***: When one of the following conditions occurs, the continuous operation is suspended and turned to the normal operation.**

- **Battery voltage remains at 10 V or less for 30 seconds.**
- **Body integrated unit custom setting, [Auto A/C Setting], is set to No.**

1. CHECK WITH SUBARU SELECT MONITOR

1. CHECK DTC.

1. Turn the ignition switch to ON.
2. Read DTCs of the following items using the Subaru Select Monitor. Ref. to LAN SYSTEM (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).
   - [Body Control]
   - [Front Relay Control Module]

Is DTC displayed?

Yes	Perform the diagnosis for the displayed DTCs.
No	Go to 2.

2. CHECK POWER SUPPLY CIRCUIT.

Display data of the following items using Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [Front Relay Control Module]
  - [BATT Voltage (Control)]
  - [BATT Voltage (BACKUP)]
  - [IGN Voltage]
- [Body control]
  - [BATT voltage (control)]
  - [BATT voltage (BACKUP)]
  - [IGN voltage]

Is the voltage 9 — 16 V?

Yes	Go to 3.
No	Check the harnesses of the battery, fuse, connector and power supply circuit. If there is no abnormality, replace the front relay control module or the body integrated unit.

3. CHECK BODY INTEGRATED UNIT SETTING.

Using the Subaru Select Monitor, check setting of [Auto A/C Setting]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is it set to [Support]?

Yes	Go to 4.
No	Change the customize setting to [Support].

4. CHECK REAR DEFOGGER SYSTEM OPERATION.

Check the rear defogger system operation. Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Active Test.

Does the rear defogger system operate normally?

Yes	Go to 5.
No	Check the harnesses of the heat wire, relay and output circuit. If there is no abnormality, replace the front relay control module.

5. CHECK DATA MONITOR.

Using Subaru Select Monitor, display [Rr Defogger SW] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display change between [OFF] ←→ [ON], when the rear defogger switch is operated?

Yes	Go to 8.
No	Go to 6.

6. CHECK INPUT CIRCUIT.

1. Switch to service diagnostics mode. Ref. to COCKPIT CONTROL (DIAGNOSTICS)>Service Diagnostics Mode>OPERATION.
2. Select [Function Check]. Ref. to COCKPIT CONTROL (DIAGNOSTICS)>Service Diagnostics Mode>OPERATION > SERVICE INSPECTION.
3. Check [Rr DEF] and [Push] are displayed when the rear defogger switch is pressed.
4. Check [Push] is switched to [Release] when the rear defogger switch is released.

Does it operate normally?

Yes	Go to 7.
No	Inspect the rear defogger switch and input circuit.

7. CHECK DTC.

1. Turn the ignition switch to ON.
2. Read the DTC of [Cockpit Control] using the Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

Is DTC displayed?

Yes	Perform the diagnosis for the displayed DTCs. Ref. to COCKPIT CONTROL (DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
No	Go to 8.

8. CHECK FRONT RELAY CONTROL MODULE.

Using Subaru Select Monitor, display [Rr Defogger output] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display change between [OFF] ←→ [ON], when the rear defogger switch is operated?

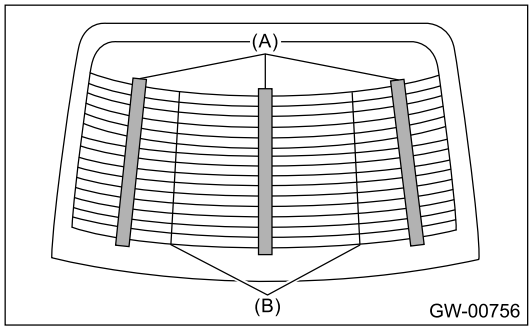
Yes	Replace the front relay control module. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.
No	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

2. HEAT WIRE INSPECTION

Caution:
When wiping off the stain on glass with cloth, use a dry and soft cloth and move it in the direction of the heat wire extension to avoid damage to the heat wire.

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.

Note:
Use the liquid crystal thermograph sheet every range it is separated with the separate line.



(A) Liquid crystal thermograph sheet

(B) Separate line

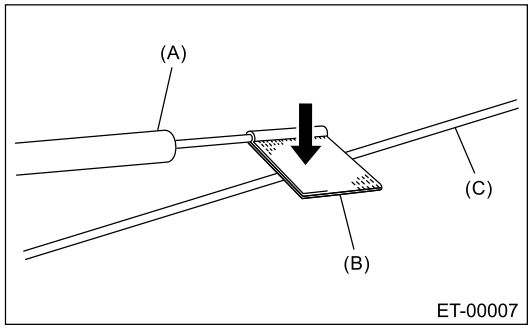
5. Determine the faulty heat wire by checking the color of the liquid crystal thermograph sheet.

Note:

- **Check from the inside of the rear gate glass if the response of liquid crystal thermograph sheet is not good.**
- **The time for the color change may differ depends on the surface temperature of the glass.**

Liquid crystal thermograph sheet	Criteria
Change occurred (red → blue)	Normal
No change (black)	Open

6. Wrap a piece of aluminum foil around the tip of tester probe and press it against the heat wire with your finger.



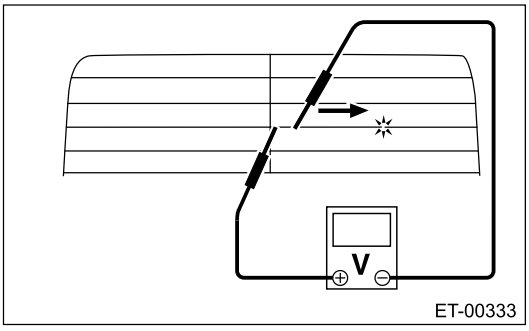
(A) Tester probe

(B) Aluminum foil

(C) Heat wire

7. Fasten the tester probe on the positive (+) side and negative (−) side to end of positive side of the section that has been found to include an open in the step 5.

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 GLASS/WINDOWS/MIRRORS>Rear Window Defogger System>REPAIR.

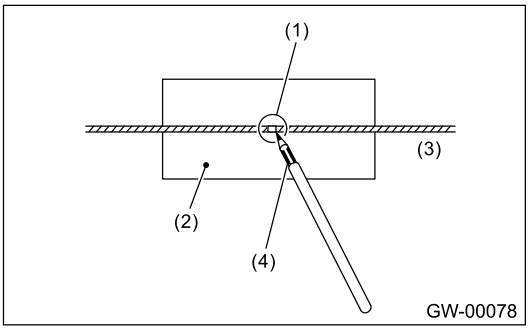
GLASS/WINDOWS/MIRRORS > Rear Window Defogger System

REPAIR

1. Clean the broken portion with alcohol or appropriate cleaning solvent.
2. Mask both side of wire with masking tape.
3. Apply the repairing material to the broken portion.

   Preparation items:

   Repairing material: DUPONT No. 4817 or equivalent



(1) Broken portion
(2) Masking tape
(3) Broken wire
(4) Conductive silver composition

4. After repair, check the wire.

WIRING DIAGRAM

For the wiring diagram, refer to “Wiper Deicer System” in the wiring diagram. Ref. to WIRING SYSTEM>Wiper Deicer System>WIRING DIAGRAM.

INSPECTION

Note:

System name	Initial setting	Customize setting
Rr Defogger op. mode	Normal	Continuous *

***: When one of the following conditions occurs, the continuous operation is suspended and turned to the normal operation.**

- **Ambient temperature at 5°C (41°F) or more continues for 10 seconds.**
- **Ambient temperature sensor malfunction continues for 10 seconds.**
- **Vehicle speed less than 15 km/h (9 MPH)**
- **CAN communication malfunction continues for 10 seconds**
- **Battery voltage remains at 10 V or less for 30 seconds.**
- **SI-DRIVE [I] mode driving continues for 10 seconds.**

1. CHECK WITH SUBARU SELECT MONITOR

1. CHECK DTC.

1. Turn the ignition switch to ON.
2. Read DTCs of the following items using the Subaru Select Monitor. Ref. to LAN SYSTEM (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).
   - [Body Control]
   - [Front Relay Control Module]

Is DTC displayed?

Yes	Perform the diagnosis for the displayed DTCs.
No	Go to 2.

2. CHECK POWER SUPPLY CIRCUIT.

Display data of the following items using Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [Front Relay Control Module]
  - [BATT Voltage (Control)]
  - [BATT Voltage (BACKUP)]
  - [IGN Voltage]
- [Body control]
  - [BATT voltage (control)]
  - [BATT voltage (BACKUP)]
  - [IGN voltage]

Is the voltage 9 — 16 V?

Yes	Go to 3.
No	Check the harnesses of the battery, fuse, connector and power supply circuit. If there is no abnormality, replace the front relay control module or the body integrated unit.

3. CHECK BODY INTEGRATED UNIT SETTING.

Using the Subaru Select Monitor, check setting of [wiperdeicer]. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

Is it set to [Support]?

Yes	Go to 4.
No	Change the customize setting to [Support].

4. CHECK WIPER DEICER SYSTEM OPERATION.

Check the wiper deicer system operation. Ref. to FRONT RELAY CONTROL MODULE (DIAGNOSTICS)>Active Test.

Does the wiper deicer system operate normally?

Yes	Go to 5.
No	Check the harnesses of the heat wire, relay and output circuit. If there is no abnormality, replace the front relay control module.

5. CHECK DATA MONITOR.

Using Subaru Select Monitor, display [Rr Defogger SW] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display change between [OFF] ←→ [ON], when the rear defogger switch is operated?

Yes	Go to 8.
No	Go to 6.

6. CHECK INPUT CIRCUIT.

1. Switch to service diagnostics mode. Ref. to COCKPIT CONTROL (DIAGNOSTICS)>Service Diagnostics Mode>OPERATION.
2. Select [Function Check]. Ref. to COCKPIT CONTROL (DIAGNOSTICS)>Service Diagnostics Mode>OPERATION > SERVICE INSPECTION.
3. Check [Rr DEF] and [Push] are displayed when the rear defogger switch is pressed.
4. Check [Push] is switched to [Release] when the rear defogger switch is released.

Does it operate normally?

Yes	Go to 7.
No	Inspect the rear defogger switch and input circuit.

7. CHECK DTC.

1. Turn the ignition switch to ON.
2. Read the DTC of [Cockpit Control] using the Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

Is DTC displayed?

Yes	Perform the diagnosis for the displayed DTCs. Ref. to COCKPIT CONTROL (DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
No	Go to 8.

8. CHECK FRONT RELAY CONTROL MODULE.

Using Subaru Select Monitor, display [Rr Defogger output] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display change between [OFF] ←→ [ON], when the rear defogger switch is operated?

Yes	Replace the front relay control module. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Front Relay Control Module.
No	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

2. HEAT WIRE INSPECTION

For inspection of the heat wire, refer to "HEAT WIRE INSPECTION" of "Rear Window Defogger System". Ref. to GLASS/WINDOWS/MIRRORS>Rear Window Defogger System>INSPECTION > HEAT WIRE INSPECTION.

Note:
Heat wire inspection needs removing/installing procedure of instrument panel assembly.

GLASS/WINDOWS/MIRRORS > Wiper Deicer System

REPAIR

For repair of the heat wire, refer to "REPAIR" of "Rear Window Defogger System". Ref. to GLASS/WINDOWS/MIRRORS>Rear Window Defogger System>REPAIR.

Note:
Heat wire repair needs removing/installing procedure of instrument panel assembly.

BODY STRUCTURE

BS

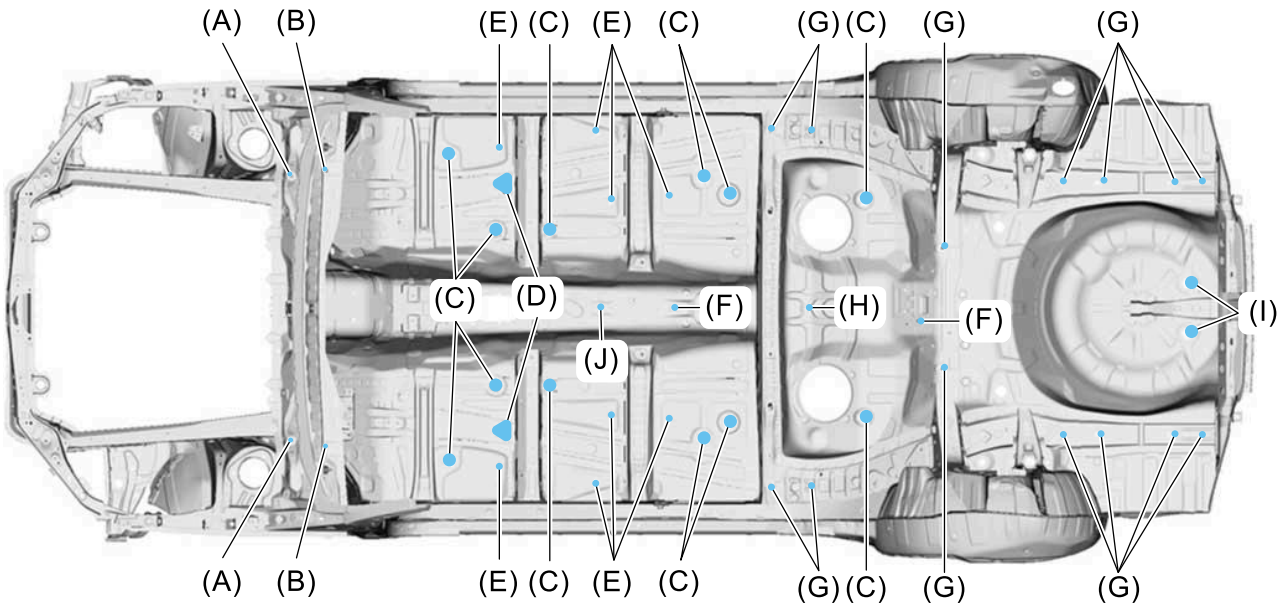
1. General Description
2. Plug / Grommet Sheet

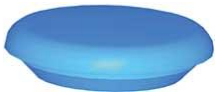
SPECIFICATION

Refer to “Body Repair Manual” for general description of body structure, reference points and reference dimensions.

COMPONENT

1. UPPER SURFACE

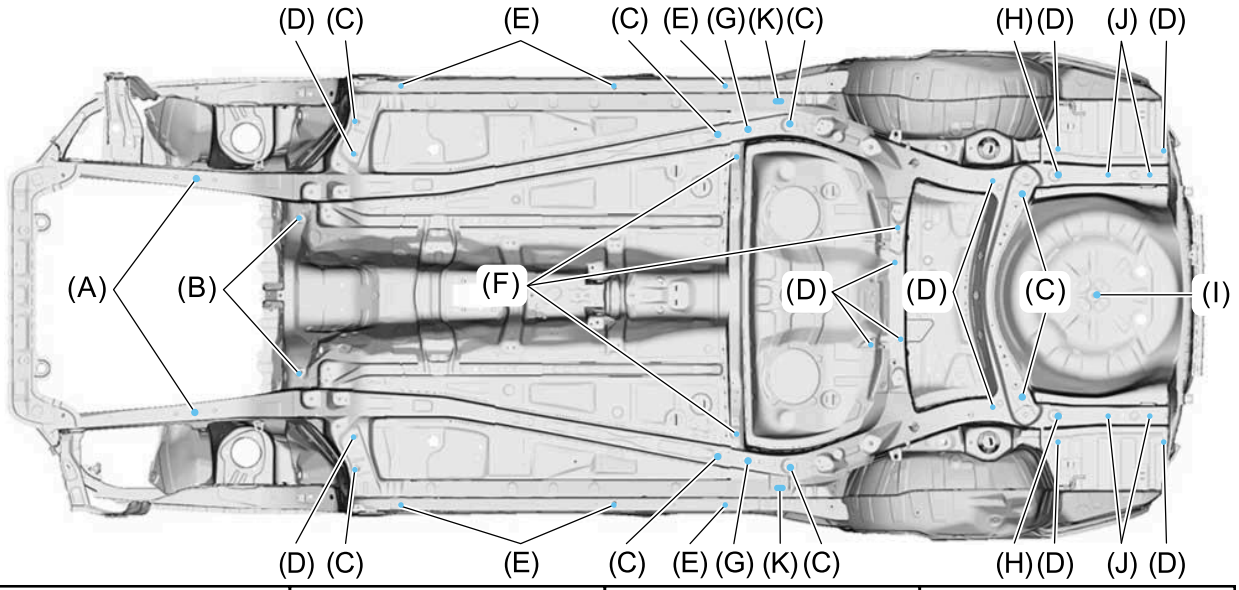


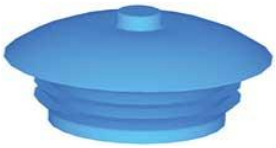
(A)	(B)	(C)	(D)
			
(E)	**(F)**	**(G)**	**(H)**
			
(I)	**(J)**		
			

BS-15224

(A) Plug
(B) Grommet sheet
(C) Plug
(D) Plug
(E) Plug
(F) Plug
(G) Grommet sheet
(H) Grommet sheet
(I) Plug
(J) Plug

2. LOWER SURFACE



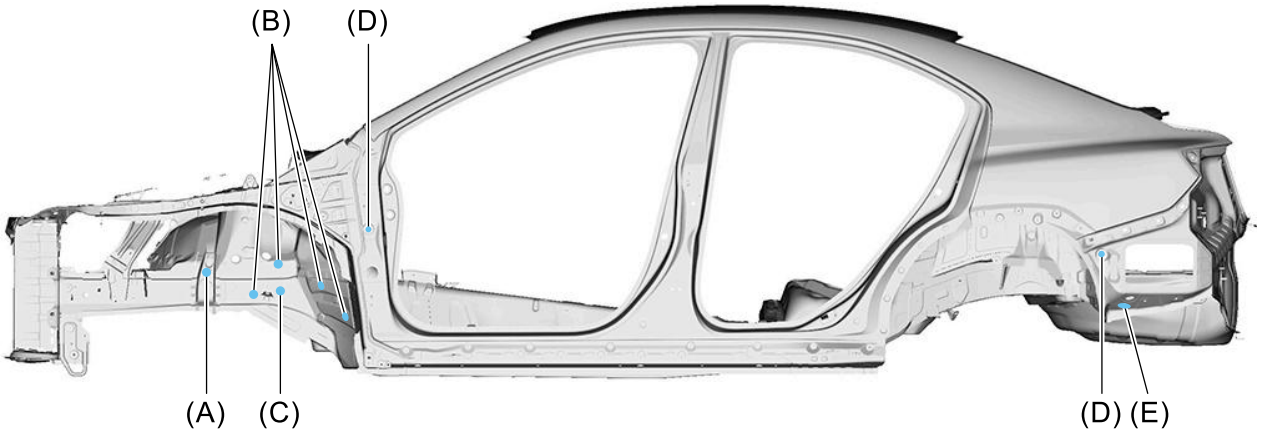
(A)	(B)	(C)	(D)
			
(E)	(F)	(G)	(H)
			
(I)	(J)	(K)	
			

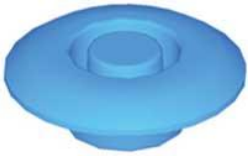
BS-15208

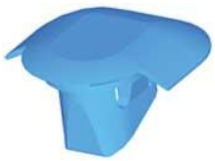
(A) Plug
(B) Plug
(C) Plug
(D) Grommet sheet
(E) Plug
(F) Plug
(G) Plug
(H) Plug
(I) Plug
(J) Plug
(K) Plug

3. SIDE SURFACE

Note:
Illustration indicates the LH side. The structure of RH side is symmetrical.



(A)	(B)	(C)	(D)
			

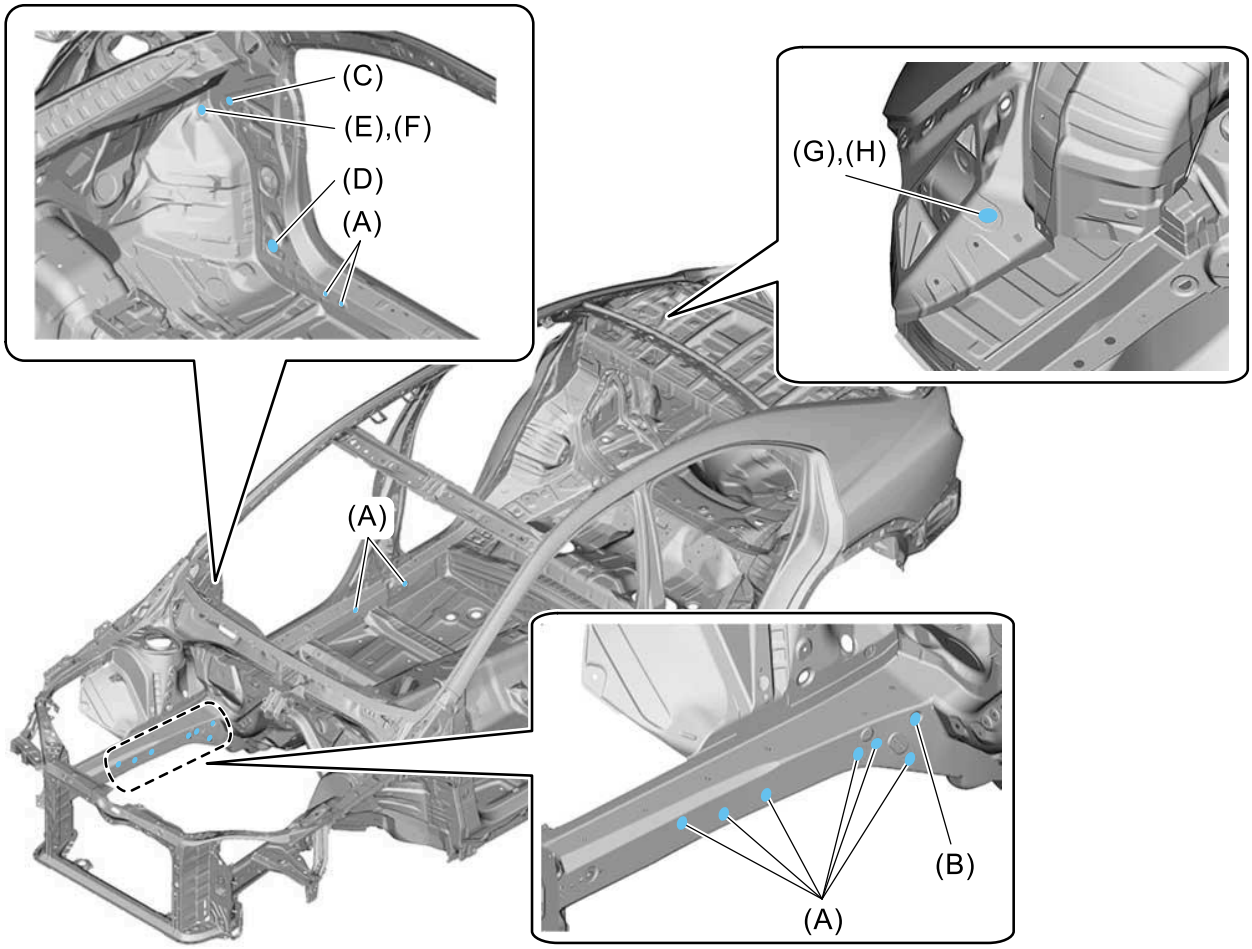
(E)


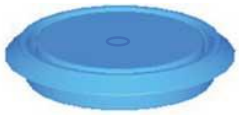
BS-15209

(A) Plug
(B) Grommet sheet
(C) Plug
(D) Plug
(E) Plug

4. OBLIQUE VIEW

Note:
Illustration indicates the RH side. The structure of LH side is symmetrical.

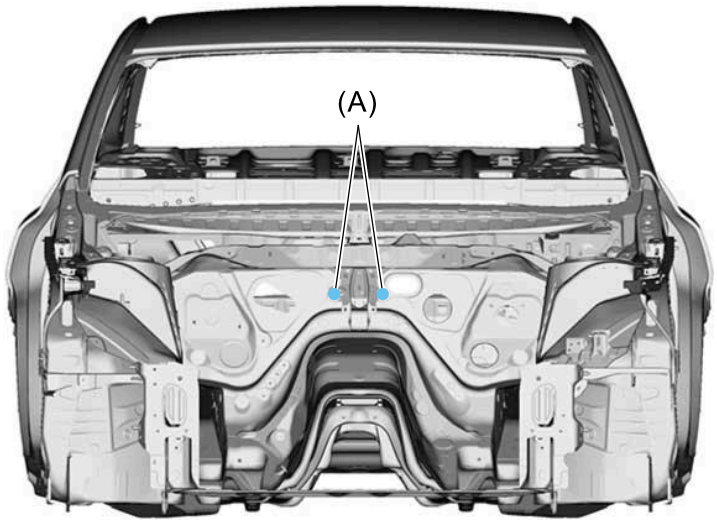


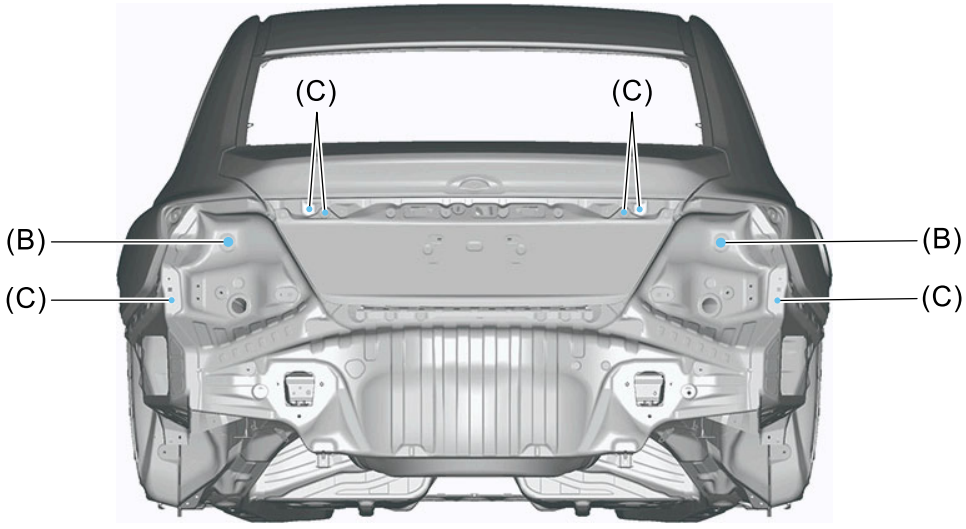
(A)	(B)	(C)	(D)
			
(E)	(F)	(G)	(H)
			

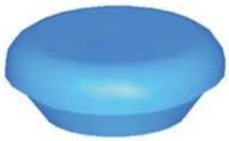
BS-15210

(A) Grommet sheet
(B) Plug
(C) Plug (right side only)
(D) Plug
(E) Plug (model without sunroof)
(F) Plug (model with sunroof)
(G) Plug (model without sunroof)
(H) Plug (model with sunroof)

5. FRONT SIDE / BACK SIDE





(A)	(B)	(C)
		

BS-15211

(A) Plug

(B) Plug

(C) Plug

INSTRUMENTATION/DRIVER INFO

IDI

1. General Description
2. Relay and Fuse
3. Combination Meter System
4. Combination Meter
5. Warning Box
6. Switches and Harness

INSTRUMENTATION/DRIVER INFO > General Description

CAUTION

- When performing service operation, refer to “Repair Contents” in “General Description”. Ref. to REPAIR CONTENTS>Repair Contents.
- When performing work on the sensors or modules, be careful of the following.
  - Before disconnecting electrical connectors, be sure to disconnect the ground terminal from the battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
  - Do not apply any impact. If the parts are accidentally dropped, replace with a new part.
  - Do not expose to high-temperature and humidity.
- When replacing the parts provided with memory functions, record the memory contents before disconnecting the ground terminal from the battery sensor.
- Refer to “CAUTION” of “General Description” in “AIRBAG SYSTEM” section. Ref. to AIRBAG SYSTEM>General Description>CAUTION.
- Use gloves to avoid damage to and get fingerprints on the glass surface. Wipe off using a soft cloth, if the part is contaminated.

INSTRUMENTATION/DRIVER INFO > General Description

SPECIFICATION

1. METER

Item	Operation method	Drive control
Speedometer	Stepping motor type	Combination meter
Tachometer		
Engine coolant temperature gauge		
Fuel gauge		

2. INDICATOR

Note:
Specifications of the indicator vary depending on the grade.

Item	Drive control
ODO indicator	Combination meter
Trip indicator	
Select lever / shift position indicator	
Information (intervention) display	
FUEL meter	
Engine coolant temperature gauge	
Warning and indicator display • ABS warning light • Tire pressure warning light • STEERING warning light • VDC warning light / VDC operation indicator light • VDC OFF indicator light • EPB operation indicator light	

Item	Drive control
• EPB warning light • Brake fluid level warning light • AVH operation indicator light/AVH ON indicator light • Electronically-controlled damper warning light • ADB warning light • ADB operation indicator light (green) • LED low beam • Turn signal indicator light • SRH indicator light • SRH OFF indicator light • Auto leveler indicator light • High beam indicator light • Front fog light indicator light • Lighting indicator light • Driver’s seat belt warning light • Airbag warning light • Fuel level warning light • Engine oil level indicator light • Malfunction indicator light • Oil pressure warning light • AT oil temperature indicator light • AWD indicator light • Charge warning light • Sonar alarm OFF indicator light • Pre-collision brake OFF indicator light • BSD/RCTA indicator light • BSD/RCTA OFF indicator light • RAB indicator light • RAB OFF indicator light • Meter illumination back light • Hood open indicator light • Door open indicator light • Low ambient temperature indicator light • Washer fluid level indicator light • Auto Start Stop operation indicator light (green) • Auto Start Stop warning • Auto Start Stop OFF indicator light (yellow) • Auto Start Stop temporary stop (white) • HILL DESCENT operation indicator light • AES OFF indicator light • ELKA OFF indicator light • Hill start assist operation indicator light • TRACK indicator light	
EyeSight system indicator • Adaptive cruise • Constant speed cruise	

Item	Drive control
• READY • Preceding vehicle • Following distance setting • Set speed • Traffic lane • EyeSight warning • EyeSight temporary stop • OFF • HOLD • Lane keep • Lane departure warning OFF indicator light	
Security indicator light	Body integrated unit

3. WARNING BOX

Display	Display method
Passenger's seat belt warning light	LED
Rear seat belt warning light	

INSTRUMENTATION/DRIVER INFO > General Description

LOCATION

For location, refer to "Electrical Component Location" for "COMBINATION METER (DIAGNOSTICS)" section.
Ref. to COMBINATION METER (DIAGNOSTICS)>Electrical Component Location.

INSTRUMENTATION/DRIVER INFO > General Description

PREPARATION TOOL

1. SUBARU SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 STSSM4	—	SUBARU SELECT MONITOR 4	Used for setting of each function and troubleshooting for electrical system. **Note:** • **For detailed operation procedures, refer to "Help" of application.** • **Used together with interface for Subaru Select Monitor (such as DST-i and DST-010).**

2. OTHER

	Remarks
Circuit tester	Used for measuring resistance, voltage and current.

INSTRUMENTATION/DRIVER INFO > Relay and Fuse

LOCATION

For the location, refer to “FUSE AND RELAY” in the wiring diagram. Ref. to WIRING SYSTEM>Fuse And Relay.

Note:
For details of relay and fuse, refer to “DC POWER SUPPLY CIRCUIT”. Ref. to WIRING SYSTEM>Power Supply Circuit.

INSTRUMENTATION/DRIVER INFO > Relay and Fuse

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.

INSTRUMENTATION/DRIVER INFO > Combination Meter System

WIRING DIAGRAM

For the wiring diagram, refer to “Combination Meter System” in the wiring diagram. Ref. to WIRING SYSTEM>Combination Meter System>WIRING DIAGRAM.

INSTRUMENTATION/DRIVER INFO > Combination Meter System

INSPECTION

1. BASIC INSPECTION

For basic inspection, refer to “Basic Diagnostic Procedure” of “COMBINATION METER (DIAGNOSTICS)” section. Ref. to COMBINATION METER (DIAGNOSTICS)>Basic Diagnostic Procedure.

2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to “System Block Diagram” in “COMBINATION METER (DIAGNOSTICS)” section. Ref. to COMBINATION METER (DIAGNOSTICS)>General Description>SYSTEM BLOCK DIAGRAM.

3. MODULE I/O SIGNAL

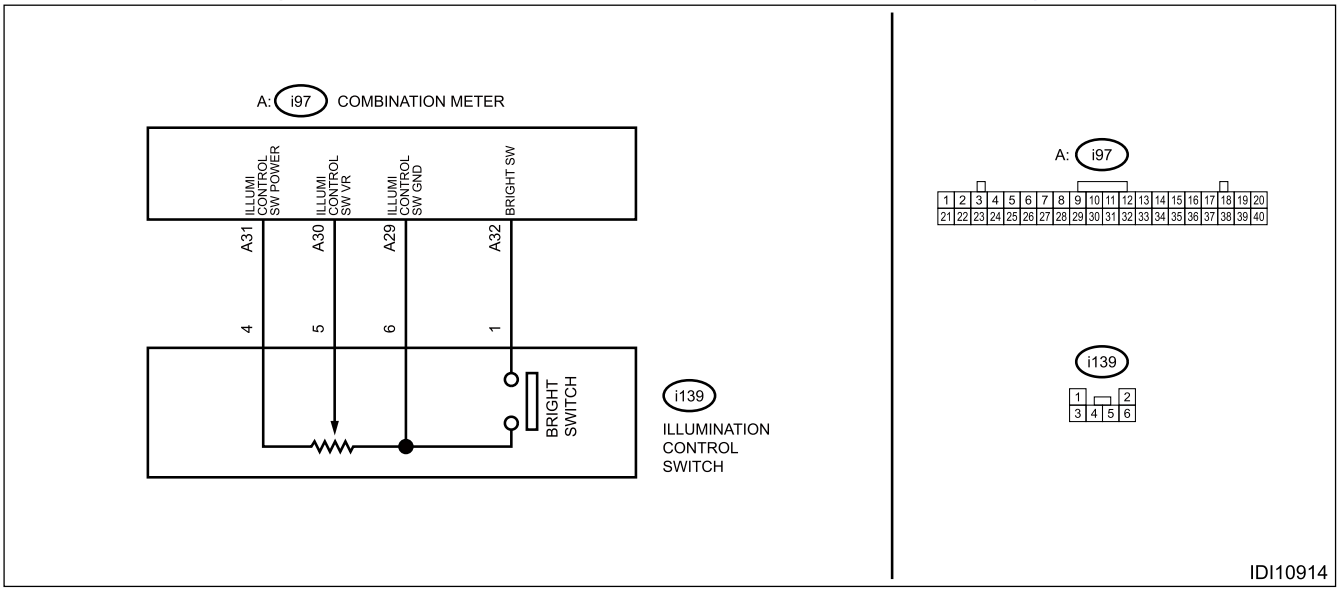
For the specification (electrical component), refer to “Control Module I/O Signal” of “COMBINATION METER (DIAGNOSTICS)” section. Ref. to COMBINATION METER (DIAGNOSTICS)>Control Module I/O Signal.

4. TROUBLE SYMPTOM

Illumination intensity does not change even when the illumination control switch is operated.

Wiring diagram:

Combination meter system Ref. to WIRING SYSTEM>Combination Meter System>WIRING DIAGRAM.



1. CHECK DATA MONITOR.

Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Combination Meter]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [Bright switch input state]
- [Illumination control switch input state]

Do the display change as [OFF] ⟷ [ON] and the value range from 0 to 100 when the bright switch and illumination control switch are operated?

Yes — Replace the combination meter assembly. Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter.

No — Go to 2.

2. CHECK ILLUMINATION CONTROL SWITCH UNIT.

Check the illumination control switch. Ref. to INSTRUMENTATION/DRIVER INFO>Switches and Harness>INSPECTION > ILLUMINATION CONTROL SWITCH.

Is the switch normal?

Yes — Go to 3.

No — Replace the illumination control switch. Ref. to INSTRUMENTATION/DRIVER INFO>Switches and Harness.

3. CHECK HARNESS.

1. Disconnect the connectors of combination meter assembly and illumination control switch.
2. Measure the resistance between the combination meter assembly and the illumination control switch.

Connector & terminal

(i97) No. 29 — (i139) No. 6:
(i97) No. 30 — (i139) No. 5:
(i97) No. 31 — (i139) No. 4:
(i97) No. 32 — (i139) No. 1:

Is the resistance less than 1 Ω?

Yes	Replace the combination meter assembly. Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter.
No	Repair or replace the defective part.

INSTRUMENTATION/DRIVER INFO > Combination Meter System

NOTE

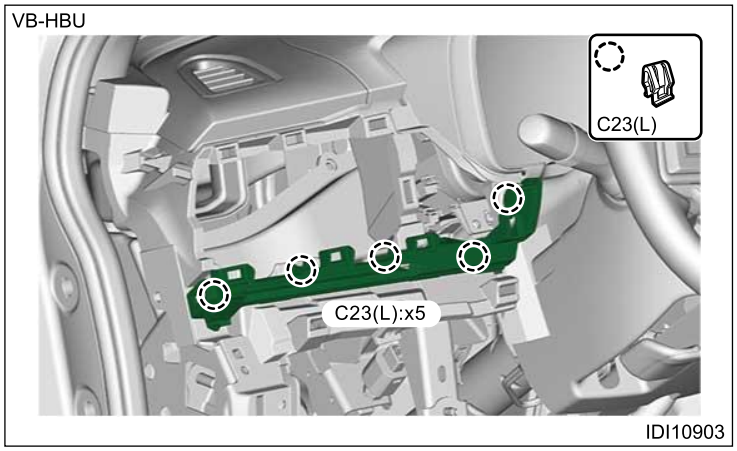
For procedure of components in the combination meter system, refer to the sections below.

- Combination meter assembly: Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter.
- Switches and harness: Ref. to INSTRUMENTATION/DRIVER INFO>Switches and Harness.

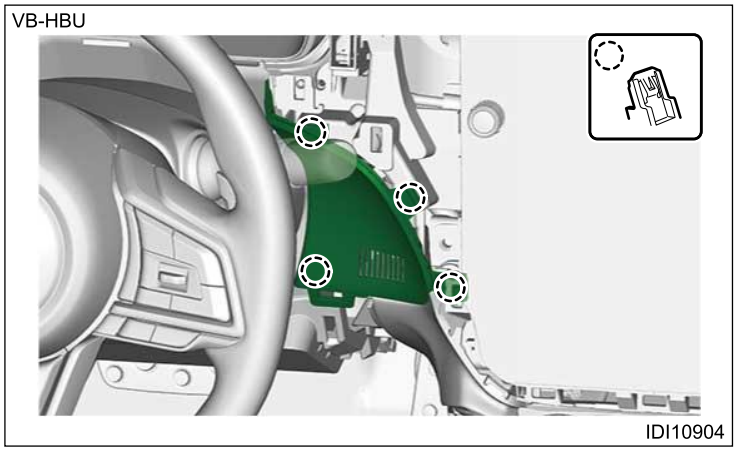
REMOVAL

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. When the combination meter assembly is replaced with a new part, perform the variant work. Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter>REPLACEMENT > VARIANT WORK.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Release the lock, tilt the steering column to the lowest end and fully extend the column by the telescopic system.
4. Remove the cover assembly instrument panel side LH and the ornament panel mid driver assembly. Ref. to AIR CONDITIONER>Air Vent Grille>REMOVAL > SIDE GRILLE.
5. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
6. Release the clips, and remove the light holder driver.



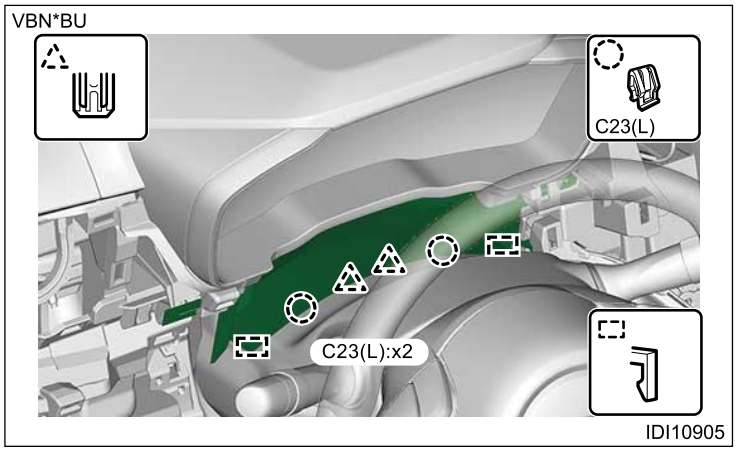
7. Remove the ornament panel mid passenger and panel assembly center. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>REMOVAL.
8. Remove the cover starter switch. (Model without push button ignition starter)



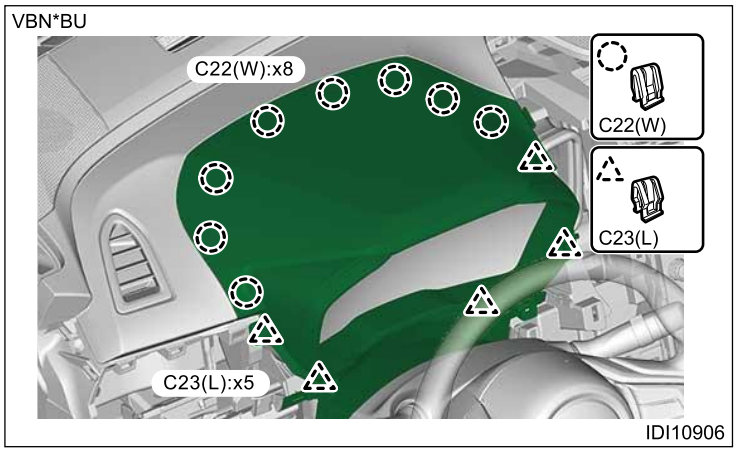
9. Remove the panel starter switch. (Model with push button ignition starter) Ref. to SECURITY AND LOCKS>Push Button Ignition Switch>REMOVAL.

10. Remove the visor assembly.

(1) Release the clips and claws of the cover steering UPR.



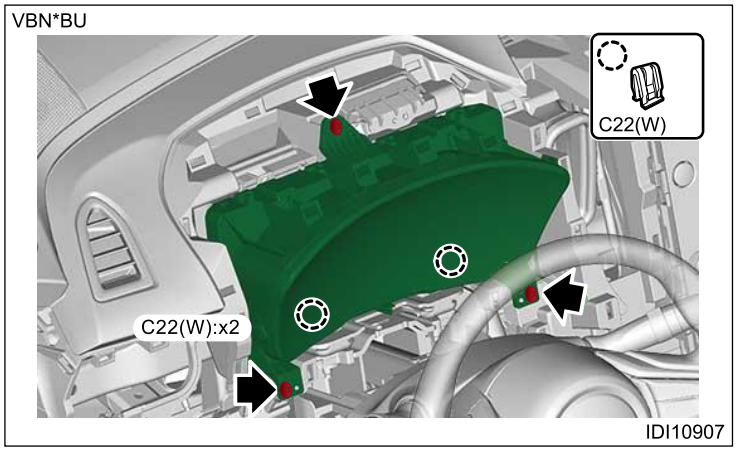
(2) Release the clips, and remove the visor assembly.



11. Remove the combination meter assembly.

Caution:
Be careful not to damage the meter glass or instrument panel.

(1) Release the screws and clips and pull out the combination meter assembly.



(2) Disconnect the connector and remove the combination meter assembly.

INSTRUMENTATION/DRIVER INFO > Combination Meter

INSTALLATION

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

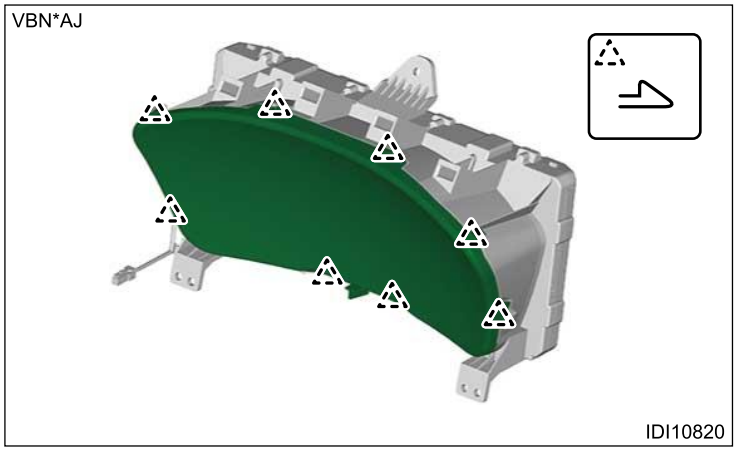
1. Connect the connector and install the combination meter assembly.
2. Install the visor assembly.
3. Install the panel starter switch. (Model with push button ignition starter) Ref. to SECURITY AND LOCKS>Push Button Ignition Switch>INSTALLATION.
4. Install the cover starter switch. (Model without push button ignition starter)
5. Install the panel assembly center and the ornament panel mid passenger. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>INSTALLATION.
6. Install the light holder driver.
7. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
8. Install the ornament panel mid driver assembly and cover assembly instrument panel side LH. Ref. to AIR CONDITIONER>Air Vent Grille>INSTALLATION > SIDE GRILLE.
9. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
10. When the combination meter assembly was replaced with a new part, perform the variant work. Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter>REPLACEMENT > VARIANT WORK.

INSTRUMENTATION/DRIVER INFO > Combination Meter

DISASSEMBLY

Caution:
- **Use gloves to avoid damage and getting fingerprints on the glass surface and meter surfaces.**
- **Be sure not to touch the meter indicator needle.**
- **Because LED components are used for all of warning lights and indicator lights, they are not removable from the combination meter assembly.**

1. Release the claws, and then remove the glass combination meter.



INSTRUMENTATION/DRIVER INFO > Combination Meter

ASSEMBLY

Caution:

- **Use gloves to avoid damage and getting fingerprints on the glass surface and meter surfaces.**
- **Be sure not to touch the meter LCD.**

1. Install the glass combination meter.

REPLACEMENT

1. VARIANT WORK

Perform when replacing with a new combination meter assembly.

- When the combination meter before replacement can communicate with Subaru Select Monitor ([Read Control module setting information] is workable): Perform the operation procedure A.
- When the combination meter before replacement cannot communicate with Subaru Select Monitor ([Read Control module setting information] is not workable): Perform the operation procedure B.

Caution:
When incorrect information is written by [Reading and Writing of the ECU Configuration Information and Odometer Value], [Write ECU setting save data] and [Write ECU setting 12 columns of models], a new combination meter cannot be used because correct information is not displayed. Obtain another new combination meter and write information again.

Item		Contents
[Read Control module setting information]		Read the setting information from the combination meter before replacement, and save it to the Subaru Select Monitor.*1
[Write Control module setting information]	[Write ECU setting save data]	Write the setting information saved by [Read Control module setting information] to the new combination meter.*2
	[Write ECU setting 12 columns of models]	Using applied models and option codes, write the setting information to the new combination meter.*2
[Reading and Writing of the ECU Configuration Information and Odometer Value]		Read the setting information and odometer value from the combination meter before replacement, and write them to the new combination meter.

*1: Odometer value reading and storing are not possible

*2: Odometer value writing is not possible

OPERATION PROCEDURE A

Caution:
- **Use wire (USB cable) to connect to Subaru Select Monitor.**
- **Carry-over of the odometer value is possible only once. If failed, odometer carry-over cannot be performed anymore.**
- **When odometer value reading is performed, the odometer displays "------" and continued use of the combination meter assembly is impossible.**
- **When the power supply of the Subaru Select Monitor is turned OFF during work, the odometer value data is cleared and carry-over becomes impossible. Be careful of the state of power supply connection of Subaru Select Monitor.**

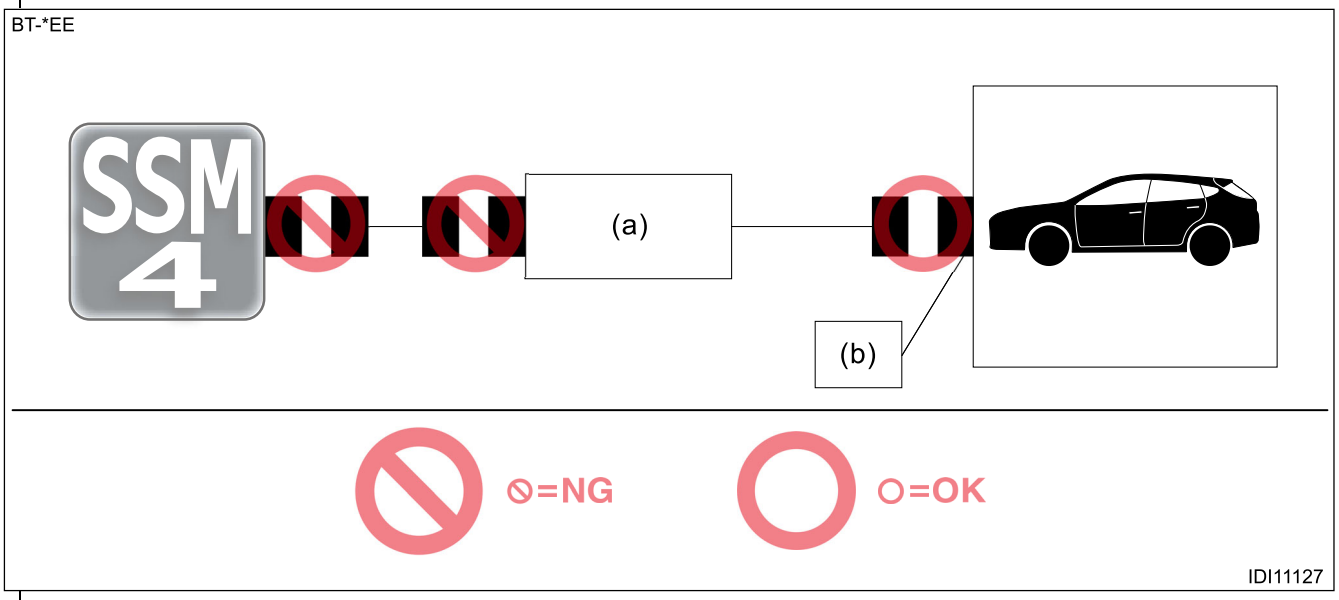
1. Read and store the setting information and odometer value.
(1) Connect the Subaru Select Monitor and then turn the ignition switch to ON.

(2) Select [Reading and Writing of the ECU Configuration Information and Odometer Value] on [Work Support] of Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Work Support>OPERATION.
(3) Save under a new name according to the display screen.
(4) When [Do you read the Odometer Value? Odometer of the Meter is locked] is displayed, select the [YES] button.
(5) Confirm that [Read the Odometer Value] is displayed, and then turn the ignition switch to OFF.

2. Replace the combination meter assembly with a new part. Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter.

Caution:
Do not perform the following. Otherwise, saved odometer values will be cleared.
- **Turn the power supply of Subaru Select Monitor to OFF.**
- **Disconnect the USB cable between Subaru Select Monitor and the interface for Subaru Select Monitor.**

Note:
The data link connector can be removed. If it is interfering with the work, move it outside the vehicle.



(a) Interface for Subaru Select Monitor (b) Data link connector

3. Write the setting information and odometer value.

Note:
When the odometer value writing operation is completed correctly, the odometer value is automatically cleared from the Subaru Select Monitor.

(1) [Did you replace the Meter?] is displayed. Select the [YES] button.
(2) When [Do you write Odometer Value?] is displayed, select the [YES] button.
(3) When [Completed the writing of Odometer Value. Write the ECU Configuration Information] is displayed, select the [OK] button.
(4) Select the file saved with [Reading and Writing of the ECU Configuration Information and Odometer Value], and click the [Execution] button.
(5) When [Write?] is displayed, select the [YES] button.

(6) Confirm that [Write operation was completed.] is displayed, and click the [OK] button.

4. Check if the combination meter assembly operates normally.

OPERATION PROCEDURE B

Note:
With [Write ECU setting 12 columns of models], carry-over of odometer value cannot be performed.

1. Replace the combination meter assembly with a new part. Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter.
2. Write the vehicle data.
   (1) Connect the Subaru Select Monitor and then turn the ignition switch to ON.
   (2) Select [Write Control module setting information] on [Work Support] of Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Work Support.
   (3) From the item list, select [Write ECU setting 12 columns of models]. Enter the applied model (7 digits) and click the [OK] button. Ref. to IDENTIFICATION > IDENTIFICATION NUMBER & LABEL LOCATIONS.
   (4) Enter the option code (4 digits) and click the [OK] button. Ref. to IDENTIFICATION > IDENTIFICATION NUMBER & LABEL LOCATIONS.
   (5) Confirm the vehicle information on [Write ECU setting 12 columns of models] screen, and click the [OK] button.
   (6) When [Write?] is displayed, select the [YES] button.
   (7) Confirm that [Write operation is complete.] is displayed, and click the [OK] button.
3. Check if the combination meter assembly operates normally.

INSTRUMENTATION/DRIVER INFO > Combination Meter

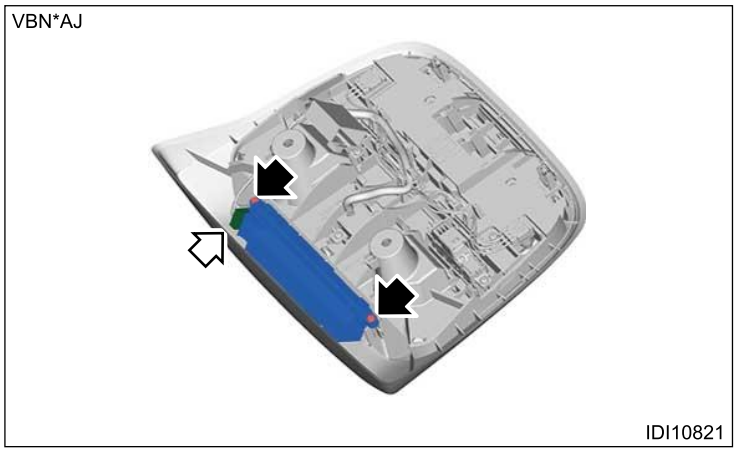
INSPECTION

1. Using the Subaru Select Monitor, perform [Buzzer Check] on [Active Test] of [Combination Meter]. Ref. to COMBINATION METER (DIAGNOSTICS)>Active Test.
2. If no buzzer sounds, replace the combination meter assembly.

INSTRUMENTATION/DRIVER INFO > Warning Box

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the light assembly map. Ref. to LIGHTING SYSTEM>Spot Map Light>REMOVAL.
3. Remove connector and screw, and remove the warning box.



INSTRUMENTATION/DRIVER INFO > Warning Box

INSTALLATION

Caution:
Make sure that each indicator operates normally.

1. Install the warning box and connect the connector.
2. Install the light assembly map. Ref. to LIGHTING SYSTEM>Spot Map Light>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

REMOVAL

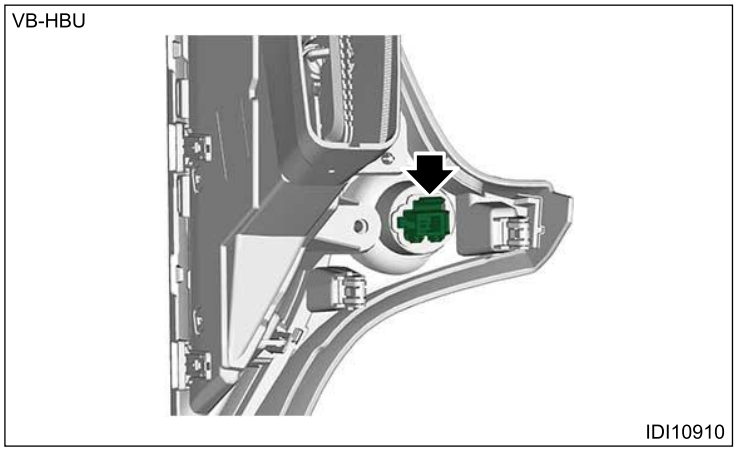
1. MULTI INFORMATION DISPLAY SWITCH

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Set the steering wheel to the straight-ahead position.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module>REMOVAL.
4. Remove the steering wheel assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>REMOVAL.
5. Remove the switch assembly steering (MID). Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>DISASSEMBLY.

2. TRIP RESET SWITCH

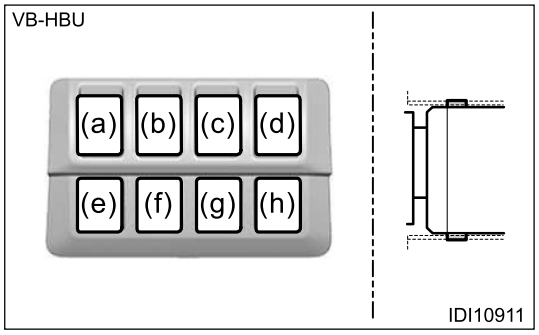
1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the cover assembly instrument panel side RH and the panel assembly center. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>REMOVAL.
3. Release the claws, and remove the switch assembly meter.



3. ILLUMINATION CONTROL SWITCH

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

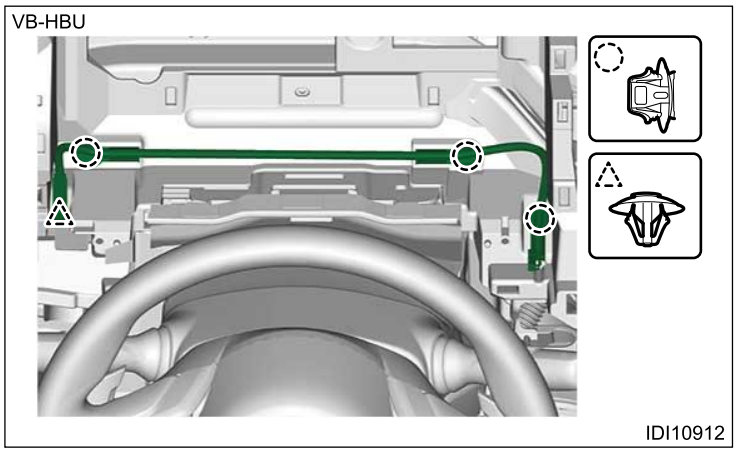
1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
3. Release the claws and remove the illumination control switch (d).



4. METER CORD

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the combination meter assembly. Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter>REMOVAL.
3. Release the clips, and remove the meter cord.



INSTRUMENTATION/DRIVER INFO > Switches and Harness

INSTALLATION

1. MULTI INFORMATION DISPLAY SWITCH

Caution:
- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**

1. Install the switch assembly steering (MID). Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>ASSEMBLY.
2. Align the center position of the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector>ADJUSTMENT.

3. Install the steering wheel assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>INSTALLATION.
4. Install the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module>INSTALLATION.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. TRIP RESET SWITCH

1. Install the switch assembly meter.
2. Install the panel assembly center and cover assembly instrument panel side RH. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

3. ILLUMINATION CONTROL SWITCH

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the illumination control switch.
2. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

4. METER CORD

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

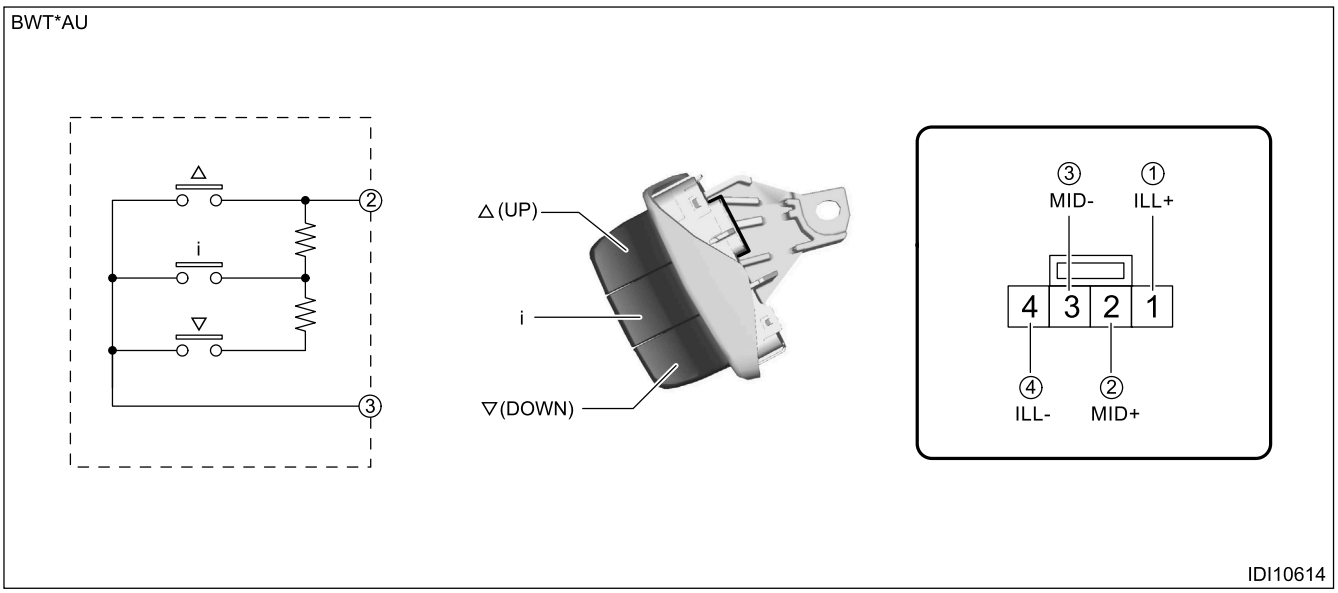
1. Install the meter cord.
2. Install the combination meter assembly. Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

INSTRUMENTATION/DRIVER INFO > Switches and Harness

INSPECTION

1. MULTI INFORMATION DISPLAY SWITCH

1. Measure the resistance between connector terminals.



Terminal No.	Inspection conditions		Standard
3 — 2	△ (UP) i ▽ (DOWN)	All OFF	Approx. 3 MΩ or more
	△ (UP)	ON	Less than 1 Ω
	i	ON	Approx. 1,000 Ω
	▽ (DOWN)	ON	Approx. 3,700 Ω

2. Apply battery voltage between the connector terminals to check lighting condition of illumination inside the switch.

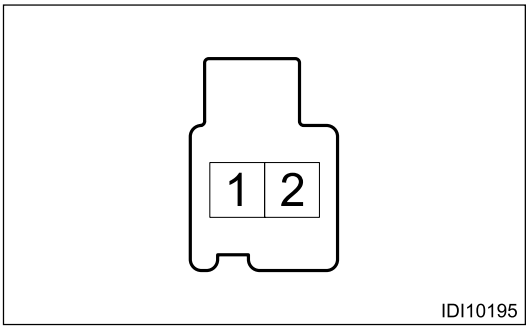
Caution:
When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.
Incorrect polarity connection may cause LED damage inside the switch.

Terminal No.	Inspection conditions	Specification
1 (+) — 4 (−)	Apply battery voltage.	Light ON

3. Replace the switch assembly steering (MID) if it is found defective.

2. TRIP RESET SWITCH

1. Measure the resistance between connector terminals.

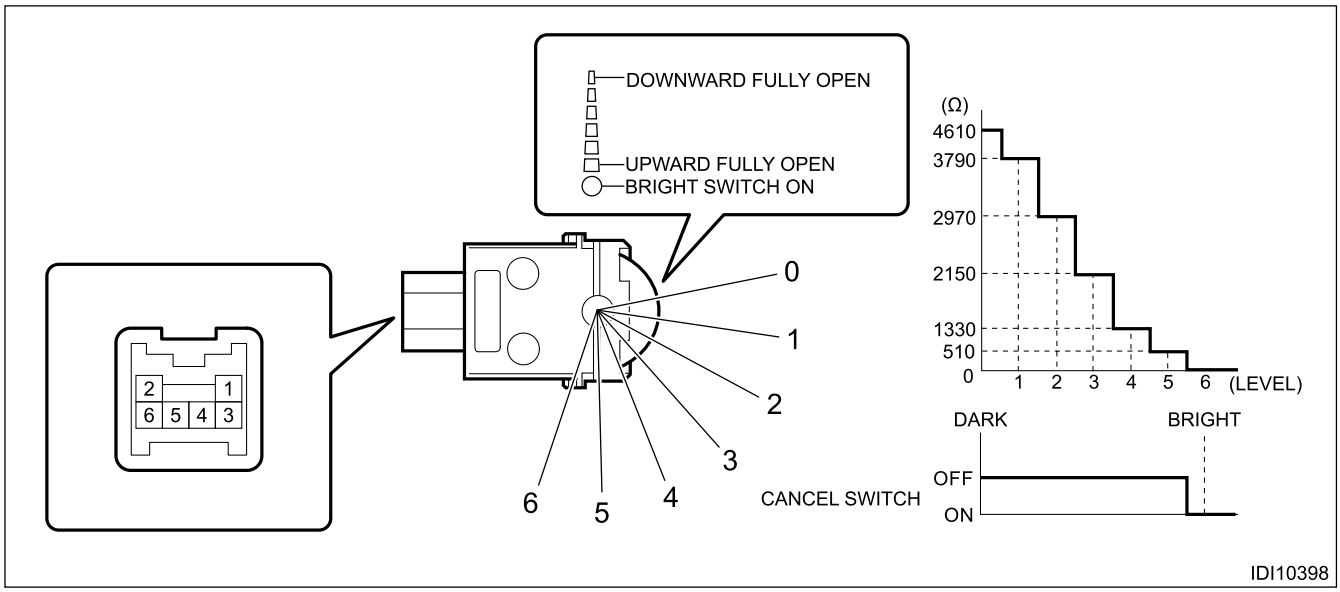


Terminal No.	Inspection conditions	Standard
1 — 2	Switch OFF	1 MΩ or more
	Switch ON	Less than 1 Ω

2. Replace the switch assembly meter if it is found defective.

3. ILLUMINATION CONTROL SWITCH

1. Measure the resistance between connector terminals.



Terminal No.	Inspection conditions	Standard
1 — 6	Bright switch OFF	1 MΩ or more
	Bright switch ON	Less than 1 Ω
4 — 6	Always	Approx. 4,710 Ω
5 — 6	Illumination control switch upward fully open	Approx. 510 Ω
	Illumination control switch downward fully open	Approx. 4,610 Ω

2. Apply battery voltage between the connector terminals to check lighting condition of illumination inside the switch.

Caution:

When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.

Incorrect polarity connection may cause LED damage inside the switch.

Terminal No.	Inspection conditions	Specification
2 (+) — 3 (−)	Apply battery voltage.	Light ON

3. Replace the illumination control switch if it is found defective.

SEATS

SE

1. General Description
2. Relay and Fuse
3. Front Seat
4. Rear Seat
5. Power Seat System
6. Power Seat
7. Seat Heater System
8. Seat Heater

SEATS > General Description

CAUTION

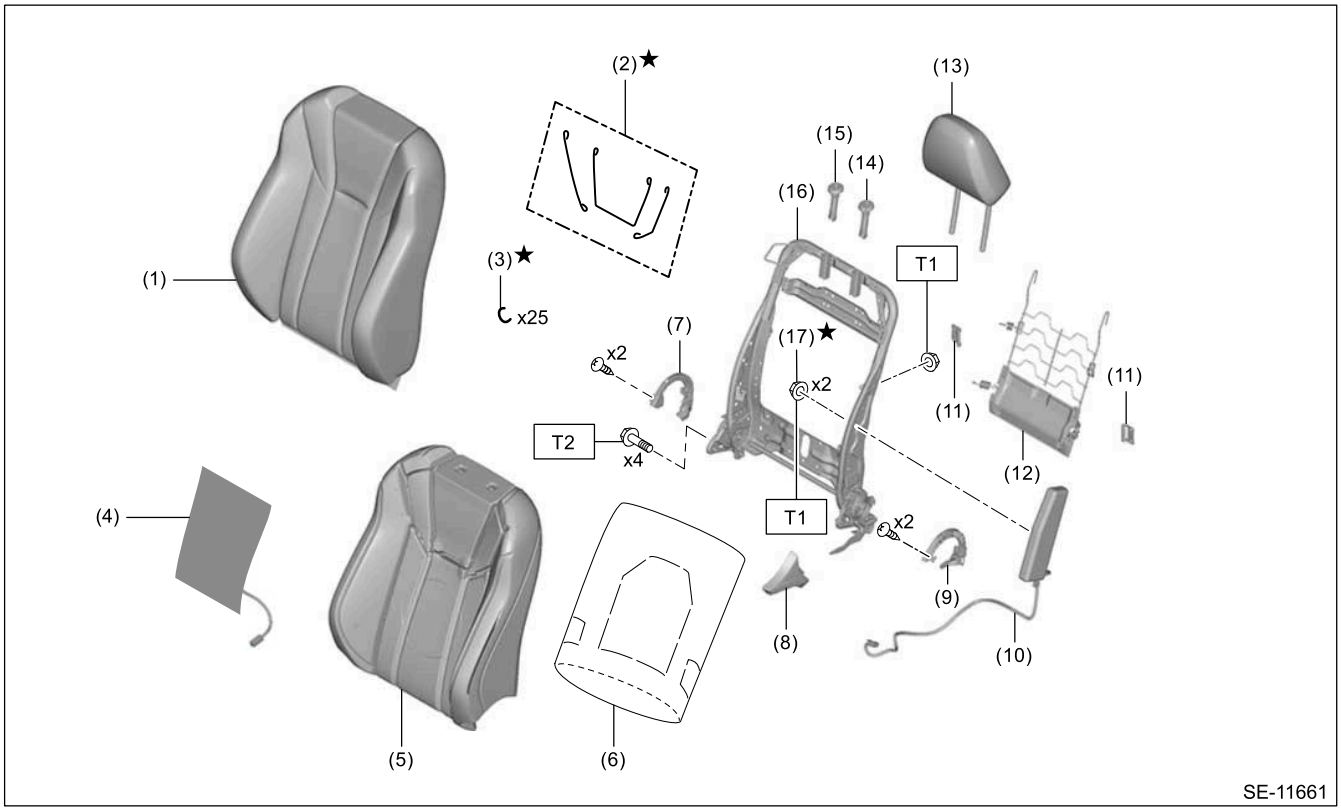
- When performing service operation, refer to “Repair Contents” in “General Description”. Ref. to REPAIR CONTENTS>Repair Contents.
- Refer to “CAUTION” of “General Description” in “AIRBAG SYSTEM” section. Ref. to AIRBAG SYSTEM>General Description>CAUTION.
- When performing work on the sensors or modules, be careful of the following.
  - Before disconnecting electrical connectors, be sure to disconnect the ground terminal from the battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
  - Do not apply any impact. If the parts are accidentally dropped, replace with a new part.
  - Do not expose to high-temperature and humidity.
- When replacing the parts provided with memory functions, record the memory contents before disconnecting the ground terminal from the battery sensor.
- Be careful not to damage the vehicle when taking out the seat from the vehicle.
- Before assembling, make sure how the harnesses such as side airbag harness and front seat belt INN harness are routed in order to avoid misarranging. Assembling with harnesses improperly routed may cause the harness to get caught and short out.
- When disassembling the passenger’s seat, be careful of the following.
  - Do not remove the load sensor from the passenger’s seat cushion frame assembly. It is fixed to the cushion frame assembly.
  - When the cushion frame assembly of the passenger’s seat is replaced, do not touch the load sensor. Failure to do so may electrically impair it.

SEATS > General Description

COMPONENT

1. FRONT SEAT

- **DRIVER’S SEAT**
  - Manual seat

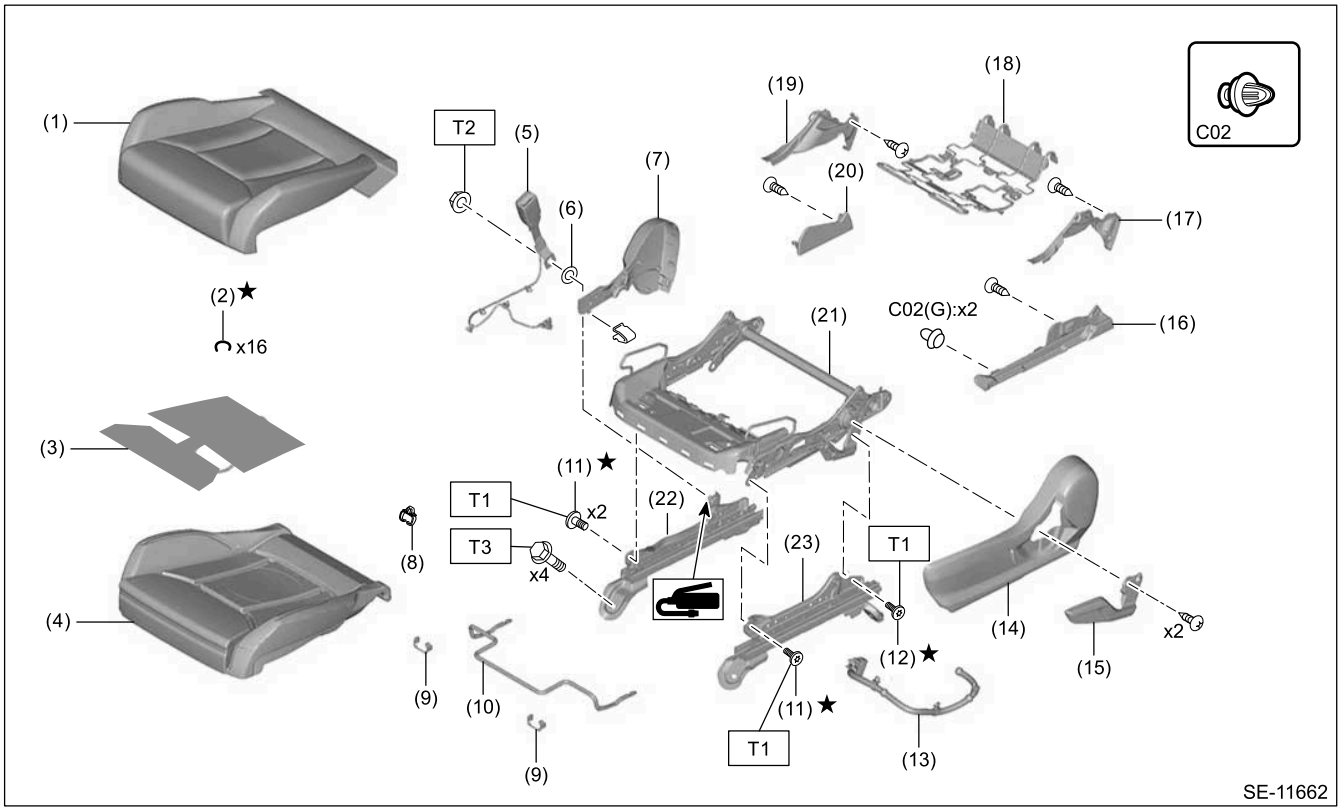


(1) Cover backrest front seat
(2) Wire set backrest front seat
(3) Hog ring
(4) Seat heater unit backrest
(5) Seat pad ASSY backrest
(6) Cover silencer
(7) Hinge base cover inside
(8) Knob hinge reclining
(9) Hinge base cover outside
(10) Side airbag module
(11) Protector spring
(12) Flat mat & hook spring ASSY
(13) Headrest ASSY
(14) Bushing headrest lock
(15) Bushing headrest free
(16) Seat frame ASSY backrest
(17) Self-locking nut

Tightening torque: N·m (kgf-m, ft-lb)

T1: 6 (0.6, 4.4)

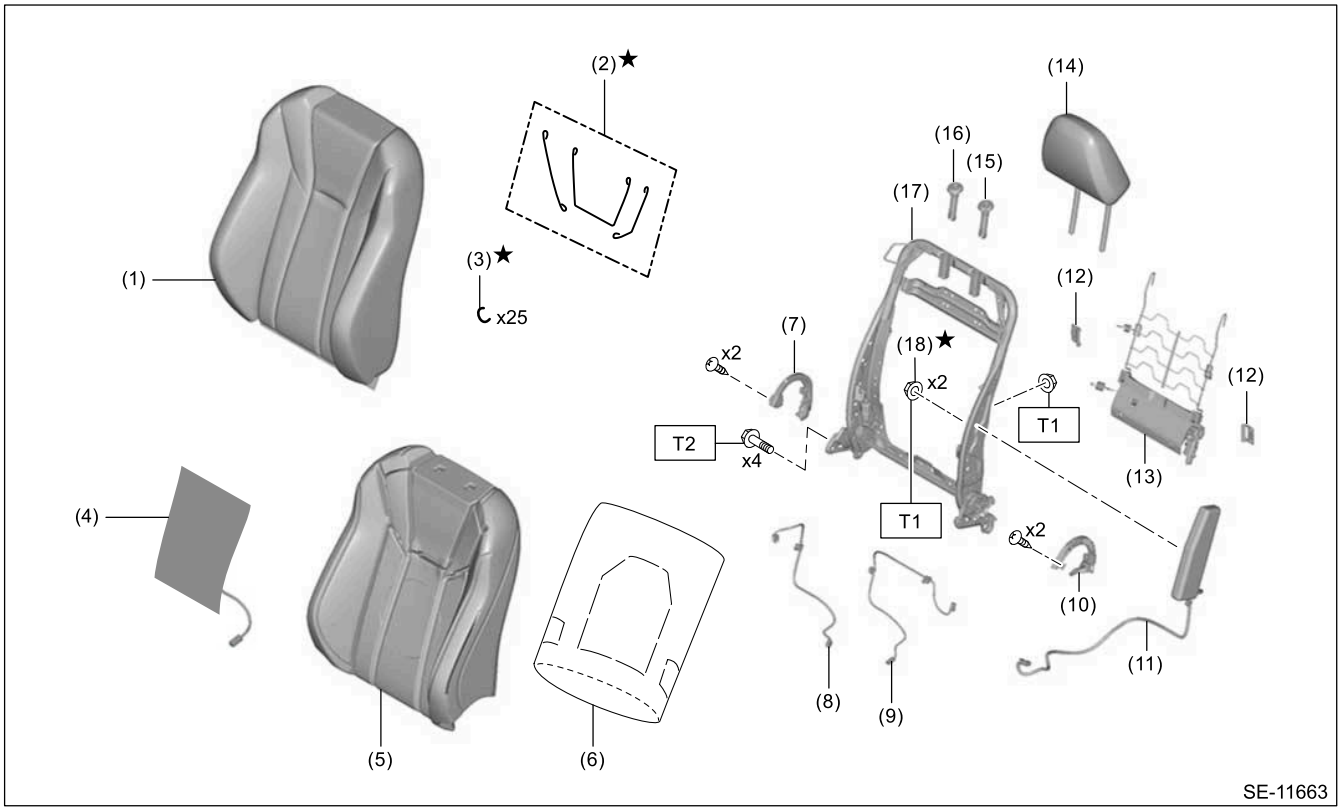
T2: Ref. to SEATS>Front Seat>ASSEMBLY > SEAT COMMON OPERATION PROCEDURE.



(1) Cover cushion front seat	(11) TORX® bolt	(21) Seat frame ASSY cushion
(2) Hog ring	(12) TORX® bolt	(22) Slide rail ASSY INN
(3) Seat heater unit cushion	(13) Harness ASSY cushion	(23) Slide rail ASSY OUT
(4) Seat pad ASSY cushion	(14) Cover hinge outside	
(5) Belt ASSY front INN	(15) Lever lifter	***Tightening torque: N·m (kgf-m, ft-lb)***
(6) Spring wave washer	(16) Cover riser BRKT INN	***T1: 17.6 (1.8, 13.0)***
(7) Cover hinge inside	(17) Cover INN cushion outside	***T2: 38 (3.9, 28.0)***
(8) Harness clip	(18) Panel front wire	***T3: Ref. to SEATS>Front Seat>INSTALLATION.***
(9) Cap end	(19) Cover INN cushion inside	
(10) Lever towel bar	(20) Cover riser link	

*: Apply grease when replacing the belt assembly front INN. Ref. to SEAT BELT SYSTEM>Front Seat Belt>INSTALLATION > BELT ASSEMBLY FRONT INN.

– Power seat

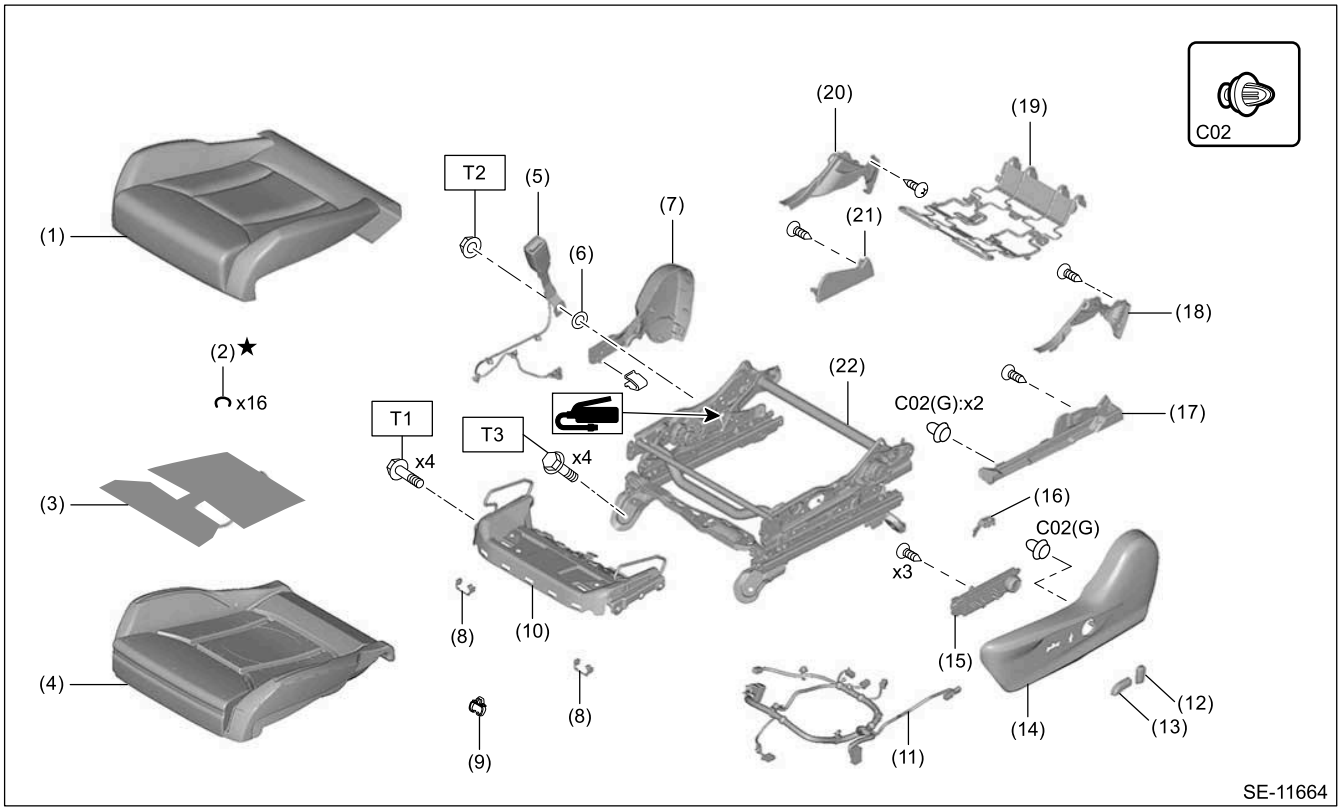


(1) Cover backrest front seat
(2) Wire set backrest front seat
(3) Hog ring
(4) Seat heater unit backrest
(5) Seat pad ASSY backrest
(6) Cover silencer
(7) Hinge base cover inside
(8) Harness ASSY backrest
(9) Harness ASSY backrest
(10) Hinge base cover outside
(11) Side airbag module
(12) Protector spring
(13) Flat mat & hook spring ASSY
(14) Headrest ASSY
(15) Bushing headrest lock
(16) Bushing headrest free
(17) Seat frame ASSY backrest
(18) Self-locking nut

Tightening torque: N·m (kgf-m, ft-lb)

T1: 6 (0.6, 4.4)

T2: Ref. to SEATS>Front Seat>ASSEMBLY > SEAT COMMON OPERATION PROCEDURE.



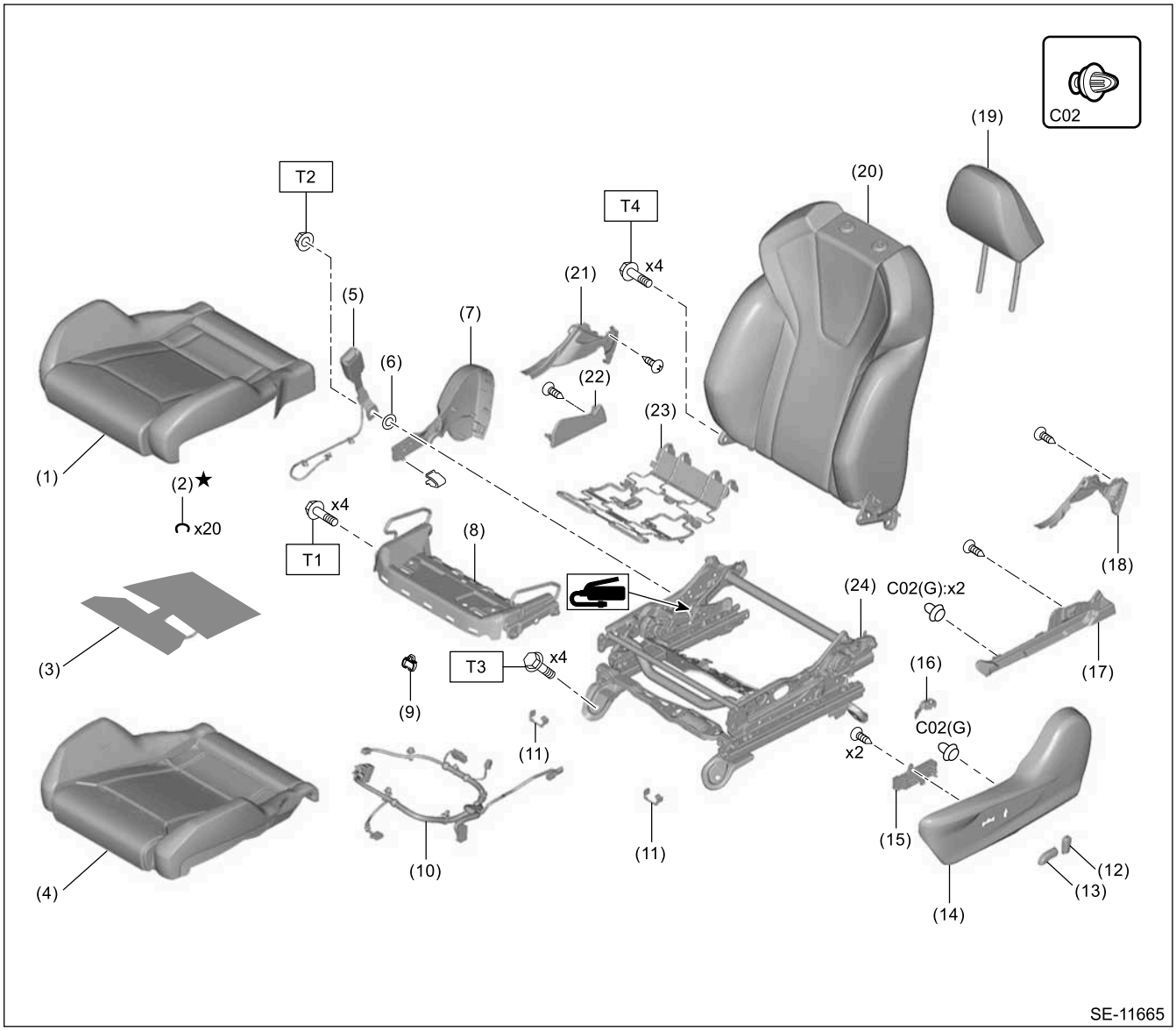
(1) Cover cushion front seat
(2) Hog ring
(3) Seat heater unit cushion
(4) Seat pad ASSY cushion
(5) Belt ASSY front INN
(6) Spring wave washer
(7) Cover hinge inside
(8) Cap end
(9) Harness clip
(10) Panel ASSY cushion
(11) Harness ASSY cushion
(12) Knob power seat
(13) Knob power seat
(14) Cover hinge outside
(15) Switch ASSY power seat
(16) Cover bracket
(17) Cover riser BRKT INN
(18) Cover INN cushion outside
(19) Panel front wire
(20) Cover INN cushion inside
(21) Cover riser link
(22) Seat frame ASSY cushion

Tightening torque: N·m (kgf-m, ft-lb)

T1: 15 (1.5, 11.1)
T2: 38 (3.9, 28.0)
T3: Ref. to SEATS>Front Seat>INSTALLATION.

*: Apply grease when replacing the belt assembly front INN. Ref. to SEAT BELT SYSTEM>Front Seat Belt>INSTALLATION > BELT ASSEMBLY FRONT INN.

– RECARO® seat



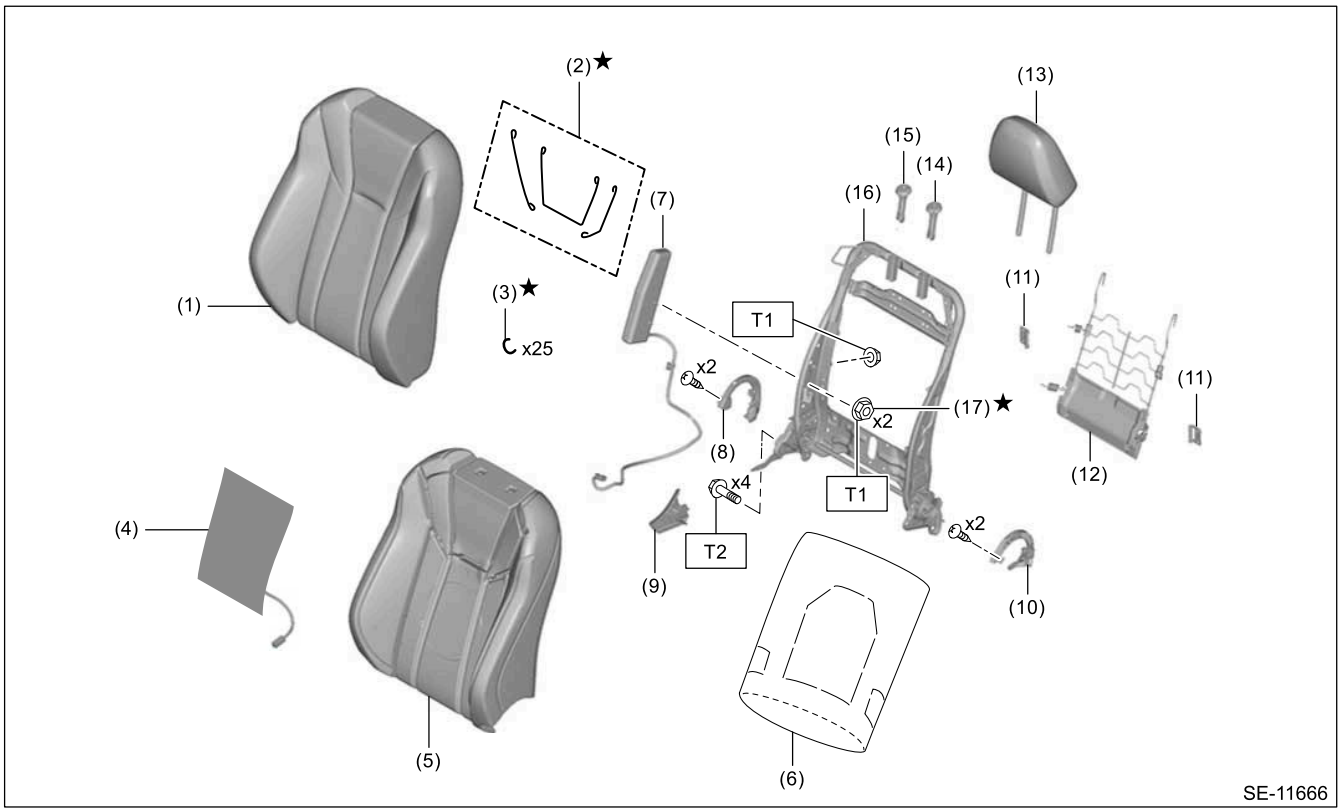
(1) Cushion ASSY front seat
(2) Hog ring
(3) Seat heater unit cushion
(4) Seat pad ASSY cushion
(5) Belt ASSY front INN
(6) Spring wave washer
(7) Cover hinge inside
(8) Panel ASSY cushion
(9) Harness clip
(10) Harness ASSY cushion
(11) Cap end
(12) Knob power seat
(13) Knob power seat
(14) Cover hinge outside
(15) Switch ASSY power seat
(16) Cover bracket
(17) Cover riser BRKT INN
(18) Cover INN cushion outside
(19) Headrest ASSY
(20) Backrest ASSY front seat
(21) Cover INN cushion inside
(22) Cover riser link
(23) Panel front wire
(24) Seat frame ASSY cushion

Tightening torque: N·m (kgf-m, ft-lb)

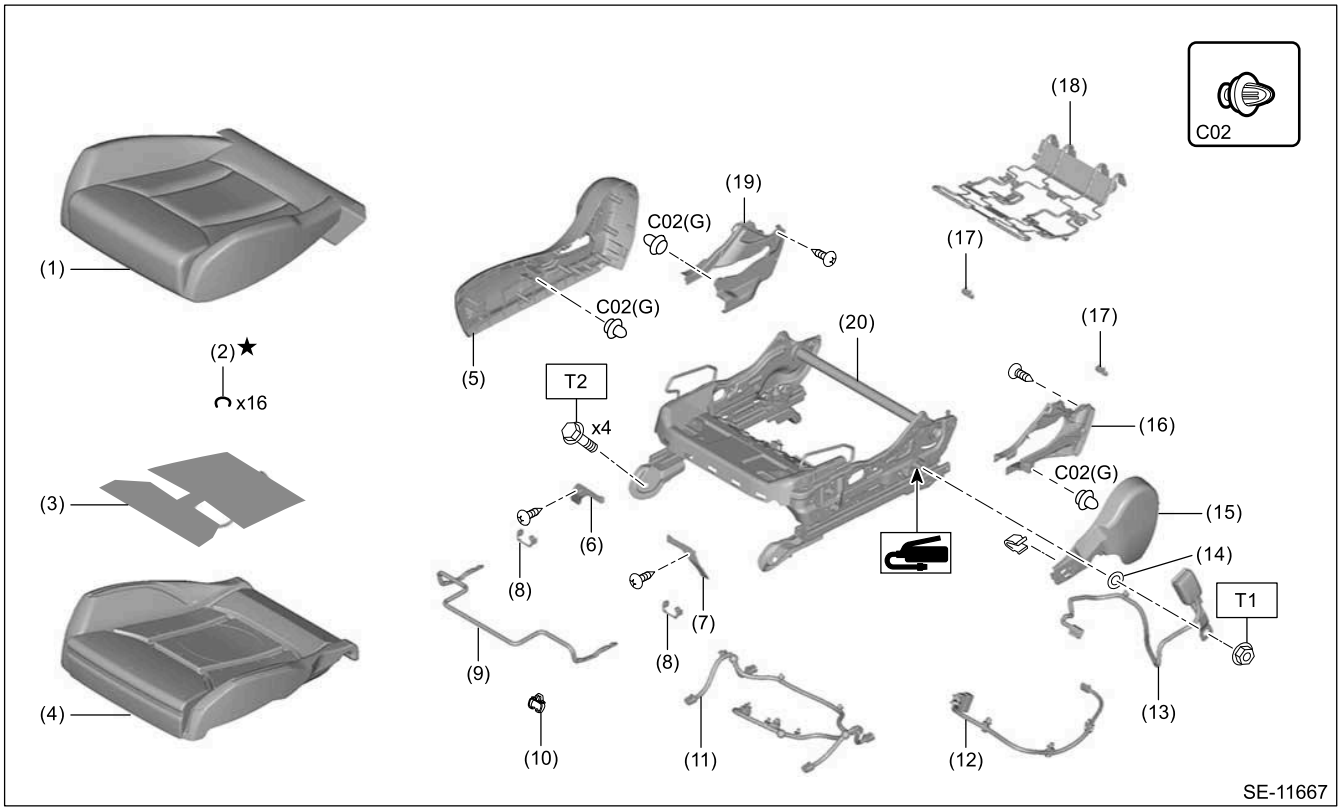
T1: 15 (1.5, 11.1)
T2: 38 (3.9, 28.0)
T3: Ref. to SEATS>Front Seat>INSTALLATION.
T4: Ref. to SEATS>Front Seat>ASSEMBLY > SEAT COMMON OPERATION PROCEDURE.

*: Apply grease when replacing the belt assembly front INN. Ref. to SEAT BELT SYSTEM>Front Seat Belt>INSTALLATION > BELT ASSEMBLY FRONT INN.

- **PASSENGER'S SEAT**
  - Manual seat



(1) Cover backrest front seat	(8) Hinge base cover outside	(15) Bushing headrest free
(2) Wire set backrest front seat	(9) Knob hinge reclining	(16) Seat frame ASSY backrest
(3) Hog ring	(10) Hinge base cover inside	(17) Self-locking nut
(4) Seat heater unit backrest	(11) Protector spring	
(5) Seat pad ASSY backrest	(12) Flat mat & hook spring ASSY	***Tightening torque: N·m (kgf-m, ft-lb)***
(6) Cover silencer	(13) Headrest ASSY	***T1: 6 (0.6, 4.4)***
(7) Side airbag module	(14) Bushing headrest lock	***T2: Ref. to SEATS>Front Seat>ASSEMBLY > SEAT COMMON OPERATION PROCEDURE.***



(1) Cover cushion front seat
(2) Hog ring
(3) Seat heater unit cushion
(4) Seat pad ASSY cushion
(5) Cover hinge outside
(6) Cover edge cushion RH
(7) Cover edge cushion LH
(8) Cap end
(9) Lever towel bar
(10) Harness clip
(11) Harness ASSY cushion
(12) Harness ASSY cushion
(13) Belt ASSY front INN
(14) Spring wave washer
(15) Cover hinge inside
(16) Cover INN cushion inside
(17) Cap end
(18) Panel front wire
(19) Cover INN cushion outside
(20) Seat frame ASSY cushion

Tightening torque: N·m (kgf-m, ft-lb)

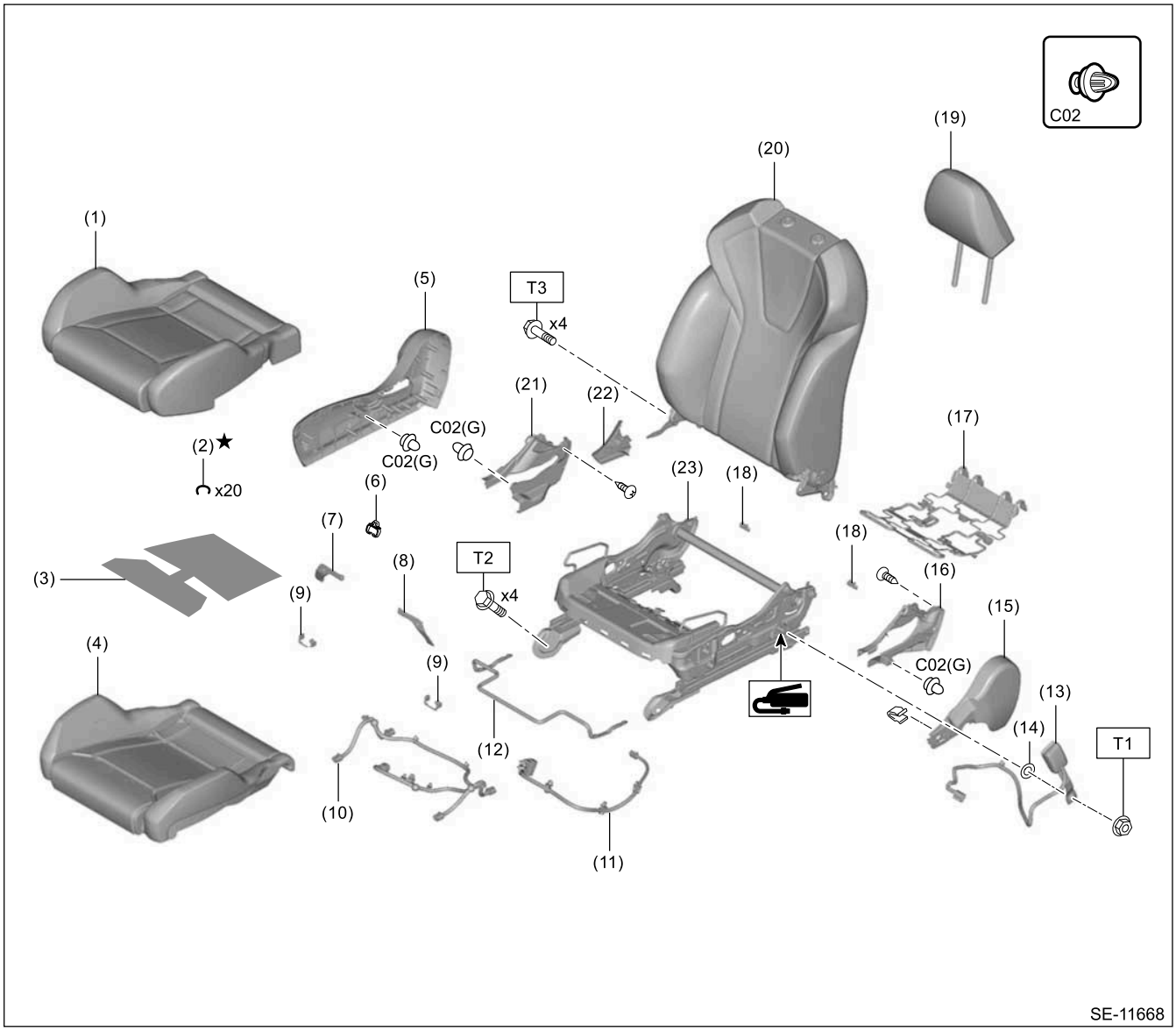
T1: 38 (3.9, 28.0)

T2: Ref. to SEATS>Front Seat>INSTALLATION.

*: Apply grease when replacing the belt assembly front INN. Ref. to SEAT BELT SYSTEM>Front Seat Belt>INSTALLATION > BELT ASSEMBLY FRONT INN.

Note:
The load sensor is integrated into the seat frame assembly cushion.

– RECARO® seat



(1) Cushion ASSY front seat
(2) Hog ring
(3) Seat heater unit cushion
(4) Seat pad ASSY cushion
(5) Hinge base cover outside
(6) Harness clip
(7) Cover edge cushion RH
(8) Cover edge cushion LH
(9) Cap end
(10) Harness ASSY cushion
(11) Harness ASSY cushion
(12) Lever towel bar
(13) Belt ASSY front INN
(14) Spring wave washer
(15) Hinge base cover inside
(16) Cover INN cushion inside
(17) Panel front wire
(18) Cap end
(19) Headrest ASSY
(20) Backrest ASSY front seat
(21) Cover INN cushion outside
(22) Knob hinge reclining
(23) Seat frame ASSY cushion

Tightening torque: N·m (kgf-m, ft-lb)

T1: 38 (3.9, 28.0)

T2: Ref. to SEATS>Front Seat>INSTALLATION.

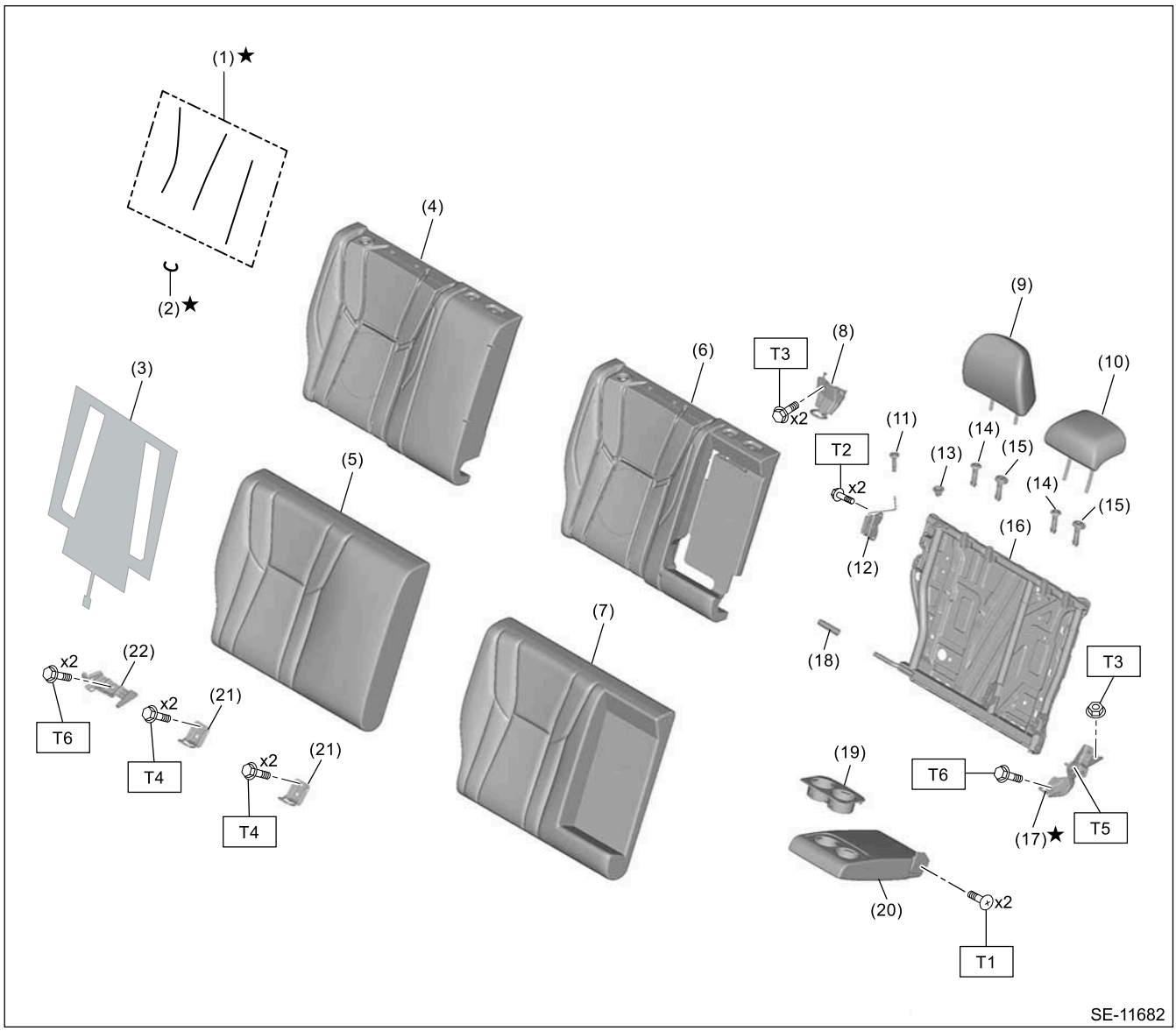
T3: Ref. to SEATS>Front Seat>ASSEMBLY > SEAT COMMON OPERATION PROCEDURE.

*: Apply grease when replacing the belt assembly front INN. Ref. to SEAT BELT SYSTEM>Front Seat Belt>INSTALLATION > BELT ASSEMBLY FRONT INN.

Note:

The load sensor is integrated into the seat frame assembly cushion.

2. REAR SEAT



(1) Wire set backrest rear seat
(2) Hog ring*
(3) Seat heater unit rear backrest (model with rear seat heater)
(4) Cover backrest rear seat RH (model without armrest)
(5) Seat pad ASSY rear backrest RH (model without armrest)
(6) Cover backrest rear seat RH (model with armrest)
(7) Seat pad ASSY rear backrest RH (model with armrest)
(8) Striker backrest RH
(11) Knob rear backrest
(12) Lock ASSY RH
(13) Knob guide
(14) Bushing headrest free
(15) Bushing headrest lock
(16) Frame ASSY rear backrest RH
(17) Hinge ASSY rear seat
(18) Bushing side hinge
(21) Plate anchor LWR
(22) Hook BRKT rear seat cushion RH

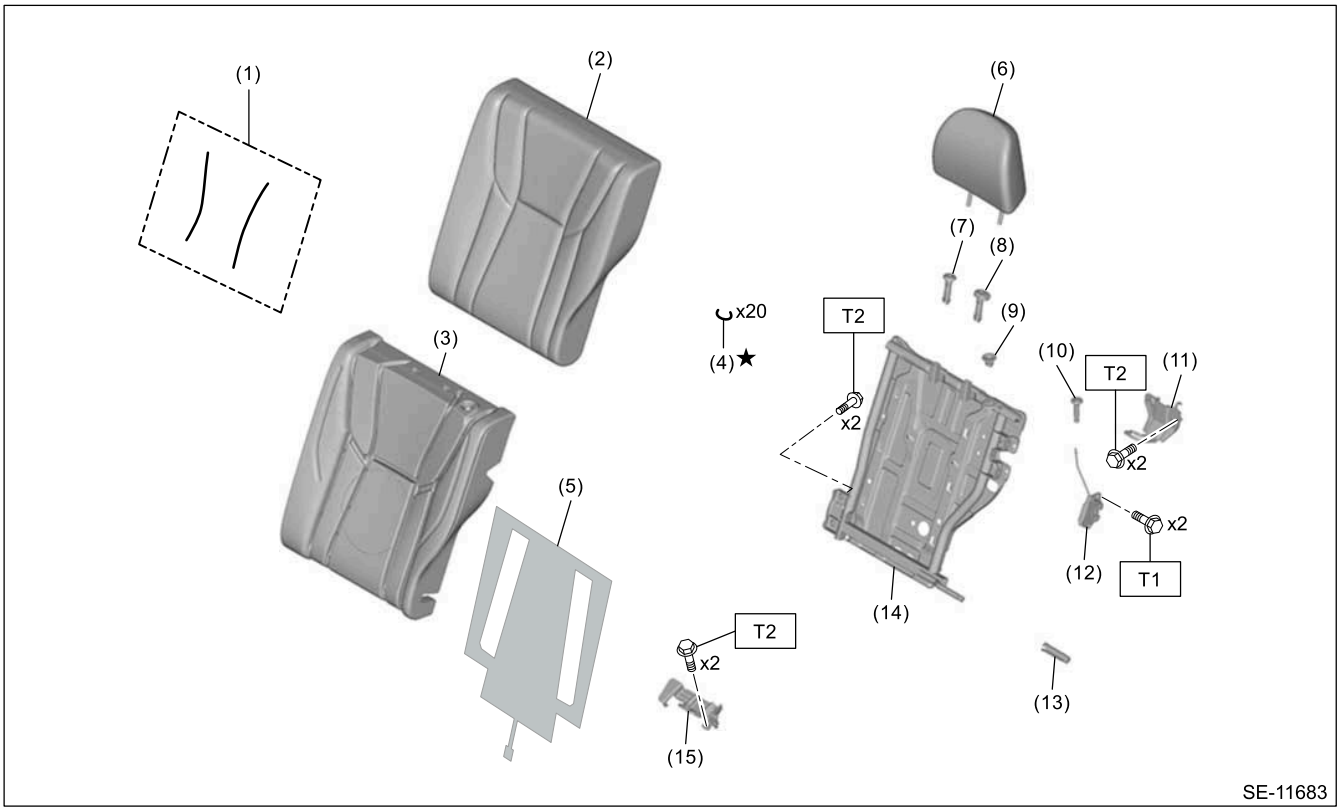
Tightening torque: N·m (kgf-m, ft-lb)

T1: 14.6 (1.5, 10.8)
T3: 18 (1.8, 13.3)
T3: 24.5 (2.5, 18.1)
T4: 25 (2.5, 18.4)

(9) Headrest ASSY rear
(10) Headrest ASSY rear CTR
(19) Cup holder rear seat
(20) Armrest ASSY rear seat

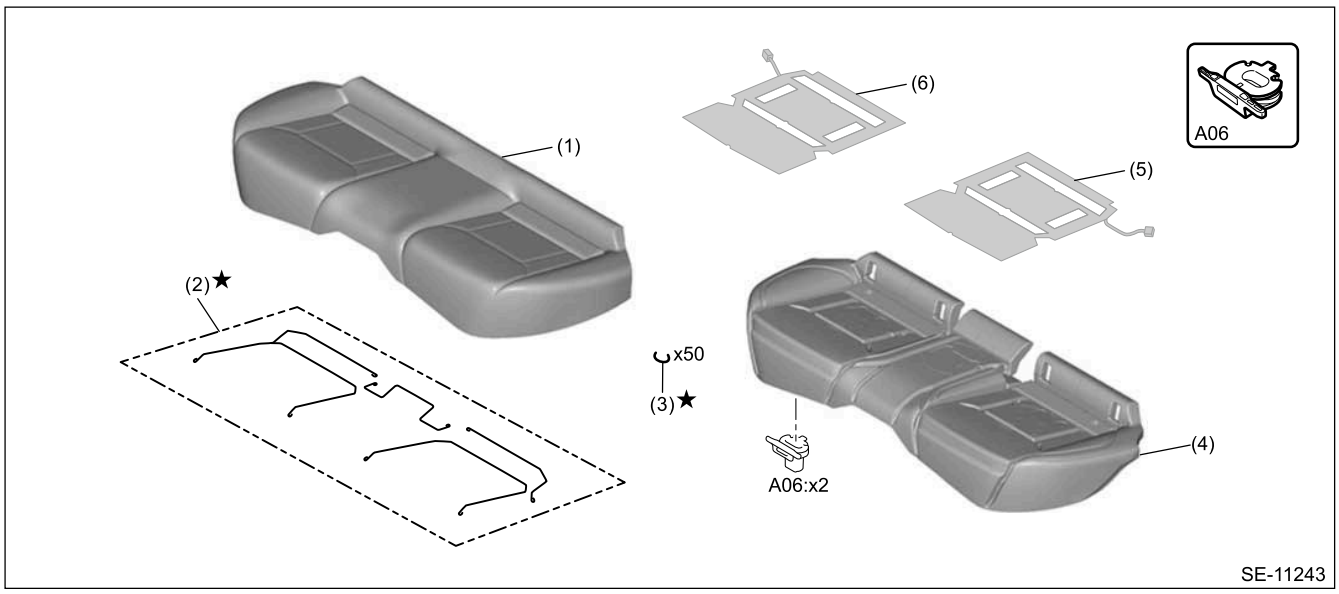
T5: 29 (3.0, 21.4)
T6: 33 (3.4, 24.3)

*: 20 pieces for model without armrest, and 22 pieces for model with armrest



(1) Wire set backrest rear seat
(2) Cover backrest rear seat LH
(3) Seat pad ASSY rear backrest LH
(4) Hog ring
(5) Seat heater unit rear backrest (model with rear seat heater)
(6) Headrest ASSY rear
(7) Bushing headrest free
(8) Bushing headrest lock
(9) Knob guide
(10) Knob rear backrest
(11) Striker backrest LH
(12) Lock ASSY LH
(13) Bushing side hinge
(14) Frame ASSY rear backrest LH
(15) Hook BRKT rear seat cushion LH

Tightening torque: N·m (kgf-m, ft-lb)
T1: 18 (1.8, 13.3)
T2: 33 (3.4, 24.3)



(1) Cover cushion rear seat	(3) Hog ring	(5) Seat heater unit rear cushion LH (model with rear seat heater)
(2) Wire set cushion rear seat	(4) Pad & frame ASSY rear cushion	(6) Seat heater unit rear cushion RH (model with rear seat heater)

Note:
The seating sensor mat is integrated into the pad & frame assembly rear cushion.

SEATS > General Description

PREPARATION TOOL

1. SUBARU SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 STSSM4	—	SUBARU SELECT MONITOR 4	Used for setting of each function and troubleshooting for electrical system. **Note:** • **For detailed operation procedures, refer to "Help" of application.** • **Used together with interface for Subaru Select Monitor (such as DST-i and DST-010).**

2. OTHER

	Remarks
Hog ring pliers	Used for installing the hog ring.

	Remarks
TORX® T40	Used for installing and removing the striker assembly adjuster and the slide rail.
Circuit tester	Used for measuring resistance, voltage and current.

SEATS > Relay and Fuse

LOCATION

For the location, refer to "FUSE AND RELAY" in the wiring diagram. Ref. to WIRING SYSTEM>Fuse And Relay.

Note:
For details of relay and fuse, refer to "DC POWER SUPPLY CIRCUIT". Ref. to WIRING SYSTEM>Power Supply Circuit.

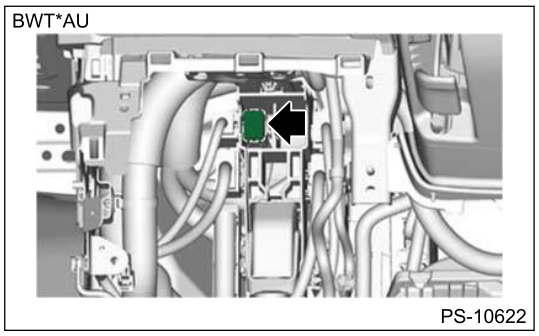
SEATS > Relay and Fuse

REMOVAL

1. ACCESSORY RELAY

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
3. Remove the knee airbag module. Ref. to AIRBAG SYSTEM>Knee Airbag Module>REMOVAL.
4. Remove the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit>REMOVAL.
5. Remove the accessory relay.



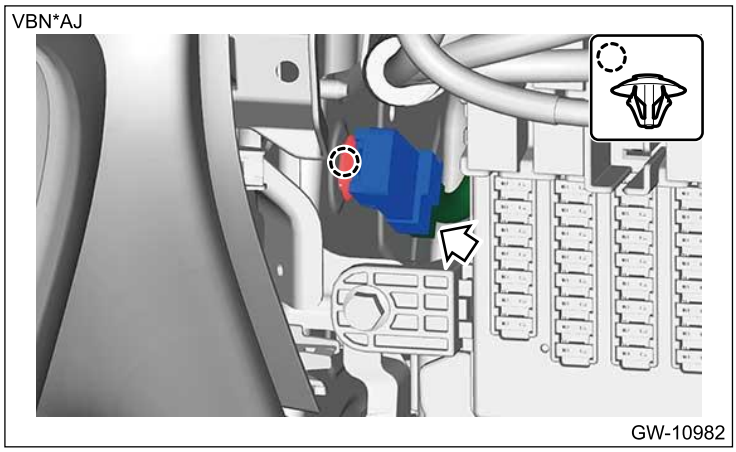
2. CIRCUIT BREAKER

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
3. Remove the circuit breaker.
   (1) Disconnect the connector.

(2) Release the clip, and remove the circuit breaker.

Caution:
Be careful not to apply excessive force when pulling the clip, as the clip may become damaged.



SEATS > Relay and Fuse

INSTALLATION

1. ACCESSORY RELAY

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the accessory relay.
2. Install the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit>INSTALLATION.
3. Install the knee airbag module. Ref. to AIRBAG SYSTEM>Knee Airbag Module>INSTALLATION.
4. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. CIRCUIT BREAKER

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the circuit breaker and connect the connector.
2. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SEATS > Relay and Fuse

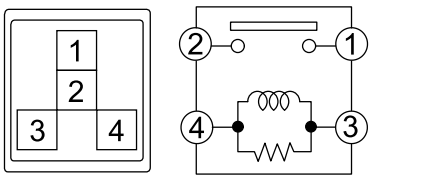
INSPECTION

1. CHECK FUSE

1. Remove the fuse and inspect visually.
2. If the fuse is blown out, replace the fuse.

2. CHECK RELAY

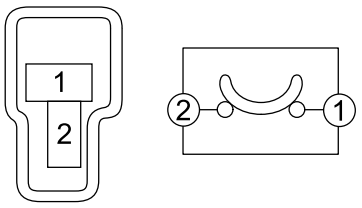
1. Check the resistance between relay terminals.

Terminal No.	Inspection conditions	Standard	Circuit
2 — 1	Always	1 MΩ or more	 SE-10662
2 — 1	Apply battery voltage between terminals 4 and 3.	Less than 1 Ω	

2. Replace the relay if the inspection result is not within the standard value.

3. CHECK CIRCUIT BREAKER

1. Check the continuity between the circuit breaker terminals.

Terminal No.	Inspection conditions	Specification	Circuit
1 — 2	Always	Continuity exists	 GW-10954

2. Replace the circuit breaker if it is found defective.

REMOVAL

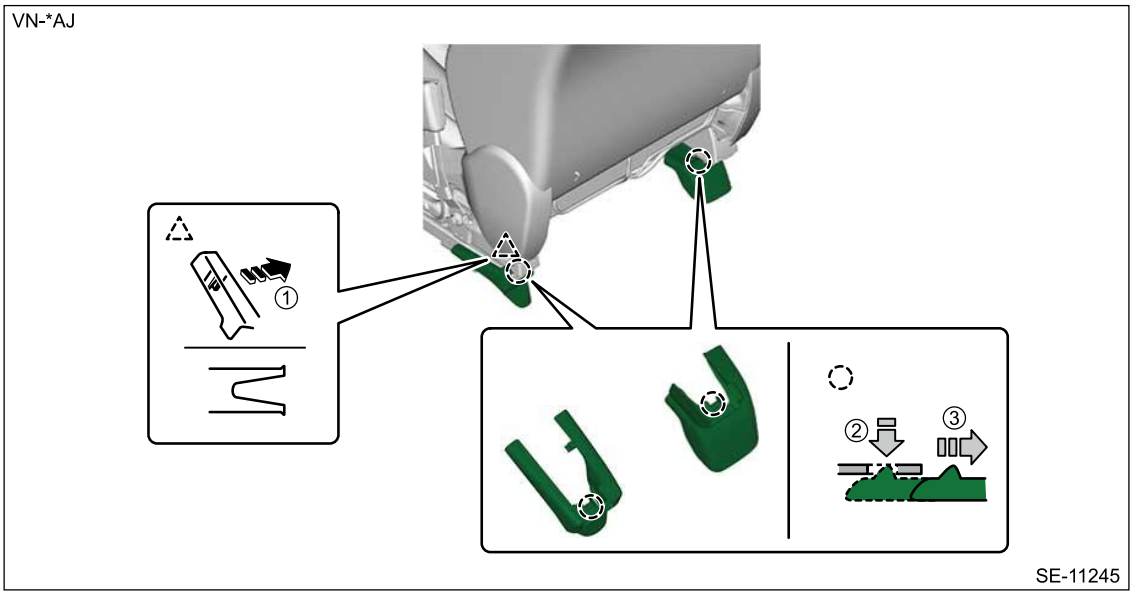
Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Remove the headrest assembly.
2. Remove the slide rail assembly installing bolt.

Caution:
Use a suitable tool for the front seat mounting bolt. As low head bolts are used, the bolts may be damaged.

(1) Tilt the backrest assembly forward and move the front seat to the front most position.
(2) Remove the cover bolt rear, and remove the bolts in order from (1) to (3).

Note:
The illustration shows the RH side.



(3) Move the front seat to the rearmost position, and remove the bolts.

Note:
After the bolts are removed, move the seat to the middle position in order to make it easier to take out of the vehicle.

3. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

Note:
Raise the cushion seating face when the seat is disassembled, for example, to replace the seat surface. (Model with lifter)

4. Disconnect the connector between passenger compartment floor under front seat — seat.
   - Integrated connector
   - Side airbag connector Ref. to AIRBAG SYSTEM>Airbag Connector>PROCEDURE > SIDE AIRBAG MODULE.
   - Seat belt connector
   - Load sensor connector (passenger's seat)

5. Take out the front seat from the vehicle.

Caution:
Be careful not to damage the body.

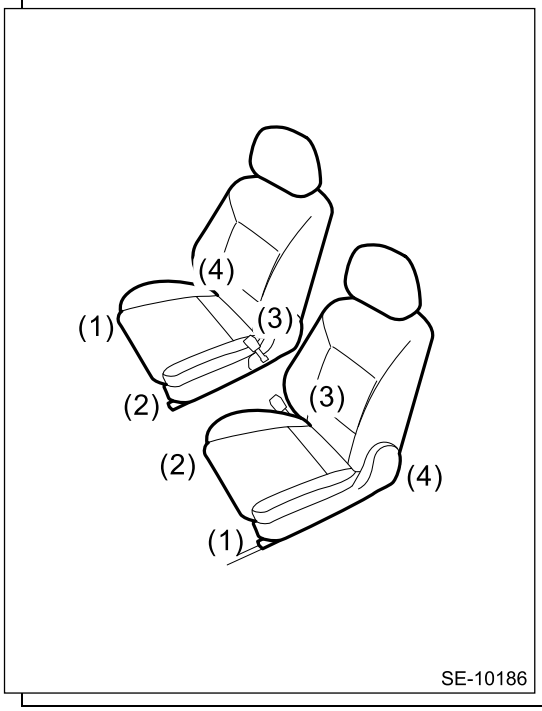
SEATS > Front Seat

INSTALLATION

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Bring the front seat inside the vehicle.
2. Connect the connectors located under the front seat.
3. Install the seat assembly.

Caution:
- **Before installing the bolt cover, check the cover inside. If deformed or damaged, replace the bolt cover with a new one. Incorrect installation of the bolt cover may result in detachment while driving the vehicle.**
- **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.**



Tightening torque:
53 N·m (5.4 kgf-m, 39.1 ft-lb)

4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
5. Install the headrest assembly.
6. Regarding the front seat (passenger's seat), perform [Rezeroing] for the occupant detection system. Ref. to AIRBAG(DIAGNOSTICS)>Rezero.
7. Regarding the front seat (passenger's seat), perform "Occupant Detection System Inspection" to check if the occupant detection system operates normally. Ref. to SEAT BELT SYSTEM>Seat Belt Warning System>INSPECTION > CHECK REAR SEAT BELT WARNING BUZZER.

DISASSEMBLY

1. DRIVER'S SEAT

- **MANUAL SEAT**

Caution:

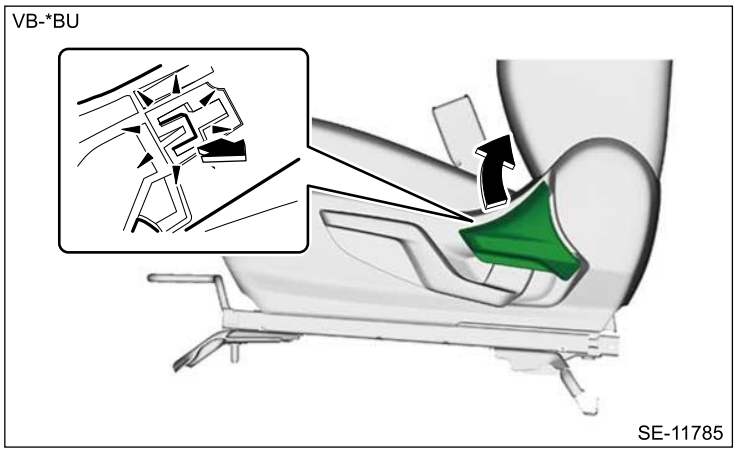
- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **When disassembling the passenger's seat, be careful of the following.**
  - **Do not remove the load sensor from the passenger's seat cushion frame assembly. It is fixed to the cushion frame assembly.**
  - **When the cushion frame assembly of the passenger's seat is replaced, do not touch the load sensor. Failure to do so may electrically impair it.**

1. Prior to starting work, check the following precautions. Ref. to SEATS>General Description>CAUTION.
2. Remove the front seat from vehicle. Ref. to SEATS>Front Seat>REMOVAL.

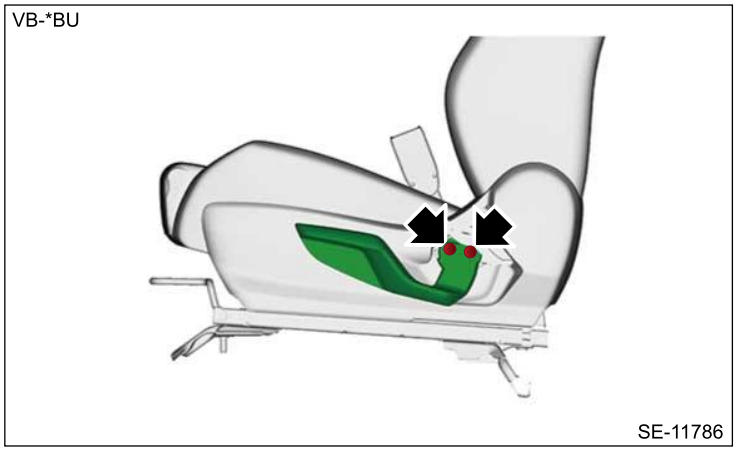
Note:

Before removing the seat, raise the cushion to the middle position.

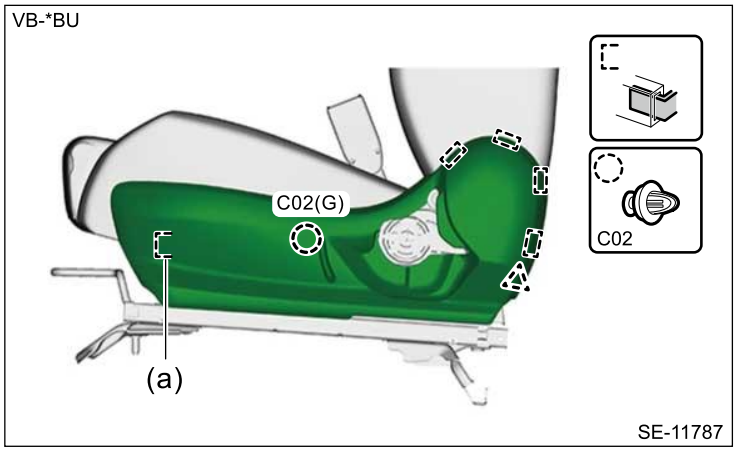
3. For the disassembly procedure of the backrest assembly, refer to the disassembly procedures for the driver's seat (power seat). Ref. to SEATS>Front Seat>DISASSEMBLY>DRIVER'S SEAT>POWER SEAT.
4. Remove the knob hinge reclining.
   (1) Pull up the knob hinge reclining and release the claws on the back.
   (2) Pull out the knob hinge reclining while the claws on the back are released.



5. Remove the screws and remove the knob lifter.

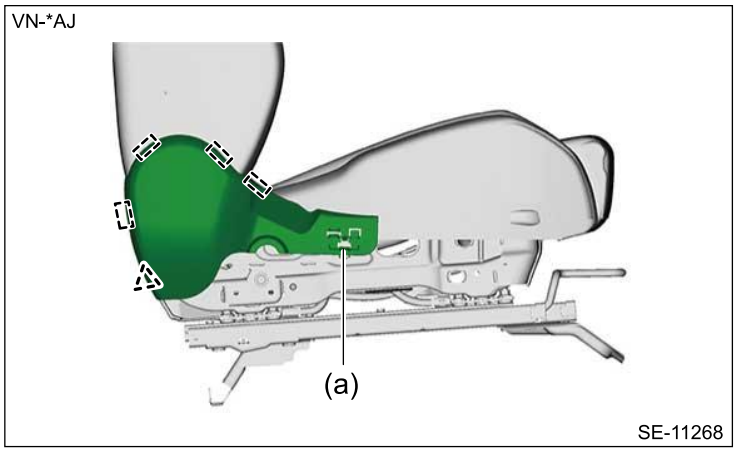


6. Remove the cover hinge outside.
(1) Release it from the hinge base cover outside in the rear side.
(2) Release the clips.
(3) Pull forward to release the claw (a) and remove the cover hinge outside.



7. Remove the belt assembly front INN. Ref. to SEAT BELT SYSTEM>Front Seat Belt>REMOVAL > BELT ASSEMBLY FRONT INN.

8. Remove the cover hinge inside.
(1) Release it from the hinge base cover inside in the rear side.
(2) Release the metal clip (a) in the front side, and detach the cover hinge inside.



9. Separate the backrest assembly and the seat cushion assembly.
(1) Remove the harness on the back side of the seat cushion assembly.

- Side airbag harness
- Seat heater harness

(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.

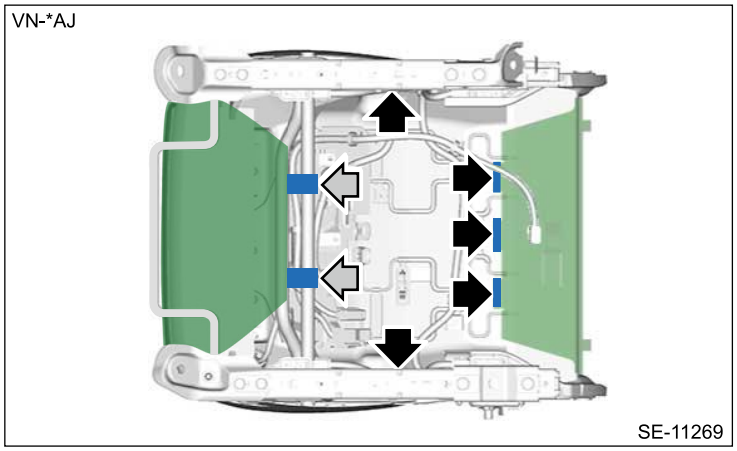
10. Remove the seat pad assembly cushion and the cover cushion front seat.

(1) Disconnect the connector.

(2) Unfasten the J-fastener on the front side.

(3) Unfasten the J-fastener on the right, left and rear side.

(4) Remove the seat pad assembly cushion and the cover cushion front seat from the seat cushion assembly.

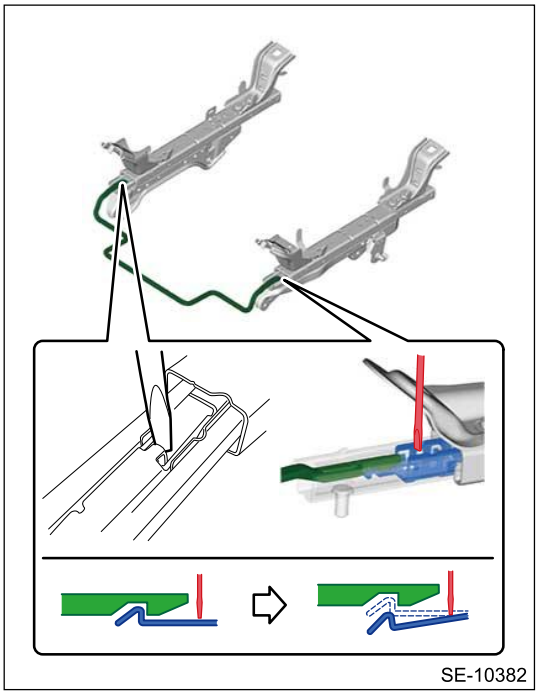


11. Remove the lever towel bar.

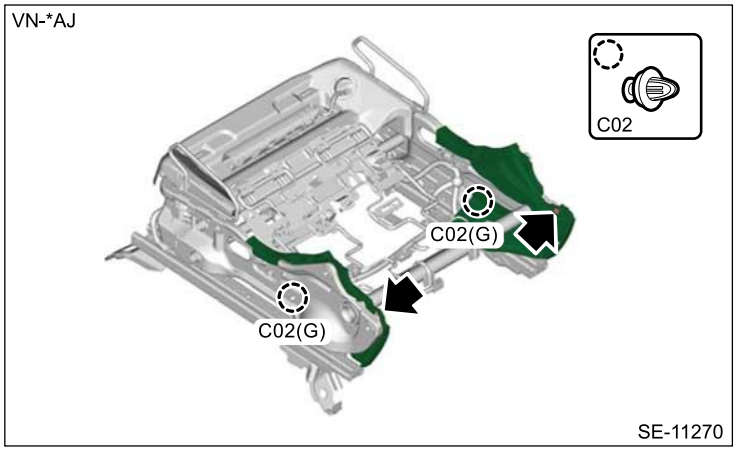
(1) Move the slide rail to the front-most position.

(2) Use a thin flat tip screwdriver to press-in the leaf spring from behind the slide rail.

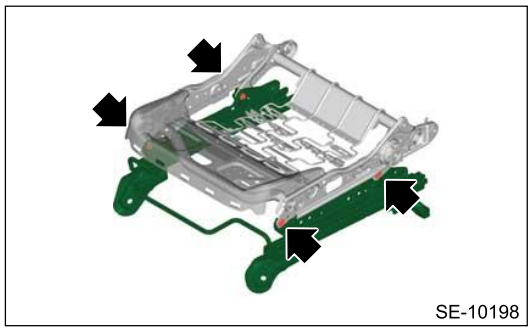
(3) Pull out the lever towel bar.



12. Remove the screws and clips and remove the cover INN cushion outside and the cover INN cushion inside.



13. Using the TORX® T40, remove the bolts, then remove the slide rail.

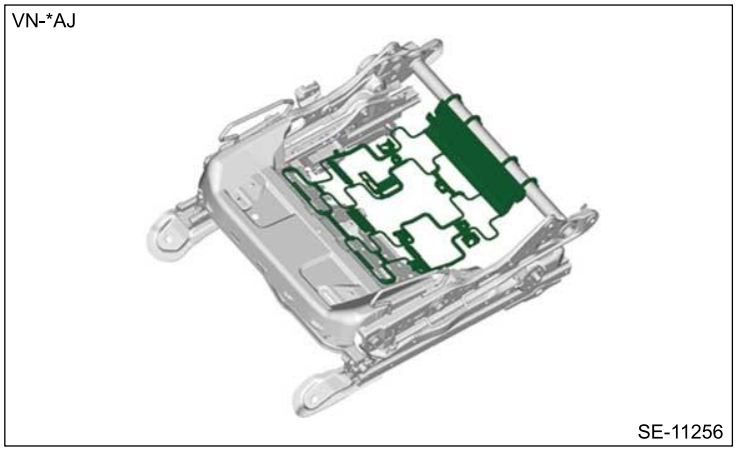


14. Remove the harness assembly seat cushion.

Note:

Routing of the harness varies depending on the specifications. For easier assembly work, it is recommended to take pictures before removing the harness.

15. Remove the panel front wire.



16. Remove the cover cushion front seat.

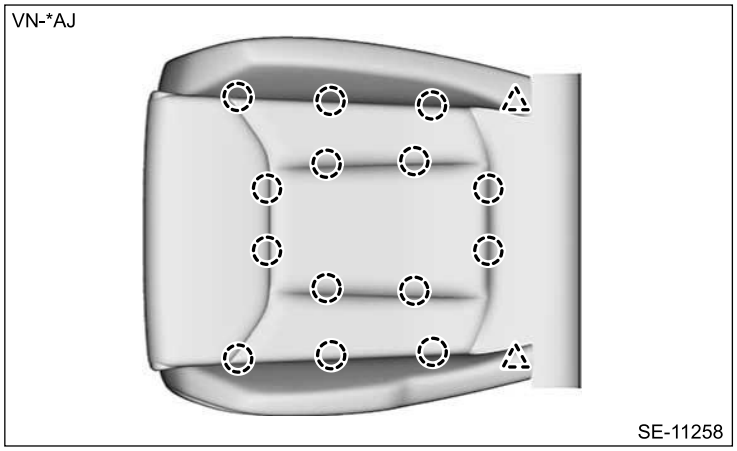
Caution:

- **If the seat heater unit is removed, replace the seat pad assembly with a new part.**
- **If the seat heater unit is reused, remove the polyurethane section and double-sided tape from the reverse side completely. Use new double-sided tape.**

Preparation items:

Double-sided tape: NITTO DENKO 501L or equivalent

(1) Remove the hog ring.



(2) Pull out the seat pad assembly cushion from the cover cushion front seat.

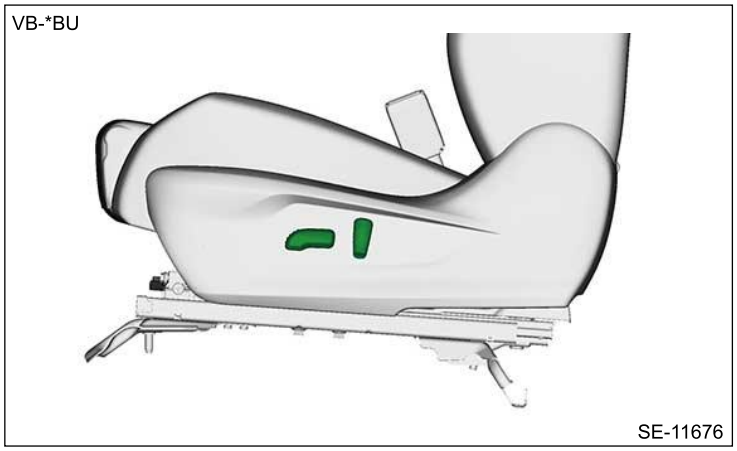
- **POWER SEAT**

Except for RECARO® seat

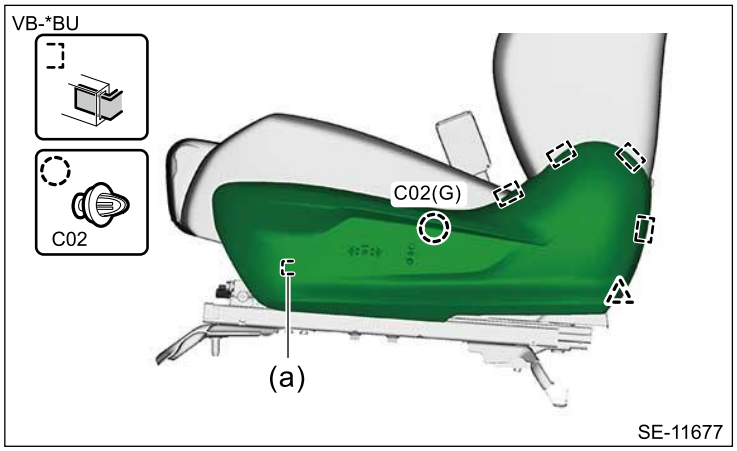
Caution:

Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Prior to starting work, check the following precautions. Ref. to SEATS>General Description>CAUTION.
2. Remove the front seat from vehicle. Ref. to SEATS>Front Seat>REMOVAL.
3. Remove the cover hinge outside.
   (1) Remove the knob power seat.

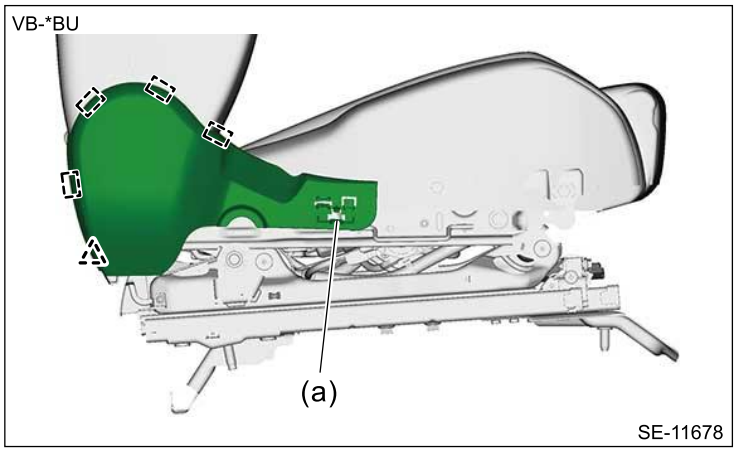


(2) Release it from the hinge base cover outside in the rear side.
(3) Release the clips.
(4) Pull forward to release the claw (a) and remove the cover hinge outside.
(5) Disconnect the switch assembly power seat connector and remove the cover hinge outside.



4. Remove the belt assembly front INN. Ref. to SEAT BELT SYSTEM>Front Seat Belt>REMOVAL > BELT ASSEMBLY FRONT INN.

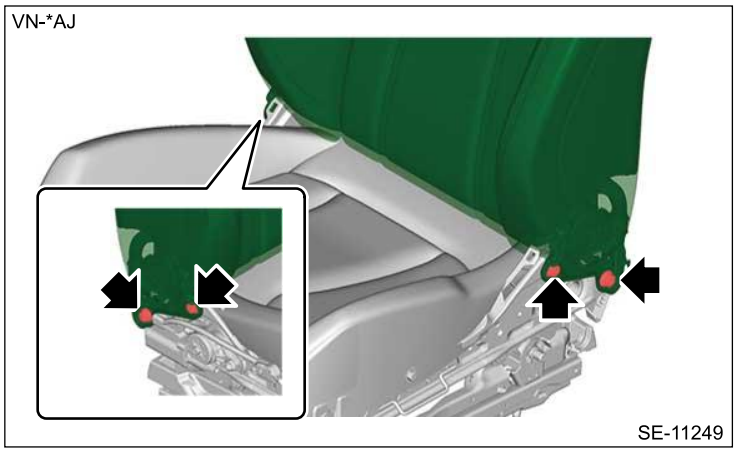
5. Remove the cover hinge inside.
(1) Release it from the hinge base cover inside in the rear side.
(2) Release the metal clip (a) in the front side, and detach the cover hinge inside.



6. Separate the backrest assembly and the seat cushion assembly.
(1) Remove the harness on the back side of the seat cushion assembly.

- Side airbag harness
- Harness assembly backrest
- Seat heater harness on the backrest side

(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.

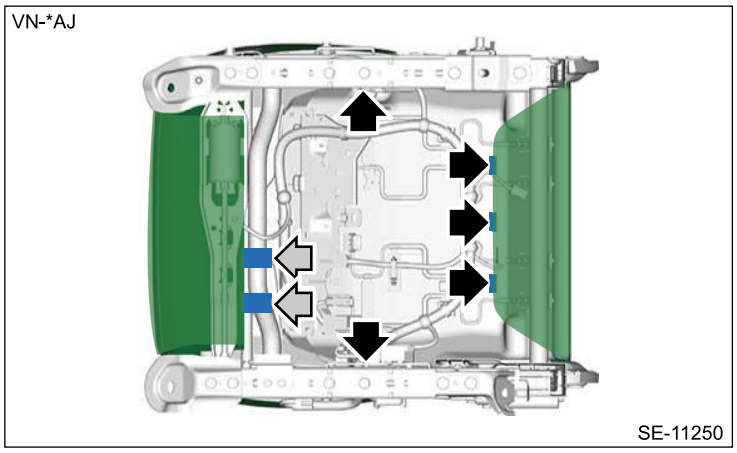
7. Remove the seat pad assembly cushion and the cover cushion front seat.

(1) Disconnect the connector.

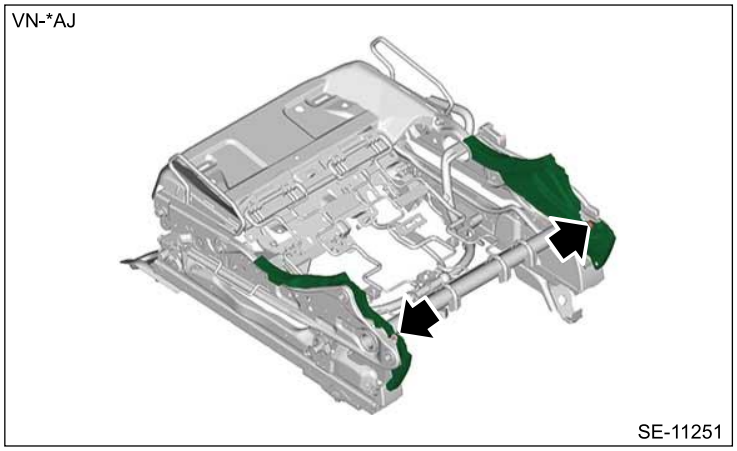
(2) Remove the plastic hook on the front side, and remove the J-fastener.

(3) Unfasten the J-fastener on the right, left and rear side.

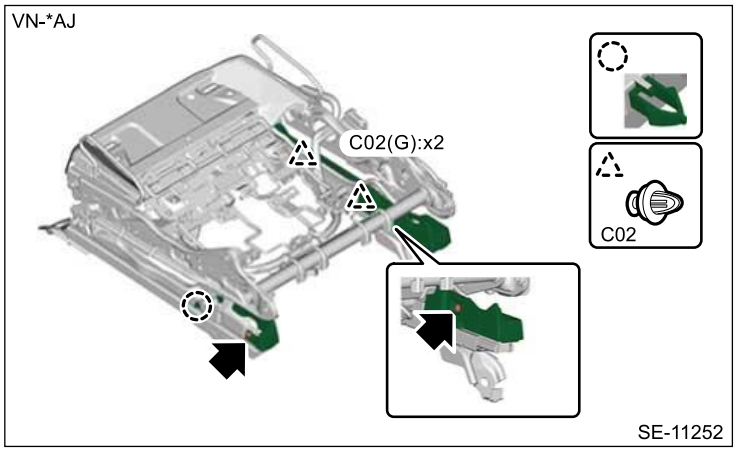
(4) Remove the seat pad assembly cushion and the cover cushion front seat from the seat cushion assembly.



8. Remove the screws and remove the cover INN cushion outside and the cover INN cushion inside.



9. Remove the screws and clips and remove the cover riser link and the cover riser BRKT INN.



10. Remove the harness assembly seat cushion.

Note:
Routing of the harness varies depending on the specifications. For easier assembly work, it is recommended to take pictures before removing the harness.

11. Remove the panel front wire.

12. Remove the bolts, and remove the panel assembly cushion.

13. Remove the cover cushion front seat.

Caution:

- **If the seat heater unit is removed, replace the seat pad assembly with a new part.**
- **If the seat heater unit is reused, remove the polyurethane section and double-sided tape from the reverse side completely. Use new double-sided tape.**

Preparation items:

Double-sided tape: NITTO DENKO 501L or equivalent

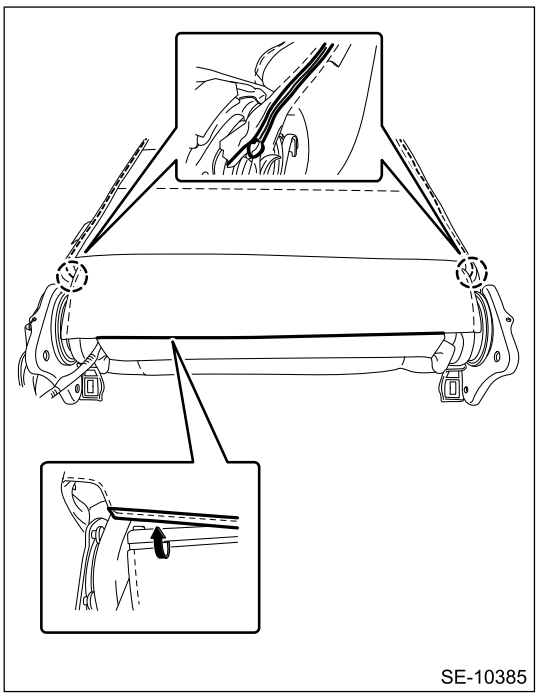
(1) Remove the hog ring.

(2) Pull out the seat pad assembly cushion from the cover cushion front seat.

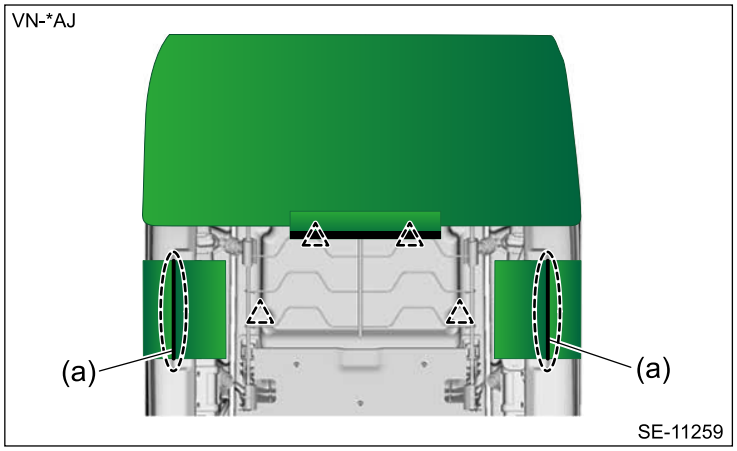
14. Remove the seat pad assembly backrest and the cover backrest front seat.

(1) Remove the plastic fastener at the back side (bottom) of backrest assembly.

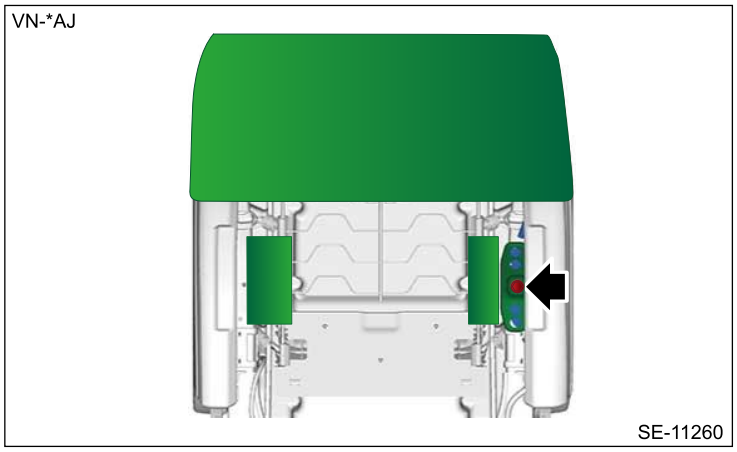
(2) Open the fastener at the rear side of backrest assembly.



(3) Remove the hog rings and the resin fasteners (a) on the left and right.



(4) Remove the hexagon cap nut.



(5) Remove the seat pad assembly backrest and the cover backrest front seat from the seat backrest assembly.

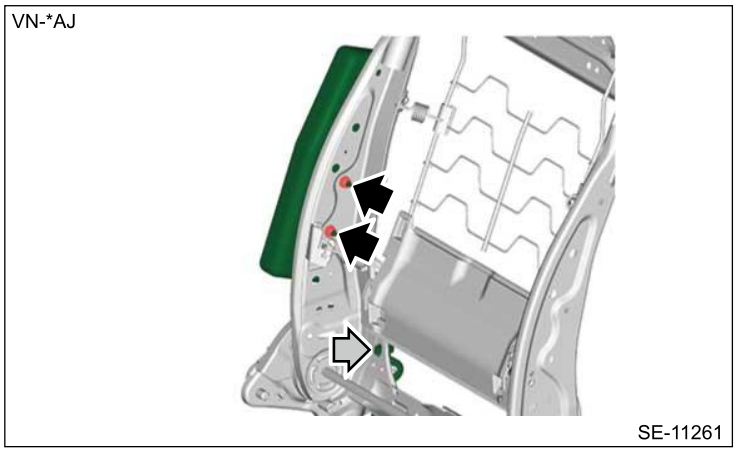
15. Remove the side airbag module.

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 self-locking nut.

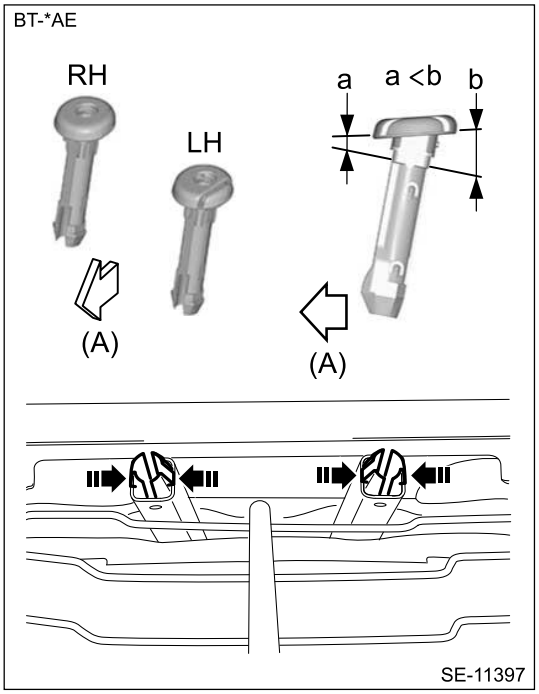
(2) While taking care not to damage the airbag protective cover, remove the side airbag module.



16. Remove the bushing headrest.

Note:

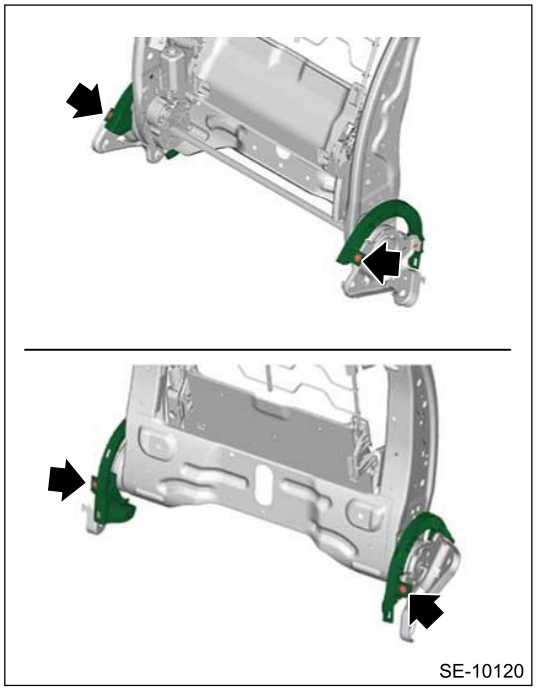
Catch the tip of headrest bushing with pliers and push it from inside seat to outside to remove it.



(A) Front

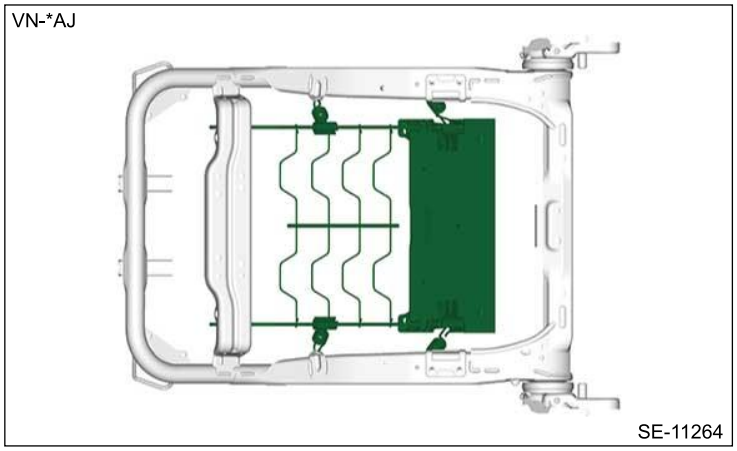
17. Pull out the seat frame assembly backrest.

18. Remove the screws and detach the hinge base cover inside and the hinge base cover outside.



19. Remove the harness assembly backrest.

20. Remove the flat mat & hook spring assembly.



21. Remove the cover backrest front seat.

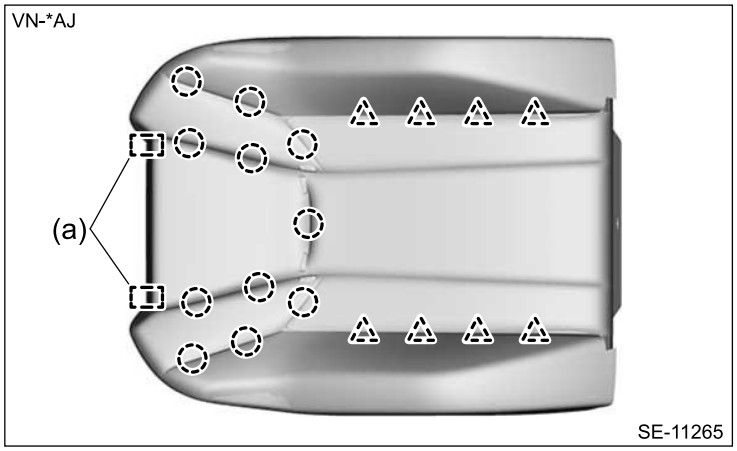
Caution:

- **If the seat heater unit is removed, replace the seat pad assembly with a new part.**
- **If the seat heater unit is reused, remove the polyurethane section and double-sided tape from the reverse side completely. Use new double-sided tape.**

Preparation items:

Double-sided tape: NITTO DENKO 501L or equivalent

(1) Remove the hog ring.



(2) Pull out the seat pad assembly backrest from the cover backrest front seat.

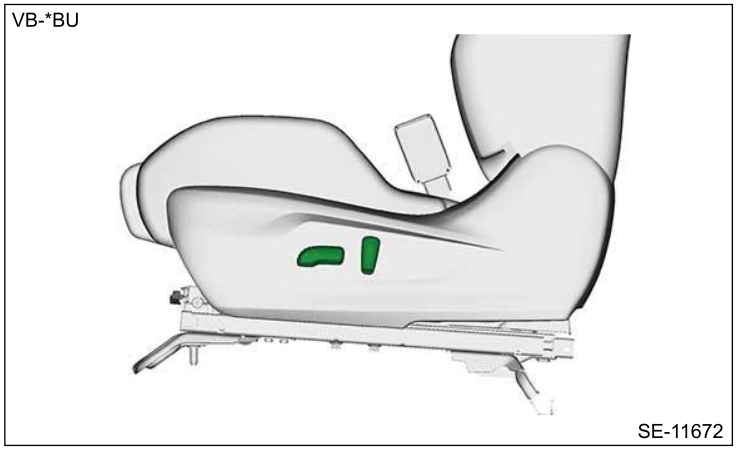
Note:
Pull it out so that the tape (a) of the seat pad assembly backrest does not come off.

- **POWER SEAT**

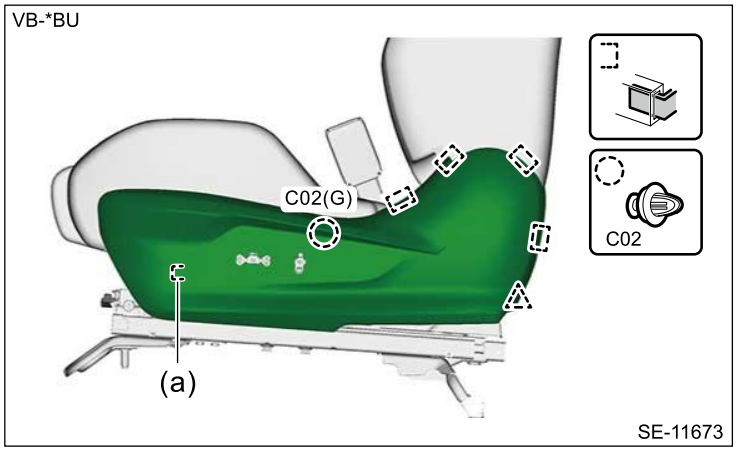
RECARO® seat

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

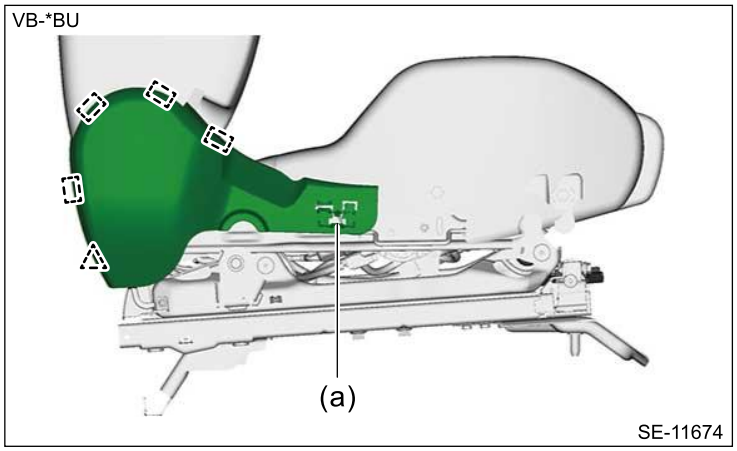
1. Prior to starting work, check the following precautions. Ref. to SEATS>General Description>CAUTION.
2. Remove the front seat from vehicle. Ref. to SEATS>Front Seat>REMOVAL.
3. Remove the cover hinge outside.
   (1) Remove the knob power seat.



(2) Release it from the hinge base cover outside in the rear side.
(3) Release the clips.
(4) Pull forward to release the claw (a) and remove the cover hinge outside.
(5) Disconnect the switch assembly power seat connector and remove the cover hinge outside.

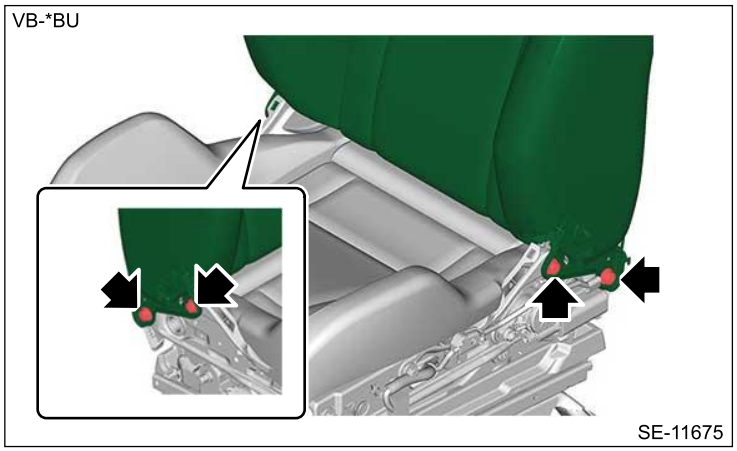


4. Remove the belt assembly front INN. Ref. to SEAT BELT SYSTEM>Front Seat Belt>REMOVAL > BELT ASSEMBLY FRONT INN.
5. Remove the cover hinge inside.
   (1) Release it from the hinge base cover inside in the rear side.
   (2) Release the metal clip (a) in the front side, and detach the cover hinge inside.



6. Separate the backrest assembly and the seat cushion assembly.
   (1) Remove the harness on the back side of the seat cushion assembly.
   - Side airbag harness
   - Harness assembly backrest
   - Seat heater harness on the backrest side

   (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.

Caution:
Do not disassemble the backrest assembly.

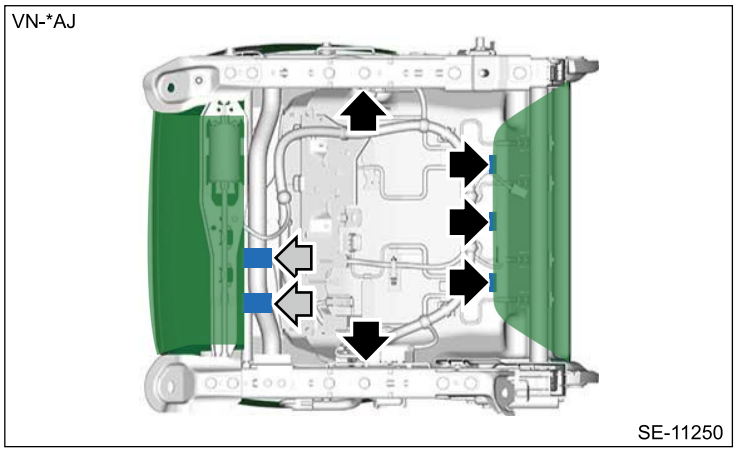
7. Remove the seat pad assembly cushion and the cover cushion front seat.

(1) Disconnect the connector.

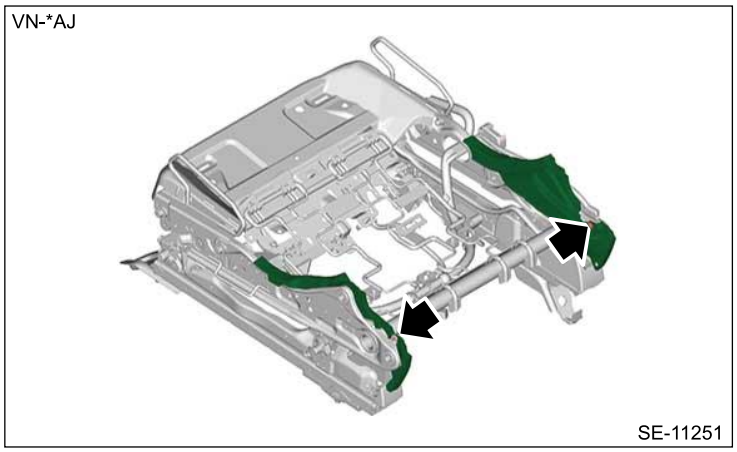
(2) Remove the plastic hook on the front side, and remove the J-fastener.

(3) Unfasten the J-fastener on the right, left and rear side.

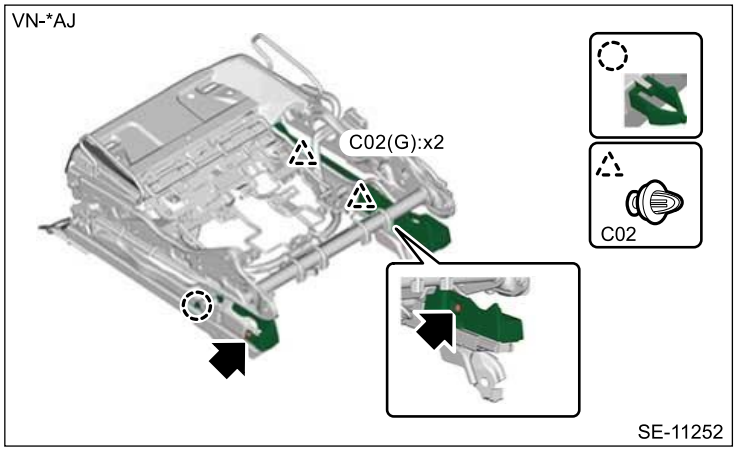
(4) Remove the seat pad assembly cushion and the cover cushion front seat from the seat cushion assembly.



8. Remove the screws and remove the cover INN cushion outside and the cover INN cushion inside.



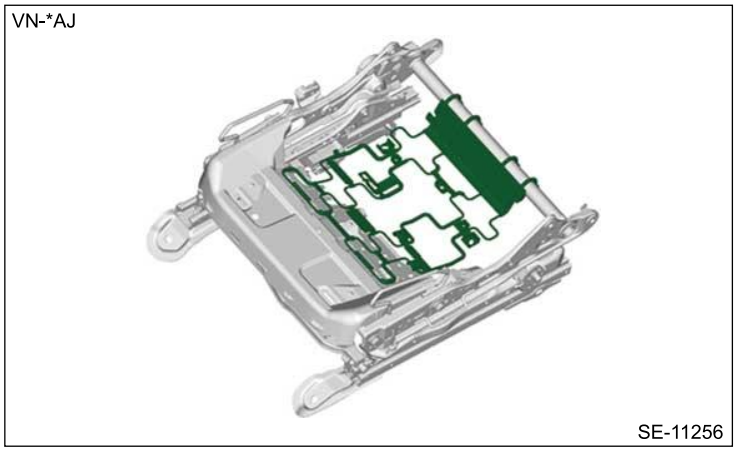
9. Remove the screws and clips and remove the cover riser link and the cover riser BRKT INN.



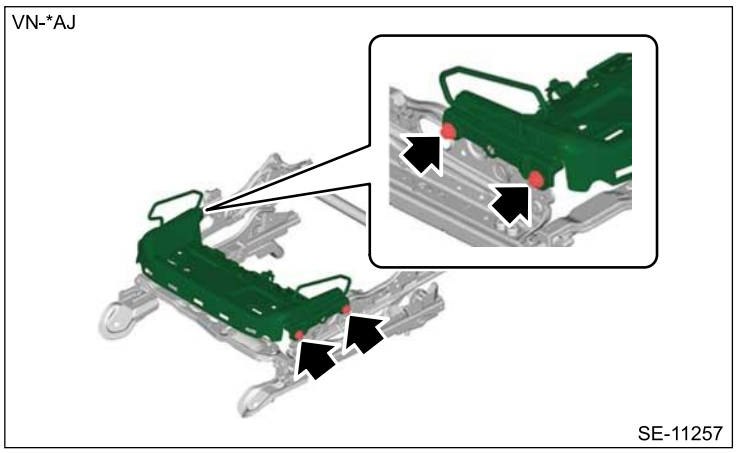
10. Remove the harness assembly seat cushion.

Note:
Routing of the harness varies depending on the specifications. For easier assembly work, it is recommended to take pictures before removing the harness.

11. Remove the panel front wire.



12. Remove the bolts, and remove the panel assembly cushion.



13. Remove the cover cushion front seat.

Caution:

- **If the seat heater unit is removed, replace the seat pad assembly with a new part.**
- **If the seat heater unit is reused, remove the polyurethane section and double-sided tape from the reverse side completely. Use new double-sided tape.**

Preparation items:

Double-sided tape: NITTO DENKO 501L or equivalent

(1) Remove the hog ring.

(2) Pull out the seat pad assembly cushion from the cover cushion front seat.

2. PASSENGER'S SEAT

- **MANUAL SEAT**

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **When disassembling the passenger's seat, be careful of the following.**
  - **Do not remove the load sensor from the passenger's seat cushion frame assembly. It is fixed to the cushion frame assembly.**
  - **When the cushion frame assembly of the passenger's seat is replaced, do not touch the load sensor. Failure to do so may electrically impair it.**

1. Prior to starting work, check the following precautions. Ref. to SEATS>General Description>CAUTION.
2. Remove the front seat from vehicle. Ref. to SEATS>Front Seat>REMOVAL.

Note:

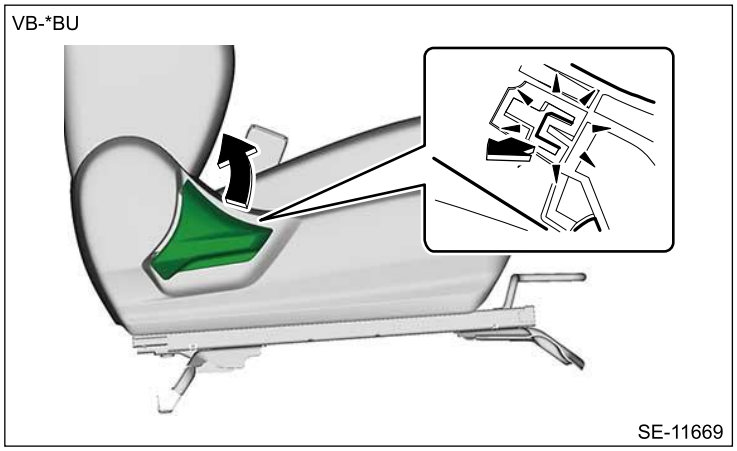
Before removing the seat, raise the cushion to the middle position.

3. For the disassembly procedure of the backrest assembly, refer to the disassembly procedures for the driver's seat (power seat). Ref. to SEATS>Front Seat>DISASSEMBLY>DRIVER'S SEAT>POWER SEAT.

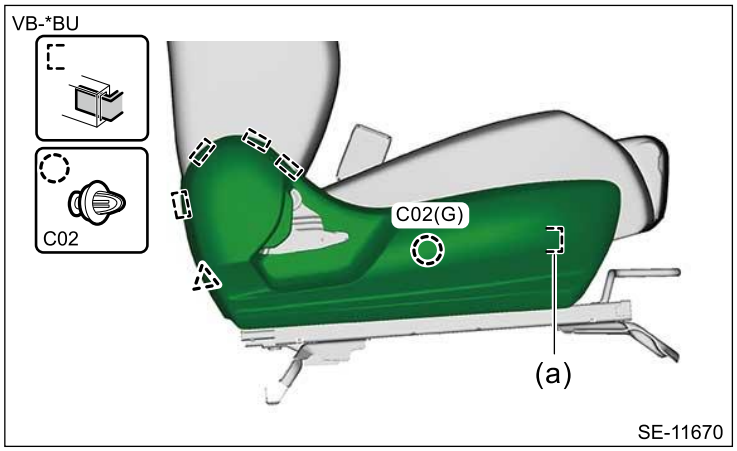
Caution:

Do not disassemble the backrest assembly of RECARO® seat.

4. Remove the knob hinge reclining.
   (1) Pull up the knob hinge reclining and release the claws on the back.
   (2) Pull out the knob hinge reclining while the claws on the back are released.

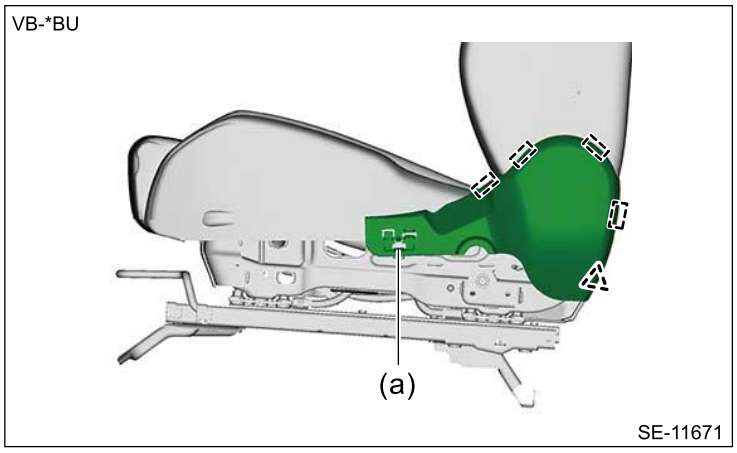


5. Remove the cover hinge outside.
(1) Release it from the hinge base cover outside in the rear side.
(2) Release the clips.
(3) Pull forward to release the claw (a) and remove the cover hinge outside.



6. Remove the belt assembly front INN. Ref. to SEAT BELT SYSTEM>Front Seat Belt>REMOVAL > BELT ASSEMBLY FRONT INN.

7. Remove the cover hinge inside.
(1) Release it from the hinge base cover inside in the rear side.
(2) Release the metal clip (a) in the front side, and detach the cover hinge inside.



8. Separate the backrest assembly and the seat cushion assembly.
(1) Remove the harness on the back side of the seat cushion assembly.

- Side airbag harness
- Seat heater harness

(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.

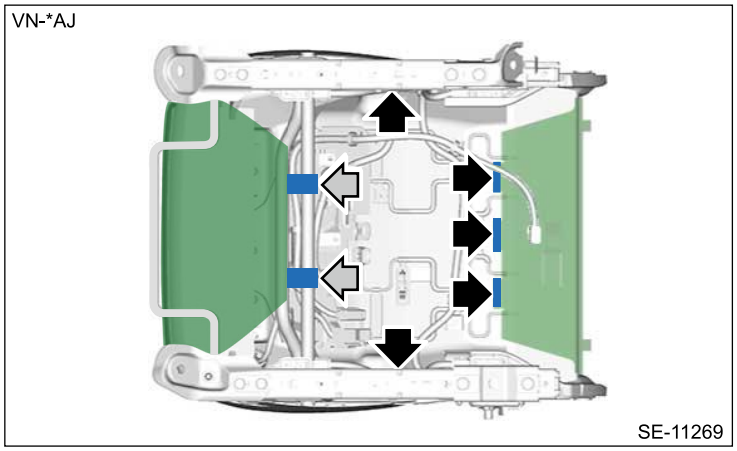
9. Remove the seat pad assembly cushion and the cover cushion front seat.

(1) Disconnect the connector.

(2) Unfasten the J-fastener on the front side.

(3) Unfasten the J-fastener on the right, left and rear side.

(4) Remove the seat pad assembly cushion and the cover cushion front seat from the seat cushion assembly.

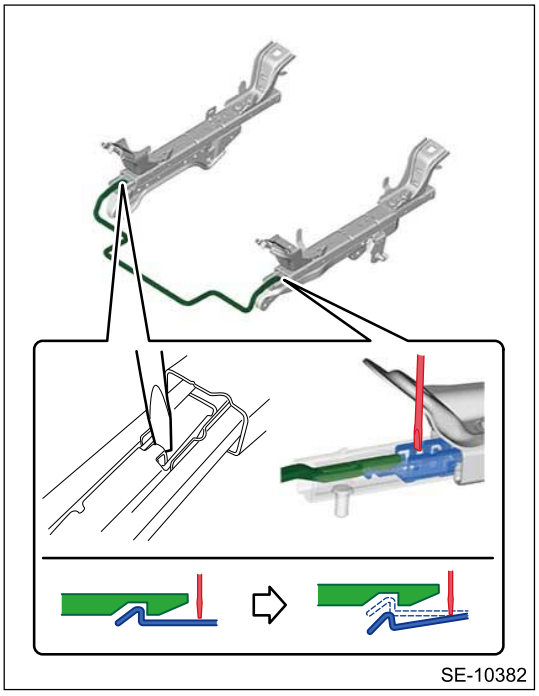


10. Remove the lever towel bar.

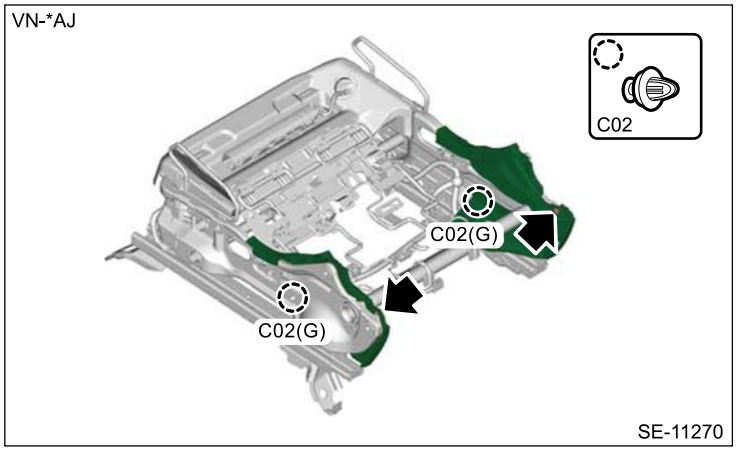
(1) Move the slide rail to the front-most position.

(2) Use a thin flat tip screwdriver to press-in the leaf spring from behind the slide rail.

(3) Pull out the lever towel bar.



11. Remove the screws and clips and remove the cover INN cushion outside and the cover INN cushion inside.



12. Remove the harness assembly seat cushion.

> **Note:**
> **Routing of the harness varies depending on the specifications. For easier assembly work, it is recommended to take pictures before removing the harness.**

13. Remove the panel front wire.

14. Remove the cover cushion front seat.

Caution:

- **If the seat heater unit is removed, replace the seat pad assembly with a new part.**
- **If the seat heater unit is reused, remove the polyurethane section and double-sided tape from the reverse side completely. Use new double-sided tape.**

Preparation items:

Double-sided tape: NITTO DENKO 501L or equivalent

(1) Remove the hog ring.

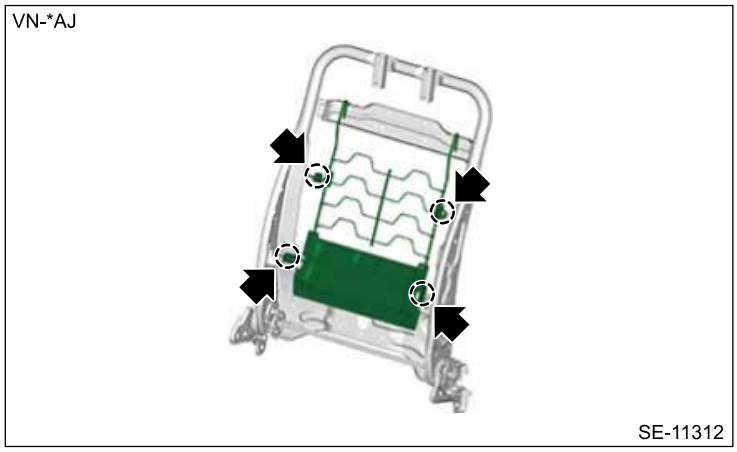
(2) Pull out the seat pad assembly cushion from the cover cushion front seat.

ASSEMBLY

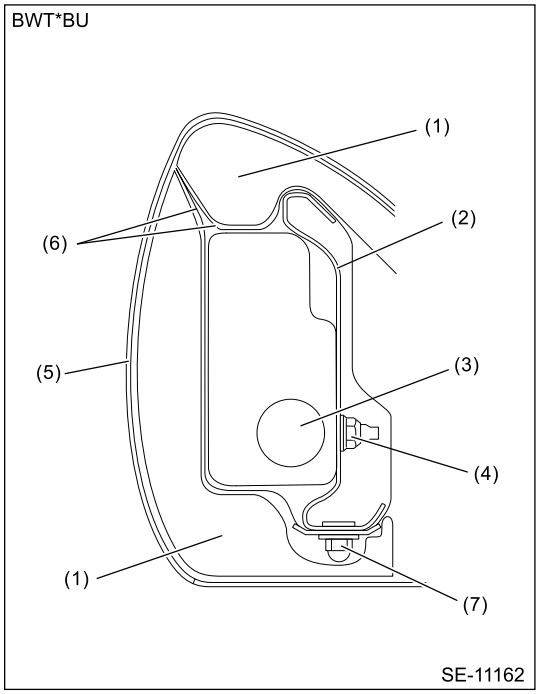
1. SEAT COMMON OPERATION PROCEDURE

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Do not confuse the harness routing of the side airbag harness and the front seat belt INN harness, etc. Assembling with harnesses improperly routed may cause the harness to get caught and short out.**
- **If the hook spring of the backrest frame assembly is deformed or comes off due to the deformation, replace the flat mat & hook spring assembly with a new part. (Except for RECARO® seat)**



- **Make sure that the side airbag module is installed as shown in the figure.**

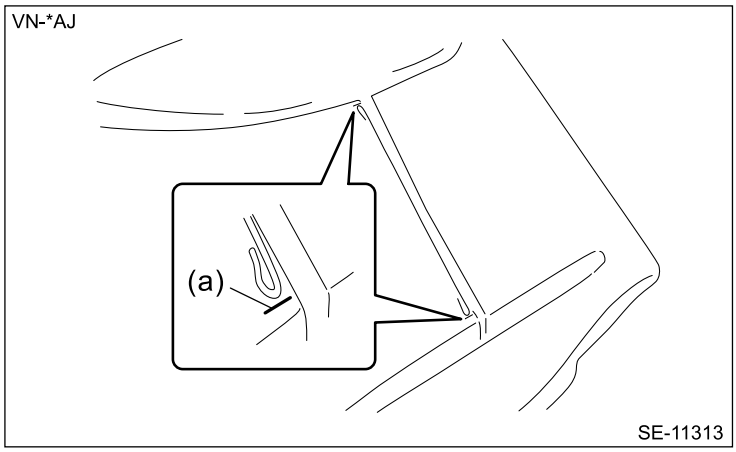


(1) Seat pad ASSY backrest
(2) Seat frame ASSY backrest
(3) Side airbag module inflator
(4) Self-locking nut
(5) Cover backrest front seat
(6) Side airbag guide cloth
(7) Hexagon cap nut

- **If the front seat cover is not installed securely, the side airbag may not be activated properly, therefore keep strictly to the following procedures.**

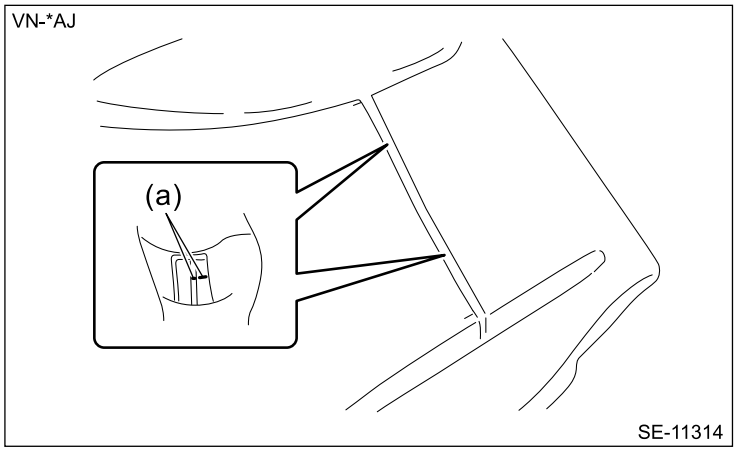
– Do not reuse the mounting nuts of the airbag module. Always replace with a new specified nut.
– Be careful not to stain or damage the front seat cover during assembly.
– Do not reuse the hog ring and hang wire.
– Secure the hog ring using hog ring pliers.
– Install the hog rings to the specified points securely and make sure that there is no wrinkle or twisting on the front seat cover.

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.



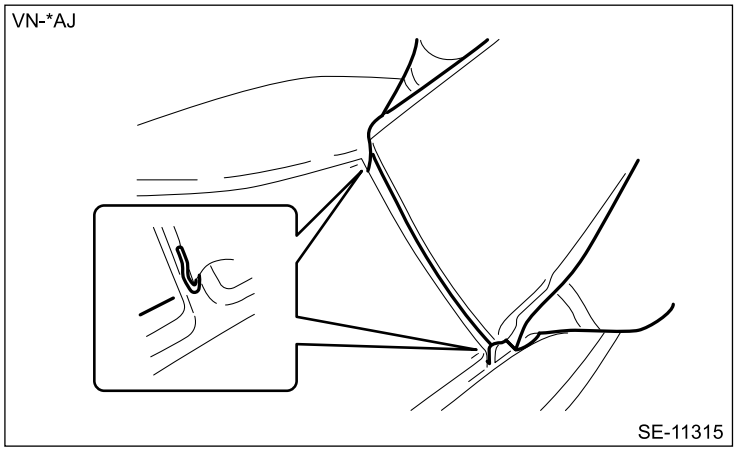
(a) Marking

   (2) Mark the center of the wire on the pad side to which the hog ring is attached.

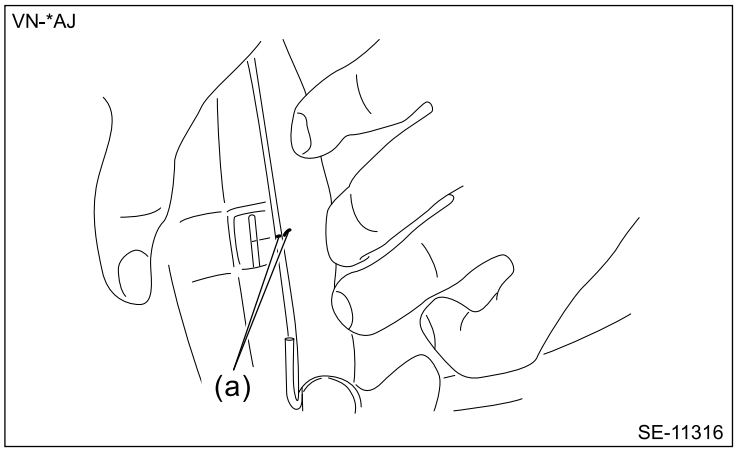


(a) Marking

   (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.

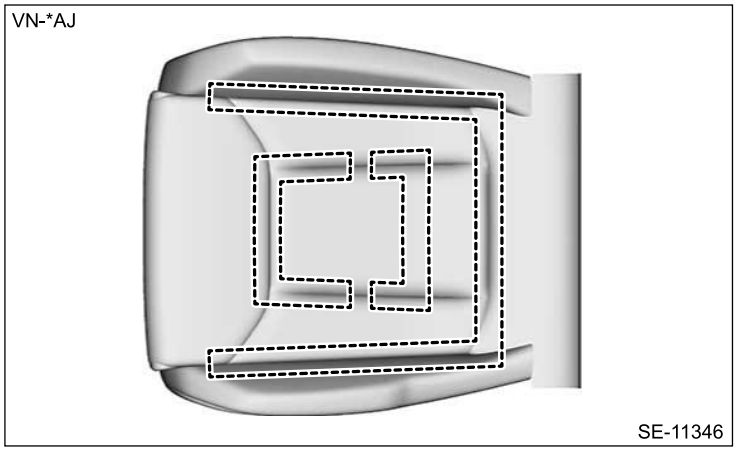


(a) Marking

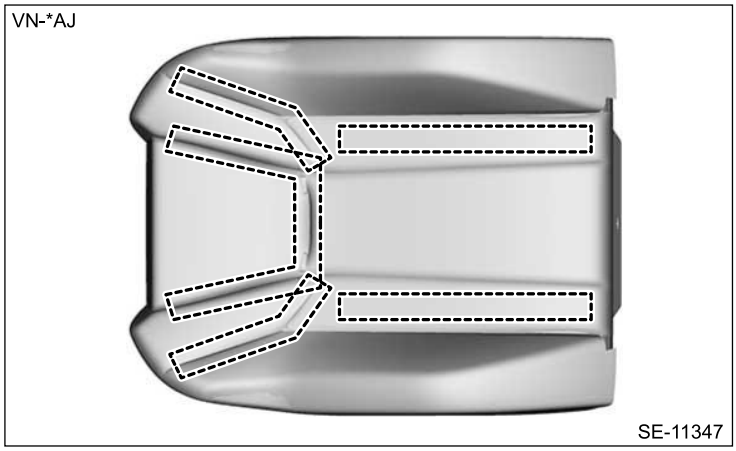
(5) Perform steps (1) — (4) for all sections to which the hog rings are attached.

(6) Secure the hang wire with new hog rings.

- Cushion cover surface side

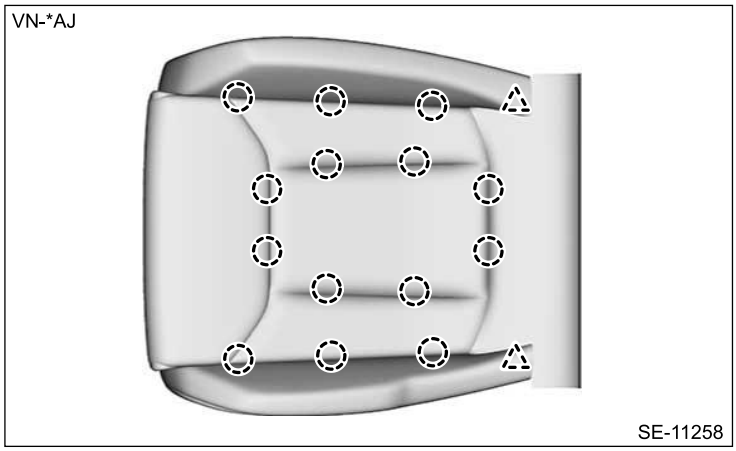


- Backrest cover surface side

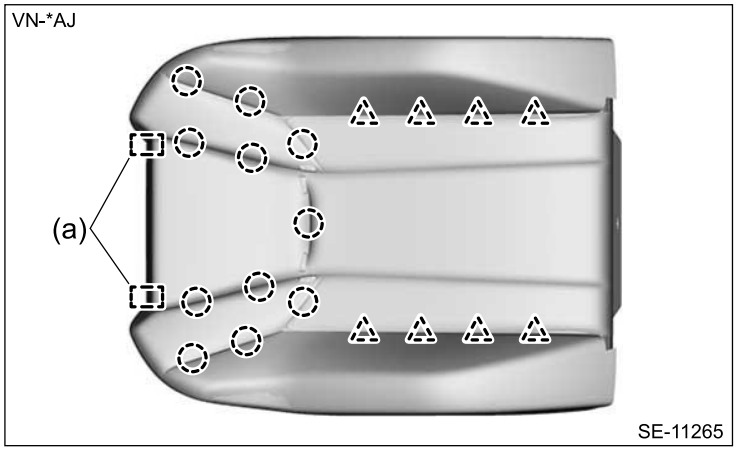


(7) Make sure that all hog rings, plastic fasteners and tape are attached securely.

- Cushion cover

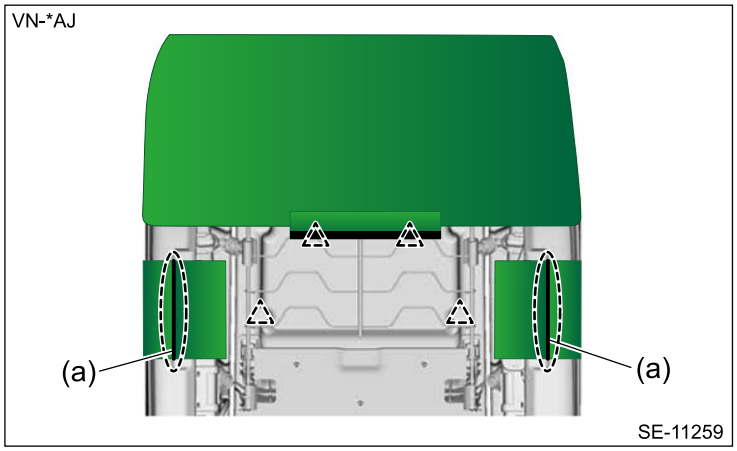


- Backrest cover surface side



(a) Tape

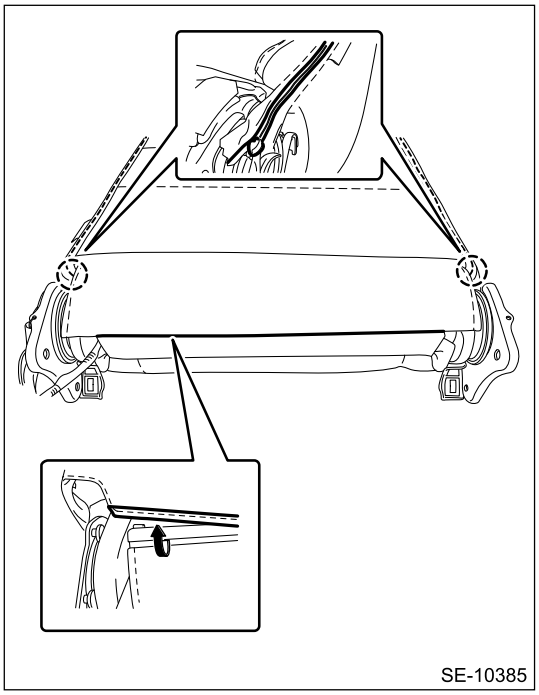
- Backrest cover back side



(a) Plastic fastener

(8) Tighten the fastener at the back side of backrest assembly.

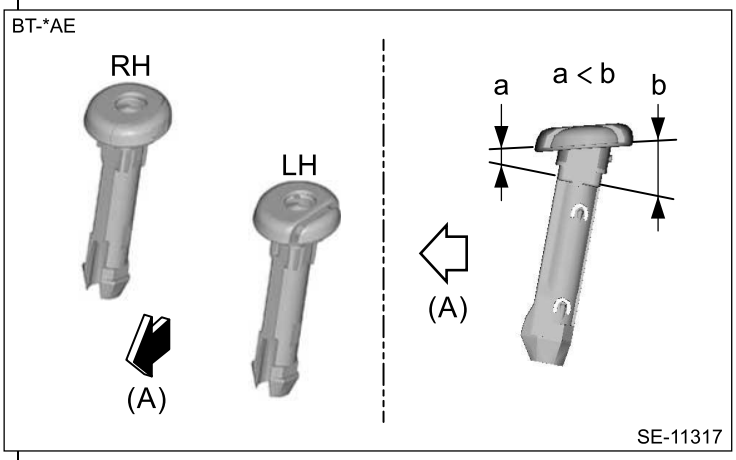
(9) Fasten the plastic fastener at the back side (bottom) of backrest assembly.



3. Assemble remaining parts in the reverse order of disassemble.

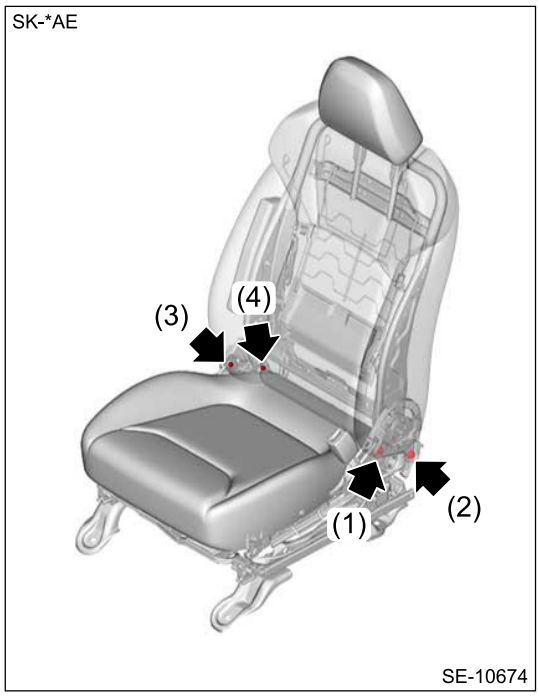
Note:

- **Check the shape and front/rear directions before assembling the headrest bushing.**



(A) Front

- **Install the backrest assembly and seat cushion assembly in the following procedure.**
  1. **Temporarily tighten the four reclining hinge bolts.**
  2. **Tighten the reclining hinge bolts in order from (1) — (4) two or three times, until they reach the specified torque.**



Tightening torque:

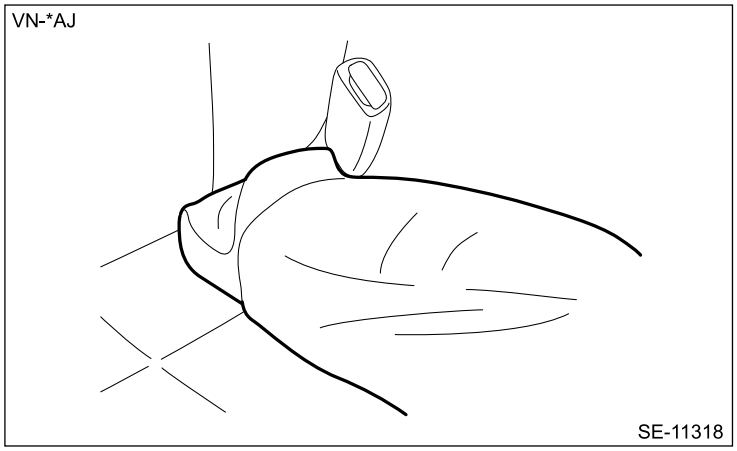
52 N·m (5.3 kgf-m, 38.4 ft-lb)

- **When installing the front seat belt INN, follow the procedures described in the SEAT BELT section. Ref. to SEAT BELT SYSTEM>Front Seat Belt>INSTALLATION.**

Tightening torque:

Refer to "COMPONENT" of "General Description" for the tightening torque. Ref. to SEATS>General Description>COMPONENT > FRONT SEAT.

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.



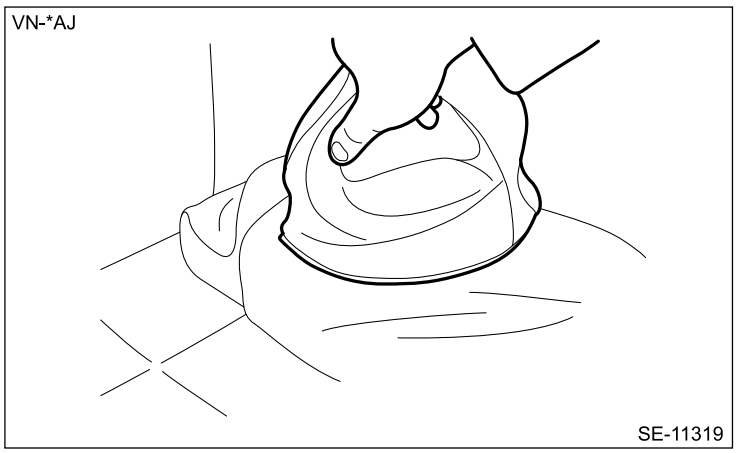
(2) Touch up with warm iron.

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.

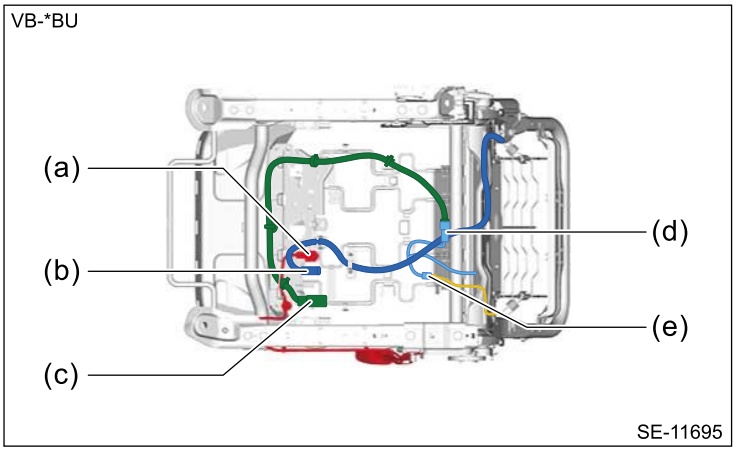


5. Install connectors located under the front seat. Ref. to SEATS>Front Seat>ASSEMBLY > CONNECTOR & HARNESS.
6. Install the seat assembly. Ref. to SEATS>Front Seat>INSTALLATION.

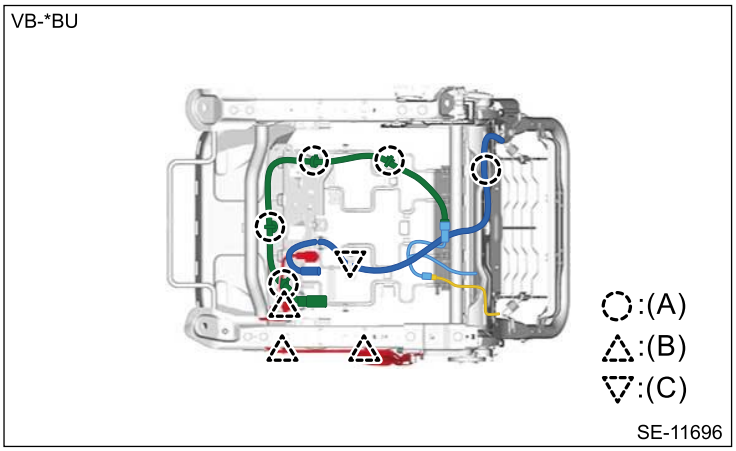
2. CONNECTOR & HARNESS

Route the harness by referring to the following.

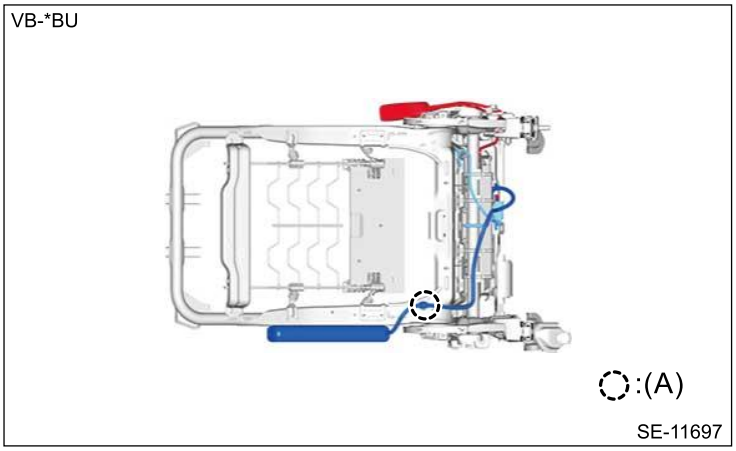
- Driver’s seat
  - – Manual seat model



(a) Seat belt connector
(b) Side airbag connector
(c) Integrated connector
(d) Cushion heater connector
(e) Backrest heater connector

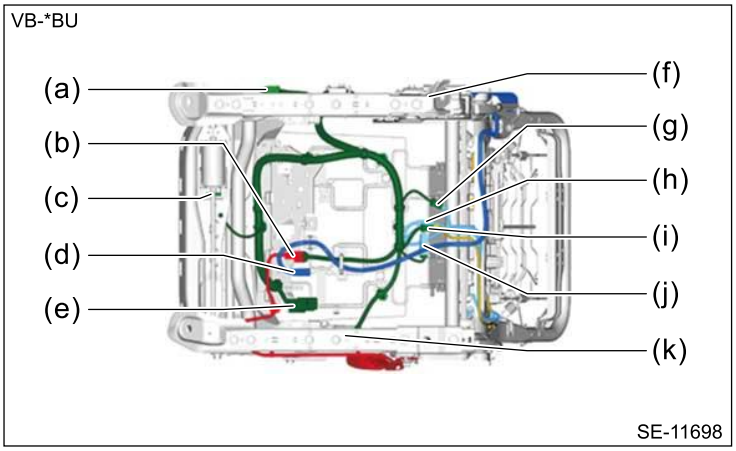


(A) Harness clamp
(B) Harness clamp
(C) Harness holder (panel front wire)

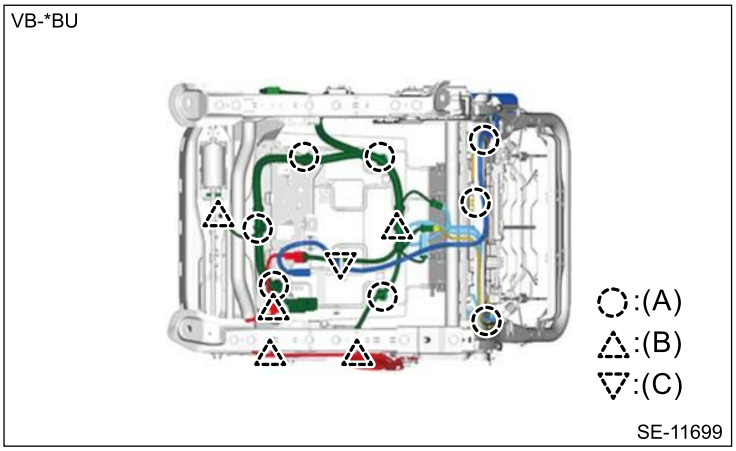


(A) Harness clamp

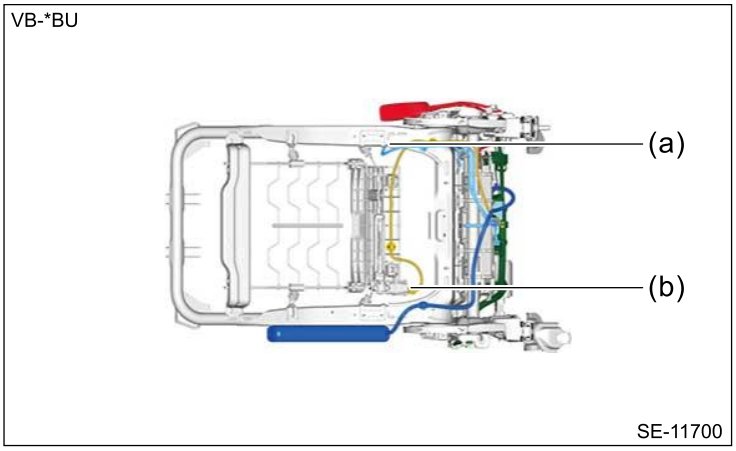
– Model with power seat (except for RECARO® seat)



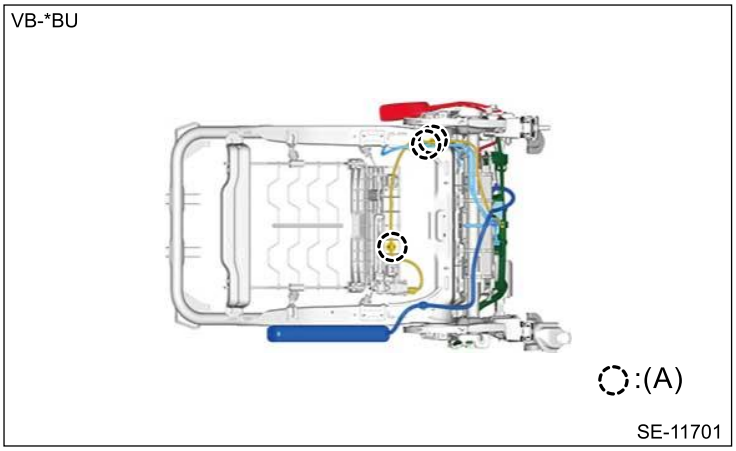
(a) Power seat switch connector
(b) Seat belt connector
(c) Slide motor connector
(d) Side airbag connector
(e) Integrated connector
(f) Lifter motor connector
(g) Reclining harness connector
(h) Backrest heater connector
(i) Lumbar harness connector
(j) Cushion heater connector
(k) Tilt motor connector



(A) Harness clamp
(B) Harness clamp
(C) Harness holder (panel front wire)

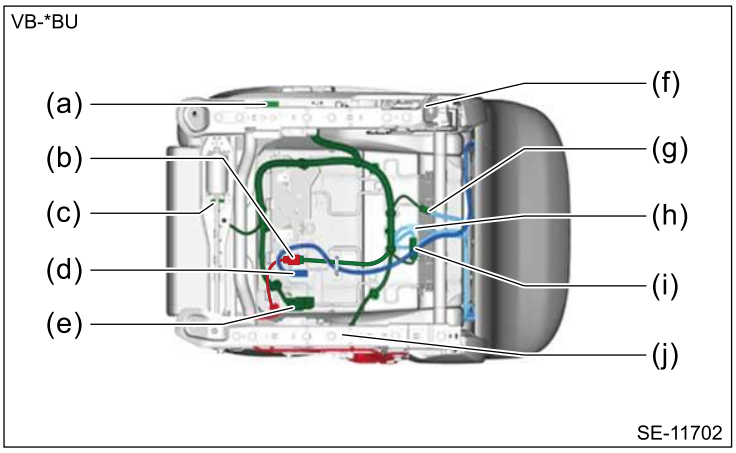


(a) Reclining motor connector
(b) Lumbar motor connector

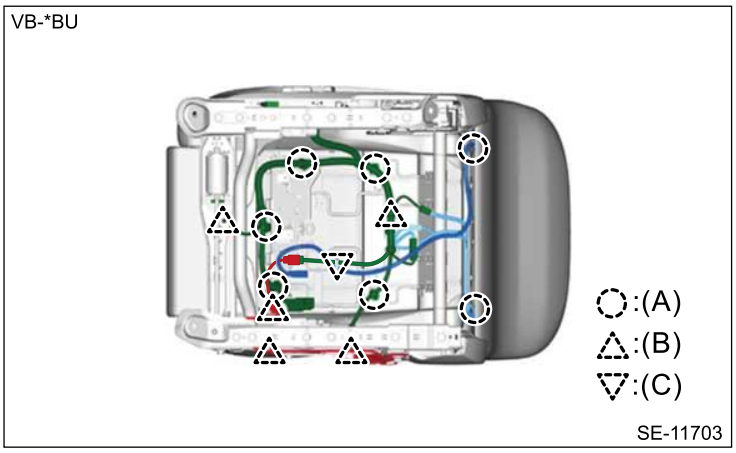


(A) Harness clamp

– Model with power seat (RECARO® seat)



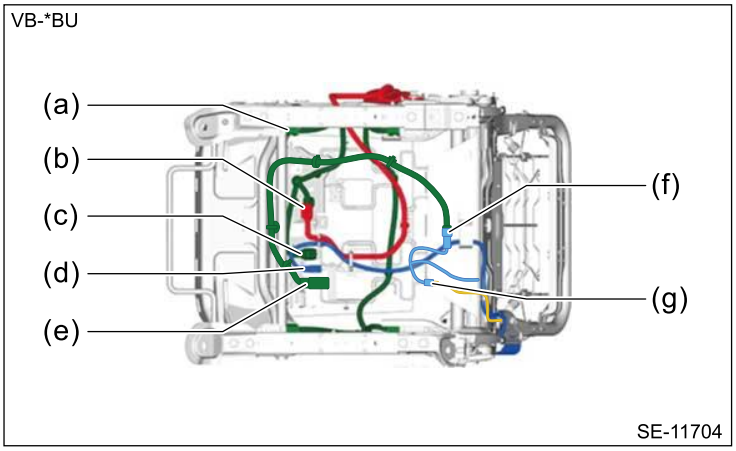
(a) Power seat switch connector
(b) Seat belt connector
(c) Slide motor connector
(d) Side airbag connector
(e) Integrated connector
(f) Lifter motor connector
(g) Reclining harness connector
(h) Backrest heater connector
(i) Cushion heater connector
(j) Tilt motor connector



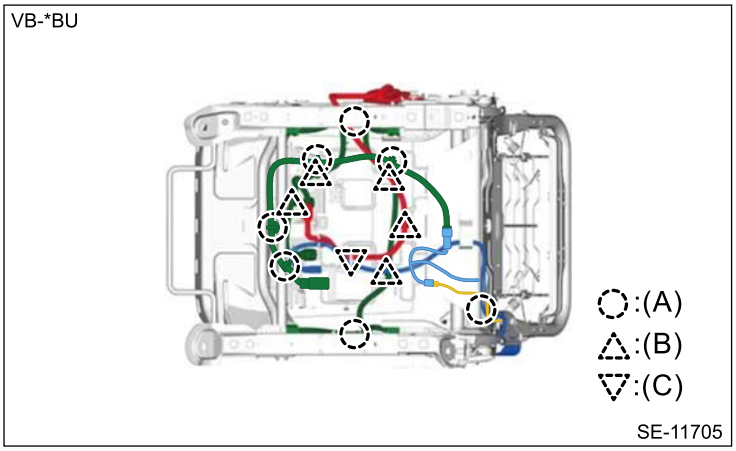
(A) Harness clamp
(B) Harness clamp
(C) Harness holder (panel front wire)

- Passenger’s seat

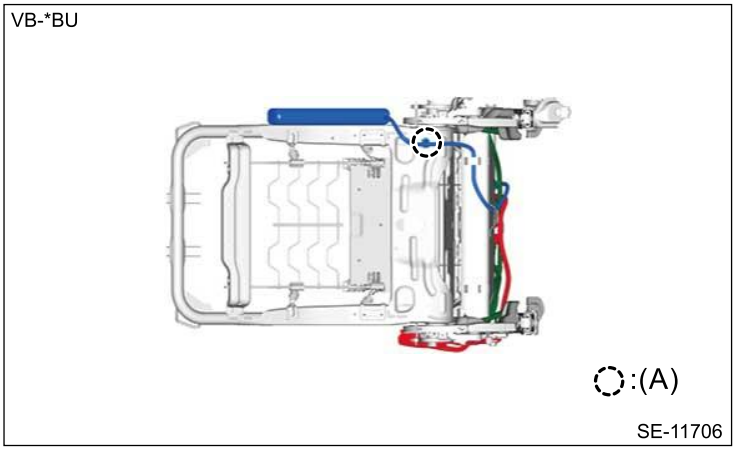
– Manual seat model (except for RECARO® seat)



(a) Load sensor
(b) Seat belt connector
(c) Load sensor connector
(d) Side airbag connector
(e) Integrated connector
(f) Cushion heater connector
(g) Backrest heater connector

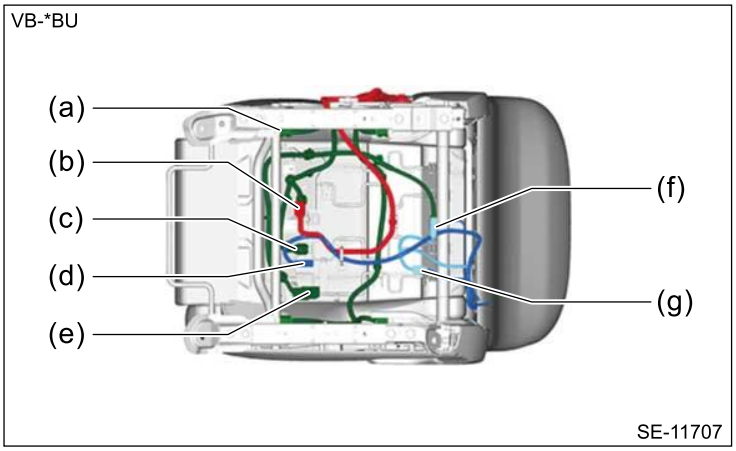


(A) Harness clamp
(B) Harness clamp
(C) Harness holder (panel front wire)

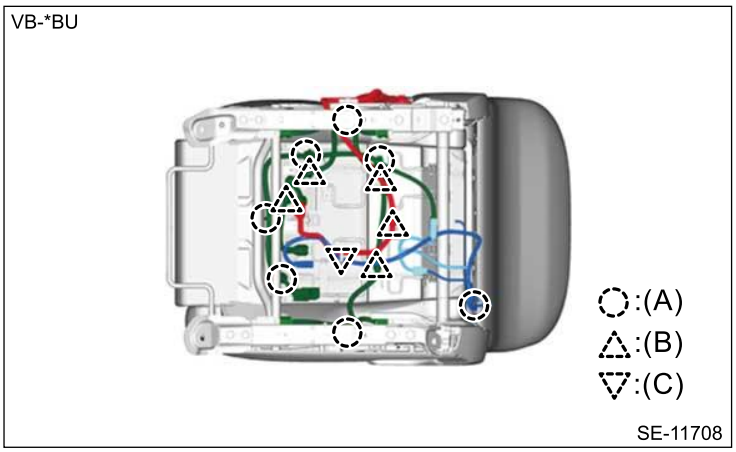


(A) Harness clamp

– Manual seat model (except for RECARO® seat)



(a) Load sensor
(b) Seat belt connector
(c) Load sensor connector
(d) Side airbag connector
(e) Integrated connector
(f) Cushion heater connector
(g) Backrest heater connector



(A) Harness clamp
(B) Harness clamp
(C) Harness holder (panel front wire)

SEATS > Front Seat

INSPECTION

1. SEAT COVER

Check that there is no tear or fray on the cover front seat backrest and the cover front seat cushion.

Note:
If the door side of the front seat backrest cover is torn or frayed, the side airbag may not be deployed properly. In this case, replace the front seat backrest cover with a new part.

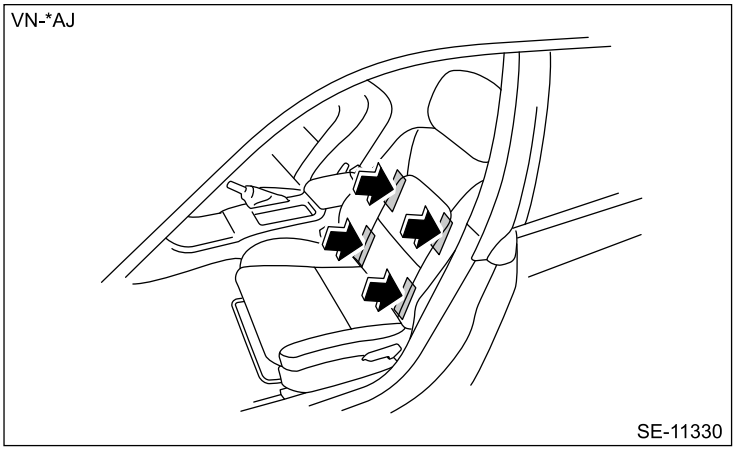
2. CHECK PASSENGER'S SEAT BELT WARNING LIGHT

For inspection of the passenger's seat belt warning light, refer to "Seat Belt Warning System" in the "SEAT BELT SYSTEM" section. Ref. to SEAT BELT SYSTEM>Seat Belt Warning System>INSPECTION.

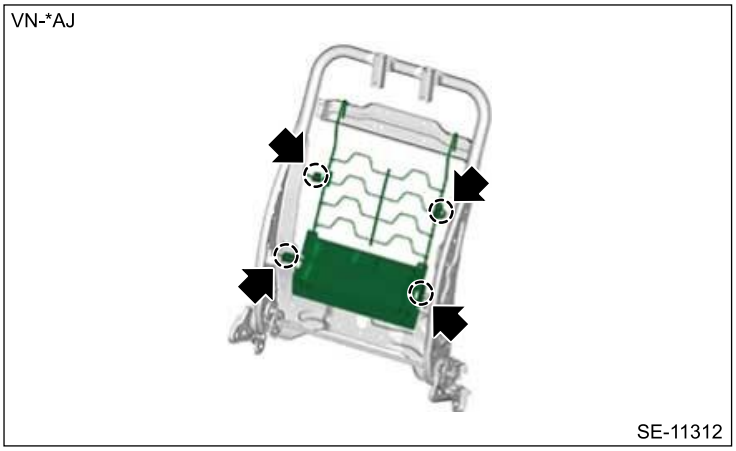
3. HOOK SPRING

Check the flat mat hook spring by applying weight to the backrest assembly. (Except for RECARO® seat model)

Note:
If the appropriate stiffness is not obtained by applying weight to the backrest assembly, the hook spring may be disengaged.



If it is due to the deformation of the hook spring, replace the flat mat & hook spring assembly with a new part.



REMOVAL

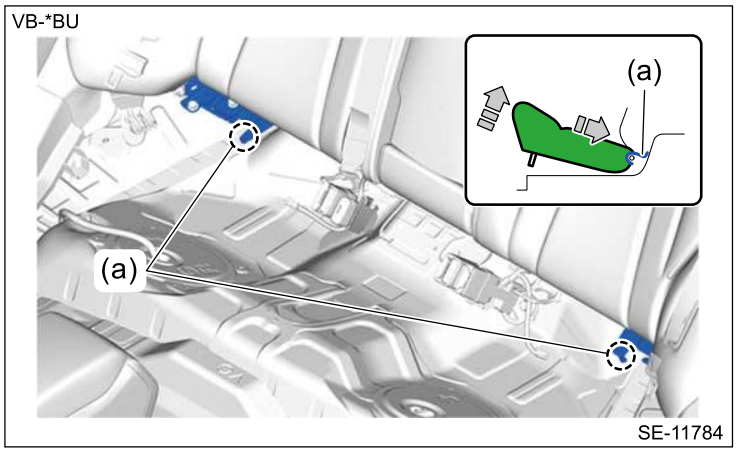
Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

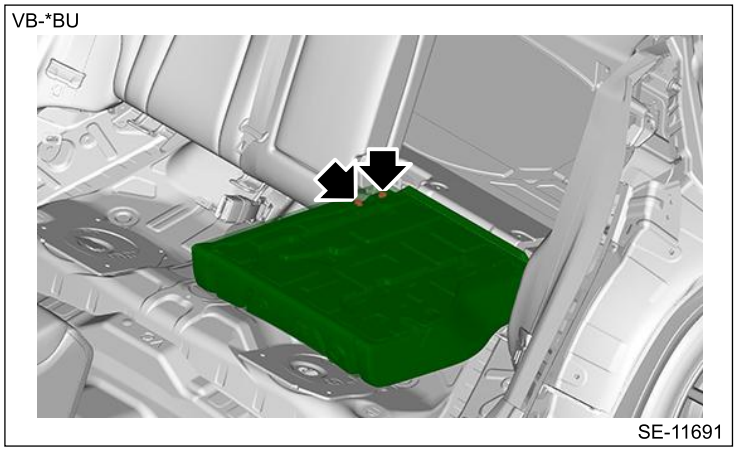
1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the rear seat cushion assembly.
   (1) While pushing the corners of the rear seat cushion from above, pull the knob of the hook seat cushion rear towards yourself.
   (2) While pulling the knob towards yourself, disconnect the hooks by lifting up the rear seat cushion.



   (3) Remove the hook (a) by pushing it back while lifting the front side of the rear seat cushion.



   (4) Disconnect the connector and remove the rear seat cushion.
3. Remove the mat trunk, spacer center and spacer rear floor side.
4. Remove the backrest assembly LH.
   (1) Tilt the backrest assembly LH forward.
   (2) Disconnect the connector, and remove the connector clip.
   (3) Turn over the cover rear seat backrest LH to remove the bolts.



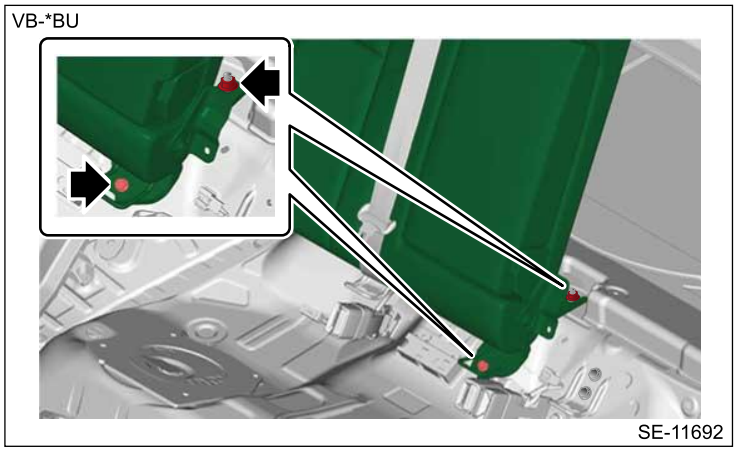
(4) Remove the backrest assembly LH.

5. Remove the backrest assembly RH.

(1) Disconnect the connector, and remove the connector clip.

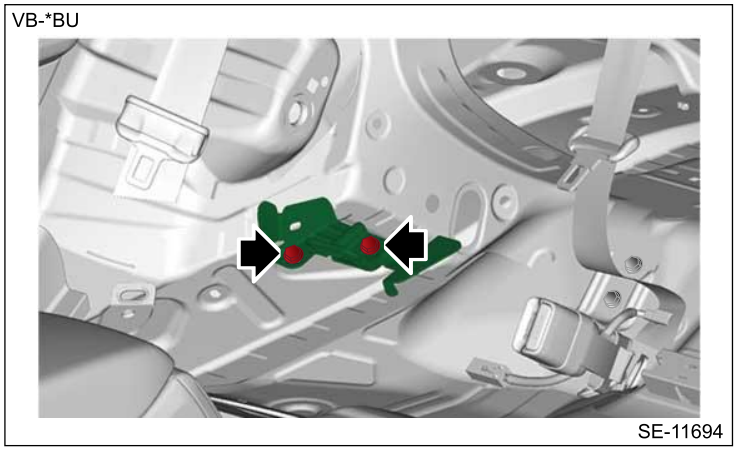
(2) Remove the bolt and nut.

(3) Tilt the backrest assembly RH forward, and remove the backrest assembly RH.



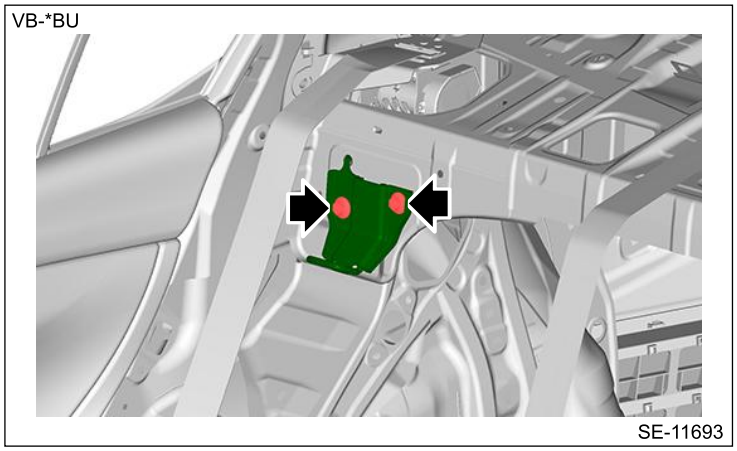
6. Remove the trim panel assembly C pillar LWR and the trim panel assembly C pillar. Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>REMOVAL.

7. Remove the bolts, and remove the hook BRKT rear seat cushion.



8. Remove the trim panel assembly rear shelf. Ref. to EXTERIOR/INTERIOR TRIM>Rear Shelf Trim>REMOVAL.

9. Remove the bolts, and then remove the striker backrest.



INSTALLATION

Caution:

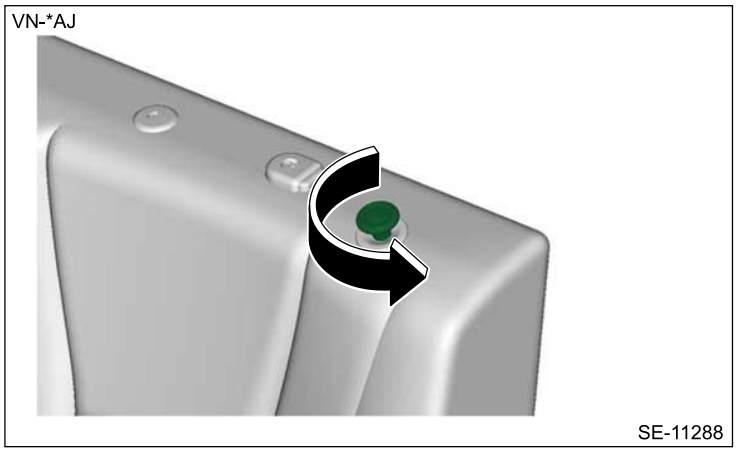
- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

1. Install the striker backrest.
   Tightening torque:
   33 N·m (3.4 kgf-m, 24.3 ft-lb)
2. Install the trim panel assembly rear shelf. Ref. to EXTERIOR/INTERIOR TRIM>Rear Shelf Trim>INSTALLATION.
3. Install the hook BRKT rear seat cushion.
   Tightening torque:
   33 N·m (3.4 kgf-m, 24.3 ft-lb)
4. Install the trim panel assembly C pillar and the trim panel assembly C pillar LWR. Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>INSTALLATION.
5. Install the backrest assembly RH and LH.
   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.**

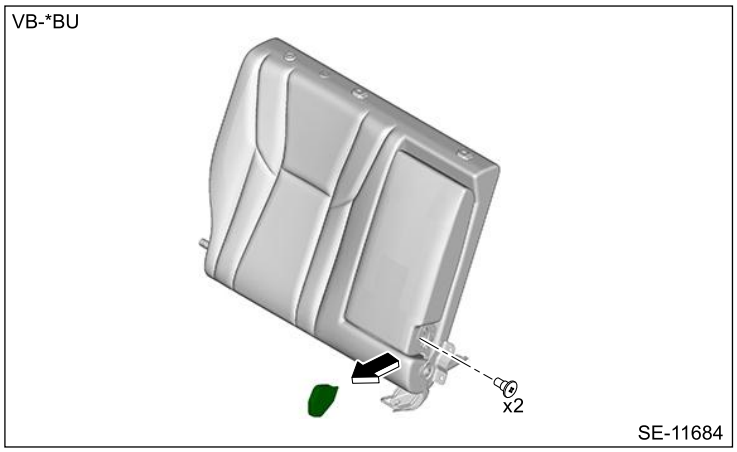
   Tightening torque:
   Refer to "COMPONENT" of "General Description" for the tightening torque. Ref. to SEATS>General Description>COMPONENT > REAR SEAT.
6. Install the spacer rear floor side, spacer center and mat trunk.
7. Install the rear seat cushion assembly.
   Caution:
   Check routing of each buckle of the seat belt.
8. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

DISASSEMBLY

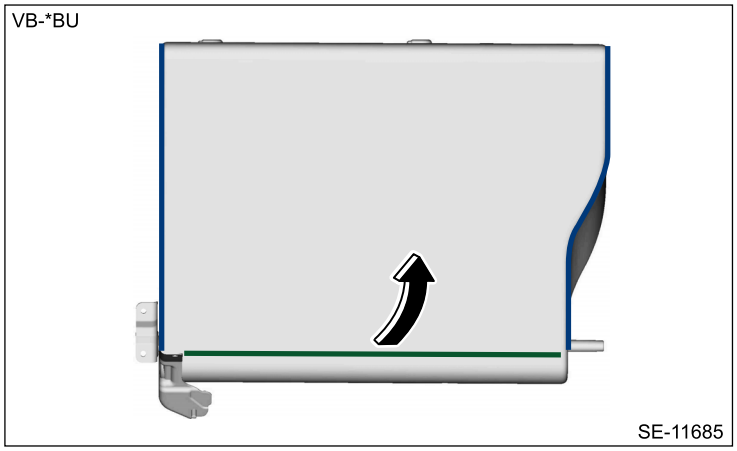
1. Prior to starting work, check the following precautions. Ref. to SEATS>General Description>CAUTION.
2. Remove the rear seat. Ref. to SEATS>Rear Seat>REMOVAL.
3. Remove the headrest assembly.
4. Remove the knob rear backrest.

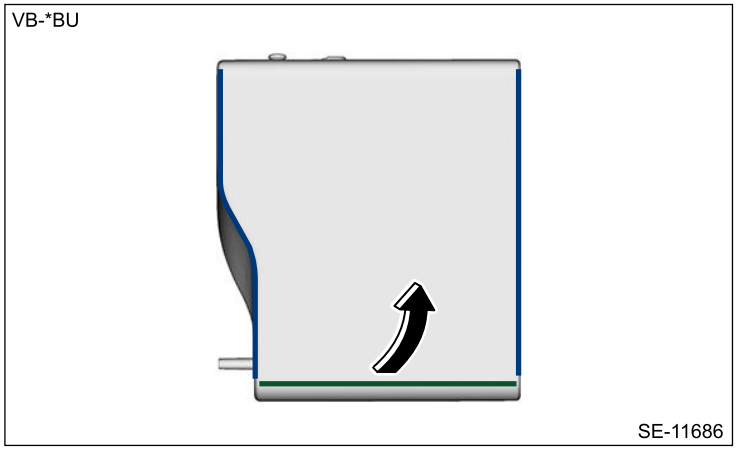


5. Remove the armrest assembly rear seat. (Models with armrest)
   (1) Slide to remove the cover.
   (2) Remove the bolts, and remove the armrest assembly rear seat.

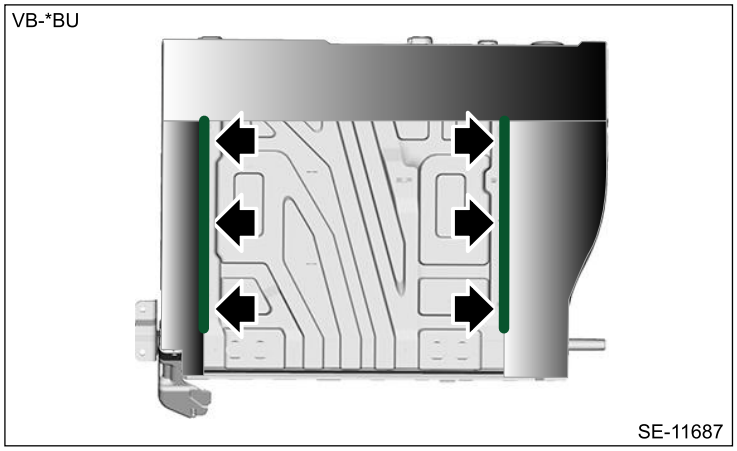


6. Remove the cover backrest rear seat and seat pad assembly rear backrest.
   (1) Detach the plastic fastener at the bottom of backrest assembly, and turn over the cover backrest rear seat.

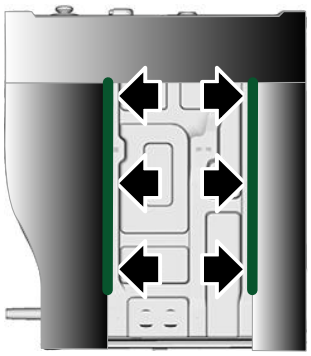




(2) Detach the plastic fasteners on the right and left of the backrest assembly.



VB-*BU



SE-11688

(3) Remove the bushing headrest and knob guide.

Note:
Catch the tip of headrest bushing with pliers and push it from inside seat to outside to remove it.

VN-*AJ

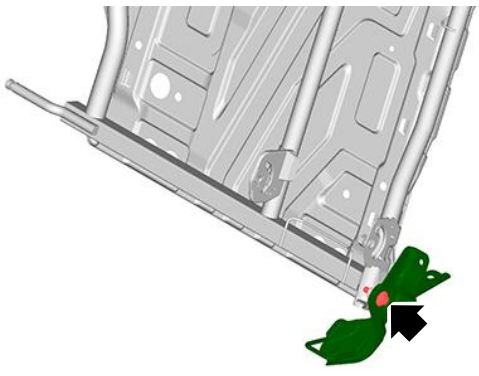


SE-11321

(4) Remove the cover backrest rear seat and seat pad assembly rear backrest.

7. Remove the bolt and remove the hinge assembly rear seat.

VB-*BU



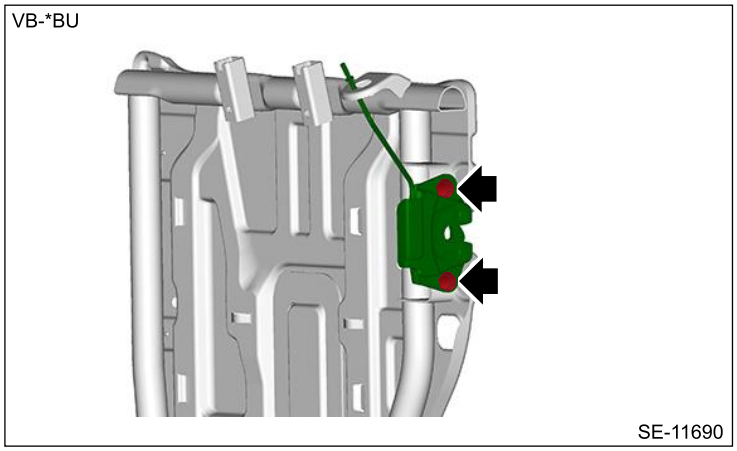
SE-11689

8. Remove the lock assembly.

Caution:
Pay attention to the burrs on the panel edge.

(1) Disconnect the connector.

(2) Remove the bolts, and remove the lock assembly.



9. Remove the hog rings, then remove the cover backrest rear seat.

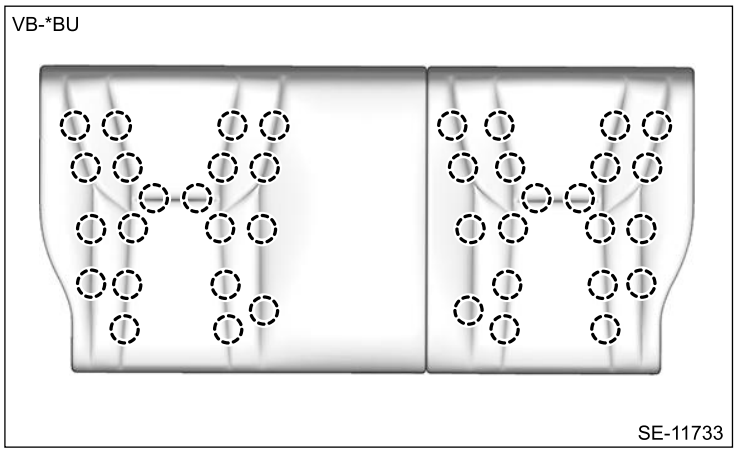
Caution:

- **If the seat heater unit is removed, replace the seat pad assembly with a new part.**
- **If the seat heater unit is reused, remove the polyurethane section and double-sided tape from the reverse side completely. Use new double-sided tape.**

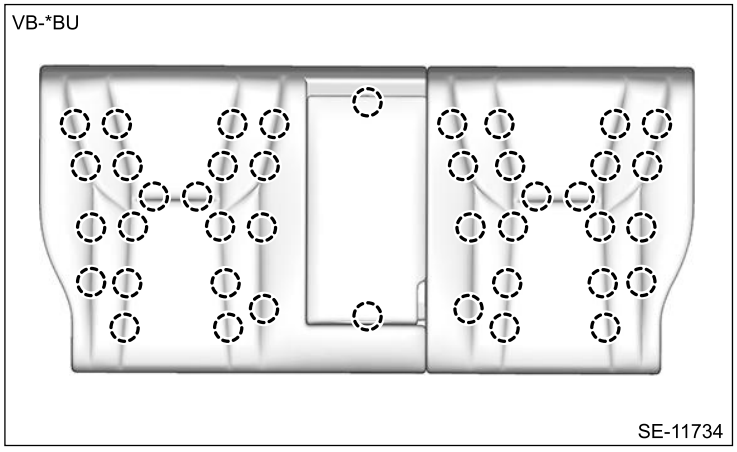
Preparation items:

Double-sided tape: NITTO DENKO 501L or equivalent

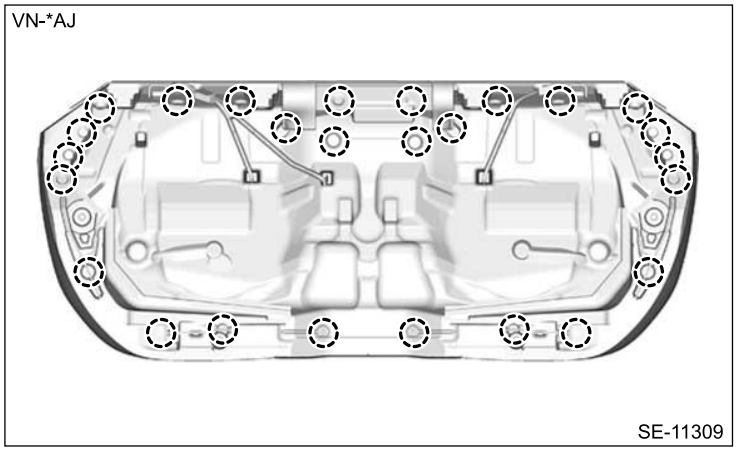
- Model without armrest



- Model with armrest



10. Remove the hog rings on the back side of the rear seat cushion assembly.



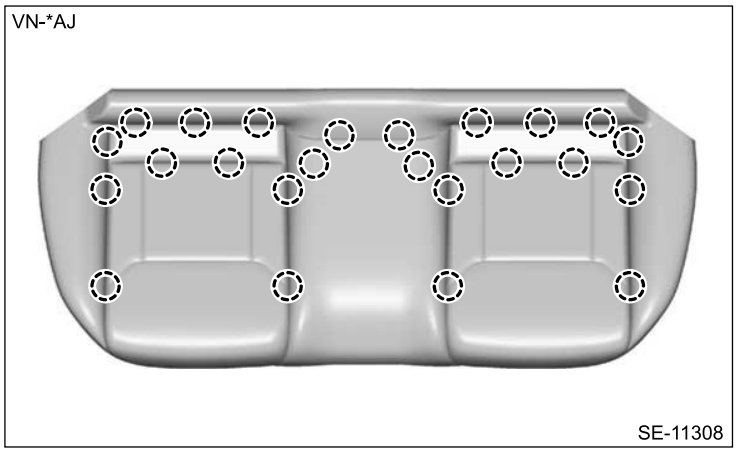
11. Remove the hog rings, then remove the cover cushion rear seat.

Caution:

- **If the seat heater unit is removed, replace the seat pad assembly with a new part.**
- **If the seat heater unit is reused, remove the polyurethane section and double-sided tape from the reverse side completely. Use new double-sided tape.**

  Preparation items:

  Double-sided tape: NITTO DENKO 501L or equivalent
- **If the seating sensor mat is removed, replace the pad & frame assembly rear cushion and the seating sensor mat with new parts. If the seating sensor mat is reused, the detection may not operate properly.**



SEATS > Rear Seat

ASSEMBLY

Caution:

- **If the seating sensor mat is removed, replace the pad & frame assembly rear cushion and the seating sensor mat with new parts. If the seating sensor mat is reused, the detection may not operate properly.**
- **Do not reuse the hog ring and hang wire.**
- **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 rear seat backrest cover and rear seat cushion cover.**

1. Assemble the cover cushion rear seat and the pad & frame assembly rear cushion in the same manner as the front seat. Ref. to SEATS>Front Seat>ASSEMBLY.

Caution:

- **If the seat heater unit is removed, replace the seat pad assembly with a new part.**
- **If the seat heater unit is reused, remove the polyurethane section and double-sided tape from the reverse side completely. Use new double-sided tape.**

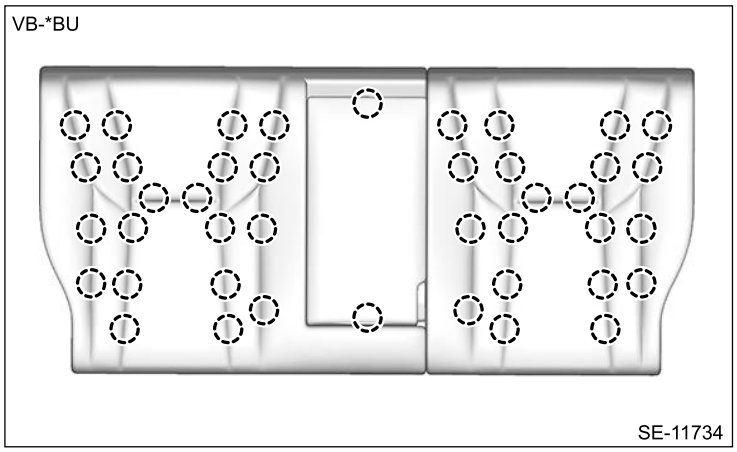
Preparation items:

Double-sided tape: NITTO DENKO 501L or equivalent

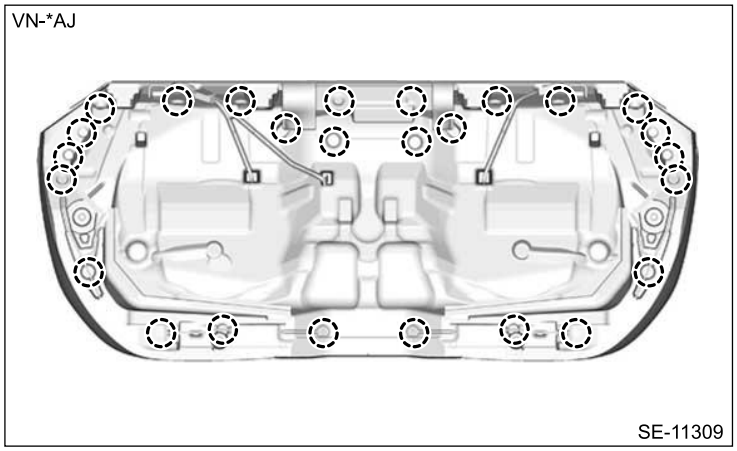
Note:

- **Do not contaminate or damage the seat surface and seat pad.**
- **While installing the hog rings, prevent the seat surface from getting wrinkled.**

(1) Install the hog rings, and assemble the cover cushion rear seat and the pad & frame assembly rear cushion.

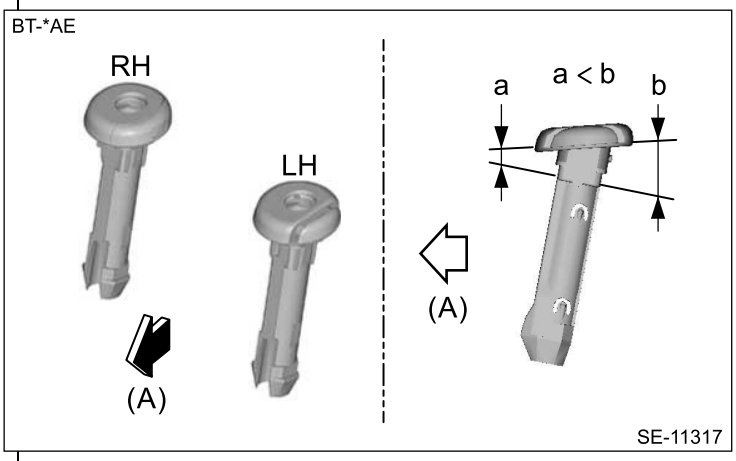


(2) Install the hog rings on the back side of the rear seat cushion assembly.



2. Install the lock assembly.
   Tightening torque:
   18 N·m (1.8 kgf-m, 13.3 ft-lb)
3. Install the hinge assembly rear seat.
   Tightening torque:
   29 N·m (3.0 kgf-m, 21.4 ft-lb)
4. Install the cover backrest rear seat to the frame assembly rear backrest.
5. Install the bushing headrest and the bushing lock headrest.

Note:
Check the shape and front/rear directions before assembling the headrest bushing.



(A) Front

6. Tighten the fastener on backside of the backrest assembly, and install the plastic fastener.
7. Install the armrest assembly rear seat. (Models with armrest)
   Tightening torque:
   14.6 N·m (1.5 kgf-m, 10.8 ft-lb)
8. Install the knob rear backrest.
9. Install the headrest assembly.
10. Check that there is no tear or fray on the seat surface.
11. Install the rear seat. Ref. to SEATS>Rear Seat>INSTALLATION.

SEATS > Rear Seat

INSPECTION

1. SEAT COVER

- Check that there is no tear or fray on the seat surface.
- Check that the folding down mechanism and the reclining mechanism operate normally.

2. CHECK REAR SEAT BELT WARNING LIGHT

For inspection of the rear seat belt warning light, refer to “Seat Belt Warning System” in the “SEAT BELT SYSTEM” section. Ref. to SEAT BELT SYSTEM>Seat Belt Warning System>INSPECTION.

SEATS > Power Seat System

WIRING DIAGRAM

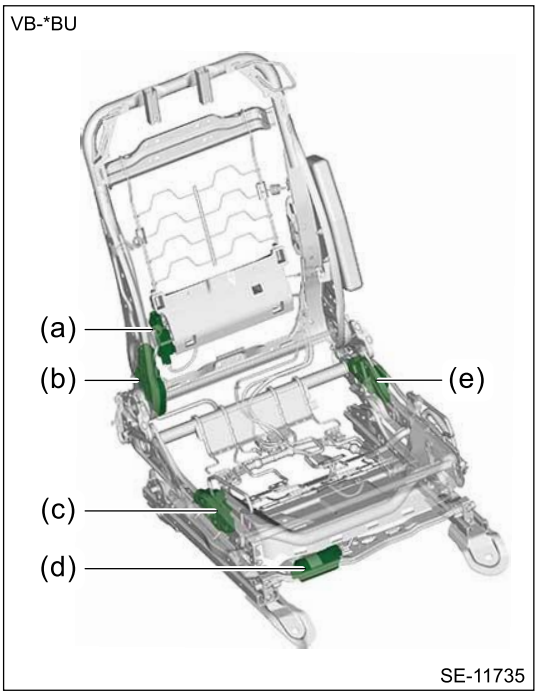
For the wiring diagram, refer to “Power Seat System” in the wiring diagram. Ref. to WIRING SYSTEM>Power Seat System>WIRING DIAGRAM.

SEATS > Power Seat System

INSPECTION

1. NOTE

- **MOTOR LAYOUT**



(a) Lumbar motor
(b) Reclining motor
(c) Tilt motor
(d) Slide motor
(e) Lifter motor

- **HARNESS LAYOUT**
  For the harness layout, refer to “CONNECTOR & HARNESS” in “FRONT SEAT”, “ASSEMBLY”. Ref. to SEATS>Front Seat>ASSEMBLY > CONNECTOR & HARNESS.

2. TROUBLE SYMPTOM

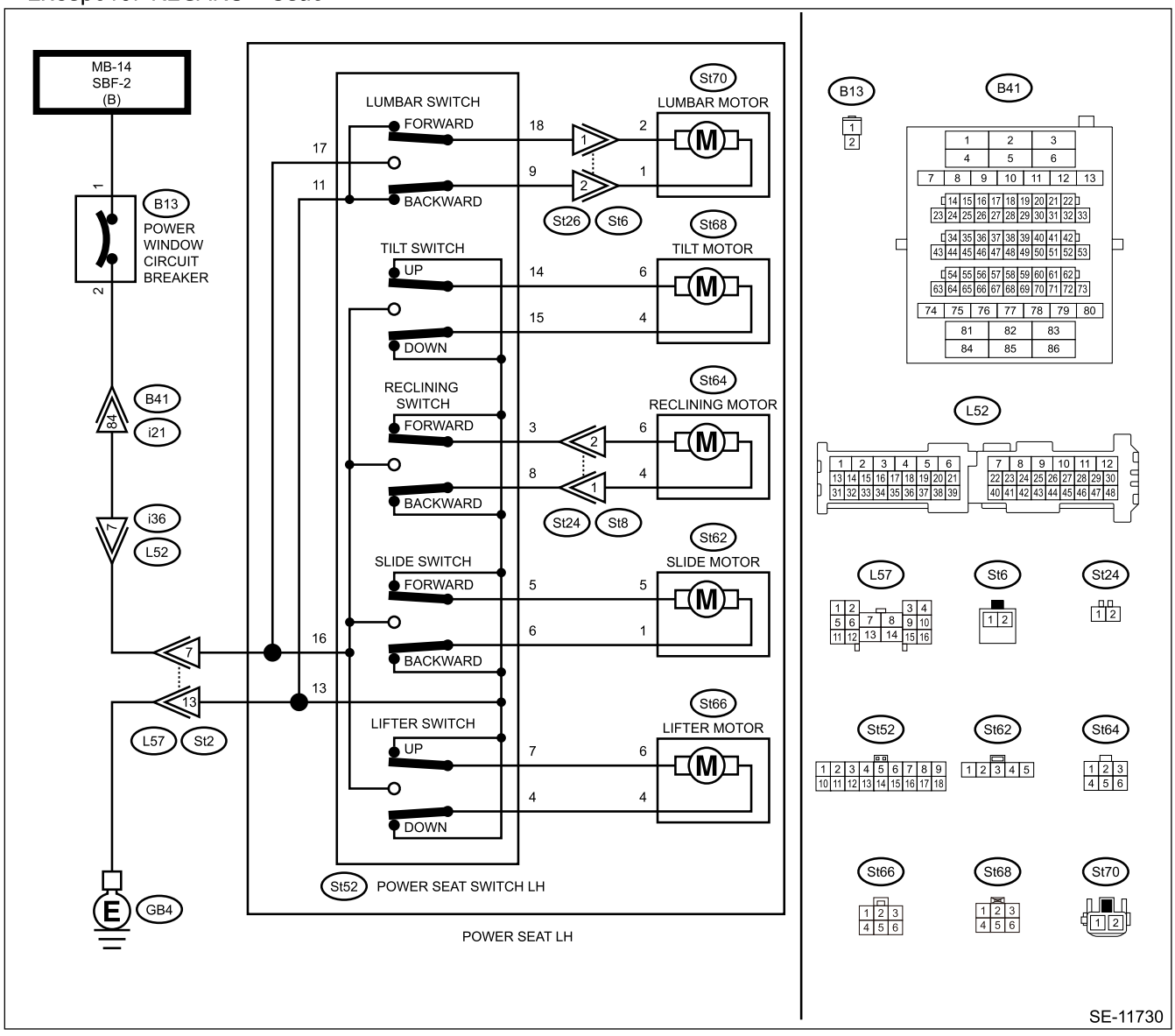
Symptoms	Reference
All functions do not operate.	Ref. to SEATS>Power Seat System>INSPECTION > ALL FUNCTIONS DO NOT OPERATE.
A part of function does not operate.	Ref. to SEATS>Power Seat System>INSPECTION > A PART OF FUNCTION DOES NOT OPERATE.

3. ALL FUNCTIONS DO NOT OPERATE

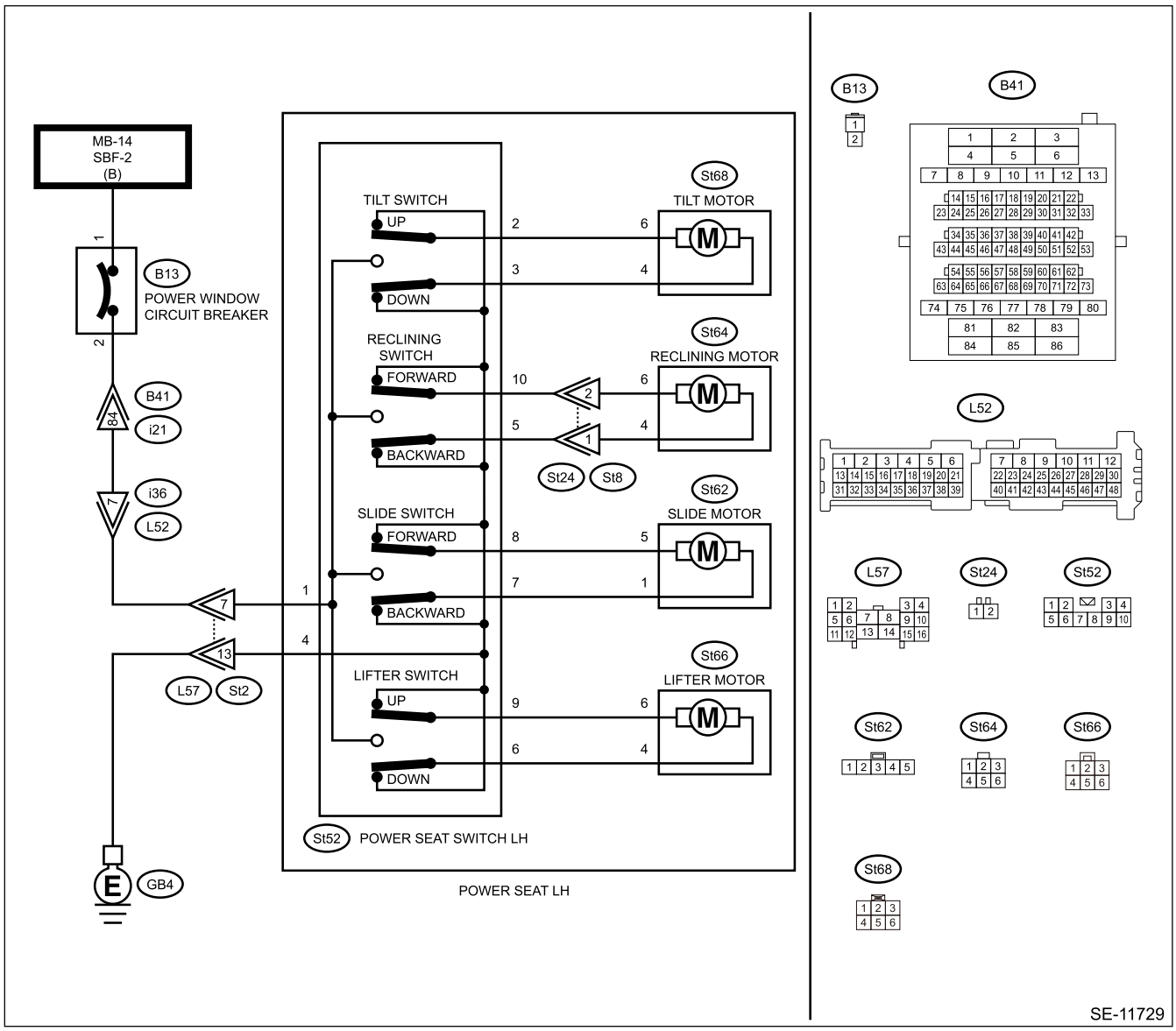
Wiring diagram:

Power seat system Ref. to WIRING SYSTEM>Power Seat System>WIRING DIAGRAM.

- Except for RECARO® seat



- RECARO® seat



1. CHECK SEAT FUNCTIONS.

Operate each power seat switch and check that each power seat function operates normally.

Does all function fail to operate?

Yes	Go to 2.
No	Check the motor which does not operate. Ref. to SEATS>Power Seat System>INSPECTION > A PART OF FUNCTION DOES NOT OPERATE.

2. CHECK FUSE.

1. Turn the ignition switch to OFF.
2. Check the power seat fuse inside the fuse box. Ref. to SEATS>Relay and Fuse>INSPECTION > CHECK FUSE.

Is the fuse blown out?

Yes	Replace the appropriate fuse.
No	Go to 3.

3. CHECK CIRCUIT BREAKER.

1. Remove the circuit breaker. Ref. to SEATS>Relay and Fuse>REMOVAL > CIRCUIT BREAKER.
2. Check the circuit breaker. Ref. to SEATS>Relay and Fuse>INSPECTION > CHECK CIRCUIT BREAKER.

Is the circuit breaker normal?

Yes	Go to 4.
No	Replace the circuit breaker.

4. CHECK POWER SUPPLY CIRCUIT.

1. Disconnect the power seat switch connector.
2. Measure the voltage between harness connector and chassis ground.

Connector & terminal

Except for RECARO® seat

(St52) No. 16 (+) — Chassis ground (−):

(St52) No. 17 (+) — Chassis ground (−):

RECARO® seat

(St52) No. 1 (+) — Chassis ground (−):

Is the voltage 10 V or more?

Yes	Go to 5.
No	Check body harness.

5. CHECK GROUND CIRCUIT.

Measure the resistance between power seat switch harness connector and chassis ground.

Connector & terminal

Except for RECARO® seat

(St52) No. 11 — Chassis ground:

(St52) No. 13 — Chassis ground:

RECARO® seat

(St52) No. 4 — Chassis ground:

Is the resistance less than 10 Ω?

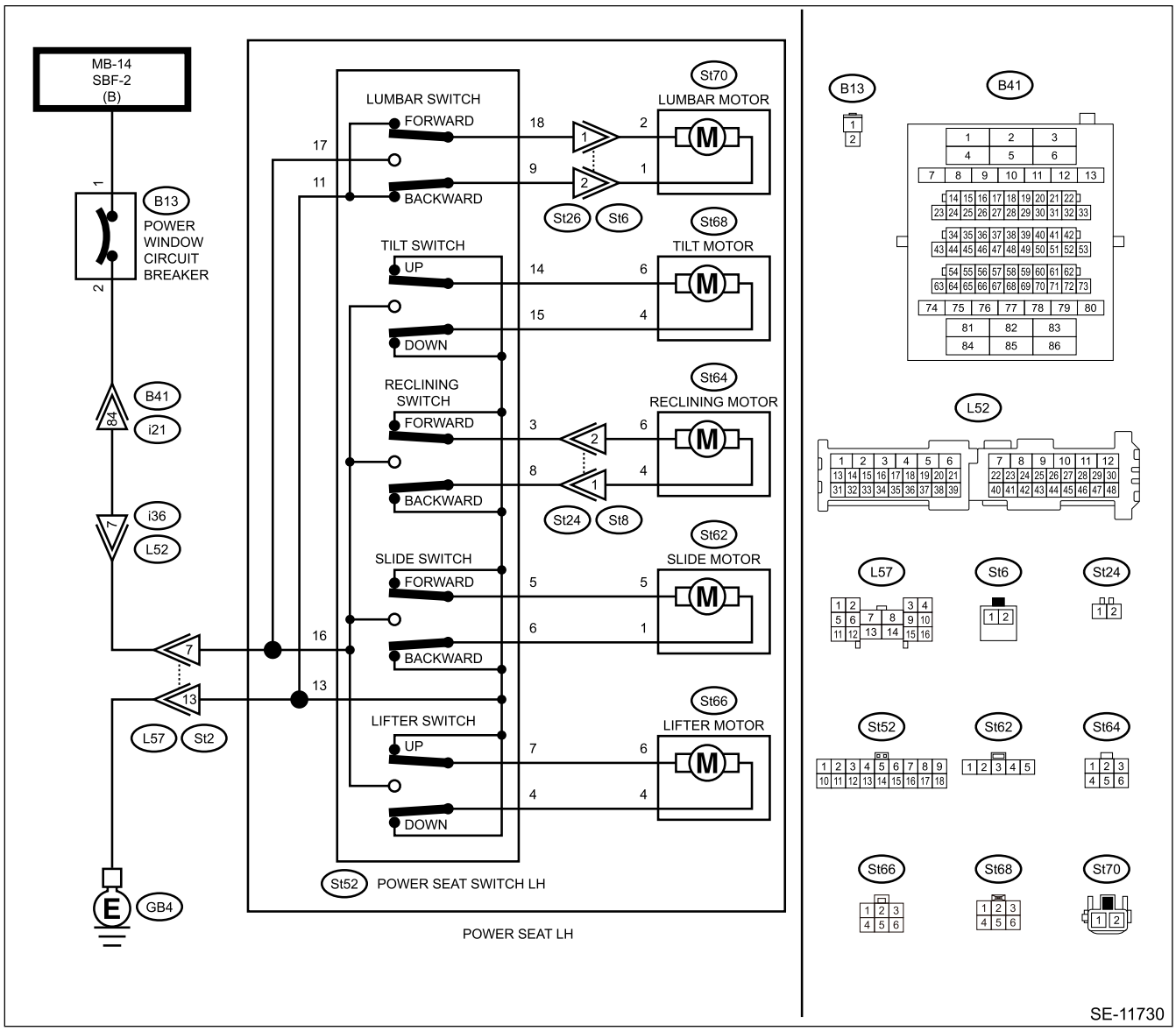
Yes	Replace the power seat switch assembly. Ref. to SEATS>Power Seat.
No	Check body harness.

4. A PART OF FUNCTION DOES NOT OPERATE

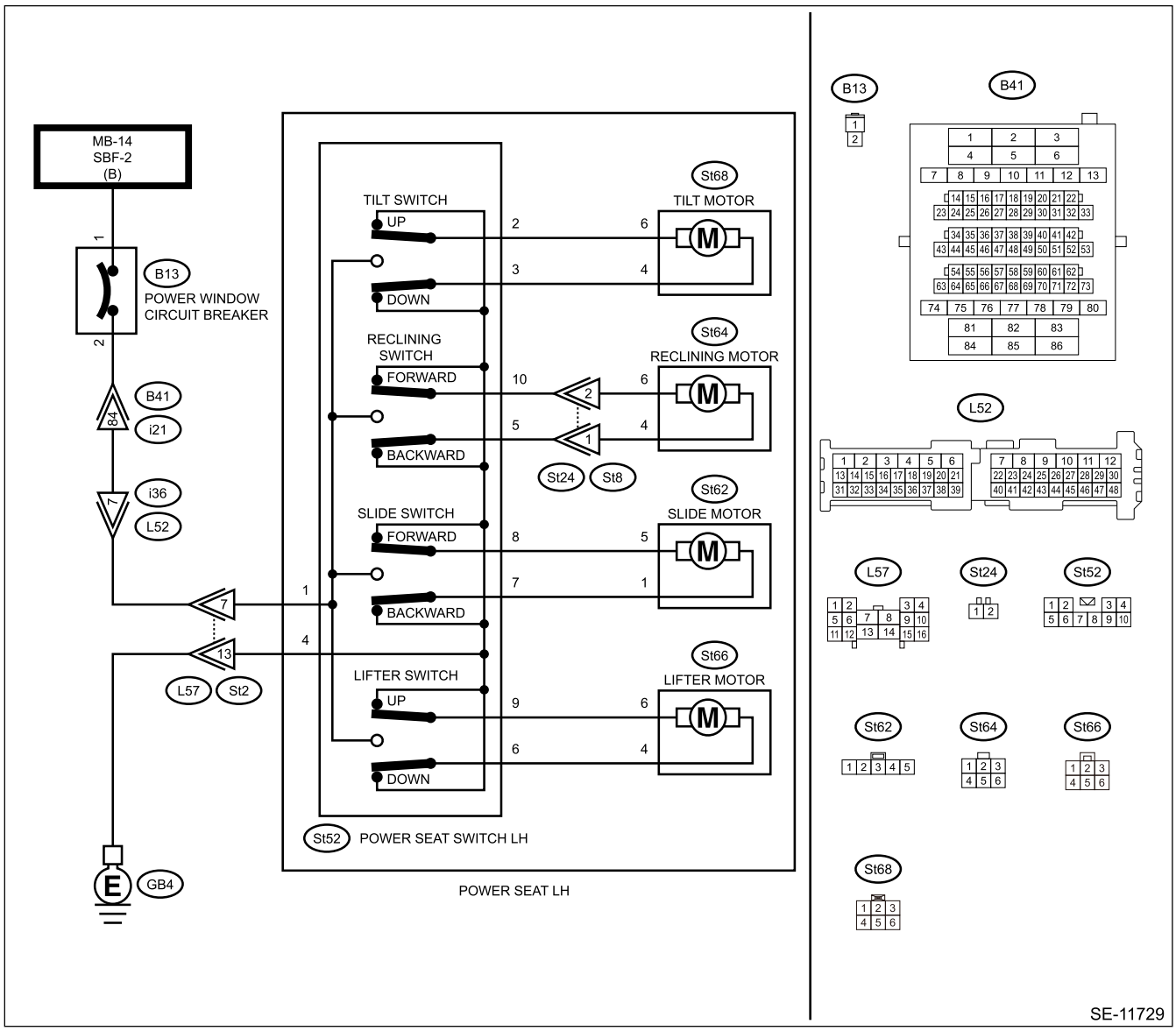
Wiring diagram:

Power seat system Ref. to WIRING SYSTEM>Power Seat System>WIRING DIAGRAM.

- Except for RECARO® seat


MB-14
SBF-2
(B)
B13
POWER
WINDOW
CIRCUIT
BREAKER
B41
i21
B4
i36
L52
L57
St2
GB4
LUMBAR SWITCH
FORWARD
BACKWARD
TILT SWITCH
UP
DOWN
RECLINING
SWITCH
FORWARD
BACKWARD
SLIDE SWITCH
FORWARD
BACKWARD
LIFTER SWITCH
UP
DOWN
St70
LUMBAR MOTOR
St68
TILT MOTOR
St64
RECLINING MOTOR
St62
SLIDE MOTOR
St66
LIFTER MOTOR
St26
St6
St24
St8
St52
POWER SEAT SWITCH LH
POWER SEAT LH
B13
B41
L52
L57
St6
St24
St52
St62
St64
St66
St68
St70
SE-11730

- RECARO® seat



- **SLIDE OPERATION FAILURE**

1. CHECK SWITCH.

1. Turn the ignition switch to OFF.
2. Disconnect the power seat switch connector.
3. Measure the resistance between connector terminals when moving the switch to slide forward and slide backward. Ref. to SEATS>Power Seat>INSPECTION > POWER SEAT SWITCH.

Is the inspection result normal?

Yes	Go to 2.
No	Replace the power seat switch assembly. Ref. to SEATS>Power Seat.

2. CHECK HARNESS.

1. Disconnect the slide motor connector.
2. Measure the resistance between power seat switch connector and slide motor connector.

Connector & terminal

Except for RECARO® seat

(St52) No. 5 — (St62) No. 5:

(St52) No. 6 — (St62) No. 1:

RECARO® seat

(St52) No. 8 — (St62) No. 5:

(St52) No. 7 — (St62) No. 1:

Is the resistance less than 10 Ω?

Yes	Go to 3.
No	Check power seat harness.

3. CHECK SLIDE MOTOR.

1. Connect the power seat switch connector and slide motor connector.
2. Apply battery voltage to the slide motor and check the motor rotation.

Connector & terminal

(St62) No. 5 (+) — (St62) No. 1 (−):

(St62) No. 1 (+) — (St62) No. 5 (−):

Does the motor rotate normally?

Yes	Check for temporary poor contact or mechanical trouble in slide rail.
No	Slide motor problem. Replace the seat cushion frame assembly.

- **MALFUNCTION OF RECLINING OPERATION**

1. CHECK SWITCH.

1. Turn the ignition switch to OFF.
2. Disconnect the power seat switch connector.
3. Measure the resistance between connector terminals when moving the switch to reclining forward and reclining backward. Ref. to SEATS>Power Seat>INSPECTION > POWER SEAT SWITCH.

Is the inspection result normal?

Yes	Go to 2.
No	Replace the power seat switch assembly. Ref. to SEATS>Power Seat.

2. CHECK HARNESS.

1. Disconnect the reclining motor connector.
2. Measure the resistance between power seat switch connector and reclining motor connector.

Connector & terminal

Except for RECARO® seat

(St52) No. 3 — (St64) No. 6:
(St52) No. 8 — (St64) No. 4:

RECARO® seat

(St52) No. 10 — (St64) No. 6:
(St52) No. 5 — (St64) No. 4:

Is the resistance less than 10 Ω?

Yes	Go to 3.
No	Check power seat harness.

- **MALFUNCTION OF LIFTER OPERATION**

3. CHECK RECLINING MOTOR.

1. Turn the ignition switch to OFF.
2. Disconnect the power seat switch connector.
3. Measure the resistance between connector terminals when moving the switch to lifter up and lifter down.

Connector & terminal

(St64) No. 4 (+) — (St64) No. 6 (−):

Ref. to SEATS>Power Seat>INSPECTION > POWER SEAT SWITCH.

Is the inspection result normal?

Does the motor rotate normally?

Yes	Go to 2.
	Check for temporary poor contact or mechanical trouble in reclining hinge.
No	Replace the power seat switch assembly. Ref. to SEATS>Power Seat.
	Reclining motor problem. Replace the backrest frame assembly.

2. CHECK HARNESS.

1. Disconnect the lifter motor connector.
2. Measure the resistance between power seat switch connector and lifter motor connector.

Connector & terminal

Except for RECARO® seat

(St52) No. 7 — (St66) No. 6:

(St52) No. 4 — (St66) No. 4:

RECARO® seat

(St52) No. 9 — (St66) No. 6:

(St52) No. 6 — (St66) No. 4:

Is the resistance less than 10 Ω?

Yes	Go to 3.
No	Check power seat harness.

- **MALFUNCTION OF TILT OPERATION**

1. CHECK SWITCH.

1. Turn the ignition switch to OFF.
2. Disconnect the power seat switch connector.
3. Measure the resistance between connector terminals when moving the switch to tilt up and tilt down. Ref. to SEATS>Power Seat>INSPECTION > POWER SEAT SWITCH.

Is the inspection result normal?

No	Lifter motor problem. Replace the seat cushion frame assembly.
Yes	Go to 2.
No	Replace the power seat switch assembly. Ref. to SEATS>Power Seat.

2. CHECK HARNESS.

1. Disconnect the tilt motor connector.
2. Measure the resistance between power seat switch connector and tilt motor connector.

Connector & terminal

Except for RECARO® seat

(St52) No. 14 — (St68) No. 6:
(St52) No. 15 — (St68) No. 4:

RECARO® seat

(St52) No. 2 — (St68) No. 6:
(St52) No. 3 — (St68) No. 4:

Is the resistance less than 10 Ω?

Yes	Go to 3.
No	Check power seat harness.

3. CHECK LIFTER MOTOR.

1. Connect the power seat switch connector and lifter motor connector.
2. Apply battery voltage to the lifter motor and check the motor rotation.

Connector & terminal

(St66) No. 6 (+) — (St66) No. 4 (−):
(St66) No. 4 (+) — (St66) No. 6 (−):

Does the motor rotate normally?

Yes	Check for temporary poor contact or mechanical trouble in lifter mechanism.

3. CHECK TILT MOTOR.

1. Connect the power seat switch connector and tilt motor connector.
2. Apply battery voltage to the tilt motor and check the motor rotation.
   Connector & terminal
   (St68) No. 6 (+) — (St68) No. 4 (−):
   (St68) No. 4 (+) — (St68) No. 6 (−):

Does the motor rotate normally?

- **MALFUNCTION OF LUMBAR OPERATION**

Yes — Check for temporary poor contact or mechanical trouble in tilt mechanism.

1. CHECK SWITCH.

No — Tilt motor problem. Replace the seat cushion frame assembly.

1. Turn the ignition switch to OFF.
2. Disconnect the power seat switch connector.
3. Measure the resistance between connector terminals when moving the switch to lumbar forward and lumbar backward. Ref. to SEATS>Power Seat>INSPECTION > POWER SEAT SWITCH.

Is the inspection result normal?

Yes — Go to 2.

No — Replace the power seat switch assembly. Ref. to SEATS>Power Seat.

2. CHECK HARNESS.

1. Disconnect the lumbar motor connector.
2. Measure the resistance between power seat switch connector and lumbar motor connector.
   Connector & terminal
   (St52) No. 18 — (St70) No. 2:
   (St52) No. 9 — (St68) No. 1:

Is the resistance less than 10 Ω?

Yes — Go to 3.

No — Check power seat harness.

3. CHECK LUMBAR MOTOR.

1. Connect the power seat switch connector and lumbar motor connector.
2. Apply battery voltage to the lumbar motor and check the motor rotation.
   Connector & terminal
   (St70) No. 2 (+) — (St70) No. 1 (−):
   (St70) No. 1 (+) — (St70) No. 2 (−):

Does the motor rotate normally?

Yes	Check for temporary poor contact or mechanical trouble (flat mat & hook spring assembly) in lumbar support mechanism.
No	Lumbar motor problem. Replace the flat mat & hook spring assembly.

NOTE

For procedure of the components in the power seat system, refer to the sections below.

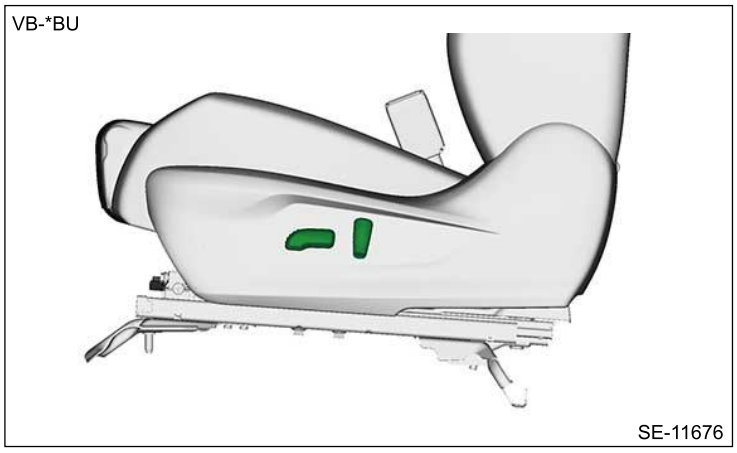
- Power seat: Ref. to SEATS>Front Seat.
- Power seat switch: Ref. to SEATS>Power Seat.

REMOVAL

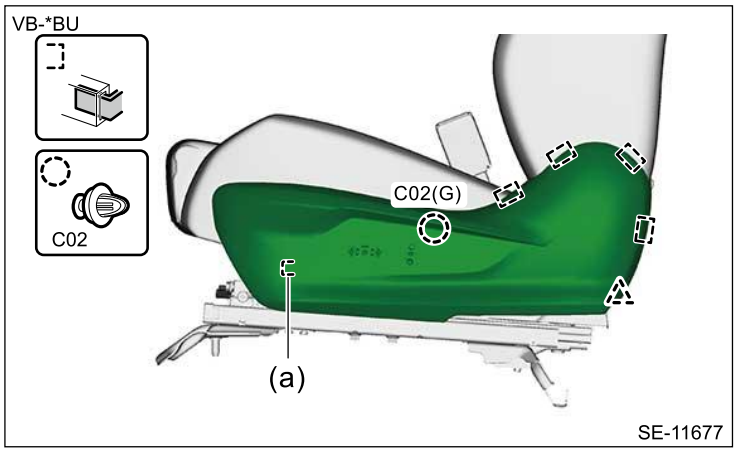
1. POWER SEAT SWITCH

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

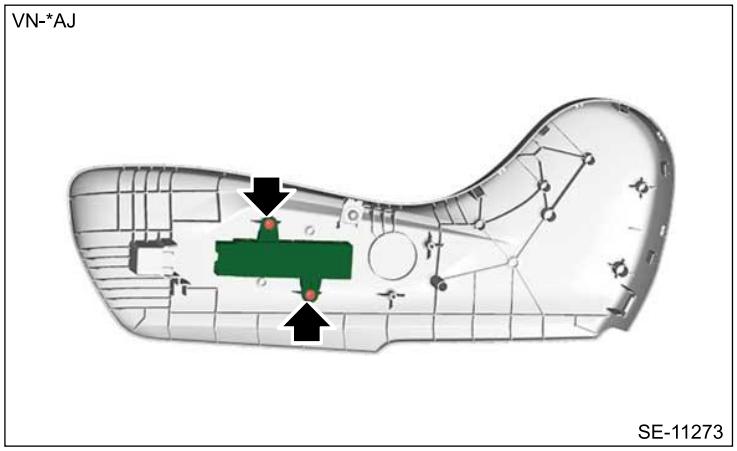
1. Prior to starting work, check the following precautions. Ref. to SEATS>General Description>CAUTION.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the front seat from vehicle. Ref. to SEATS>Front Seat>REMOVAL.
4. Remove the cover hinge outside.
   (1) Remove the knob power seat.



   (2) Release it from the hinge base cover outside in the rear side.
   (3) Release the clips.
   (4) Pull forward to release the claw (a) and remove the cover hinge outside.
   (5) Remove the screws to remove the switch assembly power seat.
   (6) Disconnect the switch assembly power seat connector and remove the cover hinge outside.



   (7) Remove the screws to remove the switch assembly power seat.



SEATS > Power Seat

INSTALLATION

1. POWER SEAT SWITCH

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

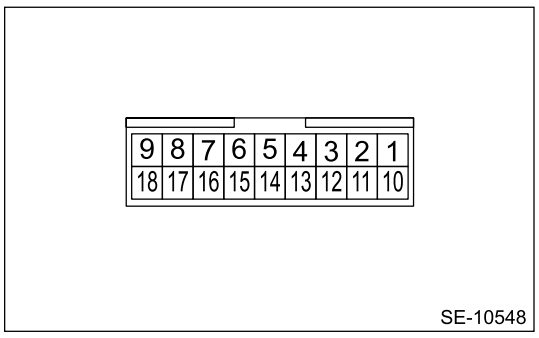
1. Install the power seat switch assembly.
2. Install the cover hinge outside.
3. Install the seat assembly. Ref. to SEATS>Front Seat>INSTALLATION.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SEATS > Power Seat

INSPECTION

1. POWER SEAT SWITCH

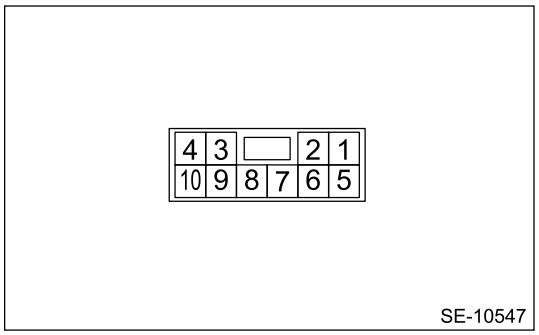
- **DRIVER'S SEAT**
  1. Measure resistance between terminals while operating each switch.
     - Except for RECARO® seat model



Switch position	Terminal No.	Standard
Slide forward	16 — 5	Less than 10 Ω
Slide rearward	16 — 6	Less than 10 Ω

Switch position	Terminal No.	Standard
Lifter up	16 — 7	Less than 10 Ω
Lifter down	16 — 4	Less than 10 Ω
Reclining forward	16 — 3	Less than 10 Ω
Reclining rearward	16 — 8	Less than 10 Ω
Tilt up	16 — 14	Less than 10 Ω
Tilt down	16 — 15	Less than 10 Ω
Lumbar forward	17 — 18 11 — 9	Less than 10 Ω
Lumbar backward	17 — 9 11 — 18	Less than 10 Ω

- RECARO® seat model



Switch position	Terminal No.	Standard
Slide forward	1 — 8 4 — 7	Less than 10 Ω
Slide rearward	1 — 7 4 — 8	Less than 10 Ω
Lifter up	1 — 9 4 — 6	Less than 10 Ω
Lifter down	1 — 6 4 — 9	Less than 10 Ω
Reclining forward	1 — 10 4 — 5	Less than 10 Ω
Reclining rearward	1 — 5 4 — 10	Less than 10 Ω
Tilt up	1 — 2 4 — 3	Less than 10 Ω
Tilt down	1 — 3 4 — 2	Less than 10 Ω

Replace the power seat switch if the inspection result is not within the standard value.

WIRING DIAGRAM

For the wiring diagram, refer to “Seat Heater System” in the wiring diagram. Ref. to WIRING SYSTEM>Seat Heater System>WIRING DIAGRAM.

INSPECTION

1. TROUBLE SYMPTOM

Symptoms	Reference
Front seat heater does not operate	Ref. to SEATS>Seat Heater System>INSPECTION > FRONT SEAT HEATER DOES NOT OPERATE.
Rear seat heater does not operate	Ref. to SEATS>Seat Heater System>INSPECTION > REAR SEAT HEATER DOES NOT OPERATE.
Rear seat heater indicator does not illuminate	Ref. to SEATS>Seat Heater System>INSPECTION > REAR SEAT HEATER INDICATOR DOES NOT ILLUMINATE.
Illumination of rear seat heater does not illuminate	Ref. to SEATS>Seat Heater System>INSPECTION > ILLUMINATION OF REAR SEAT HEATER DOES NOT ILLUMINATE.

2. FRONT SEAT HEATER DOES NOT OPERATE

1. CHECK FUSE.

1. Turn the ignition switch to OFF.
2. Check the fuse inside the fuse box. Ref. to SEATS>Relay and Fuse>INSPECTION > CHECK FUSE.

Is the fuse blown out?

Yes	Replace the appropriate fuse.
No	Go to 2.

2. CHECK RELAY.

Check the accessory relay. Ref. to SEATS>Relay and Fuse>INSPECTION > CHECK FUSE.

Is the relay OK?

Yes	Go to 3.
No	Replace the accessory relay.

3. CHECK DTC.

1. Turn the ignition switch to ON.
2. Using the Subaru Select Monitor, perform the clear memory of [Air Conditioner].
3. Read the DTC of [Air Conditioner] using the Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

Is DTC displayed?

Yes	Perform the diagnosis for the displayed DTCs. Ref. to AIR CONDITIONER(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
No	Go to 4.

4. CHECK THE SEAT HEATER UNIT.

1. Remove the seat heater unit. Ref. to SEATS>Seat Heater>REMOVAL>SEAT HEATER UNIT>FRONT SEAT.
2. Check the seat heater unit. Ref. to SEATS>Seat Heater>INSPECTION > FRONT SEAT HEATER UNIT.

Is the seat heater unit normal?

Yes	Go to 5.
No	Replace the seat heater unit. Ref. to SEATS>Seat Heater.

5. CHECK DTC.

1. Turn the ignition switch to ON.
2. Using the Subaru Select Monitor, perform the clear memory of [Cockpit Control].
3. Read the DTC of [Cockpit Control] using the Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

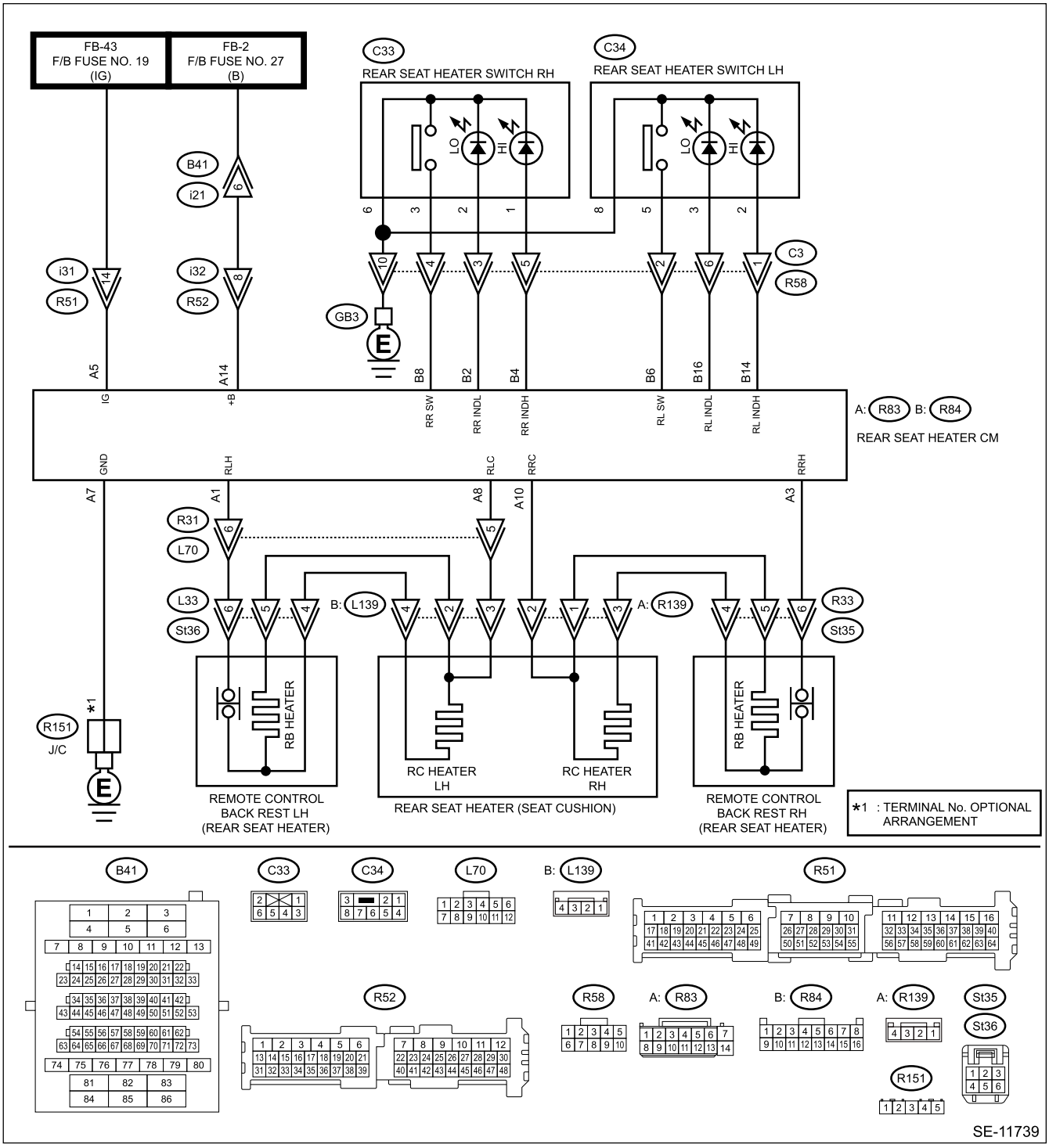
Is DTC displayed?

Yes	Perform the diagnosis for the displayed DTCs. Ref. to COCKPIT CONTROL (DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
No	Temporary improper operation.

3. REAR SEAT HEATER DOES NOT OPERATE

Wiring diagram:

Seat heater system Ref. to WIRING SYSTEM>Seat Heater System>WIRING DIAGRAM.


FB-43
F/B FUSE NO. 19
(IG)
FB-2
F/B FUSE NO. 27
(B)
C33
REAR SEAT HEATER SWITCH RH
C34
REAR SEAT HEATER SWITCH LH
LO
HI
B41
i21
i31
R51
i32
R52
C3
R58
GB3
A5
IG
A14
+B
B8
RR SW
B2
RR INDL
B4
RR INDH
B6
RL SW
B16
RL INDL
B14
RL INDH
A: R83 B: R84
REAR SEAT HEATER CM
GND
RLH
RLC
RRC
RRH
A7
A1
A8
A10
A3
R31
L70
L33
St36
B: L139
A: R139
R33
St35
RB HEATER
RC HEATER
LH
RC HEATER
RH
R151
*1
J/C
REMOTE CONTROL
BACK REST LH
(REAR SEAT HEATER)
REAR SEAT HEATER (SEAT CUSHION)
REMOTE CONTROL
BACK REST RH
(REAR SEAT HEATER)
*1 : TERMINAL No. OPTIONAL
ARRANGEMENT

B41
C33
C34
L70
B: L139
R51
R52
R58
A: R83
B: R84
A: R139
St35
St36
R151

SE-11739

1. CHECK FUSE.

1. Turn the ignition switch to OFF.
2. Check the fuse inside the fuse box. Ref. to SEATS>Relay and Fuse>INSPECTION > CHECK FUSE.

Is the fuse blown out?

Yes	Replace the appropriate fuse.
No	Go to 2.

2. CHECK SEAT HEATER SWITCH.

1. Remove the seat heater switch. Ref. to SEATS>Seat Heater>REMOVAL > REAR SEAT HEATER SWITCH.
2. Check the continuity between the terminals when pressing the seat heater switch. Ref. to SEATS>Seat Heater>INSPECTION > SEAT HEATER SWITCH.

Is the resistance less than 10 Ω?

Yes	Go to 3.
No	Replace the seat heater switch. Ref. to SEATS>Seat Heater.

3. CHECK POWER SUPPLY CIRCUIT.

1. Disconnect the harness connector of the rear seat heater CM.
2. Turn the ignition switch to ON.
3. Measure the voltage between harness connector terminal and chassis ground.
   Connector & terminal
   (R83) No. 14 (+) — Chassis ground (−):
   (R83) No. 5 (+) — Chassis ground (−):

Is the voltage 10 V or more?

Yes	Go to 4.
No	Repair or replace the defective part.

4. CHECK GROUND CIRCUIT.

1. Turn the ignition switch to OFF.
2. Measure the resistance between harness connector terminal and chassis ground.
   Connector & terminal
   (R83) No. 7 — Chassis ground:

Is the resistance less than 10 Ω?

Yes	Go to 5.
No	Repair or replace the defective part.

5. CHECK HARNESS.

Measure the resistance between rear seat heater CM and seat heater switch harness connector terminal.

Connector & terminal

LH side

(R84) No. 6 — (R58) No. 2:
(C3) No. 2 — (C34) No. 5:
(C34) No. 8 — Chassis ground:

RH side

(R84) No. 8 — (R58) No. 4:
(C3) No. 4 — (C33) No. 3:
(C33) No. 6 — Chassis ground:

Is the resistance less than 10 Ω?

Yes	Go to 6.
No	Repair or replace the defective part.

6. CHECK THE SEAT HEATER UNIT.

1. Remove the seat heater unit. Ref. to SEATS>Seat Heater>REMOVAL>SEAT HEATER UNIT>REAR SEAT.
2. Check the seat heater unit. Ref. to SEATS>Seat Heater>INSPECTION > REAR SEAT HEATER UNIT.

Is the seat heater unit normal?

Yes	Go to 7.
No	Replace the seat heater unit. Ref. to SEATS>Seat Heater.

7. CHECK HARNESS.

Measure the resistance between rear seat heater CM and seat heater unit harness connector terminal.

Connector & terminal

LH side

(R83) No. 1 — (L33) No. 6:
(R83) No. 8 — (L139) No. 3:
(L33) No. 5 — (L139) No. 2:
(L33) No. 4 — (L139) No. 4:

RH side

(R83) No. 3 — (R33) No. 6:
(R83) No. 10 — (R139) No. 2:
(R33) No. 5 — (R139) No. 1:
(R33) No. 4 — (R139) No. 3:

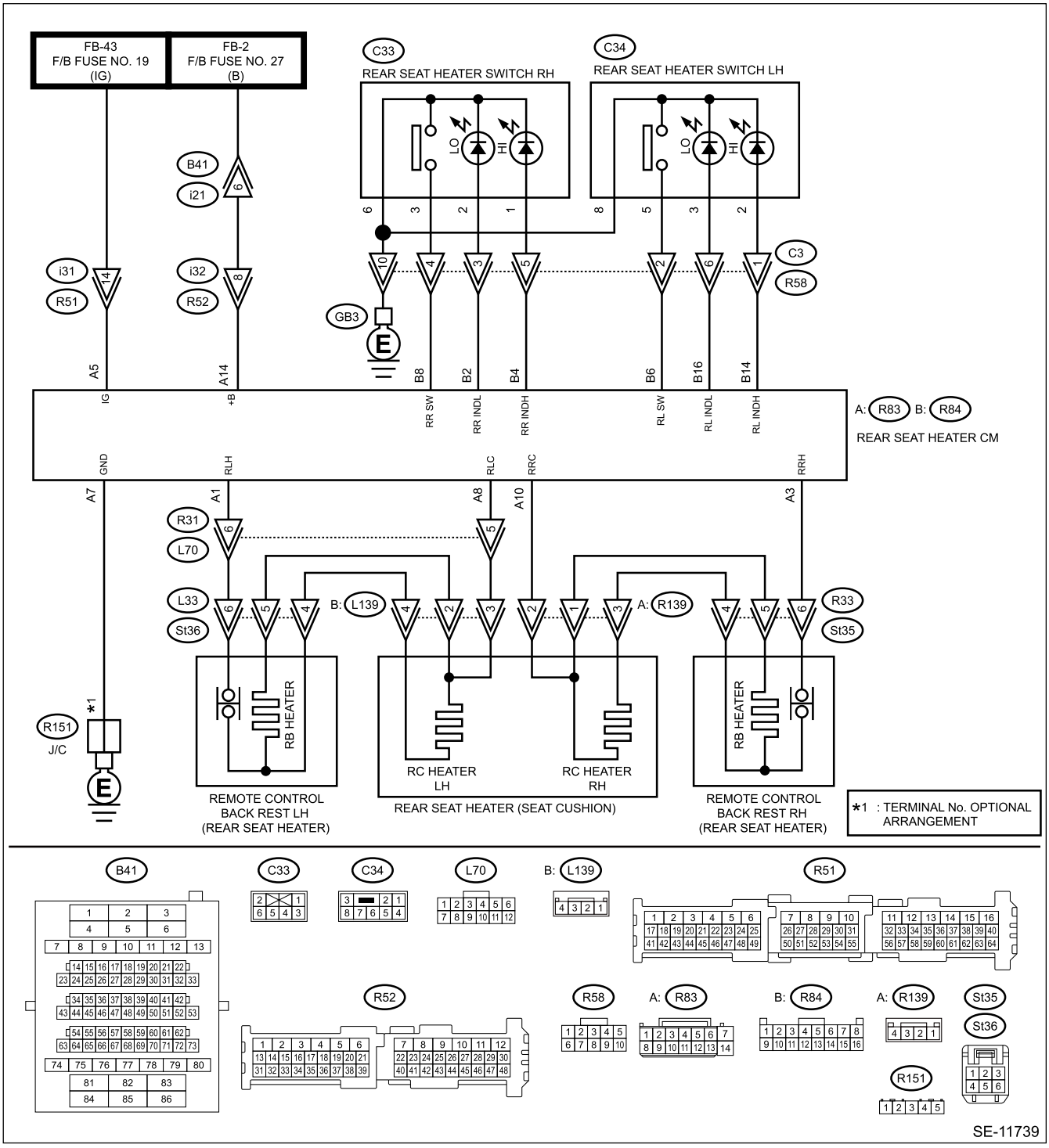
Is the resistance less than 10 Ω?

Yes	Replace the rear seat heater CM.
No	Repair or replace the defective part.

4. REAR SEAT HEATER INDICATOR DOES NOT ILLUMINATE

Wiring diagram:

Seat heater system Ref. to WIRING SYSTEM>Seat Heater System>WIRING DIAGRAM.


FB-43
F/B FUSE NO. 19
(IG)
FB-2
F/B FUSE NO. 27
(B)
C33
REAR SEAT HEATER SWITCH RH
C34
REAR SEAT HEATER SWITCH LH
LO
HI
B41
i21
i31
R51
i32
R52
C3
R58
GB3
A5
IG
A14
+B
B8
RR SW
B2
RR INDL
B4
RR INDH
B6
RL SW
B16
RL INDL
B14
RL INDH
A: R83 B: R84
REAR SEAT HEATER CM
GND
RLH
RLC
RRC
RRH
A7
A1
A8
A10
A3
R31
L70
L33
St36
B: L139
A: R139
R33
St35
RB HEATER
RC HEATER
LH
RC HEATER
RH
R151
*1
J/C
REMOTE CONTROL
BACK REST LH
(REAR SEAT HEATER)
REAR SEAT HEATER (SEAT CUSHION)
REMOTE CONTROL
BACK REST RH
(REAR SEAT HEATER)
*1 : TERMINAL No. OPTIONAL
ARRANGEMENT

B41
C33
C34
L70
B: L139
R51
R52
R58
A: R83
B: R84
A: R139
St35
St36
R151

SE-11739

1. CHECK SEAT HEATER SWITCH UNIT (INDICATOR).

1. Turn the ignition switch to OFF.
2. Remove the seat heater switch. Ref. to SEATS>Seat Heater>REMOVAL > REAR SEAT HEATER SWITCH.
3. Apply battery voltage between seat heater switch terminals, and perform the inspection.
4. Operate the LH side and RH side switches to HI and LO. Ref. to SEATS>Seat Heater>INSPECTION > SEAT HEATER SWITCH.

Does the indicator illuminate when the switch is operated to HI/LO?

Yes	Go to 2.
No	Replace the seat heater switch.

2. CHECK HARNESS.

Measure the resistance between rear seat heater CM and seat heater switch harness connector terminal.

Connector & terminal

LH side

(R84) No. 14 — (R58) No. 1:
(R84) No. 16 — (R58) No. 6:
(C3) No. 1 — (C34) No. 2:
(C3) No. 6 — (C34) No. 3:
(C34) No. 8 — Chassis ground:

RH side

(R84) No. 4 — (R58) No. 5:
(R84) No. 2 — (R58) No. 3:
(C3) No. 5 — (C33) No. 1:
(C3) No. 3 — (C33) No. 2:
(C33) No. 6 — Chassis ground:

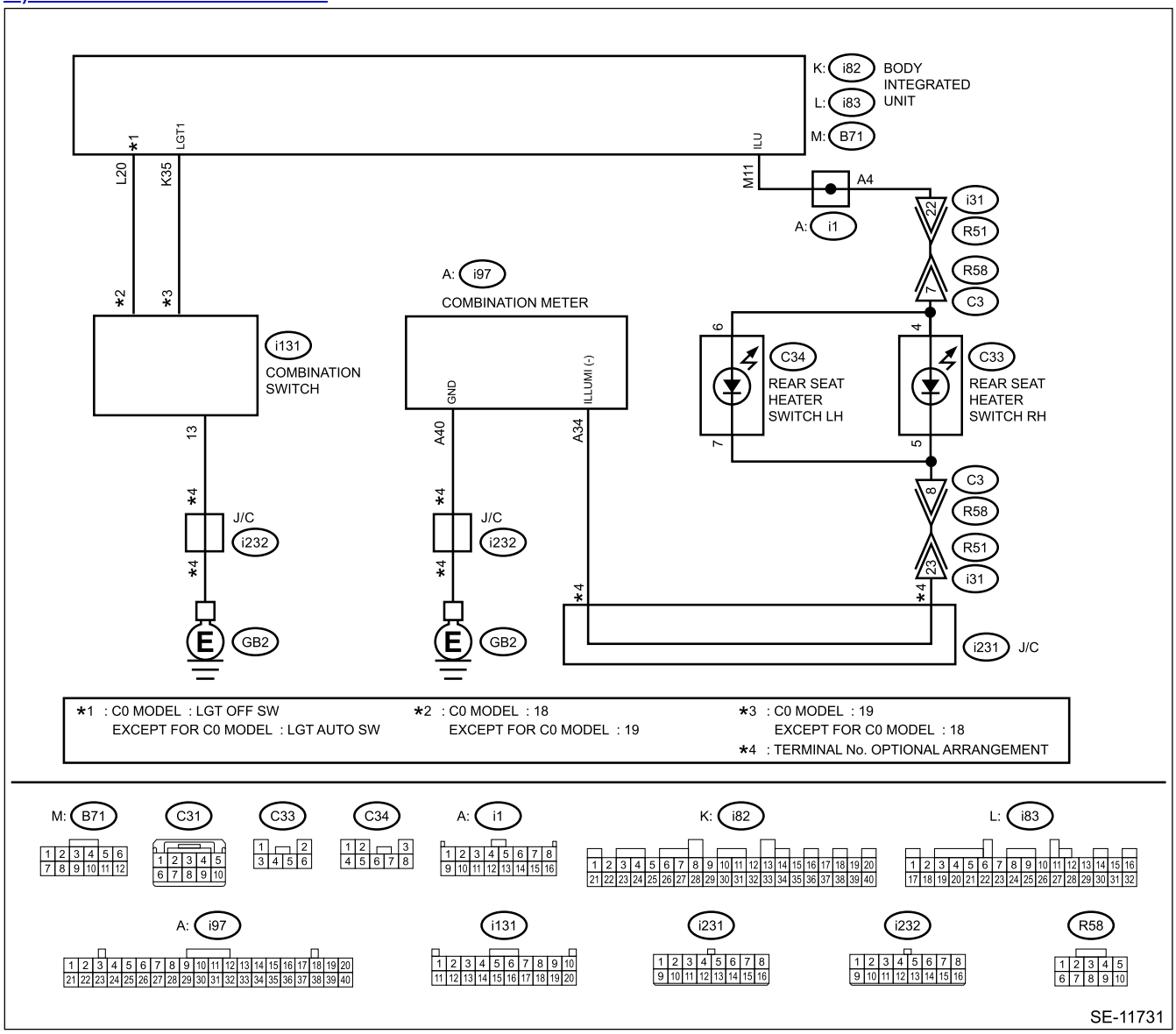
Is the resistance less than 10 Ω?

Yes	Replace the rear seat heater CM.
No	Repair or replace the defective part.

5. ILLUMINATION OF REAR SEAT HEATER DOES NOT ILLUMINATE

Wiring diagram:

Clearance and illumination light system Ref. to WIRING SYSTEM>Clearance Light and Illumination Light System>WIRING DIAGRAM.



1. CHECK ADAPTER HARNESS.

1. Turn the ignition switch to OFF.
2. Remove the seat heater switch. Ref. to SEATS>Seat Heater>INSTALLATION > REAR SEAT HEATER SWITCH.
3. Check the continuity between the adapter harness connectors.
   Connector & terminal
   LH side
   (C3) No. 7 — (C34) No. 6:
   (C3) No. 8 — (C34) No. 7:
   RH side
   (C3) No. 7 — (C33) No. 4:
   (C3) No. 8 — (C33) No. 5:

Is there continuity between the terminals?

Yes	Go to 2.
No	Replace the adapter harness.

2. CHECK SEAT HEATER SWITCH UNIT.

Apply battery voltage between seat heater switch terminals, and perform the inspection. Ref. to SEATS>Seat Heater>INSPECTION > SEAT HEATER SWITCH.

Do the illuminations come on?

Yes	Go to 3.
No	Replace the seat heater switch. Ref. to SEATS>Seat Heater>REMOVAL > REAR SEAT HEATER SWITCH.

3. CHECK POWER SUPPLY CIRCUIT.

1. Turn the ignition switch to ON.
2. Turn the lighting switch to the switch 2 (HEAD) position.
3. Measure the voltage between connector terminal and chassis ground.
   Connector & terminal
   (R58) No. 7 (+) — Chassis ground (−):

Is the voltage 10 V or more?

Yes	Go to 8.
No	Go to 4.

4. CHECK HARNESS.

1. Turn the ignition switch to OFF.
2. Disconnect the connector of body integrated unit.
3. Measure the resistance between terminals of the seat heater switch and the body integrated unit.
   Connector & terminal
   (R58) No. 7 — (B71) No. 11:

Is the resistance less than 10 Ω?

Yes	Go to 5.
No	Repair or replace the defective part.

5. CHECK INPUT OF BODY INTEGRATED UNIT.

1. Turn the ignition switch to ON.
2. Using Subaru Select Monitor, display [Lighting I Switch Input] in [Data Monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor>OPERATION.
3. Set the lighting switch to the I position and release your hand.

Does the indication change between [OFF] ←→ [ON] according to the switch operation?

Yes	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Go to 6.

6. CHECK LIGHTING SWITCH.

1. Turn the ignition switch to OFF.
2. Check the lighting switch. Ref. to LIGHTING SYSTEM>Combination Switch (Light)>INSPECTION > LIGHTING SWITCH.

Is the lighting switch OK?

Yes	Go to 7.
No	Replace the lighting switch. Ref. to LIGHTING SYSTEM>Combination Switch (Light).

7. CHECK HARNESS.

1. Disconnect the connectors of body integrated unit and combination switch (light).
2. Measure the resistance between terminals of the body integrated unit and the combination switch (light).
   Connector & terminal
   Other than for C0
   (i83) No. 20 — (i131) No. 19:
   (i83) No. 35 — (i131) No. 18:
   For C0
   (i83) No. 20 — (i131) No. 18:
   (i83) No. 35 — (i131) No. 19:

Is the resistance less than 10 Ω?

Yes	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Repair or replace the defective part.

8. CHECK HARNESS.

1. Turn the ignition switch to OFF.
2. Disconnect the connector of combination meter.
3. Measure the resistance between terminals of the seat heater switch and the combination meter.
   Connector & terminal
   (R58) No. 8 — (i97) No. 34:

Is the resistance less than 10 Ω?

Yes	Go to 9.
No	Repair or replace the defective part.

9. CHECK HARNESS.

Measure the resistance between the combination meter and the chassis ground.

Connector & terminal

(i97) No. 40 — Chassis ground:

Is the resistance less than 10 Ω?

Yes	Replace the combination meter. Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter.
No	Repair or replace the defective part.

SEATS > Seat Heater System

NOTE

For operation procedures of components of the seat heater system, refer to the following sections.

- Seat heater unit: Ref. to SEATS>Seat Heater.
- Rear seat heater switch: Ref. to EXTERIOR/INTERIOR TRIM>Console Box.
- Rear seat heater CM: Ref. to SEATS>Seat Heater.
- Air conditioner CM: Ref. to AIR CONDITIONER>Control Unit.

REMOVAL



1. SEAT HEATER UNIT

- **FRONT SEAT**

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **The load sensor of the occupant detection system is fixed to the cushion frame assembly. Do not remove the load sensor from the cushion frame assembly.**
- **When the cushion frame assembly of the passenger's seat is replaced, the seat harness and load sensor are assembled. When replacing the cushion frame assembly, do not touch the load sensor to avoid electrical damage.**

1. Prior to starting work, check the following precautions. Ref. to SEATS>General Description>CAUTION.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the front seats. Ref. to SEATS>Front Seat>REMOVAL.
4. Remove the front seat surface. Ref. to SEATS>Front Seat>DISASSEMBLY.
5. Remove the seat heater unit.

Caution:

- **If the seat heater unit is removed, replace the seat pad assembly with a new part.**
- **If the seat heater unit is reused, remove the polyurethane section and double-sided tape from the reverse side completely. Use new double-sided tape.**

Preparation items:

Double-sided tape: NITTO DENKO 501L or equivalent

- **REAR SEAT**

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

1. Prior to starting work, check the following precautions. Ref. to SEATS>General Description>CAUTION.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the rear seat. Ref. to SEATS>Rear Seat>REMOVAL.
4. Remove the rear seat surface. Ref. to SEATS>Rear Seat>DISASSEMBLY.

5. Remove the seat heater unit.

Caution:

- **If the seat heater unit is removed, replace the seat pad assembly with a new part.**
- **If the seat heater unit is reused, remove the polyurethane section and double-sided tape from the reverse side completely. Use new double-sided tape.**

Preparation items:

Double-sided tape: NITTO DENKO 501L or equivalent

2. REAR SEAT HEATER SWITCH

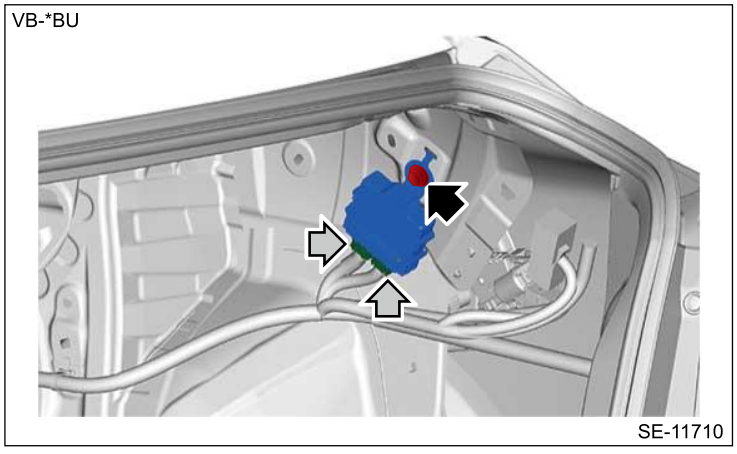
For the operation procedures of the rear seat heater switch, refer to "DISASSEMBLY" of "Console Box" of "EXTERIOR/INTERIOR TRIM" section. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>DISASSEMBLY.

3. REAR SEAT HEATER CM

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the trunk trim panel side RH. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>REMOVAL.
3. Remove the rear seat heater CM.
   (1) Disconnect the connector.
   (2) Remove the bolt and the rear seat heater CM.



SEATS > Seat Heater

INSTALLATION

1. SEAT HEATER UNIT

- **FRONT SEAT**

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the seat heater unit in a new seat pad assembly.
   Caution:
   If the seat heater unit is reused, remove the polyurethane section and double-sided tape from the reverse side completely. Use new double-sided tape.
   Preparation items:
   Double-sided tape: NITTO DENKO 501L or equivalent
2. Install the front seat surface. Ref. to SEATS>Front Seat>ASSEMBLY.
3. Install the front seat. Ref. to SEATS>Front Seat>INSTALLATION.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
5. Regarding the front seat (passenger's seat), perform [Rezeroing] for the occupant detection system. Ref. to AIRBAG(DIAGNOSTICS)>Rezero.
6. Regarding the front seat (passenger's seat), perform "Occupant Detection System Inspection" to check if the occupant detection system operates normally. Ref. to PRE-DELIVERY INSPECTION>PRE-DELIVERY INSPECTION (PDI) PROCEDURE > SEAT.

- **REAR SEAT**

Caution:
- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

1. Install the seat heater unit in a new seat pad assembly.
   Caution:
   If the seat heater unit is reused, remove the polyurethane section and double-sided tape from the reverse side completely. Use new double-sided tape.
   Preparation items:
   Double-sided tape: NITTO DENKO 501L or equivalent
2. Install the rear seat surface. Ref. to SEATS>Rear Seat>ASSEMBLY.
3. Install the rear seat. Ref. to SEATS>Rear Seat>INSTALLATION.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. REAR SEAT HEATER SWITCH

For the operation procedures of the rear seat heater switch, refer to "ASSEMBLY" of "Console Box" of "EXTERIOR/INTERIOR TRIM" section. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>ASSEMBLY.

3. REAR SEAT HEATER CM

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

1. Install the rear seat heater CM.
   Tightening torque:
   13 N·m (1.3 kgf-m, 9.6 ft-lb)
2. Install the trunk trim panel side RH. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SEATS > Seat Heater

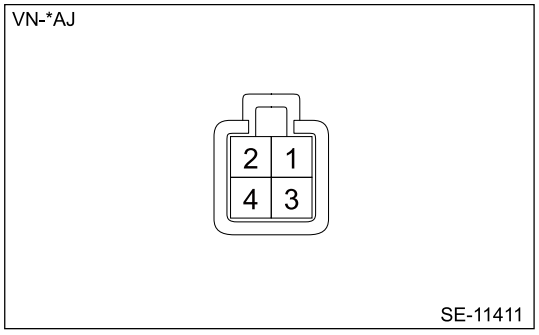
INSPECTION

1. FRONT SEAT HEATER UNIT

1. Check the continuity between the connector terminals.

Note:
Perform measurement with the seat cushion and the backrest heater connector connected.

- Seat cushion



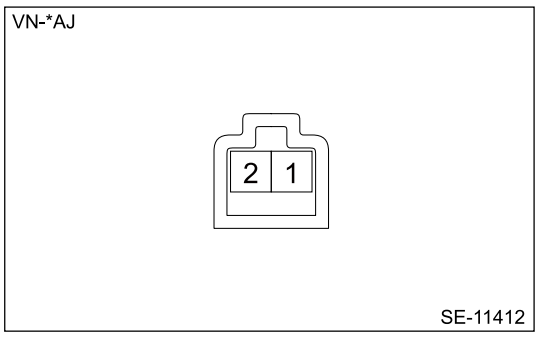
– Except for RECARO® seat

Terminal No.	Inspection conditions	Standard
1 — 2	Heater temperature 20°C (68°F)	Approx. 5.21 Ω

– RECARO® seat

Terminal No.	Inspection conditions	Standard
1 — 2	Heater temperature 20°C (68°F)	Approx. 4.93 Ω

- Backrest



– Except for RECARO® seat

Terminal No.	Inspection conditions	Standard
1 — 2	Heater temperature 20°C (68°F)	Approx. 4.65 Ω

– RECARO® seat

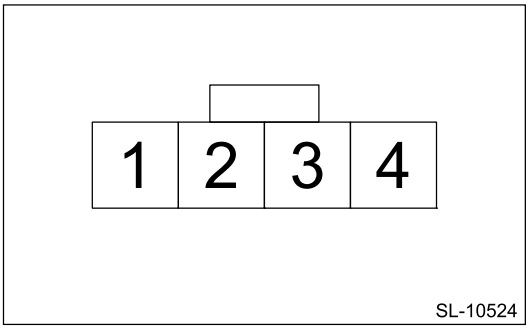
Terminal No.	Inspection conditions	Standard
1 — 2	Heater temperature 20°C (68°F)	Approx. 4.94 Ω

2. If no continuity exists, replace the seat heater unit with a new part.

2. REAR SEAT HEATER UNIT

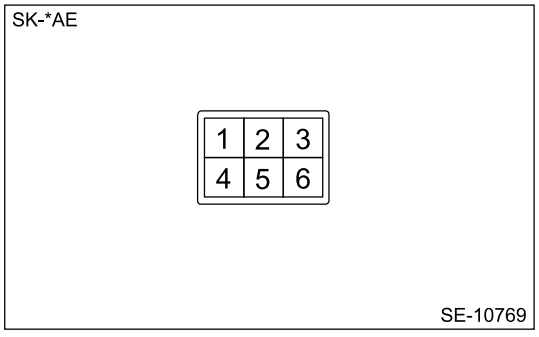
1. Check the continuity between the connector terminals.

- Seat cushion



Terminal No.	Part	Inspection conditions	Standard
3 — 4	LH side	Heater temperature 20°C (68°F)	Approx. 4.44 Ω
2 — 3	RH side		

- Backrest



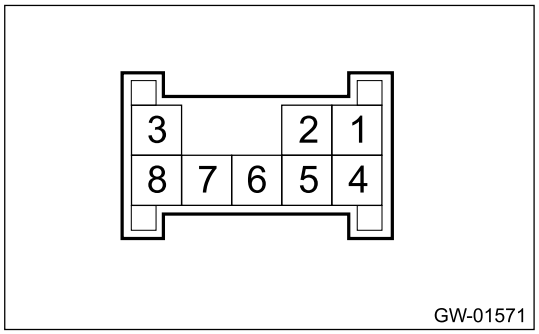
Terminal No.	Inspection conditions	Standard
5 — 6	Heater temperature 20°C (68°F)	Approx. 7.37 Ω

2. If no continuity exists, replace the seat heater unit rear with a new part.

3. SEAT HEATER SWITCH

1. Check the continuity between the connector terminals.

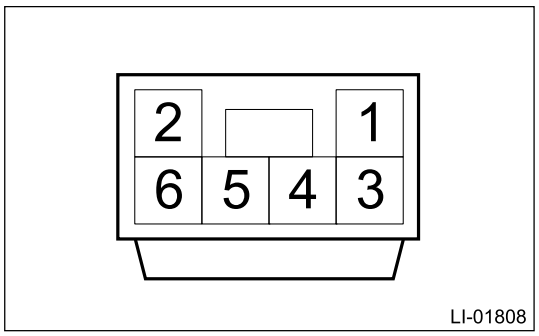
- LH side switch



Note:
When checking the LH side switch, turn the RH side switch to OFF.

Terminal No.	Inspection conditions	Standard
5 — 8	Switch ON	Less than 10 Ω

- RH side switch



Terminal No.	Inspection conditions	Standard
3 — 6	Switch ON	Less than 10 Ω

2. Apply battery voltage between the connector terminals to check lighting condition of illumination inside the switch.

Caution:
When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.
Incorrect polarity connection may cause LED damage inside the switch.

Note:
Operate the switch to HI and LO for the indicator.

- Indicator
  – LH side switch

Terminal No.	Inspection conditions	Specification
2 (+) — 8 (−)	Switch HI	Light ON
3 (+) — 8 (−)	Switch LO	Light ON

– RH side switch

Terminal No.	Inspection conditions	Specification
1 (+) — 6 (−)	Switch HI	Light ON
2 (+) — 6 (−)	Switch LO	Light ON

- Illumination

  – LH side switch

Terminal No.	Inspection conditions	Specification
6 (+) — 7 (−)	Apply battery voltage.	Light ON

– RH side switch

Terminal No.	Inspection conditions	Specification
4 (+) — 5 (−)	Apply battery voltage.	Light ON

3. Replace the seat heater switch if it is found defective.

SECURITY AND LOCKS

SL

1. General Description
2. Relay and Fuse
3. Door Lock Control System
4. Keyless Entry System
5. Keyless Access With Push Button Start System
6. Security System
7. Door Inner Remote
8. Door Outer Handle
9. Door Latch & Door Lock Actuator Assembly
10. Trunk Opener Switch
11. Trunk Lid Latch and Actuator Assembly
12. Front Hood Lock Assembly
13. Fuel Lid
14. Ignition Key Lock
15. Key Lock Cylinders
16. Keyless Entry Control Module
17. Keyless Transmitter
18. Access Key
19. Immobilizer Control Module
20. Immobilizer Antenna
21. Keyless Access Indoor Antenna
22. Keyless Access Outdoor Antenna
23. Trunk Opener Button
24. Keyless Access CM
25. ID Code Box
26. Steering Lock CM
27. Push Button Ignition Switch
28. Access Buzzer
29. Backup Unit
30. Function Setting (Customize)
31. Diagnostics with Phenomenon

SECURITY AND LOCKS > General Description

CAUTION

- When performing service operation, refer to “Repair Contents” in “General Description”. Ref. to REPAIR CONTENTS>Repair Contents.
- Refer to “CAUTION” of “General Description” in “AIRBAG SYSTEM” section. Ref. to AIRBAG SYSTEM>General Description>CAUTION.
- When performing work on the sensors or modules, be careful of the following.
  - Before disconnecting electrical connectors, be sure to disconnect the ground terminal from the battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
  - Do not apply any impact. If the parts are accidentally dropped, replace with a new part.
  - Do not expose to high-temperature and humidity.
- When replacing the parts provided with memory functions, record the memory contents before disconnecting the ground terminal from the battery sensor.
- Apply grease onto sliding or revolving surfaces before installation.
- If any immobilizer related part has been replaced, make sure to register the immobilizer.

SECURITY AND LOCKS > General Description

LOCATION

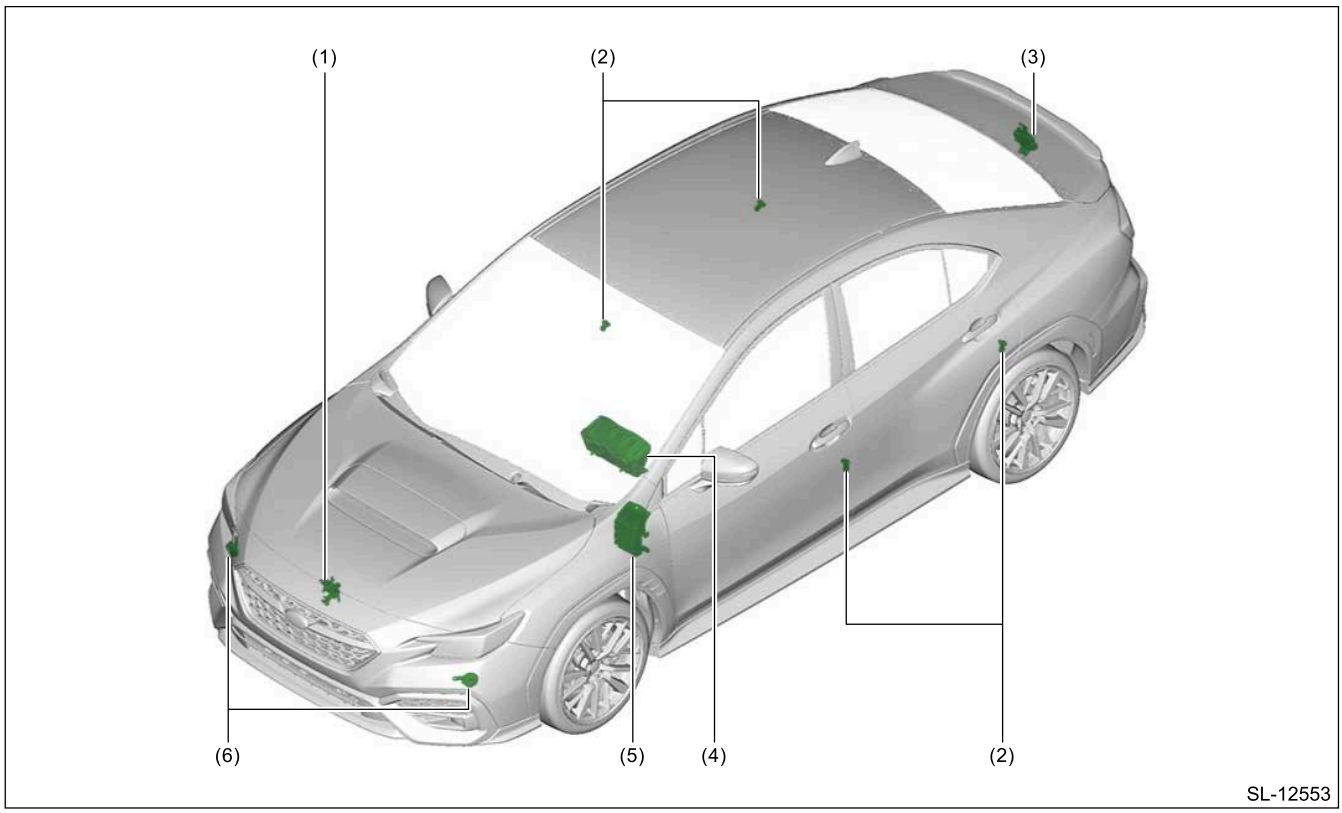
1. KEYLESS ENTRY SYSTEM

For location, refer to “Electrical Component Location” for “KEYLESS ENTRY (DIAGNOSTICS)” section. Ref. to KEYLESS ENTRY(DIAGNOSTICS) >Electrical Component Location.

2. KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM

Refer to “Electrical Component Location” for “KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)” section. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Electrical Component Location.

3. SECURITY SYSTEM



(1) Hood switch
(2) Door switch
(3) Trunk lid latch switch
(4) Security indicator light (in combination meter)
(5) Body integrated unit
(6) Horn

Note:
For the location of hazard lights, refer to "General Description" in "LIGHTING SYSTEM" section.
Ref. to LIGHTING SYSTEM>General Description>SPECIFICATION.

SECURITY AND LOCKS > General Description

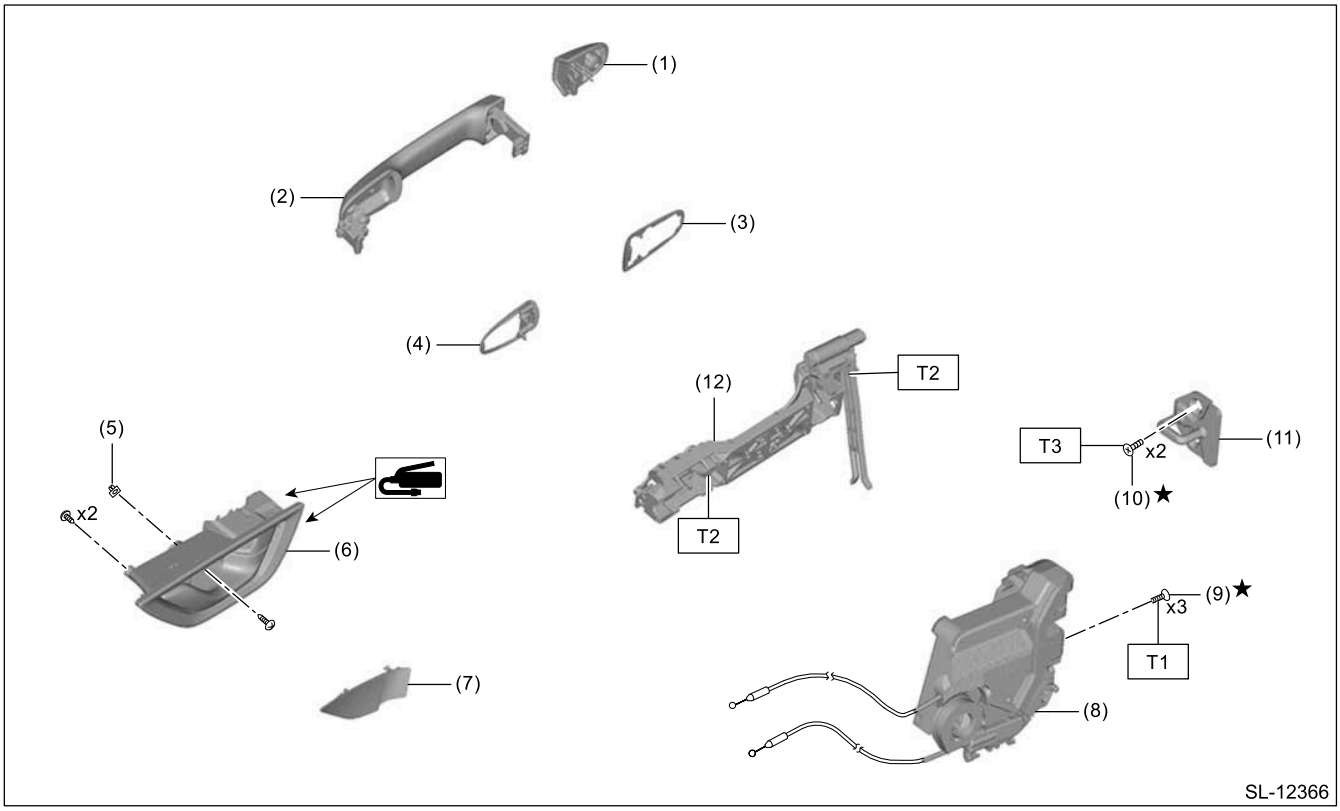
COMPONENT

1. DOOR LOCK ASSEMBLY

- **FRONT**

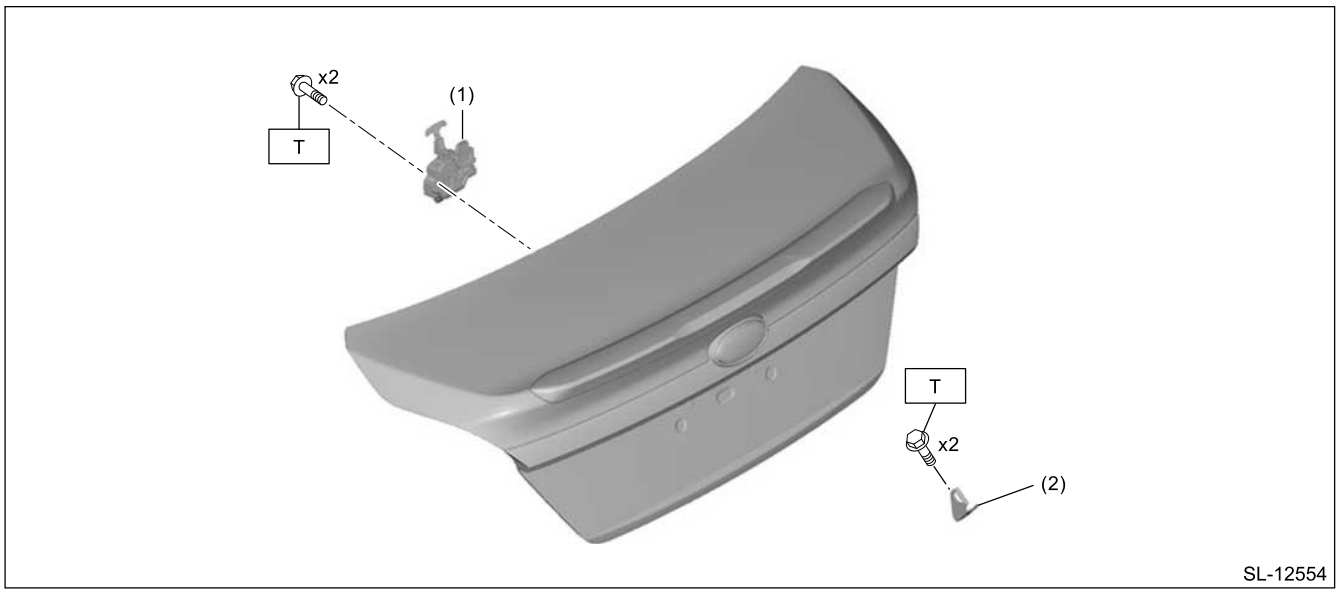
(1)	Cover handle front outer (passenger's side)	(9)	Cap remote	***Tightening torque: N·m (kgf-m, ft-lb)***
(2)	Handle front door outer (model with keyless access with push button start)	(10)	Latch & actuator ASSY front	***T1: 6.5 (0.7, 4.8)***
(3)	Cover handle front outer (driver's side)	(11)	TORX® bolt	***T2: 7.5 (0.8, 5.5)***
(4)	Handle front door outer (model without keyless access with push button start)	(12)	Screw	***T3: 18 (1.8, 13.3)***
(5)	Spacer door handle outer B	(13)	Striker door	
(6)	Spacer door handle outer A	(14)	Frame ASSY front door outer	
(7)	Grommet screw	(15)	Key cylinder (driver's side)	
(8)	Remote ASSY door			

- **REAR**



(1)	Cover handle rear outer	(7)	Cap remote	***Tightening torque: N·m (kgf-m, ft-lb)***
(2)	Handle rear door outer	(8)	Latch & actuator ASSY rear	***T1: 6.5 (0.7, 4.8)***
(3)	Spacer door handle outer B	(9)	TORX® bolt	***T2: 7.5 (0.8, 5.5)***
(4)	Spacer door handle outer A	(10)	Screw	***T3: 18 (1.8, 13.3)***
(5)	Grommet screw	(11)	Striker door	
(6)	Remote ASSY door	(12)	Frame ASSY rear door outer	

2. TRUNK LID LOCK

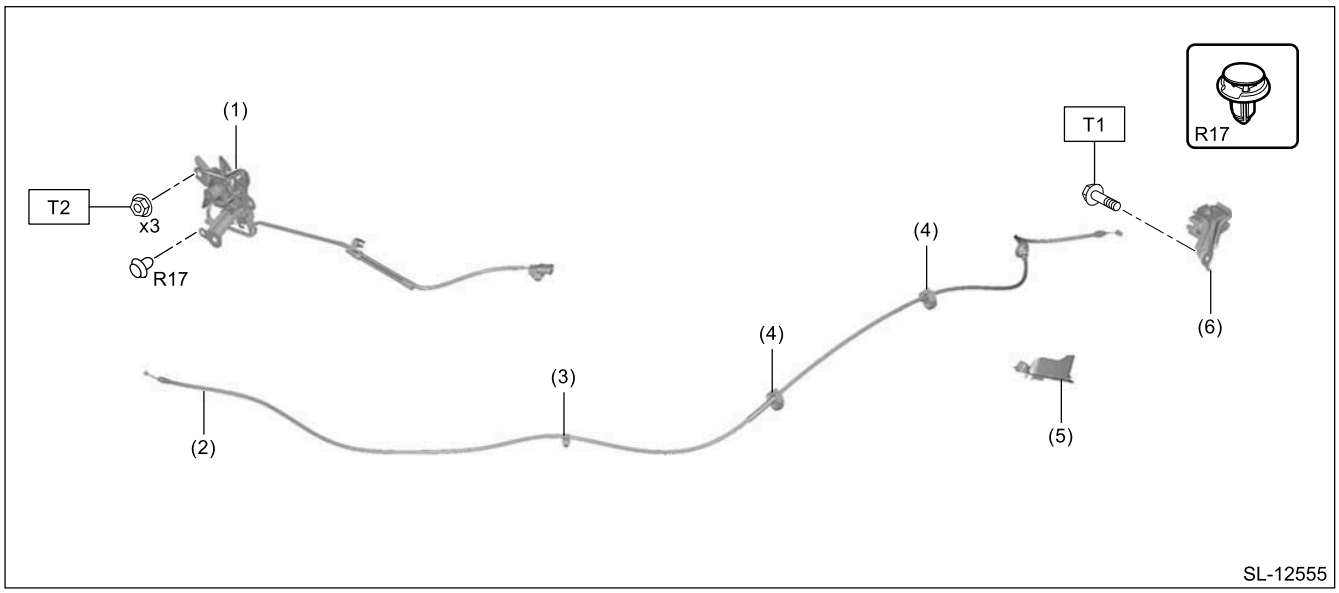


(1) Lock ASSY trunk lid
(2) Striker trunk lid

Tightening torque: N·m (kgf-m, ft-lb)

T: 7.5 (0.8, 5.5)

3. FRONT HOOD LOCK



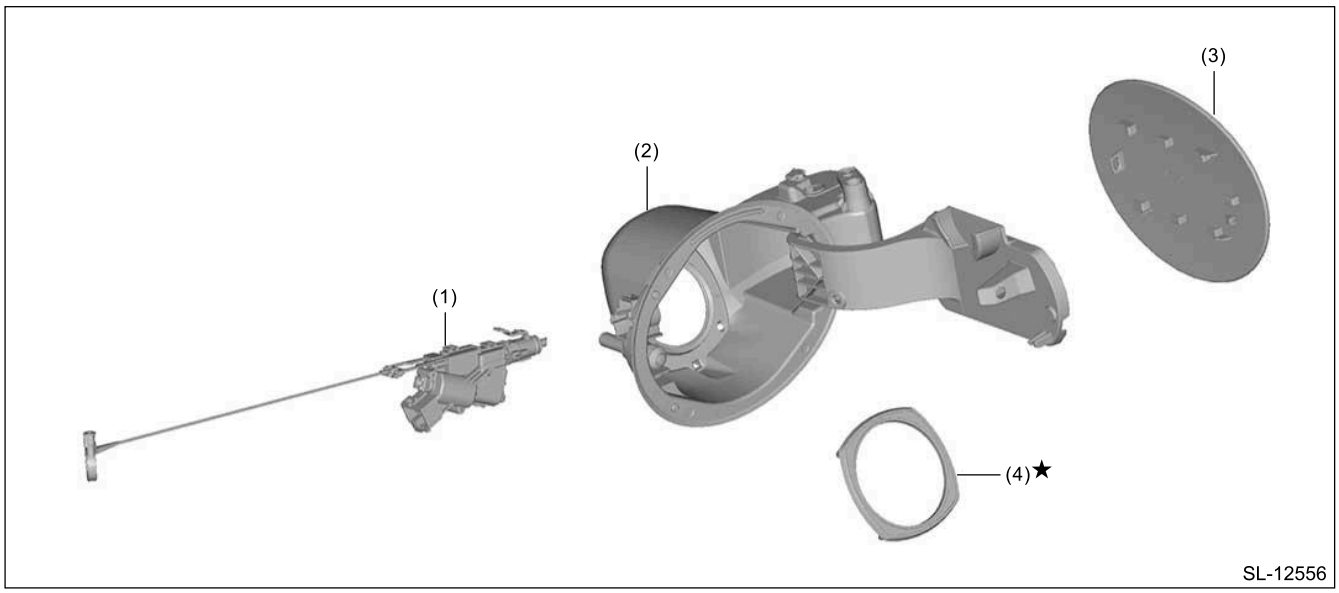
(1) Lock ASSY front hood
(2) Cable ASSY front hood
(3) Clip
(4) Clip
(5) Protector cable
(6) Opener handle

Tightening torque: N·m (kgf-m, ft-lb)

T1: 7.5 (0.8, 5.5)

T2: 33 (3.4, 24.3)

4. FUEL LID



(1) Lock ASSY fuel
(2) Saucer COMPL
(3) Flap outer
(4) Ring clip

5. BACKUP UNIT

For components of the backup unit, refer to "Instrument Panel" of the "EXTERIOR/INTERIOR TRIM" section. Ref. to EXTERIOR/INTERIOR TRIM>General Description>COMPONENT > INSTRUMENT PANEL.

6. STEERING LOCK

For the components of the ignition key lock and the steering lock CM, refer to "Steering Wheel & Column" in the "POWER ASSISTED SYSTEM (POWER STEERING)" section. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>General Description>COMPONENT > STEERING WHEEL AND COLUMN.

SECURITY AND LOCKS > General Description

PREPARATION TOOL

1. SUBARU SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
	—	SUBARU SELECT MONITOR 4	Used for setting of each function and troubleshooting for electrical system. **Note:** • **For detailed operation procedures, refer to "Help" of application.** • **Used together with interface for Subaru Select Monitor (such as DST-i and DST-010).**

2. OTHER

	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.
Drill	Used for replacing ignition key lock and steering lock CM.
Reverse tap	Used for replacing ignition key lock and steering lock CM.
TORX® T30	Used for removing and installing the latch & actuator assembly, door outer handle cover and frame assembly.

SECURITY AND LOCKS > Relay and Fuse

LOCATION

For the location, refer to "FUSE AND RELAY" in the wiring diagram. Ref. to WIRING SYSTEM>Fuse And Relay>LOCATION.

Note:
For details of relay and fuse, refer to "DC POWER SUPPLY CIRCUIT". Ref. to WIRING SYSTEM>Power Supply Circuit>WIRING DIAGRAM.

SECURITY AND LOCKS > Relay and Fuse

INSPECTION

1. CHECK FUSE

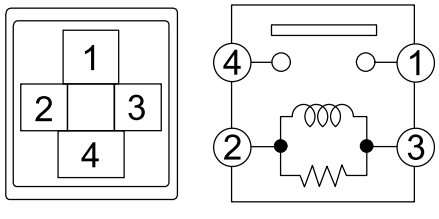
1. Remove the fuse and inspect visually.
2. If the fuse is blown out, replace the fuse.

Note:
If the fuse is blown again, check the system wiring harness.

2. CHECK RELAY

1. Measure the resistance between relay terminals.

Terminal No.	Inspection conditions	Standard	Circuit
1 — 2	Always	1 MΩ or more	
1 — 2	Apply battery voltage between terminals 4 and 3.	Less than 1 Ω	

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 value.

WIRING DIAGRAM

For the wiring diagram, refer to “Door Lock Control System” in the wiring diagram. Ref. to WIRING SYSTEM>Door Lock Control System>WIRING DIAGRAM.

INSPECTION

1. BASIC INSPECTION

For the basic inspection, refer to “Basic Diagnostic Procedure” of “BODY CONTROL (DIAGNOSTICS)” section. Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.

2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to “System Block Diagram” in “BODY CONTROL (DIAGNOSTICS)”. Ref. to BODY CONTROL(DIAGNOSTICS)>General Description>SYSTEM BLOCK DIAGRAM.

3. MODULE I/O SIGNAL

For the specification (electrical component), refer to “Control Module I/O Signal” of “BODY CONTROL (DIAGNOSTICS)” section. Ref. to BODY CONTROL(DIAGNOSTICS)>Control Module I/O Signal>ELECTRICAL SPECIFICATION.

4. SYMPTOM CHART

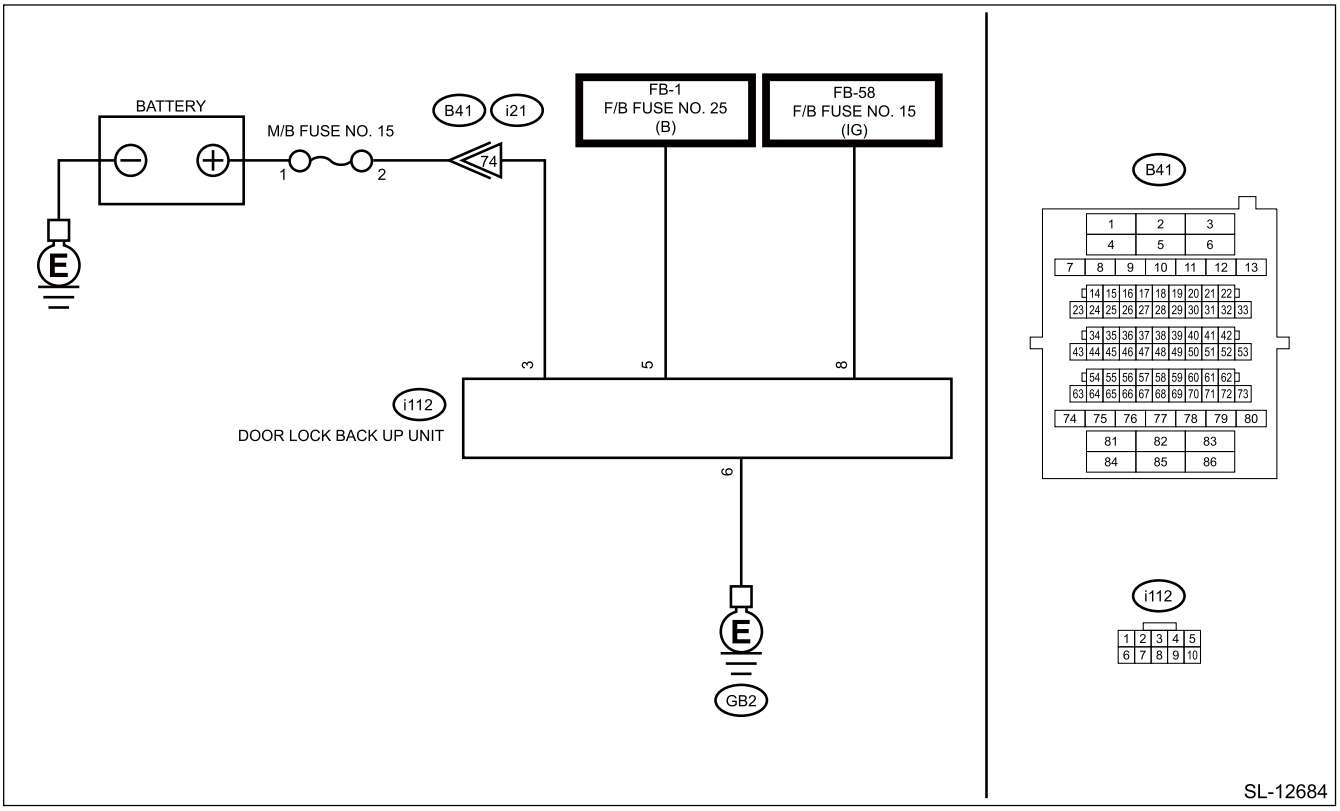
Symptoms	Repair order	Reference
The door lock control system does not operate	1. Check the power supply and ground circuit for the backup unit (model with auto door lock)	Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK POWER SUPPLY AND GROUND CIRCUIT OF BACKUP UNIT.
	2. Check the power supply and ground circuit for body integrated unit	Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK BODY INTEGRATED UNIT POWER SUPPLY AND GROUND CIRCUIT.
	3. Check the door lock switch and the circuit	Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK DOOR LOCK SWITCH.
	4. Check the door switch and the circuit	Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK DOOR SWITCH.

Symptoms	Repair order	Reference
	5. Check the trunk opener switch and the circuit	Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK TRUNK OPENER SWITCH CIRCUIT.
	6. Check the door lock actuator and the circuit	Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK DOOR LOCK ACTUATOR AND CIRCUIT.
A specific door lock actuator does not operate	Check the door lock actuator and circuit	Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK DOOR LOCK ACTUATOR AND CIRCUIT.

5. CHECK POWER SUPPLY AND GROUND CIRCUIT OF BACKUP UNIT

Wiring diagram:

DC power supply circuit Ref. to WIRING SYSTEM>Power Supply Circuit>WIRING DIAGRAM.



1. CHECK FUSE.

1. Turn the ignition switch to OFF.
2. Check the fuse on the upstream of the backup unit. Ref. to SECURITY AND LOCKS>Relay and Fuse>INSPECTION.

Is the check result OK?

Yes	Go to 2.
No	Replace the defective fuse.

2. CHECK POWER SUPPLY.

1. Disconnect the backup unit connector.
2. Turn the ignition switch to ON.
3. Measure the voltage between backup unit connector and chassis ground.

Connector & terminal

(i112) No. 3 (+) — Chassis ground (−):
(i112) No. 5 (+) — Chassis ground (−):
(i112) No. 8 (+) — Chassis ground (−):

Is the voltage 9 V or more?

Yes	Go to 3.
No	Check the harness for open or short circuit between the backup unit and the fuse.

3. CHECK GROUND CIRCUIT.

Measure the resistance between backup unit connector and chassis ground.

Connector & terminal

(i112) No. 6 — Chassis ground:

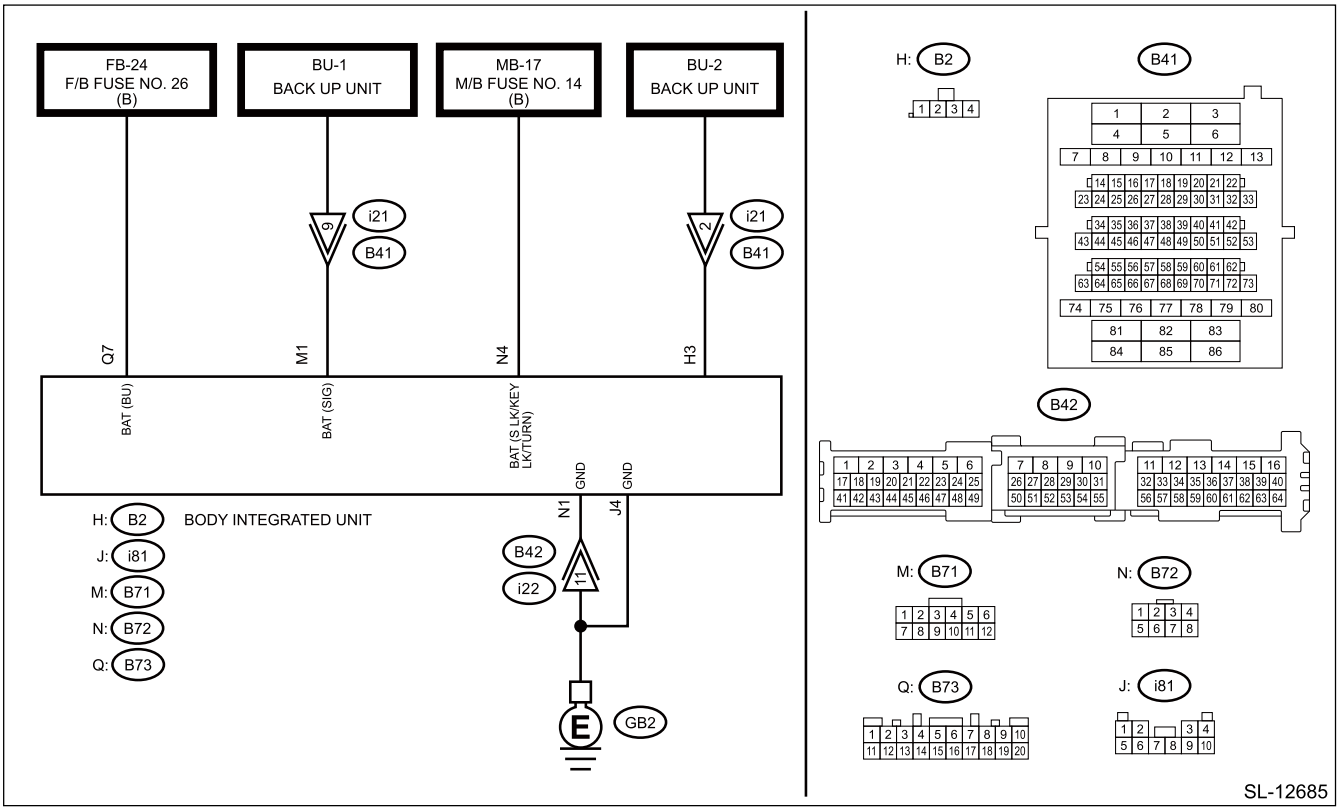
Is the resistance less than 10 Ω?

Yes	The power supply and ground circuit are OK.
No	Repair or replace the defective part.

6. CHECK BODY INTEGRATED UNIT POWER SUPPLY AND GROUND CIRCUIT

Wiring diagram:

Door lock control system Ref. to WIRING SYSTEM>Door Lock Control System>WIRING DIAGRAM.



1. CHECK FUSE.

1. Turn the ignition switch to OFF.
2. Check the fuse on the upstream of the body integrated unit. Ref. to SECURITY AND LOCKS>Relay and Fuse>INSPECTION.

Is the check result OK?

Yes	Go to 2.
No	Replace the defective fuse.

2. 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
   (B71) No. 1 (+) — Chassis ground (−):
   (B73) No. 7 (+) — Chassis ground (−):
   (B72) No. 4 (+) — Chassis ground (−):
   (B2) No. 3 (+) — Chassis ground (−):

Is the voltage 9 V or more?

Yes	Go to 3.
No	Check the harness for open or short circuit between body integrated unit and fuse.

3. CHECK GROUND CIRCUIT.

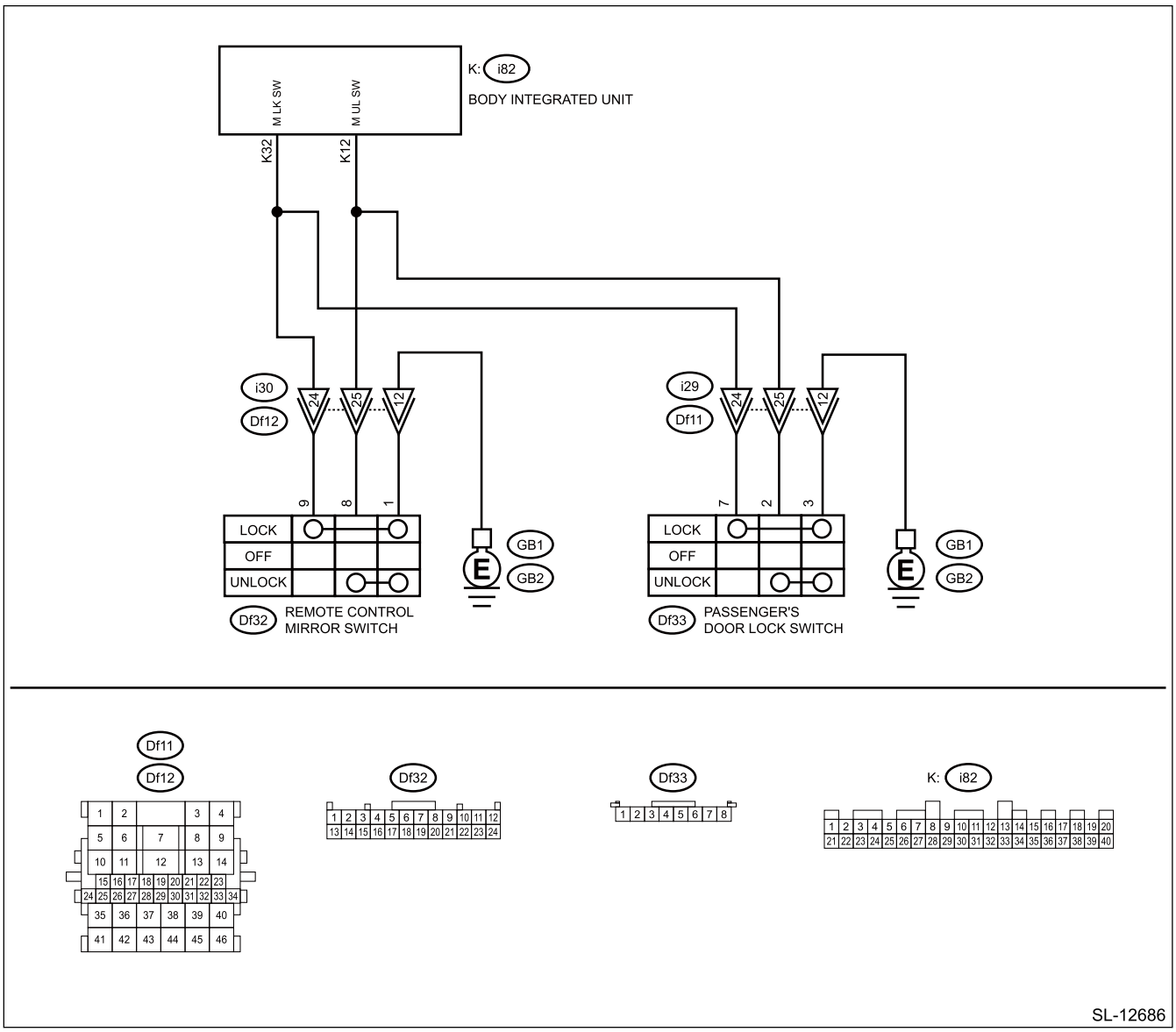
Measure the resistance between the body integrated unit connector and chassis ground.
Connector & terminal
(i81) No. 4 — Chassis ground:
(B72) No. 1 — Chassis ground:

Is the resistance less than 10 Ω?

Yes	The power supply and ground circuit are OK.
No	Repair or replace the defective part.

7. CHECK DOOR LOCK SWITCH

Wiring diagram:
Door lock control system Ref. to WIRING SYSTEM>Door Lock Control System>WIRING DIAGRAM.



1. CHECK DATA MONITOR.

1. Turn the ignition switch to ON.
2. Using Subaru Select Monitor, display [Manual lock SW input] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display change as [OFF] ←→ [ON] when each door lock switch (driver's and passenger's seats) is moved to LOCK?

Yes — Go to 2.

No — Go to 3.

2. CHECK DATA MONITOR.

Using Subaru Select Monitor, display [Manual unlock SW input] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display change as [OFF] ←→ [ON] when each door lock switch (driver's and passenger's seats) is moved to UNLOCK?

Yes	The door lock switch is OK.
No	Go to 4.

3. CHECK DOOR LOCK SWITCH.

1. Turn the ignition switch to OFF.
2. Disconnect each door lock switch (driver's and passenger's seats) connector.
3. Check the continuity between terminals when moving each door lock switch (driver's and passenger's seats) in LOCK direction.

Terminals

Driver's side

No. 9 — No. 1:

Passenger's side

No. 7 — No. 3:

Did the indicator change from "No continuity" (1 MΩ or more) to "Continuity exists" (less than 10 Ω)?

Yes	Go to 4.
No	Replace the power window main switch or switch power window sub front. Ref. to GLASS/WINDOWS/MIRRORS>Power Window Control Switch.

4. CHECK DOOR LOCK SWITCH.

Check the continuity between terminals when moving each door lock switch (driver's and passenger's seats) in UNLOCK direction.

Terminals

Driver's side

No. 8 — No. 1:

Passenger's side

No. 2 — No. 3:

Did the indicator change from "No continuity" (1 MΩ or more) to "Continuity exists" (less than 10 Ω)?

Yes	Go to 5.
No	Replace the power window main switch or switch power window sub front. Ref. to GLASS/WINDOWS/MIRRORS>Power Window Control Switch.

5. CHECK HARNESS.

Measure the resistance between each door lock switch (driver's and passenger's seats) connector and chassis ground.

Connector & terminal

Driver's side

(Df32) No. 1 — Chassis ground:

Passenger's side

(Df33) No. 3 — Chassis ground:

Is the resistance less than 10 Ω?

Yes	Go to 6.
No	Repair or replace the defective part.

6. CHECK HARNESS.

Check the harness between body integrated unit and each door lock switch (driver's and passenger's seats).

Connector & terminal

Driver's side

(Df32) No. 9 — (i82) No. 32:

(Df32) No. 8 — (i82) No. 12:

Passenger's side

(Df33) No. 7 — (i82) No. 32:

(Df33) No. 2 — (i82) No. 12:

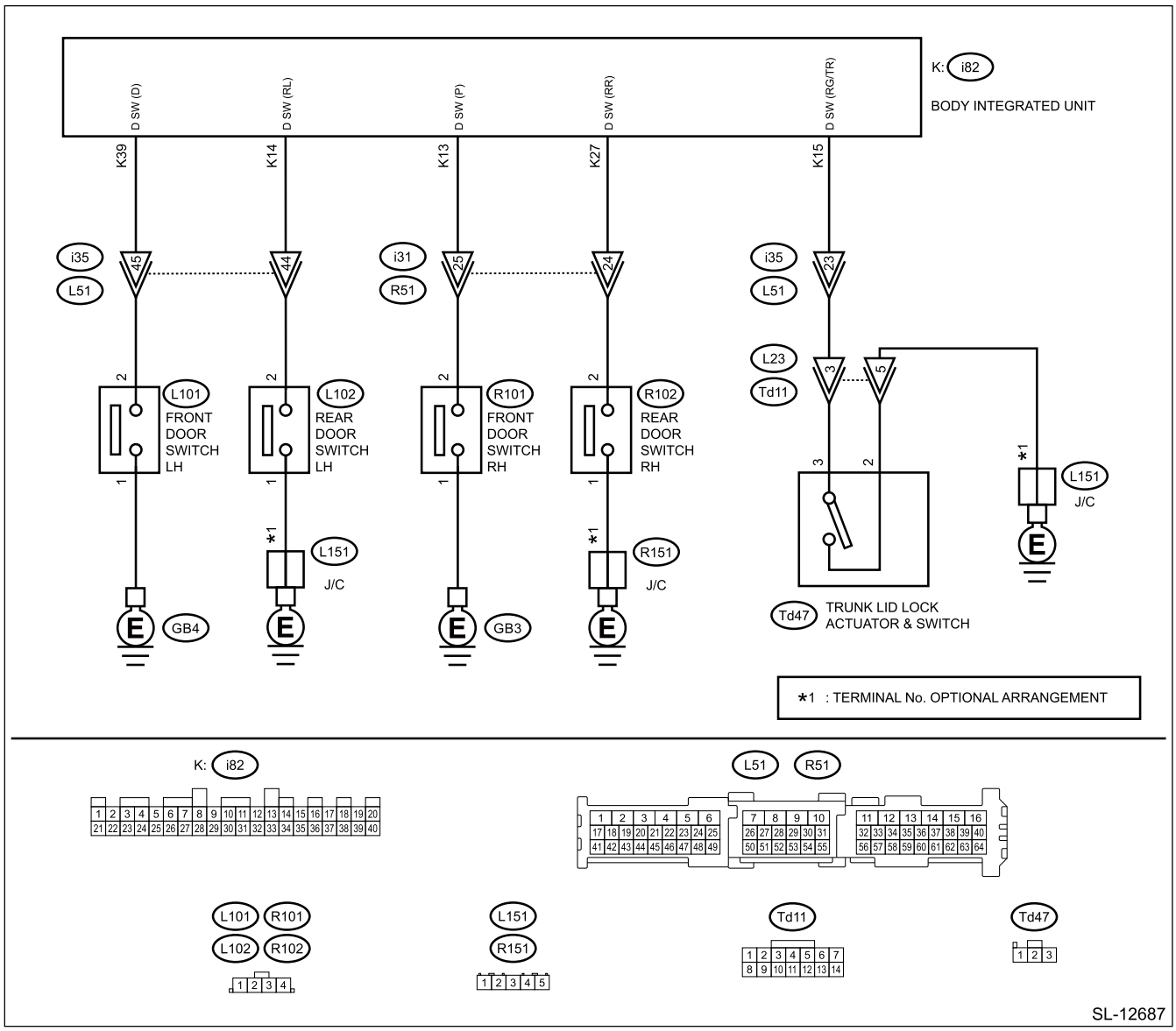
Is harness normal?

Yes	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Repair or replace the defective part.

8. CHECK DOOR SWITCH

Wiring diagram:

Door lock control system Ref. to WIRING SYSTEM>Door Lock Control System>WIRING DIAGRAM.


K: i82
BODY INTEGRATED UNIT
D SW (D)
D SW (RL)
D SW (P)
D SW (RR)
D SW (RG/TR)
K39
K14
K13
K27
K15
i35
L51
i31
R51
L23
Td11
45
44
25
24
23
3
5
2
1
L101
FRONT DOOR SWITCH LH
L102
REAR DOOR SWITCH LH
R101
FRONT DOOR SWITCH RH
R102
REAR DOOR SWITCH RH
*1
L151
J/C
R151
GB4
GB3
Td47
TRUNK LID LOCK ACTUATOR & SWITCH
*1 : TERMINAL No. OPTIONAL ARRANGEMENT

K: i82
L51
R51
L101
R101
L102
R102
L151
R151
Td11
Td47

SL-12687

1. CHECK DATA MONITOR.

1. Turn the ignition switch to ON.
2. Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.
   - [Driver's door SW input]
   - [P-door SW input]
   - [Rear right door SW input]
   - [Rear left door SW input]
   - [R Gate SW input]

Does the display switch between [OFF] ←→ [ON] when each door or trunk lid is opened/closed?

Yes	The door switch or the trunk lid latch switch is normal.
No	Go to 2.

2. CHECK HARNESS.

1. Turn the ignition switch to OFF.
2. Disconnect the connector of body integrated unit.
3. Disconnect the connector of the door switch or the trunk lid latch switch that does not show any change on the display.
4. Check the harness between body integrated unit and defective switch.

Connector & terminal

Front door LH
(i82) No. 39 — (L101) No. 2:

Front door RH
(i82) No. 13 — (R101) No. 2:

Rear door LH
(i82) No. 14 — (L102) No. 2:

Rear door RH
(i82) No. 27 — (R102) No. 2:

Trunk lid
(i82) No. 15 — (Td47) No. 3:

Is harness normal?

Yes	Go to 3.
No	Repair or replace the defective part.

3. CHECK HARNESS.

Measure the resistance between the faulty switch connector and chassis ground.

Connector & terminal

Front door LH

(L101) No. 1 — Chassis ground:

Front door RH

(R101) No. 1 — Chassis ground:

Rear door LH

(L102) No. 1 — Chassis ground:

Rear door RH

(R102) No. 1 — Chassis ground:

Trunk lid

(Td47) No. 2 — Chassis ground:

Is the resistance less than 10 Ω?

Yes — Go to 4.

No — Repair or replace the defective part.

4. CHECK DOOR SWITCH.

Measure the resistance between faulty switch terminals.

Terminals

Front LH door switch

No. 2 — No. 1:

Front RH door switch

No. 2 — No. 1:

Rear LH door switch

No. 2 — No. 1:

Rear RH door switch

No. 2 — No. 1:

Trunk lid

No. 3 — No. 2:

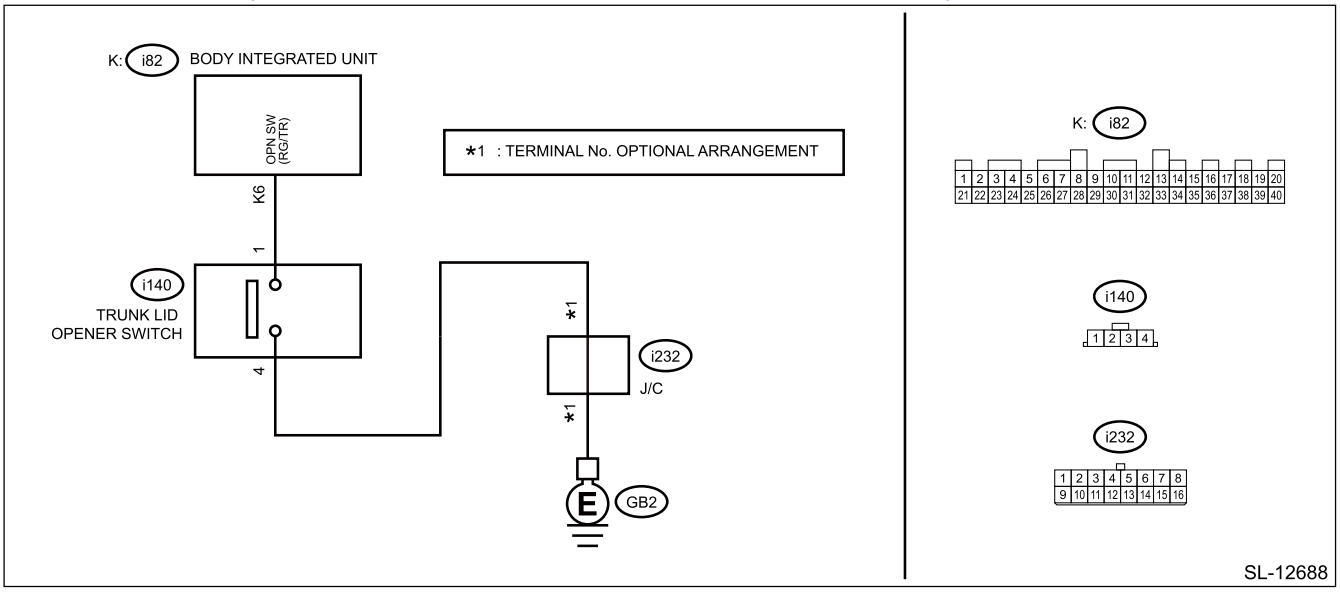
Is the resistance 1 MΩ or more when the door switch is pushed and the trunk lid is closed?

Yes	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Replace the following faulty parts. • Door switches: Ref. to LIGHTING SYSTEM>Door Switch. • Trunk lid latch & actuator assembly: Ref. to SECURITY AND LOCKS>Trunk Lid Latch and Actuator Assembly.

9. CHECK TRUNK OPENER SWITCH CIRCUIT

Wiring diagram:

Door lock control system Ref. to WIRING SYSTEM>Door Lock Control System>WIRING DIAGRAM.



1. CHECK DATA MONITOR.

1. Turn the ignition switch to ON.
2. Using Subaru Select Monitor, display [R Gate Release SW input] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display switch between [OFF] ←→ [ON] when the trunk opener switch is operated?

Yes	The trunk opener switch is normal.
No	Go to 2.

2. CHECK HARNESS.

1. Turn the ignition switch to OFF.
2. Disconnect the connectors of body integrated unit and trunk opener switch.
3. Check the harness between body integrated unit and trunk opener switch.

Connector & terminal

(i82) No. 6 — (i140) No. 1:

Is harness normal?

Yes	Go to 3.
No	Repair or replace the defective part.

3. CHECK HARNESS.

Measure the resistance between trunk opener switch connector and chassis ground.

Connector & terminal

(i140) No. 4 — Chassis ground:

Is the resistance less than 10 Ω?

Yes	Go to 4.
No	Repair or replace the defective part.

4. CHECK TRUNK OPENER SWITCH.

Check the trunk opener button. Ref. to SECURITY AND LOCKS>Trunk Opener Switch>INSPECTION.

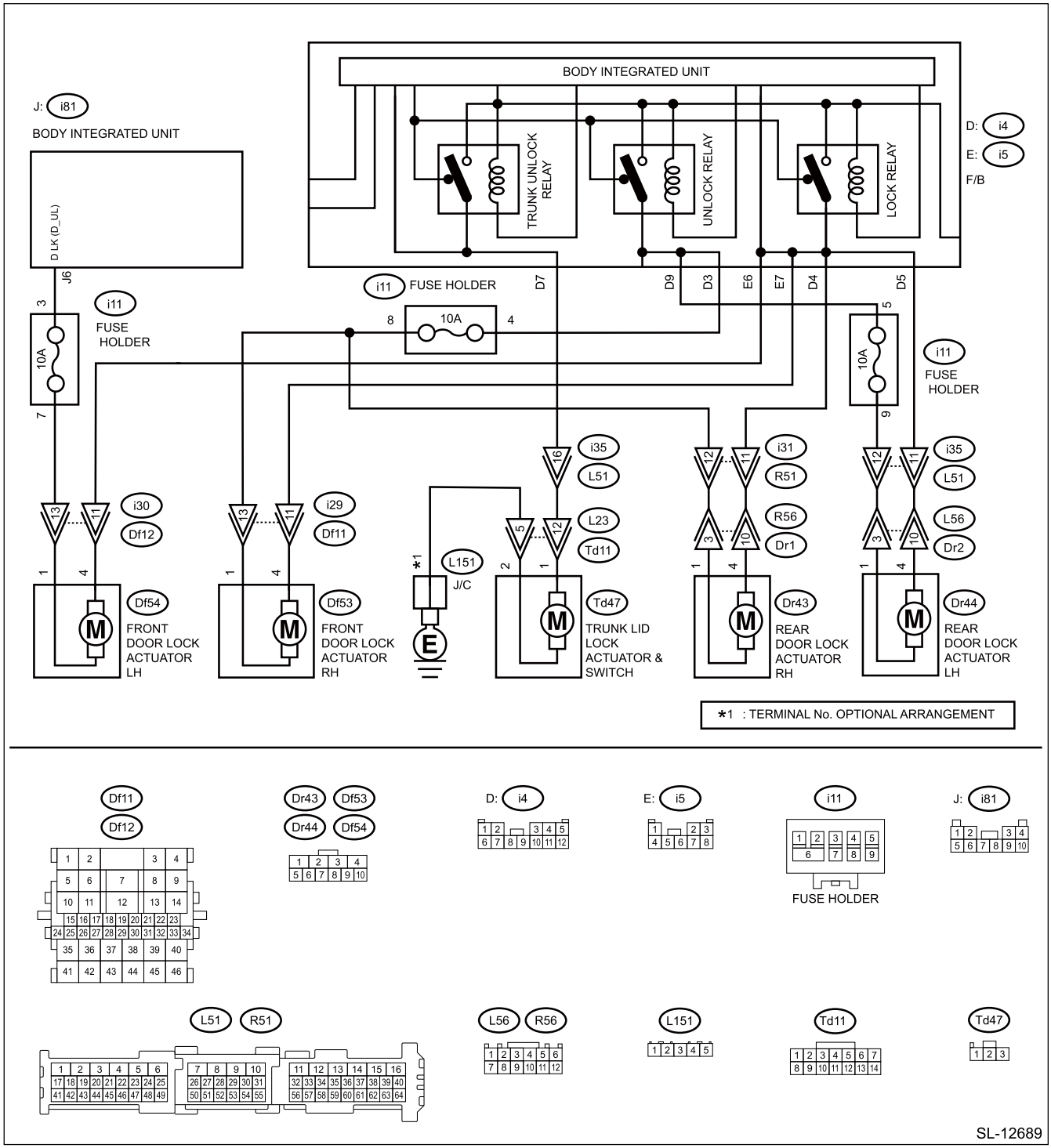
Is the trunk opener switch normal?

Yes	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Replace the trunk opener switch. Ref. to SECURITY AND LOCKS>Trunk Opener Switch.

10. CHECK DOOR LOCK ACTUATOR AND CIRCUIT

Wiring diagram:

Door lock control system Ref. to WIRING SYSTEM>Door Lock Control System>WIRING DIAGRAM.


BODY INTEGRATED UNIT
J: i81
BODY INTEGRATED UNIT
D LK (D_UL)
J6
3
7
10A
i11
FUSE HOLDER
TRUNK UNLOCK RELAY
UNLOCK RELAY
LOCK RELAY
D: i4
E: i5
F/B
i11 FUSE HOLDER
8
10A
4
D7
D9
D3
E6
E7
D4
D5
5
9
i30
Df12
i29
Df11
i35
L51
L23
Td11
i31
R51
R56
Dr1
L56
Dr2
*1
L151
J/C
Df54
FRONT DOOR LOCK ACTUATOR LH
Df53
FRONT DOOR LOCK ACTUATOR RH
Td47
TRUNK LID LOCK ACTUATOR & SWITCH
Dr43
REAR DOOR LOCK ACTUATOR RH
Dr44
REAR DOOR LOCK ACTUATOR LH
*1 : TERMINAL No. OPTIONAL ARRANGEMENT

Df11
Df12
Dr43
Df53
Dr44
Df54
D: i4
E: i5
i11
FUSE HOLDER
J: i81
L51
R51
L56
R56
L151
Td11
Td47

SL-12689

1. CHECK HARNESS (DOOR LOCK).

1. Turn the ignition switch to OFF.
2. Disconnect the body integrated unit and each door lock actuator connector.
3. Check the harness between body integrated unit and each door lock actuator.

Connector & terminal

Front door LH

(i5) No. 6 — (Df54) No. 4:

Front door RH

(i5) No. 7 — (Df53) No. 4:

Rear door LH

(i4) No. 5 — (Dr44) No. 4:

Rear door RH

(i4) No. 4 — (Dr43) No. 4:

Is harness normal?

Yes	Go to 2.
No	Repair or replace the defective part.

2. CHECK HARNESS (DOOR UNLOCK).

Check the harness between body integrated unit and each door lock actuator.

Connector & terminal

Front door LH

(i81) No. 6 — (Df54) No. 1:

Front door RH

(i4) No. 3 — (Df53) No. 1:

Rear door LH

(i4) No. 9 — (Dr44) No. 1:

Rear door RH

(i4) No. 3 — (Dr43) No. 1:

Is harness normal?

Yes	Go to 3.
No	Repair or replace the defective part.

3. CHECK HARNESS (TRUNK LID UNLOCK).

Check the harness between the body integrated unit and trunk lid lock actuator.

Connector & terminal

(i4) No. 7 — (Td47) No. 1:

Is harness normal?

Yes	Go to 4.
No	Repair or replace the defective part.

4. CHECK HARNESS (TRUNK LID UNLOCK).

Measure the resistance between the trunk lid lock actuator connector and chassis ground.

Connector & terminal

(Td47) No. 2 — Chassis ground:

Is the resistance less than 10 Ω?

Yes	Go to 5.
No	Repair or replace the defective part.

5. CHECK BODY INTEGRATED UNIT OUTPUT SIGNAL.

1. Connect the connector of body integrated unit.
2. Measure the voltage between terminals of the body integrated unit when operating the door lock switch to LOCK direction.

Connector & terminal

Front door LH

(i5) No. 6 (+) — (i81) No. 6 (−):

Front door RH

(i5) No. 7 (+) — (i4) No. 3 (−):

Rear door LH

(i4) No. 5 (+) — (i4) No. 9 (−):

Rear door RH

(i4) No. 4 (+) — (i4) No. 3 (−):

Does the voltage change from less than 1 V → 9 V or more? (During lock output)

Yes	Go to 6.
No	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

6. 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

Front door LH

(i81) No. 6 (+) — (i5) No. 6 (−):

Front door RH

(i4) No. 3 (+) — (i5) No. 7 (−):

Rear door LH

(i4) No. 9 (+) — (i4) No. 5 (−):

Rear door RH

(i4) No. 3 (+) — (i4) No. 4 (−):

Does the voltage change from less than 1 V → 9 V or more? (During unlock output)

Yes	Go to 7.
No	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

7. CHECK BODY INTEGRATED UNIT OUTPUT SIGNAL.

Measure the voltage between body integrated unit and chassis ground when operating the trunk opener switch.

Connector & terminal

(i4) No. 7 (+) — Chassis ground (−):

Does the voltage change from less than 1 V → 9 V or more? (During unlock output)

Yes	Go to 8.
No	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

8. CHECK DOOR LOCK ACTUATOR.

Check the door lock actuator. Ref. to SECURITY AND LOCKS>Door Latch & Door Lock Actuator Assembly>INSPECTION.

Is the door lock actuator OK?

Yes	Go to 9.
No	Replace the door latch and door lock actuator assembly. Ref. to SECURITY AND LOCKS>Door Latch & Door Lock Actuator Assembly.

9. CHECK TRUNK LID LOCK ACTUATOR.

Check the trunk lid lock actuator. Ref. to SECURITY AND LOCKS>Trunk Lid Latch and Actuator Assembly>INSPECTION.

Is trunk lid lock actuator normal?

Yes	Check the connection status of the harness and connector that may have a temporary poor contact.
No	Replace the trunk lid latch & actuator assembly. Ref. to SECURITY AND LOCKS>Trunk Lid Latch and Actuator Assembly.

SECURITY AND LOCKS > Door Lock Control System

NOTE

For operation procedures of components of the door lock control system, refer to the sections below.

- Door latch and door lock actuator assembly: Ref. to SECURITY AND LOCKS>Door Latch & Door Lock Actuator Assembly.
- Trunk lid latch & actuator assembly: Ref. to SECURITY AND LOCKS>Trunk Lid Latch and Actuator Assembly.
- Power window main switch: Ref. to GLASS/WINDOWS/MIRRORS>Power Window Control Switch.
- Trunk opener switch: Ref. to SECURITY AND LOCKS>Trunk Opener Switch.
- Body integrated unit: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
- Backup unit: Ref. to SECURITY AND LOCKS>Backup Unit.
- Door switch: Ref. to LIGHTING SYSTEM>Door Switch.

SECURITY AND LOCKS > Keyless Entry System

WIRING DIAGRAM

For the wiring diagram, refer to “Keyless Entry System” in the wiring diagram. Ref. to WIRING SYSTEM>Keyless Entry System>WIRING DIAGRAM.

SECURITY AND LOCKS > Keyless Entry System

INSPECTION

1. BASIC INSPECTION

For basic inspection, refer to “Basic Diagnostic Procedure” of “KEYLESS ENTRY (DIAGNOSTICS)” section. Ref. to KEYLESS ENTRY(DIAGNOSTICS) >Basic Diagnostic Procedure.

2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to “System Block Diagram” in “KEYLESS ENTRY (DIAGNOSTICS)” section. Ref. to KEYLESS ENTRY(DIAGNOSTICS) >General Description>SYSTEM BLOCK DIAGRAM.

3. MODULE I/O SIGNAL

For the specification (electrical component), refer to “Control Module I/O Signal” of “KEYLESS ENTRY (DIAGNOSTICS)” section. Ref. to KEYLESS ENTRY(DIAGNOSTICS) >Control Module I/O Signal>ELECTRICAL SPECIFICATION.

SECURITY AND LOCKS > Keyless Entry System

NOTE

For operation procedures of components of the keyless entry system, refer to the following sections.

- Keyless entry control module: Ref. to SECURITY AND LOCKS>Keyless Entry Control Module.
- Keyless transmitter: Ref. to SECURITY AND LOCKS>Keyless Transmitter.

WIRING DIAGRAM

For the wiring diagram, refer to "Keyless Access With Push Button Start System" in WI section. Ref. to WIRING SYSTEM>Keyless Access With Push Button Start System>WIRING DIAGRAM.

INSPECTION

1. BASIC INSPECTION

For basic inspection, refer to "Basic Diagnostic Procedure" of "KEYLESS ACCESS WITH PUSH BUTTON START (DIAGNOSTICS)" section. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Basic Diagnostic Procedure.

2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to "System Block Diagram" in "KEYLESS ACCESS WITH PUSH BUTTON START (DIAGNOSTICS)" section. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>General Description>SYSTEM BLOCK DIAGRAM.

3. MODULE I/O SIGNAL

For the specification (electrical component), refer to "Control Module I/O Signal" of "KEYLESS ACCESS WITH PUSH BUTTON START (DIAGNOSTICS)" section. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Control Module I/O Signal>ELECTRICAL SPECIFICATION.

4. POWER SUPPLY SWITCHING FUNCTION CHECK

1. Check push button ignition switch function
   (1) Check the power supply switching control function with push button ignition switch operation, brake pedal operation, and select lever position.
   - MT model

Shift lever position	Clutch pedal operation	Push button ignition switch operation
—	Released	Repeat Ignition switch OFF → ACC ON → Ignition switch ON → Ignition switch OFF
	Released	Engine running → Ignition switch OFF
	Depressed	Ignition switch OFF → Engine started
	Depressed	ACC ON → Engine started
	Depressed	Ignition switch ON → Engine started
	Depressed	Engine running → Ignition switch OFF

   - CVT model

Select lever position	Brake pedal operation	Push button ignition switch operation
P	Released	Repeat Ignition switch OFF → ACC ON → Ignition switch ON → Ignition switch OFF
P	Released	Engine running → Ignition switch OFF

Select lever position	Brake pedal operation	Push button ignition switch operation
P	Depressed	Ignition switch OFF → Engine started
P	Depressed	ACC ON → Engine started
P	Depressed	Ignition switch ON → Engine started
P	Depressed	Engine running → Ignition switch OFF
N	Released	Repeat Ignition switch OFF → ACC ON → Ignition switch ON → ACC ON
N	Released	Engine running → ACC ON
N	Depressed	Ignition switch OFF → Engine started
N	Depressed	ACC ON → Engine started
N	Depressed	Ignition switch ON → Engine started
N	Depressed	Engine running → ACC ON
Except for P and N	Released	Repeat Ignition switch OFF → ACC ON → Ignition switch ON → ACC ON
Except for P and N	Released	Engine running → ACC ON
Except for P and N	Depressed	Ignition switch OFF → Ignition switch ON
Except for P and N	Depressed	ACC ON → Ignition switch ON
Except for P and N	Depressed	Engine running → ACC ON

(2) Check the power supply switching functions with other than the push button ignition switch operation.

- With the select lever in “P” position (CVT model) and ACC ON, check that the ACC changes from ON → OFF when the vehicle is left for 20 minutes or more.
- With the select lever in “P” position (CVT model) and the ignition switch ON, check that ignition switch changes from ON → OFF when the vehicle is left for 1 hour or more.

(3) If the inspection result indicates an improper operation, check the push button start system. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Diagnostics with Phenomenon>LIST > POWER SUPPLY SWITCHING SYSTEM.

2. Check power status display

(1) Check the power indicator display of the push button ignition switch.

Note:

***1: Key collation is normal, and the stop light switch (CVT) is ON.**

Indicator display

Push button ignition switch status	Indicator lighting status
Ignition switch OFF (except for condition *1)	Light OFF
ACC ON (except for condition *1)	Orange light
Ignition switch ON (except for condition *1)	Orange light
Engine start standby (*1)	Green light
After engine is started	Light OFF

(2) If the inspection result indicates an improper operation, check the push button start system. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Diagnostics with Phenomenon>LIST > POWER SUPPLY SWITCHING SYSTEM.

Note:
The indicator blinks if any of the following malfunctions are detected.

Detected malfunction	Indicator lighting status
Steering lock stuck	Green blinking
Steering lock CM internal malfunction	Orange blinking
Keyless access CM internal malfunction	Orange blinking
Vehicle speed signal malfunction	Orange blinking

SECURITY AND LOCKS > Keyless Access With Push Button Start System

NOTE

For procedure of components in the keyless access with push button start system, refer to the sections below.

- Access key: Ref. to SECURITY AND LOCKS>Access Key.
- Keyless access interior antenna: Ref. to SECURITY AND LOCKS>Keyless Access Indoor Antenna.
- Keyless access exterior antenna: Ref. to SECURITY AND LOCKS>Keyless Access Outdoor Antenna.
- Keyless access CM: Ref. to SECURITY AND LOCKS>Keyless Access CM.
- ID code box: Ref. to SECURITY AND LOCKS>ID Code Box.
- Steering lock CM: Ref. to SECURITY AND LOCKS>Steering Lock CM.
- Push button ignition switch: Ref. to SECURITY AND LOCKS>Push Button Ignition Switch.
- Access buzzer: Ref. to SECURITY AND LOCKS>Access Buzzer.

WIRING DIAGRAM

For the wiring diagram, refer to “Security System” in the wiring diagram. Ref. to WIRING SYSTEM>Security System>WIRING DIAGRAM.

INSPECTION

1. BASIC INSPECTION

For the basic inspection, refer to “Basic Diagnostic Procedure” of “BODY CONTROL (DIAGNOSTICS)” section. Ref. to BODY CONTROL(DIAGNOSTICS)>Basic Diagnostic Procedure.

2. SYSTEM BLOCK DIAGRAM

For system block diagram, refer to “System Block Diagram” in “BODY CONTROL (DIAGNOSTICS)”. Ref. to BODY CONTROL(DIAGNOSTICS)>General Description>SYSTEM BLOCK DIAGRAM.

3. MODULE I/O SIGNAL

For the specification (electrical component), refer to “Control Module I/O Signal” of “BODY CONTROL (DIAGNOSTICS)” section. Ref. to BODY CONTROL(DIAGNOSTICS)>Control Module I/O Signal.

4. BASIC DIAGNOSTIC PROCEDURE

1. CHECK DTC.

1. Turn the ignition switch to ON.
2. Read the DTC of [Body Control] using the Subaru Select Monitor. Ref. to COMMON (DIAGNOSTICS)>Diagnostic Trouble Code (DTC).

Are any DTCs displayed?

Yes	Perform the diagnosis for the displayed DTCs. Ref. to BODY CONTROL(DIAGNOSTICS)>Diagnostic Trouble Code (DTC)>LIST.
No	Go to 2.

2. CHECK DATA MONITOR.

Using the Subaru Select Monitor, display the following items in the [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

- [Driver's door SW input]
- [P-door SW input]
- [Rear right door SW input]
- [Rear left door SW input]
- [R Gate SW input]
- [Hood Switch Close-side]

Does the display switch between [OFF] ⟷ [ON] when each door or the front hood is opened/closed?

Yes — Go to 3.

No — Check the following parts.

- Door switches: Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK DOOR SWITCH.
- Trunk lid latch switch: Ref. to SECURITY AND LOCKS>Trunk Lid Latch and Actuator Assembly>INSPECTION.
- Hood switch: Ref. to SECURITY AND LOCKS>Front Hood Lock Assembly>INSPECTION.

3. CHECK SECURITY SYSTEM SETTINGS.

Using Subaru Select Monitor, display [Security Alarm Setup] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Is [Security Alarm Setup] set to [ON]?

Yes — Go to 5.

No — Go to 4.

4. CHANGE SETTING OF SECURITY SYSTEM.

Using Subaru Select Monitor, change the [Security Alarm Setup] to [ON]. Ref. to SECURITY AND LOCKS>Security System>INSPECTION > SECURITY SYSTEM ON/OFF SETTING.

Is setting change completed correctly?

Yes	Go to 5.
No	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

5. CHECK KEYLESS SYSTEM OPERATION.

Check the operation of the keyless entry system or keyless access system.

Does the keyless entry system or keyless access system operate normally?

Yes	Go to 6.
No	Check the keyless entry system or keyless access system. • Keyless entry system: Ref. to SECURITY AND LOCKS>Keyless Entry System>INSPECTION. • Keyless access system: Ref. to SECURITY AND LOCKS>Keyless Access With Push Button Start System>INSPECTION.

6. CHECK SECURITY SYSTEM OPERATION.

1. Turn the ignition switch to OFF and close all doors and front hood.
2. Check the status of security indicator light.
3. Press the LOCK button of the keyless transmitter or access key.
4. Check the security indicator light blinking patterns.

Is the security indicator light blinking patterns as follows?

- Before pressing the LOCK button: Blinks once every 3 seconds
- After pressing the LOCK button:
  - When monitoring lag is set to 0 seconds, blinks twice within 0.5 seconds at 2 second intervals.
  - When monitoring lag is set to 30 seconds, blinks once every 0.4 seconds for 30 seconds, then blinks twice within 0.5 seconds at 2 second intervals.

Yes	Go to 7.
No	Check the security indicator light. Ref. to SECURITY AND LOCKS>Security System>INSPECTION > CHECK SECURITY INDICATOR LIGHT CIRCUIT.

7. CHECK SECURITY ALARM OPERATION.

1. Check that the security indicator light blinks twice within 0.5 seconds at 2 second intervals.
2. Operate the driver’s door lock switch to the UNLOCK side.
3. Open one of the doors.

Does the security alarm operate, the horn sound and the hazard light blink?

Yes	Go to 8.
No	Check the following parts. • Horn: Ref. to SECURITY AND LOCKS>Security System>INSPECTION > CHECK HORN. • Hazard light: Ref. to SECURITY AND LOCKS>Security System>INSPECTION > CHECK HAZARD LIGHT OPERATION.

8. CHECK DEACTIVATION OF SECURITY ALARM.

Press any button of the transmitter or access key while the security alarm is operating.

Do the horn sound and the blinking of the hazard light stop?

Yes	Go to 9.
No	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.

9. CHECK MANUAL SETTING CHANGE OF SECURITY SYSTEM.

1. Press the UNLOCK button of the keyless transmitter or access key.
2. Change the setting of security system. Ref. to SECURITY AND LOCKS>Security System>INSPECTION > SECURITY SYSTEM ON/OFF SETTING.

Is setting change completed correctly?

Yes	Restore the security system settings to those before the diagnosis and finish the diagnosis.
No	Check the door lock switch circuit. Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK DOOR LOCK SWITCH.

5. SECURITY SYSTEM ON/OFF SETTING

Note:
It can be set by [Security Alarm Setup] in unit customizing using Subaru Select Monitor. Ref. to BODY CONTROL(DIAGNOSTICS)>Customize.

1. Close all doors, front hood, and trunk lid, and sit down on the driver's seat. Press the UNLOCK button of the keyless transmitter or access key.
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	2 times	[AL_OFF]
OFF → ON	1 time	[AL_ON]

6. CHECK DOOR SWITCH

For inspection of the door switch, refer to the “CHECK DOOR SWITCH” of the “Door Lock Control System”. Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK DOOR SWITCH.

7. CHECK SECURITY INDICATOR LIGHT CIRCUIT

For inspection of the security indicator light circuit, refer to “Warning Light Illumination Pattern” of “KEYLESS ACCESS WITH PUSH BUTTON START (DIAGNOSTICS)” section. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Warning Light Illumination Pattern.

8. CHECK HORN

For inspection of the horn, refer to the “Horn System” of “HORN” section. Ref. to HORN>Horn System.

9. CHECK HAZARD LIGHT OPERATION

For operation procedures of the hazard lights, refer to “CHECK HAZARD LIGHT SYSTEM” in “LIGHTING SYSTEM” section. Ref. to LIGHTING SYSTEM>Turn Signal Light and Hazard Light System>INSPECTION > CHECK HAZARD LIGHT OPERATION.

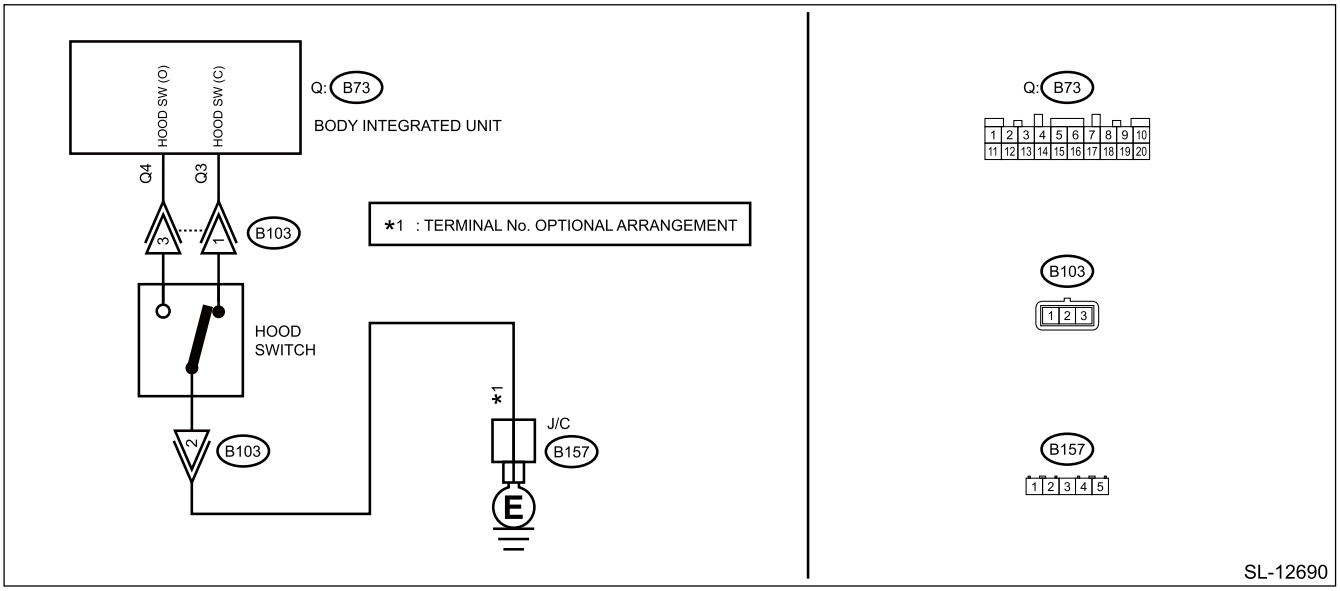
10. CHECK IGNITION SWITCH CIRCUIT

For inspection of the ignition switch circuit, refer to “Basic Diagnostic Procedure” of “KEYLESS ACCESS WITH PUSH BUTTON START (DIAGNOSTICS)” section. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Basic Diagnostic Procedure.

11. CHECK HOOD SWITCH

Wiring diagram:

Security system Ref. to WIRING SYSTEM>Security System>WIRING DIAGRAM.



1. CHECK DATA MONITOR.

1. Turn the ignition switch to ON.
2. Using Subaru Select Monitor, display [Hood Switch Close-side] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display switch between [OFF] ←→ [ON] when the front hood is opened ←→ closed?

Yes	The hood switch is OK.
No	Go to 2.

2. CHECK DATA MONITOR.

Using Subaru Select Monitor, display [Hood Switch Open-side] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the display switch between [ON] ←→ [OFF] when the front hood is opened ←→ closed?

Yes	The hood switch is OK.
No	Go to 3.

3. CHECK HARNESS.

1. Turn the ignition switch to OFF.
2. Disconnect the connector of body integrated unit.
3. Disconnect the connector of hood switch.
4. Measure the resistance of harness between body integrated unit and hood switch.
   Connector & terminal
   (B73) No. 3 — (B103) No. 1:
   (B73) No. 4 — (B103) No. 3:

Is the resistance less than 10 Ω?

Yes	Go to 4.
No	Repair or replace the defective part.

4. CHECK HARNESS.

Measure the resistance between the hood switch and chassis ground.

Connector & terminal

(B103) No. 2 — Chassis ground (−):

Is the resistance less than 10 Ω?

Yes	Go to 5.
No	Repair or replace the defective part.

5. CHECK HOOD SWITCH.

Check the hood switch. Ref. to SECURITY AND LOCKS>Front Hood Lock Assembly>INSPECTION.

Is the hood switch normal?

Yes	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Replace the lock assembly front hood. Ref. to SECURITY AND LOCKS>Front Hood Lock Assembly.

SECURITY AND LOCKS > Security System

NOTE

For operation procedures of components in the security system, refer to the sections below.

- Horn: Ref. to HORN>Horn.
- Body integrated unit: Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
- Door switch: Ref. to LIGHTING SYSTEM>Door Switch.
- Hood switch: Ref. to SECURITY AND LOCKS>Front Hood Lock Assembly.
- Security indicator light (in combination meter): Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter.
- Trunk lid latch & actuator assembly: Ref. to SECURITY AND LOCKS>Trunk Lid Latch and Actuator Assembly.
- Hazard switch: Ref. to LIGHTING SYSTEM>Hazard Switch.

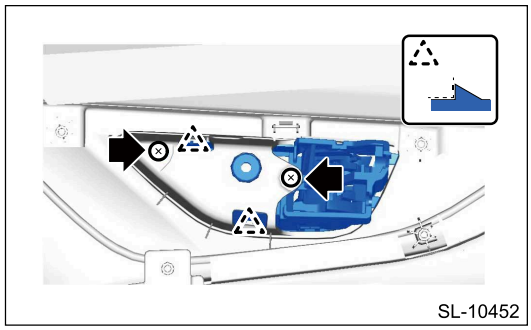
SECURITY AND LOCKS > Door Inner Remote

REMOVAL

1. FRONT

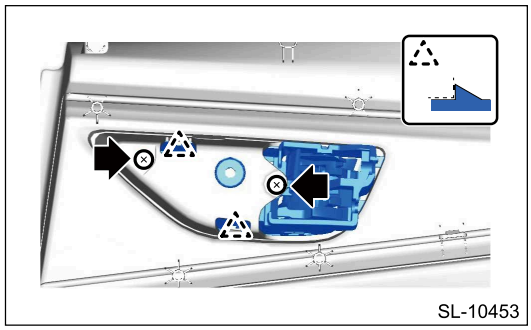
Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > FRONT DOOR.
3. Remove the remote assembly door.
   (1) Remove the screws.
   (2) Release the claws and guides, and remove the remote assembly door.



2. REAR

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > REAR DOOR.
3. Remove the remote assembly door.
   (1) Remove the screws.
   (2) Release the claws and guides, and remove the remote assembly door.



SECURITY AND LOCKS > Door Inner Remote

INSTALLATION

1. FRONT

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

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.
     Preparation items:
     Grease: Silicone grease G-30M (part No. 004404002) or equivalent
2. Install the remote assembly door.
3. Install the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION > FRONT DOOR.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. REAR

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.
     Preparation items:
     Grease: Silicone grease G-30M (part No. 004404002) or equivalent
2. Install the remote assembly door.
3. Install the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION > REAR DOOR.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SECURITY AND LOCKS > Door Inner Remote

INSPECTION

Check if the remote inner handle operates normally.

- If the lever is faulty, replace the remote assembly door.
- If the cable is deformed, replace the latch & actuator assembly.

REMOVAL

1. FRONT

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Raise the glass assembly front door to the top position.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > FRONT DOOR.
4. Remove the sealing cover front door. Ref. to EXTERIOR BODY PANELS>Sealing Cover>REMOVAL > FRONT SEALING COVER.
5. Release the clips, and remove the plate door.

Caution:
If it is removed with an excessive force, the door panel assembly may be deformed. Also, if the clip is damaged, replace it with a new clip.

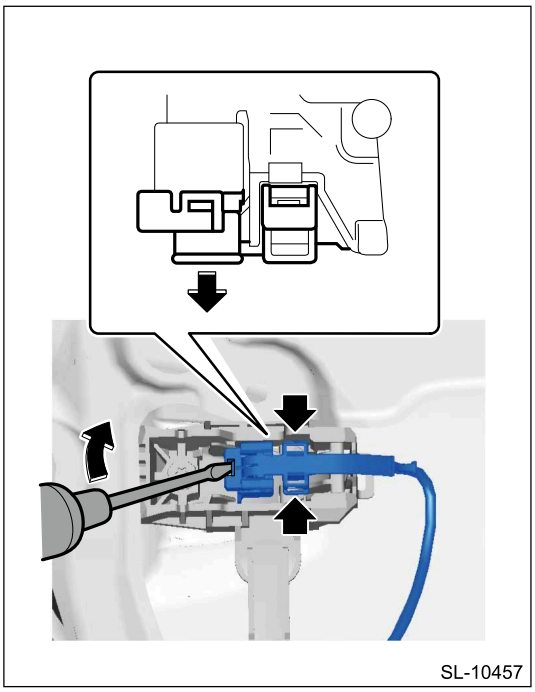
6. Remove the cover handle front outer.
   (1) Remove the plug at the rear end of the panel assembly front door.

   (2) Using TORX® T30, loosen the bolt and remove the cover handle front outer.

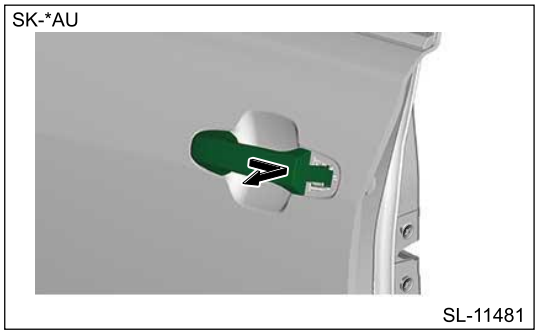
7. Remove the handle front door outer.

Caution:
Do not apply excessive force to remove the outer handle from the door frame assembly.

(1) Disconnect the harness clip and exterior antenna (touch sensor) connector using a flat tip screwdriver or similar tool wrapped with protection tape.



(2) Remove the handle front door outer by pulling it toward yourself and to the rear as shown in the figure.



8. Release the claws and hooks, and remove the spacer door handle outer A and B.

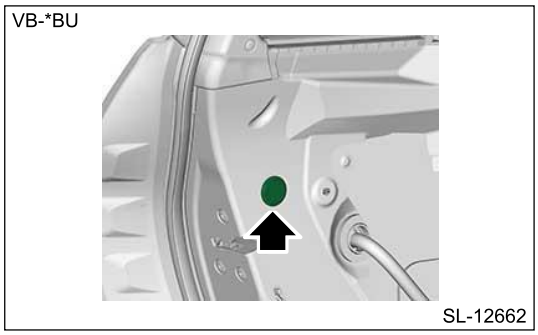
9. Remove the frame assembly front door outer.
   (1) Remove the rod clamp and remove the rod.

   (2) Using TORX® T30, loosen the bolt.
   (3) Release the claws, and remove the frame assembly front door outer as shown in the figure.

2. REAR

1. Raise the glass assembly rear door to the top position.
2. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > REAR DOOR.

4. Remove the sealing cover rear door. Ref. to EXTERIOR BODY PANELS>Sealing Cover>REMOVAL > REAR SEALING COVER.
5. Remove the latch and actuator assembly rear. Ref. to SECURITY AND LOCKS>Door Latch & Door Lock Actuator Assembly>REMOVAL > REAR.
6. Remove the cover handle rear outer.
   (1) Remove the plug.



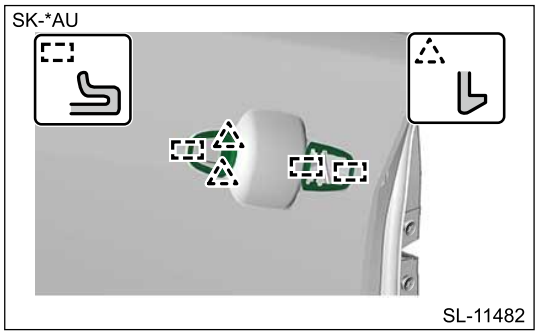
   (2) Using TORX® T30, loosen the bolt.
   (3) Release the claws, and then remove the cover handle rear outer.

7. Remove the handle rear door outer.

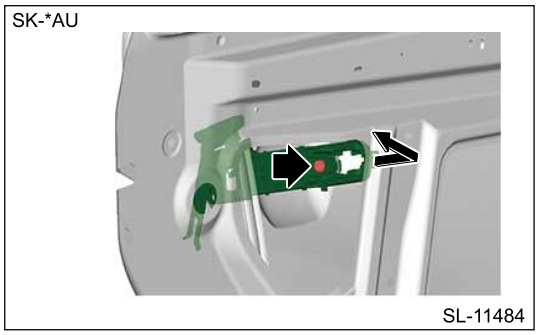
Caution:
Do not apply excessive force to remove the outer handle from the door frame assembly.

   (1) Remove the handle rear door outer by pulling it toward yourself and to the rear as shown in the figure.

8. Remove the spacer door handle outer.
(1) Release the claws and hooks, and remove the spacer door handle outer A and B.



9. Remove the frame assembly rear door outer.
(1) Using TORX® T30, loosen the bolt.
(2) Release the claws, and remove the frame assembly rear door outer as shown in the figure.



SECURITY AND LOCKS > Door Outer Handle

INSTALLATION

1. FRONT

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

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.

Preparation items:

Grease: Silicone grease G-30M (part No. 004404002) or equivalent

2. Using TORX® T30, tighten the bolt of the frame assembly front door outer.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
3. Install the spacer door handle outer A and B.
4. Install the handle front door outer.
   (1) Insert the handle door outer to the frame assembly front door outer.
   (2) Connect the connector.
5. Using TORX® T30, install the cover handle front outer.

   Note:
   When installing the outer handle cover on the driver's side, make sure that the key cylinder shaft is correctly inserted into the latch & actuator assembly front.

   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
6. Install the plugs.
7. Install the rod to the frame assembly front door outer.
8. Install the plate door.
9. Install the sealing cover front door. Ref. to EXTERIOR BODY PANELS>Sealing Cover>INSTALLATION > FRONT SEALING COVER.
10. Install the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION > FRONT DOOR.
11. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. REAR

1. Before installation, check the lever for deformation.
2. Using TORX® T30, install the frame assembly rear door outer.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
3. Install the spacer door handle outer A and B.
4. Install the handle rear door outer.
5. Using TORX® T30, install the cover handle rear outer.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
6. Install the plugs.
7. Install the latch and actuator assembly rear. Ref. to SECURITY AND LOCKS>Door Latch & Door Lock Actuator Assembly>INSTALLATION > REAR.
8. Install the sealing cover rear door. Ref. to EXTERIOR BODY PANELS>Sealing Cover>INSTALLATION > REAR SEALING COVER.
9. Install the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION > REAR DOOR.
10. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SECURITY AND LOCKS > Door Outer Handle

INSPECTION

Check if the outer handle operates normally.

- If the handle joint portion is faulty, replace the handle door outer or the frame assembly door outer.
- If the rod or lever is deformed, replace the latch & actuator assembly.

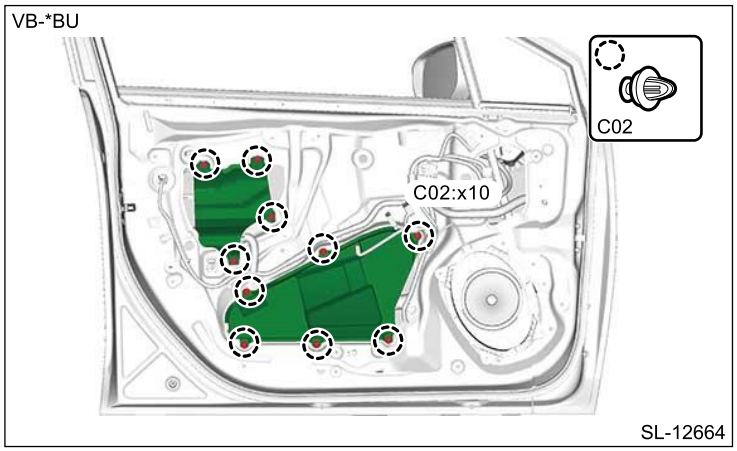
REMOVAL

1. FRONT

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

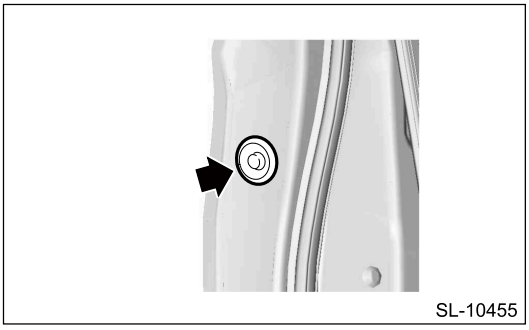
1. Raise the glass assembly front door to the top position.
2. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > FRONT DOOR.
4. Remove the sealing cover front door. Ref. to EXTERIOR BODY PANELS>Sealing Cover>REMOVAL > FRONT SEALING COVER.
5. Release the clips, and remove the plate door and the pad front door inner.

Caution:
If it is removed with an excessive force, the door panel assembly may be deformed. Also, if the clip is damaged, replace it with a new clip.



6. Remove the sash assembly front door LWR.
   (1) Remove the lower side of the running channel front door.
   (2) Remove the bolts, and remove the sash assembly front door LWR.

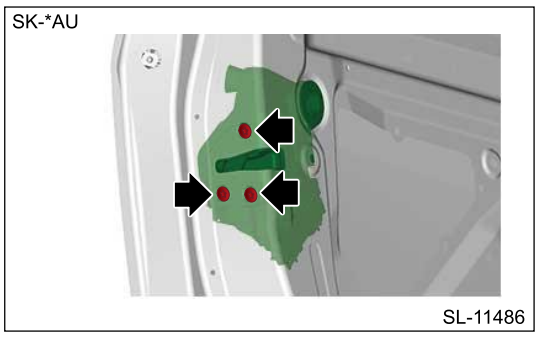
7. Remove the cover handle front outer. (If removing the driver's side latch and actuator assembly front)
(1) Remove the plug at the rear end of the panel assembly front door.



(2) Using TORX® T30, loosen the bolt and remove the cover handle front outer.

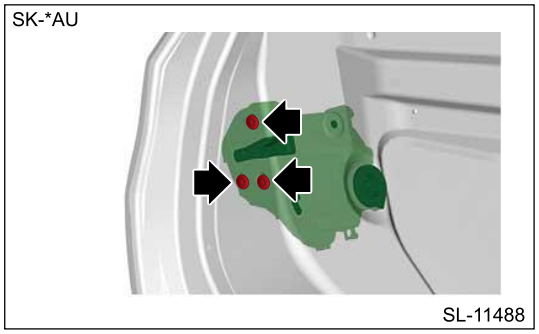
8. Remove the latch and actuator assembly front.
(1) Remove the rod clamp and remove the rod.

(2) Using TORX® T30, remove the bolts, and remove the latch & actuator assembly front.



2. REAR

1. Raise the glass assembly rear door to the top position.
2. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
3. Remove the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > REAR DOOR.
4. Remove the sealing cover rear door. Ref. to EXTERIOR BODY PANELS>Sealing Cover>REMOVAL > REAR SEALING COVER.
5. Using TORX® T30, remove the bolts, and remove the latch and actuator assembly rear.



SECURITY AND LOCKS > Door Latch & Door Lock Actuator Assembly

INSTALLATION

1. FRONT

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Before installation, check the following items.
   - Cable and rod are free from deformation.
   - Grease is applied sufficiently to cable and rod joints.
     If grease is insufficient, add it as necessary before assembling the cable and rod.
     Preparation items:
     Grease: Silicone grease G-30M (part No. 004404002) or equivalent
2. Install the latch and actuator assembly front.
   (1) Using TORX® T30, install new bolts.
   Tightening torque:
   6.5 N·m (0.7 kgf-m, 4.8 ft-lb)

(2) Install the rod.

3. Using TORX® T30, install the cover handle front outer. (If the driver's side latch & actuator assembly front has been removed)

Note:
Make sure that the key cylinder shaft is correctly inserted into the latch & actuator assembly front.

Tightening torque:
7.5 N·m (0.8 kgf-m, 5.5 ft-lb)

4. Install the plugs. (If the driver's side latch & actuator assembly front has been removed)
5. Install the sash assembly front door LWR.

Tightening torque:
7.5 N·m (0.8 kgf-m, 5.5 ft-lb)

6. Install the plate door and the pad front door inner.
7. Install the sealing cover front door. Ref. to EXTERIOR BODY PANELS>Sealing Cover>INSTALLATION > FRONT SEALING COVER.
8. Install the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION > FRONT DOOR.
9. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. REAR

1. Before installation, check the following items.
   - Cable and lever are free from deformation.
   - Grease is applied sufficiently to cable joints.
     If grease is insufficient, add it as necessary before assembling the cable.

   Preparation items:
   Grease: Silicone grease G-30M (part No. 004404002) or equivalent
2. Using TORX® T30 and new bolts, install the latch and actuator assembly rear.

   Tightening torque:
   6.5 N·m (0.7 kgf-m, 4.8 ft-lb)
3. Install the sealing cover rear door. Ref. to EXTERIOR BODY PANELS>Sealing Cover>INSTALLATION > REAR SEALING COVER.
4. Install the trim panel rear door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION > REAR DOOR.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SECURITY AND LOCKS > Door Latch & Door Lock Actuator Assembly

INSPECTION

1. LATCH

Check if the latch operates normally.
If the latch cannot be locked or the door can be opened or closed with the latch locked, check the cable, rod, or lever for deformation.

- If latch deformation, abnormal wear, or unsmooth operation is observed, replace the latch & actuator assembly.
- If the cable, rod or lever is deformed, replace the latch & actuator assembly.

2. LOCK ACTUATOR

- **FRONT**

1. Check door lock operation
   Check the door lock operation when battery voltage is applied between the connector terminals.

Terminal No.	Inspection conditions	Specification
4 (+) — 1 (−)	Apply battery voltage.	LOCK
1 (+) — 4 (−)		UNLOCK

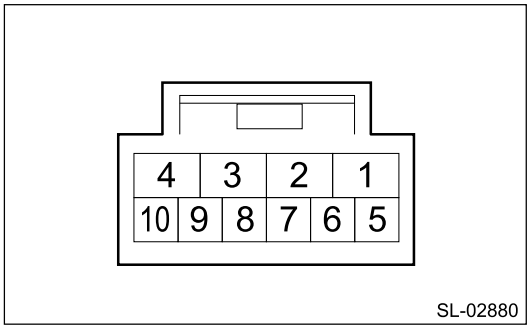
2. Check of position switch (model with keyless access with push button start)
   Measure the resistance between connector terminals.

Terminal No.	Inspection conditions	Standard
8 — 7	LOCK	1 MΩ or more
	UNLOCK	Less than 1 Ω

3. Replace the latch & actuator assembly front if it is found defective.

- **REAR**

1. Check door lock operation
   Check the door lock operation when battery voltage is applied between the connector terminals.



Terminal No.	Inspection conditions	Specification
4 (+) — 1 (−)	Apply battery voltage.	LOCK
1 (+) — 4 (−)		UNLOCK

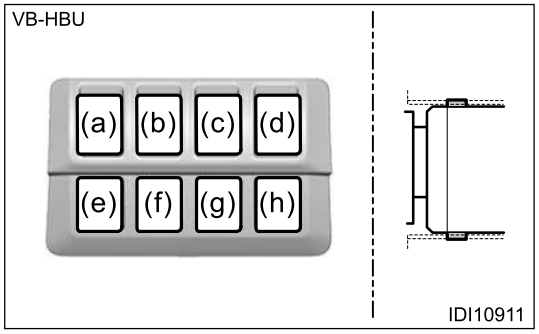
2. If it does not operate properly as a result of inspection, replace the latch & actuator assembly rear.

SECURITY AND LOCKS > Trunk Opener Switch

REMOVAL

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
3. Remove the switch trunk opener.
   (1) Release the claws.
   (2) Remove the switch trunk opener (a).



SECURITY AND LOCKS > Trunk Opener Switch

INSTALLATION

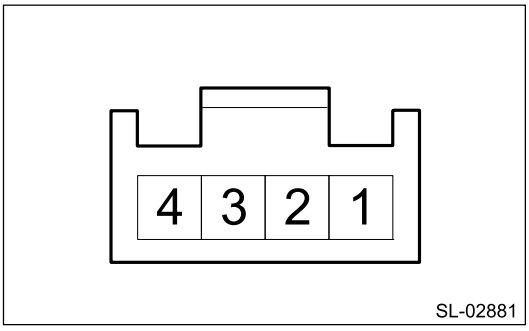
Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the switch trunk opener.
2. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SECURITY AND LOCKS > Trunk Opener Switch

INSPECTION

1. Measure the resistance between connector terminals.



Terminal No.	Inspection conditions	Standard
1 — 4	Switch OFF	1 MΩ or more
	Switch ON	Less than 1 Ω

2. Apply battery voltage between the connector terminals to check lighting condition of illumination inside the switch.

Caution:
When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.
Incorrect polarity connection may cause LED damage inside the switch.

Terminal No.	Inspection conditions	Specification
2 (+) — 3 (−)	Apply battery voltage.	Light ON

3. Replace the switch trunk opener if it is found defective.

SECURITY AND LOCKS > Trunk Lid Latch and Actuator Assembly

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the lock assembly trunk lid.
   (1) Disconnect the connector.
   (2) Remove the bolts, then remove the lock assembly trunk lid.

SECURITY AND LOCKS > Trunk Lid Latch and Actuator Assembly

INSTALLATION

1. Install the lock assembly trunk lid and connect the connector.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
2. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SECURITY AND LOCKS > Trunk Lid Latch and Actuator Assembly

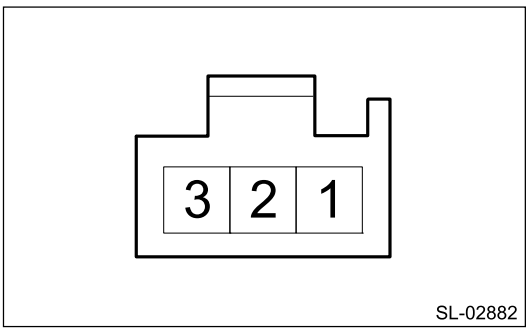
INSPECTION

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

1. Check door lock operation
   Check the door lock operation when battery voltage is applied between the connector terminals.



Terminal No.	Inspection conditions	Specification
1 (+) — 2 (−)	Connect battery to the terminals	OPEN

2. Check switch

Measure the resistance between connector terminals.

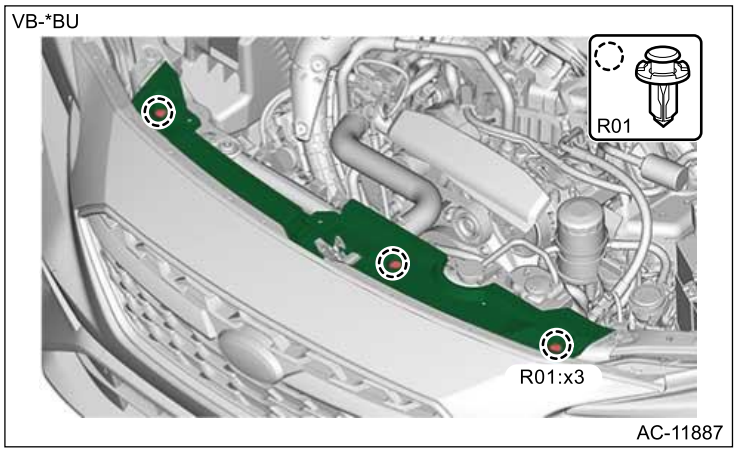
Terminal No.	Inspection conditions	Standard
3 — 2	LOCK	1 MΩ or more
	UNLOCK	Less than 1 Ω

3. Replace the lock assembly trunk lid if it is found defective.

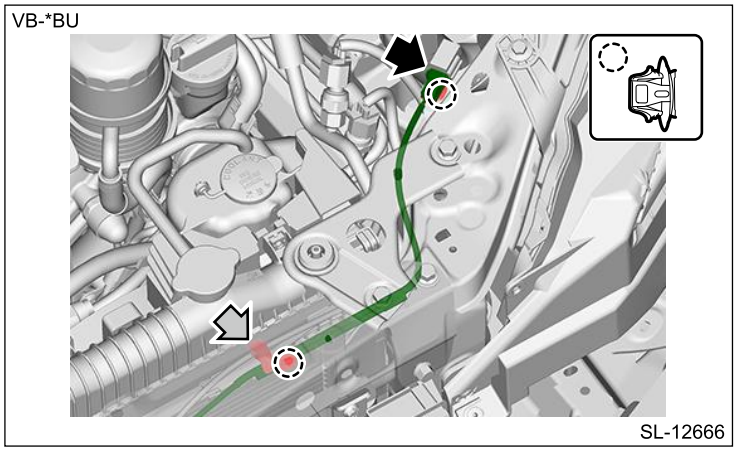
REMOVAL

1. HOOD LOCK ASSEMBLY

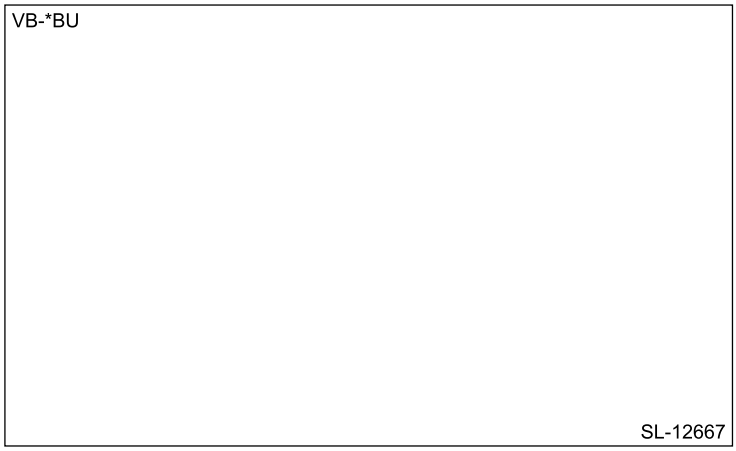
1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the air intake duct. Ref. to INTAKE (INDUCTION)(H4DOTC)>Air Intake Duct>REMOVAL.
3. Remove the clips, and remove the cover UPR front.



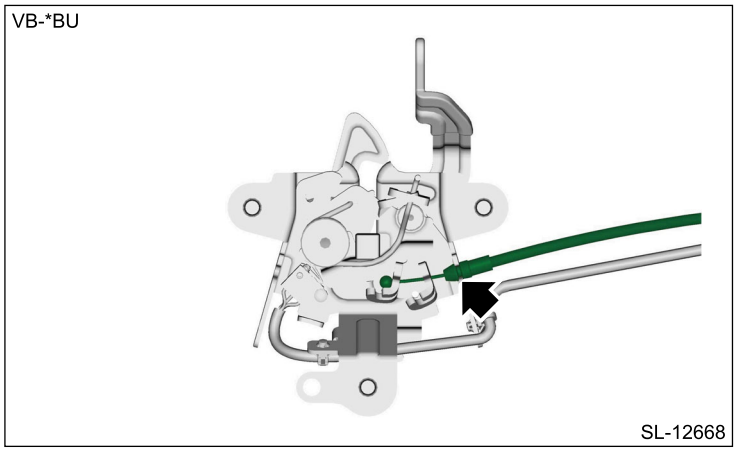
4. Remove the bumper face front. Ref. to EXTERIOR/INTERIOR TRIM>Front Bumper>REMOVAL.
5. Remove the lock assembly front hood.
   (1) Disconnect the connector.
   (2) Remove the connector clip and harness clip.



   (3) Remove the nuts and clips, and remove the lock assembly front hood.



(4) Remove the cable assembly front hood from the guide.

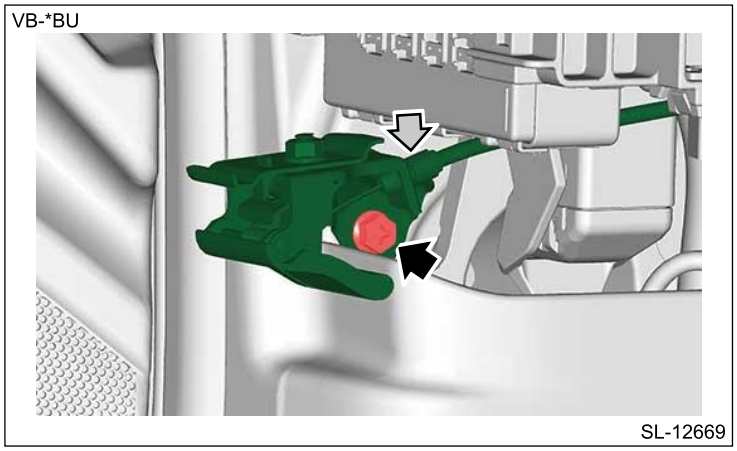


2. HOOD CABLE ASSEMBLY

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

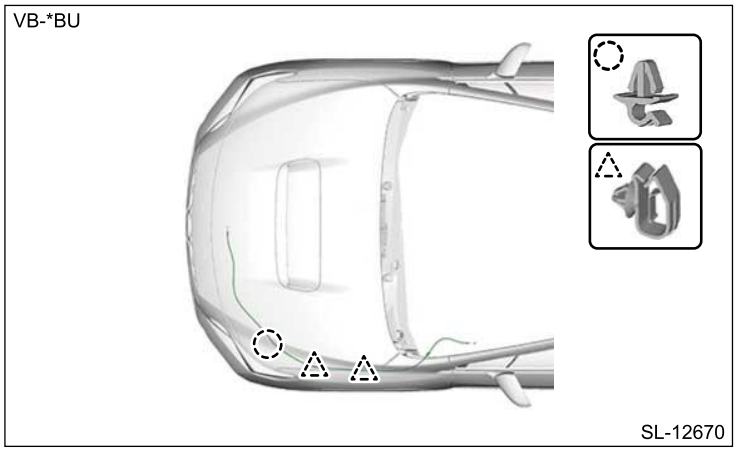
1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the mud guard front LH. Ref. to EXTERIOR/INTERIOR TRIM>Mud Guard>REMOVAL.
3. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
4. Remove the lock assembly front hood, and then attach a string to the end of the cable assembly front hood. Ref. to SECURITY AND LOCKS>Front Hood Lock Assembly>REMOVAL > HOOD LOCK ASSEMBLY.

   Note:
   A string makes operation easier during installation.
5. Remove the opener handle.
   (1) Remove the cable assembly front hood.
   (2) Remove the bolt, and remove the opener handle.



6. Remove the cable assembly front hood.

(1) Remove the cable assembly front hood from the clips.



(2) Remove the attached string from the end of the cable assembly front hood.

Note:
Leave the string attached to the body, and use it during installation.

SECURITY AND LOCKS > Front Hood Lock Assembly

INSTALLATION

1. HOOD LOCK ASSEMBLY

1. Before installation, check the following items.
- The cable is free from deformation.
- Grease is applied sufficiently to cable joints.

  If grease is insufficient, add it as necessary before assembling the cable.

2. Install the cable assembly front hood.

3. Adjust and install the lock assembly front hood.

Note:
Refer to "ADJUSTMENT" of the lock assembly front hood. Ref. to SECURITY AND LOCKS>Front Hood Lock Assembly>ADJUSTMENT.

(1) Install the lock assembly front hood with nuts and clips.

Tightening torque:
33 N·m (3.4 kgf-m, 24.3 ft-lb)

(2) Install the connectors, connector clips, and harness clips.

4. Install the bumper face front. Ref. to EXTERIOR/INTERIOR TRIM>Front Bumper>INSTALLATION.
5. Install the cover UPR front.
6. Install the air intake duct. Ref. to INTAKE (INDUCTION)(H4DOTC)>Air Intake Duct>INSTALLATION.
7. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
8. Check the clearance and surface level gap between hood COMPL front and bumper face front, and adjust if it is outside the standard value. Ref. to EXTERIOR BODY PANELS>Front Hood>ADJUSTMENT.

2. HOOD CABLE ASSEMBLY

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Check the cable for deformation such as fray before installation.
2. Install the cable assembly front hood.

   Note:
   Tie the string left on the body to the cable assembly front hood and pull it out of the vehicle.
3. Install the opener handle.

   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
4. Install the lock assembly front hood. Ref. to SECURITY AND LOCKS>Front Hood Lock Assembly>INSTALLATION > HOOD LOCK ASSEMBLY.
5. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
6. Install the mud guard front LH. Ref. to EXTERIOR/INTERIOR TRIM>Mud Guard>INSTALLATION.
7. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SECURITY AND LOCKS > Front Hood Lock Assembly

ADJUSTMENT

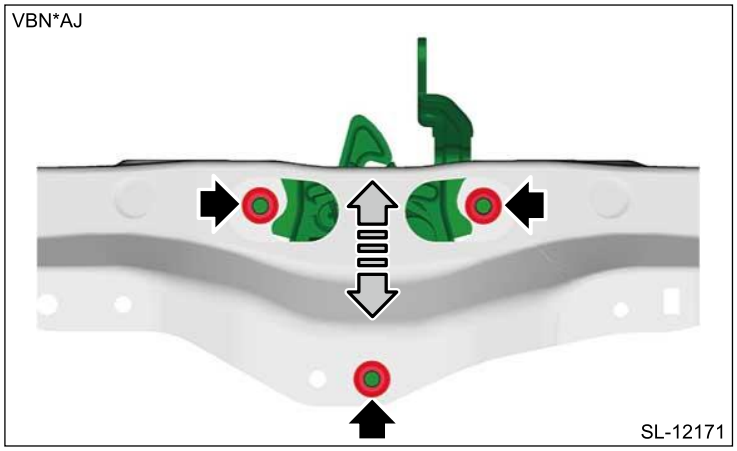
1. HOOD LOCK ASSEMBLY

1. Remove the clips of the lock assembly front hood.

   Note:
   After adjusting the lock assembly front hood, dispose the clips since they are no longer needed.
   The clips cannot be inserted because the clip holes become smaller due to adjustment.
2. Loosen the nut, and adjust the lock assembly front hood while moving it up and down.

   Caution:
   After adjustment, tighten the nut securely.

   Tightening torque:
   33 N·m (3.4 kgf-m, 24.3 ft-lb)



3. Check the clearance and surface level gap between front hood and bumper face. Ref. to EXTERIOR BODY PANELS>Front Hood>ADJUSTMENT.

SECURITY AND LOCKS > Front Hood Lock Assembly

INSPECTION

1. HOOD LOCK ASSEMBLY

- **CHECK OPERATION**

  Check if the lock assembly front hood operates normally.

  If lever deformation, abnormal wear, or unsmooth lock operation is observed, replace the lock assembly front hood.

- **UNIT INSPECTION**

  1. Check hood switch.

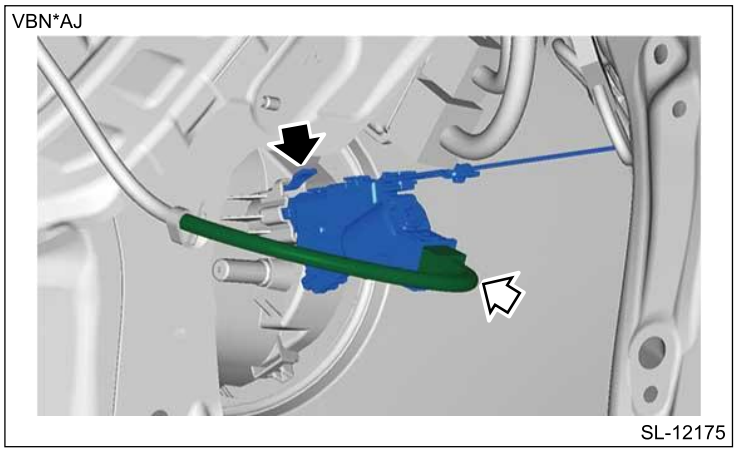
     Measure the resistance between connector terminals.

Terminal No.	Inspection conditions	Standard
1 — 2	Open the front hood	1 MΩ or more
3 — 2	Close the front hood	1 MΩ or more

  2. Replace the lock assembly front hood if faulty is found in the inspection.

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the trunk trim panel side RH. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>REMOVAL.
3. Remove the lock assembly fuel.
   (1) Disconnect the connector.
   (2) Release the claws, and remove the lock assembly fuel.



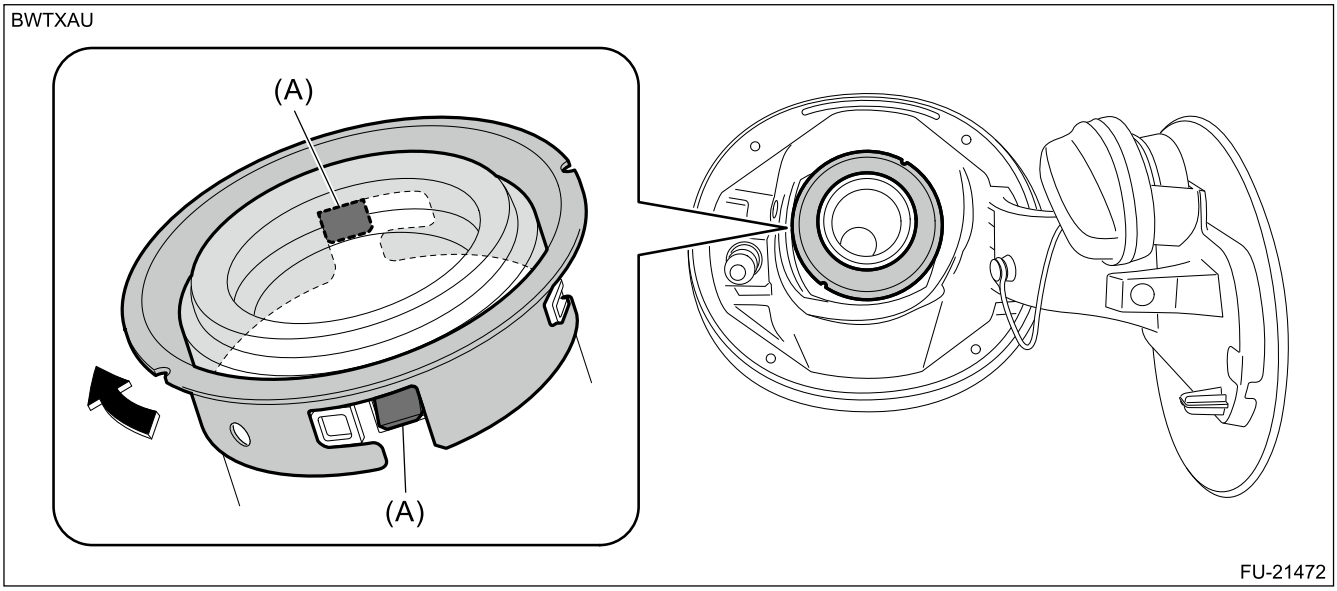
4. Remove the flap outer.
   (1) Insert a flat tip screwdriver or similar tool wrapped with protection tape or a cloth so that it comes in touch with the claw on the flap outer side.
   (2) Use a flat tip screwdriver or similar tool to lever off the claw toward the flap outer side at the end of the flap outer.
   (3) With the condition of step (2), slide the flap outer toward the vehicle outside to release the claw and guide.

5. Remove the fuel filler cap.

Note:
The clip of the fuel filler cap cannot be reused, therefore, do not remove the clip unless the saucer COMPL is replaced.

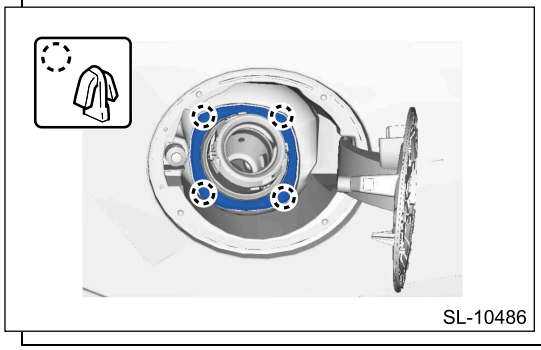
6. Remove the fuel filler pipe protector.

(1) While pressing the claw (A), turn the fuel filler pipe protector in the direction of the arrow to unlock and remove it.



7. Release the claws and then remove the ring clip.

Caution:
Do not reuse the ring clip and replace with a new part, because engagement of the claw weakens.

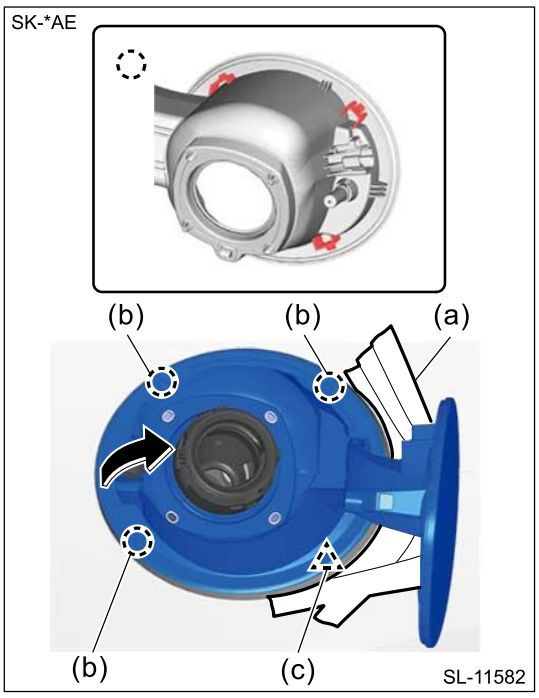


8. Remove the saucer COMPL.

Caution:
Be careful not to damage by forcibly prying at the rubber portion with a flat tip screwdriver or similar tool.

(1) Attach the protective tape (a) to the panel side outer.

(2) Release the claw (b) from vehicle inside, and pull out the saucer COMPL toward yourself, then release the claw (c).



(3) Remove the rubber portion from the fuel filler pipe using a flat tip screwdriver or similar tool wrapped with protection tape, and pull out the saucer COMPL while tilting it toward vehicle front.

SECURITY AND LOCKS > Fuel Lid

INSTALLATION

1. Install the saucer COMPL.

   Note:
   Securely install the rubber portion of the saucer COMPL to the fuel filler pipe assembly.
2. Install a new ring clip.
3. Install the fuel filler pipe protector.
4. Install the fuel filler cap.
5. Install the flap outer.
6. Install the lock assembly fuel and connect the connector.
7. Install the trunk trim panel side RH. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Room Trim>INSTALLATION.
8. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SECURITY AND LOCKS > Fuel Lid

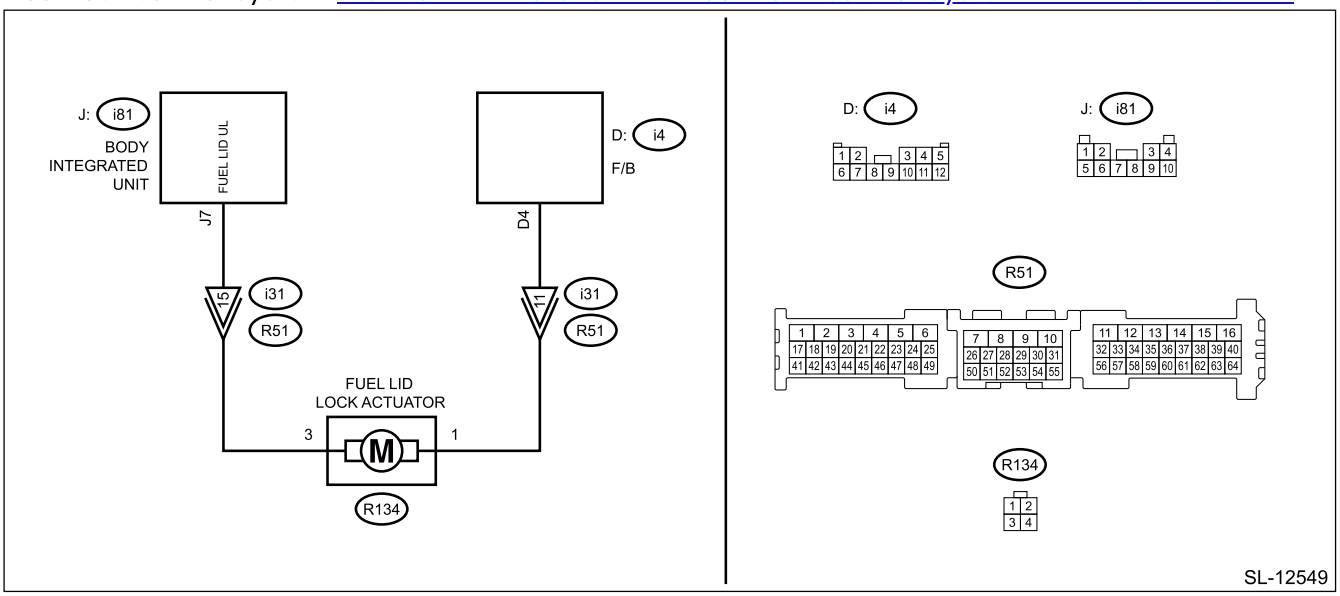
INSPECTION

1. CHECK OPERATION

Check if the fuel flap operate normally.
If the flap is deformed, replace the flap outer.

2. TROUBLE SYMPTOM

Electric fuel lock system does not operate.
Wiring diagram:
Door lock control system Ref. to WIRING SYSTEM>Door Lock Control System>WIRING DIAGRAM.



1. CHECK DOOR LOCK/UNLOCK OPERATION.

1. Turn the ignition switch to OFF.
2. Using the keyless transmitter or access key (touch sensor), check that door lock/unlock is possible.

Does it lock/unlock normally?

Yes	Go to 2.
No	Check the door lock actuator and circuit. Ref. to SECURITY AND LOCKS>Door Lock Control System>INSPECTION > CHECK DOOR LOCK ACTUATOR AND CIRCUIT.

2. CHECK ELECTRIC FUEL UNLOCK OPERATION.

1. Turn the ignition switch to ON.
2. Lock all doors using the door lock switch.
3. Turn the ignition switch to OFF.

Does the electric fuel unlock operate when turning the ignition switch to OFF?

Yes	Electric fuel unlock is normal.
No	Go to 3.

3. CHECK BODY INTEGRATED UNIT.

Using Subaru Select Monitor, display data of [Ignition Voltage] in [Data monitor] of [Body Control]. Ref. to COMMON (DIAGNOSTICS)>Data Monitor.

Does the voltage switch between 0 V (OFF) ←→ 9 V or more (ON) when the ignition switch is operated?

Yes	Go to 4.
No	Check the ignition switch circuit. Ref. to SECURITY AND LOCKS>Security System>INSPECTION > CHECK IGNITION SWITCH CIRCUIT.

4. CHECK HARNESS.

1. Turn the ignition switch to OFF.
2. Disconnect the connector of the body integrated unit and fuel lid lock actuator.
3. Check the harness between the body integrated unit and fuel lid lock actuator.
   Connector & terminal
   (i81) No. 7 — (R134) No. 3:
   (i4) No. 4 — (R134) No. 1:

Is the resistance less than 10 Ω?

Yes	Go to 5.
No	Repair or replace the defective part.

5. CHECK FUEL LID LOCK ACTUATOR.

Apply battery voltage between fuel lid lock actuator connector terminals.

Terminals

Lock

No. 1 (+) — No. 3 (−):

Unlock

No. 3 (+) — No. 1 (−):

Does it operate properly?

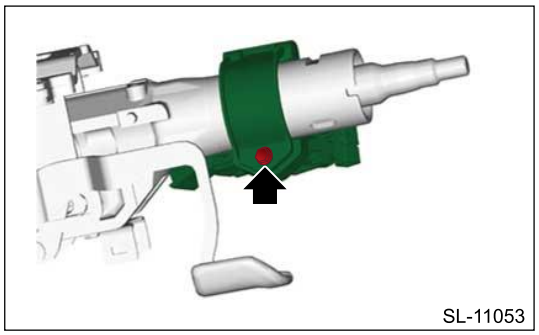
Yes	Replace the body integrated unit. Ref. to BODY CONTROL/COMMUNICATION SYSTEM>Body Integrated Unit.
No	Replace the fuel lid lock actuator. Ref. to SECURITY AND LOCKS>Fuel Lid.

REPLACEMENT

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **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 "VSC(VDC) Centering Mode" of the VDC. Ref. to VEHICLE DYNAMICS CONTROL (VDC)>VDC Control Module and Hydraulic Control Unit (VDCCM&H/U)>ADJUSTMENT > VDC SENSOR MIDPOINT SETTING MODE.**

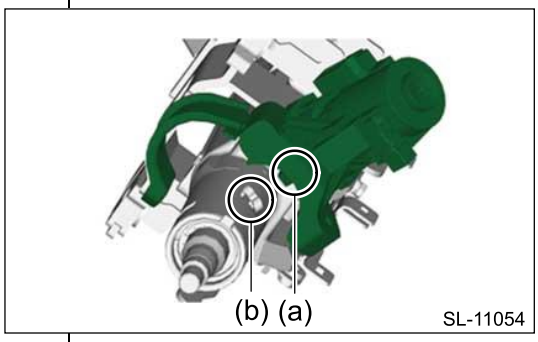
1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module>REMOVAL.
3. Remove the steering wheel assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>REMOVAL.
4. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
5. Remove the knee airbag module. Ref. to AIRBAG SYSTEM>Knee Airbag Module>REMOVAL.
6. Remove the duct foot driver. Ref. to AIR CONDITIONER>Air Vent Duct>REMOVAL > FOOT DUCT.
7. Remove the column assembly steering. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Column>REMOVAL.
8. Remove the ignition key lock.
   (1) Secure the column assembly steering in a vise.
   (2) Use the reverse tap and drill to remove the set bolt and remove the ignition key lock.



9. Install the ignition key lock.
   (1) Secure the ignition key lock to the column assembly steering.

Note:

When installing the ignition key lock, confirm that the fitting portion of the ignition key lock is properly engaged with the opening portion of the column shaft.



(a) Fitting portion

(b) Opening portion

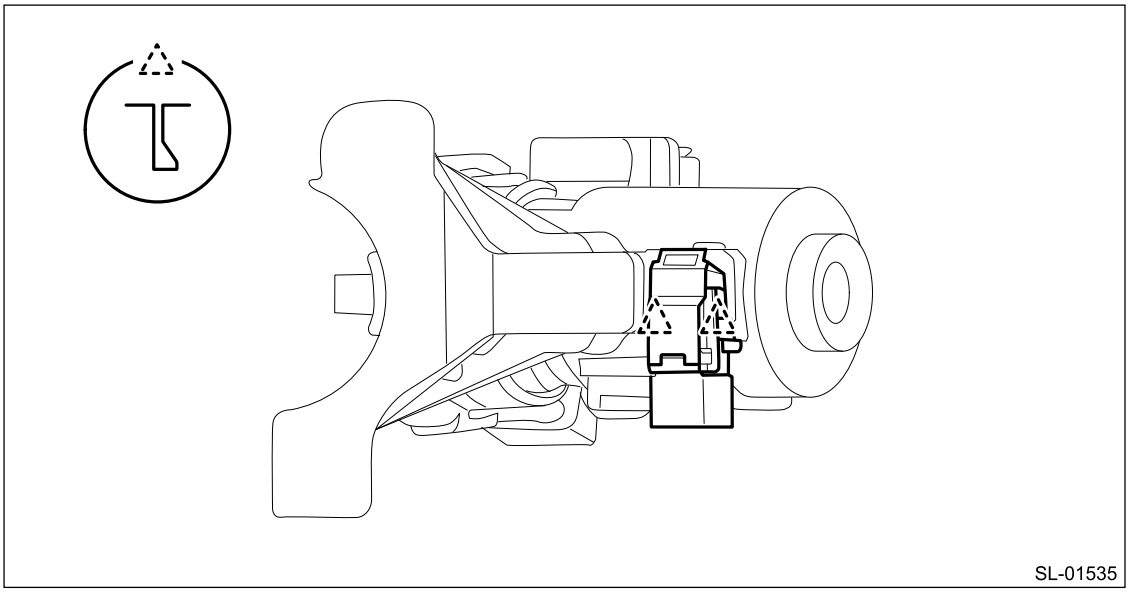
(2) Use new set bolts. Tighten the bolt until the bolt head is broken (bolt head wrenched off).

10. Install the column assembly steering. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Column>INSTALLATION.
11. Install the duct foot driver. Ref. to AIR CONDITIONER>Air Vent Duct>INSTALLATION > FOOT DUCT.
12. Install the knee airbag module. Ref. to AIRBAG SYSTEM>Knee Airbag Module>INSTALLATION.
13. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
14. Align the center position of the steering roll connector. Ref. to AIRBAG SYSTEM>Roll Connector>ADJUSTMENT.
15. Install the steering wheel assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Wheel>INSTALLATION.
16. Install the driver's airbag module. Ref. to AIRBAG SYSTEM>Driver's Airbag Module>INSTALLATION.
17. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
18. Perform "VDC sensor midpoint setting mode". Ref. to VEHICLE DYNAMICS CONTROL (VDC)>VDC Control Module and Hydraulic Control Unit (VDCCM&H/U)>ADJUSTMENT > VDC SENSOR MIDPOINT SETTING MODE.

SECURITY AND LOCKS > Ignition Key Lock

DISASSEMBLY

1. Remove the immobilizer antenna assembly. Ref. to SECURITY AND LOCKS>Immobilizer Antenna>REMOVAL.
2. Release the claws, and pull the key warning switch downwards to remove.



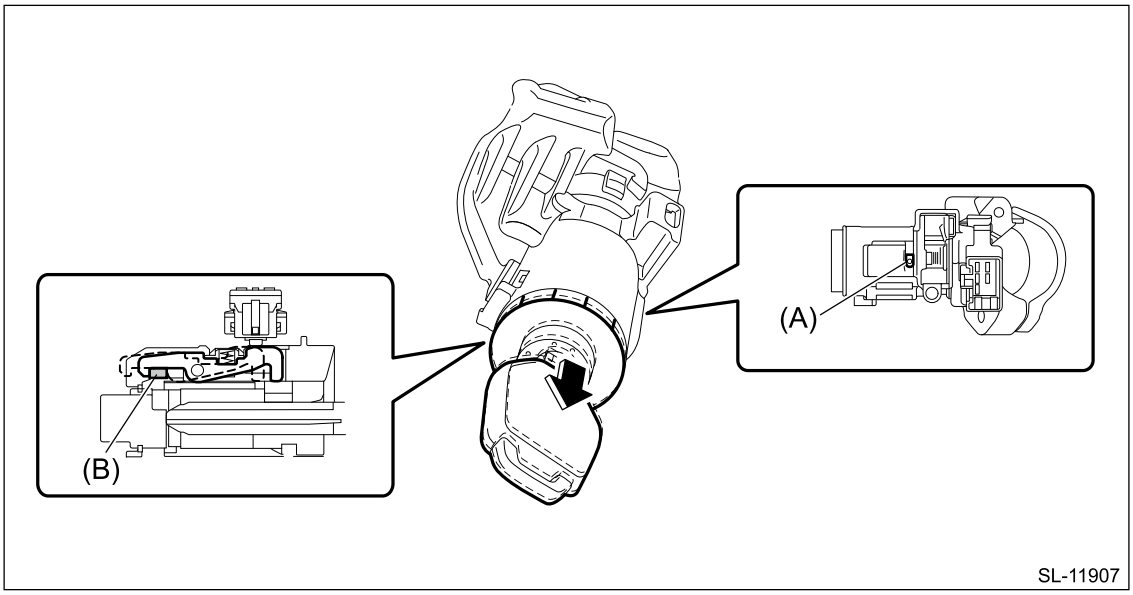
3. Remove the screws, and remove the key interlock module.

4. Remove the key lock assembly.

(1) Insert the key into the key lock assembly, and turn the key to the ACC position.

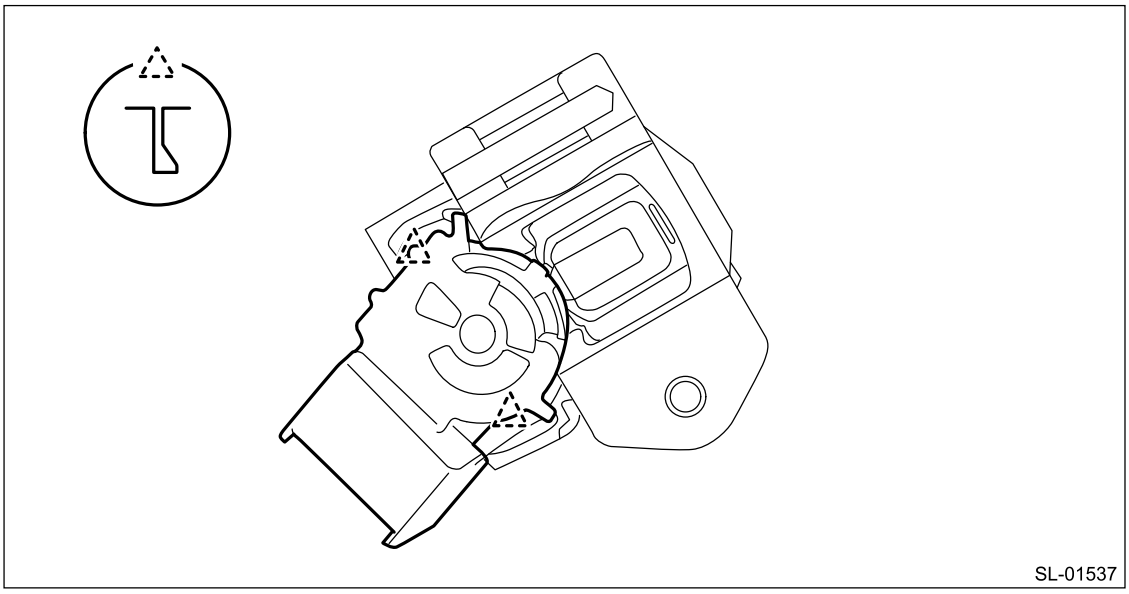
(2) Release the lock by inserting a flat tip screwdriver from the steering lock frame hole (A).

(3) Pull the key lock assembly until the key lock assembly claws touch the steering lock frame stopper (B).



(4) Insert a flat tip screwdriver from the steering lock frame hole (C), and release the claws to pull out the key lock assembly.

5. Release the claws and remove the ignition switch assembly.



SECURITY AND LOCKS > Ignition Key Lock

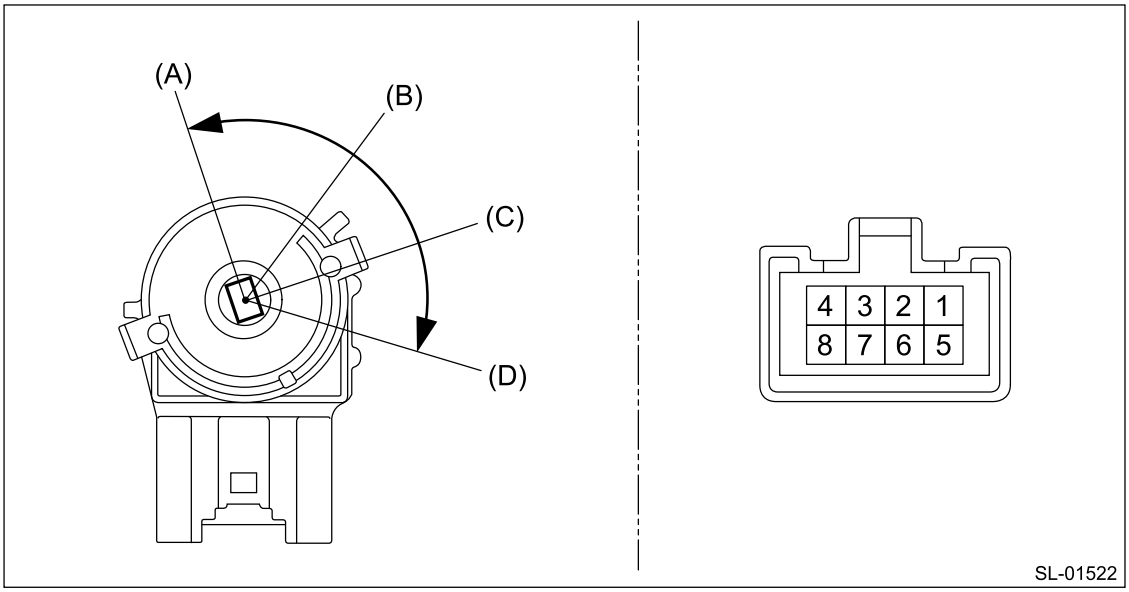
ASSEMBLY

1. Turn the key to the ACC position.
2. Install the ignition switch assembly.
3. Install the key lock assembly.
4. Install the key interlock module.
5. Install the key warning switch.
6. Install the immobilizer antenna assembly. Ref. to SECURITY AND LOCKS>Immobilizer Antenna>INSTALLATION.

SECURITY AND LOCKS > Ignition Key Lock

INSPECTION

1. Measure the resistance between connector 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

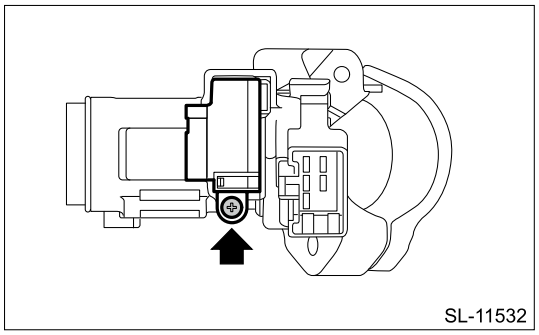
2. Replace the ignition switch assembly if the inspection result is not within the standard.

REPLACEMENT

1. STEERING LOCK

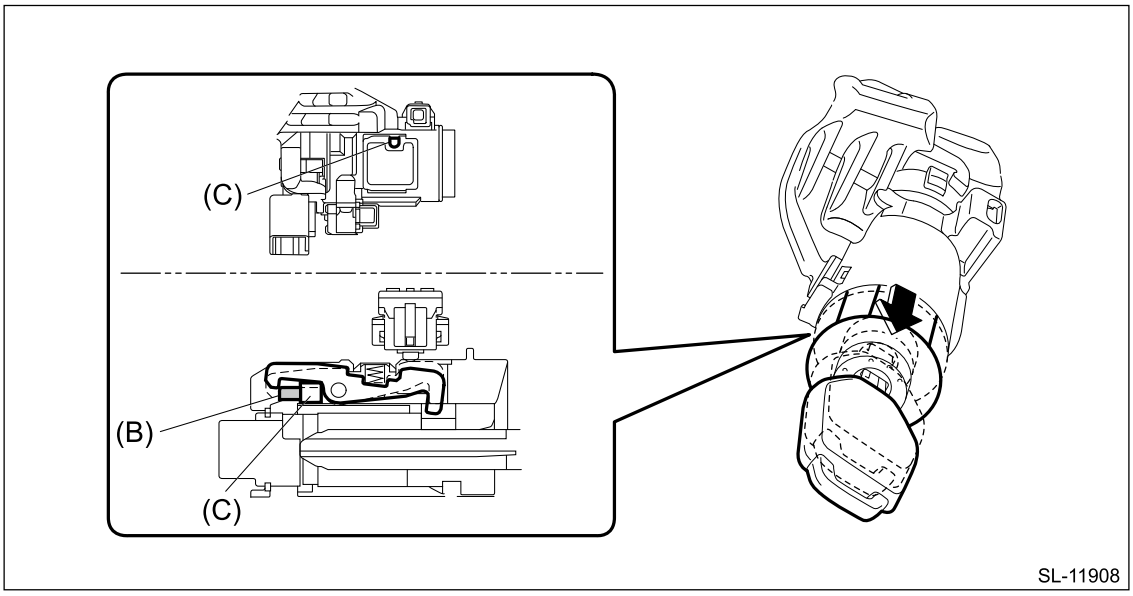
Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the column cover assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Column>REMOVAL.
3. Remove the immobilizer antenna assembly. Ref. to SECURITY AND LOCKS>Immobilizer Antenna>REMOVAL.
4. Remove the screws, and remove the key interlock module.



5. Replace the key lock assembly.
   (1) Insert the key into the key lock assembly, and turn the key to the ACC position.
   (2) Release the lock by inserting a flat tip screwdriver from the steering lock frame hole (A).
   (3) Pull the key lock assembly until the key lock assembly claws touch the steering lock frame stopper (B).

(4) Insert a flat tip screwdriver from the steering lock frame hole (C), and release the claws to pull out the key lock assembly.



(5) Install the key lock assembly in the reverse order of removal.

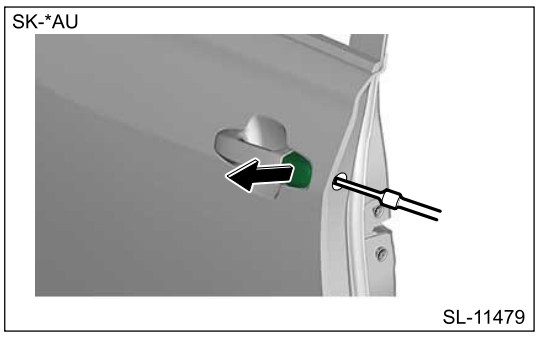
6. Install the key interlock module.
7. Install the immobilizer antenna assembly. Ref. to SECURITY AND LOCKS>Immobilizer Antenna>INSTALLATION.
8. Install the column cover assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Column>INSTALLATION.
9. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. FRONT DOOR

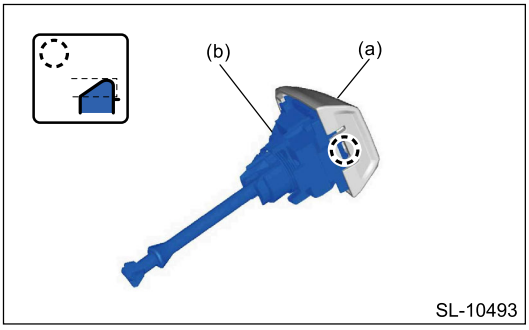
1. Raise the glass assembly front door to the top position.
2. Remove the cover handle front outer.

(1) Remove the plug at the rear end of the panel assembly front door.

(2) Using TORX® T30, loosen the bolt and remove the cover handle front outer.



3. Replace the key cylinder.
(1) Release the claws.
(2) Remove the key cylinder (b) from the cover handle front outer (a), and replace the key cylinder.



4. Using TORX® T30, install the cover handle front outer.

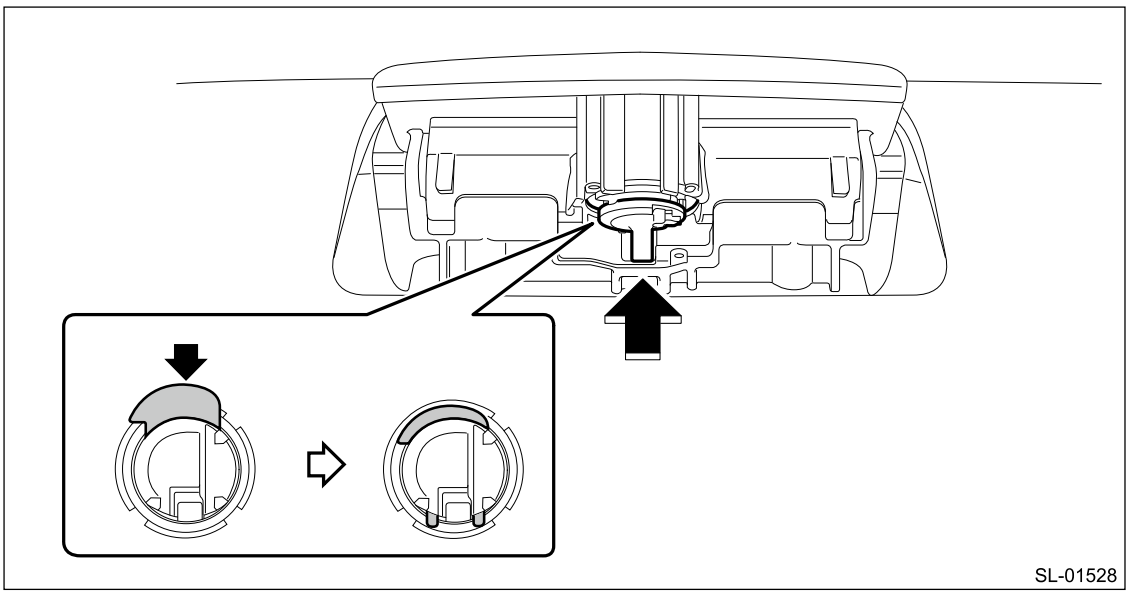
Note:
When installing the outer handle cover on the driver's side, make sure that the key cylinder shaft is correctly inserted into the latch & actuator assembly front.

Tightening torque:
7.5 N·m (0.8 kgf-m, 5.5 ft-lb)

5. Install the plugs.

3. GLOVE BOX LID

1. Remove the pocket COMPL. Ref. to EXTERIOR/INTERIOR TRIM>Glove Box>REMOVAL.
2. Replace the key cylinder.
(1) Pull up the lock knob.
(2) While pressing in the metal plate, remove the key cylinder from the pocket COMPL to replace the key cylinder.



3. Install the pocket COMPL. Ref. to EXTERIOR/INTERIOR TRIM>Glove Box>INSTALLATION.

SECURITY AND LOCKS > Keyless Entry Control Module

REMOVAL

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the rear seat cushion assembly and the backrest assembly. Ref. to SEATS>Rear Seat>REMOVAL.
3. Remove the trim panel assembly C pillar LWR and the trim panel assembly C pillar. Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>REMOVAL.
4. Remove the trim panel assembly rear shelf. Ref. to EXTERIOR/INTERIOR TRIM>Rear Shelf Trim>REMOVAL.
5. Remove the keyless entry control module.
   (1) Disconnect the connector.
   (2) Remove the bolt and then remove the keyless entry control module.

SECURITY AND LOCKS > Keyless Entry Control Module

INSTALLATION

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Side impact sensor (under the rear center seat) for the airbag system is located under the front center of the rear seat cushion. Be careful not to apply strong impact to the sensor when working with the rear seat cushion removed.**

1. Install the keyless entry control module, and connect the connector.
   Tightening torque:
   13 N·m (1.3 kgf-m, 9.6 ft-lb)
2. Install the trim panel assembly rear shelf. Ref. to EXTERIOR/INTERIOR TRIM>Rear Shelf Trim>INSTALLATION.

3. Install the trim panel assembly C pillar and the trim panel assembly C pillar LWR. Ref. to EXTERIOR/INTERIOR TRIM>Rear Quarter Trim>INSTALLATION.
4. Install the backrest assembly and rear seat cushion assembly. Ref. to SEATS>Rear Seat>INSTALLATION.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
6. When the keyless entry control module is replaced, register the transmitter ID. (Model with TPMS) Ref. to TIRE PRESSURE MONITOR(DIAGNOSTICS)>Register Transmitter (ID)>OPERATION.

REMOVAL

1. KEYLESS TRANSMITTER BATTERY

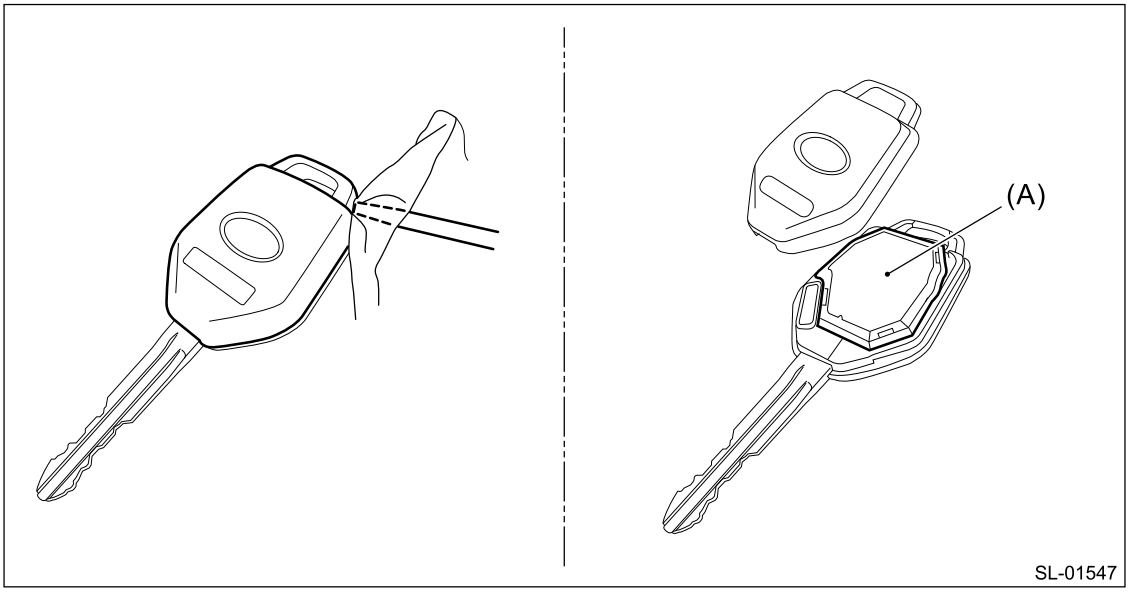
Caution:
To prevent static electricity damage to the keyless transmitter printed circuit board, touch the steel area of building with hand to discharge static electricity carried on body or clothes before disassembling the keyless transmitter.

1. Take out the transmitter case.

(1) Release the claws, and then remove the keyless transmitter cover.

Note:
Use a flat tip screwdriver with protective tape or cloth in order not to damage the components.

(2) Remove the transmitter case (A).

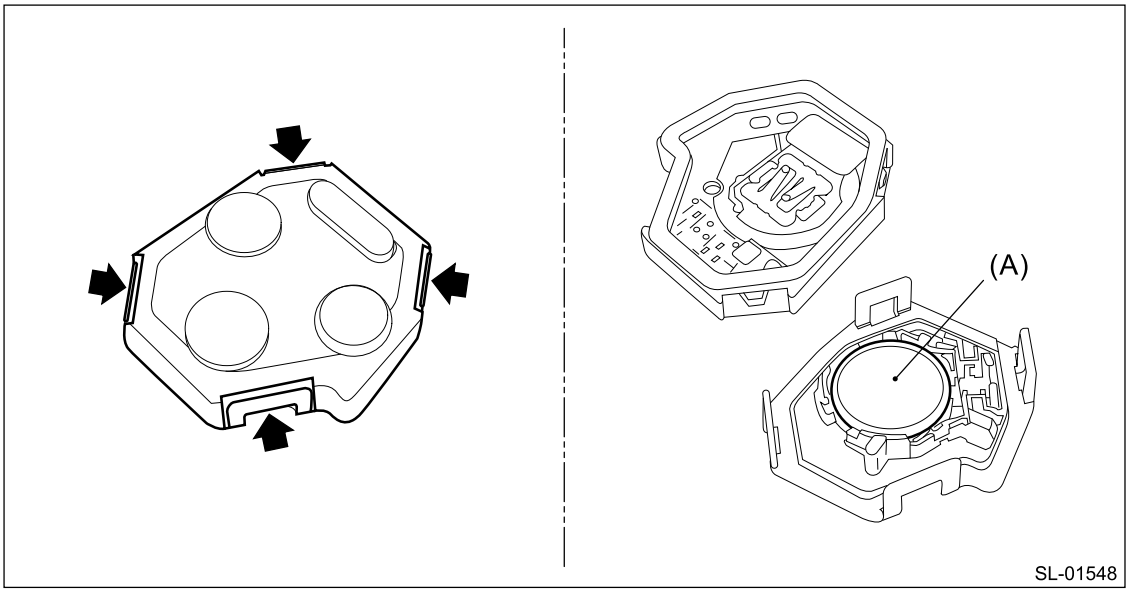


2. Take out the keyless transmitter battery.

(1) Release the claws, and remove the transmitter case.

(2) Take out the keyless transmitter battery (A).

Caution:
When using a flat tip screwdriver, apply insulation tape around a flat tip screwdriver.



SECURITY AND LOCKS > Keyless Transmitter

INSTALLATION

1. KEYLESS TRANSMITTER BATTERY

1. Install the keyless transmitter battery.
2. Install the transmitter case.
3. Install the keyless transmitter cover.

SECURITY AND LOCKS > Keyless Transmitter

INSPECTION

1. KEYLESS TRANSMITTER BATTERY

1. Measure the keyless transmitter battery voltage.

Note:
Complete the measurement within 5 seconds because the keyless transmitter battery discharges during measurement.

Battery terminal	Inspection conditions	Standard
(+) — (−)	Connect resistor (A) 510 Ω	2.5 — 3 V

2. Replace the keyless transmitter battery if the inspection result is not within the standard value. (Use CR1620 or equivalent)

REPLACEMENT

1. REGISTRATION OF KEYLESS TRANSMITTER WITH SUBARU SELECT MONITOR

Note:
- **A maximum of four keyless transmitters can be registered for each individual vehicle.**
- **When replacing or adding the keyless transmitter, new registration of transmitter is necessary.**

1. Using the Subaru Select Monitor, select [Keyless ID registration] in [Maintenance support] of [Keyless Entry]. Ref. to KEYLESS ENTRY(DIAGNOSTICS) >Work Support.
2. According to the directions on the screen, press the button of the transmitter to be registered in order of Lock → Unlock. (When registration completed: buzzer sounds once.)

   Note:
   - **Repeat the procedure as many times as the number of transmitters to be registered.**
   - **When attempting to register a key that has already been registered, the buzzer sounds twice.**
3. Press the Exit button to finish the operations.

2. CLEAR TRANSMITTERS WITH SUBARU SELECT MONITOR

1. Using the Subaru Select Monitor, select [Keyless ID erasure] in [Maintenance support] of [Keyless Entry]. Ref. to KEYLESS ENTRY(DIAGNOSTICS) >Work Support.
2. Perform the operation according to the display screen.

   Note:
   All registered transmitters will be cleared.

3. CLEAR THE REGISTRATION OF IMMOBILIZER

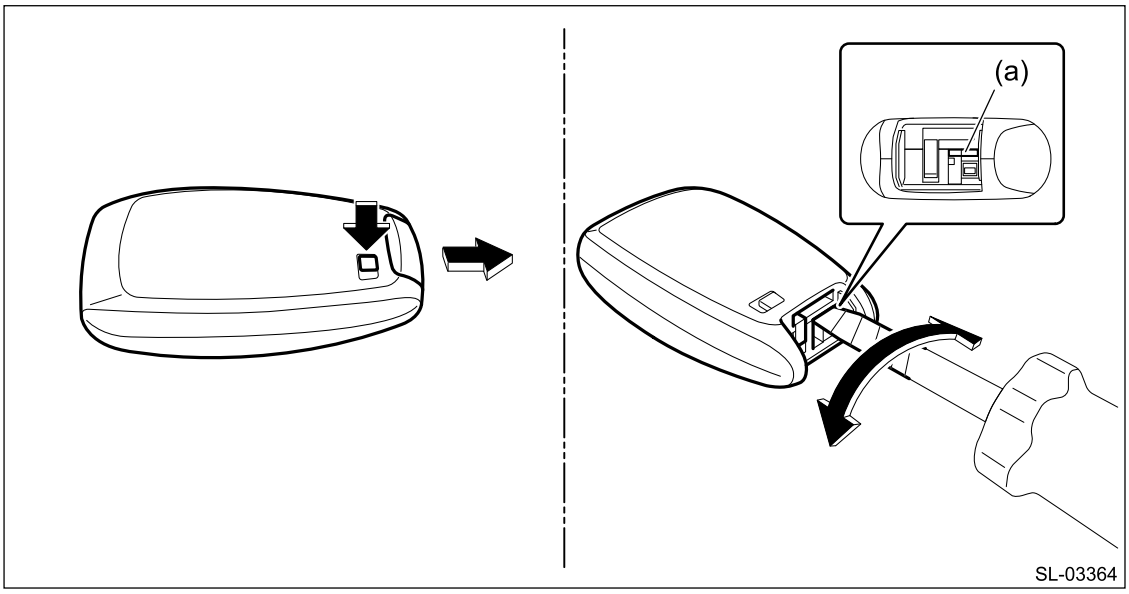
For detailed immobilizer registration clear, refer to “Type G” (except for C0 model) or “Type I” (C0 model) described in “REGISTRATION MANUAL FOR IMMOBILIZER”.

REMOVAL

1. ACCESS KEY BATTERY

Caution:
To prevent static electricity damage to the access key printed circuit board, touch the steel area of building with hand to discharge static electricity carried on body or clothes before disassembling the access key.

1. Remove the access key battery.
(1) Push the lock button and remove the mechanical key from the access key.
(2) Insert a flat tip screwdriver end wrapped with insulating tape etc. into the slit (a) of the access key to open the case.



(3) Insert a flat tip screwdriver wrapped with insulating tape, and while holding the upper side of the battery (a), remove the access key battery (a) from the case.

SECURITY AND LOCKS > Access Key

INSTALLATION

1. ACCESS KEY BATTERY

1. Install the access key battery.
2. Install the mechanical key.

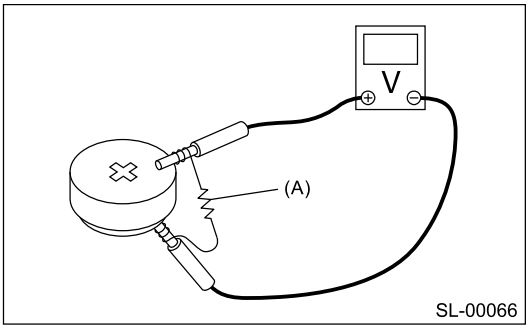
SECURITY AND LOCKS > Access Key

INSPECTION

1. ACCESS KEY BATTERY

1. Measure the access key battery voltage.

Note:
Complete the measurement within 5 seconds because the access key battery discharges during measurement.



Battery terminal	Inspection conditions	Standard
(+) — (−)	Connect resistor (A) 510 Ω	2.5 — 3 V

2. Replace the access key battery if the inspection result is not within the standard value. (Use CR2032 or equivalent)

SECURITY AND LOCKS > Access Key

REPLACEMENT

1. ACCESS KEY REGISTRATION

For detailed access key registration, refer to “Type H” described in “REGISTRATION MANUAL FOR IMMOBILIZER”.

Note:
- **A maximum of seven access keys can be registered for each individual vehicle.**
- **When replacing or adding an access key, new registration of the access key is necessary.**
- **When the access key has been newly added, it is registered to the immobilizer system at the same time.**

NOTE

Caution:
When the control module related to immobilizer has been replaced, be sure to perform the registration of immobilizer system. For detailed operation procedure, refer to "Type I" described in "REGISTRATION MANUAL FOR IMMOBILIZER".

Note:
Equipped on C0 model without keyless access with push button start.

For removal/installation procedures of immobilizer control module, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

REMOVAL

1. MODEL WITHOUT KEYLESS ACCESS WITH PUSH BUTTON START

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the column cover assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Column>REMOVAL.
3. Remove the immobilizer antenna assembly.
   (1) Disconnect the connector.
   (2) Release the claws using a flat tip screwdriver or similar tool wrapped with protection tape, and remove the immobilizer antenna assembly.

   Caution:
   Do not apply excessive force to disengage the lock of immobilizer antenna assembly. Otherwise they may be broken because those parts are the products made of a plastic.

2. MODEL WITH KEYLESS ACCESS WITH PUSH BUTTON START

Immobilizer antenna is integrated with the push button start switch.
For the operation procedures of the immobilizer antenna, refer to "Push Button Ignition Switch". Ref. to SECURITY AND LOCKS>Push Button Ignition Switch>REMOVAL.

INSTALLATION

1. MODEL WITHOUT KEYLESS ACCESS WITH PUSH BUTTON START

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the immobilizer antenna assembly and connect the connector.
2. Install the column cover assembly. Ref. to POWER ASSISTED SYSTEM (POWER STEERING)>Steering Column>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. MODEL WITH KEYLESS ACCESS WITH PUSH BUTTON START

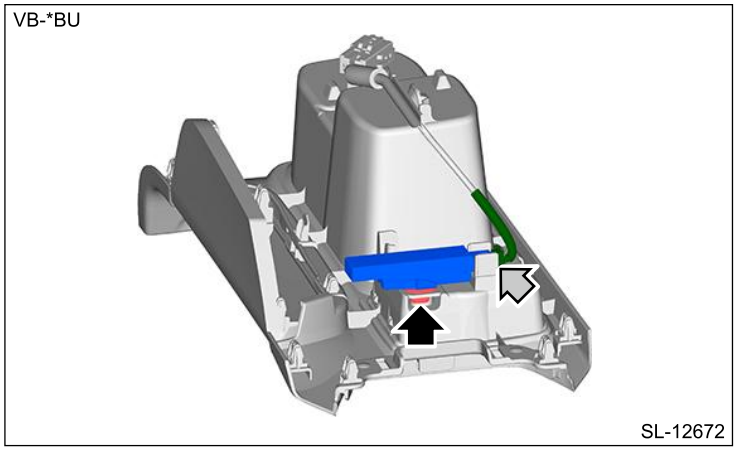
Immobilizer antenna is integrated with the push button ignition switch.
For the operation procedures of the immobilizer antenna, refer to "Push Button Ignition Switch". Ref. to SECURITY AND LOCKS>Push Button Ignition Switch>INSTALLATION.

REMOVAL

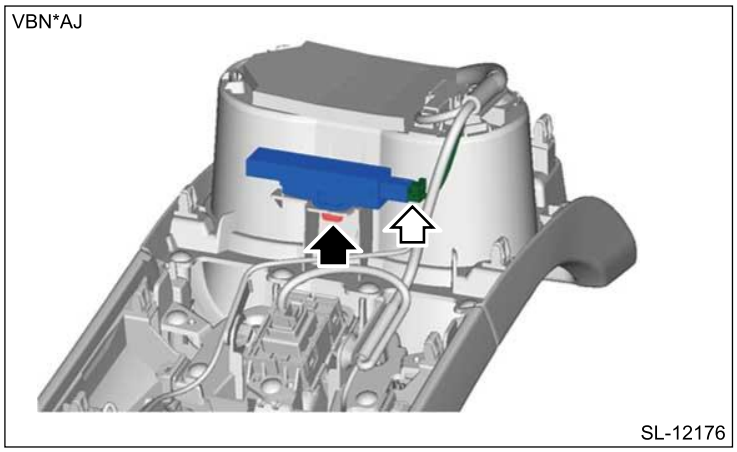
1. FRONT ANTENNA

Note:
Do not detach the antenna except when replacing it. Detaching unnecessarily will lead to insecure attachment of the antenna.

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the cover assembly front. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>REMOVAL.
3. Remove the front antenna assembly interior.
   (1) Disconnect the connector.
   (2) Release the clips, and remove the front antenna assembly interior.
   - MT model



   - CVT model



2. CENTER ANTENNA

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **The center antenna assembly is installed near the Side impact sensor (under the rear center seat) of the airbag system. Be careful not to apply strong impact to the Side impact sensor (under the rear center seat) when working with the center antenna assembly removed.**

Note:

Do not detach the antenna except when replacing it. Detaching unnecessarily will lead to insecure attachment of the antenna.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the rear seat cushion assembly. Ref. to SEATS>Rear Seat>REMOVAL.
3. Remove the center antenna assembly interior.
   (1) Disconnect the connector.
   (2) Remove the screw, and remove the center antenna assembly interior.

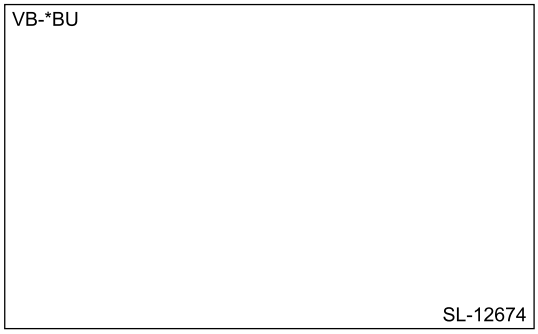
3. REAR ANTENNA

Note:

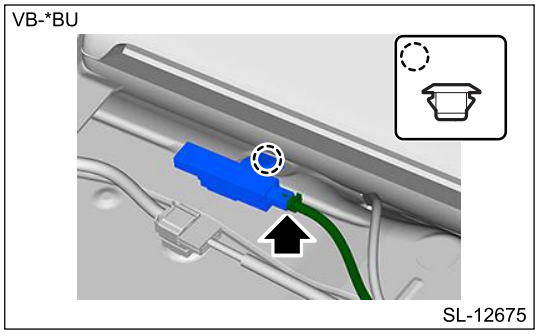
Do not detach the antenna except when replacing it. Detaching unnecessarily will lead to insecure attachment of the antenna.

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Tilt the backrest assembly forward.
3. Remove the mat trunk and spacer center.
4. Remove the spacer rear floor front.
   (1) Release the clips, and turn over the cover COMPL rear backrest.

(2) Release the clips, then detach the spacer rear floor front.



5. Remove the rear antenna assembly interior.
(1) Disconnect the connector.
(2) Release the clips, and remove the rear antenna assembly interior.



SECURITY AND LOCKS > Keyless Access Indoor Antenna

INSTALLATION

1. FRONT ANTENNA

1. Install the front antenna assembly interior and connect the connector.
2. Install the cover assembly front. Ref. to EXTERIOR/INTERIOR TRIM>Console Box>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. CENTER ANTENNA

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **The center antenna assembly is installed near the Side impact sensor (under the rear center seat) of the airbag system. Be careful not to apply strong impact to the Side impact sensor (under the rear center seat) when working with the center antenna assembly removed.**

1. Install the center antenna assembly interior and connect the connector.
2. Install the rear seat cushion assembly. Ref. to SEATS>Rear Seat>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

3. REAR ANTENNA

1. Install the rear antenna assembly interior and connect the connector.
2. Install the spacer rear floor front and cover COMPL rear backrest.
3. Install the spacer center and mat trunk.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SECURITY AND LOCKS > Keyless Access Indoor Antenna

INSPECTION

Check the keyless access interior antenna using the Subaru Select Monitor.

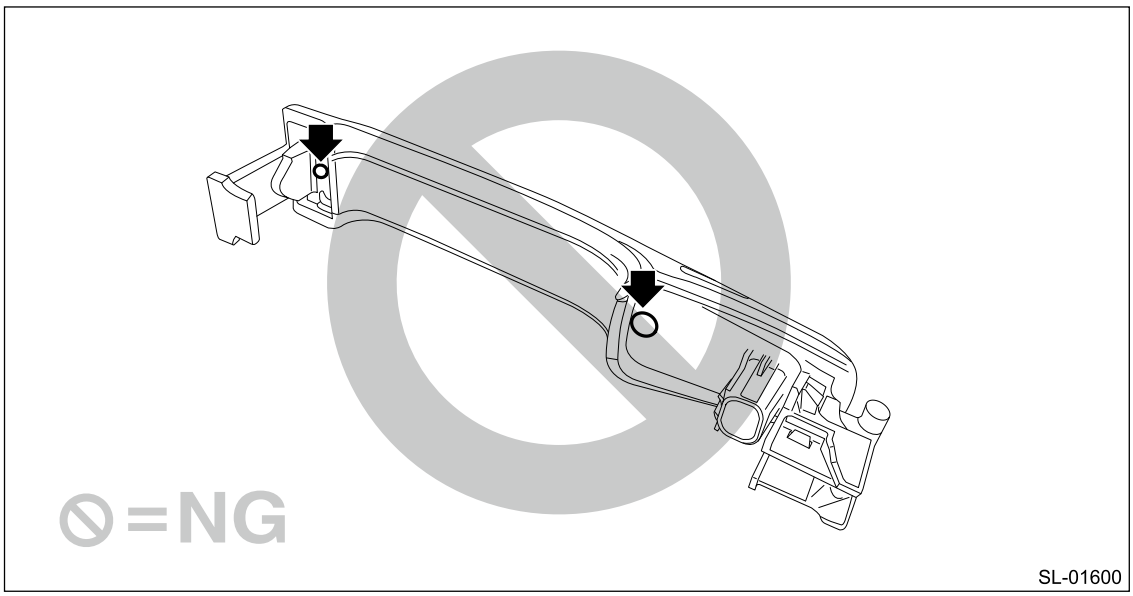
1. Check the setting by performing the keyless access with push button start system check. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>LIST.
2. While carrying the access key, operate the touch sensor of the door handle to check if door lock operates.
3. If the system does not operate normally as the result of inspection, refer to "Diagnostics with Phenomenon" of the "KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)" section. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Diagnostics with Phenomenon>LIST > KEYLESS ACCESS SYSTEM.

REMOVAL

1. FRONT ANTENNA

Caution:

- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **Do not detach the antenna from the outer handle.**
  If replacement is required, replace the handle door outer assembly as a unit.



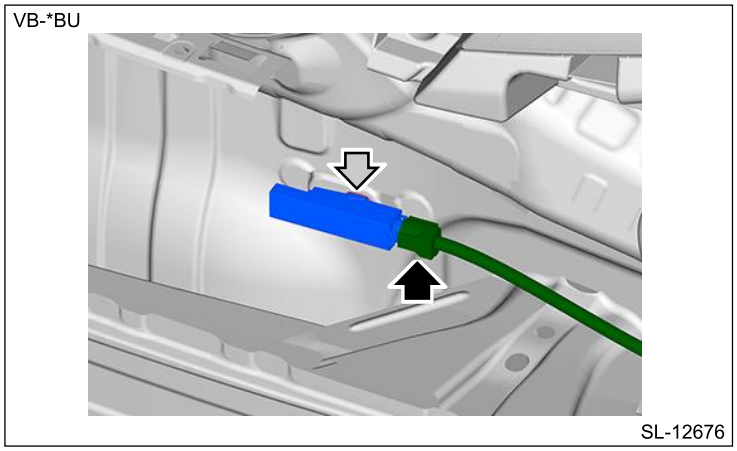
1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>REMOVAL > FRONT DOOR.
3. Remove the sealing cover front door. Ref. to EXTERIOR BODY PANELS>Sealing Cover>REMOVAL > FRONT SEALING COVER.
4. Remove the handle front door outer. Ref. to SECURITY AND LOCKS>Door Outer Handle>REMOVAL.

2. REAR ANTENNA

Note:

Do not detach the antenna except when replacing it. Detaching unnecessarily will lead to insecure attachment of the antenna.

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the light assembly rear combination. Ref. to LIGHTING SYSTEM>Rear Combination Light Assembly>REMOVAL.
3. Remove the bumper face rear. Ref. to EXTERIOR/INTERIOR TRIM>Rear Bumper>REMOVAL.
4. Remove the rear antenna assembly exterior.
   (1) Disconnect the connector.
   (2) Release the clips, and remove the rear antenna assembly exterior.



SECURITY AND LOCKS > Keyless Access Outdoor Antenna

INSTALLATION

1. FRONT ANTENNA

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the handle front door outer. Ref. to SECURITY AND LOCKS>Door Outer Handle>INSTALLATION.
2. Install the sealing cover front door. Ref. to EXTERIOR BODY PANELS>Sealing Cover>INSTALLATION.
3. Install the trim panel front door. Ref. to EXTERIOR/INTERIOR TRIM>Door Trim>INSTALLATION.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

2. REAR ANTENNA

1. Install the rear antenna assembly exterior and connect the connector.
2. Install the bumper face rear. Ref. to EXTERIOR/INTERIOR TRIM>Rear Bumper>INSTALLATION.
3. Install the light assembly rear combination. Ref. to LIGHTING SYSTEM>Rear Combination Light Assembly>INSTALLATION.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SECURITY AND LOCKS > Keyless Access Outdoor Antenna

INSPECTION

Check the keyless access exterior antenna using the Subaru Select Monitor.

1. Check the setting by performing the keyless access with push button start system check. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>LIST.
2. While bringing the access key, operate the trunk opener button to check if the trunk is opened.
3. If the system does not operate normally as the result of inspection, refer to "Diagnostics with Phenomenon" of the "KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)" section. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Diagnostics with Phenomenon>LIST > KEYLESS ACCESS SYSTEM.

SECURITY AND LOCKS > Trunk Opener Button

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the garnish assembly trunk. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Lid Garnish>REMOVAL.
3. Release the claws and remove the trunk opener button.

Note:
When using a flat tip screwdriver, apply protective tape or cloth so as not to cause damage.

SECURITY AND LOCKS > Trunk Opener Button

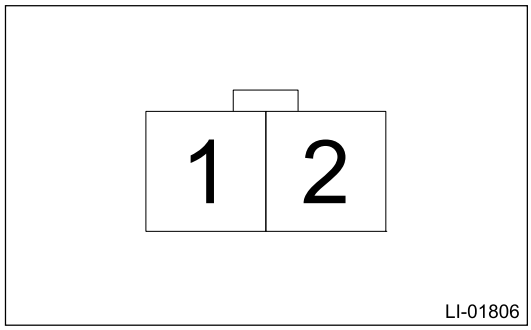
INSTALLATION

1. Install the trunk opener button.
2. Install the garnish assembly trunk. Ref. to EXTERIOR/INTERIOR TRIM>Trunk Lid Garnish>INSTALLATION.
3. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SECURITY AND LOCKS > Trunk Opener Button

INSPECTION

1. Measure the resistance between connector terminals.



Terminal No.	Inspection conditions	Standard
2 — 1	When the switch is not pressed	1 MΩ or more
	When the switch is pressed	Less than 1 Ω

2. Replace the trunk opener button if the inspection result is not within the standard value.

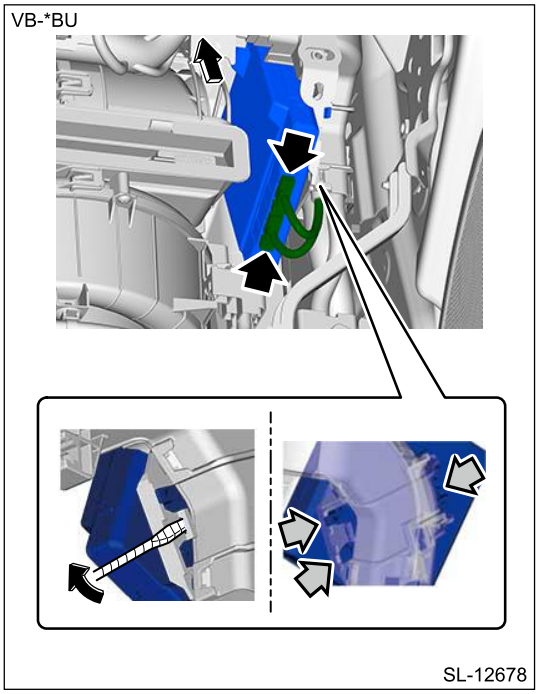
REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the pocket COMPL and the panel instrument passenger. Ref. to EXTERIOR/INTERIOR TRIM>Glove Box>REMOVAL > BACK PANEL.
3. Remove the blower motor relay.

4. Remove the keyless access CM.

Caution:
Be careful to keep water and other foreign materials away from the keyless access CM terminals.

(1) Disconnect the connector.
(2) Release the claws using a flat tip screwdriver or similar tool wrapped with protection tape.
(3) Release the guides and remove the keyless access CM.



INSTALLATION

Caution:
When the control module related to immobilizer has been replaced, be sure to perform the registration of immobilizer system. For detailed operation procedure, refer to "Type H" described in "REGISTRATION MANUAL FOR IMMOBILIZER".

1. Install the keyless access CM and connect the connector.
2. Install the blower motor relay.
3. Install the panel instrument passenger and pocket COMPL. Ref. to EXTERIOR/INTERIOR TRIM>Glove Box>INSTALLATION > BACK PANEL.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

NOTE

Caution:
When the control module related to immobilizer has been replaced, be sure to perform the registration of immobilizer system. For detailed operation procedure, refer to "Type H" described in "REGISTRATION MANUAL FOR IMMOBILIZER".

Note:
Equipped on C0 model with keyless access with push button start.

For removal/installation procedures of ID code box, refer to the "REGISTRATION MANUAL FOR IMMOBILIZER".

SECURITY AND LOCKS > Steering Lock CM

REPLACEMENT

Caution:

- **When the control module related to immobilizer has been replaced, be sure to perform the registration of immobilizer system. For detailed operation procedure, refer to "Type H" described in "REGISTRATION MANUAL FOR IMMOBILIZER".**
- **Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.**
- **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 "VSC(VDC) Centering Mode" of the VDC. Ref. to VEHICLE DYNAMICS CONTROL (VDC)>VDC Control Module and Hydraulic Control Unit (VDCCM&H/U)>ADJUSTMENT > VDC SENSOR MIDPOINT SETTING MODE.**

For operation procedures of the steering lock CM, refer to "Ignition Key Lock". Ref. to SECURITY AND LOCKS>Ignition Key Lock.

SECURITY AND LOCKS > Steering Lock CM

INSPECTION

For inspection of the steering lock CM, refer to "Diagnostics with Phenomenon" of "KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)" section. Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Diagnostics with Phenomenon>LIST > STEERING LOCK SYSTEM.

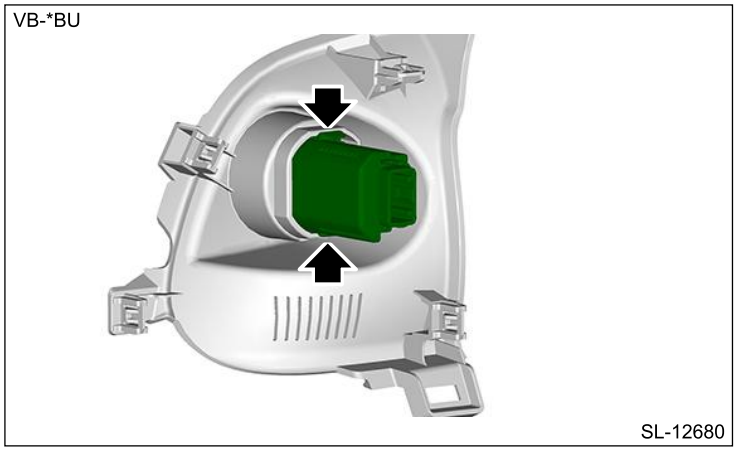
SECURITY AND LOCKS > Push Button Ignition Switch

REMOVAL

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the panel assembly center. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>REMOVAL.
3. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
4. Remove the panel start switch.
   (1) Release the claws, and pull out the panel start switch.

   (2) Disconnect the connectors and remove the panel start switch.
5. Release the claws, and remove the push button start switch.



SECURITY AND LOCKS > Push Button Ignition Switch

INSTALLATION

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Install the push button start switch.
2. Connect the connector and install the panel start switch.
3. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
4. Install the panel assembly center. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>INSTALLATION.
5. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SECURITY AND LOCKS > Push Button Ignition Switch

INSPECTION

1. Check the continuity between the connector terminals.

Terminal No.	Inspection conditions	Specification
4 (COM) — 5 (GND)	Always	Continuity exists
7 (SSW1) — 5 (GND)	Push button ignition switch released → pressed	Continuity exists
2 (SSW2) — 5 (GND)	Push button ignition switch released → pressed	Continuity exists

2. Check the push button start switch operation when battery voltage is applied between the connector terminals.

Caution:
When applying battery voltage, do not mix up the positive (+) side and the negative (−) side.
Incorrect polarity connection may cause LED damage inside the switch.

Terminal No.	Inspection conditions	Specification
11 (SWIL) — 5 (GND)	Connect battery to the terminals	Turns off → Switch indicator lights in red
12 (INDS) — 5 (GND)		Turns off → Switch indicator lights in green
13 (INDW) — 5 (GND)		Turns off → Switch indicator lights in orange

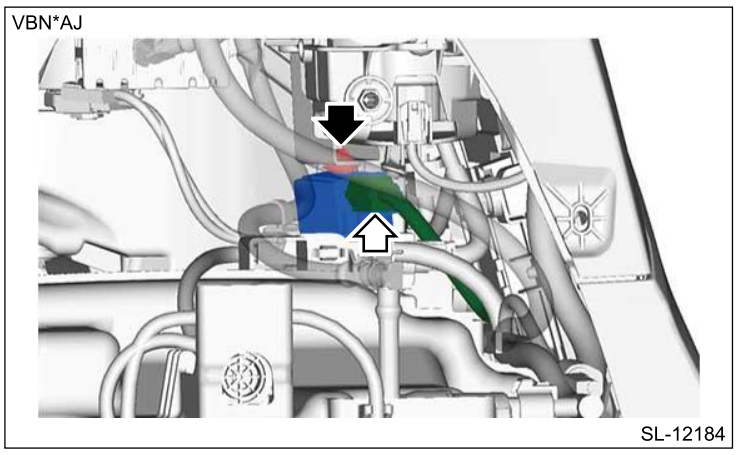
3. Replace the push button start switch if it is found defective.

SECURITY AND LOCKS > Access Buzzer

REMOVAL

1. Disconnect the ground terminal from battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Lift up the vehicle.
3. Remove the screw and clips, and turn over the mud guard front LH.

4. Remove the access buzzer.
   (1) Disconnect the connector.
   (2) Remove the clip and detach the access buzzer.



SECURITY AND LOCKS > Access Buzzer

INSTALLATION

1. Install the access buzzer and connect the connector.
2. Install the mud guard front LH. Ref. to EXTERIOR/INTERIOR TRIM>Mud Guard>INSTALLATION.
3. Lower the vehicle.
4. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

SECURITY AND LOCKS > Access Buzzer

INSPECTION

1. Measure the resistance between connector terminals.

Terminal No.	Inspection conditions	Standard
1 — 2	Always	270 — 330 Ω

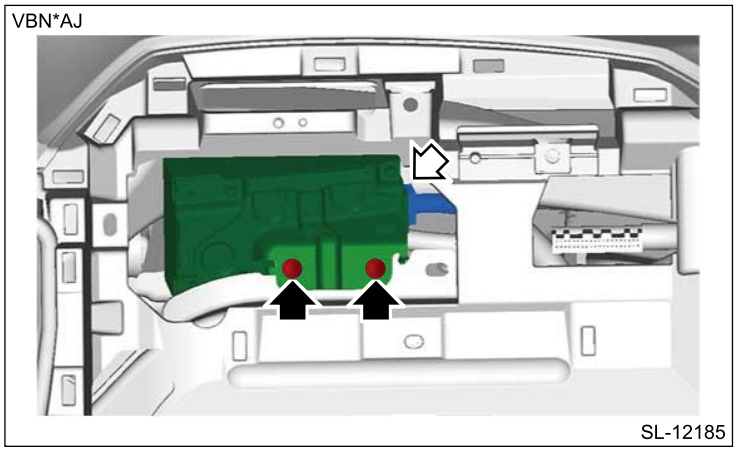
2. Replace the access buzzer if the inspection result is not within the standard value.

SECURITY AND LOCKS > Backup Unit

REMOVAL

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Disconnect the ground terminal from the battery sensor, and wait for at least 60 seconds before starting work. Ref. to REPAIR CONTENTS>NOTE > BATTERY.
2. Remove the panel assembly center. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>REMOVAL.
3. Remove the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>REMOVAL.
4. Remove the combination meter assembly. Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter>REMOVAL.
5. Remove the telematics sub antenna. Ref. to ENTERTAINMENT & MONITORING>Antenna>REMOVAL > TELEMATICS SUB ANTENNA.
6. Remove the backup unit assembly.
   (1) Remove the bolt.
   (2) Disconnect the connector, and remove the backup unit assembly.



SECURITY AND LOCKS > Backup Unit

INSTALLATION

Caution:
Before handling the airbag system components, refer to "CAUTION" of "General Description" in "AIRBAG SYSTEM". Ref. to AIRBAG SYSTEM>General Description>CAUTION.

1. Connect the connector, and install the backup unit assembly.
   Tightening torque:
   7.5 N·m (0.8 kgf-m, 5.5 ft-lb)
2. Install the telematics sub antenna. Ref. to ENTERTAINMENT & MONITORING>Antenna>INSTALLATION > TELEMATICS SUB ANTENNA.
3. Install the combination meter assembly. Ref. to INSTRUMENTATION/DRIVER INFO>Combination Meter>INSTALLATION.

4. Install the cover LWR driver. Ref. to EXTERIOR/INTERIOR TRIM>Instrument Panel Lower Cover>INSTALLATION.
5. Install the panel assembly center. Ref. to EXTERIOR/INTERIOR TRIM>Centor Cluster>INSTALLATION.
6. Connect the ground terminal to battery sensor. Ref. to REPAIR CONTENTS>NOTE > BATTERY.

OPERATION

Disabling/Activating the keyless access system
The following functions are disabled when the keyless access system functions are disabled:

- LOCK function performed by the operation of touch sensor on the door outer handle
- UNLOCK function by holding the door handle
- Trunk lid open function by trunk opener button operation in the trunk lid lock condition
- Keyless access warning function
- Engine starting control using keyless access collation

PROCEDURE

1. STOPPING KEYLESS ACCESS SYSTEM FUNCTION BY DOOR OPEN/CLOSE PROCEDURE

1. Check that the vehicle status is as follows:
   - Ignition switch OFF
   - One window is completely open
   - Keyless access system is activated (or disabled if re-activating)
2. Sit in the driver's seat with the door closed and press the door lock switch to UNLOCK once.
3. Open the driver's door within five seconds.
4. Within 5 seconds, with the driver's door opened, slowly press the door lock switch to UNLOCK twice.
5. Within 10 seconds after finishing step 4., perform the closing → opening operation of the driver's door twice.
6. Within 10 seconds after finishing step 5., with the driver's door opened, slowly press the door lock switch to UNLOCK twice.
7. Within 10 seconds after finishing step 6., perform the closing → opening operation of the driver's door once.
8. Within five seconds after finishing step 7., close the driver's door.
9. The buzzer sounds for two seconds, and the function stops.

Note:

- **Perform the same procedures to re-activate the keyless access system from the disabled condition.**
- **In step 4. and step 6., press the door lock switch completely. The function may not work properly if the switch is pressed shortly.**

2. STOPPING KEYLESS ACCESS SYSTEM FUNCTION BY USING ACCESS KEY

1. Open the driver's door, and then push the door lock knob forward (LOCK direction).
2. Press the lock button of access key and trunk button simultaneously for five seconds or more.
3. The buzzer sounds for two seconds, and the function stops.

Note:

- **For stopping the keyless access system function by using access key, it is necessary to ask the customer to register the secret code of the secret code keyless entry. (Refer to owner's manual for details.)**
- **Perform the same procedures to re-activate the keyless access system from the disabled condition.**

INSPECTION

1. KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM

For the diagnostics with phenomenon for keyless access with push button start system, refer to “Diagnostics with Phenomenon” of “KEYLESS ACCESS WITH PUSH BUTTON START SYSTEM (DIAGNOSTICS)” section.
Ref. to KEYLESS ACCESS WITH PUSH BUTTON START(DIAGNOSTICS)>Diagnostics with Phenomenon.