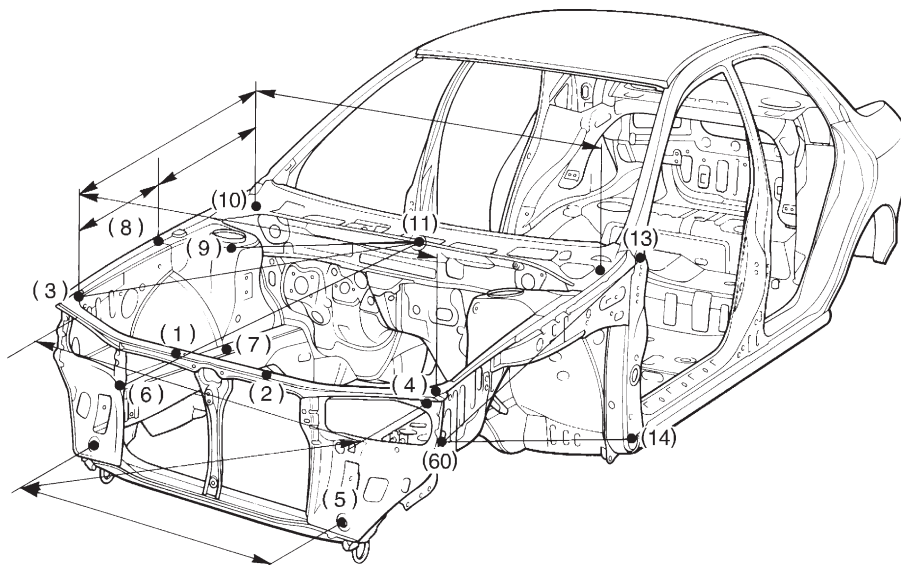


## 3. Datum Dimensions S906337

### A: MEASUREMENT S906337A14

#### 1. FRONT STRUCTURE S906337A1401



H5M0890A

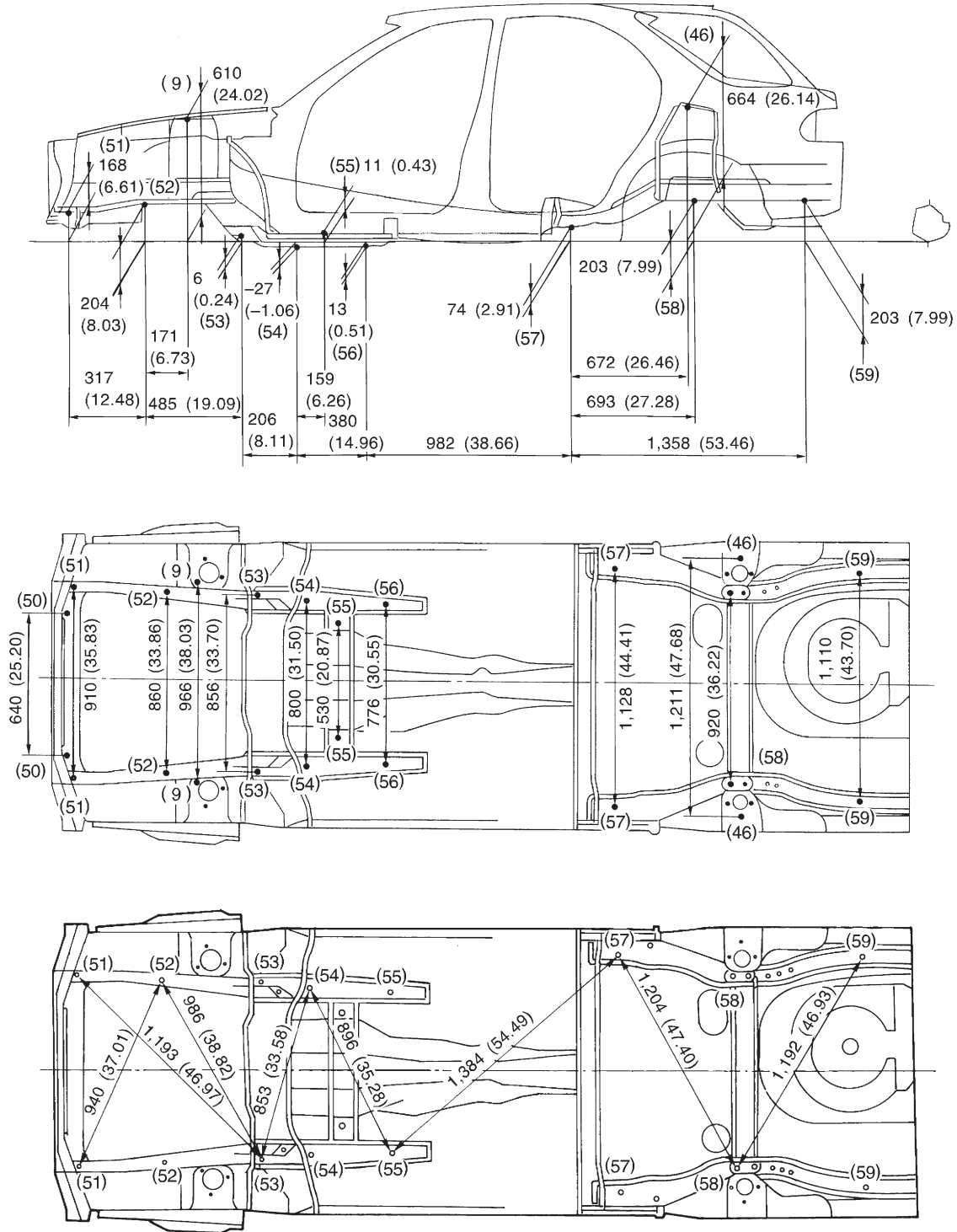
| Unit: mm (in)   |             |                  |               |
|-----------------|-------------|------------------|---------------|
| Point to point  | Dimension   | Point to point   | Dimension     |
| (11) to (9) R   | 525 (20.67) | (10) R to (10) L | 1,382 (54.41) |
| (11) to (9) L   | 525 (20.67) | (3) R to (3) L   | 1,336 (52.60) |
| (11) to (6) R   | 988 (38.90) | (5) R to (5) L   | 942 (37.09)   |
| (11) to (6) L   | 988 (38.90) | (5) R to (4) R   | 1,174 (46.22) |
| (11) to (3) R   | 990 (38.98) | (5) L to (4) L   | 1,174 (46.22) |
| (11) to (3) L   | 990 (38.98) | (4) R to (4) L   | 1,269 (49.96) |
| (10) R to (3) R | 829 (32.64) | (60) R to (13) R | 1,113 (43.82) |
| (10) L to (3) L | 829 (32.64) | (60) L to (13) L | 1,113 (43.82) |
| (10) R to (8) R | 567 (22.32) | (60) R to (14) R | 1,076 (42.36) |
| (10) L to (8) L | 567 (22.32) | (60) L to (14) L | 1,076 (42.36) |
| (8) R to (3) R  | 264 (10.39) | (1) to (11)      | 882 (34.72)   |
| (8) L to (3) L  | 264 (10.39) | (2) to (11)      | 913 (35.94)   |

# DATUM DIMENSIONS

Body Structure

## 2. CENTER STRUCTURE S906337A1402

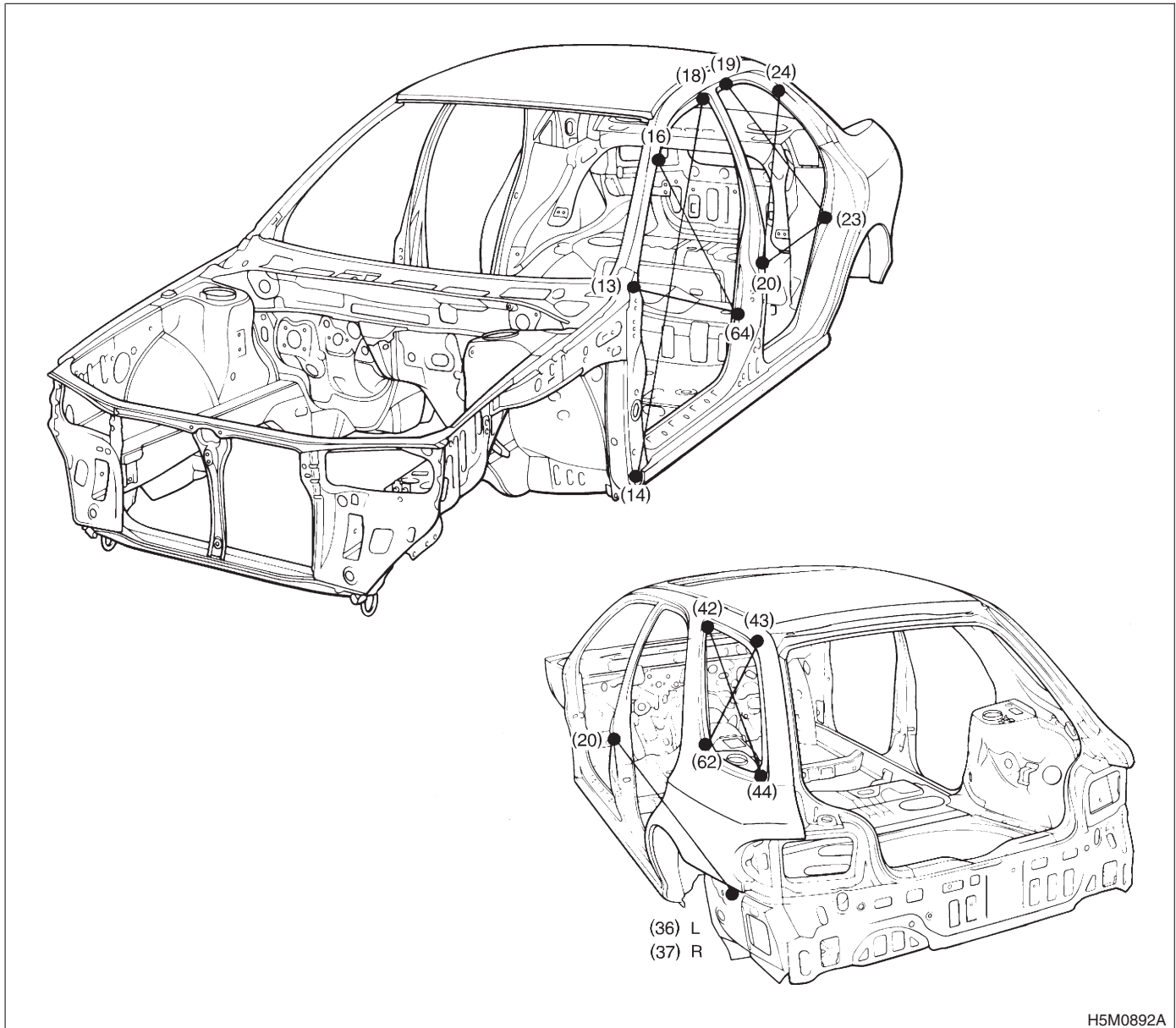
Unit: mm (in)



H5M0891A

## 3. DOORS AND REAR QUARTER S906337A1406

### ● Sedan and wagon



H5M0892A

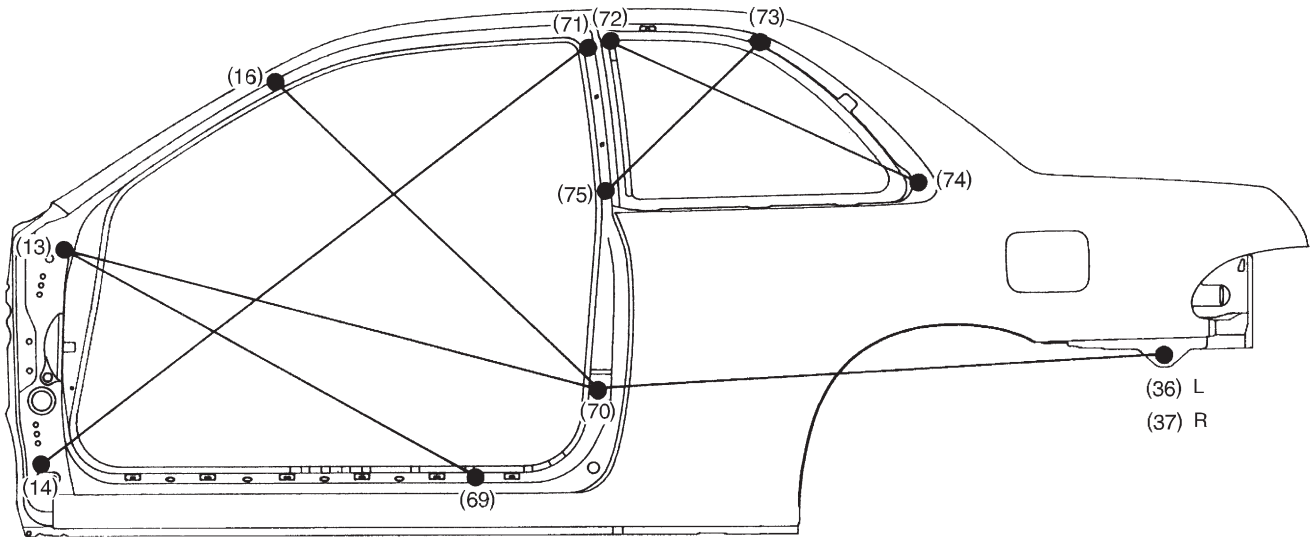
| Unit: mm (in)  |               |                   |               |
|----------------|---------------|-------------------|---------------|
| Point to point | Dimension     | Point to point    | Dimension     |
| (14) to (18)   | 1,495 (58.86) | (19) to (23)      | 912 (35.91)   |
| (13) to (64)   | 947 (37.28)   | (20) to (36) L*   | 1,462 (57.56) |
| (16) to (64)   | 976 (38.43)   | (20) R to (37) R* | 1,481 (58.31) |
| (20) to (23)   | 803 (31.61)   | (62) to (43) *    | 377 (14.84)   |
| (20) to (24)   | 829 (32.64)   | (42) to (44) *    | 847 (33.35)   |

\*: Wagon only

# DATUM DIMENSIONS

Body Structure

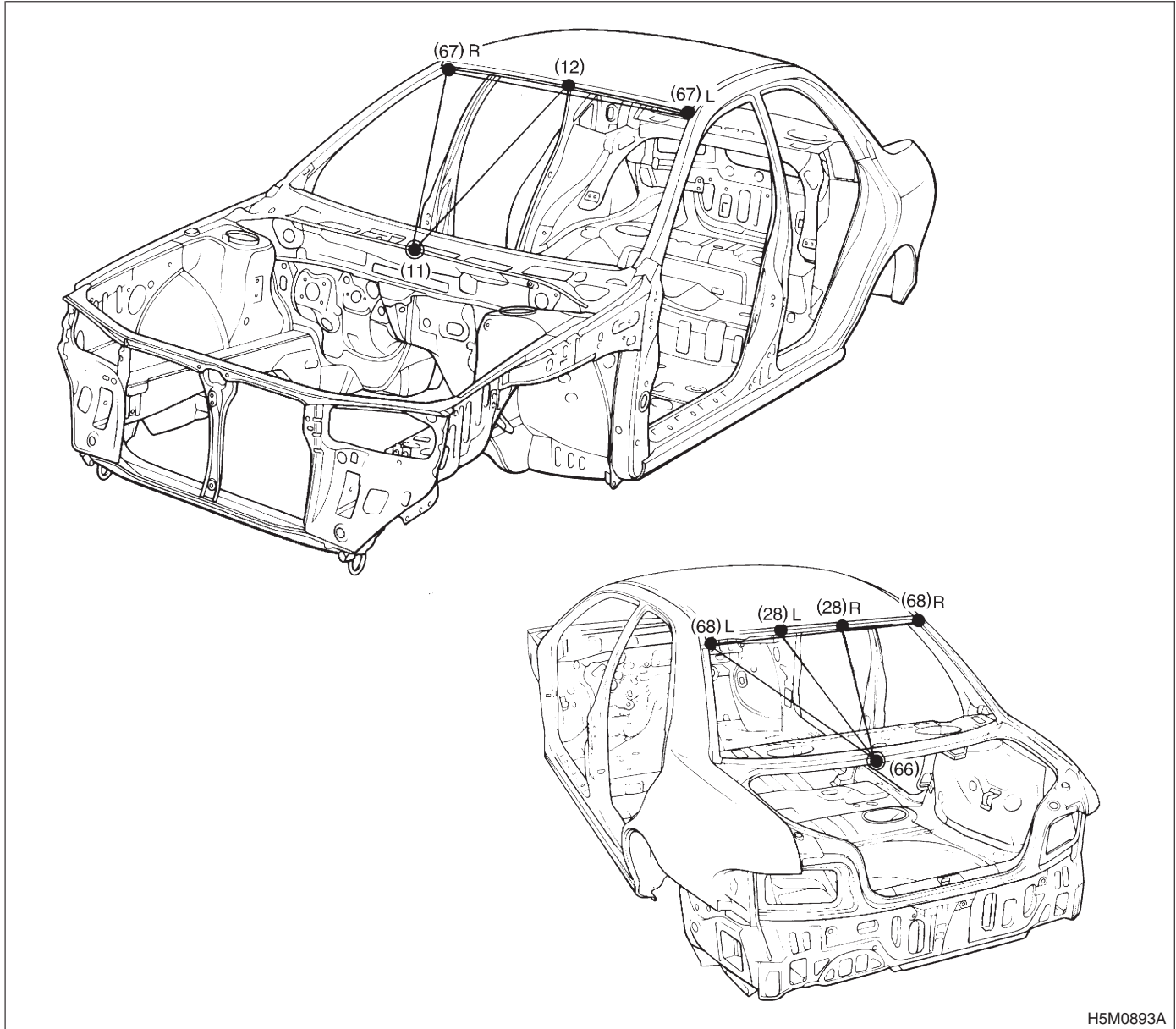
## ● Coupe



H5M0713B

| Unit: mm (in)  |               |                |               |
|----------------|---------------|----------------|---------------|
| Point to point | Dimension     | Point to point | Dimension     |
| (14) to (71)   | 1,576 (62.05) | (72) to (74)   | 778 (30.63)   |
| (13) to (70)   | 1,251 (49.25) | (73) to (75)   | 512 (20.16)   |
| (16) to (70)   | 997 (39.25)   | (70) to (36) L | 1,295 (50.98) |
| (13) to (69)   | 1,063 (41.85) | (70) to (37) R | 1,243 (48.94) |

## 4. FRONT WINDSHIELD AND REAR WINDOW S906337A1407



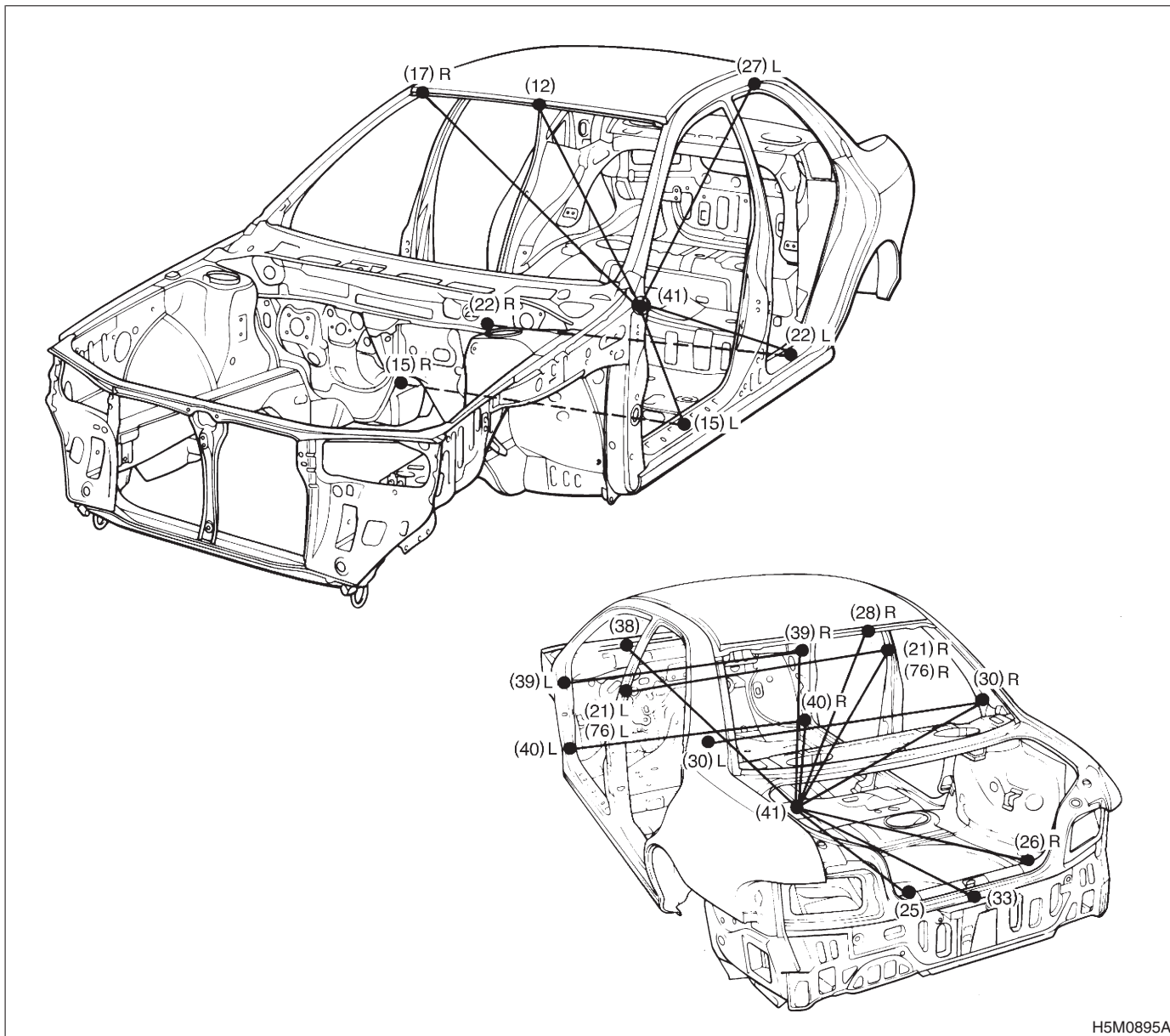
H5M0893A

| Unit: mm (in)    |               |                  |               |
|------------------|---------------|------------------|---------------|
| Point to point   | Dimension     | Point to point   | Dimension     |
| (11) to (12)     | 989 (38.94)   | (66) to (28) L   | 714 (28.11)   |
| (67) R to (67) L | 1,012 (39.84) | (66) to (68) R   | 856 (33.70)   |
| (11) to (67) R   | 1,116 (43.94) | (66) to (68) L   | 856 (33.70)   |
| (11) to (67) L   | 1,116 (43.94) | (68) R to (68) L | 1,012 (39.84) |
| (66) to (28) R   | 714 (28.11)   |                  |               |

# DATUM DIMENSIONS

Body Structure

## 5. COMPARTMENT S906337A1404



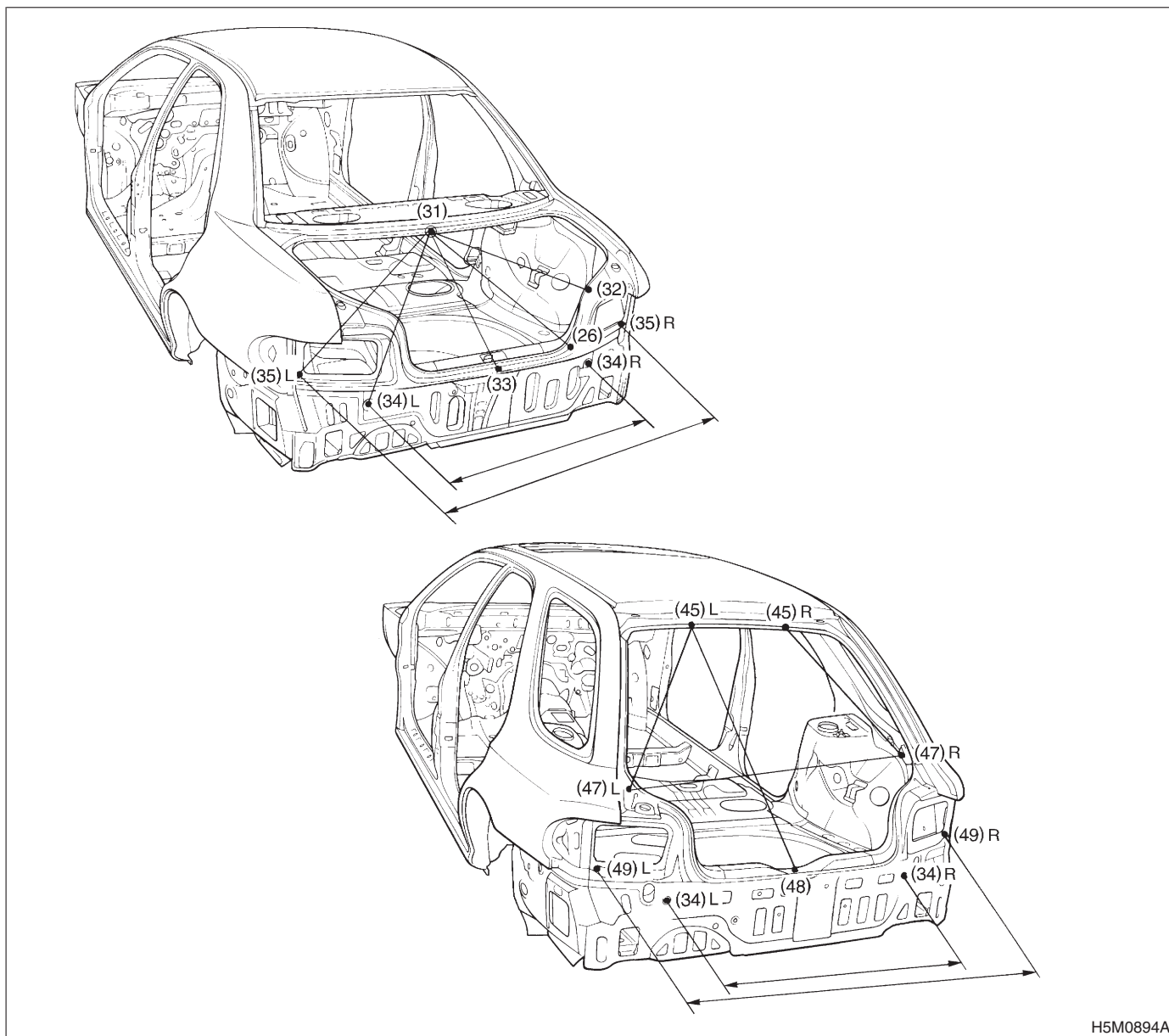
H5M0895A

| Unit: mm (in)    |               |  |                 |               |                   |
|------------------|---------------|--|-----------------|---------------|-------------------|
| Point to point   | Dimension     |  | Point to point  | Dimension     | Point to point    |
| (30) R to (30) L | 1,197 (47.13) |  | (41) to (15) R  | 1,140 (44.88) | (41) to (30) L*   |
| (21) R to (21) L | 1,061 (41.77) |  | (41) to (15) L  | 1,140 (44.88) | (41) to (28) R*   |
| (15) R to (15) L | 1,453 (57.20) |  | (41) to (22) R  | 733 (28.86)   | (41) to (28) L*   |
| (22) R to (22) L | 1,453 (57.20) |  | (41) to (22) L  | 733 (28.86)   | (41) to (21) R    |
| (39) R to (39) L | 1,388 (54.65) |  | (41) to (12)    | 1,156 (45.51) | (41) to (21) L    |
| (40) R to (40) L | 1,401 (55.16) |  | (41) to (27) R  | 1,085 (42.72) | (41) to (17) R    |
| (41) to (38)     | 1,527 (60.12) |  | (41) to (27) L  | 1,085 (42.72) | (41) to (17) L    |
| (41) to (39) R   | 1,524 (60.00) |  | (41) to (26) R  | 1,568 (61.73) | (41) to (33) *    |
| (41) to (39) L   | 1,524 (60.00) |  | (41) to (26) L  | 1,568 (61.73) | (76) R to (76) L☆ |
| (41) to (40) R   | 1,756 (69.13) |  | (41) to (25)    | 1,184 (46.61) |                   |
| (41) to (40) L   | 1,756 (69.13) |  | (41) to (30) R* | 1,168 (45.98) |                   |

\*: Sedan only

☆ : Coupe only

## 6. TRUNK LID AND REAR GATE S906337A1405



H5M0894A

| Unit: mm (in)    |             |                  |               |
|------------------|-------------|------------------|---------------|
| Point to point   | Dimension   | Point to point   | Dimension     |
| (31) to (32) R   | 575 (22.64) | (35) R to (35) L | 1,364 (53.70) |
| (31) to (32) L   | 575 (22.64) | (45) R to (48)   | 988 (38.90)   |
| (31) to (26) R   | 812 (31.97) | (45) L to (48)   | 988 (38.90)   |
| (31) to (26) L   | 812 (31.97) | (45) R to (47) R | 926 (36.46)   |
| (31) to (33)     | 522 (20.55) | (45) L to (47) L | 926 (36.46)   |
| (31) to (35) R   | 794 (31.26) | (47) R to (47) L | 1,043 (41.06) |
| (31) to (35) L   | 794 (31.26) | (49) R to (49) L | 1,355 (52.56) |
| (34) R to (34) L | 890 (35.04) | (34) R to (34) L | 890 (35.04)   |



## 7. LUGGAGE ROOM

Unit: mm (in)



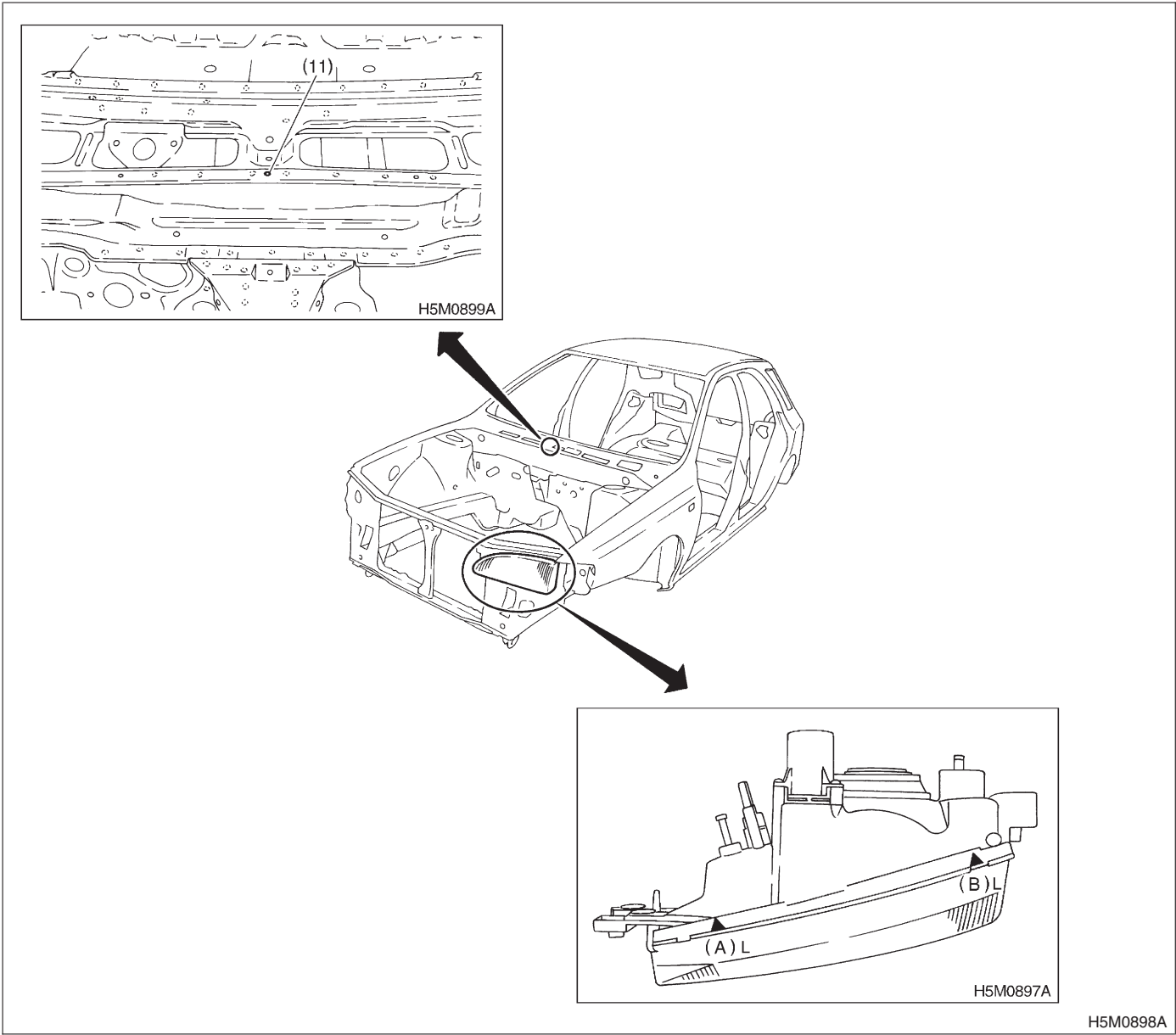
4. Datum Points and Dimensions Concerning On-Board Aiming Adjustment

S906577

A: LOCATION

S906577A13

If headlight aiming is misaligned due to damaged body panel, repair headlight mating surface using body and headlight datum points as a guide.



| Unit: mm (in)  |             |                |               |
|----------------|-------------|----------------|---------------|
| Point to point | Dimension   | Point to point | Dimension     |
| (11) to (A) L  | 993 (39.09) | (11) to (B) L  | 1,048 (41.26) |
| (11) to (A) R  | 993 (39.09) | (11) to (B) R  | 1,048 (41.26) |

**DATUM   POINTS   AND   DIMENSIONS   CONCERNING   ON-BOARD   AIMING  
ADJUSTMENT**

Body Structure

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**MEMO:**

# DATUM POINTS

Body Structure

## 2. Datum Points S906540

### A: LOCATION S906540A13

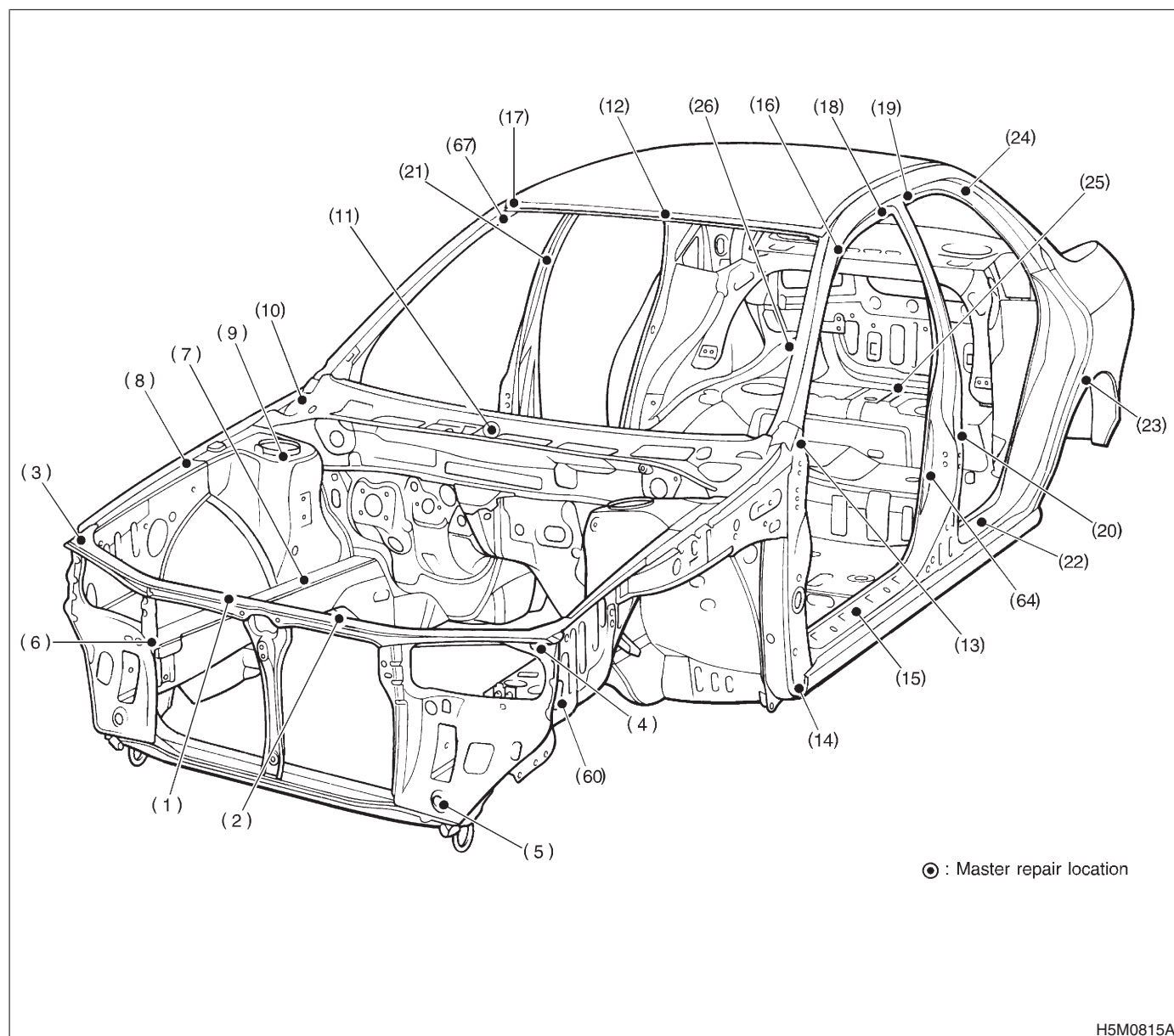
Various master repair locations are established as datum points used during body repairs. In addition, guide holes, locators and indents are provided to facilitate panel replacement and achieve alignment accuracy.

NOTE:

Left and right datum points are all symmetrical to each other.

### 1. ENGINE COMPARTMENT AND ROOM S906540A1304

#### ● Sedan and wagon



# DATUM POINTS

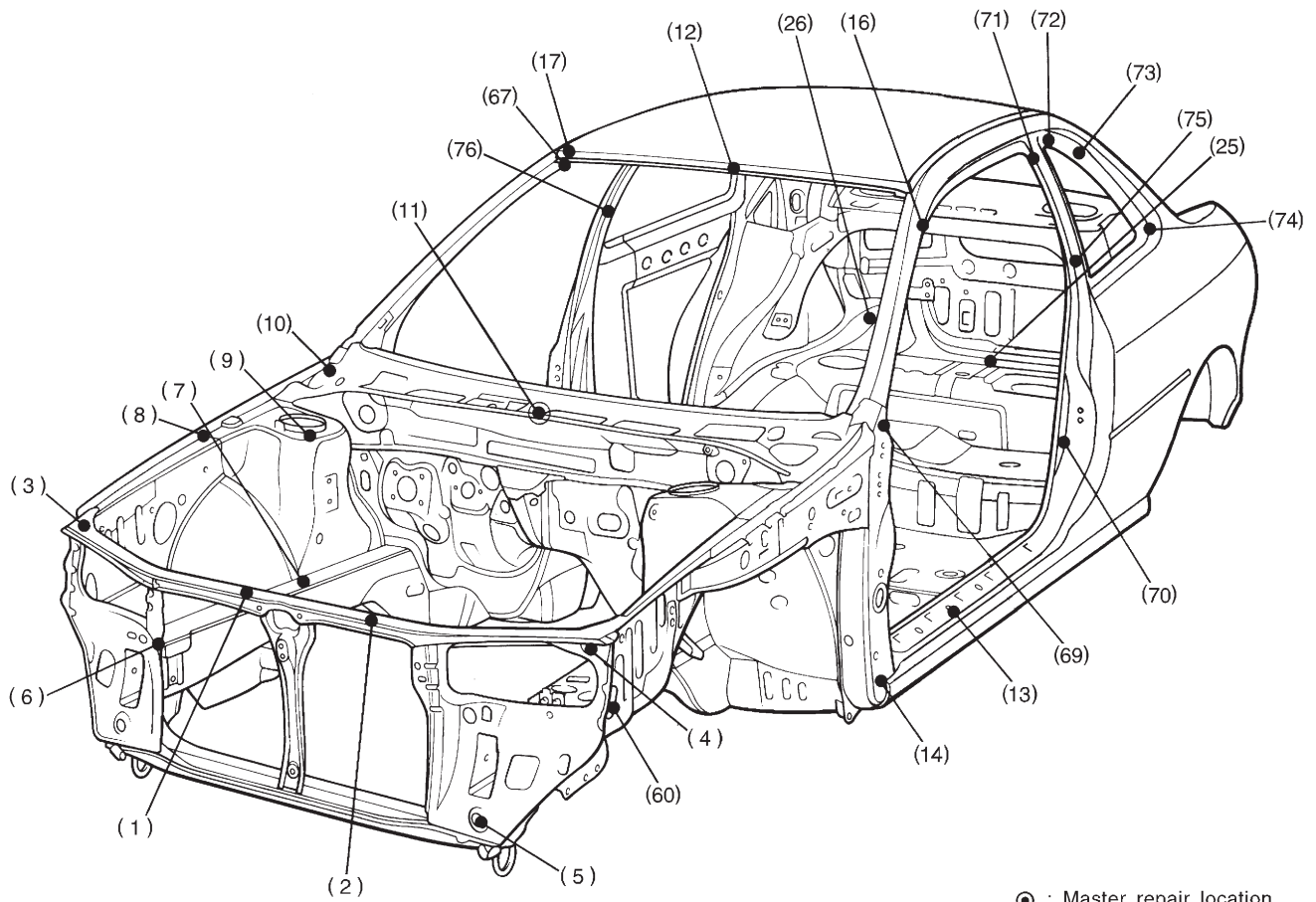
Body Structure

- |                                                                                 |                                                                                   |                                                                                                      |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| (1) Radiator panel (UPR) repair bolt hole M8 (Right)                            | (10) Hood hinge attaching bolt hole M8 (Symmetrical)                              | (20) Center pillar gauge hole 10 mm (0.39 in) dia. (Symmetrical)                                     |
| (2) Radiator panel (UPR) repair bolt hole M8 (Left)                             | (11) Cowl panel mounting hole 5 mm (0.20 in) dia. (Located in center of vehicle.) | (21) Belt anchor attaching bolt hole (Symmetrical)                                                   |
| (3) Fender attaching bolt hole M6 (Symmetrical)                                 | (12) Front rail (Inner) mirror attaching bolt hole 8 mm (0.31 in) dia.            | (22) Wax coat hole, 20 mm (0.79 in) dia. (Symmetrical)                                               |
| (4) Headlight attaching bolt hole M6 (Symmetrical)                              | (13) Fender attaching bolt hole M6 (Symmetrical)                                  | (23) Rear door switch attaching hole 20 mm (0.79 in) dia. (Symmetrical)                              |
| (5) Radiator panel side gauge hole 24 mm (0.94 in) dia. (Symmetrical)           | (14) Front pillar gauge hole 20 mm (0.79 in) dia. (Symmetrical)                   | (24) Retainer attaching square hole 7 mm (0.28 in) (Symmetrical)                                     |
| (6) Front bumper mounting hole 14 x 17 mm (0.55 x 0.67 in) dia. (Symmetrical)   | (15) Wax coat hole, 20 mm (0.79 in) dia. (Symmetrical)                            | (25) Spare tire attaching bolt hole M8                                                               |
| (7) Front crossmember attaching bolt hole 12.4 mm (0.488 in) dia. (Symmetrical) | (16) Retainer attaching square hole 7 mm (0.28 in) (Symmetrical)                  | (26) Air draw hole 7 mm (0.28 in) dia. (Symmetrical)                                                 |
| (8) Fender attaching bolt hole M6 (Symmetrical)                                 | (17) Sun visor attaching hole 20 mm (0.79 in) dia. (Symmetrical)                  | (60) Fender attaching bolt hole M6 (Symmetrical)                                                     |
| (9) Front strut mounting hole 10 mm (0.39 in) dia. (Symmetrical)                | (18) Retainer attaching square hole 7 mm (0.28 in) (Symmetrical)                  | (64) Door switch attaching hole 20 mm (0.79 in) dia. (Symmetrical)                                   |
|                                                                                 | (19) Retainer attaching square hole 7 mm (0.28 in) (Symmetrical)                  | (67) Front glass attaching hole Right 6.5 mm (0.256 in) dia. Left 6.5 x 10 mm (0.256 x 0.39 in) dia. |

# DATUM POINTS

Body Structure

## ● Coupe



⊙ : Master repair location

H5M0712B

# DATUM POINTS

## Body Structure

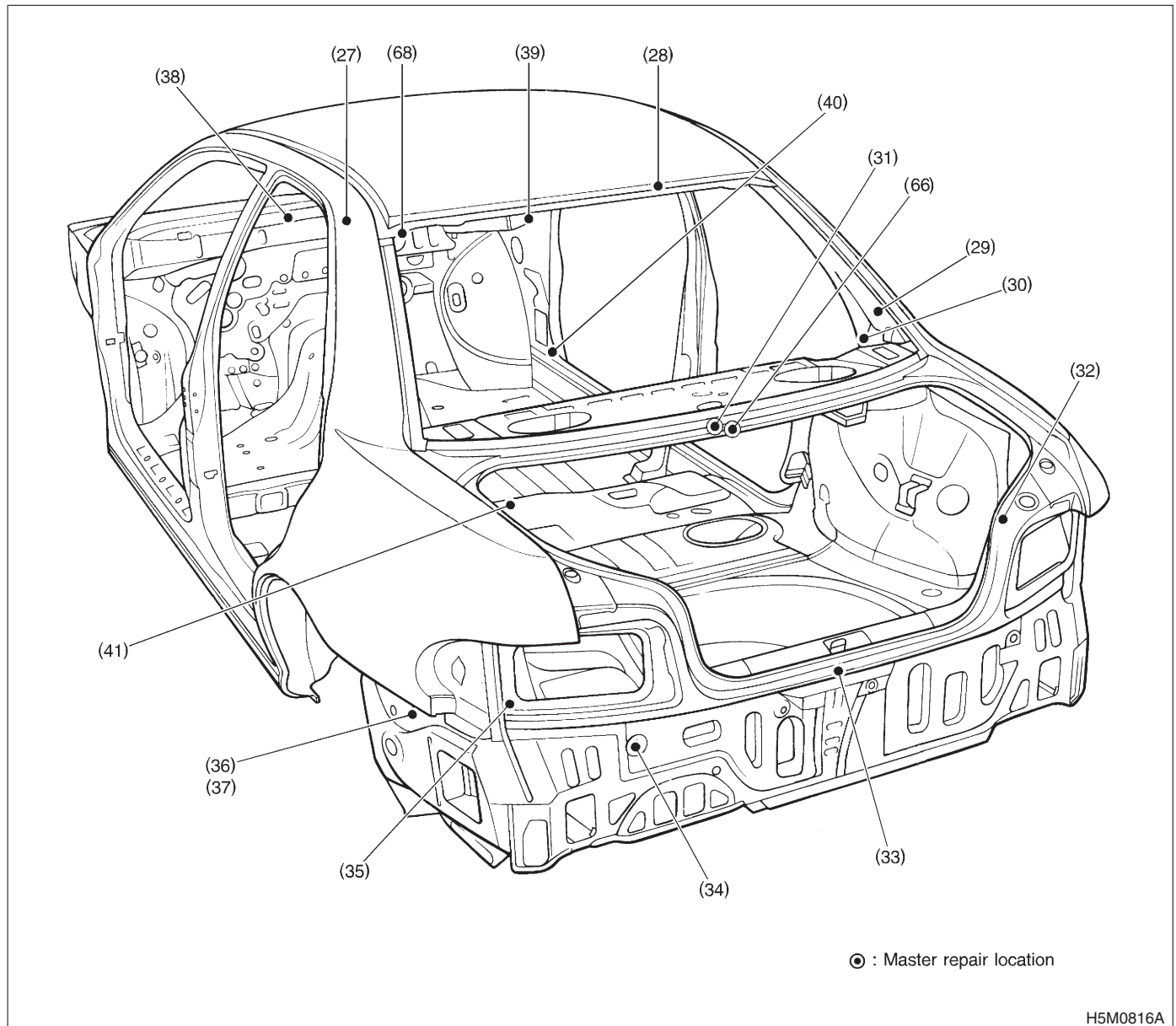
- |                                                                                 |                                                                                                      |                                                                                        |
|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| (1) Radiator panel (UPR) repair bolt hole M8 (Right)                            | (11) Cowl panel mounting hole 5 mm (0.20 in) dia. (Located in center of vehicle.)                    | (70) Door switch attaching hole 13.5 mm (0.531 in) dia. (Symmetrical)                  |
| (2) Radiator panel (UPR) repair bolt hole M8 (Left)                             | (12) Front rail (Inner) mirror attaching bolt hole 8 mm (0.31 in) dia.                               | (71) Retainer attaching square hole 8 mm (0.31 in). (Symmetrical)                      |
| (3) Fender attaching bolt hole M6 (Symmetrical)                                 | (13) Fender attaching bolt hole M6 (Symmetrical)                                                     | (72) Rear quarter glass attaching hole 8 mm (0.31 in) dia. (Symmetrical)               |
| (4) Headlight attaching bolt hole M6 (Symmetrical)                              | (14) Front pillar gauge hole 20 mm (0.79 in) dia. (Symmetrical)                                      | (73) Rear quarter glass attaching hole 7 mm (0.28 in) dia. (Symmetrical)               |
| (5) Radiator panel side gauge hole 24 mm (0.94 in) dia. (Symmetrical)           | (16) Retainer attaching square hole 7 mm (0.28 in) (Symmetrical)                                     | (74) Rear quarter glass attaching hole 8 x 5.5 mm (0.31 x 0.217 in) dia. (Symmetrical) |
| (6) Front bumper mounting hole 14 x 17 mm (0.55 x 0.67 in) dia. (Symmetrical)   | (17) Sun visor attaching hole 20 mm (0.79 in) dia. (Symmetrical)                                     | (75) Retainer attaching square hole 8 mm (0.31 in). (Symmetrical)                      |
| (7) Front crossmember attaching bolt hole 12.4 mm (0.488 in) dia. (Symmetrical) | (25) Spare tire attaching bolt hole M8                                                               | (76) Seat belt anchor attaching bolt hole 16 mm (0.63 in) dia. (Symmetrical)           |
| (8) Fender attaching bolt hole M6 (Symmetrical)                                 | (26) Air draw hole 7 mm (0.28 in) dia. (Symmetrical)                                                 |                                                                                        |
| (9) Front strut mounting hole 10 mm (0.39 in) dia. (Symmetrical)                | (60) Fender attaching bolt hole M6 (Symmetrical)                                                     |                                                                                        |
| (10) Hood hinge attaching bolt hole M8 (Symmetrical)                            | (67) Front glass attaching hole Right 6.5 mm (0.256 in) dia. Left 6.5 x 10 mm (0.256 x 0.39 in) dia. |                                                                                        |
|                                                                                 | (69) Wax coat hole 20 mm (0.79 in) dia. (Symmetrical)                                                |                                                                                        |

# DATUM POINTS

Body Structure

## 2. LUGGAGE COMPARTMENT AND ROOM S906540A1305

### ● Sedan and coupe





# DATUM POINTS

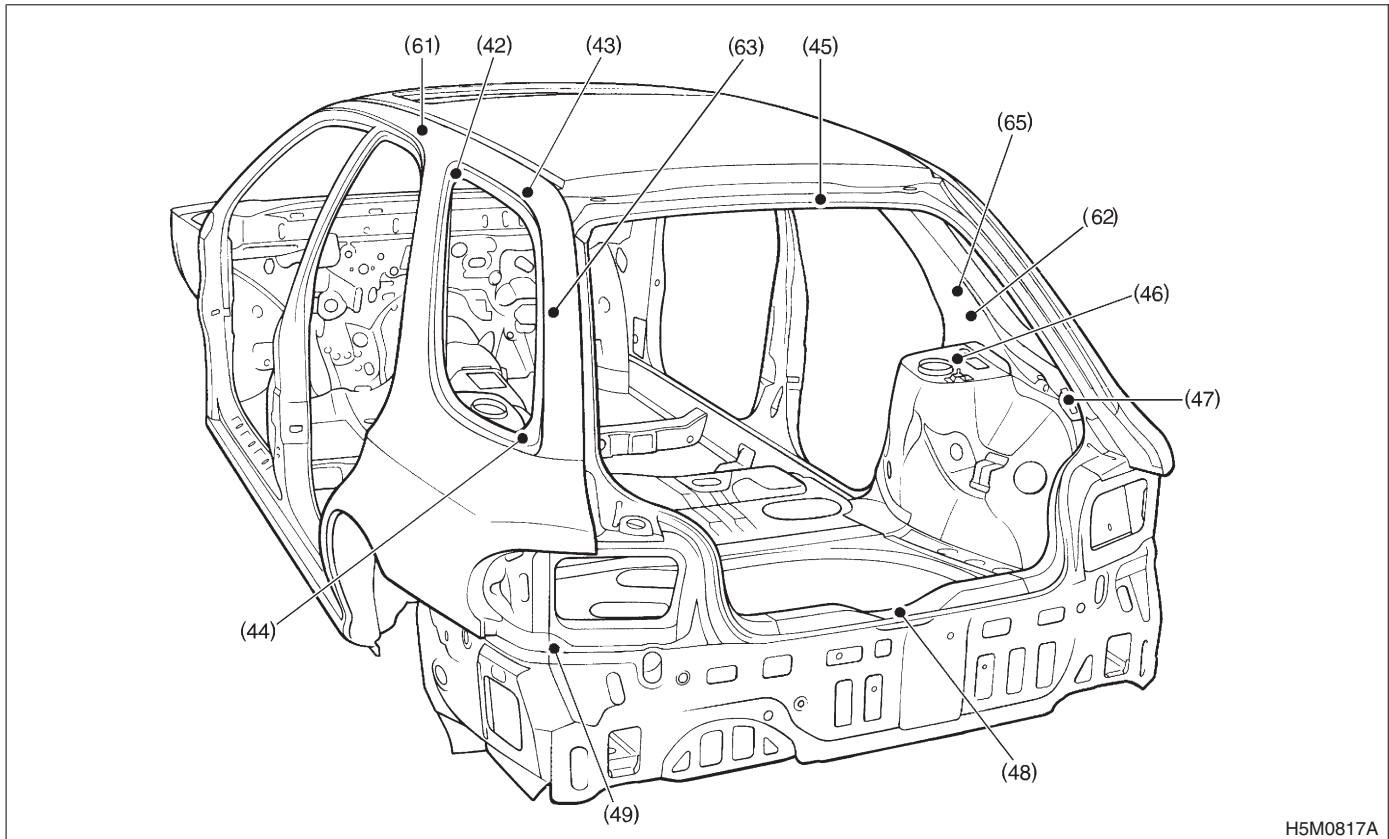
Body Structure

- |                                                                                    |                                                                                    |                                                                                                           |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| (27) Rear pillar (Inner) gauge hole 8 mm (0.31 in) dia. (Symmetrical)              | (33) Rear skirt (UPR) cutout (Repair locator)                                      | (39) Steering support beam attaching bolt hole M8 (Symmetrical)                                           |
| (28) Rear roof trim attaching hole 8 mm (0.31 in) dia. (Symmetrical)               | (34) Rear skirt gauge hole 20 mm (0.79 in) dia. (Symmetrical)                      | (40) Front pillar (Inner) gauge hole 10 mm (0.39 in) dia. (Symmetrical)                                   |
| (29) Rear quarter trim attaching hole 8 mm (0.31 in) dia. (Symmetrical)            | (35) Rear combination light mounting hole 9 mm (0.35 in) dia. (Symmetrical)        | (41) Floor mat attaching clip hole 8 mm (0.31 in) dia. (Symmetrical)                                      |
| (30) Seat belt anchor attaching bolt hole (Symmetrical)                            | (36) Rear quarter bumper side gauge hole 20 mm (0.79 in) dia. (Left)               | (66) Rear panel (Center) repair locator (Located in center of vehicle.)                                   |
| (31) Reinforcement (Rear panel rear) repair locator (Located in center of vehicle) | (37) Rear quarter bumper side gauge hole 20 mm (0.79 in) dia. (Right)              | (68) Rear glass attaching hole (Right): 6.5 mm (0.256 in) dia. (Left): 6.5 x 10 mm (0.256 x 0.39 in) dia. |
| (32) Rear corner patch at flange (Symmetrical)                                     | (38) Instrument panel attaching square hole 22 x 34.5 mm (0.87 x 1.358 in) (Right) |                                                                                                           |

# DATUM POINTS

## Body Structure

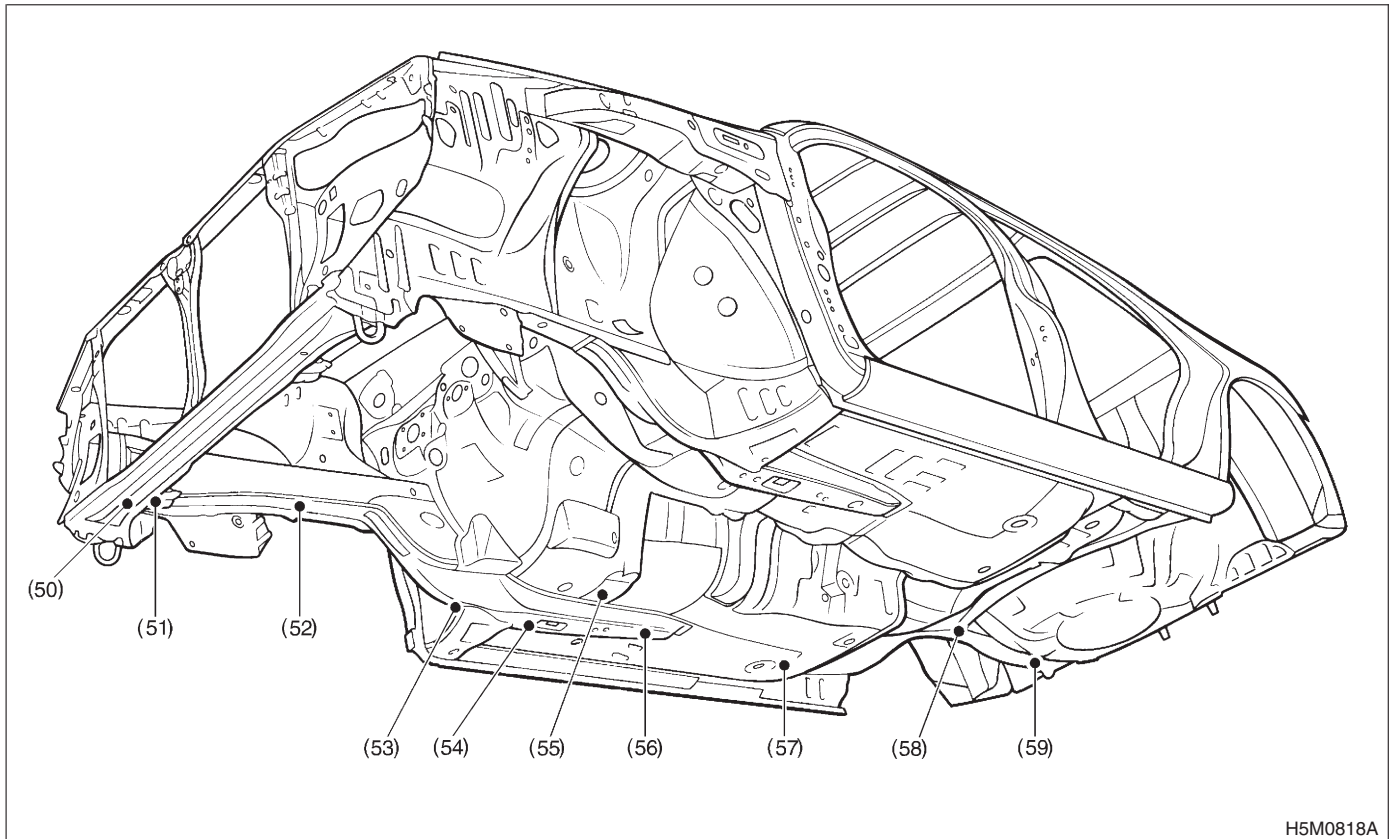
### ● Wagon



H5M0817A

- |                                                                                      |                                                                              |                                                                                 |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| (42) Rear quarter glass attaching hole 8 mm (0.31 in) dia. (Symmetrical)             | (46) Rear strut mounting hole 10 mm (0.39 in) dia. (Symmetrical)             | (61) Side rail (Inner) gauge hole 8 mm (0.31 in) dia. (Symmetrical)             |
| (43) Roof rail attaching hole 10 mm (0.39 in) dia. (Symmetrical)                     | (47) Rear gate stay attaching bolt hole M8 (Symmetrical)                     | (62) Rear quarter trim attaching hole 8 mm (0.31 in) dia. (Symmetrical)         |
| (44) Rear quarter glass attaching hole 8 x 15 mm (0.31 x 0.59 in) dia. (Symmetrical) | (48) Child seat anchor attaching bolt hole                                   | (63) Rear quarter harness attaching clip hole 7 mm (0.28 in) dia. (Symmetrical) |
| (45) Rear roof trim attaching hole 8 mm (0.31 in) dia. (Symmetrical)                 | (49) Rear combination light mounting hole 10 mm (0.39 in) dia. (Symmetrical) | (65) Seat belt anchor attaching bolt hole (Symmetrical)                         |

## 3. UNDER BODY S906540A1306



H5M0818A

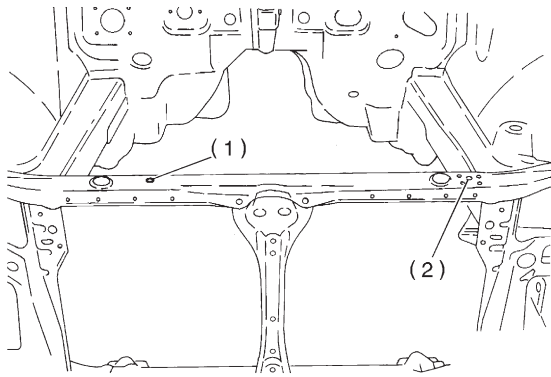
- |                                                                               |                                                               |                                                                    |
|-------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------|
| (50) Radiator panel (LWR) frame gauge hole 15 mm (0.59 in) dia. (Symmetrical) | (53) Front suspension attaching bolt hole M14                 | (57) Rear differential attaching bolt hole M12 (Symmetrical)       |
| (51) Front side frame gauge hole 20 mm (0.79 in) dia. (Symmetrical)           | (54) Side frame gauge hole 20 mm (0.79 in) dia. (Symmetrical) | (58) Rear suspension attaching bolt hole M12 (Symmetrical)         |
| (52) Front crossmember attaching hole 12.4 mm (0.488 in) dia. (Symmetrical)   | (55) Transmission mount attaching bolt hole M10 (Symmetrical) | (59) Rear side frame gauge hole 15 mm (0.59 in) dia. (Symmetrical) |
|                                                                               | (56) Side frame gauge hole 15 mm (0.59 in) dia. (Symmetrical) |                                                                    |

# DATUM POINTS

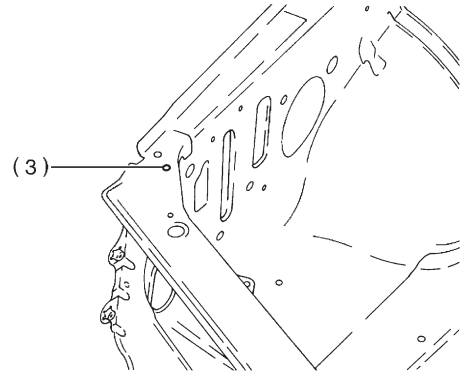
Body Structure

## 4. DATUM POINT LOCATION

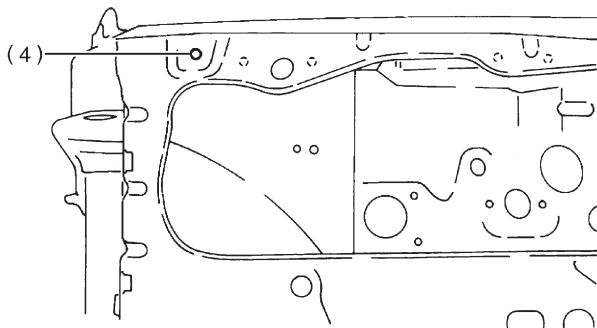
S906540A1307



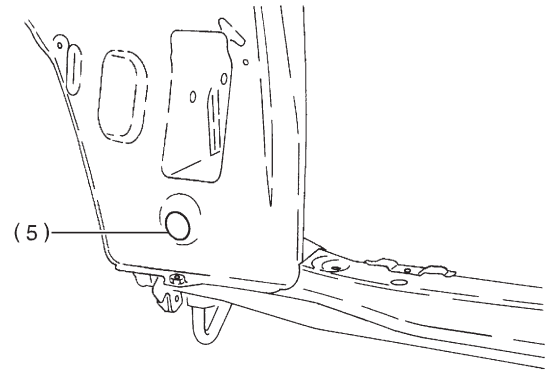
H5M0819A



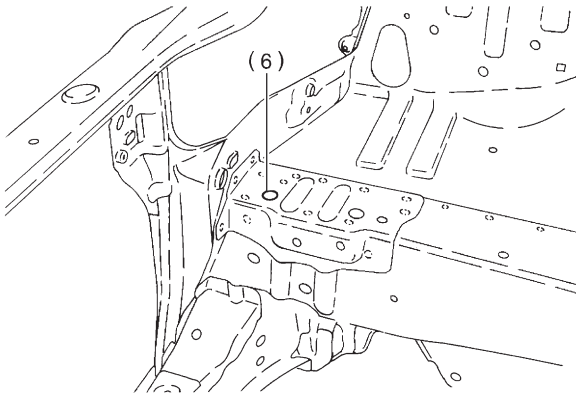
H5M0823A



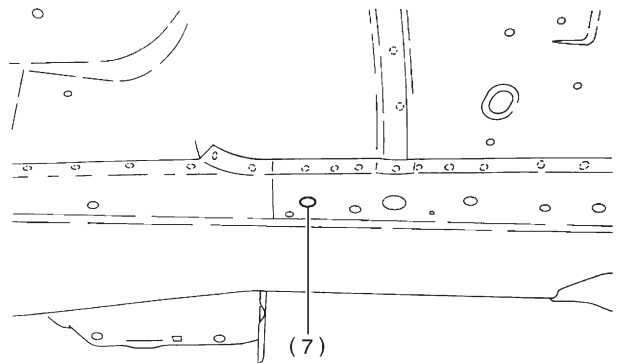
H5M0820A



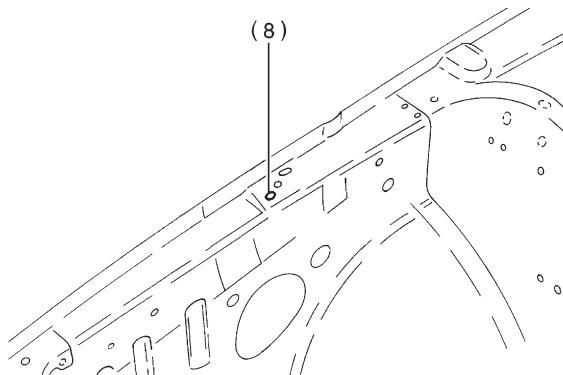
H5M0824A



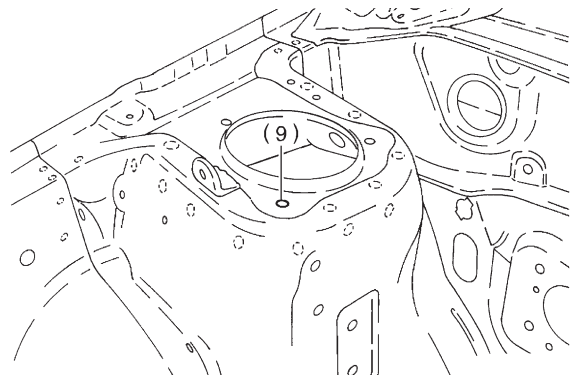
H5M0821A



H5M0825A



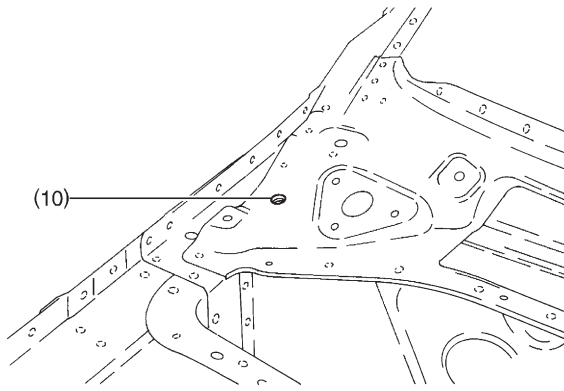
H5M0822A



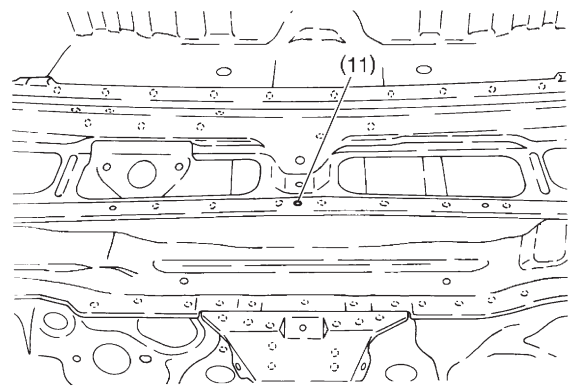
H5M0826A

# DATUM POINTS

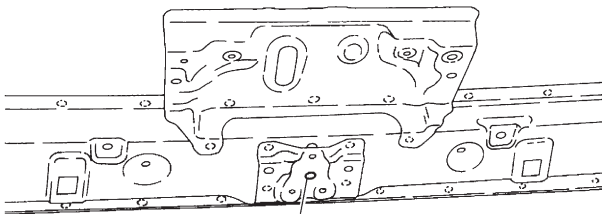
Body Structure



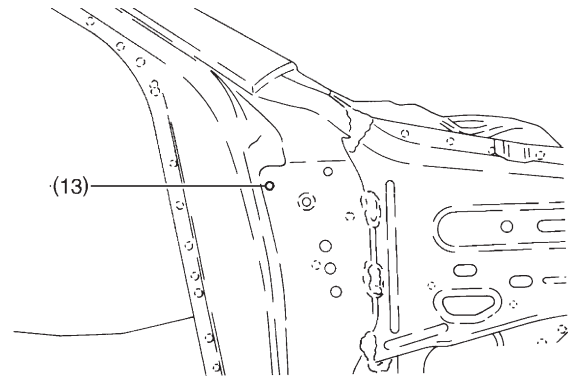
H5M0827A



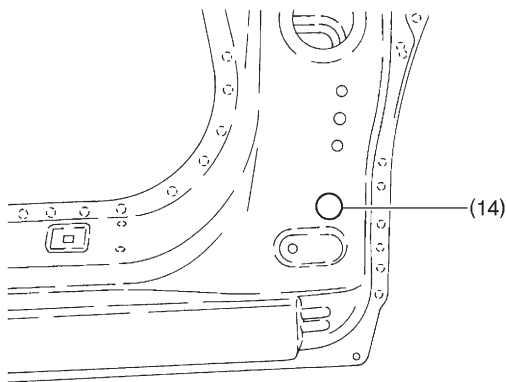
H5M0831A



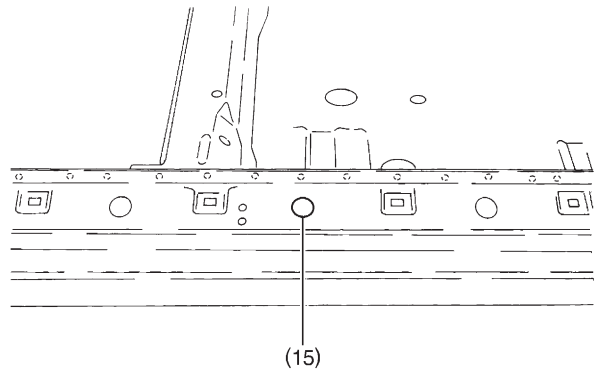
H5M0828A



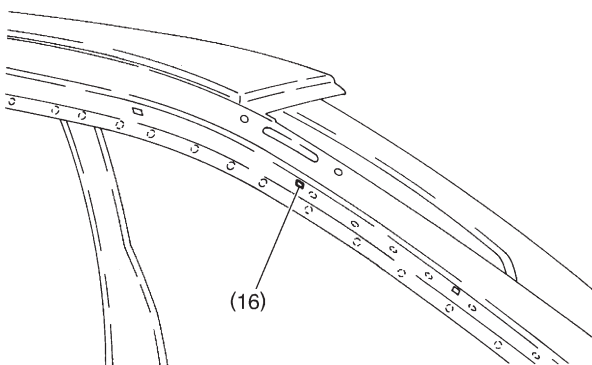
H5M0832A



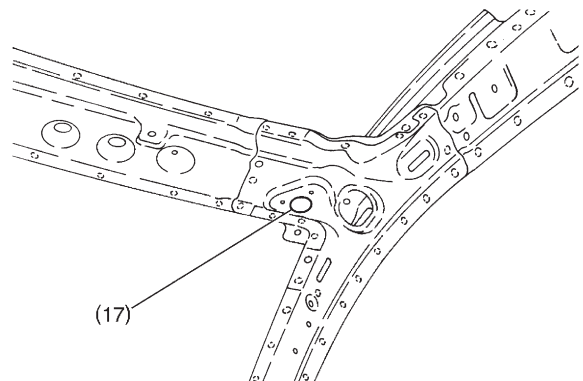
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H5M0833A



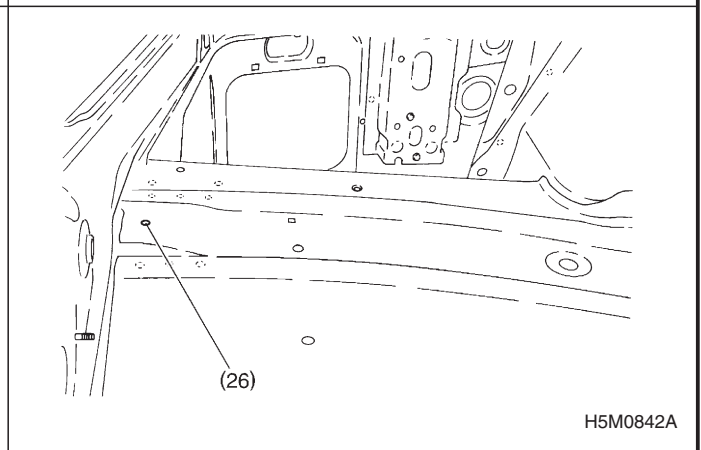
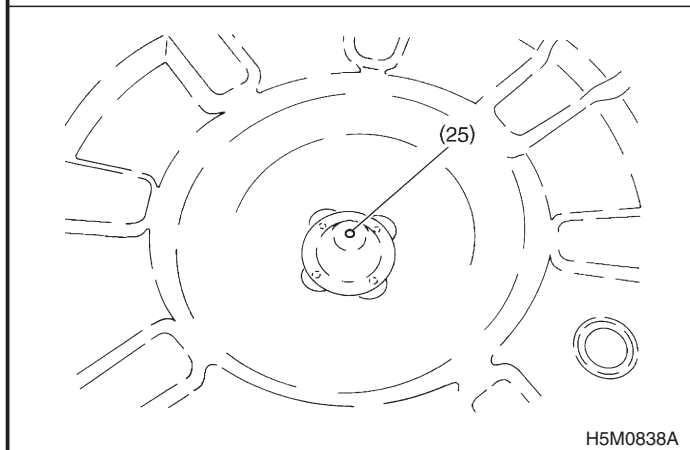
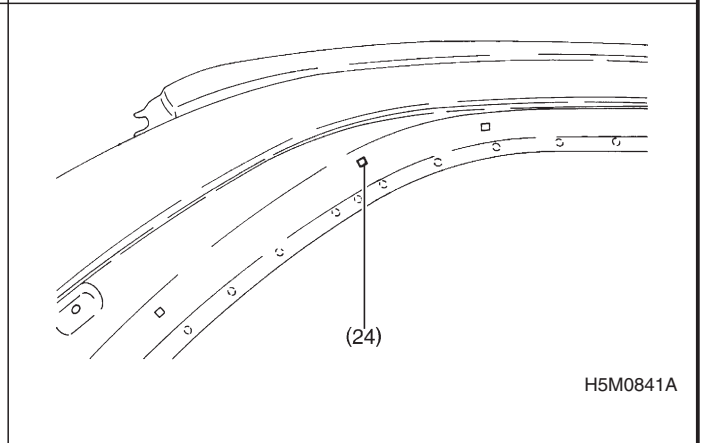
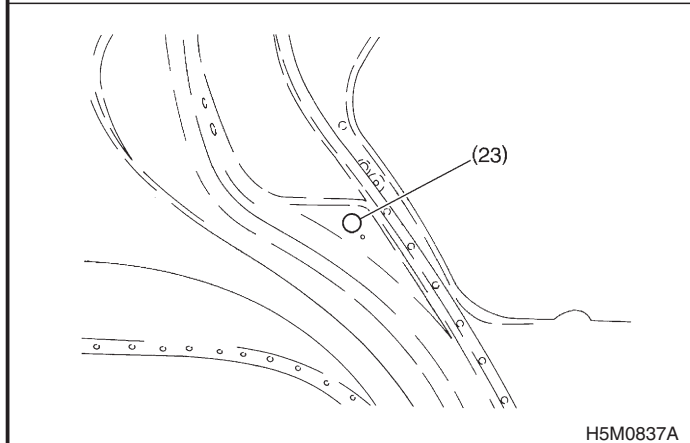
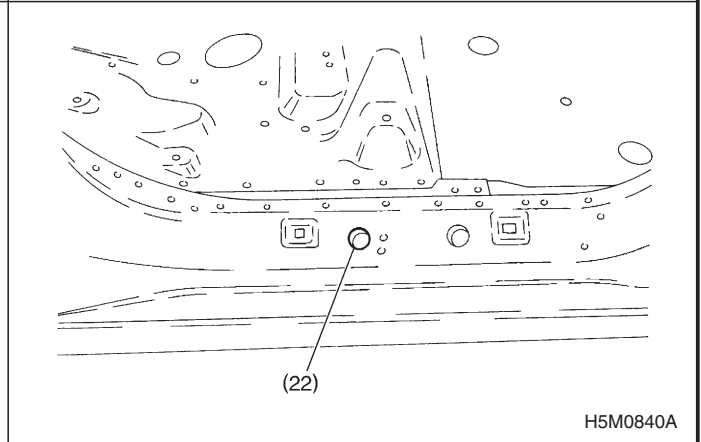
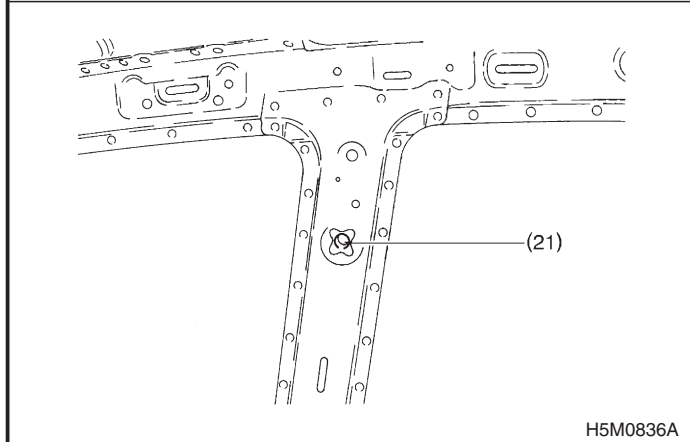
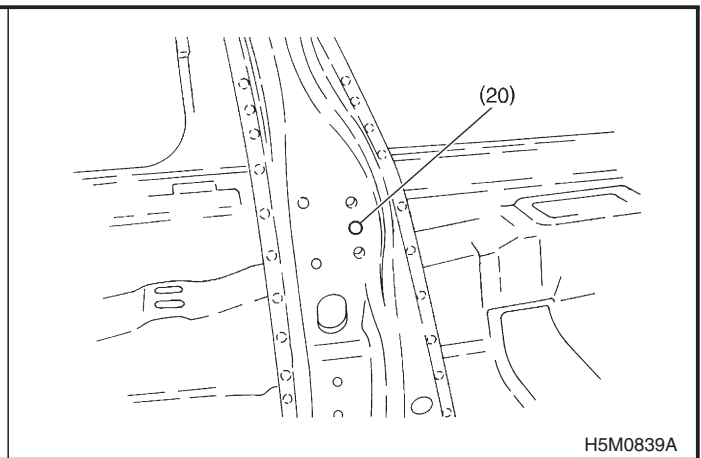
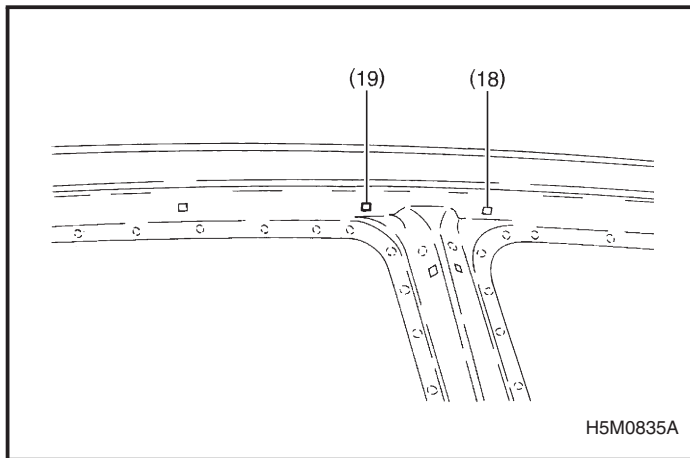
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H5M0834A

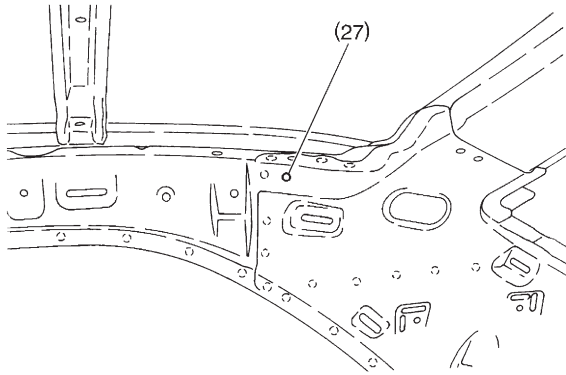
# DATUM POINTS

Body Structure



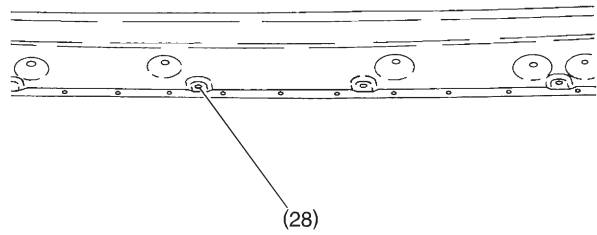
# DATUM POINTS

Body Structure

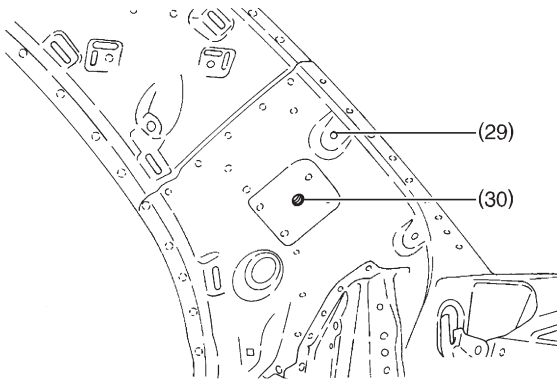


H5M0843A

Sedan

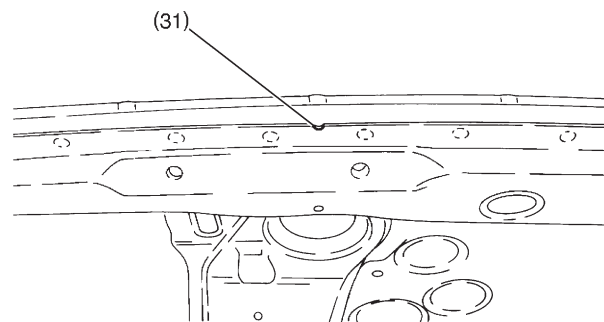


H5M0847A

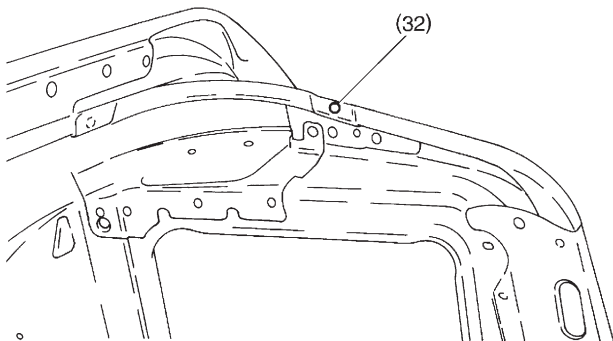


H5M0844A

Sedan

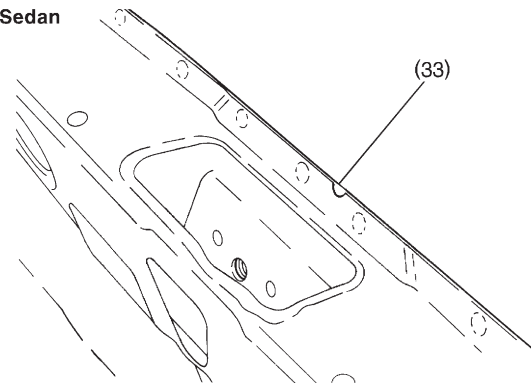


H5M0848A

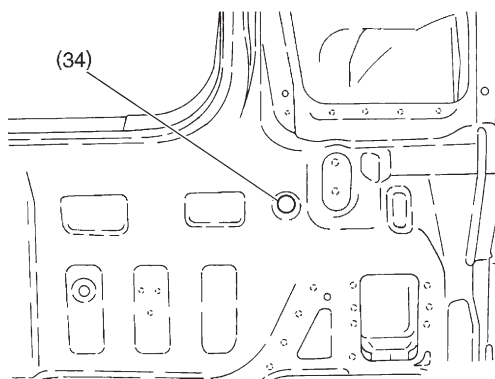


H5M0845A

Sedan

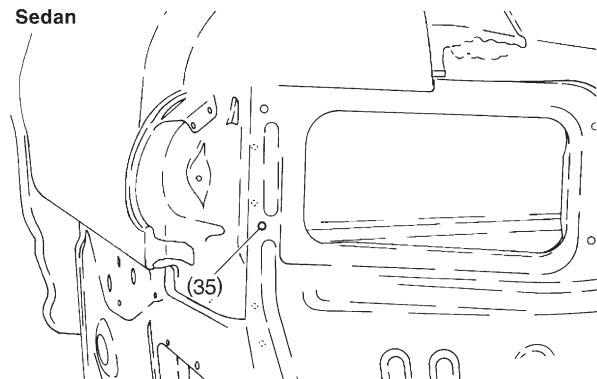


H5M0849A



H5M0846A

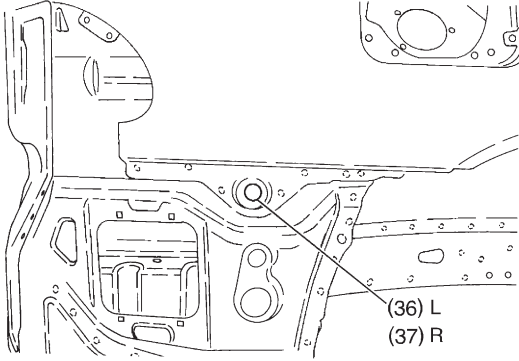
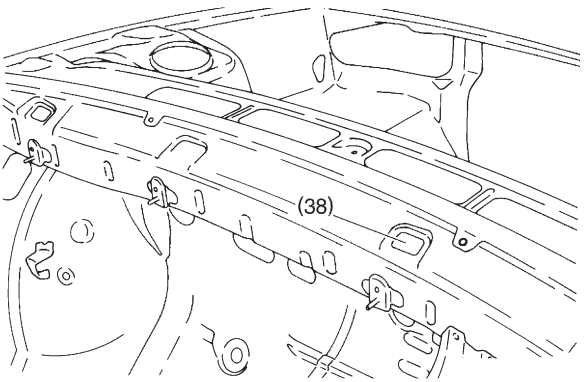
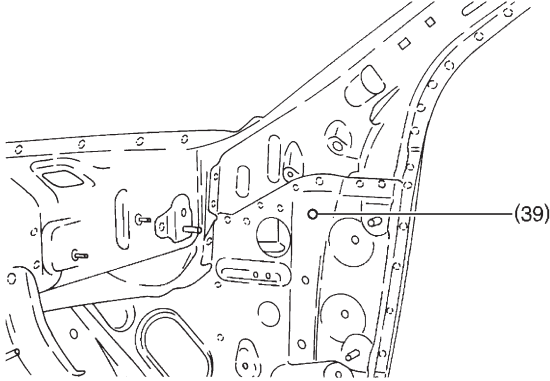
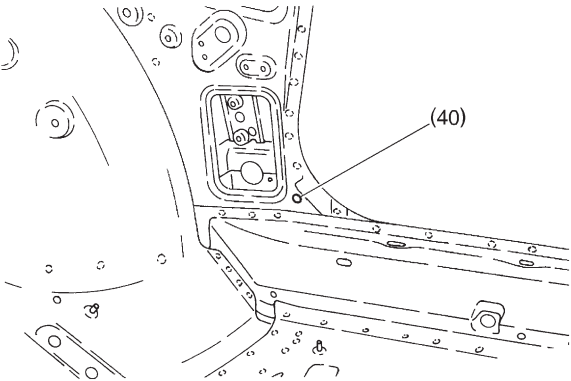
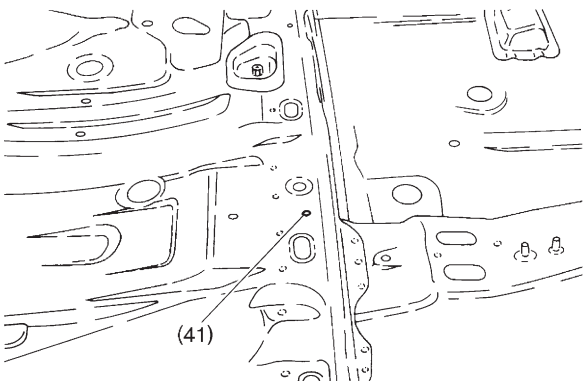
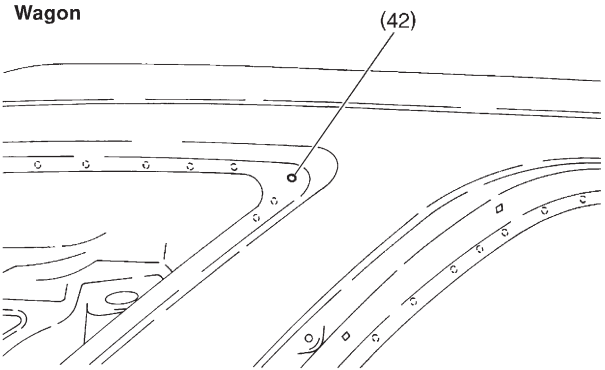
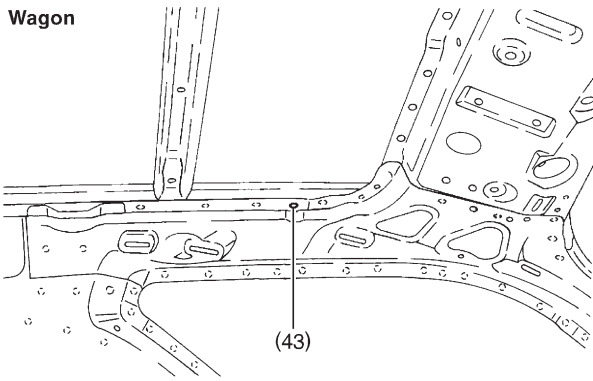
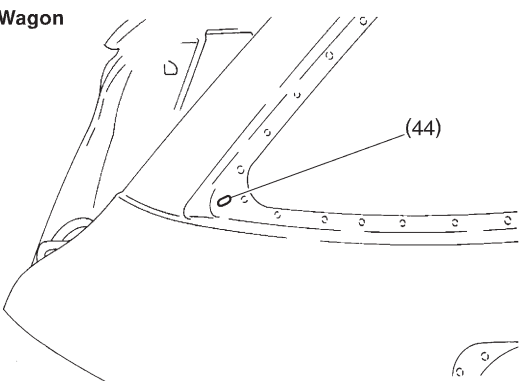
Sedan



H5M0850A

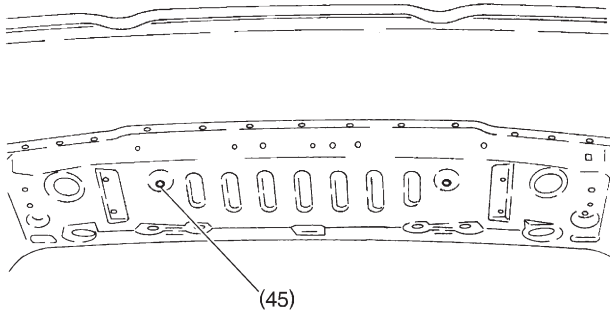
# DATUM POINTS

Body Structure

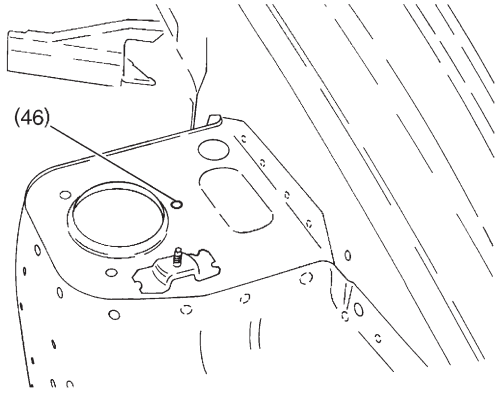
|                                                                                                                              |                                                                                                                               |
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|  <p>(36) L<br/>(37) R</p> <p>H5M0851A</p>   |  <p>(38)</p> <p>H5M0855A</p>                |
|  <p>(39)</p> <p>H5M0852A</p>                |  <p>(40)</p> <p>H5M0856A</p>                |
|  <p>(41)</p> <p>H5M0853A</p>              | <p>Wagon</p>  <p>(42)</p> <p>H5M0857A</p> |
| <p>Wagon</p>  <p>(43)</p> <p>H5M0854A</p> | <p>Wagon</p>  <p>(44)</p> <p>H5M0858A</p> |



Wagon

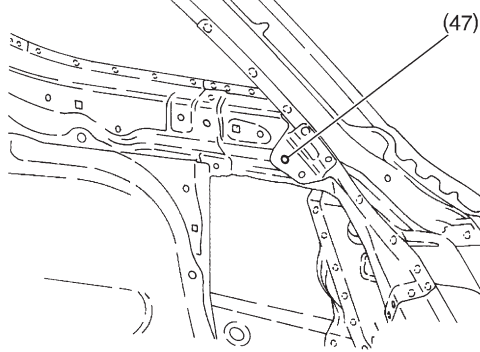


H5M0859A



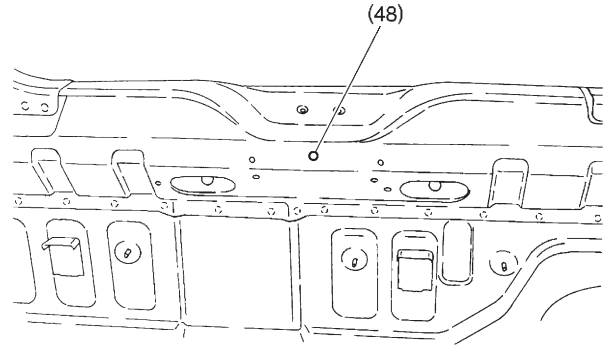
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Wagon



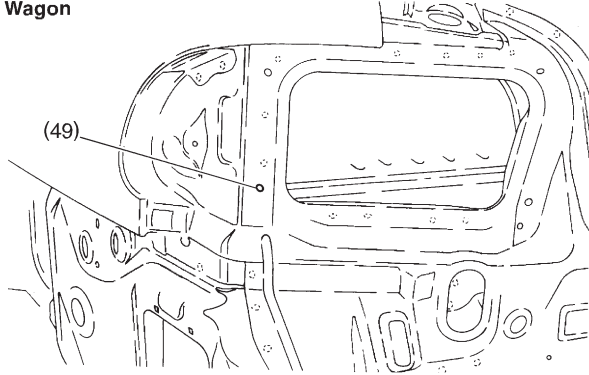
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Wagon

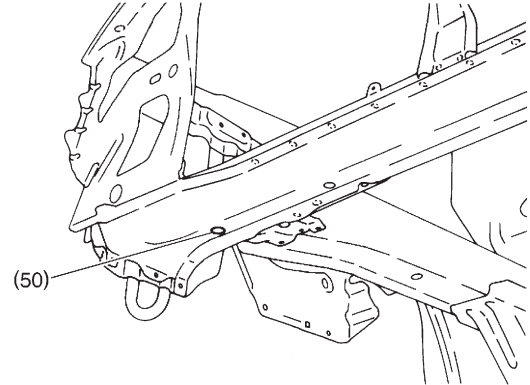


H5M0864A

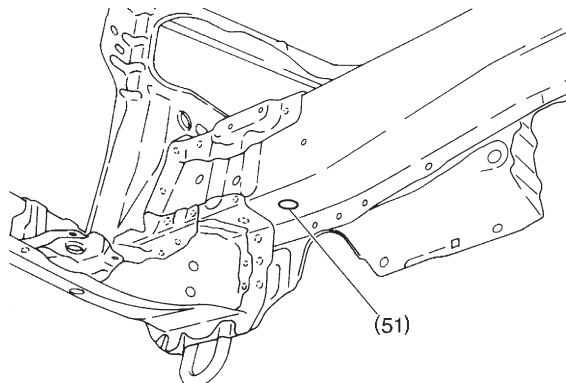
Wagon



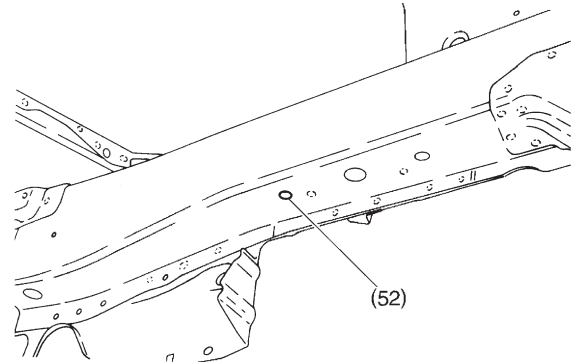
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H5M0865A



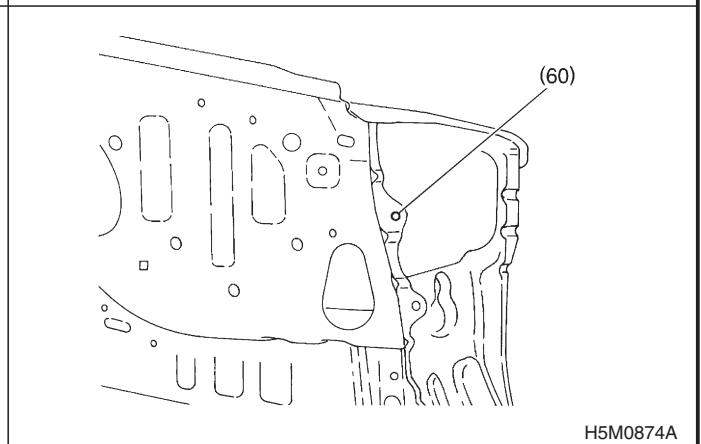
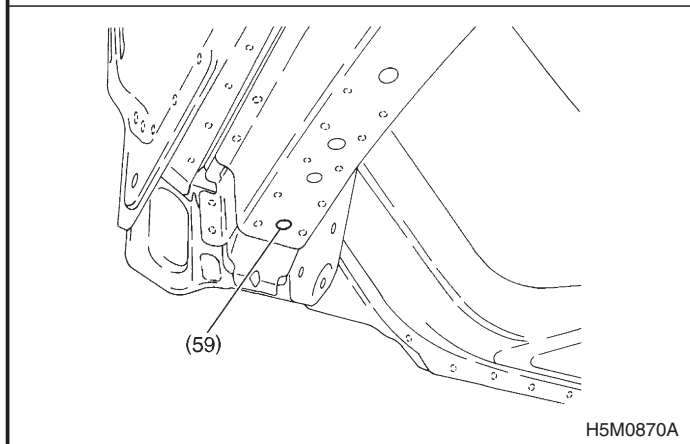
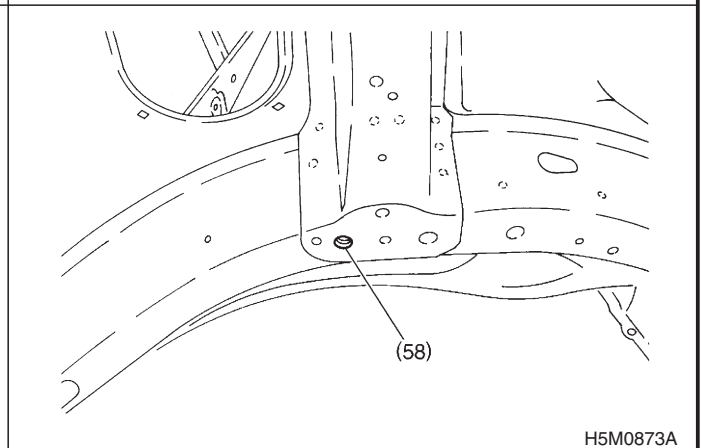
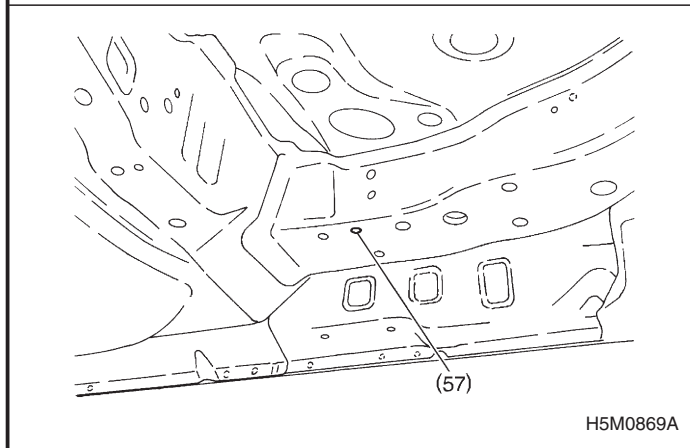
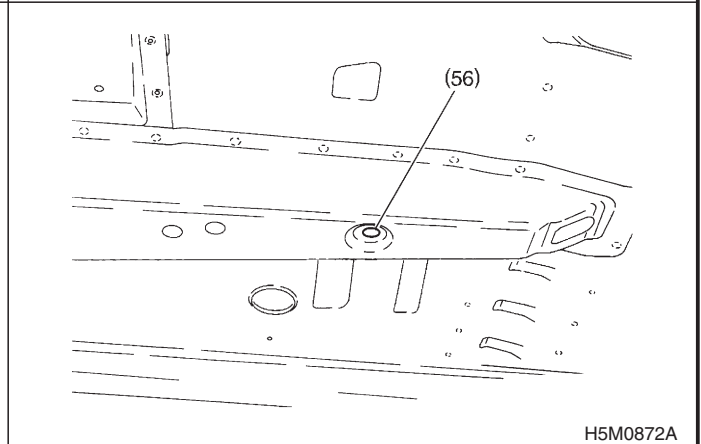
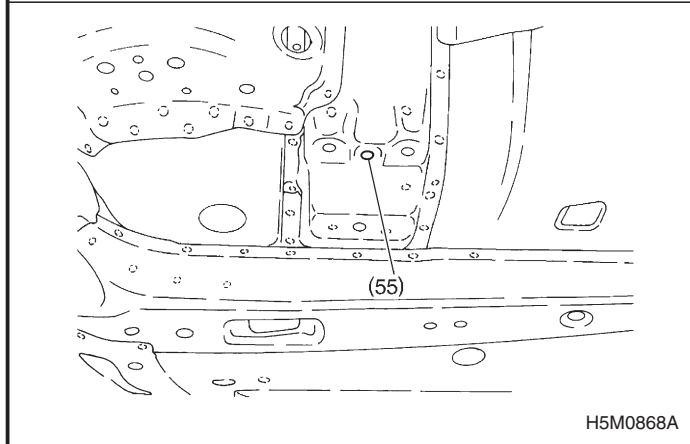
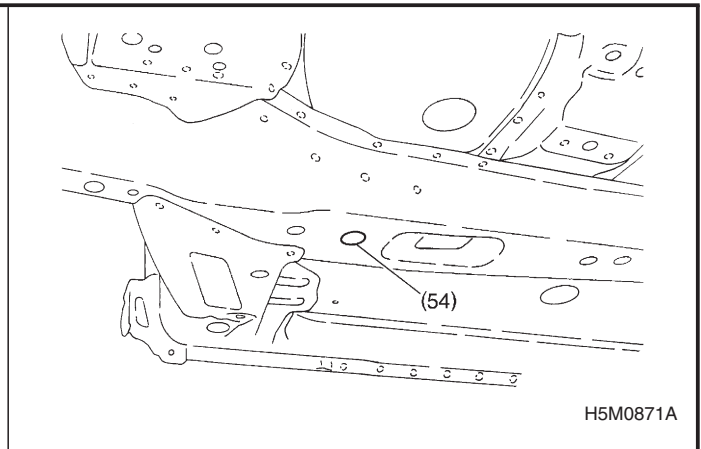
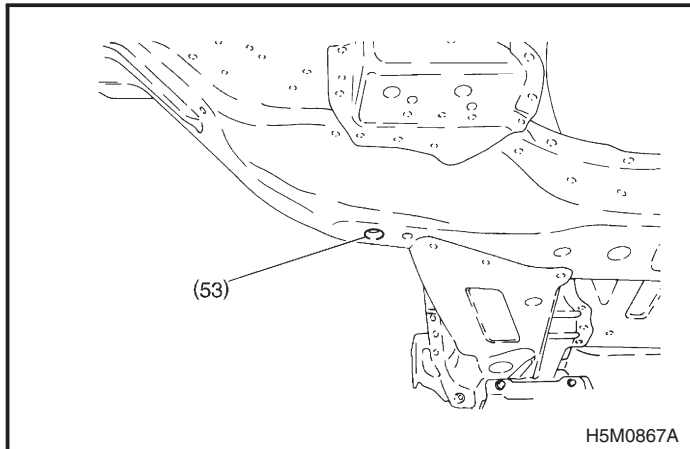
H5M0862A



H5M0866A

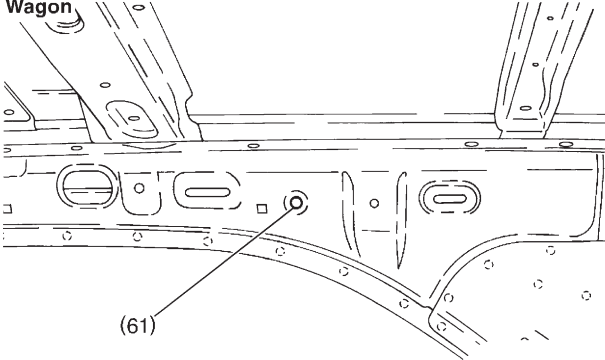
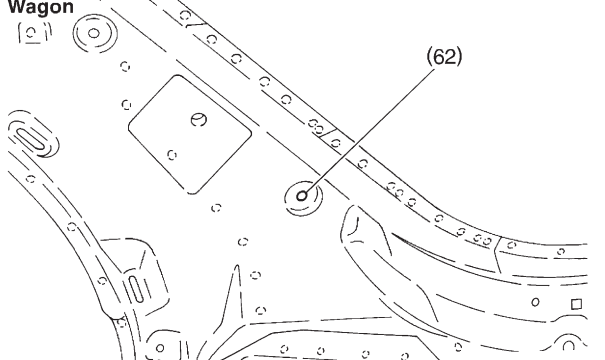
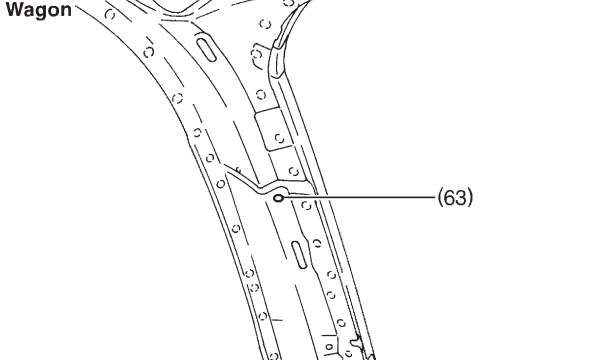
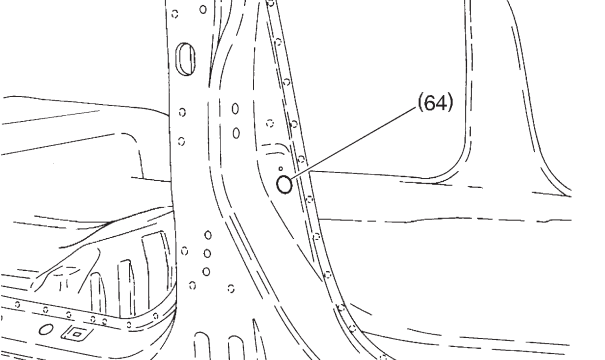
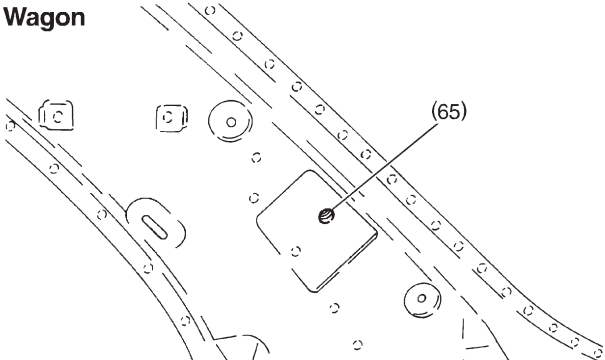
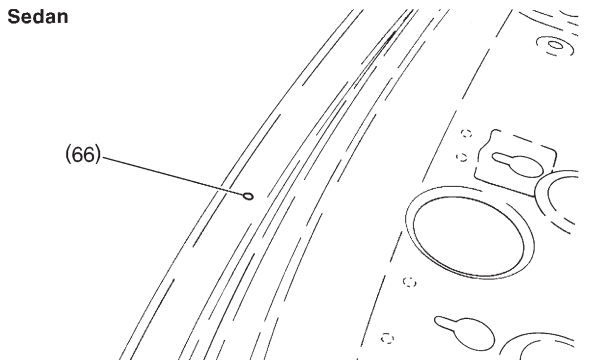
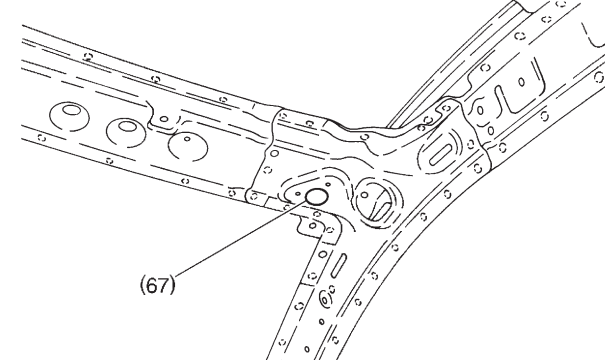
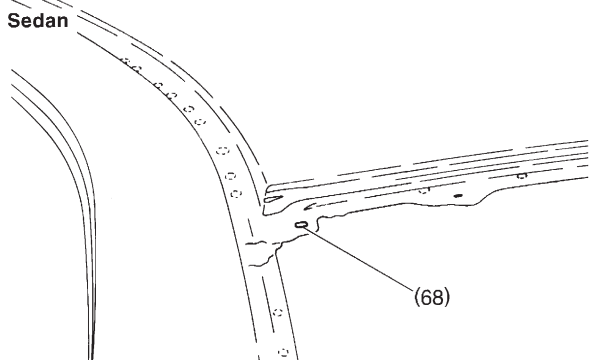
# DATUM POINTS

Body Structure



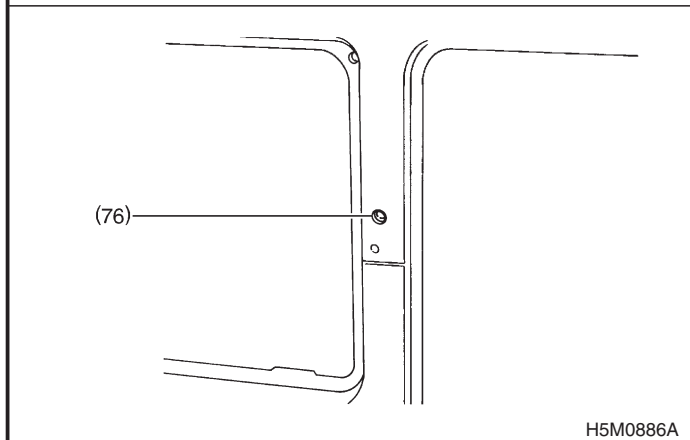
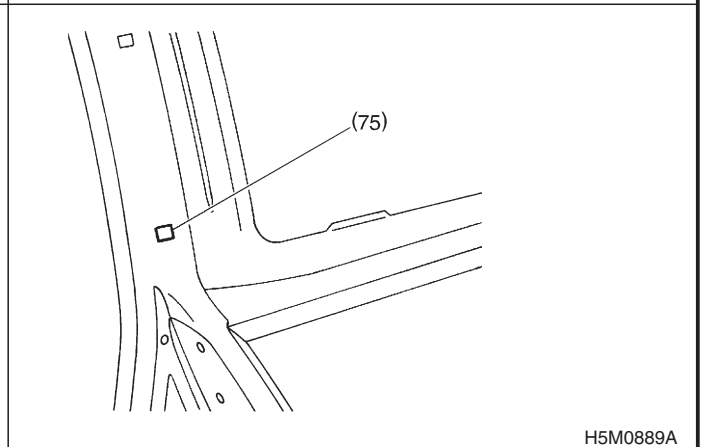
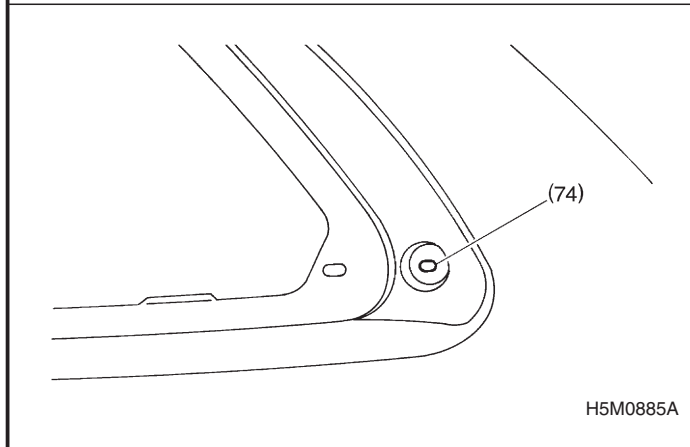
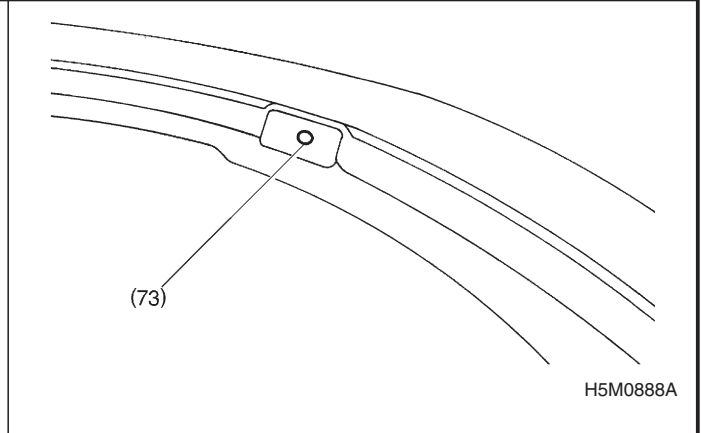
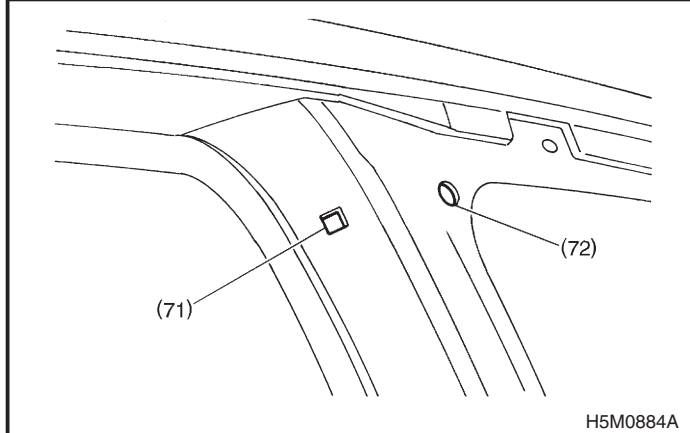
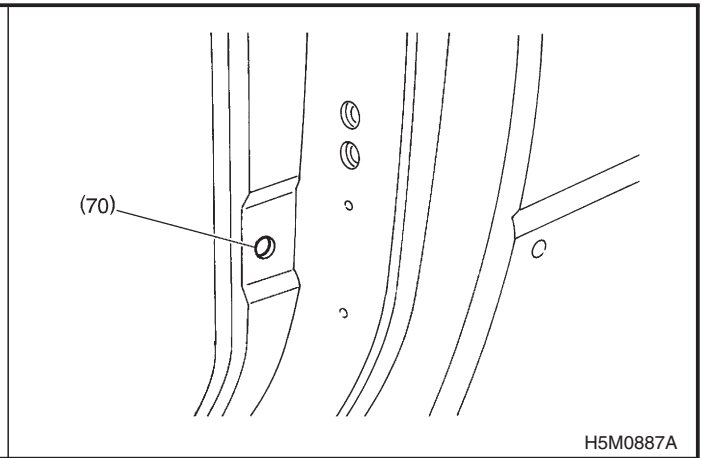
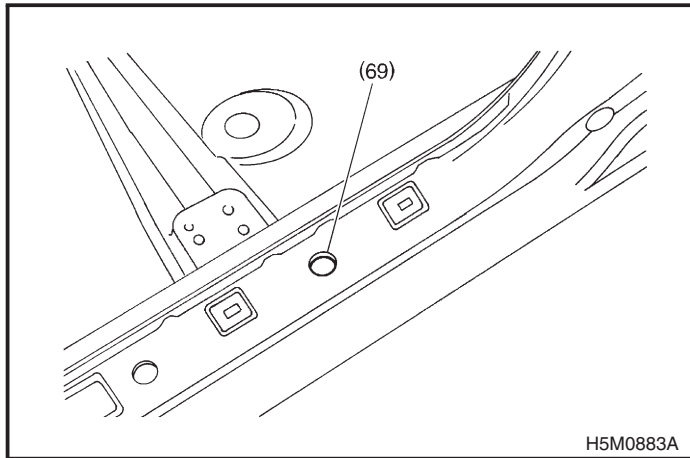
# DATUM POINTS

Body Structure

|                                                                                                                              |                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <p>Wagon</p>  <p>(61)</p> <p>H5M0875A</p>   | <p>Wagon</p>  <p>(62)</p> <p>H5M0879A</p>   |
| <p>Wagon</p>  <p>(63)</p> <p>H5M0876A</p>   |  <p>(64)</p> <p>H5M0880A</p>                |
| <p>Wagon</p>  <p>(65)</p> <p>H5M0670B</p> | <p>Sedan</p>  <p>(66)</p> <p>H5M0881A</p> |
|  <p>(67)</p> <p>H5M0878A</p>              | <p>Sedan</p>  <p>(68)</p> <p>H5M0882A</p> |

# DATUM POINTS

Body Structure



## 1. General Description S906001

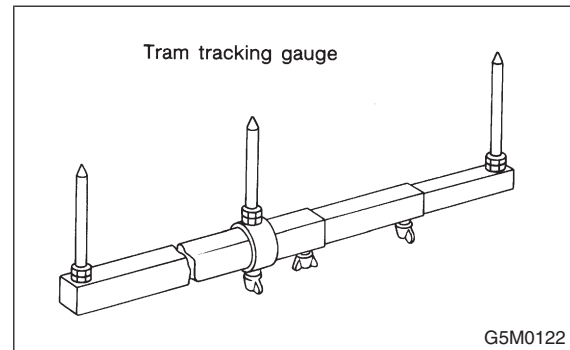
### A: CAUTION S906001A03

Airbag system wiring harness is routed on and along body panels.

- All Airbag system wiring harness and connectors are colored yellow. Do not use electrical test equipment on these circuit.
- Be careful not to damage Airbag system wiring harness when repairing the body panel.

## B: PREPARATION TOOL S906001A17

Use a tram tracking gauge to measure all dimensions. If a measuring tape is used, be extremely careful because it tends to deflect or twist, which results in a false reading.



### NOTE:

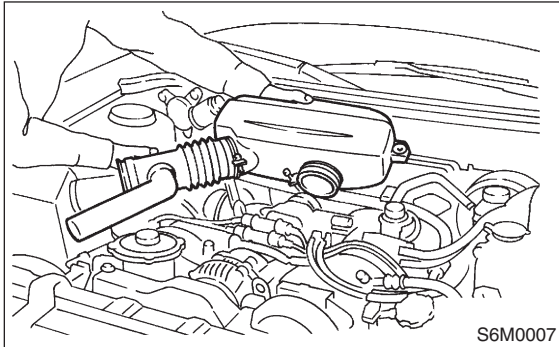
- A suffix character "R" or "L" refers to the right or the left.
- All dimensions refer to the distance between the centers of holes measured in a straight line
- Each dimension indicates a projected dimension between hole centers.

MEMO:

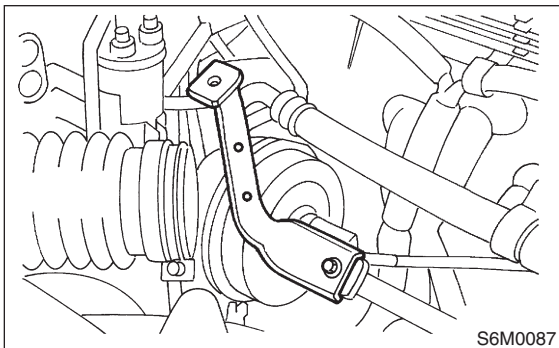
## 2. Actuator S912499

### A: REMOVAL S912499A18

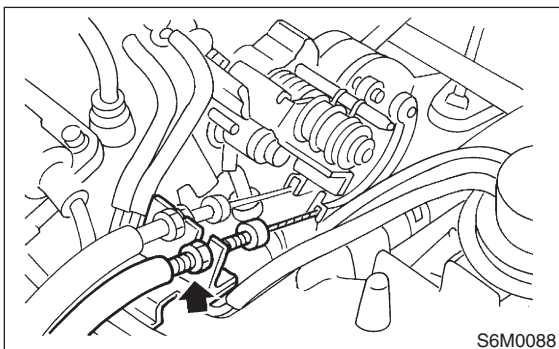
- 1) Remove air intake chamber.



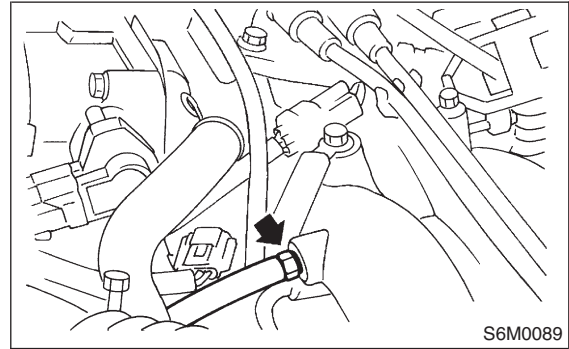
- 2) Remove air intake chamber stay.
- 3) Remove clip bands from cruise control cable.



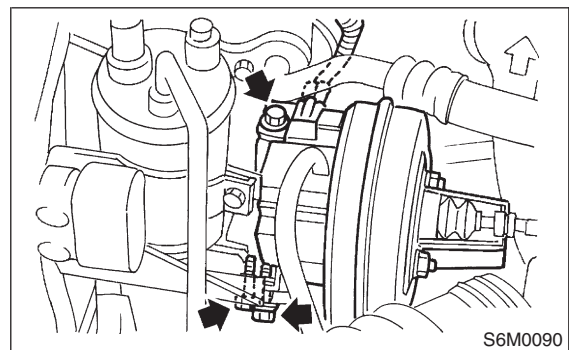
- 4) Remove cruise control cable end from throttle cam.



- 5) Disconnect cruise control vacuum hose from intake manifold.



- 6) Remove actuator attaching bolts.
- 7) Disconnect connector from actuator, then remove the actuator.



### B: INSTALLATION S912499A11

Install in the reverse order of removal.

#### **Tightening torque:**

**7.4 N·m (0.75 kgf-m, 5.4 ft-lb)**

#### **CAUTION:**

When inserting vacuum hose to intake manifold, apply sealant to the fitting hose.

#### **Fluid packing:**

**THREE BOND 1105 or equivalent**

#### **CAUTION:**

- Be careful not to apply excessive load to the wire cable when adjusting and/or installing; otherwise, the actuator may be deformed or damaged.
- Do not bend cable sharply with a radius less than 100 mm (3.94 in); otherwise, cable may bend permanently, resulting in poor performance.
- When installing cable, be careful not to sharply bend or pinch the inner cable; otherwise, the cable may break.

## 7. Clutch Switch S912258

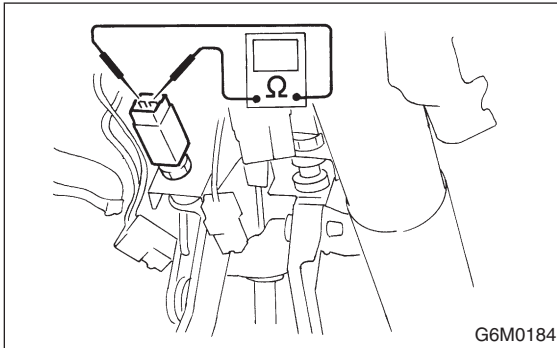
### A: REMOVAL S912258A18

Disconnect the connector from the switch, and then remove the switch. <Ref. to CL-22 REMOVAL, Pedal.>

### B: INSTALLATION S912258A11

Install in the reverse order of removal.

### C: INSPECTION S912258A10



Check continuity between clutch switch terminals.

| Switch | Pedal     | Tester connection | Specified condition |
|--------|-----------|-------------------|---------------------|
| Clutch | Released  | 1 — 2             | Continuity          |
|        | Depressed | 1 — 2             | No continuity       |

If NG, replace the clutch switch.



# CLUTCH SWITCH

Cruise Control System

---

**MEMO:**

## 5. Cruise Control Command Switch

S912497

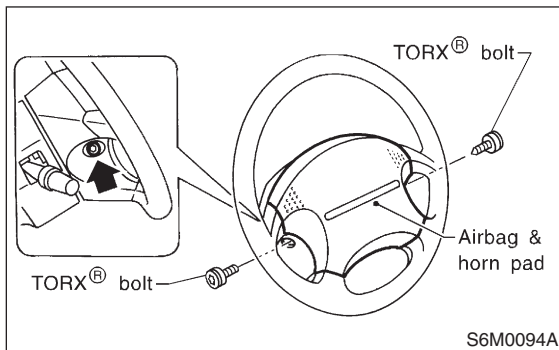
### A: REMOVAL

S912497A18

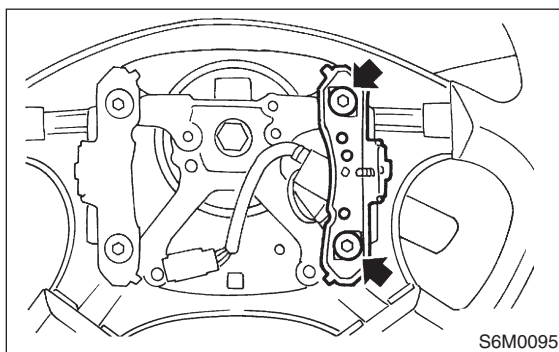
#### CAUTION:

Before starting operation carefully read the notes given in “AB” section for proper handling of the airbag module. <Ref. to AB-7 CAUTION, Driver’s Airbag Module.>

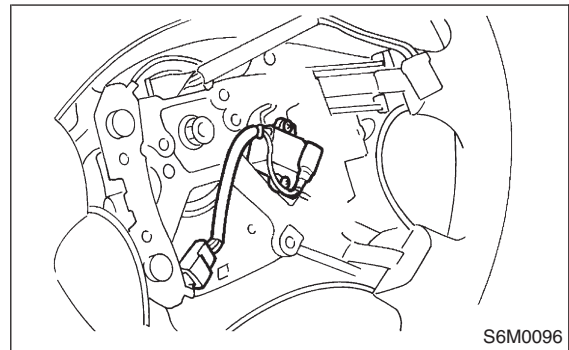
- 1) Set front wheels in straight ahead position.
- 2) Turn ignition switch OFF.
- 3) Disconnect battery ground cable from battery and wait for at least 20 seconds before starting work.
- 4) Using TORX® BIT T30 (Tamper resistant type), remove two TORX® bolts which secure driver’s airbag module.



- 5) Disconnect airbag module connector on back of airbag module.
- 6) Remove horn switch from steering wheel as shown.



- 7) Disconnect horn and cruise control command switch connector, then remove cruise control command switch.



### B: INSTALLATION

S912497A11

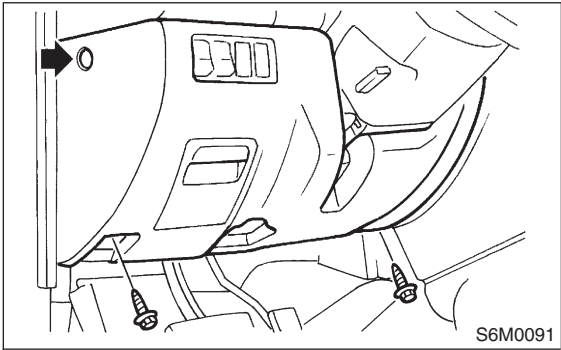
Install in the reverse order of removal.

CRUISE CONTROL MAIN SWITCH

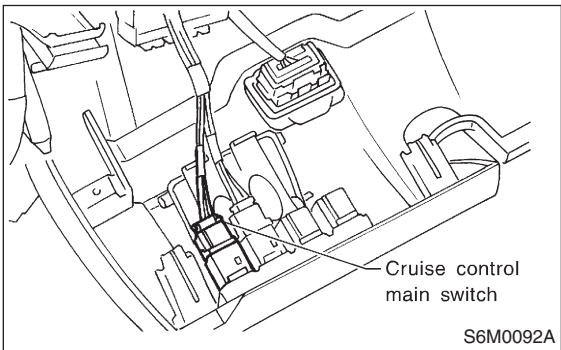
4. Cruise Control Main Switch

A: REMOVAL S912498A18

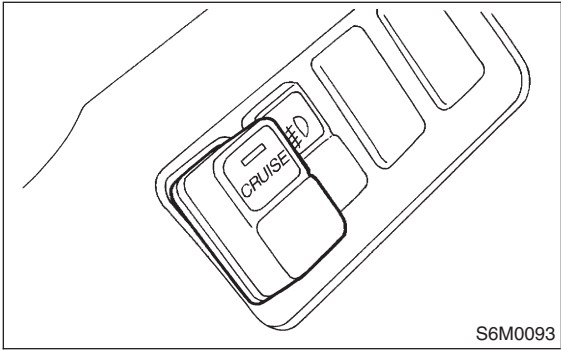
- 1) Remove screws and clip from instrument panel lower cover.
- 2) Remove panel lower cover.



- 3) Disconnect connector from cruise control main switch.



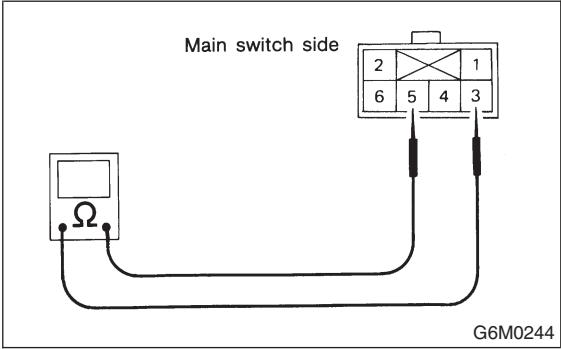
- 4) Remove main switch by pushing it outward.



B: INSTALLATION S912498A11

Install in the reverse order of removal.

C: INSPECTION S912498A10



Check continuity between cruise control main switch terminals.

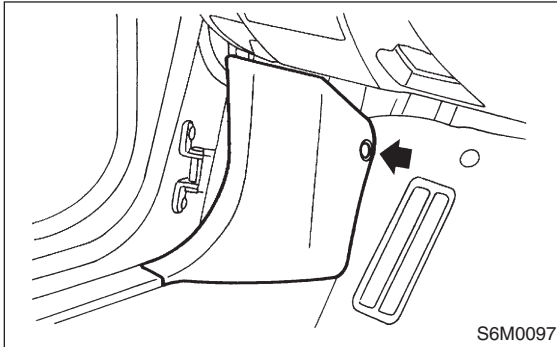
| Switch position | Tester connection | Specified condition |
|-----------------|-------------------|---------------------|
| OFF             | 3 — 5             | No continuity       |
| ON              | 3 — 5             | Continuity          |

If NG, replace cruise control main switch.

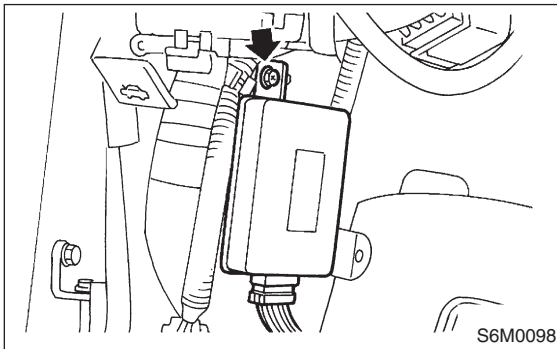
### 3. Cruise Control Module S912500

#### A: REMOVAL S912500A18

- 1) Remove front pillar lower trim.



- 2) Disconnect connector from cruise control module.
- 3) Remove bolt, then remove cruise control module.

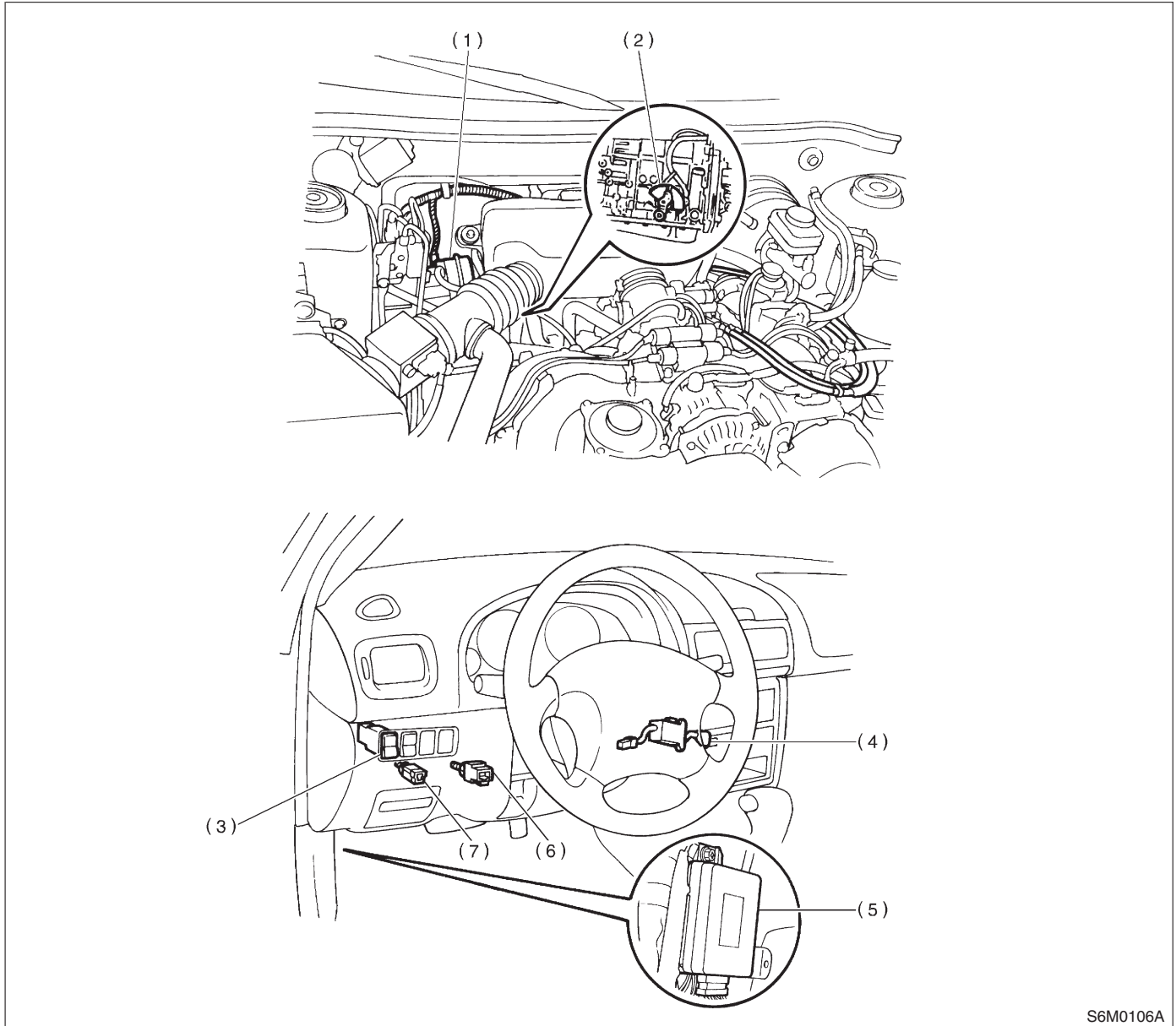


#### B: INSTALLATION S912500A11

Install in the reverse order of removal.

## 1. General Description S912001

### A: COMPONENT S912001A05



S6M0106A

- |                                |                                   |                        |
|--------------------------------|-----------------------------------|------------------------|
| (1) Actuator (with valves)     | (4) Cruise control command switch | (7) Clutch switch (MT) |
| (2) Inhibitor switch (AT)      | (5) Cruise control module         |                        |
| (3) Cruise control main switch | (6) Stop and brake switch         |                        |

**B: CAUTION** S912001A03

- Before disassembling or reassembling parts, always disconnect the battery ground cable. When repairing the radio, control module and other parts with memory functions, make note of the memory before disconnecting the battery ground cable. All memory will be erased.
- Reassemble parts in the reverse order of disassembly unless otherwise indicated.
- Adjust parts to specifications specified in this manual.
- Connect connectors and hoses securely during reassembly.
- After reassembly, ensure functional parts operate properly.

**C: PREPARATION TOOL** S912001A17**1. GENERAL TOOL** S912001A1701

| TOOL NAME      | REMARKS                                            |
|----------------|----------------------------------------------------|
| Circuit Tester | Used for measuring resistance, voltage and ampere. |

## 6. Stop and Brake Switch S912496

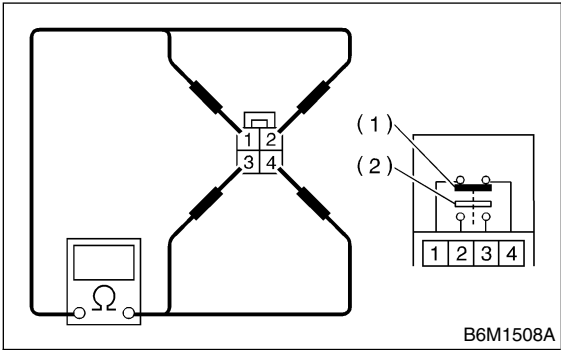
### A: REMOVAL S912496A18

Disconnect connector from switch, and then remove the switch. <Ref. to BR-57 REMOVAL, Stop Light Switch.>

### B: INSTALLATION S912496A11

Install in the reverse order of removal.

### C: INSPECTION S912496A10



Check continuity brake switch (1) and stop light switch (2) between terminals.

| Switch     | Pedal     | Tester connection | Specified condition |
|------------|-----------|-------------------|---------------------|
| Brake      | Released  | 1 — 4             | Continuity          |
|            | Depressed | 1 — 4             | No continuity       |
| Stop light | Released  | 2 — 3             | No continuity       |
|            | Depressed | 2 — 3             | Continuity          |

If NG, replace stop and brake switch.

# BASIC DIAGNOSTIC PROCEDURE

Cruise Control System

## 1. Basic Diagnostic Procedure

S003501

### A: PROCEDURE

S003501E45

| No. | Step                                                                                                                                 | Check                                                                        | Yes           | No                                                                                                                                 |
|-----|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------|
| 1   | <b>CHECK CRUISE CONTROL MAIN SWITCH.</b><br>1) Trouble occurs.<br>2) Perform pre-inspection.<br>3) Check cruise control main switch. | Does cruise control main switch turn ON?                                     | Go to step 2. | Go to "Diagnostics Chart with Symptom". <Ref. to CC-13 SYMPTOM CHART, Diagnostics Chart with Symptom.>                             |
| 2   | <b>CHECK CRUISE SPEED IS SET.</b>                                                                                                    | Does cruise speed properly set while driving at minimum of 40 km/h (25 MPH)? | Go to step 3. | Go to "Diagnostics Chart with Trouble Code". <Ref. to CC-18 LIST OF DIAGNOSTIC TROUBLE CODE, Diagnostics Chart with Trouble Code.> |
| 3   | <b>CHECK CRUISE CONTROL IS RELEASED.</b>                                                                                             | Does cruise control properly release during operation?                       | Go to step 4. | Go to "Diagnostics Chart with Trouble Code". <Ref. to CC-18 LIST OF DIAGNOSTIC TROUBLE CODE, Diagnostics Chart with Trouble Code.> |
| 4   | <b>CHECK CRUISE SPEED IS HELD WITHIN SET SPEED.</b>                                                                                  | Does cruise speed hold within set speed $\pm 3$ km/h (2 MPH)?                | Go to step 5. | Go to pre-inspection of actuator. <Ref. to CC-4 INSPECTION, General Description.>                                                  |
| 5   | <b>CHECK RESUME/ACCEL SWITCH.</b>                                                                                                    | Does RESUME/ACCEL switch function properly?                                  | Go to step 6. | Go to "Diagnostics Chart with Trouble Code". <Ref. to CC-18 LIST OF DIAGNOSTIC TROUBLE CODE, Diagnostics Chart with Trouble Code.> |
| 6   | <b>CHECK SET/COAST SWITCH.</b>                                                                                                       | Does SET/COAST switch function properly?                                     | Go to step 7. | Go to "Diagnostics Chart with Trouble Code". <Ref. to CC-18 LIST OF DIAGNOSTIC TROUBLE CODE, Diagnostics Chart with Trouble Code.> |



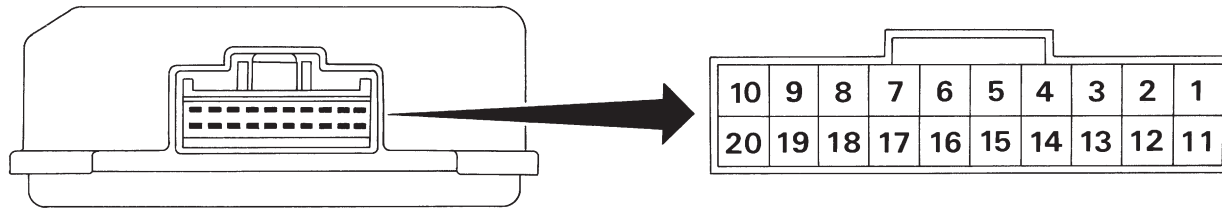
# BASIC DIAGNOSTIC PROCEDURE

Cruise Control System

| No. | Step                            | Check                                                     | Yes                                        | No                                                                                                                                    |
|-----|---------------------------------|-----------------------------------------------------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 7   | CHECK CANCEL SWITCH.            | Does CANCEL switch function properly?                     | Go to step 8.                              | Go to "Diagnostics Chart with Trouble Code".<br><Ref. to CC-18 LIST OF DIAGNOSTIC TROUBLE CODE, Diagnostics Chart with Trouble Code.> |
| 8   | CHECK CRUISE SPEED IS RELEASED. | Does cruise speed release when brake pedal is depressed?  | Go to step 9.                              | Go to "Diagnostics Chart with Trouble Code".<br><Ref. to CC-18 LIST OF DIAGNOSTIC TROUBLE CODE, Diagnostics Chart with Trouble Code.> |
| 9   | CHECK CRUISE SPEED IS RELEASED. | Does cruise speed release when clutch pedal is depressed? | Cruise control system is in correct order. | Go to "Diagnostics Chart with Trouble Code".<br><Ref. to CC-18 LIST OF DIAGNOSTIC TROUBLE CODE, Diagnostics Chart with Trouble Code.> |

## 4. Cruise Control Module I/O Signal S003515

### A: ELECTRICAL SPECIFICATION S003515A08



G6M0015

| Content                                                                    | Terminal No. | Measuring conditions and I/O signals (ignition switch ON and engine idling)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vent valve                                                                 | 1            | <ul style="list-style-type: none"> <li>Power supply is ON when vehicle is stopped.</li> <li>ON-and-OFF ("0"-and-battery voltage) operation is alternately repeated while cruise control is operating.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Safety valve                                                               | 2            | <ul style="list-style-type: none"> <li>Power supply is ON when vehicle is stopped.</li> <li>ON-and-OFF ("0"-and-battery voltage) operation is alternately repeated while cruise control is operating.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Ignition switch                                                            | 3            | <ul style="list-style-type: none"> <li>Battery voltage is present when ignition switch is turned ON.</li> <li>"0" volt is present when ignition switch is turned OFF.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Cruise control main switch                                                 | 4            | <ul style="list-style-type: none"> <li>Battery voltage is present when main power is turned ON.</li> <li>"0" volt is present when main power is turned OFF.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Power supply to vacuum valve, vent valve, safety valve and indicator light | 5            | <ul style="list-style-type: none"> <li>Battery voltage is present when main power is turned ON.</li> <li>"0" volt is present when main power is turned OFF.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| SET/COAST switch                                                           | 6            | <ul style="list-style-type: none"> <li>Battery voltage is present when command switch is turned to SET/COAST position.</li> <li>"0" volt is present when command switch is released.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| RESUME/ACCEL switch                                                        | 7            | <ul style="list-style-type: none"> <li>Battery voltage is present when command switch is turned to RESUME/ACCEL position.</li> <li>"0" volt is present when command switch is released.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Brake switch                                                               | 8            | <p>Set selector lever to any position other than "P" or "N" position (AT) / leave clutch pedal released (MT), while cruise control main switch is turned ON. Then check that;</p> <ul style="list-style-type: none"> <li>Battery voltage is present when brake pedal is released.</li> <li>"0" volt is present when brake pedal is depressed, or</li> <li>Battery voltage is present when clutch pedal is released (MT).</li> <li>"0" volt is present when clutch pedal is depressed (MT).</li> <li>Battery voltage is present when selector lever is in any position other than "P" or "N" position (AT).</li> <li>"0" volt is present when selector lever is set to "P" or "N" position (AT).</li> </ul> |
| Clutch switch (MT)/ Inhibitor switch (AT)                                  | 9            | <ul style="list-style-type: none"> <li>Battery voltage is present when clutch pedal is released (MT).</li> <li>"0" volt is present when clutch pedal is depressed (MT).</li> <li>Battery voltage is present when selector lever is in any position other than "P" or "N" position (AT).</li> <li>"0" volt is present when selector lever is set to "P" or "N" position (AT).</li> </ul>                                                                                                                                                                                                                                                                                                                    |
| Vacuum valve                                                               | 11           | <ul style="list-style-type: none"> <li>Power supply is ON when vehicle is stopped.</li> <li>ON-and-OFF ("0"-and-battery voltage) operation is alternately repeated while cruise control is operating.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Set signal to transmission control module (AT)                             | 12           | <ul style="list-style-type: none"> <li>TCM emits a ground-level signal while driving vehicle at least 40 km/h (25 MPH) with SET switch ON.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Ground                                                                     | 13           | —                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

# CRUISE CONTROL MODULE I/O SIGNAL

Cruise Control System

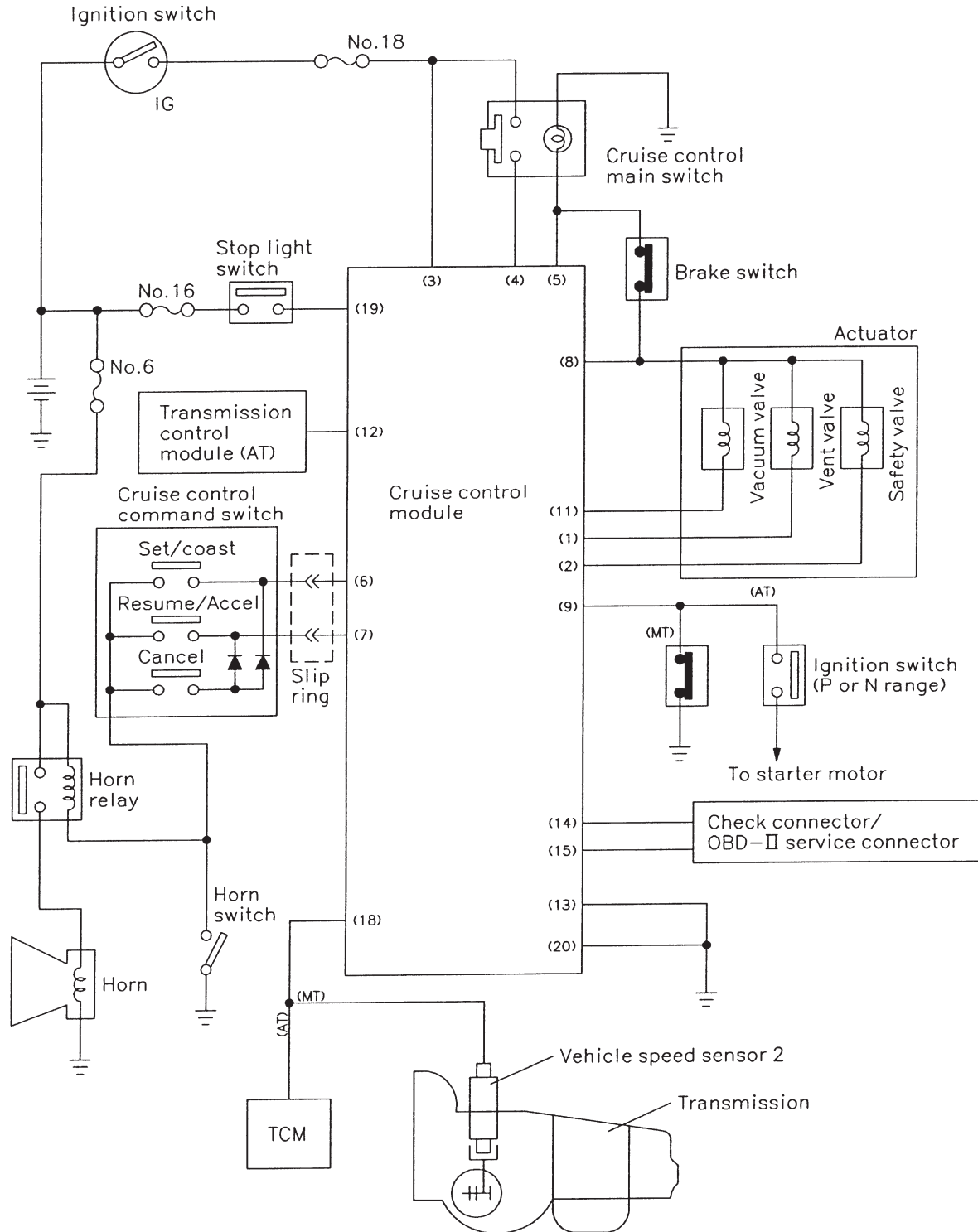
| Content                                                                                                                | Terminal No. | Measuring conditions and I/O signals (ignition switch ON and engine idling)                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Check connector/<br>OBD-II service connector                                                                           | 14           | —                                                                                                                                                                                                                     |
| Check connector/<br>OBD-II service connector                                                                           | 15           | —                                                                                                                                                                                                                     |
| Vehicle speed sensor 2 (MT)<br>Automatic transmission control module (AT)                                              | 18           | Lift-up the vehicle until all four wheels are raised off ground, and then rotate any wheel manually. Approx. 5 and 0 volt pulse signals are alternately input to cruise control module.                               |
| Stop light switch                                                                                                      | 19           | Turn ignition switch to OFF. Then check that; <ul style="list-style-type: none"><li>● Battery voltage is present when brake pedal is depressed.</li><li>● “0” volt is present when brake pedal is released.</li></ul> |
| Ground                                                                                                                 | 20           | —                                                                                                                                                                                                                     |
| NOTE:<br>Voltage at terminals 1, 2, 11 and 12 cannot be checked unless vehicle is driving by cruise control operation. |              |                                                                                                                                                                                                                       |

# CRUISE CONTROL MODULE I/O SIGNAL

Cruise Control System

## B: SCHEMATIC

S003515A21



S6M0325

## 6. Diagnostics Chart with Symptom S003619

### A: SYMPTOM CHART S003619F22

| Symptom |                                                                                                 | Repair area                           | Reference                                                                                                  |
|---------|-------------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1       | Cruise control can be set. Normally, indicator does not come on. (When main switch is pressed.) | (1) Check cruise control main switch. | <Ref. to CC-14 CHECK INDICATOR AND CIRCUIT IN CRUISE CONTROL MAIN SWITCH, Diagnostics Chart with Symptom.> |
|         |                                                                                                 | (2) Check wiring harness.             |                                                                                                            |
| 2       | Cruise control main switch is not turned ON and cruise control cannot be set.                   | (1) Check fuse.                       | <Ref. to CC-16 CHECK CRUISE CONTROL MAIN SWITCH, Diagnostics Chart with Symptom.>                          |
|         |                                                                                                 | (2) Check power supply.               |                                                                                                            |
|         |                                                                                                 | (3) Check cruise control main switch. |                                                                                                            |
|         |                                                                                                 | (4) Check wiring harness.             |                                                                                                            |

# DIAGNOSTICS CHART WITH SYMPTOM

Cruise Control System

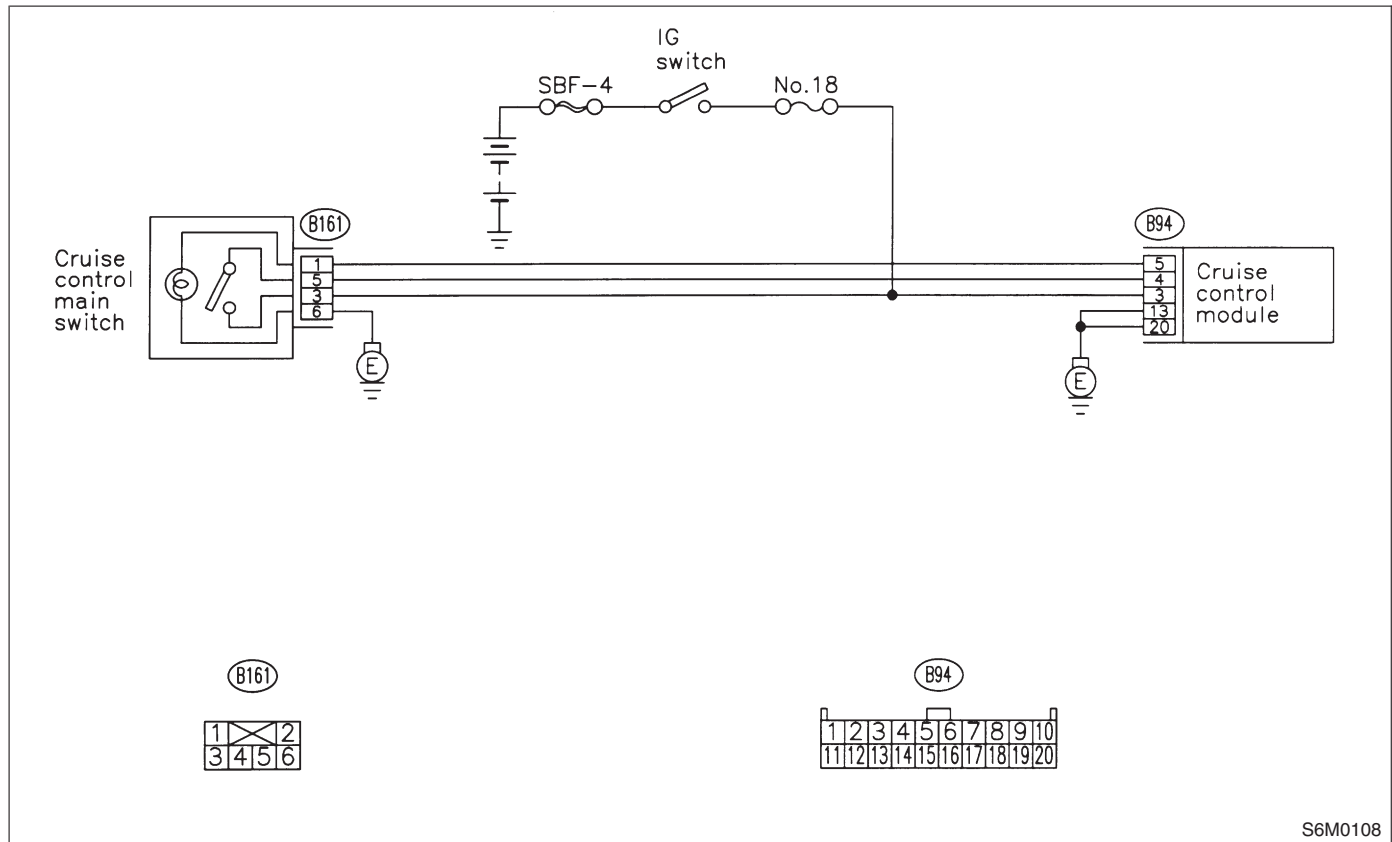
## B: CHECK INDICATOR AND CIRCUIT IN CRUISE CONTROL MAIN SWITCH

S003619F48

### DIAGNOSIS:

- Bulb failure or open harness of the indicator circuit in the cruise control main switch.

### WIRING DIAGRAM:



# DIAGNOSTICS CHART WITH SYMPTOM

Cruise Control System

| No. | Step                                                                                                                                                                                                                                                                                                                                                                                                                                         | Check                                      | Yes                                                                              | No                                                                                       |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 1   | <b>CHECK CRUISE CONTROL MAIN SWITCH.</b><br>1) Remove cruise control main switch.<br>2) Measure resistance between cruise control main switch terminals.<br><i>Terminals</i><br><i>No. 1 — No. 6:</i>                                                                                                                                                                                                                                        | Is resistance between 10 and 80 $\Omega$ ? | Go to step 2.                                                                    | Replace switch illumination bulb.<br><Ref. to CC-6 REMOVAL, Cruise Control Main Switch.> |
| 2   | <b>CHECK CIRCUIT BETWEEN CRUISE CONTROL MODULE AND CRUISE CONTROL MAIN SWITCH INDICATOR LIGHT.</b><br>1) Turn the ignition switch to ON.<br>2) Turn cruise control main switch to ON.<br>3) Measure voltage between cruise control main switch connector and the chassis ground.<br><i>Connector &amp; terminal</i><br><i>(B161) No. 1 (+) — Chassis ground (-):</i>                                                                         | Is voltage more than 10 V?                 | Go to step 3.                                                                    | Repair or replace wiring harness.                                                        |
| 3   | <b>CHECK CIRCUIT BETWEEN CRUISE CONTROL MODULE AND CRUISE CONTROL MAIN SWITCH INDICATOR LIGHT.</b><br>1) Turn the ignition switch and cruise control main switch to OFF.<br>2) Remove the connector from the cruise control main switch.<br>3) Measure resistance of ground circuit between the cruise control main switch connector and chassis ground.<br><i>Connector &amp; terminal</i><br><i>(B161) No. 6 (+) — Chassis ground (-):</i> | Is resistance less than 10 $\Omega$ ?      | Replace cruise control module.<br><Ref. to CC-5 REMOVAL, Cruise Control Module.> | Repair or replace wiring harness.                                                        |

# DIAGNOSTICS CHART WITH SYMPTOM

Cruise Control System

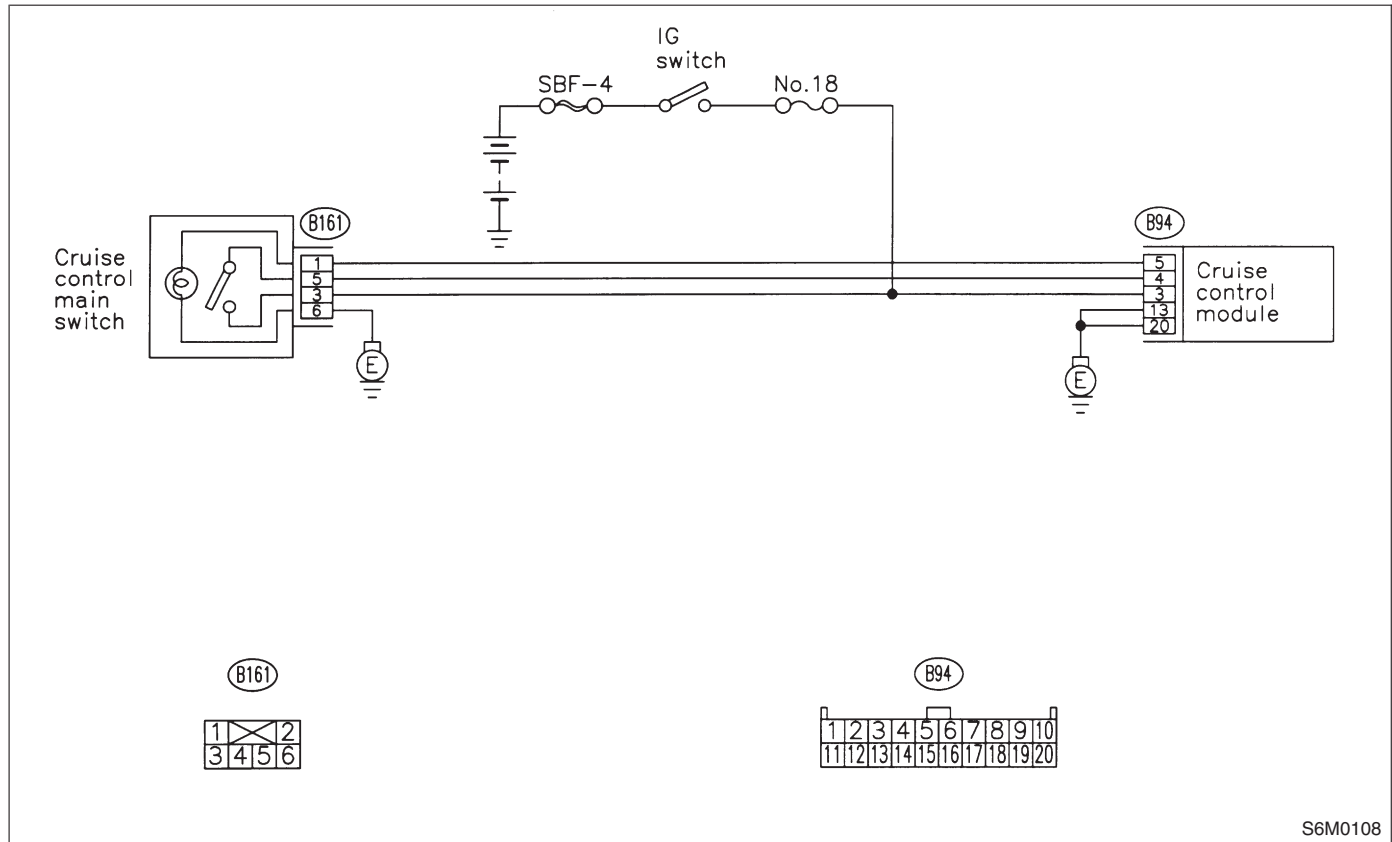
## C: CHECK CRUISE CONTROL MAIN SWITCH

S003619F49

### DIAGNOSIS:

- Faulty cruise control main switch, or open harness.

### WIRING DIAGRAM:





# DIAGNOSTICS CHART WITH SYMPTOM

Cruise Control System

| No. | Step                                                                                                                                                                                                                                                                                                                                                                                                           | Check                                                        | Yes                                                                           | No                                                                                                                                                             |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | <b>CHECK FUSE.</b><br>Check fuse No. 18.                                                                                                                                                                                                                                                                                                                                                                       | Is fuse No. 18 blown?                                        | Replace fuse No. 18. Go to step 2.                                            | Go to step 2.                                                                                                                                                  |
| 2   | <b>CHECK POWER SUPPLY.</b><br>1) Turn ignition switch to ON.<br>2) Measure voltage between fuse & relay box connector and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B152) No. 5 (+) — Chassis ground (-):</b>                                                                                                                                                                                  | Is voltage more than 10 V?                                   | Go to step 3.                                                                 | Replace fuse No. 18. When fuse No. 18 is blown again, repair shorted parts of circuit.                                                                         |
| 3   | <b>CHECK CRUISE CONTROL MAIN SWITCH.</b><br>1) Turn ignition switch to OFF.<br>2) Remove cruise control main switch and disconnect connector. <Ref. to CC-6 REMOVAL, Cruise Control Main Switch.><br>3) Turn ignition switch to ON.<br>4) Measure voltage between cruise control main switch connector and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B161) No. 3 (+) — Chassis ground (-):</b> | Is voltage more than 10 V?                                   | Go to step 4.                                                                 | Replace cruise control main switch.                                                                                                                            |
| 4   | <b>CHECK CRUISE CONTROL MAIN SWITCH.</b><br>Measure resistance between cruise control main switch terminals.<br><b>Terminals</b><br><b>No. 3 — No. 5:</b>                                                                                                                                                                                                                                                      | Is resistance less than 10 $\Omega$ ? (When switch is ON.)   | Go to step 5.                                                                 | Replace cruise control main switch.                                                                                                                            |
| 5   | <b>CHECK CRUISE CONTROL MAIN SWITCH.</b><br>Measure resistance between cruise control main switch terminals.<br><b>Terminals</b><br><b>No. 3 — No. 5:</b>                                                                                                                                                                                                                                                      | Is resistance less than 1 M $\Omega$ ? (When switch is OFF.) | Go to step 6.                                                                 | Replace cruise control main switch.                                                                                                                            |
| 6   | <b>CHECK HARNESS BETWEEN CRUISE CONTROL MAIN SWITCH CONNECTOR AND CHASSIS GROUND.</b><br>1) Connect connector.<br>2) Turn ignition switch to ON.<br>3) Turn cruise control main switch to ON.<br>4) Measure voltage between terminal of cruise control main switch and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B161) No. 3 (+) — Chassis ground (-):</b>                                     | Is voltage more than 10 V?                                   | Go to step 7.                                                                 | Repair or replace wiring harness.                                                                                                                              |
| 7   | <b>CHECK HARNESS BETWEEN CRUISE CONTROL MAIN SWITCH CONNECTOR AND CHASSIS GROUND.</b><br>Measure voltage between terminal of cruise control main switch chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B161) No. 5 (+) — Chassis ground (-):</b>                                                                                                                                                    | Is voltage more than 10 V?                                   | Go to step 8.                                                                 | Repair or replace wiring harness.                                                                                                                              |
| 8   | <b>CHECK HARNESS BETWEEN CRUISE CONTROL MODULE CONNECTOR AND CHASSIS GROUND.</b><br>Measure voltage between terminal of cruise control module and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B94) No. 4 (+) — Chassis ground (-):</b>                                                                                                                                                           | Is voltage more than 10 V?                                   | Replace cruise control module. <Ref. to CC-5 REMOVAL, Cruise Control Module.> | Repair or replace wiring harness.<br>NOTE:<br>Depress cruise control main switch with fingers while measuring voltage between (B161) No. 5 and chassis ground. |

# DIAGNOSTICS CHART WITH TROUBLE CODE

Cruise Control System

## 7. Diagnostics Chart with Trouble Code S003620

### A: LIST OF DIAGNOSTIC TROUBLE CODE S003620E40

| Diagnostic code | Item                   | Contents of diagnosis                                                                                                                                                 | Index No.                                                                                                                                 |
|-----------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 11              | BRAKE SW/STOP SW       | Input signals from brake switch "OFF", stop light switch "ON"<br>(Brake pedal is depressed.)                                                                          | <Ref. to CC-20 DIAGNOSTIC TROUBLE CODE 11 — BRAKE SWITCH, STOP LIGHT SWITCH —, Diagnostics Chart with Trouble Code.>                      |
| 12              | CLUTCH SW/INHIBITOR SW | Input signals from clutch switch "OFF" (MT), or inhibitor switch "P or N" (AT)<br>[Clutch pedal is depressed (MT), or selector lever is set to P or N position (AT).] | <Ref. to CC-22 DIAGNOSTIC TROUBLE CODE 12 — CLUTCH SWITCH, INHIBITOR SWITCH —, Diagnostics Chart with Trouble Code.>                      |
| 13              | LOW SPEED LIMIT        | Low-speed control limiter                                                                                                                                             | <Ref. to CC-24 DIAGNOSTIC TROUBLE CODE 13 AND 24 — SPEED SENSOR SYSTEM —, Diagnostics Chart with Trouble Code.>                           |
| 14              | CANCEL SW              | Input signal from cancel switch<br>(faulty SET/COAST switch or RESUME/ACCEL switch)                                                                                   | <Ref. to CC-27 DIAGNOSTIC TROUBLE CODE 14 — SET/COAST SWITCH, RESUME/ACCEL SWITCH, CANCEL SWITCH —, Diagnostics Chart with Trouble Code.> |
| 21              | VACUUM VALVE           | Faulty vacuum valve or valve drive system                                                                                                                             | <Ref. to CC-30 DIAGNOSTIC TROUBLE CODE 21, 22 AND 23 — VACUUM VALVE, VENT 2 VALVE, VENT 1 VALVE —, Diagnostics Chart with Trouble Code.>  |
| 22              | VENT 2 VALVE           | Faulty vent 2 valve or valve drive system                                                                                                                             | <Ref. to CC-30 DIAGNOSTIC TROUBLE CODE 21, 22 AND 23 — VACUUM VALVE, VENT 2 VALVE, VENT 1 VALVE —, Diagnostics Chart with Trouble Code.>  |
| 23              | VENT 1 VALVE           | Faulty vent 1 valve or valve drive system                                                                                                                             | <Ref. to CC-30 DIAGNOSTIC TROUBLE CODE 21, 22 AND 23 — VACUUM VALVE, VENT 2 VALVE, VENT 1 VALVE —, Diagnostics Chart with Trouble Code.>  |
| 24              | SPEED SENSOR           | Faulty vehicle speed sensor 2 (MT) or transmission control module (AT)                                                                                                | <Ref. to CC-24 DIAGNOSTIC TROUBLE CODE 13 AND 24 — SPEED SENSOR SYSTEM —, Diagnostics Chart with Trouble Code.>                           |

# DIAGNOSTICS CHART WITH TROUBLE CODE

Cruise Control System

| Diagnostic code | Item           | Contents of diagnosis                            | Index No.                                                                                                                          |
|-----------------|----------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 25              | CONTROL MODULE | Faulty CPU RAM included in cruise control module | <Ref. to CC-32 DIAGNOSTIC TROUBLE CODE 25 — CRUISE CONTROL MODULE BUILT-IN RELAY, CPU RAM —, Diagnostics Chart with Trouble Code.> |

# DIAGNOSTICS CHART WITH TROUBLE CODE

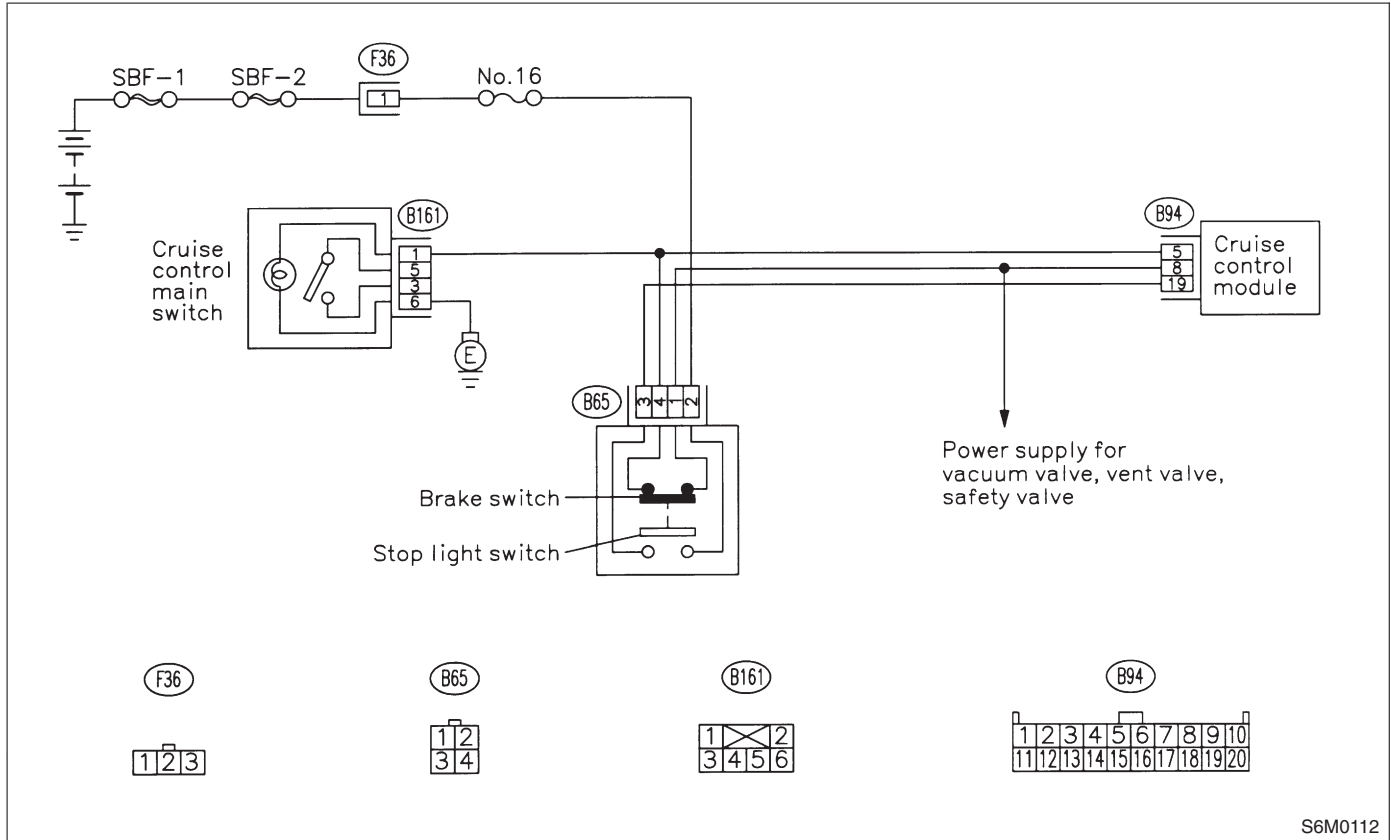
Cruise Control System

## B: DIAGNOSTIC TROUBLE CODE 11 — BRAKE SWITCH, STOP LIGHT SWITCH — S003620F50

### DIAGNOSIS:

- Failure or disconnection of the stop light switch and brake switch.

### WIRING DIAGRAM:



S6M0112

# DIAGNOSTICS CHART WITH TROUBLE CODE

Cruise Control System

| No. | Step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Check                                                                   | Yes                                                                           | No                                                                               |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| 1   | <b>CHECK BRAKE SWITCH.</b><br>1) Turn ignition switch to ON.<br>2) Turn cruise control main switch to ON.<br>3) Apply parking brake securely.<br>4) Set select monitor in "Current Data Display & Save" mode.<br>5) Depress the brake pedal and check signals for proper operation.<br>(1) The Stop Lamp Switch shown on the display turns from "OFF" to "ON".<br>(2) The Brake Switch shown on the display turns from "OFF" to "ON".<br>6) Release the brake pedal.<br>7) Remove connector of stop and brake switch.<br>8) Check circuit between brake switch terminal.<br><b>Terminals</b><br><b>No. 1 — No. 4: (Brake switch)</b> | Is resistance less than 1 $\Omega$ ? (When brake pedal is released.)    | Go to step 2.                                                                 | Replace brake and stop light switch. <Ref. to BR-57 REMOVAL, Stop Light Switch.> |
| 2   | <b>CHECK BRAKE SWITCH.</b><br>Check circuit between brake switch terminal.<br><b>Terminals</b><br><b>No. 1 — No. 4: (Brake switch)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Is resistance more than 1 M $\Omega$ ? (When brake pedal is depressed.) | Go to step 3.                                                                 | Replace brake and stop light switch. <Ref. to BR-57 REMOVAL, Stop Light Switch.> |
| 3   | <b>CHECK STOP LIGHT SWITCH.</b><br>Check circuit between stop light switch terminal.<br><b>Terminals</b><br><b>No. 2 — No. 3: (Stop light switch)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Is resistance more than 1 M $\Omega$ ? (When brake pedal is released.)  | Go to step 4.                                                                 | Replace brake and stop light switch. <Ref. to BR-57 REMOVAL, Stop Light Switch.> |
| 4   | <b>CHECK STOP LIGHT SWITCH.</b><br>Check circuit between stop light switch terminal.<br><b>Terminals</b><br><b>No. 2 — No. 3: (Stop light switch)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Is resistance less than 1 $\Omega$ ? (When brake pedal is depressed.)   | Replace cruise control module. <Ref. to CC-5 REMOVAL, Cruise Control Module.> | Replace brake and stop light switch. <Ref. to BR-57 REMOVAL, Stop Light Switch.> |

# DIAGNOSTICS CHART WITH TROUBLE CODE

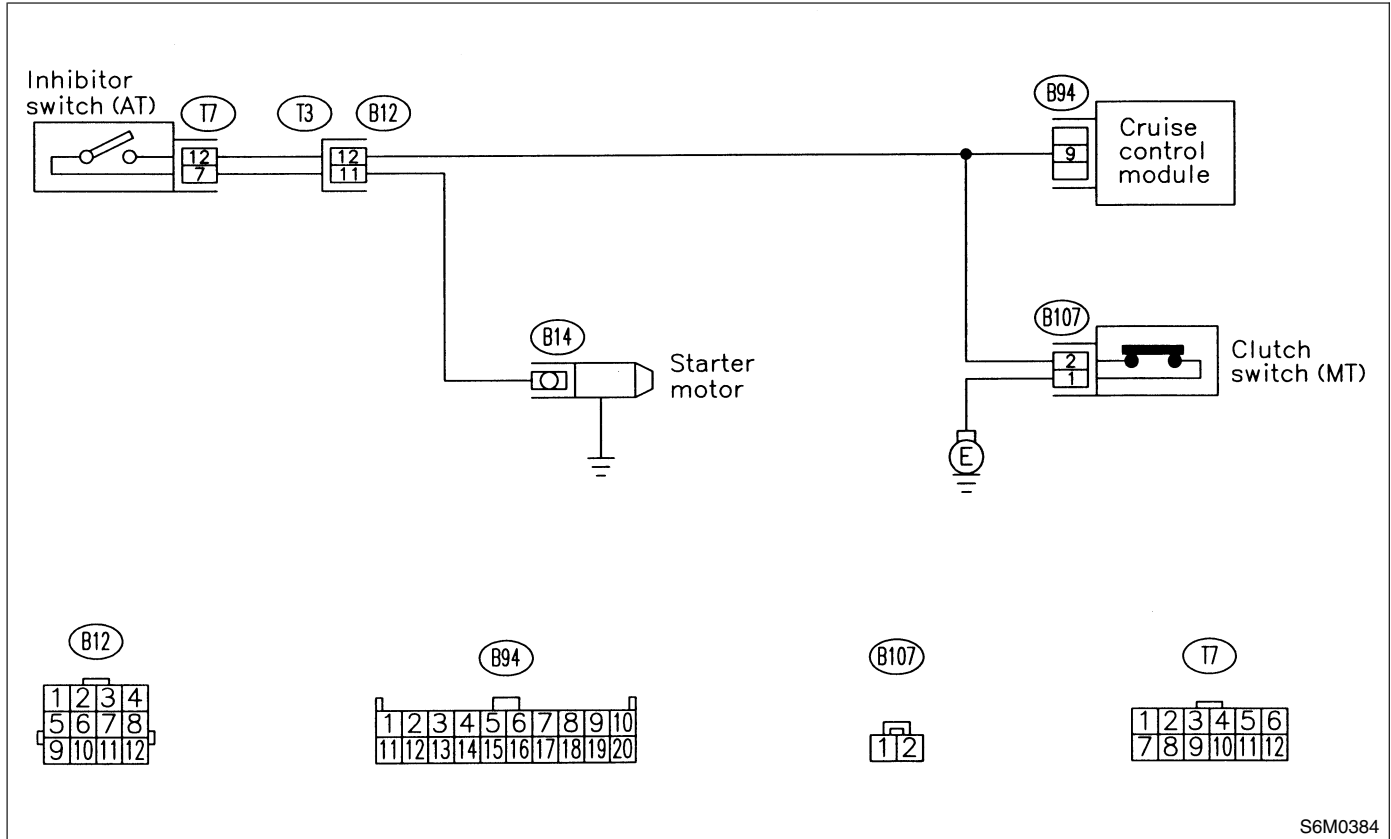
Cruise Control System

## C: DIAGNOSTIC TROUBLE CODE 12 — CLUTCH SWITCH, INHIBITOR SWITCH — S003620F51

### DIAGNOSIS:

- Failure or disconnection of the clutch switch. (MT)
- Failure or disconnection of the inhibitor switch. (AT)

### WIRING DIAGRAM:



# DIAGNOSTICS CHART WITH TROUBLE CODE

Cruise Control System

| No. | Step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Check                                                                          | Yes                                                                              | No                                                                                                              |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| 1   | <b>CHECK CLUTCH SWITCH. (MT)</b><br>1) Turn ignition switch to ON.<br>2) Turn cruise control main switch to ON.<br>3) Apply parking brake securely.<br>4) Set select monitor in "Current Data Display & Save" mode.<br>5) Depress the clutch pedal and check signal for proper operation. (MT)<br>The Clutch/Inhibitor Switch shown on the display turns from "ON" to "OFF".<br>6) Disconnect connector of clutch switch.<br>7) Check continuity of the clutch switch.<br><b>Terminals</b><br><b>No. 1 — No. 2:</b>                                                                                             | Is resistance less than 10 $\Omega$ ? (When clutch pedal is released.)         | Go to step 2.                                                                    | Replace clutch switch.                                                                                          |
| 2   | <b>CHECK CLUTCH SWITCH. (MT)</b><br>Check continuity of the clutch switch.<br><b>Terminals</b><br><b>No. 1 — No. 2:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Is resistance more than 1 M $\Omega$ ? (When clutch pedal is depressed.)       | Replace cruise control module.<br><Ref. to CC-5 REMOVAL, Cruise Control Module.> | Replace clutch switch.                                                                                          |
| 3   | <b>CHECK INHIBITOR SWITCH. (AT)</b><br>1) Turn ignition switch to ON.<br>2) Turn cruise control main switch to ON.<br>3) Apply parking brake securely.<br>4) Set select monitor in "Current Data Display & Save" mode.<br>5) Set the selector lever from P or N position to D position and check signal for proper operation. (AT)<br>The Clutch/Inhibitor Switch shown on the display turns from "ON" to "OFF".<br>6) Set the selector lever to P or N position.<br>7) Disconnect connector of inhibitor switch.<br>8) Check continuity of the inhibitor switch.<br><b>Terminals</b><br><b>No. 7 — No. 12:</b> | Is resistance less than 10 $\Omega$ ? (When selector lever is in P or N.)      | Go to step 4.                                                                    | Replace inhibitor switch. <Ref. to AT-31 REMOVAL, Inhibitor Switch.><br>Repair inhibitor switch wiring harness. |
| 4   | <b>CHECK INHIBITOR SWITCH. (AT)</b><br>Check continuity of the inhibitor switch.<br><b>Terminals</b><br><b>No. 7 — No. 12:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Is resistance more than 1 M $\Omega$ ? (When selector lever is not in P or N.) | Replace cruise control module.<br><Ref. to CC-5 REMOVAL, Cruise Control Module.> | Replace inhibitor switch. <Ref. to AT-31 REMOVAL, Inhibitor Switch.><br>Repair inhibitor switch wiring harness. |

# DIAGNOSTICS CHART WITH TROUBLE CODE

Cruise Control System

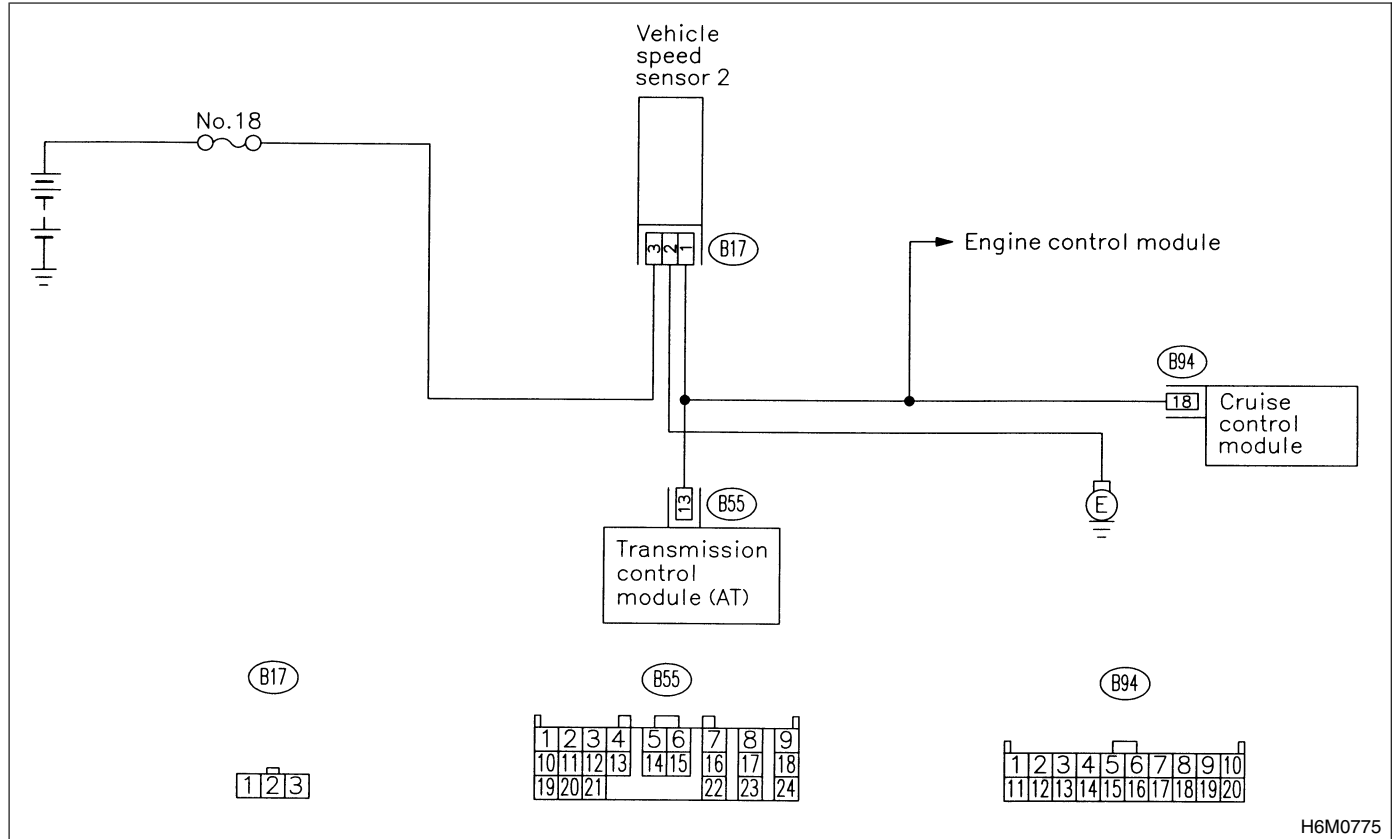
## D: DIAGNOSTIC TROUBLE CODE 13 AND 24 — SPEED SENSOR SYSTEM —

S003620F52

### DIAGNOSIS:

- Disconnection or short circuit of vehicle speed sensor 2 (MT model) or transmission control module (AT model).

### WIRING DIAGRAM:



H6M0775



# DIAGNOSTICS CHART WITH TROUBLE CODE

Cruise Control System

| No. | Step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Check                             | Yes                                                                              | No                                                                         |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 1   | <b>CHECK TRANSMISSION TYPE.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Is the transmission type MT?      | Go to step 2.                                                                    | Go to step 6.                                                              |
| 2   | <b>CHECK HARNESS CONNECTOR BETWEEN CRUISE CONTROL MODULE AND VEHICLE SPEED SENSOR 2.</b><br>1) Disconnect connector from vehicle speed sensor 2 and cruise control module.<br>2) Measure resistance of harness connector between vehicle speed sensor 2 and cruise control module.<br><b>Connector &amp; terminal</b><br><b>(B17) No. 1 — (B94) No. 18:</b>                                                                                                                                                                     | Is the resistance less than 10 Ω? | Go to step 3.                                                                    | Repair wiring harness.                                                     |
| 3   | <b>CHECK HARNESS CONNECTOR BETWEEN BATTERY AND VEHICLE SPEED SENSOR 2.</b><br>1) Turn ignition switch to ON.<br>2) Measure voltage between vehicle speed sensor 2 connector (B17) and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B17) No. 3 (+) — Chassis ground (-):</b>                                                                                                                                                                                                                                        | Is the voltage more than 10 V?    | Go to step 4.                                                                    | Repair harness connector between battery and vehicle speed sensor 2.       |
| 4   | <b>CHECK HARNESS CONNECTOR BETWEEN VEHICLE SPEED SENSOR 2 AND ENGINE GROUND.</b><br>1) Turn ignition switch to OFF.<br>2) Measure resistance between vehicle speed sensor 2 connector (B17) and engine ground.<br><b>Connector &amp; terminal</b><br><b>(B17) No. 2 (+) — Engine ground (-):</b>                                                                                                                                                                                                                                | Is the resistance less than 10 Ω? | Go to step 5.                                                                    | Repair harness connector between vehicle speed sensor 2 and engine ground. |
| 5   | <b>CHECK VEHICLE SPEED SENSOR 2.</b><br>1) Connect connector to vehicle speed sensor 2.<br>2) Set the vehicle on free roller, or lift-up the vehicle and support with safety stands.<br><b>WARNING:</b><br><b>Be careful not to be caught up by the running wheels.</b><br>3) Set oscilloscope to vehicle speed sensor 2 connector terminals.<br>Positive probe; (B17) No. 1<br>Earth lead; (B17) No. 2<br>4) Drive the vehicle at speed greater than 20 km/h (12 MPH).<br>5) Measure signal voltage indicated on oscilloscope. | Is the voltage more than 5 V?     | Replace cruise control module.<br><Ref. to CC-5 REMOVAL, Cruise Control Module.> | Replace vehicle speed sensor 2.                                            |

# DIAGNOSTICS CHART WITH TROUBLE CODE

## Cruise Control System

| No. | Step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Check                                                             | Yes                                                                              | No                                                                                                         |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 6   | <b>CHECK HARNESS CONNECTOR BETWEEN CRUISE CONTROL MODULE AND AUTOMATIC TRANSMISSION CONTROL MODULE.</b><br>1) Disconnect connector from automatic transmission control module and cruise control module.<br>2) Measure resistance between cruise control module connector and automatic transmission control module connector.<br><b>CAUTION:</b><br><b>To measure the voltage and/or resistance, use a tapered pin with a diameter of less than 0.64 mm (0.025 in). Do not insert the pin more than 5 mm (0.20 in).</b><br><i>Connector &amp; terminal</i><br><i>(B94) No. 18 — (B55) No. 13:</i>                                                                                                                                            | Is the resistance less than 10 $\Omega$ ?                         | Go to step 7.                                                                    | Repair harness connector between cruise control module and automatic transmission control module.          |
| 7   | <b>CHECK AUTOMATIC TRANSMISSION CONTROL MODULE.</b><br>1) Connect connector to automatic transmission control module.<br>2) Set the vehicle on free roller, or lift-up the vehicle and support with safety stands.<br><b>WARNING:</b><br><b>Be careful not to be caught by the running wheels.</b><br>3) Drive the vehicle faster than 10 km/h (6 MPH).<br>4) Measure voltage between automatic transmission control module connector (B55) and chassis ground.<br><b>CAUTION:</b><br><b>To measure the voltage and/or resistance, use a tapered pin with a diameter of less than 0.64 mm (0.025 in). Do not insert the pin more than 5 mm (0.20 in).</b><br><i>Connector &amp; terminal</i><br><i>(B55) No. 13 (+) — Chassis ground (-):</i> | Is the voltage less than 1 V $\longleftrightarrow$ more than 4 V? | Replace cruise control module.<br><Ref. to CC-5 REMOVAL, Cruise Control Module.> | Replace automatic transmission control module. <Ref. to AT-41 REMOVAL, Transmission Control Module (TCM).> |

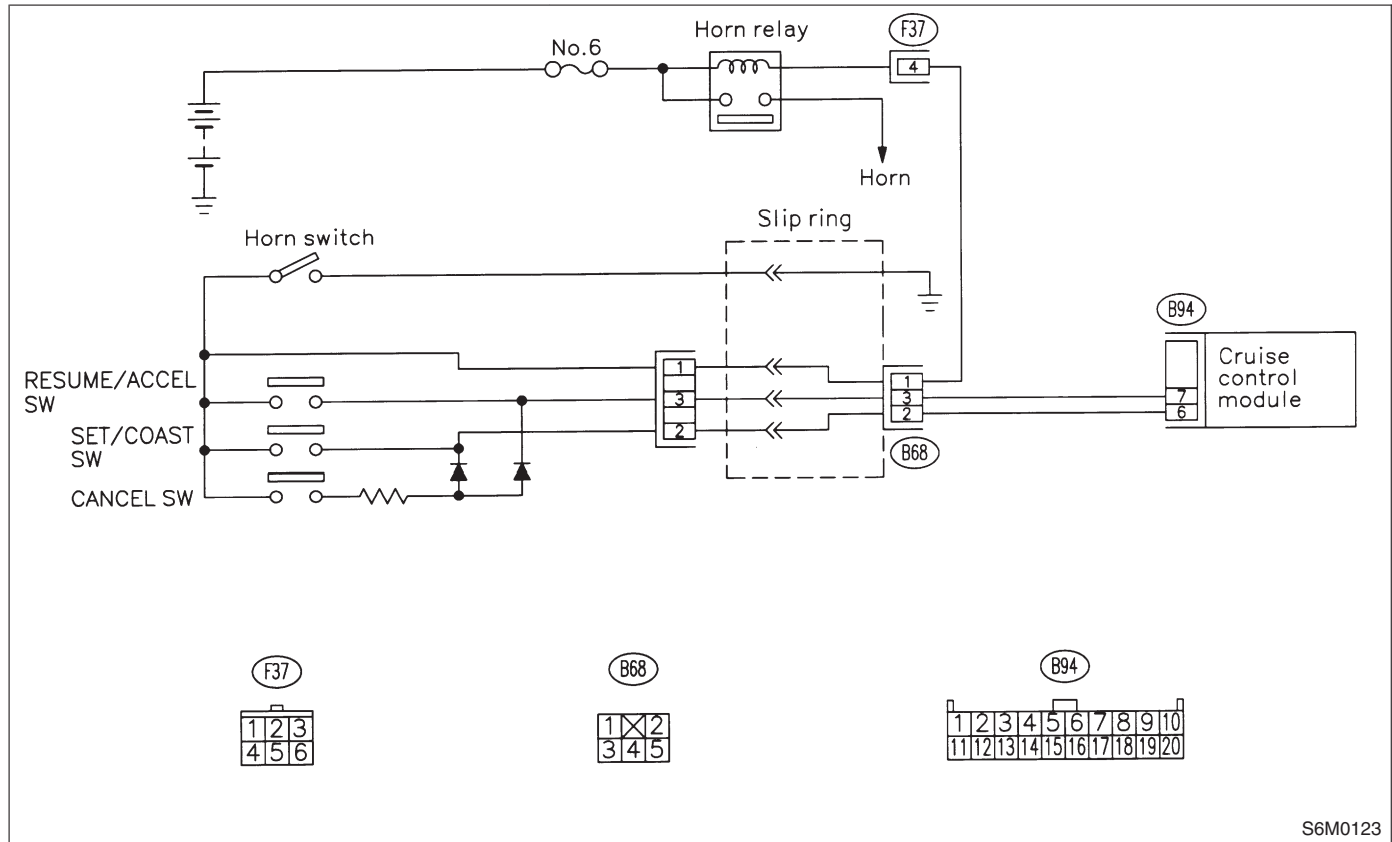
## E: DIAGNOSTIC TROUBLE CODE 14 — SET/COAST SWITCH, RESUME/ACCEL SWITCH, CANCEL SWITCH —

S003620F53

### DIAGNOSIS:

- Short circuit inside the SET SW and RESUME SW.

### WIRING DIAGRAM:



S6M0123

# DIAGNOSTICS CHART WITH TROUBLE CODE

## Cruise Control System

| No. | Step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Check                                                           | Yes           | No                                                                                                                                                  |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | <b>CHECK POWER SUPPLY.</b><br>1) Turn ignition switch to ON.<br>2) Turn cruise control main switch to ON.<br>3) Set select monitor in "Current Data Display & Save" mode.<br>4) Check signals for proper operation.<br>(1) When pushing the SET/COAST switch:<br>The SET/COAST switch shown on the display turns from "OFF" to "ON".<br>(2) When pushing the RESUME/ACCEL switch:<br>The RESUME/ACCEL switch shown on the display turns from "OFF" to "ON".<br>5) Turn ignition switch to OFF.<br>6) Disconnect connector from cruise control command switch.<br>7) Turn ignition switch to ON.<br>8) Measure voltage between cruise control command switch connector and chassis ground.<br><b>Terminals</b><br><b>No. 1 (+) — Chassis ground (-):</b> | Is voltage more than 10 V?                                      | Go to step 2. | Repair or replace wiring harness between fuse & relay box and cruise control command switch. <Ref. to CC-7 REMOVAL, Cruise Control Command Switch.> |
| 2   | <b>CHECK CRUISE CONTROL COMMAND SWITCH.</b><br>1) Turn ignition switch to OFF.<br>2) Connect connector of cruise control command switch.<br>3) Turn ignition switch to ON.<br>4) Measure voltage between cruise control command switch connector and chassis ground.<br><b>Terminals</b><br><b>No. 2 (+) — Chassis ground (-):</b>                                                                                                                                                                                                                                                                                                                                                                                                                      | Is voltage more than 10 V?<br>(When SET/COAST switch is ON.)    | Go to step 3. | Replace cruise control command switch. <Ref. to CC-7 REMOVAL, Cruise Control Command Switch.>                                                       |
| 3   | <b>CHECK CRUISE CONTROL COMMAND SWITCH.</b><br>Measure voltage between cruise control command switch connector and chassis ground.<br><b>Terminals</b><br><b>No. 3 (+) — Chassis ground (-):</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Is voltage more than 10 V?<br>(When RESUME/ACCEL switch is ON.) | Go to step 4. | Replace cruise control command switch. <Ref. to CC-7 REMOVAL, Cruise Control Command Switch.>                                                       |
| 4   | <b>CHECK CRUISE CONTROL COMMAND SWITCH.</b><br>Measure voltage between cruise control command switch connector and chassis ground.<br><b>Terminals</b><br><b>No. 2 (+) — Chassis ground (-):</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Is voltage more than 10 V?<br>(When CANCEL switch is ON.)       | Go to step 5. | Replace cruise control command switch. <Ref. to CC-7 REMOVAL, Cruise Control Command Switch.>                                                       |
| 5   | <b>CHECK CRUISE CONTROL COMMAND SWITCH.</b><br>Measure voltage between cruise control command switch connector and chassis ground.<br><b>Terminals</b><br><b>No. 3 (+) — Chassis ground (-):</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Is voltage more than 10 V?<br>(When CANCEL switch is ON.)       | Go to step 6. | Replace cruise control command switch. <Ref. to CC-7 REMOVAL, Cruise Control Command Switch.>                                                       |

# DIAGNOSTICS CHART WITH TROUBLE CODE

Cruise Control System

| No. | Step                                                                                                                                                                                                                                                                                                                                                     | Check                                                                     | Yes                                                                           | No                                                                                            |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 6   | <b>CHECK CRUISE CONTROL COMMAND SWITCH.</b><br>1) Turn ignition switch to OFF.<br>2) Disconnect connector from cruise control command switch.<br>3) Measure resistance between terminals of cruise control command switch connector (switch side) to check the switch operation.<br><b>Terminals</b><br><b>No. 1 — No. 2:</b>                            | Is resistance less than 10 $\Omega$ ? (When SET/COAST switch is ON.)      | Go to step 7.                                                                 | Replace cruise control command switch. <Ref. to CC-7 REMOVAL, Cruise Control Command Switch.> |
| 7   | <b>CHECK CRUISE CONTROL COMMAND SWITCH.</b><br>Measure resistance between terminals of cruise control command switch connector (switch side) to check the switch operation.<br><b>Terminals</b><br><b>No. 1 — No. 2:</b>                                                                                                                                 | Is resistance more than 1 M $\Omega$ ? (When SET/COAST switch is OFF.)    | Go to step 8.                                                                 | Replace cruise control command switch. <Ref. to CC-7 REMOVAL, Cruise Control Command Switch.> |
| 8   | <b>CHECK CRUISE CONTROL COMMAND SWITCH.</b><br>Measure resistance between terminals of cruise control command switch connector (switch side) to check the switch operation.<br><b>Terminals</b><br><b>No. 1 — No. 3:</b>                                                                                                                                 | Is resistance less than 10 $\Omega$ ? (When RESUME/ACCEL switch is ON.)   | Go to step 9.                                                                 | Replace cruise control command switch. <Ref. to CC-7 REMOVAL, Cruise Control Command Switch.> |
| 9   | <b>CHECK CRUISE CONTROL COMMAND SWITCH.</b><br>Measure resistance between terminals of cruise control command switch connector (switch side) to check the switch operation.<br><b>Terminals</b><br><b>No. 1 — No. 3:</b>                                                                                                                                 | Is resistance more than 1 M $\Omega$ ? (When RESUME/ACCEL switch is OFF.) | Go to step 10.                                                                | Replace cruise control command switch. <Ref. to CC-7 REMOVAL, Cruise Control Command Switch.> |
| 10  | <b>CHECK HARNESS CONNECTOR BETWEEN CRUISE CONTROL COMMAND SWITCH AND CRUISE CONTROL MODULE.</b><br>1) Disconnect connector from cruise control module.<br>2) Measure resistance of harness connector between cruise control command switch and cruise control module.<br><b>Connector &amp; terminal</b><br><b>No. 2 (command switch) — (B94) No. 6:</b> | Is resistance less than 10 $\Omega$ ?                                     | Go to step 11.                                                                | Repair or replace wiring harness.                                                             |
| 11  | <b>CHECK HARNESS CONNECTOR BETWEEN CRUISE CONTROL COMMAND SWITCH AND CRUISE CONTROL MODULE.</b><br>Measure resistance of harness connector between cruise control command switch and cruise control module.<br><b>Connector &amp; terminal</b><br><b>No. 3 (command switch) — (B94) No. 7:</b>                                                           | Is resistance less than 10 $\Omega$ ?                                     | Replace cruise control module. <Ref. to CC-5 REMOVAL, Cruise Control Module.> | Repair or replace wiring harness.                                                             |

## DIAGNOSTICS CHART WITH TROUBLE CODE

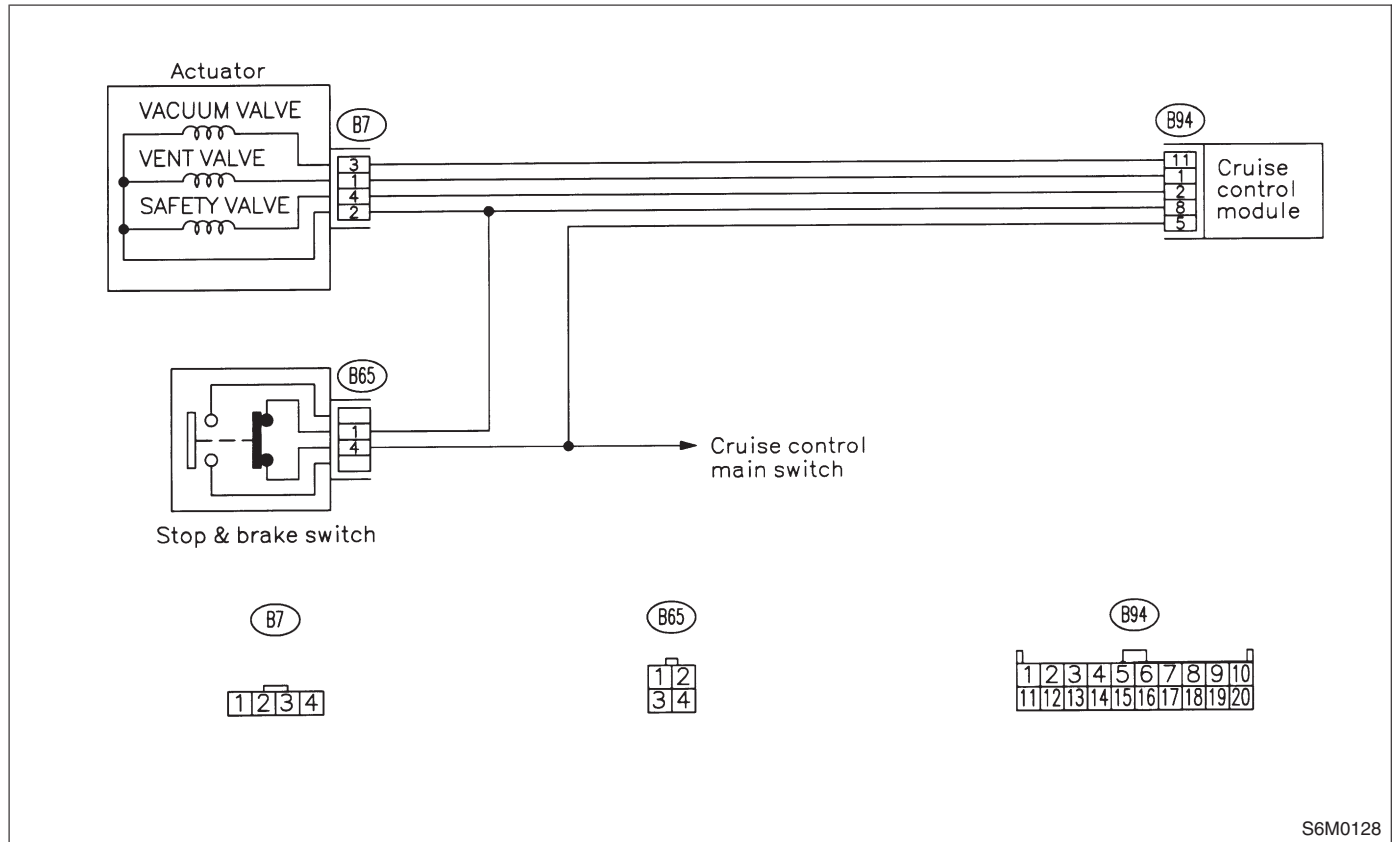
Cruise Control System

### F: DIAGNOSTIC TROUBLE CODE 21, 22 AND 23 — VACUUM VALVE, VENT 2 VALVE, VENT 1 VALVE — S003620F54

#### DIAGNOSIS:

- Open or poor contact of vacuum valve, vent 2 valve and vent 1 valve.

#### WIRING DIAGRAM:



# DIAGNOSTICS CHART WITH TROUBLE CODE

Cruise Control System

| No. | Step                                                                                                                                                                                                                                                                                                                                                                                       | Check                                 | Yes                                                                              | No                                                                           |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| 1   | <b>MEASURE RESISTANCE OF VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE.</b><br>1) Disconnect connector from actuator.<br>2) Measure resistance of vacuum valve, vent 2 valve and vent 1 valve.<br><b>Terminals</b><br><b>No. 2 — No. 3:</b>                                                                                                                                                  | Is resistance less than 22 $\Omega$ ? | Go to step 2.                                                                    | Replace actuator.<br><Ref. to CC-4 REMOVAL, Actuator.>                       |
| 2   | <b>MEASURE RESISTANCE OF VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE.</b><br>Measure resistance of vacuum valve, vent 2 valve and vent 1 valve.<br><b>Terminals</b><br><b>No. 2 — No. 1:</b>                                                                                                                                                                                               | Is resistance less than 55 $\Omega$ ? | Go to step 3.                                                                    | Replace actuator.<br><Ref. to CC-4 REMOVAL, Actuator.>                       |
| 3   | <b>MEASURE RESISTANCE OF VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE.</b><br>Measure resistance of vacuum valve, vent 2 valve and vent 1 valve.<br><b>Terminals</b><br><b>No. 2 — No. 4:</b>                                                                                                                                                                                               | Is resistance less than 55 $\Omega$ ? | Go to step 4.                                                                    | Replace actuator.<br><Ref. to CC-4 REMOVAL, Actuator.>                       |
| 4   | <b>PERFORM A CIRCUIT TEST IN HARNESS BETWEEN ACTUATOR (VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE) AND CRUISE CONTROL MODULE.</b><br>1) Disconnect connector from cruise control module.<br>2) Measure resistance of harness connector between cruise control module, vacuum valve, vent 2 valve and vent 1 valve.<br><b>Connector &amp; terminal</b><br><b>(B7) No. 1 — (B94) No. 1:</b> | Is resistance less than 10 $\Omega$ ? | Go to step 5.                                                                    | Repair or replace wiring harness between actuator and cruise control module. |
| 5   | <b>PERFORM A CIRCUIT TEST IN HARNESS BETWEEN ACTUATOR (VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE) AND CRUISE CONTROL MODULE.</b><br>Measure resistance of harness connector between cruise control module, vacuum valve, vent 2 valve and vent 1 valve.<br><b>Connector &amp; terminal</b><br><b>(B7) No. 2 — (B94) No. 8:</b>                                                           | Is resistance less than 10 $\Omega$ ? | Go to step 6.                                                                    | Repair or replace wiring harness between actuator and cruise control module. |
| 6   | <b>PERFORM A CIRCUIT TEST IN HARNESS BETWEEN ACTUATOR (VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE) AND CRUISE CONTROL MODULE.</b><br>Measure resistance of harness connector between cruise control module, vacuum valve, vent 2 valve and vent 1 valve.<br><b>Connector &amp; terminal</b><br><b>(B7) No. 3 — (B94) No. 11:</b>                                                          | Is resistance less than 10 $\Omega$ ? | Go to step 7.                                                                    | Repair or replace wiring harness between actuator and cruise control module. |
| 7   | <b>PERFORM A CIRCUIT TEST IN HARNESS BETWEEN ACTUATOR (VACUUM VALVE, VENT 2 VALVE AND VENT 1 VALVE) AND CRUISE CONTROL MODULE.</b><br>Measure resistance of harness connector between cruise control module, vacuum valve, vent 2 valve and vent 1 valve.<br><b>Connector &amp; terminal</b><br><b>(B7) No. 4 — (B94) No. 2:</b>                                                           | Is resistance less than 10 $\Omega$ ? | Replace cruise control module.<br><Ref. to CC-5 REMOVAL, Cruise Control Module.> | Repair or replace wiring harness between actuator and cruise control module. |

## DIAGNOSTICS CHART WITH TROUBLE CODE

Cruise Control System

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### **G: DIAGNOSTIC TROUBLE CODE 25 — CRUISE CONTROL MODULE BUILT-IN RELAY, CPU RAM —** S003620F55

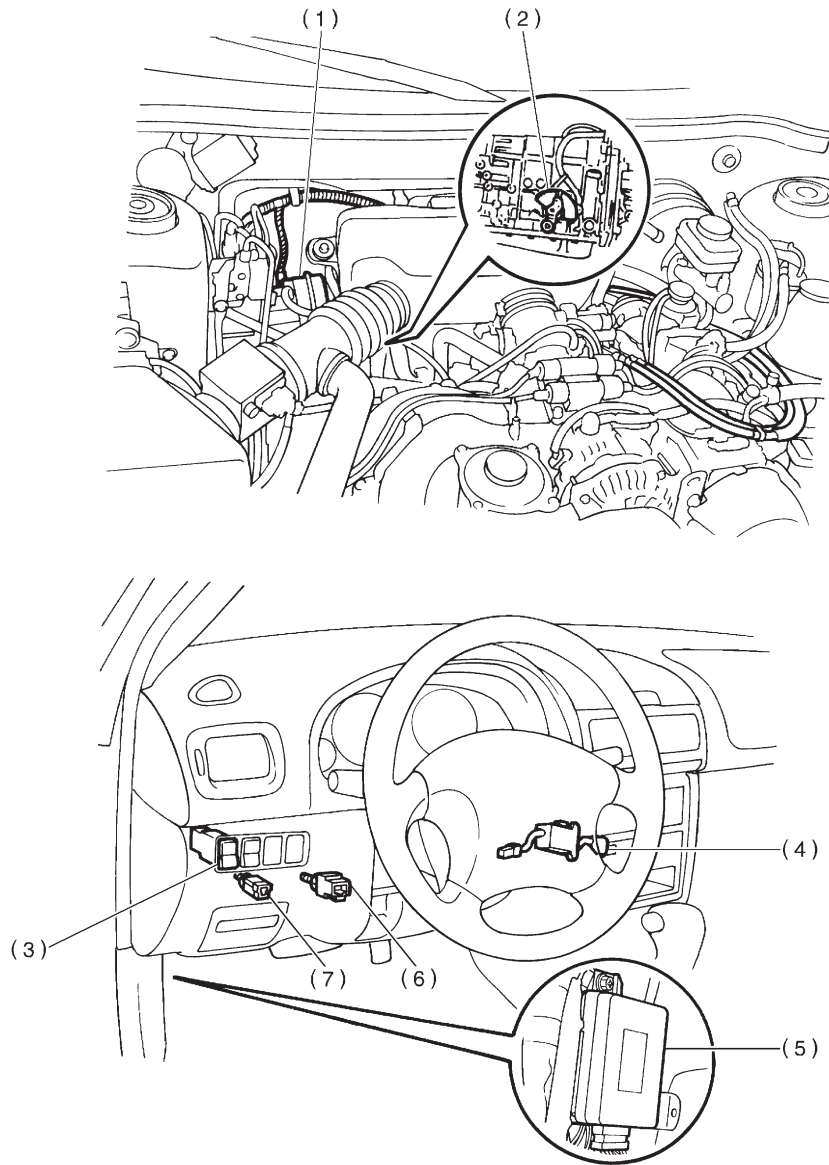
#### **DIAGNOSIS:**

- Poor welding of built-in relay of cruise control module.
- Failure of built-in CPU RAM of cruise control module.



### 3. Electrical Components Location S003507

#### A: LOCATION S003507A13



S6M0106A

- (1) Actuator (with valves)
- (2) Inhibitor switch (AT)
- (3) Cruise control main switch
- (4) Cruise control command switch
- (5) Cruise control module
- (6) Stop and brake switch
- (7) Clutch switch (MT)

## 2. General Description S003001

### A: CAUTION S003001A03

#### 1. SUPPLEMENTAL RESTRAINT SYSTEM "AIRBAG" S003001A0301

Airbag system wiring harness is routed near the cruise control module and cruise control command switch.

#### CAUTION:

- All Airbag system wiring harness and connectors are colored yellow. Do not use electrical test equipment on these circuits.
- Be careful not to damage Airbag system wiring harness when servicing the cruise control module and cruise control command switch.

### B: INSPECTION S003001A10

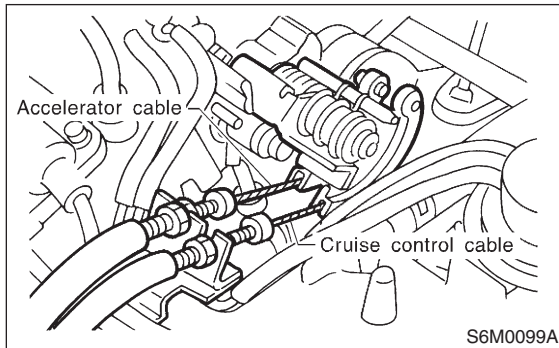
#### 1. BATTERY S003001A1002

Measure battery voltage and specific gravity of electrolyte.

**Standard voltage:**  
**12 V, or more**

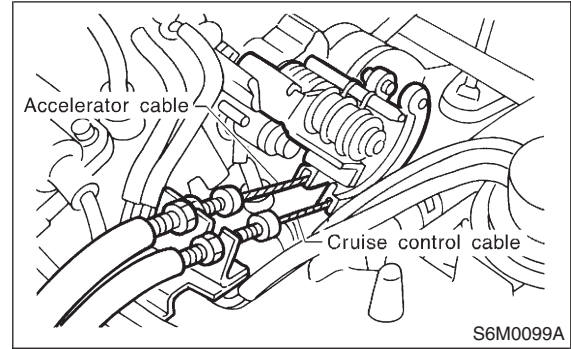
**Specific gravity:**  
**Above 1.260**

#### 2. CRUISE CONTROL CABLE S003001A1003



Check the cruise control cable installation.  
If NG, install the cable securely.

## 3. ACCELERATOR CABLE S003001A1004

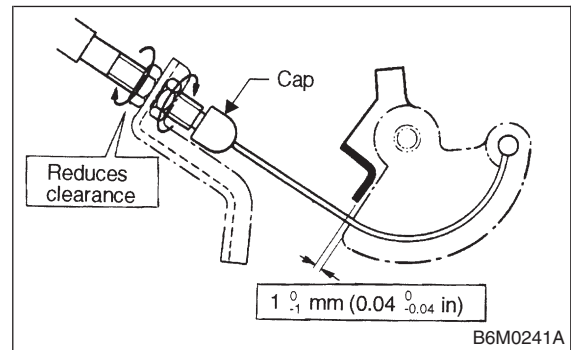


Check movement of the accelerator cable when the cruise control throttle is moved by hand.  
If NG, check throttle cam.

### 4. THROTTLE CAM S003001A1005

Check that the throttle cam moves smoothly.  
If NG, repair throttle cam.

### 5. CABLE FREE PLAY S003001A1006



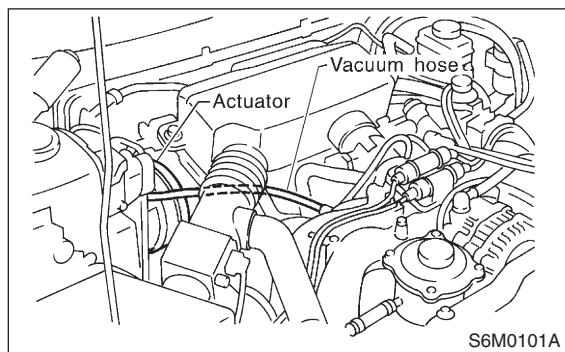
Check that the throttle cam-to-lever clearance is within specifications.

**Throttle cam-to-lever clearance:**  
**0 — 1 mm (0 — 0.04 in)**

If NG, adjust the clearance with the adjust nut.

#### NOTE:

Check that the cap is positioned in the groove.

**6. VACUUM HOSE** S003001A1007

Check vacuum hose (which connects actuator and intake manifold).  
If NG, replace vacuum hose.

**7. ACTUATOR** S003001A1008

| No. | Step                                                                                                                                                                                                                                                                                               | Check                                                                        | Yes           | No                                                                                                                                                                                                                                                                                                    |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | <b>CHECK FUNCTION OF ACTUATOR.</b><br>1) Disconnect vacuum hose from actuator.<br>2) Connect vacuum pump as shown in figure.<br>3) Make sure that cruise control cable moves smoothly and quickly when a vacuum pressure of 40.0 kPa (300 mmHg, 11.81 inHg) is applied to actuator.                | Does cruise control cable have a stroke of 35 mm (1.38 in)?                  | Go to step 2. | Replace actuator.<br><Ref. to CC-4 REMOVAL, Actuator.> Go to step 2.<br><b>NOTE:</b><br>● When vacuum pressure is released from condition 3) above, make sure the cable returns to its original position smoothly and quickly.<br>● After inspection, disconnect vacuum pump and connect vacuum hose. |
| 2   | <b>MEASURE RESISTANCE OF VALVE.</b><br>1) Disconnect connector from actuator.<br>2) Measure resistance between terminals of actuator.<br><b>Terminals</b><br><b>No. 2 — No. 3:</b>                                                                                                                 | Is resistance less than 100 $\Omega$ ?                                       | Go to step 3. | Replace actuator.<br><Ref. to CC-4 REMOVAL, Actuator.>                                                                                                                                                                                                                                                |
| 3   | <b>MEASURE RESISTANCE OF VALVE.</b><br>Measure resistance between terminals of actuator.<br><b>Terminals</b><br><b>No. 2 — No. 1:</b>                                                                                                                                                              | Is resistance less than 69 $\Omega$ ?                                        | Go to step 4. | Replace actuator.<br><Ref. to CC-4 REMOVAL, Actuator.>                                                                                                                                                                                                                                                |
| 4   | <b>MEASURE RESISTANCE OF VALVE.</b><br>Measure resistance between terminals of actuator.<br><b>Terminals</b><br><b>No. 2 — No. 4:</b>                                                                                                                                                              | Is resistance less than 69 $\Omega$ ?                                        | Go to step 5. | Replace actuator.<br><Ref. to CC-4 REMOVAL, Actuator.>                                                                                                                                                                                                                                                |
| 5   | <b>CHECK FOR LEAKAGE AND STICKING OF VALVES.</b><br>1) Disconnect connector from actuator.<br>2) Make sure that cruise control cable moves smoothly when connecting + (positive) battery cable to terminal No. 2 and – (negative) battery cable to terminals No. 1, 3 and 4 of actuator connector. | Does cruise control cable have a stroke of 35 mm (1.38 in) within 3 seconds? | Go to step 6. | Replace actuator.<br><Ref. to CC-4 REMOVAL, Actuator.> Go to step 6.                                                                                                                                                                                                                                  |

## GENERAL DESCRIPTION

### Cruise Control System

| No. | Step                                                                                                                                                                             | Check                                                                           | Yes                         | No                                                                   |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------|----------------------------------------------------------------------|
| 6   | <b>CHECK FOR LEAKAGE AND STICKING OF VALVES.</b><br>When the battery cable is disconnected from former condition, make sure the cable returns to its original position smoothly. | Does cruise control cable get back to its original position within 1.5 seconds? | Go to step 7.               | Replace actuator.<br><Ref. to CC-4 REMOVAL, Actuator.> Go to step 7. |
| 7   | <b>CHECK CABLE MOVEMENT.</b><br>Connect + (positive) battery cable to terminal No. 2 and – (negative) battery cable to terminals No. 1, 3 and 4 of actuator connector.           | Does cruise control perform pull operation?                                     | Go to step 8.               | Replace actuator.<br><Ref. to CC-4 REMOVAL, Actuator.> Go to step 8. |
| 8   | <b>CHECK CABLE MOVEMENT.</b><br>Connect + (positive) battery cable to terminal No. 2 and – (negative) battery cable to terminals No. 1 and 4 of actuator connector.              | Does cruise control perform hold operation?                                     | Go to step 9.               | Replace actuator.<br><Ref. to CC-4 REMOVAL, Actuator.> Go to step 9. |
| 9   | <b>CHECK CABLE MOVEMENT.</b><br>Connect + (positive) battery cable to terminal No. 2 and – (negative) battery cable to terminal No. 4 of actuator connector.                     | Does cruise control perform release operation?                                  | End of actuator inspection. | Replace actuator.<br><Ref. to CC-4 REMOVAL, Actuator.>               |

## 5. Subaru Select Monitor S003503

### A: OPERATION S003503A16

#### 1. GENERAL S003503A1604

The on-board diagnosis function of the cruise control system uses an external Subaru Select Monitor.

The on-board diagnosis function operates in two categories, which are used depending on the type of problems;

#### NOTE:

Subaru Select Monitor cartridge:  
No. 24082AA130

##### 1) Cruise cancel conditions diagnosis

(1) This category of diagnosis requires actual vehicle driving in order to determine the cause, (as when cruise speed is cancelled during driving although cruise cancel condition is not entered).

(2) Cruise control module memory stores the cancel condition (Code No.) which occurred during driving. When there are plural cancel conditions (Code No.), they are shown on the Subaru Select Monitor.

#### CAUTION:

- The cruise control memory stores not only the cruise “cancel” which occurred (although “cancel” operation is not entered by the driver), but also the “cancel” condition input by the driver.

- The content of memory is cleared when ignition switch or cruise main switch is turned OFF.

##### 2) Real-time diagnosis

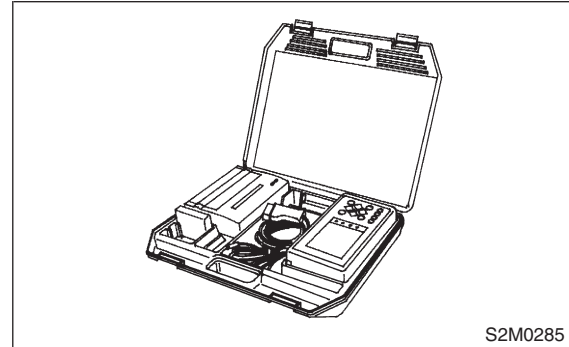
The real-time diagnosis function is used to determine whether or not the input signal system is in good order, according to signal emitted from switches, sensors, etc.

(1) Vehicle cannot be driven at cruise speed because problem occurs in the cruise control system or its associated circuits.

(2) Monitor the signal conditions from switches and sensors.

## 2. CRUISE CANCEL CONDITIONS DIAGNOSIS S003503A1605

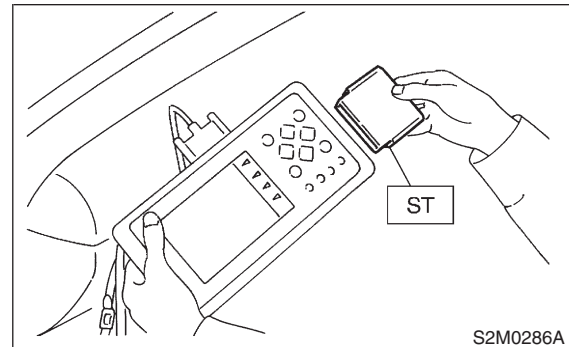
### 1) Prepare Subaru Select Monitor kit.



S2M0285

### 2) Connect diagnosis cable to Subaru Select Monitor.

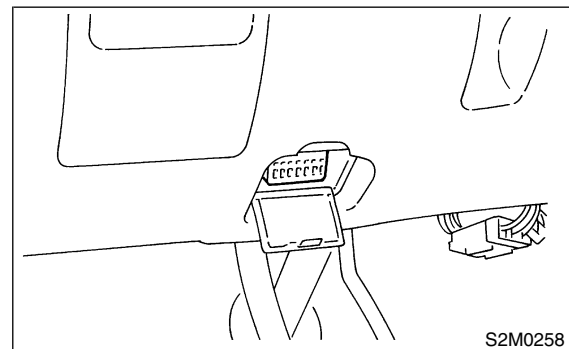
### 3) Insert cartridge into Subaru Select Monitor.



S2M0286A

### 4) Connect Subaru Select Monitor to data link connector.

(1) Data link connector located in the lower portion of the instrument panel (on the driver's side).



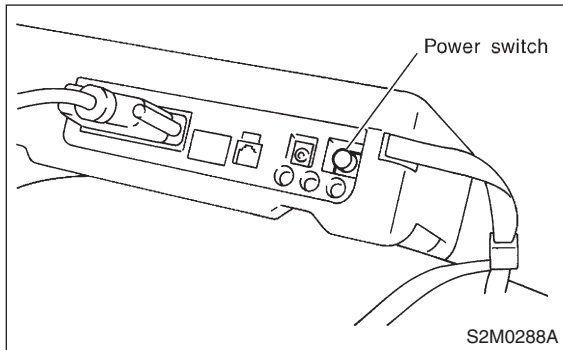
S2M0258

(2) Connect diagnosis cable to data link connector.

# SUBARU SELECT MONITOR

## Cruise Control System

- 5) Start engine and turn cruise control main switch to ON.
- 6) Turn Subaru Select Monitor switch to ON.



- 7) On the 「Main Menu」 display screen, select the {All System Diagnosis} and press the [YES] key.

### NOTE:

The diagnostic trouble code is also shown in the {Each System Check} mode. This mode is called up on the 「Cruise Control Diagnosis」 screen by selecting the item {Cancel Code(s) Display}.

- 8) Drive vehicle at least 30 km/h (19 MPH) with cruise speed set.
- 9) If cruise speed is canceled itself (without doing any cancel operations), a diagnostic trouble code will appear on select monitor display.

### CAUTION:

- A diagnostic trouble code will also appear when cruise cancel is effected by driver. Do not confuse.
- Have a co-worker ride in vehicle to assist in diagnosis during driving.

### NOTE:

Diagnostic trouble code will be cleared by turning ignition switch or cruise control main switch to OFF.

## 3. REAL-TIME DIAGNOSIS S003503A1606

- 1) Connect select monitor.
- 2) Turn ignition switch and cruise control main switch to ON.
- 3) Turn Subaru Select Monitor switch to ON.
- 4) On the 「Main Menu」 display screen, select the {Each System Check} and press the [YES] key.
- 5) On the 「System Selection Menu」 display screen, select the {Cruise Control} and press the [YES] key.
- 6) Press the [YES] key after displayed the information of engine type.
- 7) On the 「Cruise Control Diagnosis」 display screen, select the {Current Data Display & Save} and press the [YES] key.
- 8) Make sure that normal indication is displayed when controls are operated as indicated below:
  - Depress/release the brake pedal. (Stop light switch and brake switch turn ON.)
  - Turn ON the “SET/COAST” switch.
  - Turn ON the “RESUME/ACCEL” switch.
  - Depress/release the clutch pedal. (MT)
  - Set the selector lever to P or N. (AT)

### NOTE:

- For detailed operation procedure, refer to the SUBARU SELECT MONITOR OPERATION MANUAL.
  - For detailed concerning diagnostic trouble codes, refer to “LIST OF DIAGNOSTIC TROUBLE CODE”.
- <Ref. to CC-18 LIST OF DIAGNOSTIC TROUBLE CODE, Diagnostics Chart with Trouble Code.>

---

## 2. Front Speaker S901466

### A: REMOVAL S901466A18

- 1) Remove front door trim and disconnect connector. <Ref. to EI-22 REMOVAL, Door Trim.>
- 2) Remove screws which secure front speaker.
- 3) Remove speaker and disconnect connector.

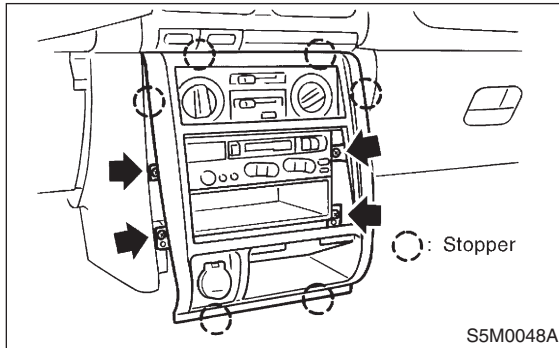
### B: INSTALLATION S901466A11

Install in the reverse order of removal.

## 1. Radio Body S901469

### A: REMOVAL S901469A18

- 1) Remove console box. <Ref. to EI-24 REMOVAL, Console Box.>
- 2) Remove AT cover (AT model).
- 3) Remove center panel.
- 4) Remove fitting screws, and slightly pull radio out from center console.



- 5) Disconnect electric connectors and antenna feeder cord.

### B: INSTALLATION S901469A11

Install in the reverse order of removal.



## 3. Rear Speaker S901470

### A: REMOVAL S901470A18

#### 1. SEDAN AND COUPE S901470A1801

- 1) Remove rear shelf trim panels.
- 2) Remove screws which secure rear speakers.
- 3) Disconnect connector and remove speakers.

#### 2. WAGON S901470A1802

- 1) Remove rear door trim and disconnect connector. <Ref. to EI-22 REMOVAL, Door Trim.>
- 2) Remove screws which secure rear speaker.
- 3) Remove speaker and disconnect connector.

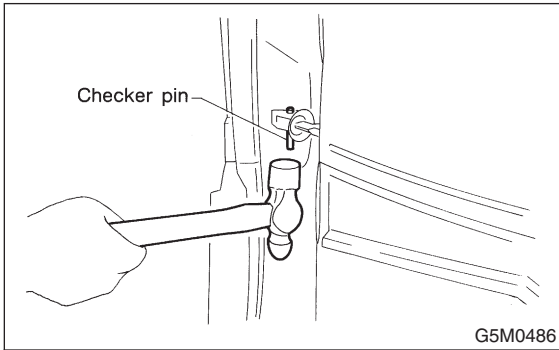
### B: INSTALLATION S901470A11

Install in the reverse order of removal.

## 4. Door Panel S913579

### A: REMOVAL S913579A18

- 1) Remove lower trim and disconnect connectors from body harness.
- 2) Place a cloth or a wood block under door to prevent damage, and support it with a jack.
- 3) Remove checker pin by driving it upward. Be careful not to damage door and body.



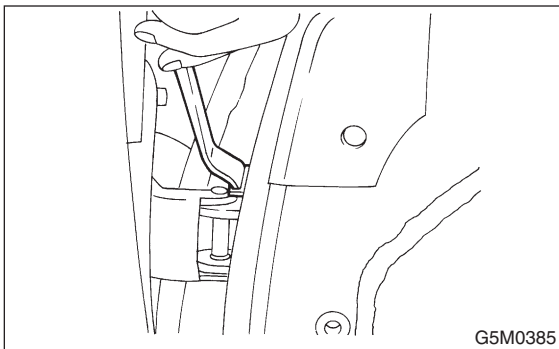
- 4) Remove bolts (M8) securing upper and lower hinges to door, and remove door from hinges.

**Tightening torque:**  
**25 N·m (2.5 kgf-m, 18.1 ft-lb)**

- 5) Remove hinges by loosening hinges mounting bolt (M8) off of body.

**Tightening torque:**  
**29 N·m (3.0 kgf-m, 21.7 ft-lb)**

**CAUTION:**  
**Work carefully to avoid damaging door.**



### B: INSTALLATION S913579A11

Install in the reverse order of removal.

**NOTE:**  
 Apply grease to moving parts of door hinges.

### C: ADJUSTMENT S913579A01

- 1) Using ST, loosen bolts securing upper and lower hinges to body, and adjust fore-and-aft and vertical alignment of door.

ST 925610000 DOOR HINGE WRENCH



- 2) Loosen screw one complete rotation, and adjust opening/closing direction of door using a hammer covered with a cloth.

**CAUTION:**  
**Be careful not to damage striker.**

**Hinge tightening torque (body side):**  
**29 N·m (3.0 kgf-m, 21.7 ft-lb)**

**Striker tightening torque:**  
**14 N·m (1.4 kgf-m, 10.1 ft-lb)**

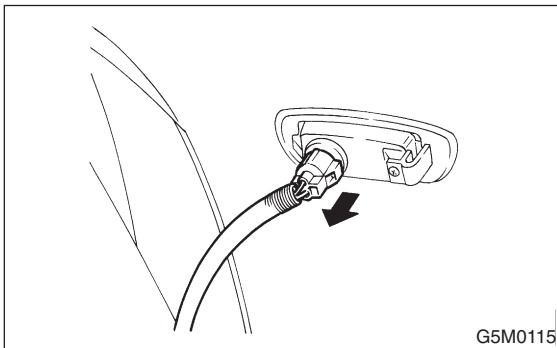
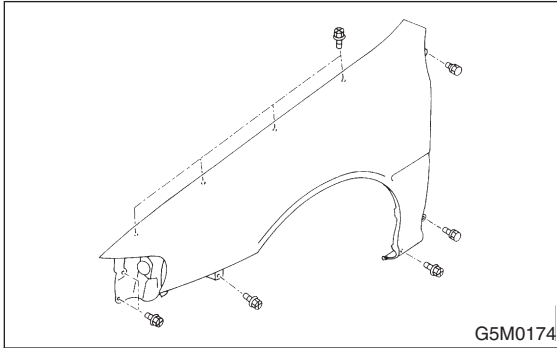
## 3. Fender Panel

S913368

### A: REMOVAL

S913368A18

- 1) Disconnect ground cable from battery.
- 2) Remove mud guard.
- 3) Remove parking light and headlight.
- 4) Remove front bumper.
- 5) Remove bolts which secure fender to radiator panel and turn signal light connector.



- 6) Remove body protector. (This step may be skipped if fender is to be reused.)
- 7) Remove attaching bolt to remove fender.

### CAUTION:

Be careful not to scratch body panels with fender edges when removing it.

### B: INSTALLATION

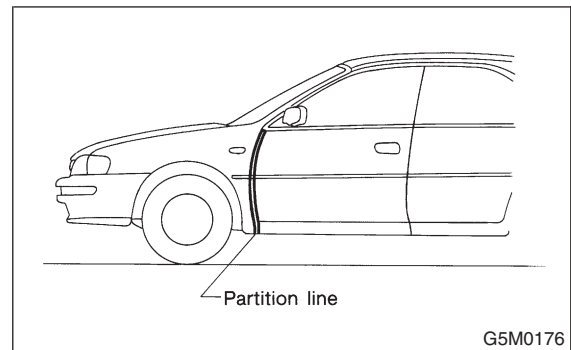
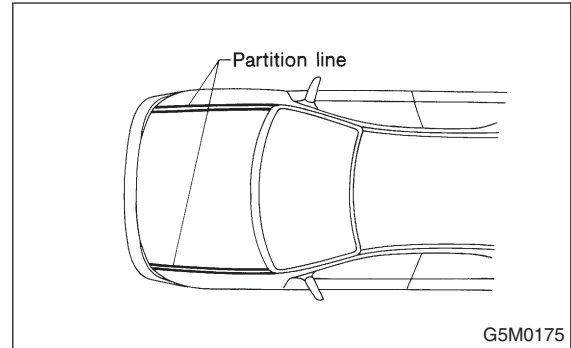
S913368A11

Install in the reverse order of removal.

### C: INSPECTION

S913368A10

Check for alignment of front fender with hood and front door with front fender at all points. Adjust, if necessary.



## 2. Front Hood S913367

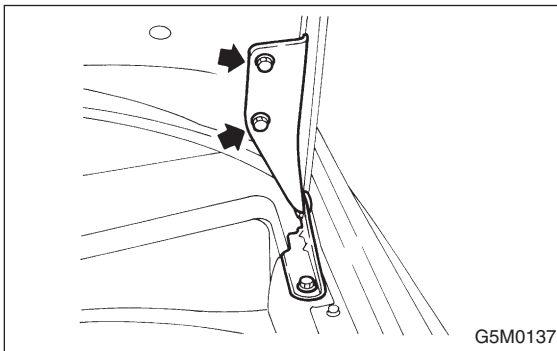
### A: REMOVAL S913367A18

#### NOTE:

The hood lock has a dual locking design which consists of a main lock and a safety lock mechanism. When the release knob located at the front pillar on the driver's side is pulled back, the main lock is released through the cable attached to the knob.

The safety lock can be released by pushing the lever protruding above the front grill while opening the hood.

- 1) Open front hood, and remove washer hose.
- 2) Remove attaching bolts.



- 3) Detach front hood from hinges.

### B: INSTALLATION S913367A11

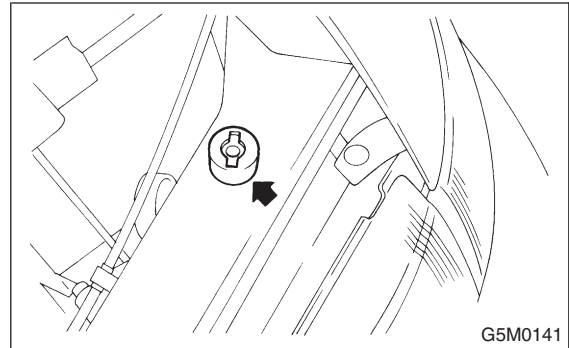
- 1) Install in the reverse order of removal.
- 2) Adjust clearance between hood and fender. Clearance must be equal on both sides.

### C: ADJUSTMENT S913367A01

Rotate hood buffer to adjust lateral height.

#### CAUTION:

**Adjust buffer assembly on each end so that main lock is applied securely when hood is released from a height of approx. 20 mm (0.79 in).**



# GENERAL DESCRIPTION

## Exterior Body Panels

### 1. General Description

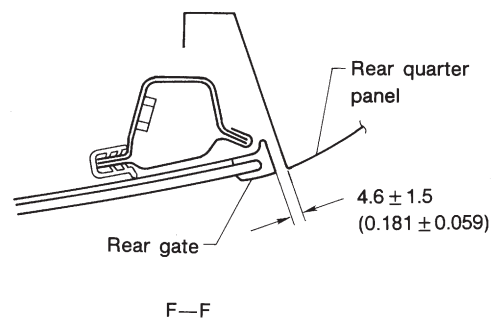
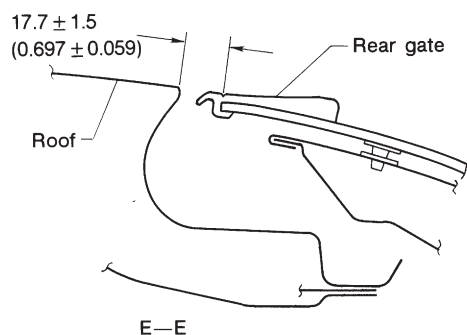
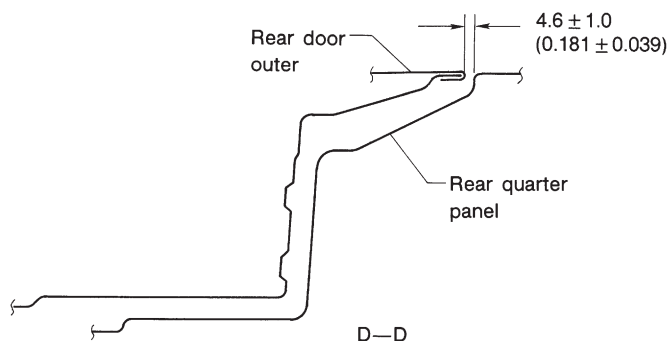
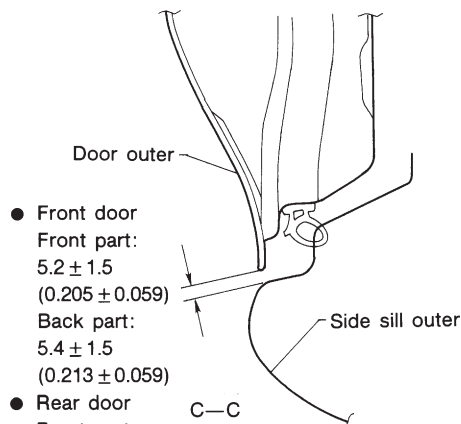
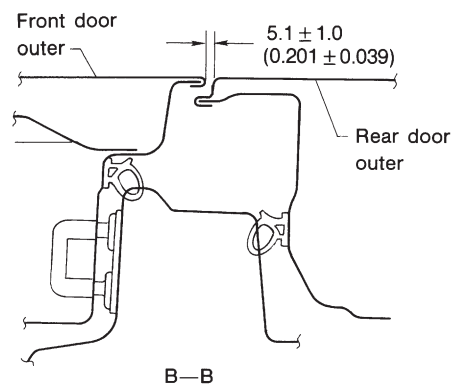
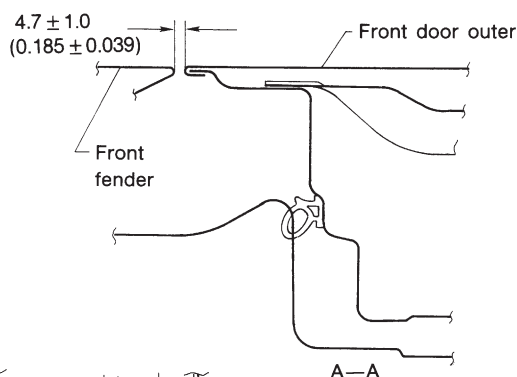
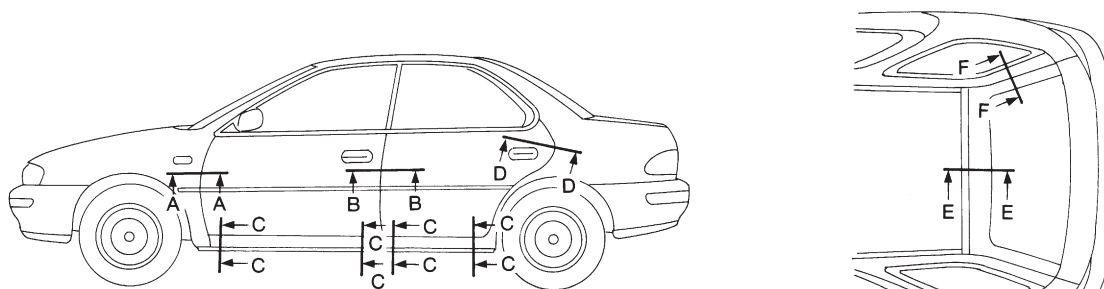
S913001

### A: SPECIFICATIONS

S913001E49

#### 1. SEDAN AND WAGON

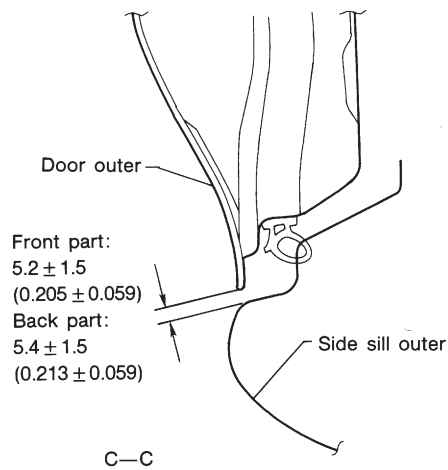
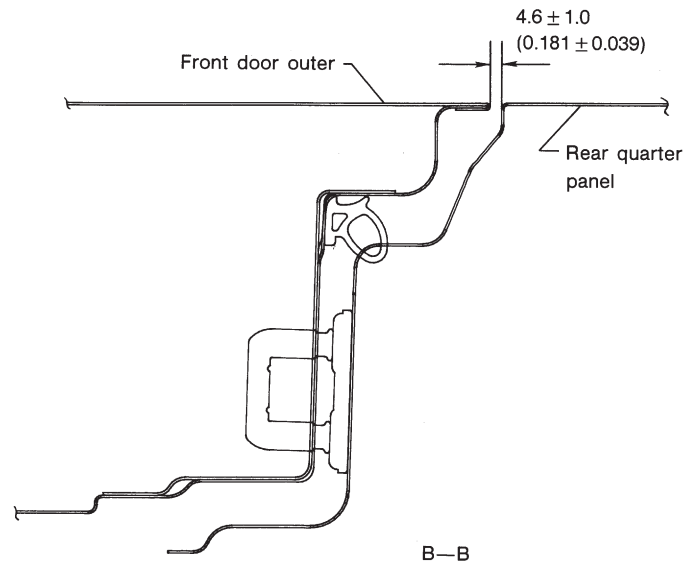
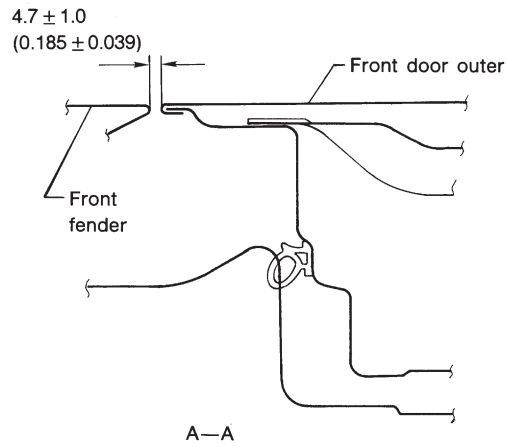
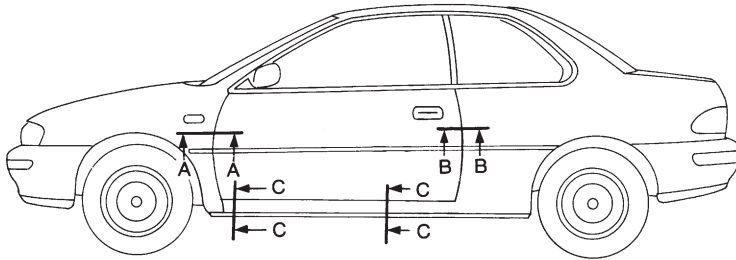
S913001E4901



Unit: mm (in)

G5M0485

## 2. COUPE S913001E4902



Unit: mm (in)

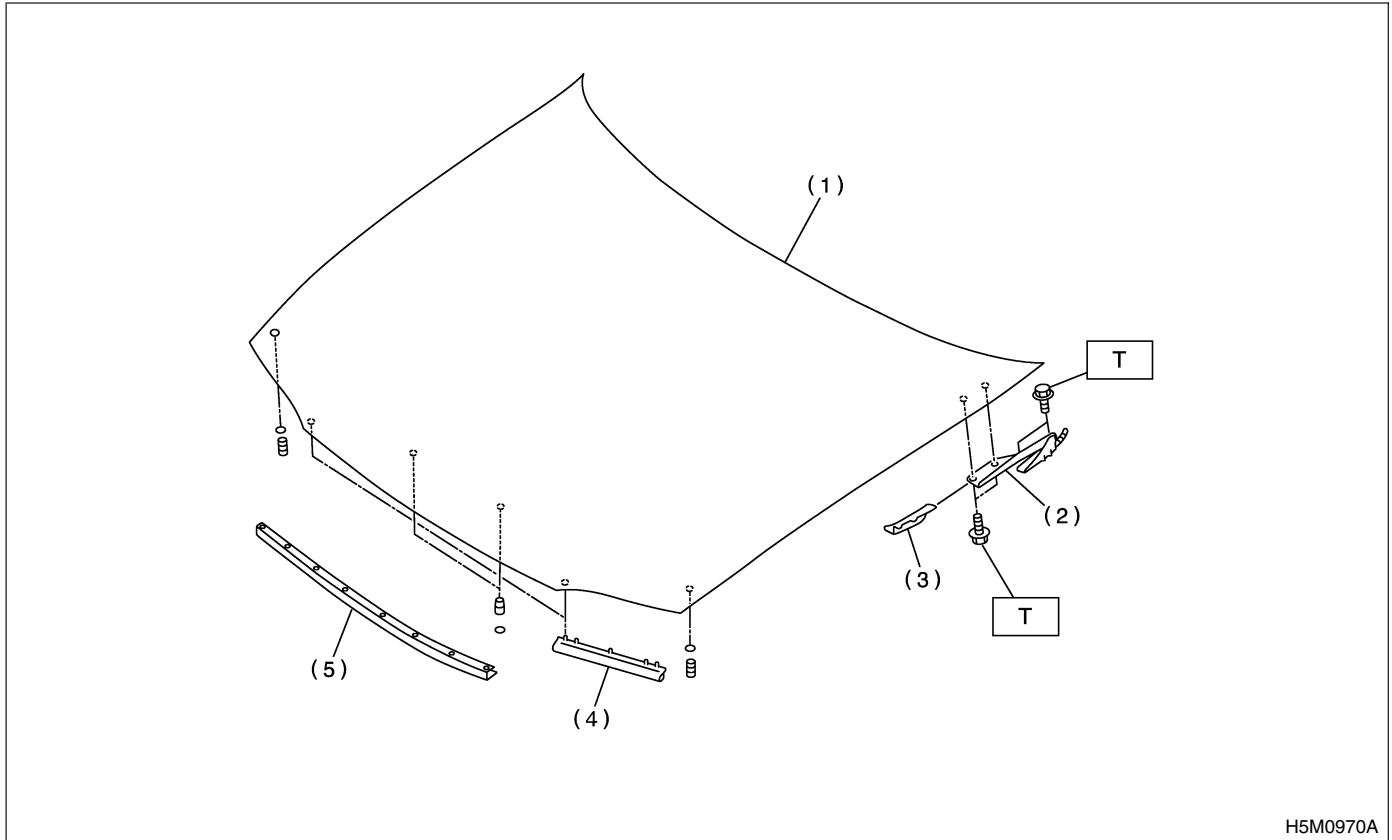
G5M0637

# GENERAL DESCRIPTION

Exterior Body Panels

## B: COMPONENT S913001A05

### 1. FRONT HOOD S913001A0501

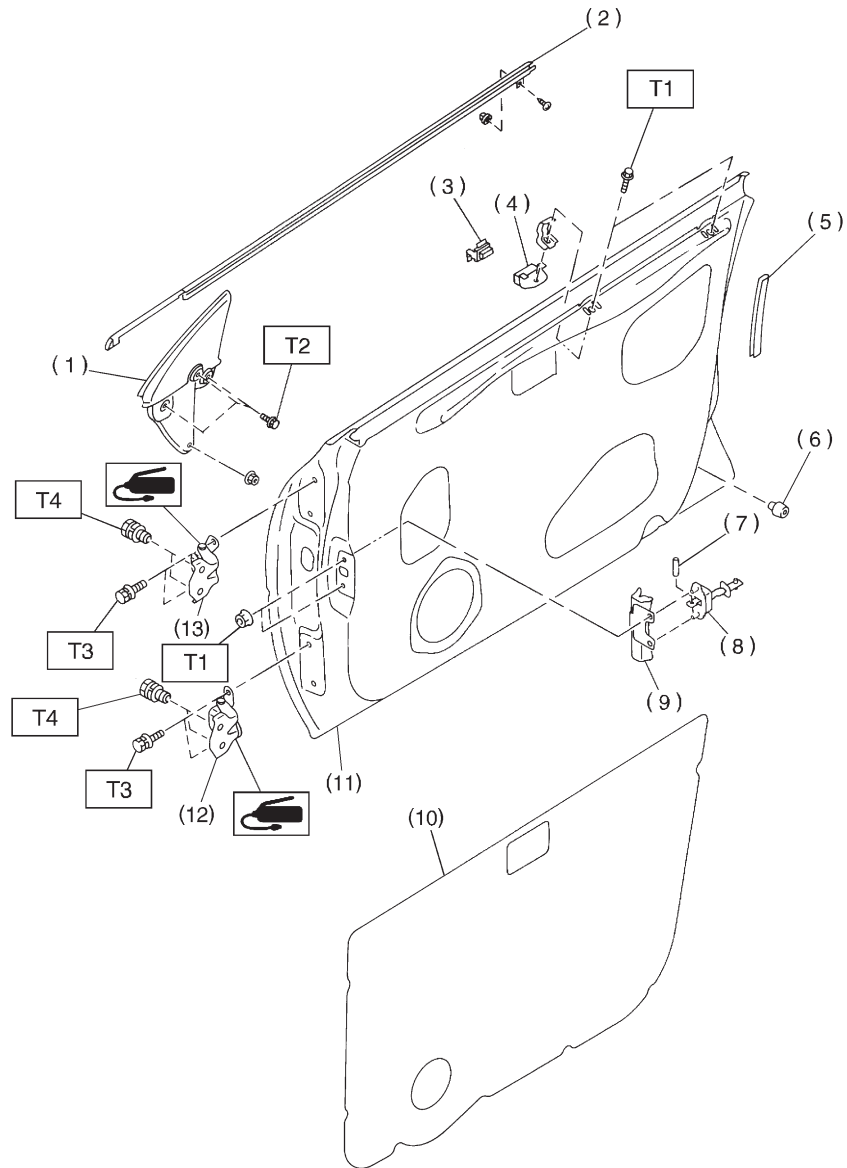


H5M0970A

- |                               |                           |
|-------------------------------|---------------------------|
| (1) Front hood                | (4) Seal (Front hood) SD  |
| (2) Hinge (RH, LH)            | (5) Seal (Front hood) CTR |
| (3) Hood hinge cover (RH, LH) |                           |

**Tightening torque: N·m (kgf-m, ft-lb)**  
**T: 14 (1.4, 10.1)**

## 2. FRONT DOOR PANEL S913001A0502



H5M0903A

- |                        |                    |
|------------------------|--------------------|
| (1) Gusset             | (8) Checker        |
| (2) Weatherstrip       | (9) Guide          |
| (3) Stabilizer (Outer) | (10) Sealing cover |
| (4) Stabilizer (Inner) | (11) Door panel    |
| (5) Protector          | (12) Lower hinge   |
| (6) Stopper            | (13) Upper hinge   |
| (7) Knock pin          |                    |

### **Tightening torque: N·m (kgf-m, ft-lb)**

**T1: 7.4 (0.75, 5.4)**

**T2: 13 (1.3, 9.4)**

**T3: 25 (2.5, 18.1)**

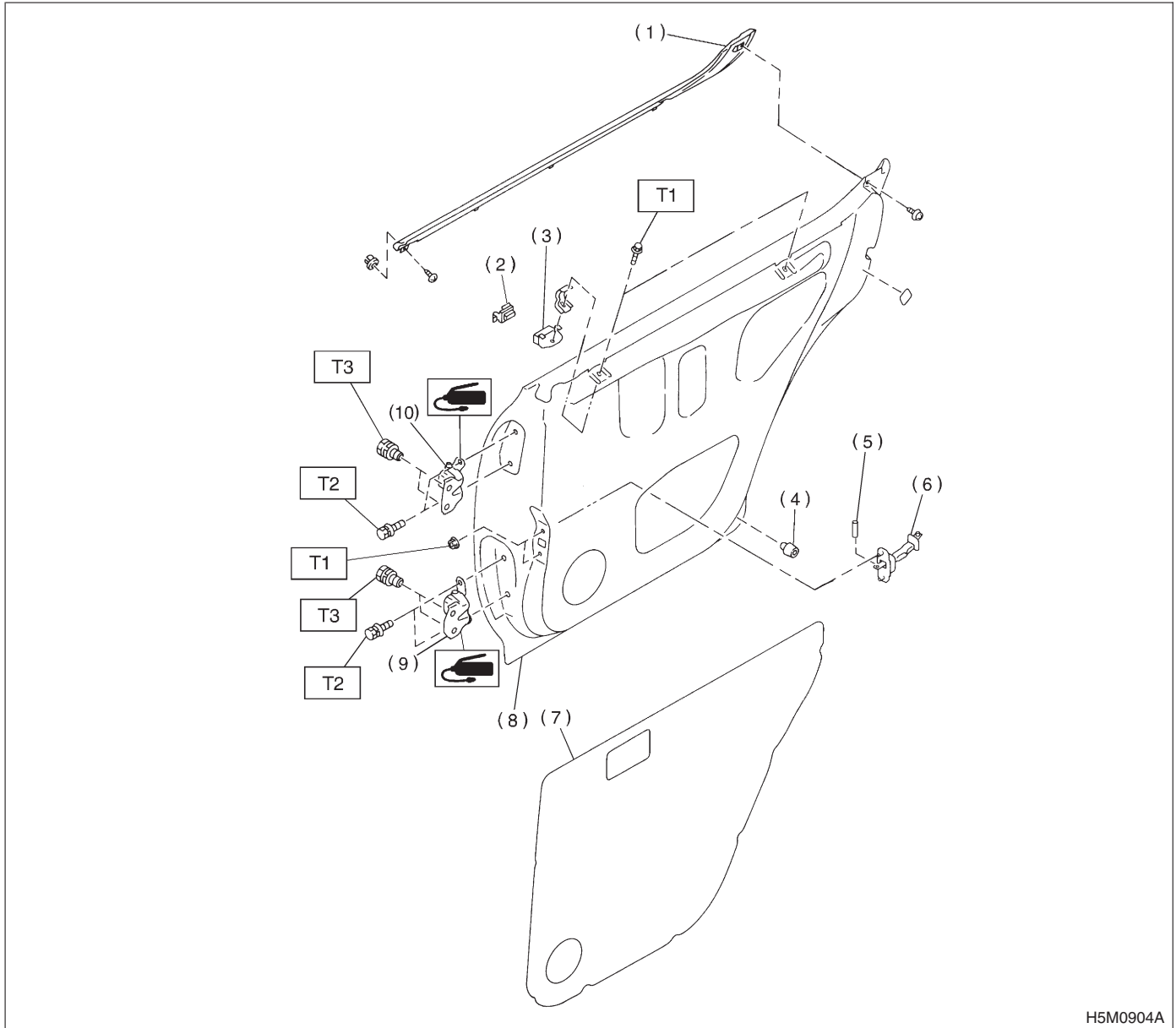
**T4: 29 (3.0, 21.7)**



# GENERAL DESCRIPTION

Exterior Body Panels

## 3. REAR DOOR PANEL S913001A0503



H5M0904A

- |                        |                   |
|------------------------|-------------------|
| (1) Weatherstrip       | (7) Seating cover |
| (2) Stabilizer (Outer) | (8) Door panel    |
| (3) Stabilizer (Inner) | (9) Lower hinge   |
| (4) Stopper            | (10) Upper hinge  |
| (5) Knock pin          |                   |
| (6) Checker            |                   |

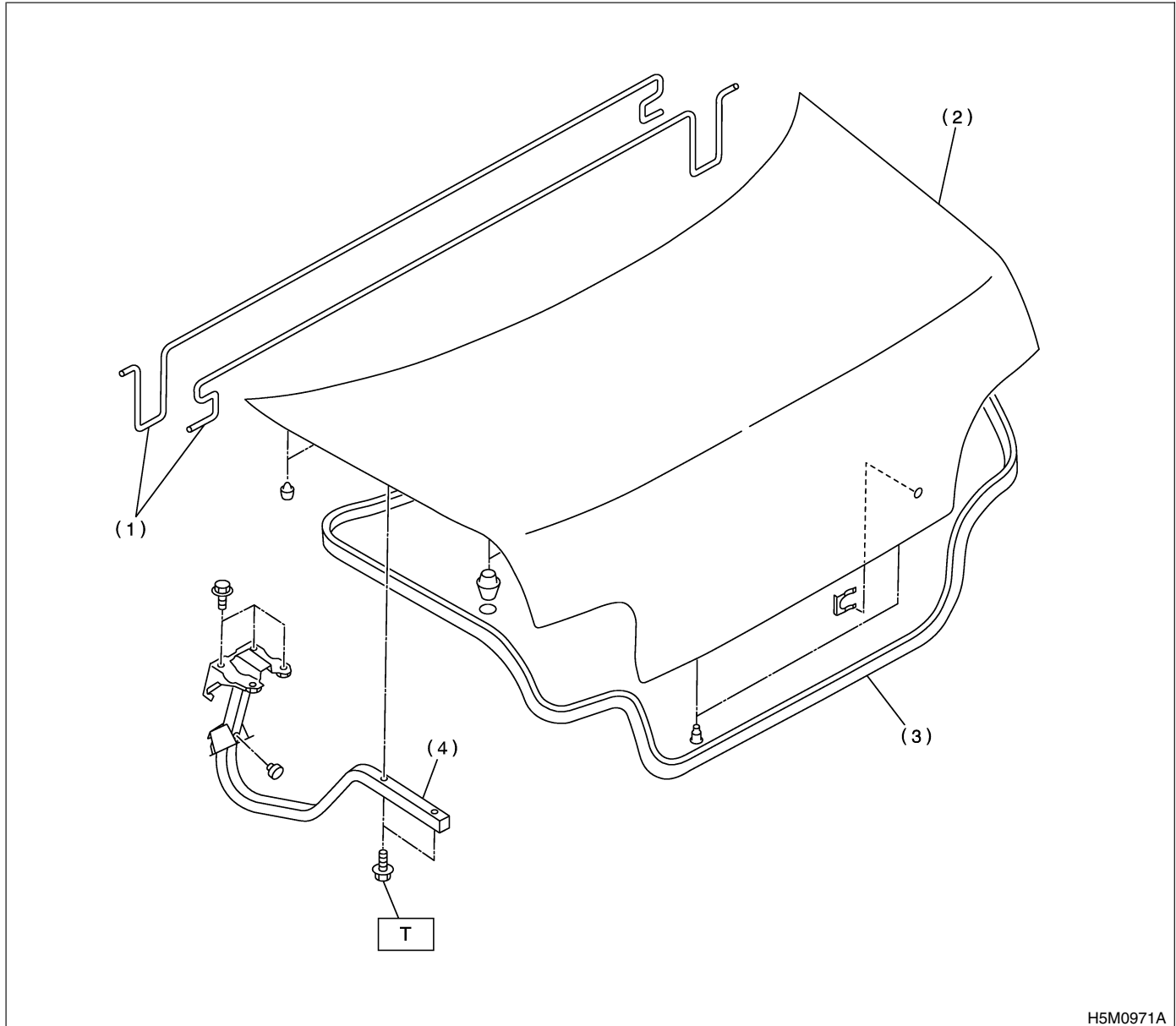
**Tightening torque: N·m (kgf-m, ft-lb)**

**T1: 7.4 (0.75, 5.4)**

**T2: 25 (2.5, 18.1)**

**T3: 29 (3.0, 21.7)**

## 4. TRUNK LID PANEL S913001A0504



- (1) Torsion bar
- (2) Trunk lid
- (3) Weatherstrip
- (4) Hinge ASSY

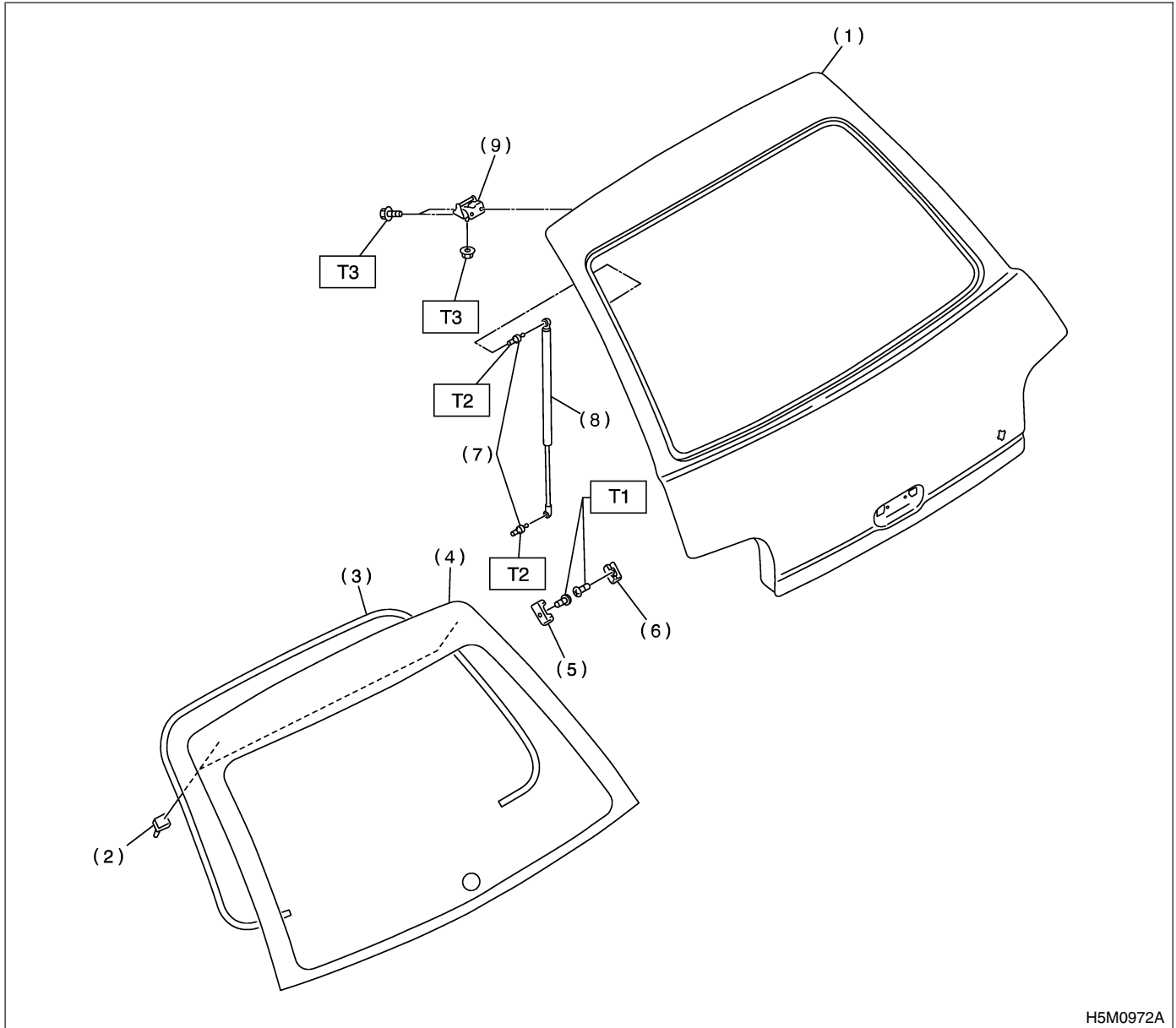
**Tightening torque: N·m (kgf-m, ft-lb)**

**T: 14 (1.4, 10.1)**

# GENERAL DESCRIPTION

Exterior Body Panels

## 5. REAR GATE PANEL S913001A0505



H5M0972A

- |               |                           |
|---------------|---------------------------|
| (1) Rear gate | (6) Rear gate side buffer |
| (2) Glass pin | (7) Stud                  |
| (3) Trim      | (8) Gas stay              |
| (4) Glass     | (9) Hinge                 |
| (5) Buffer    |                           |

**Tightening torque: N·m (kgf-m, ft-lb)**

**T1: 7.4 (0.75, 5.4)**

**T2: 14 (1.4, 10.1)**

**T3: 25 (2.5, 18.1)**

# GENERAL DESCRIPTION

Exterior Body Panels

## C: CAUTION

S913001A03

● Exterior body panels are heavy. Do not drop and damage the panels. During removal and installation, do not damage the panel painting surface.

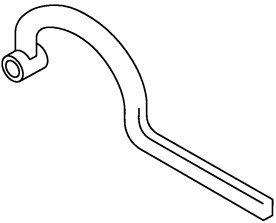
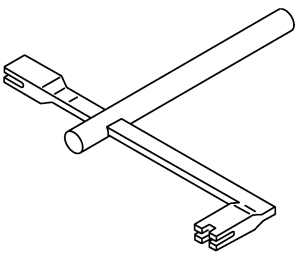
- While removing mounting bolts, using assistance devices such as a support jack will help support the panel.
- Be careful not to lose small parts.

## D: PREPARATION TOOL

S913001A17

### 1. SPECIAL TOOL

S913001A1701

| ILLUSTRATION                                                                                      | TOOL NUMBER | DESCRIPTION | REMARKS                                             |
|---------------------------------------------------------------------------------------------------|-------------|-------------|-----------------------------------------------------|
|  <p>B5M1117</p>  | 925610000   | WRENCH      | Used for removing and installing door hinge.        |
|  <p>B5M1118</p> | 927780000   | REMOVER     | Used for removing and installing trunk torsion bar. |

### 2. GENERAL TOOL

S913001A1702

| TOOL NAME    | REMARKS                         |
|--------------|---------------------------------|
| Support Jack | Used for supporting door panel. |

## 7. Rear Gate Panel

S913363

### A: REMOVAL

S913363A18

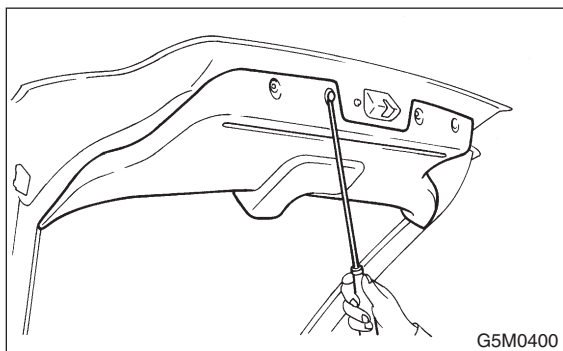
#### CAUTION:

- Be careful not to scratch coated surfaces of vehicle body and window glass during removal. Place a cloth over the affected area.
- Be careful not to damage trim panels.
- Use an assistant when handling heavy parts.
- Be careful not to damage or lose small parts.

1) Remove clips from trim panel and detach trim panel.

#### CAUTION:

Be careful not to damage clips or their holes.

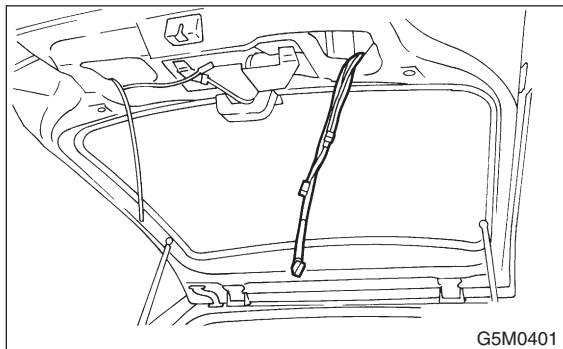


G5M0400

- 2) Disconnect connectors and terminal.
- 3) Disconnect rear washer hose from wiper motor.
- 4) Remove high-mounted stop light.
- 5) If disconnected harness is re-used, tie connector with a string and place on the upper side of rear gate for ready use.

#### CAUTION:

Do not forcefully pull cords, lead wires, etc. since damage may result; carefully extract them in a wavy motion while holding connectors.



G5M0401

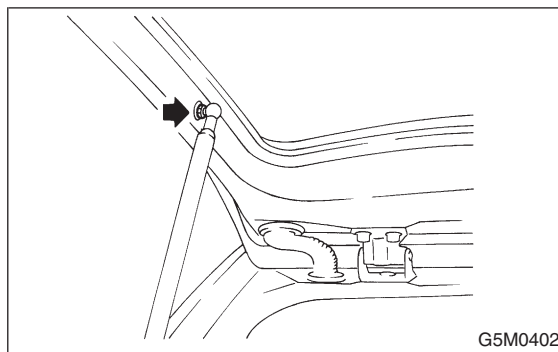
- 6) Remove rear wiper. <Ref. to WW-11 REMOVAL, Rear Wiper Motor>
- 7) Remove both rubber ducts and then extract washer hose and harness connector.

8) Gas stay:

- (1) Completely open rear gate.
- (2) Remove bolts which hold gas stay to rear gate.

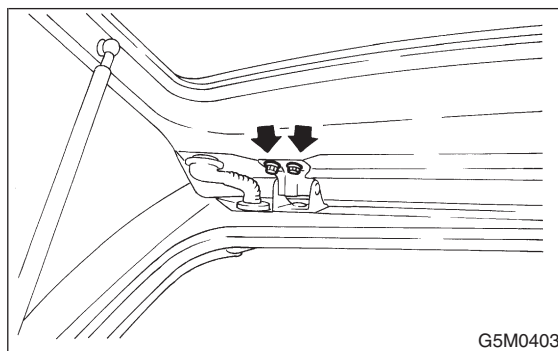
#### CAUTION:

- Be careful because rear gate drops while removing bolts. Have an assistant support it while removing bolts.
- Be sure to place a folded cloth between rear gate and body to prevent scratches.



G5M0402

9) Remove the bolts which hold rear gate to hinge and then detach rear gate.



G5M0403

# REAR GATE PANEL

Exterior Body Panels

## B: INSTALLATION

S913363A11

Install in the reverse order of removal.

### CAUTION:

- Be careful not to mistake RH and LH body side buffers.
- Be sure to add sealer to hinge.
- When installing rear gate, be careful not to damage coating on body and rear gate.

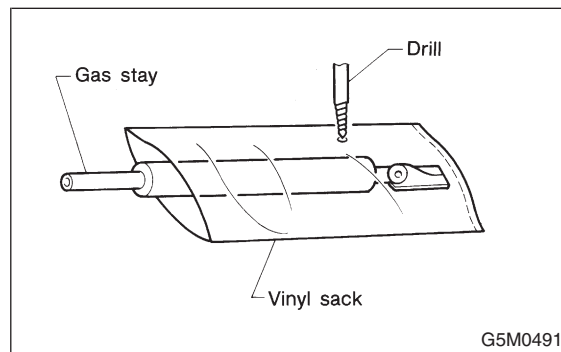
## C: DISPOSAL

S913363A07

### 1. GAS STAY

S913363A0701

- 1) Cover with a vinyl case before drilling holes.



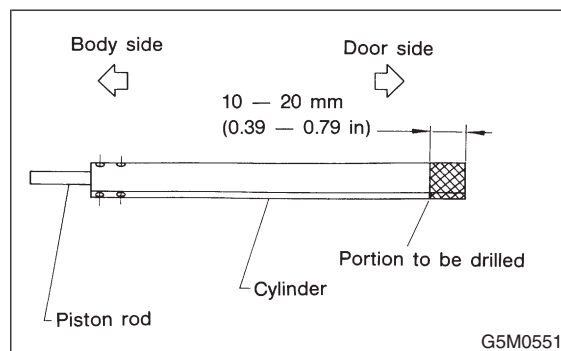
### CAUTION:

**Prevent the vinyl case from being caught by drill cutting edge**

- 2) Lift body side slightly with piston rods fully extended, and secure body side on vise stand. Drill a hole in 2 to 3 mm (0.08 to 0.12 in) diameter at a point 10 to 20 mm (0.39 to 0.79 in) from door side, and bleed gas stay completely.

### CAUTION:

**Gas is colorless, odorless, and harmless. However, gas pressure may spray cutting powder or oil. Be sure to wear dust-resistant goggles.**



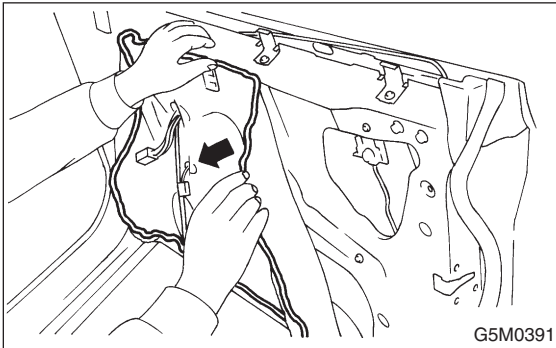
## 5. Sealing Cover S913580

### A: REMOVAL S913580A18

- 1) Remove trim panel.
- 2) Remove speaker, trim bracket and remote assembly and disconnect connectors.
- 3) Remove sealer with a spatula.

#### CAUTION:

Be careful because cover may break if sealer is removed forcefully.



### B: INSTALLATION S913580A11

Install in the reverse order of removal.

#### NOTE:

- Confirm that sealer is properly applied without breaks. Then install sealing cover.
- When repairing or replacing sealing cover, use “CEMEDINE 5430L” as sealer. It may be overlaid on existing sealer.

#### Sealer:

**CEMEDINE 5430L**

#### CAUTION:

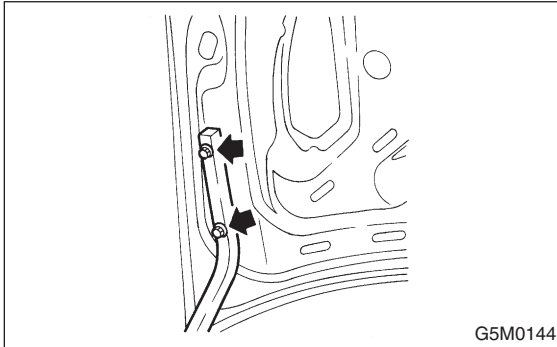
- Any breaks in sealer can cause water leakage or entry of air and dust. Be sure sealer is applied in a continuous line.
- Make sure sealing cover bonded areas are free from wrinkles or openings.

## 6. Trunk Lid Panel S913365

### A: REMOVAL S913365A18

#### 1. TRUNK LID S913365A1801

- 1) Open trunk lid.
- 2) Remove trunk lid mounting bolts and detach trunk lid from hinges.

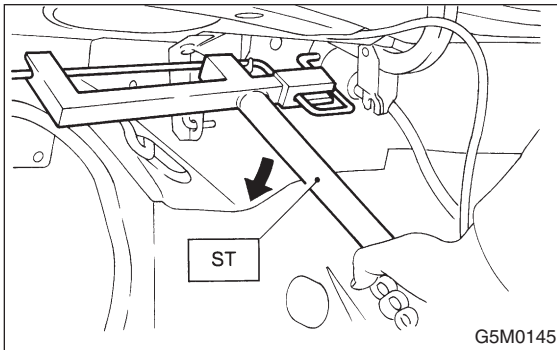


#### 2. TORSION BAR S913365A1802

- 1) Open trunk lid. Remove torsion bars from hinge links using ST.
- ST 927780000 REMOVER

#### CAUTION:

**Be careful because torsion bar quickly swings back when released.**



- 2) Remove the left and right torsion bars.

#### WARNING:

**Be careful because trunk lid drops under its own weight when torsion bars are removed.**

### B: INSTALLATION S913365A11

#### 1. TRUNK LID S913365A1101

Install in the reverse order of removal.

#### 2. TORSION BAR S913365A1102

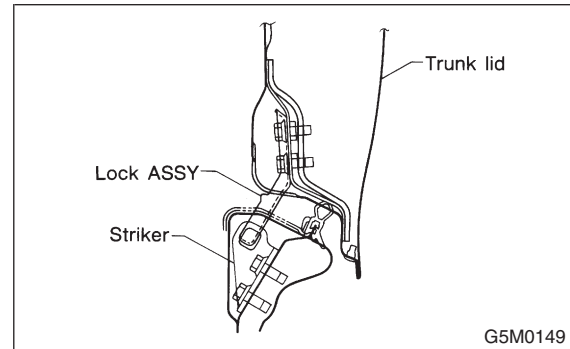
Install in the reverse order of removal.

#### NOTE:

Apply a coat of grease to the rotary section of hinges and contact surfaces of torsion bars.

### C: ADJUSTMENT S913365A01

- 1) To adjust left-right lid positioning, loosen bolts which hold trunk lid to hinges.
- 2) To adjust up-down lid alignment, place washer(s) between trunk lid and hinges or move trunk lock assembly up or down.

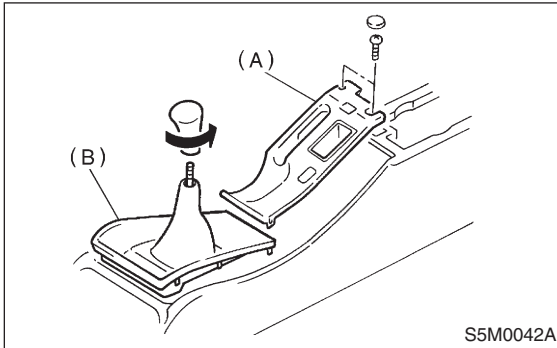




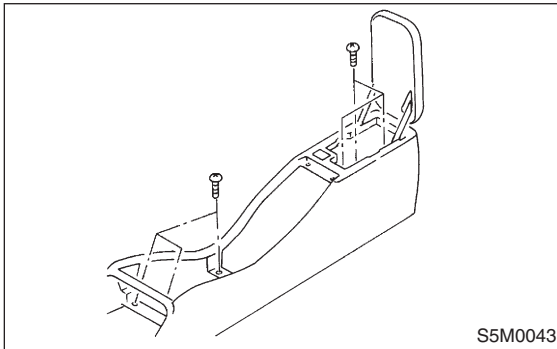
## 11. Console Box S911382

### A: REMOVAL S911382A18

- 1) Remove shift knob (MT model).
- 2) Remove console cover (A) and front cover (B).



- 3) Remove screw and then detach console box.



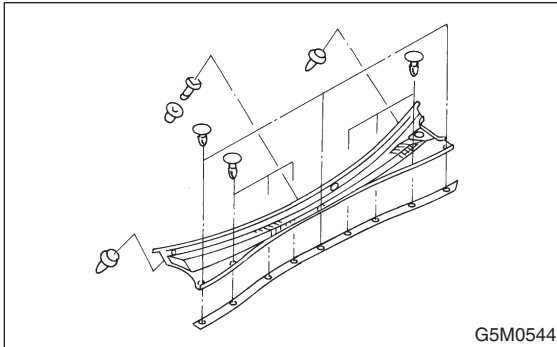
### B: INSTALLATION S911382A11

Install in the reverse order of removal.

## 7. Cowl Panel S911387

### A: REMOVAL S911387A18

- 1) Remove wiper arms.
- 2) Open front hood.
- 3) Pry clip off front hood seal using a screwdriver.
- 4) Lift cowl panel and remove clips from windshield.

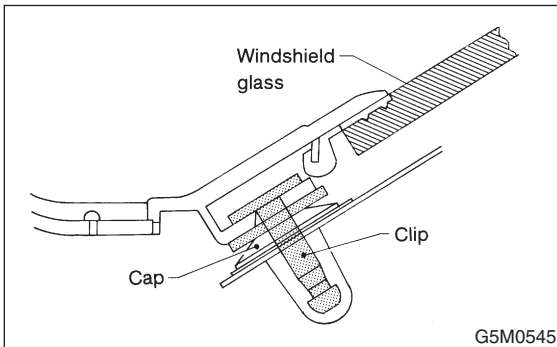


### B: INSTALLATION S911387A11

Install in the reverse order of removal.

#### NOTE:

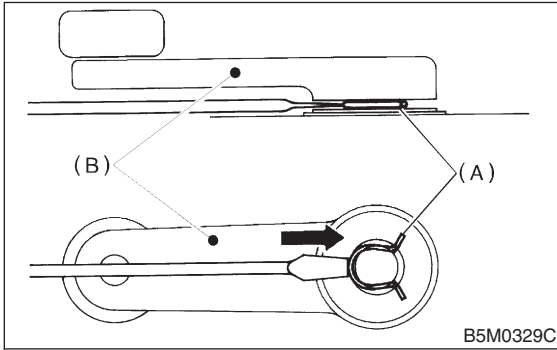
Install middle clip and other clips in that order.



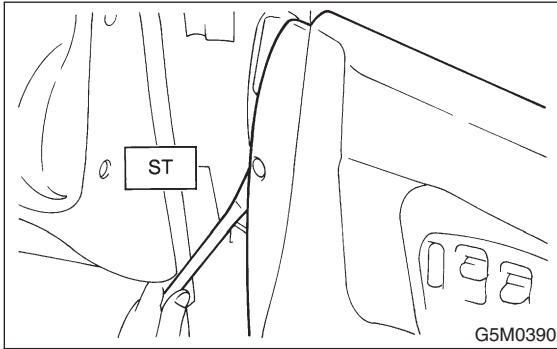
## 9. Door Trim S911614

### A: REMOVAL S911614A18

- 1) Press retainer spring (A) with a thin flat-bladed screwdriver and then remove regulator handle (B). (models without power window)



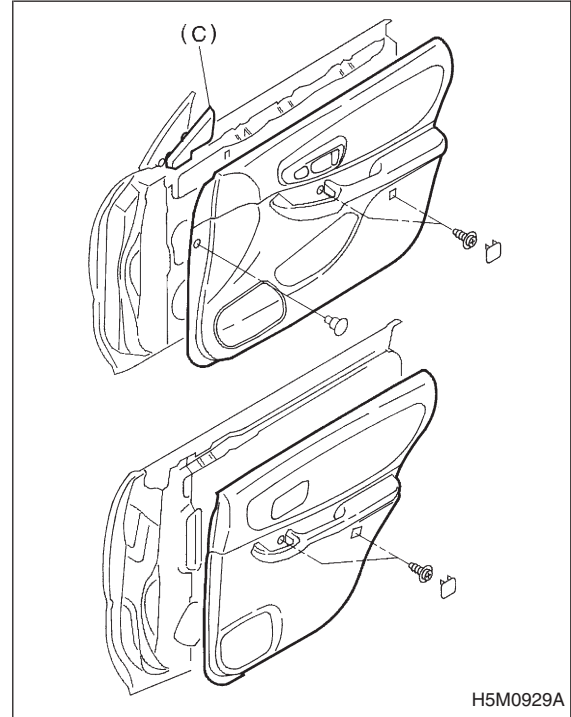
- 2) Using ST, disengage the clip.  
ST 925580000 PULLER



- 3) Remove gusset cover (C) and screws.
- 4) Remove trim panel and then disconnect connector. (models with power window)

### CAUTION:

**Be careful not to break clip by applying undue force.**



### B: INSTALLATION S911614A11

Install in the reverse order of removal.

## 17. Floor Mat S911362

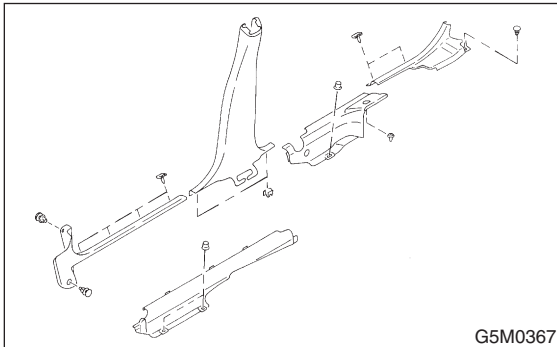
### A: REMOVAL S911362A18

**Supplemental Restraint System “Airbag”** Airbag system wiring harness is routed near floor mat.

#### CAUTION:

- All Airbag system wiring harness and connectors are colored yellow. Do not use electrical test equipment on these circuit.
- Be careful not to damage Airbag system wiring harness when servicing floor mat.

- 1) Remove front seats.
- 2) Remove rear seat cushion.
- 3) Remove center tray, indicator cover, cover assembly, and console box, depending on the specifications.
- 4) Remove front pillar lower trim panel.
- 5) Remove center pillar lower trim panel.
- 6) Remove three clips under rear seat cushion.
- 7) Remove rear cover side plate and rear pillar lower trim.
- 8) Pull out edge in the groove of side sill cover.

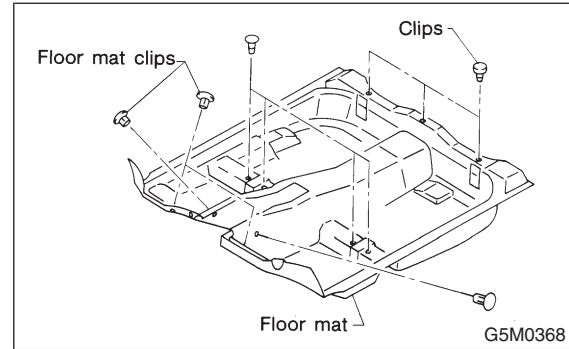


- 9) Remove four clips under front seat.
- 10) Remove four clips in toe board area.

#### NOTE:

When pulling out edge, do not pull mat alone; pull mat together with edge. Pry off two steel clips on side sill front cover and one on side sill rear cover using screwdriver.

- 11) Remove mat hook.
- 12) Remove mat from toe board area.



- 13) Remove mat from heater unit.
- 14) Roll mat, and take it out of opened rear door.

### B: INSTALLATION S911362A11

Install in the reverse order of removal.

#### NOTE:

- Secure mat firmly with hook and velcro tape.
- Insert mat edge firmly into the groove of side sill cover.

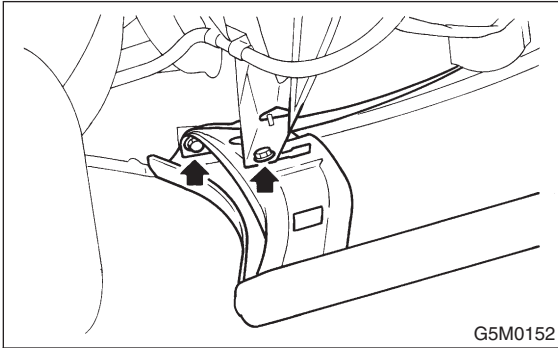
# FRONT BUMPER

Exterior/Interior Trim

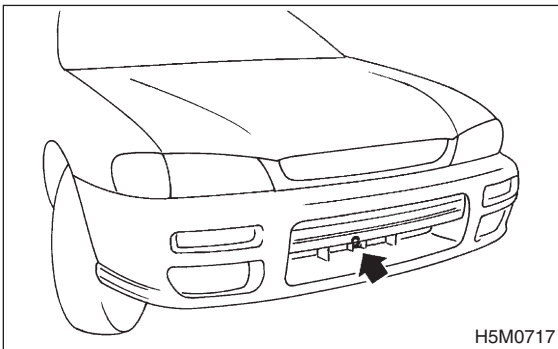
## 3. Front Bumper S911371

### A: REMOVAL S911371A18

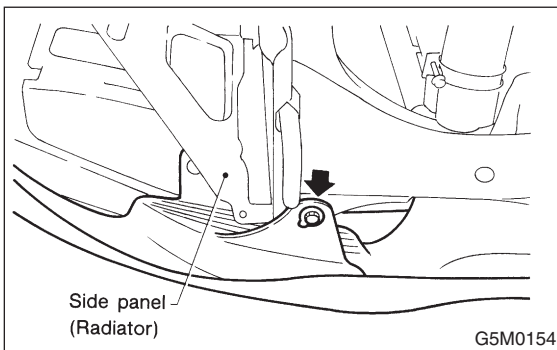
- 1) Disconnect the ground cable from the battery.
- 2) Remove the canister.
- 3) Remove the front grille.
- 4) Remove the parking light and headlight LH.
- 5) Remove the mud guard.
- 6) Remove bolts from side of bumper.



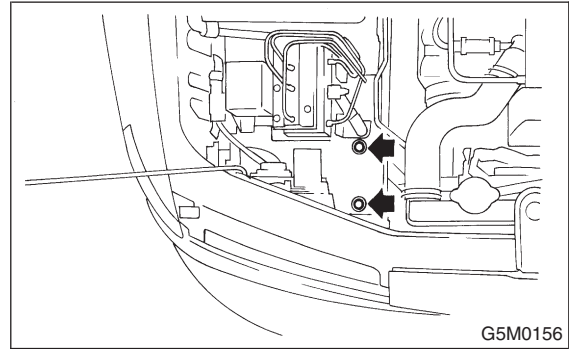
- 7) Remove bolt from lower center of bumper.



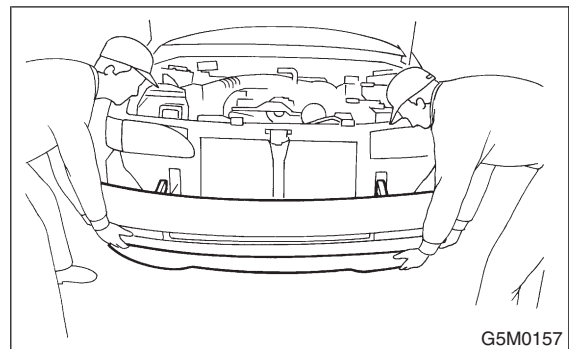
- 8) Remove bolts from lower side of bumper.



- 9) Remove bolts (engine compartment side) from bumper stays.



- 10) Remove turn signal light connector.
- 11) Remove bumper assembly.



### B: INSTALLATION S911371A11

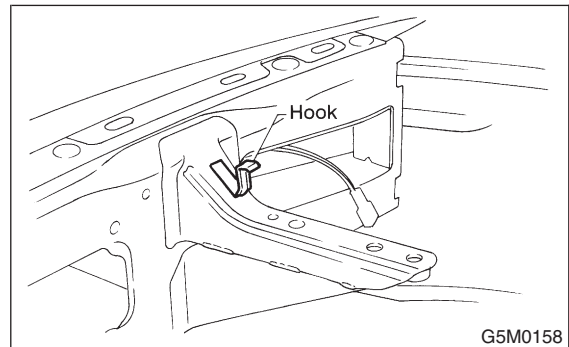
Install in the reverse order of removal.

#### CAUTION:

- Be extremely careful to prevent scratches on bumper face as it is made of resin.
- Be careful not to scratch the body when removing or installing the bumper.
- When installing canister, insert air vent hose of canister into the hole on body.

#### NOTE:

To facilitate installation of front bumper, attach hook (located at stay) to body panel.

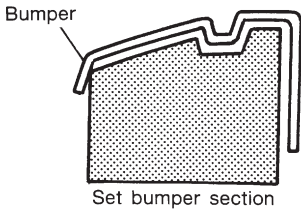


## C: REPAIR

S911371A19

### 1. COATING METHOD FOR PP BUMPER

S911371A1901

| Process No. | Process name         | Job contents                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1           | Bumper mounting      | Set bumper on paint worktable if required.<br>Use paint worktable conforming to inner shape of bumper when possible.                                                                                                                                                                                                                 |  <p>Bumper</p> <p>Set bumper section</p> <p>G5M0164</p>                                                                                                                                                                                                                            |
| 2           | Masking              | Mask specified part (black base) with masking tape. Use masking tape for PP (example, Nichiban No. 533, etc.).                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                       |
| 3           | Degreasing, cleaning | Clean all parts to be painted with white gasoline, normal alcohol, etc. to remove dirt, oil, fat, etc.                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                       |
| 4           | Primer paint         | Apply primer one to all parts to be painted, using air gun. Use primer (clear).                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                       |
| 5           | Drying               | Dry at normal temperature [10 to 15 min. at 20°C (68°F)]. In half-dried condition, PP primer paint is dissolved by solvent, e.g. thinner, etc. Therefore, if dust or dirt must be removed, use ordinary alcohol, etc.                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                       |
| 6           | Top coat paint (I)   | Solid color                                                                                                                                                                                                                                                                                                                          | Metallic color                                                                                                                                                                                                                                                                                                                                                        |
|             |                      | Use section (block) paint for top coat.<br>● Paint in use (for each color):<br>Solid paint<br>Hardener PB<br>Thinner T-301<br>● Mixing ratio: Main agent vs. hardener = 4:1<br>● Viscosity: 10 — 13 sec/20°C (68°F)<br>● Film thickness: 35 — 45μ<br>● Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kg/cm <sup>2</sup> , 36 — 50 psi) | Use section (block) paint for top coat.<br>● Paint in use (for each color):<br>Metallic paint<br>Hardener PB<br>Thinner T-306<br>● Mixing ratio: Main agent vs. hardener = 10:1<br>● Viscosity: 10 — 13 sec/20°C (68°F)<br>● Film thickness: 15 — 20μ<br>● Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kg/cm <sup>2</sup> , 36 — 50 psi)                              |
| 7           | Drying               | Not required.                                                                                                                                                                                                                                                                                                                        | Dry at normal temperature [10 min. or more at 20°C (68°F)]. In half-dried condition, avoid dust, dirt.                                                                                                                                                                                                                                                                |
| 8           | Top coat paint (II)  | Not required.                                                                                                                                                                                                                                                                                                                        | Apply a clear coat to parts with top coat paint (I), three times, at 5 — 7 minute intervals.<br>● Paint in use<br>Metallic paint<br>Hardener PB<br>Thinner T-301<br>● Mixing ratio: Clear vs. hardener = 6:1<br>● Viscosity: 14 — 16 sec/20°C (68°F)<br>● Film thickness: 25 — 30μ<br>● Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kg/cm <sup>2</sup> , 36 — 50 psi) |
| 9           | Drying               | 60°C (140°F), 60 min. or 80°C (176°F), 30 min. If higher than 80°C (176°F), PP may be deformed. Keep maximum temperature of 80°C (176°F).                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                       |
| 10          | Inspection           | Paint check.                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                       |
| 11          | Masking removal      | Remove masking in process No. 2.                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                       |

# FRONT BUMPER

Exterior/Interior Trim

## 2. REPAIR INSTRUCTIONS FOR COLORED PP BUMPER S911371A1902

### NOTE:

All PP bumpers are provided with a grained surface, and if the surface is damaged, it cannot normally be restored to its former condition. Damage limited to shallow scratches that cause only a change in the lustre of the base material or coating, can be almost fully restored. Before repairing a damaged area, explain this point to the customer and get an understanding about the matter. Repair methods are outlined below, based on a classification of the extent of damage.

### ● Minor Damage Causing Only A Change In The Lustre Of The Bumper Due To A Light Touch

Almost restorable.

| Process No. | Process name | Job contents                                                                                                                                           |                                                                                                                                                                            |
|-------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1           | Cleaning     | Clean the area to be repaired using water.                                                                                                             |                                                                                                                                                                            |
| 2           | Sanding      | Grind the repairing area with #500 sandpaper in a "feathering" motion.                                                                                 |                                                                                                                                                                            |
| 3           | Finish       | Resin section                                                                                                                                          | Coated section                                                                                                                                                             |
|             |              | Repeatedly apply wax to the affected area using a soft cloth (such as flannel).<br>Recommended wax: NITTO KASEI Soft 99 TIRE WAX BLACK, or equivalent. | Perform either the same operation as for the resin section or process No. 18 and subsequent operations in the "(3)" section, depending on the degree and nature of damage. |
|             |              | Polish the waxed area with a clean cloth after 5 to 10 minutes.                                                                                        |                                                                                                                                                                            |

### ● Deep Damage Caused By Scratching Fences, Etc.

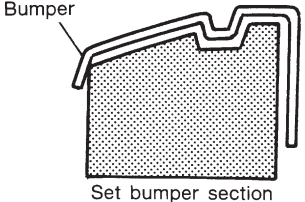
A dent cannot be repaired but a whitened or swelled part can be removed.

| Process No. | Process name            | Job contents                                                            |                                                                        |
|-------------|-------------------------|-------------------------------------------------------------------------|------------------------------------------------------------------------|
| 1           | Cleaning                | Clean damaged area with water.                                          |                                                                        |
| 2           | Removal of damaged area | Cut off protruding area, if any, due to collision, using a putty knife. |                                                                        |
| 3           | Sanding                 | Grind the affected area with #100 to #500 sandpaper.                    |                                                                        |
| 4           | Finish                  | Resin section                                                           | Coated section                                                         |
|             |                         | Same as Process No. 3 in the "(1)" section.                             | Perform Process No. 12 and subsequent operations in the "(3)" section. |

### ● Deep Damage Such As A Break Or Hole That Requires Filling

Much of the peripheral grained surface must be sacrificed for repair, and the degree of restoration is not really worth the expense. (The surface, however, will become almost flush with adjacent areas.)

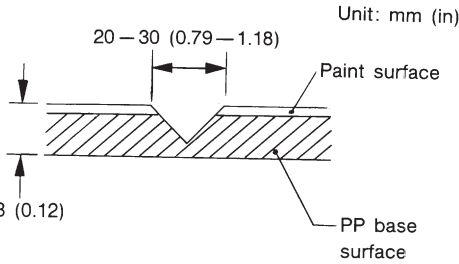
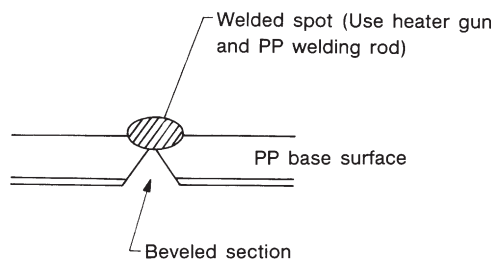
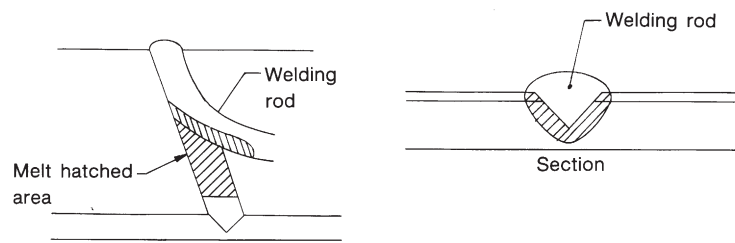
Recommended repair kit: PP Part Repair Kit (NRM)

| Process No. | Process name        | Job contents                                                                                                                                         |                                                                                       |
|-------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1           | Job contents        | Remove bumper as required.                                                                                                                           |                                                                                       |
| 2           | Part removal        | Remove parts built into bumper as required.                                                                                                          |                                                                                       |
| 3           | Bumper placement    | Place bumper on a paint worktable as required. It is recommended that contour of worktable accommodate internal shape of bumper.                     |  |
| 4           | Surface preparation | Remove dust, oil, etc. from areas to be repaired and surrounding areas, using a suitable solvent (NRM No. 900 Precleno, white gasoline, or alcohol). |                                                                                       |

G5M0164

# FRONT BUMPER

Exterior/Interior Trim

| Process No. | Process name      | Job contents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5           | Cutting           | <p>If nature of damage is cracks or holes, cut a guide slit of 20 to 30 mm (0.79 to 1.18 in) in length along the crack or hole up to the bumper's base surface. Then, bevel or "vee-out" the affected area using a knife or grinder.</p>  <p style="text-align: right;">Unit: mm (in)</p> <p style="text-align: right;">G5M0165</p>                                                                                                                                                                                            |
| 6           | Sanding (I)       | Grind beveled surface with sandpaper (#40 to #60) to smooth finish.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 7           | Cleaning          | Clean the sanded surface with the same solvent as used in Process No. 4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 8           | Temporary welding | <p>Grind the side just opposite the beveled area with sandpaper (#40 to #60) and clean using a solvent. Temporarily spot-weld the side, using a PP welding rod and heater gun.</p>  <p style="text-align: right;">G5M0166</p> <p>NOTE:</p> <ul style="list-style-type: none"> <li>● Do not melt welding rod until it flows out. This results in reduced strength.</li> <li>● Leave the welded spot unattended until it cools completely.</li> </ul>                                                                           |
| 9           | Welding           | <p>Using a heater gun and PP welding rod, weld the beveled spot while melting the rod and damaged area.</p>  <p style="text-align: right;">G5M0167</p> <p>NOTE:</p> <ul style="list-style-type: none"> <li>● Melt the sections indicated by hatched area.</li> <li>● Do not melt welding rod until it flows out, in order to provide strength.</li> <li>● Always keep the heater gun 1 to 2 cm (0.4 to 0.8 in) away from the welding spot.</li> <li>● Leave the welded spot unattended until it cools completely.</li> </ul> |



# FRONT BUMPER

Exterior/Interior Trim

| Process No. | Process name            | Job contents                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10          | Sanding (II)            | Remove excess part of weld with a putty knife. If a drill or disc wheel is used instead of the knife, operate it at a rate lower than 1,500 rpm and grind the excess part little by little. A higher rpm will cause the PP substrate to melt from the heat.                                                                                                                                                                                 |
|             |                         |                                                                                                                                                                                                                                                                                                                                                           |
|             |                         | <div>G5M0168</div> Sand the welded spot smooth with #240 sand paper.                                                                                                                                                                                                                                                                                                                                                                        |
| 11          | Masking                 | Mask the black substrate section using masking tape.<br>Recommended masking tape: Nichiban No. 533 or equivalent                                                                                                                                                                                                                                                                                                                            |
| 12          | Cleaning/ degreasing    | Completely clean the entire coated area, using solvent similar to that used in Process No. 4.                                                                                                                                                                                                                                                                                                                                               |
| 13          | Primer coating          | Apply a coat of primer to the repaired surface and its surrounding areas. Mask these areas, if necessary.<br>Recommended primer: Mp/ 364 PP Primer<br>NOTE:<br>Be sure to apply one coat of primer at a spraying pressure of 245 to 343 kPa (2.5 to 3.5 kg/cm <sup>2</sup> , 36 to 50 psi) with a spray gun.                                                                                                                                |
| 14          | Leave unattended.       | Leave the repaired area unattended at 20°C (68°F) for 10 to 15 minutes until primer is half-dry.<br>NOTE:<br>If dirt or dust comes in contact with the coated area, wipe it off with a cloth dampened with alcohol. (Do not use thinner since the coated area tends to melt.)                                                                                                                                                               |
| 15          | Primer surfacer coating | Apply a coat of primer surfacer to the repaired area two or three times at an interval of 3 to 5 minutes.<br>Recommended surfacer: <ul style="list-style-type: none"><li>● UPS 300 Flex Primer</li><li>● No. 303 UPS 300 Exclusive hardener</li><li>● NPS 725 Exclusive Reducer (thinner)</li><li>● Mixing ratio: 2 : 1 (UPS 300: No. 303)</li><li>● Viscosity: 12 — 14 sec/20°C (68°F)</li><li>● Coated film thickness: 40 — 50μ</li></ul> |
| 16          | Drying                  | Allow the coated surface to dry for 60 minutes at 20°C (68°F) [or 30 minutes at 60°C (140°F)].                                                                                                                                                                                                                                                                                                                                              |
| 17          | Sanding (III)           | Sand the coated surface and its surrounding areas using #400 sandpaper and water.                                                                                                                                                                                                                                                                                                                                                           |
| 18          | Cleaning/ degreasing    | Same as Process No. 12.                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 19          | Top coat (I)            | <div>Solid color</div> Use a “block” coating method. <ul style="list-style-type: none"><li>● Recommended paint: Suncryl (SC)</li><li>● No. 307 Flex Hardener</li><li>● SC Reducer (thinner)</li><li>● Mixing ratio: 3 : 1 (Suncryl: No. 307)</li><li>● Viscosity: 11 — 13 sec/20°C (68°F)</li><li>● Coated film thickness: 40 — 50μ</li><li>● Spraying thickness: 245 — 343 kPa (2.5 — 3.5 kg/cm<sup>2</sup>, 36 — 50 psi)</li></ul>        |
|             |                         | <div>Metallic color</div> Use a “block” coating method. <ul style="list-style-type: none"><li>● Recommended paint: Suncryl (SC)</li><li>● No. 307 Flex Hardener</li><li>● SC Reducer (thinner)</li><li>● Mixing ratio: 3 : 1 (Suncryl: No. 307)</li><li>● Viscosity: 11 — 13 sec/20°C (68°F)</li><li>● Coated film thickness: 20 — 30μ</li><li>● Spraying thickness: 245 — 343 kPa (2.5 — 3.5 kg/cm<sup>2</sup>, 36 — 50 psi)</li></ul>     |
| 20          | Leave unattended.       | Not required.<br><br>Leave unattended at 20°C (68°F) for at least 10 minutes until the topcoated area is half-dry.<br>NOTE:<br>Be careful to keep dust or dirt from coming in contact with the affected area.                                                                                                                                                                                                                               |

# FRONT BUMPER

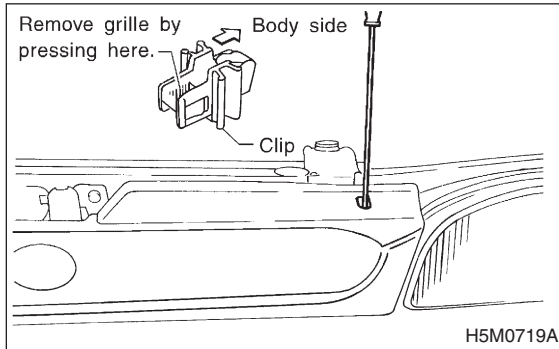
Exterior/Interior Trim

| Process No. | Process name        | Job contents                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 21          | Top coat (II)       | <p>Not required.</p> <p>Apply a clear coat three times at an interval of 3 to 5 minutes.</p> <ul style="list-style-type: none"> <li>● Recommended paint:<br/>SC710 Overlay Clear<br/>No. 307 Flex Hardener<br/>SC Reducer (thinner)</li> <li>● Mixing ratio: 3 : 1<br/>(SC710: No. 307)</li> <li>● Viscosity: 10 — 13 sec/20°C (68°F)</li> <li>● Coated film thickness: 20 — 30μ</li> <li>● Spraying pressure: 245 — 343 kPa<br/>(2.5 — 3.5 kg/cm<sup>2</sup>, 36 — 50 psi)</li> </ul> |
| 22          | Drying              | <p>Allow the coated surface to dry at 20°C (68°F) for two hours or 60°C (140°F) for 30 minutes.</p> <p>NOTE:<br/>Do not allow the temperature to exceed 80°C (176°F) since this will deform the PP substrate.</p>                                                                                                                                                                                                                                                                      |
| 23          | Inspection          | Carefully check the condition of the repaired area.                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 24          | Masking removal     | Remove masking tape applied in Process No. 11 and 13.                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 25          | Parts installation  | Install parts on bumper in reverse order of removal.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 26          | Bumper installation | Install bumper.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## 2. Front Grille S911379

### A: REMOVAL S911379A18

Remove two upper clips from body panel. To facilitate removal, press portion shown in figure using screwdriver while lightly pulling front grille.



### B: INSTALLATION S911379A11

Install in the reverse order of removal.

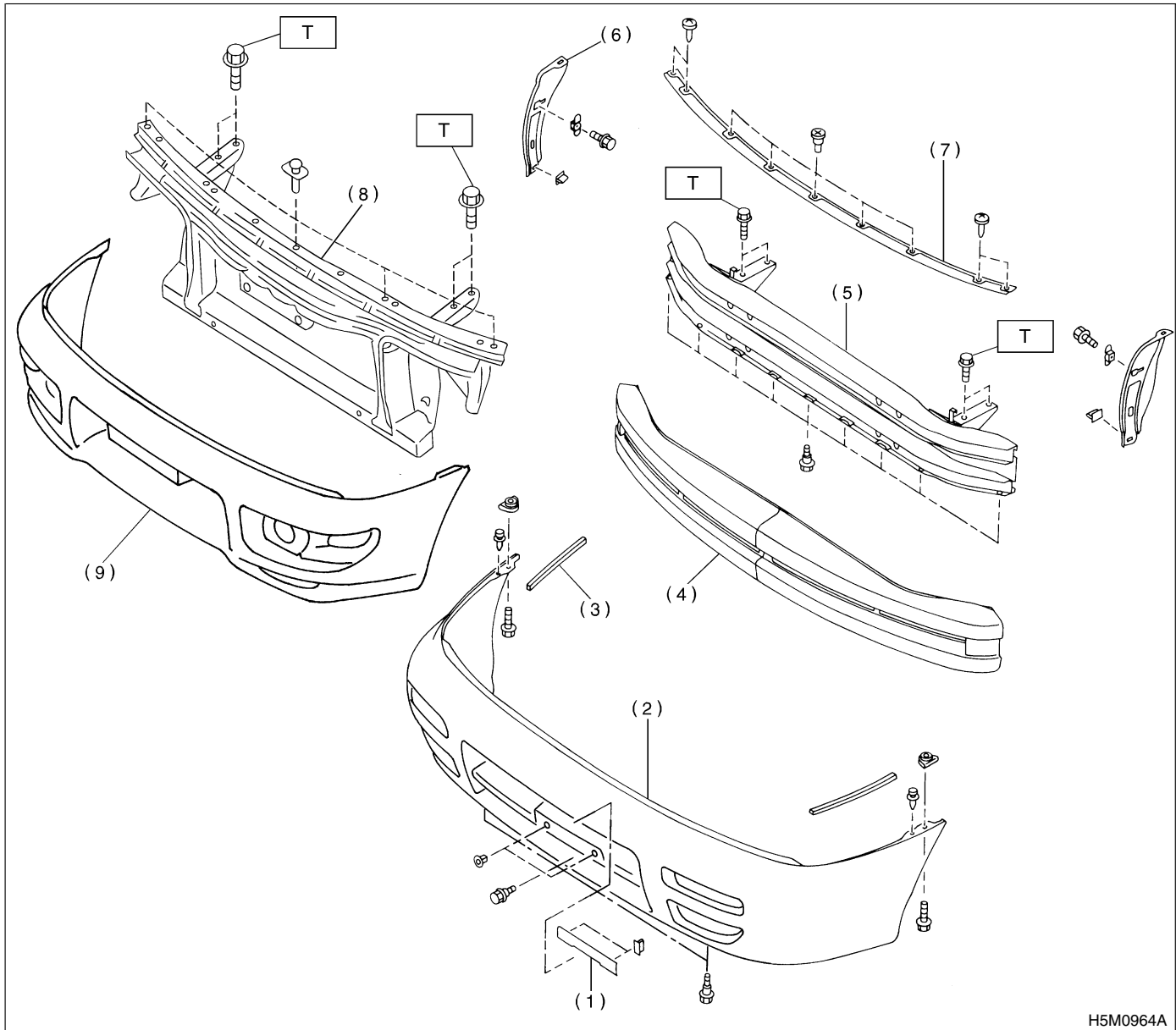
#### NOTE:

Attach all clips to grille. Align them with clip hole in body and push them into place.

## 1. General Description S911001

**A: COMPONENT** *S911001A05*

## 1. FRONT BUMPER *S911001A0501*



H5M0964A

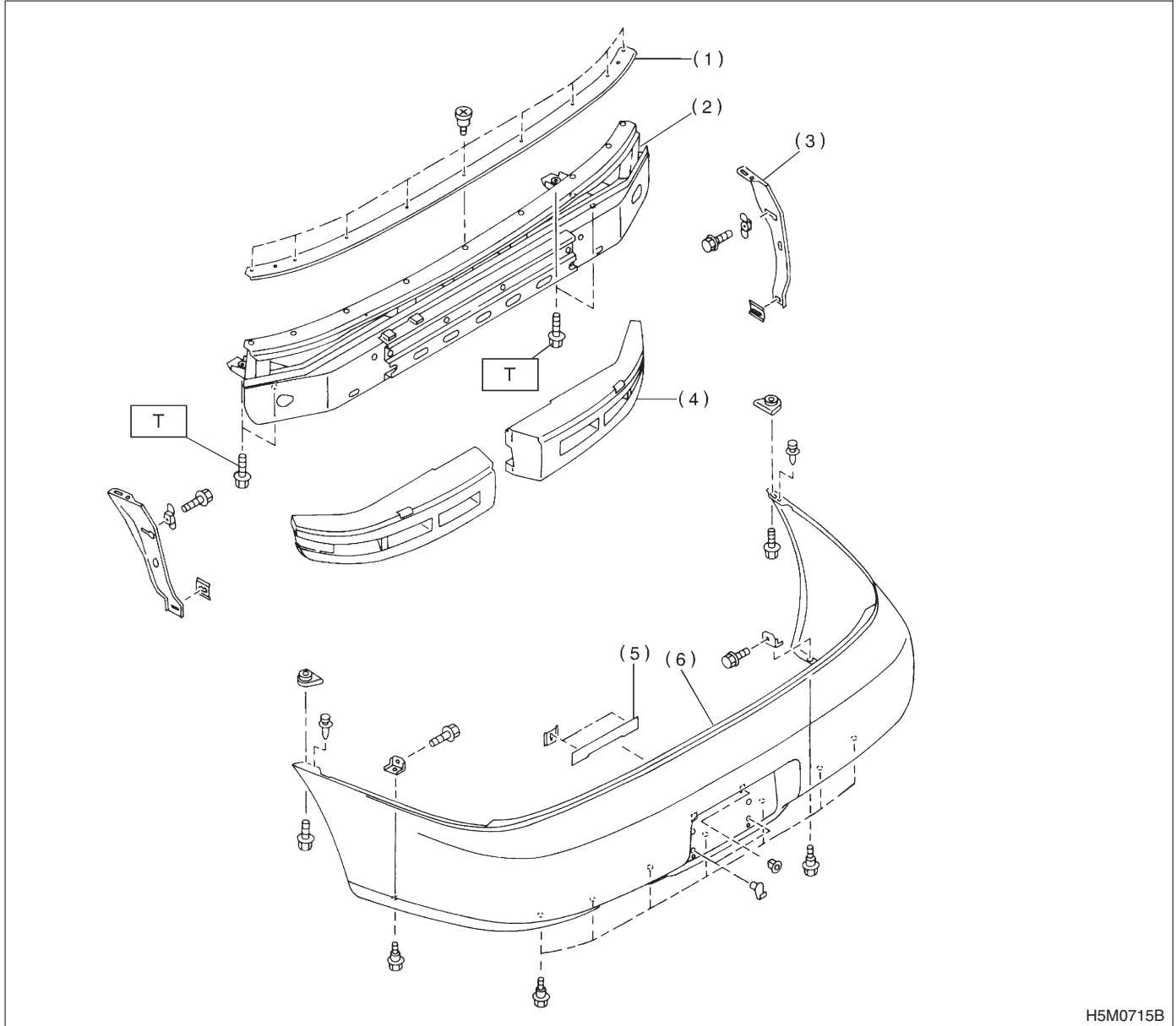
- (1) Plate
- (2) Bumper face (Except USA 2500 cc)
- (3) Spacer
- (4) E/A form bumper

- (5) Front beam (Except USA 2500 cc)
- (6) Bracket (Side)
- (7) Holder upper
- (8) Front beam (USA 2500 cc)

- (9) Bumper face (USA 2500 cc)

**Tightening torque: N·m (kgf-m, ft-lb)**  
**T: 93 (9.5, 69)**

## 2. REAR BUMPER S911001A0511



H5M0715B

- |                    |                     |
|--------------------|---------------------|
| (1) Holder upper   | (4) E/A from bumper |
| (2) Bumper beam    | (5) Plate           |
| (3) Bracket (Side) | (6) Bumper surface  |

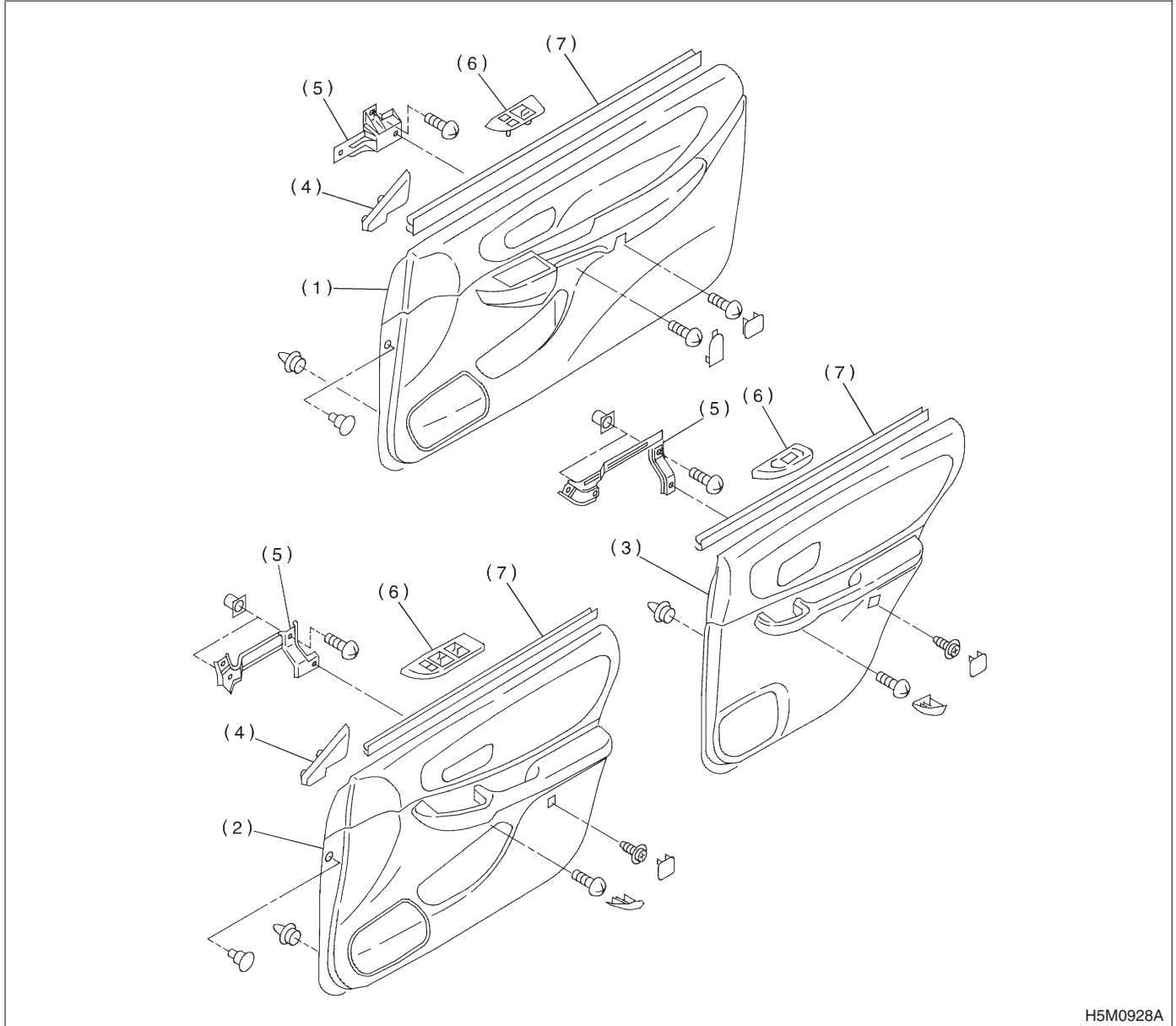
**Tightening torque: N·m (kgf-m, ft-lb)**

**T: 93 (9.5, 69)**

# GENERAL DESCRIPTION

Exterior/Interior Trim

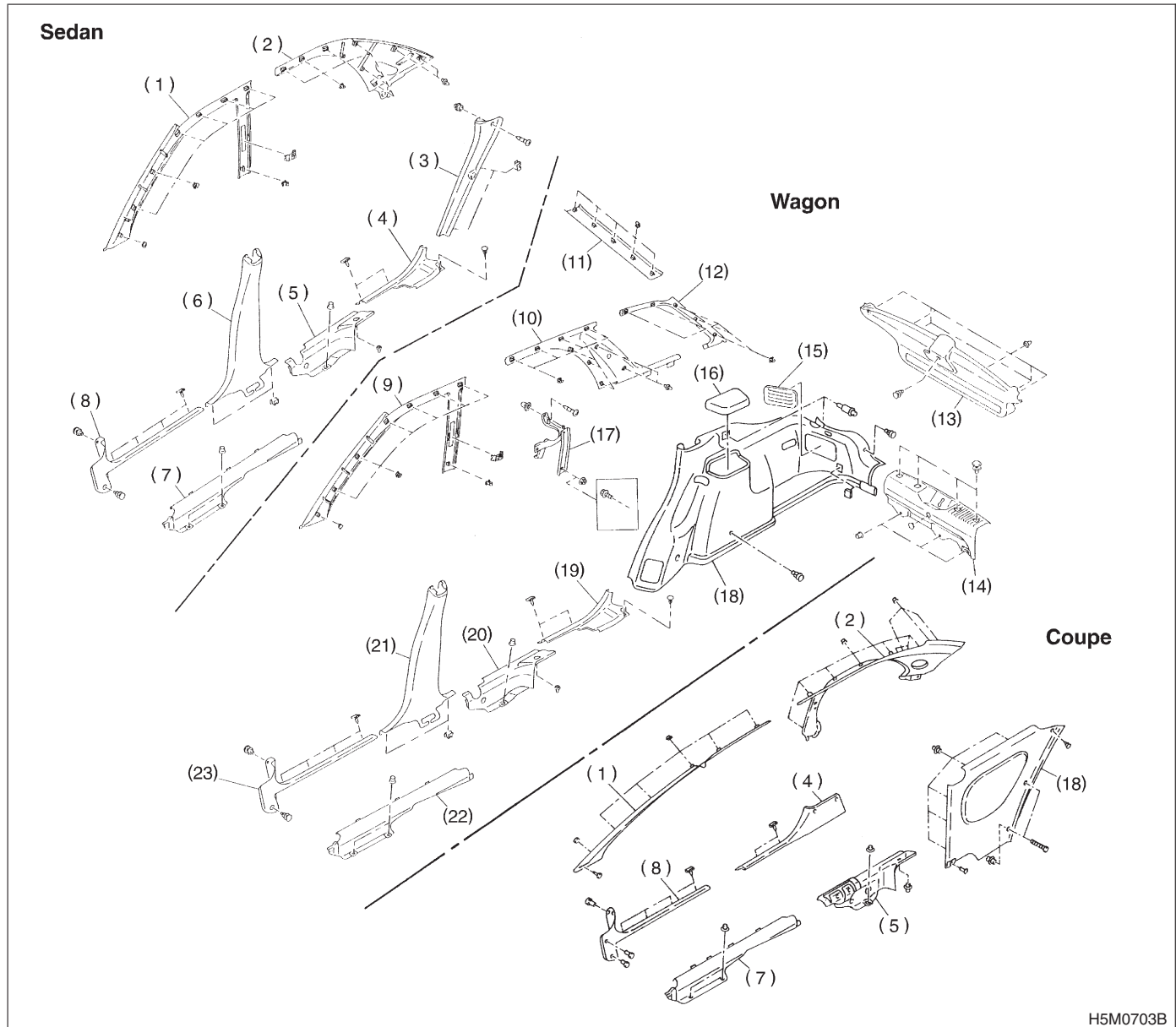
## 3. DOOR TRIM S911001A0505



H5M0928A

- |                                     |                  |                  |
|-------------------------------------|------------------|------------------|
| (1) Trim panel (Coupe)              | (4) Gusset cover | (7) Weatherstrip |
| (2) Trim panel (Except coupe/front) | (5) Bracket      |                  |
| (3) Trim panel (Except coupe/rear)  | (6) Cover        |                  |

## 4. INNER TRIM S911001A0512

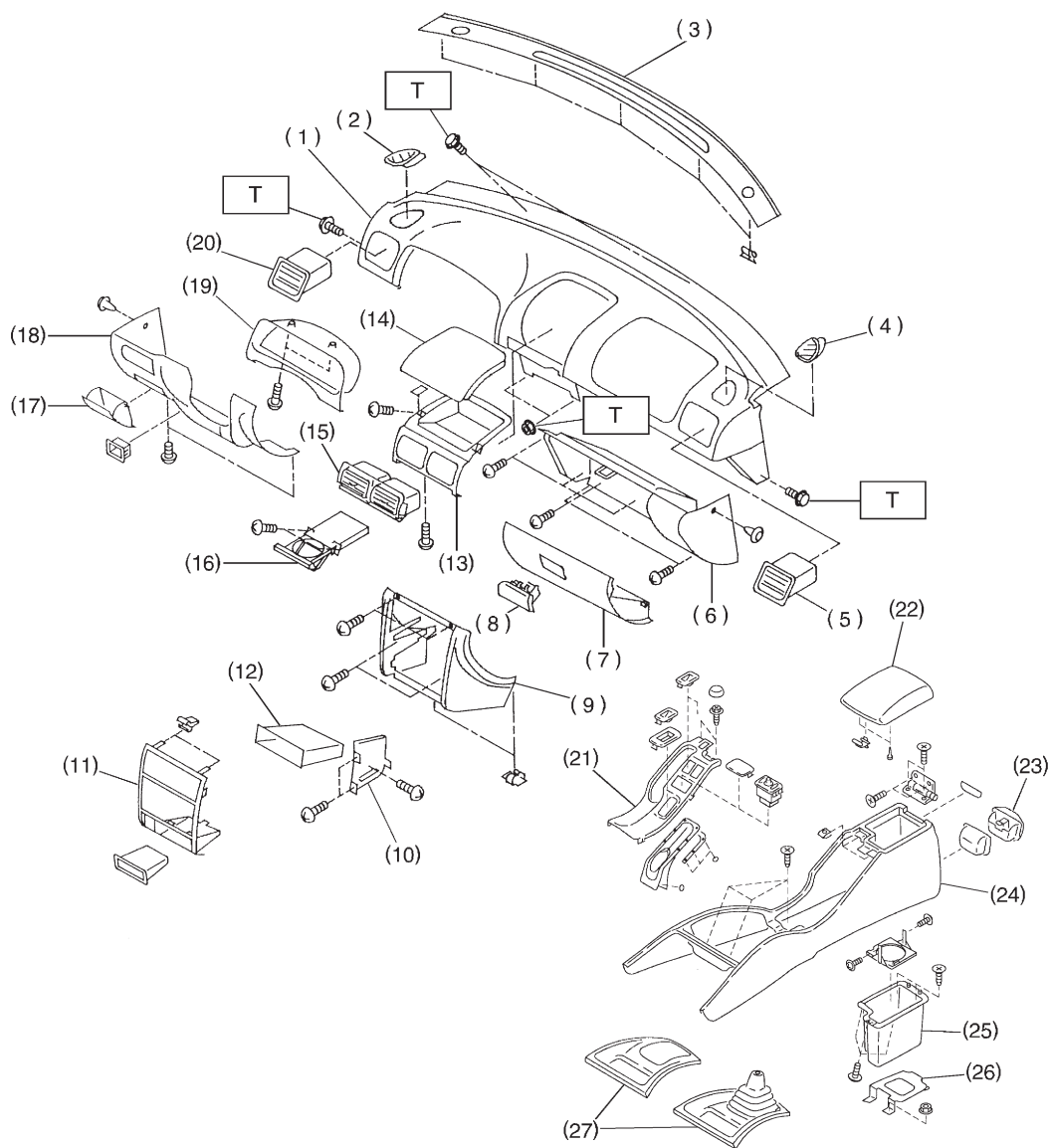


- |                                 |                                    |                                  |
|---------------------------------|------------------------------------|----------------------------------|
| (1) Front pillar upper trim     | (9) Front pillar upper trim        | (17) Trim bracket                |
| (2) Rear pillar upper trim      | (10) Rear quarter upper front trim | (18) Rear quarter lower trim     |
| (3) Rear pillar lower trim      | (11) Rear rail trim                | (19) Side sill rear upper cover  |
| (4) Side sill rear upper cover  | (12) Rear quarter upper rear trim  | (20) Side sill rear lower cover  |
| (5) Side sill rear lower cover  | (13) Rear gate trim                | (21) Center pillar lower trim    |
| (6) Center pillar lower trim    | (14) Rear skirt trim               | (22) Side sill front lower cover |
| (7) Side sill front lower cover | (15) Lamp cover                    | (23) Front pillar lower trim     |
| (8) Front pillar lower trim     | (16) Cover                         |                                  |

# GENERAL DESCRIPTION

Exterior/Interior Trim

## 5. INSTRUMENT PANEL S911001A0508



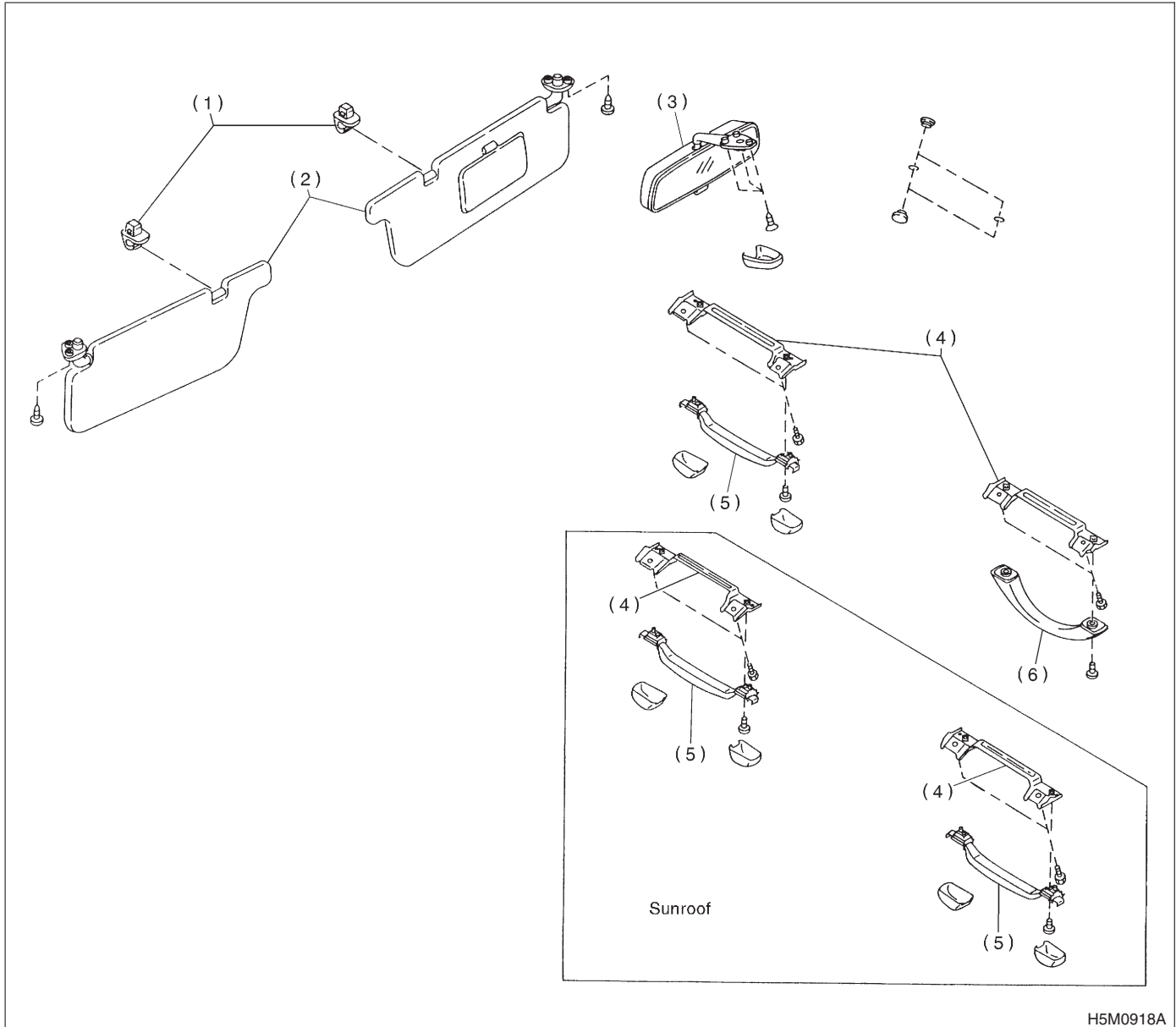
H5M0931A

- |                                     |                        |                        |
|-------------------------------------|------------------------|------------------------|
| (1) Pad & frame                     | (12) Pocket            | (23) Ash tray          |
| (2) Grille side (D)                 | (13) Panel center      | (24) Console box       |
| (3) Front def. grille               | (14) Center pocket lid | (25) Console pocket    |
| (4) Grille side (P)                 | (15) Grille center     | (26) Rear console BRKT |
| (5) Grille vent (P)                 | (16) Cup holder        | (27) Front cover       |
| (6) Glove box panel                 | (17) Side pocket       |                        |
| (7) Glove box lid                   | (18) Lower cover ASSY  |                        |
| (8) Knob                            | (19) Meter visor       |                        |
| (9) Instrument panel center console | (20) Grille vent (D)   |                        |
| (10) BRKT (Radio)                   | (21) Console cover     |                        |
| (11) Center console cover           | (22) Console lid       |                        |

**Tightening torque: N·m (kgf-m, ft-lb)**  
**T: 7 (0.7, 5.1)**



## 6. INNER ACCESSORIES S911001A0510



H5M0918A

- |               |                         |                               |
|---------------|-------------------------|-------------------------------|
| (1) Hook      | (3) Rearview mirror     | (5) Assist grip (retractable) |
| (2) Sun visor | (4) Assist rail bracket | (6) Assist grip (fixed)       |

## GENERAL DESCRIPTION

Exterior/Interior Trim

### B: PREPARATION TOOL S911001A17

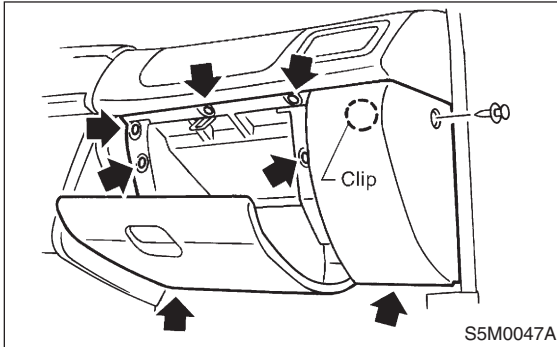
#### 1. GENERAL TOOL S911001A1701

| TOOL NAME        | REMARKS                                          |
|------------------|--------------------------------------------------|
| Clip Remover     | Used for trim removal.                           |
| Adhesive Remover | Used for side protector removal.                 |
| Primer           | Used for side protector installation.            |
| Infrared Lamp    | Used for removal/installation of side protector. |
| Tow-sided Tape   | Used for side protector installation.            |
| TORX® T30        | Used for removal/installation of crossbar.       |

## 10. Glove Box S911558

### A: REMOVAL S911558A18

Loosen screws to remove glove box.



### B: INSTALLATION S911558A11

Install in the reverse order of removal.

# HOOD DUCT

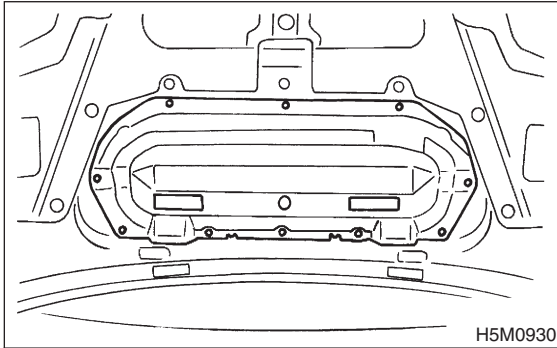
Exterior/Interior Trim

## 18. Hood Duct S911615

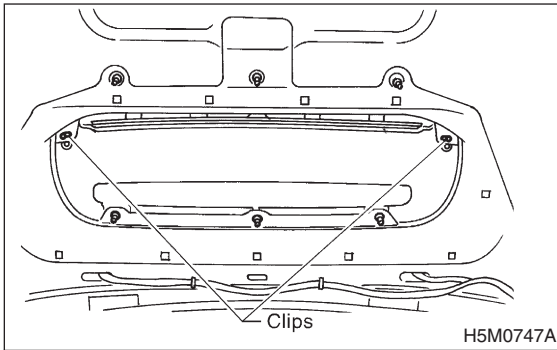
### A: REMOVAL S911615A18

#### 1. CENTER DUCT S911615A1801

- 1) Open the hood.
- 2) Remove clip and screws, then remove brace cover.

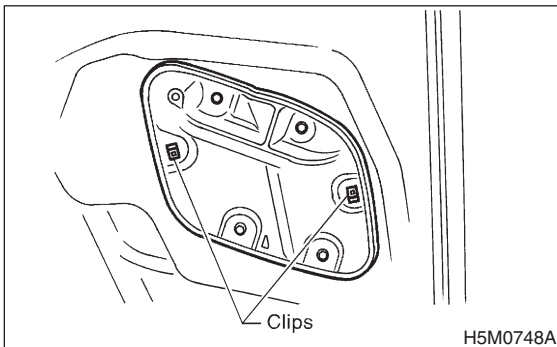


- 3) Remove six nuts.
- 4) Disconnect the two clips from hood, then remove hood duct grille.



#### 2. SIDE DUCT S911615A1802

- 1) Open the hood.
- 2) Remove four nuts.
- 3) Disconnect the two clips from brace cover, then remove brace cover.



- 4) Remove duct grille.

### B: INSTALLATION S911615A11

#### 1. CENTER DUCT S911615A1101

Install in the reverse order of removal.

#### 2. SIDE DUCT S911615A1102

Install in the reverse order of removal.

## 12. Instrument Panel Assembly

S911381

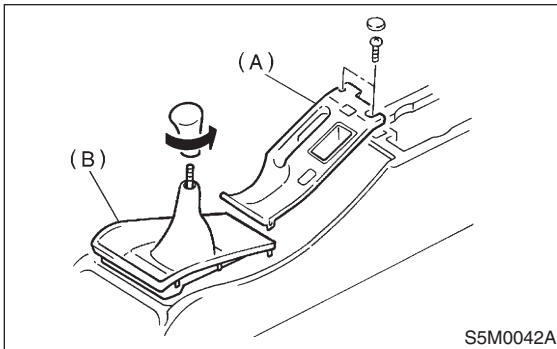
### A: REMOVAL S911381A18

Airbag system wiring harness is routed on steering support beam.

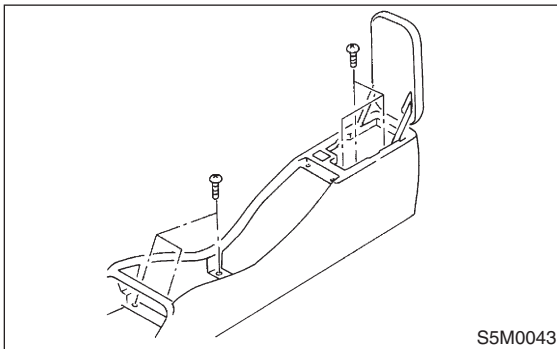
#### CAUTION:

- All Airbag system wiring harness and connectors are colored yellow. Do not use electrical test equipment on these circuits.
- Be careful not to damage Airbag system wiring harness when servicing the instrument panel.

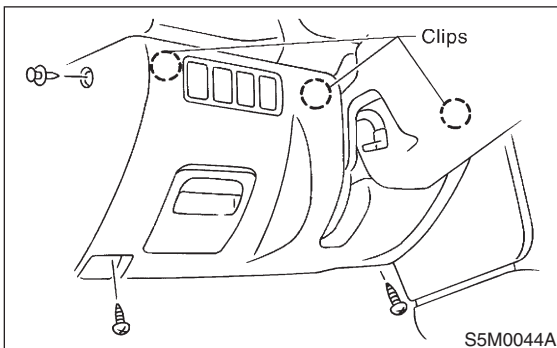
- 1) Disconnect GND cable from battery.
- 2) Remove shift knob (MT model).
- 3) Remove console cover (A) and front cover (B).



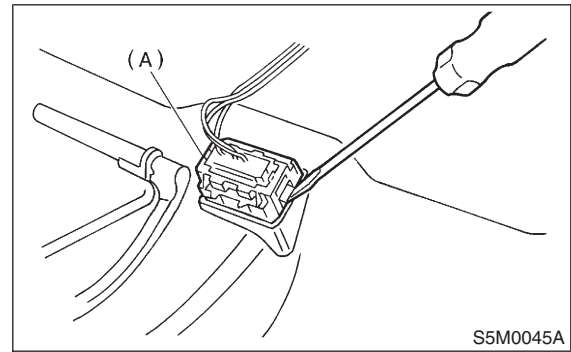
- 4) Remove console box.



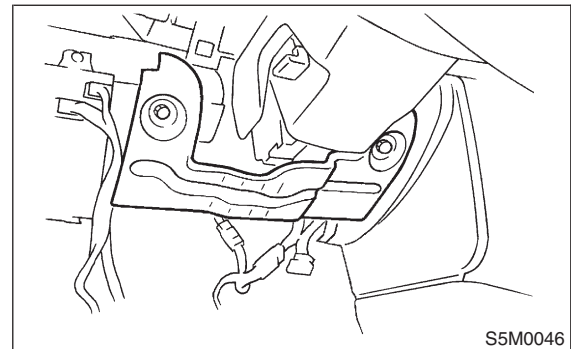
- 5) Remove lower cover and then disconnect connector.



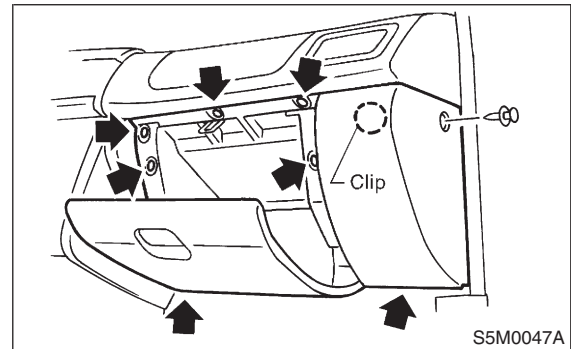
- 6) Disconnect data link connector (A) from lower cover.



- 7) Remove knee panel.

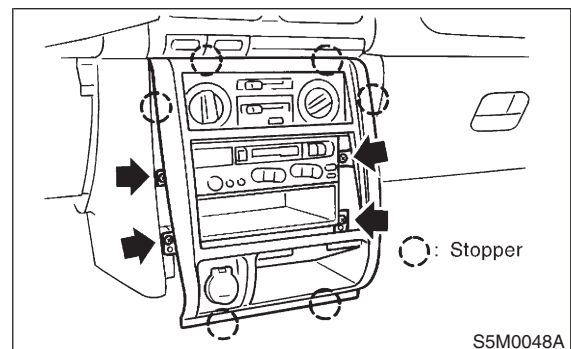


- 8) Remove glove box.



- 9) Remove center panel and disconnect connector.

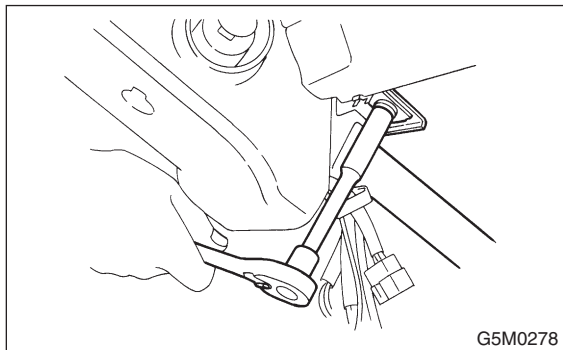
- 10) Remove audio.



# INSTRUMENT PANEL ASSEMBLY

Exterior/Interior Trim

11) Remove two bolts and lower steering column.

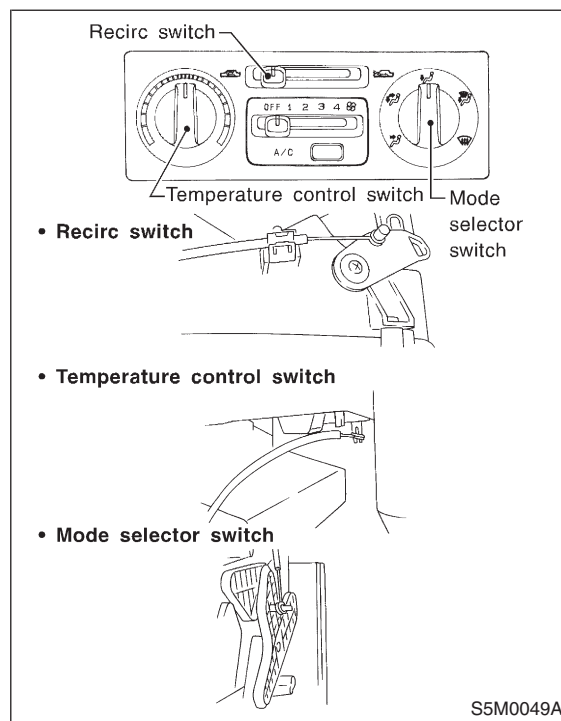


12) Set temperature control switch to “FULL HOT”, mode selector switch to “DEF” position and recirc switch to “FRESH” position.

13) Disconnect temperature control cable and mode control cable from heater unit then disconnect recirc control cable from intake unit.

**NOTE:**

Do not move switch and link when installing.



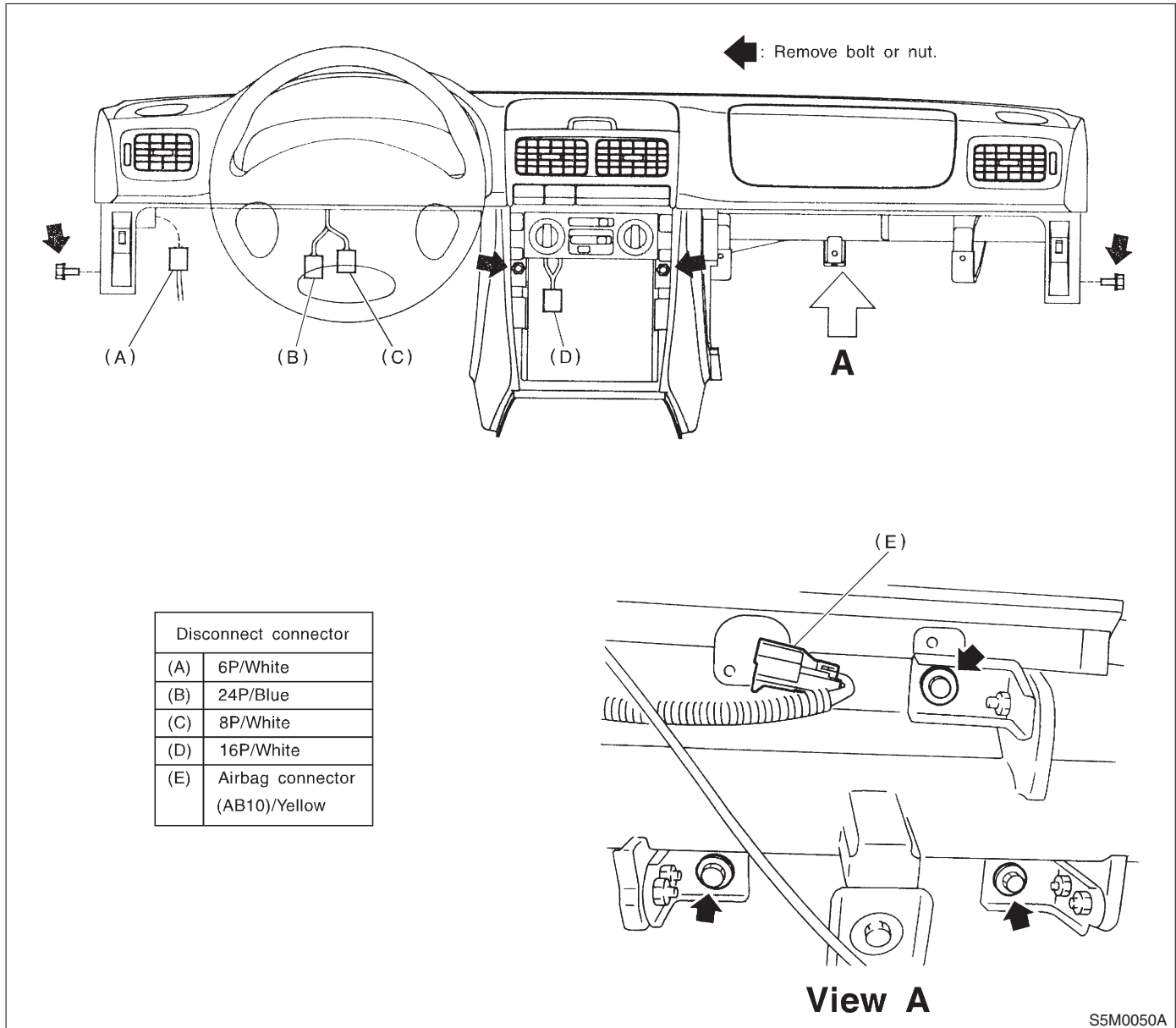
14) Disconnect harness connectors and then remove the installing bolts and nuts.

**CAUTION:**

**Be sure to hold socket section and not harness when disconnecting.**

**NOTE:**

Put matching mark, if necessary, for easy reassembly.

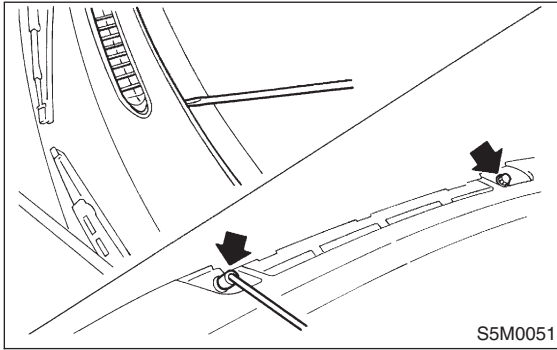


S5M0050A

# INSTRUMENT PANEL ASSEMBLY

Exterior/Interior Trim

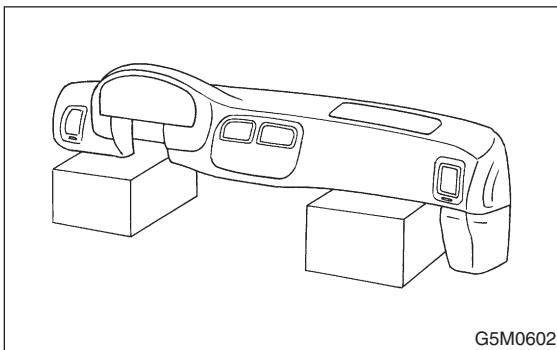
15) Remove front defroster grille and two bolts.



16) Remove instrument panel carefully from the body.

## CAUTION:

- Take care not to scratch the instrument panel and related parts.
- When storing removed instrument panel with passenger airbag module, place it standing up on the floor.



## B: INSTALLATION S911381A11

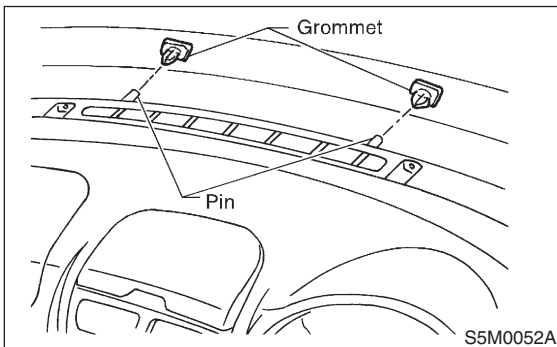
Install in the reverse order of removal.

## CAUTION:

- Be careful not to snag the harness.
- Make sure to connect harness connectors.
- Take care not to scratch the instrument panel and related parts.

## NOTE:

When setting instrument panel into position, push two pins into grommet on body panel.

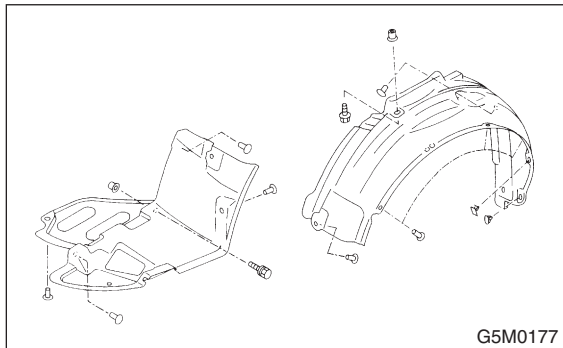




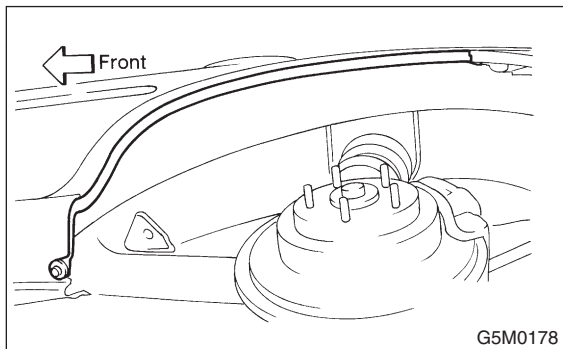
## 5. Mud Guard S911374

### A: REMOVAL S911374A18

- 1) Jack-up vehicle to remove tire.
- 2) Remove screws and clips. Move mud guard toward the center of the body and remove mud guard.



- 3) Remove clip and screws.



- 4) Remove arch protectors.

### B: INSTALLATION S911374A11

Insert hook into body, and tighten it with screw and clip.

## 6. Protector S911380

### A: REMOVAL S911380A18

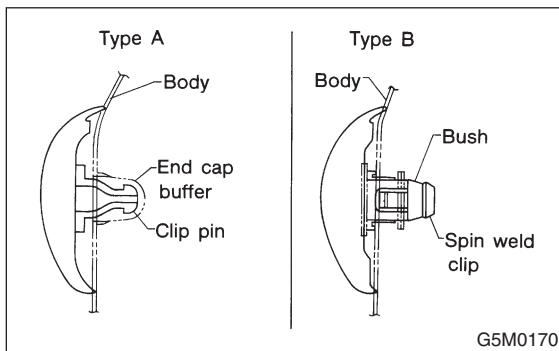
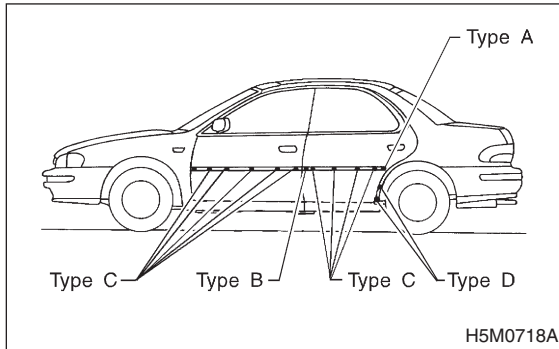
#### NOTE:

Do not re-use protector.

#### 1) Type A and B:

Protector is attached to body with clips.

While holding end of protector by hand, force protector out.



#### 2) Type C:

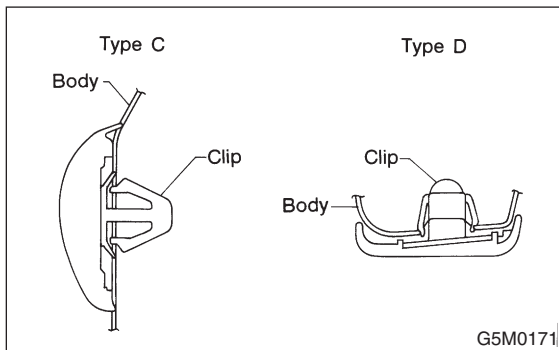
Protector is attached to body with clips.

Remove door inner trim, and detach protector by pushing clip pawl from inside.

#### 3) Type D:

Protector is attached to body with clips.

While holding end of protector by hand, force protector out.



### B: INSTALLATION S911380A11

Install in the reverse order of removal.

#### NOTE:

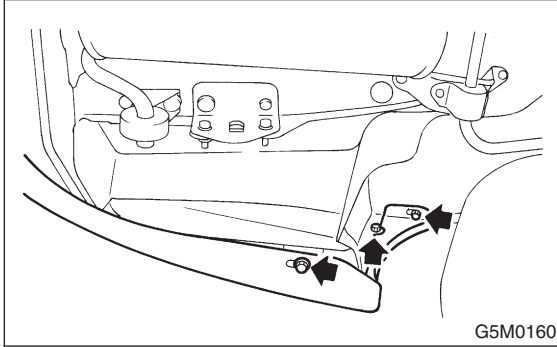
- Type A: Insert clip pins into holes in body, then fit end cap buffers into place.
- Type B: Insert spin weld clips into holes in body, then fit bushings into place.
- Type C and D: Align the clips with holes in body and insert them.
- Install clips in standard holes first.

## 4. Rear Bumper S911370

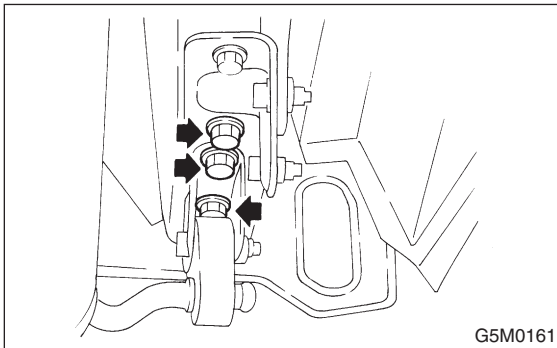
### A: REMOVAL S911370A18

#### 1. SEDAN S911370A1801

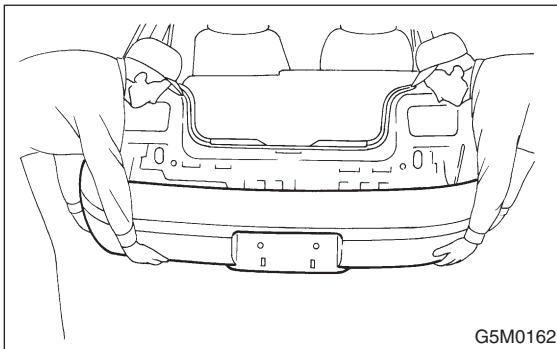
- 1) Open trunk lid. Remove trunk trim panel clips and detach trim.
- 2) Disconnect license plate light connector.
- 3) Remove bolts from side of bumper.



- 4) Remove bolts from bumper stay.



- 5) Remove rear bumper.



#### 2. WAGON S911370A1802

- 1) Open rear gate and rear quarter trim lid.
- 2) Disconnect license plate light connector.
- 3) Remove bolts from side of bumper.
- 4) Remove bolts from bumper stays.
- 5) Remove bumper assembly.

### B: INSTALLATION S911370A11

#### 1. SEDAN S911370A1101

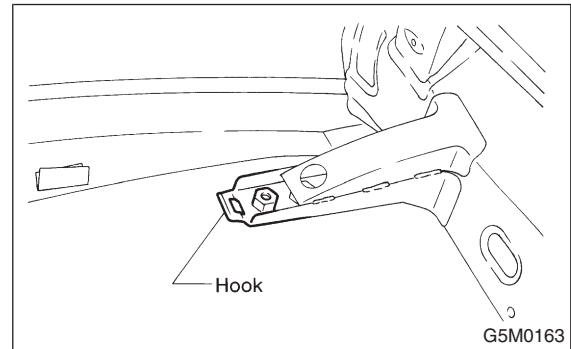
Install in the reverse order of removal.

#### CAUTION:

- Be extremely careful to prevent scratches on bumper face as it is made of resin.
- Be careful not to scratch the body when removing or installing bumper.

#### NOTE:

To facilitate installation of rear bumper, attach hook (located at stay) to body panel.



#### 2. WAGON S911370A1102

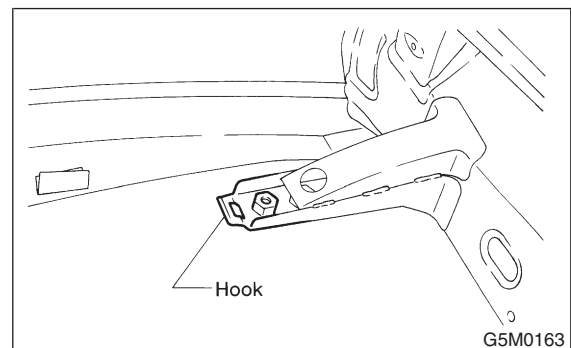
Install in the reverse order of removal.

#### CAUTION:

- Be extremely careful to prevent scratches on bumper face as it is made of resin.
- Be careful not to scratch the body when removing or installing bumper.

#### NOTE:

To facilitate installation of rear bumper, attach hook (located at stay) to body panel.



## C: REPAIR S911370A19

Refer to front bumper repair. <Ref. to EI-11  
REPAIR, Front Bumper.>

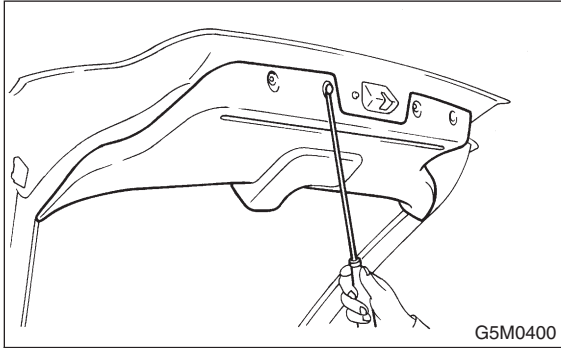
### 16. Rear Gate Trim S911357

#### A: REMOVAL S911357A18

##### CAUTION:

**Be careful not to damage clips or their holes.**

Remove clips and detach rear gate lower trim (A).



#### B: INSTALLATION S911357A11

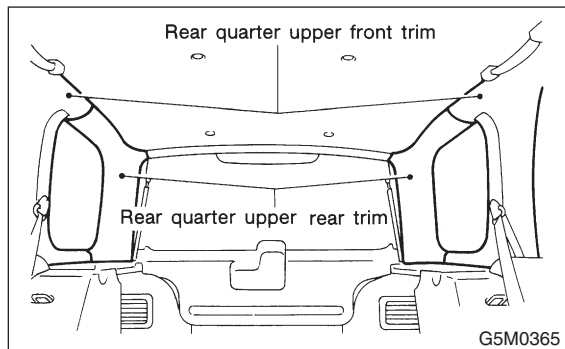
Install in the reverse order of removal.

## 14. Rear Quarter Trim S911358

### A: REMOVAL S911358A18

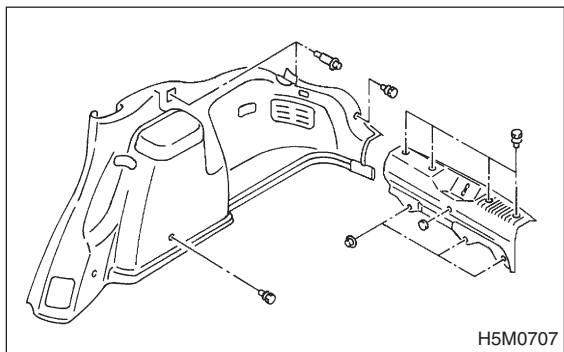
#### 1. REAR QUARTER PILLAR UPPER TRIM PANEL (WAGON) S911358A1803

- 1) Set rear seat cushion up.
- 2) Remove rear seat backrest.
- 3) Remove rear quarter lower trim.
- 4) Remove rear rail trim.
- 5) Remove rear quarter upper front trim.
- 6) Remove rear quarter upper rear trim.



#### 2. REAR QUARTER LOWER TRIM PANEL (WAGON) S911358A1804

- 1) Remove luggage cover.
- 2) Set rear seat cushion up.
- 3) Remove rear seat backrest.
- 4) Remove rear skirt trim.
- 5) Remove clip and screw then disconnect connector (RH side).
- 6) Remove rear seat belt lower anchor then remove rear quarter lower trim.



### B: INSTALLATION S911358A11

#### 1. REAR QUARTER PILLAR UPPER TRIM PANEL (WAGON) S911358A1101

Install in the reverse order of removal.

##### CAUTION:

Be sure to securely hook pawls of rear quarter pillar trim panel to body flange.

#### 2. REAR QUARTER LOWER TRIM PANEL (WAGON) S911358A1102

Install in the reverse order of removal.

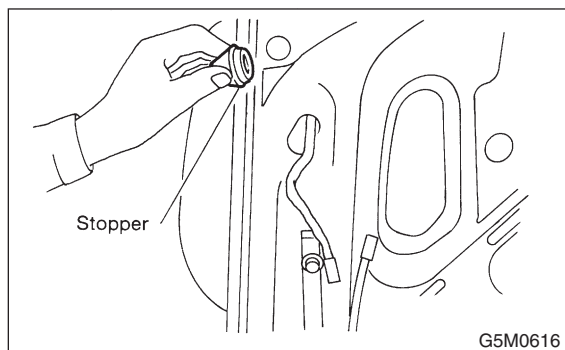
##### CAUTION:

Be careful not to ride trim panel over harness, insulators, etc.

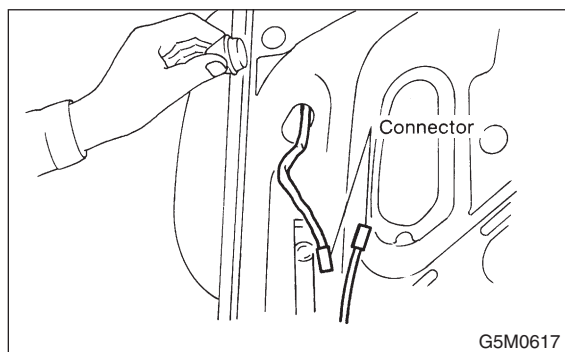
## 8. Spoiler S911385

### A: REMOVAL S911385A18

- 1) Remove stoppers from both sides of trunk lid.



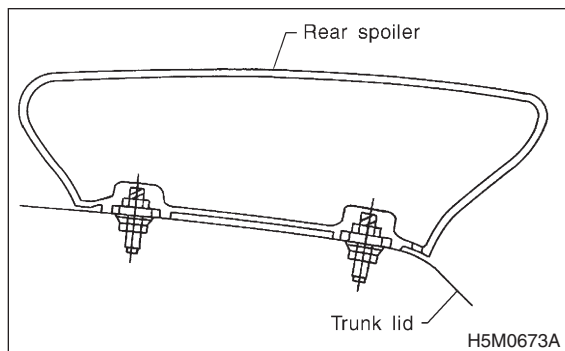
- 2) Disconnect high-mount stop light connector.



- 3) Remove nuts from rear spoiler.

**CAUTION:**

Be careful not to drop nuts into box section of trunk lid.



- 4) Lift rear spoiler and unfasten clips.  
5) Remove spoiler from trunk lid.

**CAUTION:**

Be careful not to damage trunk lid.

### B: INSTALLATION S911385A11

Install in the reverse order of removal.

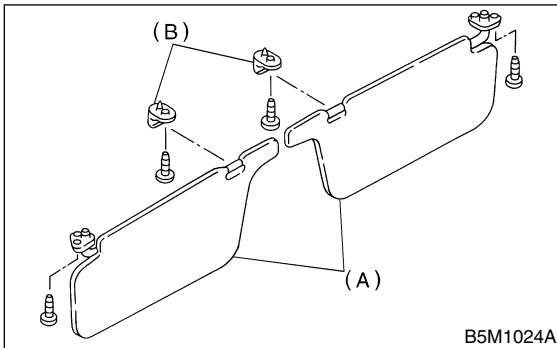
**Tightening torque:**

**7.4 N·m (0.75 kgf-m, 5.4 ft-lb)**

## 15. Sun Visor S911359

### A: REMOVAL S911359A18

Remove mounting screws then detach sun visor (A) and hook (B).



### B: INSTALLATION S911359A11

Install in the reverse order of removal.



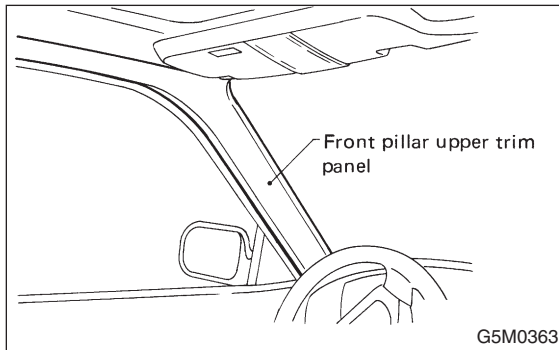
## 13. Upper Inner Trim S911384

### A: REMOVAL S911384A1801

#### 1. FRONT PILLAR UPPER TRIM PANEL

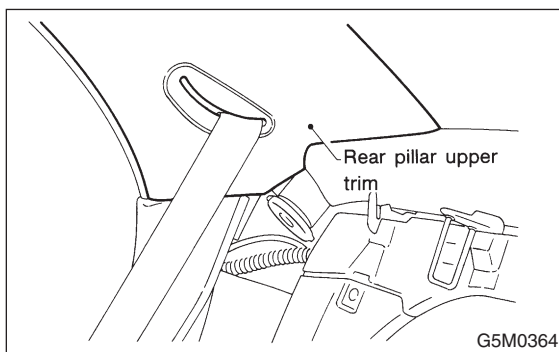
S911384A180101

- 1) Remove center pillar lower trim panel.
- 2) Remove seat belt anchor bolts.
- 3) Pry pawls off body flange of front pillar upper trim panel using screwdriver.
- 4) Remove clips which hold front pillar upper trim panel, and lift trim panel out by moving it toward the compartment.



#### 2. REAR PILLAR UPPER TRIM PANEL (SEDAN) S911384A180102

- 1) Remove rear seat cushion and backrest.
- 2) Remove tapping screw from rear pillar lower trim panel, and remove trim panel by sliding it forward.
- 3) Remove front pillar upper trim end.
- 4) Pry the pawl off front end using screwdriver.
- 5) Remove clips which hold rear pillar upper trim, and remove trim panel by sliding it forward.



### B: INSTALLATION S911384A11

#### 1. FRONT PILLAR UPPER TRIM PANEL

S911384A1101

Install in the reverse order of removal.

#### CAUTION:

**Be sure to securely hook pawls of front pillar upper trim panel to body flange.**

#### 2. REAR PILLAR UPPER TRIM PANEL (SEDAN) S911384A1102

Install in the reverse order of removal.

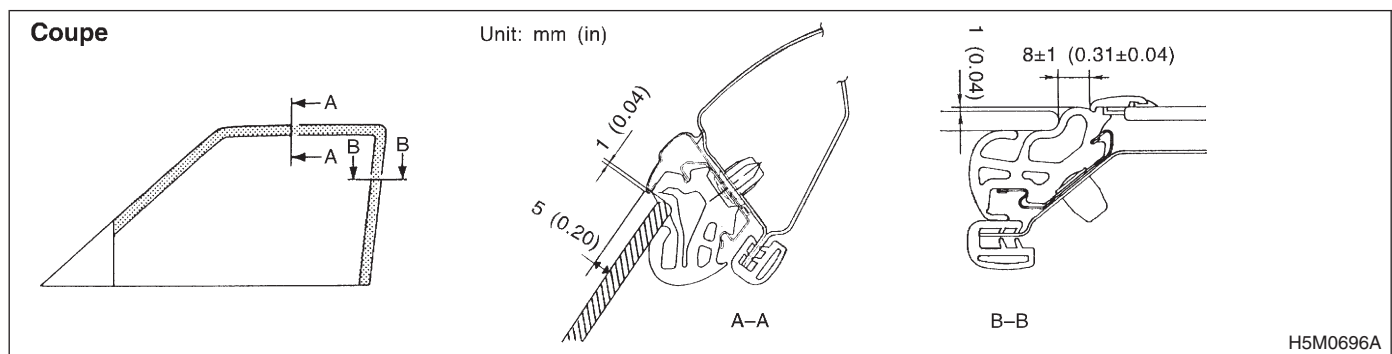
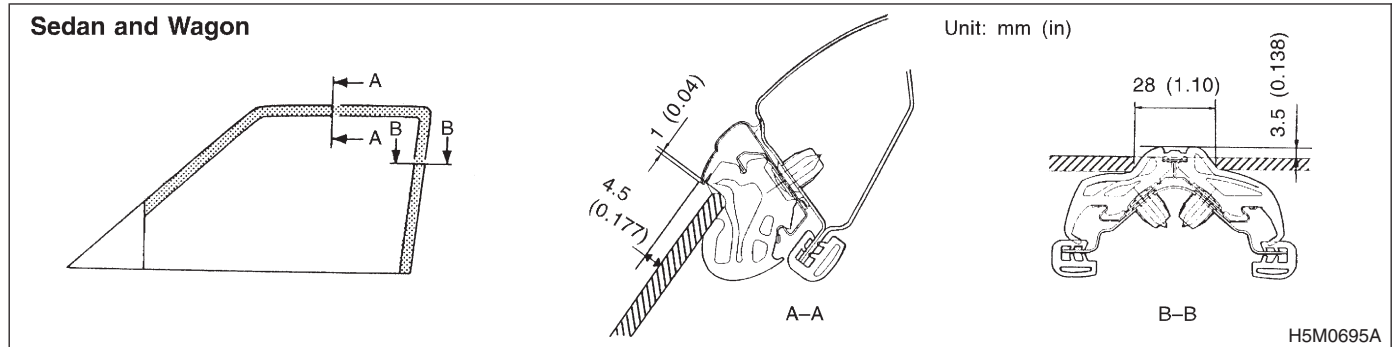
#### CAUTION:

**Be sure to securely hook pawls of rear pillar upper trim panel to body flange.**

### 3. Front Door Glass S905452

#### A: INSPECTION S905452A10

1) Close front door and make sure of all clearances.



2) If any clearance is not correct, adjust affected parts. Re-check that all clearances are correct.

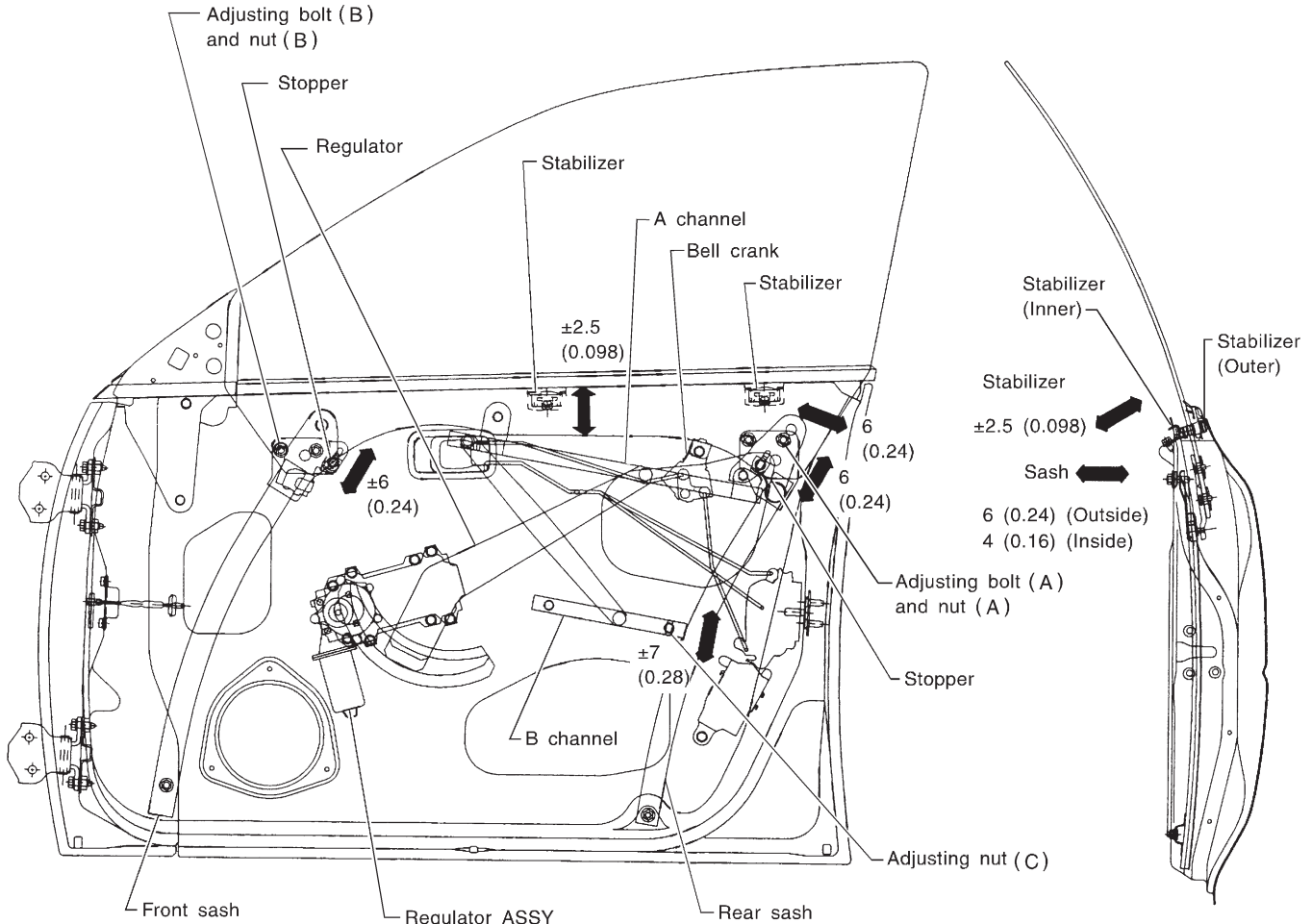
#### CAUTION:

- Repeatedly adjust parts until all clearances are correct.
- After clearance adjustment, make sure that all adjusting bolts and nuts are tightened.

## B: ADJUSTMENT

S905452A01

### SEDAN AND WAGON

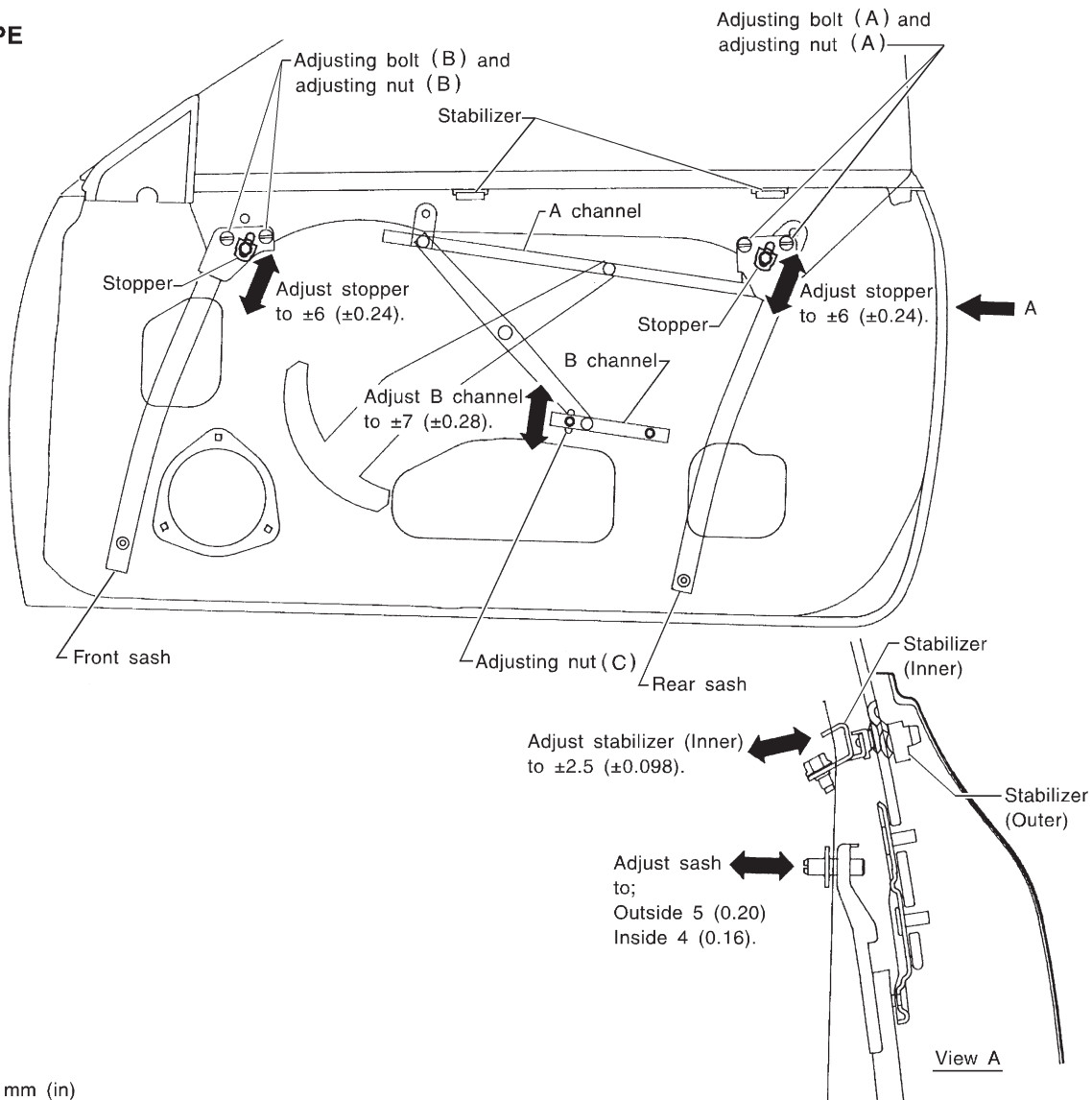


Unit: mm (in)

H5M0697B

# FRONT DOOR GLASS

## COUPE



Unit: mm (in)

H5M0728B

## 1. DOOR GLASS FIT ADJUSTMENT S905452A0101

Before adjusting door glass alignment, ensure adjusting bolts for stabilizers, upper stoppers and sashes are loose and glass is raised so that it is in contact with upper and side weatherstrip.

1) Temporarily tighten one of the two rear sash adjusting bolts, at midpoint of oblong hole on inner panel.

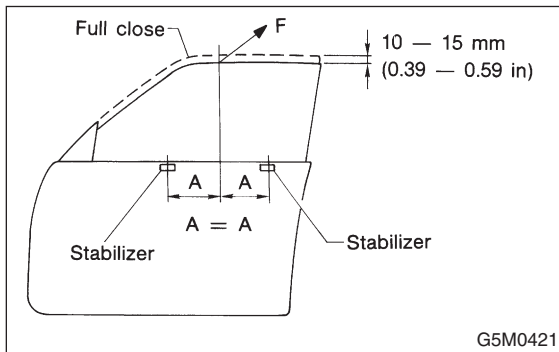
2) Temporarily tighten regulator B channel at a position slightly lower than midpoint of oblong hole on inner panel.

3) Lower door glass 10 to 15 mm (0.39 to 0.59 in) from fully closed position. While applying outward pressure (load) to upper edge of glass above midpoint of two outer stabilizers, press inner stabilizer until it just touches the glass, then secure it.

### Load: *F*

**Front door glass 44.1 N (4.5 kgf, 9.9 lb)**

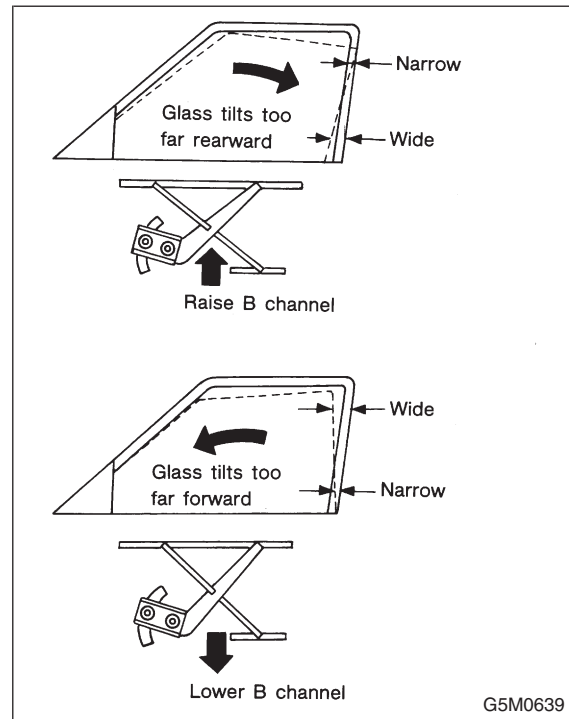
**Rear door glass 44.1 N (4.5 kgf, 9.9 lb)**



## 2. REMEDY FOR UNEQUAL DIMENSIONS, BETWEEN UPPER, LOWER AND CENTER PILLAR SIDES S905452A0102

1) Close front door and raise door glass.

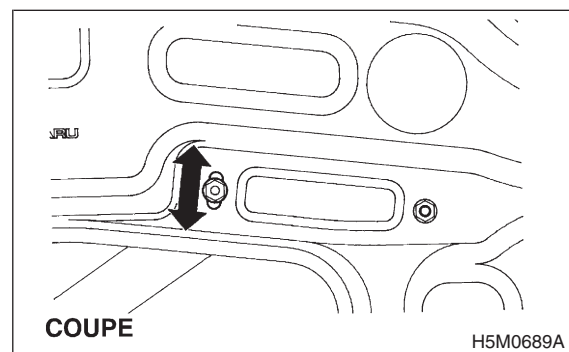
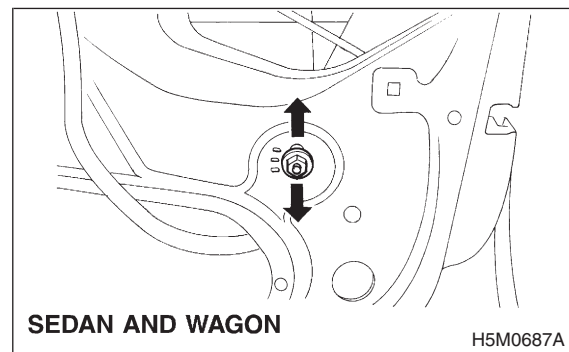
2) Make sure of unequal dimensions.



3) If glass tilts to far rearward, loosen adjusting nut (C) and adjust glass to be parallel with center pillar, then after adjustment, tighten adjusting nut (C).

### Tightening torque:

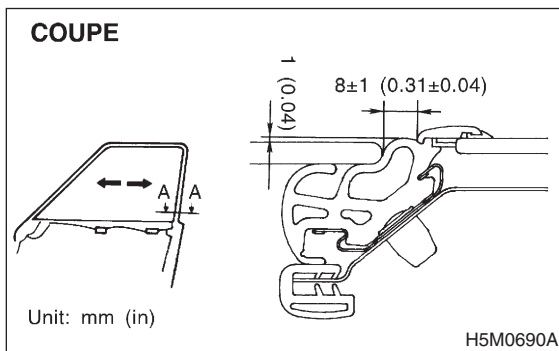
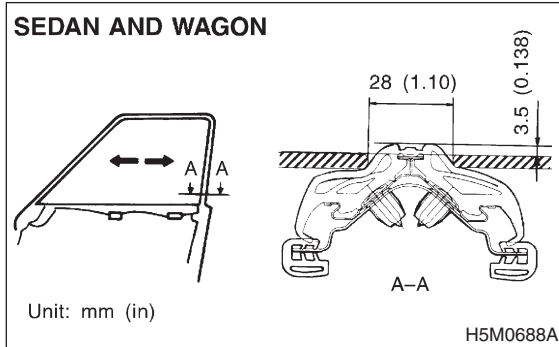
**7.4 N·m (0.75 kgf·m, 5.4 ft·lb)**



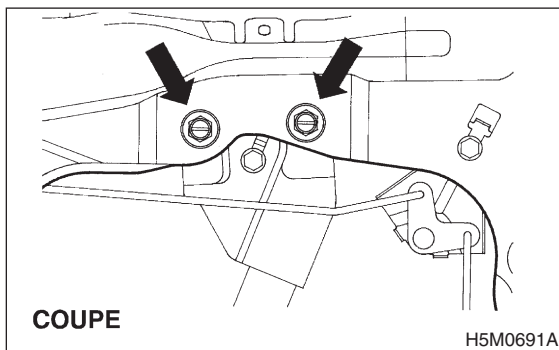
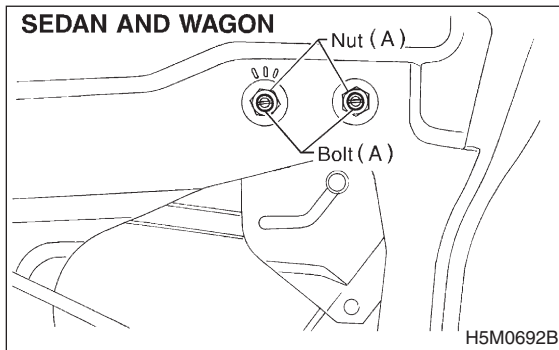
# FRONT DOOR GLASS

## 3. REMEDY FOR IMPROPER GLASS TO CENTER PILLAR CLEARANCE S905452A0103

- 1) Close front door and raise door glass.
- 2) Make sure of improper clearance.

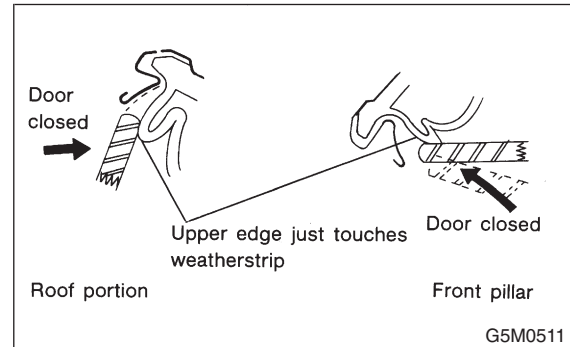


- 3) If clearance is improper, loosen adjusting nut (A), bolt (A) and adjust glass to center pillar.



## 4. REMEDY FOR IMPROPER UPPER STOP POINT OF DOOR GLASS S905452A0104

- 1) Loosen front and rear sash stoppers.
- 2) Increase the upward travel of window glass up to the position where upper edge just touches weatherstrip surface with door closed.



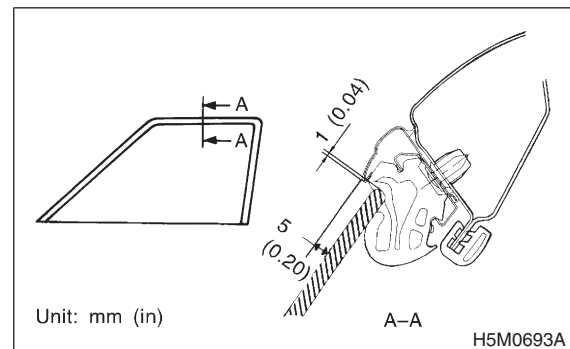
- 3) After adjustment, temporarily tighten stoppers.

### NOTE:

Make sure that each glass stopper is touched.

## 5. REMEDY FOR INCORRECT CONTACT OF DOOR GLASS TO WEATHERSTRIP S905452A0105

- 1) Close front door and raise door glass.
- 2) If clearance is below specifications, loosen bolt (A) and bolt (B).
- 3) If clearance is over specifications, tighten bolt (A) and bolt (B).



## 6. FIT ADJUSTMENT S905452A0106

Door glass fit is adjusted by displacing the glass front edge with a stabilizer.

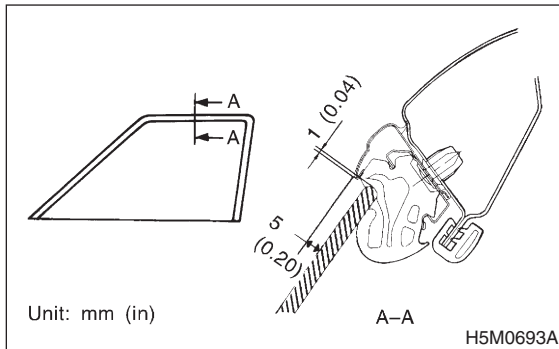
### NOTE:

Before adjusting glass fit, visually check to determine relative adjusting positions of retainer and molding (on roof side) and glass surface.

1) Alternately adjust two rear sash adjusting bolts (A) until dimensions are obtained.

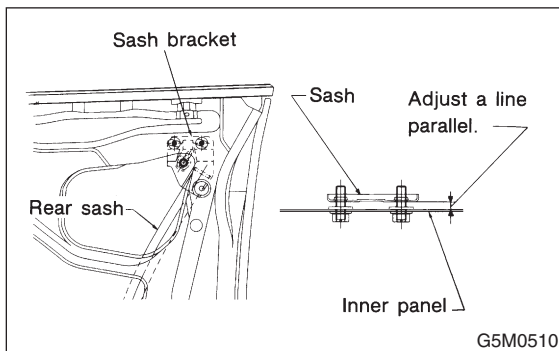
### CAUTION:

**Do not loosen two adjusting nuts (A) at the same time, as this moves sash fore and aft, creating unequal glass- to-sash clearance. During adjustment, loosen only one nut and keep the other tightened.**



### NOTE:

Always adjust two rear sash adjusting bolts (A) by the same amount. Do not adjust the adjusting bolts with sash bracket inclined toward inner panel, as this increases effort required to operate regulator.



2) Adjust front sash fit using rear sash adjustment procedure outlined in the former procedure as a guide. Two adjusting bolts must be adjusted by the same amount.

### NOTE:

● Front and rear sash adjustment procedures are basically the same; however, the amount of adjustment is not always the same due to alignment dispersion of individual doors.

● Adjust front and rear sash fit, as equally as possible. Otherwise, effort required to operate regulator may increase.

3) After adjusting front sash-to-glass fit, secure front sash.

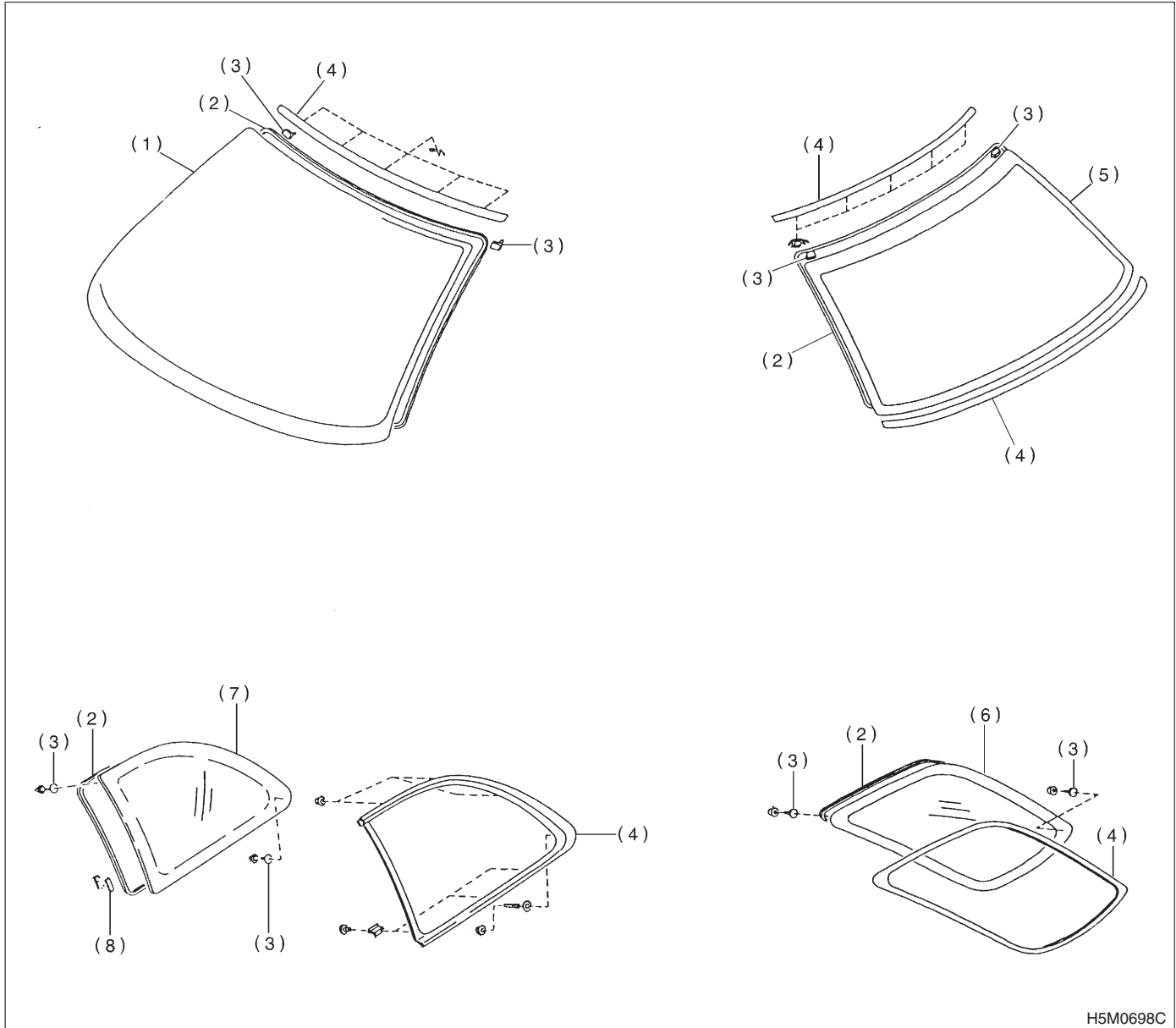
# GENERAL DESCRIPTION

Glass/Windows/Mirrors

## 1. General Description S905001

### A: COMPONENT S905001A05

#### 1. FIXED GLASS S905001A0506



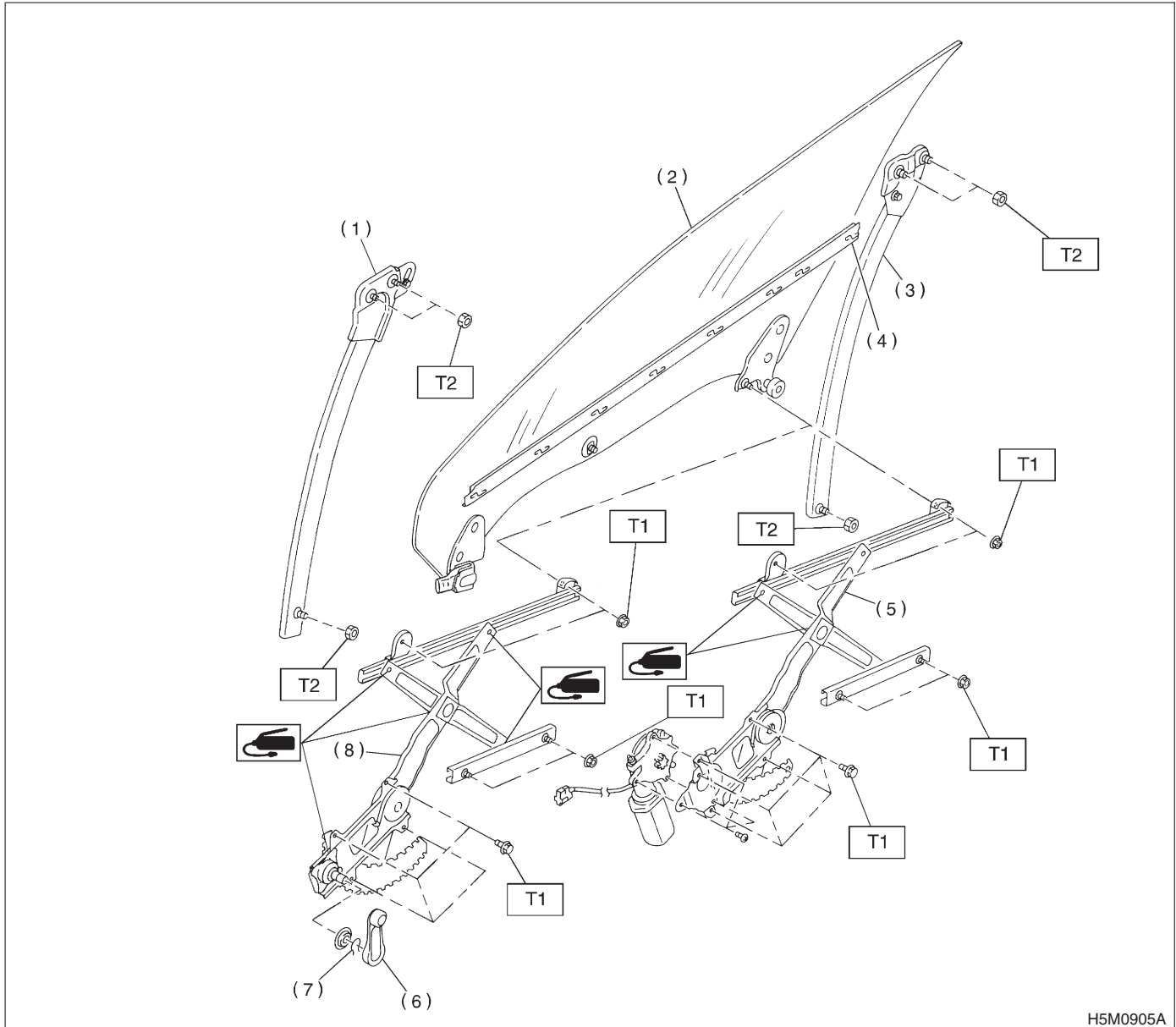
- (1) Windshield glass
- (2) Dam rubber
- (3) Locate pin

- (4) Molding
- (5) Rear window glass
- (6) Rear quarter glass (Wagon)

- (7) Rear quarter glass (Coupe)
- (8) Fastener



## 2. FRONT DOOR GLASS S905001A0503



- |                              |                                               |
|------------------------------|-----------------------------------------------|
| (1) Door sash (Front)        | (6) Regulator handle<br>(Except power window) |
| (2) Glass                    | (7) Retainer spring                           |
| (3) Door sash (Rear)         | (8) Regulator ASSY                            |
| (4) Weatherstrip (Inner)     |                                               |
| (5) Regulator and motor ASSY |                                               |

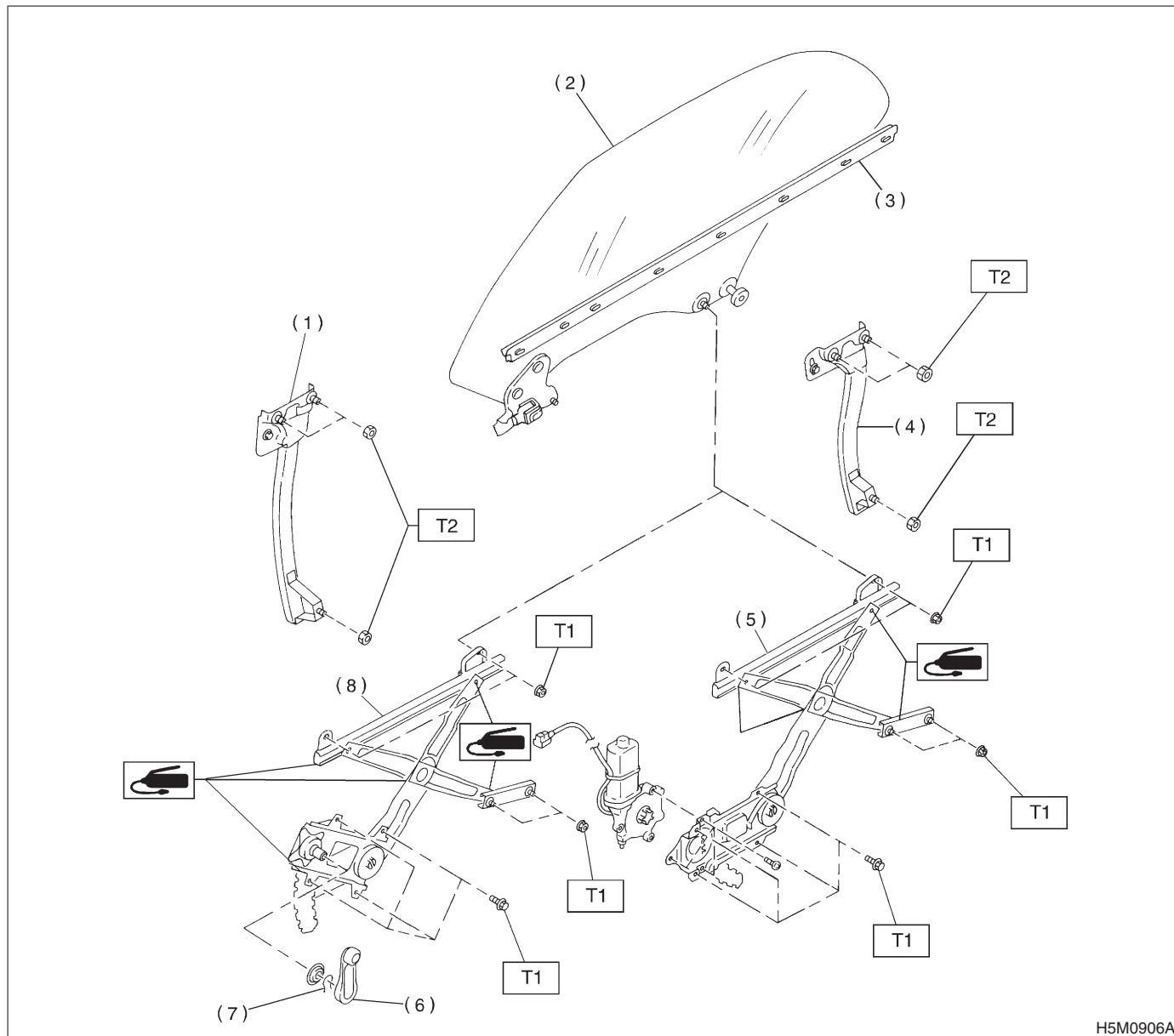
**Tightening torque: N·m (kgf-m, ft-lb)**

**T1: 7.4 (0.75, 5.4)**

**T2: 14 (1.4, 10.1)**

# GENERAL DESCRIPTION

## 3. REAR DOOR GLASS S905001A0504



- |                              |                                               |
|------------------------------|-----------------------------------------------|
| (1) Door sash (Front)        | (6) Regulator handle<br>(Except power window) |
| (2) Glass                    | (7) Retainer spring                           |
| (3) Weatherstrip (Inner)     | (8) Regulator ASSY                            |
| (4) Door sash (Rear)         |                                               |
| (5) Regulator and motor ASSY |                                               |

**Tightening torque: N·m (kgf-m, ft-lb)**

**T1: 7.4 (0.75, 5.4)**

**T2: 14 (1.4, 10.1)**

**B: CAUTION** S905001A03

- When electrical connectors are disconnected, always conduct an operational check after connecting them again.
- Avoid impact and damage to the glass.

**C: PREPARATION TOOL** S905001A17**1. GENERAL TOOL** S905001A1701

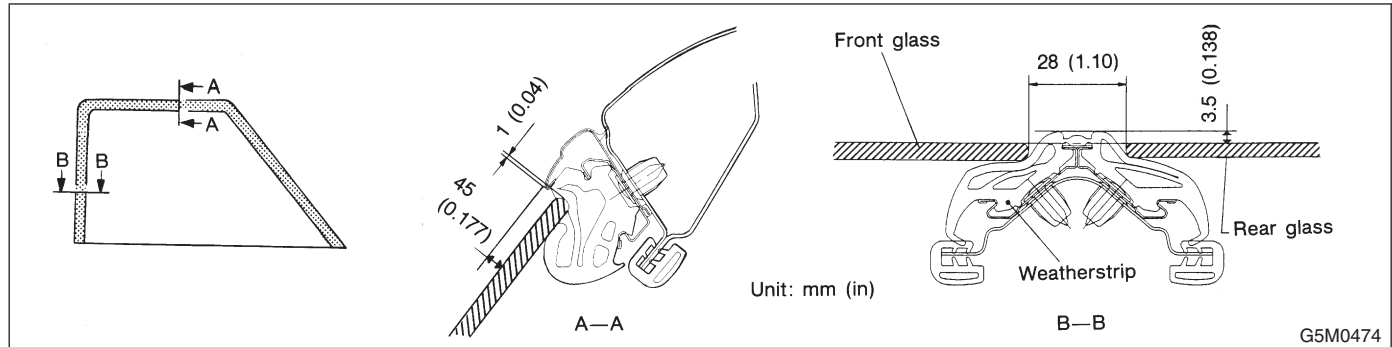
| TOOL NAME        | REMARKS                                            |
|------------------|----------------------------------------------------|
| Circuit Tester   | Used for measuring resistance, voltage and ampere. |
| Piano Wire       | Used for window glass removal.                     |
| Windshield Knife | Used for window glass removal.                     |

# REAR DOOR GLASS

## 4. Rear Door Glass S905450

### A: INSPECTION S905450A10

1) Close rear door and make sure of all clearances.



2) If any clearance is not correct, adjust affected parts. Re-check that all clearances are correct.

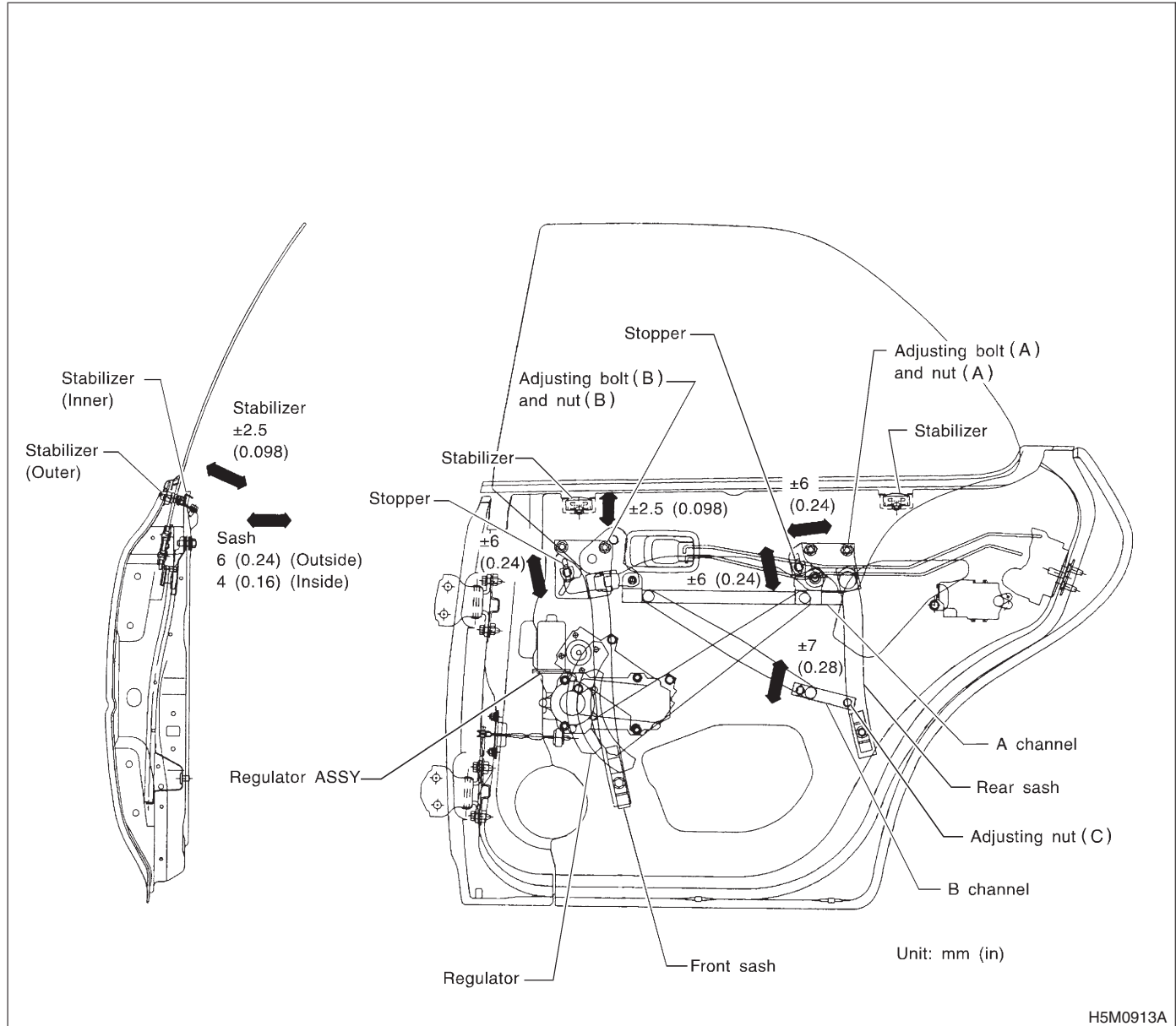
#### CAUTION:

- Repeatedly adjust parts until all clearances are correct.
- After clearance adjustment, make sure that all adjusting bolts and nuts are tightened.

## B: ADJUSTMENT

S905450A01

Alignment of rear door glass is basically the same as for the front door glass. <Ref to GW-9 ADJUSTMENT, Front Door Glass.> Due to slight difference in adjustment dimensions for fore-aft, up-down, and in-out alignments, key points for rear door adjustment are described.



H5M0913A

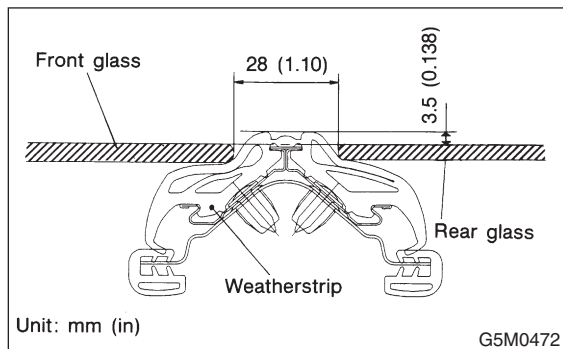
## 1. FORE-AFT ADJUSTMENT

S905450A0101

1) Door glass alignment must be adjusted so that glass-to-center pillar fit is equal at all points. Always use dimensions as a guide during adjustment.

### NOTE:

If dimensions are smaller than those indicated, glass will be caught in weatherstrip and may not raise to the fully closed position.

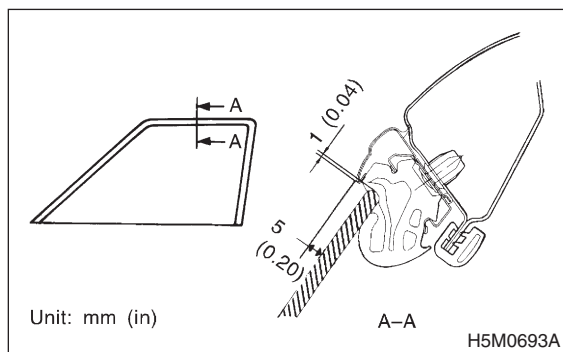


2) After making fore-aft adjustment, raise and lower glass to ensure it is free from any binding.

## 2. FIT ADJUSTMENT

S905450A0102

Increasing contact pressure causes rear door glass to be caught in center pillar upper and lower weatherstrip; this will cause premature weatherstrip wear. For this reason, always use dimensions indicated in figure as a guide during glass fit adjustment.



# REAR GATE GLASS

## 6. Rear Gate Glass

S905376

### A: REMOVAL

S905376A18

#### NOTE:

It is impossible to remove the molding from the glass. If molding is broken, replace rear glass.

- 1) Remove rear wiper and rear gate trim.
- 2) Disconnect connector from rear defogger terminal.
- 3) Remove high mount stop light.
- 4) Remove glass in same manner as for windshield. <Ref. to GW-17 REMOVAL, Windshield Glass.>

#### CAUTION:

Be careful not to damage molding re-installing the old rear window glass using a piano wire.

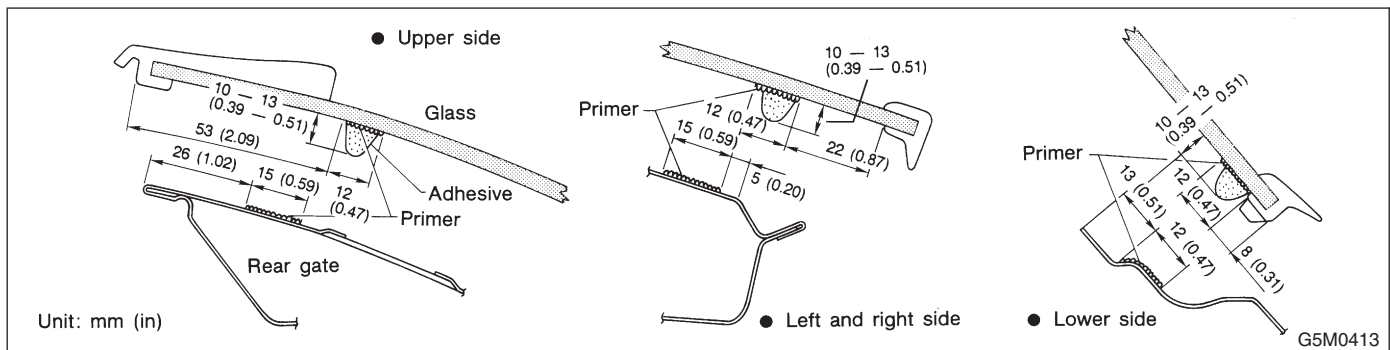
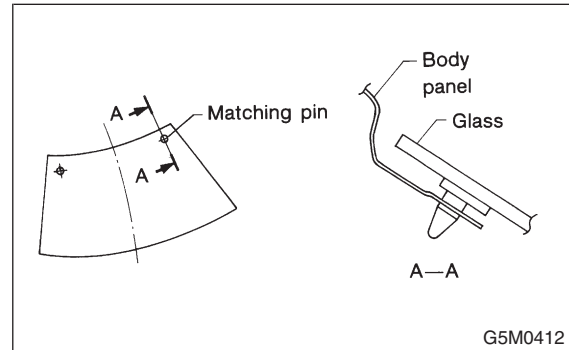
### B: INSTALLATION

S905376A11

- 1) Install rear gate trim.
- 2) Install glass in same manner as windshield. <Ref. to GW-18 INSTALLATION, Windshield Glass.>

#### NOTE:

A matching pin is cemented to corners of glass on compartment side. Use a piano wire when cutting each pin.



- 3) About one hour after installation, test for water leakage. Leave vehicle for 24 hours before using it.
- 4) Connect rear defogger connections.
- 5) Install high mount stop light and rear wiper.

## 7. Rear Quarter Glass

S905453

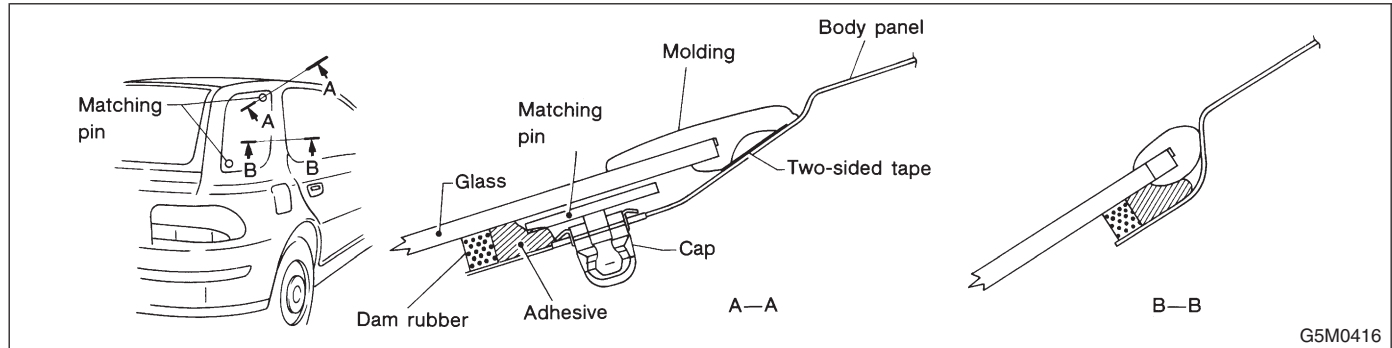
### A: REMOVAL

S905453A18

#### 1. WAGON

S905453A1802

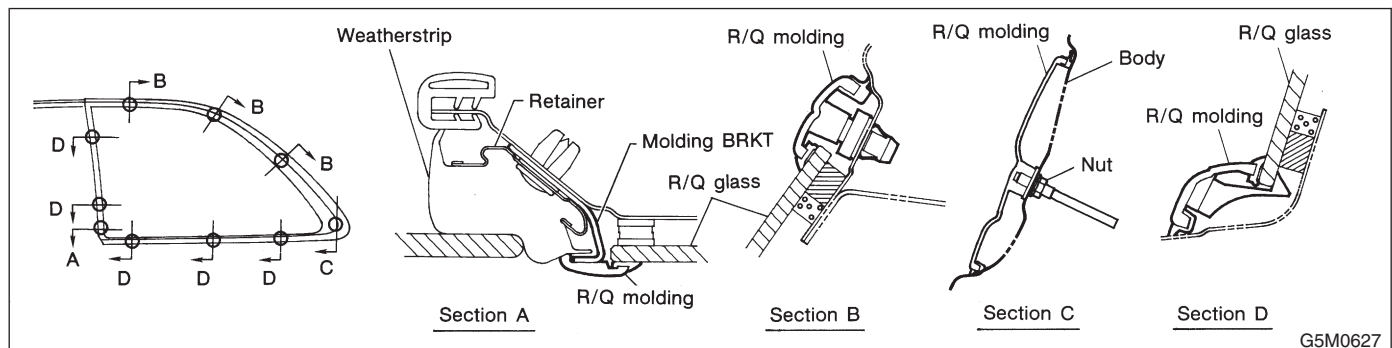
- 1) Remove rear quarter molding on corner.
- 2) Remove glass in same manner as in windshield. <Ref. to GW-17 REMOVAL, Windshield Glass.>



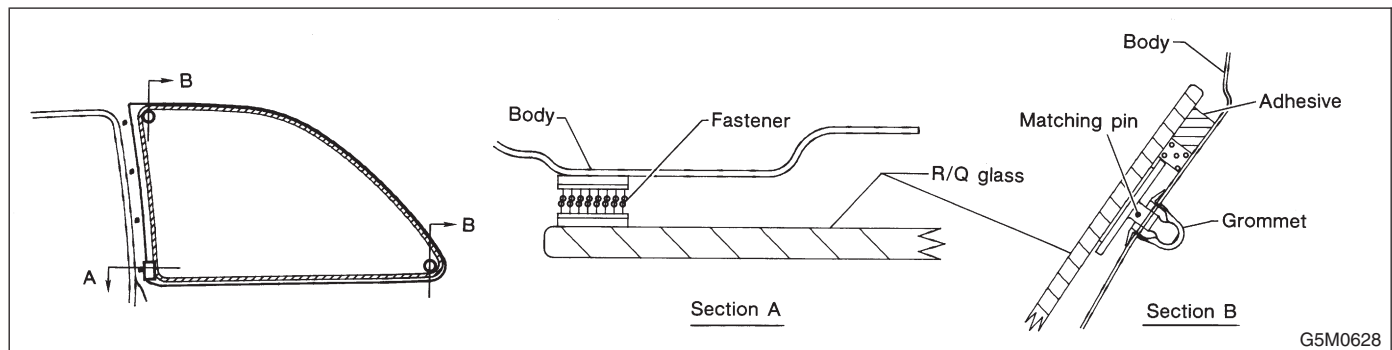
#### 2. COUPE

S905453A1803

- 1) Remove rear quarter molding.



- 2) Remove glass in same manner as in windshield. <Ref. to GW-17 REMOVAL, Windshield Glass.>





# REAR QUARTER GLASS

Glass/Windows/Mirrors

## B: INSTALLATION

S905453A11

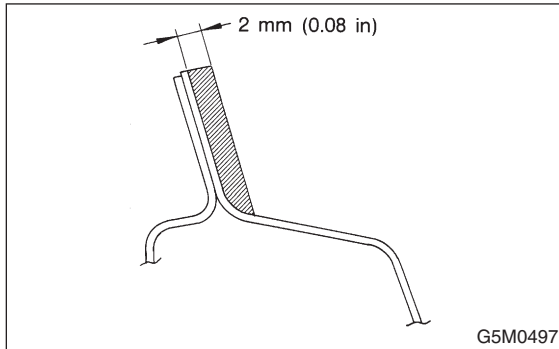
### 1. WAGON

S905453A1101

1) Finish surface of adhesive layer on body: Using a putty knife, etc., cut layer of adhesive stick firmly to body and finish it into a smooth surface of about 2 mm (0.08 in) in thickness.

#### CAUTION:

Be careful not to damage body finish.



2) Cleaning of body surface:

(1) Remove chips, dirt and dust from body surface.

(2) Clean body wall surface and upper surface of adhesive layer with a solvent such as alcohol or white gasoline.

3) Cleaning glass:

(1) Remove dirt and dust from surface of glass to be adhered.

(2) Clean surface of glass to be adhered with alcohol or white gasoline.

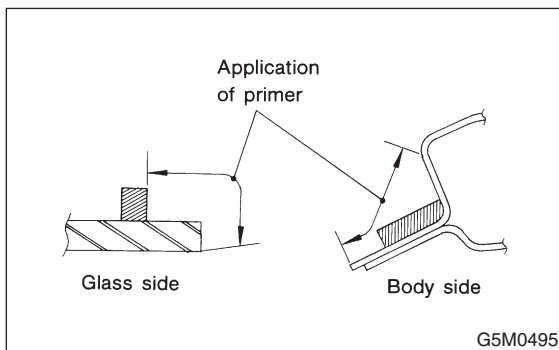
4) Application of primer:

(1) Using a sponge, apply primer to surface of glass to be adhered.

(2) Apply primer to surface of body to be adhered.

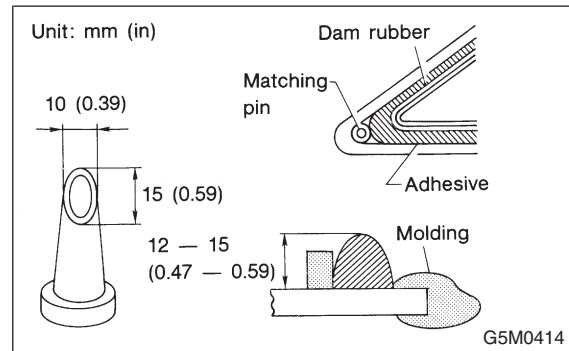
#### CAUTION:

- If primer has dropped on body finish, it is hard to wipe it off. So protect with masking.
- Primer must not project from black frame of glass.
- After applying primer, let it dry spontaneously for about 10 minutes.



5) Application of adhesive:

(1) Cut nozzle tip as shown in figure.



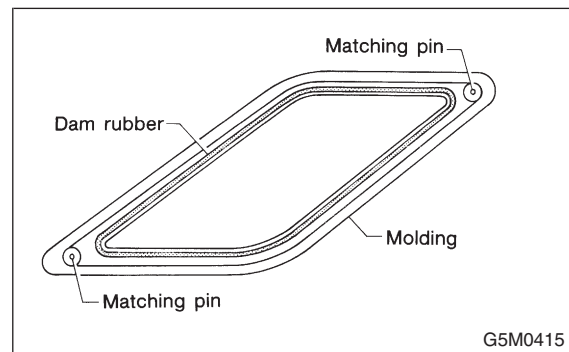
(2) Open cartridge and put it into a gun with nozzle attached.

(3) Apply adhesive uniformly to all sides of adhesion surface while operating gun along glass end face.

6) Installation of glass:

(1) Hold glass with rubber suction cups.

(2) Mount glass on body with matching pin aligned.



(3) Stick them fast by pressing all sides lightly.

7) Water leakage test:

After installing glass, test for water leakage after about one hour.

#### CAUTION:

- Move vehicle slowly.
- When opening and closing door, lower door glass and move door gently.
- Do not squirt strong hose stream on vehicle.

8) Spontaneous drying:

After completing all operations, leave vehicle alone for 24 hours.

#### CAUTION:

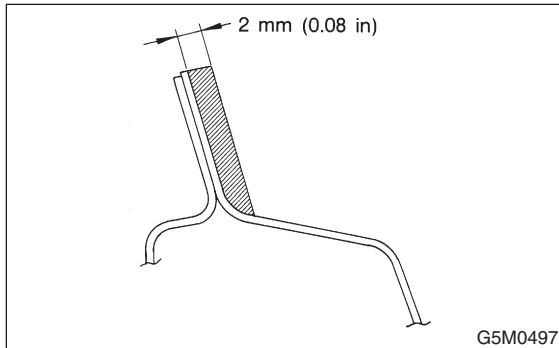
When delivering vehicle to user, tell him or her that vehicle should not be subjected to heavy shocks for at least three days.

## 2. COUPE S905453A1102

1) Finish surface of adhesive layer on body: Using a putty knife, etc., cut layer of adhesive stick firmly to body and finish it into a smooth surface of about 2 mm (0.08 in) in thickness.

### CAUTION:

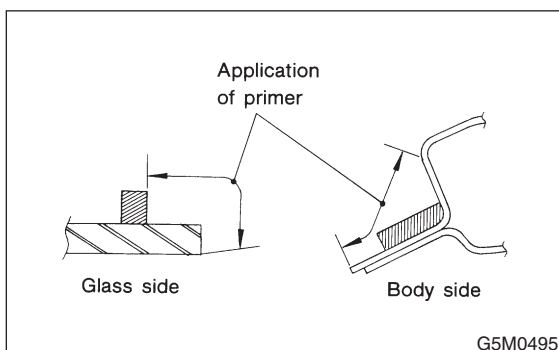
Be careful not to damage body finish.



- 2) Cleaning of body surface:
  - (1) Remove chips, dirt and dust from body surface.
  - (2) Clean body wall surface and upper surface of adhesive layer with a solvent such as alcohol or white gasoline.
- 3) Cleaning glass:
  - (1) Remove dirt and dust from surface of glass to be adhered.
  - (2) Clean surface of glass to be adhered with alcohol or white gasoline.
- 4) Application of primer:
  - (1) Using a sponge, apply primer to surface of glass to be adhered.
  - (2) Apply primer to surface of body to be adhered.

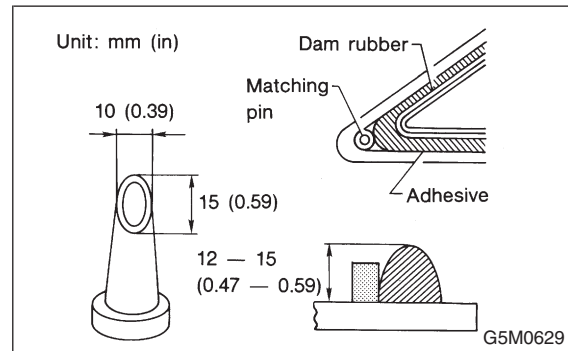
### CAUTION:

- If primer has dropped on body finish, it is hard to wipe it off. So protect with masking.
- Primer must not project from black frame of glass.
- After applying primer, let it dry spontaneously for about 10 minutes.



5) Application of adhesive:

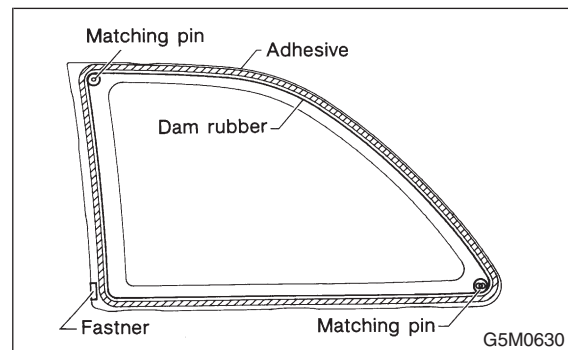
- (1) Cut nozzle tip as shown in figure.



- (2) Open cartridge and put it into a gun with nozzle attached.
- (3) Apply adhesive uniformly to all sides of adhesion surface while operating gun along glass end face.

6) Installation of glass:

- (1) Hold glass with rubber suction cups.
- (2) Mount glass on body with matching pin aligned.



- (3) Stick them fast by pressing all sides lightly.
- 7) Water leakage test:  
After installing glass, test for water leakage after about one hour.

### CAUTION:

- Move vehicle slowly.
- When opening and closing door, lower door glass and move door gently.
- Do not squirt strong hose stream on vehicle.

8) Spontaneous drying:

After completing all operations, leave vehicle alone for 24 hours.

### CAUTION:

When delivering vehicle to user, tell him or her that vehicle should not be subjected to heavy shocks for at least three days.

# REAR WINDOW DEFOGGER SYSTEM

Glass/Windows/Mirrors

## 2. Rear Window Defogger System

S905455

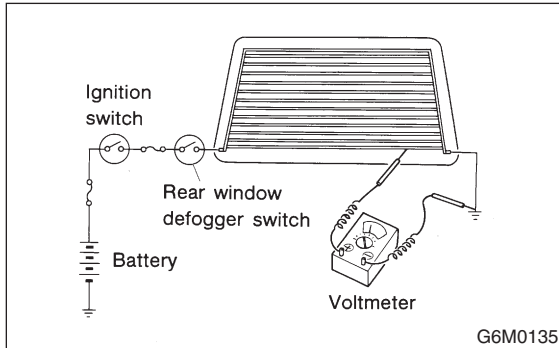
### A: INSPECTION

S905455A10

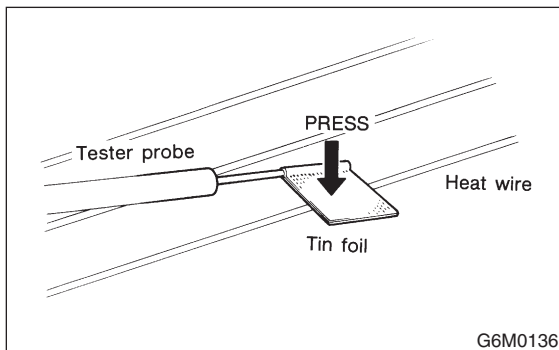
- 1) Start the engine so that battery is being charged.
- 2) Turn defogger switch ON.
- 3) Check each heat wire at its center position for discontinuity by setting direct current voltmeter.

NOTE:

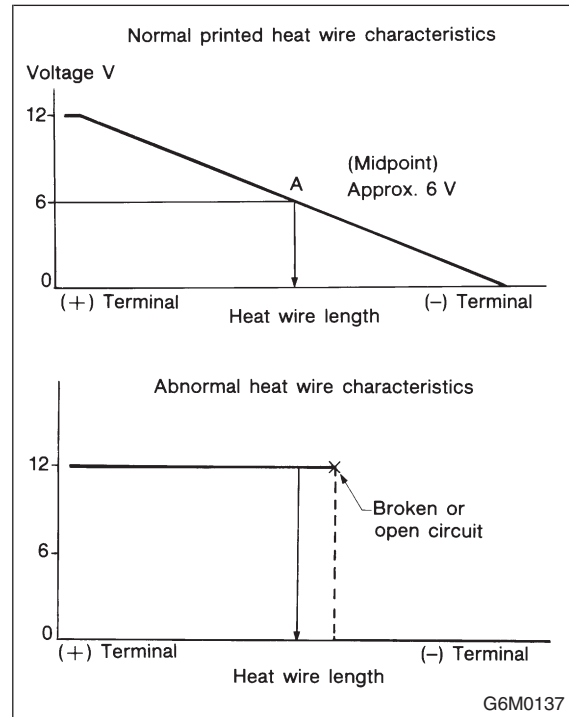
- Normal indication is about 6 volts.



- When measuring voltage, wind a piece of tin foil around the tip of the tester probe and press the foil against the wire with your finger.

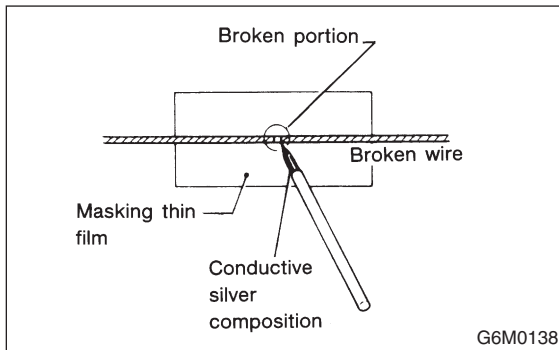


- 4) When tester indicates 12 volts when its probe reaches point "A", a broken circuit occurs between point "A" and the negative terminal. Slowly move tester probe toward the negative terminal while contacting it on heat wire to locate point where tester indication changes abruptly (0 volts). This is the point where a broken circuit occurs. When tester indicates 0 volts when its probe reaches point "A", a broken circuit occurs between point "A" and the positive terminal. Locate a point where tester indication changes abruptly (12 volts) while slowly moving tester probe toward the positive terminal.



## B: REPAIR S905455A19

- 1) Clean broken wire and its surrounding area.
- 2) Cut off slit on (used) thin film by 0.5 mm (0.020 in) width and 10 mm (0.39 in) length.
- 3) Place the slit on glass along the broken wire, and deposit conductive silver composition (DUPONT No. 4817) on the broken portion.

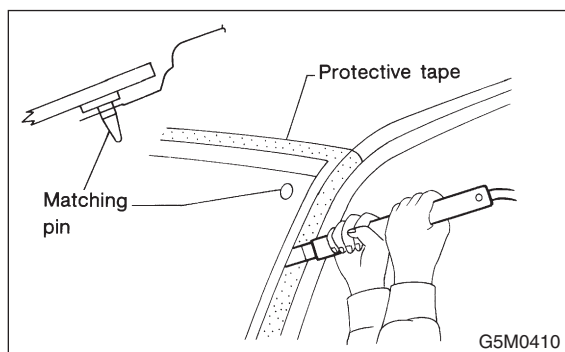


- 4) Dry out the deposited portion.
- 5) Inspect the repaired wire for continuity.

## 8. Rear Window Glass S905454

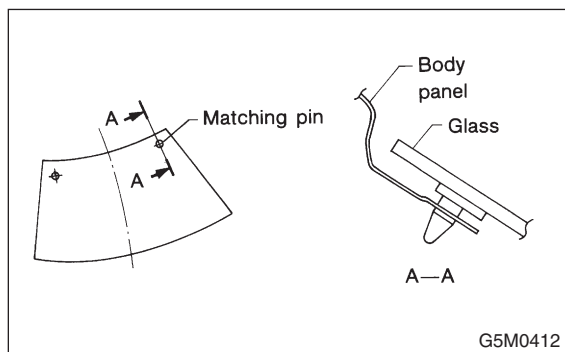
### A: REMOVAL S905454A18

- 1) Remove roof molding.
- 2) Remove rear window molding upper and lower.
- 3) Disconnect connector from rear defogger terminal.
- 4) Remove glass in same manner as in windshield. <Ref. to GW-17 REMOVAL, Windshield Glass.>



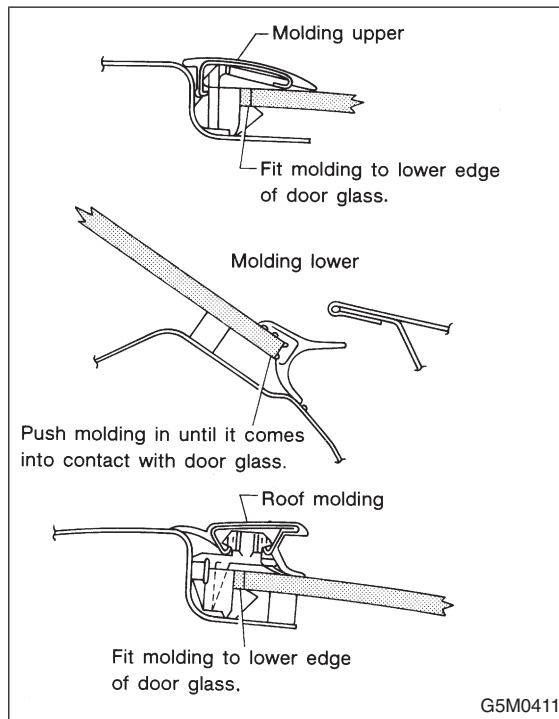
#### NOTE:

A matching pin is cemented to the corners of glass on compartment side. Use a piano wire when cutting each pin.



### B: INSTALLATION S905454A11

- 1) Install glass in same manner as in windshield. <Ref. to GW-17 INSTALLATION, Windshield Glass.>
- 2) Firstly, press-fit molding upper, then lower and lastly, roof molding.



- 3) After installation, test for water leakage after about one hour, and leave vehicle alone for 24 hours.
- 4) Make rear defogger connections.

## 5. Windshield Glass S905448

### A: REMOVAL S905448A18

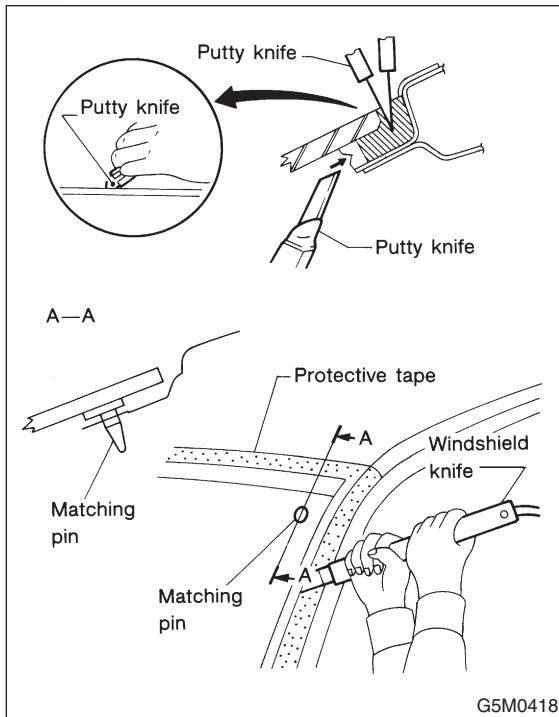
#### 1. USING WINDSHIELD KNIFE S905448A1801

The following procedure for the front windshield can also be applied to other window glass.

- 1) Remove wiper arm and cowl panel.
- 2) Remove roof molding and front window molding upper.
- 3) Remove glass:
  - (1) Put protective tape on body to prevent damage.
  - (2) Apply soapy water to the surface of the adhesive agent so the knife blade slides smoothly.
  - (3) Cut off excess adhesive agent.
  - (4) Put windshield knife into layer of adhesive.
  - (5) Cut adhesive layer with the windshield knife.

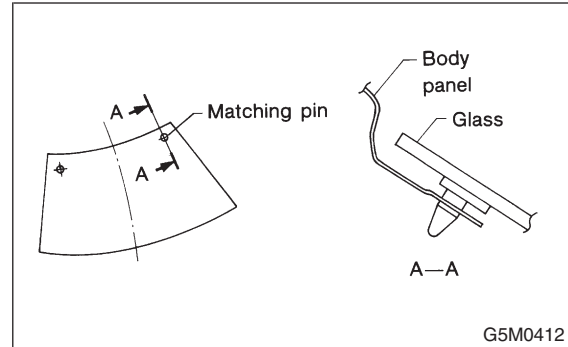
#### CAUTION:

- Keep knife edge along glass surface and end face.
- When first putting knife into layer of adhesive, select point with wide gap between body and glass.



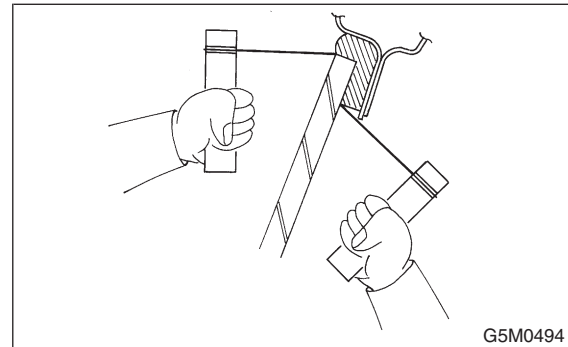
#### NOTE:

A matching pin is cemented to corners of glass on compartment side. Use a piano wire when cutting each pin.



#### 2. USING PIANO WIRE S905448A1802

- 1) Remove wiper arm and cowl panel.
- 2) Remove roof molding and front window molding upper.
- 3) Remove glass:
  - (1) Put protective tape on body to prevent damage.
  - (2) Using drill or putty knife, make through-hole (one place) in adhesive agent.
  - (3) Pass piano wire through the hole from inside the compartment, and connect both ends of wire securely to wooden blocks.



- (4) Cut adhesive layer with the wire by pulling it back and forth.

#### CAUTION:

When making through-hole into adhesive layer and cutting the adhesive, be careful not to damage interior and exterior parts.

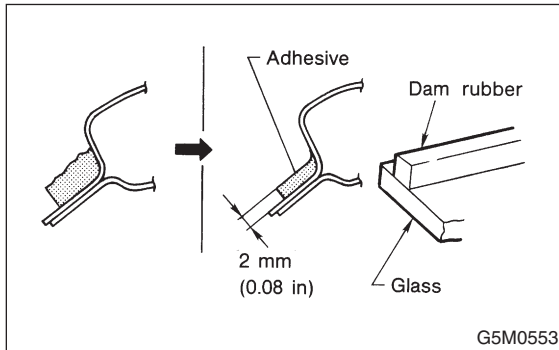
## B: INSTALLATION

S905448A11

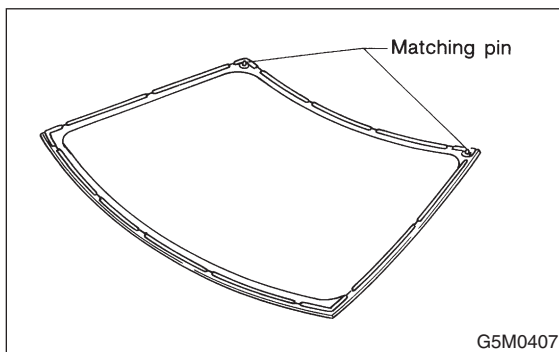
- 1) After cutting layer of adhesive, remove gum rubber remaining on body.
- 2) Finishing adhesion surface on body side: Using a cutter knife etc., cut layer of adhesive sticking firmly to body, and finish it to a smooth surface of about 2 mm (0.08 in) in thickness.

### CAUTION:

Take extra care not to cause damage to body paint.



- 3) Cleaning body surface:
  - (1) Thoroughly remove chips, dirt and dust from body surface.
  - (2) Clean body wall surface and upper surface of layer of adhesive with a solvent such as alcohol or white gasoline.
- 4) Positioning glass:
  - (1) Mount glass on body.
  - (2) Adjust position of glass so that gap between body and glass is uniform on all sides.
  - (3) Put matching pin on body and glass in several places.

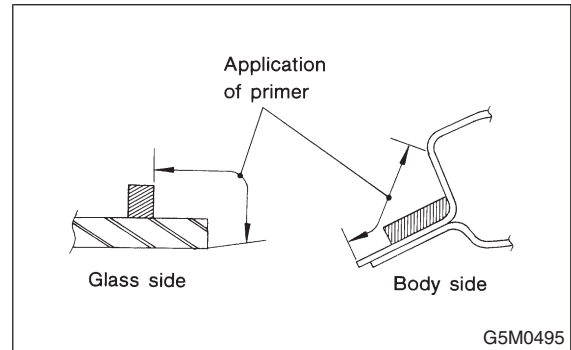


- 5) Cleaning glass:
  - (1) Dismount glass from body.
  - (2) Clean surface of glass to be adhered with alcohol or white gasoline.

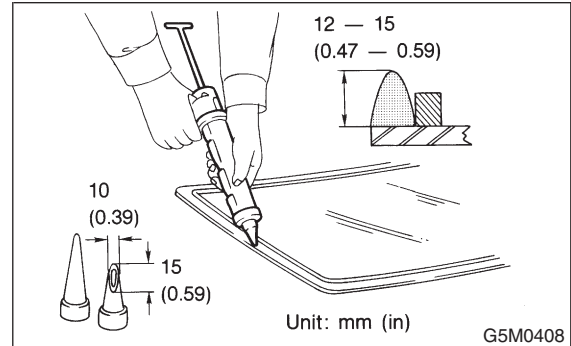
- 6) Application of primer:
  - (1) Using a sponge, apply primer to part of glass to be adhered.
  - (2) Apply primer to part of body to be adhered.

### CAUTION:

- Primer is hard to wipe off of body paint, instrument panel, inner trim, etc. So put masking around these areas for protection.
- After application, let 1st primer dry spontaneously for about 10 minutes.
- Do not touch primer-coated surface under any circumstances.



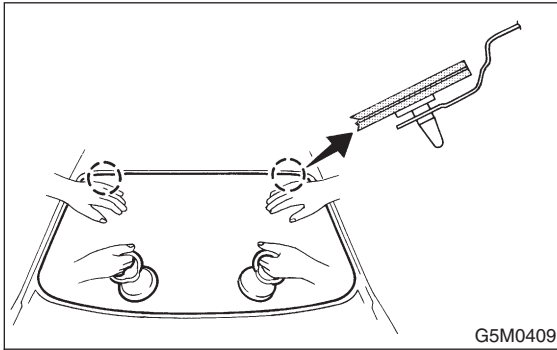
- 7) Application of adhesive:
  - (1) Cut nozzle tip of cartridge as shown in figure.



- (2) Open cartridge and put it into a gun with nozzle attached.
  - (3) Apply adhesive uniformly to all sides of adhesion surface while operating gun along glass end face.
- 8) Installation of glass:
  - (1) Hold glass with rubber suction cups.



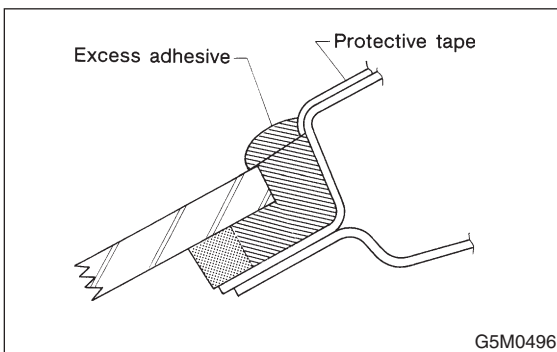
(2) Mount glass on body with matching pin aligned.



(3) Stick them fast by pressing all sides lightly.

9) Installation of molding:

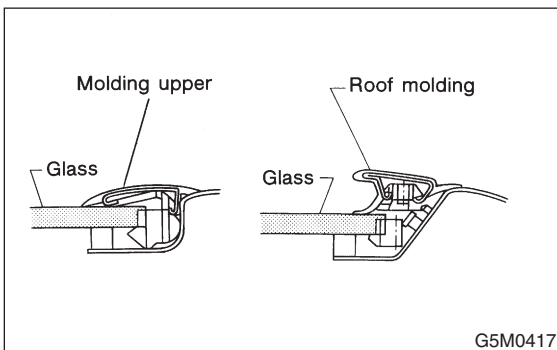
(1) Remove adhesive overflowing from outside of glass until it becomes level with outer height of glass. Then, add adhesive to portions that need it, and clean with alcohol or white gasoline.



(2) Firstly, press-fit front window molding upper and lastly, roof molding.

## CAUTION:

**Do not open and close door after moldings have been installed. When opening and closing door for unavoidable reason, lower door glass and gently move door.**



10) Water leakage test:

Test for water leakage about one hour after installation.

## CAUTION:

- Move vehicle very gently.
- Do not squirt strong hose stream on vehicle.

11) Spontaneous drying:

After completing all operations, leave vehicle alone for 24 hours.

## CAUTION:

**When delivering vehicle to user, tell him that vehicle should not be subjected to heavy shocks for at least three days.**

12) Install cowl panel and wiper arm.



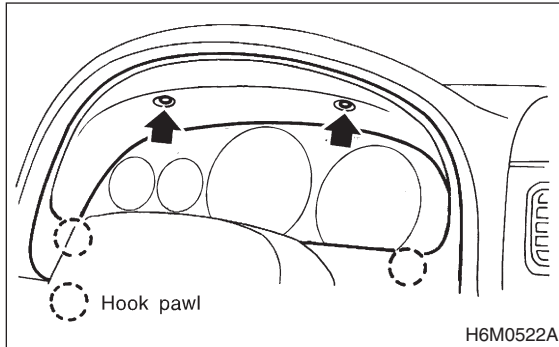
## 2. Combination Meter Assembly

S907335

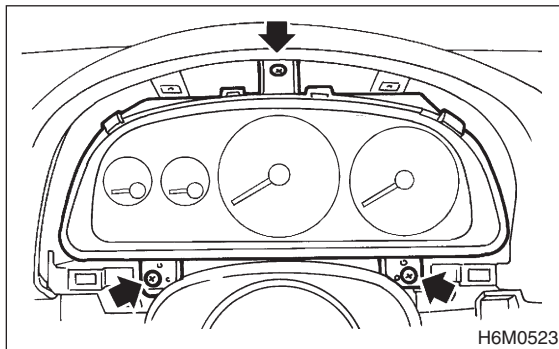
### A: REMOVAL

S907335A18

- 1) Move steering wheel most down.
- 2) Remove screws which secure visor and remove visor.



- 3) Remove screws which secure combination meter, and pull combination meter out.



- 4) Disconnect connector from back of combination meter.

### B: INSTALLATION

S907335A11

Install in the reverse order of removal.

#### CAUTION:

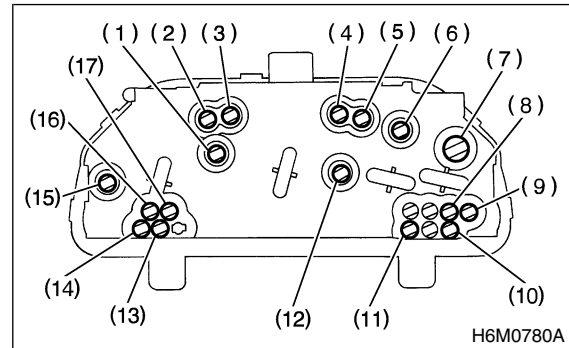
When installing combination meter, be sure to connect connectors to backside of combination meter.

### C: LOCATION

S907335A13

#### 1. COMBINATION METER BULB

S907335A1301



- (1) Speedometer and tachometer
- (2) HI-beam
- (3) Turn RH
- (4) Turn LH
- (5) Airbag
- (6) Clock
- (7) Fuel and temperature gauge
- (8) ABS
- (9) Low fuel
- (10) FWD
- (11) AT oil temp.
- (12) Speedometer
- (13) Check engine
- (14) Charge
- (15) Tachometer
- (16) Brake
- (17) Oil pressure

# GENERAL DESCRIPTION

Instrumentation/Driver Info

## 1. General Description S907001

### A: SPECIFICATIONS S907001E49

|                   |                                                          |                            |
|-------------------|----------------------------------------------------------|----------------------------|
| Combination meter | Speedometer                                              | Electric pulse type        |
|                   | Temperature gauge                                        | Thermistor cross coil type |
|                   | Fuel gauge                                               | Resistance cross coil type |
|                   | Tachometer                                               | Electric pulse type        |
|                   | Turn signal indicator light                              | 12 V — 1.4 W               |
|                   | Charge indicator light                                   | 12 V — 1.4 W               |
|                   | Oil pressure indicator light                             | 12 V — 1.4 W               |
|                   | ABS warning light                                        | 12 V — 1.4 W               |
|                   | CHECK ENGINE warning light (Malfunction indicator light) | 12 V — 1.4 W               |
|                   | HI-beam indicator light                                  | 12 V — 1.4 W               |
|                   | Door open warning light                                  | 12 V — 1.4 W (LED)         |
|                   | Seat belt warning light                                  | 12 V — 1.4 W (LED)         |
|                   | Brake fluid and parking brake warning light              | 12 V — 1.4 W               |
|                   | FWD indicator light                                      | 12 V — 1.4 W               |
|                   | AIRBAG warning light                                     | 12 V — 1.4 W               |
|                   | Meter illumination light                                 | 12 V — 3.4 W, 3.0 W, 1.4 W |
|                   | AT OIL TEMP. warning light                               | 12 V — 1.4 W               |

### B: CAUTION S907001A03

- Be careful not to damage meters and instrument panel.
- Be careful not to damage meter glasses.
- Make sure that electrical connector is connected securely.
- After installation, make sure that each meter operates normally.
- Use gloves to avoid damage and getting fingerprints on the glass surface and meter surfaces.
- Do not apply excessive force to circuit plate.
- Do not drop or otherwise apply impact.

# GENERAL DIAGNOSTIC

Instrumentation/Driver Info

## 3. General Diagnostic S907575

### A: INSPECTION S907575A10

If speedometer does not operate, or operates abnormally, check combination meter circuit.

#### CAUTION:

**Make sure that trouble code of vehicle speed sensor 2 system appears in electrical system on-board diagnosis.**

| No. | Step                                                                                                                                                                                                                                                                                                                      | Check                             | Yes           | No                                                                                                                                                                                                                                                                                            |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | <b>CHECK POWER SUPPLY FOR COMBINATION METER.</b><br>1) Remove combination meter.<br>2) Turn ignition switch to ON.<br>3) Measure voltage between combination meter connector and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(i12) No. 7 (+) — Chassis ground (-):</b>                                       | Is the voltage more than 10 V?    | Go to step 2. | Repair harness and connector.<br><b>NOTE:</b><br>In this case, repair the following:<br>● Open circuit in harness between combination meter and battery.<br>● Poor contact in coupling connectors (i12) and combination meter connector. <Ref. to IDI-3 REMOVAL, Combination Meter Assembly.> |
| 2   | <b>CHECK GROUND CIRCUIT OF COMBINATION METER.</b><br>1) Turn ignition switch to OFF.<br>2) Measure resistance of harness between combination meter connector and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(i12) No. 13 (+) — Chassis ground (-):</b>                                                      | Is the resistance less than 10 Ω? | Go to step 3. | Repair harness and connector.                                                                                                                                                                                                                                                                 |
| 3   | <b>CHECK TRANSMISSION TYPE.</b>                                                                                                                                                                                                                                                                                           | Is the transmission type MT?      | Go to step 4. | Go to step 8.                                                                                                                                                                                                                                                                                 |
| 4   | <b>CHECK HARNESS CONNECTOR BETWEEN COMBINATION METER AND VEHICLE SPEED SENSOR 2.</b><br>1) Disconnect connector from vehicle speed sensor 2.<br>2) Measure resistance of harness connector between vehicle speed sensor 2 and combination meter.<br><b>Connector &amp; terminal</b><br><b>(B17) No. 1 — (i12) No. 10:</b> | Is the resistance less than 10 Ω? | Go to step 5. | Repair wiring harness.                                                                                                                                                                                                                                                                        |
| 5   | <b>CHECK HARNESS CONNECTOR BETWEEN BATTERY AND VEHICLE SPEED SENSOR 2.</b><br>1) Turn ignition switch to ON.<br>2) Measure voltage between vehicle speed sensor 2 connector (B17) and chassis ground.<br><b>Connector &amp; terminal</b><br><b>(B17) No. 3 (+) — Chassis ground (-):</b>                                  | Is the voltage more than 10 V?    | Go to step 6. | Repair harness connector between battery and vehicle speed sensor 2.                                                                                                                                                                                                                          |

# GENERAL DIAGNOSTIC

Instrumentation/Driver Info

| No. | Step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Check                                     | Yes                            | No                                                                                            |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------|
| 6   | <b>CHECK HARNESS CONNECTOR BETWEEN VEHICLE SPEED SENSOR 2 AND ENGINE GROUND.</b><br>1) Turn ignition switch to OFF.<br>2) Measure resistance between vehicle speed sensor 2 connector (B17) and engine ground.<br><b>Connector &amp; terminal</b><br><b>(B17) No. 2 (+) — Engine ground (-):</b>                                                                                                                                                                                                                                                                             | Is the resistance less than 10 $\Omega$ ? | Go to step 7.                  | Repair harness connector between vehicle speed sensor 2 and engine ground.                    |
| 7   | <b>CHECK VEHICLE SPEED SENSOR 2.</b><br>1) Connect connector to vehicle speed sensor 2.<br>2) Set the vehicle on free roller, or lift-up the vehicle and support with safety stands.<br><b>WARNING:</b><br><b>Be careful not to be caught up by the running wheels.</b><br>3) Set oscilloscope to vehicle speed sensor 2 connector terminals.<br>Positive probe; (B17) No. 1<br>Earth lead; (B17) No. 2<br>4) Drive the vehicle at speed greater than 20 km/h (12 MPH).<br>5) Measure signal voltage indicated on oscilloscope.                                              | Is the voltage more than 5 V?             | Repair or replace speedometer. | Replace vehicle speed sensor 2.                                                               |
| 8   | <b>CHECK HARNESS CONNECTOR BETWEEN COMBINATION METER AND AUTOMATIC TRANSMISSION CONTROL MODULE.</b><br>1) Disconnect connector from automatic transmission control module.<br>2) Measure resistance between combination meter connector (i12) and automatic transmission control module connector (B55).<br><b>CAUTION:</b><br><b>To measure the voltage and/or resistance, use a tapered pin with a diameter of less than 0.64 mm (0.025 in). Do not insert the pin more than 5 mm (0.20 in).</b><br><b>Connector &amp; terminal</b><br><b>(i12) No. 10 — (B55) No. 13:</b> | Is the resistance less than 10 $\Omega$ ? | Go to step 9.                  | Repair harness connector between combination meter and automatic transmission control module. |

# GENERAL DIAGNOSTIC

Instrumentation/Driver Info

| No. | Step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Check                                            | Yes                            | No                                                                                                         |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------|
| 9   | <p><b>CHECK AUTOMATIC TRANSMISSION CONTROL MODULE.</b></p> <p>1) Connect connector to automatic transmission control module.</p> <p>2) Set the vehicle on free roller, or lift-up the vehicle and support with safety stands.</p> <p><b>WARNING:</b><br/> <b>Be careful not to be caught by the running wheels.</b></p> <p>3) Drive the vehicle faster than 10 km/h (6 MPH).</p> <p>4) Measure voltage between automatic transmission control module connector (B55) and chassis ground.</p> <p><b>CAUTION:</b><br/> <b>To measure the voltage and/or resistance, use a tapered pin with a diameter of less than 0.64 mm (0.025 in). Do not insert the pin more than 5 mm (0.20 in).</b></p> <p><i>Connector &amp; terminal<br/> (B55) No. 13 (+) — Chassis ground (-):</i></p> | Is the voltage less than 1 V<br>↔ more than 4 V? | Repair or replace speedometer. | Replace automatic transmission control module. <Ref. to AT-41 REMOVAL, Transmission Control Module (TCM).> |

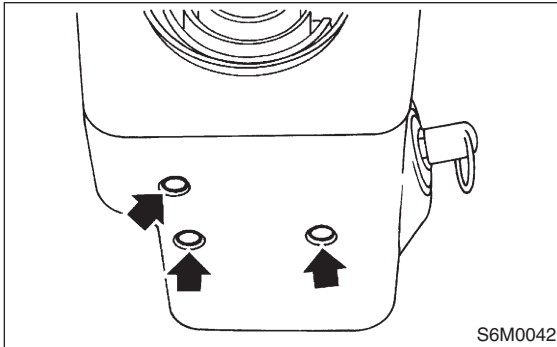
## 3. Combination Switch (Light)

S914411

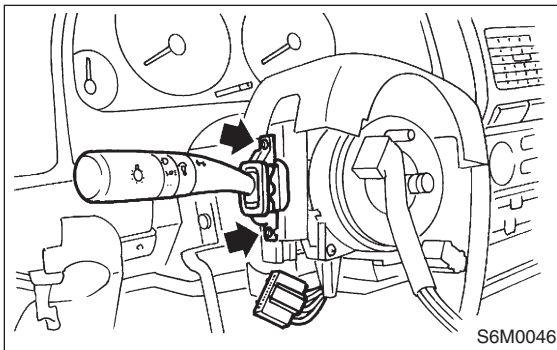
### A: REMOVAL

S914411A18

- 1) Remove instrument panel lower cover. <Ref. to EI-25 REMOVAL, Instrument Panel Assembly.>
- 2) Remove screws which secure upper column cover to lower column cover.



- 3) Disconnect connector from combination switch.
- 4) Remove screws which secure switch and remove switch.



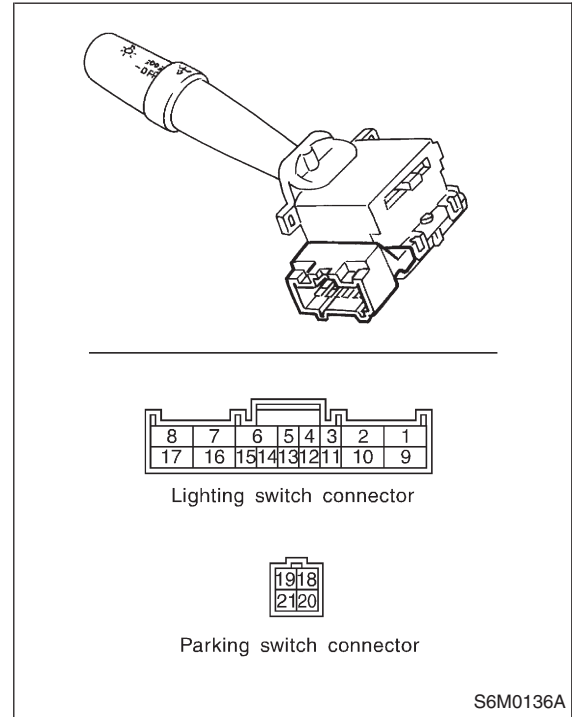
### B: INSTALLATION

S914411A11

Install in the reverse order of removal.

### C: INSPECTION

S914411A10



Move combination switch to respective positions and check continuity between terminals.

#### • LIGHTING SWITCH

| Terminal<br>Switch position | 16 | 14 | 13 |
|-----------------------------|----|----|----|
| OFF                         |    |    |    |
| Tail                        | ○  | ○  |    |
| Head                        | ○  | ○  | ○  |

#### • PARKING SWITCH

| Terminal<br>Switch position | 19 | 21 | 18 |
|-----------------------------|----|----|----|
| OFF                         | ○  | ○  |    |
| ON                          |    | ○  | ○  |

#### • DIMMER AND PASSING SWITCH

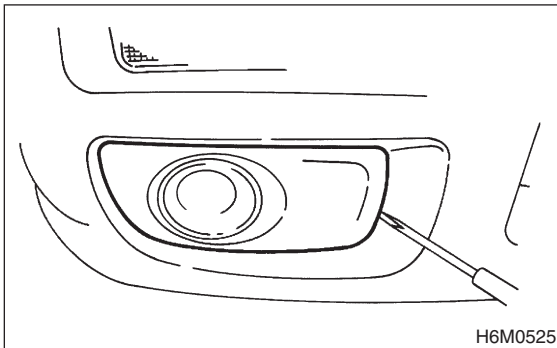
| Terminal<br>Switch position | 16 | 17 | 7 | 8 |
|-----------------------------|----|----|---|---|
| Flash                       | ○  |    | ○ | ○ |
| Low beam                    | ○  | ○  |   |   |
| HI-beam                     | ○  |    | ○ |   |

H6M0500B

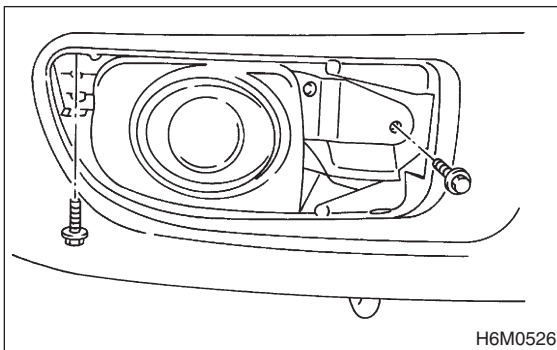
## 6. Front Fog Light Assembly S914427

### A: REMOVAL S914427A18

- 1) Disconnect ground cable from battery.
- 2) Remove front fog light cover.



- 3) Remove the two screws, then draw out the front fog light from front bumper.



- 4) Disconnect the connector.

### B: INSTALLATION S914427A11

Install in the reverse order of removal.

## GENERAL DESCRIPTION

Lighting System

### 1. General Description

S914001

### A: SPECIFICATIONS

S914001E49

|                           |                          |                    |
|---------------------------|--------------------------|--------------------|
| Headlight                 | 12 V — 60/55 W (Halogen) |                    |
| Front fog light           | 12 V — 55 W              |                    |
| Front turn signal light   | 12 V — 27 W              |                    |
| Side turn signal light    | 12 V — 3.8 W             |                    |
| Side marker/Parking light | 12 V — 3.8 W             |                    |
| Rear combination light    | Tail/Stop light          | 12 V — 8/27 W      |
|                           | Turn signal light        | 12 V — 27 W        |
|                           | Back-up light            | 12 V — 27 W        |
| License plate light       | 12 V — 3.8 W             |                    |
| High-mount stop light     | Sedan: 12 V — 18 W       | Wagon: 12 V — 13 W |
| Room light                | 12 V — 8 W               |                    |
| Spot light                | 12 V — 8 W               |                    |
| Trunk room light          | 12 V — 5 W               |                    |
| Luggage room light        | 12 V — 5 W               |                    |

### B: PRECAUTIONS

S914001E59

- Before disassembling or reassembling parts, always disconnect battery ground cable. When replacing radio, control module, and other parts provided with memory functions, record memory contents before disconnecting the battery ground cable. Otherwise, the memory will be erased.
- Reassemble in reverse order of disassembly, unless otherwise indicated.
- Adjust parts to the given specifications.
- Connect connectors and hoses securely during reassembly.
- After reassembly, make sure functional parts operate smoothly.

#### WARNING:

- **Air bag system wiring harness is routed near electrical parts and switches. All air bag system wiring harnesses and connectors are yellow. Do not use electric test equipment on these circuits.**
- **Be careful not to damage the air bag system wiring harness when servicing electrical parts and switches.**

### C: PREPARATION TOOL

S914001A17

#### 1. GENERAL TOOL

S914001A1701

| TOOL NAME      | REMARKS                                            |
|----------------|----------------------------------------------------|
| Circuit Tester | Used for measuring resistance, voltage and ampere. |



## 2. Headlight and Tail Light System

S914415

### A: INSPECTION

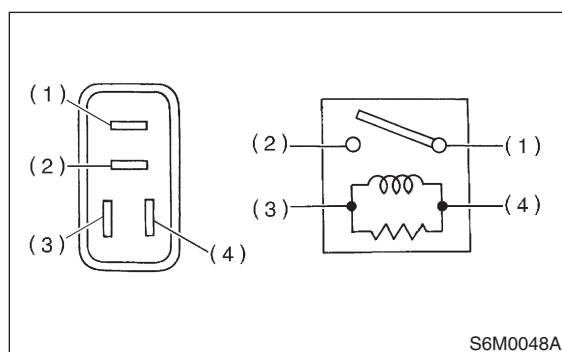
S914415A10

#### 1. HEADLIGHT RELAY

S914415A1001

Check continuity between terminals when terminal No. 4 is connected to battery and terminal No. 3 is grounded.

|                             |                                   |                            |
|-----------------------------|-----------------------------------|----------------------------|
| When current flows.         | Between terminals No. 1 and No. 2 | Continuity exists.         |
| When current does not flow. | Between terminals No. 1 and No. 2 | Continuity does not exist. |
|                             | Between terminals No. 3 and No. 4 | Continuity exists.         |

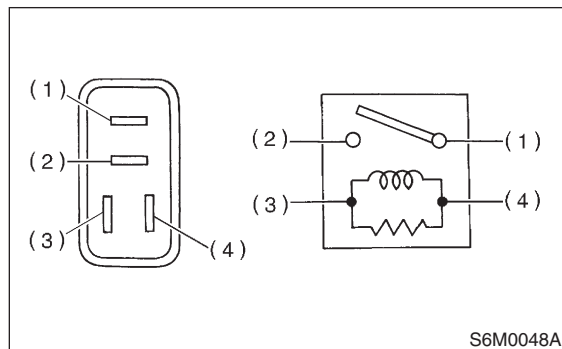


#### 2. TAIL AND ILLUMINATION RELAY

S914415A1002

Check continuity between terminals (indicated in table) when terminal No. 4 is connected to battery and terminal No. 3 is grounded.

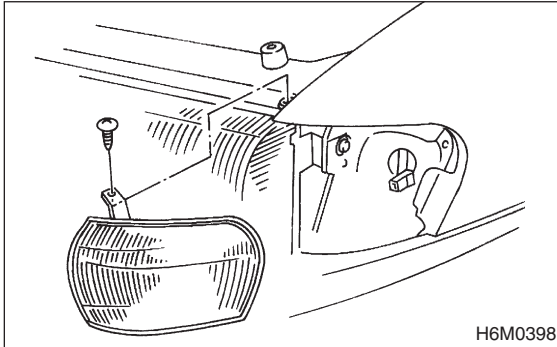
|                             |                                   |                            |
|-----------------------------|-----------------------------------|----------------------------|
| When current flows.         | Between terminals No. 1 and No. 2 | Continuity exists.         |
| When current does not flow. | Between terminals No. 1 and No. 2 | Continuity does not exist. |
|                             | Between terminals No. 3 and No. 4 | Continuity exists.         |



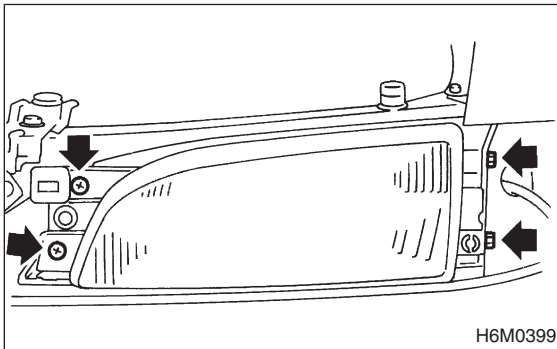
## 4. Headlight Assembly S914409

### A: REMOVAL S914409A18

- 1) Remove front grille and disconnect connector from headlight.
- 2) Remove screw then remove side marker light while disconnecting connector.



- 3) Remove screws and bolts which secure headlight and remove headlight.



### B: INSTALLATION S914409A11

Install in the reverse order of removal.

#### Tightening torque:

**7.4 N·m (0.75 kgf-m, 5.4 ft-lb)**

#### NOTE:

When installing, securely fit clip (on fender side) into locating (on side marker light side).

### C: ADJUSTMENT S914409A01

#### 1. HEADLIGHT AIMING S914409A0101

##### CAUTION:

Turn off the light before adjusting headlight aiming. If the light is necessary to check aiming, do not turn on for more than two minutes.

##### NOTE:

Before checking the headlight aiming, be sure of the following:

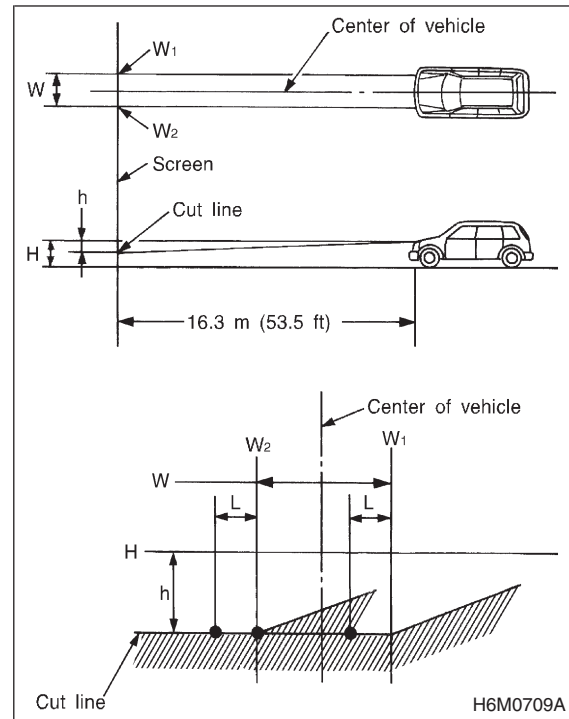
- The area around the headlight has not sustained any accident, damage or other type of deformation.
- Vehicle is parked on level ground.

- The inflation pressure of tires is correct.
- Vehicle's gas tank is fully charged.
- Bounce the vehicle several times to normalize the suspension.
- Make certain that someone is seated in the driver's seat.

- 1) Place a cloth over the headlight that does not require aiming adjustment.
- 2) Turn the headlights on. Perform the aiming adjustment for the other headlight as follows:

##### CAUTION:

Do not perform lateral headlight aiming adjustment.

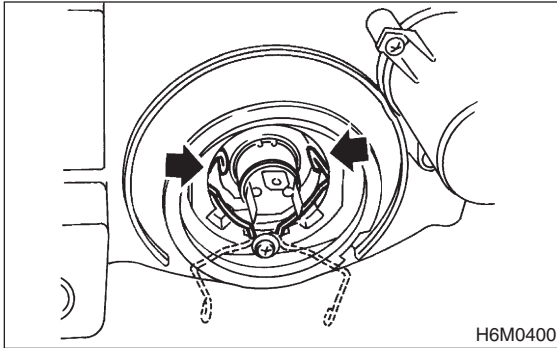


|                | W                      | H                    | L                    | h                   |
|----------------|------------------------|----------------------|----------------------|---------------------|
| Except OUTBACK | 1,070 mm<br>(42.13 in) | 630 mm<br>(24.80 in) | 712 mm<br>(28.03 in) | 114 mm<br>(4.49 in) |
| OUTBACK        | 1,070 mm<br>(42.13 in) | 650 mm<br>(25.59 in) | 712 mm<br>(28.03 in) | 114 mm<br>(4.49 in) |

## 5. Headlight Bulb S914410

### A: REMOVAL S914410A18

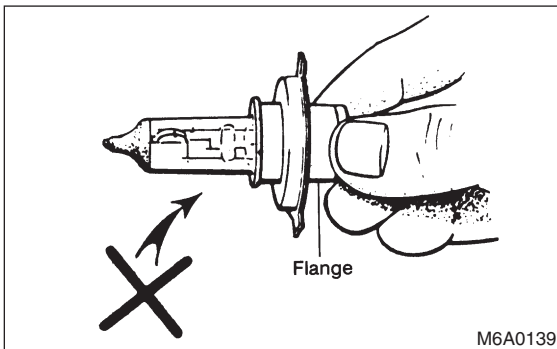
- 1) Disconnect the connector from inside of the engine compartment.
- 2) Remove rubber cap.
- 3) Remove the light bulb retaining spring to remove the bulb.



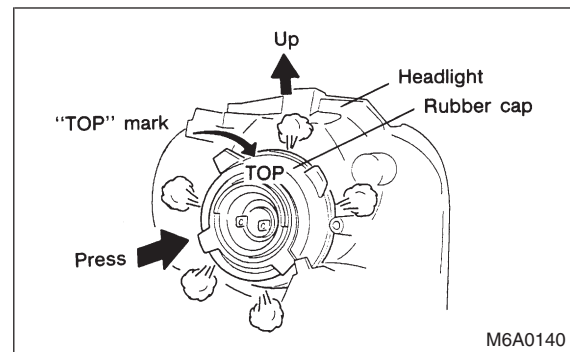
- 4) Replace the bulb with a new one and hook the spring.
- 5) Attach the rubber cap and connect the connector.

#### CAUTION:

- Since the tungsten halogen bulb operates at high temperature, dirt and oil on the bulb surface decreases the bulb's useful life. When replacing the bulb, hold the flange portion and do not touch the glass portion.



- Attach the rubber cap with letters TOP on the top so that the drain hole will be on the lower side.



- To keep water out, correctly engage the groove portion of the rubber cap.

### B: INSTALLATION S914410A11

Install in the reverse order of removal.

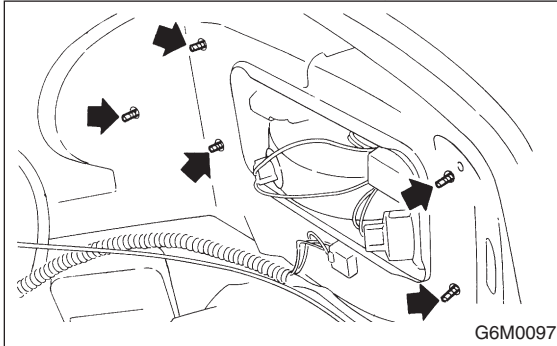
## 7. Rear Combination Light Assembly

S914426

### A: REMOVAL

S914426A18

- 1) Remove rear trim.
- 2) Remove nuts and disconnect connector.



- 3) Attach adhesive cloth tape to body area around rear combination light.
- 4) Using a standard screwdriver, carefully pry rear combination light off and away from the front of vehicle.

### B: INSTALLATION

S914426A11

Install in the reverse order of removal.

#### *Tightening torque:*

**4.4 N·m (0.45 kgf-m, 3.3 ft-lb)**

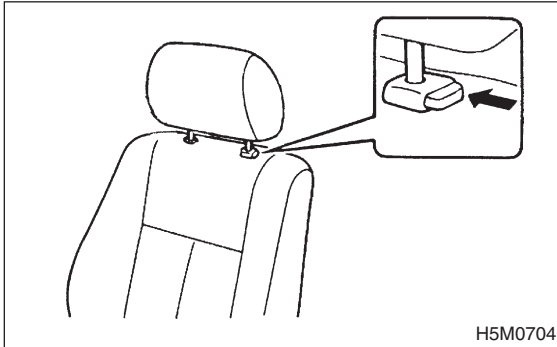
#### **CAUTION:**

- Do not pry rear combination light forcefully as this may scratch vehicle body.
- Remove all traces of adhesive tape from body before installation.
- Attach butyl rubber tape to back of rear combination light before installing rear combination light on body for sealing purposes.

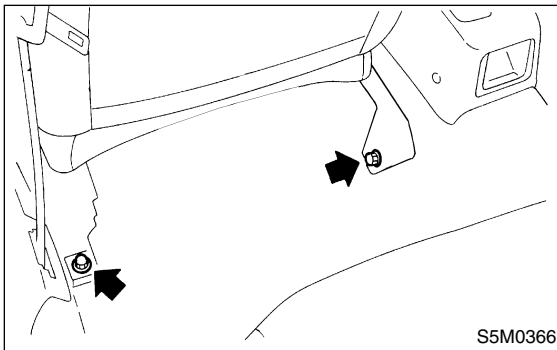
## 2. Front Seat S908343

### A: REMOVAL S908343A18

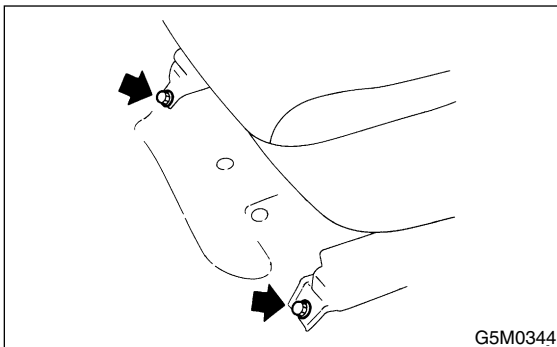
1) While operating button (located on top of backrest), lift headrest out with hand placed between backrest and headrest.



- 2) Pull reclining lever back to fold backrest all the way forward. While pulling slide adjuster lever, move seat all the way forward.
- 3) Remove bolt cover at rear end of slide rail.
- 4) Remove bolts securing seat rear.



- 5) While pulling slide adjuster lever, slide seat all the way back.
- 6) Remove bolts securing front of seat.



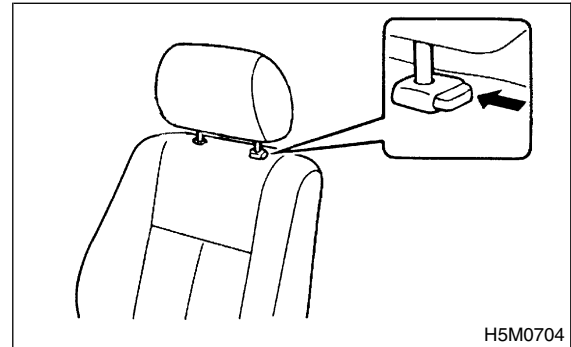
- 7) Remove front seat from vehicle.

#### CAUTION:

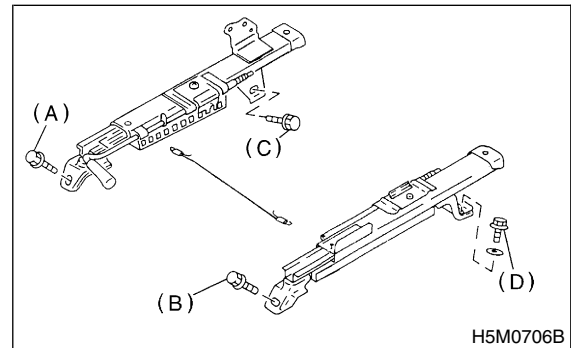
**Be careful not to scratch seat when removing it from vehicle.**

### B: INSTALLATION S908343A11

1) While operating button (located on top of backrest), lift headrest out by placing your hand between backrest and headrest.



- 2) Pull reclining lever back to fold backrest all the way forward. Pull slide adjuster lever and move lower slide rail all the way backward.
- 3) Position seat in compartment and align the holes on the seat with the holes on the car body side.
- 4) Secure the front of seat using inward and outward bolts (A) and (B) in that order.
- 5) While pulling slide adjuster lever, move seat all the way forward.
- 6) Secure the rear of seat using inward and outward bolts (C) and (D).



- 7) Connect connector under driver's seat.

#### CAUTION:

**Check that all lock plate pawls are completely and equally inserted into the holes in the slide rail brackets.**

- 8) After installation, ensure that all mechanisms operate properly and lock.
- 9) If any mechanism does not function properly, loosen bolts (C) and (D), slide seat as required, insert all lock plate pawls into holes in slide rail brackets, and tighten bolts (C) and (D) in that order.
- 10) Install bolt cover on rear end of slide rail.
- 11) Install headrest on backrest.

#### NOTE:

Tighten bolts in the designated order.

## 1. General Description

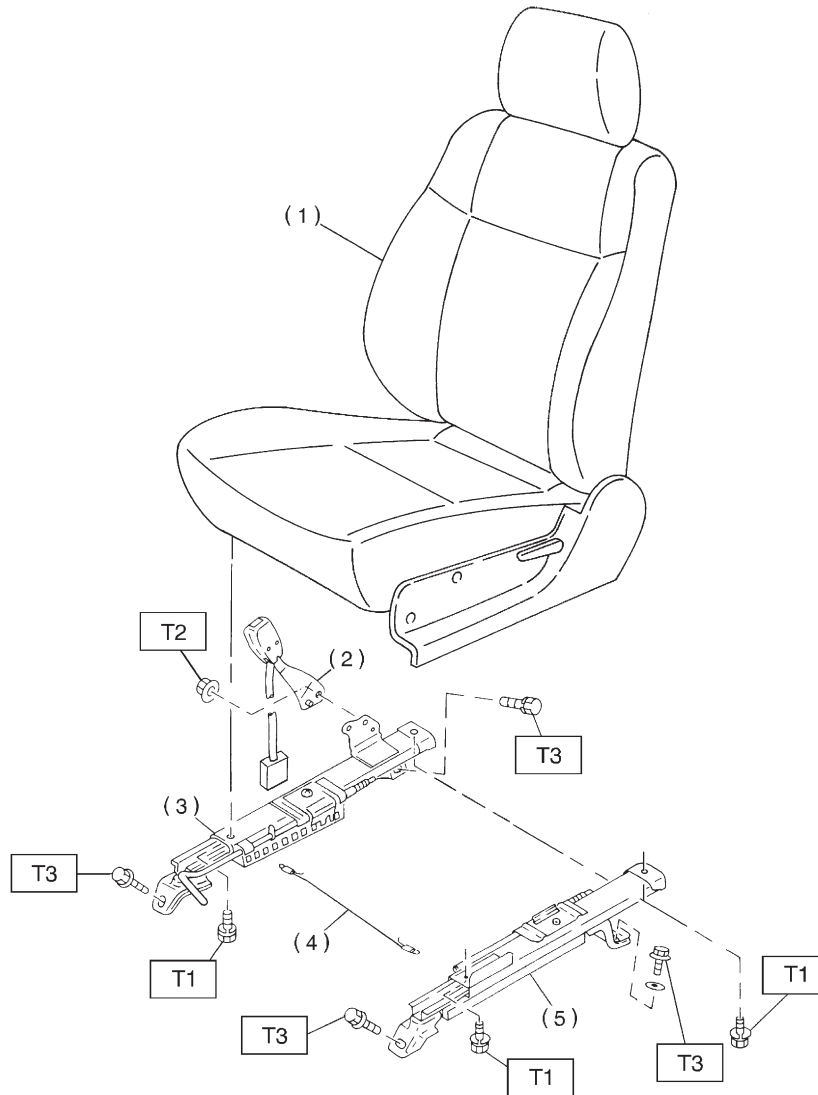
S908001

### A: COMPONENT

S908001A05

#### 1. FRONT SEAT

S908001A0501



H5M0701B

- (1) Front seat ASSY
- (2) Inner belt ASSY
- (3) Inner slide rail ASSY
- (4) Connect wire

- (5) Outer slide rail ASSY

**Tightening torque: N·m (kgf-m, ft-lb)**

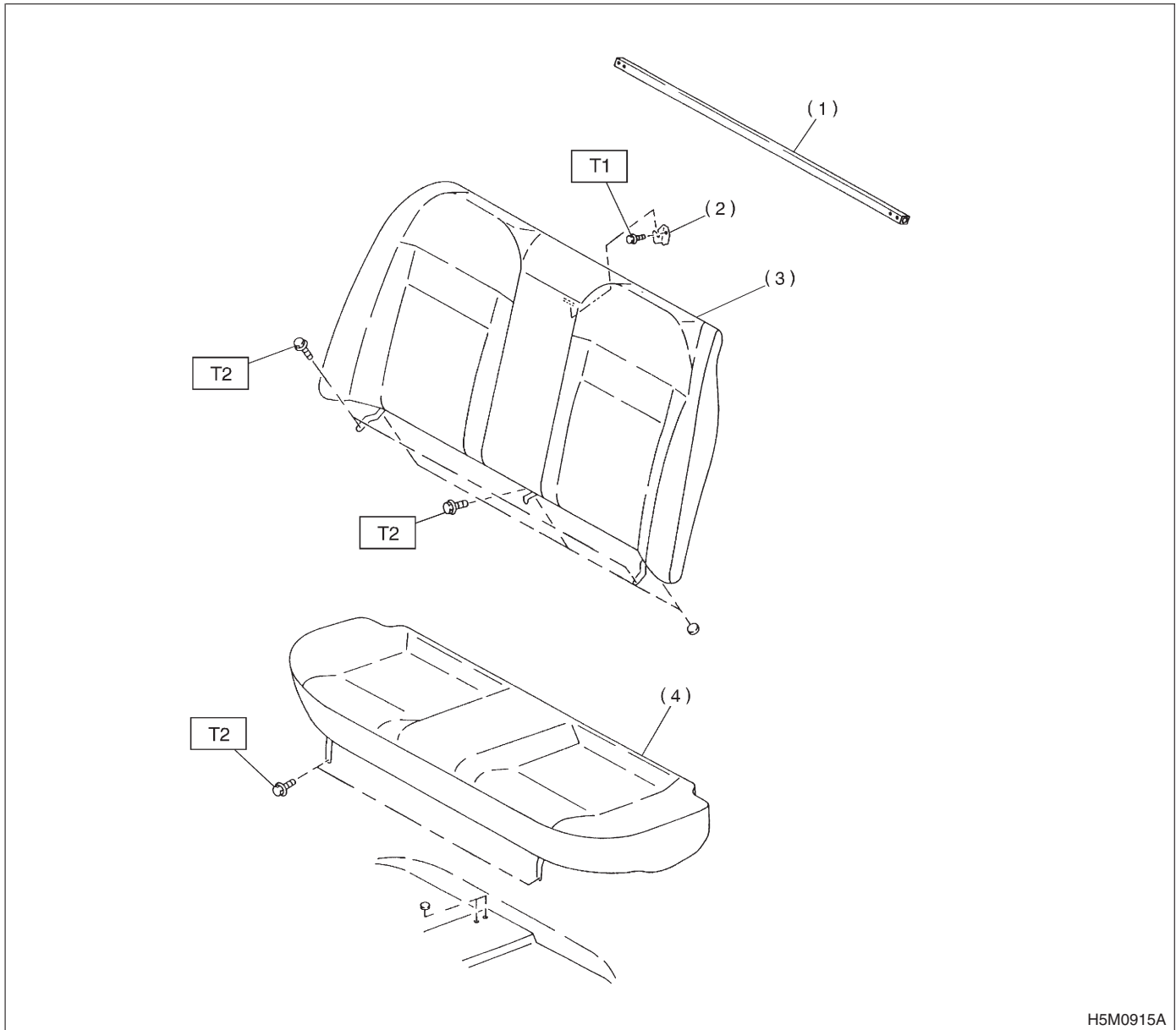
**T1: 23 (2.3, 16.6)**

**T2: 29 (3.0, 21.7)**

**T3: 52 (5.3, 38)**

## 2. REAR SEAT (SEDAN AND COUPE)

S908001A0504



H5M0915A

- (1) Rear seat reinforcement
- (2) Hook
- (3) Backrest

- (4) Rear cushion

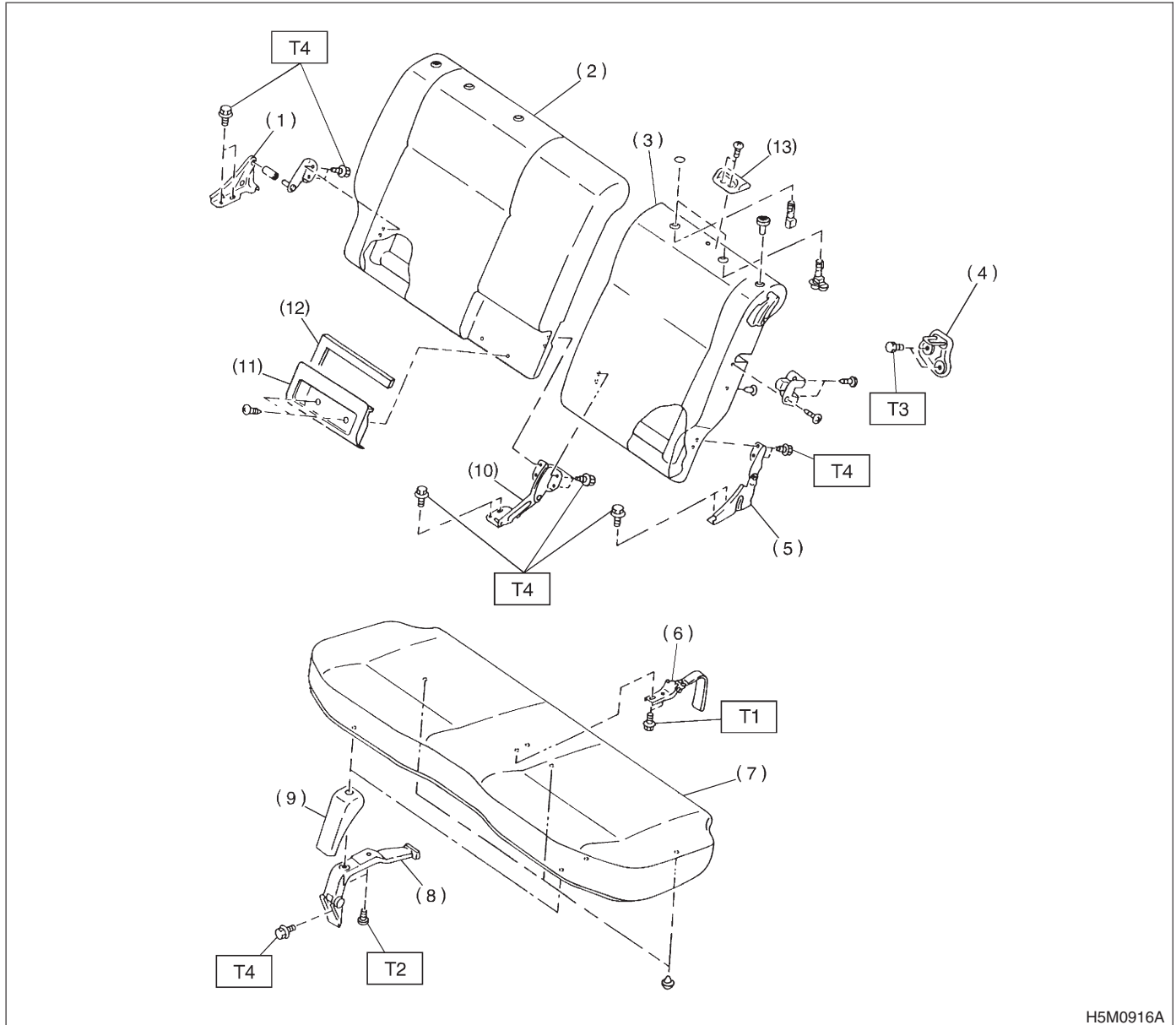
**Tightening torque: N·m (kgf-m, ft-lb)**

**T1: 10 (1.0, 7.2)**

**T2: 25 (2.5, 18.1)**

# GENERAL DESCRIPTION

## 3. REAR SEAT (WAGON) S908001A0503



H5M0916A

- |                        |                            |
|------------------------|----------------------------|
| (1) Hinge bracket (RH) | (8) Hinge                  |
| (2) Hinge bracket (RH) | (9) Hinge cover            |
| (3) Backrest (LH)      | (10) Backrest center hinge |
| (4) Striker            | (11) Belt pocket           |
| (5) Hinge bracket (LH) | (12) Pad ASSY pocket       |
| (6) Lock hinge         | (13) Hook                  |
| (7) Rear cushion       |                            |

**Tightening torque: N·m (kgf-m, ft-lb)**

**T1: 2 (0.2, 1.4)**

**T2: 5.9 (0.6, 4.3)**

**T3: 10 (1.0, 7.2)**

**T4: 25 (2.5, 18.1)**



### **B: CAUTION**

*S908001A03*

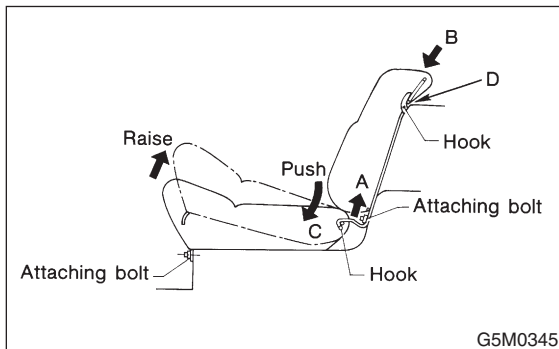
- Take care not to contaminate or damage seat surface.
- While loading to or unloading to vehicle, take care not to contact body.
- When removing front seat from a side airbag loaded vehicle, follow cautions given in the airbag section.

## 3. Rear Seat S908350

### A: REMOVAL S908350A18

#### 1. SEDAN AND COUPE S908350A1803

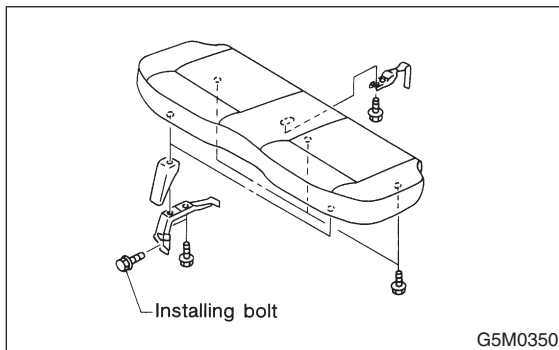
- 1) Remove bolts securing hinges (located at front of cushion) to body.
- 2) Slightly raise front of cushion while pushing down on cushion in the direction of "C". With cushion held in that position, move it forward until it is unhooked.



- 3) Remove bolts securing lower portion of backrest to body.
- 4) Lift rear seat backrest in direction "A" until it is released from upper hooks.

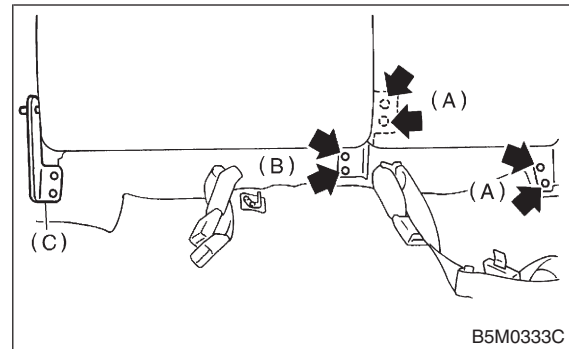
#### 2. WAGON S908350A1801

- 1) Remove bolts securing hinges (located at front of seat) to body.



- 2) Pull strap (located in middle rear portion of cushion) to release lock. Lift cushion out and away from body.
- 3) Pull knobs (located at each side of backrest's upper portion) up to release lock, and fold backrest all the way forward.

- 4) Remove the bolt and then remove backrest (LH side).
- 5) Remove the bolt and then remove backrest (RH side) from hinge bracket.



- (A) Bolt (LH side)
- (B) Bolt (RH side)
- (C) Hinge bracket

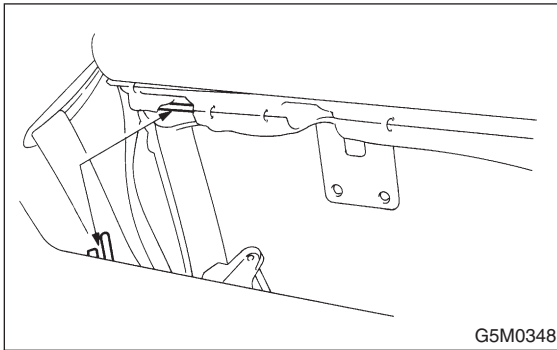
**B: INSTALLATION**

S908350A11

**1. SEDAN AND COUPE**

S908350A1103

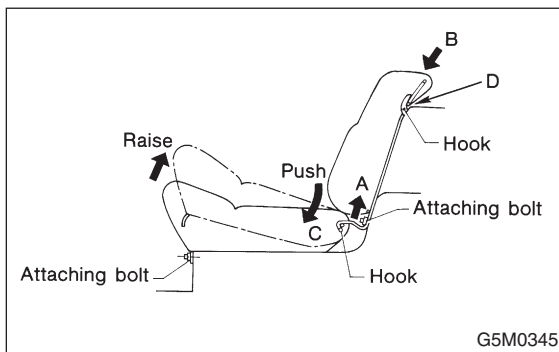
- 1) Before installing backrest, ensure that trim panel, insulator and seat belt are properly installed.
- 2) Transfer outer seat belt webbing to front of backrest and fold backrest forward. Attach seat belt webbing to upper hooks (2 places), and move pillow in the direction of "B" until backrest is aligned with lower mounting holes in body.



- 3) Secure lower center and both sides of backrest to body with bolts.
- 4) Slightly raise front section of cushion while pushing down on cushion in the direction of "C". With cushion held in that position, attach rear section of cushion to hooks at lower frame location.
- 5) Secure front of cushion to body with bolts.

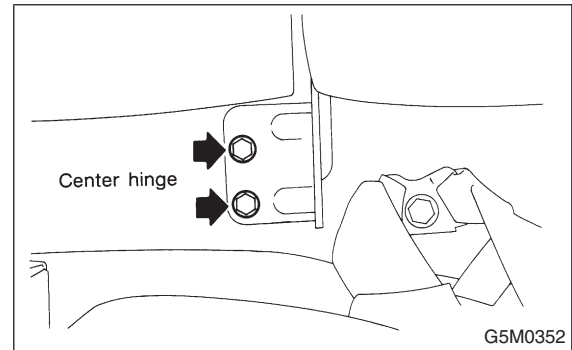
**CAUTION:**

- Before installing seat, ensure that seat belt is placed on cushion.
- Confirm that winding of three-point type seat belt can operate regularly.

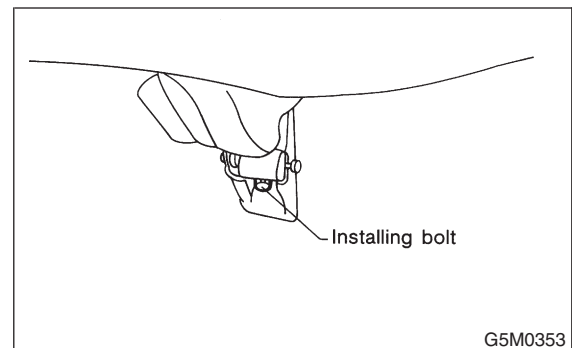
**2. WAGON**

S908350A1101

- 1) Install hinge bracket to body.
- 2) Insert right backrest hinge pin into hole in bracket. Tilt backrest backward until striker engages with lock.
- 3) Secure right backrest center hinge to body using a bolt.



- 4) Temporarily install left backrest side hinge to body using a bolt, and fold backrest forward to the floor.
- 5) Roll up mat (located at rear of left backrest), and install center hinge using a bolt.
- 6) Tilt left backrest until striker engages with lock, and tighten bolt.
- 7) Install hinges to front of cushion and tighten with bolts. Check that lock properly engages.



- 8) Fold backrest onto cushion and overlap trunk mat and mat at rear of backrest.

**CAUTION:**

- Do not allow center seat belt to get under cushion when folding cushion.
- Ensure that side seat belt tongue is free from cushion and trim panel.
- Lift front of cushion to ensure that cushion is properly locked.

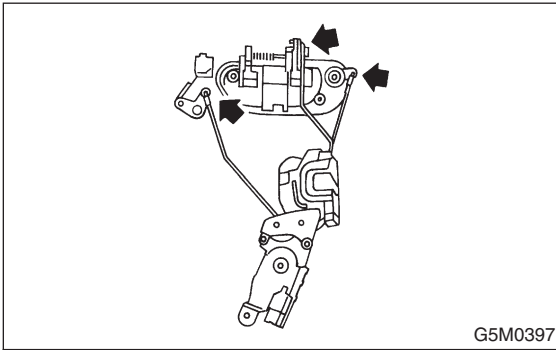
## 4. Door Latch Assembly

S909605

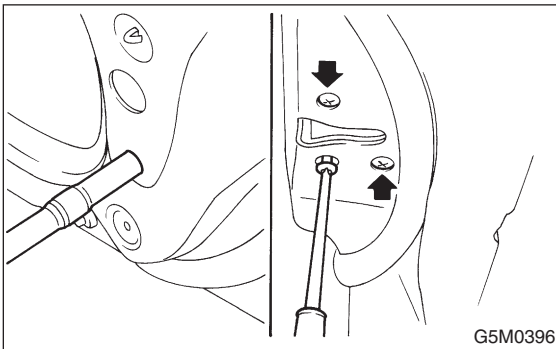
### A: REMOVAL

S909605A18

- 1) Remove trim panel.
- 2) Remove inner remote assembly.
- 3) Remove sealing cover around latch service hole.
- 4) Completely close door glass.
- 5) Remove latch and actuator assembly:
  - (1) Turn rod holder to disconnect joint between key lock and rod.
  - (2) Turn rod holder to disconnect joint between outer handle and rod.
  - (3) Turn rod holder to disconnect joint between crank and rod.



- 6) Loosen screws securing both latch and actuator, then remove latch and actuator assembly through service hole in bottom.



### B: INSTALLATION

S909605A11

Install in the reverse order of removal.

#### **Tightening torque (screw):**

**6.4 N·m (0.65 kgf-m, 4.7 ft-lb)**

#### **NOTE:**

- Check operation of each part.
- Check each sliding part for proper lubrication.

#### **CAUTION:**

**After installation, be sure lock mechanism operates normally.**

### C: INSPECTION

S909605A10

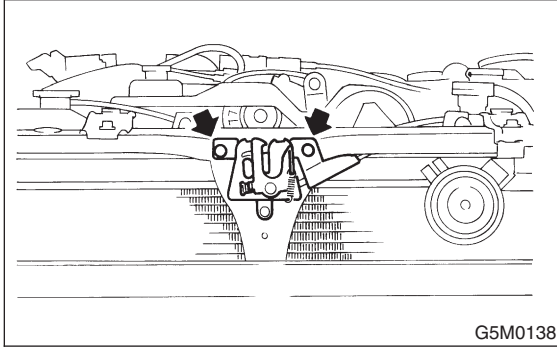
- 1) Make sure the rod is not deformed.
- 2) Make sure the lever and rod work smoothly.

## 7. Front Hood Lock Assembly

S909595

### A: REMOVAL S909595A18

- 1) Open front hood and remove front grille.
- 2) Remove bolts which secure lock assembly to radiator panel, and remove lock assembly.



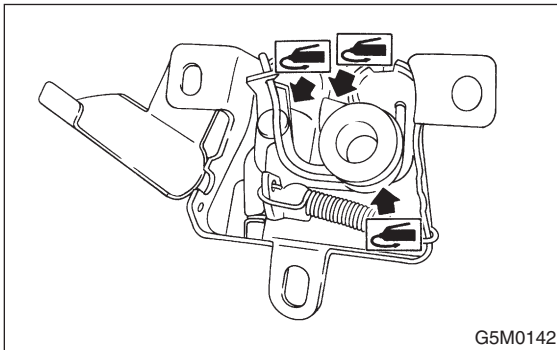
- 3) Disconnect release cable from lock assembly

### B: INSTALLATION S909595A11

Install in the reverse order of removal.

#### NOTE:

- Route hood lock release cable and hold with clips.
- After installing release cable, ensure it operates smoothly.
- Apply grease to sliding surfaces of parts.

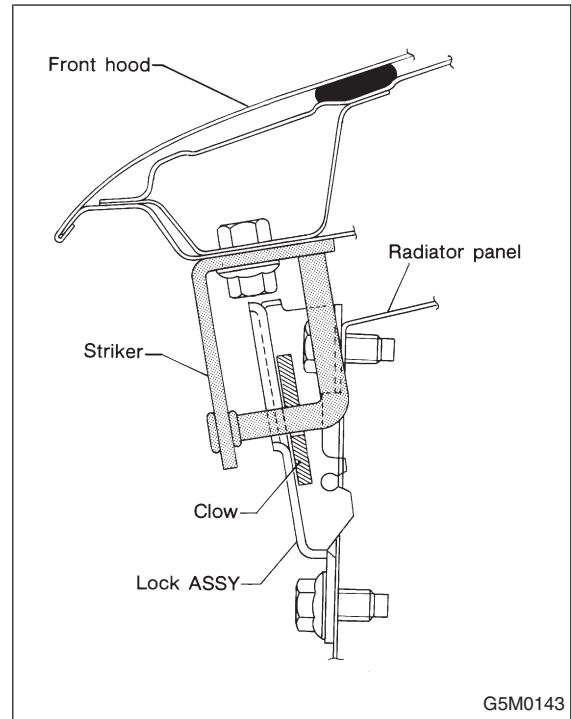


### C: ADJUSTMENT S909595A01

- 1) Fore-aft and left-right adjustments Loosen striker mounting bolts and adjust fore-and-aft position of striker.

#### CAUTION:

Do not adjust striker position using the lock. Doing so may result in a misaligned front grille.

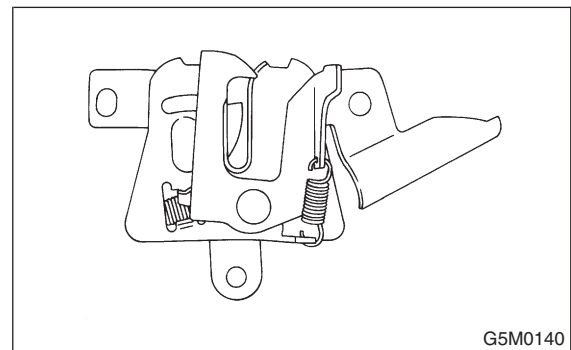


- 2) Up-down adjustment

Make up-and-down adjustment of striker only when hood does not properly contact buffer or hood is not flush with fender, or when release cable does not properly operate. Adjustment can be made by adjusting the stroke length of striker after lock assembly mounting screws are removed.

### D: INSPECTION S909595A10

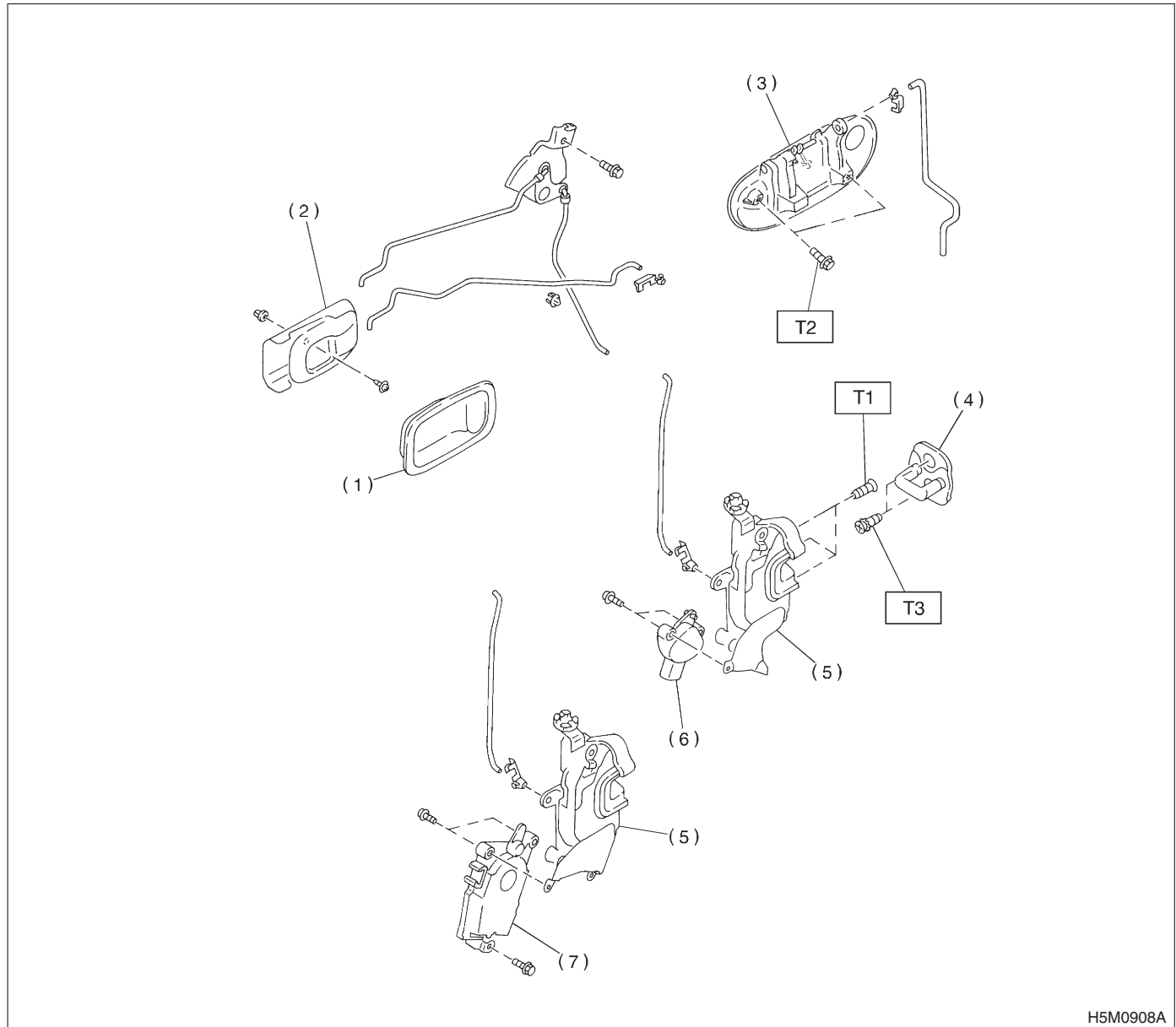
- 1) Check striker for bending or abnormal wear.
- 2) Check safety lever for improper movement.
- 3) Check other levers and spring for rust formation and unsmooth movement.



## 1. General Description S909001

### A: COMPONENT S909001A05

#### 1. FRONT DOOR LOCK ASSEMBLY S909001A0506



- |                       |                             |
|-----------------------|-----------------------------|
| (1) Cover             | (6) Switch ASSY             |
| (2) Inner remote ASSY | (7) Auto-door lock actuator |
| (3) Door outer handle |                             |
| (4) Striker           |                             |
| (5) Door latch        |                             |

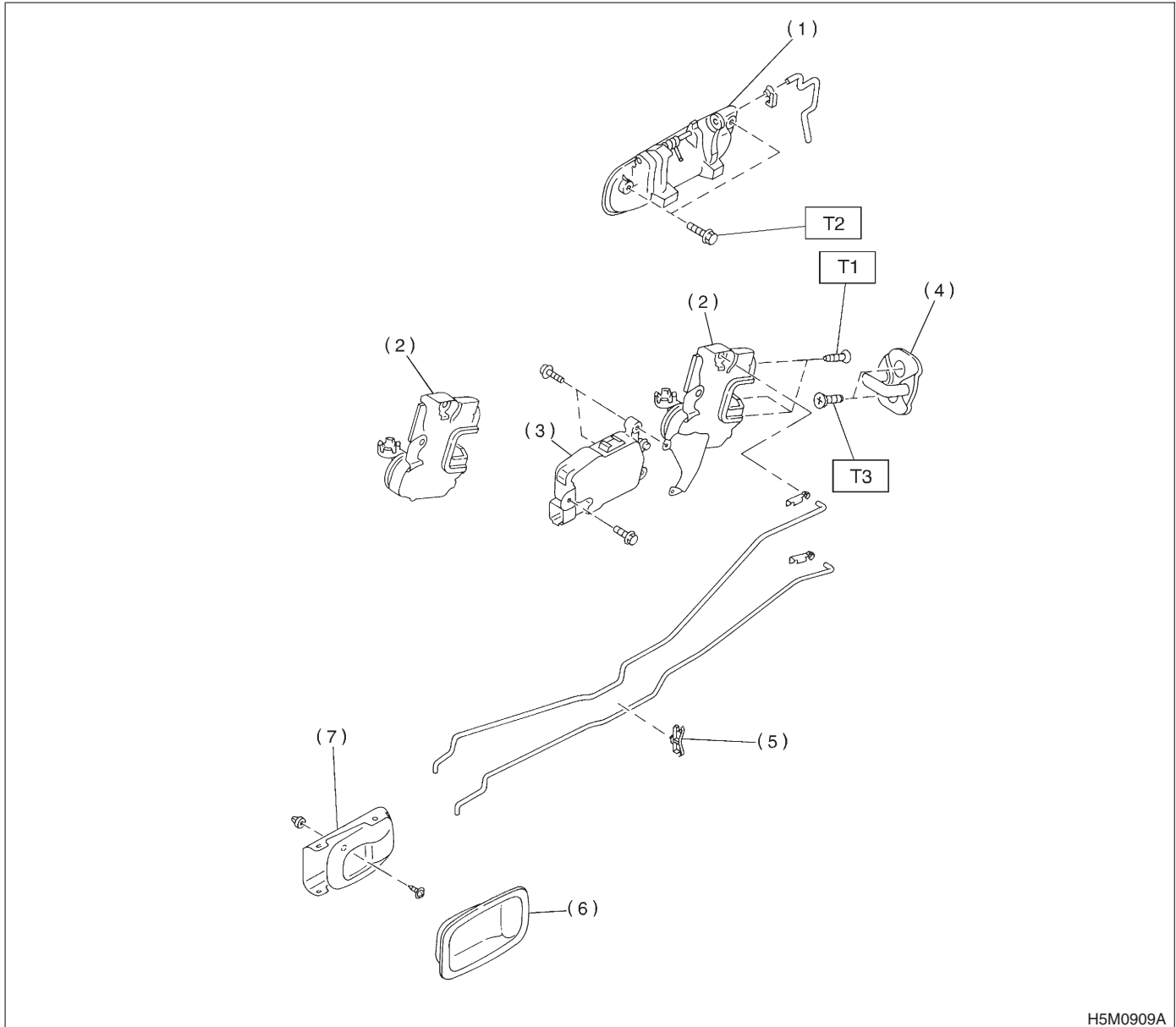
**Tightening torque: N·m (kgf-m, ft-lb)**

**T1: 6.4 (0.65, 4.7)**

**T2: 7.4 (0.75, 5.4)**

**T3: 14 (1.4, 10.1)**

## 2. REAR DOOR LOCK ASSEMBLY S909001A0507



- |                             |                       |
|-----------------------------|-----------------------|
| (1) Door outer handle       | (6) Cover             |
| (2) Door latch              | (7) Inner remote ASSY |
| (3) Auto-door lock actuator |                       |
| (4) Striker                 |                       |
| (5) Rod holder              |                       |

**Tightening torque: N·m (kgf-m, ft-lb)**

**T1: 6.4 (0.65, 4.7)**

**T2: 7.4 (0.75, 5.4)**

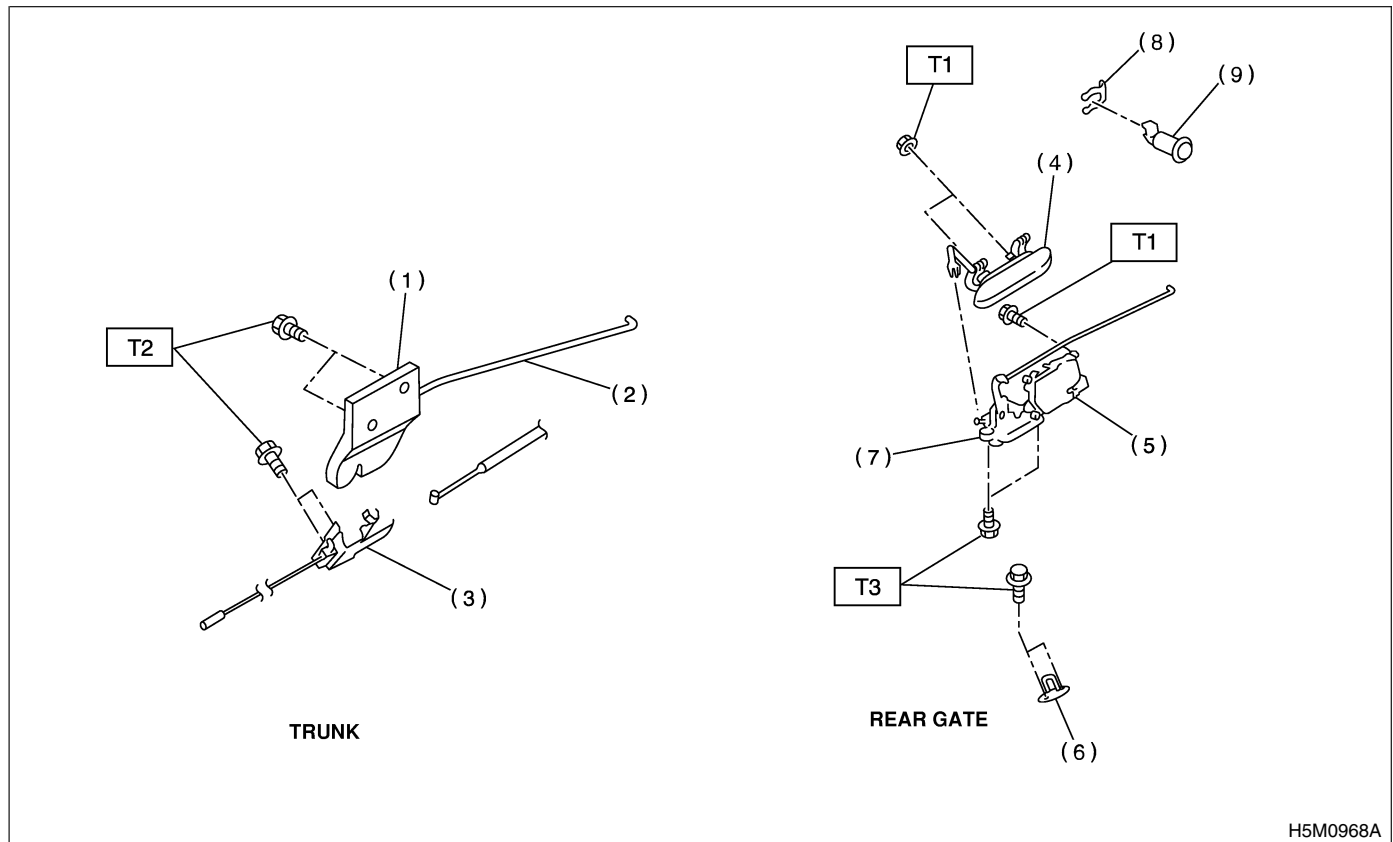
**T3: 14 (1.4, 10.1)**

# GENERAL DESCRIPTION

## Security and Locks

### 3. TRUNK LID AND REAR GATE LOCK

S909001A0502



H5M0968A

- (1) Trunk lid lock ASSY
- (2) Rod
- (3) Striker
- (4) Outer handle
- (5) Auto-door lock actuator

- (6) Striker
- (7) Latch
- (8) Clip
- (9) Key cylinder

**Tightening torque: N·m (kgf-m, ft-lb)**

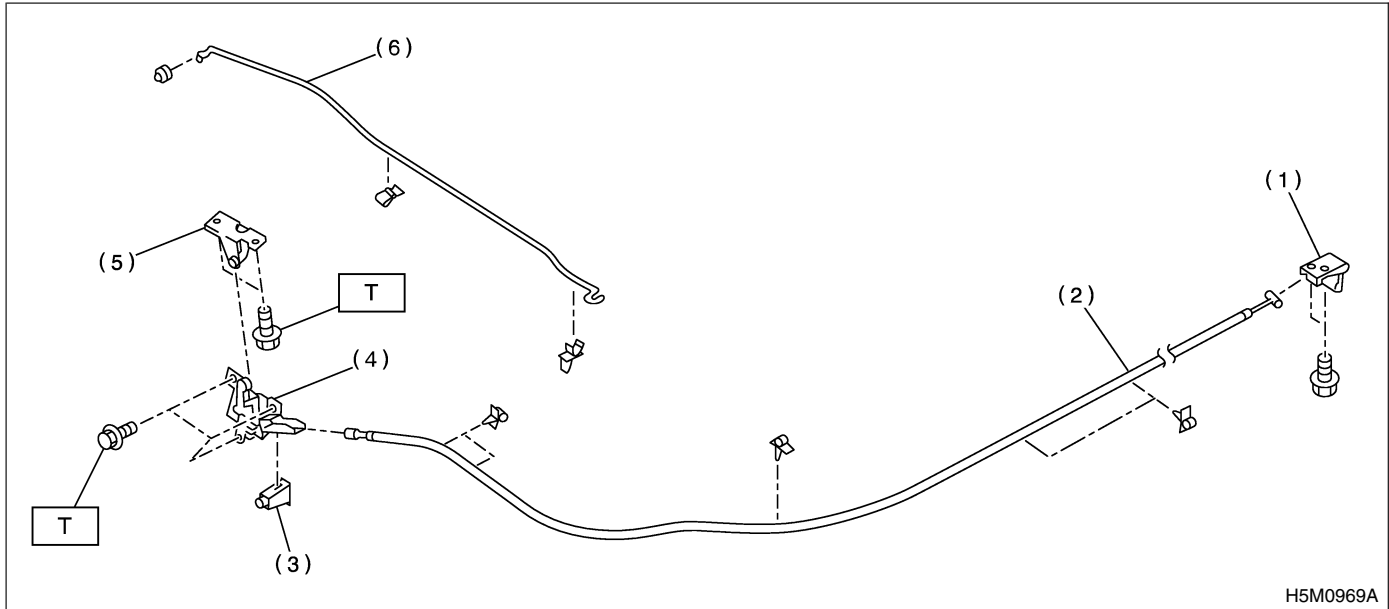
**T1: 7.4 (0.75, 5.4)**

**T2: 18 (1.8, 13.0)**

**T3: 25 (2.5, 18.1)**



## 4. HOOD LOCK S909001A0508



H5M0969A

- |                |                     |
|----------------|---------------------|
| (1) Lever ASSY | (4) Hood lock ASSY  |
| (2) Cable      | (5) Striker         |
| (3) Stopper    | (6) Front hood stay |

**Tightening torque: N·m (kgf-m, ft-lb)**  
**T: 32 (3.3, 23.9)**

## B: CAUTION S909001A03

- Before disassembling or reassembling parts, always disconnect battery ground cable. When repairing radio, control module, etc. which are provided with memory functions, record memory contents before disconnecting battery ground cable. Otherwise, these contents are cancelled upon disconnection.
- Reassemble parts in reverse order of disassembly procedure unless otherwise indicated.
- Adjust parts to specifications contained in this manual if so designated.
- Connect connectors and hoses securely during reassembly.
- After reassembly, ensure functional parts operate smoothly.
- Airbag system wiring harness is routed near the electrical parts and switch.
- All airbag system wiring harness and connectors are colored yellow. Do not use electrical test equipment on these circuits.
- Be careful not to damage Airbag system wiring harness when servicing the ignition key cylinder.

## Security and Locks

## 1. SPECIAL TOOL *S909001A1701*

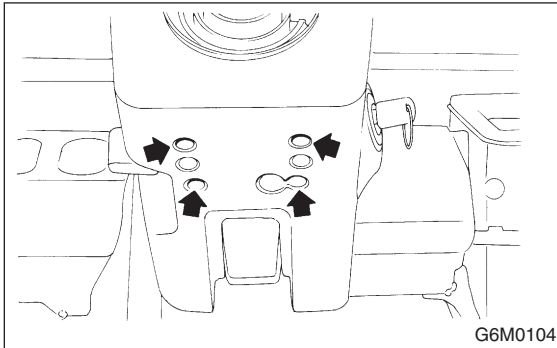
## 2. GENERAL TOOL S909001A1702

**SL-6**

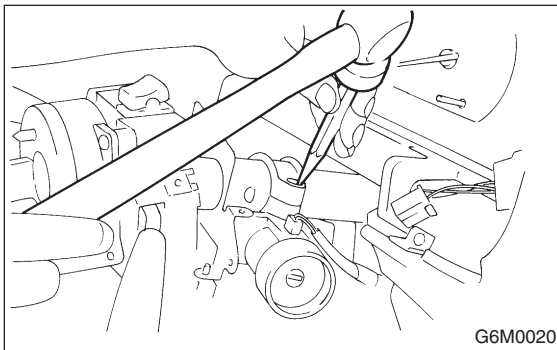
## 9. Ignition Key Lock S909318

### A: REPLACEMENT S909318A20

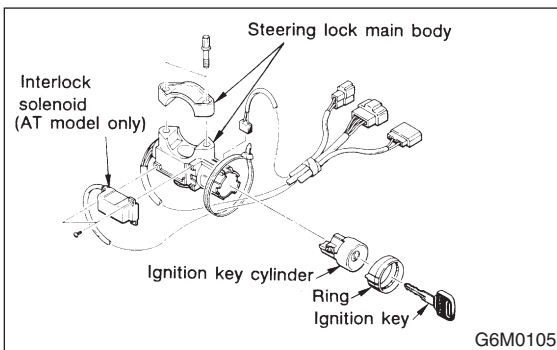
- 1) Remove screws, separate upper column cover and lower column cover.



- 2) Remove knee protector.
- 3) Remove meter visor.
- 4) Disconnect ignition switch connector from body harness.
- 5) Using a drift and hammer, hit the torn bolt head to loosen and remove the ignition switch.



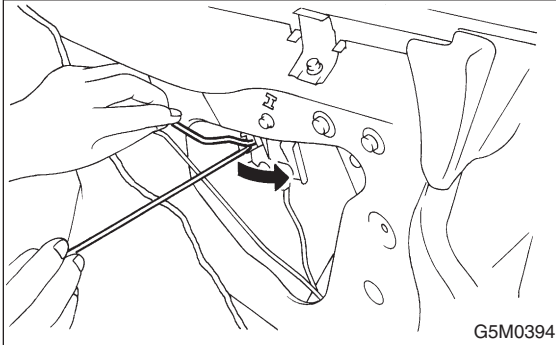
- 6) When installing, tighten the connecting bolt until its head twists off.



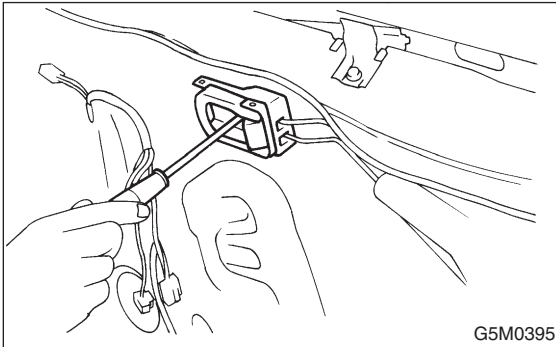
## 2. Inner Remote S909603

### A: REMOVAL S909603A18

- 1) Remove trim panel.
- 2) Remove sealing cover.
- 3) Disconnect joints of two rods.



- 4) Unlatch rod holder.
- 5) Remove screws holding remote assembly.



### B: INSTALLATION S909603A11

Install in the reverse order of removal.

#### NOTE:

If rear door is equipped with child safety lock, check that child lock lever moves without dragging.

### C: INSPECTION S909603A10

- 1) Make sure the rod is not deformed.
- 2) Make sure the lever and rod work smoothly.

## 10. Key Lock Cylinders S909326

### A: REPLACEMENT S909326A20

#### 1. DOOR S909326A2004

- 1) Remove trim panel.
- 2) Remove sealing cover.
- 3) Completely close door glass.
- 4) Remove outer handle.
- 5) Loosen spring securing key lock.
- 6) Remove key lock from outer handle.

#### NOTE:

Install so that key slot in key lock comes to center of hole in outer handle.

#### 2. REAR GATE S909326A2003

- 1) Remove trim panel.
- 2) Disengage rod from holder.
- 3) Remove retaining spring from key cylinder, and detach key cylinder from outside..

# KEY LOCK CYLINDERS

Security and Locks

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**MEMO:**

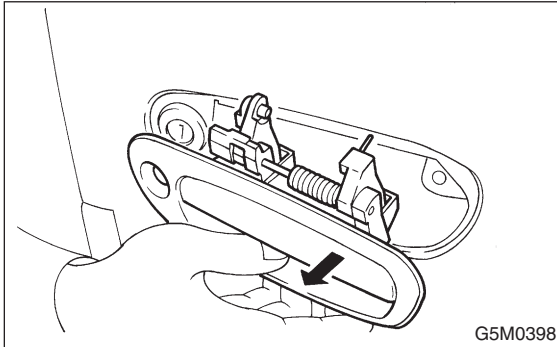
## 3. Outer Handle S909604

### A: REMOVAL S909604A18

- 1) Remove trim panel.
- 2) Remove sealing cover.
- 3) Detach door latch rod from outer handle and key lock.
- 4) Loosen nut securing outer handle and then remove outer handle from outside.

#### CAUTION:

Be careful not to damage door.



### B: INSTALLATION S909604A11

Install in the reverse order of removal.

#### **Tightening torque:**

**7.4 N·m (0.75 kgf-m, 5.4 ft-lb)**

### C: INSPECTION S909604A10

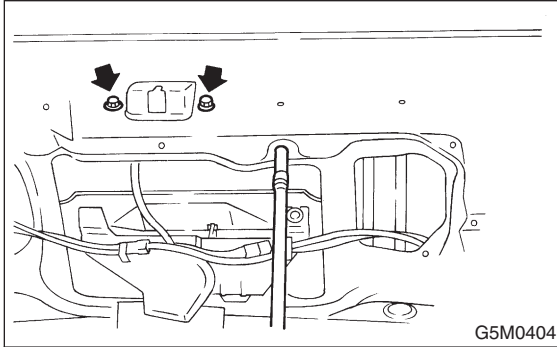
- 1) Make sure the rod is not deformed.
- 2) Make sure the lever and rod work smoothly.

## 5. Rear Gate Latch Assembly

S909316

### A: REMOVAL S909316A18

- 1) Remove trim panel.
- 2) Disengage rod from holder (= key cylinder).
- 3) Remove bolts from auto-door lock actuator.
- 4) Remove bolts from latch, and detach latch.



- 5) Disconnect rear gate switch connector.
- 6) Disconnect auto-door lock actuator connector.
- 7) Detach latch.

### B: INSTALLATION S909316A11

Install in the reverse order of removal.

#### CAUTION:

**Firmly join latch with key cylinder, and outer handle.**

### C: INSPECTION S909316A10

- 1) Make sure the rod is not deformed.
- 2) Make sure the lever and rod work smoothly.

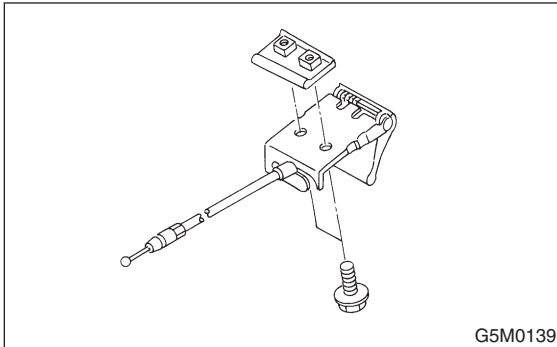


## 8. Remote Opener S909317

### A: REMOVAL S909317A18

#### 1. HOOD OPENER S909317A1801

- 1) Remove front grille.
- 2) Remove release cable from lock assembly.
- 3) Remove cable clip from engine compartment.
- 4) Remove bracket from front pillar.

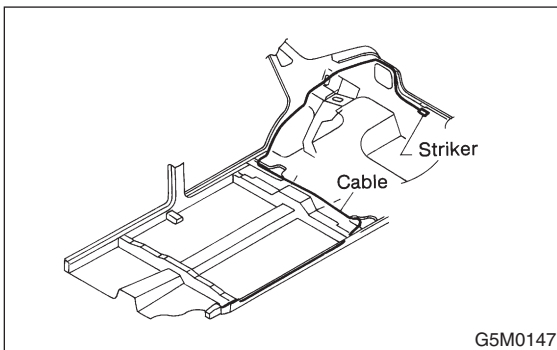


#### 2. TRUNK LID OPENER S909317A1802

- 1) Remove driver's seat, rear seats, center pillar lower cover, floor mat, rear arch cover and side sill cover (on the driver's side).
- 2) Remove all clips which hold cable.
- 3) Disconnect cable from pull handle assembly.
- 4) Remove bolts and detach pull handle assembly.
- 5) Loosen bolts which hold lock assembly, and remove it.
- 6) Remove striker from trunk lid.
- 7) Disconnect cable from striker.

#### NOTE:

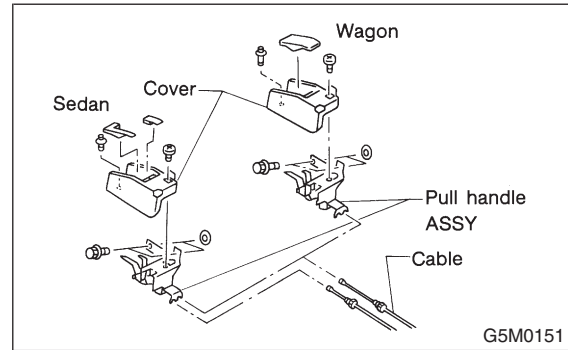
Be careful not to bend or break cable.



#### 3. FUEL FLAP OPENER S909317A1803

- 1) Remove driver's seat, rear seats, center pillar lower cover, floor mat, rear arch cover/rear quarter trim (wagon), and side sill cover (on the driver's side).
- 2) Remove all clips which hold cable.
- 3) Disconnect cable from pull handle.

- 4) Detach pull handle by removing bolts.



- 5) Detach fuel lock holder by turning it.

### B: INSTALLATION S909317A11

#### 1. HOOD OPENER S909317A1101

Install in the reverse order of removal.

#### 2. TRUNK LID OPENER S909317A1102

Install in the reverse order of removal.

#### CAUTION:

● When installing cover to pull handle assembly, observe the following:

- Be careful not to catch harness.
- Engage pull handle assembly pawls firmly.

#### NOTE:

After installing opener cable, ensure it moves smoothly.

#### 3. FUEL FLAP OPENER S909317A1103

Install in the reverse order of removal.

#### CAUTION:

● When installing cover to pull handle assembly, observe the following:

- Be careful not to catch harness.
- Engage pull handle assembly pawls firmly.

● After installing open cable, ensure it moves smoothly.

### C: INSPECTION S909317A10

Make sure the fuel flap opens and closes smoothly.

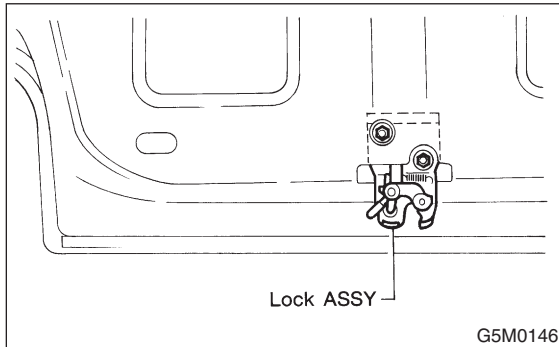
## 6. Trunk Lid Lock Assembly S909314

### A: REMOVAL S909314A18

- 1) Remove rod of lock assembly from rod holder of key lock assembly.
- 2) Remove bolts which hold lock assembly and remove lock assembly.

**NOTE:**

- Always remove rear skirt trim panel beforehand, if so equipped.
- Be careful not to bend opener cable.



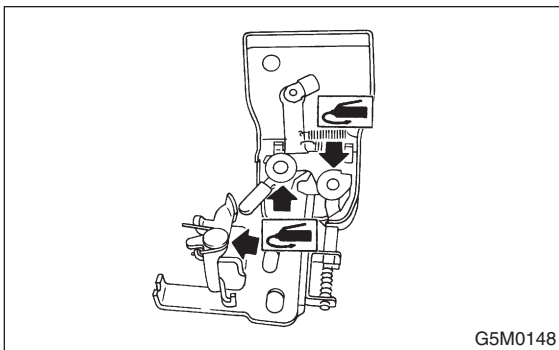
- 3) Remove clip and detach key cylinder from trunk lid.

### B: INSTALLATION S909314A11

Install in the reverse order of removal.

**NOTE:**

Apply grease to sliding surfaces of lock assembly and striker.



### C: INSPECTION S909314A10

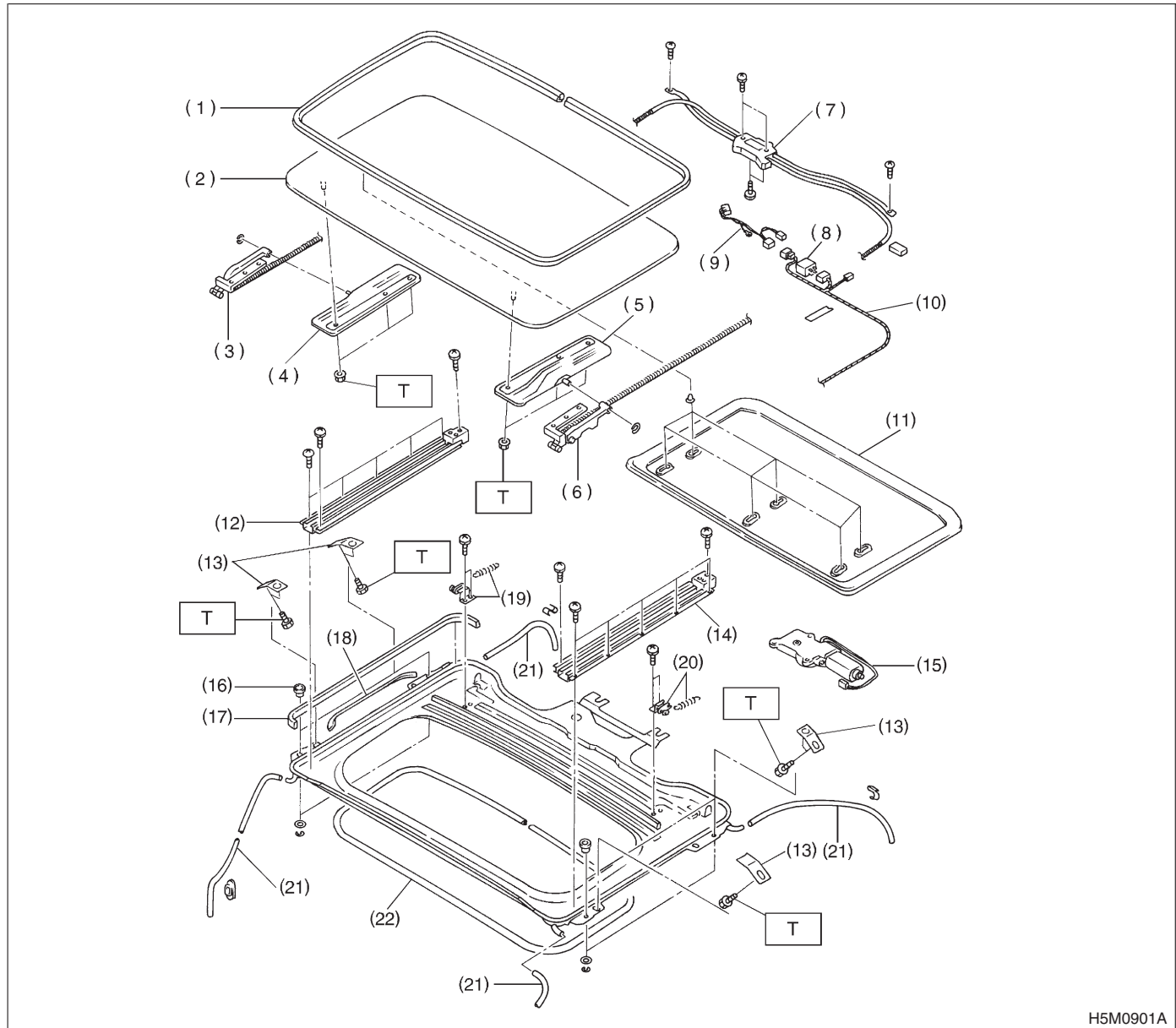
- 1) Check the striker for bending or abnormal wear.
- 2) Check the safety lever for improper movement.
- 3) Check other levers and the spring for rust formation and unsmooth movement.

# GENERAL DESCRIPTION

Sunroof/T-top/Convertible Top (Sunroof)

## 1. General Description S910001

### A: COMPONENT S910001A05



- (1) Weatherstrip
- (2) Sunroof panel
- (3) Rear guide ASSY
- (4) Lower panel
- (5) Lower panel
- (6) Rear guide ASSY
- (7) Drive unit
- (8) Relay
- (9) Harness

- (10) Harness
- (11) Sunroof trim
- (12) Guide rail
- (13) Set bracket
- (14) Guide rail
- (15) Motor ASSY
- (16) Sealed tape
- (17) Frame ASSY
- (18) Sealed cushion

- (19) Shutting ASSY (RH)
- (20) Shutting ASSY (LH)
- (21) Drain tube
- (22) Garnish

**Tightening torque: N·m (kgf-m, ft-lb)**  
**T: 7.4 (0.75, 5.4)**

# SUNROOF CONTROL SYSTEM

Sunroof/T-top/Convertible Top (Sunroof)

## 2. Sunroof Control System S910328

### A: INSPECTION S910328A10

|                                                                                       |                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Entry of water into compartment                                                       | (1) Check roof panel and sunroof panel for improper or poor sealing.<br>(2) Check drain tube for clogging.<br>(3) Check sunroof frame seal and body for improper fit.                                                                                                                                                               |
| Booming noise                                                                         | (1) Check roof panel and roof panel for improper clearance.<br>(2) Check sunroof trim and roof trim for improper clearance.                                                                                                                                                                                                         |
| Abnormal motor noise                                                                  | (1) Check motor for looseness.<br>(2) Check gears and bearings for wear.<br>(3) Check cable for wear.<br>(4) Check cable pipe for deformities.                                                                                                                                                                                      |
| Failure of sunroof to operate (Motor operates properly.)                              | (1) Check guide rail for foreign particles.<br>(2) Check guide rail for improper installation.<br>(3) Check parts for mutual interference.<br>(4) Check cable slider for improper clinching.<br>(5) Check cable for improper installation.<br>(6) Check clutch adjustment nut for improper tightness.                               |
| Motor does not rotate or rotates improperly. (Use sunroof wrench to check operation.) | (1) Check fuse for blowout.<br>(2) Check switch for improper function.<br>(3) Check motor for incorrect terminal voltage.<br>(4) Check relay for improper operation.<br>(5) Check poor grounding system.<br>(6) Check cords for discontinuity and terminals for poor connections.<br>(7) Check limit switch for improper operation. |

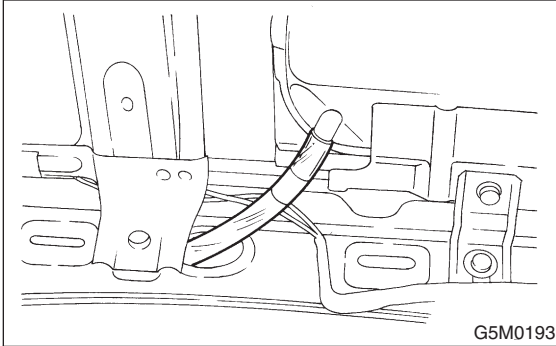
# SUNROOF FRAME

Sunroof/T-top/Convertible Top (Sunroof)

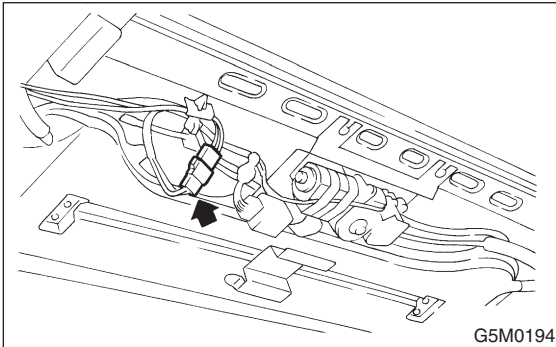
## 5. Sunroof Frame S910578

### A: REMOVAL S910578A18

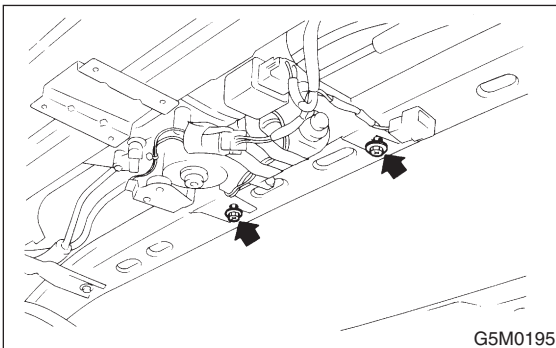
- 1) Remove roof trim, rear quarter trim <Ref. to EI-30 REMOVAL, Rear Quarter Trim.>, pillar trim <Ref. to EI-29 REMOVAL, Upper Inner Trim.>, etc.
- 2) Remove sunroof panel.
- 3) Disconnect front and rear drain tubes.



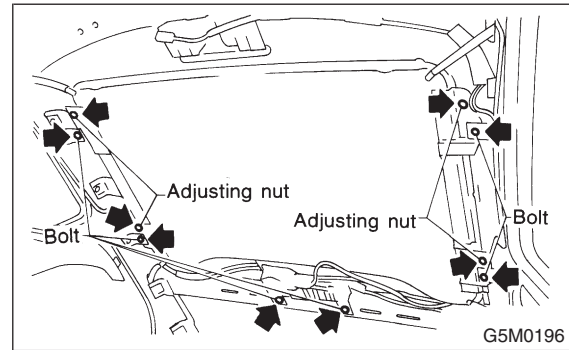
- 4) Disconnect connector between body harness and sunroof harness.



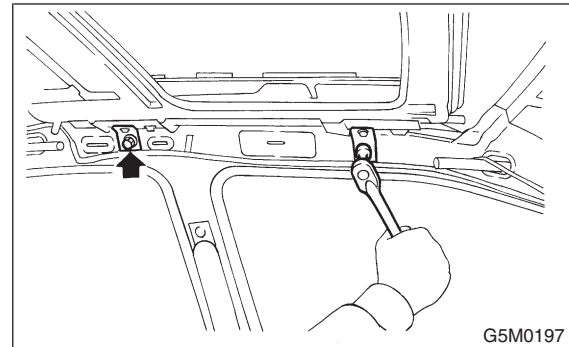
- 5) Loosen two mounting bolts near motor. (Do not remove bolts.)



- 6) Remove six bolts, and four adjusting nuts.



- 7) Remove sunroof frame.
- 8) Loosen set bracket mounting bolt.



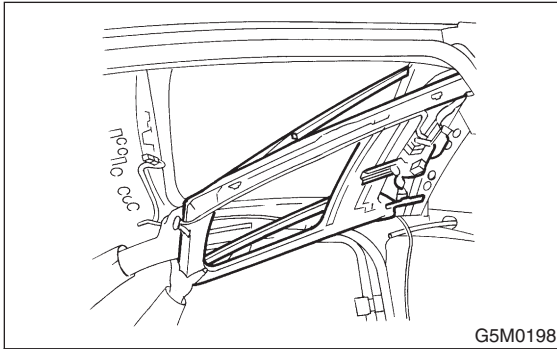
# SUNROOF FRAME

Sunroof/T-top/Convertible Top (Sunroof)

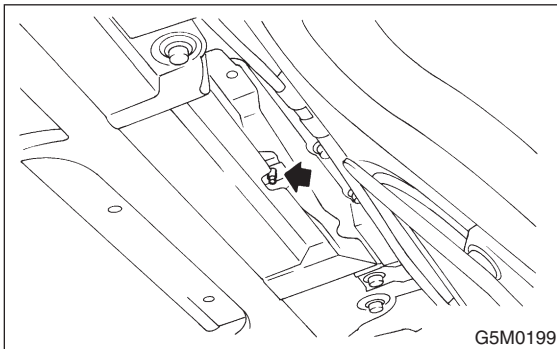
## B: INSTALLATION

S910578A11

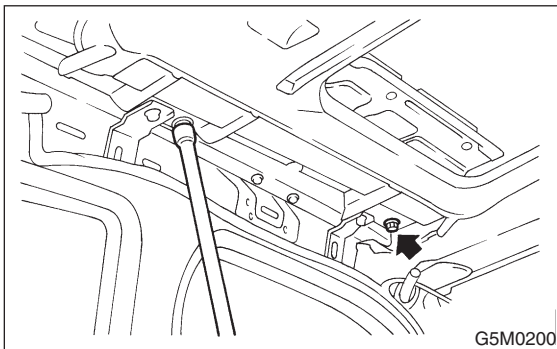
- 1) Insert frame rear end slit to two bolts fitted temporarily to roof brace.



- 2) Align frame to reference pin installed on roof.



- 3) Tighten adjusting nut (that is, set frame at highest position).  
Temporarily tighten bolts.

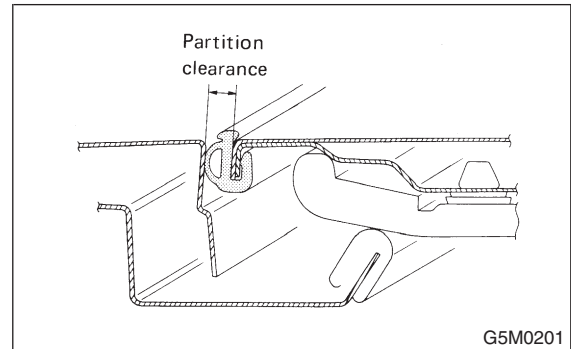


- 4) Install sunroof panel.

- 5) Adjust height by turning adjusting nut.  
Also adjust front, rear, right, and left side partitions.

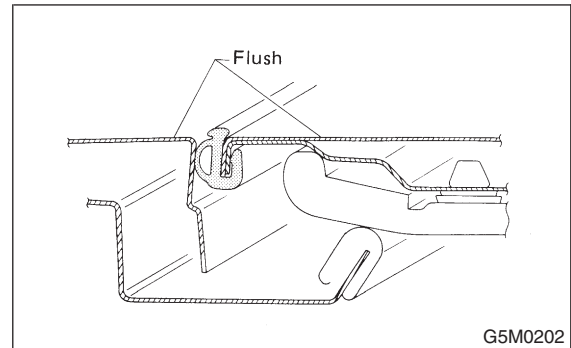
### Partition clearance:

$5.9 \pm 0.5 \text{ mm}$  ( $0.232 \pm 0.020 \text{ in}$ )

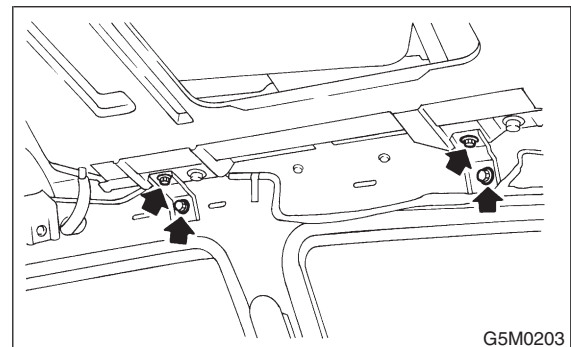


### Difference in height between roof panel and sunroof panel:

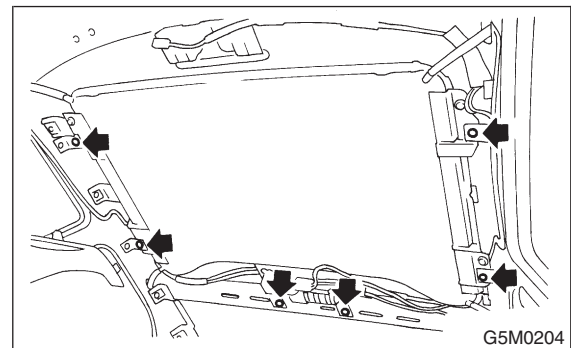
$0 \pm 1.0 \text{ mm}$  ( $0 \pm 0.039 \text{ in}$ )



- 6) Tighten set bracket mounting bolts.



- 7) Tighten bolts.



## SUNROOF FRAME

Sunroof/T-top/Convertible Top (Sunroof)

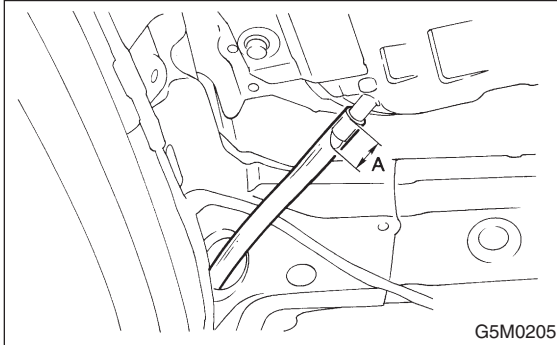
8) Install drain tubes.

**CAUTION:**

Insert drain tube securely into drain pipe.

**Length: A**

**Approx. 20 mm (0.79 in)**

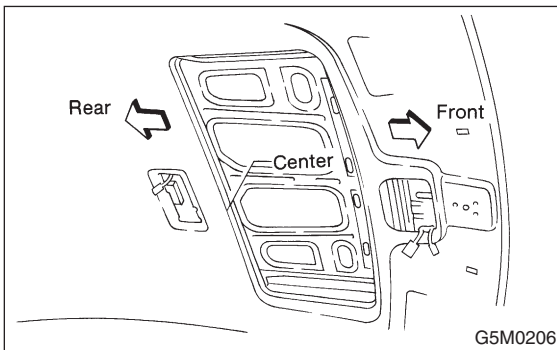


9) Install roof trim.

10) Install garnish.

**NOTE:**

Place garnish joint at rear center of body.



11) Install sunroof trim, pillar trim, rear quarter trim etc.

12) Check the following items after assembling all parts;

- (1) Garnish must be free from waves.
- (2) When sunroof is fully closed, must be no clearance between garnish and sunroof trim.
- (3) Sunroof must be free from slack and noise when it is fully opened and closed.

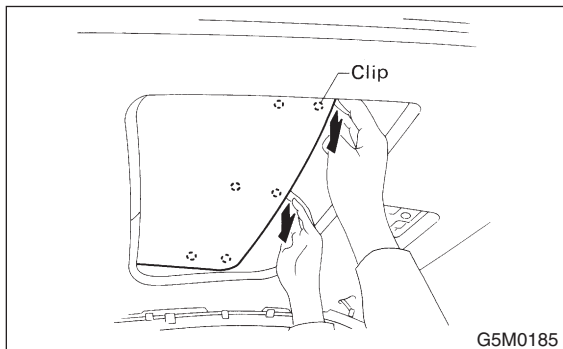
# SUNROOF LID

Sunroof/T-top/Convertible Top (Sunroof)

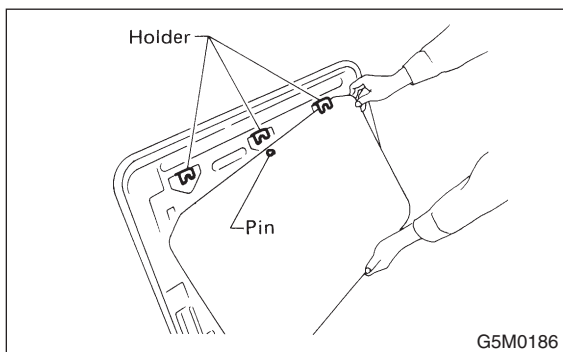
## 3. Sunroof Lid S910536

### A: REMOVAL S910536A18

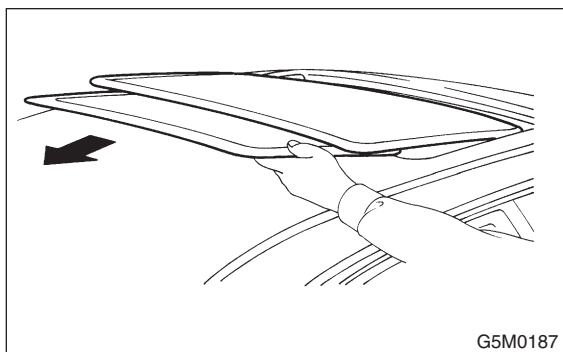
- 1) Open sunroof approx. 1/3.
- 2) Remove clips attached to front side of sunroof trim by pulling trim from inside of compartment.



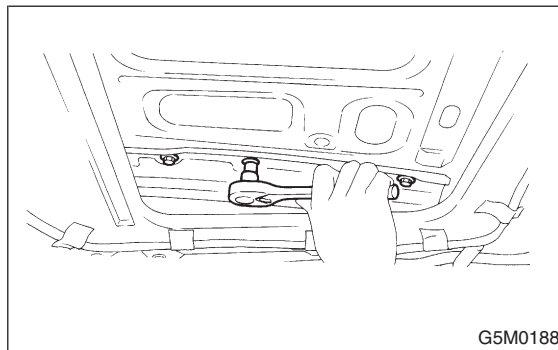
- 3) Move trim forward, and detach trim end from holder.



- 4) Detach trim.



- 5) Close sunroof and remove nuts.



- 6) Remove sunroof panel.

### B: INSTALLATION S910536A11

Install in the reverse order of removal.

#### NOTE:

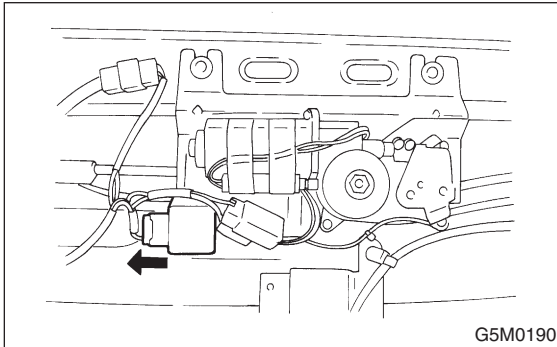
Sunroof trim reference pin must be fitted in holder notch.



## 4. Sunroof Motor S910537

### A: REMOVAL S910537A18

- 1) Remove roof trim, rear quarter trim <Ref. to EI-30 REMOVAL, Rear Quarter Trim.>, pillar trim <Ref. to EI-29 REMOVAL, Upper Inner Trim.>, etc.
- 2) Remove screw.
- 3) Disconnect connector.



- 4) Remove relay by pulling it out.

### B: INSTALLATION S910537A11

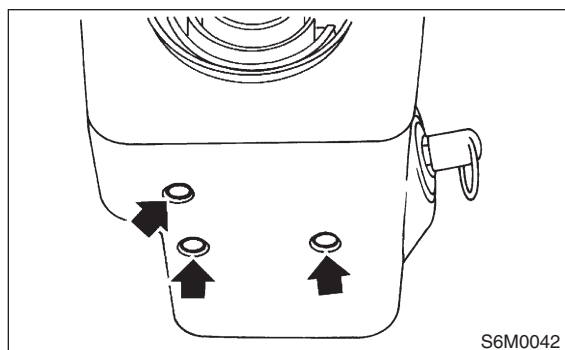
Install in the reverse order of removal.

## 2. Combination Switch (Wiper)

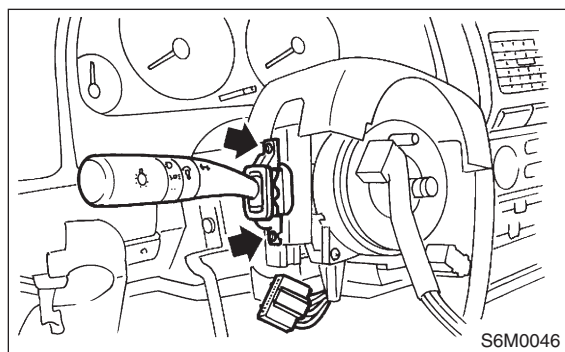
S902395

### A: REMOVAL S902395A18

- 1) Remove instrument panel lower cover. <Ref. to EI-25 REMOVAL, Instrument Panel Assembly.>
- 2) Remove screws which secure upper column cover to lower column cover.



- 3) Disconnect connector from combination switch.
- 4) Remove screws which secure switch and remove switch.



### B: INSTALLATION S902395A11

Install in the reverse order of removal.

## C: INSPECTION S902395A10

### 1. FRONT WIPER S902395A1001

Set wiper switch to each position and check continuity between terminals.

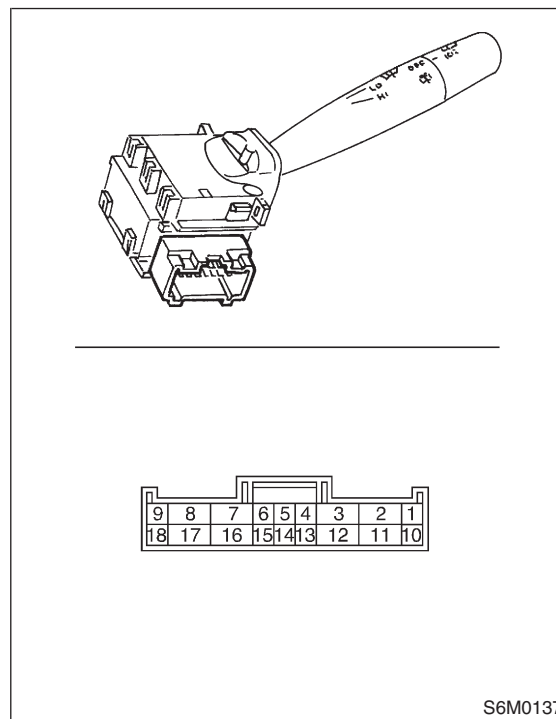
#### • Wiper switch

| Terminal<br>Switch position | 16  | 7   | 17  | 8 | INT1 | INT2 |
|-----------------------------|-----|-----|-----|---|------|------|
| OFF                         | ○—○ |     |     |   |      |      |
|                             | ×—× | ×—× |     |   |      |      |
| MIST                        |     | ○—○ |     |   |      |      |
|                             | ×—× | ×—× |     |   |      |      |
| INT                         | ○—○ |     |     |   | ○—○  |      |
|                             | ×—× | ×—× |     |   | ○—○  |      |
| LO                          |     | ○—○ |     |   |      |      |
|                             |     | ○—○ |     |   |      |      |
| HI                          |     |     | ○—○ |   |      |      |
|                             |     | ○—○ | ○—○ |   |      |      |

#### • Washer switch

| Terminal<br>Switch position | 11  | 2   |
|-----------------------------|-----|-----|
| OFF                         |     |     |
| ON                          | ○—○ | ○—○ |

H6M0501B



# COMBINATION SWITCH (WIPER)

Wiper and Washer Systems

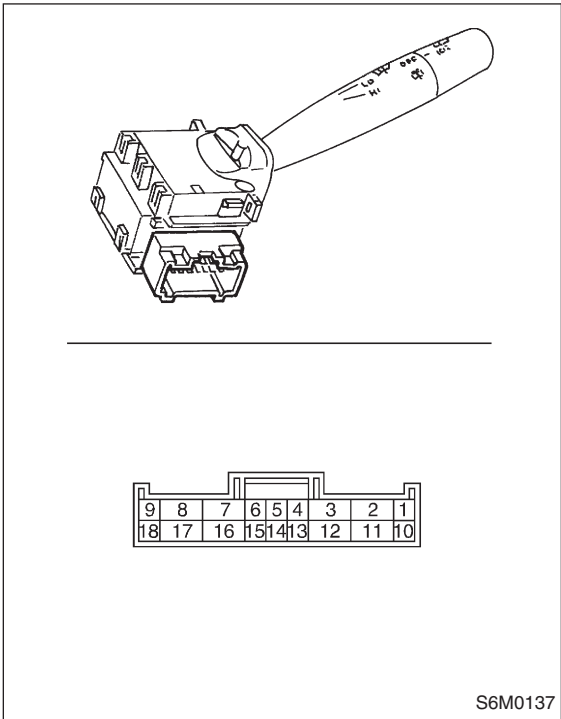
## 2. REAR WIPER S902395A1002

Set rear wiper and washer switch to each position and check continuity between terminals.

• WITHOUT INTERMITTENT REAR WIPER

| Terminal<br>Switch position | 10                                                                                | 12                                                                                |                                                                                   | 2                                                                                 |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| WASH                        |  |  |  |  |
| OFF                         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| ON                          |  |                                                                                   |                                                                                   |  |
| WASH                        |  |  |                                                                                   |  |

H6M0502B



## 6. Front Washer S902401

### A: ADJUSTMENT S902401A01

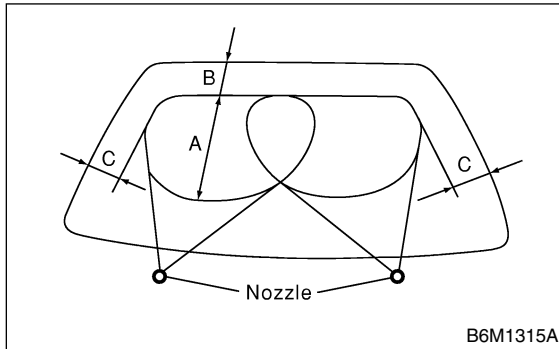
Adjust washer ejecting area on windshield glass as shown in figure when vehicle stops.

**Ejecting area:**

**A: 400 mm (15.75 in)**

**B: 150 mm (5.91 in)**

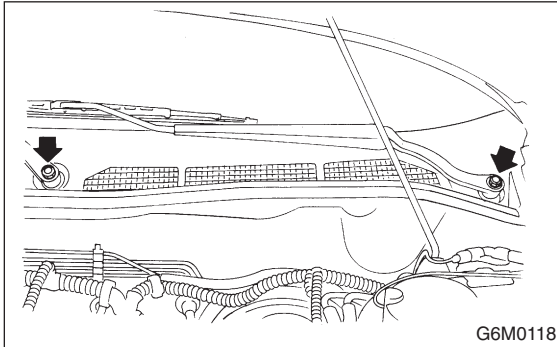
**C: 100 mm (3.97 in)**



## 4. Front Wiper Arm S902404

### A: REMOVAL S902404A18

- 1) Open front hood.
- 2) Remove cap. Remove the nut which secure wiper arm, and remove wiper arm.



### B: INSTALLATION S902404A11

Install in the reverse order of removal.

#### NOTE:

Remove metal sludge from the wiper arm fixture before installing it.

#### **Tightening torque:**

**20 N·m (2.0 kgf-m, 14.4 ft-lb)**

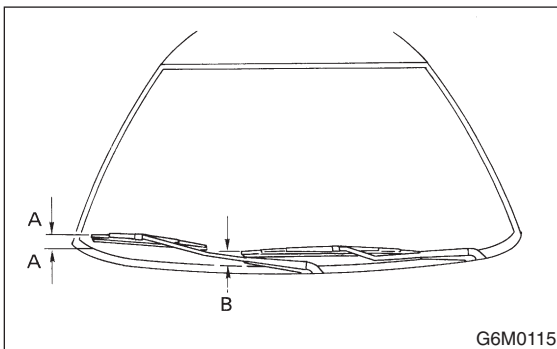
### C: ADJUSTMENT S902404A01

- 1) Turn the wiper switch to OFF position.
- 2) Adjust blades in original position as shown in figure by changing wiper arm installation.

#### **Original position:**

**A:  $22.5 \pm 7.5$  mm ( $0.886 \pm 0.295$  in)**

**B:  $32.5 \pm 7.5$  mm ( $1.280 \pm 0.295$  in)**



## 5. Front Wiper Motor and Link

S902406

### A: REMOVAL S902406A18

1) Detach weatherstrip and cowl panel. <Ref. to EI-20 REMOVAL, Cowl Panel.>

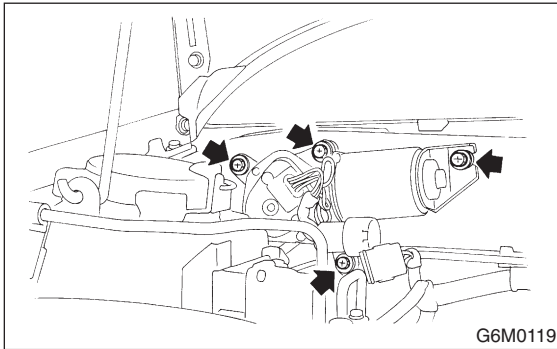
#### NOTE:

Apply silicone oil or soap water to both sides of cowl net to facilitate removal.

2) Disconnect electric connector, and remove motor attaching bolts.

#### Tightening torque:

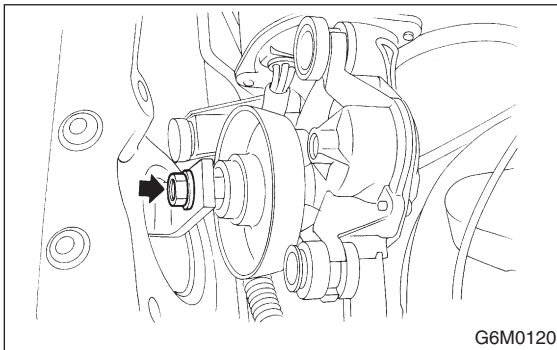
**5.9 N·m (0.6 kgf-m, 4.3 ft-lb)**



3) Remove nut securing motor link on the back side of motor.

#### Tightening torque:

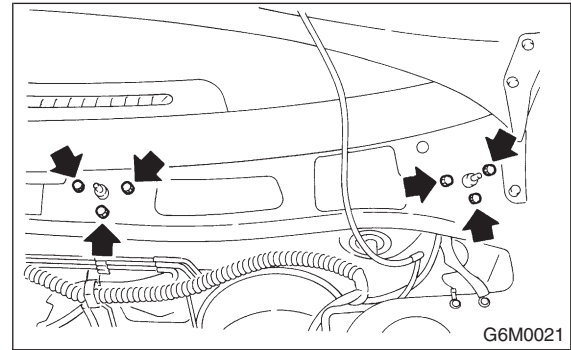
**15 N·m (1.5 kgf-m, 10.8 ft-lb)**



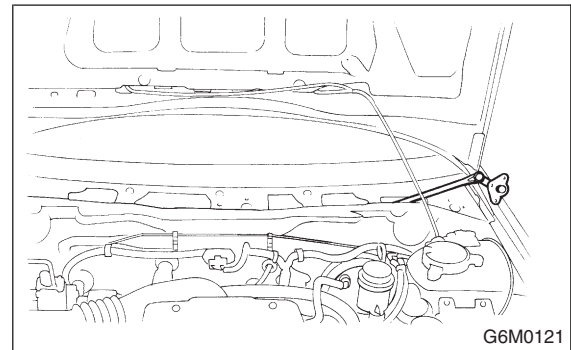
4) Remove nuts which secure sleeve unit.

#### Tightening torque:

**5.9 N·m (0.6 kgf-m, 4.3 ft-lb)**



5) Remove wiper link from service hole in front panel.



### B: INSTALLATION S902406A11

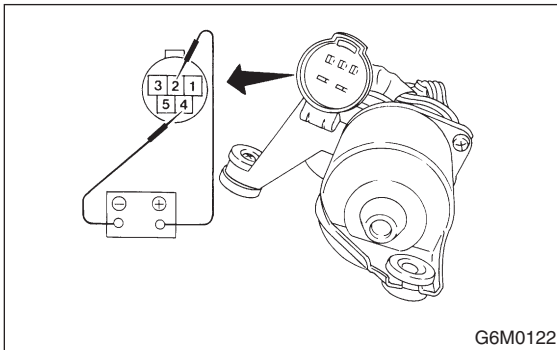
Install in the reverse order of removal.

# FRONT WIPER MOTOR AND LINK

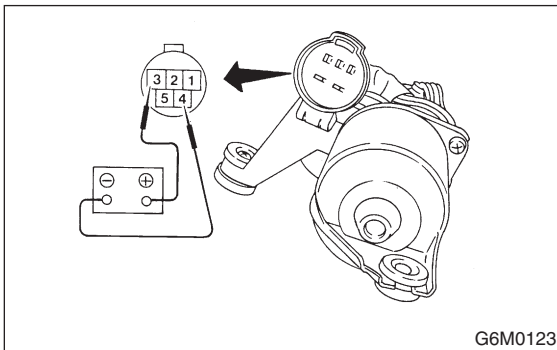
## Wiper and Washer Systems

### C: INSPECTION S902406A10

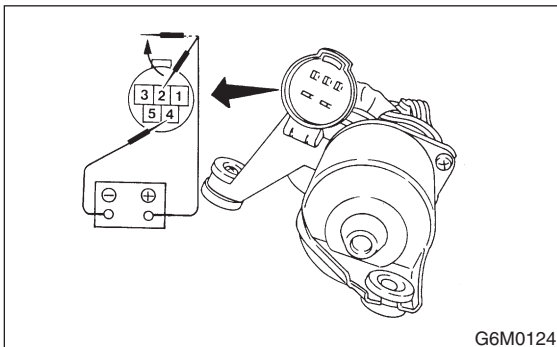
1) Check wiper motor operation at low speed:  
Connect battery to wiper motor. Check wiper motor for proper operation at low speed.



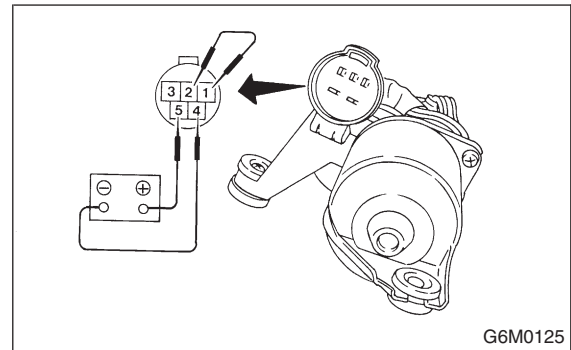
2) Check wiper motor operation at high speed:  
Connect battery wiper motor. Check wiper motor for proper operation at high speed.



3) Check wiper motor for proper stoppage:  
Connect battery to wiper motor. After operating wiper motor at low speed, disconnect battery to stop it.



4) Reconnect battery and ensure that wiper motor stops at "AUTO STOP" after operating at low speed.



### 1. General Description S902001

#### A: SPECIFICATIONS S902001E49

|                    |           |                     |
|--------------------|-----------|---------------------|
| Front wiper motor  | Input     | 12 V — 54 W or less |
| Rear wiper motor   | Input     | 12 V — 42 W or less |
| Front washer motor | Pump type | Centrifugal         |
|                    | Input     | 12 V — 36 W or less |
| Rear washer motor  | Pump type | Centrifugal         |
|                    | Input     | 12 V — 36 W or less |

#### B: CAUTION S902001A03

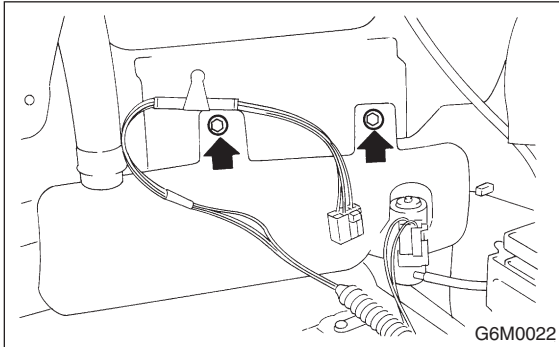
- Reconnect connectors and hoses securely. After reconnecting, confirm that each function operates normally.
- Be careful that wire harnesses of airbag system pass near electrical parts and switches.
- Wire harnesses and connectors of all airbag system are yellow color. Do not use a tester on these circuits.



## 9. Rear Washer S902400

### A: REMOVAL S902400A18

- 1) Remove rear quarter trim.
- 2) Disconnect washer hose and connector.
- 3) Remove attaching bolts.



### B: INSTALLATION S902400A11

Install in the reverse order of removal.

#### **Tightening torque:**

**5.9 N·m (0.6 kgf-m, 4.3 ft-lb)**

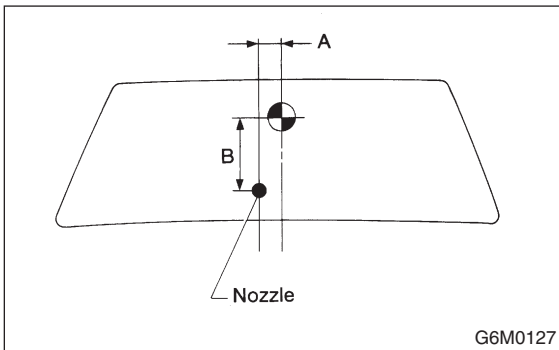
### C: ADJUSTMENT S902400A01

Adjust washer ejecting point on rear gate window as shown in figure when the vehicle stops.

#### **Ejecting point:**

**A: 25 mm (0.98 in)**

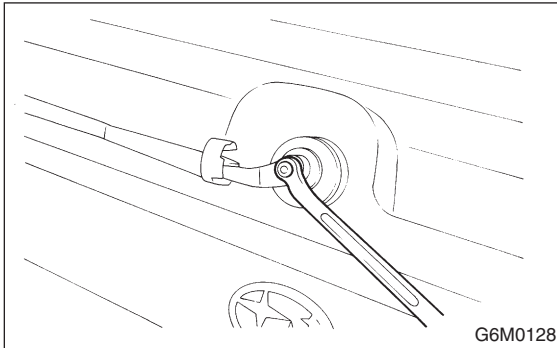
**B: 200 — 300 mm (7.87 — 11.81 in)**



## 7. Rear Wiper Arm S902402

### A: REMOVAL S902402A18

- 1) Remove head cover.
- 2) Remove nut and wiper arm.



### B: INSTALLATION S902402A11

Install in the reverse order of removal.

#### NOTE:

Remove metal sludge from the wiper arm fixture before installing it.

#### **Tightening torque:**

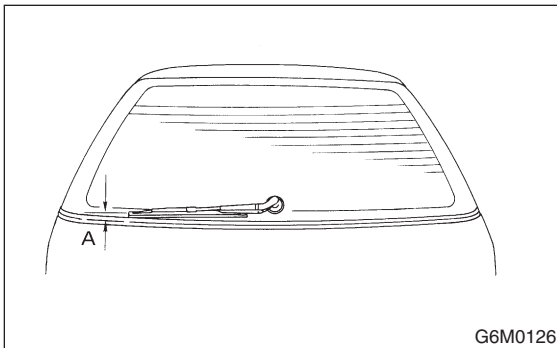
**5.9 N·m (0.6 kgf-m, 4.3 ft-lb)**

### C: ADJUSTMENT S902402A01

Adjust wiper blade in original position as shown in figure by changing wiper arm installation.

#### **Original position:**

**A:  $30 \pm 5$  mm ( $1.18 \pm 0.20$  in)**



## 8. Rear Wiper Motor

S902532

### A: REMOVAL

S902532A18

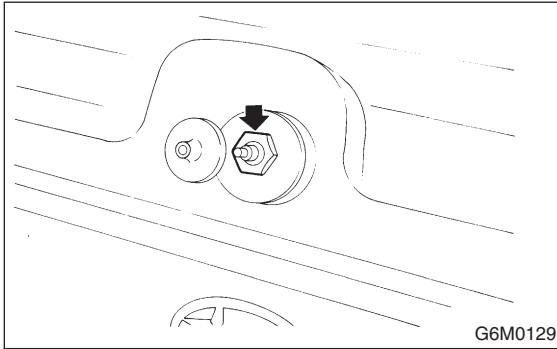
- 1) Remove cap and special nut.

#### CAUTION:

Be careful not to strike service tool against nozzle during removal.

#### Tightening torque:

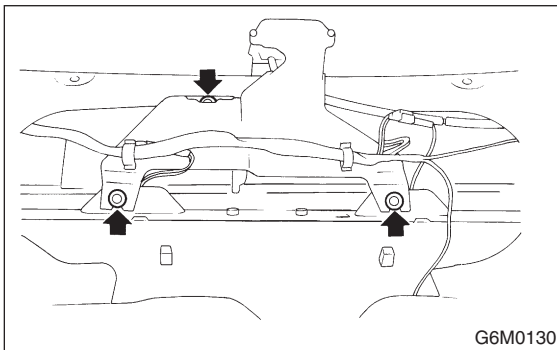
7.4 N·m (0.75 kgf-m, 5.4 ft-lb)



- 2) Remove rear gate trim. <Ref. to EI-32 REMOVAL, Rear Gate Trim.>
- 3) Undo clips which secure harness, and disconnect connector of wiper motor.
- 4) Separate washer hoses at joint.
- 5) Remove attaching screws and take out wiper motor assembly.

#### CAUTION:

Be careful not to damage O-ring when removing wiper motor assembly.



### B: INSTALLATION

S902532A11

Install in the reverse order of removal.

#### Tightening torque:

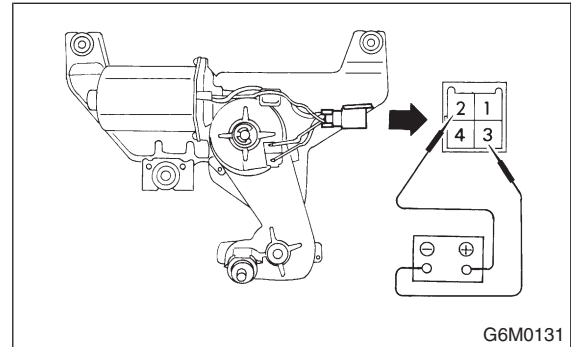
5.9 N·m (0.6 kgf-m, 4.3 ft-lb)

### C: INSPECTION

S902532A10

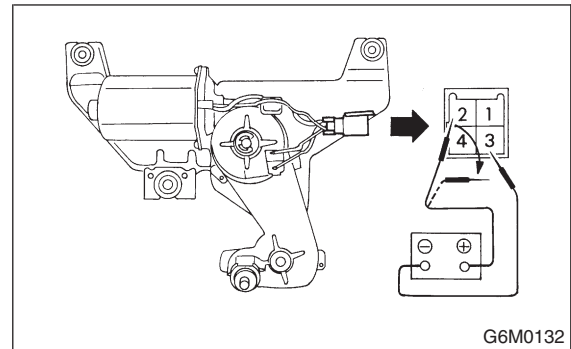
- 1) Operational check:

Connect battery to wiper motor and check operation of wiper motor.

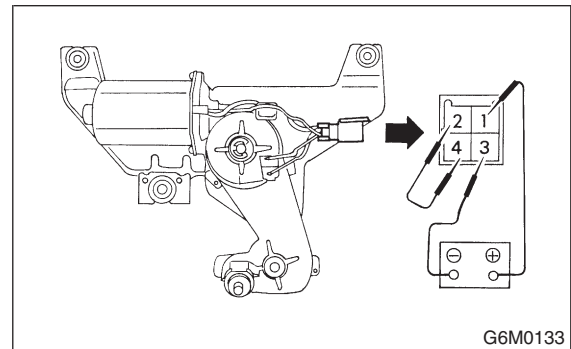


- 2) Check wiper motor for proper stoppage:

After operating wiper motor, disconnect battery from wiper motor.



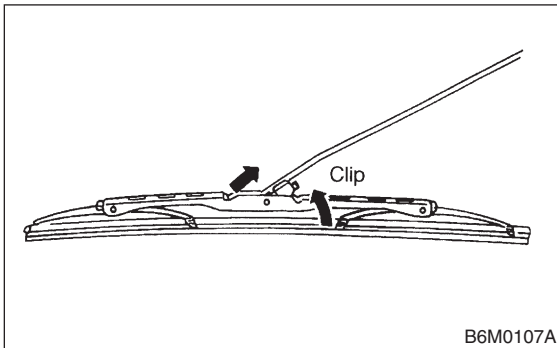
- 3) Reconnect battery and ensure that wiper motor stops at "AUTO STOP" after it has been operated.



## 3. Wiper Blade S902392

### A: REMOVAL S902392A18

Pull out blade following the arrow direction, from arm while pushing up locking clip.



### B: INSTALLATION S902392A11

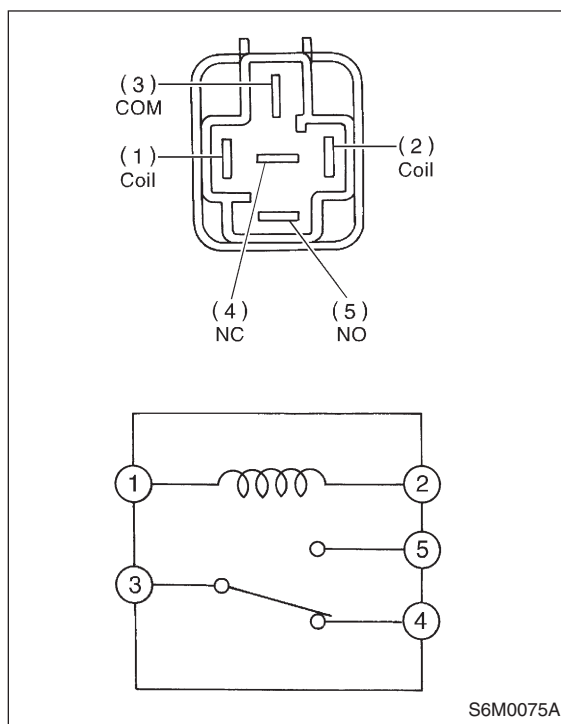
Install in the reverse order of removal.

## 10. Wiper Control Relay S902403

### A: INSPECTION S902403A10

- 1) Connect battery to terminal No. 1 and ground terminal No. 2.
- 2) Check continuity between terminals.

|                             |                                   |                            |
|-----------------------------|-----------------------------------|----------------------------|
| When current flows.         | Between terminals No. 3 and No. 4 | Continuity does not exist. |
|                             | Between terminals No. 3 and No. 5 | Continuity exists.         |
| When current does not flow. | Between terminals No. 3 and No. 4 | Continuity exists.         |
|                             | Between terminals No. 3 and No. 5 | Continuity does not exist. |
|                             | Between terminals No. 1 and No. 2 | Continuity exists.         |



## WIPER CONTROL RELAY

Wiper and Washer Systems

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**MEMO:**