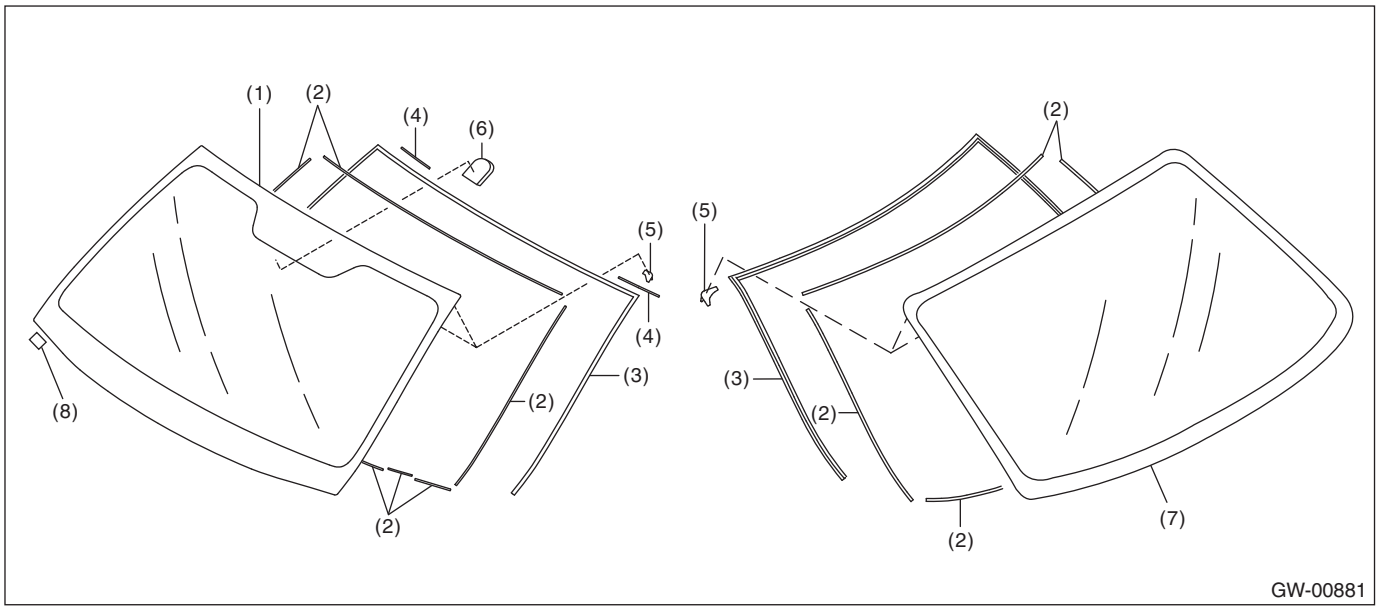
1. General Description

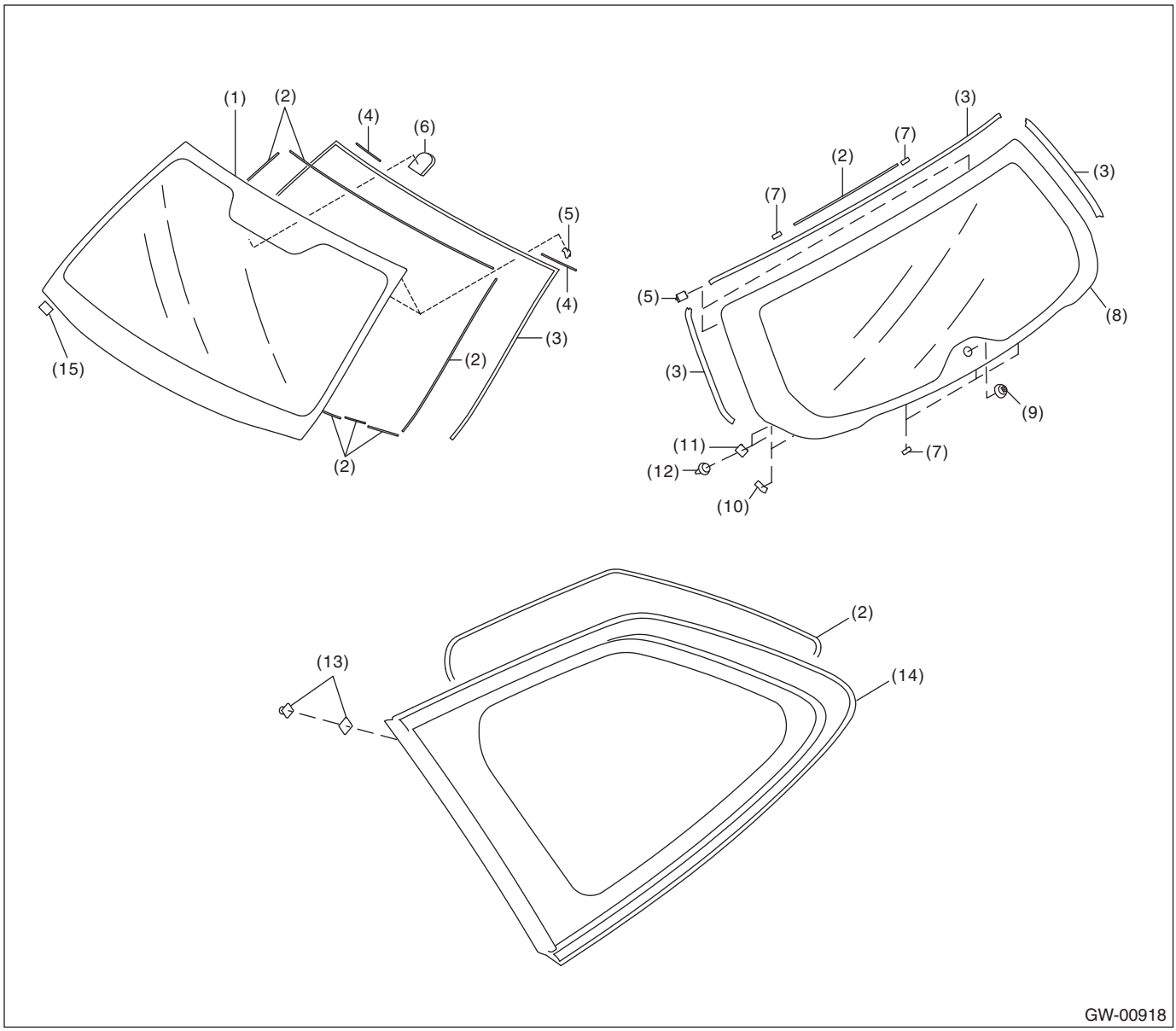
A: COMPONENT

1. FIXED GLASS (SEDAN MODEL)



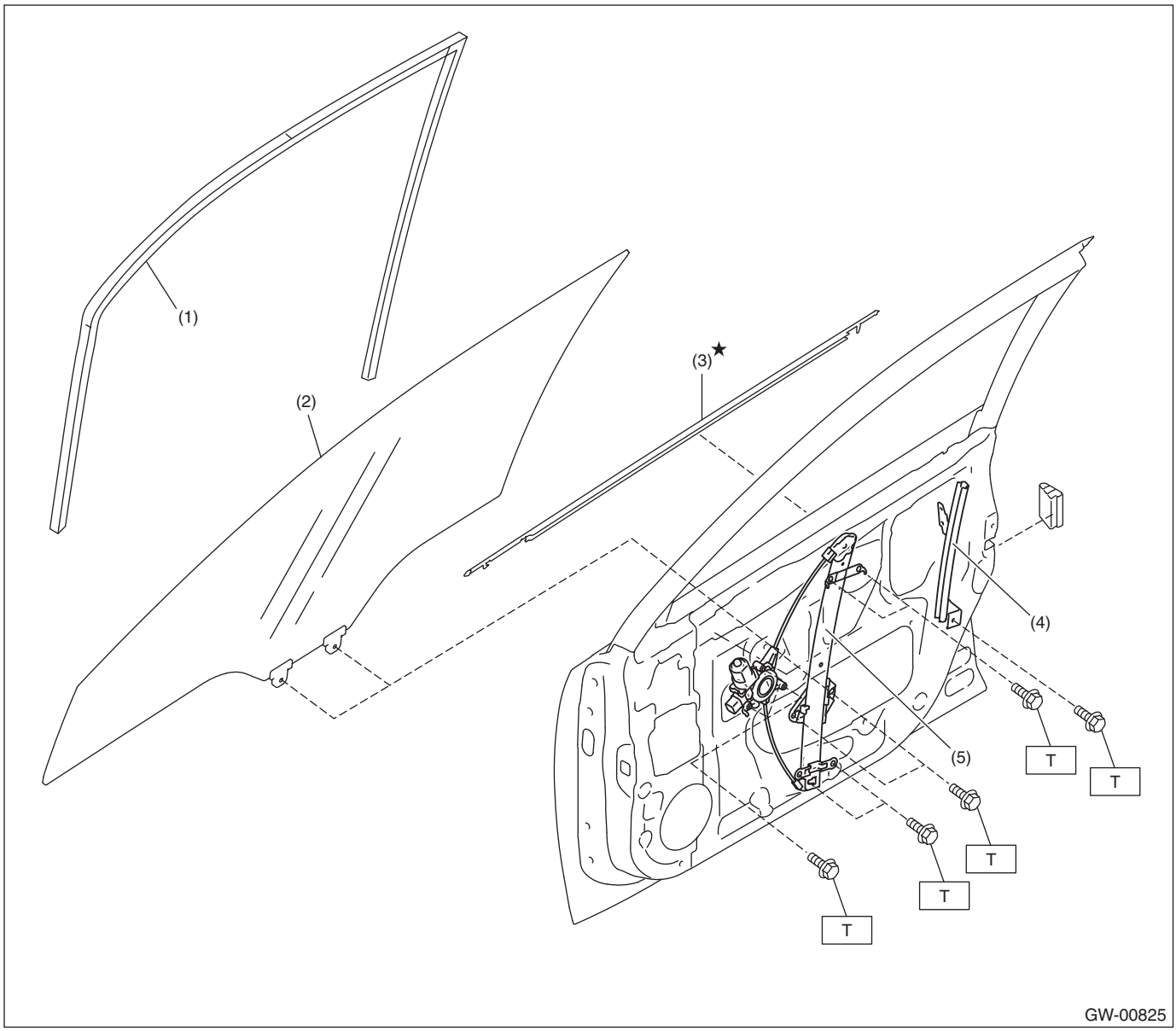
(1) Windshield glass
(2) Dam rubber
(3) Molding
(4) Seal upper side
(5) Locating pin
(6) Rearview mirror mount
(7) Rear window glass
(8) Seal A

2. FIXED GLASS (OUTBACK MODEL)



(1) Windshield glass
(2) Dam rubber
(3) Molding
(4) Seal upper side
(5) Locating pin
(6) Rearview mirror mount
(7) SPACER
(8) Rear gate glass
(9) Pivot
(10) EPT sealer
(11) HOLDER
(12) Clip
(13) Fastener
(14) Rear quarter glass
(15) Seal A

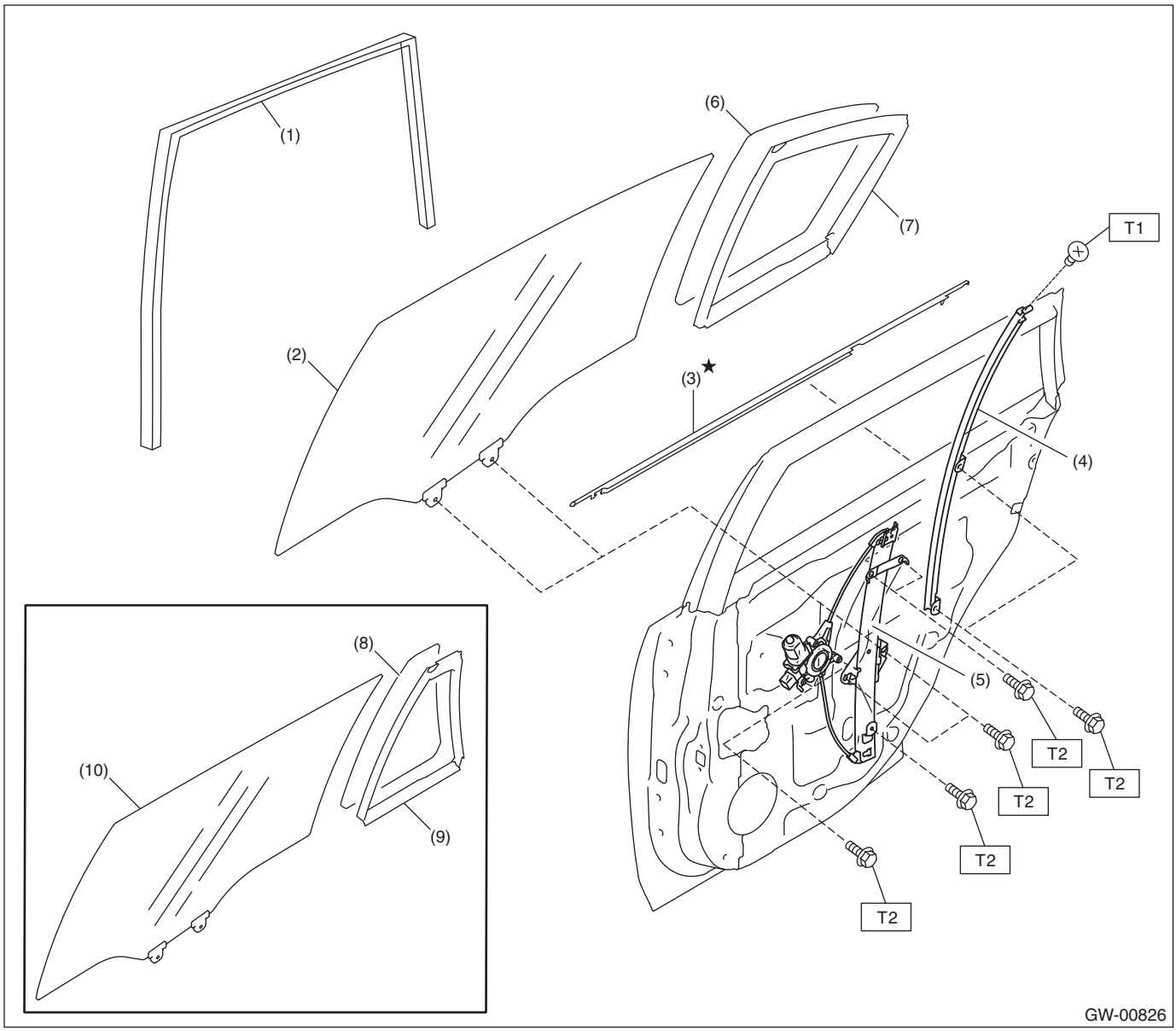
3. FRONT DOOR GLASS



(1) Glass run rubber
(2) FRONT DOOR GLASS
(3) Weather strip outer
(4) Door sash
(5) Regulator and motor ASSY

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

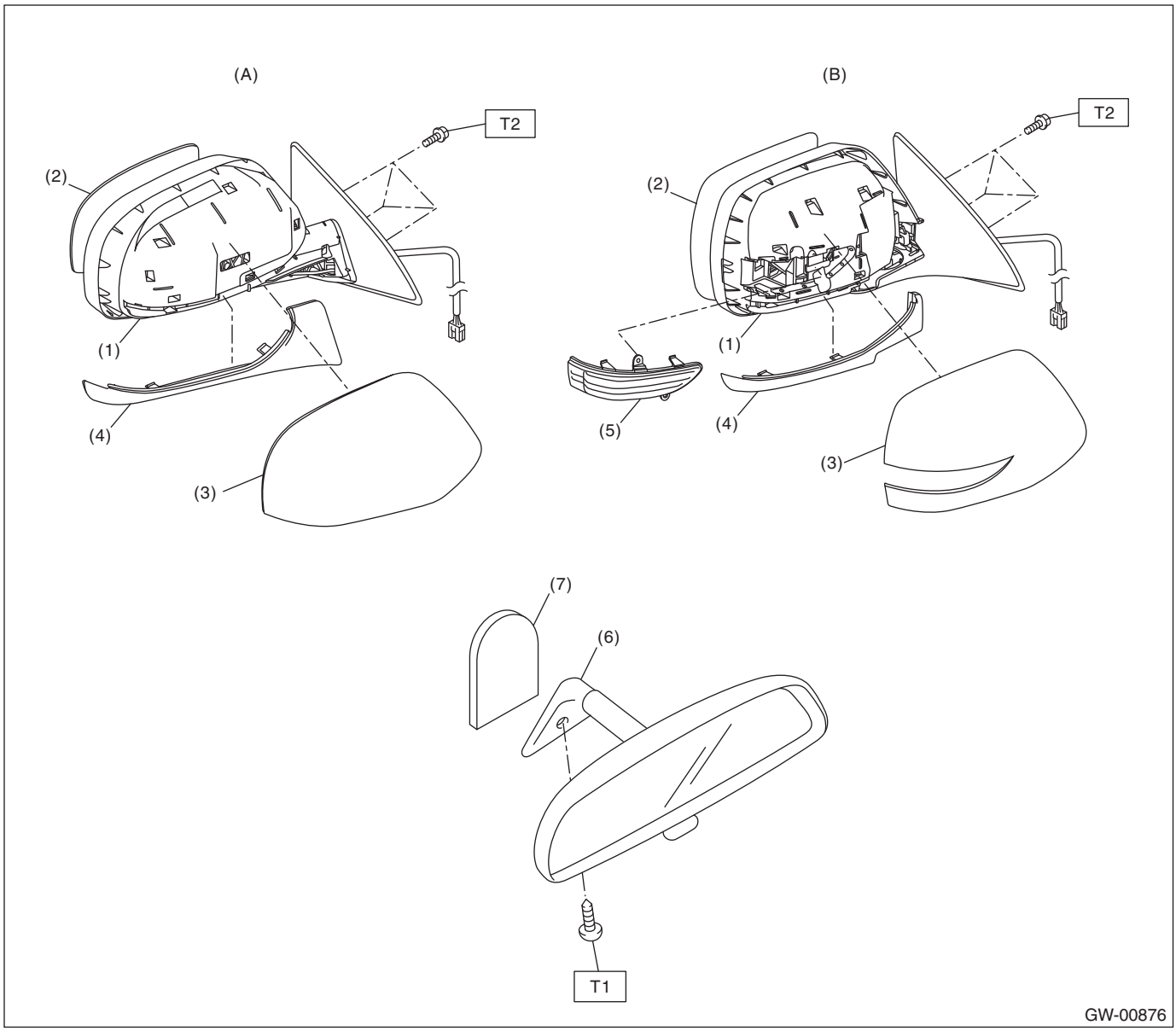
4. REAR DOOR GLASS



(1)	Glass run rubber	(6)	Partition glass (Sedan model)
(2)	Rear door glass (Sedan model)	(7)	Partition molding (Sedan model)
(3)	Weather strip outer	(8)	Partition glass (OUTBACK model)
(4)	Door sash	(9)	Partition molding (OUTBACK model)
(5)	Regulator and motor ASSY	(10)	Rear door glass (OUTBACK model)

Tightening torque:N·m (kgf-m, ft-lb)
T1: 2.2 (0.22, 1.6)
T2: 7.5 (0.76, 5.5)

5. MIRROR



(A) Model without retractable mirror
(B) Model with retractable mirror

(1) Outer mirror
(2) MIRROR
(3) Scalp cap
(4) Outer mirror lower cover
(5) Side turn signal light
(6) Rearview mirror
(7) Mount

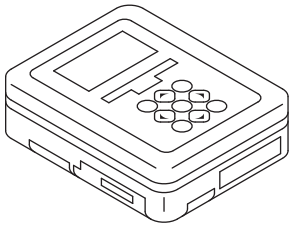
Tightening torque:N·m (kgf-m, ft-lb)
T1: 1.9 (0.19, 1.4)
T2: 4.5 (0.46, 3.3)

B: CAUTION

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

C: PREPARATION TOOL

1. SPECIAL TOOL

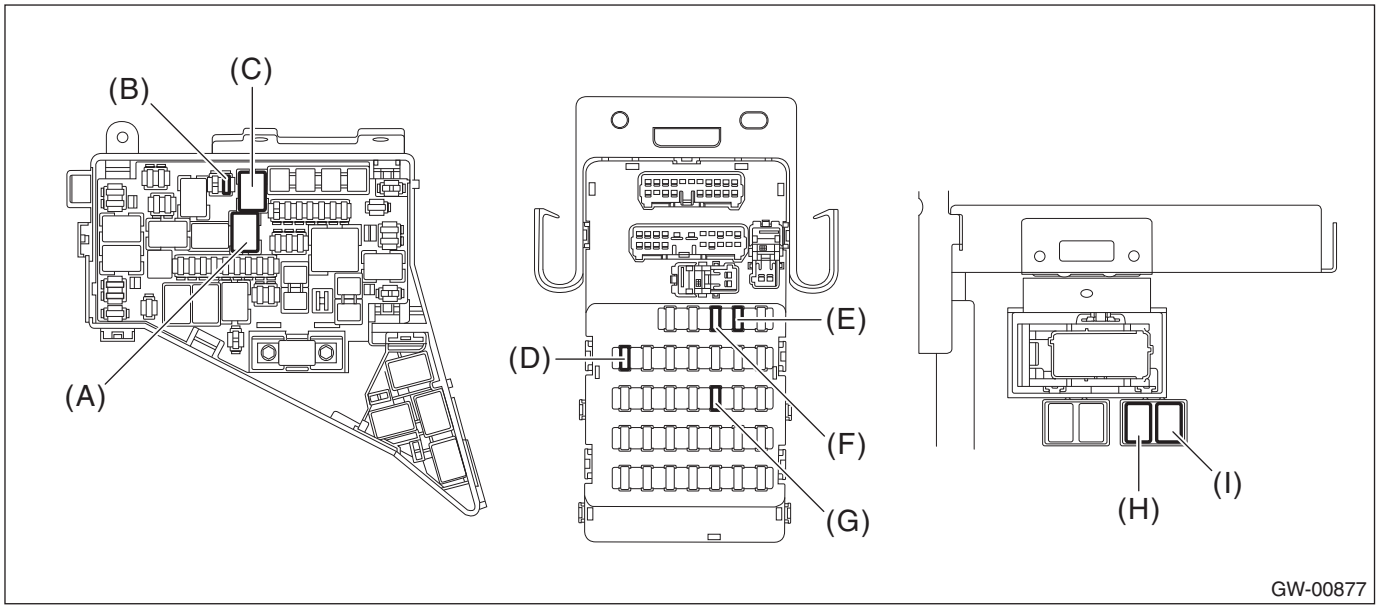
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for setting of each function and trouble-shooting for electrical system.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for checking voltage and continuity.
Piano wire	Used for removing the window glass.
Cutter knife	Used for removing the window glass.
Windshield glass knife	Used for removing the window glass.
TORX® T20	Used to remove and install the rearview mirror.

2. Relay and Fuse

A: LOCATION



Main Fuse Box	Power window relay	(A)
	Fuse 25 A (rear defogger)	(B)
	Rear defogger relay	(C)
Relay & fuse box	Fuse 7.5 A (remote control mirror)	(D)
	Fuse 7.5 A (wiper deicer)	(E)
	Fuse 20 A (power window)	(F)
	Fuse 15 A (wiper deicer, remote control mirror)	(G)
Relay holder	Wiper deicer relay	(H)
	Mirror heater relay	(I)

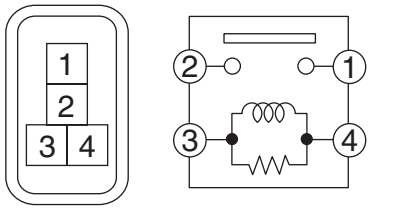
B: INSPECTION

1. CHECK FUSE.

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

2. CHECK RELAY

1) Check the resistance between relay terminals.

Terminal No.	Inspection conditions	Specification	Circuit
1 — 2	Always	1 MΩ or more	 SR-00180
1 — 2	Apply battery voltage to the terminals between 4 — 3	Less than 1 Ω	

2) Replace the relay if it is found defective.

3. Power Window System

A: WIRING DIAGRAM

Refer to “Power Window System” in WI section. <Ref. to WI-180, WIRING DIAGRAM, Power Window System.>

B: INSPECTION

Symptoms	Inspection order
All power windows do not operate.	1. Check the fuse. 2. Check the power window relay. 3. Check the wiring harness.
Particular window does not operate.	1. Check the fuse. 2. Check the power window main switch. 3. Check the power window sub switch. 4. Check the power window motor. 5. Check the wiring harness.
“Window Lock” does not operate.	Check the power window main switch.
Driver’s side window moves slightly (approx. 20 mm (0.79 in)). (model with driver’s side AUTO UP function)	1. Check the power window motor. 2. Check the power window main switch. 3. Check the wiring harness.
Driver’s side window moves slightly (approx. 50 mm (1.97 in)). (model with driver’s side AUTO UP function) (This is not malfunction.)	Perform reset operation A. <Ref. to GW-10, RESET OPERATION A, OPERATION, Power Window System.>
Driver’s side window does not close completely. (model with driver’s side AUTO UP function) (After fully closed with AUTO UP, the window reverses and slightly opens.)	Perform reset operation B. <Ref. to GW-10, RESET OPERATION B, OPERATION, Power Window System.>

C: OPERATION

1. RESET OPERATION A

1) Sit in the driver's seat and close the door.
2) Turn the ignition switch to ON.
3) Operate the power window main switch to open the window glass halfway.
4) Operate the power window main switch to "UP" direction to fully close the driver's side window glass.
5) While the window glass is fully closed, hold down the power window switch to "UP" direction for one second.
6) Operate the power window main switch to "AUTO DOWN" direction to check whether the window fully opens properly.

NOTE:
If the window does not fully open properly, repeat steps 1) to 6).

2. RESET OPERATION B

1) Sit in the driver's seat and close the door.
2) Turn the ignition switch to ON.

CAUTION:
Turn the ignition switch to OFF and then to ON within 30 seconds.
3) Hold down the power window main switch to "AUTO UP" (with the switch fully pulled), and turn the ignition switch to OFF immediately before the window fully closes. Keep down the power window switch until the window fully closes.
4) Hold down the power window main switch to "AUTO DOWN" (with the switch fully pushed), and turn the ignition switch to ON immediately before the window fully opens. Keep down the power window switch until the window fully opens.
5) Perform reset operation A.
6) Check that the window operates properly by operating the "AUTO UP" and "AUTO DOWN" switch.

NOTE:
If the window does not fully open/close properly, repeat steps 1) to 6).

D: NOTE

For operation procedures of each component of the power window system, refer to the respective sections.
- Power window control switch:<Ref. to GW-11, Power Window Control Switch.>
- Front door glass:<Ref. to GW-16, Front Door Glass.>
- Front regulator and motor assembly:<Ref. to GW-18, Front Regulator and Motor Assembly.>
- Rear door glass:<Ref. to GW-32, Rear Door Glass.>
- Rear regulator and motor assembly:<Ref. to GW-34, Rear Regulator and Motor Assembly.>

4. Power Window Control Switch

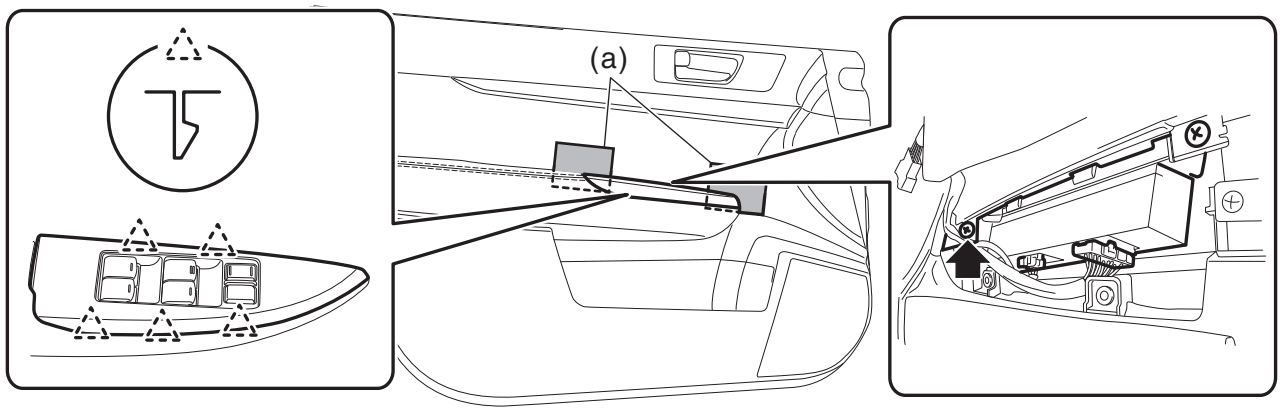
A: REMOVAL

1. MAIN SWITCH

1) Remove the front door trim. <Ref. to EI-60, FRONT DOOR, REMOVAL, Door Trim.>
2) Remove the power window switch panel.

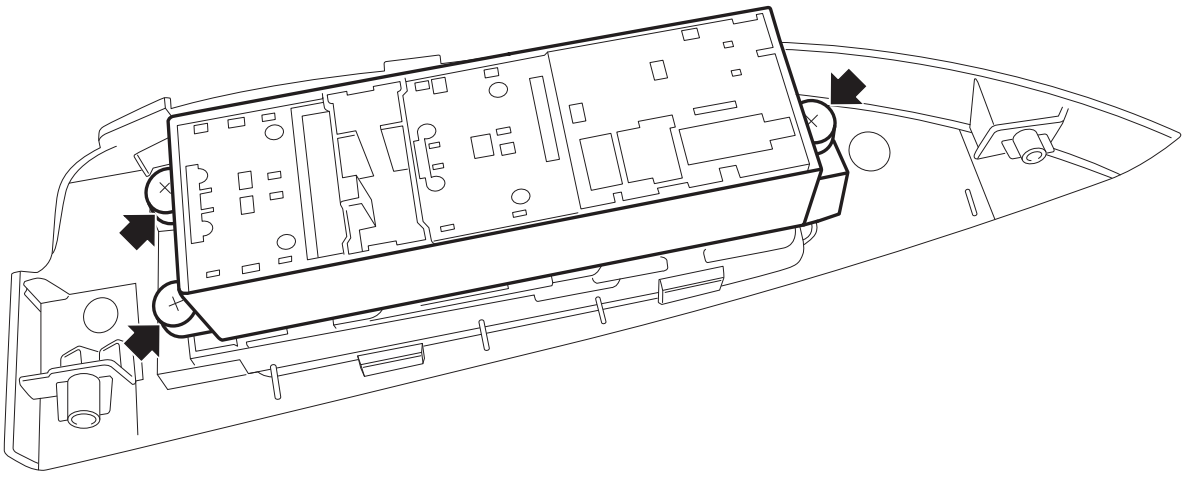
CAUTION:
Do not damage the door trim with the switch panel.

(1) Insert a sheet of protective paper (a) between switch panel and door trim.
(2) Remove the screws and disconnect the connector.
(3) Disconnect the claws and then remove the power window switch panel.



GW-00882

(4) Remove the screws and remove the power window main switch.



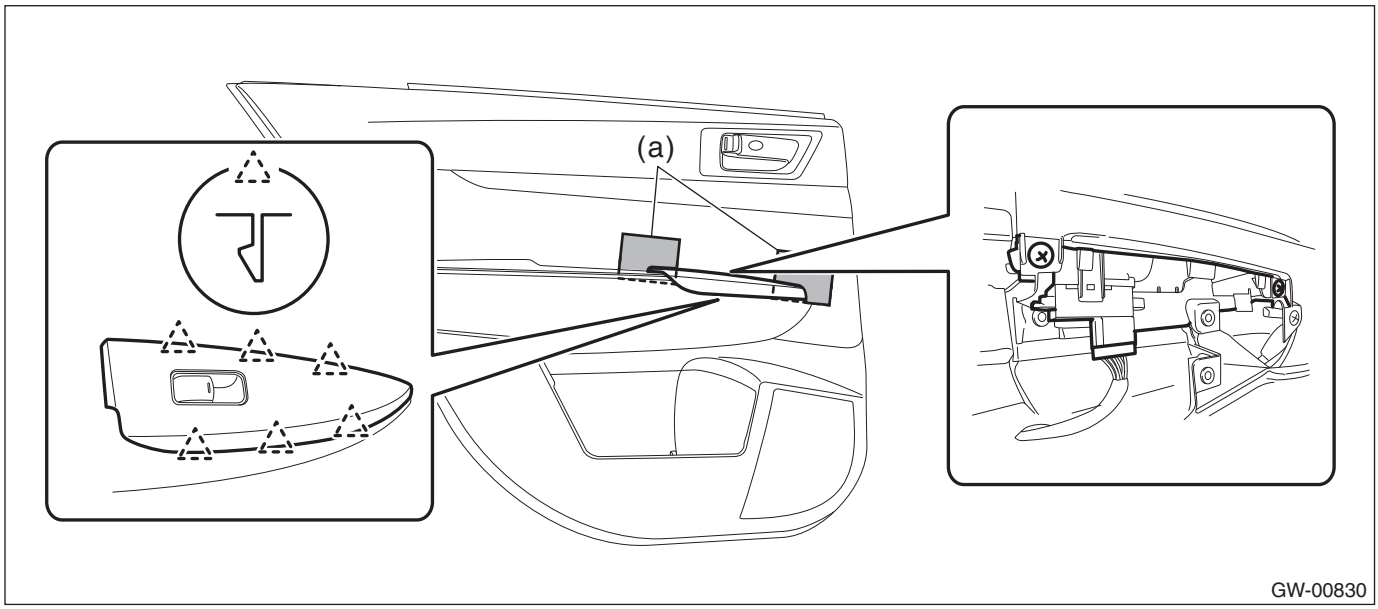
GW-00883

2. SUB-SWITCH

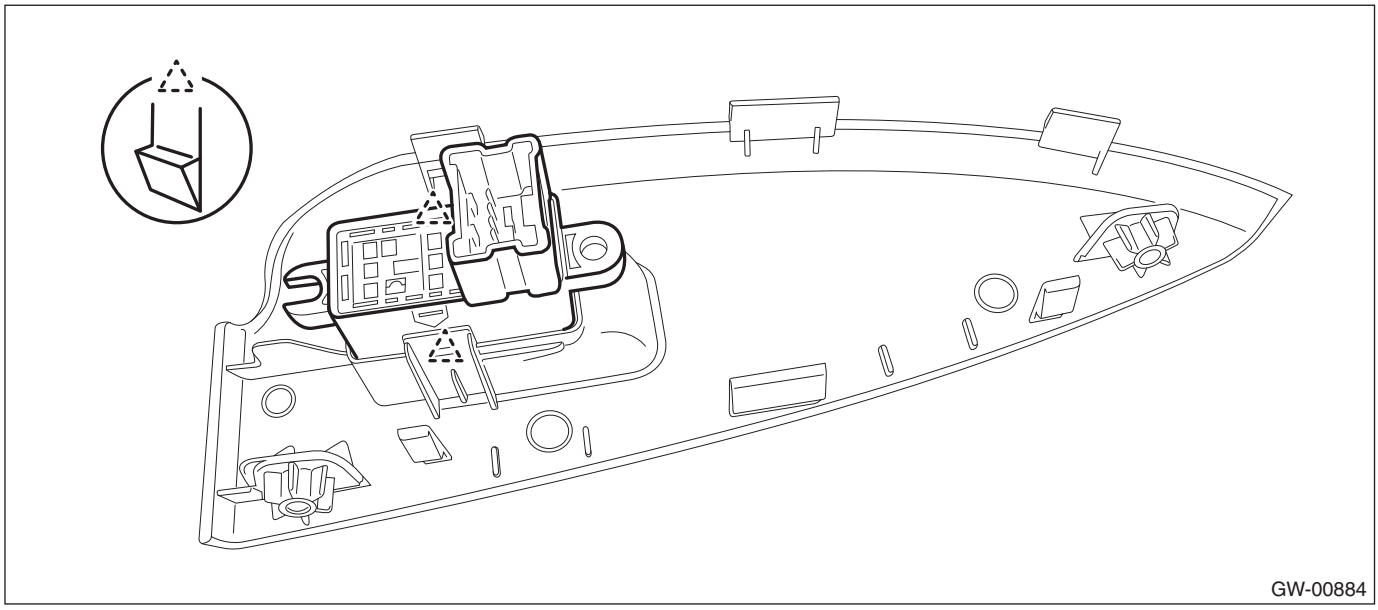
1) Remove the rear door trim. <Ref. to EI-61, REAR DOOR, REMOVAL, Door Trim.>
2) Remove the power window switch panel.

CAUTION:
Do not damage the door trim with the switch panel.

(1) Insert a sheet of protective paper (a) between switch panel and door trim.
(2) Remove the screws and disconnect the connector.
(3) Disconnect the claws and then remove the power window switch panel.



3) Disconnect the claws and then remove the power window sub switch.



B: INSTALLATION

CAUTION:
• After installation of main switch, always perform the initial setting. (model with driver's side AUTO UP function)
Failure to do so may cause the improper activation of auto-reverse operation for pinching hazard prevention. <Ref. to GW-9, INSPECTION, Power Window System.>
• Use protective paper to avoid damage to the door trim.
1) Install each part in the reverse order of removal.
2) Perform initial setting operation (reset operation A). <Ref. to GW-10, RESET OPERATION A, OPERATION, Power Window System.>

C: INSPECTION

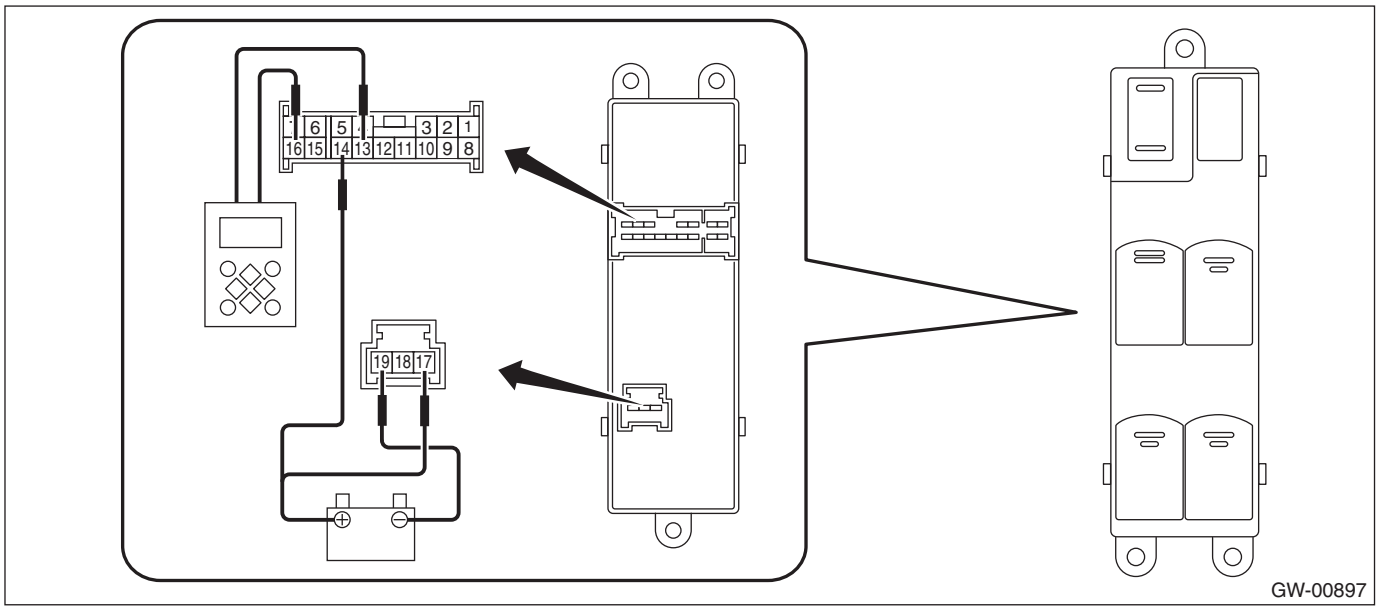
1. MAIN SWITCH

• Driver's side

CAUTION:
Since the driver's side power window switch is controlled by CPU, do not check continuity for switch alone with the circuit tester. Performing continuity check with circuit tester may damage the driver's side power window switch circuit.
Check output from the power window main switch to driver's side motor using the oscilloscope function in the Subaru Select Monitor.
1) Remove the power window main switch.
2) Connect the battery and the Subaru Select Monitor to the power window main switch terminal.

CAUTION:
Never mix up the terminals when connecting the power window main switch connector and battery. If connected to a wrong terminal, the power window main switch may be damaged.

NOTE:
• When the battery is connected to the power window main switch terminal, the letters "AUTO" on the driver's side knob illuminates.
• For detailed procedures, refer to "Subaru Select Monitor Operation Manual".



3) Operate the main switch and check the output.

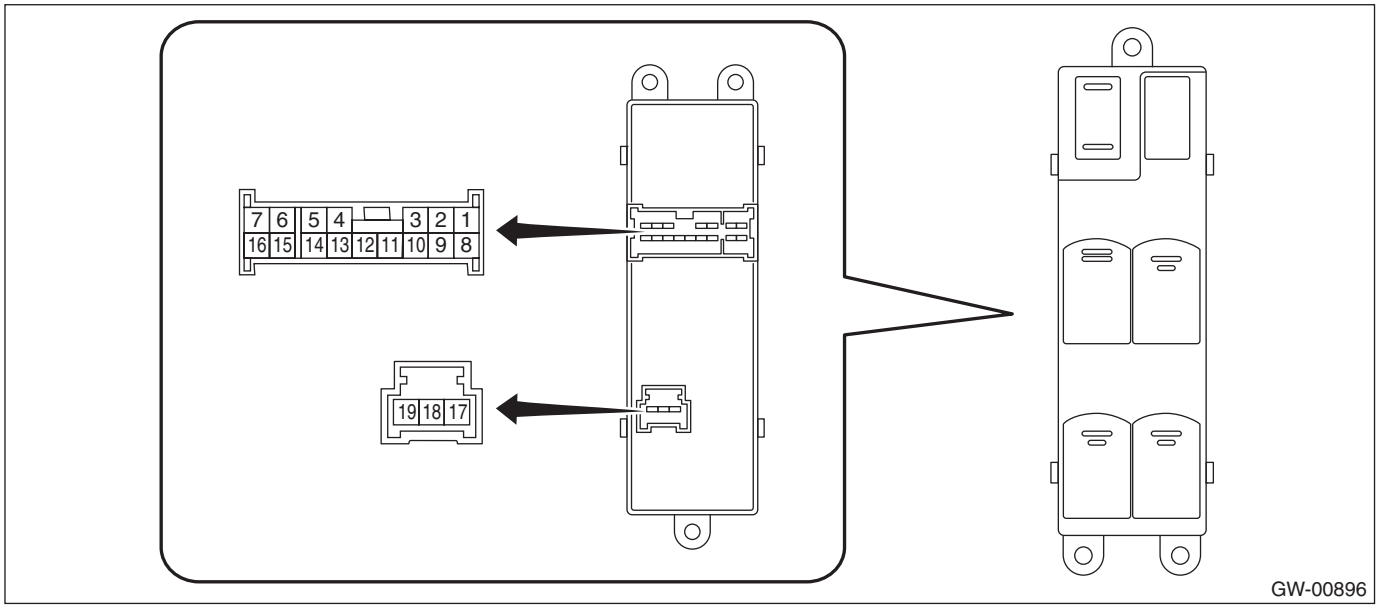
NOTE:
Since output time during window UP operation is extremely short, it cannot be checked without using a measuring instrument such as oscilloscope. Output is constantly produced while the switch is operated for window DOWN operation.

Inspection conditions	Output time (model without driver's side AUTO UP function)	Output time (model with driver's side AUTO UP function)	Specification
AUTO UP	600 ms	Approx. 130 ms	Battery voltage
UP	During switch operation		
OFF	—	—	0 V
DOWN	During switch operation	During switch operation	Battery voltage
AUTO DOWN	600 ms	Approx. 300 ms	

4) Replace the power window main switch if the inspection result is not within the standard value.

- **Except for driver's seat**

1) Check the resistance between main switch terminals.



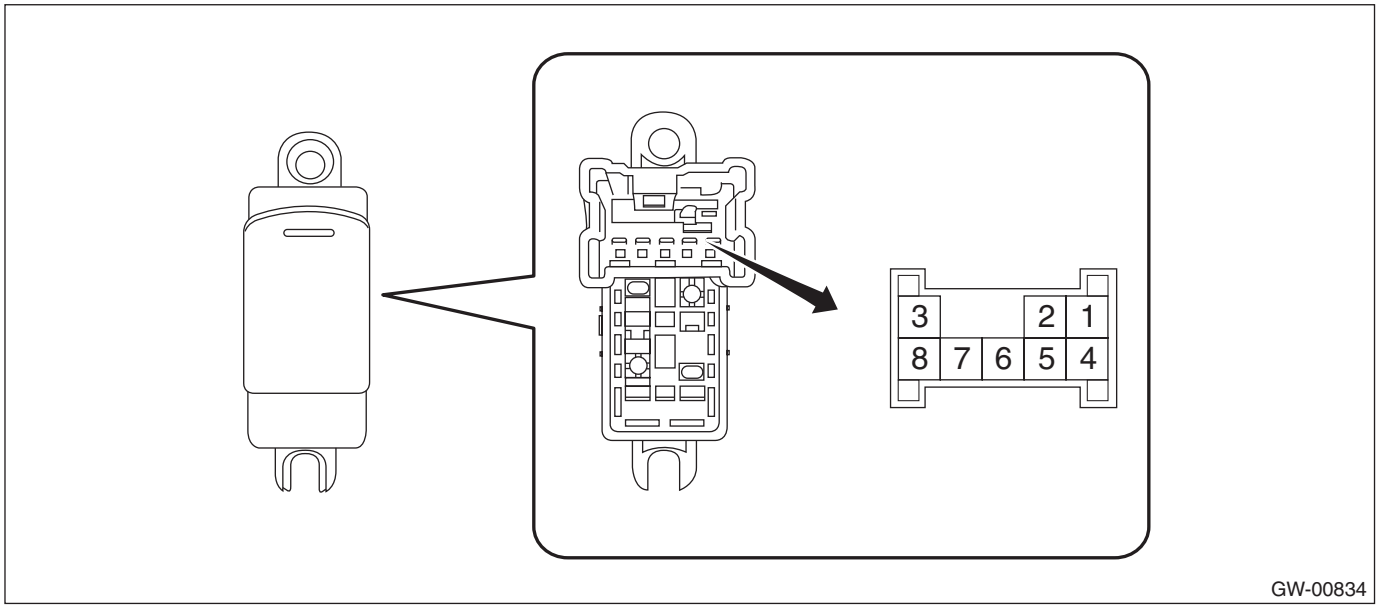
	Terminal No.	Inspection conditions	Specification
Passenger's side	14 — 8 19 — 12	UP	Less than 1 Ω
	14 — 12 14 — 8	OFF	1 MΩ or more
	19 — 8 19 — 12 8 — 12		Less than 1 Ω
	14 — 12 19 — 8	DOWN	Less than 1 Ω

	Terminal No.	Inspection conditions	Specification
Rear LH	14 — 7 19 — 5	UP	Less than 1 Ω
	14 — 7 14 — 5	OFF	1 MΩ or more
	19 — 7 19 — 5 7 — 5		Less than 1 Ω
	14 — 5 19 — 7	DOWN	Less than 1 Ω
Rear RH	14 — 1 19 — 3	UP	Less than 1 Ω
	14 — 1 14 — 3	OFF	1 MΩ or more
	19 — 3 19 — 1 3 — 1		Less than 1 Ω
	14 — 3 19 — 1	DOWN	Less than 1 Ω

2) Replace the main switch if the inspection result is not within the standard value.

2. SUB-SWITCH

1) Remove the sub switch.
2) Check the resistance between sub switch terminals.



	Terminal No.	Inspection conditions	Specification
Passenger's seat, rear	4 — 5 6 — 7	UP	Less than 1 Ω
	7 — 4 8 — 4	OFF	1 MΩ or more
	5 — 8 6 — 7		Less than 1 Ω
	4 — 6 5 — 8	DOWN	Less than 1 Ω

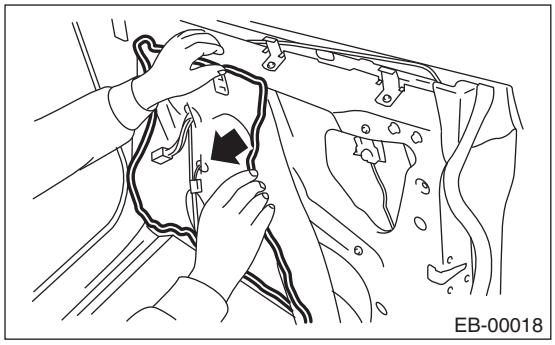
3) Replace the sub switch if the inspection result is not within the standard value.

5. Front Door Glass

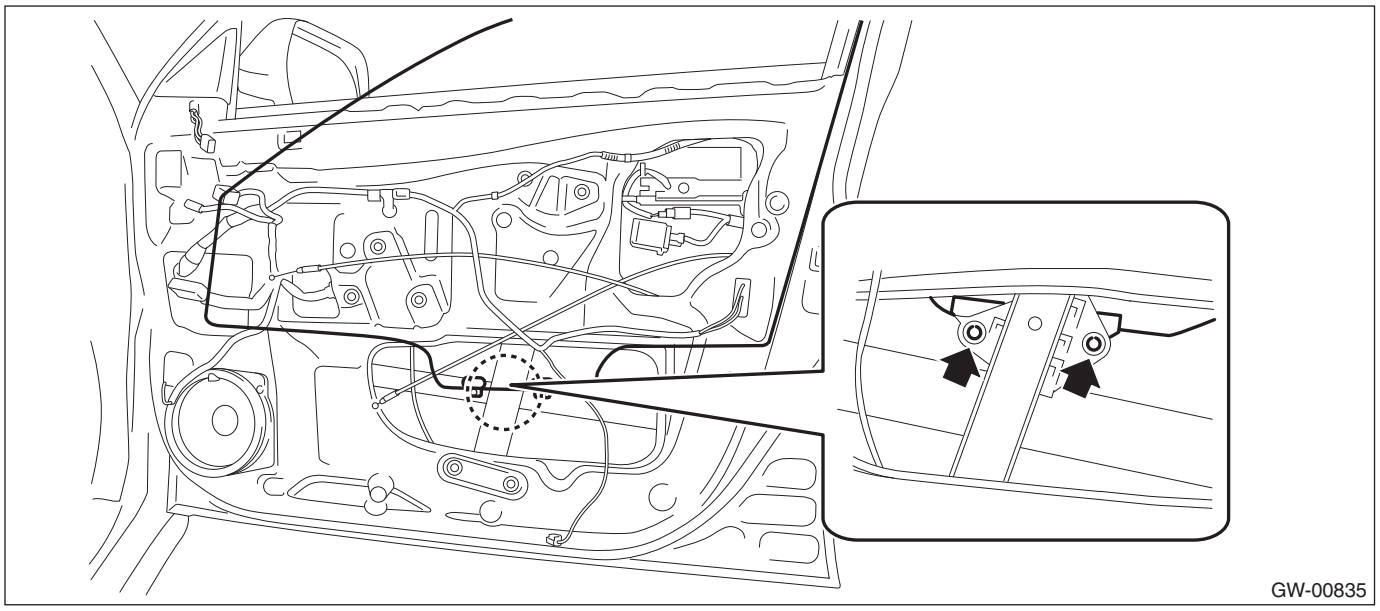
A: REMOVAL

1) Remove the front door trim. <Ref. to EI-60, FRONT DOOR, REMOVAL, Door Trim.>
2) Remove the sealing cover.

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

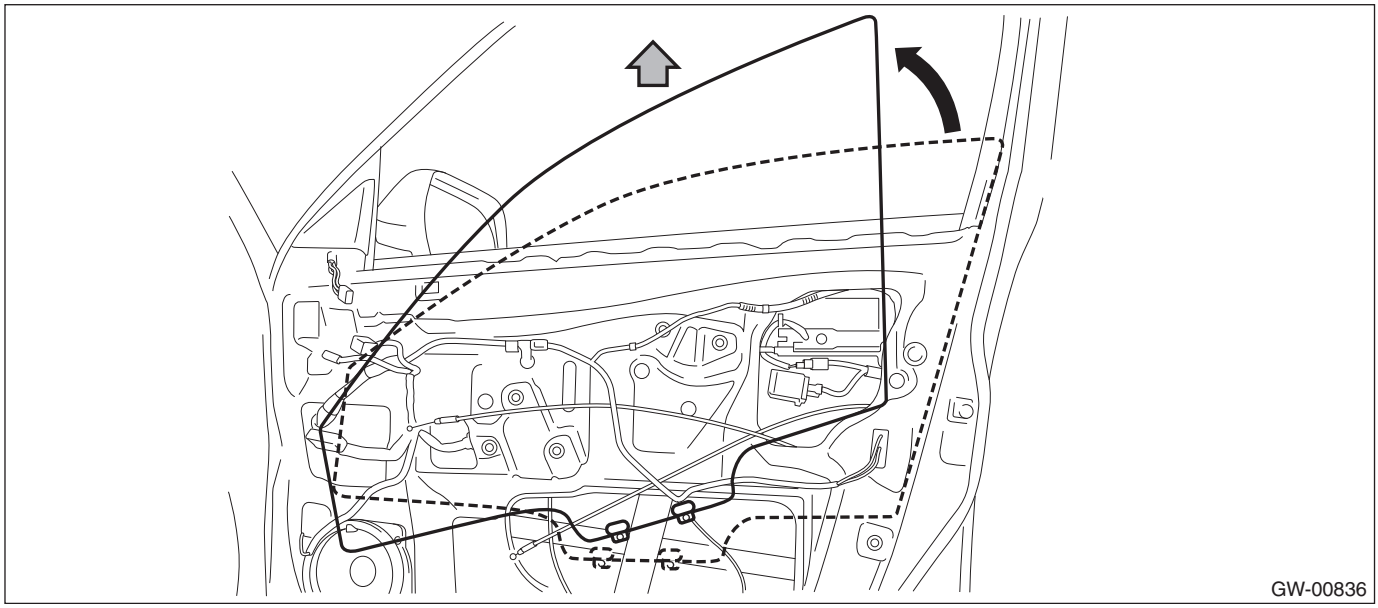


3) Attach the battery ground cable and power window switch and turn the ignition to ON.
4) Remove the front door glass.
   (1) Operate the power window switch to move the front door glass to the position where the mounting bolts can be seen.
   (2) Remove the bolt.



(3) While tilting the glass, remove the windshield glass.

CAUTION:
Avoid impact and damage to the glass.



B: INSTALLATION

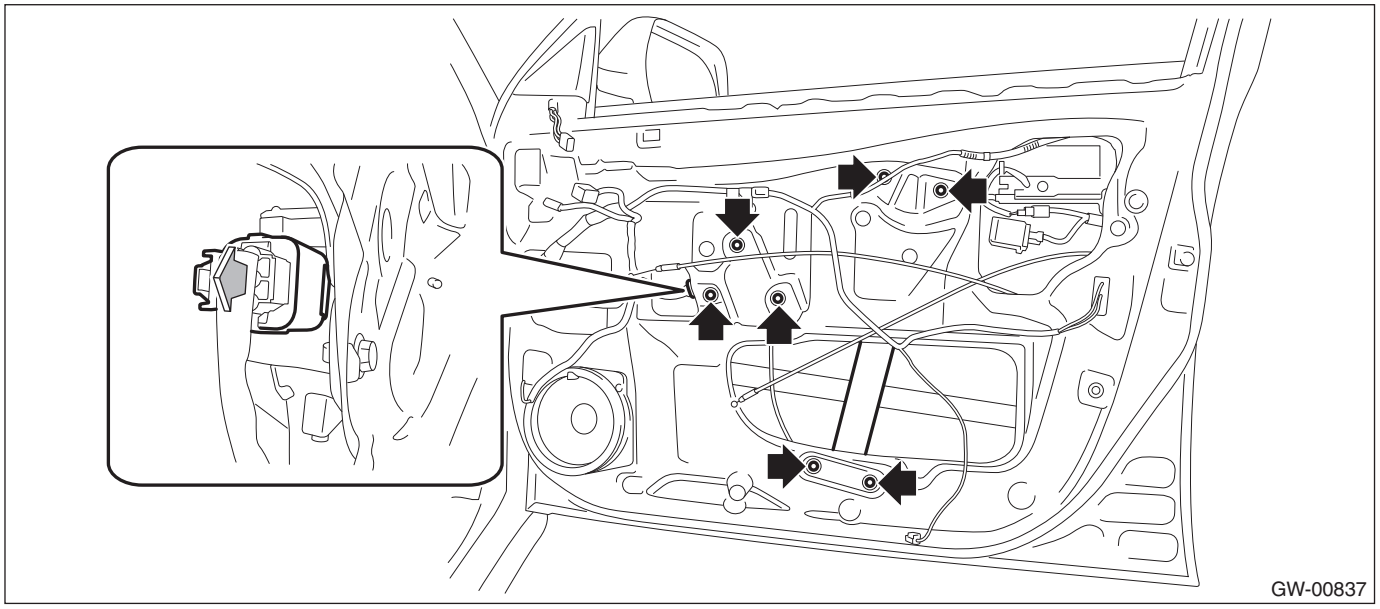
CAUTION:
Make sure that the glass run rubber is placed securely in the door frame and sash.
Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to GW-4, FRONT DOOR GLASS, COMPONENT, General Description.>

6. Front Regulator and Motor Assembly

A: REMOVAL

1) Remove the front door glass. <Ref. to GW-16, REMOVAL, Front Door Glass.>
2) Remove the front regulator and motor assembly.
   (1) Disconnect the connector.
   (2) Remove the bolts, and then remove the front regulator and motor assembly.



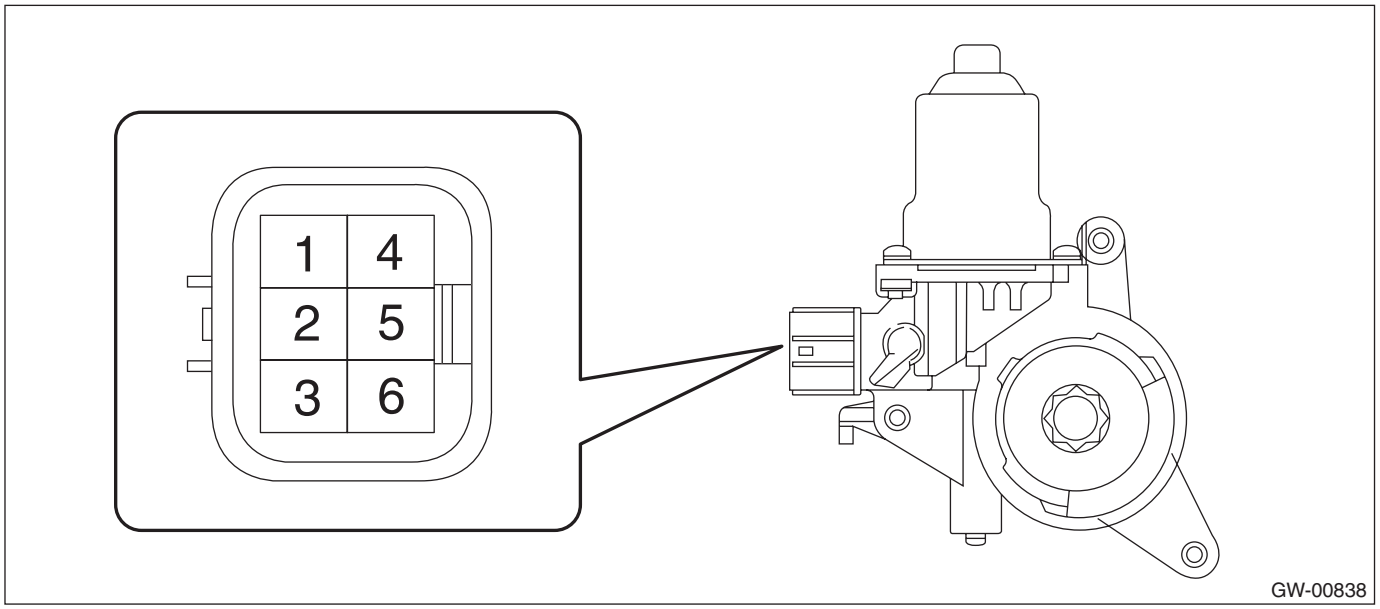
B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to GW-4, FRONT DOOR GLASS, COMPONENT, General Description.>

C: INSPECTION

1) Disconnect the motor connector.
2) Apply battery voltage between the motor connector terminals and check the motor operation.



Terminal No.	Inspection conditions	Specification
1 (+) — 4 (–)	Apply battery voltage between terminals.	Increase
4 (+) — 1 (–)	Apply battery voltage between terminals.	Decrease

3) If the inspection results in improper operation, replace the front regulator and motor assembly.

7. Remote Control Mirror System

A: WIRING DIAGRAM

Refer to “Remote Control Mirror System” in the wiring diagram. <Ref. to WI-198, WIRING DIAGRAM, Remote Control Mirror System.>

B: INSPECTION

1. SYMPTOM CHART

Symptoms	Inspection order
All function does not operate.	1. Check the fuse. 2. Check the remote control mirror switch. 3. Check the wiring harness.
One side of the mirror motor does not operate.	1. Check the remote control mirror switch. 2. Check the mirror motor. 3. Check the wiring harness.
Mirror heater does not operate.	1. Check the defogger switch. 2. Check the mirror heater relay. 3. Check the mirror heater. 4. Check the wiring harness.

C: NOTE

For operation procedures of each component of the remote control mirror system, refer to the respective sections.

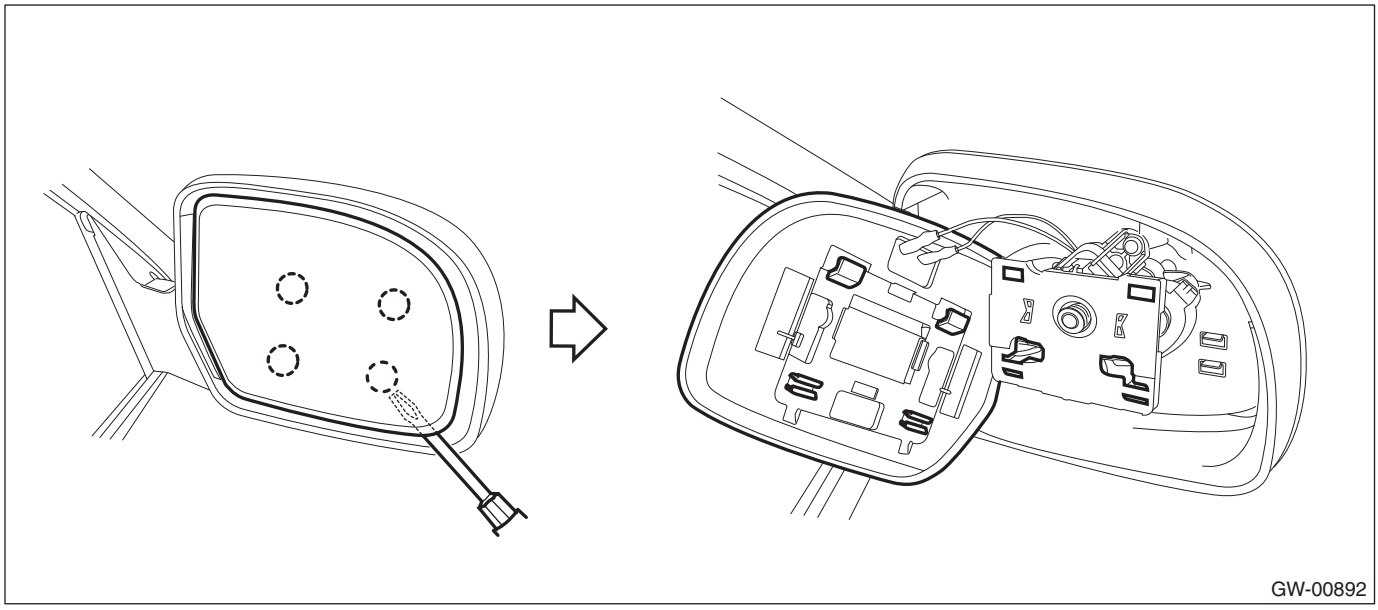
- Scalp cap:<Ref. to GW-21, Scalp Cap.>
- Outer mirror assembly:<Ref. to GW-25, Outer Mirror Assembly.>
- Outer mirror:<Ref. to GW-27, Outer Mirror.>
- Remote control mirror switch:<Ref. to GW-29, Remote Control Mirror Switch.>

8. Scalp Cap

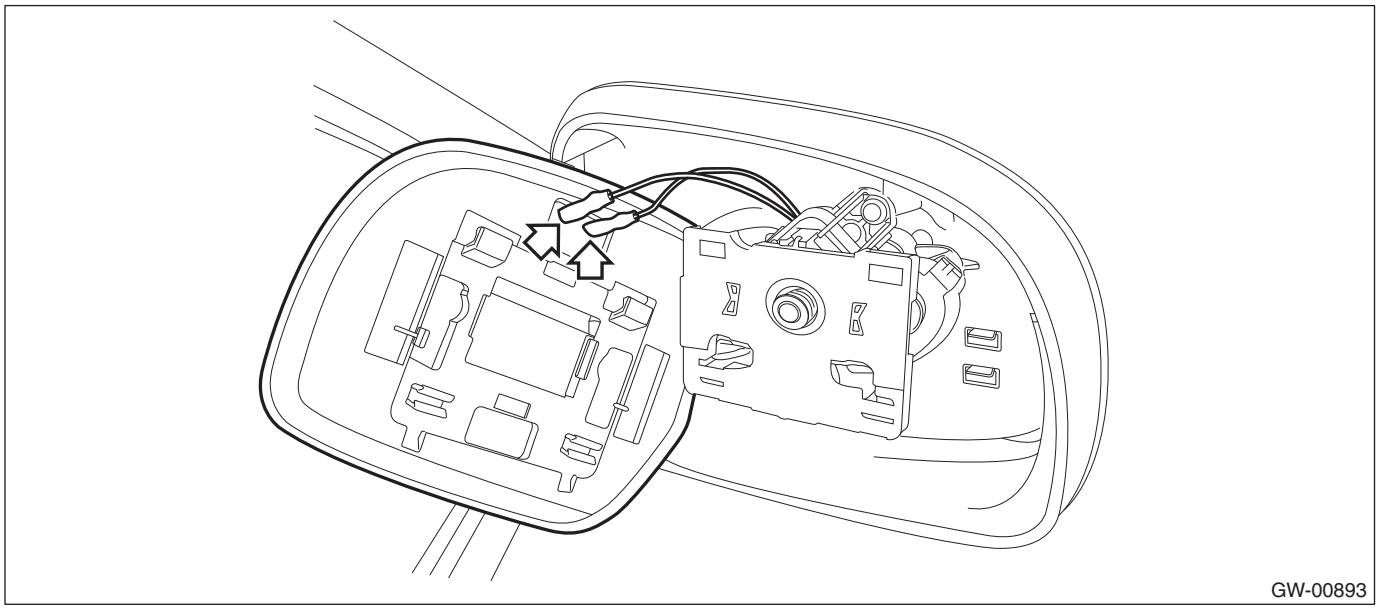
A: REPLACEMENT

1. MODEL WITHOUT RETRACTABLE MIRROR

CAUTION:
• When removing the mirror, be careful not to damage the back surface of mirror with a flat tip screwdriver.
• When installing the mirror, insert the connector and clip securely.
1) Operate the remote control mirror switch to face the mirror surface upward.
2) Disconnect the ground cable from battery.
3) Remove the outer mirror.
(1) Disconnect the clips using a flat tip screwdriver.

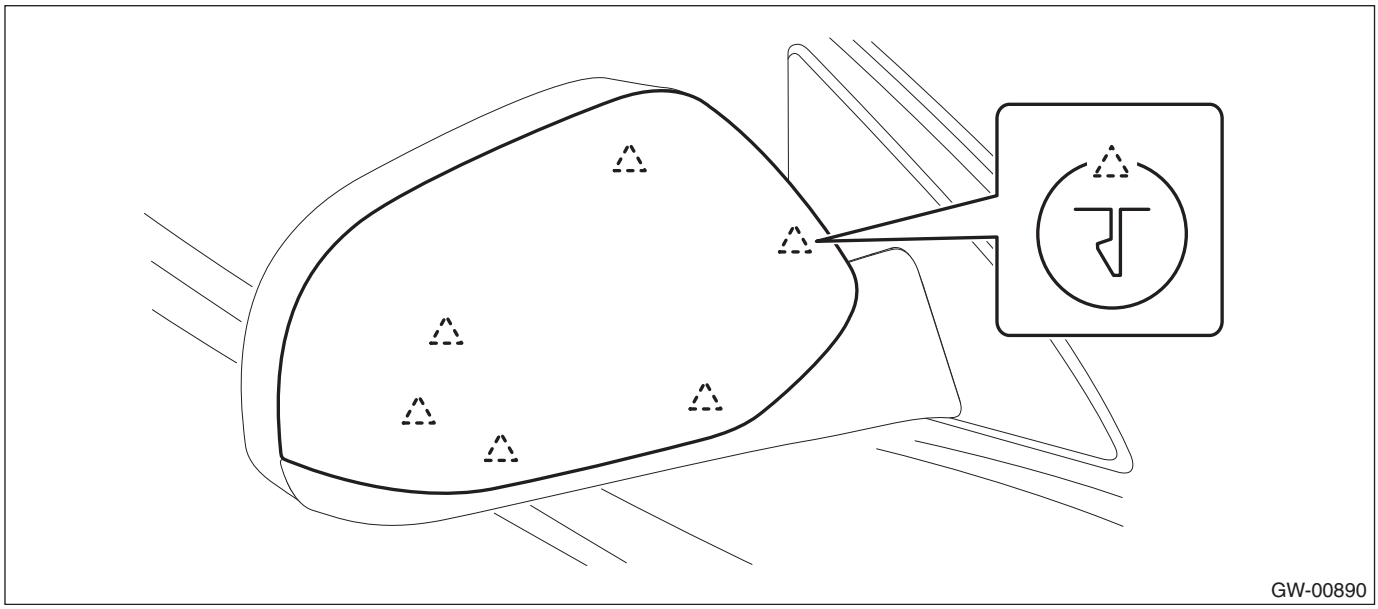


(2) Disconnect the mirror heater connector. (Model with mirror heater)

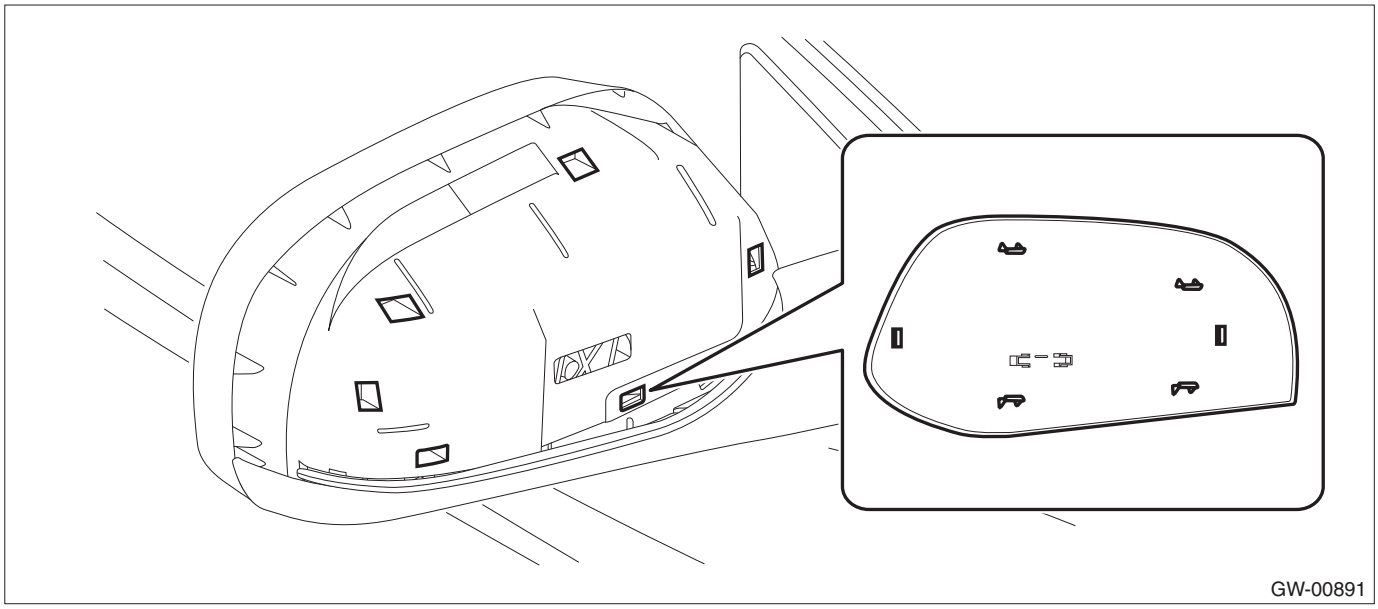


4) Disconnect the claws and then remove the scalp cap.

CAUTION:
Be careful not to apply excessive force when removing the scalp cap, as the lower hooks may become damaged.


GW-00890

5) Engage the claws into the hole and install the scalp cap.


GW-00891

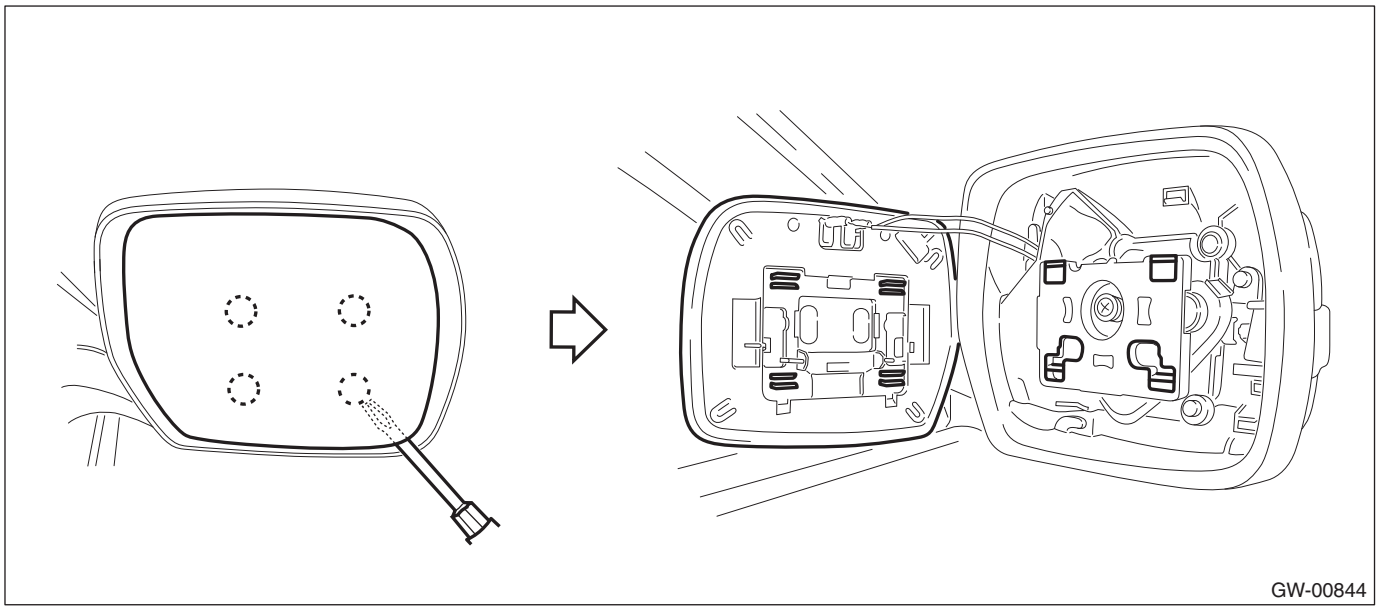
6) Check that all the claws are securely engaged.

2. MODEL WITH RETRACTABLE MIRROR

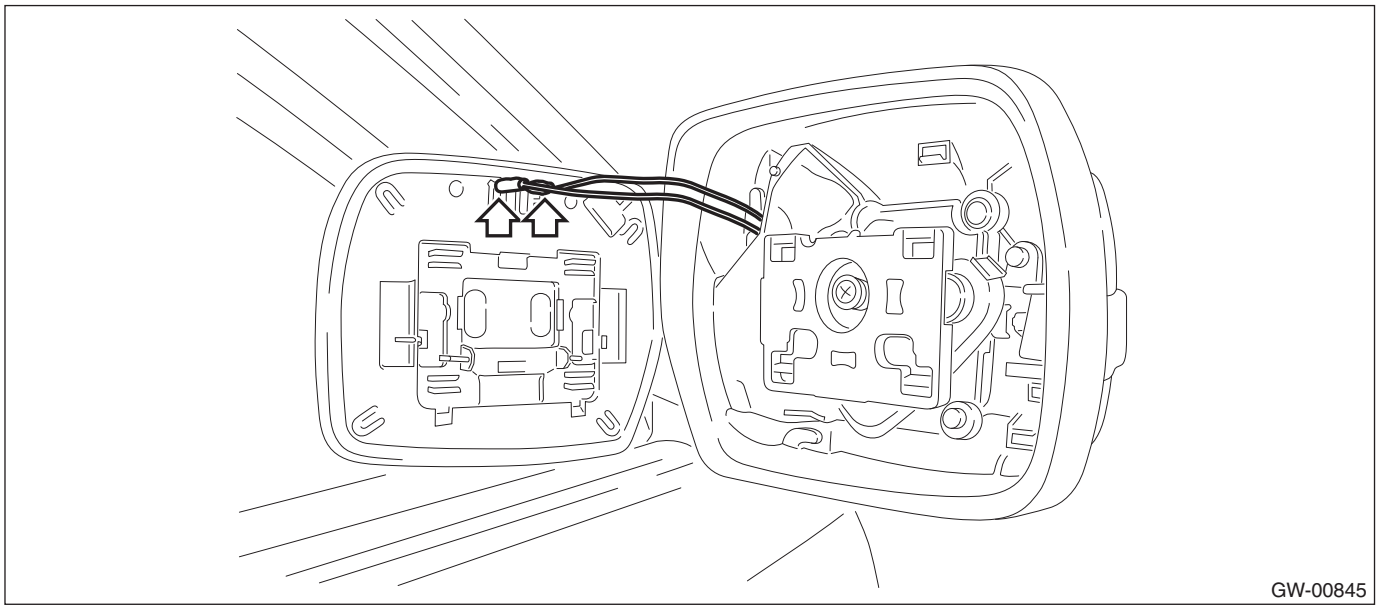
CAUTION:

- **When removing the mirror, be careful not to damage the back surface of mirror with a flat tip screwdriver.**
- **When installing the mirror, insert the connector and clip securely.**

1) Operate the remote control mirror switch to face the mirror surface upward.
2) Disconnect the ground cable from battery.
3) Remove the outer mirror.
   (1) Disconnect the clips using a flat tip screwdriver.

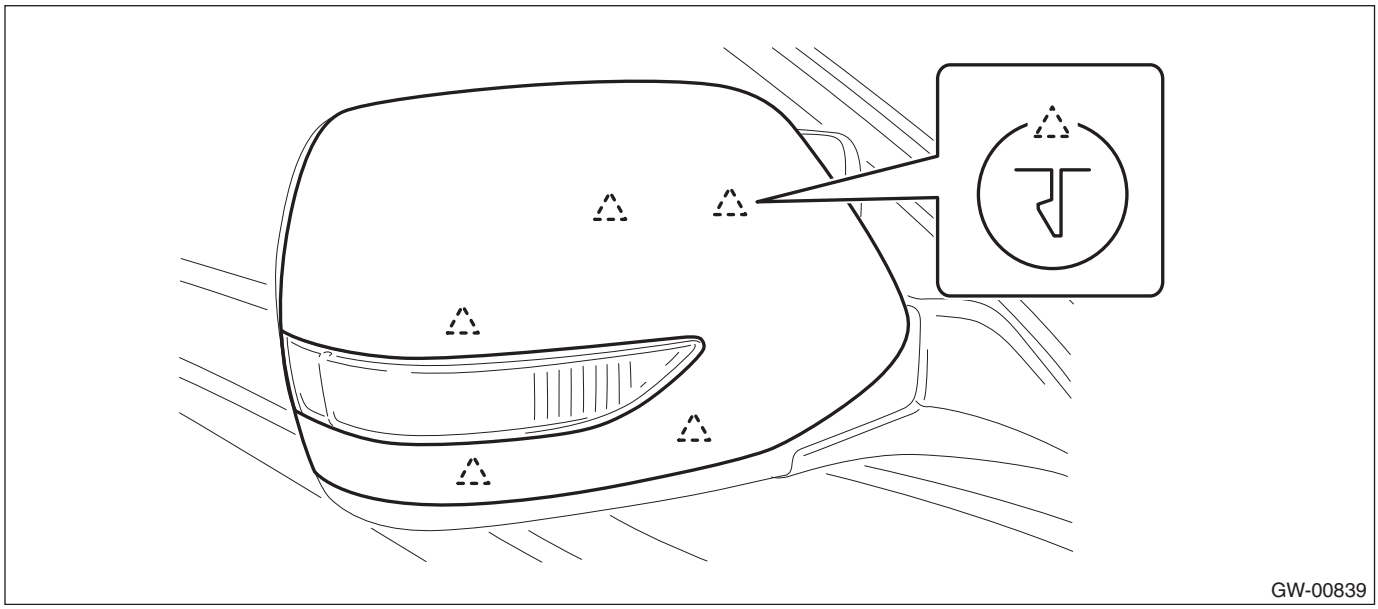


   (2) Disconnect the mirror heater connector. (Model with mirror heater)

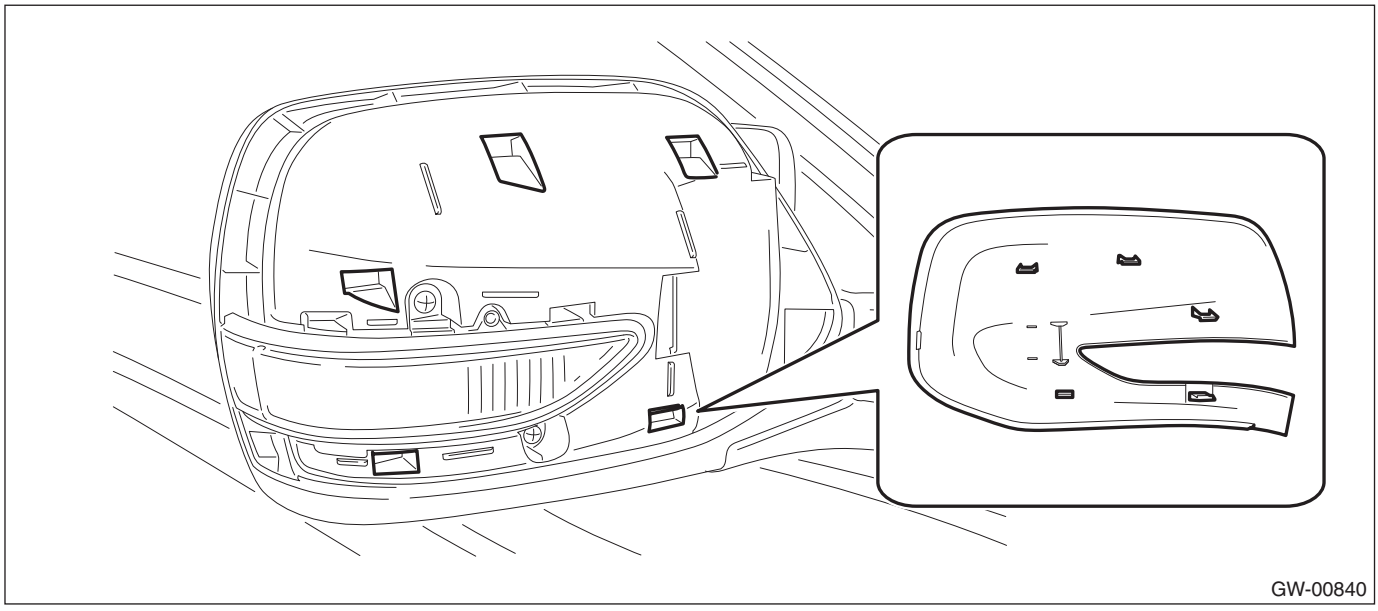


4) Disconnect the claws and then remove the scalp cap.

CAUTION:
Be careful not to apply excessive force when removing the scalp cap, as the lower hooks may become damaged.


GW-00839

5) Engage the claws into the hole and install the scalp cap.

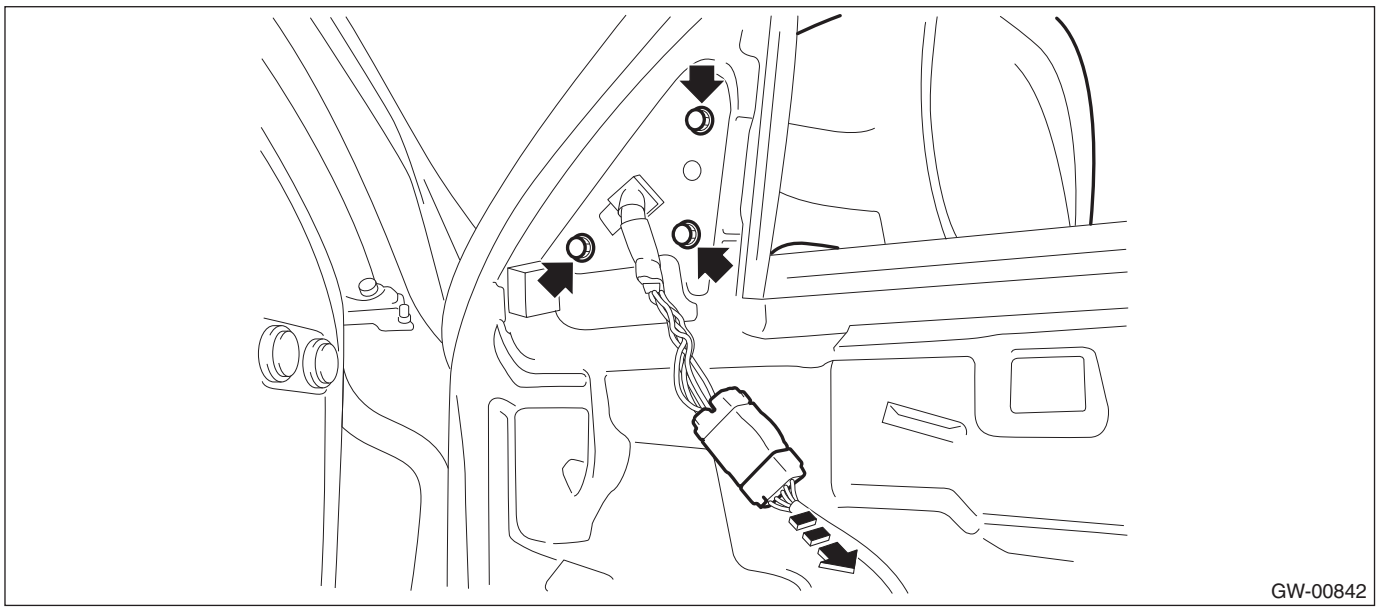

GW-00840

6) Check that all the claws are securely engaged.

9. Outer Mirror Assembly

A: REMOVAL

1) Remove the front door trim. <Ref. to EI-60, FRONT DOOR, REMOVAL, Door Trim.>
2) Remove the outer mirror assembly.
   (1) Disconnect the connector.
   (2) Remove the bolts, and then remove the outer mirror assembly.



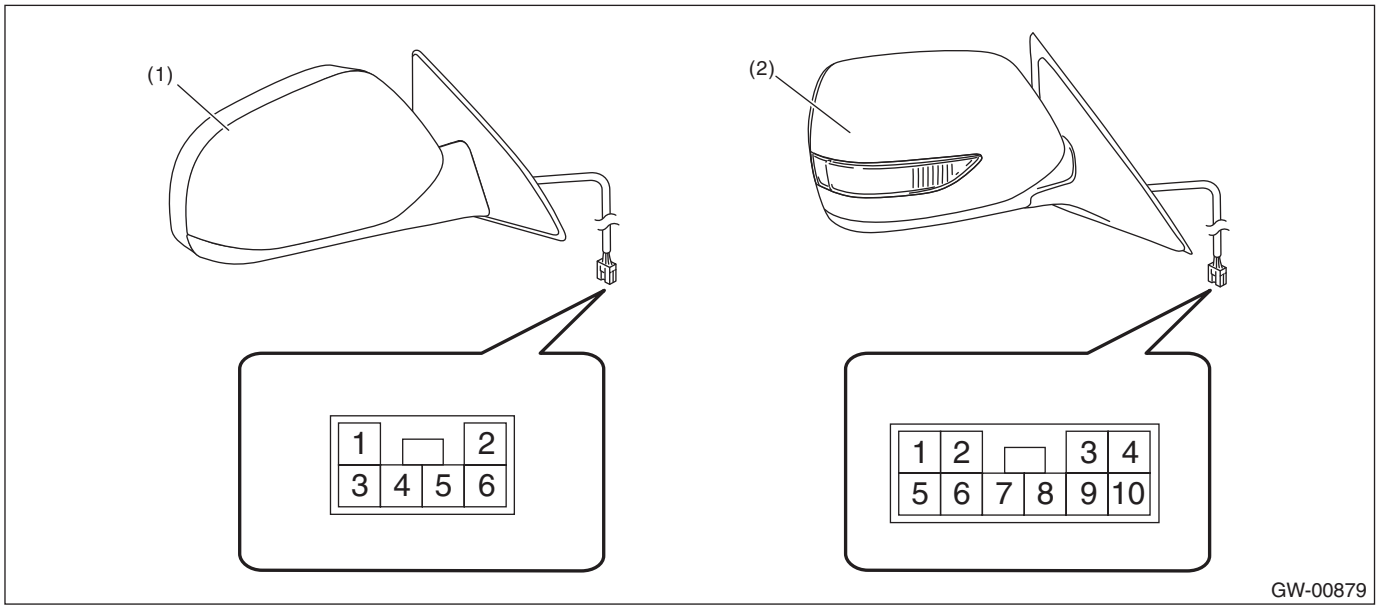
B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Outer mirror assembly: 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)

C: INSPECTION

1) Disconnect the outer mirror connector.
2) Apply battery voltage between the outer mirror connector terminals and check the mirror operation.



(1) Model without retractable mirror (2) Model with retractable mirror

- Model without retractable mirror

Terminal No.	Inspection conditions	Switch position
—	—	OFF
2 (+) — 5 (–)	Apply battery voltage between terminals.	UP
5 (+) — 2 (–)	Apply battery voltage between terminals.	DOWN
4 (+) — 2 (–)	Apply battery voltage between terminals.	LEFT
2 (+) — 4 (–)	Apply battery voltage between terminals.	RIGHT

- Model with retractable mirror

Terminal No.	Inspection conditions	Switch position
—	—	OFF
3 (+) — 8 (–)	Apply battery voltage between terminals.	UP
8 (+) — 3 (–)	Apply battery voltage between terminals.	DOWN
7 (+) — 3 (–)	Apply battery voltage between terminals.	LEFT
3 (+) — 7 (–)	Apply battery voltage between terminals.	RIGHT
2 (+) — 6 (–)	Apply battery voltage between terminals.	Folding
6 (+) — 2 (–)	Apply battery voltage between terminals.	Unfolding

3) If the inspection results in improper operation, replace the outer mirror.

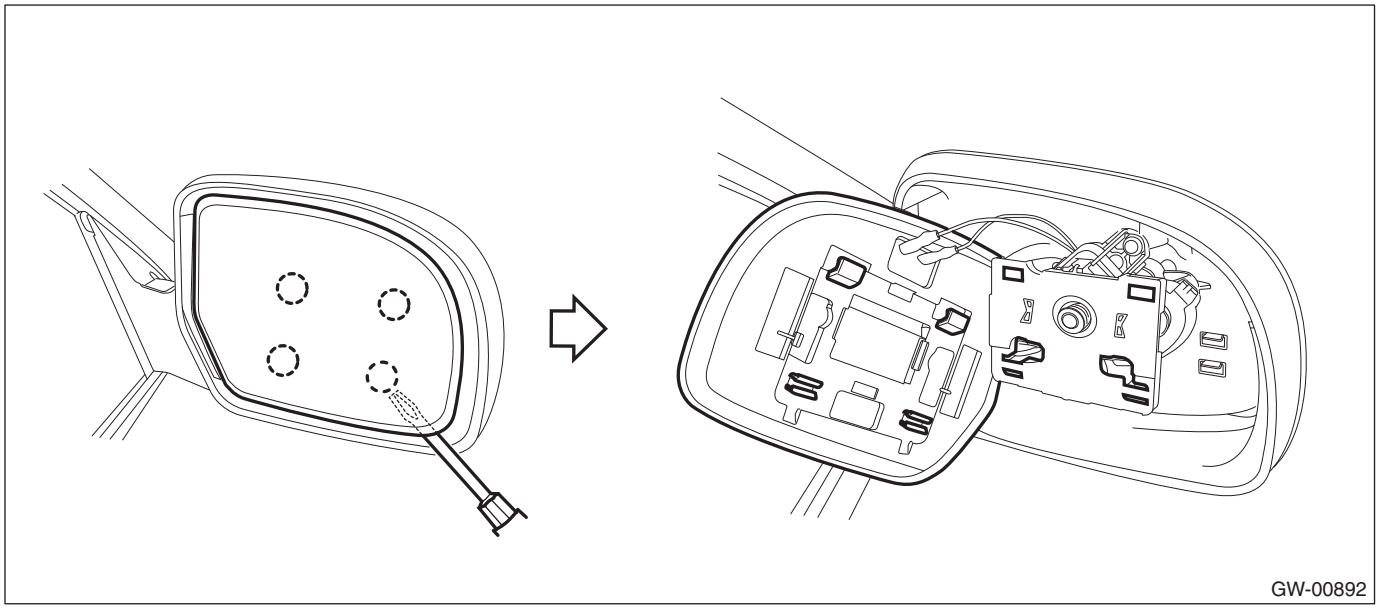
NOTE:
There always exists a current of 1.2 mA at the electric retraction terminal.

10.Outer Mirror

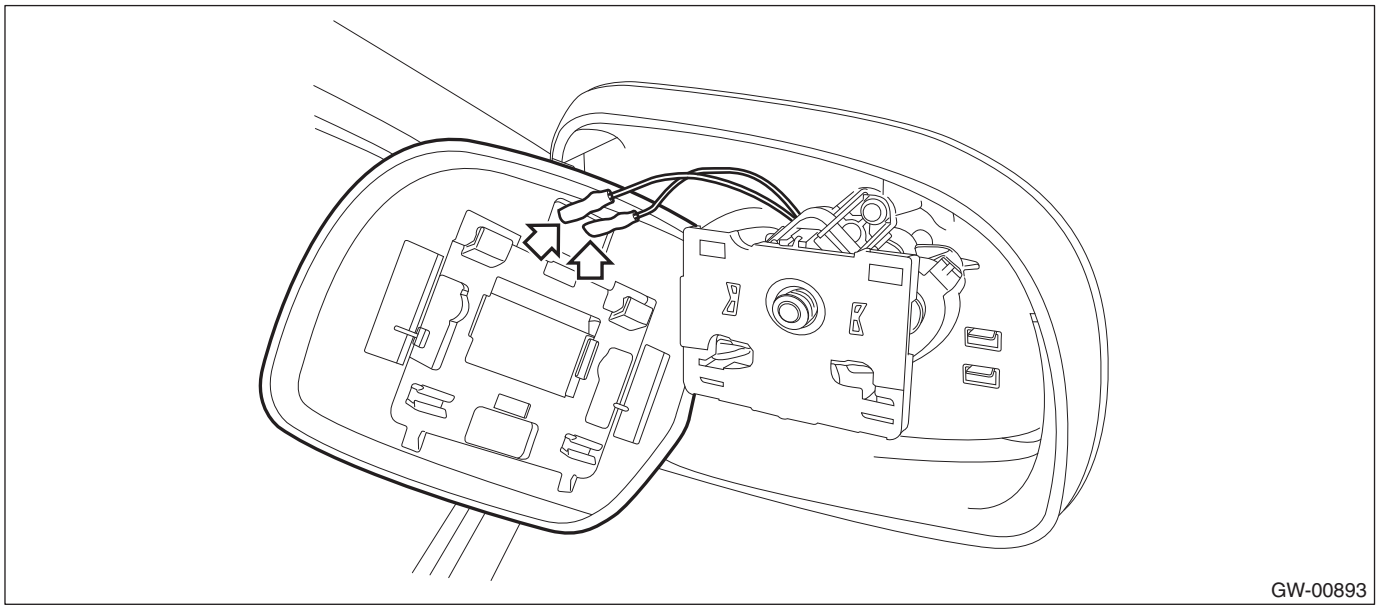
A: REPLACEMENT

1. MODEL WITHOUT RETRACTABLE MIRROR

CAUTION:
• When removing the mirror, be careful not to damage the back surface of mirror with a flat tip screwdriver.
• When installing the mirror, insert the connector and clip securely.
1) Operate the remote control mirror switch to face the mirror surface upward.
2) Disconnect the ground cable from battery.
3) Remove the outer mirror.
(1) Disconnect the clips using a flat tip screwdriver.



(2) Disconnect the mirror heater connector. (Model with mirror heater)

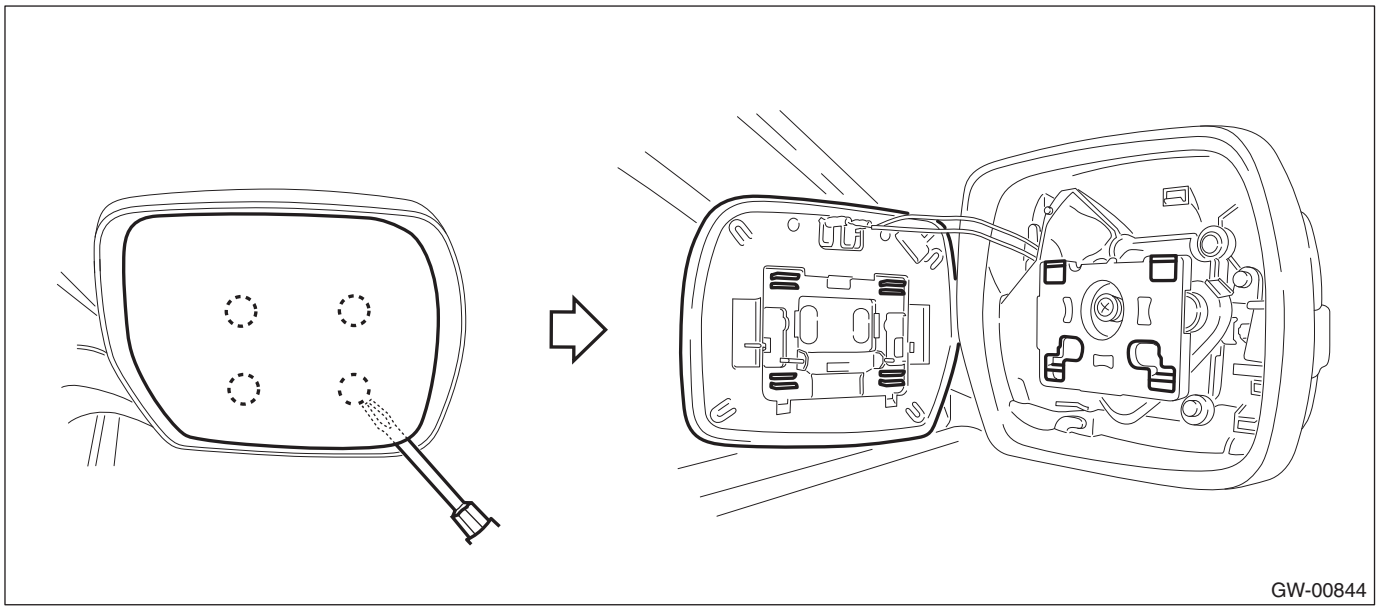


4) Install the outer mirror in the reverse order of removal.

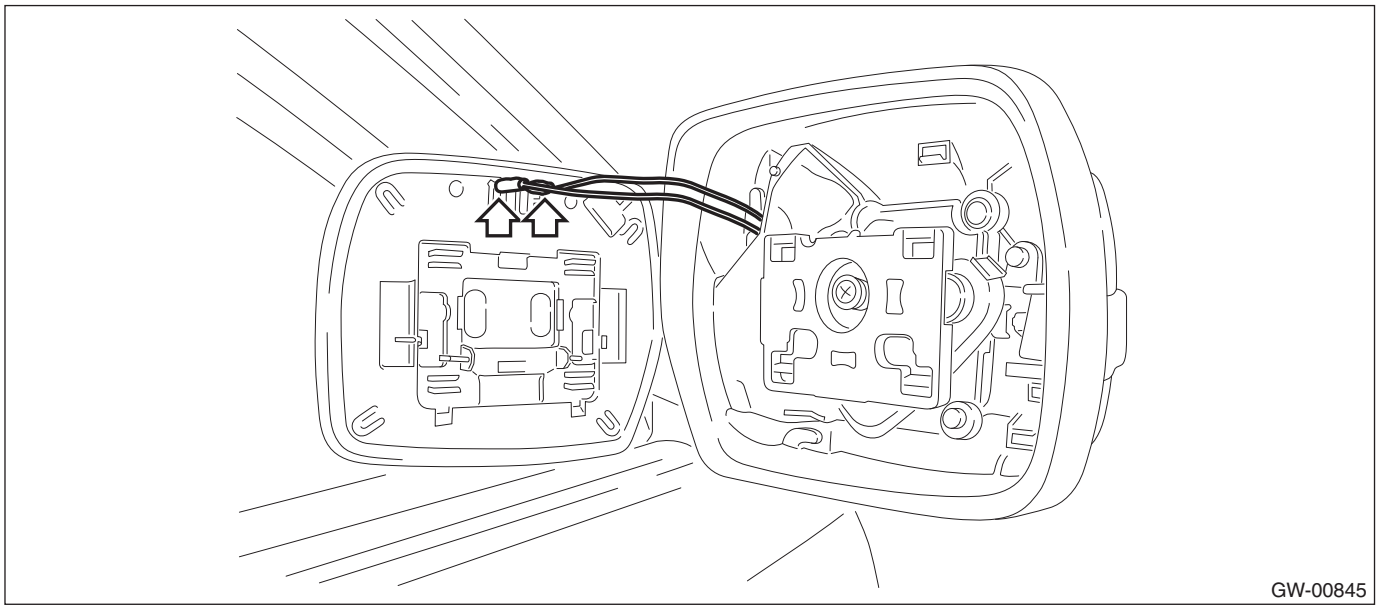
2. MODEL WITH RETRACTABLE MIRROR

CAUTION:
• When removing the mirror, be careful not to damage the back surface of mirror with a flat tip screwdriver.
• When installing the mirror, insert the connector and clip securely.

1) Operate the remote control mirror switch to face the mirror surface upward.
2) Disconnect the ground cable from battery.
3) Remove the outer mirror.
   (1) Disconnect the clips using a flat tip screwdriver.


GW-00844

   (2) Disconnect the mirror heater connector. (Model with mirror heater)

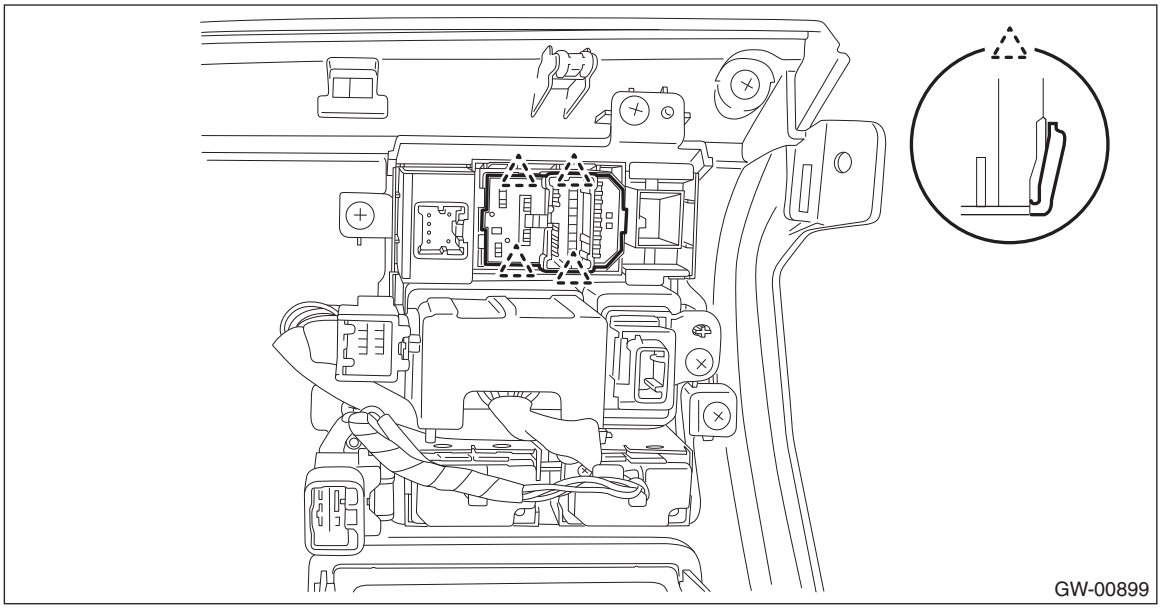

GW-00845

4) Install the outer mirror in the reverse order of removal.

11.Remote Control Mirror Switch

A: REMOVAL

1) Remove the instrument panel lower cover. <Ref. to EI-63, REMOVAL, Instrument Panel Lower Cover.>
2) Disconnect the claws and then remove the remote control mirror switch.



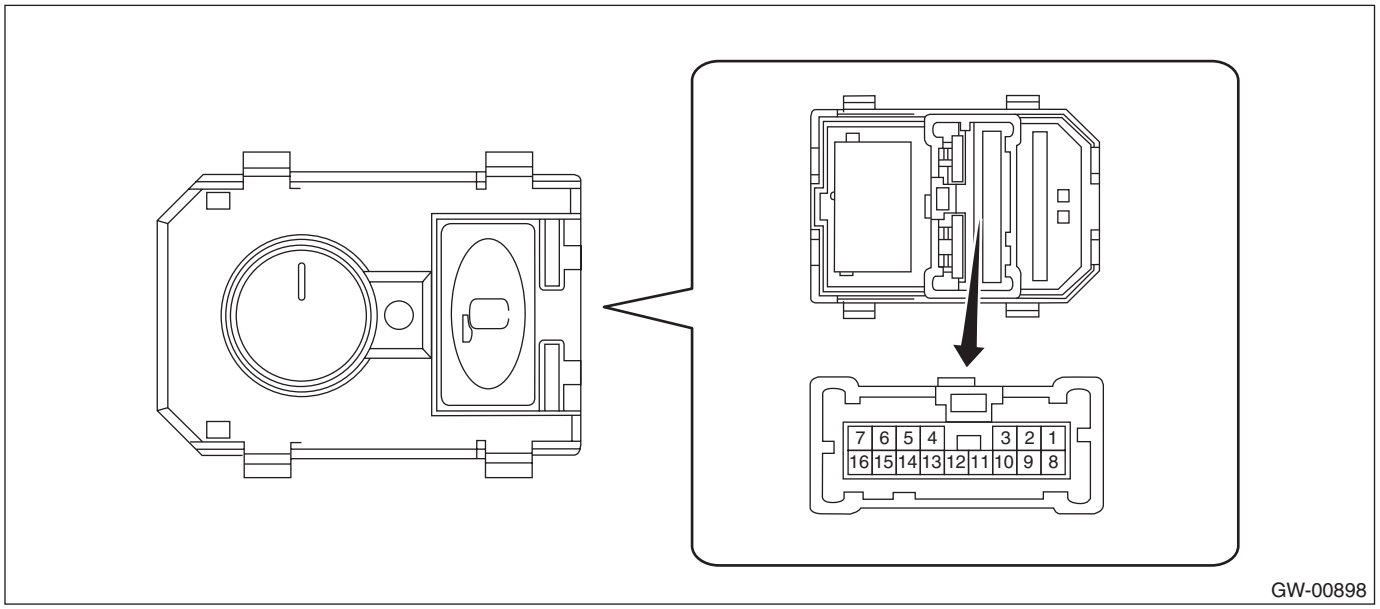
B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1) Disconnect the remote control mirror switch connector.
2) Check the resistance between remote control mirror switch terminals.

Preparation tool: Circuit tester



- Changeover switch RH

Terminal No.	Inspection conditions	Specification
—	OFF	1 MΩ or more
1 — 12 11 — 7	UP	Less than 1 Ω
1 — 11 12 — 7	DOWN	Less than 1 Ω
1 — 9 12 — 7	LEFT	Less than 1 Ω
1 — 12 9 — 7	RIGHT	Less than 1 Ω

- Changeover switch LH

Terminal No.	Inspection conditions	Specification
—	OFF	1 MΩ or more
1 — 14 10 — 7	UP	Less than 1 Ω
1 — 10 14 — 7	DOWN	Less than 1 Ω
1 — 8 14 — 7	LEFT	Less than 1 Ω
1 — 14 8 — 7	RIGHT	Less than 1 Ω

- Folding switch (model with retractable mirror)

Terminal No.	Inspection conditions	Specification
—	OFF	1 MΩ or more
1 — 5 2 — 7	Folding (LH)	Less than 1 Ω
1 — 6 3 — 7	Folding (RH)	Less than 1 Ω
1 — 2 5 — 7	Unfolding (LH)	Less than 1 Ω
1 — 3 6 — 7	Unfolding (RH)	Less than 1 Ω

3) Replace the remote control mirror switch if the inspection result is not within the standard value.

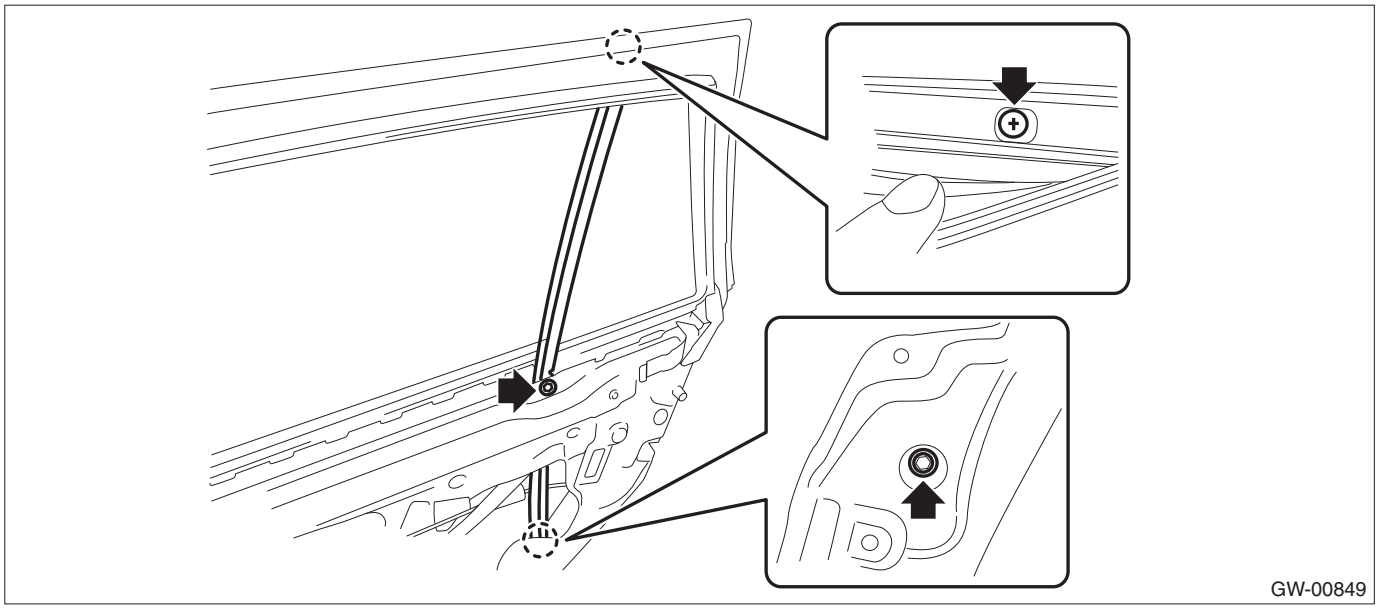
12.Rear Door Glass

A: REMOVAL

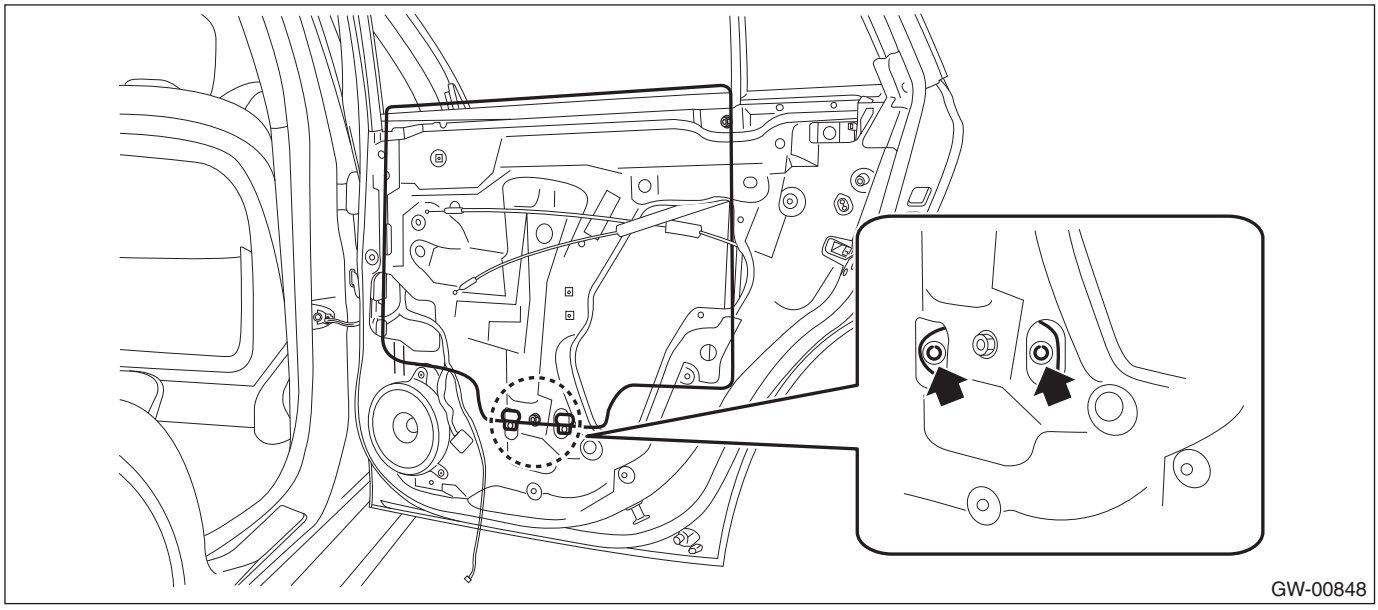
1) Remove the rear door trim. <Ref. to EI-61, REAR DOOR, REMOVAL, Door Trim.>
2) Remove the sealing cover.

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

3) Attach the battery ground cable and power window switch and turn the ignition to ON.
4) Remove the rear door glass.
   (1) Operate the power window switch to move the rear door glass to the lowest position where the mounting bolts can be seen.
   (2) Remove the screw and bolt and remove the door sash.

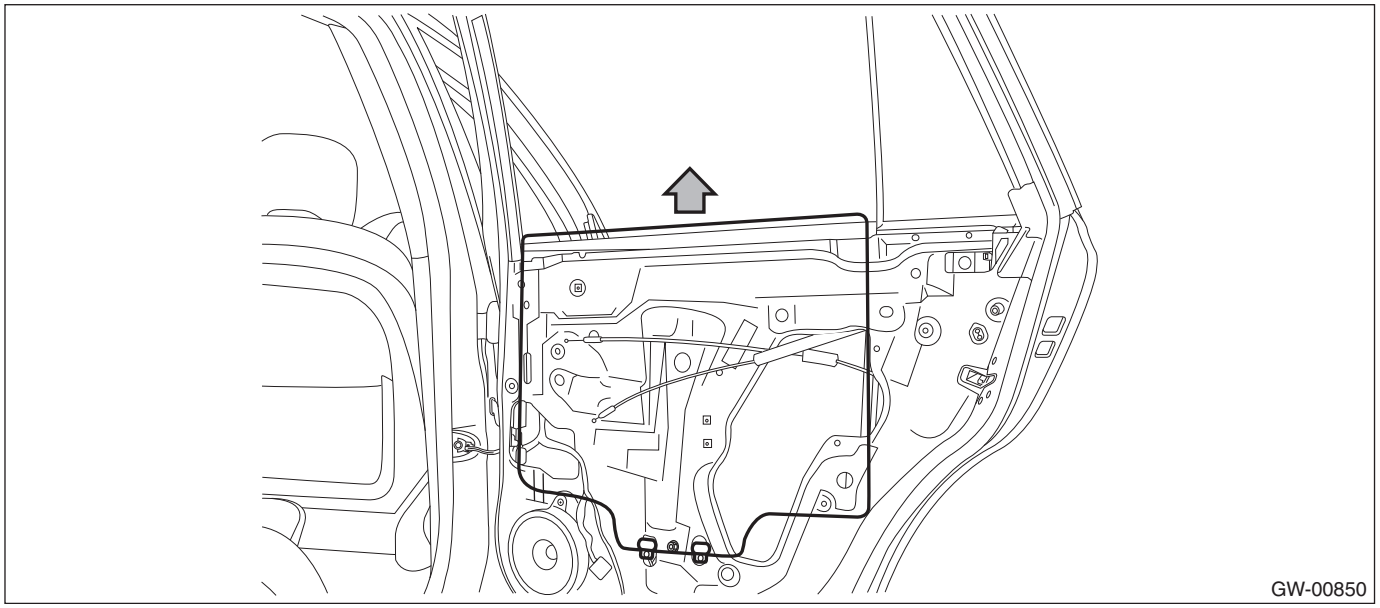

GW-00849

(3) Remove the bolt.


GW-00848

(4) Remove the rear door glass.

CAUTION:
Avoid impact and damage to the glass.



B: INSTALLATION

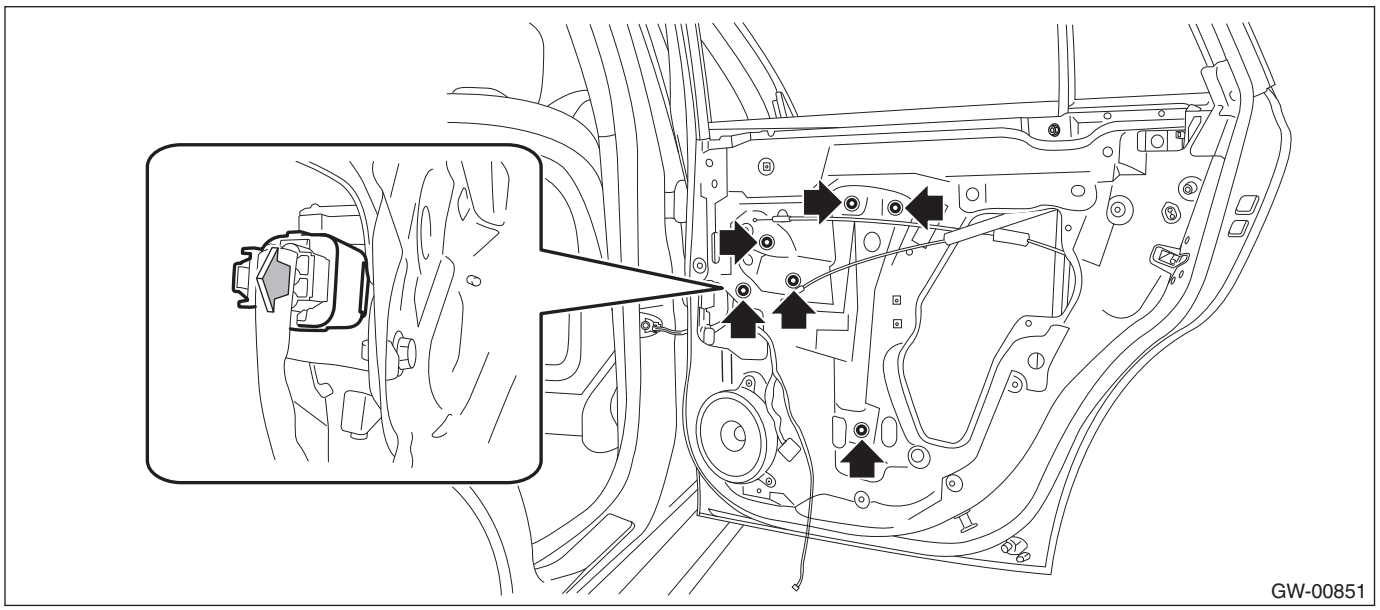
CAUTION:
Make sure that the glass run rubber is placed securely in the door frame and sash.
Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to GW-5, REAR DOOR GLASS, COMPONENT, General Description.>

13.Rear Regulator and Motor Assembly

A: REMOVAL

1) Remove the rear door glass. <Ref. to GW-32, REMOVAL, Rear Door Glass.>
2) Remove the rear regulator and motor assembly.
   (1) Disconnect the connector.
   (2) Remove the six bolts to remove the rear regulator and motor assembly.



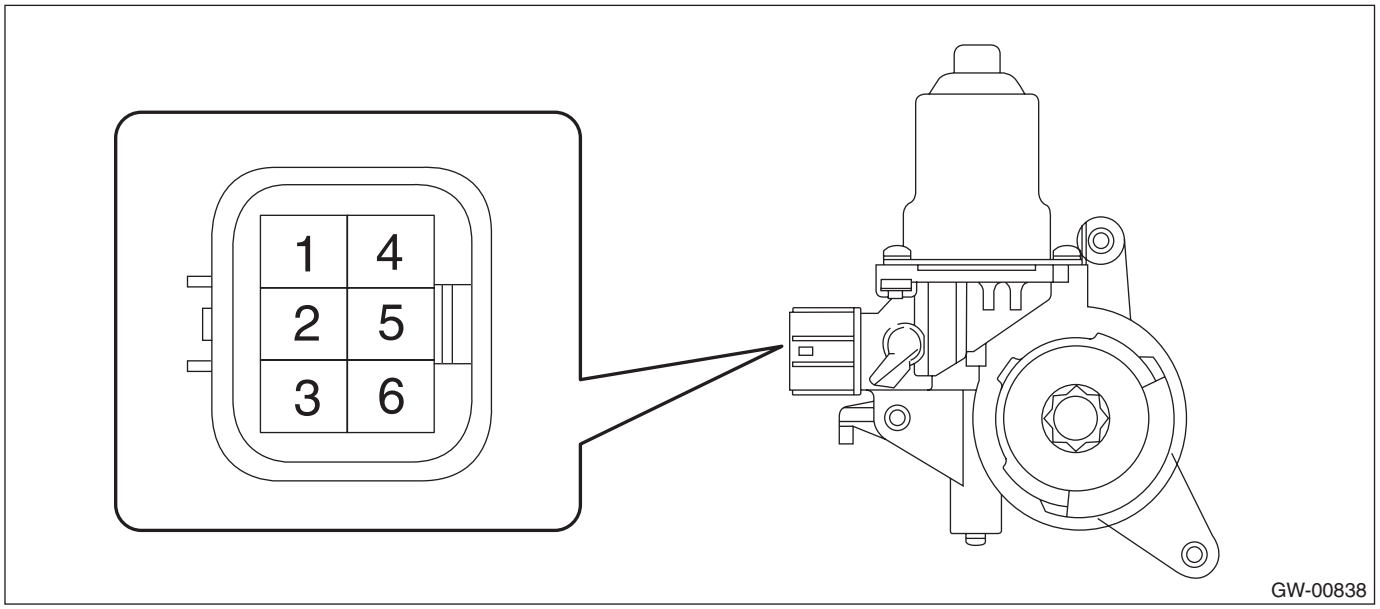
B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to GW-5, REAR DOOR GLASS, COMPONENT, General Description.>

C: INSPECTION

1) Disconnect the motor connector.
2) Apply battery voltage between the motor connector terminals and check the motor operation.



Terminal No.	Inspection conditions	Specification
1 (+) — 4 (–)	Apply battery voltage between terminals.	Increase
4 (+) — 1 (–)	Apply battery voltage between terminals.	Decrease

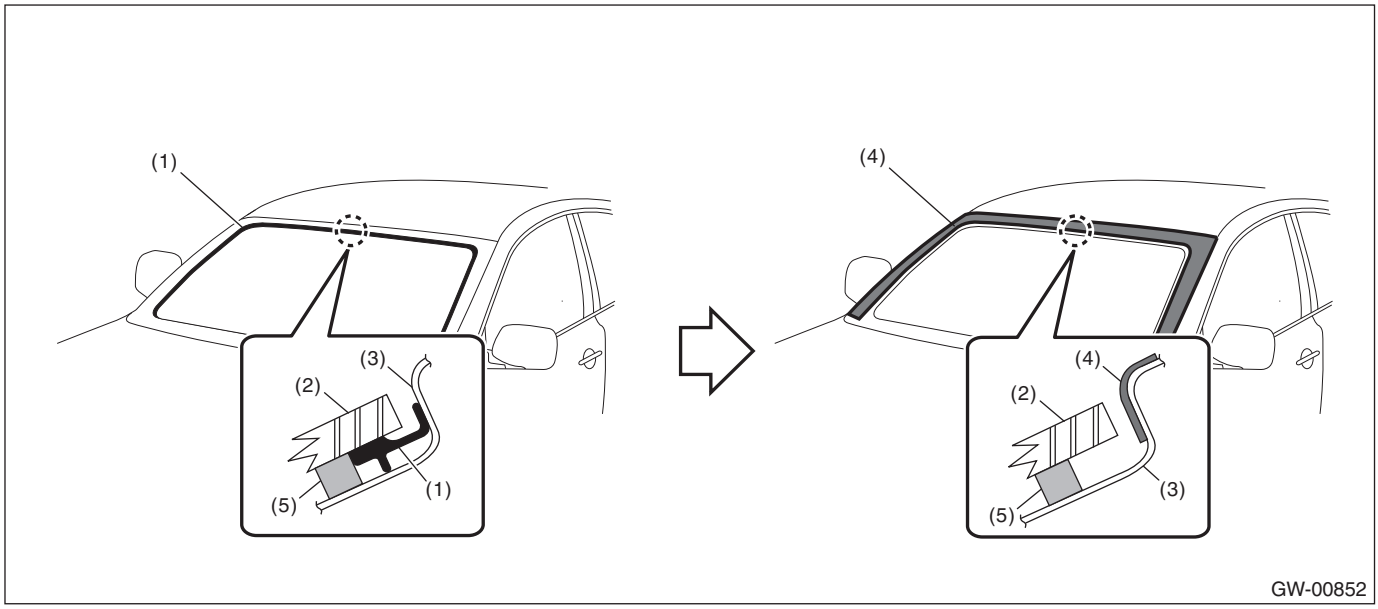
3) If the inspection results in improper operation, replace the rear regulator and motor assembly.

14.Windshield Glass

A: REMOVAL

1. USING WINDSHIELD GLASS KNIFE

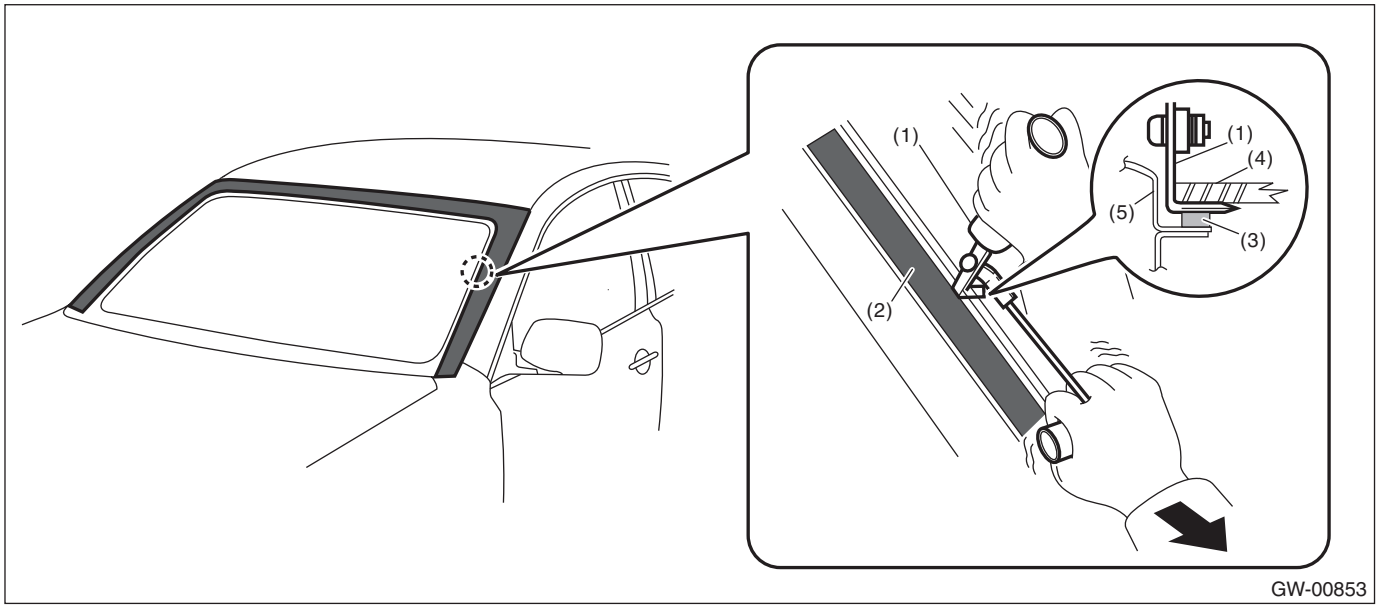
1) Disconnect the ground cable from battery. (Models with wiper deicer)
2) Remove the front pillar trim. <Ref. to EI-101, REMOVAL, Upper Inner Trim.>
3) Disconnect the wiper deicer connector. (Models with wiper deicer)
4) Remove the cowl panel. <Ref. to EI-32, REMOVAL, Cowl Panel.>
5) Remove the molding from the glass and tape the body side of the circumference of windshield glass for protection.



(1) Molding
(2) Windshield glass
(3) Body panel
(4) Protective tape
(5) Adhesive

6) Remove the windshield glass.
(1) Apply sufficient amount of soapy water to the adhesive part and insert the windshield glass knife.
(2) While holding the knife edge and windshield glass edge at a right angle, move the windshield glass knife parallel to the windshield glass edge along the surface and edge of windshield glass to cut the adhesive.

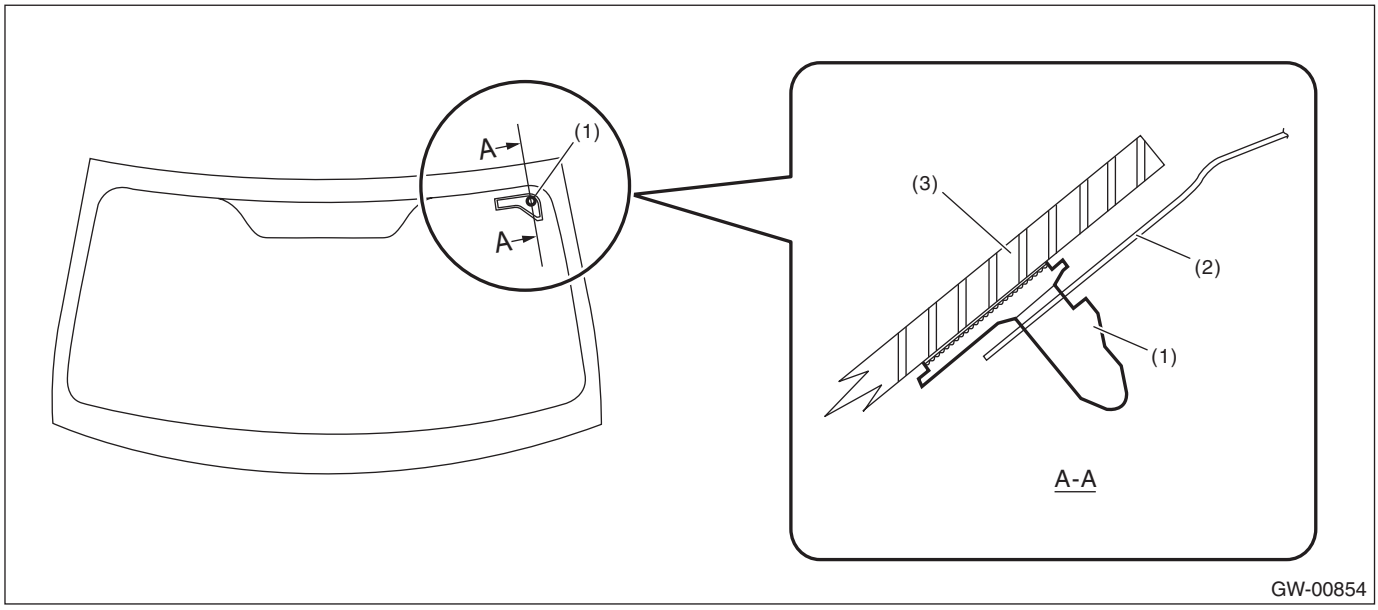
CAUTION:
- **Cutting of adhesive part should be started with wider gap between windshield glass and body.**
- **Never twist the windshield glass knife.**



(1) Windshield glass knife
(2) Protective tape
(3) Adhesive
(4) Windshield glass
(5) Body panel

(3) Disconnect the locating pin and remove the windshield glass.

NOTE:
The locating pins are bonded to the corners of glass. Use piano wire to disconnect the pins.

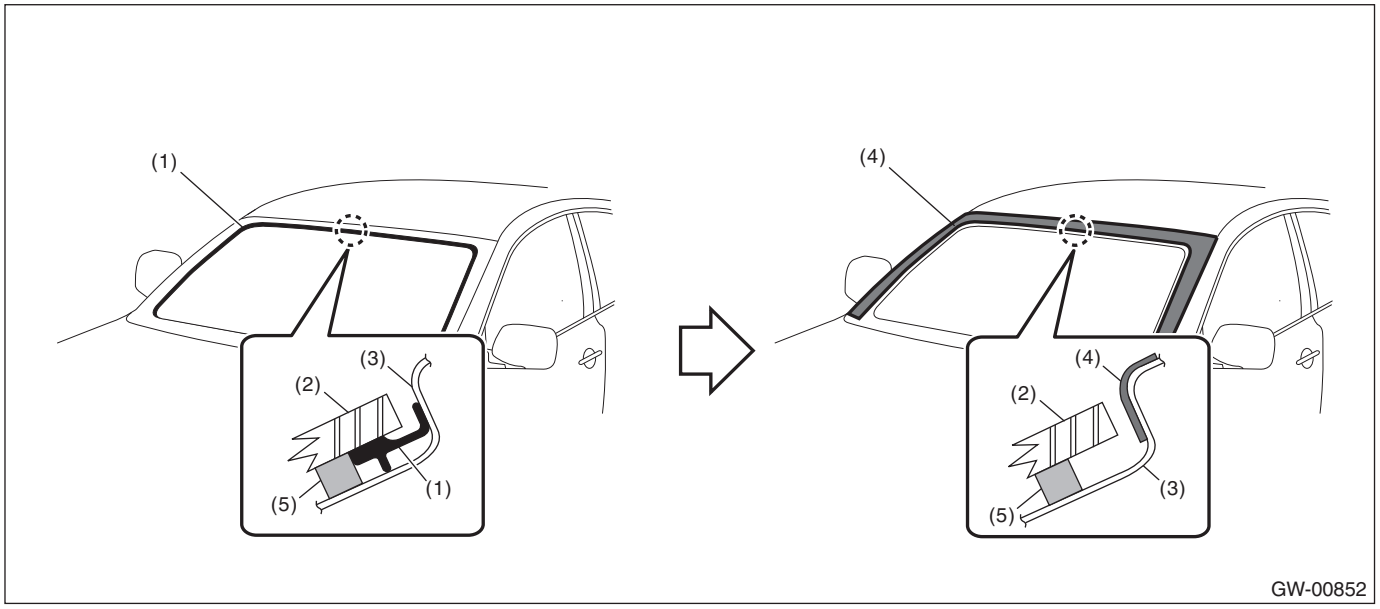


(1) Locating pin
(2) Body panel
(3) Windshield glass

2. USING PIANO WIRE

CAUTION:
- **Do not tightly pull the piano wire against the windshield glass edge.**
- **Apply protective tape, etc., and be careful not to damage interior and exterior parts.**
- **Do not cross piano wires. Otherwise they may be cut.**

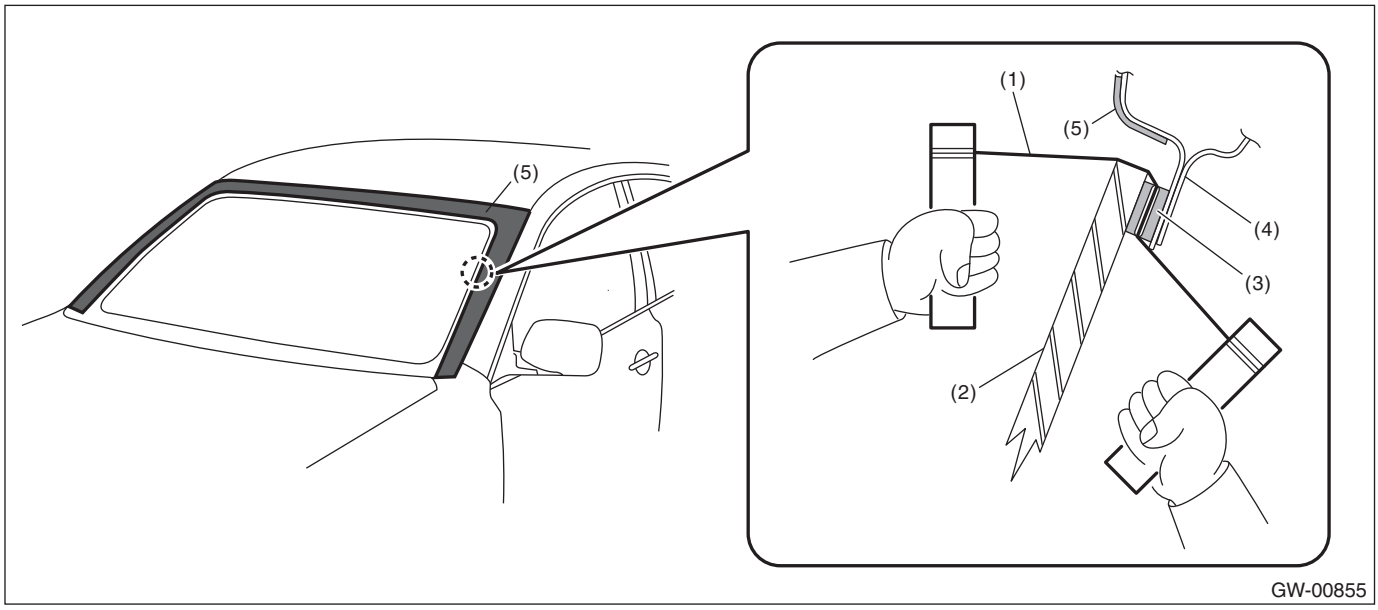
1) Disconnect the ground cable from battery. (Models with wiper deicer)
2) Remove the front pillar trim. <Ref. to EI-101, REMOVAL, Upper Inner Trim.>
3) Disconnect the wiper deicer connector. (Models with wiper deicer)
4) Remove the cowl panel. <Ref. to EI-32, REMOVAL, Cowl Panel.>
5) Remove the molding from the glass and tape the body side of the circumference of windshield glass for protection.



(1) Molding
(2) Windshield glass
(3) Body panel
(4) Protective tape
(5) Adhesive

6) Remove the windshield glass.
(1) Using a drill, make a hole in the adhesive part.
(2) Pass the piano wire through the hole, and pull the wire ends alternately to cut off the adhesive part and locating pin.

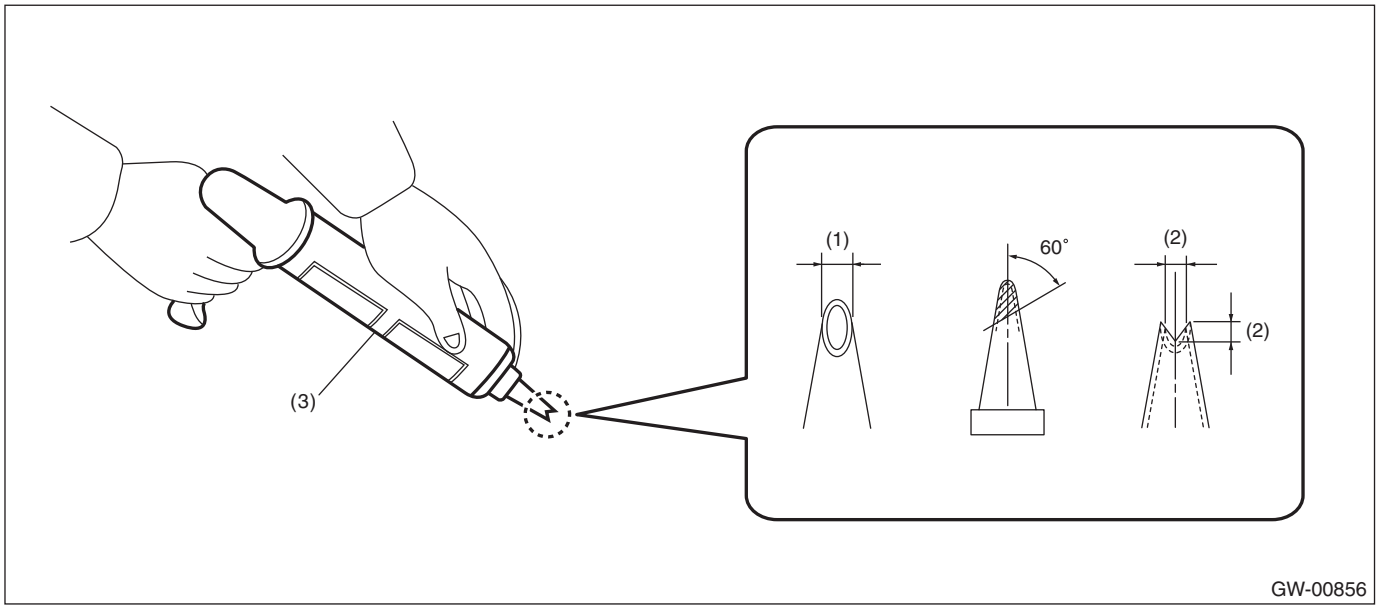
CAUTION:
Attach a piece of wood to both piano wire ends.



(1) Piano wire
(2) Windshield glass
(3) Adhesive
(4) Body panel
(5) Protective tape

B: INSTALLATION

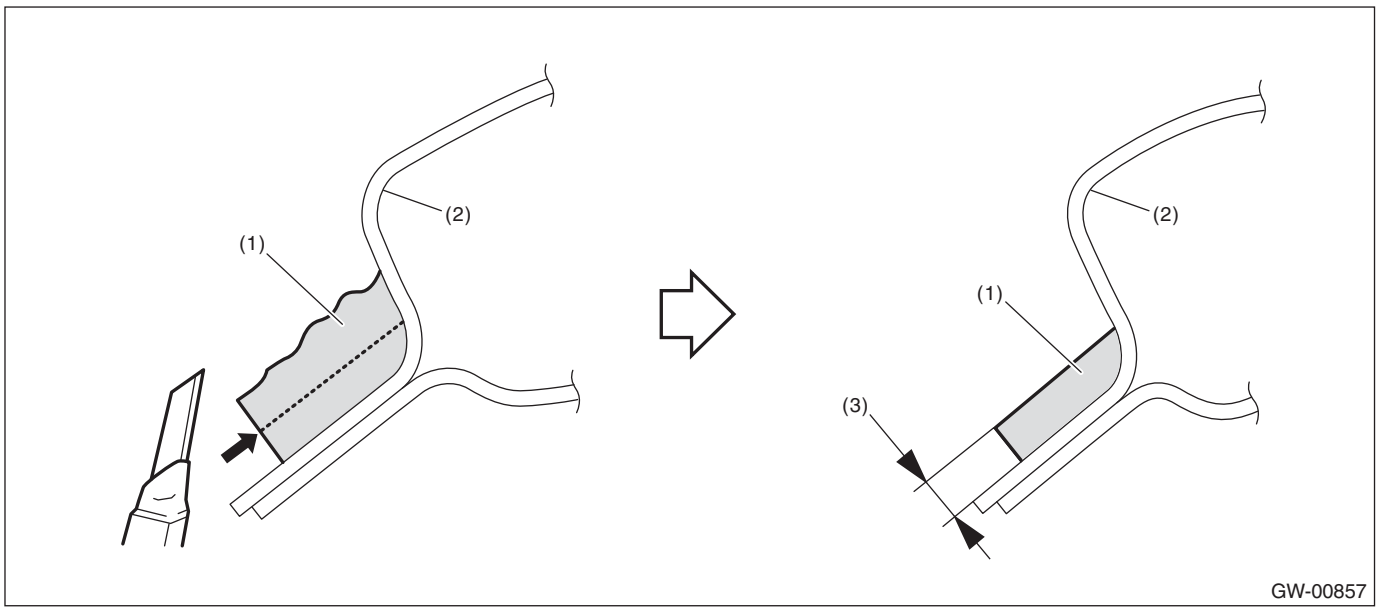
1) Cut the cartridge nozzle tip as shown in the figure, and set the adhesive in the sealant gun.



(1) 10 mm (0.39 in)
(2) 8 mm (0.31 in)
(3) Sealant gun

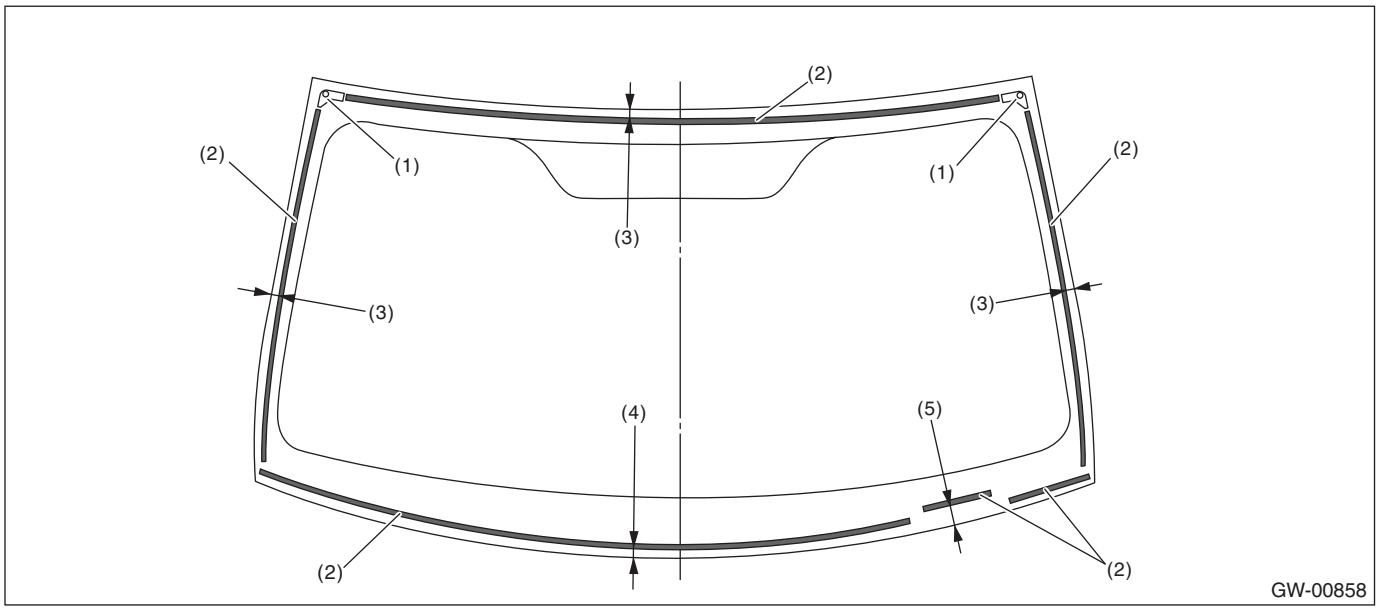
2) Remove the adhesive layer on the body using cutter knife to obtain smooth face of 2 mm (0.08 in) thick.

CAUTION:
- **Be careful not to damage the body and paint surface.**
- **Be sure to keep some of old adhesive.**



(1) Adhesive (2) Body panel (3) 2 mm (0.08 in)

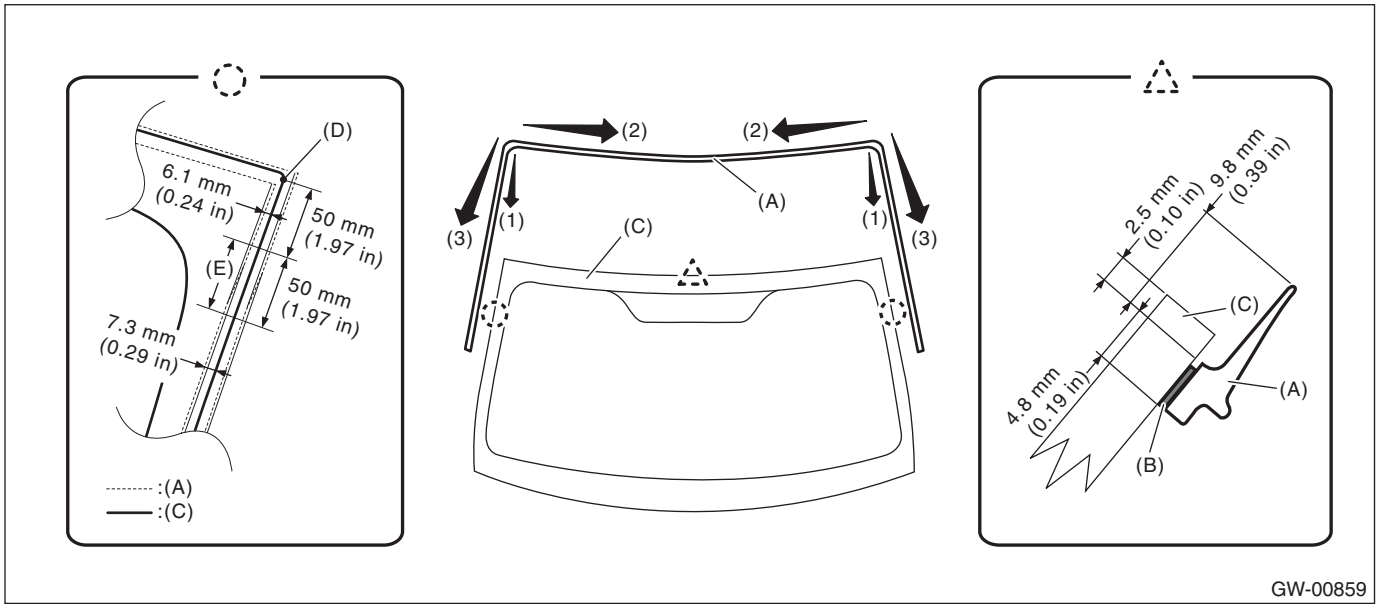
3) Clean the glass and body with alcohol or white gasoline to eliminate cutting powder, dust and dirt completely.
4) Attach the dam rubber to the glass.



(1) Locating pin (3) 15 mm (0.59 in) (5) 23.5 mm (0.92 in)
(2) Dam rubber (4) 13.5 mm (0.53 in)

5) Attach the molding to the glass.

CAUTION:
Be careful to attach the molding so that the molding has no loose or undulating part.



(1) Align the molding (A) to the upper ends of the windshield glass (C).
(2) Attach the molding from the upper corners towards the center.
(3) Attach the molding from the upper corners downward.

NOTE:
Change the molding installation width within the gradual change range (E) based on the curve end point on the upper end of side area (D).

(4) Firmly apply the double sided tape (B) of the molding evenly to the glass surface.

6) Install the windshield glass.
(1) Using a sponge, apply primer to the glass side and body side adhesive surfaces.

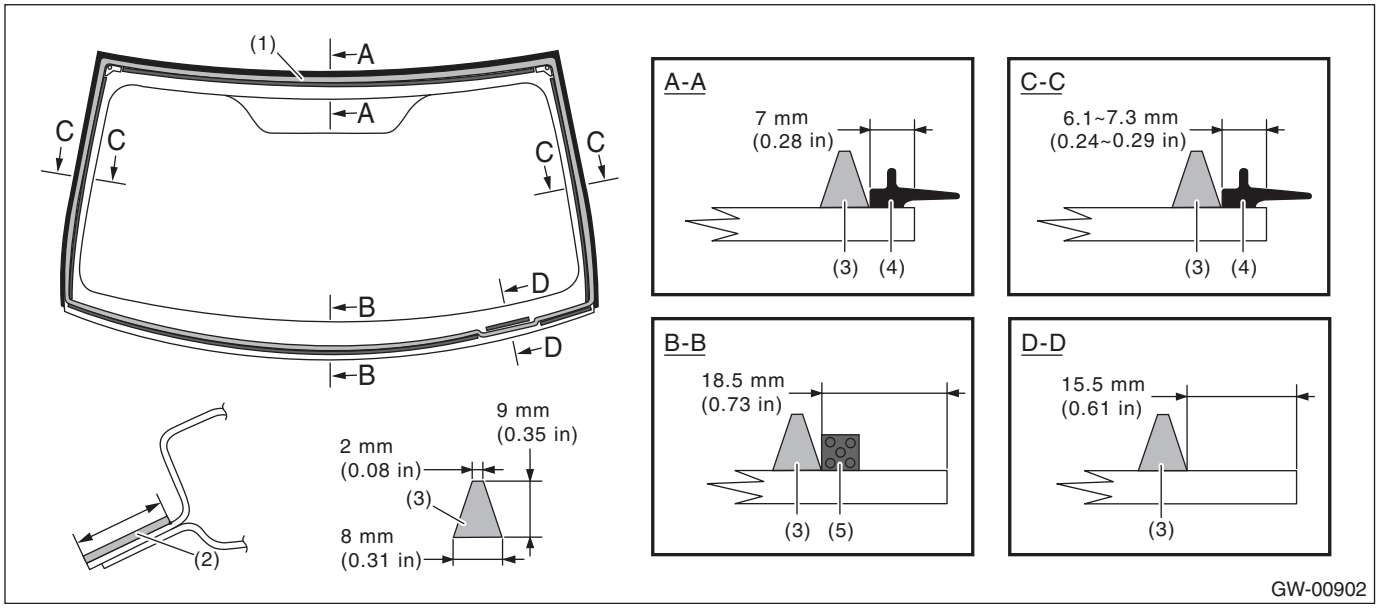
Glass primer:
Dow Automotive's
ESSEX U-401, U-402 or equivalent

Painted surface primer:
Dow Automotive's
ESSEX U-413 or equivalent

NOTE:
- Primer once attached to the painted surface of the body and internal trim is hard to wipe off. Mask the circumference of such area.
- Let primer dry for about ten minutes before installing the glass.
- Do not touch the surface coated with primer.

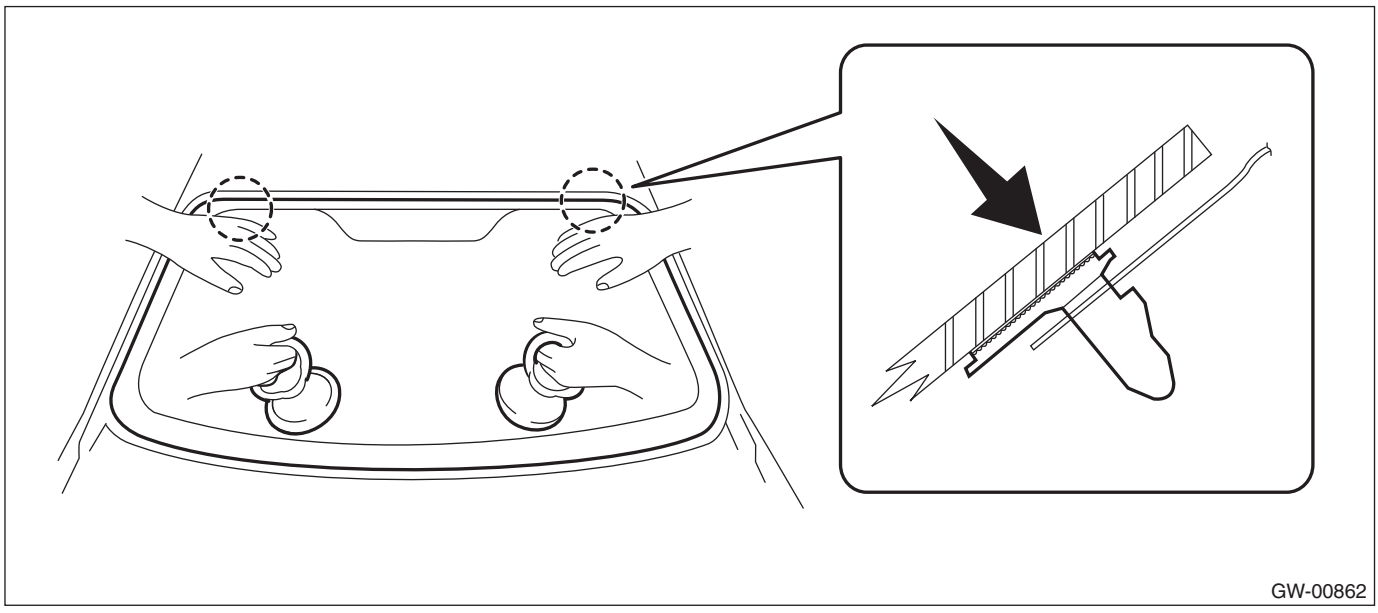
(2) Apply adhesive to the glass end back surface.

Adhesive:
Dow Automotive's
ESSEX U-400HV or equivalent



(1) Application of primer (glass side)
(2) Application of primer (body side)
(3) Adhesive
(4) Molding
(5) Dam rubber

(3) Using suction rubber cups, fit the locator pins into the body side, and attach the windshield glass.



(4) Lightly press the entire perimeter of windshield glass for tight fit.
(5) Make flush the adhesive surface jutted out using spatula.

7) After completion of all work, allow the vehicle to stand for about 24 hours.

NOTE:
• When door is opened/closed after glass is bonded, always lower the door glass first, and then open/close it carefully.
• Move the vehicle slowly.
• For minimum drying time and vehicle standing time before driving after bonding, follow instructions or instruction manual from the adhesive manufacturer.

8) After curing of adhesive, pour the water on external surface of vehicle to check that there are no water leaks.

NOTE:
When a vehicle is returned to the user, tell him or her that the vehicle should not be subjected to heavy impact for at least three days.

9) Install the cowl panel. <Ref. to EI-34, INSTALLATION, Cowl Panel.>
10) Connect the wiper deicer connector. (Models with wiper deicer)
11) Install the front pillar trim. <Ref. to EI-106, INSTALLATION, Upper Inner Trim.>

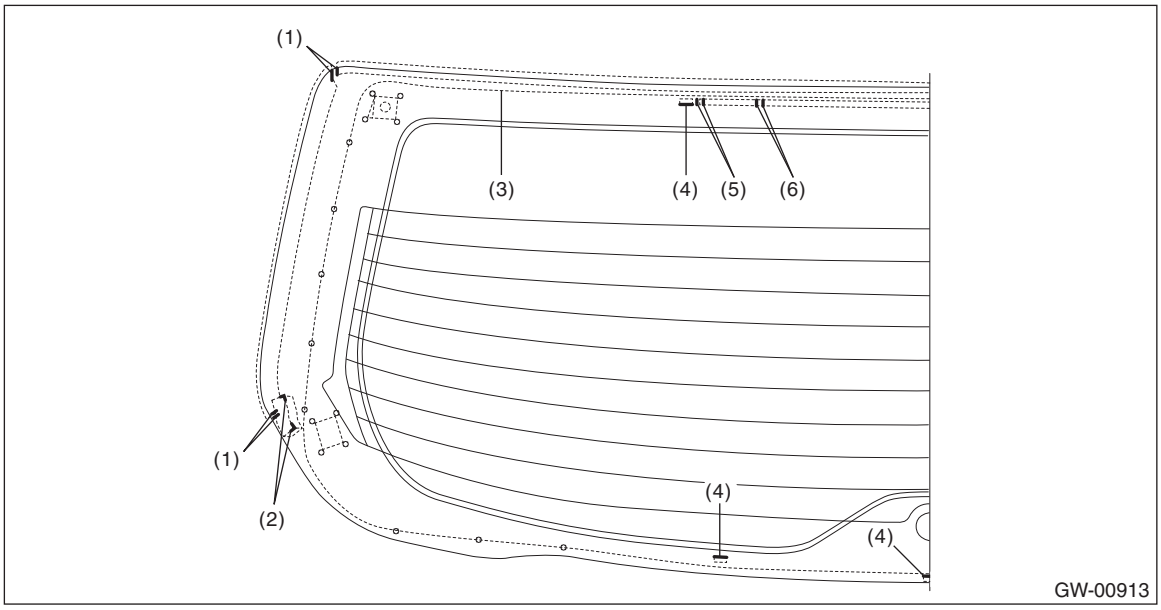
15.Rear Gate Glass

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the rear gate trim. <Ref. to EI-157, REMOVAL, Rear Gate Trim.>
3) Remove the rear gate garnish. <Ref. to EI-161, REMOVAL, Rear Gate Garnish.>
4) Remove the rear wiper motor. <Ref. to WW-37, REMOVAL, Rear Wiper Motor.>
5) Disconnect the rear defogger connector and radio antenna connector.
6) Remove the rear gate in the same procedure as for windshield glass. <Ref. to GW-36, REMOVAL, Windshield Glass.>

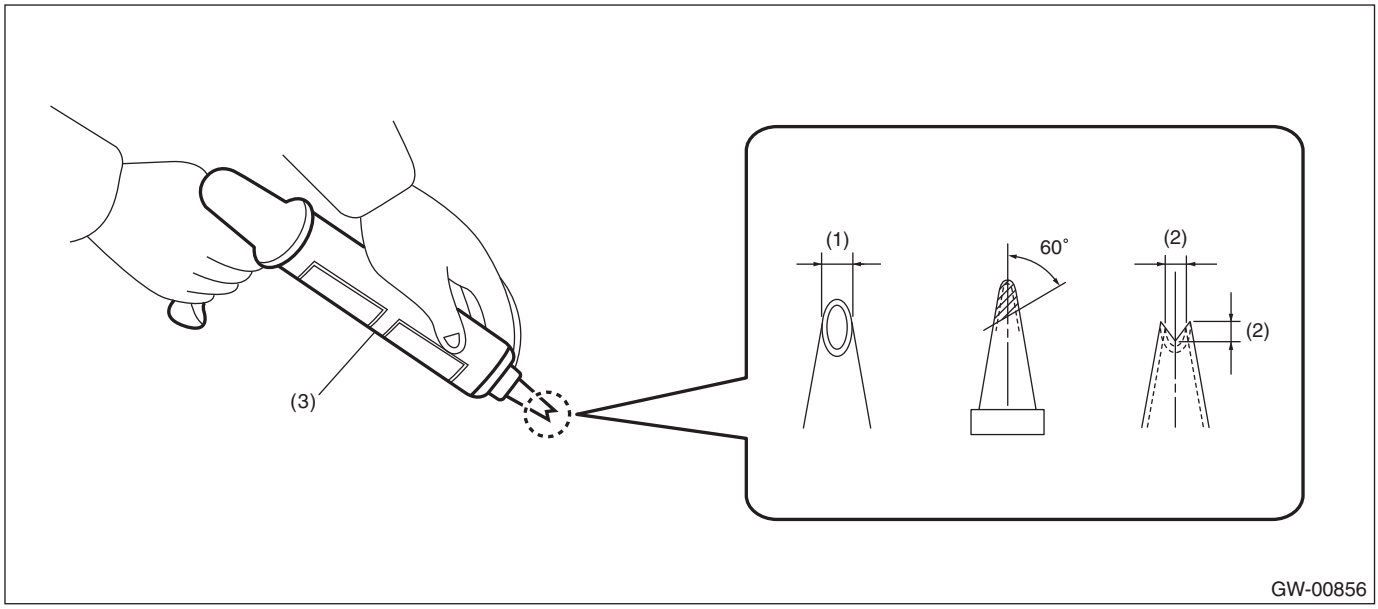
B: INSTALLATION

NOTE:
When applying adhesive and installing the dam rubber and molding, refer to Ag printing as a mark.



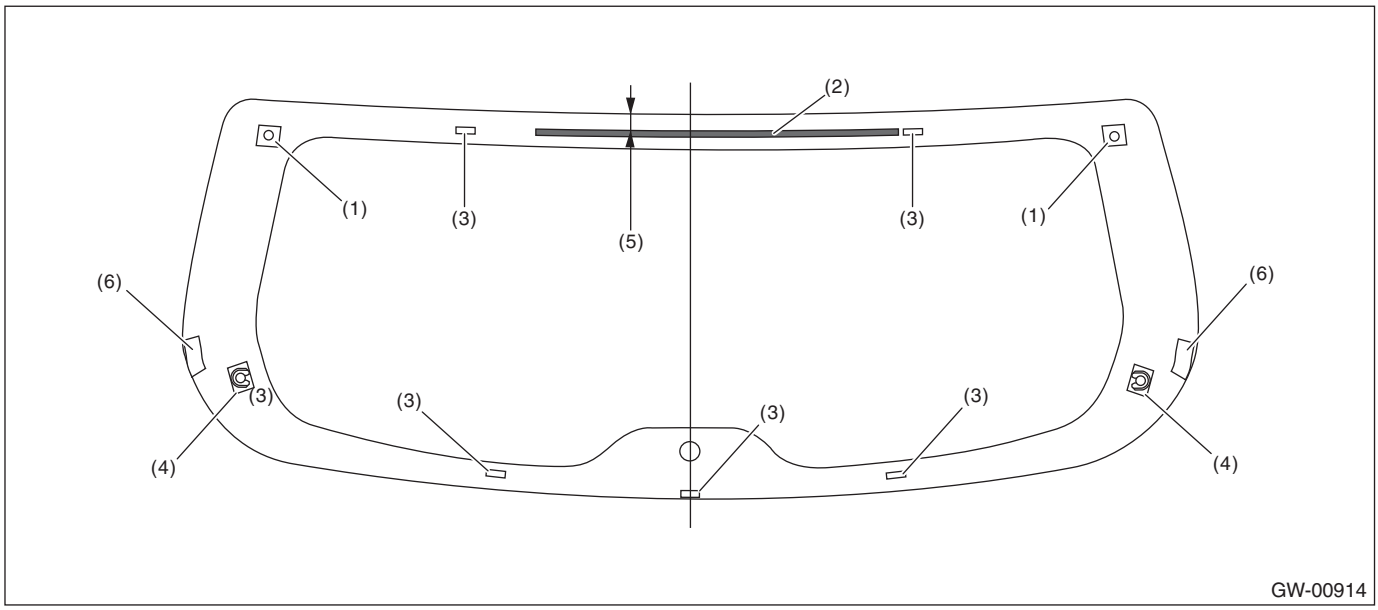
(1) Molding edge
(2) EPT SEALER edge
(3) Adhesive line
(4) Spacer edge
(5) Dam rubber edge (LH)
(6) Dam rubber edge (RH)

1) Cut the cartridge nozzle tip as shown in the figure, and set the adhesive in the sealant gun.



(1) 10 mm (0.39 in) (2) 8 mm (0.31 in) (3) Sealant gun

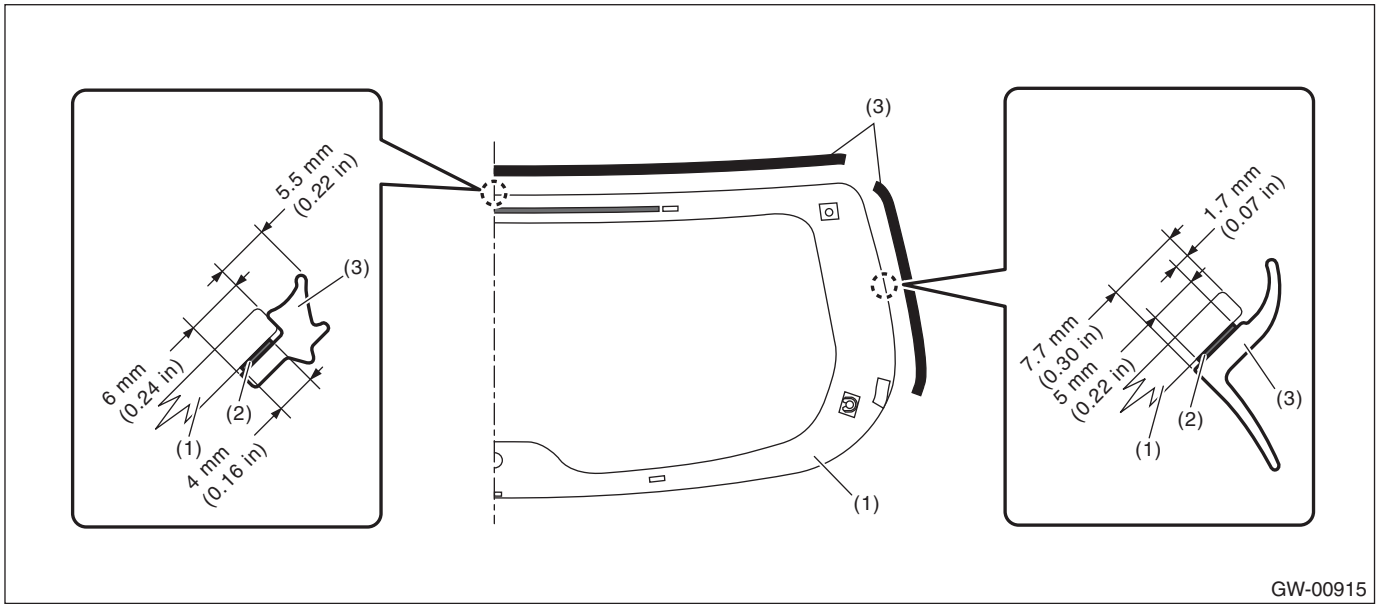
2) Prepare and clean the adhesion surfaces of the glass and body using the same procedures as for the windshield glass. <Ref. to GW-39, INSTALLATION, Windshield Glass.>
3) Attach the dam rubber to the glass.



(1) Locating pin (3) SPACER (5) 15 mm (0.59 in)
(2) Dam rubber (4) HOLDER (6) EPT sealer

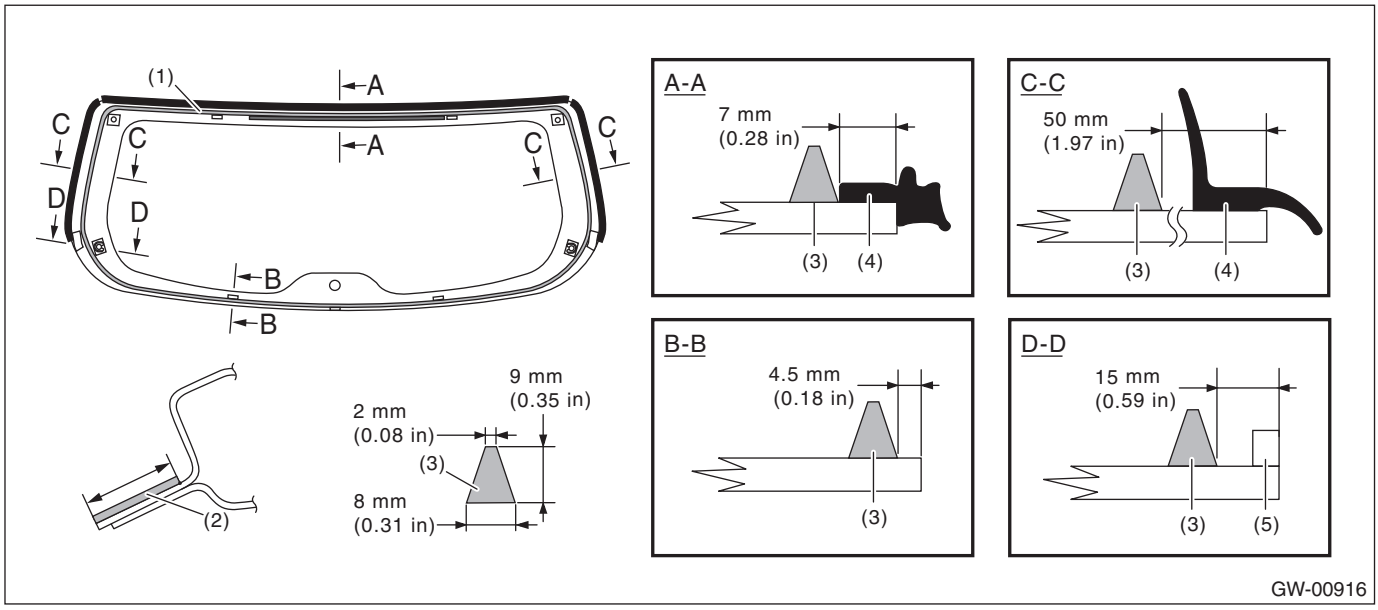
4) Attach the molding to the glass.

CAUTION:
Be careful to attach the molding so that the molding has no loose or undulating part.



(1) Rear gate glass (2) Double-sided tape (3) Molding

5) Install the rear gate glass.
(1) Using a sponge, apply primer to the glass side and body side adhesive surfaces.
(2) Apply adhesive to the glass end back surface.



(1) Application of primer (glass side) (3) Adhesive (5) EPT sealer
(2) Application of primer (body side) (4) Molding

(3) Attach the clip to the rear gate glass holder.
(4) Insert the glass locating pins in the rear gate panel holes and install the rear gate glass.
(5) Lightly press the entire perimeter of rear gate glass for tight fit.
(6) Make flush the adhesive surface jutted out using spatula.

6) After completion of all work, allow the vehicle to stand for about 24 hours.

NOTE:
• When door is opened/closed after glass is bonded, always lower the door glass first, and then open/close it carefully.
• Move the vehicle slowly.
• For minimum drying time and vehicle standing time before driving after bonding, follow instructions or instruction manual from the adhesive manufacturer.

7) After curing of adhesive, pour the water on external surface of vehicle to check that there are no water leaks.

NOTE:
When a vehicle is returned to the user, tell him or her that the vehicle should not be subjected to heavy impact for at least three days.

8) Connect the rear defogger connector and radio antenna connector.
9) Install the rear wiper motor. <Ref. to WW-40, INSTALLATION, Rear Wiper Motor.>
10) Install the rear gate garnish. <Ref. to EI-163, INSTALLATION, Rear Gate Garnish.>
11) Install the rear gate trim. <Ref. to EI-158, INSTALLATION, Rear Gate Trim.>

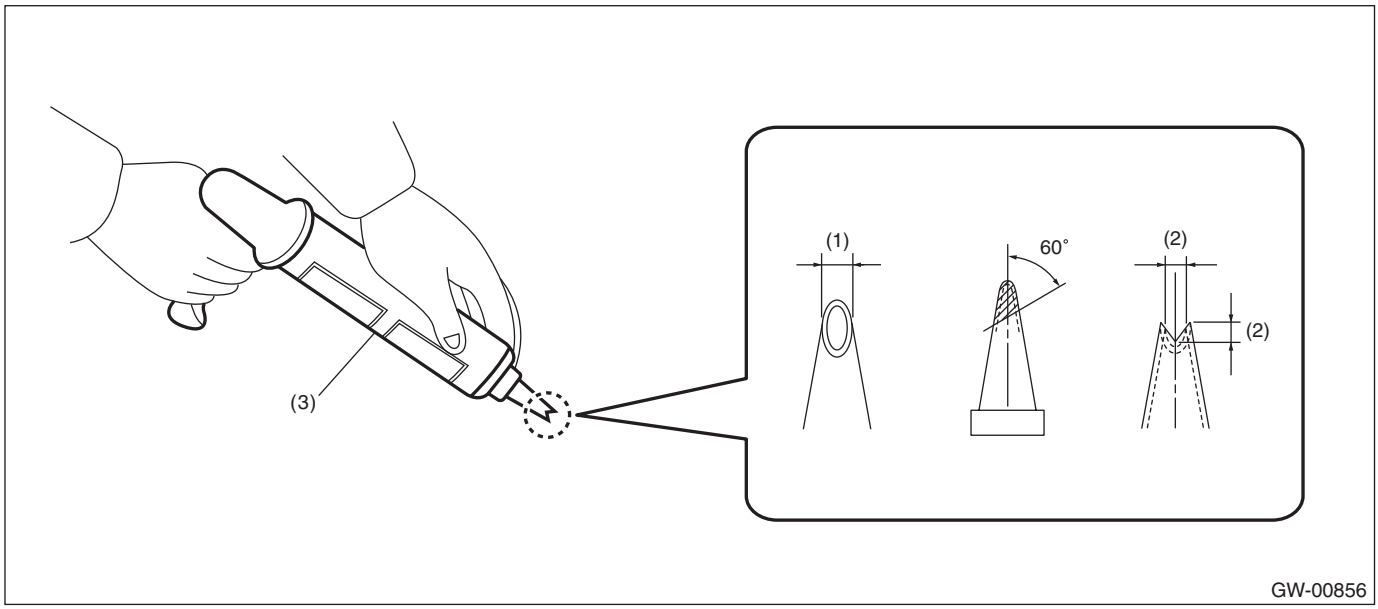
16.Rear Window Glass

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Disconnect the rear defogger connector and radio antenna connector.
3) Remove the glass in the same procedure as for windshield glass. <Ref. to GW-36, REMOVAL, Windshield Glass.>

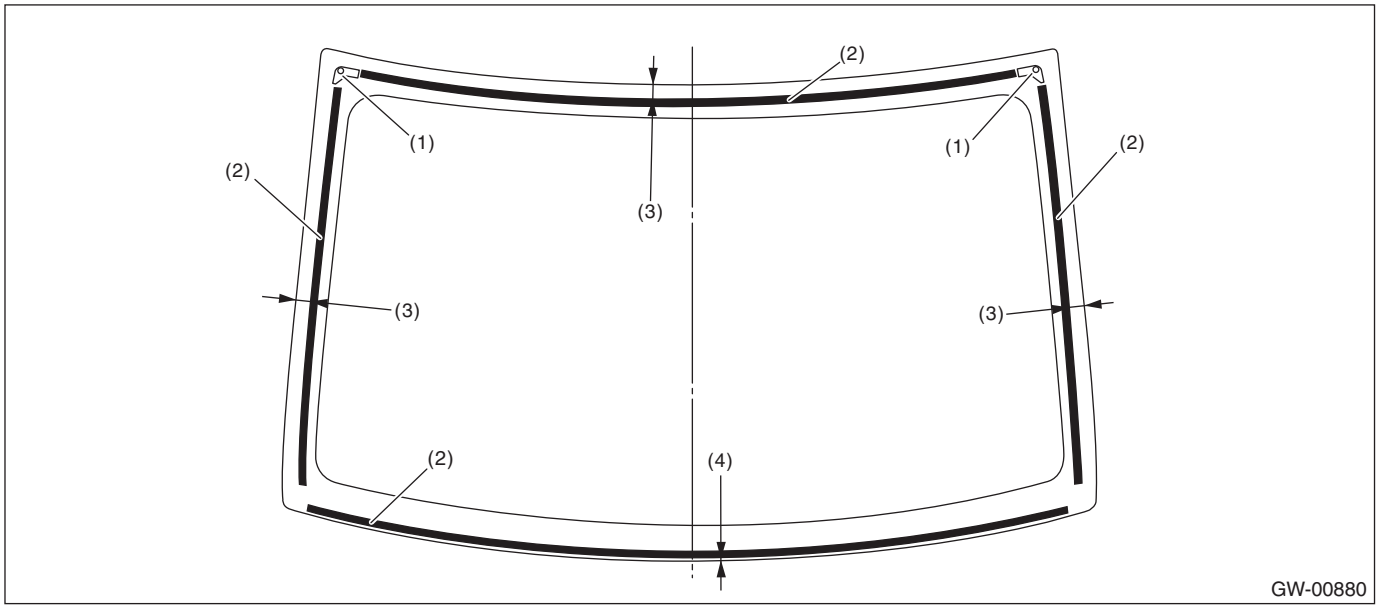
B: INSTALLATION

1) Cut the cartridge nozzle tip as shown in the figure, and set the adhesive in the sealant gun.



(1) 10 mm (0.39 in) (2) 8 mm (0.31 in) (3) Sealant gun

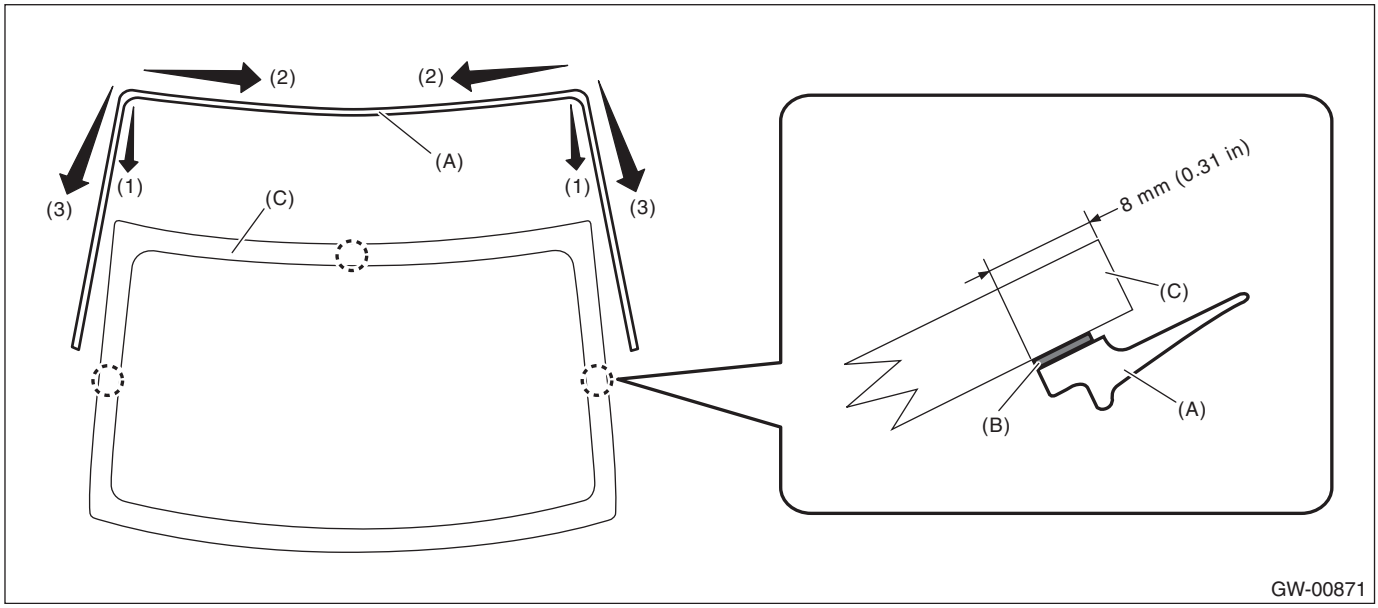
2) Prepare and clean the adhesion surfaces of the glass and body using the same procedures as for the windshield glass. <Ref. to GW-39, INSTALLATION, Windshield Glass.>
3) Attach the dam rubber to the glass.



(1) Locating pin (3) 16 mm (0.63 in) (4) 1 mm (0.04 in)
(2) Dam rubber

4) Attach the molding to the glass.

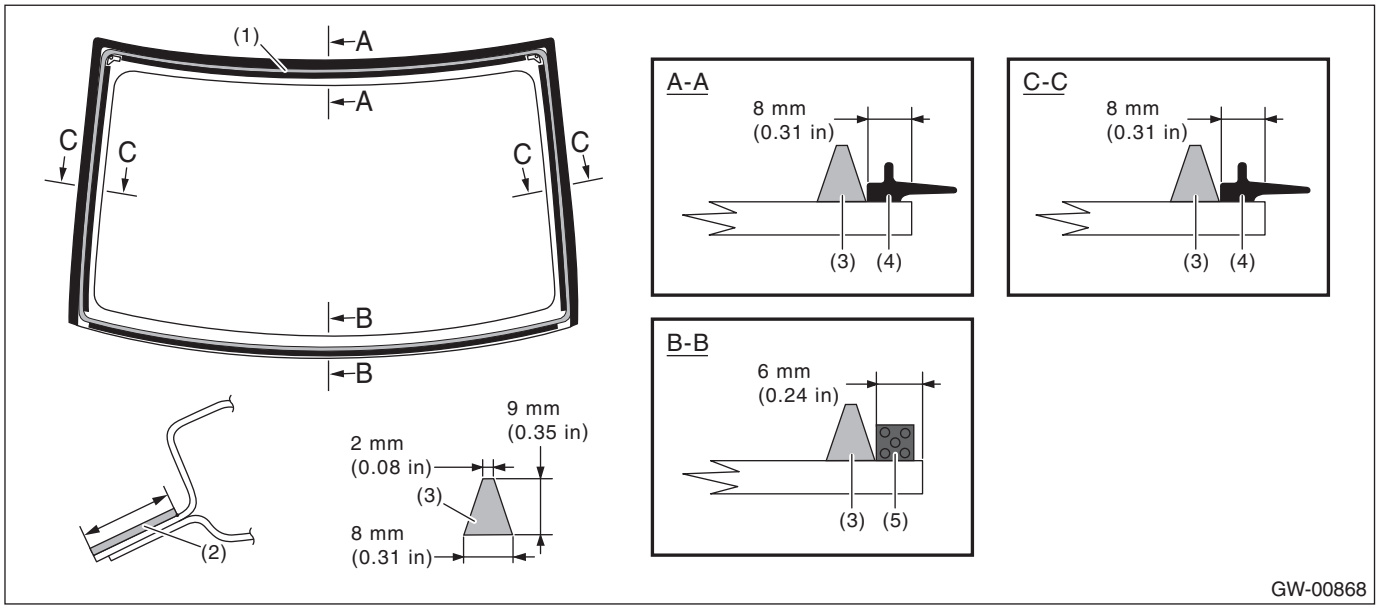
CAUTION:
Be careful to attach the molding so that the molding has no loose or undulating part.



(1) Align the molding (A) to the upper ends of the glass (C).
(2) Attach the molding from the upper corners towards the center.
(3) Attach the molding from the upper corners downward.
(4) Firmly apply the double sided tape (B) of the molding evenly to the glass surface.

5) Install the rear glass in the same procedure as for windshield glass. <Ref. to GW-39, INSTALLATION, Windshield Glass.>

(1) Using a sponge, apply primer to the glass side and body side adhesive surfaces.
(2) Apply adhesive to the glass end back surface.



(1) Application of primer (glass side)
(2) Application of primer (body side)
(3) Adhesive
(4) Molding
(5) Dam rubber

(3) Insert the glass locating pins in the rear panel holes and install the rear glass.
(4) Lightly press the entire perimeter of rear glass for tight fit.
(5) Make flush the adhesive surface jutted out using spatula.

6) After completion of all work, allow the vehicle to stand for about 24 hours.

NOTE:
• When door is opened/closed after glass is bonded, always lower the door glass first, and then open/close it carefully.
• Move the vehicle slowly.
• For minimum drying time and vehicle standing time before driving after bonding, follow instructions or instruction manual from the adhesive manufacturer.

7) After curing of adhesive, pour the water on external surface of vehicle to check that there are no water leaks.

NOTE:
When a vehicle is returned to the user, tell him or her that the vehicle should not be subjected to heavy impact for at least three days.

8) Connect the rear defogger connector and radio antenna connector.

17. Rear Window Defogger System

A: WIRING DIAGRAM

Refer to “Rear Defogger System” in the wiring diagram. <Ref. to WI-192, WIRING DIAGRAM, Rear Defogger System.>

B: INSPECTION

1. CHECK SYSTEM

Symptoms	Inspection order
Rear window defogger does not operate.	1. Check the fuse. 2. Check the rear defogger relay. 3. Check the defogger switch. 4. Check the heat wire. 5. Check the wiring harness. 6. Check body integrated unit.

NOTE:
Rear window defogger system can be customized on the Subaru Select Monitor, when the body integrated unit customize setting {A/C ECM setting} is “support”.

System name	Initial setting	Customize setting
Rr defogger op. mode	OFF after 15 min.	Repeat 15 min. operation and 2 min. stop.

2. CHECK WITH SUBARU SELECT MONITOR

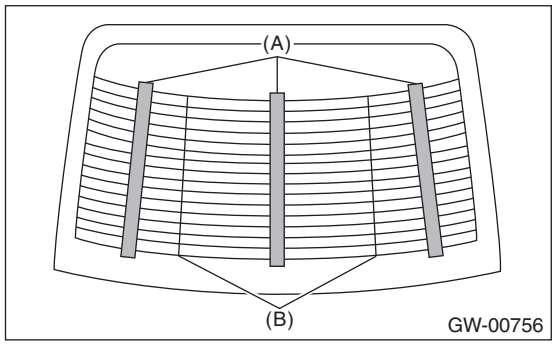
CAUTION:
Check whether the “Rr defogger op. mode” setting is in initial setting or customize setting before performing inspection.

1) Check the input signal when the rear window defogger switch is operated using Subaru Select Monitor.
   (1) Prepare the Subaru Select Monitor. <Ref. to GW-7, PREPARATION TOOL, General Description.>
   (2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”.
   (3) On «System Selection Menu» display, select {Integ. unit mode}.
   (4) Select the {R defogger output} on {Current Data Display & Save}.
   (5) Check the displayed data (ON/OFF) by operating the rear window defogger switch.
2) Check the operation with rear window defogger switch ON.
• When customize setting is set as «Continuous», it is normal if the 15-minute operation and 2-minute stop repeats.
• When customize setting is «Normal», it is normal if the operation lasts for 15 minutes and then turns OFF.
3) When the operation in 2) above fails, replace the body integrated unit.

3. HEAT WIRE INSPECTION

CAUTION:
Use a dry soft cloth to wipe off dirt on the glass along the heat wires with care not to damage the heat wires.

1) Inspect the following inspection tools.
• Liquid crystal thermograph sheet (size: approx. 300 × 300 mm (11.8 × 11.8 in), heat sensing temperature: approx. 35 — 40°C (95 — 104°F))
• Aluminum foil
2) Turn the ignition switch to ON.
3) Turn the defogger switch to ON.
4) Push the liquid crystal thermograph sheet on to the outer surface of the rear glass.



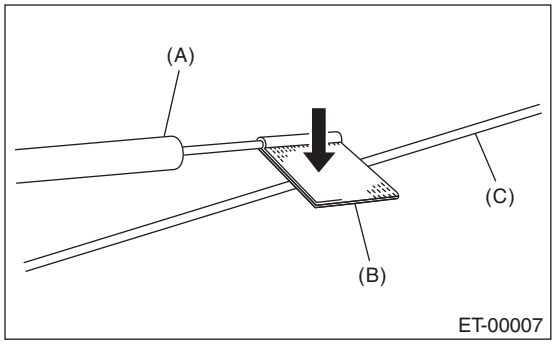
(A) Liquid crystal thermograph sheet
(B) Parting line

NOTE:
Use the liquid crystal thermograph sheet to each section divided by parting lines.
5) Check the color of the liquid crystal thermograph sheet to identify the faulty heat wire.

Liquid crystal thermograph sheet	Criteria
Changed (red → blue)	Normal operation
No change (black)	Open

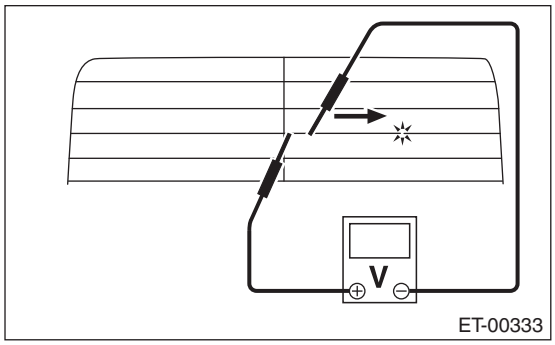
NOTE:
• If the response of the liquid crystal thermograph sheet is not sufficient, try the inspection on the inner surface of the glass.
• The time until color change depends on the glass surface temperature.

6) Wrap the aluminum foil around the tip of each tester probe and push them on to the faulty heat wire.



(A) Tester probe
(B) Aluminum foil
(C) Heat wire

7) To both ends of the section that has been found to include an open in the step 5), apply the tester positive (+) probe and the negative (–) probe.
8) Slowly move the negative (–) tester probe along the heat wire. While moving the tester probe, find an open point where the voltage reading changes from 0.

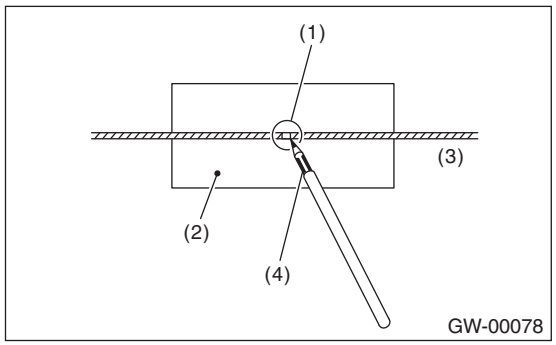


9) Repair the heat wire that determines the place of the open circuit. <Ref. to GW-52, REPAIR, Rear Window Defogger System.>

C: REPAIR

1) Clean the broken portion with alcohol or white gasoline.
2) Mask both side of wire with masking tape.
3) Apply conductive silver composition to the damaged point.

Conductive silver composition:
Permatex
QUICK GRID



(1) Broken portion
(2) Masking tape
(3) Broken wire
(4) Conductive silver composition

4) After applying conductive silver composition, dry it using a drier.
5) After repair, check the wire.

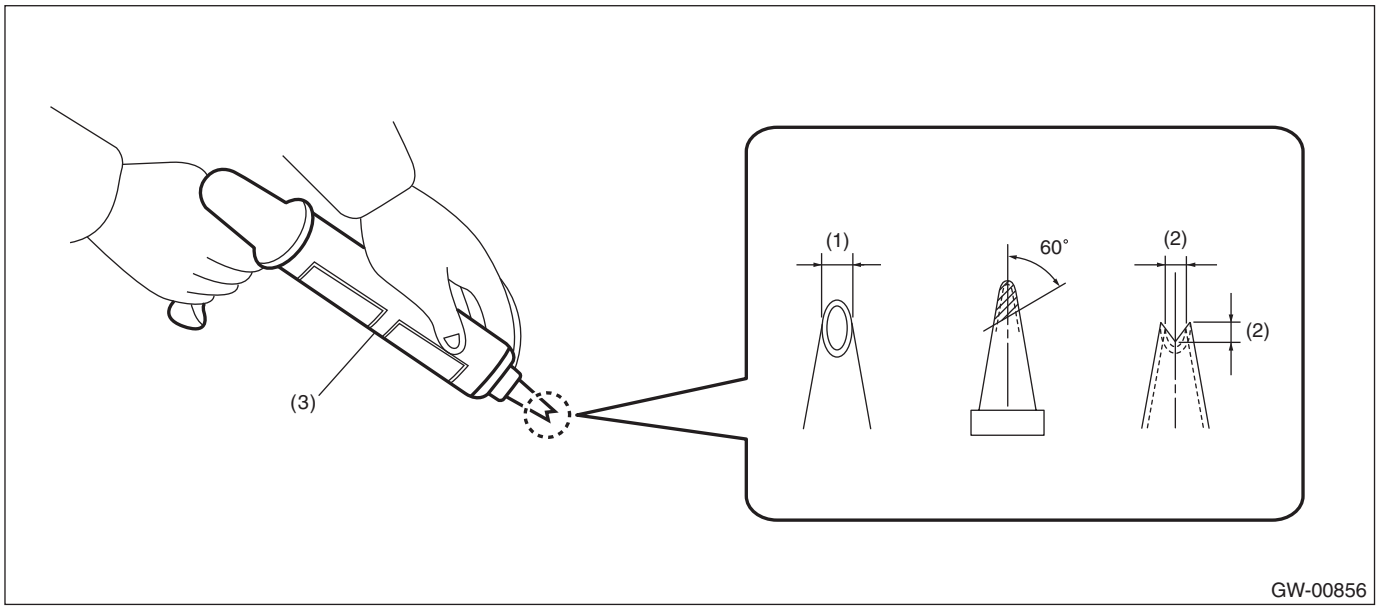
18.Rear Quarter Glass

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the rear quarter trim. <Ref. to EI-114, OUTBACK MODEL, REMOVAL, Rear Quarter Trim.>
3) Remove the rear quarter glass in the same procedure as for windshield glass. <Ref. to GW-36, REMOVAL, Windshield Glass.>

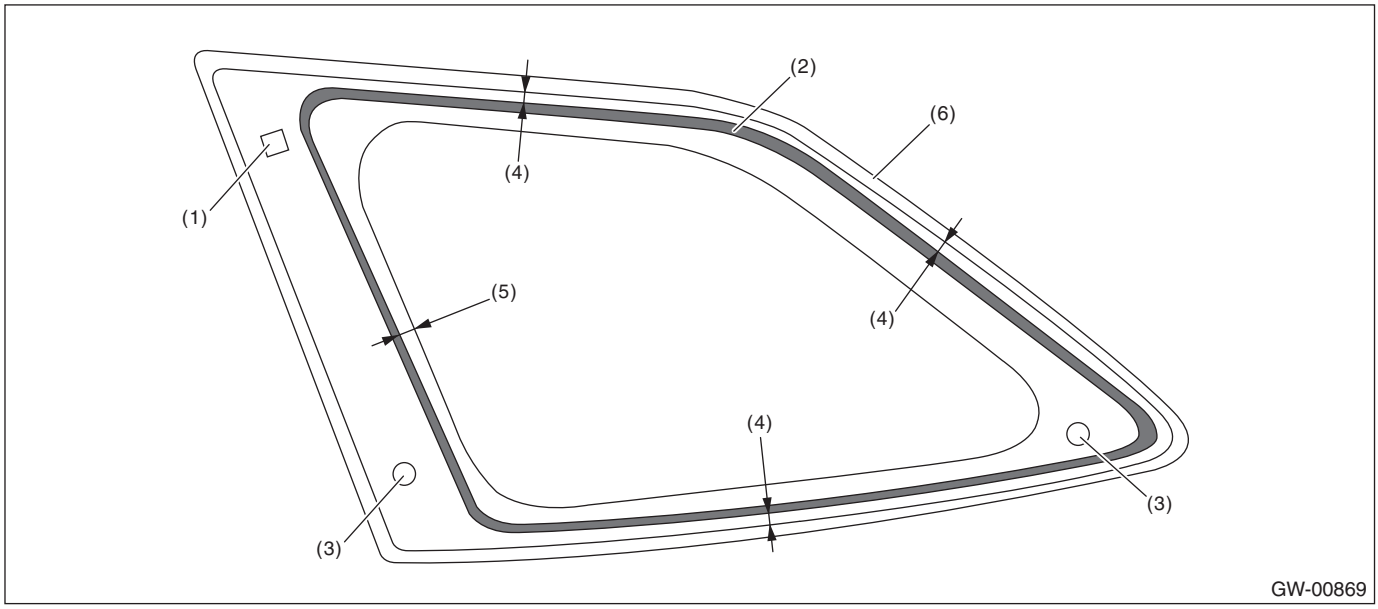
B: INSTALLATION

1) Cut the cartridge nozzle tip as shown in the figure, and set the adhesive in the sealant gun.



(1) 10 mm (0.39 in)
(2) 8 mm (0.31 in)
(3) Sealant gun

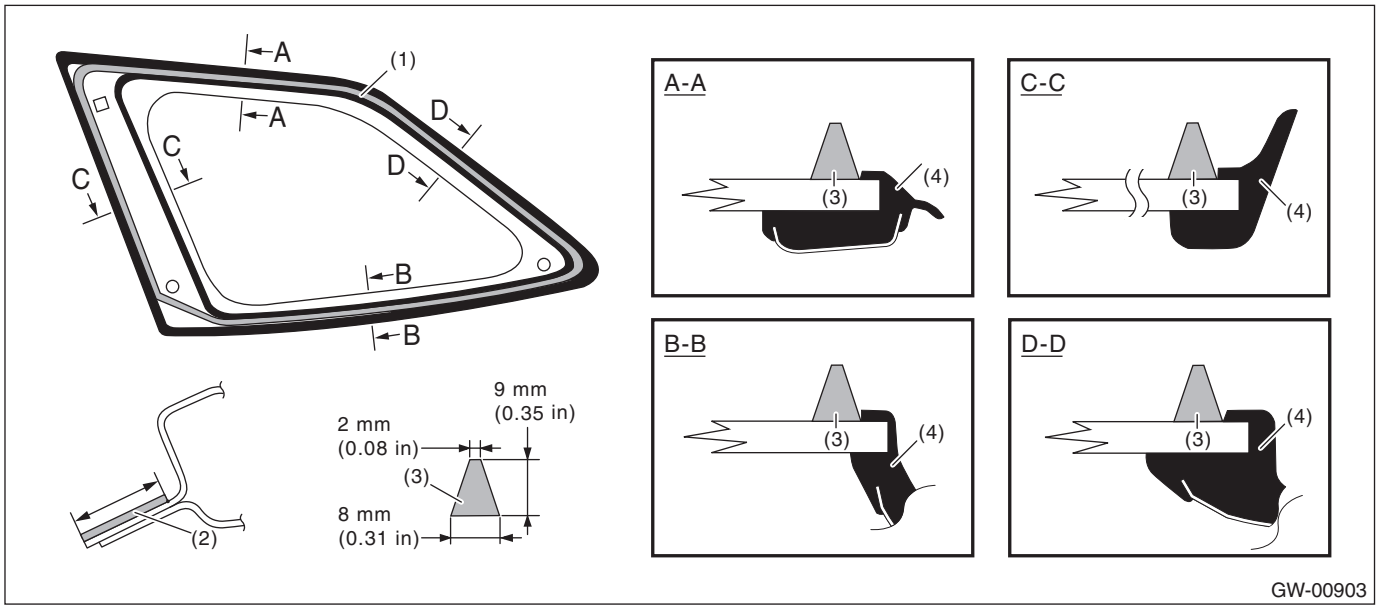
2) Prepare and clean the adhesion surfaces of the glass and body using the same procedures as for the windshield glass. <Ref. to GW-39, INSTALLATION, Windshield Glass.>
3) Attach the dam rubber to the glass.



(1) Fastener
(2) Dam rubber
(3) Clip
(4) 8 mm (0.31 in)
(5) 12 mm (0.47 in)
(6) Molding

4) Install the rear quarter glass in the same procedure as for windshield glass. <Ref. to GW-39, INSTALLATION, Windshield Glass.>
(1) Using a sponge, apply primer to the glass side and body side adhesive surfaces.
(2) Apply adhesive to the glass end back surface.

NOTE:
Use the molding terminal as a reference.



(1) Application of primer (glass side)
(2) Application of primer (body side)
(3) Adhesive
(4) Molding

(3) Attach the fastener to the body.
(4) Insert the clips in the side panel holes and install the rear quarter glass.
(5) Lightly press the entire perimeter of rear quarter glass for tight fit.
(6) Make flush the adhesive surface jutted out using spatula.

5) After completion of all work, allow the vehicle to stand for about 24 hours.

NOTE:
• When door is opened/closed after glass is bonded, always lower the door glass first, and then open/close it carefully.
• Move the vehicle slowly.
• For minimum drying time and vehicle standing time before driving after bonding, follow instructions or instruction manual from the adhesive manufacturer.

6) After curing of adhesive, pour the water on external surface of vehicle to check that there are no water leaks.

NOTE:
When a vehicle is returned to the user, tell him or her that the vehicle should not be subjected to heavy impact for at least three days.

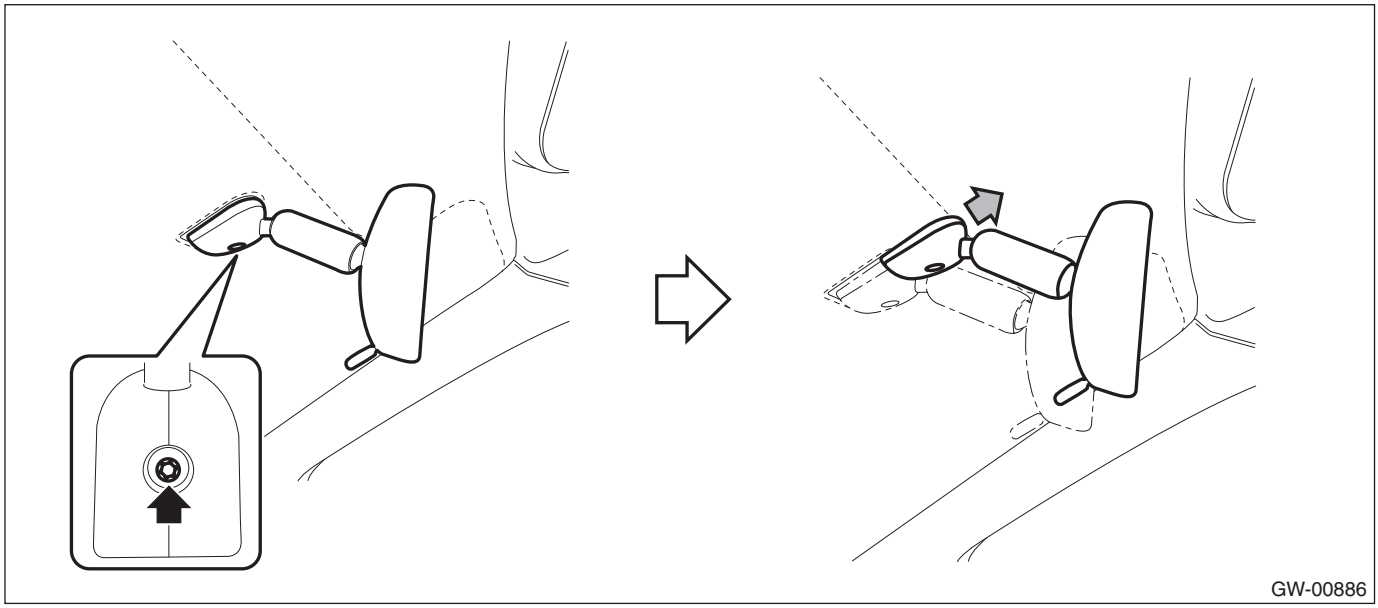
7) Install the rear quarter trim. <Ref. to EI-119, INSTALLATION, Rear Quarter Trim.>

19.Rearview Mirror

A: REMOVAL

CAUTION:
Be careful not to damage the mirror surface and windshield glass.
1) Remove the TORX® bolt, and then slide the rear view mirror to remove.

Preparation tool: TORX® T20



2) When the mirror mount is damaged, use something like piano wire or a spatula to remove.

B: INSTALLATION

CAUTION:
When tightening the mounting TORX® screw, be sure to observe the tightening torque. Otherwise, the mount may be damaged in over-torque conditions.
Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to GW-6, MIRROR, COMPONENT, General Description.>

NOTE:
If the mirror mount is removed, it is attached according to the following procedures.
1. Remove the old adhesive completely.
2. Attach the mirror mount by matching with the mark on the windshield glass.
3. Make sure that the mirror mount is firmly adhered.

Adhesive:
REPAIR KIT IN MR (Part No. 65029FC000) or equivalent

C: INSPECTION

Check the mirror and mirror mount for damage.

20.Wiper Deicer System

A: WIRING DIAGRAM

Refer to “Wiper Deicer System” in the wiring diagram. <Ref. to WI-226, Wiper Deicer System.>

B: INSPECTION

1. CHECK SYSTEM

Symptoms	Inspection order
Wiper deicer does not operate.	1. Check the fuse. 2. Check the wiper deicer relay. 3. Check the wiper deicer switch. 4. Check the heat wire. 5. Check the wiring harness. 6. Check body integrated unit.

NOTE:
• Wiper deicer system can be customized on the Subaru Select Monitor, when the body integrated unit customize setting {A/C ECM setting} is “support”.
• Set the system using the “Rr defogger op. mode”, and setting will be the same as rear defogger system setting.

System name	Initial setting	Customize setting
Rr defogger op. mode	OFF after 15 min.	Continuous operation*

*: When one of the following conditions occurs, continuous operation is suspended and turned off after 15 minutes.
- Ambient temperature at 5°C (41°F) or more continues for 10 seconds.
- Malfunction occurs on ambient sensor.
- Vehicle speed of 15 km/h (9 MPH) or less continues 15 minutes. (OFF when conditions are met)
- Malfunction occurs in CAN communication.
- Battery voltage (10 V or less) continues for 30 seconds

2. CHECK WITH SUBARU SELECT MONITOR

CAUTION:
Before performing the inspection, check the following settings.
- **Is the “wiperdeicer” setting “support”? If “no support”, set to “support” using customize setting.**
- **“Rr defogger op. mode” setting → Initial setting or customize setting**

1) Check the input signal when the rear window defogger switch is operated using Subaru Select Monitor.
   (1) Prepare the Subaru Select Monitor. <Ref. to GW-7, PREPARATION TOOL, General Description.>
   (2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”.
   (3) On «System Selection Menu» display, select {Integ. unit mode}.
   (4) Select the {Wiper deicer output} on {Current Data Display & Save}.
   (5) Check the displayed data (ON/OFF) by operating the rear window defogger switch.
2) Check the operation with rear window defogger switch ON.
• When customize setting is set as «Continuous», it is normal if the 15-minute operation and 2-minute stop repeats.
• When customize setting is «Normal», it is normal if the operation lasts for 15 minutes and then turns OFF.
3) When the operation in 2) above fails, replace the body integrated unit.

3. HEAT WIRE INSPECTION

Refer to the heat wire inspection procedure of rear window defogger system. <Ref. to GW-51, HEAT WIRE INSPECTION, INSPECTION, Rear Window Defogger System.>

NOTE:
Heat wire inspection needs removing/installing procedure of instrument panel assembly.

C: REPAIR

Refer to the REPAIR of Rear Window Defogger System. <Ref. to GW-52, REPAIR, Rear Window Defogger System.>

NOTE:
Heat wire repair needs removing/installing procedure of instrument panel assembly.

1. General Description

A: SPECIFICATION

Refer to “Body Repair Manual” for general description of body structure, reference points and reference dimensions.

1. General Description

A: SPECIFICATION

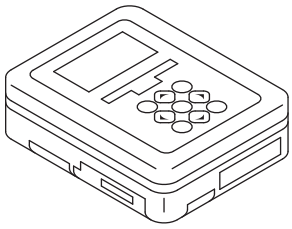
Combination meter	Speedometer	Stepping motor type
	Tachometer	
	ECO gauge	
	Fuel gauge	
	Malfunction indicator light	LED
	Oil pressure warning light	
	AT oil temperature warning light (except for MT model)	
	ABS warning light	
	Engine coolant temperature indicator light	
	Engine coolant temperature warning light	
	Airbag warning light	
	Seat belt warning light	
	Door open warning light	
	Brake fluid/parking brake warning light (C6 model)	
	Brake fluid/parking brake/EPB warning light (except for C6 model)	
	Low fuel warning light	
	Charge warning light	
	AWD warning light (except for MT model)	
	Hill hold warning light	
	EPB warning light (C6 model)	
	Low washer warning light	
	Low engine oil warning light	
	Tire air pressure warning light (except for C5 and C6 models)	
	VDC OFF indicator light	
	VDC warning light/VDC operation indicator light	
	Turn signal indicator light	
	High beam/passing indicator light	
	Security/immobilizer indicator light	
	Front fog light indicator light	
	Lighting indicator light	
	Meter illumination back-up light	
	LCD back light	
	Odo/trip meter	LCD
	Shift position indicator	
	AT select lever position indicator (AT model)	
	Door open/vehicle frame indicator	
	Cruise mode indicator	
Clock	Cruising distance, average fuel economy, instantaneous fuel economy, ambient temperature, current time	VFD
	Passenger's airbag ON indicator	LED
	Passenger's airbag OFF indicator	
	Passenger' seat belt warning light	

B: CAUTION

• Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When replacing the radio, control module, and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
• Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
• Use gloves to avoid damage and getting fingerprints on the glass surface and meter surfaces.
• Do not apply an excessive force on the printed circuit.
• Do not drop or otherwise apply impact.
• Connect the connectors securely when reassembling.
• After reassembly, make sure that the functional parts operate normally.
• When the combination meter of model with immobilizer has been replaced, be sure to perform the registration of immobilizer.

C: PREPARATION TOOL

1. SPECIAL TOOL

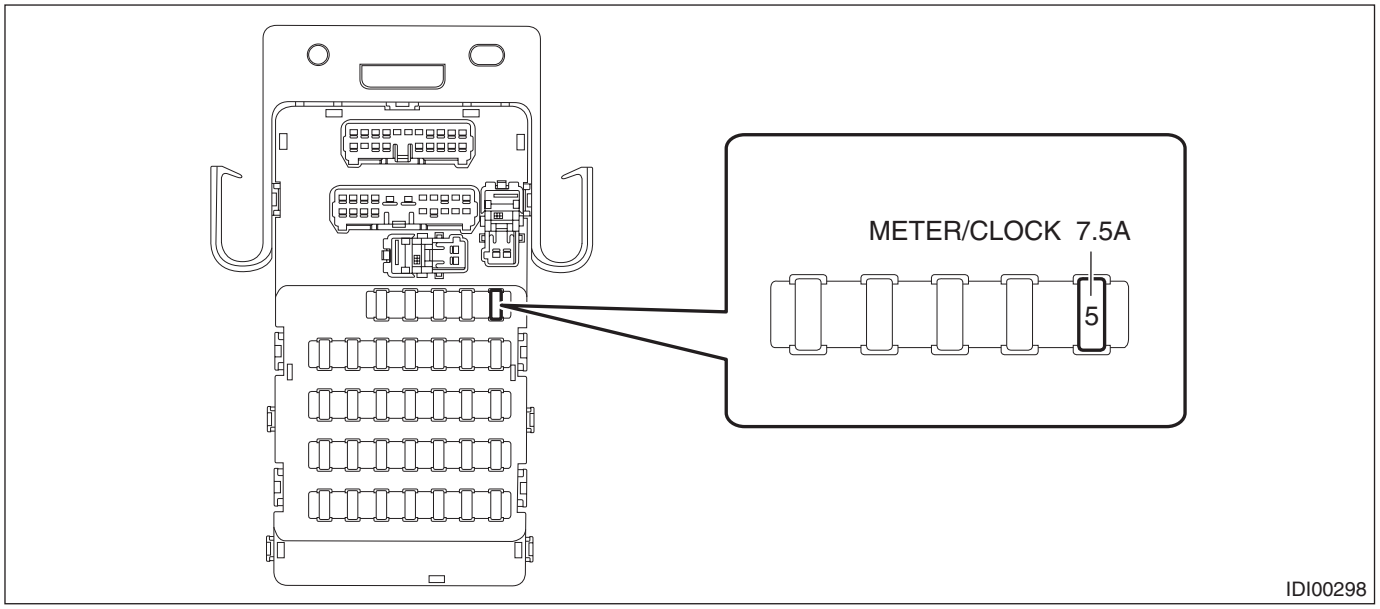
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

2. GENERAL TOOL

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

2. Relay and Fuse

A: LOCATION



B: INSPECTION

1. CHECK FUSE.

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

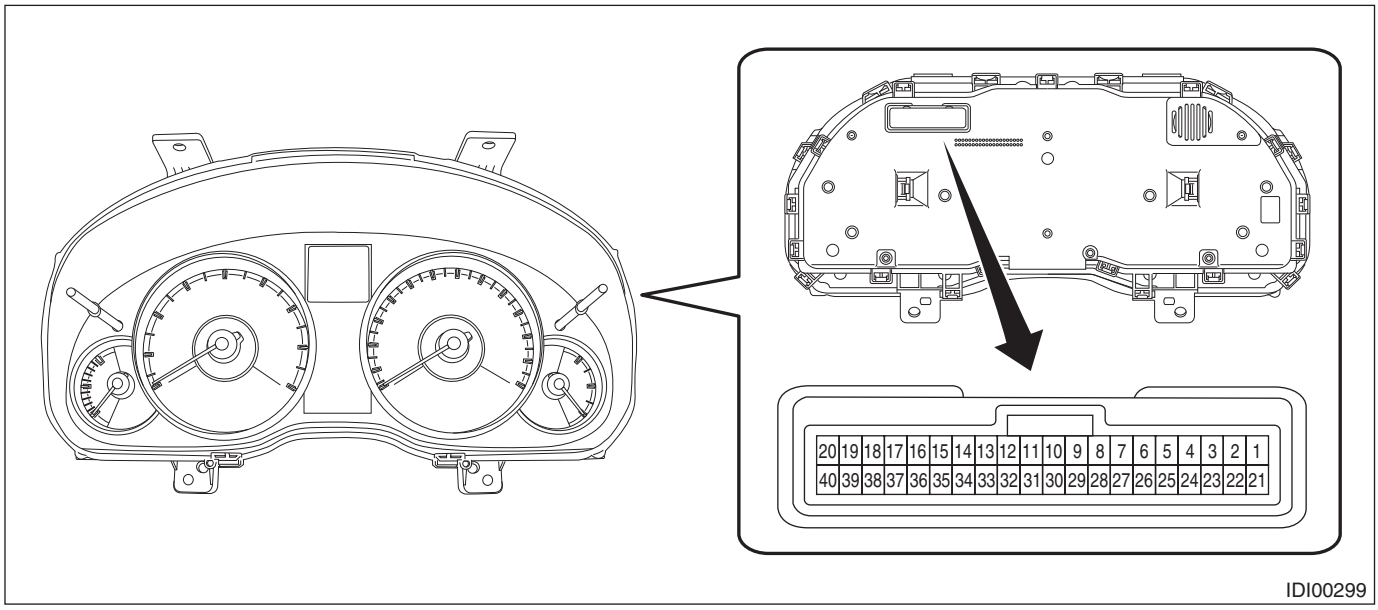
3. Combination Meter System

A: WIRING DIAGRAM

Refer to “Combination Meter System” in the wiring diagram. <Ref. to WI-81, WIRING DIAGRAM, Combination Meter System.>

B: ELECTRICAL SPECIFICATION

1. COMBINATION METER TERMINAL ARRANGEMENT



Connector

Terminal No.	Item	Measuring condition	Standard
3 (U-ART com.)	—	Cannot be measured	—
6 ← → Chassis ground	Voltage	Malfunction indicator light off → on	0 V → 10 — 14 V
7 ← → Chassis ground	Voltage	Charge warning light off → on	0 V → 10 — 14 V
8 ← → Chassis ground	Voltage	Oil pressure warning light off → on	0 V → 10 — 14 V
10 ← → Chassis ground	Voltage	LH turn indicator off → on	0 V → 10 — 14 V
11 ← → Chassis ground	Voltage	RH turn indicator off → on	0 V → 10 — 14 V
12 ← → Chassis ground	Voltage	Airbag warning light on → off	10 — 14 V → 0 V
14 ← → Chassis ground	Voltage	Auto headlight beam leveler warning light off → on	0 V → 10 — 14 V
15 ← → Chassis ground	Voltage	Security/immobilizer indicator light off → on	0 V → 10 — 14 V
19 (IG) ← → Chassis ground	Voltage	IG OFF → ON	0 V → 10 — 14 V
20 (+B) ← → Chassis ground	Voltage	Always	10 — 14 V
24 ← → Chassis ground	Voltage	Brake fluid/parking brake warning light off → on	0 V → 10 — 14 V
29 ← → Chassis ground	Waveform	Speedometer	Pulse generation
30 ← → Chassis ground	Waveform	Tachometer	Pulse generation
32 (CAN–) ← → Chassis ground	—	Cannot be measured	—
33 (CAN+) ← → Chassis ground	—	Cannot be measured	—
35 ← → Chassis ground	—	Cannot be measured	—
36 ← → Chassis ground	Voltage	Ambient sensor	0 V → 0.1 — 5 V
37 ← → Chassis ground	Resistance	Always	Less than 1 Ω
38 ← → Chassis ground	Resistance	Always	Less than 1 Ω
39 (GND) ← → Chassis ground	Resistance	Always	Less than 1 Ω

C: OPERATION

1. SELF-DIAGNOSIS DISPLAY MODE

The self-diagnosis (checking of each meter, warning light, indicator light, illumination, LCD) of combination meter can be performed in the following procedure.

CAUTION:
Perform the steps described in 1) through 4) within 10 seconds.
1) Within 3 seconds after turning the ignition switch to ON, set the lighting switch to tail light or headlight position.
2) Press the trip meter knob three times.
3) Turn the lighting switch to OFF, and press the trip meter knob three times.
4) Set the lighting switch to tail light or headlight position again, and press the trip meter knob three times.

NOTE:
• When pressing the trip meter knob four times, the display changes to DTC display mode. <Ref. to IDI-8, DTC DISPLAY MODE, OPERATION, Combination Meter System.>
• When pressing the trip meter knob five times, the display changes to dealer customize mode. <Ref. to IDI-9, DEALER CUSTOMIZE MODE, OPERATION, Combination Meter System.>
• When the self-diagnosis function operates, the warning light, indicator light, and LCD display checks are performed. After this, the buzzer will sound for 0.5 seconds every time the trip meter knob is pressed, and operation checks are performed in the order of meter indicator needle operation, meter indicator needle indication, and LCD. Turn the ignition switch to OFF to cancel the self-diagnosis function.
• When the engine starts during diagnosis, the self-diagnosis function is not cancelled, however, once the vehicle starts driving, the self-diagnosis function is deactivated automatically.
5) Move on to the “Meter Indicator Needle Operation Check”.
Check meter operation, warning light, indicator light, illumination and LCD.

Meter indicator needle	LCD display, illumination	Warning lights, indicator lights
MIN indication ↓ MAX indication	ILL1 (Min. brightness) ↓(Display for one second for each level) ILL6 (Max. brightness)	Light ON The engine coolant temperature warning light illuminates in red.
MAX indication ↓ MIN indication	ILL6 (Max. brightness) ↓(Display for one second for each level) ILL1 (Min. brightness)	

6) Press the trip meter knob once.
7) Move on to the “Meter Indicator Needle Indication Check”.
Check meter operation, warning light, indicator light, and LCD.

NOTE:
• The meter indicator needle will switch every 1.5 seconds.
• The ILL illumination level will be at the brightness it was set to when switching to the “Meter Indicator Needle Indication Check”.
• During operation, “_S_2” is displayed on the LCD trip display.

Speedometer (km/h)	Tachometer (rpm)	Fuel gauge	ECO gauge	Low fuel warning light	Warning lights, indicator lights
0	0	Lowest point	Lowest point	Light ON	Light OFF The engine coolant temperature indicator light illuminates in blue.
0	0	E	–Max	Light ON	
40	1000	1/2	0	Light OFF	
100	4000	F	+Max	Light OFF	
40	1000	1/2	0	Light OFF	
0	0	E	–Max	Light ON	

8) Press the trip meter knob once.

9) Move on to the “LCD Display Check”.
Check the LCD display.

NOTE:
- All warning lights and indicator lights turn off.
- The meter indicator needle maintains its position in the “Meter Indicator Needle Indication Check”.
- The ILL illumination level is lit at ILL6 (highest brightness).
- After No. 14 is displayed in the illumination order, display is repeated from No. 1 again.

ORDER	AT/SS	CRUISE/SET	TRIP/UNIT/ODO/ S/I/S#	DOOR/ REAR GATE/ TRUNK OPEN
1	▲ ▼	CRUISE SET	[A][B] 888.8 888888 [S] [I] S#	
2		OFF	111.1 111111	OFF
3	▲	CRUISE	[A] 222.2 222222 [S]	
4		OFF	333.3 333333	OFF
5	▼	SET	[B] 444.4 444444 [I]	
6		OFF	555.5 555555	OFF
7	▲	CRUISE	[A] 666.6 666666 S#	
8		OFF	777.7 777777	OFF
9	▼	SET	[B] 888.8 888888 [S]	
10		OFF	999.9 999999	OFF
11	▲	CRUISE	[A] 000.0 000000 [I]	
12		OFF	888.8 888888	OFF
13	▼	SET	[B] 888.8 888888 S#	
14		OFF	888.8 888888	OFF

IDI00316

2. DTC DISPLAY MODE

The combination meter DTC can be displayed according to the following procedure.

CAUTION:
Perform the steps described in 1) through 4) within 10 seconds.
1) Within 3 seconds after turning the ignition switch to ON, set the lighting switch to tail light or headlight position.
2) Press the trip meter knob four times.
3) Turn the lighting switch to OFF, and press the trip meter knob four times.
4) Set the lighting switch to tail light or headlight position again, and press the trip meter knob four times.
5) Move on to the “DTC display mode”.

NOTE:
• If a diagnostic trouble code (DTC) is detected, an input error to meters exists. Check the harness on the body side and related parts.
• Detected diagnostic trouble code (DTC) cannot be cleared.
• When the engine starts during diagnosis, the self-diagnosis function is not cancelled, however, once ignition switch is turned OFF or the vehicle is driven, the DTC display mode is cancelled automatically.

(1) When the DTC display mode operates, the LCD displays whether diagnostic trouble code (DTC) exists.

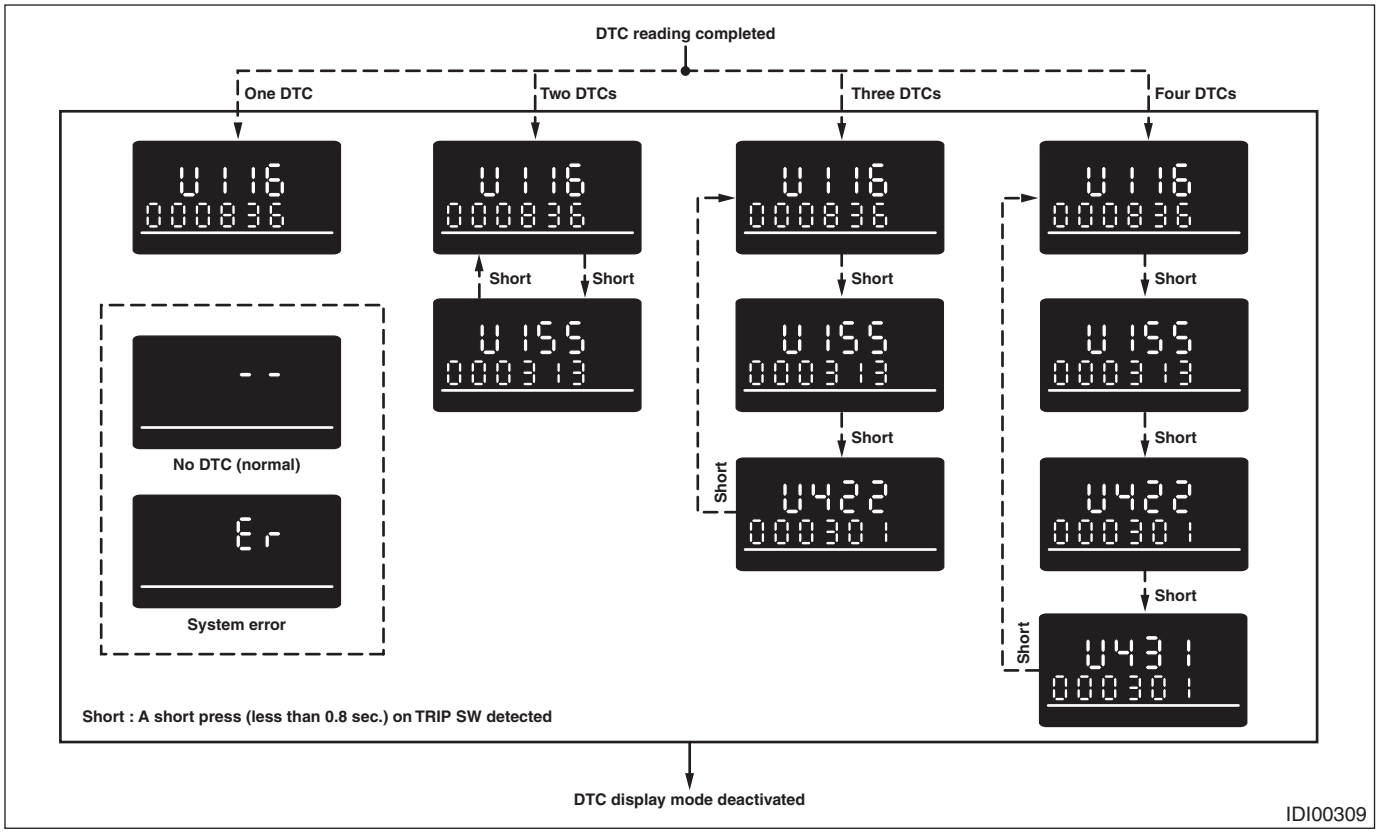
DTC display	Item	Condition
“--”	-	Normal
“Er”	-	System error (meter error)
B900	Power supply system	When IG OFF is detected while driving
B901	Speedometer	Abnormal speed pulse value and CAN data value with engine ON
B902	Speedometer	Inconsistency between speed pulse value and CAN data value with engine ON
U116	Tachometer	Abnormal input data with engine ON
U140	Fuel meter	Abnormal input data with engine ON
U155	CAN communication	CAN communication error
U167	Immobilizer collation	Collation with body integrated unit failed
U422	Fuel meter	Abnormal input data with IG ON
U431	Fuel meter	When input data out of range is detected with engine ON

(2) If the diagnostic trouble code (DTC) is stored, ODO value at occurrence of trouble is displayed.

NOTE:
• Diagnostic trouble code (DTC) is stored for up to four cases. If diagnostic trouble code (DTC) is input exceeding four cases, the code is deleted in order starting with the oldest one.
• When there are more than one diagnostic trouble code (DTC), the code is displayed according to the following conditions and switches every time when the trip meter knob is pressed.

1. Displayed in the descending order of ODO value.

2. If the ODO value is the same, displayed in the ascending order of diagnostic trouble code (DTC) value.



3. DEALER CUSTOMIZE MODE

The combination meter can be customized with dealer customize according to the following procedure.

CAUTION:
Perform the steps described in 1) through 4) within 10 seconds.

1) Within 3 seconds after turning the ignition switch to ON, set the lighting switch to tail light or headlight position.
2) Press the trip meter knob five times.
3) Turn the lighting switch to OFF, and press the trip meter knob five times.
4) Set the lighting switch to tail light or headlight position again, and press the trip meter knob five times.
5) Move on to the “DEALER CUSTOMIZE MODE”.

- When the dealer customize mode operates, the LCD displays each adjustment screen.
- The dealer customize mode consists of three setting screens. {Avg.F/E Correction Screen}, {Ambient Temp. Correction Screen} and {Clock Adjust. Screen} is displayed cyclically in this order every time the trip meter knob is tapped.
- Holding down the trip meter knob while each setting screen is displayed can change the setting value.

NOTE:
When ignition switch is turned OFF or the vehicle is driven, the customize mode is cancelled automatically.

No.	Customize mode	Initial value	Correction range
1	Avg.F/E Correction Screen	±0%	±10%
2	Ambient Temp. Correction Screen	±0°C (°F)	±3°C (°F)
3	Clock Adjust. Screen	on	on or off

D: INSPECTION

1. SYMPTOM CHART

CAUTION:
When measuring the voltage and resistance of each control module or sensor, use a tapered pin with a diameter of less than 0.64 mm (0.03 in) in order to avoid poor contact. Do not insert the pin more than 2 mm (0.08 in).

Symptoms	Repair order	Note
Combination meter assembly does not operate.	1. Power supply 2. Ground circuit 3. Combination meter	<Ref. to IDI-10, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Combination Meter System.>
Speedometer does not operate.	1. VDC C/M 2. Harness 3. Combination meter	<Ref. to IDI-11, CHECK VDC CONTROL MODULE, INSPECTION, Combination Meter System.>
Tachometer does not operate.	1. ECM 2. Harness 3. Combination meter	<Ref. to IDI-11, CHECK ENGINE CONTROL MODULE (ECM), INSPECTION, Combination Meter System.>
Fuel gauge does not operate.	1. Communication circuit 2. Harness 3. Body integrated unit 4. Fuel level sensor 5. Combination meter	<Ref. to IDI-12, CHECK FUEL LEVEL SENSOR, INSPECTION, Combination Meter System.>
ECO gauge does not operate.	1. Communication circuit 2. Combination meter	<Ref. to IDI-14, CHECK ECO GAUGE, INSPECTION, Combination Meter System.> NOTE: The ECO gauge does not operate unless the vehicle is driven at least 1 km after the trip meter is reset.
Warning buzzer for key left in ignition does not beep.	1. Communication circuit 2. Combination meter	<Ref. to IDI-14, CHECK WARNING BUZZER FOR KEY LEFT IN IGNITION., INSPECTION, Combination Meter System.>

2. CHECK POWER SUPPLY AND GROUND CIRCUIT

	Step	Check	Yes	No
1	**CHECK POWER SUPPLY FOR COMBINATION METER.** 1) Remove the combination meter. 2) Measure the voltage between combination meter connector and chassis ground. ***Connector & terminal*** ***(i10) No. 20 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **2**.	Check the harness for open or short between the fuse and combination meter.
2	**CHECK POWER SUPPLY FOR COMBINATION METER.** 1) Turn the ignition switch to ON. 2) Measure the voltage between combination meter connector and chassis ground. ***Connector & terminal*** ***(i10) No. 19 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Check the harness for open or short between the ignition switch and combination meter.
3	**CHECK GROUND CIRCUIT OF COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between combination meter connector and chassis ground. ***Connector & terminal*** ***(i10) No. 39 — Chassis ground:***	Is the resistance less than 10 Ω?	Replace the meter case assembly.	Repair or replace the harness.

3. CHECK VDC CONTROL MODULE

	Step	Check	Yes	No
1	**CHECK VEHICLE SPEED SIGNAL.** 1) Remove the combination meter mounting screws. 2) Lift up the vehicle and support it with rigid racks. 3) Drive the vehicle faster than 10 km/h (6 MPH). **WARNING:** **Be careful not to get caught in the running wheels.** 4) Measure the voltage between combination meter connector and chassis ground. ***Connector & terminal*** ***(i10) No. 29 (+) — Chassis ground (–):***	Is the voltage less than 1 V ←→ 5 V or more?	Replace the meter case assembly.	Go to step **2**.
2	**CHECK HARNESS BETWEEN VDC CONTROL MODULE AND COMBINATION METER.** 1) Turn the ignition switch to OFF. 2) Disconnect the VDC control module connector and combination meter connector. 3) Measure the resistance between the VDC control module connector and the combination meter connector. ***Connector & terminal*** ***(B310) No. 11 — (i10) No. 29:***	Is the resistance less than 10 Ω?	Check the VDC control module. <Ref. to VDC(diag)-2, Basic Diagnostic Procedure.>	Repair or replace the harness.

4. CHECK ENGINE CONTROL MODULE (ECM)

	Step	Check	Yes	No
1	**CHECK ECM SIGNAL.** 1) Start the engine. 2) Measure the voltage between ECM connector and chassis ground. ***Connector & terminal*** ***(B135) No. 15 (+) — Chassis ground (–):***	Is the voltage 0 ←→ 14 V or more?	Go to step **2**.	Inspect the ECM. • H4 NA model:<Ref. to EN(H4SO)(diag)-2, Basic Diagnostic Procedure.> • H4 turbo model:<Ref. to EN(H4DOTC)(diag)-2, Basic Diagnostic Procedure.> • H6 model:<Ref. to EN(H6DO)(diag)-2, Basic Diagnostic Procedure.>
2	**CHECK HARNESS BETWEEN COMBINATION METER AND ECM.** 1) Turn the ignition switch to OFF. 2) Disconnect the ECM connector and combination meter connector. 3) Measure the resistance between the ECM connector and the combination meter connector. ***Connector & terminal*** ***(B135) No. 15 — (i10) No. 30:***	Is the resistance less than 10 Ω?	Replace the meter case assembly.	Repair or replace the harness.

5. CHECK FUEL LEVEL SENSOR

	Step	Check	Yes	No
1	**CHECK COMBINATION METER.** 1) Drain fuel. 2) Check the fuel indication status in the combination meter.	Does the fuel gauge needle indicate EMPTY and is the low fuel warning light blinking?	Go to step **4**.	Go to step **2**.
2	**CHECK COMBINATION METER.** Perform the self-diagnosis of combination meter. <Ref. to IDI-6, SELF-DIAGNOSIS DISPLAY MODE, OPERATION, Combination Meter System.>	Is operation normal?	Go to step **3**.	Replace the meter case assembly. <Ref. to IDI-20, Combination Meter.>
3	**CHECK DIAGNOSTIC TROUBLE CODE (DTC).** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”. 3) On «System Selection Menu» display, select {Integ. unit mode}. 4) Select the {Diagnostic Code(s) Display}.	Is a DTC detected?	Perform the diagnosis according to DTC. <Ref. to LAN(diag)-31, LIST, List of Diagnostic Trouble Code (DTC).>	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the connector of body integrated unit. 2) Measure the resistance between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(i84) No. 17 — Chassis ground:***	Is the resistance 2 — 96 Ω?	Go to step **5**. Go to step **9**.(If the step 1 is “Yes”)	Repair or replace the harness.
5	**CHECK COMMUNICATION BETWEEN BODY INTEGRATED UNIT AND COMBINATION METERS.** 1) Remove the fuel sub level sensor. • H4 NA model:<Ref. to FU(H4SO)-62, REMOVAL, Fuel Sub Level Sensor.> • H4 turbo model:<Ref. to FU(H4DOTC)-82, REMOVAL, Fuel Sub Level Sensor.> • H6 model:<Ref. to FU(H6DO)-71, REMOVAL, Fuel Sub Level Sensor.> 2) Attach the approx. 100 Ω resistance to the fuel sub level sensor connector terminal, and short circuit to the chassis ground. 3) Turn the ignition switch to ON. ***Connector & terminal*** ***(R59) No. 1 — Chassis ground:***	Does the meter needle indicate EMPTY?	Go to step **7**.	Go to step **6**.
6	**CHECK BODY INTEGRATED UNIT.** 1) Retain the condition in step 5. 2) Select the {Fuel level resistance} from the {Integ. unit mode} using the Subaru Select Monitor.	Is approx. 100 Ω displayed in the data?	Go to step **11**.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>

Step		Check	Yes	No
7	**CHECK COMMUNICATION BETWEEN BODY INTEGRATED UNIT AND COMBINATION METERS.** 1) Remove the fuel sub level sensor. • H4 NA model:<Ref. to FU(H4SO)-62, REMOVAL, Fuel Sub Level Sensor.> • H4 turbo model:<Ref. to FU(H4DOTC)-82, REMOVAL, Fuel Sub Level Sensor.> • H6 model:<Ref. to FU(H6DO)-71, REMOVAL, Fuel Sub Level Sensor.> 2) Attach the approx. 2 — 6 Ω resistance to the fuel sub level sensor connector terminal, and short circuit to the chassis ground. 3) Turn the ignition switch to ON. ***Connector & terminal (R59) No. 1 — Chassis ground:***	Does the meter needle indicate FULL?	Go to step **9**.	Go to step **8**.
8	**CHECK BODY INTEGRATED UNIT.** 1) Retain the condition in step 7. 2) Select the {Fuel level resistance} from the {Integ. unit mode} using the Subaru Select Monitor.	Is the resistance 2 to 6 Ω?	Go to step **11**.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>
9	**CHECK FUEL SUB LEVEL SENSOR.** 1) Remove the fuel sub level sensor. • H4 NA model:<Ref. to FU(H4SO)-62, REMOVAL, Fuel Sub Level Sensor.> • H4 turbo model:<Ref. to FU(H4DOTC)-82, REMOVAL, Fuel Sub Level Sensor.> • H6 model:<Ref. to FU(H6DO)-71, REMOVAL, Fuel Sub Level Sensor.> 2) Measure the resistance between the fuel sub level sensor connectors when the float is in FULL and EMPTY position. ***Connector & terminal (R59) No. 1 — No. 2:***	Is the resistance 1.0 to 3.0 Ω (FULL) and 61 to 63 Ω (EMPTY)?	Go to step **10**.	Replace the fuel sub level sensor.
10	**CHECK FUEL LEVEL SENSOR.** 1) Remove the fuel level sensor. • H4 NA model:<Ref. to FU(H4SO)-60, REMOVAL, Fuel Level Sensor.> • H4 turbo model:<Ref. to FU(H4DOTC)-80, REMOVAL, Fuel Level Sensor.> • H6 model:<Ref. to FU(H6DO)-69, REMOVAL, Fuel Level Sensor.> 2) Measure the resistance between the fuel level sensor connectors when the float is in FULL and EMPTY position. ***Connector & terminal (R58) No. 1 — No. 4:***	Is the resistance 1.0 to 3.0 Ω (FULL) and 31 to 33 Ω (EMPTY)?	Check the connection status of the harness and connector that may have a temporary poor contact.	Replace the fuel level sensor.
11	**CHECK COMBINATION METER OPERATION.** 1) Remove the combination meter. 2) Attach the combination meter to another vehicle on which the fuel gauge operates normally to check its operation.	Is the fuel gauge normal?	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>	Replace the meter case assembly.

6. CHECK ECO GAUGE

	Step	Check	Yes	No
1	**CHECK DIAGNOSTIC TROUBLE CODE (DTC).** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”. 3) On «System Selection Menu» display, select {Integ. unit mode}. 4) Select the {Diagnostic Code(s) Display}.	Is a DTC of high-speed CAN detected?	Perform the diagnosis according to DTC. <Ref. to LAN(diag)-31, LIST, List of Diagnostic Trouble Code (DTC).>	Go to step **2**.
2	**CHECK ECO GAUGE.** Perform the self-diagnosis of combination meter. <Ref. to IDI-6, SELF-DIAGNOSIS DISPLAY MODE, OPERATION, Combination Meter System.>	Does ECO gauge operate properly?	Check the connection status of the harness and connector that may have a temporary poor contact.	Replace the meter case assembly. <Ref. to IDI-20, Combination Meter.>

7. CHECK WARNING BUZZER FOR KEY LEFT IN IGNITION.

	Step	Check	Yes	No
1	**CHECK WARNING BUZZER FOR KEY LEFT IN IGNITION.** 1) Insert the key into the ignition key lock. 2) Open the driver’s side door.	Does the buzzer from the meter sound?	Normal operation.	Go to step **2**.
2	**CHECK COMMUNICATION STATUS.** 1) Prepare the Subaru Select Monitor. 2) On «System Selection Menu» display, select {Integ. unit mode}. 3) Select the {key-lock warning SW} from {Current Data Display & Save}. 4) Insert and remove the key.	Does display switch between ON ⇔ OFF?	Go to step **3**.	Check the ignition switch circuit. <Ref. to SL-60, INSPECTION, Ignition Key Lock.>
3	**CHECK COMMUNICATION STATUS.** 1) Select the {Driver’s door SW input} from {Current Data Display & Save}. 2) Open and close the door.	Does display switch between ON ⇔ OFF?	Go to step **4**.	Check the door switch circuit. <Ref. to SL-11, CHECK DOOR LOCK SWITCH, INSPECTION, Door Lock Control System.>
4	**CHECK COMMUNICATION STATUS.** 1) Turn the ignition switch to ON (engine OFF) and run the “PC application help for Subaru Select Monitor”. 2) On «System Selection Menu» display, select {Integ. unit mode}. 3) Select the {Diagnostic Code(s) Display}.	Is a DTC detected?	Perform the diagnosis according to DTC. <Ref. to LAN(diag)-31, LIST, List of Diagnostic Trouble Code (DTC).>	Go to step **5**.
5	**CHECK COMBINATION METER.** The self-diagnosis of combination meter is performed. <Ref. to IDI-6, SELF-DIAGNOSIS DISPLAY MODE, OPERATION, Combination Meter System.>	Did the buzzer sound?	Go to step **6**.	Replace the meter case assembly.
6	**CHECK COMBINATION METER.** 1) Remove the combination meter. 2) Install the combination meter to another vehicle with a normally operating buzzer and check buzzer operation.	Did the buzzer sound?	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>	Replace the meter case assembly.

E: NOTE

For operation procedures of each component of the combination meter system, refer to the respective section.

- Combination meter:<Ref. to IDI-20, Combination Meter.>
- Speedometer:<Ref. to IDI-26, Speedometer.>
- Tachometer:<Ref. to IDI-27, Tachometer.>
- Fuel gauge:<Ref. to IDI-28, Fuel Gauge.>
- ECO gauge:<Ref. to IDI-29, ECO Gauge.>

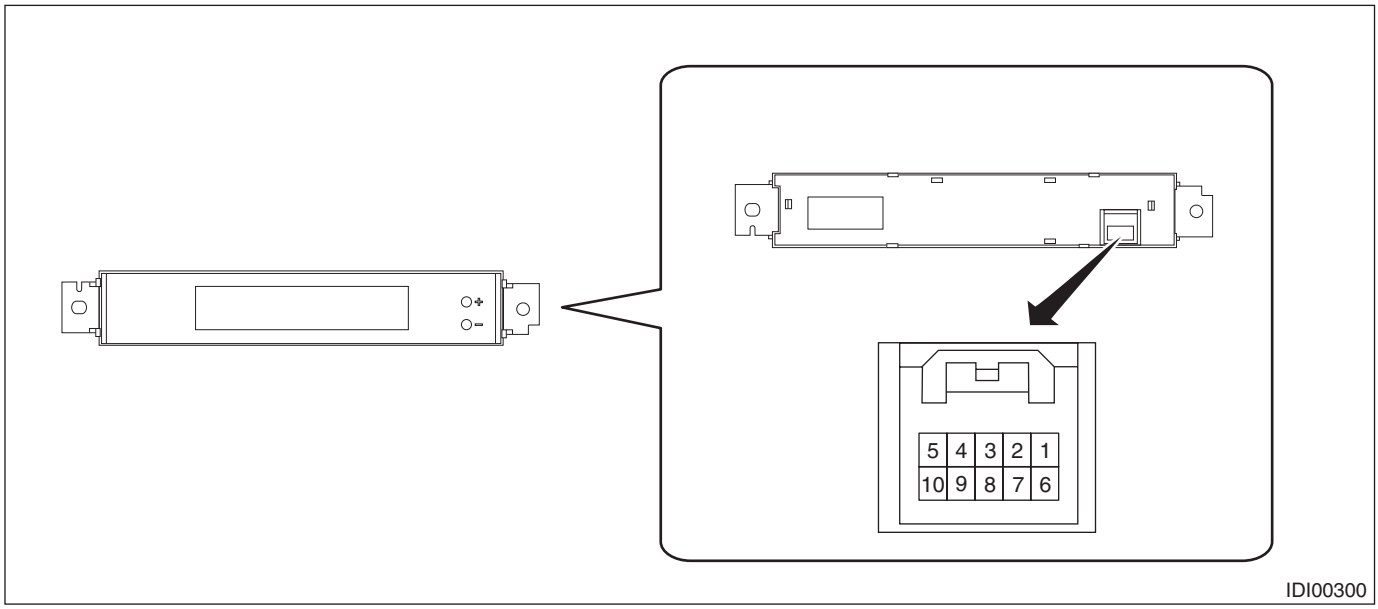
4. Clock System

A: WIRING DIAGRAM

Refer to “Clock System” in the wiring diagram. <Ref. to WI-80, WIRING DIAGRAM, Clock System.>

B: ELECTRICAL SPECIFICATION

1. MULTI DISPLAY TERMINAL ARRANGEMENT



Connector

Terminal No.	Item	Measuring condition	Specification
5 (U-ART com.)	—	Cannot be measured	—
6 (GND) ←→ Chassis ground	Resistance	Always	Less than 1 Ω
8 (IG) ←→ Chassis ground	Voltage	IG OFF → ON	0 V → 10 — 14 V
10 (+B) ←→ Chassis ground	Voltage	Always	10 — 14 V

C: INSPECTION

1. SYMPTOM CHART

Symptoms	Repair order	NOTE
No display is shown.	1. Power supply 2. Ground circuit 3. Communication circuit harness 4. Multi display	<Ref. to IDI-17, CHECK POWER SUPPLY AND GROUND CIRCUIT., INSPECTION, Clock System.>
Ambient air temperature/fuel economy displays do not appear.	1. Power supply 2. Ground circuit 3. Communication circuit harness 4. Multi display	<Ref. to IDI-17, CHECK CLOCK SYSTEM COMMUNICATION CIRCUIT, INSPECTION, Clock System.>
Ambient air temperature display do not appear.	1. Power supply 2. Harness 3. Ambient sensor 4. Communication circuit 5. Multi display	<Ref. to IDI-18, CHECK AMBIENT TEMPERATURE SYSTEM COMMUNICATION CIRCUIT, INSPECTION, Clock System.>
Fuel economy display do not appear.	1. Settings 2. Communication circuit 3. Multi display	<Ref. to IDI-19, CHECK FUEL ECONOMY SYSTEM COMMUNICATION CIRCUIT., INSPECTION, Clock System.>

2. CHECK POWER SUPPLY AND GROUND CIRCUIT.

	Step	Check	Yes	No
1	**CHECK POWER SUPPLY.** 1) Disconnect the multi display connector. 2) Measure the voltage between multi display connector and chassis ground. ***Connector & terminal*** ***(i59) No. 10 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **2**.	Check the harness for open or short between the fuse and multi display.
2	**CHECK GROUND CIRCUIT.** Measure the resistance between multi display connector and chassis ground. ***Connector & terminal*** ***(i59) No. 6 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **3**.	Repair or replace the harness.
3	**CHECK HARNESS BETWEEN MULTI DISPLAY AND COMBINATION METER.** 1) Disconnect the combination meter connector. 2) Measure the resistance between multi display connector and combination meter connector. ***Connector & terminal*** ***(i59) No. 5 — (i10) No. 3:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the harness.
4	**CHECK MULTI DISPLAY.** 1) Remove the multi display. 2) Attach the clock to another vehicle on which the clock display operates normally, and check its operation.	Is the multi display normal?	Replace the meter case assembly.	Replace the multi display.

3. CHECK CLOCK SYSTEM COMMUNICATION CIRCUIT

	Step	Check	Yes	No
1	**CHECK POWER SUPPLY.** 1) Disconnect the multi display connector. 2) Measure the voltage between multi display connector and chassis ground. ***Connector & terminal*** ***(i59) No. 8 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **2**.	Repair or replace the harness.
2	**CHECK GROUND CIRCUIT.** Measure the resistance between multi display connector and chassis ground. ***Connector & terminal*** ***(i59) No. 6 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **3**.	Repair or replace the harness.
3	**CHECK HARNESS BETWEEN MULTI DISPLAY AND COMBINATION METER.** 1) Disconnect the combination meter connector. 2) Measure the resistance between multi display connector and combination meter connector. ***Connector & terminal*** ***(i59) No. 5 — (i10) No. 3:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the harness.
4	**CHECK MULTI DISPLAY.** 1) Remove the multi display. 2) Attach the clock to another vehicle on which the clock display operates normally, and check its operation.	Is the multi display normal?	Replace the meter case assembly.	Replace the multi display.

4. CHECK AMBIENT TEMPERATURE SYSTEM COMMUNICATION CIRCUIT

	Step	Check	Yes	No
1	**CHECK POWER SUPPLY FOR AMBIENT SENSOR.** 1) Disconnect the ambient sensor connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between the ambient sensor connector and chassis ground. ***Connector & terminal*** ***(F138) No. 2 (+) — Chassis ground (–):***	Is the voltage 4 V or more?	Go to step **2**.	Check the harness for open or short between the fuse and multi display.
2	**CHECK HARNESS BETWEEN AMBIENT SENSOR AND COMBINATION METER.** 1) Disconnect the combination meter connector. 2) Measure the resistance between the ambient sensor connector and the combination meter connector. ***Connector & terminal*** ***(F138) No. 1 — (i10) No. 37:*** ***(F138) No. 2 — (i10) No. 36:***	Is the resistance less than 10 Ω?	Go to step **3**.	Repair or replace the harness.
3	**CHECK AMBIENT SENSOR.** 1) Remove the ambient sensor. <Ref. to AC-68, REMOVAL, Ambient Sensor (Auto A/C Model).> 2) Check the ambient sensor. <Ref. to AC(diag)-23, AMBIENT SENSOR, Diagnostic Procedure for Sensors.>	Is the ambient sensor operating properly?	Go to step **4**.	Replace the ambient sensor.
4	**CHECK AMBIENT TEMPERATURE DISPLAY.** 1) Connect the combination meter connector. 2) Install the 3 Ω resistance to ambient sensor connector terminal. 3) Turn the ignition switch to ON. ***Connector & terminal*** ***(F138) No. 1 — (F78) No. 2:***	Does the ambient temperature display 25°C (77°F)?	Repair the poor contact between the ambient air temperature sensor and harness connector.	Go to step **5**.
5	**CHECK AMBIENT AIR TEMPERATURE OUTPUT DATA.** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”. 3) On «System Selection Menu» display, select {Integ. unit mode}. 4) Select the {Ambient Temperature}.	Does the ambient temperature display 25°C (77°F)?	Go to step **6**.	Replace the meter case assembly. <Ref. to IDI-20, Combination Meter.>
6	**CHECK MULTI DISPLAY.** 1) Remove the multi display. 2) Attach the ambient temperature display to another vehicle on which the ambient temperature display operates normally to check its operation.	Does the ambient temperature display 25°C (77°F)?	Replace the multi display.	Replace the meter case assembly. <Ref. to IDI-20, Combination Meter.>

5. CHECK FUEL ECONOMY SYSTEM COMMUNICATION CIRCUIT.

	Step	Check	Yes	No
1	**CHECK FUEL ECONOMY DISPLAY OFF MODE.** Check that the mode display changes when the MFD changeover knob is operated. (Display changes in the following order: Cruising Distance → Average Fuel Economy → Instantaneous Fuel Economy → blank display)	Is fuel economy displayed?	Multi display is normal.	Go to step **2**.
2	**CHECK DIAGNOSTIC TROUBLE CODE (DTC).** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”. 3) On «System Selection Menu» display, select {Integ. unit mode}. 4) Select the {Diagnostic Code(s) Display}.	Is DTC detected?	Go to step **3**.	Replace the meter case assembly. <Ref. to IDI-20, Combination Meter.>
3	**CHECK MULTI DISPLAY.** 1) Remove the multi display. 2) Attach the fuel economy display to another vehicle on which the fuel economy display operates normally to check its operation.	Is the fuel economy display correct?	Replace the multi display.	Replace the meter case assembly. <Ref. to IDI-20, Combination Meter.>

D: NOTE

For operation procedures of each component of the clock system, refer to the following section:

- Multi display:<Ref. to IDI-30, Multi Display.>

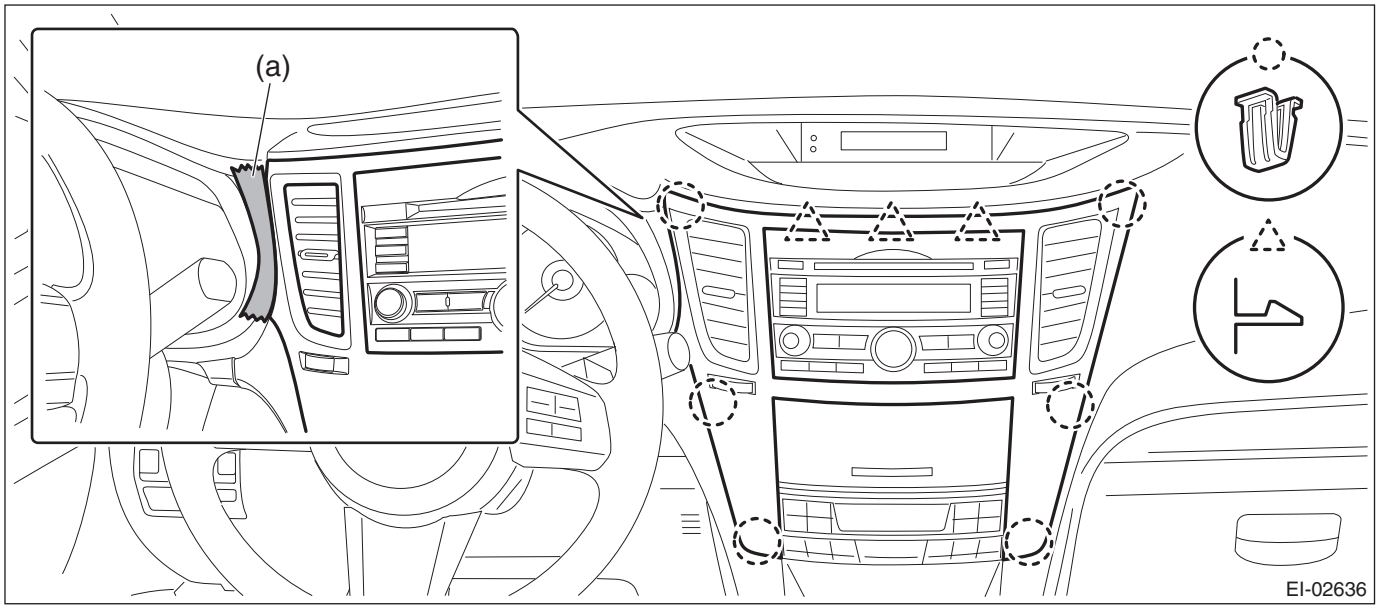
5. Combination Meter

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the center panel assembly.

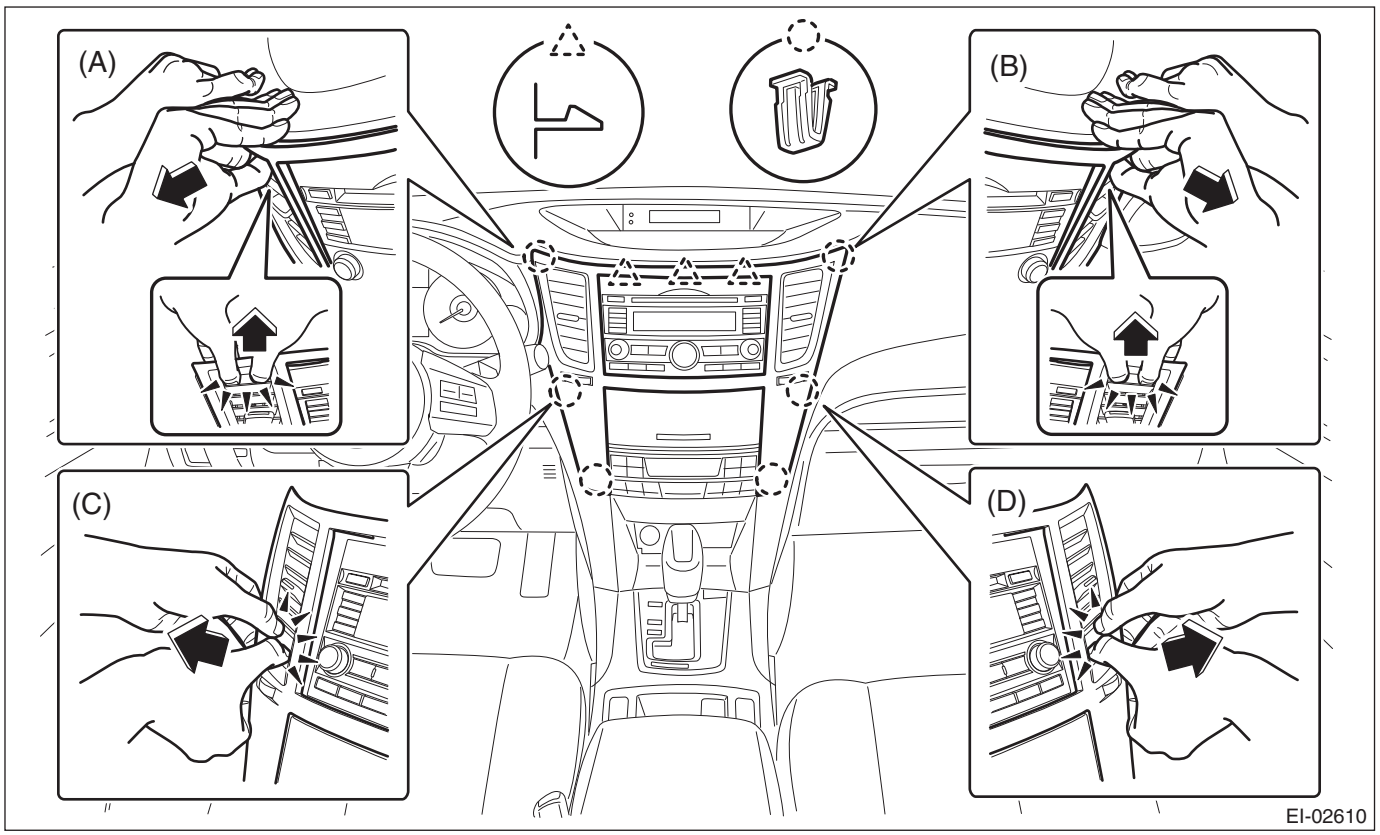
CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(1) Attach the protective tape (a) to the meter visor.

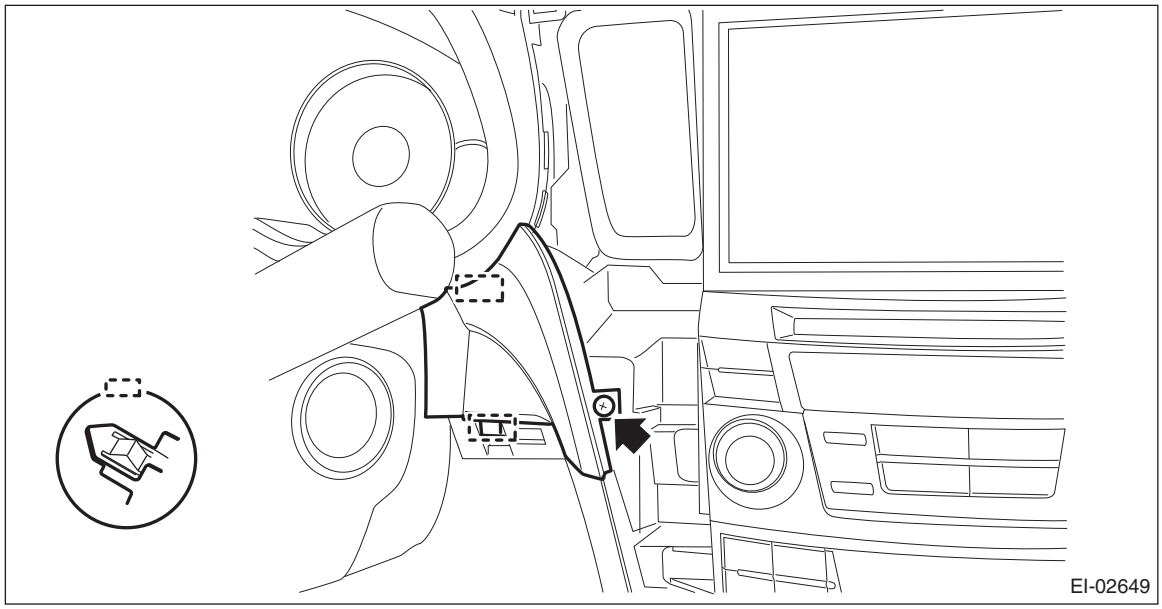


(2) Insert a finger into the air vent grille and release the left and right clips at the top of the center panel. (A), (B)
(3) Insert a finger into the air vent grille and release the left and right clips at the center of the center panel. (C), (D)

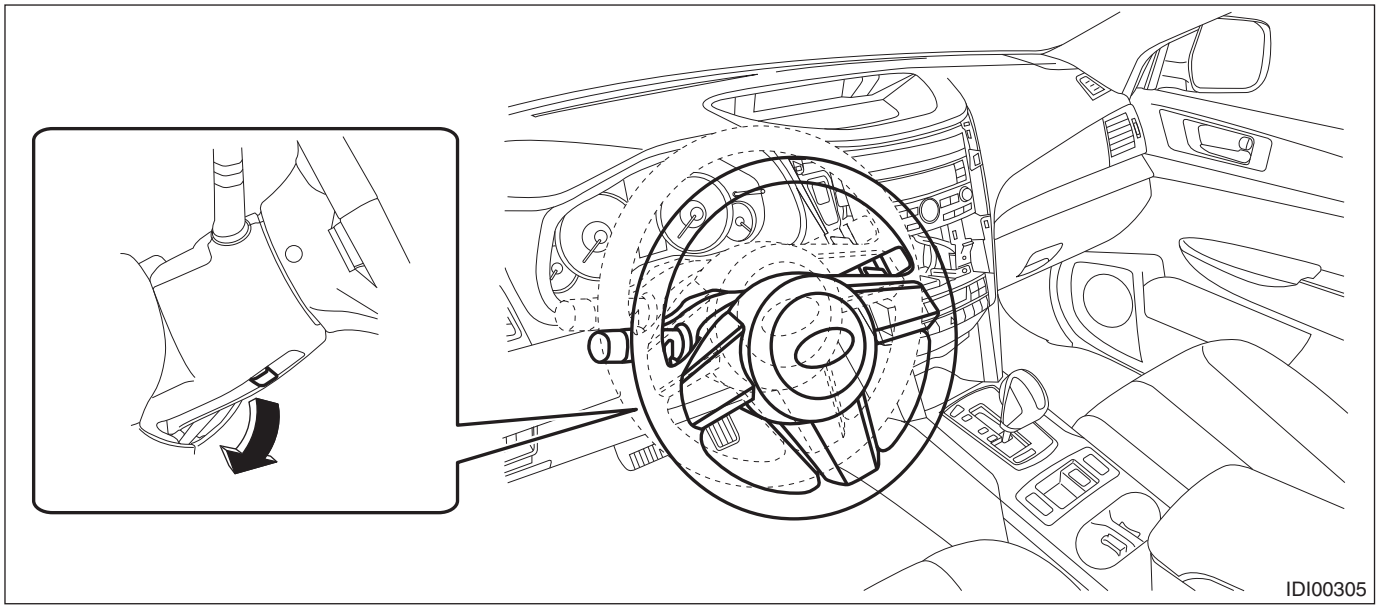
(4) Release the clips at the bottom of the center panel and remove the center panel assembly.



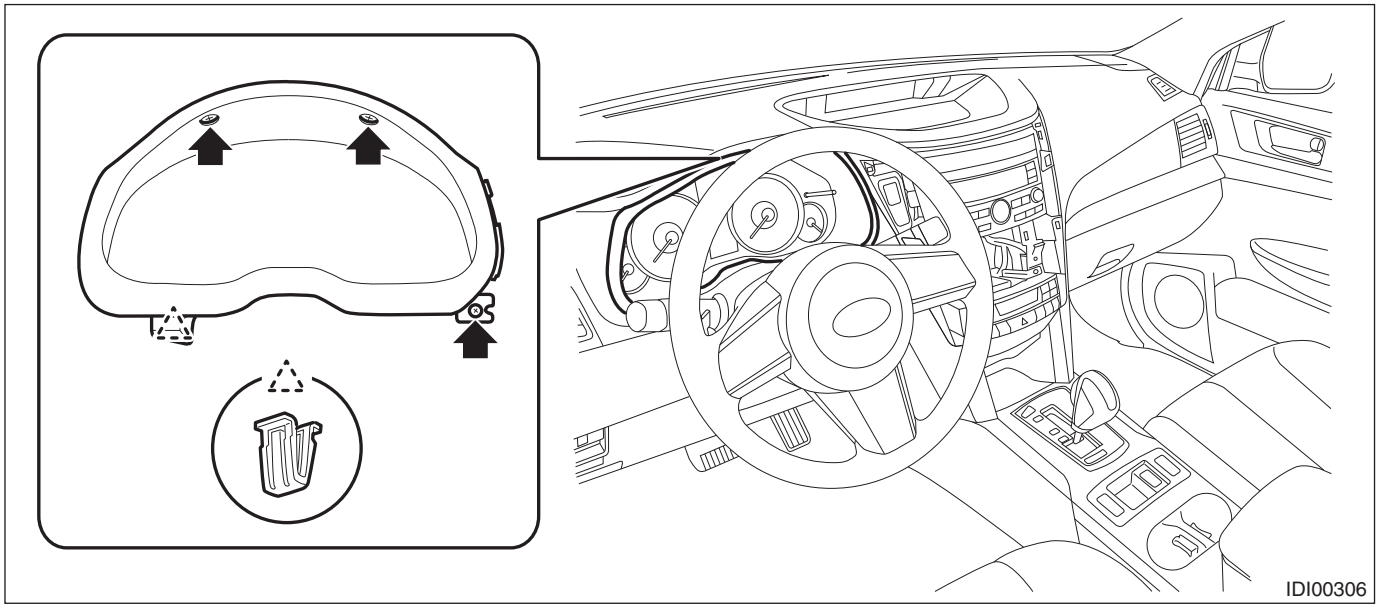
3) Remove the screw and release the claws, then detach the starter cover assembly.



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



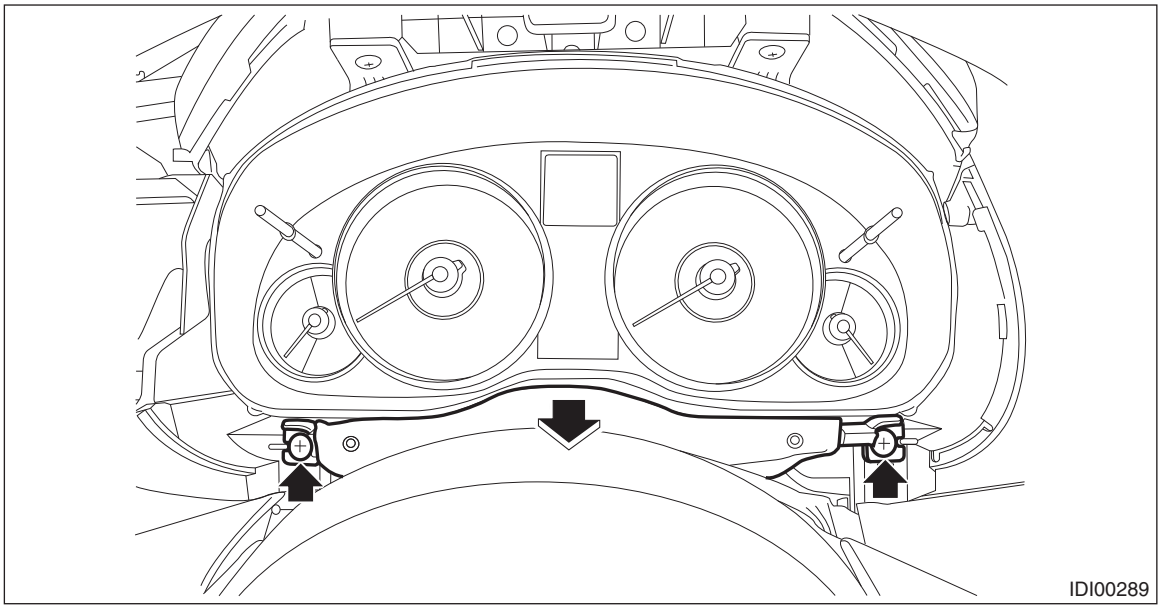
5) Release the screws and clips, then detach the meter visor assembly.



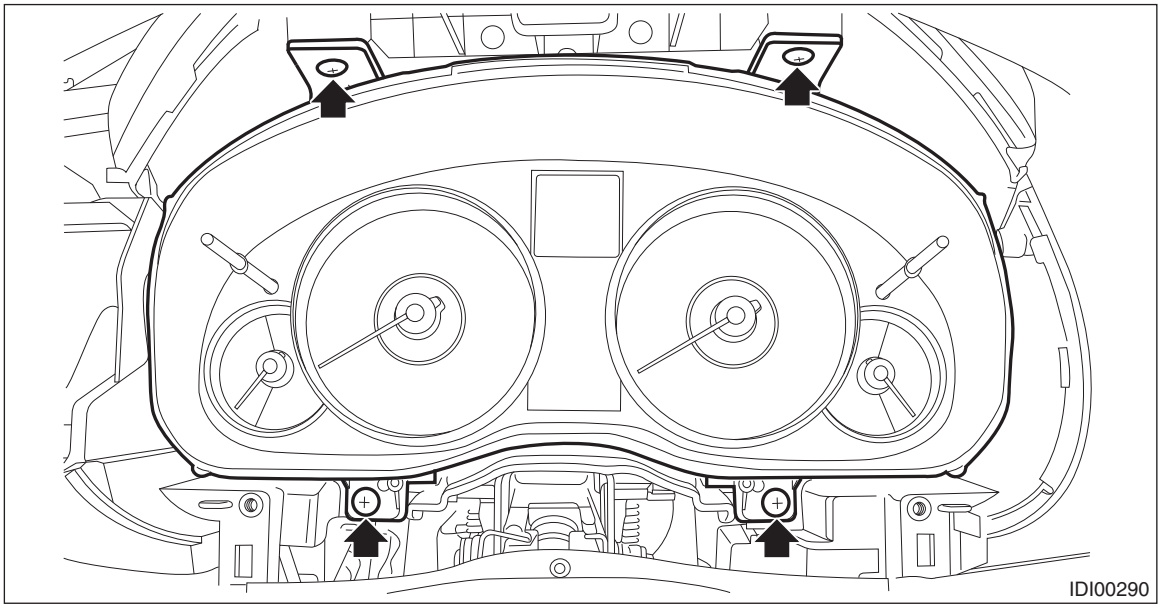
6) Remove the combination meter assembly.

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

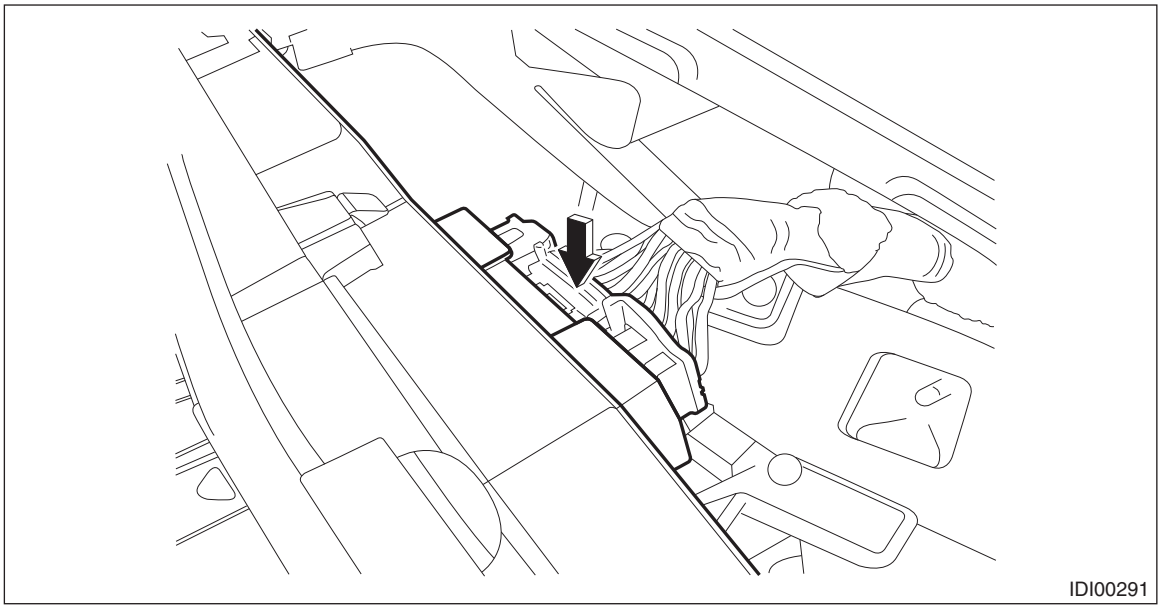
(1) Remove the screws and move the steering COMPL upper cover toward you.



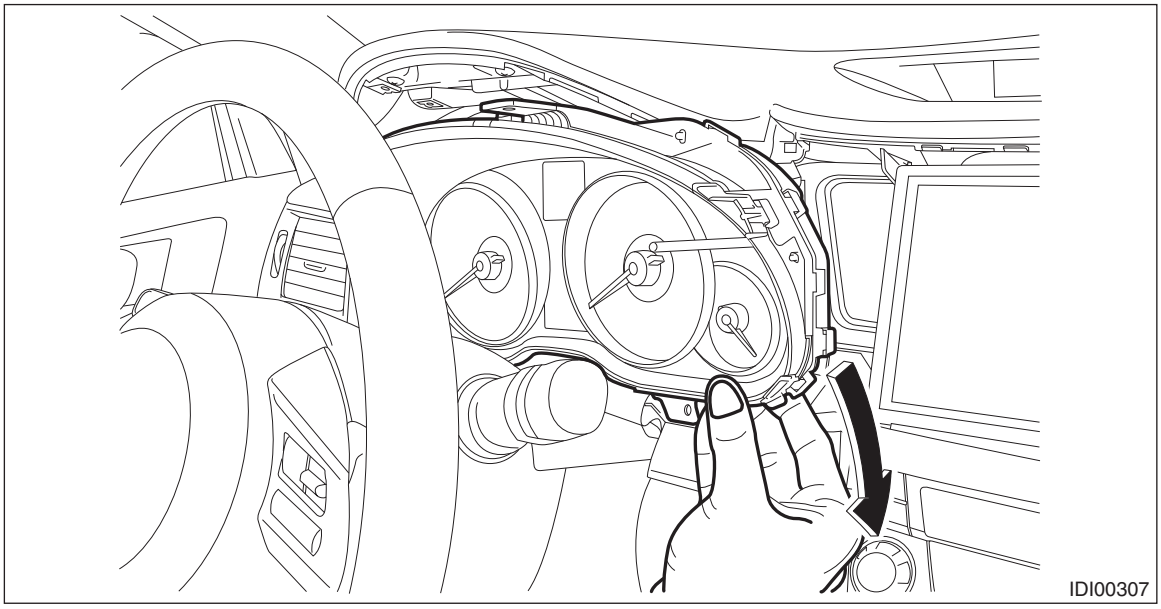
(2) Remove the screws.



(3) Pull the combination meter toward you and disconnect the connector.



(4) Remove the combination meter assembly as shown in the figure.



B: INSTALLATION

CAUTION:
- **Make sure the electrical connector is connected securely.**
- **Make sure that each meter operates normally.**
- **When the combination meter of model with immobilizer has been replaced, be sure to perform the registration of immobilizer.**

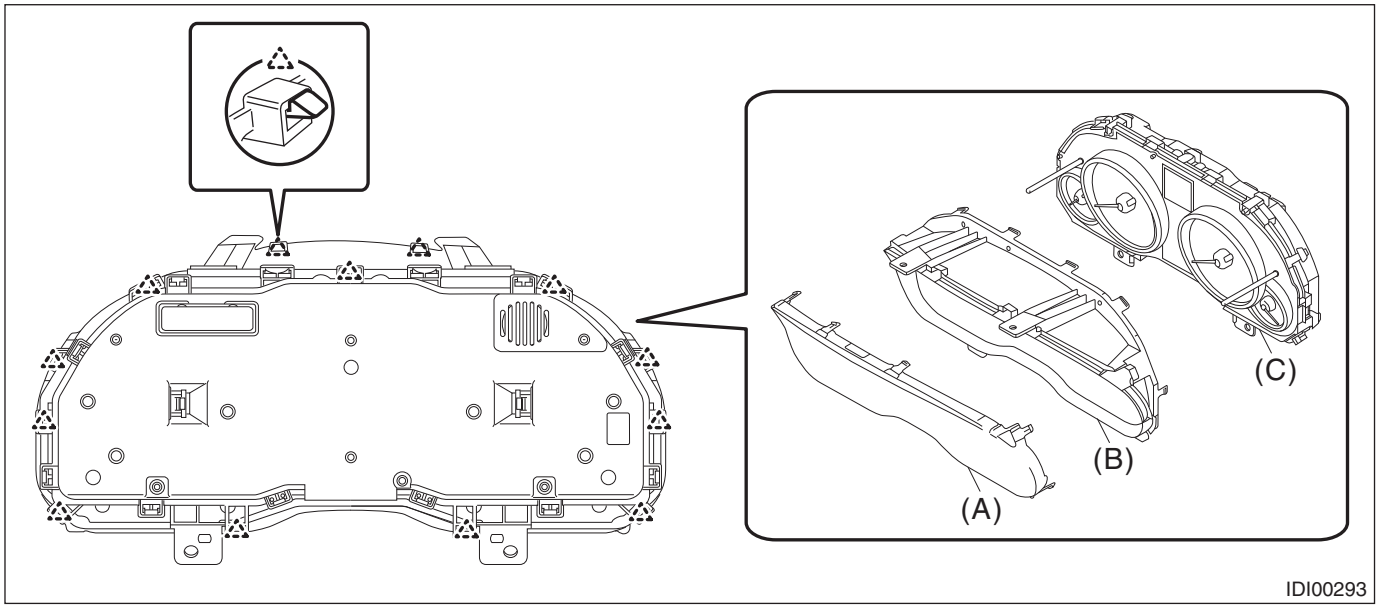
Install each part in the reverse order of removal.

C: DISASSEMBLY

1. DISASSEMBLY OF COMBINATION METER ASSEMBLY

CAUTION:
- **Use gloves to avoid damage and getting fingerprints on the glass surface and meter surfaces.**
- **Be careful not to apply excessive force to the trip knob.**
- **Be sure not to touch the meter indicator needle.**

Disengage the claw, and remove the meter glass (A) and meter visor (B) from the meter case assembly (C).



2. BULB REPLACEMENT

LEDs are used for all of warning lights and indicator lights of combination meters, replace the meter case assembly if faulty.

D: ASSEMBLY

Install each part in the reverse order of removal.

6. Speedometer

A: SPECIFICATION

Since the meter case assembly cannot be disassembled, do not remove or inspect the speedometer alone. (Do not remove the cover on the back surface.)

7. Tachometer

A: SPECIFICATION

Since the meter case assembly cannot be disassembled, do not remove or inspect the tachometer alone. (Do not remove the cover on the back surface.)

8. Fuel Gauge

A: SPECIFICATION

Since the meter case assembly cannot be disassembled, do not remove or inspect the fuel gauge alone. (Do not remove the cover on the back surface.)

9. ECO Gauge

A: SPECIFICATION

Since the meter case assembly cannot be disassembled, do not remove or inspect the ECO gauge alone. (Do not remove the cover on the back surface.)

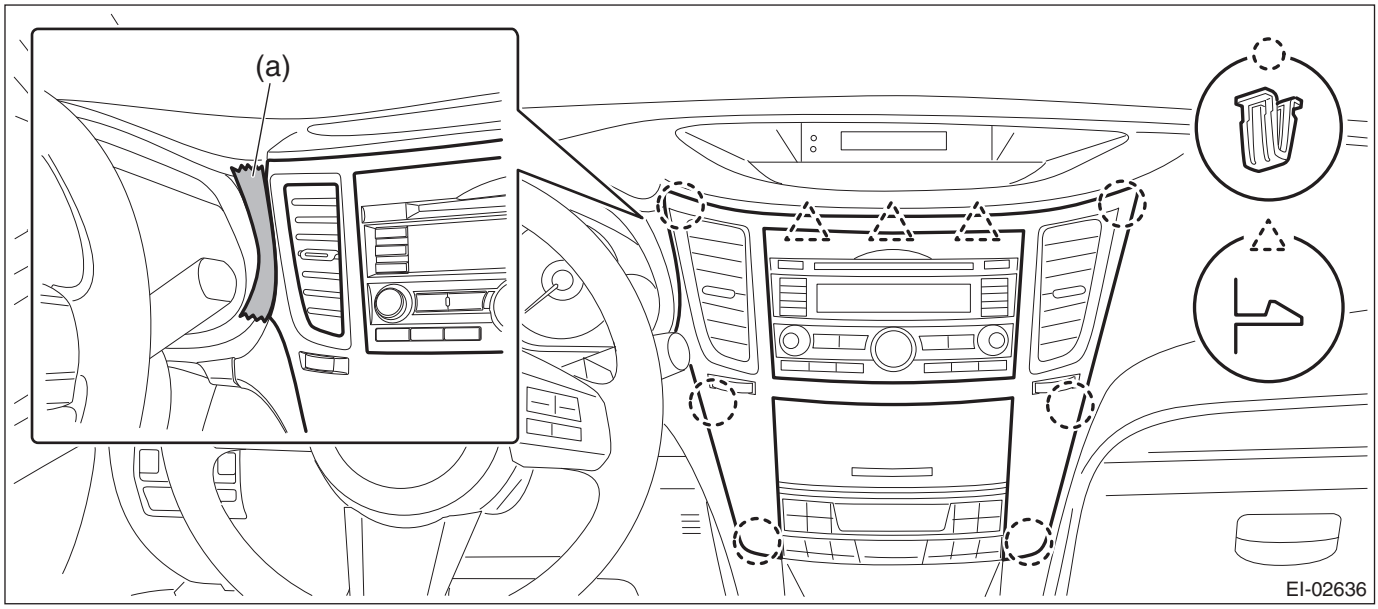
10.Multi Display

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the center panel assembly.

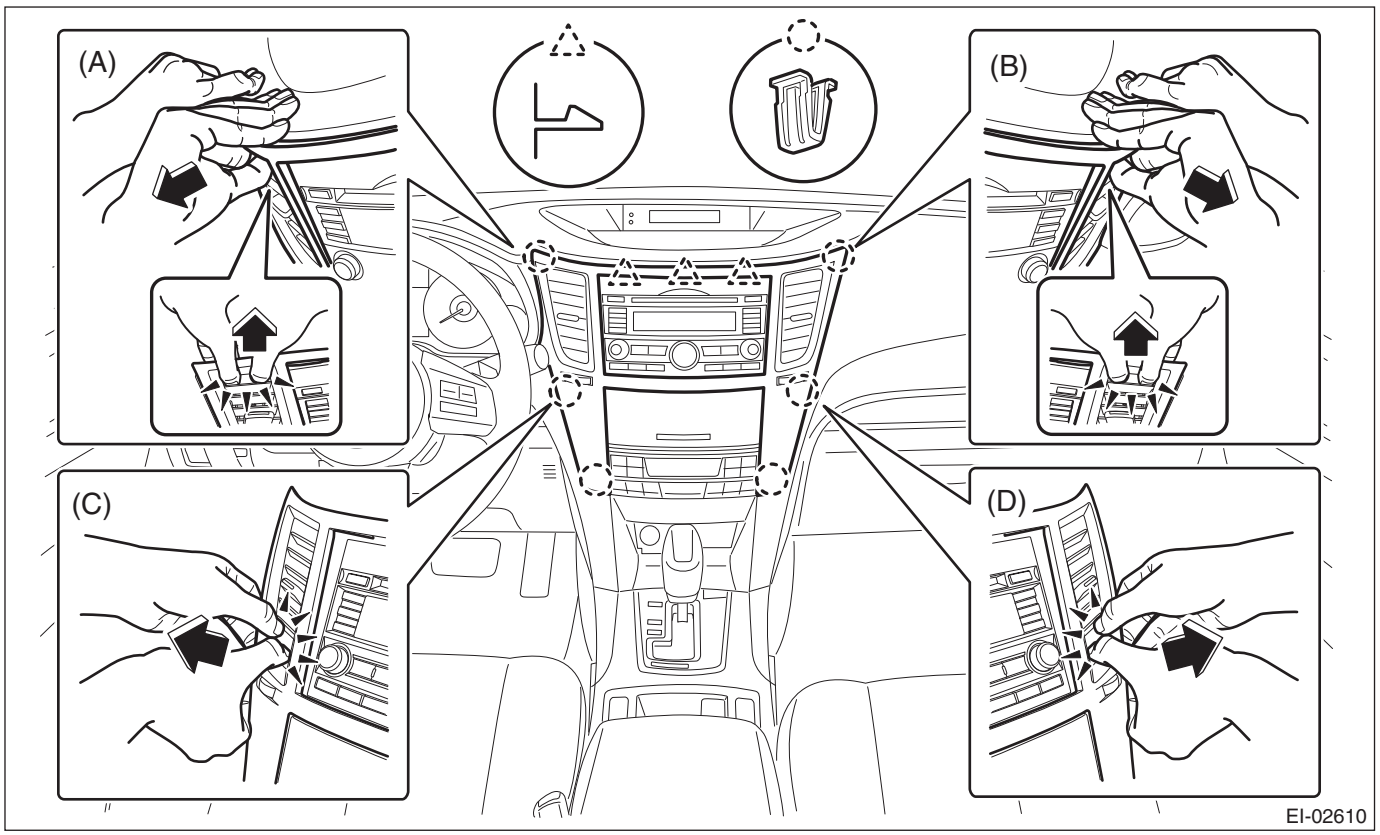
CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(1) Attach the protective tape (a) to the meter visor.

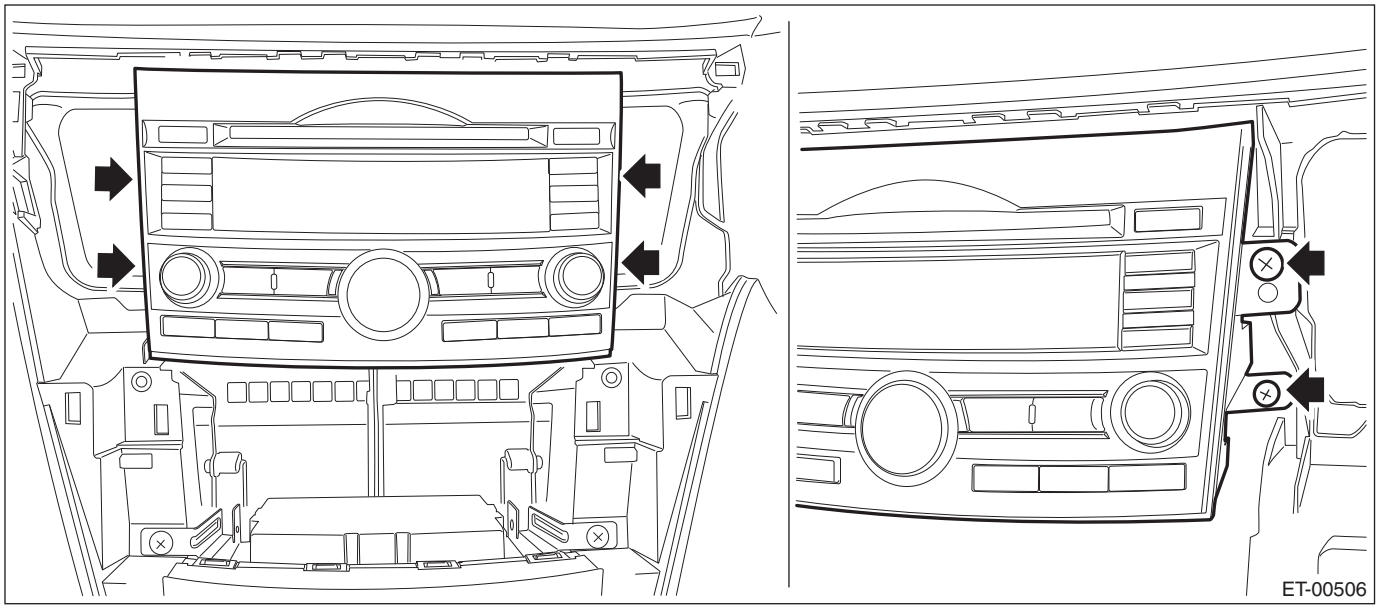


(2) Insert a finger into the air vent grille and release the left and right clips at the top of the center panel. (A), (B)
(3) Insert a finger into the air vent grille and release the left and right clips at the center of the center panel. (C), (D)

(4) Release the clips at the bottom of the center panel and remove the center panel assembly.

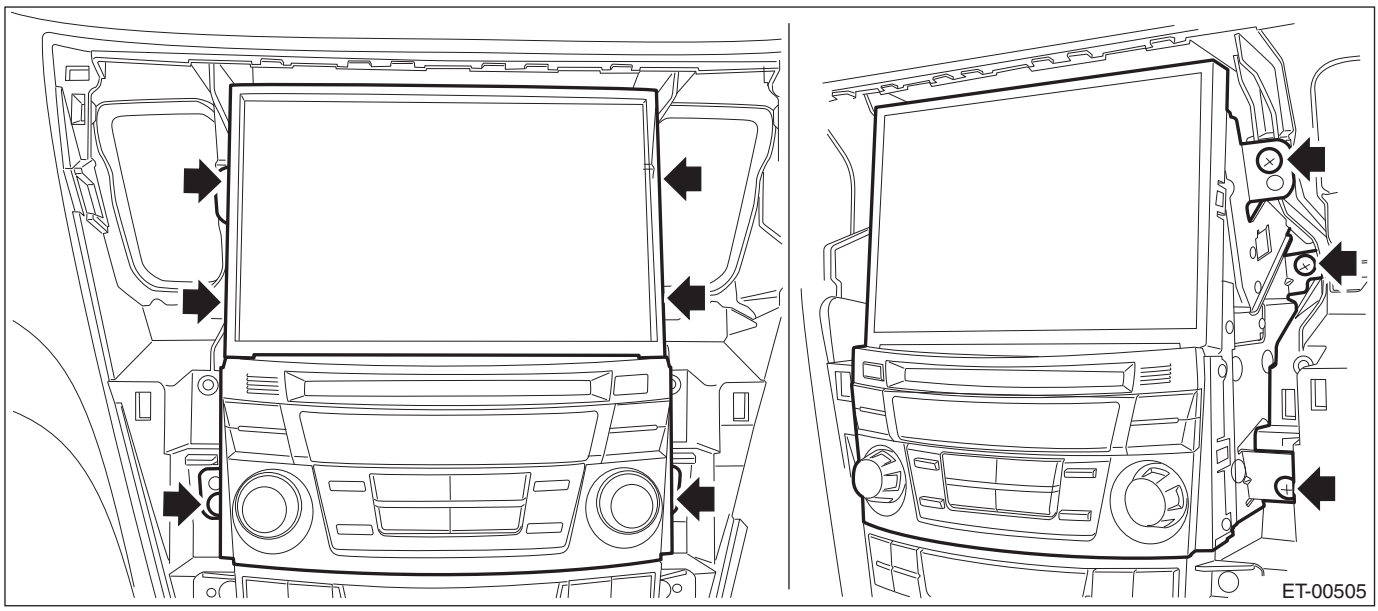


3) Remove the audio assembly.
(1) Remove the left and right screws, and partially pull the audio out from center console.
(2) Disconnect the connectors, and remove the audio assembly.

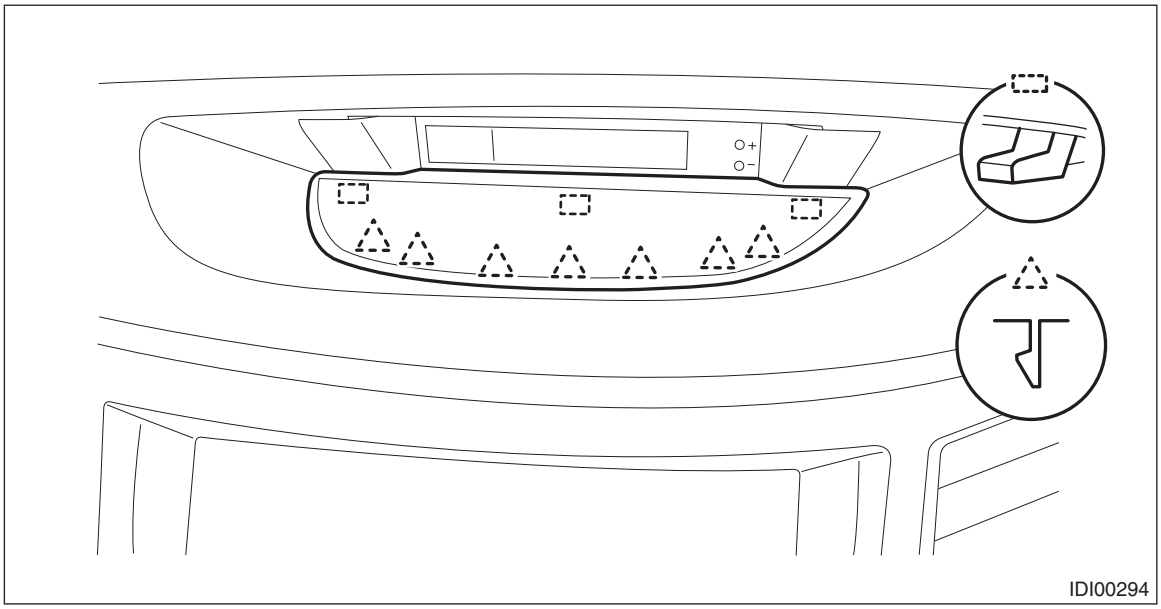


4) Remove the navigation assembly. (model with navigation)
(1) Remove the left and right screws.

(2) Disconnect the connectors, and remove the navigation assembly.



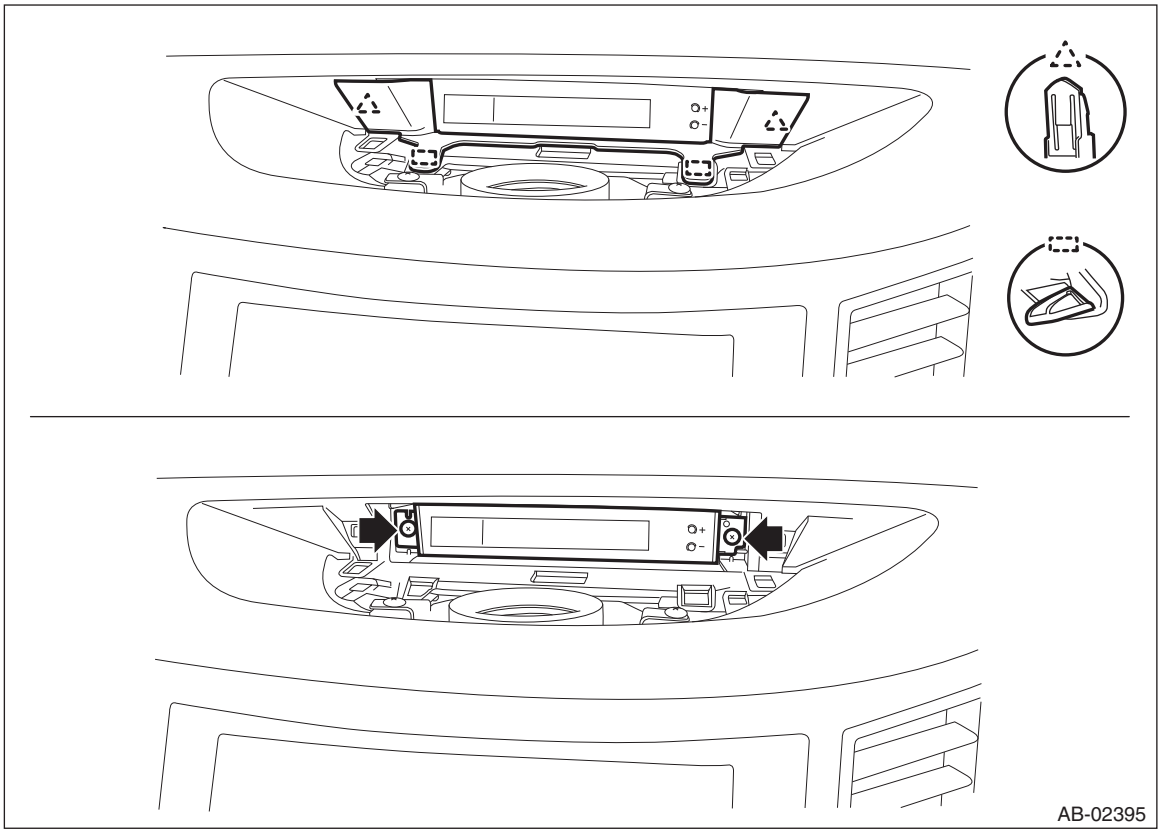
5) Remove the center speaker cover.
(1) Push up the center speaker cover from the audio space.
(2) Disconnect the claws and hooks and remove the center speaker cover.



6) Remove the multi display.

CAUTION:
Be careful not to damage the multi display or instrument panel.
(1) Release the clips and claws, detach the multi display panel LWR.

(2) Remove the screws and pull out the multi display toward you to disconnect the connectors.



B: INSTALLATION

CAUTION:
- **Make sure the electrical connector is connected securely.**
- **Make sure that the multi display operates normally.**

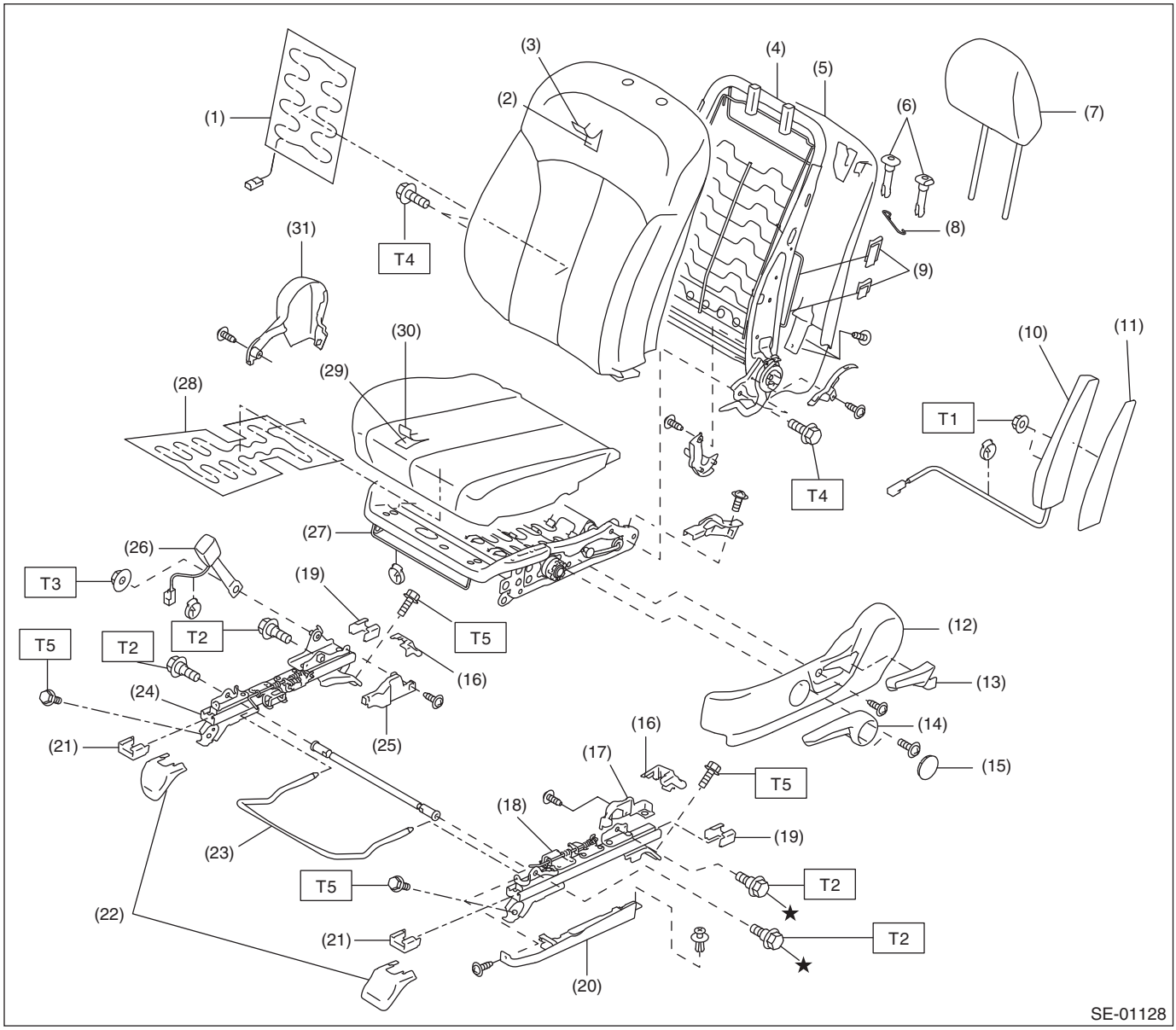
Install each part in the reverse order of removal.

1. General Description

A: COMPONENT

1. FRONT SEAT

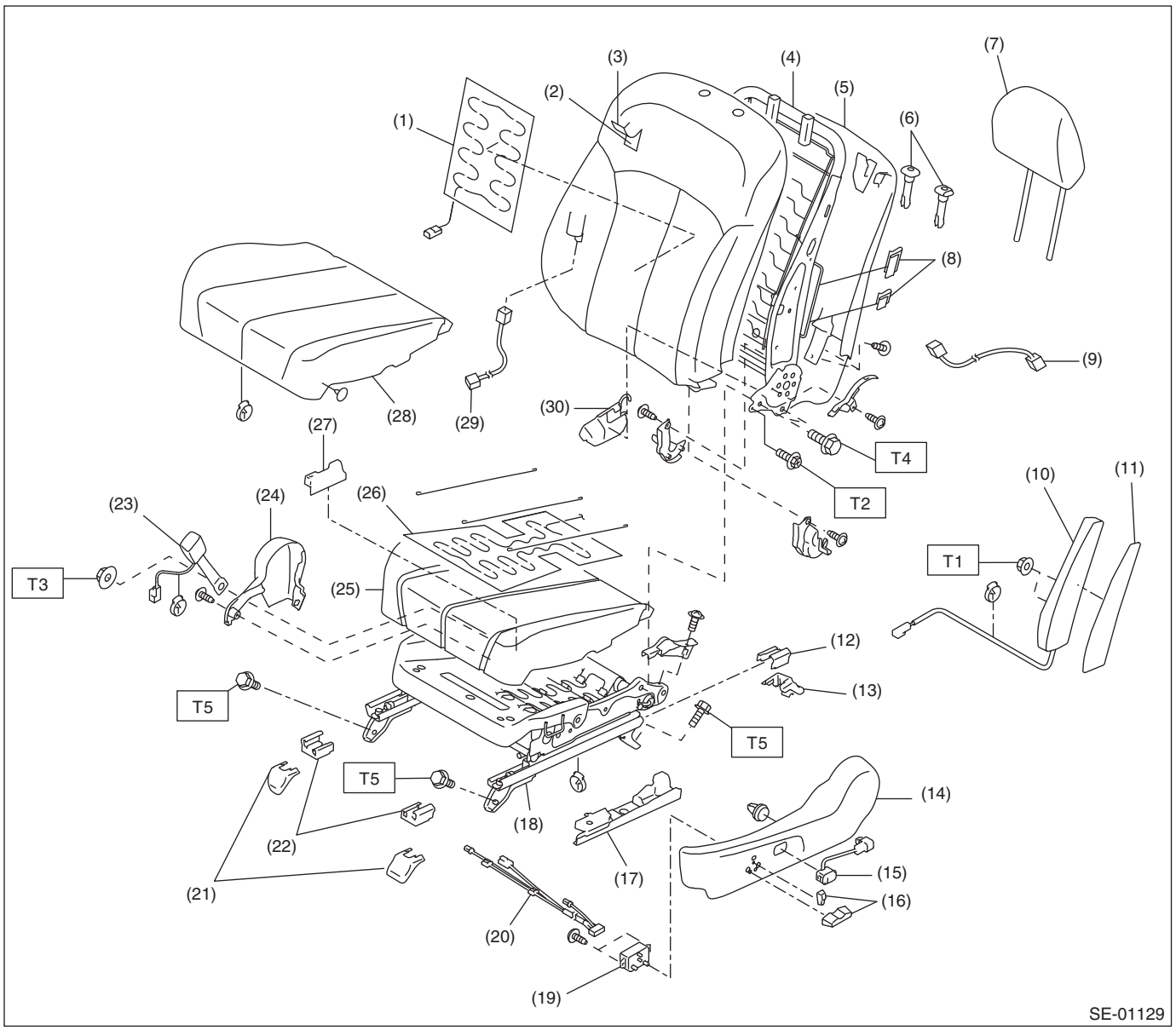
- Manual seat LH



(1) Backrest heater ASSY
(2) Backrest pad
(3) Backrest cover
(4) Backrest frame ASSY
(5) Backrest back cover
(6) Headrest bushing
(7) Headrest ASSY
(8) Flat mat hook
(9) S hook
(10) Side airbag module ASSY
(11) Side airbag tape
(12) Seat side cover OUT
(13) Reclining lever
(14) Lifter lever
(15) Lifter lever cap
(16) Rear bolt cover
(17) Riser cover INN LH
(18) Slide rail ASSY LH
(19) Rail end cap rear
(20) Riser cover OUT
(21) Rail end cap front
(22) Front bolt cover
(23) Sliding adjust bar
(24) Slide rail ASSY RH
(25) Riser cover INN RH
(26) Inner seat belt ASSY
(27) Cushion frame ASSY
(28) Cushion heater ASSY
(29) Cushion pad
(30) Cushion cover
(31) Seat side cover IN

Tightening torque:N·m (kgf-m, ft-lb)
T1: 6 (0.61, 4.4)
T2: 18 (1.84, 13.3)
T3: 38 (3.87, 28.0)
T4: 52 (5.3, 38.4)
T5: 53 (5.4, 39.1)

- Power seat LH

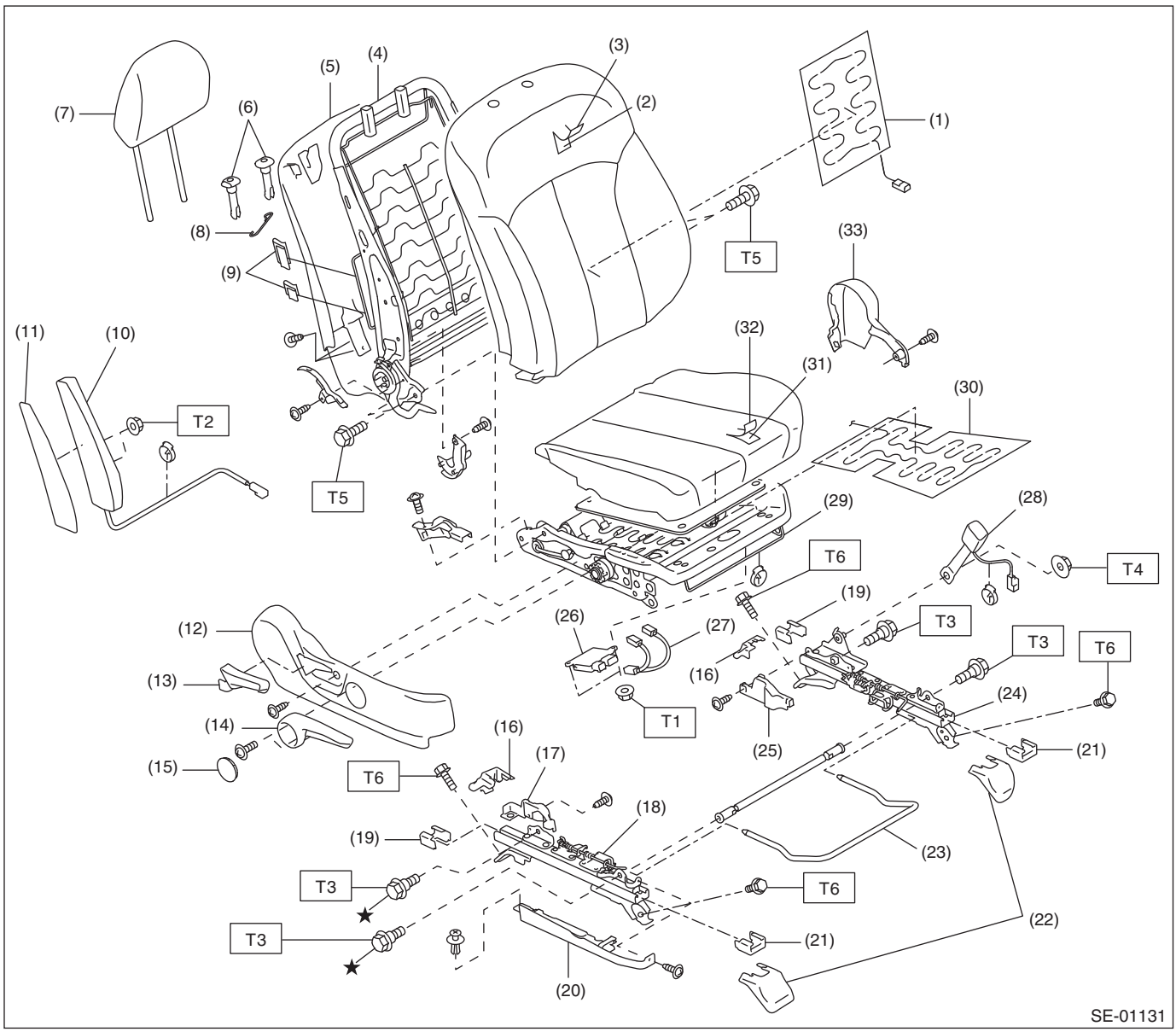


(1) Backrest heater ASSY
(2) Backrest pad
(3) Backrest cover
(4) Backrest frame ASSY
(5) Backrest back cover
(6) Headrest bushing
(7) Headrest ASSY
(8) S hook
(9) Reclining motor harness
(10) Side airbag module ASSY
(11) Side airbag tape
(12) Rail end cap rear
(13) Rear bolt cover
(14) Seat side cover OUT
(15) Lumber switch ASSY
(16) Power seat switch knob
(17) Riser cover OUT LH
(18) Seat cushion frame ASSY
(19) Power seat switch ASSY
(20) Power seat switch harness
(21) Front bolt cover
(22) Rail end cap front
(23) Inner seat belt ASSY
(24) Seat side cover IN
(25) Cushion pad
(26) Cushion heater ASSY
(27) Riser cover INN RH
(28) Cushion cover
(29) Lumber motor harness
(30) Backrest inner cover

Tightening torque:N·m (kgf-m, ft-lb)

T1: 6 (0.61, 4.4)
T2: 18 (1.84, 13.3)
T3: 38 (3.87, 28.0)
T4: 52 (5.3, 38.4)
T5: 53 (5.4, 39.1)

- Manual seat RH

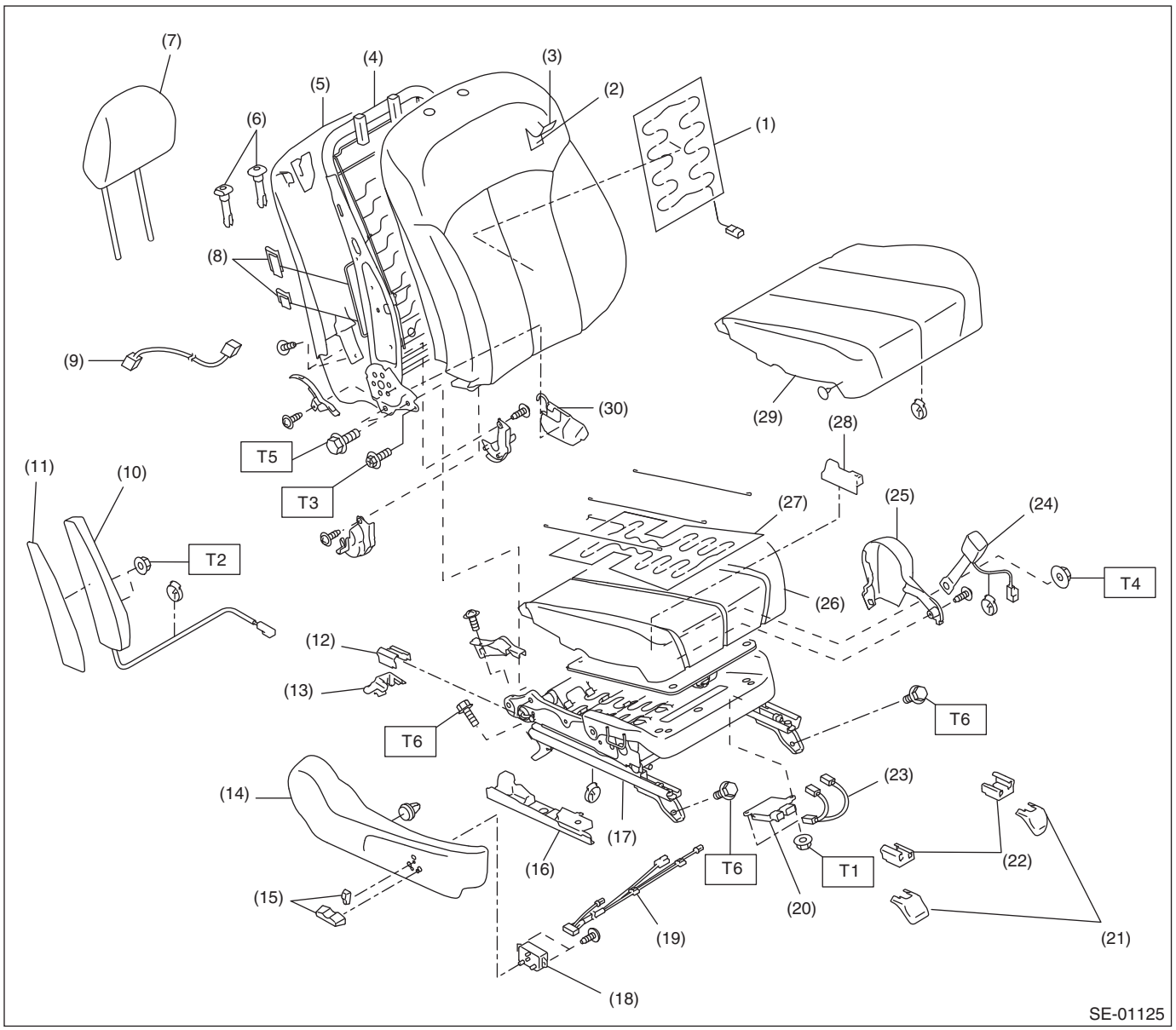


(1)	Backrest heater ASSY	(15)	Lifter lever cap	(29)	Cushion frame ASSY
(2)	Backrest pad	(16)	Rear bolt cover	(30)	Cushion heater ASSY
(3)	Backrest cover	(17)	Riser cover INN RH	(31)	Cushion pad
(4)	Backrest frame ASSY	(18)	Slide rail ASSY RH	(32)	Cushion cover
(5)	Backrest back cover	(19)	Rail end cap rear	(33)	Seat side cover IN
(6)	Headrest bushing	(20)	Riser cover OUT		
(7)	Headrest ASSY	(21)	Rail end cap front		
(8)	Flat mat hook	(22)	Front bolt cover		
(9)	S hook	(23)	Sliding adjust bar		
(10)	Side airbag module ASSY	(24)	Slide rail ASSY LH		
(11)	Side airbag tape	(25)	Riser cover INN LH		
(12)	Seat side cover OUT	(26)	Occupant detection control module		
(13)	Reclining lever	(27)	Occupant detection control module harness		
(14)	Lifter lever	(28)	Inner seat belt ASSY		

Tightening torque:N·m (kgf-m, ft-lb)

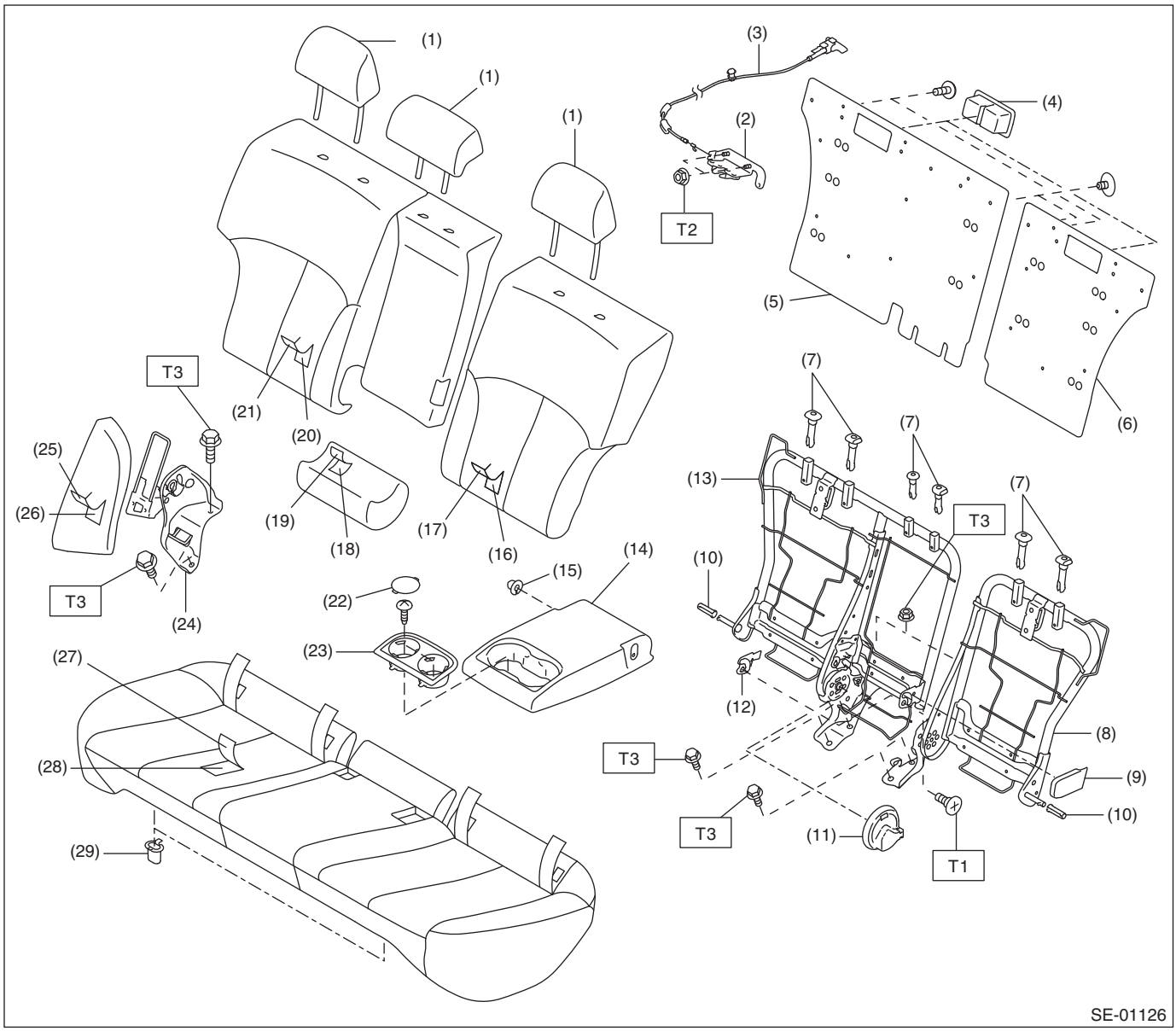
T1: 5.9 (0.6, 4.4)
T2: 6 (0.61, 4.4)
T3: 18 (1.84, 13.3)
T4: 38 (3.87, 28.0)
T5: 52 (5.3, 38.4)
T6: 53 (5.4, 39.1)

- Power seat RH



(1)	Backrest heater ASSY	(14)	Seat side cover OUT	(27)	Cushion heater ASSY
(2)	Backrest pad	(15)	Power seat switch knob	(28)	Riser cover INN RH
(3)	Backrest cover	(16)	Riser cover OUT LH	(29)	Cushion cover
(4)	Backrest frame ASSY	(17)	Seat cushion frame ASSY	(30)	Backrest inner cover
(5)	Backrest back cover	(18)	Power seat switch ASSY		
(6)	Headrest bushing	(19)	Power seat harness	***Tightening torque:N·m (kgf-m, ft-lb)***	
(7)	Headrest ASSY	(20)	Occupant detection control module	***T1:***	***5.9 (0.6, 4.4)***
(8)	S hook	(21)	Front bolt cover	***T2:***	***6 (0.61, 4.4)***
(9)	Reclining motor harness	(22)	Rail end cap front	***T3:***	***18 (1.84, 13.3)***
(10)	Side airbag module ASSY	(23)	Occupant detection control module harness	***T4:***	***38 (3.87, 28.0)***
(11)	Side airbag tape	(24)	Inner seat belt ASSY	***T5:***	***52 (5.3, 38.4)***
(12)	Rail end cap rear	(25)	Seat side cover IN	***T6:***	***53 (5.4, 39.1)***
(13)	Rear bolt cover	(26)	Cushion pad		

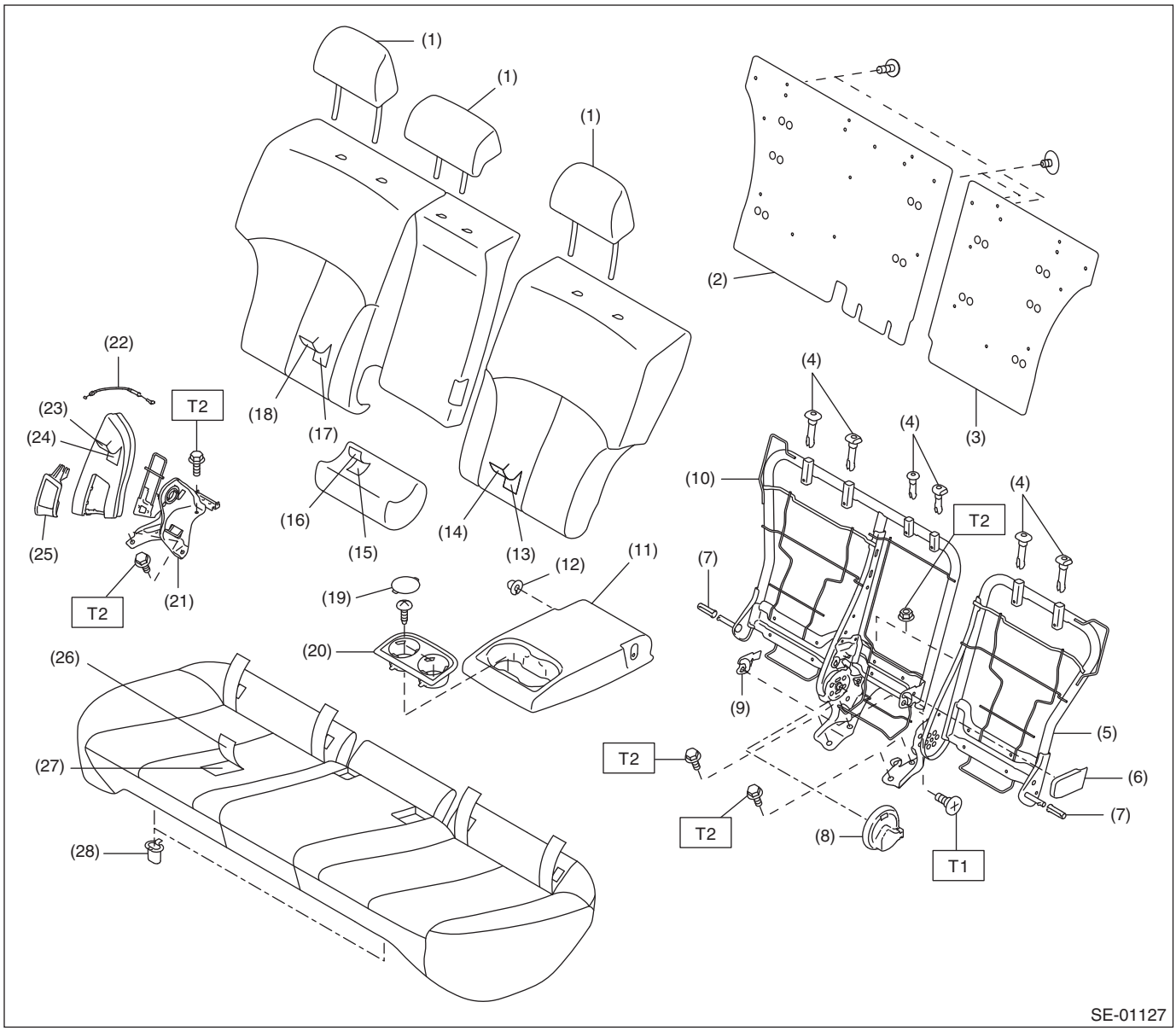
2. REAR SEAT (SEDAN MODEL)



(1) Headrest ASSY
(2) Backrest lock ASSY
(3) Release lever ASSY
(4) Backrest back board RH
(5) Backrest striker cover
(6) Backrest back board LH
(7) Headrest lock bushing
(8) Backrest frame ASSY LH
(9) Armrest hinge cover
(10) Backrest hinge bushing
(11) Reclining hinge cover RH
(12) Armrest hinge bushing
(13) Backrest frame ASSY RH
(14) Armrest ASSY
(15) Armrest bushing
(16) Backrest pad LH
(17) Backrest cover LH
(18) Seat center pad
(19) Seat center cover
(20) Backrest pad RH
(21) Backrest cover RH
(22) Cup holder rubber
(23) Cup holder ASSY
(24) Hinge ASSY
(25) Backrest side cover
(26) Backrest side pad
(27) Seat cushion cover
(28) Seat cushion pad
(29) Hook

Tightening torque:N·m (kgf-m, ft-lb)
T1: 9.8 (1.0, 7.2)
T2: 24.5 (2.5, 18.1)
T3: 53 (5.4, 39.1)

3. REAR SEAT (OUTBACK MODEL)



(1) Headrest ASSY
(2) Backrest back board RH
(3) Backrest back board LH
(4) Headrest lock bushing
(5) Backrest frame ASSY LH
(6) Armrest hinge cover
(7) Backrest hinge bushing
(8) Reclining hinge cover RH
(9) Armrest hinge bushing
(10) Backrest frame ASSY RH
(11) Armrest ASSY
(12) Armrest bushing
(13) Backrest pad LH
(14) Backrest cover LH
(15) Seat center pad
(16) Seat center cover
(17) Backrest pad RH
(18) Backrest cover RH
(19) Cup holder rubber
(20) Cup holder ASSY
(21) Hinge ASSY
(22) Reclining cable
(23) Backrest side cover
(24) Backrest side pad
(25) Reclining lever ASSY
(26) Seat cushion cover
(27) Seat cushion pad
(28) Hook

Tightening torque:N·m (kgf-m, ft-lb)
T1: 24.5 (2.5, 18.1)
T2: 53 (5.4, 39.1)

B: CAUTION

When removing the front seat from a vehicle, follow the safety instructions given in the airbag section.

C: PREPARATION TOOL

1. GENERAL TOOL

TOOL NAME	Remarks
Long nose plier	Used for removing the hog ring.
Hog ring pliers	Used for installing the hog ring.
Circuit tester	Used for checking voltage and continuity.

2. Front Seat

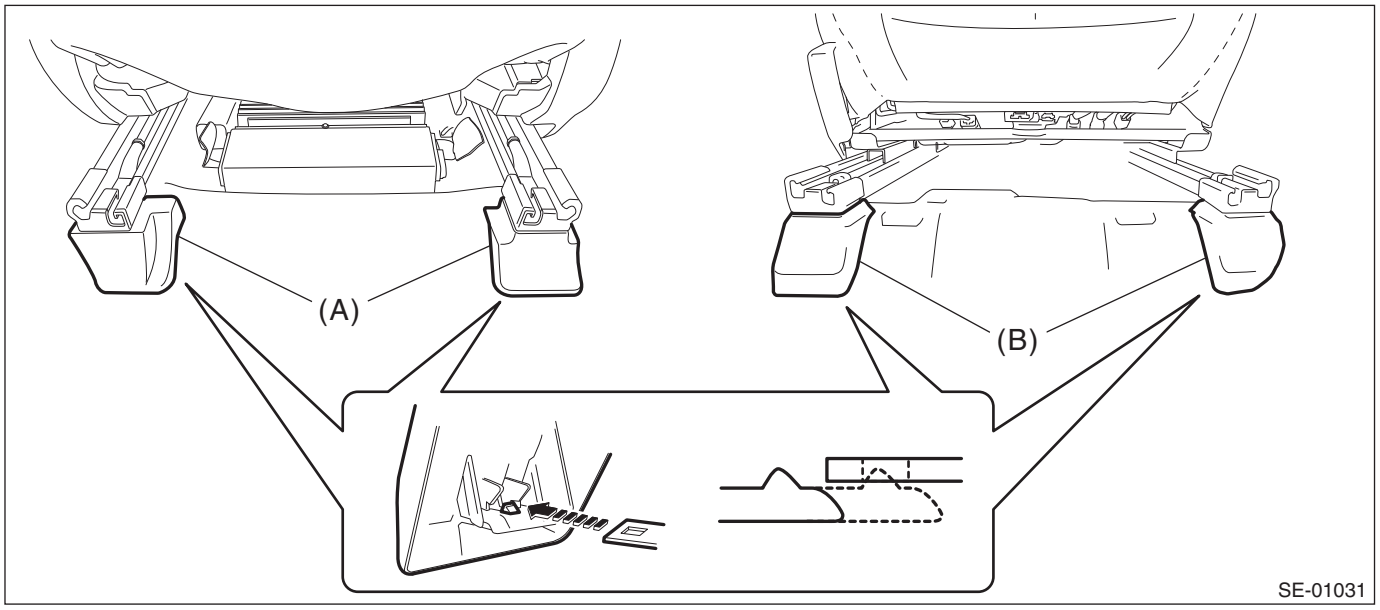
A: REMOVAL

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

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

NOTE:
For the power seat, remove the slide rail installing bolt before removing the battery ground terminal.

3) Remove the bolts from the slide rail.
   (1) Tilt the backrest forward and move the seat to the front most position.
   (2) Remove the rear bolt cover (A) and remove the two bolts.
   (3) Move the seat to the rearmost position.
   (4) Remove the front bolt cover (B) and remove the two bolts.



4) Disconnect the connector under the seat.

CAUTION:
Disconnect the ground cable from battery, and wait 60 seconds before disconnecting the connector.

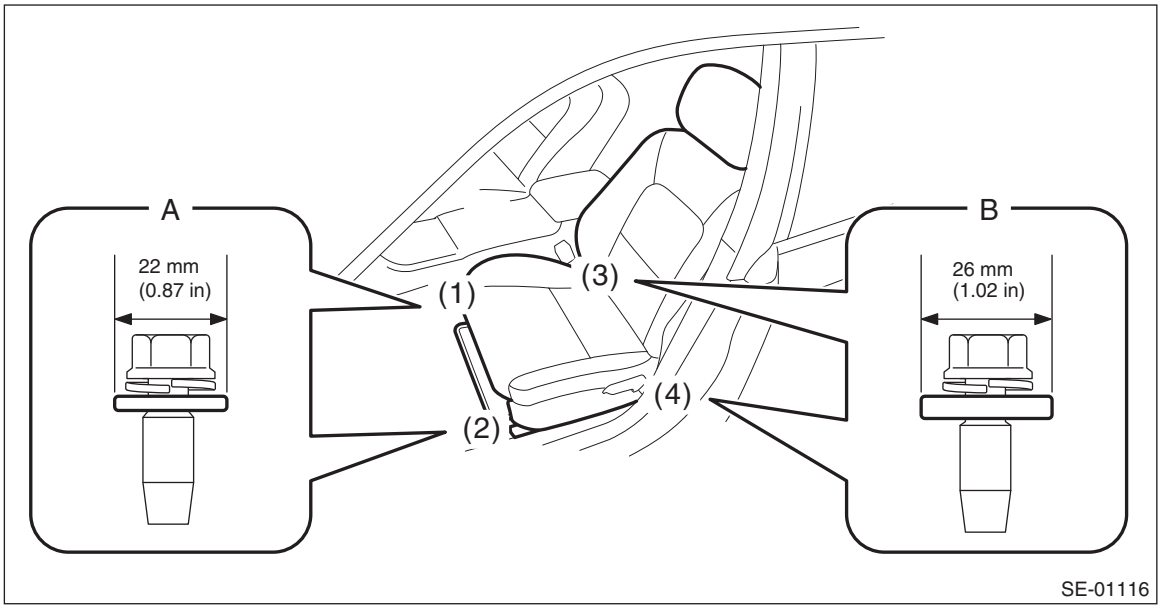
- Seat belt warning light connector (driver's seat)
- Occupant detection system harness connector (passenger's seat)
- Side airbag connector
- Seat heater connector (model with seat heater)
- Power seat connector (model with power seats)

5) Remove the front seat from vehicle.

B: INSTALLATION

Install each part in the reverse order of removal.

CAUTION:
• The seat mounting bolts differ between the front mounting points and the rear mounting points. Make sure that you are using correct bolts at correct positions.
• Tighten the slide rail installing bolt gradually in several steps to the specified torque in the order as shown in the figure.



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

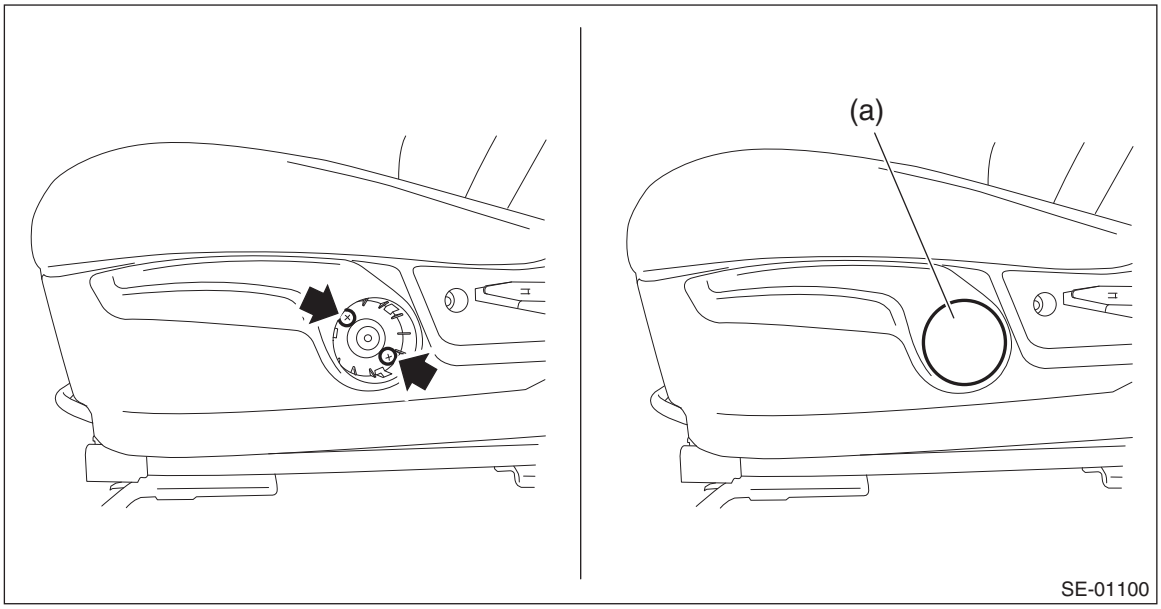
Tightening torque:
Front seat assembly: 53 N·m (5.4 kgf-m, 39.1 ft-lb)

C: DISASSEMBLY

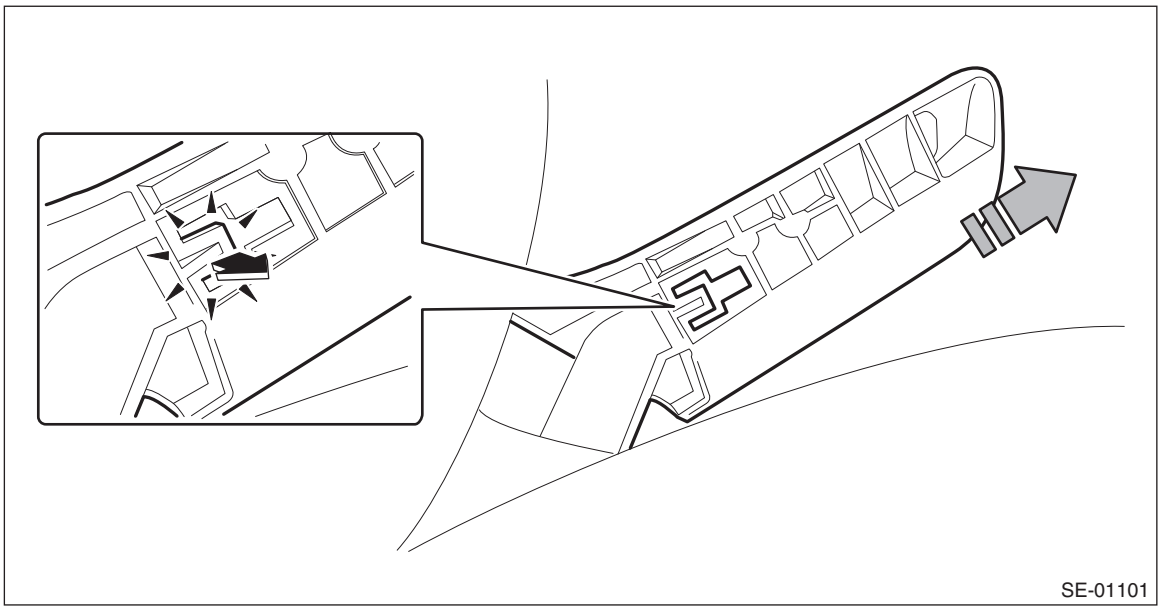
1. DRIVER SEAT (MANUAL SEAT)

CAUTION:
Make sure how the harnesses of the side airbag and inner seat belt are routed before assembling to avoid misarranging. Incorrect harness routing during assembly can result in pinched harnesses or short circuits.

1) Remove the seat from vehicle. <Ref. to SE-10, REMOVAL, Front Seat.>
2) Remove the seat lifter lever.
   (1) Using a flat tip screwdriver, remove the seat lifter lever cover (a).
   (2) Remove the screw and remove the seat lifter lever.

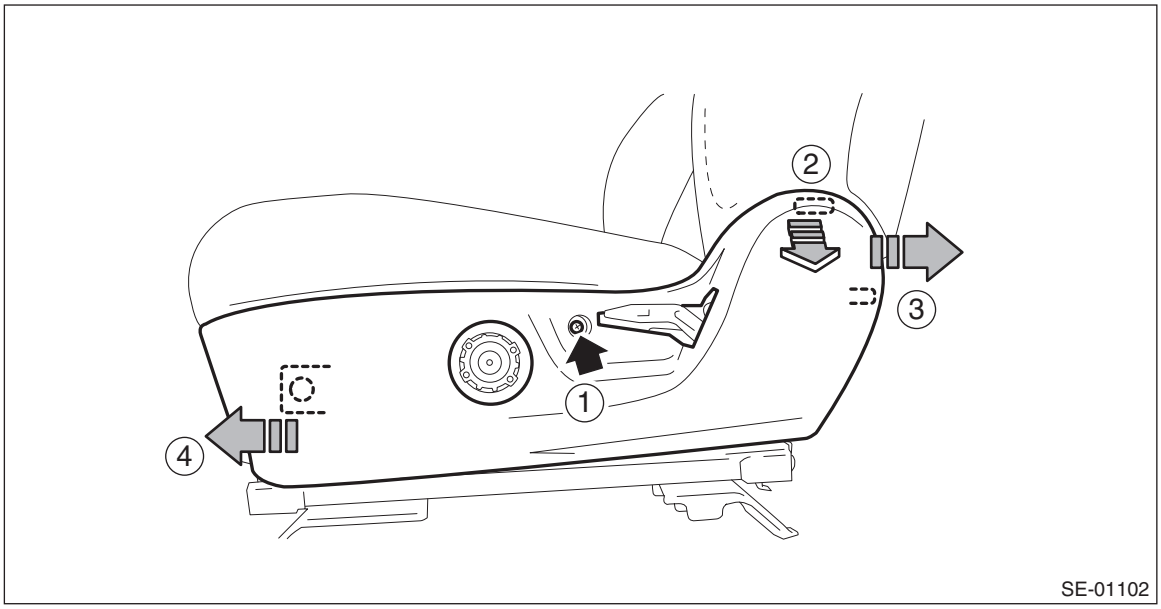


3) Remove the reclining lever cover.
   (1) Pull up the reclining lever and release the claws on the back.
   (2) Pull out the reclining lever cover.

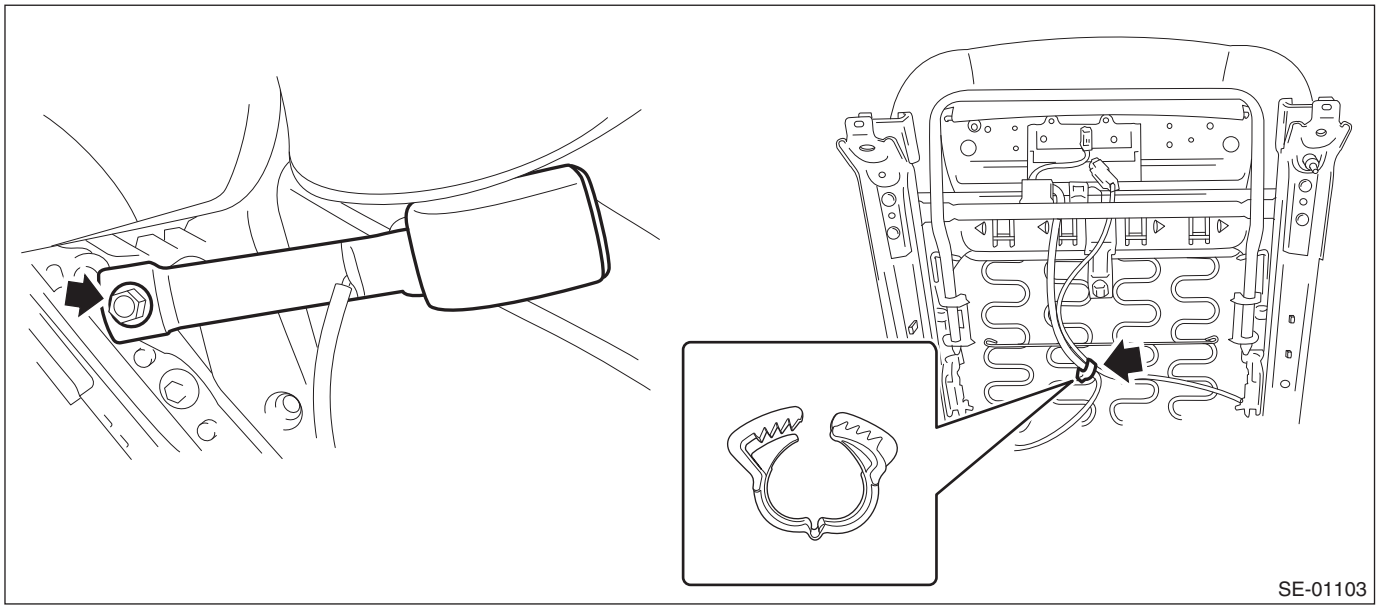


4) Remove the seat side cover OUT.
   (1) Remove the screws.
   (2) Release the claw in the upper section of the seat side cover.
   (3) Release the claw in the rear section of the seat side cover.

(4) Release the claw in the front section of the seat side cover, then remove the seat side cover OUT.

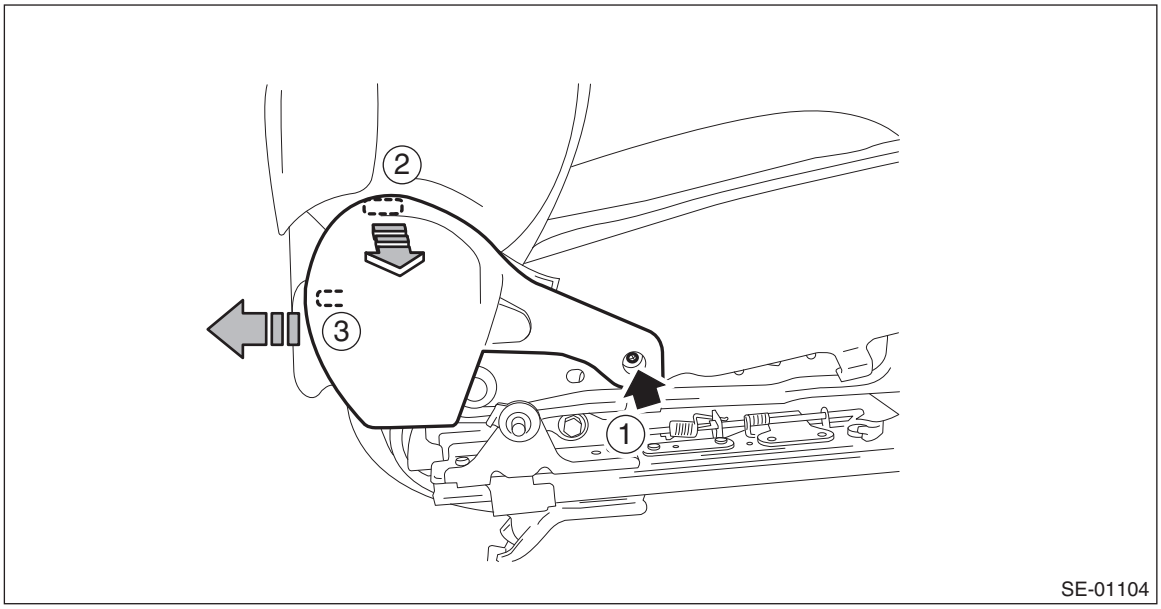


5) Remove the inner seat belt assembly.
(1) Remove the nut and remove the inner seat belt assembly.
(2) Remove the clip for the inner seat belt harness located under the seat cushion.

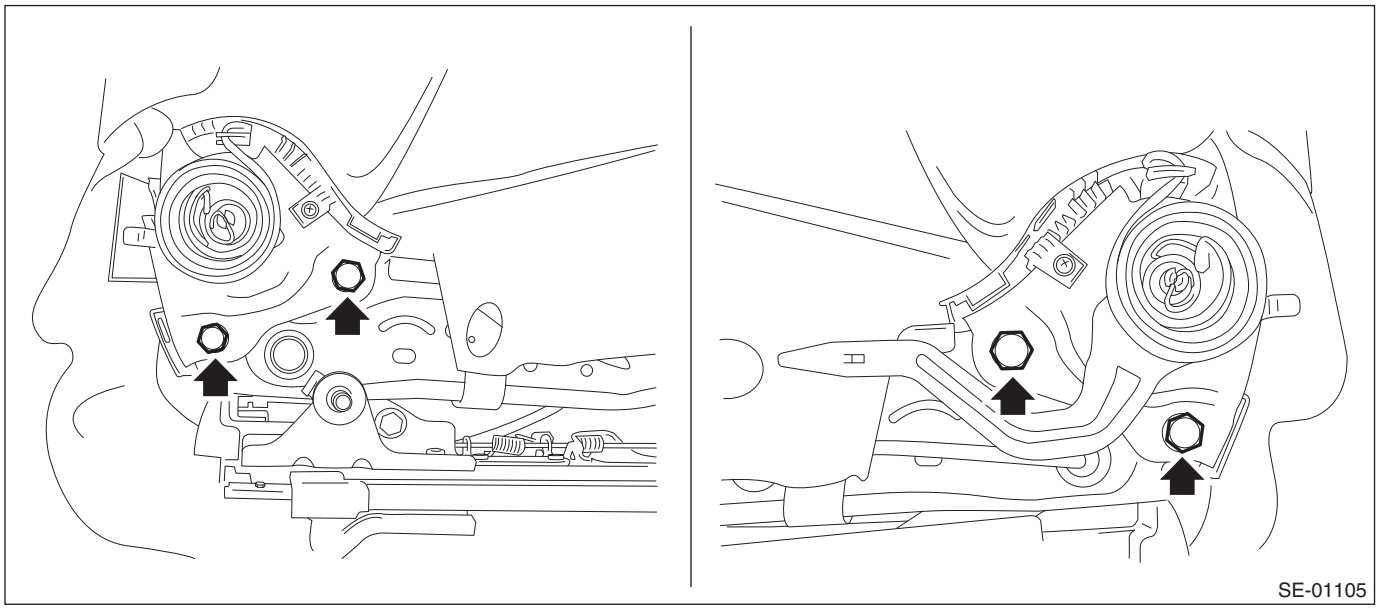


6) Remove the seat side cover IN.
(1) Remove the screws.
(2) Release the claw in the upper section of the seat side cover.

(3) Release the claw in the rear section of the seat side cover, then remove the seat side cover IN.

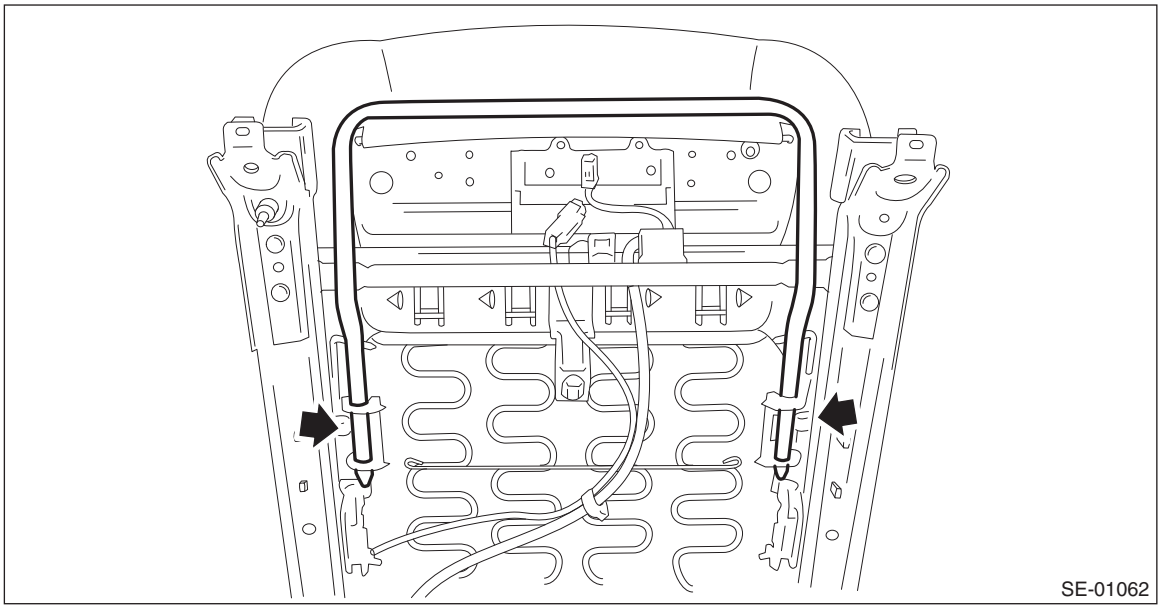


7) Separate the backrest assembly and the seat cushion assembly.
(1) Remove the clip for the side airbag harness located under the seat cushion. (seat with side airbag)
(2) Remove the bolts from the right and left reclining hinges.
(3) While taking care not to damage the airbag harness, separate the backrest assembly and the seat cushion assembly.

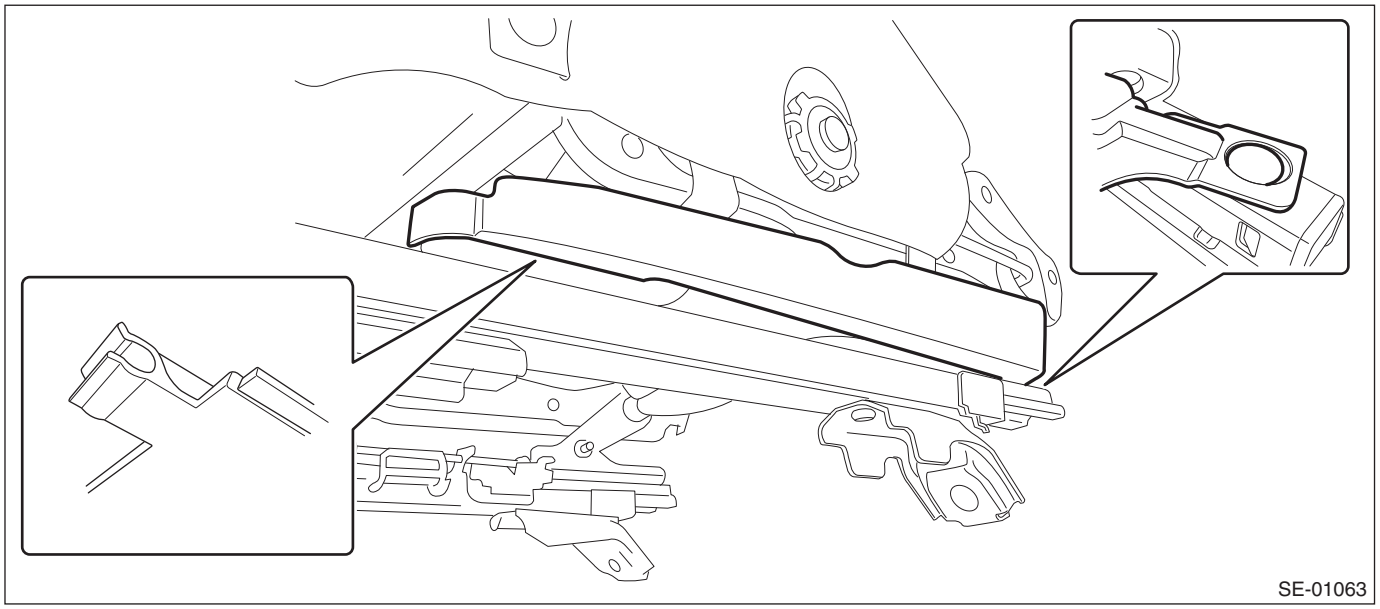


8) Remove the sliding adjuster bar.
(1) Remove the left and right spring locks.

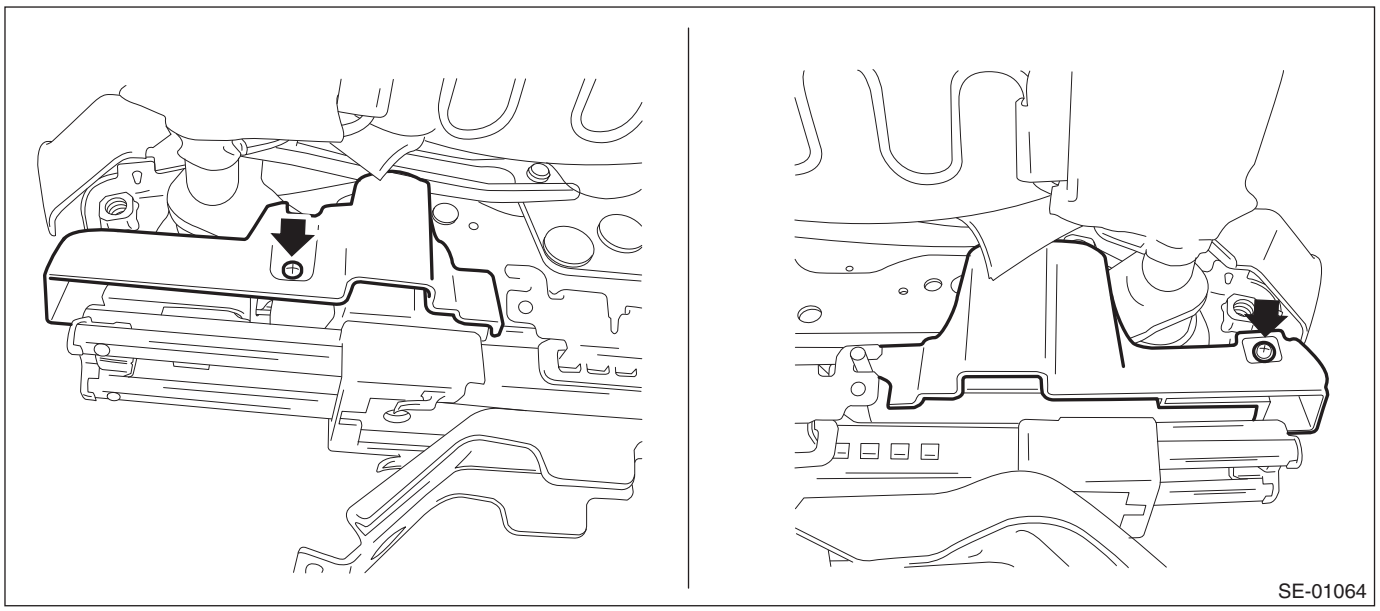
(2) Pull out the sliding adjust bar.



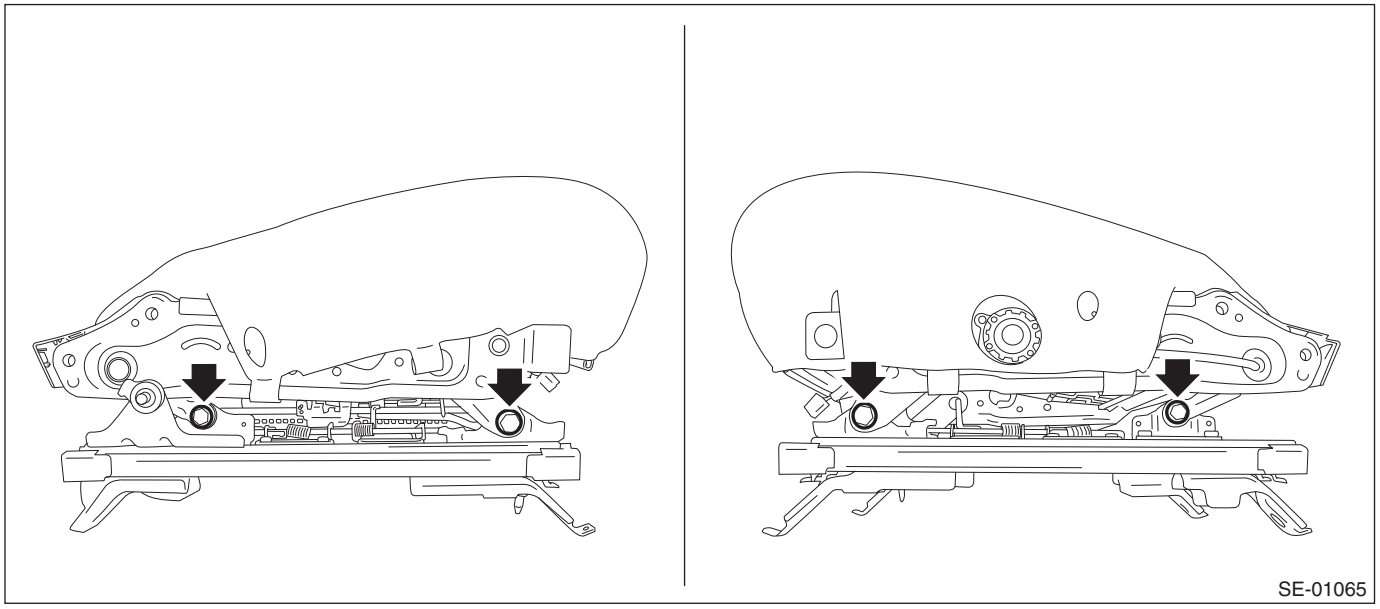
9) Remove the riser cover OUT.
(1) Remove the clip.
(2) Remove the hook, and detach the riser cover OUT.



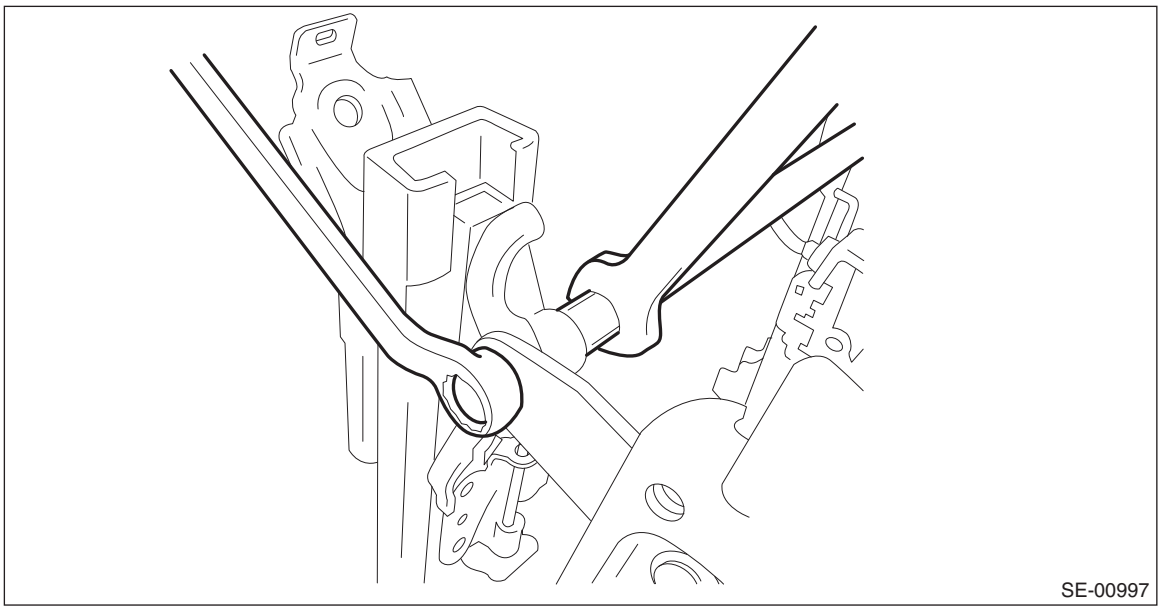
10) Remove the screws and remove the riser cover INN LH and RH.



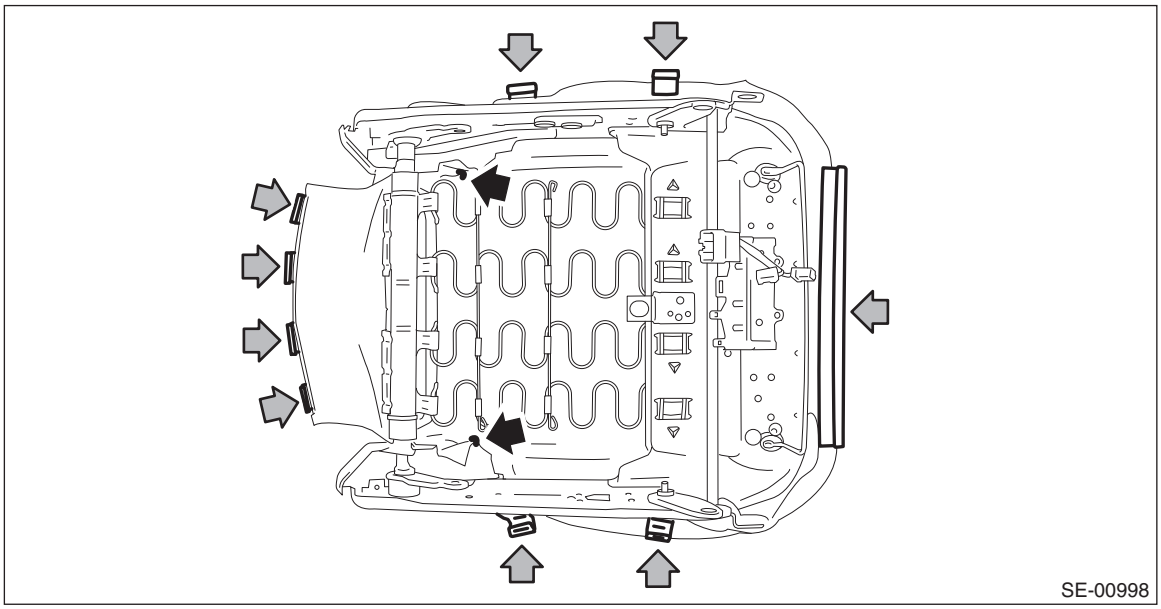
11) Remove the bolts and bushings on the seat cushion assembly (left and right) sides, and remove the slide rail assembly.



NOTE:
To remove the front bolt, use a spanner.

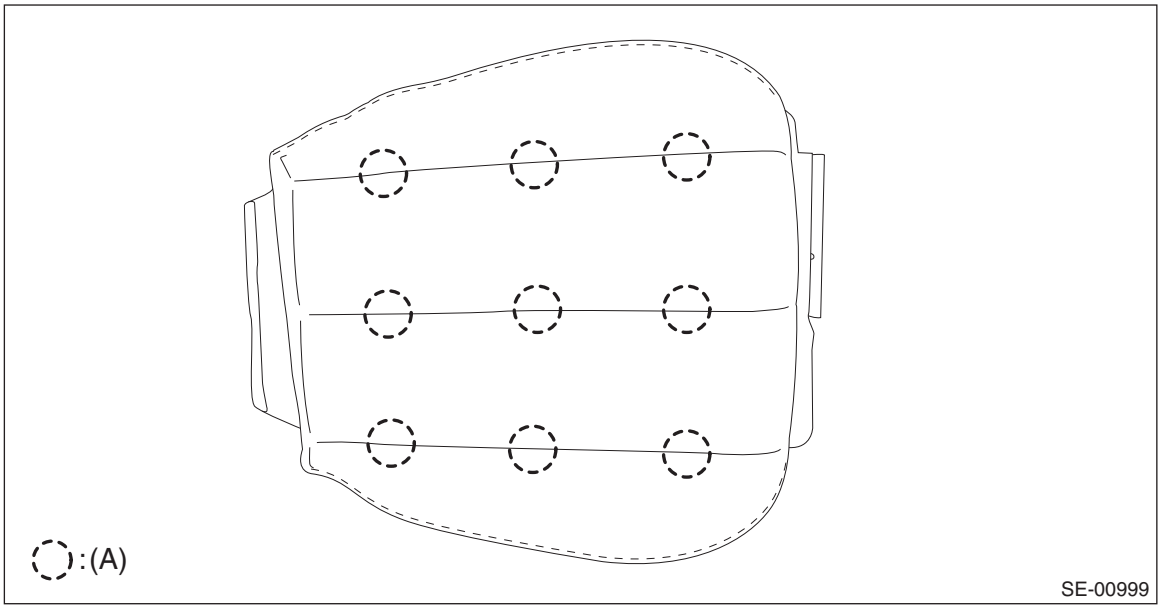


12) Remove the seat cushion pad & cover.
(1) Remove the hooks and hog rings.
(2) Remove the seat cushion pad & cover from seat cushion assembly.

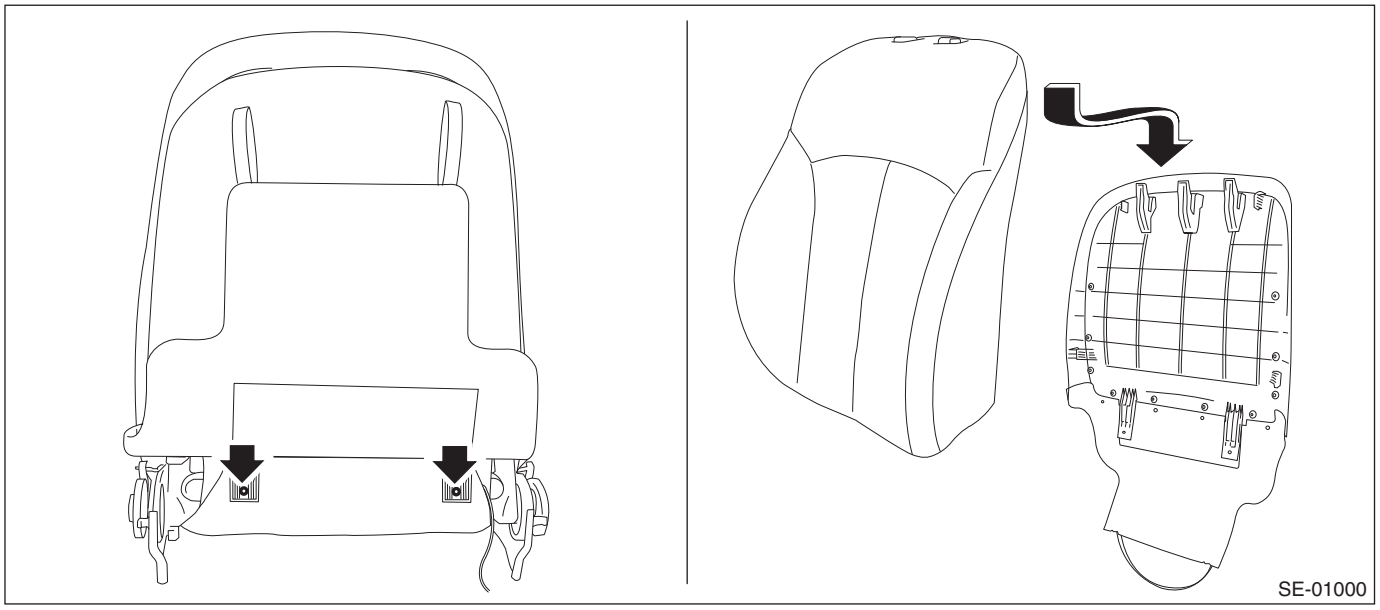


13) Remove the seat cushion cover.
(1) Remove the hog ring (A).

(2) Pull out the seat cushion pad from the seat cushion cover.

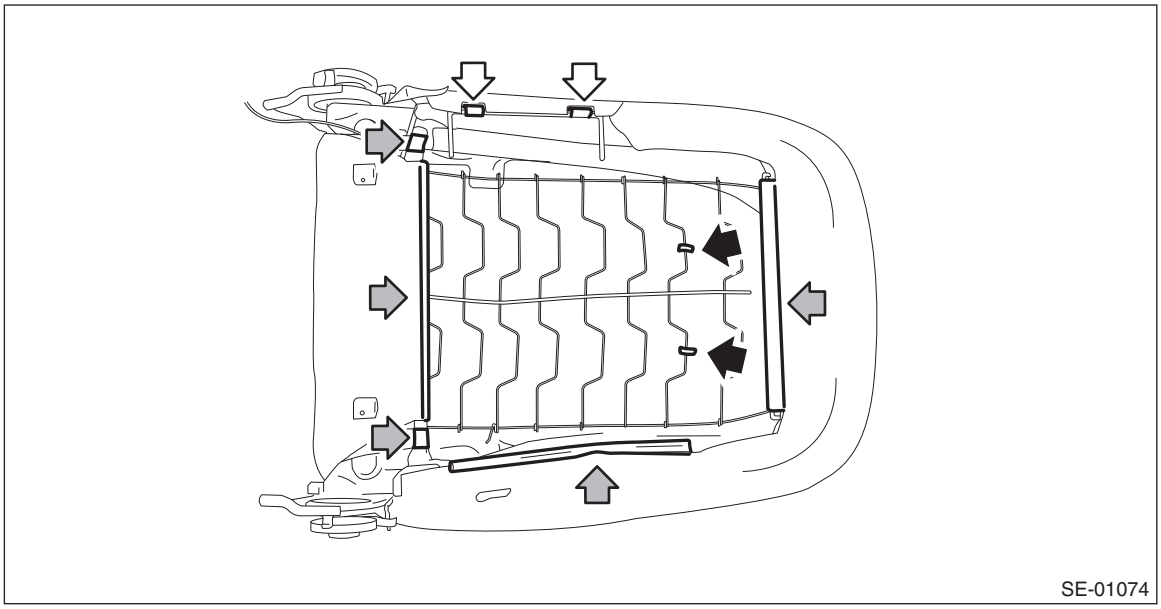


14) Remove the backrest back cover.
(1) Remove the screws.
(2) Release the hooks by pulling down the back cover and remove the backrest back cover.



15) Remove the backrest pad & cover.
(1) Remove the hooks and hog rings.

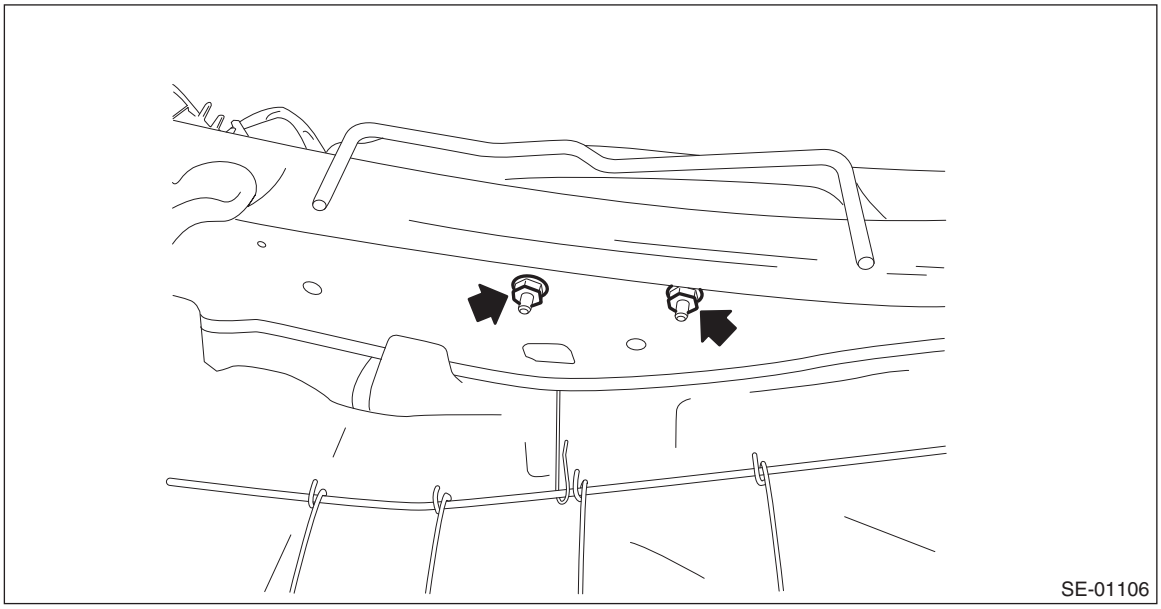
(2) Remove the backrest pad & cover from backrest assembly.



16) Remove the side airbag module assembly.

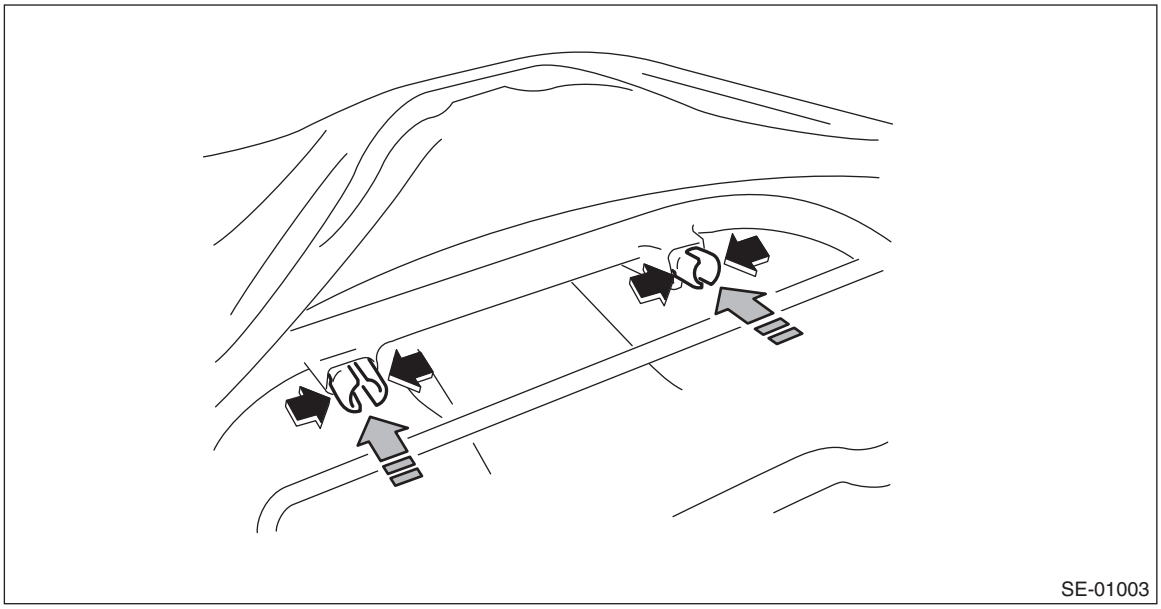
CAUTION:
Do not open the (plastic) protective cover of the airbag. If any damage is present in the protective cover (such as airbag module cloth coming out), replace the side airbag module assembly with a new one.

(1) Remove the S hook.
(2) Remove the mounting nuts of the side airbag module.



(3) Remove the side airbag harness from backrest frame assembly.
(4) While taking care not to damage the airbag (plastic) protective cover, remove the side airbag module assembly.

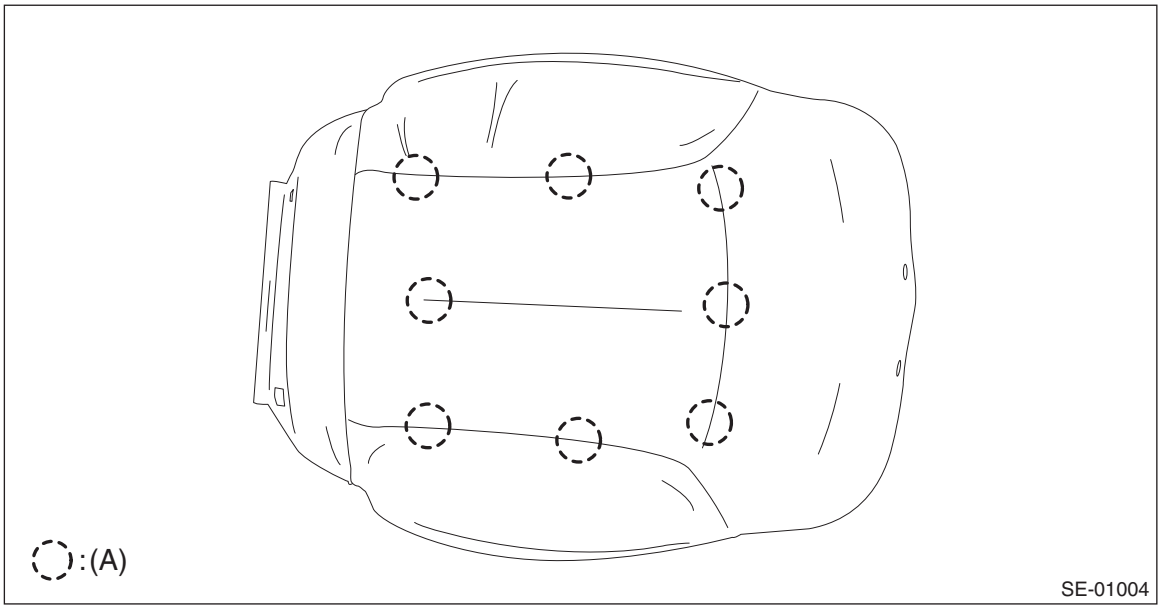
17) Remove the headrest bushing.



NOTE:
Catch the tip of headrest bushing with pliers and push it from inside seat to outside to remove it.

18) Pull out the backrest frame.

19) Remove the backrest cover.
(1) Remove the hog ring (A).
(2) Pull out the backrest pad from the backrest cover.



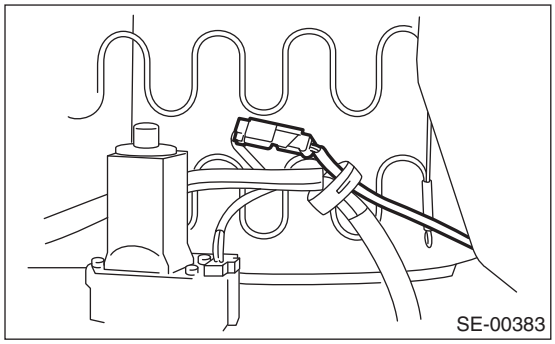
2. DRIVER SEAT (POWER SEAT)

CAUTION:
• Make sure how the harnesses of the side airbag and inner seat belt are routed before assembling to avoid misarranging. Incorrect harness routing during assembly can result in pinched harnesses or short circuits.
• Do not disassemble the backrest assembly, and seat cushion frame and slide rail assembly.

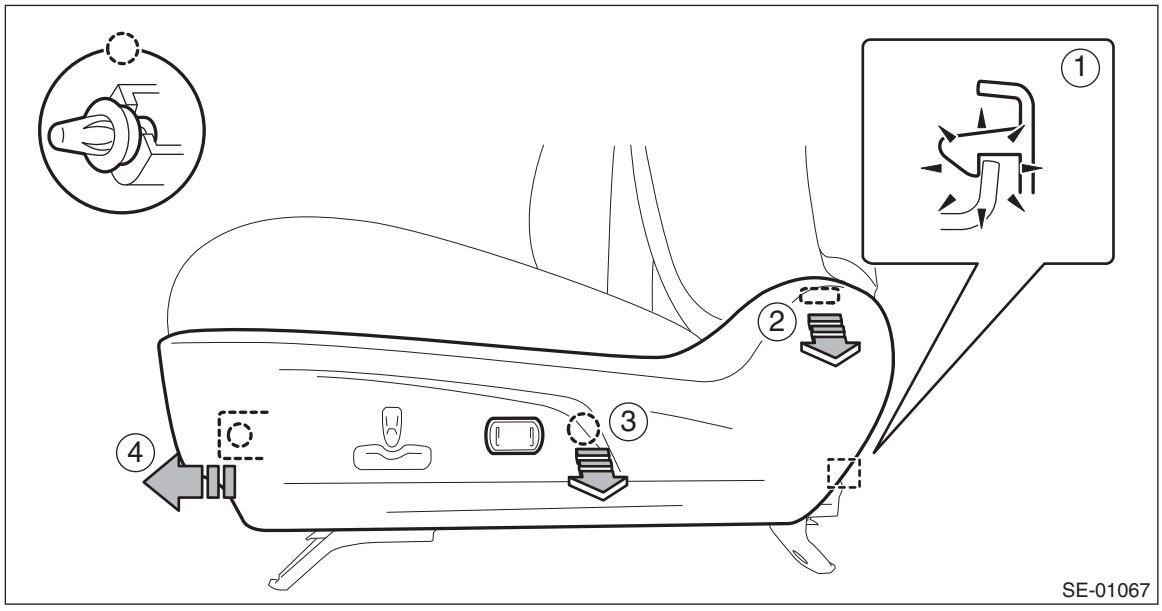
1) Remove the seat from vehicle. <Ref. to SE-10, REMOVAL, Front Seat.>

NOTE:
Before removing the seat, lift the seating face.

2) Disconnect the connector for reclining motor from the backside of seat cushion.

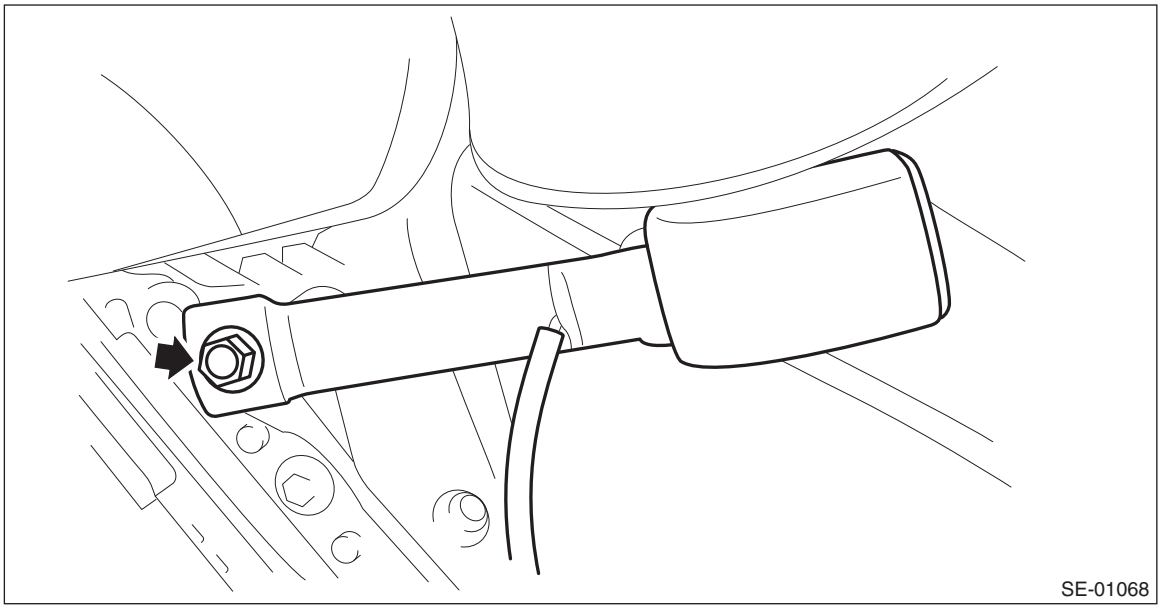


3) Remove the seat side cover OUT.
(1) Release the claw in the rear section of the seat side cover.
(2) Release the claw in the upper section of the seat side cover.
(3) Remove the clip and release the claw in the front section of the seat side cover
(4) Disconnect the power seat switch and lumber switch connectors and remove the seat side cover OUT.

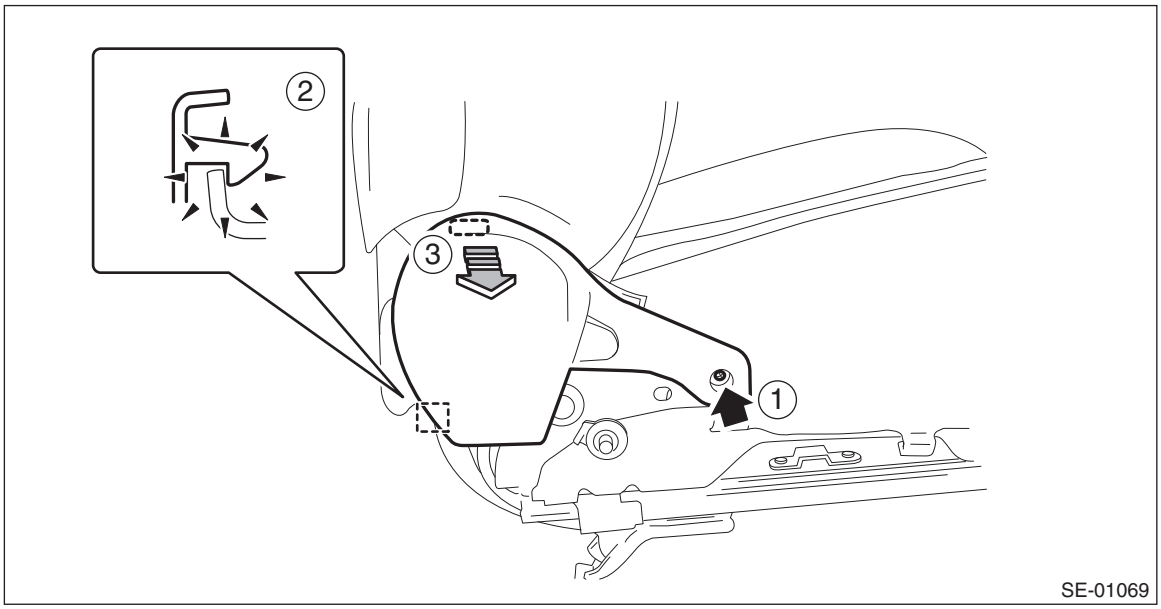


4) Remove the inner seat belt assembly.
(1) Remove the nut and remove the inner seat belt assembly.

(2) Disconnect the connector of the inner seat belt harness located under the seat cushion.

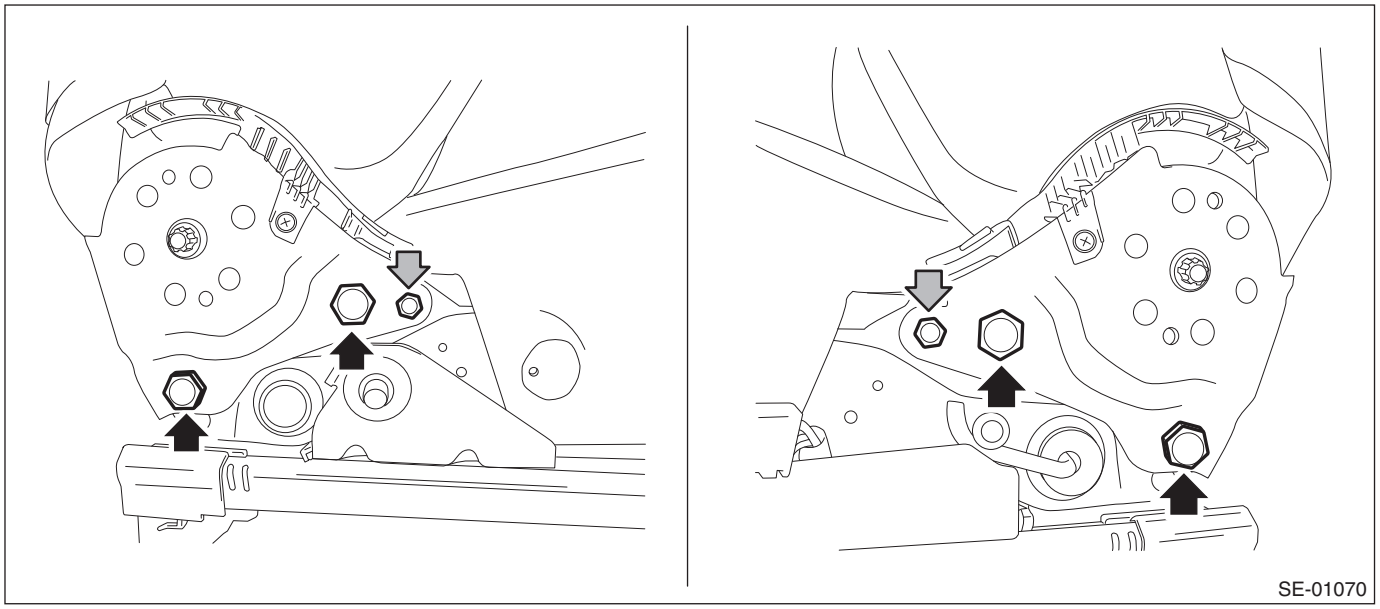


5) Remove the seat side cover IN.
(1) Remove the screws.
(2) Release the claw in the rear section of the seat side cover.
(3) Release the claw in the upper section of the seat side cover, then remove the seat side cover IN.

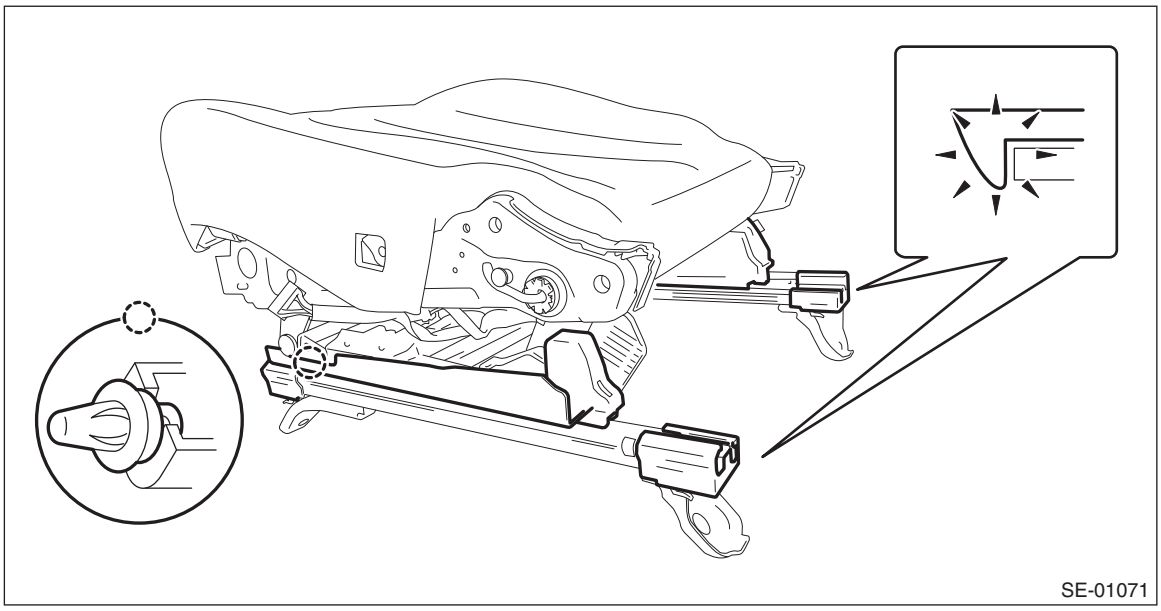


6) Separate the backrest assembly and the seat cushion assembly.
(1) Remove the clip for the side airbag harness located under the seat cushion. (seat with side airbag)
(2) Remove the bolts from the right and left reclining hinges.

(3) While taking care not to damage the airbag harness, separate the backrest assembly and the seat cushion assembly.

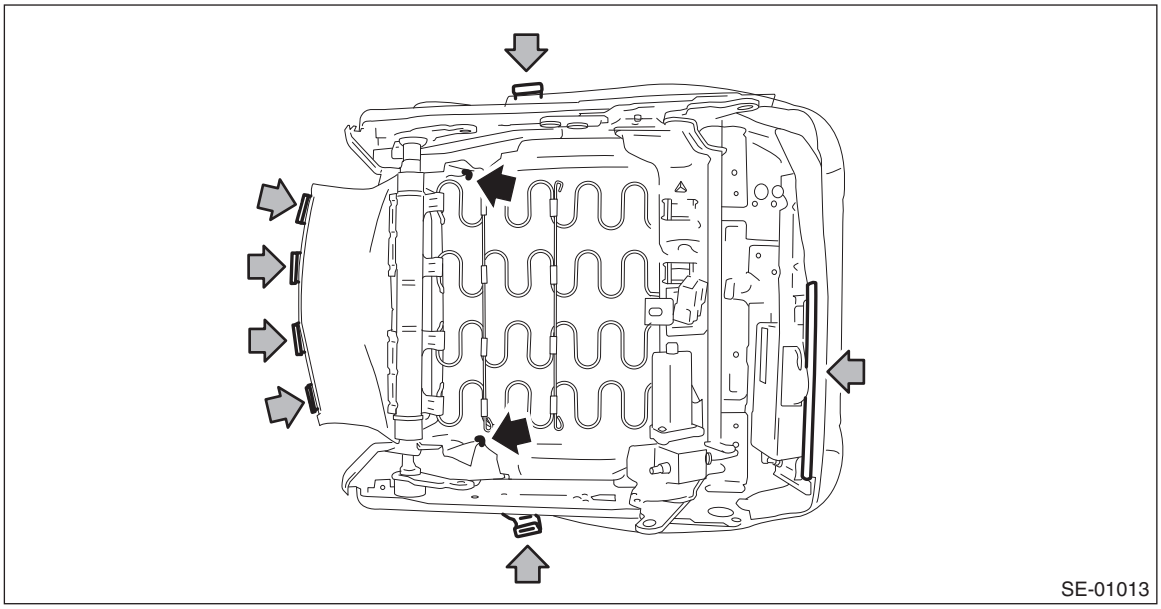


7) Remove the riser covers LH and RH as well as slide rail end cover.
(1) Remove the clips and remove the riser covers LH and RH.
(2) Remove the hook, and then remove the slide rail end cover.

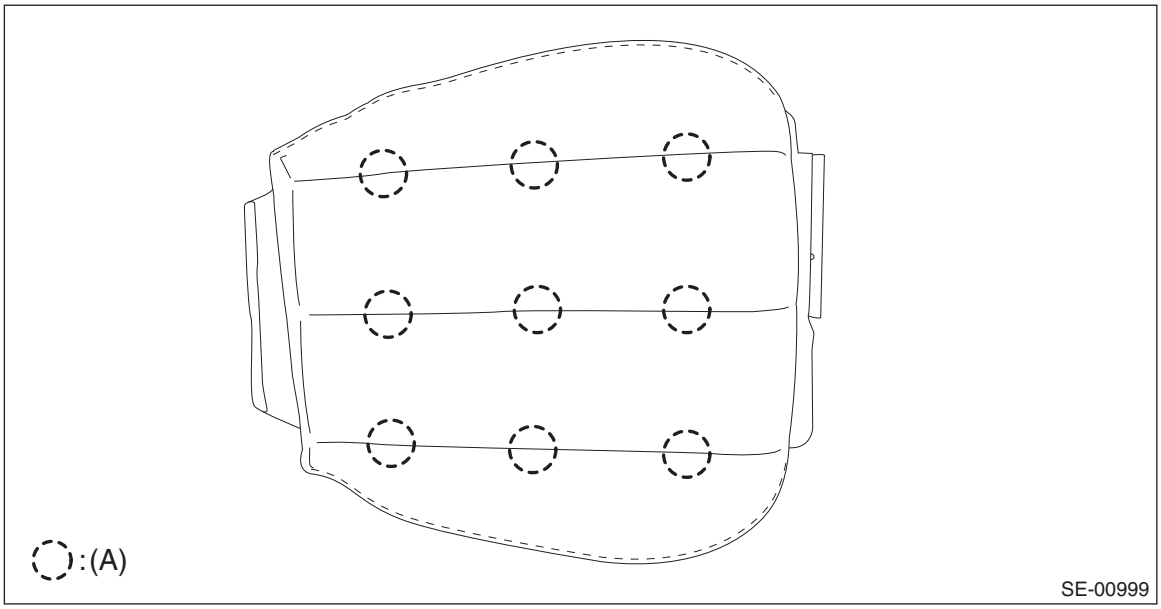


8) Remove the seat cushion pad & cover.
(1) Remove the hooks and hog rings.

(2) Remove the seat cushion pad & cover from seat cushion assembly.

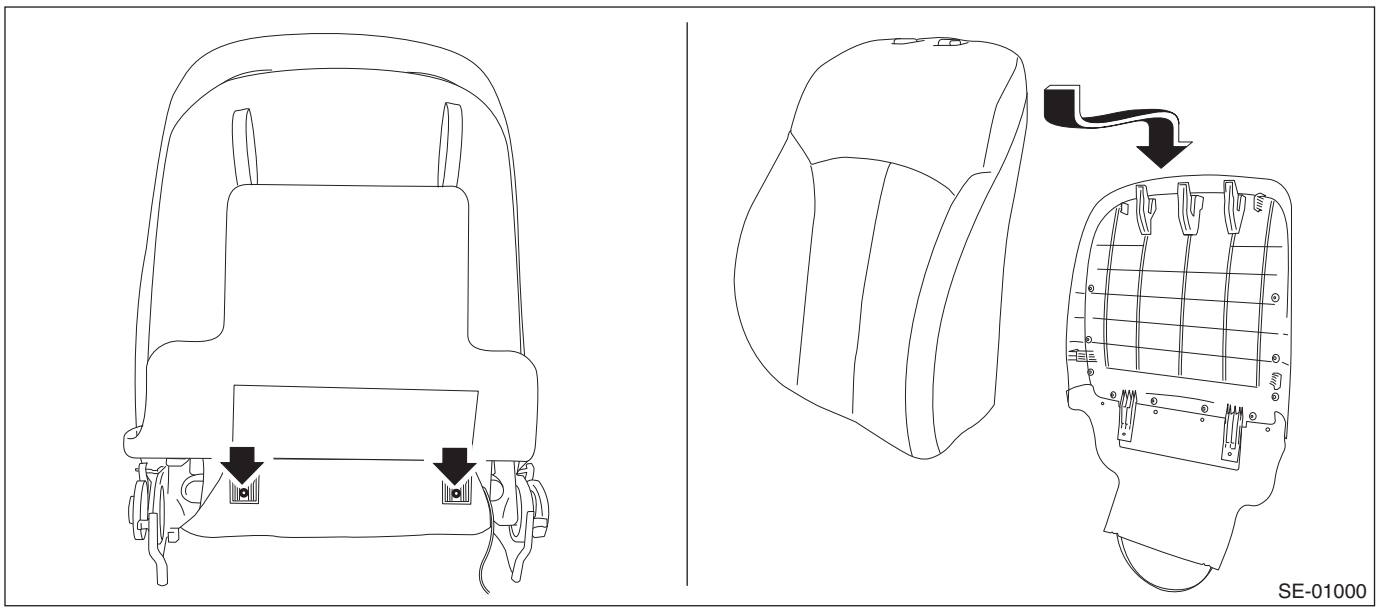


9) Remove the seat cushion cover.
(1) Remove the hog ring (A).
(2) Pull out the seat cushion pad from the seat cushion cover.

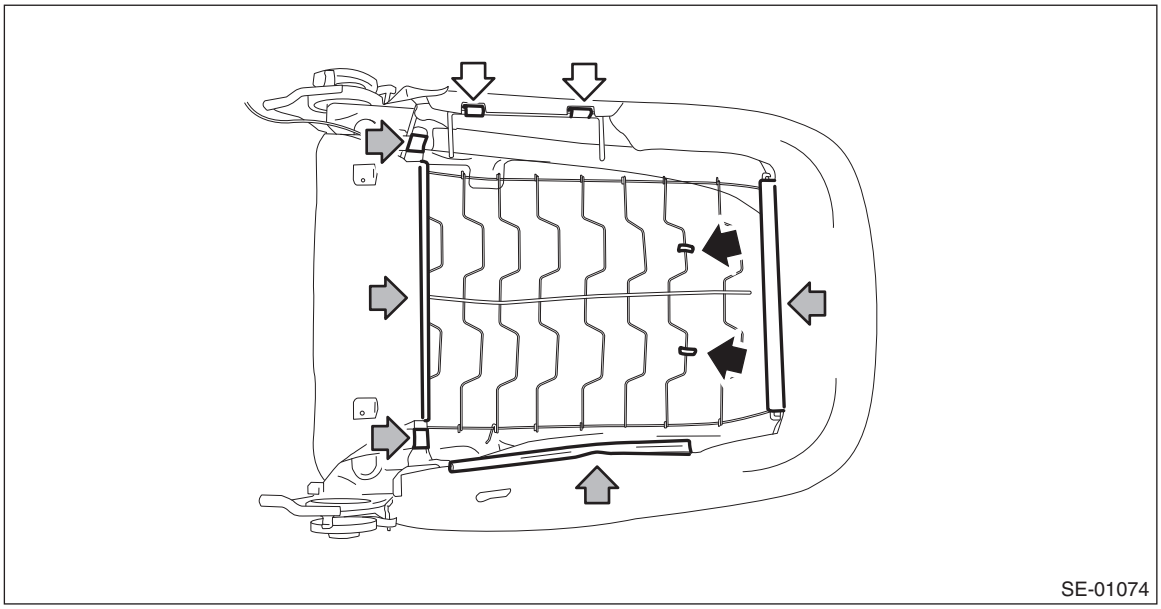


10) Remove the backrest back cover.
(1) Remove the screws.

(2) Release the hooks by pulling down the back cover and remove the backrest back cover.



11) Remove the backrest pad & cover.
(1) Remove the hooks, hog rings, and metal clips.
(2) Remove the backrest pad & cover from backrest assembly.

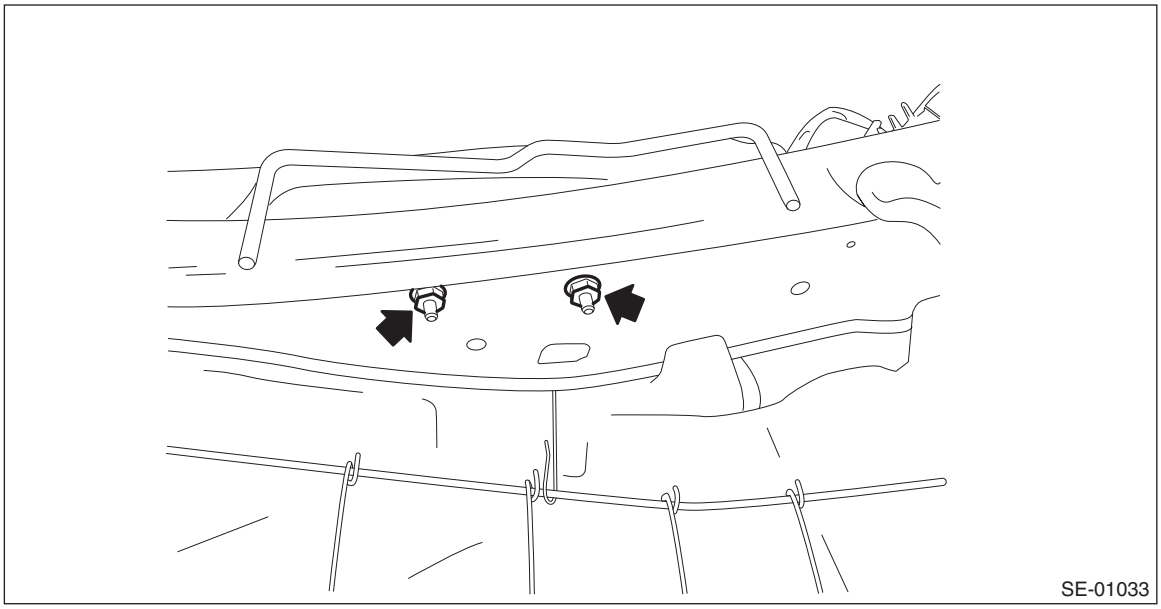


12) Remove the side airbag module assembly.

CAUTION:
Do not open the (plastic) protective cover of the airbag. If any damage is present in the protective cover (such as airbag module cloth coming out), replace the side airbag module assembly with a new one.

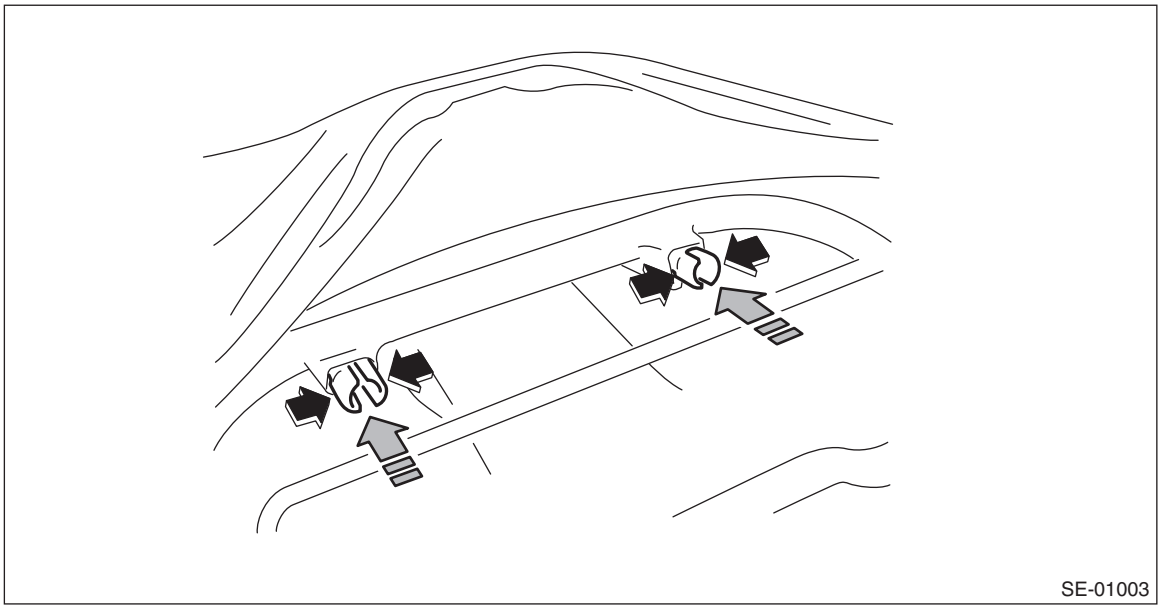
(1) Remove the S hook.

(2) Remove the mounting nuts of the side airbag module.



(3) Remove the side airbag harness from backrest frame assembly.
(4) While taking care not to damage the airbag (plastic) protective cover, remove the side airbag module assembly.

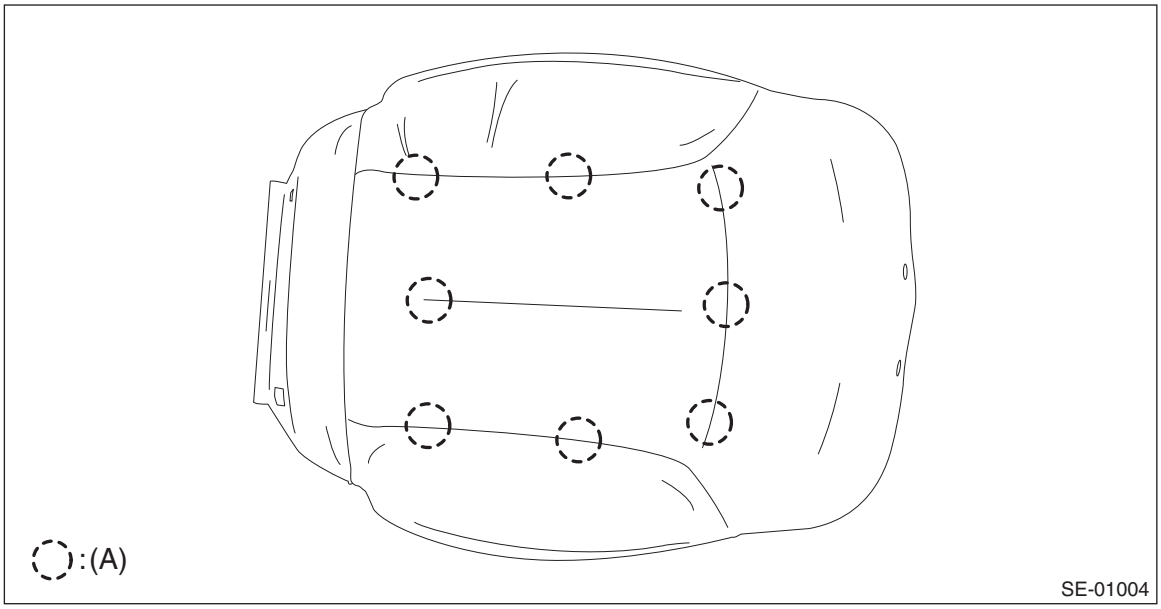
13) Remove the headrest bushing.



NOTE:
Catch the tip of headrest bushing with pliers and push it from inside seat to outside to remove it.

14) Pull out the backrest frame.
15) Remove the backrest cover.
(1) Remove the hog ring (A).

(2) Pull out the backrest pad from the backrest cover.



3. PASSENGER'S SEAT

CAUTION:
• When removing or replacing the seat cushion cover, be sure to perform the system calibration for the occupant detection system after installing the seat. <Ref. to OD(diag)-15, OPERATION, System Calibration (Rezeroing).>
If system adjustment is not performed, the passenger's airbag may not function properly.
• Only for passenger's seat, the occupant detection control module, occupant detection sensor, seat cushion pad and seat cushion frame are integrated in the seat cushion pad & frame assembly. Do not remove the occupant detection control module and occupant detection sensor from the seat cushion frame.
• When removing the seat cushion cover, be sure to replace the sling wire of seat cushion cover side with new one.

1) Remove the seat from vehicle. <Ref. to SE-10, REMOVAL, Front Seat.>

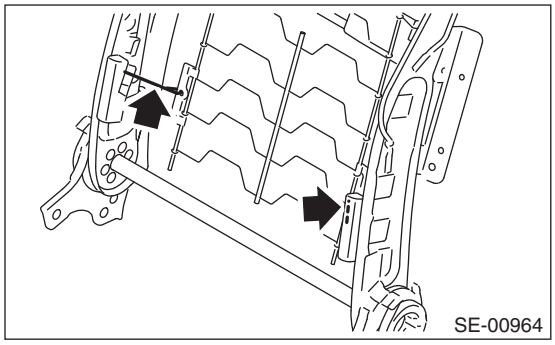
NOTE:
For power seat, lift the seating face before removing the seat.

2) Refer to the disassembly procedure of the driver's seat.
- MANUAL SEAT <Ref. to SE-12, DRIVER SEAT (MANUAL SEAT), DISASSEMBLY, Front Seat.>
- POWER SEAT <Ref. to SE-21, DRIVER SEAT (POWER SEAT), DISASSEMBLY, Front Seat.>

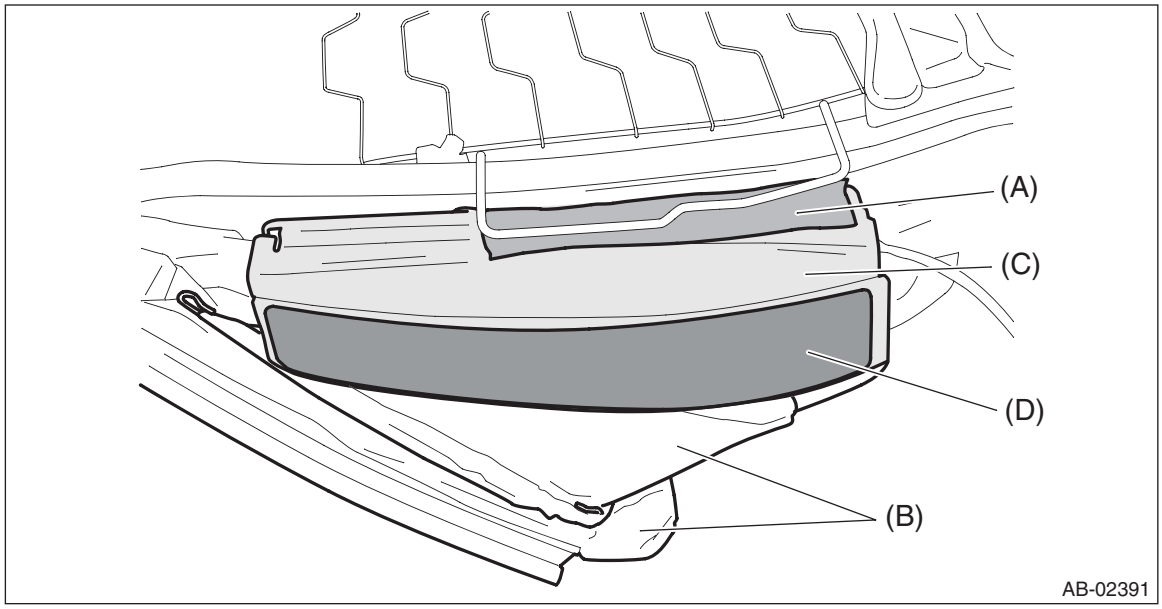
CAUTION:
The occupant detection control module, occupant detection sensor, seat cushion pad and seat cushion frame are integrated in the seat cushion pad & frame assembly. Do not remove the occupant detection control module and occupant detection sensor from the seat cushion frame.

D: ASSEMBLY

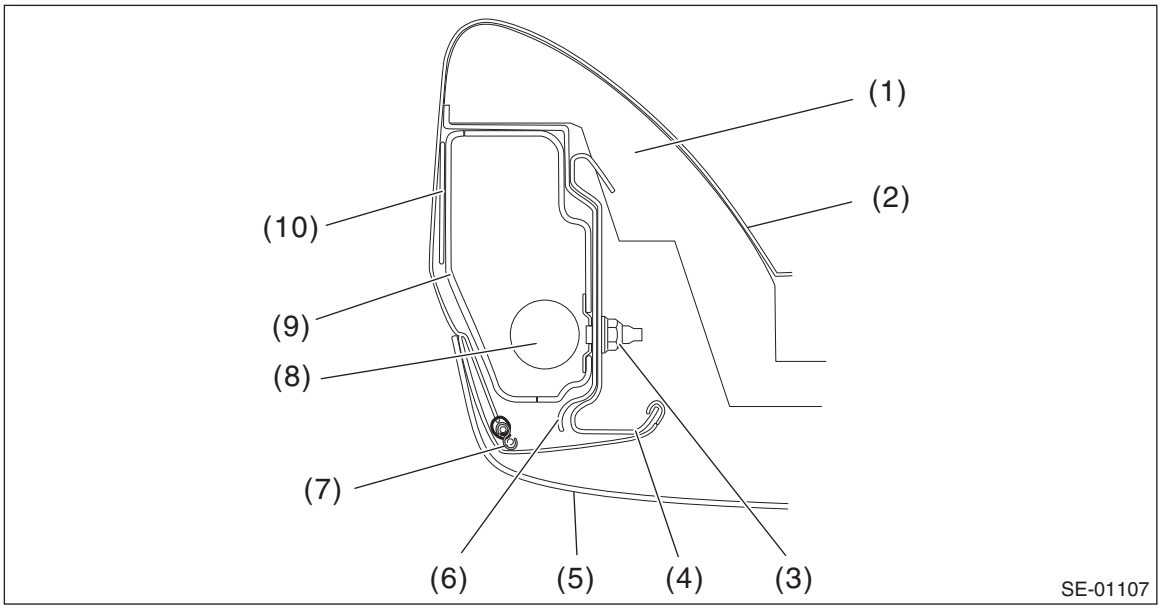
CAUTION:
• Make sure that the wire harnesses such as side airbag harness and inner seat belt harness are laid out correctly. Incorrect harness routing during assembly can result in pinched harnesses or short circuits.
• If the flat mat hood of backrest frame assembly is deformed or detached, replace it with a new hook.



• Make sure that the side airbag module assembly is installed as shown in the figure.



(A) Side airbag guide cloth (B) Backrest cover (C) Side airbag module ASSY
(D) Side airbag tape

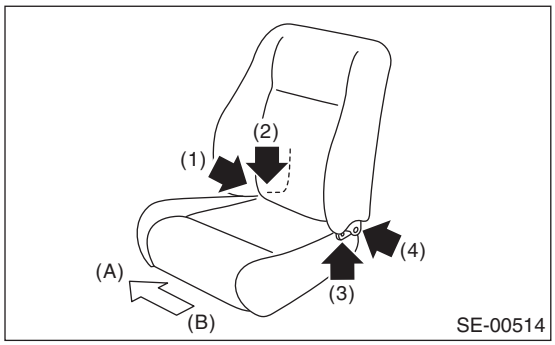


(1) Backrest pad
(2) Backrest cover
(3) Nut
(4) Backrest frame
(5) Backrest back cover
(6) Side airbag guide cloth
(7) S hook
(8) Side airbag module inflator
(9) Side airbag module case
(10) Side airbag tape

When the backrest cover is not installed securely, the side airbag module may not be deployed properly, therefore keep strictly to the following procedure.
- **When replacing the side airbag assembly with new one, be sure to attach the side airbag tape.**
- **Be careful not to stain or damage the backrest cover during assembly.**
- **Do not reuse hog rings and S hooks.**
- **Secure the hog ring using hog ring pliers.**
- **Install the hog rings to the specified points securely and make sure that no wrinkle or twisting on backrest cover.**

1) Make sure that there is no foreign matter on side airbag module.
2) Assemble remaining parts in the reverse order of removal.

NOTE:
Temporarily tighten the reclining hinge bolts in the order from (1) to (4) so that the seat back assembly is not fixed securely.

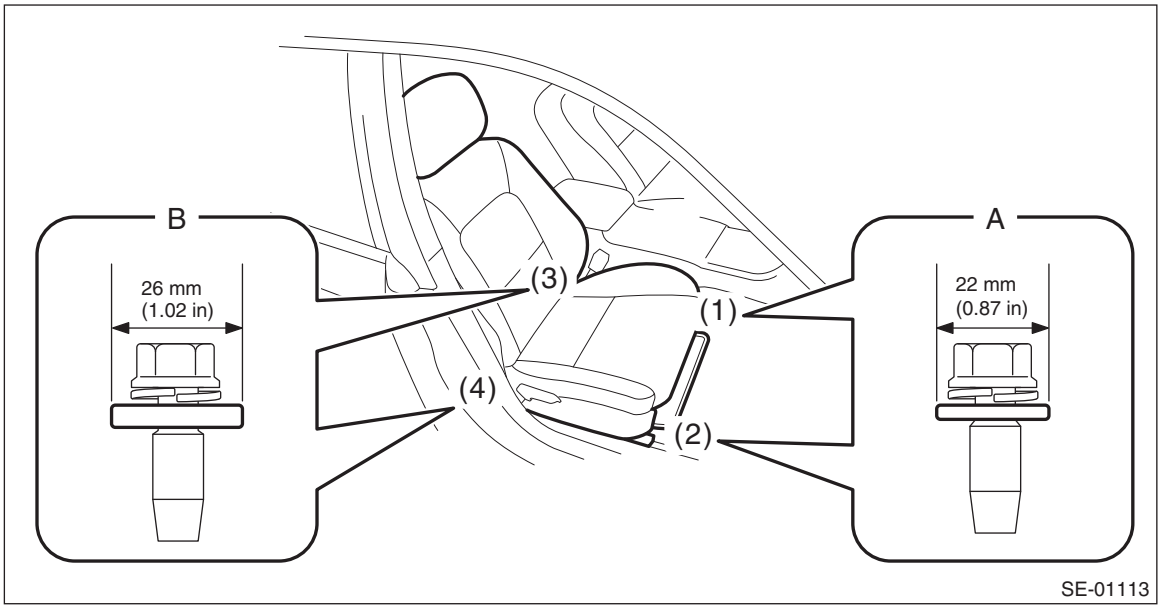


(A) Vehicle inside
(B) Vehicle outside

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

3) Install the seat assembly.

CAUTION:
• The seat mounting bolts differ between the front mounting points and the rear mounting points. Make sure that you are using correct bolts at correct positions.
• Tighten the slide rail installing bolt gradually in several steps to the specified torque in the order as shown in the figure.



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

Tightening torque: 53 N·m (5.4 kgf-m, 39.1 ft-lb)

E: INSPECTION

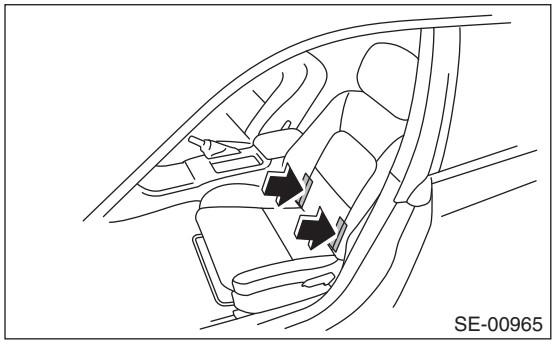
1. SEAT COVER

Check that no tear or fray on the backrest cover and seat cushion cover.

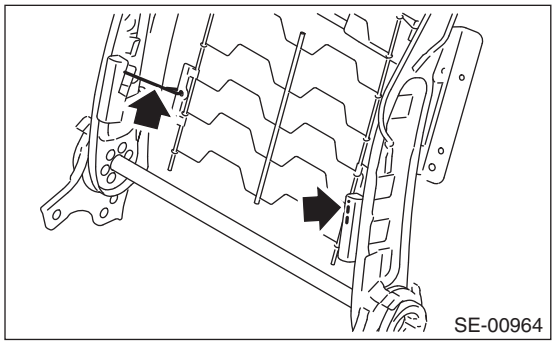
NOTE:
For model with side airbag, if the door side of the backrest cover is torn or frayed, the side airbag may not be deployed properly. In this case, replace the backrest cover.

2. FLAT MAT HOOK

Apply load to the backrest and check the flat mat hook.



NOTE:
If the backrest does not keep sufficient tension when subject to load, some hooks may be detached.
If any hook is deformed and detached, replace it with a new hook.



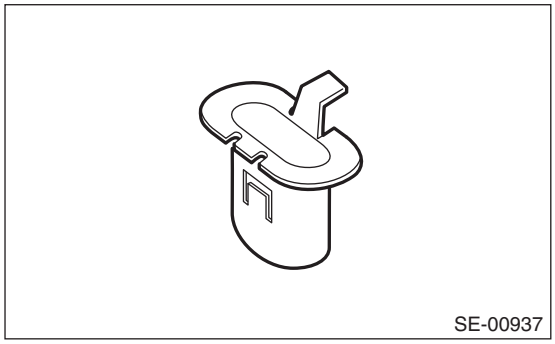
3. Rear Seat

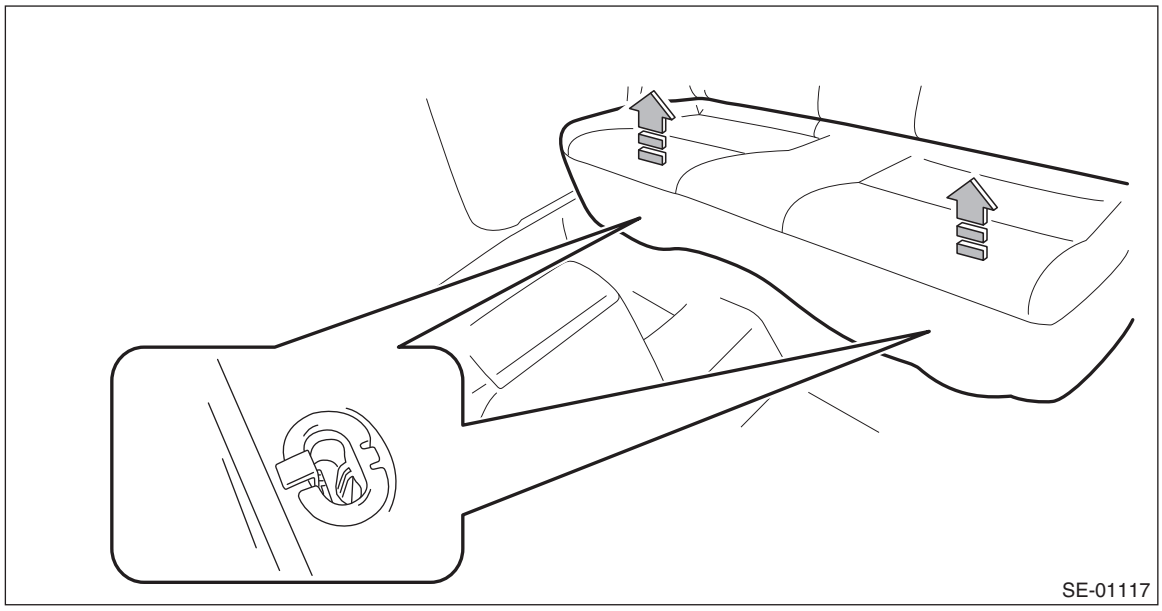
A: REMOVAL

1. SEDAN MODEL

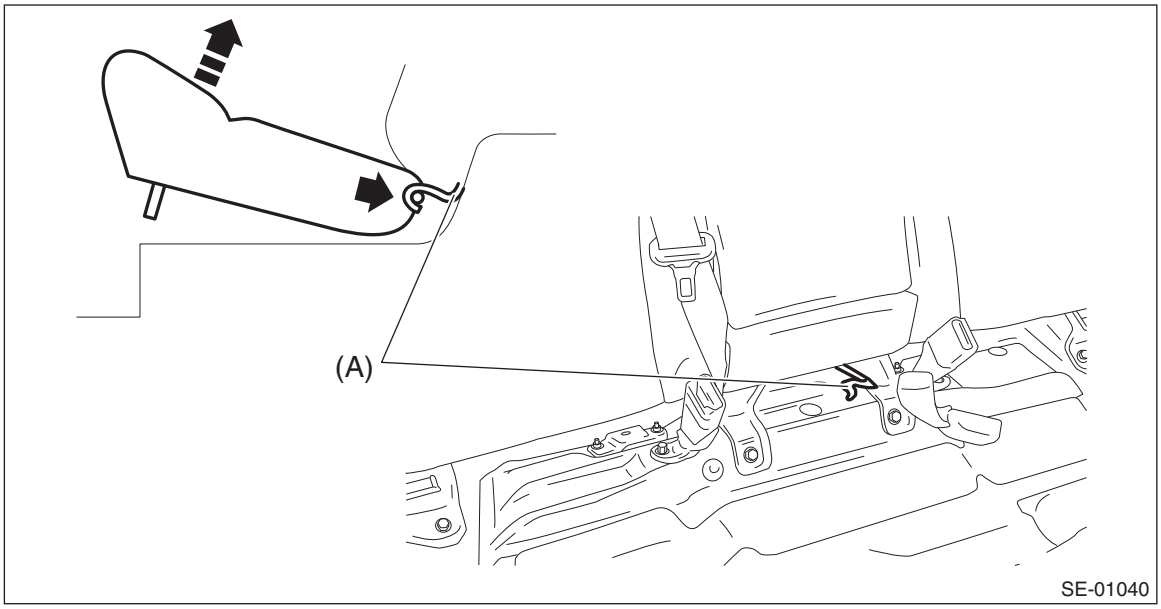
1) Remove the rear seat cushion.
   (1) Pull up the seat cushion and release the hook.

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.

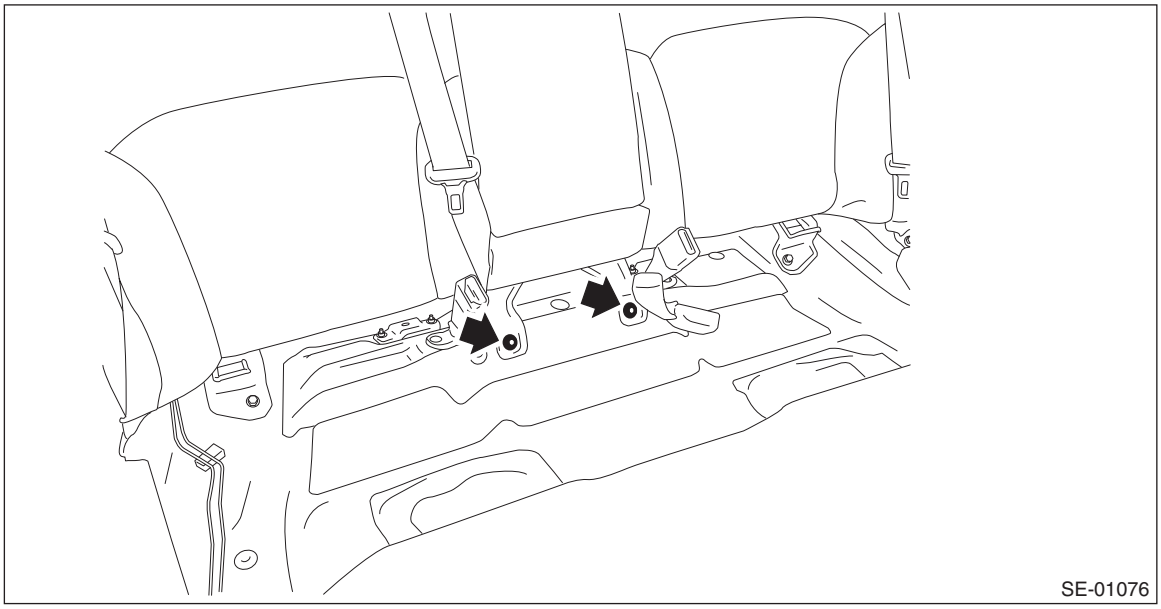

SE-00937


SE-01117

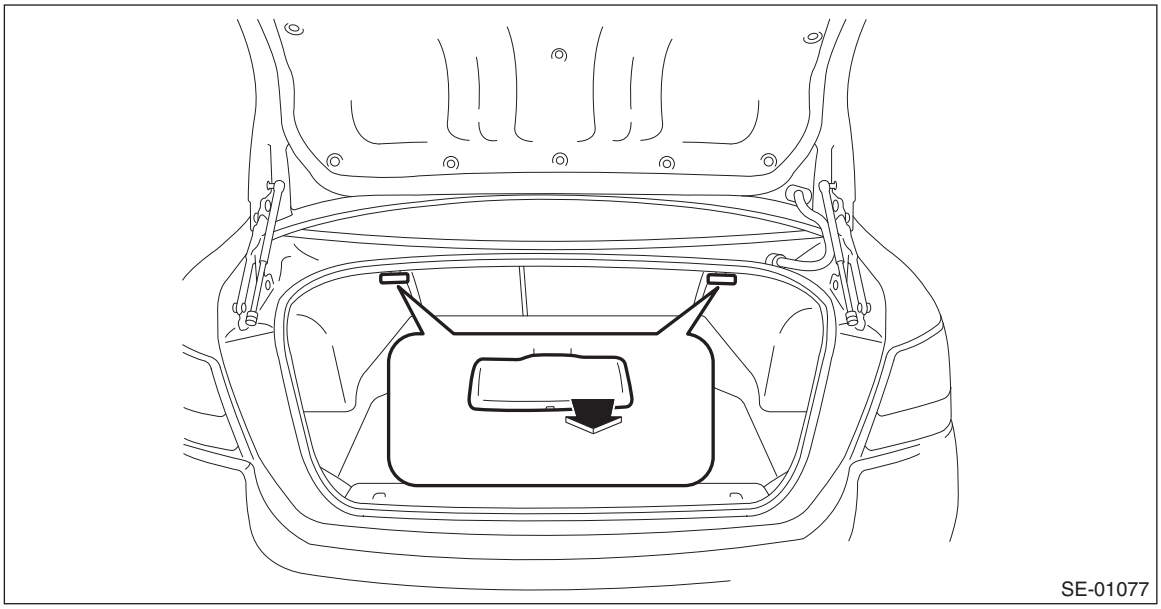
(2) Remove the hook (A) by pushing it back while lifting the front side of the seat cushion, and remove the seat cushion.



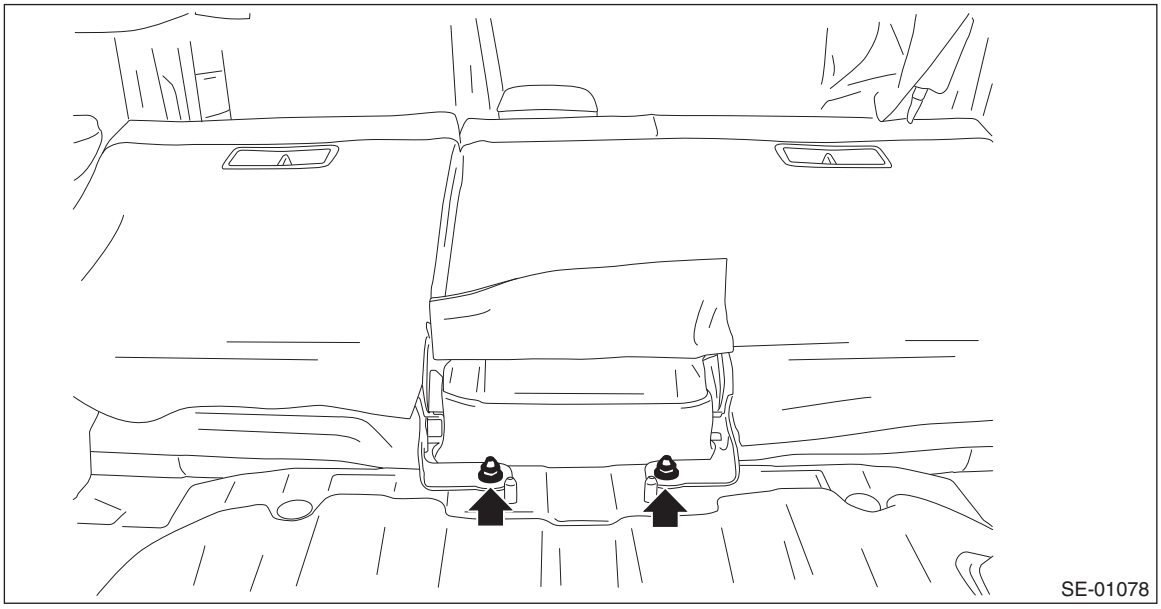
2) Remove the backrest assembly.
(1) Remove the bolts at the front of backrest hinge.



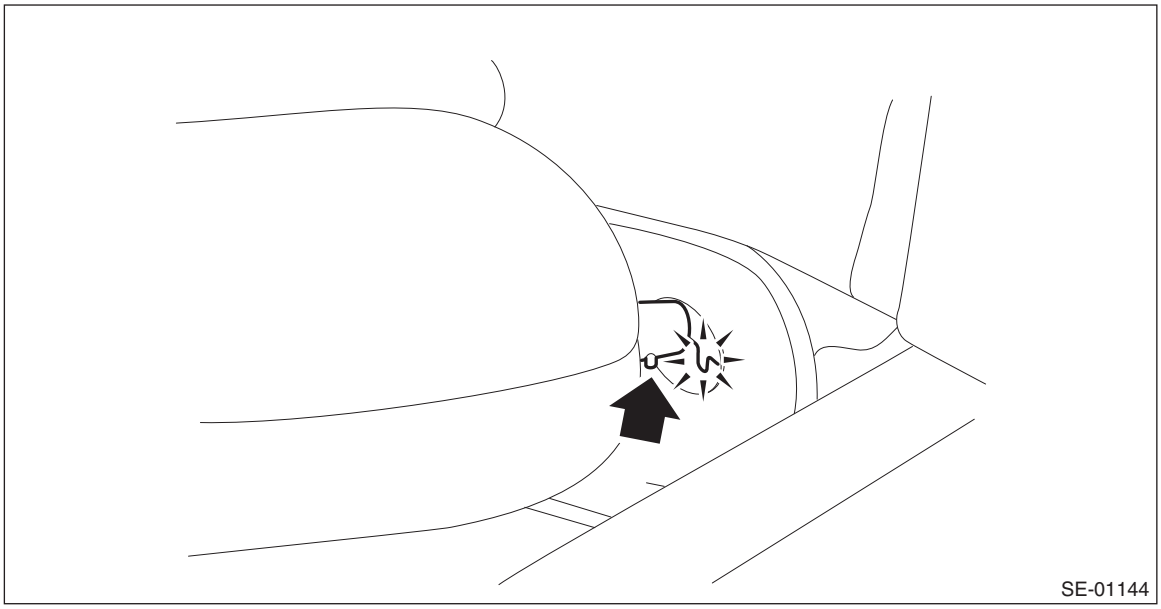
(2) Pull the release lever in the trunk room, and then tilt the backrest forward.



(3) Remove the nuts at the rear of backrest hinge.

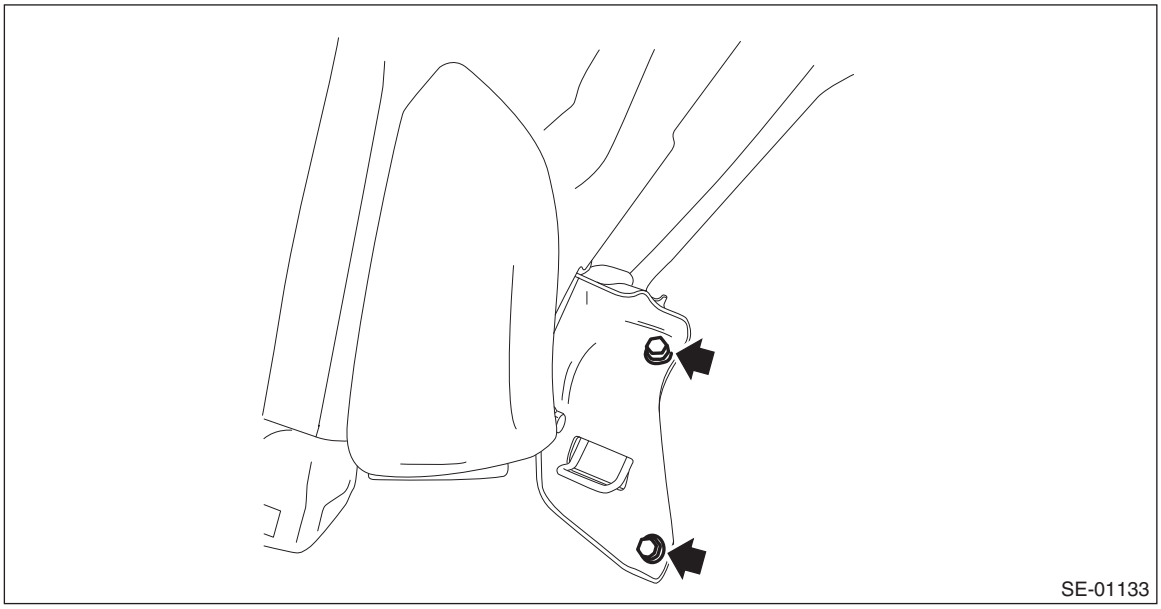


(4) Remove the backrest assembly RH from the hinge assembly RH.



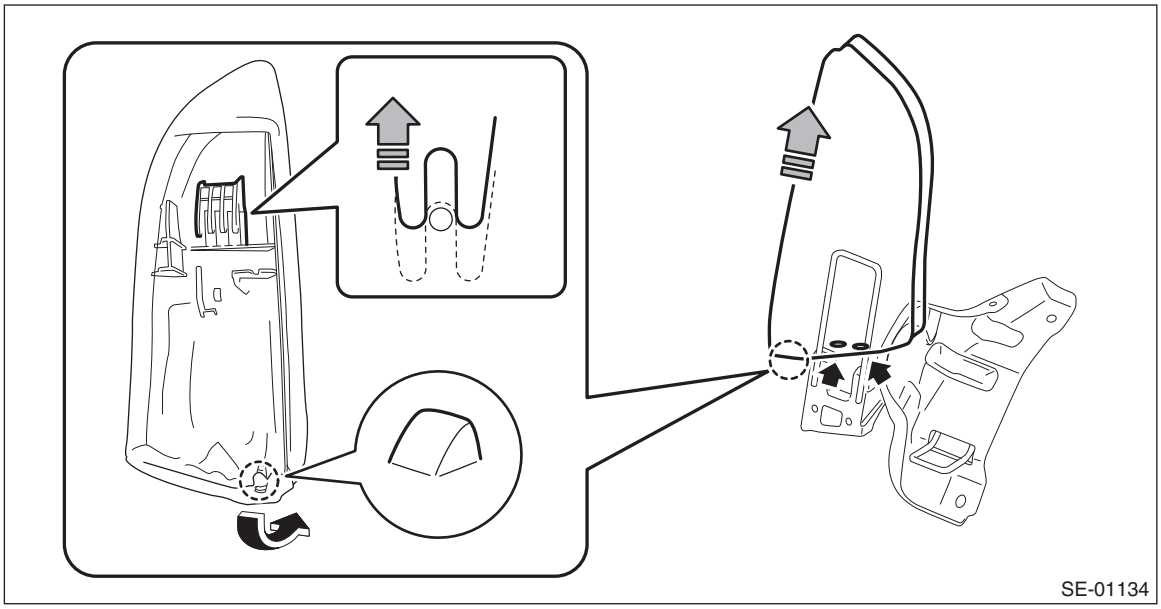
NOTE:
The backrest cannot be detached unless the backrest pin is aligned to the hinge assembly.

3) Referring to the above steps, remove the backrest assembly LH.
4) Remove the backrest side pad.
(1) Remove the bolts, and remove the backrest side pad assembly RH.



(2) Remove the screws.
(3) Turn over the bottom end of the backrest side pad in the forward direction so that the claws are released.

(4) Remove the backrest side pad by pulling it up.

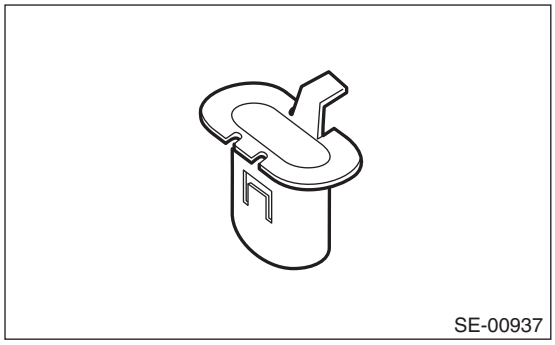


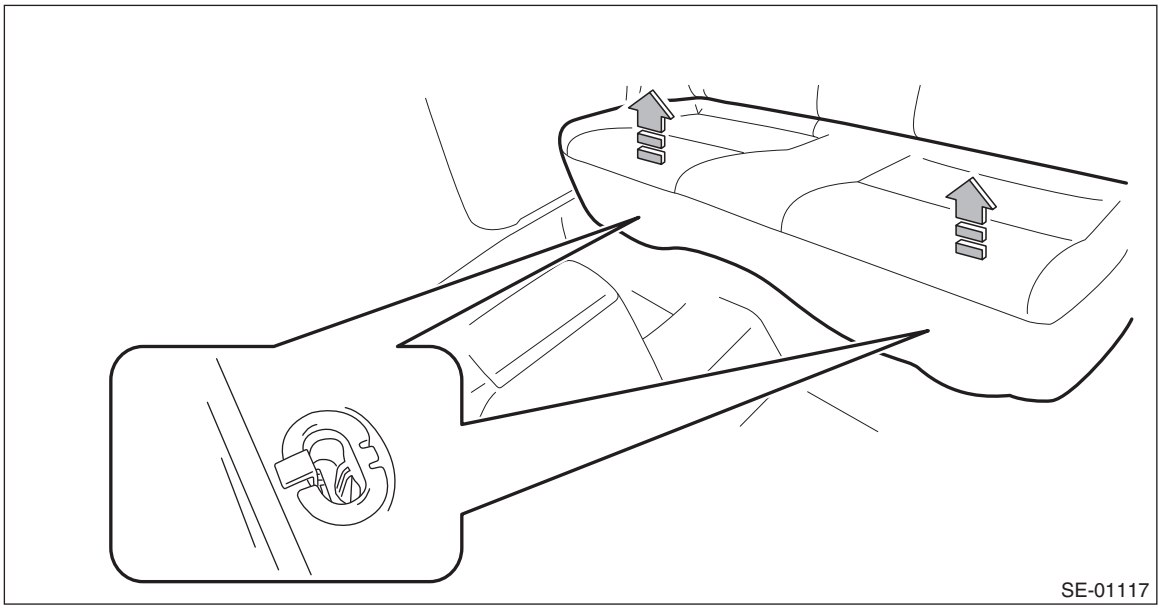
5) Referring to the above steps, remove the backrest side pad assembly LH.

2. OUTBACK MODEL

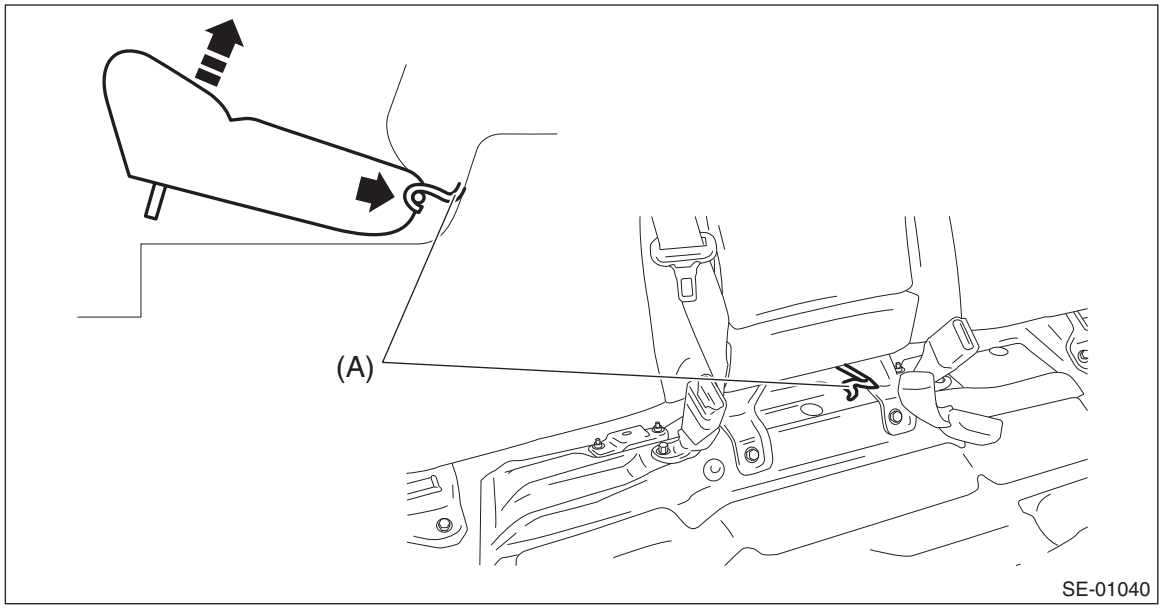
1) Disconnect the ground cable from battery.
2) Remove the rear seat cushion.
   (1) Pull up the seat cushion and release the hook.

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.

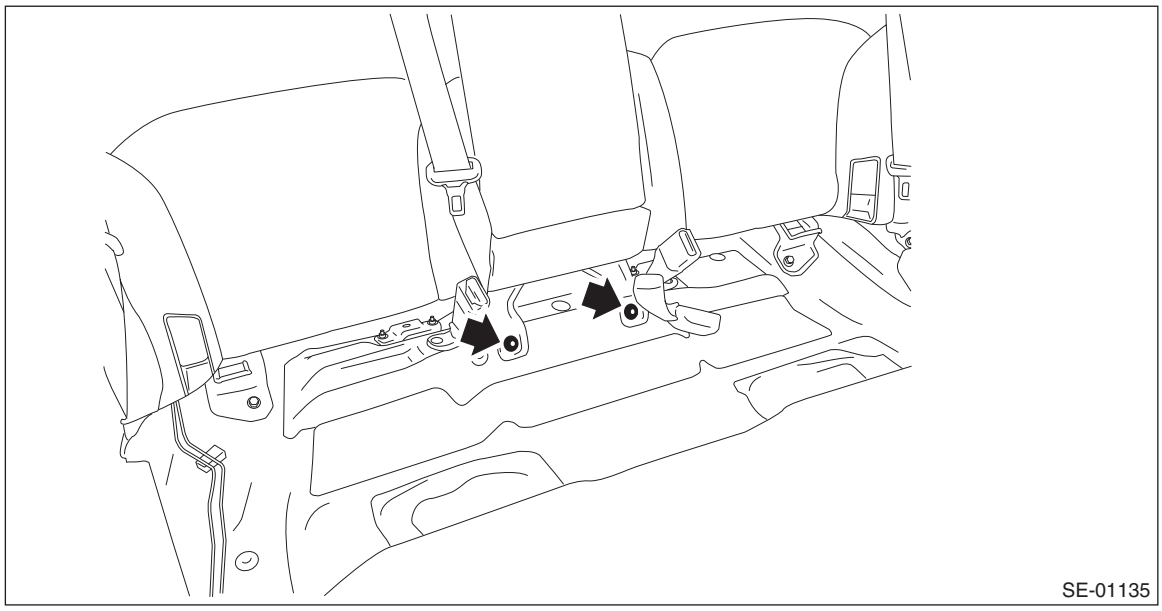

SE-00937


SE-01117

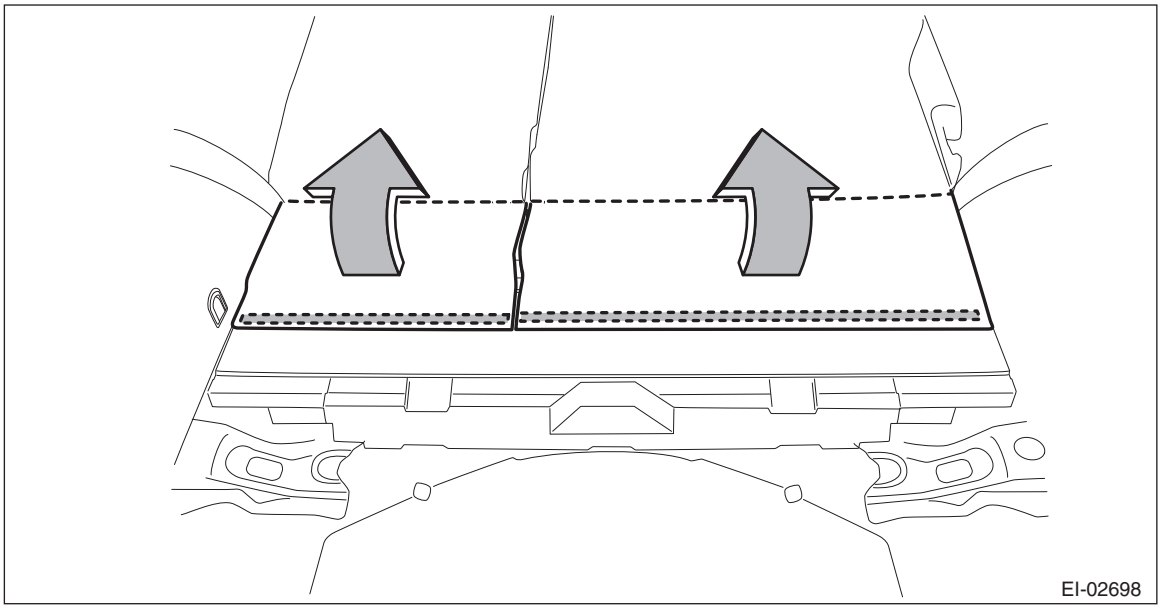
(2) Remove the hook (A) by pushing it back while lifting the front side of the seat cushion, and remove the seat cushion.



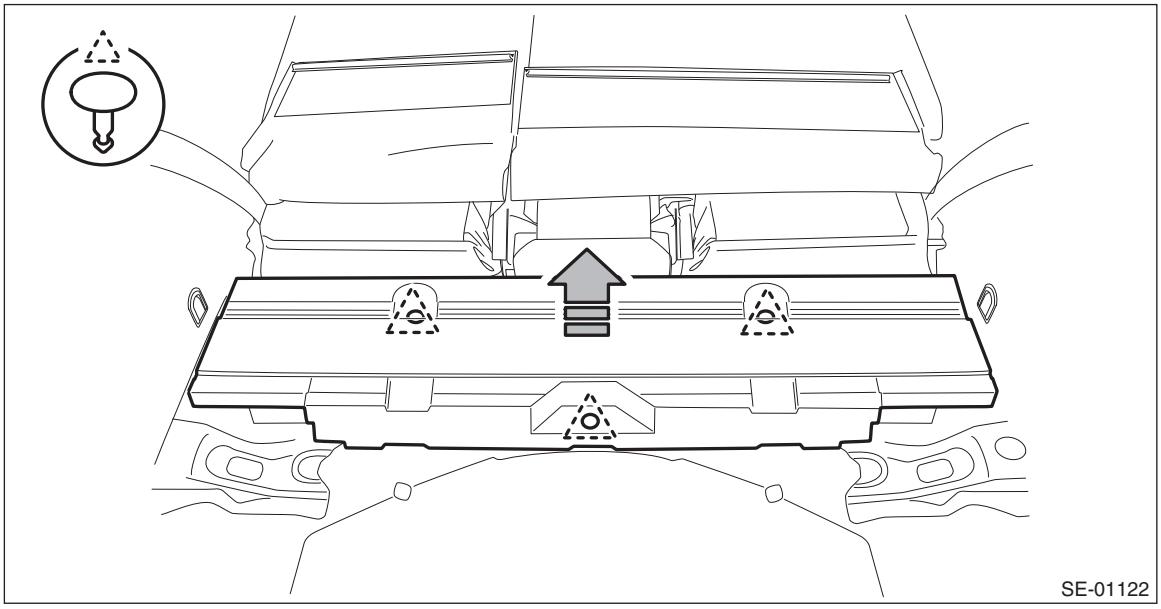
3) Remove the headrest.
4) Remove the backrest assembly RH.
(1) Remove the hinge bolts at the front of the backrest assembly RH.



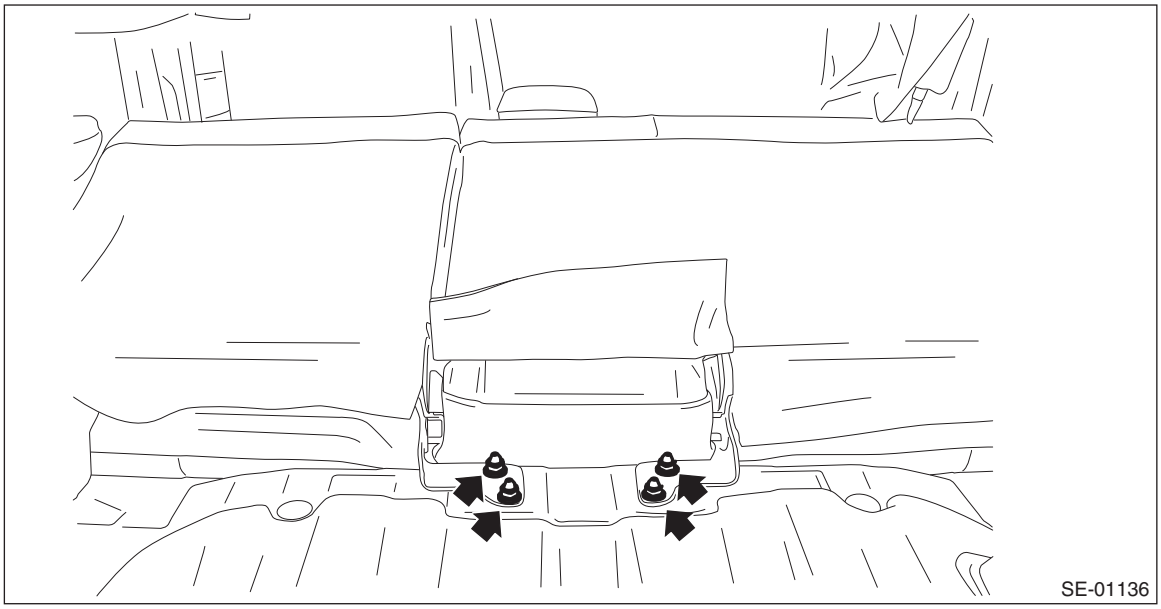
(2) Tilt the backrest forward, and then turn over the backrest backside mat.



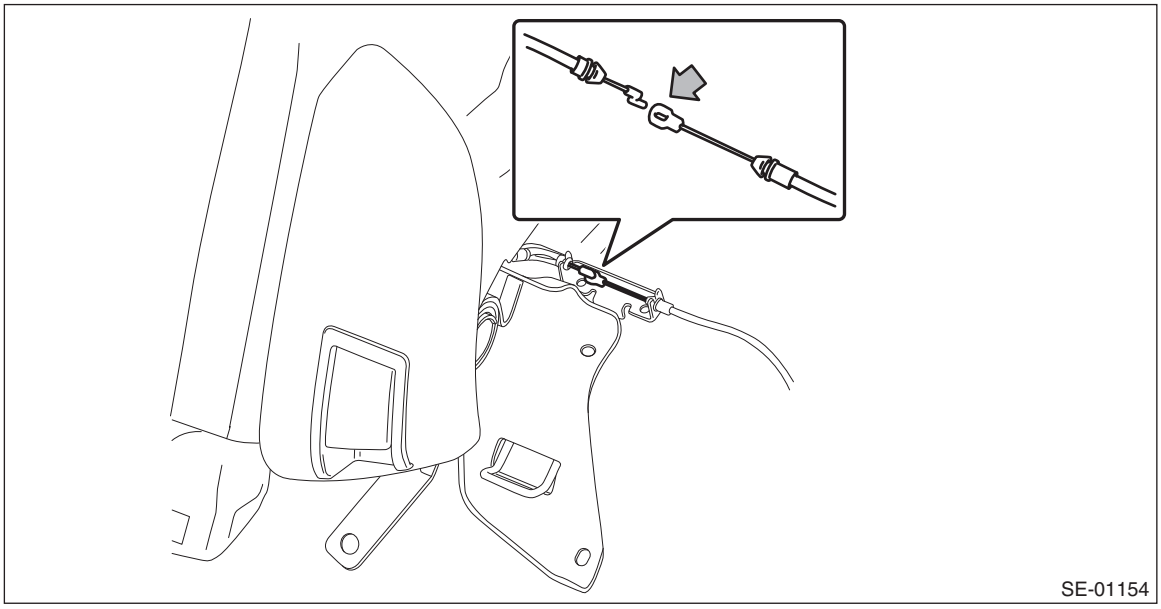
(3) Remove the clips, and remove the rear floor mat-front.



(4) Remove the nuts at the rear of backrest hinge.

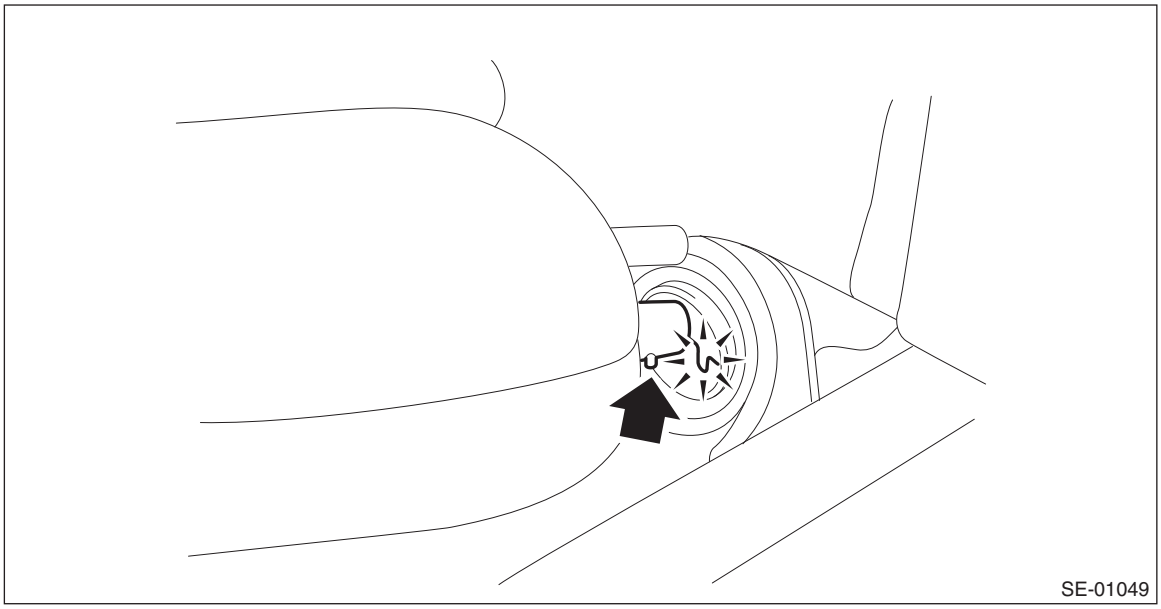


(5) Disconnect the backrest cable and reclining cable.



NOTE:
The backrest cannot be detached unless the backrest pin is aligned to the hinge assembly.

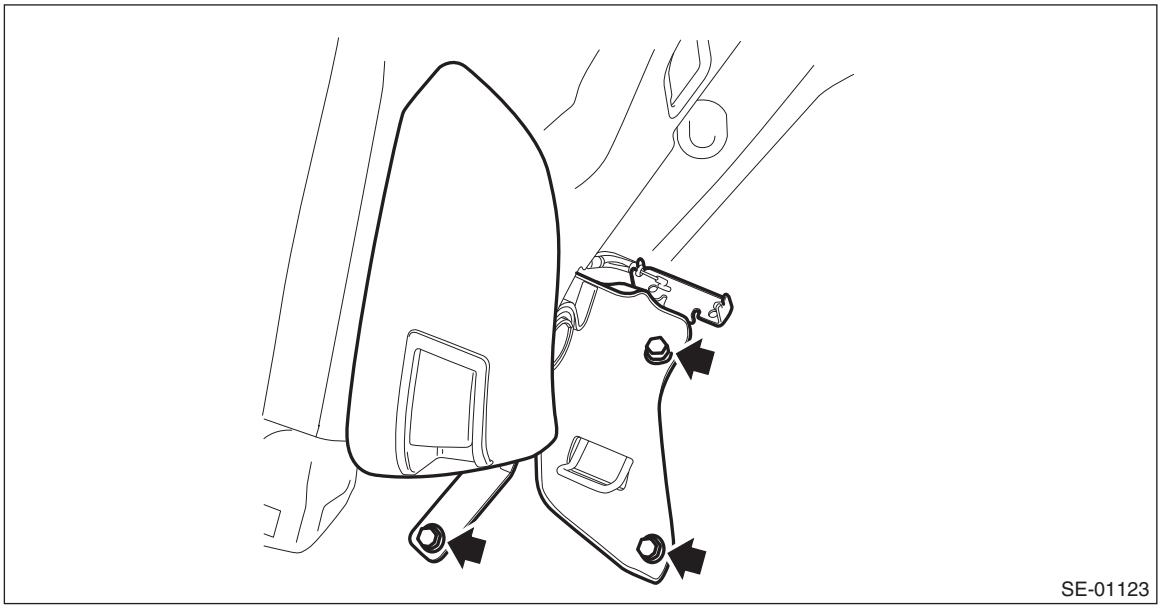
(6) Remove the backrest assembly RH from the hinge assembly RH.



NOTE:
The backrest cannot be detached unless the backrest pin is aligned to the hinge assembly.

(7) Take out the part outside the vehicle so that the body is not damaged by the hinges.

5) Referring to the above steps, remove the backrest assembly LH.
6) Remove the bolts, and remove the backrest side pad assembly RH.

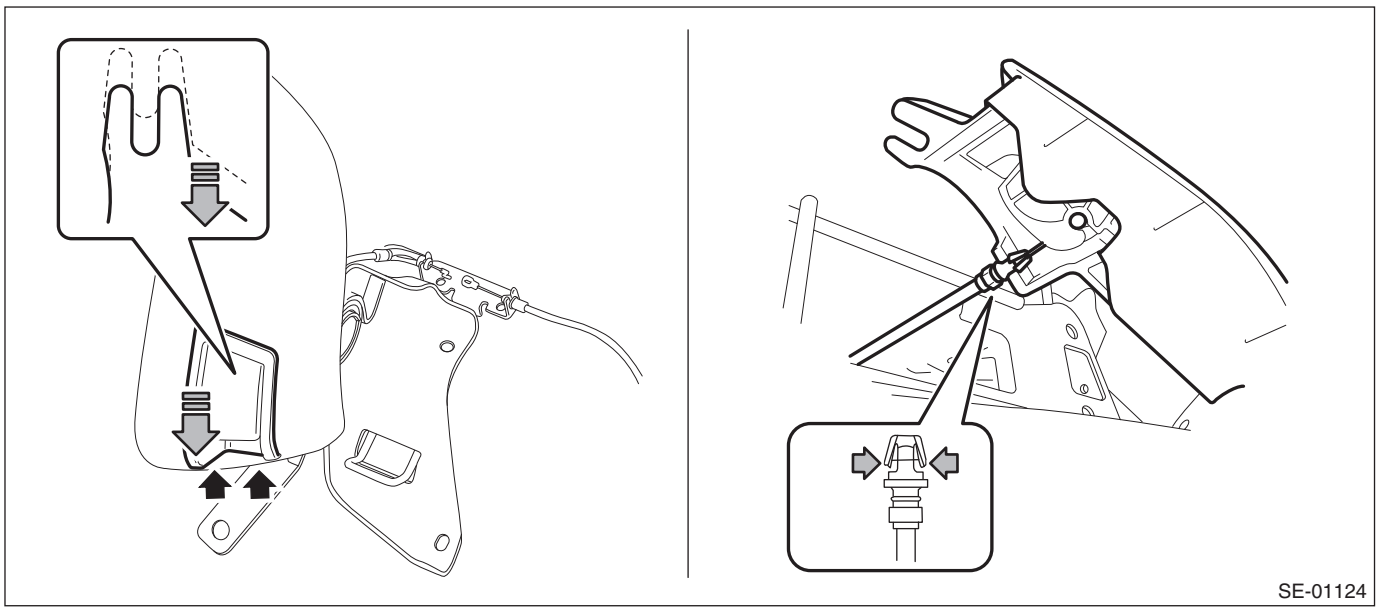


7) Remove the reclining lever assembly RH.

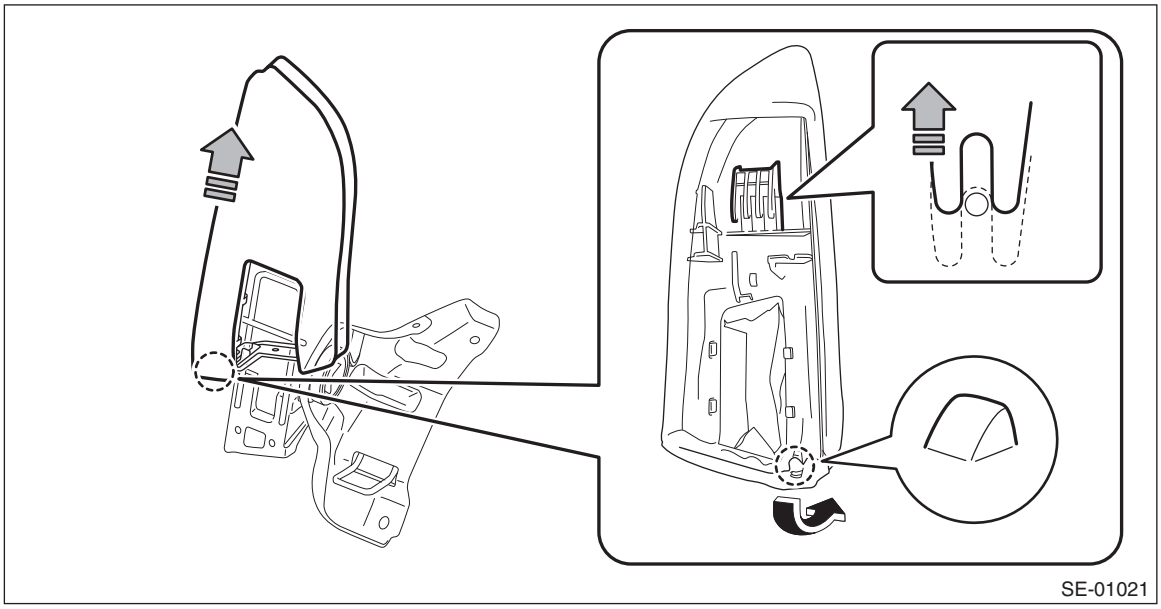
(1) Remove the screws and remove the reclining lever assembly by pulling it downward.

Preparation tool: Stubby screwdriver

(2) By pressing the wire cable claws, remove the relining cable from the reclining lever assembly.



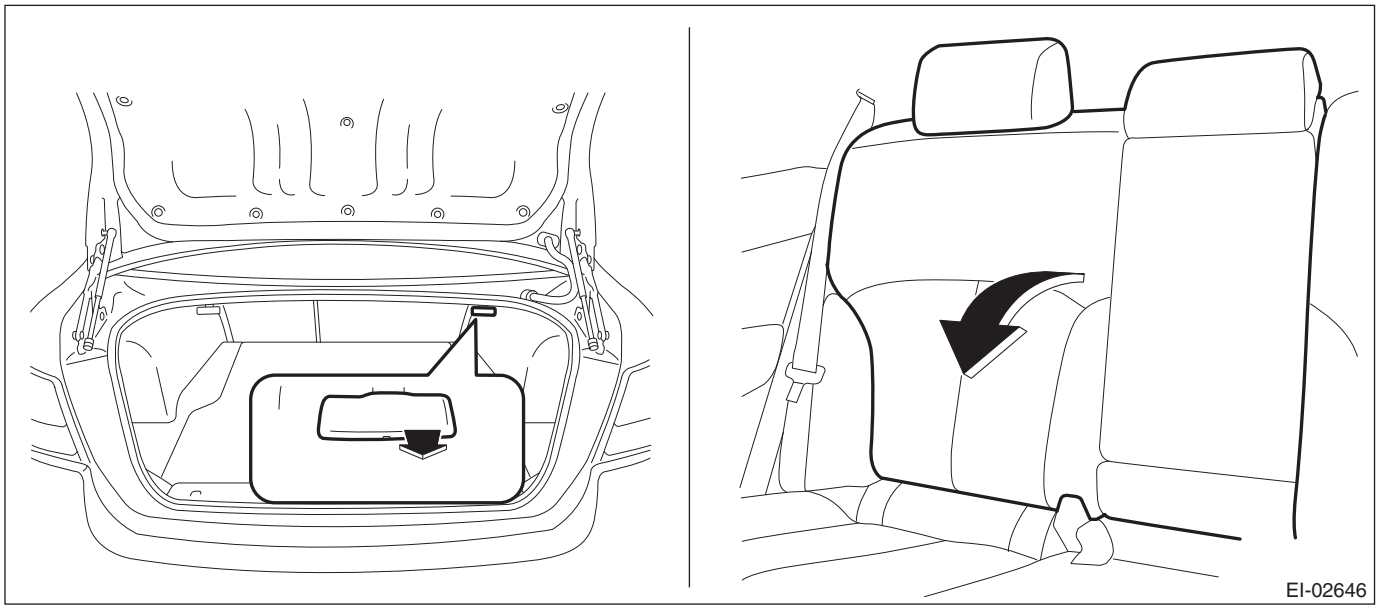
(3) Turn over the bottom end of the backrest side pad in the forward direction so that the claws are released.
(4) Remove the backrest side pad by pulling it up.



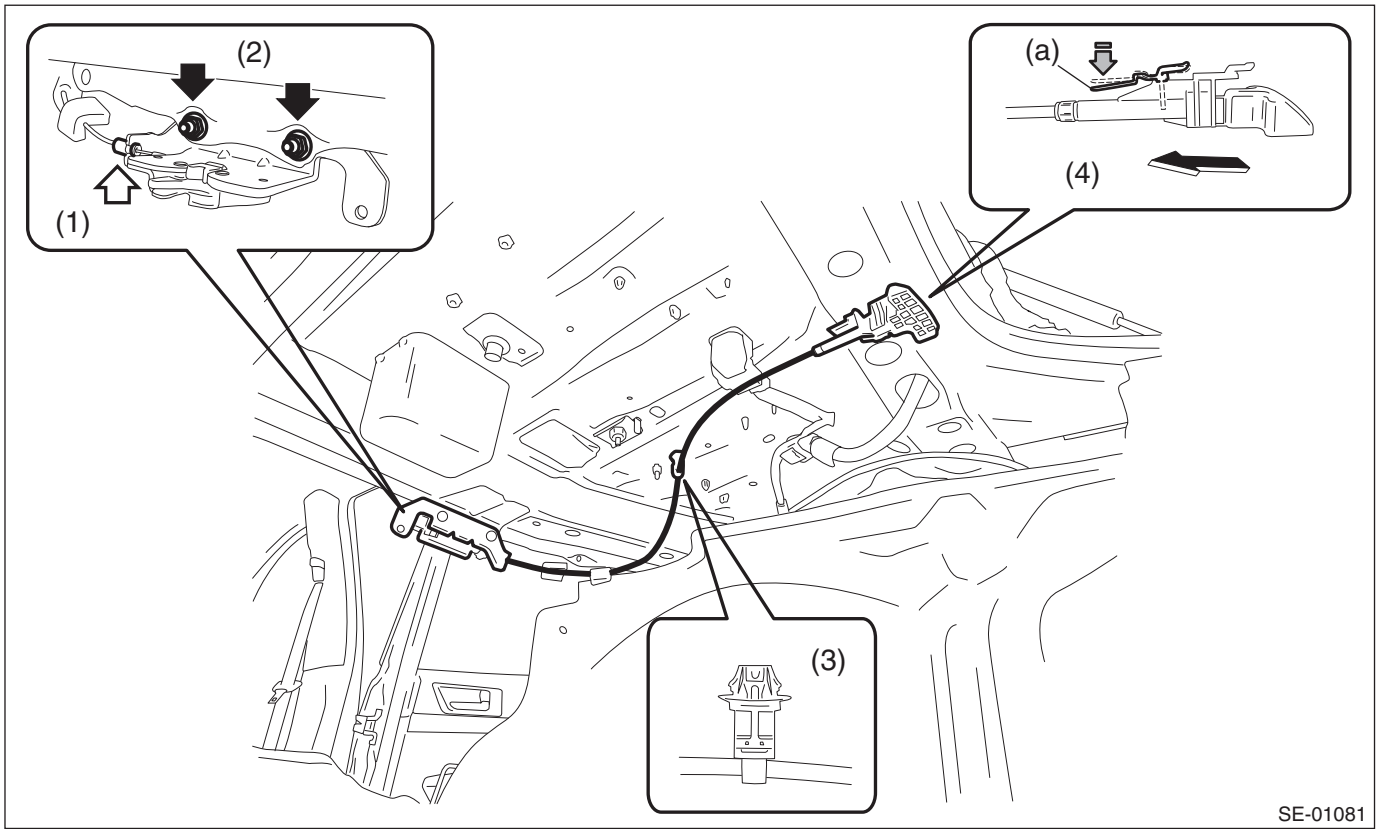
3. WIRE CABLE

Release lever cable (sedan model)

1) Pull the release lever in the trunk room, and then tilt the backrest forward.



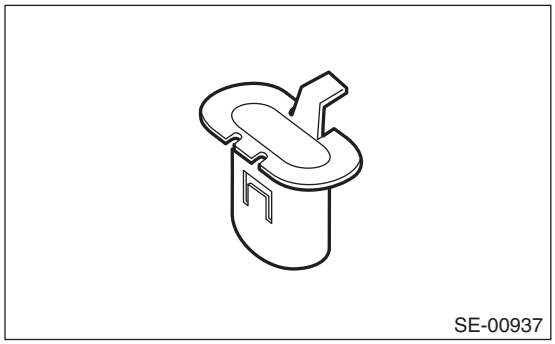
2) Remove the release lever assembly.
   (1) Remove the wire cable from lock assembly.
   (2) Remove the nuts, and then remove the lock assembly.
   (3) Remove the wire cable holder.
   (4) Press the stopper portion (a), and remove the release lever assembly while sliding it forward.

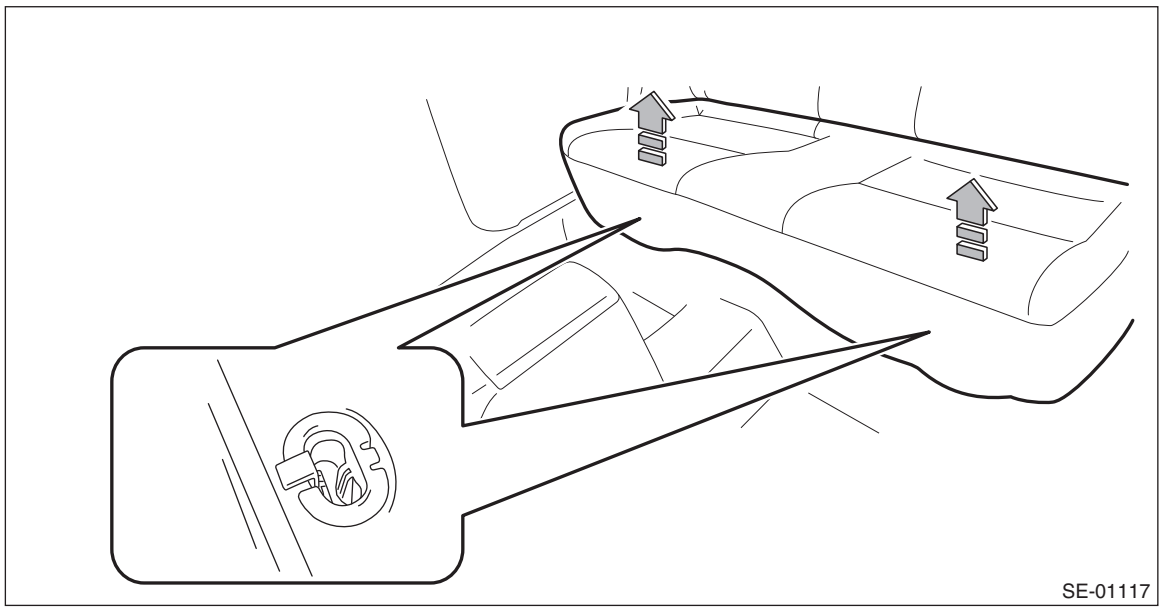


Reclining cable (OUTBACK model)

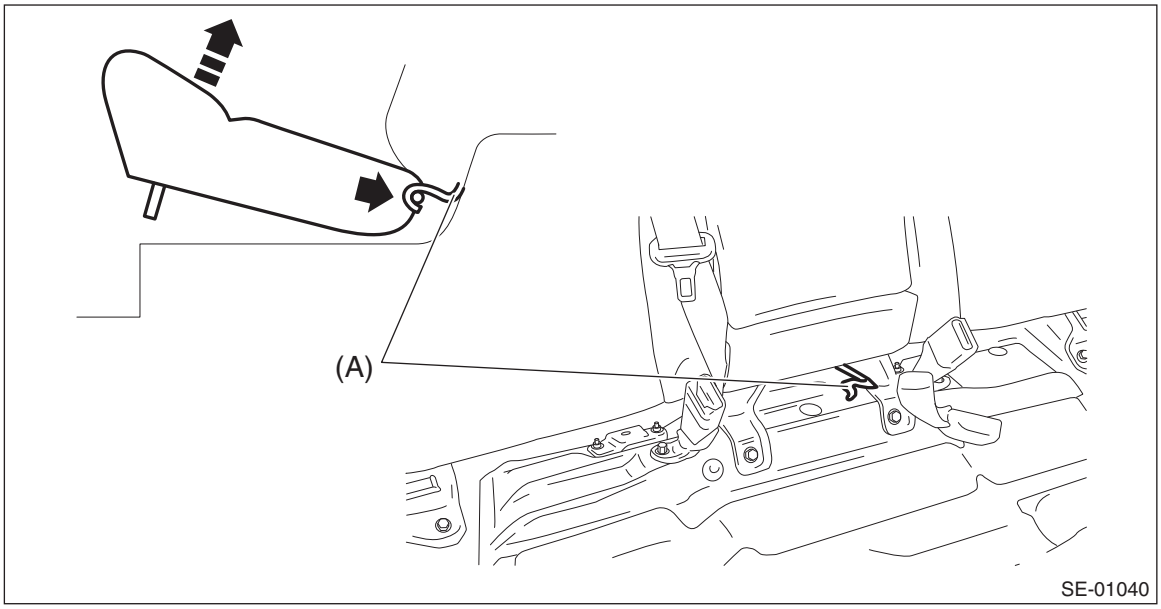
1) Remove the rear seat cushion.
   (1) Pull up the seat cushion and release the hook.

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.

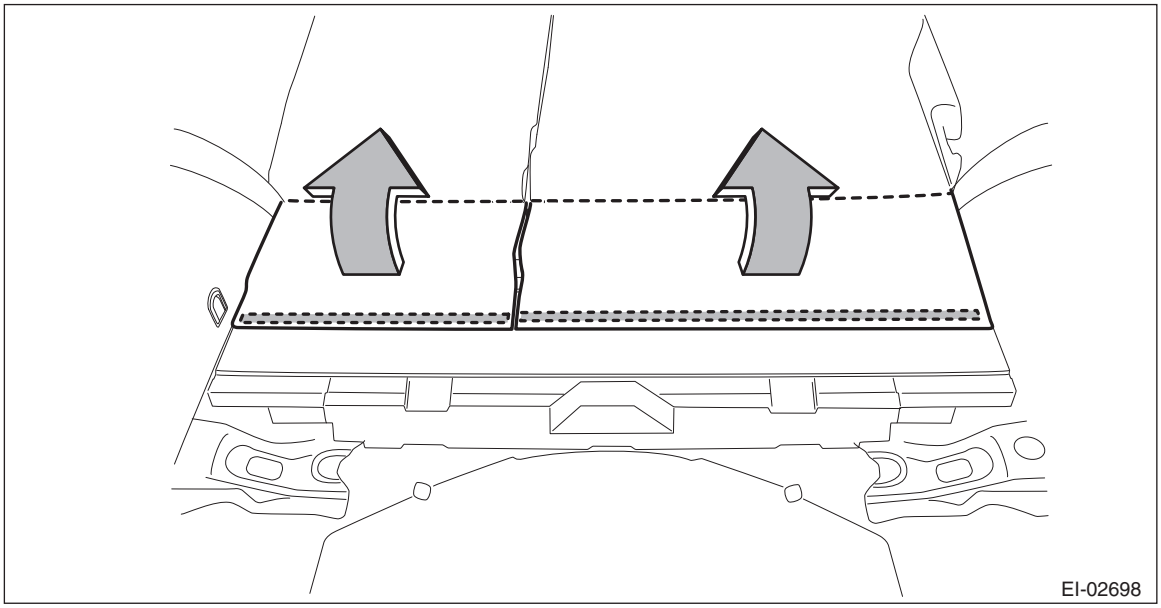

SE-00937


SE-01117

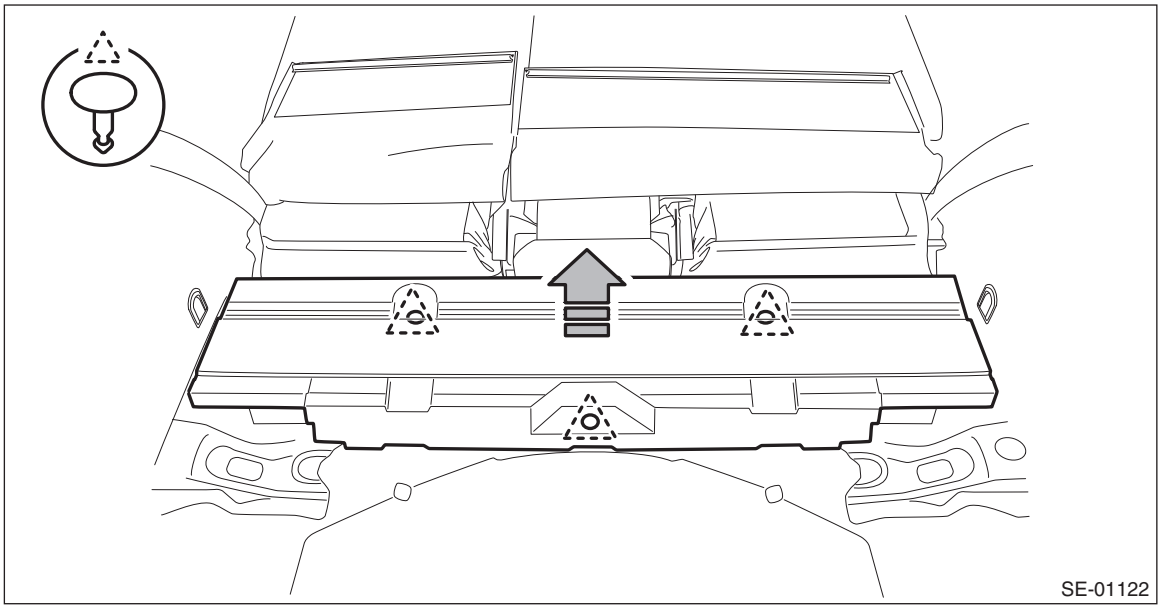
(2) Remove the hook (A) by pushing it back while lifting the front side of the seat cushion, and remove the seat cushion.



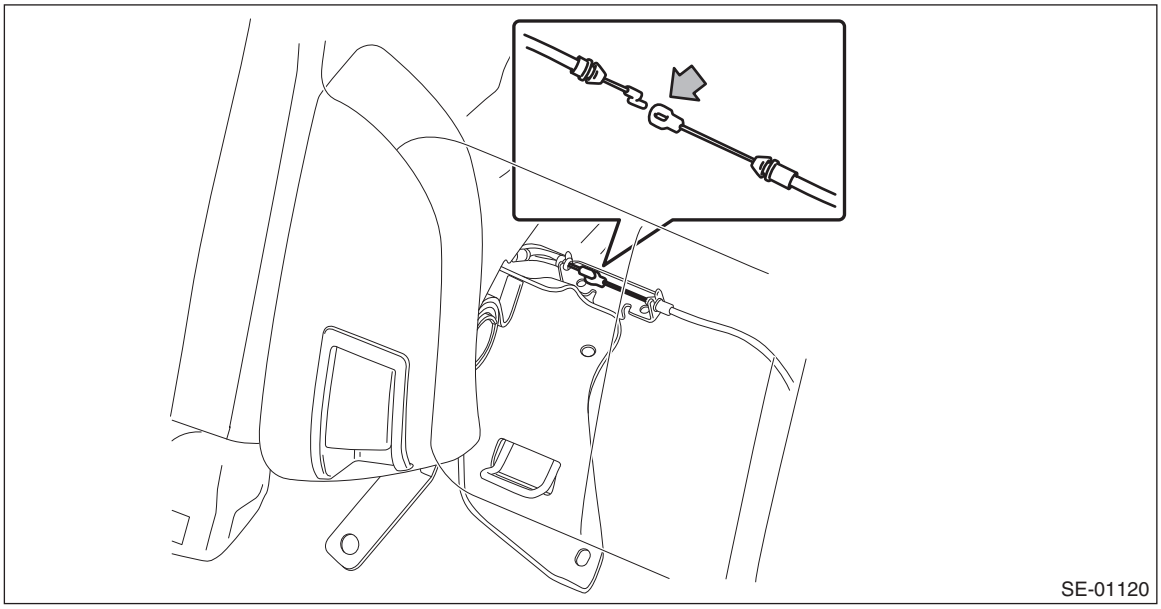
2) Tilt the backrest and turn over the seat backrest cover.



3) Remove the clips, and remove the rear floor mat-front.



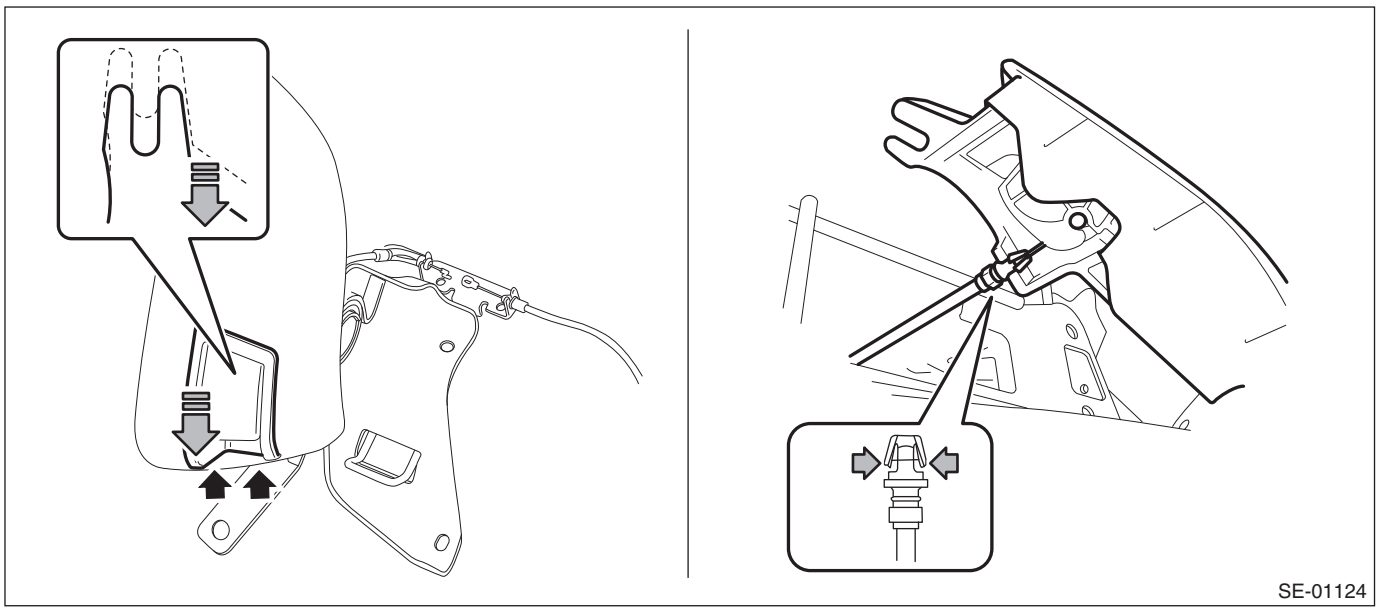
4) Remove the reclining lever assembly.
(1) Disconnect the backrest cable and reclining lever cable.



(2) Remove the screws and remove the reclining lever assembly by pulling it downward.

Preparation tool: Stubby screwdriver

(3) By pressing the wire cable claws, remove the relining cable from the reclining lever assembly.



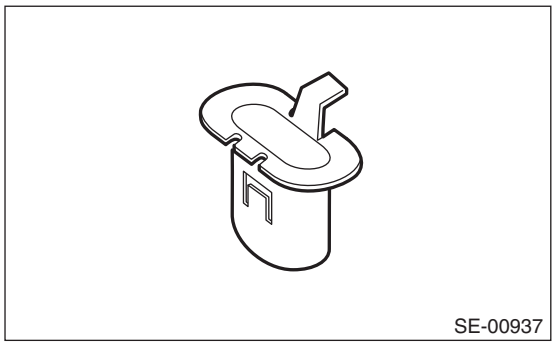
Backrest cable (OUTBACK model)

1) Remove the rear seat backrest assembly. <Ref. to SE-37, OUTBACK MODEL, REMOVAL, Rear Seat.>
2) Disassemble the backrest assembly and remove the backrest cable. <Ref. to SE-48, DISASSEMBLY, Rear Seat.>

B: INSTALLATION

Install each part in the reverse order of removal.

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.



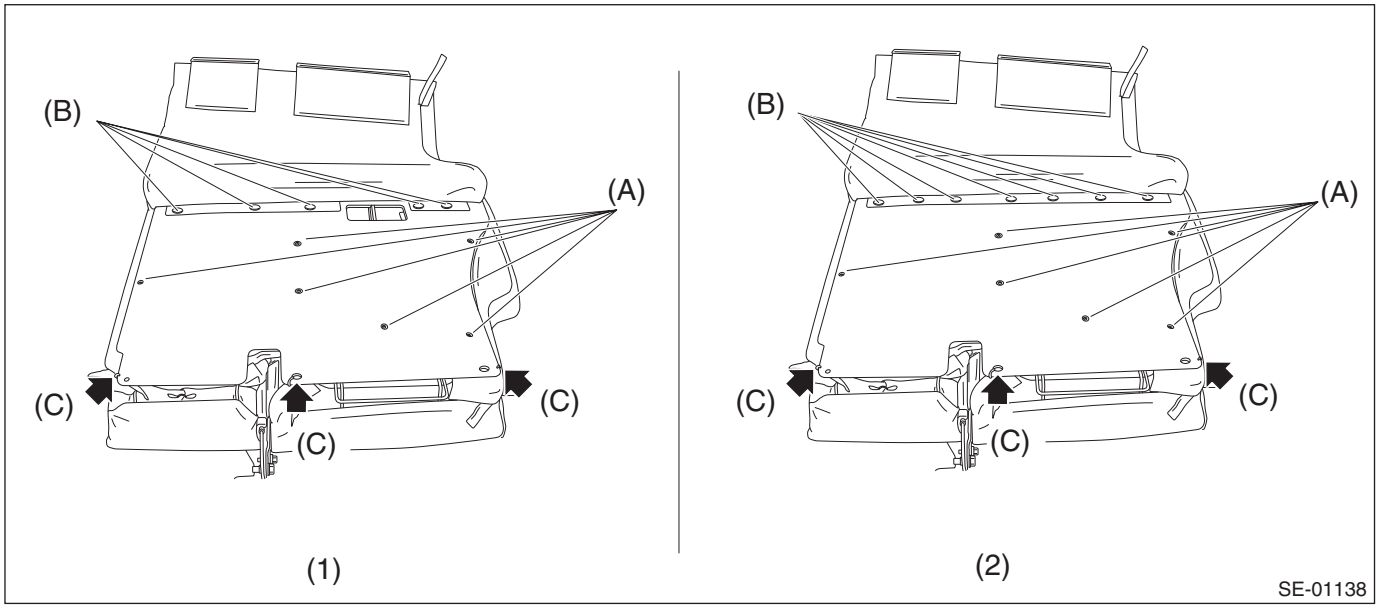
NOTE:
- After installing the backrest, make sure that each seat belt operates normally.
- Check that the remote lever and reclining lever operate normally.
- Make sure that they are properly secured on each hook on the vehicle side.

Tightening torque:
Refer to "COMPONENT" of "General Description".
Sedan model:<Ref. to SE-7, REAR SEAT (SEDAN MODEL), COMPONENT, General Description.>
OUTBACK model <Ref. to SE-8, REAR SEAT (OUTBACK MODEL), COMPONENT, General Description.>

C: DISASSEMBLY

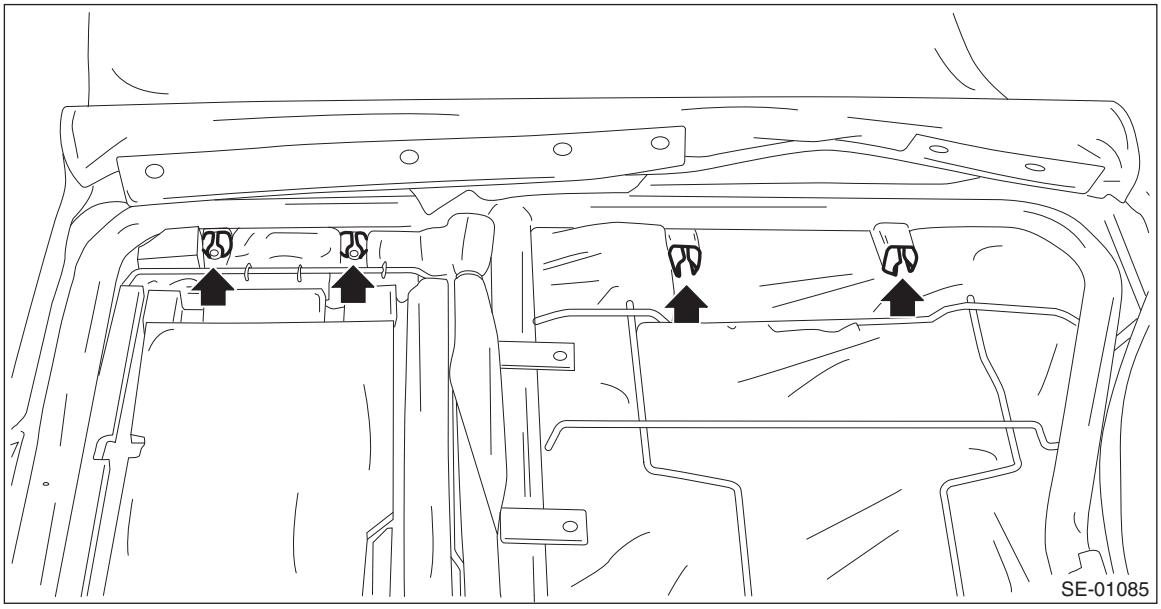
1) Remove the rear seat.
- Sedan model:<Ref. to SE-32, SEDAN MODEL, REMOVAL, Rear Seat.>
- OUTBACK model <Ref. to SE-37, OUTBACK MODEL, REMOVAL, Rear Seat.>

2) Remove the headrest.
3) Remove the backrest back board.
   (1) Remove the plastic fastener at the lower part of backrest assembly, and open the fastener at both side to turn over the backrest cover.
   (2) Remove the backrest striker cover. (Sedan model)
   (3) Remove the screws (A) and clips (B).
   (4) Remove the hog rings (C) and remove the backrest backboard.



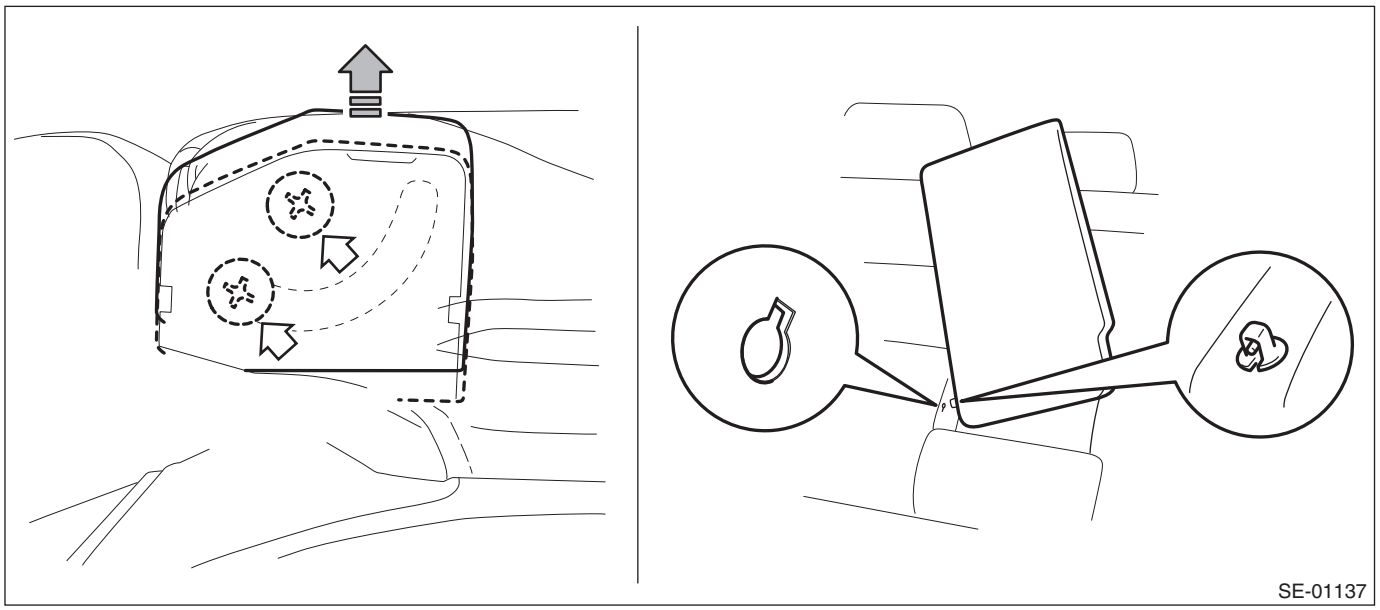
(1) Sedan model (2) OUTBACK model

4) Remove the headrest bushing.

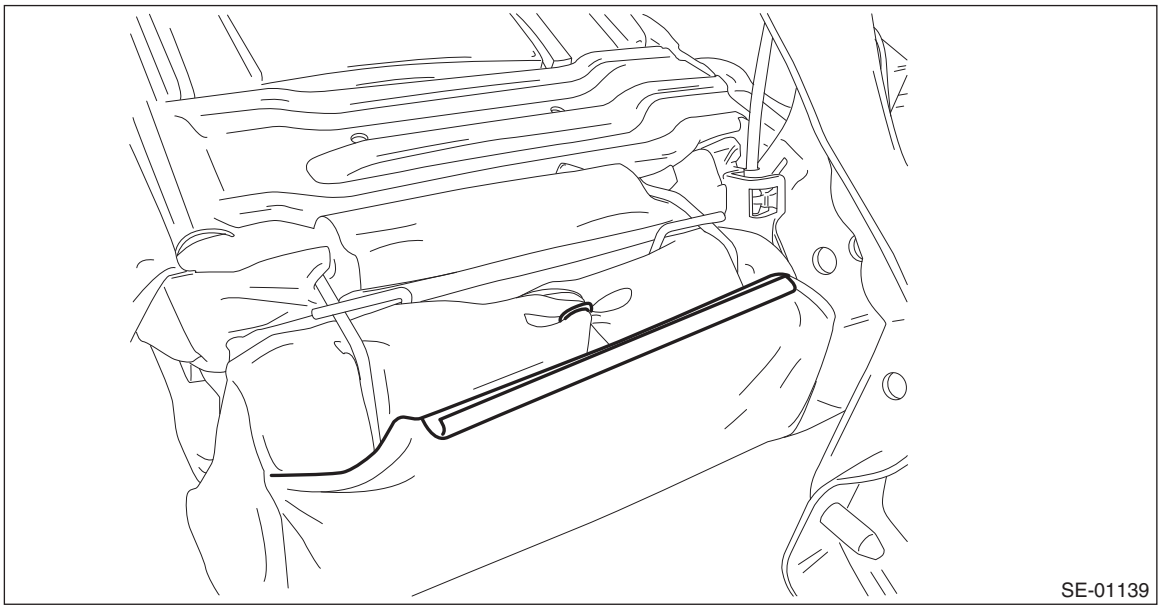


NOTE:
Catch the tip of headrest bushing with pliers and push it from inside seat to outside to remove it.
5) Remove the armrest assembly.

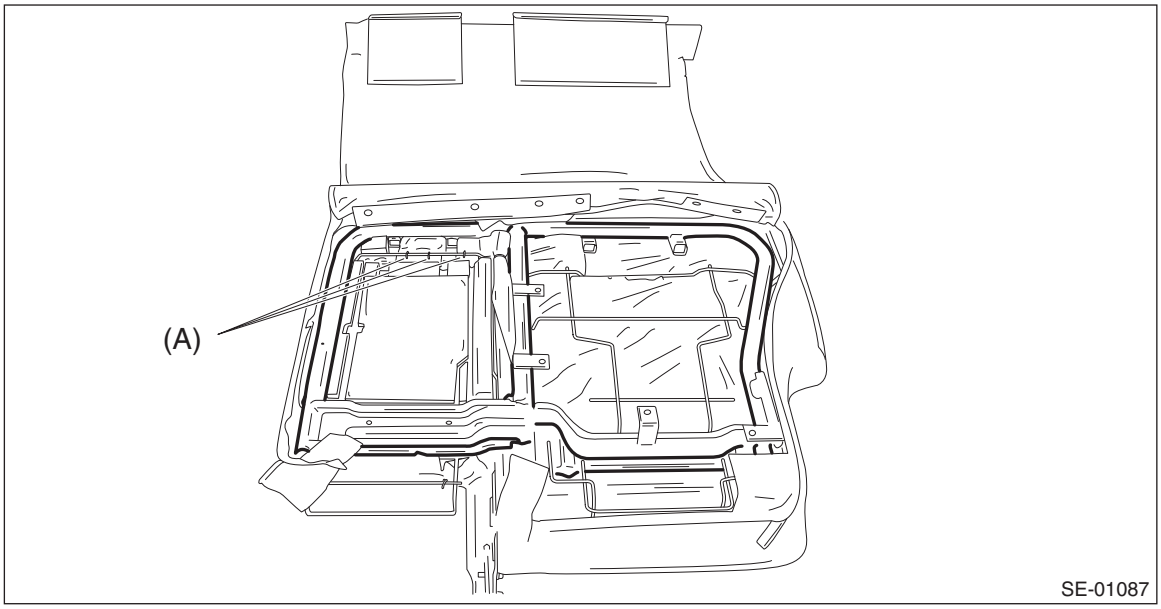
(1) Remove the armrest hinge cover by pulling it in the direction of arrow (black).
(2) Remove the screws, and remove the armrest.



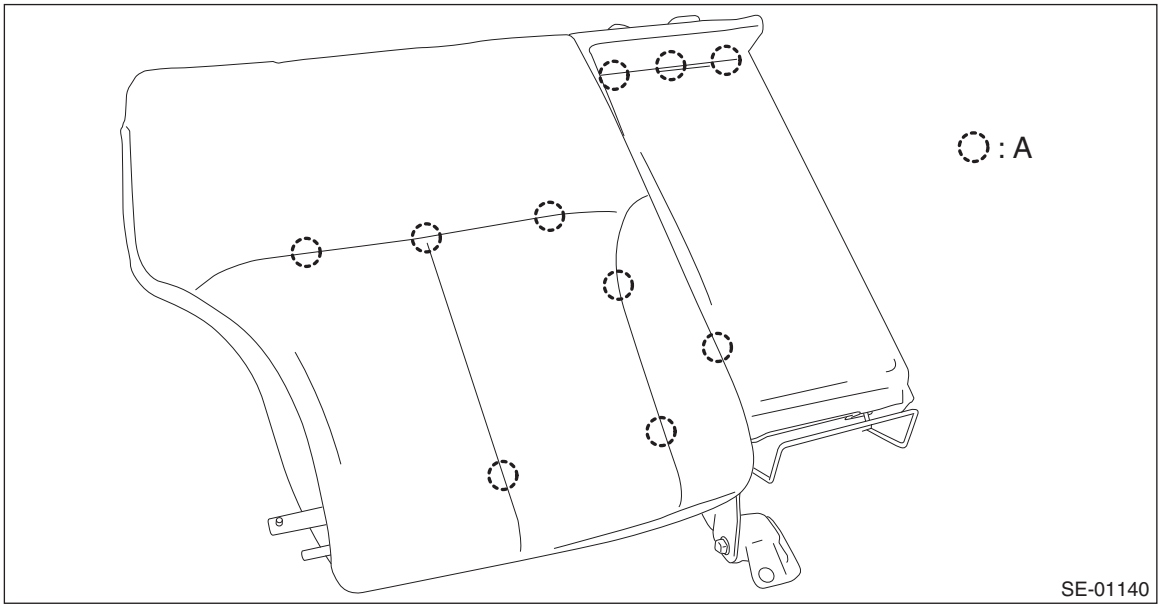
NOTE:
The armrests cannot be detached while the backrest assembly RH and armrest side pin positions are not aligned.
6) Remove the plastic hooks and hog rings, and remove the pad at lower side of armrest.



7) Remove the hog rings (A) and remove the backrest pad & frame assembly from the backrest assembly.

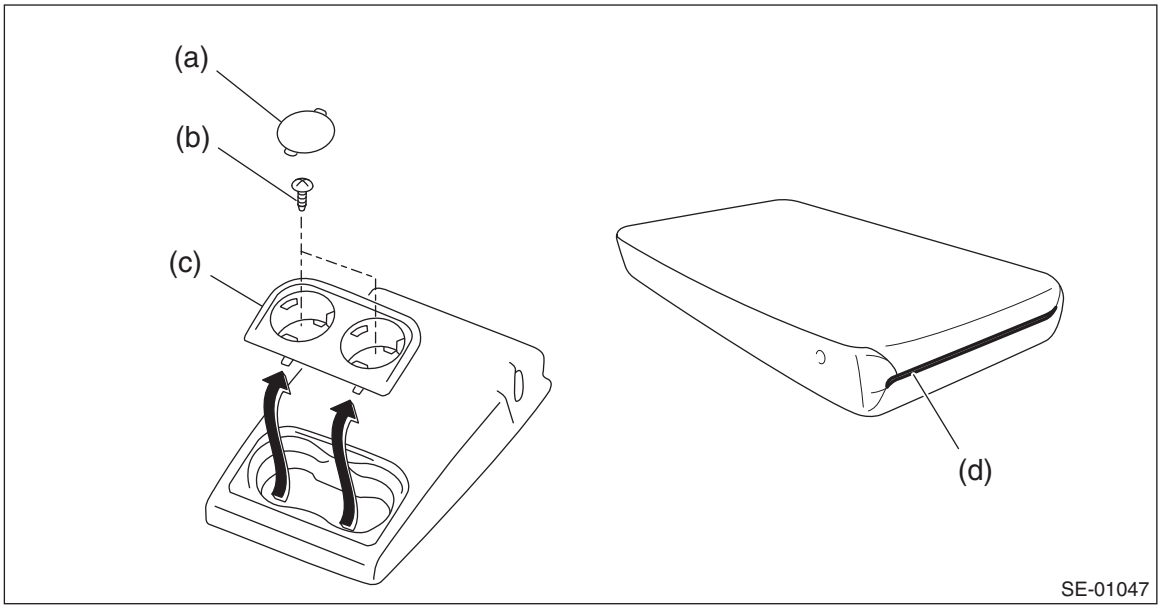


8) Remove the hog rings (A) on the front side of backrest, and then remove the backrest cover.

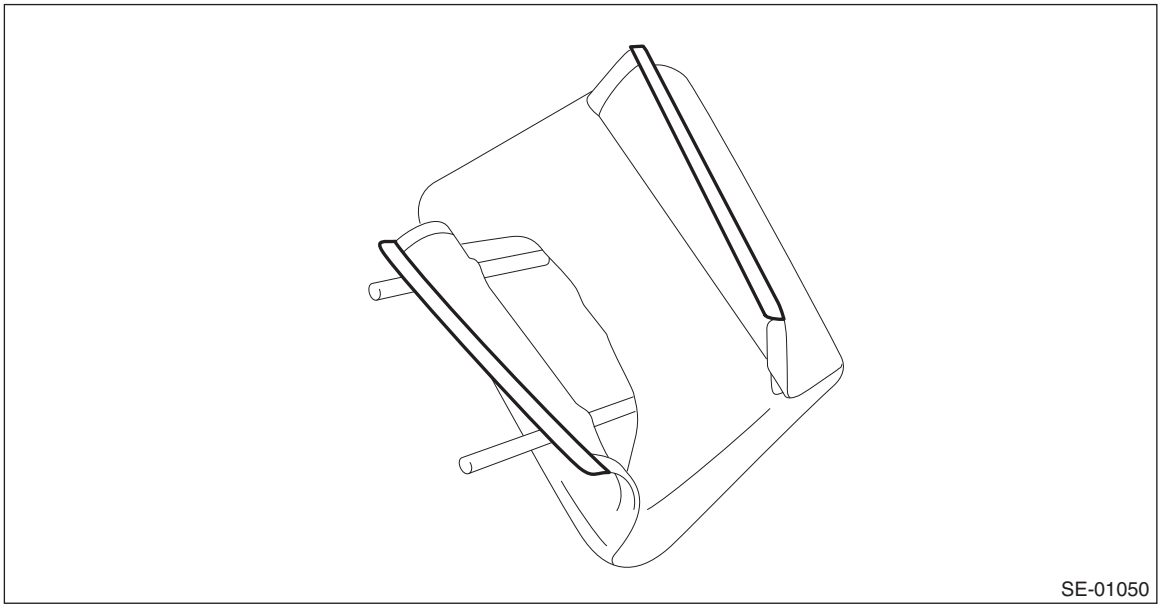


9) Referring to the step 2), disassemble the backrest assembly LH.
10) Remove the armrest cover.
(1) Take out the bottom sheets (a) from the cup holder and remove the screws (b).
(2) Remove the cup holder assembly (c).

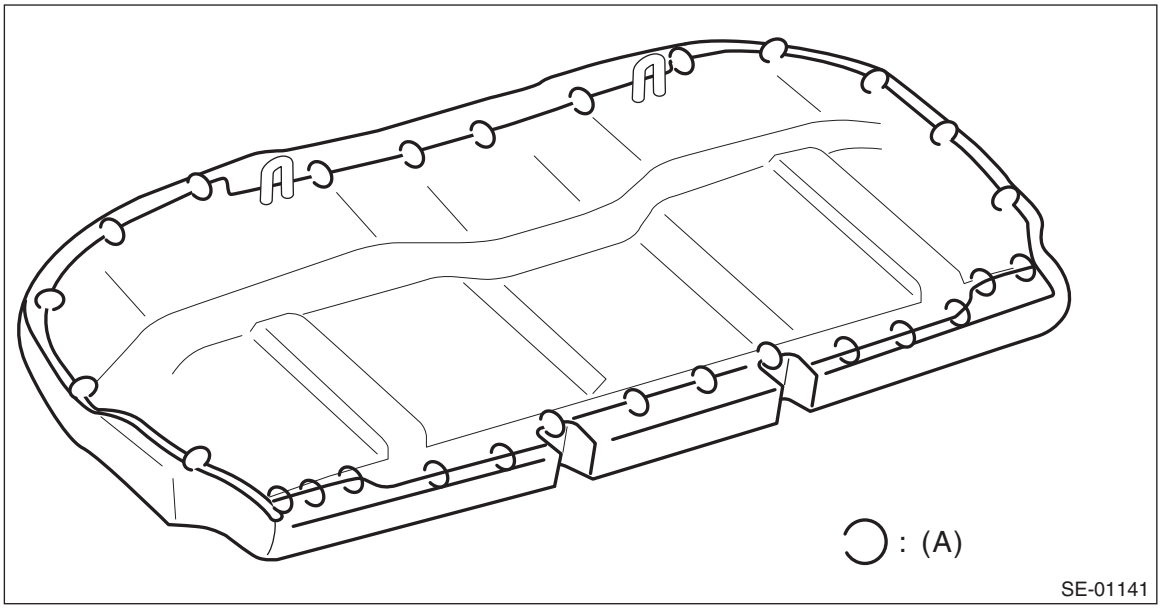
(3) Detach the plastic fastener (d) and remove the armrest cover.



11) Detach the plastic fastener and hog ring, and then remove the headrest cover.

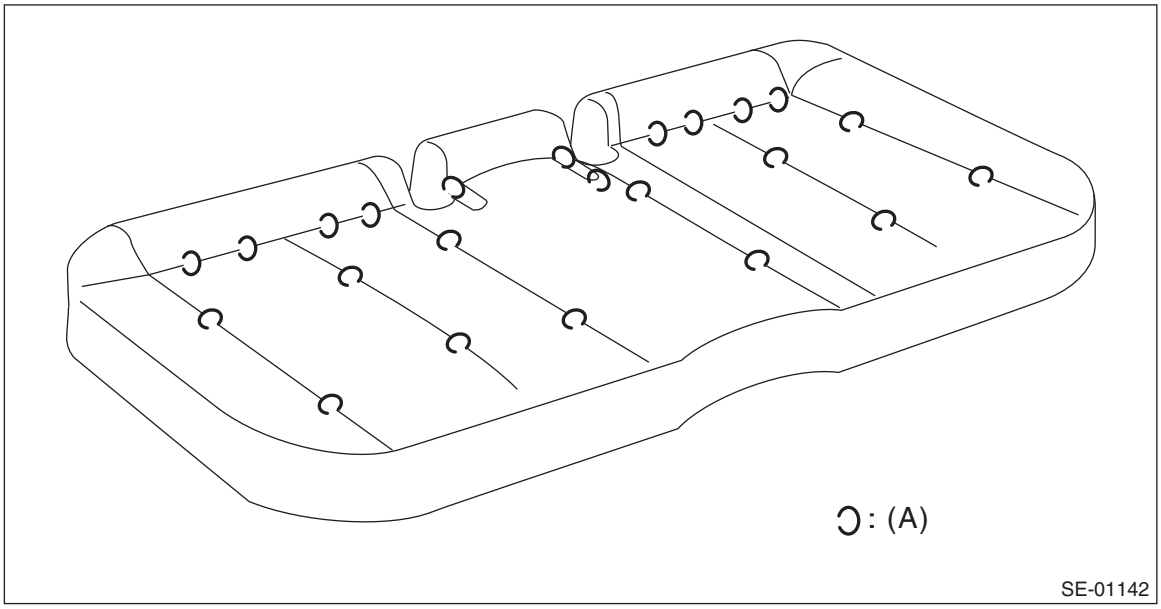


12) Remove the hog rings (A) on the rear side of the seat cushion.

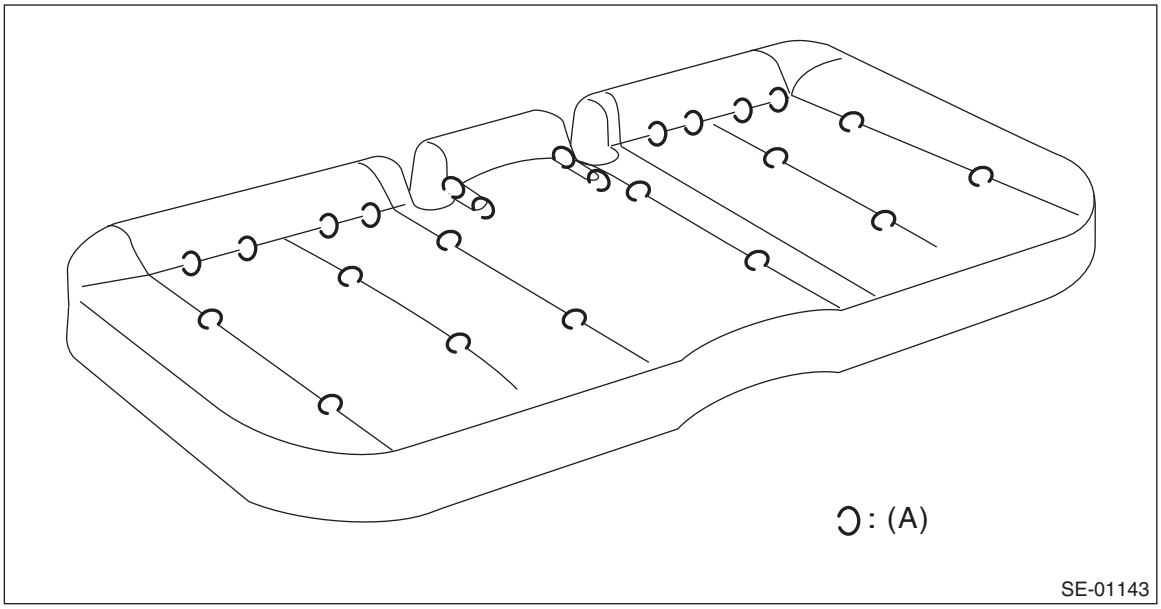


13) Remove the hog rings (A), then remove the seat cushion cover.

- Sedan model



- OUTBACK model



D: ASSEMBLY

CAUTION:
- **Do not re-use the hog rings.**
- **Secure the hog ring using hog ring pliers.**
- **Install the hog rings to the specified points securely and make sure that no wrinkle or twisting on backrest cover.**

1) Assemble in the reverse order of disassembly.

NOTE:
- Do not contaminate or damage the cover.
- While installing the hog rings, prevent the seat from getting wrinkled.

Tightening torque:
Refer to "COMPONENT" of "General Description".
Sedan model:<Ref. to SE-7, REAR SEAT (SEDAN MODEL), COMPONENT, General Description.>
OUTBACK model <Ref. to SE-8, REAR SEAT (OUTBACK MODEL), COMPONENT, General Description.>

2) Before installation, check the following items.
- No break and fray on seat cover.
- No fray or deformation on each wire cable.

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

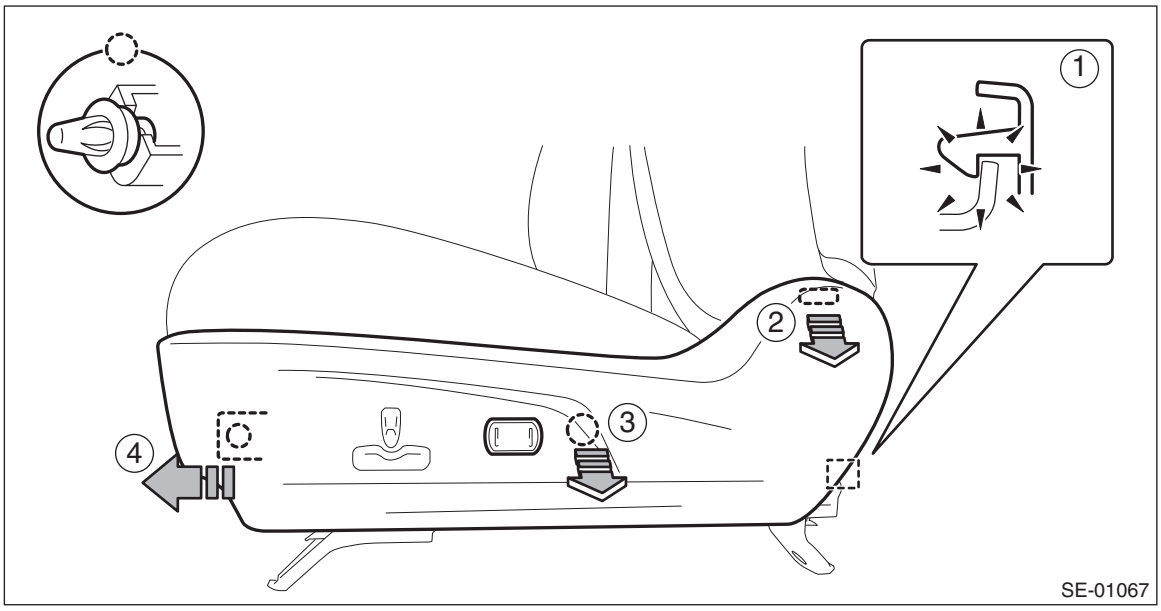
4. Power Seat System

A: REMOVAL

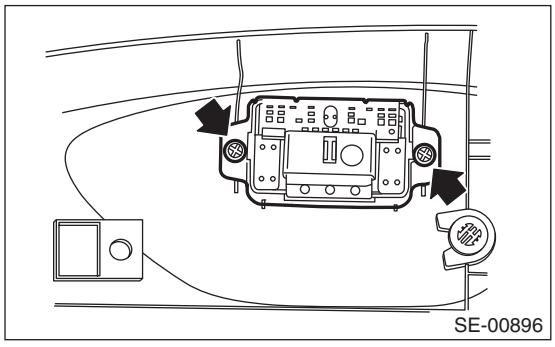
CAUTION:
When removing the front seat, Disconnect the ground cable from battery before disconnecting the side airbag module harness connector, and wait for 60 seconds before starting the operation.

1. POWER SEAT SWITCH

1) Remove the seat from vehicle. <Ref. to SE-10, REMOVAL, Front Seat.>
2) Remove the seat side cover OUT.
   (1) Release the claw in the rear section of the seat side cover.
   (2) Release the claw in the upper section of the seat side cover.
   (3) Remove the clip and release the claw in the front section of the seat side cover
   (4) Disconnect the power seat switch and lumber switch connectors and remove the seat side cover OUT.

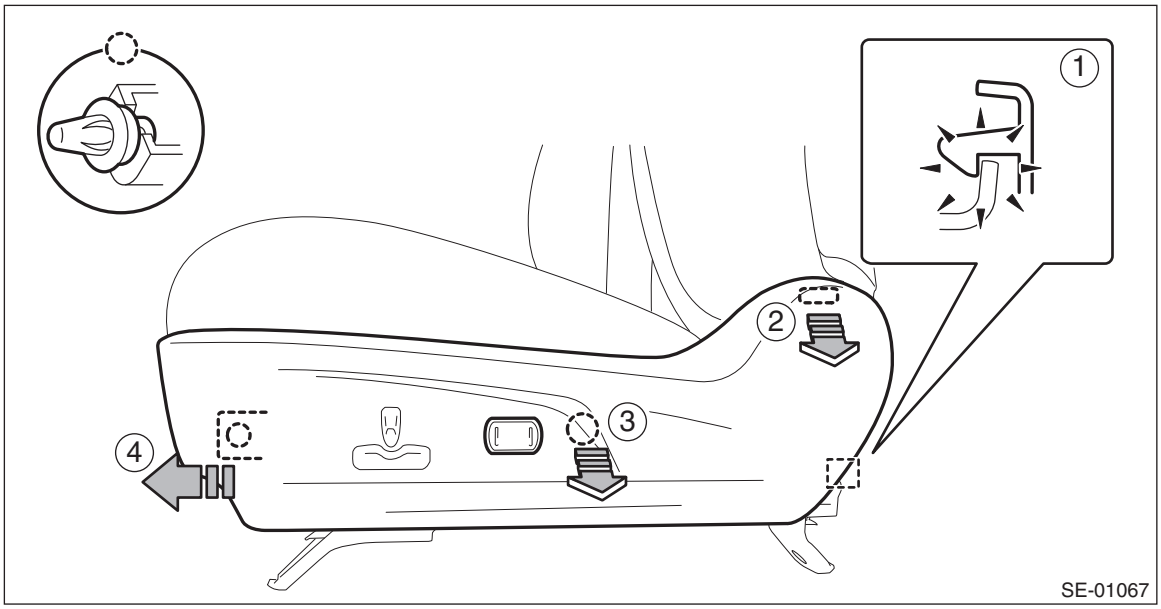


3) Remove the screws to remove the power seat switch assembly.

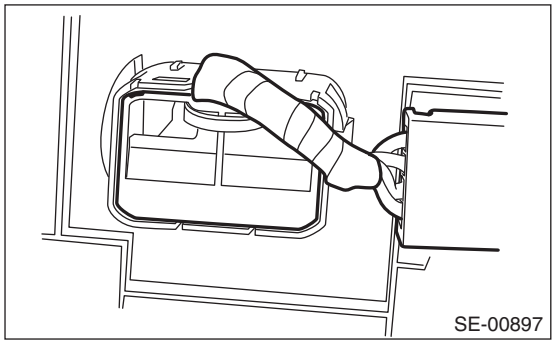


2. LUMBAR SWITCH

1) Remove the seat from vehicle. <Ref. to SE-10, REMOVAL, Front Seat.>
2) Remove the seat side cover OUT.
   (1) Release the claw in the rear section of the seat side cover.
   (2) Release the claw in the upper section of the seat side cover.
   (3) Remove the clip and release the claw in the front section of the seat side cover
   (4) Disconnect the power seat switch and lumber switch connectors and remove the seat side cover OUT.



3) Disconnect the connector and remove the lumbar switch assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1. WIRING DIAGRAM

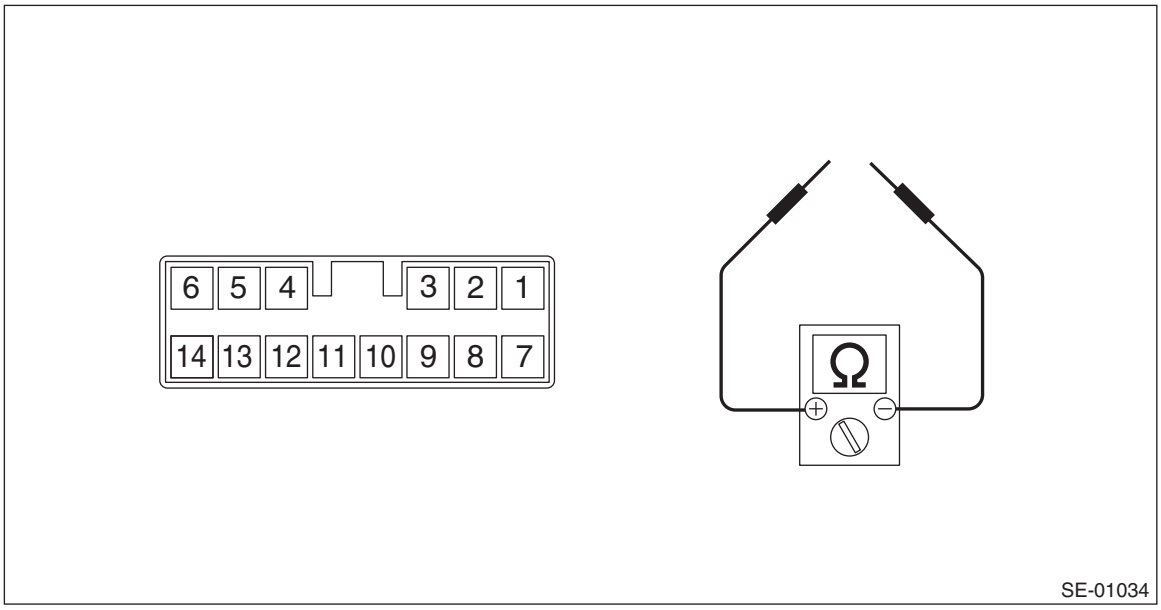
Refer to “Power Seat System” in the wiring diagram. <Ref. to WI-178, WIRING DIAGRAM, Power Seat System.>

2. TROUBLE SYMPTOM

Symptoms	Criteria
All functions do not operate. <Ref. to SE-58, ALL FUNCTIONS DO NOT OPERATE., INSPECTION, Power Seat System.>	• POWER SEAT SWITCH • LUMBAR SWITCH • Power seat harness • Body harness
A part of function does not operate. <Ref. to SE-58, SOME MOTORS DO NOT OPERATE., INSPECTION, Power Seat System.>	• POWER SEAT SWITCH • LUMBAR SWITCH • Power seat harness • Relevant motor

3. CHECK POWER SEAT SWITCH

Measure resistance between terminals while operating each switch.



- Driver’s side

Switch position	Terminal No.	Specification
Slide forward	7 and 14 8 and 13	Less than 10 Ω
Slide rearward	7 and 13 8 and 14	Less than 10 Ω
Tilt up	7 and 2 8 and 1	Less than 10 Ω
Tilt down	7 and 1 8 and 2	Less than 10 Ω
Lifter up	7 and 5 8 and 6	Less than 10 Ω
Lifter down	7 and 6 8 and 5	Less than 10 Ω
Reclining forward	7 and 3 8 and 4	Less than 10 Ω
Reclining rearward	7 and 4 8 and 3	Less than 10 Ω

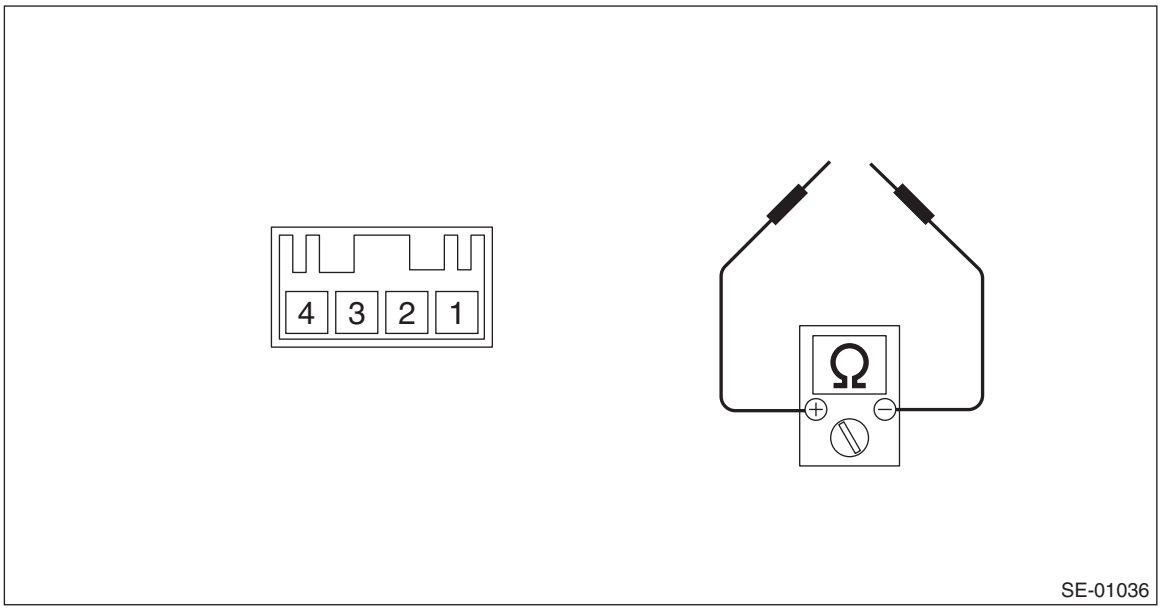
- Passenger's side

Switch position	Terminal No.	Specification
Slide forward	7 and 13 8 and 14	Less than 10 Ω
Slide rearward	7 and 14 8 and 13	Less than 10 Ω
Reclining forward	7 and 4 8 and 3	Less than 10 Ω
Reclining rearward	7 and 3 8 and 4	Less than 10 Ω

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

4. CHECK LUMBAR SWITCH

Measure resistance between terminals while operating each switch.



Switch position	Terminal No.	Specification
Lumbar forward	1 and 4 2 and 3	Less than 10 Ω
Lumber rearward	1 and 3 2 and 4	Less than 10 Ω

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

5. ALL FUNCTIONS DO NOT OPERATE.

	Step	Check	Yes	No
1	**CHECK SEAT FUNCTIONS.** Operate each power seat switch and check that each power seat function operates normally.	Does all function fail to operate?	Go to step **2**.	Check motors that do not operate. <Ref. to SE-58, SOME MOTORS DO NOT OPERATE., INSPECTION, Power Seat System.>
2	**CHECK FUSE.** Check the power seat fuse inside the fuse box.	Is the fuse blown out?	Replace the appropriate fuse.	Go to step **3**.
3	**CHECK POWER SUPPLY CIRCUIT.** 1) Disconnect the connector of power seat switch assembly. 2) Measure the voltage between harness connector and chassis ground. ***Connector & terminal*** ***Driver's side*** ***(R369) No. 7 (+) — Chassis ground (–):*** ***Passenger's side*** ***(R190) No. 7 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **4**.	Check body harness.
4	**CHECK POWER SUPPLY CIRCUIT.** Measure the resistance between power seat switch harness connector and chassis ground. ***Connector & terminal*** ***Driver's side*** ***(R369) No. 8 — Chassis ground:*** ***Passenger's side*** ***(R190) No. 8 — Chassis ground:***	Is the resistance less than 10 Ω?	Replace the power seat switch assembly.	Check body harness.

6. SOME MOTORS DO NOT OPERATE.

- Malfunction of slide operation

	Step	Check	Yes	No
1	**CHECK SWITCH.** 1) Disconnect the connector of power seat switch assembly. 2) Measure resistance between terminals while moving the switch to slide forward and slide rearward positions. <Ref. to SE-56, CHECK POWER SEAT SWITCH, INSPECTION, Power Seat System.>	Is there any problem on the inspection result?	Go to step **2**.	Replace the power seat switch assembly.
2	**CHECK HARNESS.** 1) Disconnect the power seat switch connector and slide motor connector. 2) Measure the resistance between power seat switch connector and slide motor connector. ***Connector & terminal*** ***Driver's side*** ***(R370) No. 2 — (R369) No. 13:*** ***(R370) No. 1 — (R369) No. 14:*** ***Passenger's side*** ***(R192) No. 2 — (R190) No. 13:*** ***(R192) No. 1 — (R190) No. 14:***	Is the resistance less than 10 Ω?	Go to step **3**.	Check power seat harness.

Step		Check	Yes	No
3	**CHECK SLIDE MOTOR.** 1) Connect the power seat switch connector and slide motor connector. 2) Apply 12 V voltage to the slide motor and check the motor rotation. ***Connector & terminal*** ***Driver's side*** ***(R369) No. 13 (+) — (R369) No. 14 (–):*** ***(R369) No. 14 (+) — (R369) No. 13 (–):*** ***Passenger's side*** ***(R190) No. 13 (+) — (R190) No. 14 (–):*** ***(R190) No. 14 (+) — (R190) No. 13 (–):***	Does the motor rotate normally?	Check for temporary poor contact or mechanical trouble in slide rail.	Slide motor problem. Replace the slide rail assembly.

- Malfunction of tilt operation

Step		Check	Yes	No
1	**CHECK SWITCH.** 1) Disconnect the connector of power seat switch assembly. 2) Measure resistance between terminals while moving the switch to tilt up and tilt down positions. <Ref. to SE-56, CHECK POWER SEAT SWITCH, INSPECTION, Power Seat System.>	Is there any problem on the inspection result?	Go to step **2**.	Replace the power seat switch assembly.
2	**CHECK HARNESS.** 1) Disconnect the power seat switch connector and tilt motor connector. 2) Measure the resistance between power seat switch connector and tilt motor connector. ***Connector & terminal*** ***Driver's side*** ***(R372) No. 2 — (R369) No. 1:*** ***(R372) No. 1 — (R369) No. 2:***	Is the resistance less than 10 Ω?	Go to step **3**.	Check power seat harness.
3	**CHECK TILT MOTOR.** 1) Connect the power seat switch connector and tilt motor connector. 2) Apply 12 V voltage to the tilt motor and check the motor rotation. ***Connector & terminal*** ***Driver's side*** ***(R369) No. 1 (+) — (R369) No. 2 (–):*** ***(R369) No. 2 (+) — (R369) No. 1 (–):***	Does the motor rotate normally?	Check for temporary poor contact or mechanical trouble in tilt mechanism.	Tilt motor problem. Replace the slide rail assembly.

- Malfunction of lifter operation

	Step	Check	Yes	No
1	**CHECK SWITCH.** 1) Disconnect the connector of power seat switch assembly. 2) Measure resistance between terminals while moving the switch to lifter up and lifter down positions. <Ref. to SE-56, CHECK POWER SEAT SWITCH, INSPECTION, Power Seat System.>	Is there any problem on the inspection result?	Go to step **2**.	Replace the power seat switch assembly.
2	**CHECK HARNESS.** 1) Disconnect the power seat switch connector and lifter motor connector. 2) Measure the resistance between power seat switch connector and lifter motor connector. ***Connector & terminal*** ***Driver's side*** ***(R371) No. 2 — (R369) No. 6:*** ***(R371) No. 1 — (R369) No. 5:***	Is the resistance less than 10 Ω?	Go to step **3**.	Check power seat harness.
3	**CHECK LIFTER MOTOR.** 1) Connect the power seat switch connector and lifter motor connector. 2) Apply 12 V voltage to the lifter motor and check the motor rotation. ***Connector & terminal*** ***Driver's side*** ***(R369) No. 6 (+) — (R369) No. 5 (–):*** ***(R369) No. 5 (+) — (R369) No. 6 (–):***	Does the motor rotate normally?	Check for temporary poor contact or mechanical trouble in lifter mechanism.	Lifter motor problem. Replace the slide rail assembly.

- Malfunction of reclining operation

	Step	Check	Yes	No
1	**CHECK SWITCH.** 1) Disconnect the connector of power seat switch assembly. 2) Measure resistance between terminals while moving the switch to reclining forward and reclining rearward positions. <Ref. to SE-56, CHECK POWER SEAT SWITCH, INSPECTION, Power Seat System.>	Is there any problem on the inspection result?	Go to step **2**.	Replace the power seat switch assembly.
2	**CHECK HARNESS.** 1) Disconnect the power seat switch connector and reclining motor connector. 2) Measure the resistance between power seat switch connector and reclining motor connector. ***Connector & terminal*** ***Driver's side*** ***(R375) No. 2 — (R369) No. 4:*** ***(R375) No. 1 — (R369) No. 3:*** ***Passenger's side*** ***(R368) No. 2 — (R190) No. 3:*** ***(R368) No. 1 — (R190) No. 4:***	Is the resistance less than 10 Ω?	Go to step **3**.	Check power seat harness.
3	**CHECK RECLINING MOTOR.** 1) Connect the power seat switch connector and reclining motor connector. 2) Apply 12 V voltage to the reclining motor and check the motor rotation. ***Connector & terminal*** ***Driver's side*** ***(R369) No. 4 (+) — (R369) No. 3 (–):*** ***(R369) No. 3 (+) — (R369) No. 4 (–):*** ***Passenger's side*** ***(R190) No. 4 (+) — (R190) No. 3 (–):*** ***(R190) No. 3 (+) — (R190) No. 4 (–):***	Does the motor rotate normally?	Check for temporary poor contact or mechanical trouble in reclining hinge.	Reclining motor problem. Replace the reclining motor assembly.

- Malfunction of lumbar operation

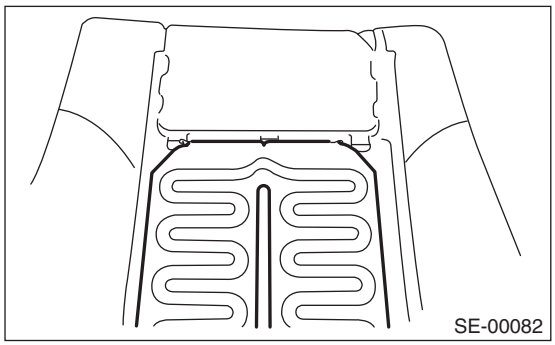
	Step	Check	Yes	No
1	**CHECK SWITCH.** 1) Disconnect the connector of lumbar switch assembly. 2) Measure resistance between terminals while moving the switch to lumbar forward and lumbar rearward positions. <Ref. to SE-57, CHECK LUMBAR SWITCH, INSPECTION, Power Seat System.>	Is there any problem on the inspection result?	Go to step **2**.	Replace the lumbar switch assembly.
2	**CHECK HARNESS.** 1) Disconnect the lumbar switch connector and lumbar motor connector. 2) Measure the resistance between lumbar switch connector and lumbar motor connector. ***Connector & terminal*** ***Driver's side*** ***(R379) No. 1 — (R376) No. 4:*** ***(R379) No. 2 — (R376) No. 3:***	Is the resistance less than 10 Ω?	Go to step **3**.	Check power seat harness.
3	**CHECK LUMBAR MOTOR.** 1) Connect the lumbar switch connector and lumbar motor connector. 2) Apply 12 V voltage to the lumbar motor and check the motor rotation. ***Connector & terminal*** ***Driver's side*** ***(R376) No. 4 (+) — (R376) No. 3 (–):*** ***(R376) No. 3 (+) — (R376) No. 4 (–):***	Does the motor rotate normally?	Check for temporary poor contact or mechanical trouble in lumbar mechanism.	Lumbar motor problem. Replace the lumbar motor assembly.

5. Seat Heater System

A: REMOVAL

1. SEAT HEATER UNIT

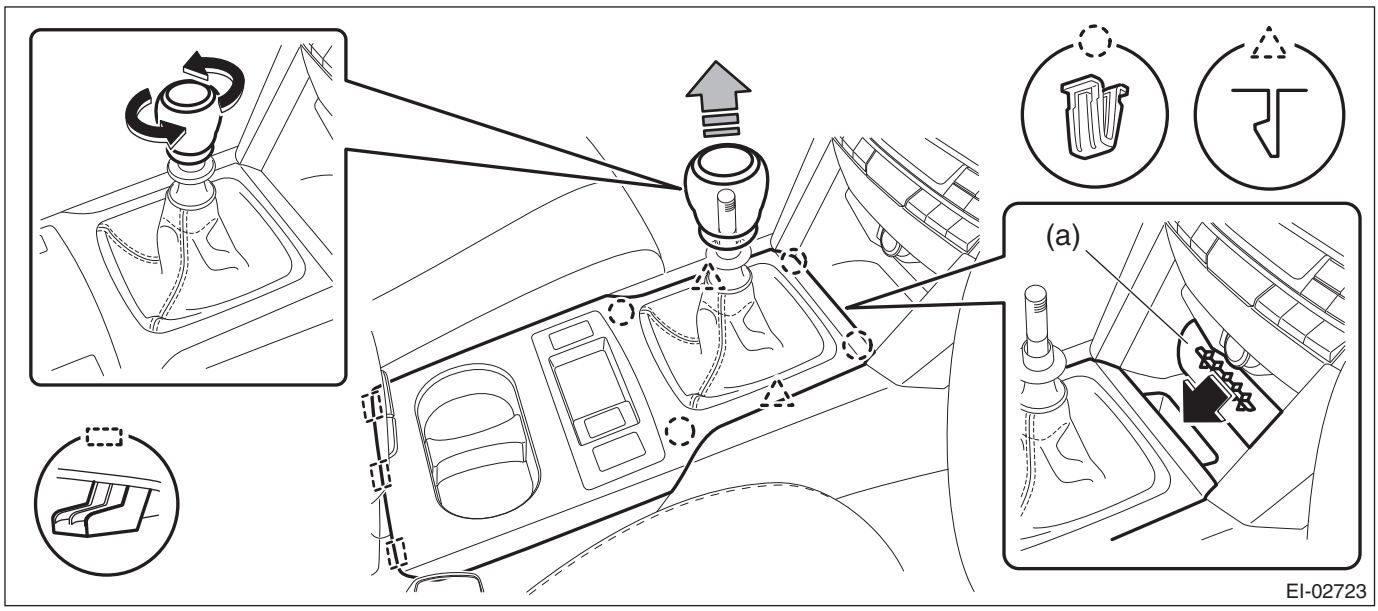
1) Remove the front seats. <Ref. to SE-10, REMOVAL, Front Seat.>
2) Remove the backrest cover of front seat and seat cushion cover. <Ref. to SE-12, DISASSEMBLY, Front Seat.>
3) Remove the seat heater unit.



2. SEAT HEATER SWITCH

1) Disconnect the ground cable from battery.
2) Remove the console front cover assembly.

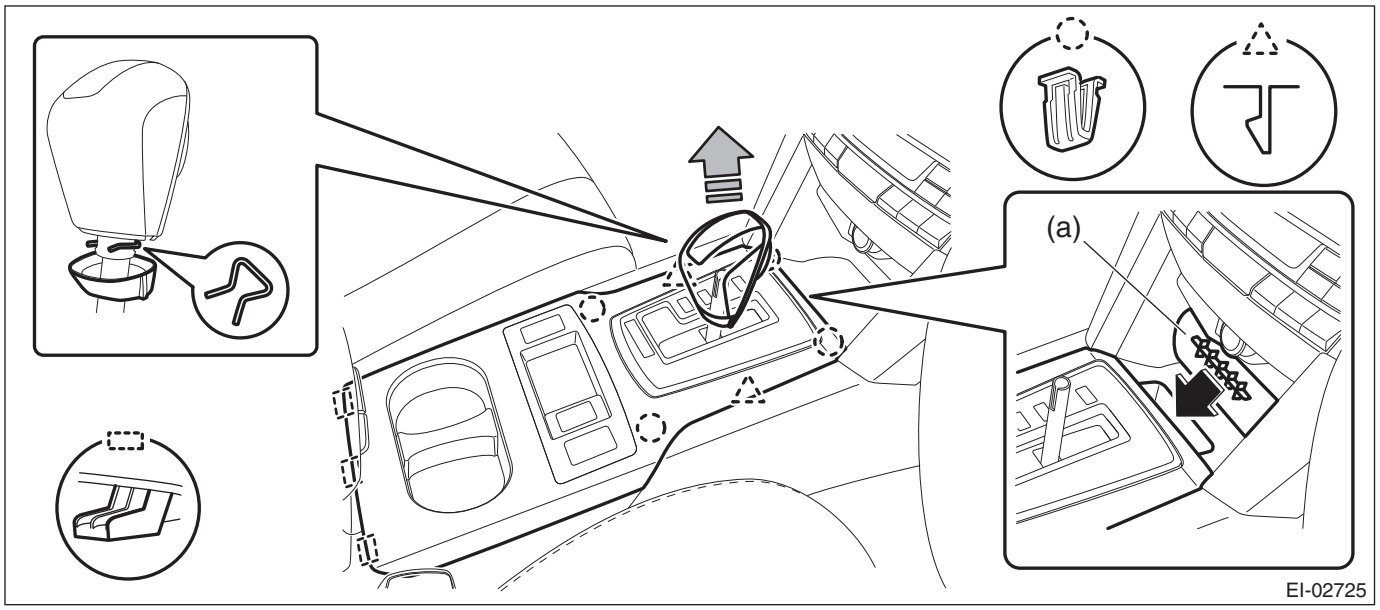
- MT model
  1. Remove the shift knob.
  2. Release the clips and claws, then pull up the console front cover assembly.



NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

  3. Disconnect the harness connector and remove the console front cover assembly.

- AT model
  1. Remove the select lever knob.
     a. Lower the cover grip AT.
     b. Remove the clamp grip pin, then remove the select lever knob.
  2. Release the clips and claws, then pull up the console front cover assembly.



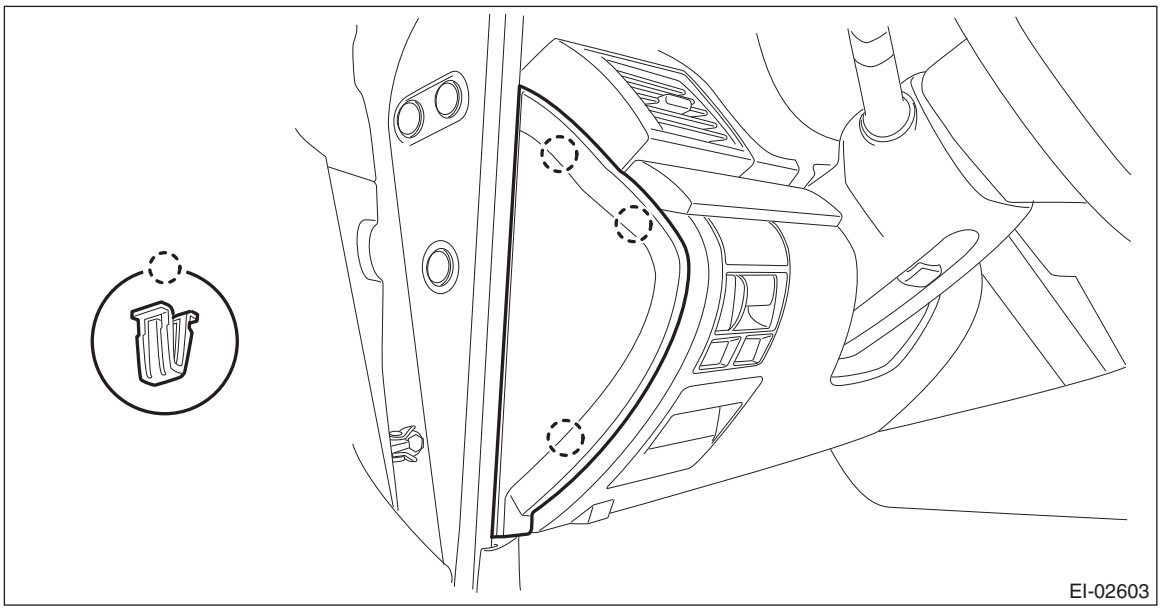
NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

  3. Disconnect the harness connector and remove the console front cover assembly.

3) Release the claws and remove the seat heater switch from the back of console front cover.

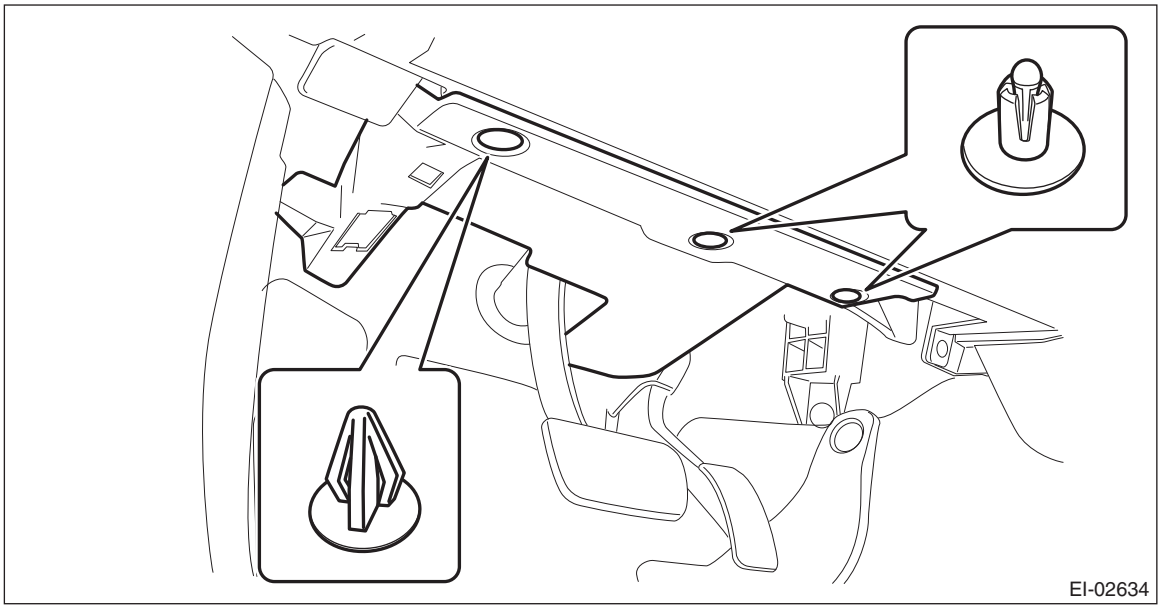
3. SEAT HEATER RELAY AND FUSE

1) Disconnect the ground cable from battery.
2) Remove the clips, and remove the instrument panel side cover LH.

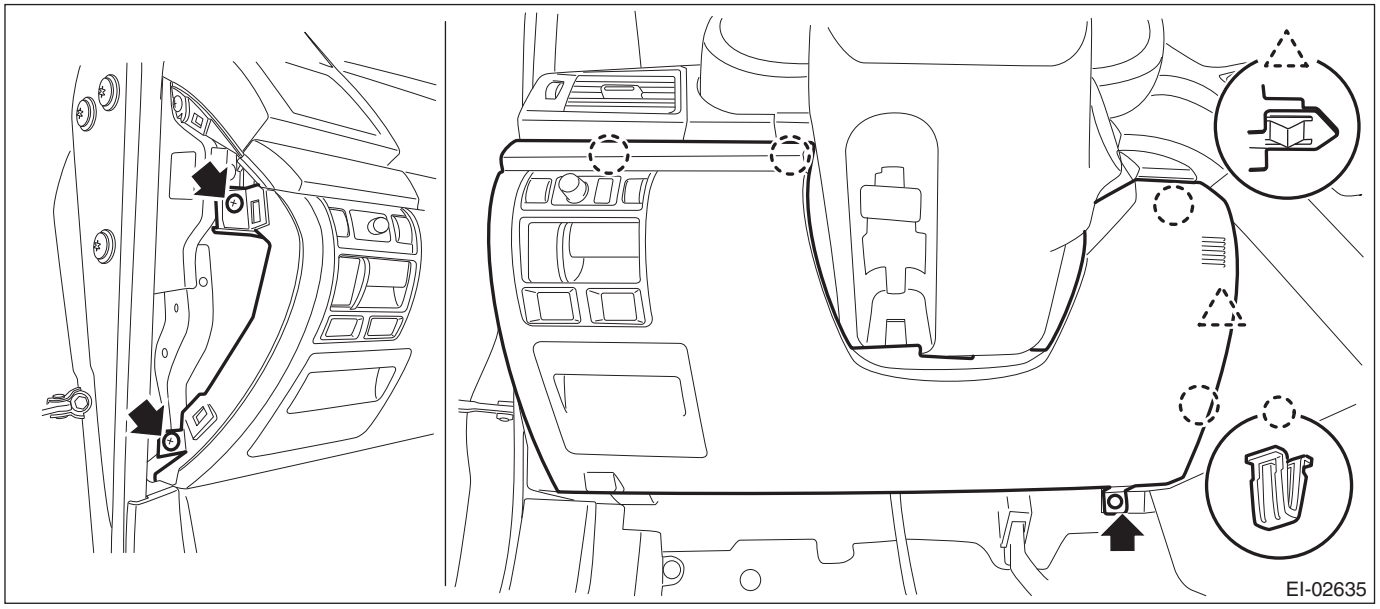


3) Remove the instrument panel lower cover.

(1) Remove the clips and data link connector, and remove the instrument panel lower cover under.

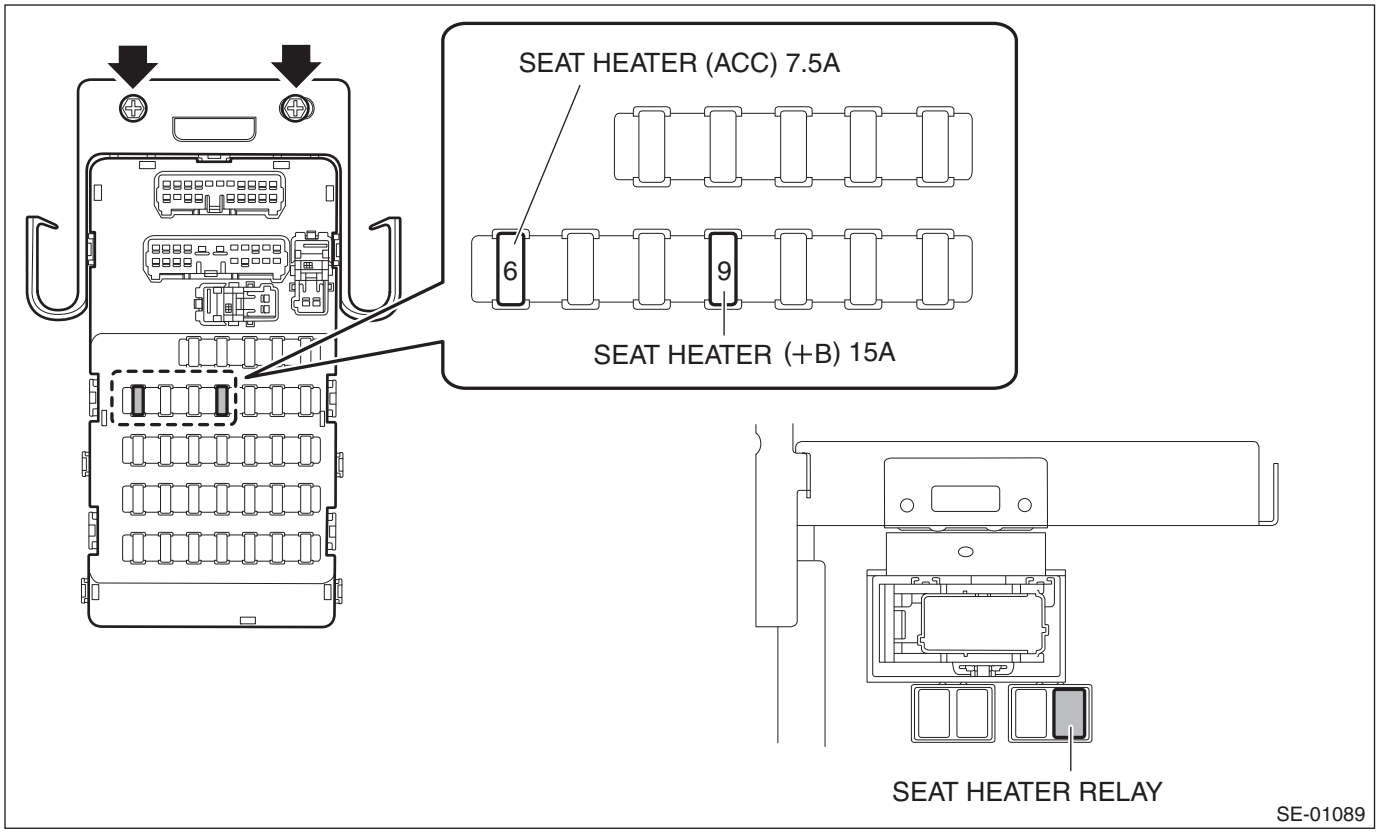


(2) Remove the screws and clips and release the claws, and remove the instrument panel lower cover while disconnecting the harness connectors.



4) Remove the seat heater relay and fuse.
(1) Remove the joint box bolts.

(2) Remove the seat heater relay



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1. WIRING DIAGRAM

Refer to “Seat Heater System” in the wiring diagram. <Ref. to WI-207, WIRING DIAGRAM, Seat Heater System.>

2. DIAGNOSTIC CHART

Symptoms	Repair order
Seat heater does not operate.	1. Check the fuse. <Ref. to SE-66, CHECK SEAT HEATER FUSE, INSPECTION, Seat Heater System.>
	2. Check the seat heater relay. <Ref. to SE-67, CHECK SEAT HEATER RELAY, INSPECTION, Seat Heater System.>
	3. Check the seat heater switch. <Ref. to SE-67, CHECK SEAT HEATER SWITCH, INSPECTION, Seat Heater System.>
	4. Check the power supply and ground circuit for the seat heater system. <Ref. to SE-67, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Seat Heater System.>

3. CHECK SEAT HEATER FUSE

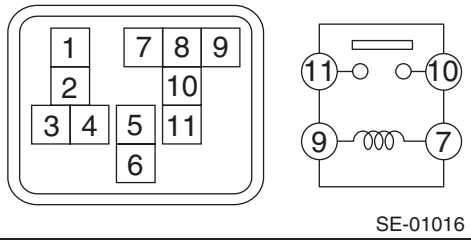
Remove the seat heater fuse and inspect visually.
Is the fuse blown out?

- **Yes** → Replace the fuse.
- **No** → Check the power supply and ground circuits.

4. CHECK SEAT HEATER RELAY

1) Remove the seat heater relay from the relay holder.
2) Measure the resistance between seat heater relay terminals.

Preparation tool: Circuit tester

Terminal No.	Inspection conditions	Specification	Circuit
11 — 10	Always	1 MΩ or more	
11 — 10	Apply battery voltage between terminals 9 — 7.	Less than 1 Ω	

SE-01016

3) Replace the seat heater relay if the inspection result is not within the standard value.

5. CHECK SEAT HEATER SWITCH

1) CHECK SEAT HEATER SWITCH
   (1) Turn the ignition switch to ON.
   (2) Measure the voltage between the seat heater switch and chassis ground when turning the switch to a position other than OFF.

Connector & terminal
LHD side seat
(R42) No. 4 (+) — Chassis ground (–):
RHD side seat
(R45) No. 4 (+) — Chassis ground (–):
Does the voltage fluctuate between 12 V ←→ 0 V?
- **Yes** → Harness faulty, open circuit of heater or thermostat faulty.
- **No** → Replace the seat heater switch.

6. CHECK POWER SUPPLY AND GROUND CIRCUIT

1) CHECK POWER SUPPLY CIRCUIT.
   (1) Disconnect the seat heater switch.
   (2) Turn the ignition switch to ON.
   (3) Measure the voltage between harness connector terminal and chassis ground.

Connector & terminal
Driver's side
(R42) No. 4 (+) — Chassis ground (–):
Passenger's side
(R45) No. 4 (+) — Chassis ground (–):
Is the voltage 12 V or more?
- **Yes** → Go to step 2.
- **No** → Check the harness between the seat heater switch and fuse.

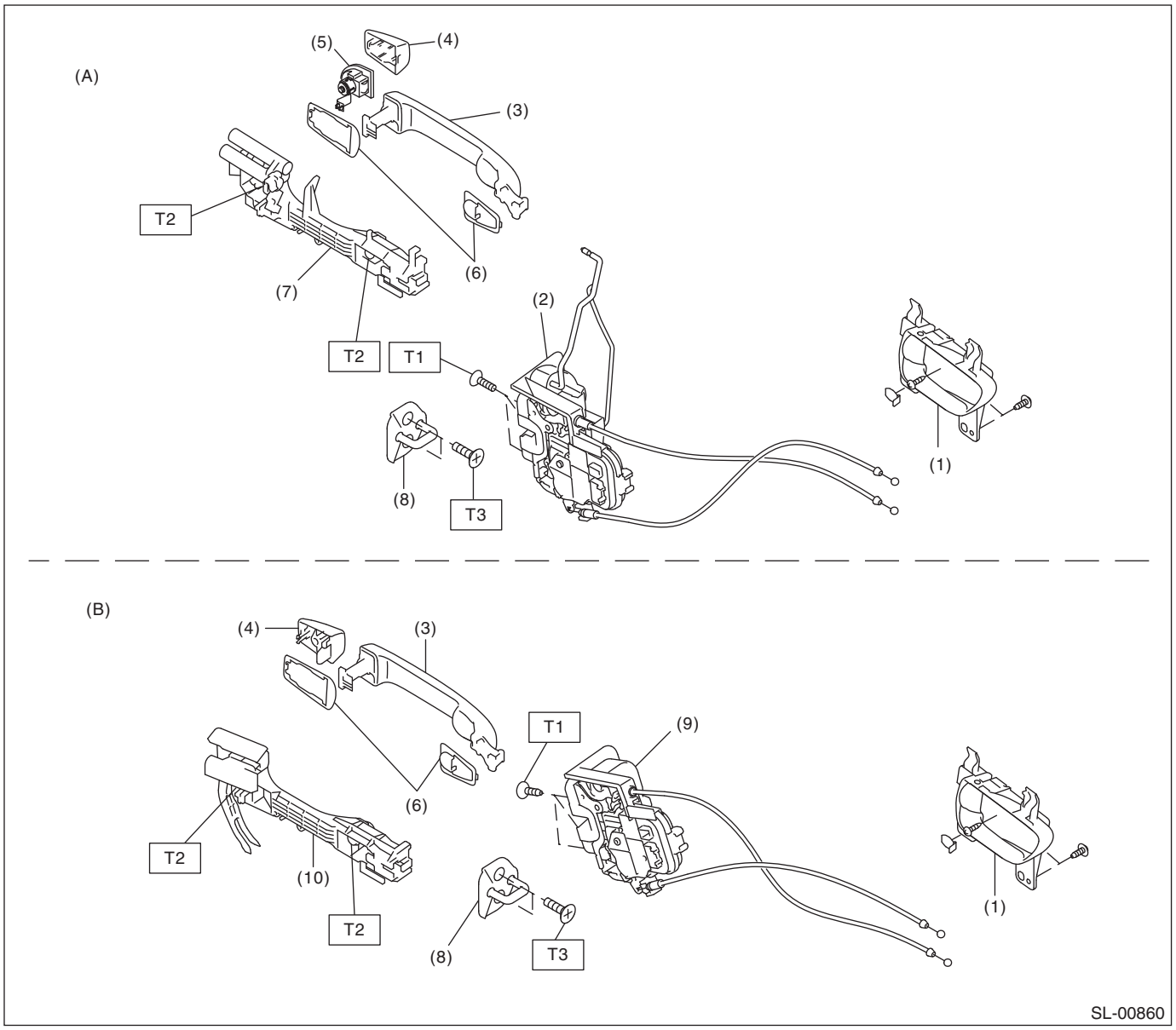
2) CHECK GROUND CIRCUIT.
Measure the resistance between harness connector terminal and chassis ground.

Connector & terminal
Driver seat (manual seat)
(R42) No. 6 — Chassis ground:
(R41) No. 1 — Chassis ground:
Passenger seat (manual seat)
(R45) No. 6 — Chassis ground:
(R44) No. 1 — Chassis ground:
Driver seat (power seat)
(R42) No. 6 — Chassis ground:
(R380) No. 1 — Chassis ground:
Passenger seat (power seat)
(R45) No. 6 — Chassis ground:
(R363) No. 1 — Chassis ground:
Is the resistance less than 10 Ω?
- **Yes** → The power supply and ground circuits are normal.
- **No** → Repair the harness.

1. General Description

A: COMPONENT

1. DOOR LOCK ASSEMBLY

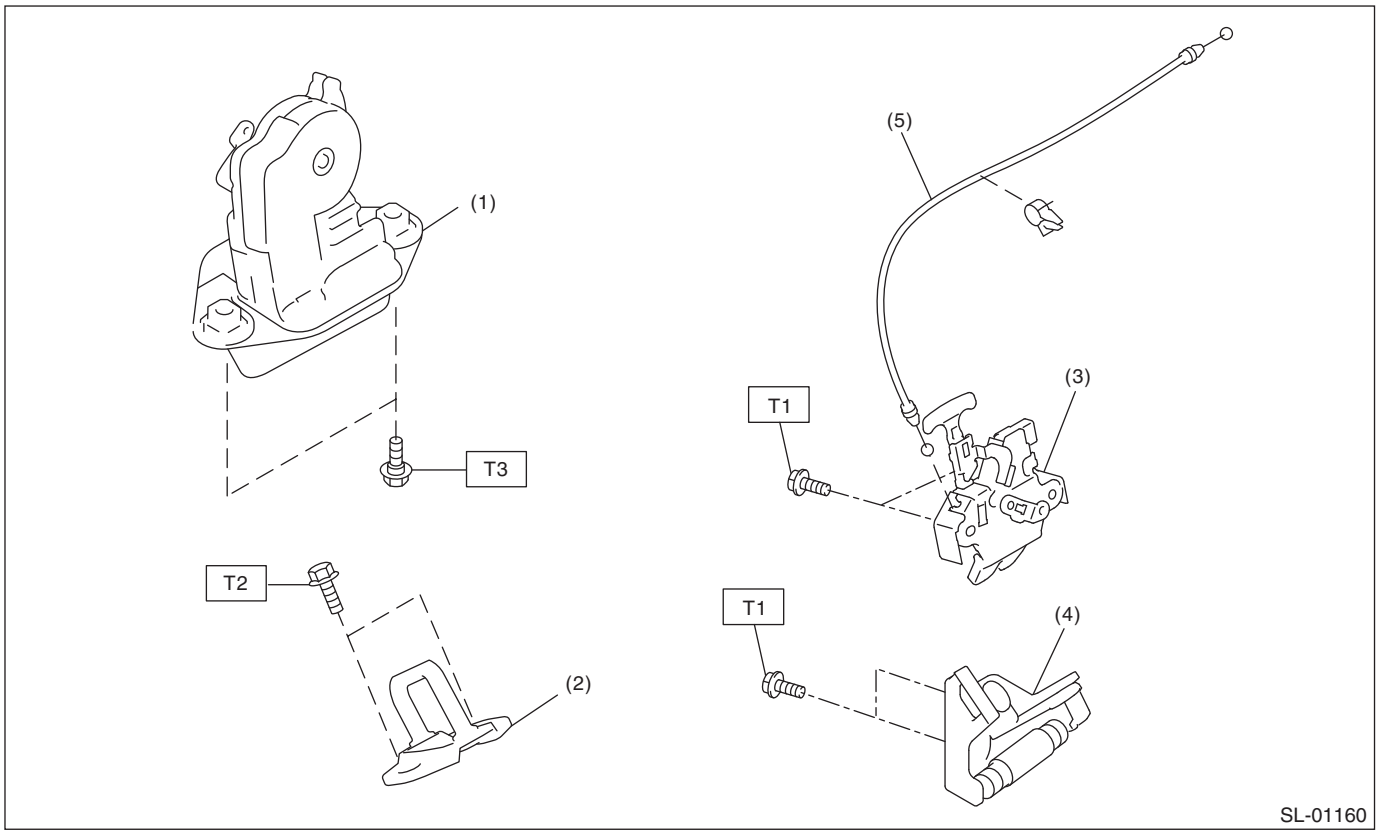


(A) Front
(B) Rear

(1) Inner remote ASSY
(2) Front door latch and door lock actuator ASSY
(3) Door outer handle
(4) Door outer handle cover
(5) Key cylinder (driver's seat side only)
(6) Door outer handle spacer
(7) Front door outer handle frame ASSY
(8) Striker
(9) Rear door latch and door lock actuator ASSY
(10) Rear door outer handle frame ASSY

Tightening torque:N·m (kgf-m, ft-lb)
T1: 6.5 (0.66, 4.8)
T2: 7.5 (0.76, 5.5)
T3: 18 (1.8, 13.3)

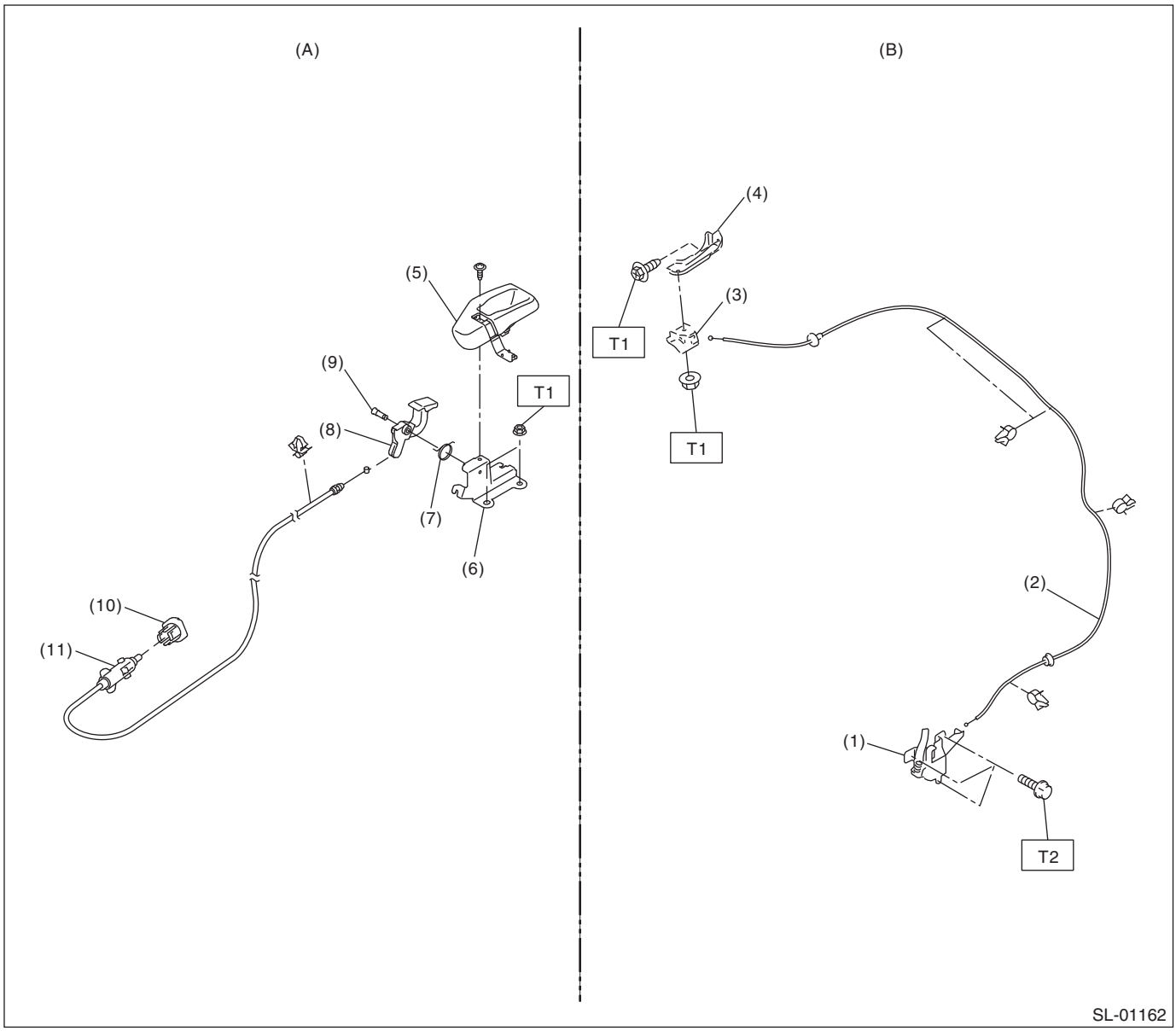
2. REAR GATE LOCK AND TRUNK LID LOCK



(1) Rear gate latch & actuator ASSY
(2) Rear gate striker
(3) Trunk lid latch & actuator ASSY
(4) Trunk lid striker
(5) Cable

Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 25 (2.5, 18.4)
T3: 18 (1.8, 13.3)

3. FRONT HOOD LOCK AND REMOTE OPENERS



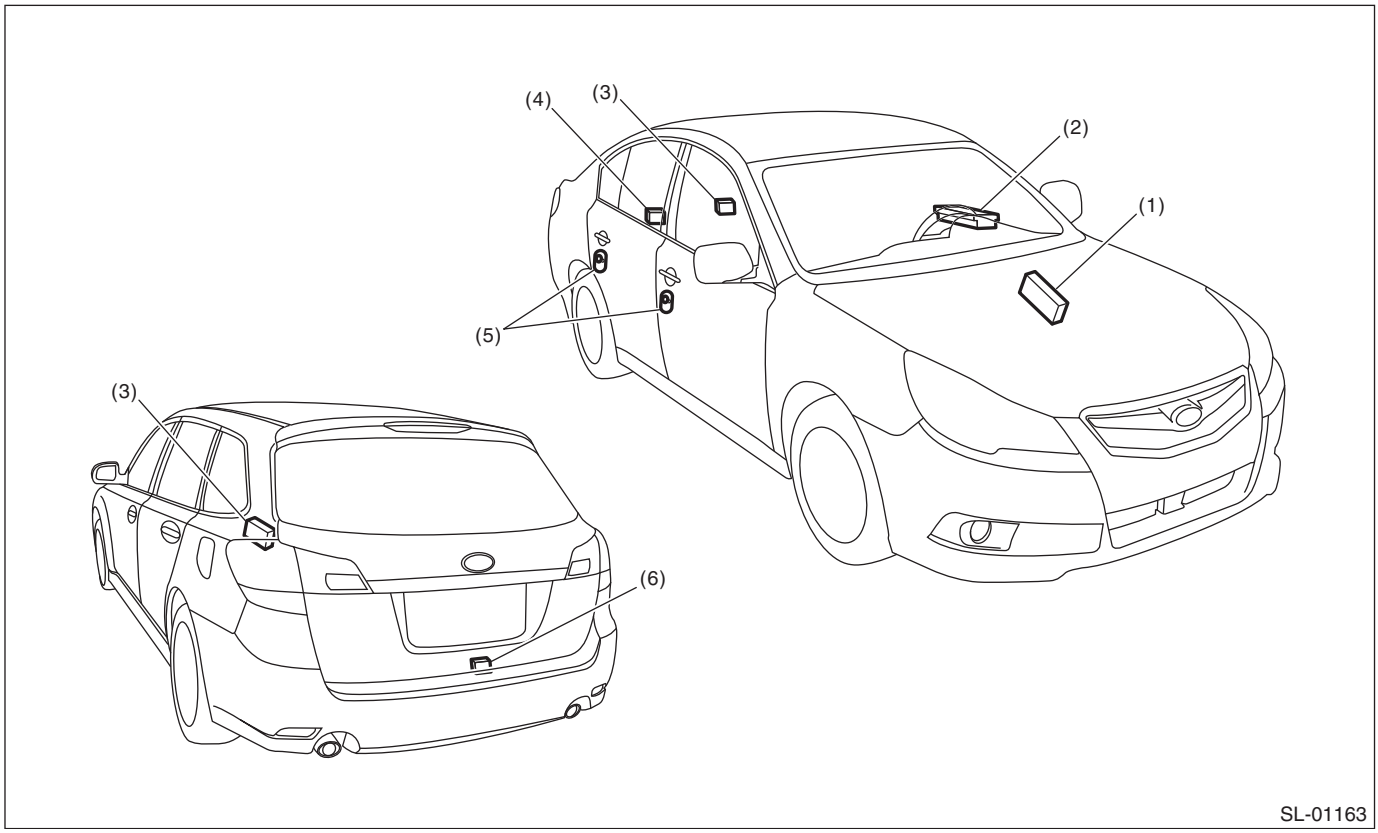
(A) Fuel lock release
(B) Hood lock release

(1) Front hood lock ASSY
(2) Cable
(3) Lever ASSY
(4) Bracket
(5) Cover
(6) Bracket
(7) Spring
(8) Pull handle ASSY
(9) Pin
(10) Holder
(11) Fuel lock

Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 33 (3.36, 24.3)

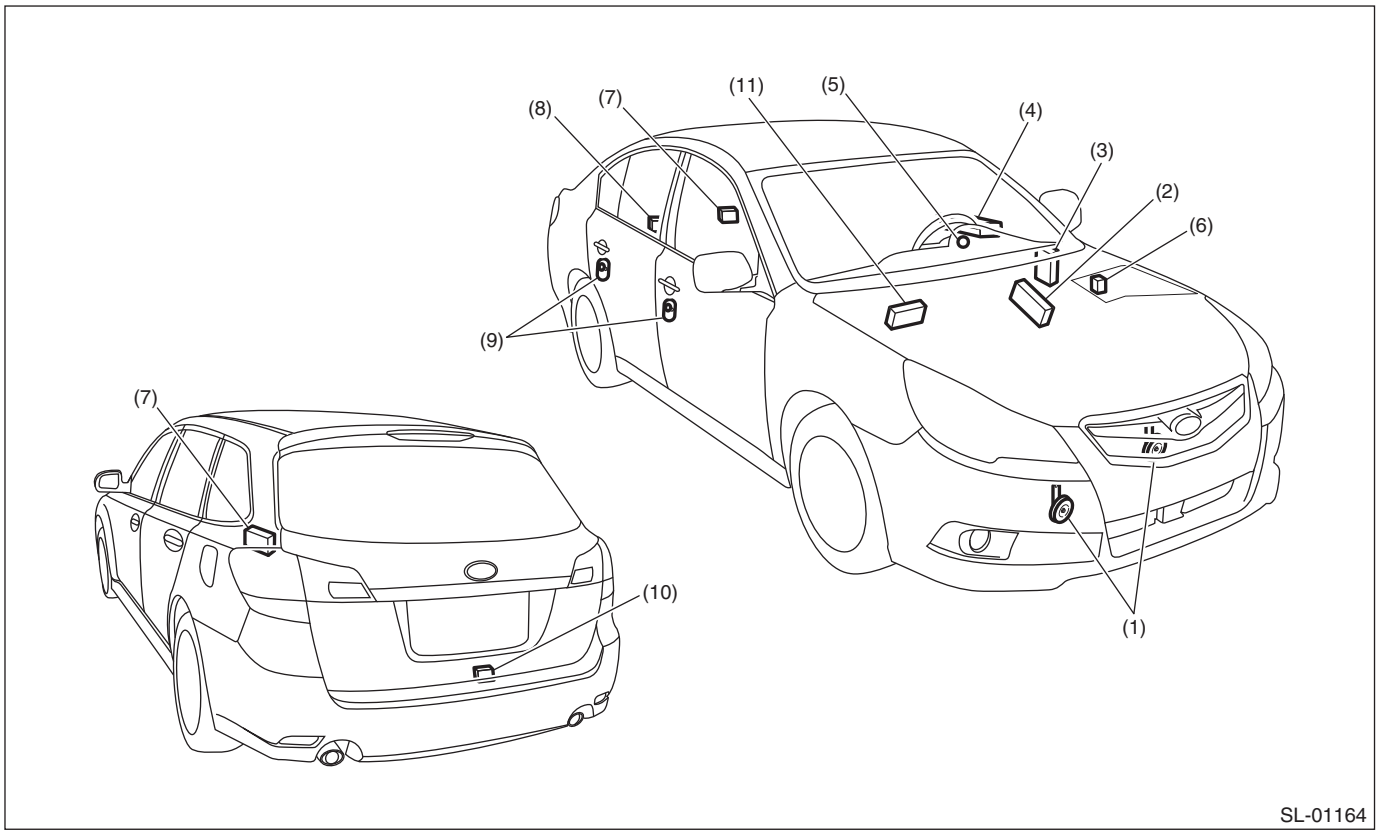
4. KEYLESS ENTRY SYSTEM

NOTE:
Except for model with keyless access



(1) Body integrated unit
(2) Power window main switch
(3) Keyless entry control module
(4) Trunk lid latch switch (Sedan model)
(5) Door switch
(6) Rear gate latch switch (OUTBACK model)

5. SECURITY SYSTEM



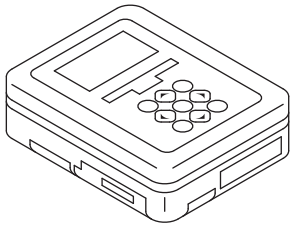
(1)	Horn	(5)	Security indicator light (in combination meter)	(9)	Door switch
(2)	Body integrated unit	(6)	Horn relay (in man fuse box)	(10)	Rear gate latch switch (OUTBACK model)
(3)	Impact sensor (Instrument panel side end on driver's side) (dealer option)	(7)	Keyless entry control module	(11)	Security control module (C0, C5 model)
(4)	Power window main switch	(8)	Trunk lid latch switch (Sedan model)		

B: CAUTION

- Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When replacing the control module and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
- After disconnecting the battery or after restoring from a dead battery condition, turn the ignition to ON and OFF, and perform after opening and closing the driver's side door a few times.
- Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
- Connect the connectors securely when reassembling.
- After reassembly, make sure that all functional parts operate normally.
- If any immobilizer related part has been replaced, make sure to register the immobilizer.
- Do not use any electrical test equipment on the airbag system wiring harnesses and connector circuits.
- Be careful not to damage the airbag system wiring harness when servicing the ignition key cylinder.

C: PREPARATION TOOL

1. SPECIAL TOOL

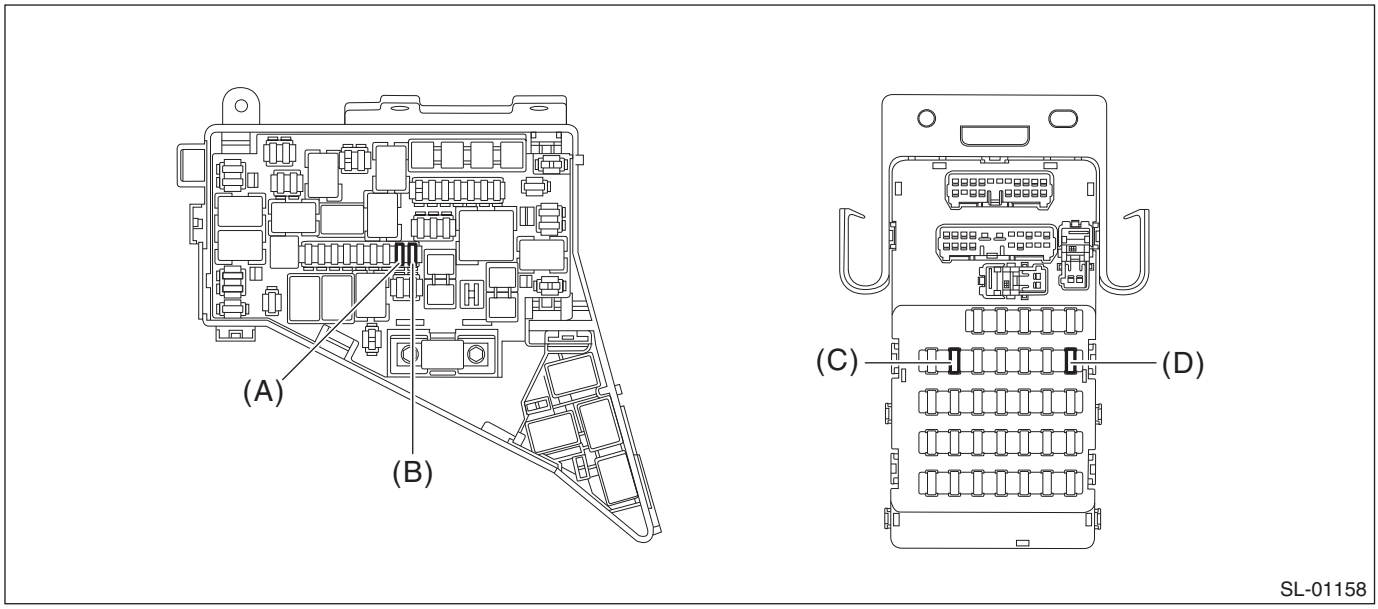
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Drill	Used for replacing the ignition key lock and steering lock CM.
TORX® T30	Used for removing and installing door outer handle.
Clip remover	Used for removing trim clip.

2. Relay and Fuse

A: LOCATION



Main Fuse Box	Fuse 15A (K/L)	(A)
	Fuse 20A (K/L, SEC)	(B)
Relay & fuse box	Fuse 7.5A (SEC)	(C)
	Fuse 15A (SEC)	(D)

B: INSPECTION

1. CHECK FUSE.

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

3. Door Lock Control System

A: WIRING DIAGRAM

Refer to “Keyless Entry System” in the wiring diagram. <Ref. to WI-163, WIRING DIAGRAM, Keyless Entry System.>

B: ELECTRICAL SPECIFICATION

1. BODY INTEGRATED UNIT

Refer to the Control Module I/O Signal of the BODY CONTROL SYSTEM (DIAGNOSIS). <Ref. to BC(diag)-9, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

C: INSPECTION

1. SYMPTOM CHART

Symptoms	Repair order	Reference
The door lock control system does not operate.	1. Remove and visually check the following fuses. • No. 7 (in fuse & relay box) • No. 10 (in main fuse box) • No. 19 (in main fuse box)	If the fuse is blown out, replace the fuse with a new part. When there is no defective with the fuse, check the power supply and ground circuit. <Ref. to SL-10, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>
	2. Check the power supply and ground circuit for body integrated unit.	<Ref. to SL-10, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>
	3. Check the door lock switch and the circuit.	<Ref. to SL-11, CHECK DOOR LOCK SWITCH, INSPECTION, Door Lock Control System.>
	4. Check the rear gate/trunk opener button and the circuit.	<Ref. to SL-12, CHECK REAR GATE/TRUNK OPENER BUTTON SWITCH CIRCUIT, INSPECTION, Door Lock Control System.>
	5. Check the door lock actuator and the circuit.	<Ref. to SL-13, CHECK DOOR LOCK ACTUATOR AND CIRCUIT., INSPECTION, Door Lock Control System.>
A specific door lock actuator does not operate.	Check the door lock actuator and circuit.	<Ref. to SL-13, CHECK DOOR LOCK ACTUATOR AND CIRCUIT., INSPECTION, Door Lock Control System.>

2. CHECK POWER SUPPLY AND GROUND CIRCUIT

	Step	Check	Yes	No
1	**CHECK POWER SUPPLY.** 1) Disconnect the connector of body integrated unit. 2) Measure the voltage between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(i84) No. 6 (+) — Chassis ground (–):*** ***(i171) No. 1 (+) — Chassis ground (–):*** ***(B281) No. 7 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **2**.	Check the harness for open or short circuit between body integrated unit and fuse.
2	**CHECK GROUND CIRCUIT.** Measure the resistance between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(i84) No. 1 — Chassis ground:*** ***(i171) No. 29 — Chassis ground:*** ***(B280) No. 1 — Chassis ground:*** ***(B281) No. 31 — Chassis ground:***	Is the resistance less than 10 Ω?	The power supply and ground circuit are OK.	Repair or replace the harness.

3. CHECK DOOR LOCK SWITCH

	Step	Check	Yes	No
1	**CHECK DOOR LOCK SWITCH.** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”. 3) On «System Selection Menu» display, select {Integ. unit mode}. 4) Select the {Current Data Display & Save}. 5) Select the {Manual lock SW input}.	Does the display switch between OFF ⇔ ON when each door lock switch is moved to LOCK?	Go to step **2**.	Go to step **3**.
2	**CHECK DOOR LOCK SWITCH.** From the condition in step 1), operate each door lock switch in the UNLOCK direction.	Does the display switch between OFF ⇔ ON?	The door lock switch is OK.	Go to step **4**.
3	**CHECK DOOR LOCK SWITCH.** 1) Disconnect the door lock switch connector. 2) Check the continuity when the door lock switch is operated to the LOCK direction. ***Connector & terminal*** ***Driver’s side:*** ***(D7) No. 2 — (D7) No. 3:*** ***Passenger’s side:*** ***(D125) No. 4 — (D125) No. 5:***	Did the indicator change from “No continuity” (1 MΩ or more) to “Continuity exists” (less than 10 Ω)?	Go to step **4**.	Replace the power window main switch or door lock switch.
4	**CHECK DOOR LOCK SWITCH.** Check the continuity when the door lock switch is operated to the UNLOCK direction. ***Connector & terminal*** ***Driver’s side:*** ***(D17) No. 1 — (D7) No. 3:*** ***Passenger’s side:*** ***(D125) No. 2 — (D125) No. 5:***	Did the indicator change from “No continuity” (1 MΩ or more) to “Continuity exists” (less than 10 Ω)?	Go to step **5**.	Replace the power window main switch or door lock switch.
5	**CHECK HARNESS.** Measure the resistance between the door lock switch connector and chassis ground. ***Connector & terminal*** ***Driver’s side:*** ***(D7) No. 3 — Chassis ground:*** ***Passenger’s side:*** ***(D125) No. 5 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **6**.	Repair or replace the harness.
6	**CHECK HARNESS.** 1) Disconnect the connector of body integrated unit. 2) Measure the resistance between body integrated unit connector and door lock switch connector. ***Connector & terminal*** ***Driver’s side:*** ***(D7) No. 2 — (i84) No. 9:*** ***(D7) No. 1 — (i84) No. 20:*** ***Passenger’s side:*** ***(D125) No. 4 — (i84) No. 9:*** ***(D125) No. 2 — (i84) No. 20:***	Is the resistance less than 10 Ω?	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>	Repair or replace the harness.

4. CHECK REAR GATE/TRUNK OPENER BUTTON SWITCH CIRCUIT

	Step	Check	Yes	No
1	**CHECK REAR GATE/TRUNK OPENER BUTTON SWITCH.** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”. 3) On «System Selection Menu» display, select {Integ. unit mode}. 4) Select the {Current Data Display & Save}. 5) Select the {Rear gate/Trunk release switch}.	Does the display switch between OFF ⇔ ON when the rear gate/trunk opener button is operated?	The rear gate/trunk opener button is normal.	Go to step **2**.
2	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector and rear gate/trunk opener button connector. 2) Measure the resistance between body integrated unit connector and rear gate/trunk opener button connector. ***Connector & terminal*** ***Sedan model*** ***(i84) No. 10 — (i162) No. 4:*** ***OUTBACK model*** ***(i84) No. 10 — (D77) No. 5:***	Is the resistance less than 10 Ω?	Go to step **3**.	Repair or replace the harness.
3	**CHECK HARNESS.** Measure the resistance between the rear gate/trunk opener button connector and chassis ground. ***Connector & terminal*** ***Sedan model*** ***(i162) No. 2 — Chassis ground:*** ***OUTBACK model*** ***(D77) No. 6 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the harness.
4	**CHECK REAR GATE/TRUNK OPENER BUTTON SWITCH.** Measure the resistance between connector terminals both when the rear gate/trunk opener button is pressed and when not pressed. ***Connector & terminal*** ***Sedan model*** ***(D162) No. 4 — (D162) No. 2:*** ***OUTBACK model*** ***(D77) No. 5 — (D77) No. 6:***	Is the resistance less than 10 Ω when the switch is pressed and 1 MΩ or more when not pressed?	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>	Replace the rear gate/trunk opener button.

5. CHECK DOOR LOCK ACTUATOR AND CIRCUIT.

	Step	Check	Yes	No
1	**CHECK HARNESS (DOOR LOCK).** 1) Disconnect the body integrated unit connector and each door lock actuator connector. 2) Check the harness between body integrated unit connector and each door lock actuator connector. ***Connector & terminal*** ***Front door RH*** ***(i171) No. 2 — (D72) No. 1:*** ***Front door LH*** ***(i171) No. 2 — (D18) No. 1:*** ***Rear door RH*** ***(i171) No. 2 — (D32) No. 1:*** ***Rear door LH*** ***(i171) No. 2 — (D26) No. 1:***	Is harness normal?	Go to step **2**.	Repair or replace the harness.
2	**CHECK HARNESS (DOOR UNLOCK).** Check the harness between body integrated unit connector and each door lock actuator connector. ***Connector & terminal*** ***Front door RH*** ***(i171) No. 3 — (D72) No. 2:*** ***Front door LH*** ***(i171) No. 4 — (D18) No. 2:*** ***Rear door RH*** ***(i171) No. 3 — (D32) No. 2:*** ***Rear door LH*** ***(i171) No. 3 — (D26) No. 2:***	Is harness normal?	OUTBACK model Go to step **3**. Sedan model:Go to step **5**.	Repair or replace the harness.
3	**CHECK HARNESS (REAR GATE UNLOCK).** Check the harness between body integrated unit connector and rear gate lock actuator connector. ***Connector & terminal*** ***(i171) No. 7 — (D47) No. 1:***	Is harness normal?	Go to step **4**.	Repair or replace the harness.
4	**CHECK HARNESS (REAR GATE UNLOCK).** Measure the resistance between the rear gate lock actuator connector and chassis ground. ***Connector & terminal*** ***(D47) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **7**.	Repair or replace the harness.
5	**CHECK HARNESS (TRUNK UNLOCK).** Check the harness between body integrated unit connector and trunk lid lock actuator connector. ***Connector & terminal*** ***(i171) No. 7 — (R186) No. 1:***	Is harness normal?	Go to step **6**.	Repair or replace the harness.
6	**CHECK HARNESS (TRUNK UNLOCK).** Measure the resistance between the trunk lid lock actuator connector and chassis ground. ***Connector & terminal*** ***(R186) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **7**.	Repair or replace the harness.

Step		Check	Yes	No
7	**CHECK BODY INTEGRATED UNIT OUTPUT SIGNAL.** 1) Connect the body integrated unit connector. 2) Measure the voltage between the terminals of the body integrated unit connector when operating the door lock switch to LOCK direction. ***Connector & terminal*** ***Except for front door LH*** ***(i171) No. 2 (+) — (i171) No. 3 (–):*** ***Front door LH*** ***(i171) No. 2 (+) — (i171) No. 4 (–):***	Does the voltage change from less than 1 V → 9 V or more? (During lock output)	Go to step **8**.	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>
8	**CHECK BODY INTEGRATED UNIT OUTPUT SIGNAL.** Measure the voltage between the terminals of the body integrated unit connector when operating the door lock switch to UNLOCK direction. ***Connector & terminal*** ***Except for front door LH*** ***(i171) No. 3 (+) — (i171) No. 2 (–):*** ***Front door LH*** ***(i171) No. 4 (+) — (i171) No. 2 (–):***	Does the voltage change from less than 1 V → 9 V or more? (During unlock output)	Go to step **9**.	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>
9	**CHECK BODY INTEGRATED UNIT OUTPUT SIGNAL.** Measure the voltage between body integrated unit connector and chassis ground when operating the rear gate/trunk opener button. ***Connector & terminal*** ***(i171) No. 7 (+) — Chassis ground (–):***	Does the voltage change from less than 1 V → 9 V or more? (During unlock output)	Go to step **10**.	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>
10	**CHECK DOOR LOCK ACTUATOR.** Check the door lock actuator. • Front door lock actuator <Ref. to SL-37, INSPECTION, Front Door Latch and Door Lock Actuator Assembly.> • Rear door lock actuator <Ref. to SL-43, INSPECTION, Rear Door Latch and Door Lock Actuator Assembly.>	Is the door lock actuator OK?	OUTBACK model Go to step **11**. Sedan model:Go to step **12**.	Replace the door latch and door lock actuator assembly.
11	**CHECK REAR GATE LOCK ACTUATOR.** Check the rear gate lock actuator. <Ref. to SL-48, Rear Gate Latch and Actuator Assembly.>	Is the rear gate lock actuator normal?	Check the connection status of the harness and connector that may have a temporary poor contact.	Replace the rear gate latch and actuator assembly.
12	**CHECK TRUNK LID LOCK ACTUATOR.** Check the trunk lid lock actuator. <Ref. to SL-50, Trunk Lid Latch and Actuator Assembly.>	Is trunk lid lock actuator normal?	Check the connection status of the harness and connector that may have a temporary poor contact.	Replace the trunk lid latch & actuator assembly.

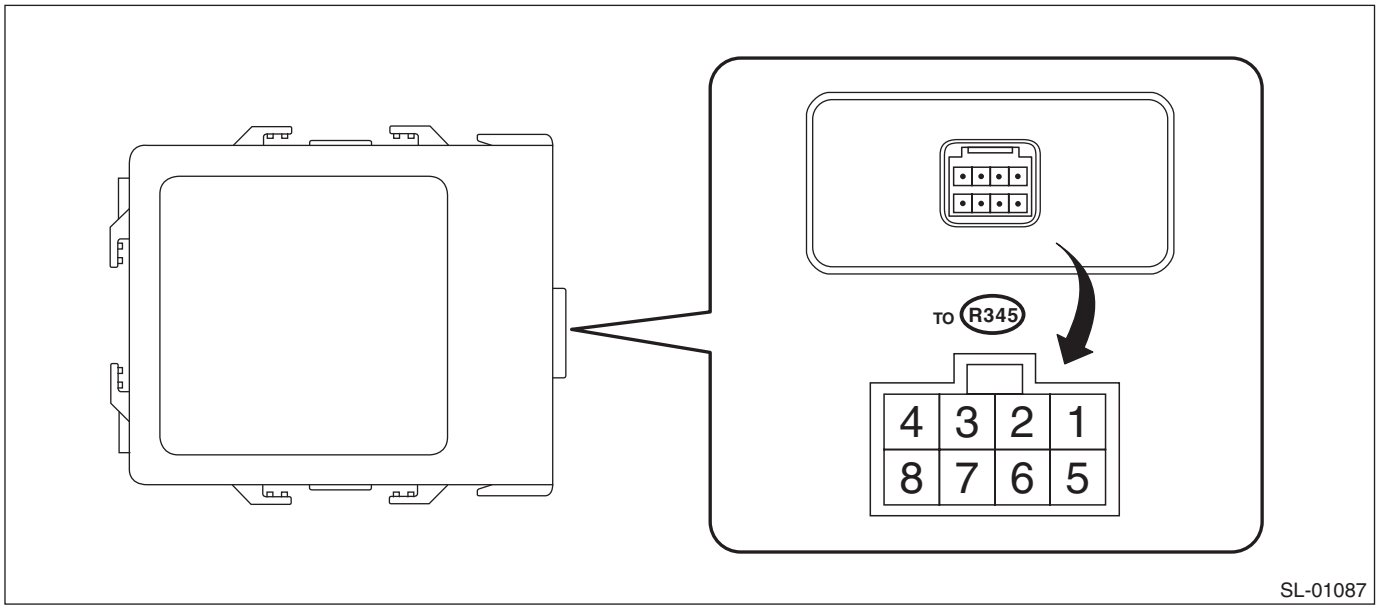
4. Keyless Entry System

A: WIRING DIAGRAM

Refer to “Keyless Entry System” in the wiring diagram. <Ref. to WI-163, WIRING DIAGRAM, Keyless Entry System.>

B: ELECTRICAL SPECIFICATION

1. KEYLESS ENTRY CONTROL MODULE



Content	Terminal No.	Measuring condition
—	1	—
—	2	—
BODY INTEGRATED UNIT	3 (OUTPUT)	Battery voltage cannot be measured because of digital signal.
Power supply (Backup)	4	Battery voltage is constantly present.
—	5	—
—	6	—
Ground	7	0 V is constantly present.
—	8	—

2. BODY INTEGRATED UNIT

Refer to the Control Module I/O Signal of the BODY CONTROL SYSTEM (DIAGNOSIS). <Ref. to BC(diag)-9, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

C: INSPECTION

1. SYMPTOM CHART

Symptoms	Repair order	Reference
None of the functions of the keyless entry system operate.	1. Check the keyless transmitter battery.	<Ref. to SL-18, CHECK KEYLESS TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Remove and visually check the following fuses. • No. 7 (in fuse & relay box) • No. 10 (in main fuse box) • No. 19 (in main fuse box)	If the fuse is blown out, replace the fuse with a new part. When there is no defective with the fuse, check the power supply and ground circuit. <Ref. to SL-10, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>
	3. Check the keyless entry control module.	<Ref. to SL-19, CHECK KEYLESS ENTRY CONTROL MODULE, INSPECTION, Keyless Entry System.>
	4. Check the power supply and ground circuit for body integrated unit.	<Ref. to SL-19, CHECK BODY INTEGRATED UNIT POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Keyless Entry System.>
	5. Check the key warning switch.	<Ref. to SL-22, CHECK KEY WARNING SWITCH., INSPECTION, Keyless Entry System.>
	6. Check the door lock switch signal.	<Ref. to SL-20, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	7. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>
The keyless transmitter cannot be registered.	1. Check the keyless transmitter battery.	<Ref. to SL-18, CHECK KEYLESS TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the key warning switch.	<Ref. to SL-22, CHECK KEY WARNING SWITCH., INSPECTION, Keyless Entry System.>
	3. Check the door lock switch signal.	<Ref. to SL-25, CHECK DOOR LOCK SWITCH, INSPECTION, Keyless Entry System.>
	4. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>

Symptoms	Repair order	Reference
Door lock or unlock does not operate. NOTE: If the door lock control system does not operate when using the door lock switch, check the door lock control system. <Ref. to SL-9, INSPECTION, Door Lock Control System.>	1. Check the keyless transmitter battery.	<Ref. to SL-18, CHECK KEYLESS TRANSMITTER BATTERY AND FUNCTION, INSPECTION, Keyless Entry System.>
	2. Check the keyless entry control module.	<Ref. to SL-19, CHECK KEYLESS ENTRY CONTROL MODULE, INSPECTION, Keyless Entry System.>
	3. Check the key warning switch.	<Ref. to SL-22, CHECK KEY WARNING SWITCH., INSPECTION, Keyless Entry System.>
	4. Check the door lock switch signal.	<Ref. to SL-20, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
	5. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>
The keyless buzzer and hazard light does not operate.	1. Check the keyless buzzer operation.	<Ref. to SL-24, CHECK KEYLESS BUZZER, INSPECTION, Keyless Entry System.>
	2. Check the hazard light operation.	<Ref. to SL-24, CHECK HAZARD LIGHT OPERATION, INSPECTION, Keyless Entry System.>
Room light does not operate.	Check the room light operation.	<Ref. to SL-23, CHECK ROOM LIGHT OPERATION, INSPECTION, Keyless Entry System.>
Ignition switch illumination does not operate.	1. Check the ignition switch illumination.	<Ref. to SL-26, CHECK IGNITION SWITCH ILLUMINATION, INSPECTION, Keyless Entry System.>
	2. Check the body integrated unit.	<Ref. to BC(diag)-2, Basic Diagnostic Procedure.>

2. CHECK KEYLESS TRANSMITTER BATTERY AND FUNCTION

CAUTION:
Be sure to reset keyless transmitter of other vehicles registered to the inspection target vehicle, and vehicles to which keyless transmitters were registered for inspection, to the condition before performing the inspection. (Re-register the keyless transmitters.)

	Step	Check	Yes	No
1	**CHECK KEYLESS TRANSMITTER BATTERY.** 1) Remove the battery from the keyless transmitter. <Ref. to SL-73, REMOVAL, Keyless Transmitter.> 2) Check the battery voltage. <Ref. to SL-73, INSPECTION, Keyless Transmitter.>	Is the voltage 2.5 V or more?	Go to step **2**.	Replace the keyless transmitter battery. <Ref. to SL-73, Keyless Transmitter.>
2	**CHECK KEYLESS TRANSMITTER.** Register the keyless transmitter which operates normally on other vehicles to the inspection target vehicle. <Ref. to SL-73, REGISTRATION OF KEYLESS TRANSMITTER WITH SUBARU SELECT MONITOR, REPLACEMENT, Keyless Transmitter.> 1) Close all the doors and rear gate (OUTBACK model) or trunk lid (sedan model) of inspection target vehicle. 2) Using the keyless transmitter, lock and unlock the doors and rear gate of vehicle. For 4 door model, release the trunk lid lock.	Does the inspection target vehicle operate lock, unlock and trunk lid unlock normally?	Go to step **3**.	Due to vehicle malfunction, continue the keyless entry system diagnosis.
3	**CHECK KEYLESS TRANSMITTER.** Register the keyless transmitter of inspection target vehicle to the another vehicle on which the keyless system operates normally. <Ref. to SL-73, REGISTRATION OF KEYLESS TRANSMITTER WITH SUBARU SELECT MONITOR, REPLACEMENT, Keyless Transmitter.>	Is the keyless transmitter registered correctly?	Go to step **4**.	Replace the keyless transmitter. <Ref. to SL-73, REGISTRATION OF KEYLESS TRANSMITTER WITH SUBARU SELECT MONITOR, REPLACEMENT, Keyless Transmitter.>
4	**CHECK KEYLESS TRANSMITTER.** Check the registered keyless transmitter. 1) Close all the doors and rear gate of the vehicle which keyless system operates normally. 2) Using the keyless transmitter, lock and unlock the doors and rear gate of vehicle. For 4 door model, release the trunk lid lock.	Does the inspection target vehicle operate lock, unlock and trunk lid unlock normally?	Keyless transmitter is OK.	Replace the keyless transmitter. <Ref. to SL-73, REGISTRATION OF KEYLESS TRANSMITTER WITH SUBARU SELECT MONITOR, REPLACEMENT, Keyless Transmitter.>

3. CHECK KEYLESS ENTRY CONTROL MODULE

	Step	Check	Yes	No
1	**CHECK DIAGNOSTIC TROUBLE CODE (DTC).** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”. 3) On «System Selection Menu» display, select {Integ. unit mode}. 4) Select the {Diagnostic Code(s) Display}.	Is DTC B1500 “Keyless UART com. Malfunction” displayed?	Go to step **2**.	Keyless entry control module is normal.
2	**CHECK POWER SUPPLY.** 1) Disconnect the keyless entry control module connector. 2) Measure the voltage between keyless entry control module connector and chassis ground. ***Connector & terminal*** ***(R345) No. 4 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Check the harness for open or short circuits between the keyless entry control module and the fuse.
3	**CHECK GROUND CIRCUIT.** Measure the resistance between keyless entry control module connector and chassis ground. ***Connector & terminal*** ***(R345) No. 7 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the harness.
4	**CHECK KEYLESS ENTRY CONTROL MODULE CIRCUIT.** 1) Disconnect the connector of body integrated unit. 2) Measure the resistance between keyless entry control module connector and body integrated unit connector. ***Connector & terminal*** ***(i171) No. 11 — (R345) No. 3:***	Is the resistance less than 10 Ω?	Replace the keyless entry control module.	Repair or replace the harness.

4. CHECK BODY INTEGRATED UNIT POWER SUPPLY AND GROUND CIRCUIT

For the detailed procedure, refer to the INSPECTION of POWER SUPPLY AND GROUND CIRCUIT of the Door Lock Control System. <Ref. to SL-10, CHECK POWER SUPPLY AND GROUND CIRCUIT, INSPECTION, Door Lock Control System.>

5. CHECK DOOR SWITCH

	Step	Check	Yes	No
1	**CHECK INPUT CIRCUIT.** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”. 3) On «System Selection Menu» display, select {Integ. unit mode}. 4) Select the {Current Data Display}. 5) Select the {Driver’s door SW input}, {P-door SW input}, {Rear right door SW input}, {Rear left door SW input}, and {R Gate SW input}.	Does the display switch between OFF ⇔ ON when each door or rear gate, trunk lid is opened/closed?	The door switches, trunk lid latch switch or rear gate latch switch are normal.	Go to step **2**.
2	**CHECK HARNESS.** 1) Disconnect the connector of body integrated unit. 2) Disconnect the door switch connector that the display does not change. 3) Check the harness for open or short circuit between body integrated unit connector and faulty door switch connector. ***Connector & terminal*** ***Front door RH*** ***(i84) No. 13 — (R12) No. 2:*** ***Front door LH*** ***(i84) No. 14 — (R9) No. 2:*** ***Rear door RH*** ***(i84) No. 25 — (R16) No. 2:*** ***Rear door LH*** ***(i84) No. 24 — (R22) No. 2:*** ***Trunk lid*** ***(i84) No. 33 — (R186) No. 3:*** ***Rear gate latch*** ***(i84) No. 33 — (D46) No. 3:***	Is harness normal?	Go to step **3**.	Repair or replace the harness.
3	**CHECK HARNESS.** Measure the resistance between the faulty door switch connector and chassis ground. ***Connector & terminal*** ***Front door RH*** ***(R12) No. 3 — Chassis ground:*** ***Front door LH*** ***(R9) No. 3 — Chassis ground:*** ***Rear door RH*** ***(R16) No. 3 — Chassis ground:*** ***Rear door LH*** ***(R22) No. 3 — Chassis ground:*** ***Trunk lid*** ***(R186) No. 2 — Chassis ground:*** ***Rear gate latch*** ***(D47) No. 4 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the harness.

Step		Check	Yes	No
4	**CHECK DOOR SWITCH.** Measure the resistance between terminals of faulty door switch, trunk lid switch or rear gate latch switch. ***Connector & terminal*** ***Front RH door switch*** ***(R12) No. 2 — No. 3:*** ***Front LH door switch*** ***(R9) No. 2 — No. 3:*** ***Rear RH door switch*** ***(R16) No. 2 — No. 3:*** ***Rear LH door switch*** ***(R22) No. 2 — No. 3:*** ***Trunk lid latch switch*** ***(R186) No. 3 — No. 2:*** ***Rear gate latch switch*** ***(D47) No. 3 — No. 4:***	Is the resistance 1 MΩ or more when the door switch is pushed, or the trunk lid or rear gate is closed?	Go to step **5**.	Replace the faulty parts. • Door switch • Trunk lid latch & actuator ASSY • Rear gate latch & actuator ASSY
5	**CHECK DOOR SWITCH.** Measure the resistance between terminals of faulty door switch, trunk lid switch or rear gate latch switch. ***Connector & terminal*** ***Front RH door switch*** ***(R12) No. 2 — No. 3:*** ***Front LH door switch*** ***(R9) No. 2 — No. 3:*** ***Rear RH door switch*** ***(R16) No. 2 — No. 3:*** ***Rear LH door switch*** ***(R22) No. 2 — No. 3:*** ***Trunk lid latch switch*** ***(R186) No. 3 — No. 2:*** ***Rear gate latch switch*** ***(D47) No. 3 — No. 4:***	Is the resistance less than 10 Ω when switch is released?	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>	Replace the faulty parts. • Door switch • Trunk lid latch & actuator ASSY • Rear gate latch & actuator ASSY

6. CHECK KEY WARNING SWITCH.

	Step	Check	Yes	No
1	**CHECK KEY WARNING SWITCH.** 1) Prepare the Subaru Select Monitor kit. 2) On «System Selection Menu» display, select {Integ. unit mode}. 3) Select the {Current Data Display & Save}. 4) Select the {key-lock warning SW}.	Is the normal input signal displayed when the key is inserted in/removed from the ignition switch?	The key warning switch is OK.	Go to step **2**.
2	**CHECK FUSE.** Remove and visually check fuse No. 18 (in the main fuse box).	Is the fuse blown out?	Replace the fuse with a new part.	Go to step **3**.
3	**CHECK KEY WARNING SWITCH CIRCUIT.** 1) Disconnect the connector of body integrated unit. 2) Insert the key into ignition switch. (LOCK position) 3) Measure the voltage between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 4 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **4**.	Go to step **5**.
4	**CHECK KEY WARNING SWITCH CIRCUIT.** 1) Remove the key from ignition switch. 2) Measure the voltage between body integrated unit connector and chassis ground. ***Connector & terminal*** ***(B280) No. 4 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>	Go to step **5**.
5	**CHECK KEY WARNING SWITCH.** 1) Disconnect the key warning switch connector. 2) Insert the key into ignition switch. (LOCK position) 3) Measure the resistance between key warning switch terminals. ***Connector & terminal*** ***(B350) No. 3 — No. 4:***	Is the resistance less than 1 Ω?	Go to step **6**.	Replace the key warning switch.
6	**CHECK KEY WARNING SWITCH.** 1) Remove the key from ignition switch. 2) Measure the resistance between key warning switch terminals. ***Connector & terminal*** ***(B350) No. 3 — No. 4:***	Is the resistance 1 MΩ or more?	Check the following: • Harness for open circuits or shorts between the key warning switch and fuse. • Harness for open or short between the body integrated unit and key warning switch	Replace the key warning switch.

7. CHECK ROOM LIGHT OPERATION

	Step	Check	Yes	No
1	**CHECK ROOM LIGHT OPERATION.** Make sure the room light illuminates when the room light switch is ON, and goes off when the switch is OFF.	Does the room light illuminate or go off?	Go to step **2**.	Check the room light circuit. <Ref. to LI-65, INSPECTION, Room Light.>
2	**CHECK ROOM LIGHT OPERATION.** 1) Turn the room light switch to the "DOOR" position. 2) Open and close any door.	Does the room light illuminate ⇔ go off (including off delay) when the door is opened and closed?	Go to step **3**.	Go to step **4**.
3	**CHECK KEYLESS ENTRY OPERATION.** Press the LOCK/UNLOCK button of the keyless transmitter.	Does it operate properly?	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>	Check the keyless entry control module. <Ref. to SL-16, SYMPTOM CHART, INSPECTION, Keyless Entry System.>
4	**CHECK ROOM LIGHT.** 1) Disconnect the room light connector. 2) Check the room light. <Ref. to LI-65, INSPECTION, Room Light.>	Is room light normal?	Go to step **5**.	Replace the bulb or room light assembly.
5	**CHECK HARNESS.** 1) Disconnect the connector of body integrated unit. 2) Check the harness between body integrated unit connector and room light connector. ***Connector & terminal*** ***(i84) No. 4 — (R52) No. 2:***	Is harness normal?	Go to step **6**.	Repair or replace the harness.
6	**CHECK HARNESS.** Measure the voltage between room light connector and chassis ground. ***Connector & terminal*** ***(R52) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>	Repair or replace the harness.

8. CHECK HAZARD LIGHT OPERATION

	Step	Check	Yes	No
1	**CHECK HAZARD LIGHT OPERATION.** Make sure the hazard light blinks when hazard switch is turned to ON.	Does the hazard light blink?	Go to step **2**.	Check the hazard light circuit.
2	**CHECK BODY INTEGRATED UNIT.** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”. 3) On «System Selection Menu» display, select {Integ. unit mode}. 4) Select {Hazard answer-back setup} from {ECM customizing}.	Is the setting ON?	Go to step **3**.	Change the setting to ON.
3	**CHECK HAZARD LIGHT CIRCUIT.** 1) Disconnect the connector of body integrated unit. 2) Disconnect the turn signal & hazard unit connector. 3) Measure the resistance between body integrated unit connector and turn signal&hazard unit connector. ***Connector & terminal*** ***(i171) No. 18 — (i170) No. 8:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the harness.
4	**CHECK OUTPUT TO HAZARD LIGHT.** 1) Remove the key from ignition switch. 2) Prepare the Subaru Select Monitor kit. 3) On «System Selection Menu» display, select {Integ. unit mode}. 4) From {Current Data Display & Save}, select {Hazard Output}.	Is output signal present when operating the transmitter LOCK/UNLOCK button?	System is normal.	Inspect the keyless entry system. If there are no problems, replace the body integrated unit. • Inspection:<Ref. to SL-16, SYMPTOM CHART, INSPECTION, Keyless Entry System.> • Replacement:<Ref. to SL-72, Body Integrated Unit.>

9. CHECK KEYLESS BUZZER

	Step	Check	Yes	No
1	**CHECK KEYLESS BUZZER SETTING.** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”. 3) On «System Selection Menu» display, select {Integ. unit mode}. 4) Select {Answer-back buzzer setup} from {ECM customizing}.	Is the setting ON?	Go to step **2**.	Change the setting to ON.
2	**CHECK BODY INTEGRATED UNIT.** 1) Select the {Function check} from {Integ. unit mode}. 2) Select the {Keyless Buzzer Output} and execute it.	Does the keyless buzzer sound?	Check the keyless control module.	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK KEYLESS BUZZER CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector and keyless buzzer connector. 3) Measure the resistance between body integrated unit connector and keyless buzzer connector. ***Connector & terminal*** ***(B280) No. 20 — (B490) No. 1:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the harness.
4	**CHECK KEYLESS BUZZER CIRCUIT.** Measure the resistance between keyless buzzer connector and chassis ground. ***Connector & terminal*** ***(B490) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **5**.	Repair or replace the harness.
5	**CHECK KEYLESS BUZZER.** 1) Remove the keyless buzzer. 2) Connect the battery positive (+) terminal to terminal No. 2 of keyless buzzer, and negative (–) terminal to terminal No. 1 and check if buzzer sounds. <Ref. to SL-71, INSPECTION, Keyless Buzzer.>	Does the keyless buzzer sound?	Go to step **6**.	Replace the keyless buzzer.
6	**CHECK BODY INTEGRATED UNIT.** 1) Prepare the Subaru Select Monitor kit. 2) Select the {Function check} from {Integ. unit mode}. 3) Select the {Keyless Buzzer Output} and execute it. 4) Measure the voltage between body integrated unit connector and chassis ground.	Is the voltage 9 V or more?	Go to step **7**.	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>
7	**CHECK OUTPUT OF BODY INTEGRATED UNIT.** 1) Select the {Current Data Display & Save} from {Integ. unit mode}. 2) Select the {Keyless Buzzer Output}. 3) Press the LOCK/UNLOCK button of the keyless transmitter.	Is output signal present when operating the LOCK/UNLOCK button?	System is normal.	Inspect the keyless entry system. If there are no problems, replace the body integrated unit. • Inspection:<Ref. to SL-16, SYMPTOM CHART, INSPECTION, Keyless Entry System.> • Replacement:<Ref. to SL-72, Body Integrated Unit.>

10.CHECK DOOR LOCK SWITCH

For operation procedures, refer to the INSPECTION of DOOR LOCK SWITCH of the Door Lock Control System. <Ref. to SL-11, CHECK DOOR LOCK SWITCH, INSPECTION, Door Lock Control System.>

11.CHECK IGNITION SWITCH ILLUMINATION

	Step	Check	Yes	No
1	**CHECK IGNITION CIRCUIT.** Check the ignition switch circuit.	Is the circuit normal?	Go to step **2**.	Repair or replace.
2	**CHECK DOOR SWITCH CIRCUIT.** Check the door switch circuit.	Is the circuit normal?	Go to step **3**.	Repair or replace.
3	**CHECK FUSE.** Remove and visually check fuse No. 18 (in the main fuse box).	Is the fuse blown out?	Replace the fuse with a new part.	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the ignition switch illumination connector. 2) Measure the voltage between ignition switch illumination connector and chassis ground. ***Connector & terminal*** ***(B350) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **5**.	Check the harness for open circuits or shorts between the ignition switch illumination and fuse.
5	**CHECK IGNITION SWITCH ILLUMINATION CIRCUIT.** 1) Disconnect the connector of body integrated unit. 2) Check the harness for open or short circuit between body integrated unit connector and ignition switch illumination connector. ***Connector & terminal*** ***(B280) No. 25 — (B350) No. 2:***	Is harness normal?	Go to step **6**.	Check the harness for open circuits and shorts between the body integrated unit and ignition switch illumination.
6	**CHECK IGNITION SWITCH ILLUMINATION BULB.** Apply battery voltage to the bulb.	Does the bulb illuminate?	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>	Replace the ignition switch illumination bulb. <Ref. to LI-71, REMOVAL, Ignition Switch Illumination.>

5. Security System

A: WIRING DIAGRAM

Refer to “Security System” in the wiring diagram. <Ref. to WI-209, WIRING DIAGRAM, Security System.>

B: ELECTRICAL SPECIFICATION

Refer to the Control Module I/O Signal of the BODY CONTROL SYSTEM (DIAGNOSIS). <Ref. to BC(diag)-9, ELECTRICAL SPECIFICATION, Control Module I/O Signal.>

C: INSPECTION

1. BASIC DIAGNOSTIC PROCEDURE

	Step	Check	Yes	No
1	**INITIAL CHECK.** Check keyless entry system.	Does the keyless entry system operate normally?	Go to step **2**.	Check the keyless entry control module. <Ref. to SL-16, INSPECTION, Keyless Entry System.>
2	**CHECK SECURITY ON/OFF SETTING.** 1) Remove the key from ignition switch, and then close all doors. 2) Press the UNLOCK button of the keyless transmitter. 3) Check the blinking pattern of security indicator light.	Does the security indicator light blinks at 3 seconds intervals?	Go to step **3**.	Check the security indicator light circuit. <Ref. to SL-29, CHECK SECURITY INDICATOR LIGHT CIRCUIT, INSPECTION, Security System.>
3	**CHECK SECURITY ON/OFF SETTING.** 1) Press the LOCK button of the keyless transmitter. 2) Check the blinking pattern of security indicator light.	Does the security indicator light blinks in the following pattern? / When monitor delay set to 0 second: Blinks twice in 0.5 seconds at 2 seconds intervals / When monitor delay set to 30 seconds: Repeat blinking once in 30 seconds at 0.4 seconds intervals	Go to step **6**.	Go to step **4**.
4	**CHANGE SECURITY SYSTEM SETTING.** Change the security system setting to ON. <Ref. to SL-29, SECURITY SYSTEM ON/OFF SETTING, INSPECTION, Security System.>	Is the setting change implemented normally?	Go to step **5**.	• Check the ignition switch circuit. <Ref. to SL-30, CHECK IGNITION SWITCH CIRCUIT, INSPECTION, Security System.> • Check the door lock switch circuit. <Ref. to SL-25, CHECK DOOR LOCK SWITCH, INSPECTION, Keyless Entry System.>

	Step	Check	Yes	No
5	**CHECK SECURITY SYSTEM SETTING CHANGE.** 1) Remove the key from ignition switch, and then close all doors. 2) Press the LOCK button of the keyless transmitter. 3) Check the blinking pattern of security indicator light.	Does the security indicator light blinks in the following pattern? / When monitor delay set to 0 second: Blinks twice in 0.5 seconds at 2 seconds intervals / When monitor delay set to 30 seconds: Repeat blinking once in 30 seconds at 0.4 seconds intervals	Go to step **6**.	Check the security indicator light. <Ref. to SL-29, CHECK SECURITY INDICATOR LIGHT CIRCUIT, INSPECTION, Security System.>
6	**CHECK SECURITY SYSTEM OPERATION.** Press the LOCK button of keyless transmitter, and wait for 30 seconds.	Does the security indicator light blink twice in 0.5 seconds at 2 seconds intervals?	Go to step **7**.	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>
7	**CHECK SECURITY ALARM OPERATION.** 1) Using the door lock switch on the driver's door, unlock all doors. 2) Open any door, trunk or rear gate.	Does the security alarm operate when opening any door, trunk, or rear gate?	Go to step **8**.	Check the door switches, trunk lid switch or rear gate latch switch. <Ref. to SL-20, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>
8	**CHECK SECURITY ALARM OPERATION.** Check the security alarm operation.	Do all security alarms operate? /horn activation/hazard light flashing/security indicator light activation	Go to step **9**.	• Check the horn. <Ref. to SL-30, CHECK HORN, INSPECTION, Security System.> • Check the hazard light. <Ref. to SL-30, CHECK HAZARD LIGHT OPERATION, INSPECTION, Security System.>
9	**CHECK SECURITY ALARM CANCEL OPERATION.** While the security alarm is operating, press any button on the keyless transmitter, or turn the ignition switch to ON.	Do all security alarms stop? / horn/hazard light	Go to step **10**.	Check the ignition switch circuit. <Ref. to SL-30, CHECK IGNITION SWITCH CIRCUIT, INSPECTION, Security System.>
10	**CHECK SECURITY SYSTEM STATUS MEMORY.** Check if the system functions normally even when the battery is temporarily disconnected. <Ref. to SL-29, CHECK SECURITY SYSTEM CONDITION MEMORY, INSPECTION, Security System.>	Does the system function normally even when the battery is temporarily disconnected?	Go to step **11**.	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>
11	**CHECK IMPACT SENSOR (DEALER OPTION).** Check the sensitivity of impact sensor. <Ref. to SL-67, CHECK IMPACT SENSOR, ADJUSTMENT, Impact Sensor.>	Is the sensitivity set appropriately?	Press the UNLOCK button of keyless transmitter, and finish the diagnosis.	Adjust the sensitivity appropriately. <Ref. to SL-68, IMPACT SENSITIVITY ADJUSTMENT, ADJUSTMENT, Impact Sensor.>

NOTE:
If any of the following symptoms emerges, check the function settings of body integrated unit. <Ref. to BC(diag)-20, User Customizing.>
• Horn does not sound though security alarm is activated. A possible cause for this is that the «Security Alarm Setup» has been set to ON by the customization function.
• Horn sounds when the security is set to ON (monitoring) by the keyless transmitter. A possible cause for this is that the impact sensor presence setting (ON: present, OFF: not present) has been set to ON by the customization function though no impact sensor is fitted.

2. CHECK SECURITY SYSTEM CONDITION MEMORY

1) Remove the key from the ignition switch or turn the ignition switch to OFF.
2) Close all the doors, trunk lid and rear gate.
3) Open the front hood.
4) Press the LOCK button of the keyless transmitter.

NOTE:
Wait until the security indicator light starts blinking twice in 0.5 second at 2 seconds intervals.
If the monitor delay is set to 30 seconds, wait for 30 seconds.
5) Disconnect the ground cable from battery.
6) Connect the ground cable to battery.
7) Check if the security indicator light blinks twice in 0.5 second at 2 seconds intervals. If not, replace the body integrated unit.

3. SECURITY SYSTEM ON/OFF SETTING

1) Close all doors, trunk lid and rear gate, and get seated on the driver's seat. Press the UNLOCK button of the keyless transmitter.
2) Turn the ignition switch to ON.
3) Press the central door lock switch and open the driver's door simultaneously, and maintain this condition for 10 seconds.
4) Status changes to OFF if the security system is ON, or changes to ON if the security system is OFF.

4. CHECK DOOR SWITCH

Refer to the door switch inspection procedure of keyless entry system. <Ref. to SL-20, CHECK DOOR SWITCH, INSPECTION, Keyless Entry System.>

5. CHECK SECURITY INDICATOR LIGHT CIRCUIT

For the procedure, refer to CHECK SECURITY INDICATOR LIGHT CIRCUIT in IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-11, CHECK SECURITY INDICATOR LIGHT CIRCUIT, INSPECTION, Diagnostics Chart for Security Indicator Light.>

6. CHECK HORN

	Step	Check	Yes	No
1	**CHECK HORN OPERATION.** Check if the horn sounds when pressing the horn switch.	Does horn sound?	Go to step **2**.	Check the horn circuit.
2	**CHECK OUTPUT TO HORN RELAY.** 1) Connect the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”. 3) On «System Selection Menu» display, select {Integ. unit mode}. 4) Select the {Function check}. 5) Select the {Hazard Output} and execute it.	Does horn sound?	The horn circuit is OK.	Go to step **3**.
3	**CHECK HORN RELAY CIRCUIT.** 1) Disconnect the connector of body integrated unit. 2) Remove the horn relay. 3) Measure the resistance between body integrated unit connector and horn relay. ***Connector & terminal*** ***(B280) No. 24 — Horn relay No. 4:***	Is the resistance less than 10 Ω?	Check body integrated unit. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Repair or replace the harness.

7. CHECK HAZARD LIGHT OPERATION

Refer to the hazard light inspection procedure of keyless entry system. <Ref. to SL-24, CHECK HAZARD LIGHT OPERATION, INSPECTION, Keyless Entry System.>

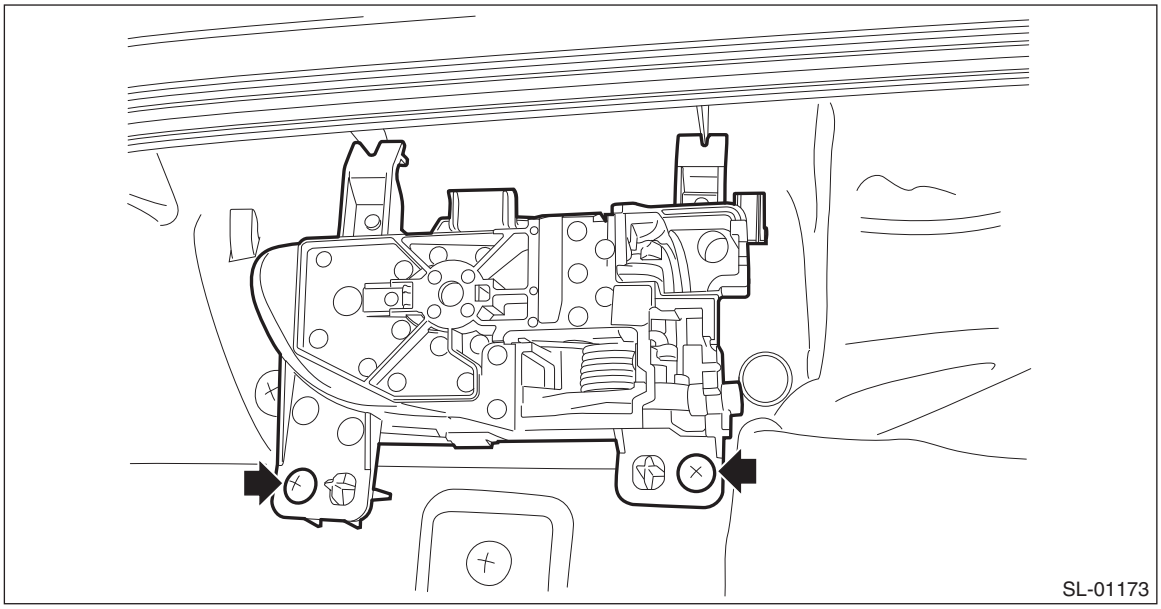
8. CHECK IGNITION SWITCH CIRCUIT

	Step	Check	Yes	No
1	**CHECK IGNITION SWITCH VOLTAGE.** 1) Prepare the Subaru Select Monitor kit. 2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”. 3) On «System Selection Menu» display, select {Integ. unit mode}. 4) Select the {Current Data Display & Save}. 5) Select the {BATT voltage} and {IG power supply}.	Does the {IG power supply voltage} indicates 0 V when ignition is OFF or a value in a range of ±1 V from the {BATT voltage} when ignition is ON.	The ignition switch input circuit is OK.	Go to step **2**.
2	**CHECK IGNITION SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of body integrated unit. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(i171) No. 17 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Check body integrated unit. <Ref. to BC(diag)-2, Basic Diagnostic Procedure.>	Check the harness for open or short circuit between body integrated unit and fuse.

6. Front Inner Remote

A: REMOVAL

1) Remove the door trim. <Ref. to EI-60, REMOVAL, Door Trim.>
2) Remove the screws to detach the front inner remote handle.



B: INSTALLATION

1) Before installation, check the following items.
- Cable is free from deformation such as fray.
- Grease is applied sufficiently to cable joints.

If grease is insufficient, add it as necessary before assembling the cable.
2) Install each part in the reverse order of removal.

C: INSPECTION

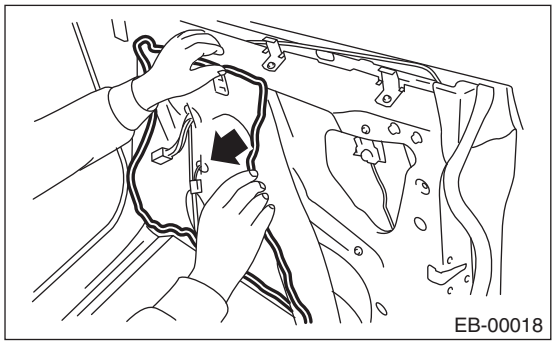
Check if the front remote handle operates normally.
- If the lever is faulty, replace the front inner remote handle.
- If the cable is deformed, replace the front door latch & door lock actuator assembly.

7. Front Outer Handle

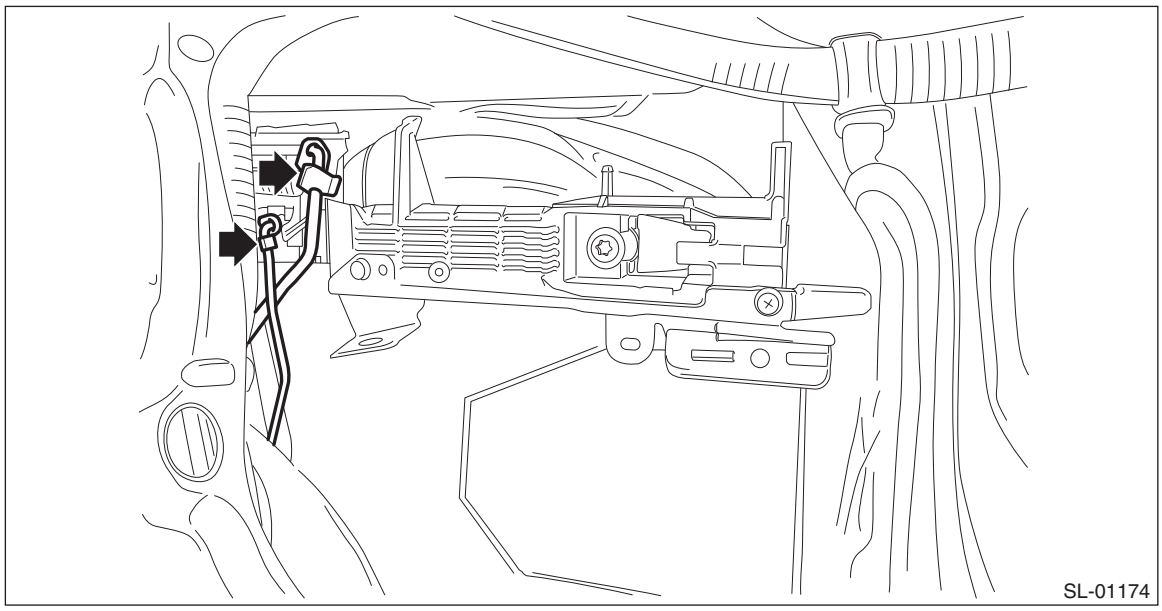
A: REMOVAL

1) Raise the front door glass to the top position.
2) Remove the door trim. <Ref. to EI-60, REMOVAL, Door Trim.>
3) Remove the sealing cover.

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



4) Release the rod from the rod clamp of outer handle.

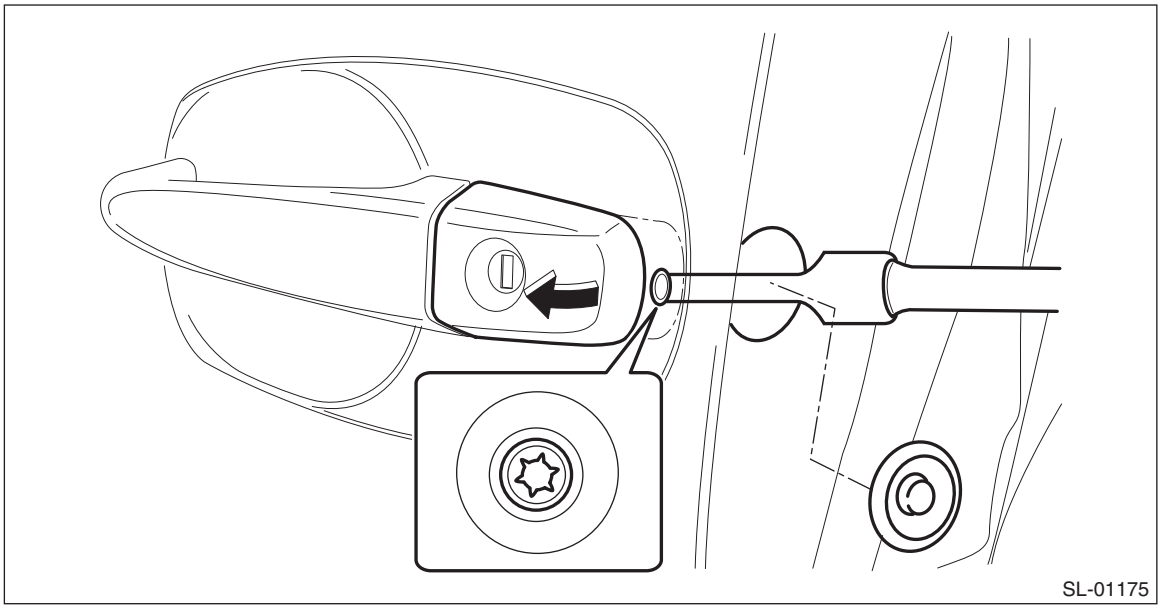


5) Remove the door outer handle cover.

Preparation tool: TORX® T30

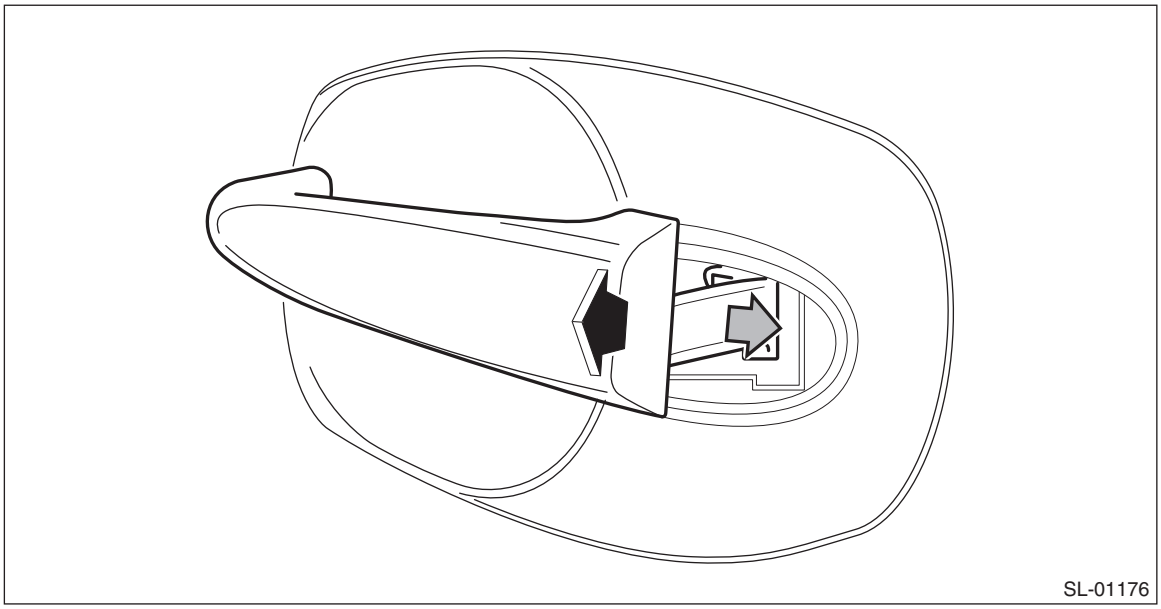
(1) Remove the plug to the rear of the door panel.

(2) Loosen the TORX® bolt and remove the door outer handle cover.



6) Move the front outer handle to the rear and remove the front outer handle.

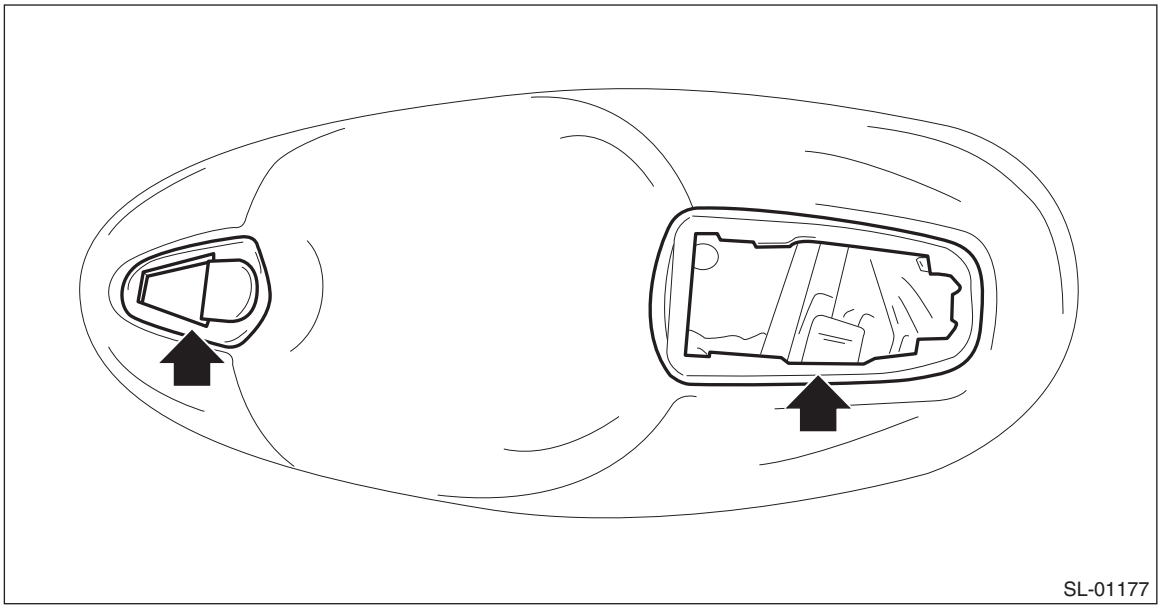
CAUTION:
Do not apply excessive force to remove the handle from the door panel. The door panel may become deformed.



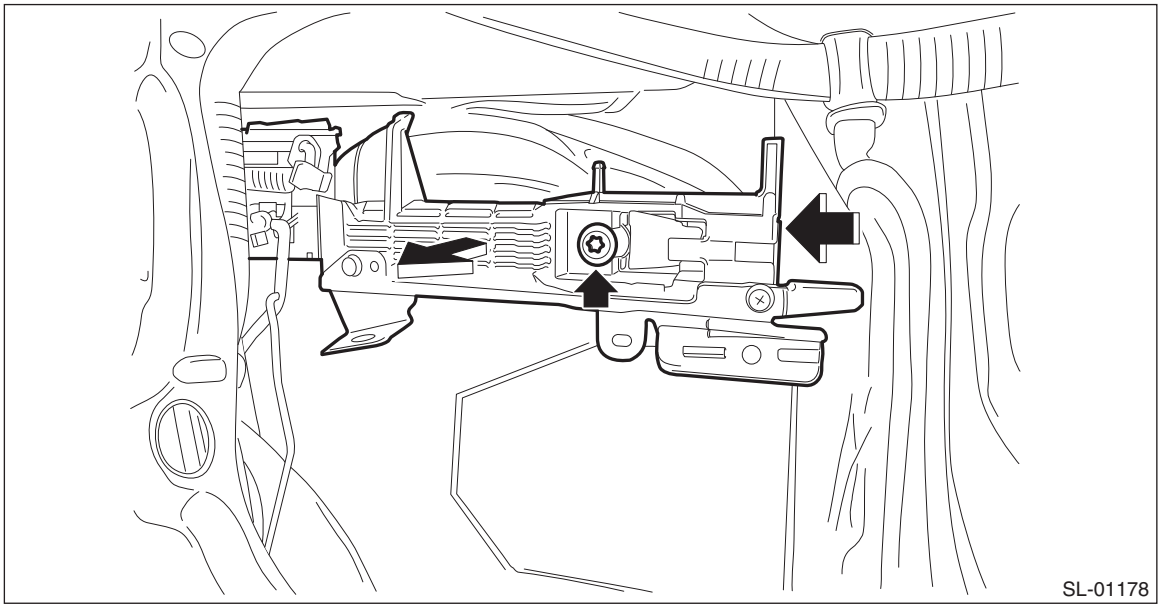
7) Remove the frame assembly.

Preparation tool: TORX® T30

(1) Remove the outer spacer.



(2) Loosen the TORX® bolt and remove the frame assembly from the door panel.



B: INSTALLATION

1) Before installation, check the following items.
- Rod is free from deformation.
- Grease is applied sufficiently to rod joints.

If grease is insufficient, add it as necessary before assembling the rod.
2) Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

C: INSPECTION

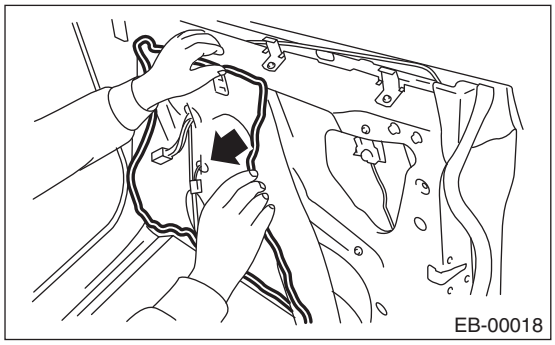
Check if the front outer handle operates normally.
- If the lever is faulty, replace the front outer handle.
- If the rod is deformed, replace the front door latch & door lock actuator assembly.

8. Front Door Latch and Door Lock Actuator Assembly

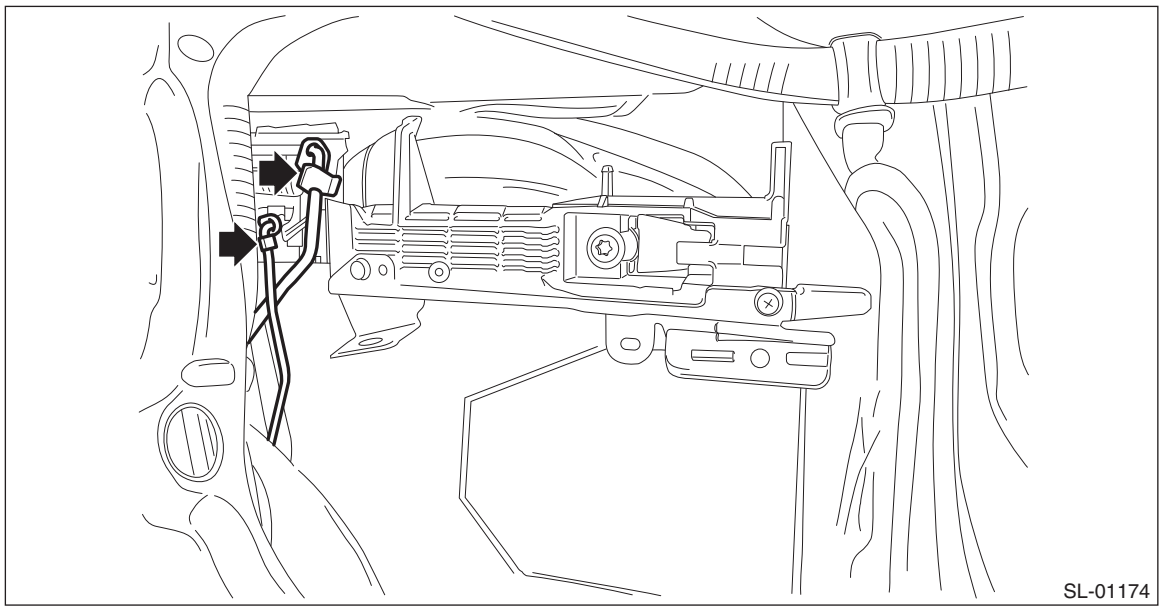
A: REMOVAL

1) Raise the front door glass to the top position.
2) Remove the front door trim. <Ref. to EI-60, REMOVAL, Door Trim.>
3) Remove the sealing cover.

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

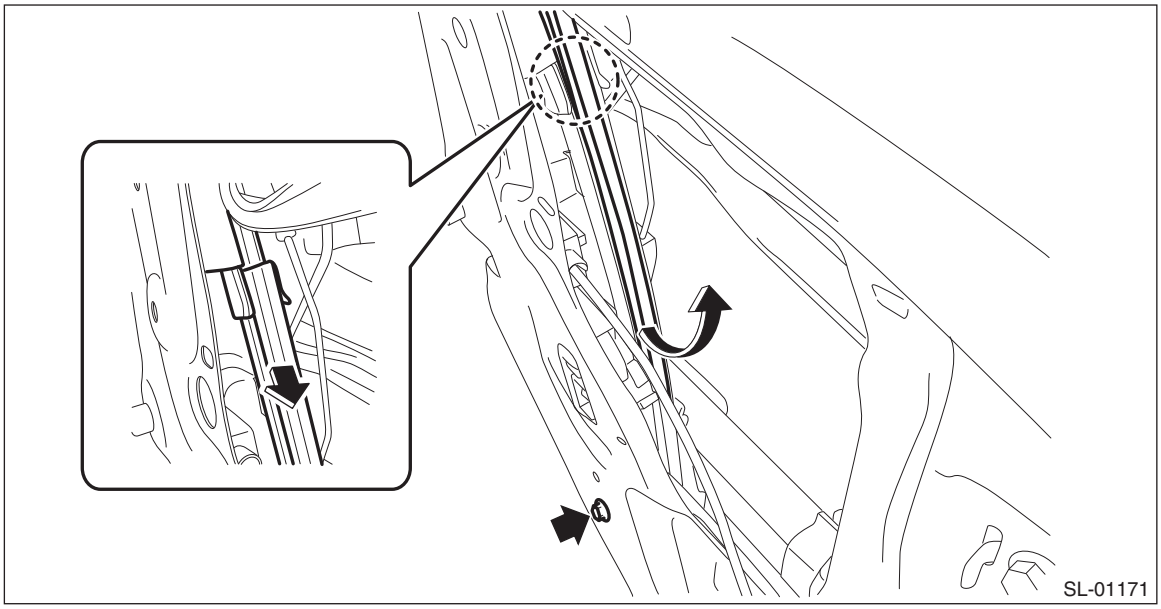


4) Release the rod from the rod clamp of outer handle.

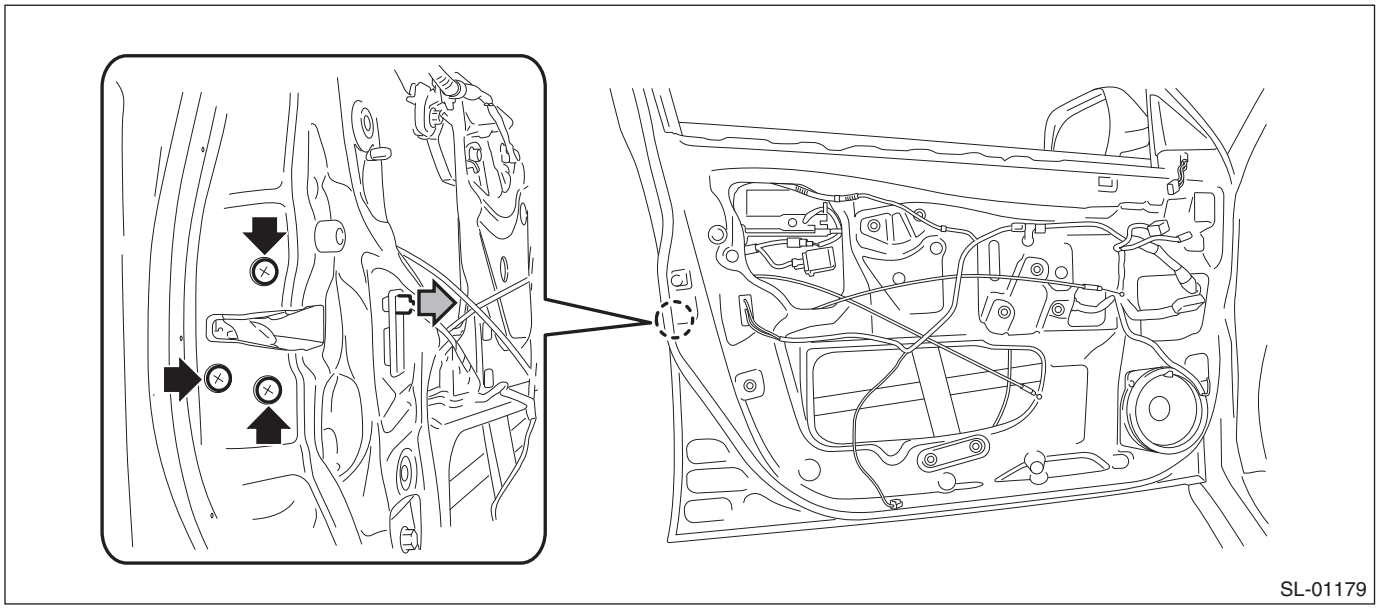


5) Remove the rear sash lower.
   (1) Remove the lower side of the glass run rubber.

(2) Remove the bolt and remove the rear sash lower.



6) Remove the front door latch and door lock actuator assembly.
(1) Disconnect the connector.
(2) Remove the screws, and remove the front door latch & door lock actuator assembly.



B: INSTALLATION

1) Before installation, check the following items.
- Cable and rod are free from deformation.
- Grease is applied sufficiently to rod joints.

If grease is insufficient, add it as necessary before assembling the rod.
2) Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

C: INSPECTION

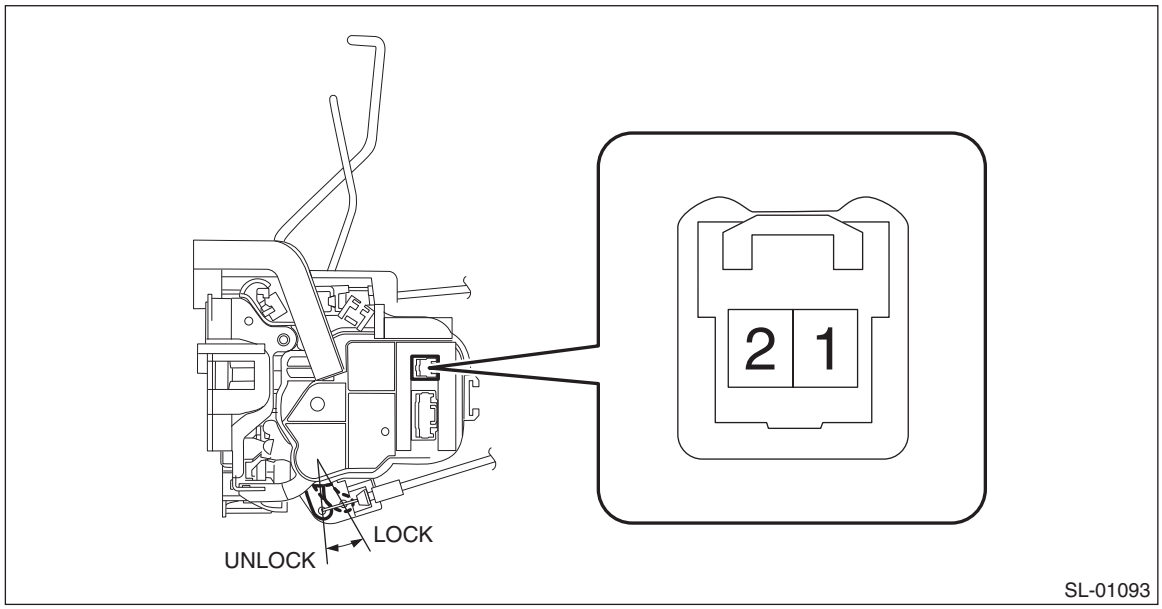
1. FRONT DOOR LATCH

Check if the front door latch operates normally.

- If the cable or rod is faulty, replace the front door latch & door lock actuator assembly.

2. FRONT DOOR LOCK ACTUATOR

1) Disconnect the front door lock actuator connector.
2) Check the door lock operation by applying battery voltage between the terminals of front door lock actuator.



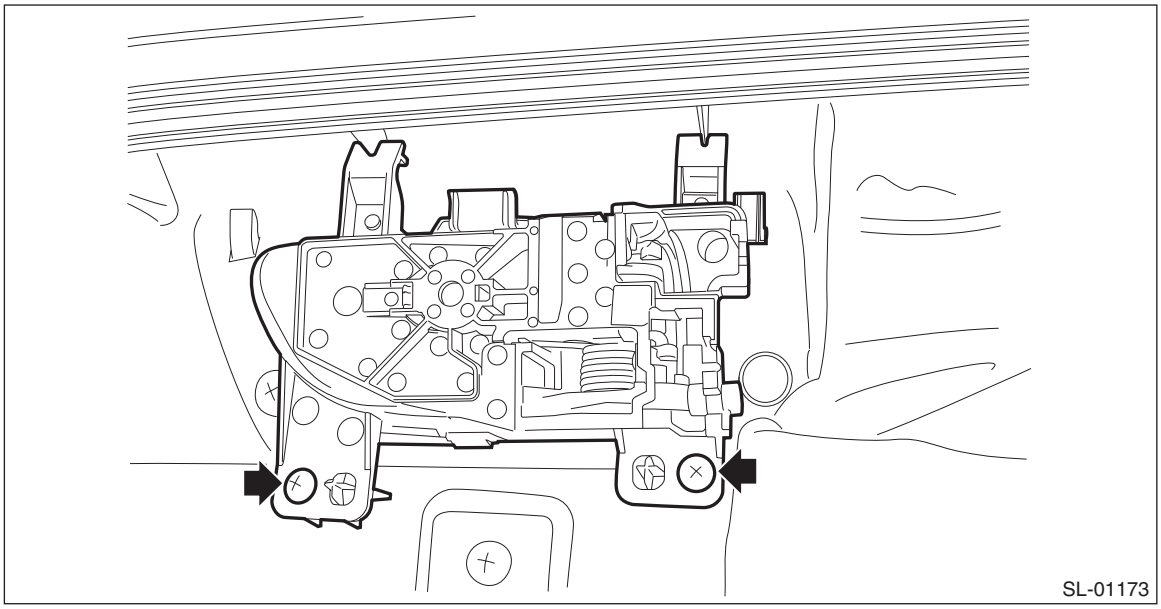
Inspection conditions	Terminal No.	
	1	2
LOCK → UNLOCK	–	+
UNLOCK → LOCK	+	–

3) If the actuator does not operate normally, replace the front door latch & door lock actuator assembly.

9. Rear Inner Remote

A: REMOVAL

1) Remove the door trim. <Ref. to EI-60, REMOVAL, Door Trim.>
2) Remove the screws and detach the rear inner remote handle.



B: INSTALLATION

1) Before installation, check the following items.
- Cable is free from deformation such as fray.
- Grease is applied sufficiently to cable joints.

If grease is insufficient, add it as necessary before assembling the cable.
2) Install each part in the reverse order of removal.

C: INSPECTION

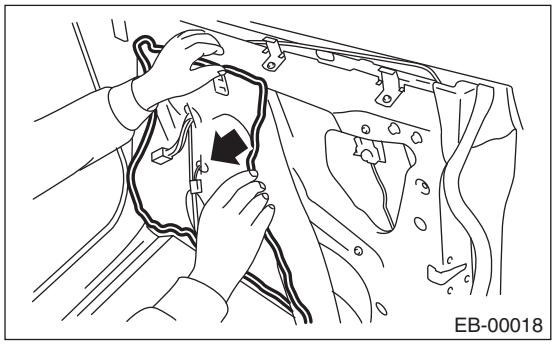
Check if the rear remote handle operates normally.
- If the lever is faulty, replace the rear inner remote handle.
- If the cable is deformed, replace the rear door latch & door lock actuator assembly.

10.Rear Outer Handle

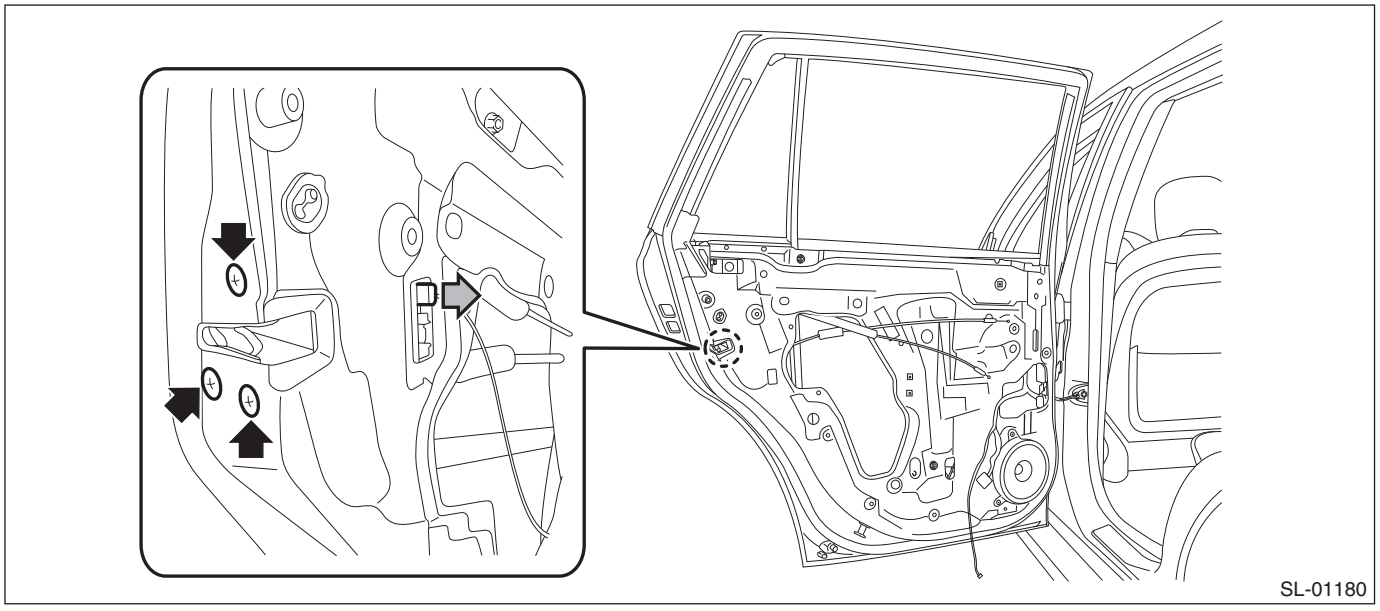
A: REMOVAL

1) Raise the rear door glass to the top position.
2) Remove the door trim. <Ref. to EI-60, REMOVAL, Door Trim.>
3) Remove the sealing cover.

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



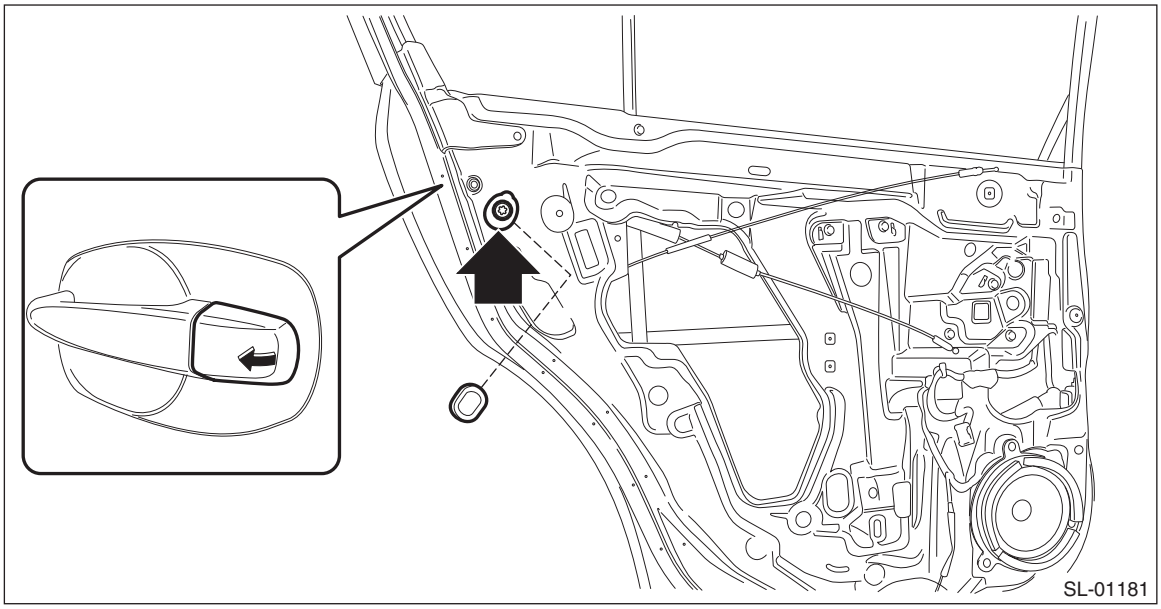
4) Move downward the rear door latch & door lock actuator assembly.
   (1) Disconnect the connector.
   (2) Remove the screws and move downward the rear door latch & door lock actuator assembly.



5) Remove the door outer handle cover.

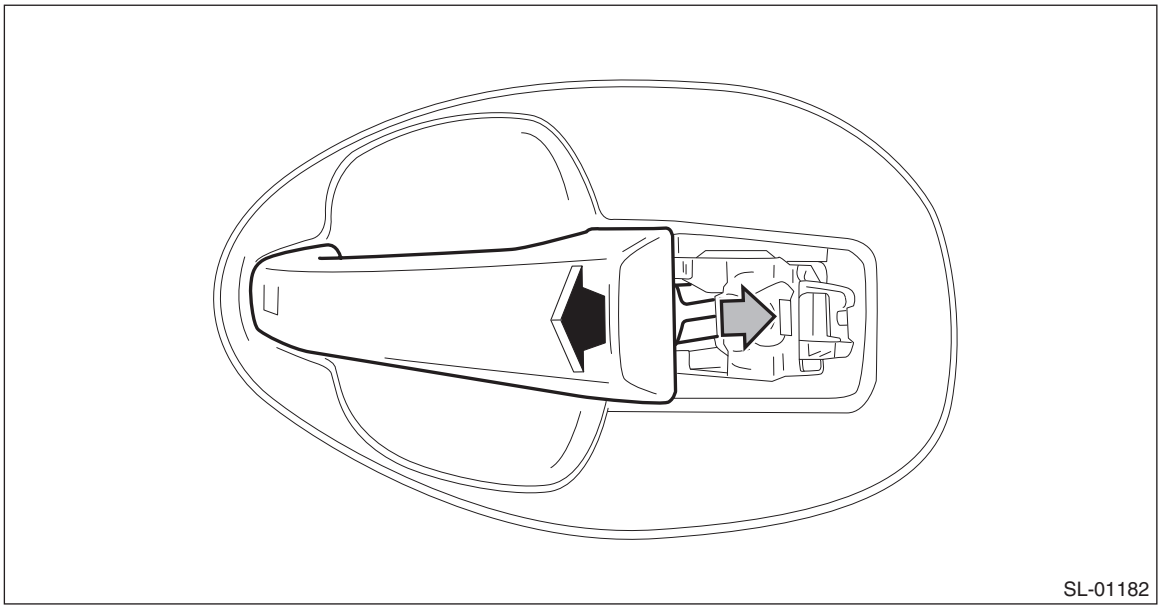
Preparation tool: TORX® T30
   (1) Remove the child protector cover.

(2) Loosen the TORX® bolt and remove the door outer handle cover.



6) Remove the rear outer handle by moving it rearward.

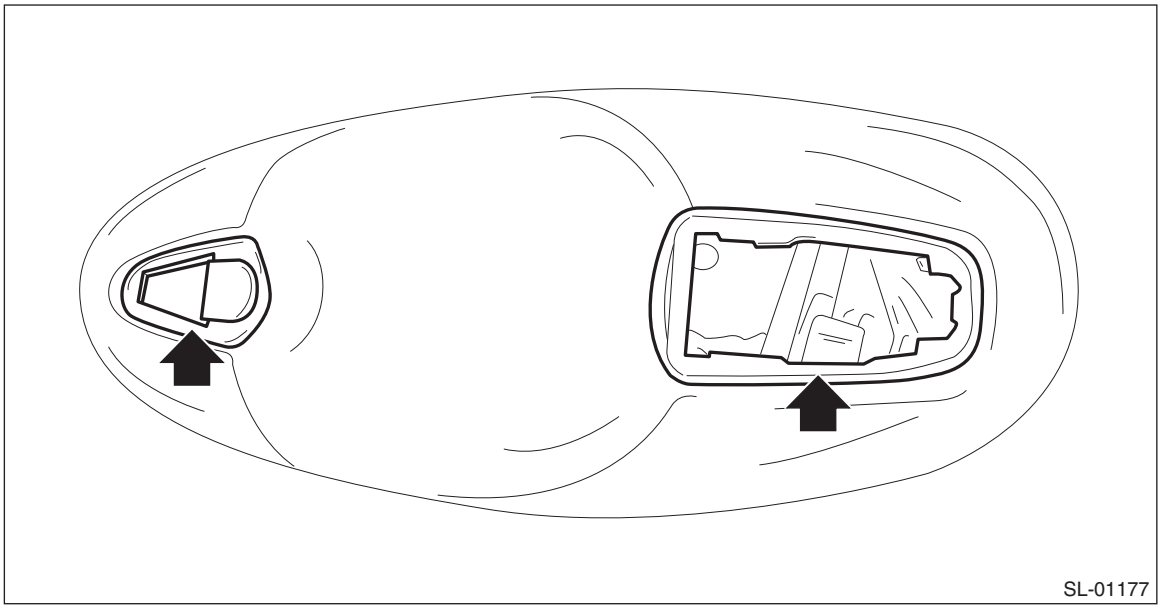
CAUTION:
Do not apply excessive force to remove the handle from the door panel. The door panel may become deformed.



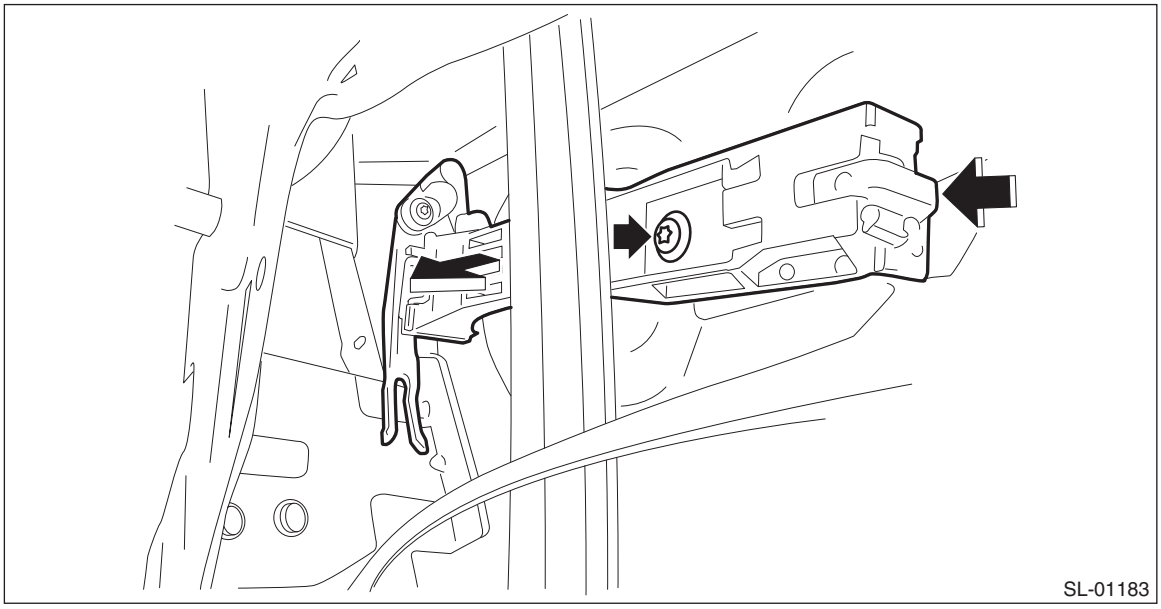
7) Remove the frame assembly.

Preparation tool: TORX® T30

(1) Remove the outer spacer.



(2) Remove the TORX® bolt and remove the frame assembly from the door panel.



B: INSTALLATION

1) Before installation, check the following items.
- Rod is free from deformation.
- Grease is applied sufficiently to rod joints.

If grease is insufficient, add it as necessary before assembling the rod.
2) Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

C: INSPECTION

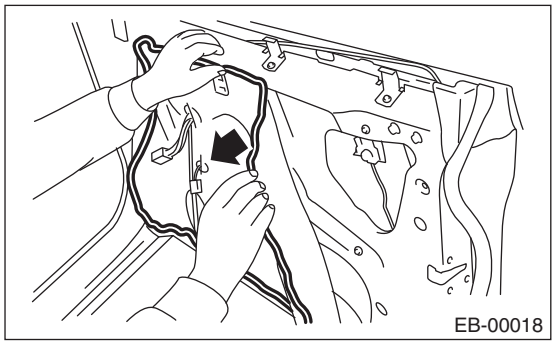
1) Check if the rear outer handle operates normally.
- If the lever is faulty, replace the front outer handle.
- If the rod is deformed, replace the rear door latch & door lock actuator assembly.

11.Rear Door Latch and Door Lock Actuator Assembly

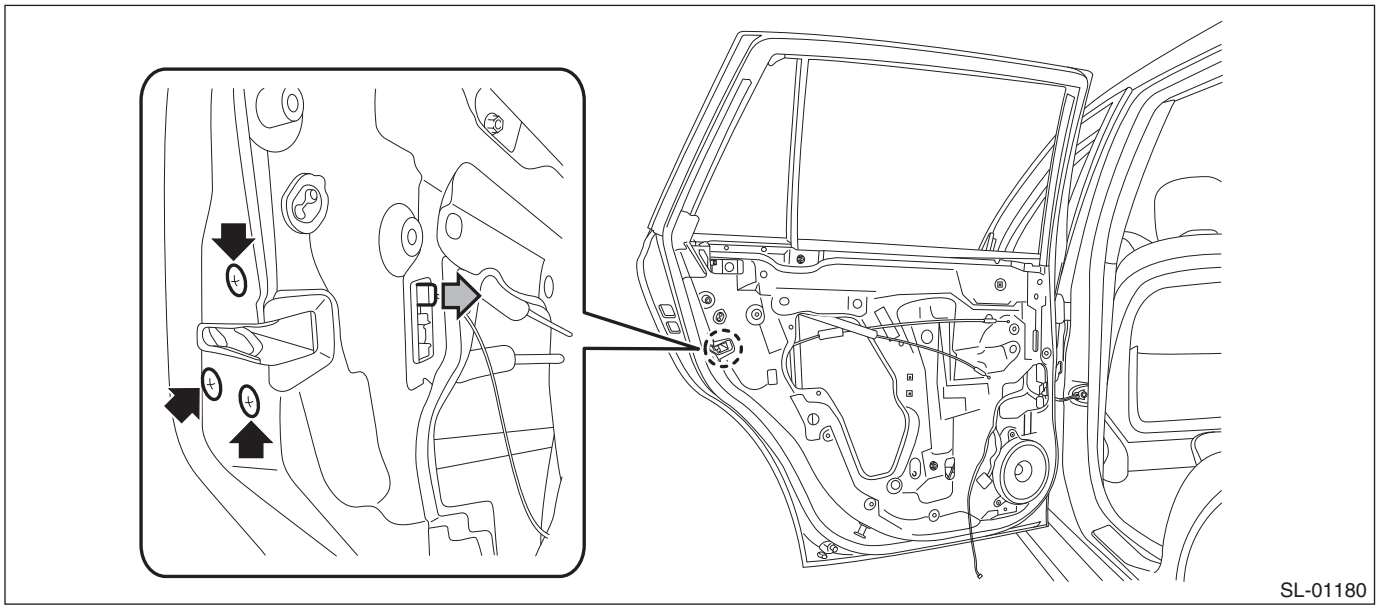
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the rear door trim. <Ref. to EI-60, REMOVAL, Door Trim.>
3) Remove the sealing cover.

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



4) Remove the rear door glass. <Ref. to GW-32, REMOVAL, Rear Door Glass.>
5) Remove the rear door latch and door lock actuator assembly.
   (1) Disconnect the connector.
   (2) Remove the screws, and remove the rear door latch & door lock actuator assembly.



B: INSTALLATION

1) Before installation, check the following items.
- Cable and rod are free from deformation.
- Grease is applied sufficiently to rod joints.

If grease is insufficient, add it as necessary before assembling the rod.
2) Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

NOTE:
After installation, make sure that the child safety lock works correctly.

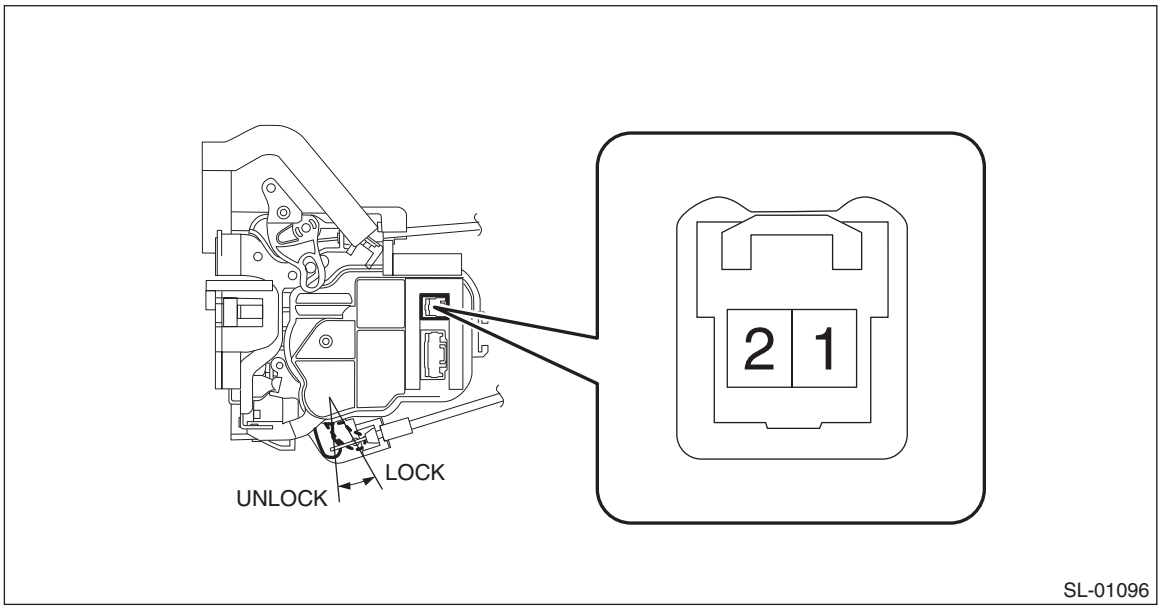
C: INSPECTION

1. REAR DOOR LATCH

Check if the rear door latch operates normally.
If the cable or rod is faulty, replace the front door latch & door lock actuator assembly.

2. REAR DOOR LOCK ACTUATOR

1) Disconnect the rear door lock actuator connector.
2) Check the door lock operation by applying battery voltage between the terminals of rear door lock actuator.



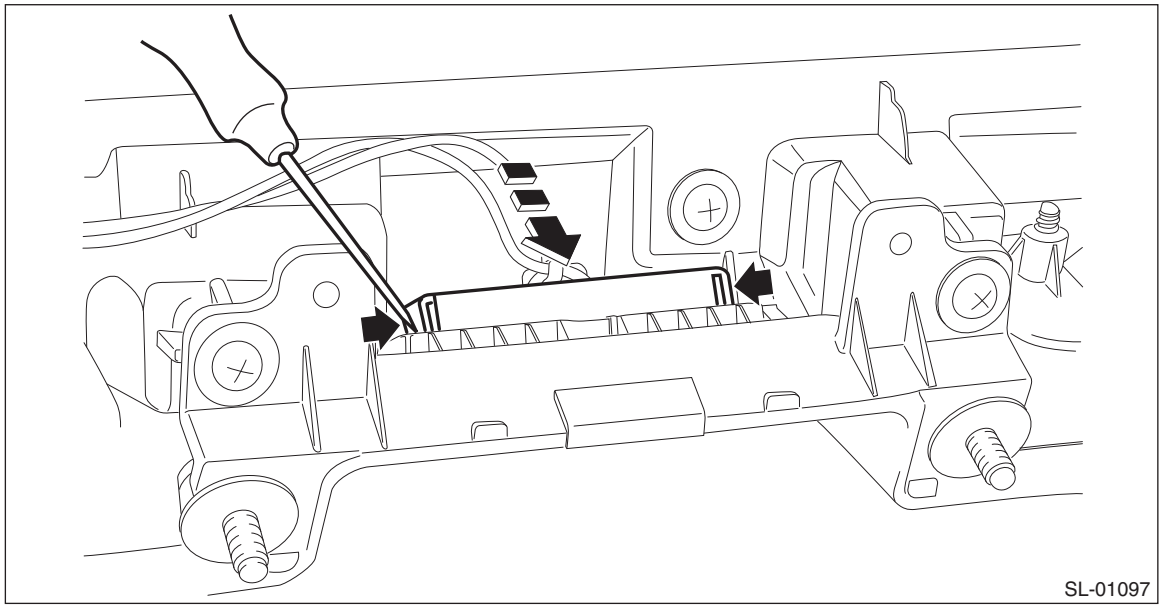
Inspection conditions	Terminal No.	
	1	2
LOCK → UNLOCK	–	+
UNLOCK → LOCK	+	–

3) If the actuator does not operate normally, replace the rear door latch & door lock actuator assembly.

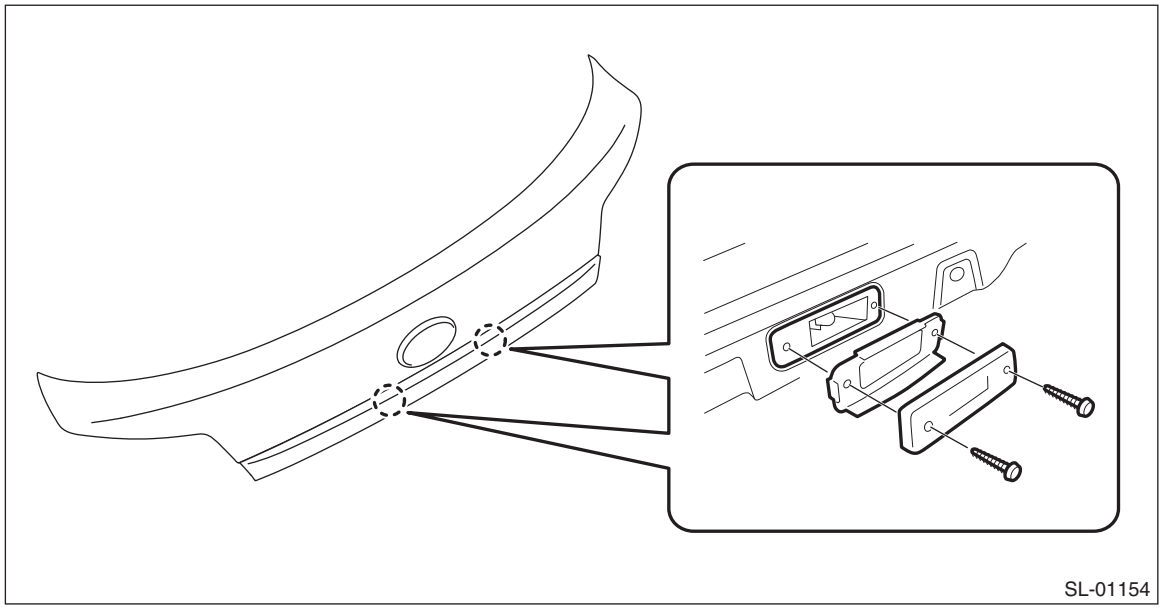
12.Rear Gate Opener Button

A: REMOVAL

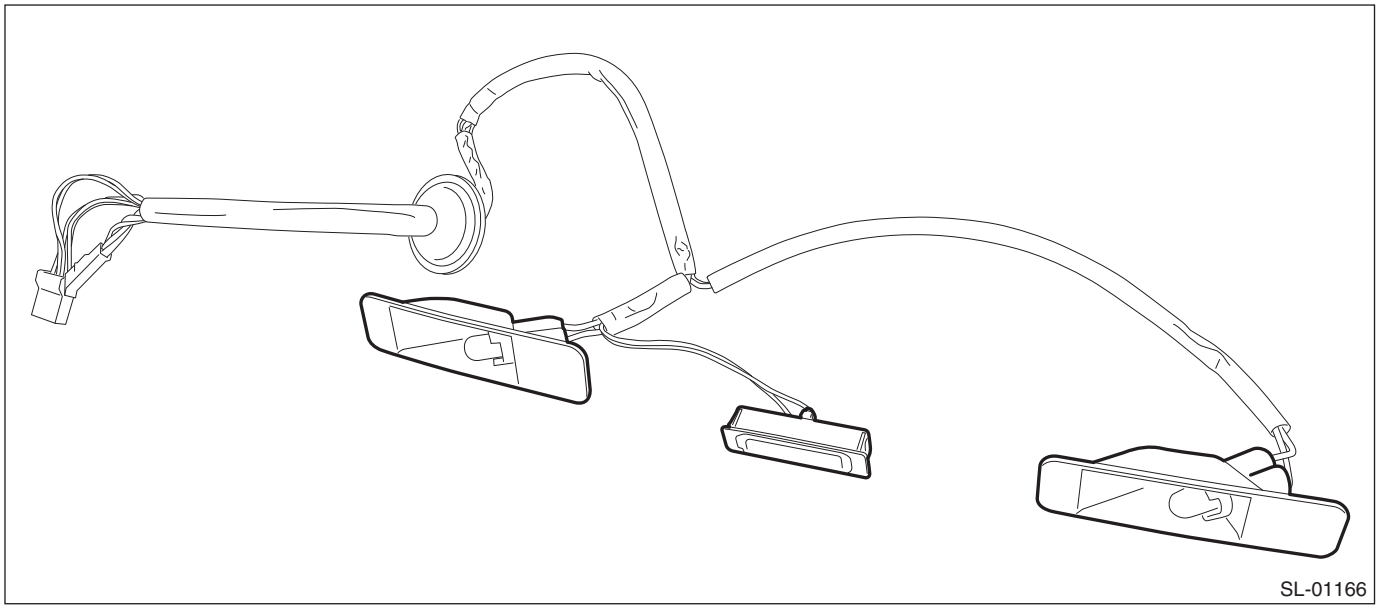
NOTE:
The rear gate opener button is integrated into the license plate light assembly harness.
1) Remove the rear gate trim. <Ref. to EI-157, REMOVAL, Rear Gate Trim.>
2) Remove the rear gate garnish. <Ref. to EI-161, REMOVAL, Rear Gate Garnish.>
3) Remove the rear gate opener button.
(1) Release the locks at both ends of the rear gate opener button by pushing with a flat tip screwdriver.


SL-01097

(2) Remove the screws and remove the license plate light.


SL-01154

(3) Remove the license plate light assembly harness from the rear gate garnish.



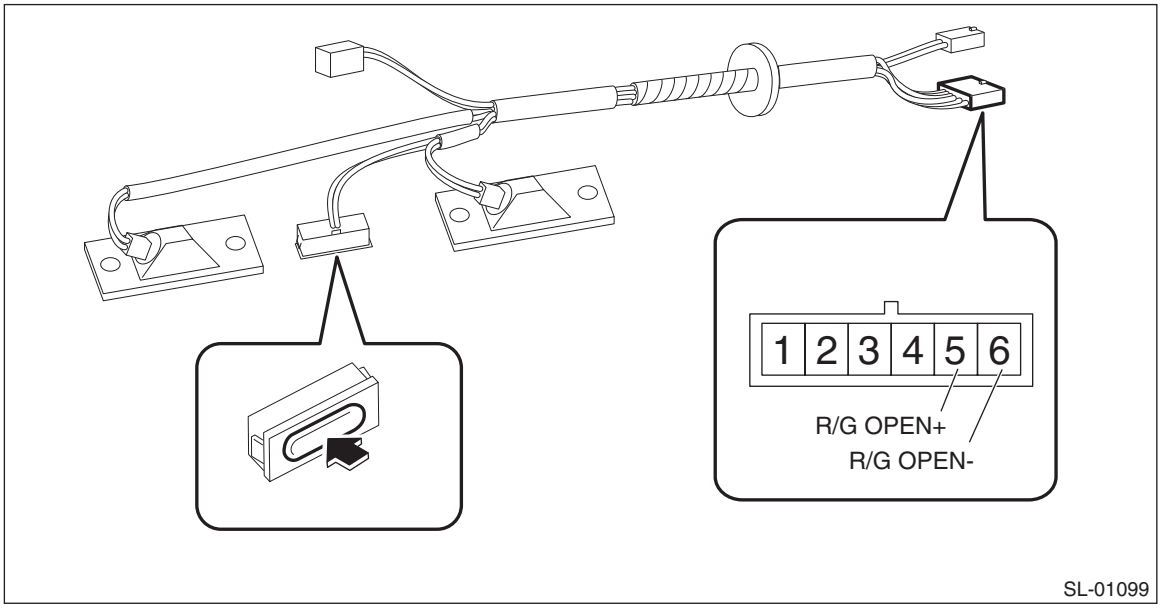
B: INSTALLATION

CAUTION:
Make sure that the harness grommet is installed securely.
Incomplete installation causes water leak.
Install each part in the reverse order of removal.

C: INSPECTION

1) Disconnect the rear gate opener button connector.
2) Measure the resistance between rear gate opener button terminals.

Preparation tool: Circuit tester



Terminal No.	Inspection conditions	Specification
5 — 6	Open	Less than 1 Ω
	Close	1 MΩ or more

3) Replace the rear gate opener button if the inspection result is not within the standard value.

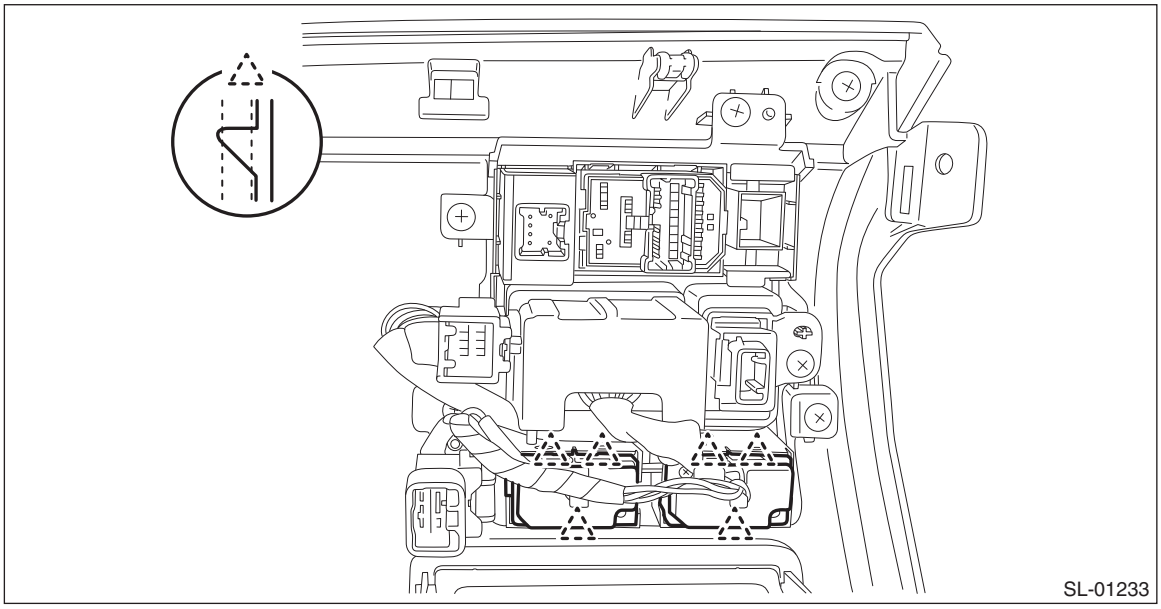
13.Trunk Opener Switch

A: REMOVAL

1. TRUNK OPENER SWITCH

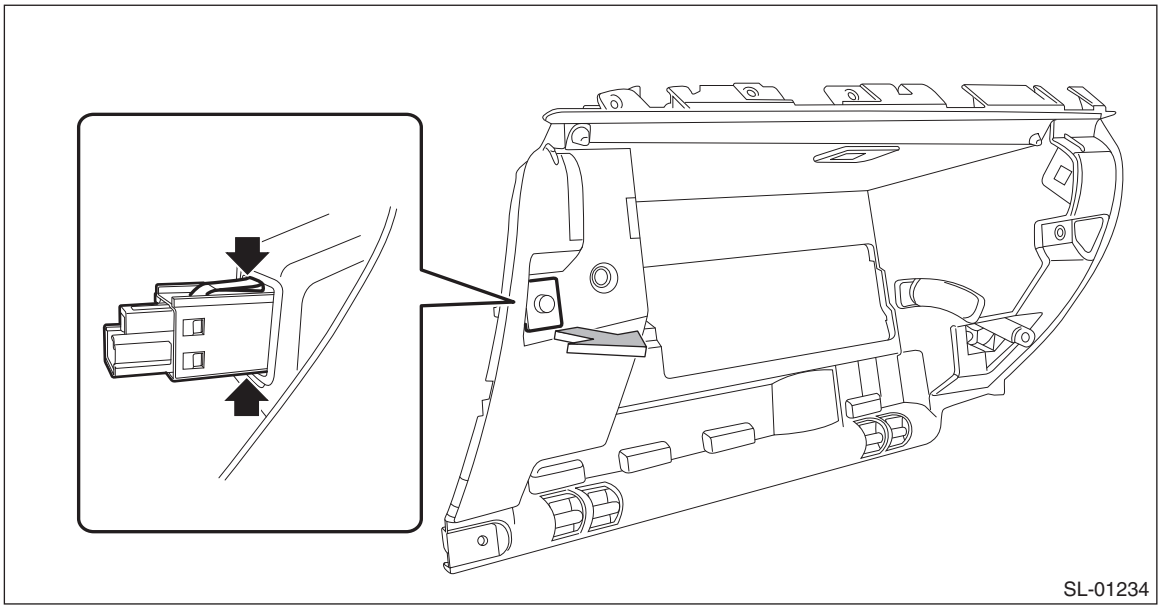
1) Remove the instrument panel lower cover. <Ref. to EI-63, REMOVAL, Instrument Panel Lower Cover.>
2) Release the claws and remove the trunk opener button.

NOTE:
The trunk opener button is integrated with the VDC OFF switch.



2. TRUNK OPENER CANCEL BUTTON

1) Remove the glove box. <Ref. to EI-65, REMOVAL, Glove Box.>
2) Release the claws and remove the trunk opener cancel button.



B: INSTALLATION

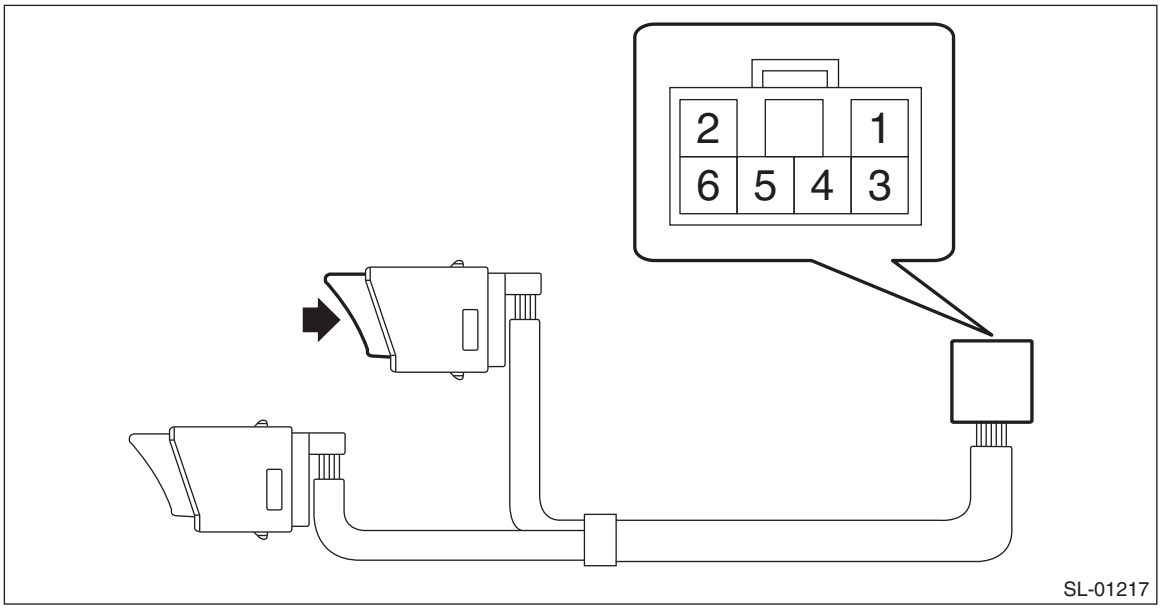
Install each part in the reverse order of removal.

C: INSPECTION

1. TRUNK OPENER SWITCH

1) Disconnect the trunk opener button connector.
2) Measure the resistance between trunk opener button terminals.

Preparation tool: Circuit tester



Terminal No.	Inspection conditions	Specification
4 — 2	Open	Less than 1 Ω
	Close	1 MΩ or more

3) Replace the trunk opener button if the inspection result is not within the standard value.

2. TRUNK OPENER CANCEL BUTTON

1) Disconnect the trunk opener cancel button connector.
2) Measure the resistance between trunk opener cancel button terminals.

Preparation tool: Circuit tester

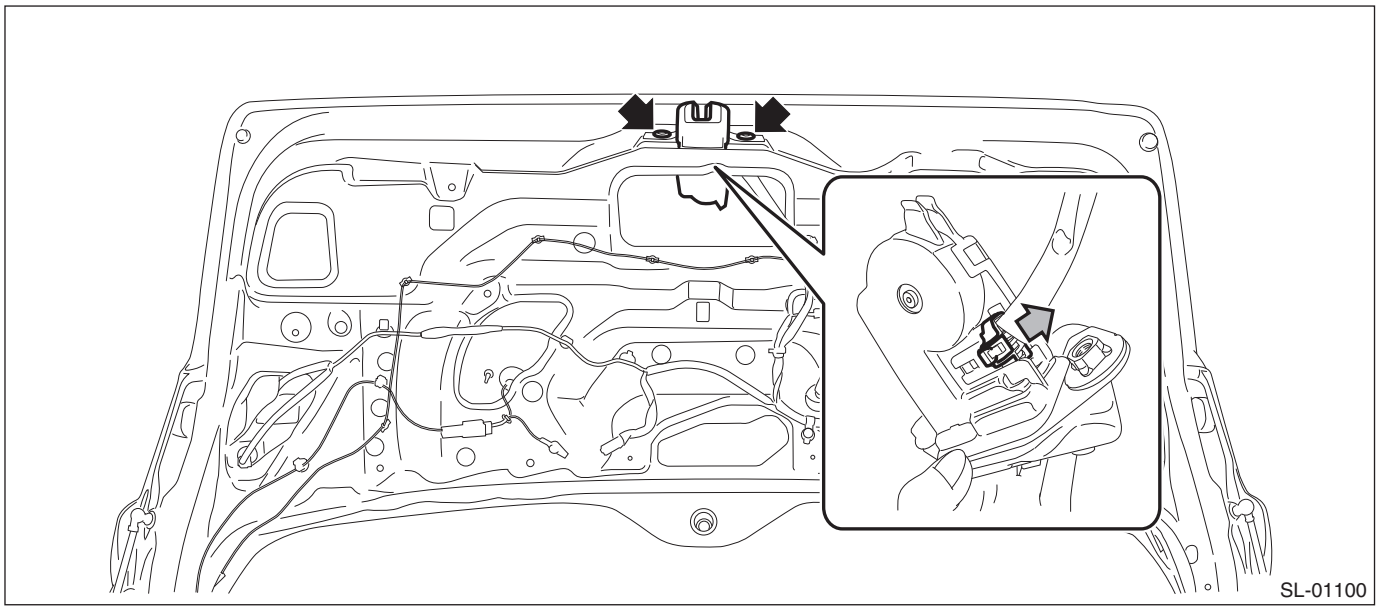
Terminal No.	Inspection conditions	Specification
1 — 2	Switch ON	Less than 1 Ω
	Switch OFF	1 MΩ or more

3) Replace the trunk opener button if the inspection result is not within the standard value.

14.Rear Gate Latch and Actuator Assembly

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the rear gate trim. <Ref. to EI-157, REMOVAL, Rear Gate Trim.>
3) Remove the rear gate latch & actuator assembly.
   (1) Remove the bolts and pull out the rear gate latch & actuator assembly to the vehicle front.
   (2) Disconnect the connectors, and then remove the rear gate latch & actuator assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-3, REAR GATE LOCK AND TRUNK LID LOCK, COMPONENT, General Description.>

C: INSPECTION

1. REAR GATE LATCH

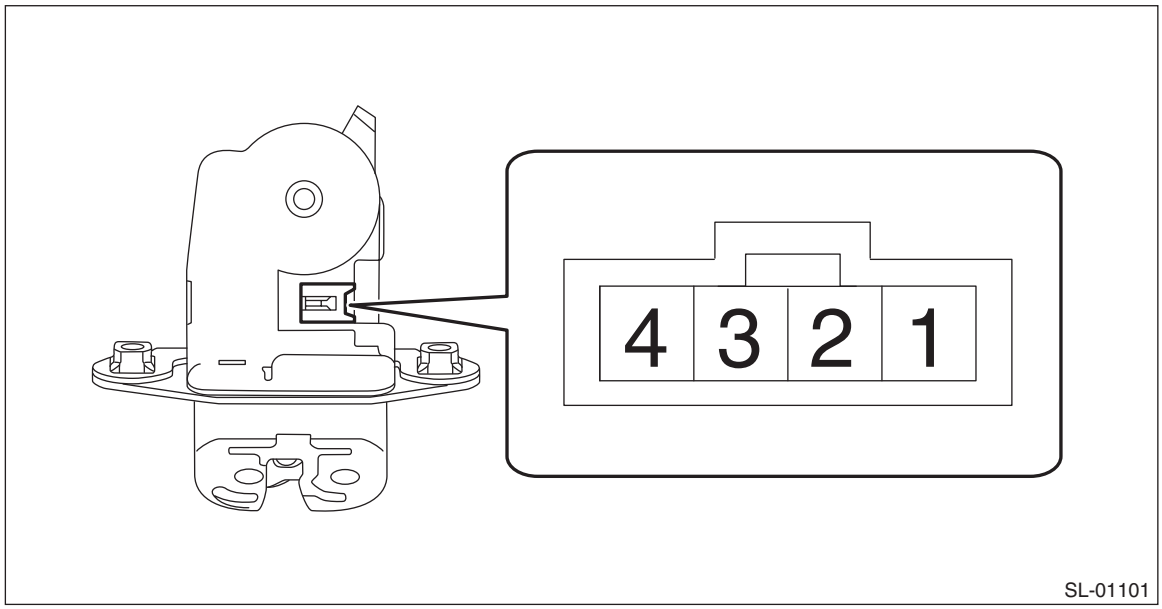
Check if the rear gate latch operates normally.

- If latch deformation, abnormal wear, or unsmooth lock operation is observed, replace the rear gate latch & actuator assembly.

2. LOCK ACTUATOR

1) Disconnect the rear gate latch & actuator assembly connector.
2) Check the door lock operation by applying battery voltage between the terminals of rear gate latch & actuator.

Preparation tool: Circuit tester



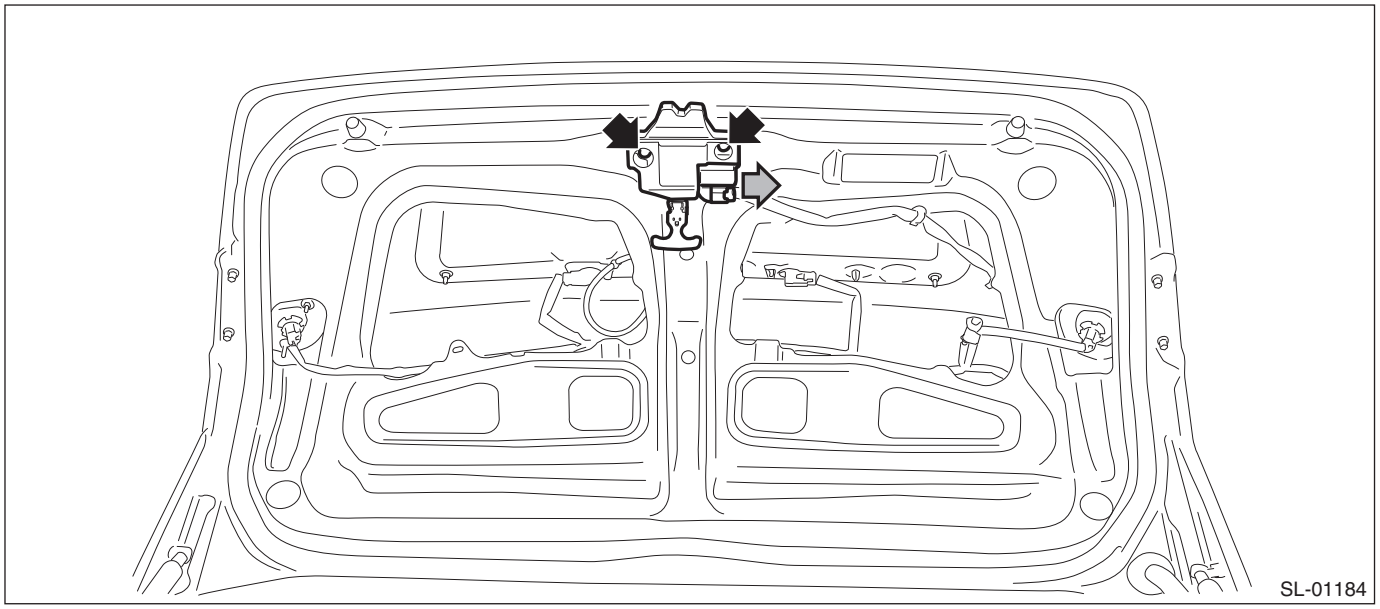
Inspection conditions	Terminal No.	
	1	2
LOCK → UNLOCK	+	–

3) If the actuator does not operate normally, replace the rear gate latch & actuator assembly.

15.Trunk Lid Latch and Actuator Assembly

A: REMOVAL

1) Disconnect the harness connector.
2) Remove the bolts, and remove the trunk lid latch & actuator assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-3, REAR GATE LOCK AND TRUNK LID LOCK, COMPONENT, General Description.>

C: INSPECTION

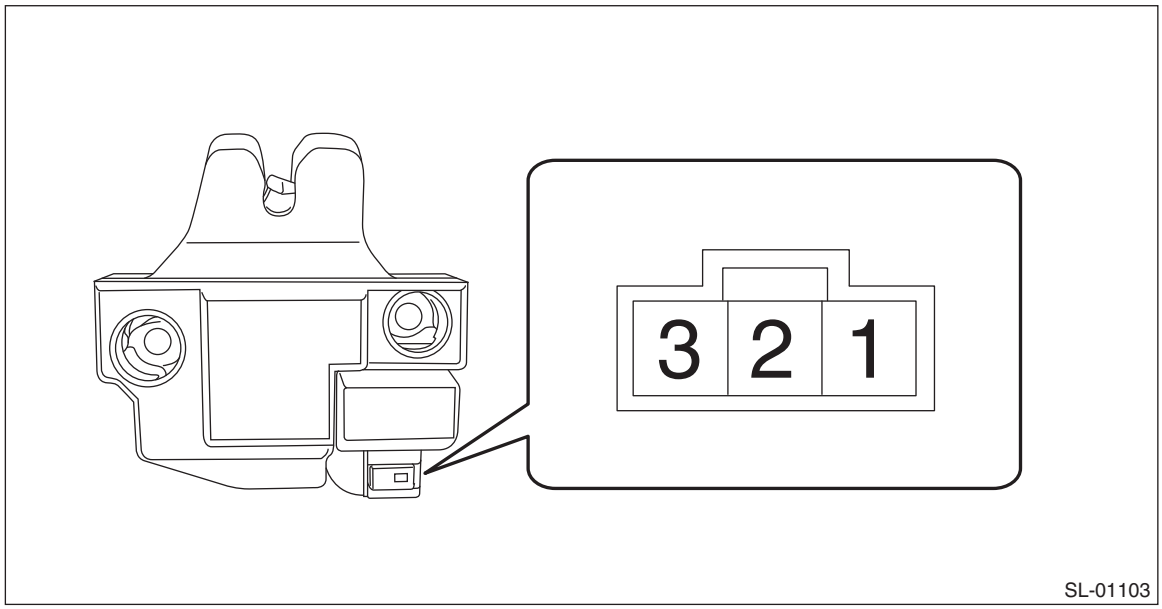
1. TRUNK LID LATCH

Check if the trunk lid latch operates normally.
If latch deformation, abnormal wear, or unsmooth lock operation is observed, replace the rear gate latch & actuator assembly.

2. LOCK ACTUATOR

1) Disconnect the trunk lid latch & actuator assembly connector.
2) Check the door lock operation by applying battery voltage between the terminals of trunk lid latch & actuator.

Preparation tool: Circuit tester



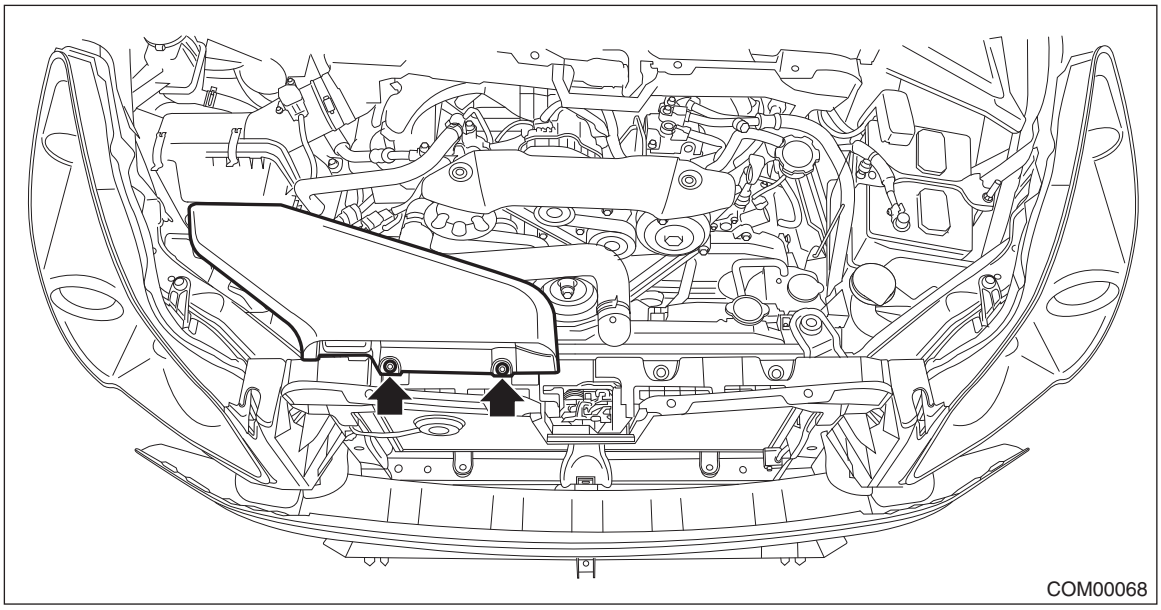
Inspection conditions	Terminal No.	
	1	2
LOCK → UNLOCK	+	–

3) If the actuator does not operate normally, replace the trunk lid latch & actuator assembly

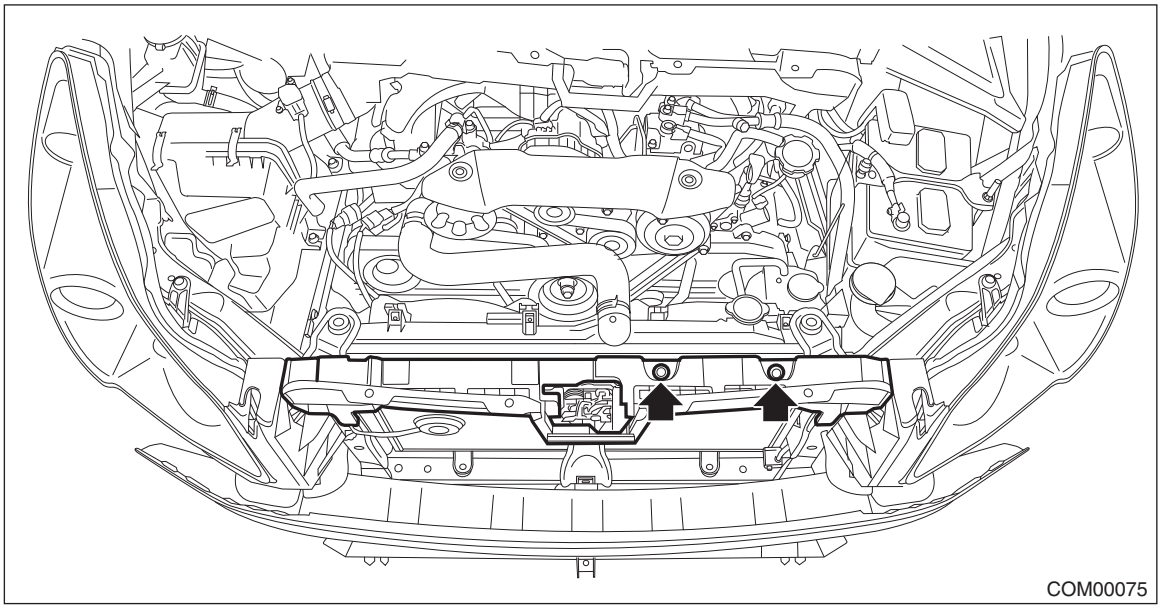
16.Front Hood Lock Assembly

A: REMOVAL

1) Open the front hood.
2) Remove the front bumper face. <Ref. to EI-39, REMOVAL, Front Bumper.>
3) Remove the clips and remove the air intake duct.

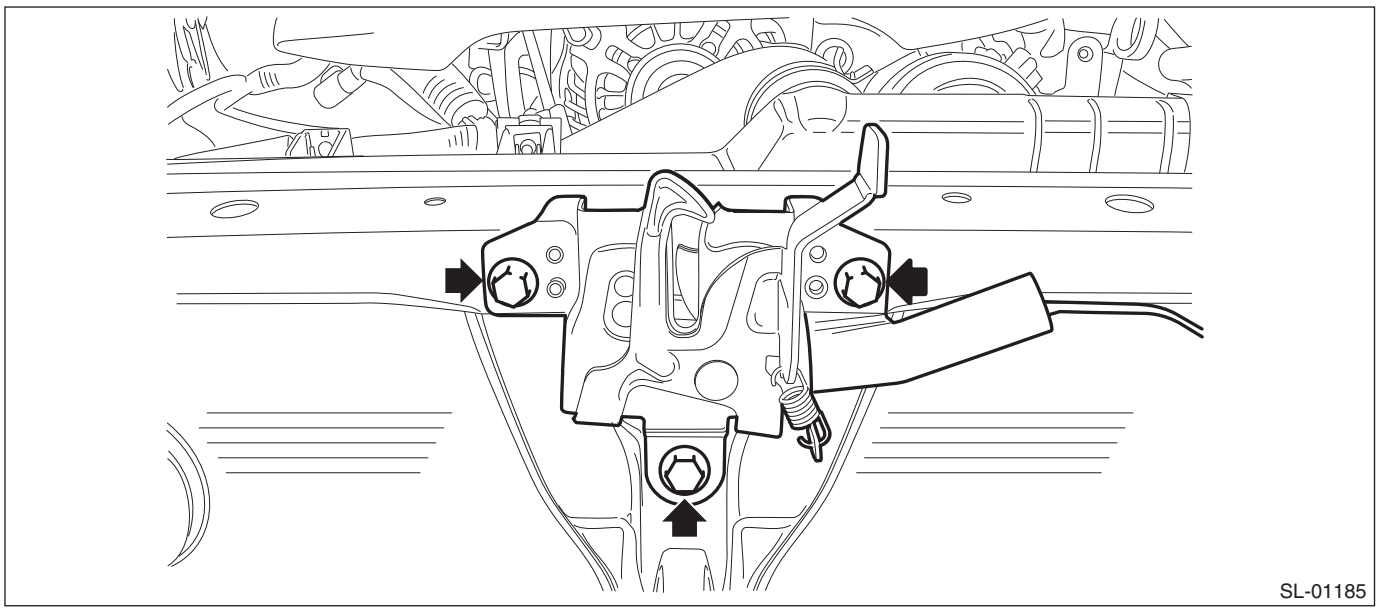


4) Remove the clips and remove the grille bracket.

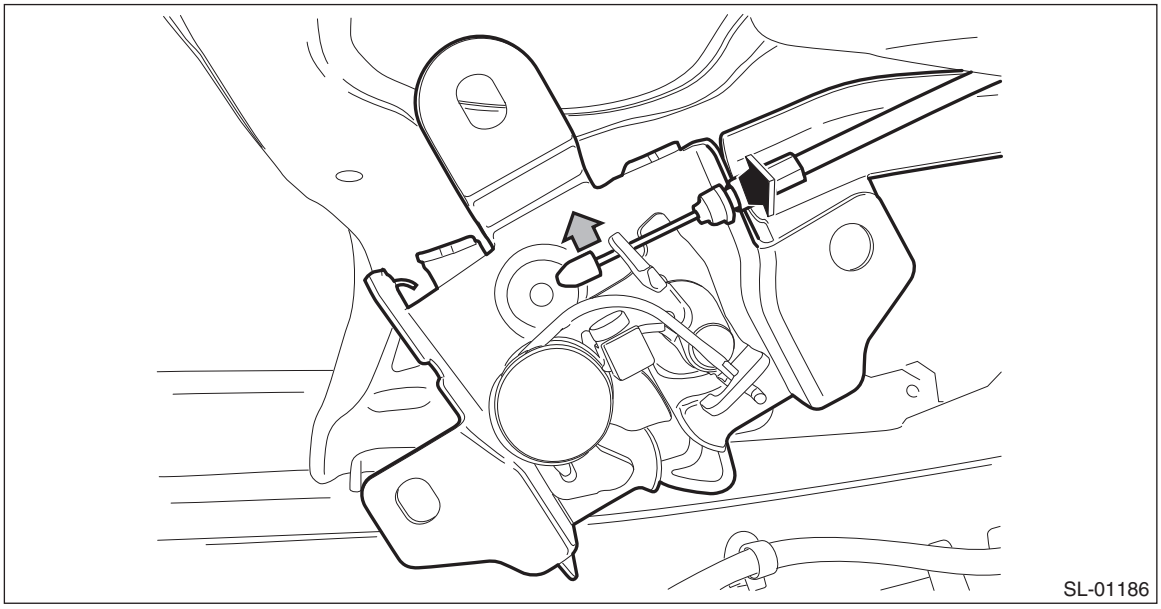


5) Remove the front hood lock assembly.

(1) Remove the bolt.



(2) Remove the release cable, and detach the front hood lock assembly.



B: INSTALLATION

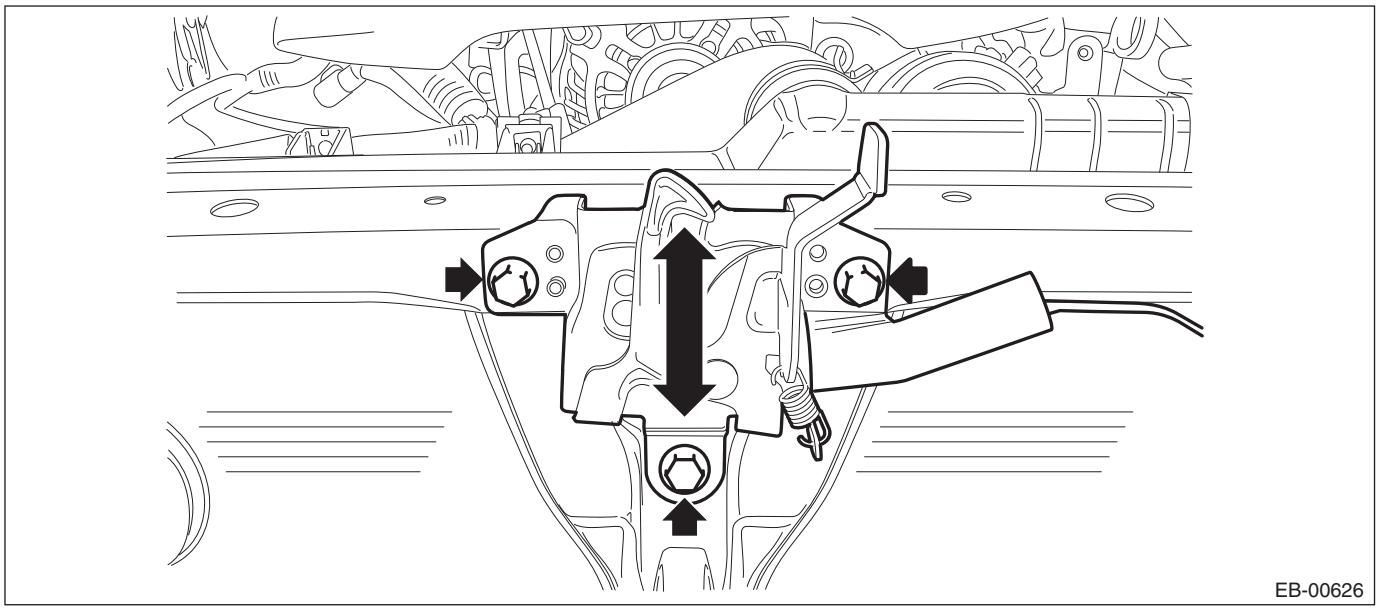
1) Before installation, check the following items.
- Grease is applied sufficiently to cable joints.

If grease is insufficient, add it as necessary before assembling the cable.
2) Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-4, FRONT HOOD LOCK AND REMOTE OPENERS, COMPONENT, General Description.>

C: ADJUSTMENT

1) Loosen the bolt, and adjust the lock assembly while moving it up and down.



2) After adjustment, tighten the bolts securely.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-4, FRONT HOOD LOCK AND REMOTE OPENERS, COMPONENT, General Description.>

D: INSPECTION

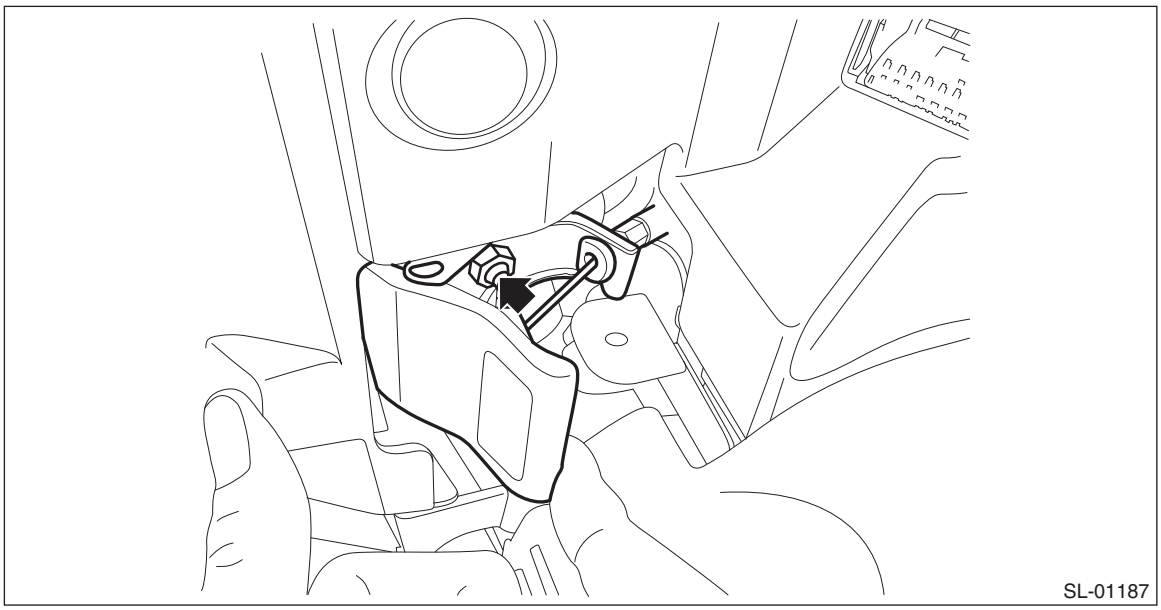
Check if the front hood lock ASSY operates normally.
If latch deformation, abnormal wear, or unsmooth lock operation is observed, replace the front hood lock assembly.

17.Remote Openers

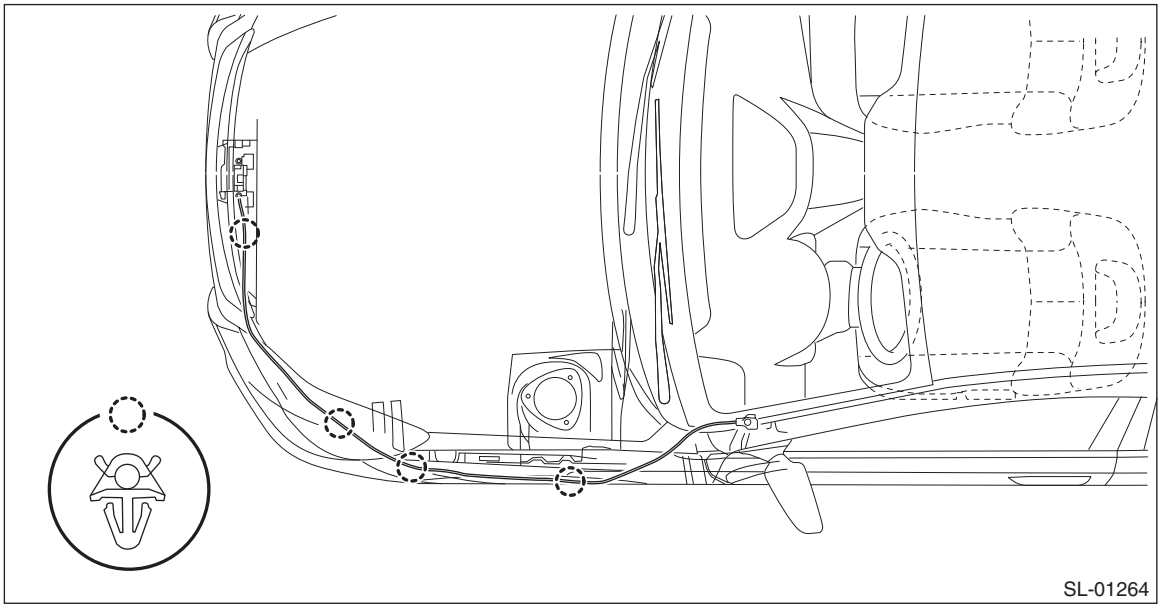
A: REMOVAL

1. FRONT HOOD OPENER

1) Remove the opener lever.
   (1) Remove the cable.
   (2) Remove the nut, and detach the opener lever.

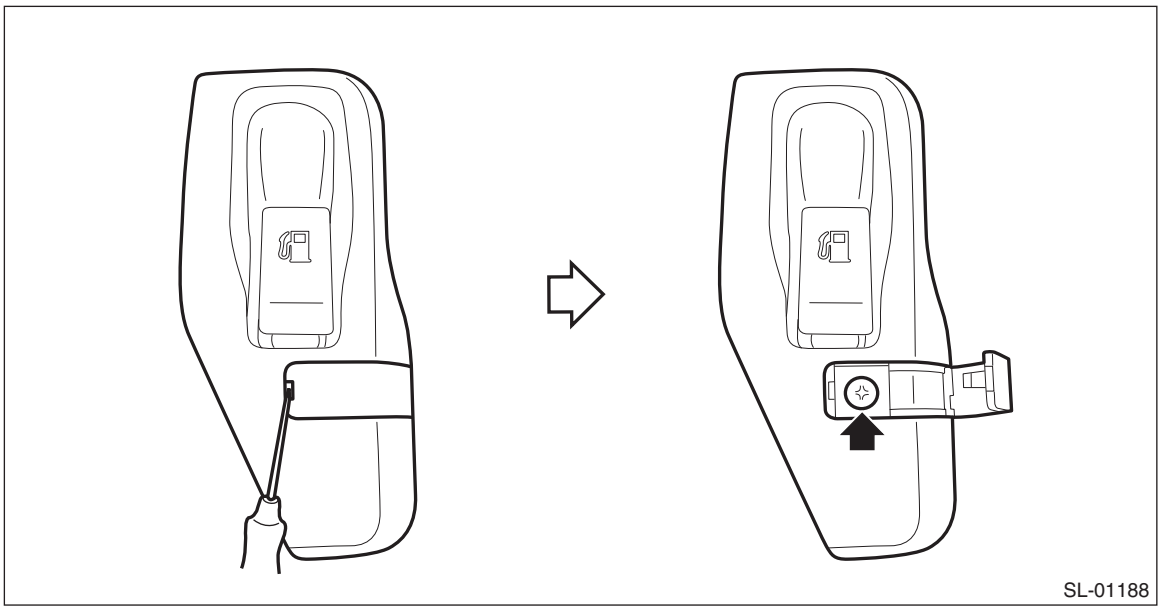


2) Remove the following parts and remove the cable clip and cable.
- Front hood lock ASSY:<Ref. to SL-52, REMOVAL, Front Hood Lock Assembly.>
- Instrument panel lower cover:<Ref. to EI-63, REMOVAL, Instrument Panel Lower Cover.>

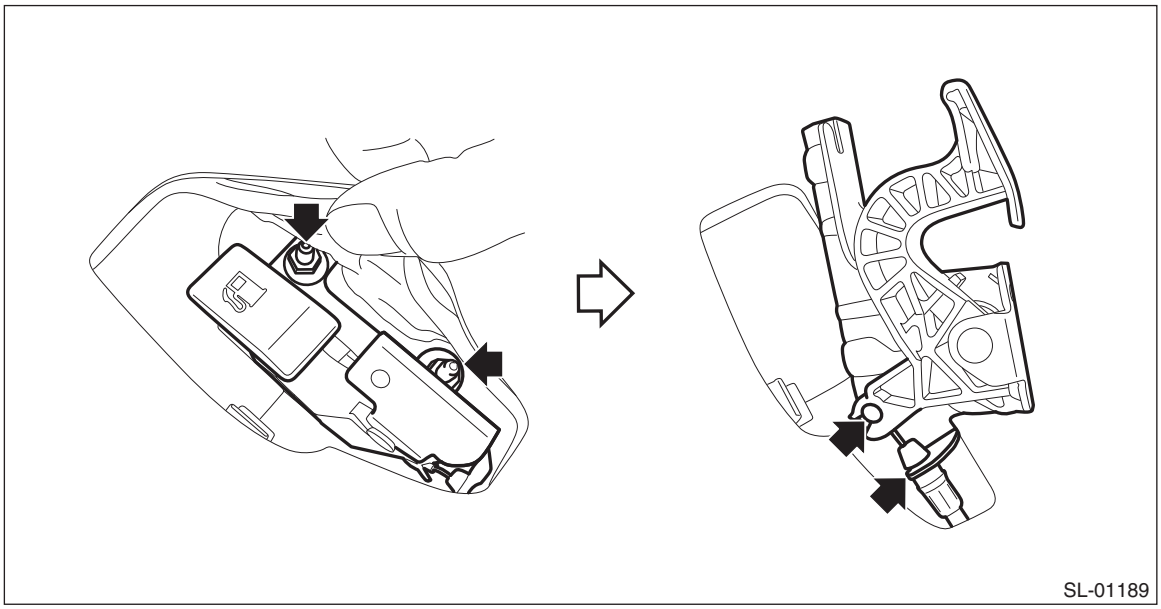


2. FUEL FLAP OPENER

1) Remove the pull handle cover.
   (1) Open the cover by using a flat tip screwdriver.
   (2) Remove the screw and remove the pull handle cover.

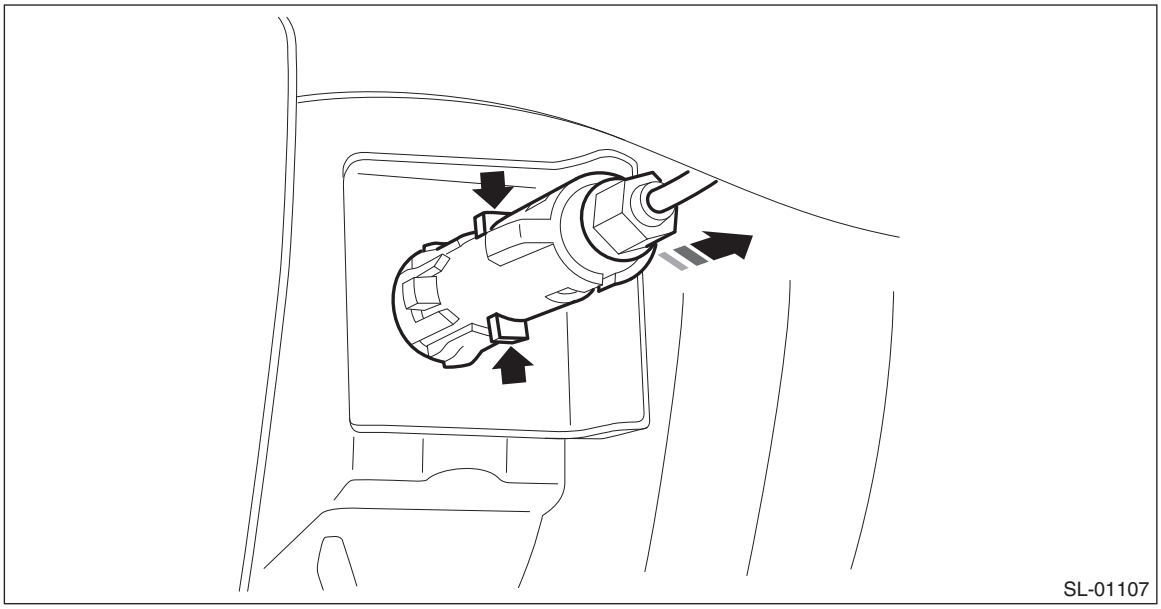


2) Remove the opener handle.
   (1) Remove the nuts.
   (2) Remove the cable from opener pull handle.



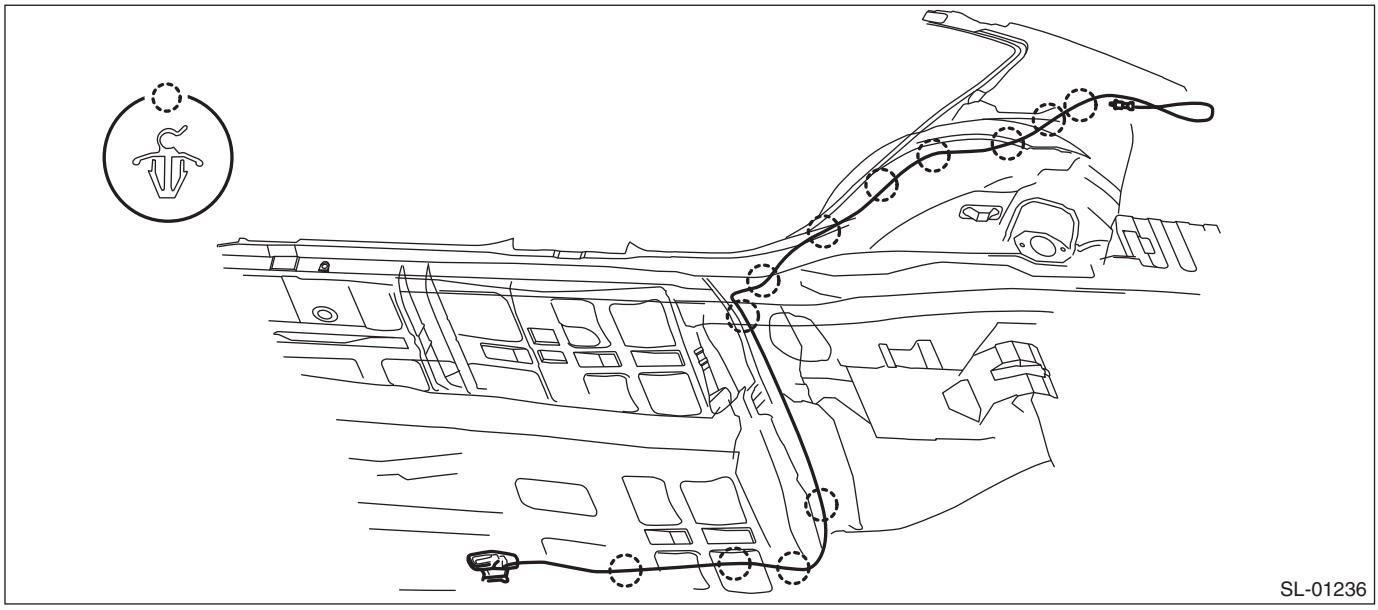
3) Remove the rear quarter trim RH. (OUTBACK model) <Ref. to EI-114, OUTBACK MODEL, REMOVAL, Rear Quarter Trim.>
4) Remove the trunk room trim (RH). (Sedan model) <Ref. to EI-127, TRUNK ROOM TRIM, REMOVAL, Trunk Room Trim.>
5) Remove the fuel lock inside the quarter panel.
   (1) Press the claws of the fuel lock.

(2) While keeping the condition in step (1), pull the fuel lock to the rearward of the vehicle.

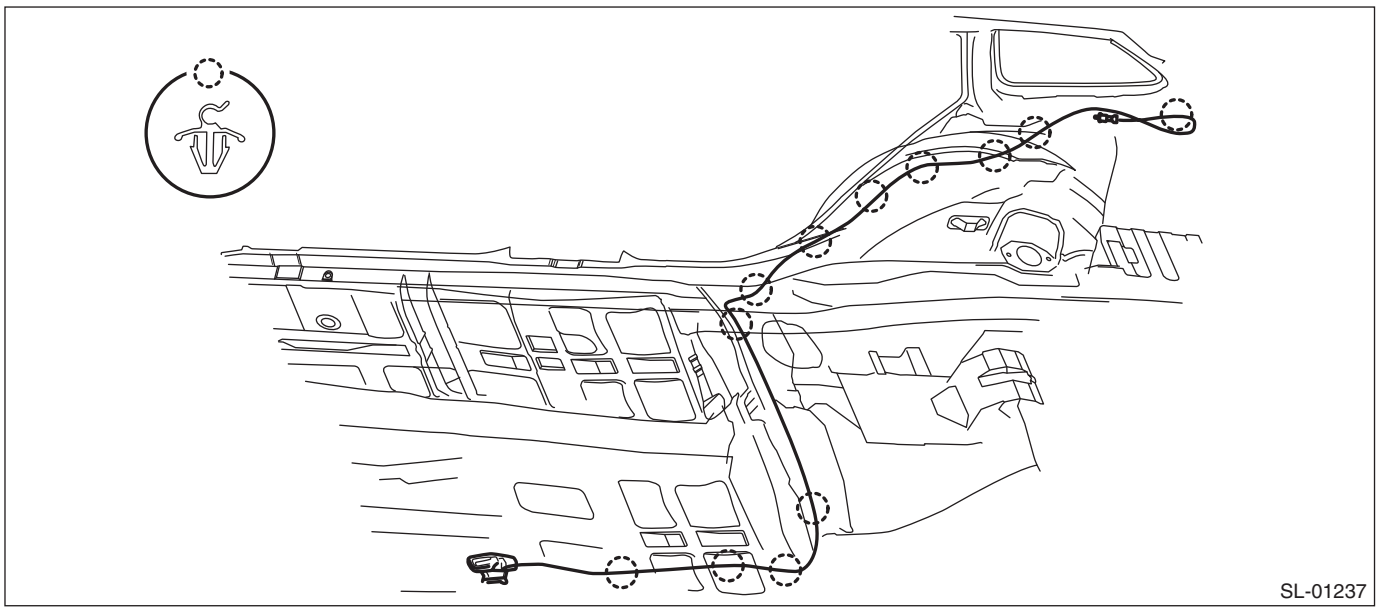


6) Remove the lower inner trim. <Ref. to EI-95, REMOVAL, Lower Inner Trim.>
7) Remove the cable clip, and remove the cable.

- Sedan model



- OUTBACK model



B: INSTALLATION

1) Before installation, check the following items.
- Cable is free from deformation such as fray.

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

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-4, FRONT HOOD LOCK AND REMOTE OPENERS, COMPONENT, General Description.>

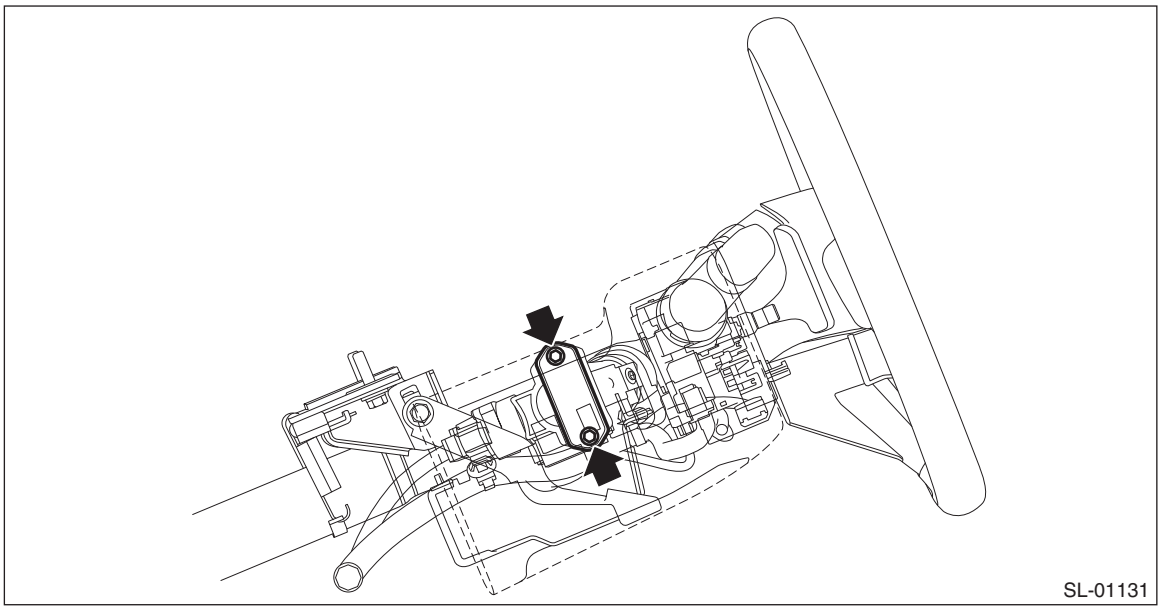
C: INSPECTION

Check if the front hood and fuel flap operate normally.

18.Ignition Key Lock

A: REPLACEMENT

1) Disconnect the ground cable from battery.
2) Remove the steering column. <Ref. to PS-20, REMOVAL, Steering Column.>
3) Remove the ignition key lock.
   (1) Secure the steering column in a vise.
   (2) Drill out the bolts and remove the ignition key lock.

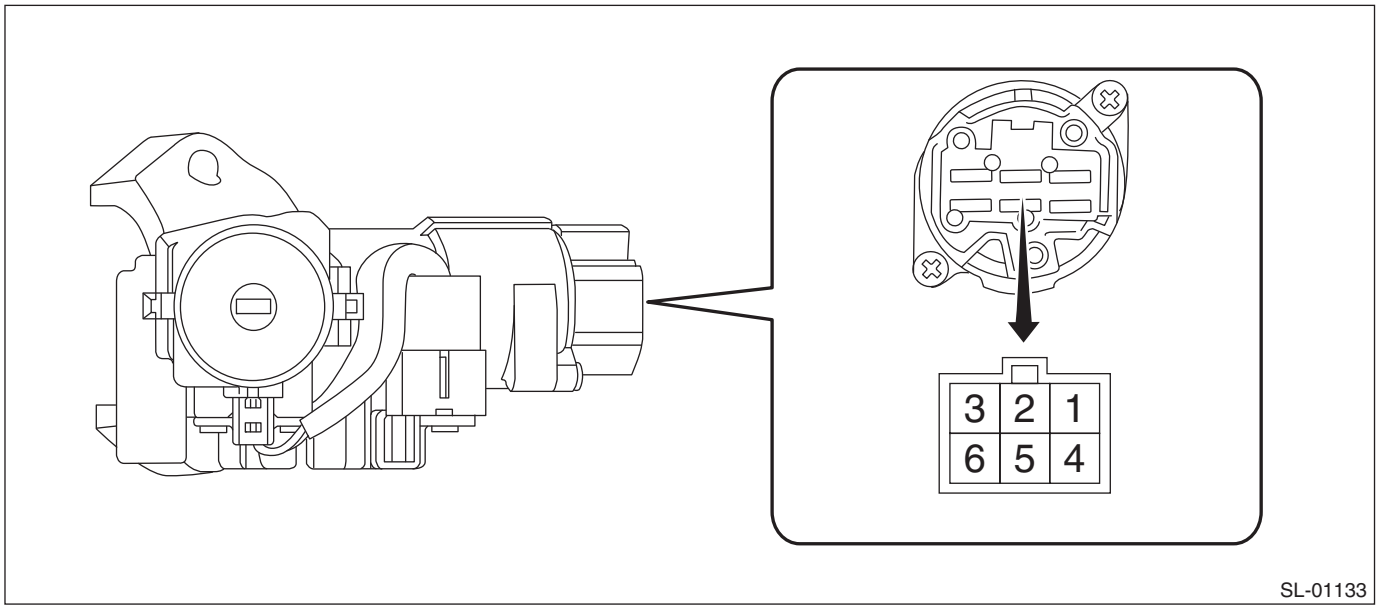


4) Install the ignition key lock.
   (1) Secure the ignition key lock to the steering column.
   (2) Use new bolts. Tighten the bolt until the bolt head is broken (bolt head wrenched off).

B: INSPECTION

1) Disconnect the ignition switch connector.
2) Measure the resistance between ignition switch terminals.

Preparation tool: Circuit tester



Terminal No.	Inspection Conditions	Specification
—	LOCK	—
3 — 5	ACC	Less than 1 Ω
3 — 1, 4 3 — 5	ON	Less than 1 Ω
3 — 2, 6 3 — 1, 4	ST	Less than 1 Ω

3) Replace the ignition switch if the inspection result is not within the standard value.

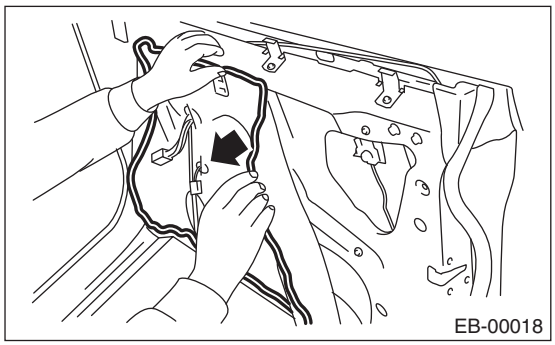
19.Key Lock Cylinders

A: REPLACEMENT

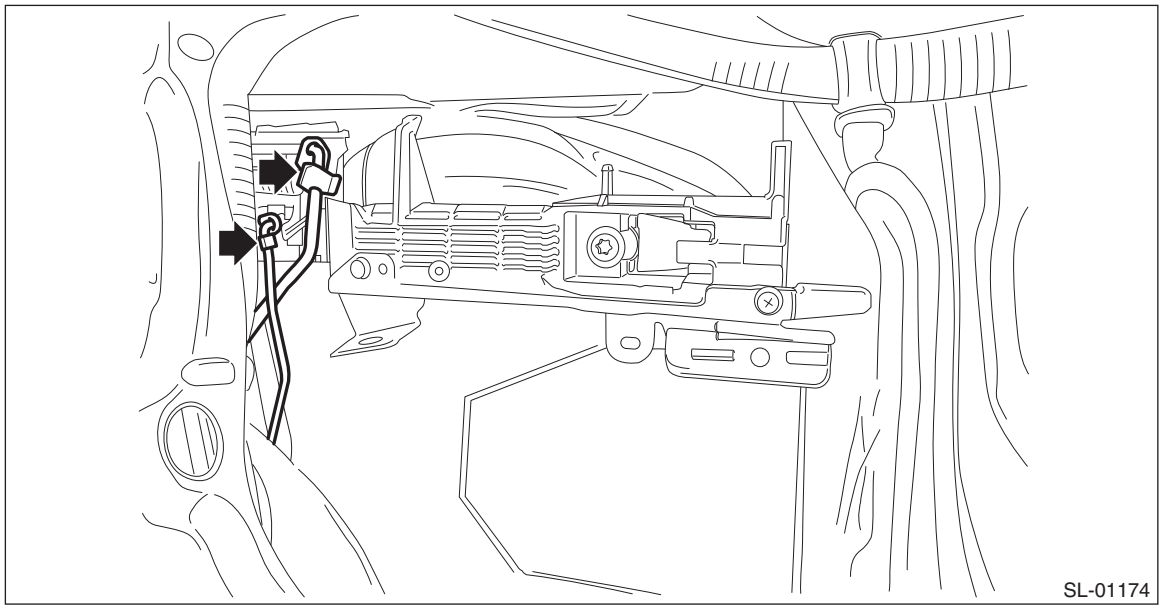
1. FRONT DOOR

1) Raise the front door glass to the top position.
2) Remove the door trim. <Ref. to EI-60, FRONT DOOR, REMOVAL, Door Trim.>
3) Remove the sealing cover.

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



4) Release the rod from the rod clamp of outer handle.

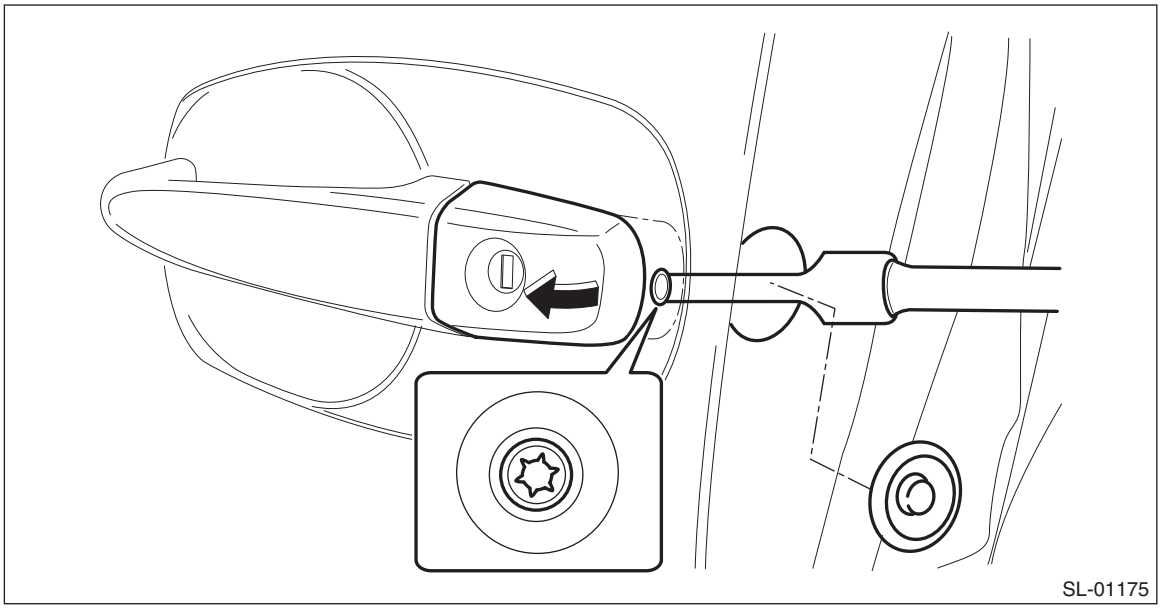


5) Remove the door outer handle cover.

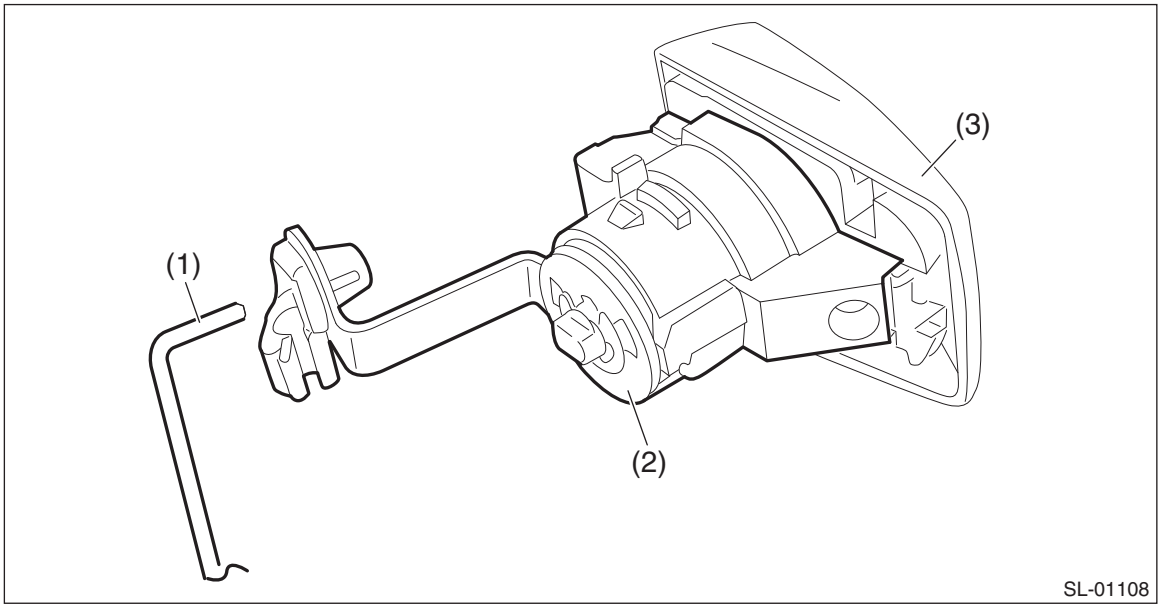
Preparation tool: TORX® T30

(1) Remove the plug to the rear of the door panel.

(2) Loosen the TORX® bolt and remove the door outer handle cover.



6) Remove the key cylinder from the door outer handle cover, and replace the key cylinder.

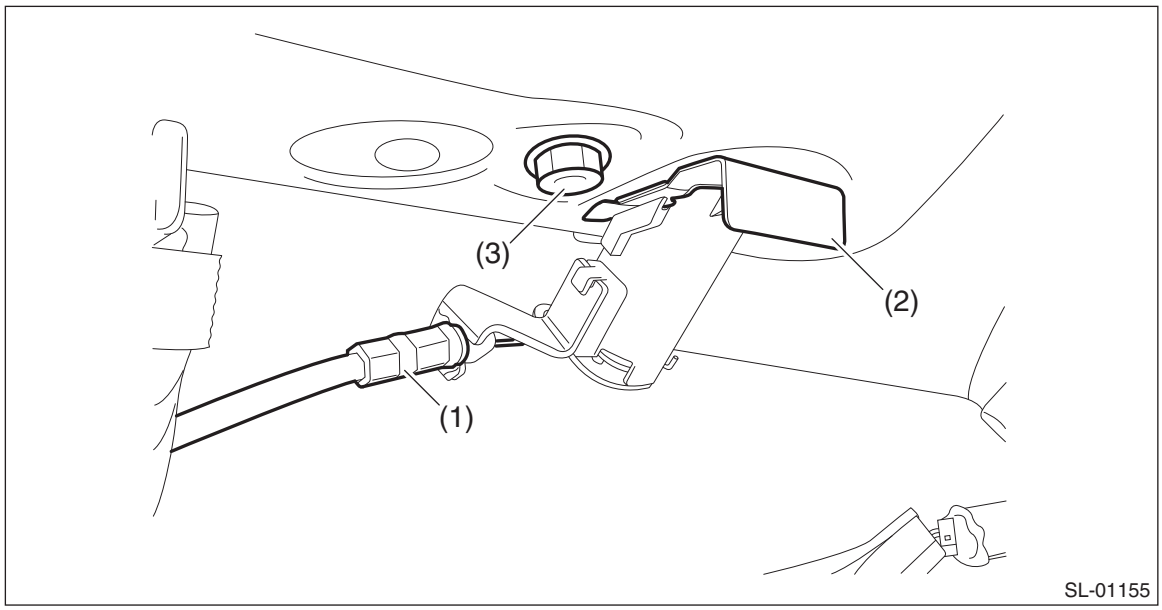


(1) Latch connection rod
(2) Key cylinder
(3) Door outer handle cover (driver's seat only)

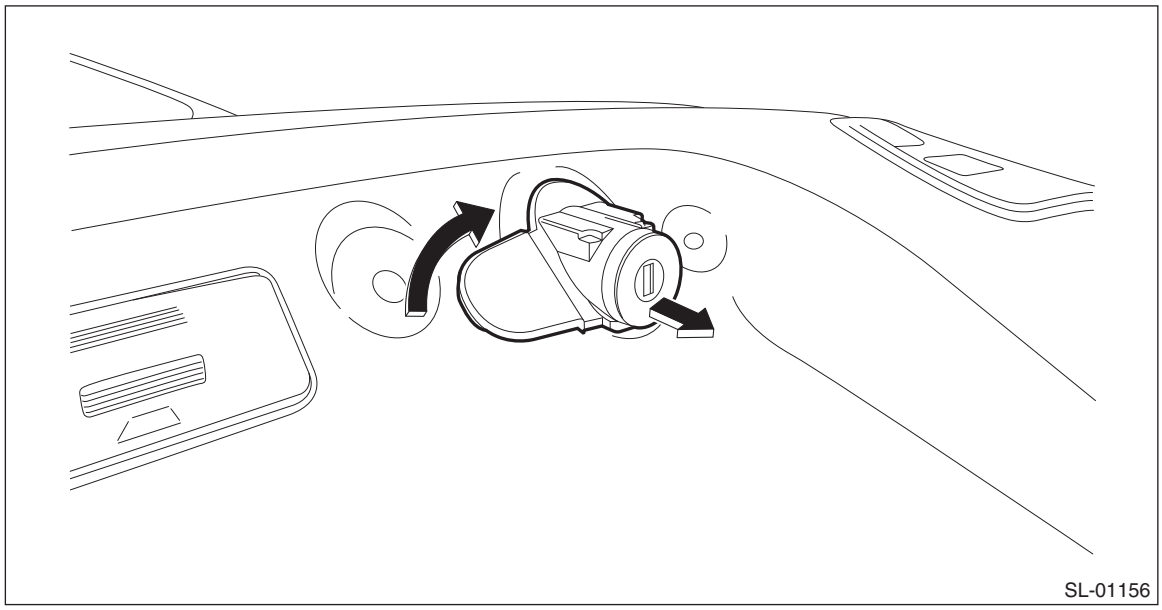
Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SL-2, DOOR LOCK ASSEMBLY, COMPONENT, General Description.>

2. TRUNK LID

1) Remove the trunk lid trim. <Ref. to EI-127, TRUNK LID TRIM, REMOVAL, Trunk Room Trim.>
2) Remove the key cylinder.
   (1) Remove the cable (1), clip (2) and bolt (3).



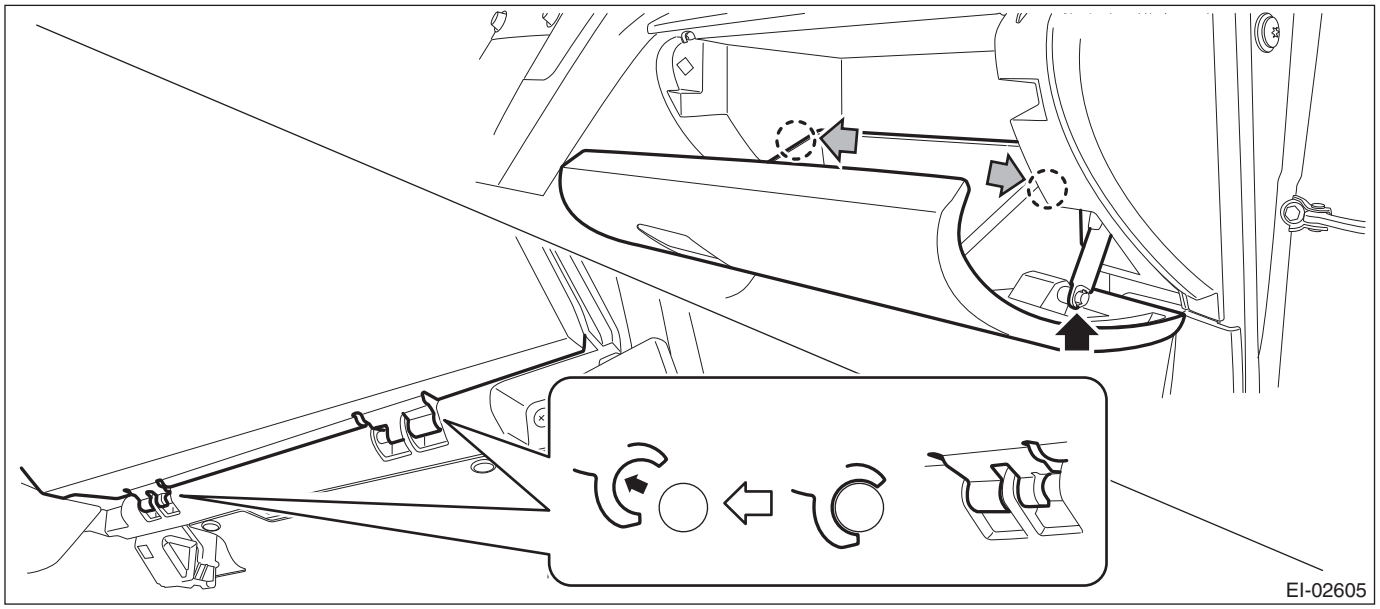
   (2) Remove the key cylinder from the trunk lid, and replace the key cylinder.



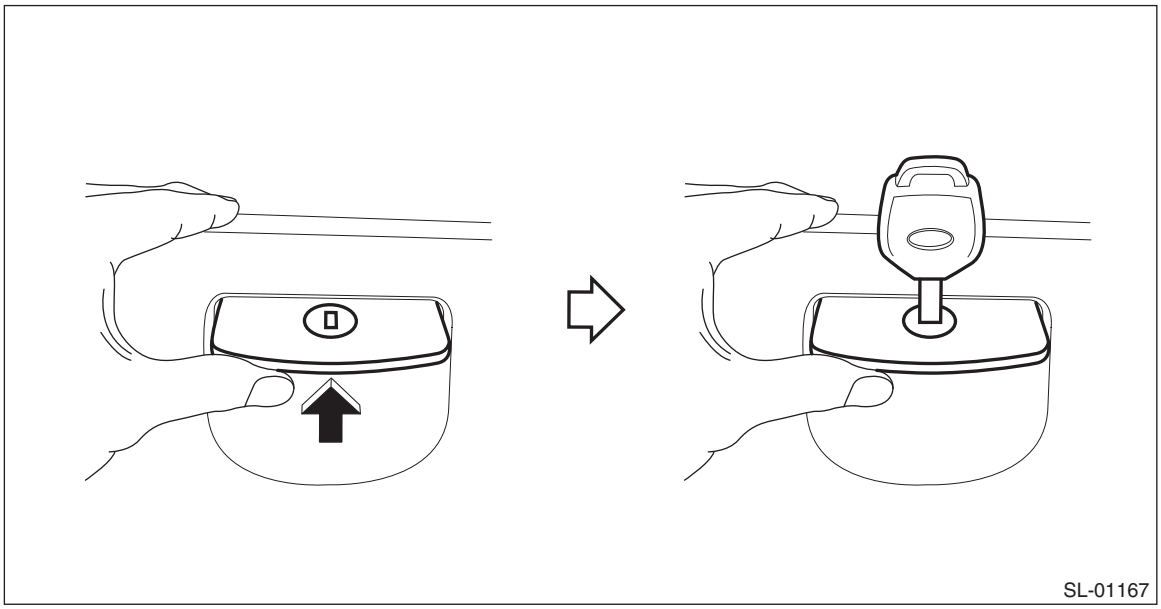
Tightening torque:
Key cylinder: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

3. GLOVE BOX LID

1) Remove the glove box lid assembly.
   (1) Remove the glove box damper.
   (2) Release the stoppers and remove the glove box lid assembly by pulling it toward you.

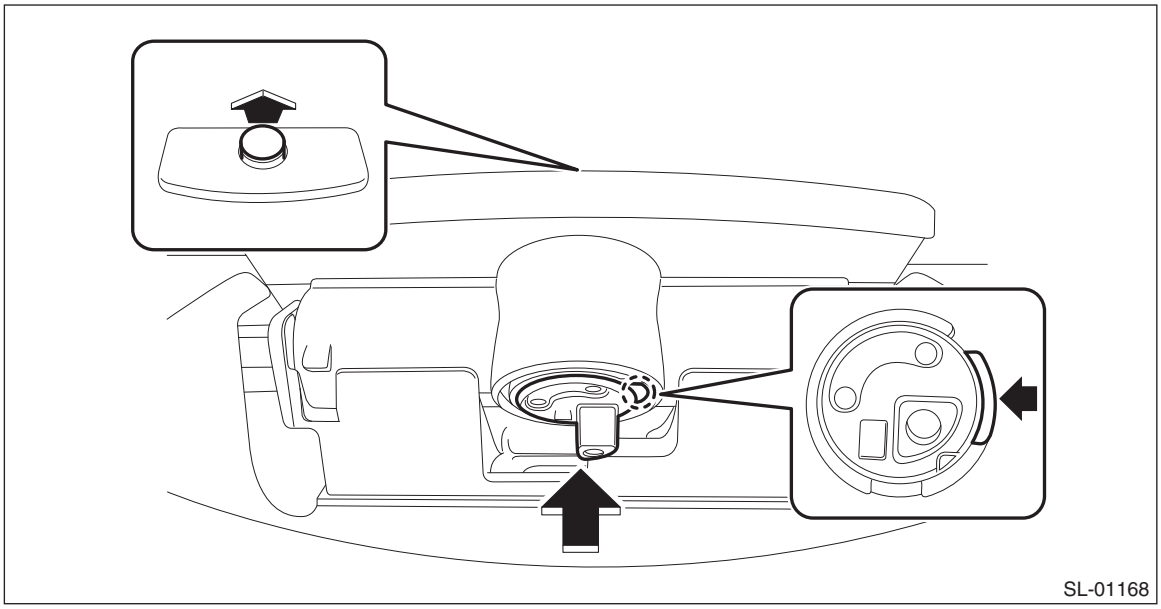


2) Remove the key cylinder.
   (1) UNLOCK the key cylinder, and pull up the lock knob.
   (2) While maintaining the condition (1), insert the key to set LOCK condition.



   (3) Push out the key cylinder, while pressing in the metal plate.

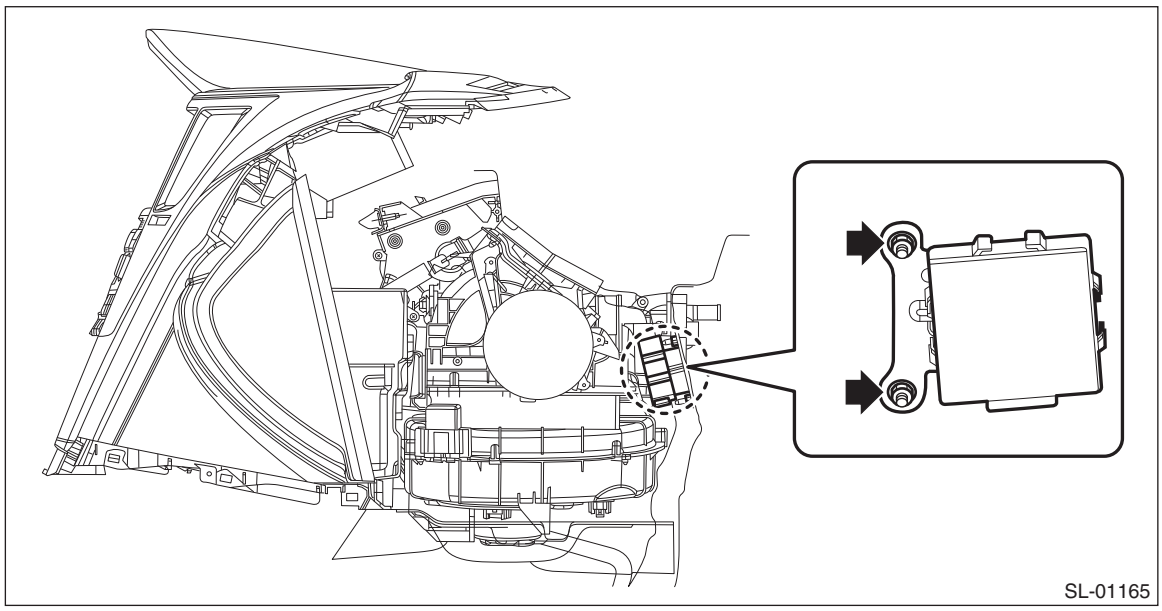
(4) Remove the key cylinder from lock knob, and replace the key cylinder.



20.Security Control Module

A: REMOVAL

1) Remove the heater and cooling unit. <Ref. to AC-54, REMOVAL, Heater and Cooling Unit.>
2) Remove the security control module.
   (1) Disconnect the connector.
   (2) Remove the nuts, and remove the security control module.



B: INSTALLATION

Install each part in the reverse order of removal.

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

21.Impact Sensor

A: REMOVAL

1) Remove the key from ignition switch.
2) Close all the doors and rear gate.
3) Press the UNLOCK button of the keyless transmitter.
4) Disconnect the ground cable from battery.
5) Remove the impact sensor.
6) Change the impact sensor setting using the Subaru Select Monitor.

B: INSTALLATION

1) Remove the key from ignition switch.
2) Close all the doors and rear gate.
3) Press the UNLOCK button of the keyless transmitter.
4) Disconnect the ground cable from battery.
5) Install the impact sensor.
6) Change the impact sensor setting using the Subaru Select Monitor.

C: OPERATION

1. IMPACT SENSOR SETTING USING SUBARU SELECT MONITOR

1) Prepare the Subaru Select Monitor kit.
2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”.
3) On «System Selection Menu» display, select {Integ. unit mode}.
4) Select {ECM customizing}.
5) Perform impact sensor ON/OFF setting.
- Installed: ON
- Removed: OFF

6) Perform impact sensor ON/OFF setting.
- Installed: ON
- Removed: OFF

7) Turn the ignition switch to OFF and remove the Subaru Select Monitor.

D: ADJUSTMENT

1. CHECK IMPACT SENSOR

1) Remove the key from ignition switch.
2) Close all windows.
3) Close all the doors and rear gate. Leave the front hood open.
4) Press the LOCK button of the keyless transmitter from outside the vehicle.
5) After 30 seconds, check if the security indicator light blinks twice in 0.5 second at 2 seconds intervals.
6) For all glasses, hit the glass strongly and consecutively to see if the security alarm operates. In addition, lift the front hood by approximately 12 cm (4.7 in) or more and let it drop by its weight to see if the security alarm operates.
7) If it does not operate, adjust the impact sensitivity.

2. IMPACT SENSITIVITY ADJUSTMENT

1) Prepare the Subaru Select Monitor kit.
2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”.
3) On «System Selection Menu» display, select {Impact Sensor}.
4) Execute the {Sensitivity Adjustment Mode}.
- The sensitivity can be adjusted in 11 levels from 0 to 10.
- The initial value is 5.
- A smaller number indicates a higher sensitivity.
- A larger number indicates a lower sensitivity.

5) Turn the ignition switch to OFF and remove the Subaru Select Monitor.

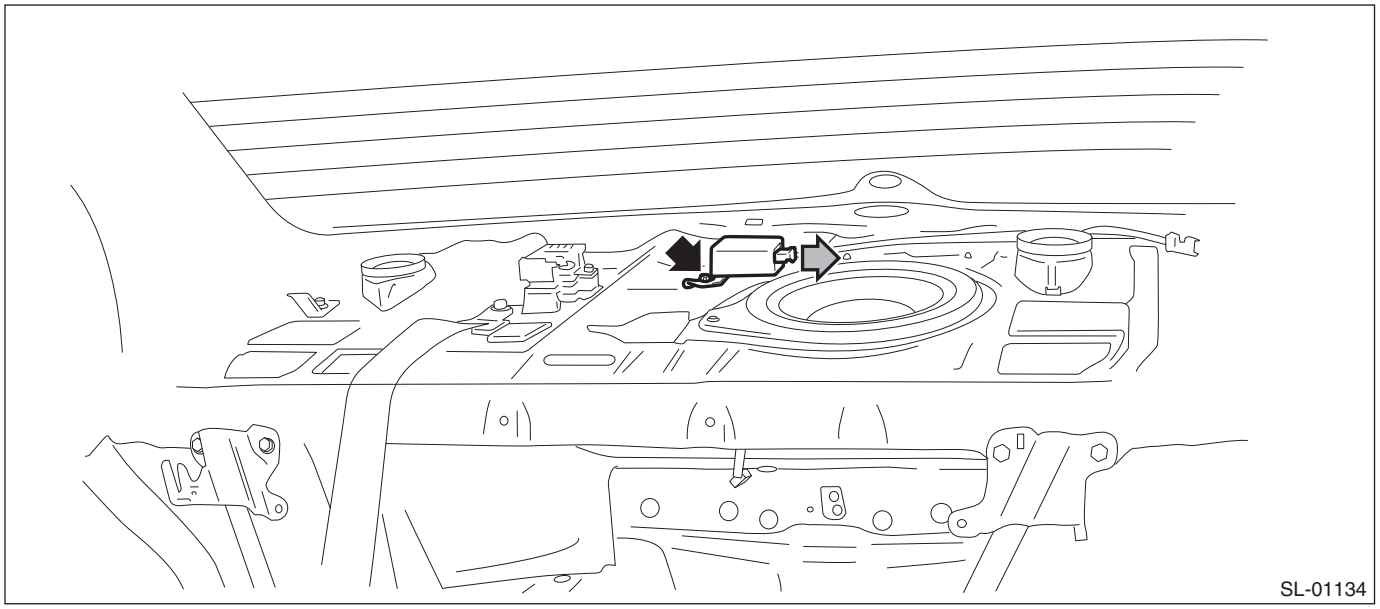
NOTE:
- Make sure that the sensitivity is set to an appropriate level so that any minor vibration typically experienced on a daily basis, such as a person leaning over a door or a ball hitting vehicle lightly, will not activate the alarm.
- The alarm should respond to significant vibrations that suggest a violence by a theft such as window glasses or doors being hit strongly and consecutively.
- The alarm may respond to substantial vibrations even though they do not mean any theft behavior, for example, road construction, multi-story parking space, train passing, vehicle getting on a ferry. Therefore, when adjusting the sensitivity, consult the customer to confirm the parking environment or other external conditions.
- If the sensitivity adjustment fails, the buzzer sounds four times. At that time, check the following points.
  - Error in CAN communication
  - Harness for open between body integrated unit and impact sensor
  - Body integrated unit, or impact sensor failure

22.Keyless Entry Control Module

A: REMOVAL

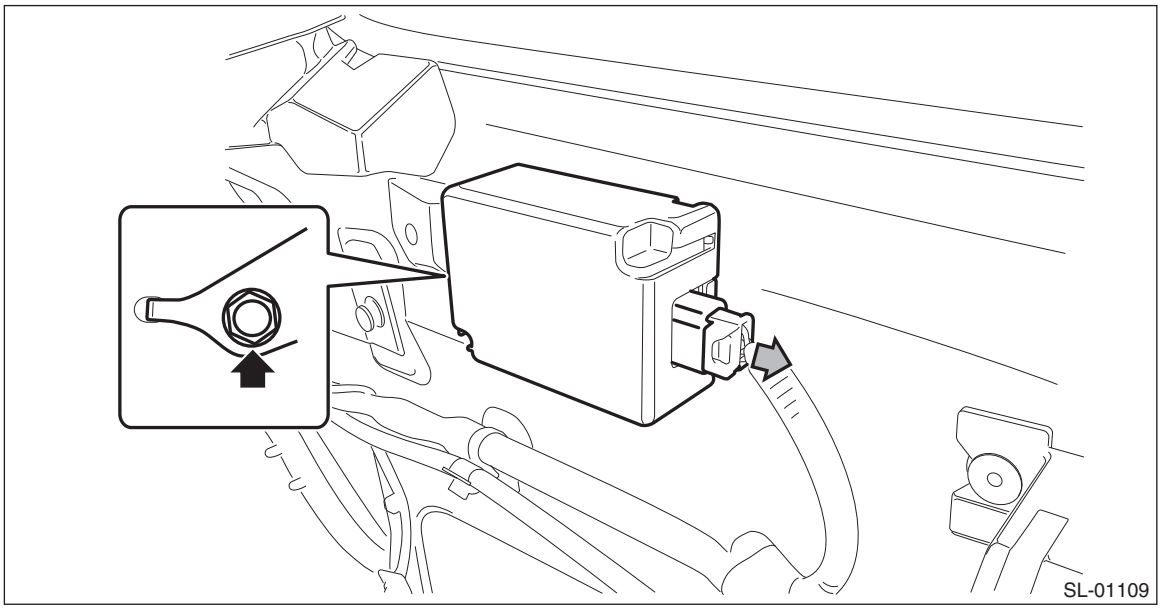
1. SEDAN MODEL

1) Disconnect the ground cable from battery.
2) Remove the rear shelf trim. <Ref. to EI-120, REMOVAL, Rear Shelf Trim.>
3) Remove the keyless entry control module.
   (1) Disconnect the connector.
   (2) Remove the bolt and remove the keyless entry control module.



2. OUTBACK MODEL

1) Disconnect the ground cable from battery.
2) Remove the rear quarter trim LH. <Ref. to EI-109, REMOVAL, Rear Quarter Trim.>
3) Remove the keyless entry control module.
   (1) Disconnect the connector.
   (2) Remove the bolt and remove the keyless entry control module.



B: INSTALLATION

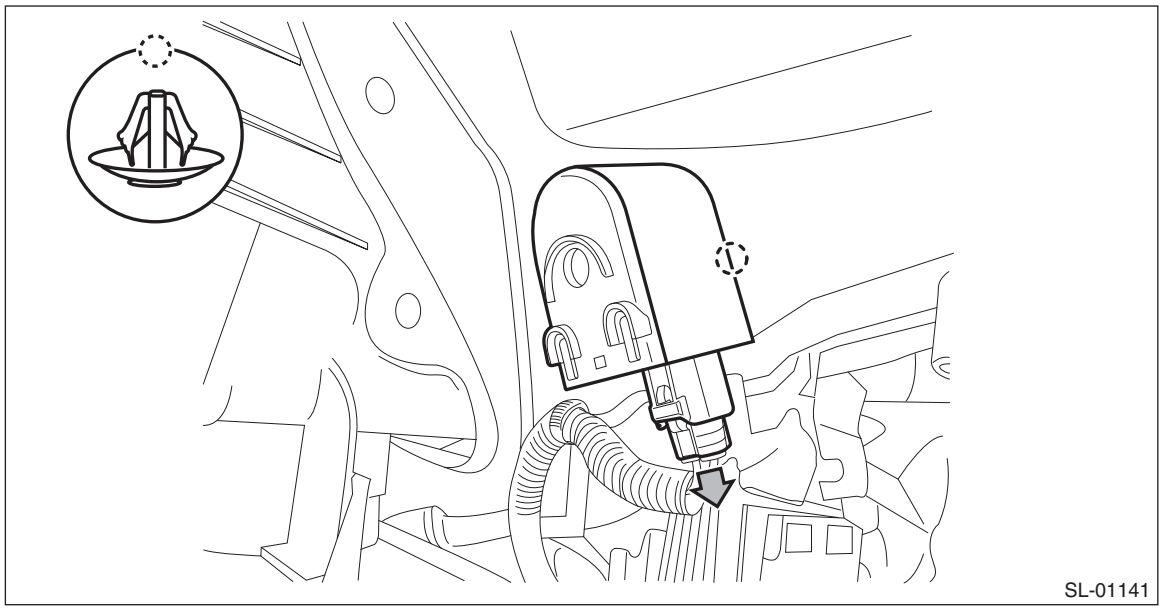
Install each part in the reverse order of removal.

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

23.Keyless Buzzer

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the front bumper face. <Ref. to EI-39, REMOVAL, Front Bumper.>
3) Remove the keyless buzzer.
   (1) Disconnect the connector.
   (2) Remove the clip, and remove the keyless buzzer.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

Using the Subaru Select Monitor, perform forced operation of the keyless buzzer. <Ref. to BC(diag)-20, OPERATION, User Customizing.>

NOTE:
If it does not sound, replace the keyless buzzer.

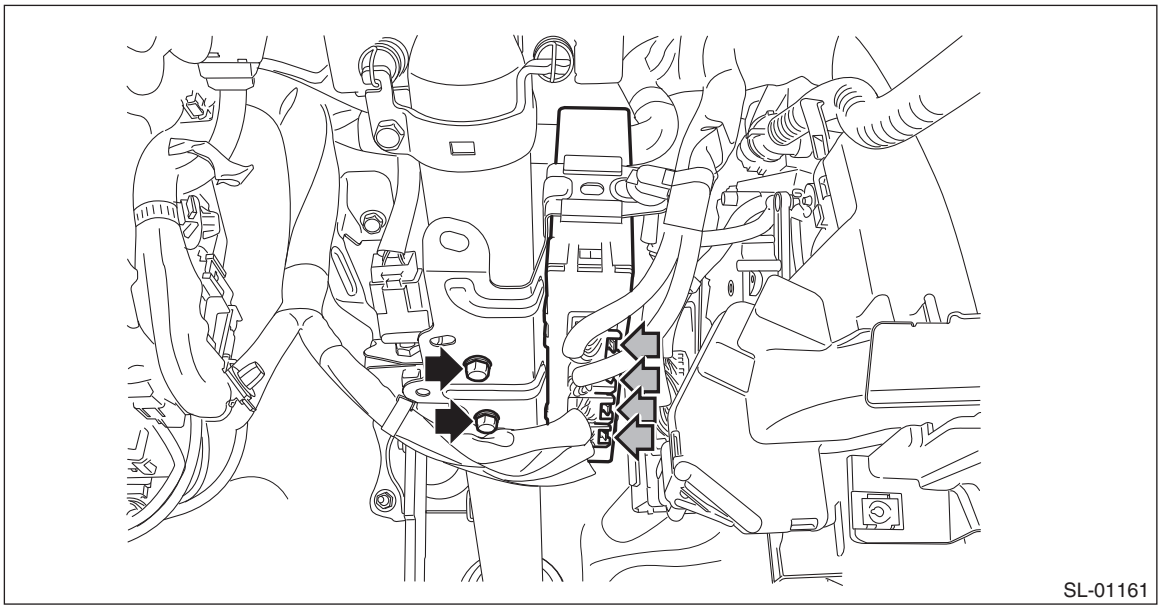
24.Body Integrated Unit

A: REMOVAL

NOTE:
1. When replacing the body integrated unit
   • Prepare the security ID plate.
   • When replacing the body integrated unit, check the current settings and record it. <Ref. to BC(diag)-15, LIST, Read Current Data.>
2. After replacing the body integrated unit
   • Register the immobilizer. For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”. (models with immobilizer)
   • Set the current settings as recorded.

1) Disconnect the ground cable from battery.
2) Remove the instrument panel lower cover. <Ref. to EI-63, REMOVAL, Instrument Panel Lower Cover.>
3) Remove the body integrated unit.

CAUTION:
Be careful to keep water and other foreign materials away from body integrated unit.
   (1) Disconnect the harness clip and connector.
   (2) Remove the bolts, and remove the body integrated unit.



B: INSTALLATION

Install each part in the reverse order of removal.

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

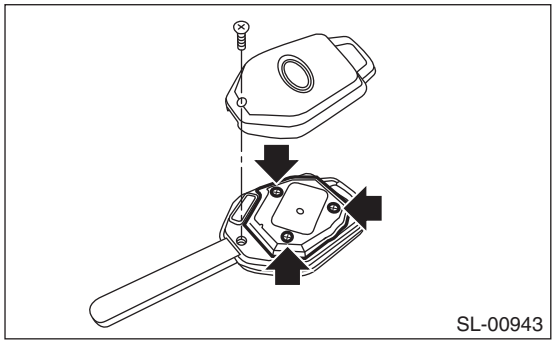
NOTE:
Make sure that there are no differences from the contents of the current settings after installation. <Ref. to BC(diag)-15, LIST, Read Current Data.>

25.Keyless Transmitter

A: REMOVAL

1. KEYLESS TRANSMITTER BATTERY

CAUTION:
To prevent static electricity damage to the keyless transmitter printed circuit board, touch the steel area of building with hand to discharge static electricity carried on body or clothes before disassembling the keyless transmitter.
Remove the screw from the keyless transmitter, then remove the keyless transmitter battery.


SL-00943

B: INSTALLATION

1. KEYLESS TRANSMITTER BATTERY

Install each part in the reverse order of removal.

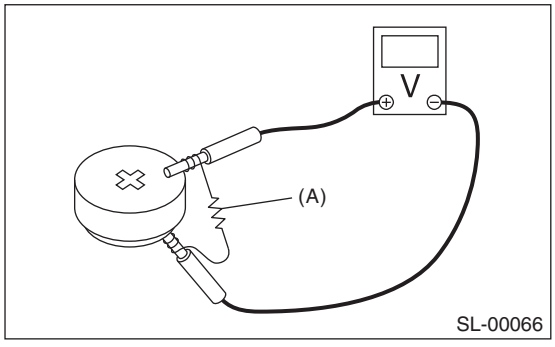
C: INSPECTION

1. KEYLESS TRANSMITTER BATTERY

Check the keyless transmitter battery voltage.

Preparation tool: Circuit tester

NOTE:
Complete the measurement within 5 seconds because the battery discharges during measurement.



SL-00066

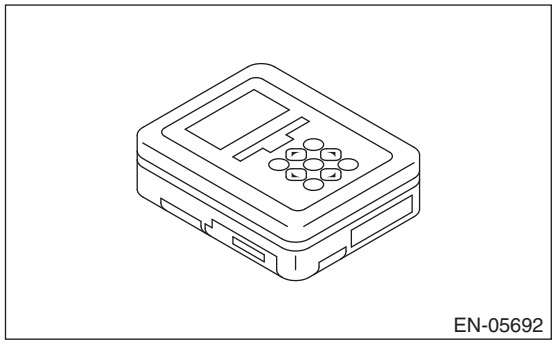
Battery terminal	Inspection Conditions	Specification
(+) — (–)	Connect resistor (A) 47 Ω	2.5 — 3.0 V

Replace the battery if the inspection result is not within the standard value. (Use CR1620 or equivalent.)

D: REPLACEMENT

1. REGISTRATION OF KEYLESS TRANSMITTER WITH SUBARU SELECT MONITOR

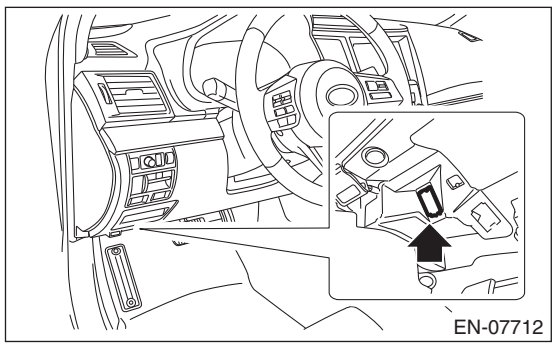
NOTE:
• A maximum of four keyless transmitter can be registered for each individual vehicle.
• When replacing or adding the keyless transmitter, new registration of transmitter is necessary.
1) Prepare the Subaru Select Monitor kit. <Ref. to SL-7, SPECIAL TOOL, PREPARATION TOOL, General Description.>


EN-05692

2) Prepare PC with Subaru Select Monitor installed.
3) Connect the USB cable to SDI (Subaru Diagnosis Interface) and USB port on the personal computer (dedicated port for the Subaru Select Monitor).

NOTE:
The dedicated port for the Subaru Select Monitor means the USB port which was used to install the Subaru Select Monitor.
4) Connect the diagnosis cable to SDI.
5) Connect SDI to data link connector located in the lower portion of the instrument panel (on the driver's side).

CAUTION:
Do not connect scan tools other than the Subaru Select Monitor.


EN-07712

6) Start the PC.
7) Turn the ignition switch to ON (engine OFF) and run the "PC application for Subaru Select Monitor".

8) On the «Main Menu» of the Subaru Select Monitor, select the {Each System Check} → {Integ. unit mode} → {Keyless ID registration}.
9) Input the 8-digit ID number attached to the tag plate of the transmitter or inside the transmitter, from left to right. Press the [OK] key.
10) The ID number you have entered will be shown. Make sure that the ID number shown is the same as that of plastic bag or inside of transmitter.
11) Press the [OK] key if the ID number is correct. Press the [EXIT] key if incorrect, to return to the step 3) and enter the ID number again.
12) «ID is being registered···» is displayed and registration starts.
13) «ID registration done » will be displayed when the registration process is done.
14) To exit, select «Quit: NO» to return to {Keyless ID registration}. If there are additional keyless transmitters to be registered, select «The following are registered: OK» to return to the step 4).

NOTE:
• If the registration fails, «ID cannot register. Try again.» will be shown. Select the [OK] key to return to the {Keyless ID registration}. And retry from the step 3).
• «Quit: NO» is shown on the Subaru Select Monitor when fourth keyless transmitter has been registered. Select the [NO] key to return to {Keyless ID registration}.

26.Immobilizer Control Module

A: NOTE

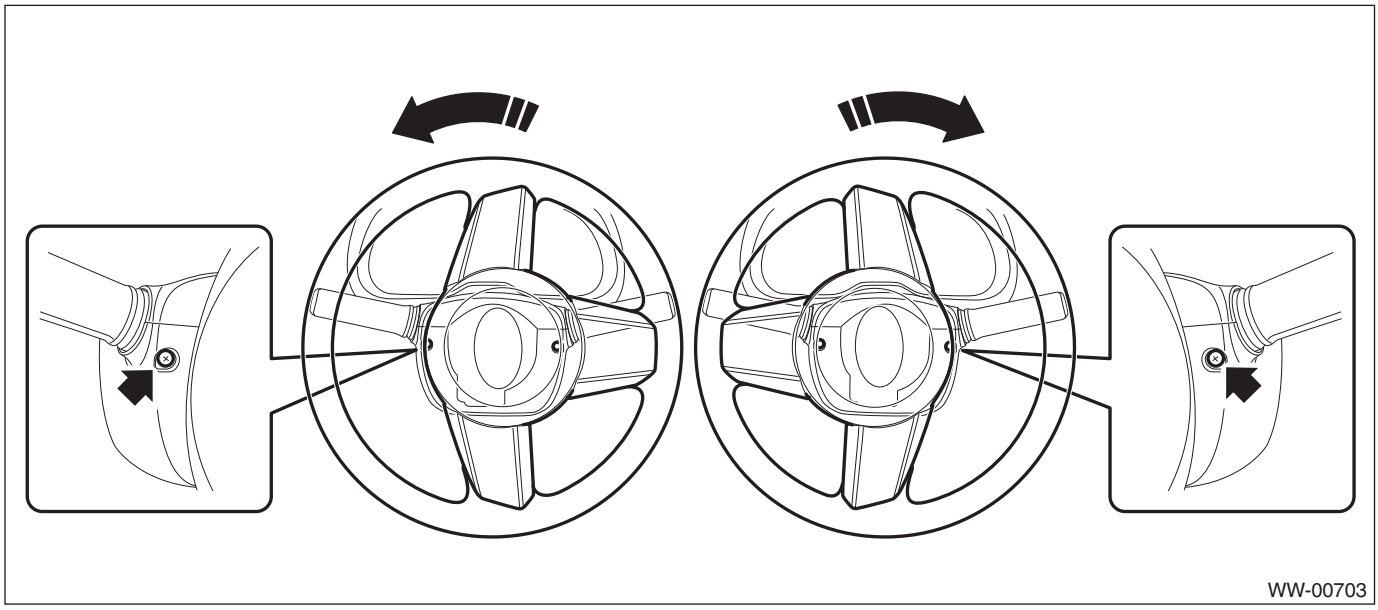
The control of immobilizer system is carried out in body integrated unit. For the detailed procedure, refer to the section of body integrated unit.

- Removal:<Ref. to SL-72, REMOVAL, Body Integrated Unit.>
- Installation:<Ref. to SL-72, INSTALLATION, Body Integrated Unit.>

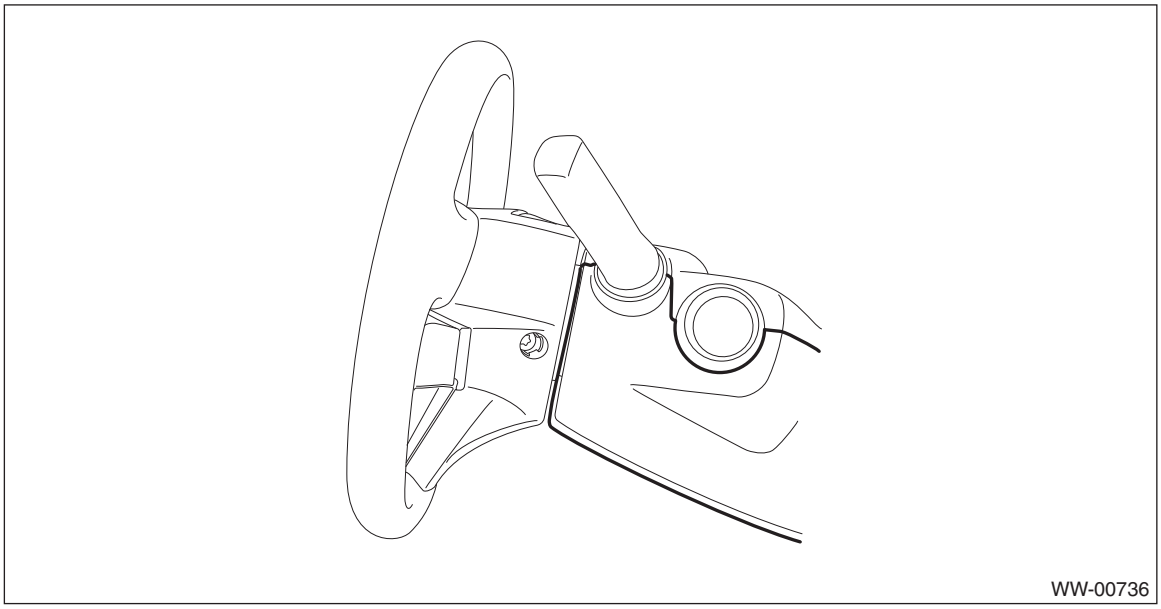
27.Immobilizer Antenna

A: REMOVAL

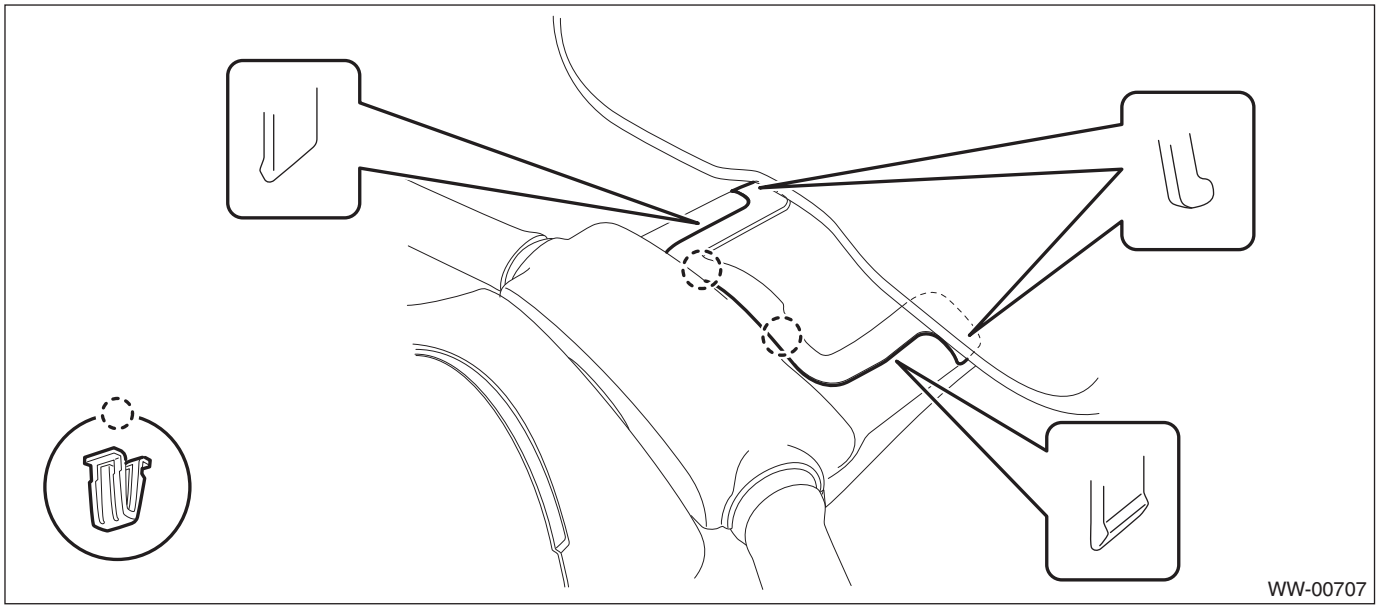
1) Disconnect the ground cable from battery.
2) Remove the steering column cover.
   (1) Remove the screws by turning the steering wheel to right and left.



   (2) Release the claws and remove the steering column lower cover.



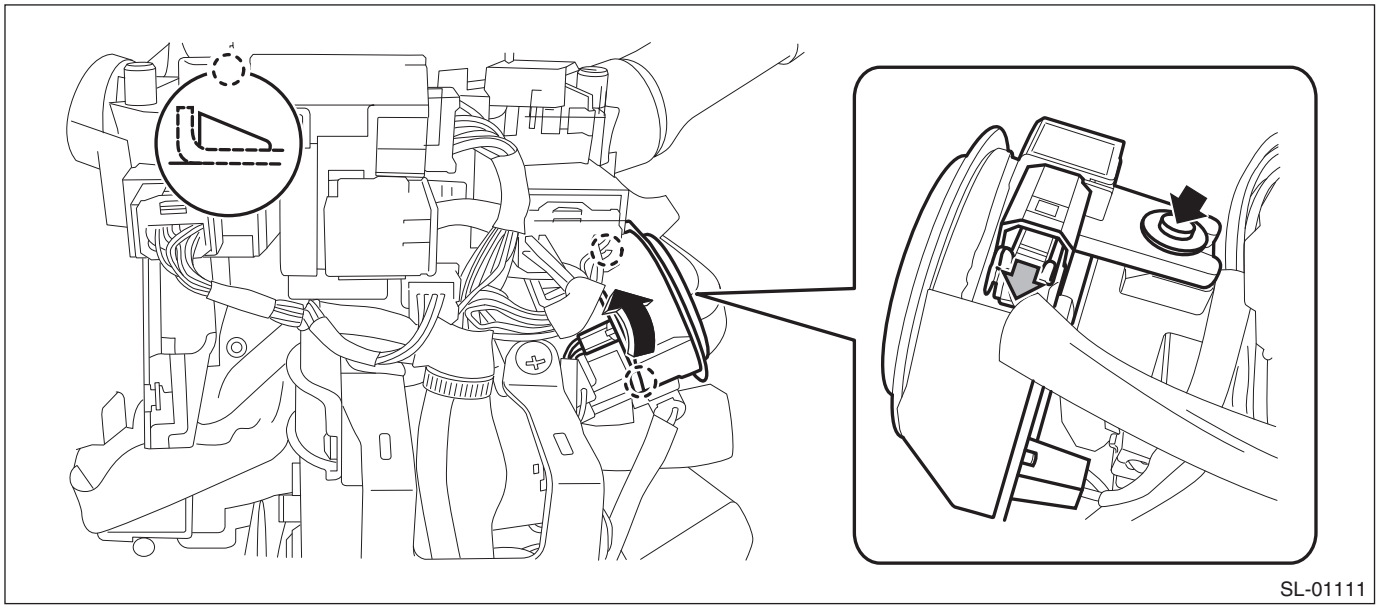
(3) Separate the steering column upper cover and steering upper cover, and remove the steering column upper cover.



3) Remove the immobilizer antenna.

CAUTION:
Do not apply excessive force to remove the immobilizer antenna and lock. Otherwise they may be broken because those parts are the products made of a plastic.

(1) Disconnect the connector and remove the screw.
(2) Remove the ignition illumination light and release the claws, then detach the immobilizer antenna.

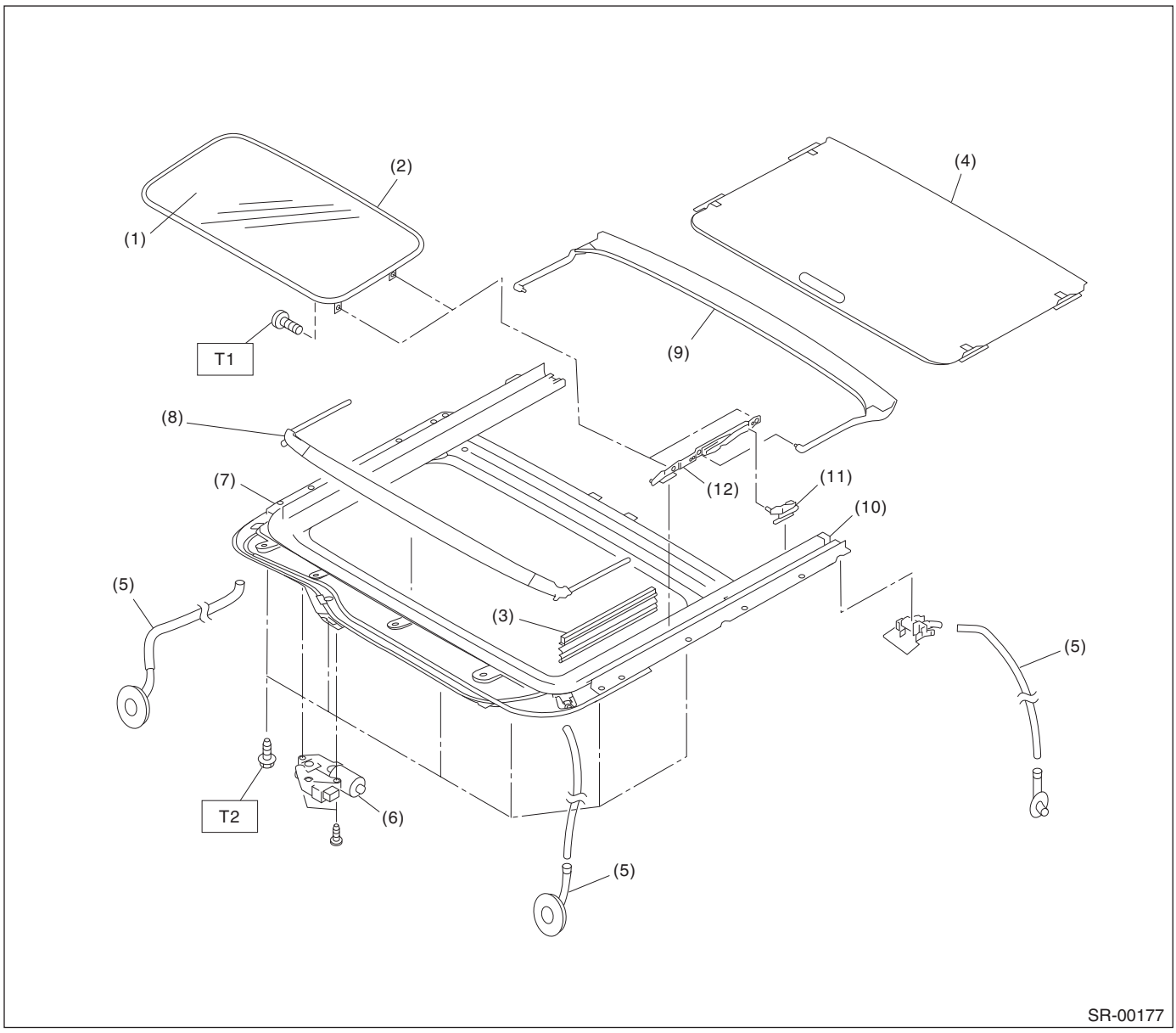


B: INSTALLATION

Install each part in the reverse order of removal.

1. General Description

A: COMPONENT



(1)	Glass lid	(7)	Frame ASSY
(2)	Weather strip	(8)	Deflector
(3)	Lid cover	(9)	Drain plate
(4)	Sunshade	(10)	Stopper rubber
(5)	Drain tube	(11)	Link ASSY
(6)	Motor ASSY	(12)	Lid bracket

Tightening torque:N·m (kgf-m, ft-lb)
T1: 4.5 (0.46, 3.3)
T2: 6.0 (0.61, 4.4)

B: CAUTION

• Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When replacing the radio, control module, and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
• Reassemble the parts in the reverse order of disassembly unless otherwise indicated.
• Adjust parts to the given specifications.
• Connect the connectors securely when reassembling.
• After reassembly, make sure that the functional parts operate normally.

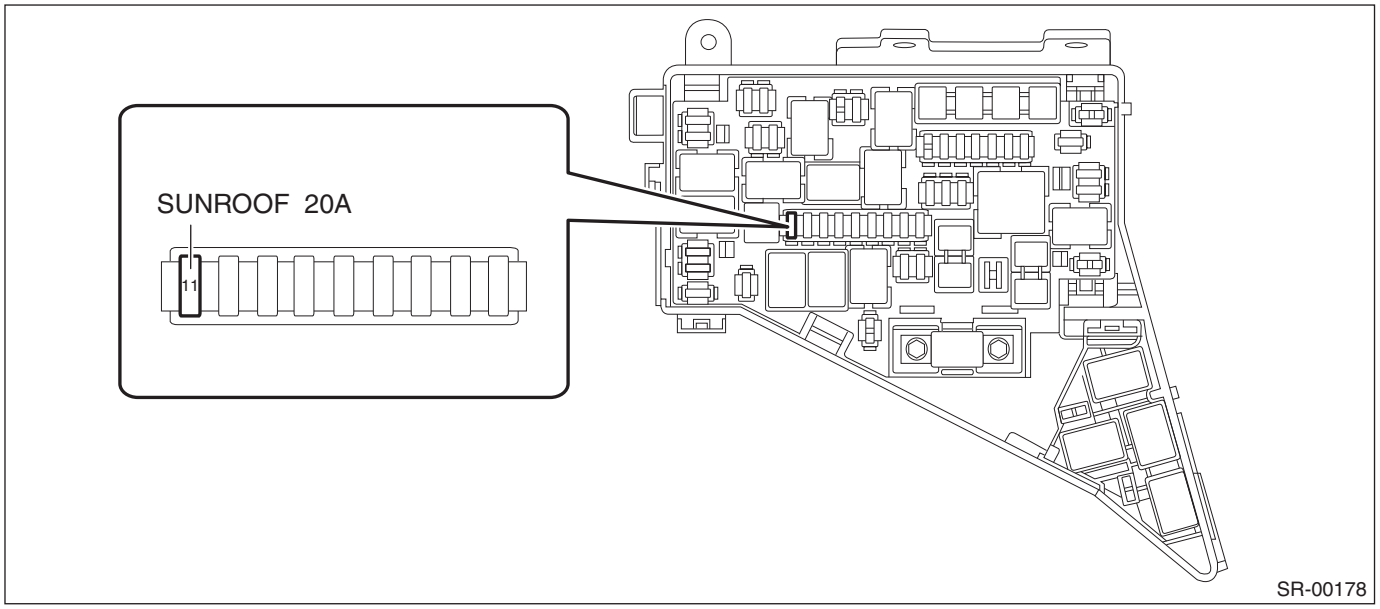
C: PREPARATION TOOL

1. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
Hexagon wrench	Used for forcedly driving the sunroof motor.

2. Relay and Fuse

A: LOCATION



B: INSPECTION

1. CHECK FUSE.

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

3. Sunroof Control System

A: WIRING DIAGRAM

Refer to “Sunroof Control System” in the wiring diagram. <Ref. to WI-219, WIRING DIAGRAM, Sunroof Control System.>

B: INSPECTION

Symptoms	Inspection steps
Water leakage	1. Check roof panel and glass lid for improper or poor sealing. 2. Check drain tube for clogging. 3. Check sunroof frame seal and body for improper fit.
Booming noise, wind noise and other noise	1. Check glass lid and roof panel for improper clearance. 2. Check sunshade and roof trim for improper clearance.
Abnormal motor noise	1. Check installing part of motor for looseness. 2. Check gears and bearings for wear. 3. Check cable for wear. 4. Check cable pipe for deformities.
Failure of sunroof (Motor operates properly.)	1. Check guide rail for foreign particles. 2. Check guide rail for improper installation. 3. Check parts for mutual interference. 4. Check cable slider for improper clinching. 5. Check cable for improper installation.
Motor does not rotate or rotate improperly.	1. Check fuse for blown out. 2. Check switch for improper function. 3. Check motor for incorrect terminal voltage. 4. Check the relay for improper operation. 5. Check harness for open or short and terminals for poor connections.
Failure turn of glass lid	Check guide rail for foreign particles.

- Failure turn of glass lid while driving rough road.

Glass lid has auto-reverse function. When specified or more force is applied to the glass lid, the lid turns back and stops. When operating the glass lid (open or close) while driving the rough road, the lid judges vibration as a force and may causes failure turns. When the failure turn is occurred, need to perform the initialize operation with following procedure.

C: OPERATION

1. INITIALIZE OPERATION

NOTE:
When initialize operation is performed, it is necessary to press the switch repeatedly as it operates for only at the moment when the switch is pressed, even when the switch is held down.
1) Press the slide switch to close the glass lid completely.
2) Press the slide switch again and tilt up the glass lid to lock.
3) Press the slide switch for more than 0.3 seconds.
4) Initialize operation is completed.

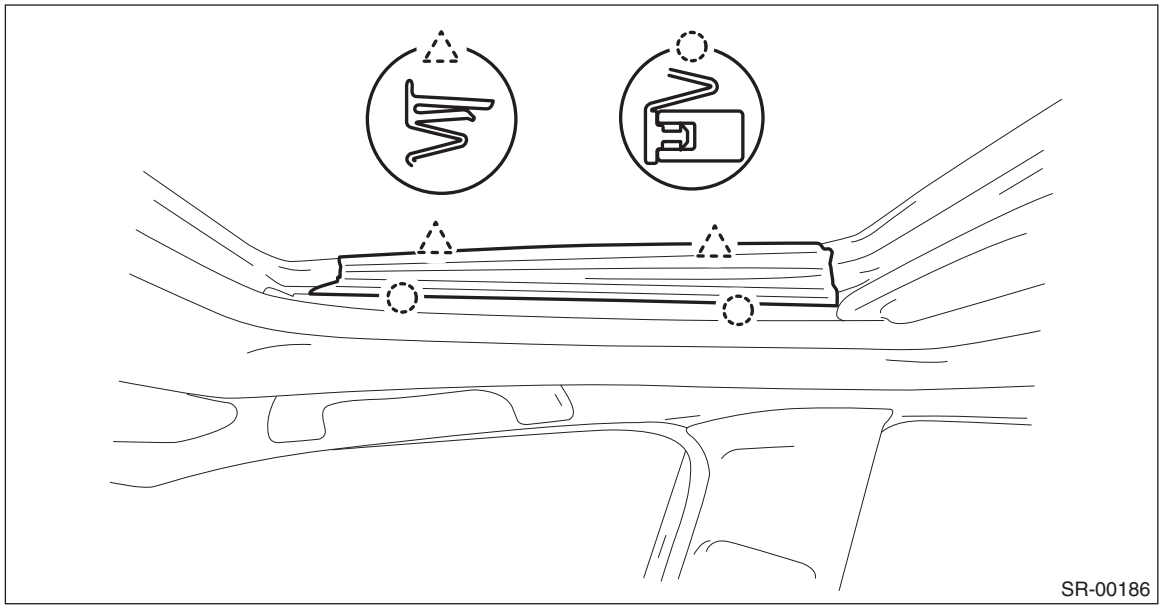
D: NOTE

For operation procedures of each component of the sunroof control system, refer to the respective section.
- Glass lid:<Ref. to SR-6, Glass Lid.>
- Sunroof assembly:<Ref. to SR-9, Sunroof Assembly.>
- Sunroof motor:<Ref. to SR-14, Sunroof Motor.>
- Sunroof switch:<Ref. to SR-16, Sunroof Switch.>
- Sunshade:<Ref. to SR-18, Sunshade.>

4. Glass Lid

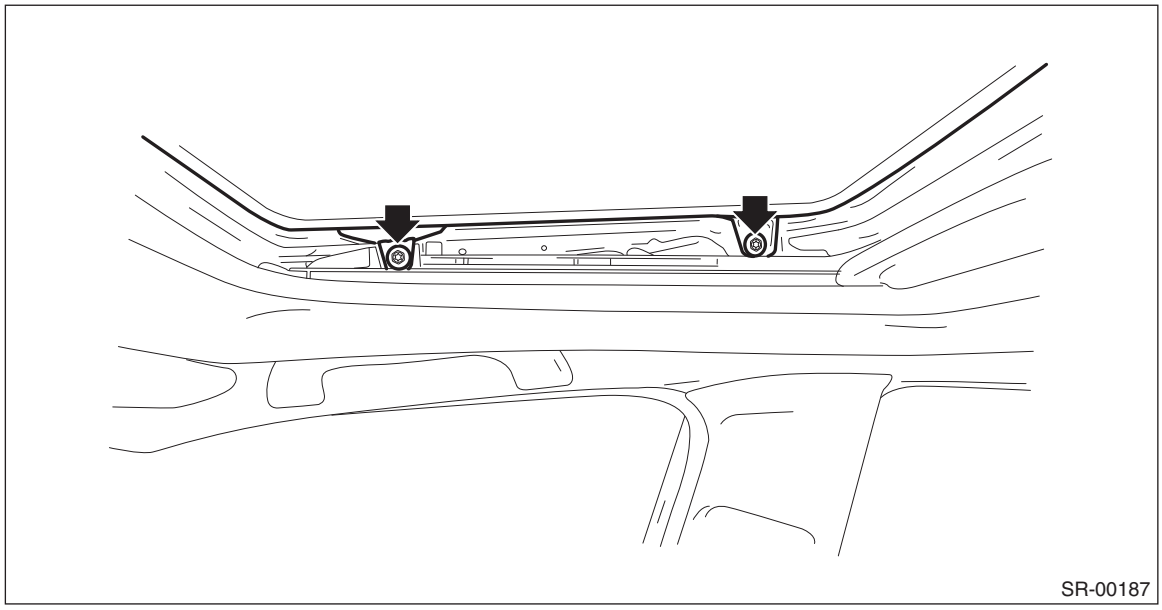
A: REMOVAL

1) Completely close the glass lid, and then open the sunshade.
2) Disconnect the claws and then remove the lid cover.



3) Remove the bolts, then remove the glass lid.

CAUTION:
Be careful not to damage the glass lid.



B: INSTALLATION

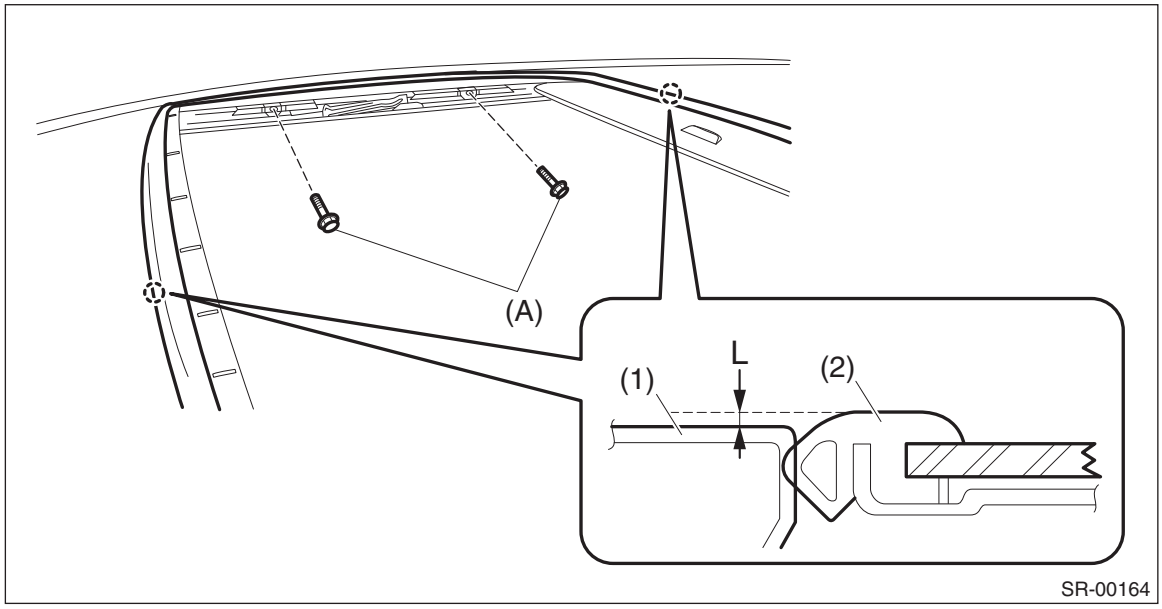
Install each part in the reverse order of removal.

C: ADJUSTMENT

Adjust the height of the glass lid and roof panel.

- Loosen the glass lid mounting bolts (A), and then adjust the height with moving the lid side.

Difference in height between weather strip and roof panel L:
0±1.0 mm (0±0.04 in)



(1) Roof panel
(2) Weather strip

D: FORCED DRIVE

If the glass lid does not operate or the sunroof motor is not supplied with power, move the glass lid using the hexagon wrench.

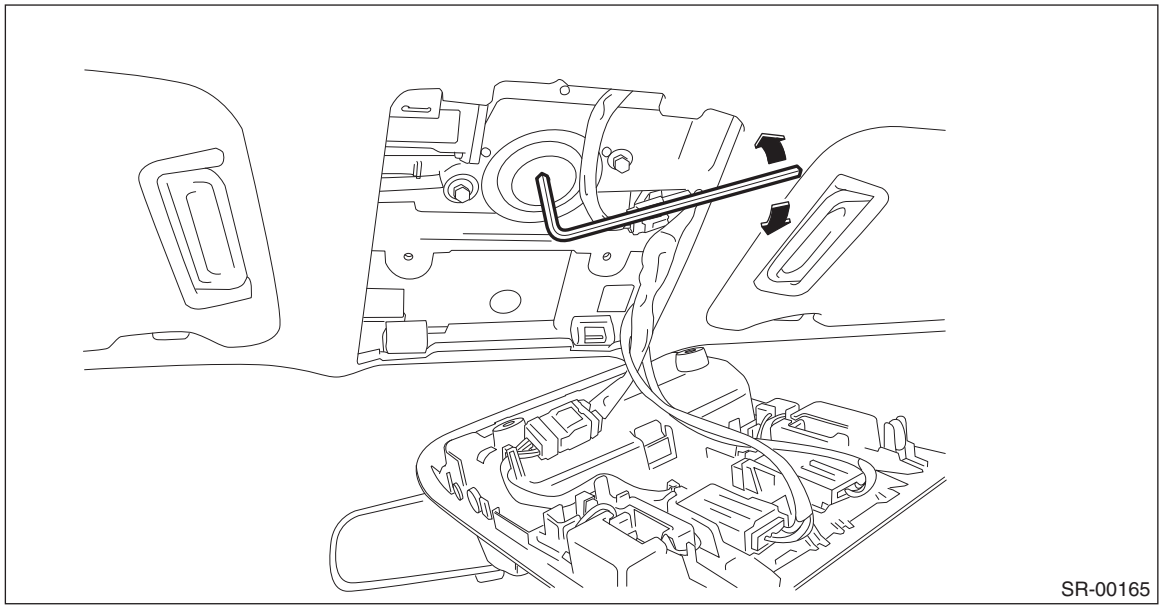
Width across flat 5 mm (0.20 in)

CAUTION:
After a forced operation, make sure to perform an initialize operation. <Ref. to SR-5, INITIALIZE OPERATION, OPERATION, Sunroof Control System.>

1) Remove the spot map light. <Ref. to LI-62, REMOVAL, Spot Map Light.>
2) Insert the hexagon wrench securely until it touches the motor shaft edge.
3) Turn the hexagon wrench, and move the glass lid.

- Turning right, the glass lid open.
- Turning left, the glass lid close.

CAUTION:
Be careful not to damage the adjacent parts with the rod end when moving the glass lid with the hexagon wrench.

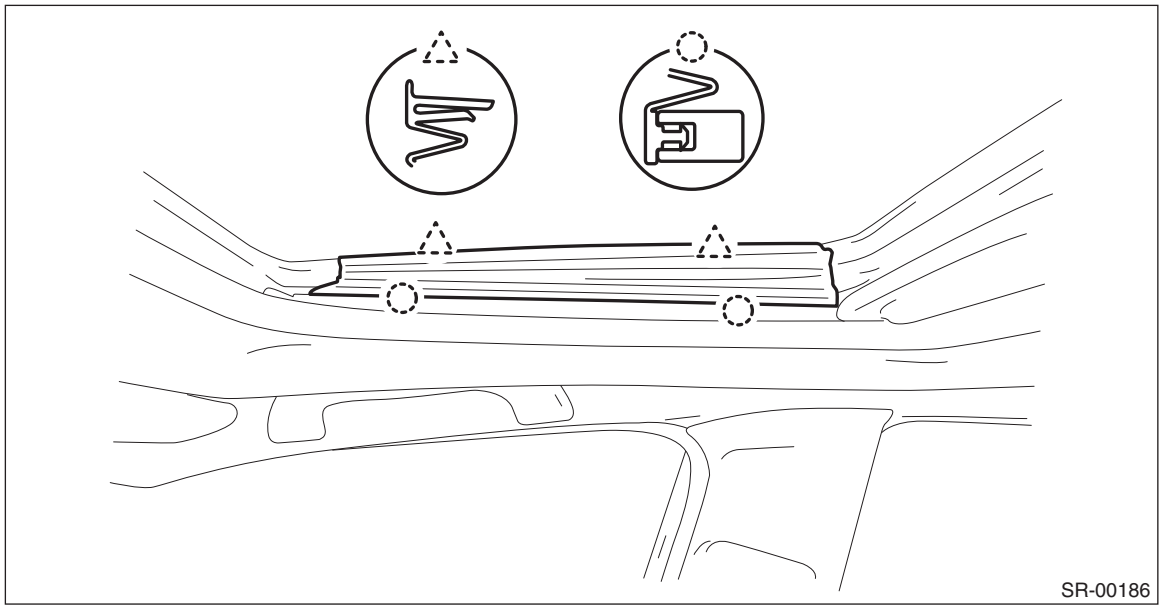

SR-00165

5. Sunroof Assembly

A: REMOVAL

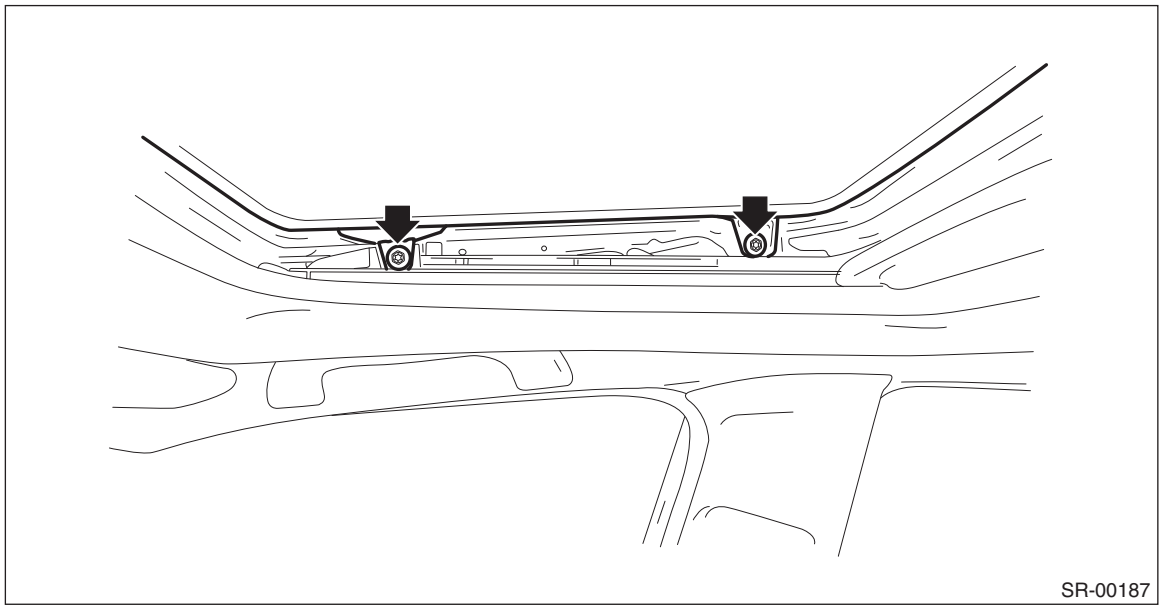
CAUTION:
When removing the clip, use great care not to damage the roof trim.

1) Remove the glass lid.
   (1) Completely close the glass lid, and then open the sunshade.
   (2) Disconnect the claws and then remove the lid cover.



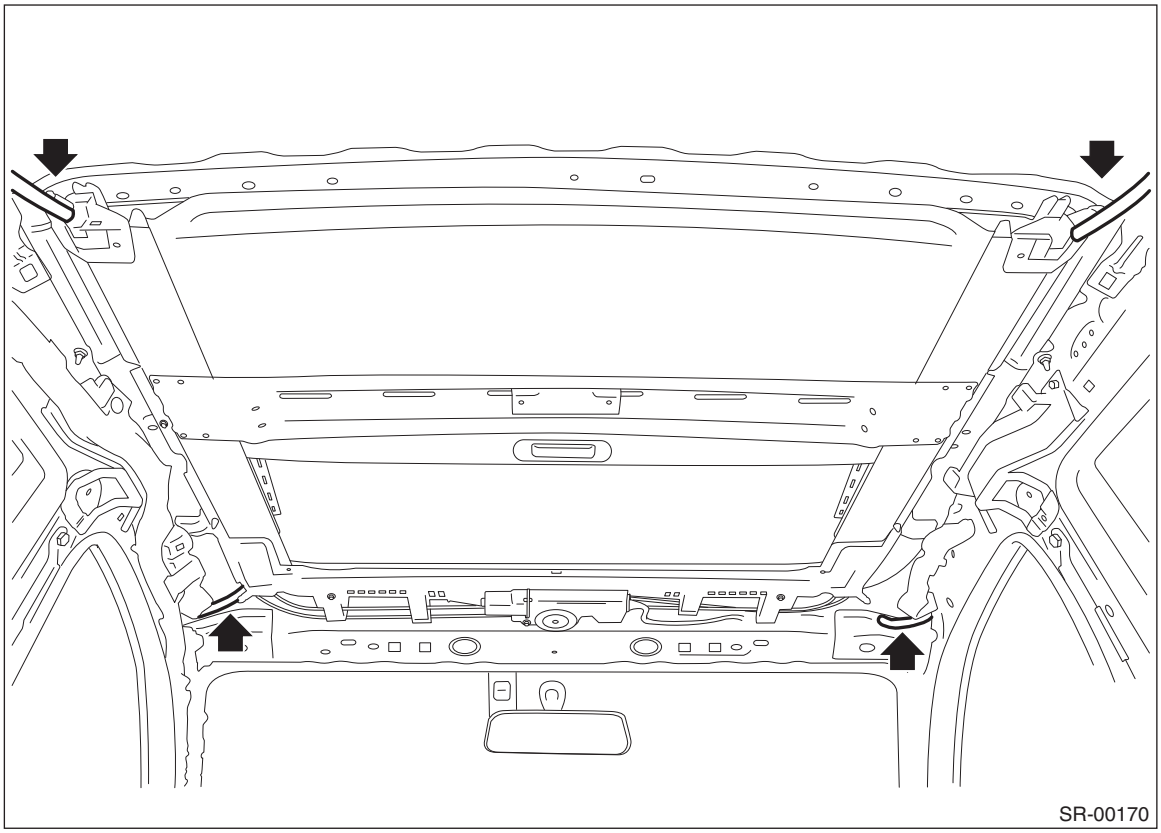
   (3) Remove the bolts, then remove the glass lid.

CAUTION:
Be careful not to damage the glass lid.

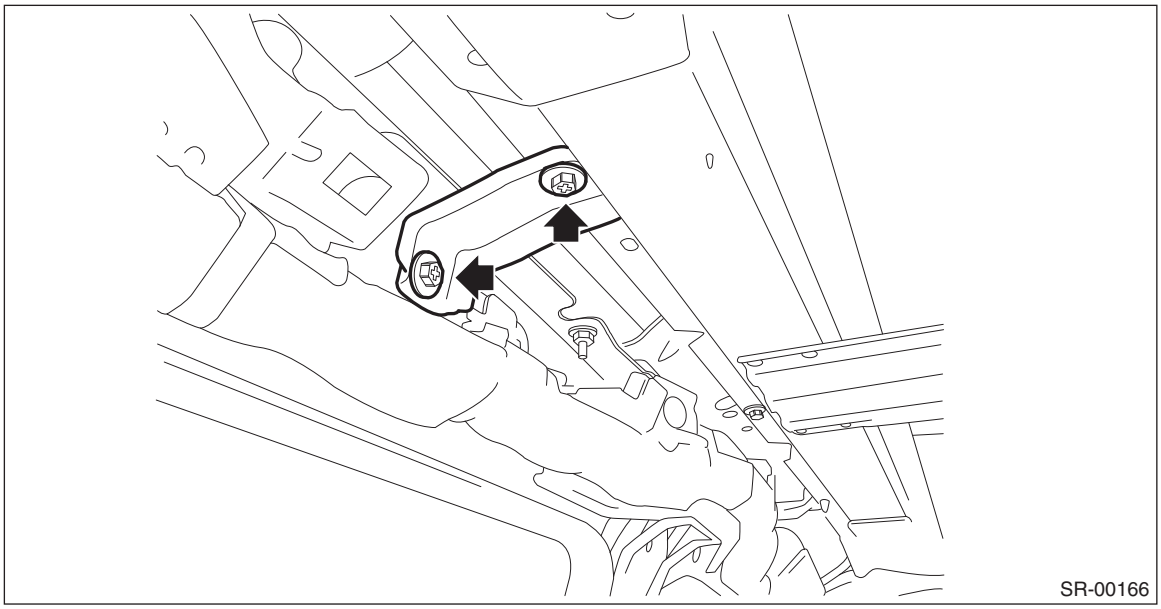


2) Remove the roof trim. <Ref. to EI-131, REMOVAL, Roof Trim.>
3) Disconnect the sunroof motor connector.
4) Remove the frame assembly.

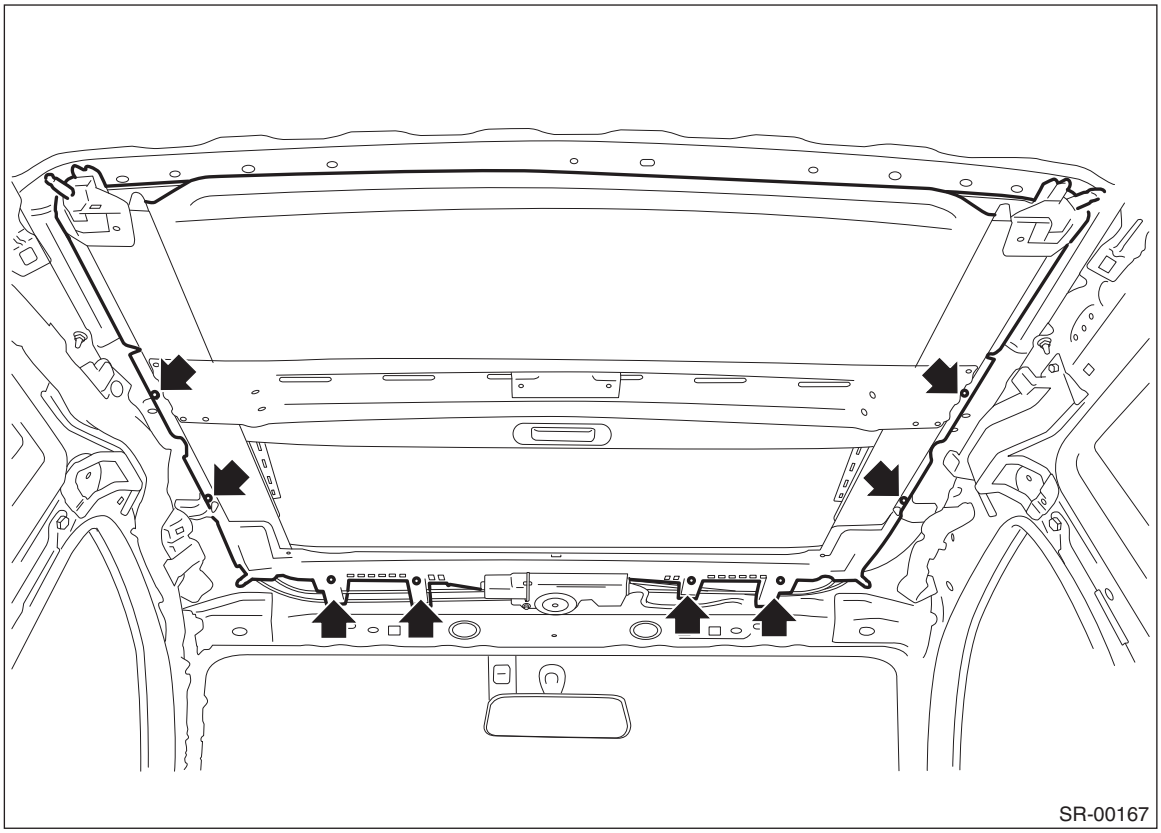
(1) Remove the drain tube.



(2) Remove the bolts and then remove the sunroof bracket.



(3) Remove the bolts, then remove the frame assembly.

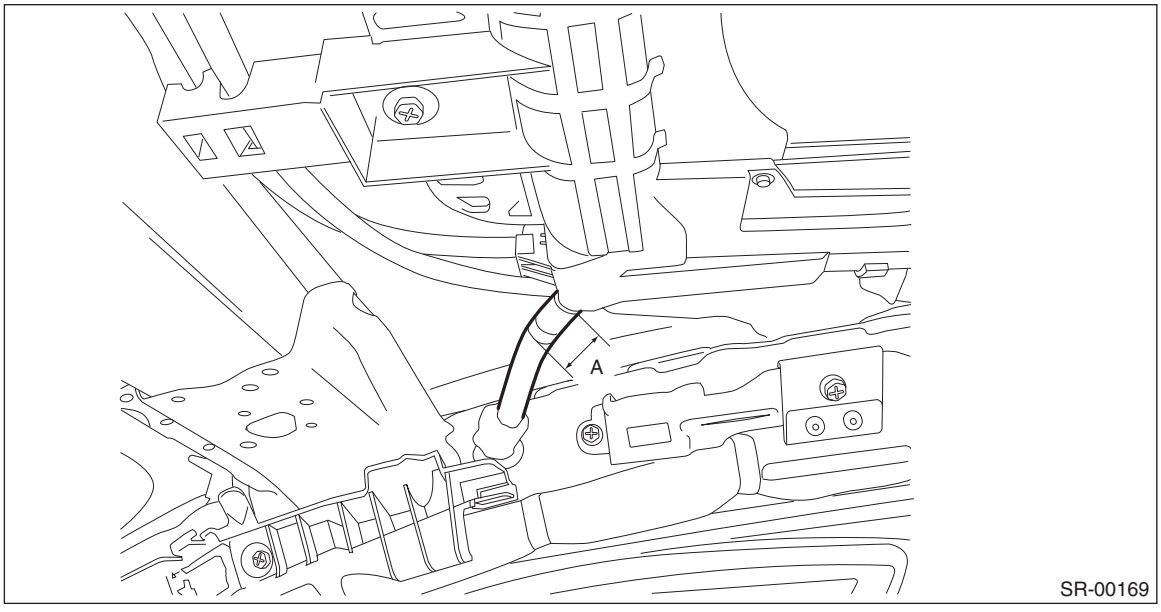

SR-00167

B: INSTALLATION

CAUTION:
Be careful not to snag the harness.
Install each part in the reverse order of removal.

NOTE:
- Be sure to connect the harness connector.
- When installing the drain tube, insert it securely into drain pipe.

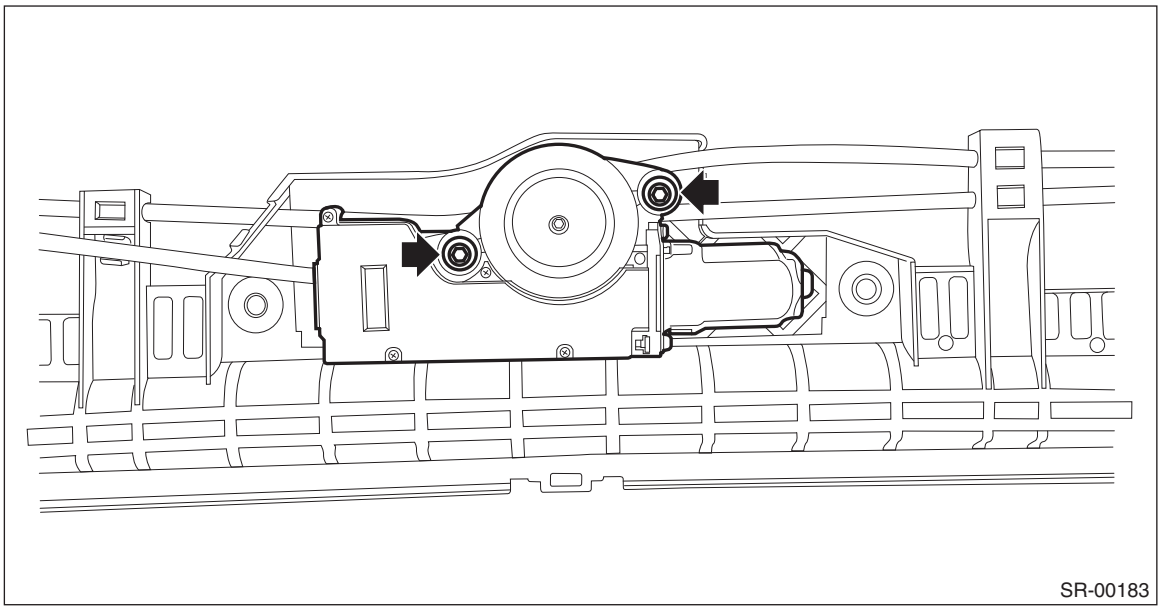
Length A:
15 mm (0.59 in) or more



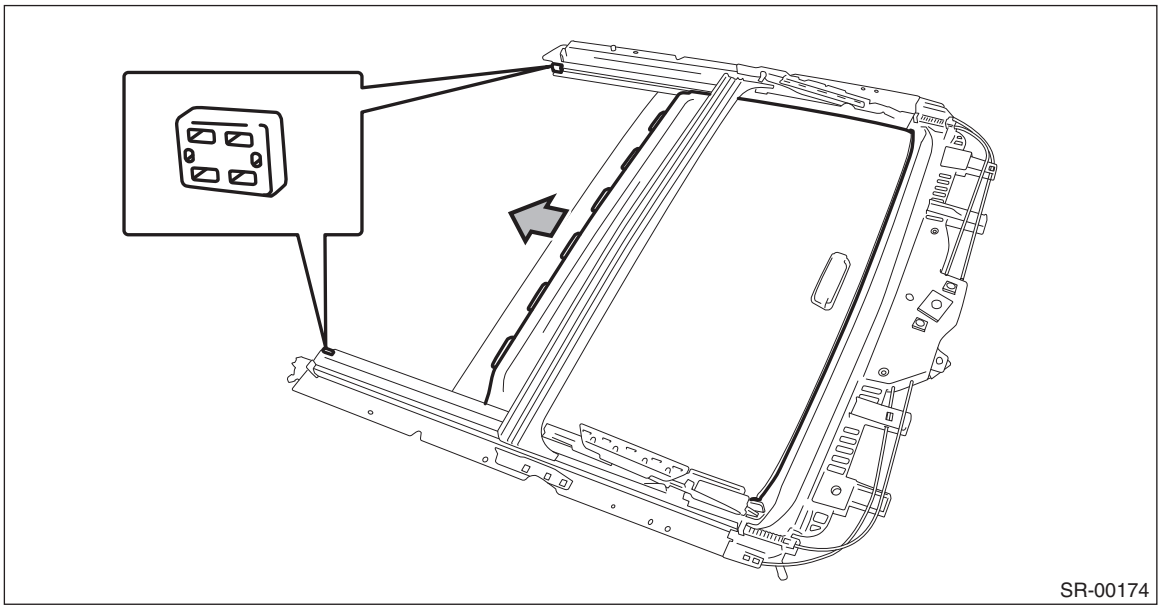
SR-00169

C: DISASSEMBLY

1) Remove the bolts and then remove the sunroof motor.

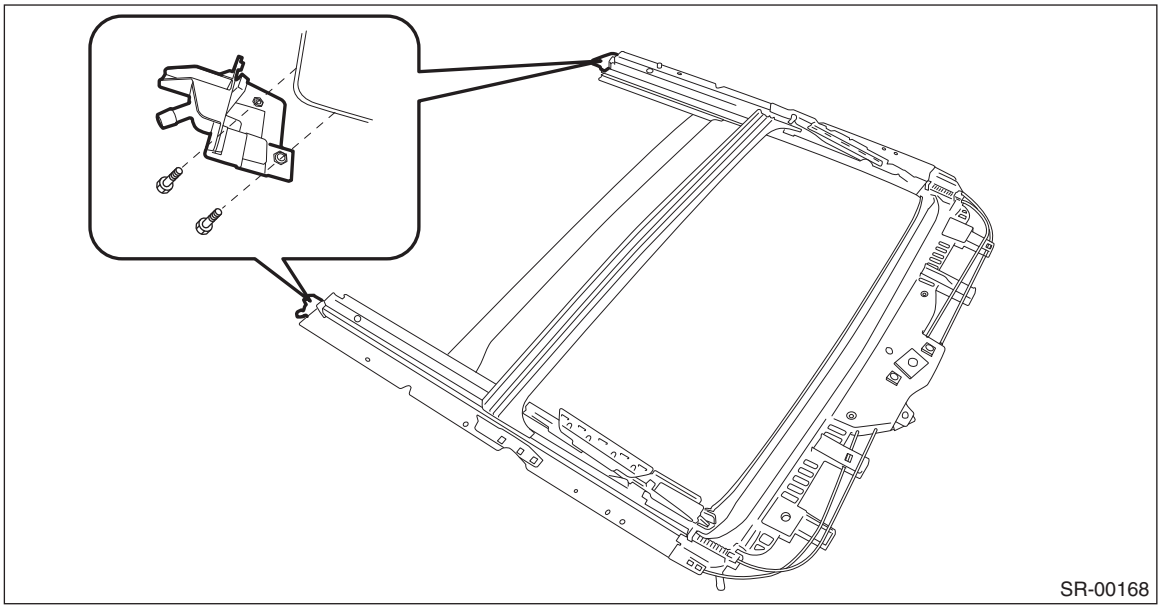


2) Remove the stopper rubber and pull out the sunshade from sunroof frame.

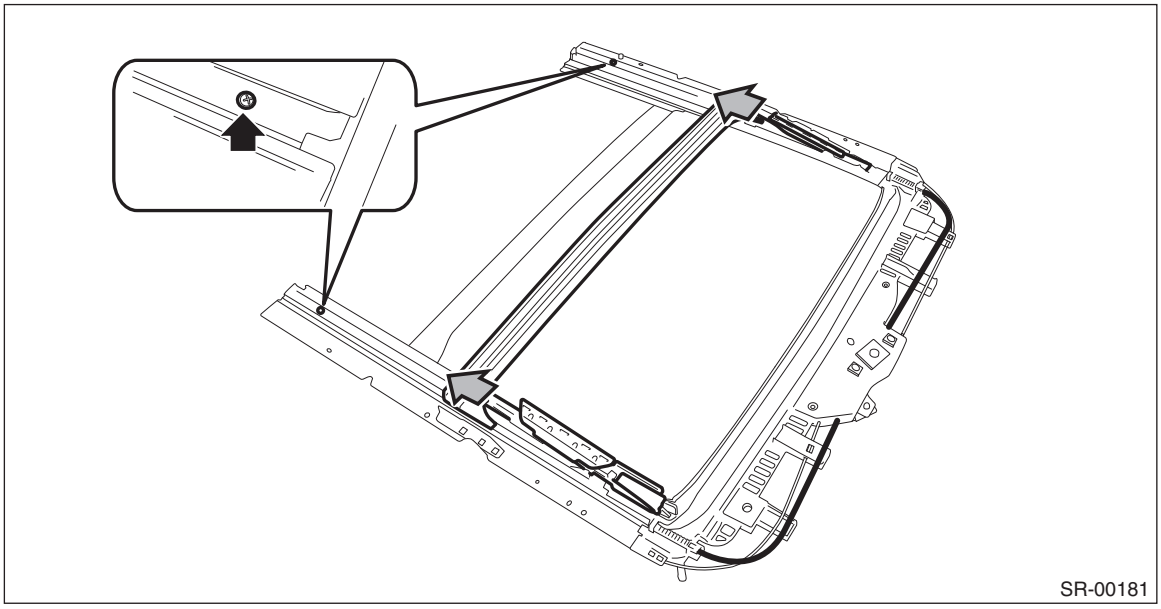


3) Remove the sunroof cable assembly.

(1) Remove the screw and remove the drain holder.



(2) Remove the screw and pull out the sunroof cable assembly from the frame roof assembly.



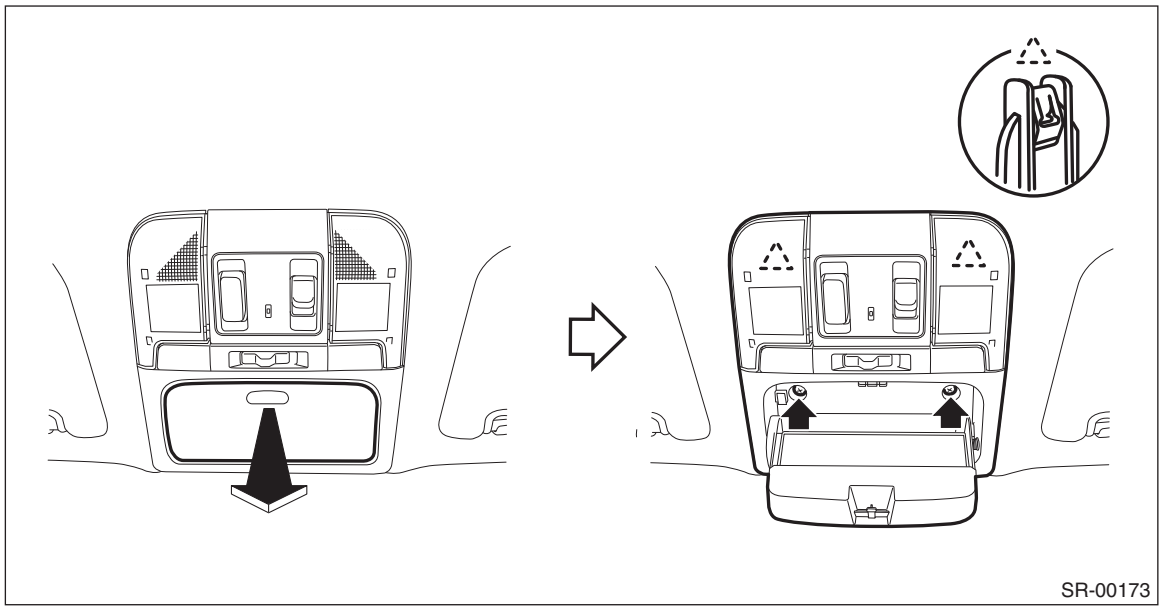
D: ASSEMBLY

Install each part in the reverse order of removal.

6. Sunroof Motor

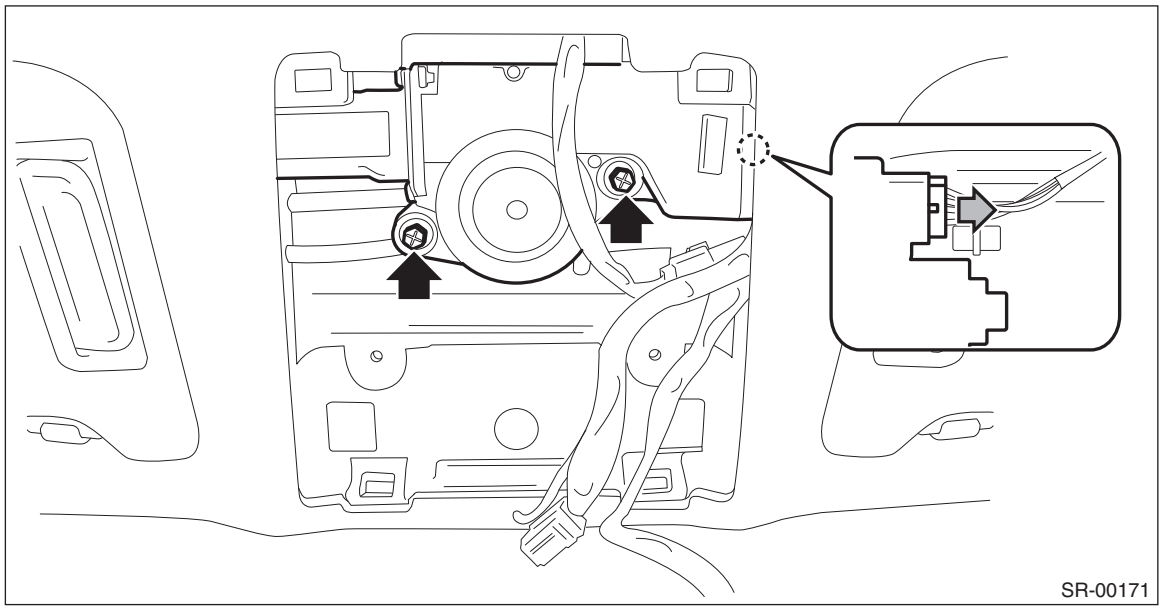
A: REMOVAL

1) Completely close the glass lid.
2) Disconnect the ground cable from battery.
3) Remove the overhead console.
   (1) Push and open the rear end of the overhead console lid, and remove the screws.
   (2) Remove the clips and pull out the overhead console to disconnect the connectors.



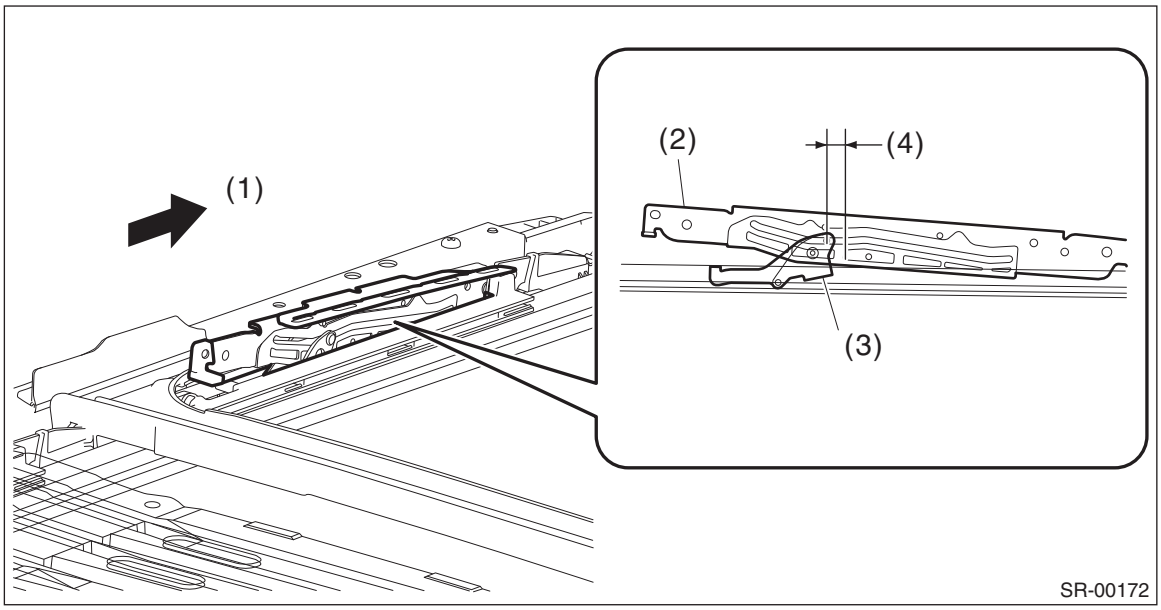
4) Remove the sunroof motor assembly.
   (1) Disconnect the connector.
   (2) Remove the bolts and remove the sunroof motor assembly.

CAUTION:
When removing the motor assembly, secure the cable wires so that it does not move.



B: INSTALLATION

CAUTION:
When installing the motor assembly, be careful not to move the sunroof cable.
1) Align the lid bracket and link assembly in the same position.



(1) Front
(2) Lid bracket
(3) Link ASSY
(4) 8.9 mm (0.35 in)

2) Install the sunroof motor assembly.
3) Install the spot map light, and connect the ground cable to the battery.
4) Perform the initialize operation. <Ref. to SR-5, INITIALIZE OPERATION, OPERATION, Sunroof Control System.>
5) Check the operation of sunroof with following table below.

Operation	Switch position
(1) Glass lid closes completely.	Close
(2) Glass lid tilt up to the top position.	Tilt up
(3) Glass lid closes completely.	Tilt down
(4) Glass lid opens 291 mm (11.46 in) away from completely closed position. (OUTBACK model)	Open
(5) Glass lid opens completely.	Open
(6) Glass lid closes completely.	Close

C: INSPECTION

Check the auto-reverse mechanism.

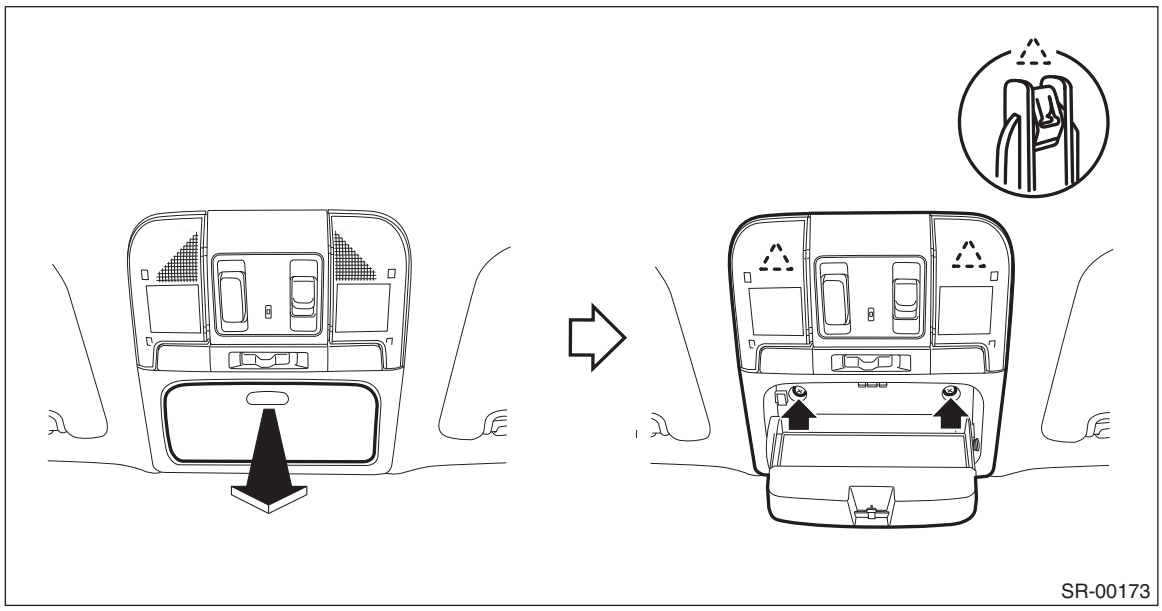
CAUTION:
Do not place objects in the way to check the auto-reverse mechanism.
1) Open the glass lid.
2) Forcefully push the glass lid in the opening direction while auto-closing, to check whether the window auto-reverse mechanism functions.

NOTE:
• The auto-function is cancelled when the window auto-reverse mechanism is activated more than five times.
• If the auto function is cancelled, reset it. <Ref. to SR-5, OPERATION, Sunroof Control System.>

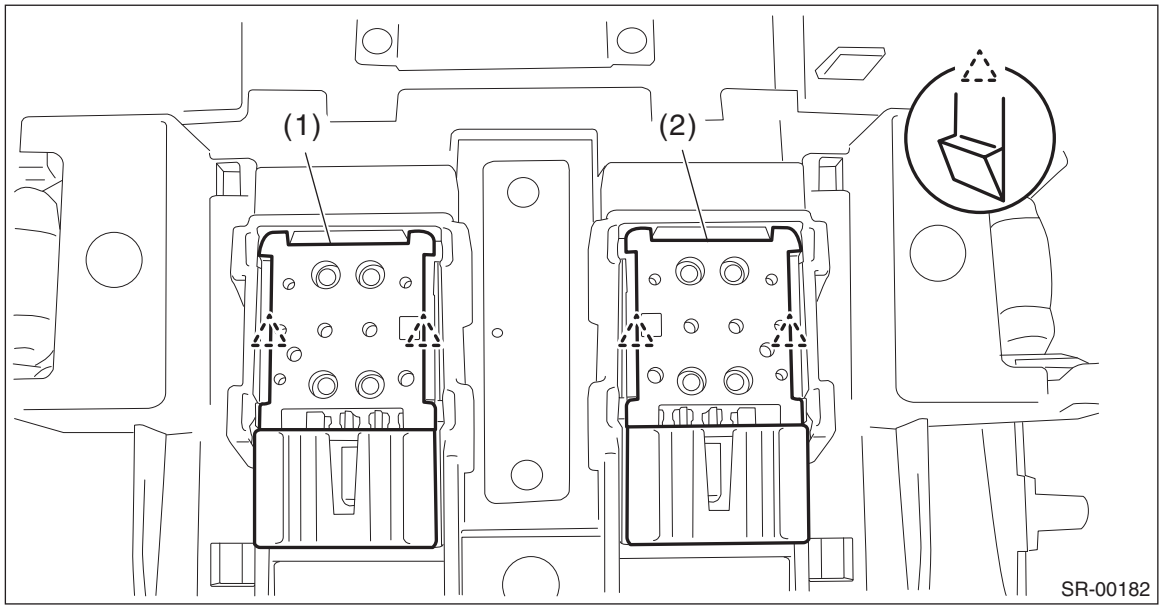
7. Sunroof Switch

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the overhead console.
   (1) Push and open the rear end of the overhead console lid, and remove the screws.
   (2) Remove the clips and pull out the overhead console to disconnect the connectors.



3) Release the claws and remove the sunroof switch from the overhead console.



(1) Sunroof switch (tilt)
(2) Sunroof switch (slide)

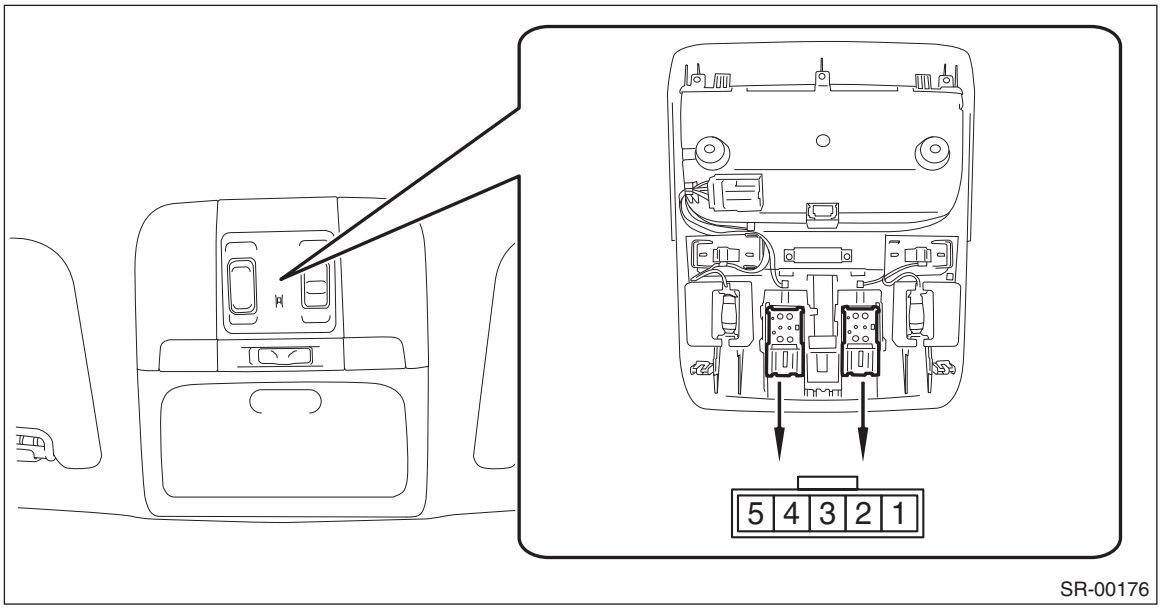
B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1) Remove the overhead console.
2) Check the resistance between sunroof switch terminals.

Preparation tool: Circuit tester



Terminal No.	Inspection conditions	Standard	Connector No.
1 — 3	Open	Less than 1 Ω	R128
4 — 3	Close	Less than 1 Ω	
1 — 3	Tilt up	Less than 1 Ω	R187
4 — 3	Tilt down	Less than 1 Ω	

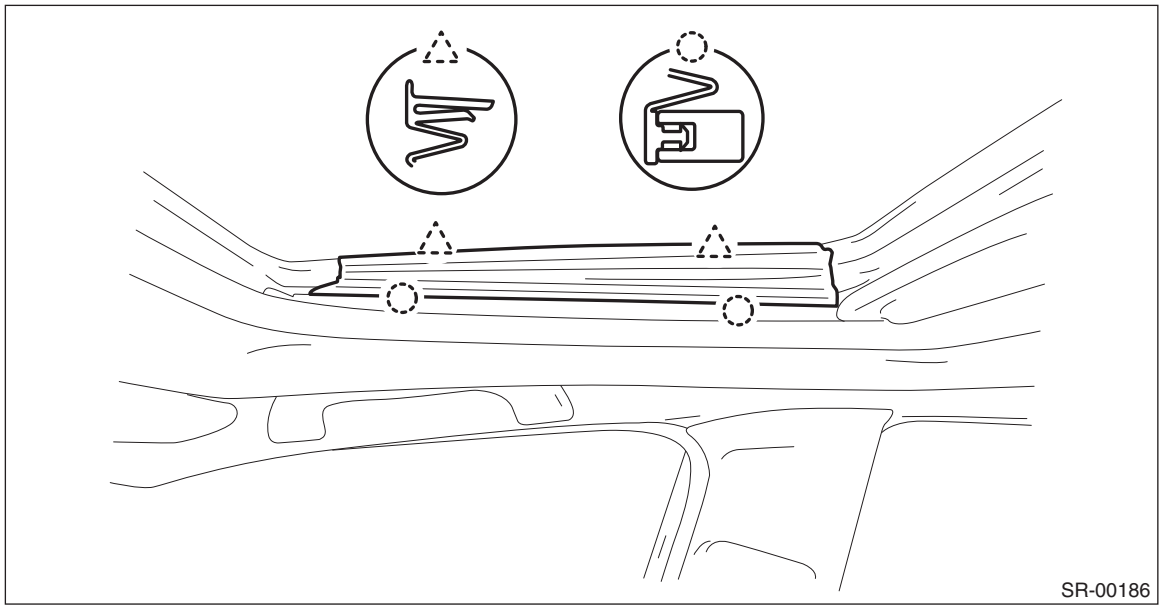
3) Replace the sunroof switch if it is found defective.

8. Sunshade

A: REMOVAL

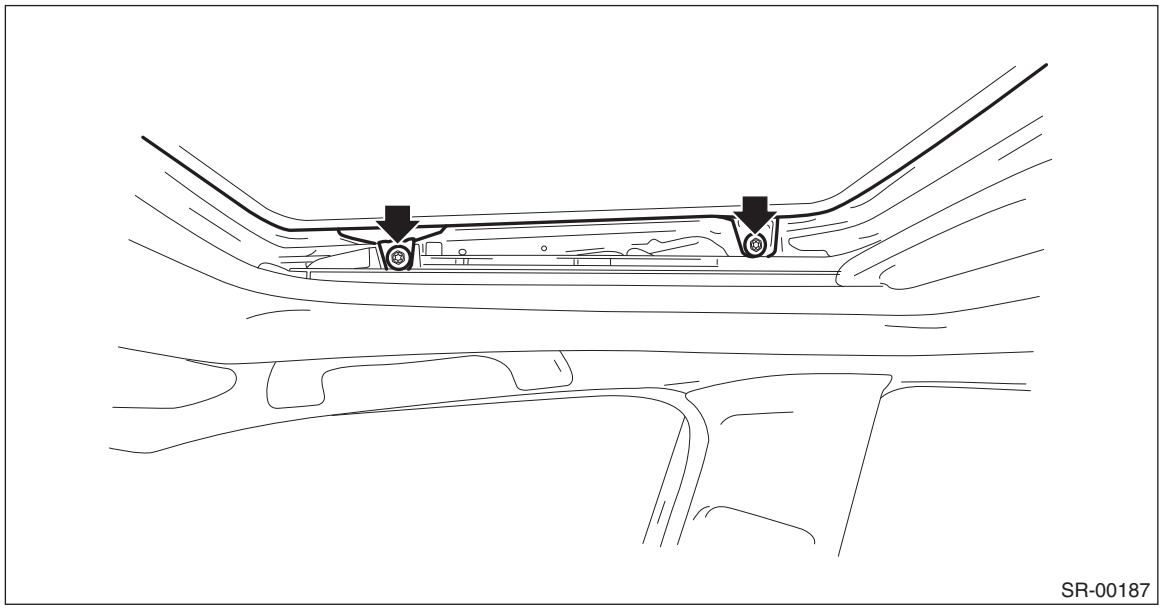
CAUTION:
When removing the clip, use great care not to damage the roof trim.

1) Remove the glass lid.
   (1) Completely close the glass lid, and then open the sunshade.
   (2) Disconnect the claws and then remove the lid cover.



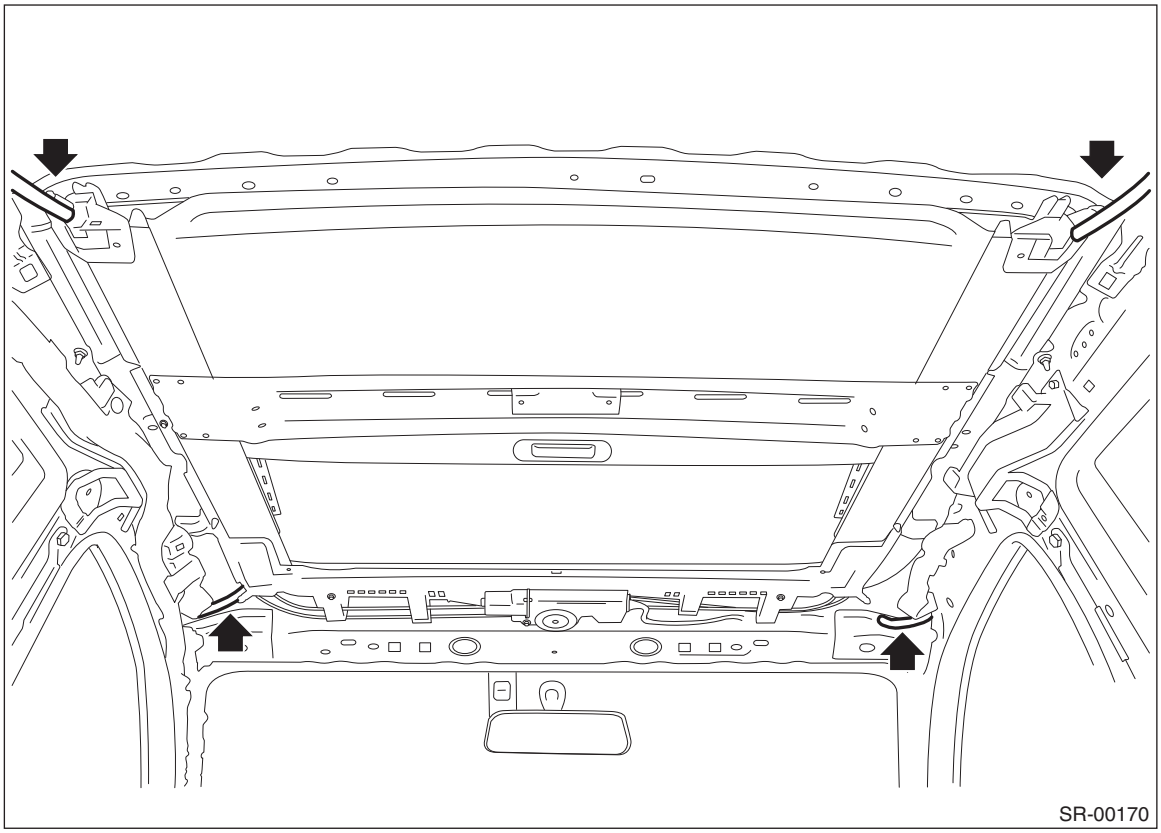
   (3) Remove the bolts, then remove the glass lid.

CAUTION:
Be careful not to damage the glass lid.

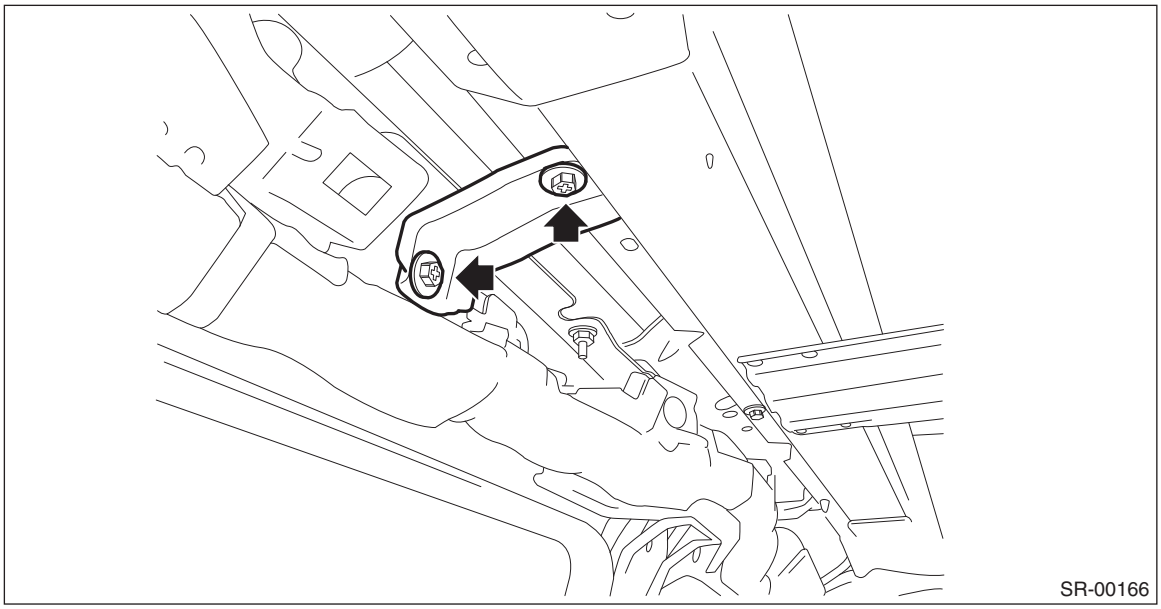


2) Remove the roof trim. <Ref. to EI-131, REMOVAL, Roof Trim.>
3) Disconnect the sunroof motor connector.
4) Remove the frame assembly.

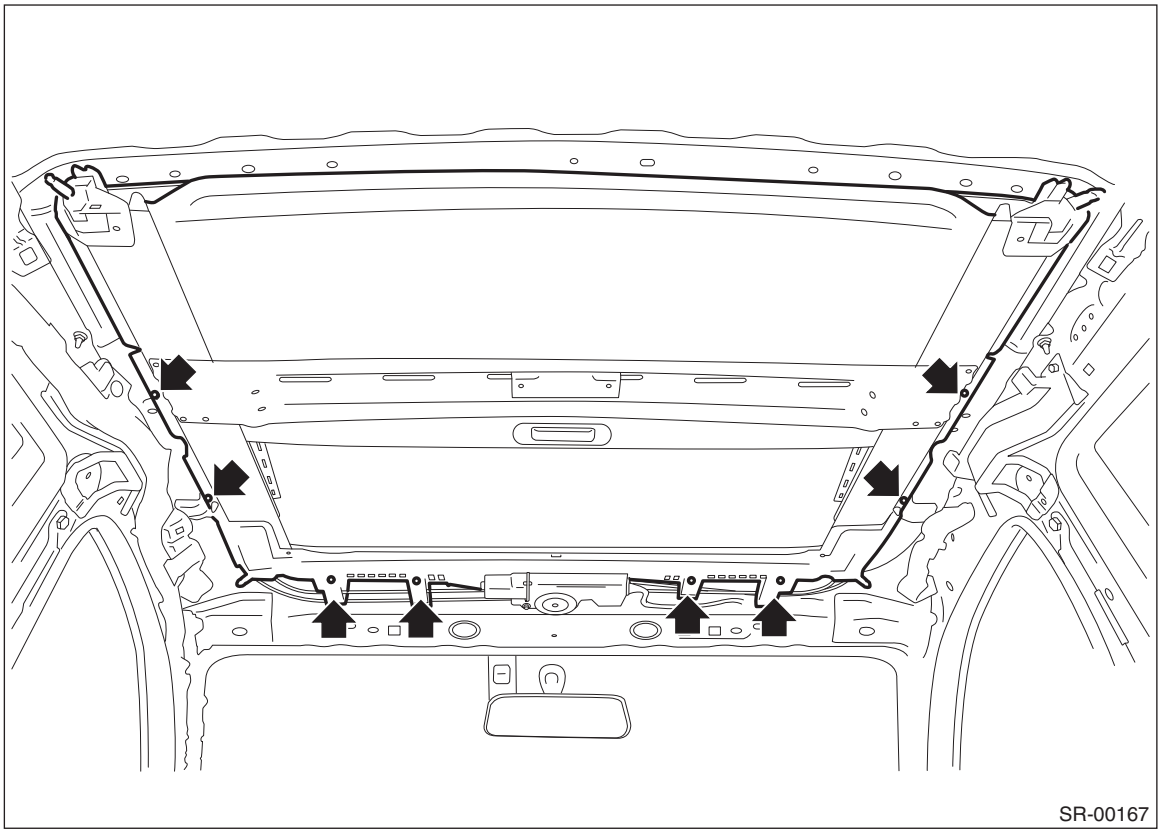
(1) Remove the drain tube.



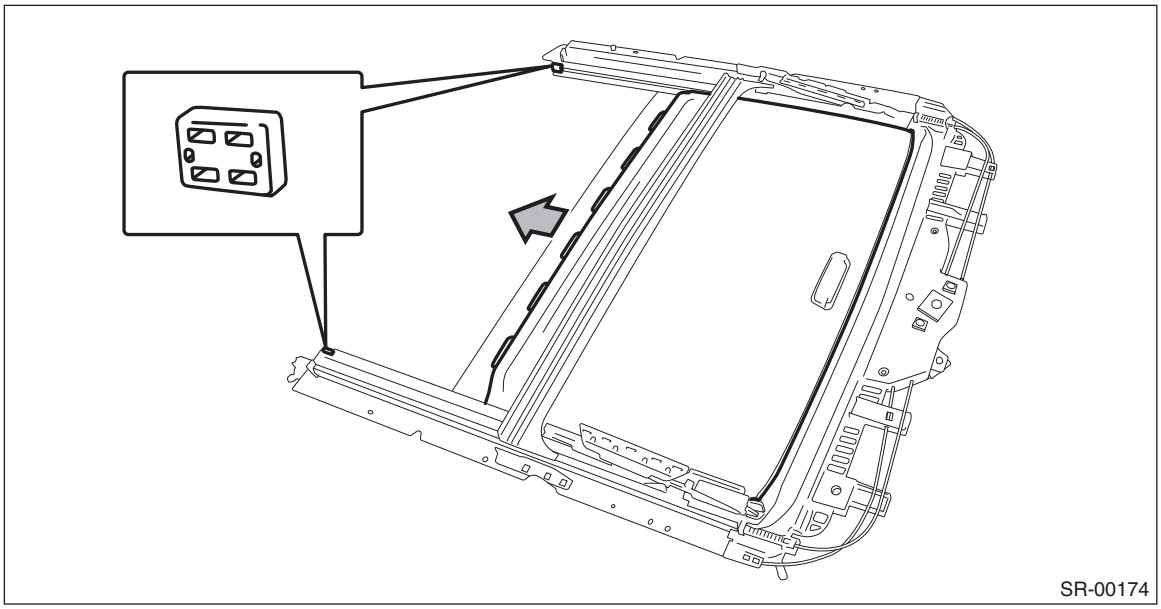
(2) Remove the bolts and then remove the sunroof bracket.



(3) Remove the bolts, then remove the frame assembly.



5) Remove the stopper rubber and pull out the sunshade from sunroof frame.



B: INSTALLATION

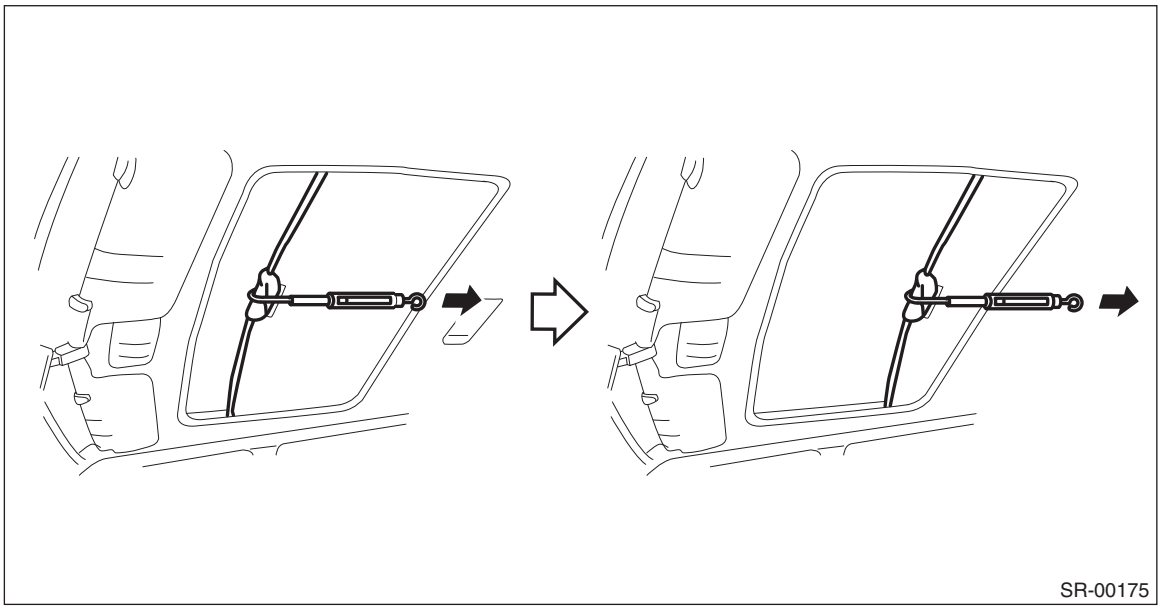
Install each part in the reverse order of removal.

C: INSPECTION

1. CHECK FOR MOVING LOAD OF SUNSHADE

1) Attach a spring scale to sunshade edge using a cloth.
2) Pull the spring scale to measure moving load of the sunshade.

Moving load of sunshade:
14±6 N (1.43 kgf, 3.1 lbf±0.61 kgf, 1.3 lbf)

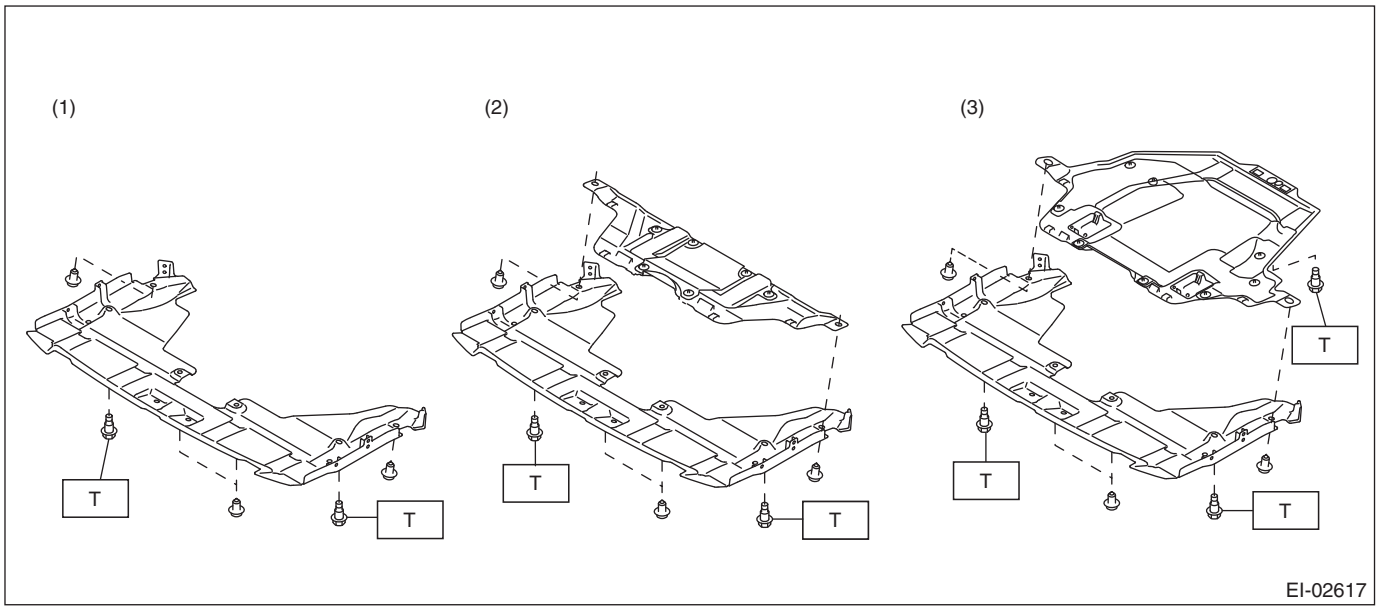


NOTE:
Moving load is larger at the beginning of pulling a spring scale, so take a spring scale reading while sunshade sliding smoothly.
3) If the inspection result exceeds the standard value, check if the installation to sunshade and frame assembly are sufficient, and replace if necessary.

1. General Description

A: COMPONENT

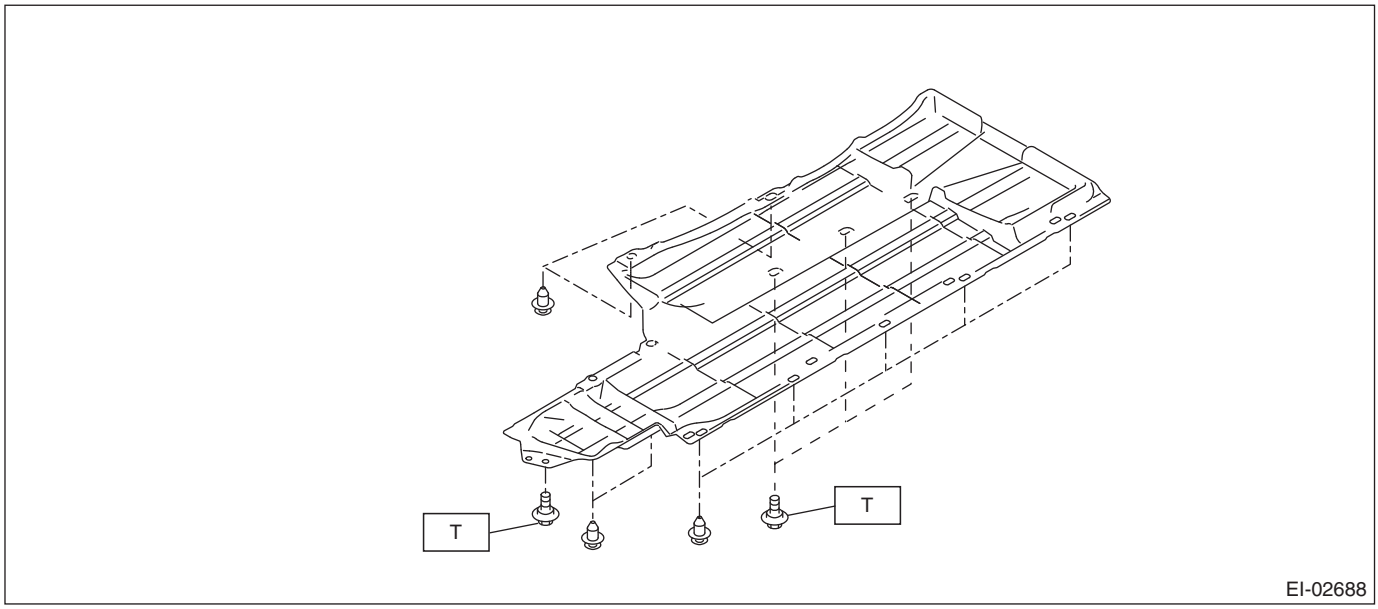
1. FRONT UNDER COVER



(1) Small type
(2) Medium type
(3) Large type

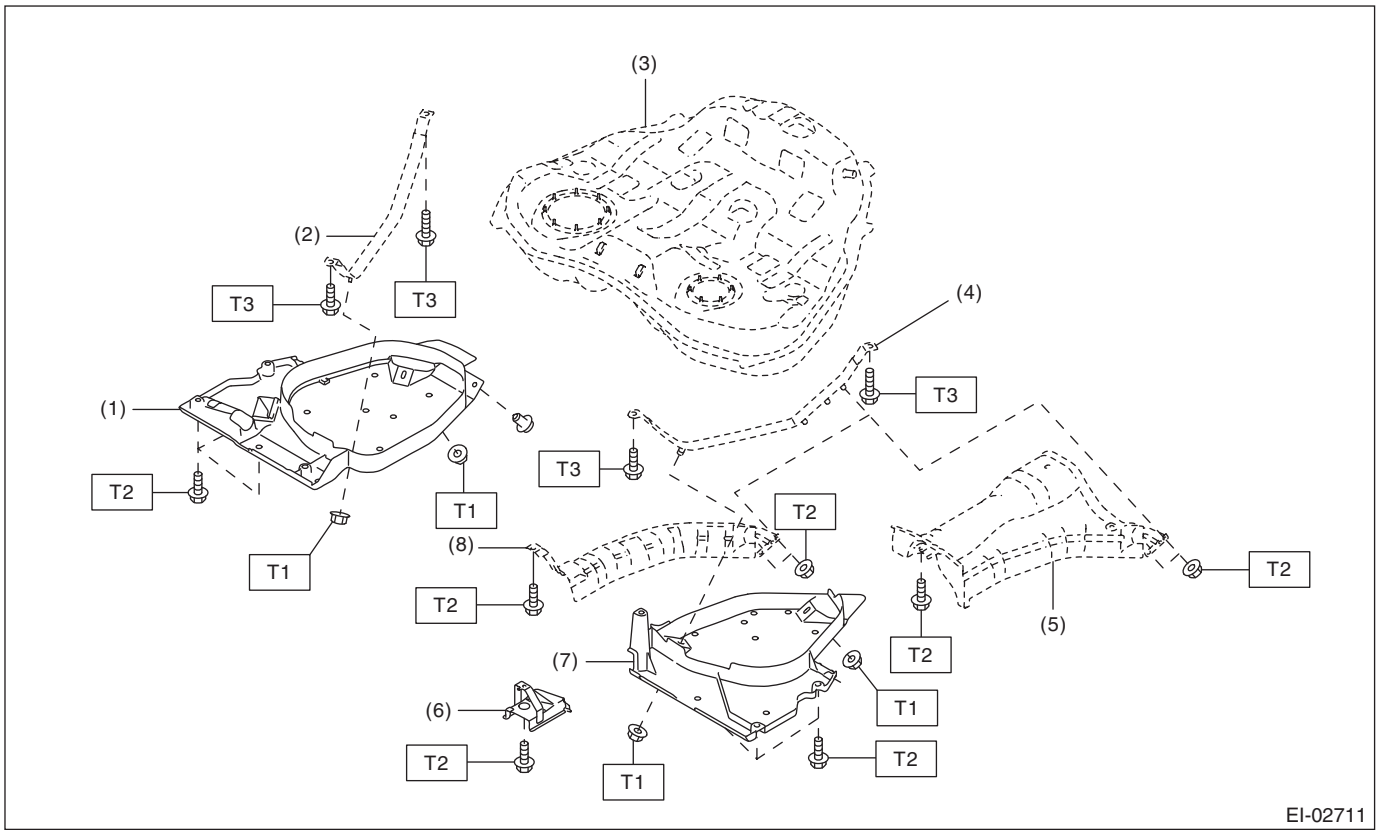
Tightening torque:N·m (kgf-m, ft-lb)
T: 17.5 (1.78, 12.9)

2. FLOOR UNDER PROTECTOR



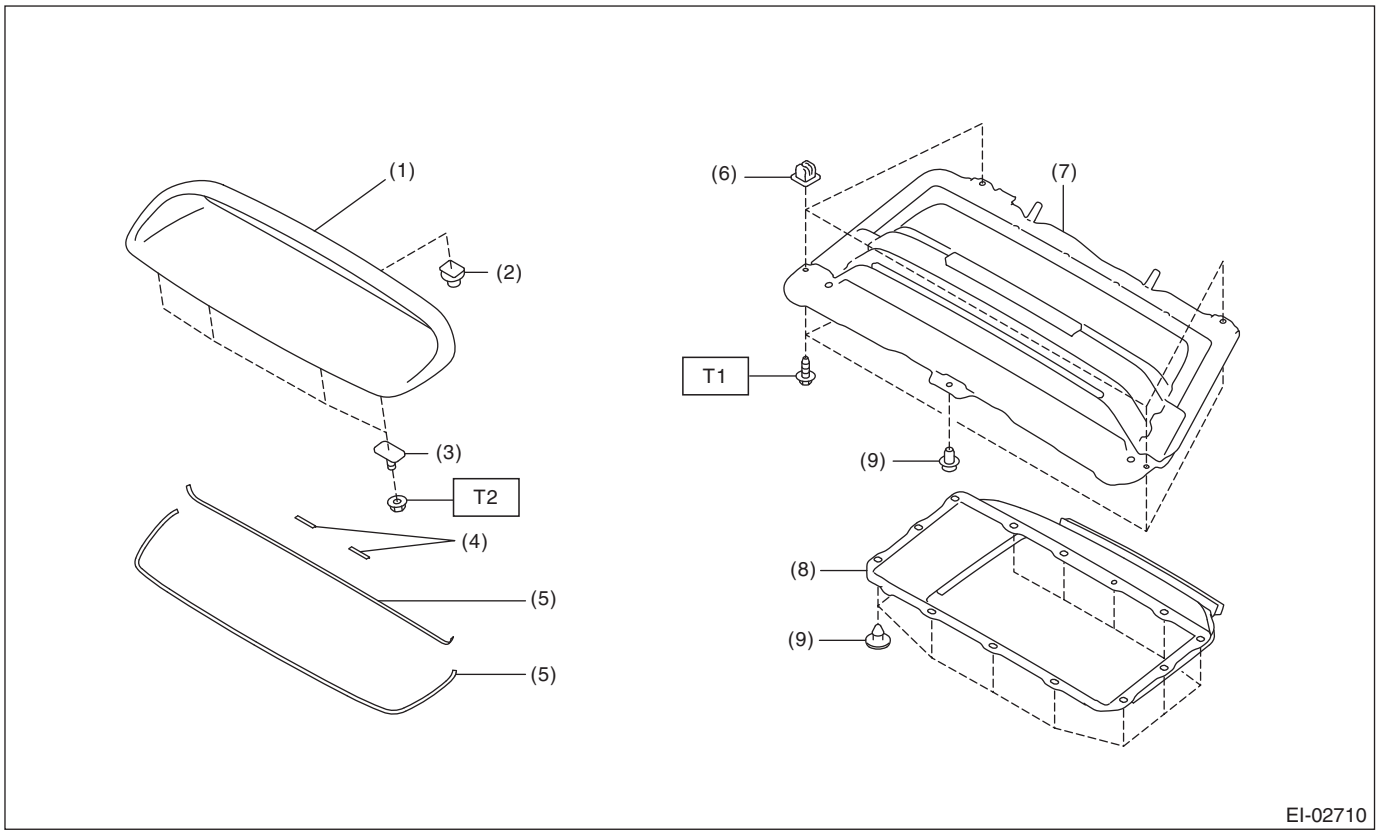
Tightening torque:N·m (kgf-m, ft-lb)
T: 7.5 (0.76, 5.5)

3. FUEL TANK PROTECTOR



(1)	Fuel tank protector RH	(5)	Center heat shield cover (turbo model)	***Tightening torque:N·m (kgf-m, ft-lb)***
(2)	Fuel tank band ASSY RH	(6)	Fuel tank bracket	***T1: 9 (0.92, 6.6)***
(3)	Fuel tank ASSY	(7)	Fuel tank protector LH	***T2: 18 (1.84, 13.3)***
(4)	Fuel tank band ASSY LH	(8)	Center heat shield cover (non-turbo model)	***T3: 33 (3.36, 24.3)***

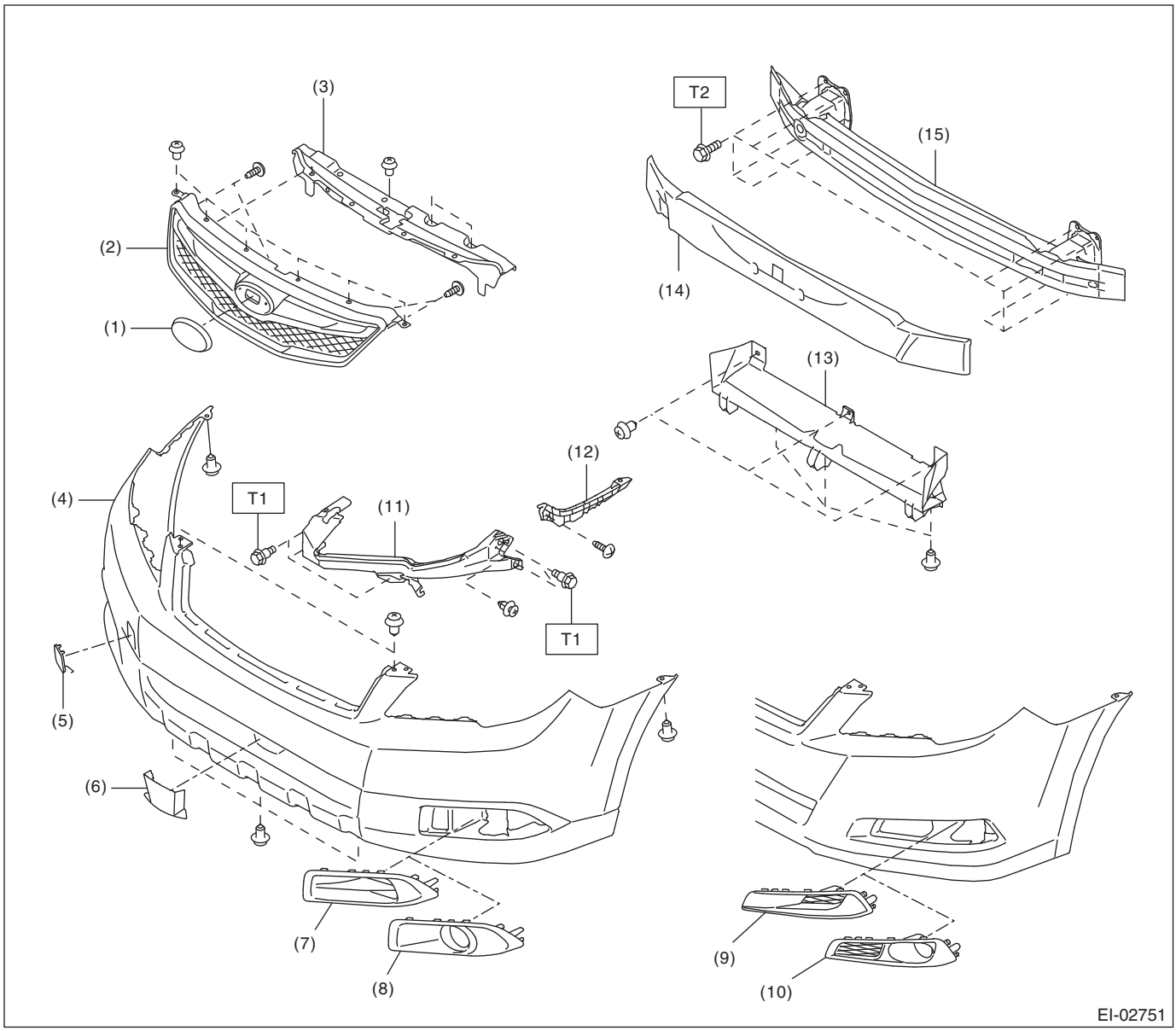
4. FRONT HOOD GRILLE



(1)	Front hood grille	(6)	Grommet
(2)	Clip anchor	(7)	Hood duct
(3)	Bolt	(8)	Hood duct inner
(4)	Protector	(9)	Clip
(5)	Gasket		

Tightening torque:N·m (kgf-m, ft-lb)
T1: 1.0 (0.1, 0.7)
T2: 4.5 (0.46, 3.3)

5. FRONT BUMPER

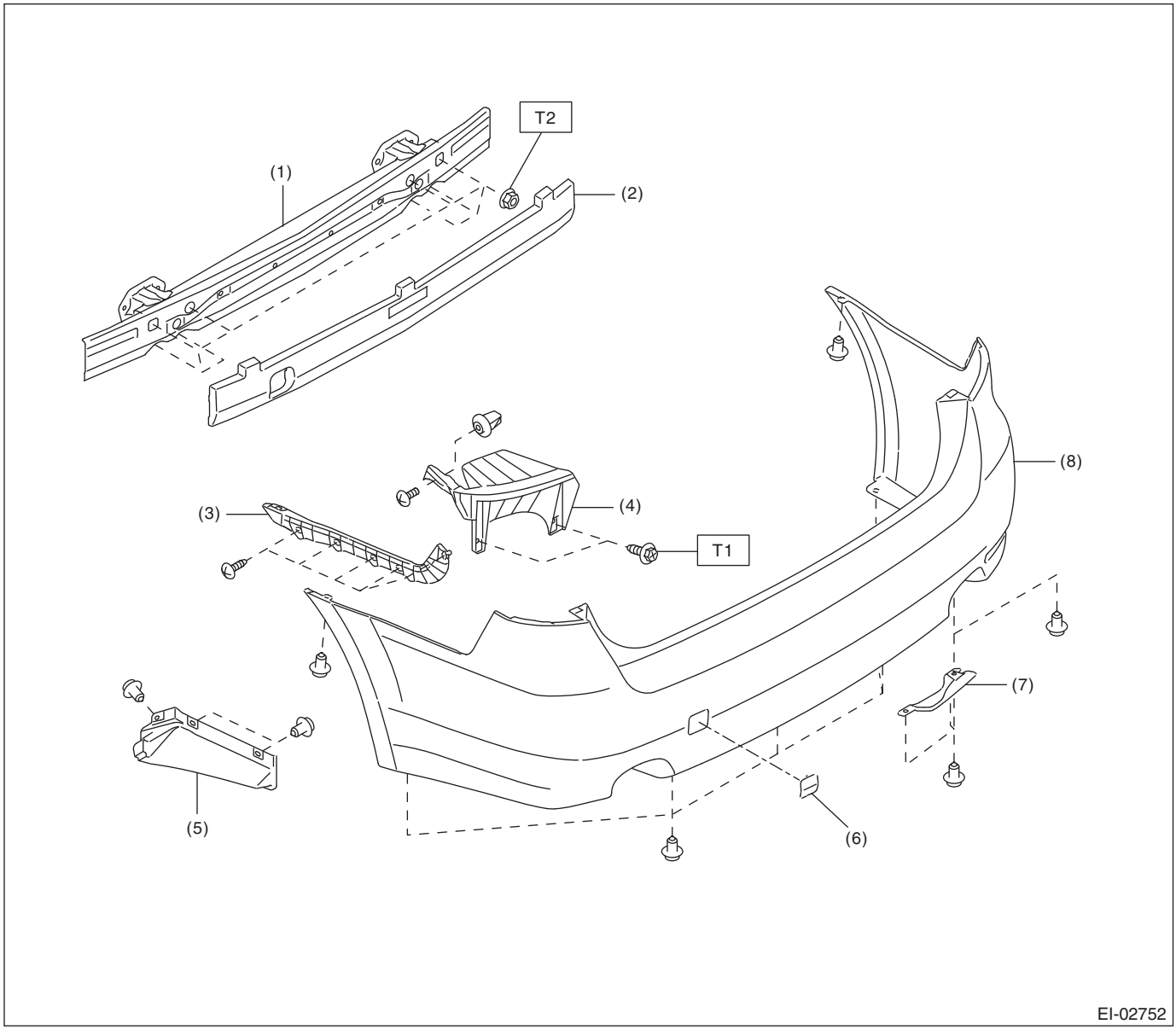


(1) Floor ornament
(2) Front grille ASSY
(3) Grille bracket
(4) FRONT BUMPER FACE
(5) Front hook cover
(6) Bumper cover CTR
(7) Bumper cover (OUTBACK model)
(8) Fog light cover (OUTBACK model)
(9) Bumper cover (Sedan model)
(10) Fog light cover (Sedan model)
(11) Bracket corner front
(12) Bracket side front UPR
(13) Bracket center LWR front
(14) E/A foam front
(15) Beam COMPL front

Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 32 (3.26, 23.6)

6. REAR BUMPER

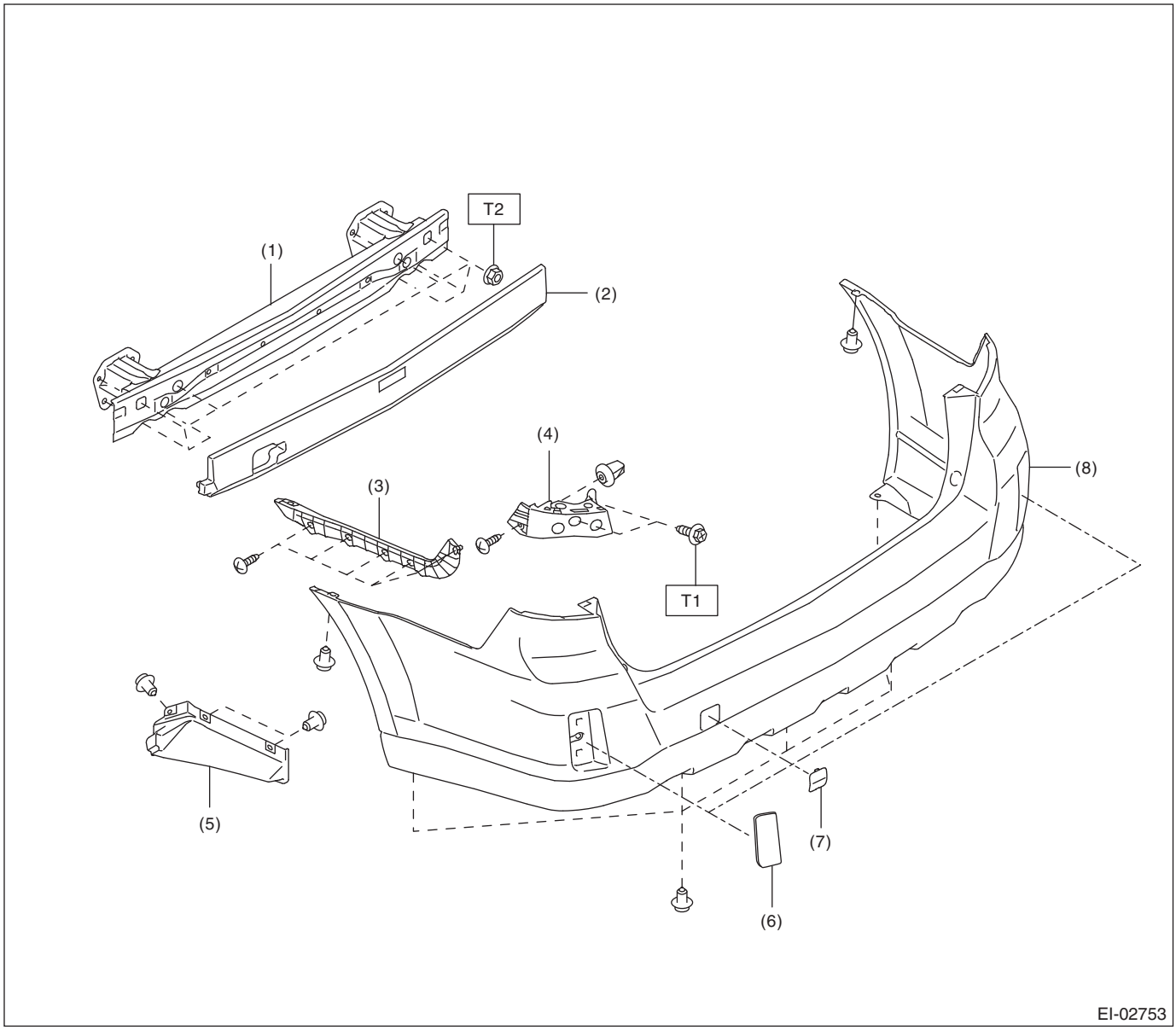
- Sedan model



(1) Beam COMPL rear
(2) E/A foam rear
(3) Bracket side rear UPR
(4) Bracket corner rear
(5) Bracket side rear LWR
(6) Rear hook cover
(7) Bumper cover rear
(8) REAR BUMPER FACE

Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 45 (4.6, 33.2)

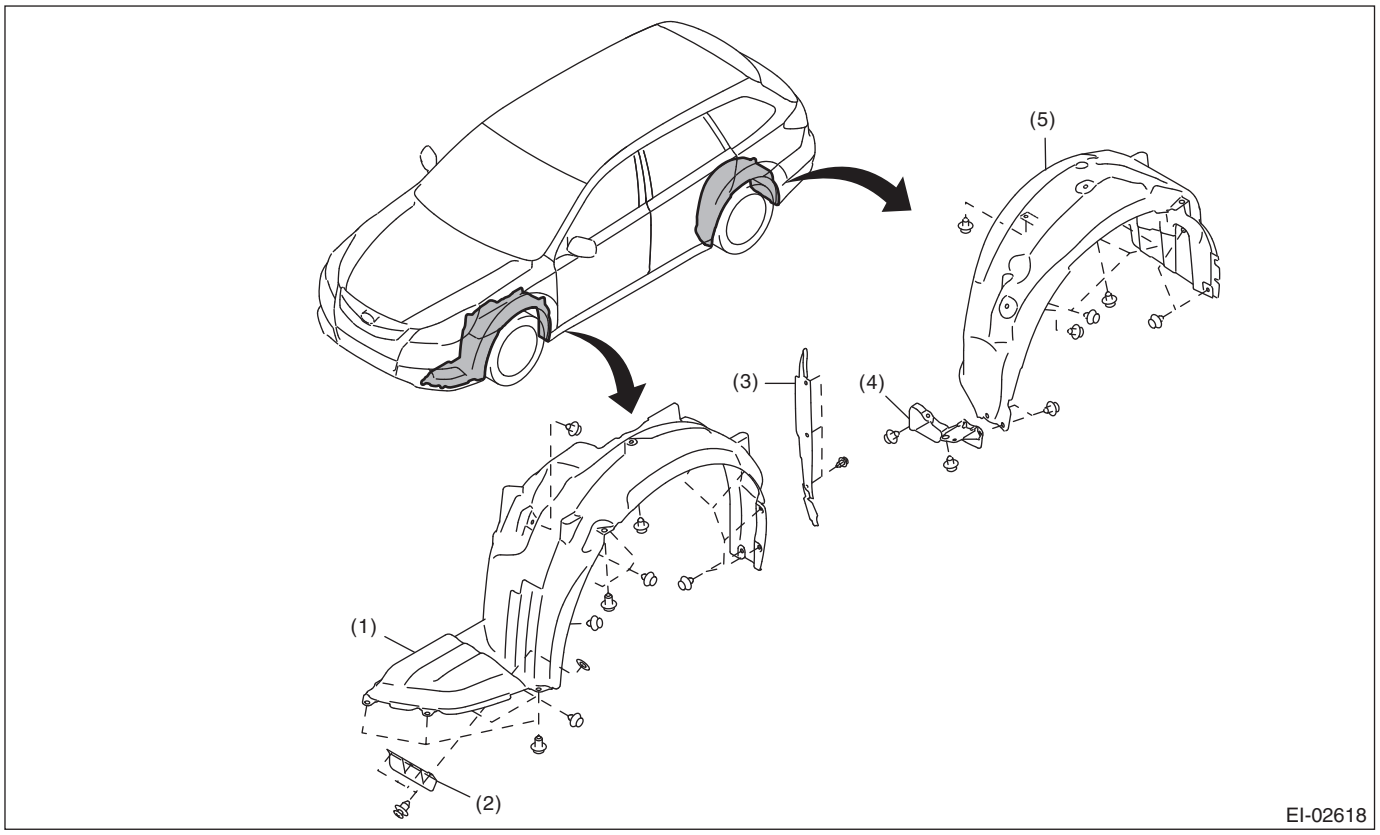
- OUTBACK model



(1) Beam COMPL rear
(2) E/A foam rear
(3) Bracket side rear UPR
(4) Bracket corner rear
(5) Bracket side rear LWR
(6) Rear hook cover
(7) Reflex reflector
(8) REAR BUMPER FACE

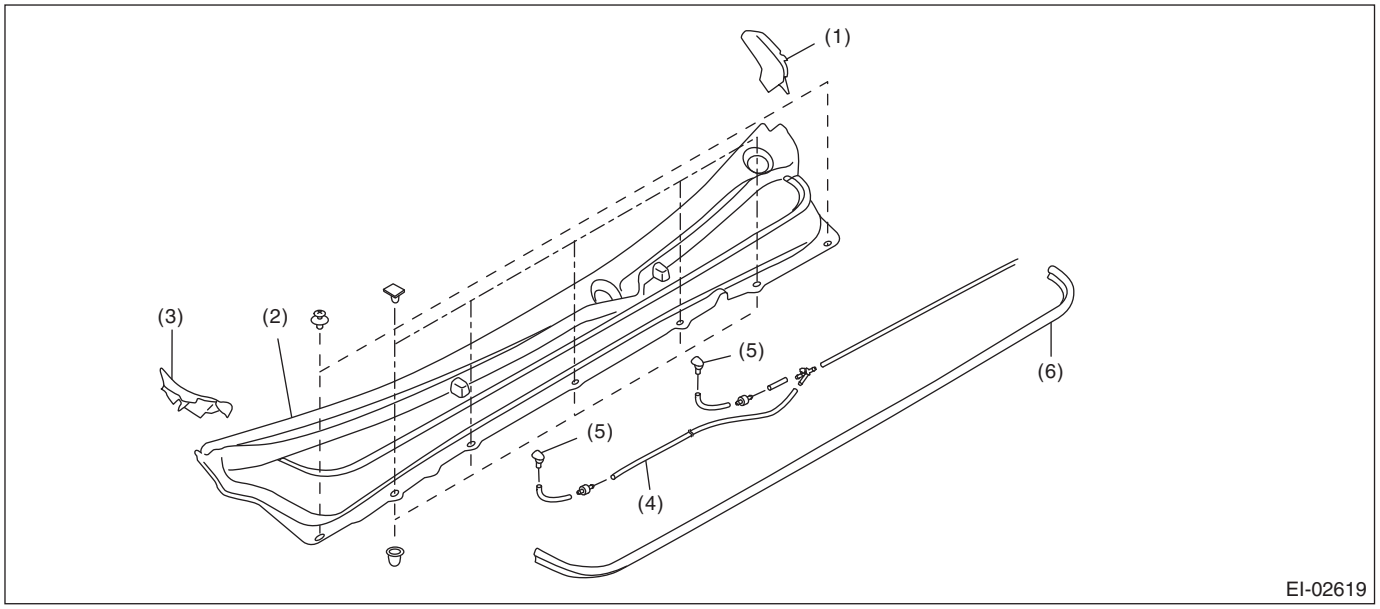
Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 45 (4.6, 33.2)

7. MUD GUARD



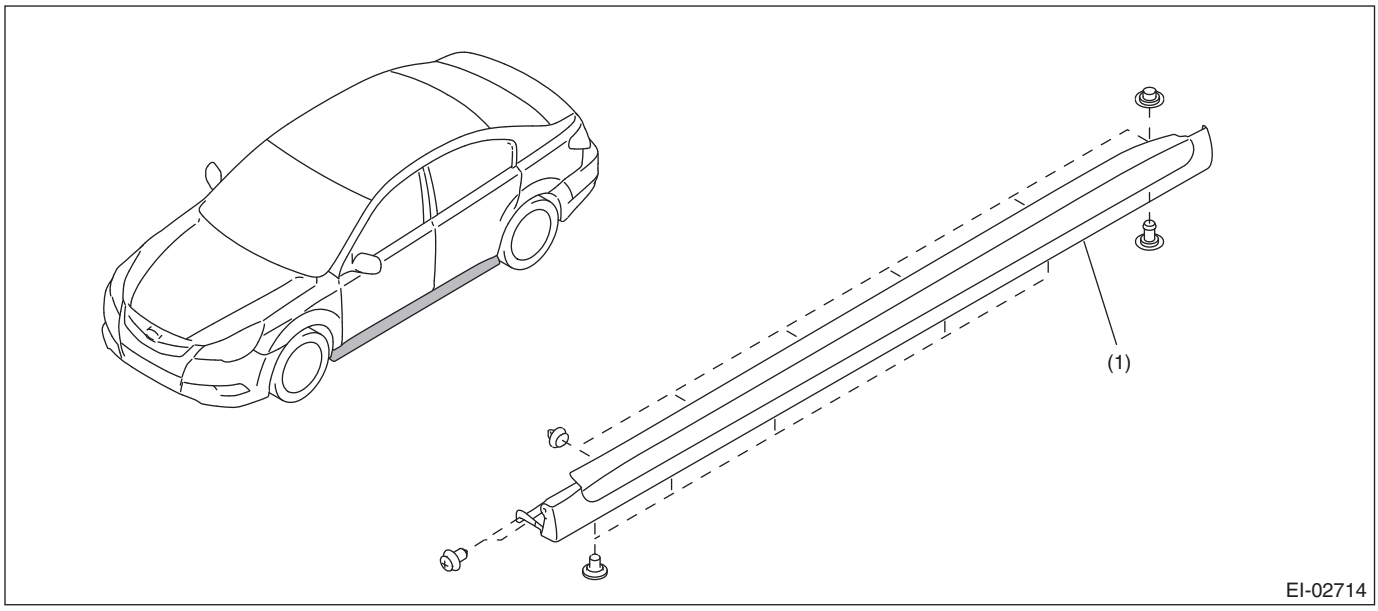
(1) Front mud guard
(2) Front air flap plate
(3) Fender cover lower
(4) Rear air flap plate
(5) Rear mud guard

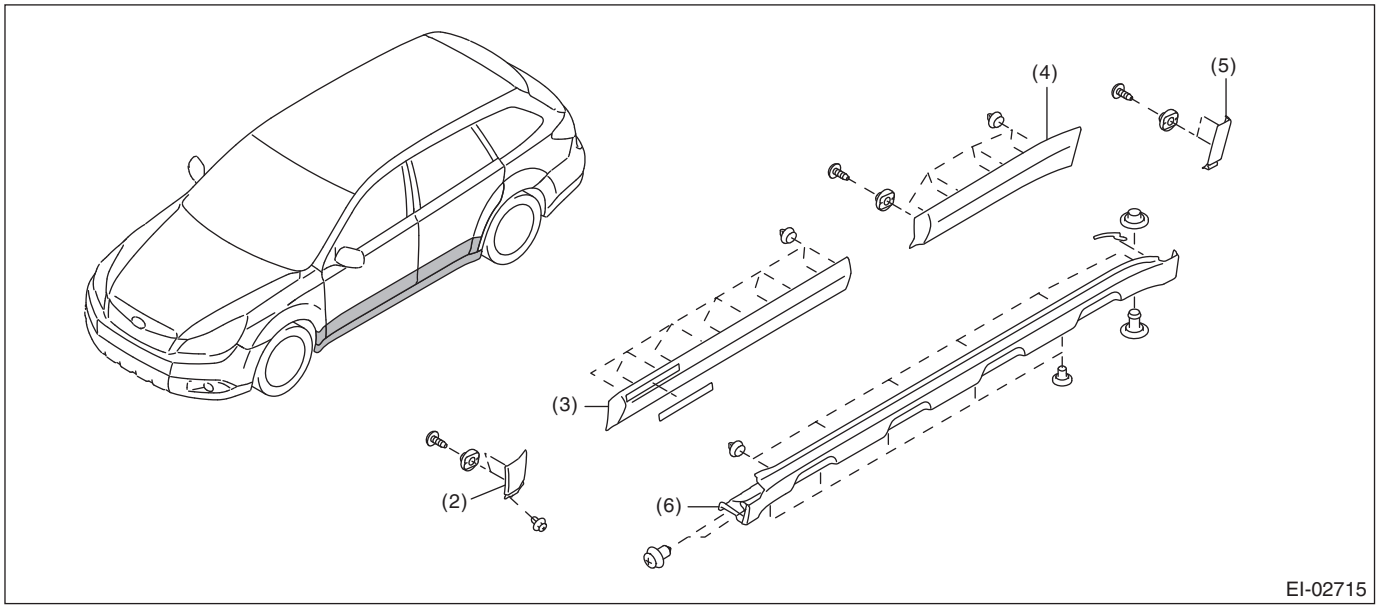
8. COWL PANEL



(1) Cowl panel side LH
(2) Cowl panel
(3) Cowl panel side RH
(4) Washer hose
(5) Washer nozzle
(6) Cowl panel seal

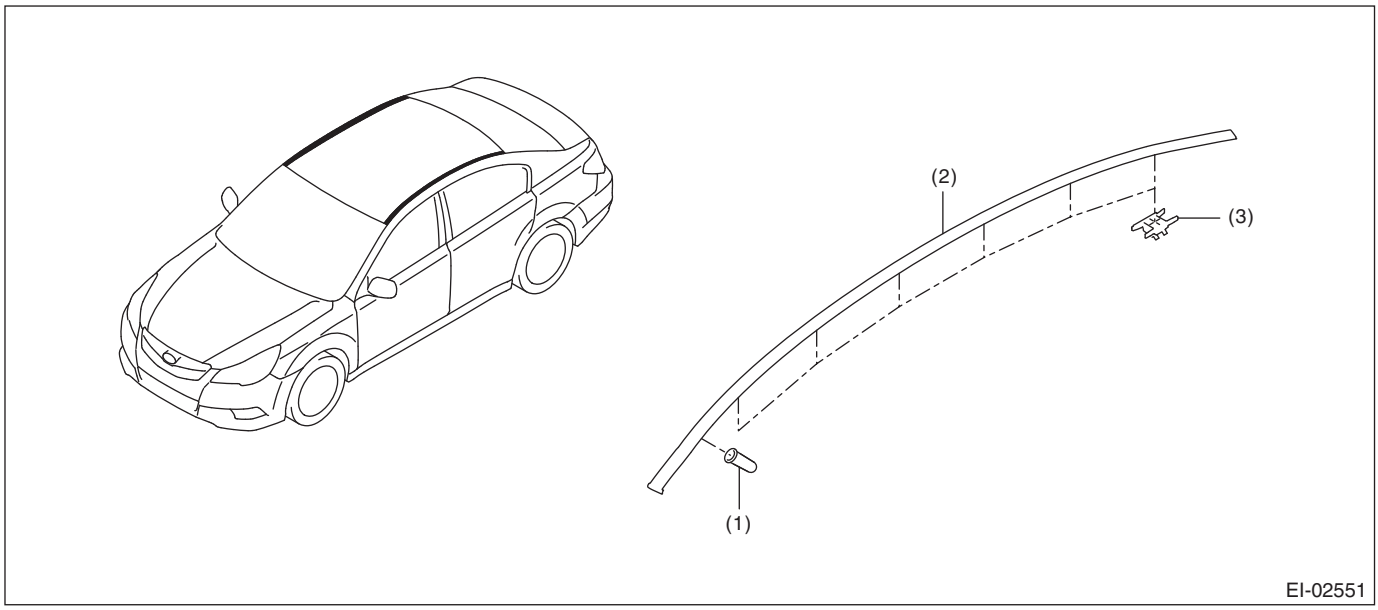
9. SIDE SILL SPOILER





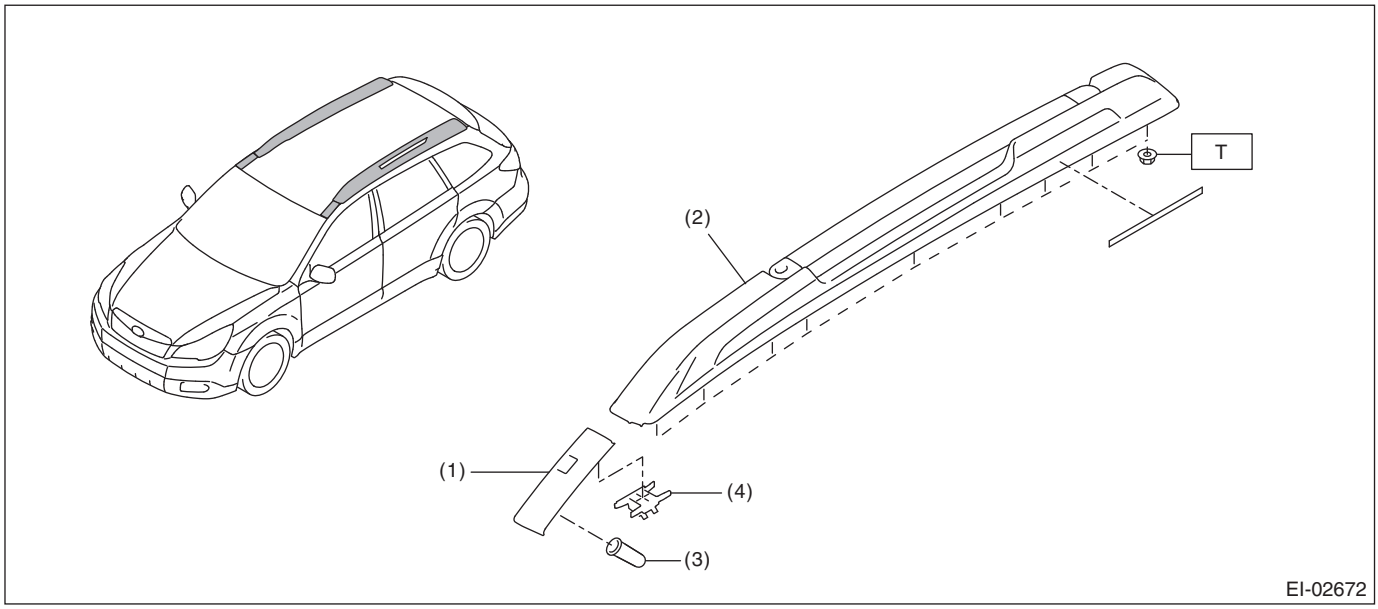
(1) Side sill garnish ASSY (Sedan model)
(2) Garnish ASSY front fender (OUTBACK model)
(3) Garnish ASSY front door (OUTBACK model)
(4) Garnish ASSY rear door (OUTBACK model)
(5) Garnish ASSY rear quarter (OUTBACK model)
(6) Side sill garnish ASSY (OUTBACK model)

10.ROOF MOLDING



(1) Rivet
(2) Roof molding
(3) Clip

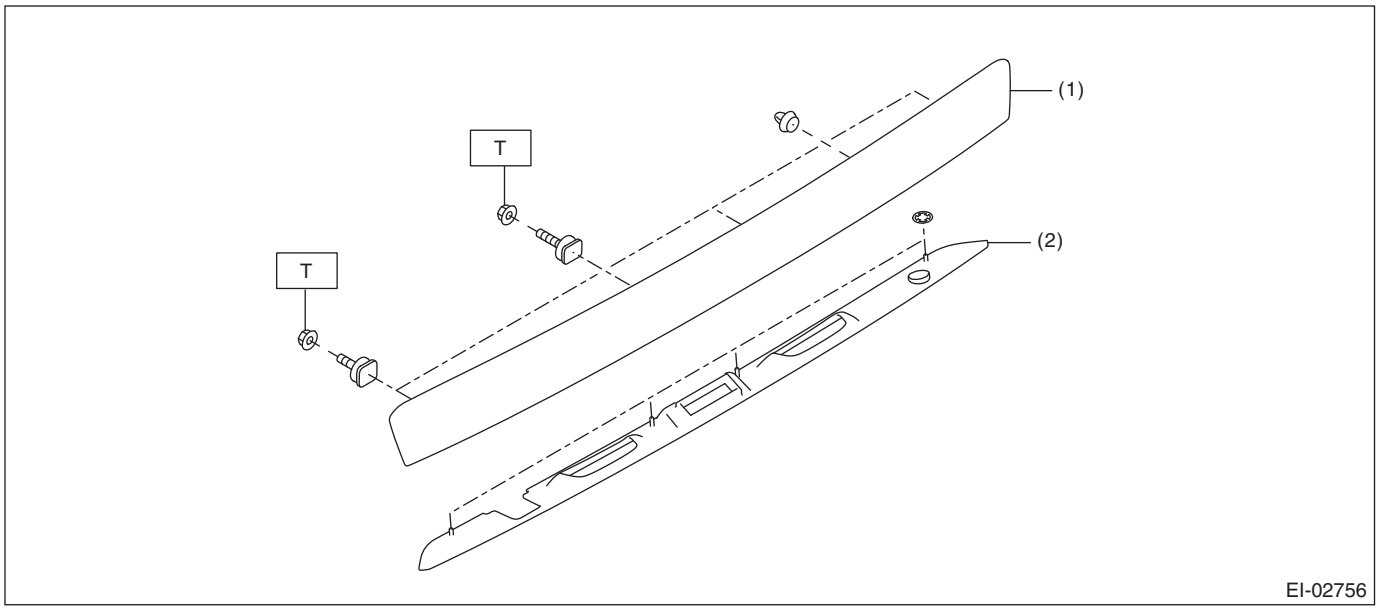
11.ROOF RAIL



(1) Roof molding
(2) Roof rail ASSY
(3) Rivet
(4) Clip

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

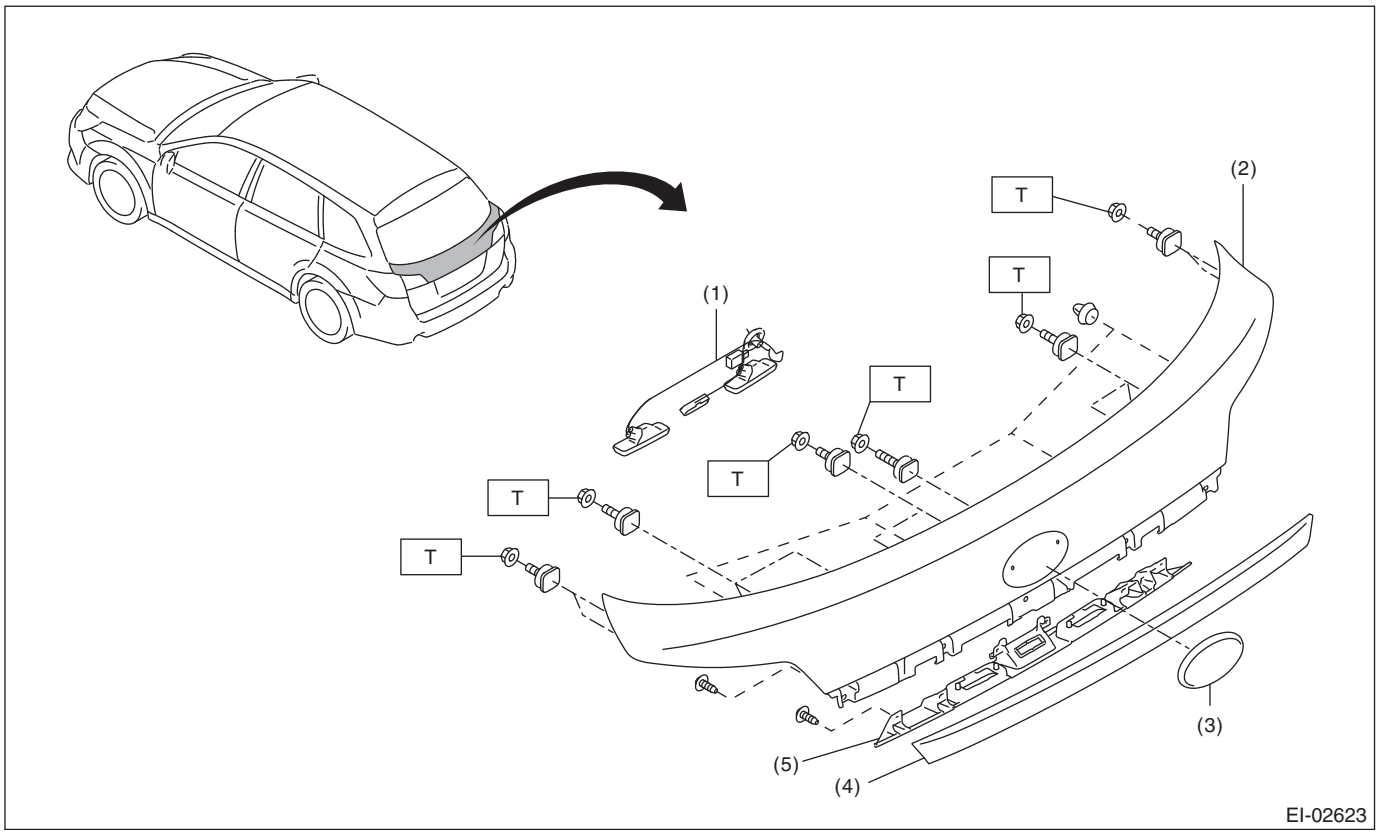
12.TRUNK LID GARNISH



(1) Trunk lid garnish
(2) License plate light bracket

Tightening torque:N·m (kgf-m, ft-lb)
T: 4.5 (0.46, 3.3)

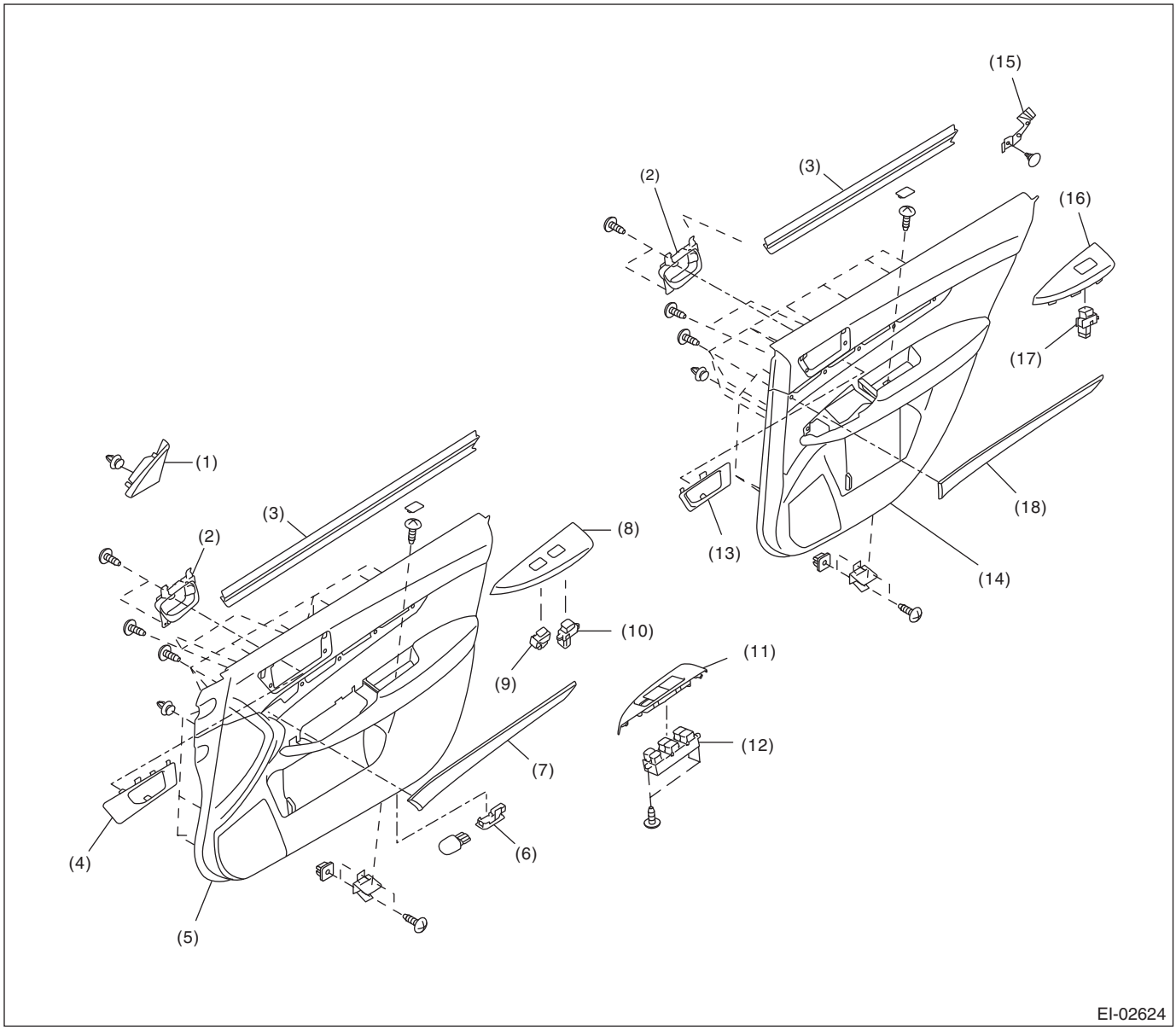
13.REAR GATE GARNISH



(1) Rear gate opener ASSY harness
(2) Rear gate garnish UPR
(3) Ornament
(4) Rear gate garnish LWR
(5) License plate light bracket

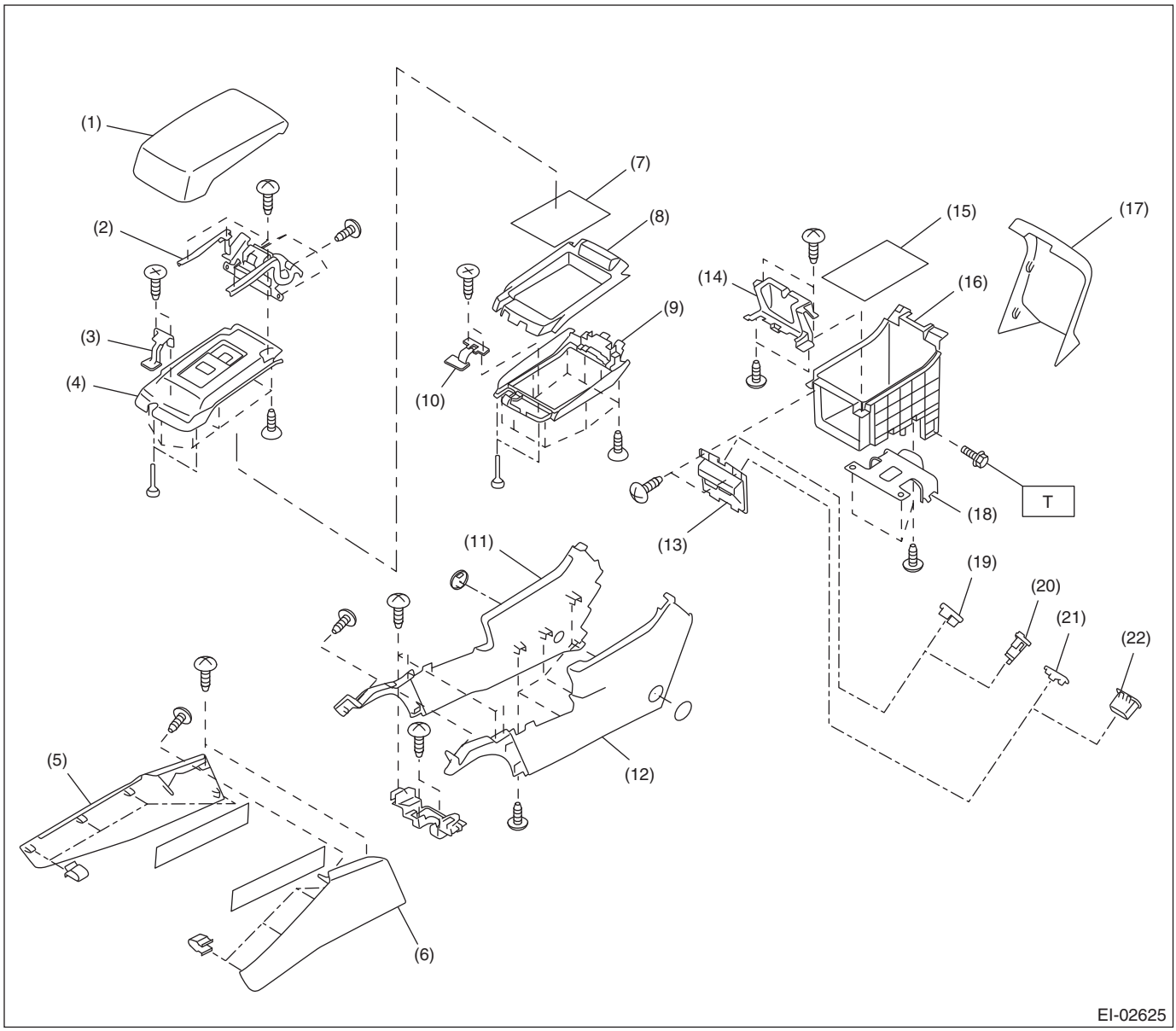
Tightening torque:N·m (kgf-m, ft-lb)
T: 4.5 (0.46, 3.3)

14.DOOR TRIM



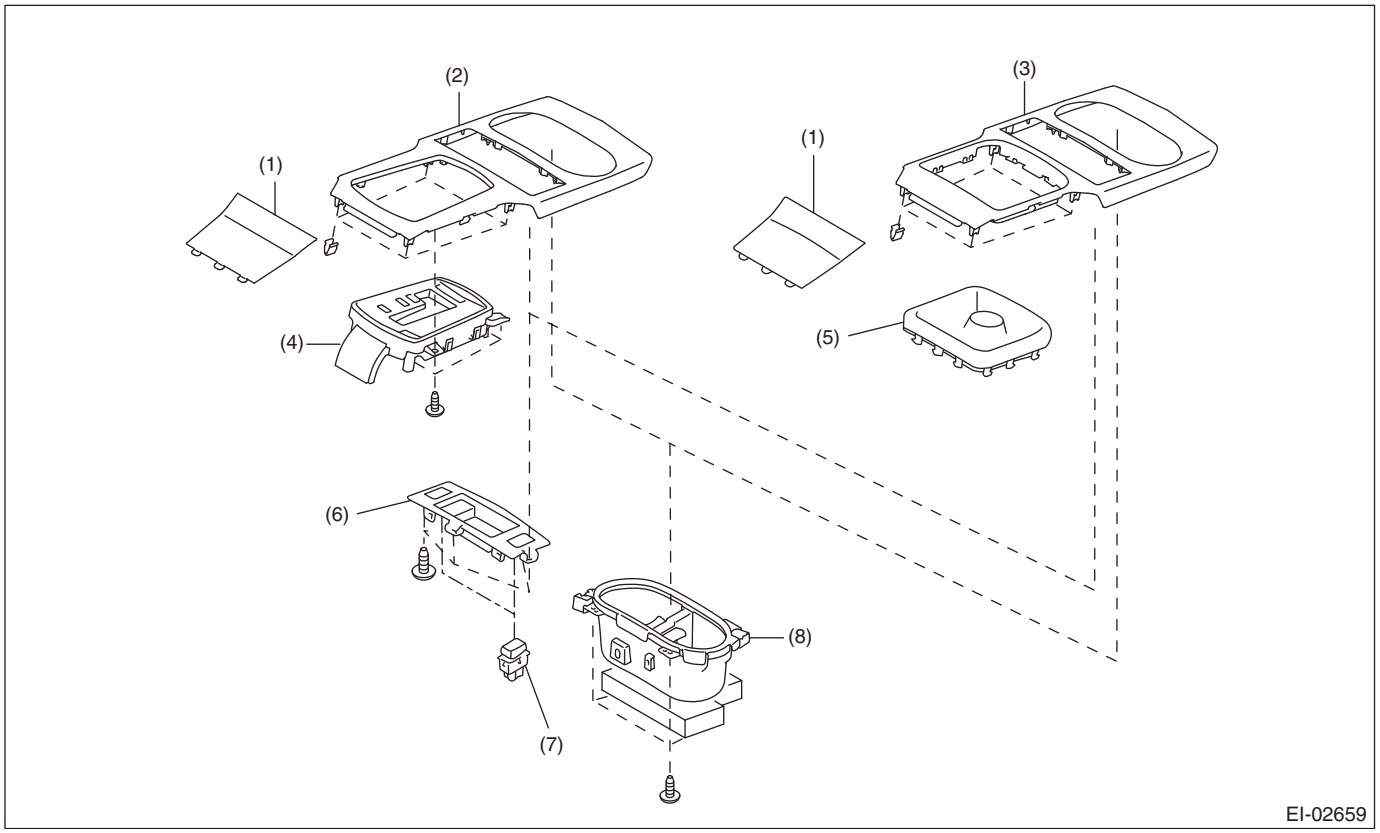
(1)	Gusset cover front	(7)	Front door ornament panel	(13)	Rear door inner remote cover
(2)	Inner remote ASSY	(8)	Power window switch panel front RH	(14)	Rear door trim
(3)	Weather strip inner	(9)	Door lock switch ASSY	(15)	Rear door cover upper
(4)	Front door inner remote cover	(10)	Power window sub-switch ASSY front	(16)	Power window switch panel rear
(5)	Front door trim ASSY	(11)	Power window switch panel front LH	(17)	Power window sub-switch ASSY rear
(6)	Door step light	(12)	Power window main switch ASSY	(18)	Rear door ornament panel

15.CONSOLE BOX



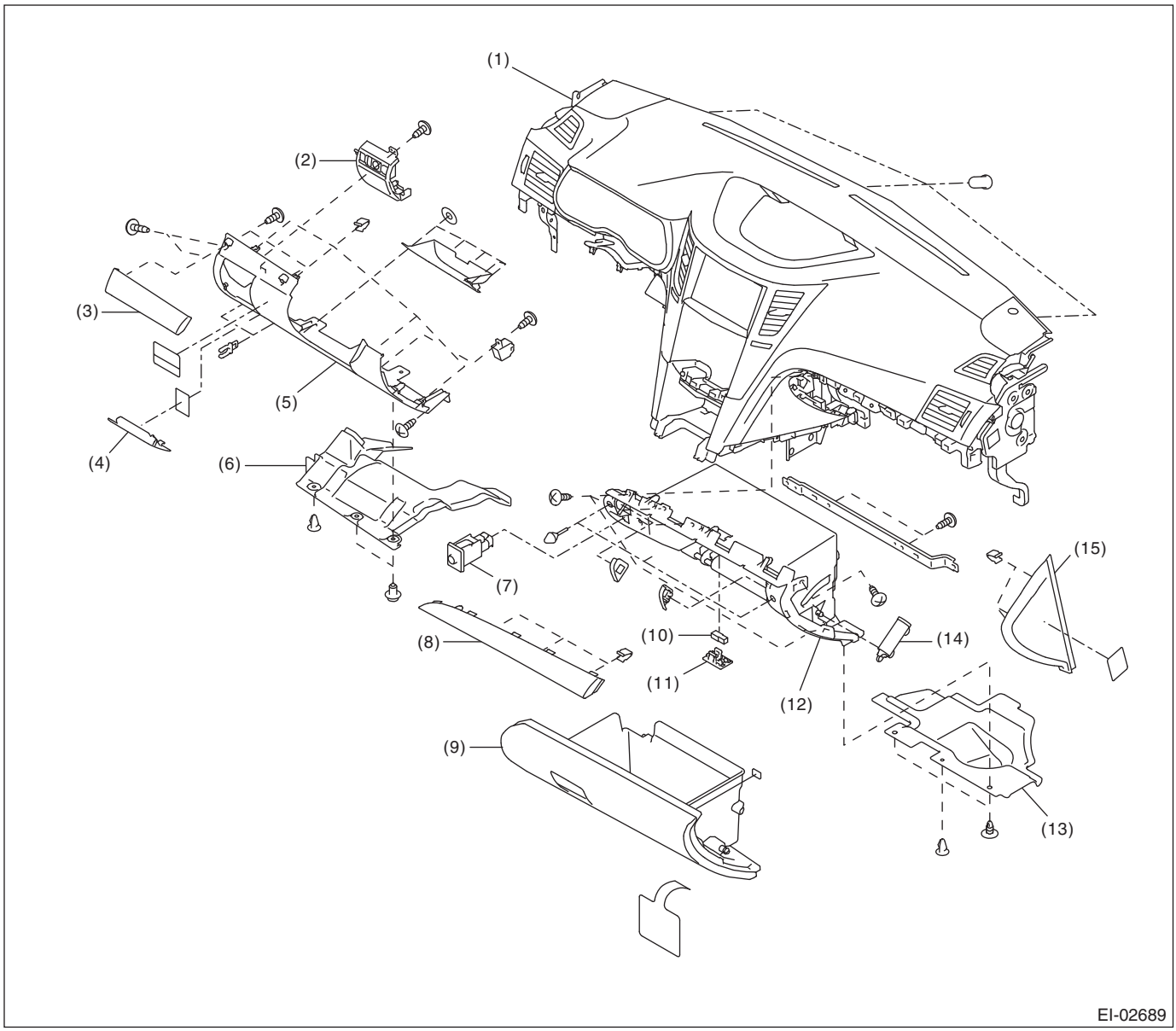
(1) Console lid COMPL
(2) Console lid hinge COMPL
(3) Lid lock UPR
(4) Lid inner UPR
(5) Console front side cover ASSY RH
(6) Console front side cover ASSY LH
(7) Mat (lid LWR)
(8) Lid inner LWR
(9) Lid outer LWR
(10) Lid lock LWR
(11) Console box LWR RH
(12) Console box LWR LH
(13) Pocket case
(14) Cover center
(15) Mat (pocket)
(16) Console pocket
(17) Console rear cover
(18) Console bracket
(19) Cover A
(20) Accessory socket
(21) Cover B
(22) AUX unit

Tightening torque:N·m (kgf-m, ft-lb)
T: 6.5 (0.66, 4.8)

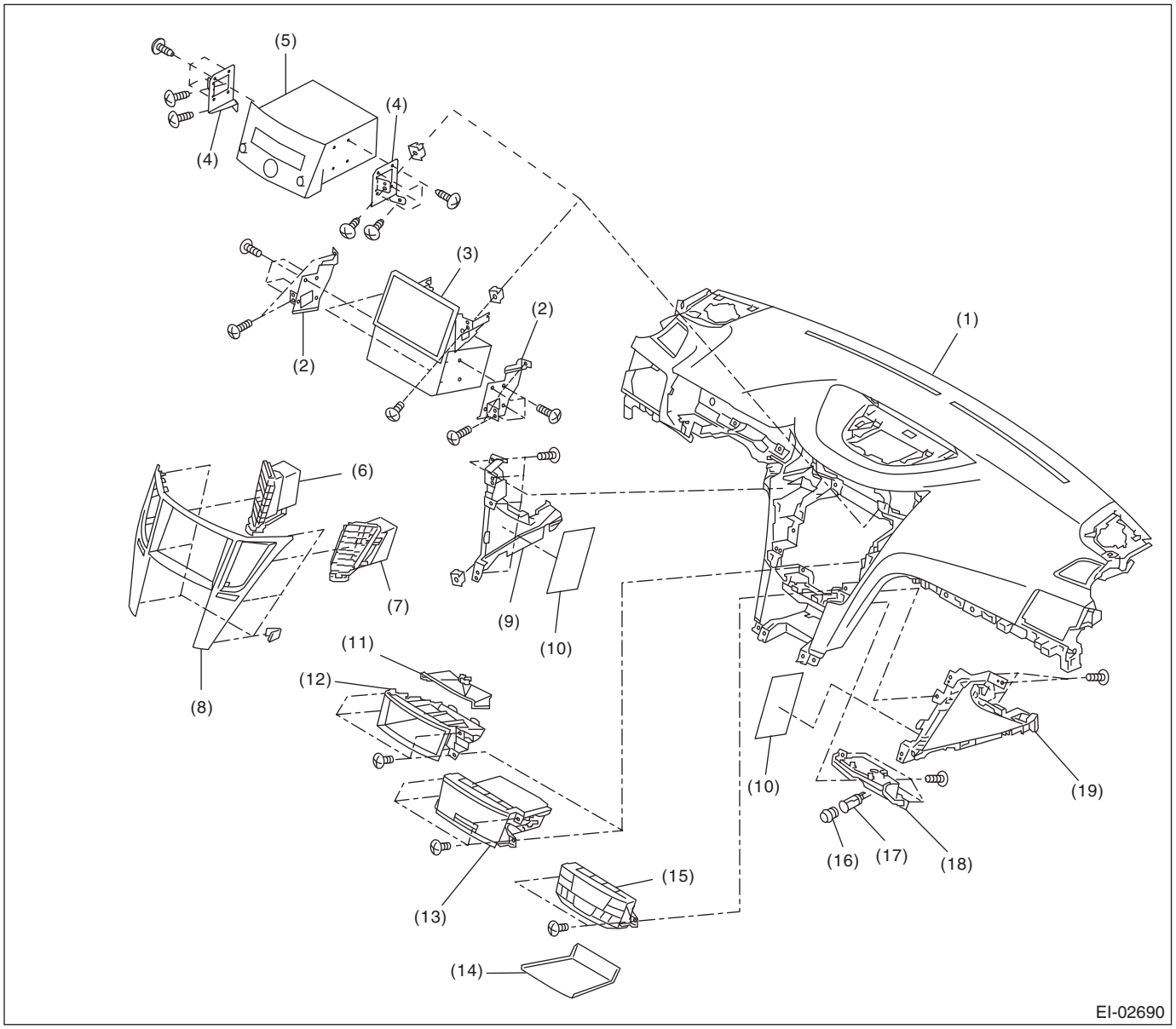


(1) Center pocket mat
(2) Front cover AT
(3) Front cover MT
(4) Indicator ASSY AT
(5) Shift boot (MT model)
(6) Switch case
(7) Seat heater switch
(8) Cup holder ASSY

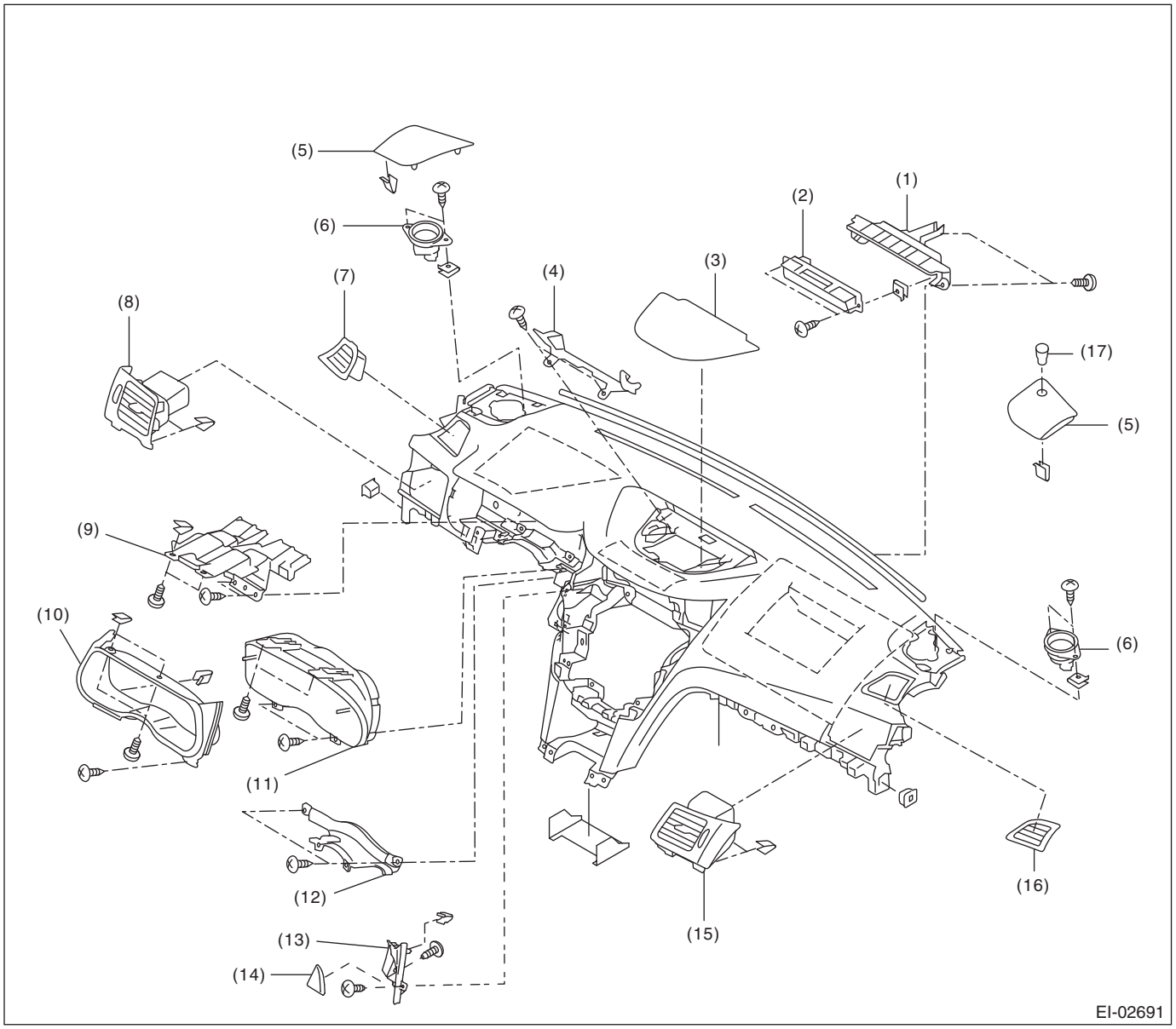
16.INSTRUMENT PANEL



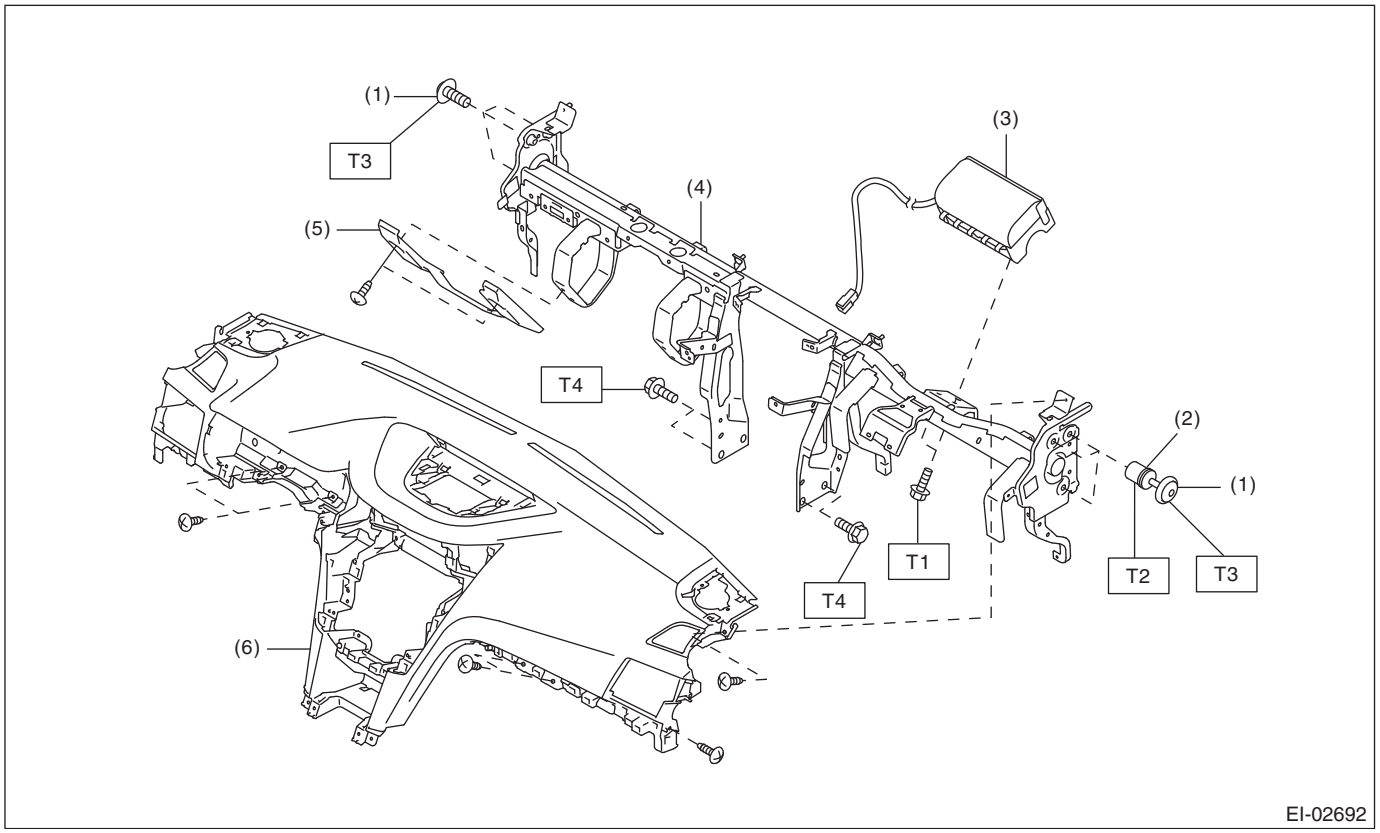
(1)	Instrument panel ASSY	(6)	Instrument panel lower cover under	(11)	Illumination bracket
(2)	Switch panel ASSY	(7)	Trunk opener cancel button	(12)	Glove box back panel
(3)	Ornament panel ASSY D OUT	(8)	Ornament panel ASSY P	(13)	Glove box under cover
(4)	Fuse lid	(9)	Glove box lid ASSY	(14)	Glove box damper
(5)	Instrument panel lower cover	(10)	Illumination LED ASSY	(15)	Instrument panel side cover



(1)	Instrument panel pad and frame ASSY	(8)	Center panel ASSY	(15)	Control panel ASSY
(2)	Navigation bracket	(9)	Center cover side RH	(16)	Plug
(3)	Navigation ASSY	(10)	Insulator	(17)	Accessory socket ASSY
(4)	Audio bracket	(11)	Pocket center light	(18)	Center pocket back panel
(5)	Audio ASSY	(12)	Pocket ASSY (without lid)	(19)	Center cover side LH
(6)	Center grille ASSY LH	(13)	Pocket ASSY (with lid)		
(7)	Center grille ASSY RH	(14)	Center pocket mat		

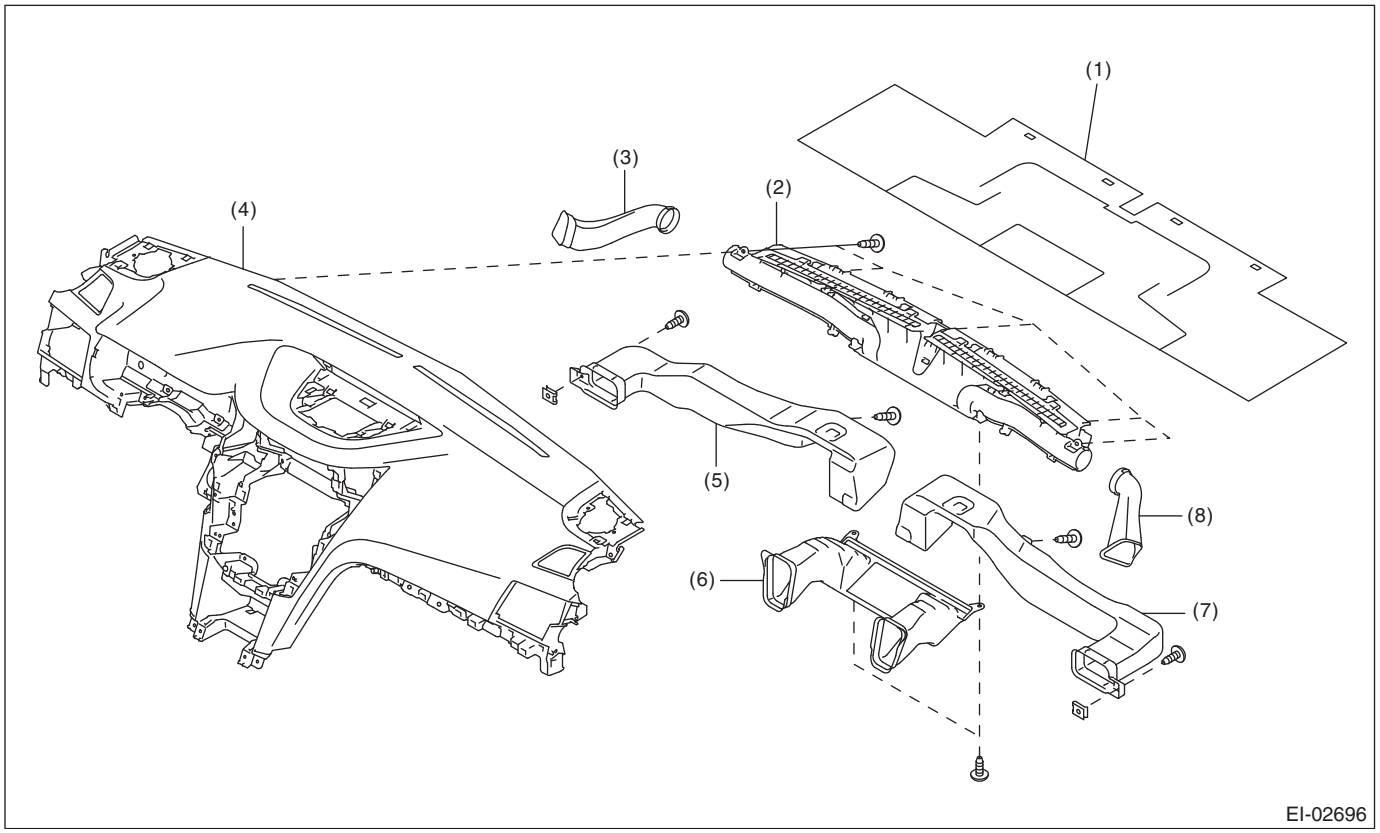


(1) Multi display panel UPR
(2) Multi display ASSY
(3) Center speaker cover
(4) Multi display panel LWR
(5) Side speaker cover
(6) Front side speaker ASSY
(7) Defroster side grille RH
(8) Side vent grille ASSY RH
(9) Meter reinforcement panel
(10) Meter visor ASSY
(11) Combination meter ASSY
(12) Steering upper cover
(13) Starter switch cover
(14) Ornament panel ASSY D INN
(15) Side vent grille ASSY LH
(16) Defroster side grille LH
(17) Sunload sensor



(1) TORX® bolt
(2) Adjuster bolt
(3) Passenger's airbag module ASSY
(4) Steering support beam ASSY
(5) Knee guard panel COMPL
(6) Instrument panel pad and frame ASSY

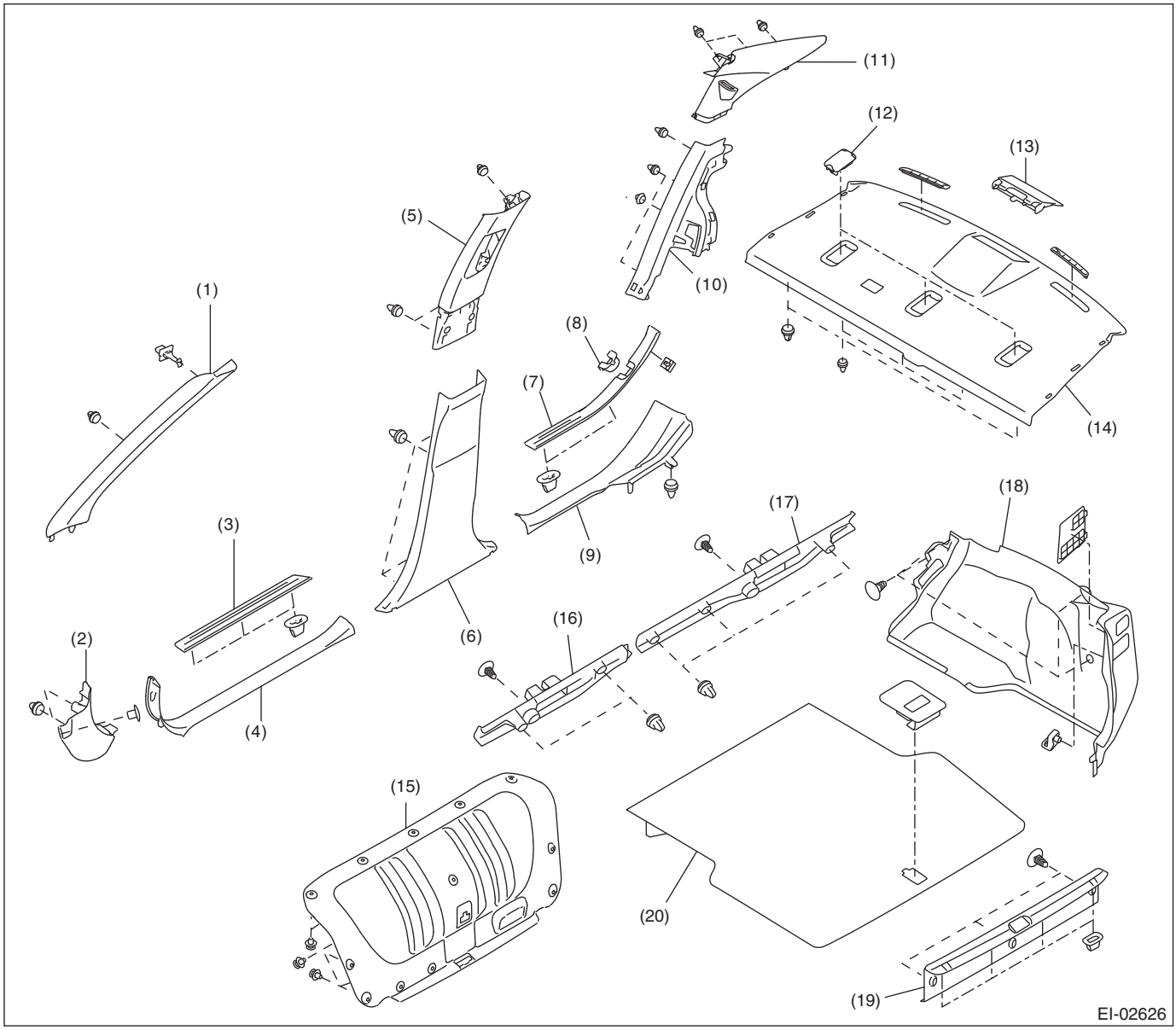
Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 3 (0.31, 2.2)
T3: 18 (1.84, 13.3)
T4: 25 (2.55, 18.4)



(1) Insulator
(2) Front defroster nozzle ASSY
(3) Side defroster duct RH
(4) Instrument panel pad and frame ASSY
(5) Side vent duct LH
(6) Center vent duct
(7) Side vent duct RH
(8) Side defroster duct LH

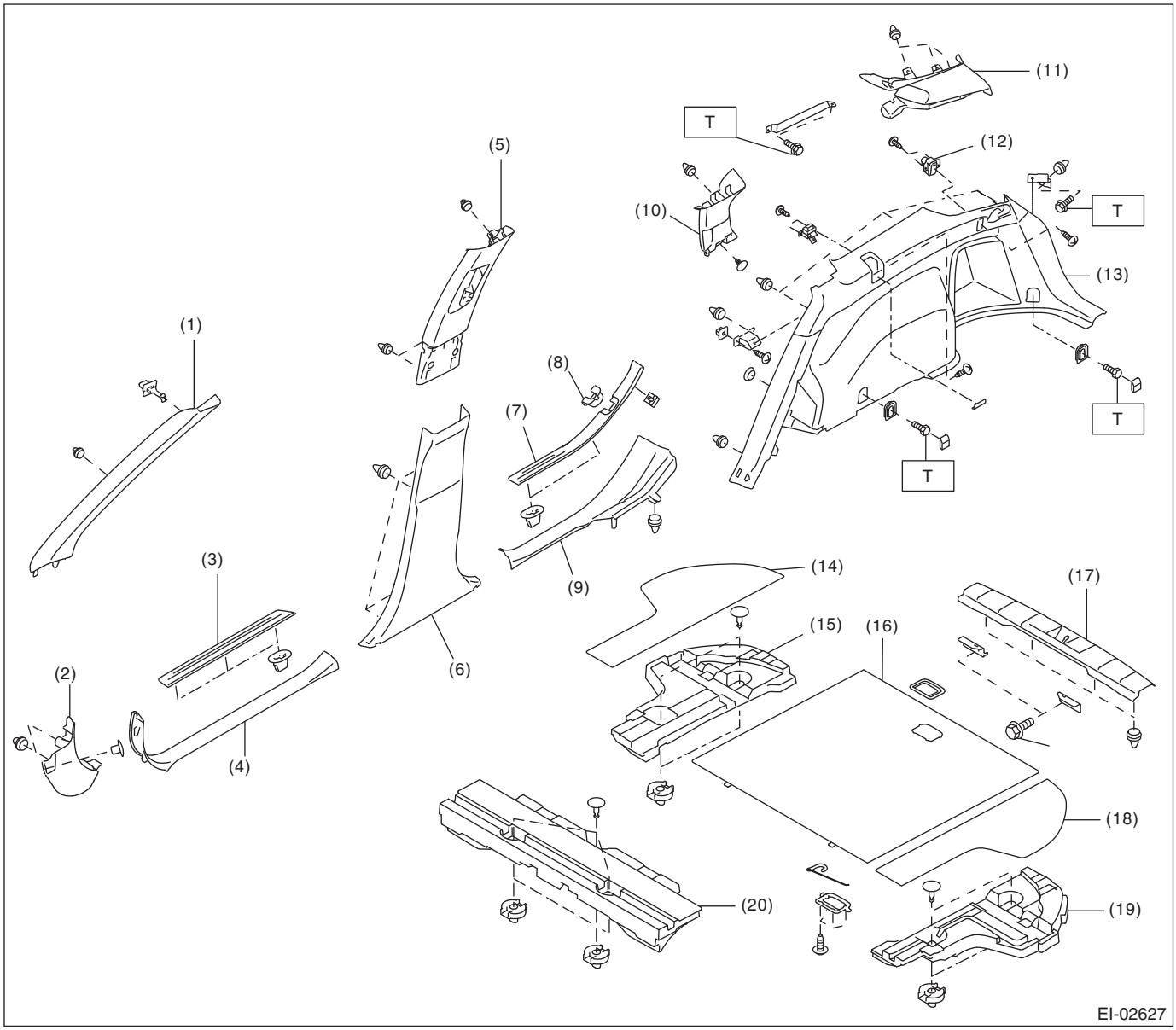
17.INNER TRIM

- Sedan model



(1)	Front pillar trim	(8)	Catcher cover	(15)	Trunk lid trim
(2)	Side sill cover front	(9)	Side sill cover-rear INN	(16)	Trunk trim panel ASSY-front LH
(3)	Side sill cover-front OUT	(10)	Rear quarter trim LWR	(17)	Trunk trim panel ASSY-front RH
(4)	Side sill cover-front INN	(11)	Rear quarter trim UPR	(18)	Trunk trim panel ASSY-side
(5)	Center pillar trim UPR	(12)	Child anchor cap	(19)	Trunk trim panel ASSY-rear
(6)	Center pillar trim LWR	(13)	High-mounted stop light ASSY	(20)	Trunk mat
(7)	Side sill cover-rear OUT	(14)	Rear shelf panel		

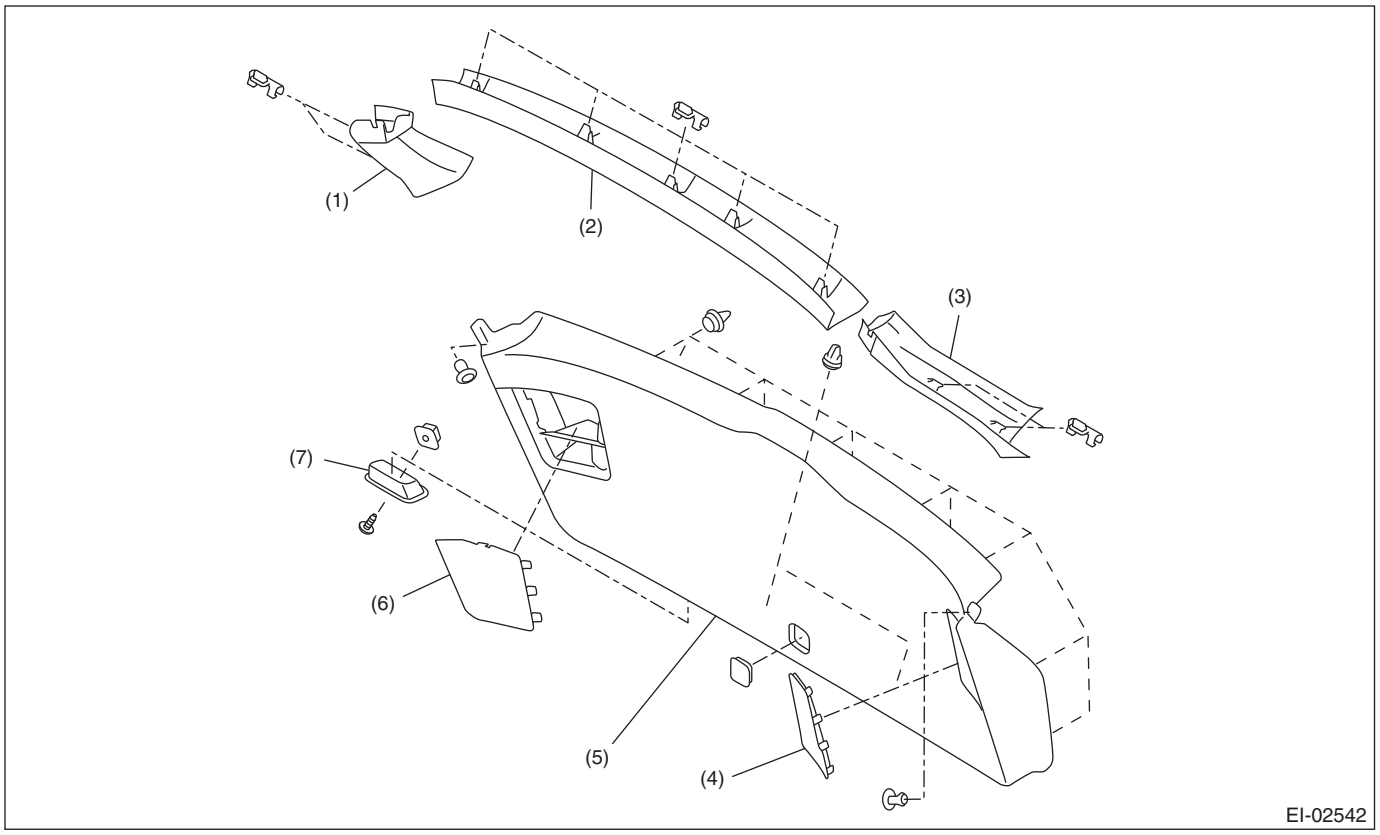
- OUTBACK model



(1) Front pillar trim
(2) Side sill cover front
(3) Side sill cover-front OUT
(4) Side sill cover-front INN
(5) Center pillar trim UPR
(6) Center pillar trim LWR
(7) Side sill cover-rear OUT
(8) Catcher cover
(9) Side sill cover-rear INN
(10) Rear quarter trim UPR-front
(11) Rear quarter trim UPR-rear
(12) Hook
(13) Rear quarter trim LWR
(14) Rear floor mat RH
(15) Rear floor spacer RH
(16) Rear floor mat CTR
(17) Rear floor edge cover
(18) Rear floor mat LH
(19) Rear floor spacer LH
(20) Rear floor spacer CTR-front

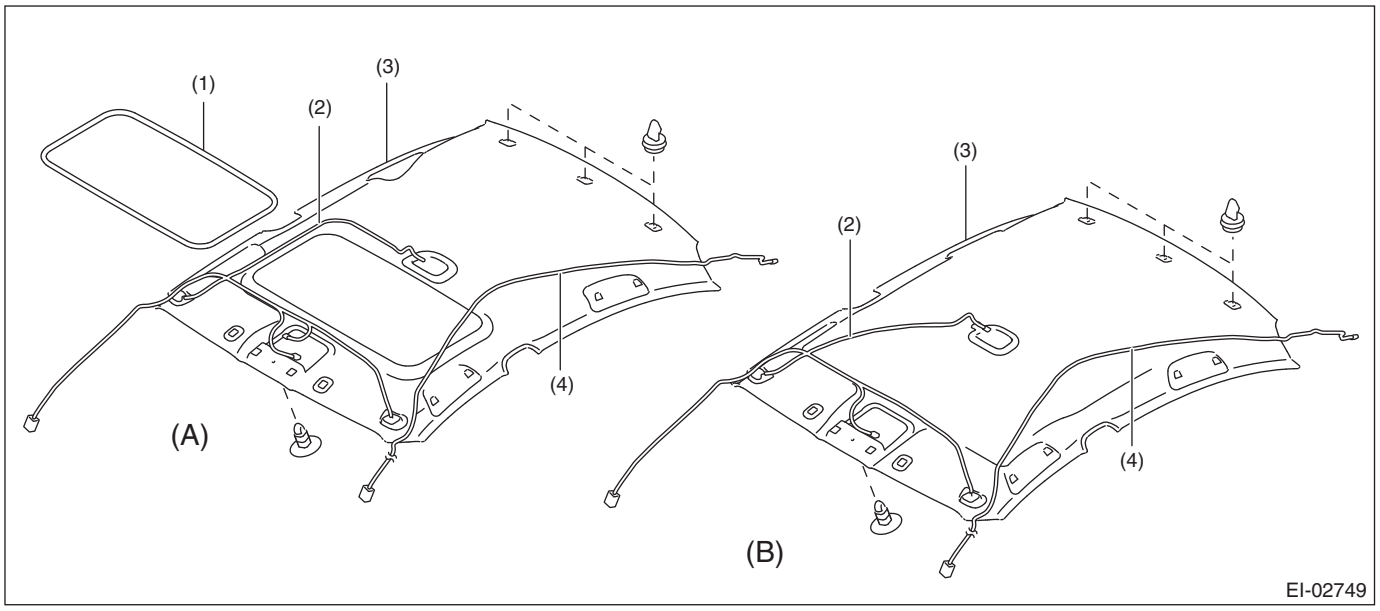
Tightening torque:N·m (kgf-m, ft-lb)
T: 7.5 (0.76, 5.5)

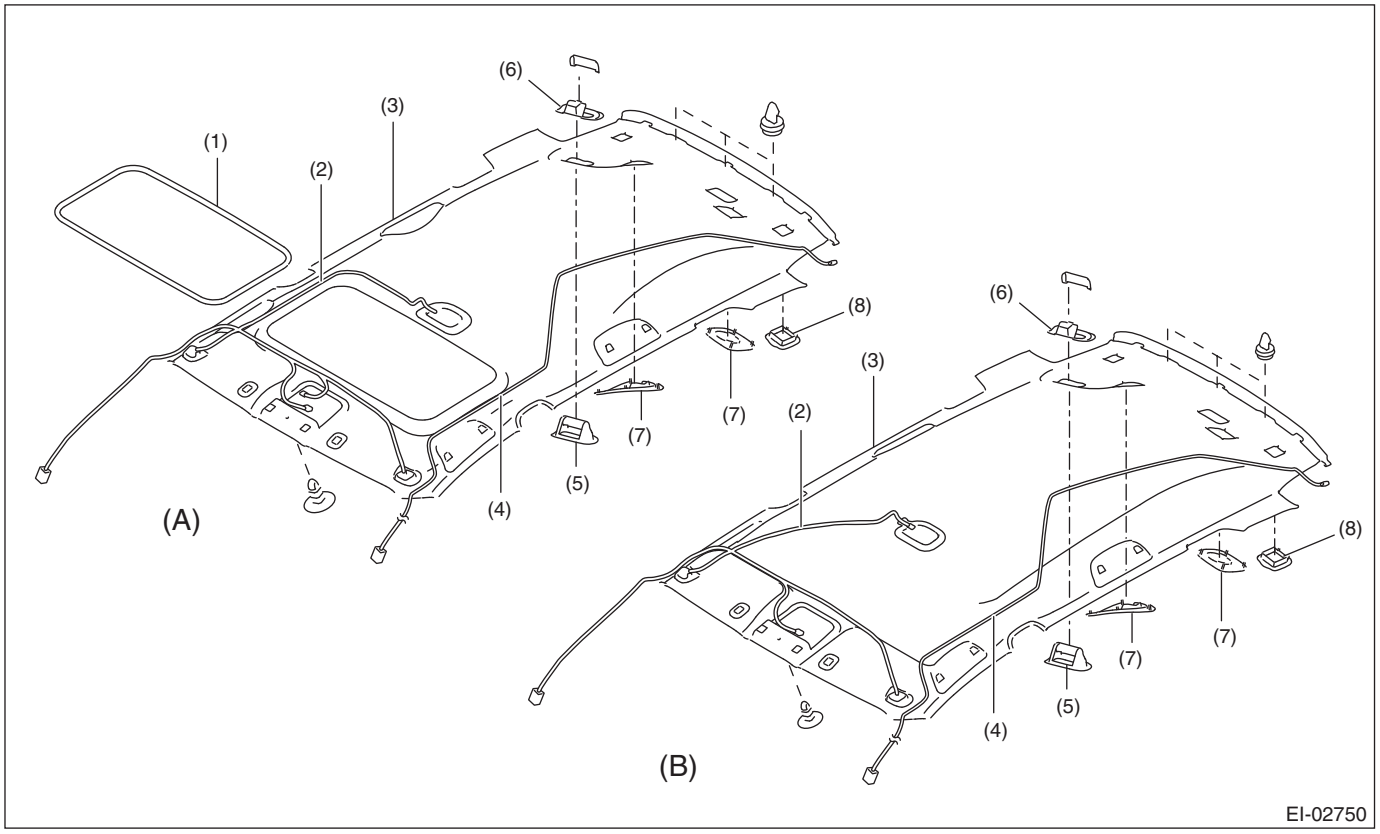
18.REAR GATE TRIM



(1) Rear gate pillar trim RH
(2) Rear gate upper trim
(3) Rear gate pillar trim LH
(4) Rear gate lower cap LH
(5) Rear gate lower trim
(6) Rear gate lower cap RH
(7) Rear gate handle

19.ROOF TRIM

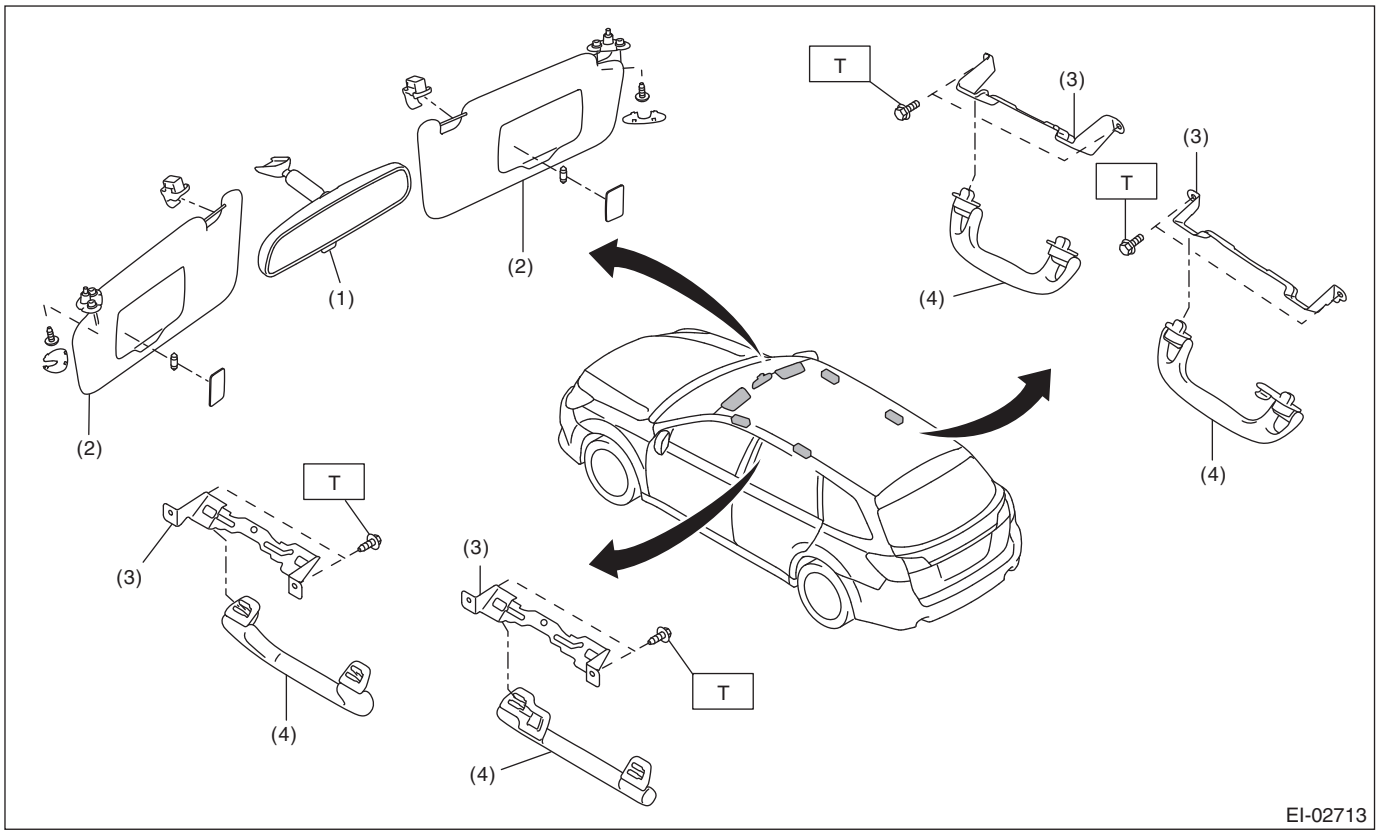




(A) Model with sunroof
(B) Normal roof model

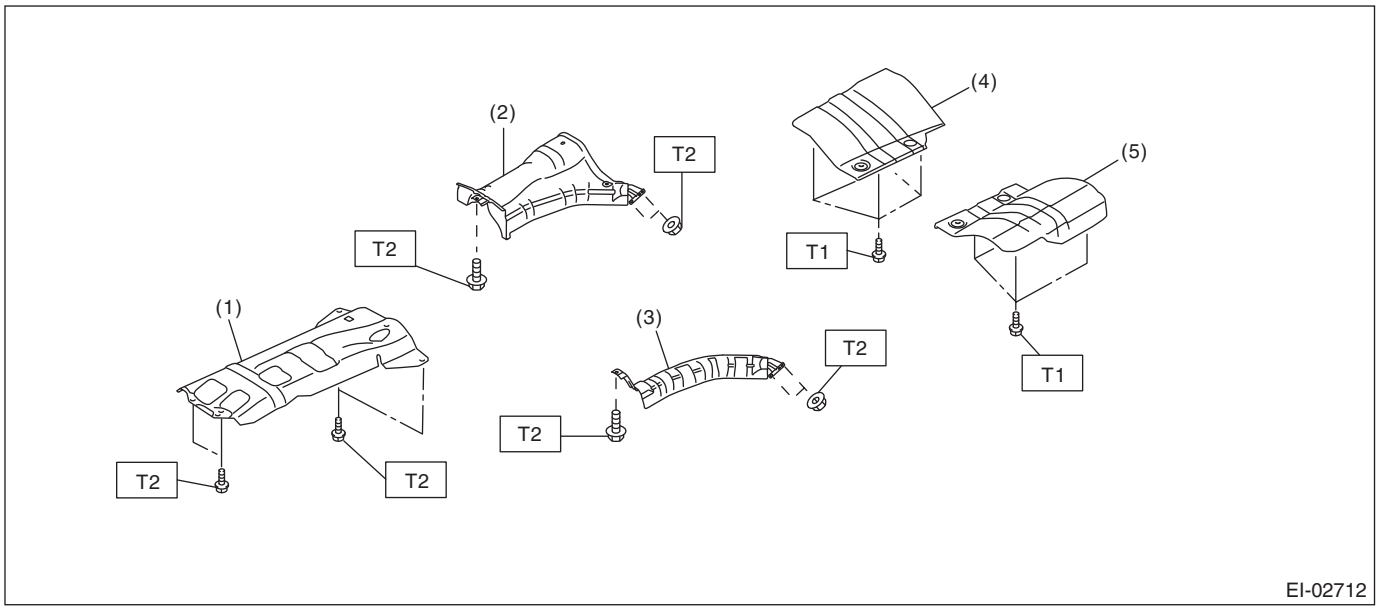
(1) Sun roof garnish
(2) Roof cord ASSY
(3) Roof trim
(4) Feeder cord ASSY
(5) Seat belt holder cover
(6) Seat belt holder base
(7) Speaker cover
(8) Child anchor cover

20.ROOM INNER PARTS



(1)	Room mirror	(3)	Assist grip bracket	***Tightening torque:N·m (kgf-m, ft-lb)***
(2)	Sun visor	(4)	Assist grip	***T: 7.5 (0.76, 5.5)***

21.HEAT SHIELD COVER



(1) Front heat shield cover
(2) Center heat shield cover (turbo model)
(3) Center heat shield cover (non-turbo model)
(3) Rear heat shield cover RH (only DOHC model)
(5) Rear heat shield cover LH

Tightening torque:N·m (kgf-m, ft-lb)

T1: 10 (1.02, 7.4)

T2: 18 (1.84, 13.3)

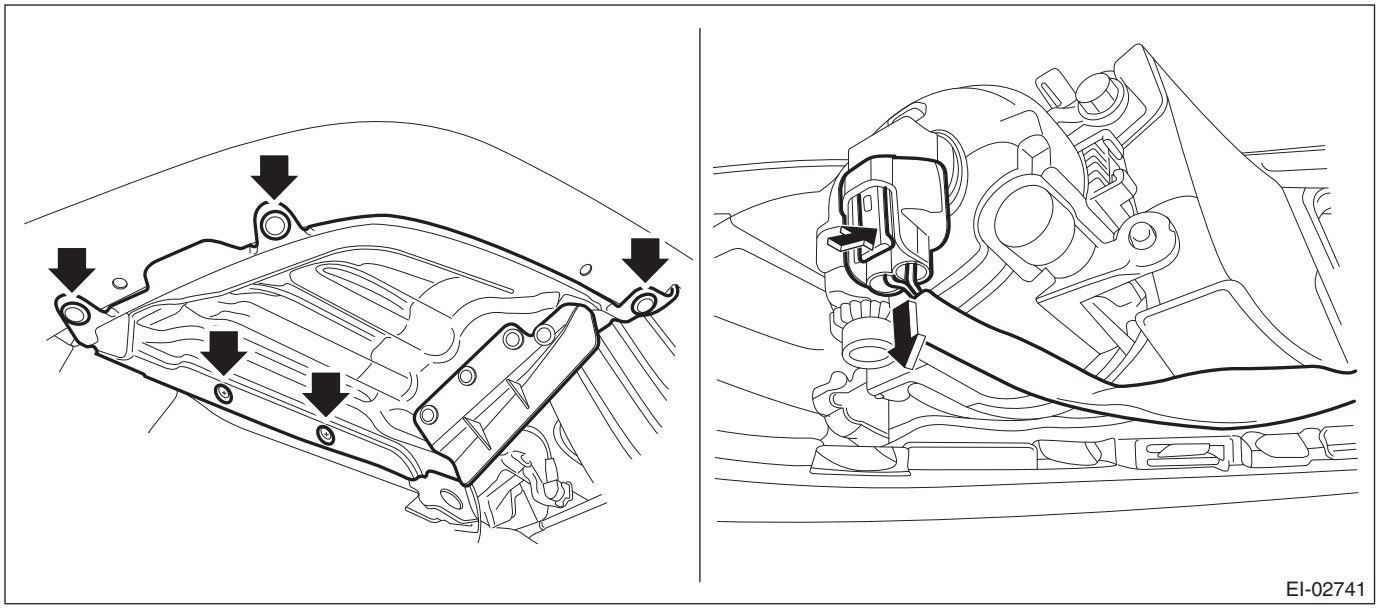
B: PREPARATION TOOL

TOOL NAME	REMARKS
Clip remover	Used for removing trim. • KTC AP201-10A • KTC AP201-N • KTC AP203-10A • KTC AP20L-10B or equivalent
Clip clamp pliers	Used for removal of various clips and clamps. • KTC CCP-190 or equivalent

2. Front Grille

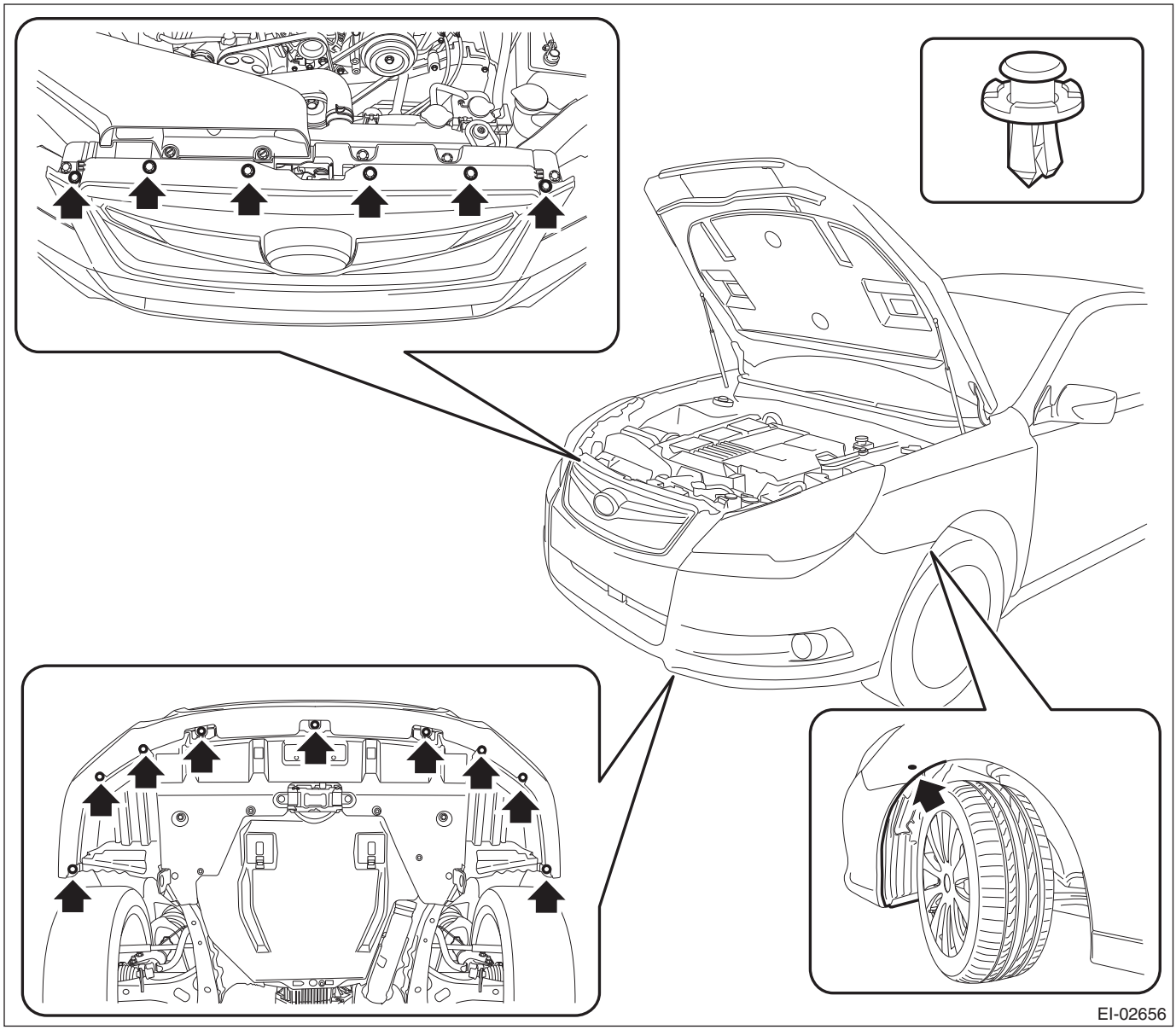
A: REMOVAL

1) Remove the front bumper face assembly.
   (1) Remove the clips, turn over the front mud guard, and disconnect the fog light connector. (Model with fog light)



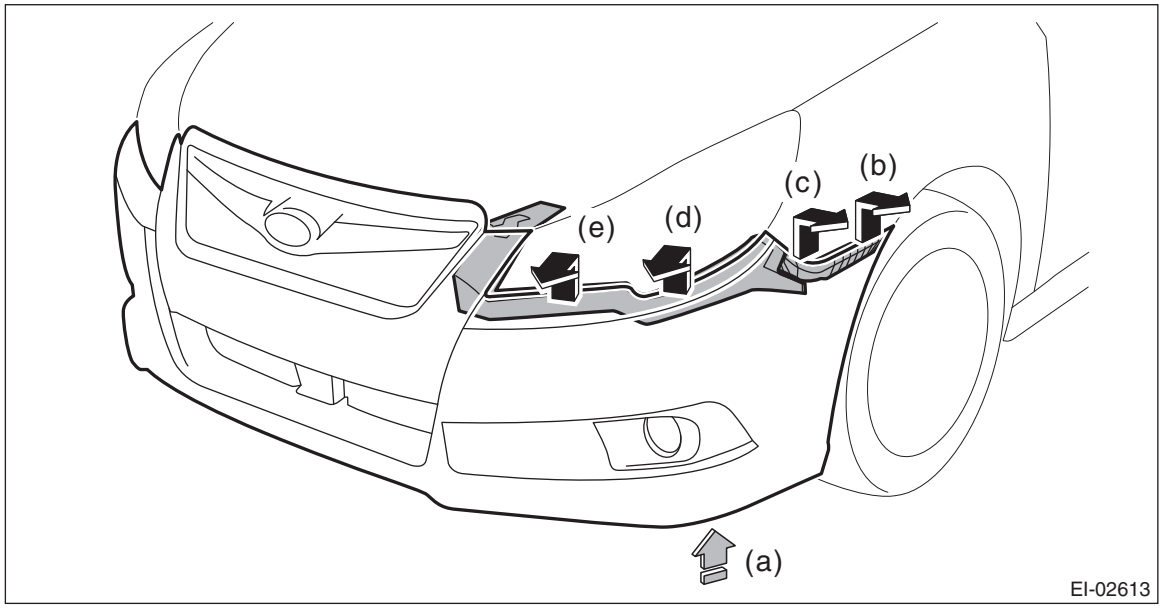
   (2) Remove the clips at the upper side of the bumper.
   (3) Remove the clips from the fender.

(4) Remove the clips at the lower side of bumper.



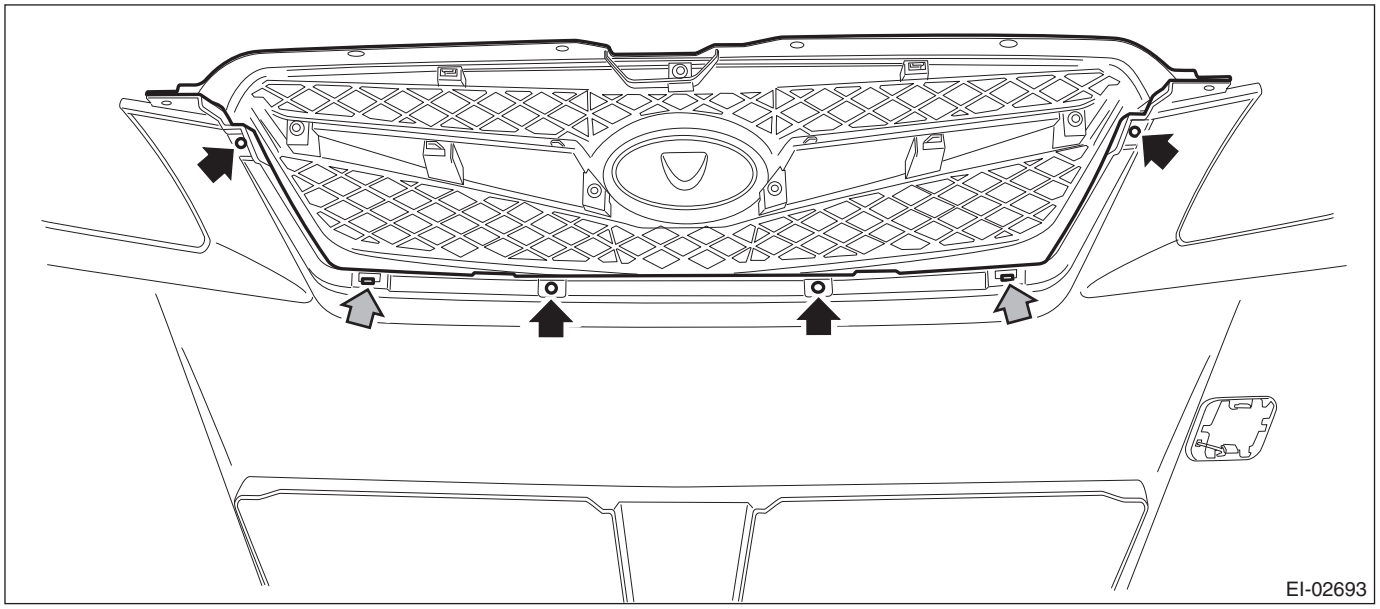
(5) Detach the flange section on the bumper face side from the bracket side front UPR.

CAUTION:
Do not pull forcibly. Doing so may damage the flange sections on the bumper face side.



NOTE:
Detach the parts in order from (b) to (e) while pulling up the lower side of the fog light (a).
Detach the opposite side in the same manner.

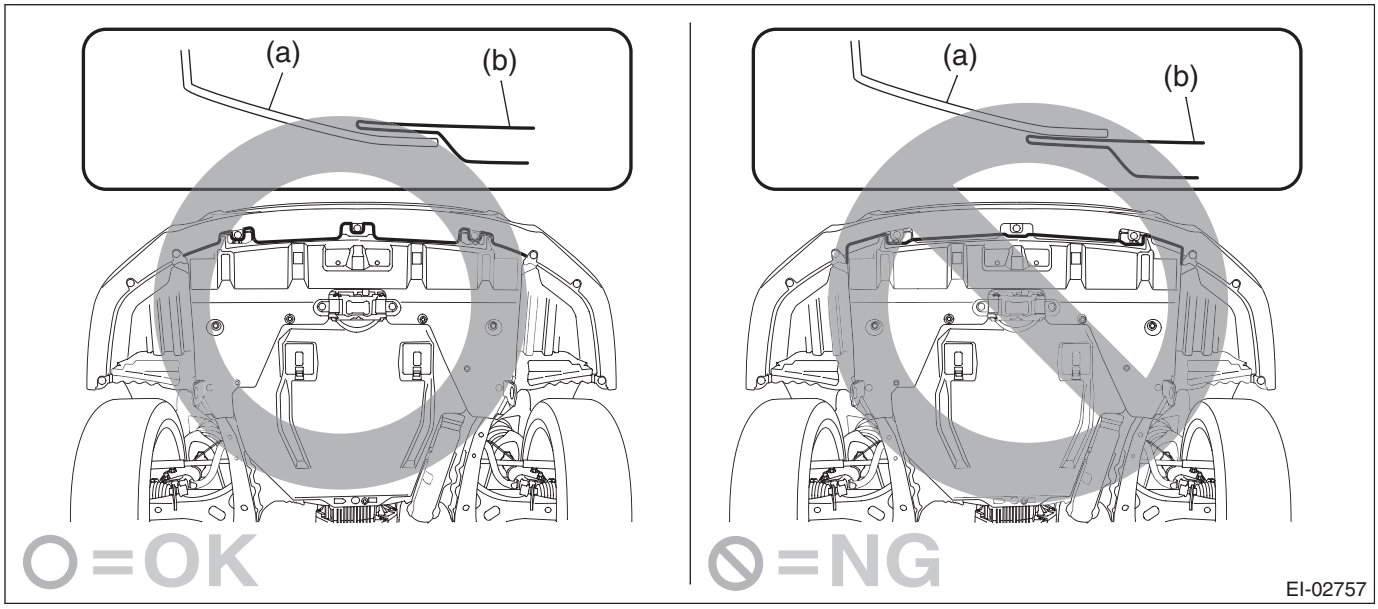
2) Remove the front grille assembly.
(1) Remove the screws from the back side of bumper face.
(2) Release the claws, and remove the front grille assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

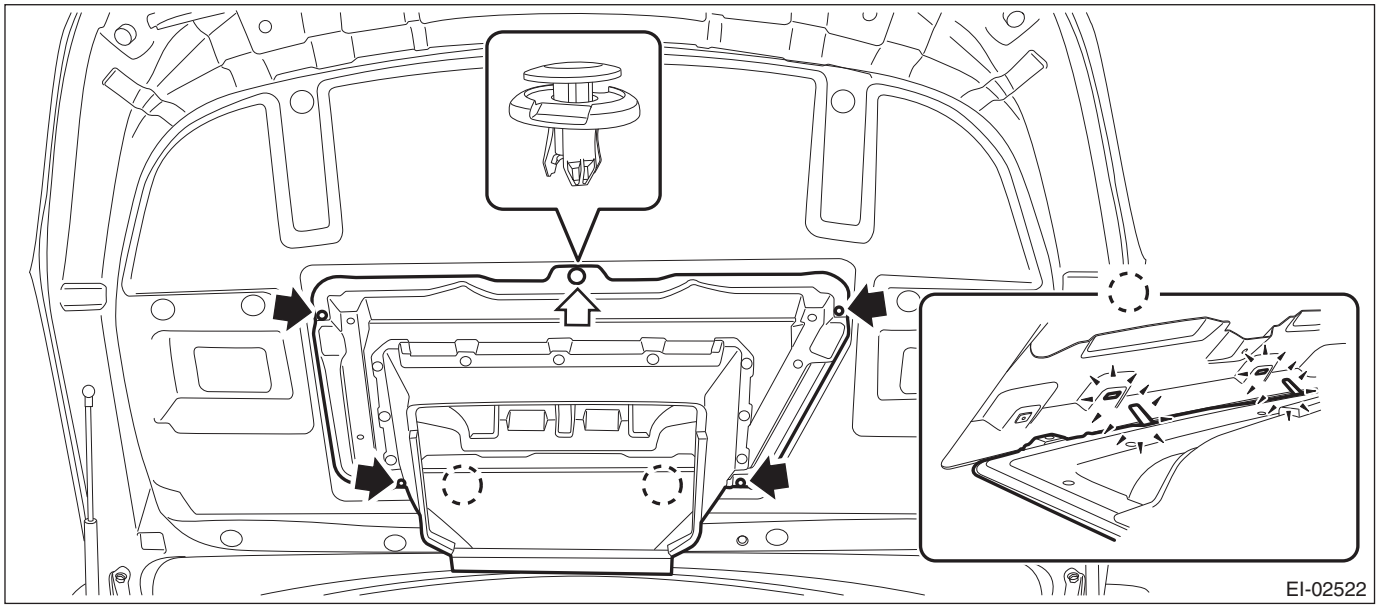
CAUTION:
Install the bumper face so that the under cover front end (b) comes inside the front bumper face (a).



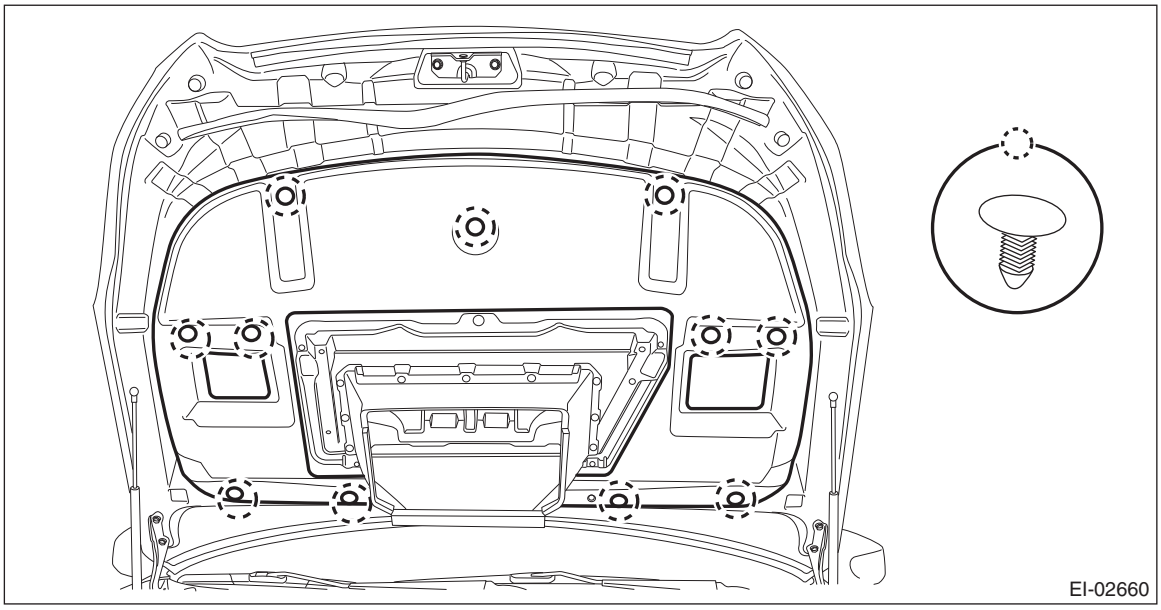
3. Front Hood Grille

A: REMOVAL

1) Open the front hood.
2) Remove the hood duct assembly.
   (1) Remove the screws.
   (2) Remove the clips and remove the hood duct assembly.

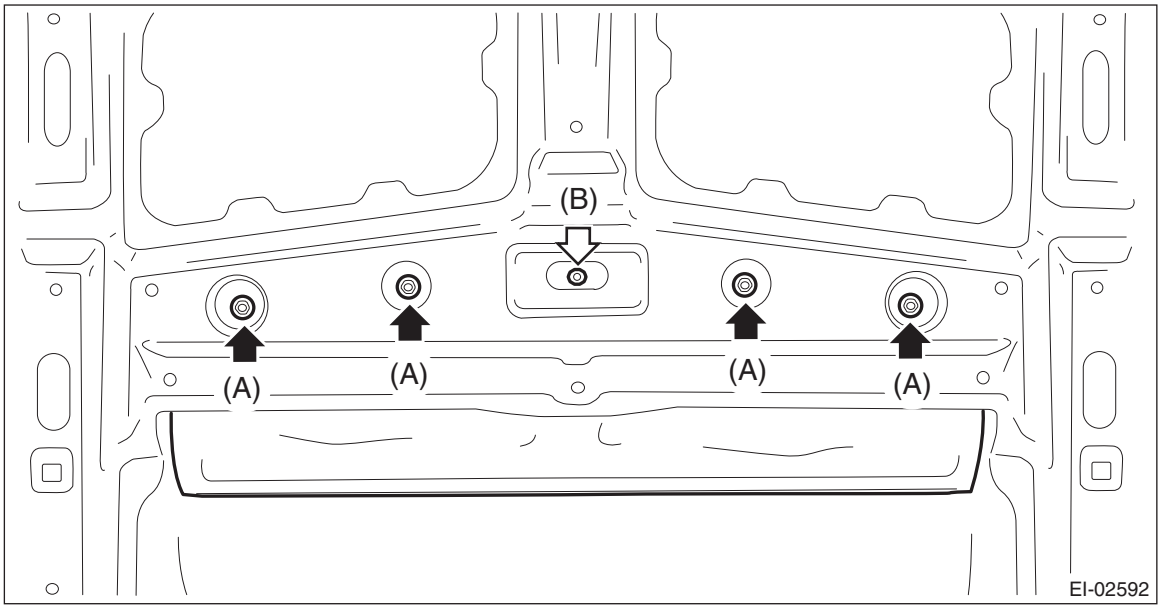


3) Release the clips to remove the front hood insulator.



4) Remove the front hood grille.
   (1) Remove the nuts (A).

(2) Remove clip (B), and remove the front hood grille.

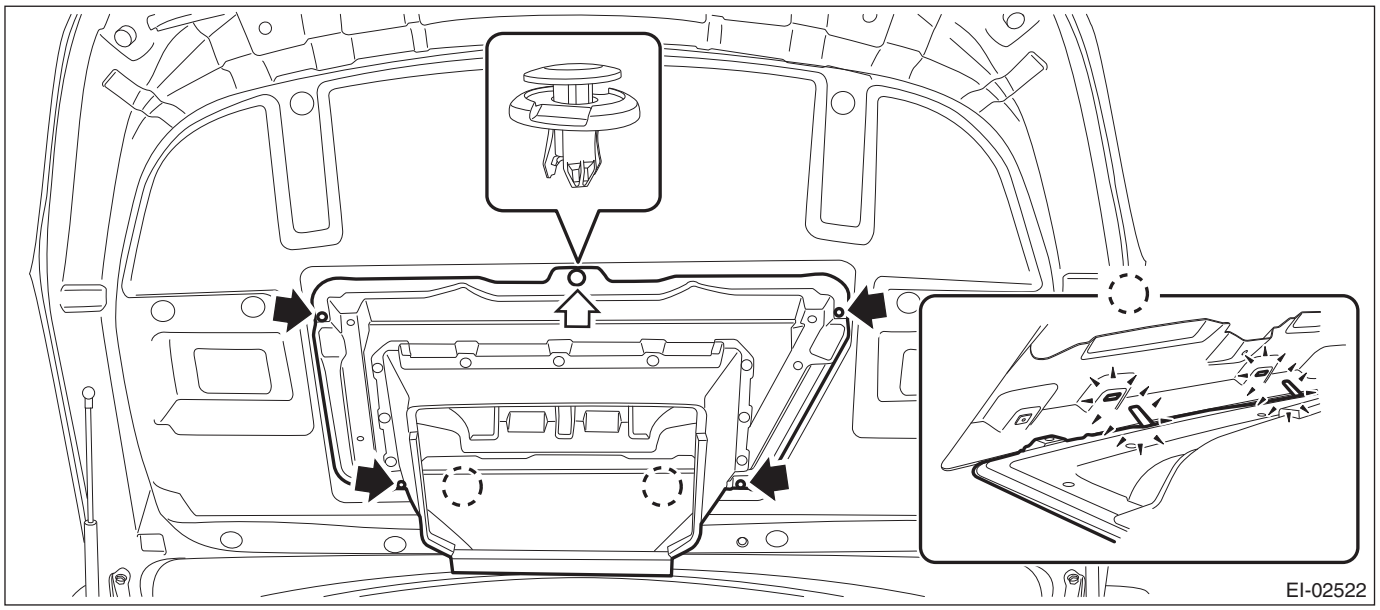


B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:<Ref. to EI-4, FRONT HOOD GRILLE, COMPONENT, General Description.>

NOTE:
Make sure that the front hood duct claws are inserted in the holes on the front hood.



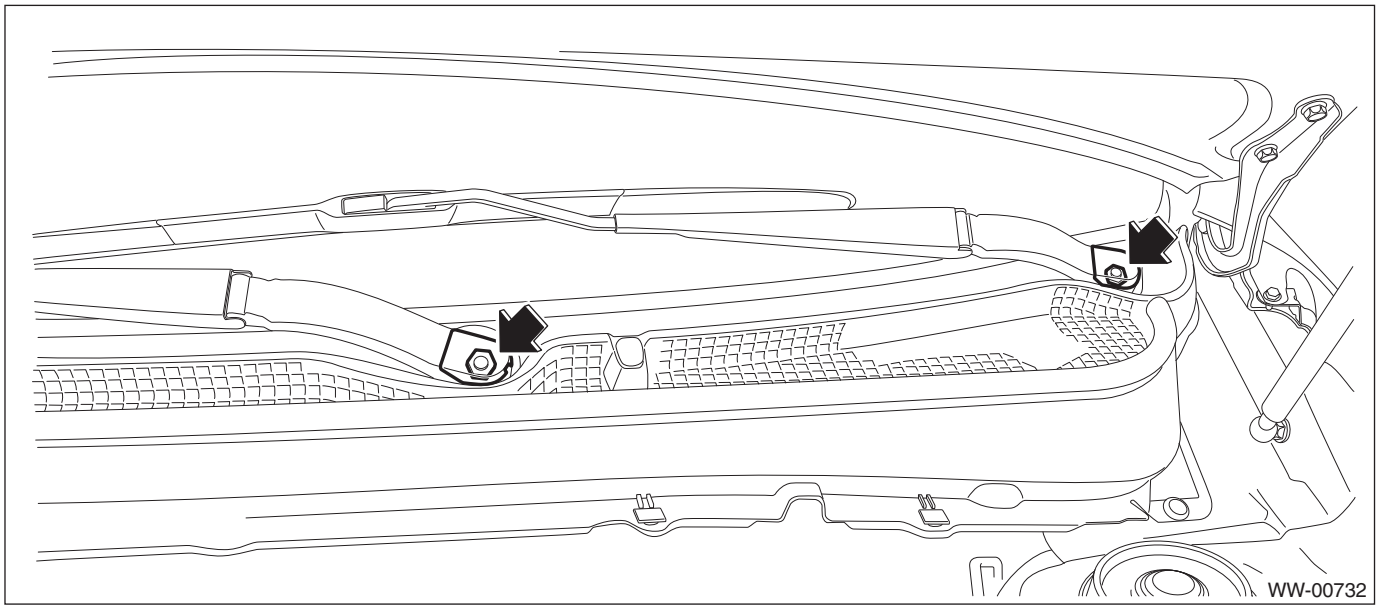
4. Cowl Panel

A: REMOVAL

1) Open the front hood.
2) Remove the front wiper arm assembly.

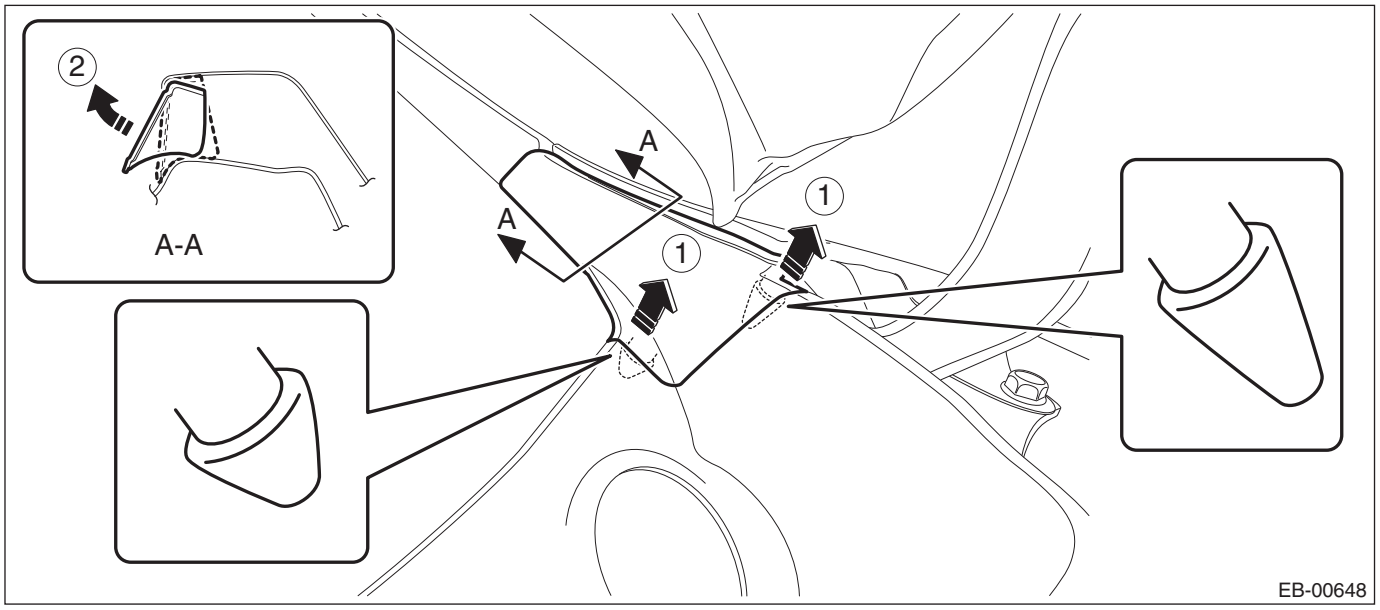
CAUTION:
Follow the steps below when standing up the wiper arm. Not following the steps may cause contacting of wiper arms and damages of wiper arms.
1. Stand up the driver's side wiper arm.
2. Stand up the passenger's side wiper arm.
Fold the wiper arms in the reverse order.

(1) Remove the cap.
(2) Remove the nuts, and remove the front wiper arm assembly.



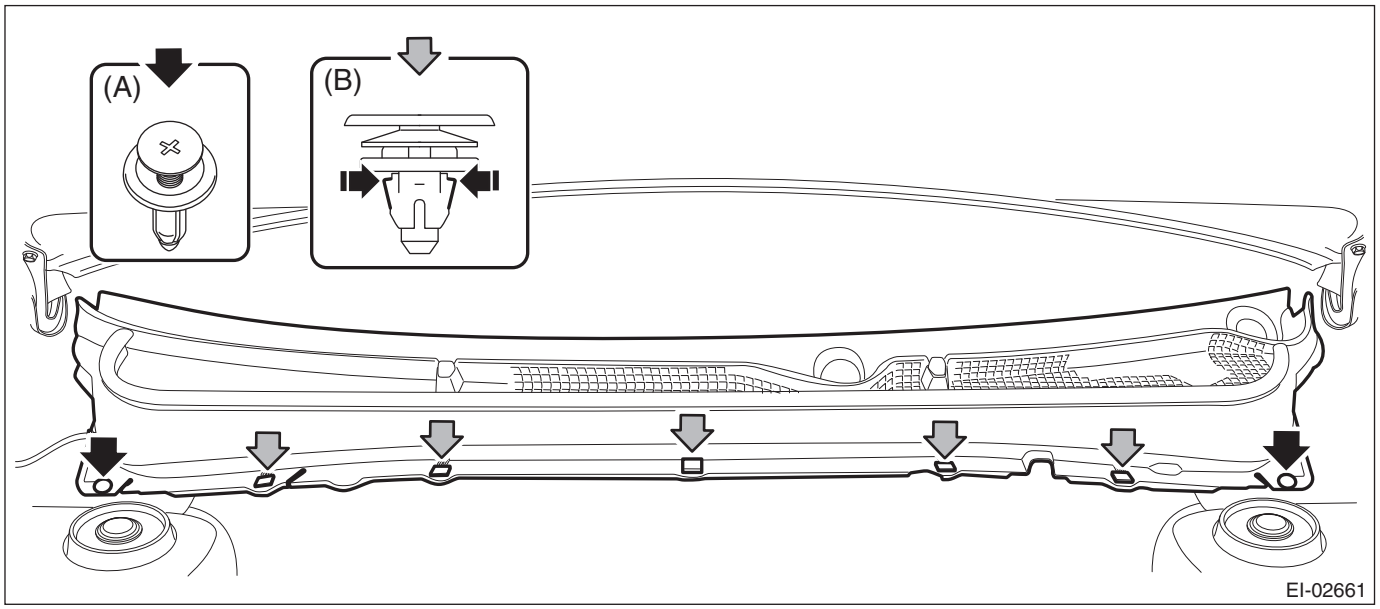
3) Remove the cowl panel side.
   (1) Detach the pins of the cowl panel side.
   (2) Remove the cowl panel side from inside the fender panel by pulling it.

CAUTION:
Applying excessive pulling force may damage the cowl panel side. If it is difficult to remove, use a plastic remover or equivalent tool.

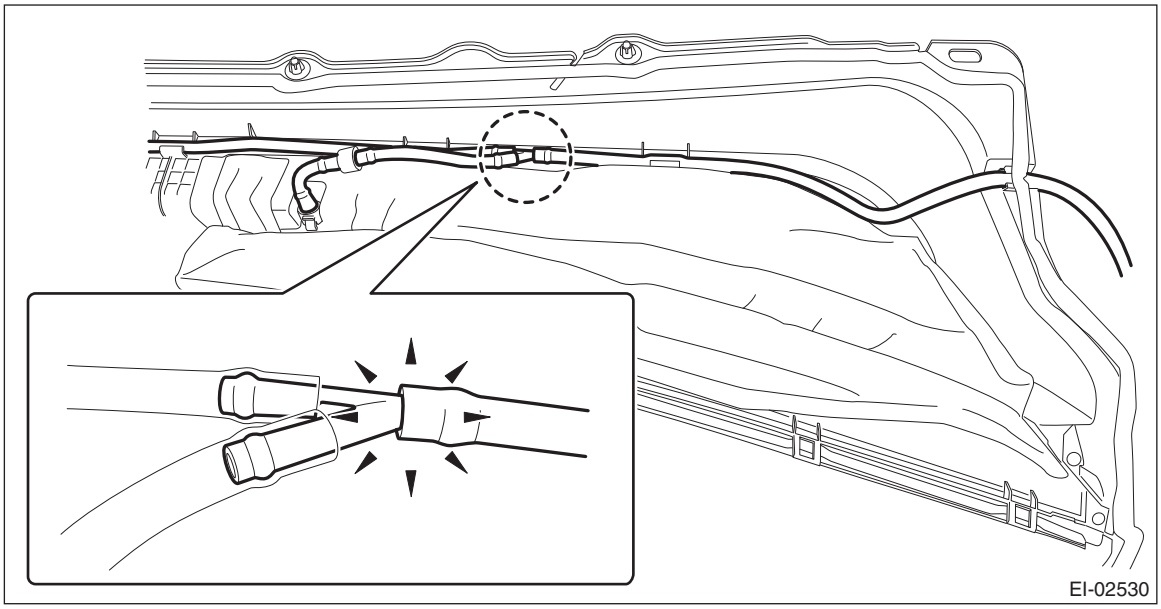


4) Remove the cowl panel.
   (1) Release the clip (A).
   (2) Push the claw of the clip (B) from both sides to remove it.

CAUTION:
When removing the clip (B), push the claw of the clip from both sides.
The clip may be damaged if forcibly pulled.



(3) Disconnect the washer hose.

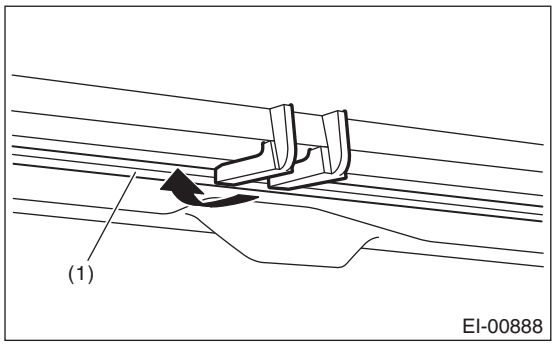


B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:

- Attach the claws of cowl panel to the bottom end of windshield.



(1) Cross section of windshield

- If the washer nozzles have been removed from the cowl panel, adjust the washer spray positions. <Ref. to WW-34, ADJUSTMENT, Front Washer Nozzle.>

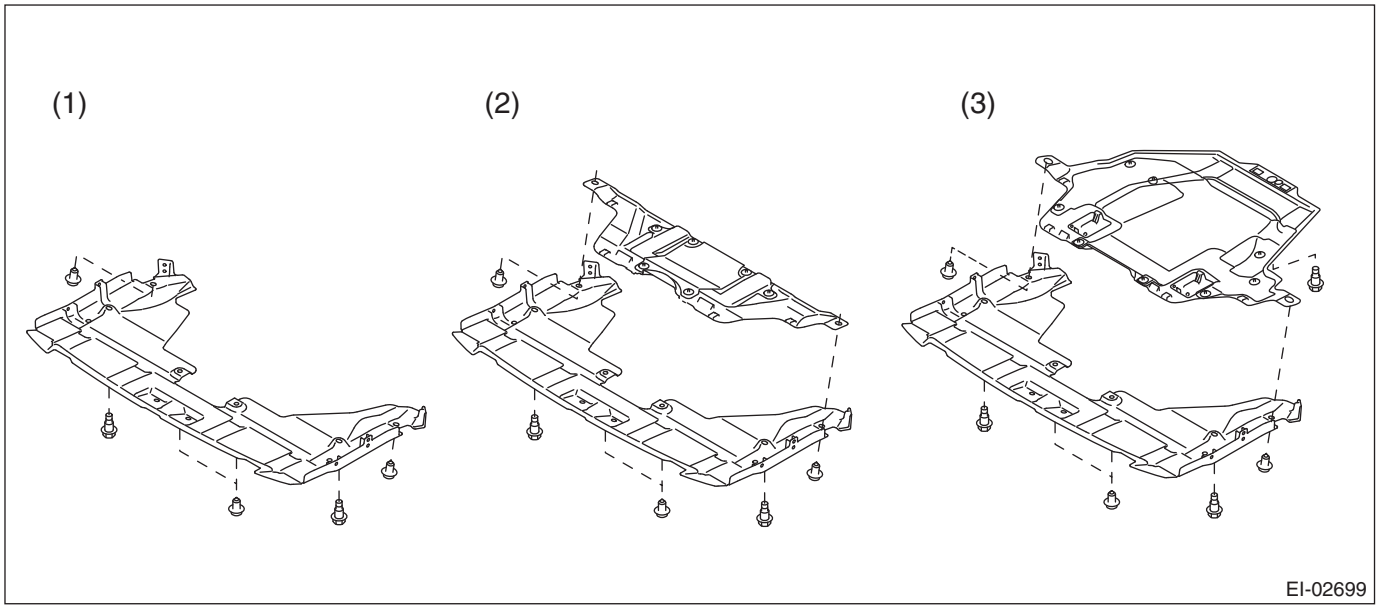
Tightening torque:

Front wiper arm:<Ref. to WW-3, FRONT WIPER, COMPONENT, General Description.>

5. Front Under Cover

A: REMOVAL

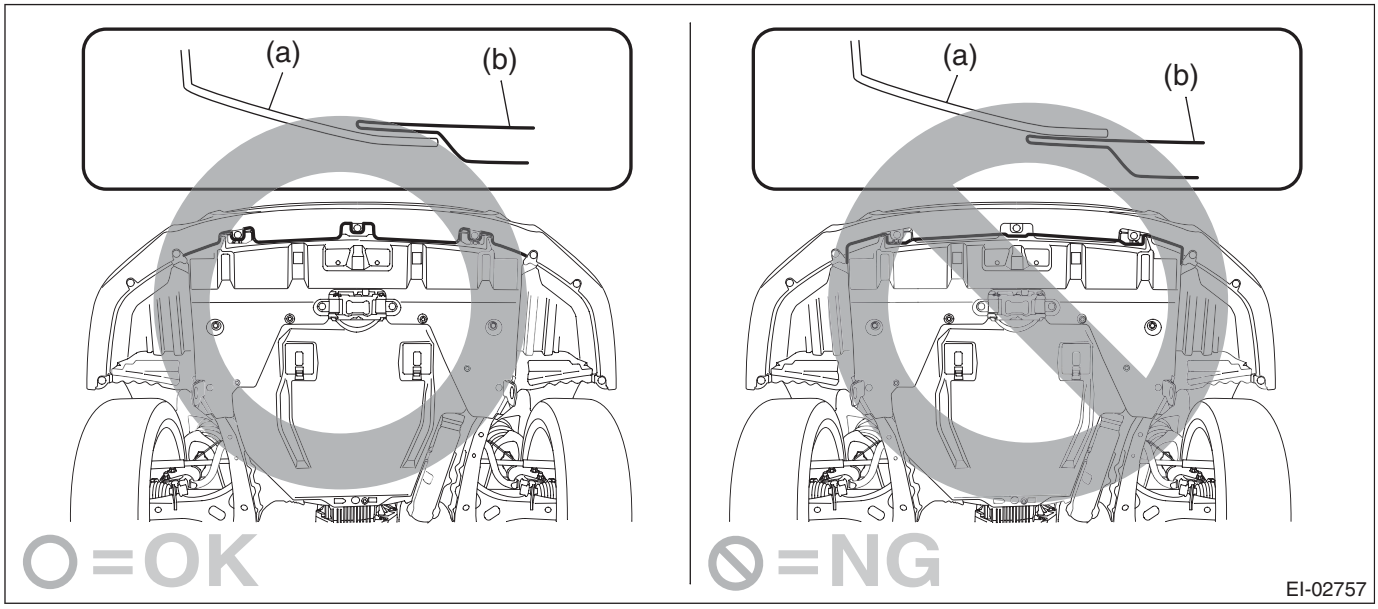
1) Lift up the vehicle.
2) Remove the bolts and clips, and remove the front under cover.



(1) Small type (2) Medium type (3) Large type

B: INSTALLATION

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



Install each part in the reverse order of removal.

Tightening torque:
17.5 N·m (1.78 kgf-m, 12.9 ft-lb)

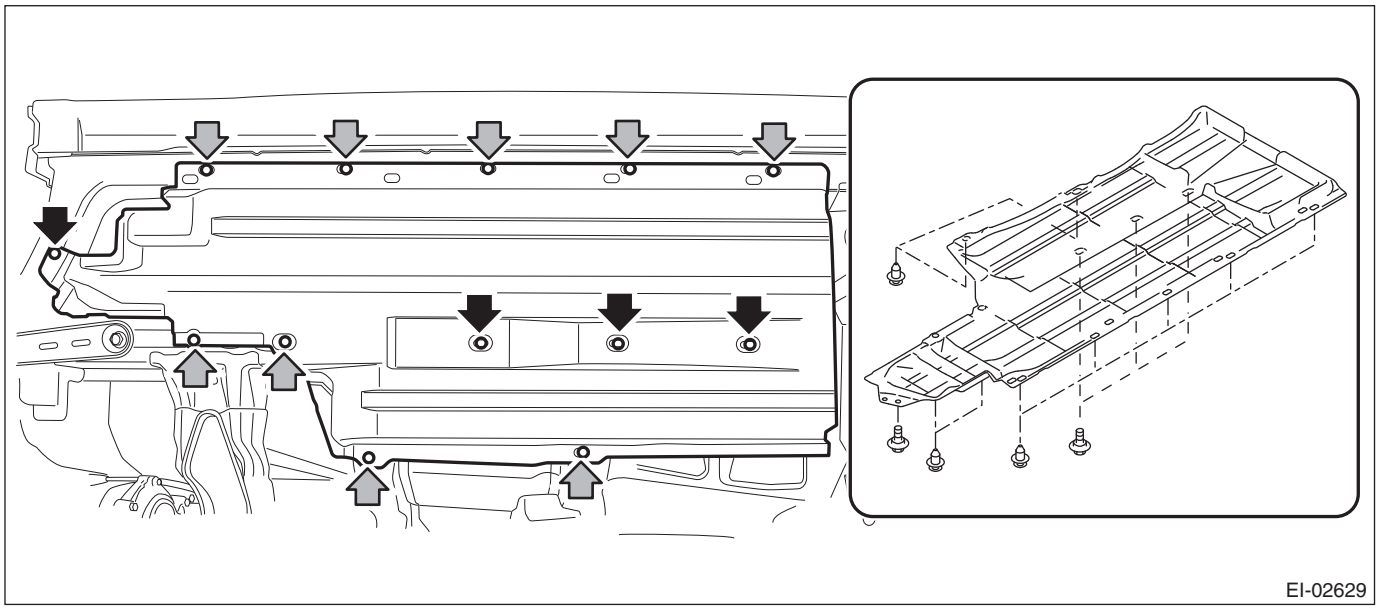
6. Floor Under Protector

A: REMOVAL

1) Lift up the vehicle.

NOTE:
A plate type lift cannot be used.

2) Remove the bolts and clips, and remove the front under protector.



B: INSTALLATION

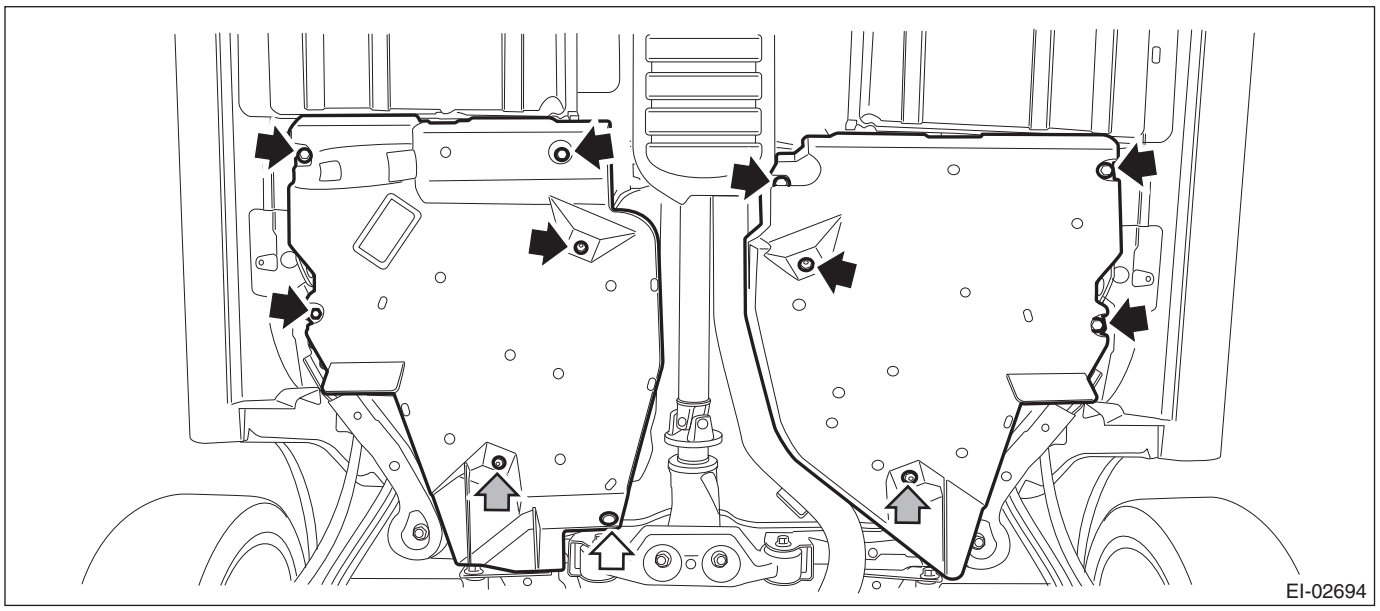
Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EI-2, FLOOR UNDER PROTECTOR, COMPONENT, General Description.>

7. Fuel Tank Protector

A: REMOVAL

1) Lift up the vehicle.
2) Remove the fuel tank protector.
   (1) Remove the bolt and nuts and remove the fuel tank protector.
   (2) Remove the clip.



B: INSTALLATION

Install each part in the reverse order of removal.

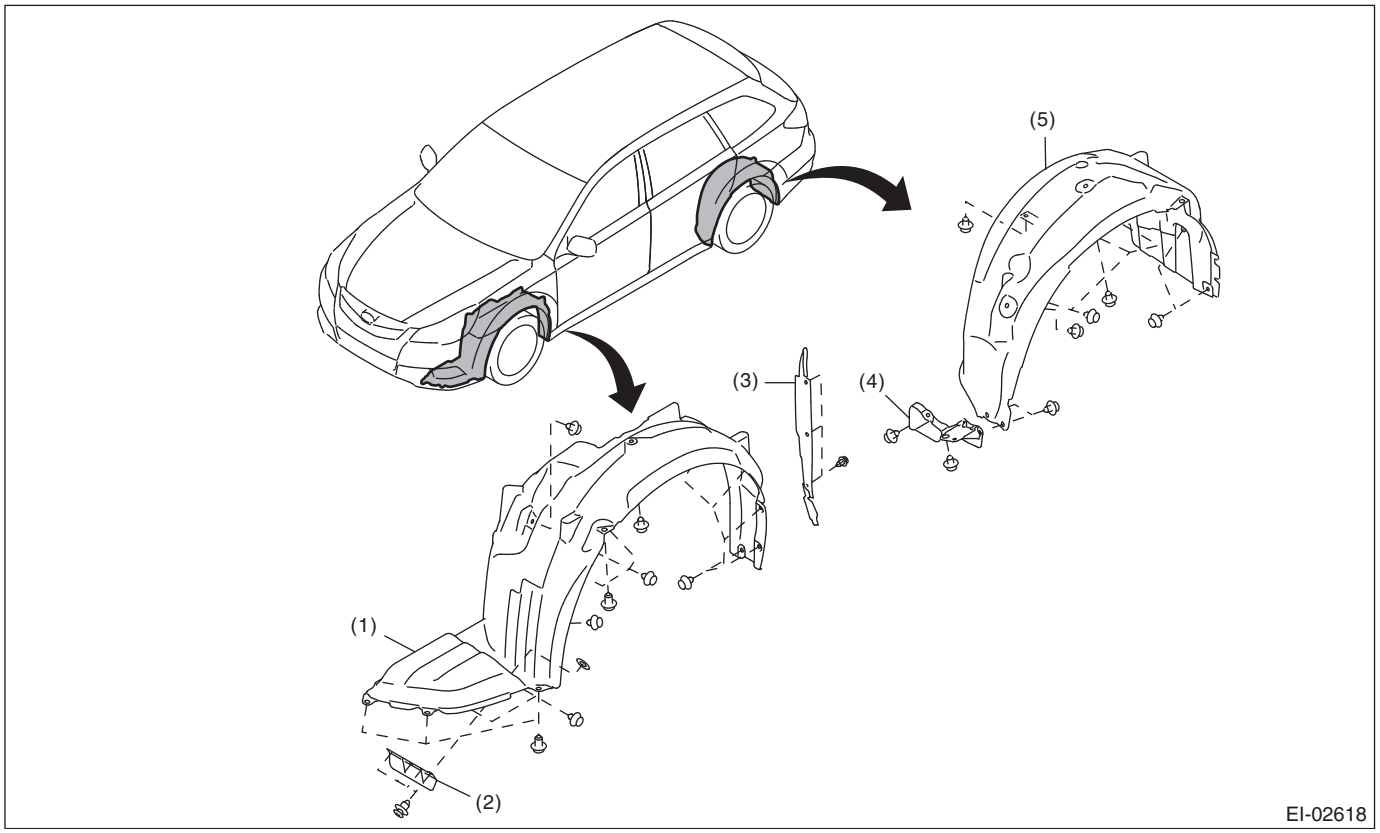
CAUTION:
Do not reuse the nut (self-locking nuts). Always replace them with new ones.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EI-3, FUEL TANK PROTECTOR, COMPONENT, General Description.>

8. Mud Guard

A: REMOVAL

1) Lift up the vehicle.
2) Remove the wheels.
3) Remove the clips, and remove the mud guard.



(1) Front mud guard
(2) Front air flap plate
(3) Fender cover lower
(4) Rear air flap plate
(5) Rear mud guard

B: INSTALLATION

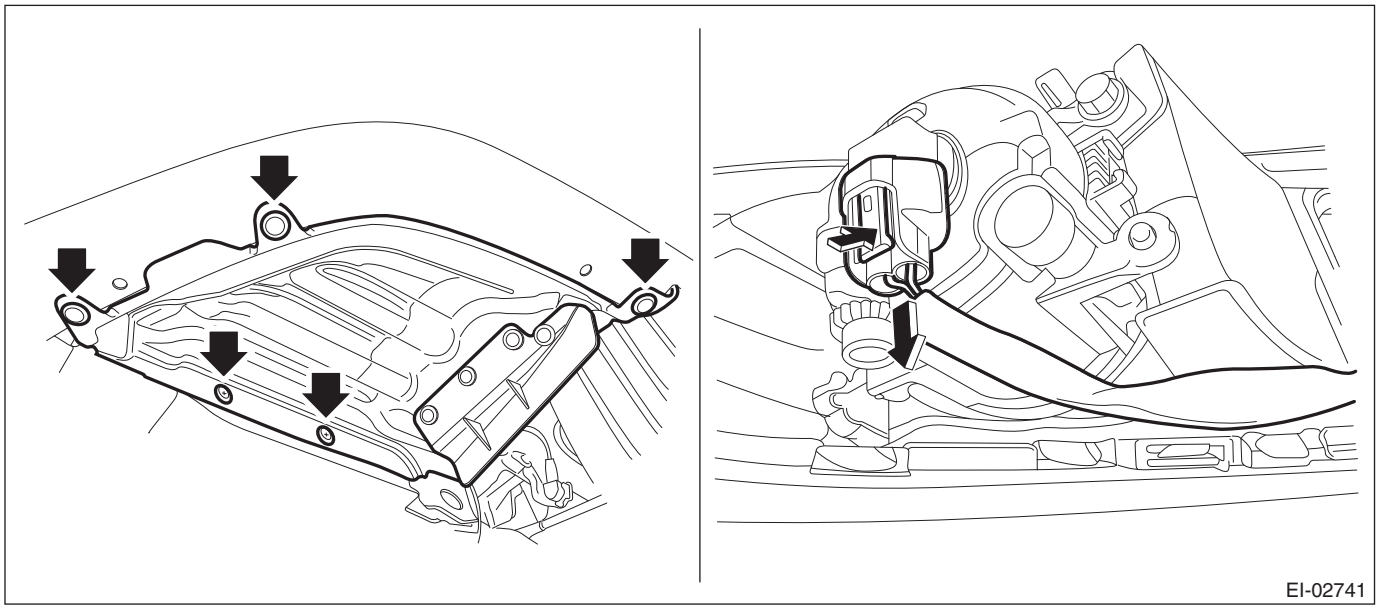
Install each part in the reverse order of removal.

Tightening torque:
Wheel nut: 120 N·m (12.2 kgf-m, 88.5 ft-lb)

9. Front Bumper

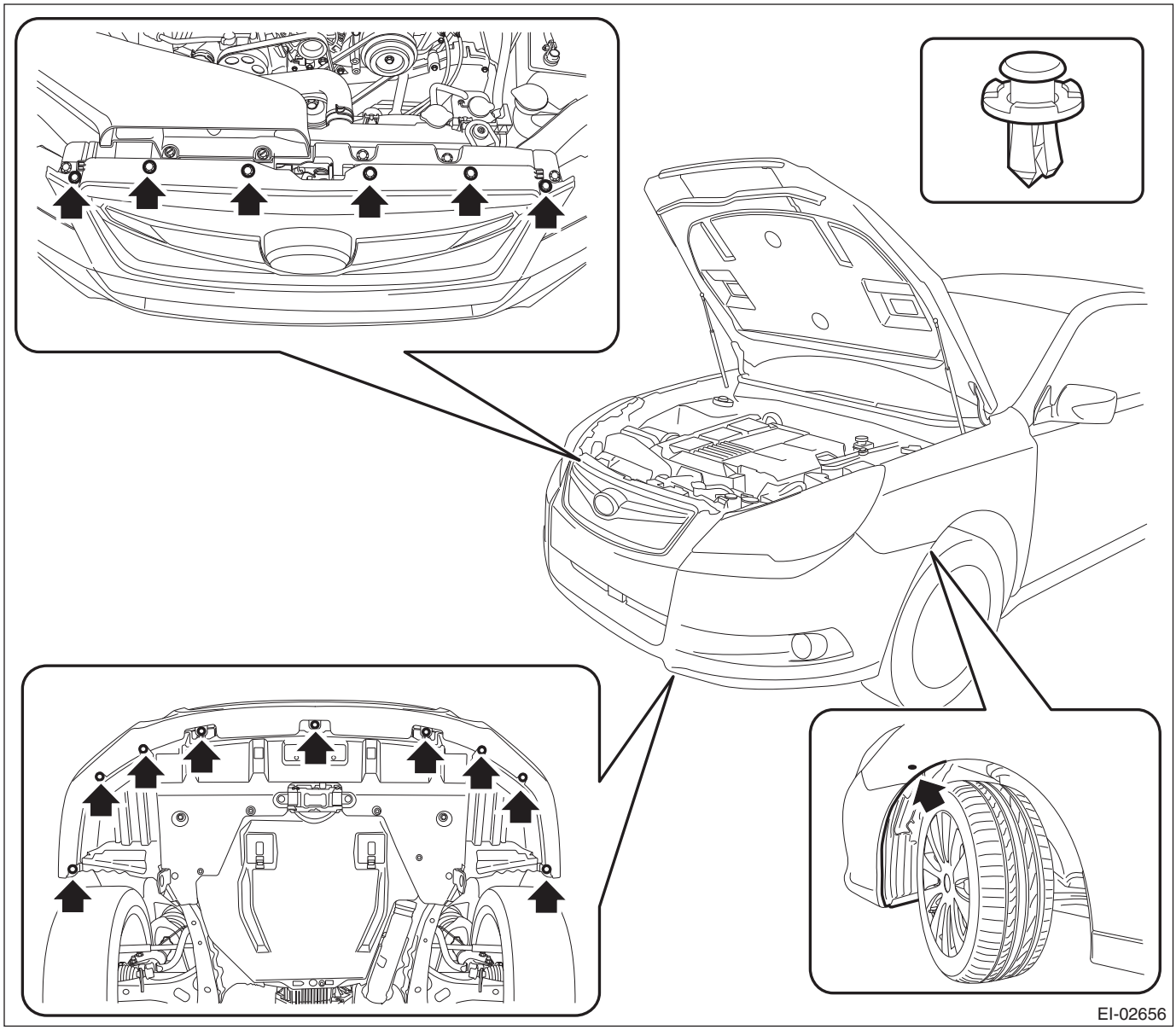
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the front bumper face assembly.
   (1) Remove the clips, turn over the front mud guard, and disconnect the fog light connector. (Model with fog light)



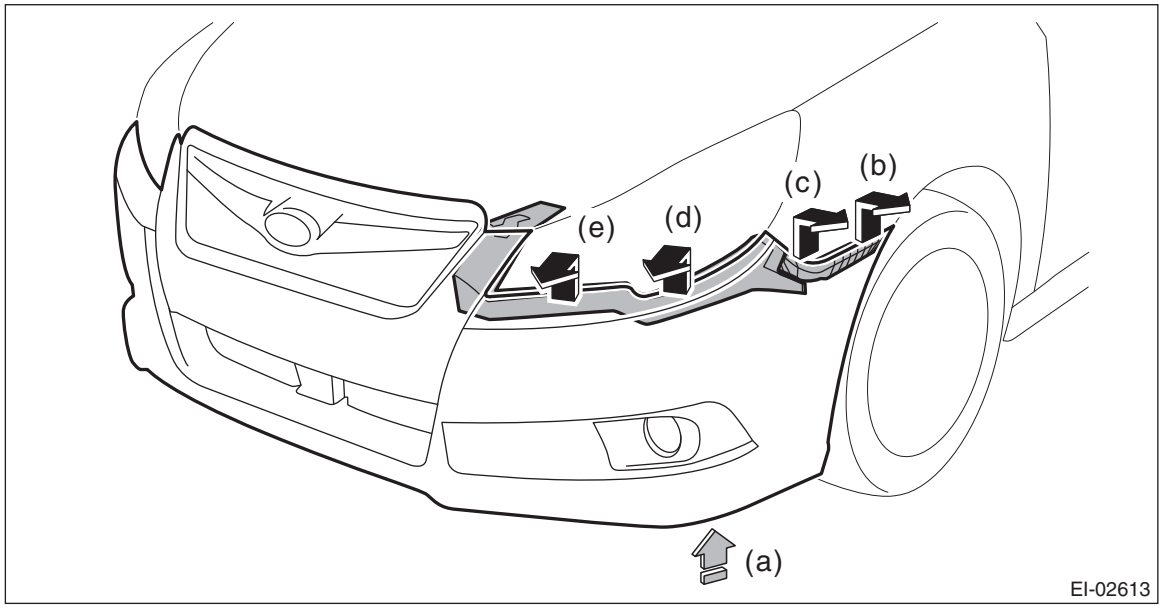
   (2) Remove the clips at the upper side of the bumper.
   (3) Remove the clips from the fender.

(4) Remove the clips at the lower side of bumper.



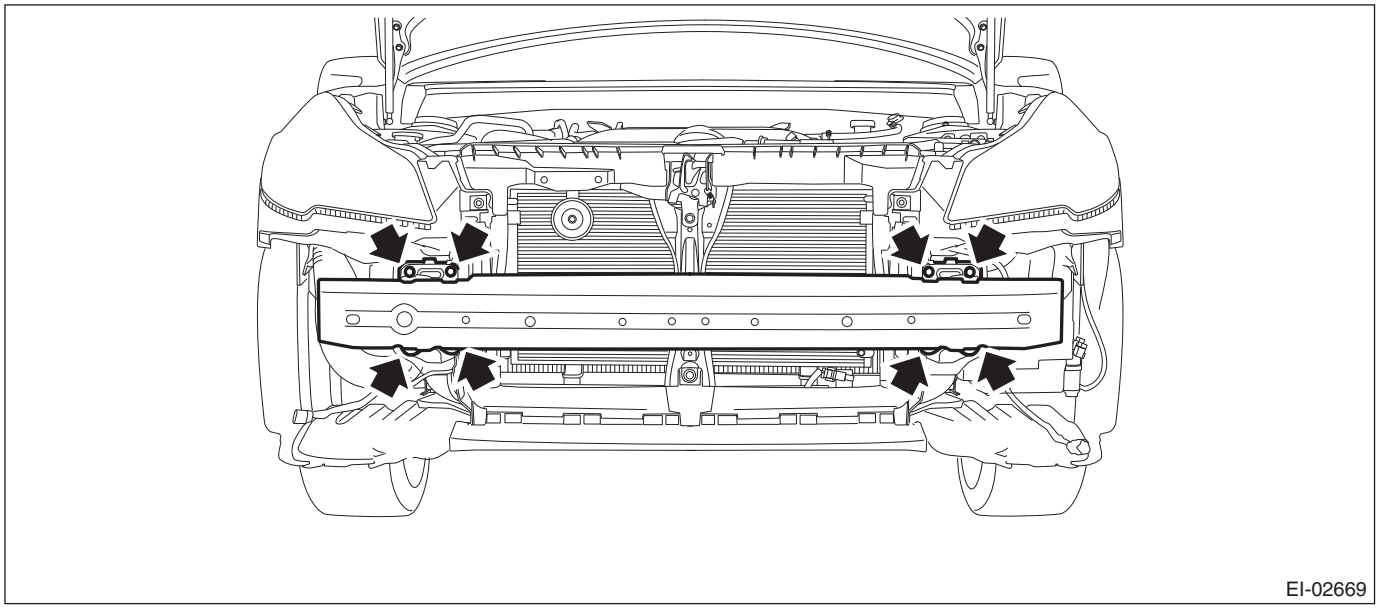
(5) Detach the flange section on the bumper face side from the bracket side front UPR.

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



NOTE:
Detach the parts in order from (b) to (e) while pulling up the lower side of the fog light (a).
Detach the opposite side in the same manner.

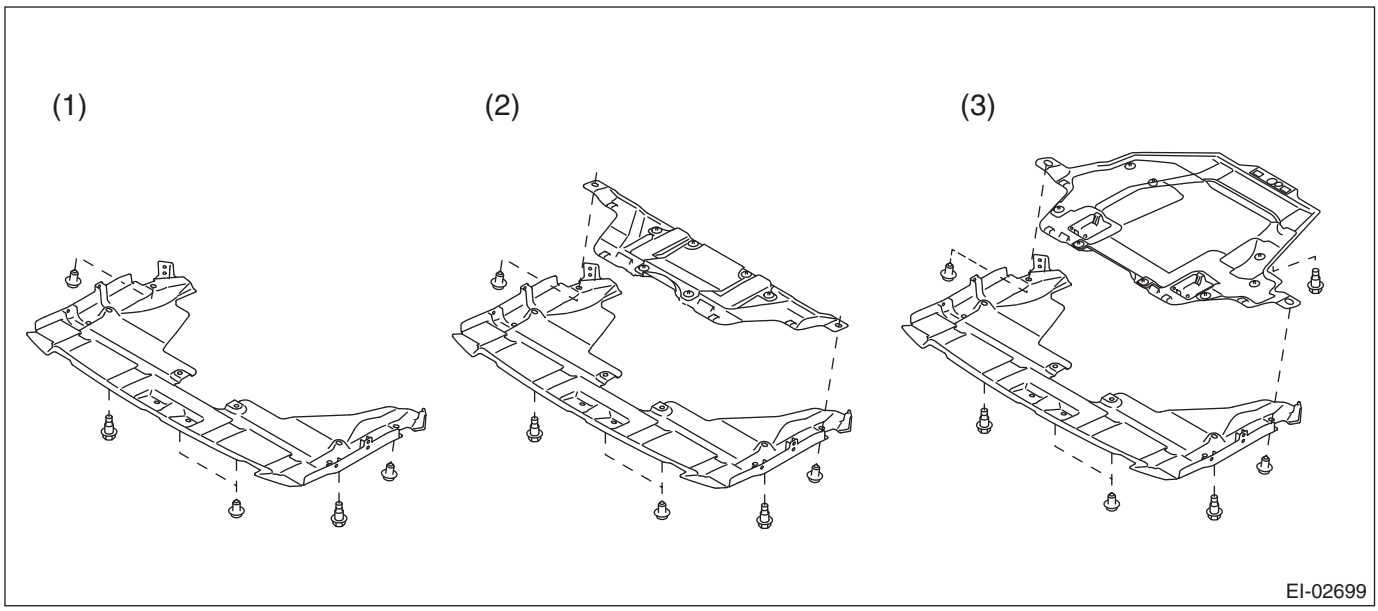
3) Remove the beam COMPL front ASSY.
(1) Remove the energy absorber foam.
(2) Remove the bolts, and remove the beam COMPL front from vehicle body.



NOTE:
After all bolts are removed, raise the whole beam COMPL front a little to remove it from vehicle body.

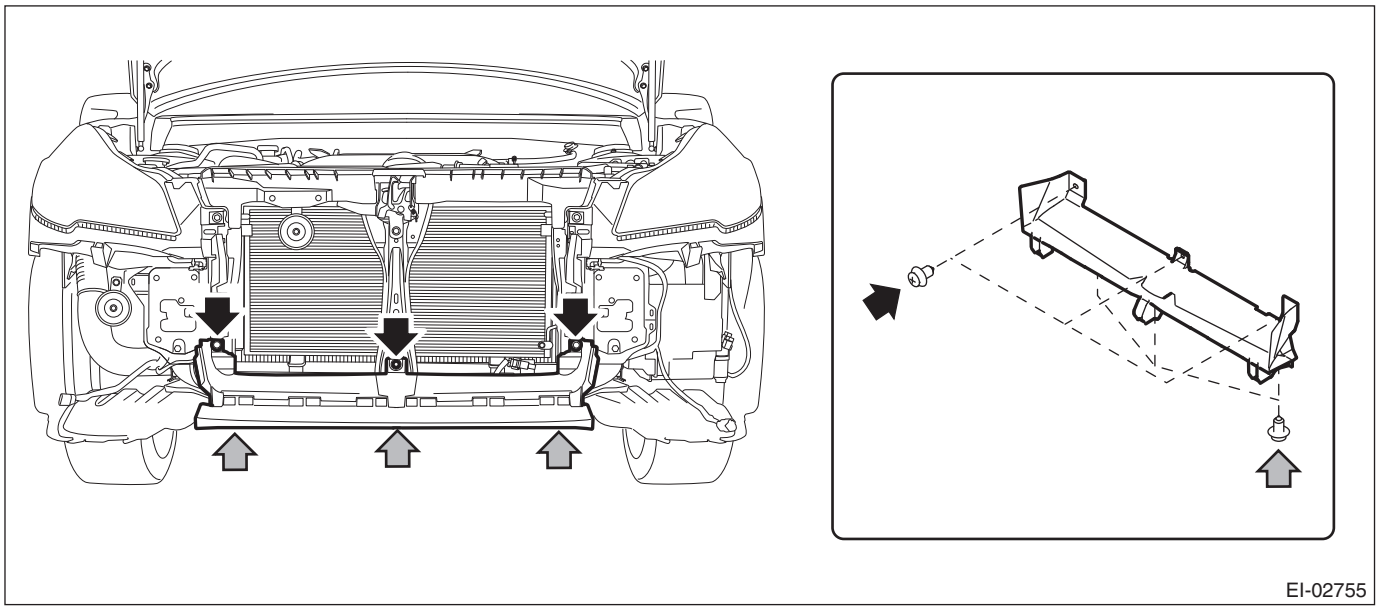
4) Remove the bracket center LWR-front.

(1) Release the clips to remove the front under cover.



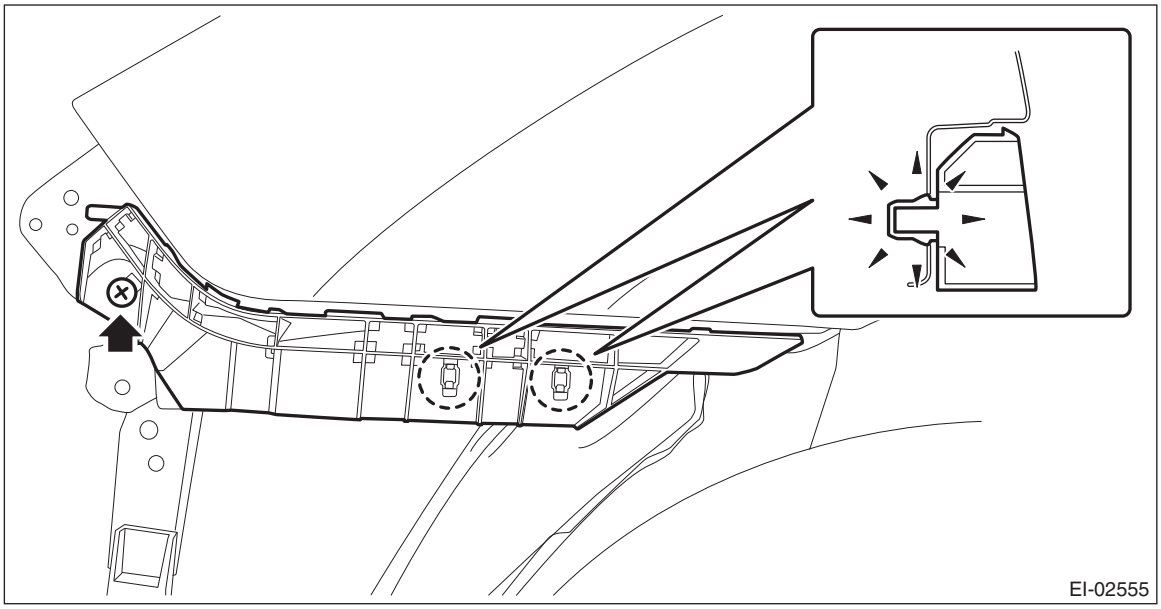
(1) Small type (2) Medium type (3) Large type

(2) Remove the clip, and remove the bracket center LWR-front.

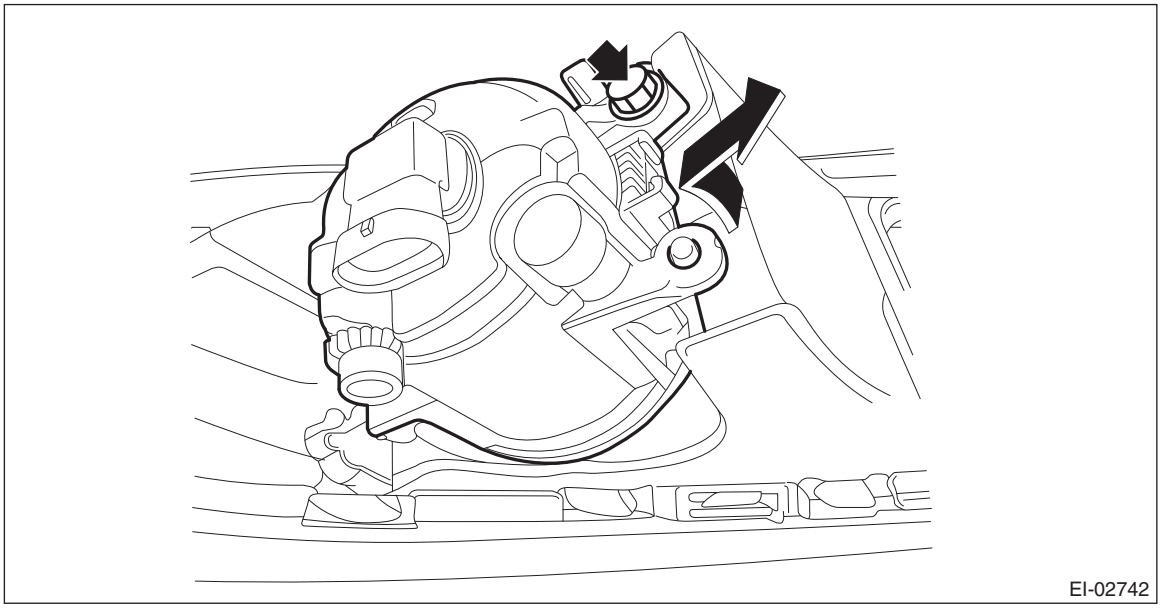


5) Remove the bracket side front UPR.
(1) Remove the screws.

(2) Release the claws and remove the bracket side front UPR.



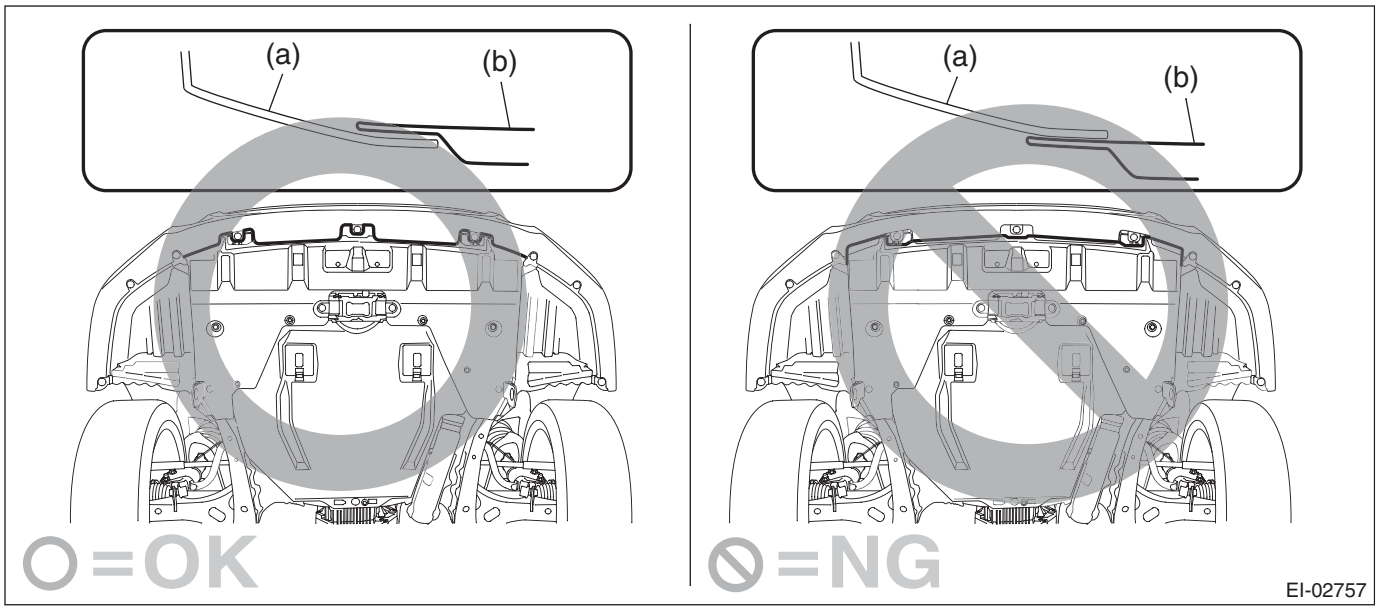
6) Remove the bolts and pins, and remove the front fog light assembly.



B: INSTALLATION

1) Install each part in the reverse order of removal.
2) Make sure that the bumper flanges are secured to the bracket side front UPR.

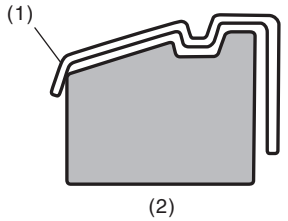
CAUTION:
Install the bumper face so that the under cover front end (b) comes inside the front bumper face (a).



Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EI-5, FRONT BUMPER, COMPONENT, General Description.>

C: REPAIR

1. COATING METHOD FOR PP BUMPER

Process No.	Process name	Job contents	
1	Bumper installation	Place the bumper on a paint worktable as required. Use the paint worktable conforming to inner shape of bumper if possible.	 EI-00234 (1) Bumper (2) Set bumper section
2	Masking	Mask specified part (black base) with masking tape. Use masking tape for PP (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 to all parts to be painted, using spray gun. Use primer (clear).	
5	Drying	Dry at normal temperature. [10 — 15 min. at 20°C (68°F)] In half-dried condition, PP primer paint is dissolved by solvent, e.g. thinner, etc. Therefore, if dust or dirt must be removed, use ordinary alcohol etc.	
6	Top coat paint (I)	Non-colored	Metallic paint
		Use section (block) paint for top coat. • Paint to be used (for each color): Solid paint Hardener PB Thinner T-301 • Mixture ratio: Main agent : Hardener = 4 : 1 • Viscosity: 10 — 13 sec./20°C (68°F) • Film thickness: 35 — 45 µ • Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi)	Use section (block) paint for top coat. • Paint to be used (for each color): Metallic paint Hardener PB Thinner T-306 • Mixture ratio: Main agent : Hardener = 10 : 1 • Viscosity: 10 — 13 sec./20°C (68°F) • Film thickness: 15 — 20 µ • Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi)
7	Drying	Not required	Dry at normal temperature. [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 minutes intervals. • Paint to be used: Metallic paint Hardener PB Thinner T-301 • Mixture ratio: Clear coat : Hardener = 6 : 1 • Viscosity: 14 — 16 sec./20°C (68°F) • Film thickness: 25 — 30 µ • Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi)
9	Drying	60°C (140°F), 60 min. or 80°C (176°F), 30 min. If higher than 80°C (176°F), PP may be deformed. Keep maximum temperature 80°C (176°F) or less.	
10	INSPECTION	Check paint.	
11	Removal of masking	Remove the masking tape applied in procedure 2.	

2. REPAIR INSTRUCTIONS FOR COLORED PP BUMPER

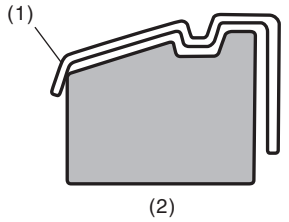
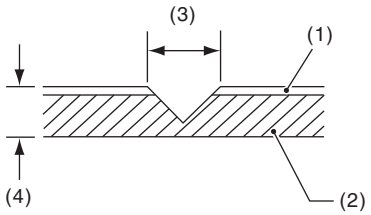
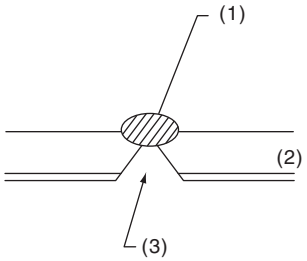
NOTE:
All PP bumpers are provided with a grained surface, and if the surface is damaged, it cannot normally be restored to its former condition. Damages limited to the shallow scratches that cause only a change in the luster of the base material or coating, can be almost fully restored. Before repairing a damaged area, explain this point to the customer and obtain an understanding about the matter.
Repair methods are outlined below, based on a classification of the extent of damage.
1) Minor damage causing only a change in the luster of the bumper due to a light touch
Almost restorable.

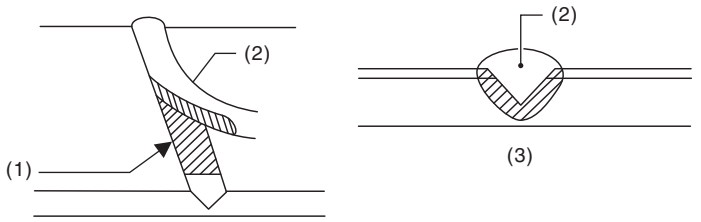
<table>
<tr><th>Process No.</th><th>Process name</th><th colspan="2">Job contents</th></tr>
<tr><td>1</td><td>Cleaning</td><td colspan="2">Clean the area to be repaired using water.</td></tr>
<tr><td>2</td><td>Sanding</td><td colspan="2">Grind the repairing area with #500 sand paper in a “feathering”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

2) Deep damage caused by scratching with fences etc.
A dent cannot be repaired but a whitened or swelled part can be removed.

<table>
<tr><th>Process No.</th><th>Process name</th><th colspan="2">Job contents</th></tr>
<tr><td>1</td><td>Cleaning</td><td colspan="2">Clean the damaged area with water.</td></tr>
<tr><td>2</td><td>Removal of damaged area</td><td colspan="2">Cut off protruding area, if any, due to collision, using a putty knife.</td></tr>
<tr><td>3</td><td>Sanding</td><td colspan="2">Grind the affected area with #100 — #500 sand paper.</td></tr>
<tr><td rowspan="2">4</td><td rowspan="2">Finish</td><td>Resin section</td><td>Coated section</td></tr>
<tr><td>Same as process No. 3 in the 1) section.</td><td>Perform process No. 12 and subsequent operations in the 3) section.</td></tr>
</table>

3) Deep damage such as a break or hole that requires filling
Much of the peripheral grained surface must be sacrificed for repair. The degree of restoration is not really worth the expense. (The surface, however, will become almost flush with adjacent areas.)
Recommended repair kit: PP Part Repair Kit (NRM)

Process No.	Process name	Job contents	
1	Bumper removal	Remove the bumper as required.	
2	Removal of parts	Remove the parts built into bumper as required.	
3	Bumper placement	Place the bumper on a paint worktable as required. It is recommended to use the paint worktable conforming to internal shape of bumper.	 EI-00234 (1) Bumper (2) Set bumper section
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, etc.).	
5	Cutting	If the damage is a crack or a hole, cut a guide slit of 20 to 30 mm (0.79 to 1.18 in) in length along the crack or hole up to the bumper base surface. Next, use a knife or grinder to carve a V-shaped groove in the area for repair.	 EI-00235 (1) Paint surface (2) PP base surface (3) 20 — 30 mm (0.79 — 1.18 in) (4) 3 mm (0.12 in)
6	Sanding (I)	Grind beveled surface with sand paper (#40 — #60) to smooth finish.	
7	Cleaning	Clean the sanded surface with the same solvent as used in procedure No. 4.	
8	Temporary welding	Grind the side just opposite the beveled area with sand paper (#40 — #60) and clean using a solvent. Temporarily spot-weld the side, using PP welding rod and heater gun.	 EI-00236 (1) Welded point (use heater gun and PP welding rod) (2) PP base surface (3) Beveled section NOTE: • Do not melt welding rod until it flows out. This results in reduced strength. • Leave the welded spot unattended until it cools completely.

Process No.	Process name	Job contents
9	Welding	Using a heater gun and PP welding rod, weld the beveled spot while melting both the rod and damaged area.  EI-00237 (1) Welding rod (2) Melt hatched area (3) Section NOTE: • Melt the sections indicated by hatched area. • Do not melt the welding rod until it flows out, in order to provide strength. • Always keep the heater gun 1 to 2 cm (0.4 to 0.8 in) away from the welding spot. • Leave the welded spot unattended until it cools completely.
10	Sanding (II)	Remove excess part of weld with a putty knife. If a drill or disc wheel is used instead of the knife, operate it at a rate 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. EI-00042 Sand the welded spot smooth with #240 sand paper.
11	Masking	Mask the black substrate section using masking tape. Recommended masking tape: Nichiban No. 533 or equivalent
12	Cleaning/degreasing	Completely clean the entire coated area, using solvent similar to that used in procedure No. 4.
13	Primer coating	Apply a coat of primer to the repaired surface and its surrounding areas. Mask these areas, if necessary. Recommended primer: Mp/ 364 PP Primer NOTE: Be sure to apply a coat of primer using a spray gun at a pressure of 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi).
14	Leave unattended	Leave the repaired area unattended at 20°C (68°F) for 10 to 15 minutes until primer is half-dry. NOTE: If dirt or dust comes in contact with the coated area, wipe it off with a cloth dampened with alcohol. (Do not use thinner since the coated area tends to melt.)
15	Primer surfacer coating	Apply primer surfacer to the repaired area two or three times at an interval of 3 — 5 minutes. Recommended surfacer: • UPS 300 Flex Primer • No. 303 UPS 300 Exclusive hardener • NPS 725 Exclusive Reducer (thinner) • Mixture ratio: 2 : 1 (UPS 300 : No. 303) • Viscosity: 12 — 14 sec./20°C (68°F) • Coating film thickness: 40 — 50 µ
16	Drying	Allow the coated surface to dry for 20 minutes at 20°C (68°F) [or 30 minutes at 60°C (140°F)].

Process No.	Process name	Job contents	
17	Sanding (III)	Sand the coated surface and its surrounding areas using #400 sand paper and water.	
18	Cleaning/degreasing	Same as process No. 12.	
19	Top coat (I)	Non-colored	Metallic paint
		Use a “block” coating method. • Recommended paint: Suncryl (SC) No. 307 Flex Hardener SC Reducer (thinner) • Mixture ratio: Suncryl (SC): No. 307 Flex Hardener = 3 : 1 • Viscosity: 11 — 13 sec./20°C (68°F) • Coating film thickness: 40 — 50 µ • Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi)	Use a “block” coating method. • Recommended paint: Suncryl (SC) No. 307 Flex Hardener SC Reducer (thinner) • Mixture ratio: Suncryl (SC): No. 307 Flex Hardener = 3 : 1 • Viscosity: 11 — 13 sec./20°C (68°F) • Coating film thickness: 20 — 30 µ • Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi)
20	Leave unattended	Not required	Leave unattended at 20°C (68°F) for at least 10 minutes until the topcoated area is half-dry. NOTE: Be careful to keep dust or dirt from coming in contact with the affected area.
21	Top coat (II)	Not required	Apply a clear coat three times at an interval of 3 to 5 minutes. • Recommended paint: SC710 Overlay Clear No. 307 Flex Hardener SC Reducer (thinner) • Mixture ratio: Suncryl (SC): No. 307 Flex Hardener = 3 : 1 • Viscosity: 10 — 13 sec./20°C (68°F) • Coating film thickness: 20 — 30 µ • Spraying pressure: 245 — 343 kPa (2.5 — 3.5 kgf/cm^2, 36 — 50 psi)
22	Drying	Allow the coated surface to dry for two hours at 20°C (68°F) or 30 minutes at 60°C (140°F)]. NOTE: Do not allow the temperature to exceed 80°C (176°F) since this will deform the PP substrate.	
23	INSPECTION	Carefully check the condition of the repaired area.	
24	Removal of masking	Remove the masking tape applied in process No. 11 and 13.	
25	Parts installation	Install parts on the bumper in reverse order of removal.	
26	Bumper installation	Install the bumper.	

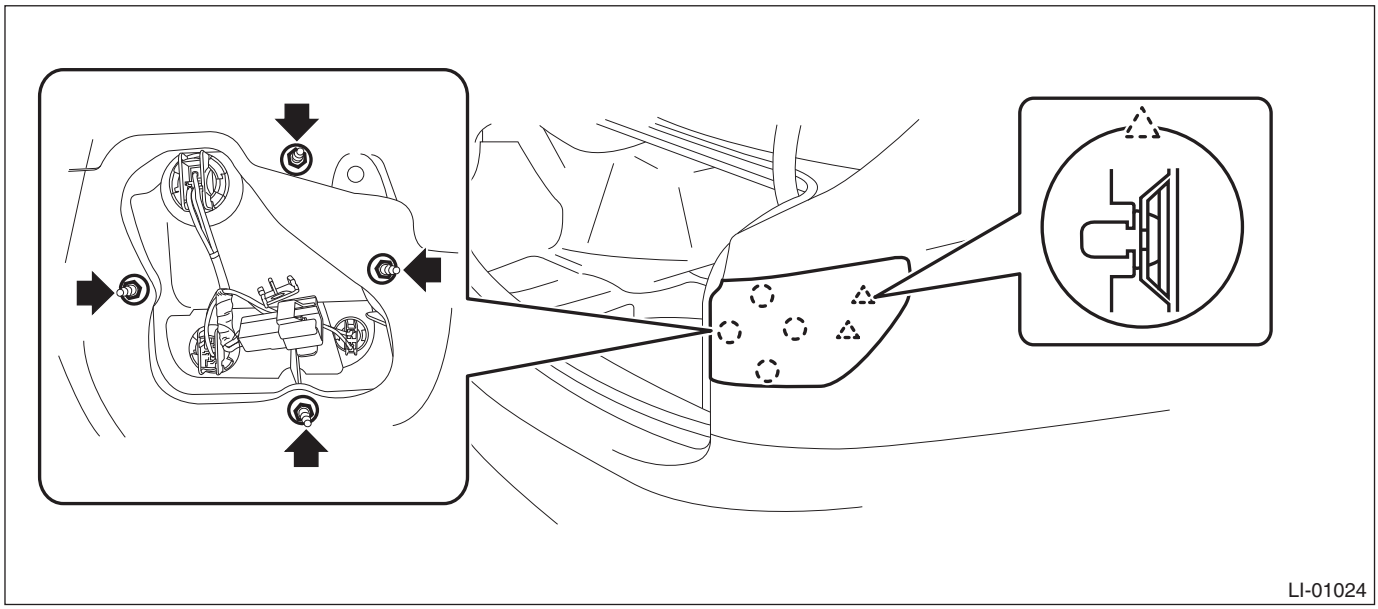
10.Rear Bumper

A: REMOVAL

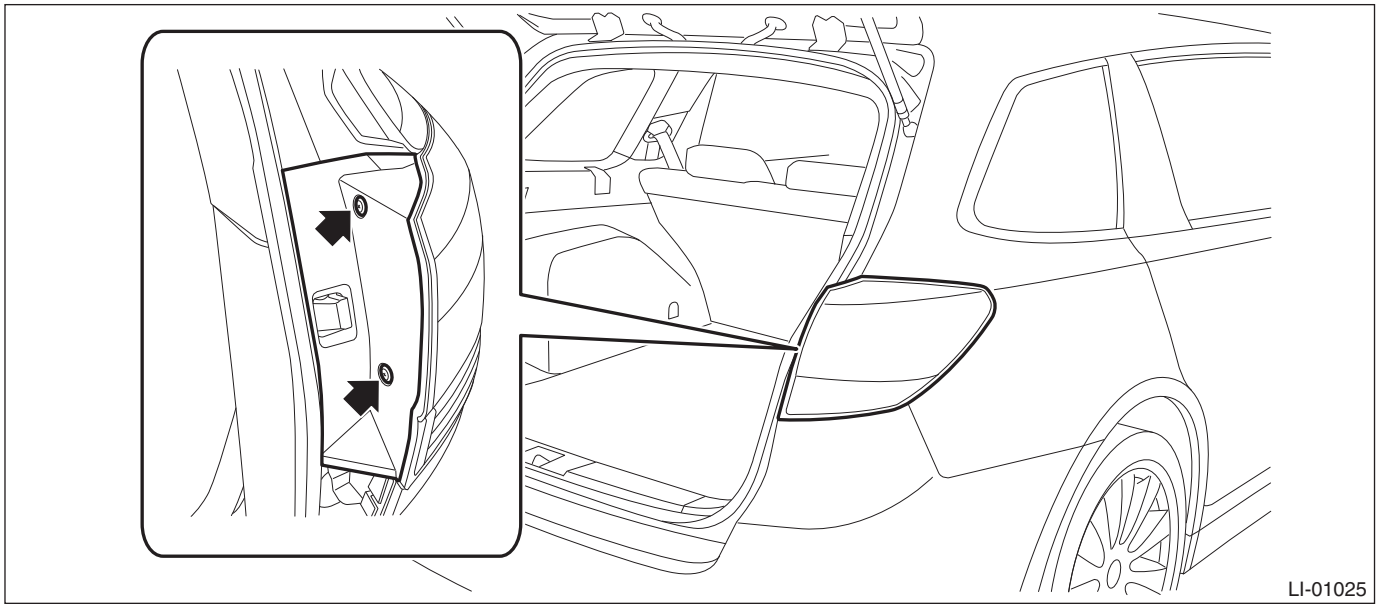
1) Remove the rear combination light assembly.

- Sedan model
  1. Remove the trunk room trim. <Ref. to EI-127, REMOVAL, Trunk Room Trim.>
  2. Disconnect the connector.
  3. Release the nuts and clips, then remove the rear combination light assembly.

CAUTION:
Be careful not to damage the clips.



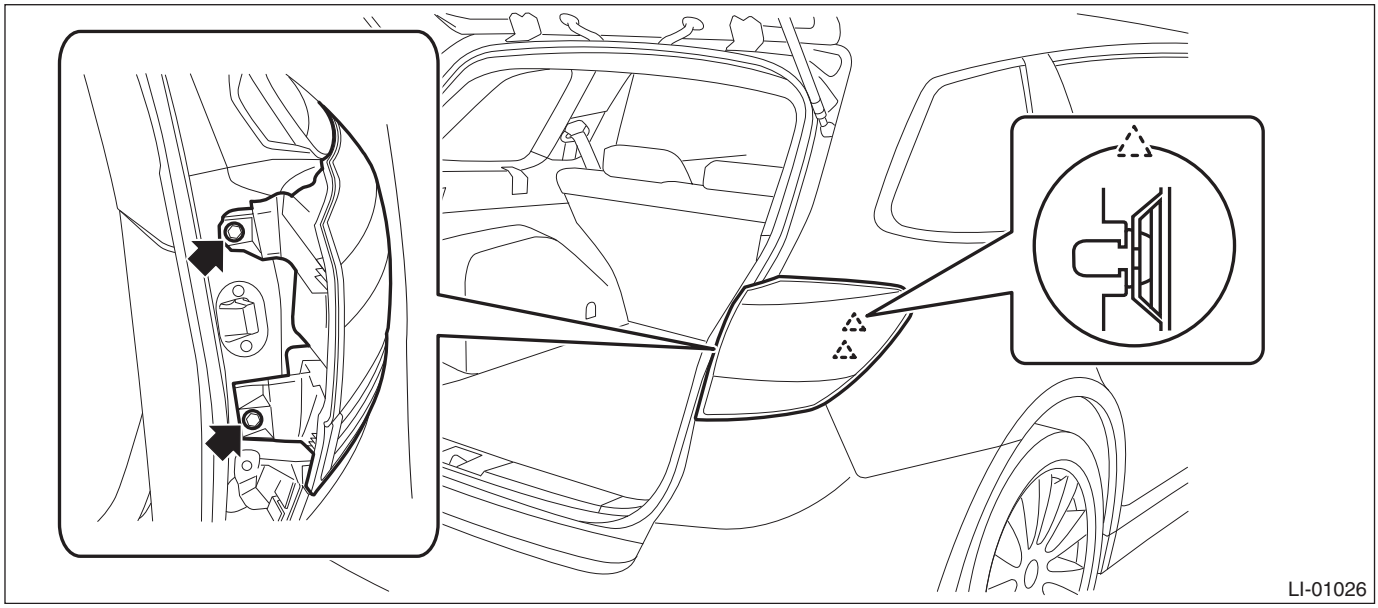
- OUTBACK model
  1. Remove the clips and detach the rear combination light covers.



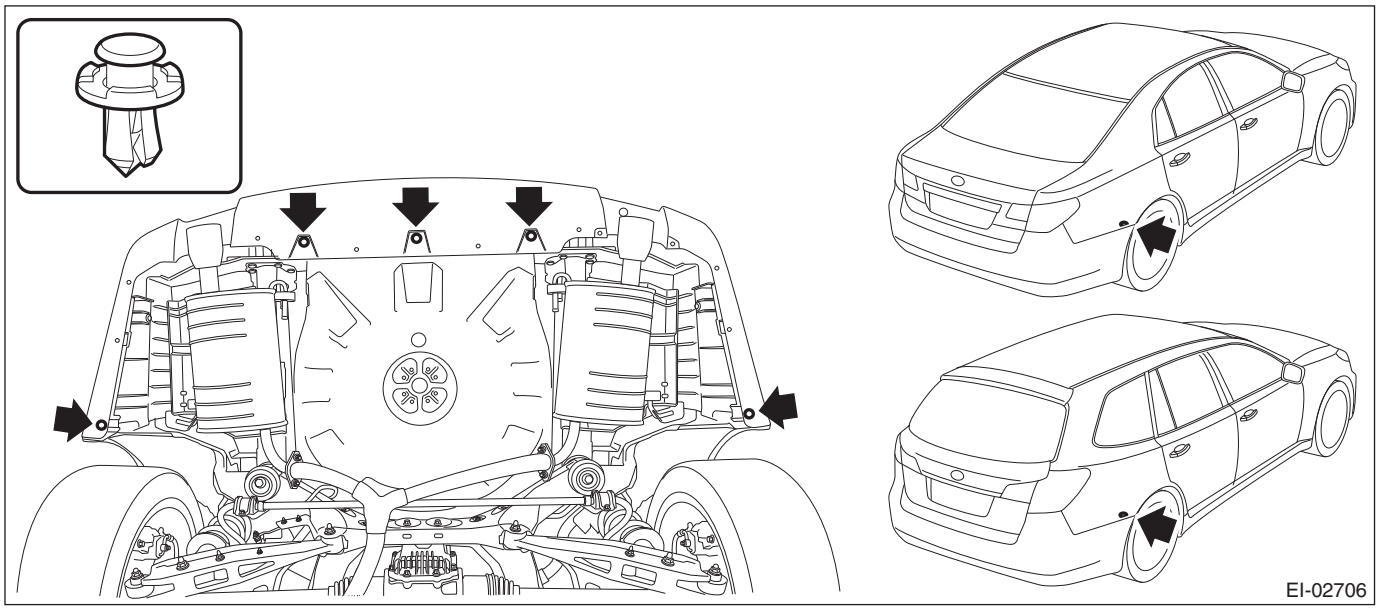
  2. Release the bolts and clips, then pull out the rear combination light assembly to the vehicle rear.

3. Disconnect the connector and remove the rear combination light assembly.

CAUTION:
Be careful not to damage the clips.



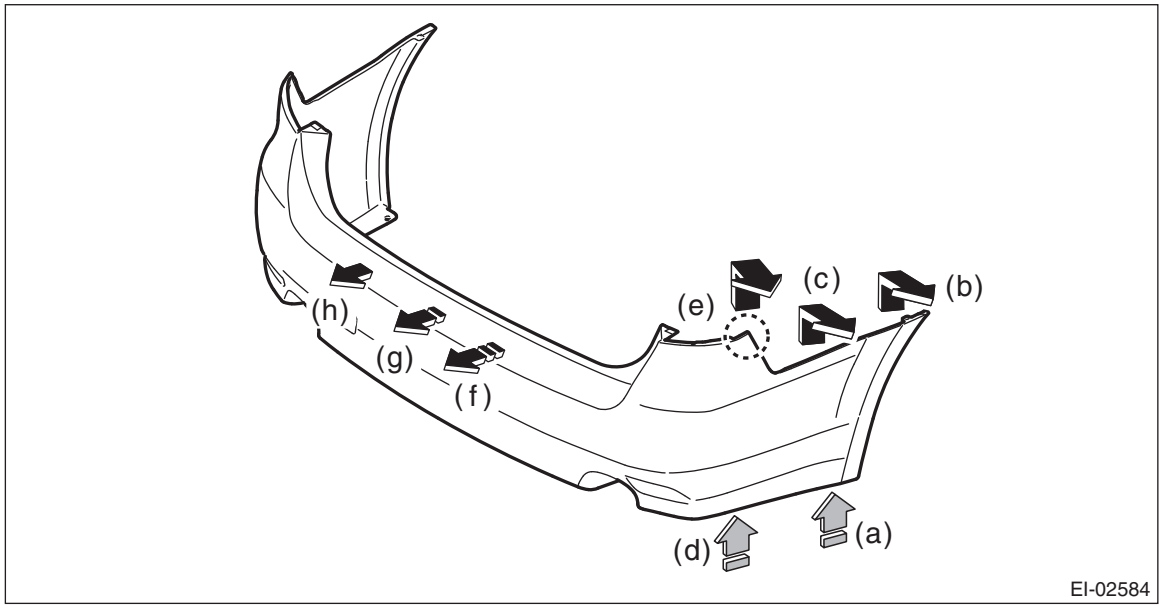
2) Remove the rear bumper face assembly.
(1) Remove the clip inside the wheel house.
(2) Remove the clips at the lower side of rear bumper.



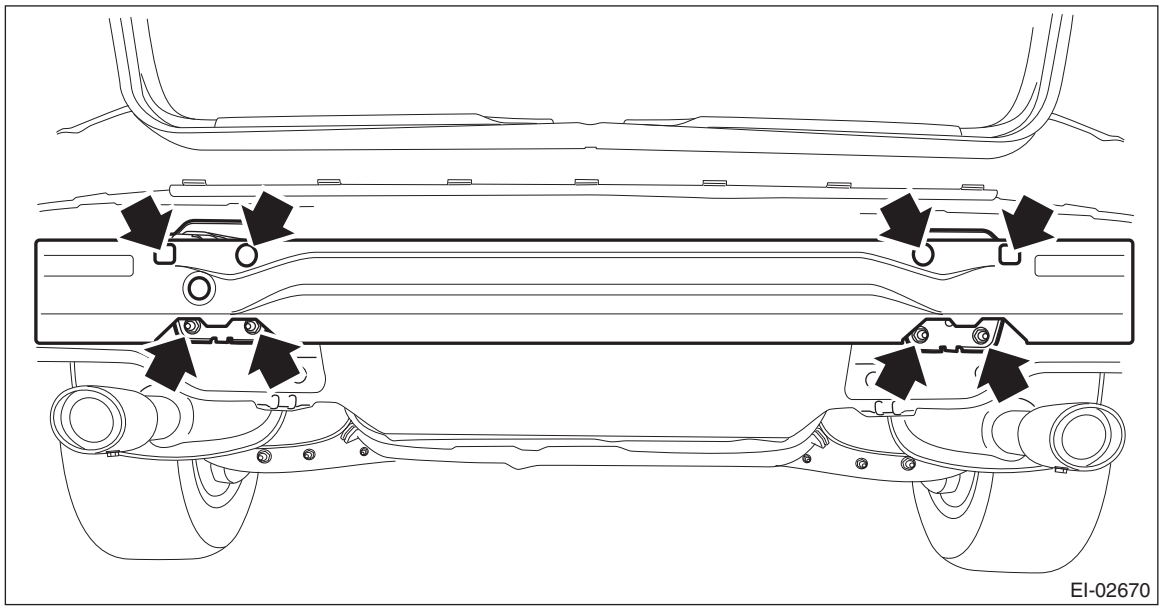
(3) Detach the (b) and (c) while pulling up (a) of the bumper.
(4) Detach (e) while pulling up the bumper (d).
(5) Detach the opposite side in the same manner.

(6) Detach in order from (f) to (h) while pulling up center part of the bumper face.

CAUTION:
Do not pull with a excessive force. Otherwise the bracket installation area may be damaged.

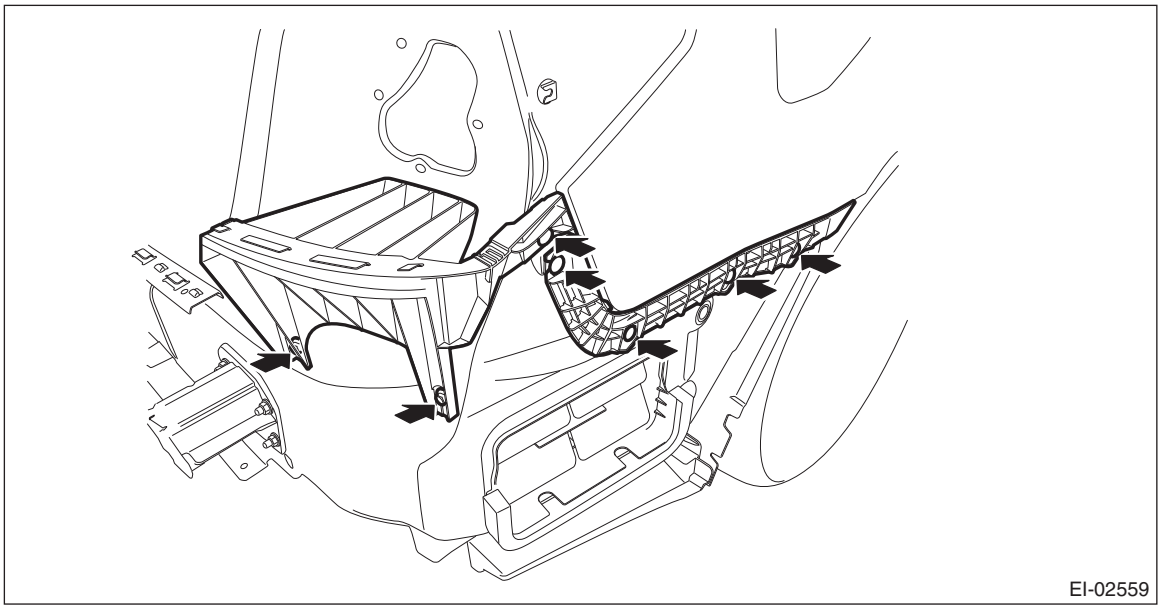


3) Remove the rear bumper beam assembly.
(1) Remove the energy absorber foam.
(2) Remove the nuts, and remove the rear bumper beam assembly from vehicle body.

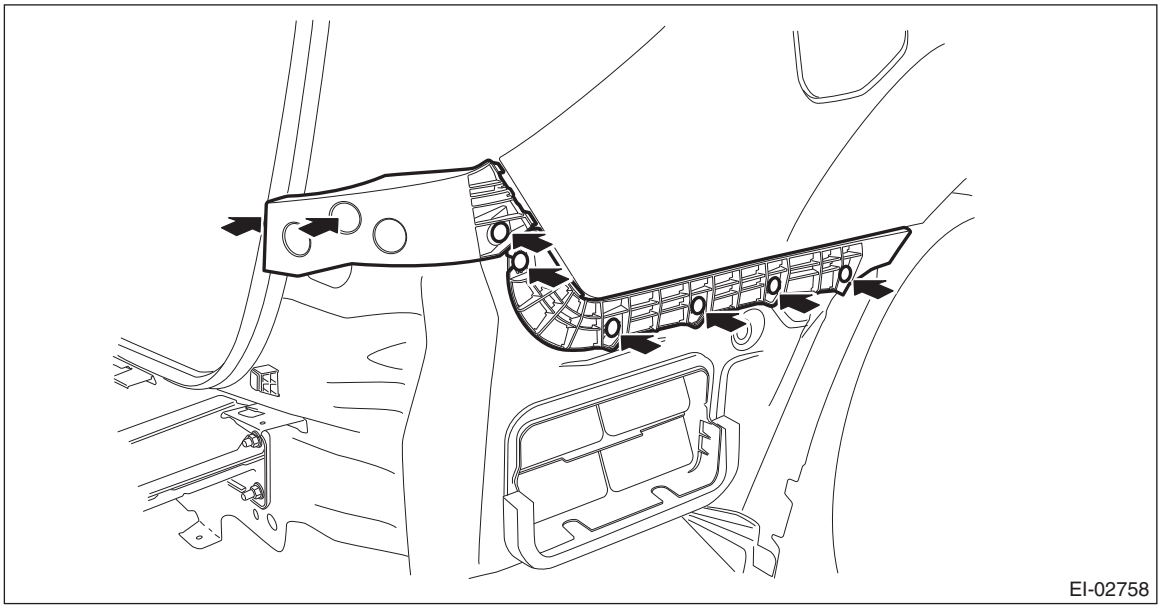


NOTE:
After all nuts are removed, raise the rear bumper beam assembly a little to remove it from vehicle body.

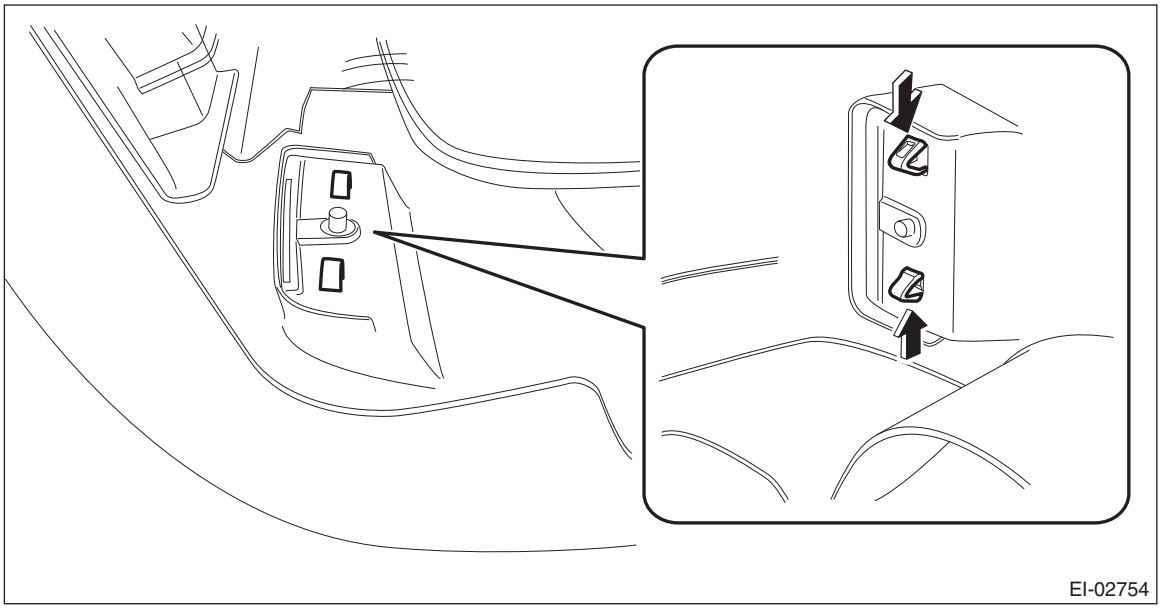
4) Remove bumper brackets.
- Sedan model


EI-02559

- OUTBACK model


EI-02758

5) Remove the reflex reflector. (OUTBACK model)



(1) Press the claws of reflex reflector from the back of the bumper face.
(2) Remove the reflex reflector.

B: INSTALLATION

Install each part in the reverse order of removal.

NOTE:
If the bumper face comes off too easily, adjust the hook of the bracket side.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EI-6, REAR BUMPER, COMPONENT, General Description.>

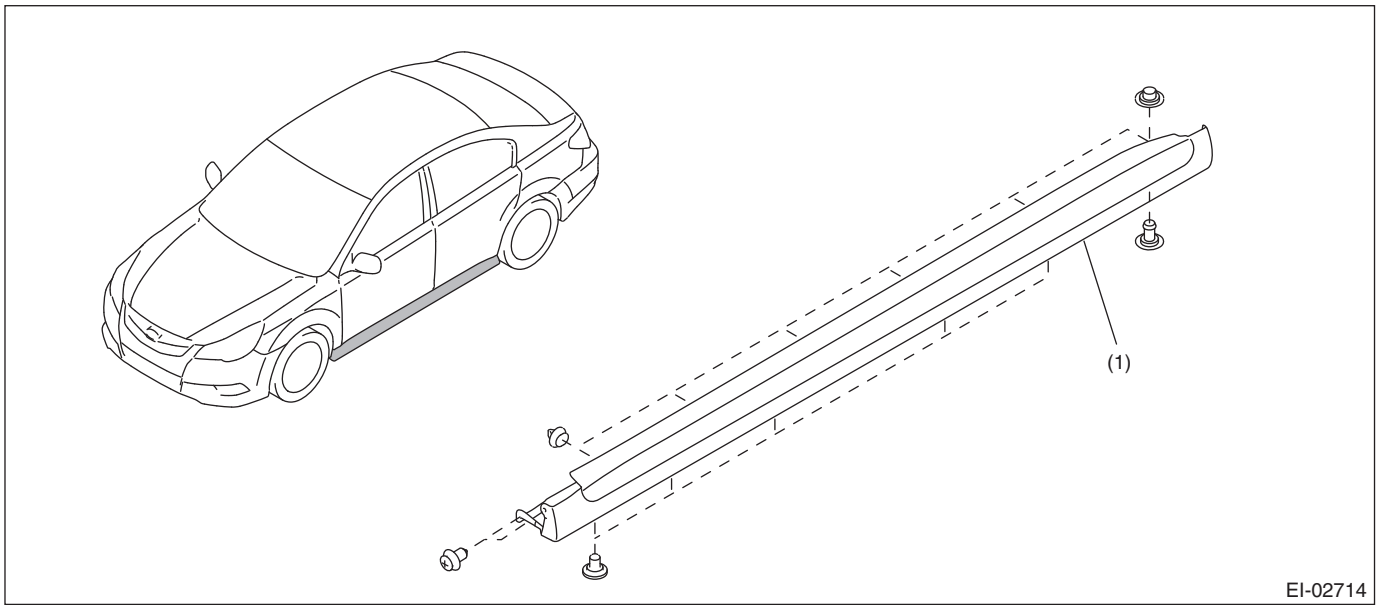
C: REPAIR

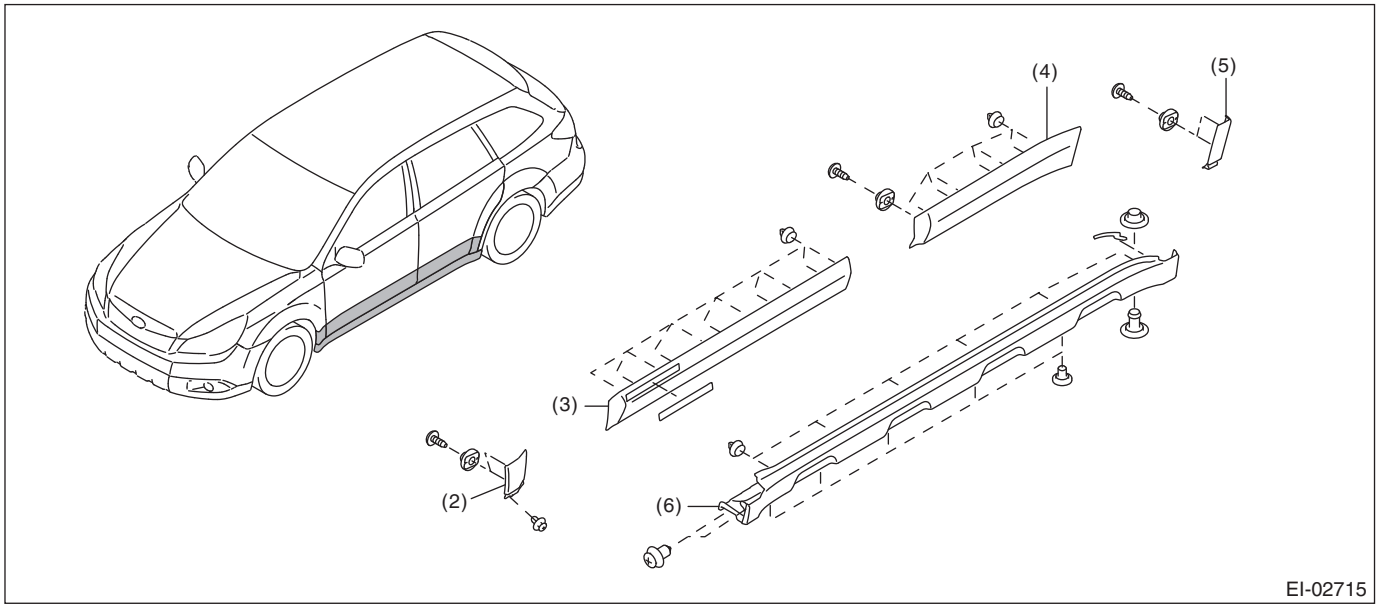
Refer to the front bumper repair. <Ref. to EI-45, REPAIR, Front Bumper.>

11.Side Sill Spoiler

A: REMOVAL

Remove the clips and detach the side spoiler.





(1) Side sill garnish ASSY (Sedan model)
(2) Garnish ASSY front fender (OUT-BACK model)
(3) Garnish ASSY front door (OUT-BACK model)
(4) Garnish ASSY rear door (OUT-BACK model)
(5) Garnish ASSY rear quarter (OUT-BACK model)
(6) Side sill garnish ASSY (OUT-BACK model)

B: INSTALLATION

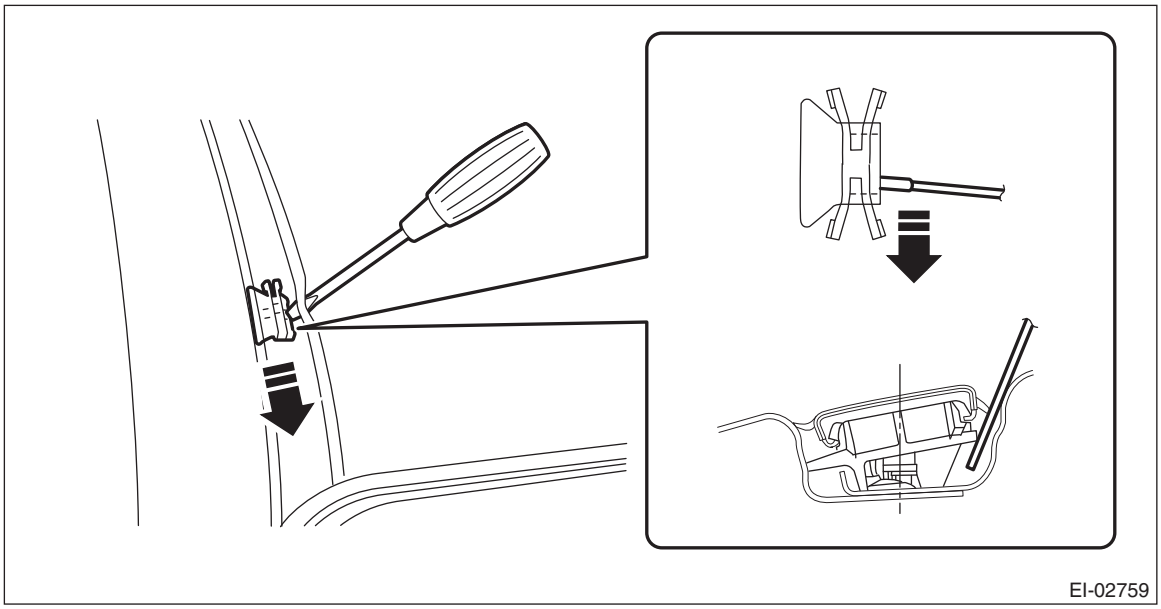
Install each part in the reverse order of removal.

12.Roof Molding

A: REMOVAL

CAUTION:
Be careful not to damage the body.

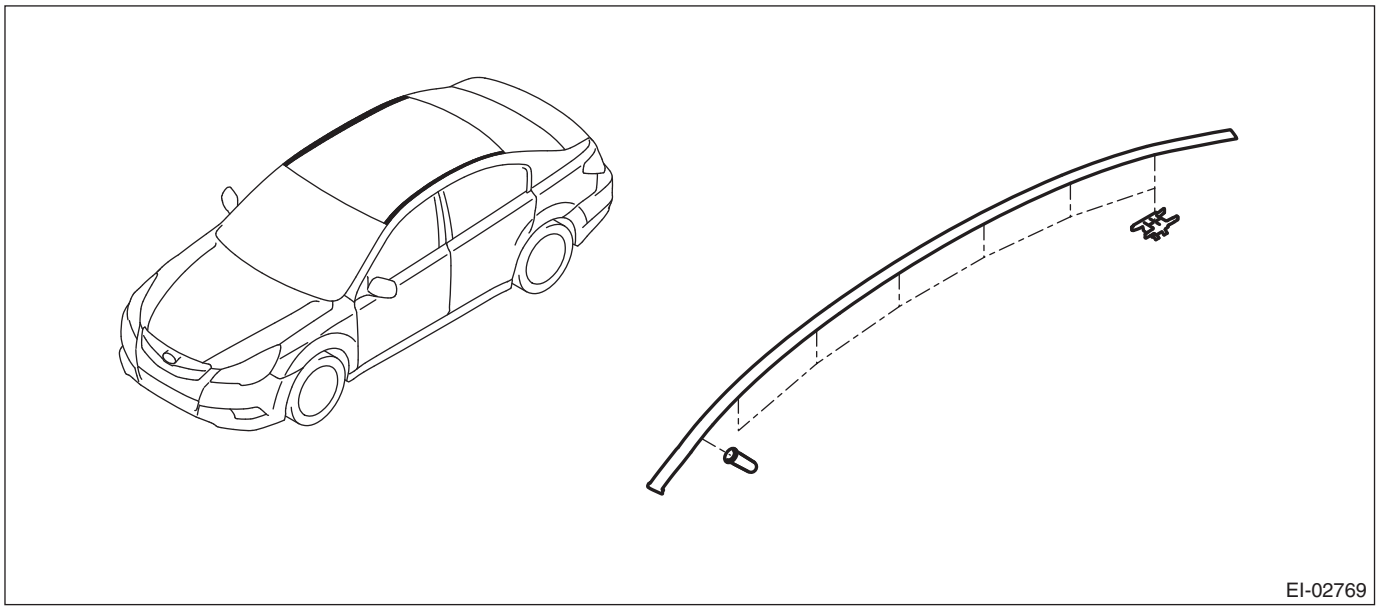
1) Remove the roof rail assembly. (OUTBACK model) <Ref. to EI-59, REMOVAL, Roof Rail.>
2) Turn over the front end of roof molding.
3) Using a flat tip screwdriver, slide the internal clip in the direction of arrow.


EI-02759

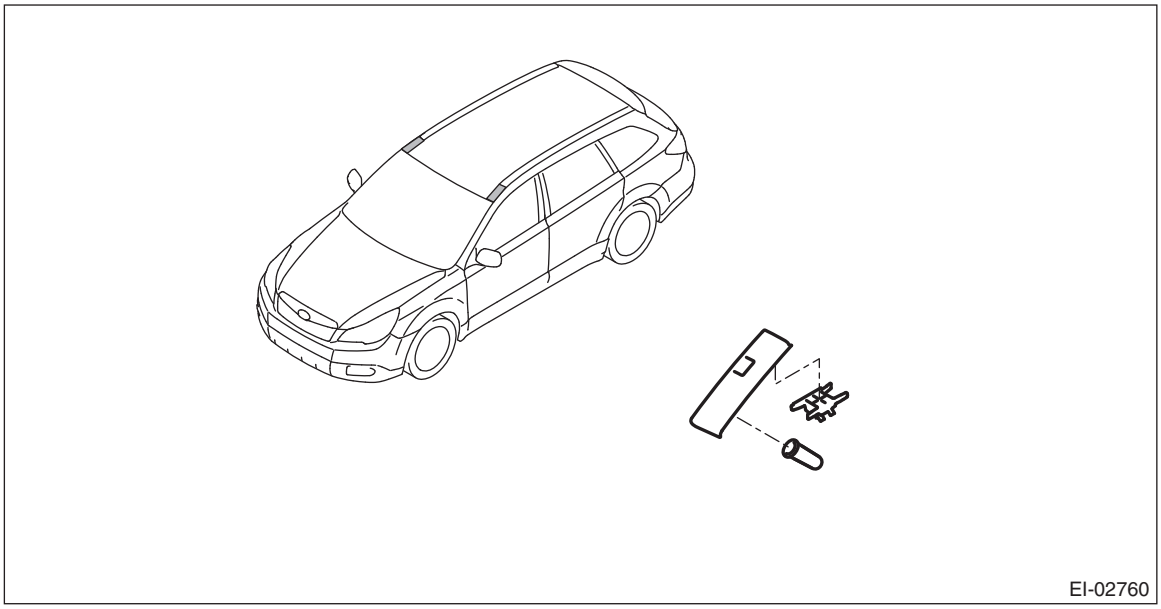
Right: Slide toward vehicle front.
Left: Slide toward vehicle rear.

4) Remove the clip from the stud on the body by sliding it.

- Sedan model: 6 clips per side


EI-02769

- OUTBACK model: 1 clip per side

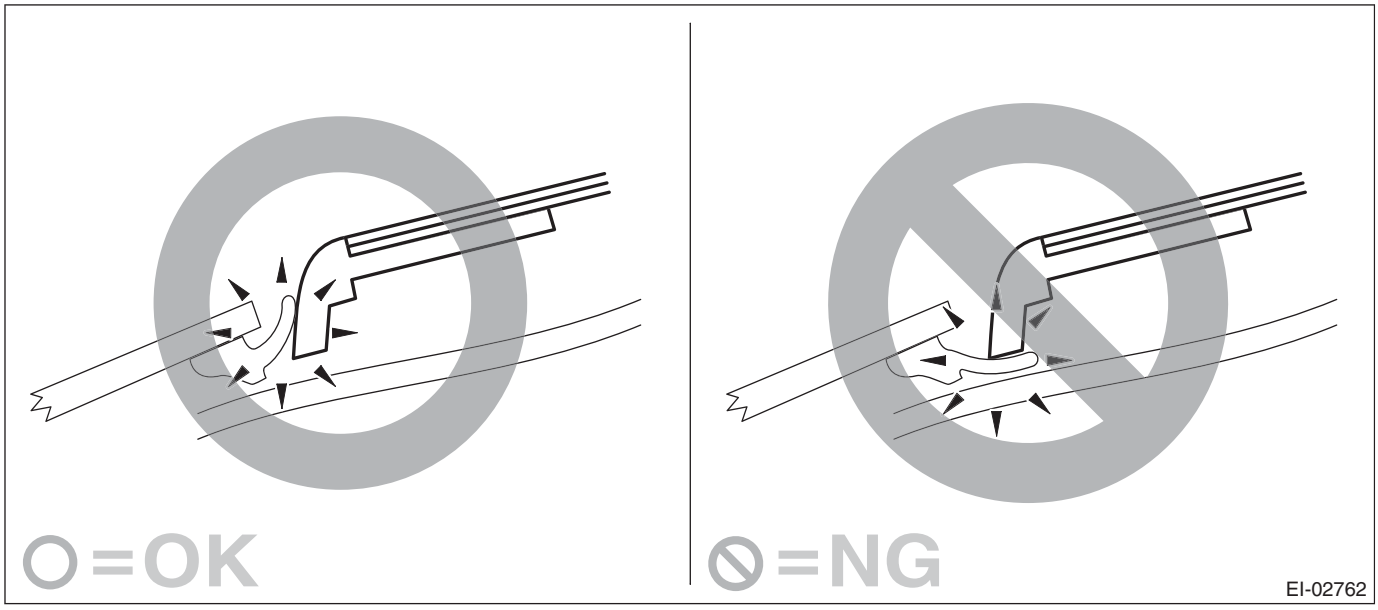


5) Remove the roof molding from the vehicle body by pulling it upward.

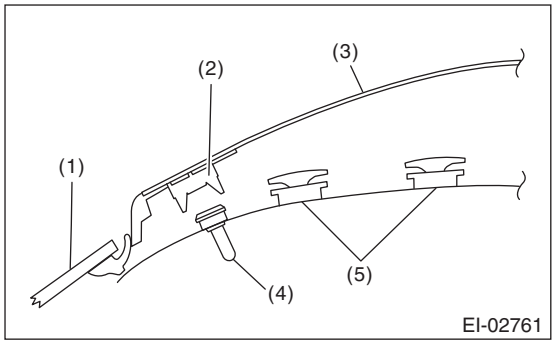
B: INSTALLATION

1) Remove the clips from the roof molding and attach them on the stud on body.

CAUTION:
- **Any clips damaged during roof molding removal must be replaced with new parts.**
- **While installing the roof molding, be careful not to catch the glass molding with the tip of the front side and rear side.**



2) Apply the front end of roof molding to the front window, and attach the front positioning clip to the rivet on body.



(1) Windshield
(2) Positioning clip
(3) Roof molding
(4) Rivet
(5) Clip

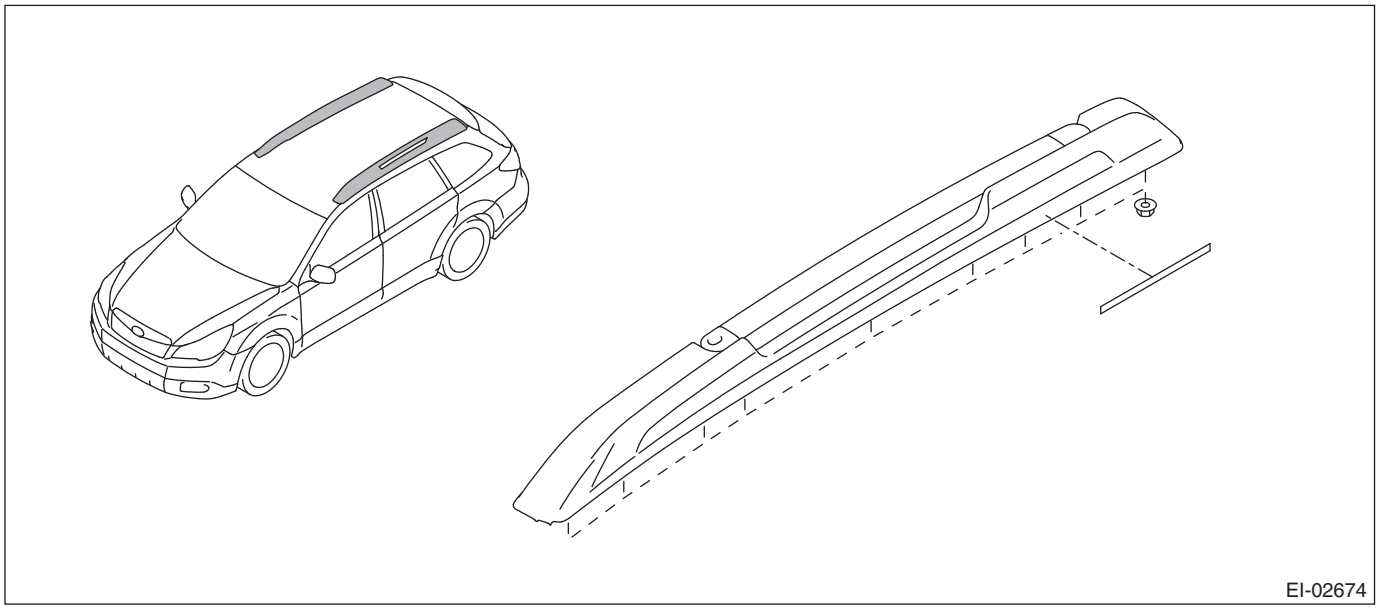
3) While pressing the roof molding from above, connect the roof molding with clips.

13.Roof Rail

A: REMOVAL

1) Remove the roof trim. <Ref. to EI-146, OUTBACK MODEL, REMOVAL, Roof Trim.>
2) Remove the curtain airbag module. <Ref. to AB-62, OUTBACK MODEL, REMOVAL, Curtain Airbag Module.>

CAUTION:
• Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>
• Be careful not to damage the curtain airbag module during removal.
3) Remove the nine installing nuts.



B: INSTALLATION

Install each part in the reverse order of removal.

CAUTION:
When removing or installing the roof rail, be careful not to scratch the body panel with the stud bolt of roof rail.

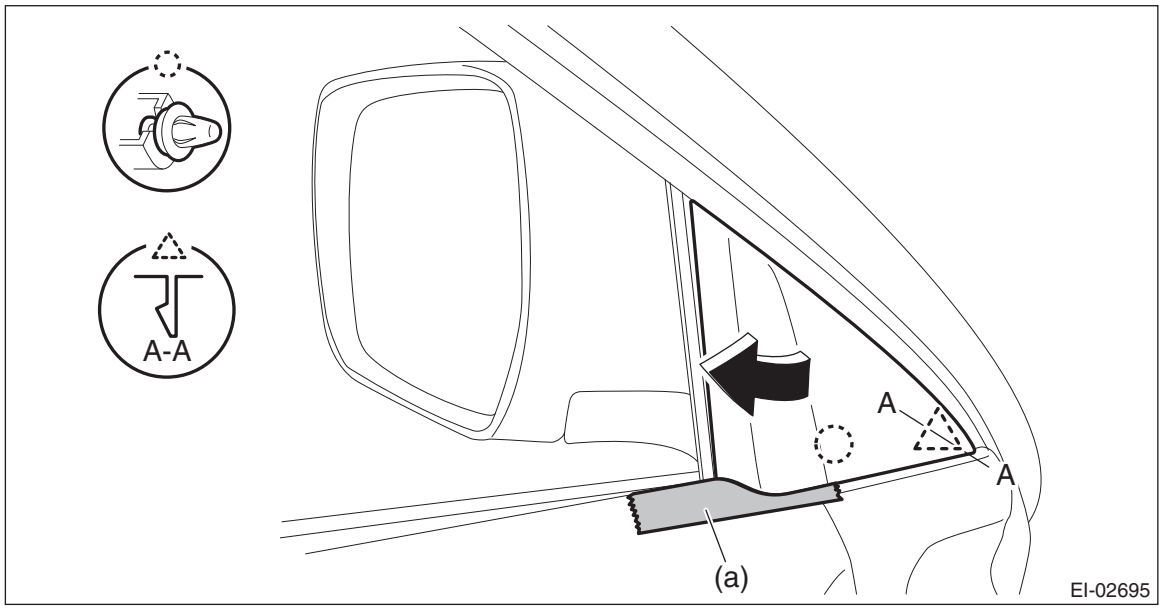
Tightening torque:
7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

14.Door Trim

A: REMOVAL

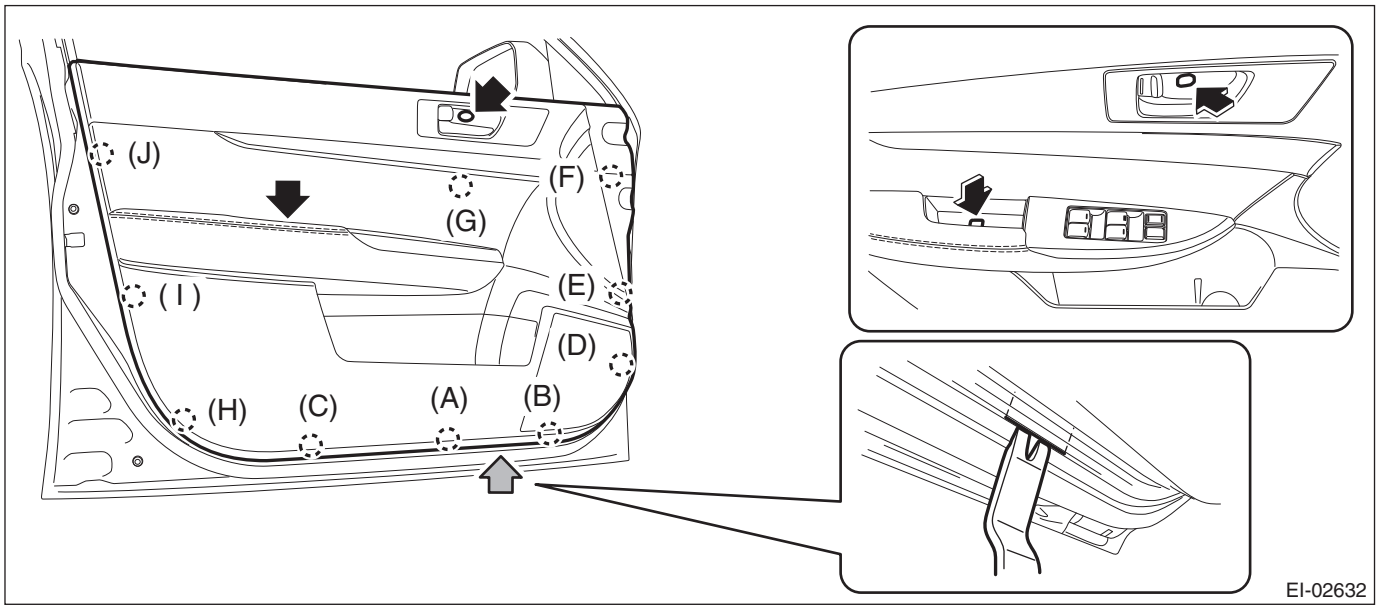
1. FRONT DOOR

1) Disconnect the ground cable from battery.
2) Remove the gusset cover.
   (1) Attach the protective tape (a) to the door trim.
   (2) Release the clips and claws, then detach the gusset cover.



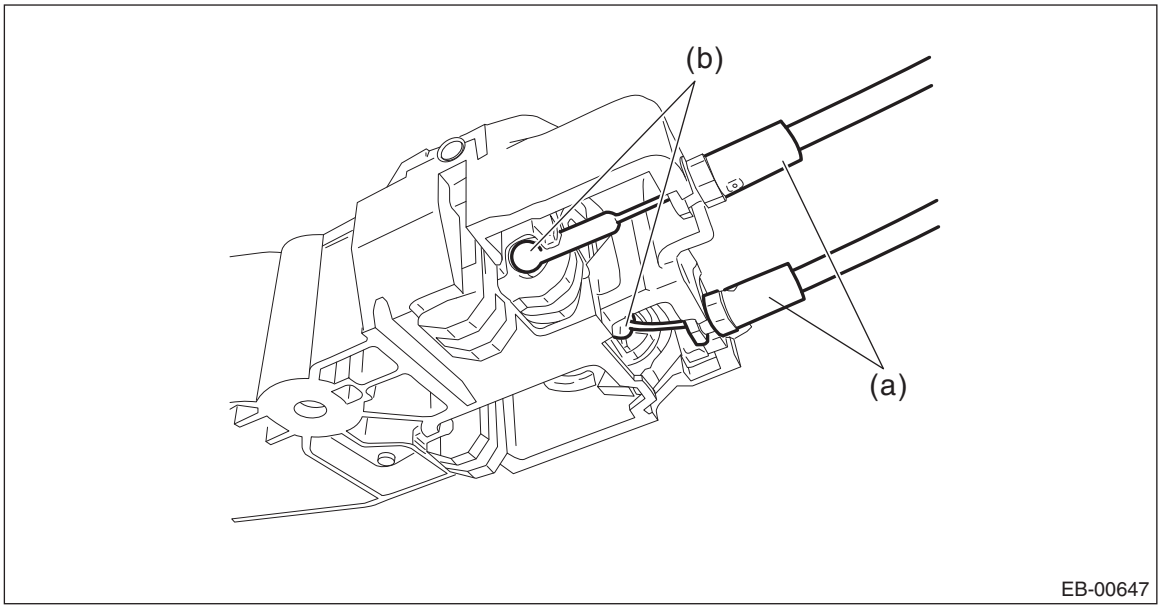
3) Remove the front door trim assembly.
   (1) Open the cover and remove the screw.
   (2) Remove the clips in the order of (A) to (J) and remove the front door trim assembly from the door panel.

CAUTION:
When removing the door trim, be sure to remove the clips in the correct order. Forcibly removing clips may damage the door panel assembly.



NOTE:
Insert a plastic clip remover into the slit at the bottom edge of the door trim and lift the door trim.

(3) Remove the cables (a) and (b) from the cable holder of inner remote.

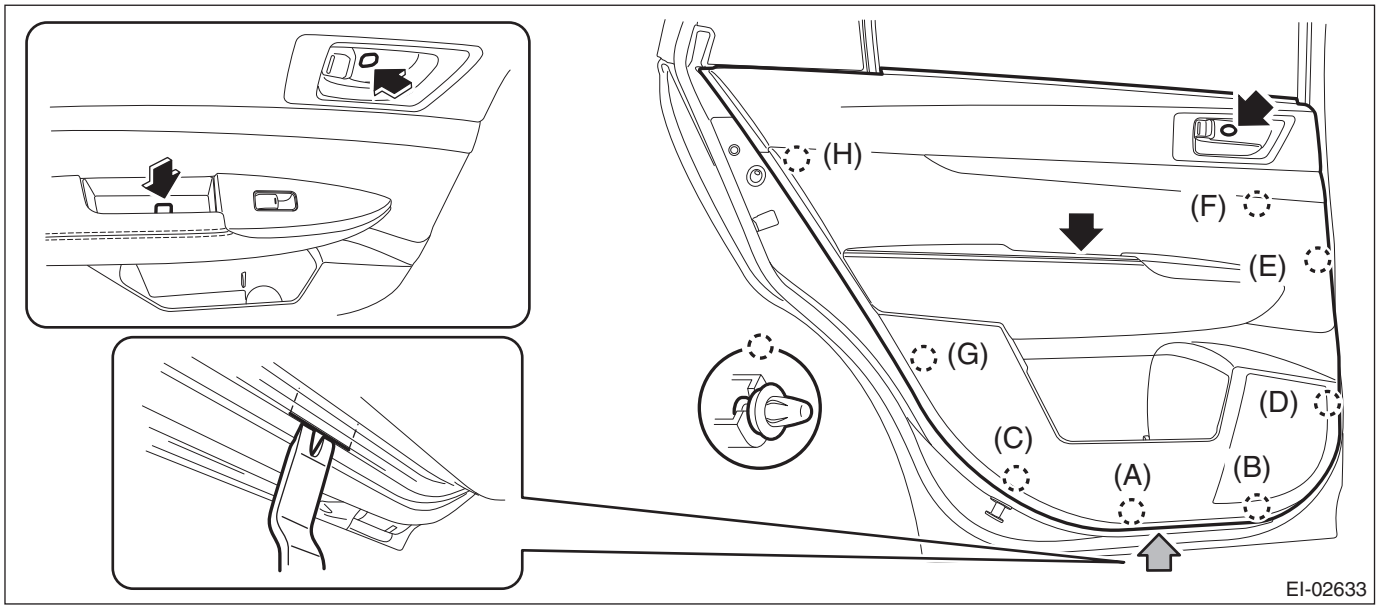


(4) Disconnect the harness connector and remove the door trim assembly.

2. REAR DOOR

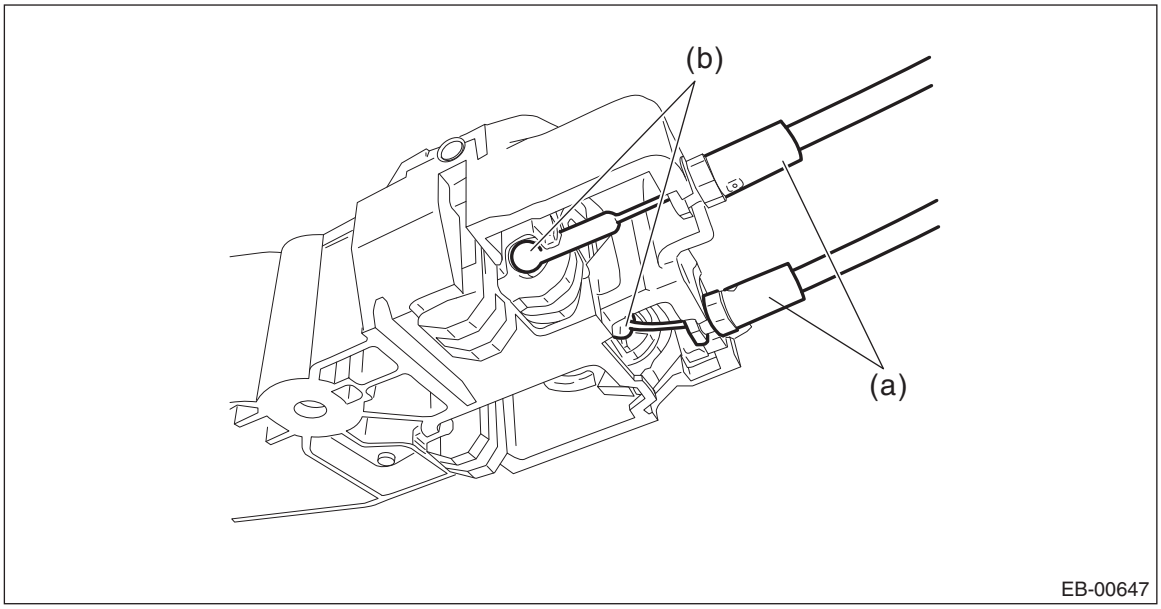
1) Disconnect the ground cable from battery.
2) Remove the rear door trim assembly.
   (1) Open the cover and remove the screw.
   (2) Remove the clips in the order of (A) to (H) and remove the rear door trim assembly from the door panel.

CAUTION:
When removing the door trim, be sure to remove the clips in the correct order. Forcibly removing clips may damage the door panel assembly.



NOTE:
Insert a plastic clip remover into the slit at the bottom edge of the door trim and lift the door trim.

(3) Remove the cables (a) and (b) from the cable holder of inner remote.



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

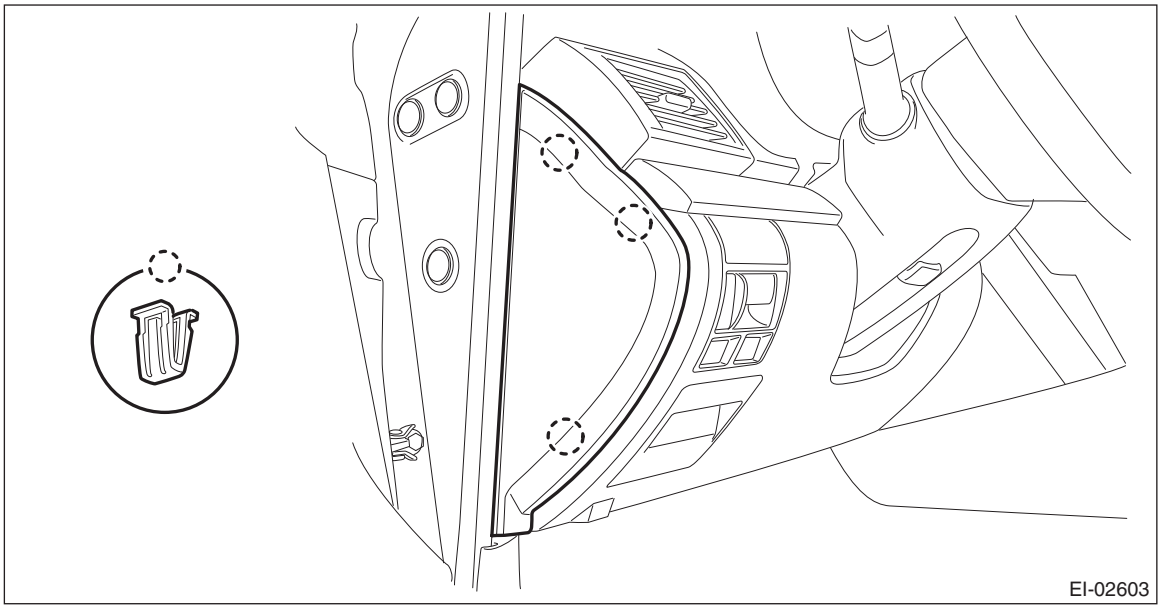
B: INSTALLATION

Install each part in the reverse order of removal.

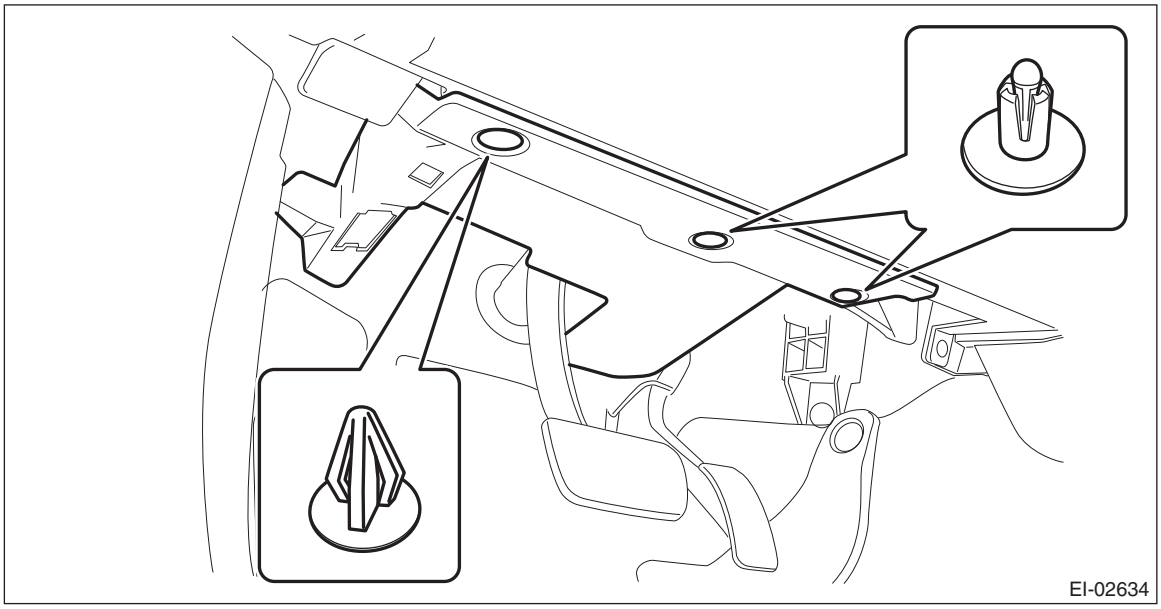
15.Instrument Panel Lower Cover

A: REMOVAL

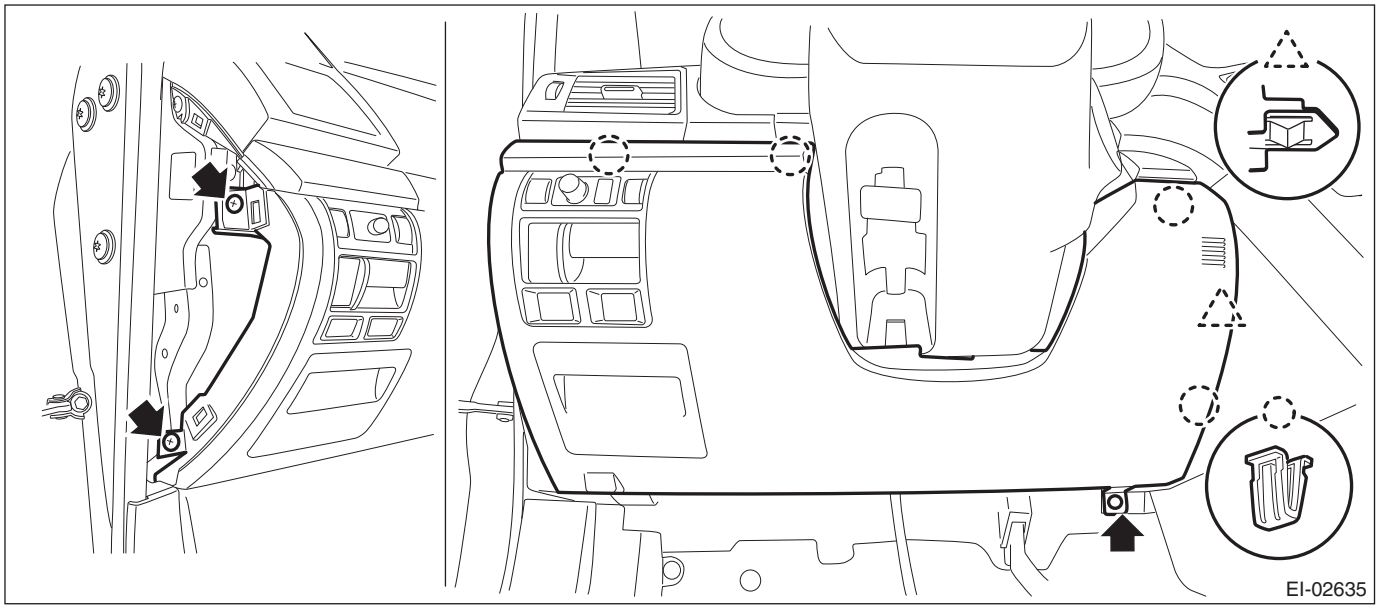
1) Disconnect the ground cable from battery.
2) Remove the clips, and remove the instrument panel side cover LH.



3) Remove the instrument panel lower cover.
   (1) Remove the clips and data link connector, and remove the instrument panel lower cover under.



(2) Remove the screws and clips and release the claws, and remove the instrument panel lower cover while disconnecting the harness connectors.



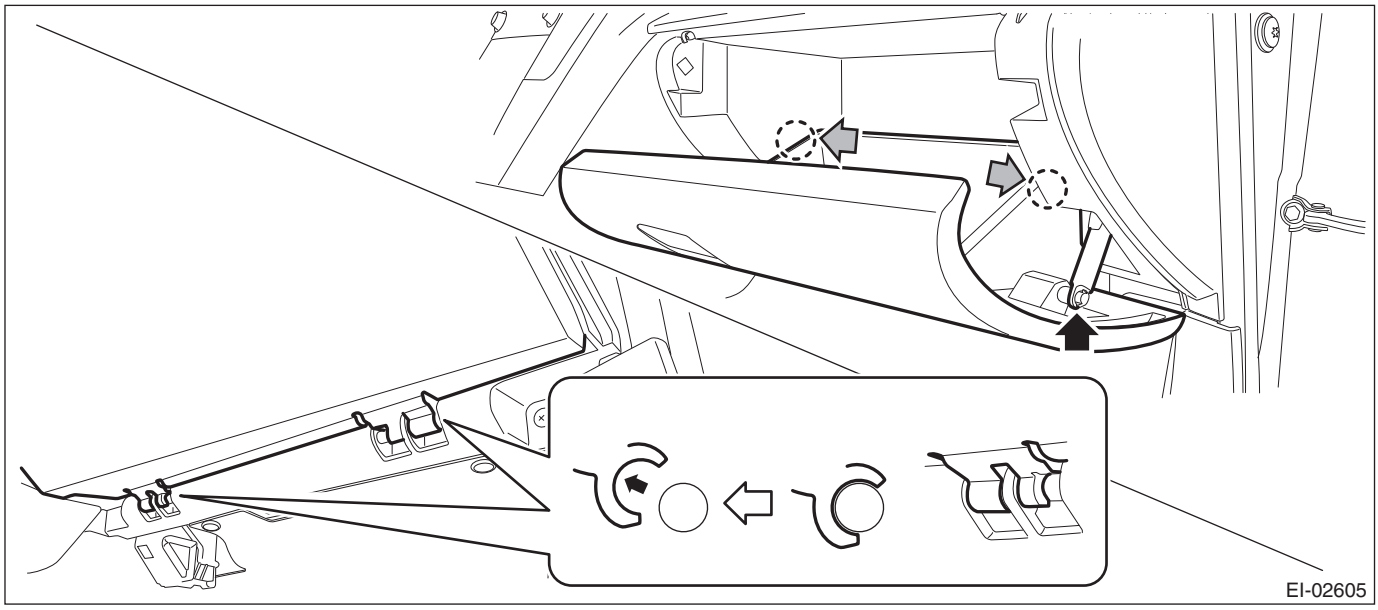
B: INSTALLATION

Install each part in the reverse order of removal.

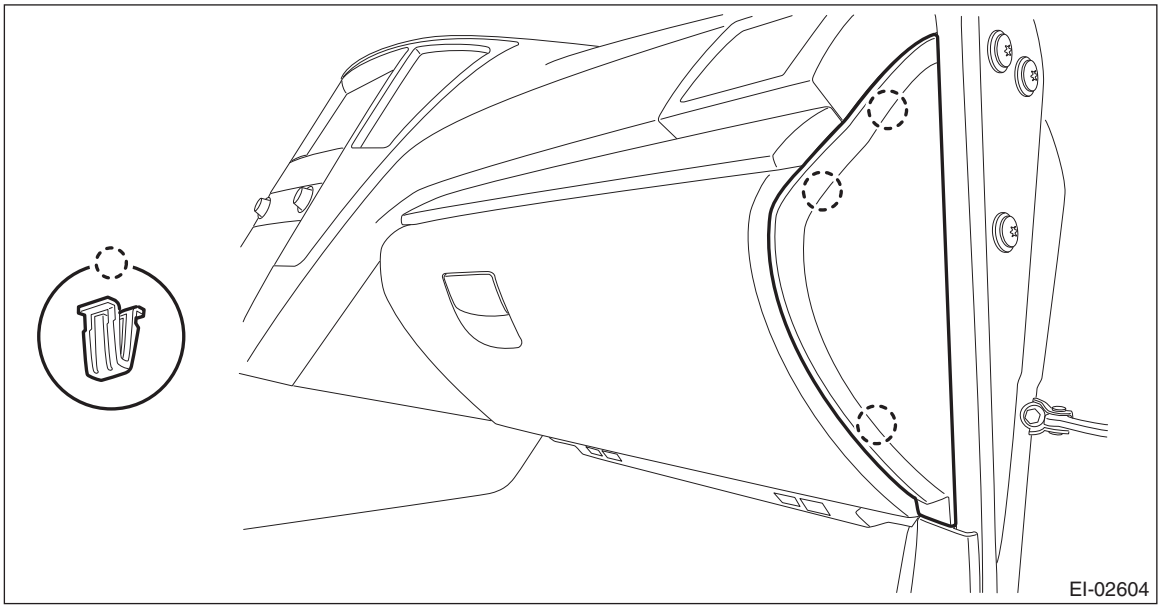
16.Glove Box

A: REMOVAL

1) Remove the glove box lid assembly.
   (1) Remove the glove box damper.
   (2) Release the stoppers and remove the glove box lid assembly by pulling it toward you.

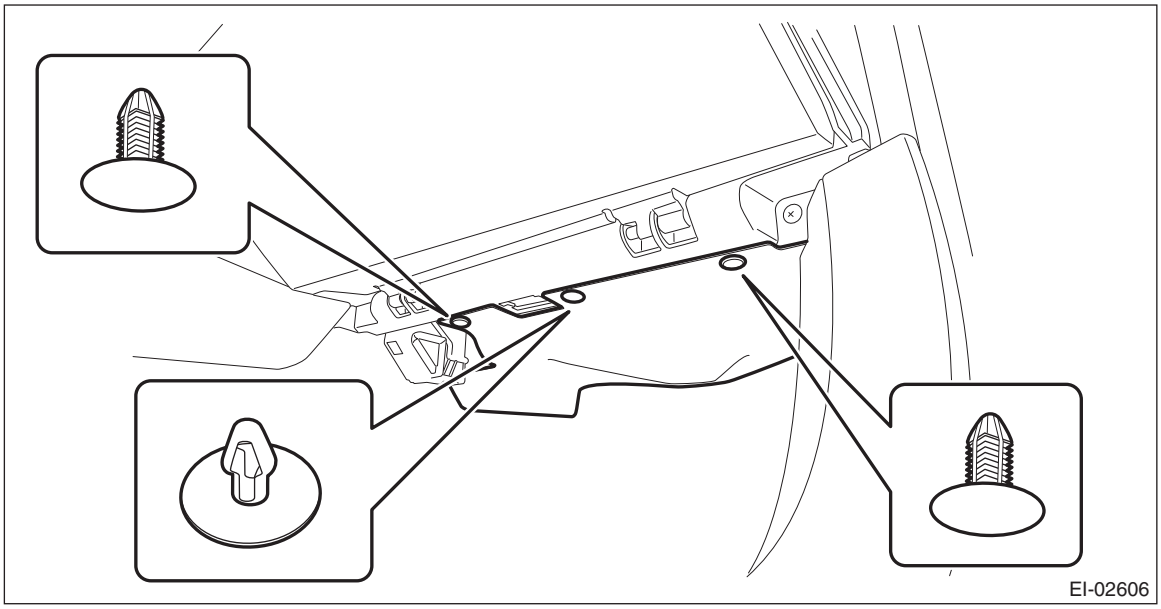


2) Release the clips, and remove the instrument panel side cover RH.

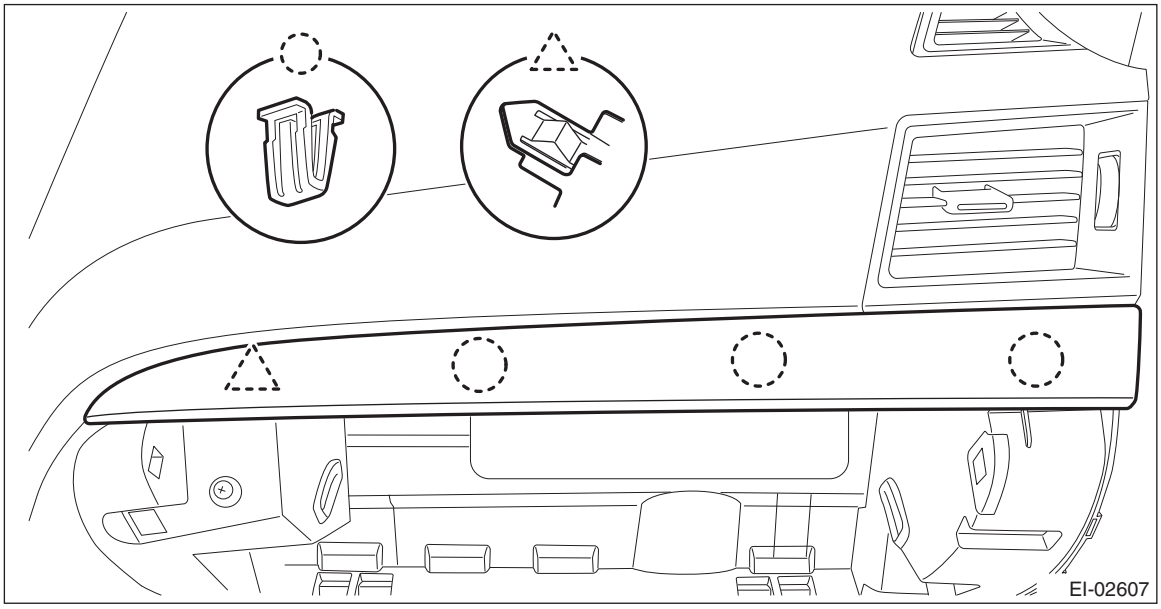


3) Remove the glove box back panel.

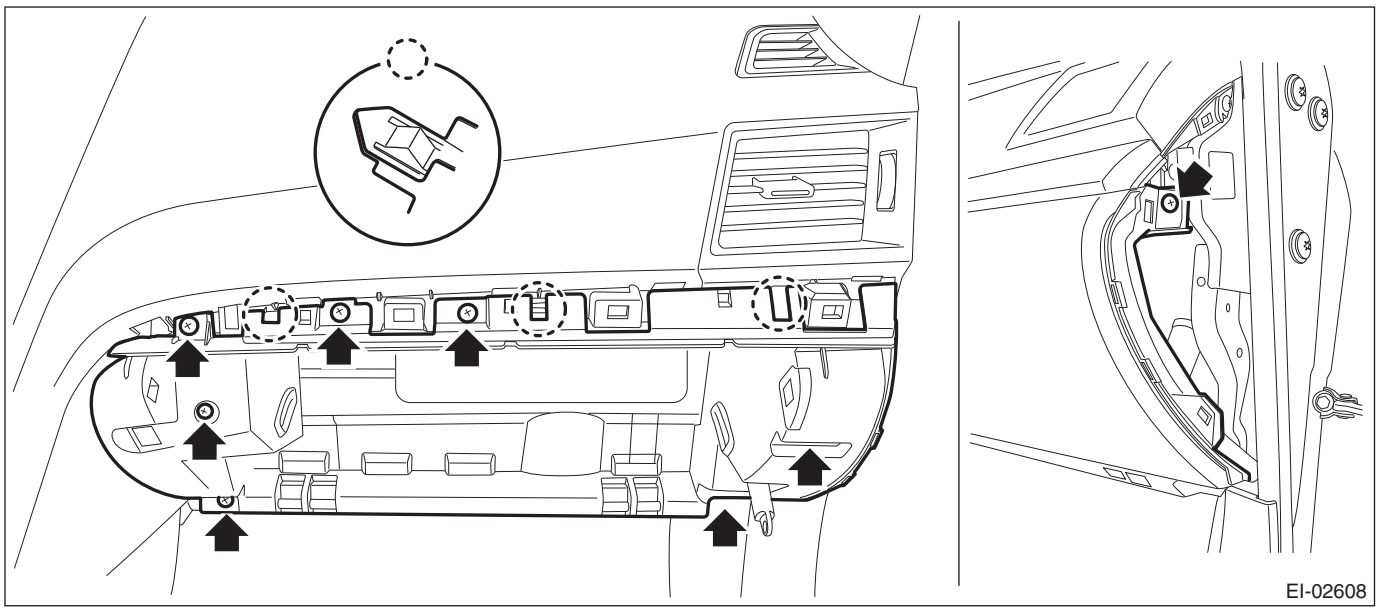
(1) Release the clips, and remove the glove box under cover.



(2) Release the clips and claws, and remove the ornament panel assembly P.



(3) Remove the screws and release the claws, then detach the glove box back panel.



(4) Disconnect the glove box light LED connector.

B: INSTALLATION

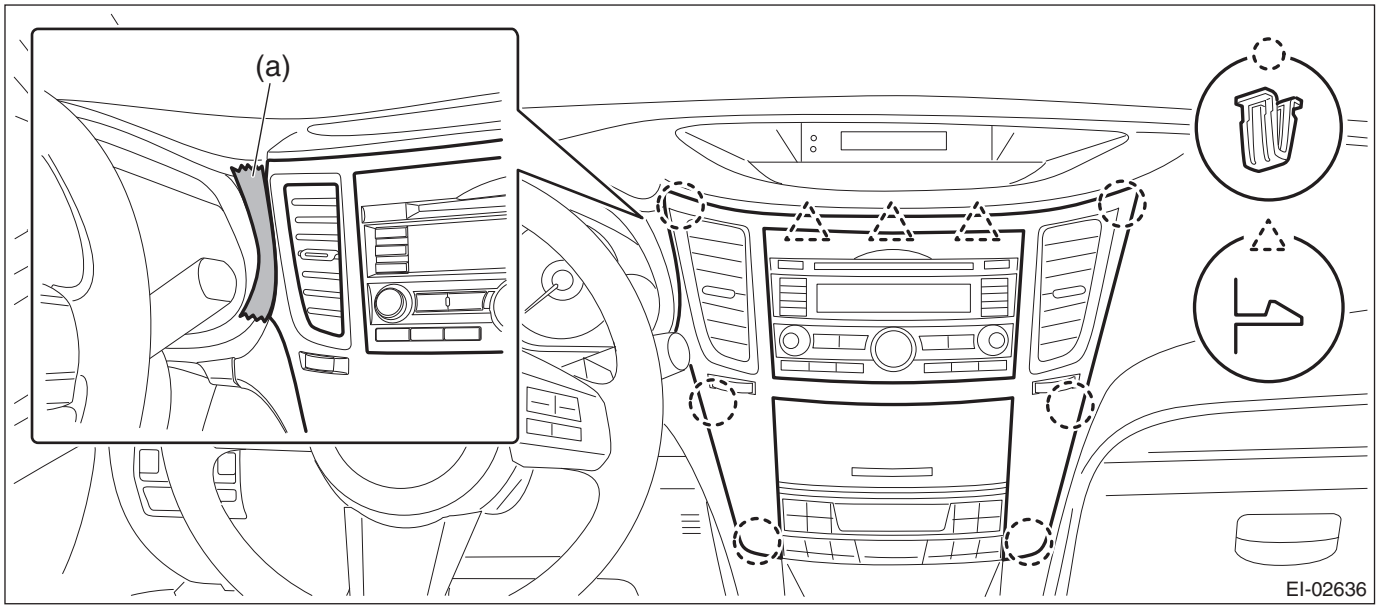
Install each part in the reverse order of removal.

17.Center Console

A: REMOVAL

1. CENTER PANEL ASSY

1) Attach the protective tape (a) to the meter visor.
2) Remove the center panel assembly.



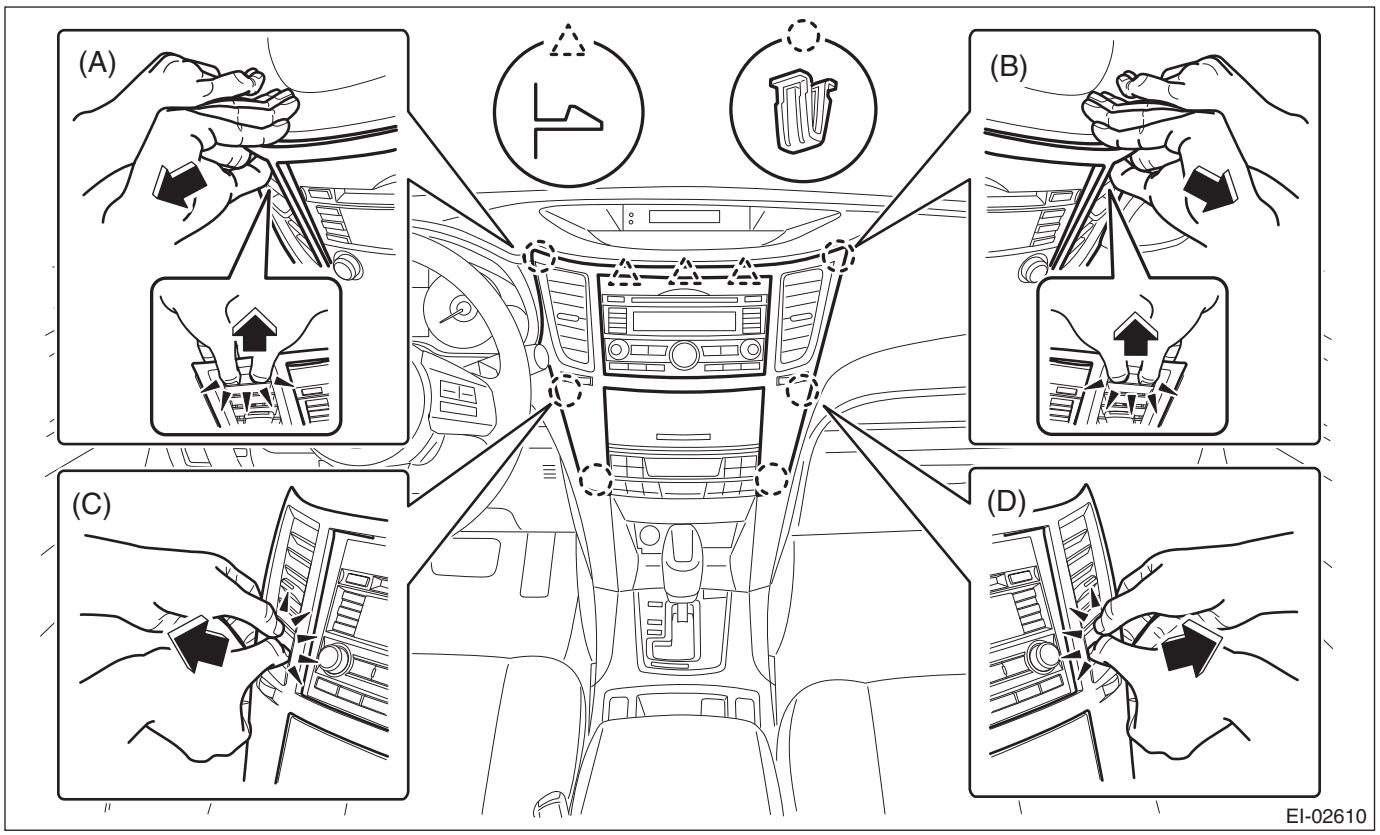
(1) Insert a finger into the air vent grille and release the left and right clips at the top of the center panel. (A), (B)

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

(2) Insert a finger into the air vent grille and release the left and right clips at the center of the center panel. (C), (D)

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

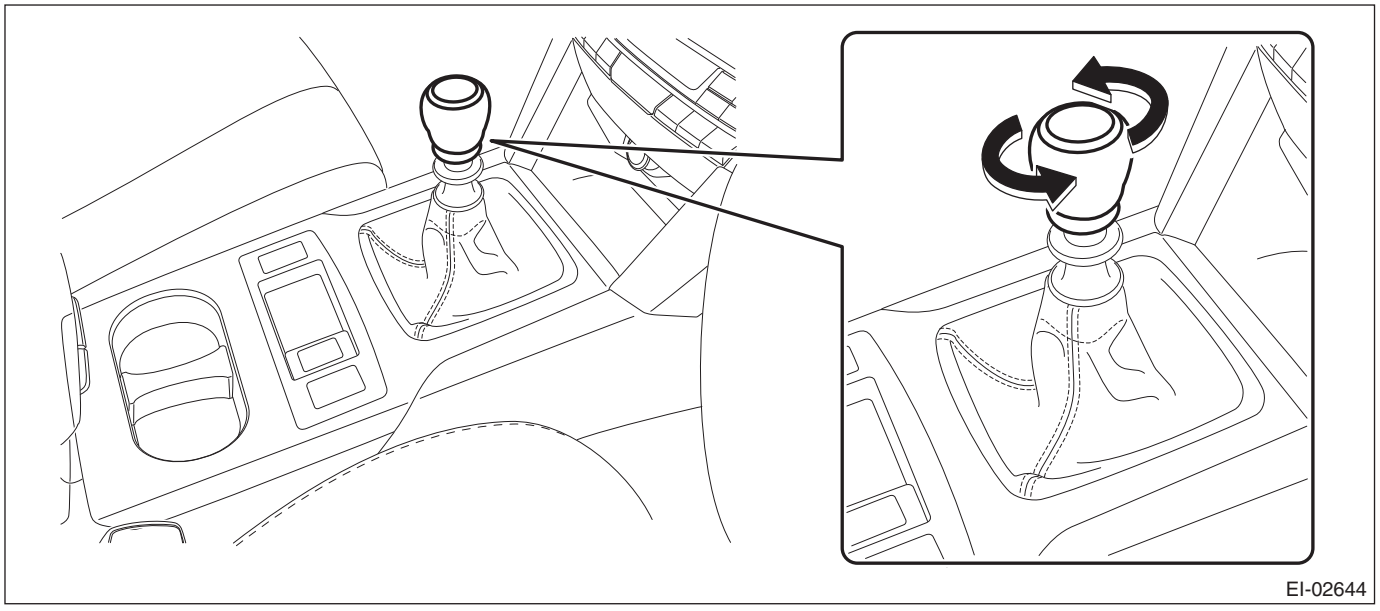
(3) Release the clips at the bottom of the center panel and remove the center panel assembly.



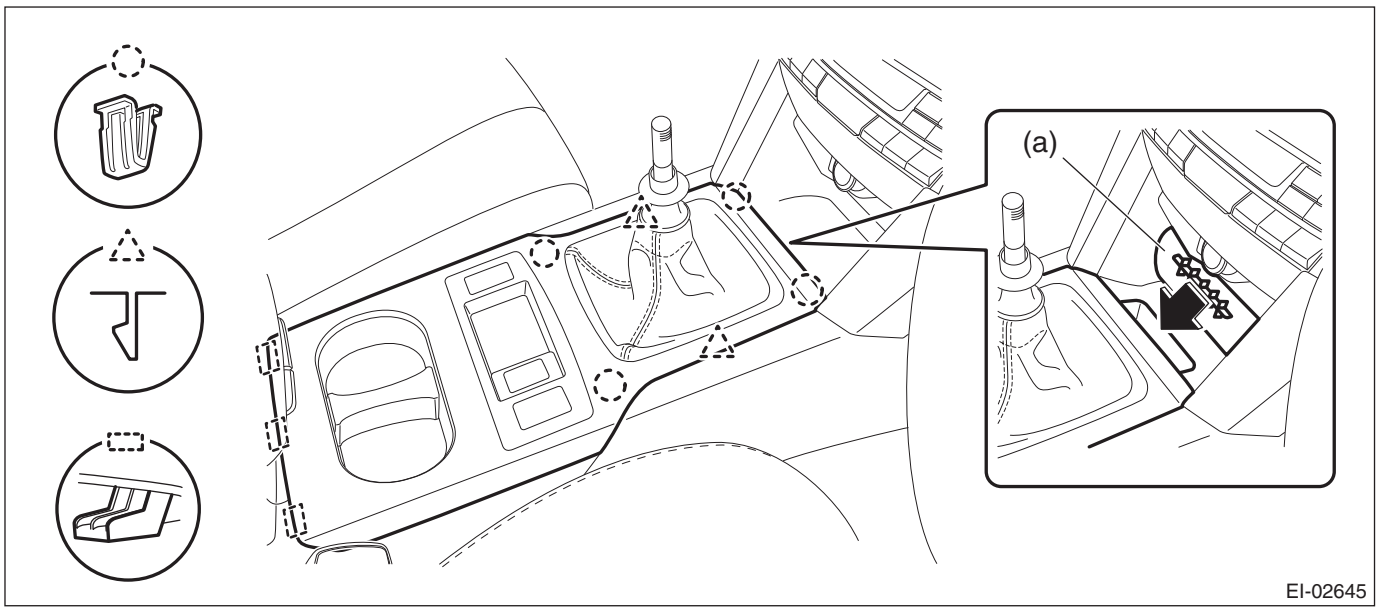
2. CONSOLE FRONT COVER

MT model

1) Remove the console front cover assembly.
(1) Remove the shift knob.



(2) Release the clips and claws, then pull up the console front cover assembly.

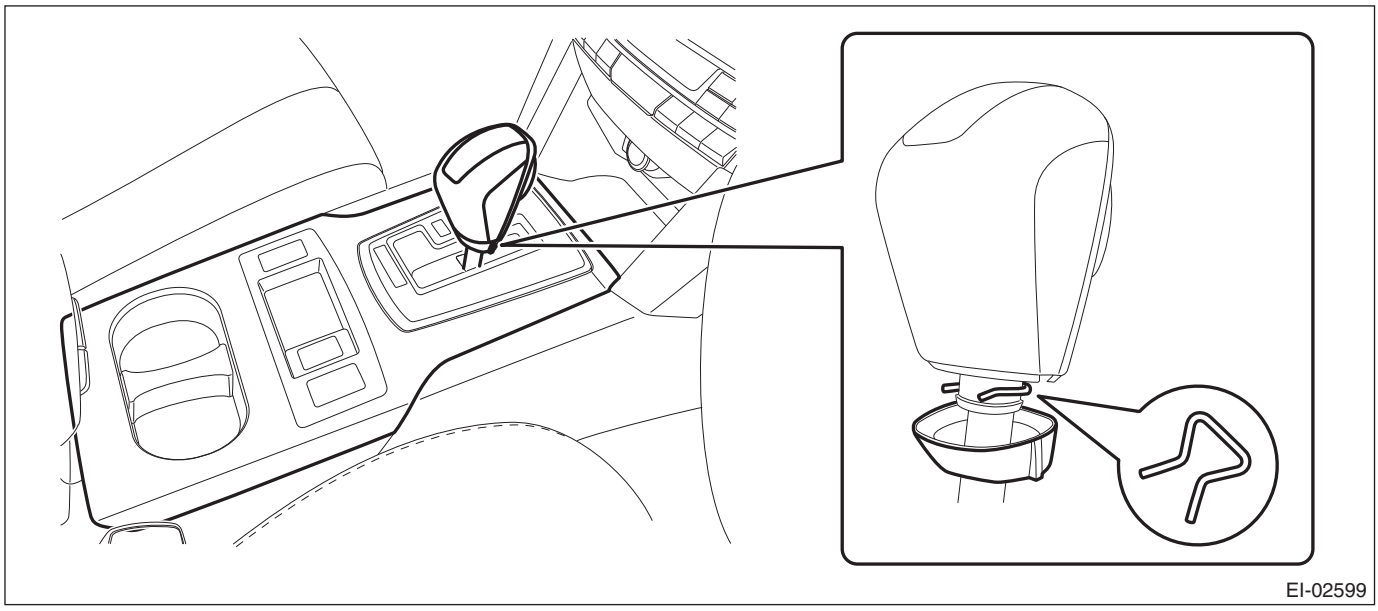


NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

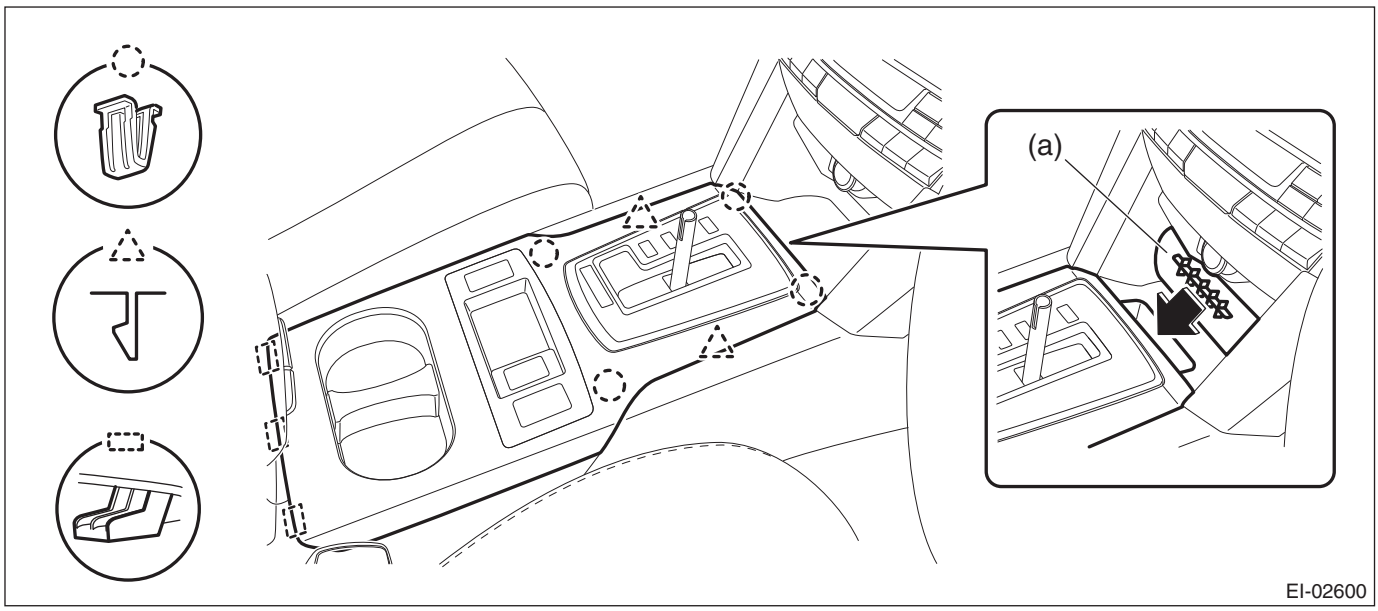
(3) Disconnect the harness connector and remove the console front cover assembly.

AT model

1) Remove the console front cover assembly.
   (1) Remove the select lever knob.
      a) Lower the cover grip AT.
      b) Remove the clamp grip pin, then remove the select lever knob.



(2) Release the clips and claws, then pull up the console front cover assembly.



NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

(3) Disconnect the harness connector and remove the console front cover assembly.

B: INSTALLATION

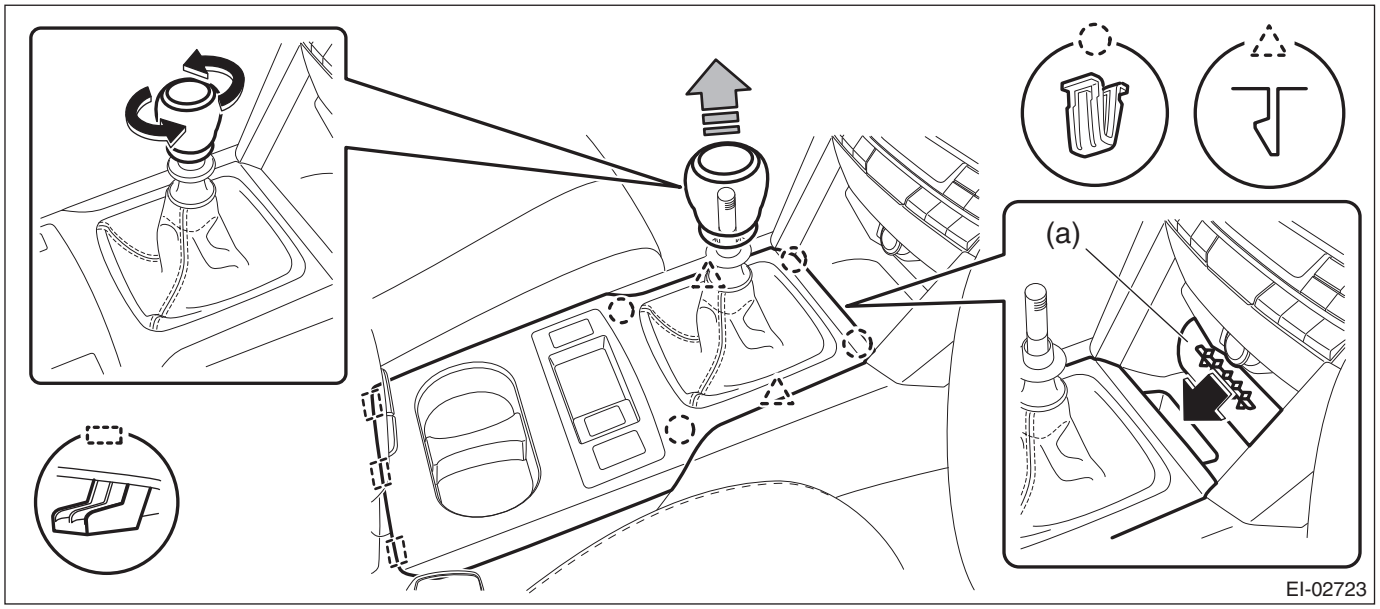
Install each part in the reverse order of removal.

18.Console Box

A: REMOVAL

1) Remove the console front cover assembly.

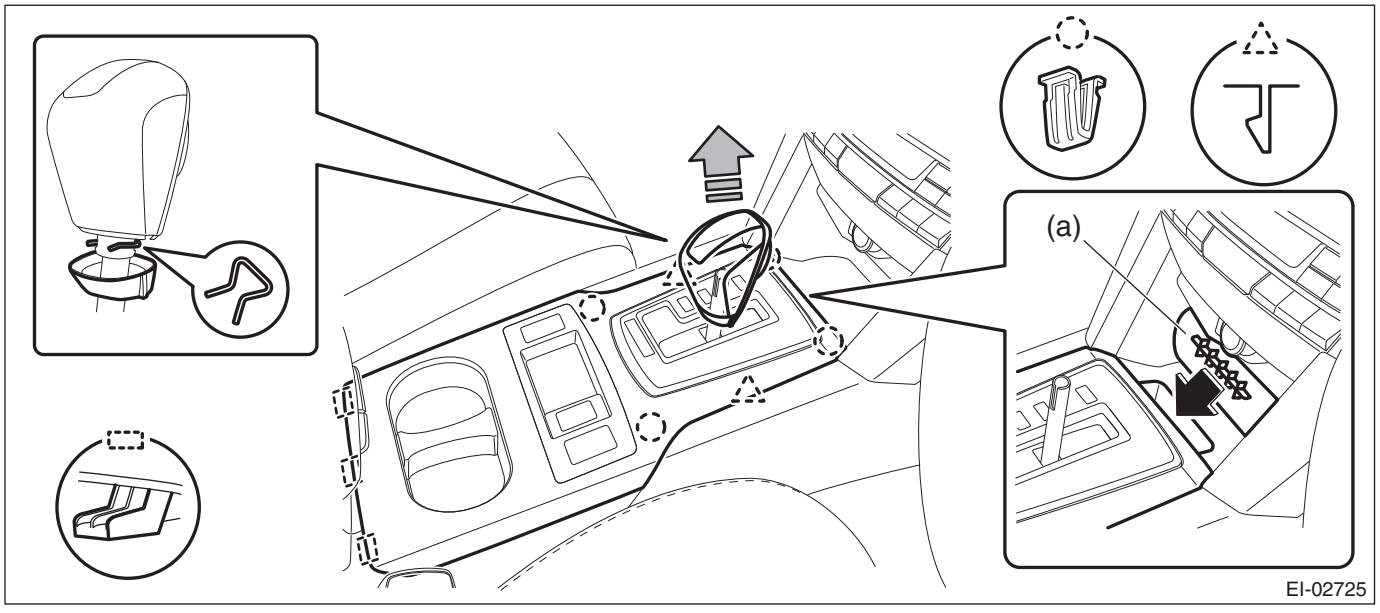
- MT model
  1. Remove the shift knob.
  2. Release the clips and claws, then pull up the console front cover assembly.



NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

  3. Disconnect the harness connector and remove the console front cover assembly.

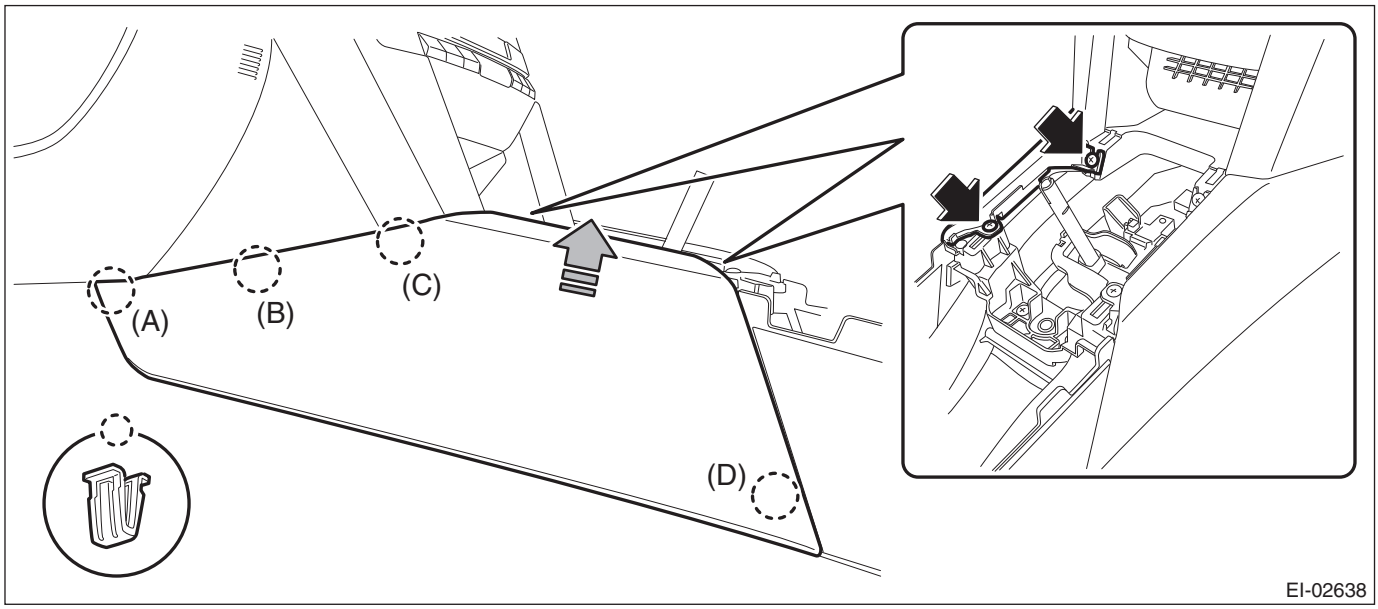
- AT model
  1. Remove the select lever knob.
     a. Lower the cover grip AT.
     b. Remove the clamp grip pin, then remove the select lever knob.
  2. Release the clips and claws, then pull up the console front cover assembly.

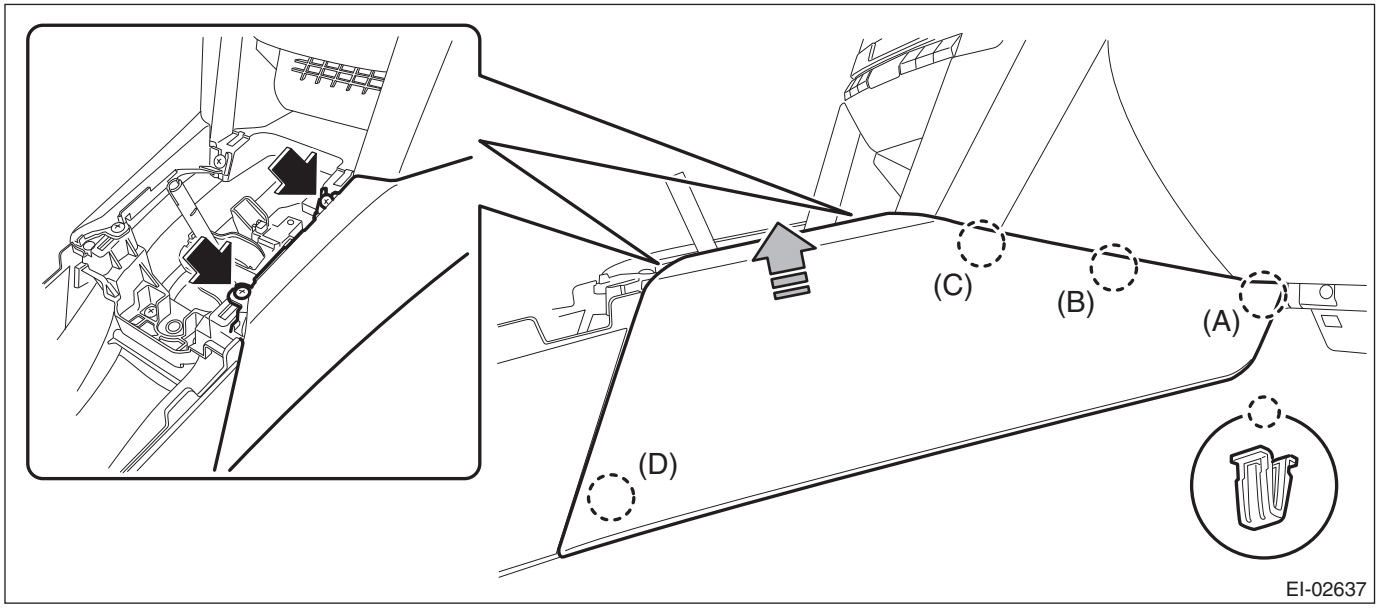


NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

3. Disconnect the harness connector and remove the console front cover assembly.

2) Remove the left and right console front side cover assembly.
   (1) Remove the screws and release the clip engagings (A) to (D) in order.
   (2) Remove the console front side cover assembly by pulling it up.

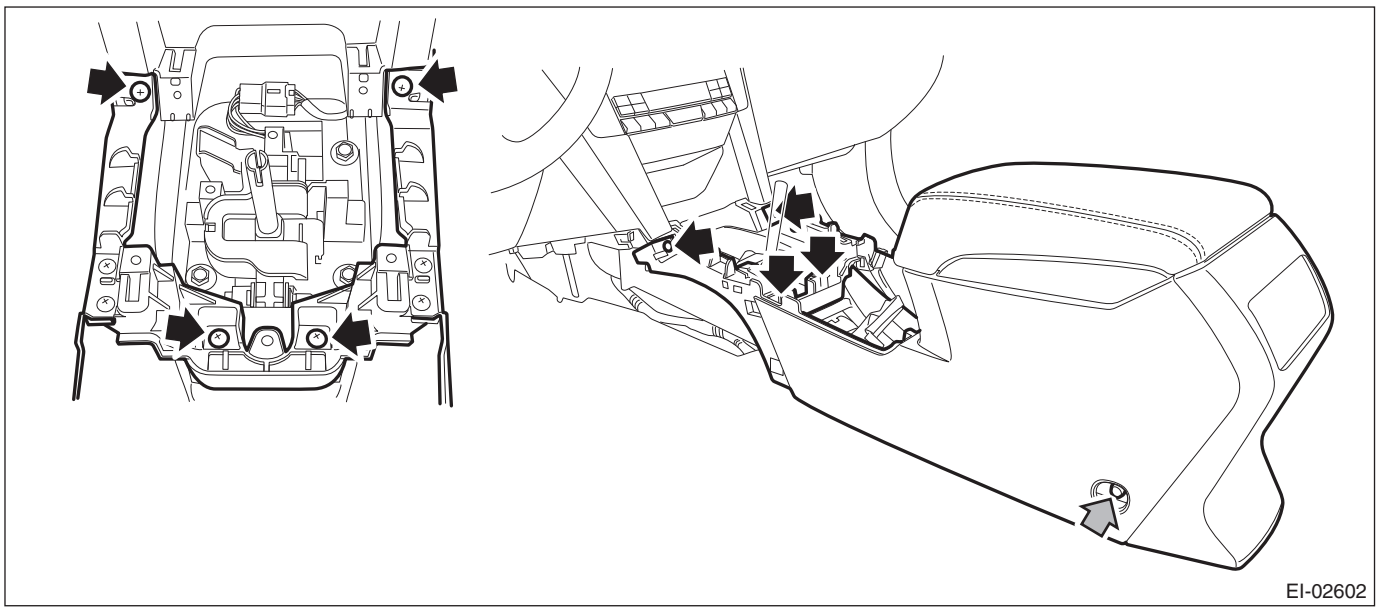




3) Remove the console box assembly.
   (1) Move the seat forward, and remove the bolts after detaching the left and right caps.

NOTE:
For a model with power seat, connect the battery ground cable and move the seat. Then, disconnect the battery ground cable again and wait for 60 seconds at least before restarting the work.

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



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
6.5 N·m (0.66 kgf-m, 4.8 ft-lb)

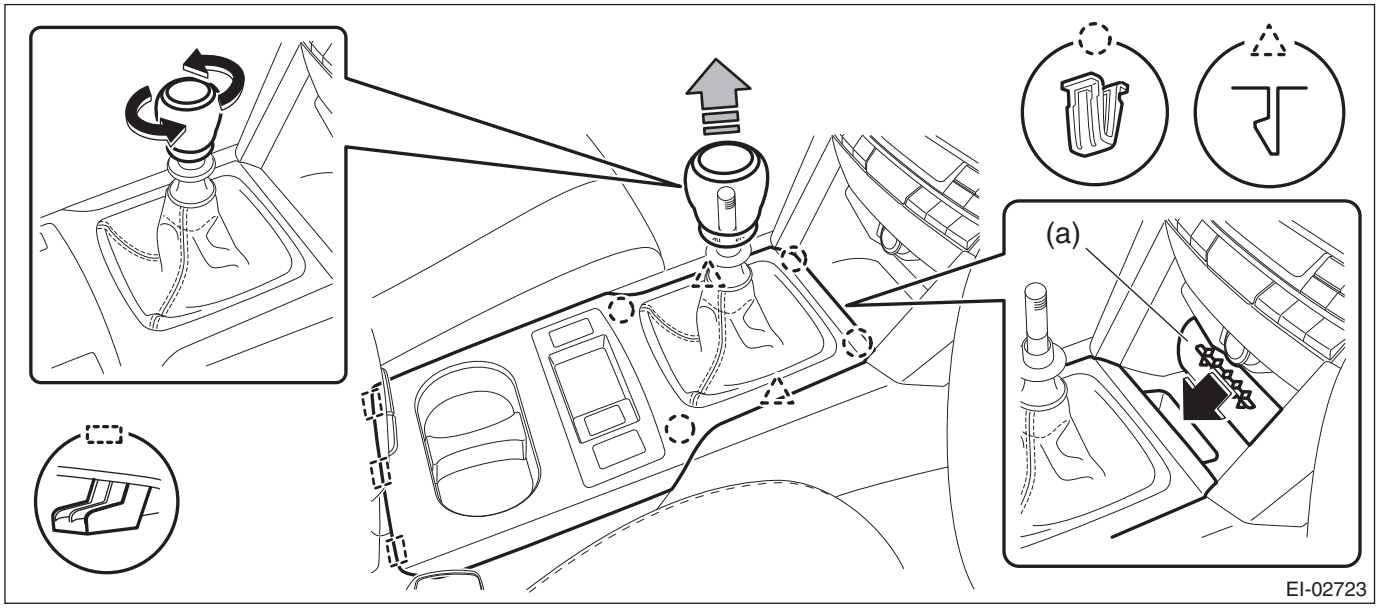
19.Instrument Panel Assembly

A: REMOVAL

CAUTION:
Be careful not to damage the airbag system harness when servicing the instrument panel. Damage may cause the system to malfunction.

1) Disconnect the ground cable from battery.
2) Remove the console front cover assembly.

- MT model
  1. Remove the shift knob.
  2. Release the clips and claws, then pull up the console front cover assembly.

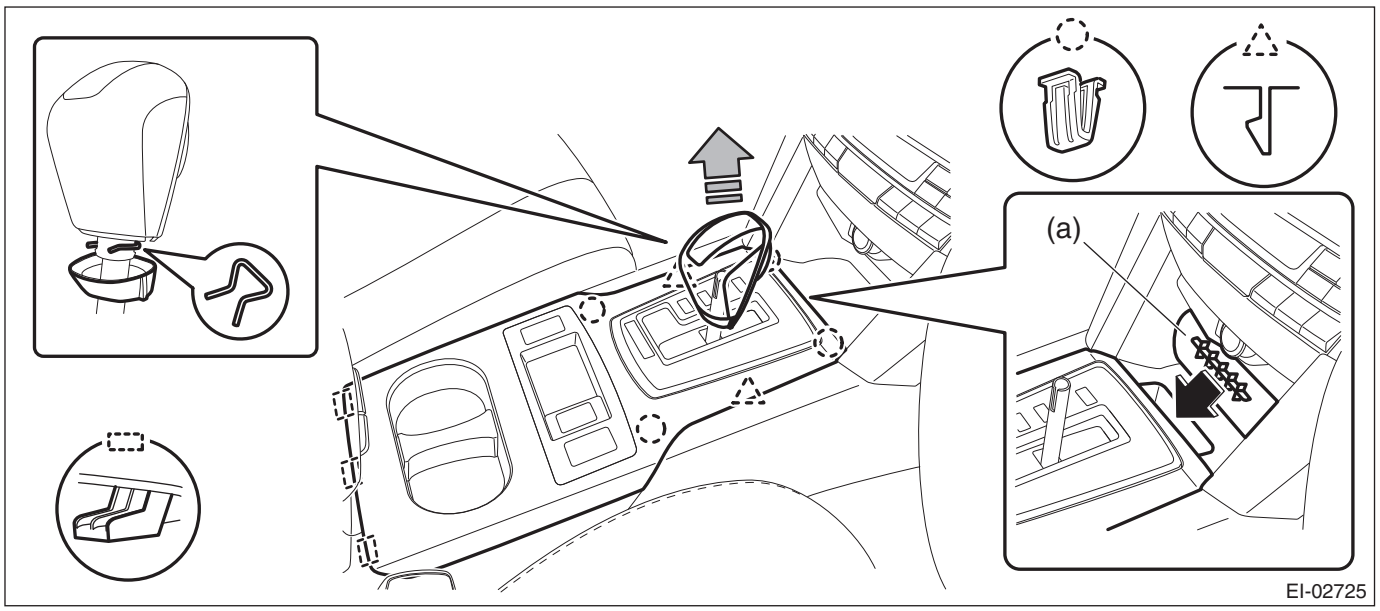


NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

  3. Disconnect the harness connector and remove the console front cover assembly.

- AT model
  1. Remove the select lever knob.
     a. Lower the cover grip AT.
     b. Remove the clamp grip pin, then remove the select lever knob.

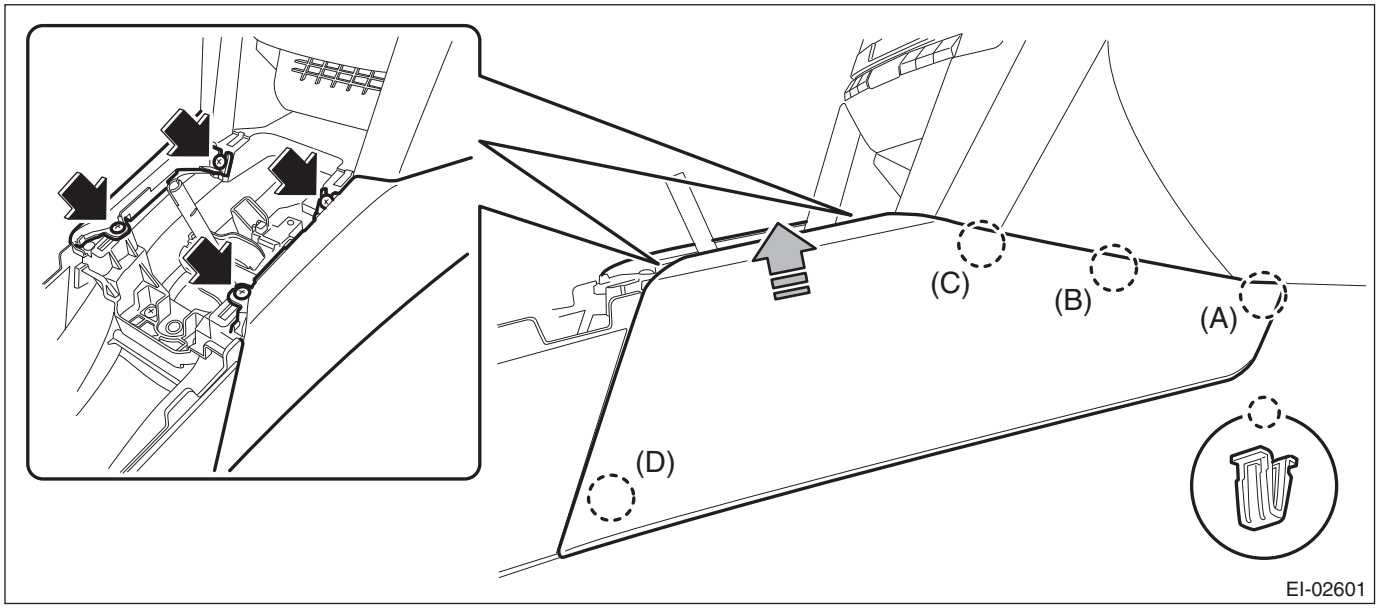
2. Release the clips and claws, then pull up the console front cover assembly.



NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

3. Disconnect the harness connector and remove the console front cover assembly.

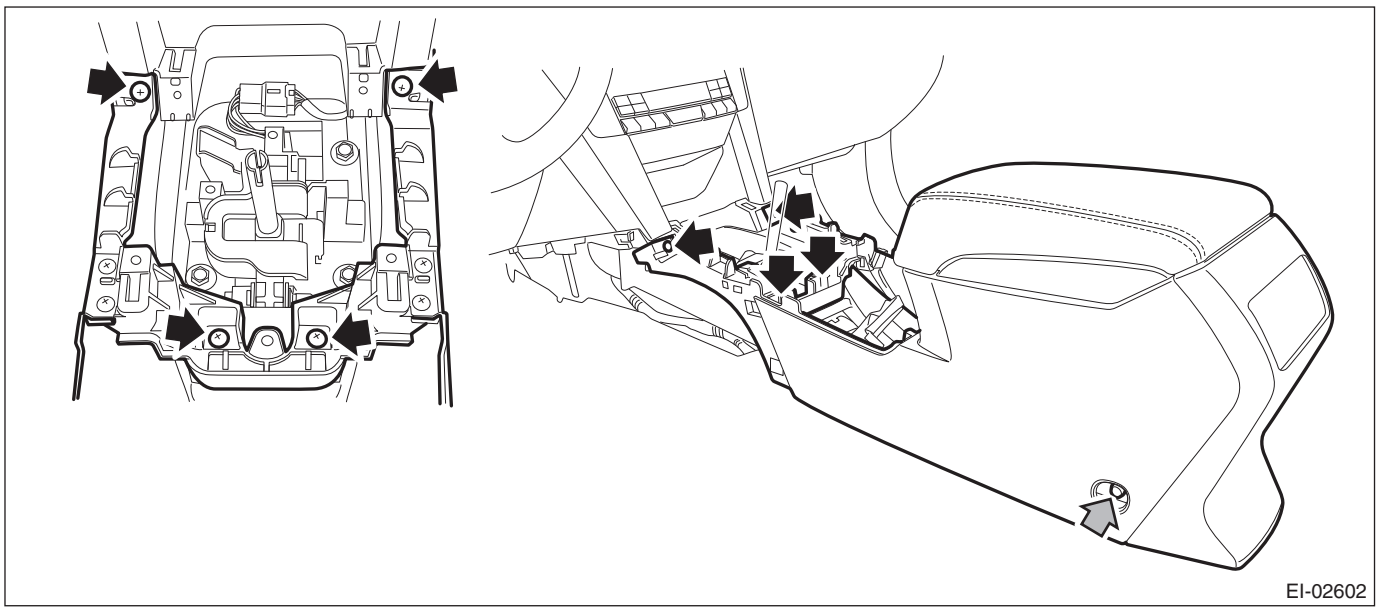
3) Remove the left and right console front side cover assembly.
(1) Remove the screws and release the clips (A) to (D) in order.
(2) Remove the console front side cover assembly by pulling it up.



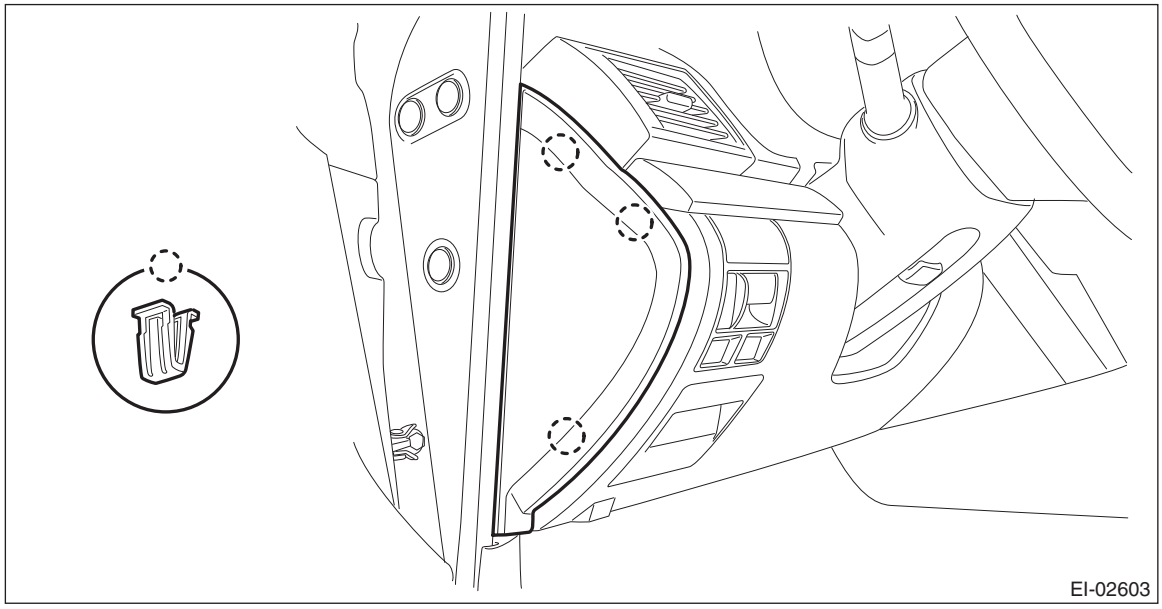
4) Remove the console box assembly.
(1) Move the seat forward, and remove the bolts after detaching the left and right caps.

NOTE:
For a model with power seat, connect the battery ground cable and move the seat. Then, disconnect the battery ground cable again and wait for 60 seconds at least before restarting the work.

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

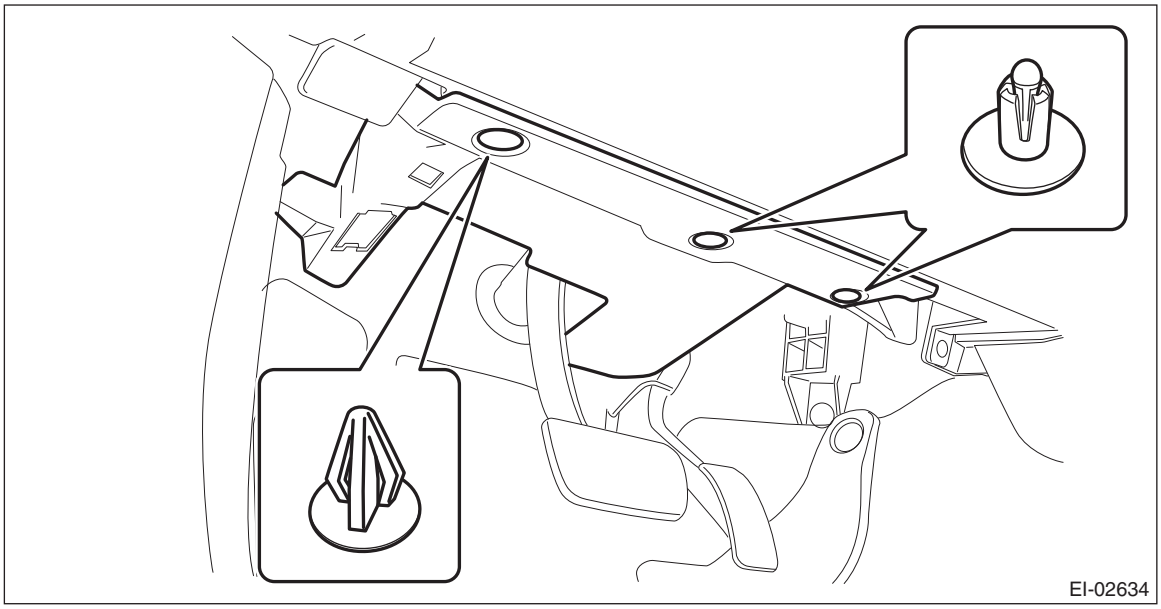


5) Remove the clips, and remove the instrument panel side cover LH.

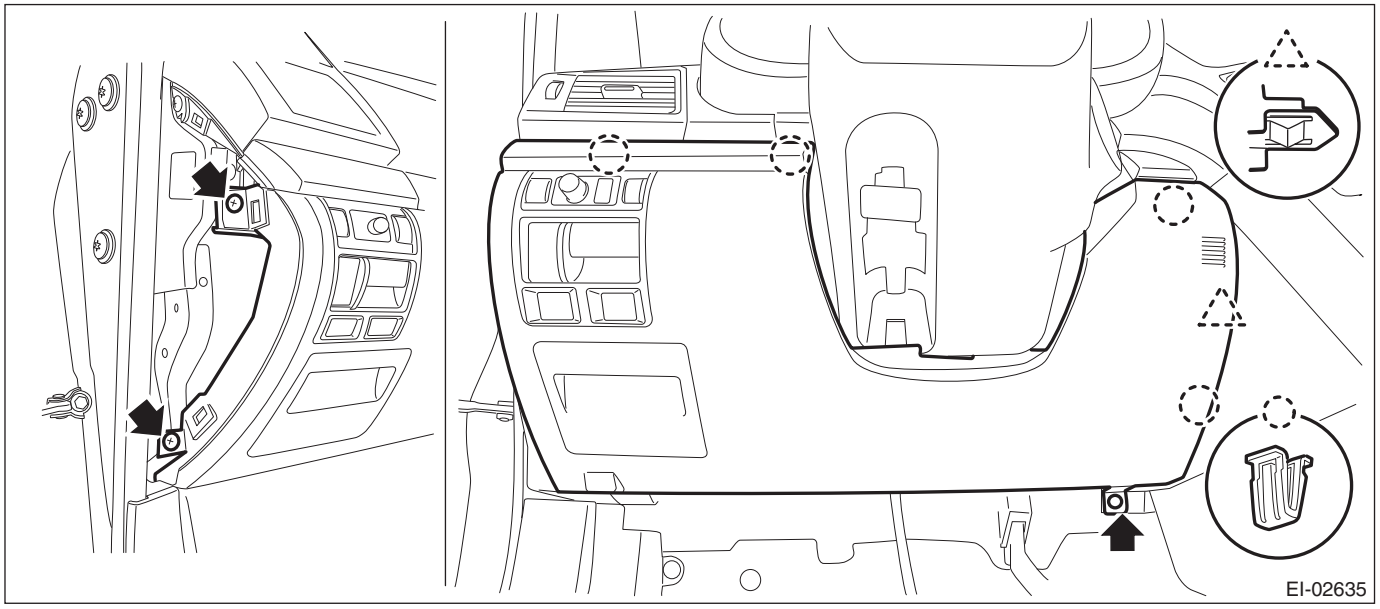


6) Remove the instrument panel lower cover.

(1) Remove the clips and data link connector, and remove the instrument panel lower cover under.



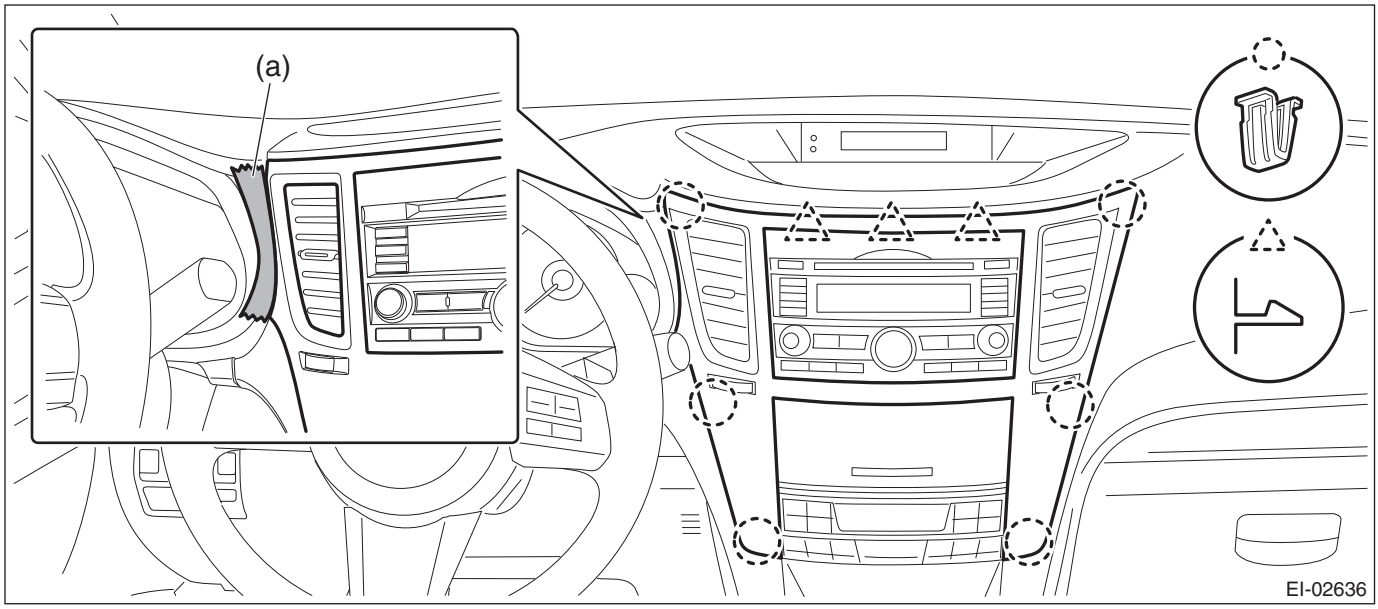
(2) Remove the screws and clips and release the claws, and remove the instrument panel lower cover while disconnecting the harness connectors.



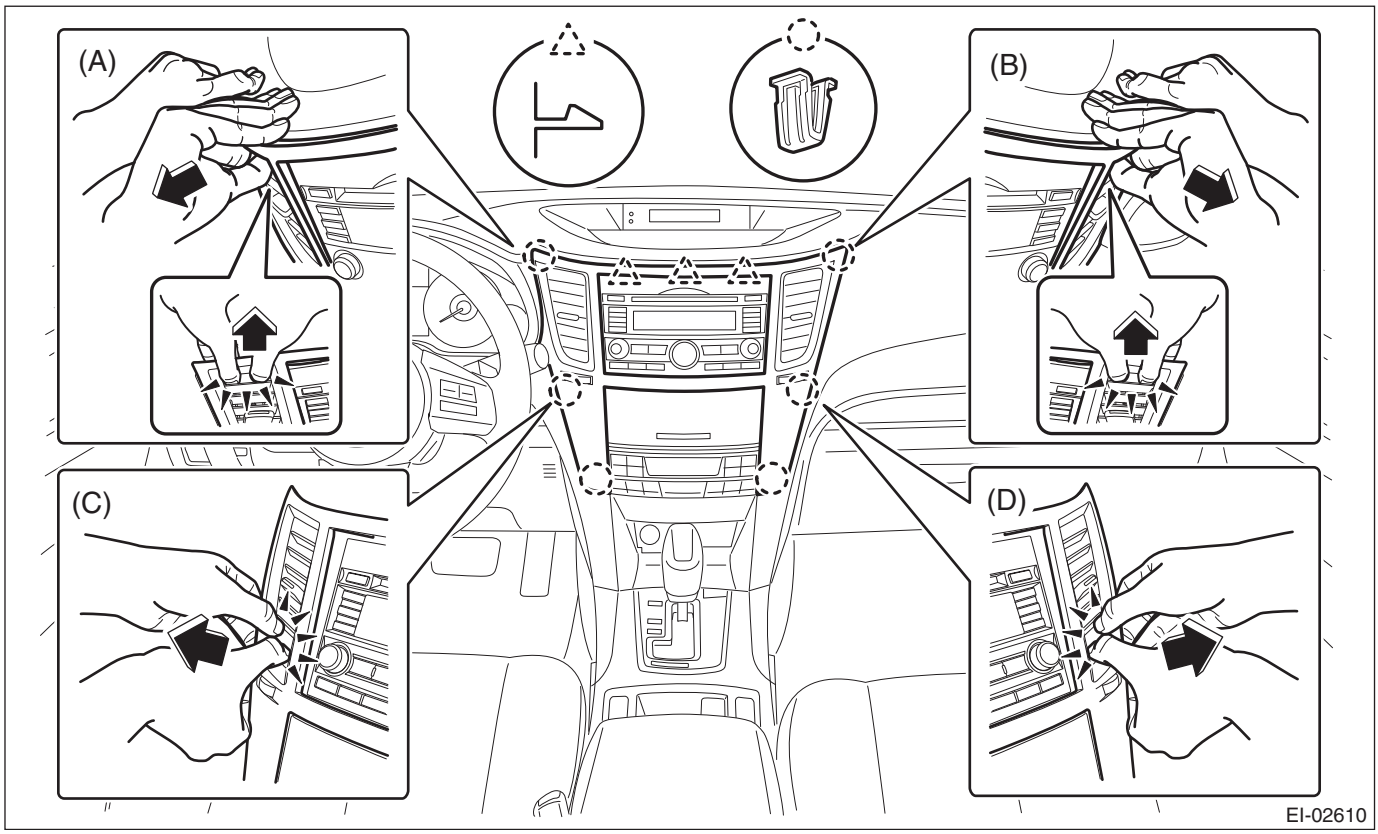
7) Remove the center panel assembly.

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

(1) Attach the protective tape (a) to the meter visor.



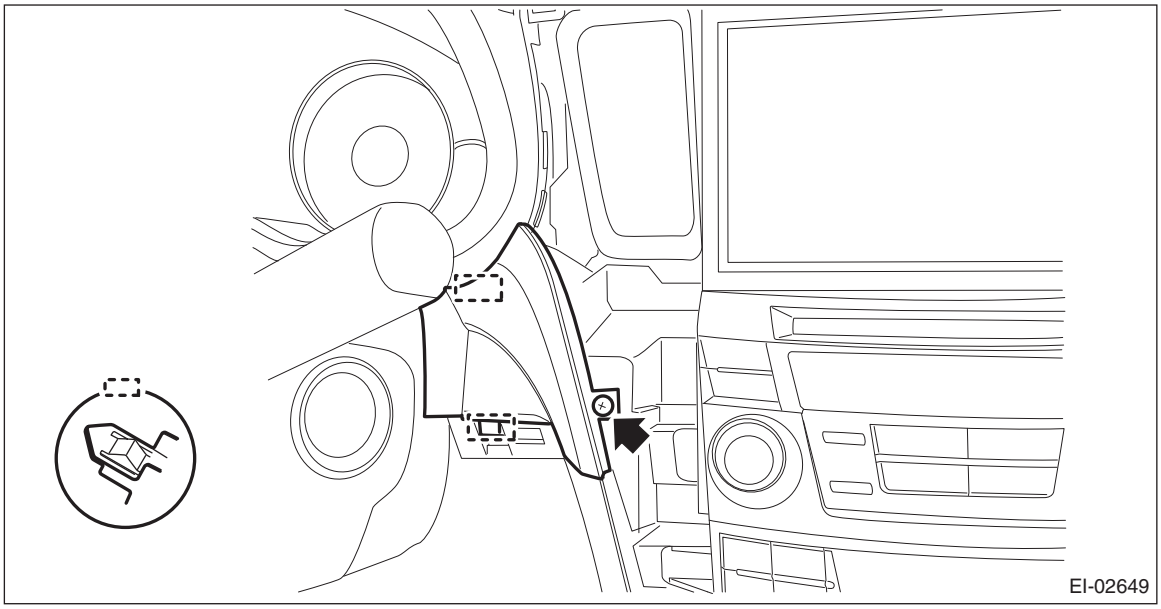
(2) Insert a finger into the air vent grille and release the left and right clips at the top of the center panel. (A), (B)
(3) Insert a finger into the air vent grille and release the left and right clips at the center of the center panel. (C), (D)
(4) Release the clips at the bottom of the center panel and remove the center panel assembly.



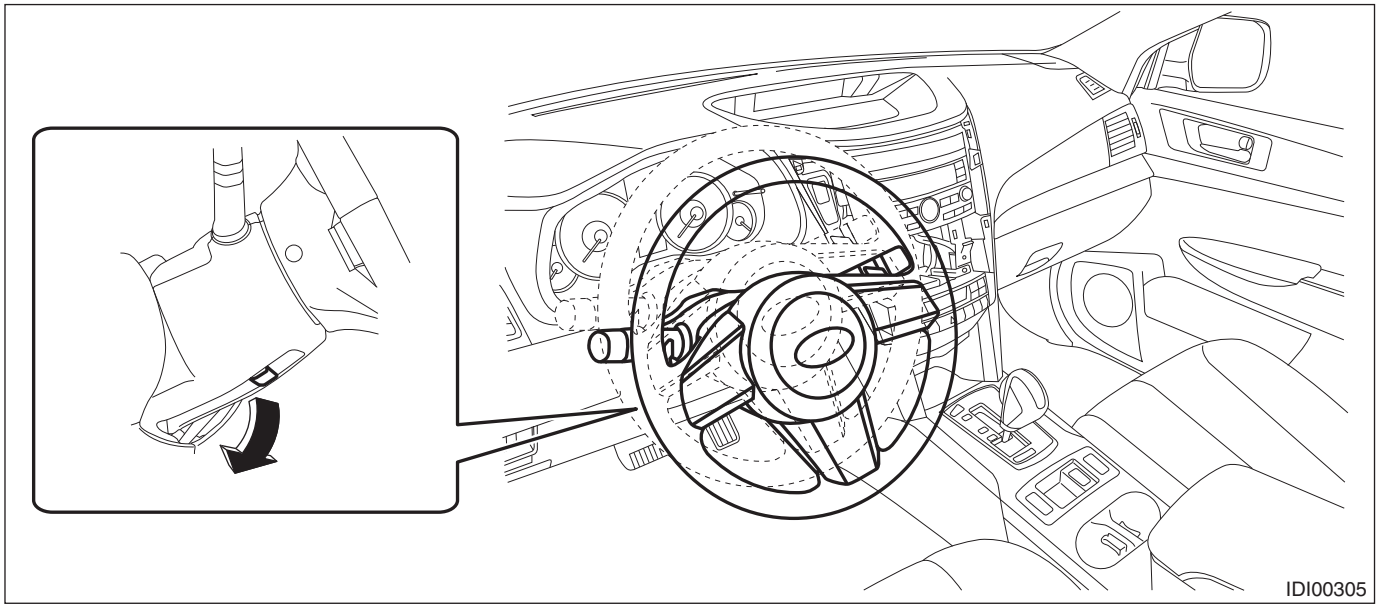
8) Remove the combination meter assembly.

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

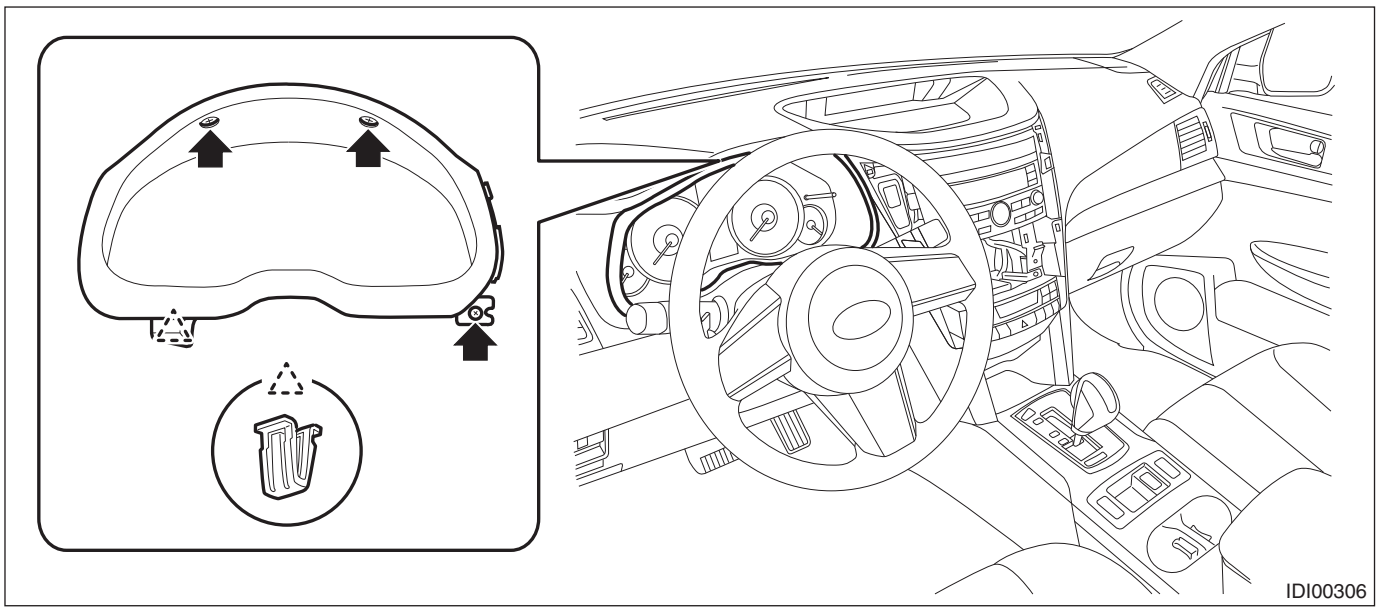
(1) Remove the screws and release the claws, then detach the starter cover assembly.



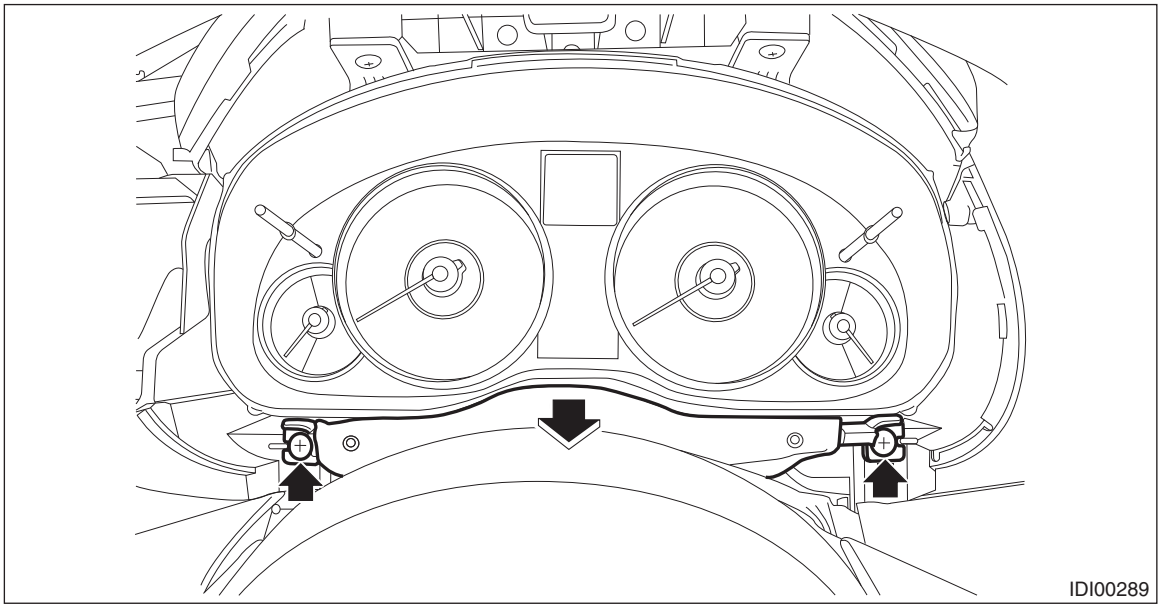
(2) Release the lock, tilt the steering column to the lowest end and fully extend the column by the telescopic system.



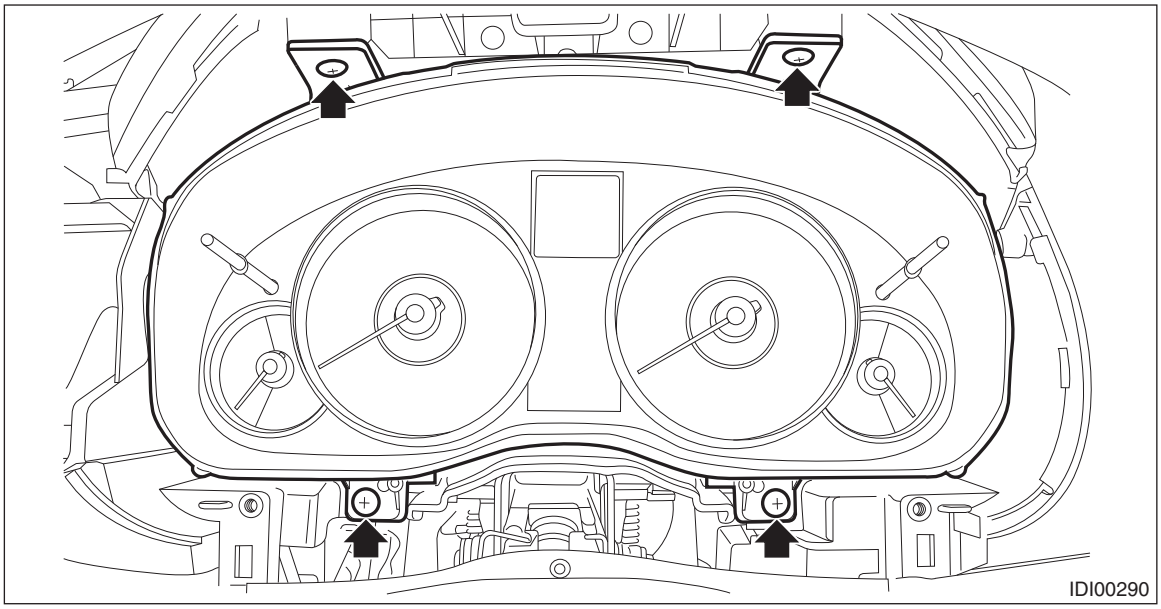
(3) Release the screws and clips, then detach the meter visor assembly.



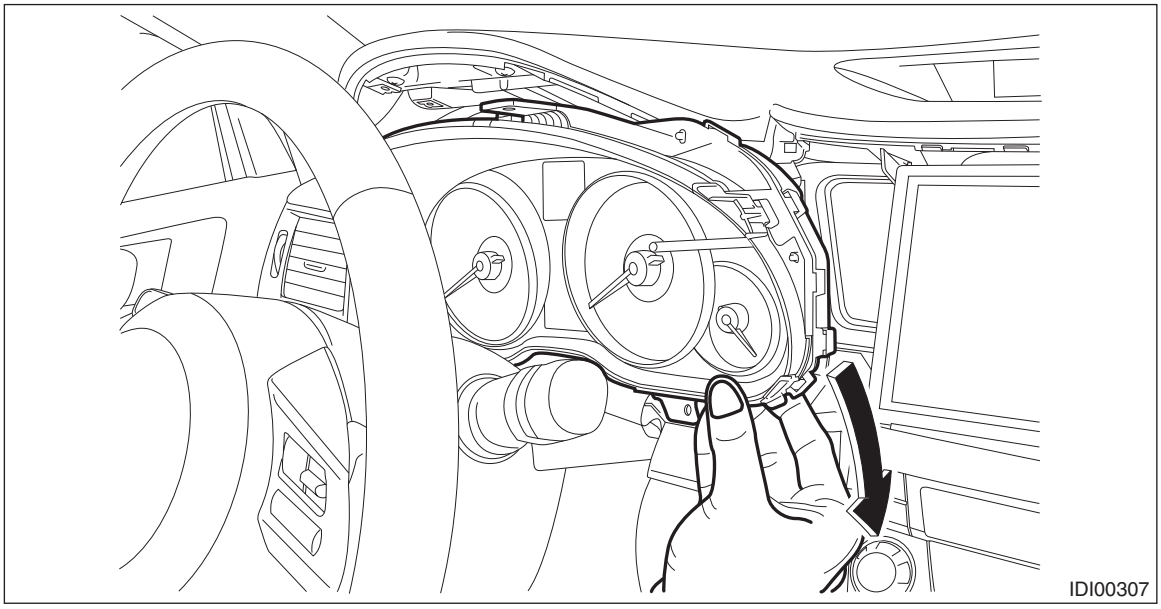
(4) Remove the screws and pull the steering COMPL upper cover toward you.



(5) Remove the four screws and pull out the combination meter toward you to disconnect the connectors.



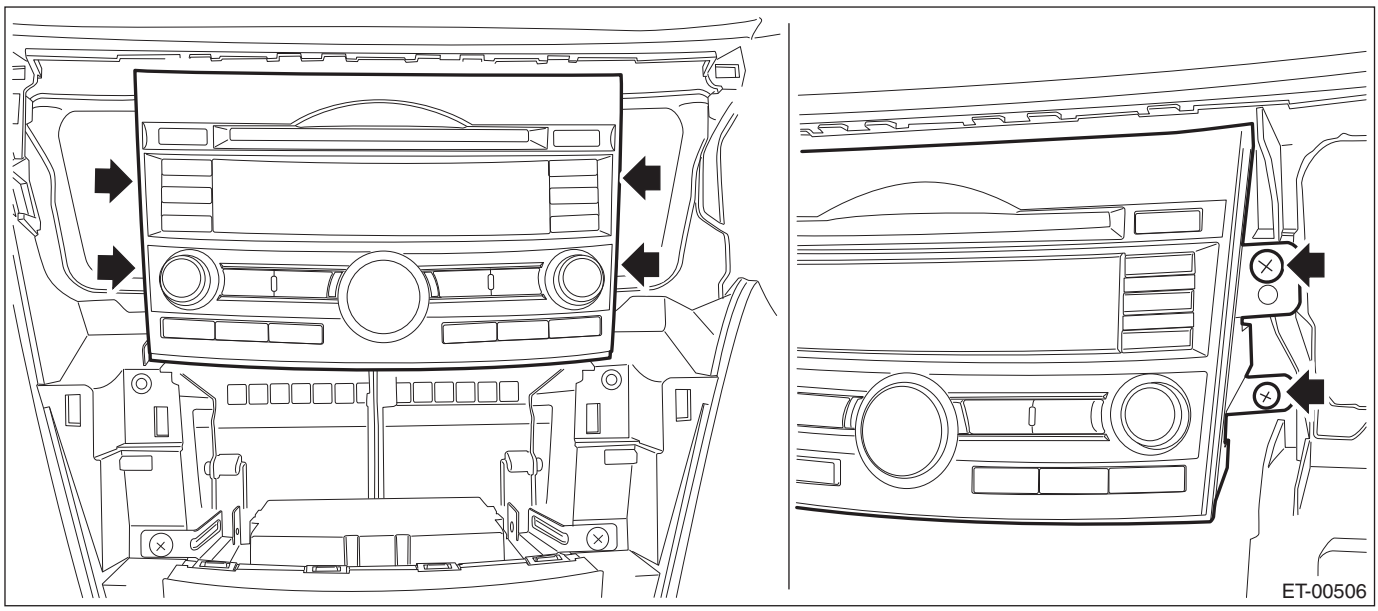
(6) Remove the combination meter assembly as shown in the figure.



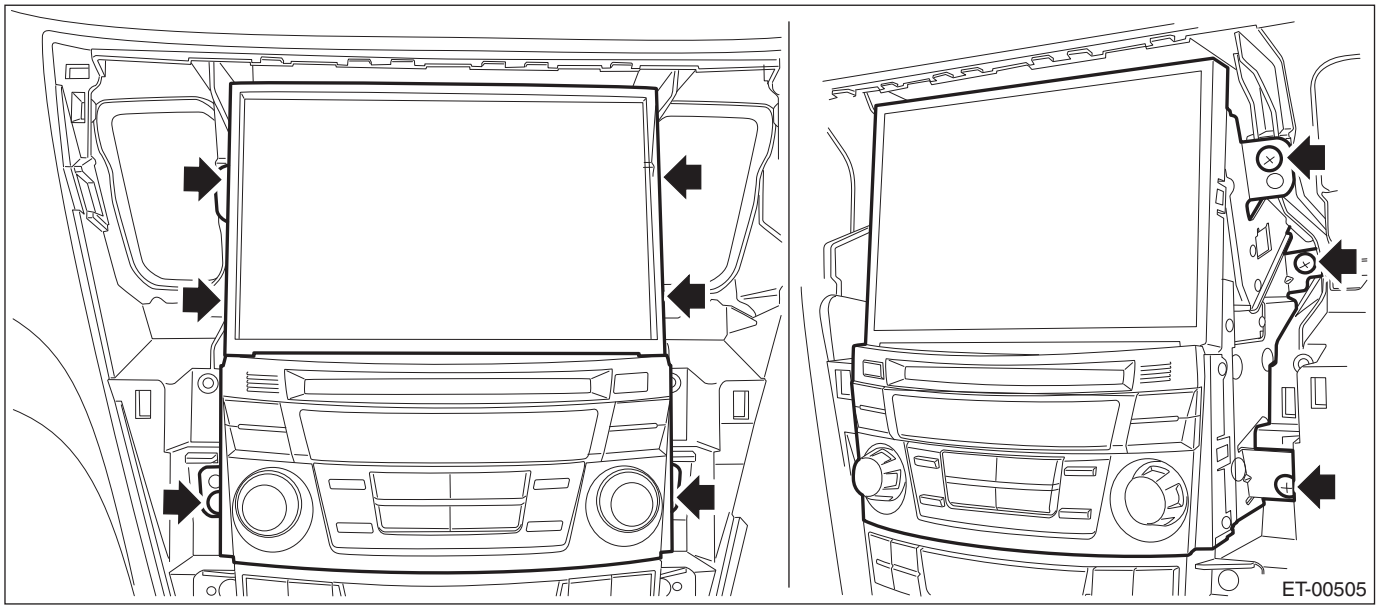
9) Remove the audio assembly.

(1) Remove the left and right screws, and partially pull the audio out from center console.

(2) Disconnect the connectors, and remove the audio assembly.

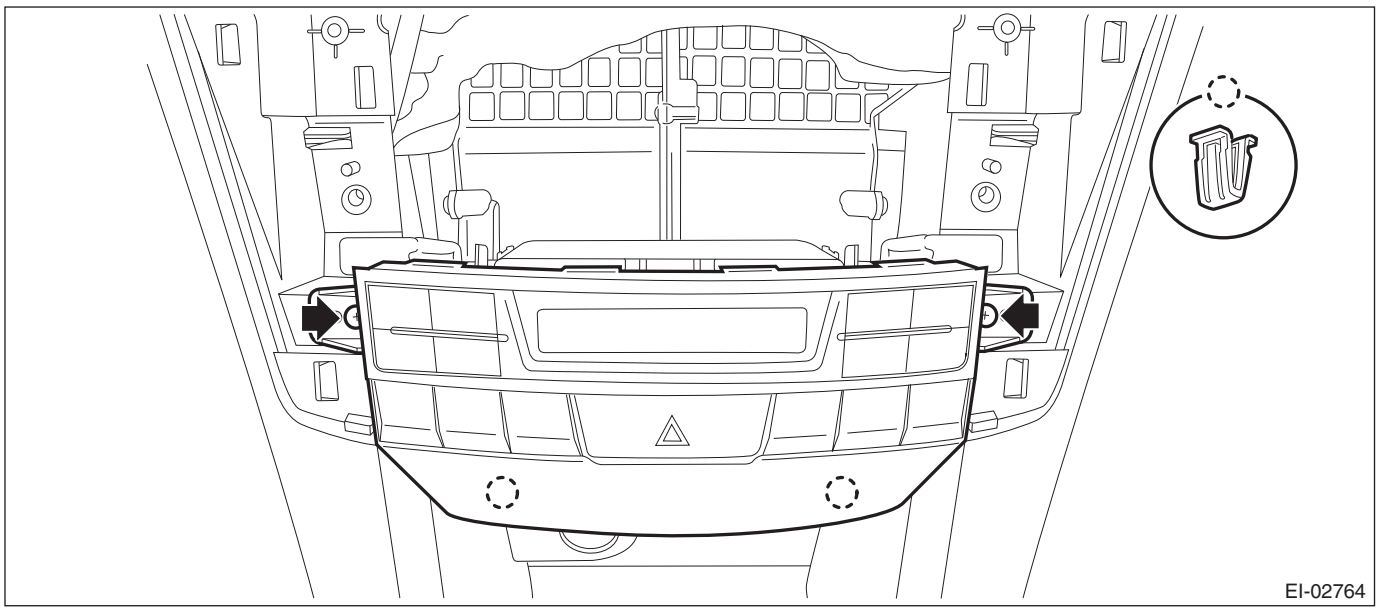


10) Remove the navigation assembly. (model with navigation)
(1) Remove the left and right screws.
(2) Disconnect the connectors, and remove the navigation assembly.



11) Remove the control panel assembly.
(1) Remove the screws, and pull out the control panel assembly toward you.

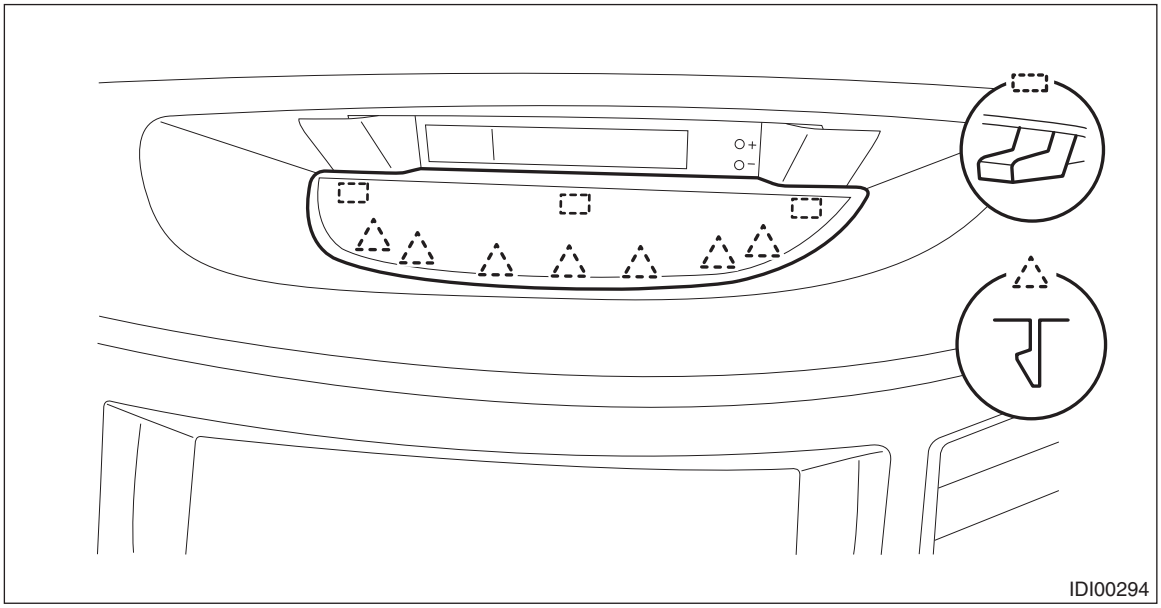
(2) Disconnect the connector, and remove the control panel assembly.



12) Remove the multi display assembly.

CAUTION:
Be careful not to damage the multi display or instrument panel.

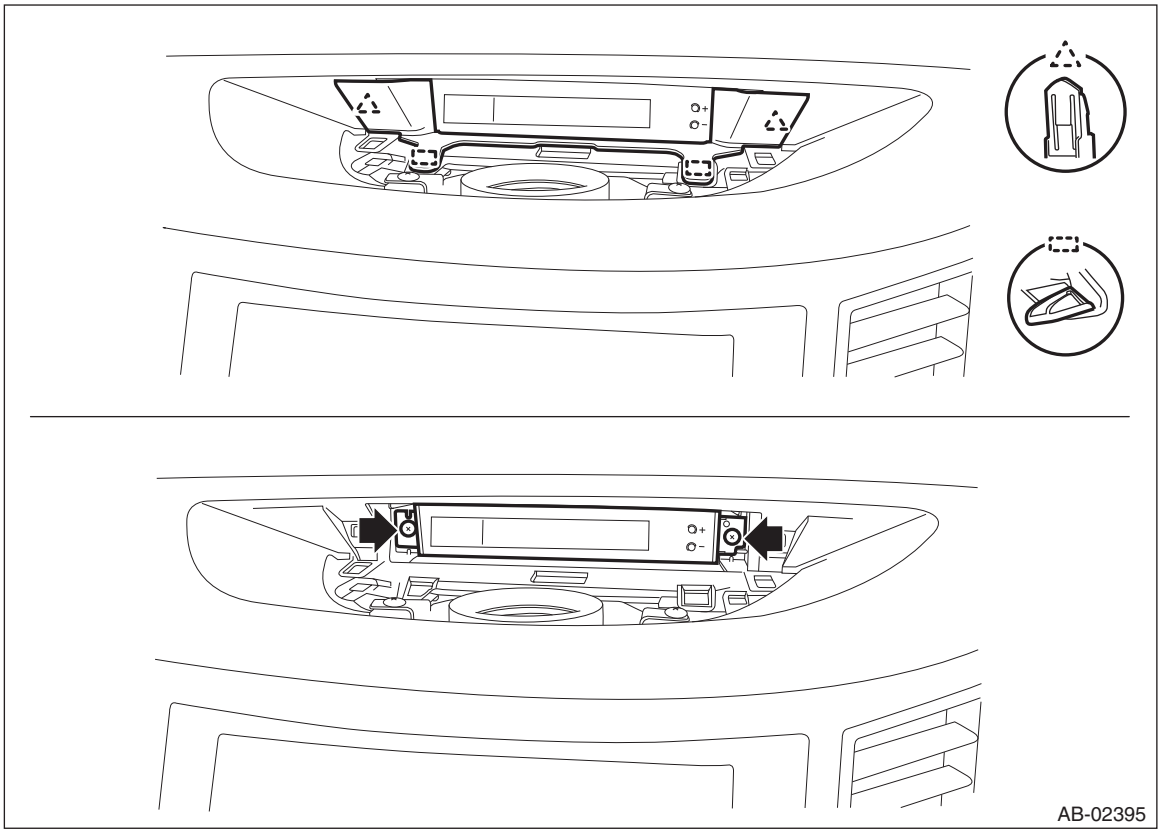
(1) Detach the center speaker cover by releasing the claws and hooks.



NOTE:
An easy way of removal is to first remove the audio assembly or navigation assembly and push up the cover from the backside.

(2) Release the clips and claws, detach the multi display panel LWR.

(3) Remove the screws and pull out the multi display toward you to disconnect the connectors.



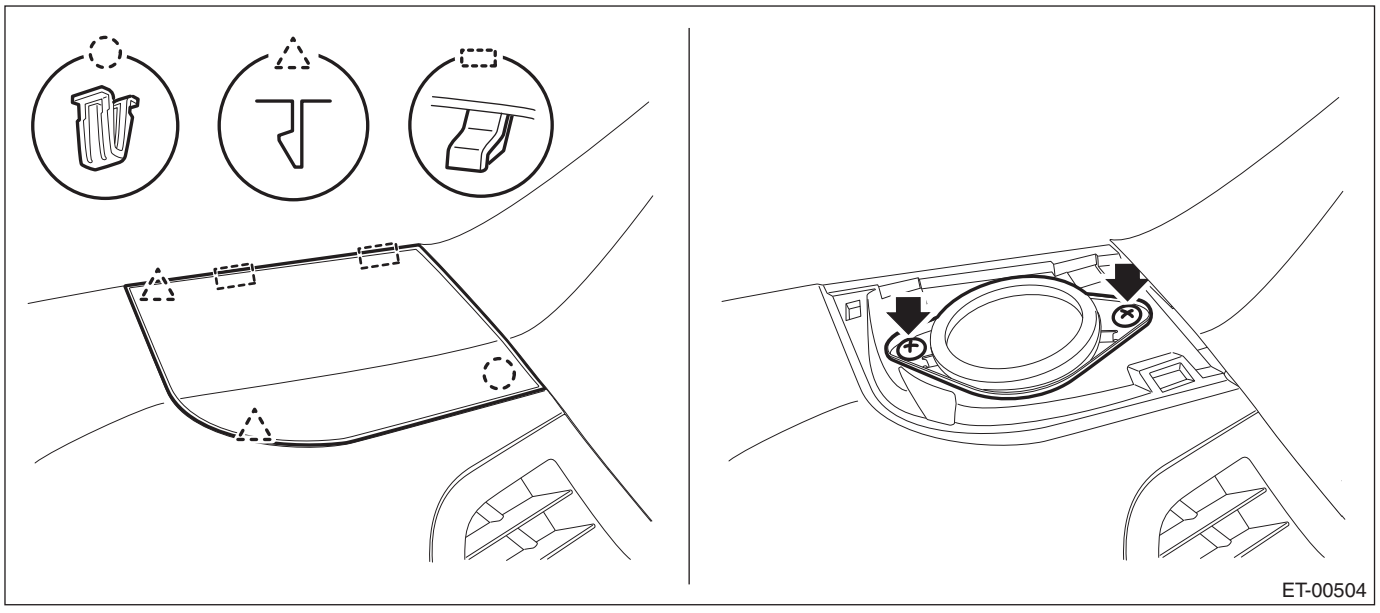
13) Remove the left and right front side speaker assembly. (Models with front side speaker)
(1) Release the clips and claws, then detach the side speaker cover.

CAUTION:
To remove the cover, use a plastic clip remover or equivalent tool.

(2) Remove the screws.

Preparation tool: Stubby screwdriver

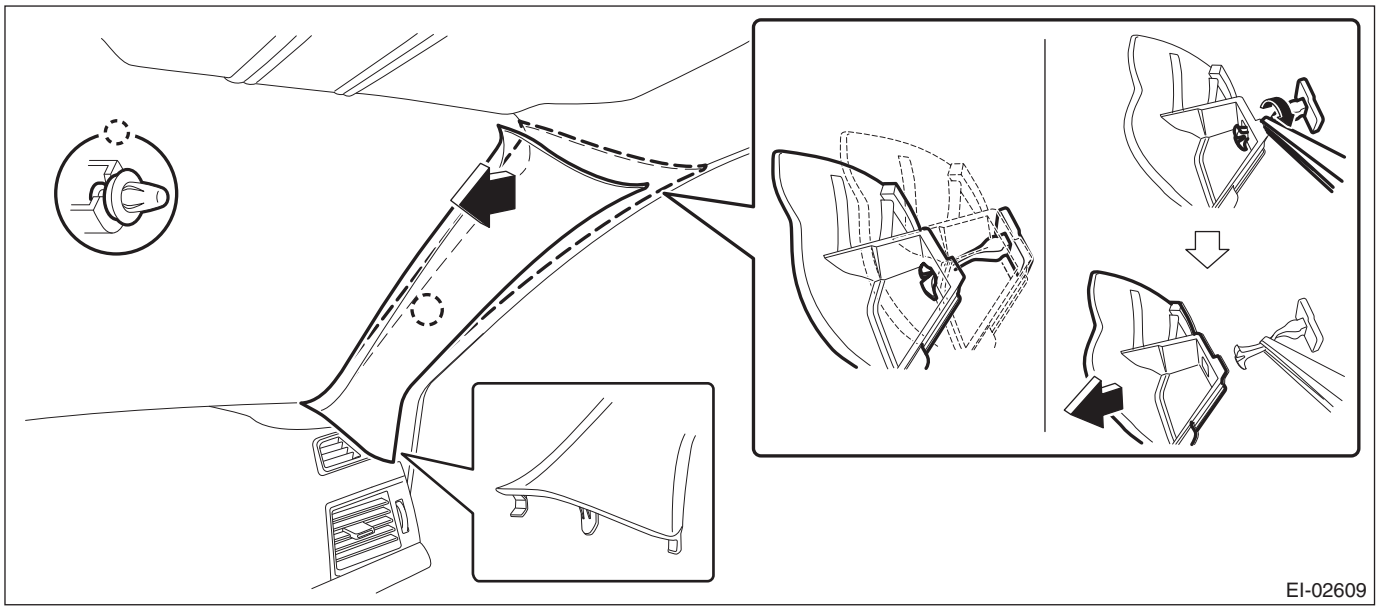
(3) Disconnect the connector and remove the front side speaker assembly.



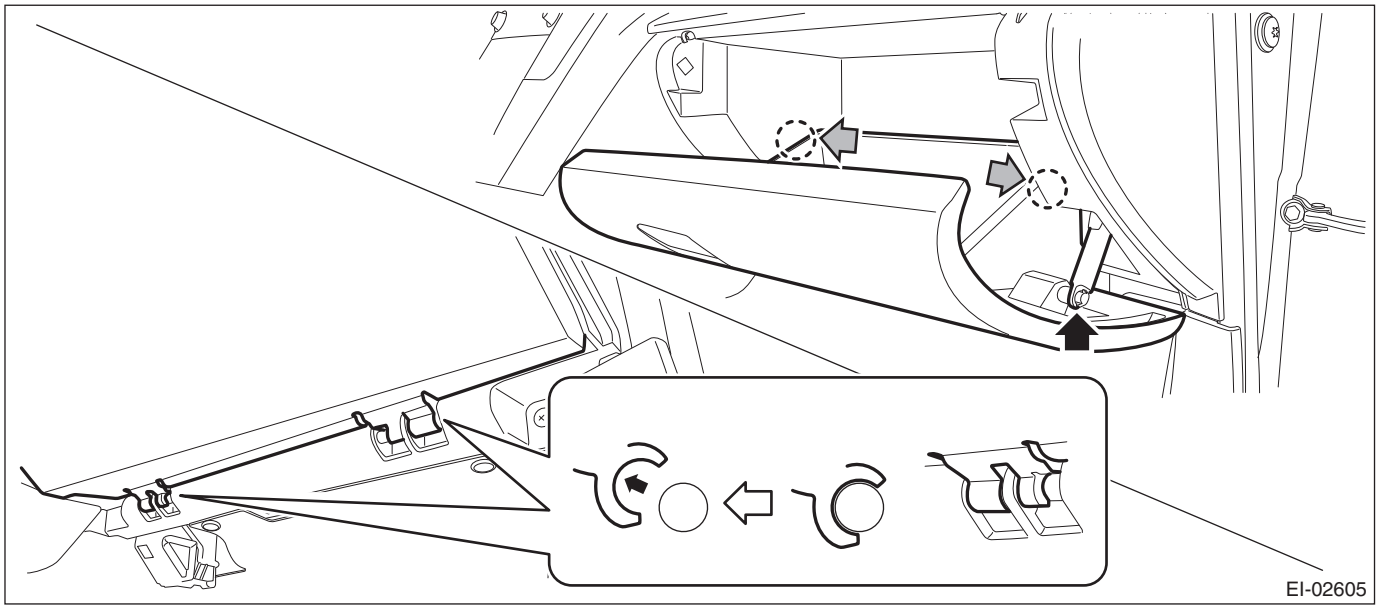
NOTE:
On the passenger's side, also disconnect the sunload sensor connector.

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

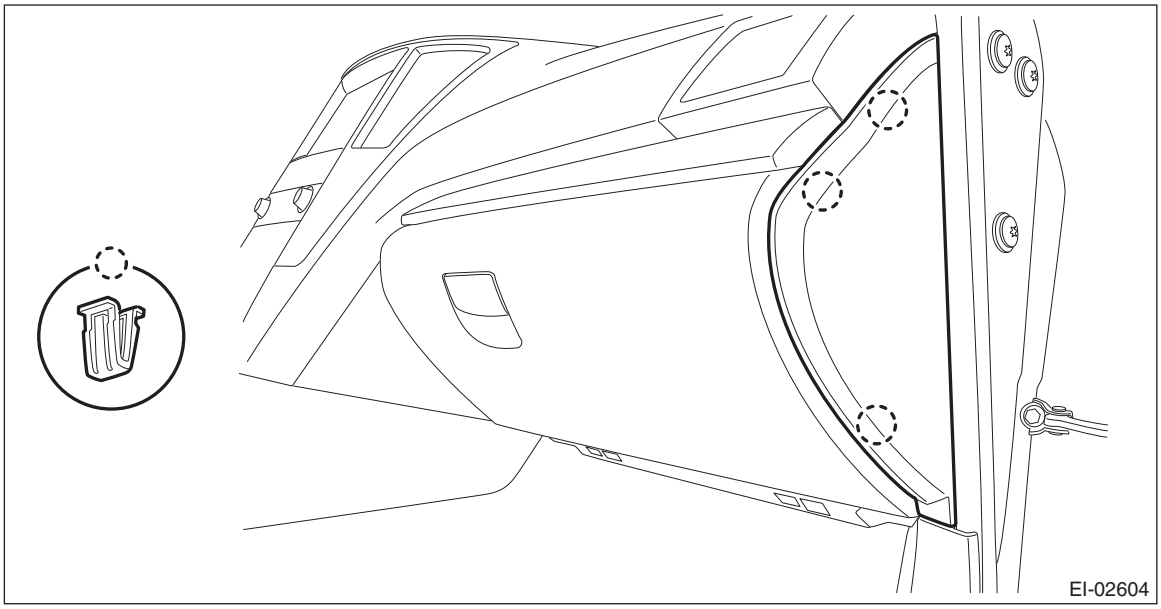
CAUTION:
Be careful not to damage the pillar trim surface and curtain airbag module when inserting the pliers.
(3) Holding the clip twisted as in the previous step, remove the front pillar trim from the clip.
(4) Remove the clip and the front pillar trim.


EI-02609

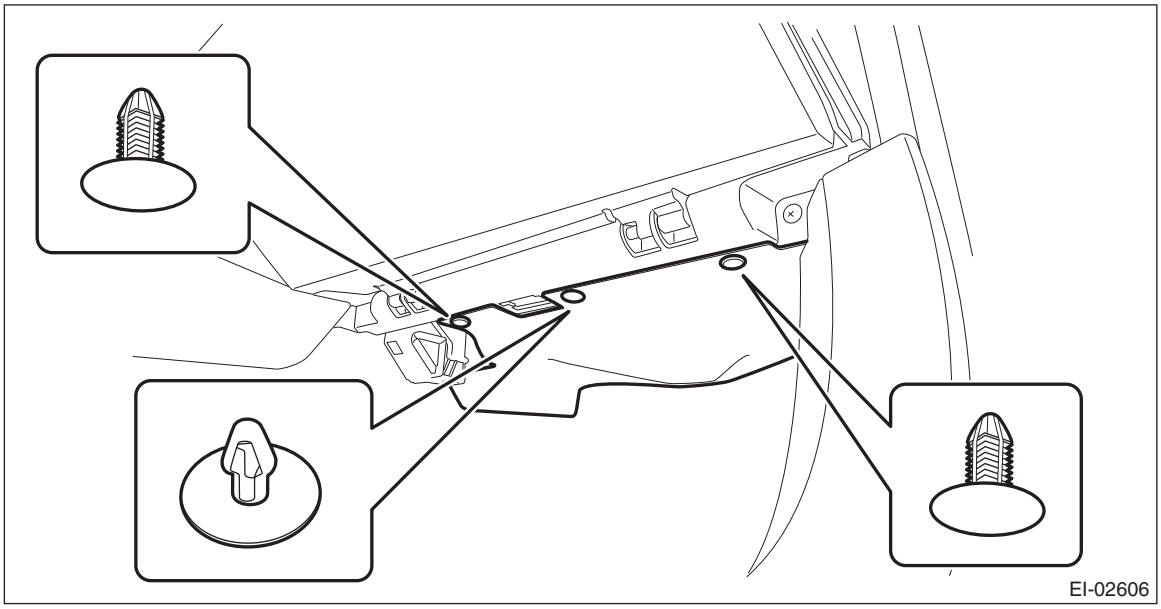
15) Remove the glove box lid assembly.
(1) Remove the glove box damper.
(2) Release the stoppers and remove the glove box lid assembly by pulling it toward you.


EI-02605

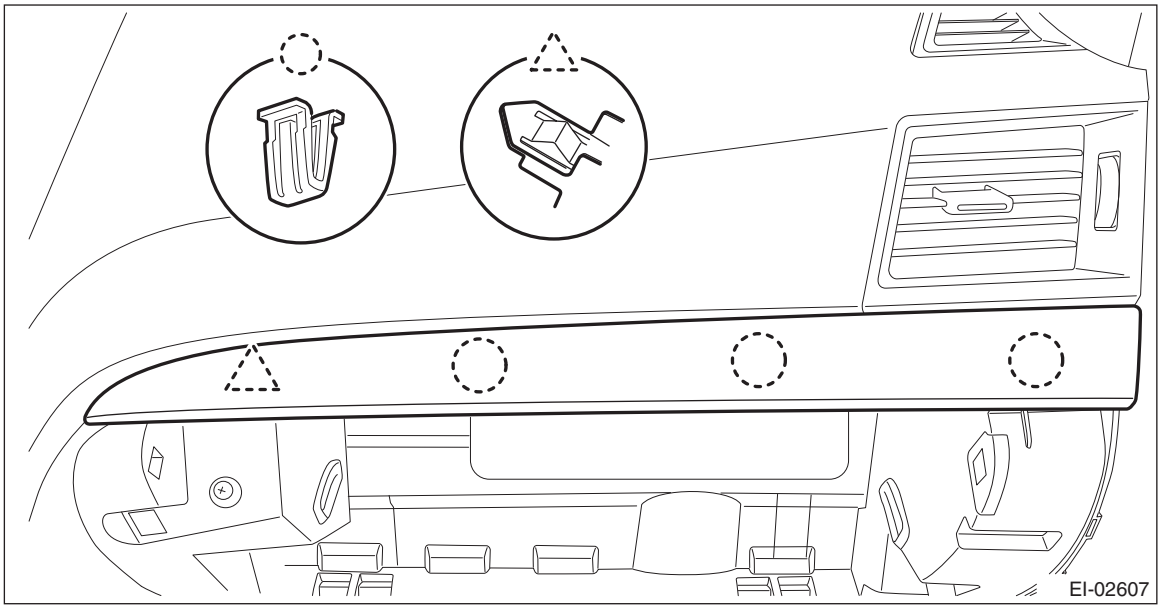
16) Release the clips, and remove the instrument panel side cover RH.



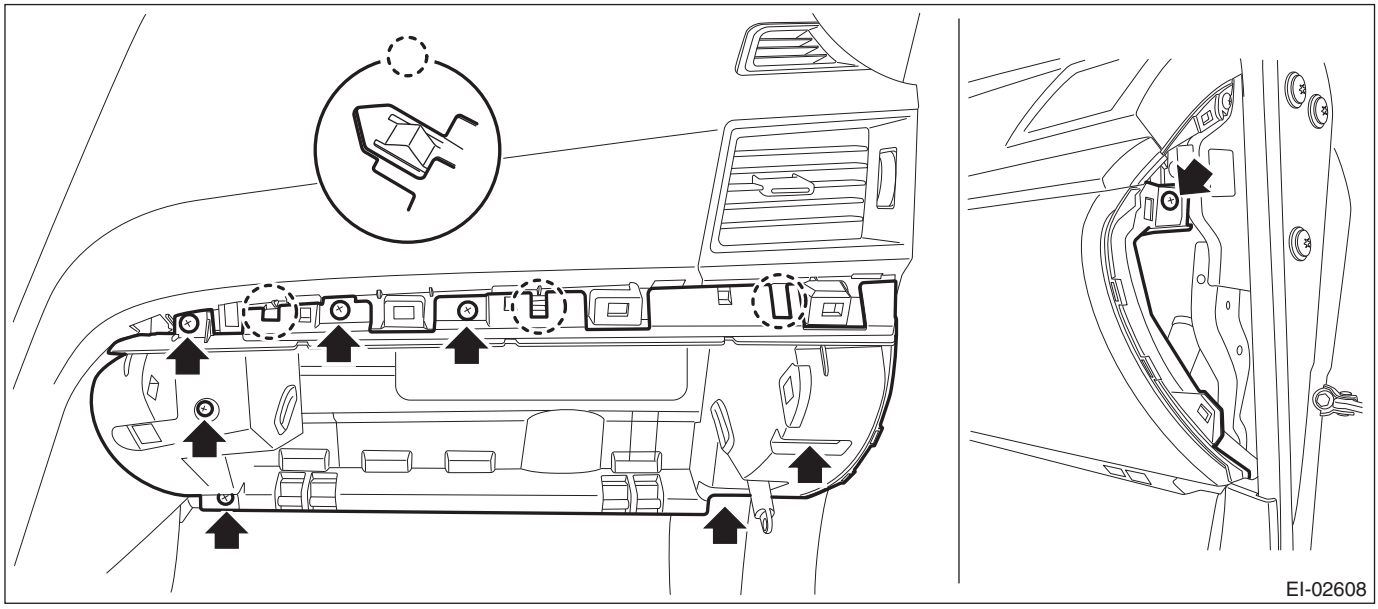
17) Remove the glove box back panel.
(1) Release the clips, and remove the glove box under cover.



(2) Release the clips and claws, and remove the ornament panel assembly P.



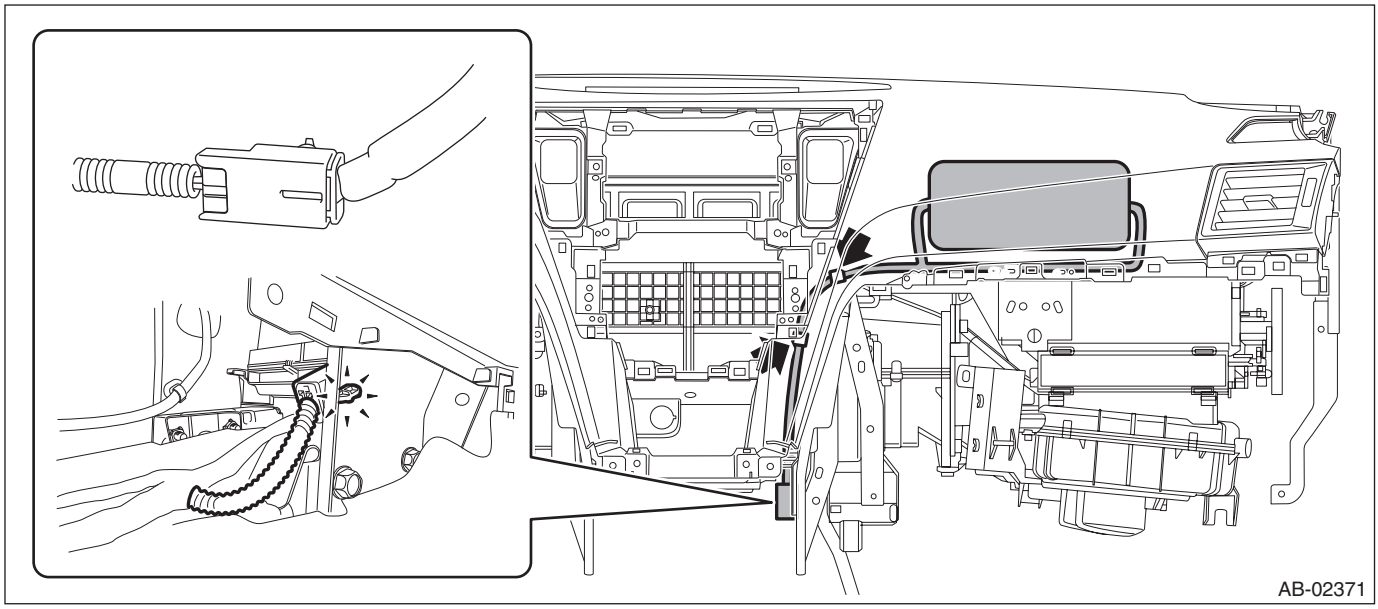
(3) Remove the screws and release the claws, then detach the glove box back panel.



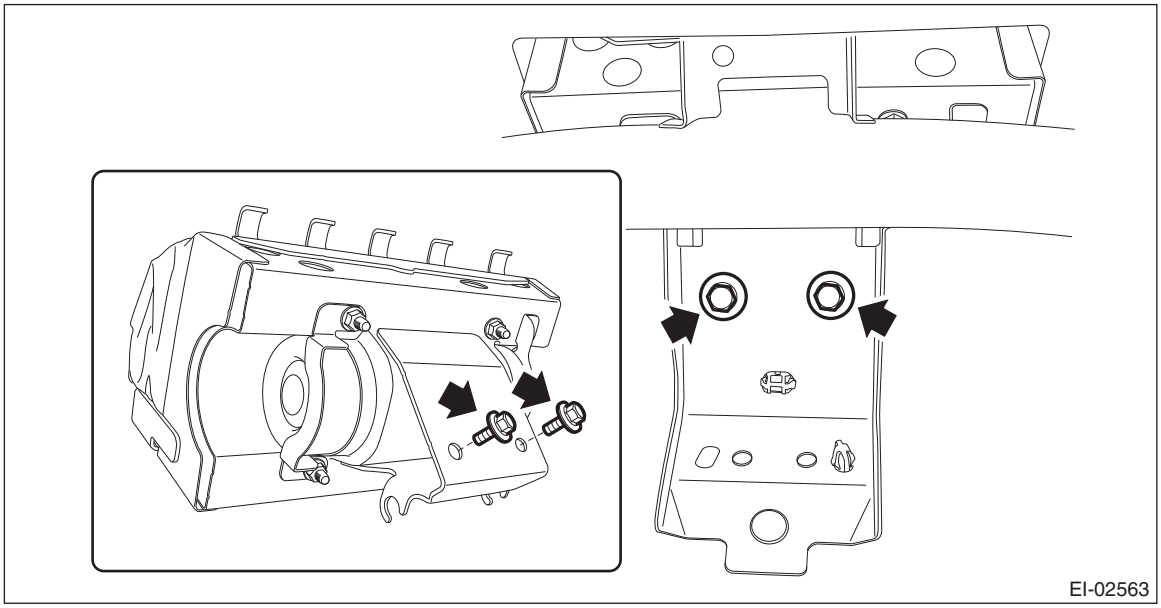
(4) Disconnect the glove box light LED connector.

18) Disconnect the connector from the passenger's airbag module assembly and remove the bolt.

(1) Release the connector and harness clamps and disconnect the airbag connector.

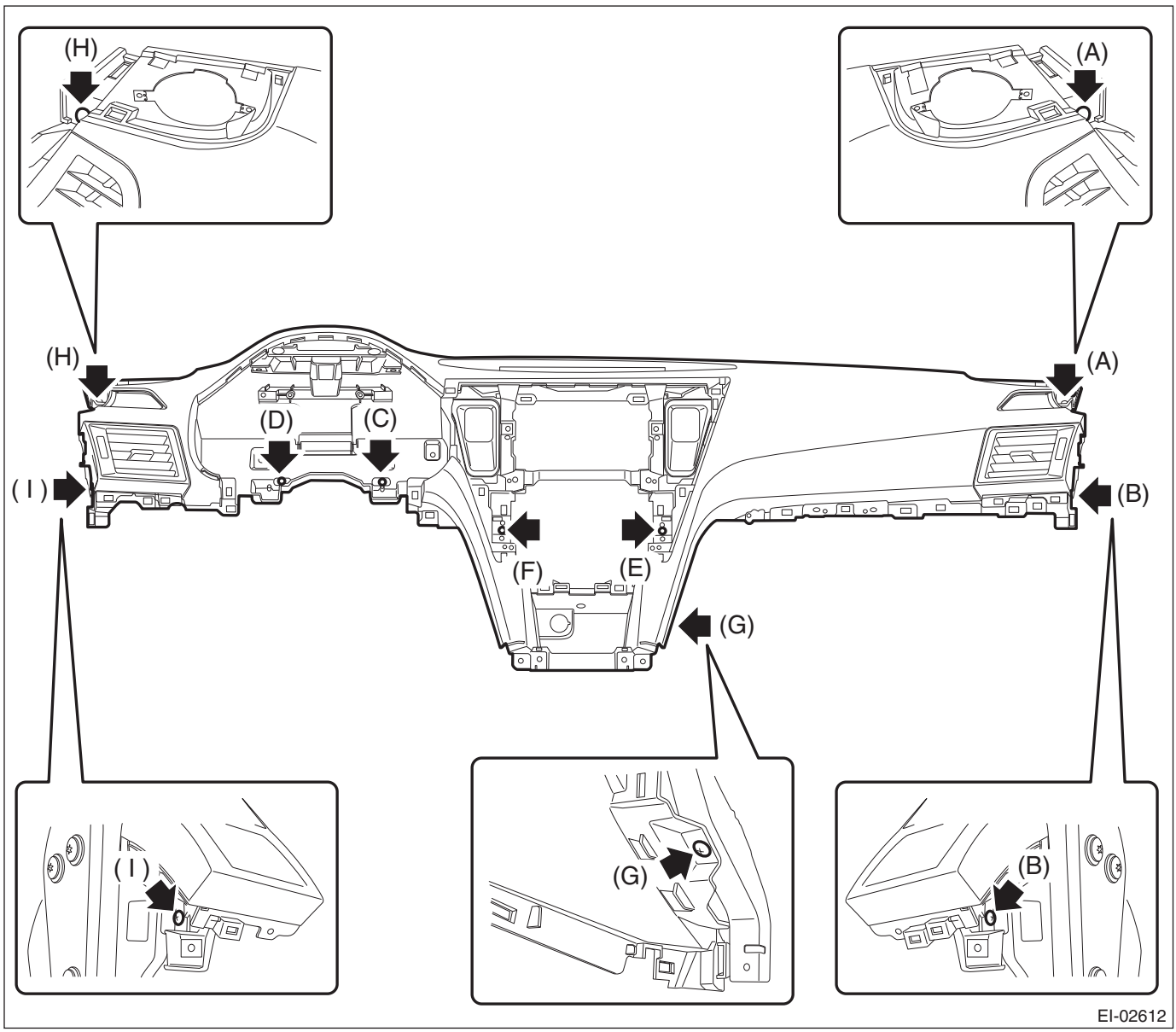


(2) Remove passenger's airbag module assembly bolts.



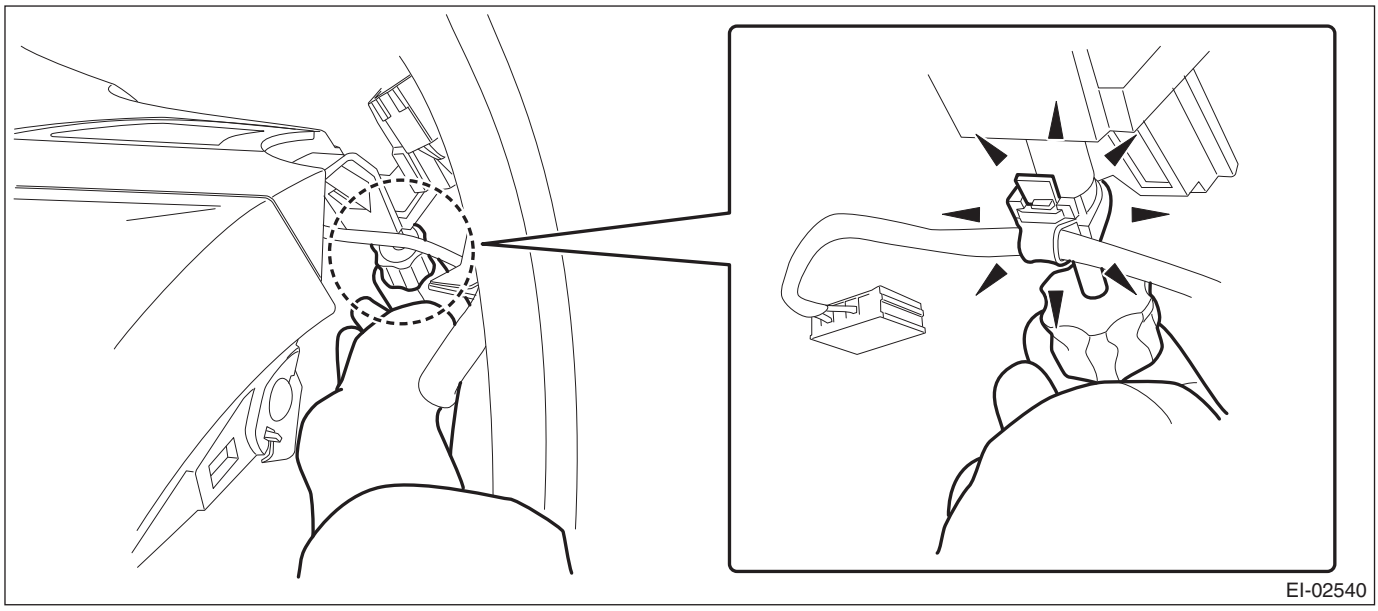
19) Remove the steering shaft assembly. <Ref. to PS-20, REMOVAL, Steering Column.>
20) Remove the instrument panel assembly.

(1) Remove the screws. (A), (B), (C), (D), (E), (F), (G), (H), (I)



(2) Pull out the instrument panel assembly toward you and release the clamps of the left and right front side speakers.

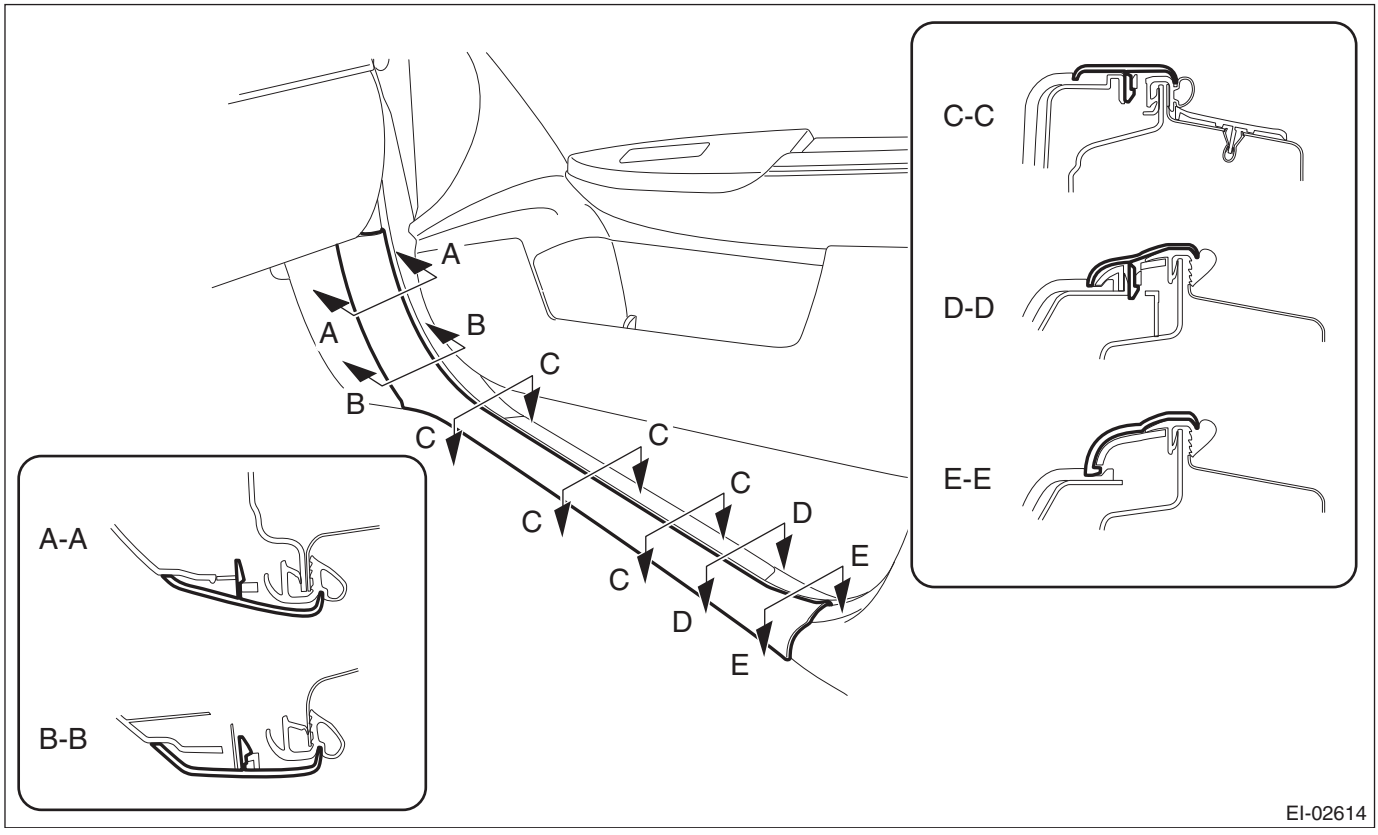
Preparation tool: Stubby screwdriver



(3) After checking that all harness clamps and connectors are released and disconnected, remove the instrument panel assembly.

CAUTION:
Be careful not to damage the instrument panel surface and interior trims.

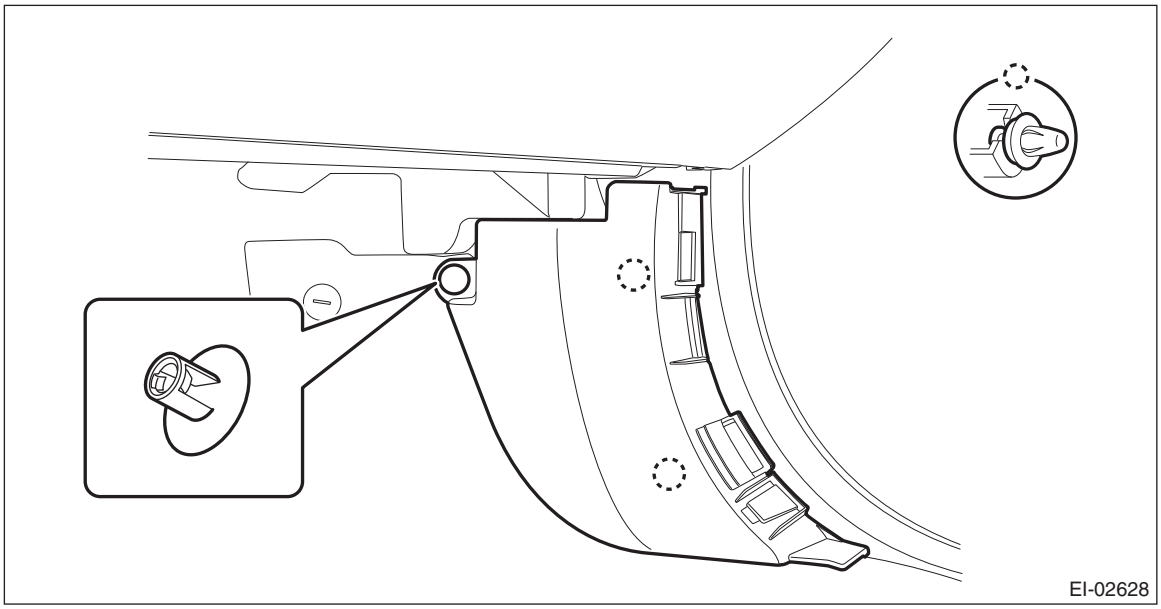
21) Release the claws, and then remove the left and right side sill cover-front INN.



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

NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claw (C) by accessing from behind the side sill cover INN.

22) Remove the clip, and remove the left and right side sill cover front.



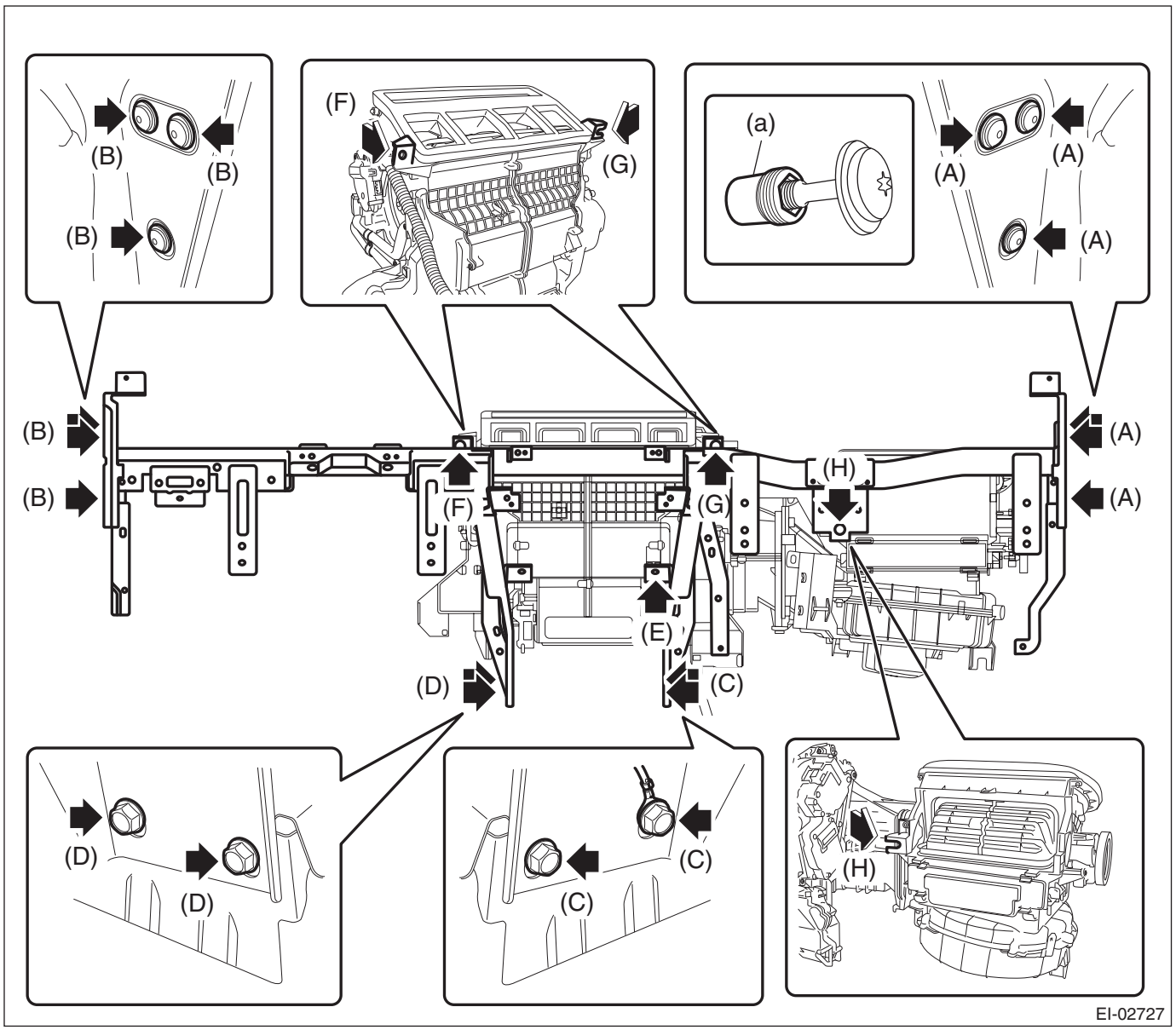
23) Remove the steering support beam assembly.
   (1) Remove the fuse box and relay box.
   (2) Remove the screws. (E)
   (3) Disconnect all harness clamps and connectors of the instrument panel harness.
   (4) Remove the TORX® bolt and adjuster bolt (a) (only passenger's side). (A), (B)

PREPARATION TOOL:

TORX® T40

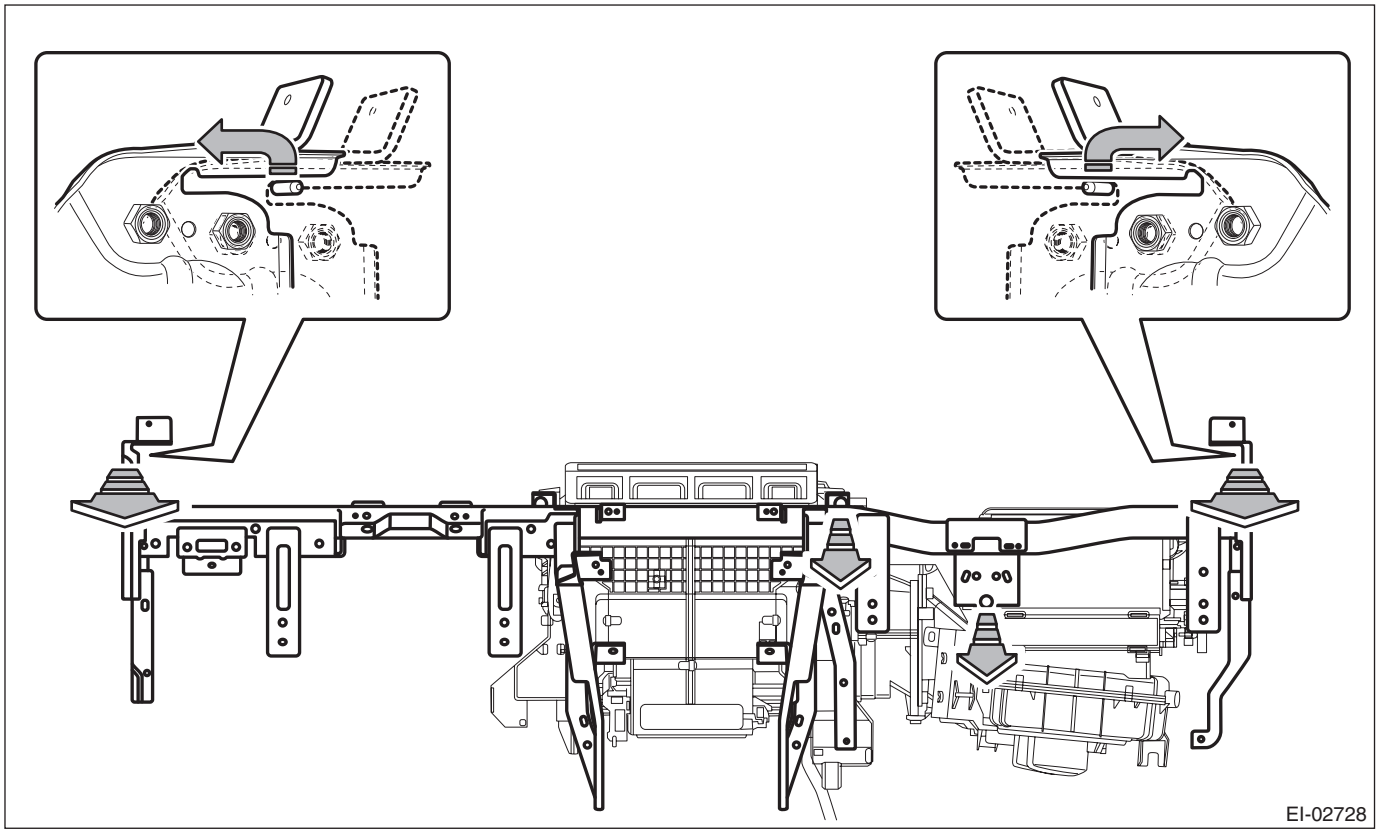
Hexagon wrench (12 mm)
   (5) Remove the bolts at the floor center. (C), (D)
   (6) Remove the nut (F) and (G) behind the cooling unit.

(7) Remove the nut (H) behind the blower unit.



(8) Slightly lift the steering support beam assembly to detach the left and right pins. Then pull it toward you to remove the assembly.

CAUTION:
- **Check that all harness clamps and connectors are detached.**
- **Be careful not to damage interior trims.**



B: INSTALLATION

1) Install parts in the reverse order of removal to restore the instrument panel assembly.

NOTE:
How to install insulators
- Adhesive

Use polyurethane adhesive. When assembling the instrument panel assembly, wait until the adhesive has evaporated to prevent filling of the smell in the compartment.
- Double-sided tape

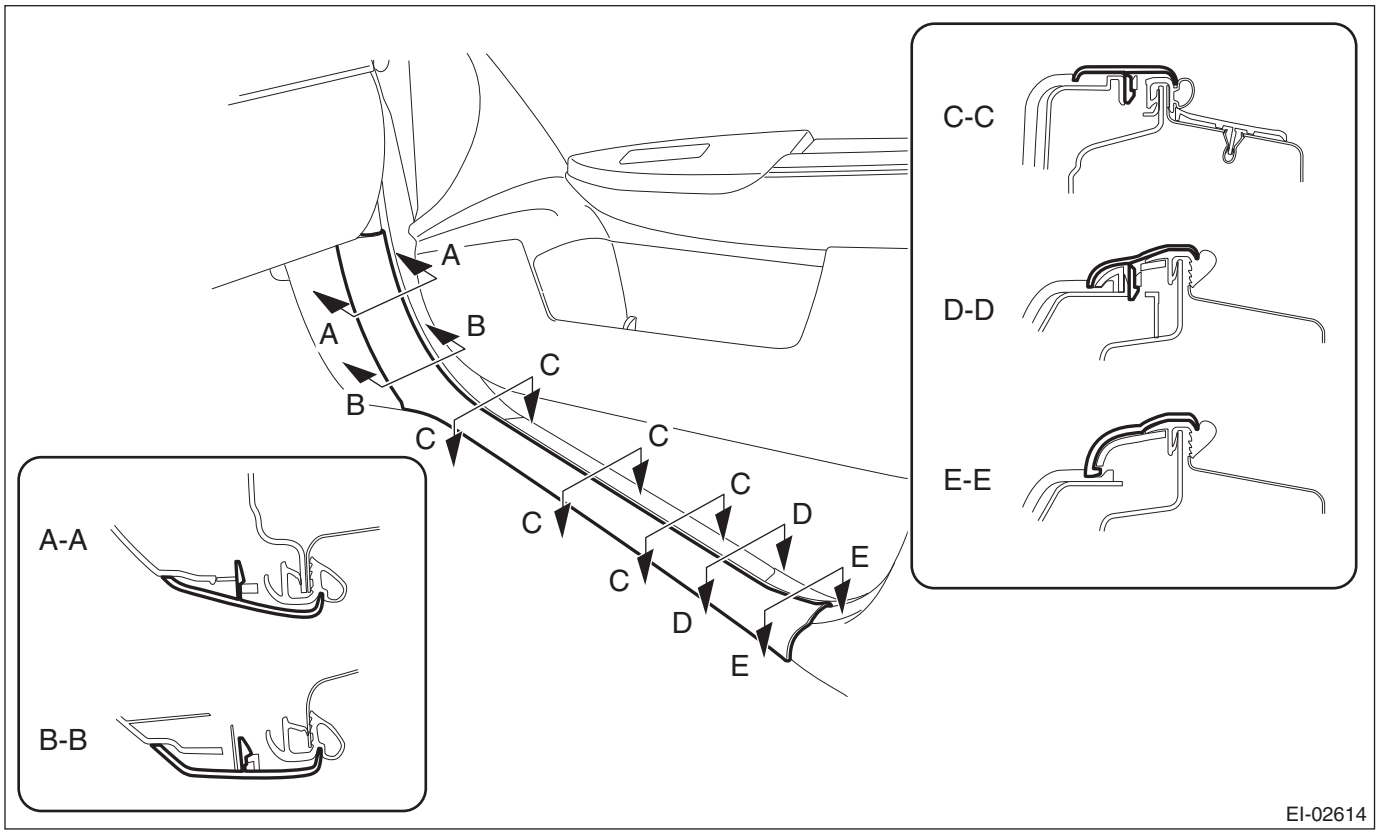
Use commercial double-sided tape. (Use strong double-sided adhesive tape.)
2) Insert the three matching pins on body into the instrument panel assembly.
3) Check that the matching pins are inserted securely, and then route the harness.
4) Install each part in the reverse order of removal.

Tightening torque:
Steering support beam:<Ref. to EI-15, INSTRUMENT PANEL, COMPONENT, General Description.>
Passenger's airbag module ASSY: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)
Steering shaft:<Ref. to PS-4, STEERING WHEEL AND COLUMN, COMPONENT, General Description.>
Console box: 6.5 N·m (0.66 kgf-m, 4.8 ft-lb)

20.Lower Inner Trim

A: REMOVAL

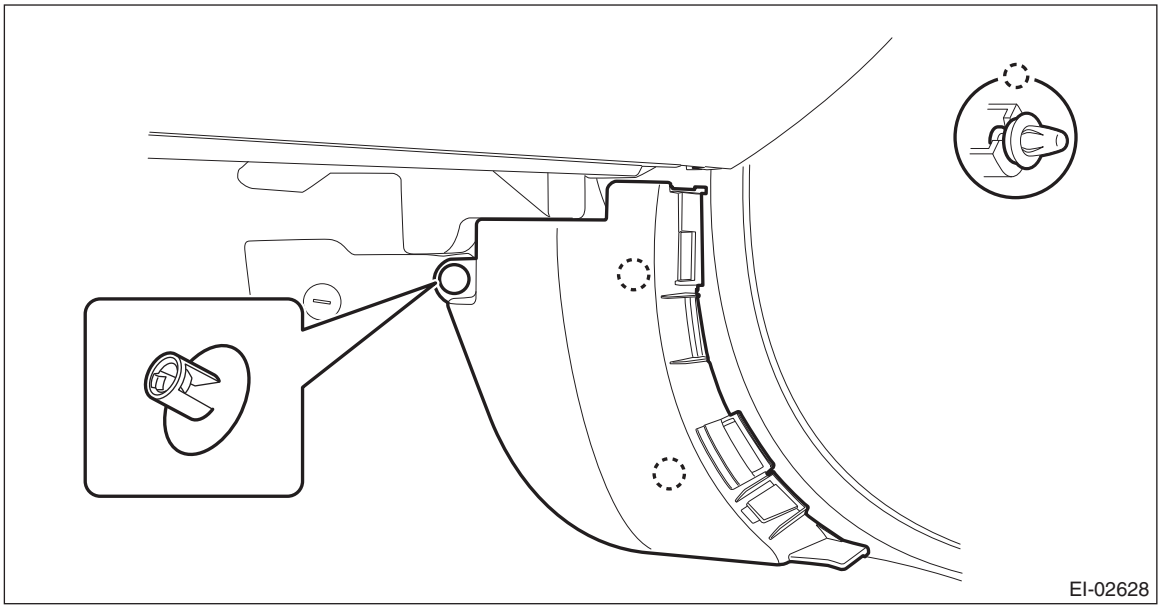
1) Release the claws, and then remove the side sill cover-front INN.



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

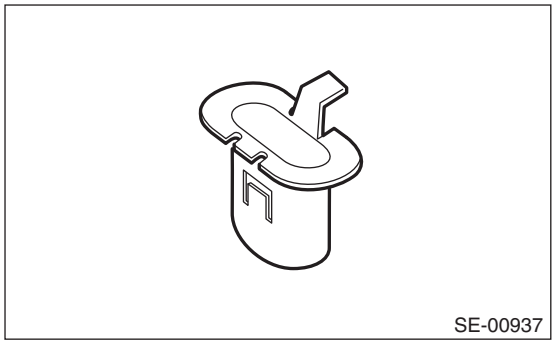
NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claw (C) by accessing from behind the side sill cover INN.

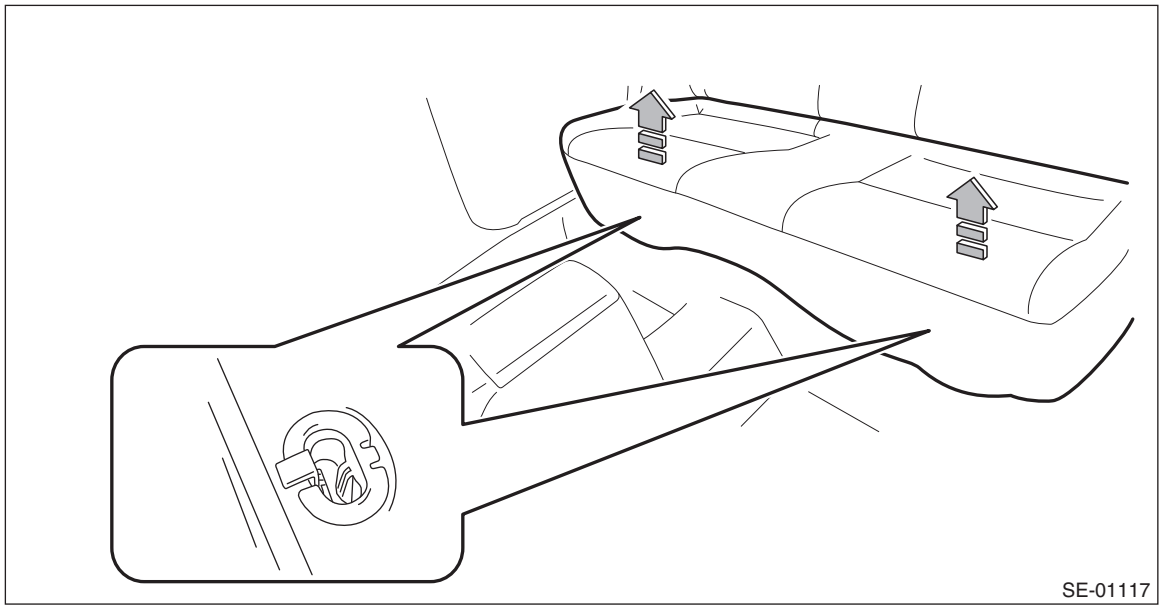
2) Remove the clip, and remove the side sill cover front.



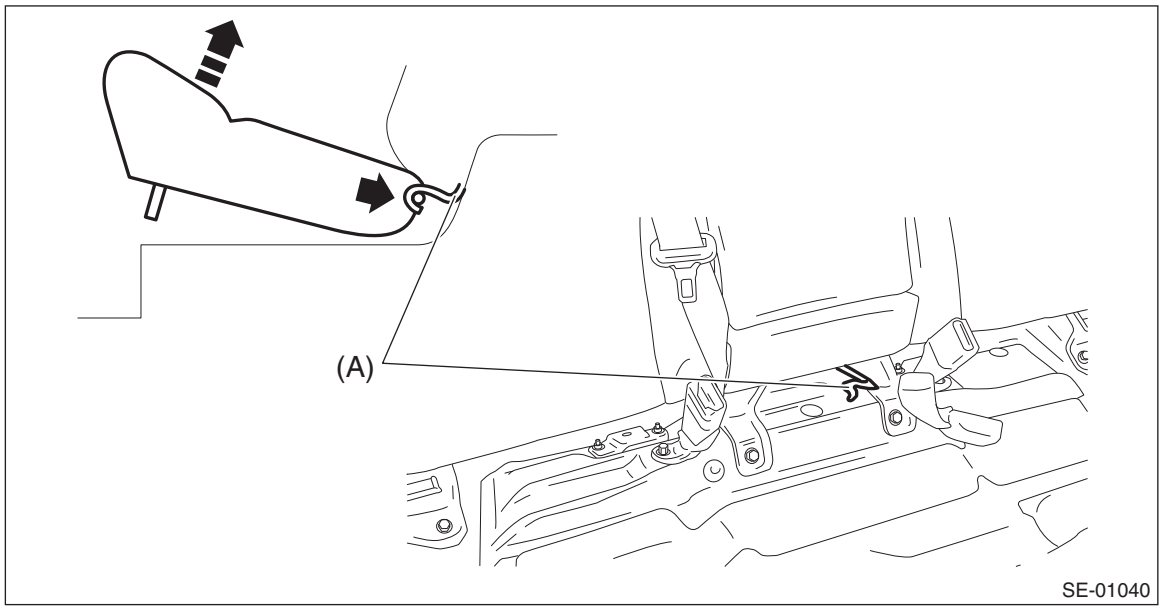
3) Remove the rear seat cushion assembly.
(1) Pull up the seat cushion and release the hook.

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.


SE-00937

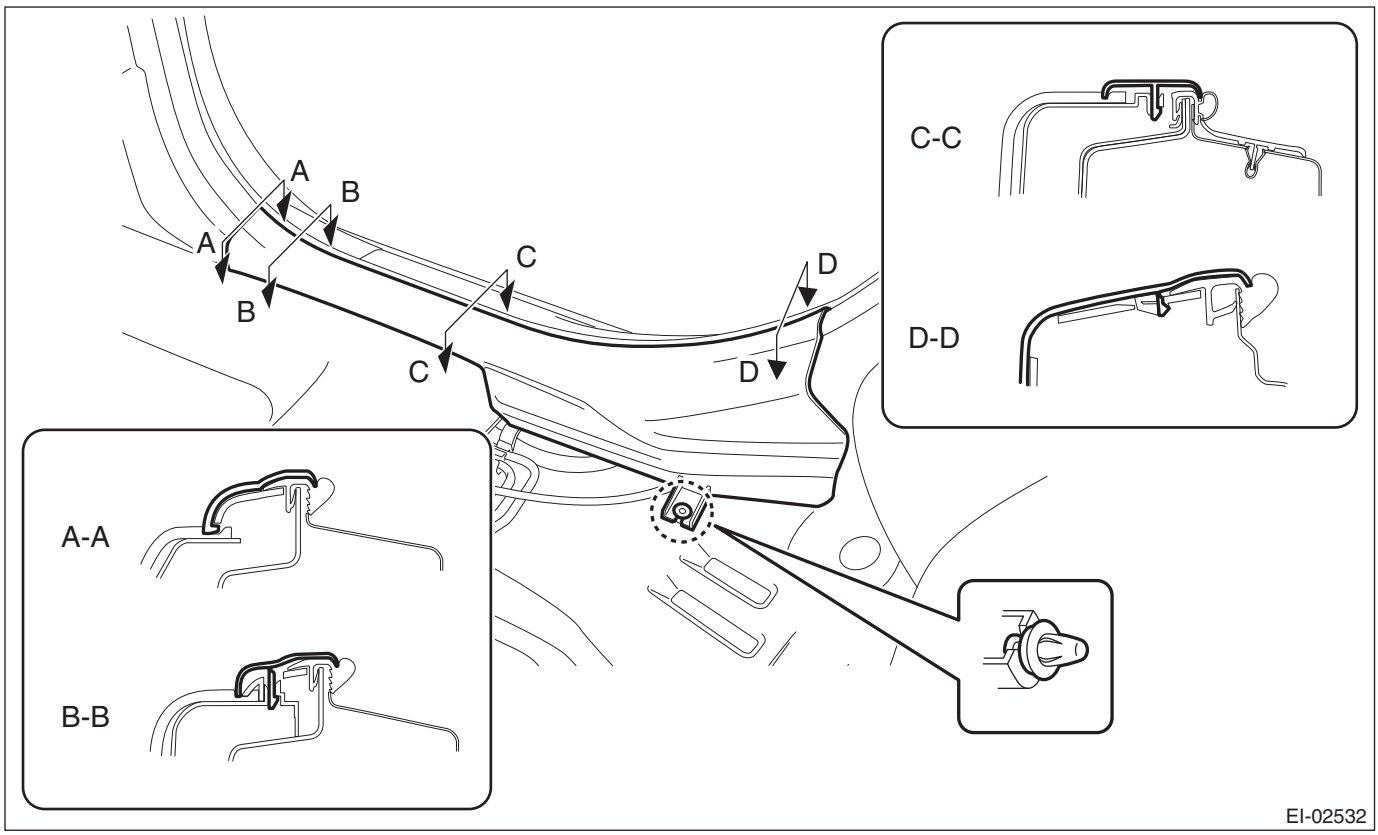

SE-01117

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



SE-01040

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

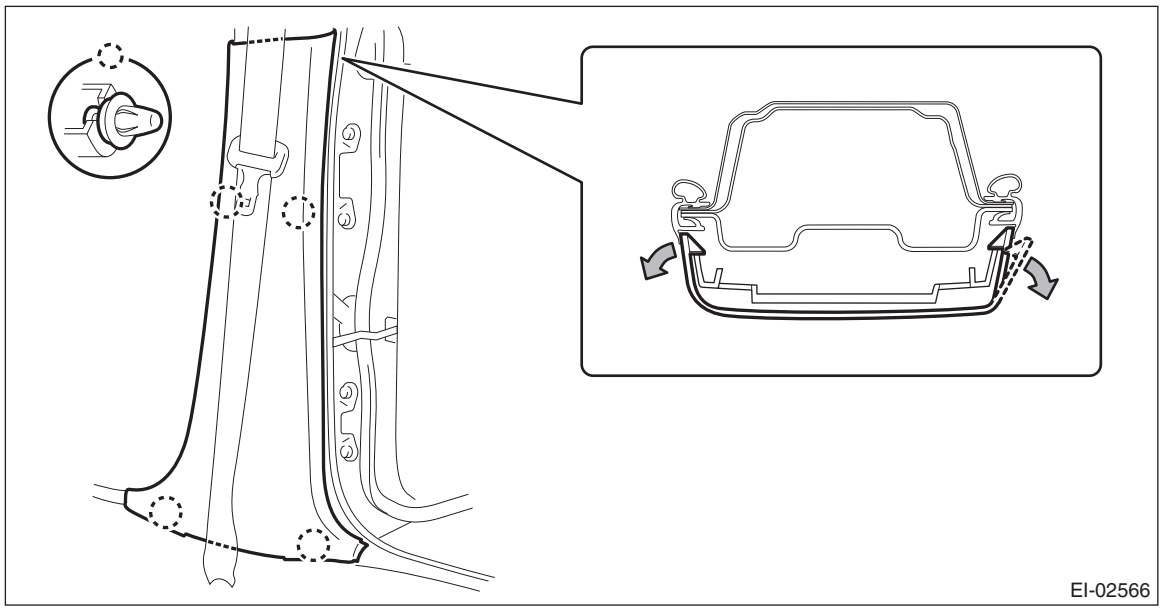


CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

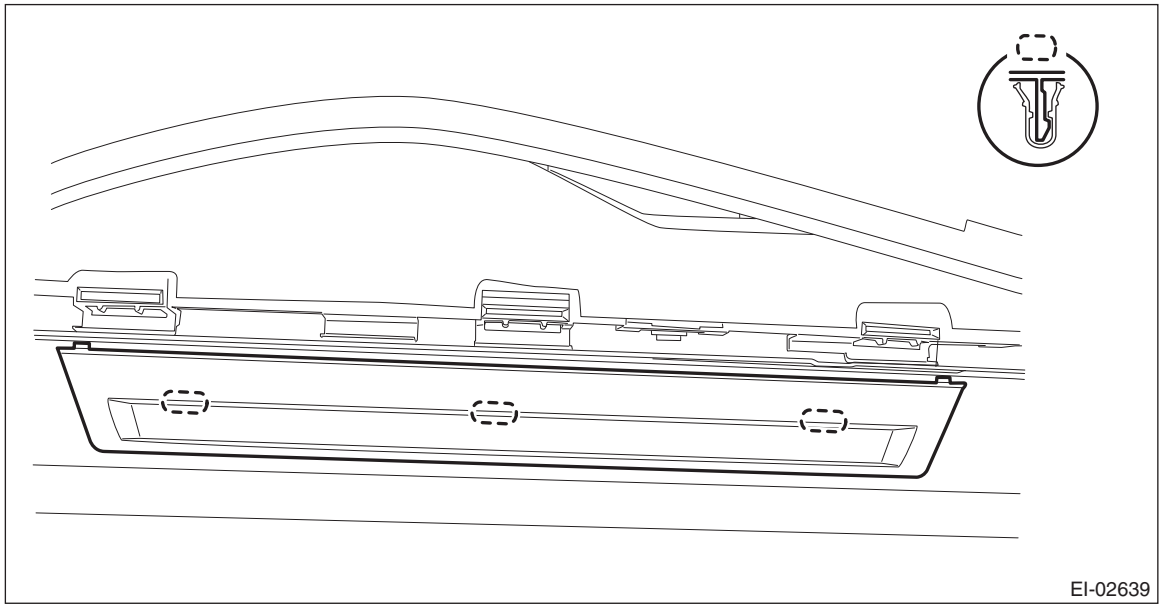
NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claws (C) and (D) by accessing from behind the side sill cover INN.

5) Remove the center pillar trim LWR.
   (1) Release the clip by pulling the center pillar trim LWR toward you.
   (2) Expand the claws of center pillar trim LWR outward and remove it from the center pillar trim UPR.

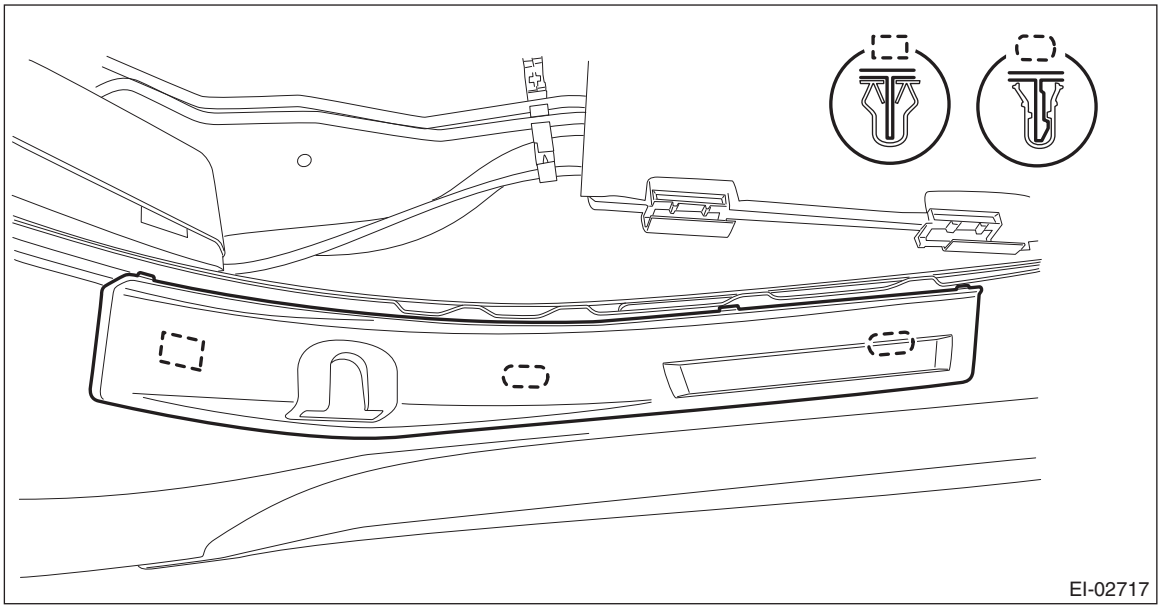
CAUTION:
Do not expand the center pillar trim LWR excessively. Doing so may damage the trim.


EI-02566

NOTE:
First release the claw located to the rear of the vehicle.
6) Release the claws, and then remove the side sill cover-front OUT.


EI-02639

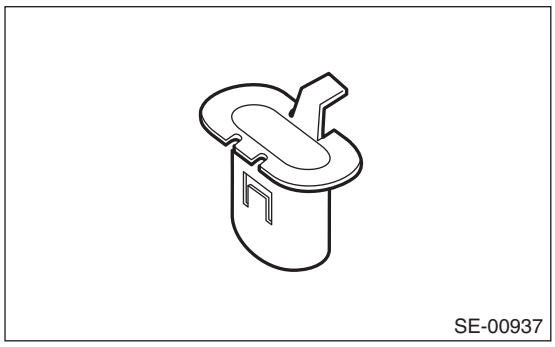
7) Release the claws and metal clips, and then remove the side sill cover-rear OUT.



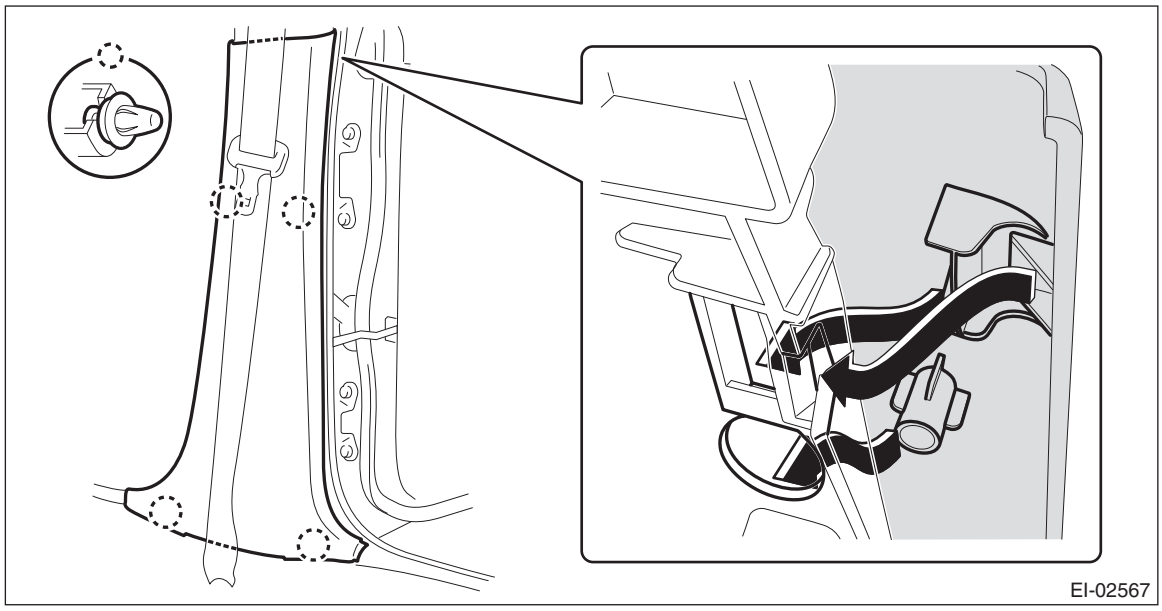
B: INSTALLATION

Install each part in the reverse order of removal.

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.



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

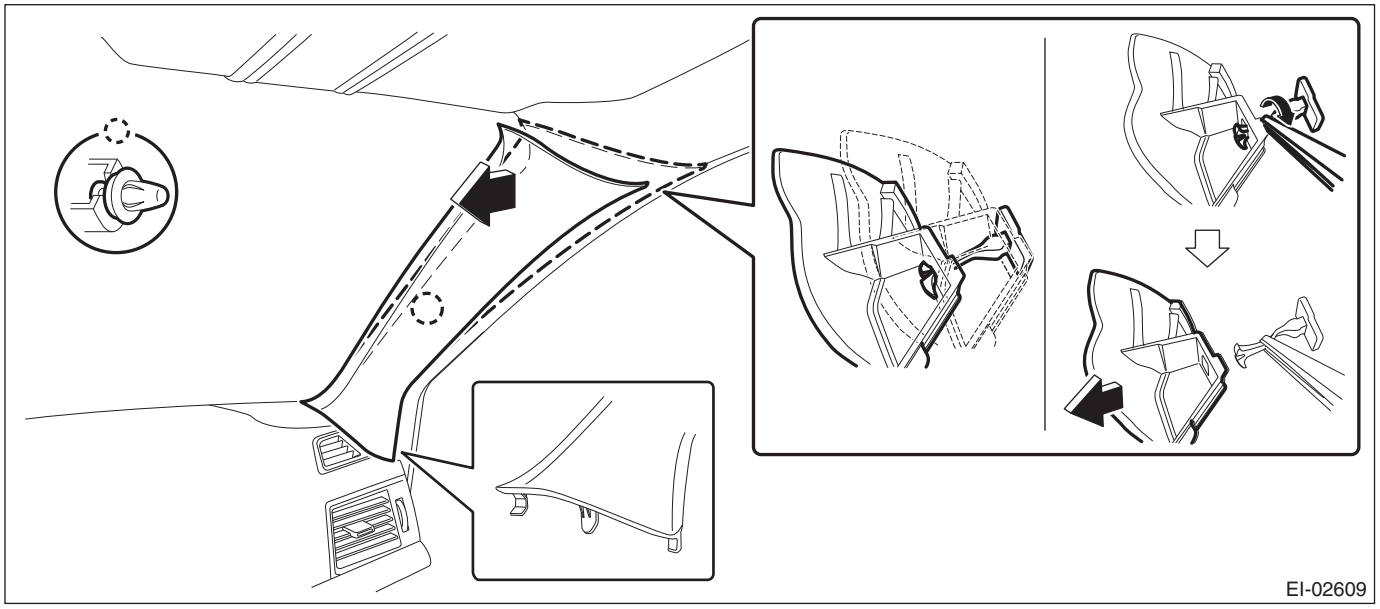


21.Upper Inner Trim

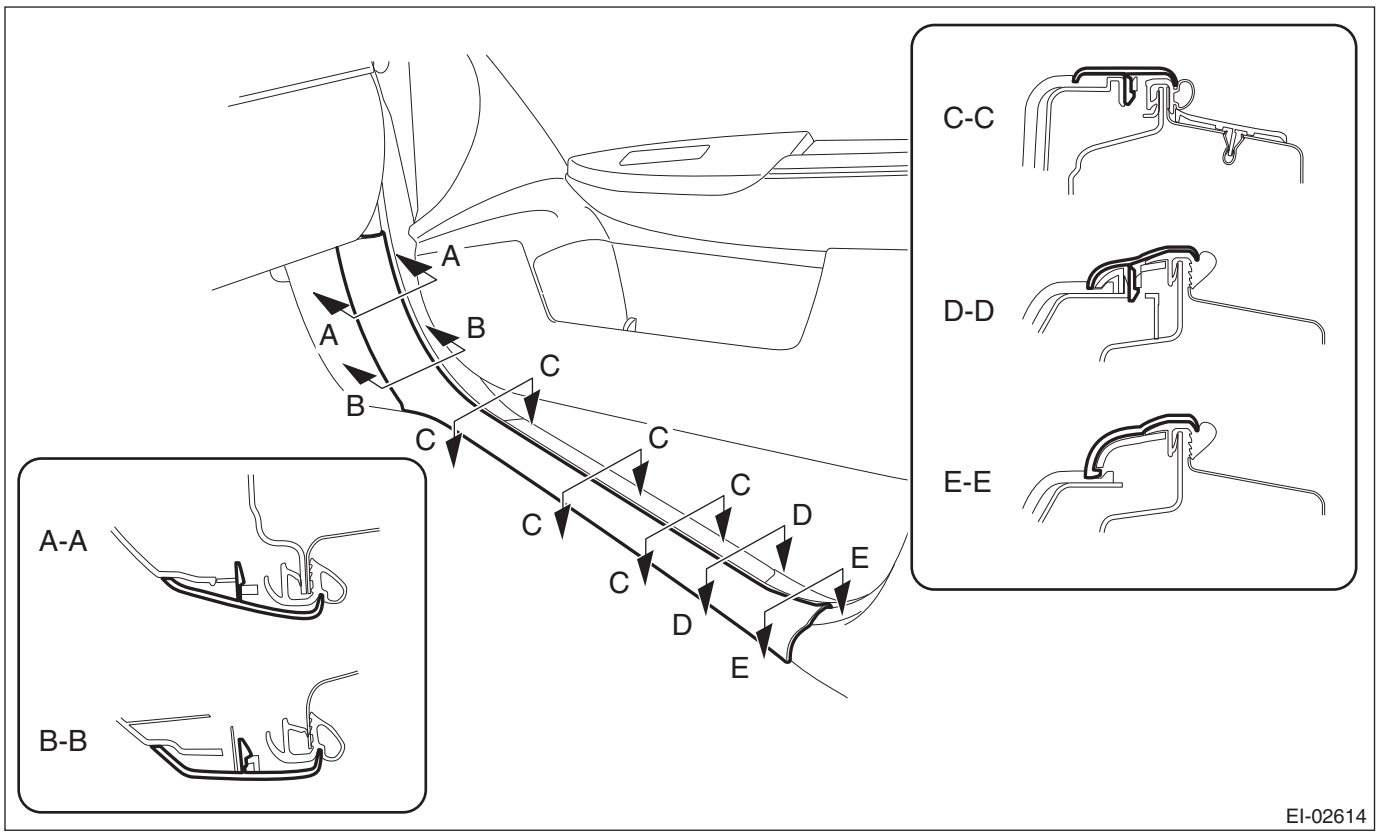
A: REMOVAL

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

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



2) Release the claws, and then remove the side sill cover-front INN.

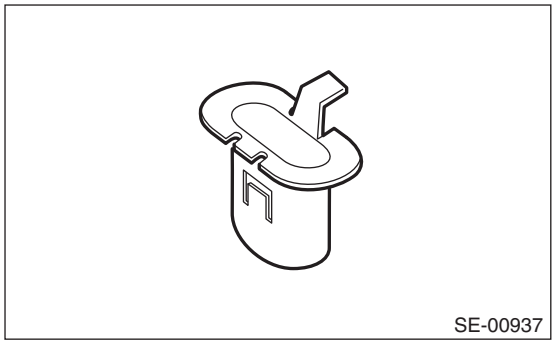


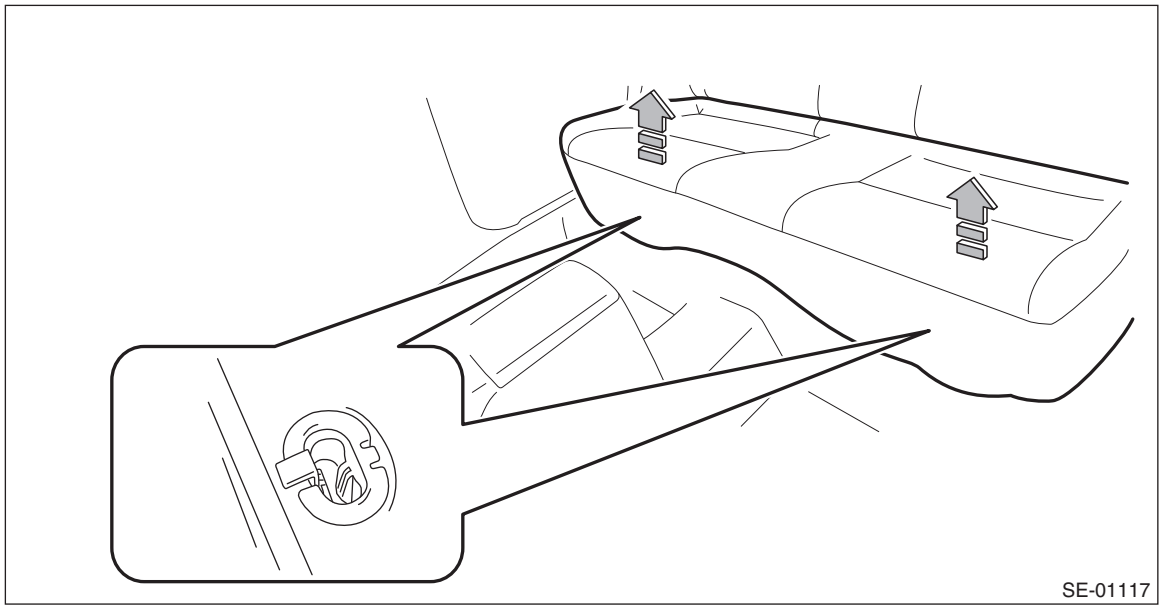
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claw (C) by accessing from behind the side sill cover INN.

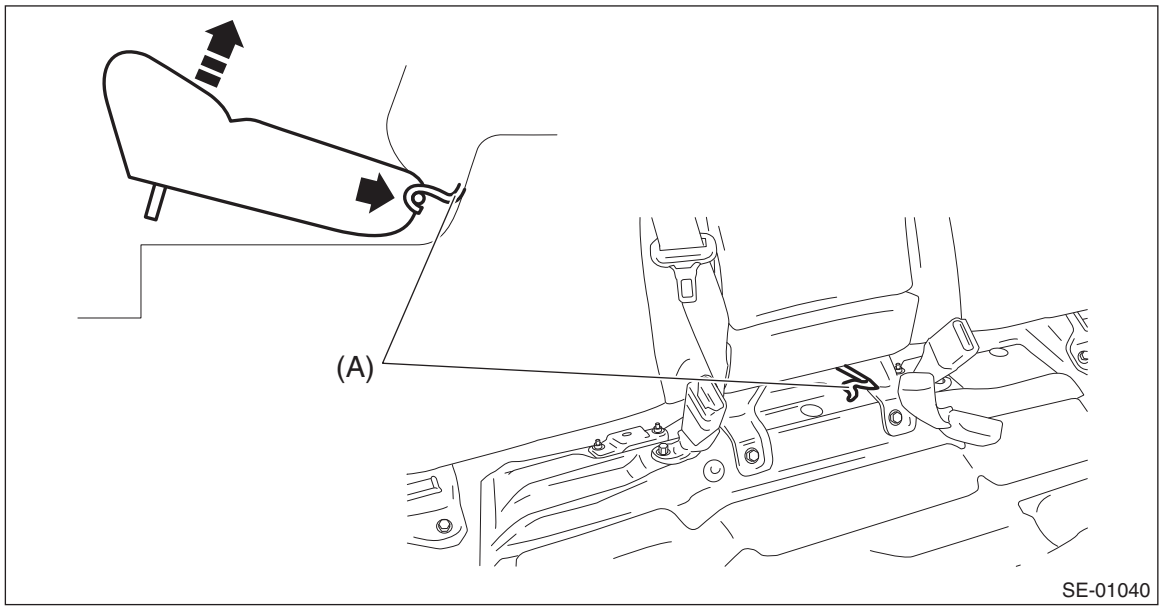
3) Remove the rear seat cushion assembly.
(1) Pull up the seat cushion and release the hook.

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.


SE-00937

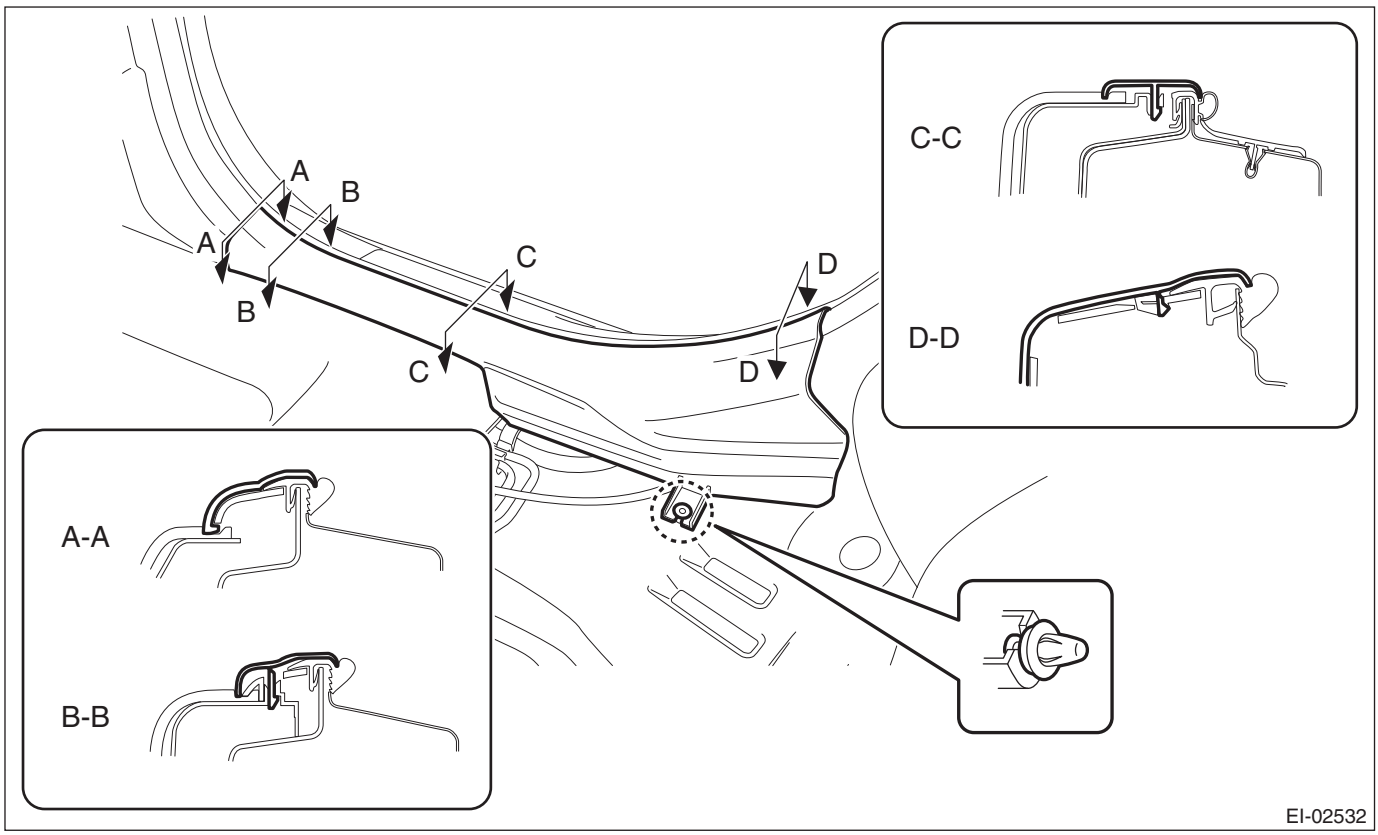

SE-01117

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



SE-01040

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

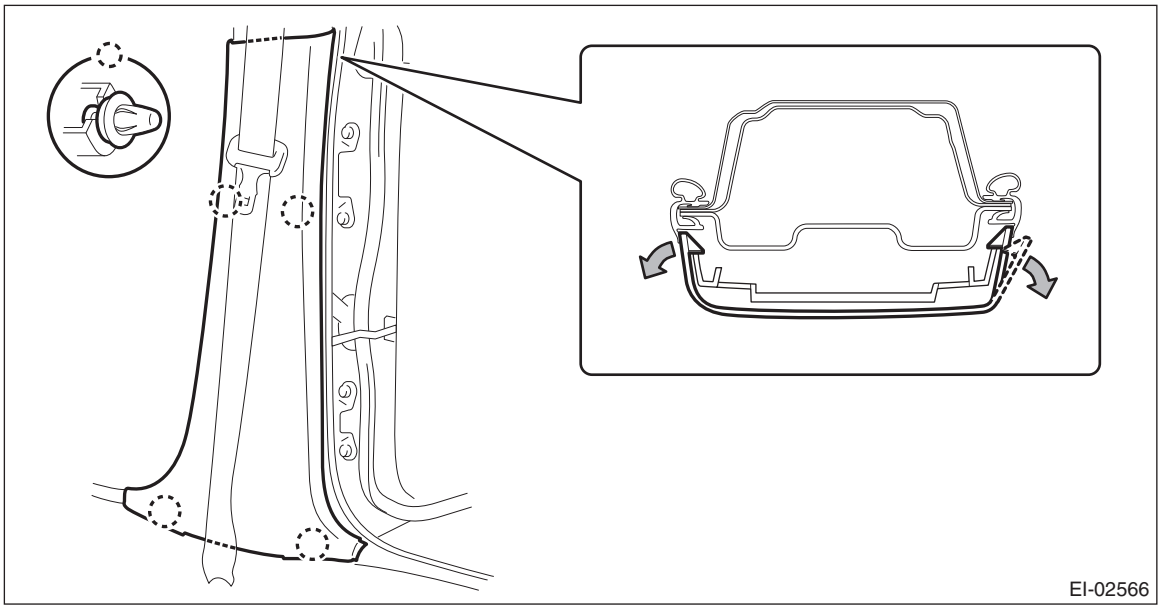


CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

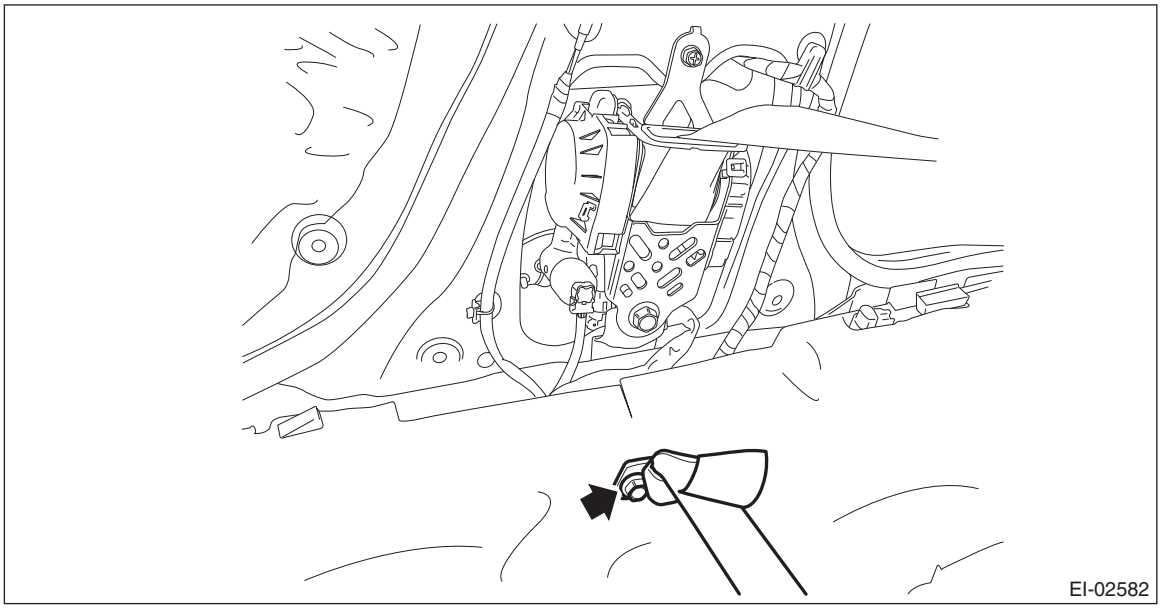
NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claws (C) and (D) by accessing from behind the side sill cover INN.

5) Remove the center pillar trim LWR.
(1) Release the clip by pulling the center pillar trim LWR toward you.
(2) Expand the claws of center pillar trim LWR outward and remove it from the center pillar trim UPR.

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

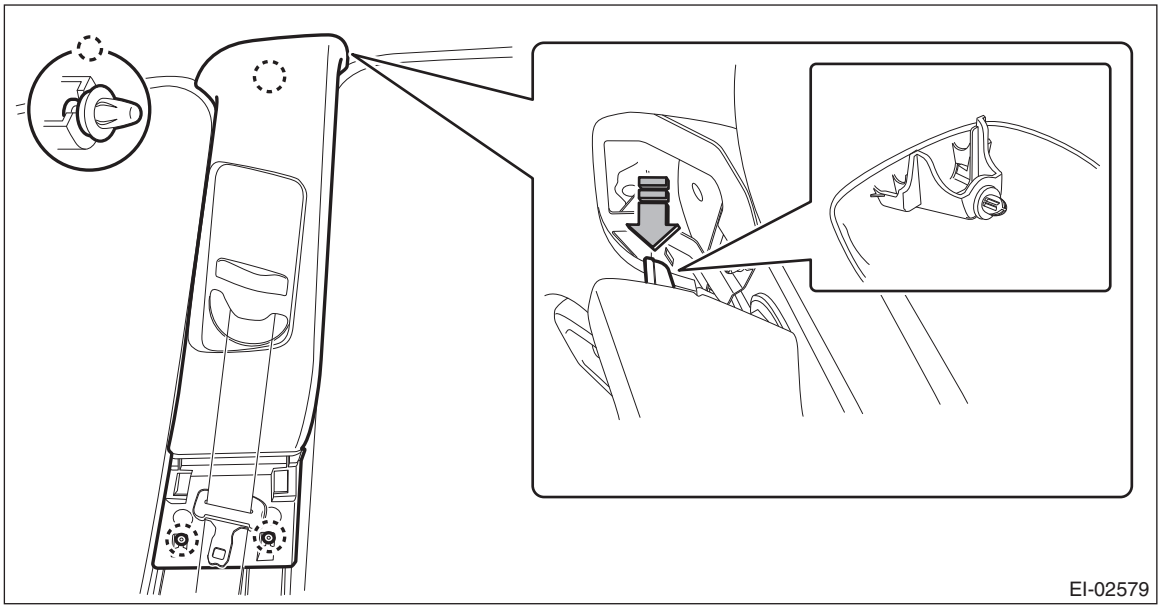


NOTE:
First release the claw located to the rear of the vehicle.
6) Remove the center pillar trim UPR.
(1) Remove the seat belt lower anchor bolt.



(2) Release the clip by pulling the center pillar trim UPR toward you.

(3) Remove the center pillar trim UPR by lowering the entire trim.



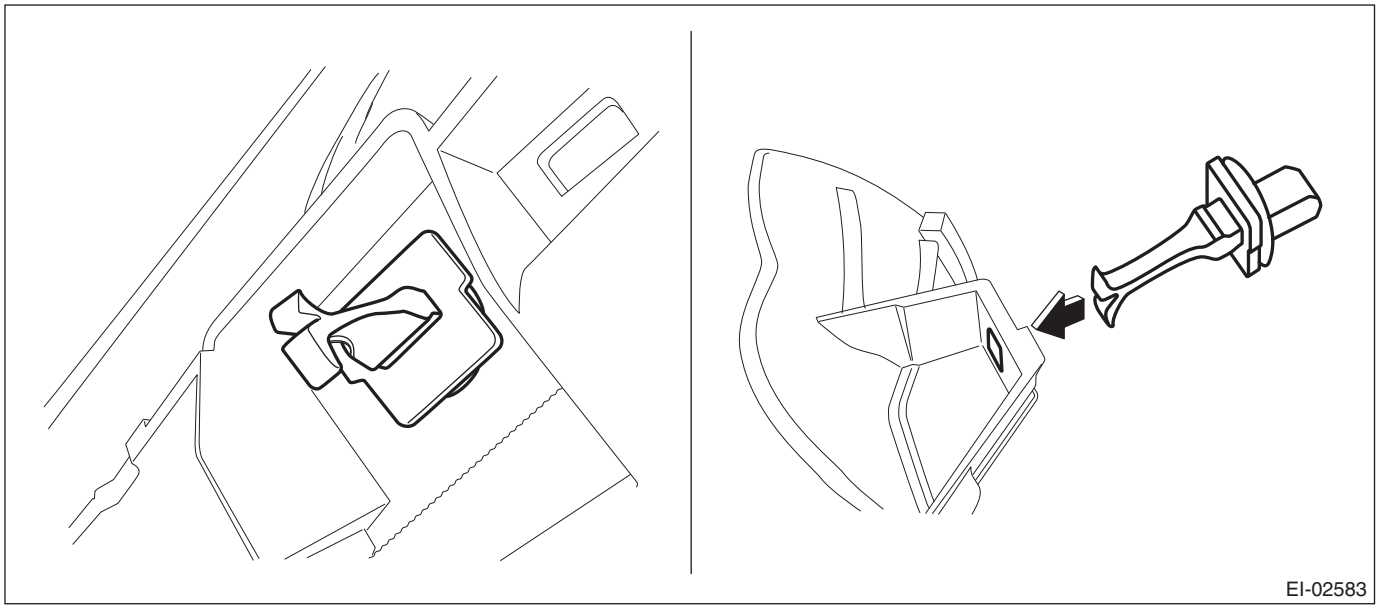
(4) Pull out the seat belt and remove the center pillar trim UPR.

B: INSTALLATION

CAUTION:
• Do not reuse the clips in the upper section of the front pillar trim. Always replace them with new ones.
Once removed from the pillar trim, the clip retention power deteriorates and the front pillar trim may come off.
• Do not reuse the clips in the upper section of the center pillar trim. Always replace them with new ones.
Once the pillar trim is removed, the clip retention power deteriorates and the center pillar trim may come off.
• Before installing the front pillar trim, check the condition of (white) protective unwoven cloth of curtain airbag. If it is damaged (airbag module cloth is exposed), replace the curtain airbag module assembly with a new part.

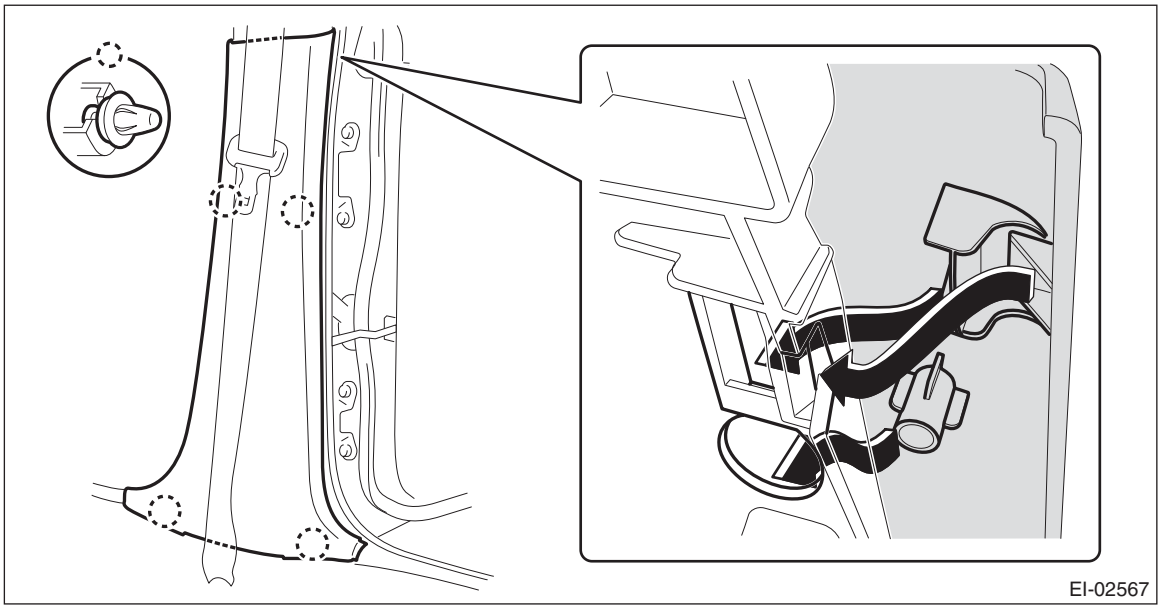
1) Remove any clips remaining on body.
2) Prepare new clips and attach them to the front pillar trim.

3) Install the front pillar trim.



4) Assemble the center pillar trim LWR to the center pillar trim UPR securely.

CAUTION:
Do not forget to install the seat belt.

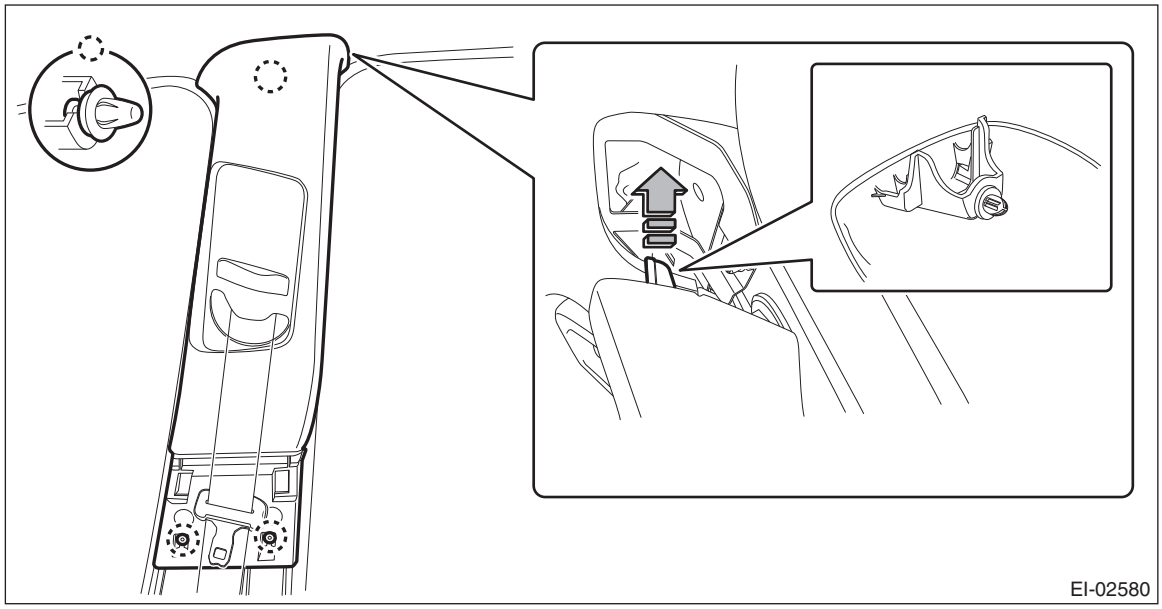


5) Assemble the center pillar trim LWR and center pillar trim UPR to the body.

CAUTION:
Do not reuse the clips in the upper section of the pillar trim. Always replace them with new ones.

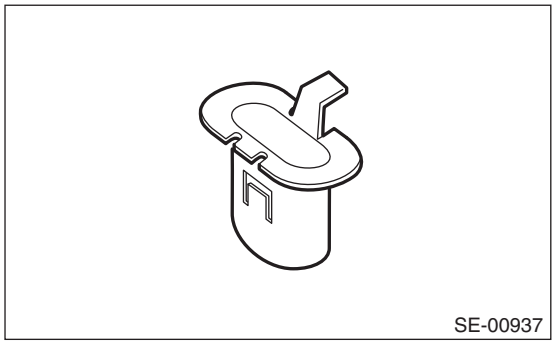
(1) Guide the seat belt through the center pillar trim UPR.
(2) Insert the upper claws of the pillar trim.

(3) Attach the pillar trim by fitting the lower clips to the body.



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

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.



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

22.Rear Quarter Trim

A: REMOVAL

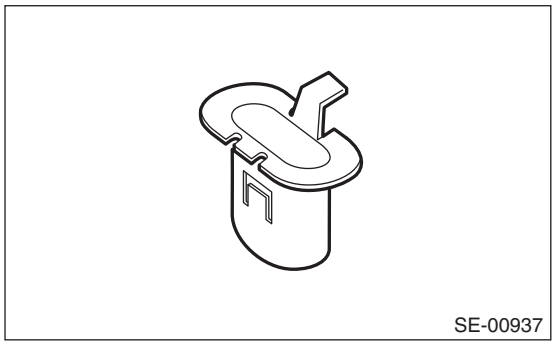
1. SEDAN MODEL

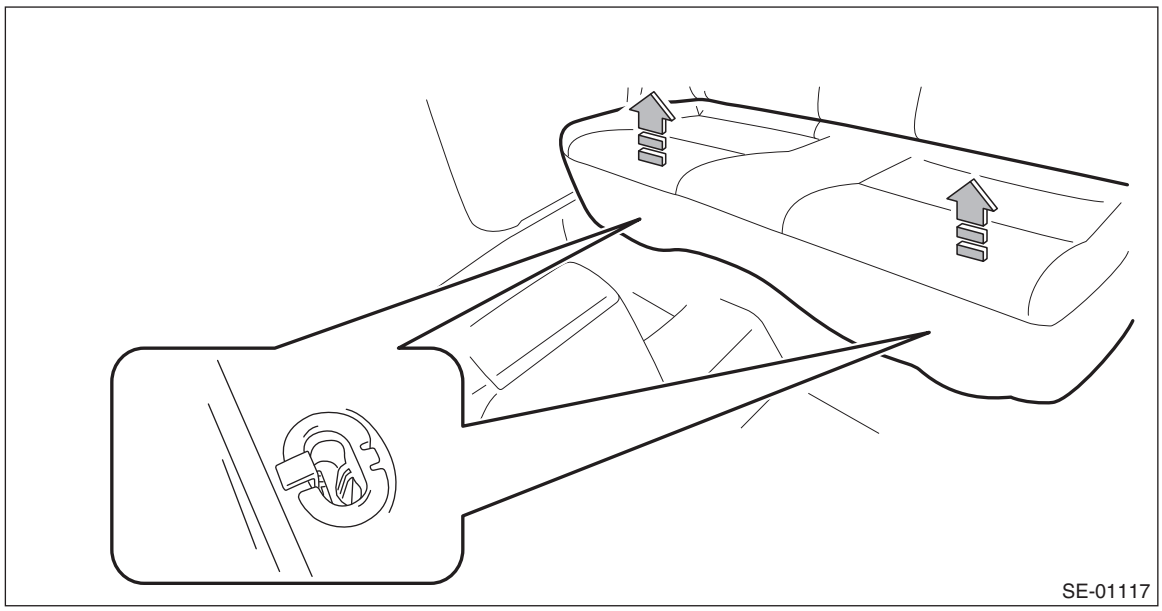
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

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

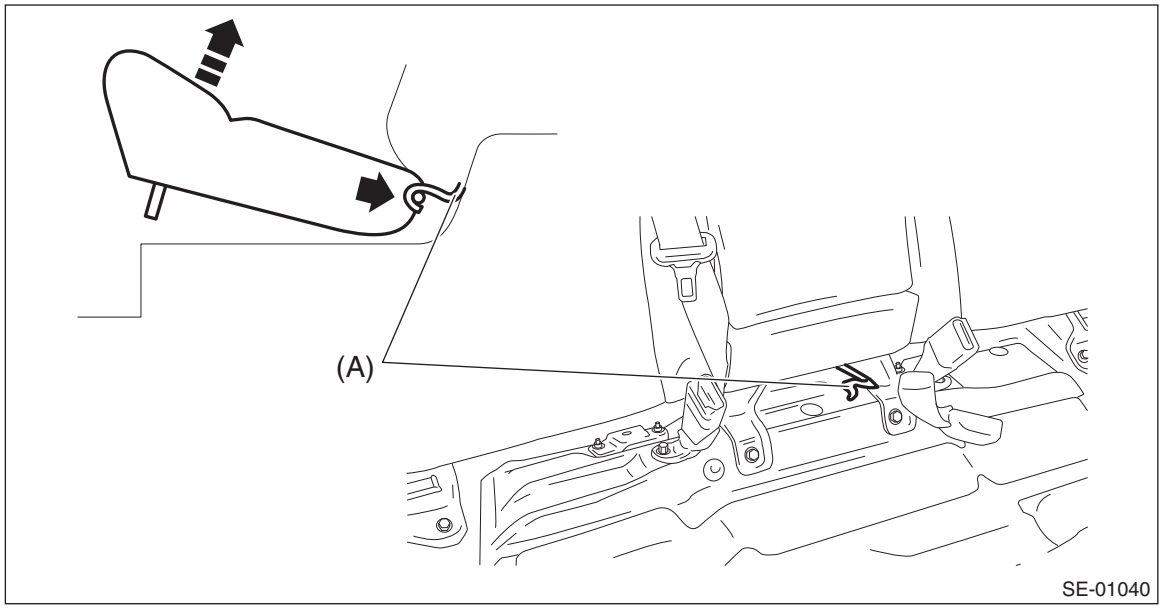
2) Remove the rear seat cushion assembly.
   (1) Pull up the seat cushion and release the hook.

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.

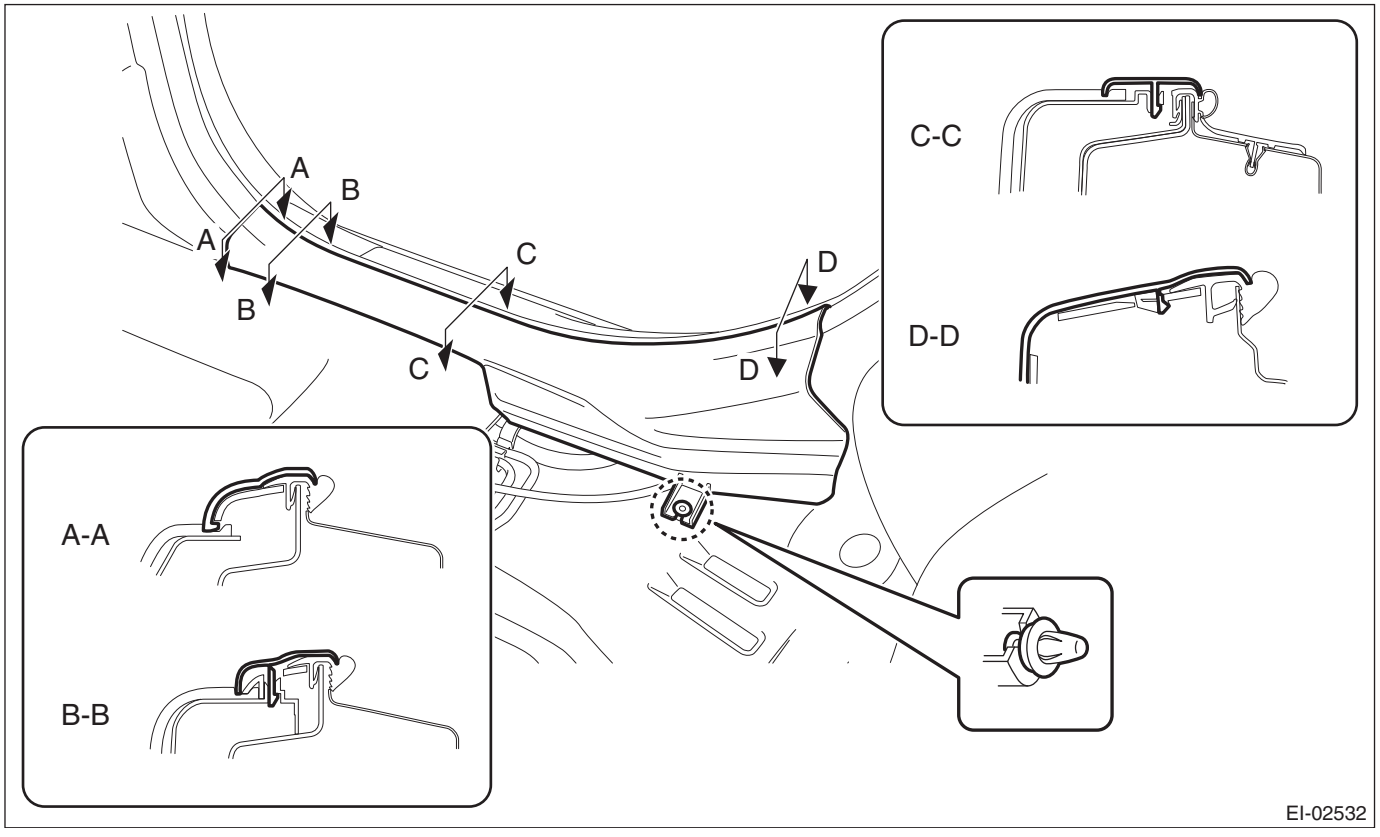

SE-00937


SE-01117

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



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



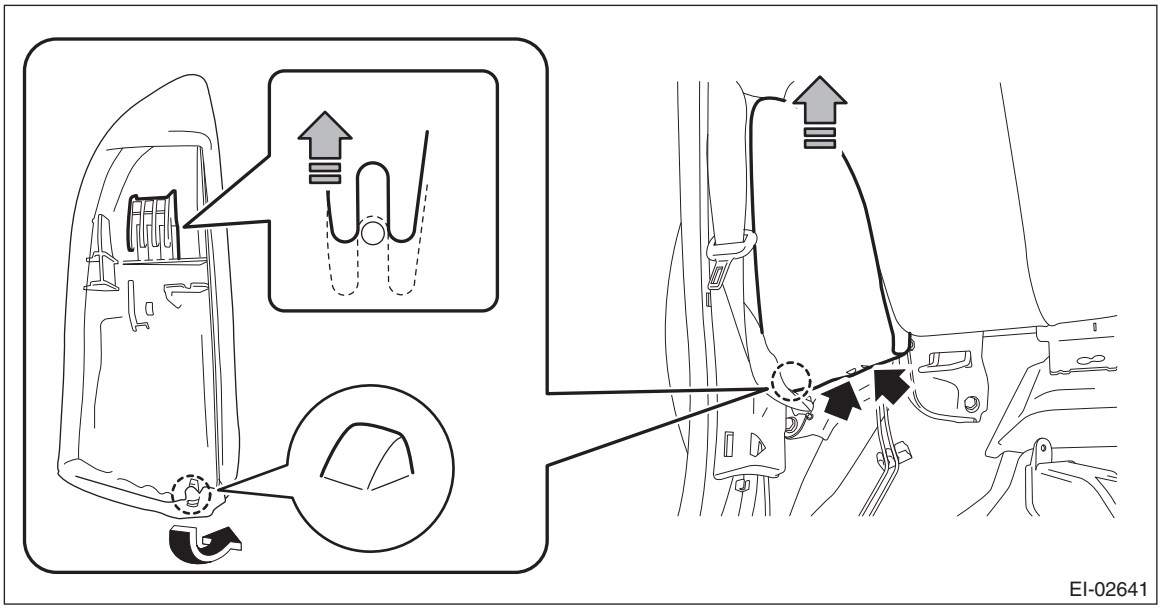
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claws (C) and (D) by accessing from behind the side sill cover INN.

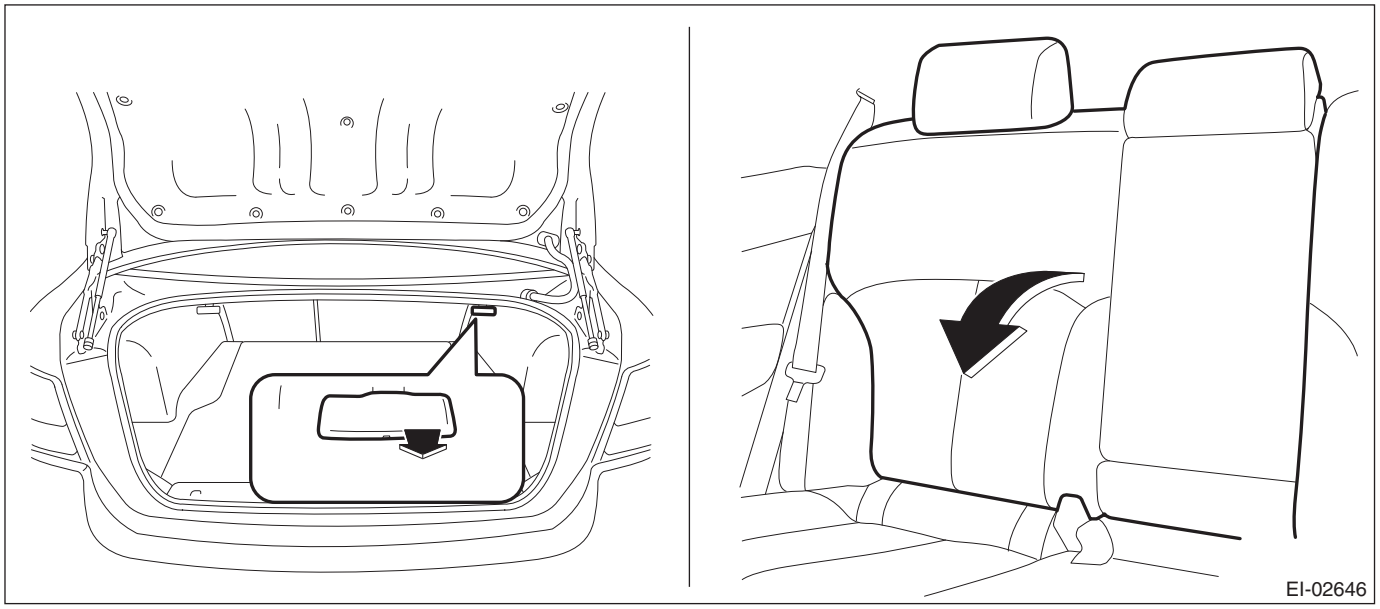
4) Remove the rear quarter trim LWR.
(1) Remove the backrest side pad.
a) Remove the screws.

Preparation tool: Stubby screwdriver

b) Turn over the bottom end of the backrest side pad in the forward direction so that the claws are released.
c) Remove the backrest side pad by pulling it up.

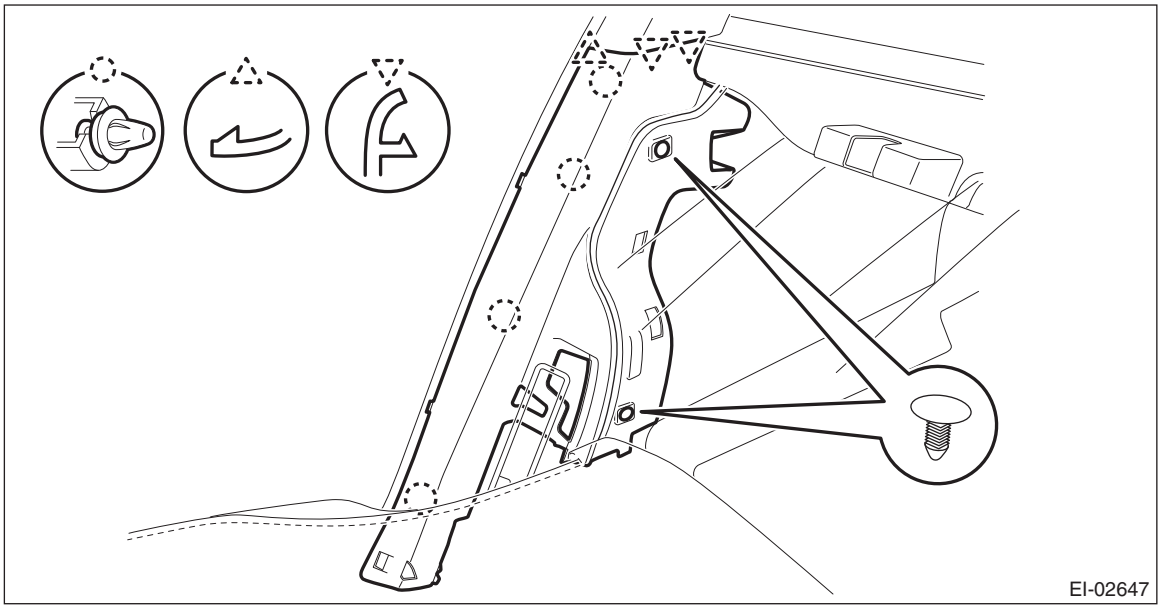


(2) Pull the release lever in the trunk room, and then tilt the backrest forward.



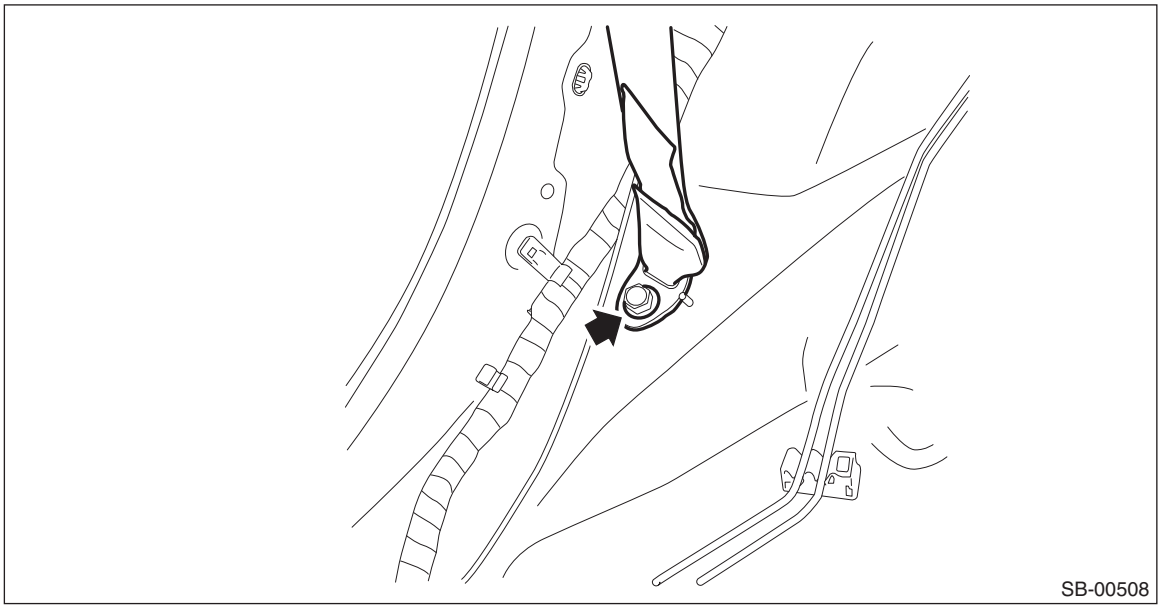
(3) Release the clips of the trunk trim panel assembly-side.

(4) Remove the clips, and remove the rear quarter trim LWR.

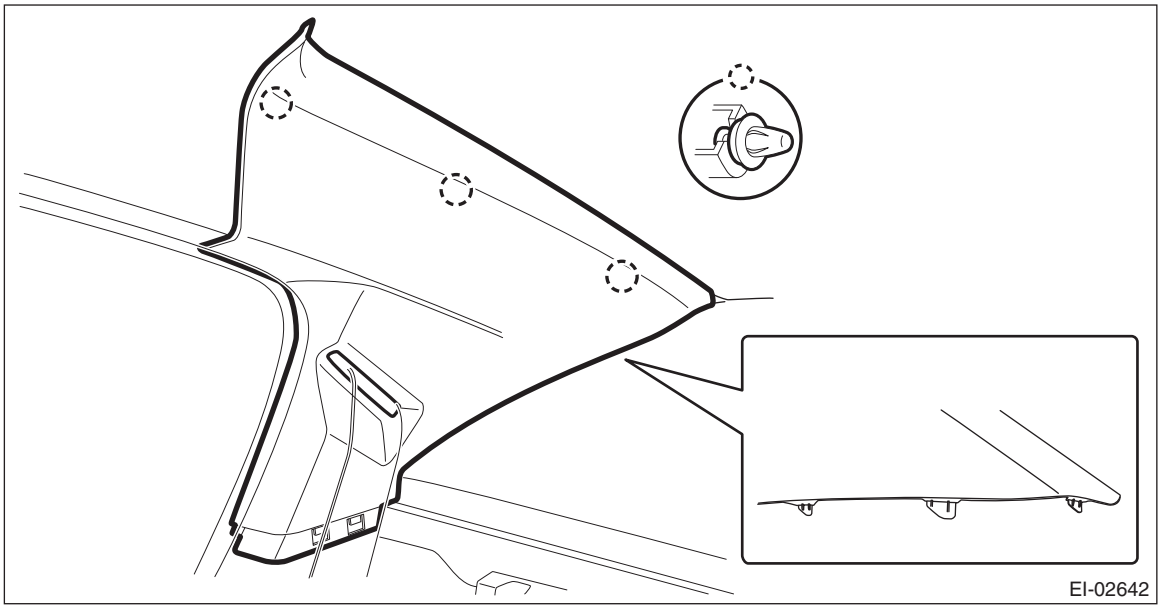


5) Remove the rear quarter trim UPR.

(1) Remove the lower anchor bolt of the outer belt assembly.



(2) Release the clips, and remove the rear quarter trim UPR.



(3) Pull out the seat belt and remove the rear quarter trim UPR.

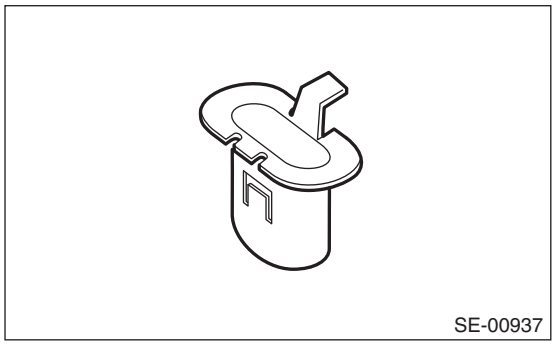
2. OUTBACK MODEL

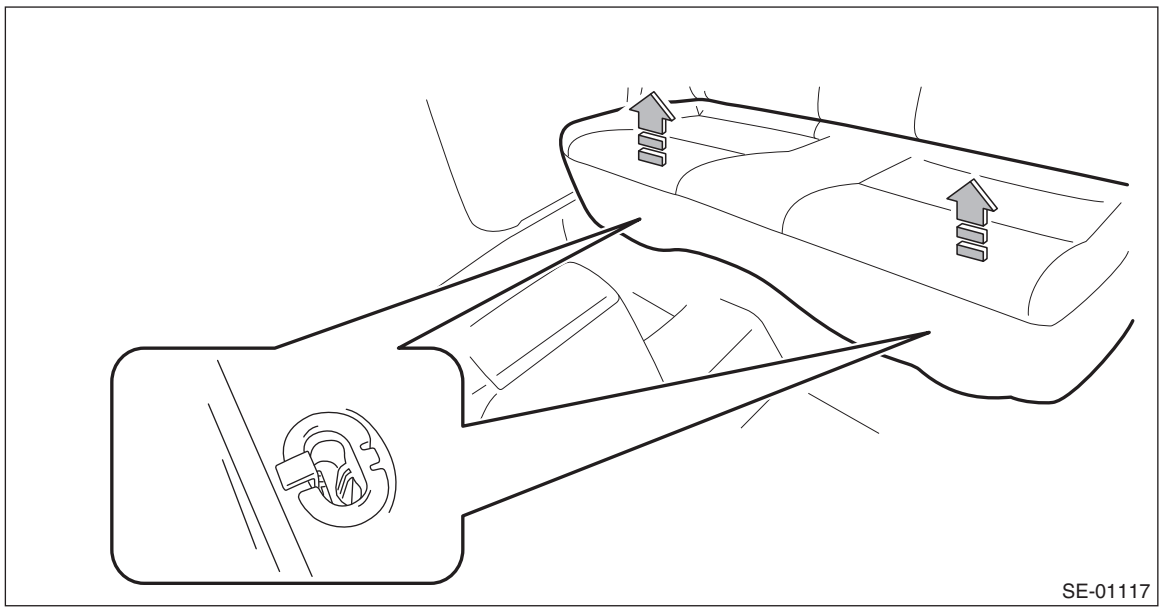
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

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

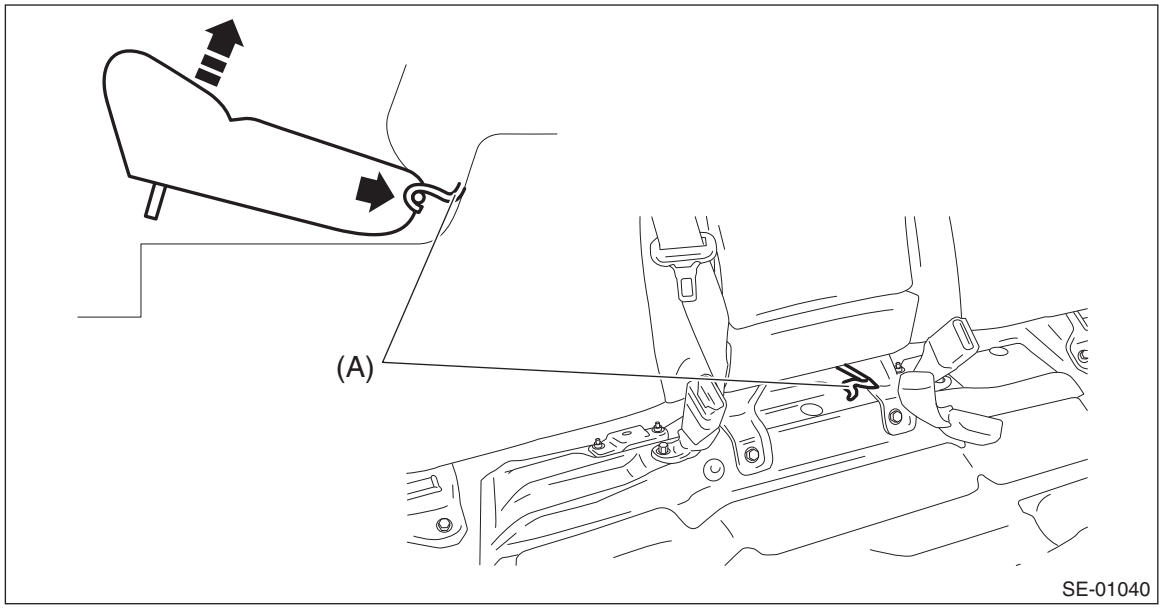
2) Remove the rear seat cushion assembly.
   (1) Pull up the seat cushion and release the hook.

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.

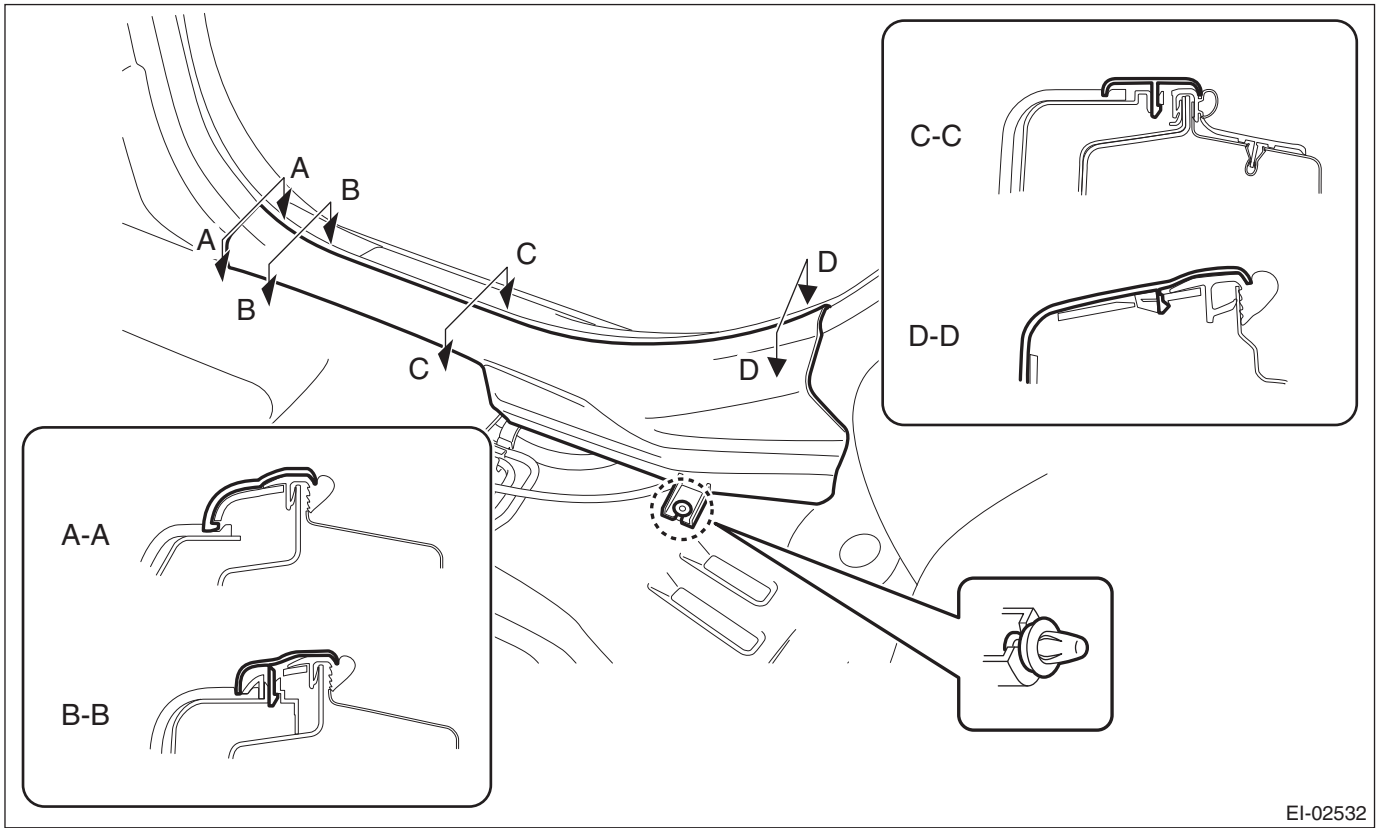

SE-00937


SE-01117

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



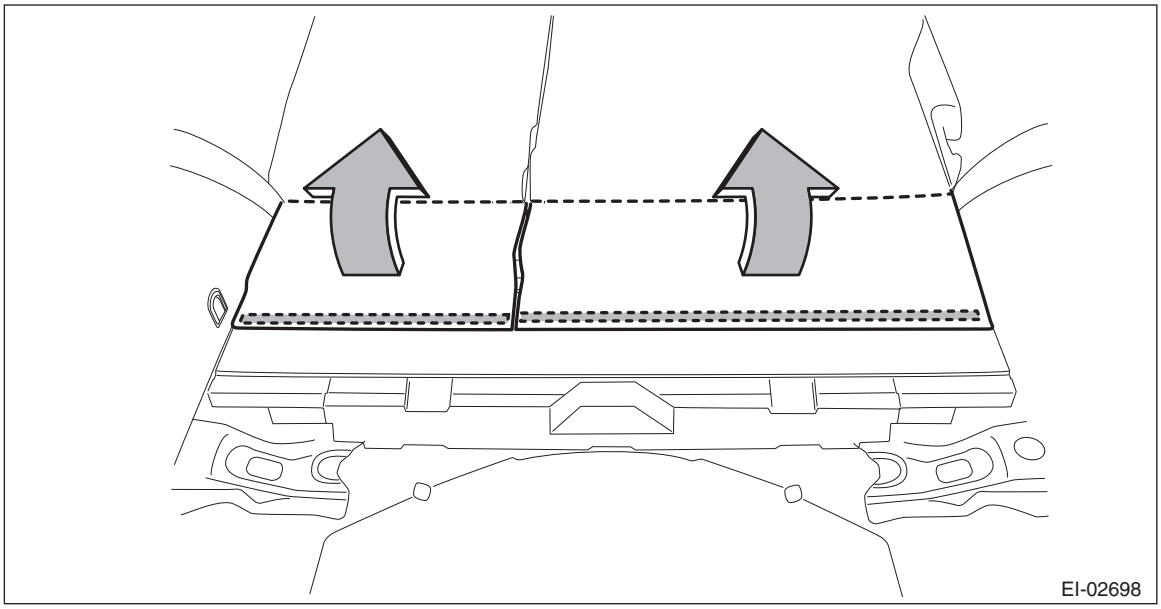
3) Release the clips and claws, and then remove the side sill cover - rear INN.



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

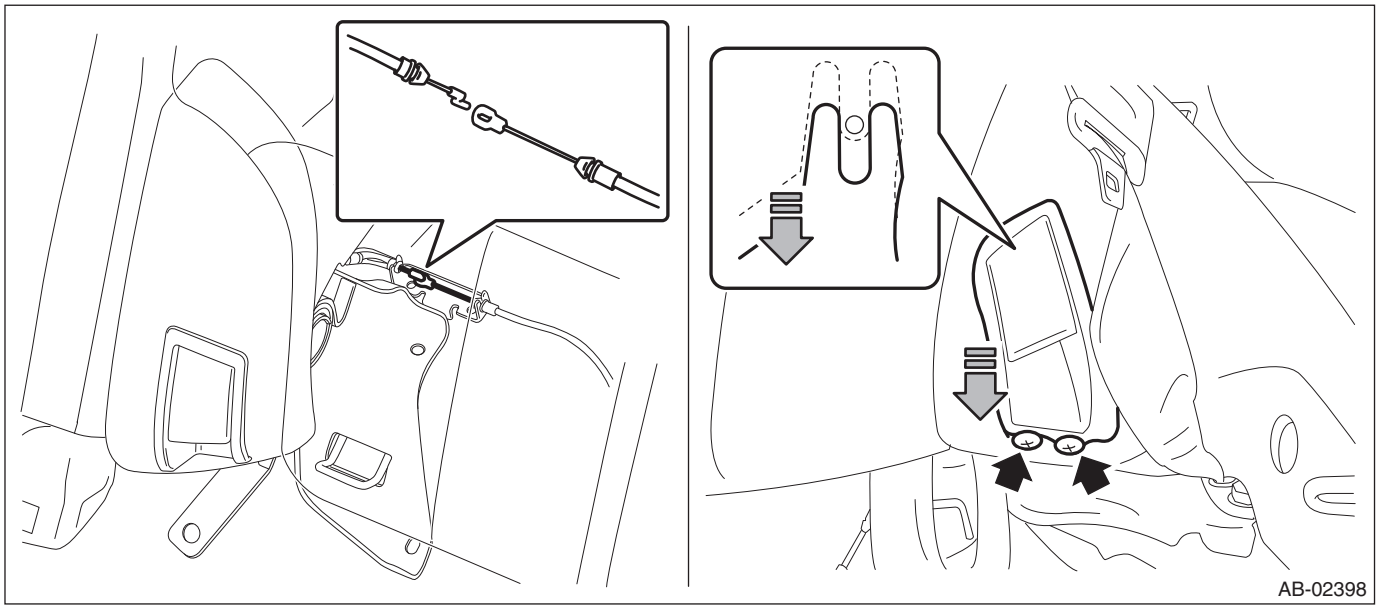
NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claws (C) and (D) by accessing from behind the side sill cover INN.

4) Tilt the backrest forward, and then turn over the backrest backside mat.



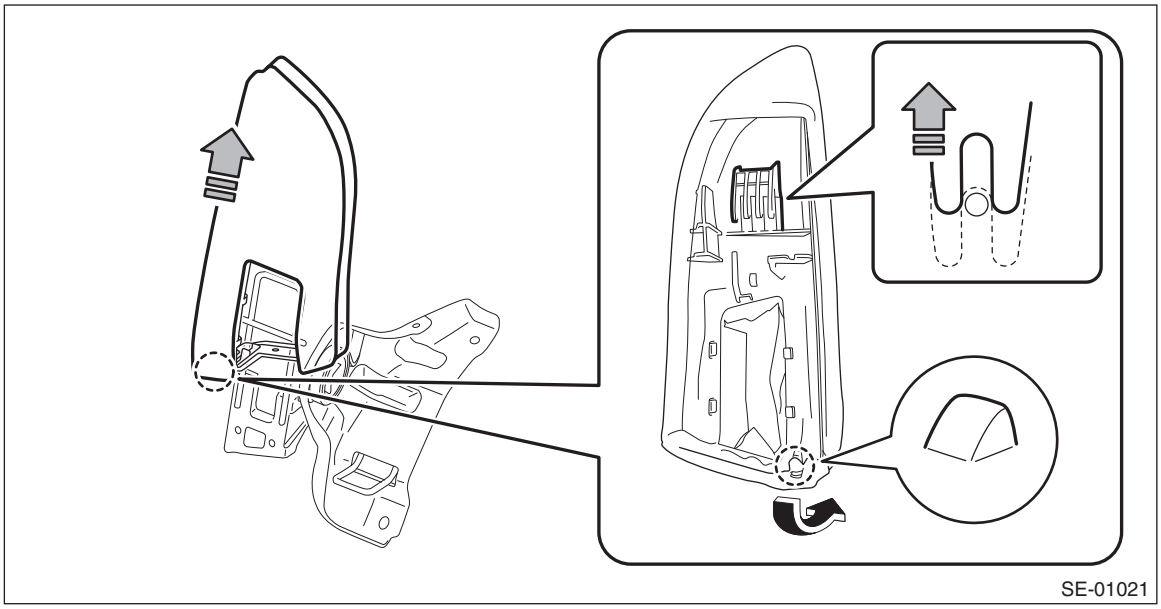
5) Remove the backrest side pad assembly.
   (1) Disconnect the backrest cable and reclining lever cable.
   (2) Remove the screws and remove the reclining lever assembly by pulling it downward.

Preparation tool: Stubby screwdriver

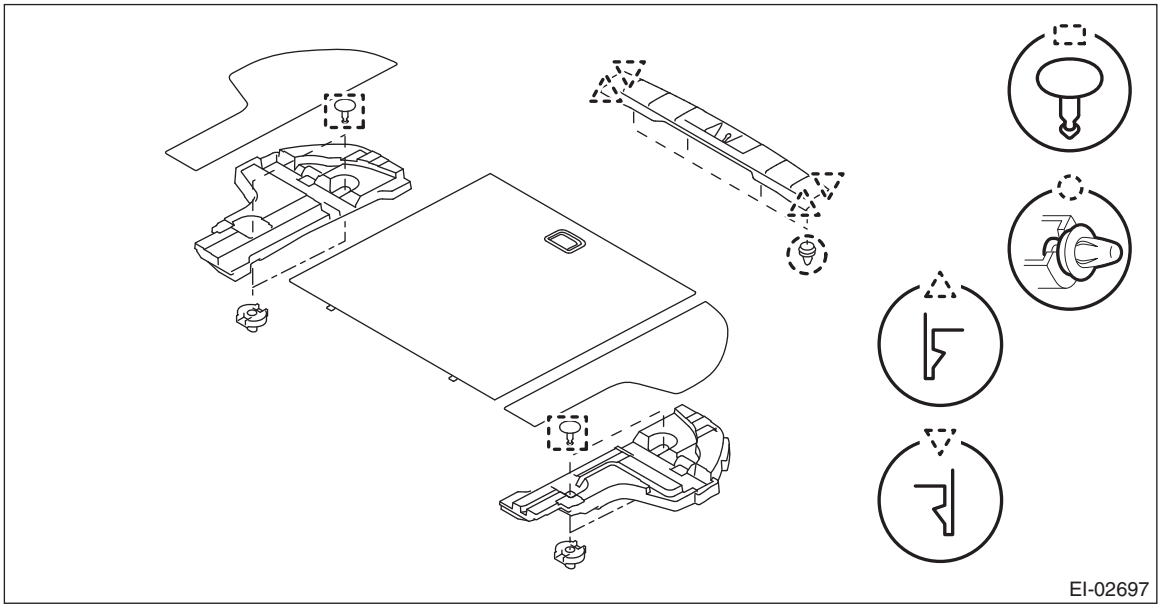


   (3) Turn over the bottom end of the backrest side pad in the forward direction so that the claws are released.

(4) Remove the backrest side pad by pulling it up.

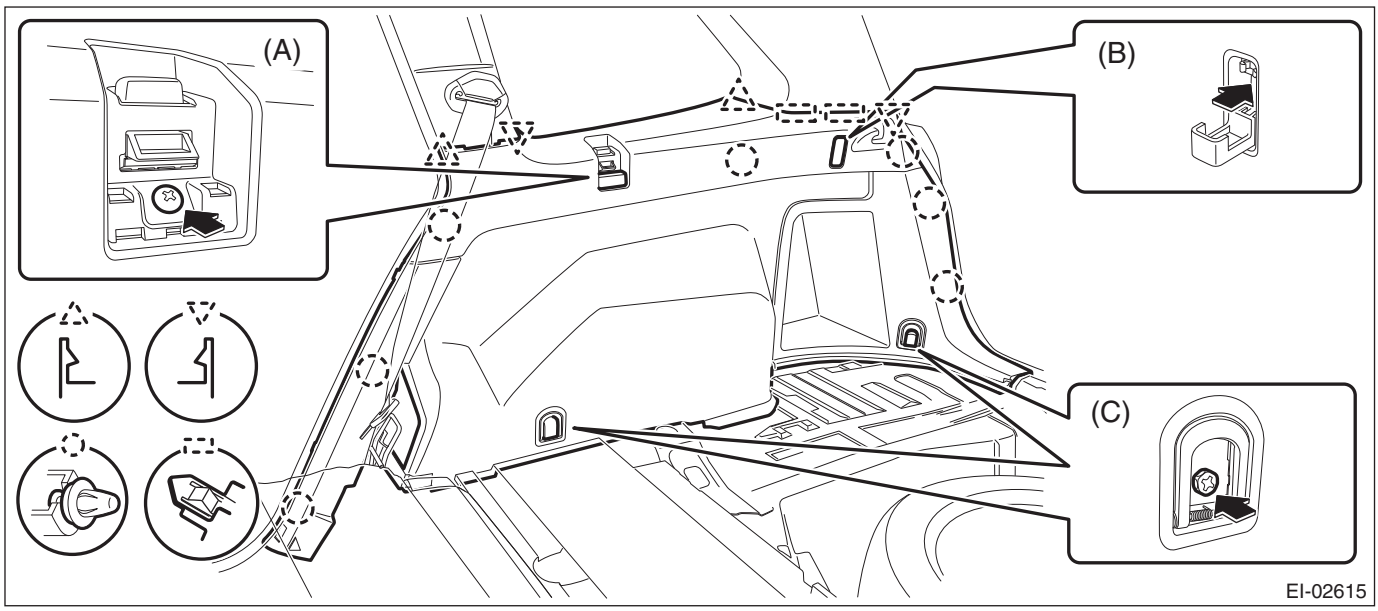


6) Remove the clips, and remove the luggage floor box and rear floor edge cover.

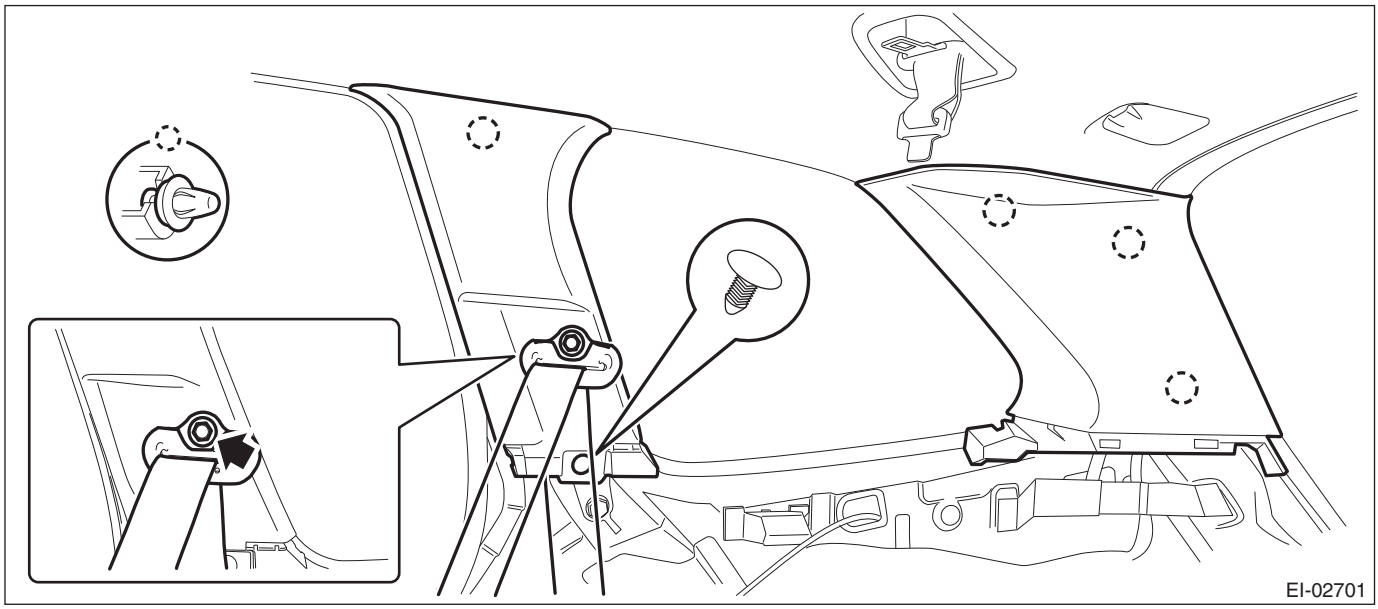


7) Remove the rear quarter trim LWR.
(1) Remove the caps, screws, and bolts. (A), (C)
(2) Take out the hook and remove the screw inside. (B)

(3) Remove the clips, and remove the rear quarter trim LWR.



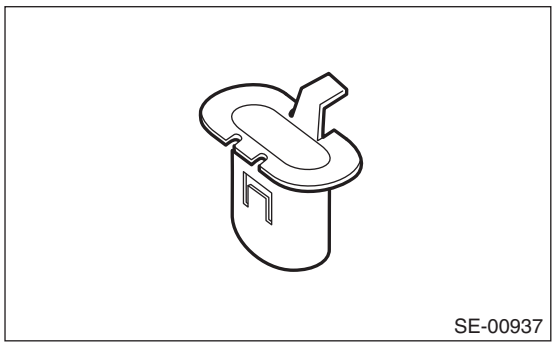
8) Remove the rear quarter trim UPR.
(1) Open the cap and remove the bolt to remove the seat belt anchor.
(2) Remove the clips, and remove the rear quarter trim UPR-front.
(3) Remove the clips, and remove the rear quarter trim UPR-rear.



B: INSTALLATION

Install each part in the reverse order of removal.

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.



Tightening torque:
Sedan model
Rear seat belt:<Ref. to SB-3, REAR SEAT BELT (SEDAN MODEL), COMPONENT, General Description.>
OUTBACK model
Rear seat belt:<Ref. to SB-4, REAR SEAT BELT (OUTBACK MODEL), COMPONENT, General Description.>

23.Rear Shelf Trim

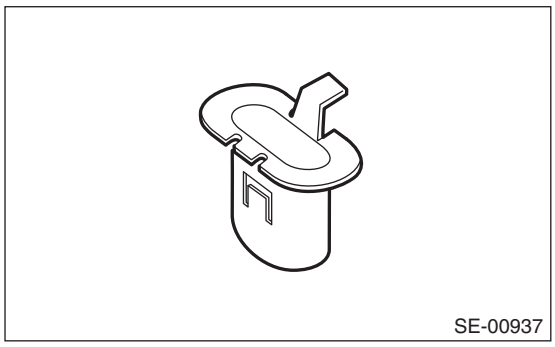
A: REMOVAL

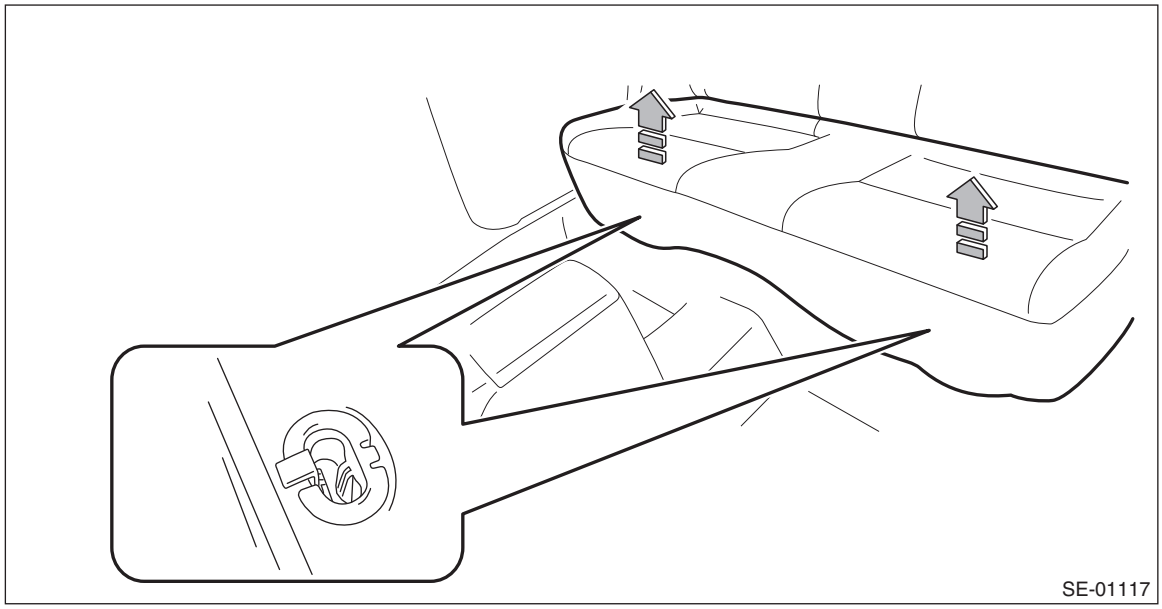
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

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

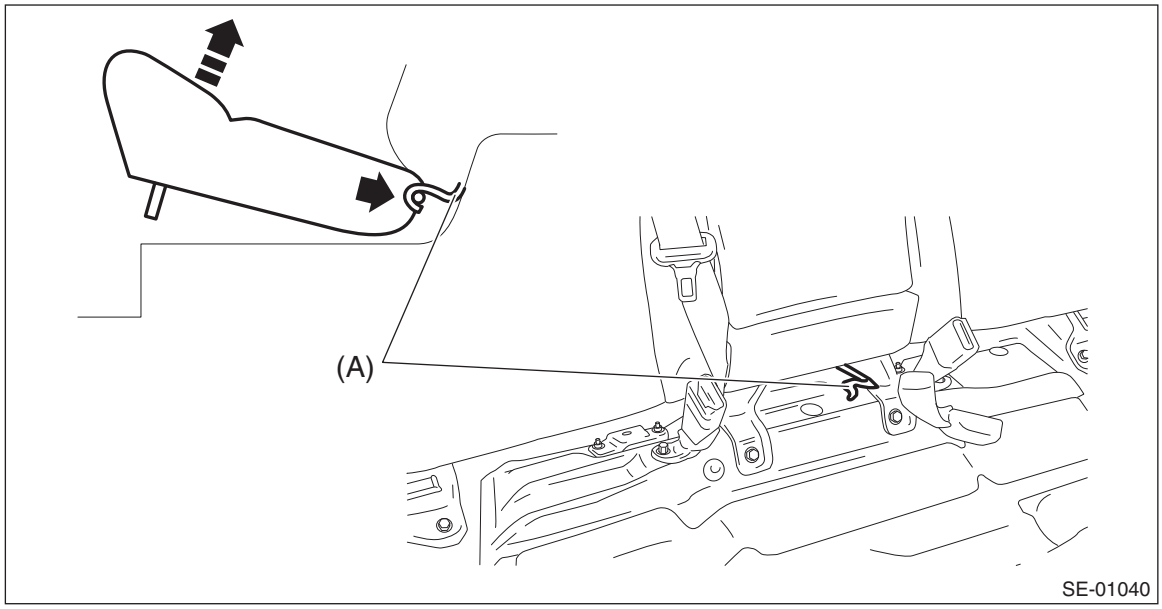
2) Remove the rear seat cushion assembly.
   (1) Pull up the seat cushion and release the hook.

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.

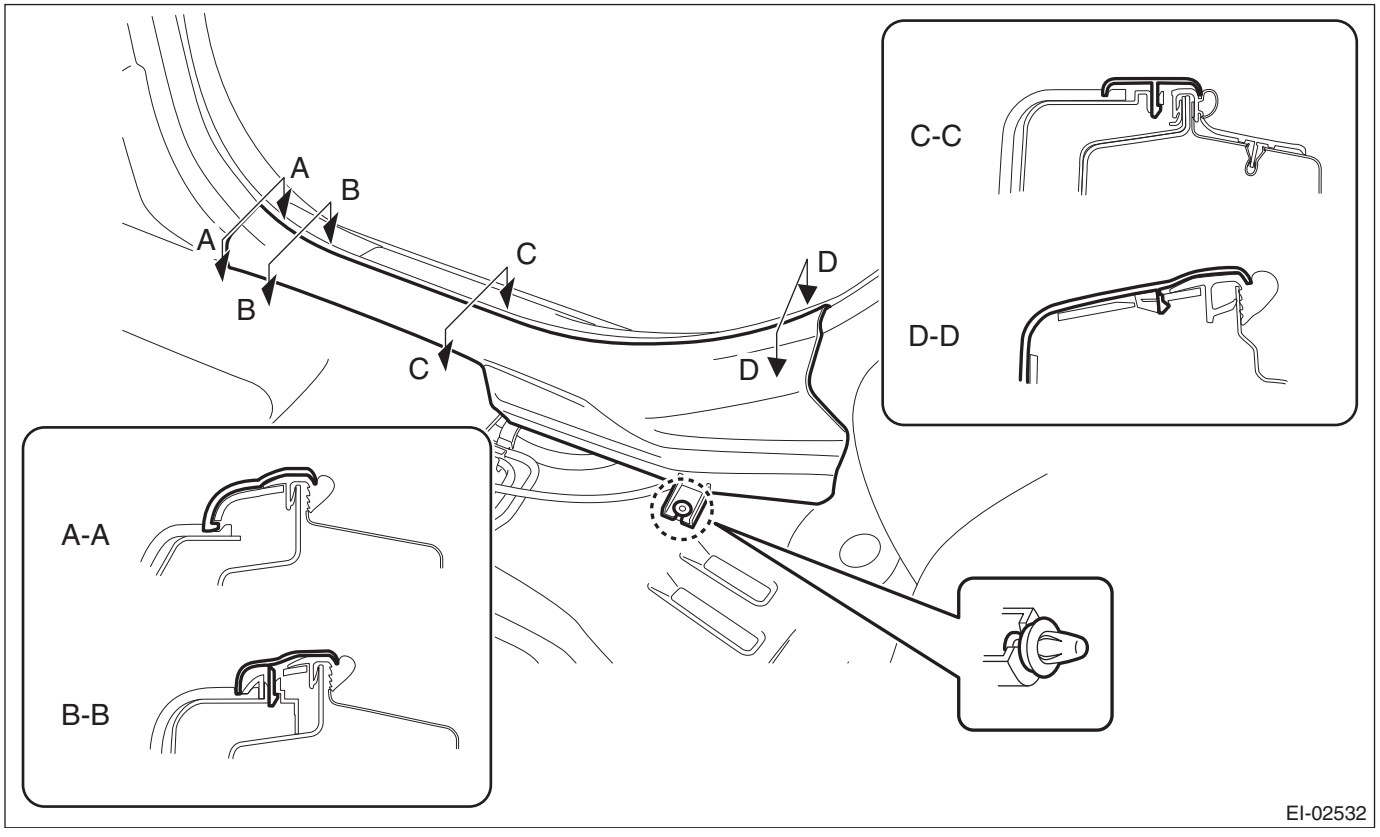

SE-00937


SE-01117

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



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



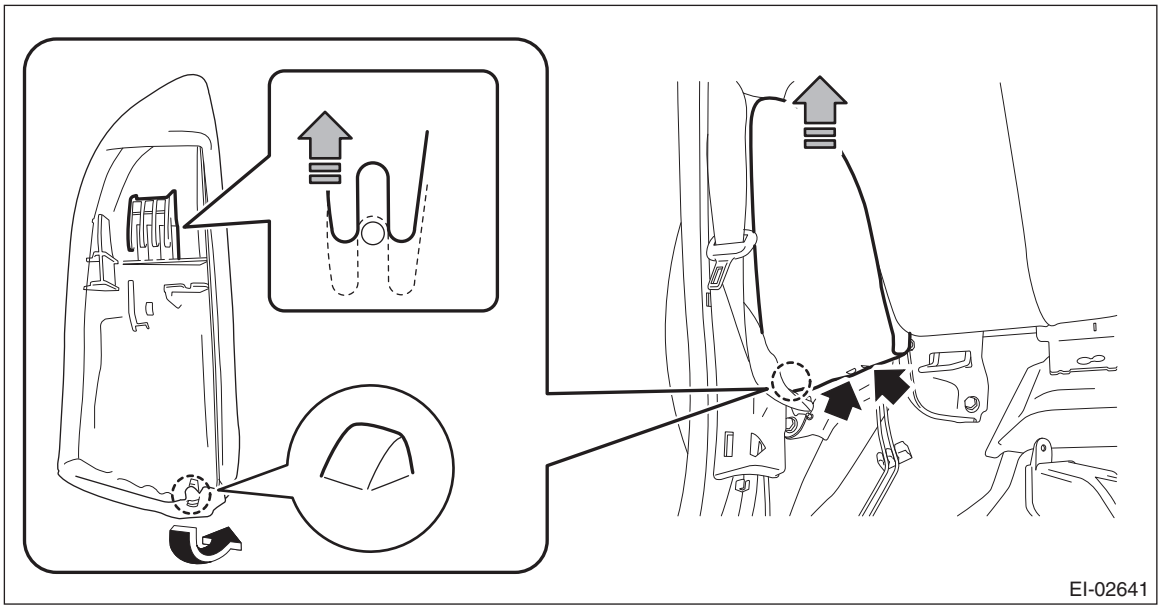
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claws (C) and (D) by accessing from behind the side sill cover INN.

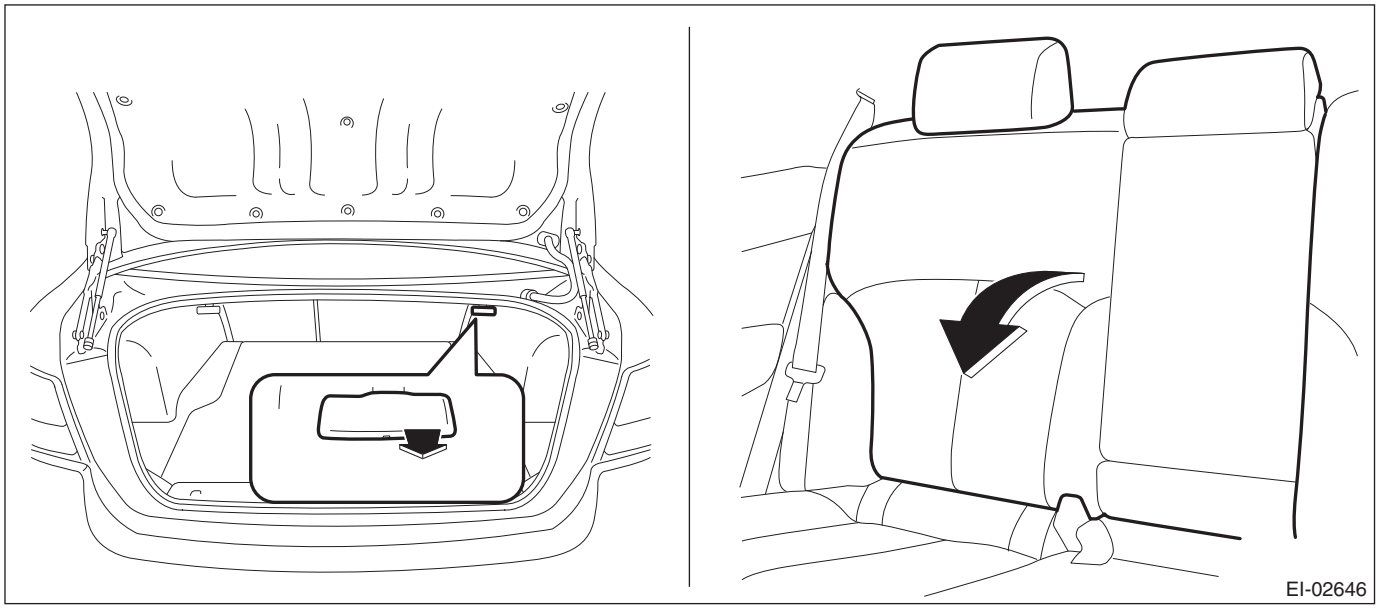
4) Remove the left and right rear quarter trim LWR.
(1) Remove the backrest side pad.
a) Remove the screws.

Preparation tool: Stubby screwdriver

b) Turn over the bottom end of the backrest side pad in the forward direction so that the claws are released.
c) Remove the backrest side pad by pulling it up.

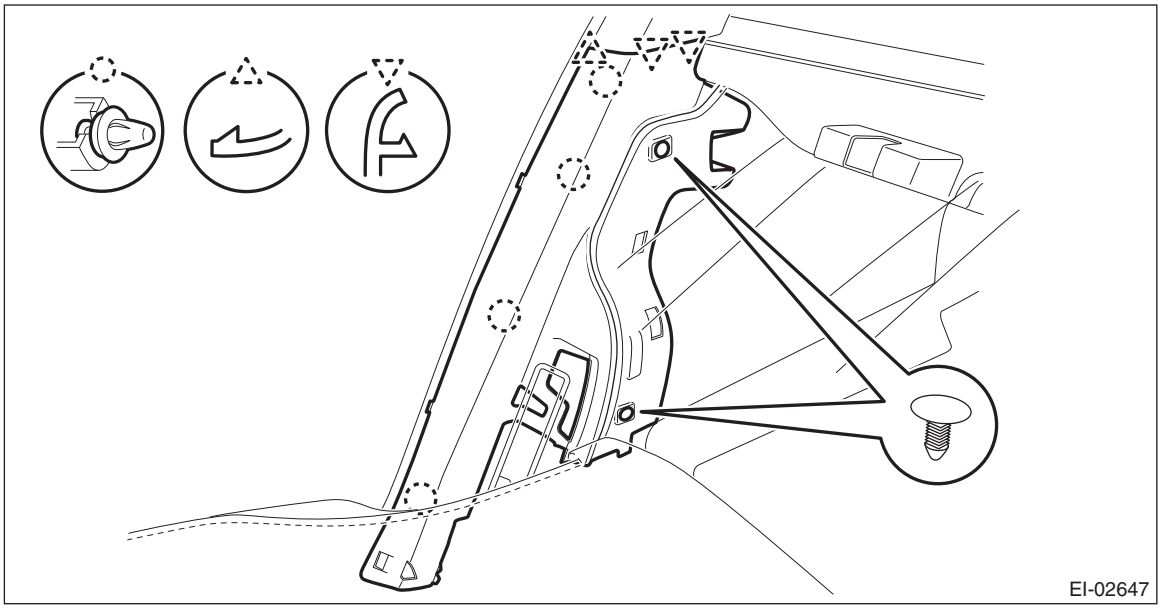


(2) Pull the release lever in the trunk room, and then tilt the backrest forward.

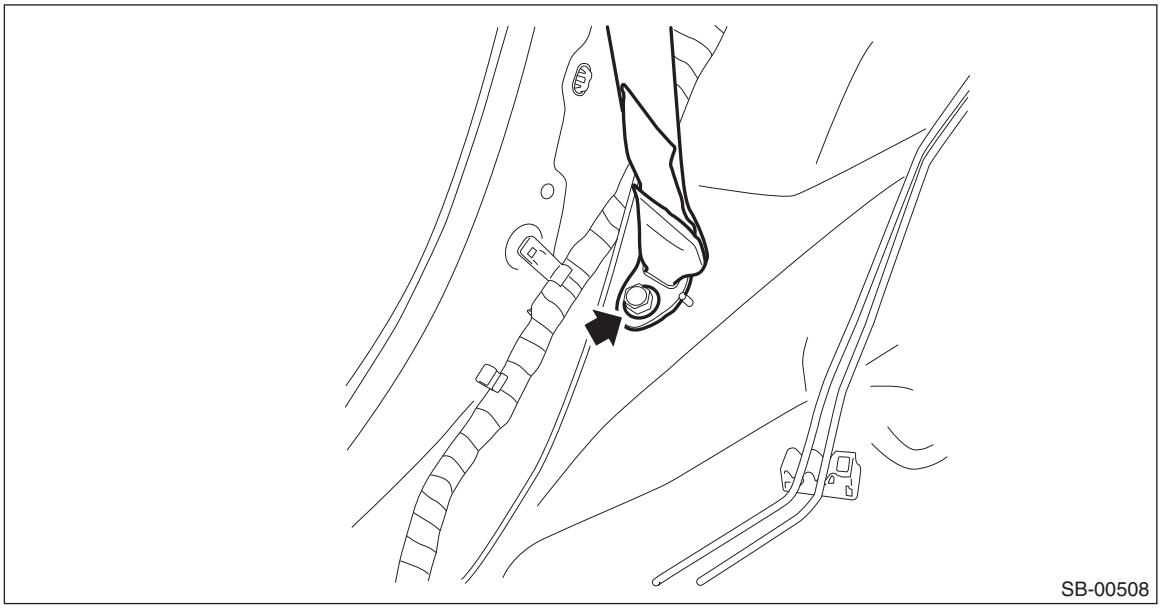


(3) Release the clips of the trunk trim panel assembly-side.

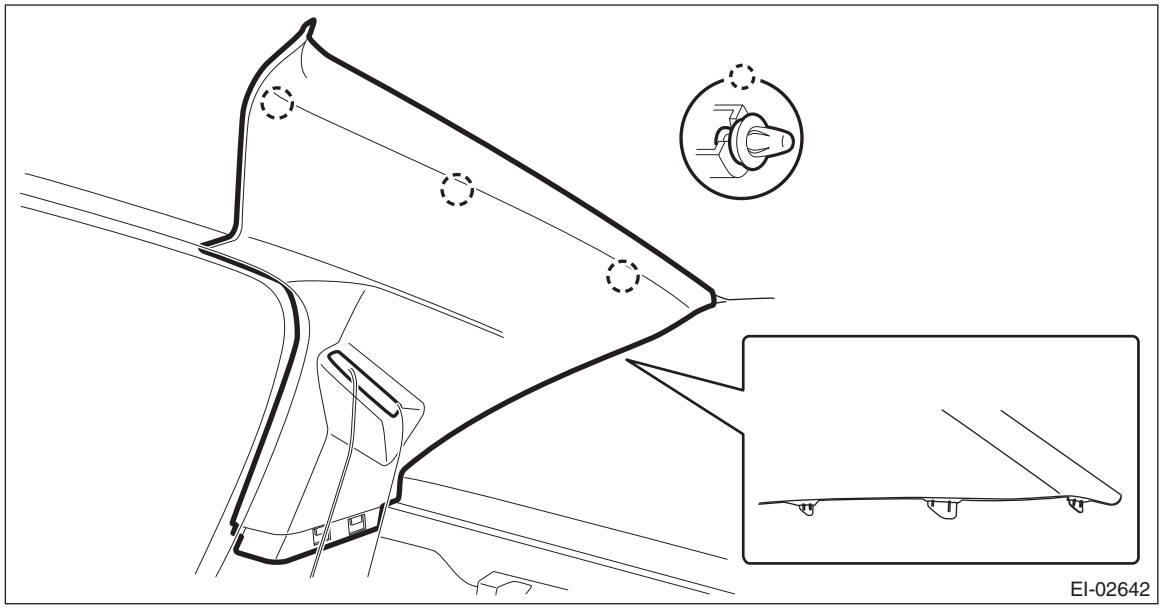
(4) Remove the clips, and remove the rear quarter trim LWR.



5) Remove the left and right rear quarter trim UPR.
(1) Remove the lower anchor bolt of the outer belt assembly.

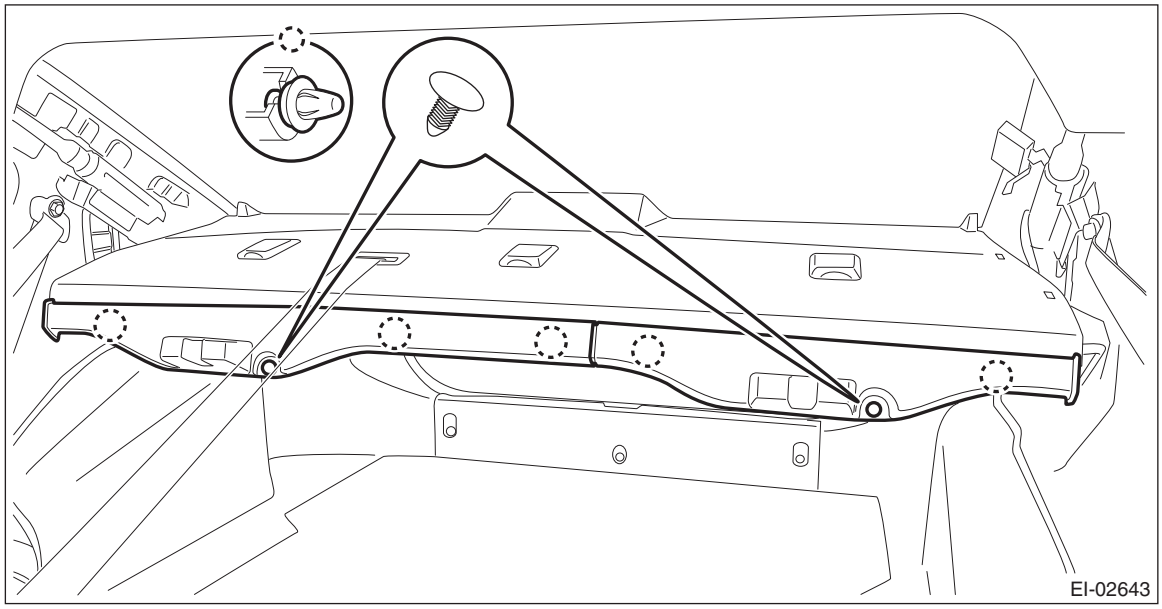


(2) Release the clips, and remove the rear quarter trim UPR.



(3) Pull out the seat belt and remove the rear quarter trim UPR.

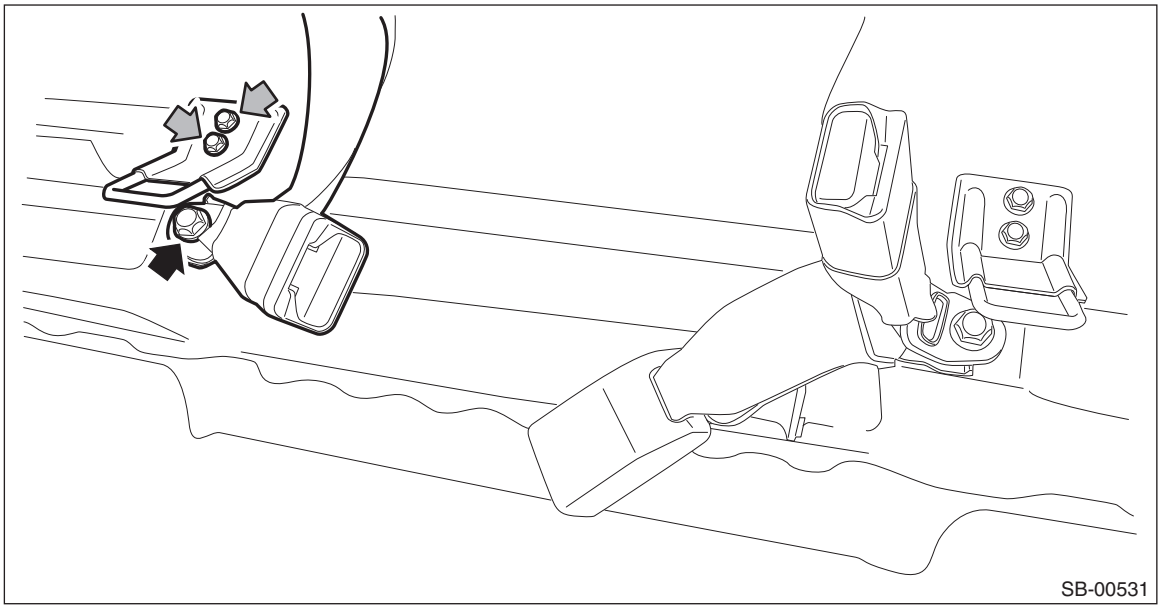
6) Release the clips and remove the left and right trunk trim panel assembly-front.



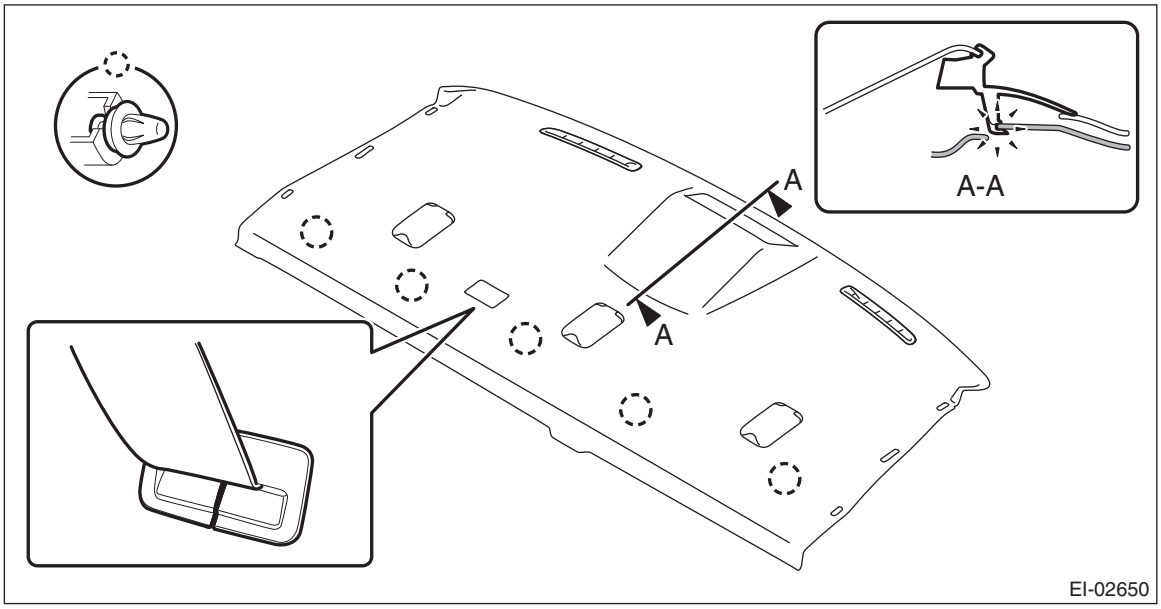
7) Remove the lower anchor of the shoulder belt assembly CTR.

(1) Remove the nuts and remove the ISO-FIX anchor.

(2) Remove the bolts, and remove the lower anchor of shoulder belt assembly CTR.



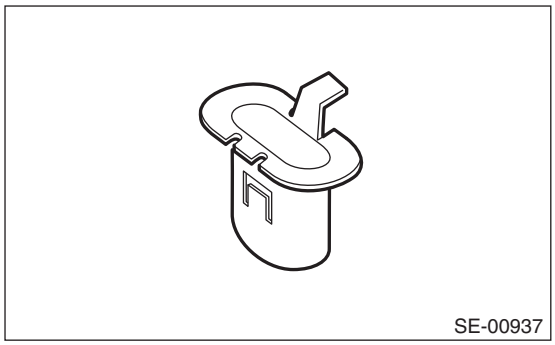
8) Remove the rear shelf panel assembly.
(1) Release the clips to float the rear shelf panel assembly.
(2) Release the belt guide and guide the anchor of rear center seat belt to behind the shelf panel.
(3) Disconnect the connector of high-mounted stop light.
(4) Remove the rear shelf panel assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

CAUTION:
- **Make sure to insert the claws on the back of high-mounted stop light into the rear shelf panel.**
- **If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.**



- **Make sure to insert the claws on the back of high-mounted stop light into the rear shelf panel.**

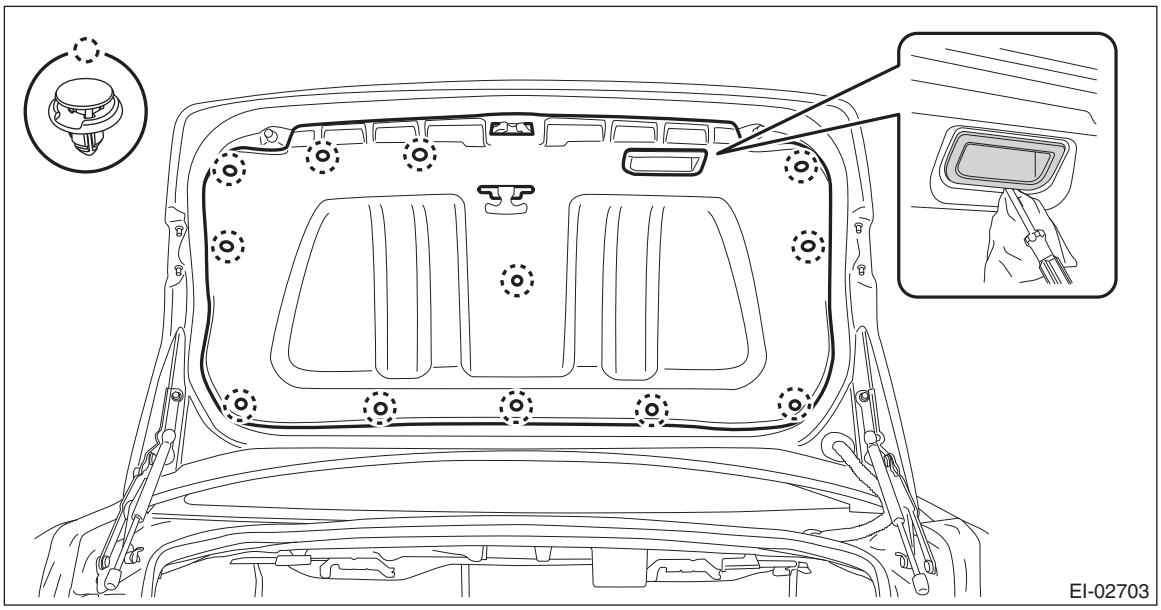
Tightening torque:
ISO-FIX anchor: 25 N·m (2.55 kgf-m, 18.4 ft-lb)
Rear seat belt:<Ref. to SB-3, REAR SEAT BELT (SEDAN MODEL), COMPONENT, General Description.>

24.Trunk Room Trim

A: REMOVAL

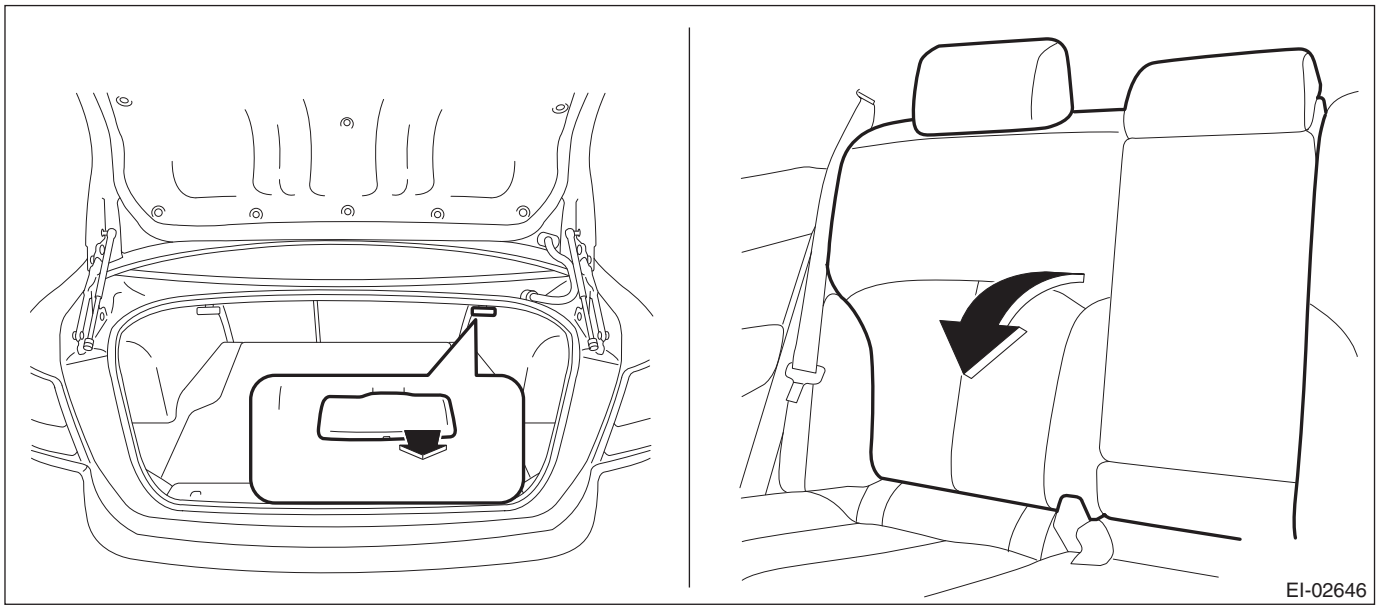
1. TRUNK LID TRIM

1) Open the trunk lid.
2) Remove the trunk handle.
3) Remove the clips and the trunk lid trim.



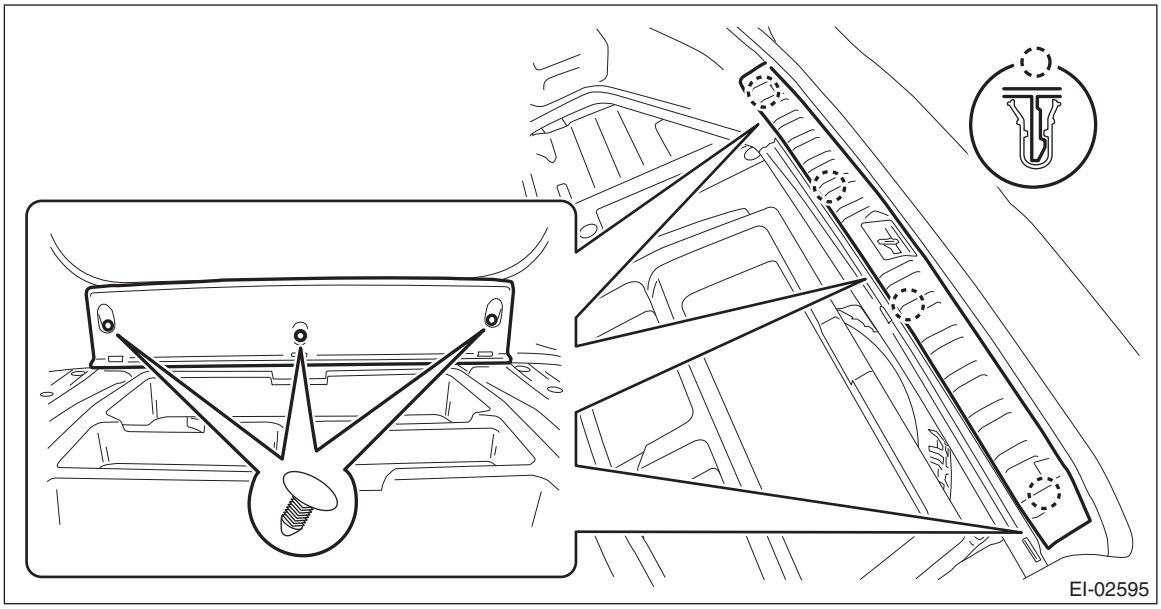
2. TRUNK ROOM TRIM

1) Pull the release lever in the trunk room, and then tilt the backrest forward.

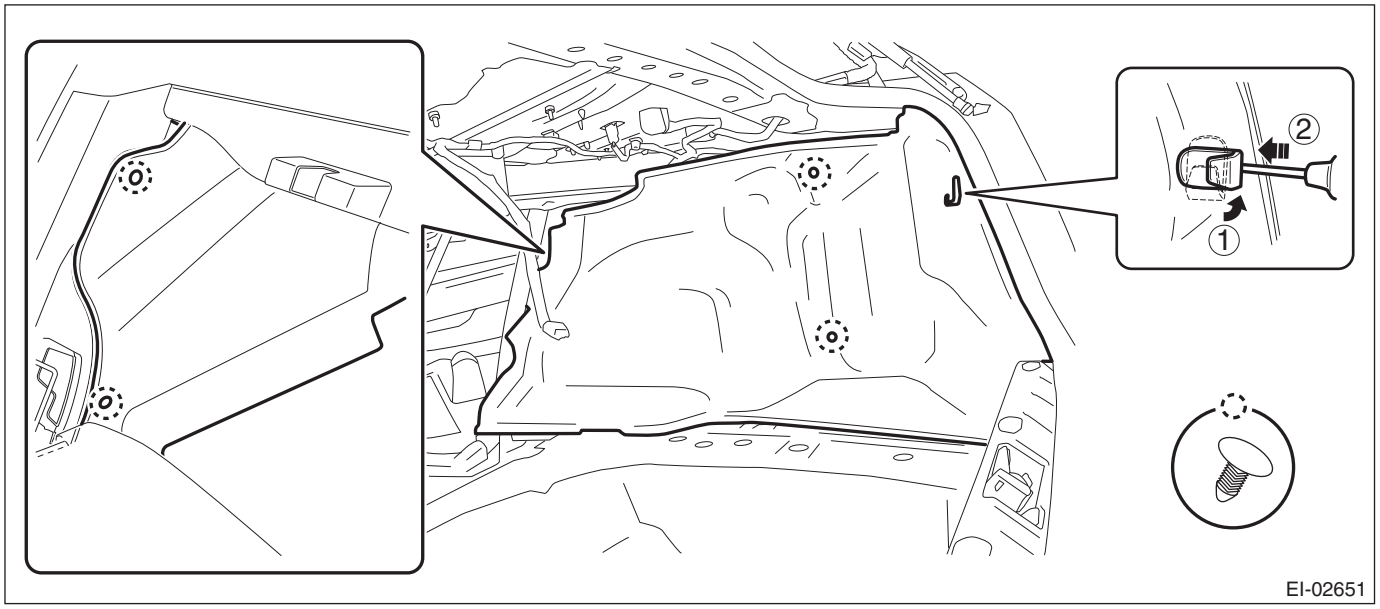


2) Remove the trunk room mat.
3) Remove the trunk trim assembly-rear.
   (1) Remove the clip.

(2) Release the claws, and remove the trunk trim assembly-rear.



4) Remove the trunk trim panel assembly-side.
   (1) Remove the hook.
      a) Turn the hook to 90°.
      b) Press the claw using a screwdriver to detach the hook.
   (2) Release the clips and remove the trunk trim panel assembly-side.



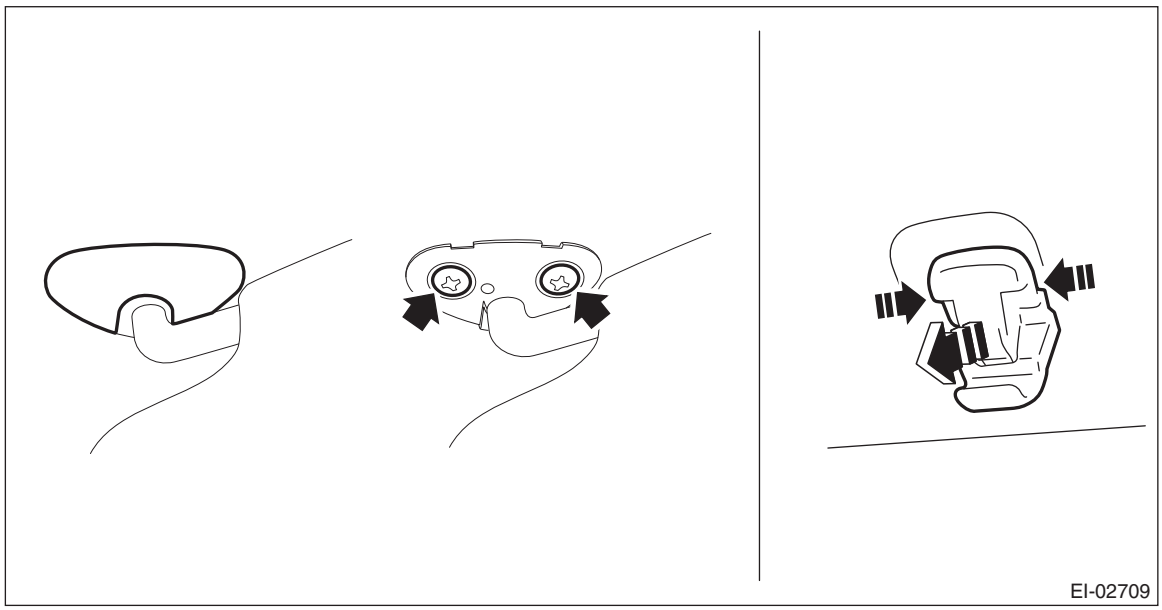
B: INSTALLATION

Install each part in the reverse order of removal.

25.Sun Visor

A: REMOVAL

1) Remove the cover, loosen the screws, and remove the sun visor assembly.
2) Remove the sun visor hook.
   (1) Press both sides using a flat tip screwdriver.
   (2) Remove the sun visor hook by pulling toward you.



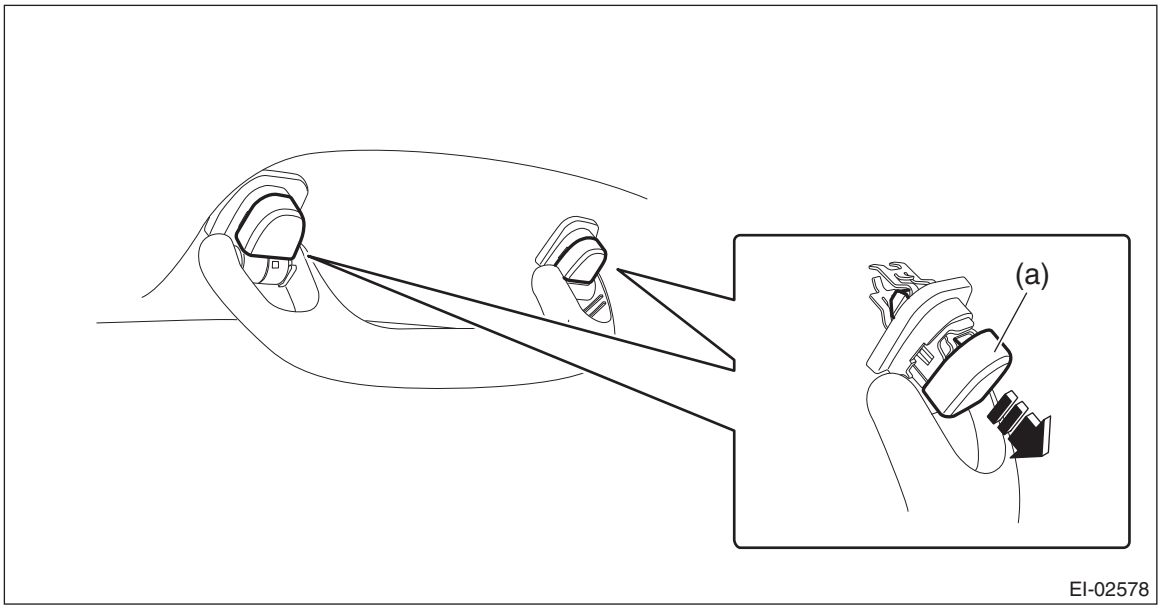
B: INSTALLATION

Install each part in the reverse order of removal.

26.Assist Grip

A: REMOVAL

Remove the assist grip assembly.
1) Remove the cap (a).
2) Pull the assist grip toward you (to the vehicle center) and remove the metal clip from the bracket.



B: INSTALLATION

Install each part in the reverse order of removal.

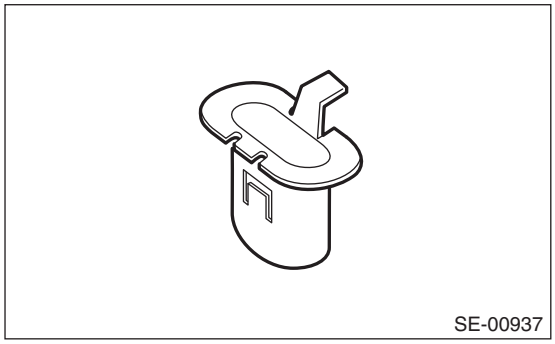
27.Roof Trim

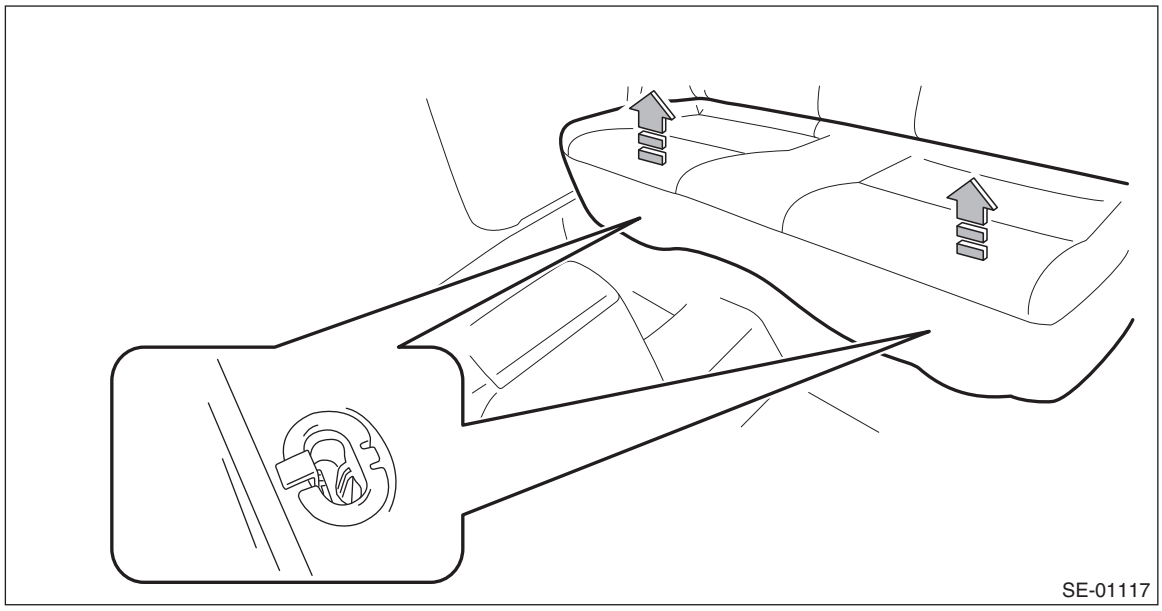
A: REMOVAL

1. SEDAN MODEL

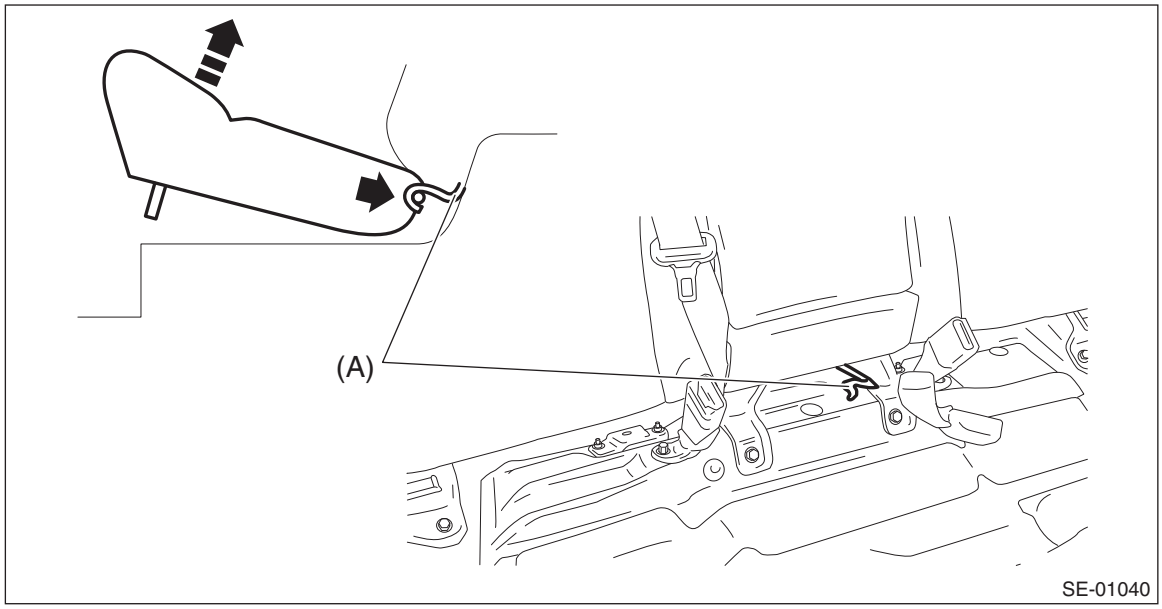
1) Remove the rear seat cushion assembly.
   (1) Pull up the seat cushion and release the hook.

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.

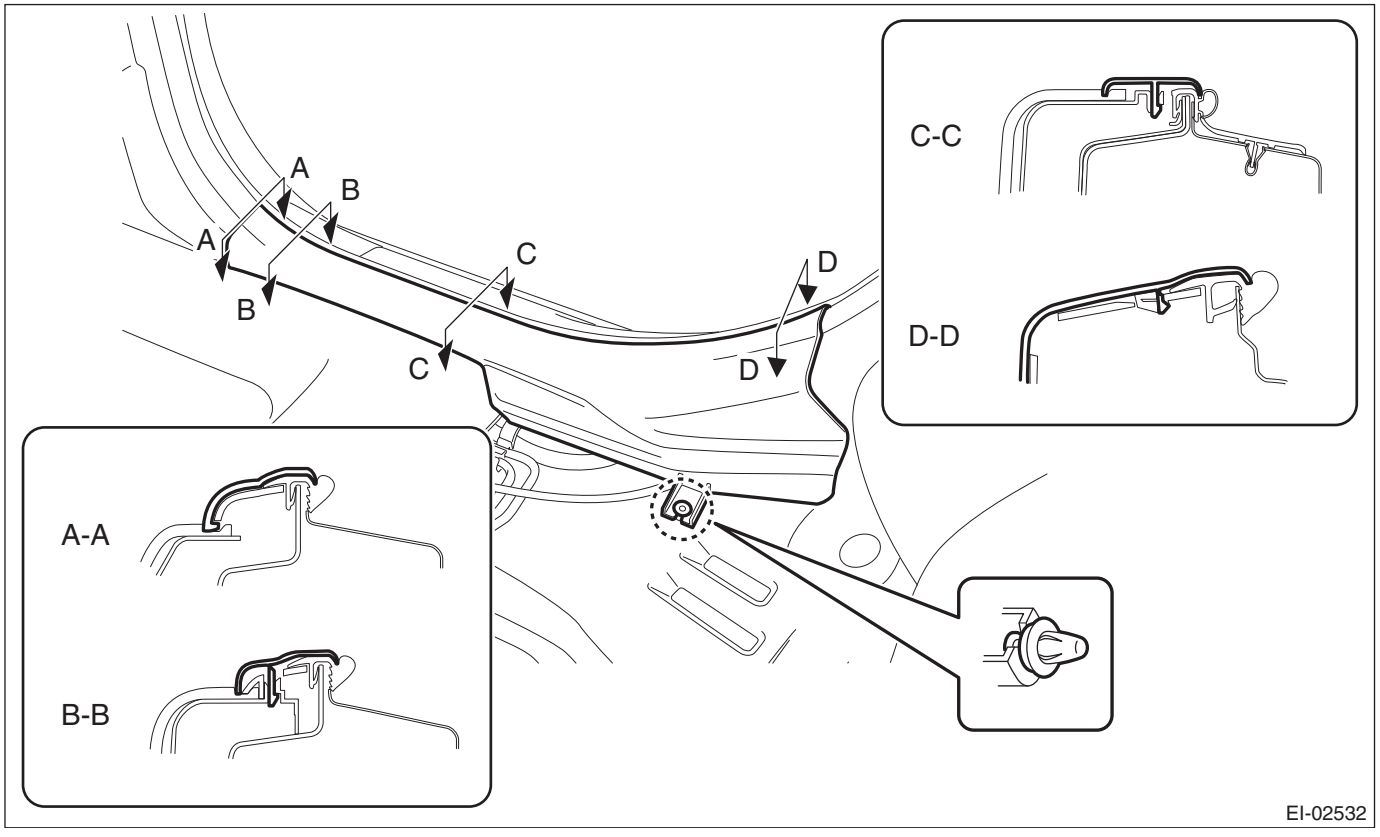

SE-00937


SE-01117

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



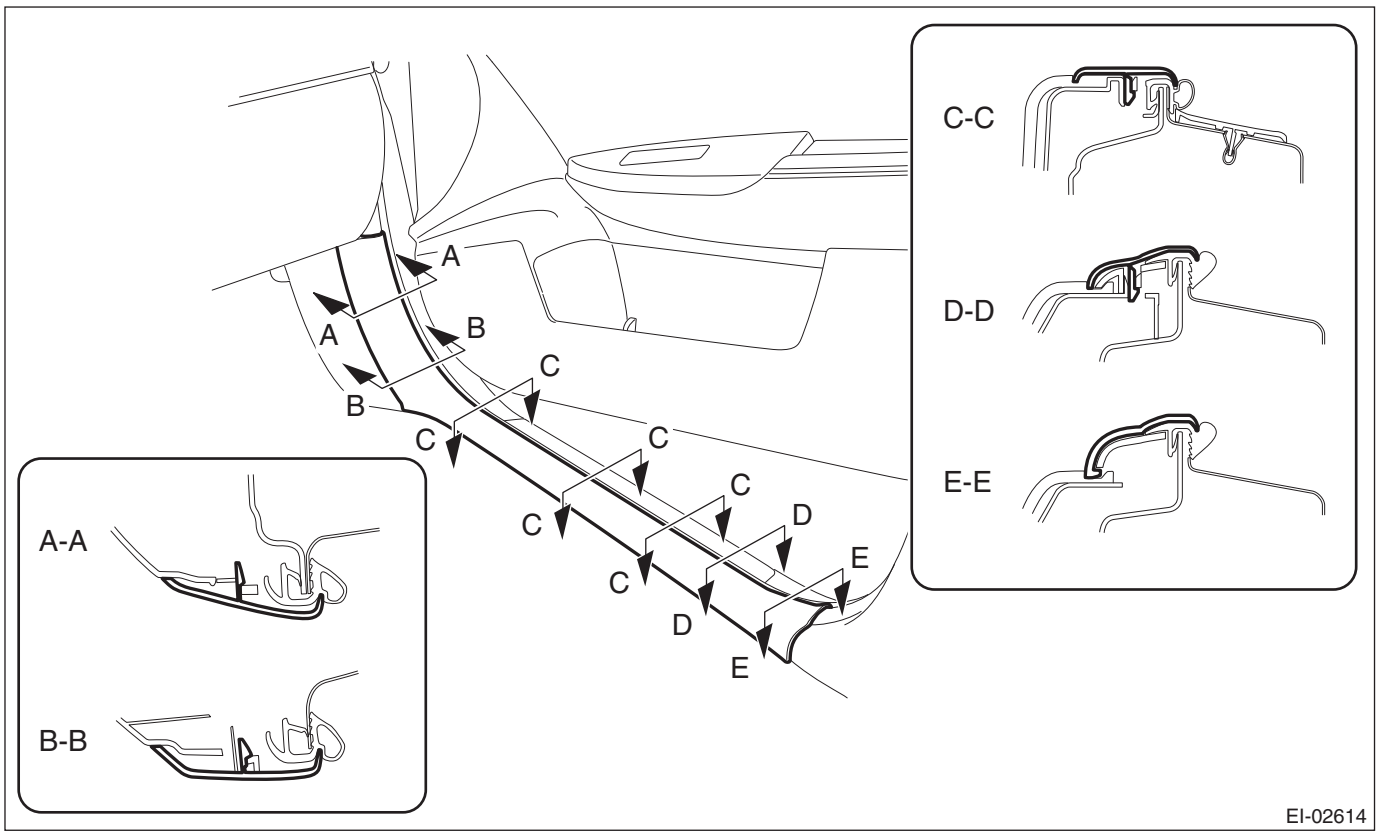
2) Release the clips and claws, and then remove the left and right side sill covers-rear INN.



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

NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claws (C) and (D) by accessing from behind the side sill cover INN.

3) Release the claws, and then remove the left and right side sill cover-front INN.

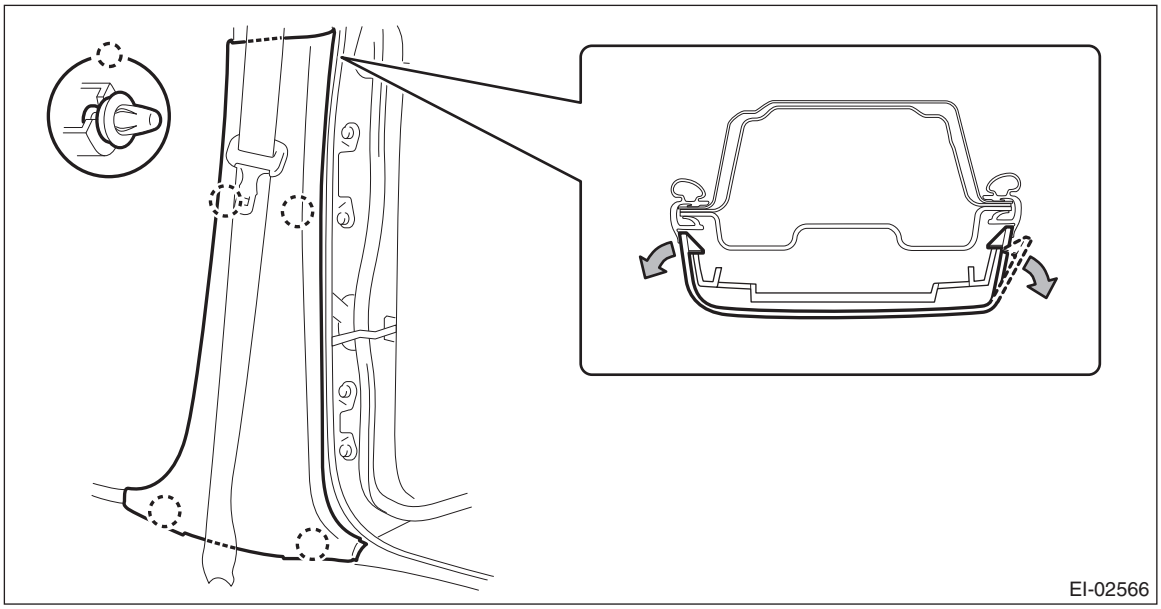


CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claw (C) by accessing from behind the side sill cover INN.

4) Remove the left and right center pillar trim LWR.
   (1) Release the clip by pulling the center pillar trim LWR toward you.
   (2) Expand the claws of center pillar trim LWR outward and remove it from the center pillar trim UPR.

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

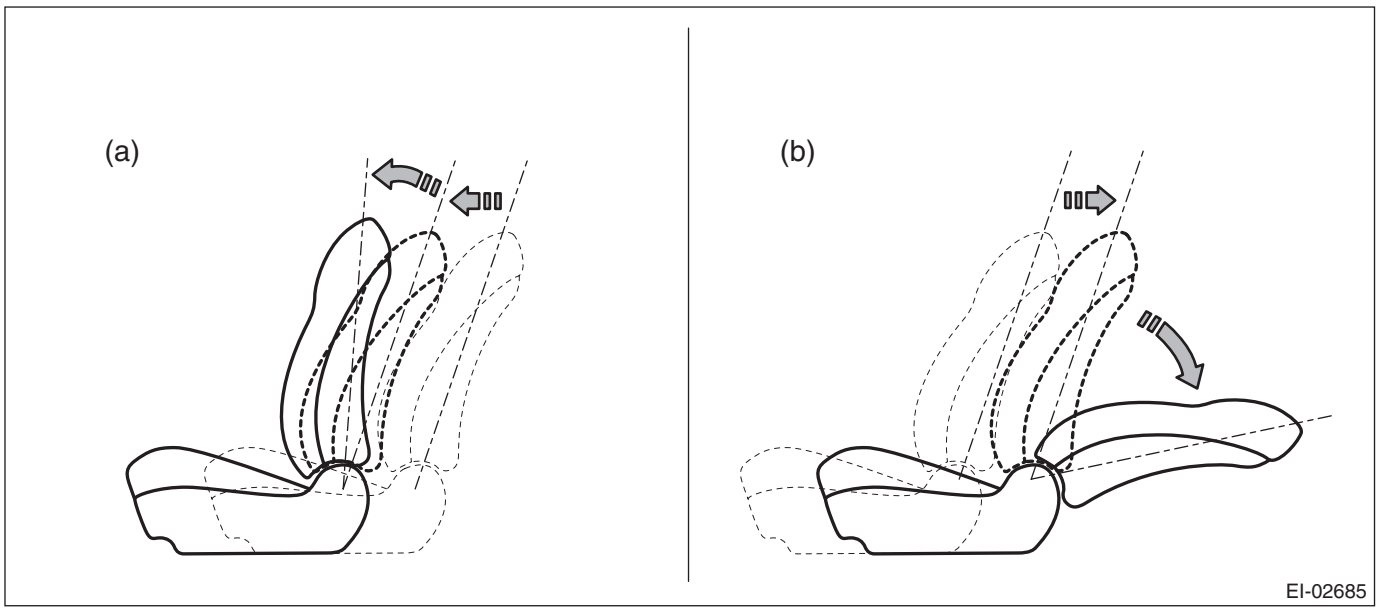


NOTE:
First release the claw located to the rear of the vehicle.
5) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

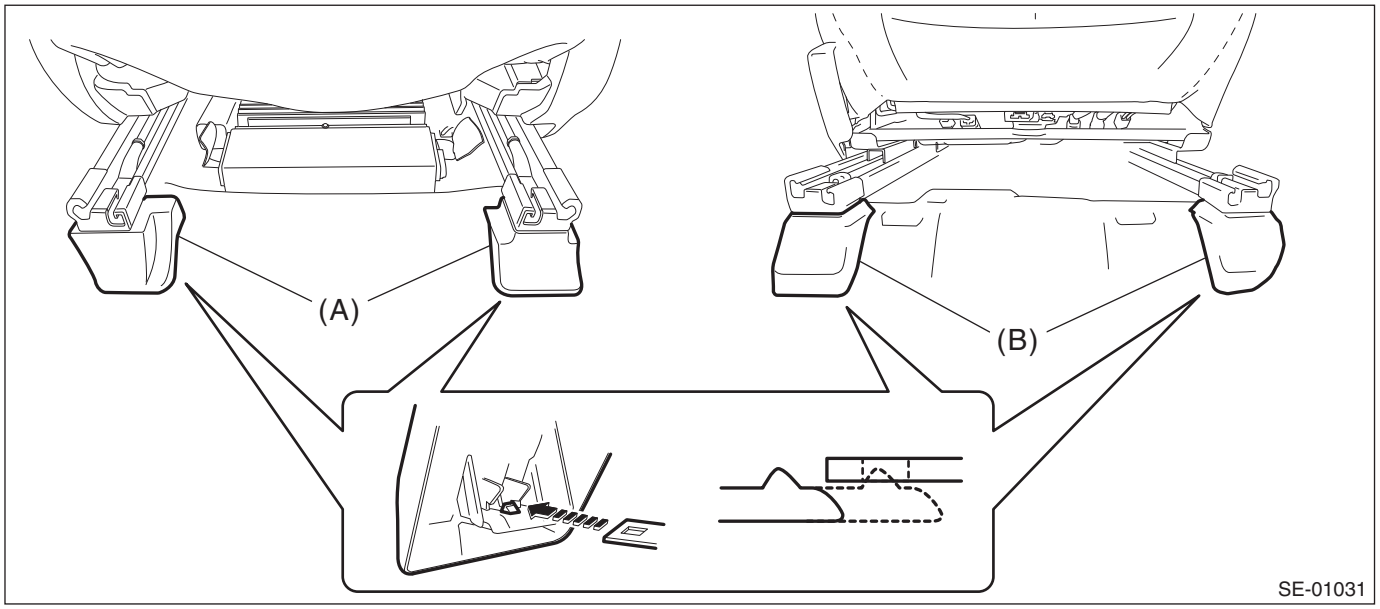
CAUTION:
The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds before starting the service of airbag system.

NOTE:
For the power seat, adjust the front seat position before removing the battery ground.
6) Adjust the front seat position.
   (1) Remove the driver's seat and passenger's seat headrests.
   (2) Tilt the driver's seat backrest forward and move the seat to the front most position. (a)

(3) Tilt the passenger's seat backrest rearward and move the seat to the rearmost position. (b)



7) Remove the front seats.
(1) Remove the bolts from the slide rail.
a) Tilt the backrest forward and move the seat to the front most position.
b) Remove the rear bolt cover (A) and remove the two bolts.
c) Move the seat to the rearmost position.
d) Remove the front bolt cover (B) and remove the two bolts.



(2) Disconnect the connector under the seat.

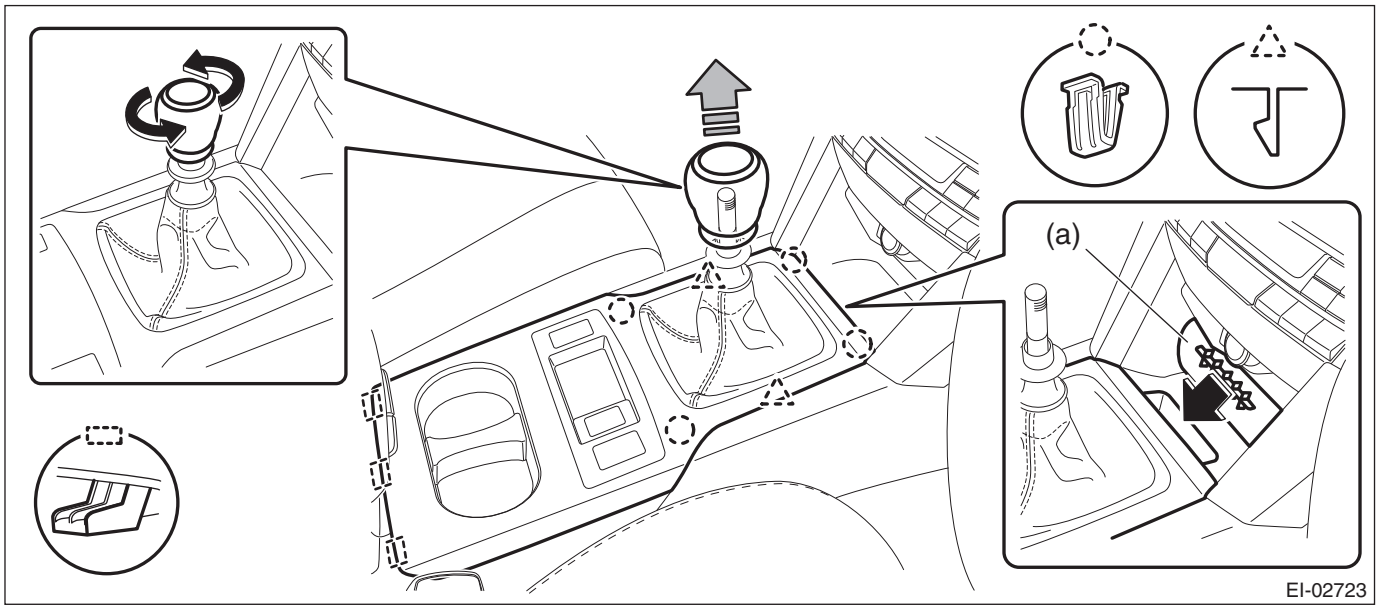
CAUTION:
Disconnect the ground cable from battery, and wait 60 seconds before disconnecting the connector.
- Seat belt warning light connector (driver's seat)
- Occupant detection system harness connector (passenger's seat)
- Side airbag connector
- Seat heater connector (model with seat heater)
- Power seat connector (model with power seats)

(3) Take out the front seat from the vehicle.

CAUTION:
Be careful not to damage the body.

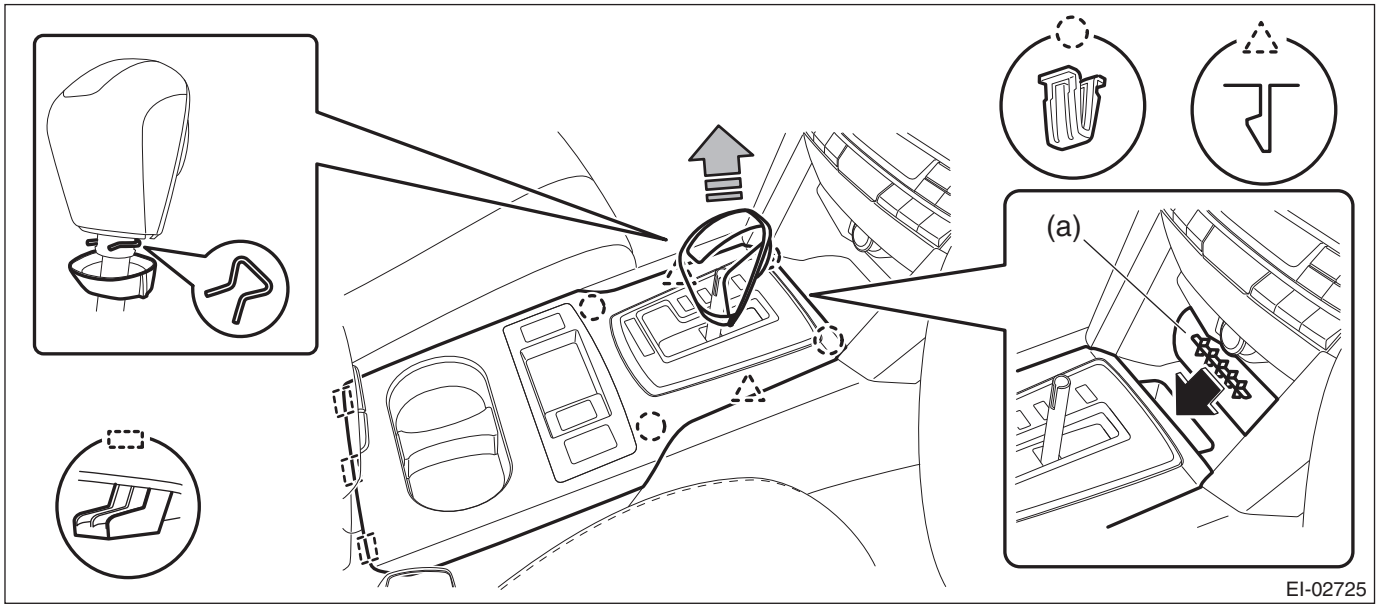
8) Cover the following areas to protect from damage.
- Steering wheel
- Instrument panel surface
- Glove box surface

9) Remove the console front cover assembly.
- MT model
  1. Remove the shift knob.
  2. Release the clips and claws, then pull up the console front cover assembly.



NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

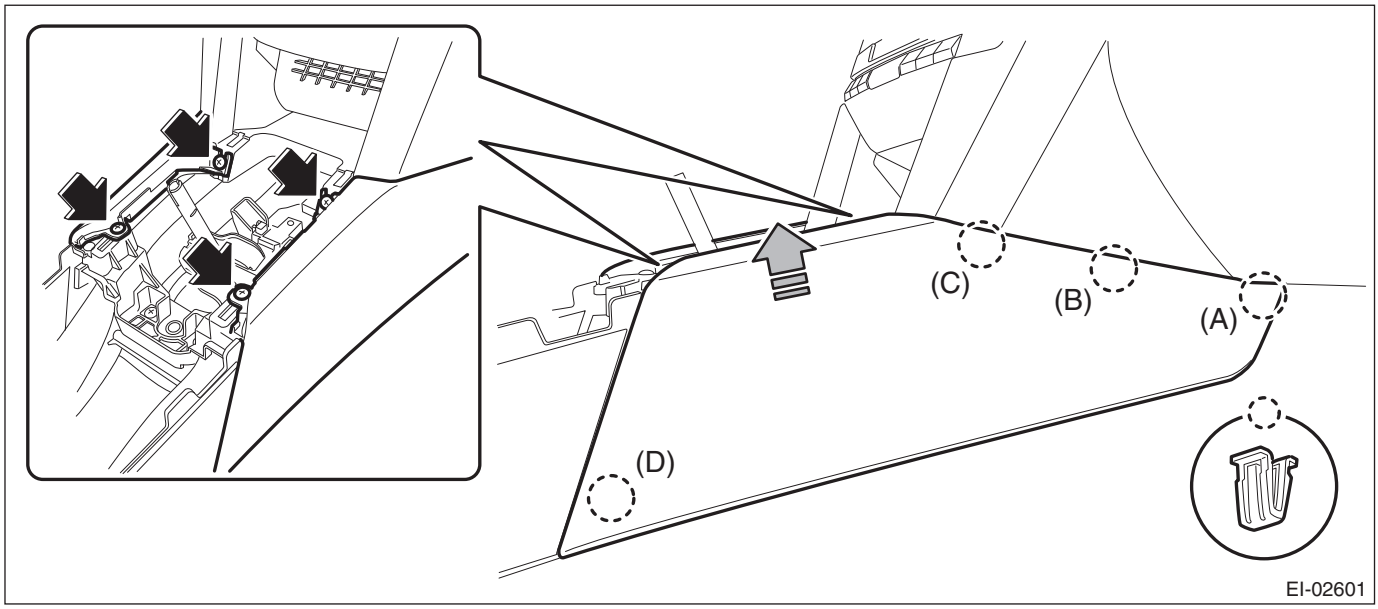
  3. Disconnect the harness connector and remove the console front cover assembly.
- AT model
  1. Remove the select lever knob.
     a. Lower the cover grip AT.
     b. Remove the clamp grip pin, then remove the select lever knob.
  2. Release the clips and claws, then pull up the console front cover assembly.



NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

3. Disconnect the harness connector and remove the console front cover assembly.

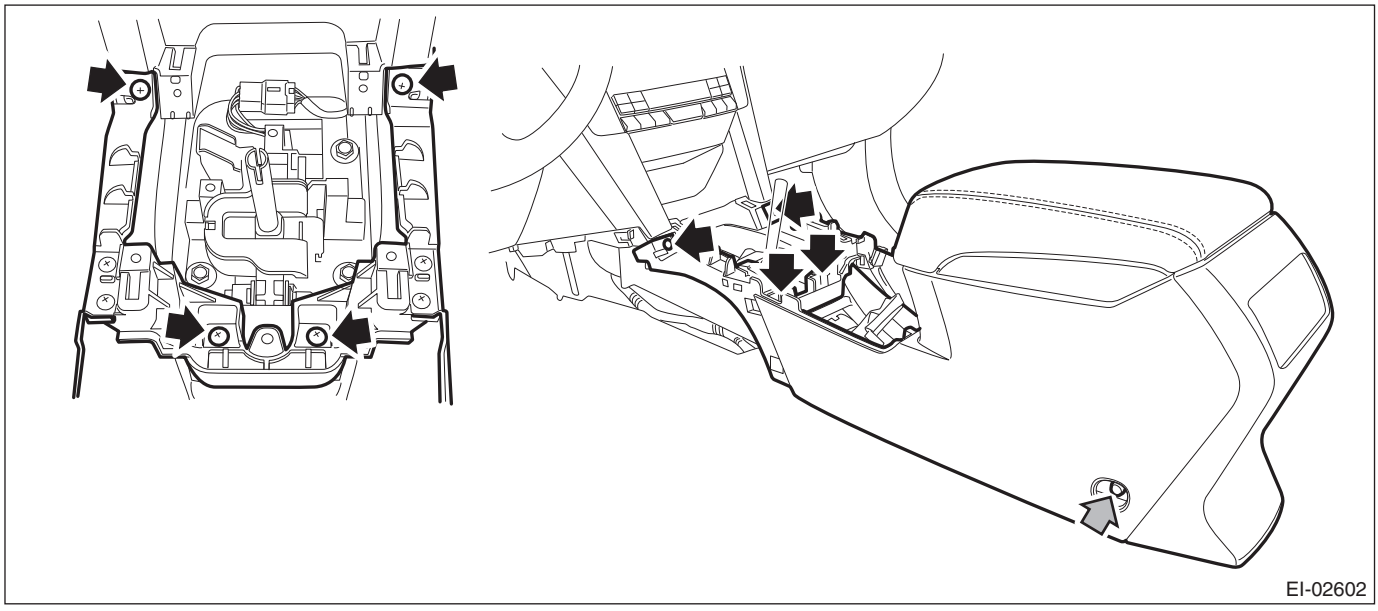
10) Remove the left and right console front side cover assembly.
(1) Remove the screws and release the clips (A) to (D) in order.
(2) Remove the console front side cover assembly by pulling it up.



11) Remove the console box assembly.
(1) Move the seat, and remove the bolts after detaching the left and right caps.

NOTE:
For a model with power seat, connect the battery ground cable and move the seat. Then, disconnect the battery ground cable again and wait for 60 seconds at least before restarting the work.

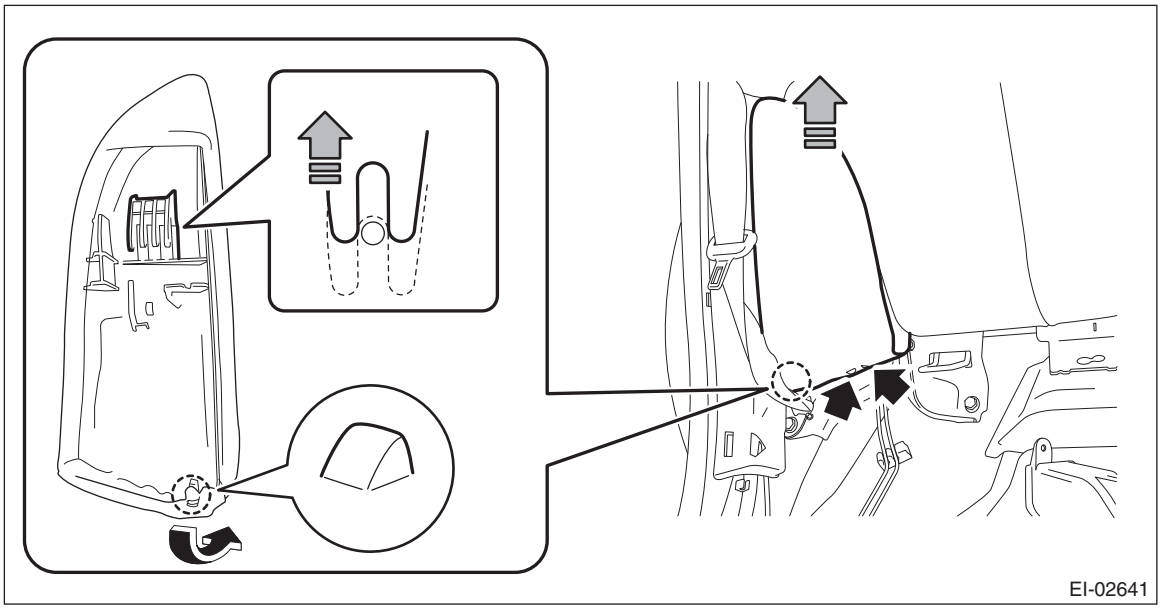
(2) Remove the screws, disconnect the harness connector and remove the console box assembly.



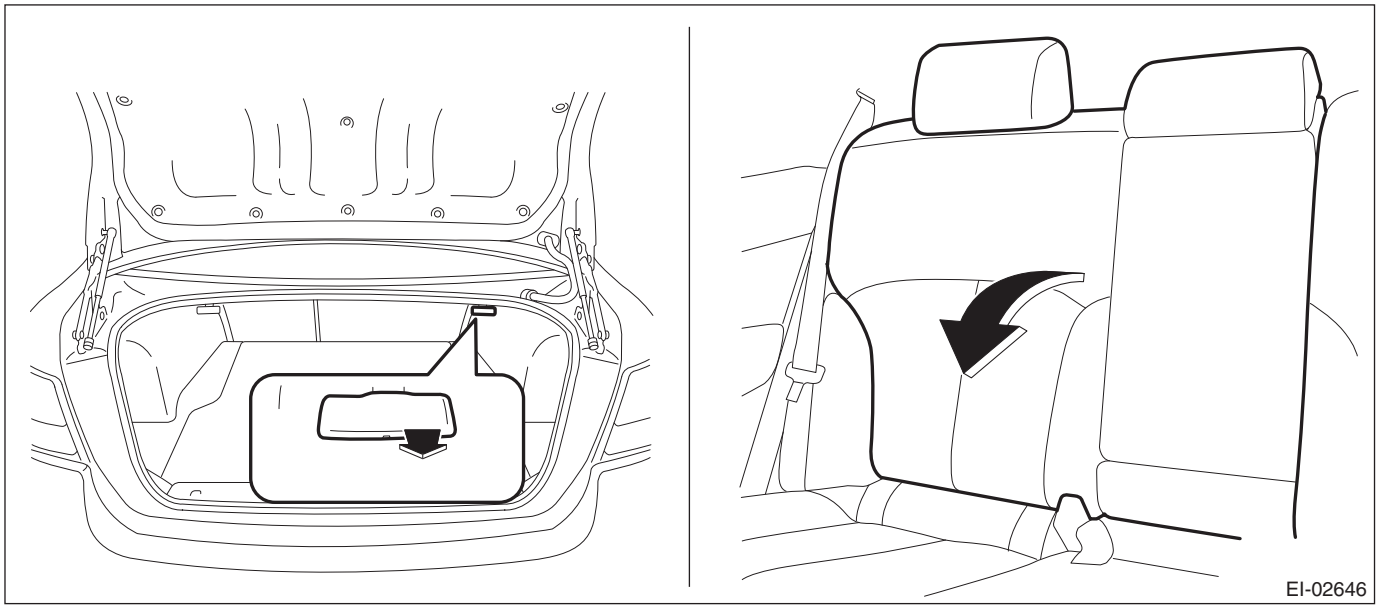
12) Remove the left and right rear quarter trim LWR.
(1) Remove the backrest side pad.
a) Remove the screws.

Preparation tool: Stubby screwdriver

b) Turn over the bottom end of the backrest side pad in the forward direction so that the claws are released.
c) Remove the backrest side pad by pulling it up.

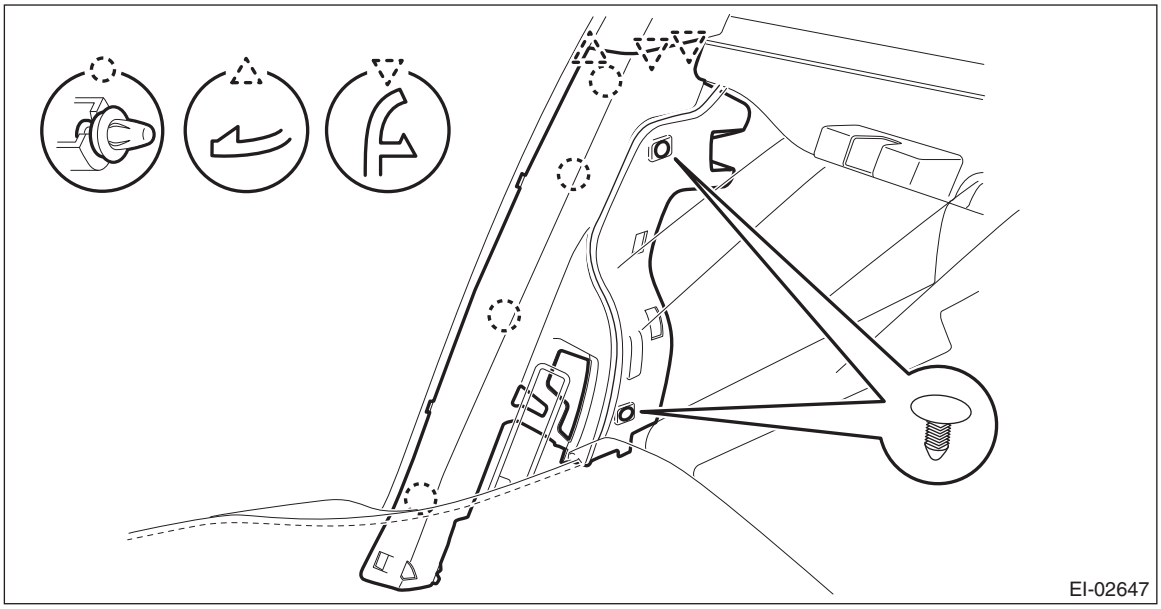

EI-02641

(2) Pull the release lever in the trunk room, and then tilt the backrest forward.

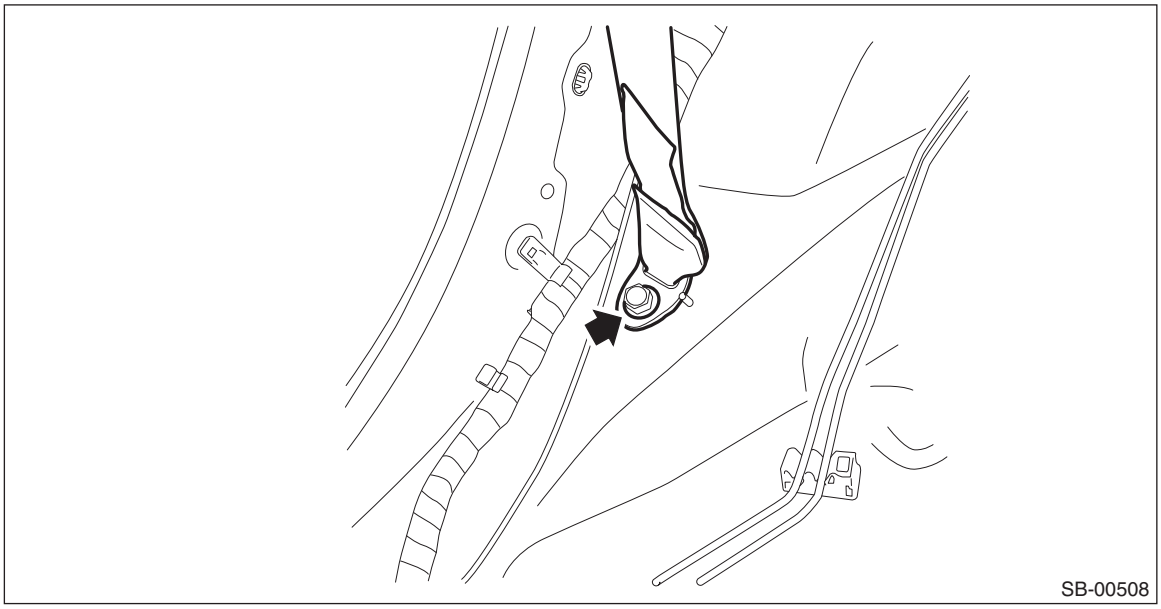

EI-02646

(3) Release the clips of the trunk trim panel assembly-side.

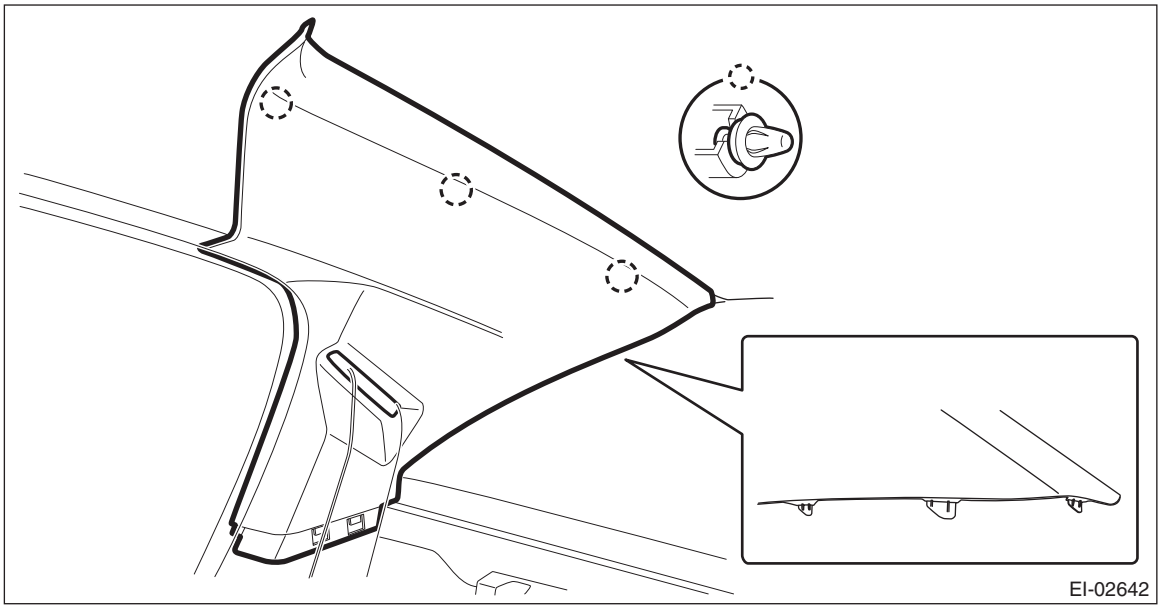
(4) Remove the clips, and remove the rear quarter trim LWR.



13) Remove the left and right rear quarter trim UPR.
(1) Remove the lower anchor bolt of the outer belt assembly.



(2) Release the clips, and remove the rear quarter trim UPR.



(3) Pull out the seat belt and remove the rear quarter trim UPR.

14) Remove the left and right front pillar trims.

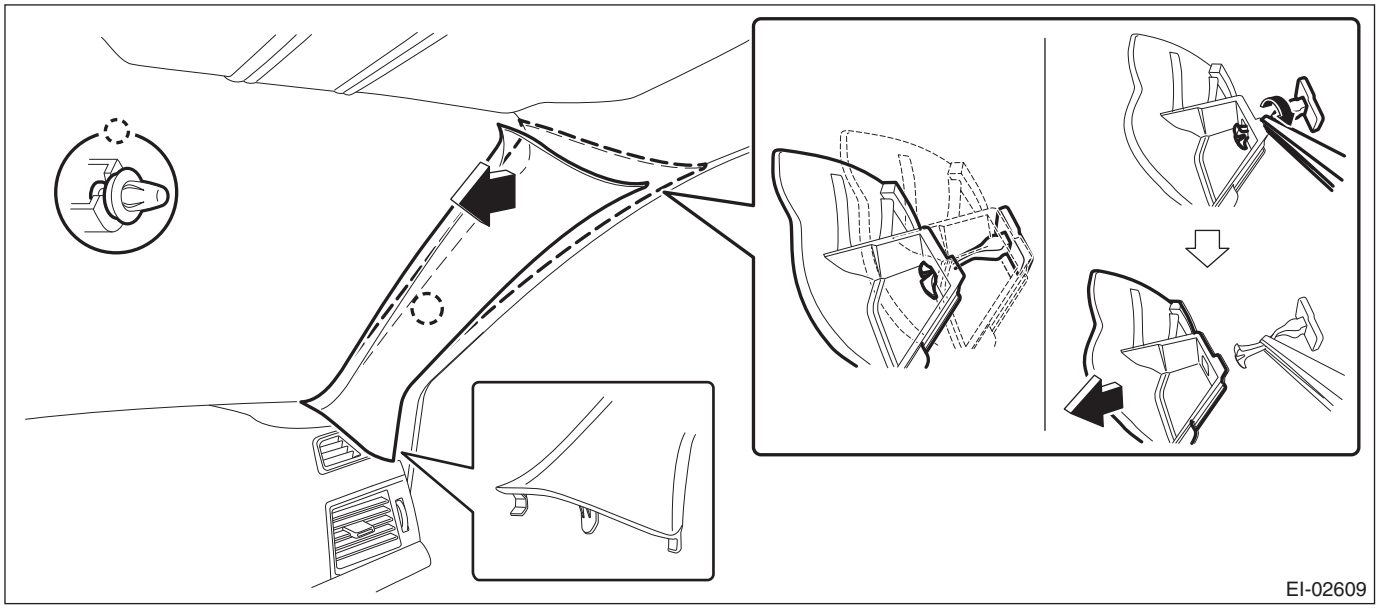
(1) Pull the upper part of the front pillar trim towards the center of the vehicle.

(2) Insert long-nose pliers into the top part of the trim, grip the clip with the pliers and twist 90° in that position.

CAUTION:
Be careful not to damage the pillar trim surface and curtain airbag module when inserting the pliers.

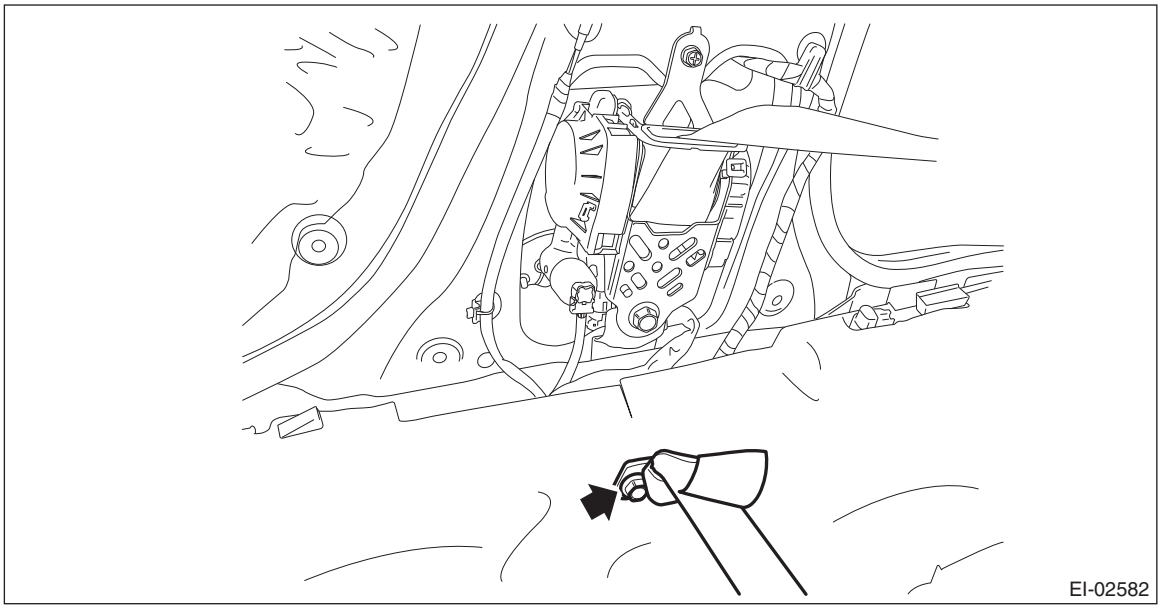
(3) Holding the clip twisted as in the previous step, remove the front pillar trim from the clip.

(4) Remove the clip and the front pillar trim.



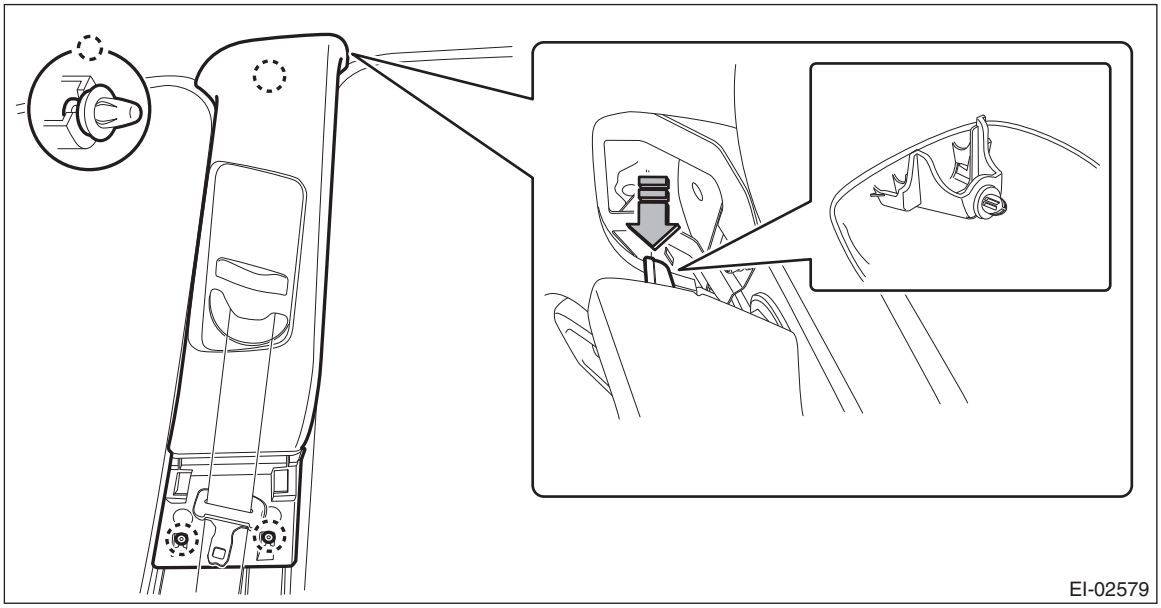
15) Remove the center pillar trim UPR.

(1) Remove the seat belt lower anchor bolt.



NOTE:
On passenger's side, disconnect the connector of the seat belt tension sensor.

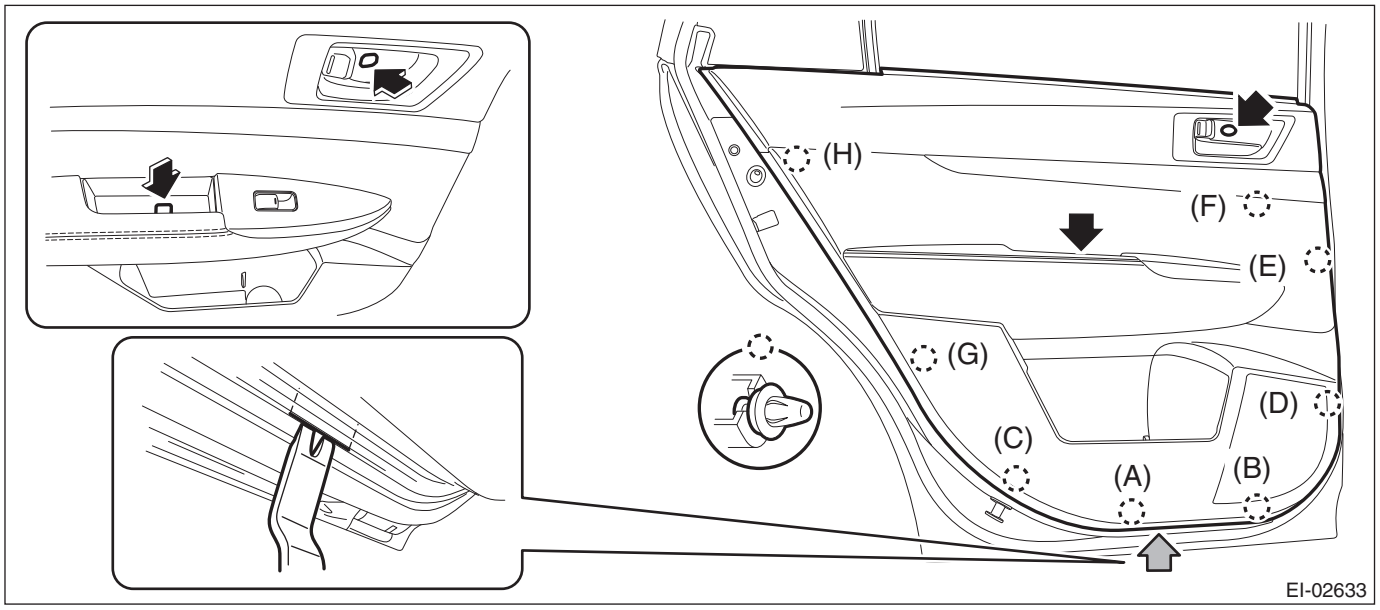
(2) Release the clip by pulling the center pillar trim UPR toward you.
(3) Remove the center pillar trim UPR by lowering the entire trim.



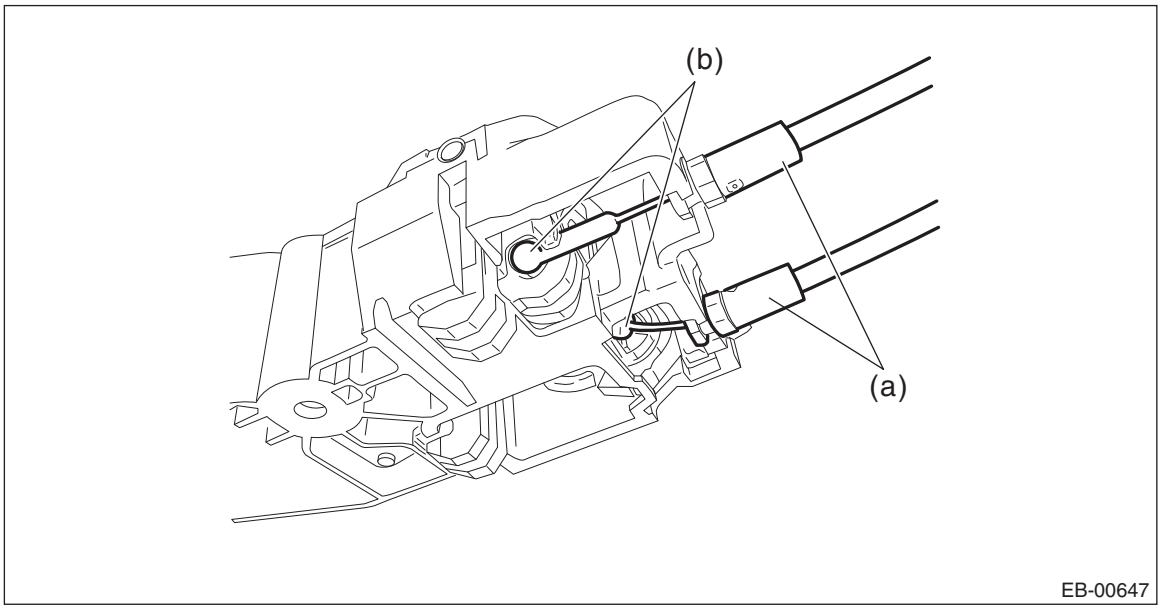
(4) Pull out the seat belt and remove the center pillar trim UPR.

16) Remove the rear door trim assembly on driver's side.
(1) Open the cover and remove the screw.
(2) Remove the clips in the order of (A) to (H) and remove the door trim from the door panel.

CAUTION:
When removing the door trim, be sure to remove the clips in the correct order. Forcibly removing clips may damage the door panel assembly.

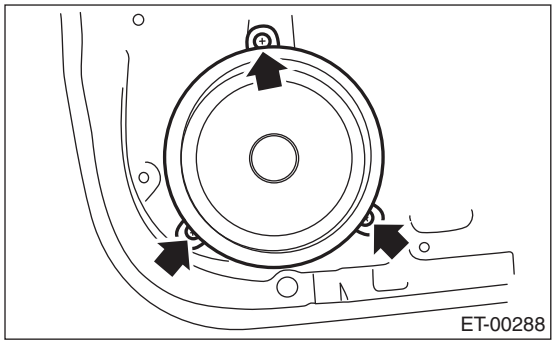


NOTE:
Insert a plastic clip remover into the slit at the bottom edge of the door trim and lift the door trim.
(3) Remove the cables (a) and (b) from the cable holder of inner remote.

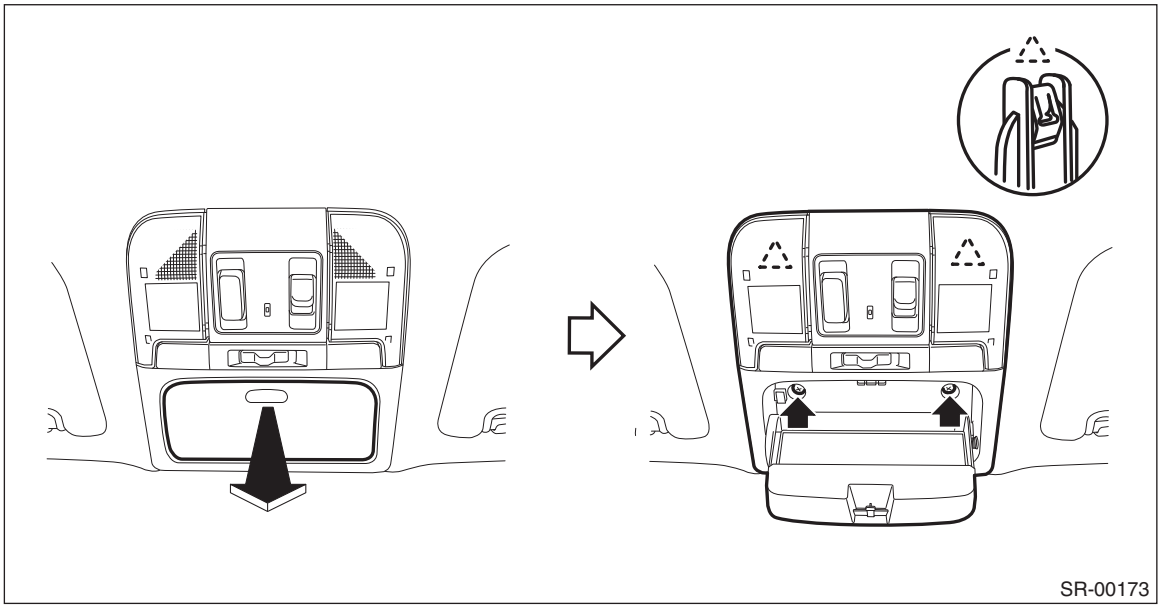


(4) Disconnect the harness connector and remove the door trim.
17) Remove the rear speaker assembly on driver's side.
(1) Remove the screws.

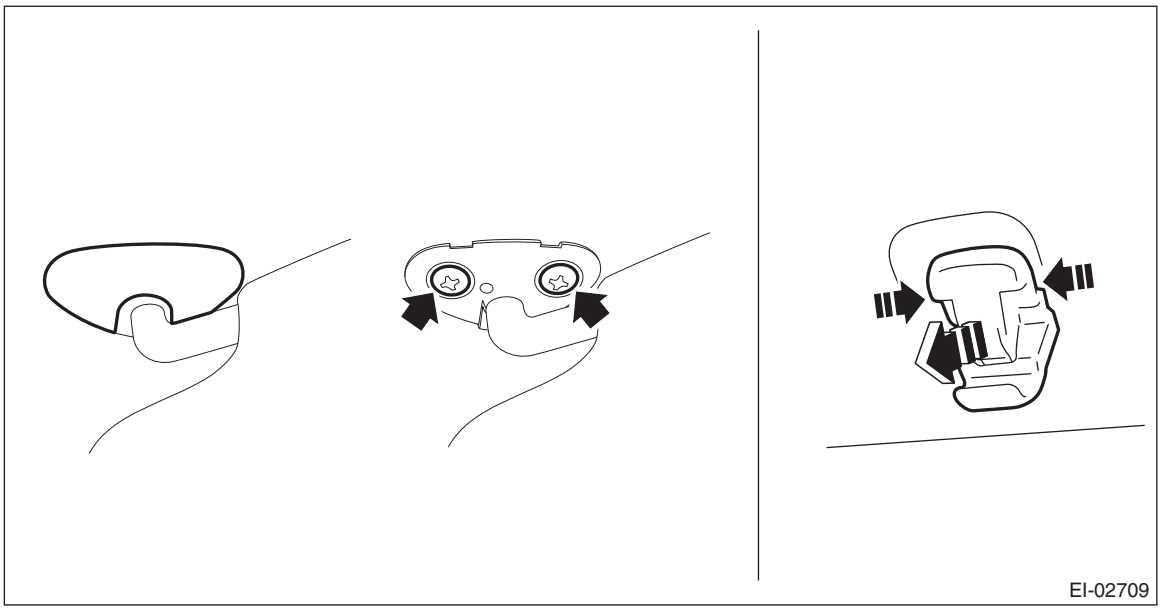
(2) Disconnect the harness connector and remove the rear door speaker.



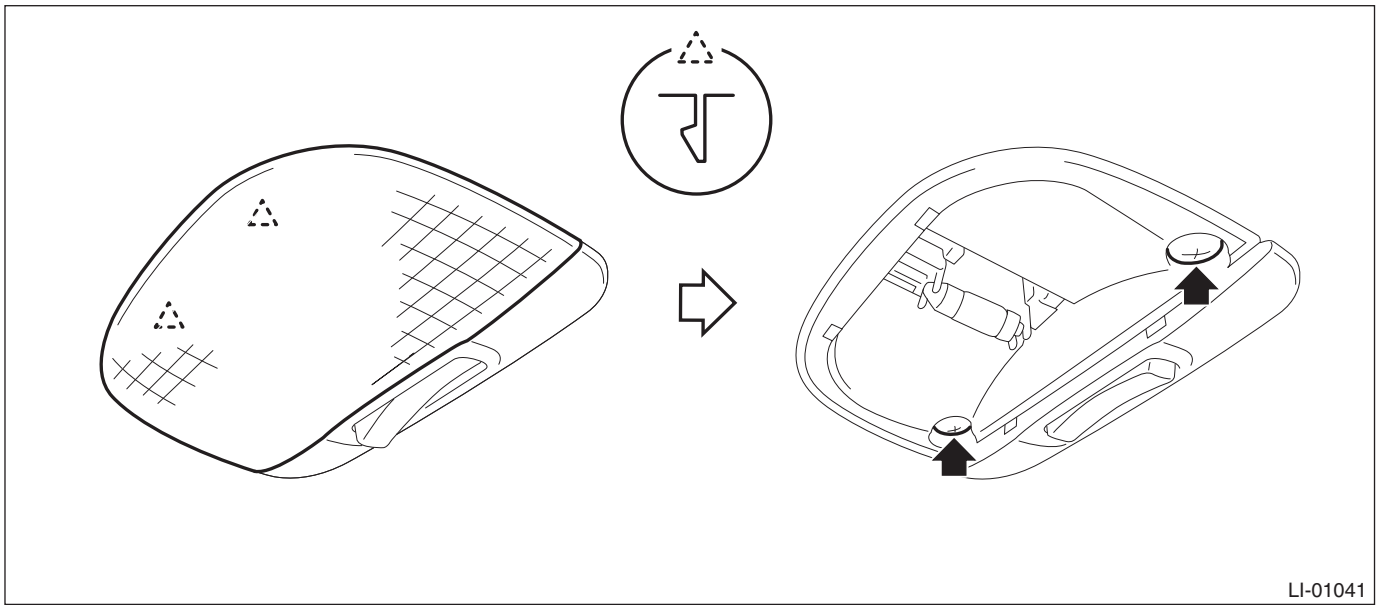
18) Remove the overhead console assembly.
(1) Push and open the rear end of the overhead console lid, and remove the screws.
(2) Disconnect the connector and remove the overhead console assembly.



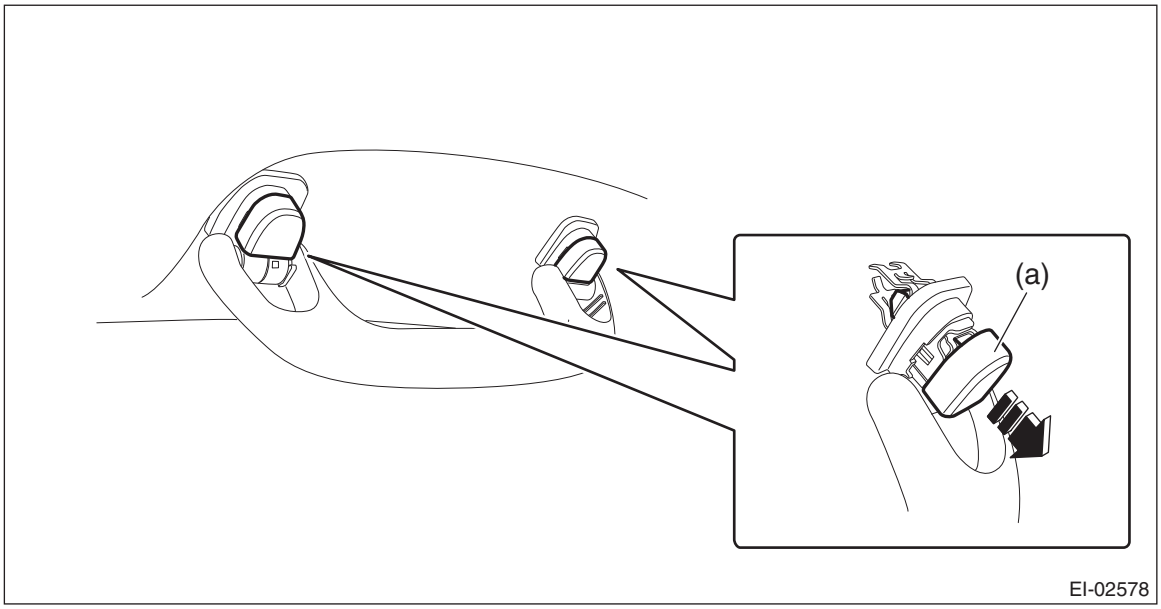
19) Remove the left and right sun visor assembly.
(1) Remove the cover, loosen the screws, and remove the sun visor assembly.
(2) Press the both sides of the sun visor hook using a flat tip screwdriver.
(3) Remove the sun visor hook by pulling toward you.



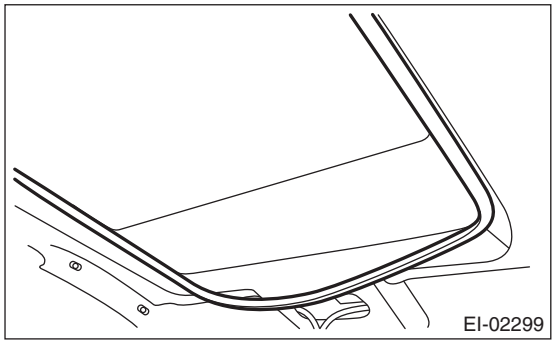
20) Remove the room light assembly.
(1) Release the claws and remove the cover.
(2) Remove the two screws.



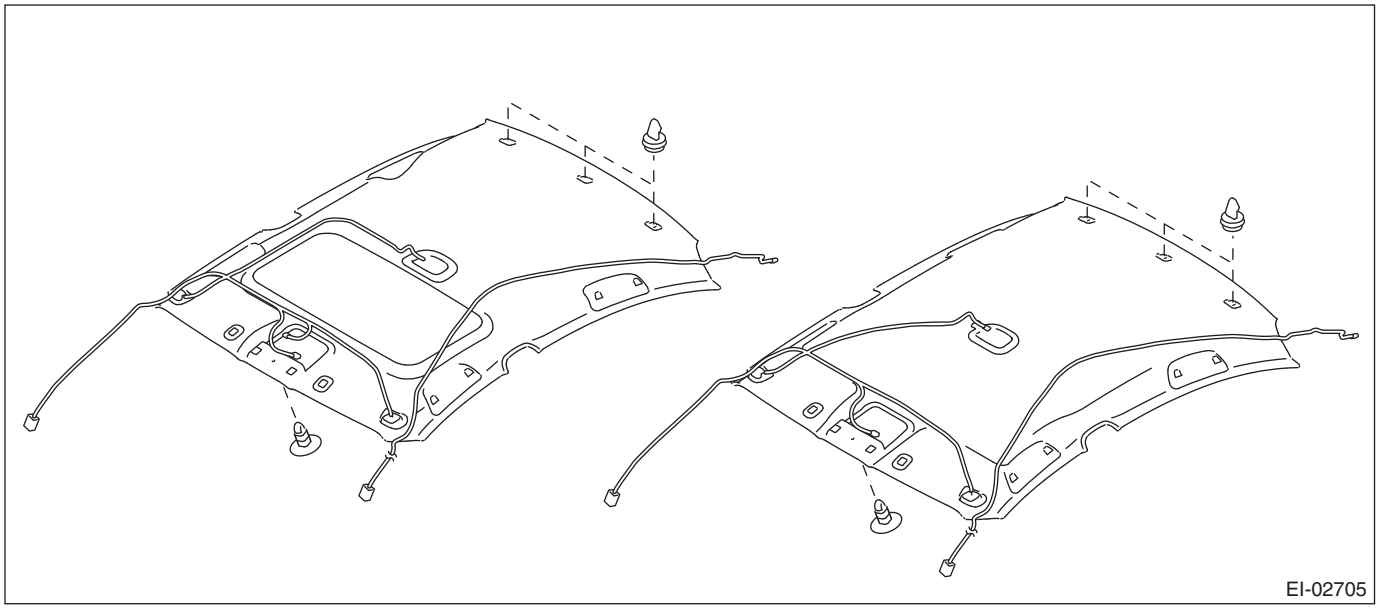
(3) Disconnect the connector and remove the room light assembly.
21) Remove all assist grip assembly.
(1) Remove the cap (a).
(2) Pull the assist grip toward you (to the vehicle center) and remove the metal clip from the bracket.



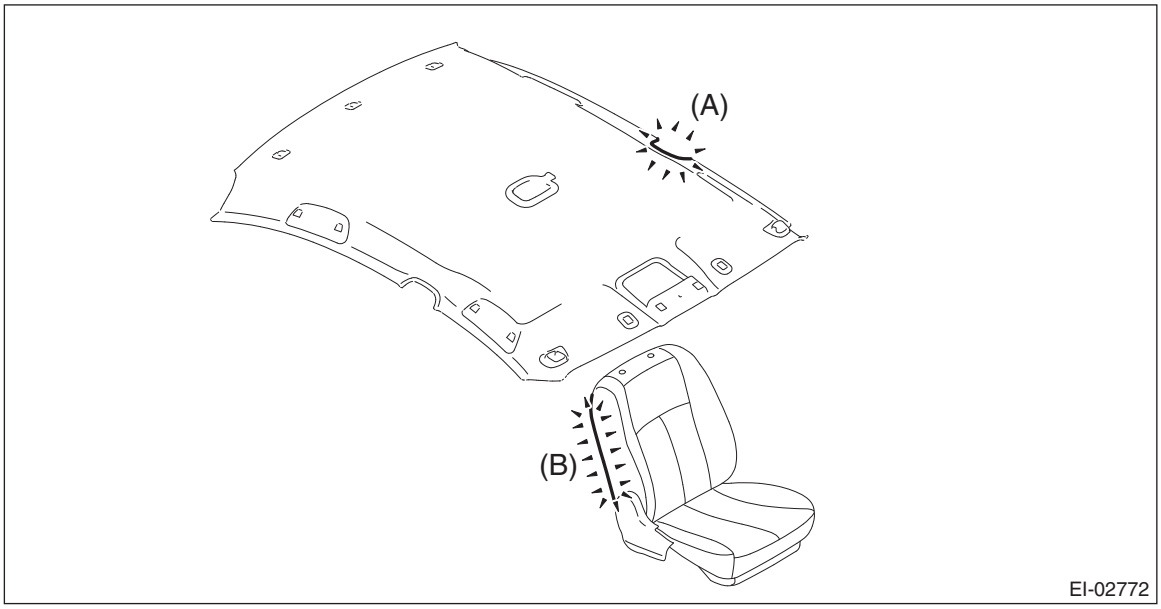
22) Remove the sun roof garnish. (Model with sunroof)



23) Disconnect the roof harness connector at the front pillar RH.
24) Remove the roof trim assembly.
(1) Remove the clips, and then remove the roof trim.
(2) Remove the feeder cable from the roof trim.


EI-02705

(3) Take out the roof trim assembly from inside the vehicle.
a) Align the center pillar (A) of roof trim with a corner (B) of the driver's seat and turn the roof trim obliquely.



EI-02772

b) While holding the roof trim assembly in the condition in step a), take it out from the driver's side rear door opening.

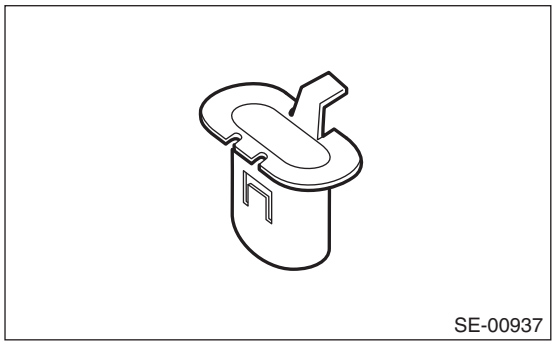
2. OUTBACK MODEL

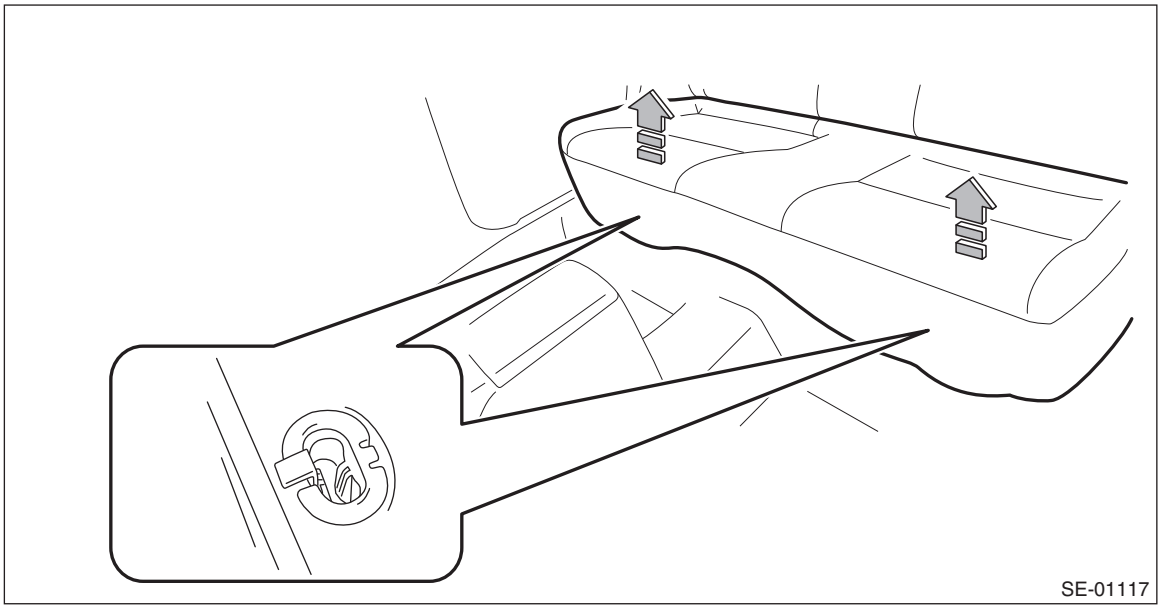
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

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

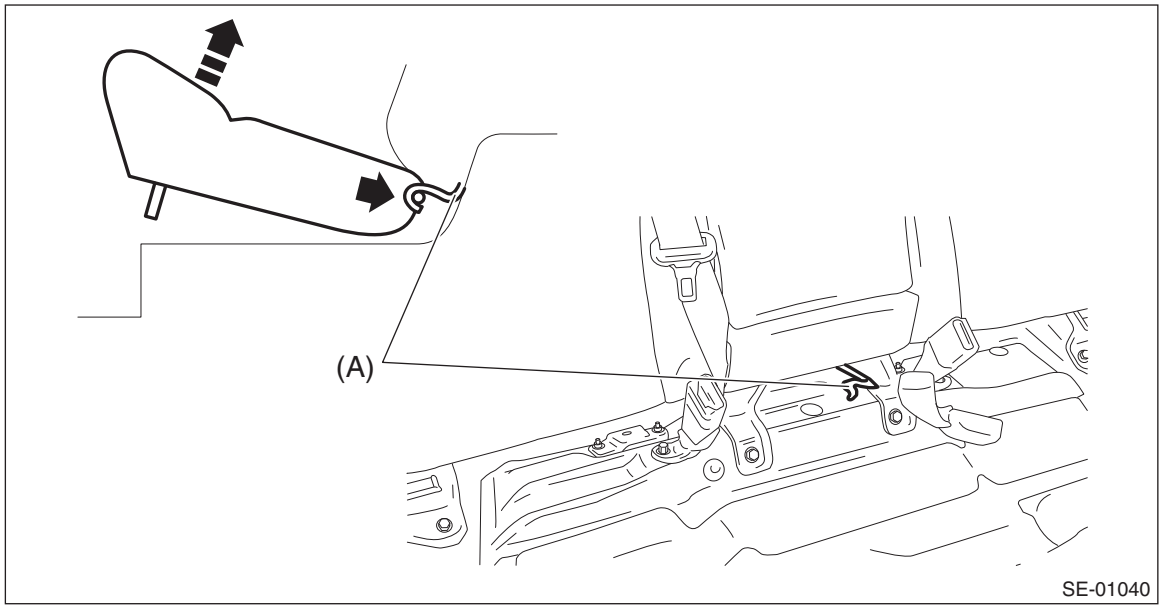
2) Remove the rear seat cushion assembly.
   (1) Pull up the seat cushion and release the hook.

CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.

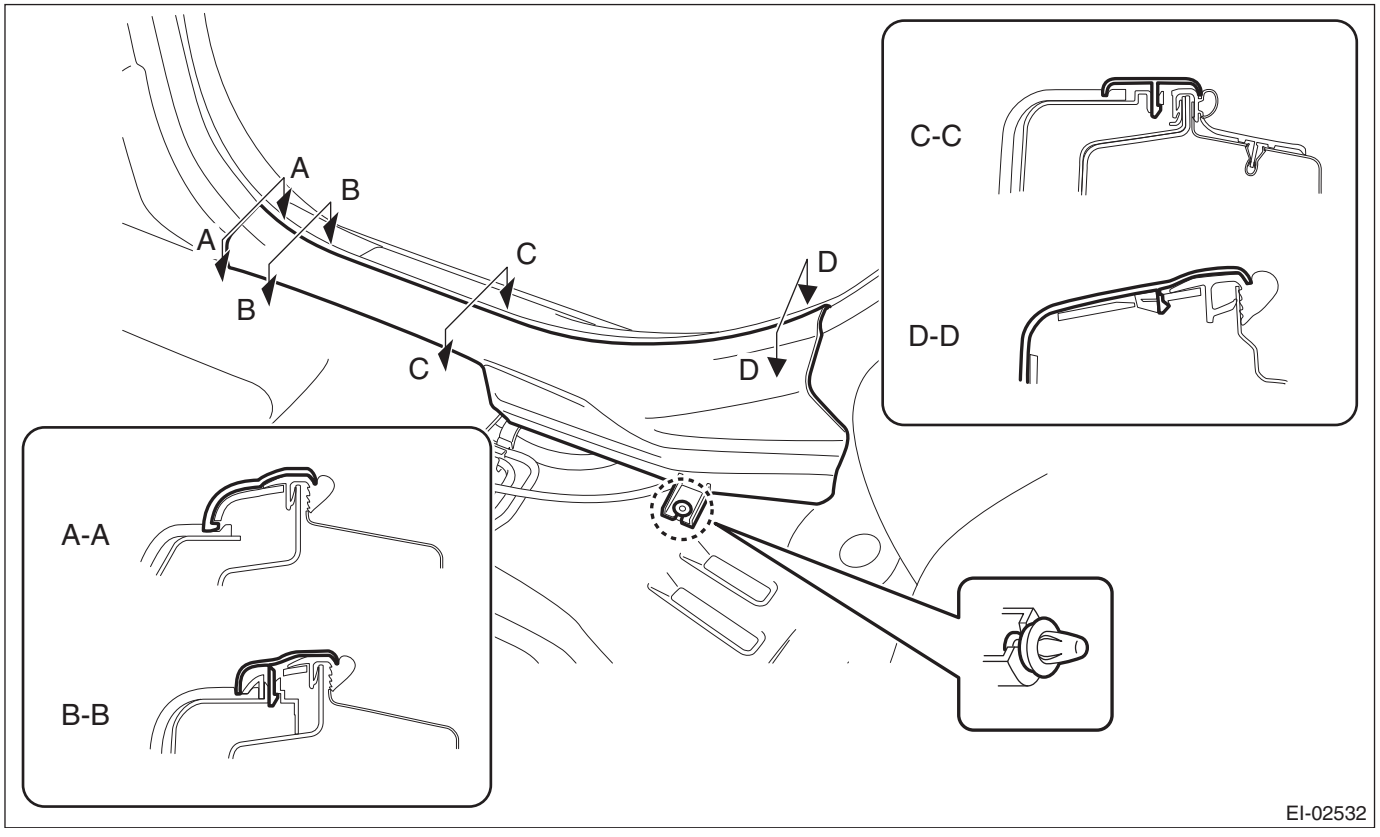

SE-00937


SE-01117

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



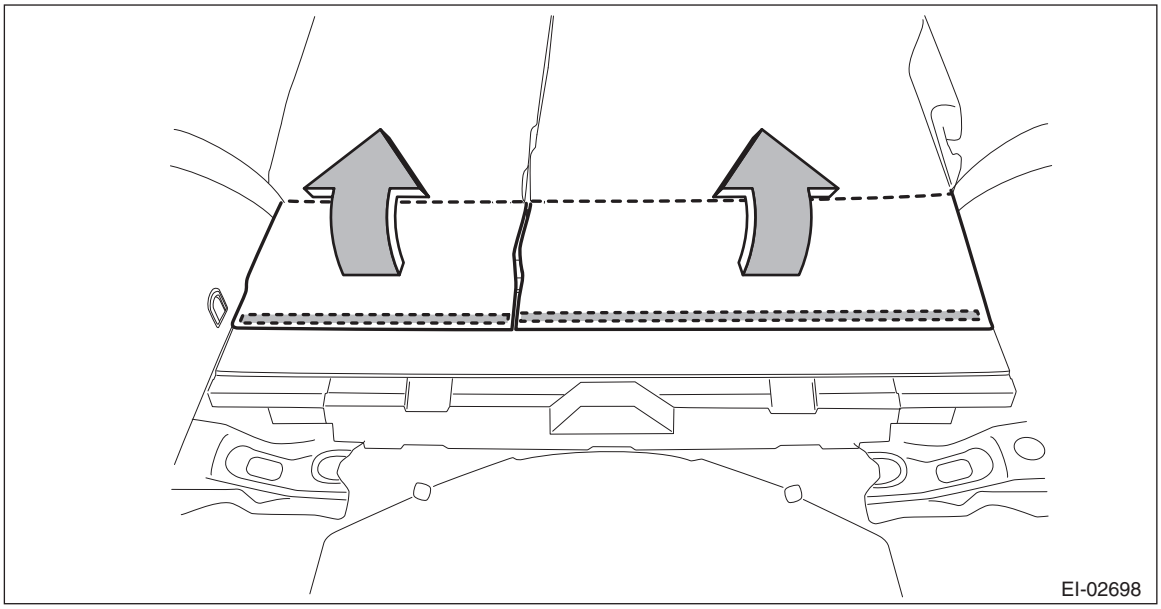
3) Release the clips and claws, and then remove the left and right side sill covers-rear INN.



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

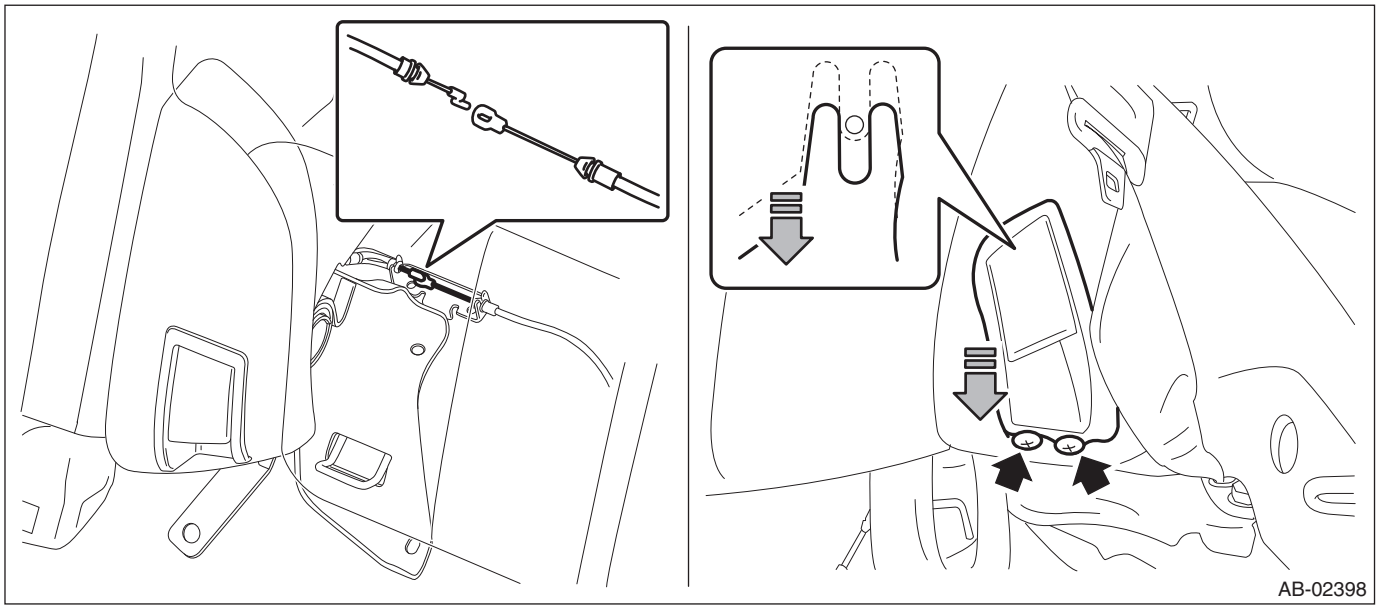
NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claws (C) and (D) by accessing from behind the side sill cover INN.

4) Tilt the backrest forward and release the clips of the backrest backside mat.



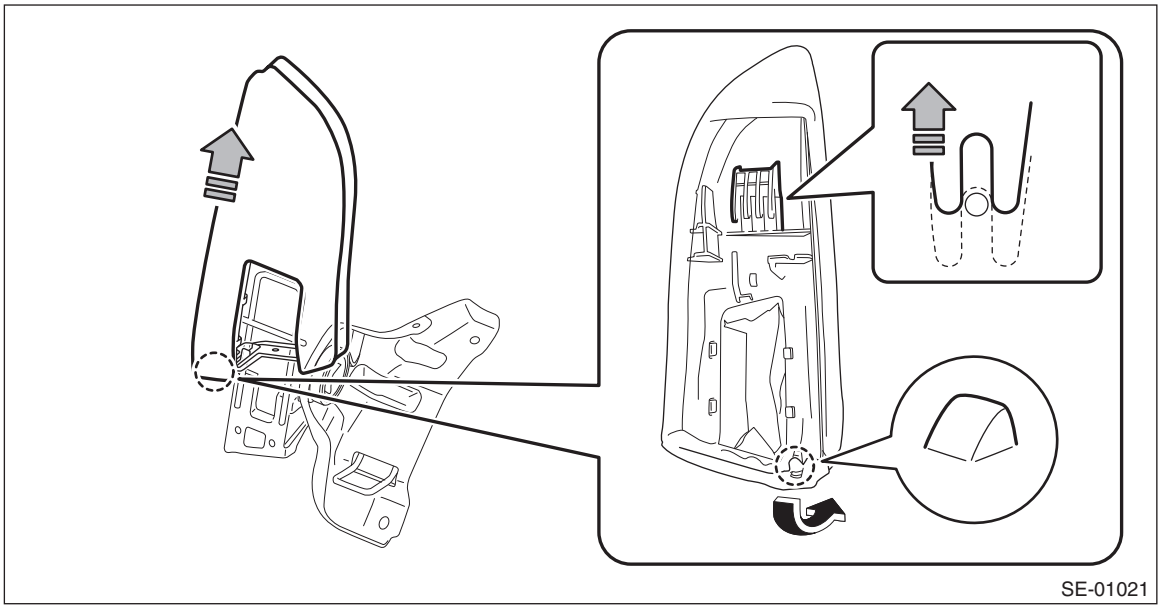
5) Remove the left and right backrest side pad assembly. (On the side where airbag sensor is removed)
   (1) Disconnect the backrest cable and reclining lever cable.
   (2) Remove the screws and remove the reclining lever assembly by pulling it downward.

Preparation tool: Stubby screwdriver

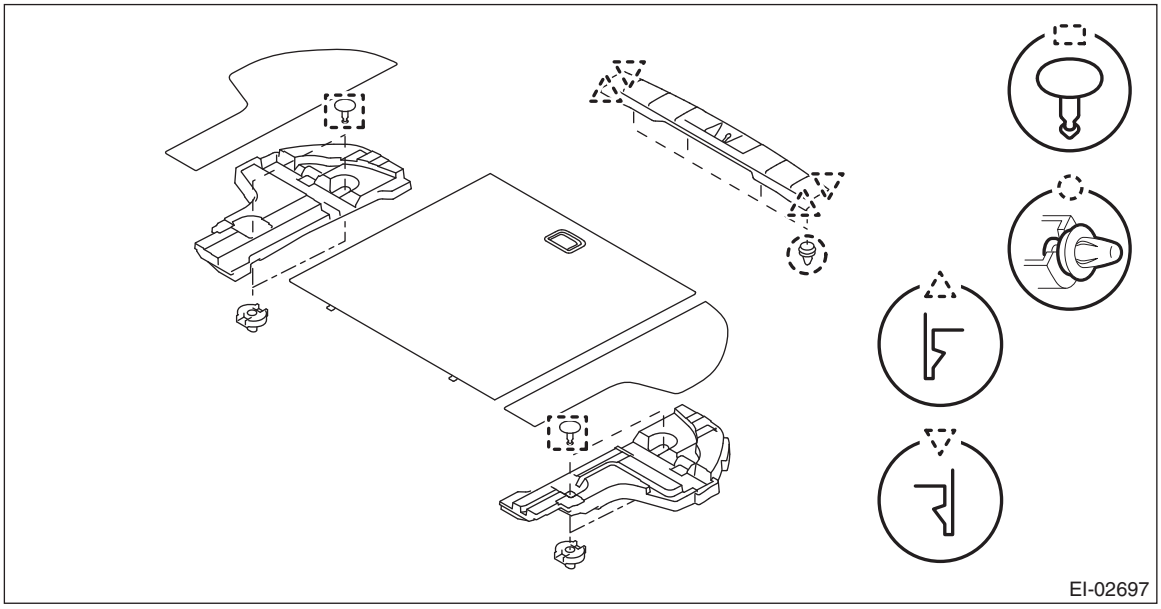


   (3) Turn over the bottom end of the backrest side pad in the forward direction so that the claws are released.

(4) Remove the backrest side pad by pulling it up.

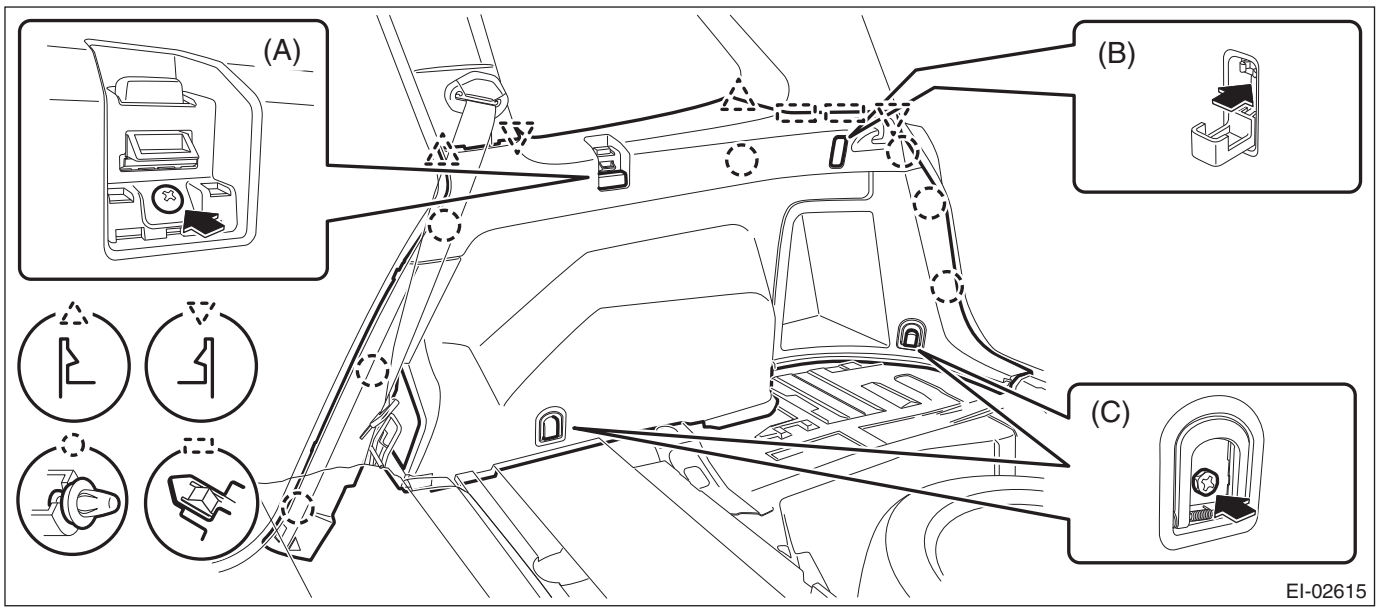


6) Remove the clips, and remove the luggage floor box and rear floor edge cover.

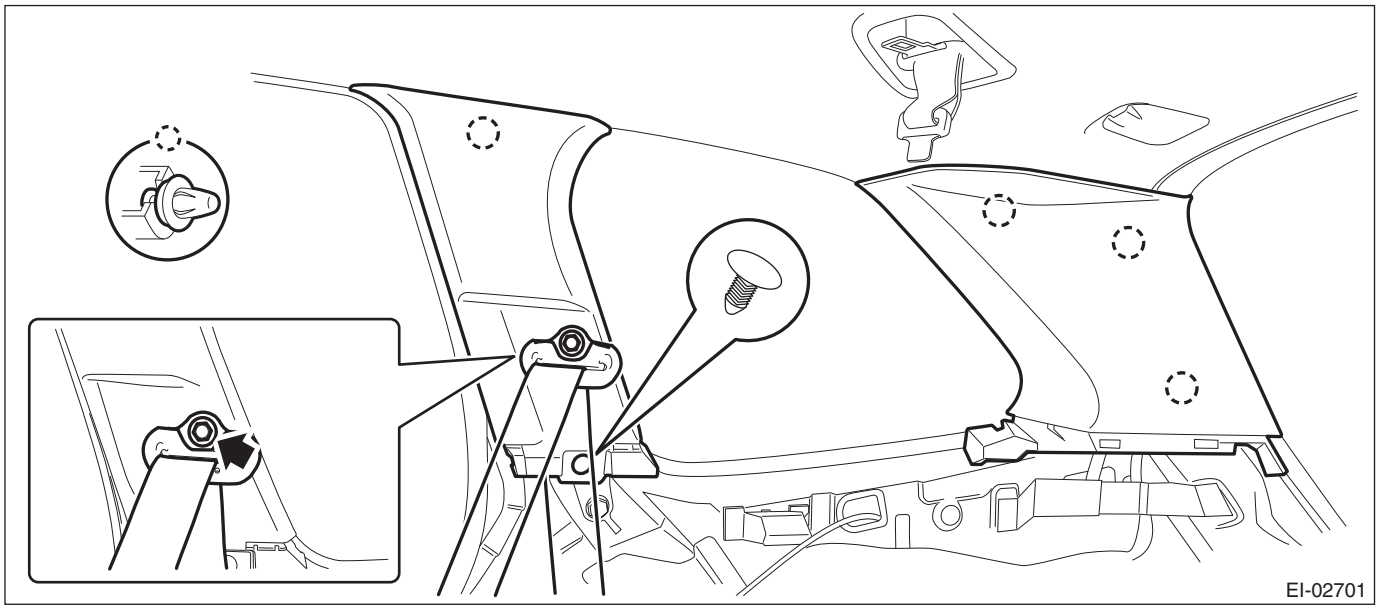


7) Remove the left and right rear quarter trim LWR.
(1) Remove the caps, screws, and bolts. (A), (C)
(2) Take out the hook and remove the screw inside. (B)

(3) Remove the clips, and remove the rear quarter trim LWR.



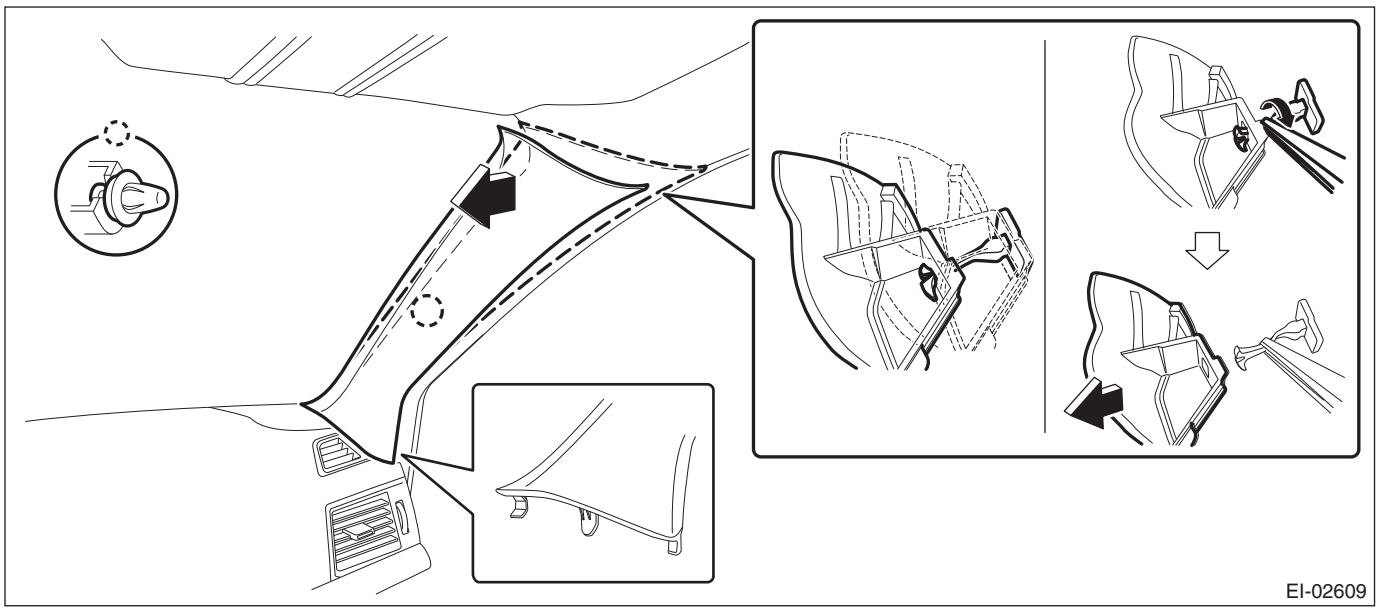
8) Remove the left and right rear quarter trim UPR.
(1) Open the cap and remove the bolt to remove the seat belt anchor.
(2) Remove the clips, and remove the rear quarter trim UPR-front.
(3) Remove the clips, and remove the rear quarter trim UPR-rear.



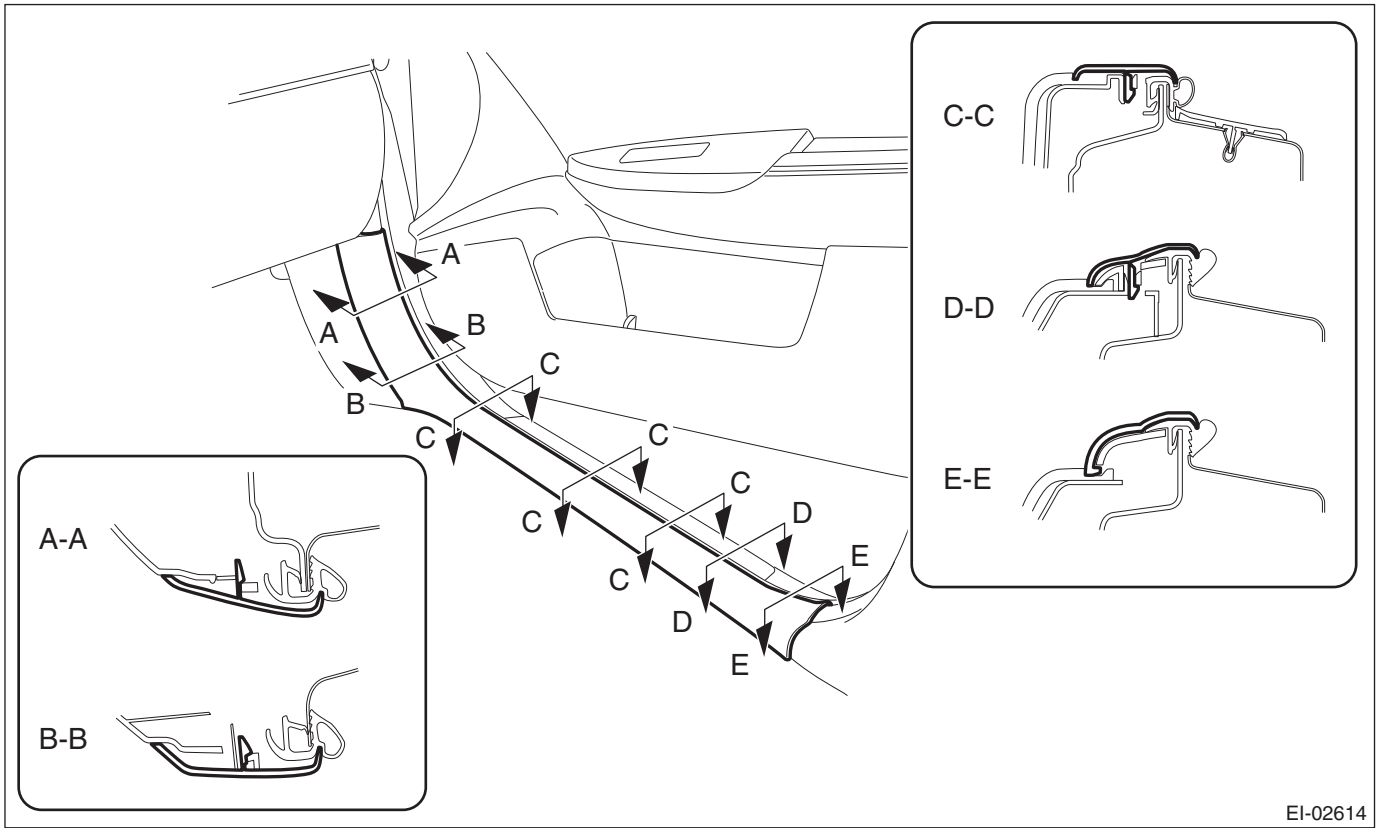
9) Remove the left and right front pillar trims.
(1) Pull the upper part of the front pillar trim towards the center of the vehicle.
(2) Insert long-nose pliers into the top part of the trim, grip the clip with the pliers and twist 90° in that position.

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

(4) Remove the clip and the front pillar trim.



10) Release the claws, and then remove the left and right side sill cover-front INN.

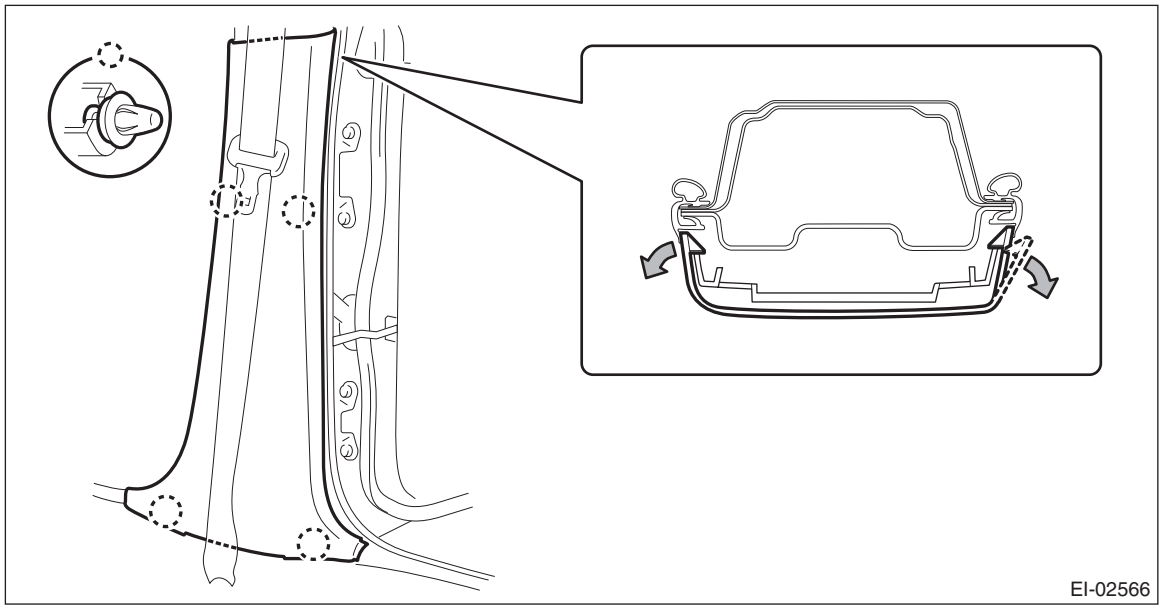


CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

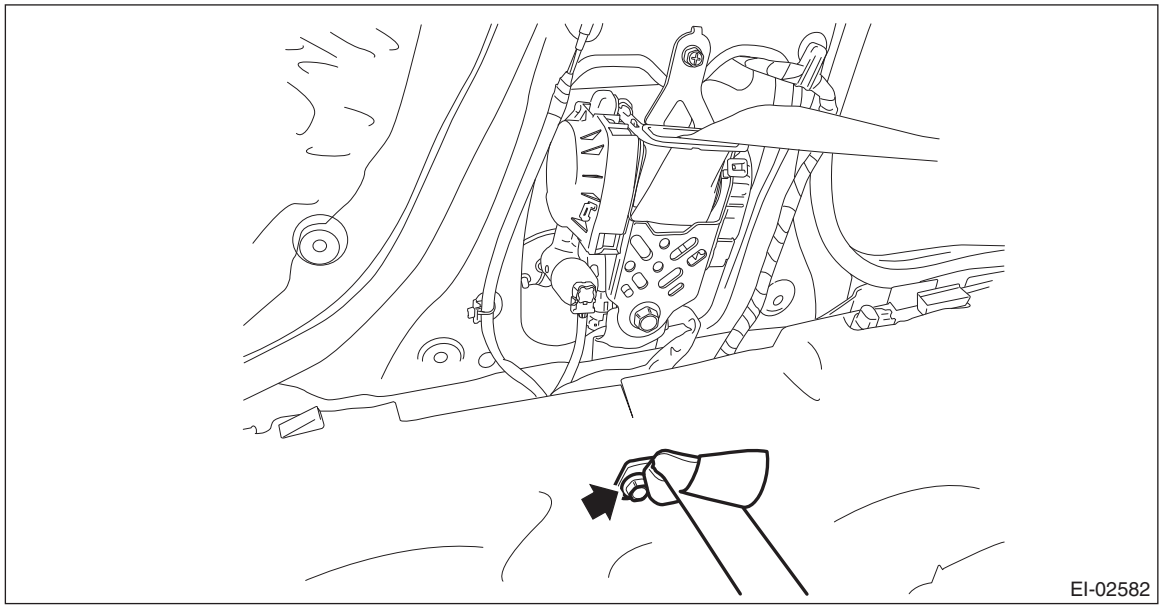
NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claw (C) by accessing from behind the side sill cover INN.

11) Remove the left and right center pillar trim LWR.
(1) Release the clip by pulling the center pillar trim LWR toward you.
(2) Expand the claws of center pillar trim LWR outward and remove it from the center pillar trim UPR.

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

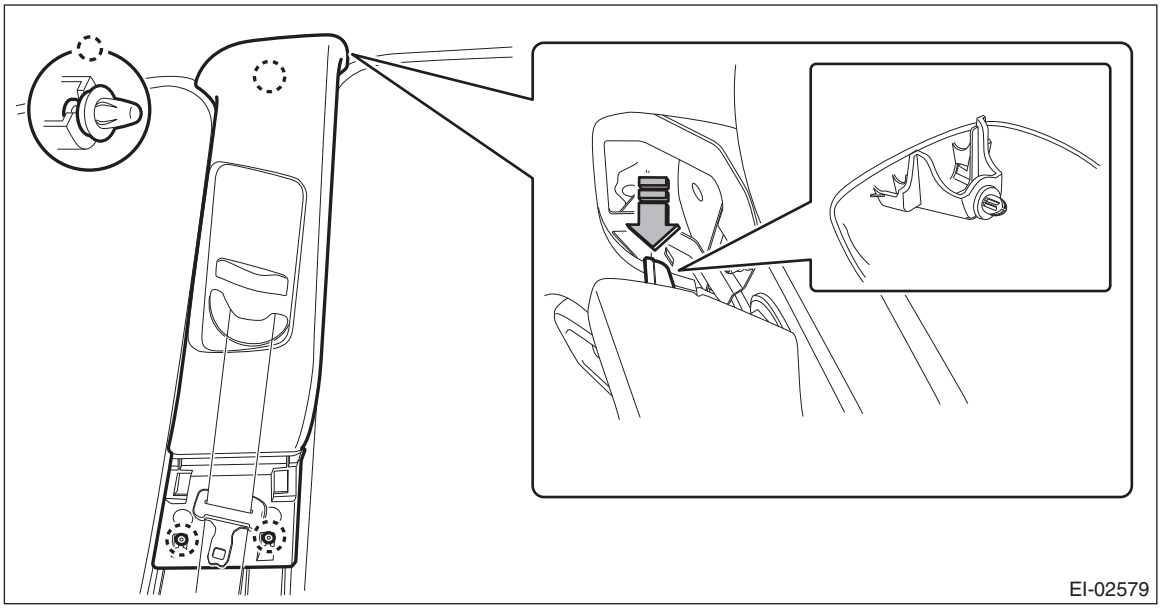


NOTE:
First release the claw located to the rear of the vehicle.
12) Remove the center pillar trim UPR.
(1) Remove the seat belt lower anchor bolt.



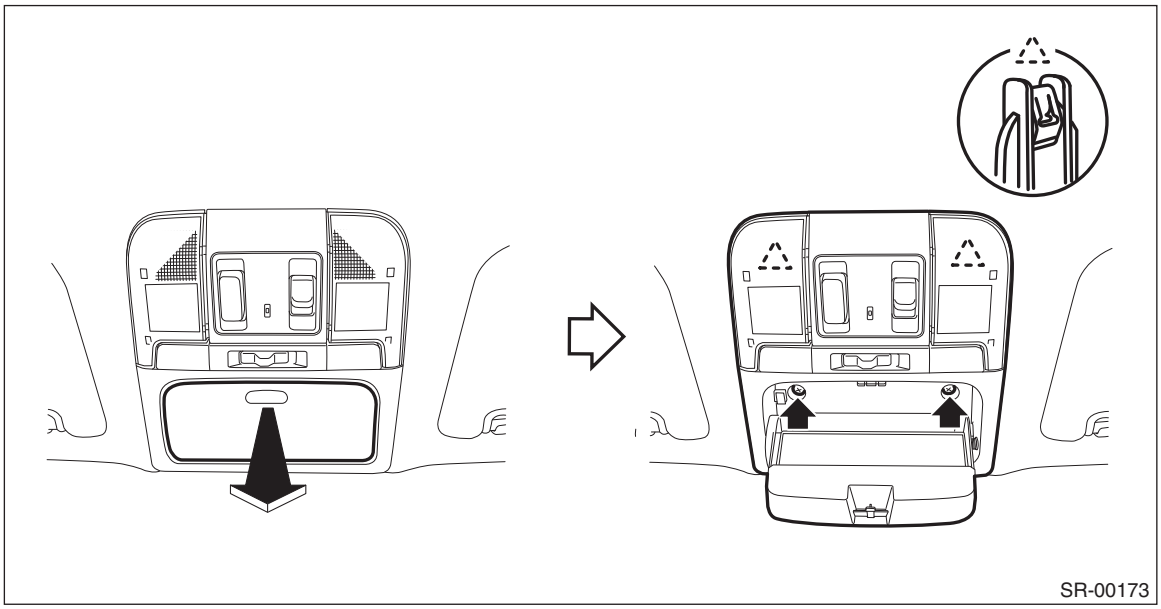
(2) Release the clip by pulling the center pillar trim UPR toward you.

(3) Remove the center pillar trim UPR by lowering the entire trim.



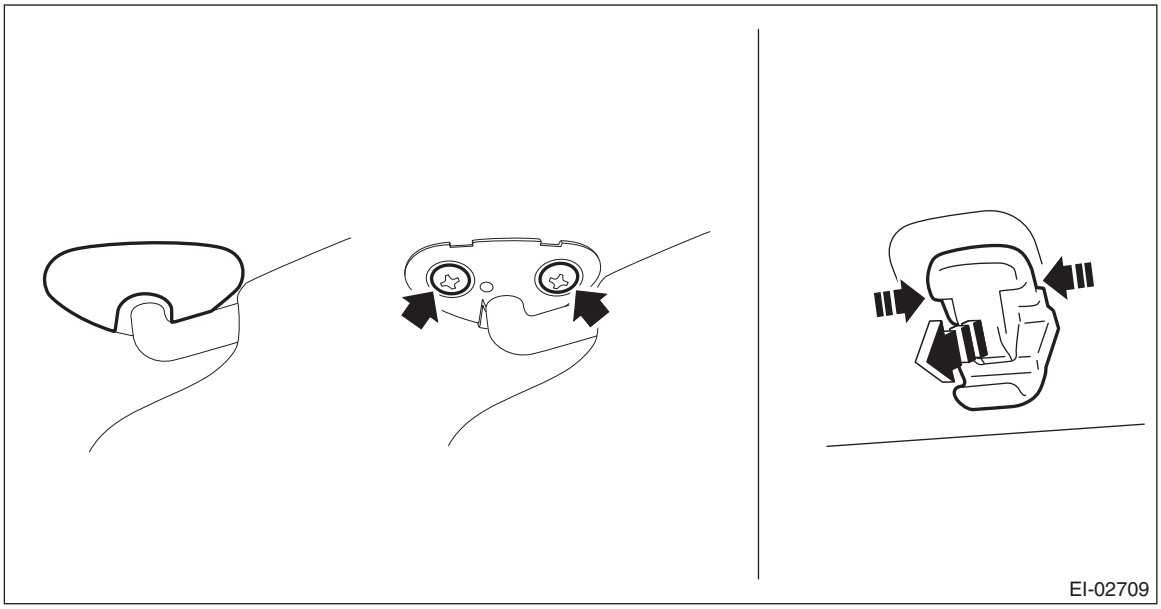
(4) Pull out the seat belt and remove the center pillar trim UPR.

13) Remove the overhead console assembly.
(1) Push and open the rear end of the overhead console lid, and remove the screws.
(2) Disconnect the connector and remove the overhead console assembly.

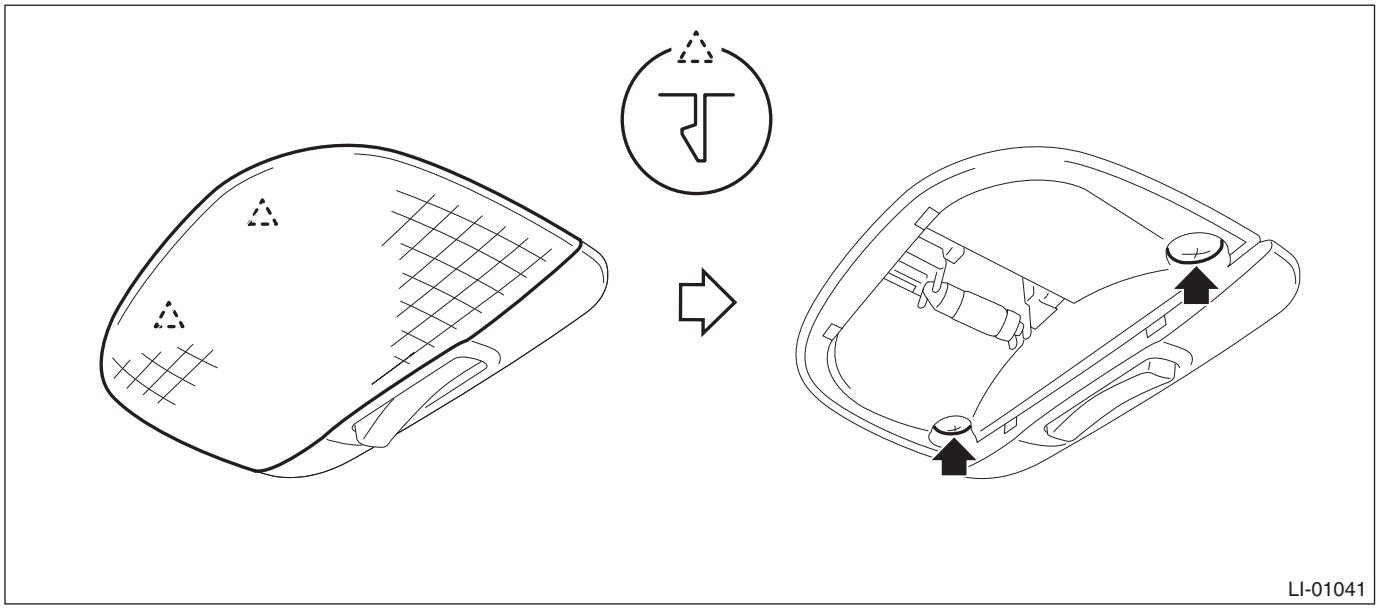


14) Remove the left and right sun visor assembly.
(1) Remove the cover, loosen the screws, and remove the sun visor assembly.
(2) Press the both sides of the sun visor hook using a flat tip screwdriver.

(3) Remove the sun visor hook by pulling toward you.

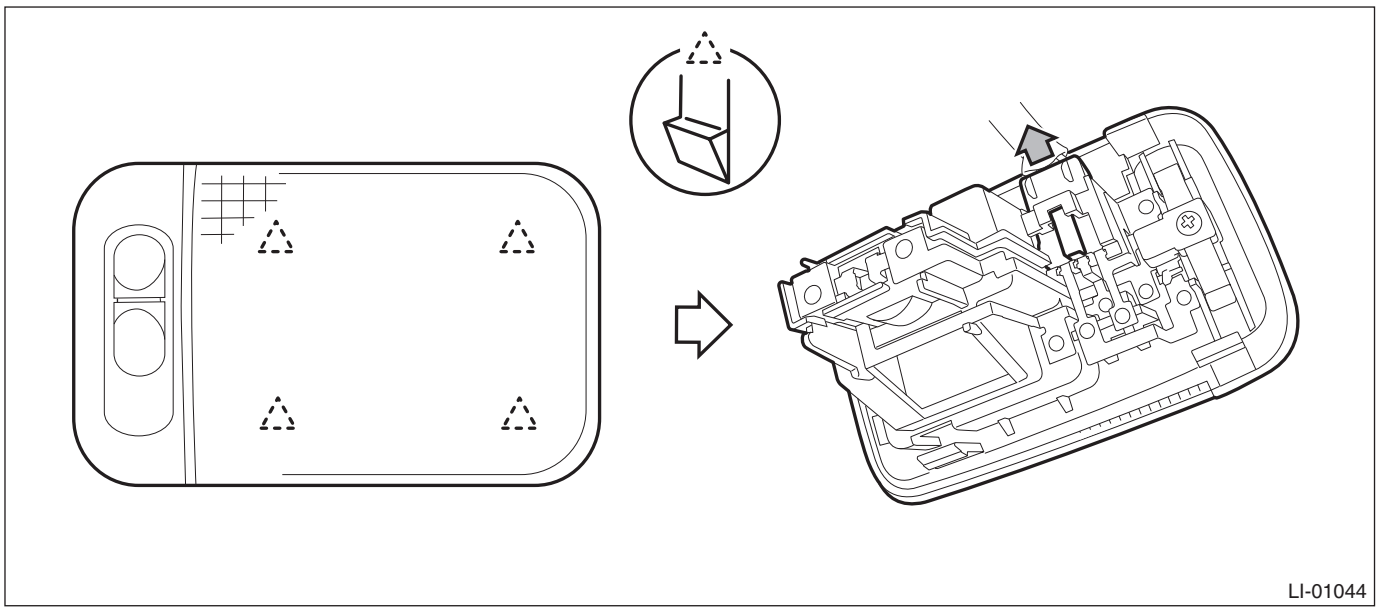


15) Remove the room light assembly.
(1) Release the claws and remove the cover.
(2) Remove the two screws.

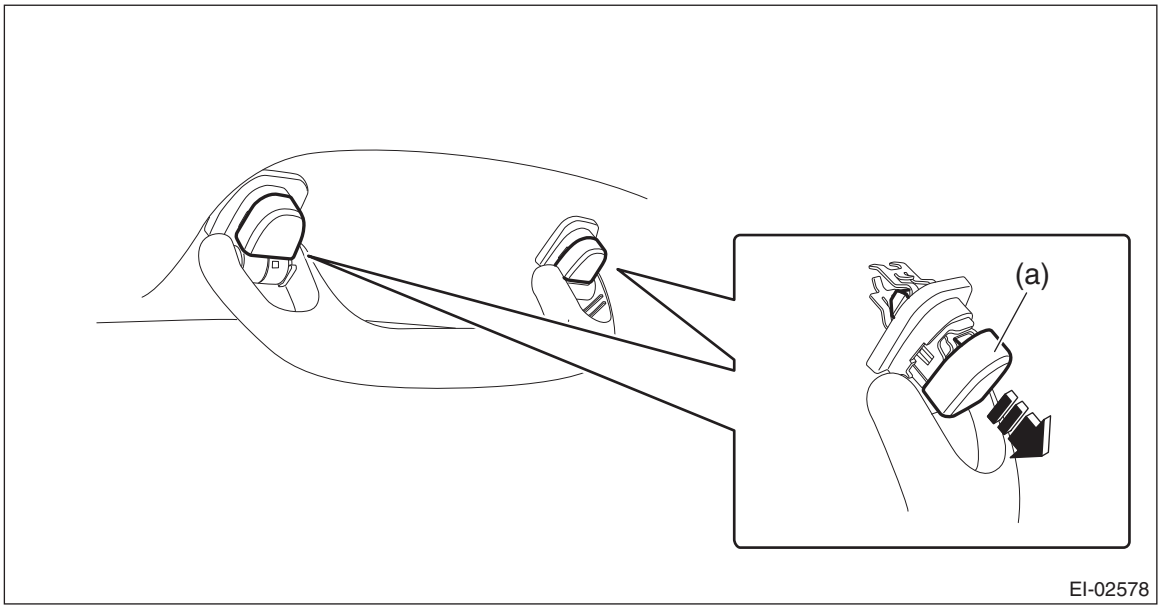


(3) Disconnect the connector and remove the room light assembly.
16) Remove the luggage light.
(1) Release the claws and remove the luggage room light main body.

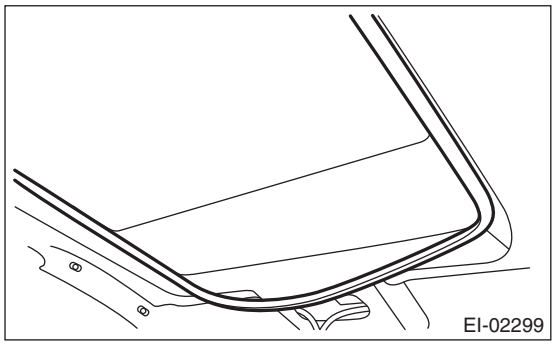
(2) Disconnect the connector and remove the luggage room light.



17) Remove all assist grip assembly.
(1) Remove the cap (a).
(2) Pull the assist grip toward you (to the vehicle center) and remove the metal clip from the bracket.

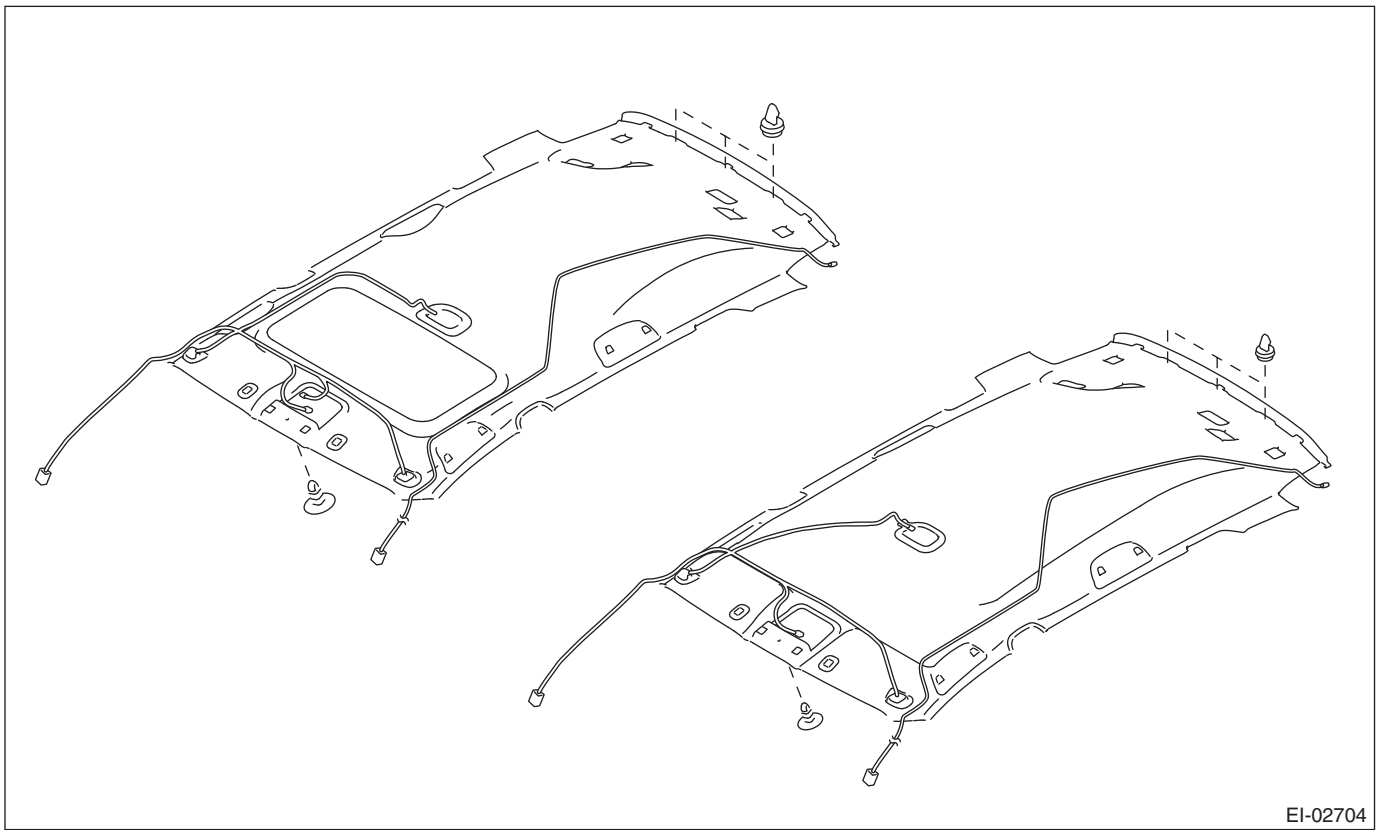


18) Remove the sun roof garnish. (Model with sunroof)



19) Disconnect the roof harness connector at the front pillar RH.
20) Remove the roof trim assembly.

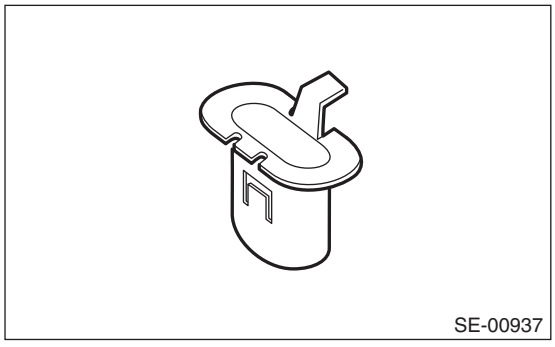
(1) Release the clips and remove the feeder cable from the roof trim.
(2) Take out the roof trim assembly from the rear gate opening to outside.


EI-02704

B: INSTALLATION

Install each part in the reverse order of removal.

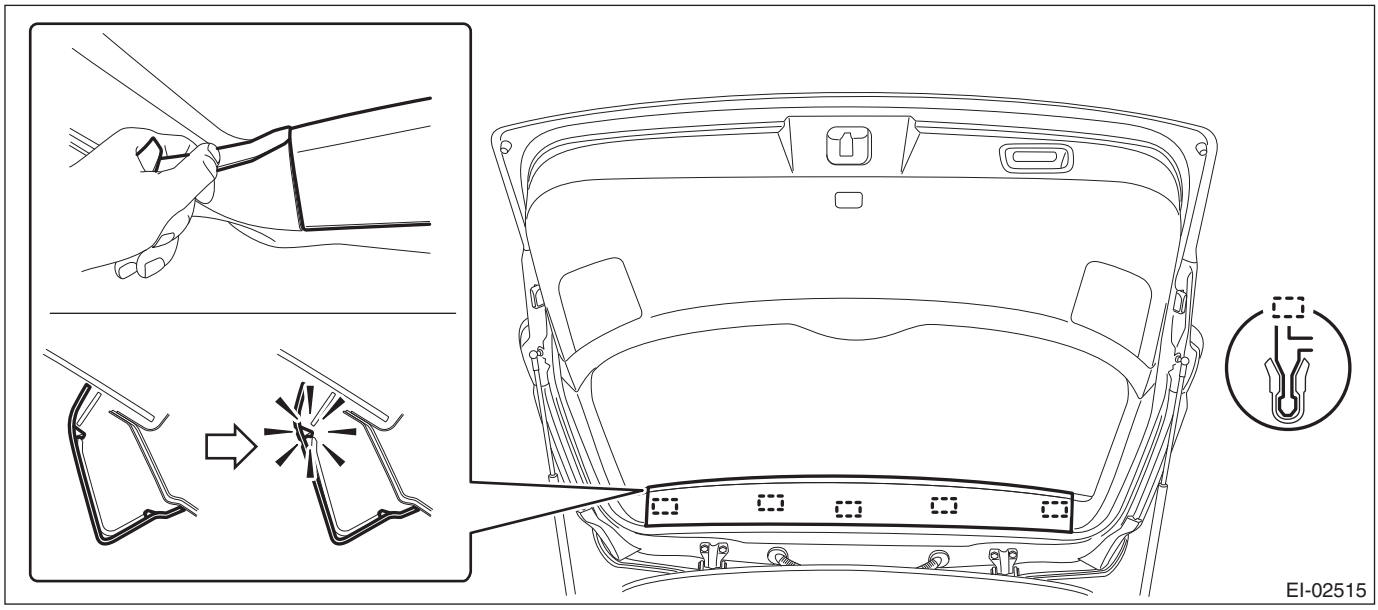
CAUTION:
If the hook is removed from vehicle body, replace the hook with the new part to avoid the deterioration of seat securing.


SE-00937

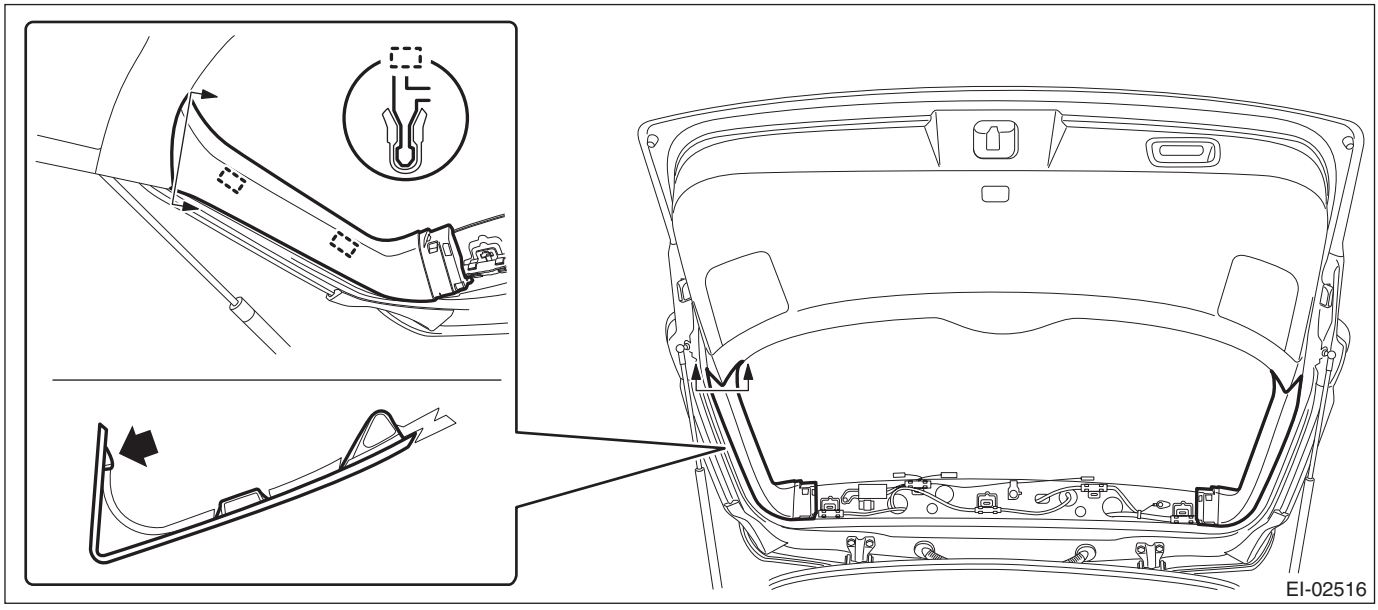
28.Rear Gate Trim

A: REMOVAL

1) Remove the rear gate upper trim.
   (1) Remove the claws on the trim edge.
   (2) Disconnect the claws in the center of trim, and remove the rear gate upper trim.



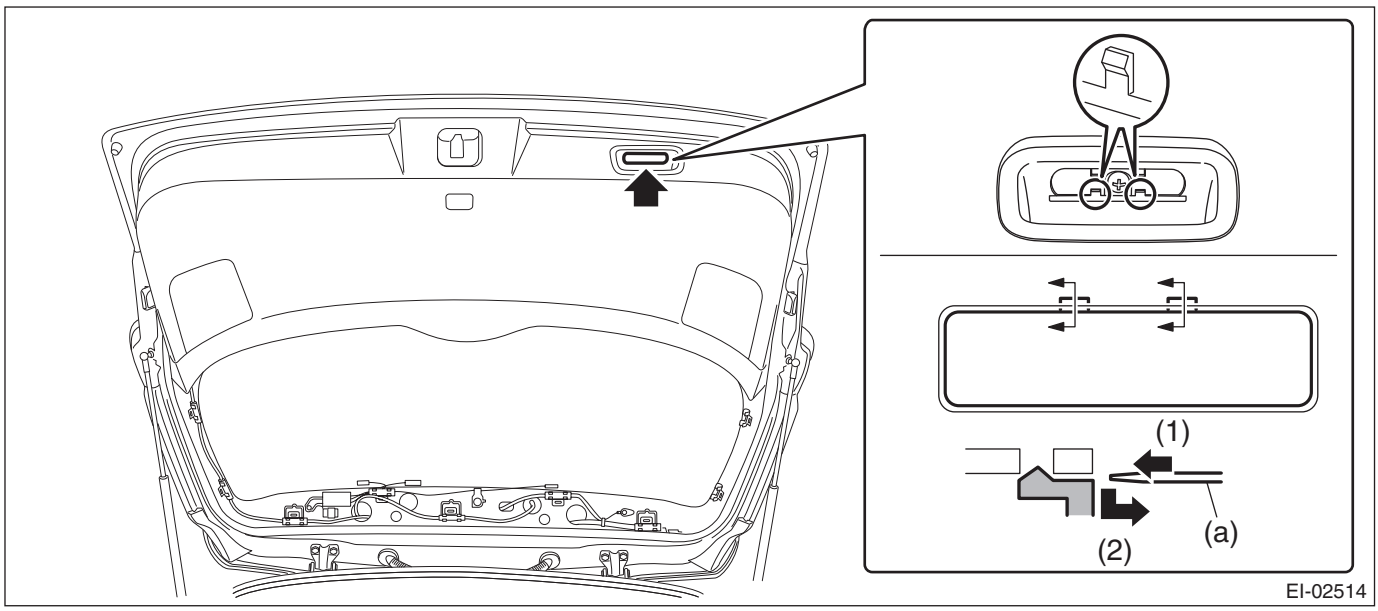
2) Remove the rear gate pillar trim.
   (1) Release the claws.
   (2) Remove the claws on the bottom of trim, and remove the rear gate pillar trim.



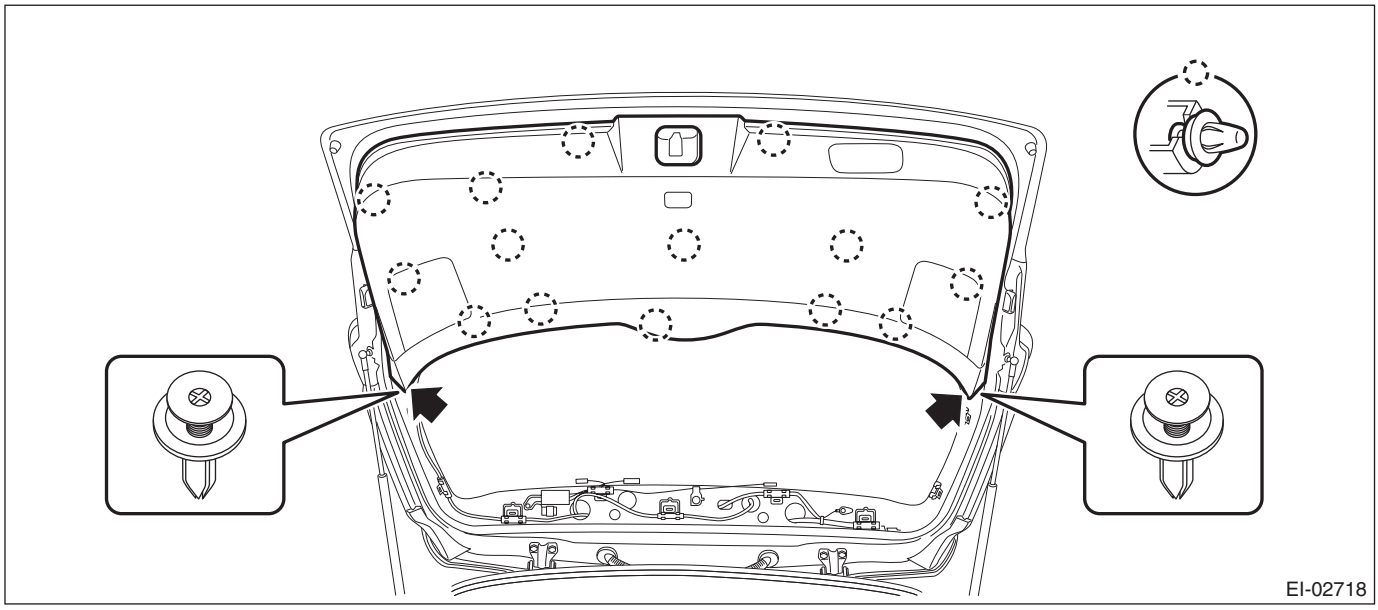
3) Remove the hand grip of rear gate.

CAUTION:
- **Be careful not to scratch the trim.**
- **To protect the trim from damage, attach a protective tape to the tool in use.**
  (1) Insert a precision screwdriver (a).
  (2) With the precision screwdriver inserted, push down the claw to disengage and pull it toward yourself.

(3) Remove the screws and detach the hand grip.



4) Remove the clips and rear gate lower trim.
(1) Remove the clips on both ends.
(2) Release the clips and remove the rear gate lower trim.



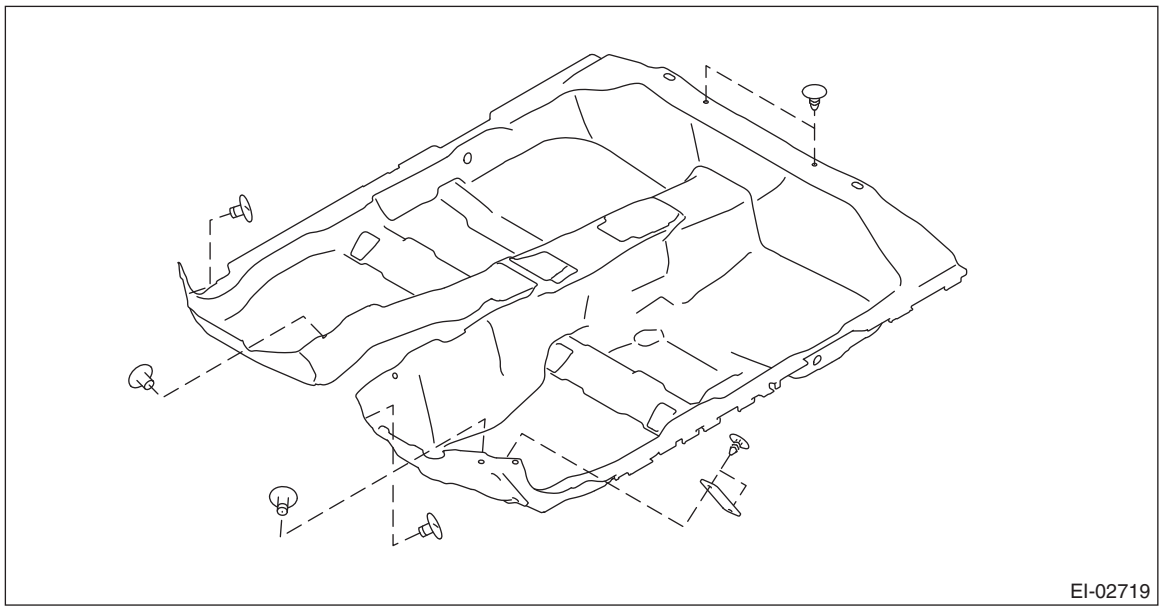
B: INSTALLATION

Install each part in the reverse order of removal.

29.Floor Mat

A: REMOVAL

1) Remove the front seat assembly. <Ref. to SE-10, REMOVAL, Front Seat.>
2) Remove the rear seat cushion assembly. <Ref. to SE-32, REMOVAL, Rear Seat.>
3) Remove the console box assembly. <Ref. to EI-72, REMOVAL, Console Box.>
4) Remove the console front side cover. <Ref. to EI-69, CONSOLE FRONT COVER, REMOVAL, Center Console.>
5) Remove the lower inner trim. <Ref. to EI-95, REMOVAL, Lower Inner Trim.>
6) Take out the floor mat from the vehicle.
   (1) Remove the clips from the floor mat.
   (2) Remove the mat hook on both sides.
   (3) Take out the floor mat after folding down.



B: INSTALLATION

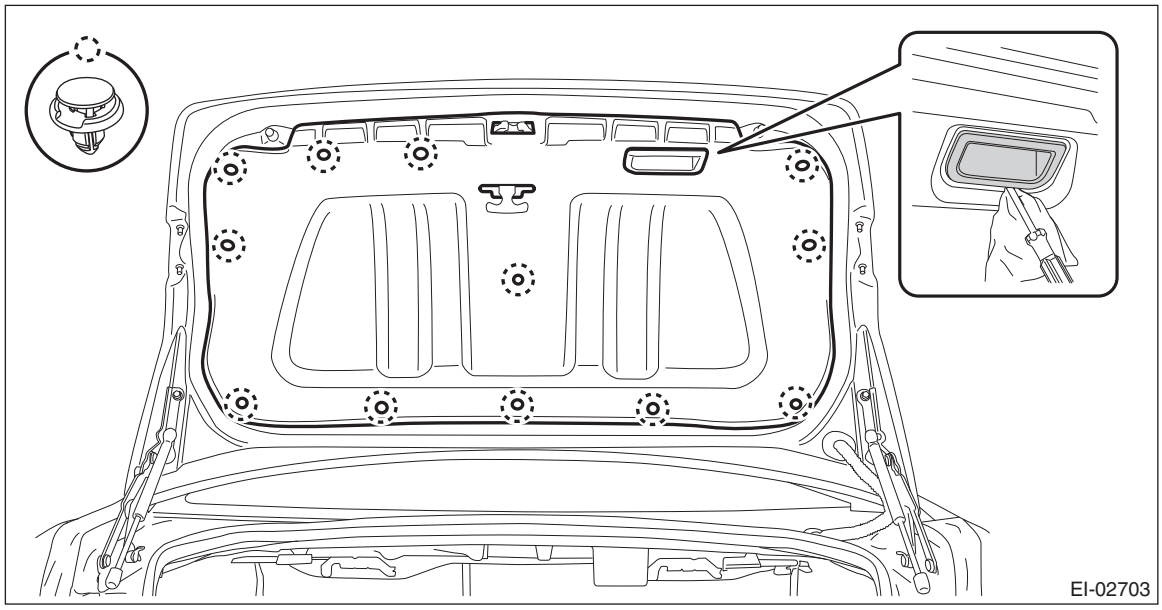
Install each part in the reverse order of removal.

NOTE:
Secure the mat firmly with hook and clip.

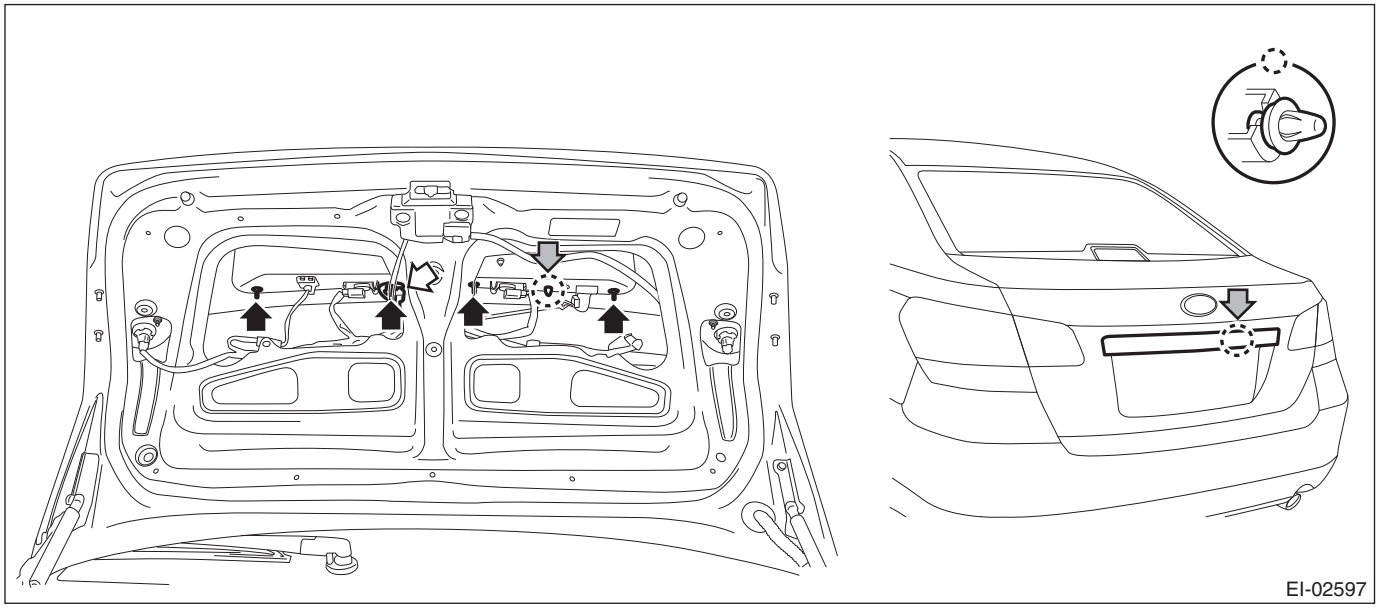
30.Trunk Lid Garnish

A: REMOVAL

1) Remove the trunk lid trim.
   (1) Remove the trunk handle.
   (2) Remove the clips and the trunk lid trim.



2) Remove the trunk lid garnish.
   (1) Remove the nuts.
   (2) Remove the clips and the trunk lid garnish.



B: INSTALLATION

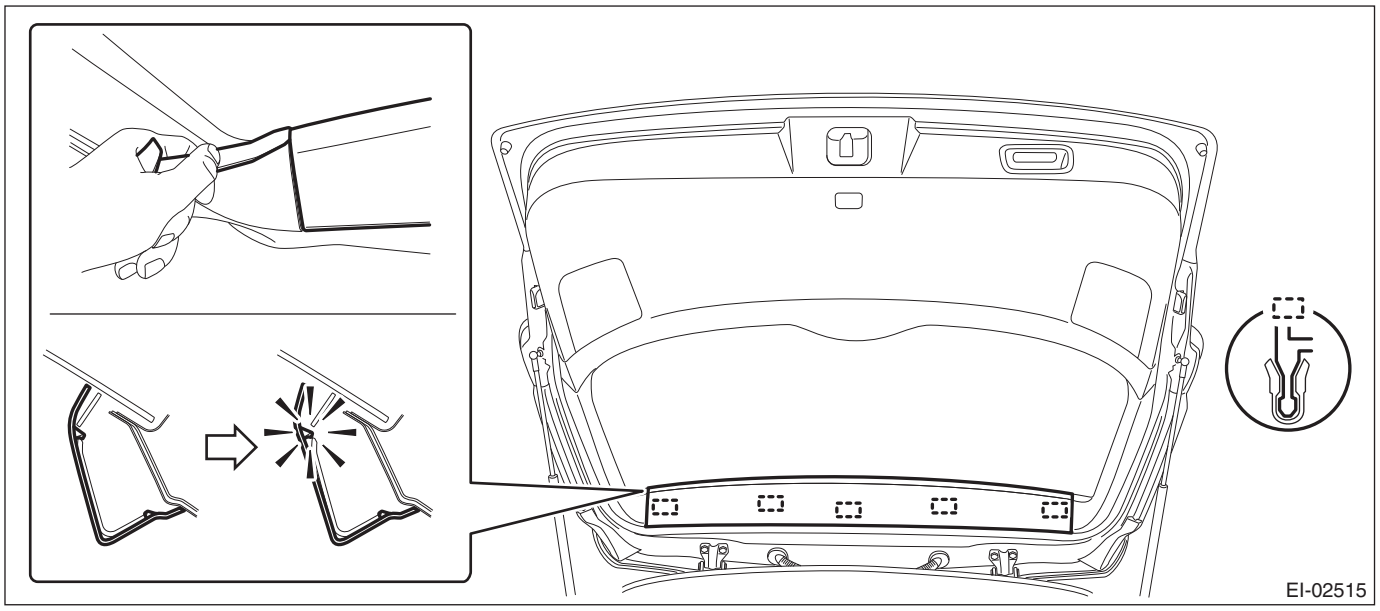
Install each part in the reverse order of removal.

Tightening torque:
4.5 N·m (0.46 kgf-m, 3.3 ft-lb)

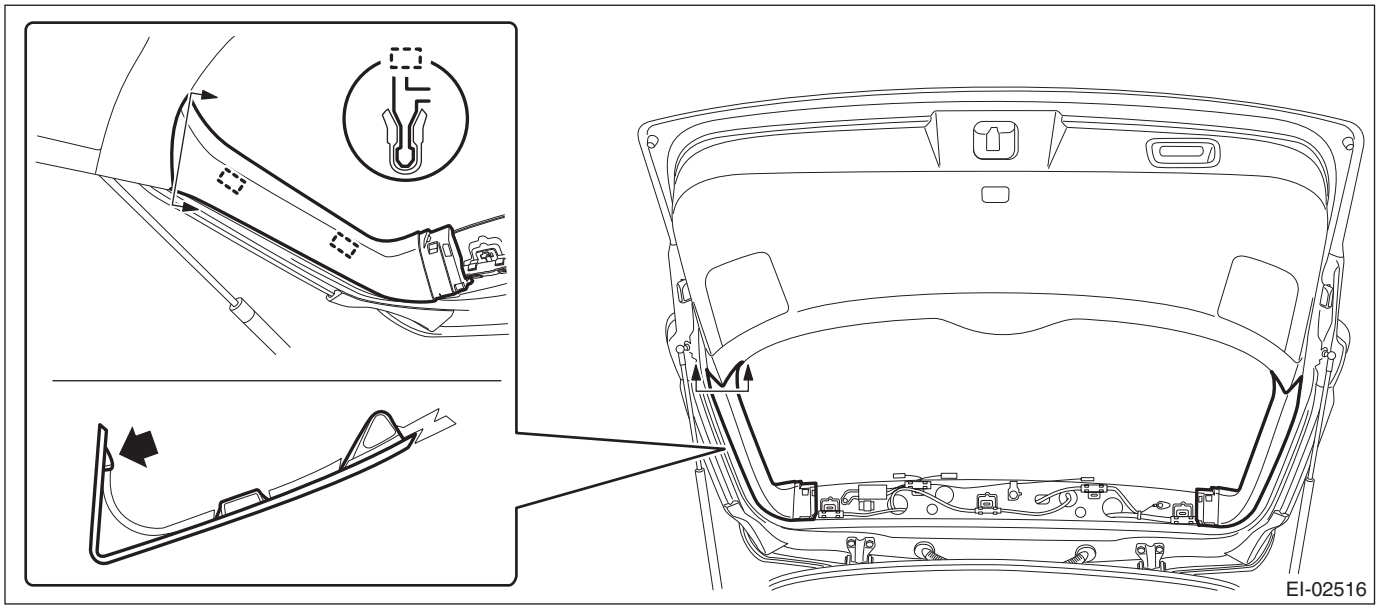
31.Rear Gate Garnish

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the rear gate trim.
   (1) Remove the rear gate upper trim.
      a) Remove the claws on the trim edge.
      b) Disconnect the claws in the center of trim, and remove the rear gate upper trim.



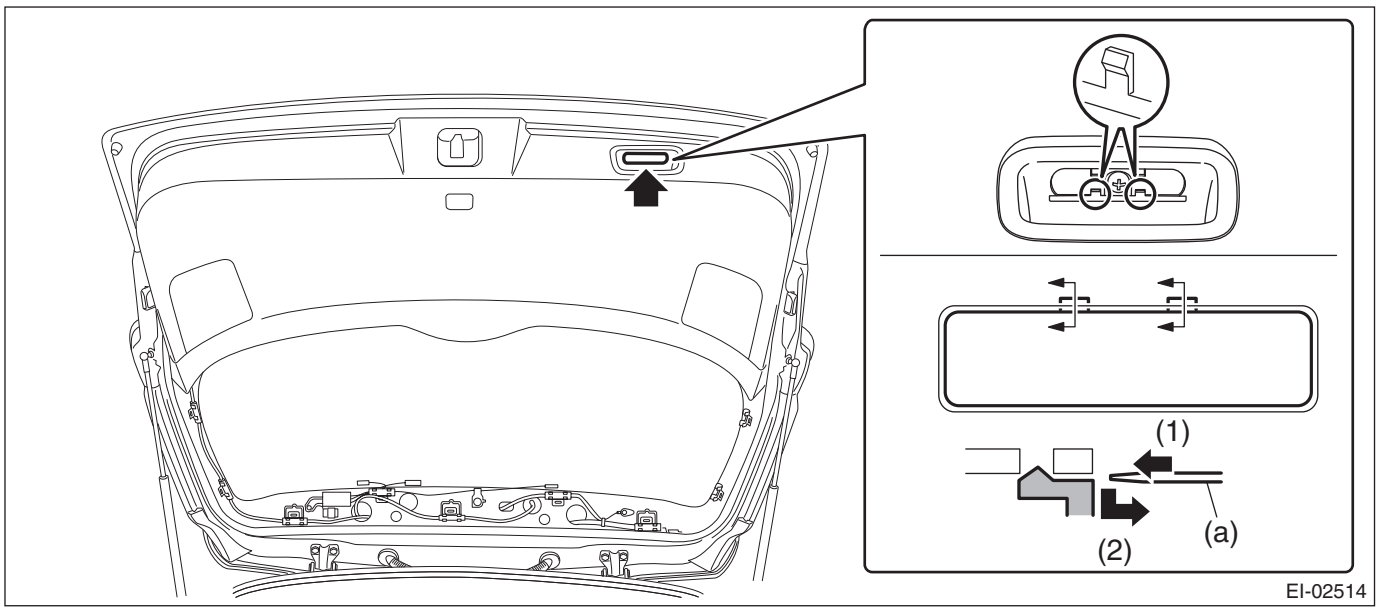
   (2) Remove the rear gate pillar trim.
      a) Release the claws.
      b) Remove the claws on the bottom of trim, and remove the rear gate pillar trim.



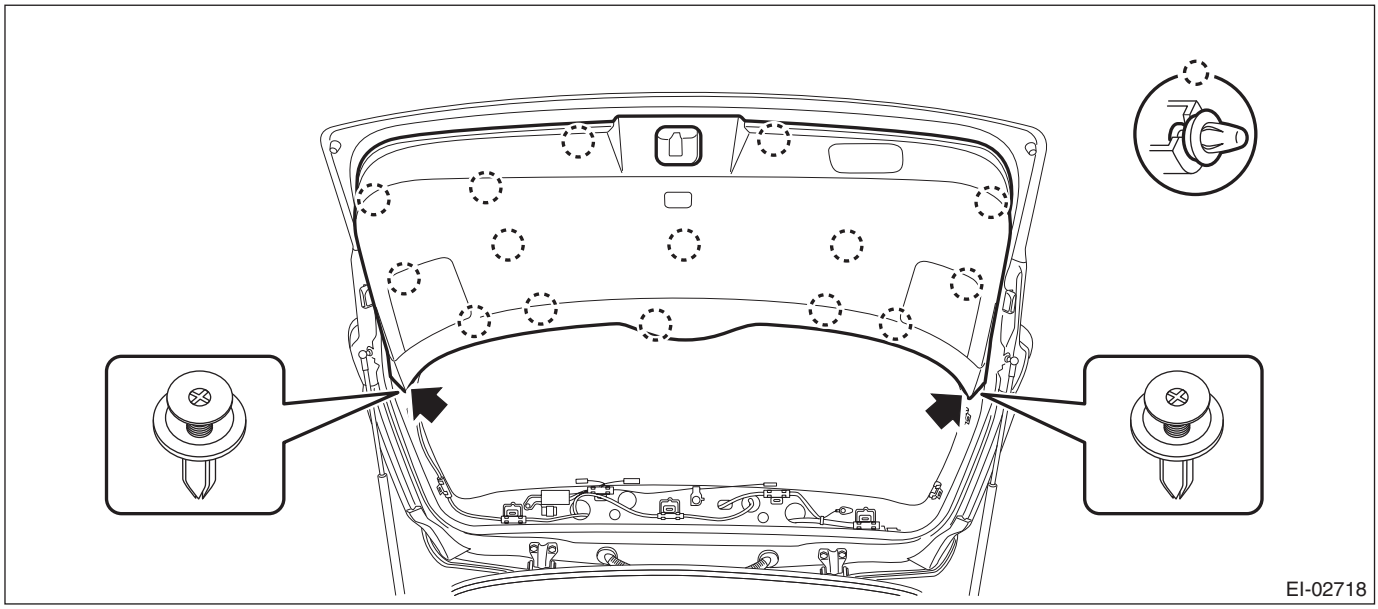
   (3) Remove the hand grip of rear gate.

CAUTION:
- **Be careful not to scratch the trim.**
- **To protect the trim from damage, attach a protective tape to the tool in use.**
      a) Insert a precision screwdriver (a).
      b) With the screwdriver inserted, push it down to release the claw and pull it toward you.

c) Remove the screws and detach the hand grip.

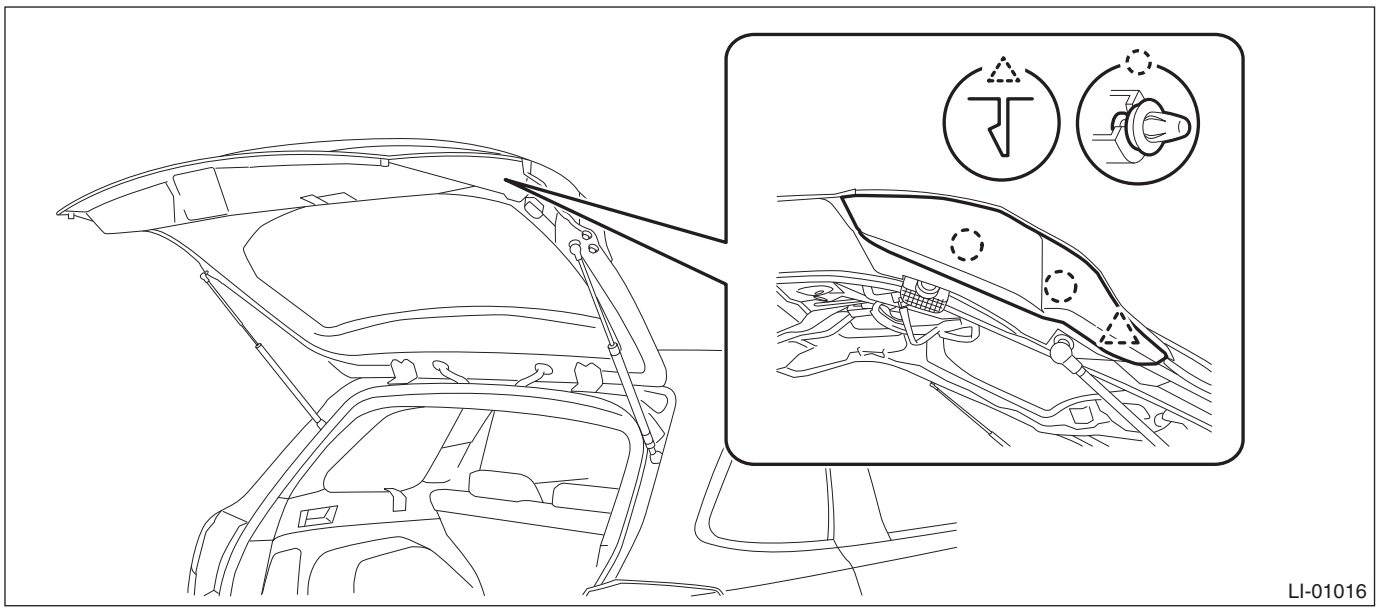


(4) Remove the rear gate lower trim.
a) Remove the clips on both ends.
b) Release the clips and remove the rear gate lower trim.

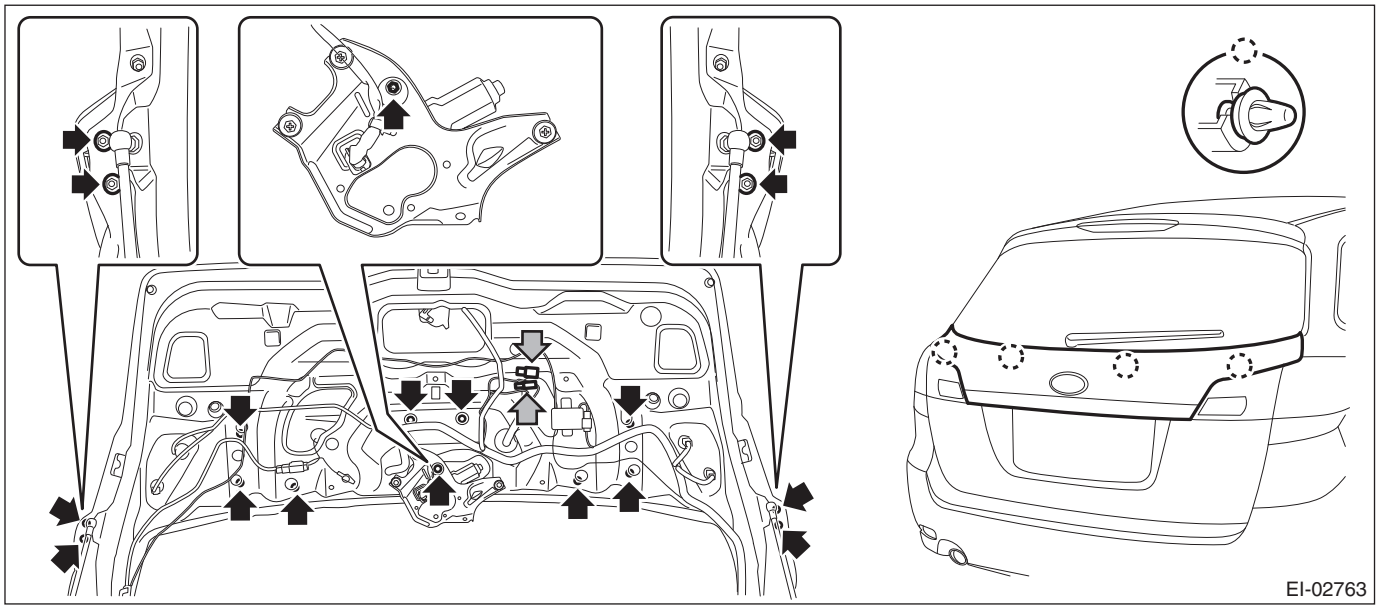


3) Remove the rear gate garnish.

(1) Release the clips and claws, then detach the rear finisher light side cover.



(2) Disconnect the harness connector of license plate light assembly.
(3) Remove the nuts.
(4) Remove the clips and the rear gate garnish.



B: INSTALLATION

CAUTION:
Make sure that the harness grommet is installed securely.
Incomplete installation causes water leak.
Install each part in the reverse order of removal.

Tightening torque
Rear gate garnish: 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)

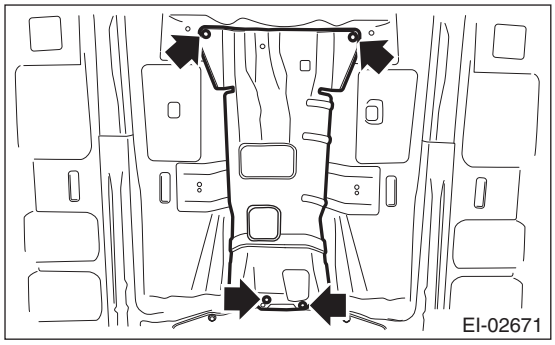
32.Heat Shield Cover

A: REMOVAL

1. FRONT HEAT SHIELD COVER

1) Remove the center exhaust pipe.
- Turbo model <Ref. to EX(H4DOTC)-15, REMOVAL, Rear Exhaust Pipe.>
- Non-turbo model <Ref. to EX(H4SO)-8, REMOVAL, Rear Exhaust Pipe.>
- H6 model <Ref. to EX(H6DO)-8, REMOVAL, Rear Exhaust Pipe.>

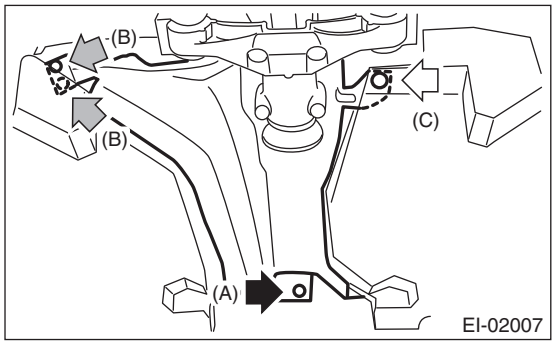
2) Remove the four bolts to remove the front heat shield cover.

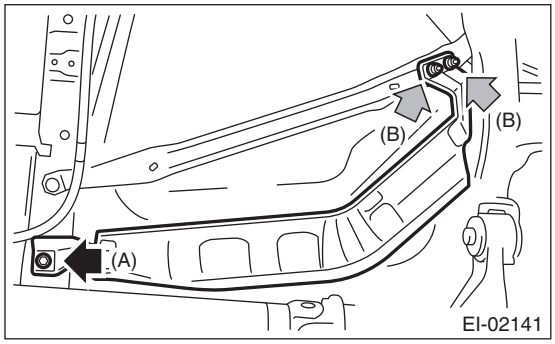


2. CENTER HEAT SHIELD COVER

1) Remove the rear exhaust pipe.
- Turbo model <Ref. to EX(H4DOTC)-15, REMOVAL, Rear Exhaust Pipe.>
- Non-turbo model <Ref. to EX(H4SO)-8, REMOVAL, Rear Exhaust Pipe.>
- H6 model <Ref. to EX(H6DO)-8, REMOVAL, Rear Exhaust Pipe.>

2) Remove the propeller shaft. (Turbo model only) <Ref. to DS-10, REMOVAL, Propeller Shaft.>
3) Remove the bolt (A), nuts (B), and clip (C), and remove the center heat shield cover.

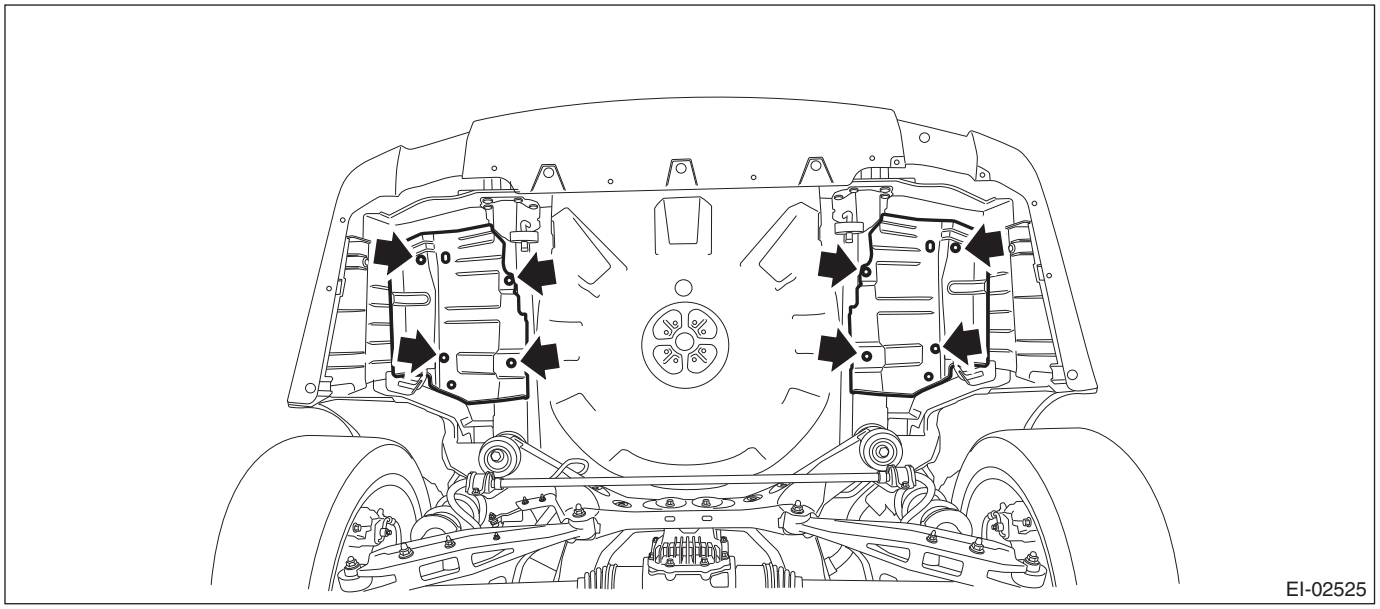




3. REAR HEAT SHIELD COVER

1) Remove the muffler.
- Turbo model <Ref. to EX(H4DOTC)-16, REMOVAL, Muffler.>
- Non-turbo model <Ref. to EX(H4SO)-9, REMOVAL, Muffler.>
- H6 model <Ref. to EX(H6DO)-9, REMOVAL, Muffler.>

2) Remove the bolts, and remove the rear heat shield cover.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EI-25, HEAT SHIELD COVER, COMPONENT, General Description.>

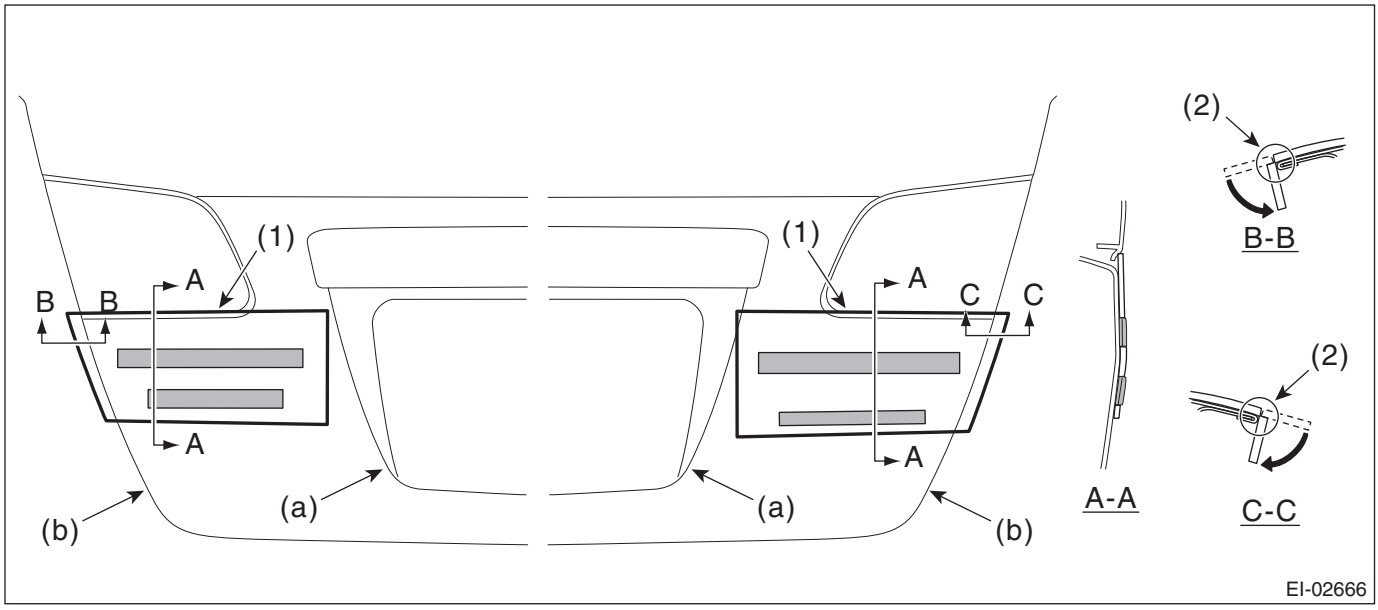
33.Ornament

A: INSTALLATION

1. LETTER MARK

Adhere the letter mark according to the following measurements.

- Sedan model



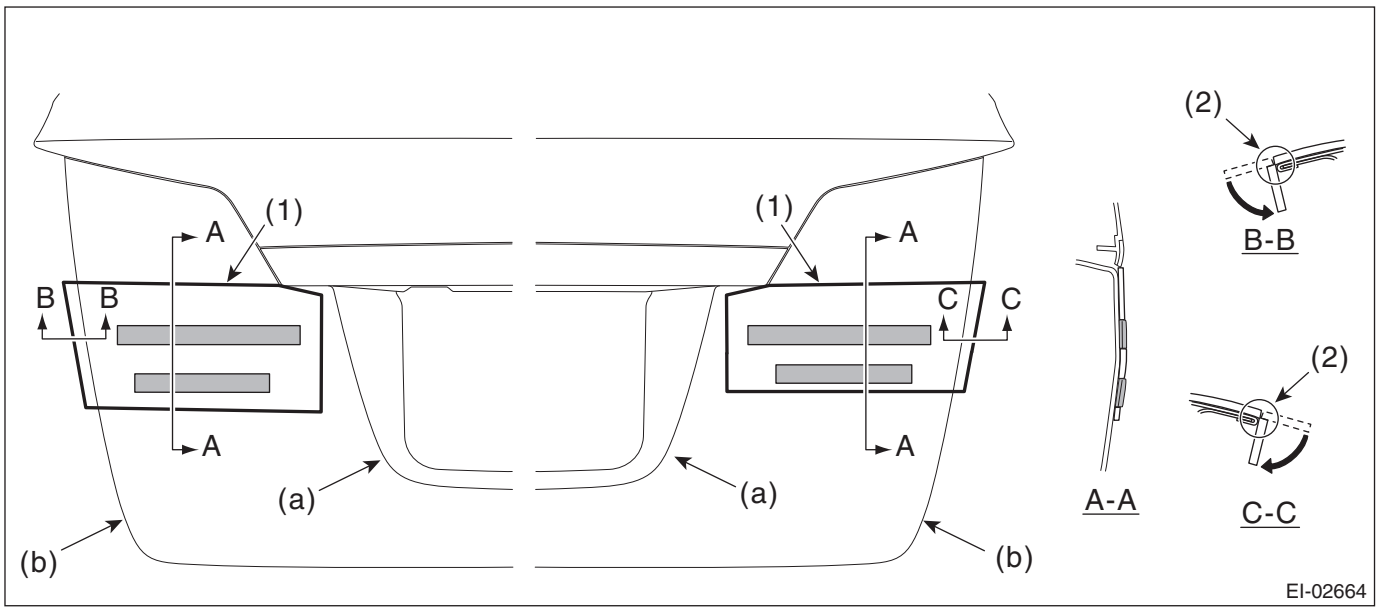
(a) Character line

(b) Trunk lid panel end

(1) Align the top end of application tape to the rear finisher light.

(2) Align the slit of application tape to the end of trunk lid panel and break off the application tape.

- OUTBACK model



(a) Character line

(b) End of rear gate panel

(1) Align the top end of application tape to the rear finisher light.

(2) Align the slit of application tape to the end of rear ate panel and break off the application tape.

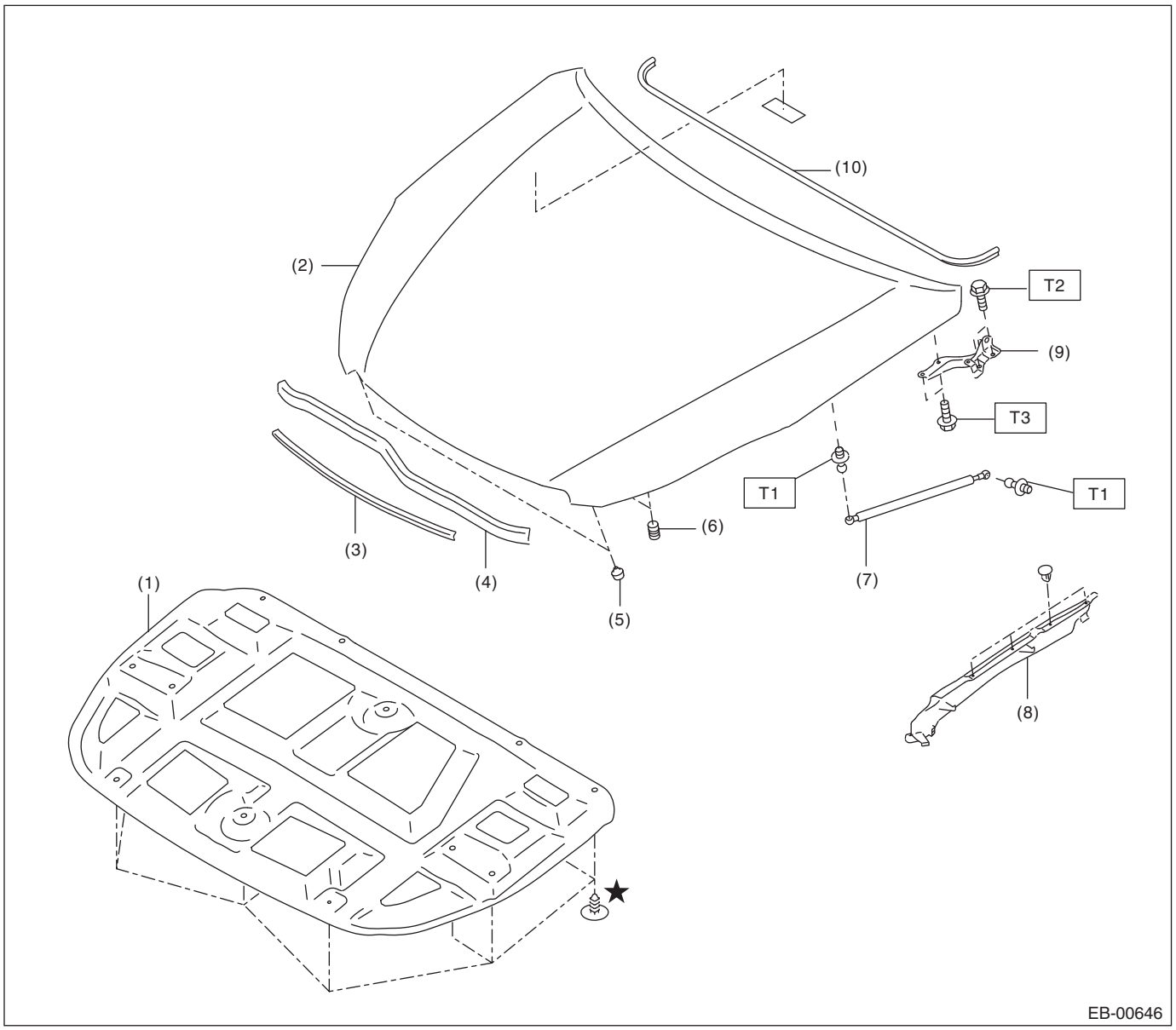
1. General Description

A: SPECIFICATION

Refer to Body Repair Manual for the dimensions of the body.

B: COMPONENT

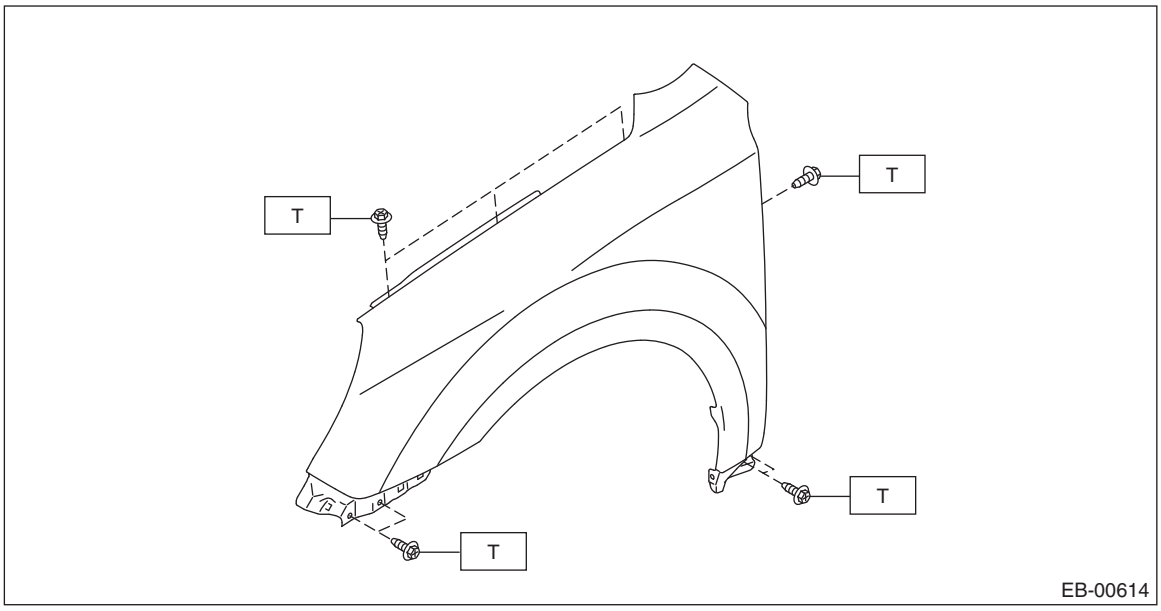
1. FRONT HOOD



(1)	Insulator	(6)	Buffer (hood side)
(2)	Front hood panel ASSY	(7)	Damper stay ASSY
(3)	Front grille seal ASSY	(8)	Fender cover ASSY UPR
(4)	Front hood seal ASSY	(9)	Hinge
(5)	Front hood stopper	(10)	Cowl panel seal

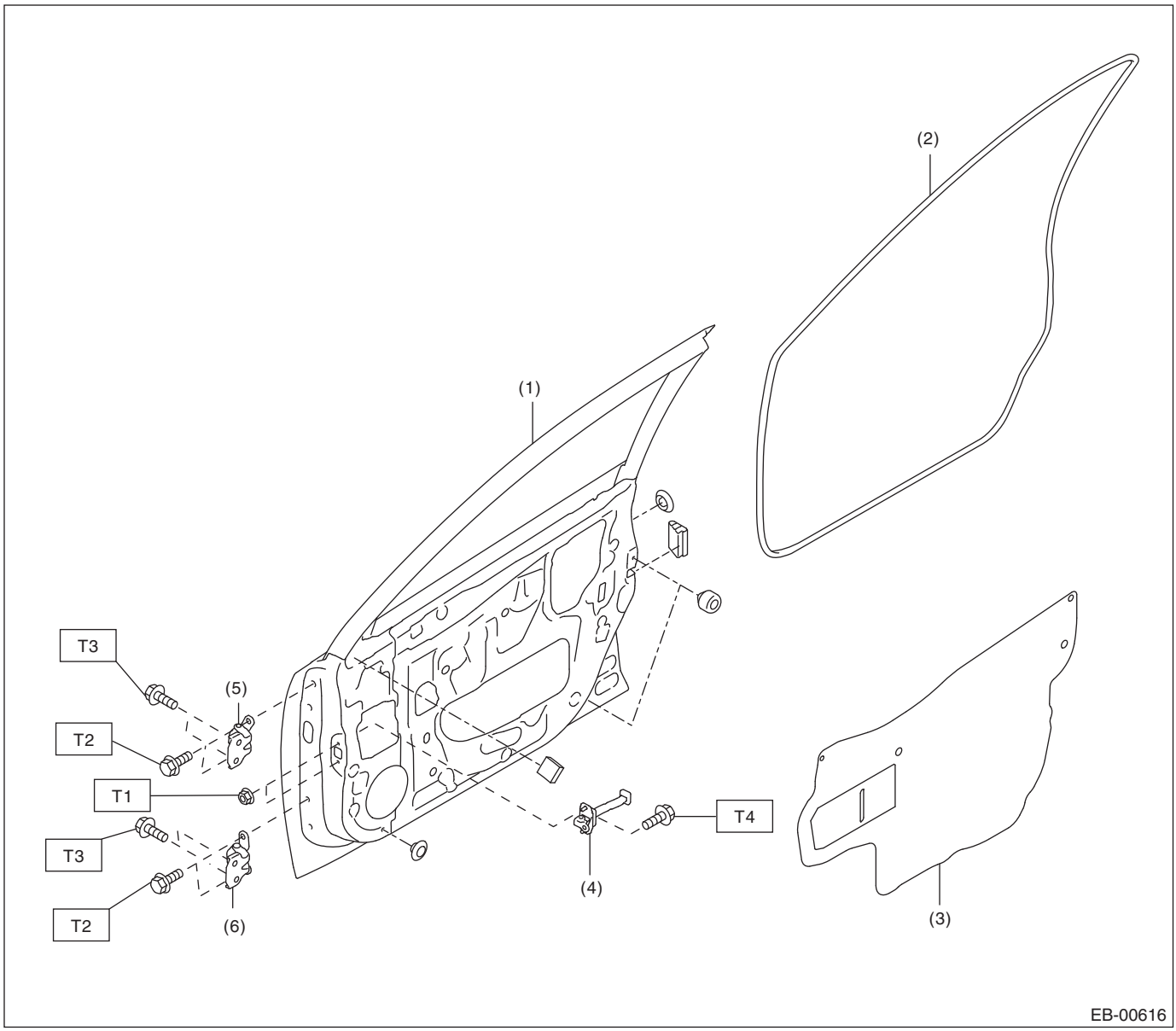
Tightening torque:N·m (kgf-m, ft-lb)
T1: 20 (2.04, 14.8)
T2: 25 (2.55, 18.4)
T3: 37 (3.77, 27.3)

2. FRONT FENDER



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

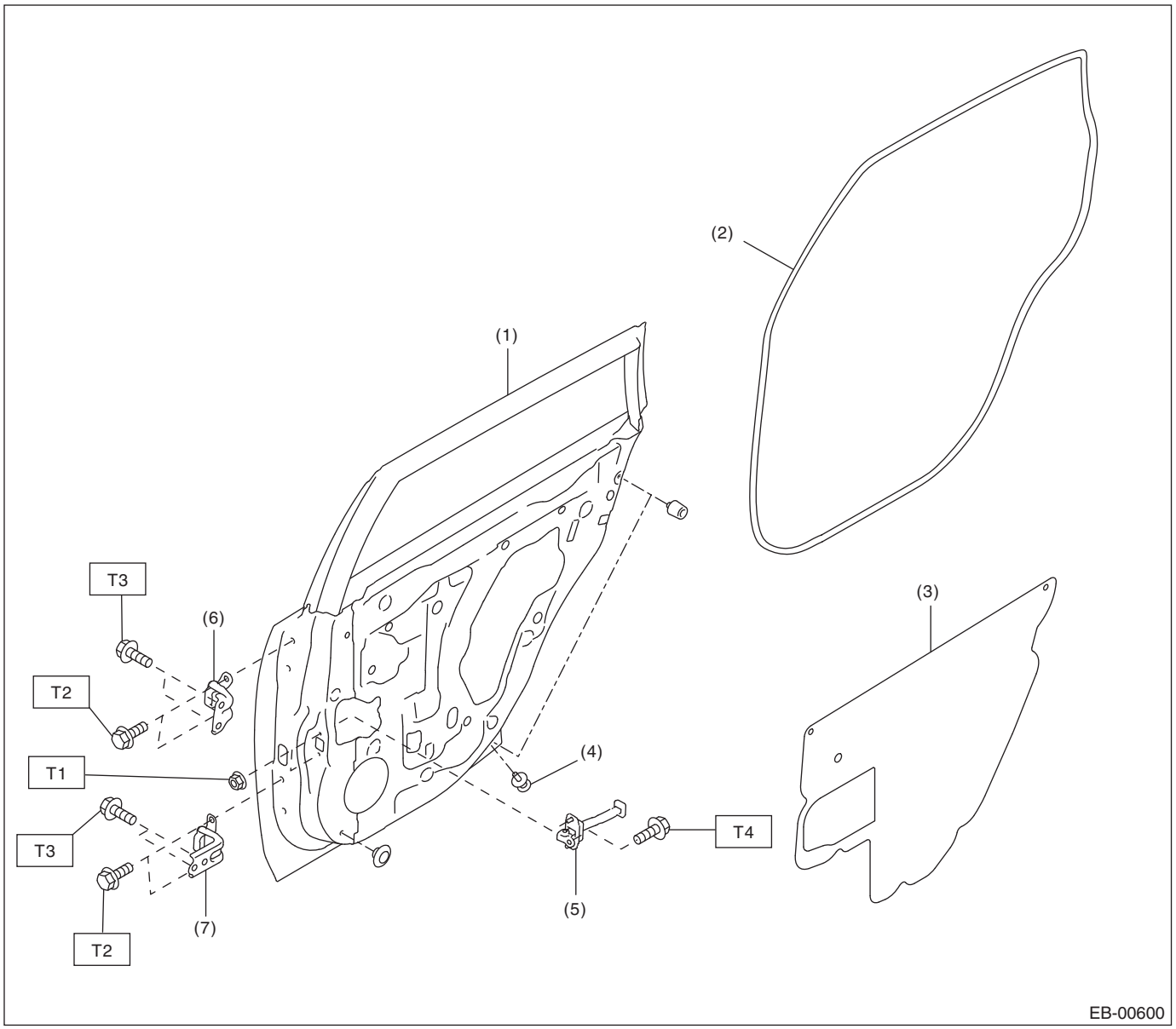
3. FRONT DOOR



(1) Front door panel
(2) Front door weather strip
(3) Sealing cover
(4) Checker
(5) Upper hinge
(6) Lower hinge

Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 25 (2.55, 18.4)
T3: 30 (3.06, 22.1)
T4: 33 (3.36, 24.3)

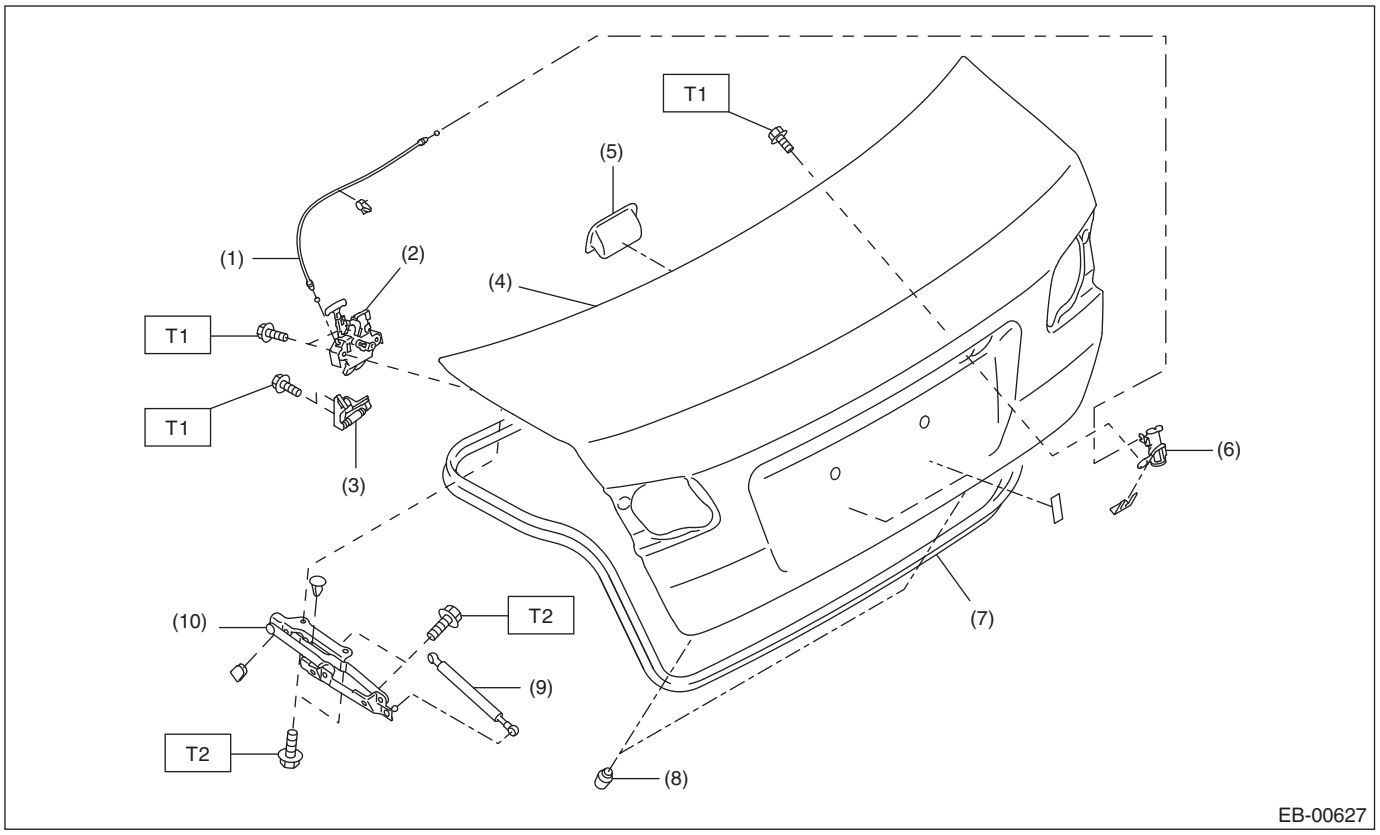
4. REAR DOOR



(1)	Rear door panel	(6)	Upper hinge
(2)	Rear door weather strip	(7)	Lower hinge
(3)	Sealing cover		
(4)	Rear door catcher		
(5)	Checker		

Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 25 (2.55, 18.4)
T3: 30 (3.06, 22.1)
T4: 33 (3.36, 24.3)

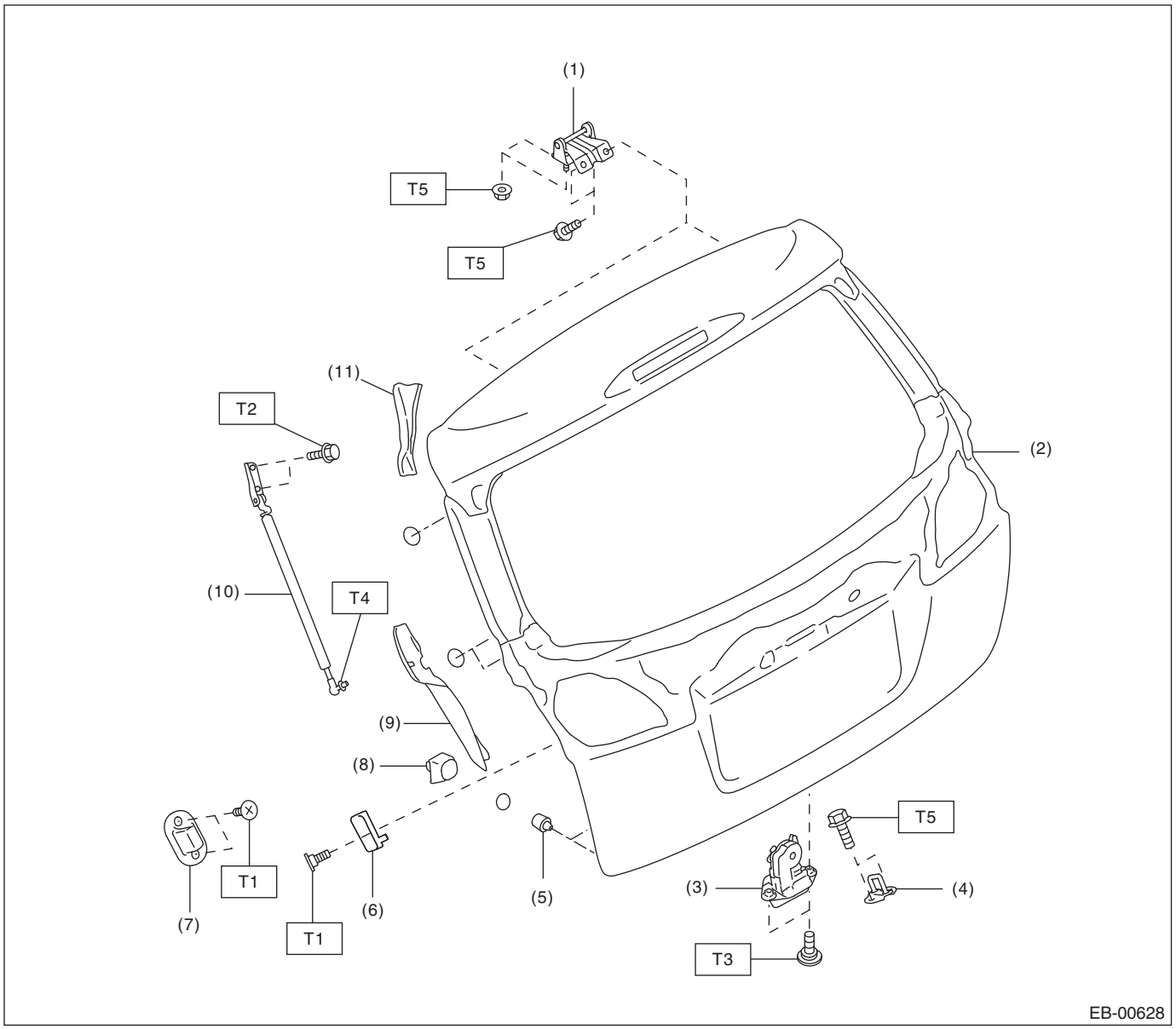
5. TRUNK LID PANEL



(1) Trunk release cable ASSY
(2) Trunk lid latch & actuator ASSY
(3) Striker
(4) Trunk lid panel ASSY
(5) Trunk lid inner handle
(6) Trunk lid key cylinder ASSY
(7) Weather strip
(8) Trunk lid stopper
(9) Trunk lid damper stay
(10) Trunk lid hinge ASSY

Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 37 (3.77, 27.3)

6. REAR GATE



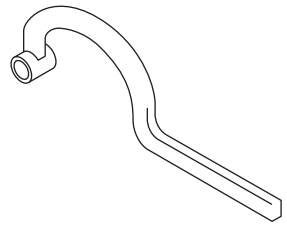
(1)	Hinge	(7)	Buffer (body side)	***Tightening torque:N·m (kgf-m, ft-lb)***
(2)	Rear gate panel	(8)	Rear gate spacer (mounted to the body)	***T1: 7.5 (0.76, 5.5)***
(3)	Rear gate latch & actuator ASSY	(9)	Rear gate cover	***T2: 16 (1.63, 11.8)***
(4)	Striker	(10)	Rear gate damper stay	***T3: 18 (1.84, 13.3)***
(5)	Stopper rubber	(11)	Rear gate drip rubber	***T4: 20 (2.04, 14.8)***
(6)	Buffer (rear gate side)			***T5: 25 (2.55, 18.4)***

C: CAUTION

Exterior body panels are heavy. When removing and installing them, do not drop and damage the panels. Also, be careful not to scratch the coated surfaces of the panels.

D: PREPARATION TOOL

1. SPECIAL TOOL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST-925610000	925610000	WRENCH	Used for removing and installing door hinge.

2. GENERAL TOOL

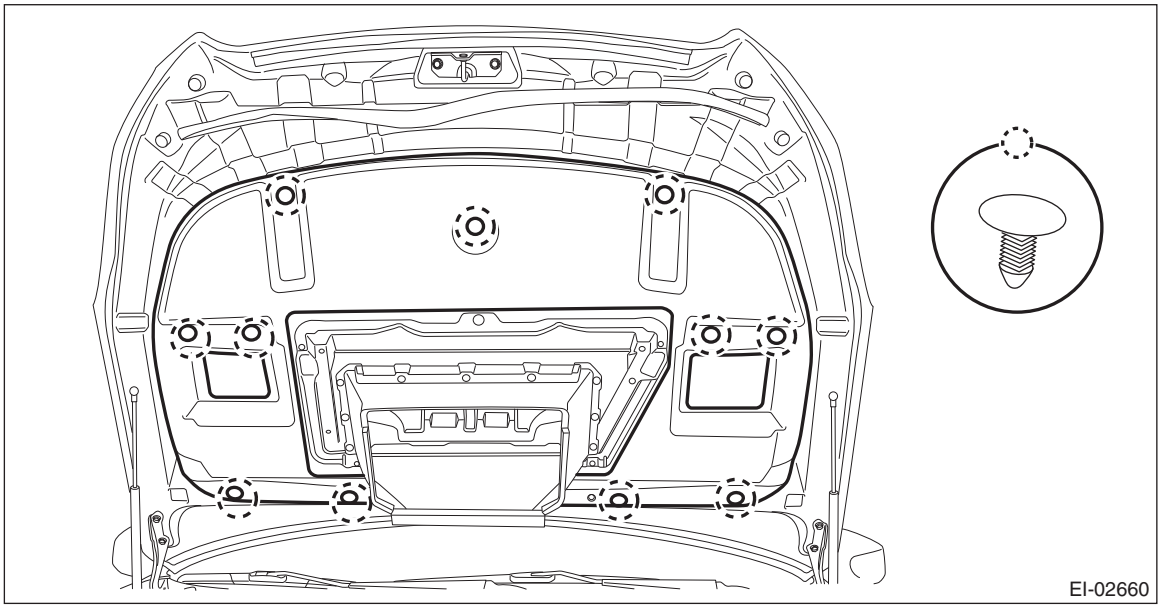
TOOL NAME	REMARKS
Support jack	Used for supporting door panel.
Clip remover	Used for removing various types of clips

2. Front Hood

A: REMOVAL

1. FRONT HOOD INSULATOR

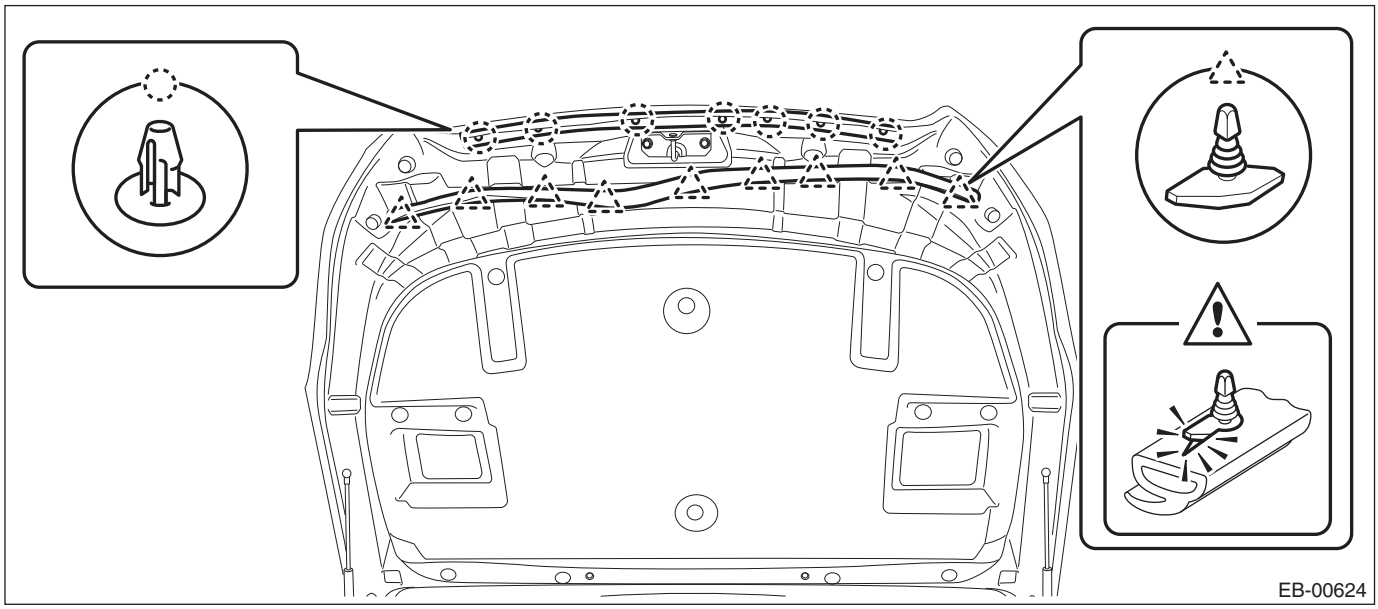
Release the clips to remove the front hood insulator.



2. FRONT HOOD SEAL

Remove the clip, and remove the seal.

CAUTION:
If the weather strip clip is removed with excessive force, the seal may be damaged. Be sure to use clip remover, etc. to remove.



3. FRONT HOOD DAMPER

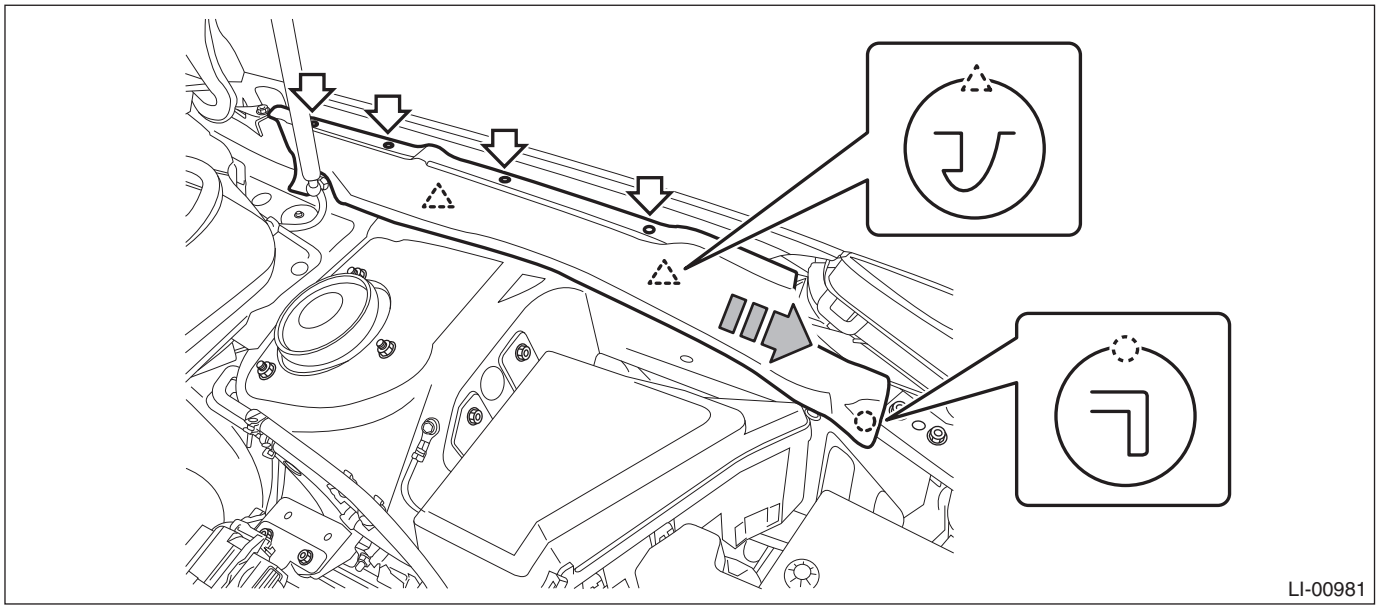
CAUTION:
- **Do not damage piston rods and oil seals.**
- **Never disassemble cylinders: They contain gas.**
- **Front hood panels are heavy. When removing and installing the damper stays and hood hinges, always work in a team of two or more persons.**

Remove the damper stay by removing mounting bolts.

4. FRONT HOOD HINGE

CAUTION:
Front hood panels are heavy. When removing and installing the damper stays and hood hinges, always work in a team of two or more persons.

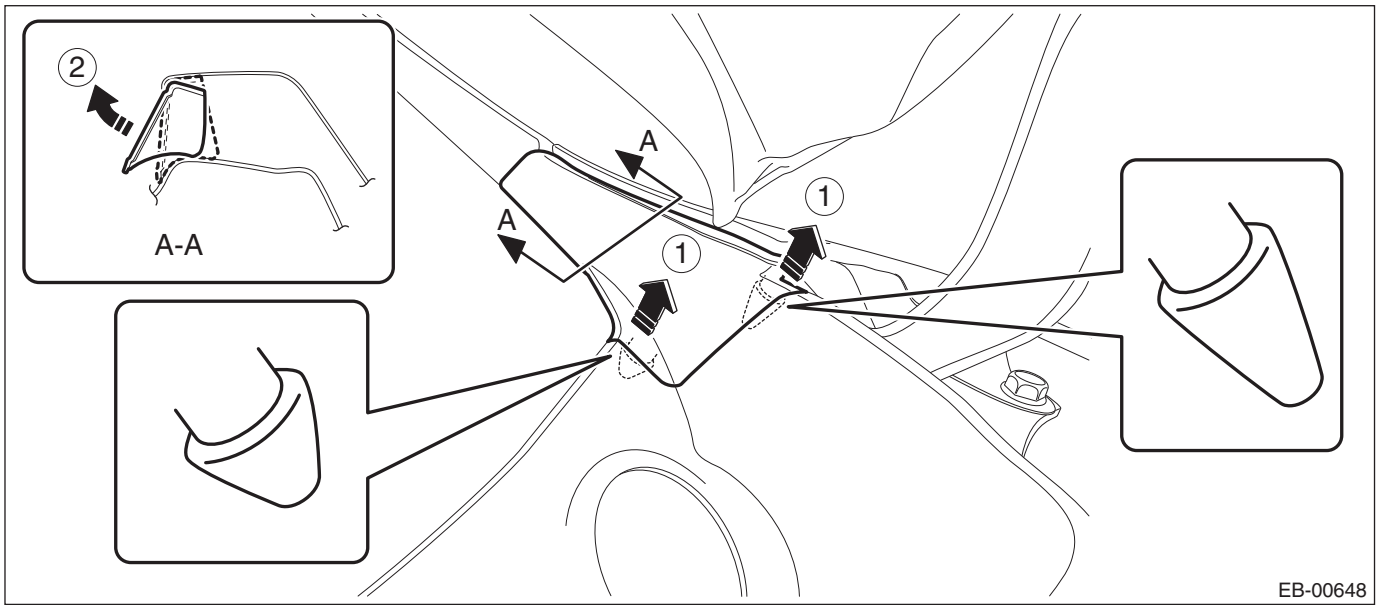
1) Remove the fender cover assembly UPR.
   (1) Remove the clip.
   (2) Release the claws of the fender cover assembly UPR by pulling it forward and remove the fender cover.



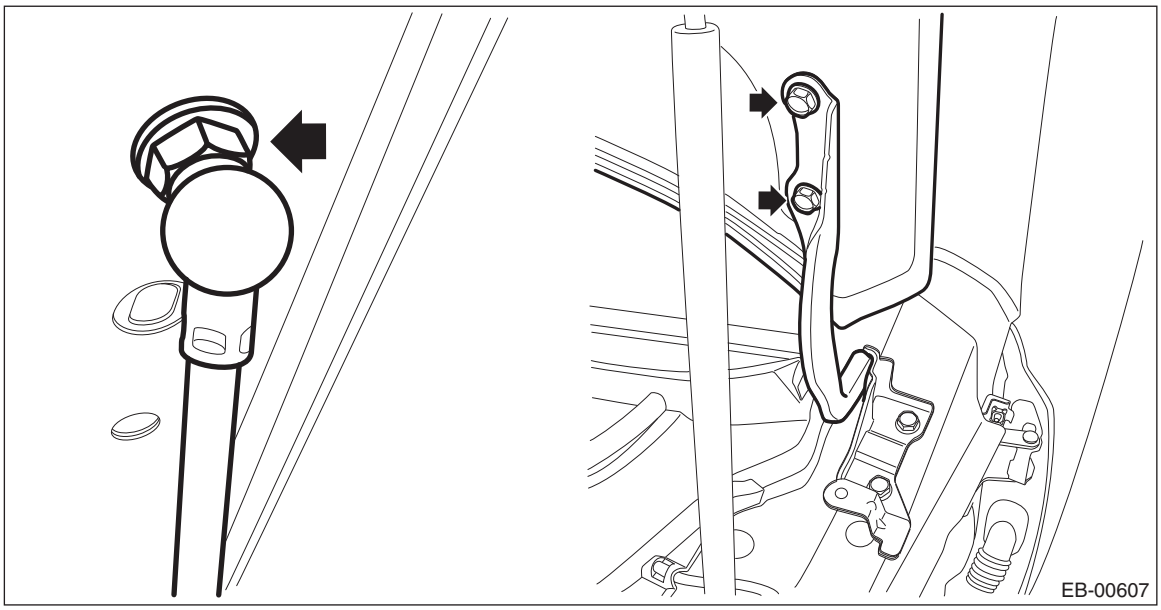
2) Remove the cowl panel side.
   (1) Detach the pins of the cowl panel side.

(2) Remove the cowl panel side from inside the fender panel by pulling it.

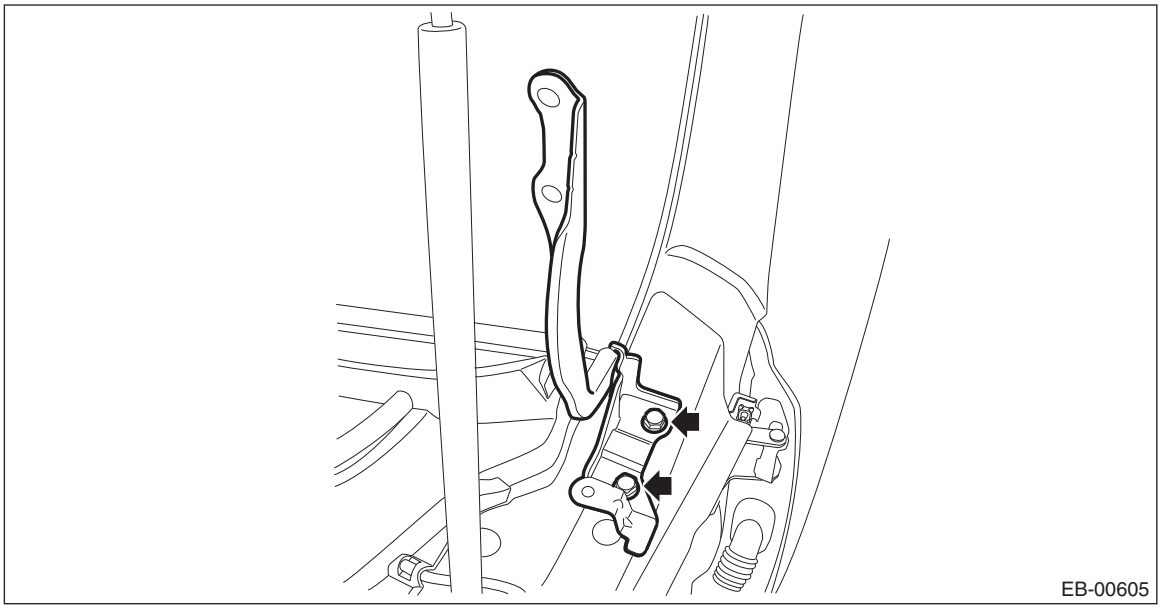
CAUTION:
Applying excessive pulling force may damage the cowl panel side. If it is difficult to remove, use a plastic remover or equivalent tool.



3) Remove the front fender panel. <Ref. to EB-16, REMOVAL, Front Fender.>
4) Remove the front hood panel.
(1) Remove the damper stay mounting bolt on the hood panel side.
(2) Remove the bolts on the hood panel, and remove the front hood panel.



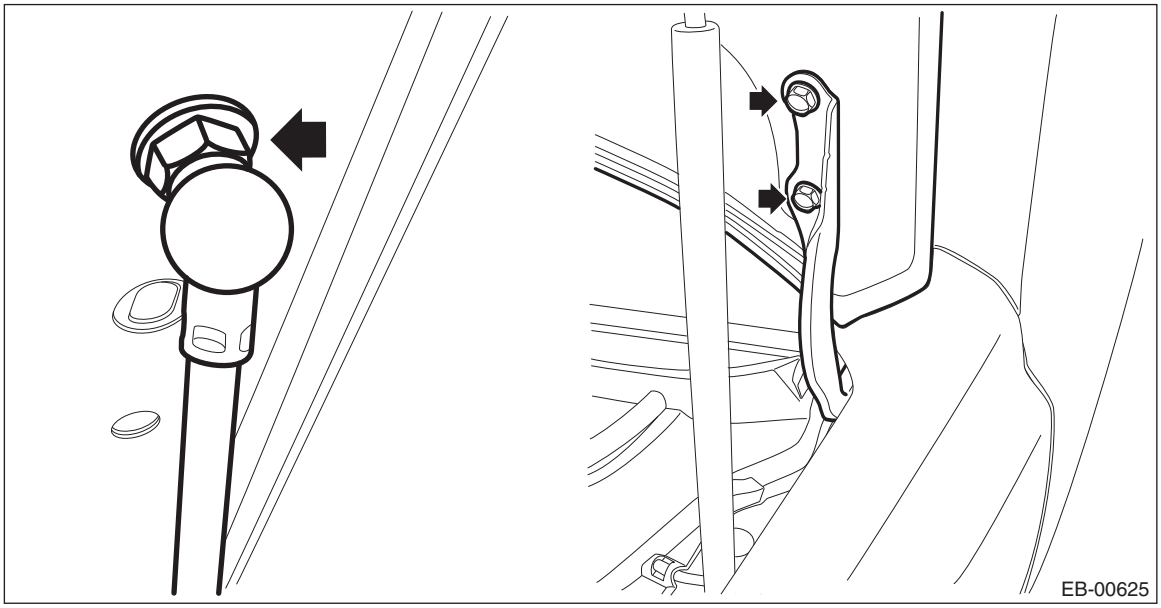
5) Remove the bolts, and remove the front hood hinge.



5. FRONT HOOD PANEL

CAUTION:
Front hood panels are heavy. When removing and installing the damper stays and hood hinges, always work in a team of two or more persons.

1) Remove the damper stay mounting bolt on the hood panel side.
2) Remove the bolts on the hood panel, and remove the front hood panel.



B: INSTALLATION

CAUTION:
Front hood panels are heavy. When removing and installing the damper stays and hood hinges, always work in a team of two or more persons.
To install the front hood insulator, front hood seal, and front hood damper, follow the reverse order of removal.
To install the front hood hinges and front hood panel, follow the procedure below.
1) Install the front hood hinges to the vehicle body. (When front hood hinges are removed)
2) Temporarily install the front hood panel to the front hood hinges.

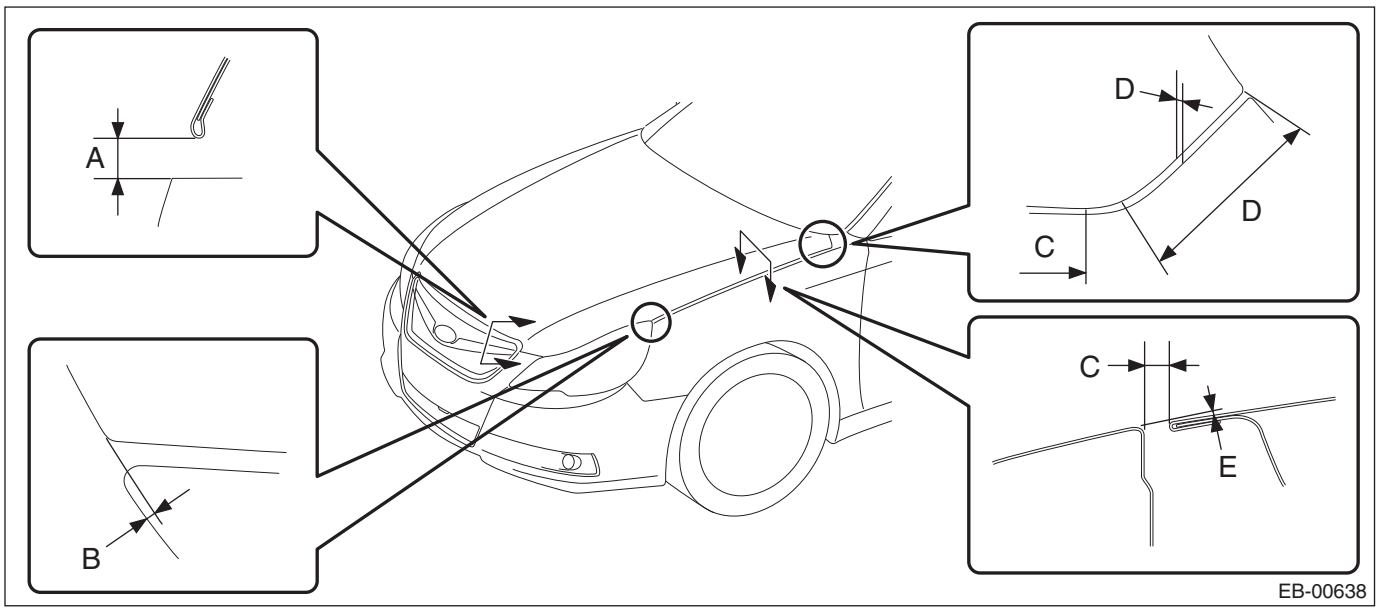
NOTE:
When installing the front hood panel, make sure that a uniform clearance is created around the panel.
3) Adjust the clearance around the front hood panel. <Ref. to EB-13, ADJUSTMENT, Front Hood.>
4) Tighten the front hood hinge bolts.

Tightening torque:
37 N·m (3.77 kgf-m, 27.3 ft-lb)
5) Install each part of the front hood in the reverse order of removal.

Tightening torque:
Front hood damper: 20 N·m (2.04 kgf-m, 14.8 ft-lb)
Front hood duct: 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)

C: ADJUSTMENT

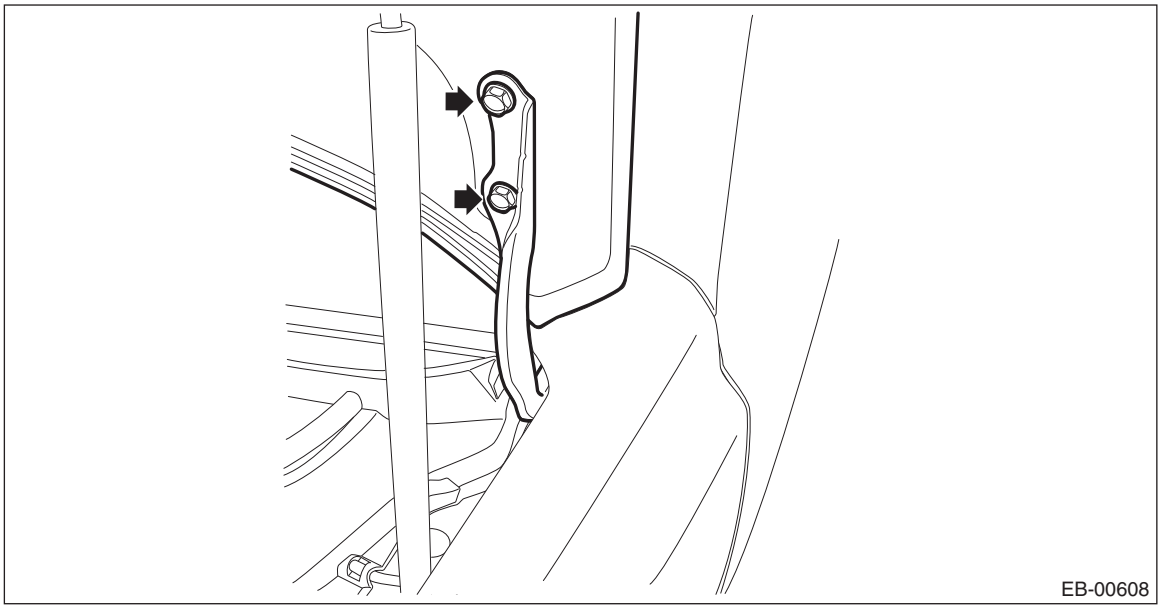
Adjust the clearance around the front hood panel as follows.



Part		Standard
A	Front hood panel to front bumper	6.0±1.0 mm (0.24±0.04 in)
B	Offset value between front hood panel and front fender panel tip	0+0.5, –1.0 mm (0+0.02, –0.04 in)
C	Front hood panel to Front fender panel (from front end to just before curved portion)	3.5±1.0 mm (0.14±0.04 in)
D	Front hood panel to Front fender panel (from rear end to just before curved portion)	4.1±1.0 mm (0.16±0.04 in)
E	Surface level gap between front hood panel and front fender panel	0.5+0.5, –1.0 mm (0.02+0.02, –0.04 in)

1) Adjust the horizontal position of front hood.

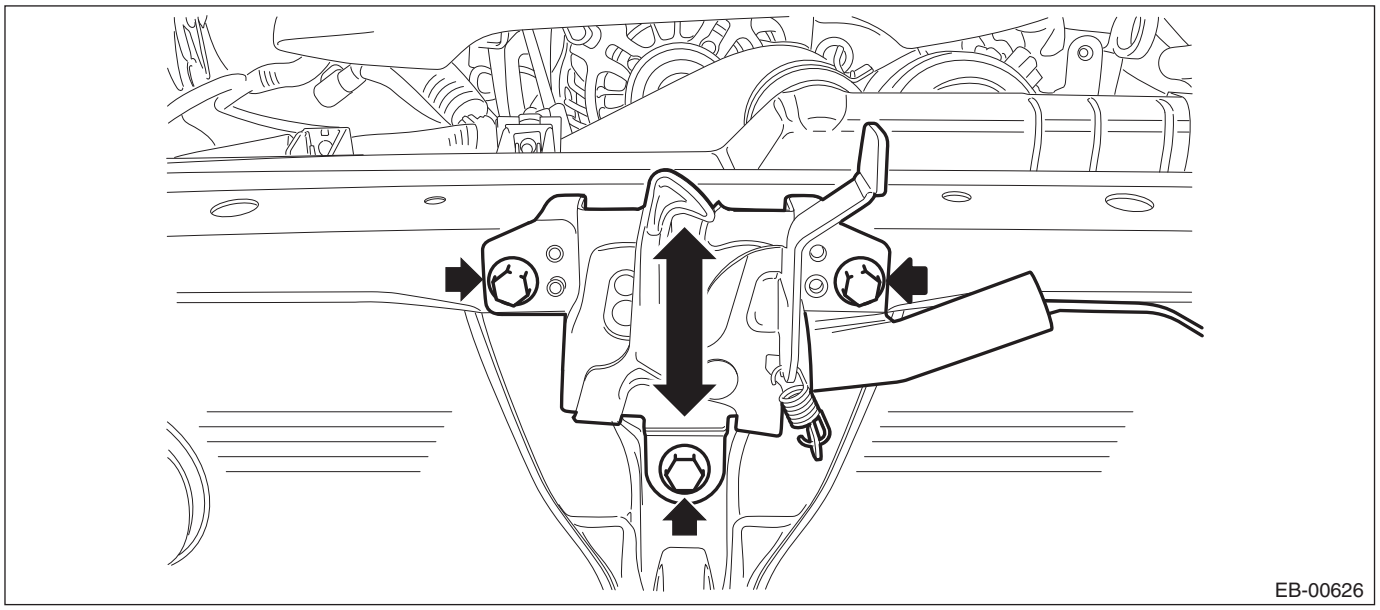
(1) Loosen the left and right hinge attaching bolts.



(2) Adjust the horizontal panel gap of the front hood and tighten the hinge attaching bolts.

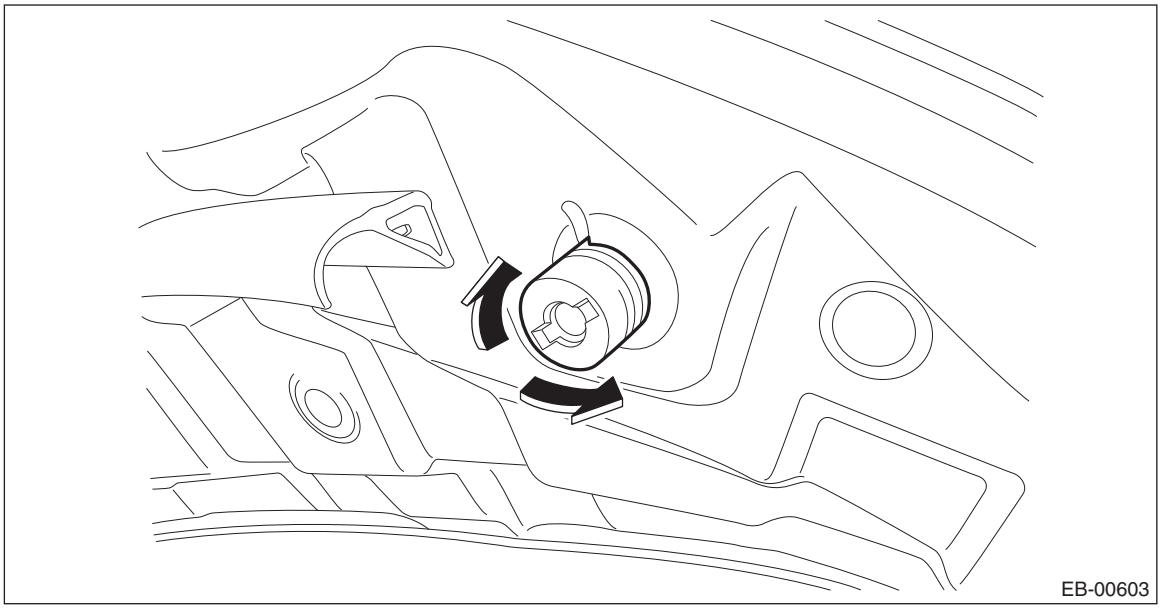
Tightening torque:
37 N·m (3.77 kgf-m, 27.3 ft-lb)

2) Adjust the height at the front end of hood.
(1) Loosen the bolts of the front hood lock assembly.
(2) Adjust the front hood lock assembly by moving it up and down.



Tightening torque:
33 N·m (3.36 kgf-m, 24.3 ft-lb)

3) Rotate the hood buffer to adjust lateral height.



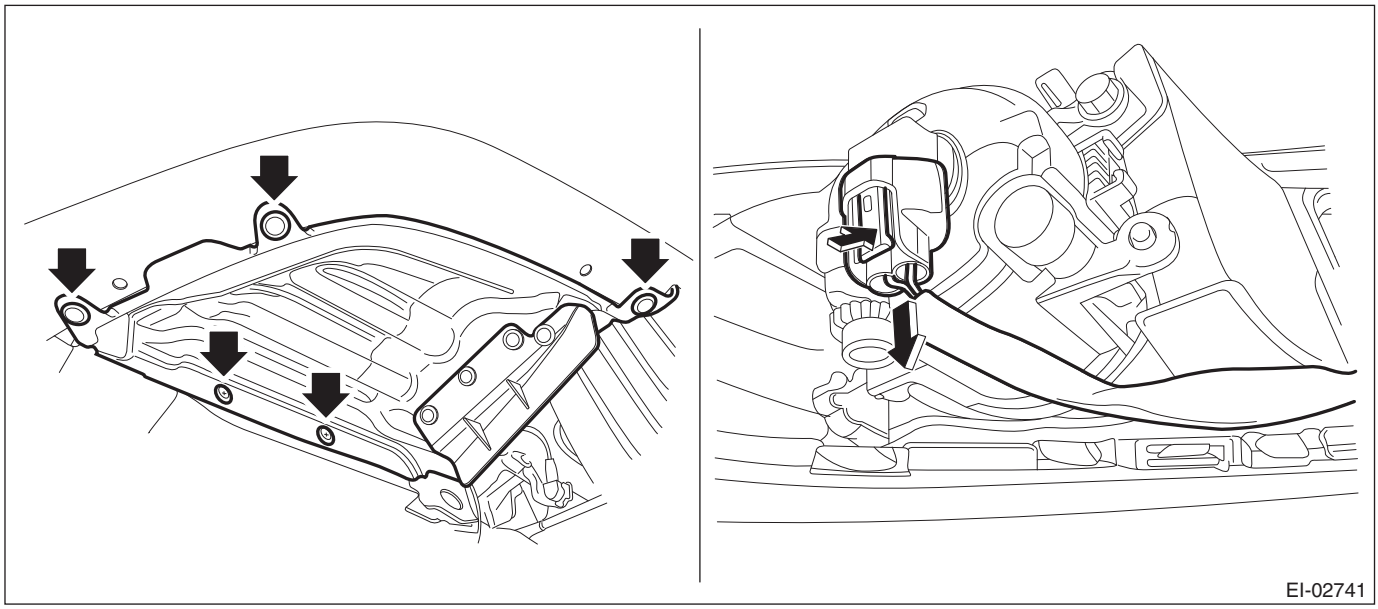
D: DISPOSAL

For how to dispose of the front hood damper stay, refer to the disposal procedure for rear gate damper stay. <Ref. to EB-53, REAR GATE DAMPER STAY, DISPOSAL, Rear Gate.>

3. Front Fender

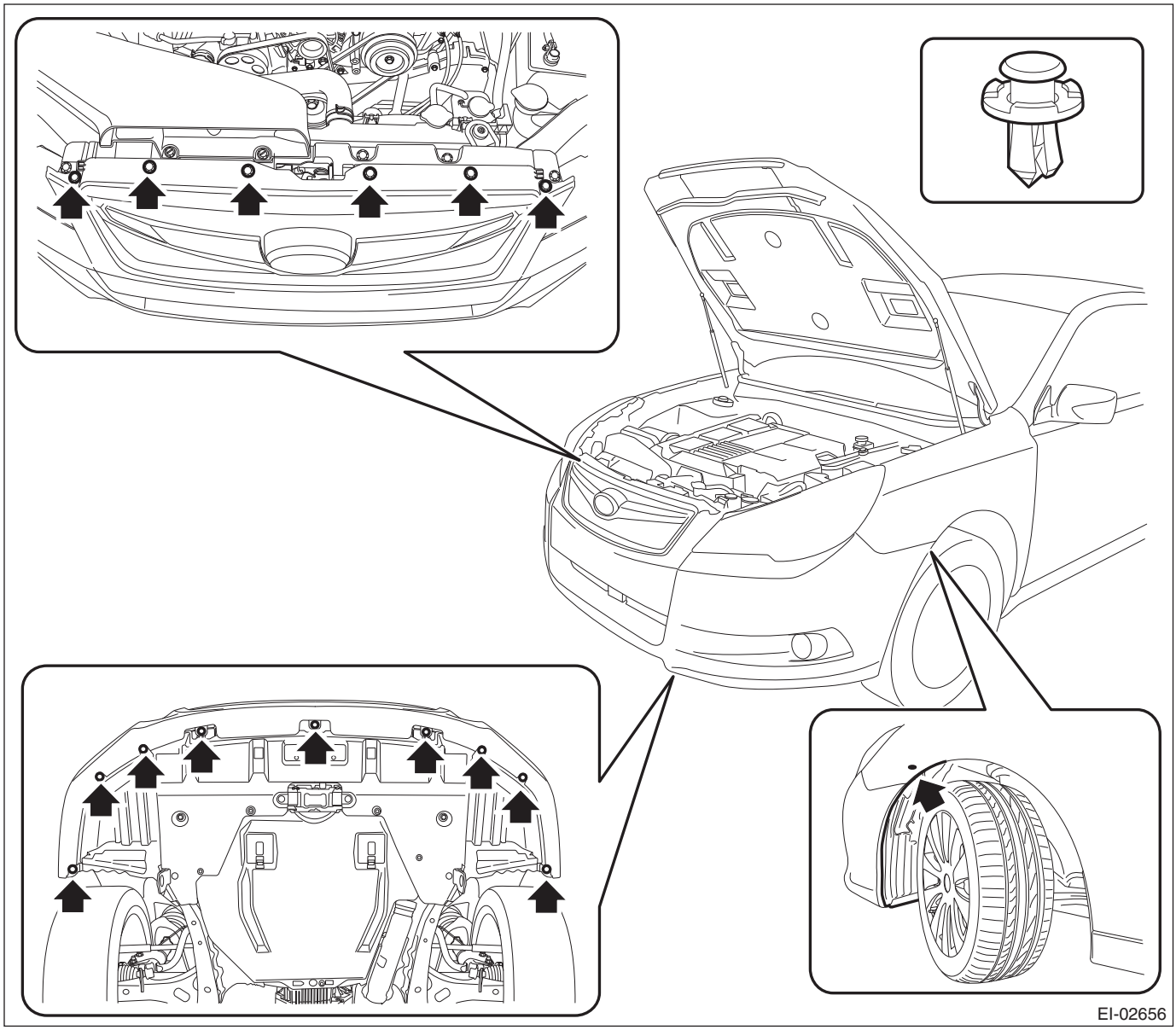
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the bumper face assembly.
   (1) Remove the clips, turn over the front mud guard, and disconnect the fog light connector. (Model with fog light)



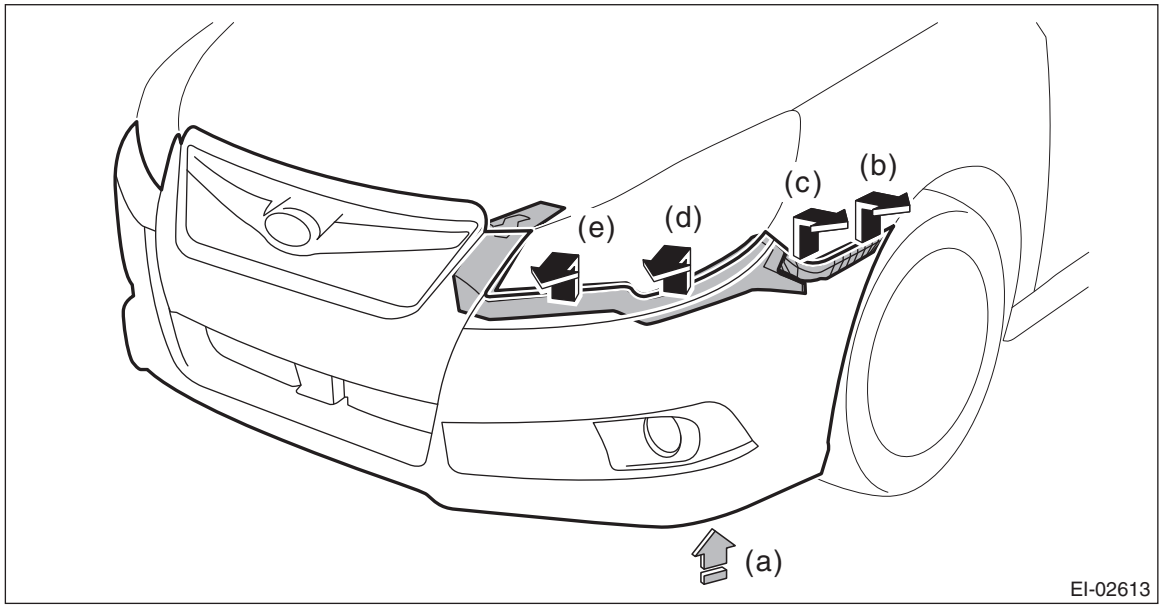
   (2) Remove the clips at the upper side of the bumper.
   (3) Remove the clips from the fender.

(4) Remove the clips at the lower side of bumper.



(5) Detach the flange section on the bumper face side from the bracket side front UPR.

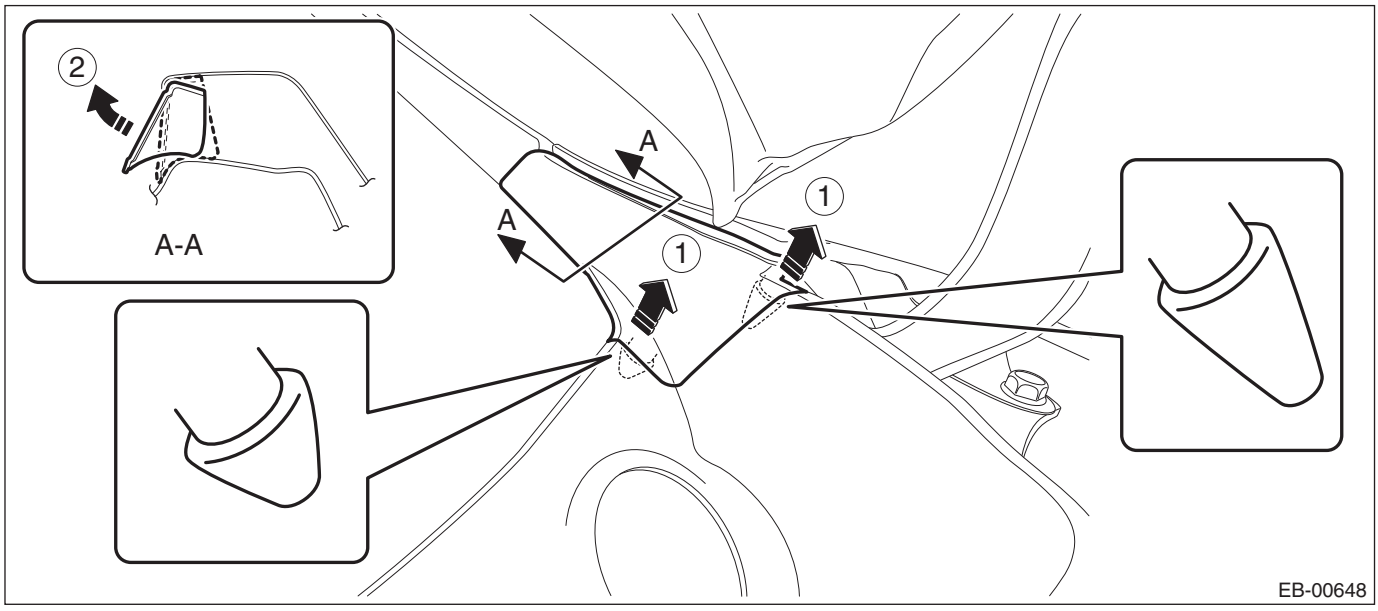
CAUTION:
Do not pull forcibly. It may damage the flange sections of the bumper face.



NOTE:
Detach the parts in order from (b) to (e) while pulling up the lower side of the fog light (a).
Detach the opposite side in the same manner.

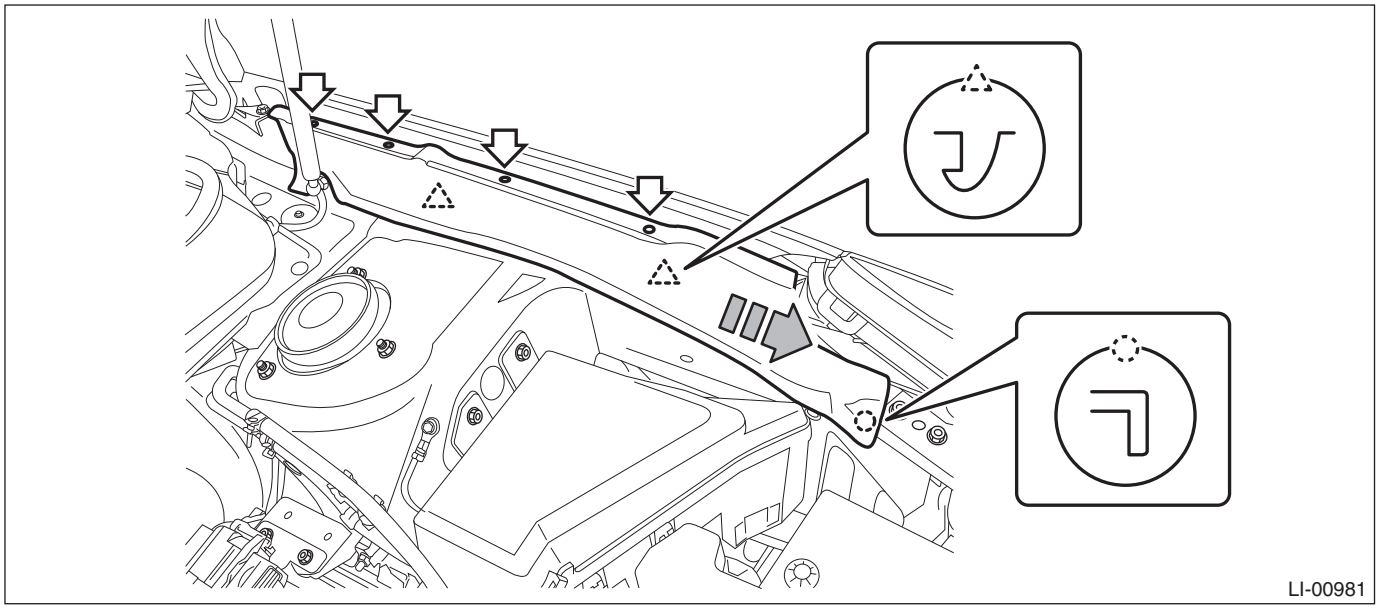
3) Remove the cowl panel side.
(1) Detach the pins of the cowl panel side.
(2) Remove the cowl panel side from inside the fender panel by pulling it.

CAUTION:
Applying excessive pulling force may damage the cowl panel side. If it is difficult to remove, use a plastic remover or equivalent tool.



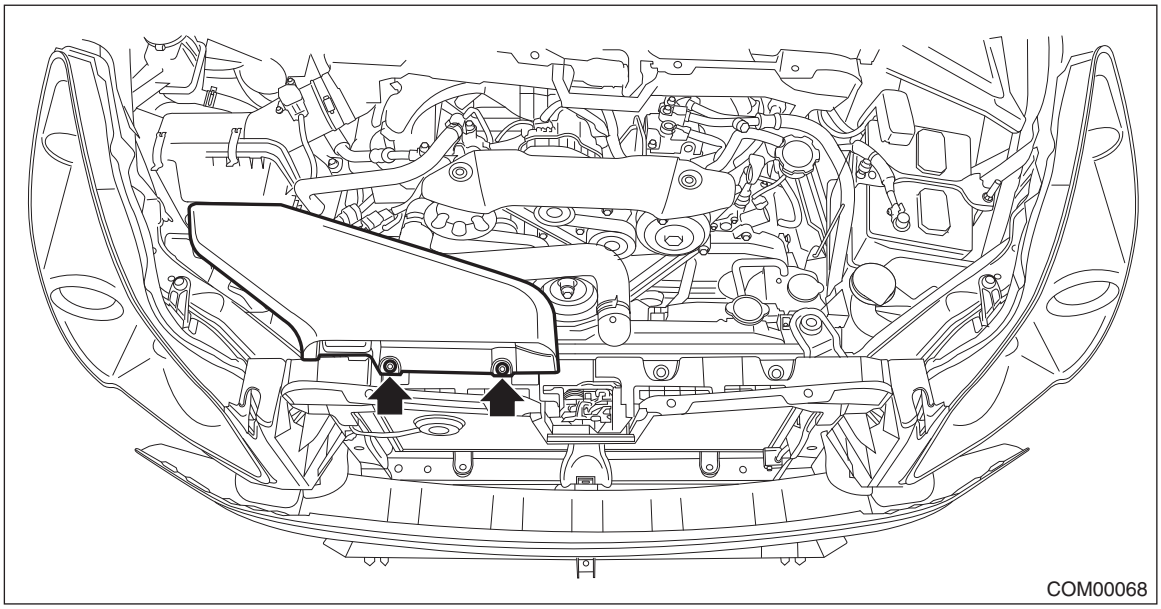
4) Remove the headlight assembly.
(1) Remove the fender cover assembly UPR.
a) Remove the clip.

b) Release the claws of the fender cover assembly UPR by pulling it forward and remove the fender cover.

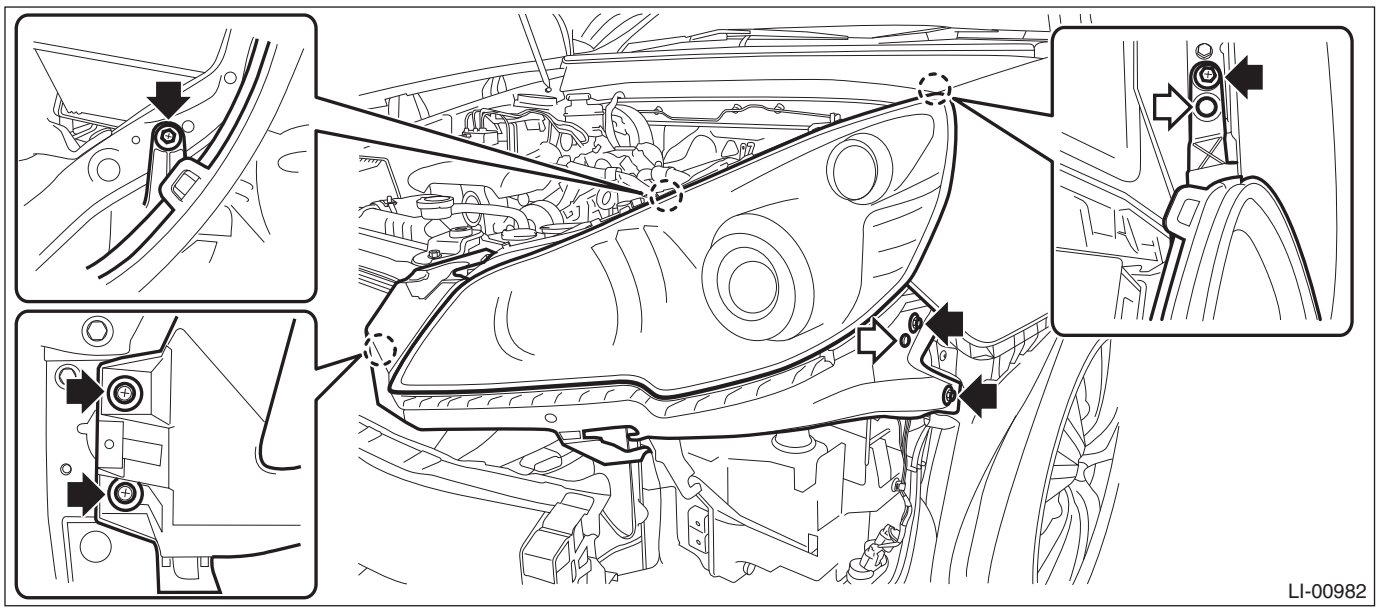


(2) Remove the headlight assembly.

NOTE:
When removing the RH headlight, remove the air intake duct.

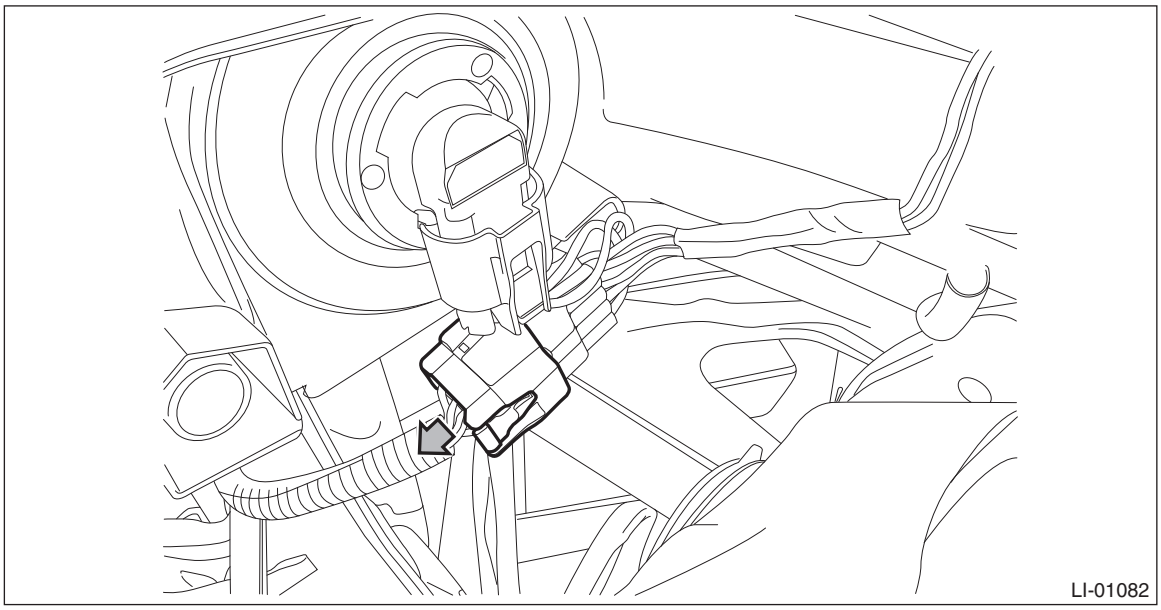


a) Remove the bolts and two clips, and pull out the headlight assembly to the front of the vehicle.

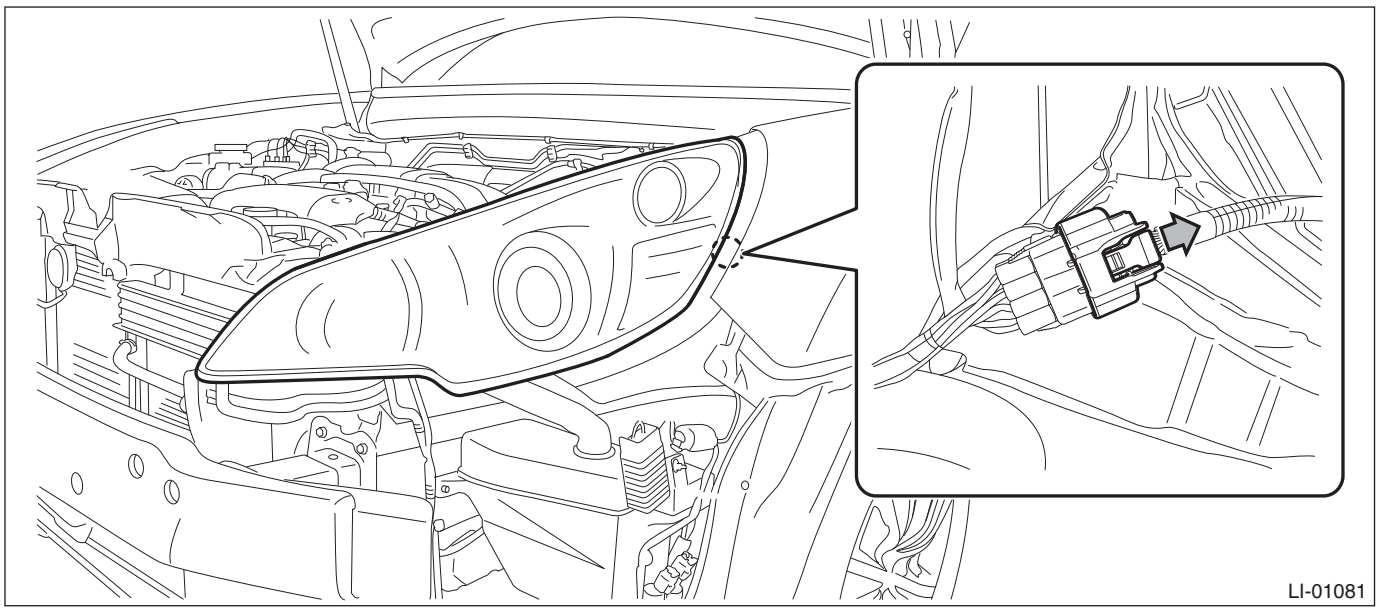


b) Disconnect the connector and remove the headlight assembly.

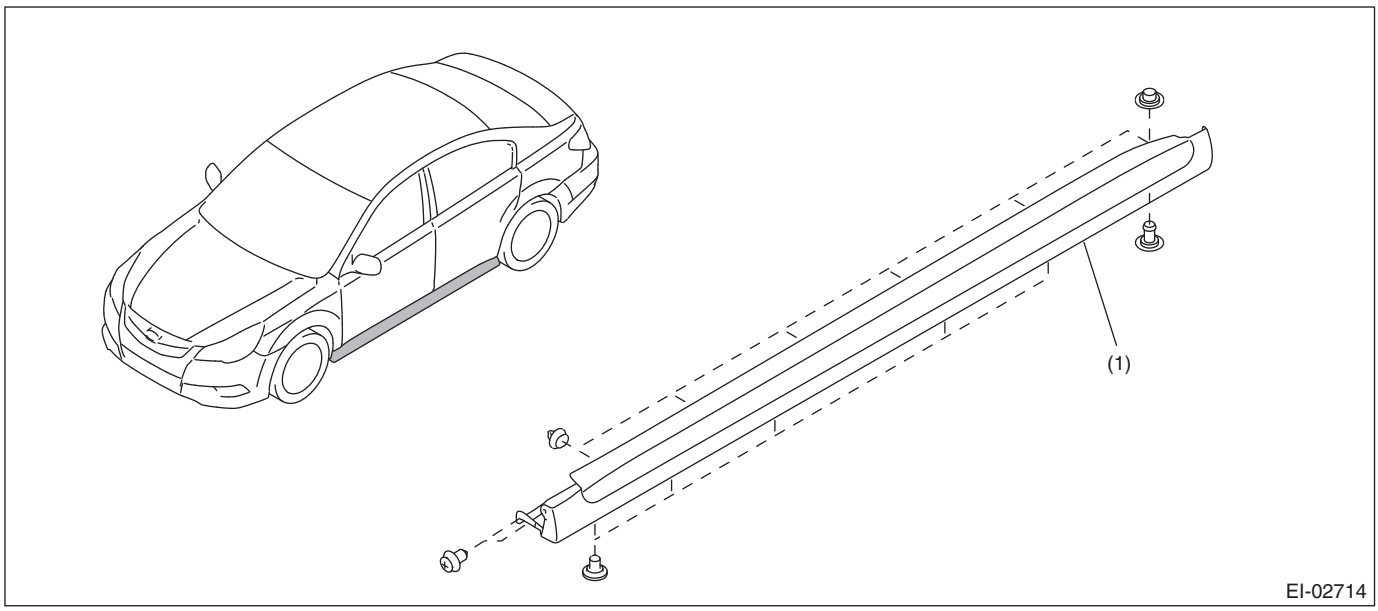
- Headlight connector RH

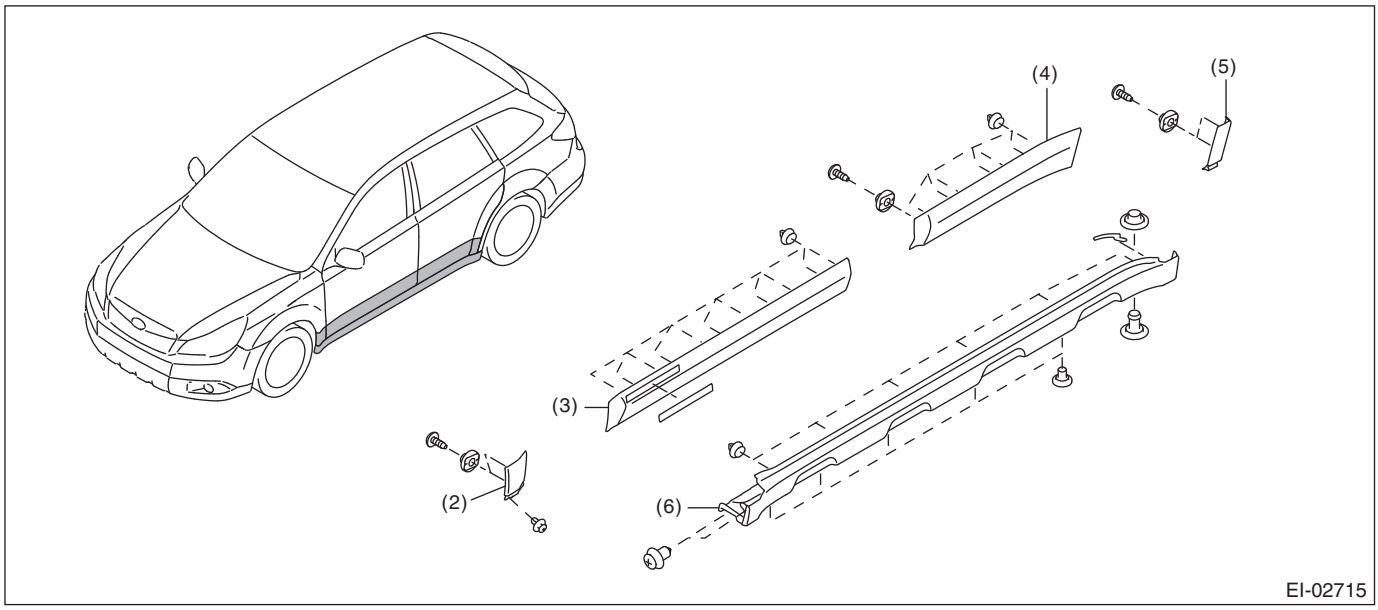


- Headlight connector LH



5) Remove the clips, and then remove the side sill garnish.

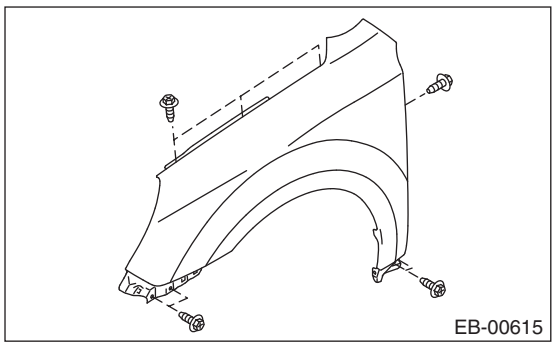




(1) Side sill garnish ASSY (Sedan model)
(2) Garnish ASSY front fender (OUTBACK model)
(3) Garnish ASSY front door (OUTBACK model)
(4) Garnish ASSY rear door (OUTBACK model)
(5) Garnish ASSY rear quarter (OUTBACK model)
(6) Side sill garnish ASSY (OUTBACK model)

6) Remove the front fender panel.
(1) Remove the mud guard clips.

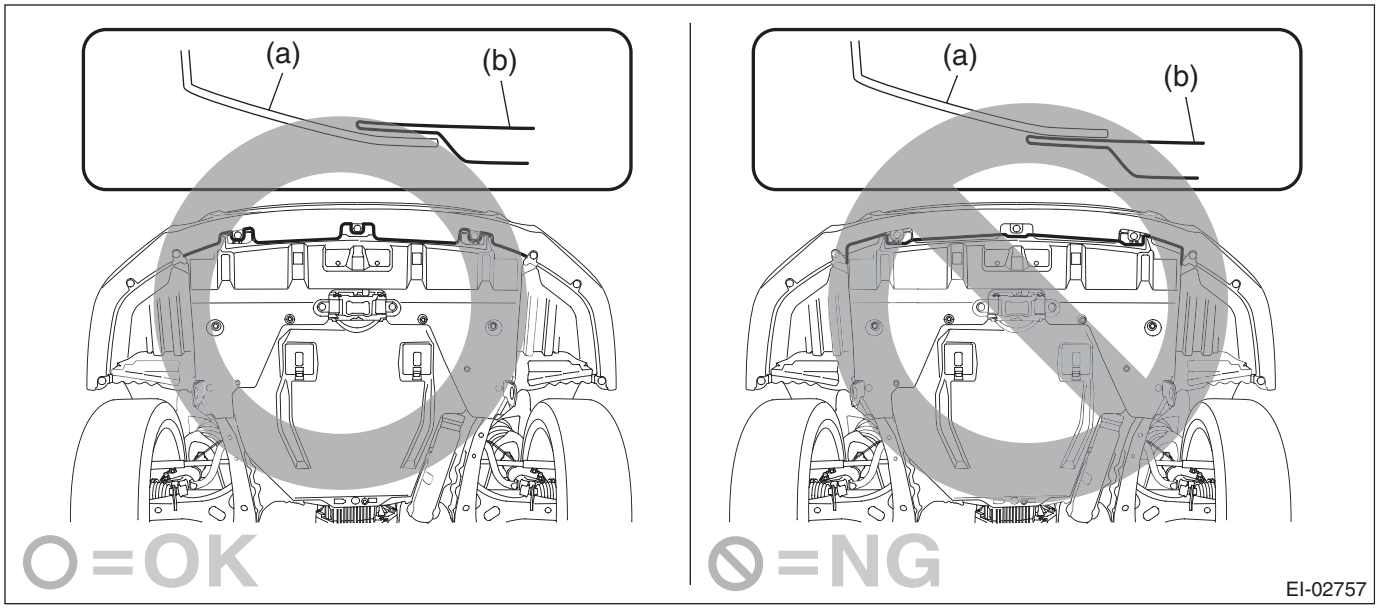
(2) Remove the bolt, and remove the front fender panel.



B: INSTALLATION

Install each part in the reverse order of removal.

CAUTION:
- **After installing the front fender panel, be sure to perform headlight beam adjustment.**
- **Install the bumper face so that the under cover front end (b) comes inside the front bumper face (a).**



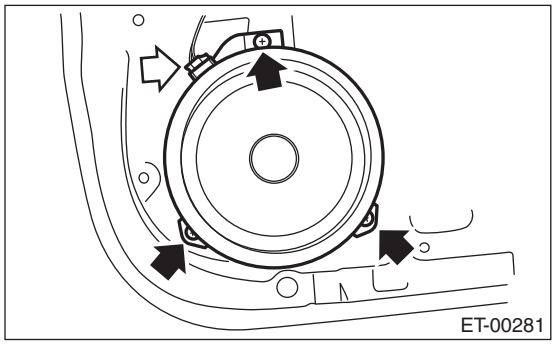
Tightening torque:
Front fender panel: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)
Headlight ASSY: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

NOTE:
When installing, make sure that a uniform clearance is created around the front fender panel.
- Front fender panel — Front hood panel:<Ref. to EB-13, ADJUSTMENT, Front Hood.>
- Front fender panel — Front door panel:<Ref. to EB-28, ADJUSTMENT, Front Door.>

4. Front Door

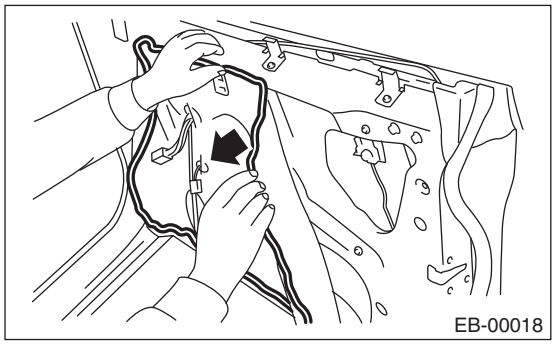
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the front door trim. <Ref. to EI-60, FRONT DOOR, REMOVAL, Door Trim.>
3) Remove the outer mirror assembly. <Ref. to GW-25, REMOVAL, Outer Mirror Assembly.>
4) Remove the front door speaker assembly.
   (1) Remove the screws.
   (2) Disconnect the harness connector and remove the front speaker assembly.


ET-00281

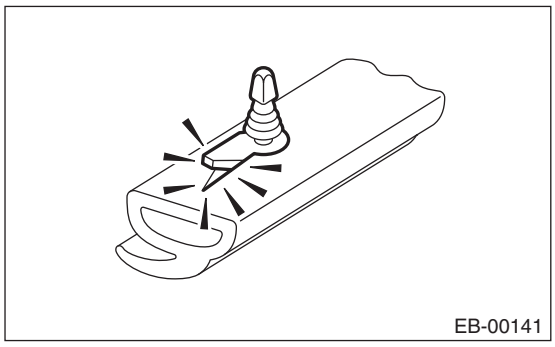
5) Remove the front sealing cover.

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

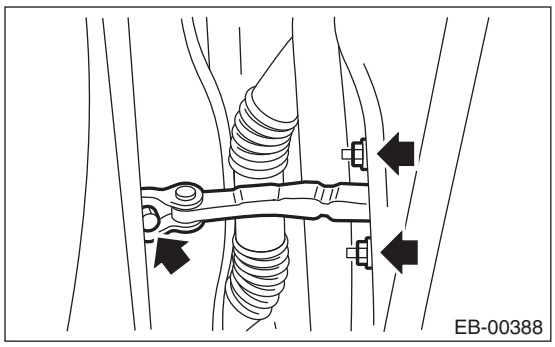

EB-00018

6) Remove the door sash and front door glass. <Ref. to GW-16, REMOVAL, Front Door Glass.>
7) Remove the front door regulator and motor. <Ref. to GW-18, REMOVAL, Front Regulator and Motor Assembly.>
8) Remove the front door latch assembly. <Ref. to SL-35, REMOVAL, Front Door Latch and Door Lock Actuator Assembly.>
9) Remove the front outer handle. <Ref. to SL-32, REMOVAL, Front Outer Handle.>
10) Remove the front door weather strip.

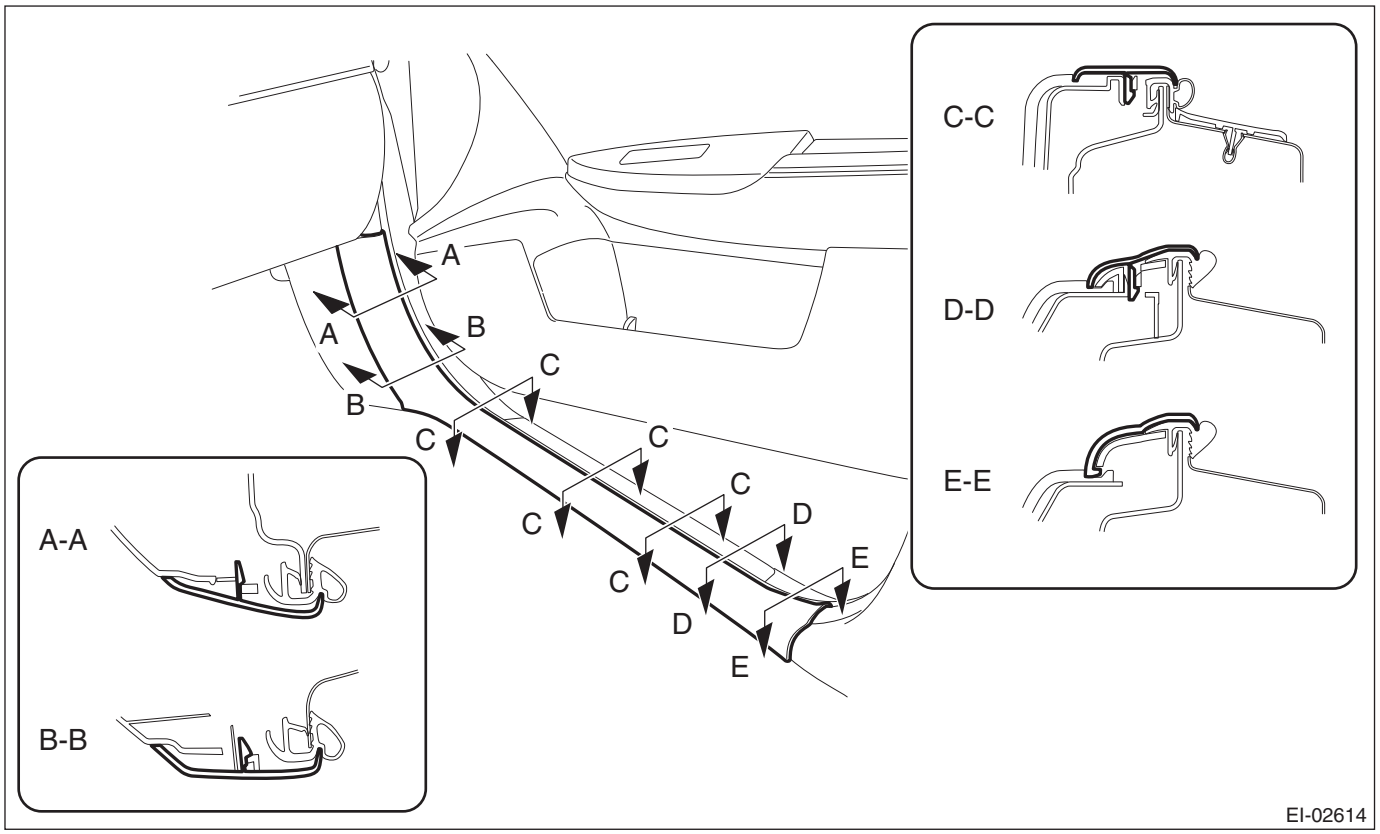
CAUTION:
If the weather strip clip is removed with excessive force, the weather strip may be damaged. Be sure to use clip remover to remove.


EB-00141

11) Remove the bolts and nuts to remove the door checker.



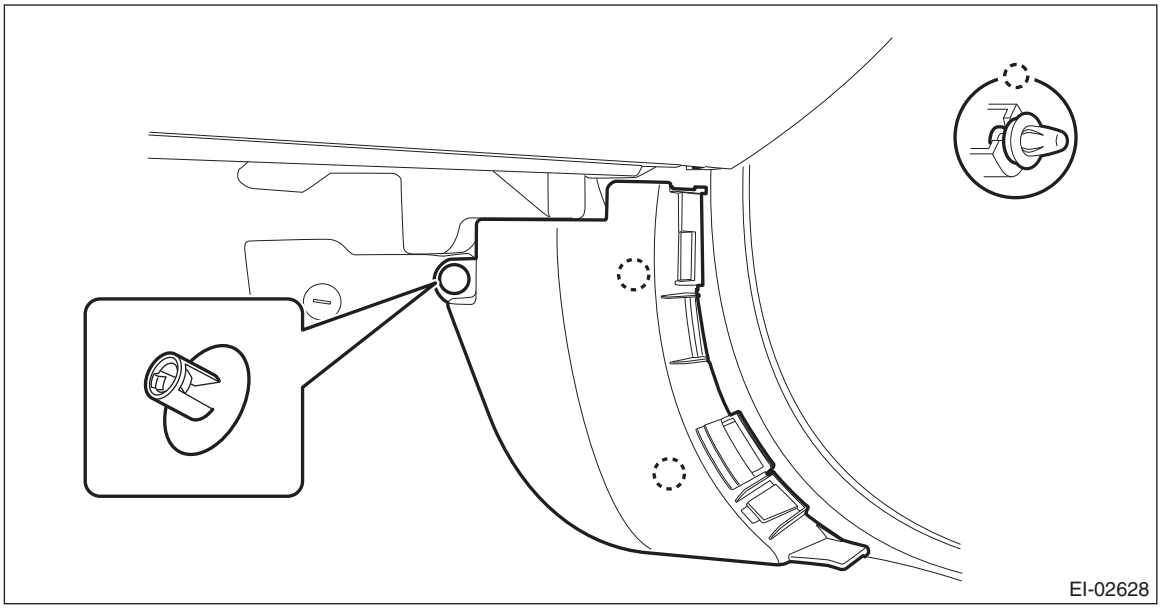
12) Release the claws, and then remove the side sill cover-front INN.



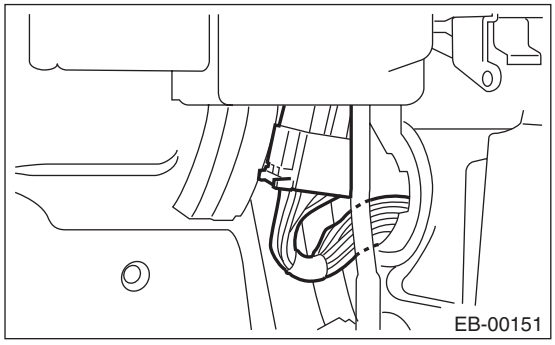
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claw (C) by accessing from behind the side sill cover INN.

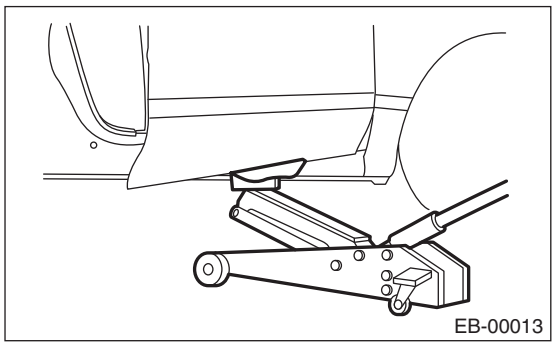
13) Remove the clip, and remove the side sill cover front.



14) Disconnect the connector of door harness from body harness.



15) Before removing the door panel, make the following preparations.

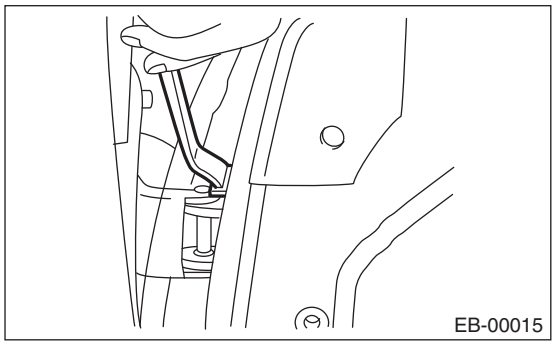


(1) Put a wooden block on a floor jack and place the jack under the front door.
(2) Support the door with a jack to protect it from damage.

CAUTION:
Do not lift the door panel with a floor jack excessively. The door hinges may be damaged.

16) Remove the door-side bolts for upper and lower hinges to remove front door panel.

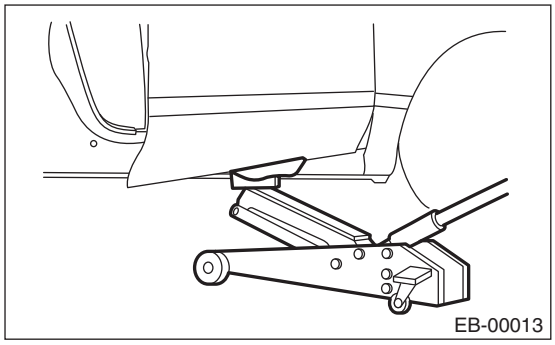
CAUTION:
Door panels are heavy. When removing and installing them, always work in a team of two or more persons.



17) Remove the door hinge from vehicle.

B: INSTALLATION

1) Put a wooden block on jack and place the front door on that.



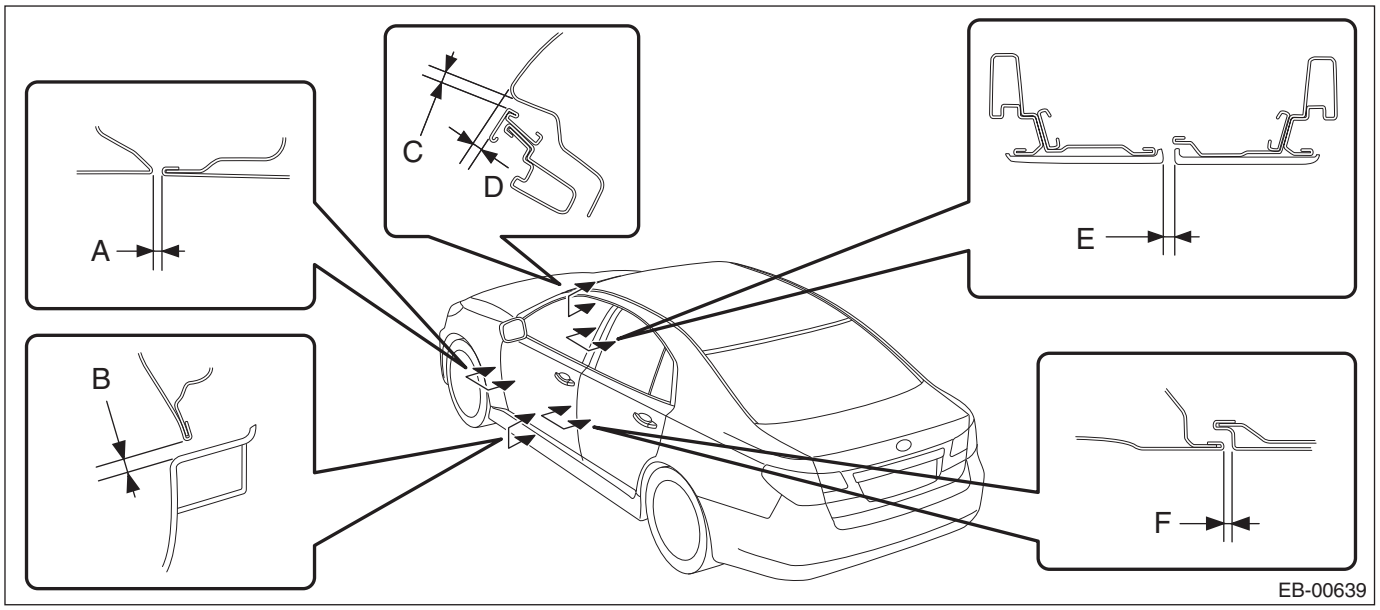
2) Apply grease to the sliding area of door hinges, and install the door hinge to vehicle.
3) Temporarily install the front door to upper hinge and lower hinge after adjusting the height by jack.

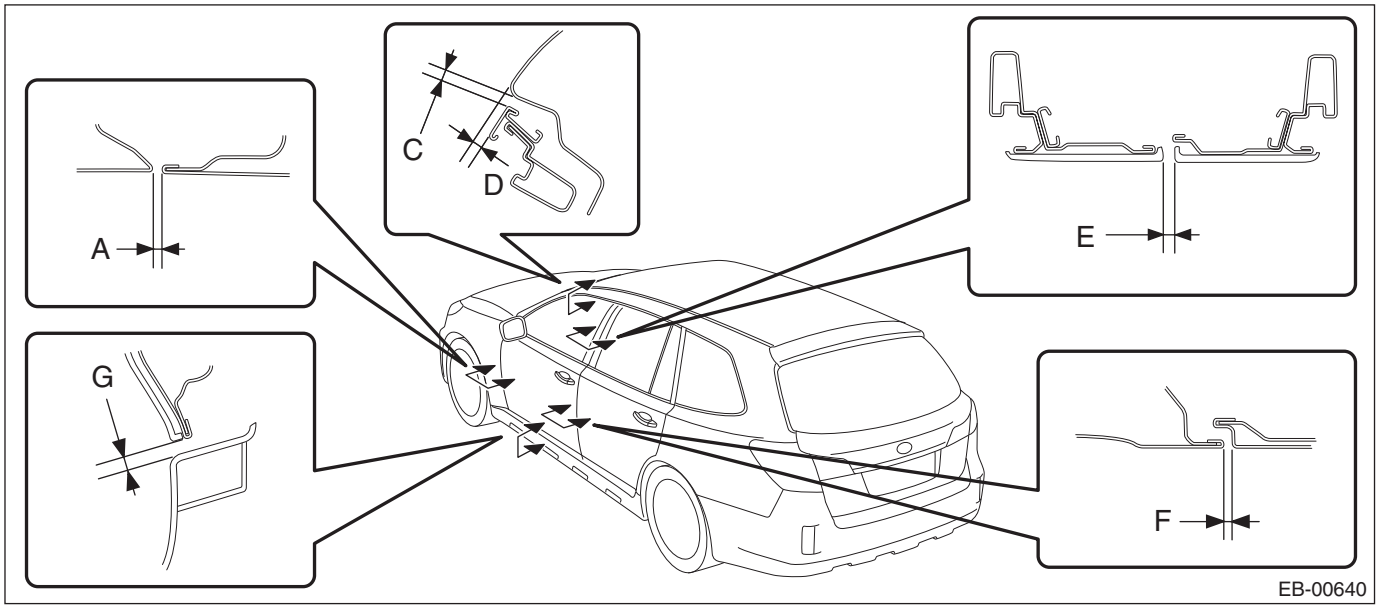
NOTE:
When installing, make sure that a uniform clearance is created around the front door panel.
4) Adjust the clearance around the front door panel. <Ref. to EB-28, ADJUSTMENT, Front Door.>
5) Tighten the bolts and nuts of door hinges and door checker.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EB-4, FRONT DOOR, COMPONENT, General Description.>
6) Install door internal parts in the reverse order of removal.
7) Connect the door harness connector, and install the front pillar lower trim.

C: ADJUSTMENT

Adjust the clearance around the front door panel as follows.

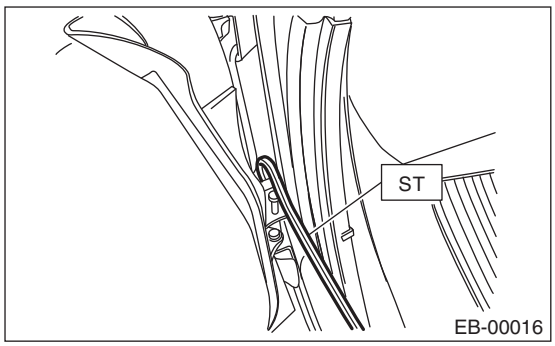




Part		Standard
A	Front fender panel to Front door panel	4.6±1.0 mm (0.18±0.04 in)
B	Front door panel to Side sill garnish (Sedan model)	5.7±1.0 mm (0.22±0.04 in)
C	Roof panel to Front door sash	5.0±1.0 mm (0.20±0.04 in)
D	Surface level gap between roof panel and front door sash	3.5±1.0 mm (0.14±0.04 in)
E	Front door sash to Rear door sash	5.5±1.0 mm (0.22±0.04 in)
F	Front door panel to Rear door panel	4.6±1.0 mm (0.18±0.04 in)
G	Front door garnish to Side sill garnish (OUTBACK model)	4.1±1.0 mm (0.16±0.04 in)

NOTE:
Common to sedan and OUTBACK models

1) Adjust the vertical and horizontal positions of front door panel.

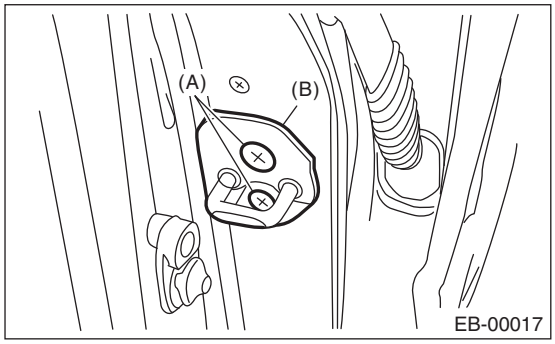


SPECIAL TOOL (ST) WRENCH 925610000

(1) Using ST, loosen the body side bolts of the upper and lower hinges.
(2) Adjust the vertical and horizontal clearance of front door panel.

2) Adjust the surface level gap between front door panel and rear door.

CAUTION:
Do not use an impact wrench. Welding area on the striker nut plate is easily broken.

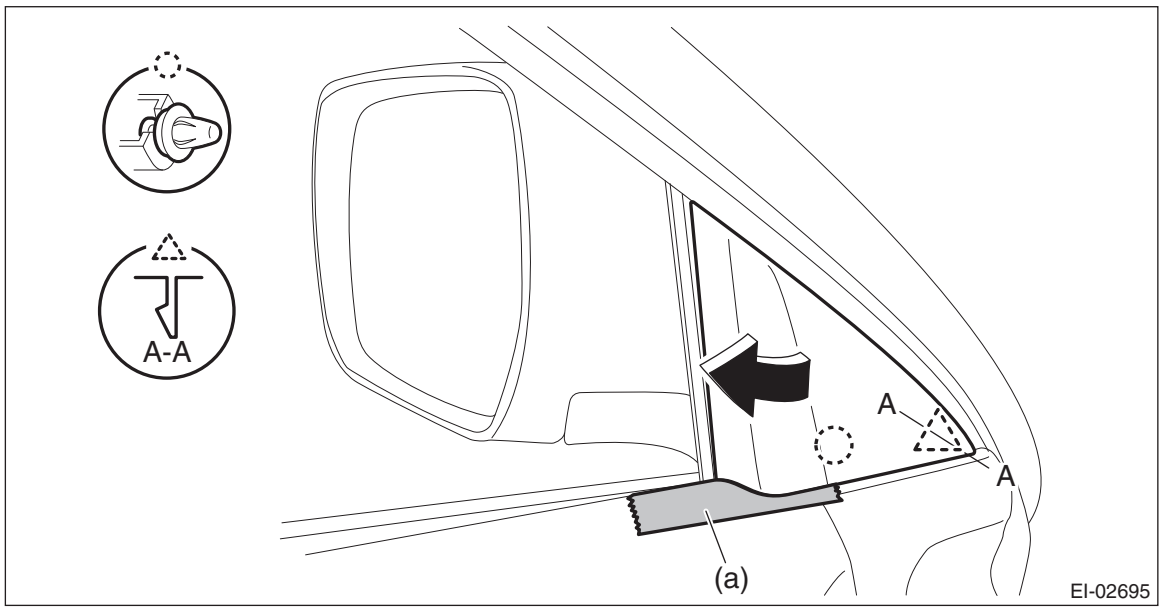


(1) Loosen the screws (A).
(2) Tap the striker (B) using a plastic hammer to adjust the surface level gap between rear end of front door panel and front end of rear door panel.

5. Front Sealing Cover

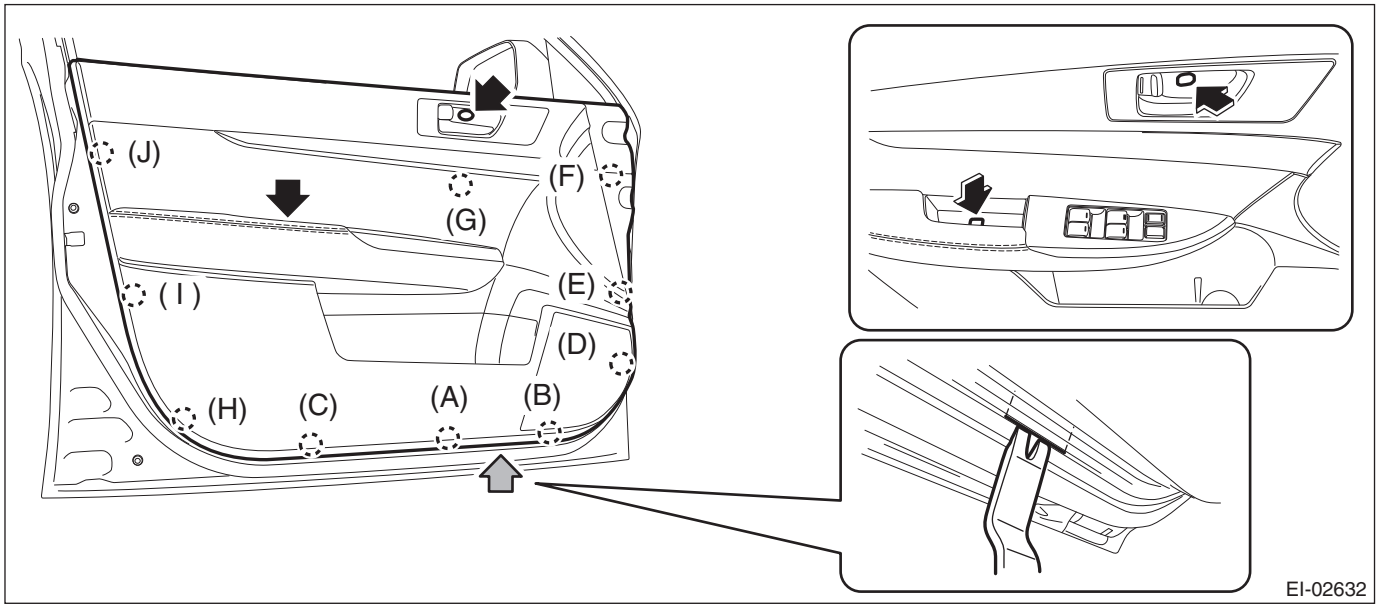
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the gusset cover.
   (1) Attach the protective tape (a) to the door trim.
   (2) Release the clips and claws, then detach the gusset cover.



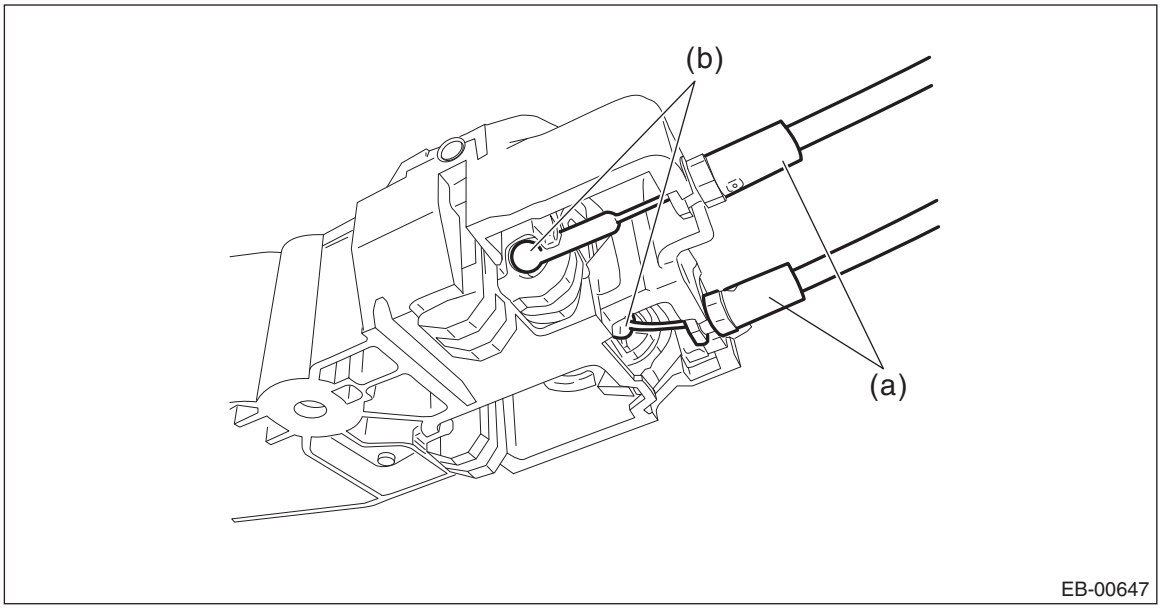
3) Remove the door trim assembly.
   (1) Open the cover and remove the screw.
   (2) Remove the clips in the order of (A) to (J) and remove the door trim assembly from the door panel.

CAUTION:
When removing the door trim, be sure to remove the clips in the correct order. Forcibly removing clips may damage the door panel assembly.



NOTE:
Insert a plastic clip remover into the slit at the bottom edge of the door trim and lift the door trim.

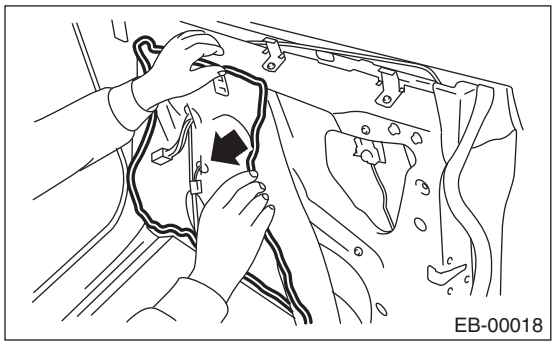
(3) Remove the cables (a) and (b) from the cable holder of inner remote.



(4) Disconnect the harness connector and remove the door trim assembly.

4) Remove the sealing cover.

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



B: INSTALLATION

CAUTION:
- **If the sealing cover gets broken, replace it with a new part.**
- **Apply a uniform bead of butyl tape.**
- **Attach the sealing cover, keeping it from becoming wrinkled.**
- **Breaks in the bead will allow water leakage and contamination.**

1) Install each part in the reverse order of removal.
2) When replacing the sealing cover, use the butyl tape.
3) Press the butyl tape-applied area firmly to prevent any floating on surface.

Butyl tape:
3M8626 or equivalent

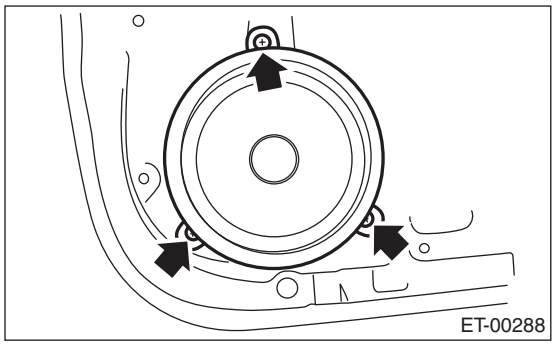
C: INSPECTION

If the sealing cover gets damaged, replace it with a new part.

6. Rear Door

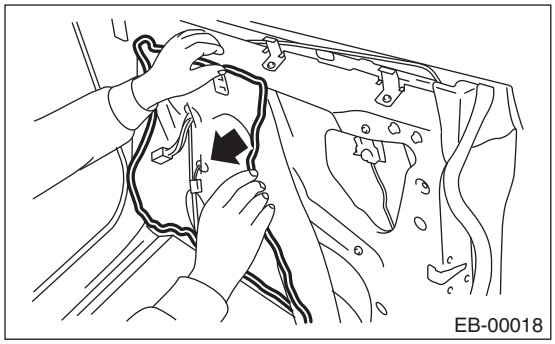
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the rear door trim. <Ref. to EI-61, REAR DOOR, REMOVAL, Door Trim.>
3) Remove the rear door speaker assembly.
   (1) Remove the screws.
   (2) Disconnect the harness connector and remove the rear speaker assembly.


ET-00288

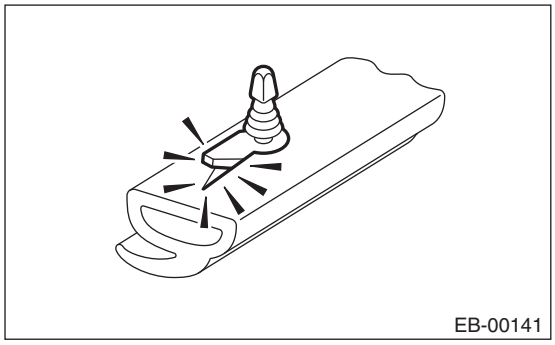
4) Remove the rear sealing cover.

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

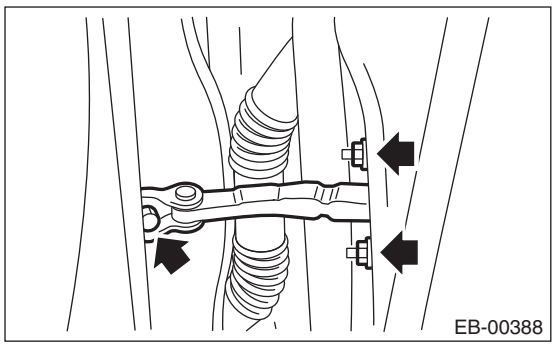

EB-00018

5) Remove the door sash and rear door glass. <Ref. to GW-32, REMOVAL, Rear Door Glass.>
6) Remove the rear door regulator and motor assembly. <Ref. to GW-34, REMOVAL, Rear Regulator and Motor Assembly.>
7) Remove the rear door latch. <Ref. to SL-42, REMOVAL, Rear Door Latch and Door Lock Actuator Assembly.>
8) Remove the rear outer handle. <Ref. to SL-39, REMOVAL, Rear Outer Handle.>
9) Remove the rear door weather strip.

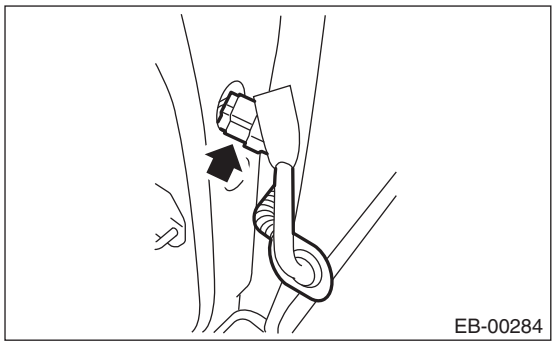
CAUTION:
If the weather strip clip is removed with excessive force, the weather strip may be damaged. Be sure to use clip remover to remove.


EB-00141

10) Remove the bolts and nuts to remove the door checker.

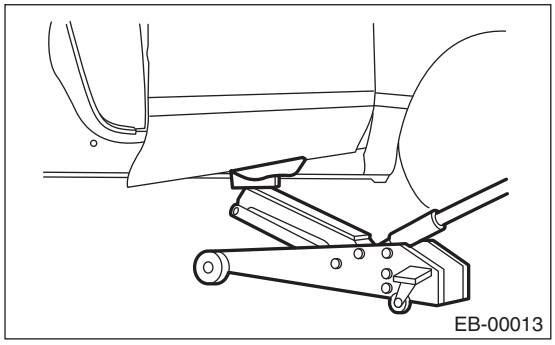


11) Disconnect the rear door harness connectors.



(1) Remove the grommet and pull out the rear door harness connector from inside the center pillar.
(2) Disconnect the rear door harness connectors.

12) Before removing the door panel, make the following preparations.

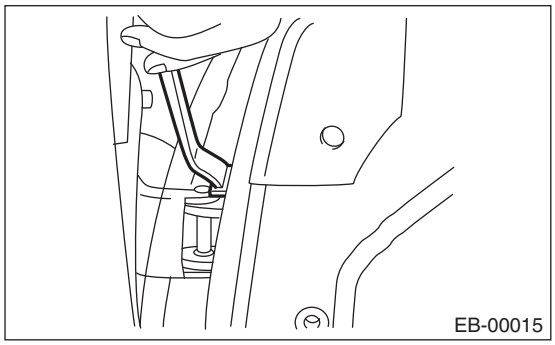


(1) Put a wooden block on a floor jack and place the jack under the front door.
(2) Support the door with a jack to protect it from damage.

CAUTION:
Do not lift the door panel with a floor jack excessively. The door hinges may be damaged.

13) Remove the door-side bolts for upper and lower hinges to remove the rear door panel.

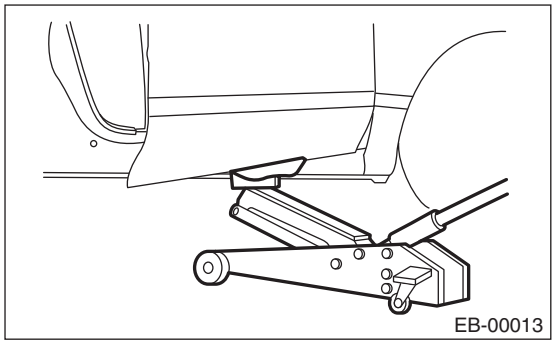
CAUTION:
Door panels are heavy. When removing and installing them, always work in a team of two or more persons.



14) Remove the door hinge from vehicle.

B: INSTALLATION

1) Put a wooden block on jack and place the rear door on that.



2) Apply grease to the moving part of door hinges.
3) Temporarily install the rear door to upper hinge and lower hinge after adjusting the height by jack.

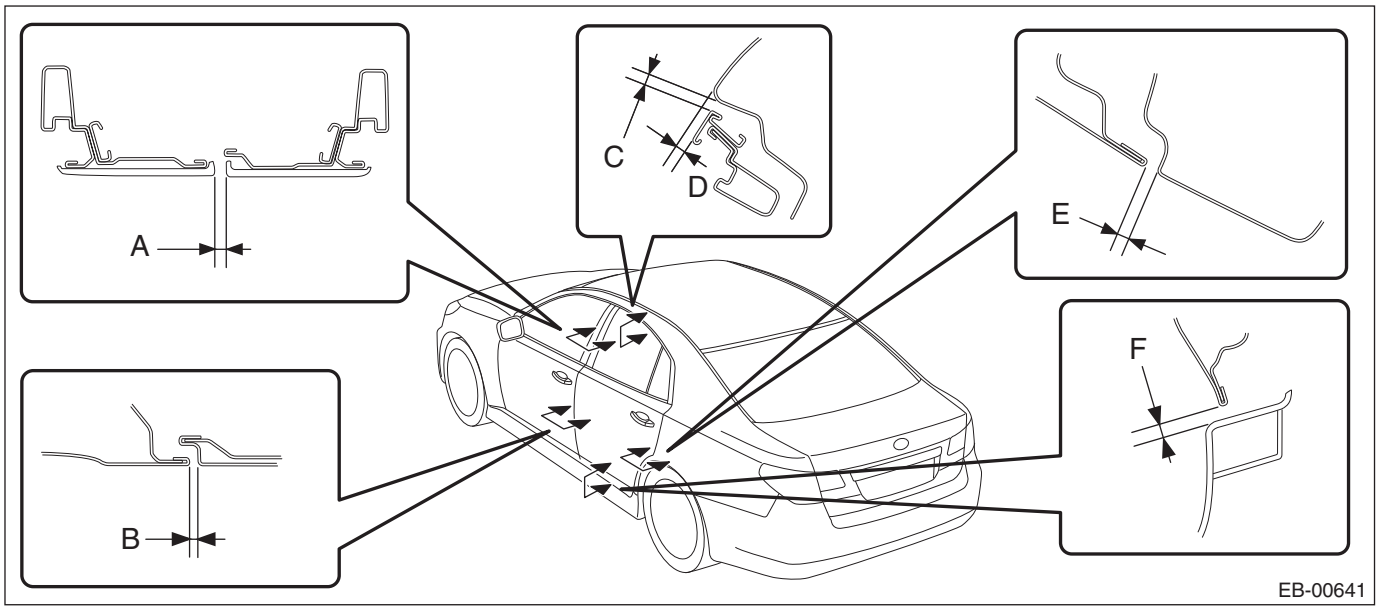
NOTE:
When installing, make sure that a uniform clearance is created around the rear door panel.
4) Adjust the clearance around the rear door panel. <Ref. to EB-35, ADJUSTMENT, Rear Door.>
5) Tighten the bolts and nuts of door hinges and door checker.

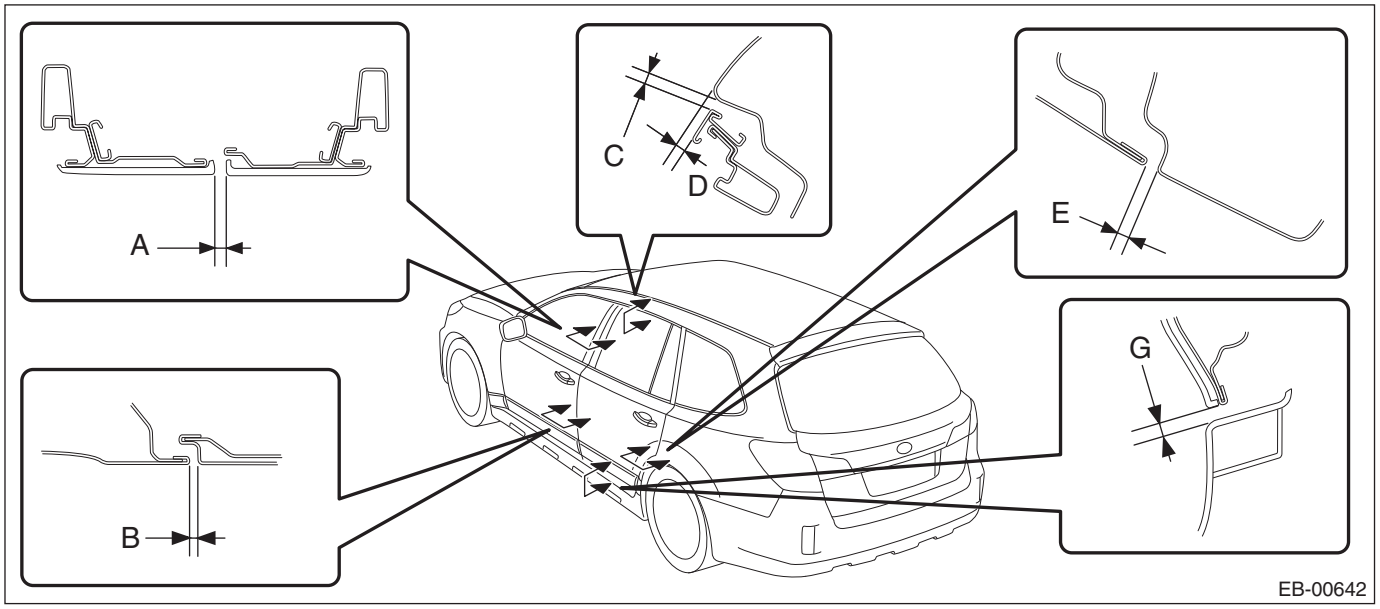
Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EB-5, REAR DOOR, COMPONENT, General Description.>

6) Install door internal parts in the reverse order of removal.
7) Connect the door harness connector, and install the center pillar lower trim.

C: ADJUSTMENT

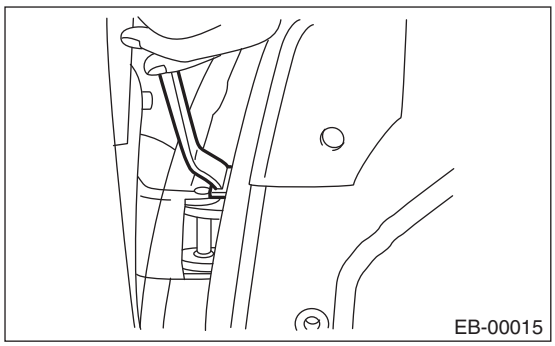
Adjust the clearance around the rear door panel as follows.





Part		Standard
A	Front door sash to Rear door sash	5.5±1.0 mm (0.22±0.04 in)
B	Front door panel to Rear door panel	4.6±1.0 mm (0.18±0.04 in)
C	Roof panel to Rear door sash	5.0±1.0 mm (0.20±0.04 in)
D	Surface level gap between roof panel and rear door sash	3.5±1.0 mm (0.14±0.04 in)
E	Rear door panel to Rear quarter panel	4.0±1.0 mm (0.16±0.04 in)
F	Rear door panel to Side sill garnish (Sedan model)	5.7±1.0 mm (0.22±0.04 in)
G	Rear door garnish to Side sill garnish (OUTBACK model)	4.1±1.0 mm (0.16±0.04 in)

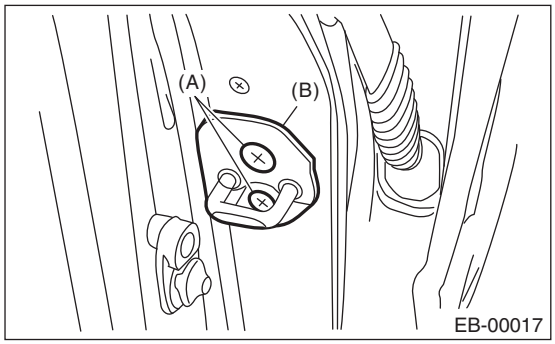
1) Adjust the vertical and horizontal positions of rear door panel.



(1) Loosen the body side bolts of upper and lower hinges.
(2) Adjust the vertical and horizontal clearance of rear door panel.

2) Adjust the surface level gap between rear door panel and body.

CAUTION:
Do not use an impact wrench. Welding area on the striker nut plate is easily broken.



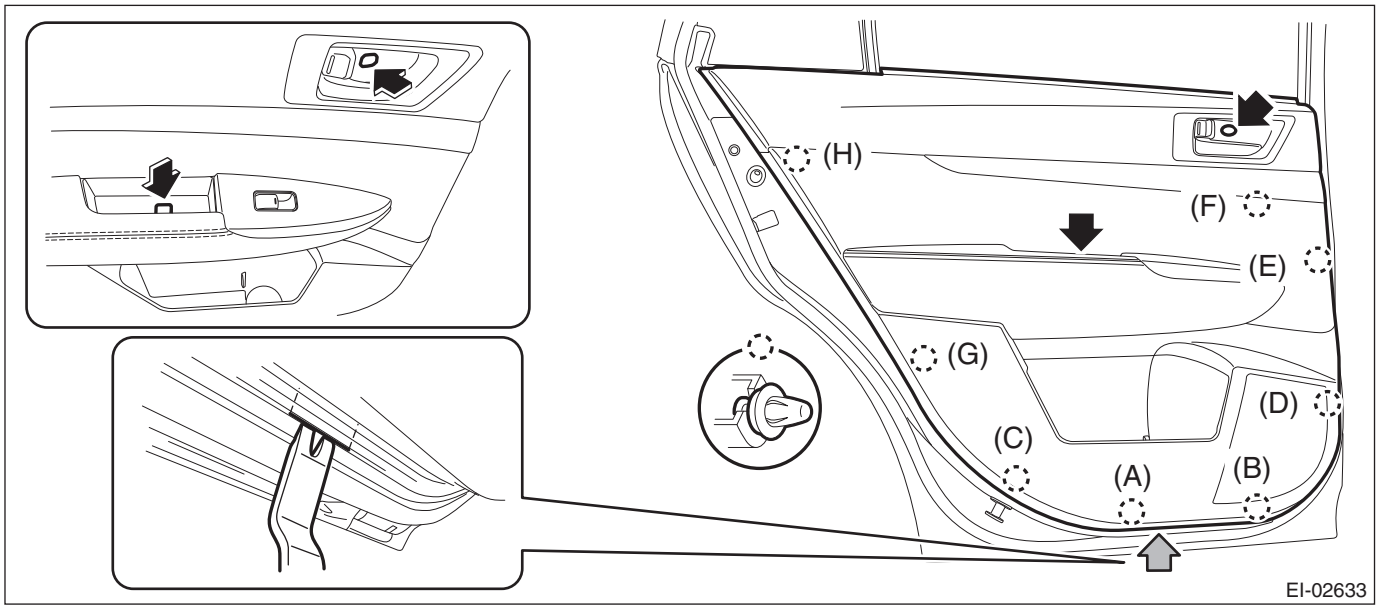
(1) Loosen the screws (A).
(2) Tap the striker (B) using a plastic hammer to adjust the surface level gap between rear end of rear door panel and rear quarter.

7. Rear Sealing Cover

A: REMOVAL

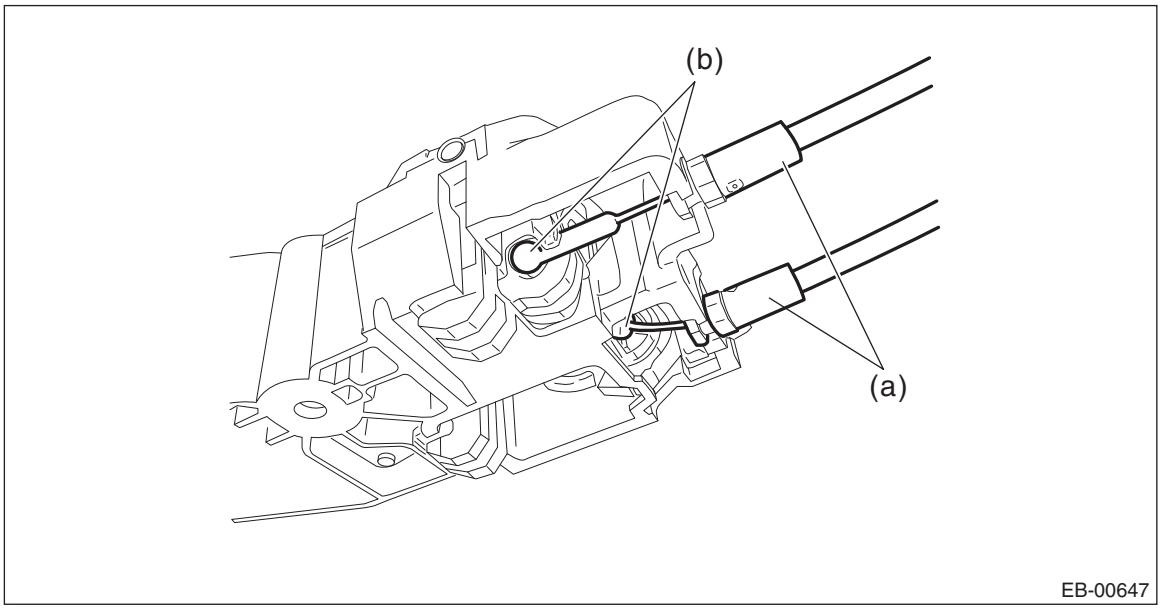
1) Disconnect the ground cable from battery.
2) Remove the door trim assembly.
   (1) Open the cover and remove the screw.
   (2) Remove the clips in the order of (A) to (H) and remove the door trim assembly from the door panel.

CAUTION:
When removing the door trim, be sure to remove the clips in the correct order. Forcibly removing clips may damage the door panel assembly.



NOTE:
Insert a plastic clip remover into the slit at the bottom edge of the door trim and lift the door trim.

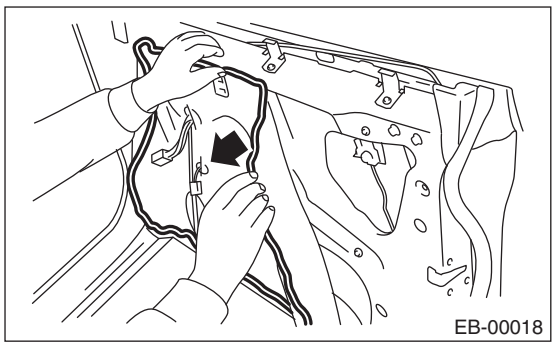
   (3) Remove the cables (a) and (b) from the cable holder of inner remote.



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

3) Remove the sealing cover.

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



B: INSTALLATION

CAUTION:
- **If the sealing cover gets broken, replace it with a new part.**
- **Apply a butyl tape evenly.**
- **Attach the sealing cover, keeping it from becoming wrinkled.**
- **Breaks in the bead will allow water leakage and contamination.**

1) Install each part in the reverse order of removal.
2) When replacing the sealing cover, use the butyl tape.
3) Press the butyl tape-applied area firmly to prevent any floating on surface.

Butyl tape:
3M8626 or equivalent

C: INSPECTION

If the sealing cover gets damaged, replace it with a new part.

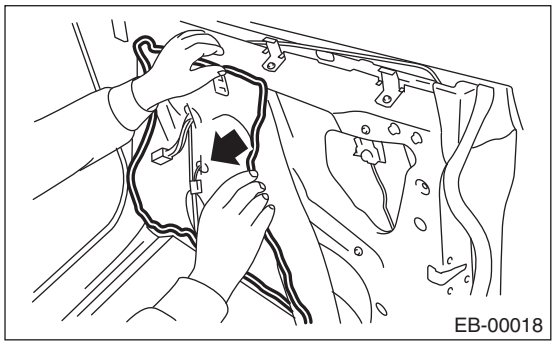
8. Door Sash Tape

A: REMOVAL

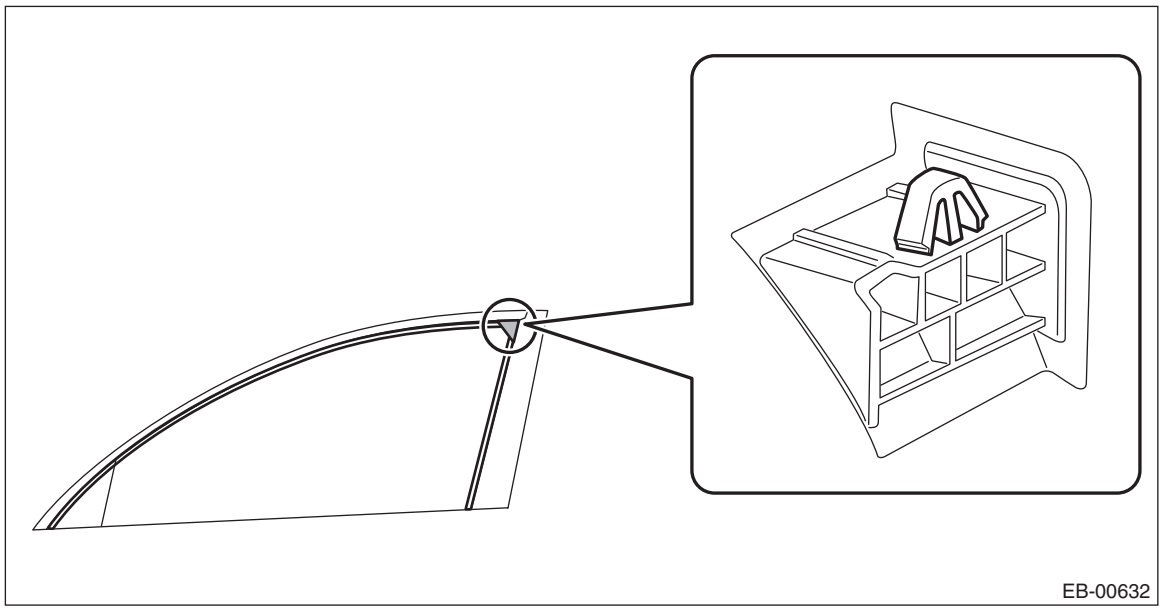
1. FRONT DOOR

1) Disconnect the ground cable from battery.
2) Remove the front door trim. <Ref. to EI-60, FRONT DOOR, REMOVAL, Door Trim.>
3) Remove the outer mirror assembly. <Ref. to GW-25, REMOVAL, Outer Mirror Assembly.>
4) Remove the sealing cover.

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


EB-00018

5) Remove the front door glass. <Ref. to GW-16, REMOVAL, Front Door Glass.>
6) Remove the glass run rubber.
7) Release the clips, and remove the inner cover.


EB-00632

8) Detach the inner tape.

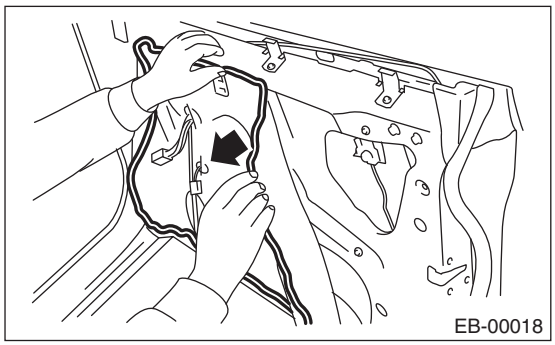
NOTE:
- If the tape is difficult to detach, warm it by a hot air drier.

Make sure to use a home use drier. Do not use an industrial use drier.
- Wipe away any trace of tape adhesive from the door sash.

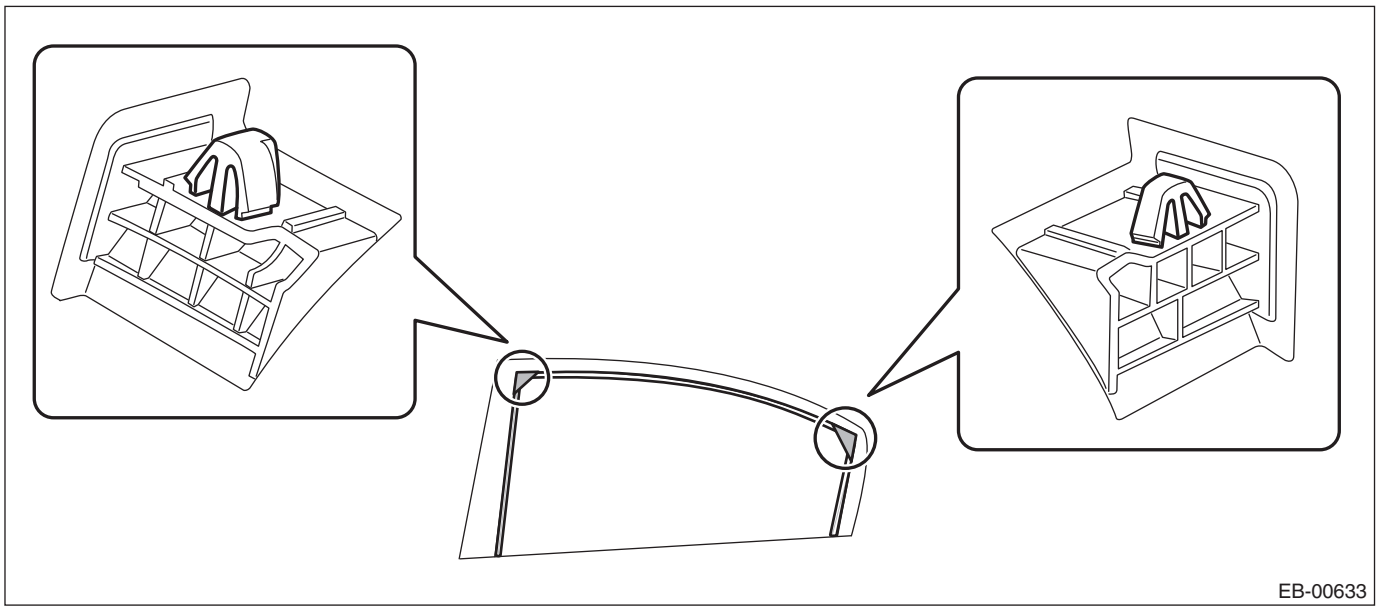
2. REAR DOOR

1) Disconnect the ground cable from battery.
2) Remove the rear door trim. <Ref. to EI-61, REAR DOOR, REMOVAL, Door Trim.>
3) Remove the sealing cover.

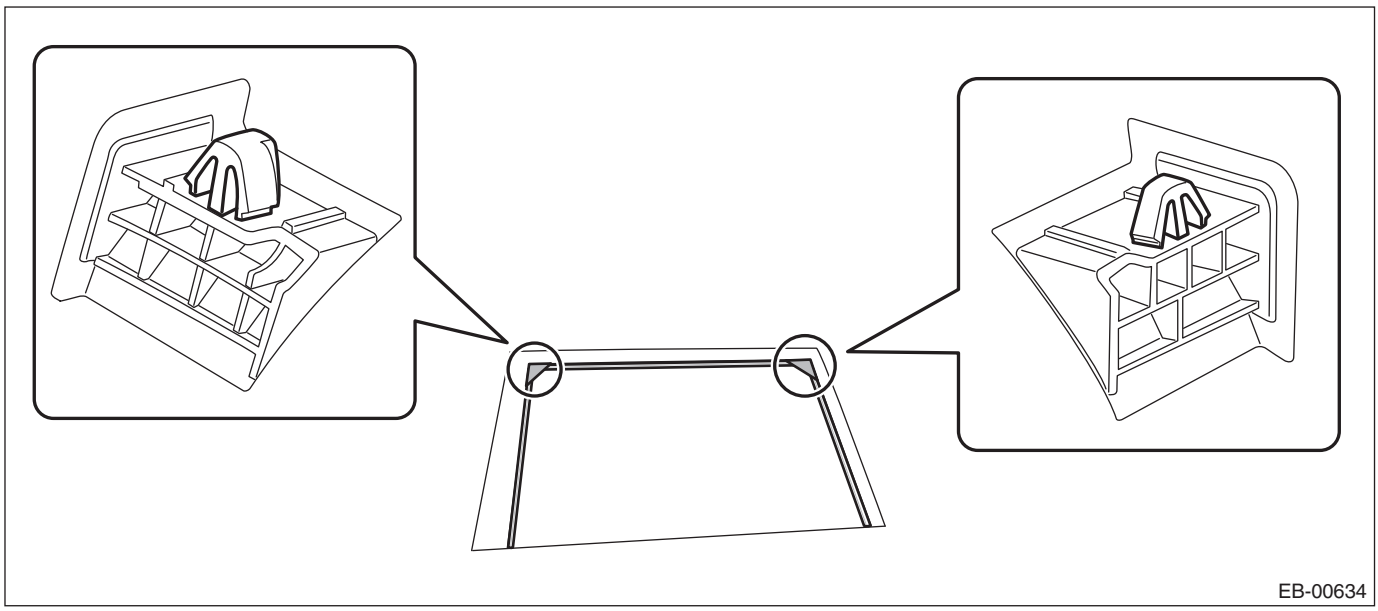
CAUTION:
- **Carefully remove the butyl tape. Excessive force will easily break the cover.**
- **If the sealing cover gets broken, replace it with a new part.**



4) Remove the door sash and rear door glass. <Ref. to GW-32, REMOVAL, Rear Door Glass.>
5) Remove the glass run rubber.
6) Release the clips, and remove the inner cover.
- Sedan model



• OUTBACK model

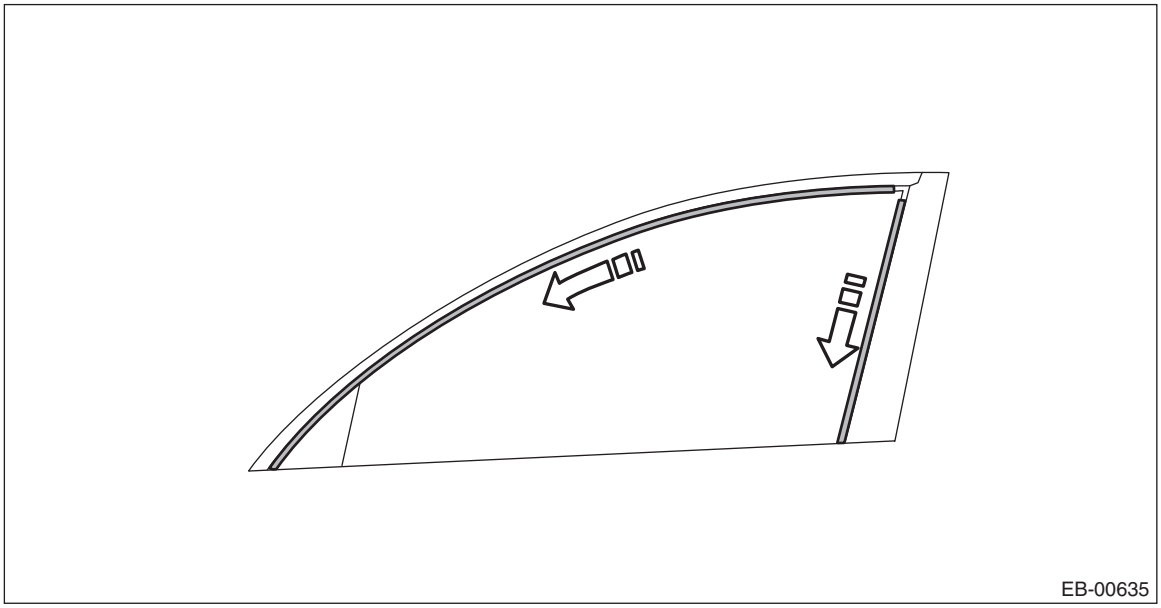


7) Detach the inner tape.

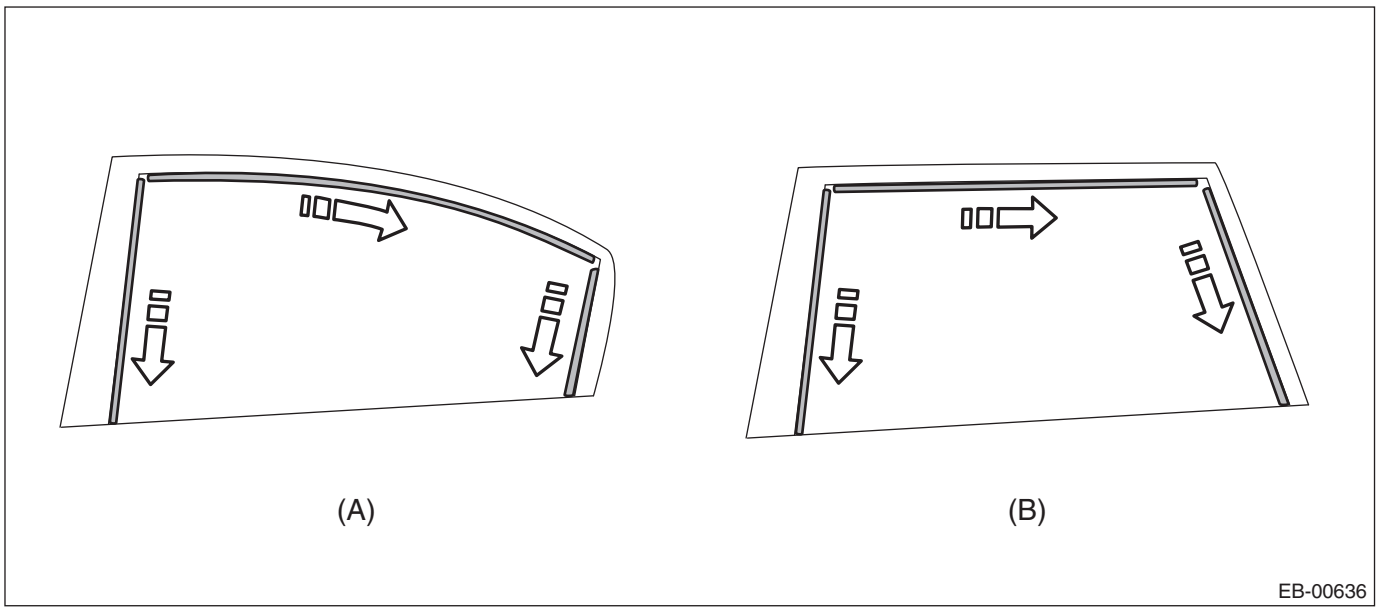
NOTE:
• If the tape is difficult to detach, warm it by a hot air drier.
Make sure to use a home use drier. Do not use an industrial use drier.
• Wipe away any trace of tape adhesive from the door sash.

B: INSTALLATION

CAUTION:
• Press evenly along the sash when applying the tape using a spatula or similar object to make sure no bubbles are formed.
If any bubbles are formed, replace the tape.
• If any wrinkles form in the tape while applying, replace the tape with new tape.
• Be sure to press the ends of the tape firmly to adhere securely. If the tape comes off at the ends or where folded, the adhesive strength is weakened and the tape may peel off.
1) Apply the inner tape along the arrow directions.
• Front



- Rear



(A) Sedan model (B) OUTBACK model

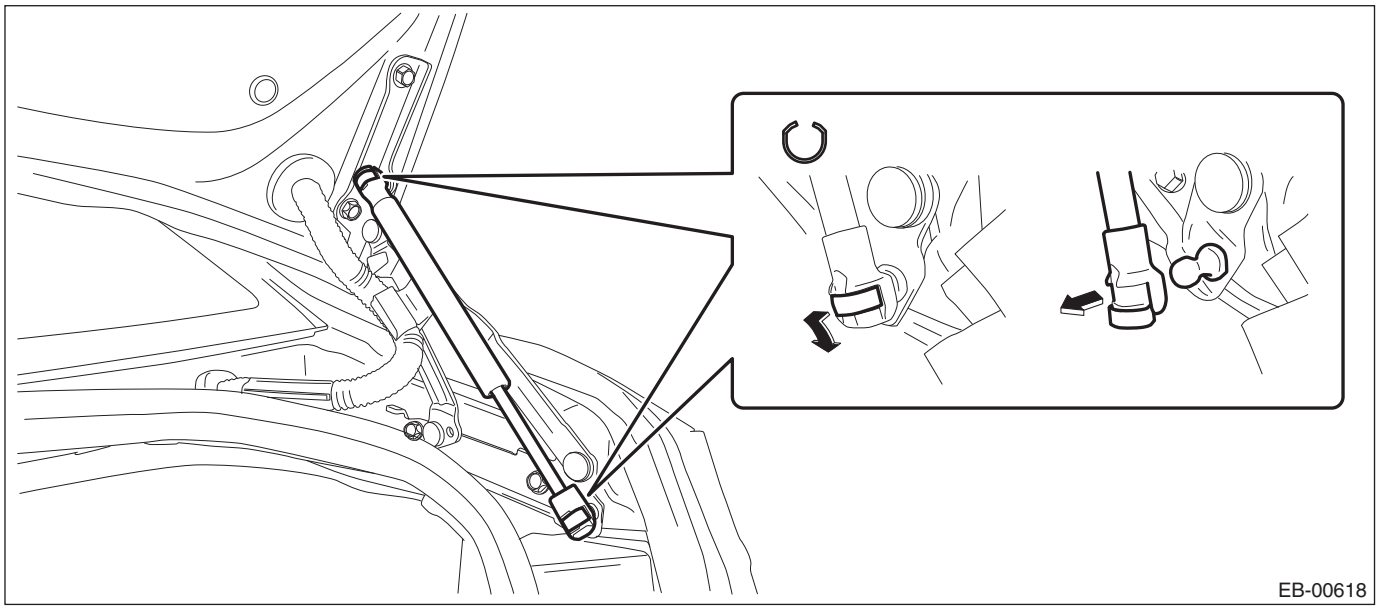
2) Install the remaining parts in the reverse order of removal.

9. Trunk Lid

A: REMOVAL

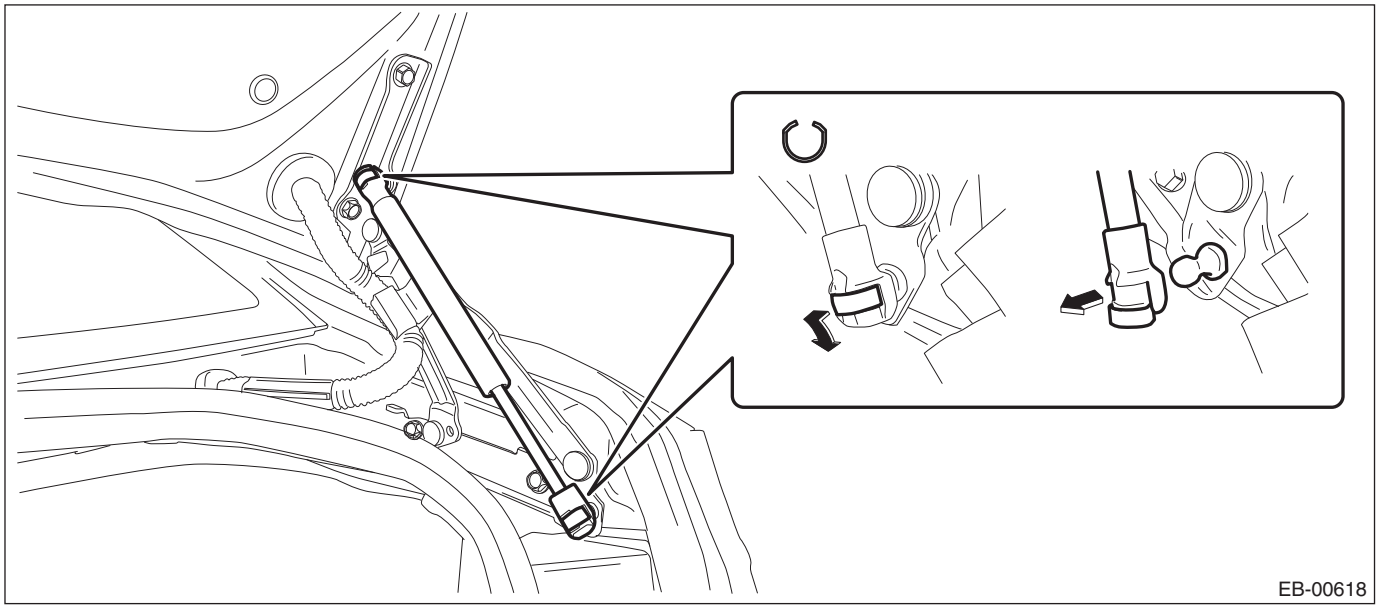
1. TRUNK LID DAMPER STAY

1) Open the trunk lid.
2) Remove the trunk lid damper stay.
   (1) Float the lock pin using a flat tip screwdriver, etc. and slide it.
   (2) Remove the trunk lid damper stay by pulling the damper stay mounting point.



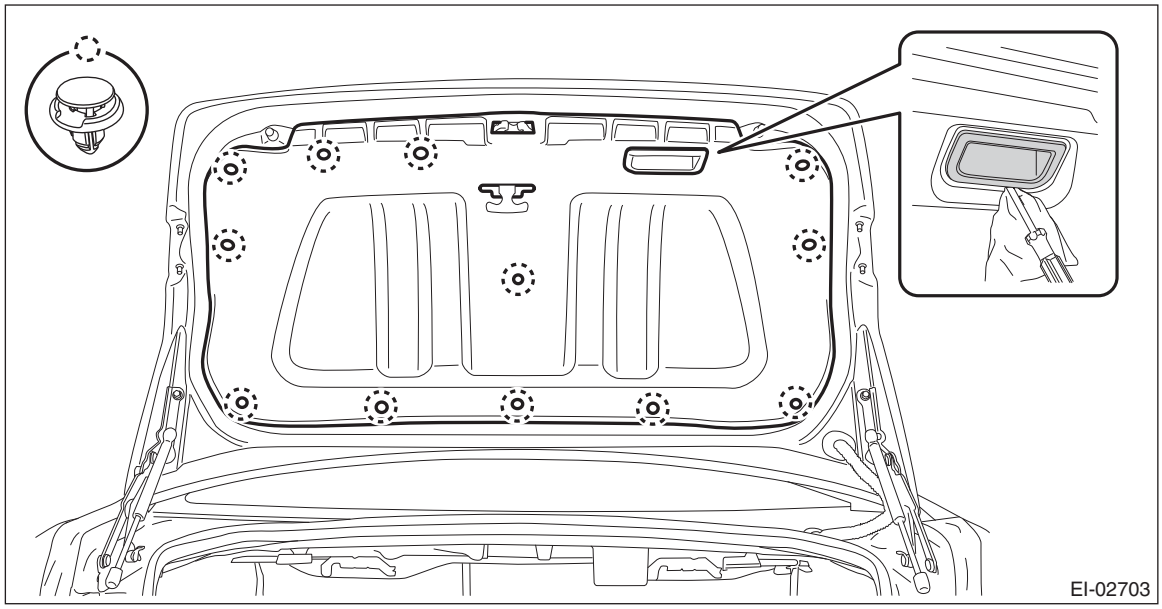
2. TRUNK LID HINGE

1) Open the trunk lid.
2) Remove the trunk lid damper stay.
   (1) Float the lock pin using a flat tip screwdriver, etc. and slide it.
   (2) Remove the trunk lid damper stay by pulling the damper stay mounting point.

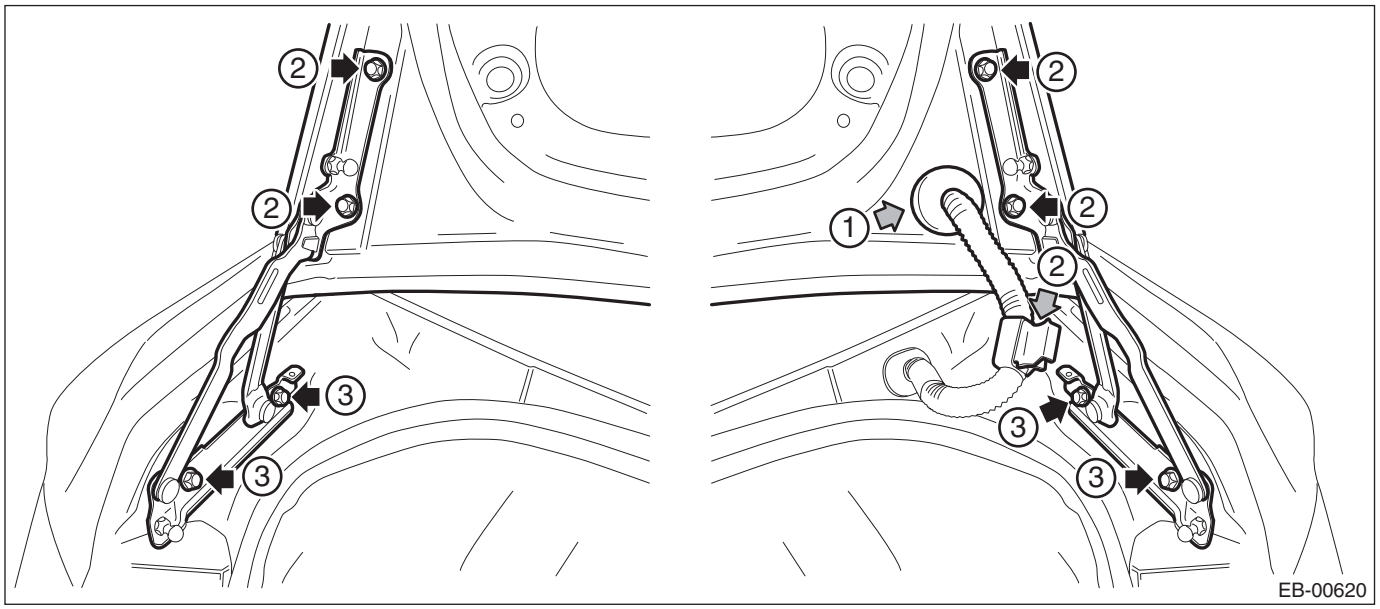


3) Remove the trunk lid trim.
   (1) Remove the trunk handle.

(2) Remove the clips and the trunk lid trim.

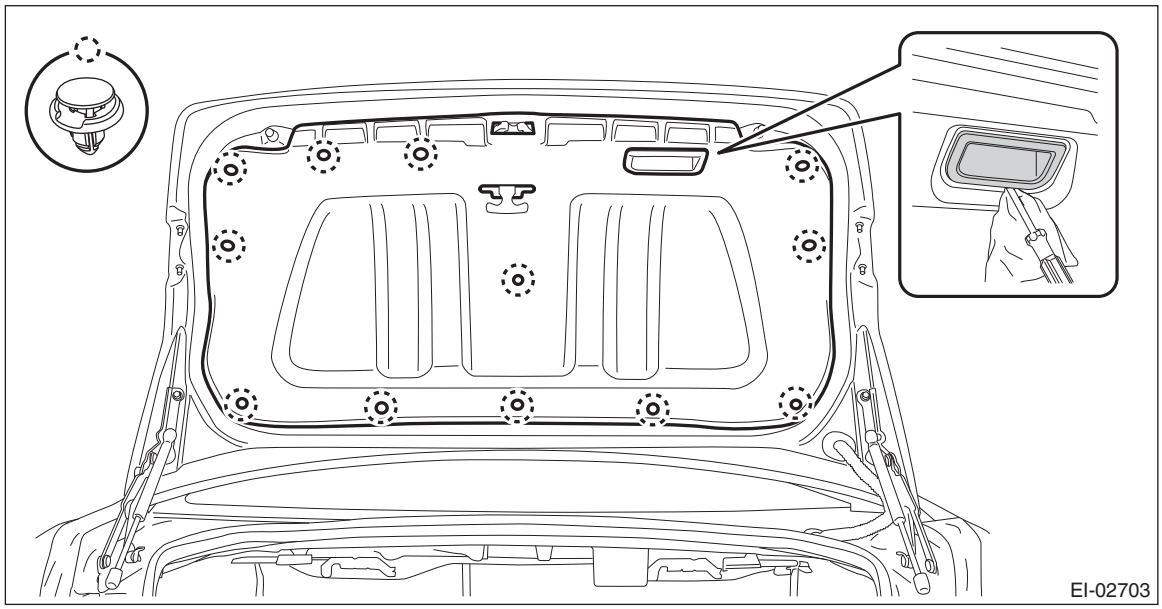


4) Remove the trunk lid hinges.
(1) Disconnect the trunk lid harness connector and remove the grommet, and pull out the trunk lid harness.
(2) Remove the harness clamps and bolts, and remove the trunk lid panel.
(3) Remove the bolts, then remove the trunk lid hinge.

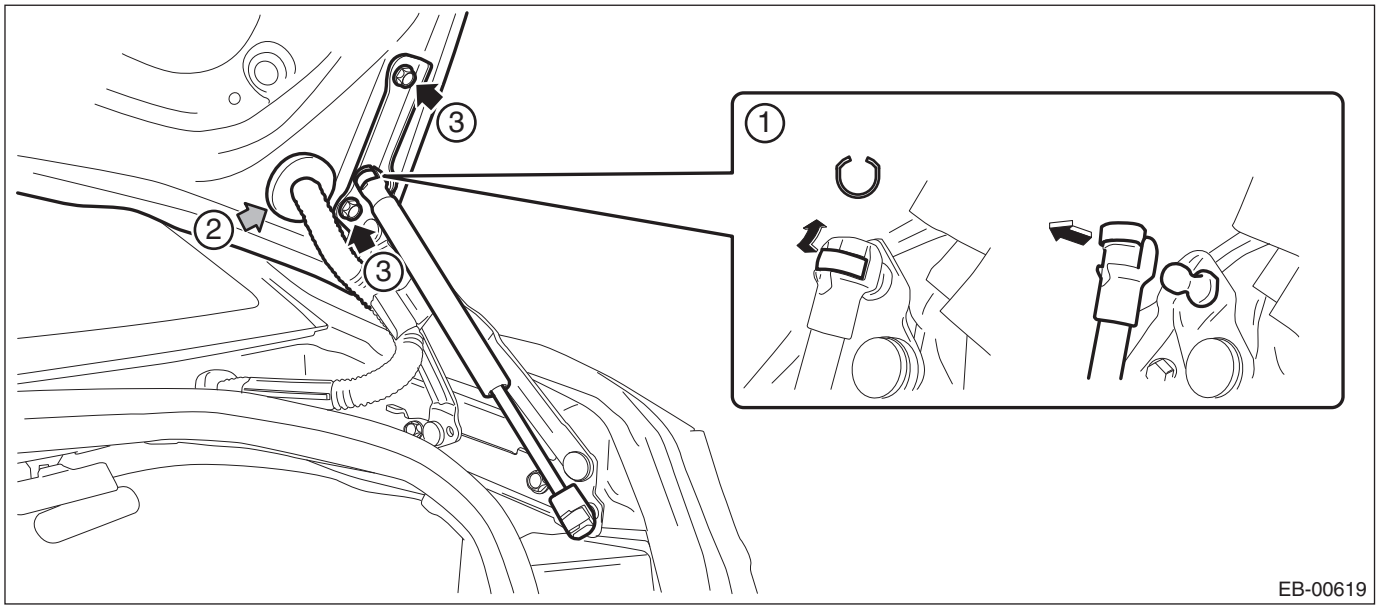


3. TRUNK LID PANEL

1) Disconnect the ground cable from battery.
2) Remove the trunk lid trim.
   (1) Remove the trunk handle.
   (2) Remove the clips and the trunk lid trim.



3) Disconnect the connector to remove the trunk lid harness.
4) Remove the trunk lid latch&actuator assembly. <Ref. to SL-50, REMOVAL, Trunk Lid Latch and Actuator Assembly.>
5) Remove the trunk lid garnish. <Ref. to EI-160, REMOVAL, Trunk Lid Garnish.>
6) Remove the trunk lid panel.
   (1) Remove the left and right damper stay upper.
   (2) Remove the grommet and pull out the trunk lid harness. (RH side only)
   (3) Remove the left and right bolts, and remove the trunk lid panel.



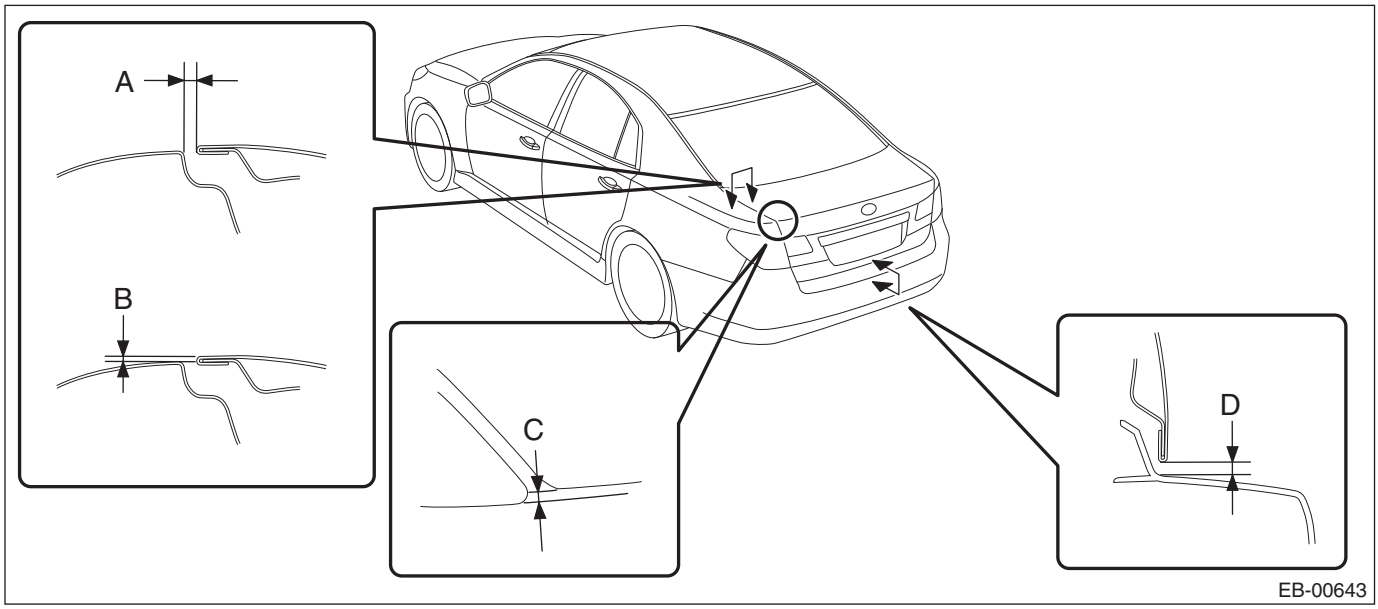
B: INSTALLATION

1) Install each part in the reverse order of removal.
2) Apply grease to the rotating area of hinges and damper stay.
3) Install while paying attention to make a uniform clearance around the trunk lid panel. <Ref. to EB-46, ADJUSTMENT, Trunk Lid.>

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EB-6, TRUNK LID PANEL, COMPONENT, General Description.>

C: ADJUSTMENT

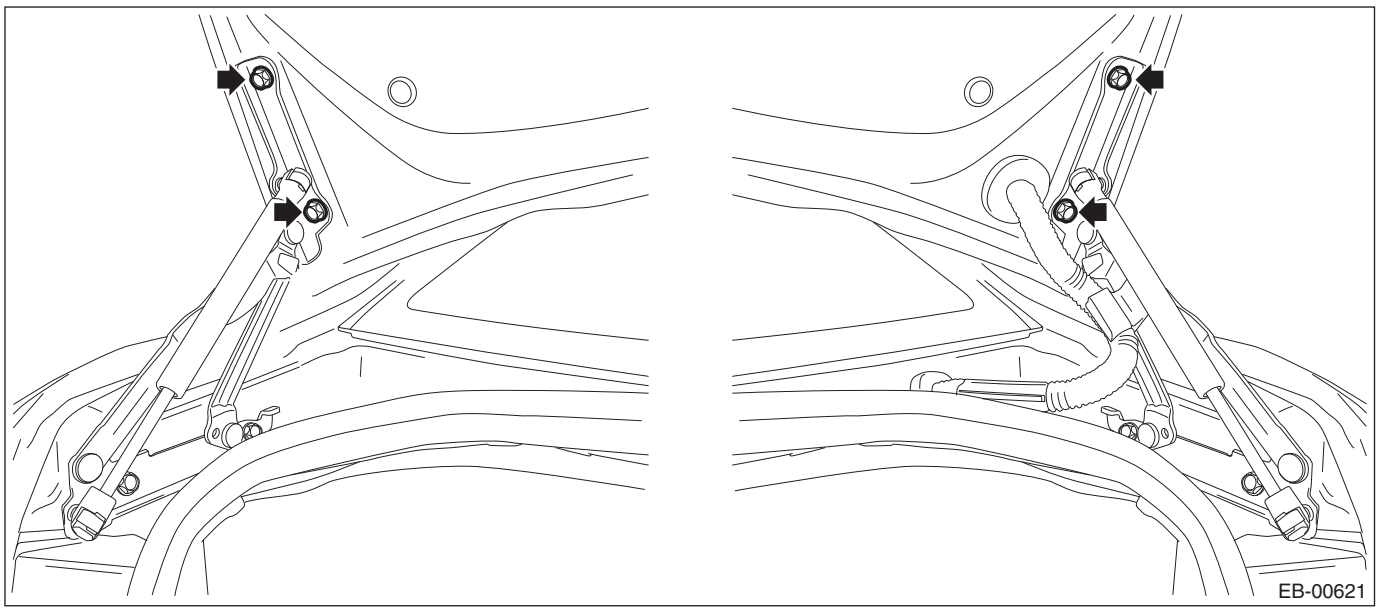
Adjust the clearance around the trunk lid panel as follows.



Part		Standard
A	Trunk lid panel to Rear quarter panel	3.5±1.0 mm (0.14±0.04 in)
B	Surface level gap between trunk lid panel and rear quarter panel	–0.5+1.0, –0.5 mm (0+0.04, –0.02 in)
C	Offset value between trunk lid panel and rear end of rear quarter panel	–0.5±0.7 mm (0.02±0.03 in)
D	Trunk lid panel to Rear bumper	7.0±1.5 mm (0.28±0.06 in)

1) Adjust the horizontal position of trunk lid panel.
   (1) Loosen the mounting bolts.

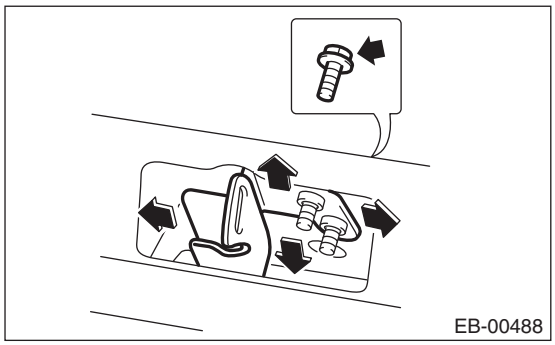
(2) Adjust the horizontal clearance of trunk lid panel.



2) Adjust the surface level gap between trunk lid panel and body.

(1) Loosen the bolts.

(2) Tap the striker using a plastic hammer to adjust the surface level gap between trunk lid panel and body.



10.Rear Gate

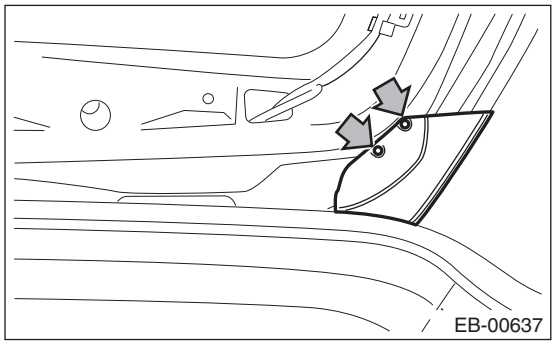
A: REMOVAL

CAUTION:
Rear gate panels are heavy. When removing and installing them, always work in a team of two or more persons.

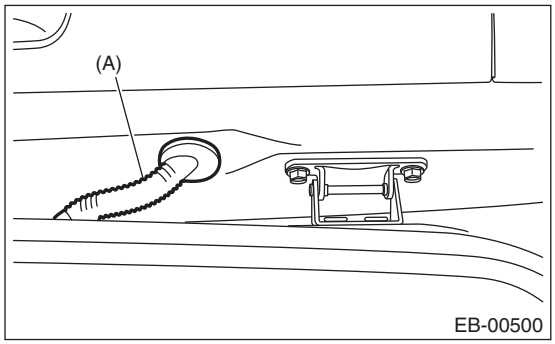
1. REAR GATE PANEL

1) Disconnect the ground cable from battery.
2) Remove the following parts. <Ref. to EI-161, REMOVAL, Rear Gate Garnish.>
- Rear gate trim
- Rear wiper arm assembly and rear wiper motor assembly
- Rear gate garnish

3) Remove the high-mounted stop light assembly and rear washer nozzle. <Ref. to WW-42, REMOVAL, Rear Washer.>
4) Remove the rear finisher light assembly. <Ref. to LI-54, OUTBACK MODEL, REMOVAL, Rear Finisher Light Assembly.>
5) Remove the rearview camera assembly. <Ref. to ET-41, OUTBACK MODEL, REMOVAL, Rearview Camera System.>
6) Remove the rear gate latch&actuator assembly. <Ref. to SL-48, REMOVAL, Rear Gate Latch and Actuator Assembly.>
7) Remove the clips, and then remove the rear gate drip rubber.



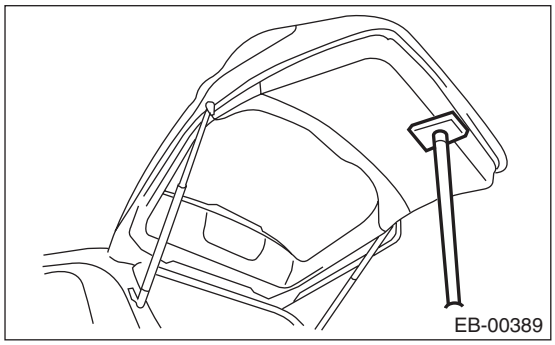
8) Disconnect the rubber duct (A) connection.



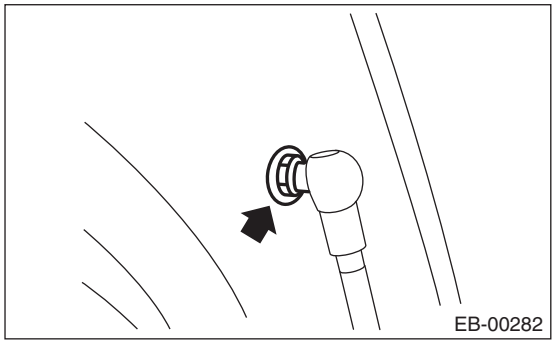
9) Pull out the harnesses and washer hose from the rear gate.
10) Remove harness clip of each connector from the rear gate panel.

11) Before removing the rear gate damper stay, prevent the rear gate from closing using prop or the like.

CAUTION:
If the prop comes off, operators may get injured and vehicle may get damaged. Make sure to support the rear gate with secure material to prevent injury or damage.

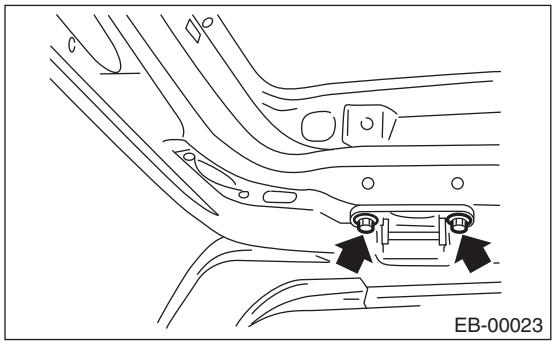

EB-00389

12) Remove the mounting bolt of rear gate damper stay.


EB-00282

13) Remove the rear gate hinge bolt, and remove the rear gate panel.

CAUTION:
Rear gate panels are heavy. When removing and installing them, always work in a team of two or more persons.


EB-00023

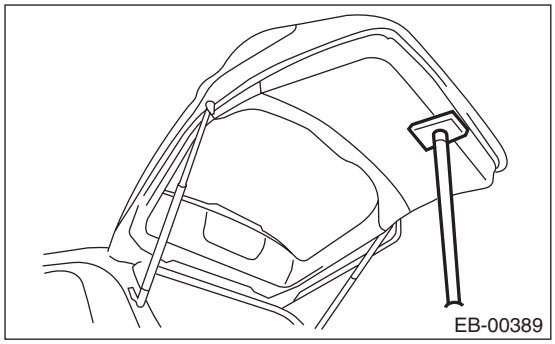
14) Remove the rear gate hinge from the vehicle.

2. REAR GATE DAMPER STAY

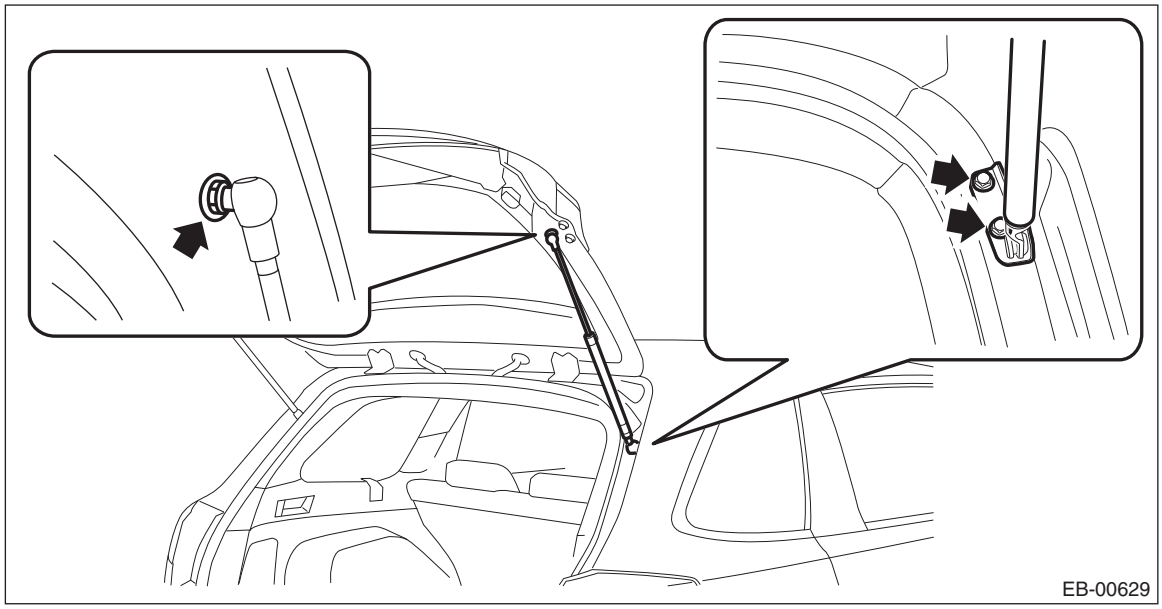
CAUTION:
- **Do not damage piston rods and oil seals.**
- **Never disassemble cylinders: They contain gas.**
- **Rear gate panels are heavy. When removing and installing them, always work in a team of two or more persons.**

1) Before removing the rear gate damper stay, prevent the rear gate from closing using prop or the like.

CAUTION:
If the prop comes off, operators may get injured and vehicle may get damaged. Make sure to support the rear gate with secure material to prevent injury or damage.



2) Remove the rear gate damper stay by removing mounting bolts.



B: INSTALLATION

1. REAR GATE PANEL

CAUTION:
Rear gate panels are heavy. When removing and installing them, always work in a team of two or more persons.

1) Install the rear gate hinges to the vehicle body.
2) Temporarily install the rear gate panel to the rear gate hinges.

NOTE:
When installing, make sure that a uniform clearance is created around the rear gate panel.

3) Adjust the clearance around the rear gate panel. <Ref. to EB-52, ADJUSTMENT, Rear Gate.>
4) Tighten the rear gate hinge bolts.

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

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

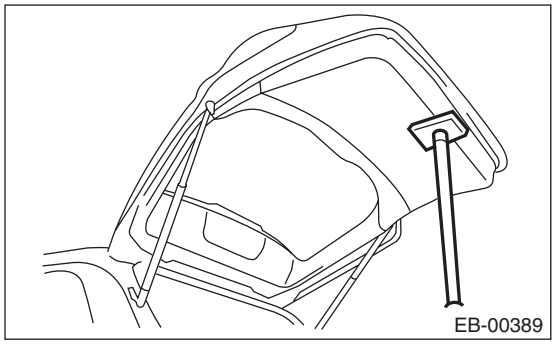
Tightening torque:
Rear gate parts:<Ref. to EB-7, REAR GATE, COMPONENT, General Description.>
Rear gate garnish: 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)
Rear wiper motor & rear wiper arm:<Ref. to WW-4, REAR WIPER, COMPONENT, General Description.>

2. REAR GATE DAMPER STAY

CAUTION:
Rear gate panels are heavy. When removing and installing them, always work in a team of two or more persons.

1) Prevent the rear gate from closing using prop or the like.

CAUTION:
If the prop comes off, operators may get injured and vehicle may get damaged. Make sure to support the rear gate with secure material to prevent injury or damage.

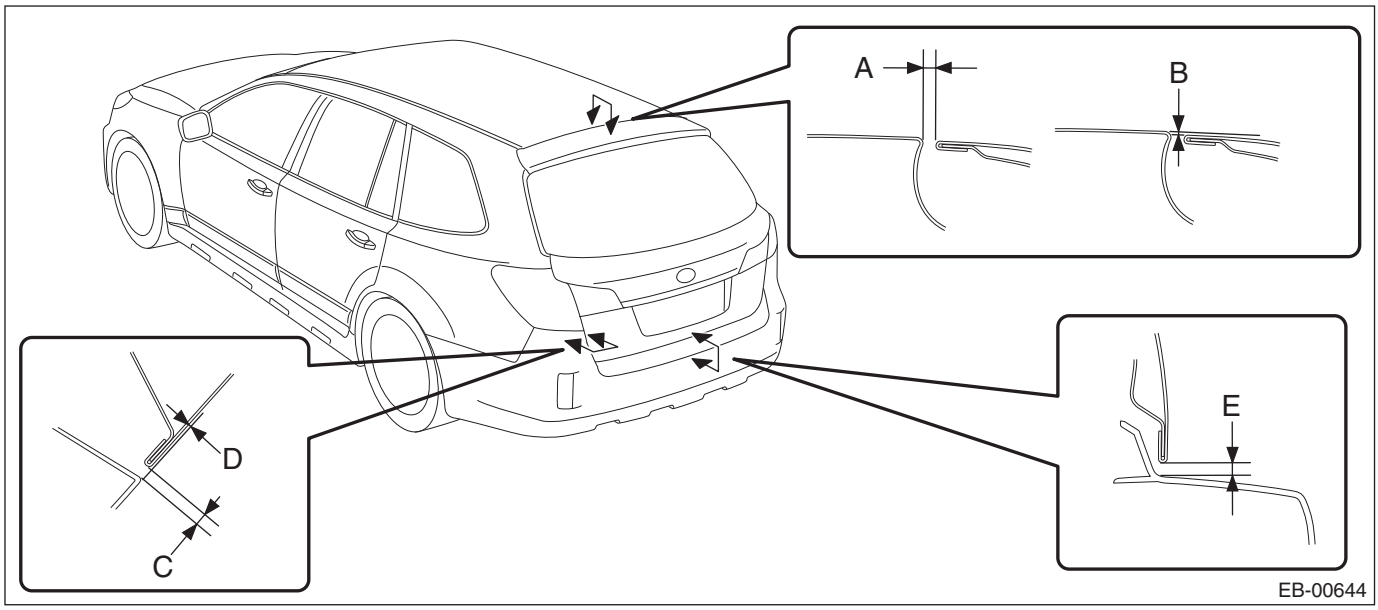


2) Install each part in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to EB-7, REAR GATE, COMPONENT, General Description.>

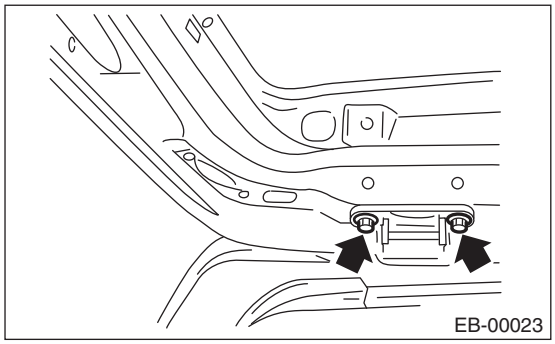
C: ADJUSTMENT

Adjust the clearance around the rear gate panel as follows.



Part		Standard
A	Rear gate panel to Roof panel	6.6+1.0, –0.5 mm (0+0.26, –0.02 in)
B	Surface level gap between rear gate panel and roof panel	1.0±1.0 mm (0.04±0.04 in)
C	Rear gate panel to Rear bumper	5.0±1.0 mm (0.20±0.04 in)
D	Surface level gap between rear gate panel and rear bumper	0.4±1.0 mm (0.02±0.04 in)
E	Rear gate panel to Rear bumper	8.0±1.5 mm (0.31±0.06 in)

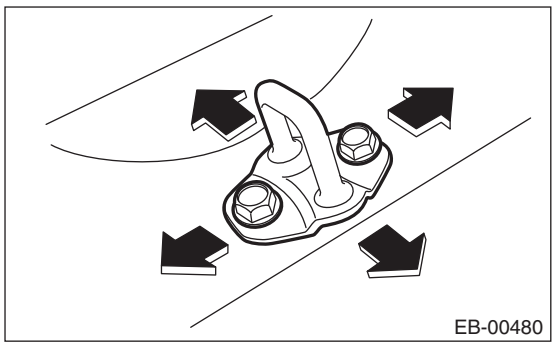
1) Adjust the vertical and horizontal positions of rear gate panel.



(1) Loosen the hinge mounting bolts.
(2) Adjust the vertical and horizontal clearance of rear gate panel.

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

2) Adjust the surface level gap between rear gate panel and body.



(1) Loosen the bolts.
(2) Tap the striker using a plastic hammer to adjust the surface level gap between rear gate panel and body.

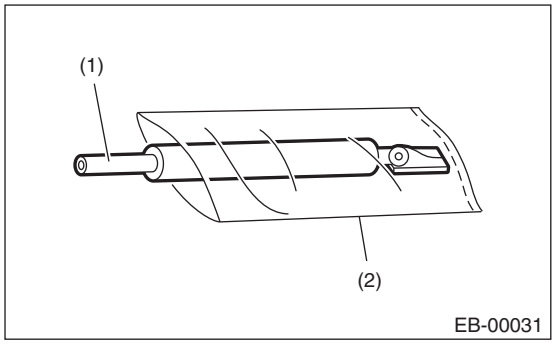
Tightening torque:
25 N·m (2.55 kgf-m, 18.4 ft-lb)

D: DISPOSAL

1. REAR GATE DAMPER STAY

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

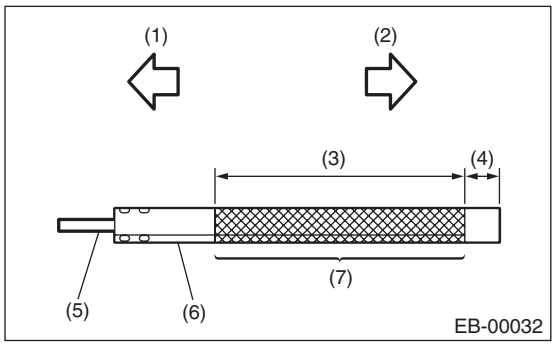
1) Cover with a vinyl sack as shown in the figure.



(1) Rear gate damper stay
(2) Vinyl sack

NOTE:
Prevent the vinyl sack from being caught by drill cutting edge.

2) Lift the body side slightly with piston rods fully extended, and secure the body side with vise.
Drill a hole in 2 to 3 mm (0.08 to 0.12 in) diameter at a point 10 to 200 mm (0.39 to 7.87 in) from body side, and bleed the rear gate damper stay gas completely.



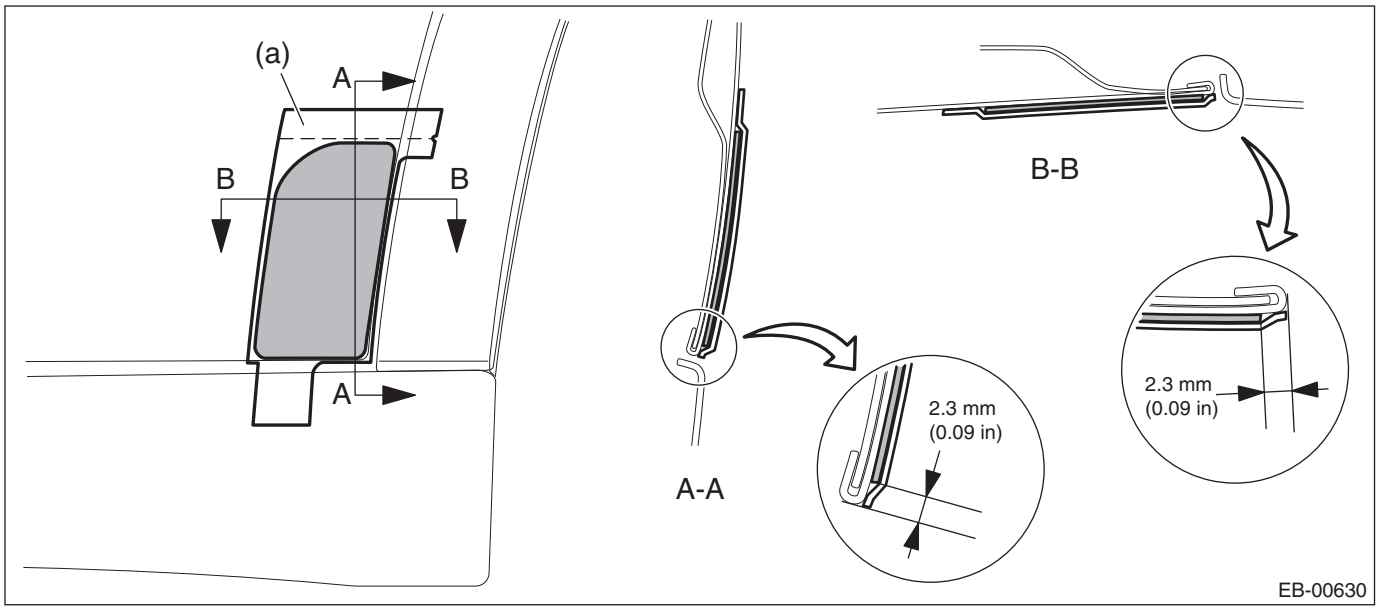
(1) Door side
(2) Body side
(3) 190 mm (7.48 in)
(4) 10 mm (0.39 in)
(5) Piston rod
(6) Cylinder
(7) Portion to be drilled

11.Protector Tape

A: INSTALLATION

Apply the protector tape by the following steps.

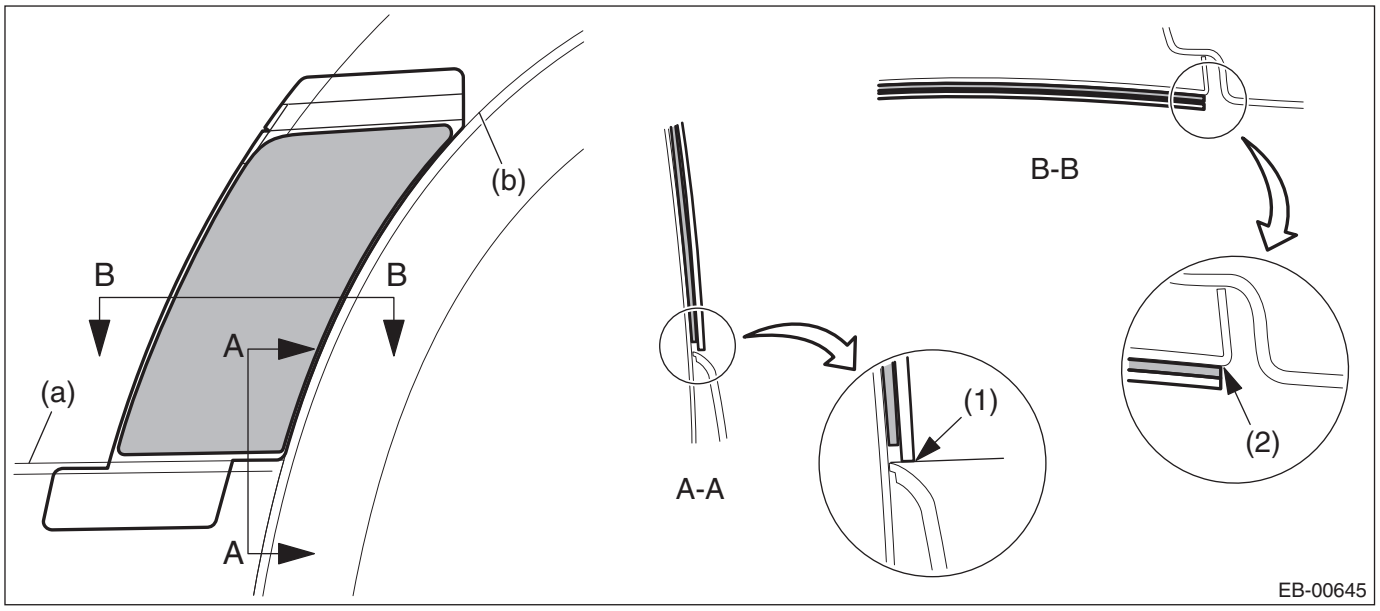
1. REAR DOOR PROTECTOR



1) Clean the area around applying position to remove any foreign objects on body.
2) Detach the backing paper from the temporary retention area (a) and apply the protector tape after positioning it correctly.
3) Detach the remaining backing paper, and moisten the applying area and the backside of protector tape by spraying liquid (mild detergent solution at 3% concentration).
4) Align the protector tape to the position shown in the figure and apply it to the body.

CAUTION:
Remove the water or air bubbles out of the protector tape by using the plastic or rubber spatula.
5) Detach the application tape and temporary retention tape.

2. REAR DOOR PROTECTOR (OUTBACK MODEL)

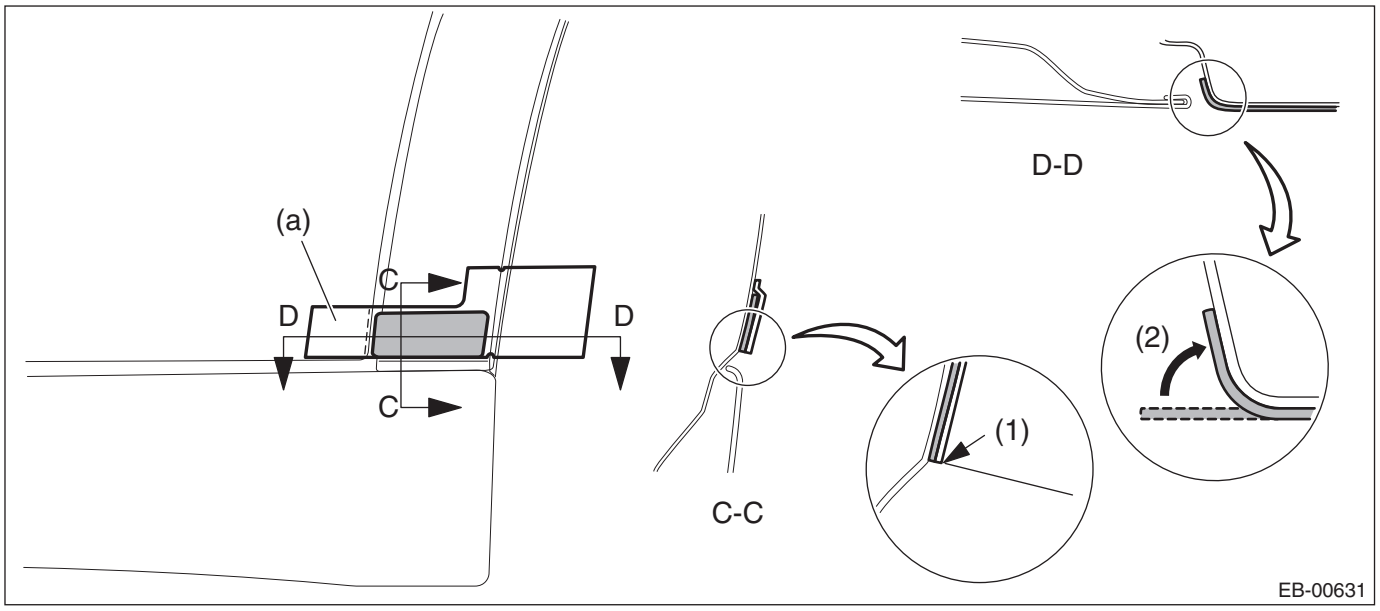


(a) Rear door garnish end
(b) Rear door panel end
(1) Align the application sheet to the end of rear door garnish.
(2) Align the application sheet to the end of rounded corner.

1) Clean the area around applying position to remove any foreign objects on body.
2) Detach the backing paper and apply the protector tape after positioning it correctly.
3) Detach the backing papers, and moisten the applying area and the backside of protector tape by spraying liquid (mild detergent solution at 3% concentration).
4) Apply the protector tape to the vehicle body.

CAUTION:
Remove the water or air bubbles out of the protector tape by using the plastic or rubber spatula.
5) Detach the application tape and temporary retention tape.

3. REAR QUARTER PROTECTOR



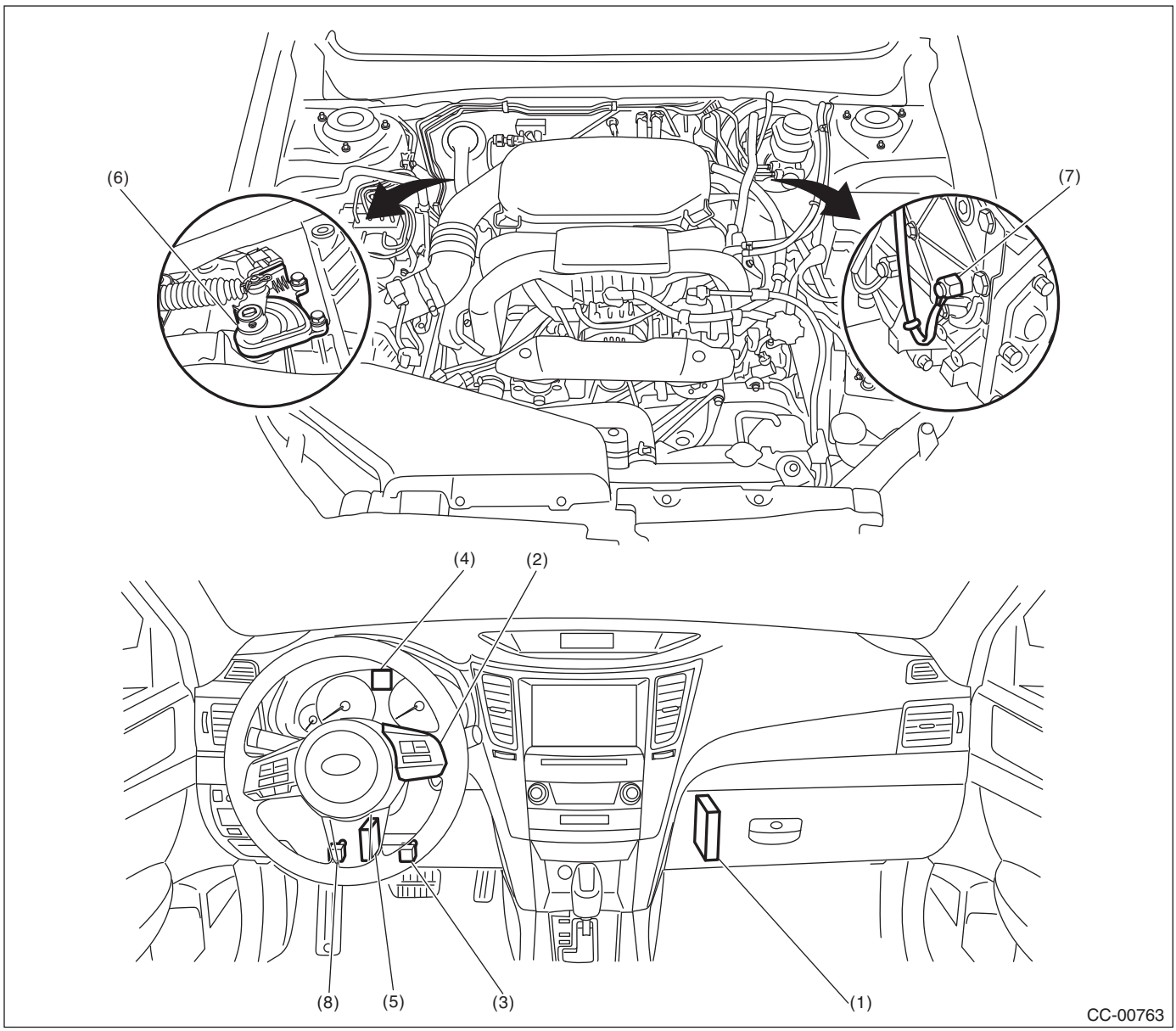
(1) Align the application sheet to the end of rounded corner.
(2) Apply the protector tape along the rounded surface.

1) Clean the area around applying position to remove any foreign objects on body.
2) Detach the backing paper from the temporary retention area (a) and apply the protector tape after positioning it correctly.
3) Detach the backing papers, and moisten the applying area and the backside of protector tape by spraying liquid (mild detergent solution at 3% concentration).
4) Apply the protector tape to the vehicle body.

CAUTION:
Remove the water or air bubbles out of the protector tape by using the plastic or rubber spatula.
5) Detach the application tape and temporary retention tape.
6) Bend the tack-in end and apply it as shown by (2) in the figure.

1. General Description

A: COMPONENT



(1) Engine control module (ECM)
(2) Cruise control command switch
(3) Stop light and brake switch
(4) Cruise indicator light and cruise set indicator light
(5) Transmission control module (TCM) (AT and CVT model)
(6) Inhibitor switch (CVT model)
(7) Neutral position switch (MT model)
(8) Clutch switch (MT model)

B: CAUTION

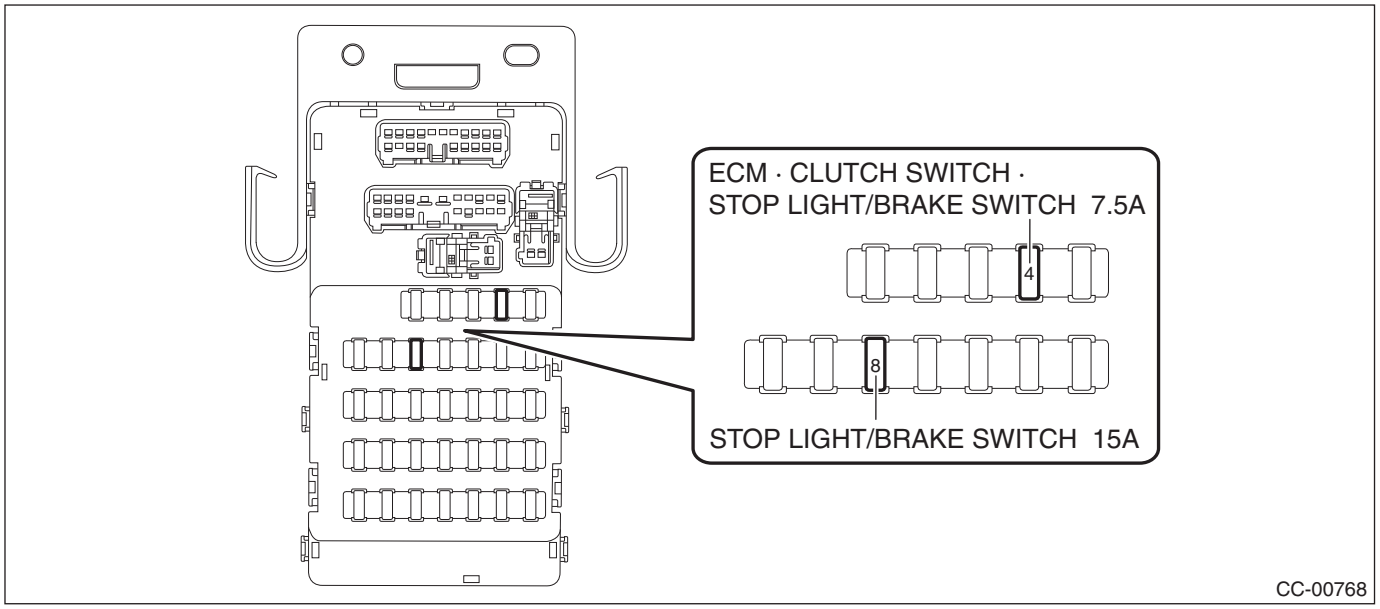
- Before disassembling or reassembling parts, always disconnect the battery ground cable from battery. When repairing the audio, control module, etc. which are provided with memory functions, record the memory contents before disconnecting the ground cable from battery. Otherwise, the memory will be cleared.
- Reassemble the parts in the reverse order of disassembly unless otherwise indicated.
- Adjust the parts to specifications specified in this manual.
- Connect the connectors securely when reassembling.
- After reassembly, make sure that the functional parts operate normally.

C: PREPARATION TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
TORX® bit T30	Used for removing/installing driver's airbag module.

2. Relay and Fuse

A: LOCATION



B: INSPECTION

1. CHECK FUSE.

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

3. Cruise Control System

A: WIRING DIAGRAM

Refer to “Cruise Control System” in the wiring diagram. <Ref. to WI-88, WIRING DIAGRAM, Cruise Control System.>

B: INSPECTION

Refer to CRUISE CONTROL SYSTEM (DIAGNOSIS). <Ref. to CC(diag)-11, Diagnostics with Phenomenon.>

C: NOTE

For operation procedures of each component of the cruise control system, refer to the respective section.

- Cruise control unit:<Ref. to CC-6, Cruise Control Module.>
- Cruise control command switch:<Ref. to CC-7, Cruise Control Command Switch.>
- Combination meter:<Ref. to CC-11, Combination Meter.>
- Stop light & brake switch:<Ref. to CC-12, Stop Light & Brake Switch.>
- Clutch switch:<Ref. to CC-13, Clutch Switch.>
- Inhibitor switch:<Ref. to CC-14, Inhibitor Switch.>
- Transmission control module (TCM):<Ref. to CC-15, Transmission Control Module (TCM).>
- Neutral position switch:<Ref. to CC-16, Neutral Position Switch.>

4. Cruise Control Module

A: NOTE

The control of cruise control system is carried out in engine control module (ECM).

B: REMOVAL

- H4 NA model:<Ref. to FU(H4SO)-39, REMOVAL, Engine Control Module (ECM).>
- H4 turbo model:<Ref. to FU(H4DOTC)-57, REMOVAL, Engine Control Module (ECM).>
- H6 model:<Ref. to FU(H6DO)-50, REMOVAL, Engine Control Module (ECM).>

C: INSTALLATION

- H4 NA model:<Ref. to FU(H4SO)-39, INSTALLATION, Engine Control Module (ECM).>
- H4 turbo model:<Ref. to FU(H4DOTC)-57, INSTALLATION, Engine Control Module (ECM).>
- H6 model:<Ref. to FU(H6DO)-50, INSTALLATION, Engine Control Module (ECM).>

5. Cruise Control Command Switch

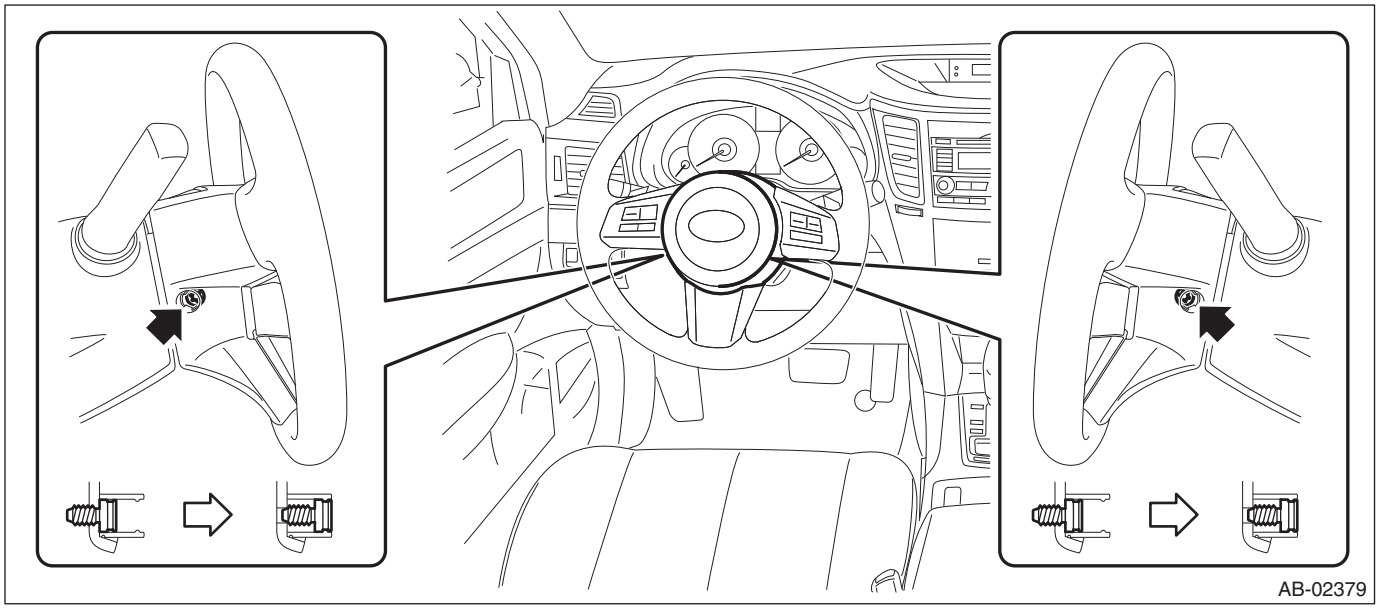
A: REMOVAL

CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>

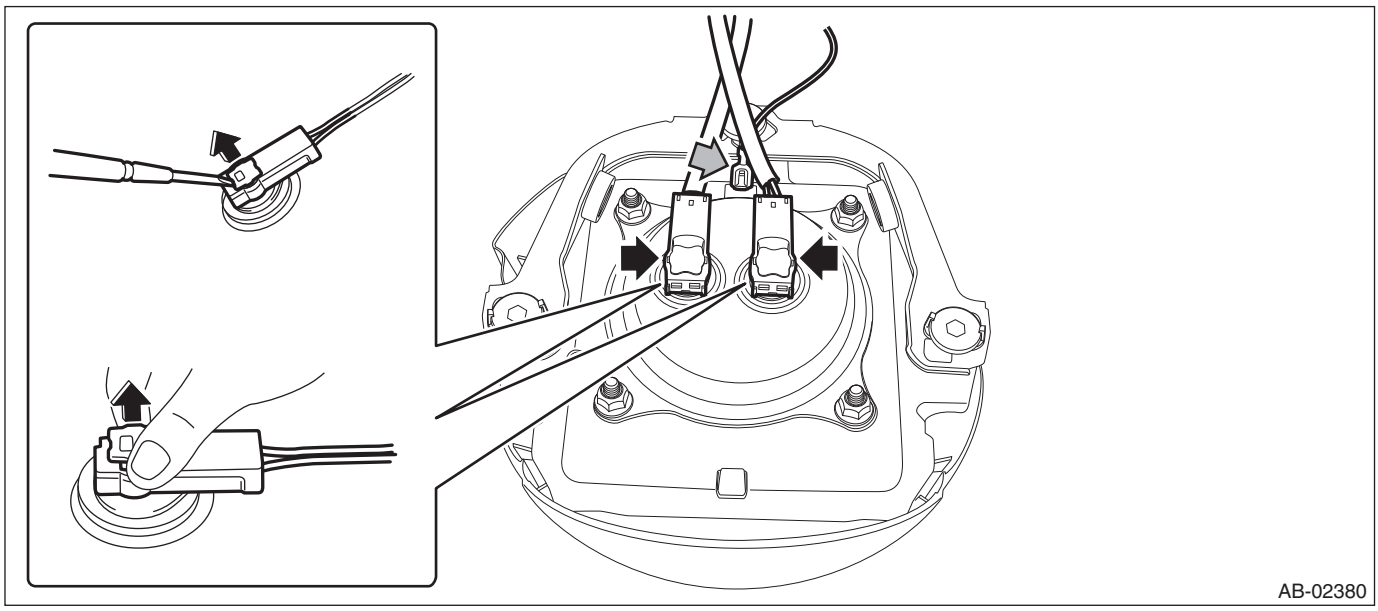
1) Position the front wheels straight ahead. (After moving a vehicle 5 m (16 ft) or more with front wheels positioned straight ahead, make sure that the vehicle moves straight ahead).
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before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

Preparation tool: TORX® T30

(1) Loosen the TORX® bolts located on the sides of the steering wheel.


AB-02379

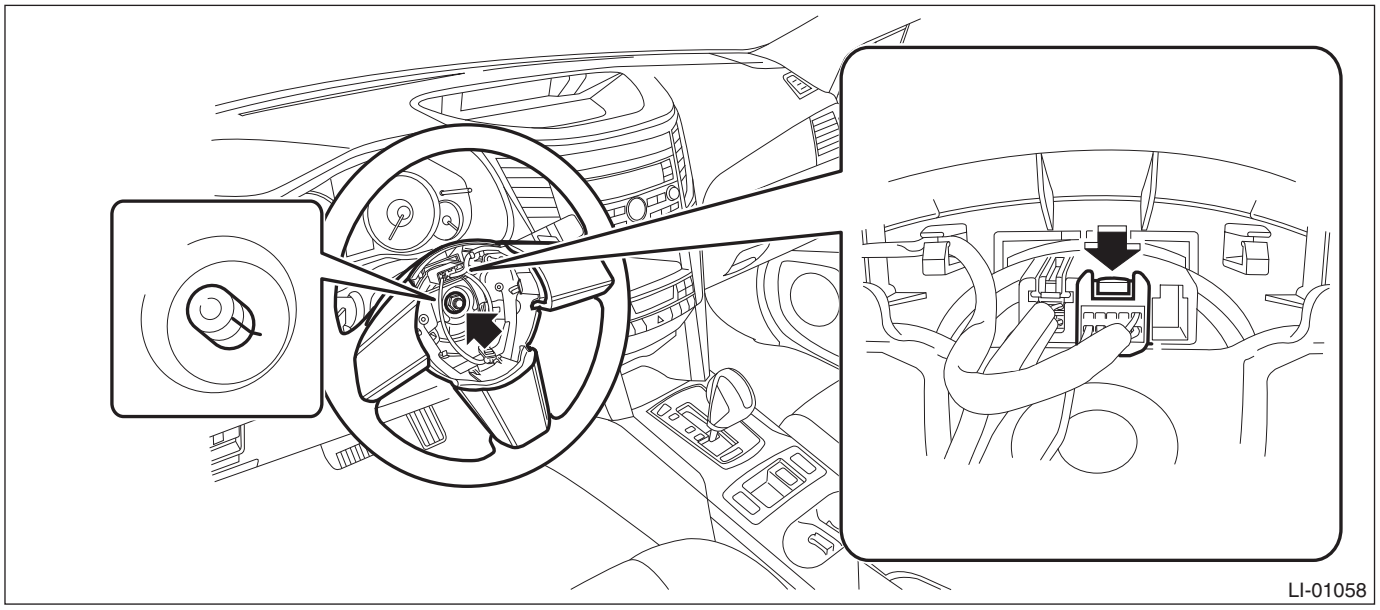
(2) Disconnect the horn harness and airbag connector and remove the airbag module assembly.


AB-02380

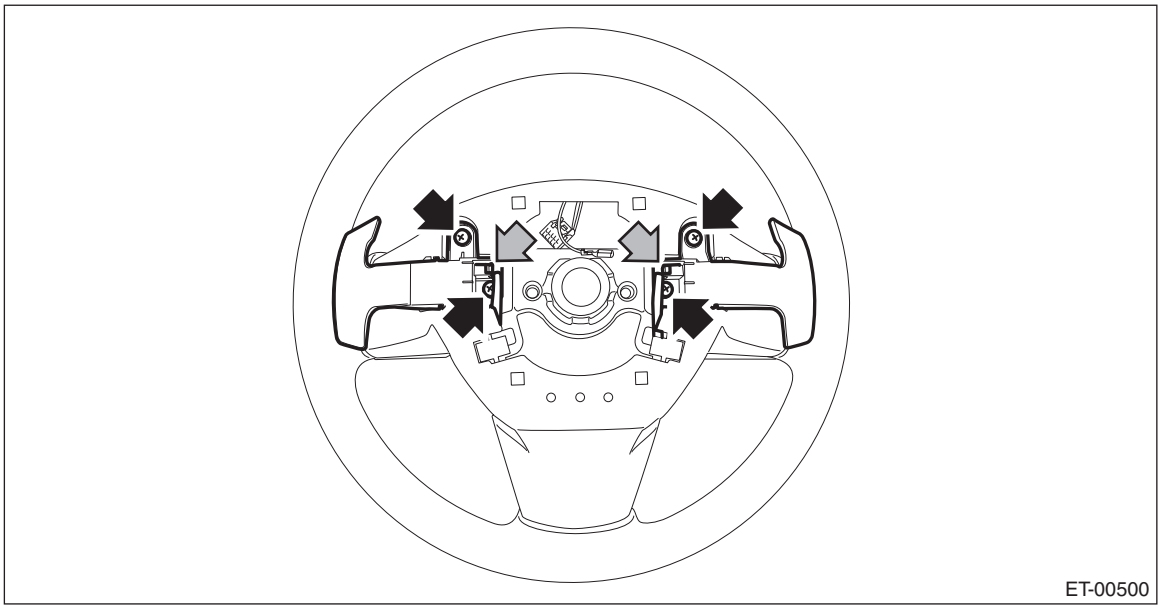
5) Remove the steering wheel.

CAUTION:
If the steering wheel has been removed, make sure that the roll connector is not turned from the original position.

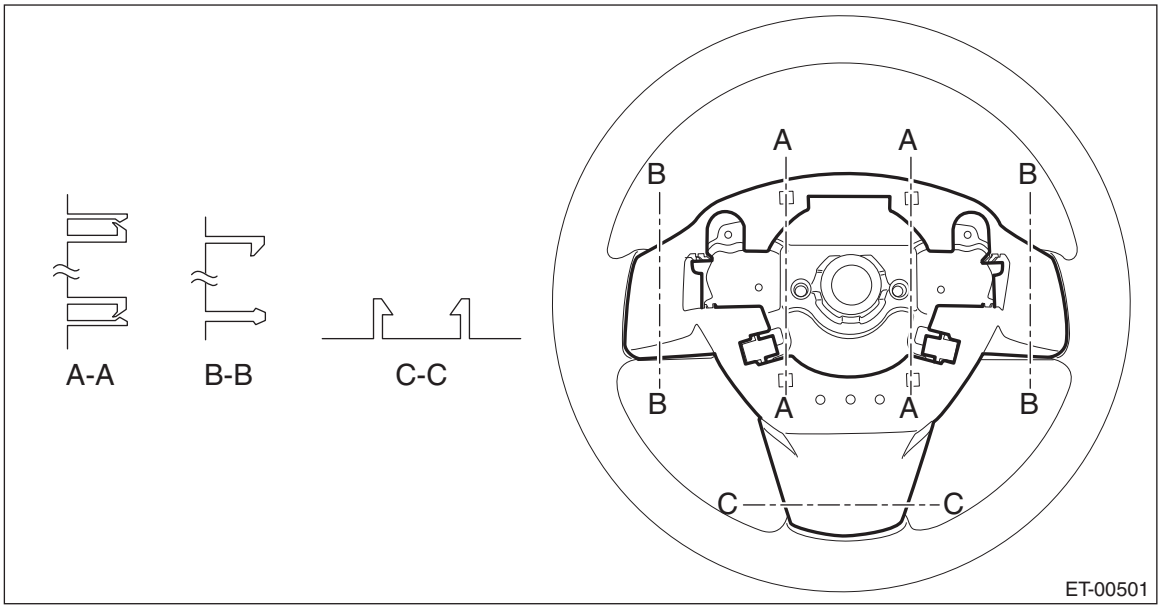
(1) Disconnect the connector and remove the nut.
(2) Put alignment marks and remove the steering wheel using a steering puller.



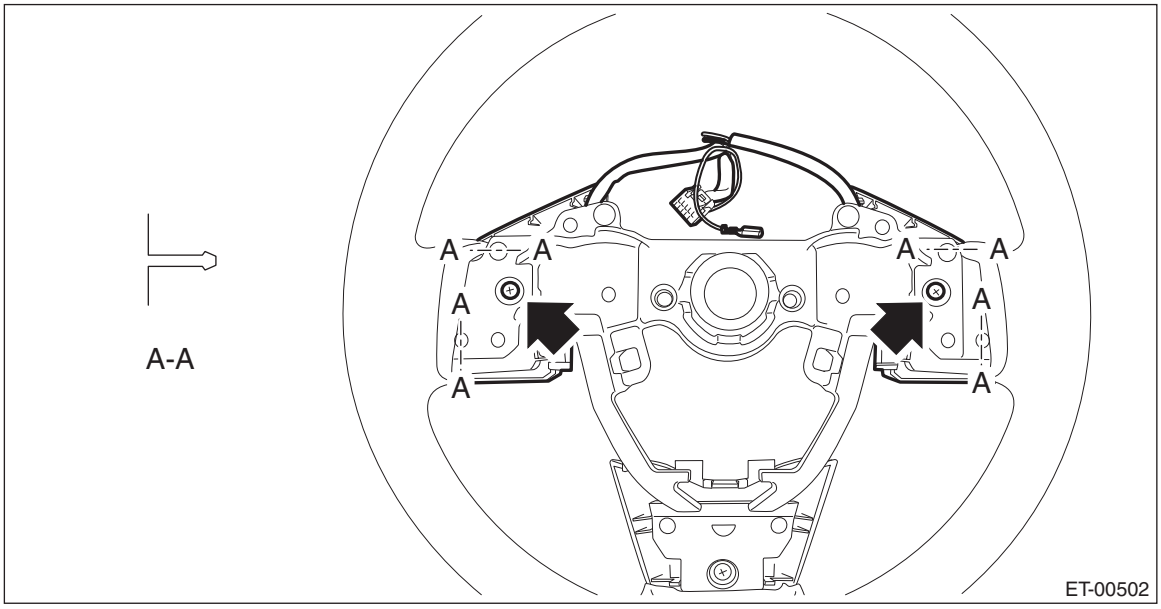
6) Remove the clutch control command switches.
(1) Remove the screw, disconnect the connector and remove the paddle shift switch. (Model with paddle shift)



(2) Disconnect the claws and then remove the lower cover.



(3) Remove the screw to remove the cruise control command switch.



B: INSTALLATION

CAUTION:

- **Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>**
- **Do not allow harness and connectors to interfere or get tangled up with other parts.**

1) Align the center position of the roll connector. <Ref. to AB-93, ADJUSTMENT, Roll Connector.>
2) Align the alignment marks on the steering wheel and steering shaft.
3) Install each part in the reverse order of removal.

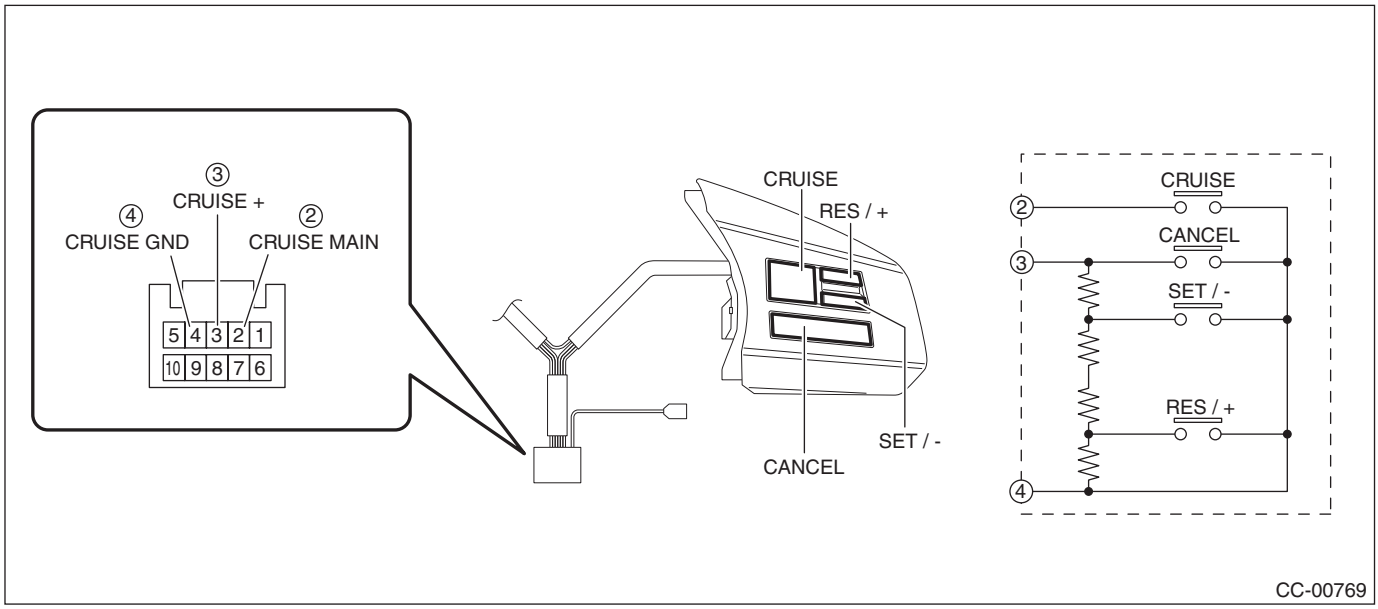
Tightening torque:

Airbag module: 10 N·m (1.0 kgf-m, 7.4 ft-lb)
Steering wheel: 39 N·m (4.0 kgf-m, 28.8 ft-lb)
Clearance between column cover and steering wheel: 2 — 4 mm (0.08 — 0.16 in)

C: INSPECTION

1) Disconnect the cruise control command switch connector.
2) Check the resistance between cruise control command switch terminals.

Preparation tool: Circuit tester



Terminal No.	Inspection conditions		Standard
3 — 4	CANCEL SET/– RES/+	All OFF	Approx. 4 kΩ
3 — 4	CANCEL	ON	Less than 1 Ω
3 — 4	SET/–	ON	Approx. 250 Ω
3 — 4	RES/+	ON	Approx. 1470 Ω
2 — 4	CRUISE (MAIN)	OFF	1 MΩ or more
2 — 4		ON	Less than 1 Ω

3) Replace the cruise control command switch if it is found defective.

6. Combination Meter

A: NOTE

For combination meter, refer to the “IDI”. <Ref. to IDI-20, Combination Meter.>

7. Stop Light & Brake Switch

A: NOTE

For stop light & brake switch, refer to “BR”. <Ref. to BR-41, INSPECTION, Stop Light Switch.>

8. Clutch Switch

A: NOTE

For clutch switch, refer to “CL”. <Ref. to CL-31, Clutch Switch.>

9. Inhibitor Switch

A: NOTE

1. CVT MODEL

For inhibitor switch, refer to “Continuously Variable Transmission”. <Ref. to CVT-94, Inhibitor Switch.>

2. 5AT MODEL

Inhibitor switch cannot be removed and checked, because the inhibitor switch is installed on control valve assembly.
When a malfunction occurs, refer to 5AT (diag) section. <Ref. to 5AT(diag)-36, DTC P0705 TRANSMISSION RANGE SENSOR CIRCUIT (PRNDL INPUT), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

10. Transmission Control Module (TCM)

A: NOTE

For transmission control module (TCM), refer to following section.

- CVT model:<Ref. to CVT-122, Transmission Control Module (TCM).>
- 5AT model:<Ref. to 5AT-58, Transmission Control Module (TCM).>

11.Neutral Position Switch

A: NOTE

For neutral position switch, refer to the manual transmission & differential section. <Ref. to 6MT-36, Switches and Harness.>

1. Basic Diagnostic Procedure

A: PROCEDURE

CAUTION:
• When performing diagnosis, observe the legal speed limit on the road.
• The cancel code will also appear when cruise control is cancelled by the driver's operation. Do not confuse them.
• Be sure to get an assistant to support the diagnosis while driving, and have him/her operate the select monitor.

	Step	Check	Yes	No
1	**CHECK MALFUNCTION INDICATOR LIGHT.** Make sure the malfunction indicator light illuminates.	Does the malfunction indicator light illuminate?	Go to step **5**.	Go to step **2**.
2	**CHECK CRUISE INDICATOR LIGHT.** Make sure the cruise indicator light blinks.	Does the cruise indicator light blink?	Go to step **7**.	Go to step **3**.
3	**CHECK CRUISE SWITCH OPERATION.** Check the CRUISE switch operation. (Check the illumination of the CRUISE indicator.)	Is the CRUISE switch turned on? (Does the CRUISE indicator illuminate?)	Go to step **4**.	Go to phenomenon 1. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
4	**CHECK CRUISE CONTROL SET OPERATION.** Check the cruise control setting operation.	Can the cruise control be set while driving at 40 km/h (25 MPH) or more?	Go to step **8**.	Go to step **7**.
5	**CHECK DTC.** Read all DTCs using the Subaru Select Monitor.	Is an engine or ABS/VDC related DTC displayed?	Record the DTC. Go to step **6**.	Go to phenomenon 2. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
6	**CHECK FREEZE FRAME DATA.** Using the Subaru Select Monitor, check the Freeze Frame Data or Information in Trouble State.	Was the Freeze Frame Data or Information in Trouble State recorded?	Record the data. Perform the diagnosis according to DTC related to engine or ABS/VDC.	Perform the diagnosis according to DTC related to engine or ABS/VDC.
7	**CHECK CANCEL CODE.** Using the Subaru Select Monitor, read the cancel codes. NOTE: • Do not turn the ignition switch to OFF after the cruise control is deactivated. • Do not operate the cruise control command switch after the cruise control is deactivated. If the above is performed, the cancel code will be cleared.	Is it possible to read the cancel codes?	Perform the diagnosis according to the cancel code. <Ref. to CC(diag)-13, LIST, List of Cancel Code.>	Go to step **8**.

	Step	Check	Yes	No
8	**CHECK SET INDICATOR.** Check the illumination of the SET indicator.	Does the SET indicator illuminate?	Go to step **9**.	Go to phenomenon 3. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
9	**CHECK VEHICLE SPEED IS HELD WITHIN SET SPEED.** Make sure the vehicle speed is held within set speed.	Is the vehicle speed kept within setting speed ±3 km/h (±2 MPH)? (Make sure that on a level road.)	Go to step **10**.	Go to phenomenon 4. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
10	**CHECK RES/+ OPERATION.** Check the RES/+ switch operation.	Does the vehicle speed increase or return to set speed after RES/+ switch has been pressed?	Go to step **11**.	Go to phenomenon 5. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
11	**CHECK SET/– OPERATION.** Check the SET/– switch operation.	Does the vehicle speed decrease after SET/– switch has been pressed?	Go to step **12**.	Go to phenomenon 6. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
12	**CANCEL OPERATION CHECK.** Check the CANCEL switch operation.	Is the cruise control released after CANCEL switch has been pressed?	Go to step **13**.	Go to phenomenon 7. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
13	**CHECK CRUISE CONTROL RELEASE OPERATION.** Check the cruise control release operation.	Is the cruise control released after brake pedal has been depressed?	Go to step **14**.	Go to phenomenon 8. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>

	Step	Check	Yes	No
14	**CHECK CRUISE CONTROL RELEASE OPERATION.** Check the cruise control release operation.	Is the cruise control released after shifting to the neutral position?	Go to step **15**.	Go to phenomenon 9. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>
15	**CHECK CRUISE CONTROL RELEASE OPERATION.** Check the cruise control release operation.	Is the cruise control released after depressing the clutch pedal?	Finish the diagnosis.	Go to phenomenon 10. <Ref. to CC(diag)-11, DIAGNOSTIC PROCEDURE WITH PHENOMENON, Diagnostics with Phenomenon.>

2. General Description

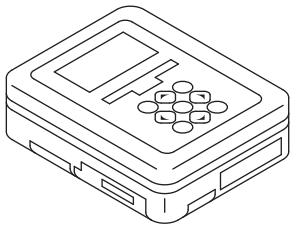
A: CAUTION

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

CAUTION:
• Do not use the electrical test equipment on the airbag system wiring harnesses and connector circuits.
• Be careful not to damage the airbag system wiring harness when servicing the cruise control command switch. Airbag system wiring harness is routed near the cruise control command switch.

B: PREPARATION TOOL

1. SPECIAL TOOL

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

2. GENERAL TOOL

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

C: INSPECTION

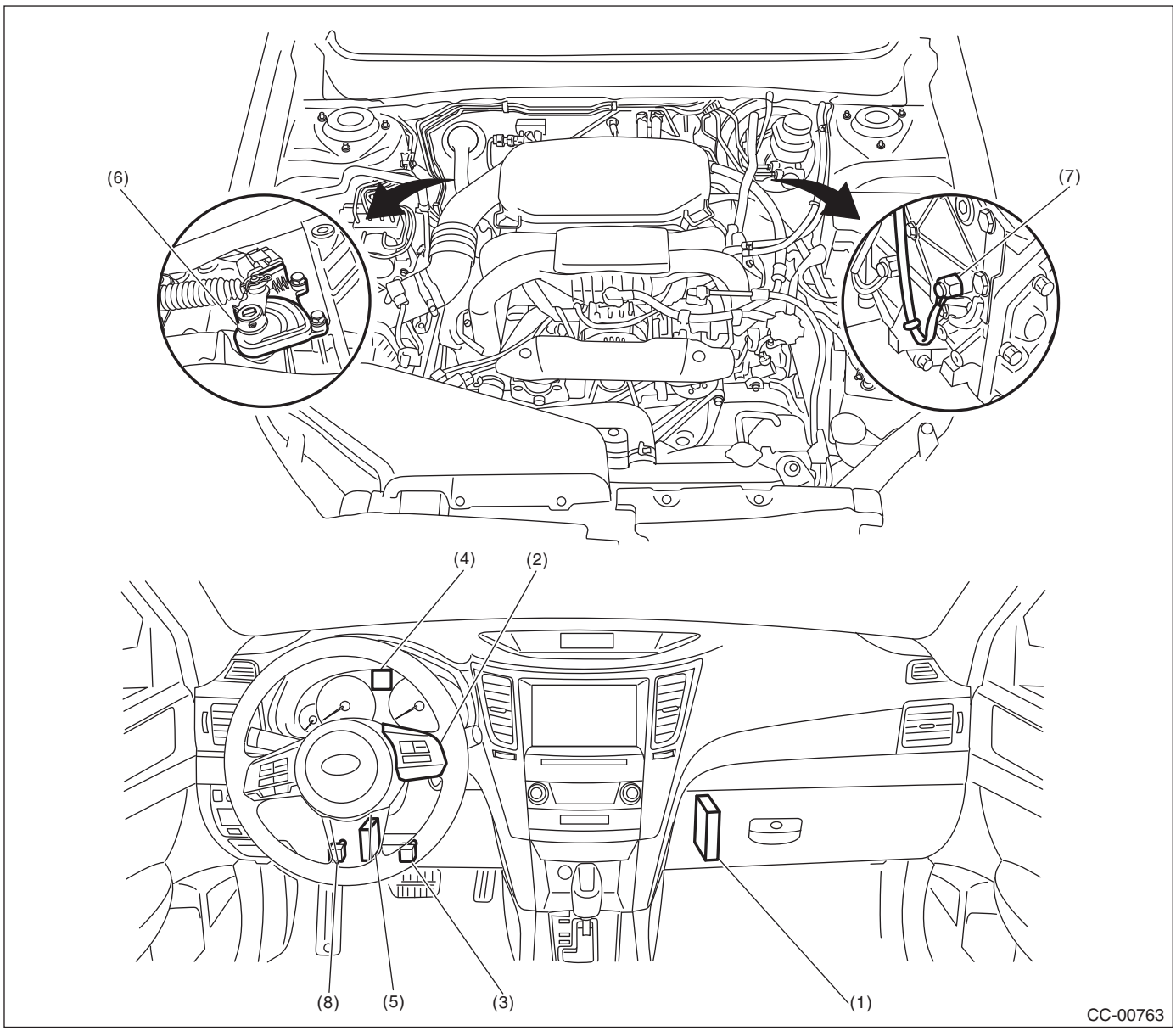
Measure the battery voltage and specific gravity of electrolyte.

Standard voltage:
12 V or more

Specific gravity:
1.260 or more

3. Electrical Component Location

A: LOCATION



(1) Engine control module (ECM)
(2) Cruise control command switch
(3) Stop light & brake switch
(4) Cruise indicator light and cruise set indicator light
(5) Transmission control module (TCM) (AT model and CVT model)
(6) Inhibitor switch (CVT model)
(7) Neutral position switch (MT model)
(8) Clutch switch (MT model)

4. Engine Control Module (ECM) I/O Signal

A: ELECTRICAL SPECIFICATION

For details on the input/output signals for the engine control module, refer to ENGINE (DIAGNOSTICS). <Ref. to EN(H4SO)(diag)-18, ELECTRICAL SPECIFICATION, Engine Control Module (ECM) I/O Signal.> <Ref. to EN(H4DOTC)(diag)-19, ELECTRICAL SPECIFICATION, Engine Control Module (ECM) I/O Signal.> <Ref. to EN(H6DO)(diag)-18, ELECTRICAL SPECIFICATION, Engine Control Module (ECM) I/O Signal.>

B: WIRING DIAGRAM

<Ref. to WI-88, WIRING DIAGRAM, Cruise Control System.>

5. Subaru Select Monitor

A: OPERATION

1. GENERAL DESCRIPTION

The on-board diagnosis function of the cruise control system uses Subaru Select Monitor.
The on-board diagnosis function operates in two categories, which are used depending on the type of problems;
1) Cruise Control Cancel Conditions Diagnosis:
(1) This category of diagnosis requires actual vehicle driving in order to determine the cause, as when cruise speed is cancelled during driving although cruise cancel condition is not entered.
(2) Cruise control memory in ECM stores the cancel code which occurred during driving. When there are multiple cancel code, they are shown on the Subaru Select Monitor.

CAUTION:
• The cruise control memory stores not only the cruise "cancel" which occurred (although "cancel" operation is not entered by the driver), but also the "cancel" condition input by the driver.
• The content of the latest memory (the latest code) is cleared when the ignition switch is turned to OFF. However, memory contents set by the diagnosis of faulty switches related to the system and cruise control will remain as trouble history (memory code) after the ignition switch is turned to OFF.
2) Real-time Diagnosis:
Real-time diagnosis function is used to determine whether or not the input signal system is in good order, according to signal emitted from switches, sensors, etc.
(1) Vehicle cannot be driven at cruise speed when the problem occurs in the cruise control system or relevant circuits.
(2) Monitor the signal conditions from switches and sensors.

2. BASIC OPERATION

For the operation procedure, refer to the "PC application help for Subaru Select Monitor".

6. Read Cancel Code

A: OPERATION

1) On «Main Menu» display, select {Each System Check}.
On «System Selection Menu» display, select {Engine Control System} and select the [OK]. Select [OK] after the engine type information is displayed.
2) Drive vehicle at 40 km/h (25 MPH) or more and set the cruise control.

CAUTION:
• When performing diagnosis, observe the legal speed limit on the road.
• The cancel code will also appear when cruise control is cancelled by the driver's operation. Do not confuse them.
• Be sure to get an assistant to support the diagnosis while driving, and have him/her operate the select monitor.
3) When the set speed is cancelled by itself (without any cancel operations such as applying brake) or when the cruise control could not be set by performing the setting operation, selecting the {Cancel Code(s) Display} on the engine malfunction diagnosis screen will display the cancel code on the select monitor display.

NOTE:
The {Latest Diagnostic Code(s)} and {Memorized Diagnostic Code(s)} are contained in the cancel code. The latest code recognized during current test drive is displayed in {Latest Diagnostic Code(s)}. Cancel codes resulting from fault diagnosis of switches relating to the system and cruise control are also displayed in {Memorized Diagnostic Code(s)}.
4) Perform engine DTC clear memory operation. <Ref. to EN(H4SO)(diag)-53, OPERATION, Clear Memory Mode.> <Ref. to EN(H4DOTC)(diag)-55, OPERATION, Clear Memory Mode.> <Ref. to EN(H6DO)(diag)-57, OPERATION, Clear Memory Mode.>
Cancel code of switches relating to the system and cruise control are deleted by clearing memory on the engine side.

NOTE:
• The latest code will be cleared by turning ignition switch to OFF.
• For detailed operation procedures, refer to "PC application help for Subaru Select Monitor".
• For details on cancel codes, refer to List of Cancel Code. <Ref. to CC(diag)-13, List of Cancel Code.>

7. Real-time Diagnosis

A: OPERATION

1) Select {Current Data Display & Save} in «Engine Diagnosis» display screen.
2) Make sure that normal display is shown when operated as follows:
- Depress and release the brake pedal. (Stop light switch and brake switch are turned to ON.)
- Turn the “CRUISE” switch to ON.
- Turn the “CANCEL” switch to ON.
- Turn the “SET/COAST” switch to ON.
- Turn the “RESUME/ACCEL” switch to ON.
- Depress or release the clutch switch.
- Place the shift lever in any position other than neutral.

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

8. Diagnostics with Phenomenon

A: DIAGNOSTIC PROCEDURE WITH PHENOMENON

Phenomenon		Check item	Reference
1	CRUISE switch is not turned ON. (CRUISE indicator does not illuminate.) Or the cruise control is cancelled without CRUISE switch operation.	(1) Perform cruise cancel conditions diagnosis.	Perform the diagnosis according to displayed cancel code.
		(2) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(3) Check the cruise control command switch.	<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>
		(4) Check the CRUISE indicator.	<Ref. to CC(diag)-12, CHECK CRUISE INDICATOR LIGHT AND CRUISE SET INDICATOR LIGHT, Diagnostics with Phenomenon.>
2	Cruise control cannot be set. Or the cruise control is cancelled without canceling operation.	(1) Perform cruise cancel conditions diagnosis.	Perform the diagnosis according to displayed cancel code.
		(2) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(3) Check the cruise control command switch.	<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>
		(4) Check stop light switch and brake switch.	<Ref. to BR-41, Stop Light Switch.> <Ref. to CC(diag)-18, 12, Diagnostic Procedure with Cancel Code.>
		(5) Check clutch switch.	<Ref. to CL-31, Clutch Switch.> <Ref. to CC(diag)-20, 13, Diagnostic Procedure with Cancel Code.>
		(6) Check the neutral position switch.	<Ref. to CC(diag)-21, 14, Diagnostic Procedure with Cancel Code.> <Ref. to CC(diag)-26, 62, Diagnostic Procedure with Cancel Code.>
		(7) Check vehicle speed sensor.	<Ref. to CC(diag)-25, 22, Diagnostic Procedure with Cancel Code.>
3	SET indicator does not illuminate.	Check the SET indicator.	<Ref. to CC(diag)-12, CHECK CRUISE INDICATOR LIGHT AND CRUISE SET INDICATOR LIGHT, Diagnostics with Phenomenon.>
4	Vehicle speed is not held within set speed ±3 km/h (±2 MPH).	Check the vehicle speed sensor.	<Ref. to CC(diag)-25, 22, Diagnostic Procedure with Cancel Code.>
5	Vehicle speed does not increase or does not return to set speed after RES/+ switch has been pressed.	(1) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(2) Check the RES/+ switch.	<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>
6	Vehicle speed does not decrease after SET/– switch has been pressed.	(1) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(2) Check the SET/– switch.	<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>
7	Cruise control is not released after CANCEL switch has been pressed.	(1) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(2) Check the CANCEL switch.	<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>
8	Cruise control is not released after brake pedal has been depressed.	(1) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(2) Check stop light switch and brake switch.	<Ref. to CC(diag)-18, 12, Diagnostic Procedure with Cancel Code.> <Ref. to BR-41, INSTALLATION, Stop Light Switch.>
9	Cruise control is not released after shifting to the neutral position.	(1) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(2) Check the neutral position switch.	<Ref. to CC(diag)-21, 14, Diagnostic Procedure with Cancel Code.> <Ref. to CC-16, Neutral Position Switch.>

Phenomenon		Check item	Reference
10	Cruise control is not released after clutch pedal has been depressed.	(1) Perform the real-time diagnosis.	Check the input signal of cruise control system.
		(2) Check clutch switch.	<Ref. to CC(diag)-20, 13, Diagnostic Procedure with Cancel Code.> <Ref. to CL-31, CLUTCH SWITCH, INSTALLATION, Clutch Switch.>

B: CHECK CRUISE INDICATOR LIGHT AND CRUISE SET INDICATOR LIGHT

TROUBLE SYMPTOM:

Cruise control can be set, but the CRUISE indicator and SET indicator do not illuminate.

Step		Check	Yes	No
1	**CHECK CRUISE & SET INDICATORS.** Check the combination meter. <Ref. to IDI-6, OPERATION, Combination Meter System.>	Do the CRUISE & SET indicators illuminate?	Go to step **2**.	Replace the meter case assembly. <Ref. to IDI-20, Combination Meter.>
2	**CHECK LAN SYSTEM.** Perform the diagnosis for LAN system. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Is a DTC of the LAN system detected?	Perform the diagnosis according to DTC for LAN system.	Replace the ECM. <Ref. to FU(H4DOTC)-57, Engine Control Module (ECM).>

9. List of Cancel Code

A: LIST

NOTE:
• The cancel code is registered even when cancel is performed intentionally by the driver.
• Cancel codes are cleared if the ignition switch is turned to OFF.
• If a different cancel code is input after a cancel code (latest code) has been input, the latest code is overwritten.
• If the cruise indicator light is flashing, a malfunction is occurring in the system or cruise control related switch. The cancel code at this time is saved even after ignition switch is OFF as a memory code of a past malfunction.
• To display a cancel code, use the Subaru Select Monitor to read the code after the cruise control is deactivated during a driving test.

Cancel code	Item	Contents of diagnosis	Reference
11	Main Switch	CRUISE switch of cruise control command switch is turned to OFF, and then the cruise control is released.	This code is displayed without operating the CRUISE switch. <Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>
12	Stop Light & Brake Switch	Stop light switch or brake switch is turned to ON, and then the cruise control is released.	This code is displayed without depressing the brake pedal. <Ref. to CC(diag)-18, 12, Diagnostic Procedure with Cancel Code.>
13	Clutch Switch	Clutch switch is turned to ON, and then the cruise control is released.	This code is displayed without depressing the clutch pedal. <Ref. to CC(diag)-20, 13, Diagnostic Procedure with Cancel Code.>
14	Neutral Position Switch	Neutral position switch is turned to ON, and then the cruise control is released.	This code is displayed without shifting to neutral position. <Ref. to CC(diag)-21, 14, Diagnostic Procedure with Cancel Code.>
15	Cancel Switch	Cancel switch is turned to ON, and then the cruise control is released.	This code is displayed without operating the cancel switch. <Ref. to CC(diag)-23, 15, Diagnostic Procedure with Cancel Code.>
16	Ignition switch	Ignition switch is turned to OFF, and then the cruise control is released.	This code is displayed without operating the ignition switch. <Ref. to CC(diag)-24, 16, Diagnostic Procedure with Cancel Code.>

List of Cancel Code

Cancel code	Item	Contents of diagnosis	Reference
21	Cruise control switch malfunction when ignition switch is turned to ON	When the ignition switch is turned to ON, each switch of cruise control command switch is already turned to ON.	This code is displayed when the ignition switch is turned to ON without operating the cruise control command switch. <Ref. to CC(diag)-24, 21, Diagnostic Procedure with Cancel Code.>
22	Abnormality of change in vehicle speed	Malfunction of vehicle speed signal variation is detected.	<Ref. to CC(diag)-25, 22, Diagnostic Procedure with Cancel Code.>
24	Abnormality of switches related to cruise control	Open circuit of the cruise control switch is detected during cruise driving. (The system is judged as model without cruise control.)	This code is displayed with normal operation. <Ref. to CC(diag)-25, 24, Diagnostic Procedure with Cancel Code.>
25	Abnormality of input circuit for Brake switch	Malfunction of brake switch input circuit in ECM is detected.	<Ref. to CC(diag)-25, 25, Diagnostic Procedure with Cancel Code.>
31	Abnormal engine speed Signal	• Abnormal increase of engine speed is detected. • Gear is placed in Neutral, 1st or Reverse position.	Cruise in 2nd shift position or more. <Ref. to CC(diag)-25, 31, Diagnostic Procedure with Cancel Code.>
32	Cruse Control out of Range	• Controlled vehicle speed decreased under the limit during cruising. • Set operation was performed at vehicle speed unavailable for setting. • RESUME operation was performed without memorized vehicle speed.	This code is displayed, though the vehicle speed is increased to the speed available for cruise set and set operation was performed again. <Ref. to CC(diag)-25, 32, Diagnostic Procedure with Cancel Code.>
34	Prohibition of cruise control at continuing big Accel. angle	The vehicle has been driven at higher speed than set vehicle speed for an abnormally long time (approximately 10 minutes) during cruise driving.	This code is displayed when driving for a long period of time at higher speed than appropriate cruise set vehicle speed by operating accelerator pedal. In this case, the cruise setting is deactivated. <Ref. to CC(diag)-26, 34, Diagnostic Procedure with Cancel Code.>
35	Prohibition of cruise control at vehicle speed F/B malfunction	Set vehicle speed cannot be kept because of some reasons (steep uphill, parking brake, abnormal decrease of engine output, etc.) during cruise driving.	This code is displayed when driving condition is not suitable for cruise control. Perform cruise set operation again after clearing the possible cause. <Ref. to CC(diag)-26, 35, Diagnostic Procedure with Cancel Code.>

List of Cancel Code

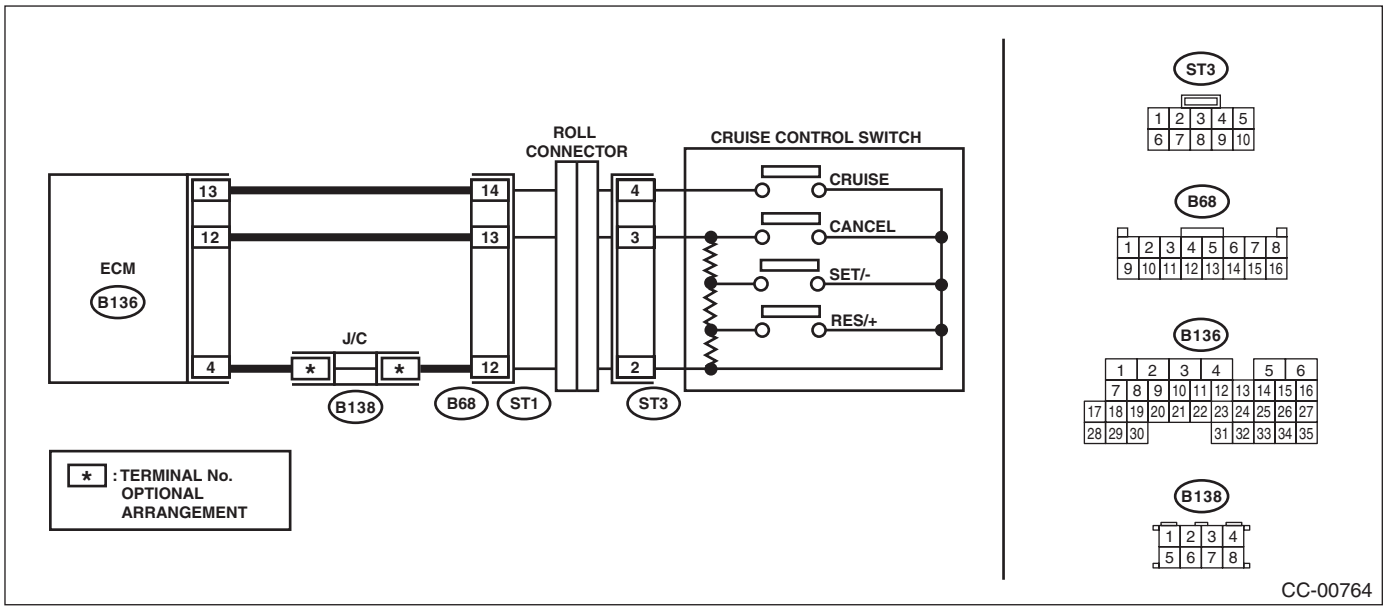
Cancel code	Item	Contents of diagnosis	Reference
41	VDC/TCS Operating	Vehicle dynamics control (VDC) or TCS is operated during cruise driving or cruise setting.	This code is displayed when driving condition is not suitable for cruise control. Perform cruise set operation again after clearing the possible cause. <Ref. to CC(diag)-26, 41, Diagnostic Procedure with Cancel Code.>
43	ABS/VDC Failure	ABS or Vehicle dynamics control (VDC) system malfunction is detected during cruise driving or cruise setting.	<Ref. to CC(diag)-26, 43, Diagnostic Procedure with Cancel Code.>
44	Body Integrated unit Failure	Body integrated unit system malfunction is detected during cruise driving or cruise setting.	<Ref. to CC(diag)-26, 44, Diagnostic Procedure with Cancel Code.>
45	Meter Failure	Combination meter malfunction is detected during cruise driving or cruise setting.	<Ref. to CC(diag)-26, 45, Diagnostic Procedure with Cancel Code.>
49	TCM Failure	Transmission control module (TCM) malfunction is detected during cruise driving or cruise setting.	<Ref. to CC(diag)-26, 49, Diagnostic Procedure with Cancel Code.>
61	Brake switch abnormal	Malfunction in the stop light & brake switch is detected.	<Ref. to CC(diag)-26, 61, Diagnostic Procedure with Cancel Code.>
62	Neutral Switch Failure	Neutral position switch malfunction is detected.	<Ref. to CC(diag)-26, 62, Diagnostic Procedure with Cancel Code.>
63	Abnormality 1 of change in vehicle speed	Malfunction of vehicle speed signal variation is detected.	<Ref. to CC(diag)-27, 63, Diagnostic Procedure with Cancel Code.>
64	Engine Sensor Failure 1	Malfunction related to engine is detected.	<Ref. to CC(diag)-27, 64, Diagnostic Procedure with Cancel Code.>
65	Abnormality 1 of switches related to cruise control	Cruise control command switch malfunction is detected. (When the switch is pressed ON for a long time (approximately two minutes), stuck ON condition is detected.)	<Ref. to CC(diag)-27, 65, Diagnostic Procedure with Cancel Code.>
66	Cruise Control Calculation Error	Cruise control calculation (microcomputer) malfunction is detected.	<Ref. to CC(diag)-27, 66, Diagnostic Procedure with Cancel Code.>

10.Diagnostic Procedure with Cancel Code

A: 11

When CRUISE switch is pressed, or a malfunction related to CRUISE switch occurs, this is detected.
TROUBLE SYMPTOM:
- Cruise control cannot be set. (Cancelled immediately.)
- Cruise control cannot be released.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CRUISE CONTROL COMMAND SWITCH CIRCUIT.** 1) Remove the driver's airbag module. <Ref. to AB-31, REMOVAL, Driver's Airbag Module.> 2) Disconnect the harness connector of cruise control command switch. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(ST3) No. 4 (+) — Chassis ground (–):*** ***(ST3) No. 3 (+) — Chassis ground (–):***	Is the voltage 5 V or more?	Go to step **2**.	Check the harness between cruise control command switch and ECM, and the steering roll connector for open or short circuit, or for poor contact.
2	**CHECK CRUISE CONTROL COMMAND SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Remove the cruise control command switch. <Ref. to CC-7, REMOVAL, Cruise Control Command Switch.> 3) Measure the resistance between harness connector terminal and chassis ground. ***Connector & terminal*** ***(ST3) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **3**.	Check for open circuit between cruise control command switch, ECM, and chassis ground and check the ECM.
3	**CHECK CRUISE CONTROL COMMAND SWITCH.** Measure the resistance between switch terminals when the cruise control command switch is not depressed. ***Terminals*** ***No. 2 — No. 3:***	Is the resistance approx. 4 kΩ?	Go to step **4**.	Replace the cruise control command switch. <Ref. to CC-7, Cruise Control Command Switch.>

	Step	Check	Yes	No
4	**CHECK CANCEL SWITCH.** 1) Turn the ignition switch to OFF. 2) Remove the cruise control command switch. <Ref. to CC-7, REMOVAL, Cruise Control Command Switch.> 3) Measure the resistance between switch terminals with the CANCEL switch pressed. ***Terminals*** ***No. 2 — No. 3:***	Is the resistance approx. less than 1 Ω when the CANCEL switch is pressed?	Go to step **5**.	Replace the cruise control command switch. <Ref. to CC-7, Cruise Control Command Switch.>
5	**CHECK SET/COAST SWITCH.** Measure the resistance between switch terminals with the SET/COAST switch pressed. ***Terminals*** ***No. 2 — No. 3:***	Is the resistance approx. 250 Ω when SET/COAST switch is pressed?	Go to step **6**.	Replace the cruise control command switch. <Ref. to CC-7, Cruise Control Command Switch.>
6	**CHECK RESUME/ACCEL SWITCH CIRCUIT.** Measure the resistance between switch terminals with the RESUME/ACCEL switch pressed. ***Terminals*** ***No. 2 — No. 3:***	Is the resistance approx. 1,500 Ω when RESUME/ACCEL switch is pressed?	Replace the ECM. <Ref. to FU(H4SO)-39, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-57, Engine Control Module (ECM).> <Ref. to FU(H6DO)-50, Engine Control Module (ECM).>	Replace the cruise control command switch. <Ref. to CC-7, Cruise Control Command Switch.>

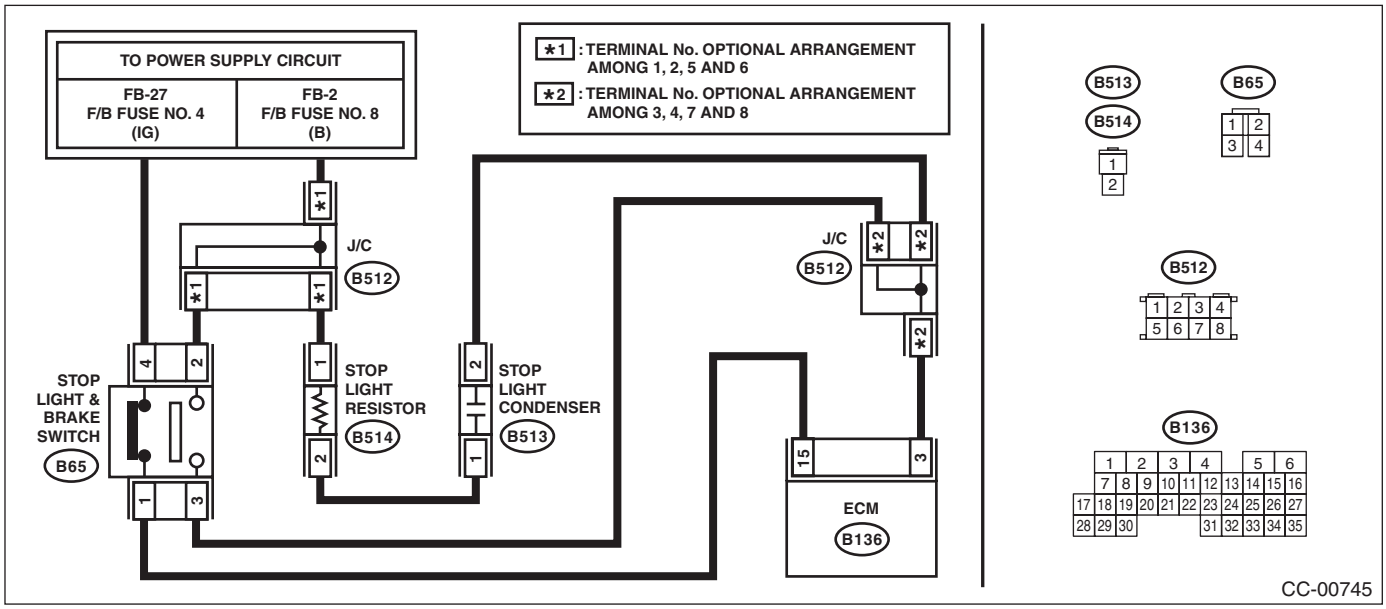
B: 12

Detected when brake pedal is depressed or malfunction related to stop light & brake switch occurs.

TROUBLE SYMPTOM:

- Cruise control cannot be set.
- Cruise control cannot be released.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK STOP LIGHT & BRAKE SWITCH.** Check the stop light & brake switch. <Ref. to CC-12, Stop Light & Brake Switch.>	Is the stop light & brake switch and installation position OK?	Go to step **2**.	Replace the stop light & brake switch. Or adjust the installation position.
2	**CHECK STOP LIGHT & BRAKE SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the stop light & brake switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(B65) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	• Check fuse No. 8 (in fuse & relay box). • Check for open or short circuit in the harness between stop light/ brake switch and fuse and relay box.
3	**CHECK STOP LIGHT & BRAKE SWITCH CIRCUIT.** Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(B65) No. 4 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **4**.	• Check fuse No. 4 (in fuse & relay box). • Check for open or short circuit in the harness between stop light/ brake switch and fuse and relay box.

	Step	Check	Yes	No
4	**CHECK STOP LIGHT & BRAKE SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of ECM. 3) Measure the resistance between ECM harness connector terminal and stop light & brake switch harness connector terminal. ***Connector & terminal*** ***(B136) No. 3 — (B65) No. 3:*** ***(B136) No. 15 — (B65) No. 1:***	Is the resistance less than 10 Ω?	Replace the ECM. <Ref. to FU(H4SO)-39, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-57, Engine Control Module (ECM).> <Ref. to FU(H6DO)-50, Engine Control Module (ECM).>	Repair the harness.

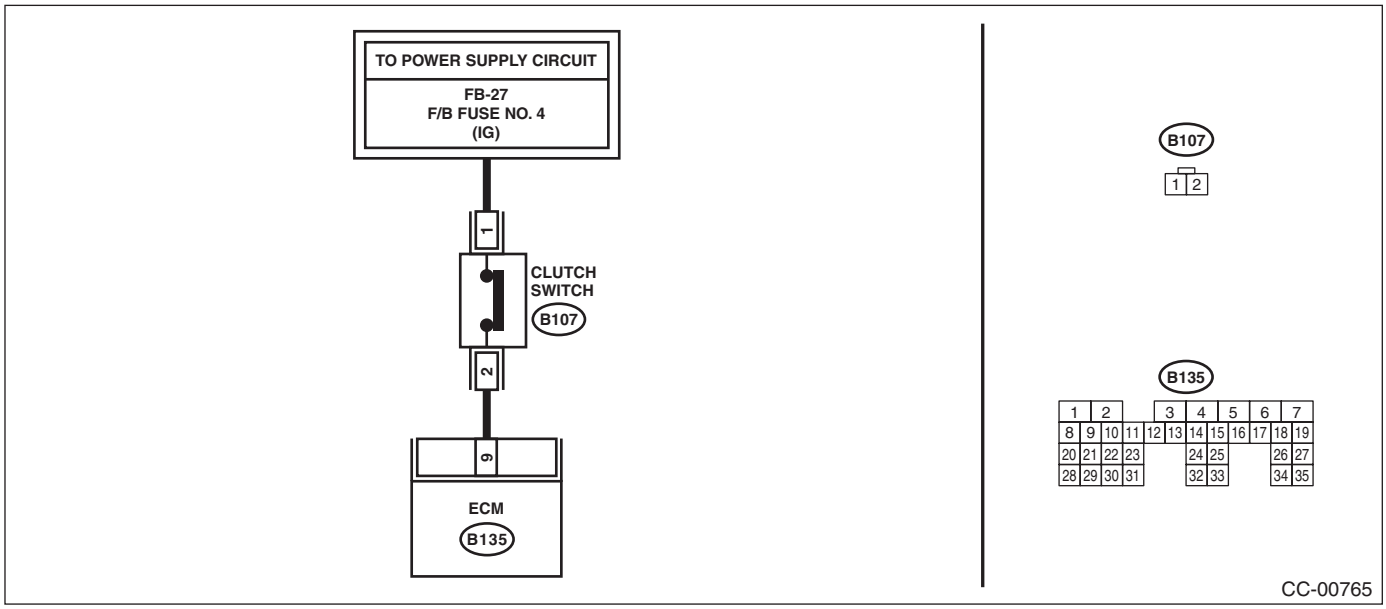
C: 13

Detected when clutch pedal is depressed or malfunction related to clutch switch occurs.

TROUBLE SYMPTOM:

- Cruise control cannot be set.
- Cruise control cannot be released.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CLUTCH SWITCH.** Check the clutch switch. <Ref. to CC-13, Clutch Switch.>	Is the clutch switch and installation position OK?	Go to step **2**.	Replace the clutch switch. Or adjust the installation position.
2	**CHECK CLUTCH SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the clutch switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(B107) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	• Check fuse No. 4 (in fuse & relay box). • Check open or short circuit of harness between clutch switch and fuse & relay box.
3	**CHECK CLUTCH SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector of ECM. 3) Measure the resistance between clutch switch harness connector terminal and ECM harness connector terminal. ***Connector & terminal*** ***(B107) No. 2 — (B135) No. 9:***	Is the resistance less than 10 Ω?	Replace the ECM. <Ref. to FU(H4SO)-39, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-57, Engine Control Module (ECM).> <Ref. to FU(H6DO)-50, Engine Control Module (ECM).>	Repair the harness.

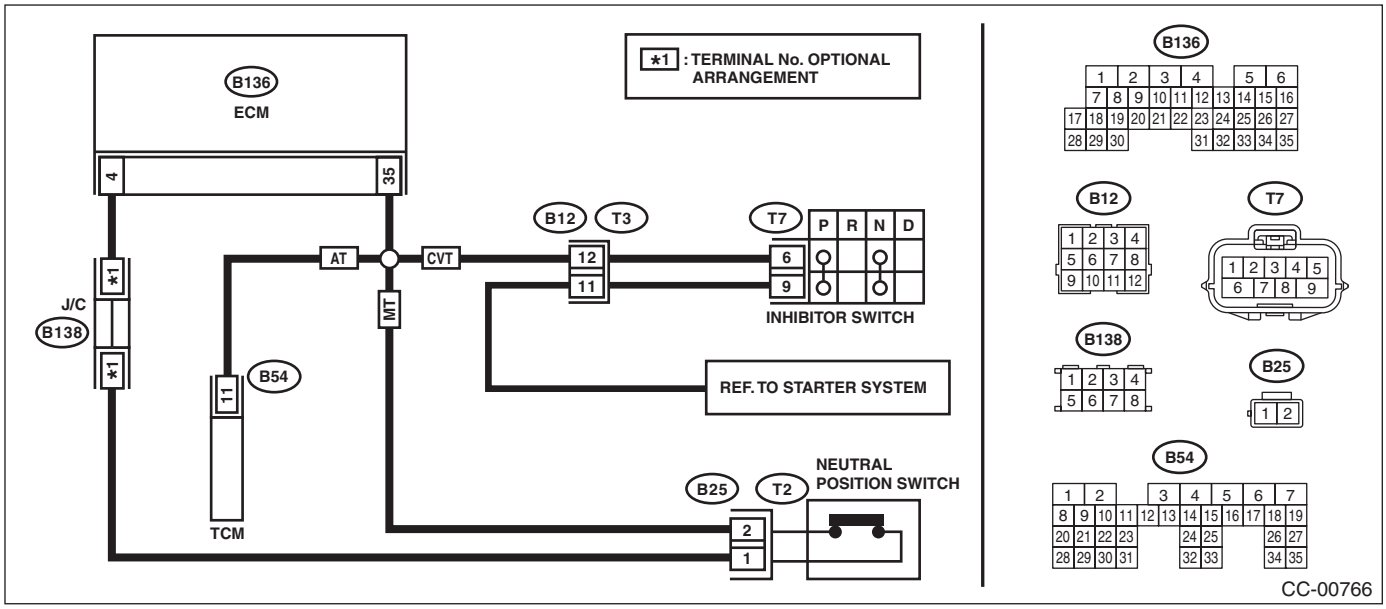
D: 14

Detected when select lever is set in the neutral position, or when malfunction related to neutral position switch occurs.

TROUBLE SYMPTOM:

Cruise control cannot be set.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK SPECIFICATIONS OF CHECKED VEHICLE.** Check the vehicle destination and specification.	Is the vehicle 5AT model?	Go to step **2**.	Go to step **5**.
2	**CHECK NEUTRAL POSITION SWITCH SIGNAL.** 1) Connect the Subaru Select Monitor to data link connector. 2) Turn the ignition switch to ON and run the Subaru Select Monitor. 3) Select {Engine Control System} from the main menu. 4) Then, select the {Current Data Display & Save}. 5) Shift the select lever to "P" or "N" range, and check the signal of the neutral position switch.	If the select lever is in the "P" or the "N" range, is the Subaru Select Monitor Display ON? Or, if in a range other than "P" or "N", is the Subaru Select Monitor display OFF?	Replace the ECM. <Ref. to FU(H4DOTC)-57, Engine Control Module (ECM).> <Ref. to FU(H6DO)-50, Engine Control Module (ECM).>	Go to step **3**.
3	**CHECK TCM OUTPUT VOLTAGE.** 1) Turn the ignition switch to ON. 2) Measure the voltage between TCM harness connector terminal and chassis ground. ***Connector & terminal*** ***(B54) No. 11 (+) — Chassis ground (–):***	If the select lever is in a range other than "P" or "N" ranges, is the voltage 10V or more? Or, if in "P" or "N", is the voltage less than 1V?	Go to step **4**.	Check the TCM. <Ref. to 5AT(diag)-2, Basic Diagnostic Procedure.>
4	**CHECK HARNESS BETWEEN TCM AND ECM.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector from TCM and ECM. 3) Measure the resistance between TCM harness connector terminal and ECM harness connector terminal. ***Connector & terminal*** ***(B136) No. 35 — (B54) No. 11:***	Is the resistance less than 10 Ω?	Replace the ECM. <Ref. to FU(H4DOTC)-57, Engine Control Module (ECM).> <Ref. to FU(H6DO)-50, Engine Control Module (ECM).>	Repair the wiring harness.

	Step	Check	Yes	No
5	**CHECK TRANSMISSION TYPE.**	Is the transmission type CVT?	Go to step **6**.	Go to step **9**.(MT model)
6	**CHECK INHIBITOR SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the inhibitor switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(T7) No. 6 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **7**.	Check for open or short circuit in the harness between inhibitor switch and ECM.
7	**CHECK INHIBITOR SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the starter motor harness connector. 3) Measure the resistance between inhibitor switch harness connector terminal and starter motor. ***Connector & terminal*** ***(T7) No. 9 — Starter motor:***	Is the resistance less than 10 Ω?	Go to step **8**.	Repair the harness.
8	**CHECK INHIBITOR SWITCH.** Remove and check the inhibitor switch. <Ref. to CC-14, Inhibitor Switch.>	Is the inhibitor switch OK?	Replace the ECM. <Ref. to FU(H4SO)-39, Engine Control Module (ECM).>	Replace the inhibitor switch.
9	**CHECK NEUTRAL POSITION SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the neutral position switch harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(B25) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **10**.	Check for open or short circuit in the harness between neutral position switch and ECM.
10	**CHECK NEUTRAL POSITION SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Measure resistance between harness connector terminal of neutral position switch and chassis ground. ***Connector & terminal*** ***(B25) No. 1 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **11**.	Repair the harness.
11	**CHECK NEUTRAL POSITION SWITCH.** Remove and check the neutral position switch. <Ref. to CC-16, Neutral Position Switch.>	Is the neutral position switch OK?	Replace the ECM. <Ref. to FU(H4SO)-39, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-57, Engine Control Module (ECM).>	Replace the neutral position switch.

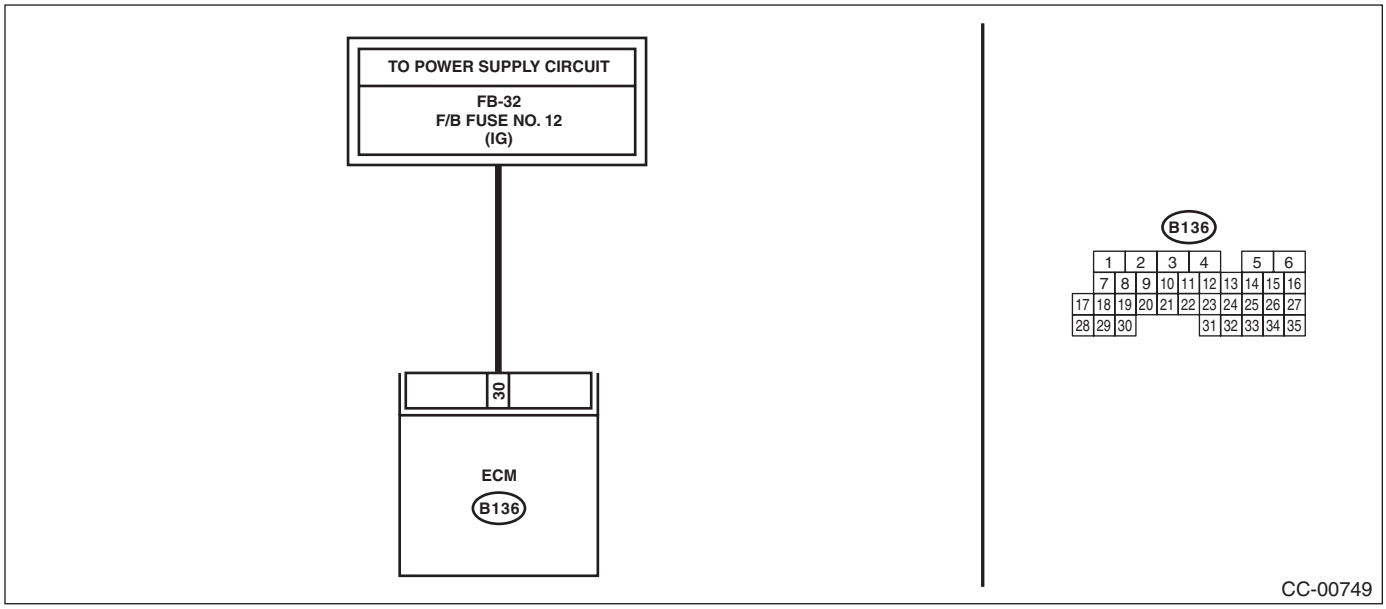
E: 15

Detected when CANCEL switch is pressed or malfunction related to CRUISE switch occurs.
TROUBLE SYMPTOM:
- Cruise control cannot be set. (Cancelled immediately.)
- Cruise control cannot be released.

Refer to DTC 11 for diagnostic procedure.
<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>

F: 16

Detected when ignition switch is turned to OFF or malfunction related to the ignition switch occurs.
TROUBLE SYMPTOM:
Cruise control cannot be set.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK IGNITION SWITCH CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the ECM harness connector. 3) Turn the ignition switch to ON. 4) Measure the voltage between harness connector terminal and chassis ground. ***Connector & terminal*** ***(B136) No. 30 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Check for poor contact of ECM connector.	• Check fuse No. 12 (in fuse & relay box). • Check the harness for open or short circuit between ignition switch and ECM.

G: 21

Cruise control command switch malfunction is detected.
TROUBLE SYMPTOM:
- Cruise control cannot be set. (Cancelled immediately.)
- Cruise control cannot be released.

Refer to DTC 11 for diagnostic procedure.
<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>

H: 22

Malfunction related to vehicle speed sensor is detected.
DIAGNOSIS:
Open or shorted circuit in vehicle speed sensor system.
TROUBLE SYMPTOM:
Cruise control cannot be set. (Cancelled immediately.)

	Step	Check	Yes	No
1	**CHECK ABS OR VDC WARNING LIGHT.** 1) Turn the ignition switch to ON. 2) After the initial operation of combination meter is completed, check if ABS or VDC warning light continues to illuminate.	Does the warning light continue to illuminate?	Check the VDCCM. <Ref. to VDC(diag)-2, Basic Diagnostic Procedure.>	Go to step **2**.
2	**CHECK DTC OF LAN COMMUNICATION CIRCUIT.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is DTC displayed?	Perform inspection according to DTC.	Replace the ECM. <Ref. to FU(H4SO)-39, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-57, Engine Control Module (ECM).> <Ref. to FU(H6DO)-50, Engine Control Module (ECM).>

I: 24

Malfunction in cruise control-related switch is detected.
TROUBLE SYMPTOM:
- Cruise control cannot be set. (Cancelled immediately.)
- Cruise control cannot be released.

Refer to DTC 11 for diagnostic procedure.
<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>

J: 25

Malfunction of brake input circuit in ECM is detected.
Refer to the Engine Diagnostic Procedure for diagnostic procedure.
<Ref. to EN(H4SO)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
<Ref. to EN(H4DOTC)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
<Ref. to EN(H6DO)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

K: 31

Engine speed signal malfunction is detected.
Abnormal increase of engine speed is detected.
Gear is placed in 1st or Reverse position.
After driving at the 2nd gear position or higher, perform the cruise setting again. If a cancel code is not detected, it is normal.

L: 32

This DTC is detected out of vehicle speed range.
Increase vehicle speed high enough to allow the cruise control to function, and then perform setting operation again.
If cancel code is still detected after setting cruise again, perform the diagnosis for DTC 22.
Refer to DTC 22 for diagnostic procedure.
<Ref. to CC(diag)-25, 22, Diagnostic Procedure with Cancel Code.>

M: 34

The vehicle has been driven at a speed higher than set speed for a long time (approximately 10 minutes) during cruise driving.
This cancel code is detected when driving for a long period of time at a speed higher than appropriate for cruise control setting by operating the accelerator pedal.
Perform the cruise control setting operation again. If the cancel code is not detected, it is normal.

N: 35

Detected when it is impossible to perform the vehicle speed feedback.
Set vehicle speed cannot be kept for some reasons (steep uphill, unreleased parking brake, etc.) during cruise driving.
Cancel code is detected when driving conditions are not suitable for cruise control.
Perform cruise set operation again after clearing the possible cause.

O: 41

VDC/TCS has operated.
Vehicle dynamics control (VDC) or TCS is operated during cruise driving or cruise setting.
<Ref. to VDC(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

P: 43

Malfunction of ABS/VDC is detected.
VDC malfunction is detected during cruise driving or cruise setting.
<Ref. to VDC(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

Q: 44

Body integrated unit malfunction is detected.
Body integrated unit system malfunction is detected during cruise driving or cruise setting.
<Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

R: 45

Malfunction of the combination meter is detected.
Combination meter malfunction is detected during cruise driving or cruise setting.
<Ref. to LAN(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

S: 49

Automatic transmission malfunction is detected.
Automatic transmission malfunction is detected during cruise driving or cruise setting. <Ref. to 5AT(diag)-2, PROCEDURE, Basic Diagnostic Procedure.> <Ref. to CVT(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

T: 61

Malfunction in the stop light & brake switch is detected.
TROUBLE SYMPTOM:
- Cruise control cannot be set.
- Cruise control cannot be released.

Refer to DTC 12 for diagnostic procedure.
<Ref. to CC(diag)-18, 12, Diagnostic Procedure with Cancel Code.>

U: 62

Neutral position switch malfunction is detected.
TROUBLE SYMPTOM:
Cruise control cannot be set.
Refer to DTC 14 for diagnostic procedure.
<Ref. to CC(diag)-21, 14, Diagnostic Procedure with Cancel Code.>

V: 63

Malfunction of vehicle speed signal variation is detected.
TROUBLE SYMPTOM:
Cruise control cannot be set. (Cancelled immediately.)
Refer to DTC 22 for diagnostic procedure.
<Ref. to CC(diag)-25, 22, Diagnostic Procedure with Cancel Code.>

W: 64

Malfunction related to engine is detected.
Refer to the Engine Diagnostic Procedure for diagnostic procedure.
<Ref. to EN(H4SO)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
<Ref. to EN(H4DOTC)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
<Ref. to EN(H6DO)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

X: 65

Cruise control command switch malfunction is detected.
While the command switch is pressed ON for a long time (approximately two minutes), stuck ON condition is detected.
TROUBLE SYMPTOM:
- Cruise control cannot be set. (Cancelled immediately.)
- Cruise control cannot be released.

Refer to DTC 11 for diagnostic procedure.
<Ref. to CC(diag)-16, 11, Diagnostic Procedure with Cancel Code.>

Y: 66

Cruise control processing malfunction is detected.
Refer to the Engine Diagnostic Procedure for diagnostic procedure.
<Ref. to EN(H4SO)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
<Ref. to EN(H4DOTC)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
<Ref. to EN(H6DO)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

1. Basic Diagnostic Procedure

A: PROCEDURE

	Step	Check	Yes	No
1	**CHECK SECURITY INDICATOR LIGHT.** 1) Turn the ignition switch to “OFF” or “ACC”. 2) Wait at least 60 seconds.	Does the security indicator light blink?	Go to step **2**.	Check the security indicator light circuit. <Ref. to IM(diag)-11, CHECK SECURITY INDICATOR LIGHT CIRCUIT, INSPECTION, Diagnostics Chart for Security Indicator Light.>
2	**CHECK KEY SWITCH.** Remove the key from ignition switch.	Does the security indicator light begin to blink within 1 second after the key is removed?	Go to step **3**.	Check the key switch circuit. <Ref. to IM(diag)-13, CHECK KEY SWITCH CIRCUIT, INSPECTION, Diagnostics Chart for Security Indicator Light.>
3	**CHECK SECURITY INDICATOR LIGHT.** Turn the ignition switch to ON.	Does the security indicator light go off?	Go to step **5**.	Go to step **4**.
4	**CHECK ENGINE START.** Turn the ignition switch to START.	Does the starter operate?	Check the LAN communication system. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Go to step **7**.
5	**CHECK ENGINE START.** Turn the ignition switch to START.	Does the starter operate?	Go to step **6**.	Check the LAN communication system. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>
6	**CHECK ENGINE START.** Turn the ignition switch to START.	Does the engine start?	Immobilizer system is normal.	Go to step **8**.
7	**CHECK DTC.** Read the DTC using Subaru Select Monitor. <Ref. to IM(diag)-8, Subaru Select Monitor.>	Is the DTC displayed on screen?	Go to step **10**.	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.> Register all ignition keys (transponders). Refer to the “PC application help for Subaru Select Monitor”.

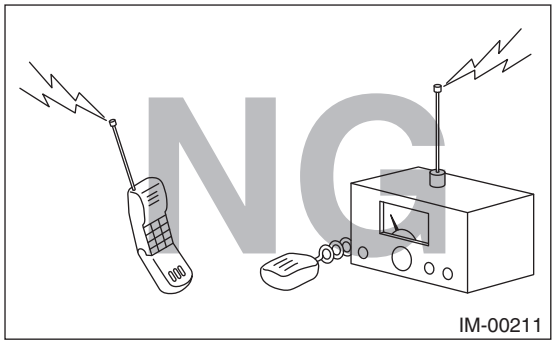
	Step	Check	Yes	No
8	**CHECK DTC.** Read the DTC using Subaru Select Monitor. <Ref. to IM(diag)-8, Subaru Select Monitor.>	Is the DTC displayed on screen?	Go to step **9**.	Perform the diagnosis for engine system. <Ref. to EN(H4SO)(diag)-65, PROCEDURE, Diagnostics for Engine Starting Failure.> <Ref. to EN(H4DOTC)(diag)-67, PROCEDURE, Diagnostics for Engine Starting Failure.> <Ref. to EN(H6DO)(diag)-69, PROCEDURE, Diagnostics for Engine Starting Failure.>
9	**CHECK FREEZE FRAME DATA.** Using the Subaru Select Monitor, check the Freeze Frame Data.	Was the Freeze Frame Data recorded?	Record the data. Go to step **10**.	Go to step **10**.
10	**PERFORM DIAGNOSIS.** 1) Inspect using the “Diagnostic Procedure with Diagnostic Trouble Code (DTC)”. <Ref. to IM(diag)-16, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> 2) Repair the trouble cause. 3) Perform the Clear Memory Mode. 4) Read DTC’s again.	Is the DTC displayed on screen?	Inspect using the “Diagnostic Procedure with Diagnostic Trouble Code (DTC)”. <Ref. to IM(diag)-16, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

2. General Description

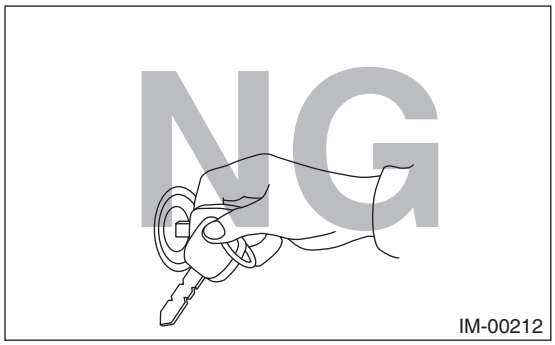
A: CAUTION

CAUTION:

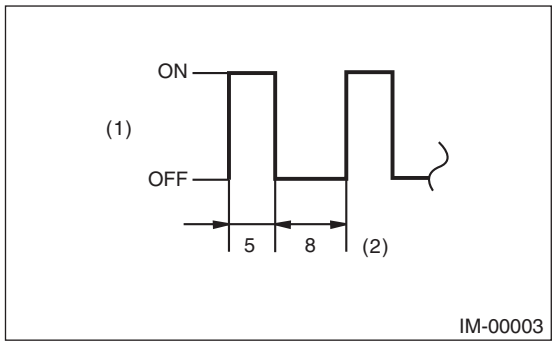
- **Do not use electrical test devices on any airbag system wiring harnesses and connector circuits.**
- **Be careful not to damage the airbag system wiring harness.**
- **While diagnostic items are being checked, do not operate radios, portable telephones, etc. which emit electromagnetic waves near or inside the vehicle.**



- **When turning the ignition switch to ON or OFF while diagnostic items are being checked, do not allow keys with different ID codes close to the ignition switch. If the ignition key is on a key holder, remove it from the key holder before performing diagnoses.**



- **When repeatedly turning the ignition switch to ON or OFF while diagnostic items are being checked, it should be switched in cycles of "ON" for at least 5 seconds → "OFF" for at least 8 seconds.**

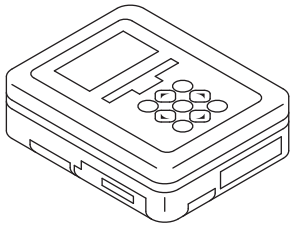


(1) Ignition switch position
(2) Sec.

- **If the engine fails to start with a registered ignition key, detach the ignition key from ignition switch and wait for approx. 1 second until security indicator light begins to flash. And then start the engine again.**
- **Before performing the diagnostics, obtain all keys for the vehicle from the owner.**
- **Do not install or register a body integrated unit already registered to another vehicle to diagnose failures or inspect functions.**

B: PREPARATION TOOL

1. SPECIAL TOOL

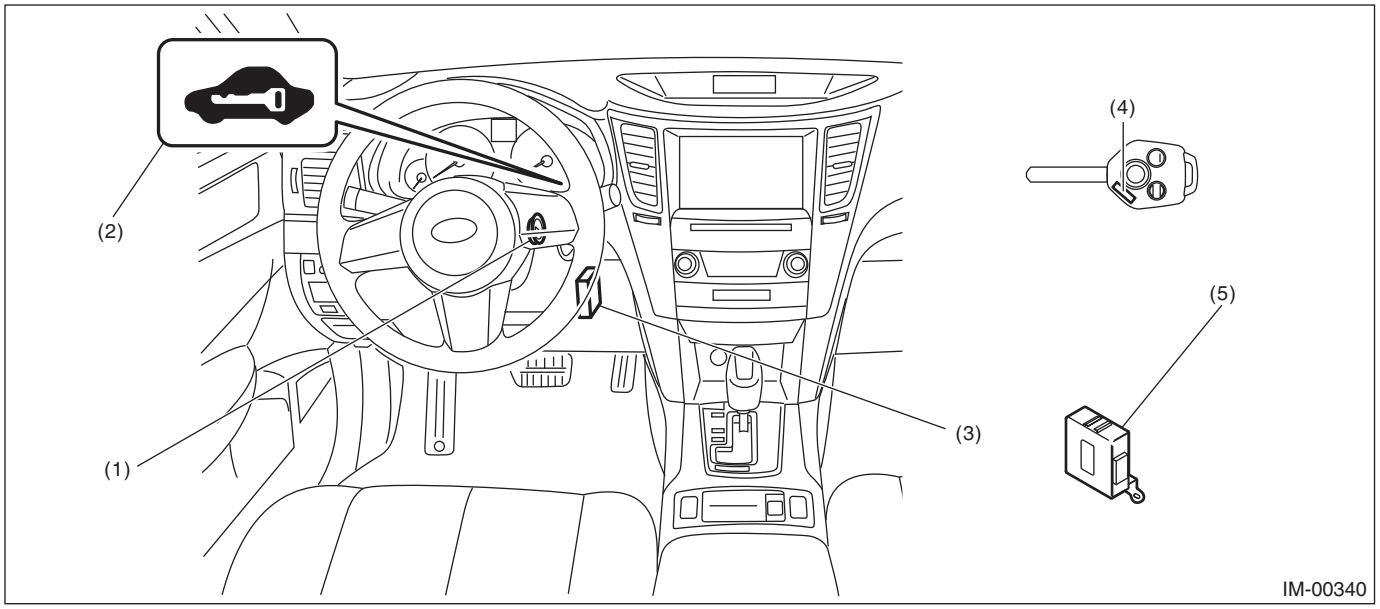
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

2. GENERAL TOOL

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

3. Electrical Component Location

A: LOCATION



(1) Antenna
(2) Security indicator light (LED bulb)
(3) Body integrated unit
(4) Transponder
(5) Security control module (Only for Canada models)

4. Immobilizer Control Module I/O Signal

A: WIRING DIAGRAM

1. IMMOBILIZER

<Ref. to WI-158, WIRING DIAGRAM, Immobilizer System.>

5. Subaru Select Monitor

A: OPERATION

1. HOW TO USE THE SUBARU SELECT MONITOR

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

2. READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE AND BODY INTEGRATED UNIT

Refer to “Read Diagnostic Trouble Code” for information about how to indicate DTC. <Ref. to IM(diag)-9, Read Diagnostic Trouble Code (DTC).>

3. COMMUNICATION LINE CHECK

The communication line between ECM and body integrated unit can be checked in “System Operation Check Mode”. This is referred to as “Communication line check”.
For the operation procedure, refer to the “PC application help for Subaru Select Monitor”.

NOTE:
If a problem is detected, repair the trouble cause. <Ref. to IM(diag)-20, DTC P1572 IMM CIRCUIT FAILURE (EXCEPT ANTENNA CIRCUIT), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

6. Read Diagnostic Trouble Code (DTC)

A: OPERATION

1. ECM

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

NOTE:
For detailed concerning DTC, refer to the List of Diagnostic Trouble Codes (DTC). <Ref. to IM(diag)-14, LIST, List of Diagnostic Trouble Code (DTC).>

2. BODY INTEGRATED UNIT

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

NOTE:
For detailed concerning DTC, refer to the List of Diagnostic Trouble Codes (DTC). <Ref. to IM(diag)-14, LIST, List of Diagnostic Trouble Code (DTC).>

7. Clear Memory Mode

A: OPERATION

1. ECM

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

NOTE:
Initial diagnosis of electronic throttle control is performed after memory clearance. Wait for 10 seconds or more after turning the ignition switch to ON, and then start the engine.

2. BODY INTEGRATED UNIT

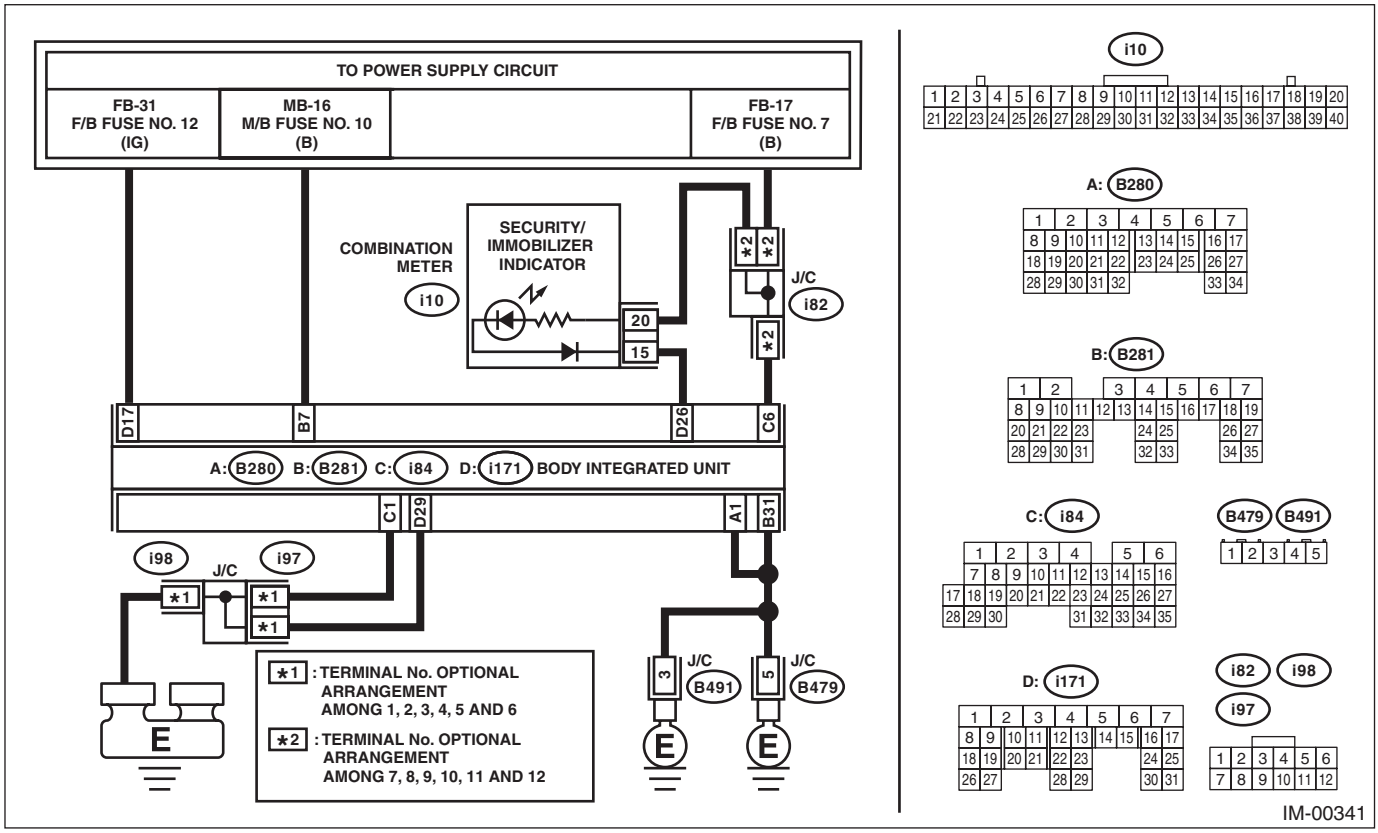
For the operation procedure, refer to the “PC application help for Subaru Select Monitor”.

8. Diagnostics Chart for Security Indicator Light

A: INSPECTION

1. CHECK SECURITY INDICATOR LIGHT CIRCUIT

WIRING DIAGRAM:

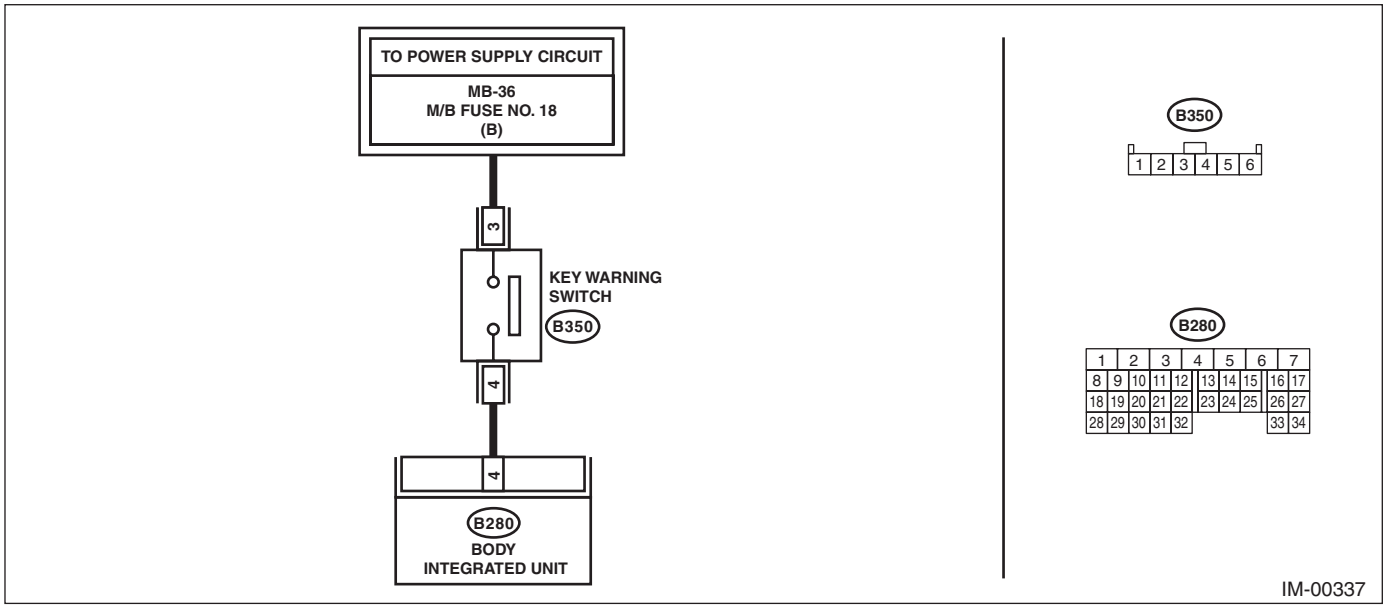


Step		Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Check the fuse (M/B No. 10).	Is the fuse blown out?	Replace the fuse. If the replaced fuse blows out easily, repair the short circuit in the harness between the fuse and body integrated unit.	Go to step **2**.
2	**CHECK SECURITY INDICATOR LIGHT.** 1) Disconnect the harness connector from body integrated unit. 2) Connect the resistor (100 Ω) between the body integrated unit harness connector terminal (i171) No. 26 and chassis ground.	Does the security indicator light illuminate?	Go to step **3**.	Go to step **6**.
3	**CHECK BODY INTEGRATED UNIT GROUND CIRCUIT.** Measure the resistance between body integrated unit harness connector terminal and chassis ground. ***Connector & terminal*** ***(B280) No. 1 — Chassis ground:*** ***(B281) No. 31 — Chassis ground:*** ***(i84) No. 1 — Chassis ground:*** ***(i171) No. 29 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair the open circuit of the body integrated unit ground circuit.

	Step	Check	Yes	No
4	**CHECK BODY INTEGRATED UNIT IGNITION CIRCUIT.** 1) Turn the ignition switch to ON. (engine OFF) 2) Measure the voltage between the body integrated unit harness connector terminal and chassis ground. ***Connector & terminal*** ***(i171) No. 17 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **5**.	Check the harness for open or short circuit between the body integrated unit and ignition switch.
5	**CHECK BODY INTEGRATED UNIT POWER SUPPLY CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Measure the voltage between the body integrated unit harness connector terminal and chassis ground. ***Connector & terminal*** ***(B281) No. 7 (+) — Chassis ground (–):*** ***(i84) No. 6 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.> Register all ignition keys (transponders). Refer to the "PC application help for Subaru Select Monitor".	Check the harness for open or short circuit between body integrated unit and fuse.
6	**CHECK COMBINATION METER CIRCUIT.** 1) Remove the combination meter. <Ref. to IDI-20, Combination Meter.> 2) Measure the voltage between combination meter harness connector terminal and chassis ground. ***Connector & terminal*** ***(i10) No. 20 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **7**.	Check for an open or short circuit in the harness between the combination meter and fuse.
7	**CHECK COMBINATION METER CIRCUIT.** Measure the resistance between the body integrated unit harness connector terminal and combination meter harness connector terminal. ***Connector & terminal*** ***(i171) No. 26 — (i10) No. 15:***	Is the resistance less than 10 Ω?	LED bulb is defective. Replace the combination meter case assembly. <Ref. to IDI-25, DISASSEMBLY, Combination Meter.>	Repair the harness or connector.

2. CHECK KEY SWITCH CIRCUIT

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POWER SUPPLY CIRCUIT.** 1) Disconnect the harness connector from key warning switch. 2) Measure the voltage between key warning switch harness connector terminal and chassis ground. ***Connector & terminal*** ***(B350) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **2**.	Check the harness for an open or short between the key warning switch and fuse.
2	**CHECK KEY WARNING SWITCH.** 1) Insert the ignition key in the ignition switch. (OFF or ACC) 2) Measure the resistance between key warning switch connector terminals. ***Connector & terminal*** ***No. 3 — No. 4:***	Is the resistance less than 1 Ω?	Go to step **3**.	Replace the key warning switch.
3	**CHECK KEY WARNING SWITCH.** 1) Remove the ignition key from ignition switch. 2) Measure the resistance between key warning switch connector terminals. ***Connector & terminal*** ***No. 3 — No. 4:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the key warning switch.
4	**CHECK HARNESS BETWEEN KEY WARNING SWITCH AND BODY INTEGRATED UNIT.** 1) Disconnect the harness connector from body integrated unit. 2) Measure the resistance between key warning switch harness connector terminal and body integrated unit harness connector terminal. ***Connector & terminal*** ***(B350) No. 4 — (B280) No. 4:***	Is the resistance less than 10 Ω?	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.> Register all ignition keys (transponders). Refer to the “PC application help for Subaru Select Monitor”.	Repair the harness between key warning switch and body integrated unit.

9. List of Diagnostic Trouble Code (DTC)

A: LIST

1. ECM

DTC	Item	Contents of diagnosis	Index No.
P0513	Incorrect Immobilizer Key	Incorrect immobilizer key (Use of unregistered key in body integrated unit)	<Ref. to IM(diag)-16, DTC P0513 INCORRECT IMMOBILIZER KEY, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1570	Antenna	Faulty antenna	<Ref. to IM(diag)-17, DTC P1570 ANTENNA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1571	Reference Code Incompatibility	Reference code incompatibility between body integrated unit and ECM	<Ref. to IM(diag)-19, DTC P1571 REFERENCE CODE INCOMPATIBILITY, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1572	IMM Circuit Failure (Except Antenna Circuit)	• Communication failure between body integrated unit and ECM • Combination meter and body integrated unit registration failed	<Ref. to IM(diag)-20, DTC P1572 IMM CIRCUIT FAILURE (EXCEPT ANTENNA CIRCUIT), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1574	Key Communication Failure	Communication failure between key and body integrated unit	<Ref. to IM(diag)-22, DTC P1574 KEY COMMUNICATION FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1576	EGI Control Module EEPROM	ECM malfunctioning	<Ref. to IM(diag)-22, DTC P1576 EGI CONTROL MODULE EEPROM, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1577	IMM Control Module EEPROM	Body integrated unit malfunctioning	<Ref. to IM(diag)-23, DTC P1577 IMM CONTROL MODULE EEPROM, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
P1578	Meter Failure (Except for model for Canada)	• Reference code incompatibility between combination meter and body integrated unit • Communication failure between body integrated unit and ECM	<Ref. to IM(diag)-24, DTC P1578 METER FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
	Meter Failure (Model for Canada)	• Reference code incompatibility between body integrated unit and security control module • Communication failure between body integrated unit and ECM	

NOTE:
Perform diagnosis of engine DTC when a DTC other than an immobilizer DTC is detected. <Ref. to EN(H4SO)(diag)-78, List of Diagnostic Trouble Code (DTC).> <Ref. to EN(H4DOTC)(diag)-78, List of Diagnostic Trouble Code (DTC).> <Ref. to EN(H6DO)(diag)-82, List of Diagnostic Trouble Code (DTC).>

2. BODY INTEGRATED UNIT

DTC	Item	Contents of diagnosis	Index No.	Relation between ECM and DTC
B1401	M Collation NG	Reference code incompatibility between combination meter and body integrated unit	<Ref. to IM(diag)-25, DTC B1401 M COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	P1578
B1402	Immobilizer Key Collation NG	• Incorrect immobilizer key (Use of unregistered key in body integrated unit) • Faulty antenna	<Ref. to IM(diag)-25, DTC B1402 IMMOBILIZER KEY COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	• P0513 • P1570 • P1574
B1403	E/G request NG	Communication failure between body integrated unit and ECM	<Ref. to IM(diag)-25, DTC B1403 E/G REQUEST NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	P1572
B1405	SCU Collation NG	Reference code incompatibility between body integrated unit and security control module	<Ref. to IM(diag)-25, DTC B1405 SCU COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	P1578
B1406	SCU_EEPROM_NG	Malfunction of security control module	<Ref. to IM(diag)-26, DTC B1406 SCU_EEPROM_NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	P1578

NOTE:
The starter relay control is performed in immobilizer system. When the body integrated unit detects a non-conformity of reference code, it immediately outputs a starter relay cut signal to ECM, and then ECM stops the starter relay operation. In this case, engine does not start, and DTC is not recorded in ECM. Check that the engine does not start on the DTC of body integrated unit.

10.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC P0513 INCORRECT IMMOBILIZER KEY

DTC DETECTING CONDITION:

Incorrect immobilizer key (Use of unregistered key in body integrated unit)

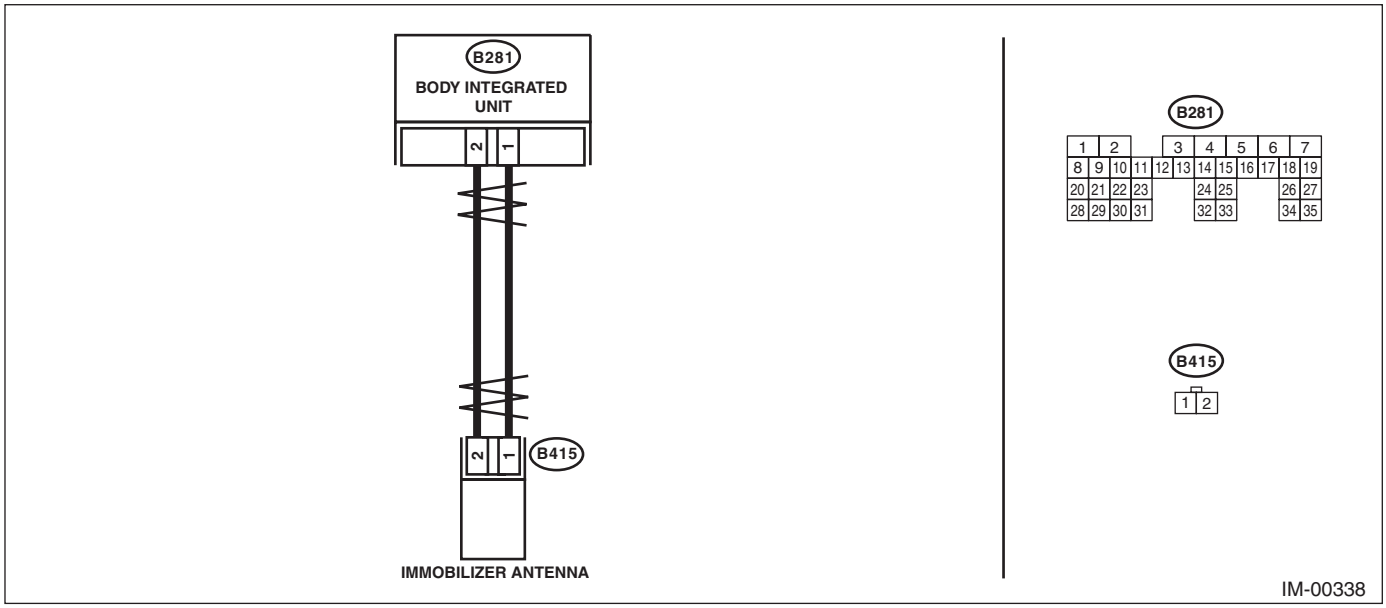
	Step	Check	Yes	No
1	**PERFORM REGISTRATION ON IGNITION KEY.** Perform registration on all keys of the vehicle. Refer to the “PC application help for Subaru Select Monitor”.	Is registration for all keys complete?	Finish the diagnosis.	Replace ignition keys (including transponder) which cannot be registered. Go to step **2**.
2	**PERFORM REGISTRATION ON IGNITION KEY.** Perform registration on all keys of the vehicle. Refer to the “PC application help for Subaru Select Monitor”.	Is registration for all keys complete?	Finish the diagnosis.	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.> Register all ignition keys (transponders). Refer to the “PC application help for Subaru Select Monitor”.

B: DTC P1570 ANTENNA

DTC DETECTING CONDITION:

Faulty antenna

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK ANTENNA CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector from the antenna. <Ref. to SL-76, Immobilizer Antenna.> 3) Measure the resistance of antenna circuit. ***Connector & terminal*** ***(B415) No. 1 — No. 2:***	Is the resistance less than 10 Ω?	Go to step **2**.	Replace the antenna. <Ref. to SL-76, Immobilizer Antenna.>
2	**CHECK ANTENNA CIRCUIT.** 1) Disconnect the harness connector from body integrated unit. 2) Measure the resistance between harness connector and chassis ground. ***Connector & terminal*** ***(B281) No. 1 — Chassis ground:***	Is the resistance less than 10 Ω?	Repair the harness.	Go to step **3**.
3	**CHECK ANTENNA CIRCUIT.** Measure the resistance between harness connector and chassis ground. ***Connector & terminal*** ***(B281) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Repair the harness.	Go to step **4**.
4	**CHECK ANTENNA CIRCUIT.** 1) Turn the ignition switch to ON. (engine OFF) 2) Measure the voltage between harness connector and chassis ground. ***Connector & terminal*** ***(B281) No. 1 (+) — Chassis ground (–):***	Is the voltage 0 V?	Go to step **5**.	Repair the harness.
5	**CHECK ANTENNA CIRCUIT.** Measure the voltage between harness connector and chassis ground. ***Connector & terminal*** ***(B281) No. 2 (+) — Chassis ground (–):***	Is the voltage 0 V?	Go to step **6**.	Repair the harness between body integrated unit and antenna.

	Step	Check	Yes	No
6	**CHECK BODY INTEGRATED UNIT FUNCTION.** 1) Turn the ignition switch to OFF. 2) Connect the harness connector to body integrated unit. 3) Insert the key into the ignition switch, then measure changes in voltage between the antenna harness connectors. ***Connector & terminal*** ***(B281) No. 1 (+) — No. 2 (–):***	Is the voltage –30 — 30 V? (Approx. 0.1 second after inserting the key) Is the voltage 0 V? (Approx. 1 second after inserting the key)	Go to step **7**.	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.> Register all ignition keys (transponders). Refer to the "PC application help for Subaru Select Monitor".
7	**CHECK IGNITION KEY (TRANSPONDER).** 1) Remove the key from ignition switch. 2) Start the engine using other key which is already registered.	Does the engine start?	Register ignition keys (transponders). Refer to the "PC application help for Subaru Select Monitor".	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.> Register all ignition keys (transponders). Refer to the "PC application help for Subaru Select Monitor".

C: DTC P1571 REFERENCE CODE INCOMPATIBILITY

DTC DETECTING CONDITION:

Reference code incompatibility between body integrated unit and ECM

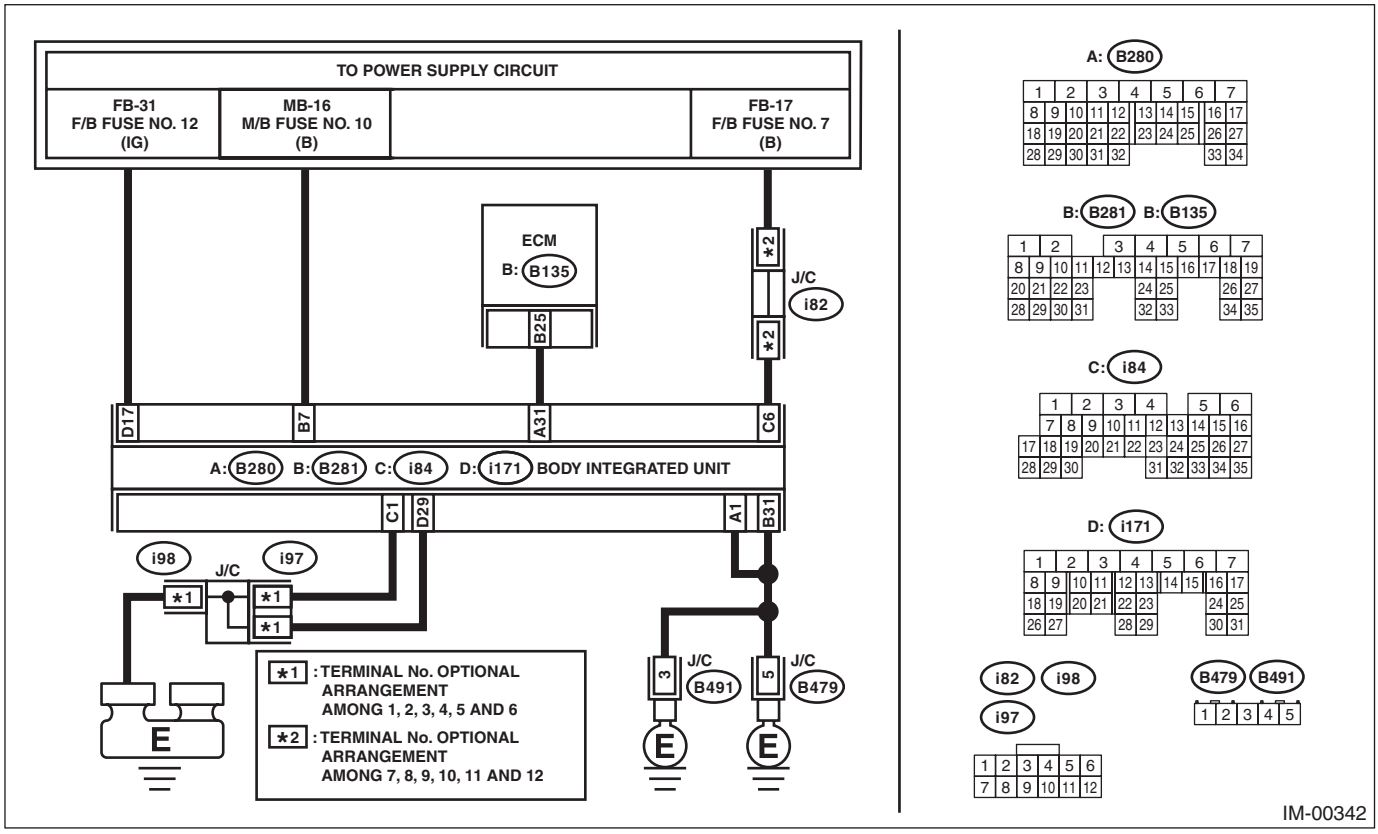
	Step	Check	Yes	No
1	**PERFORM REGISTRATION ON IGNITION KEY.** Perform registration on all keys of the vehicle. Refer to the “PC application help for Subaru Select Monitor”.	Is registration for all keys complete?	Finish the diagnosis.	Go to step **2**.
2	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other immobilizer DTC displayed?	Check the appropriate DTC using the “List of Diagnostic Trouble Code (DTC)”. <Ref. to IM(diag)-14, List of Diagnostic Trouble Code (DTC).> Execute the registration procedure next. Refer to the “PC application help for Subaru Select Monitor”.	Replace the ECM. <Ref. to FU(H4DOTC)-57, Engine Control Module (ECM).> <Ref. to FU(H6DO)-50, Engine Control Module (ECM).> Body integrated unit <Ref. to SL-72, Body Integrated Unit.> Replace and register all ignition keys (transponders). Refer to the “PC application help for Subaru Select Monitor”.

D: DTC P1572 IMM CIRCUIT FAILURE (EXCEPT ANTENNA CIRCUIT)

DTC DETECTING CONDITION:

Communication failure between body integrated unit and ECM

WIRING DIAGRAM:



IM-00342

Step		Check	Yes	No
1	**CHECK LAN COMMUNICATION SYSTEM.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is DTC displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK BODY INTEGRATED UNIT POWER SUPPLY CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Disconnect the harness connector from body integrated unit. 3) Measure the voltage between the body integrated unit harness connector terminal and chassis ground. ***Connector & terminal*** ***(B281) No. 7 (+) — Chassis ground (–):*** ***(i84) No. 6 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Check the harness for open or short circuit between body integrated unit and fuse.
3	**CHECK BODY INTEGRATED UNIT POWER SUPPLY CIRCUIT.** 1) Turn the ignition switch to ON. (engine OFF) 2) Measure the voltage between the body integrated unit harness connector terminal and chassis ground. ***Connector & terminal*** ***(i171) No. 17 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **4**.	Check the harness for open or short circuit between the body integrated unit and ignition switch.

	Step	Check	Yes	No
4	**CHECK BODY INTEGRATED UNIT GROUND CIRCUIT.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between body integrated unit harness connector terminal and chassis ground. ***Connector & terminal*** ***(B280) No. 1 — Chassis ground:*** ***(B281) No. 31 — Chassis ground:*** ***(i84) No. 1 — Chassis ground:*** ***(i171) No. 29 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **5**.	Repair the open circuit of the body integrated unit ground circuit.
5	**CHECK GROUND CIRCUIT FOR ECM.** Measure the resistance between the ECM ground terminal and engine ground.	Is the resistance less than 10 Ω?	Go to step **6**.	Repair ground circuit of ECM.
6	**CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND ECM.** 1) Disconnect the harness connector from the ECM and body integrated unit. 2) Measure the resistance between body integrated unit harness connector terminal and ECM harness connector terminal. ***Connector & terminal*** ***(B280) No. 31 — (B135) No. 25:***	Is the resistance less than 10 Ω?	Go to step **7**.	Repair the open circuit of the harness between the body integrated unit and ECM.
7	**CHECK COMMUNICATION CIRCUIT HARNESS.** 1) Turn the ignition switch to ON. (engine OFF) 2) Measure the voltage between the body integrated unit harness connector terminal and chassis ground. ***Connector & terminal*** ***(B280) No. 31 (+) — Chassis ground (–):***	Is the voltage 0 V?	Go to step **8**.	Repair the harness between body integrated unit and ECM.
8	**CHECK COMMUNICATION CIRCUIT HARNESS.** Measure the voltage between ECM harness connector terminal and engine ground. ***Connector & terminal*** ***(B135) No. 25 (+) — Engine ground (–):***	Is the voltage 0 V?	Go to step **9**.	Repair the harness between body integrated unit and ECM.
9	**CHECK ECM BY COMMUNICATION LINE CHECK.** 1) Connect the harness connector to ECM only. 2) Start the communication line short check. <Ref. to IM(diag)-8, COMMUNICATION LINE CHECK, OPERATION, Subaru Select Monitor.>	Is the communication line check OK?	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.> Register all ignition keys (transponders). Refer to the “PC application help for Subaru Select Monitor”.	Replace the ECM. <Ref. to FU(H4DOTC)-57, Engine Control Module (ECM).> <Ref. to FU(H6DO)-50, Engine Control Module (ECM).> Perform the registration procedure next. Refer to the “PC application help for Subaru Select Monitor”.

E: DTC P1574 KEY COMMUNICATION FAILURE

DTC DETECTING CONDITION:

Communication failure between key and body integrated unit

	Step	Check	Yes	No
1	**CHECK BODY INTEGRATED UNIT FUNCTION.** Insert the key into the ignition switch (LOCK position), then measure changes in voltage between the antenna connectors. ***Connector & terminal (B415) No. 1 (+) — No. 2 (–):***	Is the voltage –30 — 30 V? (Approx. 0.1 second after inserting the key) Is the voltage 0 V? (Approx. 1 second after inserting the key)	Go to step **2**.	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.> Register all ignition keys (transponders). Refer to the "PC application help for Subaru Select Monitor".
2	**CHECK IGNITION KEY (TRANSPONDER).** 1) Remove the key from ignition switch. 2) Start the engine using other key which is already registered.	Does the engine start?	Register ignition keys (transponders). Refer to the "PC application help for Subaru Select Monitor".	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.> Register all ignition keys (transponders). Refer to the "PC application help for Subaru Select Monitor".

F: DTC P1576 EGI CONTROL MODULE EEPROM

DTC DETECTING CONDITION:

- ECM malfunctioning
- Inaccessible ROM in ECM during key registration.

	Step	Check	Yes	No
1	**PERFORM REGISTRATION ON IGNITION KEY.** Perform registration on all keys of the vehicle. Refer to the "PC application help for Subaru Select Monitor".	Is registration for all keys complete?	Make sure it is possible to start the engine with all keys that have been taught. This completes the work.	Go to step **2**.
2	**PERFORM REGISTRATION ON IGNITION KEY.** Perform registration on all keys of the vehicle. Refer to the "PC application help for Subaru Select Monitor".	Is registration for all keys complete?	Make sure it is possible to start the engine with all keys that have been taught. This completes the work.	Go to step **3**.
3	**PERFORM REGISTRATION ON IGNITION KEY.** Perform registration on all keys of the vehicle. Refer to the "PC application help for Subaru Select Monitor".	Is registration for all keys complete?	Make sure it is possible to start the engine with all keys that have been taught. This completes the work.	Replace the ECM. <Ref. to FU(H4DOTC)-57, Engine Control Module (ECM).> <Ref. to FU(H6DO)-50, Engine Control Module (ECM).>

G: DTC P1577 IMM CONTROL MODULE EEPROM

DTC DETECTING CONDITION:

- Body integrated unit malfunctioning
- Failed to access ROM inside the body integrated unit.

	Step	Check	Yes	No
1	**PERFORM REGISTRATION ON IGNITION KEY.** Perform registration on all keys of the vehicle. Refer to the “PC application help for Subaru Select Monitor”.	Is registration for all keys complete?	Make sure it is possible to start the engine with all keys that have been taught. This completes the work.	Go to step **2**.
2	**PERFORM REGISTRATION ON IGNITION KEY.** Perform registration on all keys of the vehicle. Refer to the “PC application help for Subaru Select Monitor”.	Is registration for all keys complete?	Make sure it is possible to start the engine with all keys that have been taught. This completes the work.	Go to step **3**.
3	**PERFORM REGISTRATION ON IGNITION KEY.** Perform registration on all keys of the vehicle. Refer to the “PC application help for Subaru Select Monitor”.	Is registration for all keys complete?	Make sure it is possible to start the engine with all keys that have been taught. This completes the work.	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.> Register all ignition keys (transponders). Refer to the “PC application help for Subaru Select Monitor”.

H: DTC P1578 METER FAILURE

DTC DETECTING CONDITION:

- Except Canada models

Reference code incompatibility between combination meter and body integrated unit or communication failure between body integrated unit and ECM

- Canada models

Reference code incompatibility between security control module and body integrated unit or communication failure between body integrated unit and ECM

	Step	Check	Yes	No
1	**CHECK DIAGNOSTIC TROUBLE CODE (DTC).** Read the DTC of body integrated unit using Subaru Select Monitor.	Is any of DTC B1401, B1405 and B1406 detected?	Go to step **2**.	<Ref. to IM(diag)-20, DTC P1572 IMM CIRCUIT FAILURE (EXCEPT ANTENNA CIRCUIT), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
2	**CHECK LAN COMMUNICATION SYSTEM.** Inspect LAN communication system. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Is DTC U1201, U1202, B1100 or B1101 of the body integrated unit displayed?	Perform the diagnosis according to DTC. <Ref. to LAN(diag)-31, List of Diagnostic Trouble Code (DTC).>	Go to step **3**.
3	**CHECK DIAGNOSTIC TROUBLE CODE (DTC).** Perform inspection for the diagnosis trouble code detected in step 1.	Is DTC B1401 detected?	Go to step **4**.	Perform the diagnosis for DTC B1405 or B1406.
4	**CHECK COMBINATION METER.** Perform the registration of immobilizer. Refer to the “PC application help for Subaru Select Monitor”.	Is the immobilizer registration achieved?	Go to step **5**.	Replace the combination meter and perform the registration of immobilizer again.
5	**CHECK ENGINE START.** Start the engine.	Does the engine start?	System is normal.	Replace the combination meter, perform the registration of immobilizer again and check that the engine starts normally.

I: DTC B1401 M COLLATION NG

NOTE:
Refer to DTC P1578 "Meter Failure" for diagnostic procedure. <Ref. to IM(diag)-24, DTC P1578 METER FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

J: DTC B1402 IMMOBILIZER KEY COLLATION NG

NOTE:
Refer to the following inspections for diagnostic procedure.

- DTC P0513 "Incorrect Immobilizer Key"<Ref. to IM(diag)-16, DTC P0513 INCORRECT IMMOBILIZER KEY, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
- DTC P1570 "Antenna"<Ref. to IM(diag)-17, DTC P1570 ANTENNA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
- DTC P1574 "Key Communication Failure"<Ref. to IM(diag)-22, DTC P1574 KEY COMMUNICATION FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

K: DTC B1403 E/G REQUEST NG

NOTE:
Refer to DTC P1572 "IMM Circuit Failure (Except Antenna Circuit)" for diagnostic procedure. <Ref. to IM(diag)-20, DTC P1572 IMM CIRCUIT FAILURE (EXCEPT ANTENNA CIRCUIT), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

L: DTC B1405 SCU COLLATION NG

DTC DETECTING CONDITION:
Reference code incompatibility between security control module and body integrated unit

	Step	Check	Yes	No
1	**CHECK SCM COLLATION MODE.** Using Subaru Select Monitor, perform the function check «SCM Collation Mode» for the body integrated unit. <Ref. to BC(diag)-24, OPERATION, Function Check.>	Is there any malfunction?	Make sure it is possible to start the engine with all keys. This completes the work.	Perform the diagnosis according to the Select Monitor display.

M: DTC B1406 SCU_EEPROM_NG

DTC DETECTING CONDITION:

- Defective security control module
- ROM of security control module cannot be accessed

	Step	Check	Yes	No
1	**PERFORM REGISTRATION ON IGNITION KEY.** Perform registration on all keys of the vehicle. Refer to the “PC application help for Subaru Select Monitor”.	Is registration for all keys complete?	Make sure it is possible to start the engine with all keys that have been taught. This completes the work.	Go to step **2**.
2	**PERFORM REGISTRATION ON IGNITION KEY.** Perform registration on all keys of the vehicle. Refer to the “PC application help for Subaru Select Monitor”.	Is registration for all keys complete?	Make sure it is possible to start the engine with all keys that have been taught. This completes the work.	Go to step **3**.
3	**PERFORM REGISTRATION ON IGNITION KEY.** Perform registration on all keys of the vehicle. Refer to the “PC application help for Subaru Select Monitor”.	Is registration for all keys complete?	Make sure it is possible to start the engine with all keys that have been taught. This completes the work.	Replace the security control module, <Ref. to SL-66, Security Control Module.> and register all ignition keys (transponders). Refer to the “PC application help for Subaru Select Monitor”.

1. Basic Diagnostic Procedure

A: PROCEDURE

CAUTION:
• Subaru Select Monitor is required for reading DTC, performing diagnosis, reading current data, customizing and active test (compulsory drive).
• Remove foreign matter (dust, water, oil, etc.) from each control module connector during removal and installation.
• For model with immobilizer or model with keyless access, registration of immobilizer may be needed after the replacement of controller etc. For details, refer to the "PC application help for Subaru Select Monitor".

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

	Step	Check	Yes	No
1	**CHECK PRE-INSPECTION.** Ask the customer when and how the trouble occurred using the interview check list. <Ref. to LAN(diag)-3, Check List for Interview.>	Did you interview the customer?	Go to step **2**.	Interview the customer.
2	**BASIC INSPECTION.** Check components which might affect CAN communication problem. <Ref. to LAN(diag)-4, INSPECTION, General Description.>	Is the component that might affect CAN communication problem normal?	Go to step **3**.	Repair or replace each component.
3	**CHECK DTC.** 1) Start the engine and read all DTCs. NOTE: • When the engine does not start, perform the diagnosis for the engine start malfunction. <Ref. to EN(H4SO)(diag)-65, Diagnostics for Engine Starting Failure.> • If the communication function of the Subaru Select Monitor cannot be executed properly, check the communication circuit. <Ref. to LAN(diag)-47, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> 2) Record all DTCs and freeze frame data.	Is DTC regarding CAN communication displayed on Subaru Select Monitor?	Go to step **5**.	Go to step **4**.
4	**PERFORM GENERAL DIAGNOSTICS.** Inspect using "General Diagnostics Table". <Ref. to LAN(diag)-81, General Diagnostic Table.>	Is result of inspection OK?	LAN system is normal.	Go to step **5**.
5	**PERFORM DIAGNOSIS.** 1) Correct the cause of trouble. 2) Perform the Clear Memory Mode. <Ref. to LAN(diag)-11, OPERATION, Clear Memory Mode.> 3) Read the DTC. <Ref. to LAN(diag)-10, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed on Subaru Select Monitor?	Repeat step 5 until DTC is not shown.	Finish the diagnosis.

2. Check List for Interview

A: CHECK

Inspect the following item about the vehicle's state.

1. DISPLAY STATUS OF FAILURE INFORMATION

Ignition position	❑ OFF ❑ ACC ❑ ON (before starting engine) ❑ START ❑ ON (after starting engine, engine is running) ❑ ON (after starting engine, engine is at a standstill)
Timing	❑ Immediately after turning the ignition ON. ❑ Immediately after turning the ignition to START.

2. DISPLAY STATUS IN THE COMBINATION METER

Display status in the combination meter	Engine coolant temperature gauge display	❑ OK / ❑ NG
	Fuel gauge display	❑ OK / ❑ NG
Display of other indicators	Malfunction indicator light	❑ ON / ❑ OFF
	SPORT indicator light (AT warning light)	❑ ON / ❑ OFF
	ABS warning light/Vehicle dynamics control (VDC) warning light	❑ ON / ❑ OFF
	Immobilizer indicator light	❑ ON / ❑ Blink / ❑ OFF

3. CONDITIONS UNDER WHICH TROUBLE OCCURS

Driving condition	❑ At standstill (While idling)				
	❑ When the vehicle is running	Vehicle speed	km/h (MPH)		
	❑ While accelerating	Acceleration	km/h (MPH) to	km/h (MPH)	
	❑ Decelerating (With braking)	Deceleration	km/h (MPH) to	km/h (MPH)	
	❑ Decelerating (Without braking)	Deceleration	km/h (MPH) to	km/h (MPH)	
	❑ Flat road ❑ Uphill ❑ Downhill ❑ Gravel road ❑ Bumpy road ❑ Snowy road				
	Does it occur when operating any part? Operated part: **TROUBLE SYMPTOM:**				
	Are there any other troubles occurred? From where: **TROUBLE SYMPTOM:**				

3. General Description

A: CAUTION

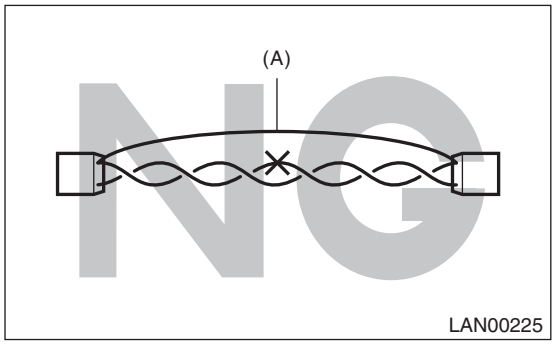
1. SUPPLEMENTAL RESTRAINT SYSTEM "AIRBAG"

Airbag system wiring harness is routed near the body integrated unit and twisted pair line.

CAUTION:
• Do not use the electrical test equipment on all airbag system wiring harnesses and connectors.
• Be careful not to damage the airbag system wiring harness when servicing the body integrated unit and LAN system.

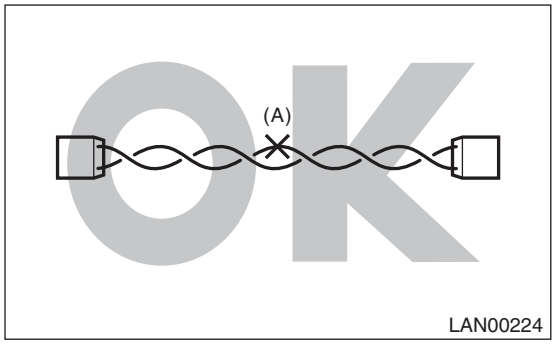
2. LAN SYSTEM

• Bus line of LAN system is twisted pair line. Be careful not to by-pass or partly unbind the twisted pair line.
• Do not make clearance between bus lines (CAN High, CAN Low).
• Difference of bus line length should be within 10 cm (3.94 in).
• Fray near the connector should be within 8 cm (3.14 in).



(A) Bypass wire connection

• If the characteristics of the twisted pair line are changed, it may extremely weaken against noise.
• When repairing the harness, connect the wires using soldering and protect it with insulating tape etc.



(A) Soldering and protection with insulating tape

B: INSPECTION

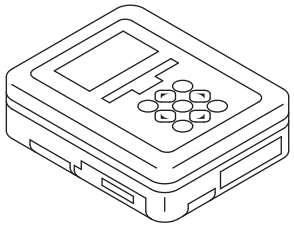
Before performing diagnostics, check the following item which might affect body integrated unit malfunctions.
1) Measure the battery voltage and check electrolyte.

Standard voltage: 12 V or more

Specific gravity: 1.260 or more
2) Check the fuse condition.
Make sure that ampere of the fuse is setting value, and it is not blown out.
3) Check the connecting condition of harness and harness connector.
4) Confirm settings of body integrated unit are corresponded to vehicle equipment. <Ref. to BC(diag)-22, OPERATION, Registration Body Integrated Unit.>
5) Make sure that the User Customizing of the body integrated unit matches the vehicle equipment. <Ref. to BC(diag)-20, OPERATION, User Customizing.>
6) Confirm "Factory or Market setting" of body integrated unit registrations is set to "Market".
7) Confirm key illumination does not blink with ignition switch turned to ON.

C: PREPARATION TOOL

1. SPECIAL TOOL

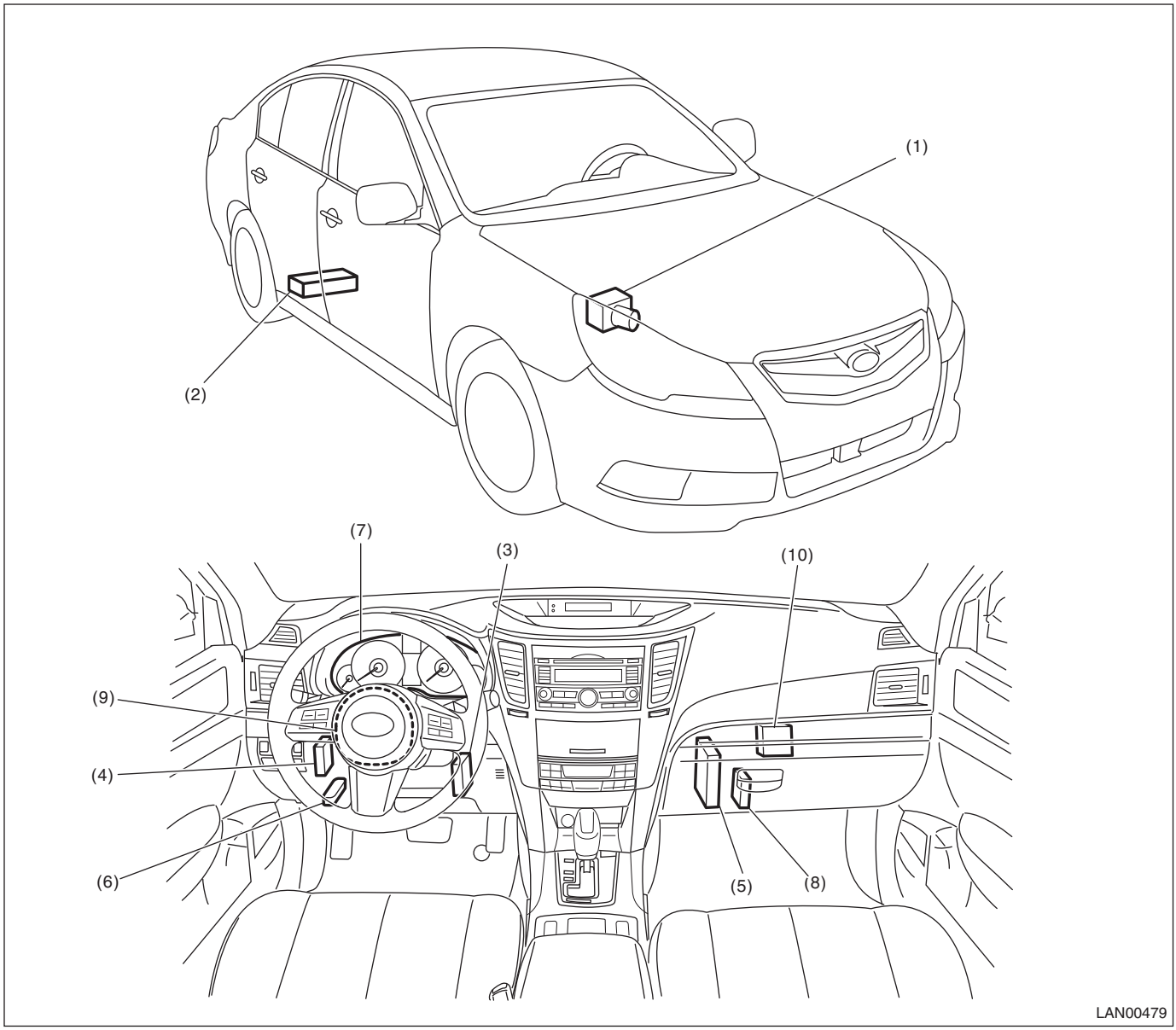
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

2. GENERAL TOOL

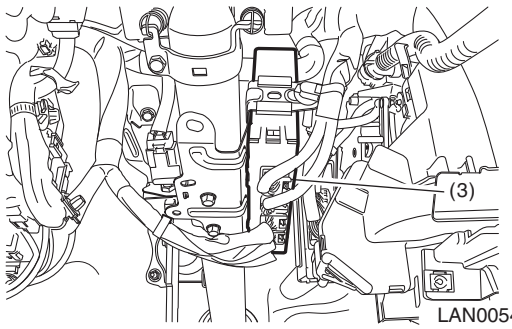
TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.

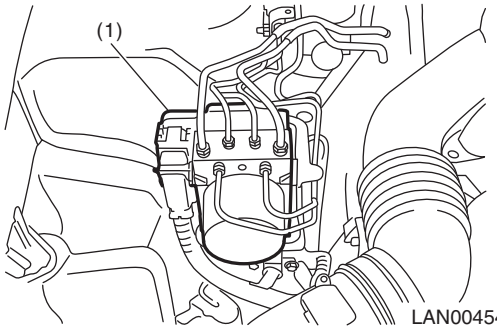
4. Electrical Component Location

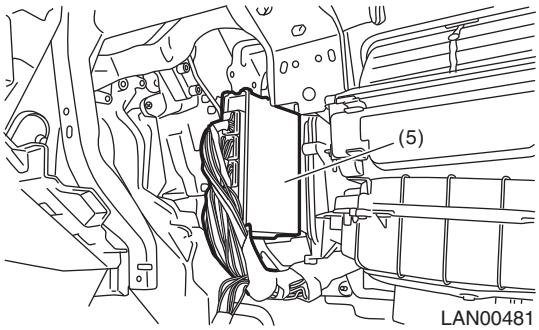
A: LOCATION

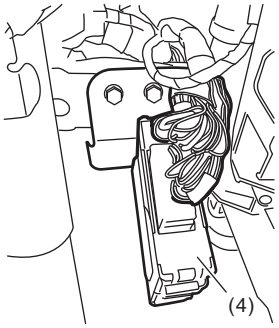


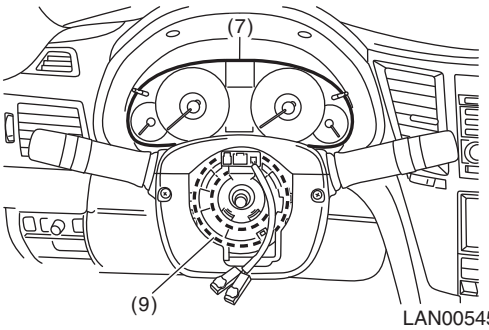
(1) ABSCM&H/U or VDCCM&H/U(inside engine room)
(2) Electronic parking CM
(3) Body integrated unit
(4) Transmission control module (AT)
(5) Engine control module
(6) Data link connector
(7) Combination meter
(8) A/C CM
(9) Steering angle sensor
(10) Security CM

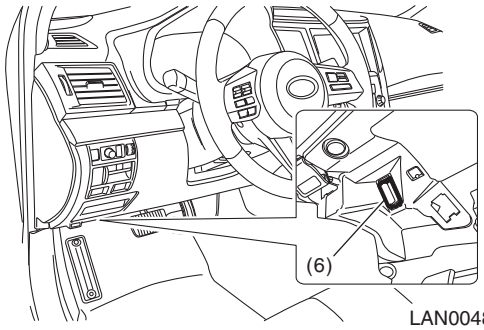

(3)
LAN00544

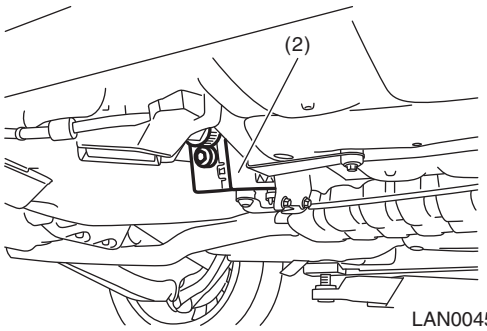

(1)
LAN00454

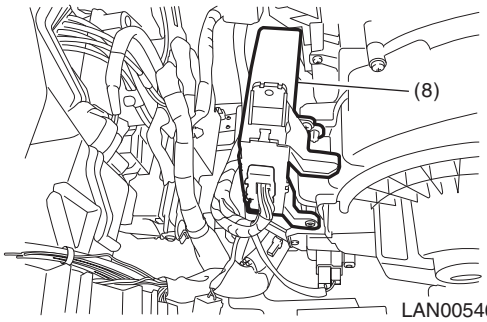

(5)
LAN00481


(4)
LAN00483


(7)
(9)
LAN00545


(6)
LAN00484


(2)
LAN00459


(8)
LAN00546

5. Control Module I/O Signal

A: ELECTRICAL SPECIFICATION

• Body integrated unit

For I/O signals of the body integrated unit unit, refer to Body Control (Diagnostics). <Ref. to BC(diag)-9, Control Module I/O Signal.>

• Engine control module

For I/O signals of ECM, refer to Engine (Diagnostics). <Ref. to EN(H4SO)(diag)-18, Engine Control Module (ECM) I/O Signal.> <Ref. to EN(H4DOTC)(diag)-19, Engine Control Module (ECM) I/O Signal.> <Ref. to EN(H6DO)(diag)-18, Engine Control Module (ECM) I/O Signal.>

• Transmission control module

For I/O signals of TCM, refer to Automatic Transmission (Diagnostics). <Ref. to 5AT(diag)-13, Transmission Control Module (TCM) I/O Signal.> <Ref. to CVT(diag)-11, Transmission Control Module (TCM) I/O Signal.>

• VDC control module

For I/O signals of VDC CM, refer to Vehicle Dynamics Control (Diagnostics). <Ref. to VDC(diag)-12, Control Module I/O Signal.>

• Electronic parking CM

For I/O signals of electronic CM, refer to Parking Brake (Diagnostics). <Ref. to PB(diag)-12, Control Module I/O Signal.>

• A/C CM

For unit I/O signals of A/C CM, refer to HVAC System (Diagnostics). <Ref. to AC(diag)-11, Auto A/C Control Module I/O Signal.>

• Combination meter

For I/O signals of combination meter, refer to Combination Meter System. <Ref. to WI-81, WIRING DIAGRAM, Combination Meter System.>

• Data link connector

For I/O signals of data link connector, refer to Engine (Diagnostics). <Ref. to EN(H4SO)(diag)-29, Data Link Connector.> <Ref. to EN(H4DOTC)(diag)-31, Data Link Connector.> <Ref. to EN(H6DO)(diag)-28, Data Link Connector.>

* CAN sleep state:

Hold on for approx. one minute with ignition OFF and the doors, trunk, rear gate all closed.

B: WIRING DIAGRAM

<Ref. to WI-69, WIRING DIAGRAM, CAN Communication System.>

6. Subaru Select Monitor

A: OPERATION

For details of basic operations, refer to “PC application help for Subaru Select Monitor”.

7. Read Diagnostic Trouble Code (DTC)

A: OPERATION

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

8. Clear Memory Mode

A: OPERATION

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

9. CAN Communication Circuit Check

A: PROCEDURE

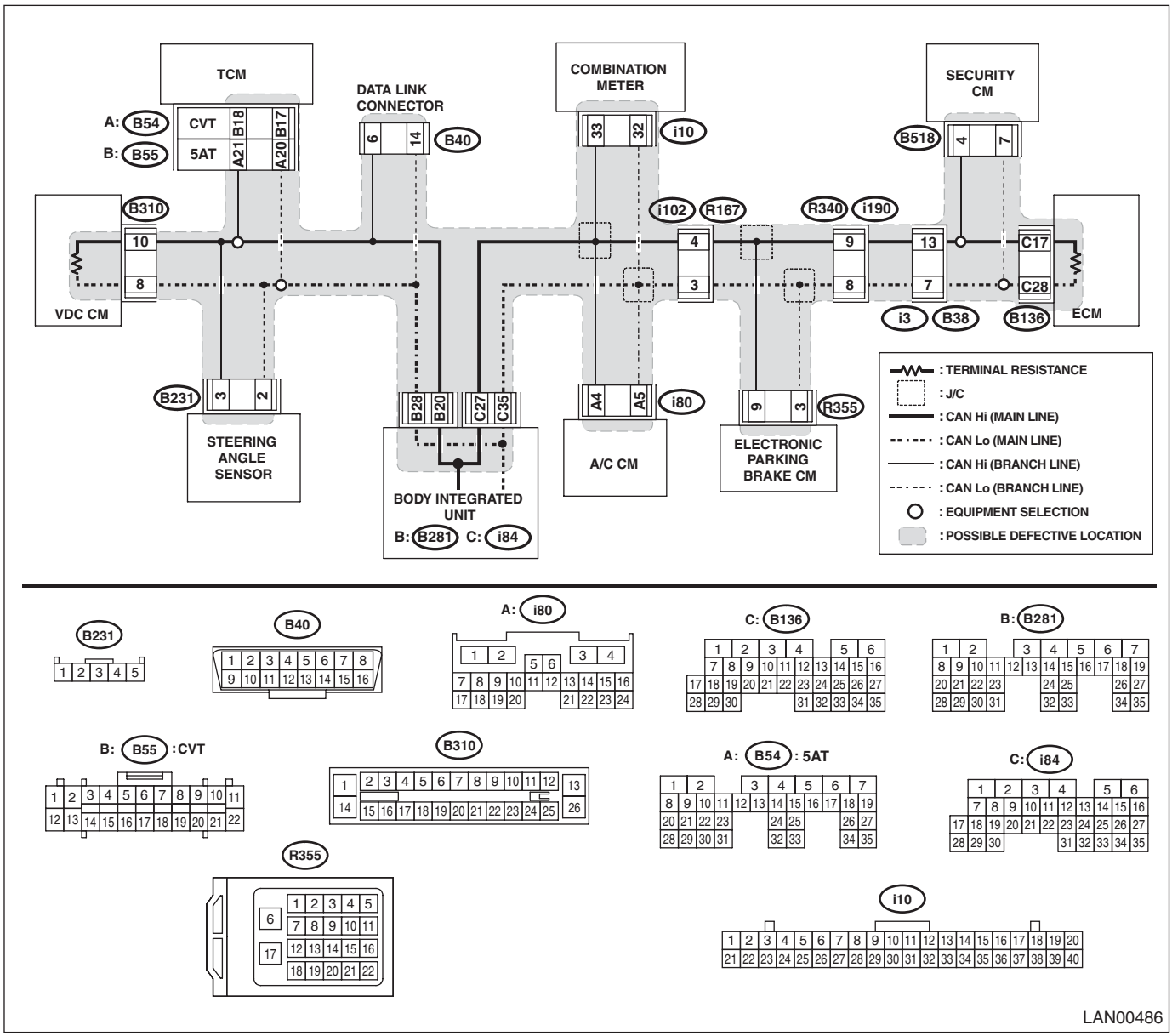
	Step	Check	Yes	No
1	**CHECK FROM DATA LINK CONNECTOR.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Is the resistance 10 Ω or less?	Check for ground short. <Ref. to LAN(diag)-14, GROUND SHORT INSPECTION, INSPECTION, CAN Communication Circuit Check.>	Go to step **2**.
2	**CHECK FROM DATA LINK CONNECTOR.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Is the voltage 5 V or less?	Go to step **3**.	Check for battery short. <Ref. to LAN(diag)-16, BATTERY SHORT INSPECTION, INSPECTION, CAN Communication Circuit Check.>
3	**CHECK FROM DATA LINK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B40) No. 6 — No. 14:***	Is the voltage 55 Ω or less?	Perform the inspection for 55 Ω or less. <Ref. to LAN(diag)-20, 55 Ω OR LESS, INSPECTION, CAN Communication Circuit Check.>	Go to step **4**.
4	**CHECK FROM DATA LINK CONNECTOR.** Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B40) No. 6 — No. 14:***	Is the voltage 65 Ω or more?	Perform the inspection for 65 Ω or more. <Ref. to LAN(diag)-22, 65 Ω OR MORE, INSPECTION, CAN Communication Circuit Check.>	A related line may be open. Perform the inspection for 56 — 64 Ω relevant to the detected DTC. <Ref. to LAN(diag)-13, LIST, CAN Communication Circuit Check.>

B: LIST

Resistance value between CAN Hi And Lo	Contents of inspection	Remarks
Ground short inspection	<Ref. to LAN(diag)-14, GROUND SHORT INSPECTION, INSPECTION, CAN Communication Circuit Check.>	Shorted to ground in the communication circuit or control module.
Battery short inspection	<Ref. to LAN(diag)-16, BATTERY SHORT INSPECTION, INSPECTION, CAN Communication Circuit Check.>	Shorted to battery power supply in the communication circuit or control module.
56 — 64 Ω	<Ref. to LAN(diag)-18, 56 — 64 Ω, INSPECTION, CAN Communication Circuit Check.>	Combined resistance of end resistance does not have malfunction; short to ground or +B short of the CAN communication circuit is possible, however.
55 Ω or less	<Ref. to LAN(diag)-20, 55 Ω OR LESS, INSPECTION, CAN Communication Circuit Check.>	Resistance is lower than combined resistance of end resistance. Short to CAN Hi and CAN Lo on the CAN communication circuit is possible.
65 Ω or more	<Ref. to LAN(diag)-22, 65 Ω OR MORE, INSPECTION, CAN Communication Circuit Check.>	Resistance is higher than combined resistance of end resistance. Open circuit of CAN communication circuit is possible.
56 — 64 Ω (TCM)	<Ref. to LAN(diag)-24, 56 — 64 Ω (TCM), INSPECTION, CAN Communication Circuit Check.>	No TCM data is received. Perform inspection when faulty is detected.
56 — 64 Ω (Steering angle sensor)	<Ref. to LAN(diag)-26, RELATED LINES 56 — 64 Ω (STEERING ANGLE SENSOR), INSPECTION, CAN Communication Circuit Check.>	No other data is received. Perform inspection when faulty is not detected.
56 — 64 Ω (A/C CM)	<Ref. to LAN(diag)-27, 56 — 64 Ω (A/C CM), INSPECTION, CAN Communication Circuit Check.>	No A/C data is received. Perform inspection when faulty is detected.
56 — 64 Ω (Electronic parking CM)	<Ref. to LAN(diag)-28, 56 — 64 Ω (ELECTRONIC PARKING CM), INSPECTION, CAN Communication Circuit Check.>	No EPB data is received. Perform inspection when faulty is detected.
56 — 64 Ω (Combination meter)	<Ref. to LAN(diag)-29, 56 — 64 Ω (COMBINATION METER), INSPECTION, CAN Communication Circuit Check.>	No meter data is received. Perform inspection when faulty is detected.
56 — 64 Ω (Security CM)	<Ref. to LAN(diag)-30, 56 — 64 Ω (SECURITY CM), INSPECTION, CAN Communication Circuit Check.>	No security CM data is received. Perform inspection when faulty is detected.

C: INSPECTION

1. GROUND SHORT INSPECTION



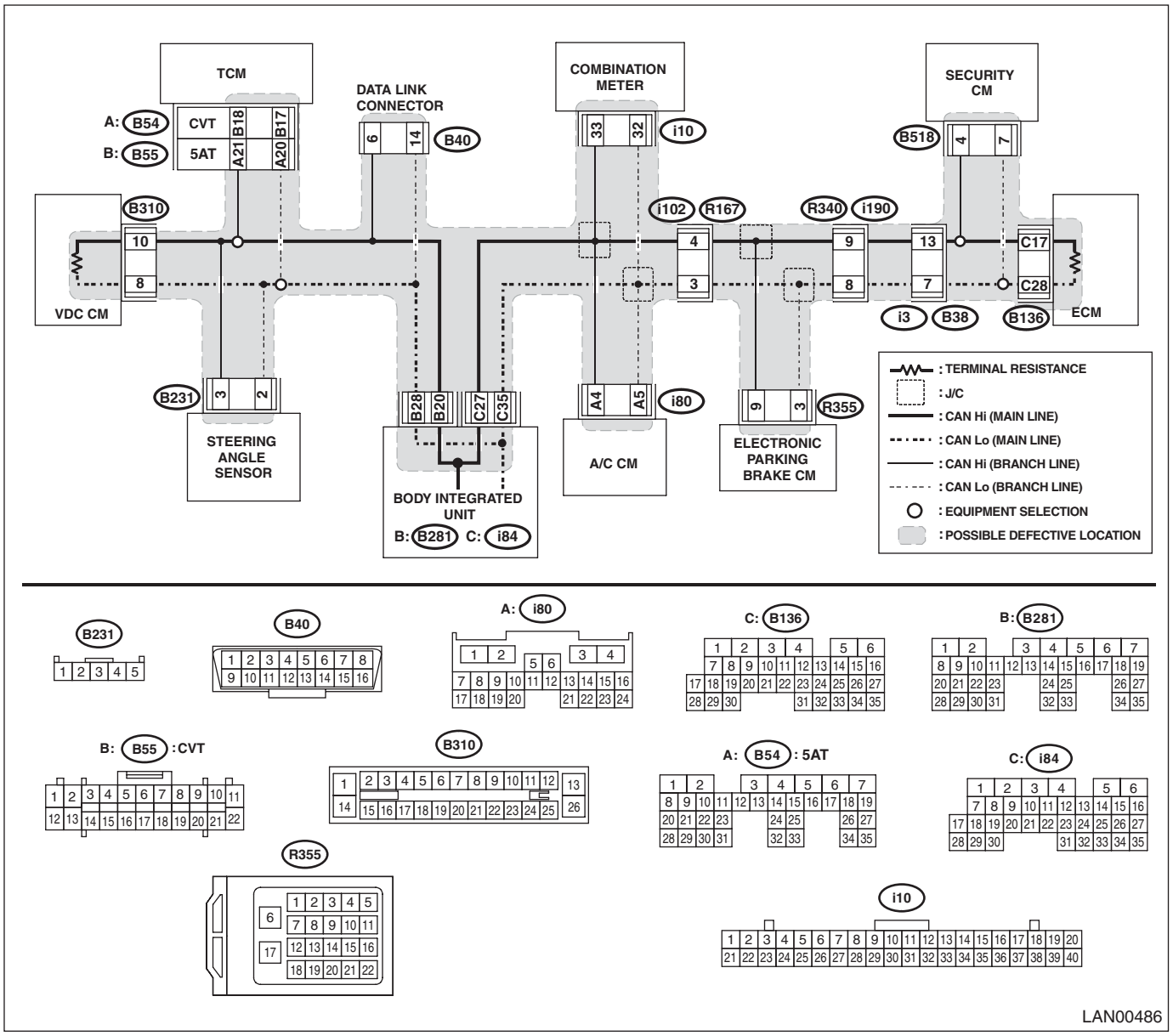
LAN00486

NOTE:
Main wiring harness or related lines may be shorted to ground, or shorted to ground in one of the control modules.

Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Is the resistance 10 Ω or less?	Go to step **2**.	Repair or replace the short circuit of the harness.

	Step	Check	Yes	No
2	**CHECK CONTROL MODULE.** With the tester connected, disconnect control module. NOTE: Disconnect the body integrated unit at the end. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Did the resistance change to 10 Ω or more?	Replace the control module whose resistance has changed. When the value changed at disconnecting the body integrated unit, go to next. Go to step **3**.	Go to step **3**.
3	**CHECK BETWEEN MAIN WIRING HARNESSES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i84) No. 27 — Chassis ground:*** ***(i84) No. 35 — Chassis ground:***	Is the resistance 10 Ω or less?	Repair or replace the short circuit of the harness.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>

2. BATTERY SHORT INSPECTION



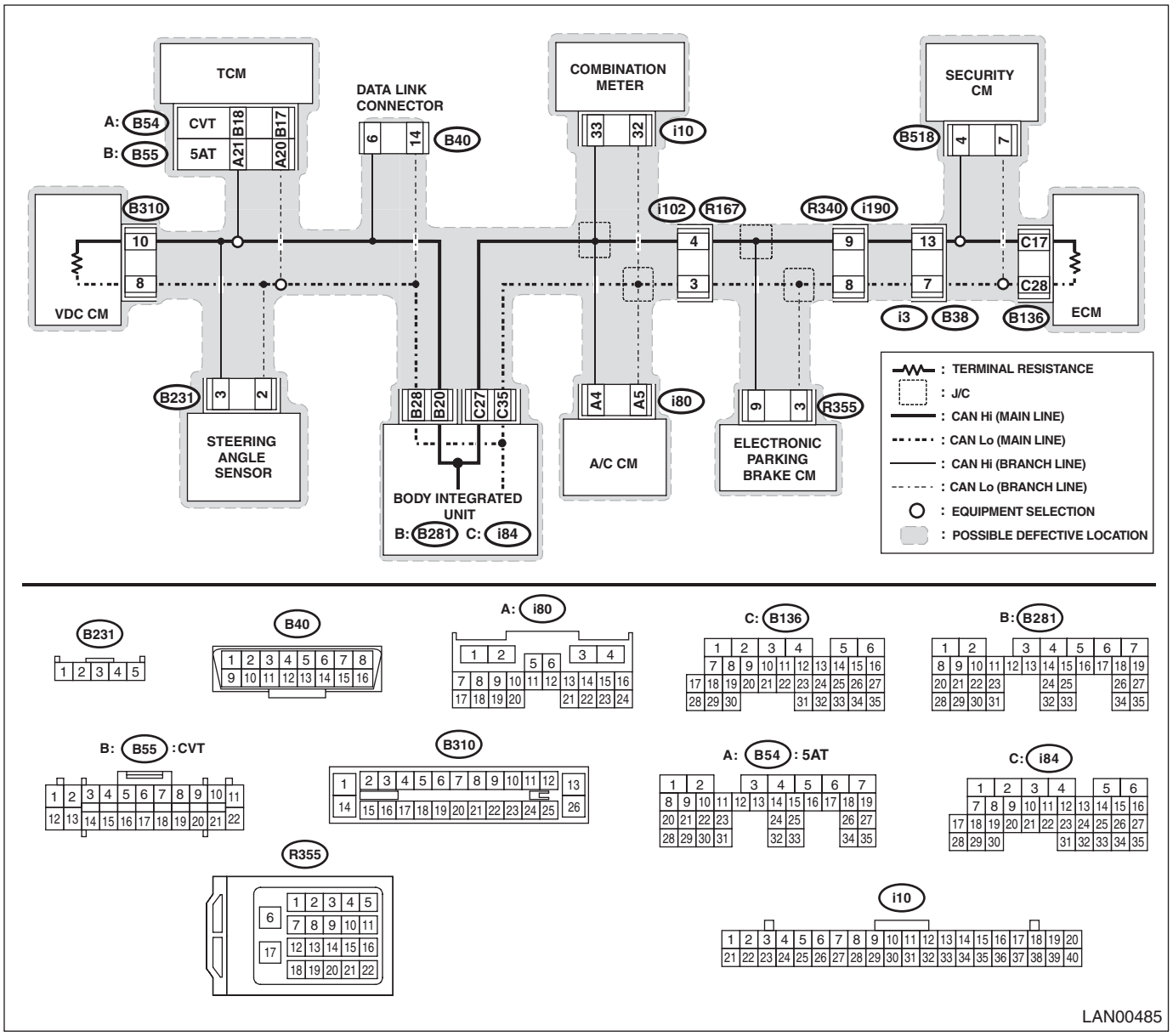
LAN00486

NOTE:
Main wiring harness or related lines may be shorted to battery circuit, or shorted to battery circuit in one of the control modules.

Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Is the resistance 5 V or less?	Currently returned to normal.	Go to step **2**.

Step		Check	Yes	No
2	**CHECK CONTROL MODULE.** With the tester connected, disconnect control module. NOTE: Disconnect the body integrated unit at the end. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Did the voltage change to 5 V or less?	Replace the control module whose resistance has changed. When the value changed at disconnecting the body integrated unit, go to next. Go to step **3**.	Go to step **3**.
3	**CHECK BETWEEN MAIN WIRING HARNESSES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i84) No. 27 — Chassis ground:*** ***(i84) No. 35 — Chassis ground:***	Is the voltage 1 V or less?	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>	Repair or replace the short circuit of the harness.

3. 56 — 64 Ω

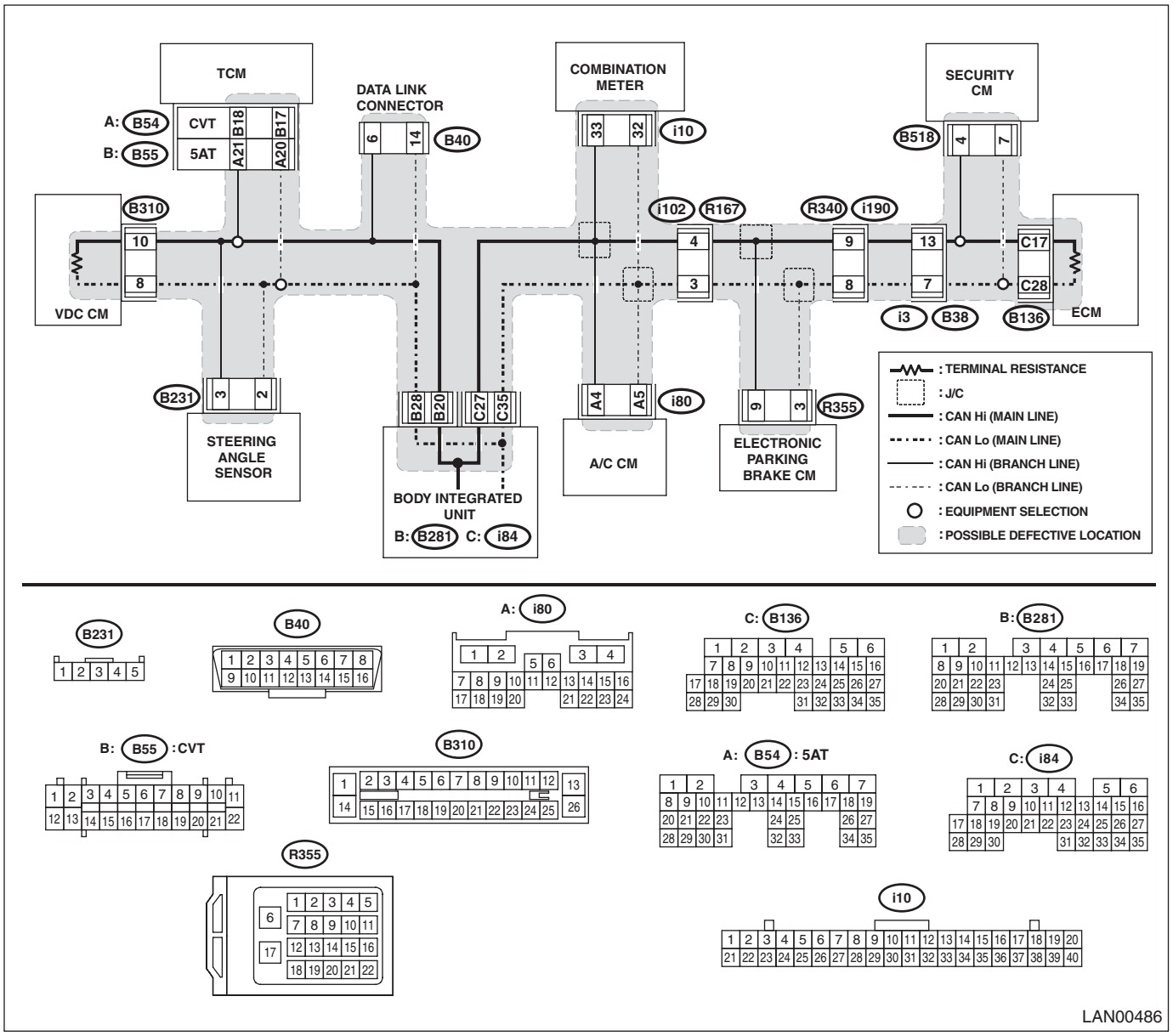


NOTE:
When the measured resistance value is 56 — 64 Ω, main wiring harness or related lines may be shorted to ground, or shorted to power supply line, or related line may be open.

Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Is the resistance 10 Ω or less?	Go to step **2**.	Go to step **4**.

	Step	Check	Yes	No
2	**CHECK CONTROL MODULE.** With the tester connected, disconnect control module. NOTE: Disconnect the body integrated unit at the end. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Did the resistance change to 10 Ω or more?	Replace the control module whose resistance has changed. When the value changed at disconnecting the body integrated unit, go to next. Go to step **3**.	Repair or replace the short circuit of the harness.
3	**CHECK MAIN WIRING HARNESS AND RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i84) No. 27 — Chassis ground:*** ***(i84) No. 35 — Chassis ground:***	Is the resistance 10 Ω or less?	Repair or replace the short circuit of the harness.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>
4	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Is the voltage 5 V or less?	CAN communication circuit is normal.	Go to step **5**.
5	**CHECK CONTROL MODULE.** With the tester connected, disconnect control module. NOTE: Disconnect the body integrated unit at the end. ***Connector & terminal*** ***(B40) No. 6 — Chassis ground:*** ***(B40) No. 14 — Chassis ground:***	Did the voltage change to 5 V or less?	Replace the control module whose voltage has changed. When the value changed at disconnecting the body integrated unit, go to next. Go to step **6**.	Repair or replace the short circuit of the harness.
6	**CHECK HARNESS.** Using a tester, measure the voltage between terminals and chassis ground. ***Connector & terminal*** ***(i84) No. 27 — Chassis ground:*** ***(i84) No. 35 — Chassis ground:***	Is the voltage 5 V or less?	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>	Repair or replace the short circuit of the harness.

4. 55 Ω OR LESS

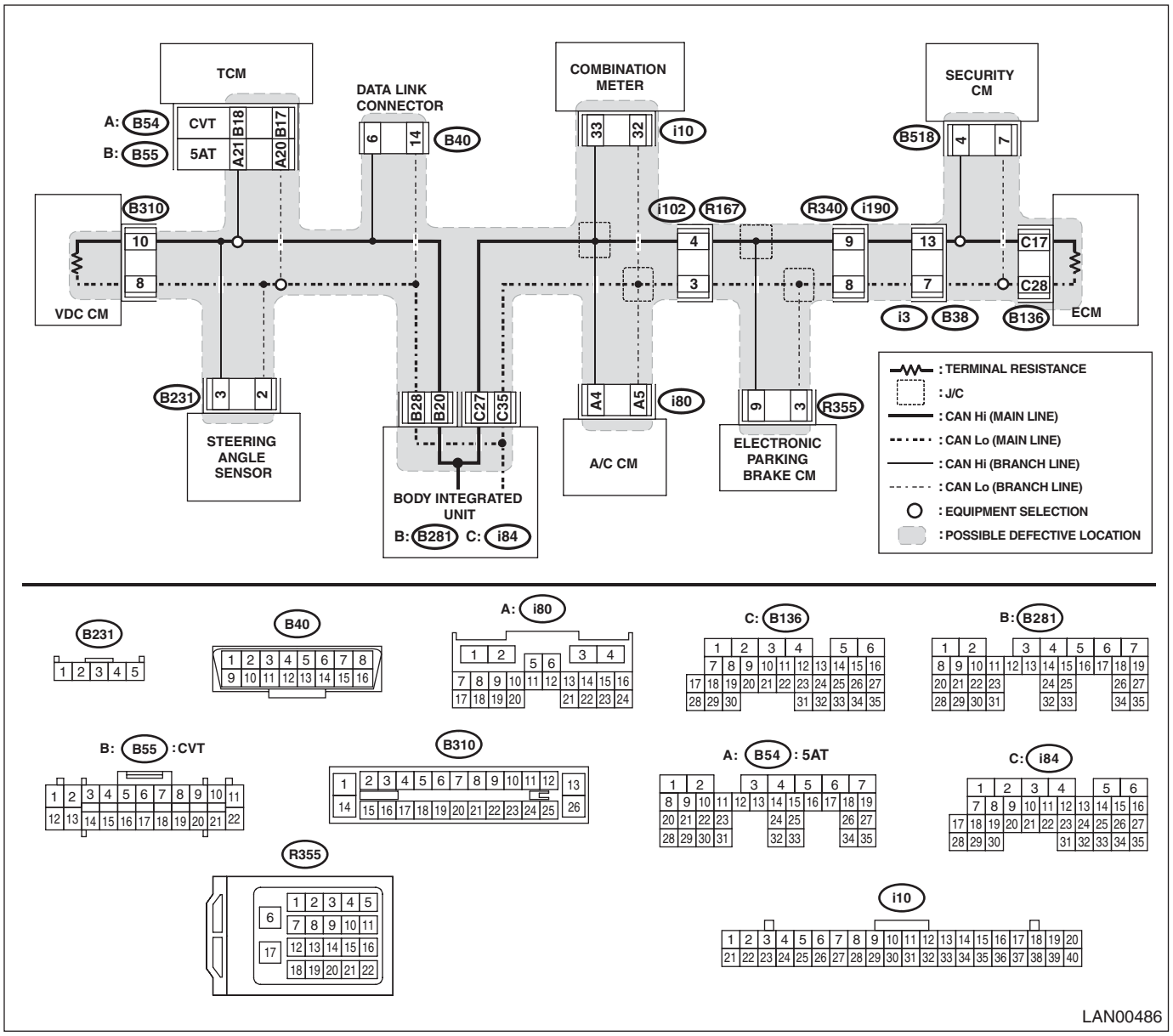


NOTE:
When the bus line is measured, combined resistance of end resistance (120 Ω) in ECM and end resistance (120 Ω) in VDC CM can be measured. The combined resistance is approximately 56 — 64 Ω. When the measured resistance value is 55 Ω or less, main wiring harness or related lines may be shorted, or combined resistance may have changed because resistance other than end resistance is created on the circuit.

Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** Using the tester, measure the resistance between terminals. ***Connector & terminal (B40) No. 6 — No. 14:***	Is the resistance 10 Ω or less?	Go to step **2**.	Go to step **4**.

	Step	Check	Yes	No
2	**CHECK MAIN WIRING HARNESS AND RELATED LINES.** With a tester connected, disconnect control module connectors in order. NOTE: Disconnect the body integrated unit at the end. ***Connector & terminal*** ***(B40) No. 6 — No. 14:***	Is there any control module whose condition has changed from short state?	Replace the control module whose resistance has changed. When the value changed at disconnecting the body integrated unit, go to next. Go to step **3**.	Go to step **4**.
3	**CHECK BETWEEN MAIN WIRING HARNESSES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i84) No. 27 — No. 35:***	Is the resistance 10 Ω or less?	Repair or replace the short circuit of the harness.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>
4	**CHECK CONTROL MODULE.** 1) Disconnect ECM and VDC CM connectors. 2) Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(B136) No. 17 — No. 28:*** ***(B310) No. 8 — No. 10:***	Is the resistance between 115 — 135 Ω?	Replace the control module whose end resistance value is out of the specified range.	Go to step **5**.
5	**CHECK CONTROL MODULE.** 1) Disconnect the body integrated unit connector. 2) Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(B281) No. 28 — (i84) No. 27:*** ***(B281) No. 20 — (i84) No. 35:***	Is the resistance between 1425 — 1575 Ω?	Go to step **6**.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>
6	**CHECK CONTROL MODULE.** Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(B281) No. 28 — (i84) No. 35:*** ***(B281) No. 20 — (i84) No. 27:***	Is the resistance less than 1 Ω?	Go to step **7**.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>
7	**CHECK CONTROL MODULE.** 1) Disconnect the security CM connector. 2) Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(B40) No. 6 — No. 14:***	Is the resistance between 1425 — 1575 Ω?	Go to step **8**.	Replace the security CM.
8	**CHECK HARNESS.** Using the tester, check the short circuit portion of each harness. ***Connector & terminal*** ***(B281) No. 28 — No. 20:***	Is the resistance 1 MΩ or more?	Go to step **10**.	Go to step **9**.
9	**CHECK CONTROL MODULE.** With a tester connected, disconnect control modules in order. ***Connector & terminal*** ***(B281) No. 28 — No. 20:***	Are there any control modules whose resistance changed to 1 MΩ or more?	Replace the control module that has changed.	Repair or replace the harness due to resistance component.
10	**CHECK CONTROL MODULE.** With a tester connected, disconnect control modules in order. ***Connector & terminal*** ***(i84) No. 27 — No. 35:***	Is there any control module whose resistance has changed to 1 MΩ or more?	Replace the control module that has changed.	Repair or replace the harness due to resistance component.

5. 65 Ω OR MORE



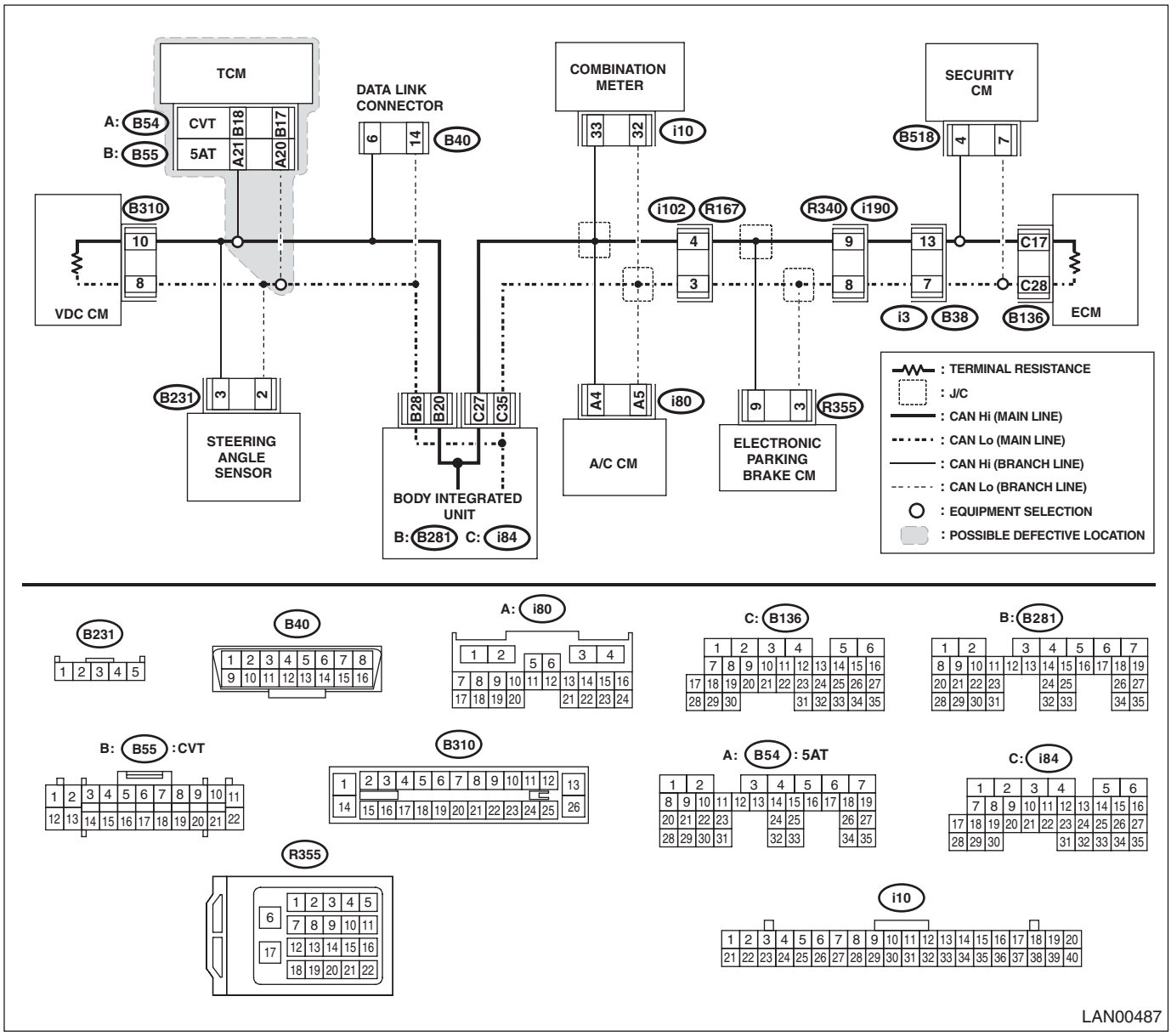
LAN00486

NOTE:
When CAN communication circuit is measured, combined resistance of end resistance (120 Ω) in ECM and end resistance (120 Ω) in VDC CM can be measured. The combined resistance is approximately 56 — 64 Ω. When the measured resistance value is 65 Ω or more, either of end resistance or main wiring harness may have malfunction such as open circuit.

Step		Check	Yes	No
1	**CHECK CONTROL MODULE.** 1) Disconnect ECM and VDC CM connectors. 2) Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(B136) No. 17 — No. 28:*** ***(B310) No. 8 — No. 10:***	Is the resistance 115 — 135 Ω or more?	Replace the control module whose value is out of the specification.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK CONTROL MODULE.** 1) Disconnect the connector of body control module. 2) Using a tester, measure the resistance between control module terminals. ***Connector & terminal*** ***(B281) No. 28 — (i84) No. 27:*** ***(B281) No. 20 — (i84) No. 35:***	Is the resistance between 1425 — 1575 Ω?	Go to step **3**.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>
3	**CHECK CONTROL MODULE.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B281) No. 28 — (i84) No. 35:*** ***(B281) No. 20 — (i84) No. 27:***	Is the resistance less than 1 Ω?	Go to step **4**.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>
4	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B40) No. 6 — (B310) No. 10:*** ***(B40) No. 14 — (B310) No. 8:*** ***(B40) No. 6 — (i281) No. 20:*** ***(B40) No. 14 — (i281) No. 28:***	Is there any continuity?	Go to step **5**.	Repair or replace the open circuit of harness.
5	**CHECK HARNESS.** 1) Disconnect the connector from ECM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B40) No. 6 — (B136) No. 17:*** ***(B40) No. 14 — (B136) No. 28:***	Is there any continuity?	It is possible that temporary poor contact occurs.	Repair or replace the open circuit of harness.

6. 56 — 64 Ω (TCM)

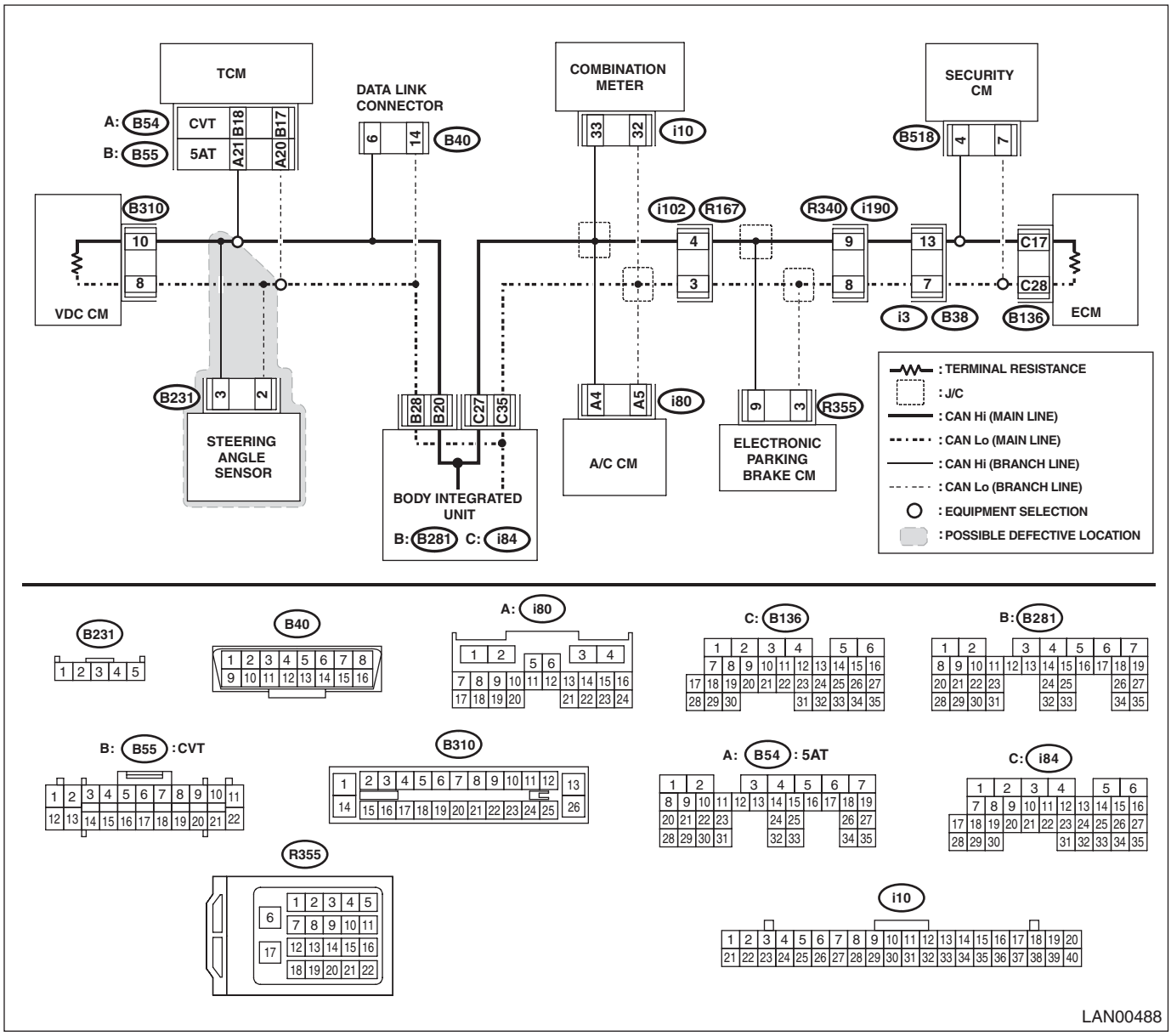


NOTE:
Perform inspection when no data is received, or faulty is detected. This is different from power supply shorted or ground shorted.

Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Disconnect the TCM connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***CVT model*** ***(B55) No. 17 — No. 18:*** ***5AT model*** ***(B54) No. 20 — No. 21:***	Is the resistance 400 Ω or more?	Related lines between TCM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step **2**.

Step		Check	Yes	No
2	**CHECK RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***CVT model*** ***(B55) No. 17 — (B40) No. 14:*** ***(B55) No. 18 — (B40) No. 6:*** ***5AT model*** ***(B54) No. 20 — (B40) No. 14:*** ***(B54) No. 21 — (B40) No. 6:***	Is the resistance 10 Ω or more?	Repair or replace the open circuit portion of TCM related lines.	Check DTC of TCM. <Ref. to CVT(diag)-17, OPERATION, Read Diagnostic Trouble Code (DTC).> <Ref. to 5AT(diag)-20, OPERATION, Read Diagnostic Trouble Code (DTC).>

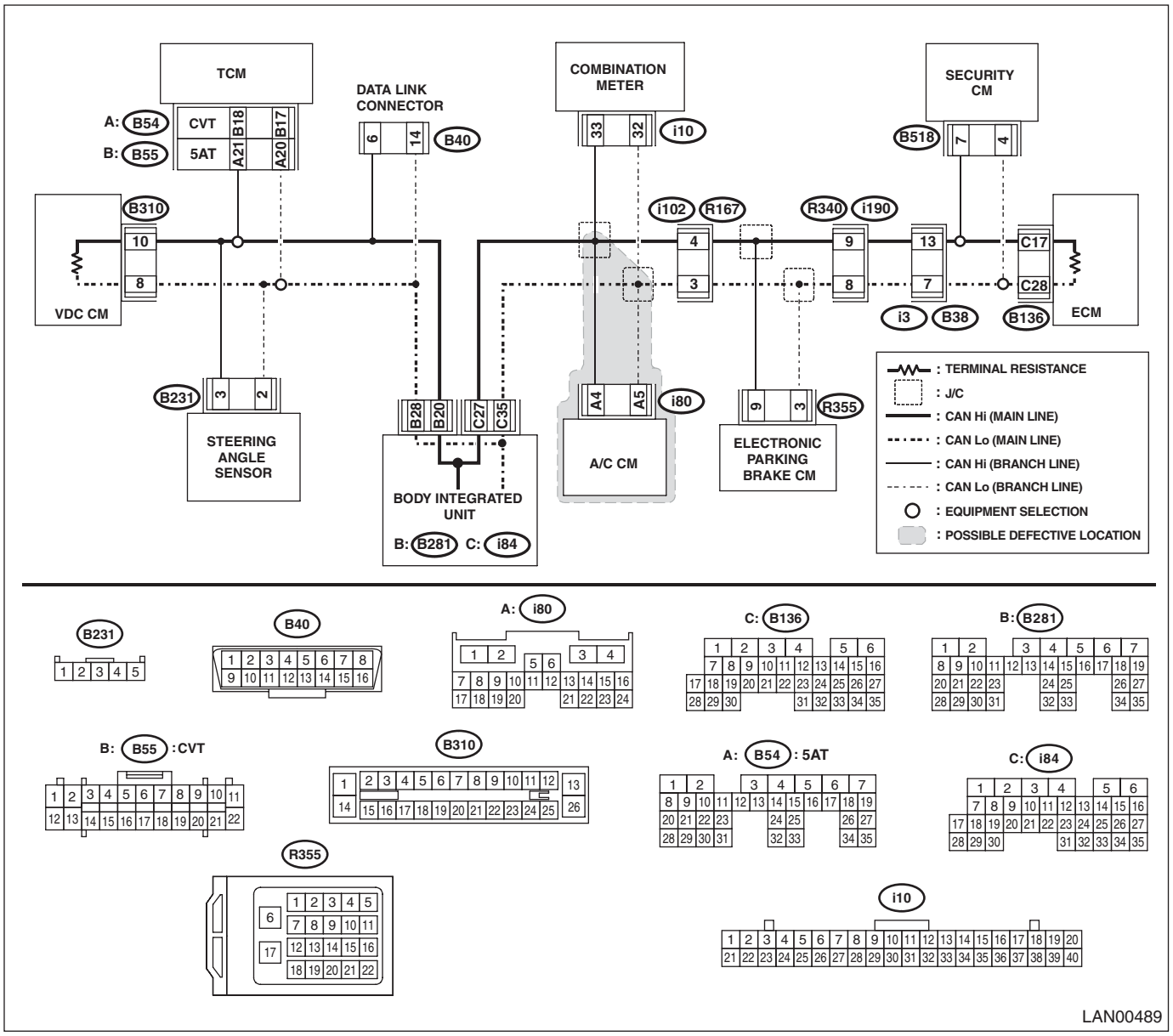
7. RELATED LINES 56 — 64 Ω (STEERING ANGLE SENSOR)



LAN00488

Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Disconnect the steering angle sensor connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B231) No. 2 — No. 3:***	Is the resistance 400 Ω or more?	Related lines between steering angle sensor and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step **2**.
2	**CHECK RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B231) No. 2 — (B40) No. 14:*** ***(B231) No. 3 — (B40) No. 6:***	Is the resistance 10 Ω or more?	Repair or replace the open circuit portion of steering angle sensor related lines.	Check DTC of VDC CM. <Ref. to VDC(diag)-23, OPERATION, Read Diagnostic Trouble Code (DTC).>

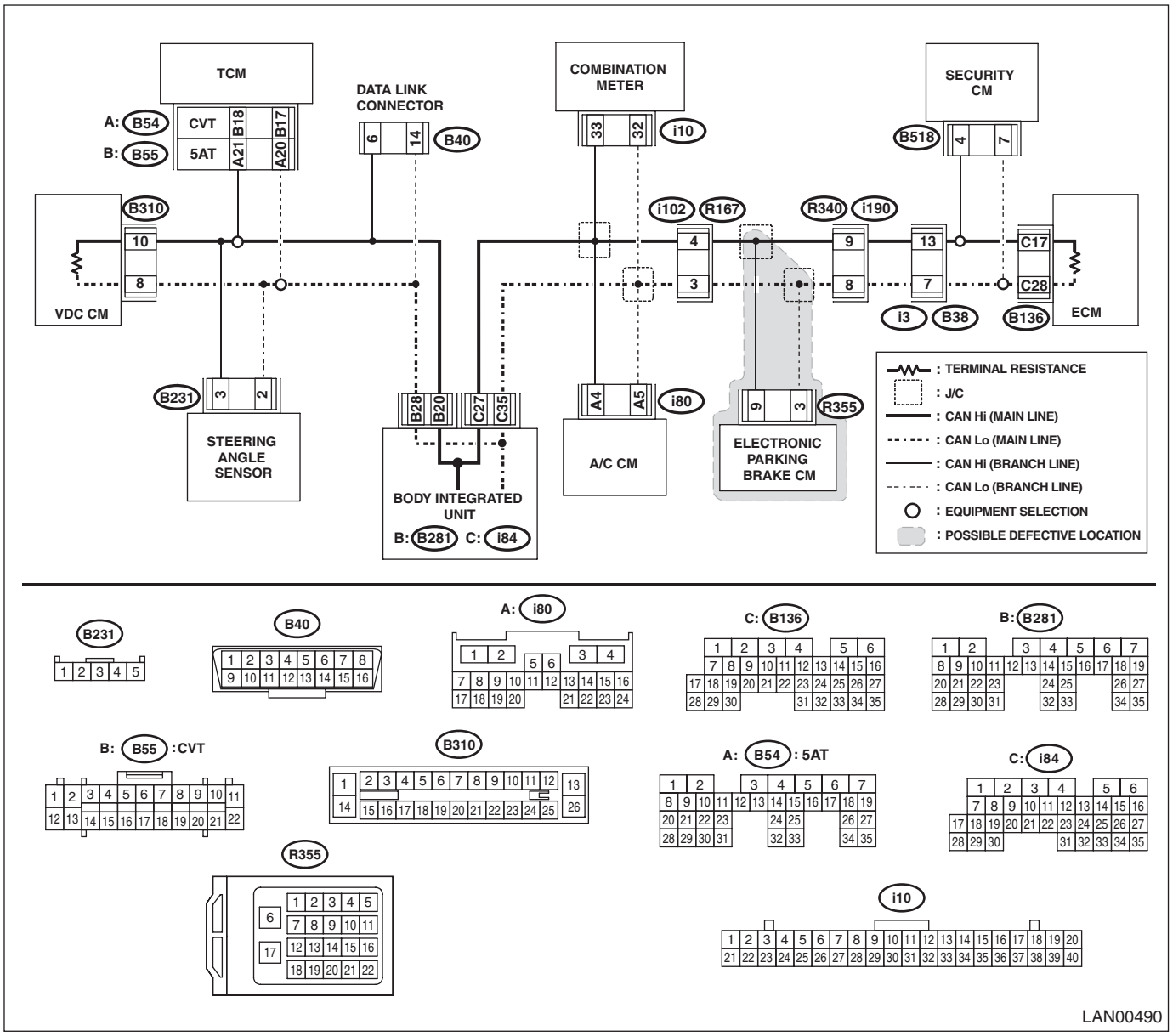
8. 56 — 64 Ω (A/C CM)



LAN00489

Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Disconnect the A/C CM connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i80) No. 4 — No. 5:***	Is the resistance 400 Ω or more?	Related lines between A/C CM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step **2**.
2	**CHECK RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i80) No. 4 — (B40) No. 6:*** ***(i80) No. 5 — (B40) No. 14:***	Is the resistance 10 Ω or more?	Repair or replace the open circuit of A/C CM related lines.	Check DTC of A/C CM. <Ref. to AC(diag)-26, OPERATION, Read Diagnostic Trouble Code (DTC).>

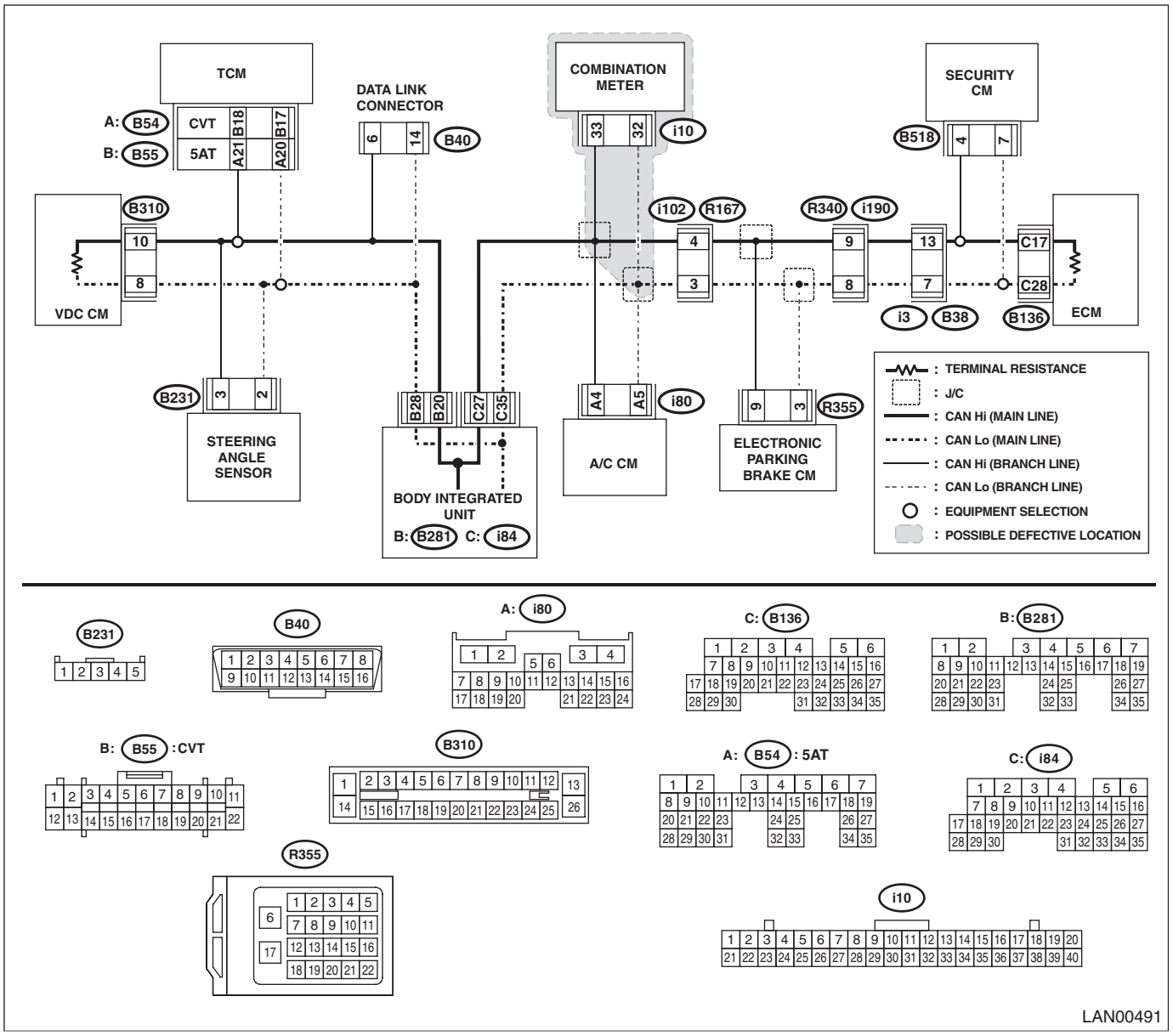
9. 56 — 64 Ω (ELECTRONIC PARKING CM)



LAN00490

	Step	Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Disconnect the electronic parking CM connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(R355) No. 6 — No. 7:***	Is the resistance 400 Ω or more?	Related lines between electronic parking CM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step **2**.
2	**CHECK RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(R355) No. 6 — (B40) No. 6:*** ***(R355) No. 7 — (B40) No. 14:***	Is the resistance 10 Ω or more?	Repair or replace the open circuit portion of electronic parking CM related lines.	Check DTC of electronic parking CM. <Ref. to PB(diag)-22, OPERATION, Read Diagnostic Trouble Code (DTC).>

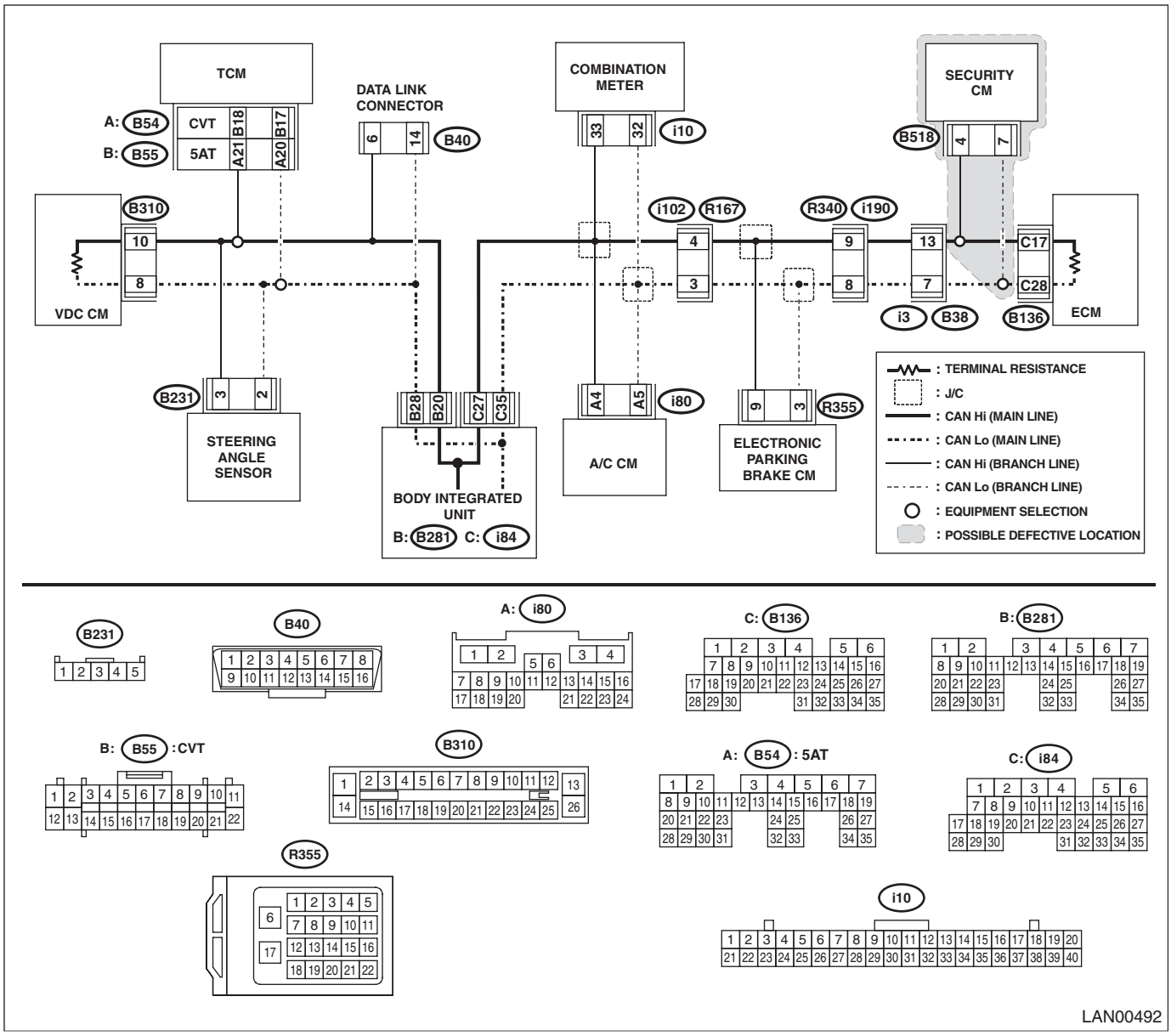
10.56 — 64 Ω (COMBINATION METER)



LAN00491

Step		Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Disconnect the combination meter connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i10) No. 32 — No. 33:***	Is the resistance 400 Ω or more?	Related lines between combination meter and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step **2**.
2	**CHECK RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i10) No. 32 — (B40) No. 14:*** ***(i10) No. 33 — (B40) No. 6:***	Is the resistance 10 Ω or more?	Repair or replace the open circuit portion of combination meter related lines.	Check DTC of combination meter.

11.56 — 64 Ω (SECURITY CM)



LAN00492

	Step	Check	Yes	No
1	**CHECK BETWEEN RELATED LINES AND MAIN WIRING HARNESS.** 1) Disconnect the security CM connector. 2) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B518) No. 7 — No. 4:***	Is the resistance 400 Ω or more?	Related lines between security CM and main wiring harness is open, or main wiring harness is open at two places or more.	Go to step **2**.
2	**CHECK RELATED LINES.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B518) No. 4 — (B40) No. 6:*** ***(B518) No. 7 — (B40) No. 14:***	Is the resistance 10 Ω or more?	Repair or replace the open circuit portion of security CM related lines.	Check DTC of immobilizer system. <Ref. to IM(diag)-9, OPERATION, Read Diagnostic Trouble Code (DTC).>

10.List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Contents	Content of diagnosis	Note
None	Communication for Initializing Impossible	Subaru Select Monitor communication is open or shorted.	<Ref. to LAN(diag)-47, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1201	CAN-HS counter abnormal	High speed CAN communication error	<Ref. to LAN(diag)-49, DTC U1201 CAN-HS COUNTER ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1202	CAN-HS Bus OFF	Communication of some module is shut down.	<Ref. to LAN(diag)-51, DTC U1202 CAN-HS BUS OFF, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1211	CAN-HS ECM data abnormal	Received error data from ECM.	<Ref. to LAN(diag)-53, DTC U1211 CAN-HS ECM DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1212	CAN-HS TCM data abnormal	Received error data from TCM.	<Ref. to LAN(diag)-55, DTC U1212 CAN-HS TCM DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1213	CAN-HS VDC Data Abnormal	Received error data from VDC module.	<Ref. to LAN(diag)-57, DTC U1213 CAN-HS VDC DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U121A	CAN-HS Meter Unit Data Abnormal	Received error data from meter.	<Ref. to LAN(diag)-61, DTC U121A CAN-HS METER UNIT DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U121B	CAN-HS A/C Data Abnormal	Received error data from A/C module.	<Ref. to LAN(diag)-63, DTC U121B CAN-HS A/C DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U121C	CAN-HS SCU Data Abnormal	Received error data from SCU.	<Ref. to LAN(diag)-65, DTC U121C CAN-HS SCU DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1219	CAN-HS EPB Data Abnormal	Received error data from EPB module.	<Ref. to LAN(diag)-59, DTC U1219 CAN-HS EPB DATA ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1221	CAN-HS ECM no-receive data	Not received data from ECM.	<Ref. to LAN(diag)-67, DTC U1221 CAN-HS ECM NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1222	CAN-HS TCM No-Receive Data	Not received data from TCM.	<Ref. to LAN(diag)-69, DTC U1222 CAN-HS TCM NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1223	CAN-HS VDC No-Receive Data	Not received data from VDC module.	<Ref. to LAN(diag)-71, DTC U1223 CAN-HS VDC NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U122A	CAN-HS Meter No-Receive Data	Not received data from meter.	<Ref. to LAN(diag)-75, DTC U122A CAN-HS METER NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U122B	CAN-HS A/C No-Receive Data	Not received data from A/C CM.	<Ref. to LAN(diag)-77, DTC U122B CAN-HS A/C NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U122C	CAN-HS SCU No-Receive Data	Not received data from SCU.	<Ref. to LAN(diag)-79, DTC U122C CAN-HS SCU NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U1229	CAN-HS EPB No-Receive Data	Not received data from EPB module.	<Ref. to LAN(diag)-73, DTC U1229 CAN-HS EPB NO-RECEIVE DATA, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

1. DTC TABLE

NOTE:
When more than one DTC codes are recorded, referring to their combination and indicator display in the combination meter will make it easy to identify the possible cause. Refer to the list for typical examples.

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
CRUISE blink Check engine lit [S] lit [S] lit VDC OFF lit EPB operating light lit	U0122	Communication failure	Communication failure	U1222 U1223	P1718	5144 5143 5136	Hi-side circuit near the body integrated unit 1 is open
CRUISE lit Check engine lit VDC lit [S] lit	U0122 (Past)	U0002 (Past)	C0264	U1201 U1222 U1223 (Past)	P1718 (Past)	5143 5144 5136	Hi-side circuit near the body integrated unit 1 was open (restored)
CRUISE blink Check engine lit [S] lit VDC lit VDC OFF lit EPB operating light lit Shift indicator off	U0122	Communication failure	Communication failure	U1222 U1223	P1718	5144 5136	Lo-side circuit near the body integrated unit 1 is open
CRUISE blink CHECKEGI [S] blink VDC VDC OFF ABS EPB operating light lit Shift indicator off	U0122 (Past)	U0002 (Past)	C0264	U1222 U1223 (Past)	U1718 (Past)	5143 5121 5144	Lo-side circuit near the body integrated unit 1 was open (restored)
CRUISE blink CHECKEGI [S] blink VDC VDC OFF ABS EPB operating light lit Shift indicator off	U0122	Communication failure	Communication failure	U1222 U1223	P1718	5144 5136	Hi- and Lo-side circuits near the body integrated unit 1 are open
CRUISE lit CHECKEGI VDC S blink	U0122 (Past)	U0002 (Past)	C0262 C0264	U1222 U1223 (Past)	P1718 (Past)	5143 5144 5136	Hi- and Lo-side circuits near the body integrated unit 1 were open (restored)
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light Door off [I] blink CRUISE/blink Shift indicator off	U0073	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718	5135 5121	Hi-side circuit near the body integrated unit 1 is shorted to ground

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light Door off [I] blink CRUISE/blink Shift indicator off	U0073 (Past)	U0002 (Past)	—	U1221 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 (Past)	5143 5135 5121	Hi-side circuit near the body integrated unit 1 was shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near the body integrated unit 1 is shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near the body integrated unit 1 was shorted to ground
CRUISE lit CHECKEGI [S] blink VDC Shift indicator off	U0073 U0140	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718	5135 5121	Hi- and Lo-side circuits near the body integrated unit 1 are shorted
CRUISE lit CHECKEGI [S] blink VDC	U0073 U0140	U0002 (Past)	—	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 (Past)	5143 5135 5121	Hi- and Lo-side circuits near the body integrated unit 1 were shorted
CRUISE blink CHECKEGI [S] blink FUEL blink VDC VDC OFF ABS EPB operating light lit Shift indicator off	U0122	Communication failure	Communication failure	U1221 U1229 U122A U122B	P1718	5144 5136	Hi-side circuit near the body integrated unit 2 is open
CRUISE lit CHECKEGI VDC S blink	U0122 (Past)	U0002 (Past)	C0262 C0263 C0264 C0265 C0266 C0267	U1221 (Past)	P1718 (Past)	5143 5144 5136	Hi-side circuit near the body integrated unit 2 was open

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
CRUISE blink CHECKEGI [S] blink FUEL blink VDC VDC OFF ABS EPB operating light lit Shift indicator off	—	Communication failure	Communication failure	U1221	P1718	5144 5136	Lo-side circuit near the body integrated unit 2 is open
CRUISE lit CHECKEGI VDC S blink	—	U0002 (Past)	—	U1221 (Past)	P1718 (Past)	5143 5144 5136	Lo-side circuit near the body integrated unit 2 was open
CRUISE blink CHECKEGI [S] blink FUEL blink VDC VDC OFF ABS EPB operating light lit Shift indicator off	—	Communication failure	Communication failure	U1221	P1718	5144 5136	Hi- and Lo-side circuits near the body integrated unit 2 are open
CRUISE lit CHECKEGI VDC S blink	—	U0002 (Past)	—	U1221 (Past)	P1718 (Past)	5143 5144 5136	Hi- and Lo-side circuits near the body integrated unit 2 were open
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light Door off [I] blink CRUISE/blink Shift indicator off	U0073	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718	5135 5121	Hi-side circuit near the body integrated unit 2 is shorted to ground
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light Door off [I] blink CRUISE/blink Shift indicator off	U0073 (Past)	U0002 (Past)	—	U1221 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 (Past)	5143 5135 5121	Hi-side circuit near the body integrated unit 2 was shorted to ground

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
Normal operation	—	—	—	—	—	—	Lo-side circuit near the body integrated unit 2 is shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near the body integrated unit 2 was shorted to ground
CRUISE lit CHECKEGI [S] blink VDC Shift indicator off	U0073 U0140	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718	5135 5121	Hi- and Lo-side circuits near the body integrated unit 2 are shorted
CRUISE lit CHECKEGI [S] blink VDC	U0073 U0140	U0002 (Past)	—	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 (Past)	5143 5135 5121	Hi- and Lo-side circuits near the body integrated unit 2 were shorted
CRUISE lit CHECKEGI [S] blink VDC Shift indicator off	U0101	—	C0262	U1222	P1718 or P1725	5143 5137	Hi-side circuit near TCM is open
CRUISE lit CHECKEGI [S] blink VDC	U0101 (Past)	—	C0262	U1222 (Past)	P1718 or P1725 (Past)	5143 5137	Hi-side circuit near TCM was open
CRUISE lit CHECKEGI [S] blink VDC Shift indicator off	U0101	—	C0262	U1222	P1718 or P1725	5143 5137	Lo-side circuit near TCM is open
CRUISE lit CHECKEGI [S] blink VDC	U0101 (Past)	—	C0262	U1222 (Past)	P1718 or P1725 (Past)	5143 5137	Lo-side circuit near TCM was open
CRUISE lit CHECKEGI [S] blink VDC Shift indicator off	U0101	—	C0262	U1222	P1718 or P1725	5143 5137	Hi- and Lo-side circuits near TCM are open
CRUISE lit CHECKEGI [S] blink VDC	U0101 (Past)	—	C0262	U1222 (Past)	P1718 or P1725 (Past)	5143 5137	Hi- and Lo-side circuits near TCM were open

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light CHECKEGI Door off [I] blink CRUISE/blink Shift indicator off	U0073	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718 or P1725	5135 5136 5152	Hi-side circuit near TCM is shorted to ground
CRUISE lit CHECKEGI VDC S blink	U0073 (Past)	U0002 (Past)	—	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 or P1725 (Past)	5143 5135 5136	Hi-side circuit near TCM was shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near TCM is shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near TCM was shorted to ground
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light CHECKEGI Door off [I] blink CRUISE/blink Shift indicator off	U0073	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718 or P1725	5135 5121	Hi- and Lo-side circuits near TCM are shorted
CRUISE lit CHECKEGI VDC S blink	U0073 (Past)	U0001 U0002 (Past)	C0261	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	U1718 or P1725 (Past)	5143 5135 5121	Hi- and Lo-side circuits near TCM were shorted
CRUISE lit	—	Communication failure	—	U122B	—	—	Hi-side circuit near A/C is open

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
Normal operation	—	U0001 U0002 (Past)	—	U122B (Past)	—	—	Hi-side circuit near A/C was open
AT_OIL blink VDC CRUISE lit	—	Communication failure	—	U122B U1201	P1718 or P1725	5135 5121	Lo-side circuit near A/C is open
Normal operation	—	U0001 U0002	—	U1201 U122B (Past)	P1718 or P1725 (Past)	5144 5135 5121	Lo-side circuit near A/C was open
CRUISE lit	—	Communication failure	—	U122B	—	—	Hi- and Lo-side circuits near A/C are open
Normal operation	—	U0002 (Past)	—	122B (Past)	—	—	Hi- and Lo-side circuits near A/C were open
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light CHECKEGI Door off [I] blink CRUISE/blink Shift indicator off	U0073 U0122	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718 or P1725	5135 5137 5121	Hi-side circuit near A/C is shorted to ground
CRUISE lit CHECKEGI VDC S blink	—	U0001 U0002 (Past)	—	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 or P1725 (Past)	5143 5135 5137	Hi-side circuit near A/C was shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near A/C is shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near A/C was shorted to ground
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL lit ABS EPB operating light blink EPB warning light CHECKEGI Door off [I] blink CRUISE/blink Shift indicator off	U0073	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718 or P1725	5135 5136 5152	Hi- and Lo-side circuits near A/C are shorted

List of Diagnostic Trouble Code (DTC)

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
CRUISE lit CHECKEGI VDC S blink	U0073 (Past)	U0001 U0002 (Past)	C0261	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 or P1725 (Past)	5143 5135 5136	Hi- and Lo-side circuits near A/C were shorted
CRUISE lit Coolant temperature blink (red/blue) CHECKEGI ATOIL I blink FUEL blink VDC EPS warning light	U0073	Communication failure	C0261 C0263	U1201 U1202 U1221	P1718	5144 5135 5121	Hi-side circuit near ECM is open
CRUISE lit CHECKEGI VDC S blink	U0073 (Past)	U0001 U0002	—	U1201 U1202 U1221 (Past)	P1718 (Past)	5143	Hi-side circuit near ECM was open
CRUISE lit Coolant temperature blink (red/blue) CHECKEGI ATOIL blink I blink FUEL blink VDC	U0073	Communication failure	C0261 C0263	U1201 U1202 U1221	P1718	5144 5135 5136	Lo-side circuit near ECM is open
CRUISE lit CHECKEGI VDC S blink	U0073 (Past)	U0001 U0002 (Past)	C0261 C0263	U1201 U1202 U1221 (Past)	P1718 (Past)	5143 5144 5135	Lo-side circuit near ECM was open
CRUISE lit Coolant temperature blink (red/blue) CHECKEGI ATOIL blink I blink FUEL blink VDC	U0073	U0002	C0263	U1221 U1201	P1718	5144 5136	Hi- and Lo-side circuits near ECM are open
CRUISE lit CHECKEGI VDC S blink	U0073 (Past)	U0001 U0002 (Past)	C0263	U1201 U1221 (Past)	P1718 (Past)	5143 5144 5136	Hi- and Lo-side circuits near ECM were open

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light CHECKEGI Door off [I] blink CRUISE/blink Shift indicator off	U0073	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718	5135 5121	Hi-side circuit near ECM is shorted to ground
CRUISE lit CHECKEGI VDC S blink	U0073 (Past)	U0001 U0002	—	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 (Past)	5143 5135 5121	Hi-side circuit near ECM was shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near ECM is shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near ECM was shorted to ground
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light CHECKEGI Door off [I] blink CRUISE/blink Shift indicator off	U0073 U0122	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718	5143 5135 5144	Hi- and Lo-side circuits near ECM are shorted
CRUISE lit CHECKEGI VDC S blink	U0073 U0122 (Past)	U0001 U0002 (Past)	C0261	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 (Past)	5143 5135 5144	Hi- and Lo-side circuits near ECM were shorted

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light Door off [I] blink CRUISE/blink Shift indicator off	—	U0002	C0267	U122A	—	—	Hi-side circuit near meter is open
Normal operation	—	U0002 (Past)	C0267	U122A (Past)	—	—	Hi-side circuit near meter was open
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light Door off [I] blink CRUISE/blink Shift indicator off	—	U0002	C0267	U122A	—	—	Lo-side circuit near meter is open
Normal operation	—	U0002	C0267	U122A (Past)	—	—	Lo-side circuit near meter was open
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light Door off [I] blink CRUISE/blink Shift indicator off	—	U0002	C0267	U122A	—	—	Hi- and Lo-side circuits near meter are open
Normal operation	—	U0002	C0267	U122A (Past)	—	—	Hi- and Lo-side circuits near meter were open
CRUISE lit CHECKEGI VDC S blink	U0122 U0073	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718 or P1725	5135 5137 5136	Hi-side circuit near meter is shorted to ground

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
CRUISE lit CHECKEGI VDC S blink	U0122 U0073 (Past)	U0001 U0002 (Past)	C0261	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 or P1725 (Past)	5143 5135 5137	Hi-side circuit near meter was shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near meter is shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near meter was shorted to ground
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light CHECKEGI Door off [I] blink CRUISE/blink Shift indicator off	U0073	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718 or P1725	5135 5121	Hi- and Lo-side circuits near meter are shorted
CRUISE lit CHECKEGI VDC S blink	U0073 (Past)	U0001 U0002 (Past)	C0261	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 or P1725 (Past)	5134 5135 5121	Hi- and Lo-side circuits near meter were shorted
EPB OFF EPB operating light blink EPB warning light CRUISE/lit	—	—	Communication failure	U1229	—	—	Hi-side circuit near electronic parking brake is open
Normal operation	—	—	C0261	U1229	—	—	Hi-side circuit near electronic parking brake was open
EPB OFF EPB operating light blink EPB warning light CRUISE/lit	—	—	Communication failure	U1229	—	—	Lo-side circuit near electronic parking brake is open
Normal operation	—	—	C0261	U1229	—	—	Lo-side circuit near electronic parking brake was open

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
EPB OFF EPB operating light blink EPB warning light CRUISE/lit	—	—	Communication failure	U1229	—	—	Hi- and Lo-side circuits near electronic parking brake are open
Normal operation	—	—	C0261	U1229	—	—	Hi- and Lo-side circuits near electronic parking brake were open
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light CHECKEGI Door off [I] blink CRUISE/blink Shift indicator off	U0073 U0122	Communication failure	Communication failure	U1201 U1202 U1221 U1229 U122A U122B	P1718 or P1725	51335 5137 5121	Hi-side circuit near electronic parking brake is shorted to ground
CRUISE lit CHECKEGI VDC S blink	U0073 U0122 (Past)	U0001 U0002 (Past)	C0261	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 or P1725 (Past)	5143 5135 5137	Hi-side circuit near electronic parking brake was shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near electronic parking brake is shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near electronic parking brake was shorted to ground
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light CHECKEGI Door off [I] blink CRUISE/blink Shift indicator off	U0073	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718 or P1725	5135 5121	Hi- and Lo-side circuits near electronic parking brake are shorted

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
CRUISE lit CHECKEGI VDC S blink	U0073 (Past)	U0001 U0002 (Past)	C0261	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 or P1725	5143 5135 5121	Hi- and Lo-side circuits near electronic parking brake were shorted
CRUISE lit VDC OFF CHECKEGI ATOIL blink VDC S blink EPS warning light ABS	U0122	U0002	C0264	U1223	P1718	5135 5136 5137	Hi-side circuit near VDC is open
CRUISE lit CHECKEGI VDC S blink	—	—	C0264	U1223 (Past)	—	5143	Hi-side circuit near VDC was open
CRUISE lit VDC OFF CHECKEGI ATOIL blink VDC S blink EPS warning light ABS	U0122	U0002	C0264	U1201 U1202 U1223	P1718	5135 5136 5152	Lo-side circuit near VDC is open
CRUISE lit CHECKEGI VDC S blink	—	—	C0264	U1201 U1202 U1223 (Past)	—	5143	Lo-side circuit near VDC was open
CRUISE lit VDC OFF CHECKEGI ATOIL blink VDC S blink EPS warning light ABS	U0122	U0002	C0264	U1223	P1718	5135 5136 5137	Hi- and Lo-side circuits near VDC are open
CRUISE lit CHECKEGI VDC S blink	—	—	C0264	U1223 (Past)	—	5143	Hi- and Lo-side circuits near VDC were open

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light CHECKEGI Door off [I] blink CRUISE/blink Shift indicator off	U0073	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718	5135 5121	Hi-side circuit near VDC is shorted to ground
CRUISE lit CHECKEGI VDC S blink	—	U0001 U0002	C0261	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	—	5143	Hi-side circuit near VDC was shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near VDC is shorted to ground
Normal operation	—	U0028	—	—	—	—	Lo-side circuit near VDC was shorted to ground
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light CHECKEGI Door off [I] blink CRUISE/blink Shift indicator off	U0073	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718	5135 5152 5136	Hi- and Lo-side circuits near VDC are shorted
CRUISE lit CHECKEGI VDC S blink	U0073 (Past)	U0028	—	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 (Past)	5143	Hi- and Lo-side circuits near VDC were shorted
CRUISE lit VDC	—	—	—	U1201 U1202	—	5121	Hi-side circuit near steering angle sensor is open
Normal operation	—	—	—	U1201 U1202 (Past)	—	5121	Hi-side circuit near steering angle sensor was open

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
CRUISE lit VDC	—	—	—	U1201	—	5121	Lo-side circuit near steering angle sensor is open
Normal operation	—	—	—	U1201 (Past)	—	5121	Lo-side circuit near steering angle sensor was open
CRUISE lit VDC	—	U0028 (Past)	—	—	—	5121	Hi- and Lo-side circuits near steering angle sensor are open
Normal operation	—	U0028 (Past)	—	—	—	5121	Hi- and Lo-side circuits near steering angle sensor were open
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light CHECKEGI Door off [I] blink CRUISE/blink Shift indicator off	U0073	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718 or P1725	5135 5137	Hi-side circuit near steering angle sensor is shorted to ground
VDC CHECKEGI [S] blink CRUISE lit	U0073 (Past)	U0001 U0002 (Past)	C0261	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 or P1725 (Past)	5143 5135	Hi-side circuit near steering angle sensor was shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near steering angle sensor is shorted to ground
Normal operation	—	—	—	—	—	—	Lo-side circuit near steering angle sensor was shorted to ground
EPB OFF VDC VDC OFF Coolant temperature blink (red/blue) FUEL blink ABS EPB operating light blink EPB warning light CHECKEGI Door off [I] blink CRUISE/blink Shift indicator off	U0073	Communication failure	Communication failure	U1201 U1202 U1221 U1223 U1229 U122A U122B	P1718 or P1725	5135 5152 5136	Hi- and Lo-side circuits near steering angle sensor are shorted

Combination meter display	Diagnostic Code that was displayed.						Portions with high rate of malfunction occurrence
	ECM	A/C	EPB (electronic parking brake)	Body integrated unit	TCM	VDC CM (Detailed code)	
VDC CHECKEGI [S] blink CRUISE lit	U0073 (Past)	U0001 U0002 (Past)	C0261	U1201 U1202 U1221 U1223 U1229 U122A U122B (Past)	P1718 or P1725 (Past)	5143 5135 5152	Hi- and Lo-side circuits near steering angle sensor were shorted

11.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

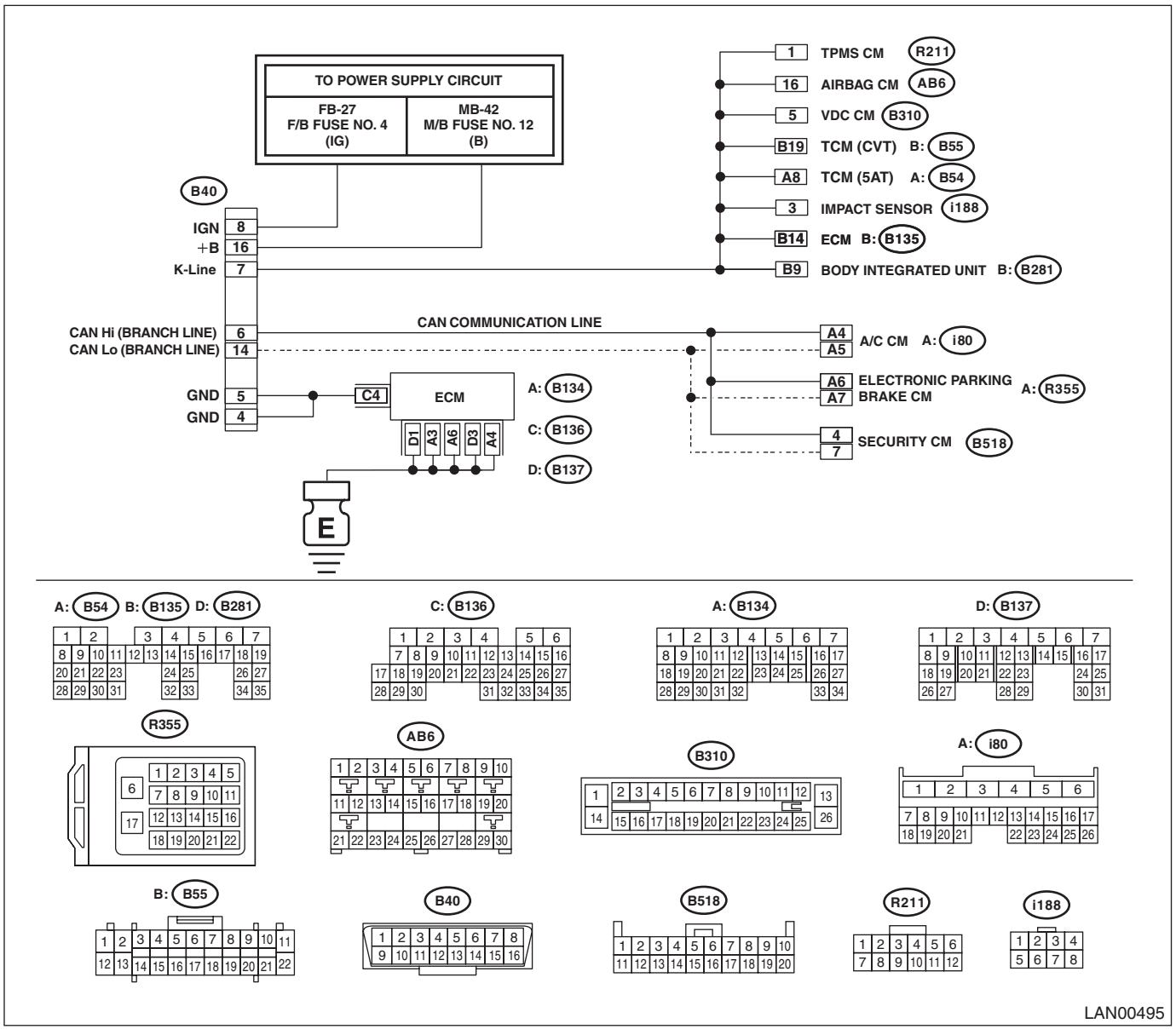
A: COMMUNICATION FOR INITIALIZING IMPOSSIBLE

NOTE:
• This is an inspection method for control modules using the Subaru Select Monitor communication line (K-line).
• For the control modules that read trouble code and current data using CAN communication circuit, perform diagnosis following DTCs for CAN communications.

DIAGNOSIS:
Subaru Select Monitor communication line (K-line) is open or shorted.

TROUBLE SYMPTOM:
Not communicable with Subaru Select Monitor.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK COMBINATION METER.** 1) Connect the Subaru Select Monitor. 2) Start the engine. 3) Check display of combination meter.	Does the warning lights illuminate or gauge have display error?	Go to step **2**.	Go to step **4**.

	Step	Check	Yes	No
2	**CHECK SUBARU SELECT MONITOR.** 1) Connect the Subaru Select Monitor to another vehicle. 2) Check communication condition between Subaru Select Monitor and vehicle.	Is communication performed normally?	Go to step **3**.	Subaru Select Monitor unit or diagnosis cable is faulty.
3	**CHECK CAN COMMUNICATION CIRCUIT.** Check CAN communication circuit. (Refer to the inspection for CAN communication circuit.)	Is the CAN communication circuit normal?	Replace the modules that did not perform communication.	Repair the CAN communication circuit.
4	**CHECK K-LINE.** 1) Perform communication between Subaru Select Monitor and all modules. 2) Check continuity between the modules that did not communicate with Subaru Select Monitor. ***Connector & terminal*** ***(B40) No. 7 — (AB6) No. 16:*** ***(B40) No. 7 — (B310) No. 5:*** ***(B40) No. 7 — (B55) No. 19 (CVT):*** ***(B40) No. 7 — (B54) No. 8 (5AT):*** ***(B40) No. 7 — (B135) No. 14:*** ***(B40) No. 7 — (B281) No. 9:*** ***(B40) No. 7 — (R211) No. 1 (TPMS):*** ***(B40) No. 7 — (i188) No. 3 (OP):***	Is there any continuity?	Go to step **5**.	Repair or replace the open circuit portion.
5	**CHECK K-LINE.** Check continuity between K-line and chassis ground. ***Connector & terminal*** ***(B40) No. 7 — Chassis ground:***	Is there any continuity?	Repair or replace the short circuit portion.	Go to step **6**.
6	**CHECK K-LINE.** Check voltage between K-line and chassis ground. ***Connector & terminal*** ***(B40) No. 7 — Chassis ground:***	Is the voltage 5 V or more with IG ON?	Repair or replace the short circuit portion.	Go to step **7**.
7	**CHECK GROUND CIRCUIT.** Check continuity of ground circuit. ***Connector & terminal*** ***(B40) No. 4 — Chassis ground:*** ***(B40) No. 5 — Chassis ground:***	Is there any continuity?	Go to step **9**.	Go to step **8**.
8	**CHECK HARNESS.** 1) Disconnect the connector from ECM. 2) Check continuity between data link connector and ECM. ***Connector & terminal*** ***(B40) No. 4 — (B137) No. 4:*** ***(B40) No. 5 — (B137) No. 4:***	Is there any continuity?	Check ECM ground.	Repair or replace the open circuit portion.
9	**CHECK POWER SUPPLY CIRCUIT.** Check the power supply circuit for data link connector. ***Connector & terminal*** ***(B40) No. 8 (+) — Chassis ground (–):*** ***(B40) No. 16 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	The vehicle is normal.	Check the power supply circuits to the data link connector.

CAUTION:
When replacing body integrated unit on the model with immobilizer system, refer to the "PC application help for Subaru Select Monitor".

B: DTC U1201 CAN-HS COUNTER ABNORMAL

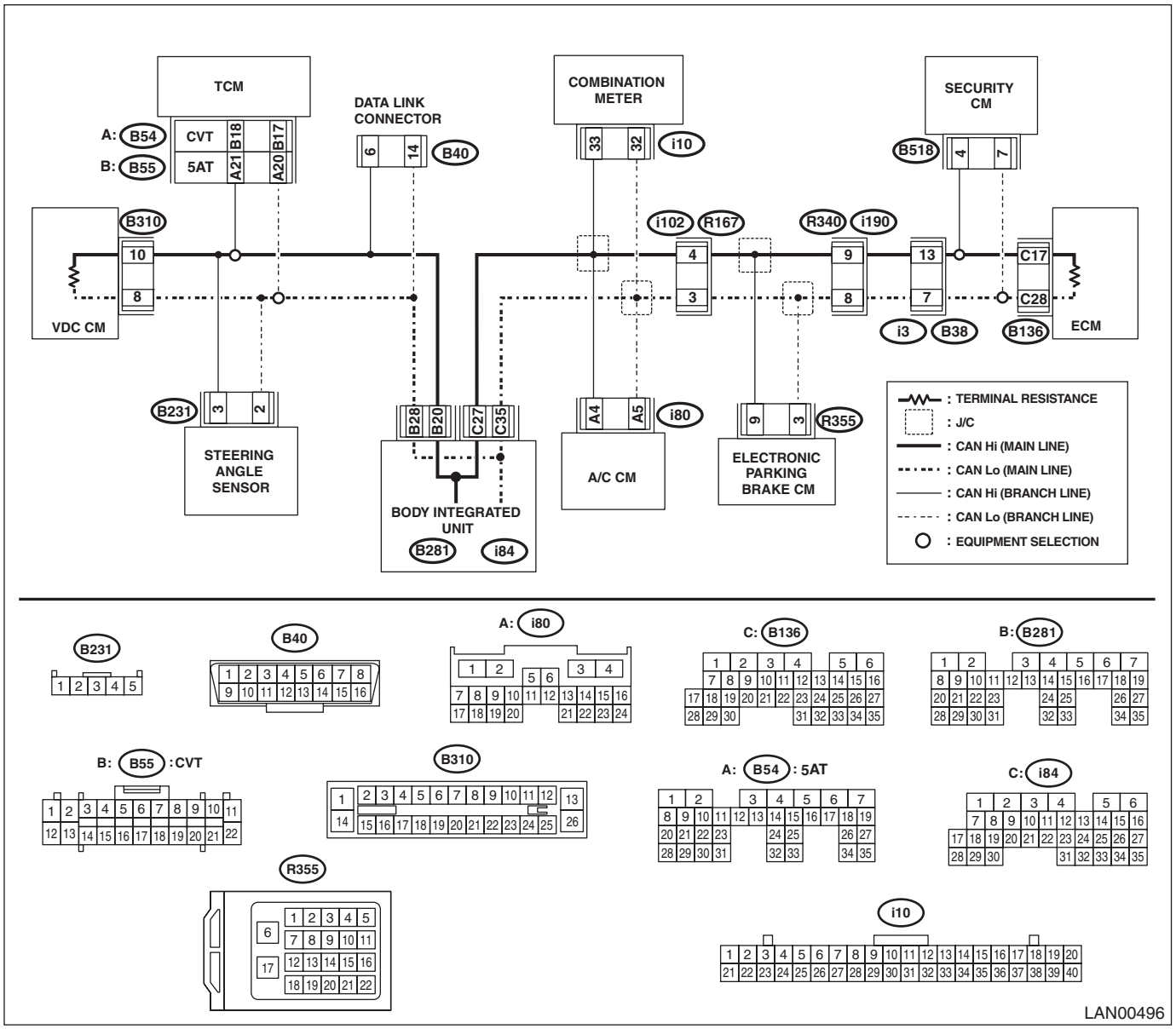
DTC DETECTING CONDITION:

Communication is unstable because of high speed CAN communication error.

TROUBLE SYMPTOM:

- Display of combination meter indicates faulty.
- Control faulty may occur due to CAN communication error.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CAN COMMUNICATION CIRCUIT.** Check CAN communication circuit. <Ref. to LAN(diag)-12, PROCEDURE, CAN Communication Circuit Check.>	Is CAN communication circuit faulty?	Repair the faulty portion, following the diagnosis procedure.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK DTC.** 1) Start the engine. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1202 a current malfunction?	Perform the diagnosis of U1202. <Ref. to LAN(diag)-49, DTC U1201 CAN-HS COUNTER ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	Go to step **3**.
3	**CHECK DTC.** Check the displayed DTC.	Is U1201 a current malfunction?	Go to step **4**.	It may be a temporary communication malfunction. Perform the clear memory.
4	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1201 a current malfunction?	Go to step **5**.	It may be a temporary communication malfunction. Perform the clear memory.
5	**CHECK CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Disconnect the control modules other than body integrated unit in order. NOTE: When disconnecting ECM or VDC CM, connect resistance of 120 Ω between CAN Hi and CAN Lo as an alternative of end resistance. 3) Turn the ignition switch to ON. 4) Using the Subaru Select Monitor, read DTC of CAN system.	Is there any control module that U1201 is not detected as current malfunction?	Replace the control module.	Repeat 1) to 4) in step 5 until U1201 is not detected.

C: DTC U1202 CAN-HS BUS OFF

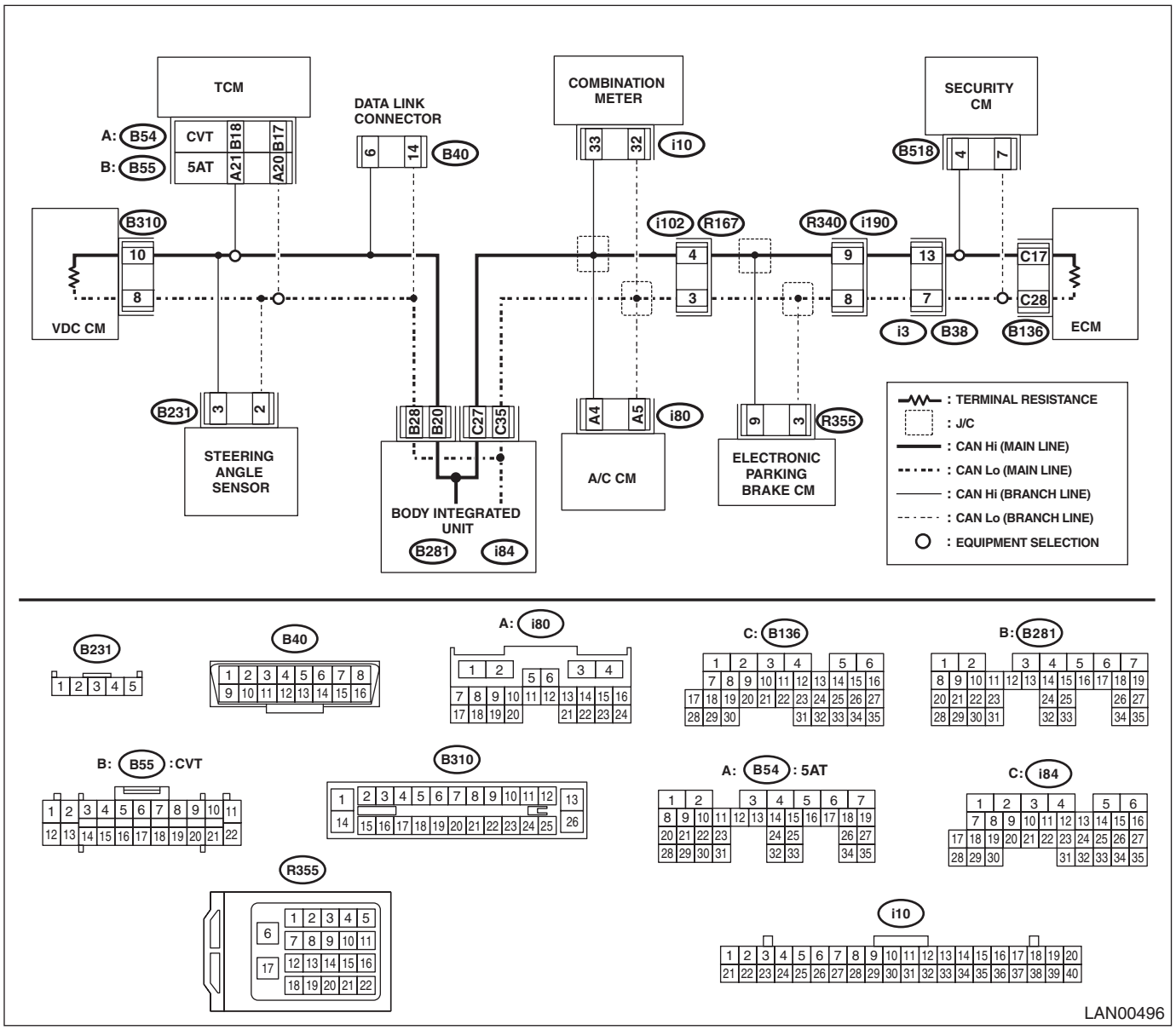
DTC DETECTING CONDITION:

Integrated unit communication is shut down because of high speed CAN error.

TROUBLE SYMPTOM:

CAN communication is not normal.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CAN COMMUNICATION CIRCUIT.** Check CAN communication circuit. <Ref. to LAN(diag)-12, PROCEDURE, CAN Communication Circuit Check.>	Is CAN communication circuit faulty?	Repair the faulty portion, following the diagnosis procedure.	Go to step **2**.
2	**CHECK DTC.** 1) Start the engine. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1202 a current malfunction?	Go to step **3**.	It may be a temporary poor contact. Perform the clear memory.

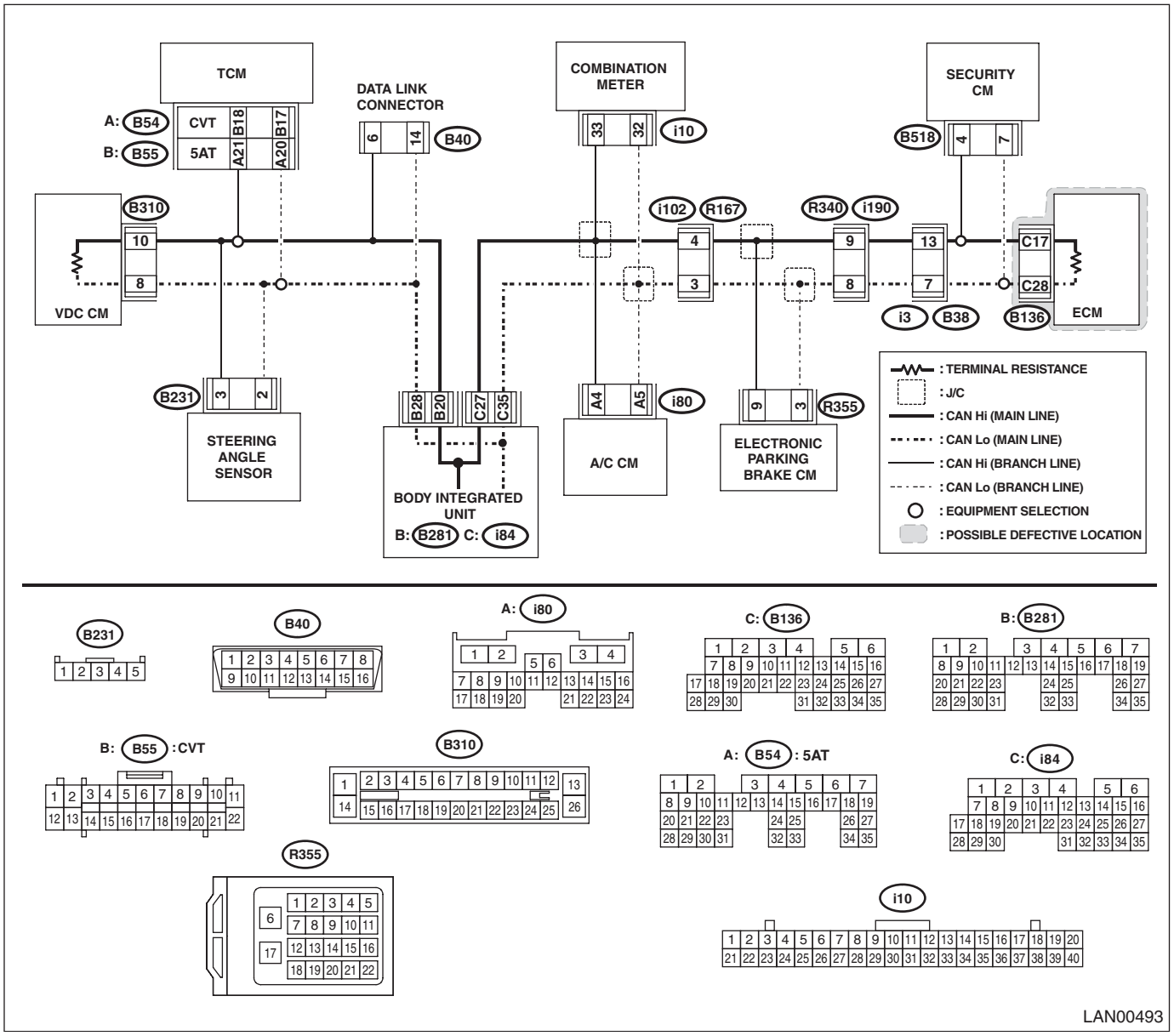
	Step	Check	Yes	No
3	**CHECK CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Disconnect the control modules other than body integrated unit in order. NOTE: When disconnecting ECM or VDC CM, connect resistance of 120 Ω between CAN Hi and CAN Lo as an alternative of end resistance. 3) Turn the ignition switch to ON. 4) Using the Subaru Select Monitor, read DTC of CAN system.	Is there any control module that U1201 is not detected as current malfunction?	Replace the control module.	Repeat 1) to 4) in step 5 until U1202 is not detected.

D: DTC U1211 CAN-HS ECM DATA ABNORMAL

DTC DETECTING CONDITION:
Defective data from ECM.

TROUBLE SYMPTOM:
Defective data on CAN communication occurs.

WIRING DIAGRAM:



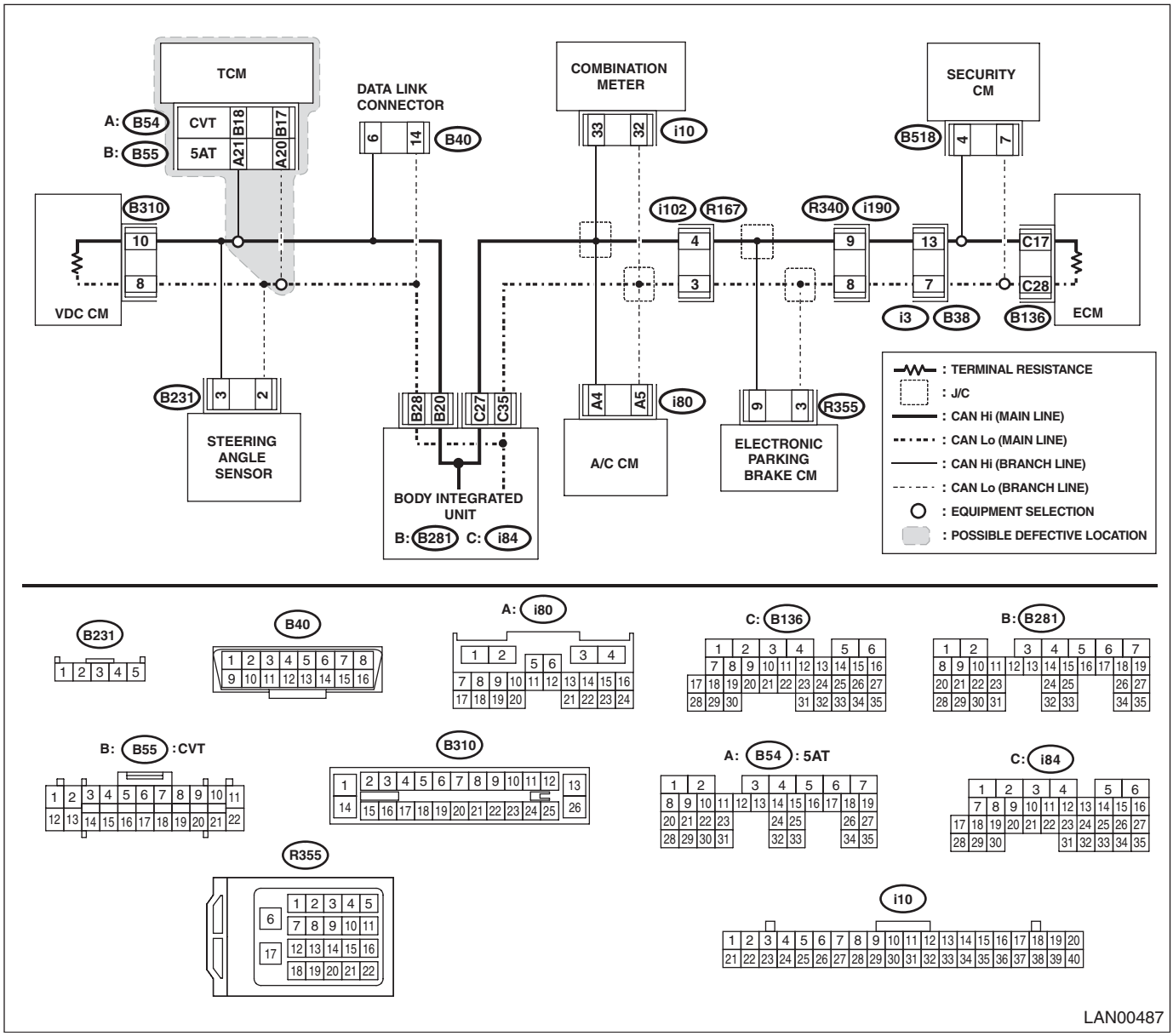
LAN00493

Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U1211 a current malfunction?	Go to step **3**.	Go to step **4**.

	Step	Check	Yes	No
3	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from ECM. 3) Connect the disconnected connectors. 4) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1211 a current malfunction?	Replace the ECM. <Ref. to FU(H6DO)-50, Engine Control Module (ECM).>	Go to step **4**.
4	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1202 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **5**.
5	**CHECK CONNECTOR.** Check the connecter used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It may be a temporary communication malfunction. Delete the DTC.

E: DTC U1212 CAN-HS TCM DATA ABNORMAL

DTC DETECTING CONDITION:
Received error data from TCM.
TROUBLE SYMPTOM:
SPORT indicator light blinks.
WIRING DIAGRAM:



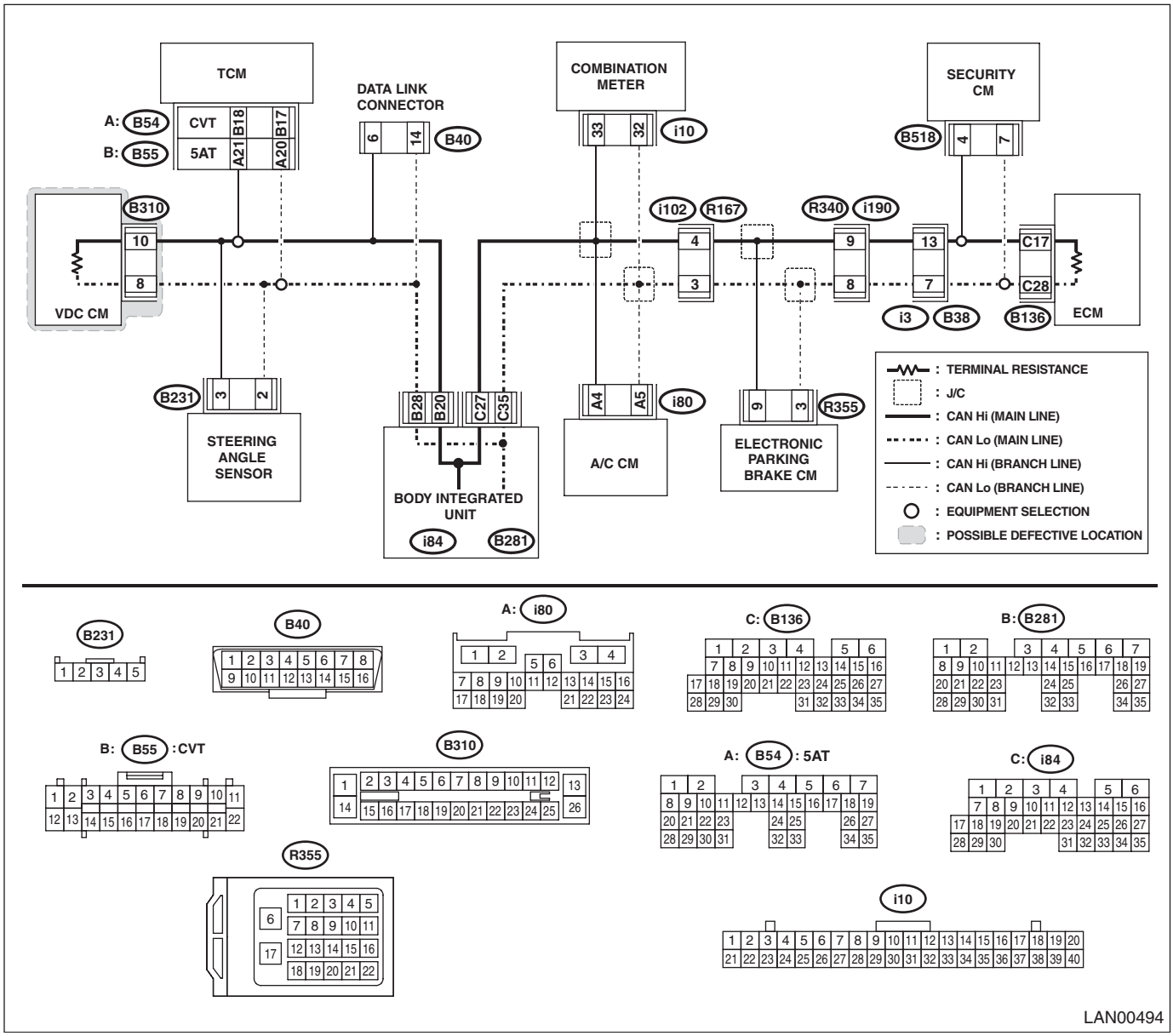
LAN00487

Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U1212 a current malfunction?	Go to step **3**.	Go to step **4**.

Step		Check	Yes	No
3	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the TCM connector. 3) Connect the disconnected connectors. 4) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1212 a current malfunction?	Replace the TCM. <Ref. to 5AT-58, Transmission Control Module (TCM).>	Go to step **4**.
4	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1212 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **5**.
5	**CHECK CONNECTOR.** Check the connecter used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	A temporary communication failure may be a possible cause. Clear the DTC memory.

F: DTC U1213 CAN-HS VDC DATA ABNORMAL

DTC DETECTING CONDITION:
Data from VDCCM is faulty.
TROUBLE SYMPTOM:
ABS warning light and VDC warning light illuminate.
WIRING DIAGRAM:



LAN00494

Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U1213 a current malfunction?	Go to step **3**.	Go to step **4**.

	Step	Check	Yes	No
3	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the VDC CM connector. 3) Connect the disconnected connectors. 4) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1213 a current malfunction?	Replace the VDC CM. <Ref. to VDC-7, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>	Go to step **4**.
4	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1213 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **5**.
5	**CHECK CONNECTOR.** Check the connecter used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	A temporary communication failure may be a possible cause. Clear the DTC memory.

G: DTC U1219 CAN-HS EPB DATA ABNORMAL

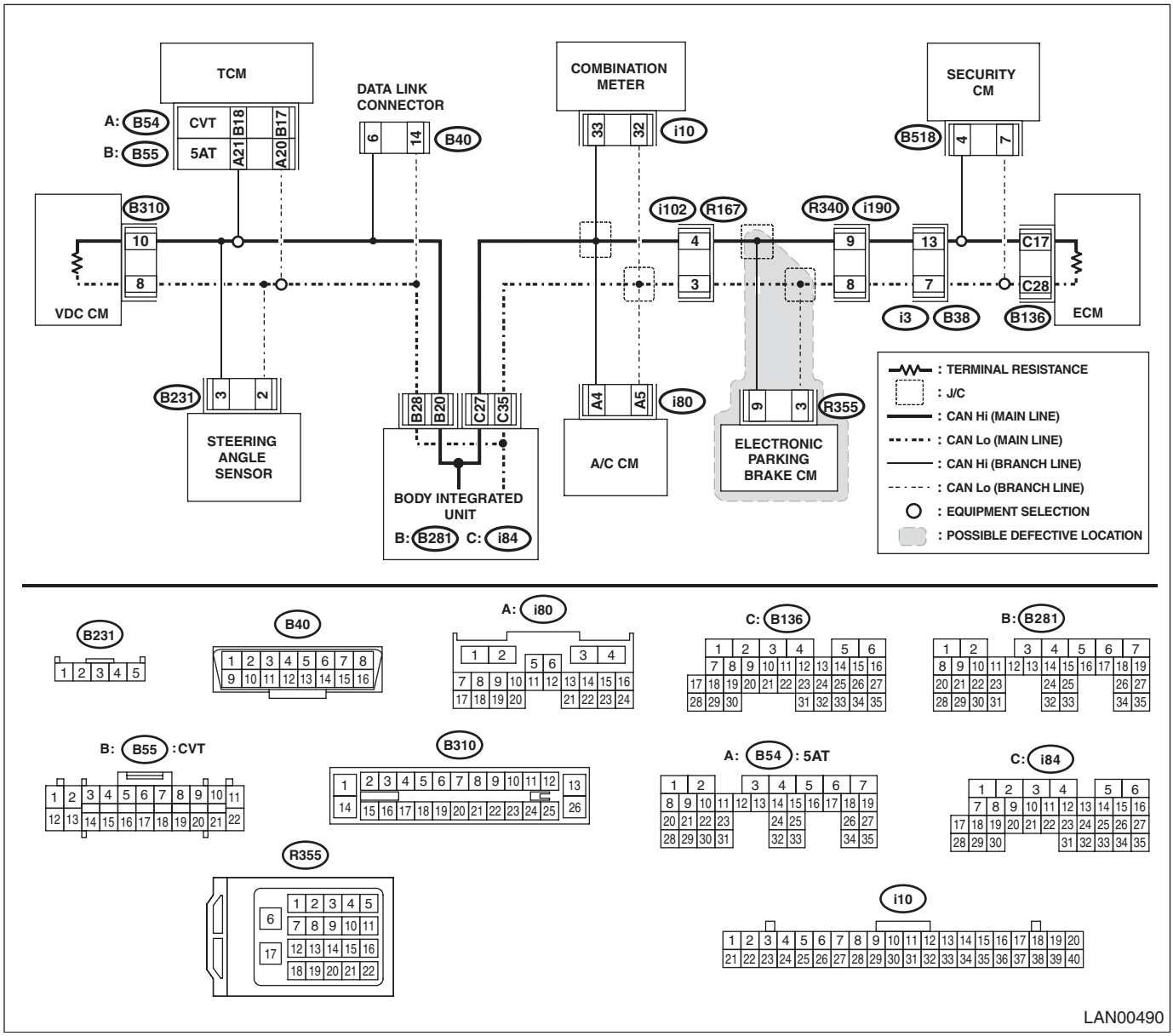
DTC DETECTING CONDITION:

Defective data was transmitted from electronic parking brake control module.

TROUBLE SYMPTOM:

Electronic parking brake cooperation control does not operate.

WIRING DIAGRAM:



LAN00490

Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U1219 a current malfunction?	Go to step **3**.	Go to step **4**.

	Step	Check	Yes	No
3	**CHECK DTC.** Turn the ignition switch to OFF, and read the DTC again.	Is U1219 a current malfunction?	Replace the electronic parking CM. <Ref. to PB-5, REMOVAL, Parking Brake Actuator.>	Go to step **4**.
4	**CHECK ELECTRONIC PARKING CM.** 1) Disconnect the electronic parking CM connector. 2) Using the Subaru Select Monitor, perform the clear memory. 3) Using the Subaru Select Monitor, read DTC of CAN system.	Is the displayed DTC other than U1219?	Go to step **5**.	Replace the electronic parking CM. <Ref. to PB-5, REMOVAL, Parking Brake Actuator.>
5	**CHECK ELECTRONIC PARKING CM.** 1) Connect the electronic parking CM connector. 2) Using the Subaru Select Monitor, read DTC of electronic parking CM. <Ref. to PB(diag)-14, OPERATION, Subaru Select Monitor.>	Is DTC other than CAN system displayed?	Perform the diagnosis according to DTC.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>

H: DTC U121A CAN-HS METER UNIT DATA ABNORMAL

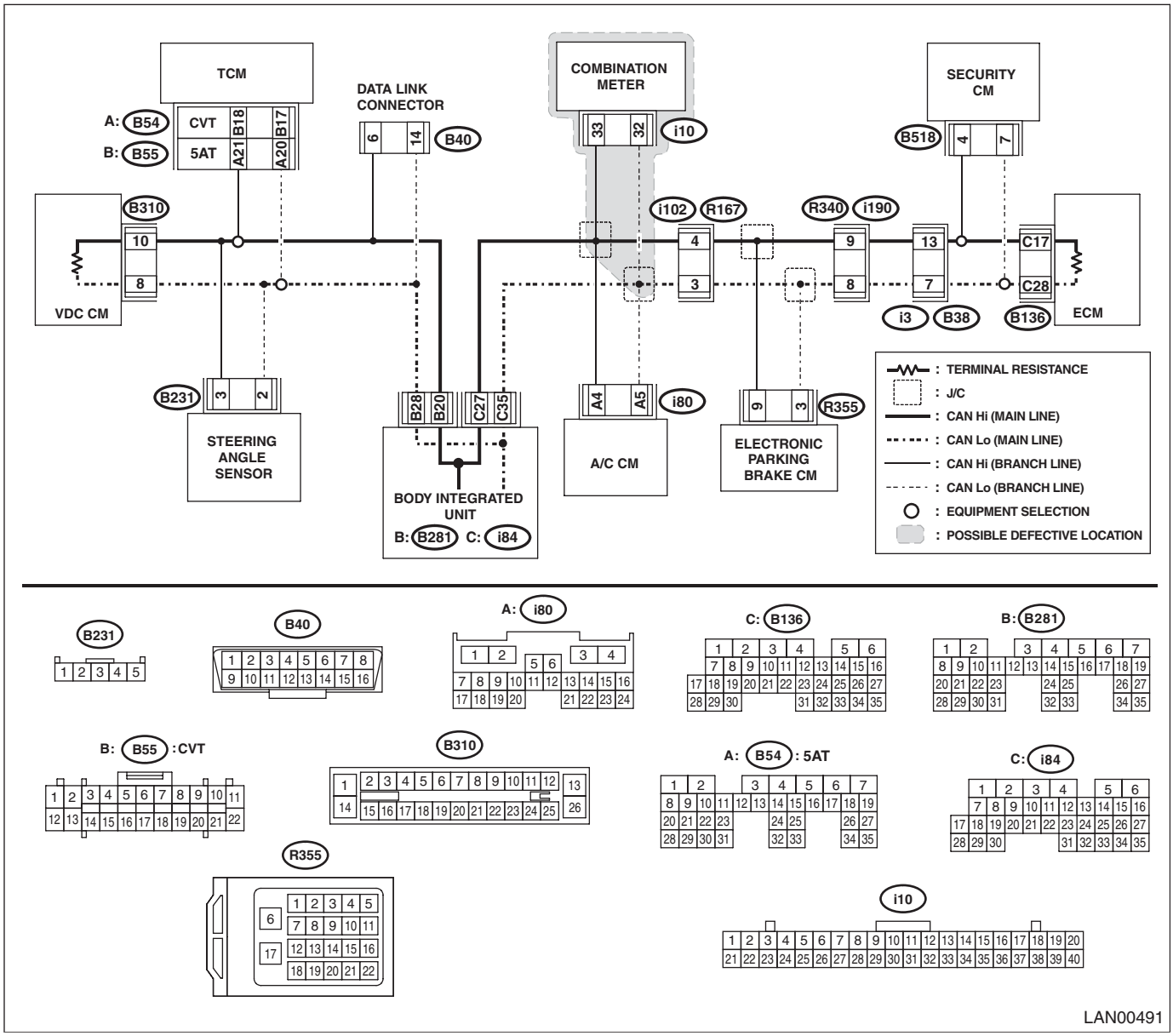
DTC DETECTING CONDITION:

Defective data was transmitted from combination meter.

TROUBLE SYMPTOM:

Display of combination meter does not operate properly.

WIRING DIAGRAM:



LAN00491

Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U121A a current malfunction?	Go to step **3**.	Go to step **4**.
3	**CHECK DTC.** Turn the ignition switch to OFF, and read the DTC again.	Is U121A a current malfunction?	Replace the combination meter. <Ref. to IDI-20, REMOVAL, Combination Meter.>	Go to step **4**.

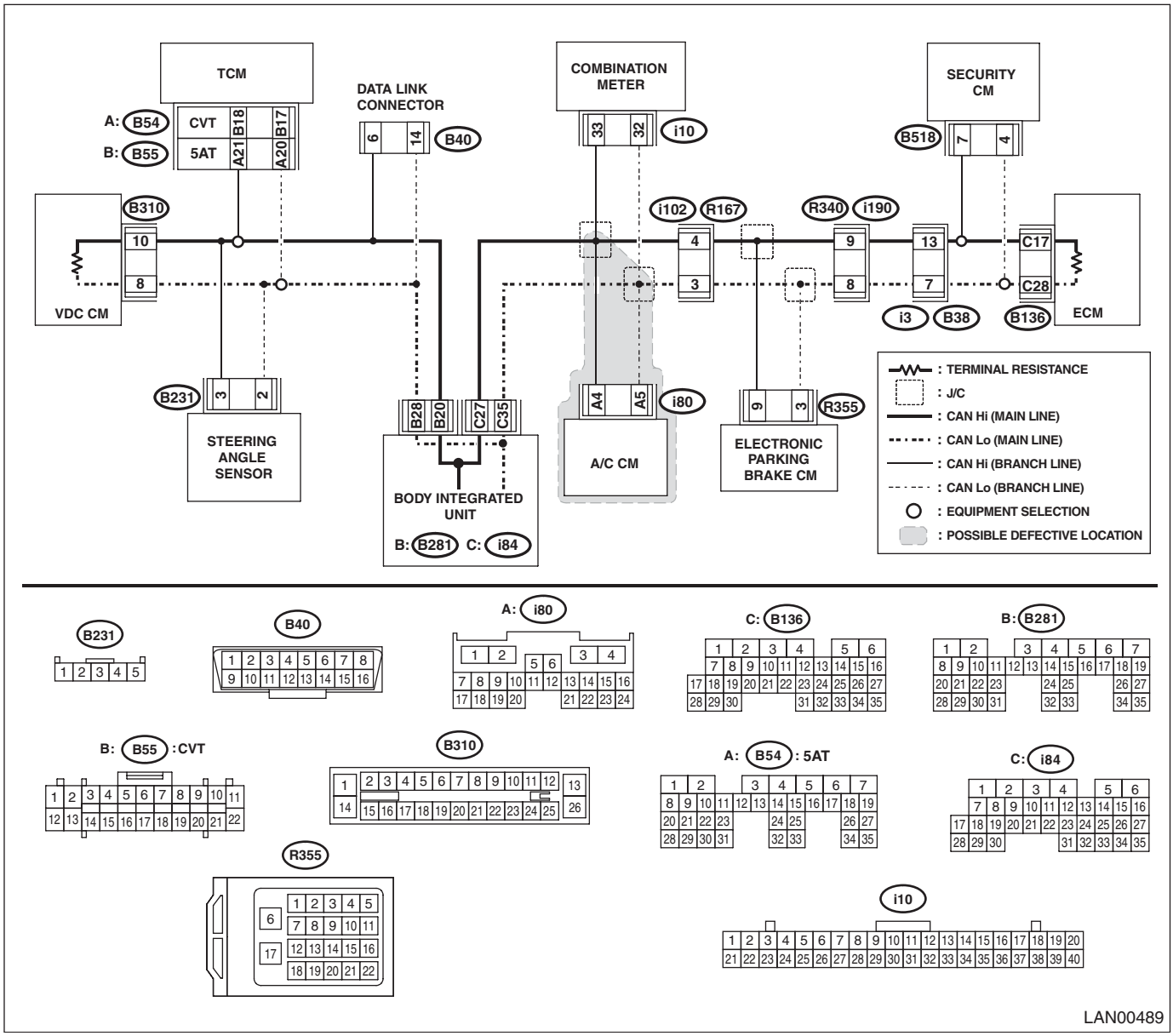
	Step	Check	Yes	No
4	**CHECK COMBINATION METER.** 1) Disconnect the combination meter connector. 2) Using the Subaru Select Monitor, perform the clear memory. 3) Using the Subaru Select Monitor, read DTC of CAN system.	Is the displayed DTC other than U121A?	Go to step **5**.	Replace the combination meter. <Ref. to IDI-20, REMOVAL, Combination Meter.>
5	**CHECK COMBINATION METER.** 1) Connect the combination meter connector. 2) Using the Subaru Select Monitor, read DTC of combination meter. <Ref. to IDI-6, SELF-DIAGNOSIS DISPLAY MODE, OPERATION, Combination Meter System.>	Is DTC other than CAN system displayed?	Perform the diagnosis according to DTC.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>

I: DTC U121B CAN-HS A/C DATA ABNORMAL

DTC DETECTING CONDITION:
Defective data was transmitted from A/C CM.

TROUBLE SYMPTOM:
Cooperation control of air conditioner does not operate properly.

WIRING DIAGRAM:



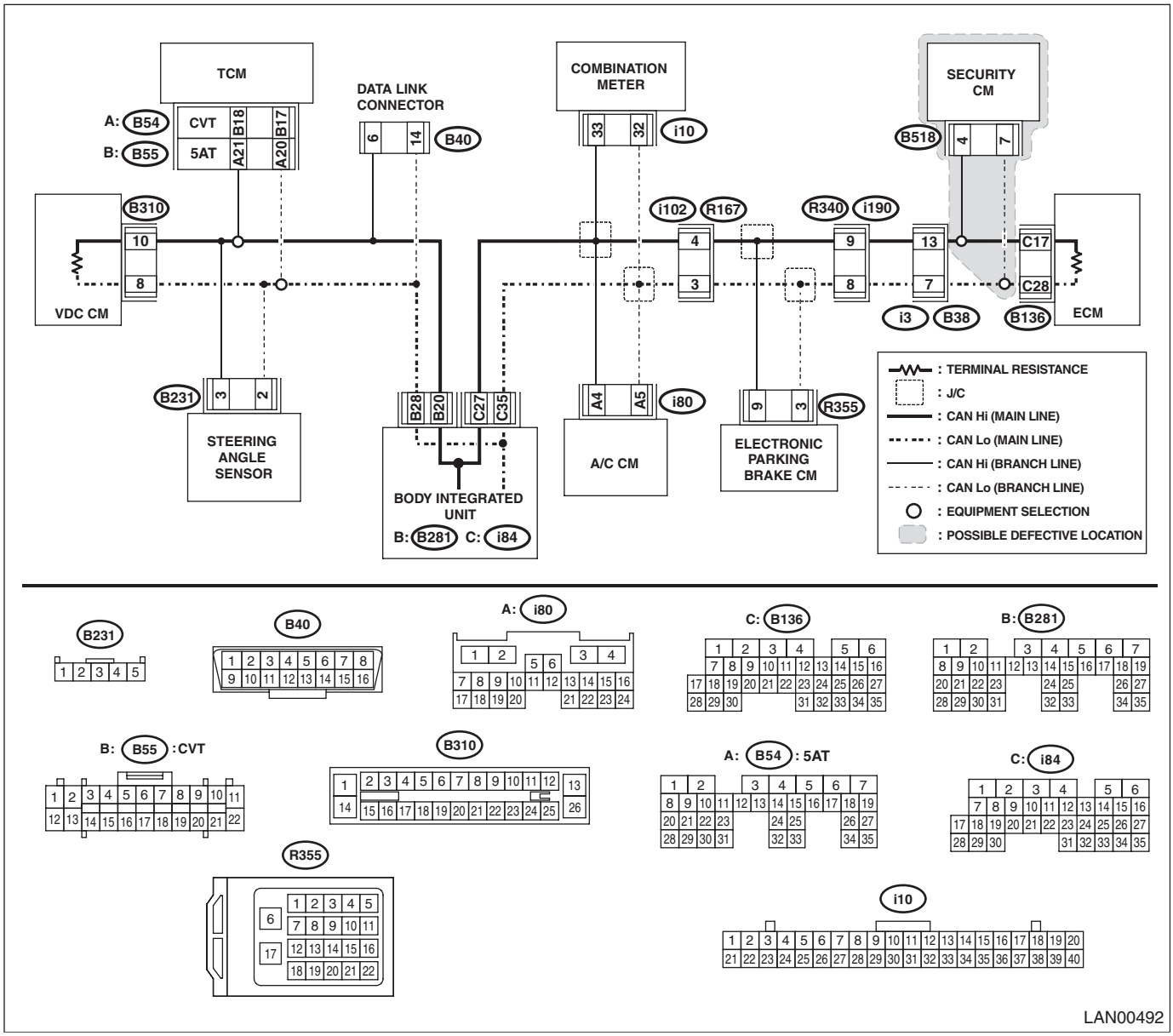
LAN00489

Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U121B a current malfunction?	Go to step **3**.	Go to step **4**.
3	**CHECK DTC.** Turn the ignition switch to OFF, and read the DTC again.	Is U121B a current malfunction?	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>	Go to step **4**.

	Step	Check	Yes	No
4	**CHECK A/C CM.** 1) Disconnect the A/C CM connector. 2) Using the Subaru Select Monitor, perform the clear memory. 3) Using the Subaru Select Monitor, read DTC of CAN system.	Is the displayed DTC other than U121B?	Go to step **5**.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>
5	**CHECK A/C CM.** 1) Connect the A/C CM connector. 2) Using the Subaru Select Monitor, read DTC of A/C CM. <Ref. to AC(diag)-25, OPERATION, Subaru Select Monitor.>	Is DTC other than CAN system displayed?	Perform the diagnosis according to DTC.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>

J: DTC U121C CAN-HS SCU DATA ABNORMAL

DTC DETECTING CONDITION:
Defective data was transmitted from SCM.
TROUBLE SYMPTOM:
Immobilizer does not operate normally.
WIRING DIAGRAM:



LAN00492

Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U121C a current malfunction?	Go to step **3**.	Go to step **4**.
3	**CHECK DTC.** Turn the ignition switch to OFF, and read the DTC again.	Is U121C a current malfunction?	Replace SCM. <Ref. to SL-66, REMOVAL, Security Control Module.>	Go to step **4**.

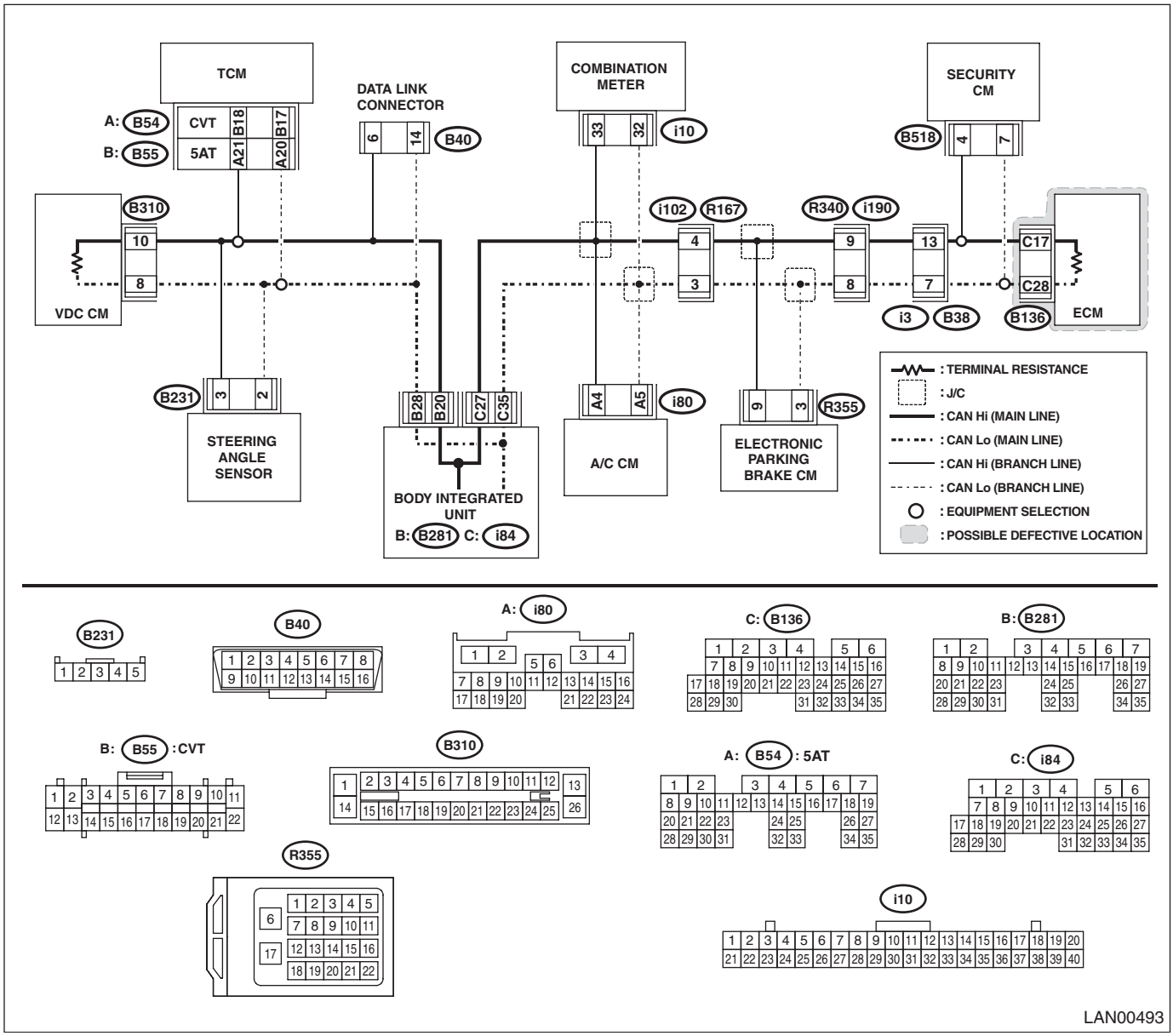
	Step	Check	Yes	No
4	**CHECK SCM.** 1) Disconnect the connector from SCM. 2) Using the Subaru Select Monitor, perform the clear memory. 3) Using the Subaru Select Monitor, read DTC of CAN system.	Is the displayed DTC other than U121C?	Go to step **5**.	Replace SCM. <Ref. to SL-66, REMOVAL, Security Control Module.>
5	**CHECK SCM.** 1) Connect the SCM connector. 2) Using the Subaru Select Monitor, read DTC of immobilizer. <Ref. to IM(diag)-9, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC other than CAN system displayed?	Perform the diagnosis according to DTC.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>

K: DTC U1221 CAN-HS ECM NO-RECEIVE DATA

DTC DETECTING CONDITION:
Not received data from ECM.

TROUBLE SYMPTOM:
Cooperation control of transmission may not operate properly.

WIRING DIAGRAM:



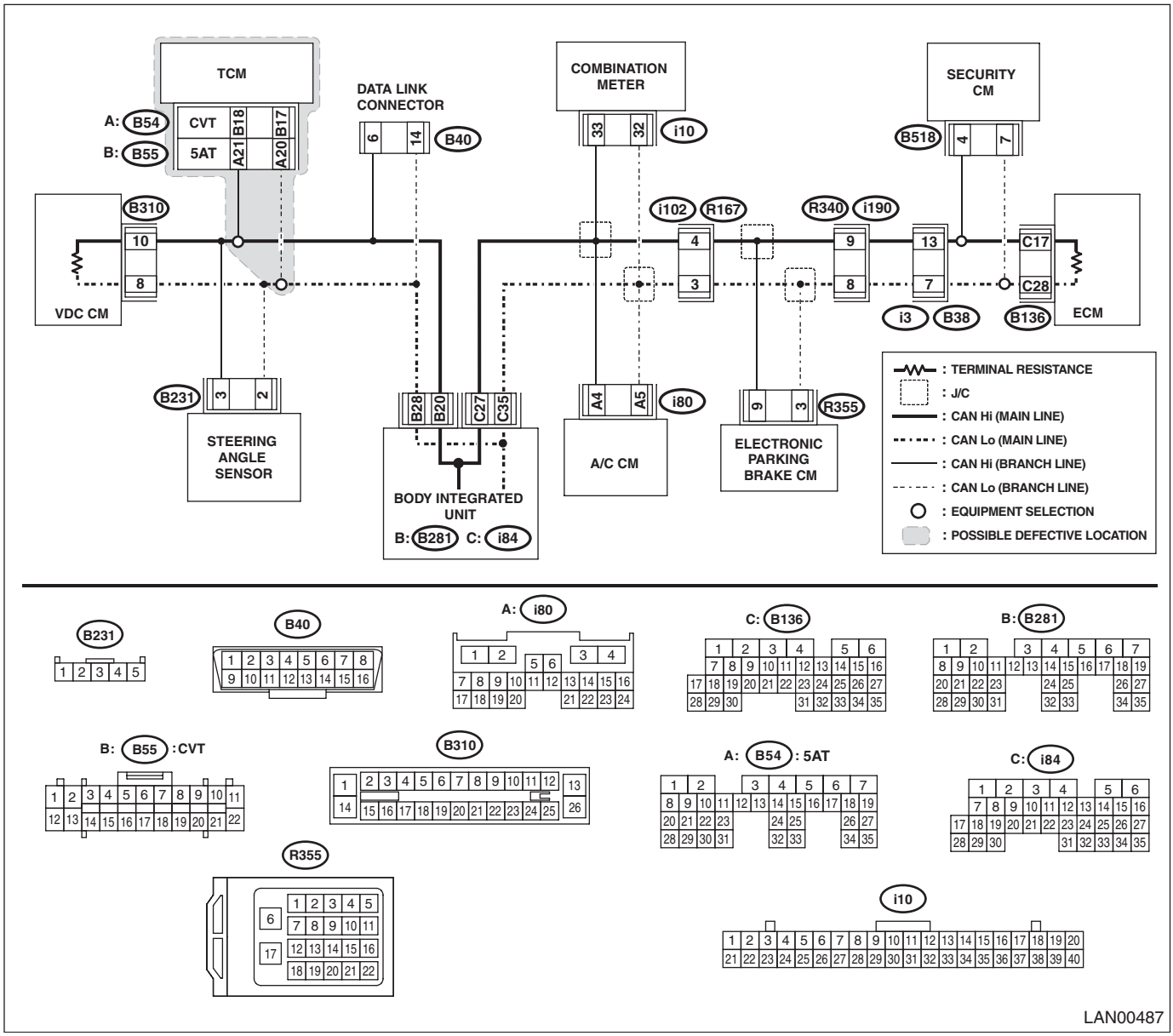
LAN00493

Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U1221 a current malfunction?	Go to step **3**.	Go to step **7**.

	Step	Check	Yes	No
3	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the control module connector that is connected to high speed CAN. 3) Connect the disconnected connectors. 4) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1221 a current malfunction?	Go to step **4**.	Go to step **7**.
4	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the control module connector that is connected to high speed CAN. 3) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B40) No. 6 — (B136) No. 17:*** ***(B40) No. 14 — (B136) No. 28:***	Is the resistance 10 Ω or less?	Go to step **5**.	Repair the open circuit of harness or replace harness.
5	**CHECK DTC.** 1) Connect the disconnected connectors. 2) Start the engine. 3) Turn the ignition switch to OFF. 4) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1221 a current malfunction?	Go to step **6**.	Go to step **7**.
6	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is P1718, C0044, C0045 detected?	Replace the ECM. <Ref. to FU(H4DOTC)-57, REMOVAL, Engine Control Module (ECM).>	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>
7	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1221 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **8**.
8	**CHECK CONNECTOR.** Check the connecter used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector, or replace harness.	It may be a temporary communication malfunction. Delete the DTC.

L: DTC U1222 CAN-HS TCM NO-RECEIVE DATA

DTC DETECTING CONDITION:
Not received data from TCM.
TROUBLE SYMPTOM:
Cooperation control with transmission is not performed.
WIRING DIAGRAM:



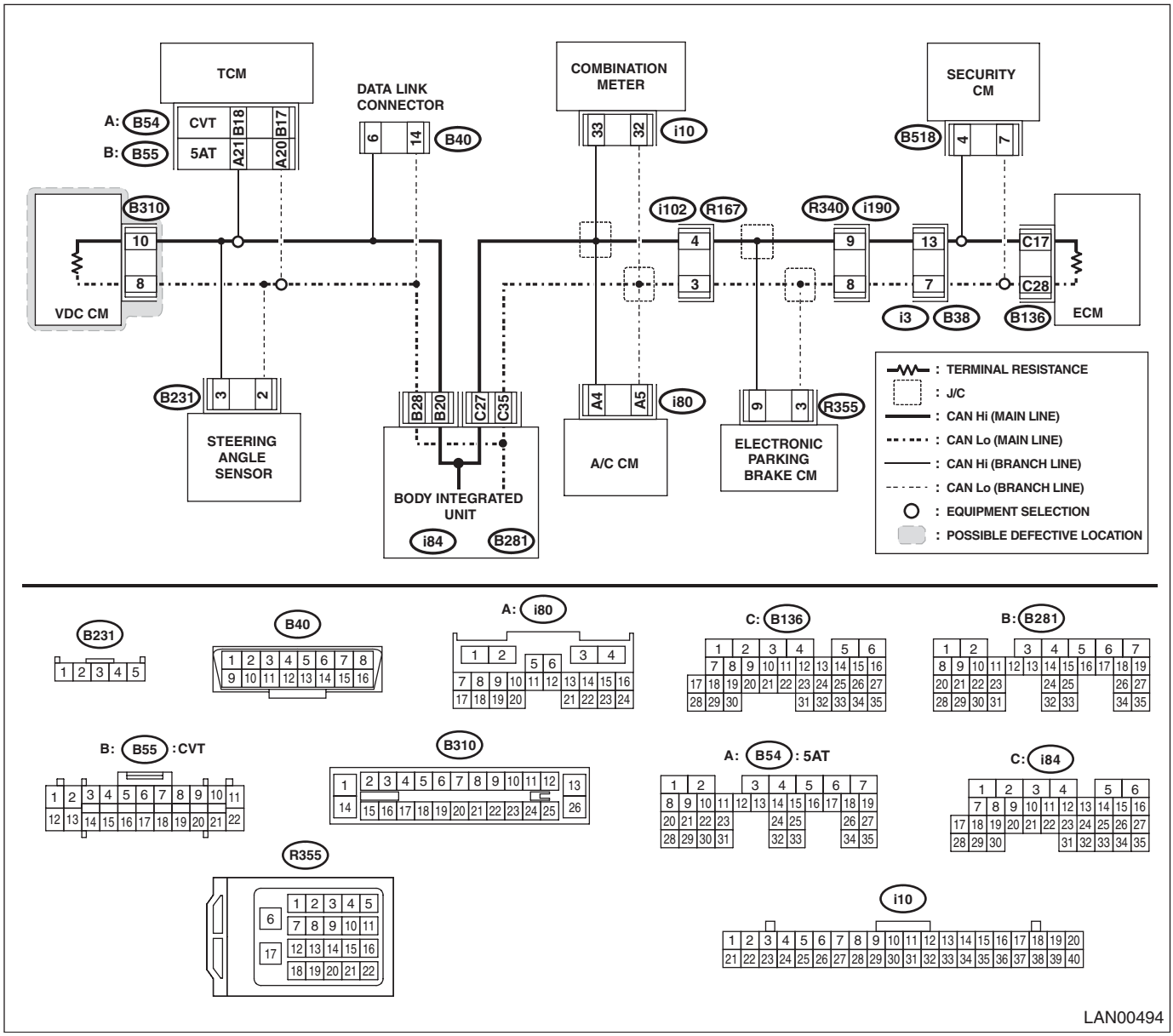
LAN00487

Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U1222 a current malfunction?	Go to step **3**.	Go to step **7**.

	Step	Check	Yes	No
3	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the control module connector that is connected to high speed CAN. 3) Connect the disconnected connectors. 4) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1222 a current malfunction?	Go to step **4**.	Go to step **7**.
4	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the control module connector that is connected to high speed CAN. 3) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B40) No. 6 — (B55) No. 18 (CVT):*** ***(B40) No. 14 — (B55) No. 17 (CVT):*** ***(B40) No. 6 — (B54) No. 21 (5AT):*** ***(B40) No. 14 — (B54) No. 20 (5AT):***	Is the resistance 10 Ω or less?	Go to step **5**.	Repair the open circuit of harness or replace harness.
5	**CHECK DTC.** 1) Connect the disconnected connectors. 2) Start the engine. 3) Turn the ignition switch to OFF (stop the engine). 4) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1222 a current malfunction?	Go to step **6**.	Go to step **7**.
6	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is P1718, C0044, C0045 detected?	Replace the TCM. <Ref. to 5AT-58, REMOVAL, Transmission Control Module (TCM).>	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>
7	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1222 a current malfunction?	Repair the open circuit of harness or replace harness.	Go to step **8**.
8	**CHECK CONNECTOR.** Check the connecter used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector, or replace harness.	It may be a temporary communication malfunction. Delete the DTC.

M: DTC U1223 CAN-HS VDC NO-RECEIVE DATA

DTC DETECTING CONDITION:
No data from VDCCM is received.
TROUBLE SYMPTOM:
ABS warning light and VDC warning light illuminate.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U1223 a current malfunction?	Go to step **3**.	Go to step **7**.

	Step	Check	Yes	No
3	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the control module connector that is connected to high speed CAN. 3) Connect the disconnected connectors. 4) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1223 a current malfunction?	Go to step **4**.	Go to step **7**.
4	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the control module connector that is connected to high speed CAN. 3) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B40) No. 6 — (B310) No. 10:*** ***(B40) No. 6 — (B231) No. 3:*** ***(B40) No. 14 — (B310) No. 8:*** ***(B40) No. 14 — (B231) No. 2:***	Is the resistance 10 Ω or less?	Go to step **5**.	Repair the open circuit of harness or replace harness.
5	**CHECK DTC.** 1) Connect the disconnected connectors. 2) Start the engine. 3) Turn the ignition switch to OFF. 4) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1223 a current malfunction?	Go to step **6**.	Go to step **7**.
6	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is P1718 detected?	Replace the VDC CM. <Ref. to VDC-7, REMOVAL, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>
7	**CHECK HARNESS.** 1) Shake the harness, and check for poor contact. 2) Using the Subaru Select Monitor, read DTC of CAN system.	Is U1223 a current malfunction?	Repair the poor contact of harness, or replace the harness.	Go to step **8**.
8	**CHECK CONNECTOR.** Check the connecter used for high speed CAN for poor contact.	Is there poor contact of connector?	Repair the connector, or replace harness.	It may be a temporary communication malfunction. Delete the DTC.

N: DTC U1229 CAN-HS EPB NO-RECEIVE DATA

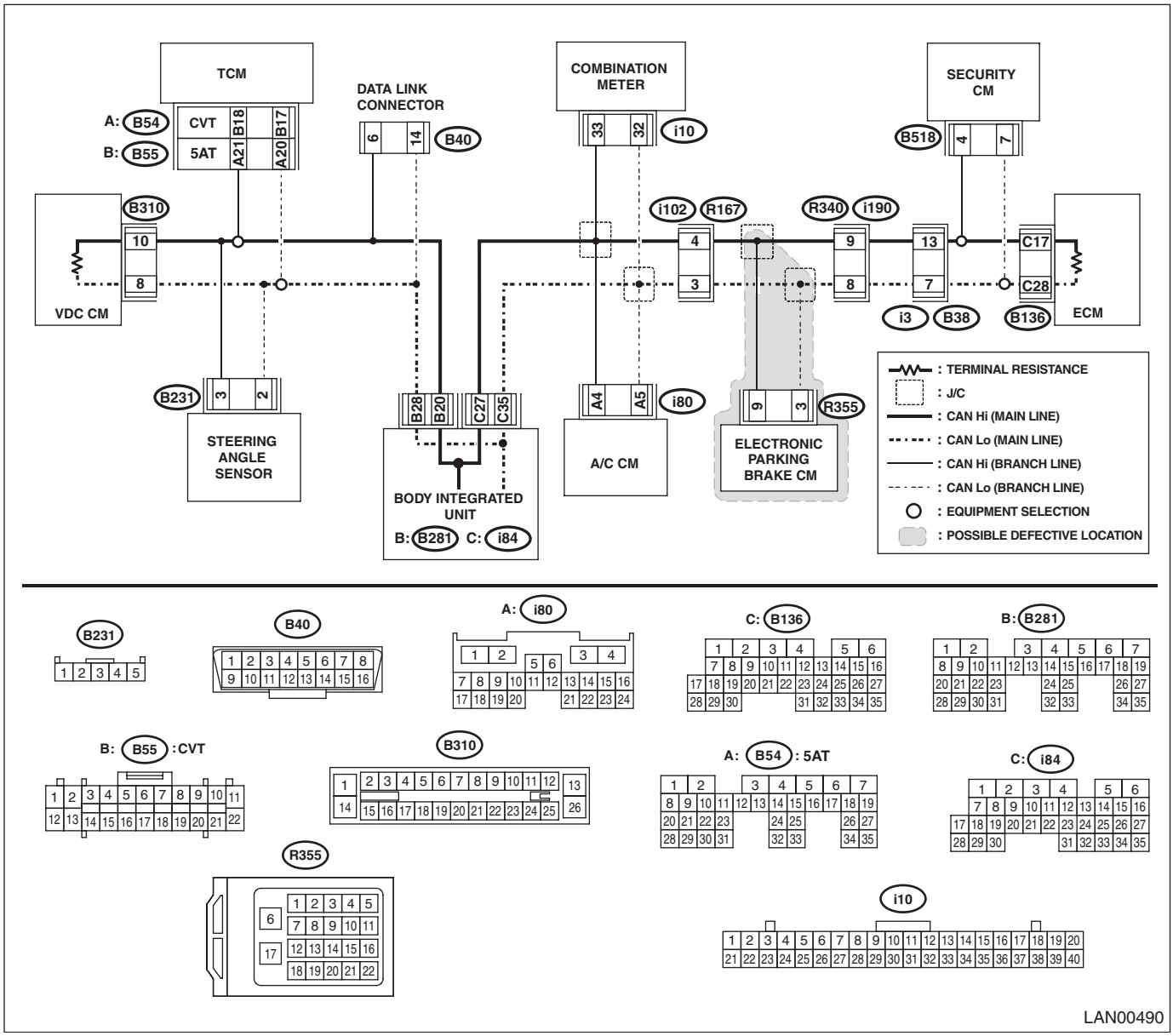
DTC DETECTING CONDITION:

No data from electronic parking brake control module is received.

TROUBLE SYMPTOM:

Electronic parking brake cooperation control does not operate.

WIRING DIAGRAM:

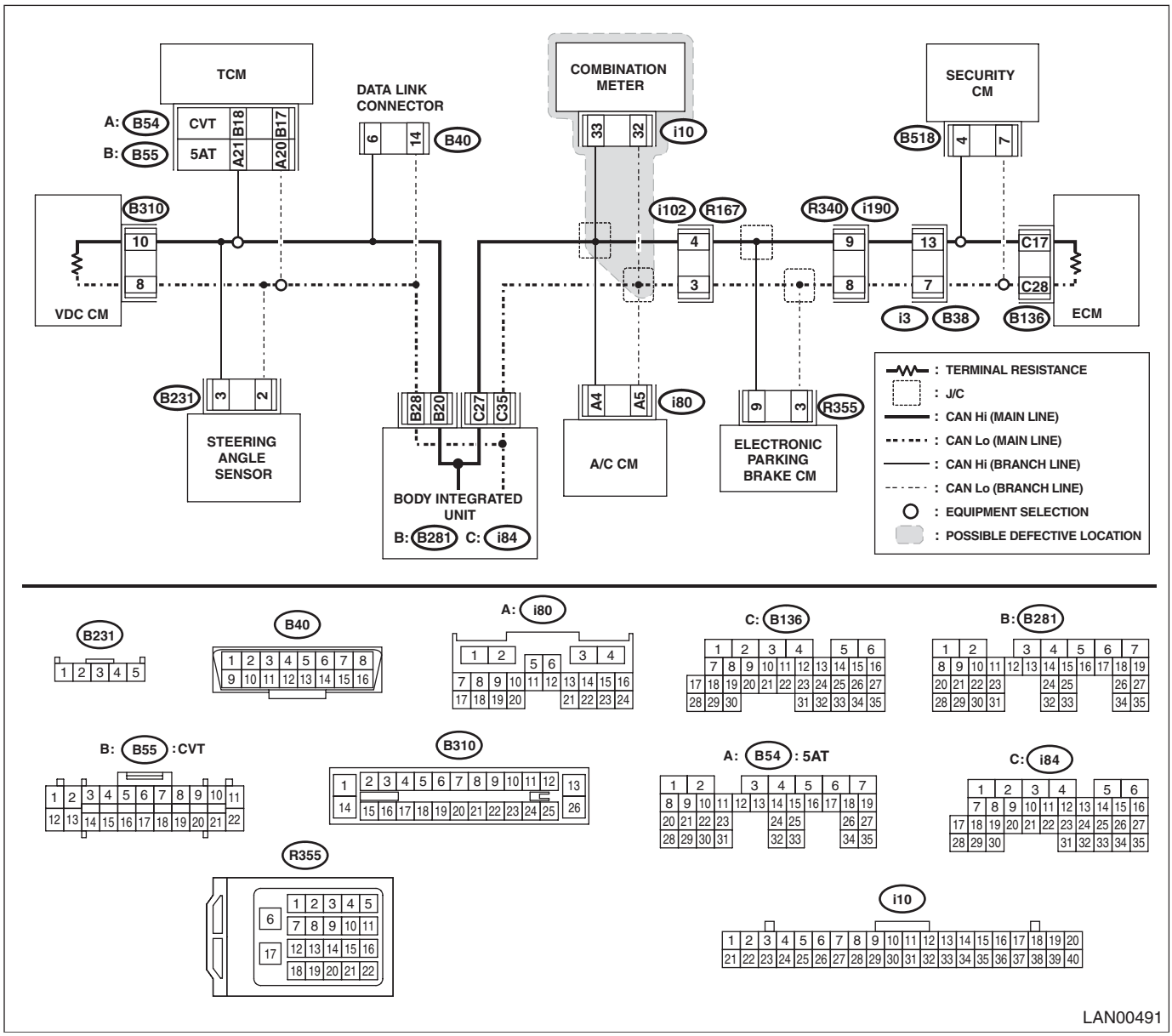


Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U1229 a current malfunction?	Go to step **3**.	Go to step **4**.

	Step	Check	Yes	No
3	**CHECK DTC.** Turn the ignition switch to OFF, and read the DTC again.	Is U1229 a current malfunction?	Replace the electronic parking CM. <Ref. to PB-5, REMOVAL, Parking Brake Actuator.>	Go to step **4**.
4	**CHECK ELECTRONIC PARKING CM.** 1) Disconnect the electronic parking CM connector. 2) Using the Subaru Select Monitor, perform the clear memory. 3) Using the Subaru Select Monitor, read DTC of CAN system.	Is the displayed DTC other than U1229?	Go to step **5**.	Replace the electronic parking CM. <Ref. to PB-5, REMOVAL, Parking Brake Actuator.>
5	**CHECK ELECTRONIC PARKING CM.** 1) Connect the electronic parking CM connector. 2) Using the Subaru Select Monitor, read DTC of electronic parking CM. <Ref. to PB(diag)-14, OPERATION, Subaru Select Monitor.>	Is DTC other than CAN system displayed?	Perform the diagnosis according to DTC.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>

O: DTC U122A CAN-HS METER NO-RECEIVE DATA

DTC DETECTING CONDITION:
No data received from combination meter.
TROUBLE SYMPTOM:
Display of combination meter does not operate properly.
WIRING DIAGRAM:



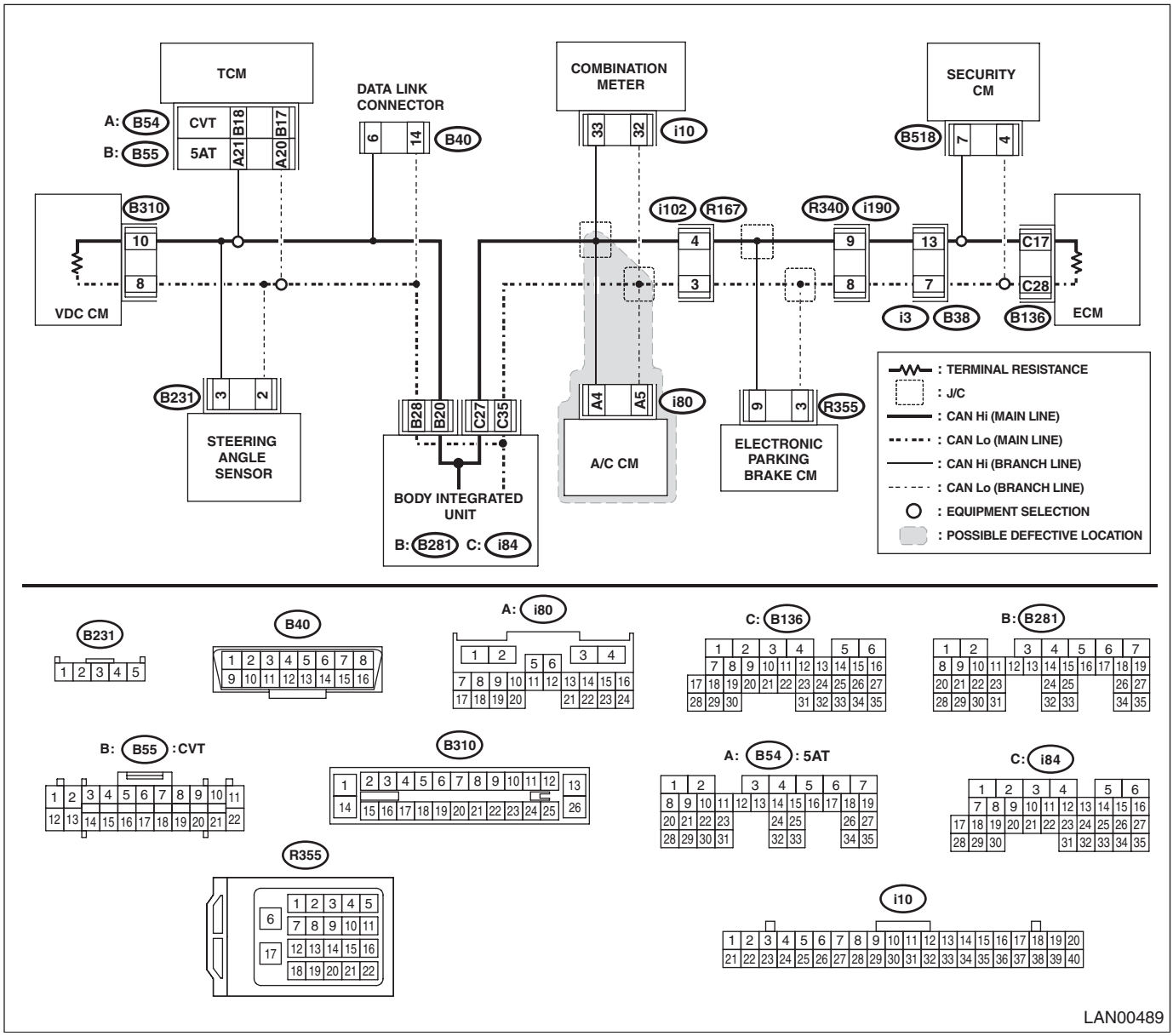
LAN00491

Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U122A a current malfunction?	Go to step **3**.	Go to step **4**.
3	**CHECK DTC.** Turn the ignition switch to OFF, and read the DTC again.	Is U122A a current malfunction?	Replace the combination meter. <Ref. to IDI-20, REMOVAL, Combination Meter.>	Go to step **4**.

	Step	Check	Yes	No
4	**CHECK COMBINATION METER.** 1) Disconnect the combination meter connector. 2) Using the Subaru Select Monitor, perform the clear memory. 3) Using the Subaru Select Monitor, read DTC of CAN system.	Is the displayed DTC other than U122A?	Go to step **5**.	Replace the combination meter. <Ref. to IDI-20, REMOVAL, Combination Meter.>
5	**CHECK COMBINATION METER.** 1) Connect the combination meter connector. 2) Using the Subaru Select Monitor, read DTC of combination meter. <Ref. to IDI-6, SELF-DIAGNOSIS DISPLAY MODE, OPERATION, Combination Meter System.>	Is DTC other than CAN system displayed?	Perform the diagnosis according to DTC.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>

P: DTC U122B CAN-HS A/C NO-RECEIVE DATA

DTC DETECTING CONDITION:
No data received from A/C CM.
TROUBLE SYMPTOM:
Cooperation control of air conditioner does not operate properly.
WIRING DIAGRAM:



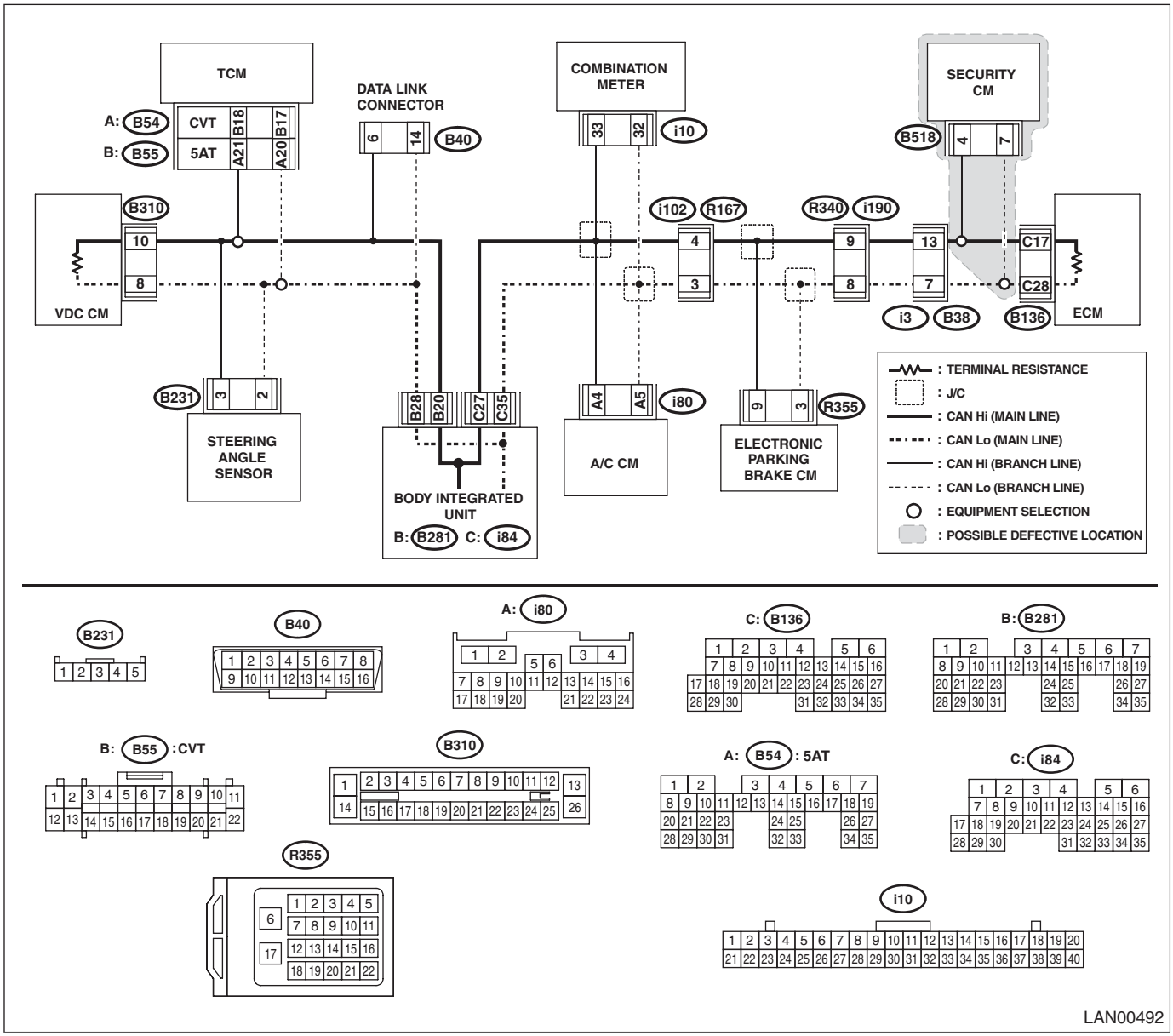
LAN00489

Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U122B a current malfunction?	Go to step **3**.	Go to step **4**.
3	**CHECK DTC.** Turn the ignition switch to OFF, and read the DTC again.	Is U122B a current malfunction?	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>	Go to step **4**.

Step		Check	Yes	No
4	**CHECK A/C CM.** 1) Disconnect the A/C CM connector. 2) Using the Subaru Select Monitor, perform the clear memory. 3) Using the Subaru Select Monitor, read DTC of CAN system.	Is the displayed DTC other than U122B?	Go to step **5**.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>
5	**CHECK A/C CM.** 1) Connect the A/C CM connector. 2) Using the Subaru Select Monitor, read DTC of A/C CM. <Ref. to AC(diag)-25, OPERATION, Subaru Select Monitor.>	Is DTC other than CAN system displayed?	Perform the diagnosis according to DTC.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>

Q: DTC U122C CAN-HS SCU NO-RECEIVE DATA

DTC DETECTING CONDITION:
No data received from SCM.
TROUBLE SYMPTOM:
Immobilizer does not operate normally.
WIRING DIAGRAM:



LAN00492

Step		Check	Yes	No
1	**CHECK DTC.** Using the Subaru Select Monitor, read all DTCs.	Is there DTC other than CAN system?	Perform the diagnosis according to DTCs for other control modules.	Go to step **2**.
2	**CHECK DTC.** Check DTC indicated in CAN system.	Is U122C a current malfunction?	Go to step **3**.	Go to step **4**.
3	**CHECK DTC.** Turn the ignition switch to OFF, and read the DTC again.	Is U122C a current malfunction?	Replace SCM. <Ref. to SL-66, REMOVAL, Security Control Module.>	Go to step **4**.

	Step	Check	Yes	No
4	**CHECK SCM.** 1) Disconnect the connector from SCM. 2) Using the Subaru Select Monitor, perform the clear memory. 3) Using the Subaru Select Monitor, read DTC of CAN system.	Is the displayed DTC other than U122C?	Go to step **5**.	Replace SCM. <Ref. to SL-66, REMOVAL, Security Control Module.>
5	**CHECK SCM.** 1) Connect the SCM connector. 2) Using the Subaru Select Monitor, read DTC of immobilizer. <Ref. to IM(diag)-8, OPERATION, Subaru Select Monitor.>	Is DTC other than CAN system displayed?	Perform the diagnosis according to DTC.	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>

12.General Diagnostic Table

A: INSPECTION

Contents	Operation	Specifications		Note
		YES	NO	
Diagnostic code	DTC is displayed when inspecting all DTCs.	Perform the diagnosis according to DTC.	System is normal.	—
Speedometer	Faster vehicle speed than the actual speed is displayed.	VDC CM data may not be received.	System is normal.	Also, check vehicle speed pulse circuit.
Fuel gauge	Fuel is present, but displayed less than actual amount.	Communication error may be present.	System is normal.	Also, check the fuel gauge.
Fuel level warning light	Fuel is present, but the light illuminates.	Communication error may be present.	System is normal.	Also, check the fuel gauge.
Engine coolant temperature light	Engine coolant temperature illuminates in red or blue.	Communication error may be present.	System is normal.	Check the engine coolant light related items.
[S], [I] or [S#] indicator	Blinking.	Communication error may be present.	System is normal.	Check the intelligent switch.
VDC indicator	Illuminating.	Communication error may be present.	System is normal.	Check that VDC is not operating.
VDC OFF indicator	Illuminating.	Communication error may be present.	System is normal.	Check that VDC is not OFF.
Electronic parking brake warning, etc.	Blinking.	Communication error may be present.	System is normal.	Check the electronic parking system as well.
Brake warning, etc.	Illuminating.	Brake fluid may be low in amount, or communication error may be present.	System is normal.	Check brake related items.
Shift position	Not displayed.	Communication error may be present.	System is normal.	Also, check AT system.
AT temperature light	Blinking.	Communication error may be present.	System is normal.	Also, check AT system.
Door indicator	Not displayed.	Communication error may be present.	System is normal.	Check the door switch.
Clearance indicator	Not illuminating.	Communication error may be present.	System is normal.	Check the combination switch.
Hi beam indicator	Not illuminating.	Communication error may be present.	System is normal.	Check the combination switch.
Front fog indicator	Not illuminating.	Communication error may be present.	System is normal.	Check the combination switch.
Illumination	Illuminating at the maximum brightness.	Communication error may be present.	System is normal.	Also, check the illumination switch.

Contents	Operation	Specifications		Note
		YES	NO	
Cruise control indicator	Not illuminating.	Communication error may be present.	System is normal.	Check the cruise control system.
AWD indicator	Not illuminating.	Communication error may be present.	System is normal.	Check TCM.
Hill hold indicator	Not illuminating.	Communication error may be present.	System is normal.	Also, check VDC CM.

1. Basic Diagnostic Procedure

A: PROCEDURE

CAUTION:
• Subaru Select Monitor is required for reading DTC, performing diagnosis and reading current data.
• Remove foreign matter (dust, water, oil, etc.) from the body integrated unit connector during removal and installation.
• For model with immobilizer, registration of immobilizer is necessary after the replacement of control module, etc. For details, refer to the "PC application help for Subaru Select Monitor".

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

	Step	Check	Yes	No
1	**CHECK PRE-INSPECTION.** Ask the customer when and how the trouble occurred using the interview check list. <Ref. to BC(diag)-3, Check List for Interview.>	Did you interview the customer?	Go to step **2**.	Interview the customer.
2	**BASIC INSPECTION.** Check components which might affect body control. <Ref. to BC(diag)-6, INSPECTION, General Description.>	Is the component that might influence the body control problem normal?	Go to step **3**.	Repair or replace each component.
3	**CHECK DTC.** 1) Read the DTC. <Ref. to BC(diag)-13, OPERATION, Read Diagnostic Trouble Code (DTC).> NOTE: If the communication function of the Subaru Select Monitor cannot be executed properly, check the communication circuit. <Ref. to LAN(diag)-47, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).> 2) Record all DTCs and freeze frame data.	Is DTC displayed on Subaru Select Monitor?	Go to step **5**.	Go to step **4**.
4	**PERFORM GENERAL DIAGNOSTICS.** Inspect using "General Diagnostics Table". <Ref. to BC(diag)-40, General Diagnostic Table.>	Is result of inspection OK?	The body control system is normal.	Go to step **5**.
5	**PERFORM DIAGNOSIS.** 1) Correct the cause of trouble. 2) Perform the Clear Memory Mode. <Ref. to BC(diag)-14, OPERATION, Clear Memory Mode.> 3) Read the DTC. <Ref. to BC(diag)-13, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed on Subaru Select Monitor?	Repeat step 5 until DTC is not shown.	Finish the diagnosis.

2. Check List for Interview

A: CHECK

Inspect the following item about the vehicle's state.

1. DISPLAY STATUS OF FAILURE INFORMATION

Ignition position	❑ OFF ❑ ACC ❑ ON (before starting engine) ❑ START ❑ ON (after starting engine, engine is running) ❑ ON (after starting engine, engine is at a standstill)
Timing	❑ Immediately after turning the ignition ON. ❑ Immediately after turning the ignition to START.

2. SYMPTOMS

Vehicle condition	Clearance light does not illuminate.	❑ Yes / ❑ No
	Low beam does not illuminate.	❑ Yes / ❑ No
	Hi beam indicator does not illuminate	❑ Yes / ❑ No
	Front fog light indicator does not illuminate.	❑ Yes / ❑ No
	Rear fog light indicator does not illuminate.	❑ Yes / ❑ No
	Seat belt indicator light does not illuminate	❑ Yes / ❑ No
	Immobilizer indicator light does not illuminate	❑ Yes / ❑ No
	Clearance indicator does not illuminate	❑ Yes / ❑ No
	High beam does not illuminate.	❑ Yes / ❑ No
	Front fog light does not illuminate.	❑ Yes / ❑ No
	Rear fog light does not illuminate.	❑ Yes / ❑ No
	Key cannot be removed from key cylinder.	❑ Yes / ❑ No
	Key can be removed in other than P range	❑ Yes / ❑ No
	Shift lock does not operate.	❑ Yes / ❑ No
	Warning buzzer for key left in ignition does not beep.	❑ Yes / ❑ No
	Key illumination is blinking	❑ Yes / ❑ No
	Reverse warning buzzer does not sound	❑ Yes / ❑ No
	Driver's seat belt warning light does not illuminate.	❑ Yes / ❑ No
	Seat belt warning alarm does not sound.	❑ Yes / ❑ No
	Wiper deicer does not operate	❑ Yes / ❑ No
	Rear defogger does not operate	❑ Yes / ❑ No
	Illumination volume control is not available.	❑ Yes / ❑ No
	Front wiper does not operate	❑ Yes / ❑ No
	Rear wiper does not operate.	❑ Yes / ❑ No
	Central door lock does not operate	❑ Yes / ❑ No
	Keyless entry does not operate	❑ Yes / ❑ No
	Rear gate/trunk does not open	❑ Yes / ❑ No
	Hazard answer-back does not operate.	❑ Yes / ❑ No
	Answer-back buzzer does not sound	❑ Yes / ❑ No
	Key illumination does not illuminate	❑ Yes / ❑ No
	Key illumination is blinking	❑ Yes / ❑ No
	Room light does not interlock with doors	❑ Yes / ❑ No
	Room light blinks.	❑ Yes / ❑ No
	Map light does not interlock with doors	❑ Yes / ❑ No
	Map light blinks.	❑ Yes / ❑ No
	Luggage/trunk light does not interlock with rear gate/trunk	❑ Yes / ❑ No
	Luggage/trunk light is blinking	❑ Yes / ❑ No
	Engine does not start	❑ Yes / ❑ No
	Security monitoring does not start	❑ Yes / ❑ No
	Security cannot be cancelled	❑ Yes / ❑ No
	Hazard does not blink during security monitoring	❑ Yes / ❑ No
	Horn does not sound during security monitoring	❑ Yes / ❑ No
	Operation starts immediately after security monitoring begins	❑ Yes / ❑ No
	Security monitoring does not begin even though an impact is applied (Models with impact sensor)	❑ Yes / ❑ No

3. CONDITIONS UNDER WHICH TROUBLE OCCURS

Driving condition	❑ At standstill (While idling) ❑ When the vehicle is running Vehicle speed km/h (MPH) ❑ While accelerating Acceleration km/h (MPH) to km/h (MPH) ❑ Decelerating (With braking) Deceleration km/h (MPH) to km/h (MPH) ❑ Decelerating (Without braking) Deceleration km/h (MPH) to km/h (MPH)
	❑ Flat road ❑ Uphill ❑ Downhill ❑ Gravel road ❑ Bumpy road ❑ Snowy road
	Does it occur when operating any part? Operated part: **TROUBLE SYMPTOM:**
	Are there any other troubles occurred? From where: **TROUBLE SYMPTOM:**

3. General Description

A: CAUTION

1. SUPPLEMENTAL RESTRAINT SYSTEM "AIRBAG"

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

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

B: INSPECTION

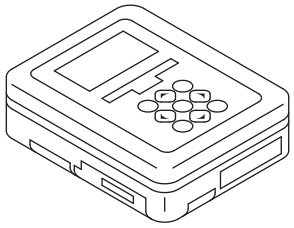
Before performing diagnosis, check the following items which might affect body control system problems.
1) Measure the battery voltage and check electrolyte.

Standard voltage: 12 V or more

Specific gravity: 1.260 or more
2) Check the fuse condition.
Make sure that ampere of the fuse is setting value, and it is not blown out.
3) Check the connecting condition of harness and harness connector.
4) Confirm settings of body integrated unit are corresponded to vehicle equipment. <Ref. to BC(diag)-22, OPERATION, Registration Body Integrated Unit.>
5) Make sure that the User Customizing of the body integrated unit matches the vehicle equipment. <Ref. to BC(diag)-20, OPERATION, User Customizing.>
6) Confirm "Factory or Market setting" of body integrated unit registrations is "Market".
7) Confirm key illumination does not blink with ignition switch turned to ON.

C: PREPARATION TOOL

1. SPECIAL TOOL

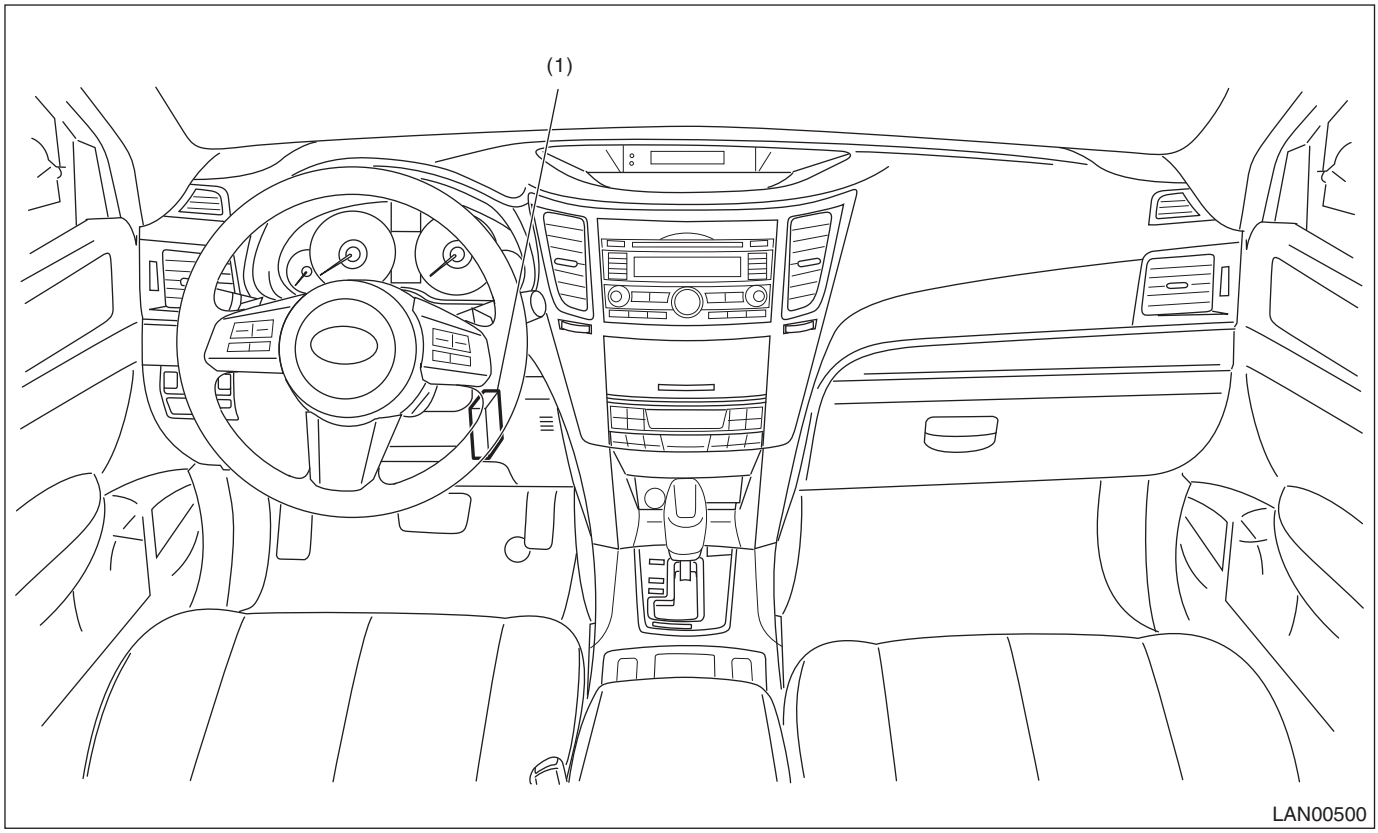
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for troubleshooting the electrical system.

2. GENERAL TOOL

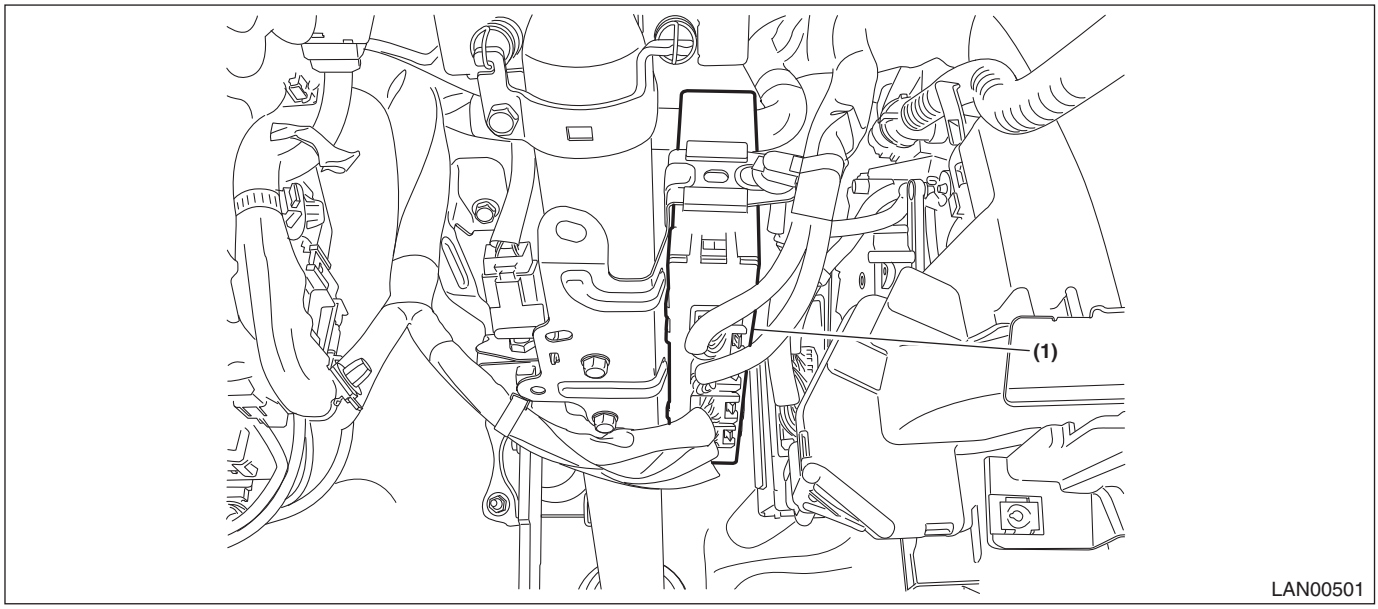
TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.

4. Electrical Component Location

A: LOCATION

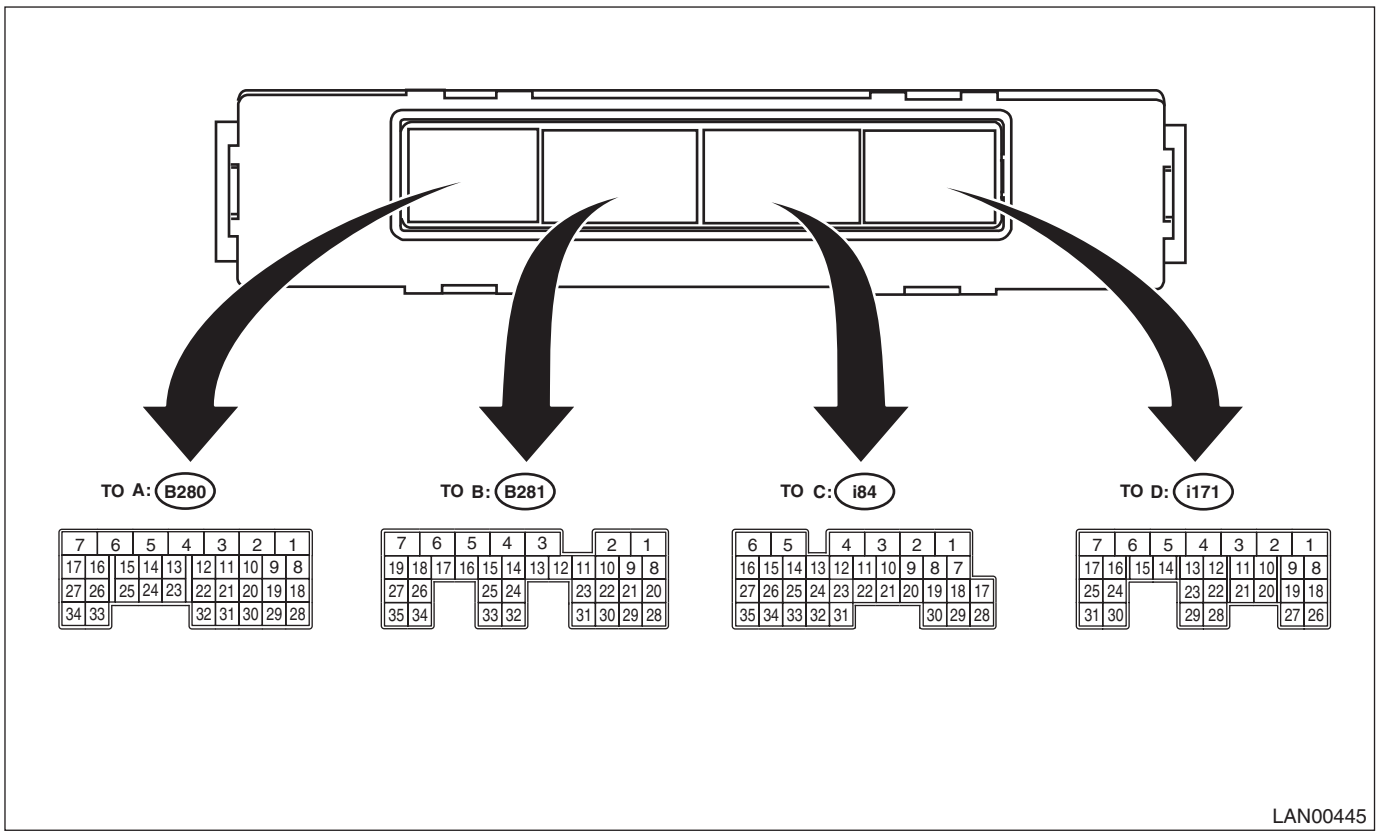


(1) Body integrated unit



5. Control Module I/O Signal

A: ELECTRICAL SPECIFICATION



Description	Connector No.	Terminal No.	Signal (V or Ω) Ignition switch ON (engine OFF)	Note
Ignition power supply (rear wiper)	B280	5 ← → chassis ground	Less than 1.5 V → 10 — 13 V	Ignition ON
Battery power supply (shift lock/key lock)	B281	6 ← → chassis ground	10 — 13 V	Always
Battery power supply (door lock)	i171	1 ← → chassis ground	10 — 13 V	Always
Battery power supply (control)	i84	6 ← → chassis ground	10 — 13 V	Always
GND	B280	1 ← → chassis ground	Less than 1.5 V	Always
	B281	31 ← → chassis ground		
	i84	1 ← → chassis ground		
	i171	29 ← → chassis ground		
Battery power supply (back-up)	B281	7 ← → chassis ground	10 — 13 V	Always
Ignition power supply	i171	17 ← → chassis ground	Less than 1.5 V → 10 — 13 V	Ignition ON
ACC power supply	i171	25 ← → chassis ground	Less than 1.5 V → 10 — 13 V	ACC ON
Key-in switch	B280	4 ← → chassis ground	Less than 1.5 V → 10 — 13 V	When key inserted
P range SW	B281	21 ← → chassis ground	8 V or more → less than 1.5 V	Shift lever shifted from P to other than P
Stop light SW	B280	10 ← → chassis ground	Less than 1.5 V → 8 V	Stop light switch ON
Door SW (driver's)	i84	14 ← → chassis ground	8 V or more → less than 1.5 V	Front right door open
Door SW (passenger's)	i84	13 ← → chassis ground	8 V or more → less than 1.5 V	Front left door open
Door SW (rear right)	i84	25 ← → chassis ground	8 V or more → less than 1.5 V	Rear right door open

Description	Connector No.	Terminal No.	Signal (V or Ω)	Note
			Ignition switch ON (engine OFF)	
Door SW (rear left)	i84	24 ← → chassis ground	8 V or more → less than 1.5 V	Rear left door open
Rear gate SW	B281	303 ← → chassis ground	8 V or more → less than 1.5 V	Rear gate open (wagon model)
Trunk SW	i84	33 ← → chassis ground	8 V or more → less than 1.5 V	Trunk open (sedan model)
Request SW (driver's)	i171	14 ← → chassis ground	8 V or more → less than 1.5 V	Request switch ON
Opener SW (trunk/rear gate)	i84	10 ← → chassis ground	8 V or more → less than 1.5 V	Rear gate/trunk opener switch ON
Manual switch (LOCK)	i84	9 ← → chassis ground	8 V or more → less than 1.5 V	Door lock switch ON
Manual switch (UNLOCK)	i84	20 ← → chassis ground	8 V or more → less than 1.5 V	Door unlock switch ON
Door lock status switch (driver's)	i84	12	Less than 1 Ω	Door in UNLOCK status
Door lock status switch (passenger's)	i84	23	Less than 1 Ω	Door in UNLOCK status
Door lock status switch (driver's)	i84	12 ← → chassis ground	8 V or more → less than 1.5 V	Door in UNLOCK status
Door lock status switch (passenger's)	i84	23 ← → chassis ground	8 V or more → less than 1.5 V	Door in UNLOCK status
TPMS	i84	34	Less than 1 Ω	At answer-back of transmitter registration
Lighting AUTO	B281	16 ← → chassis ground	8 V or more → less than 1.5 V	Switch at AUTO position
Lighting II	B280	34 ← → chassis ground	8 V or more → less than 1.5 V	Switch at II position
	B281	34 ← → chassis ground		
Lighting I	B281	17 ← → chassis ground	8 V or more → less than 1.5 V	Switch at I position
Dimmer passing	B281	25 ← → chassis ground	8 V or more → less than 1.5 V	Switch at passing position
Dimmer Hi beam	B281	15 ← → chassis ground	8 V or more → less than 1.5 V	Switch at Hi beam position
Front fog light SW	B281	26 ← → chassis ground	8 V or more → less than 1.5 V	Front fog light switch ON
Front wiper Lo	B281	11 ← → chassis ground	Less than 1.5 V → 8 V or more	Switch at Lo position
Front wiper Hi	B281	23 ← → chassis ground	Less than 1.5 V → 8 V or more	Switch at Hi position
	B280	28 ← → chassis ground		
Rear wiper SW ON	B280	12 ← → chassis ground	8 V or more → less than 1.5 V	Switch at ON position
Rear wiper SW INT	B280	22 ← → chassis ground	8 V or more → less than 1.5 V	Switch at INT position
Front washer SW	B281	32 ← → chassis ground	8 V or more → less than 1.5 V	Switch at ON position
Rear washer SW	B280	32 ← → chassis ground	8 V or more → less than 1.5 V	Switch at ON position
Illumination SW (Vi1)	i171	12 ← → chassis ground	Approx. 5 V	While clearance light illuminates
Illumination SW (Vi2)	i171	22 ← → chassis ground	0.3 — 4.5 V	
Illumination SW (Vi3)	i171	28 ← → chassis ground	Less than 1.5 V	Always
Bright SW	i84	21 ← → chassis ground	8 V or more → less than 1.5 V	Switch at ON position
Reverse SW (MT)	B281	22 ← → chassis ground	Less than 1.5 V → 8 V or more	Reverse SW ON
Fuel level sensor	i84	17 ← → chassis ground	2 — 96 Ω	Always
Seat belt SW (driver's)	i84	30 ← → chassis ground	Less than 1.5 V → 8 V or more	Buckle removal → insert
Seat belt SW (passenger's)	i84	29 ← → chassis ground	Less than 1.5 V → 8 V or more	Buckle removal → insert
Impact sensor	i84	28 ← → chassis ground	Less than 1.5 V → 8 V or more	Apply an impact

Description	Connector No.	Terminal No.	Signal (V or Ω)	Note
			Ignition switch ON (engine OFF)	
Hi-speed CAN communication circuit 1 (Hi)	B281	20	Serial communication	Except for sleep status *1
Hi-speed CAN communication circuit 1 (Lo)	B281	28		
Hi-speed CAN communication circuit 2 (Hi)	i84	27	Serial communication	Except for sleep status *1
Hi-speed CAN communication circuit 2 (Lo)	i84	35		
Low-speed CAN circuit (Hi)	B280	11	Serial communication	Except for sleep status *1
Low-speed CAN circuit (Lo)	B280	21		
LIN circuit	i171	16	Serial communication	Except for sleep status *1
K-line	B281	9	Serial communication	Select Monitor communication in progress
Audio/Navigation communication circuit	i171	21	Serial communication	
Keyless entry communication line	i171	11	Serial communication	
Immobilizer antenna	B281	1	0 — 30 V	Communication with ignition key in progress
	B281	2		
Key lock solenoid (LOCK)	B281	4 ← →3	Less than 1.5 V → 8 V or more	LOCK status ON (AT models) *2
Key lock solenoid (UNLOCK)	B281	3 ← →4		UNLOCK status ON (AT models) *2
Shift lock solenoid	B281	5 ← → chassis ground	Less than 1.5 V → 8 V or more	When shift lock is operating (AT models)
Rear wiper ON output	B280	7 ← → chassis ground	Less than 0.5 V → 8 V or more	Rear wiper operation in progress
Rear wiper return output	B280	6 ← → chassis ground	Less than 0.5 V → 8 V or more	Wiper reversed operation in progress
Door LOCK output	i171	2 ← → chassis ground	Less than 0.5 V → 8 V or more	When LOCK signal is output
Door UNLOCK output	i171	3 ← → chassis ground	Less than 0.5 V → 8 V or more	When UNLOCK signal is output
Rear gate/trunk UNLOCK output	i171	7 ← → chassis ground	Less than 0.5 V → 8 V or more	When UNLOCK signal is output
Lighting relay power supply	B280	3 ← → chassis ground	10 — 13 V	ACC or key-in SW ON
	B281	19 ← → chassis ground	10 — 13 V	ACC or key-in SW ON
Lighting relay Hi output	B280	17 ← → chassis ground	8 V or more → less than 1.0 V	Dimmer SW at Hi position
Lighting relay Lo output	B281	35 ← → chassis ground	8 V or more → less than 1.0 V	Dimmer SW at Lo position
Lighting Lo relay output 2	B280	27 ← → chassis ground	8 V or more → less than 1.0 V	Lighting II SW at ON position
Lighting relay I output	B280	16 ← → chassis ground	8 V or more → less than 1.0 V	Lighting I SW at ON position
Front fog light output	B280	15 ← → chassis ground	8 V or more → less than 1.0 V	Front fog light SW at ON position
Illumination output	B281	8	Pulse output	Illumination ON
	i84	16	Pulse output	Illumination ON
Key ring illumination	B280	25	Pulse output	Illumination ON
Room light output	i84	4	Pulse output	Room light ON (doors interlocked)
Foot light output	B280	33	Pulse output	In sync with room light output

Description	Connector No.	Terminal No.	Signal (V or Ω)	Note
			Ignition switch ON (engine OFF)	
Map light output	i171	8	Pulse output	Map light ON (keyless answer-back, etc.)
Luggage/trunk light output	i84	3	Pulse output	Luggage/trunk at open state
Front wiper return	B280	2 ← → chassis ground	Less than 1.5 V → 8 V or more	When front wiper is reversed
Front wiper Lo output	B280	8 ← → chassis ground	Less than 1.5 V → 8 V or more	Front wiper Lo SW ON
Front wiper Hi output	B281	27 ← → chassis ground	Less than 1.5 V → 8 V or more	Front wiper Hi SW ON
Front wiper Hi output 2	B280	18 ← → chassis ground	Less than 1.5 V → 8 V or more	Front wiper Hi SW ON
Rear defogger relay output	B280	26 ← → chassis ground	8 V or more → less than 1.0 V	Rear defogger SW ON
Wiper deicer relay output	i171	9 ← → chassis ground	8 V or more → less than 1.0 V	Wiper deicer SW ON
Turn/hazard output	i171	18 ← → chassis ground	8 V or more → less than 1.0 V	When answer-back is output
Security horn output	B280	24 ← → chassis ground	8 V or more → less than 1.0 V	When security is operating
Security light	i171	15	Pulse control	When security light is illuminating
Impact sensor	i171	26 ← → chassis ground	8 V or more → less than 1.0 V	When security is operating
Answer-back buzzer output	B280	20 ← → chassis ground	8 V or more → less than 1.0 V	When answer-back operates
Immobilizer communication	B280	31	Serial communication	

*1:
For CAN sleep state, hold on for approx. one minute with ignition OFF and the doors, trunk, rear gate all closed.
*2:
Use an oscilloscope for measurement due to short output time.

6. Read Diagnostic Trouble Code (DTC)

A: OPERATION

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

NOTE:
For details concerning DTC, refer to List of Diagnostic Trouble Code (DTC). <Ref. to BC(diag)-25, List of Diagnostic Trouble Code (DTC).>

7. Clear Memory Mode

A: OPERATION

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

8. Read Current Data

A: OPERATION

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

B: LIST

Items to be displayed	Unit of measure	Remarks	Note
BATT voltage (control)	10 — 15 V	Body integrated unit input value	Always
BATT voltage (BACKUP)	10 — 15 V	Body integrated unit input value	Always
IG power supply voltage	10 — 15 V	Body integrated unit input value	Ignition switch ON
ACC voltage	10 — 15 V	Body integrated unit input value	Ignition switch ACC
Illumination VR Voltage	0 — 5 V	Body integrated unit input value	Input value from illumination volume
Illumi. output d-ratio	0 — 100%	Body integrated unit output value	Small light ON Illumination volume is other than bright.
Ambient Temperature	–40 — 87.5°C	CAN data input value	Ignition switch ON
Fuel level voltage	0 — 8.89 V	Body integrated unit input value	Ignition switch ON
Fuel level resistance	0 — 102.3 Ω	Body integrated unit input value	Ignition switch ON
number of regist.	0 — 4	Number of keyless key registered	
Front Wheel Speed	km/h	CAN data input value	Reception from VDC module
Blower Fan Steps	0 — 2 levels	CAN data input value	0: OFF, 1: Low, 2: 2 levels or more Reception from air conditioner ECM
Fuel level resistance 2	0 — 102.3 Ω	CAN data output value	Reception from body integrated unit
Fuel consumption	cc/s	CAN data input value	Reception from ECM and transmission to center monitor
Coolant Temp.	–40 — 130°C	CAN data input value	Reception from ECM
Vehicle longitudinal G	m/s^2	CAN data input value	Reception from VDC module
Shift Position	0 — 7 levels	CAN data input value	0: 1, 1: 2, 2: 3, 3: 4, 4: D, 5: N, 6: R, 7: P shift position (8 indicates no input) Reception from TCM
Buzzer beeping request	No beeping Reverse warning Belt warning Key warning Beeping pattern 1 Beeping pattern 2 Free beeping ---	CAN data output value	Reception from body integrated unit
EPB Operating status	Error Cancellation Operation Operating Cancelling Dynamic parking	CAN data input value	Reception from EPB
D-belt warning light O/P	Light ON Light blinking Light OFF	CAN data input value	

Items to be displayed	Unit of measure	Remarks	Note
P-belt warning light O/P	Light ON Light blinking Light OFF	CAN data input value	
Engine displacement	1.5L — 3.6L	CAN data input value	Display engine equipped
Destination Code	0 — 16	CAN data input value	—
Illumination Sensor Output	0 — 1250 Hz	CAN data input value	—
key-lock warning SW	ON/OFF	Body integrated unit input value	ON when ignition key inserted
Stop Light Switch	ON/OFF	Body integrated unit input value	ON when brake pedal is depressed
Front fog lamp SW input	ON/OFF	Body integrated unit input value	When front fog light switch is ON
TPMS input	ON/OFF	Body integrated unit input value	TPMS registration answer-back signal
Driver's door SW input	ON/OFF	Body integrated unit input value	ON when driver's door is open
P-door SW input	ON/OFF	Body integrated unit input value	ON when passenger's door is open
Rear right door SW input	ON/OFF	Body integrated unit input value	ON when rear right door is open
Rear left door SW input	ON/OFF	Body integrated unit input value	ON when rear left door is open
R Gate SW input	ON/OFF	Body integrated unit input value	ON when rear gate/trunk open
Manual lock SW input	ON/OFF	Body integrated unit input value	Manual lock switch ON
Manual unlock SW input	ON/OFF	Body integrated unit input value	Manual unlock switch ON
Bright SW input	ON/OFF	Body integrated unit input value	Bright switch ON
P SW	ON/OFF	Body integrated unit input value	ON when shift range is in parking Shift lever P switch signal
MT Reverse Switch	ON/OFF	Body integrated unit input value	Reverse switch ON
R wiper ON SW input	ON/OFF	Body integrated unit input value	Rear wiper switch ON
R wiper INT SW input	ON/OFF	Body integrated unit input value	Rear wiper switch (INT ON)
R washer SW input	ON/OFF	Body integrated unit input value	Rear washer switch ON
Driver's Seat SW input	ON/OFF	Body integrated unit input value	Driver's seat buckle switch ON
P seatbelt SW input	ON/OFF	Body integrated unit input value	Passenger's seat buckle switch ON
Fr wiper input	ON/OFF	Body integrated unit input value	ON when front wiper is operating
R gate lock status SW input	ON/OFF	Body integrated unit input value	Displays latch state, ON when locked
Rear gate/Trunk release switch	ON/OFF	Body integrated unit input value	Rear gate/trunk release switch ON
Rr defogger output	ON/OFF	Body integrated unit output value	ON when rear defogger relay is operating
lock actuat. LOCK output	ON/OFF	Body integrated unit output value	ON when LOCK signal is output

Items to be displayed	Unit of measure	Remarks	Note
All seat UNLOCK output	ON/OFF	Body integrated unit output value	ON when unlock signal is output
D-seat UNLOCK output	ON/OFF	Body integrated unit output value	ON when unlock signal is output
R gate/trunk UNLK output	ON/OFF	Body integrated unit output value	ON when rear gate/trunk unlock signal is output
R wiper output	ON/OFF	Body integrated unit output value	ON when rear wiper motor is operating
Shift Lock Solenoid	ON/OFF	Body integrated unit output value	ON when shift lock solenoid is operating (only AT)
Key Lock solenoid	lock/unlock	Body integrated unit output value	With ignition switch ON and in other than the shift P range, with key in switch ON
wiper deicer output	ON/OFF	Body integrated unit output value	ON when wiper deicer relay is operating
Hazard Output	ON/OFF	Body integrated unit output value	ON when answer-back signal is received or when hazard is operating
Keyless Buzzer Output	ON/OFF	Body integrated unit output value	ON when lock/unlock signal is received
Horn Output	ON/OFF	Body integrated unit output value	ON when security warning is operating
Siren Output	ON/OFF	Body integrated unit output value	ON when siren equipped, customize setting enable, and security warning in operation
Illumination lamp O/P	ON/OFF	Body integrated unit output value	ON when illumination is illuminated
Room lamp output	ON/OFF	Body integrated unit output value	ON when keyless lock/unlock signal is received (when key in switch connector is removed)
key illumi. lamp o/p	ON/OFF	Body integrated unit output value	ON when key illumination light is illuminated
Immobilizer lamp output	ON/OFF	Body integrated unit output value	ON when immobilizer pilot light blinks
Keyless operation 1	Regist./Normal	Body integrated unit input value	When keyless registration connector connected
Keyless operation 2	Deletion/Normal	Body integrated unit input value	When keyless registration is deleted
Small Light SW	ON/OFF	Body integrated unit input value	ON when small light is illuminated
Headlamp	ON/OFF	Body integrated unit input value	ON when headlight Lo is illuminated
High Beam	ON/OFF	Body integrated unit input value	ON when headlight Hi is illuminated
Rr Defogger SW	ON/OFF	Body integrated unit output value	Rear defogger switch ON
Number of cylinders	4 Cylinder/6 Cylinder	CAN data input value	Display engine equipped
Cam shaft specification	SOHC/DOHC	CAN data input value	Display engine equipped
Turbo	Turbo/Non-turbo	CAN data input value	Display engine equipped
AT Vehicle ID Signal	ON/OFF	CAN data input value	Display transmission equipped
Blower fan information	ON/OFF	CAN data input value	ON when blower fan is operating (always OFF for auto A/C equipped models)
Auto A/C failure	OK/NG	CAN data input value	NG when there is a failure in auto air conditioning system Reception from auto A/C module
Lighting I Switch Input	ON/OFF	Body integrated unit input value	Small light switch ON

Items to be displayed	Unit of measure	Remarks	Note
Lighting II Switch Input	ON/OFF	Body integrated unit input value	Headlight switch ON
Lighting AUTO input	ON/OFF	Body integrated unit input value	Headlight AUTO switch ON
Dimmer Hi Switch Input	ON/OFF	Body integrated unit input value	Dimmer Hi switch ON
Dimmer Pass Switch Input	ON/OFF	Body integrated unit input value	Dimmer Pass switch ON
Illumination sensor flag	ON/OFF	Body integrated unit input value	
Lighting I Lamp Output	ON/OFF	Relay drive	ON when small light is illuminated
Lighting II Lamp Output	ON/OFF	Relay drive	ON when headlight is illuminated
Lighting Hi Lamp Output	ON/OFF	Relay drive	ON when headlight Hi is illuminated
Front Fog Lamp Output	ON/OFF	Relay drive	When front fog light relay ON output
DRL Cancel Output	ON/OFF	Relay drive	When DRL cancel relay ON output
Power Supply Tr	ON/OFF	Inner Tr drive	
Map lamp output	ON/OFF	Body integrated unit output value	
Luggage/Trunk lamp output	ON/OFF	Body integrated unit output value	
Off delay time	OFF — Long	Body integrated unit setting value	
Auto Light Sensitivity Adjustment	0 — 3	Body integrated unit setting value	
Rr defogger op. mode	Continuous/Normal	Body integrated unit setting value	
Security Alarm Setup	ON/OFF	Body integrated unit setting value	
Alarm delay setup	ON/OFF	Body integrated unit setting value	
Lockout prevention	ON/OFF	Body integrated unit setting value	
Impact sensor	ON/OFF	Body integrated unit setting value	
Answer-back buzzer setup	ON/OFF	Body integrated unit setting value	
Hazard answer-back setup	ON/OFF	Body integrated unit setting value	
Ans.-back Buzzer	ON/OFF	Body integrated unit setting value	
Auto locking	ON/OFF	Body integrated unit setting value	
Passive Alarm	ON/OFF	Body integrated unit setting value	
Door open warning	ON/OFF	Body integrated unit setting value	
Dome Light Alarm Setting	ON/OFF	Body integrated unit setting value	
Belt Warning Switch	ON/OFF	Body integrated unit setting value	
A/C ECM setting	ON/OFF	Body integrated unit setting value	
Line Navigation Setting	ON/OFF	Body integrated unit setting value	

Items to be displayed	Unit of measure	Remarks	Note
wiperdeicer	ON/OFF	Body integrated unit setting value	
Sedan/Wagon Setting	Sedan/wagon	Body integrated unit setting value	
MT/AT Setting	MT/AT	Body integrated unit setting value	
6MT Setting	6MT/Other than 6MT	Body integrated unit setting value	
Destination Setting	0 — 16	Body integrated unit setting value	
Factory or Market setting	Market/Factory	Body integrated unit setting value	Displays body integrated unit customizing
SCU applicable	Applicable/Not applicable	Body integrated unit setting value	(Models for Canada only)

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

9. User Customizing

A: OPERATION

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

List of User Customizing item

Data	Initial setting value	Customize setting	Remarks
Off delay time	Long		Delay time below can be selected by setting.
		OFF	0 seconds
		Short	10 seconds
		Normal	20 seconds
		Long	30 seconds
Auto Light Sensitivity Adjustment	Standard	1st	Slow response
		2nd	Standard
		3rd	Quick response
		4th	Fairly quick response
Rr defogger op. mode	Normal	Normal	Automatically stops in 15 minutes after switch is turned to ON.
		Continuous	Repeats active condition for 15 minutes and inactive condition for 2 minutes until switch is turned to OFF.
Wiper deicer op. mode	Normal	Normal	Automatically stops in 15 minutes after switch is turned to ON.
		Continuous	Repeats active condition for 15 minutes and inactive condition for 2 minutes until switch is turned to OFF.
Security Alarm Setup	OFF	ON	Security alarm (hazard, horn or siren) in active condition
		OFF	Security alarm in inactive condition
Impact Sensor Setup	OFF	ON	Workable when Impact Sensor Setup is set to “ON” Impact sensor function becomes activated.
		OFF	Impact sensor in inactive condition (Set to “OFF” in models without sensors.)
Alarm delay setup	ON		After the keyless lock operation, the alarm monitor starts after the following delay time has passed.
		ON	Delay time is 30 seconds.
		OFF	Delay time is 0 seconds.
Lockout prevention	ON	ON	Lockout prevention in active condition. (The function does not operate if safety knob is locked by hand.)
		OFF	Lockout prevention in inactive condition
Impact sensor (OP)	OFF	ON	Vehicle is controlled in impact sensor equipped mode. (Make sure to set to “OFF” for models without the impact sensor. When “ON”, hazard, horn or siren become activated by keyless lock (alarm monitor start).)
		OFF	Vehicle is controlled in no impact sensor mode.
Answer-back buzzer setup	ON	ON	When lock/unlock is selected by keyless entry system operation, buzzer operates.
		OFF	When lock/unlock is selected by keyless entry system operation, buzzer does not operate.
Hazard answer-back setup	ON	ON	When lock/unlock is selected by keyless entry system operation, hazard blinks.
		OFF	When lock/unlock is selected by keyless entry system operation, hazard does not interlock.

Data	Initial setting value	Customize setting	Remarks
Initial keyless setting	—	—	
		Execution	
Initial button setting	—	—	
		Execution	
Passive Alarm	ON	ON	
		OFF	
Door open warning	ON	ON	
		OFF	
Dome Light Alarm Setting	ON	ON	Room light illuminates interlocking with alarm.
		OFF	Room light does not illuminate interlocking with alarm.
Belt Warning Switch	ON	ON	Belt warning buzzer beeps.
		OFF	Belt warning buzzer stops.
Auto A/C ECU Setting	—	ON	Diagnoses with auto A/C ECU.
		OFF	Diagnoses without auto A/C ECU.
Line Navigation Setting	—	ON	Diagnoses with line navigation.
		OFF	Diagnoses without line navigation.
wiperdeicer	—	ON	Wiper deicer control is performed.
		OFF	Wiper deicer control is not performed.
Sedan/Wagon Setting	—	Sedan	Body control is performed by Sedan.
		Wagon	Body control is performed by Wagon.
MT/AT Setting	—	MT	Body control is performed by MT.
		AT	Body control is performed by AT.
6MT Setting	—	6MT	Body control is performed by 6MT.
		Other than 6MT	Body control is performed by other than 6MT.
Seat Memory Setting	—	ON	Performs control when seat memory is ON.
		OFF	Performs control when seat memory is OFF.
Factory or Market setting	Market	Market	Customize setting is reset when mode is switched from Market to Factory.
		Factory	

5) After setting, make sure that the setting changed in the {Current Data Display & Save} is same as vehicle equipment.

CAUTION:
- **The above settings must match the actual vehicle equipment.**
- **Do not change settings except for setting above while setting the functions.**
- **Be sure not to change Factory or Market setting except when installing a new body integrated unit.**

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

10.Registration Body Integrated Unit

A: OPERATION

1. CONFIRMATION OF CURRENT SETTING

1) On «Main Menu» display, select {Others}.
2) On «Other Menu» display, select {Customized Setting}.
3) Save the setting.
Required items for new registration. (Except for system not equipped)

Contents	Item to confirm				Remarks
number of regist.	1	2	3	4	Number of registered ID
Off delay time	OFF	Long	Normal	Short	Setting for lighting off time
Auto Light Sensitivity Adjustment	1st	2nd (Standard)	3rd	4th	1st (slow) — 4th (fairly quick)
Rr defogger op. mode	Normal		Continuous		
Wiper deicer op. mode	Normal		Continuous		
Security Alarm Setup	ON		OFF		
Impact Sensor Setup	ON		OFF		Option setting
Alarm delay setup	ON		OFF		
Lockout prevention	ON		OFF		
Impact sensor	ON		OFF		Option setting
Answer-back buzzer setup	ON		OFF		
Hazard answer-back setup	ON		OFF		
Passive Alarm	ON		OFF		
Door open warning	ON		OFF		
Dome Light Alarm Setting	ON		OFF		
Belt Warning Switch	ON		OFF		
A/C ECM setting	ON		OFF		Model with auto A/C
Line Navigation Setting	ON		OFF		Models with line navigation
wiperdeicer	ON		OFF		Option setting
Sedan/Wagon Setting	Wagon		Sedan		
MT/AT Setting	MT		AT		
6MT Setting	6MT		Other than 6MT		
Seat Memory Setting	ON		OFF		
Factory or Market setting	Factory		Market		Do not change to factory mode.

2. REGISTRATION BODY INTEGRATED UNIT (FUNCTION SETTING)

CAUTION:
For the body integrated unit, function selection is available to control the entire vehicle systems. It is possible to control the original functions of vehicle when registrations of body integrated unit and function setting are corresponded to vehicle equipment.
If registrations and function setting are different from vehicle equipment, vehicle system does not operate normally and diagnosis cannot be performed correctly. Pay attention to following item.
• Make sure that the vehicle equipment matches with the registration or user customizing contents.
• Do not change the settings of vehicle improperly.
• Confirm that the key illumination does not blink when the ignition switch is ON, and that "Factory or Market setting" of the body integrated unit registrations is set to "Market". If "Factory or Market setting" is set to "Factory," key illumination blinks when ignition key is turned ON, to notify that the settings are unconfirmed.
• Key illumination does not blink with ignition switch turned to ON and go off with door closed.
• Be sure to register immobilizer if body integrated unit is replaced with a new part. (model with immobilizer)
• Make a registration of immobilizer when the parts related to immobilizer have been replaced. Refer to the "PC application help for Subaru Select Monitor".
1) On «Main Menu» display, select {Each System Check}.
2) On «System Selection Menu» display, select {Integ. unit mode}.
3) Click the [OK] button after the control module name {Integ. Unit} is displayed.
4) On «Integ. unit mode failure diag» display, select {ECM customizing}.
5) Change the setting to the contents saved at confirmation of current setting.

CAUTION:
• To perform normal operation of vehicle and diagnosis, the above settings must match the actual vehicle equipment.
• When the body integrated unit is new or in Factory mode, the key illumination blinks, and user customizing is incomplete. Check the user customizing settings.
• Be sure not to change Factory or Market setting except when installing a new body integrated unit.

NOTE:
"Factory" mode:
• Body integrated unit has not been set yet. It can be recognized by key illumination blinking with ignition switch turned to ON.
• All replacement body integrated units are set to "Factory" mode. When replacing a body integrated unit, be sure to perform the registration operation.
"Market" mode:
• Each settings have been set. It can be recognized by key ring illumination coming on in concocting with room light and going off with ignition switch turned to ON.
6) Perform the Factory or Market setting. On the «ECM customizing" display screen of Subaru Select Monitor, select the {Factory or Market setting}.
7) Change the mode from Factory to Market.
8) Turn the ignition switch to OFF and settle the contents of settings.
9) Change the Subaru Select Monitor system selection to «Immobilizer» to register the immobilizer key. (model with immobilizer)
10) Perform procedures according to the "PC application help for Subaru Select Monitor".
11) When key registration is completed, "Do you want to register remote engine start?" is displayed. Perform registration only for equipped models.
12) Perform the User Customizing. <Ref. to BC(diag)-20, OPERATION, User Customizing.>

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

11.Function Check

A: OPERATION

NOTE:
In order to check the body integrated unit function, inspect the body integrated unit and actuator using Subaru Select Monitor without operating switches.
1) On «Main Menu» display, select {Each System Check}.
2) On «System Selection Menu» display, select {Integ. unit mode}.
3) On «Integ. unit mode failure diag» display, select {Function Check}.
4) Select an item to be operated on «Function check» display, and press the [OK] button.
5) Pressing [Next] starts, [End] cancels the operation and [OK] returns to the System Operation Check Mode display screen.

NOTE:
- If not equipped (based on area or condition), process will not go on.
- For detailed operation procedures, refer to “PC application help for Subaru Select Monitor”.

12.List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Contents	Content of diagnosis	Note
None	Communication for Initializing Impossible	Subaru Select Monitor communication is open or shorted.	<Ref. to LAN(diag)-47, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1100	Integ. Unit System Error	Body integrated unit internal error	<Ref. to BC(diag)-26, DTC B1100 INTEG. UNIT SYSTEM ERROR, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1101	BATT p/supply malfunction cont.	Open or short in battery power supply control circuit	<Ref. to BC(diag)-27, DTC B1101 BATT P/SUPPLY MALFUNCTION CONT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1102	BATT p/supply malfunction backup	Battery power supply backup circuit is open or shorted.	<Ref. to BC(diag)-29, DTC B1102 BATT P/SUPPLY MALFUNCTION BACKUP, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1103	Ignition power failure	IGN power supply circuit is open or shorted.	<Ref. to BC(diag)-31, DTC B1103 IGNITION POWER FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1104	ACC power failure	ACC power supply circuit is open or shorted.	<Ref. to BC(diag)-33, DTC B1104 ACC POWER FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1106	shift lock circuit Failure	Ground short of shift lock circuit	<Ref. to BC(diag)-35, DTC B1106 SHIFT LOCK CIRCUIT FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1401	M Collation NG	Malfunction related immobilizer	<Ref. to BC(diag)-37, DTC B1401 M COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1402	Immobilizer Key Collation NG	Malfunction related immobilizer	<Ref. to BC(diag)-37, DTC B1402 IMMOBILIZER KEY COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1403	E/G request NG	Malfunction related immobilizer	<Ref. to BC(diag)-37, DTC B1403 E/G REQUEST NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1405	SCU Collation NG	Malfunction related immobilizer	<Ref. to BC(diag)-37, DTC B1405 SCU COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1406	SCU_EEPROM_NG	Malfunction related immobilizer	<Ref. to BC(diag)-37, DTC B1406 SCU_EEPROM_NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1500	Keyless UART com. Malfunction	Open or short circuit in keyless UART circuit	<Ref. to BC(diag)-38, DTC B1500 KEYLESS UART COM. MALFUNCTION, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

13.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC B1100 INTEG. UNIT SYSTEM ERROR

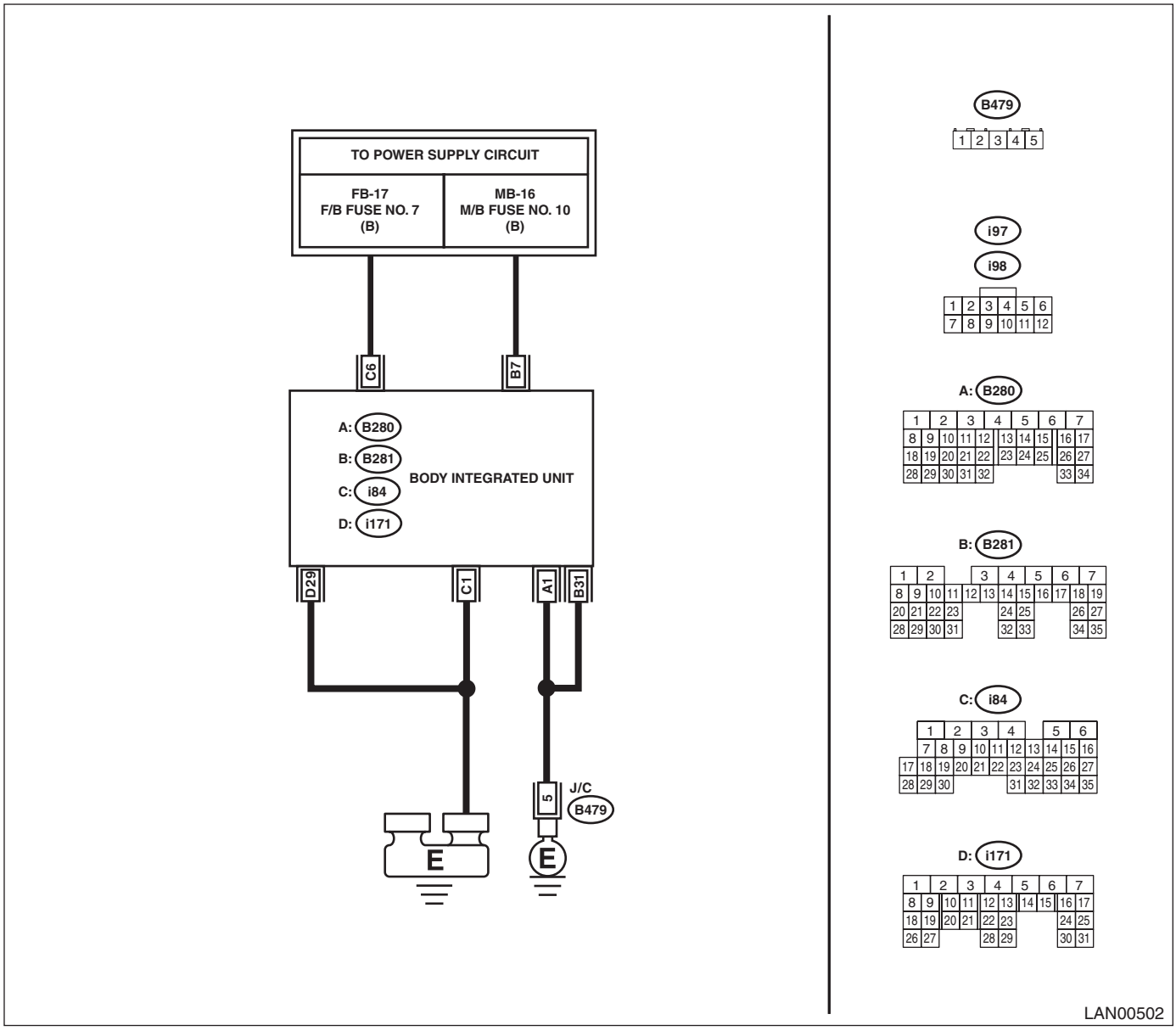
DTC DETECTING CONDITION:
System error in body integrated unit
TROUBLE SYMPTOM:
LAN communication immobilizer function may not be executed normally.

	Step	Check	Yes	No
1	**CHECK DTC.** Check DTC indicated by body integrated unit.	Is the DTC B1100 displayed current malfunction?	Go to step **2**.	Temporary EEPROM access error occurred.
2	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector. 3) Connect the disconnected connectors. 4) Read the DTC of body integrated unit using Subaru Select Monitor.	Is the DTC B1100 displayed current malfunction?	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>	Temporary EEPROM access error occurred.

B: DTC B1101 BATT P/SUPPLY MALFUNCTION CONT

DTC DETECTING CONDITION:
Battery power supply control circuit is open or shorted.
TROUBLE SYMPTOM:
Functions of body integrated unit stop.

NOTE:
When B1102 BATT p/supply (backup) malfunction is output at the same time, all the function of body integrated unit may not operate.
WIRING DIAGRAM:



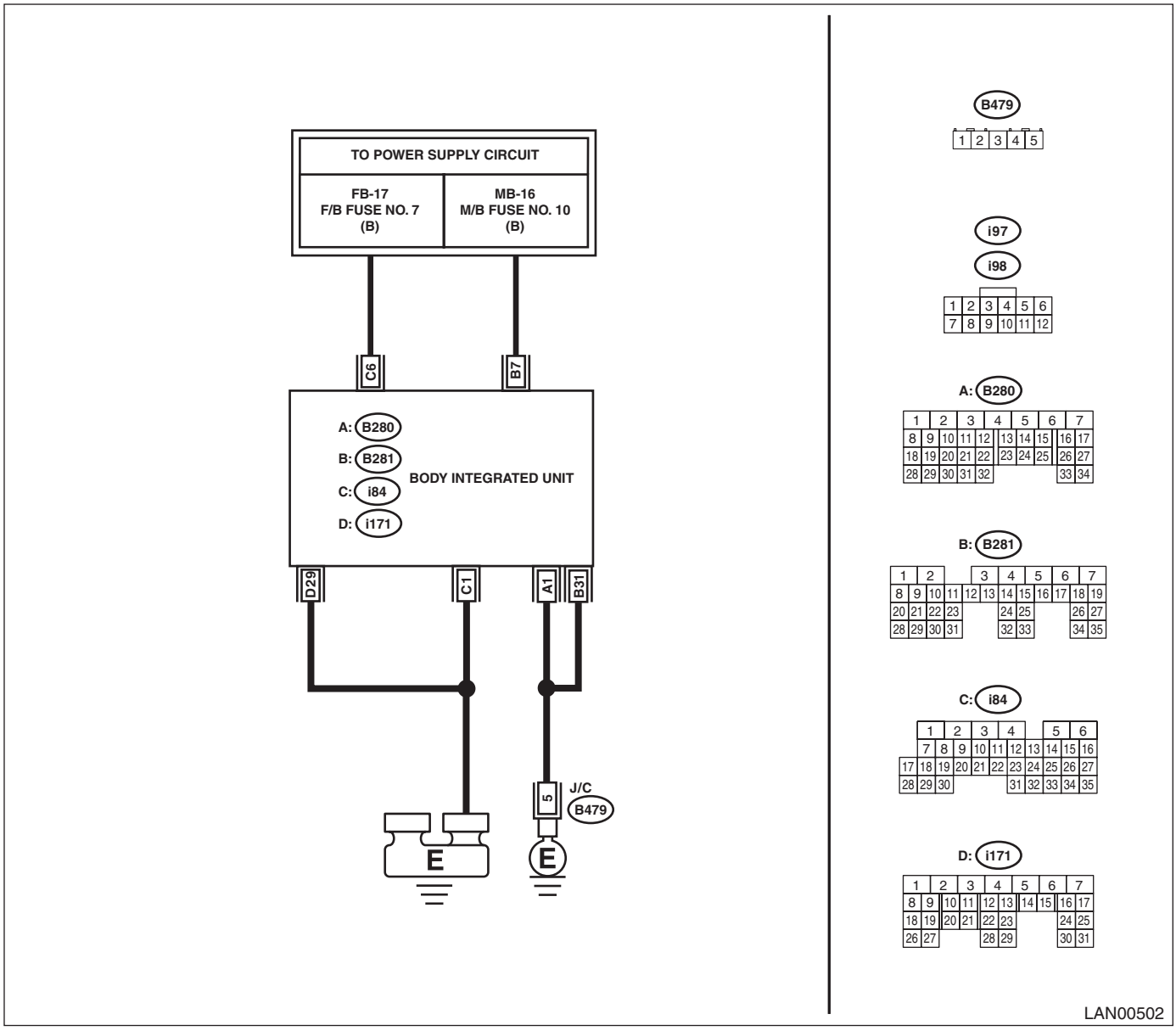
Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1101 a current malfunction?	Go to step **2**.	Go to step **5**.

	Step	Check	Yes	No
2	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect and then connect the body integrated unit connector. 3) Wait approx. 2 minutes. 4) Turn the ignition switch to ON. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1101 a current malfunction?	Go to step **3**.	Go to step **5**.
3	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Inspect the fuse.	Is the fuse OK?	Go to step **4**.	Replace the defective fuse.
4	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i84) No. 6 (+) — Chassis ground (–):***	Is the voltage 8.5 — 16 V?	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>	Repair the harness between body integrated unit and fuse.
5	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

C: DTC B1102 BATT P/SUPPLY MALFUNCTION BACKUP

DTC DETECTING CONDITION:
Battery power supply backup circuit is open or shorted.
TROUBLE SYMPTOM:
Does not exist.

NOTE:
When B1101 BATT p/supply (cont.) malfunction are output at the same time, all function of body integrated unit may not operate.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1102 a current malfunction?	Go to step **2**.	Go to step **5**.

	Step	Check	Yes	No
2	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect and then connect the body integrated unit connector. 3) Wait approx. 2 minutes. 4) Turn the ignition switch to ON. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1102 a current malfunction?	Go to step **3**.	Go to step **5**.
3	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Inspect the fuse.	Is the fuse OK?	Go to step **4**.	Replace the defective fuse.
4	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B281) No. 7 (+) — Chassis ground (–):***	Is the voltage 8.5 — 16 V?	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>	Repair the harness between body integrated unit and fuse.
5	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

D: DTC B1103 IGNITION POWER FAILURE

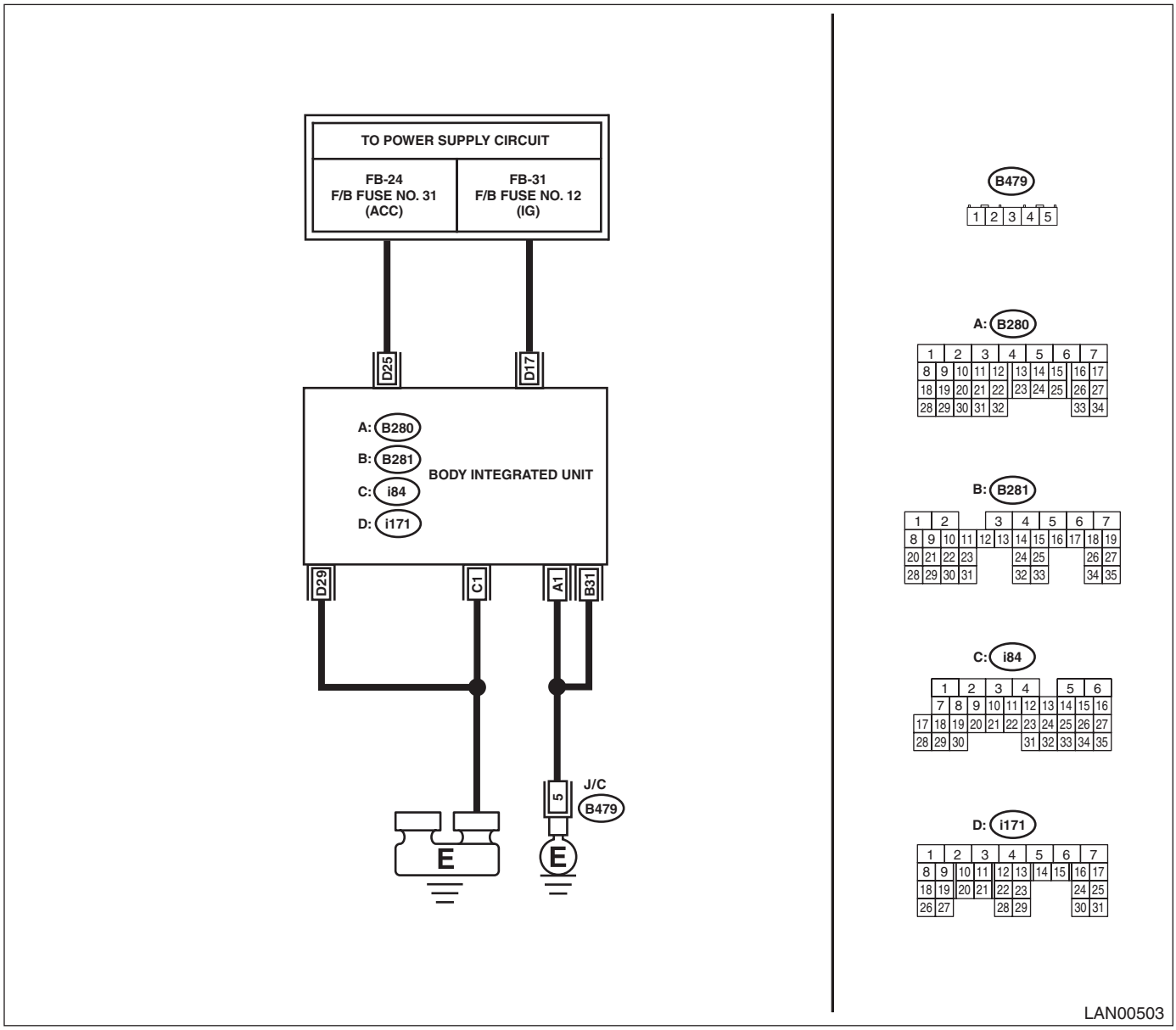
DTC DETECTING CONDITION:

IGN power supply circuit is open or shorted.

TROUBLE SYMPTOM:

Symptoms such as shift lock, reverse lock or wiper not operating may occur.

WIRING DIAGRAM:

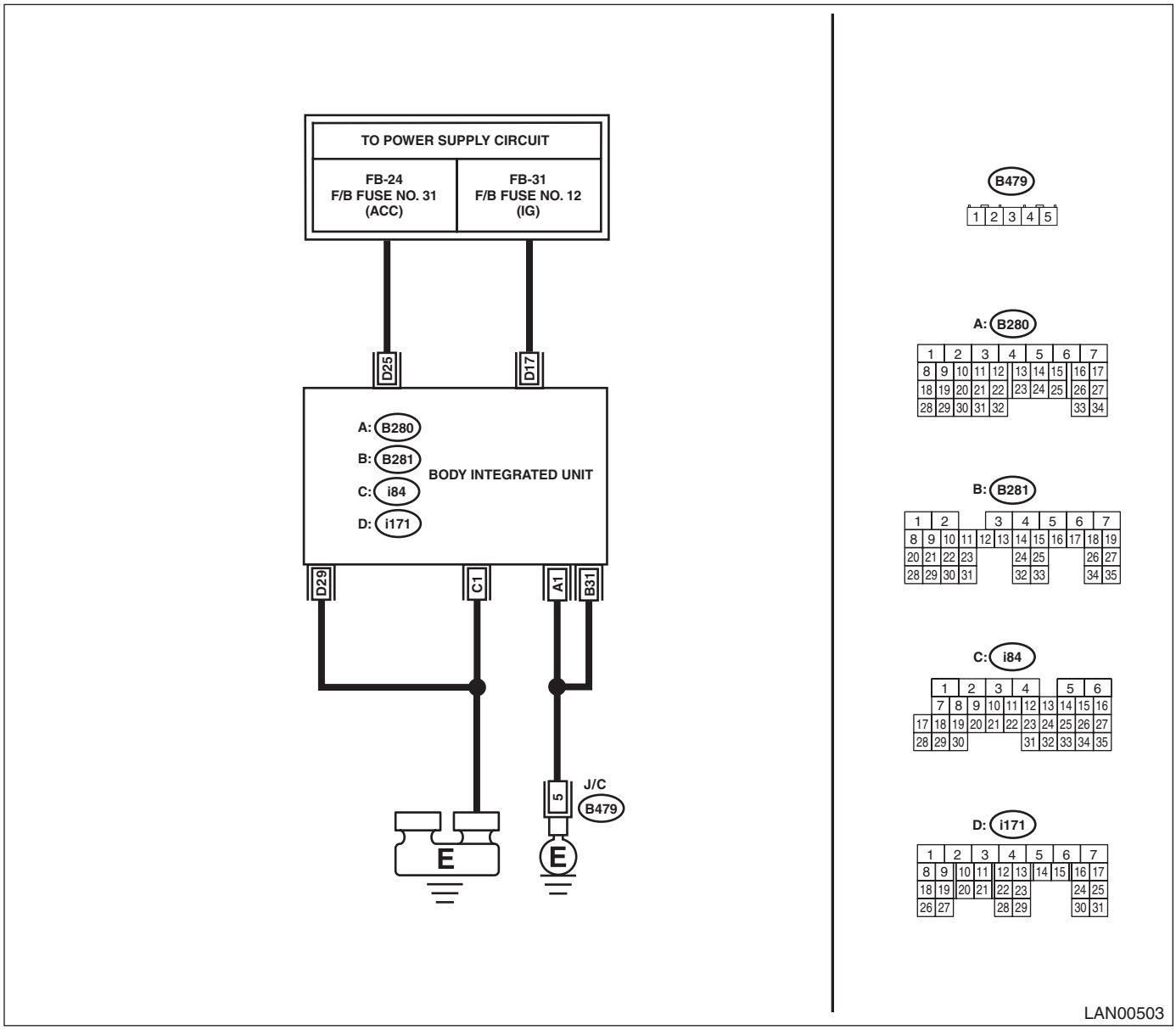


Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1103 a current malfunction?	Go to step **2**.	Go to step **5**.
2	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect and then connect the body integrated unit connector. 3) Wait approx. 2 minutes. 4) Turn the ignition switch to ON. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1103 a current malfunction?	Go to step **3**.	Go to step **5**.

	Step	Check	Yes	No
3	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Inspect the fuse.	Is the fuse OK?	Go to step **4**.	Replace the defective fuse.
4	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i171) No. 17 (+) — Chassis ground (–):***	Is the voltage 8.5 — 16 V?	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>	Repair the harness between body integrated unit and fuse.
5	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

E: DTC B1104 ACC POWER FAILURE

DTC DETECTING CONDITION:
ACC power supply circuit is open or shorted.
TROUBLE SYMPTOM:
Rear wiper may not operate at ACC position.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1104 a current malfunction?	Go to step **2**.	Go to step **5**.
2	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect and then connect the body integrated unit connector. 3) Wait approx. 2 minutes. 4) Turn the ignition switch to ON. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1104 a current malfunction?	Go to step **3**.	Go to step **5**.

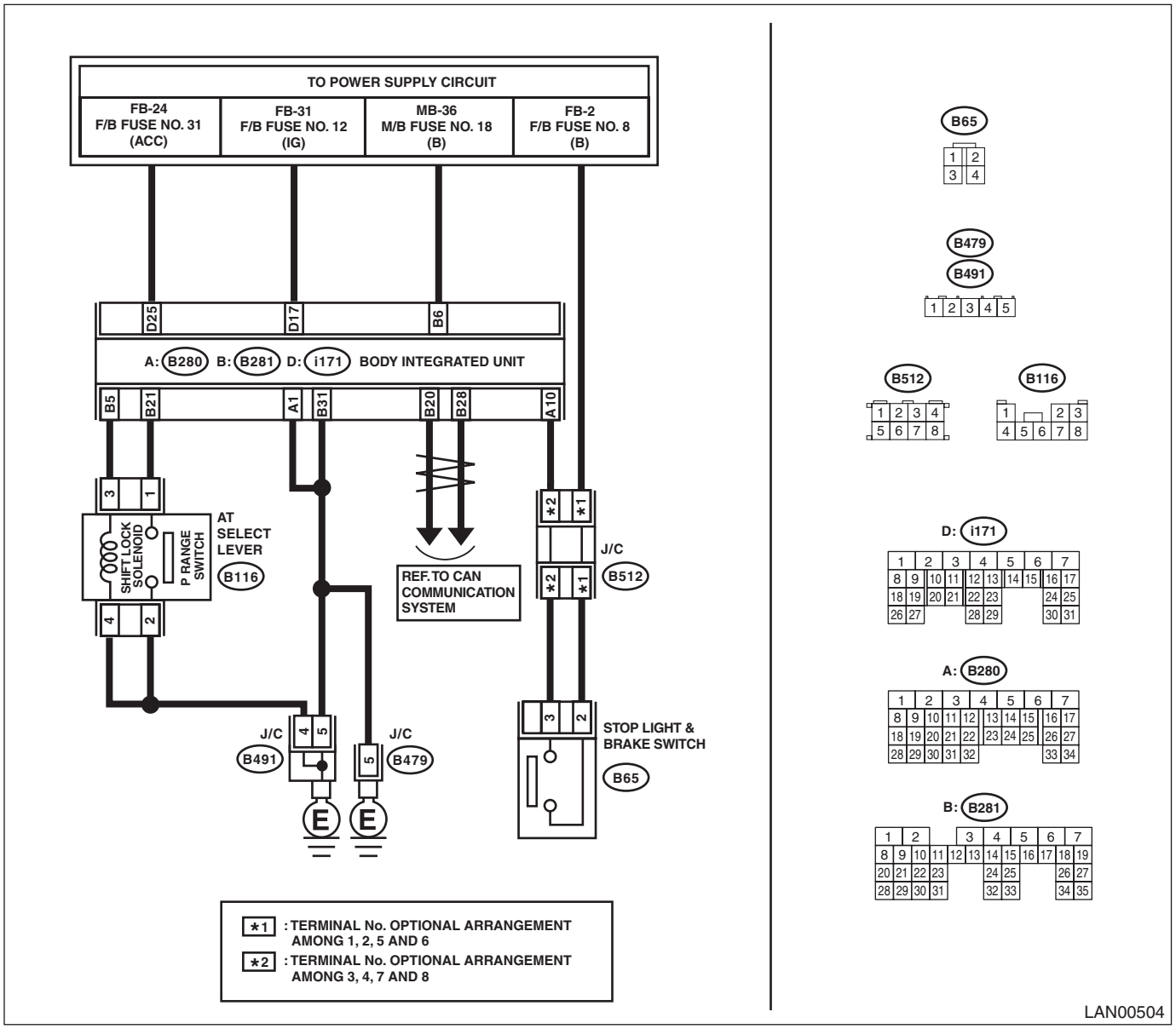
	Step	Check	Yes	No
3	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Inspect the fuse.	Is the fuse OK?	Go to step **4**.	Replace the defective fuse.
4	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i171) No. 25 (+) — Chassis ground (–):***	Is the voltage 8.5 — 16 V?	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>	Repair the harness between body integrated unit and fuse.
5	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector.	Is there poor contact of connector?	Repair or replace the poor contact of connector.	A temporary change of voltage occurred.

F: DTC B1106 SHIFT LOCK CIRCUIT FAILURE

DTC DETECTING CONDITION:
Shift lock circuit is shorted to ground.

TROUBLE SYMPTOM:
Shift lock does not be released or remain locked.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Keep the Parking range for approx. 5 seconds. 3) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1106 a current malfunction?	Go to step **6**.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the shift lock solenoid connector. 3) Connect the disconnected connectors. 4) Turn the ignition switch to ON, then keep the Parking range for approx. 5 seconds. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1106 a current malfunction?	Go to step **3**.	Go to step **7**.
3	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the shift lock solenoid connector. 3) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(B116) No. 4 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **4**.	Repair or replace the open circuit of harness.
4	**CHECK SHIFT LOCK SOLENOID.** Using a tester, measure the resistance between shift lock solenoid terminals. ***Connector & terminal*** ***(B116) No. 4 — No. 3:***	Is the resistance less than 27 — 31 Ω?	Go to step **5**.	Replace the shift lock solenoid. <Ref. to CS-30, DISASSEMBLY, Select Lever.>
5	**CHECK SHIFT LOCK SOLENOID.** Connect the battery terminal to shift lock solenoid. ***Connector & terminal*** ***(B116) No. 3 — positive terminal:*** ***(B116) No. 4 — ground terminal:***	Does the shift lock solenoid operate and then release the lock?	Go to step **6**.	Replace the shift lock solenoid. <Ref. to CS-30, DISASSEMBLY, Select Lever.>
6	**CHECK HARNESS.** Use a tester to measure the resistance between harness terminals. ***Connector & terminal*** ***(B116) No. 3 — (B281) No. 5:*** NOTE: If body integrated unit and shift lock connector are not disconnected, disconnect them first and then perform measurement.	Is the resistance less than 10 Ω?	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>	Repair or replace the open circuit of harness.
7	**CHECK DTC.** 1) Depress the brake pedal at the parking range. 2) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1106 a current malfunction?	Go to step **8**.	Go to step **9**.
8	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector and shift lock connector. 3) Connect the disconnected connectors. 4) Turn the ignition switch to ON. 5) Depress the brake pedal at the parking range. 6) Read the DTC of body integrated unit using Subaru Select Monitor.	Is B1106 a current malfunction?	Go to step **4**.	Go to step **9**.
9	**CHECK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector and shift lock connector.	Is there poor contact of connector terminal?	Repair or replace the poor contact of terminal.	It is possible that temporary poor contact occurs.

G: DTC B1401 M COLLATION NG

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-25, DTC B1401 M COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

H: DTC B1402 IMMOBILIZER KEY COLLATION NG

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-25, DTC B1402 IMMOBILIZER KEY COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

I: DTC B1403 E/G REQUEST NG

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-25, DTC B1403 E/G REQUEST NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

J: DTC B1405 SCU COLLATION NG

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-25, DTC B1405 SCU COLLATION NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

K: DTC B1406 SCU_EEPROM_NG

For detailed diagnosis procedure, refer to IMMOBILIZER (DIAGNOSTICS). <Ref. to IM(diag)-26, DTC B1406 SCU_EEPROM_NG, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

L: DTC B1500 KEYLESS UART COM. MALFUNCTION

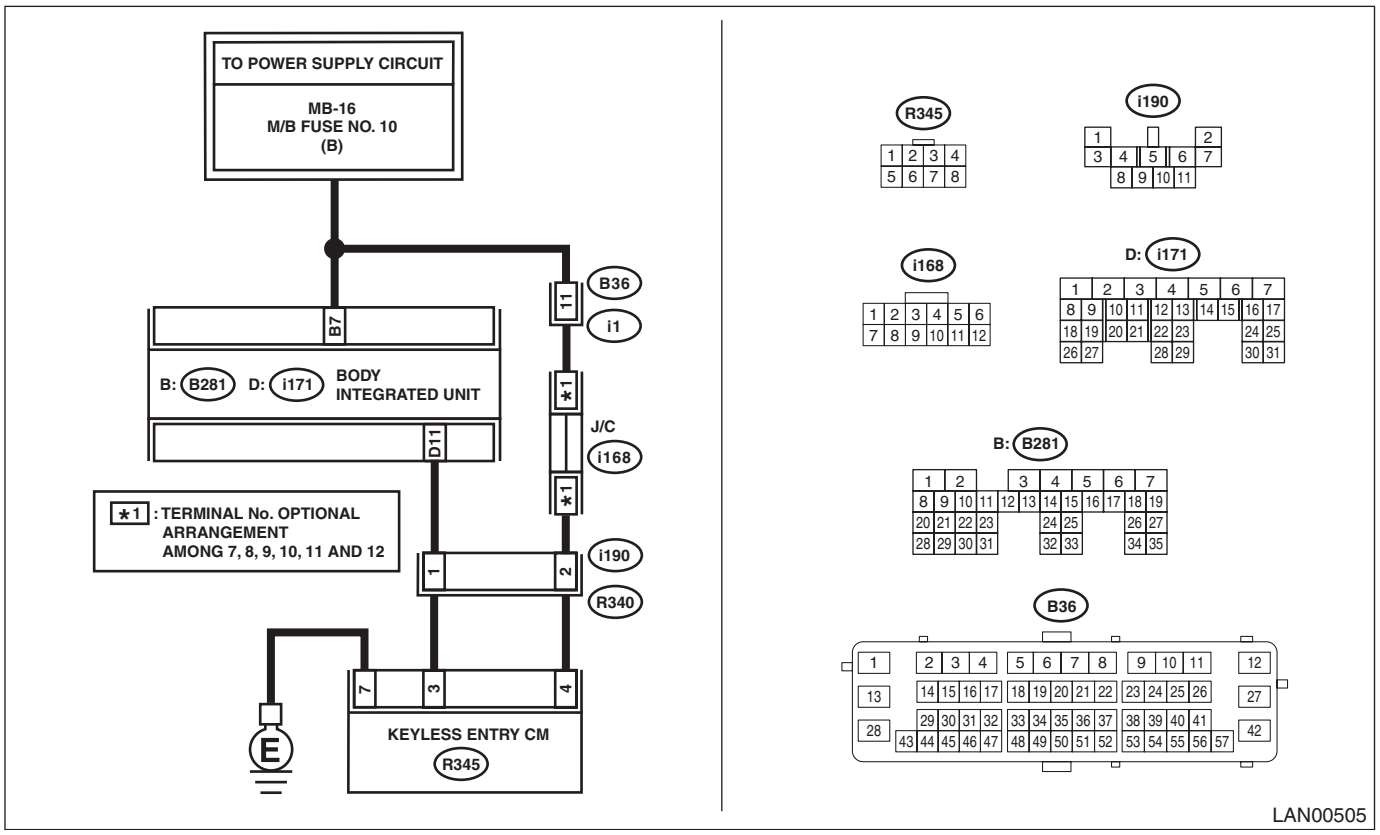
DTC DETECTING CONDITION:

UART between keyless control unit and body integrated unit is open or shorted, the connector is not connected properly, or the terminal is crimped improperly.

TROUBLE SYMPTOM:

Door lock does not operate with keyless.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK DTC.** 1) Insert the ignition key to the ignition key cylinder and remove. 2) Read the DTC of body integrated unit using Subaru Select Monitor.	Is U1500 a current malfunction?	Go to step **2**.	Go to step **7**.
2	**CHECK DTC.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit and keyless entry control module connector. 3) Connect the disconnected connectors. 4) Insert the ignition key to the ignition key cylinder and remove. 5) Read the DTC of body integrated unit using Subaru Select Monitor.	Is U1500 a current malfunction?	Go to step **3**.	Go to step **7**.
3	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit and keyless entry control module connector. 3) Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(i171) No. 11 — (R345) No. 3:***	Is the resistance 10 Ω or less?	Go to step **4**.	Repair the open circuit of harness or replace harness.

	Step	Check	Yes	No
4	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(R345) No. 4 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **5**.	Repair the power supply circuit.
5	**CHECK HARNESS.** Using the tester, measure the resistance between terminals. ***Connector & terminal*** ***(R345) No. 7 — Chassis ground:***	Is the resistance 10 Ω or less?	Go to step **6**.	Repair the ground circuit.
6	**CHECK CONTROL MODULE.** 1) Turn the ignition switch to OFF. 2) Remove the keyless entry control module. 3) Install a keyless entry control module that was operating normally on another vehicle.	Does it operate with the remote control key of another vehicle?	Replace the keyless entry control module. <Ref. to SL-69, REMOVAL, Keyless Entry Control Module.>	Replace the body integrated unit.
7	**CHECK CONNECTOR.** Check for poor contact of connectors used for low-speed CAN.	Is there poor contact of connector?	Repair the connector that has poor contact, or replace harness.	It may be a temporary communication malfunction. Delete the DTC.

14.General Diagnostic Table

A: INSPECTION

Using the Subaru Select Monitor, read DTC, or check the following data on the current data display to make judgements.

Contents	Operation	Specifications		Note
		YES	NO	
Diagnostic code	DTC is not displayed when inspecting all DTCs.	DTC is not displayed.	Perform the diagnosis according to DTC.	—
Remaining fuel level	Fuel gauge displays correctly	System is normal.	Check the combination meter system and LAN system.	When “Fuel level resistance” and “Fuel level resistance 2” are different values on current data of the body integrated unit, the body integrated unit may have inner malfunction.
	Remaining fuel level warning light is not illuminating.	System is normal.		
Clearance light (Low beam) (High beam)	Clearance light and low/high beams illuminate normally when the switch is operated. Indicator in the meter illuminates at the same time.	System is normal.	Check the lighting system, combination meter system and LAN system.	
Fog light	Front fog light illuminates when the switch is operated. Indicator in the meter illuminates at the same time.	System is normal.	Check the lighting system, combination meter system and LAN system.	
Rear defogger	Rear defogger operates when the switch is operated. The indicator illuminates at the same time.	System is normal.	Check the rear window defogger system and A/C system.	
Wiper deicer	Wiper deicer operates when the switch is operated. The indicator illuminates at the same time. When the ambient temperature is 5°C (41°F) or higher, press the switch 3 seconds or more to forcibly activate the system.	System is normal.	Check the wiper deicer system and A/C system.	Wiper deicer operates when “Wiper deicer setting” of the body integrated unit is set to on.
Rear wiper	Rear wiper operates when the switch is operated.	System is normal.	Check wiper or washer system.	Depending on user customizing “Sedan/Wagon setting” of the body integrated unit, vehicle sensory time varies.
Key interlock	Key cannot be removed in other than P range.	System is normal.	Check the body control system.	
Shift Lock	Shift operation is normal.	System is normal.	Check the body control system.	
Key warning switch alarm	When the driver’s door is open without the key removed, the buzzer sounds.	System is normal.	Check the combination meter and body control system.	
Reverse warning	When the lever is shifted to reverse, the buzzer sounds.	System is normal.	Check the combination meter and body control system.	

Contents	Operation	Specifications		Note
		YES	NO	
Seat belt warning alarm	With driver's seat belt unfastened, the indicator on the meter illuminates. When the vehicle speed exceeds 20 km/h with the condition, the buzzer sounds.	System is normal.	Check the seat belt system and combination meter LAN system.	
Door lock	The doors lock/unlock when the door switch is operated. Rear gate/ trunk opens when the rear gate/ trunk release switch is operated.	System is normal.	Check the security & lock and body control system.	If user customizing "Sedan/Wagon setting" is different, trunk and rear gate do not open.
Keyless entry	The lock locks/unlocks when the keyless transmitter is operated. Trunk/rear gate unlocks when trunk/ rear gate unlock button is operated.	System is normal.	Check the keyless entry and body control system.	
Answer back	Answer-back operates when the keyless entry locks/unlocks.	System is normal.	Check the security & lock system, and LAN system.	
Room light	The light illuminates/goes off according to the door open/close.	System is normal.	Check the room light system, security & lock system, and LAN system.	
Map light	The light illuminates/goes off according to the door open/close. (Except for rear gate)	System is normal.	Check the spot map light, security & lock system, and LAN system.	
Luggage/trunk light	The light illuminates/goes off according to the rear gate open/ close.	System is normal.	Check the luggage/ trunk light, security & lock system, and LAN system.	
Key illumination	The light illuminates/goes off according to the driver's door open/ close.	System is normal.	Check the ignition switch illumination, security & lock, and LAN system.	
Illumination control	Illumination volume control is available.	System is normal.	Check the illumination control switch, combination meter, and body control system.	Illumination volume control is not available when user customizing "Illumination Control On/Off" of the body integrated unit is set to off.
Engine start	Engine starts.	System is normal.	Check the engine system, immobilizer, and LAN system.	
Vehicle security	Security monitoring/security canceling can be performed by operating the keyless entry.	System is normal.	Check the security & lock system, and LAN system.	Security monitoring starts and at the same time the warning buzzer sounds, when impact sensor is not connected and user customizing "Impact Sensor" of the body integrated unit is set to on.