1. General Description

A: SPECIFICATION

1. HEATER SYSTEM

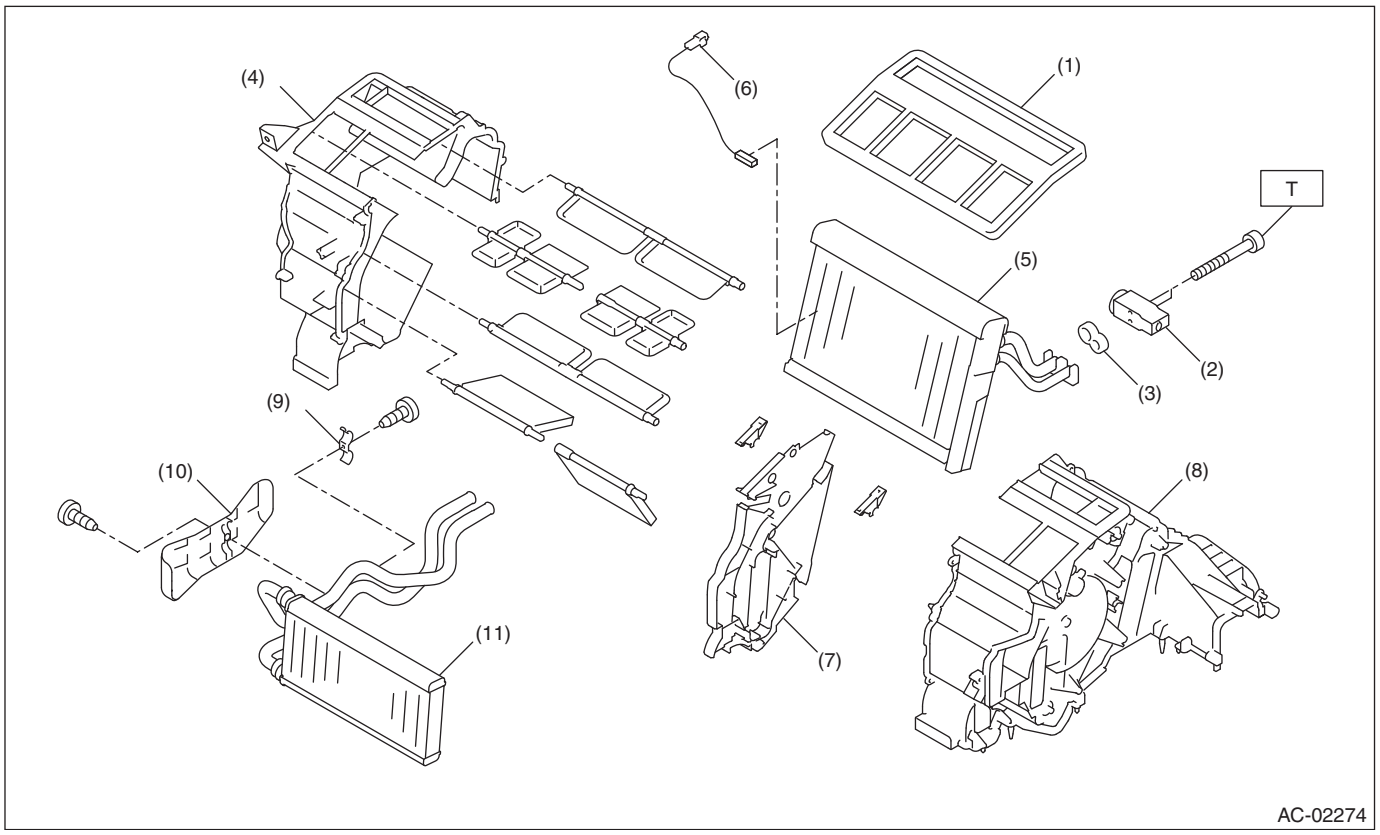
Item		Specification	Condition
Heating capacity		4.8 kW (4,127 kcal/h, 16,377 BTU/h) or more	• Air flow control switch: FOOT • Temperature control switch (Auto A/C): FULL HOT • Temperature control dial (Manual A/C): FULL HOT • Temperature difference between hot water and inlet air: 65°C (149°F) • Hot water flow rate: 300 ℓ (79.3 US gal, 66 Imp gal)/h
Air flow rate		300 m^3 (10,596 cu ft)/h	FOOT mode (FRESH), FULL HOT at 12.5 V
Max air flow rate		495 m^3 (17,483 cu ft)/h	• Temperature control switch (Auto A/C): FULL COLD • Temperature control dial (Manual A/C): FULL COLD • Airflow adjustment switch (AUTO A/C): MAX (6th position) • Airflow adjustment dial (Manual A/C): MAX (4th position) • FRESH/RECIRC switch: RECIRC
Heater core size (height × length × width)		264 × 100 × 27 mm (10.4 × 3.94 × 1.06 in)	—
Blower motor	Type	Magnet motor 260 W or less	12 V
	Fan type and size (diameter × width)	Sirocco fan type 150 × 75 mm (5.91 × 2.95 in)	—

2. A/C SYSTEM

Item			Specification
Type of air conditioner			Reheat air-mix type
Cooling capacity			4.18 kW [at 500 m^3 (17,660 cu ft)/h] (3,594 kcal/h, 14,262 BTU/h)
Refrigerant			HFC-134a (CH_2FCF_3) [0.425±0.025 kg (0.94±0.06 lb)]
Compressor		Type	Swash plate, variable capacity (TSE14C)
		Discharge	140.6 cc (8.58 cu in)/rev
		Max. permissible speed	6,000 rpm
Pulley		Type of belt	V-belt 6 PK
		Pulley dia. (effective dia.)	110 mm (4.33 in)
		Pulley ratio	H4 model: 1.21 H6 model: 1.30
Condenser		Type	Corrugated fin (Sub cool type)
		Core face area	0.186 m^2 (2.002 sq ft)
		Core thickness	16 mm (0.63 in)
		Radiation area	5.49 m^2 (59.09 sq ft)
Receiver drier		Effective inner capacity	190 cm^3 (11.6 cu in)
Expansion valve		Type	Internally equalizing
Evaporator		Type	Single tank
		Dimensions (W × H × T)	293.1 × 171 × 38 mm (11.54 × 6.73 × 1.50 in)
Blower fan		Fan type	Sirocco fan
		Outer diameter × width	150 × 75 mm (5.91 × 2.95 in)
		Power consumption	260 W
Condenser fan (Sub fan)		Motor type	Magnet
		Power consumption	H4 non-turbo model: 90 W H4 turbo model: 120 W H6 model: 200 W
		Fan outer diameter	H4 non-turbo model: 300 mm (11.8 in) H4 turbo model: 318.5 mm (12.5 in) H6 model: 320 mm (12.6 in)
Radiator fan (Main fan)		Motor type	Magnet
		Power consumption	H4 non-turbo model: 90 W H4 turbo model: 120 W H6 model: 200 W
		Fan outer diameter	H4 non-turbo model: 300 mm (11.8 in) H4 turbo model: 318.5 mm (12.5 in) H6 model: 320 mm (12.6 in)
Idle speed	MPFI model	No load	H4 non-turbo model (MT): 650±100 rpm H4 non-turbo model (CVT): 6750±100 rpm H4 turbo model: 700±100 rpm H6 model: 700±100 rpm
		A/C ON	H4 model: 700 — 850±100 rpm H6 model: 700 — 910±100 rpm

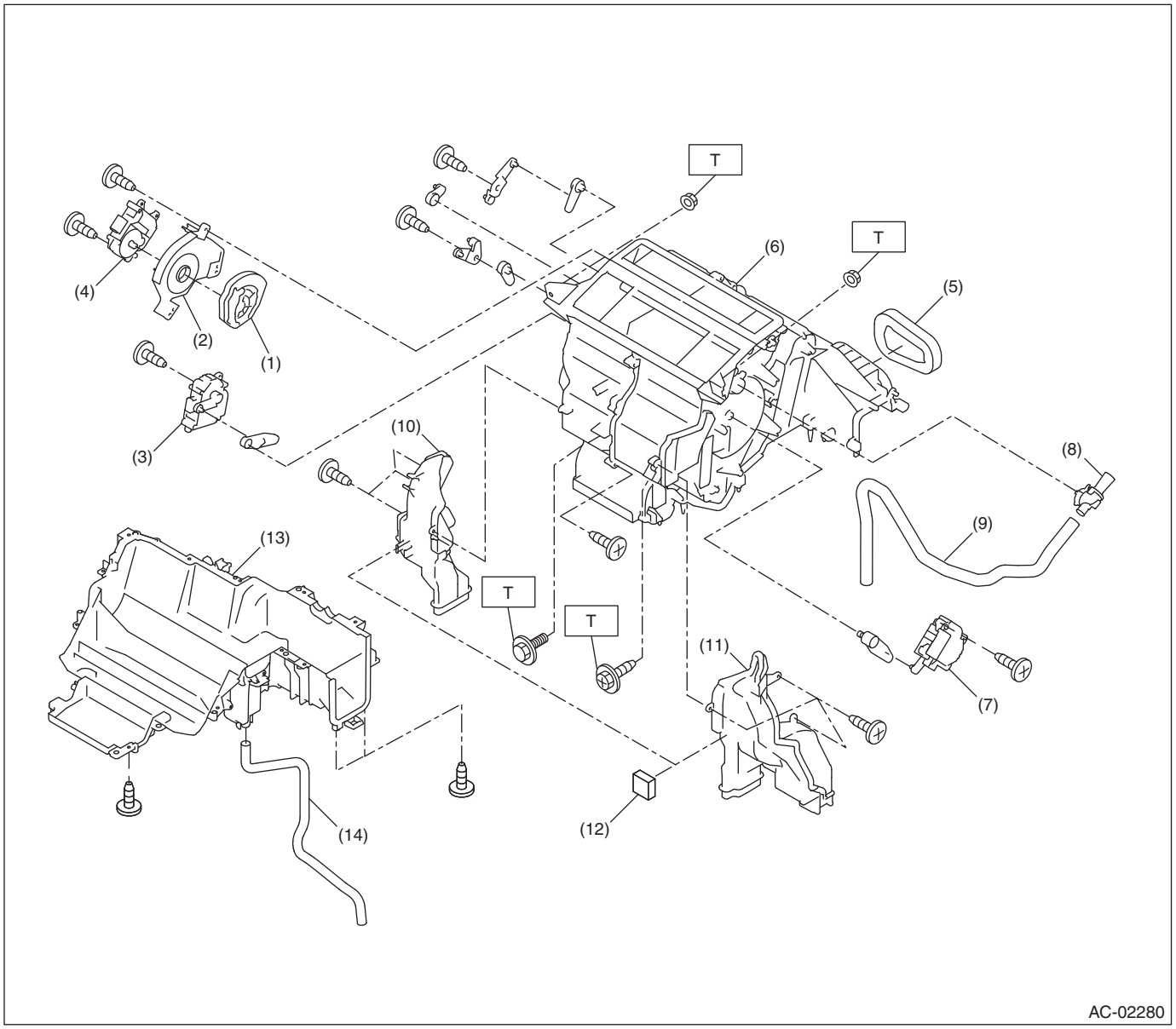
B: COMPONENT

1. HEATER COOLING UNIT



(1) Lining
(2) Expansion valve
(3) Gasket
(4) Heater case LH
(5) Evaporator
(6) Evaporator sensor
(7) Center plate
(8) Heater case RH
(9) Heater pipe clamp
(10) Heater pipe cover
(11) Heater core ASSY

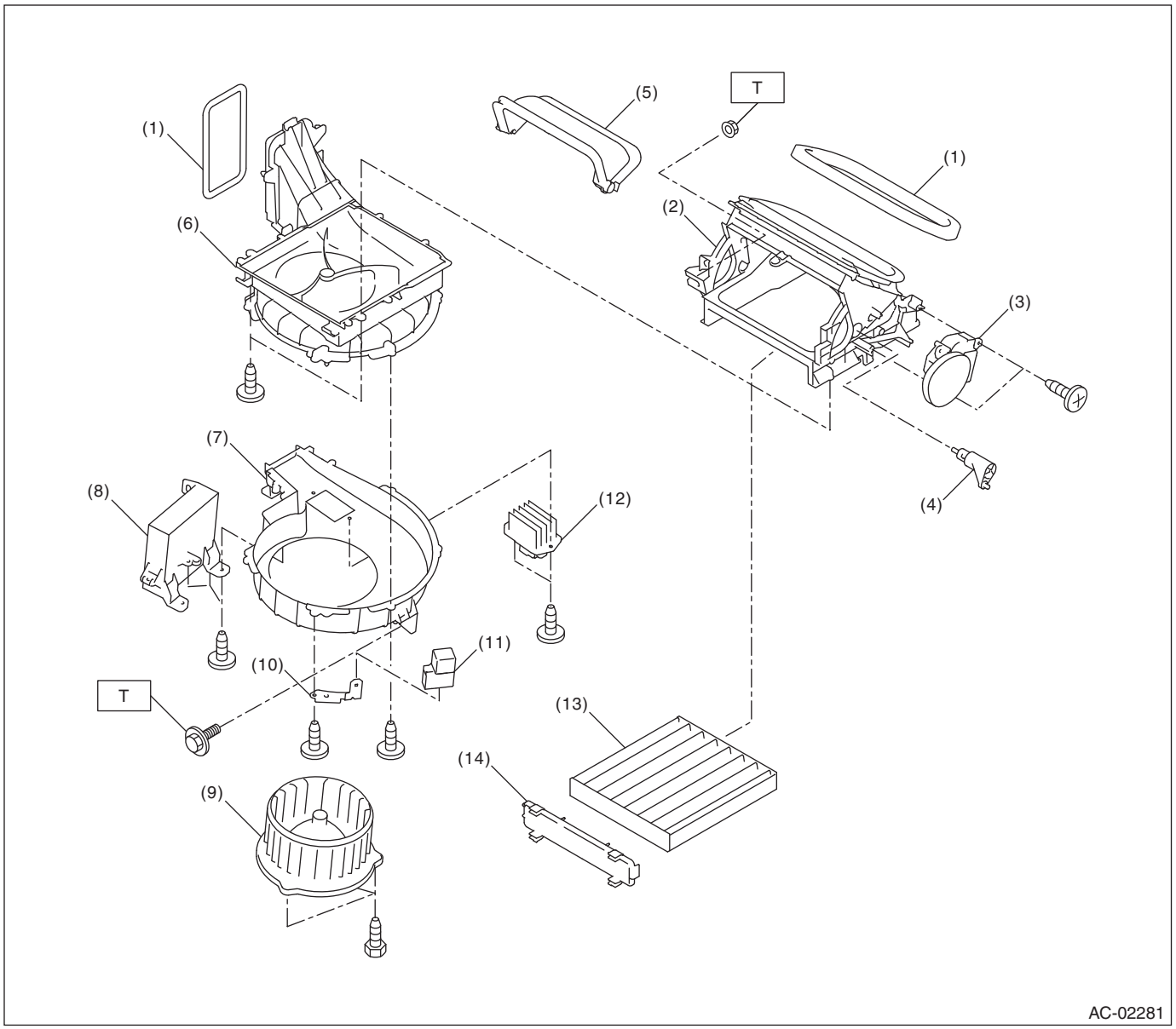
Tightening torque:N·m (kgf-m, ft-lb)
T: 3.5 (0.30, 2.6)



(1) Mode main lever
(2) Cover
(3) Air-mix actuator LH
(4) Mode actuator
(5) Gasket
(6) Unit ASSY
(7) Air-mix actuator RH
(8) Aspirator
(9) Aspirator hose
(10) Foot duct LH
(11) Foot duct RH
(12) Gasket
(13) Heater case lower
(14) Drain hose

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

2. BLOWER MOTOR UNIT

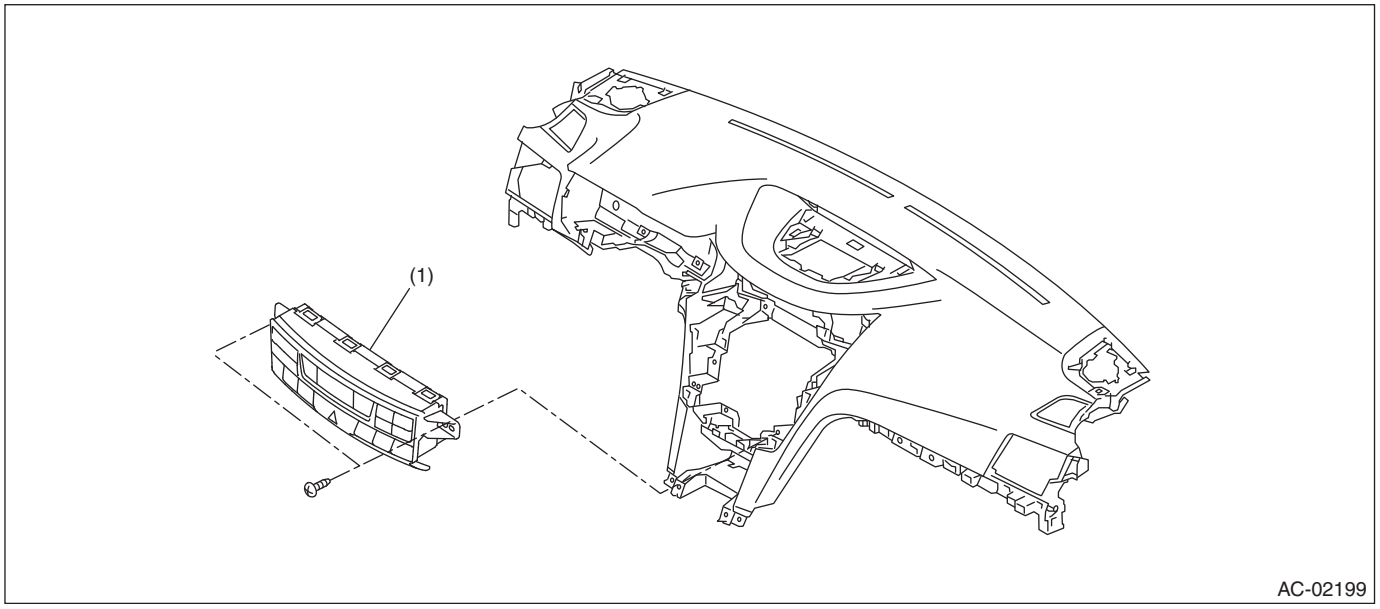


(1) Gasket
(2) Air duct cover ASSY
(3) Intake door actuator
(4) Intake door link
(5) Intake door
(6) Upper case
(7) Lower case
(8) Control module
(9) Blower motor ASSY
(10) Relay holder bracket
(11) Blower motor relay
(12) Transistor (AUTO A/C model) or resistor (manual A/C)
(13) Filter
(14) Filter cover

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

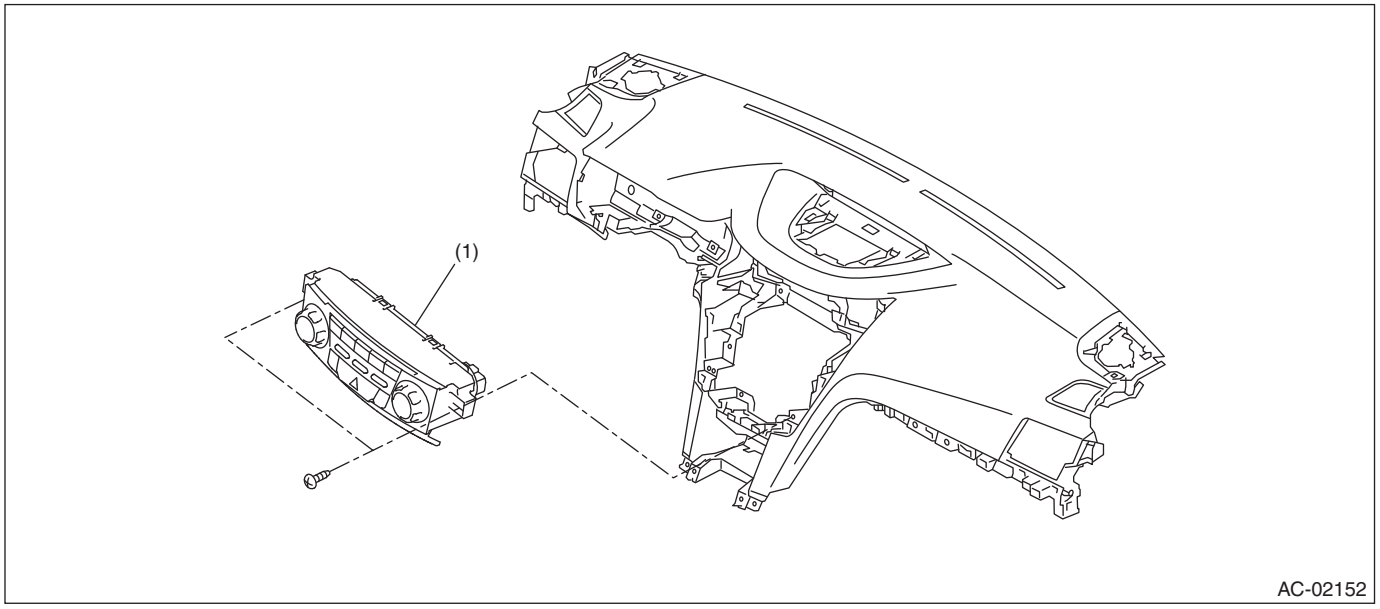
3. CONTROL MODULE

- AUTO A/C MODEL



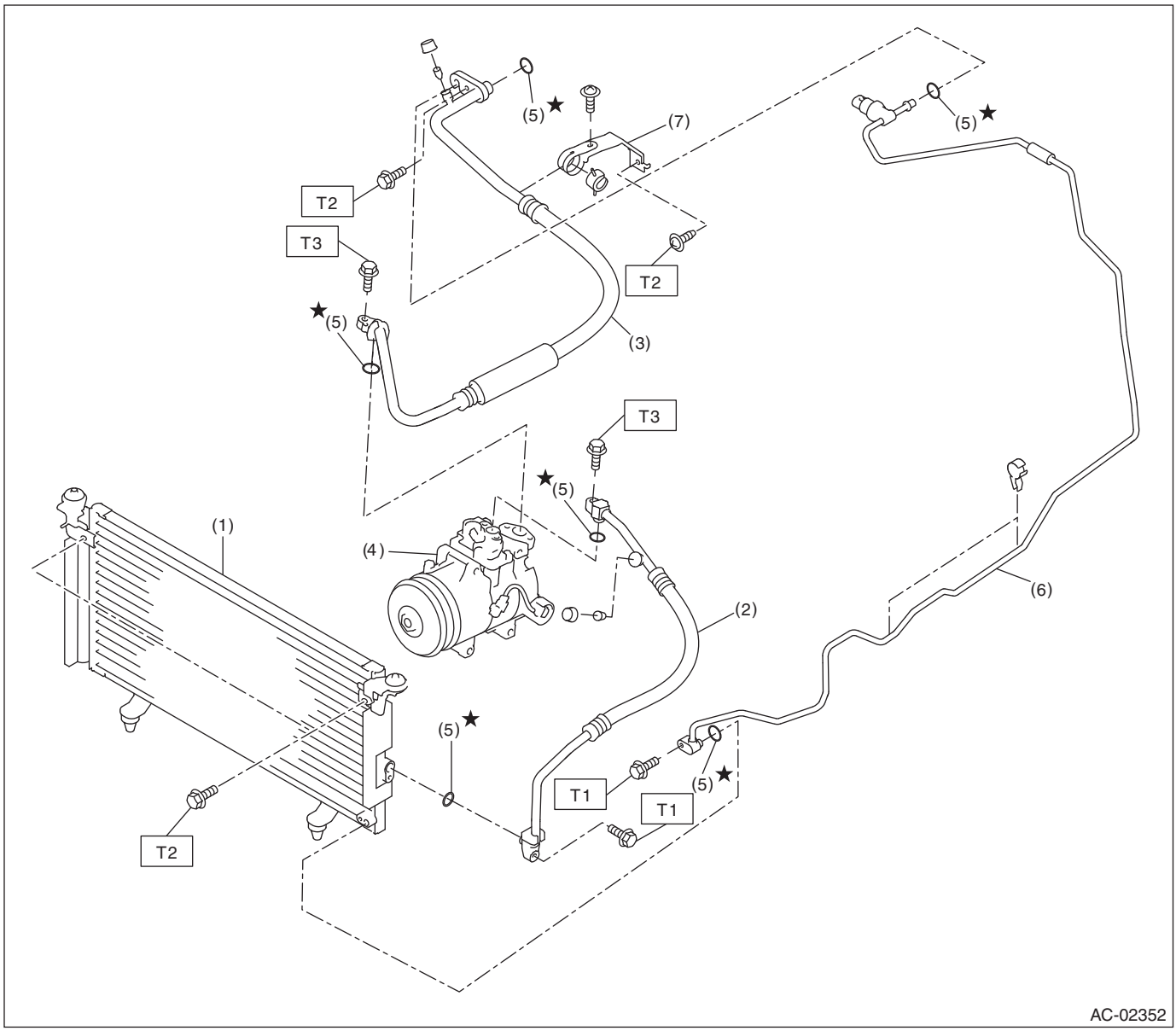
(1) Control module

- MANUAL A/C MODEL



(1) Control module

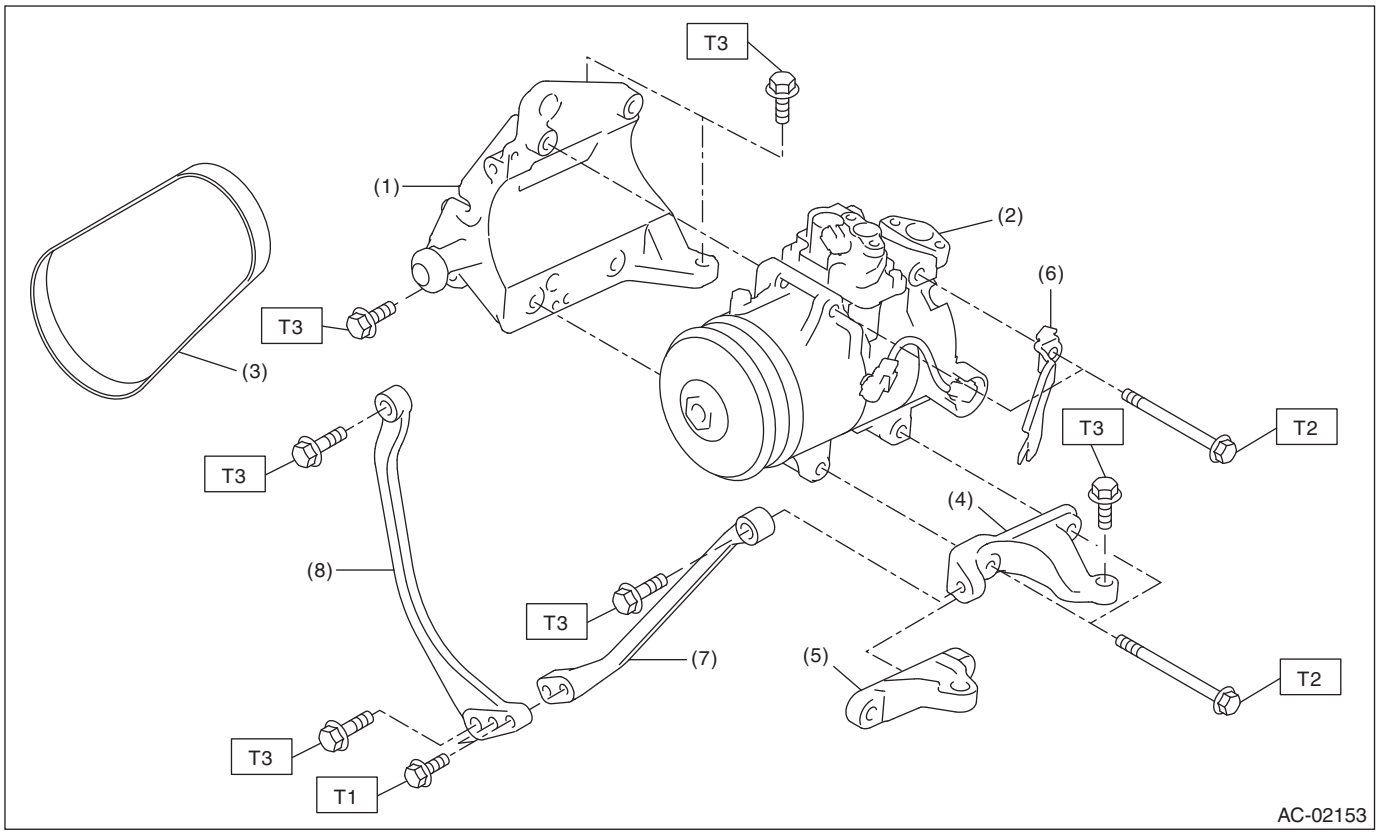
4. AIR CONDITIONING UNIT



(1)	Condenser	(5)	O-ring
(2)	Hose (High-pressure)	(6)	Pipe
(3)	Hose (Low-pressure)	(7)	Bracket
(4)	Compressor		

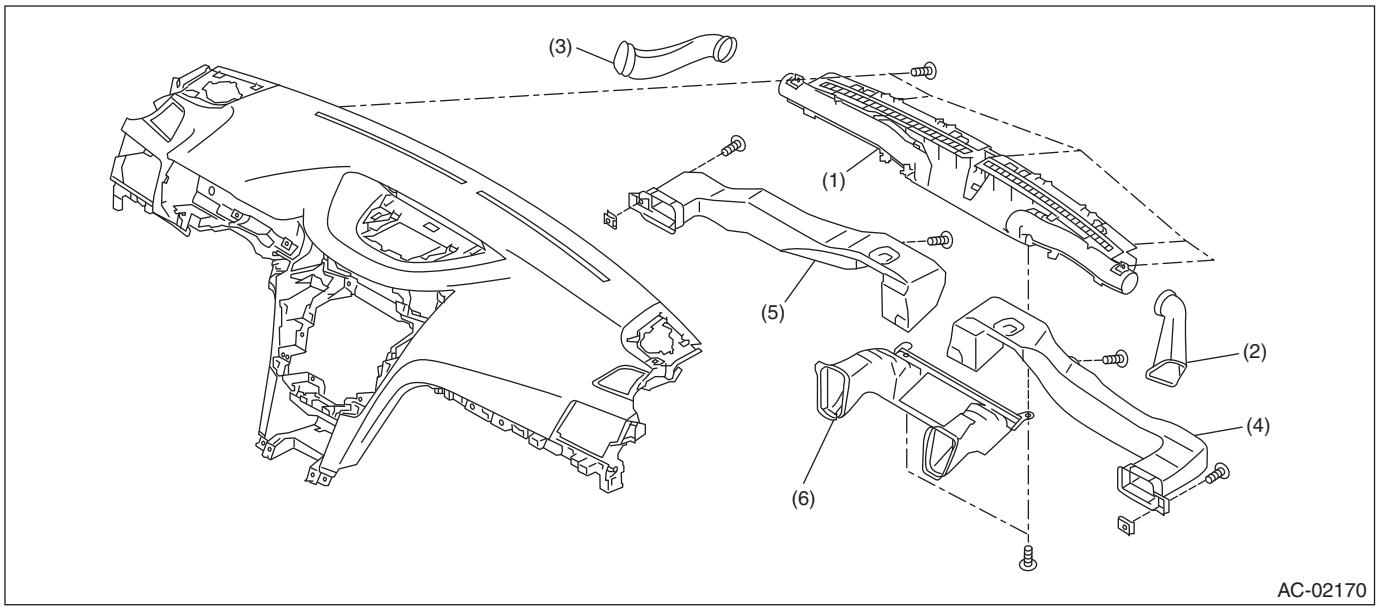
Tightening torque:N·m (kgf-m, ft-lb)
T1: 5 (0.51, 3.7)
T2: 7.5 (0.76, 5.5)
T3: 10 (1.0, 7.4)

5. COMPRESSOR

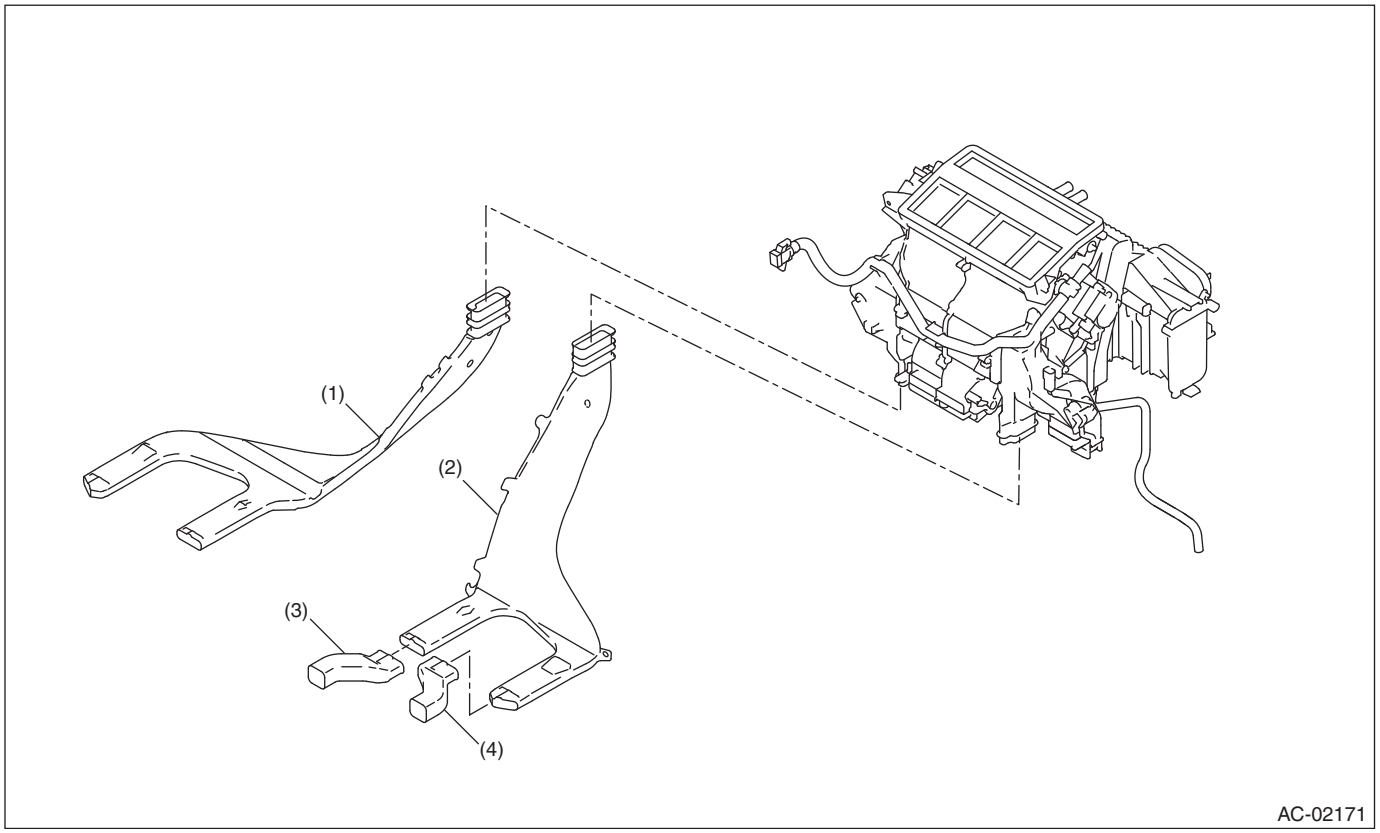


(1)	A/C compressor stay	(5)	Compressor bracket (H6 model)	***Tightening torque:N·m (kgf-m, ft-lb)***
(2)	Compressor	(6)	Connector bracket	***T1: 22 (2.2, 16.2)***
(3)	V-belt (6PK)	(7)	Stopper rod LH (H4 model)	***T2: 26.5 (2.7, 19.5)***
(4)	Compressor bracket (H4 model)	(8)	Stopper rod RH (H4 model)	***T3: 36 (3.7, 26.6)***

6. HEATER DUCT



(1) Defroster nozzle ASSY
(2) Side defroster duct RH
(3) Side defroster duct LH
(4) Side vent duct RH
(5) Side vent duct LH
(6) Front vent duct



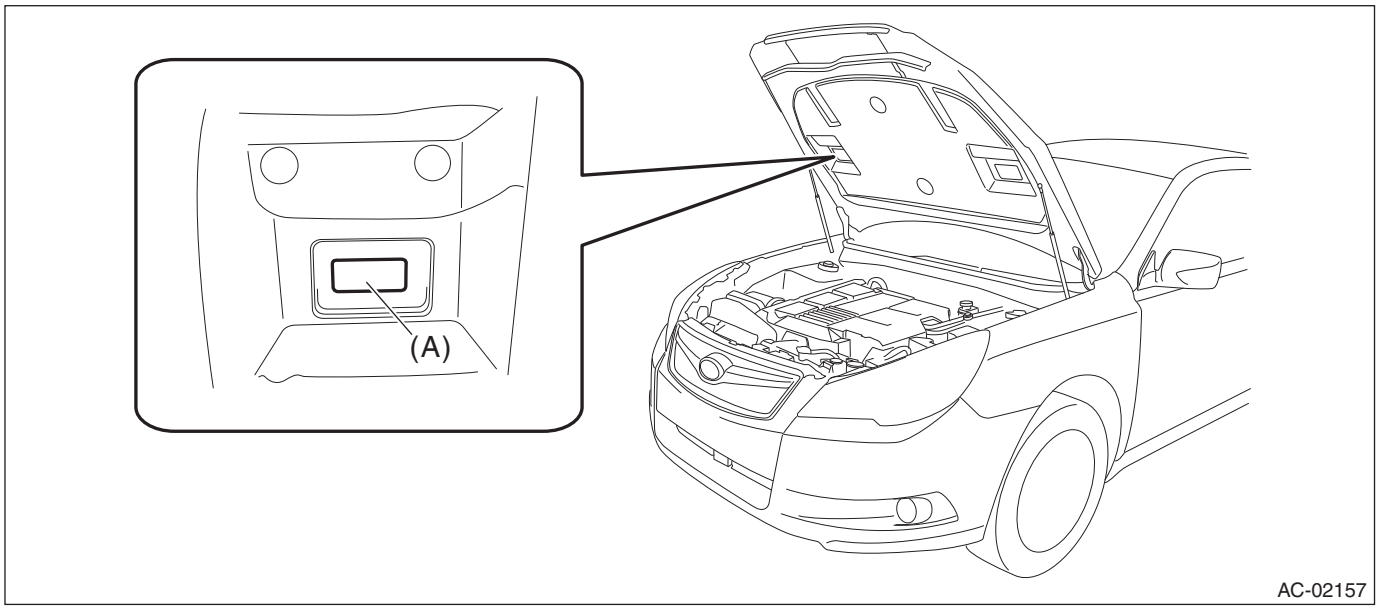
(1) Rear heater duct LH
(2) Rear heater duct RH
(3) Extension duct LH
(4) Extension duct RH

C: CAUTION

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

1. HFC-134A A/C SYSTEM

• The cooling system components for the HFC-134a system such as the refrigerant and compressor oil are different from the conventional CFC-12 system components and they are incompatible with each other.
• Vehicles with the HFC-134a system can be identified by the label (A) attached to the vehicle.
Before maintenance, check which A/C system is installed to the vehicle.



2. COMPRESSOR OIL

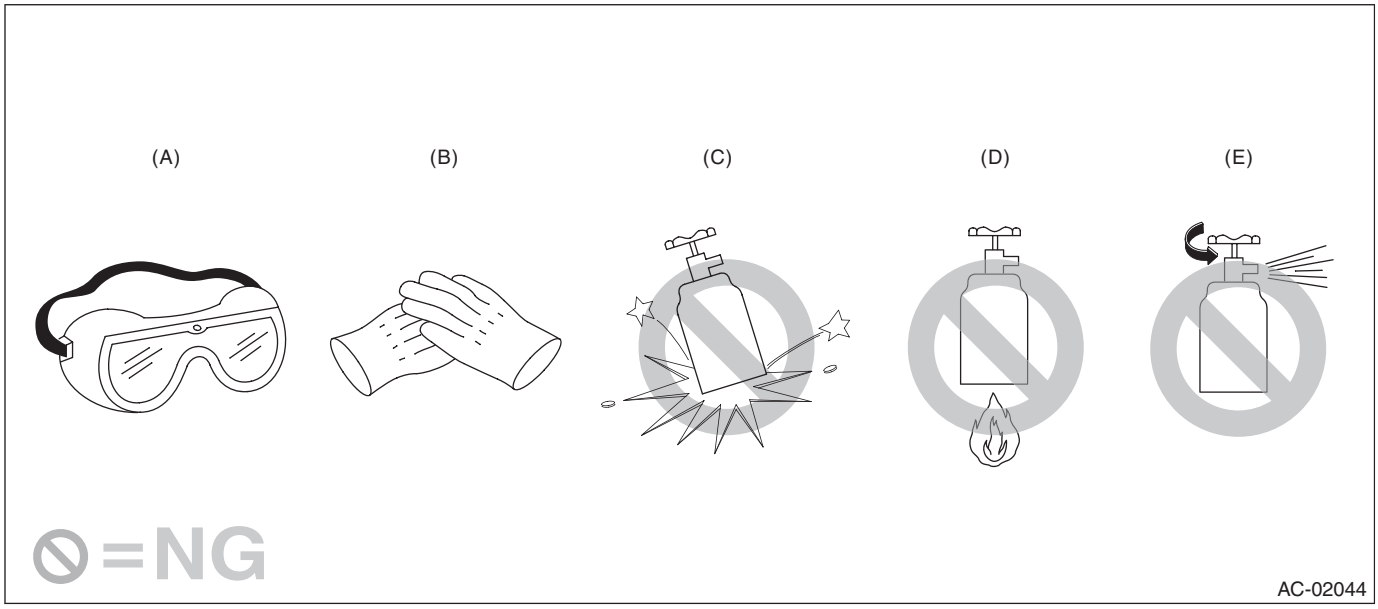
• HFC-134a compressor oil has no compatibility with that of CFC-12 system.
• Use only the manufacturer-authorized compressor oil, ND-OIL8, for the HFC-134a system.
• Do not mix multiple compressor oils.
If CFC-12 compressor oil is used in the HFC-134a A/C system, the compressor may become stuck due to poor lubrication, or the refrigerant may leak due to swelling of rubber parts.
On the other hand, if HFC-134a compressor oil is used in a CFC-12 A/C system, the durability of the A/C system will be lowered.
• HFC-134a compressor oil is very hygroscopic. When replacing or installing/removing A/C parts, immediately isolate the oil from atmosphere using a plug or tape. In order to avoid moisture, store the oil in a container with its cap tightly closed.

3. REFRIGERANT

• CFC-12 refrigerant cannot be used in a HFC-134a A/C system. HFC-134a refrigerant, also cannot be used in a CFC-12 A/C system.
• If an incorrect or no refrigerant is used, it will result in poor lubrication and the compressor itself may be damaged.

4. HANDLING OF REFRIGERANT

• The refrigerant boils at approx. –30°C (–22°F). When handling it, be sure to wear protective goggles and protective gloves. Direct contact of the refrigerant with skin may cause frostbite.
If the refrigerant gets into your eye, avoid rubbing your eyes with your hands. Wash your eye with plenty of water, and receive medical treatment from an eye doctor.
• Do not heat a service can. If a service can is directly heated, or put into boiling water, the inside pressure will become extremely high. This may cause the can to explode. If a service can must be warmed up, use warm water of 40°C (104°F) or less.
• Do not drop or impact a service can. (Observe the precautions and operation procedure described on the refrigerant can.)
• When the engine is running, do not open the high-pressure valve of manifold gauge. The high-pressure gas will back-flow resulting in an explosion of the can.
• Provide good ventilation and do not work in a closed area.
• In order to prevent global warming, avoid releasing HFC-134a into the atmosphere. Using a refrigerant recovery system, discharge and recycle the gas.

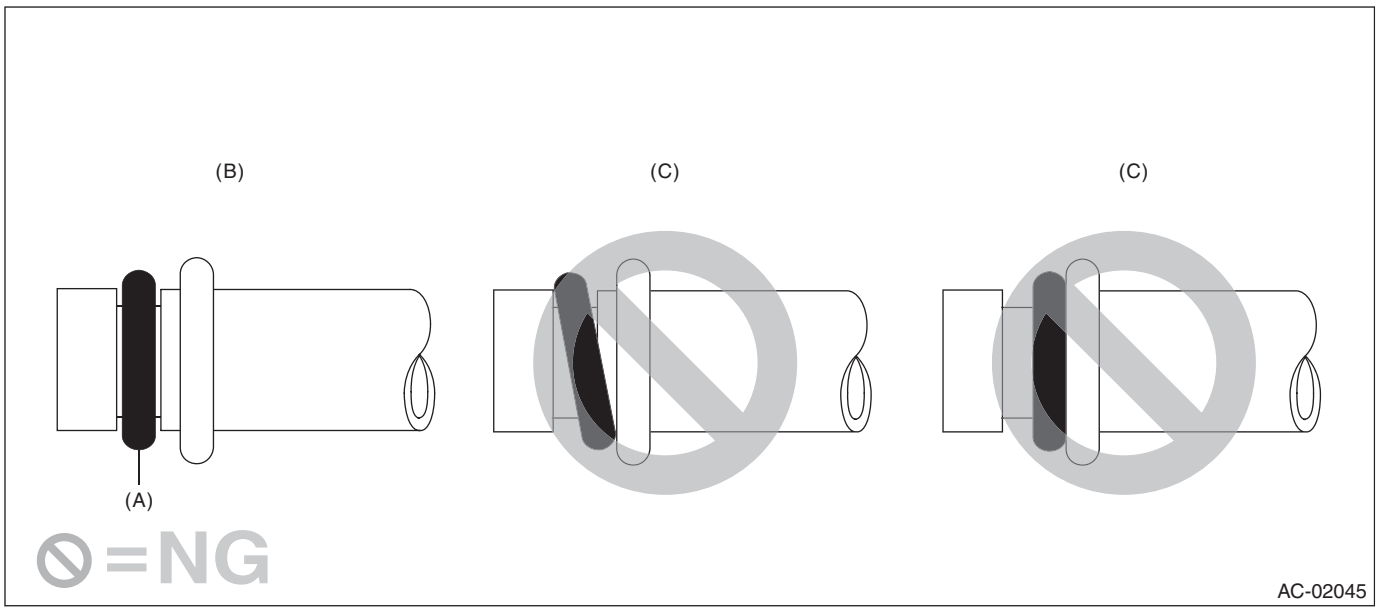


(A) Goggles
(B) Gloves
(C) Do not apply impact.
(D) No direct heat on container
(E) Do not discharge

5. O-RING CONNECTIONS

• Always use a new O-ring.
• In order to keep the O-rings free of lint which can cause a refrigerant gas leak, perform operations without gloves and cloth.
• Apply compressor oil to O-rings to avoid sticking, before installation.
• Use a torque wrench to tighten the O-ring fittings. Over-tightening will result in damage of the O-ring and deformation of the pipe end.
• If the work is interrupted before completing pipe connections, recap the pipes, components and fittings with a plug or tape to prevent foreign matter from entering.
• Visually check the surfaces and mating surfaces of O-rings, threads and connecting points. If a failure is found, replace the applicable parts.

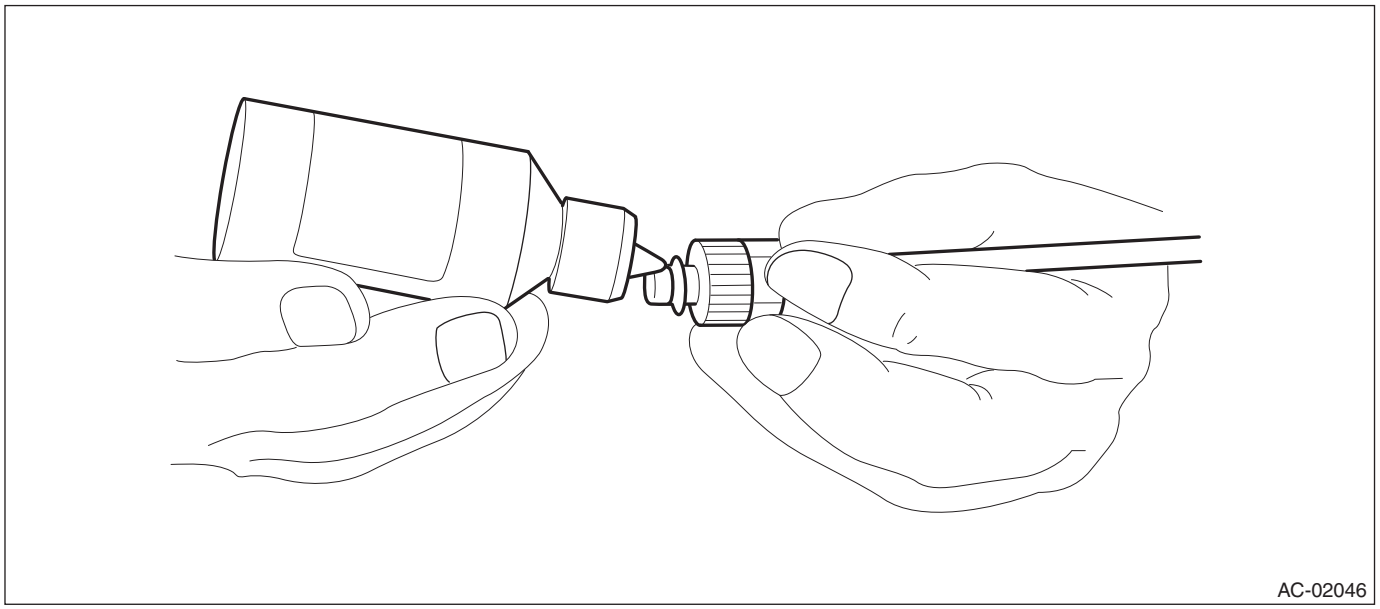
- Install the O-rings straight against the pipe groove.



(A) O-ring (B) OK (C) NG

- Use compressor oil specified in the service manual to lubricate the O-rings.

Apply oil to the top and sides of O-rings before installation.
Apply compressor oil to the pipe grooves.



- After tightening, use a clean cloth to remove excess compressor oil from the connections and any oil which may have run on the vehicle body or other parts.
- If any leakage is suspected after tightening, do not tighten the connections further, but disconnect the connections, remove the O-rings, and check the O-rings, threads, and connections.

D: PREPARATION TOOL

CAUTION:
When working on vehicles with a HFC-134a system, only use HFC-134a specified tools and parts. Do not mix CFC-12 tools and parts. If HFC-134a and CFC-12 refrigerant or compressor oil is mixed, it will result in poor lubrication and the compressor itself may be damaged.
In order to prevent the mixture of HFC-134a and CFC-12 parts and liquid, the type of tool and screw, and the replacement valves used are different. The gas leak detectors for the HFC-134a and CFC-12 systems must also not be interchanged.

	HFC-134a	CFC-12
Tool & screw type	Millimeter size	Inch size
Valve type	Quick joint type	Screw-in type

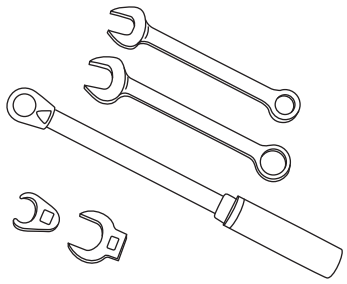
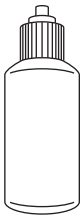
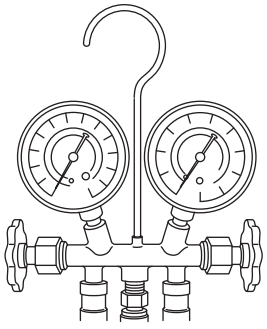
ILLUSTRATION	Name and Function
 AC-00213	Wrench Various **WRENCHES** will be required to service any A/C system. 7 — 40 N·m (0.7 — 4.1 kgf-m, 5 — 30 ft-lb) torque wrench and various crowfoot wrenches will be needed. Open end or flare nut wrenches will be needed to affix the pipe and hose fittings.
 AC-00012	Applicator bottle A small **APPLICATOR BOTTLE** is recommended to apply compressor oil to the various parts. It can be available at a hardware store.
 AC-00013	Manifold gauge set A **MANIFOLD GAUGE SET** (with hoses) is available at either a refrigerant supplier or an automotive equipment supplier.

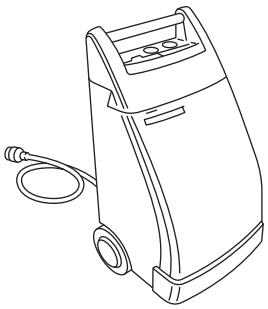
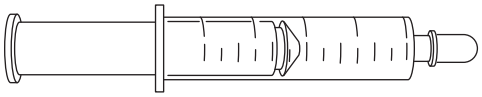
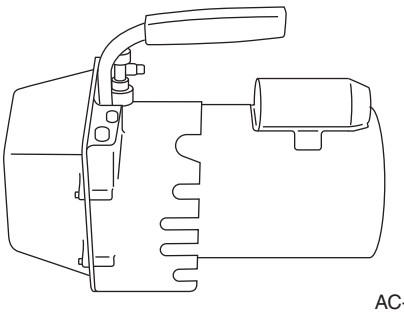
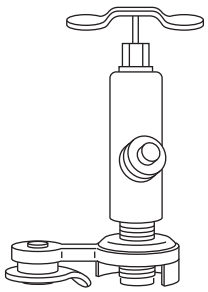
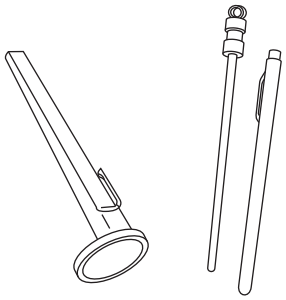
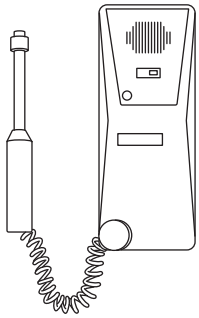
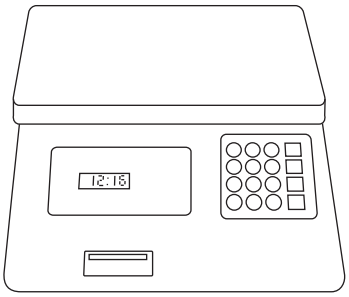
ILLUSTRATION	Name and Function
 AC-00014	Refrigerant recovery system A **REFRIGERANT RECOVERY SYSTEM** is used for the recovery and recycling of A/C system refrigerant after contaminants and moisture have been removed from the refrigerant.
 AC-00015	Syringe A graduated plastic **SYRINGE** will be needed to add oil into the system again. A syringe can be available at a pharmacy or drug store.
 AC-00016	Vacuum pump A **VACUUM PUMP** is necessary (for a good working condition), and is available either at a refrigerant supplier or an automotive equipment supplier.
 AC-00017	Can tap A **CAN TAP** for the 397 g (14 oz.) can is available at an automotive equipment supplier.
 AC-00018	Thermometer A Pocket **THERMOMETER** is available at either a industrial hardware store or a refrigerant supplier.

ILLUSTRATION	Name and Function
 AC-00019	Electronic leak detector An **ELECTRONIC LEAK DETECTOR** can be available at either a specialty tool supplier or an A/C equipment supplier.
 AC-00020	Weight scale A **WEIGHT SCALE** such as an electronic charging scale or a bathroom scale with digital display will be needed, if a 13.6 kg (30 lb) refrigerant container is used.

2. Refrigerant Pressure with Manifold Gauge Set

A: PROCEDURE

1) Place the vehicle in the shade and windless condition.
2) Open the front hood.
3) Connect the manifold gauge set.
4) Open the front windows and close all doors.
5) Increase the engine to 1,500 rpm.
6) Turn the A/C switch to ON.
7) Turn the temperature control switch to MAX COOL.
8) Put in RECIRC position.
9) Turn the blower control switch to HI.
10) Read the gauge.

Standard:
Low pressure: 127 — 196 kPa (1.3 — 2.0 kgf/cm^2, 18 — 28 psi)
High pressure: 1,471 — 1,667 kPa (15 — 17 kgf/cm^2, 213 — 242 psi)
Ambient temperature: 30 — 35°C (86 — 95°F)

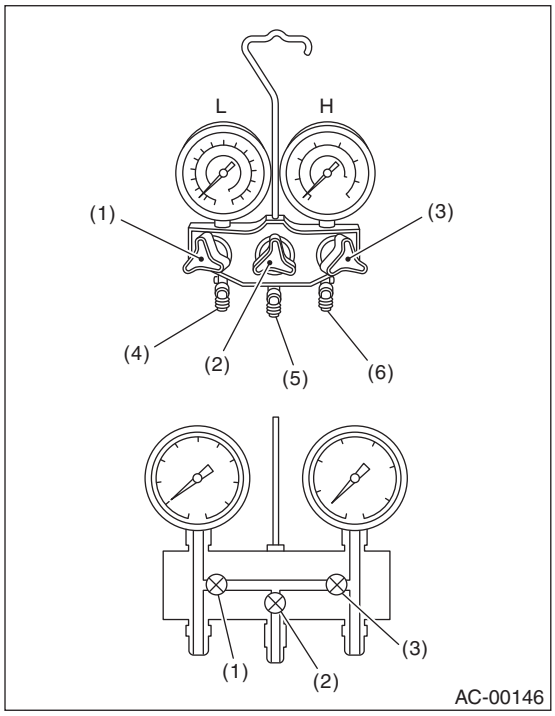
B: INSPECTION

Symptoms	Probable cause	Inspection order
High-pressure side is unusually high.	• Defective condenser fan motor • Clogged condenser fin • Too much refrigerant • Air inside the system • Defective receiver dryer	• Replace the fan motor. • Clean the condenser fin. • Discharge refrigerant. • Replace the receiver dryer. • After evacuating again, charge an appropriate amount of refrigerant.
High-pressure side is unusually low.	• Defective compressor • Not enough refrigerant • Clogged expansion valve • Expansion valve frozen temporarily by moisture.	• Replace the compressor. • Check for leaks. • Replace the expansion valve. • Fully evacuate the expansion valve.
Low-pressure side is unusually high.	• Defective compressor • Defective expansion valve • Too much refrigerant	• Replace the compressor. • Replace the expansion valve. • Discharge refrigerant.
Low-pressure side is unusually low.	• Not enough refrigerant • Clogged expansion valve • Expansion valve frozen temporarily by moisture. • Saturated receiver dryer	• Check for leaks. • Replace the expansion valve. • Replace the receiver dryer.

3. Refrigerant Recovery Procedure

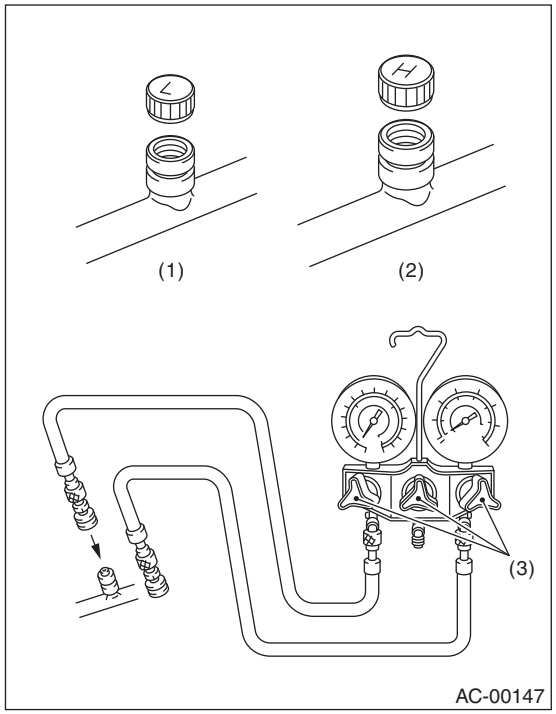
A: PROCEDURE

CAUTION:
• During operation, be sure to wear protective goggles and protective gloves.
• Connect the refrigerant recovery system with the manifold gauge set to discharge the refrigerant from the A/C system and recycle the gas.
• When recycling the discharged refrigerant, keep service cans on hand. Because the recovery rate with the recovery system is approx. 90%, service cans are necessary to charge the refrigerant.
• Follow the detailed operation procedure described in the operation manual attached to the refrigerant recovery system.
1) Perform compressor oil return operation. <Ref. to AC-24, PROCEDURE, Compressor Oil.>
2) Stop the engine.
3) Make sure the valves on low/high pressure sides of manifold gauge set are fully closed.



L: Low pressure gauge
H: High pressure gauge
(1) Low pressure valve
(2) Vacuum pump valve
(3) High pressure valve
(4) For low pressure
(5) For vacuum pump
(6) For high pressure

4) Install the low/high pressure hoses to the service ports on the low/high pressure sides of the vehicle respectively.



(1) Low-pressure side service port
(2) High-pressure side service port
(3) Close

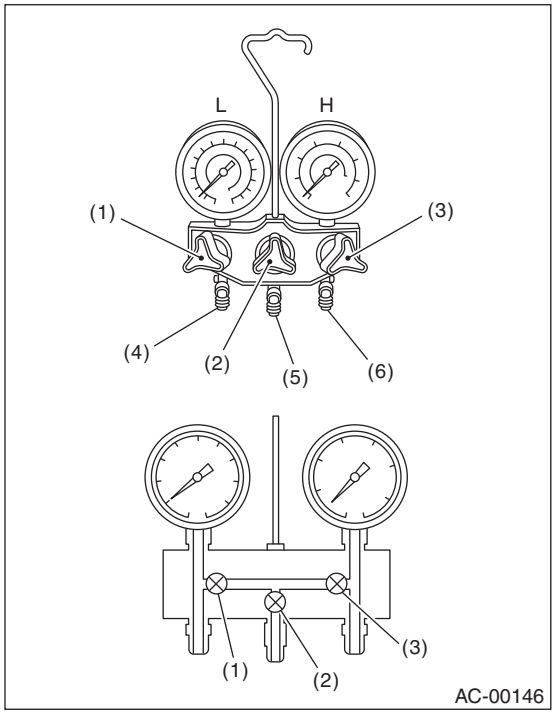
5) Connect the center hose to the refrigerant recovery system.
6) Follow the operation manual to activate the refrigerant recovery system.

4. Refrigerant Charging Procedure

A: PROCEDURE

CAUTION:
• While working, be sure to wear protective goggles and protective gloves.
• Air in the cycle can cause insufficient air conditioning, and water in the cycle can cause clogging in the cycle (icing) and rust. To remove this air and water content, use a vacuum pump to perform evacuation before filling with refrigerant. By making the inside of the cycle a vacuum, the water content will evaporate even at normal temperatures, and can be removed.
• Never run the engine while charging refrigerant.

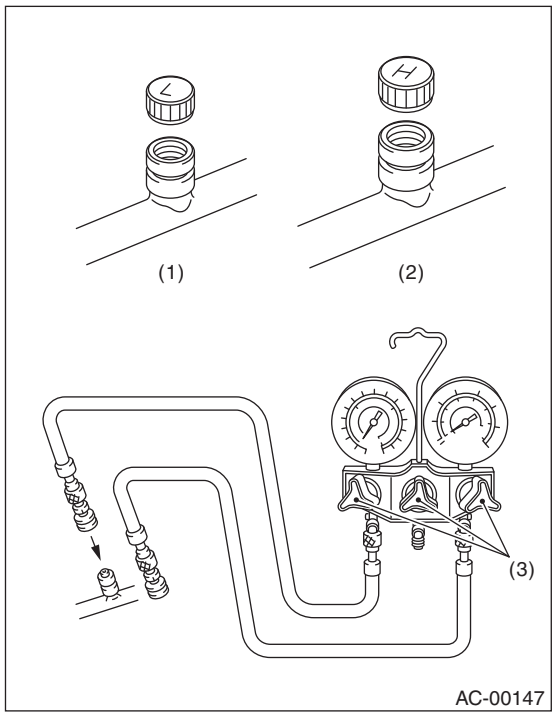
1) Close all valves of the manifold gauge.



L: Low pressure gauge
H: High pressure gauge
(1) Low pressure valve
(2) Vacuum pump valve
(3) High pressure valve
(4) For low pressure
(5) For vacuum pump
(6) For high pressure

2) Attach the low pressure side and high pressure side hoses to the vehicle service port.

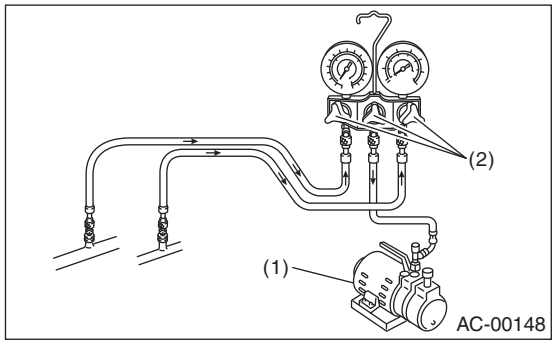
CAUTION:
Confirm that the connections are secure.



(1) Low-pressure side service port
(2) High-pressure side service port
(3) Close

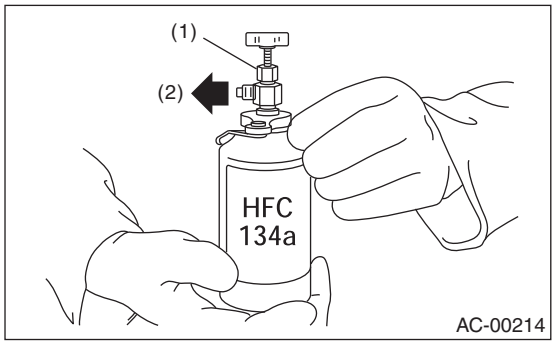
3) Connect the center manifold hose of the manifold gauge to the vacuum pump.
4) Operate the vacuum pump and open the low pressure and high pressure side valves. Next, open the center manifold hose valve, and begin evacuation.

CAUTION:
Make sure to perform evacuation using a vacuum pump.



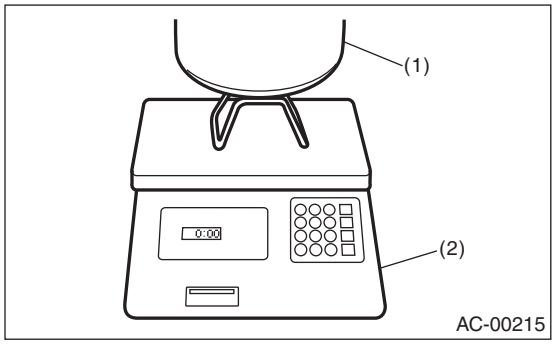
(1) Vacuum pump
(2) Open

5) Perform evacuation for 5 minutes or more, and when the low pressure gauge needle reaches –100.0 kPa (–750 mmHg, –29.5 inHg), close the center manifold hose valve, and stop the vacuum pump.
6) Leave alone for 5 to 10 minutes after closing the low pressure side and high pressure side valves, and check whether there is any change in the low pressure gauge needle indication. If the needle position changes, this indicates a leak. Check the pipe and hose connections, and repair the location with the problem. In this case, repeat again from step 1).
7) If there is no leakage, continue evacuation for additional 20 to 30 minutes.
8) Close all valves and stop the vacuum pump.
9) Follow the can tap operation manual, install to the refrigerant can.



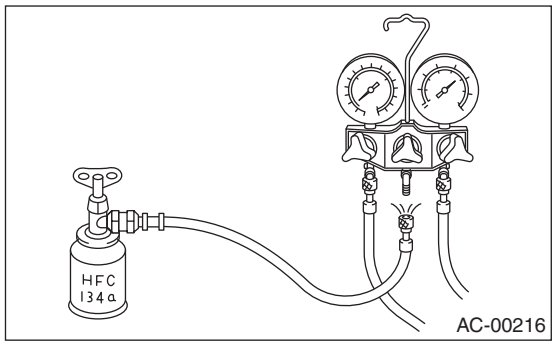
(1) Tap valve
(2) To the center manifold hose

10) Disconnect the center manifold hose from the vacuum pump, and connect the hose to the tap valve.
11) When a 13.6 kg (30 lb) refrigerant container is used, measure the amount of refrigerant with a refrigerant charging scale, and connect with the center manifold hose.



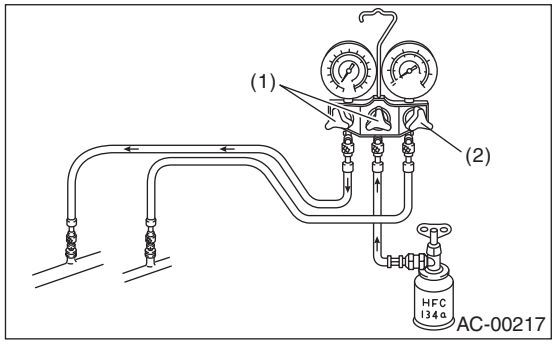
(1) Refrigerant container (HFC-134a)
(2) Weight scale

12) Open the valve on the HFC-134a source.
13) Loosen the center manifold hose connection on the manifold gauge for a few seconds (if there is a purge valve on the manifold gauge, push this instead) to allow the air in the center manifold hose to be bled by the refrigerant pressure.



14) Open the high pressure side and low pressure side valves of the manifold gauge to fill with refrigerant.

CAUTION:
When filling with the engine running, do not open the high pressure side valve. Always fill from the low pressure side.



(1) Open
(2) Open

15) When the gauge needle reaches approximately 200 kPa (1,500 mmHg, 59.1 inHg), close all valves.
16) Using a leak tester, check for refrigerant leaks in the system.
17) After checking that there are no refrigerant leaks, fill with refrigerant up to the specified amount.
18) If the HFC-134a supply container becomes empty, close all valves, and close the can tap valve to replace the empty container. After replacing with a new HFC-134a supply container, perform air purge, and resume the filling operation.
19) If the refrigerant filling efficiency drops, close all valves.
20) Check that both the low pressure and high pressure valves are closed. Start the engine with the A/C switch OFF.

21) To prevent damage to the compressor, push the A/C switch ON-OFF quickly a few times.
22) Set up the vehicle to the following status:

CAUTION:
When filling with the engine running, do not open the high pressure side valve.
Always fill from the low pressure side valve.

- A/C switch ON
- Engine running at 1,500 rpm
- Blower speed setting to “HI”
- Temperature setting to “MAX COOL”
- Air inlet setting to “RECIRC”
- Window open

23) Open the low pressure side valve and fill with refrigerant up to the specified amount.
24) After filling with refrigerant, close all valves and disconnect the hose from the service port.
25) Attach the cap to the service port.

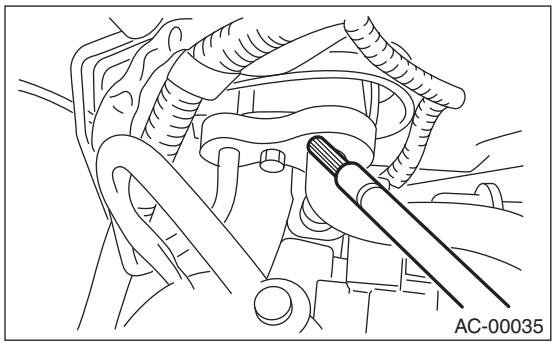
5. Refrigerant Leak Check

A: INSPECTION

1) Operate the A/C system for approx. 10 minutes, and check that the high-side pressure shows at least 690 kPa (7.03 kgf/cm^2, 100 psi). Then stop the engine to start the leak test.
2) Starting from the connection between high-pressure pipe and evaporator, check the system for leaks along the high-pressure side through the compressor. The following items must be checked thoroughly.
• Check the joint and seam between pressure sensor and high-pressure pipe.
• Check the connections between condenser and pipes, and welded joints on the condenser.

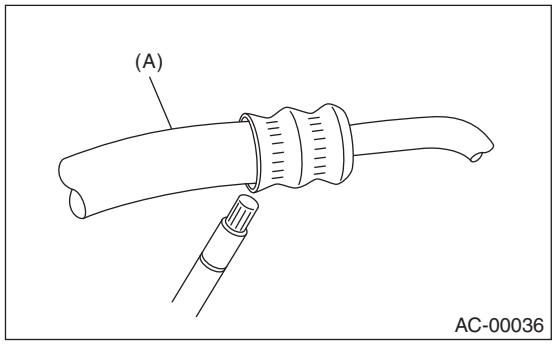
NOTE:
The leak tester may detect the oil on the condenser fins as a leak.
• Check the joint between compressor and hoses.
• Check the machined area of the compressor and other joints on the compressor.
• Check the compressor shaft seal at the area near the center of compressor clutch pulley.

NOTE:
Shaft seals may show a slight amount of leakage, about 3 g (0.1 oz) per year. This is not a problem.
3) Starting from the connection between low-pressure pipe and evaporator, check the system for leakage along the low-pressure side through the compressor. The following items must be checked thoroughly.
• Connection between 2 parts
• Connection between pipe and plate


AC-00035

4) Visually check the rubber area of the flexible hose for cracks. Check the entire length of the flexible hose, especially the connection with the metal hose end.

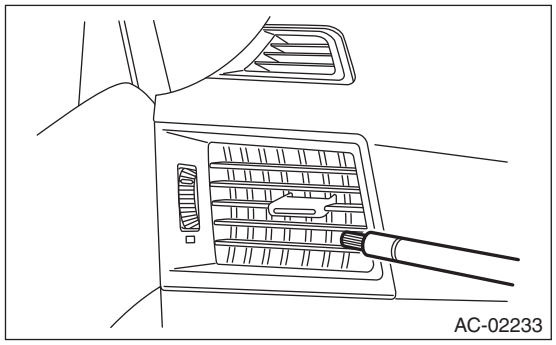
CAUTION:
Carefully check the external surface of hoses and pipes at approx. 25 mm (0.98 in) per second.



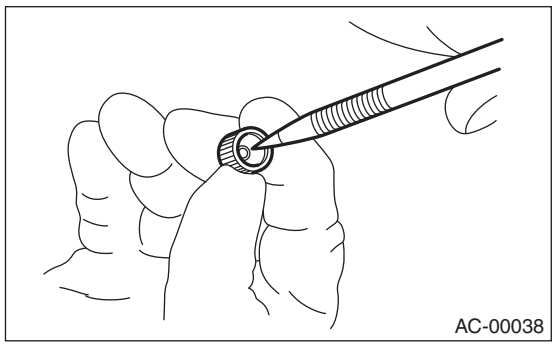
AC-00036

(A) Flexible hose

5) Disconnect the drain hose from the heater case, and check the hose end for at least 10 seconds.
After the test is finished, reconnect the drain hose.
6) Turn the ignition key to ON, and run the blower at high speed for approx. 1 minute. Stop the blower and check the ventilation grille on the instrument panel. While moving the tester closer to the grille, run the blower for 1 or 2 seconds, then stop it. Check the grille at that position for at least 10 seconds.

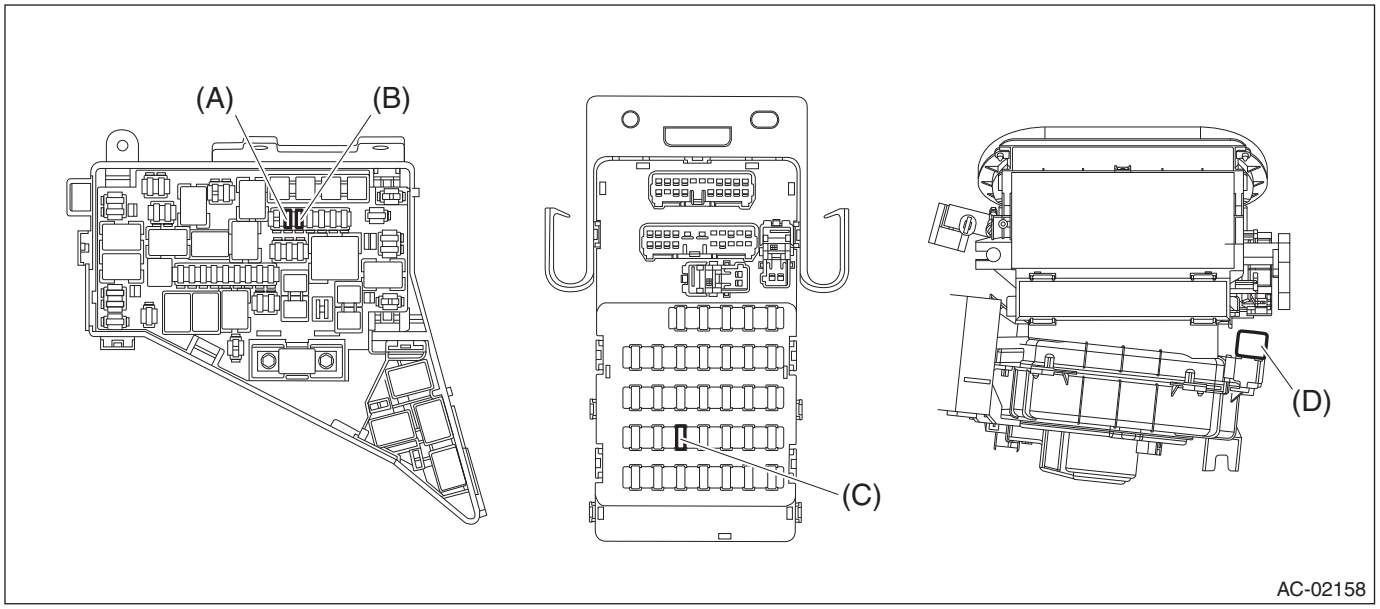

AC-02233

7) Check the valve in the service port.
8) Visually check the rubber seal in the service port cap.


AC-00038

6. Relay and Fuse

A: LOCATION



Main Fuse Box	Fuse 15 A	(A)
	Fuse 15 A	(B)
Relay & fuse box	Fuse 15 A	(C)
BLOWER MOTOR UNIT	Blower motor relay	(D)

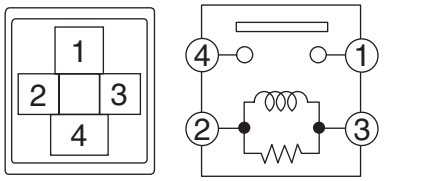
B: INSPECTION

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	Standard	Circuit
1 — 4	Always	1 MΩ or more	
1 — 4	Apply battery voltage between terminals 2 — 3.	Less than 1 Ω	

2) Replace the relay if it is found defective.

7. Compressor Oil

A: PROCEDURE

NOTE:
Before making repairs, perform the oil return operation to return the compressor oil in circulation with the refrigerant to the compressor.
1) Increase the engine to 1,500 rpm.
2) Turn the A/C switch to ON.
3) Turn the temperature control switch to MAX COOL.
4) Put in RECIRC position.
5) Turn the blower control switch to HI.
6) Leave in this condition for 10 minutes.

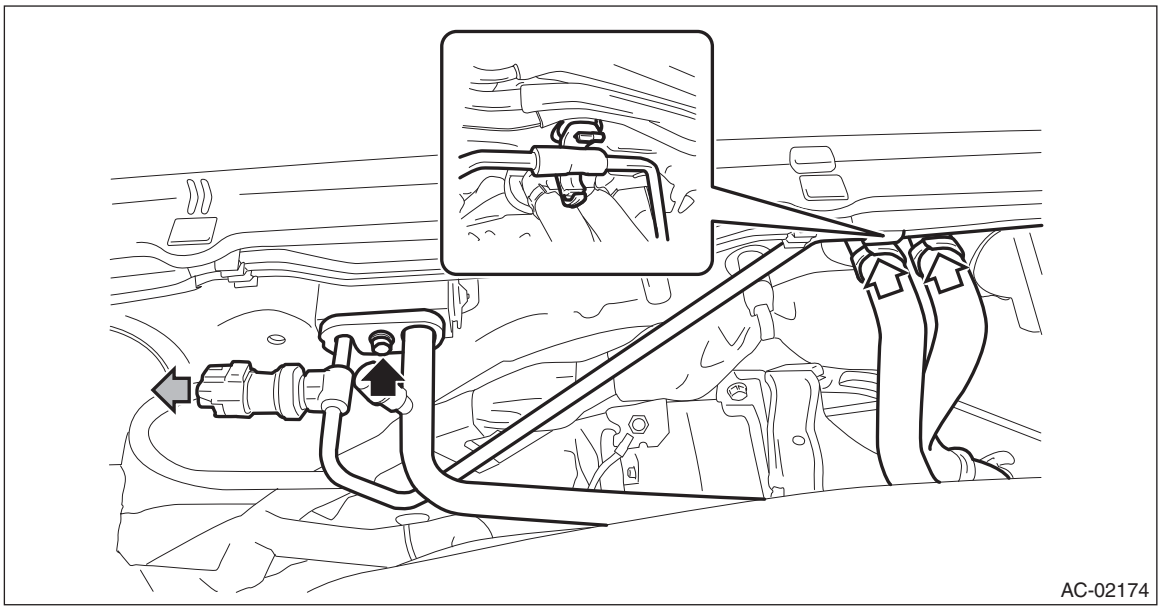
B: REPLACEMENT

NOTE:
• If a component has been replaced, add an appropriate amount of compressor oil (same as the amount of remaining oil in removed component).
• When replacing the compressor, the new compressor will already have the specified amount of oil in it. Install the new compressor so that the amount of oil becomes the same as the amount of remaining oil in the removed compressor.
• Since the hygroscopicity of compressor oil is high, perform this series of works quickly.

8. Blower Motor Unit Assembly

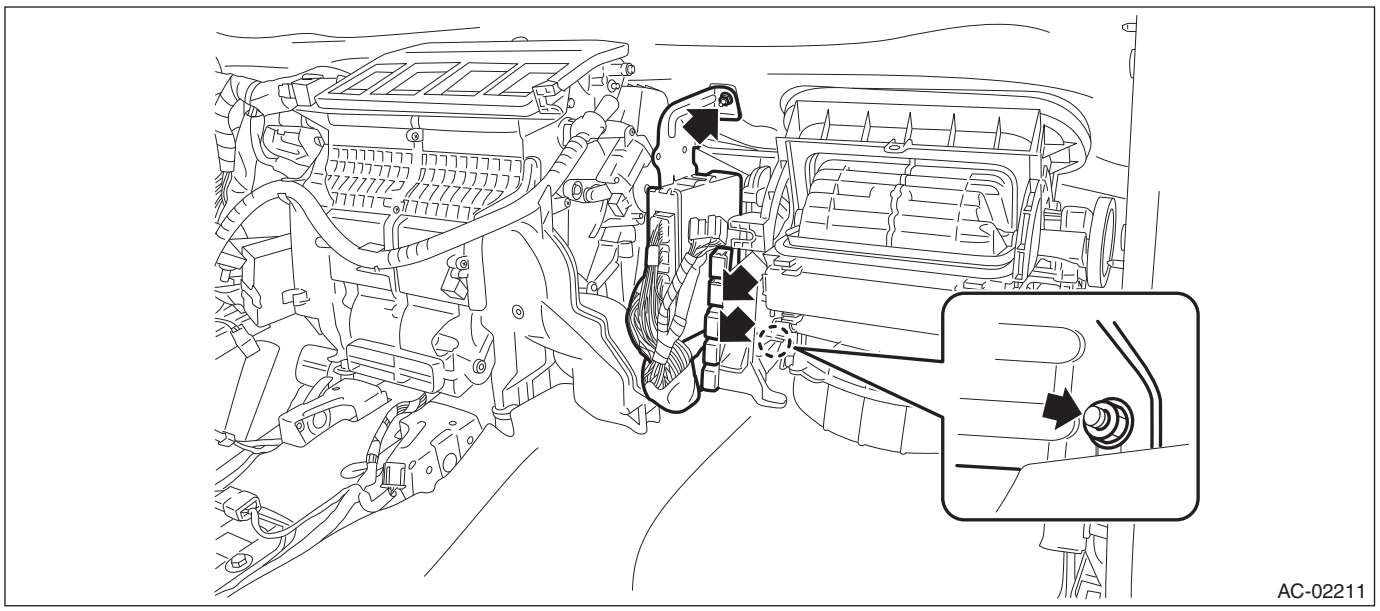
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Using the refrigerant recovery system, drain the refrigerant. <Ref. to AC-18, PROCEDURE, Refrigerant Recovery Procedure.>
3) Drain the coolant from the radiator.
• H4 non-turbo model: <Ref. to CO(H4SO)-14, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
• H4 turbo model: <Ref. to CO(H4DOTC)-14, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
• H6 model: <Ref. to CO(H6DO)-12, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
4) Remove the connector and bolts, and remove the expansion valve and AC pipes from the evaporator.
5) Loosen the heater hose clamps and remove the hoses.

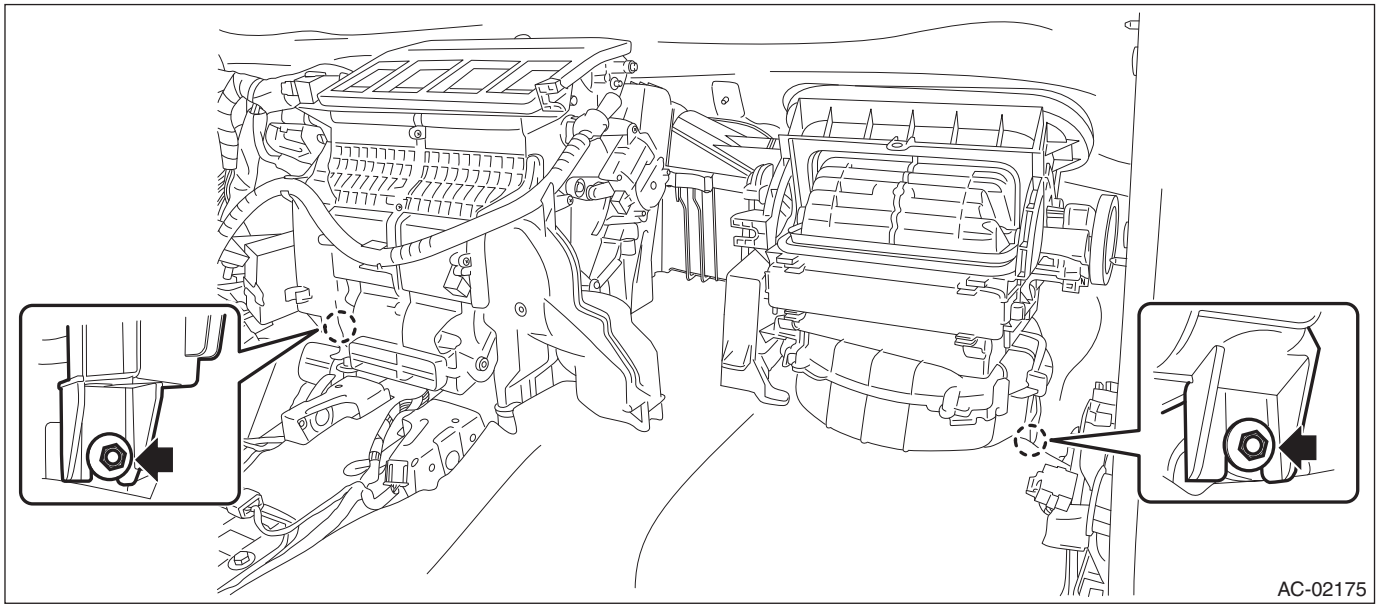


6) Remove the instrument panel assembly. <Ref. to EI-75, REMOVAL, Instrument Panel Assembly.>
7) Remove the heater and cooling unit.
(1) Release the lock and remove the relay holder.

(2) Remove the nuts, and remove the engine control module (ECM).

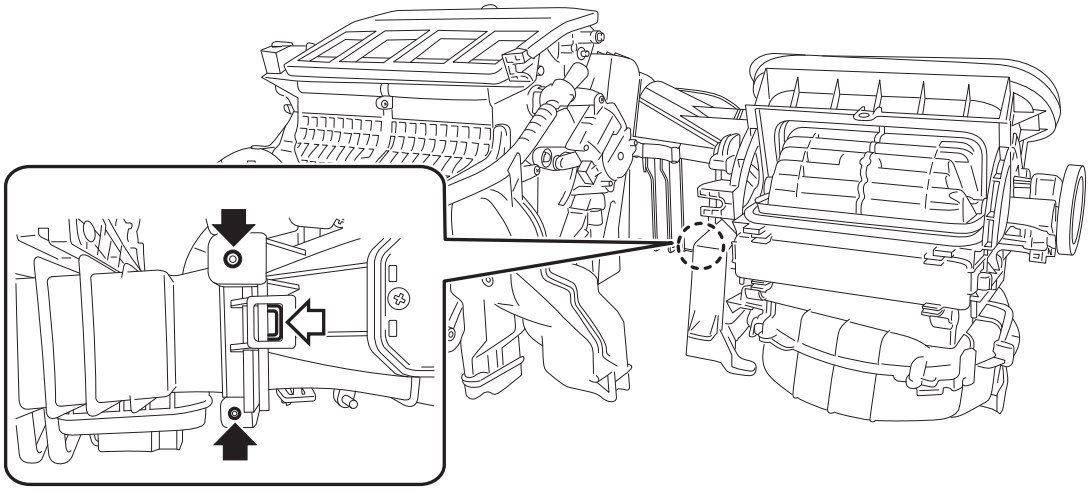


(3) Remove the bolts and remove the heater and cooling unit.



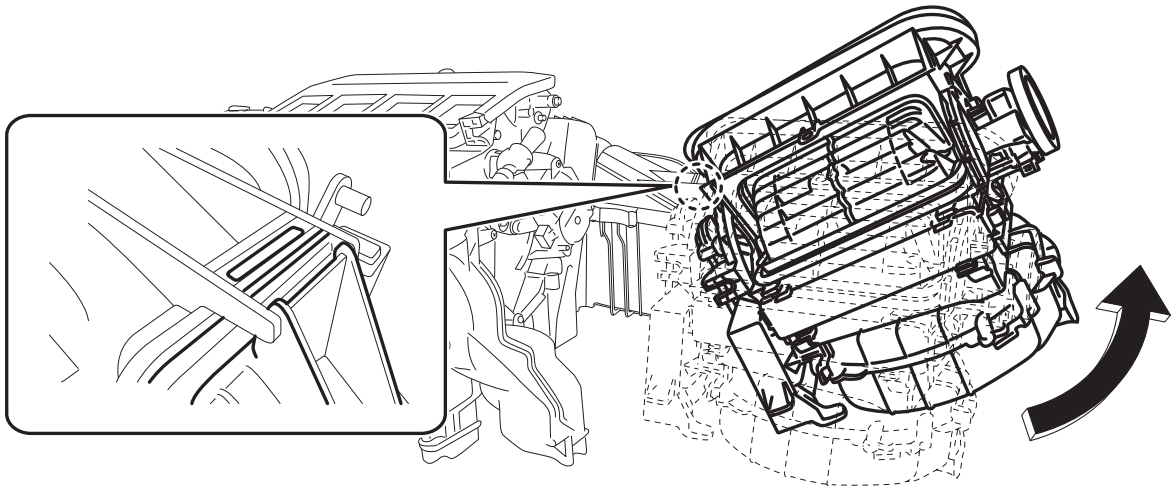
8) Remove the blower motor unit assembly.

(1) Release the claws and remove the bolts.



AC-02159

(2) Remove the blower motor unit assembly as shown in the figure.



AC-02160

B: INSTALLATION

CAUTION:
• After installing the compressor, do not start the engine until the A/C system is charged with refrigerant.
• If the engine is started with no refrigerant charge, replace the compressor.
• If the engine may have been started with no refrigerant charge, check for any diagnosis code (DTC) using Subaru Select Monitor. If the code B1644 (Refrigerant not sealed drive error) is output, replace the compressor.

1) Install each part in the reverse order of removal.
2) Fill engine coolant.
• H4 non-turbo model: <Ref. to CO(H4SO)-14, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
• H4 turbo model: <Ref. to CO(H4DOTC)-14, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
• H6 model: <Ref. to CO(H6DO)-12, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
3) Charge refrigerant. <Ref. to AC-19, PROCEDURE, Refrigerant Charging Procedure.>

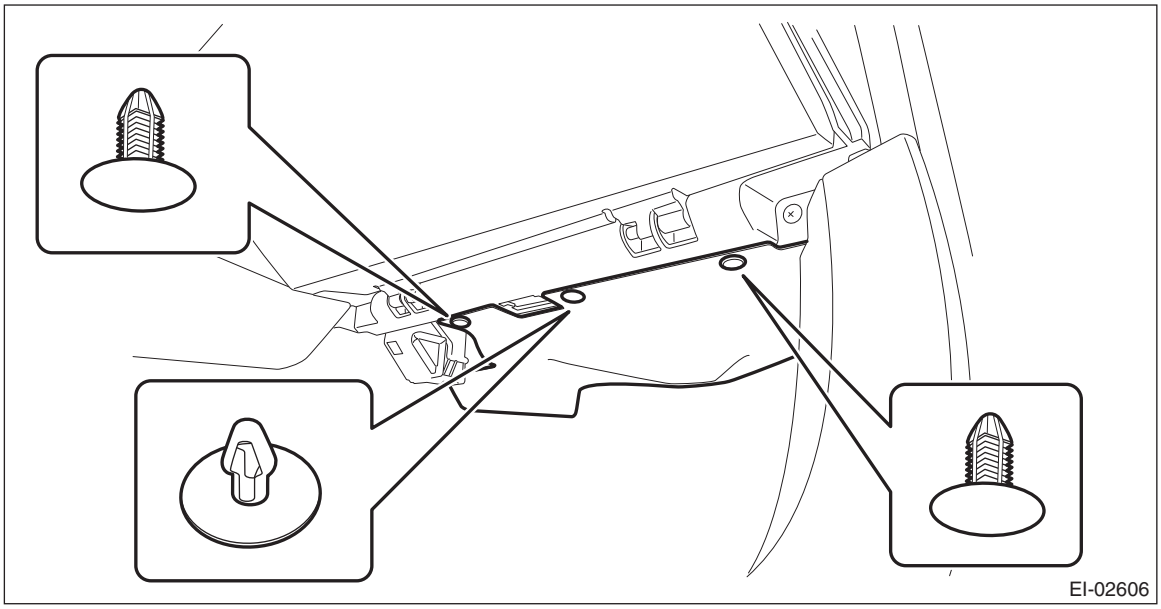
Tightening torque:

- ***Heater cooling unit: <Ref. to AC-4, HEATER COOLING UNIT, COMPONENT, General Description.>***
- ***Blower motor unit: <Ref. to AC-6, BLOWER MOTOR UNIT, COMPONENT, General Description.>***

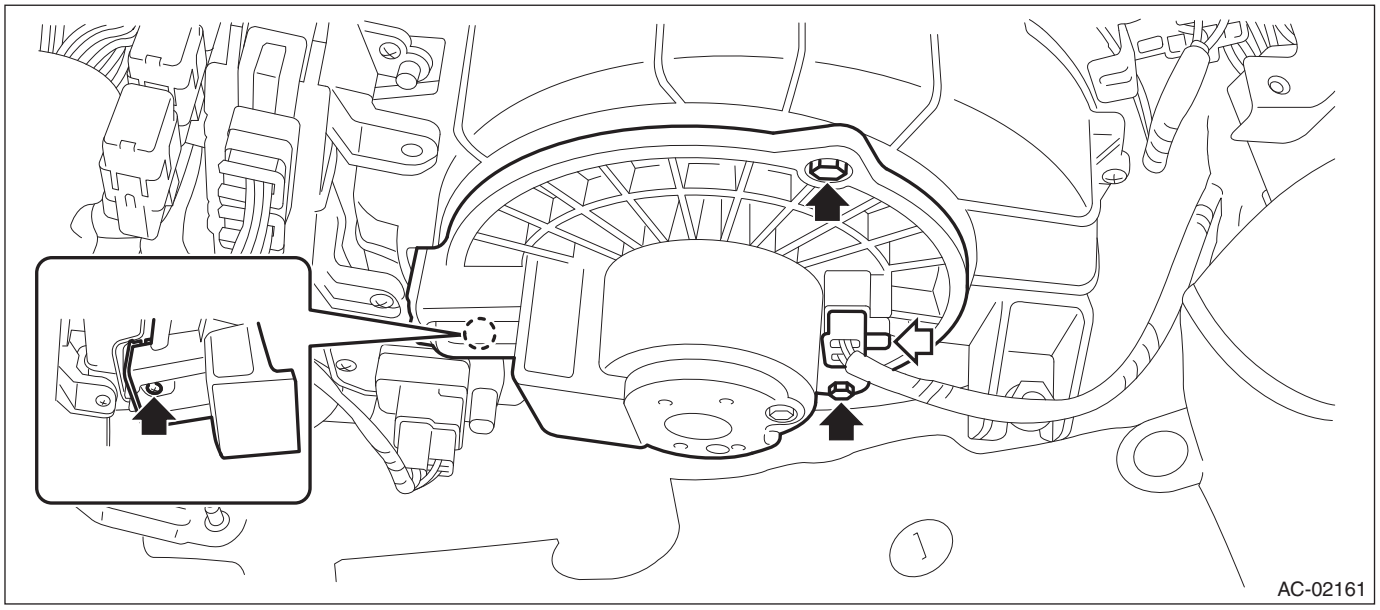
9. Blower Motor

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the clips, and remove the glove box under cover.



3) Remove the blower motor.
   (1) Disconnect the connector.
   (2) Remove the screw and remove the blower motor.

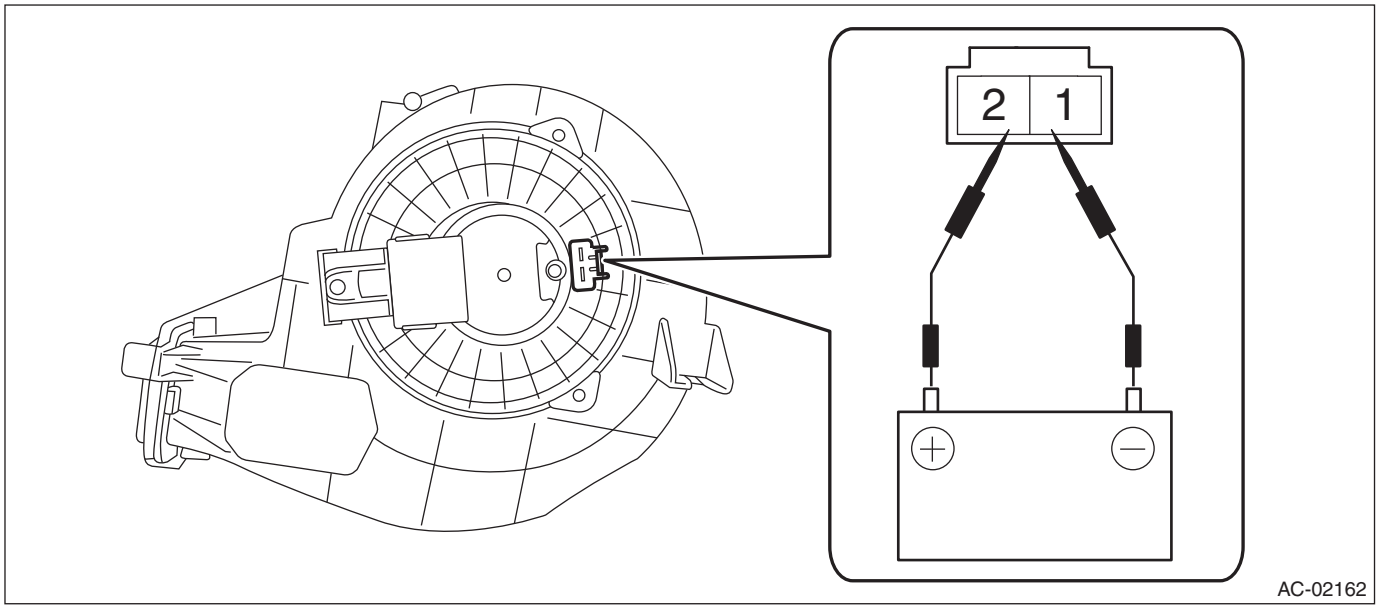


B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1) Disconnect the blower motor connector.
2) Apply battery voltage between the blower motor terminals.
   (1) Connect the positive (+) cable to the No. 2 terminal.
   (2) Connect the negative (–) cable to the No. 1 terminal and check that the blower motor rotates normally.

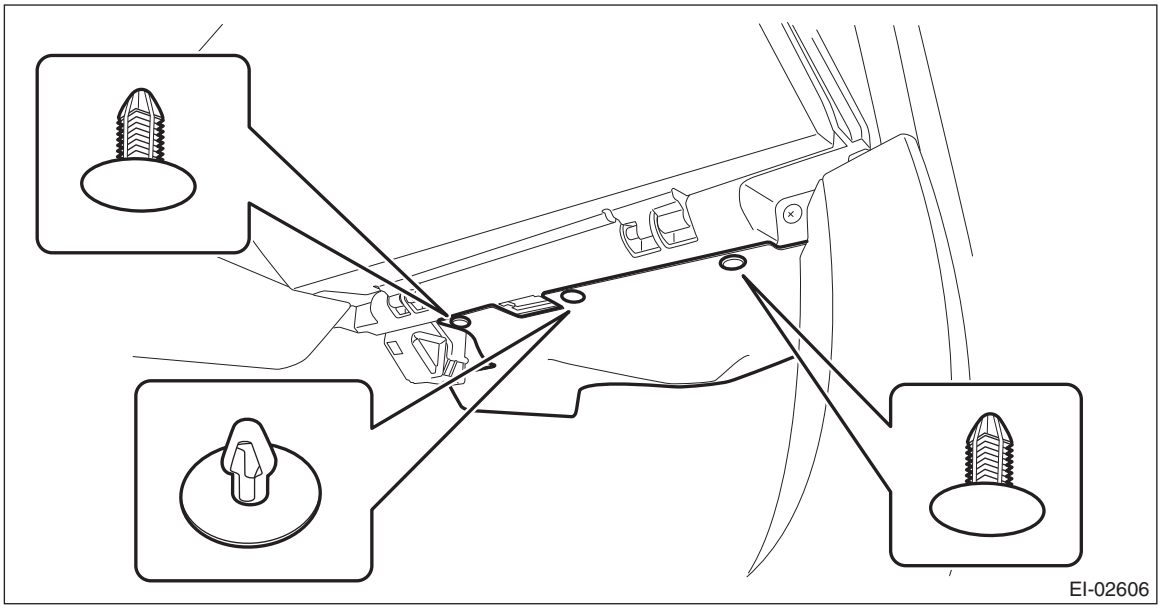


3) If the blower motor does not operate normally, replace the blower motor.

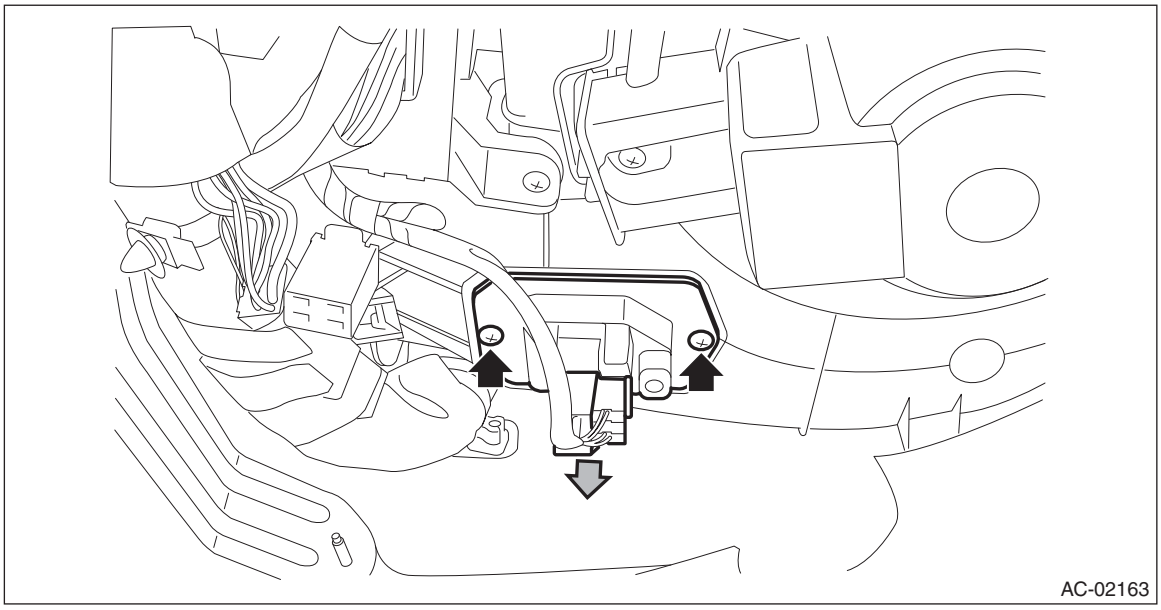
10.Power Transistor (Auto A/C Model)

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the clips, and remove the glove box under cover.



3) Remove the power transistor.
   (1) Disconnect the connector.
   (2) Remove the screws and remove the power transistor.



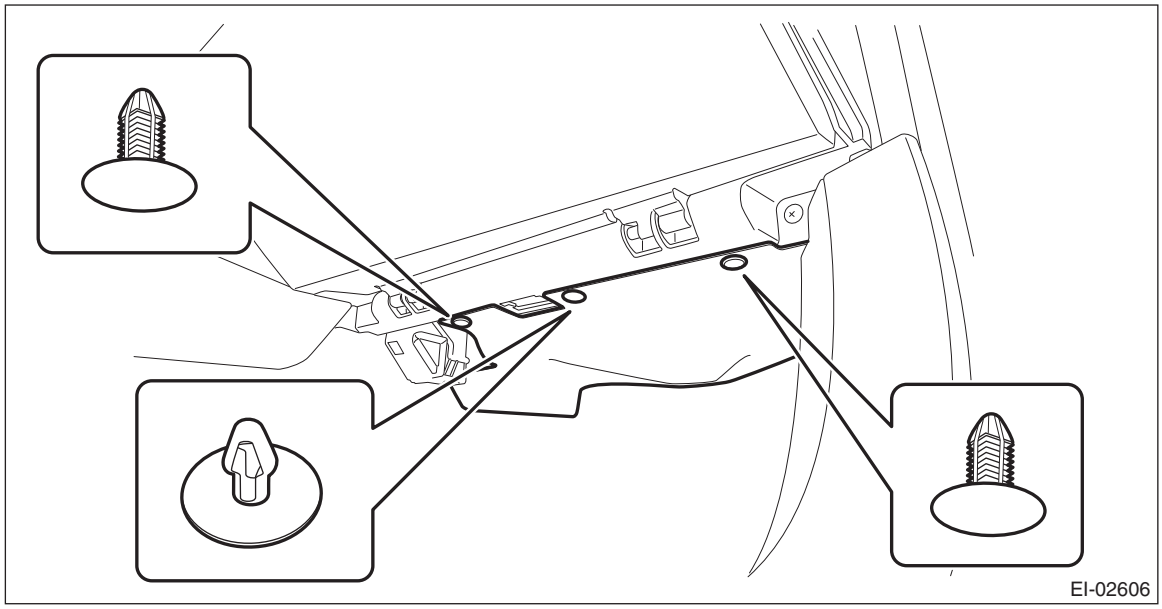
B: INSTALLATION

Install each part in the reverse order of removal.

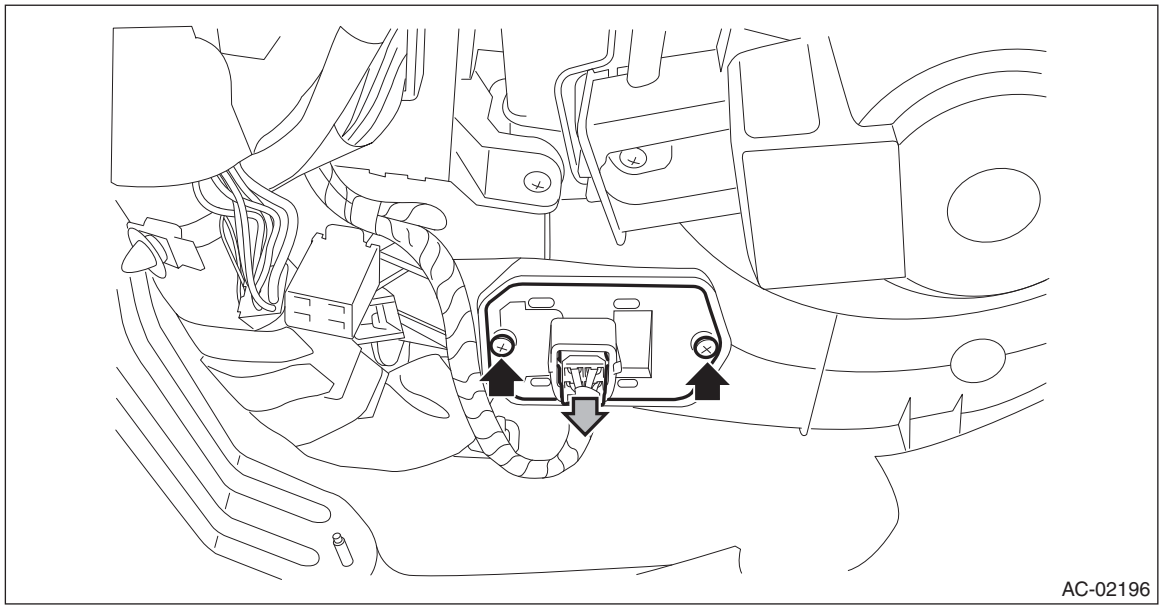
11.Blower Resistor (Manual A/C Model)

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the clips, and remove the glove box under cover.



3) Remove the blower resistor.
   (1) Disconnect the connector.
   (2) Remove the screw and remove the blower resistor.



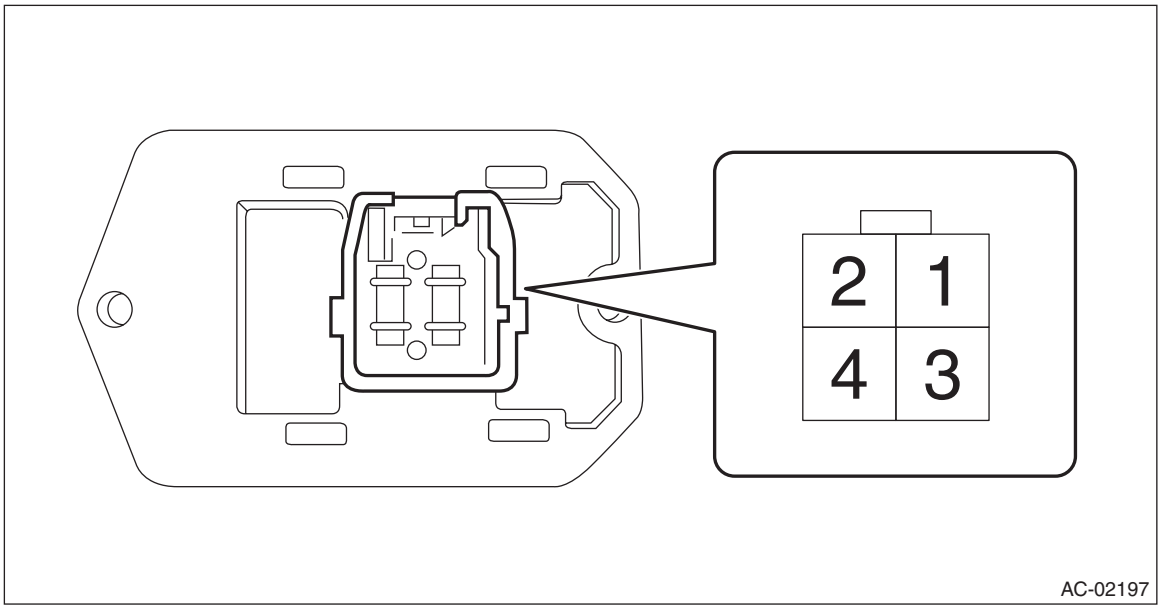
B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1) Disconnect the blower resistor connector.
2) Check the resistance between blower resistor terminals.

Preparation tool: Circuit tester



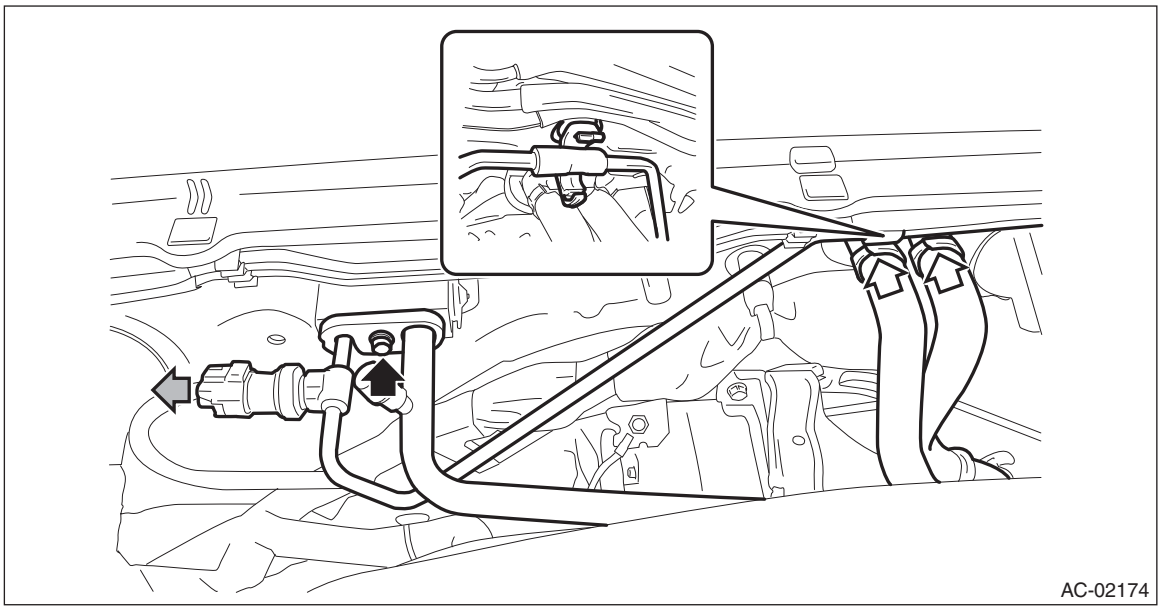
Terminal No.	Standard
4 — 2	Approx. 0.44 Ω
4 — 3	Approx. 1.12 Ω
4 — 1	Approx. 2.92 Ω

3) Replace the blower resistor if the inspection result is not within the standard value.

12.Heater Core

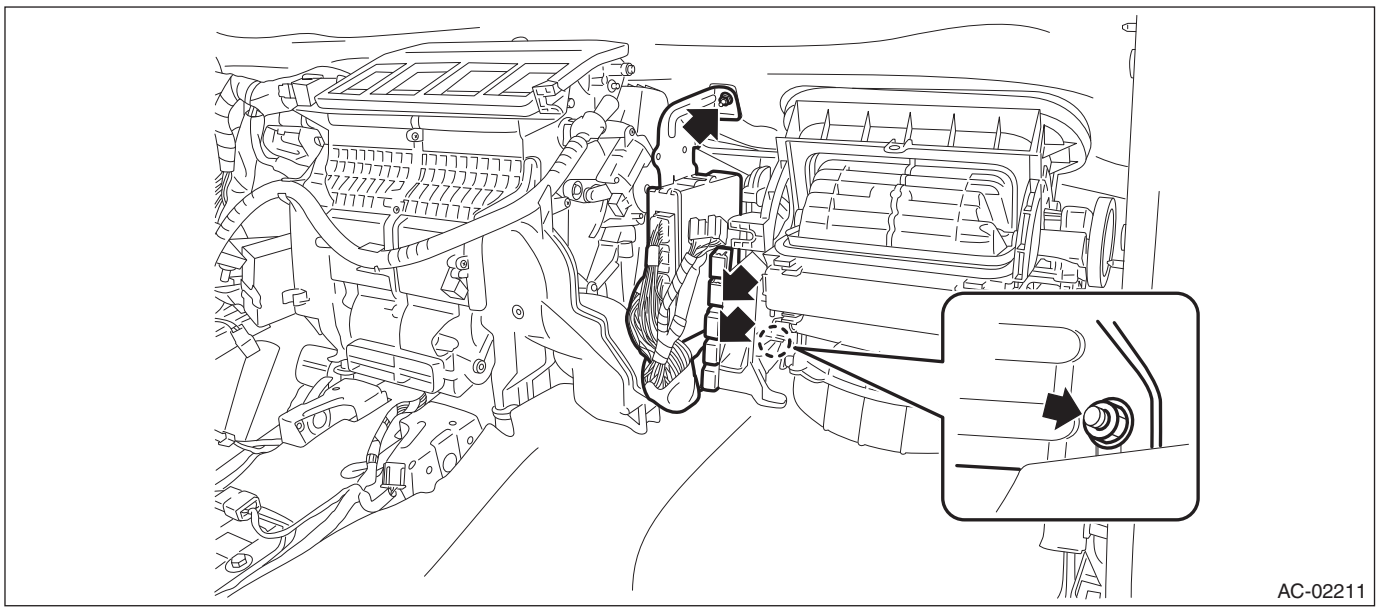
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Using the refrigerant recovery system, drain the refrigerant. <Ref. to AC-18, PROCEDURE, Refrigerant Recovery Procedure.>
3) Drain the coolant from the radiator.
• H4 non-turbo model: <Ref. to CO(H4SO)-14, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
• H4 turbo model: <Ref. to CO(H4DOTC)-14, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
• H6 model: <Ref. to CO(H6DO)-12, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
4) Remove the connector and bolts, and remove the expansion valve and AC pipes from the evaporator.
5) Loosen the heater hose clamps and remove the hoses.

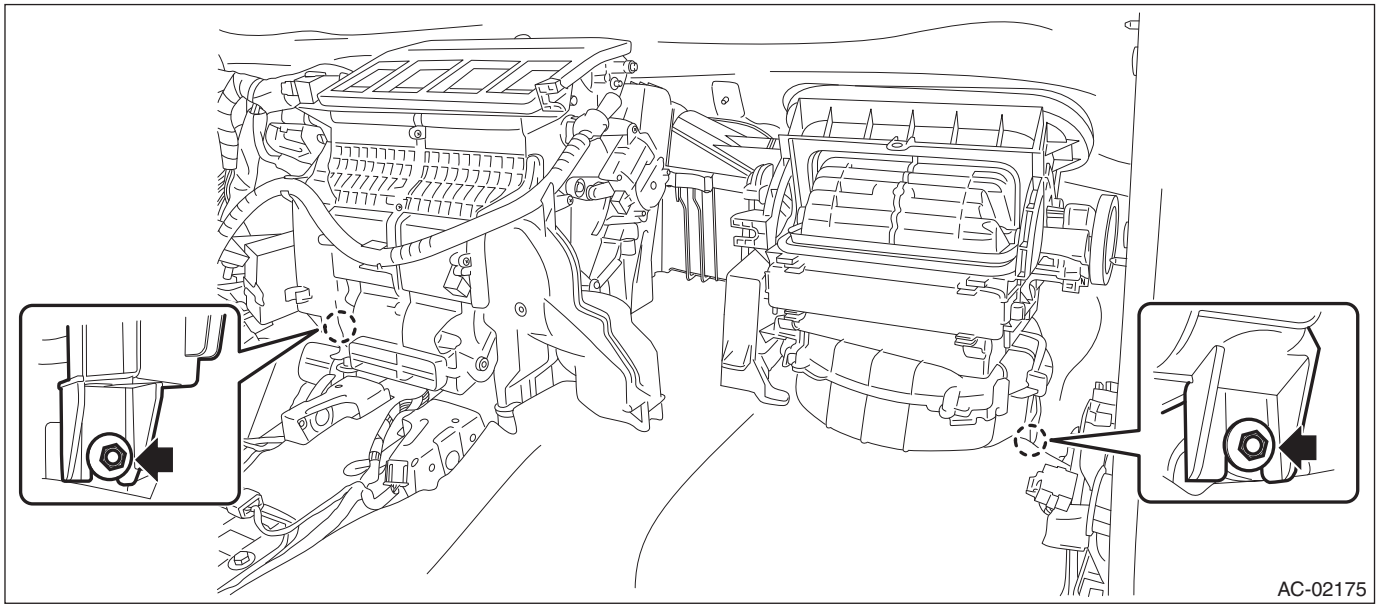


6) Remove the instrument panel assembly. <Ref. to EI-75, REMOVAL, Instrument Panel Assembly.>
7) Remove the heater and cooling unit.
(1) Release the lock and remove the relay holder.

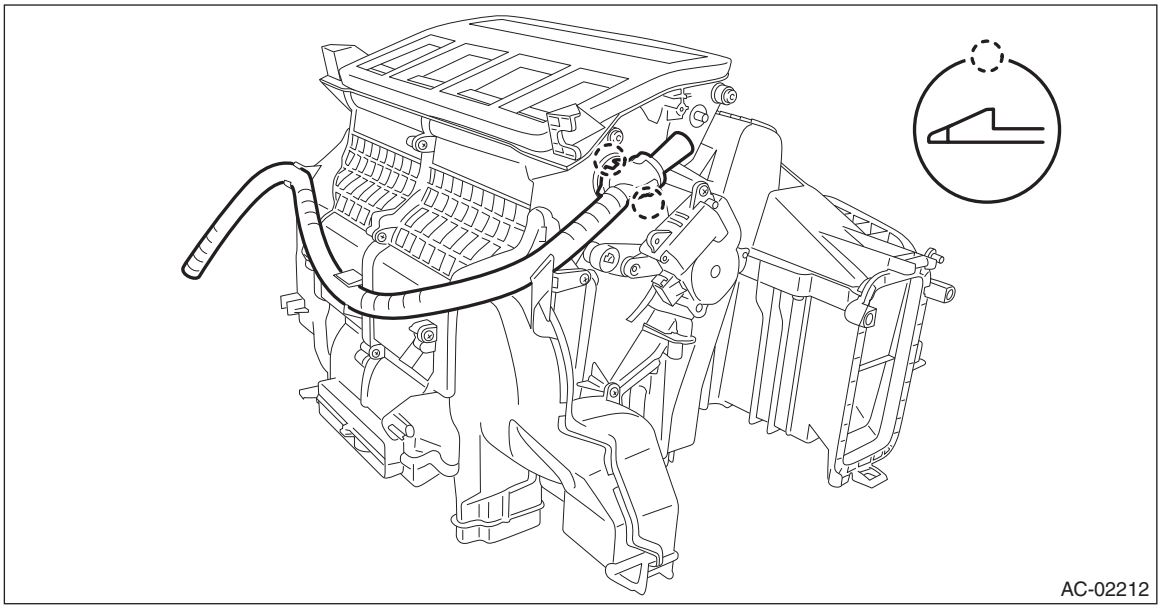
(2) Remove the nuts, and remove the engine control module (ECM).



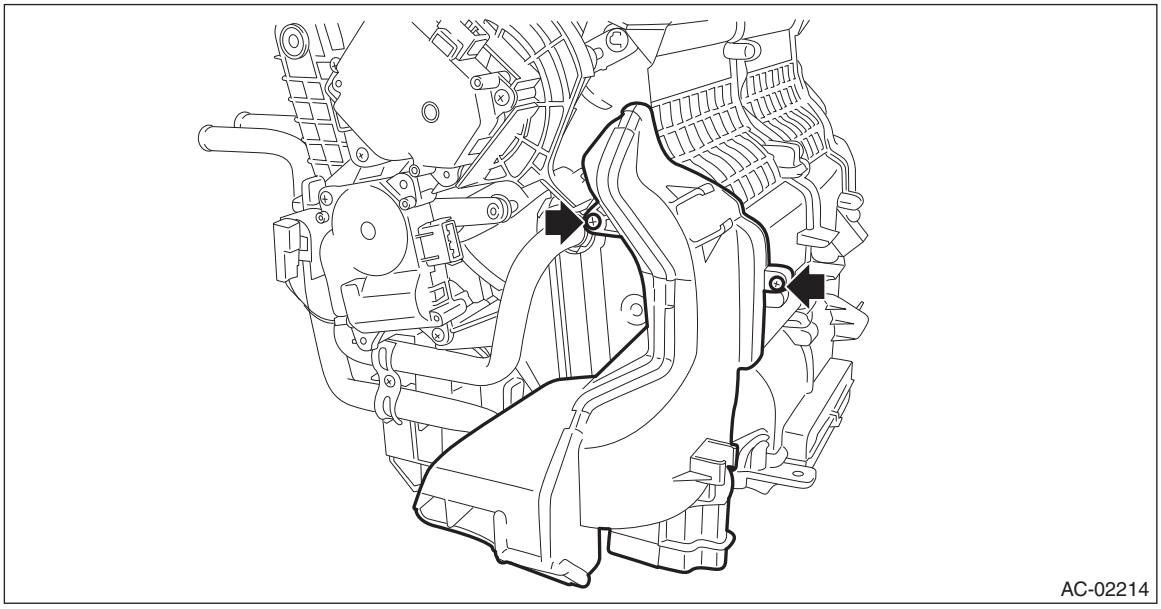
(3) Remove the bolts and remove the heater and cooling unit.



8) Disconnect the claws and then remove the aspirator hose.

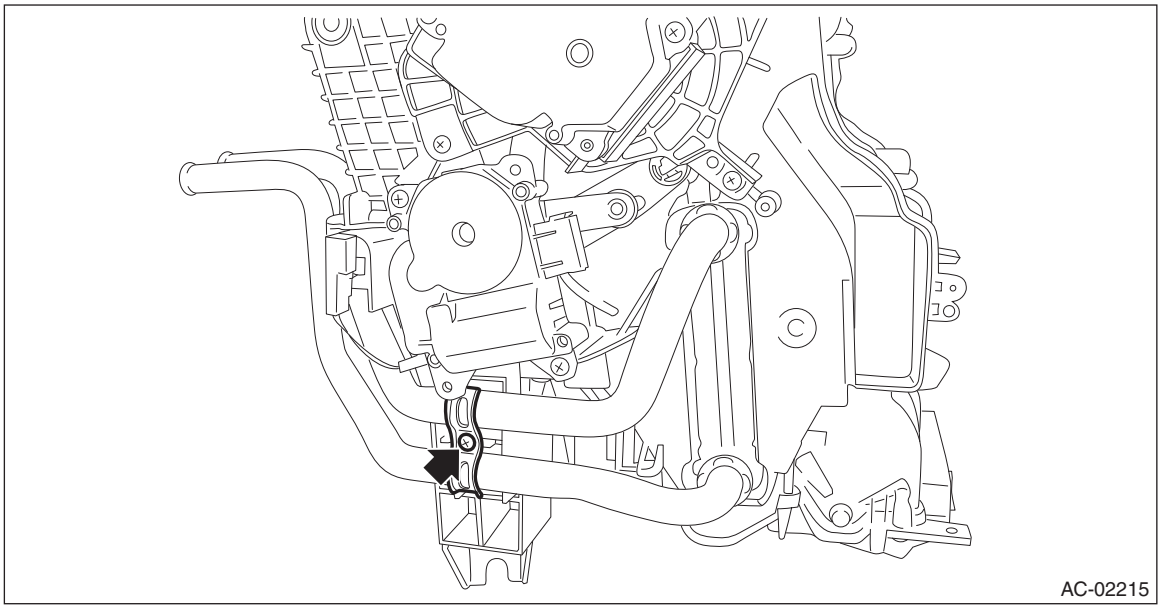


9) Remove the screws and remove the foot duct (LH).

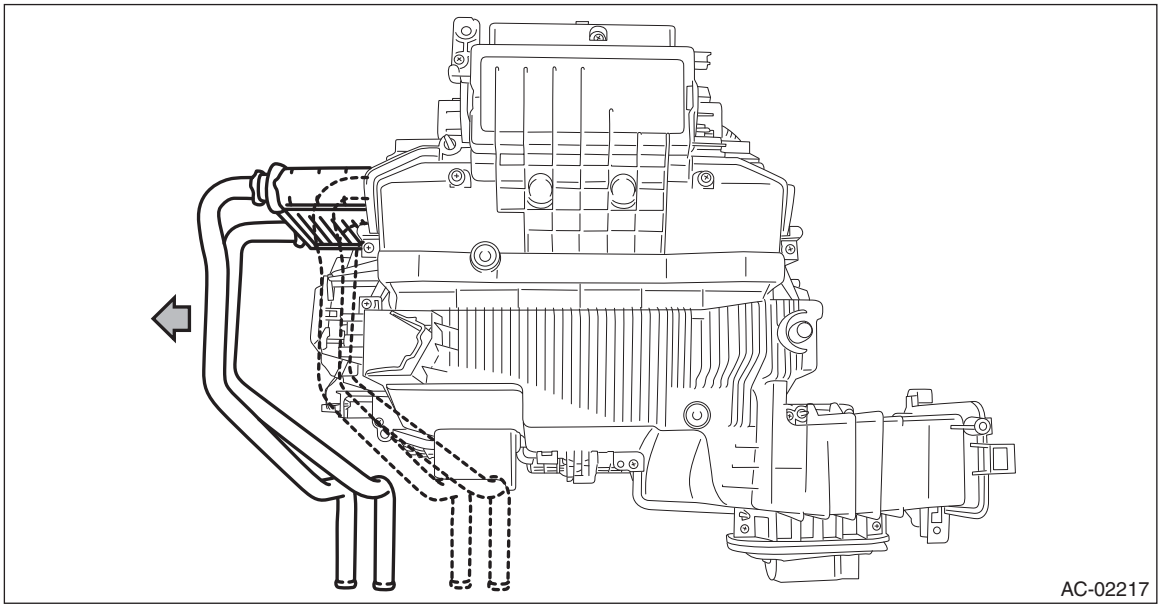


10) Remove the heater core.

(1) Remove the screw and remove the heater pipe clamp.



(2) Pull out the heater core from the heater and cooling unit assembly.



B: INSTALLATION

CAUTION:
- **Do not start the engine before charging refrigerant.**
- **If the engine is started with no refrigerant charge, replace the compressor.**
- **If the engine may have been started with no refrigerant charge, check for any diagnosis code (DTC) using Subaru Select Monitor. If the code B1644 (Refrigerant not sealed drive error) is output, replace the compressor.**
- **Replace the O-rings and pipe clamps with new parts, and attach securely.**

1) Install each part in the reverse order of removal.
2) Fill engine coolant.
- H4 non-turbo model: <Ref. to CO(H4SO)-14, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
- H4 turbo model: <Ref. to CO(H4DOTC)-14, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
- H6 model: <Ref. to CO(H6DO)-12, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>

3) Charge refrigerant. <Ref. to AC-19, PROCEDURE, Refrigerant Charging Procedure.>

Tightening torque:

- ***Heater cooling unit: <Ref. to AC-4, HEATER COOLING UNIT, COMPONENT, General Description.>***
- ***Blower motor unit: <Ref. to AC-6, BLOWER MOTOR UNIT, COMPONENT, General Description.>***

13.Control Panel

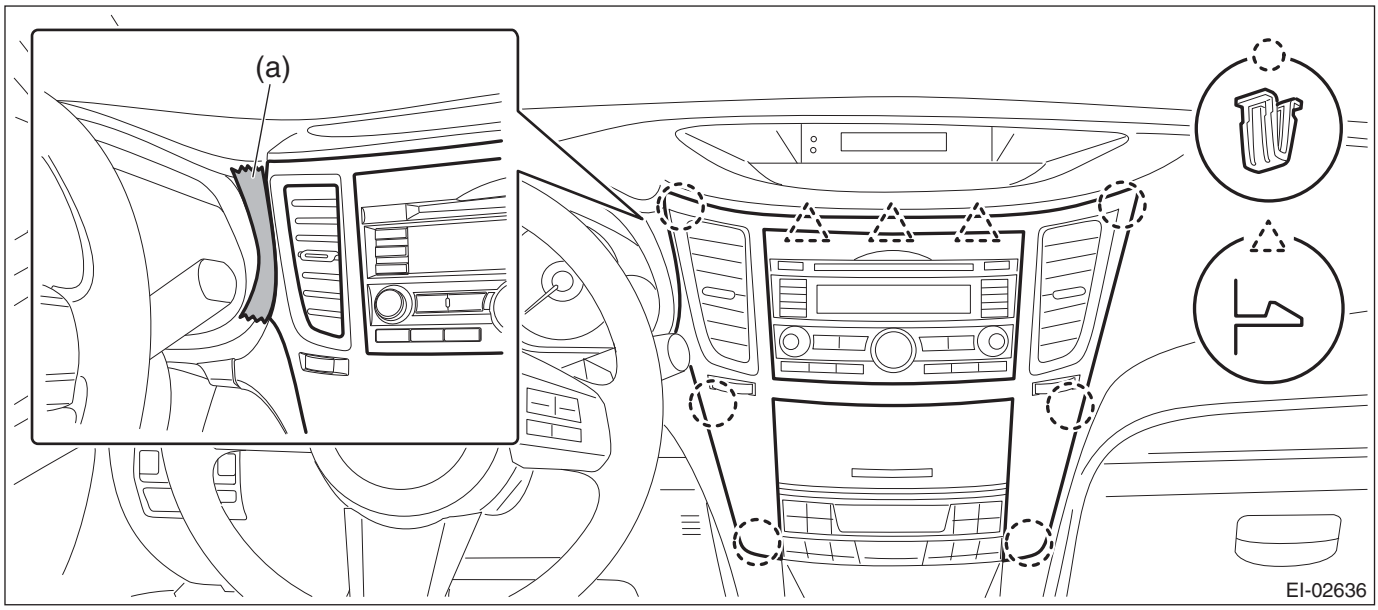
A: REMOVAL

1. AUTO A/C MODEL

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

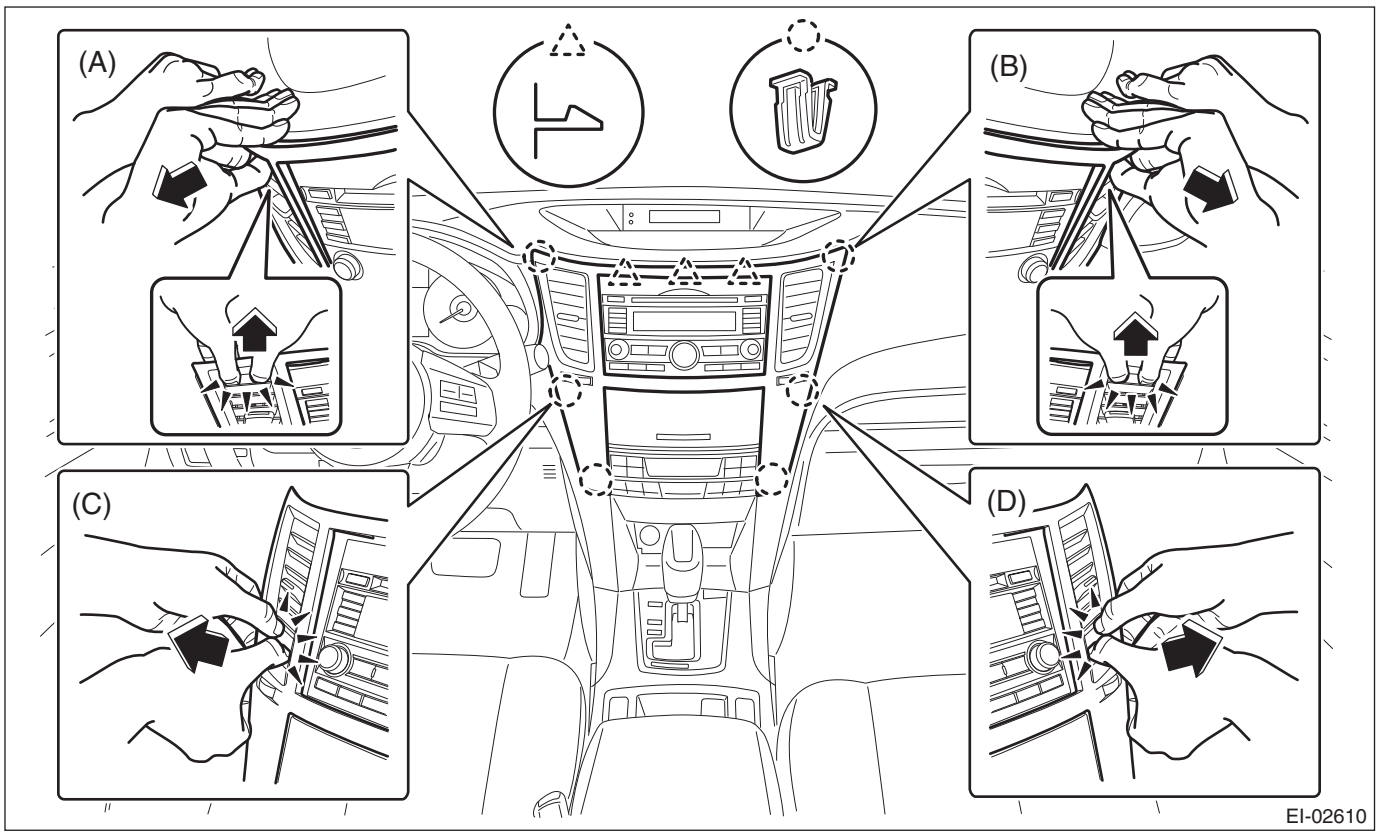
CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

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

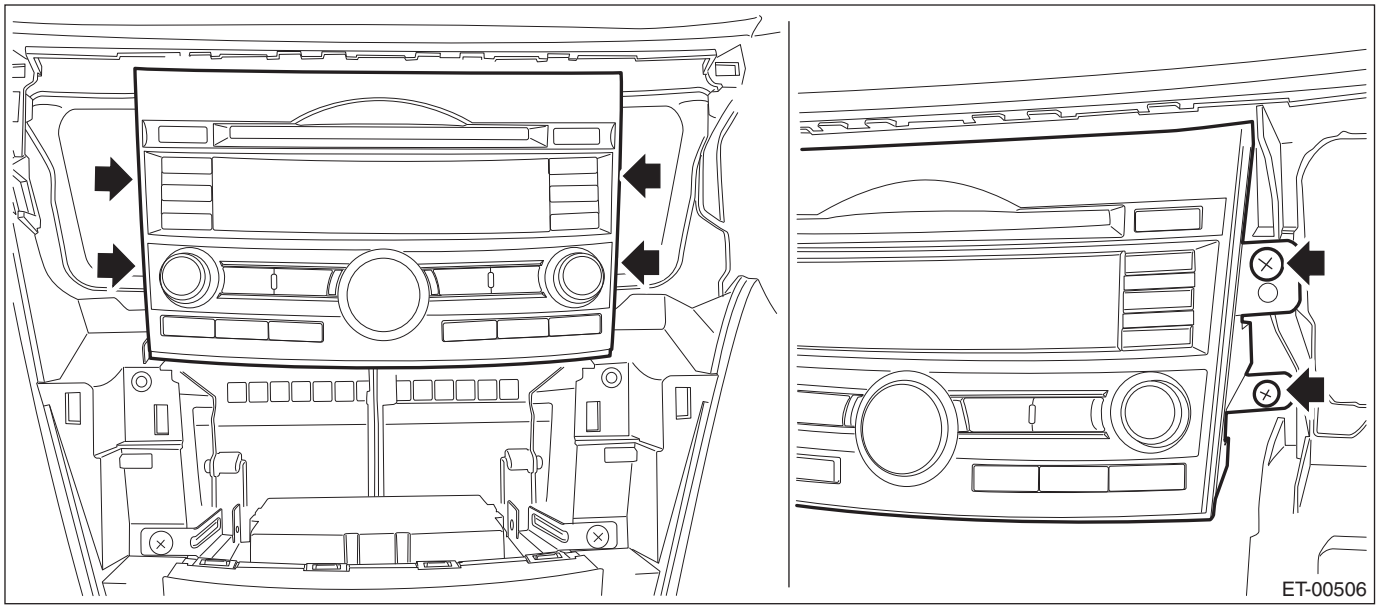


(2) Insert a finger into the air vent grille and release the left and right clips at the top of the center panel. (A), (B)
(3) Insert a finger into the air vent grille and release the left and right clips at the center of the center panel. (C), (D)

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

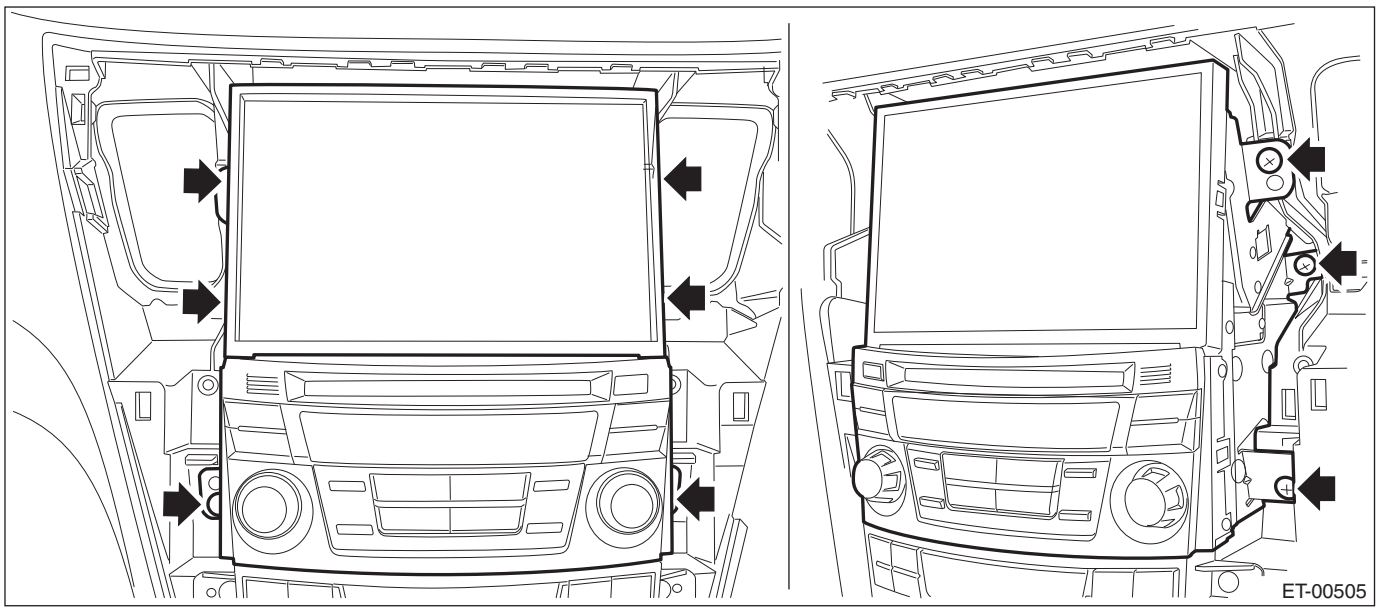


3) Remove the audio assembly.
(1) Remove the left and right screws, and partially pull the audio out from center console.
(2) Disconnect the connectors, and remove the audio assembly.



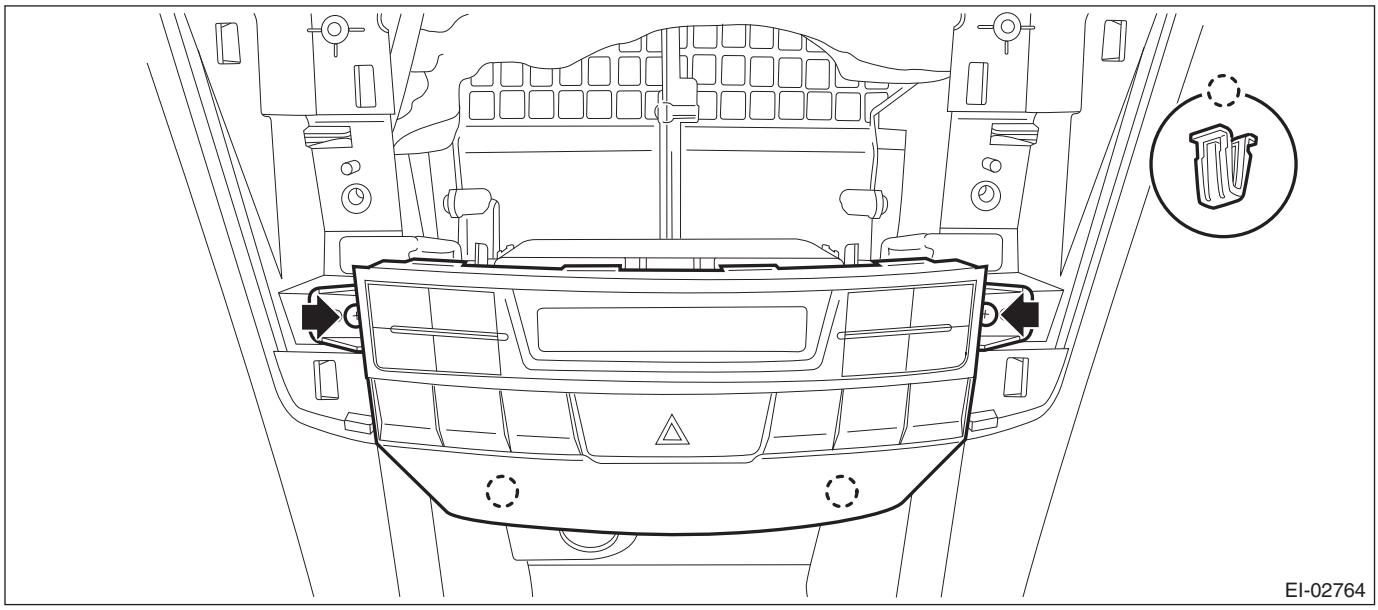
4) Remove the navigation assembly. (model with navigation)
(1) Remove the left and right screws.

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

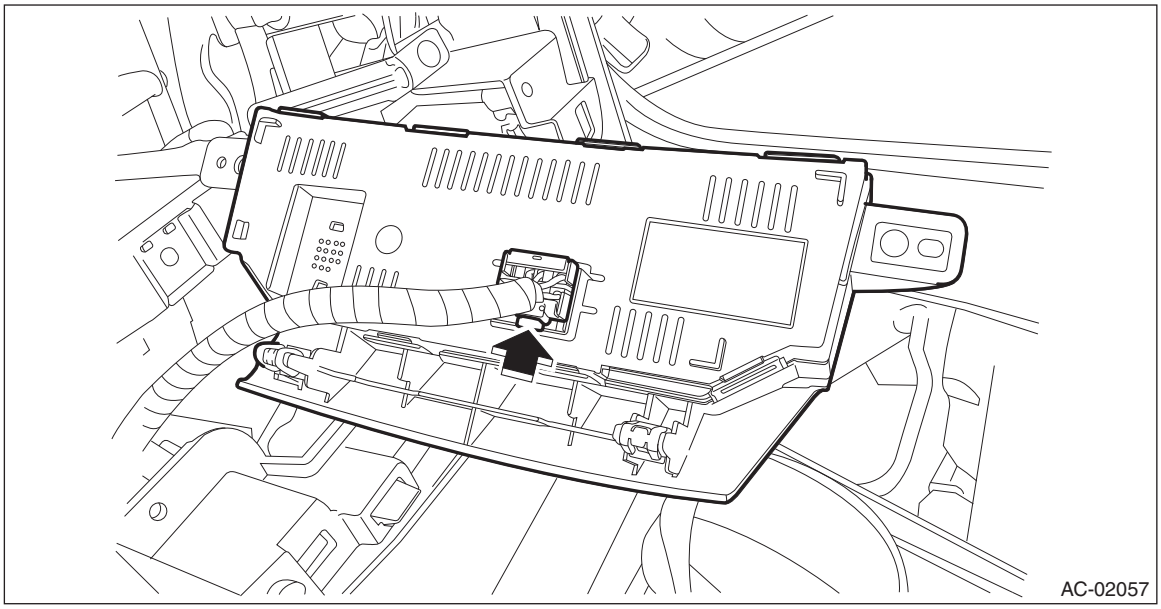


5) Remove the control panel.

(1) Remove the screws and release the clip.



(2) Pull forward the control module and disconnect the connector.

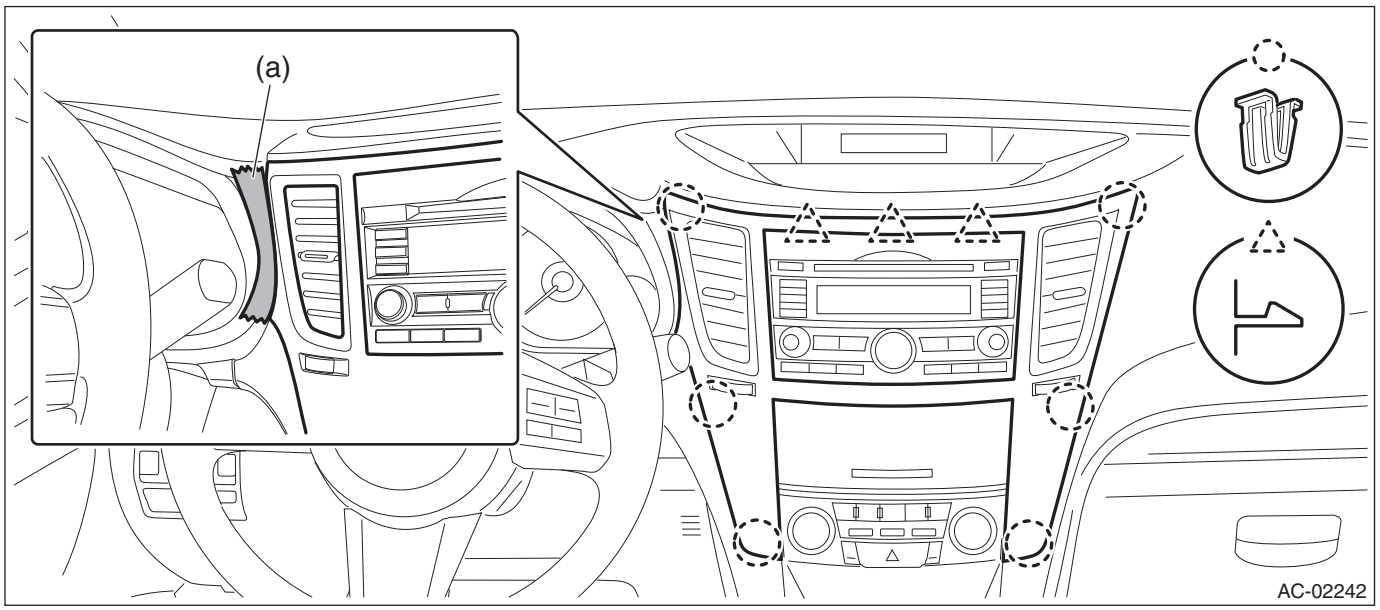


2. MANUAL A/C MODEL

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

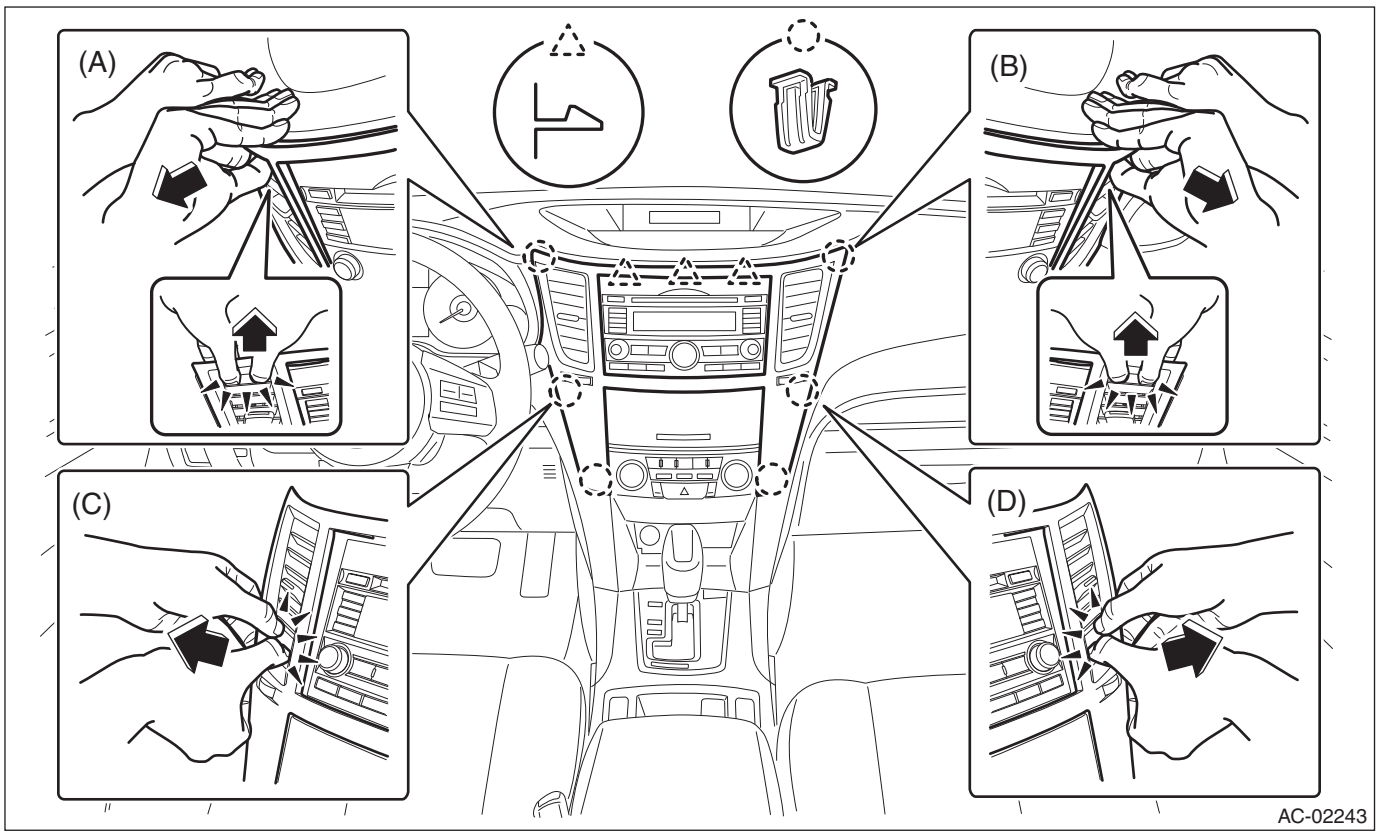
CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

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

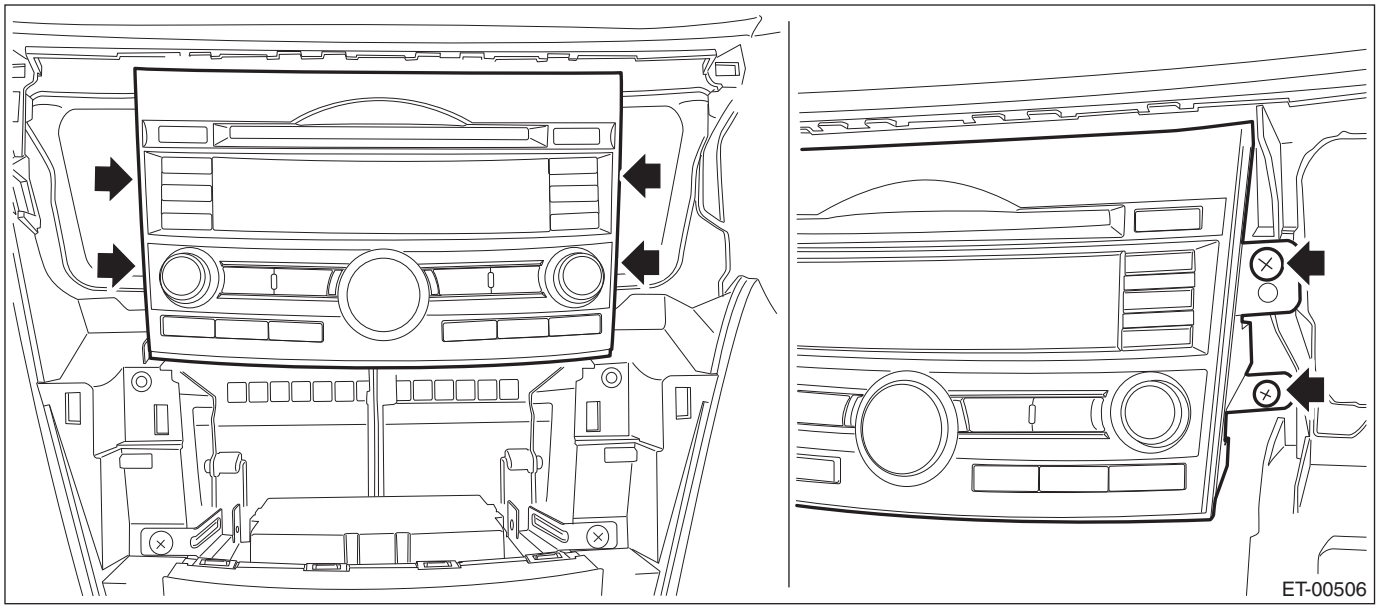


(2) Insert a finger into the air vent grille and release the left and right clips at the top of the center panel. (A), (B)
(3) Insert a finger into the air vent grille and release the left and right clips at the center of the center panel. (C), (D)

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

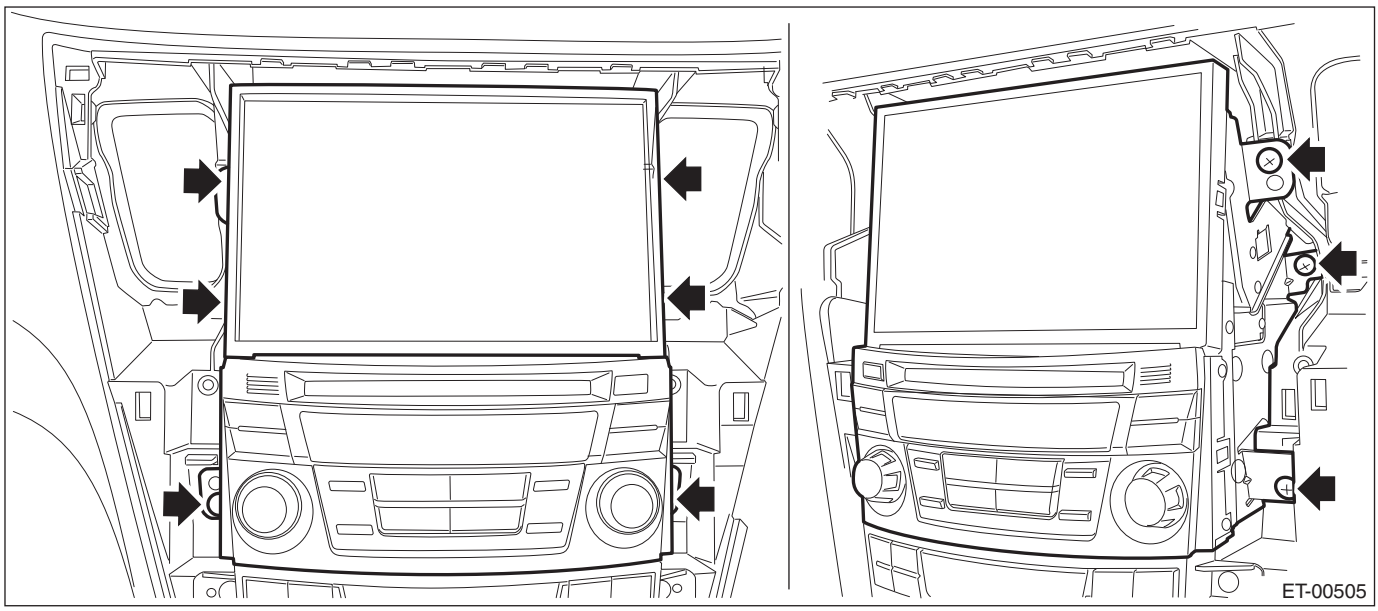


3) Remove the audio assembly.
(1) Remove the left and right screws, and partially pull the audio out from center console.
(2) Disconnect the connectors, and remove the audio assembly.



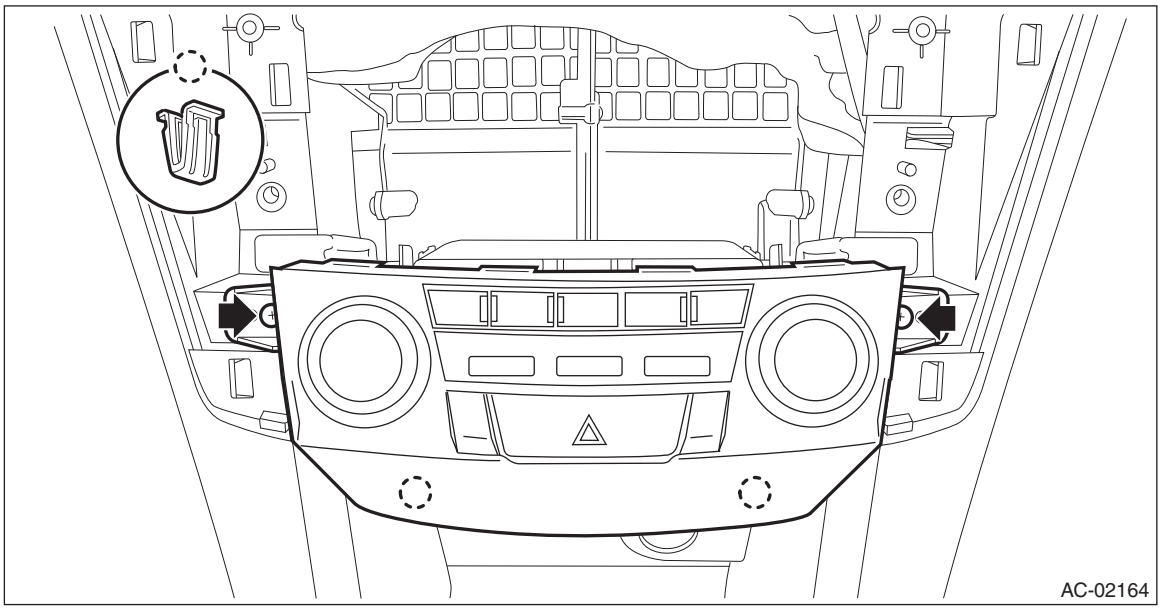
4) Remove the navigation assembly. (model with navigation)
(1) Remove the left and right screws.

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

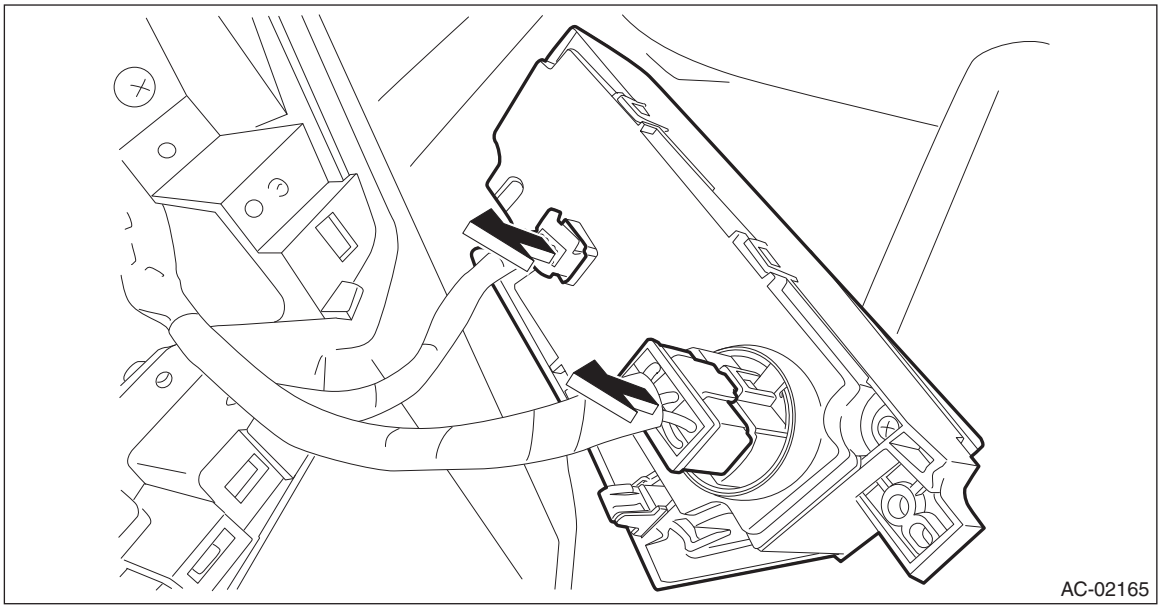


5) Remove the control panel.

(1) Remove the screws and release the clip.



(2) Pull the control panel and disconnect the connector.



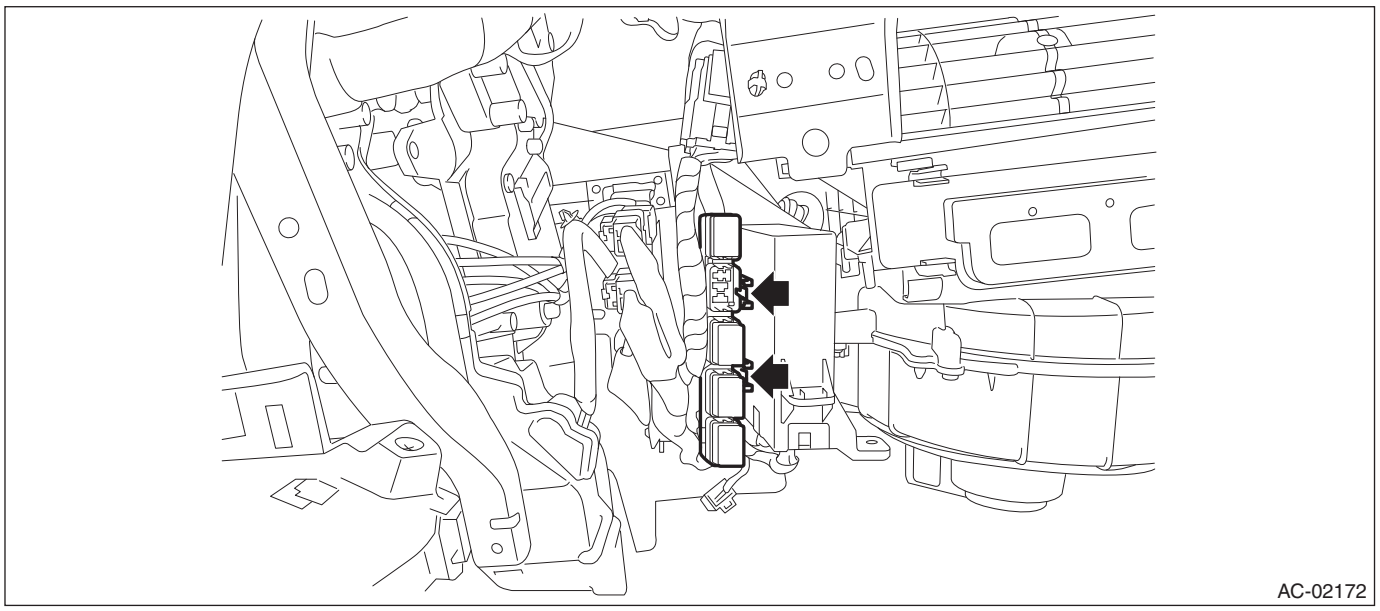
B: INSTALLATION

Install each part in the reverse order of removal.

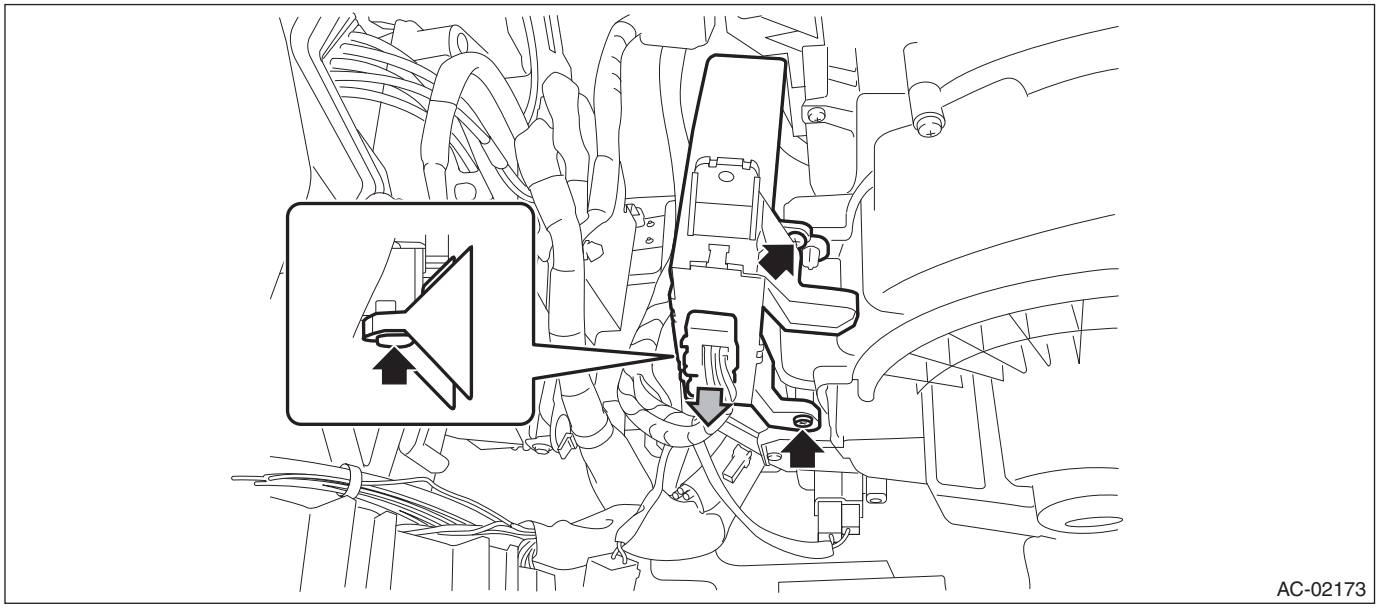
14.Control Unit

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the glove box. <Ref. to EI-65, REMOVAL, Glove Box.>
3) Remove the control module.
   (1) Release the lock and remove the relay bracket.


AC-02172

   (2) Disconnect the connector.
   (3) Remove the screws, and remove the control module.


AC-02173

B: INSTALLATION

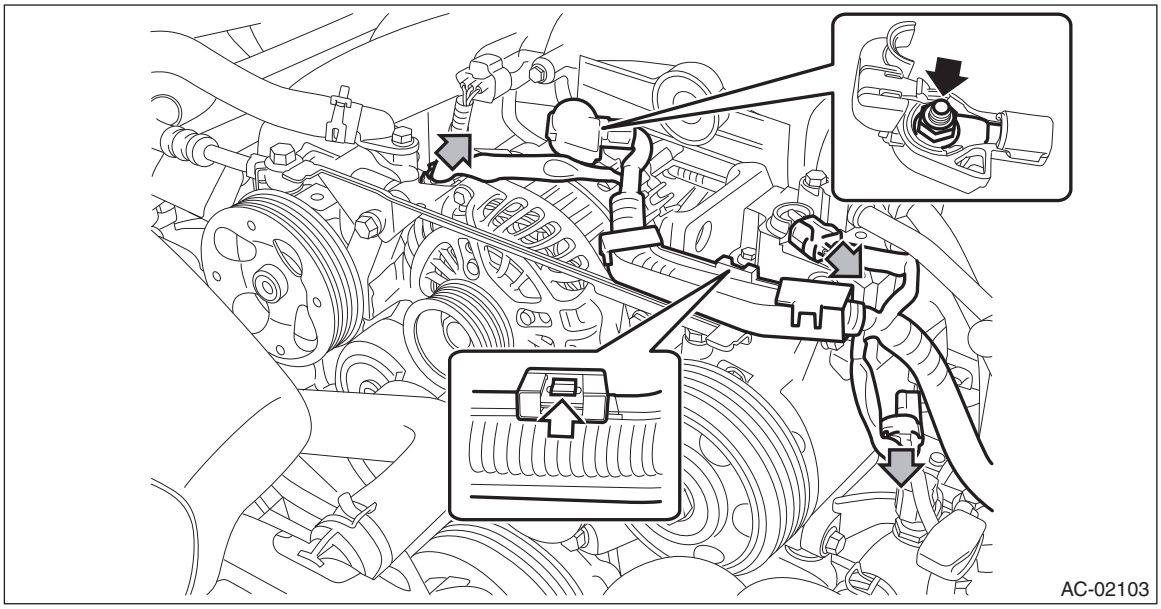
Install each part in the reverse order of removal.

15.Compressor

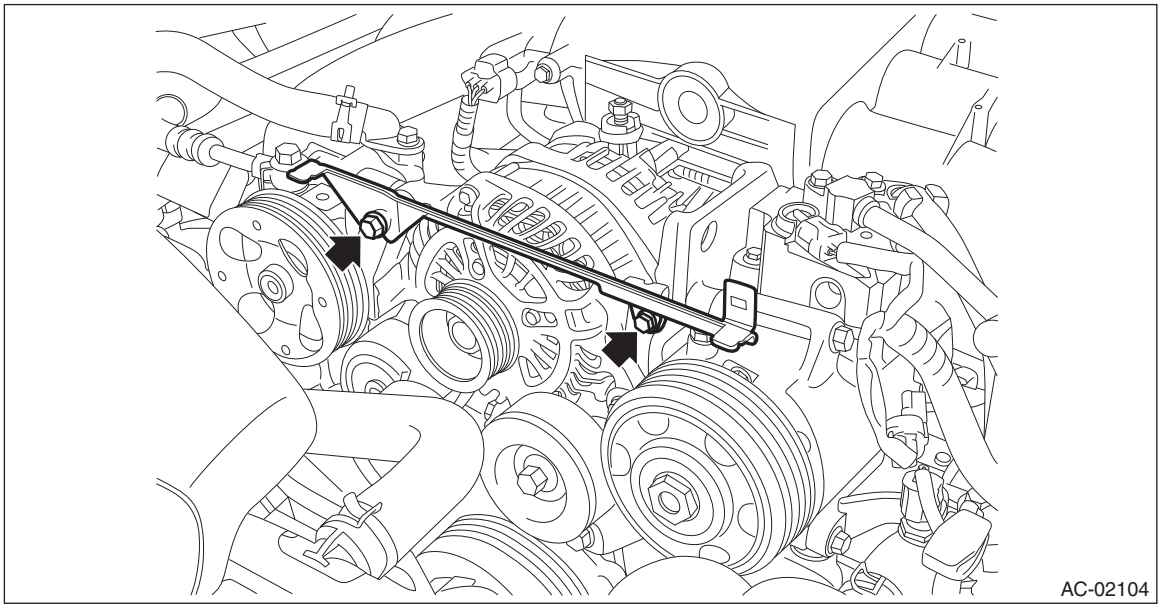
A: REMOVAL

1) Perform compressor oil return operation. <Ref. to AC-24, PROCEDURE, Compressor Oil.>
2) Turn the A/C switch to OFF and stop the engine.
3) Using the refrigerant recovery system, drain the refrigerant. <Ref. to AC-18, PROCEDURE, Refrigerant Recovery Procedure.>
4) Disconnect the ground cable from battery.
5) Remove the V-belts.
- H4 non-turbo model: <Ref. to ME(H4SO)-42, REMOVAL, V-belt.>
- H4 turbo model: <Ref. to ME(H4DOTC)-42, REMOVAL, V-belt.>
- H6 model: <Ref. to ME(H6DO)-48, REMOVAL, V-belt.>

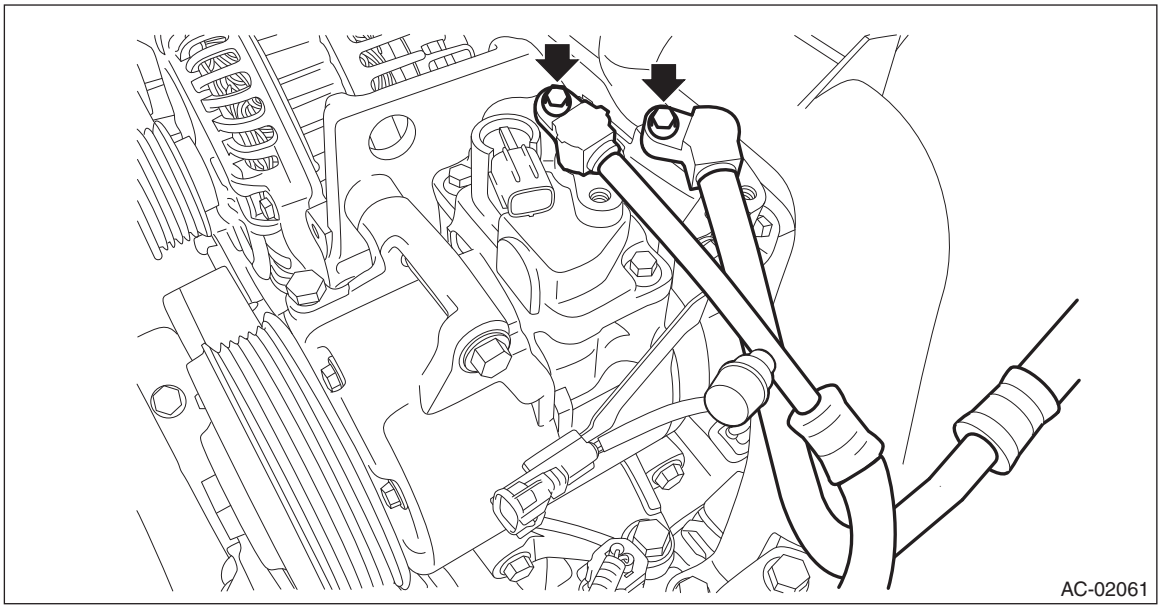
6) Move the alternator harness to the right.
   (1) Remove the nuts and connector.
   (2) Release the lock and move the alternator harness to the right.


AC-02103

7) Remove the bolts and then remove the collector cover bracket.

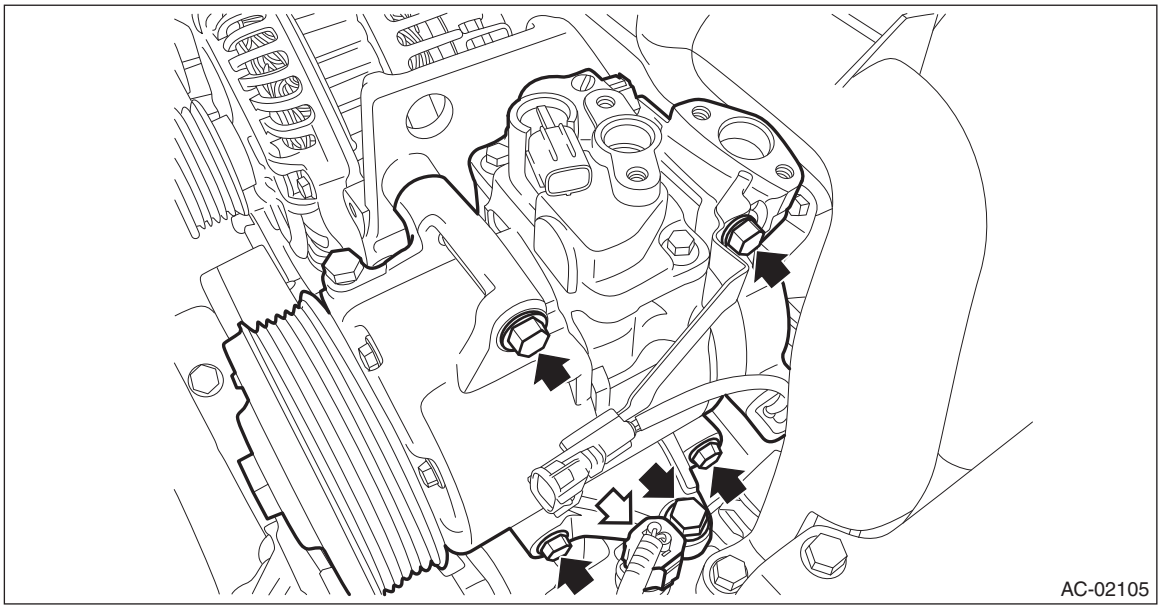

AC-02104

8) Remove the bolt and remove the low-pressure hose and high-pressure hose.



9) Remove the compressor.
   (1) Disconnect the water temperature sensor connector.
   (2) Remove the bolts and remove the compressor.

NOTE:
• Since the compressor cannot be removed by itself, remove it with the loosened bolts inserted in the bracket.
• Be careful not to damage the pulley and sensor.



B: INSTALLATION

CAUTION:
- **Replace the O-rings on low/high pressure hoses with new parts, and apply compressor oil.**
- **If the compressor is replaced, adjust the amount of the compressor oil. <Ref. to AC-24, PROCEDURE, Compressor Oil.>**
- **After installing the compressor, do not start the engine until the A/C system is charged with refrigerant.**
- **If the engine is started with no refrigerant charge, replace the compressor.**
- **If the engine may have been started with no refrigerant charge, check for any diagnosis code (DTC) using Subaru Select Monitor. If the code B1644 (Refrigerant not sealed drive error) is output, replace the compressor.**

1) Install each part in the reverse order of removal.
2) Charge refrigerant. <Ref. to AC-19, PROCEDURE, Refrigerant Charging Procedure.>
3) After installing the compressor, perform a break-in operation according to the following steps.

NOTE:
Do not increase the engine speed to and above 4,000 rpm unless the break-in operation finishes.
(1) Check that all connectors are locked securely.
(2) Reset the control module. (Disconnect and then connect the connector)
(3) Attach a delivery (test) mode fuse to the main fuse box.
(4) Set the airflow adjustment dial to MAX (4th position). (manual A/C model)
(5) Connect the Subaru Select Monitor, and then select the {Break-in variable compressor drive} mode to display the {Break-in variable compressor drive, finish status} according to the procedures.
(6) Start and idle the engine at or below 1,800 rpm. (The compressor operation is automatically changed to the break-in operation mode.)
(7) Stop the engine when the {Break-in variable compressor drive, finish status} is changed from “incomplete” → “Finished”.
(8) Remove the delivery (test) mode fuse from the main fuse box.
(9) The break-in operation finishes.

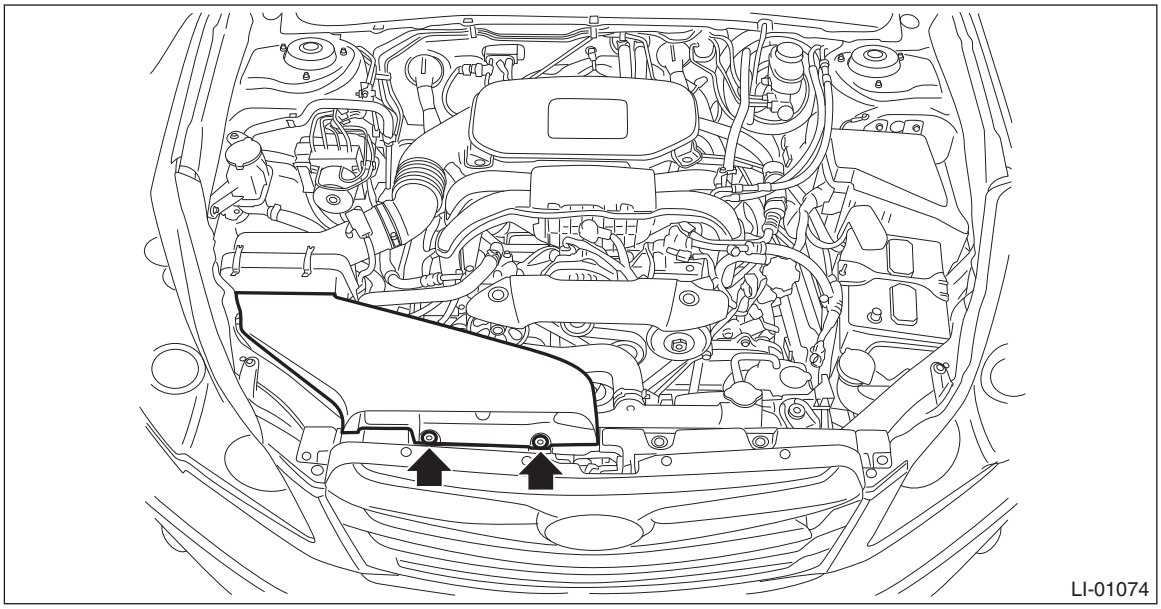
Tightening torque:

- ***Air conditioning unit: <Ref. to AC-8, AIR CONDITIONING UNIT, COMPONENT, General Description.>***
- ***Compressor: <Ref. to AC-9, COMPRESSOR, COMPONENT, General Description.>***

16.Condenser

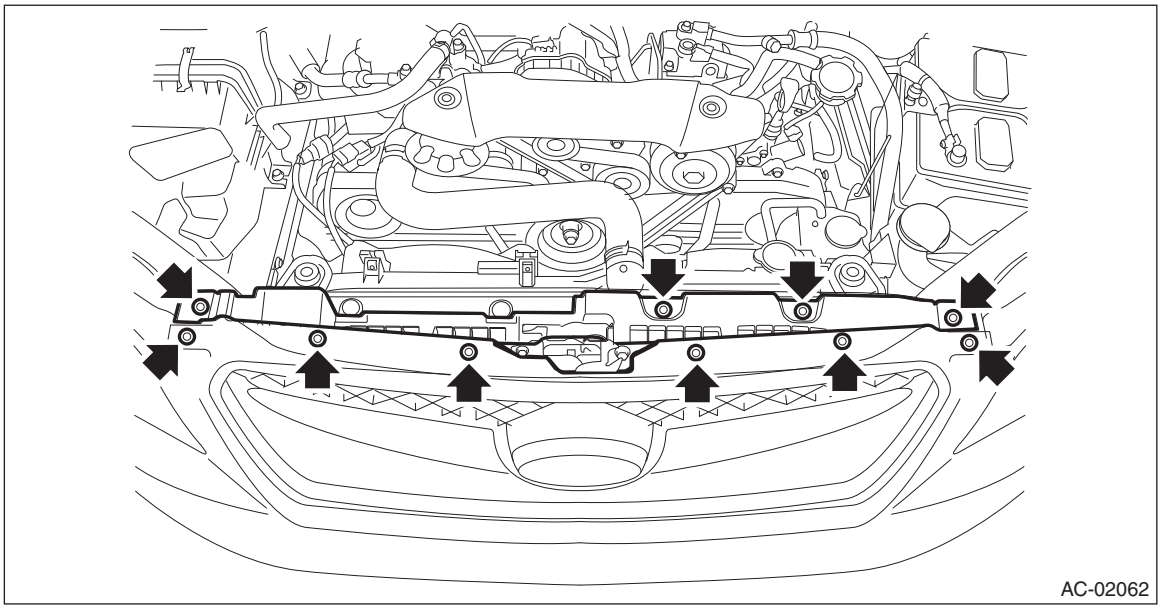
A: REMOVAL

1) Using the refrigerant recovery system, drain the refrigerant. <Ref. to AC-18, PROCEDURE, Refrigerant Recovery Procedure.>
2) Remove the clips and remove the air intake duct.

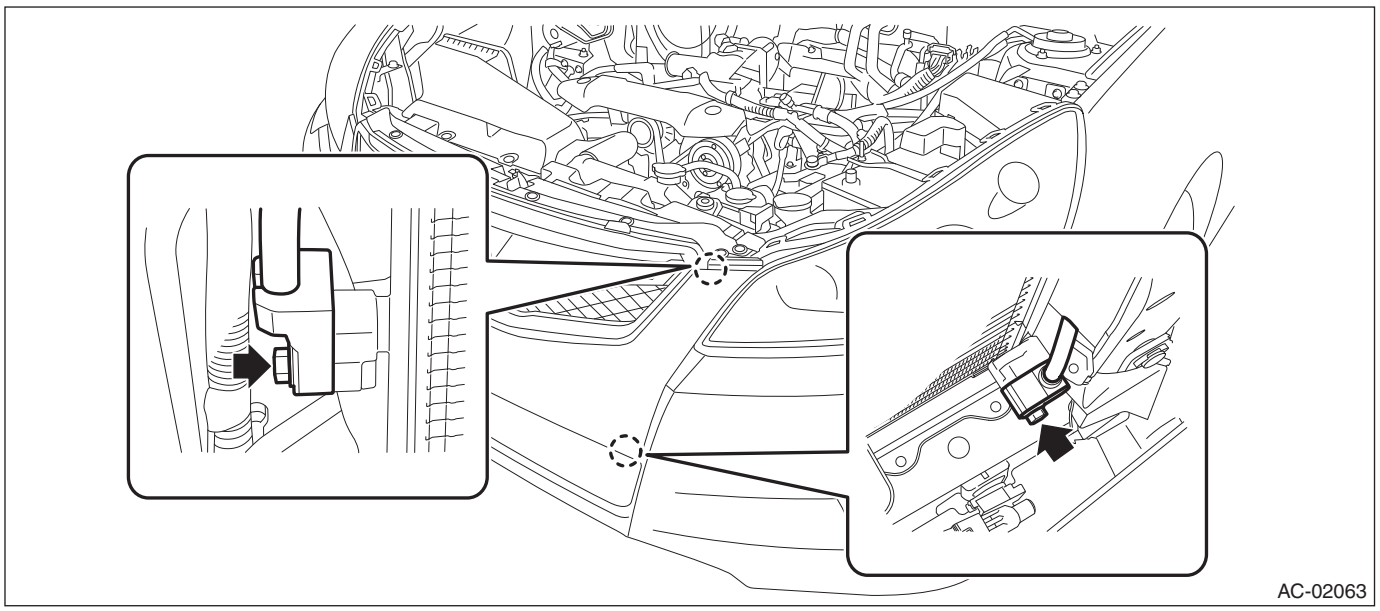


3) Remove the clips and remove the grille bracket.

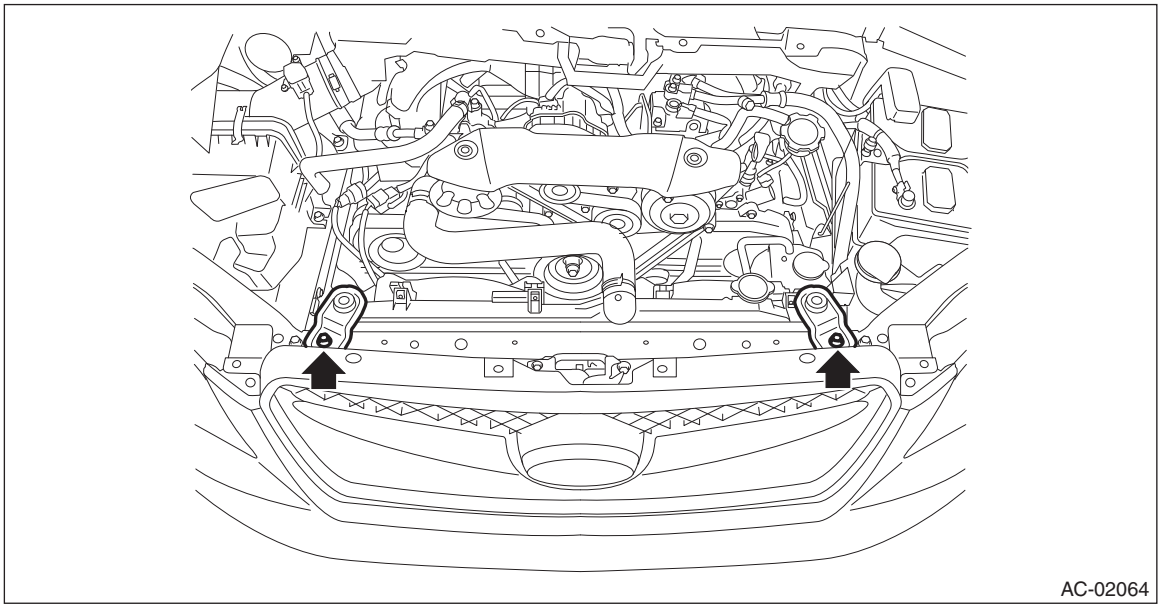
NOTE:
To prevent damage to the grille bracket, make sure to remove all clips.



4) Remove the bolts and disconnect the high pressure hose and A/C pipe from the condenser.

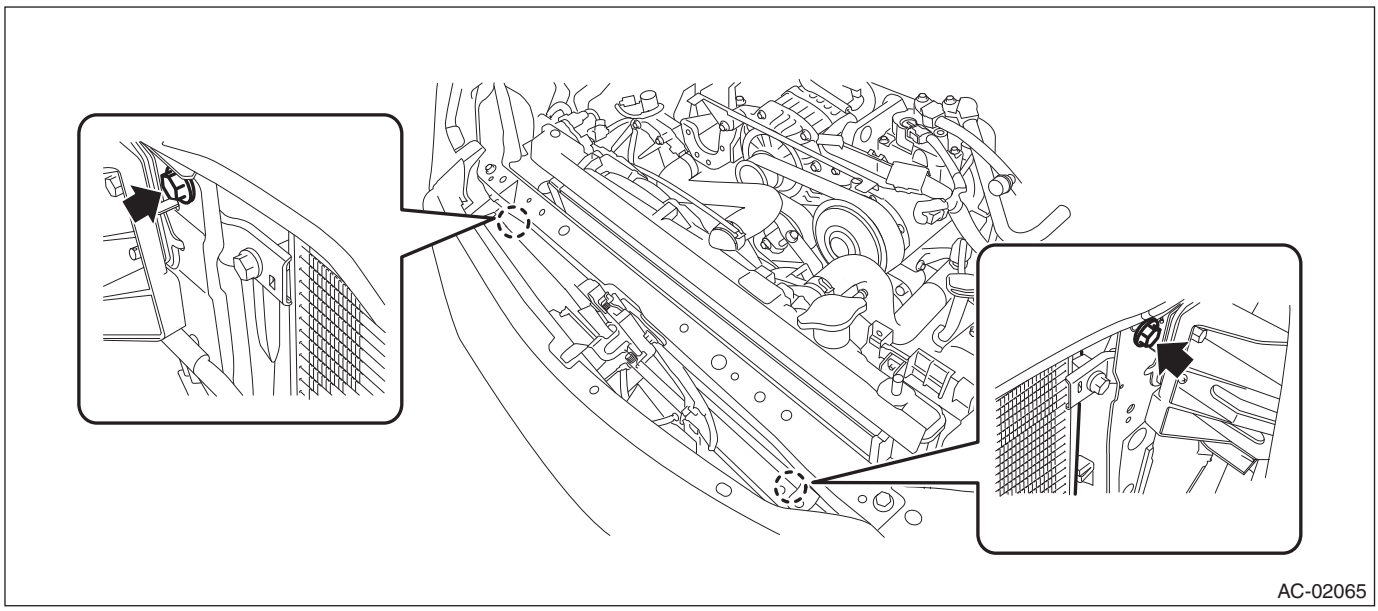


5) Remove the bolts and remove the radiator upper bracket.



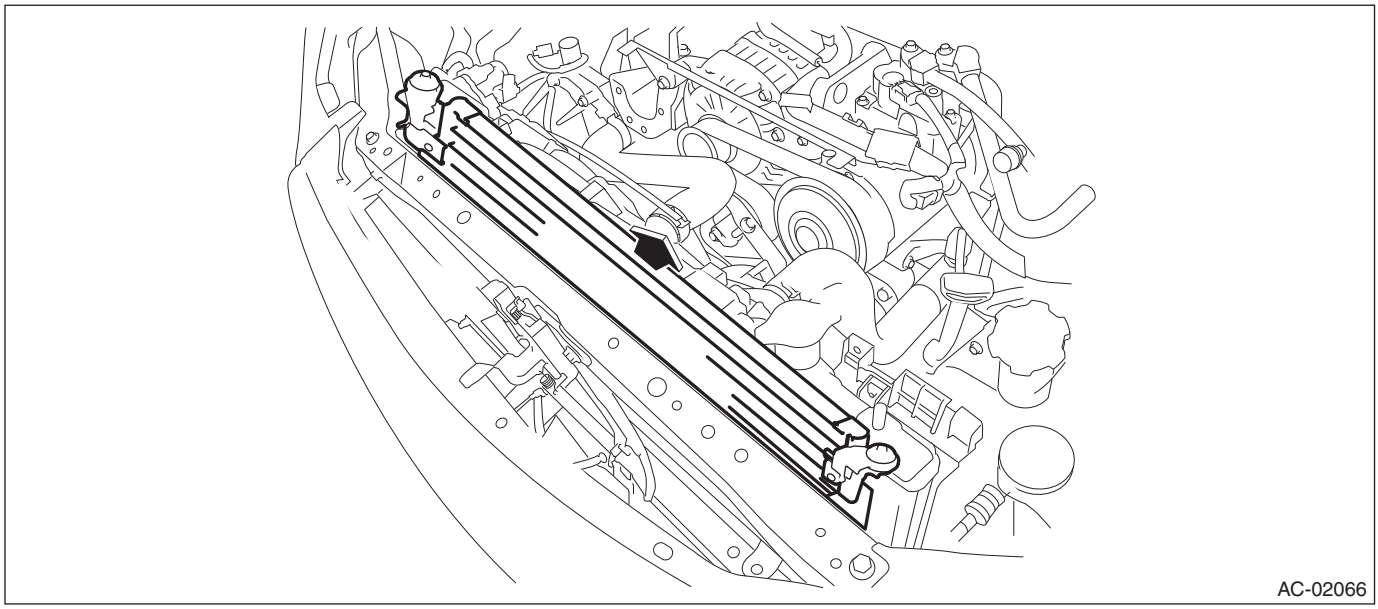
6) Remove the condenser.

(1) Remove the bolt.



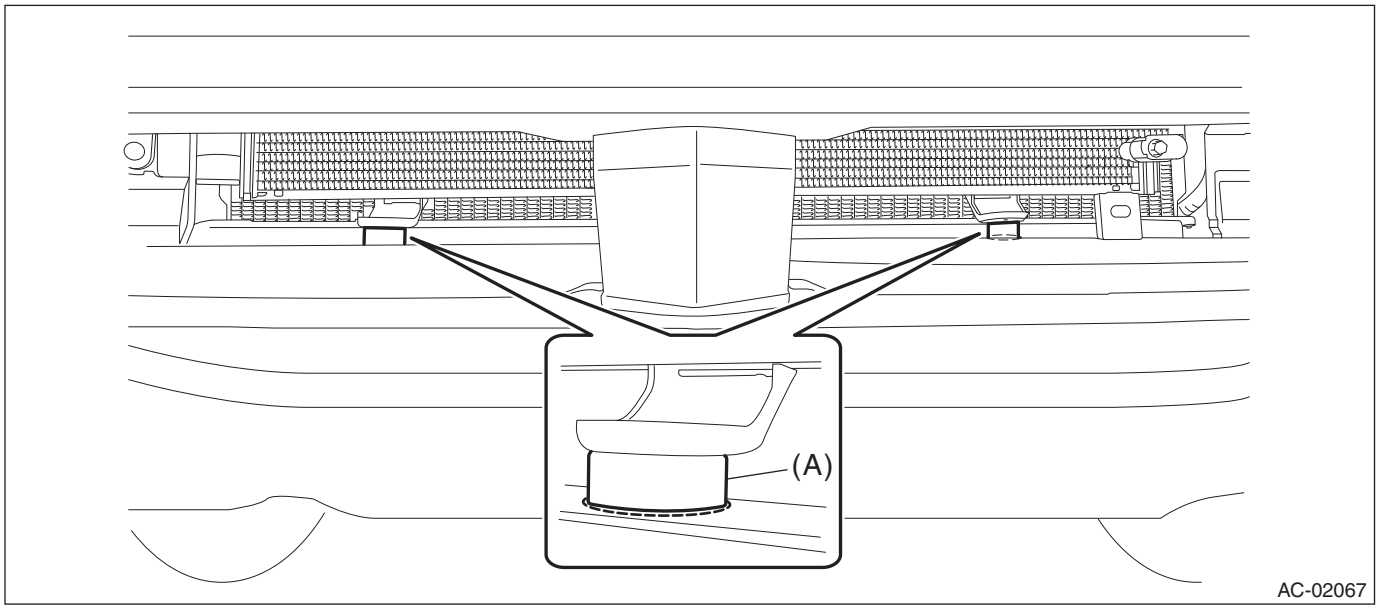
(2) By lifting the condenser, pull it out through the space between the radiator and the radiator panel.

CAUTION:
Be careful not to damage the condenser fins. If a damaged fin is found, repair it using a thin screwdriver.



B: INSTALLATION

CAUTION:
- **Do not start the engine before charging refrigerant.**
- **If the engine is started with no refrigerant charge, replace the compressor.**
- **If the engine may have been started with no refrigerant charge, check for any diagnosis code (DTC) using Subaru Select Monitor. If the code B1644 (Refrigerant not sealed drive error) is output, replace the compressor.**
- **If the condenser has been replaced, add an appropriate amount of compressor oil to the compressor. <Ref. to AC-24, REPLACEMENT, Compressor Oil.>**
- **Replace the O-rings on pipes with new parts, and then apply compressor oil.**
- **Confirm that lower guide (A) of condenser fits into holes on radiator panel.**



1) Install each part in the reverse order of removal.
2) Charge refrigerant. <Ref. to AC-19, PROCEDURE, Refrigerant Charging Procedure.>

Tightening torque:

- ***Air conditioning unit: <Ref. to AC-8, AIR CONDITIONING UNIT, COMPONENT, General Description.>***
- ***Radiator bracket: <Ref. to CO(H4DOTC)-4, RADIATOR AND RADIATOR FAN, COMPONENT, General Description.>***

C: INSPECTION

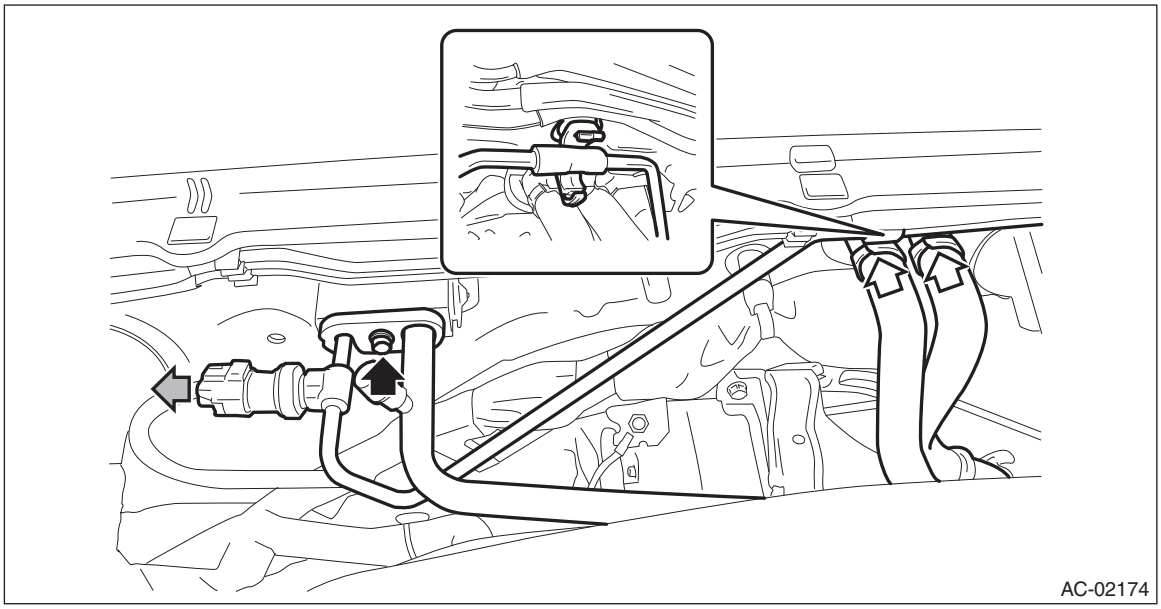
1) Check to see that the condenser fins are not clogged with debris or insects. Blow with compressed air or flush fins with water as needed.
2) If any oil leak is found from the condenser, replace the condenser.

17.Heater and Cooling Unit

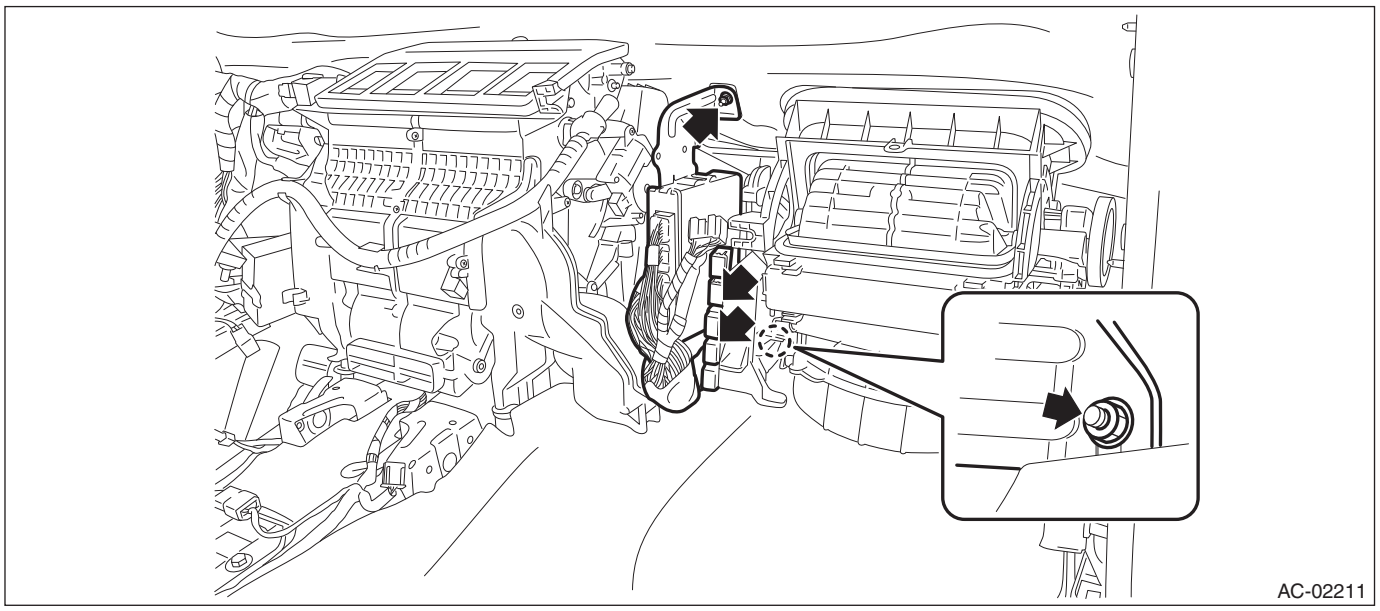
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Using the refrigerant recovery system, drain the refrigerant. <Ref. to AC-18, PROCEDURE, Refrigerant Recovery Procedure.>
3) Drain the coolant from the radiator.
- H4 non-turbo model: <Ref. to CO(H4SO)-14, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
- H4 turbo model: <Ref. to CO(H4DOTC)-14, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
- H6 model: <Ref. to CO(H6DO)-12, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>

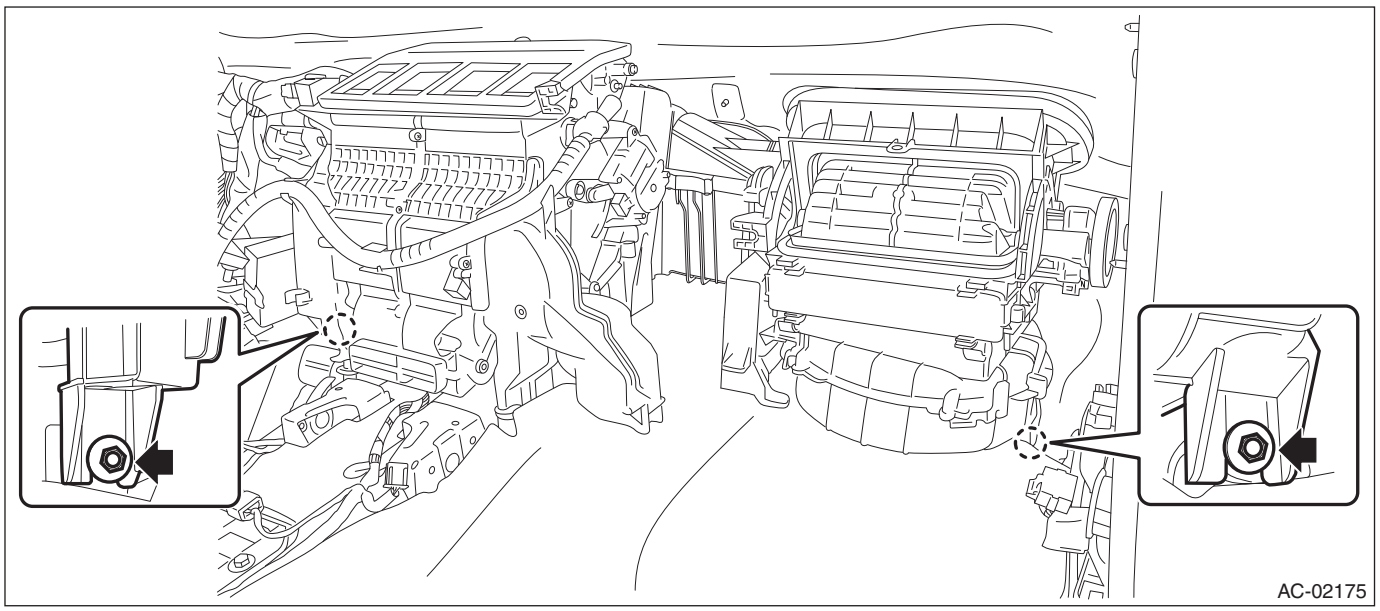
4) Remove the connector and bolts, and remove the expansion valve and AC pipes from the evaporator.
5) Loosen the heater hose clamps and remove the hoses.


AC-02174

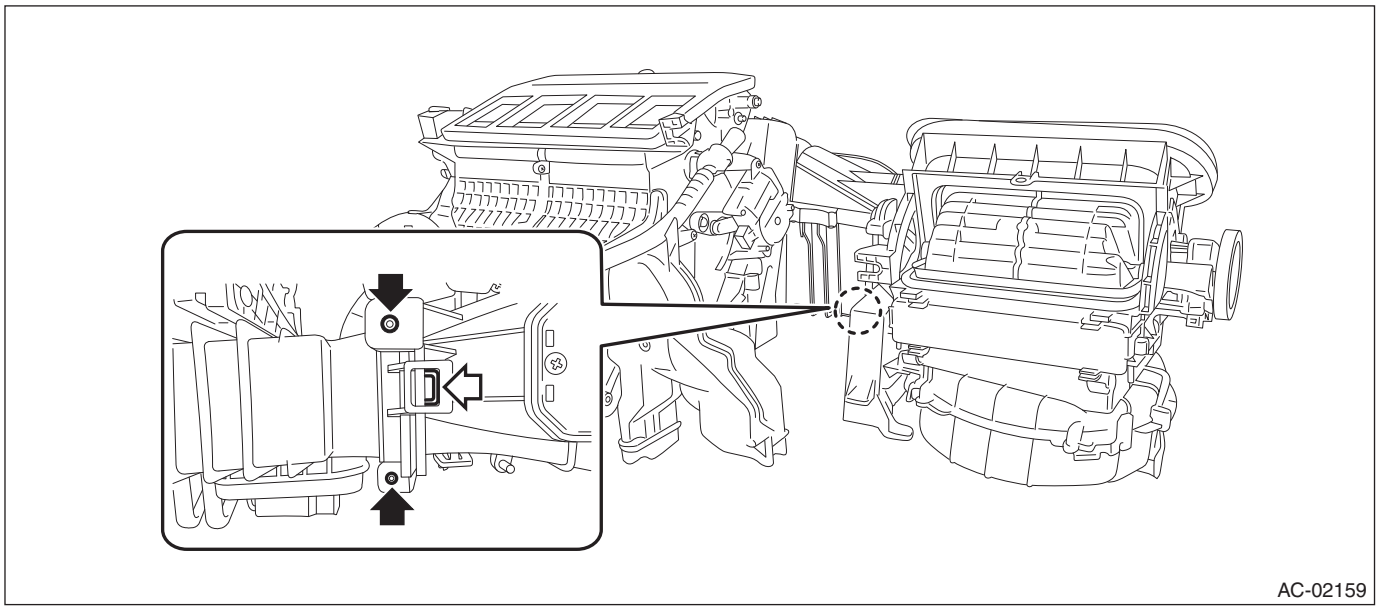
6) Remove the instrument panel assembly. <Ref. to EI-75, REMOVAL, Instrument Panel Assembly.>
7) Remove the heater and cooling unit.
   (1) Release the lock and remove the relay holder.
   (2) Remove the nuts, and remove the engine control module (ECM).


AC-02211

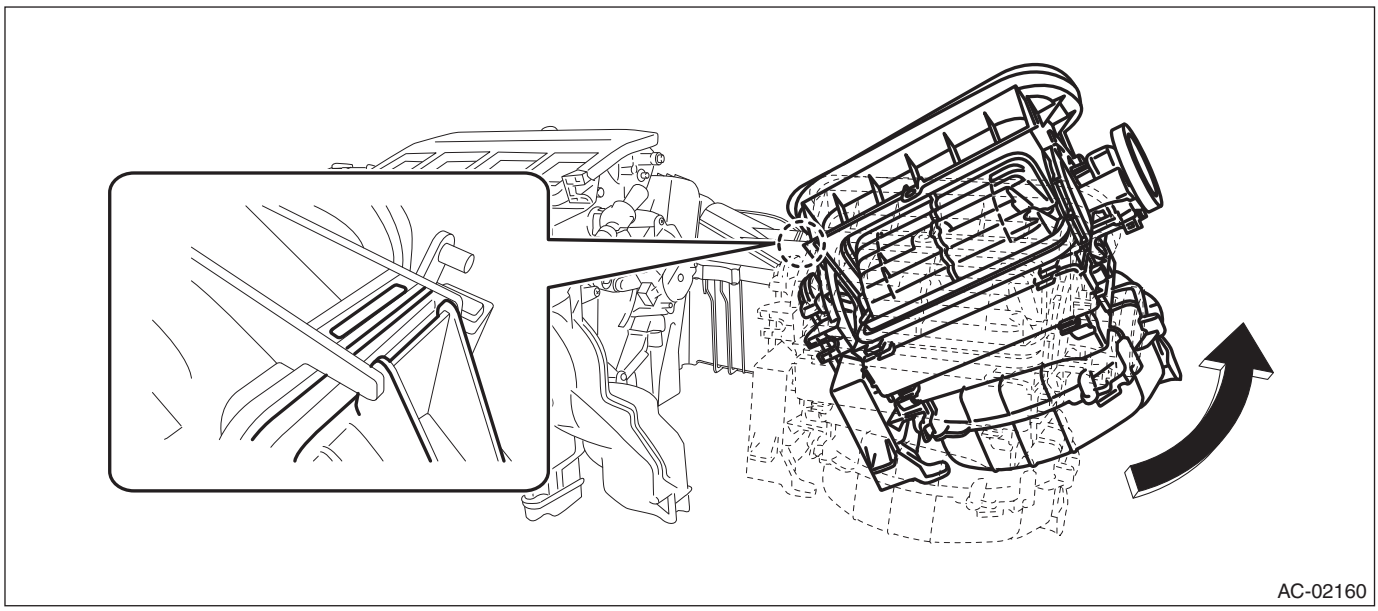
(3) Remove the bolts and remove the heater and cooling unit.



8) Remove the blower motor unit assembly.
(1) Release the claws and remove the bolts.



(2) Remove the blower motor unit assembly as shown in the figure.



B: INSTALLATION

CAUTION:
- **Do not start the engine before charging refrigerant.**
- **If the engine is started with no refrigerant charge, replace the compressor.**
- **If the engine may have been started with no refrigerant charge, check for any diagnosis code (DTC) using Subaru Select Monitor. If the code B1644 (Refrigerant not sealed drive error) is output, replace the compressor.**

1) Install each part in the reverse order of removal.
2) Fill engine coolant.
- H4 non-turbo model: <Ref. to CO(H4SO)-14, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
- H4 turbo model: <Ref. to CO(H4DOTC)-14, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
- H6 model: <Ref. to CO(H6DO)-12, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>

3) Charge refrigerant. <Ref. to AC-19, PROCEDURE, Refrigerant Charging Procedure.>

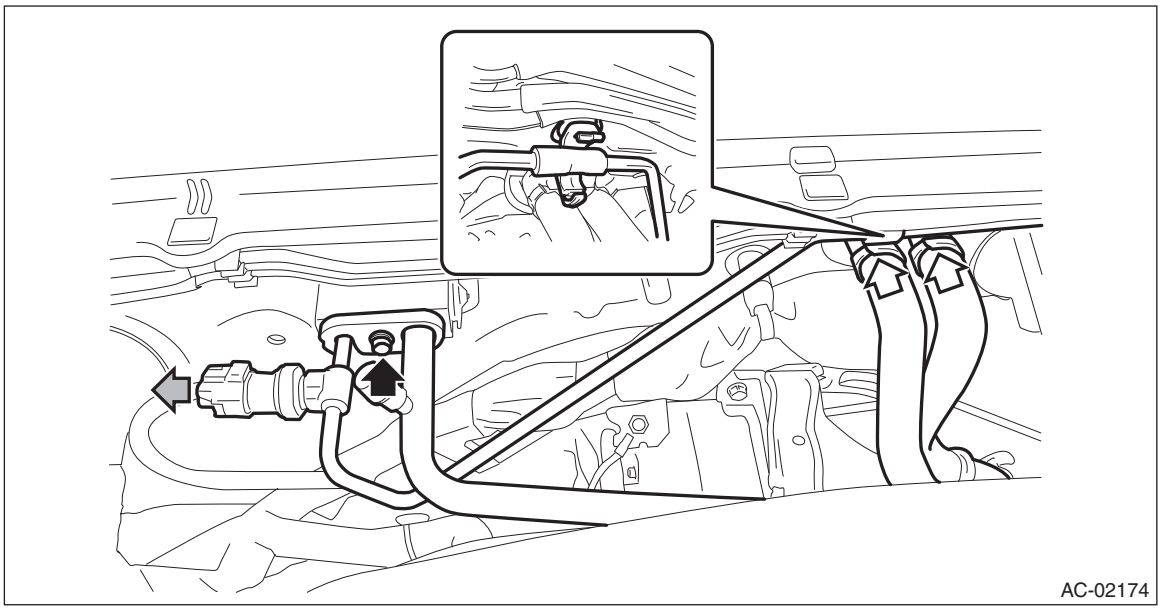
Tightening torque:

- ***Heater cooling unit: <Ref. to AC-4, HEATER COOLING UNIT, COMPONENT, General Description.>***
- ***Blower motor unit: <Ref. to AC-6, BLOWER MOTOR UNIT, COMPONENT, General Description.>***

18.Evaporator

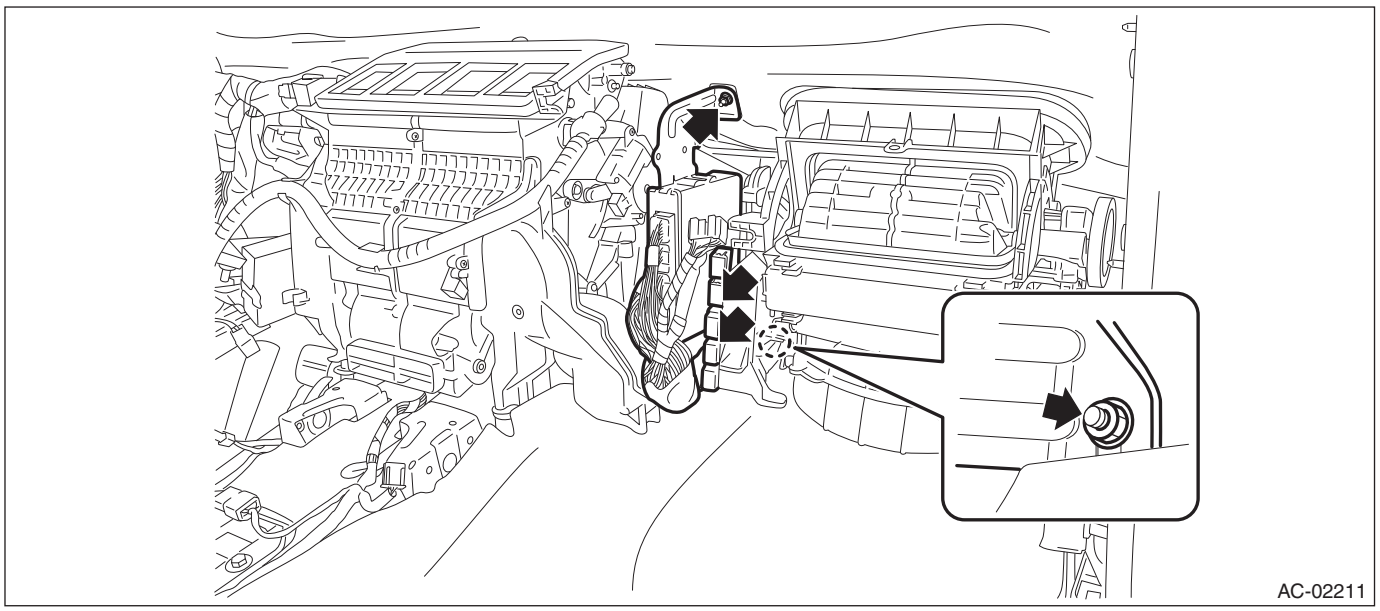
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Using the refrigerant recovery system, drain the refrigerant. <Ref. to AC-18, PROCEDURE, Refrigerant Recovery Procedure.>
3) Drain the coolant from the radiator.
• H4 non-turbo model: <Ref. to CO(H4SO)-14, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
• H4 turbo model: <Ref. to CO(H4DOTC)-14, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
• H6 model: <Ref. to CO(H6DO)-12, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
4) Remove the connector and bolts, and remove the expansion valve and AC pipes from the evaporator.
5) Loosen the heater hose clamps and remove the hoses.

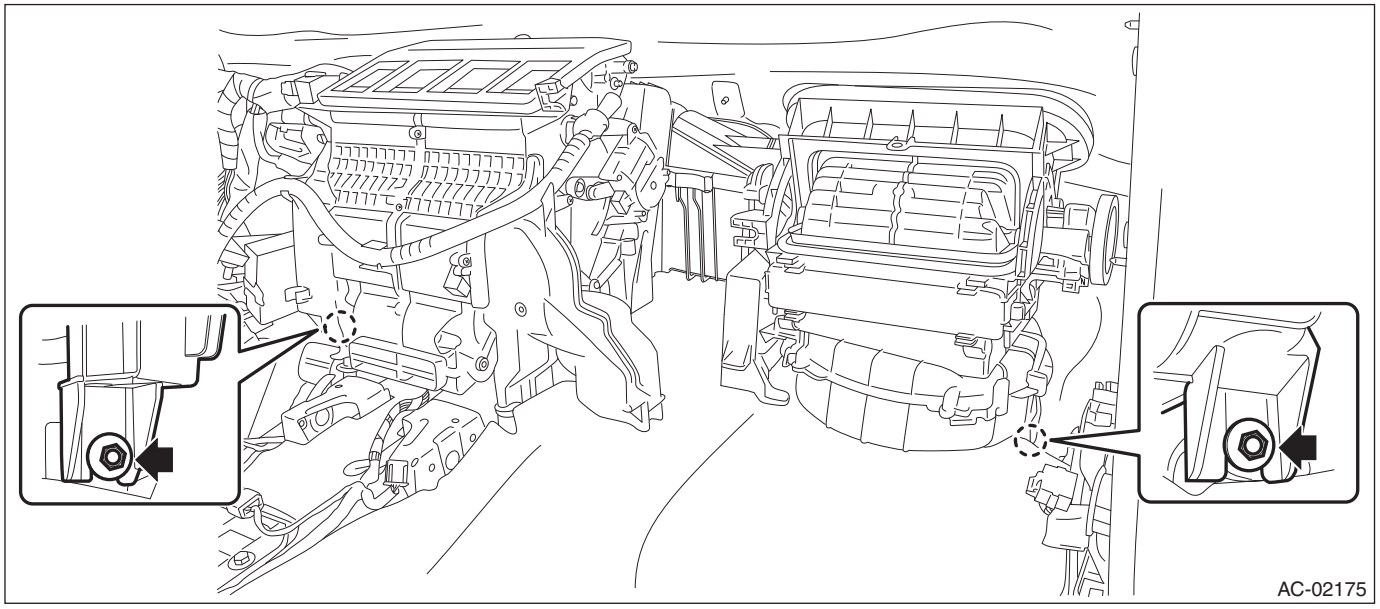


6) Remove the instrument panel assembly. <Ref. to EI-75, REMOVAL, Instrument Panel Assembly.>
7) Remove the heater and cooling unit.
(1) Release the lock and remove the relay holder.

(2) Remove the nuts, and remove the engine control module (ECM).

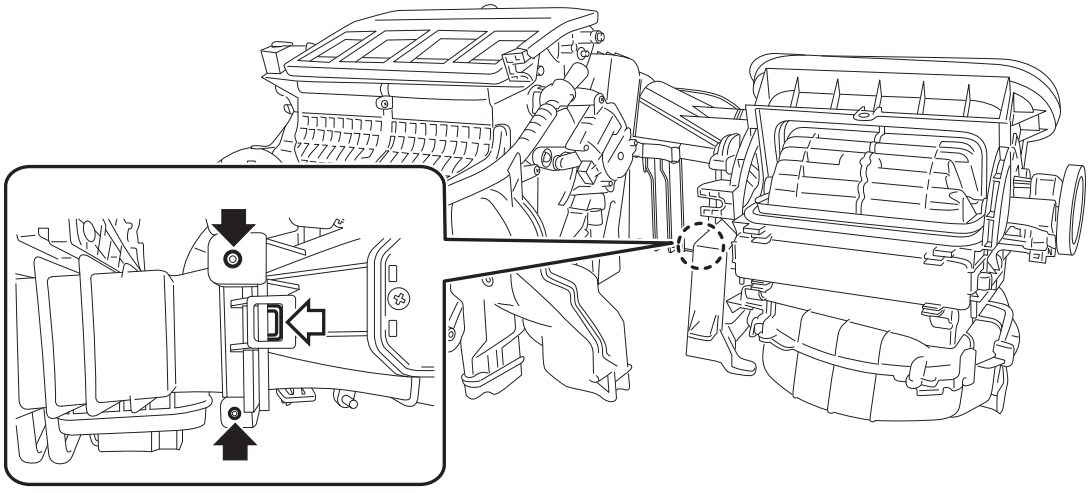


(3) Remove the bolts and remove the heater and cooling unit.



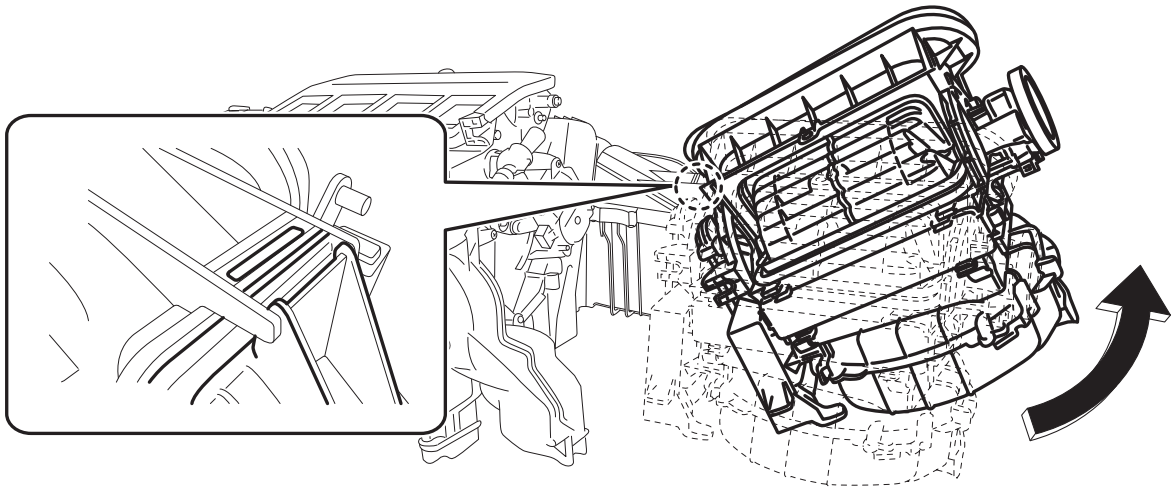
8) Remove the blower motor unit assembly.

(1) Release the claws and remove the bolts.



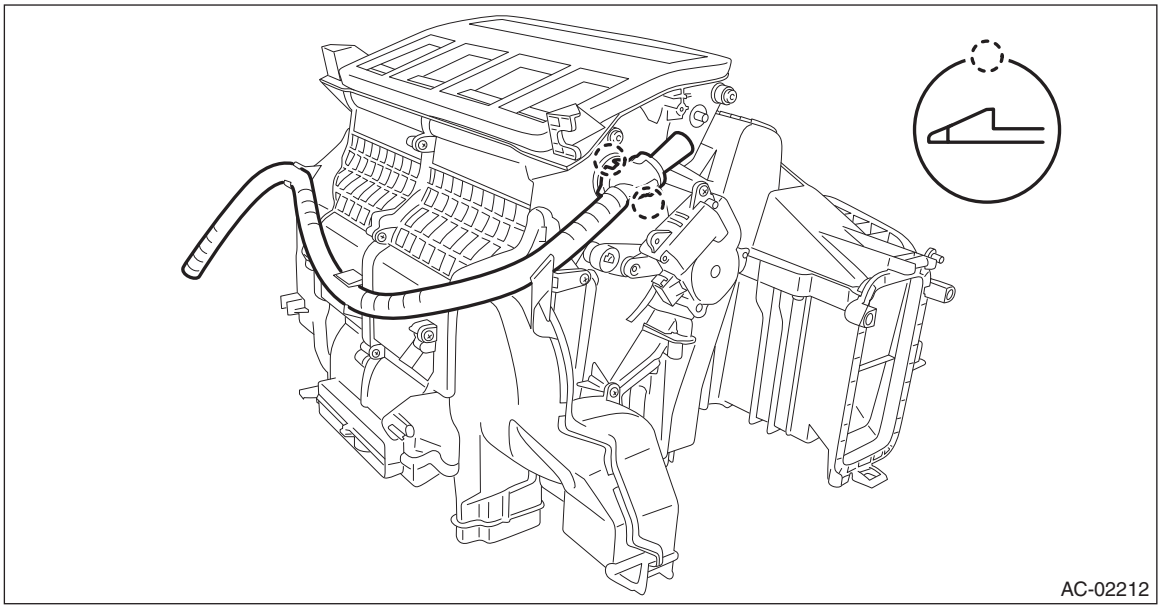
AC-02159

(2) Remove the blower motor unit assembly as shown in the figure.

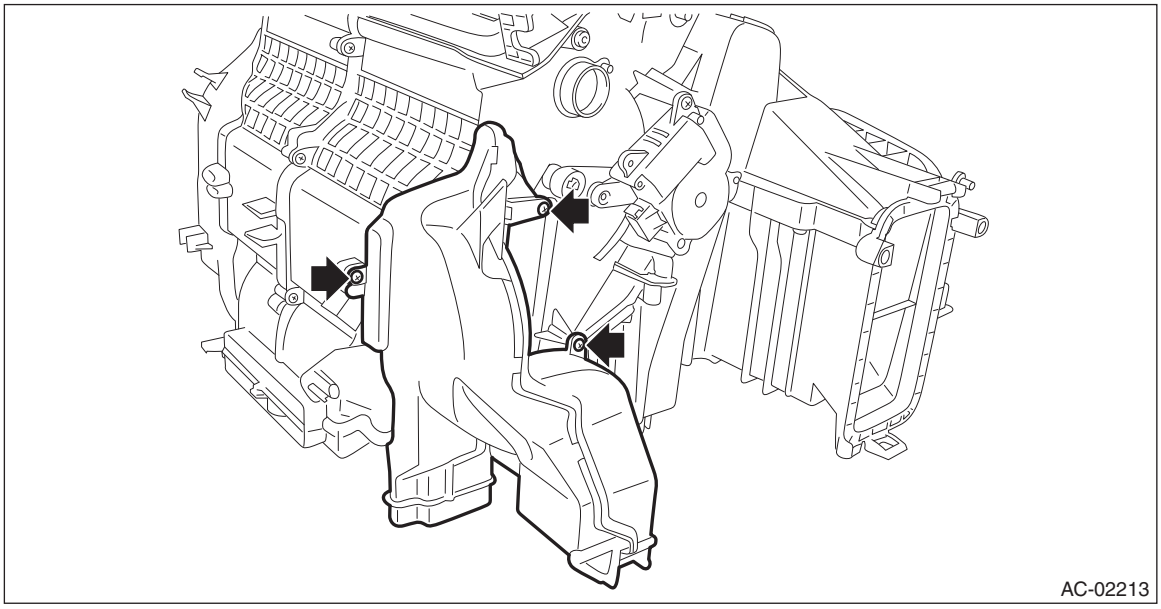


AC-02160

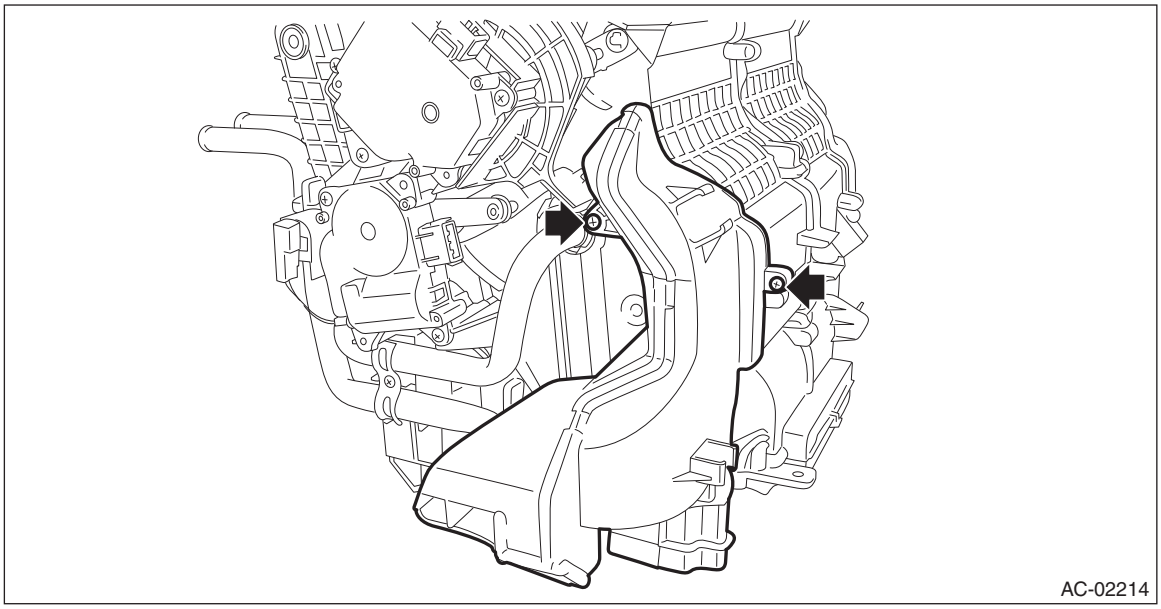
9) Disconnect the claws and then remove the aspirator hose.



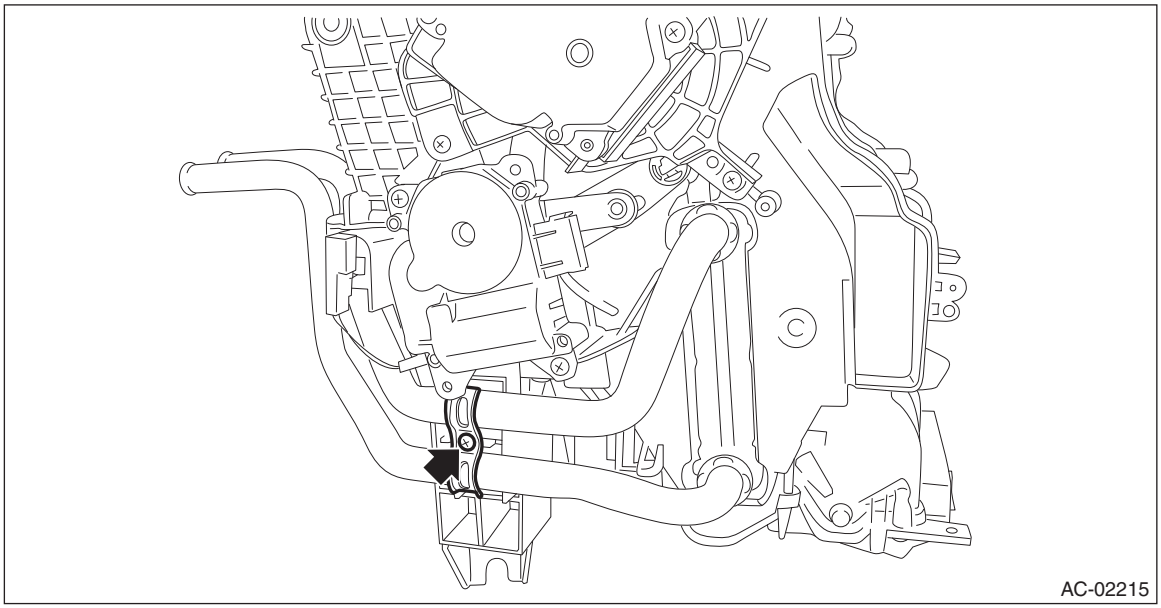
10) Remove the screws and remove the foot duct (RH).



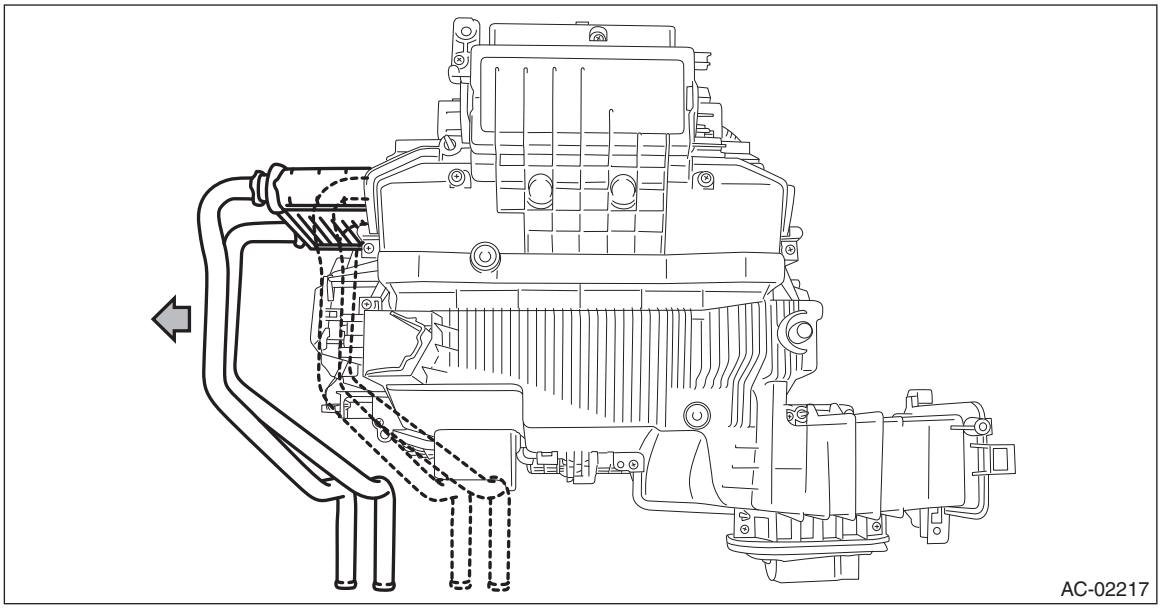
11) Remove the screws and remove the foot duct (LH).



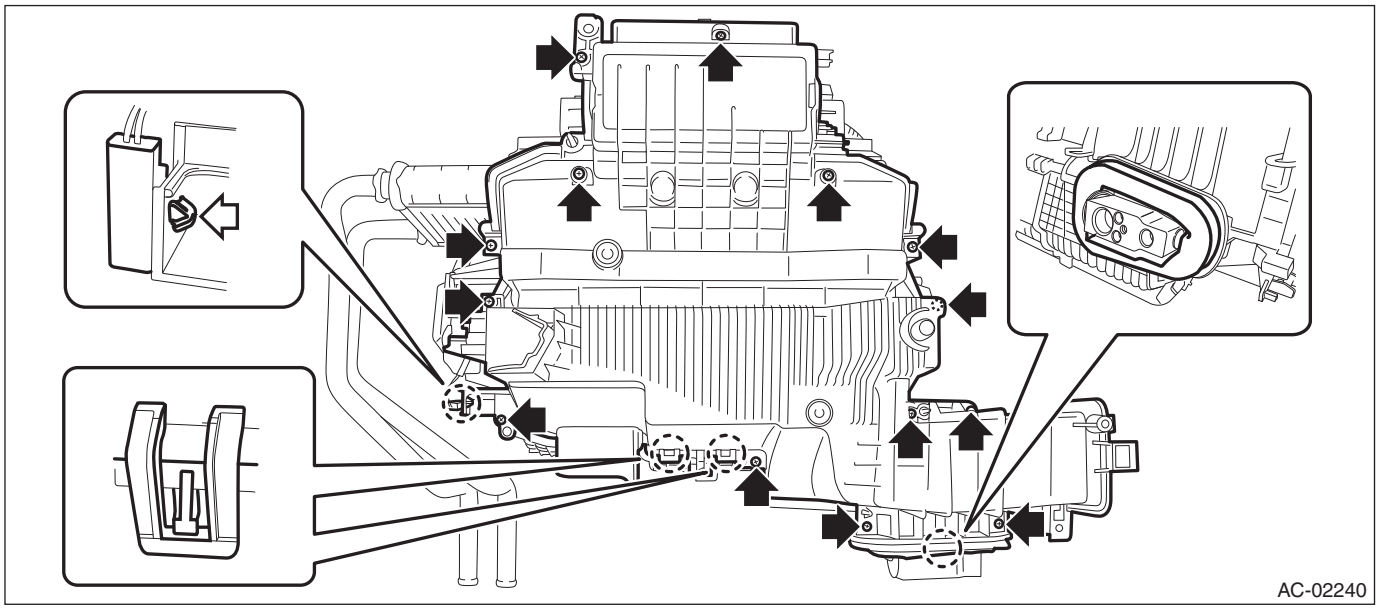
12) Pull out the heater core.
(1) Remove the screw and remove the heater pipe clamp.



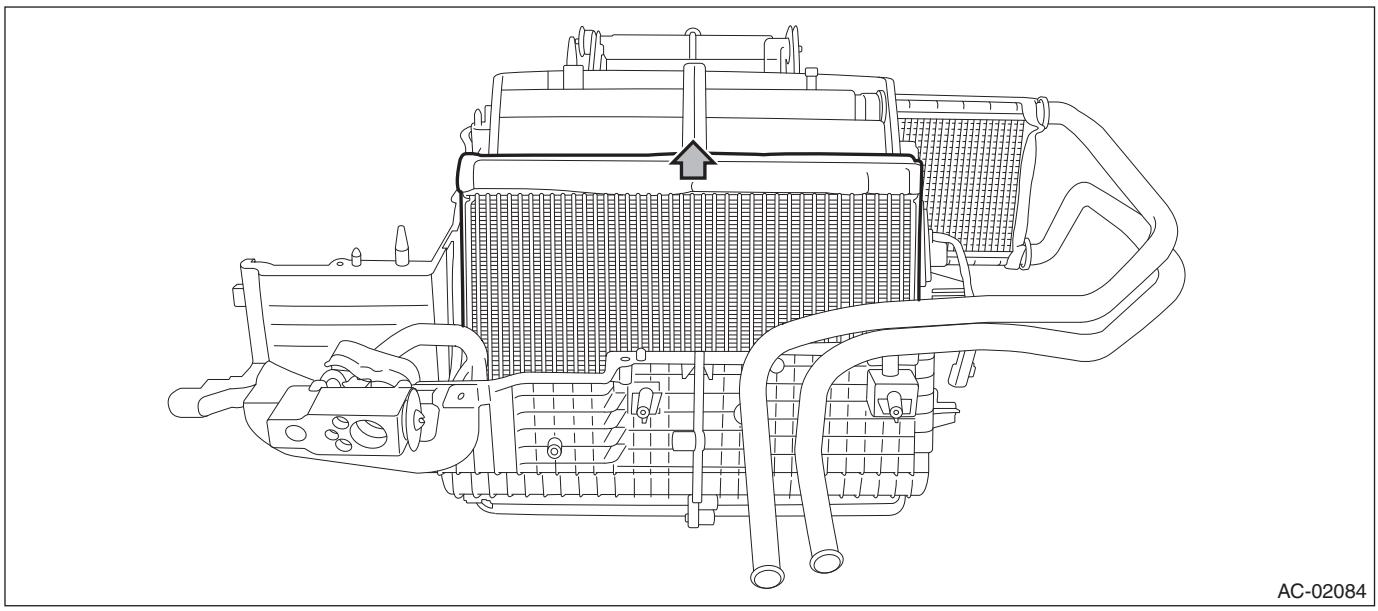
(2) Pull out the heater core from the heater and cooling unit assembly.



13) Remove the heater case lower.
(1) Remove the clip, and remove the evaporator connector.
(2) Remove the gasket.
(3) Remove the screw and lock, then remove the heater case lower.

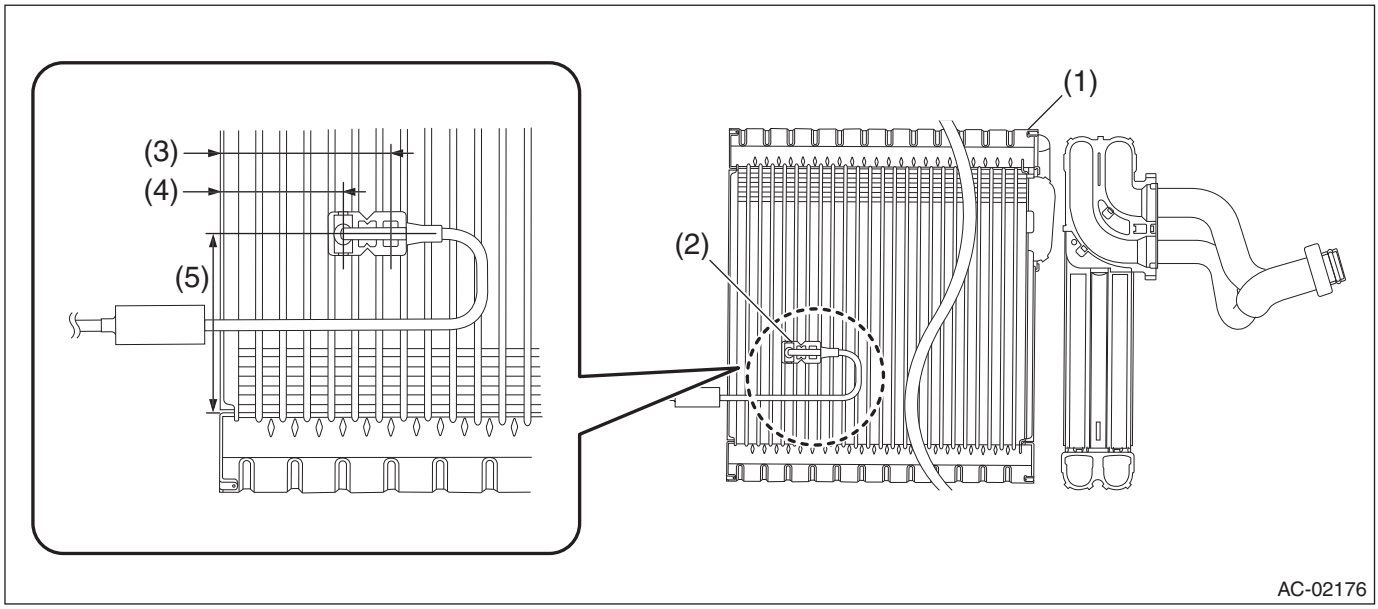


14) Remove the evaporator.



B: INSTALLATION

CAUTION:
- **Do not start the engine before charging refrigerant.**
- **If the engine is started with no refrigerant charge, replace the compressor.**
- **If the engine may have been started with no refrigerant charge, check for any diagnosis code (DTC) using Subaru Select Monitor. If the code B1644 (Refrigerant not sealed drive error) is output, replace the compressor.**
- **If the evaporator has been replaced, add an appropriate amount of compressor oil to the evaporator. <Ref. to AC-24, REPLACEMENT, Compressor Oil.>**
- **Make sure that the water stop gasket of the cover attachment area is securely attached.**
- **Replace the O-rings on pipes with new parts, and then apply compressor oil.**
- **Install the evaporator sensor at the position shown in the figure below.**



(1)	Evaporator	(3)	47.7 mm (1.88 in)	(5)	50 mm (1.97 in)
(2)	Evaporator sensor	(4)	34.3 mm (1.35 in)		

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

2) Fill engine coolant.
• H4 non-turbo model: <Ref. to CO(H4SO)-14, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
• H4 turbo model: <Ref. to CO(H4DOTC)-14, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
• H6 model: <Ref. to CO(H6DO)-12, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
3) Charge refrigerant. <Ref. to AC-19, PROCEDURE, Refrigerant Charging Procedure.>

Tightening torque:

- ***Heater cooling unit: <Ref. to AC-4, HEATER COOLING UNIT, COMPONENT, General Description.>***
- ***Blower motor unit: <Ref. to AC-6, BLOWER MOTOR UNIT, COMPONENT, General Description.>***

C: INSPECTION

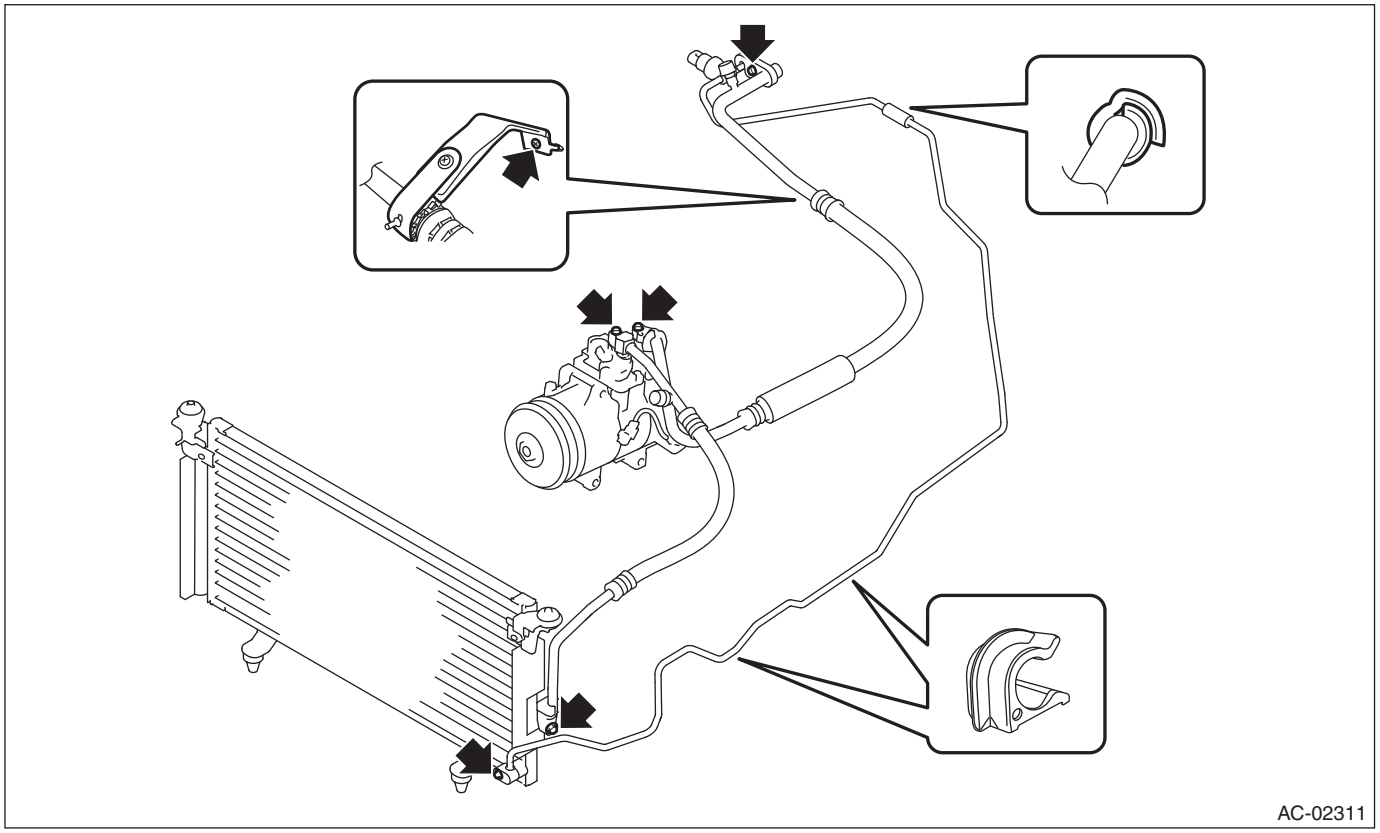
1) Check the evaporator fin for dust. Blow with compressed air or flush fins with water as needed.
2) If any oil leak is found from the evaporator, replace the evaporator.

19.Hose and Pipe

A: REMOVAL

CAUTION:
- **When disconnecting hoses, do not apply an excessive force to them.**
- **Seal the disconnected hose with a plug or vinyl tape to prevent foreign matter from entering.**

1) Disconnect the ground cable from battery.
2) Using the refrigerant recovery system, drain the refrigerant. <Ref. to AC-18, PROCEDURE, Refrigerant Recovery Procedure.>
3) Remove the bolts and screws and detach the hoses and pipes.



B: INSTALLATION

CAUTION:
- **Do not start the engine before charging refrigerant.**
- **If the engine is started with no refrigerant charge, replace the compressor.**
- **If the engine may have been started with no refrigerant charge, check for any diagnosis code (DTC) using Subaru Select Monitor. If the code B1644 (Refrigerant not sealed drive error) is output, replace the compressor.**
- **Replace the O-rings with new parts, and then apply compressor oil.**
- **When connecting hoses, do not apply an excessive force to them. After installing, check that no torsion or excessive tension applied to the hoses.**

1) Install each part in the reverse order of removal.
2) Charge refrigerant. <Ref. to AC-19, PROCEDURE, Refrigerant Charging Procedure.>

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to AC-8, AIR CONDITIONING UNIT, COMPONENT, General Description.>

C: INSPECTION

1) Check the hoses for cracks, damage and expansion. Replace the hose if faulty.
2) Check the pipes for crack or damage. Replace the pipe if faulty.

20.Pressure Sensor

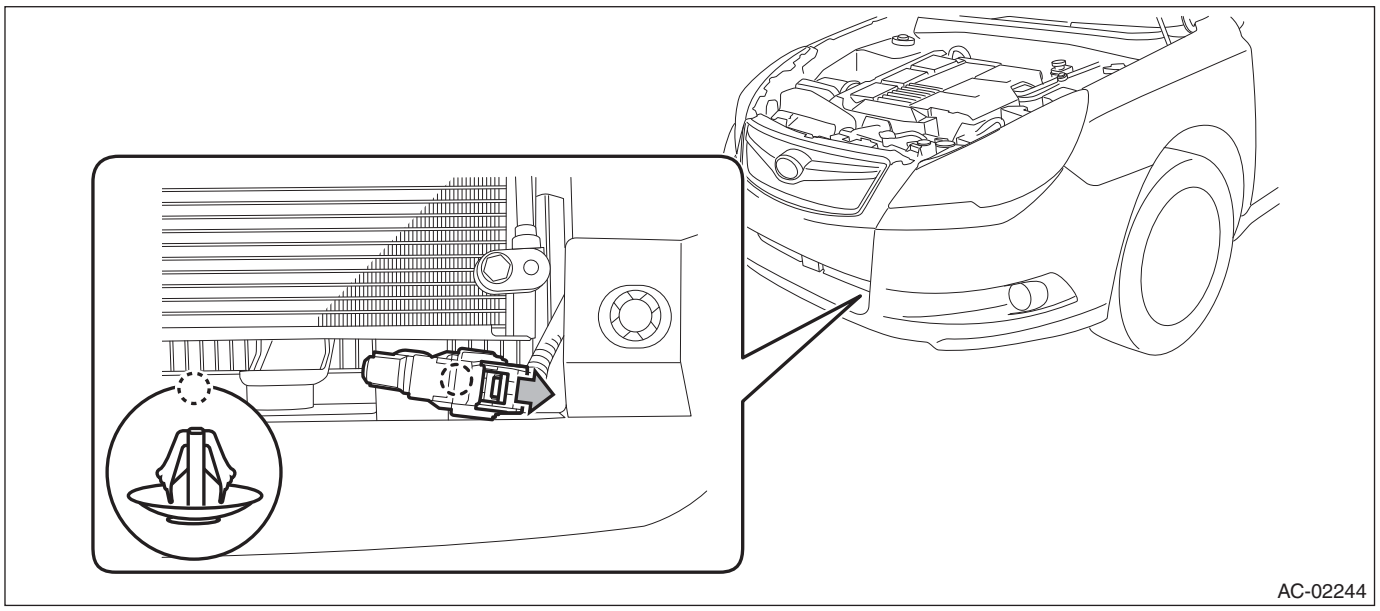
A: INSPECTION

1) Perform a diagnosis code (DTC) check by connecting the Subaru Select Monitor.
2) If any diagnosis code (DTC) is displayed, consult the List of Diagnostic Trouble Code (DTC) in HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS). <Ref. to AC(diag)-31, LIST, List of Diagnostic Trouble Code (DTC).>

21.Ambient Sensor (Auto A/C Model)

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the ambient sensor.
   (1) Disconnect the connector.
   (2) Remove the ambient sensor from the radiator lower panel.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1) Perform a diagnosis code (DTC) check by connecting the Subaru Select Monitor.
2) If any diagnosis code (DTC) is displayed, consult the List of Diagnostic Trouble Code (DTC) in HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS). <Ref. to AC(diag)-31, LIST, List of Diagnostic Trouble Code (DTC).>

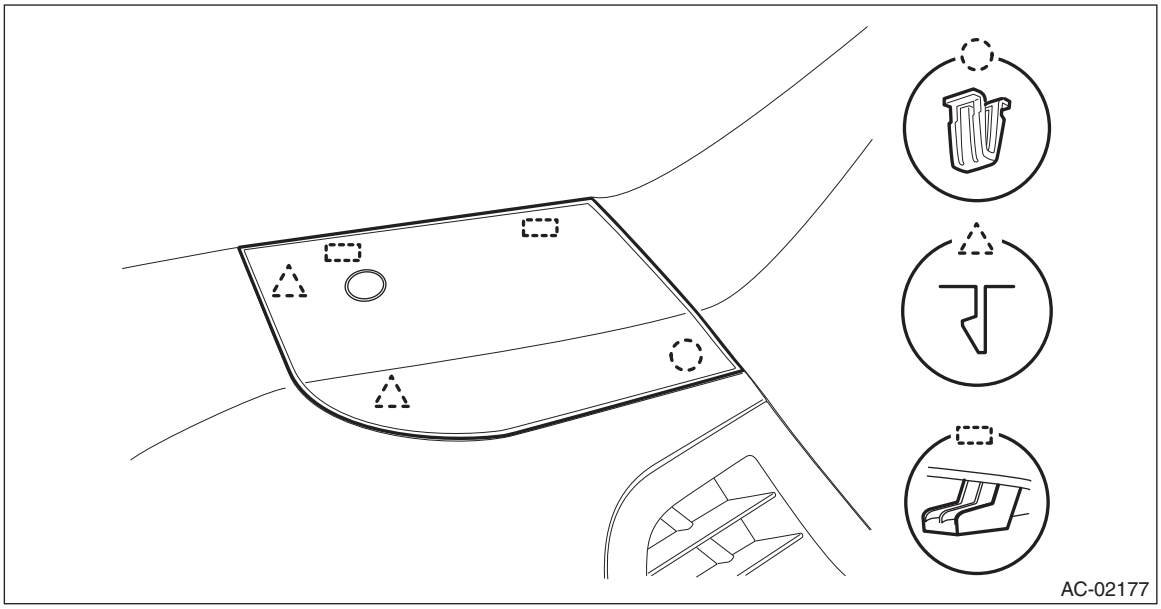
22.Sunload Sensor (Auto A/C Model)

A: REMOVAL

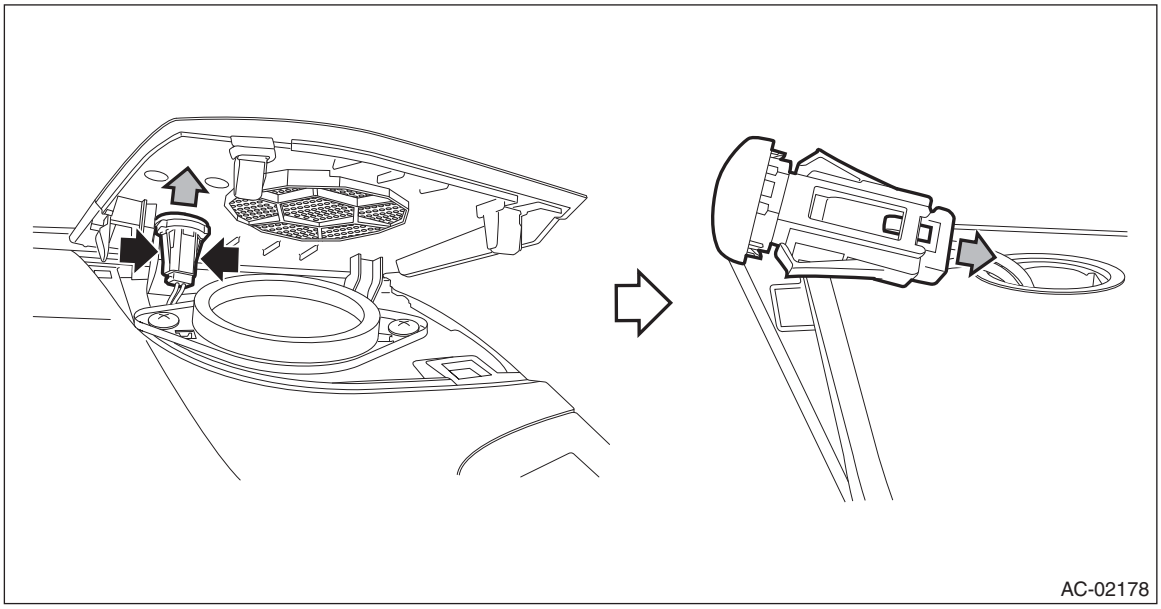
NOTE:
Sunload sensor is integrated with the light control sensor.
1) Disconnect the ground cable from battery.
2) Remove the sunload sensor.

CAUTION:
Be careful not to damage the sensors and interior trims when removing.

(1) Release the claws and clips, then detach the side speaker cover (RH).



(2) Push out the sunload sensor by pressing the left and right claws.
(3) Disconnect the connector and remove the sunload sensor.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

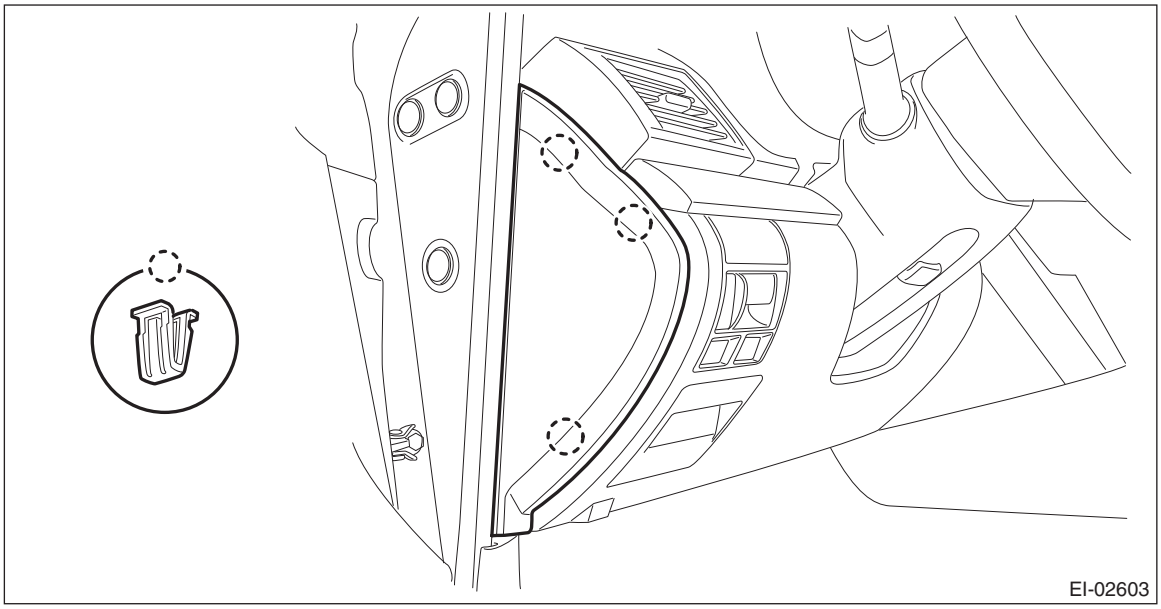
1) Perform a diagnosis code (DTC) check by connecting the Subaru Select Monitor.
2) If any diagnosis code (DTC) is displayed, consult the List of Diagnostic Trouble Code (DTC) in HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS). <Ref. to AC(diag)-31, LIST, List of Diagnostic Trouble Code (DTC).>

23.In-Vehicle Sensor (Auto A/C Model)

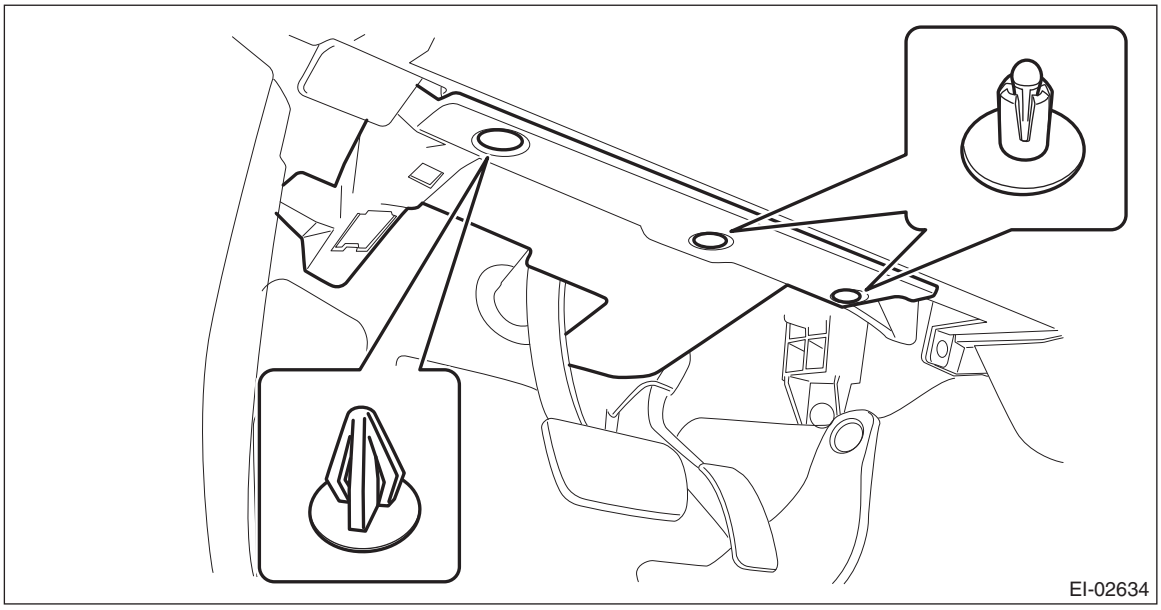
A: REMOVAL

CAUTION:
Be careful not to damage the sensors and interior trims when removing.

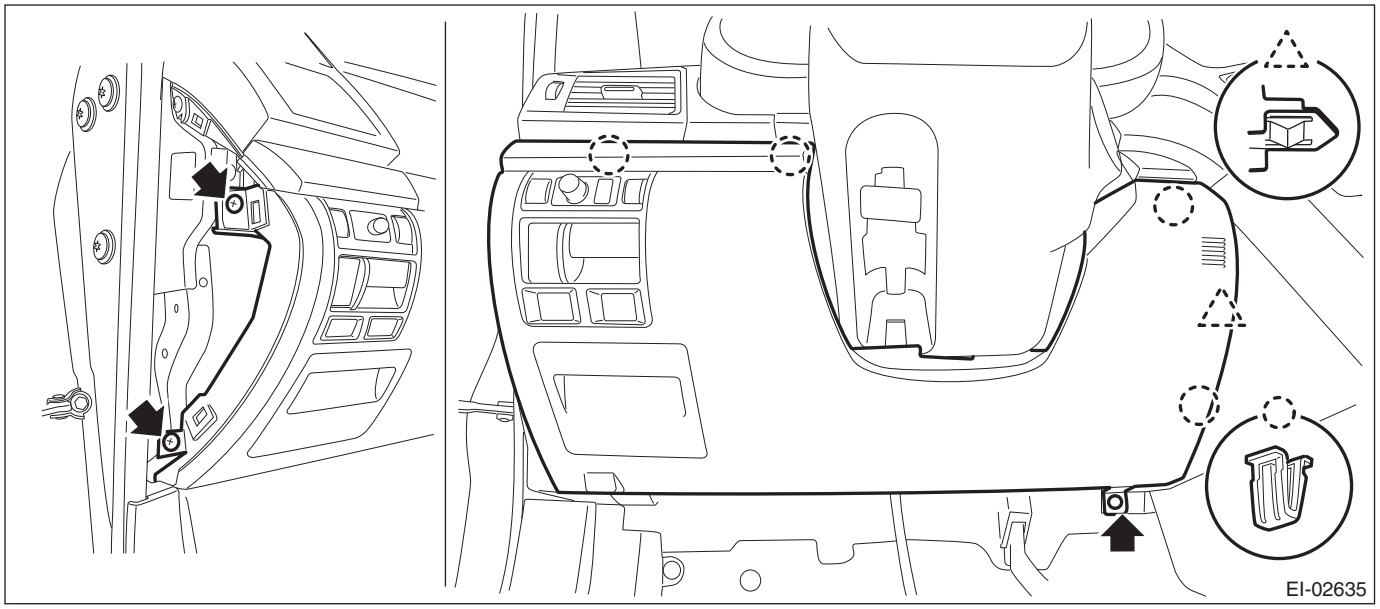
1) Disconnect the ground cable from battery.
2) Remove the clips, and remove the instrument panel side cover LH.



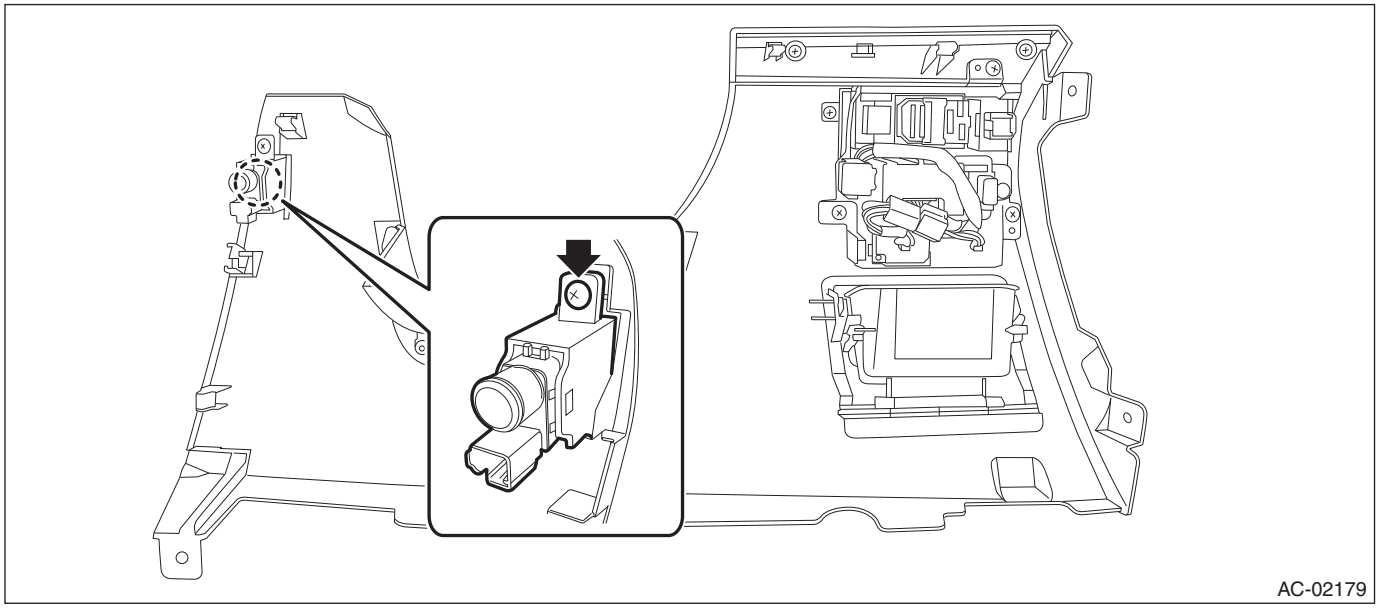
3) Remove the instrument panel lower cover.
   (1) Remove the clip.
   (2) Remove the data link connector, and remove the instrument panel lower cover under.



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



4) Remove the screw and remove the in-vehicle sensor from the instrument lower cover.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1) Perform a diagnosis code (DTC) check by connecting the Subaru Select Monitor.
2) If any diagnosis code (DTC) is displayed, consult the List of Diagnostic Trouble Code (DTC) in HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS). <Ref. to AC(diag)-31, LIST, List of Diagnostic Trouble Code (DTC).>

24.Air Vent Grille

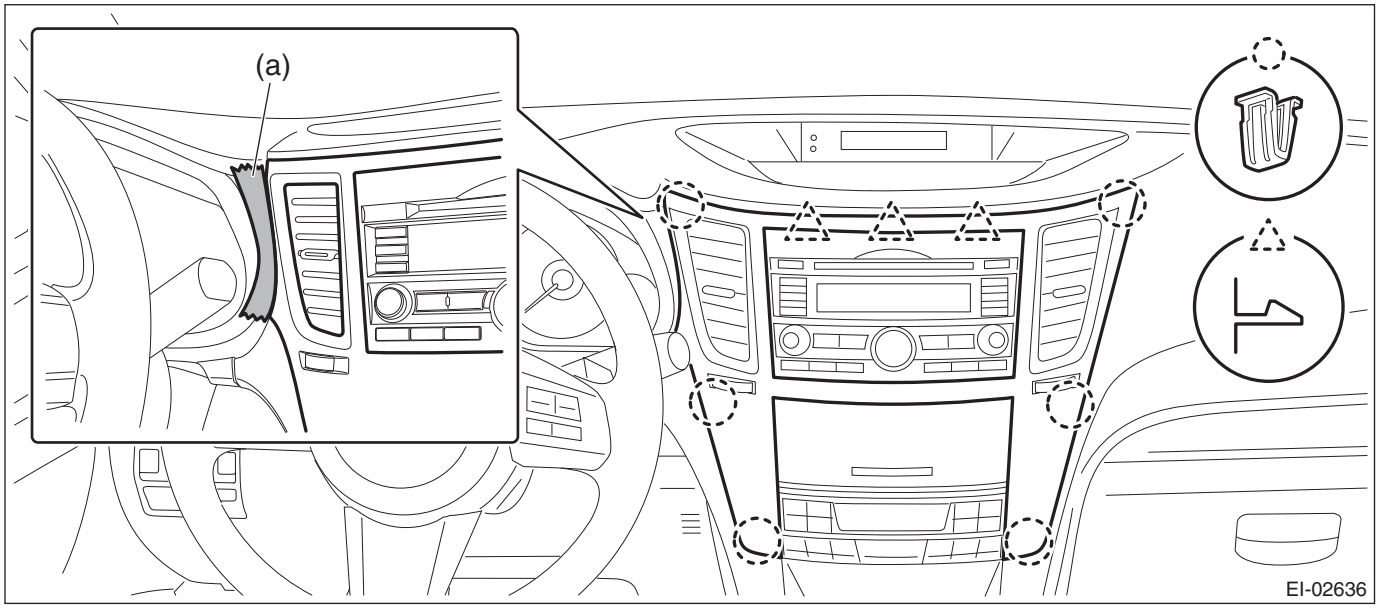
A: REMOVAL

1. CENTER GRILLE ASSEMBLY

1) 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.

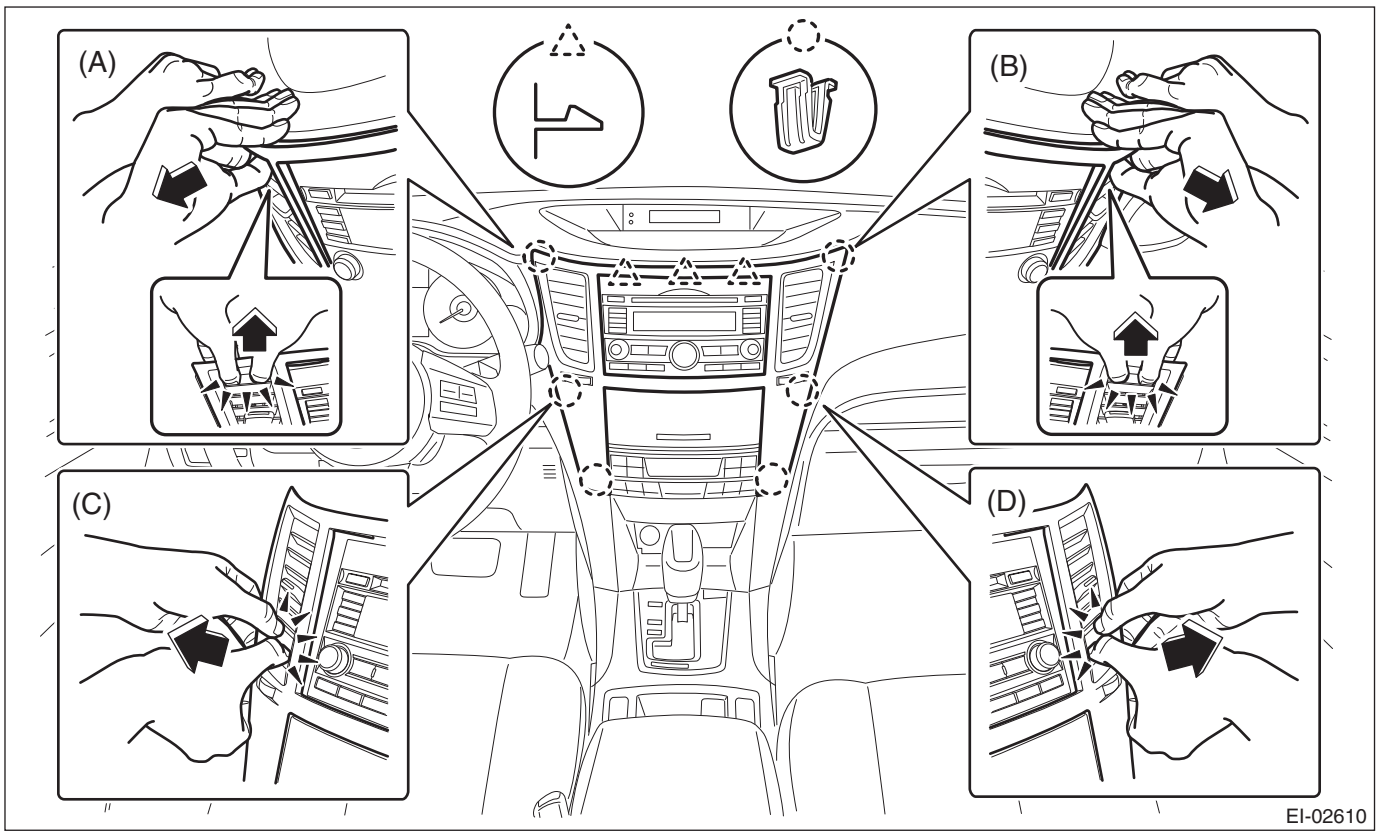
(1) Attach the protective tape (a) to the meter visor.



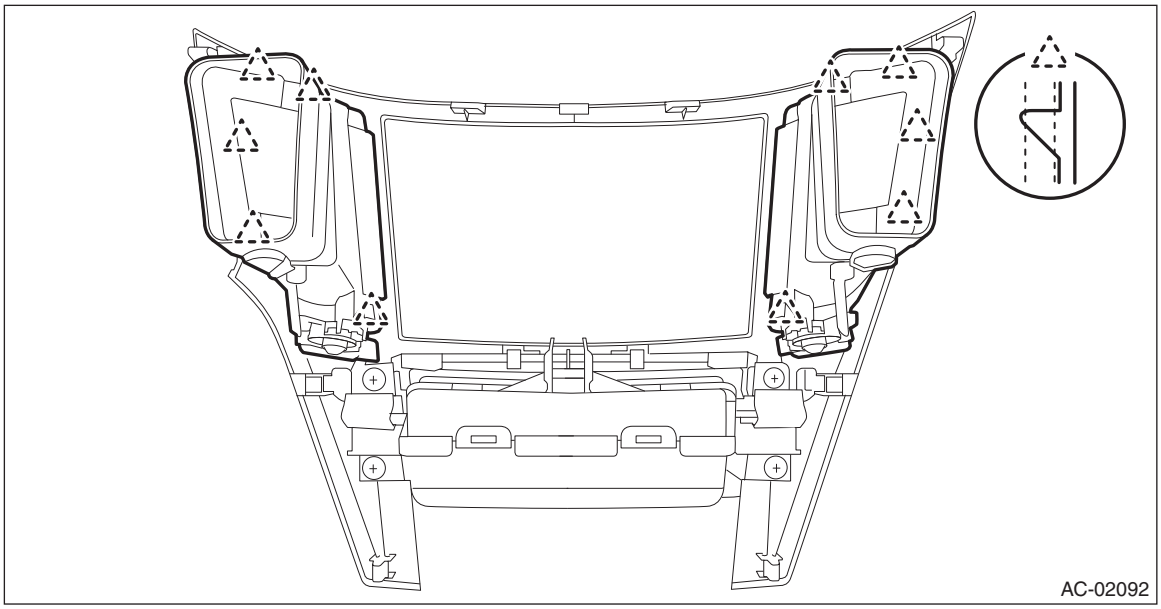
(2) Insert a finger into the air vent grille and release the left and right clips at the top of the center panel. (A), (B)

(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.

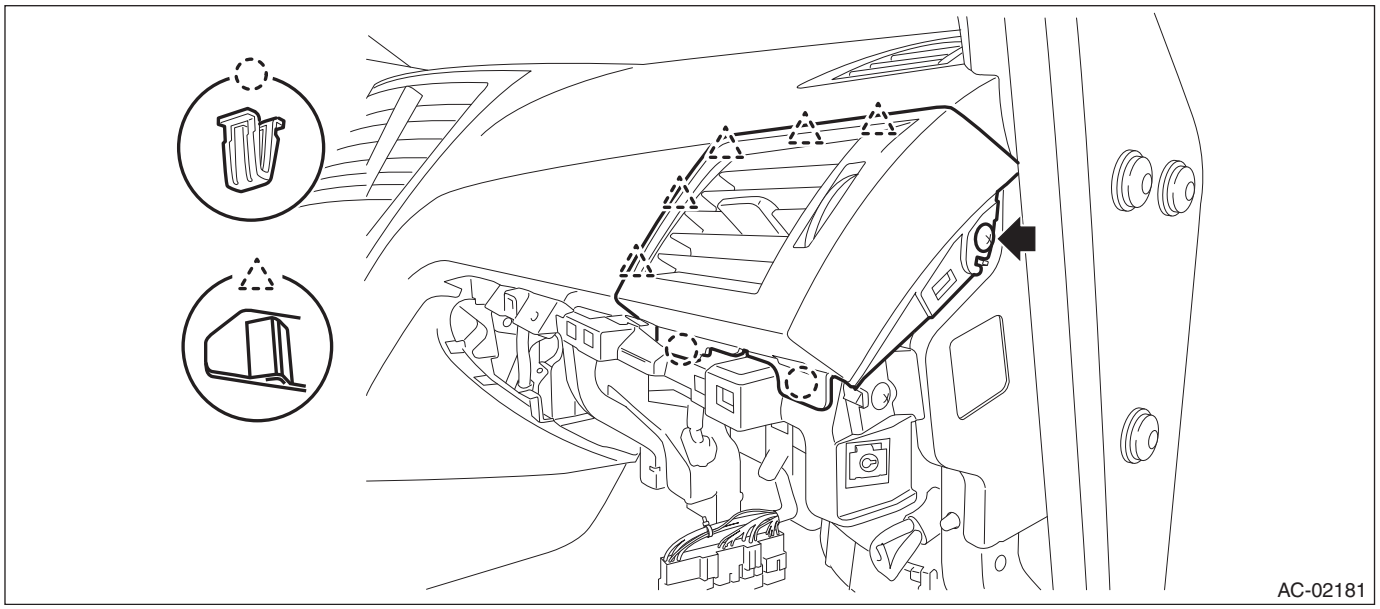


2) Release the claws, and then remove the center grille assembly.

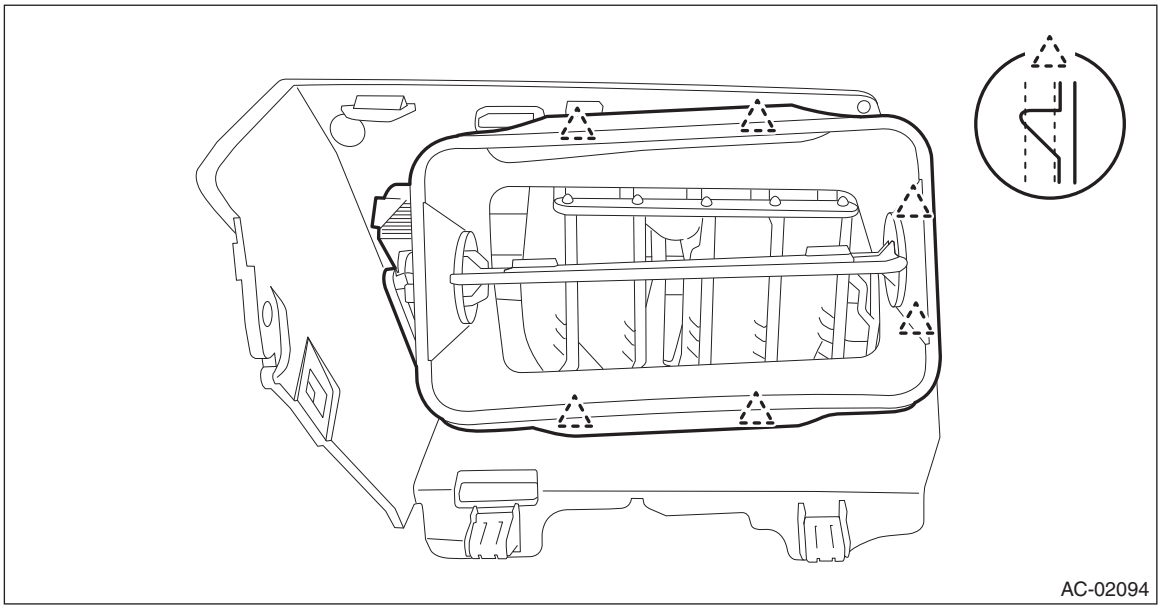


2. SIDE GRILLE ASSEMBLY RH

1) Remove the instrument panel lower cover. <Ref. to EI-63, REMOVAL, Instrument Panel Lower Cover.>
2) Remove the side vent grille assembly RH.
   (1) Remove the screws.
   (2) Release the claws and clips, then detach the side vent grille assembly RH.

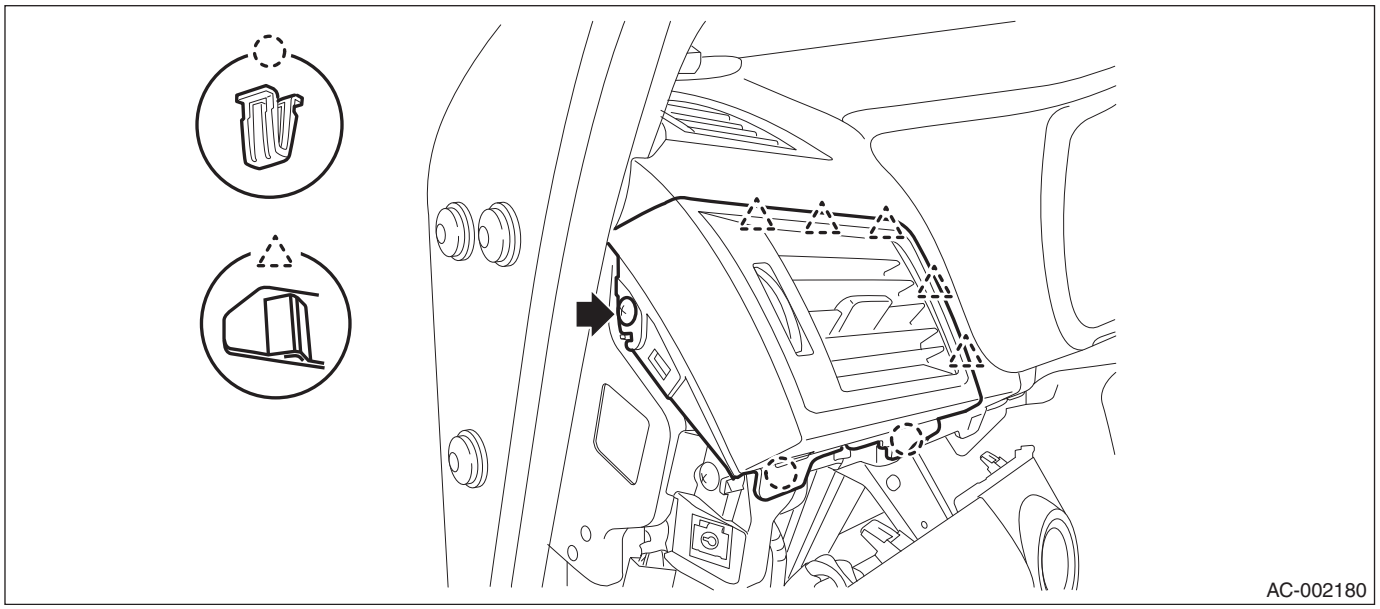


   (3) Release the claws, and then remove the side grille assembly RH.

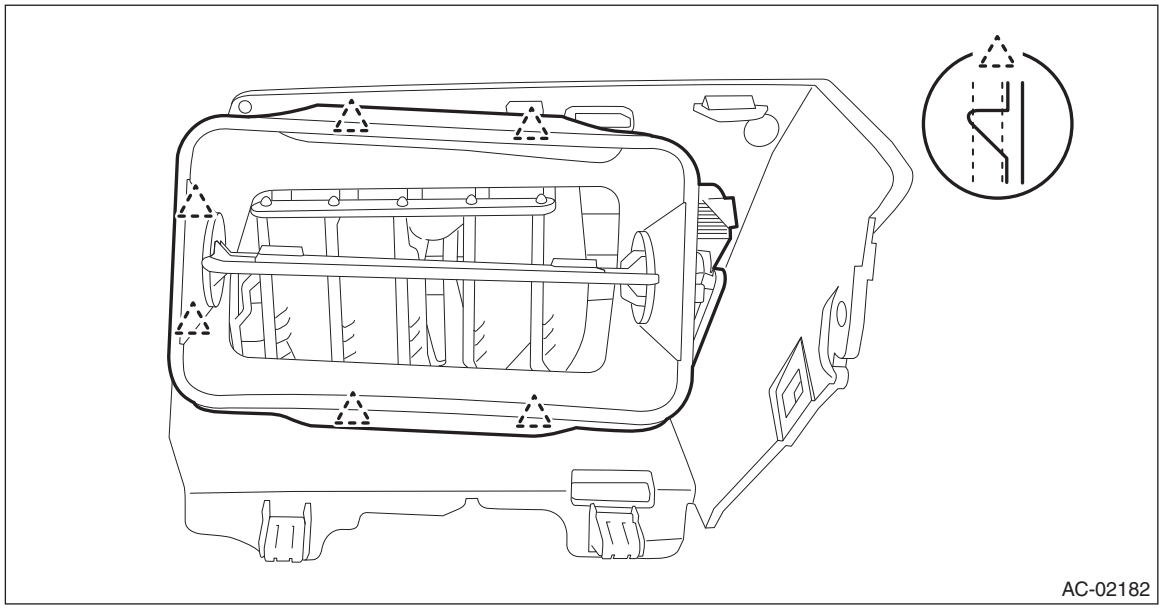


3. SIDE GRILLE ASSEMBLY LH

1) Remove the glove box. <Ref. to EI-65, REMOVAL, Glove Box.>
2) Remove the side vent grille assembly LH.
   (1) Remove the screws.
   (2) Release the claws and clips, then detach the side vent grille assembly LH.



   (3) Release the claws, and then remove the side grille assembly LH.



B: INSTALLATION

Install each part in the reverse order of removal.

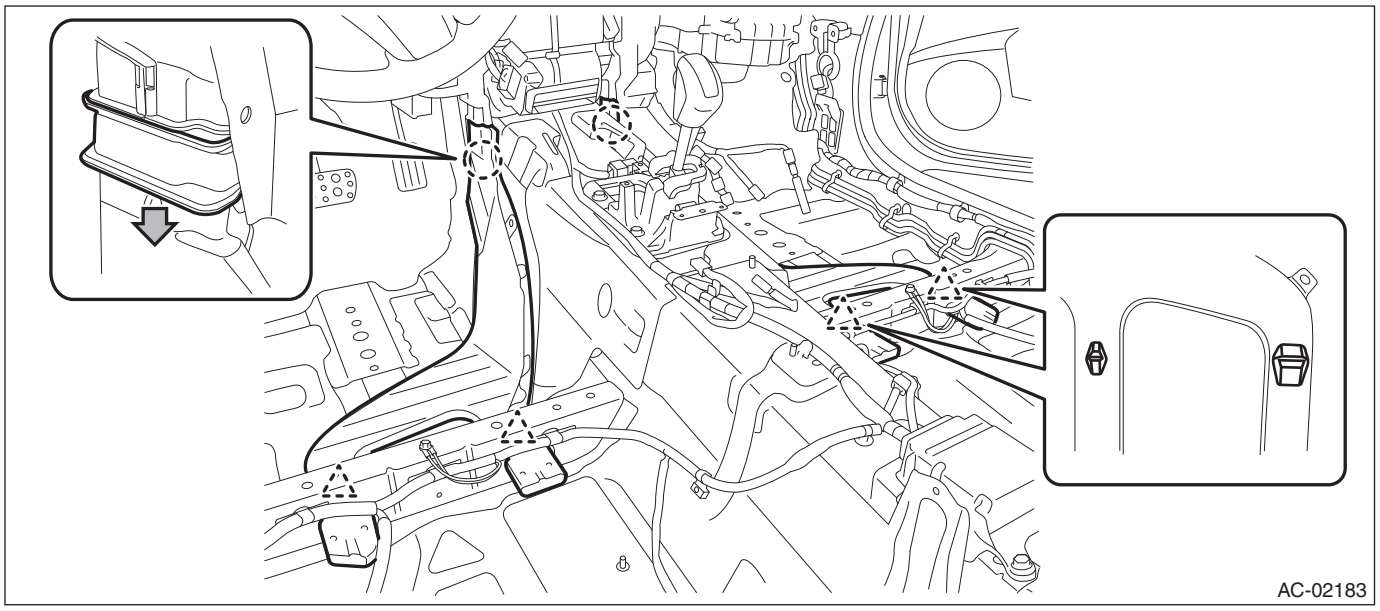
C: INSPECTION

1) Check that the direction and amount of air can be adjusted smoothly. Replace the air vent grille if faulty.
2) Check that the adjustment can be maintained in each position. Replace the air vent grille if faulty.

25.Heater Duct

A: REMOVAL

1) Remove the front seats. <Ref. to SE-10, REMOVAL, Front Seat.>
2) Remove the instrument panel face assembly. <Ref. to EI-75, REMOVAL, Instrument Panel Assembly.>
3) Remove the rear heater duct.
   (1) Pull off the floor carpet to disengage the rear heater duct slide lock.
   (2) Release the claws, and then remove the rear heater duct LH and RH.



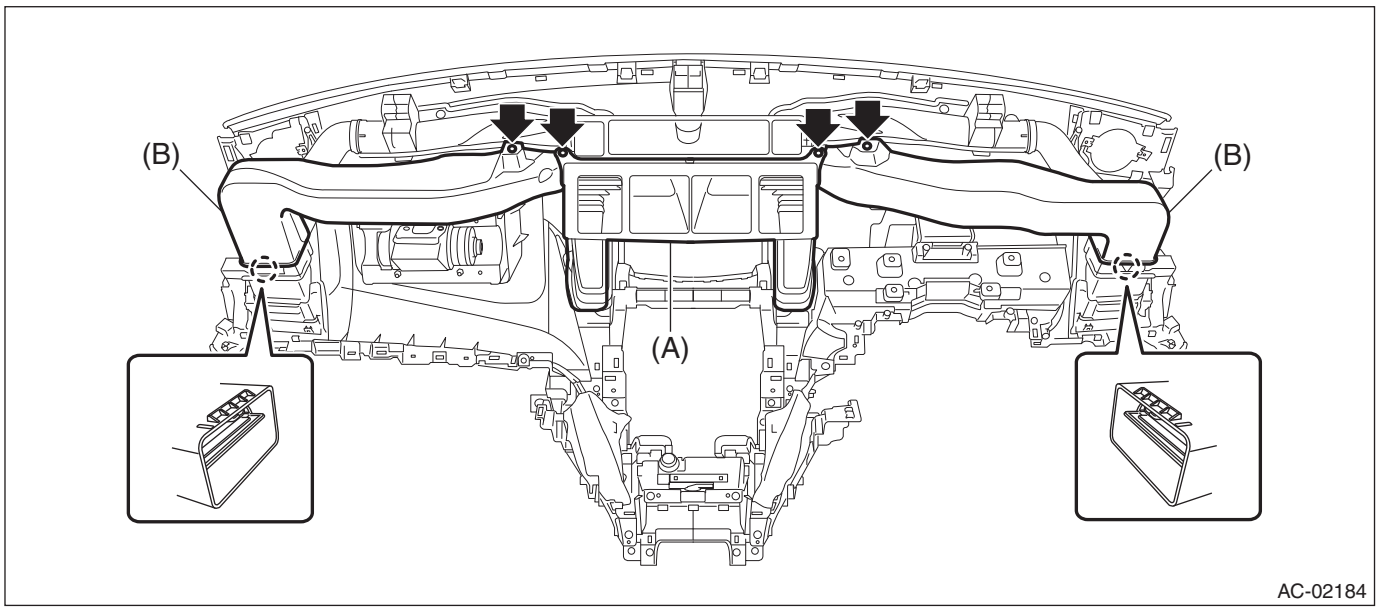
B: INSTALLATION

Install each part in the reverse order of removal.

26.Heater Vent Duct

A: REMOVAL

1) Remove the instrument panel face assembly. <Ref. to EI-75, REMOVAL, Instrument Panel Assembly.>
2) Remove the heater vent duct.
   (1) Remove the screws and detach the front vent duct (A).
   (2) Release the claws and remove the screws, then detach the side vent ducts LH and RH (B).



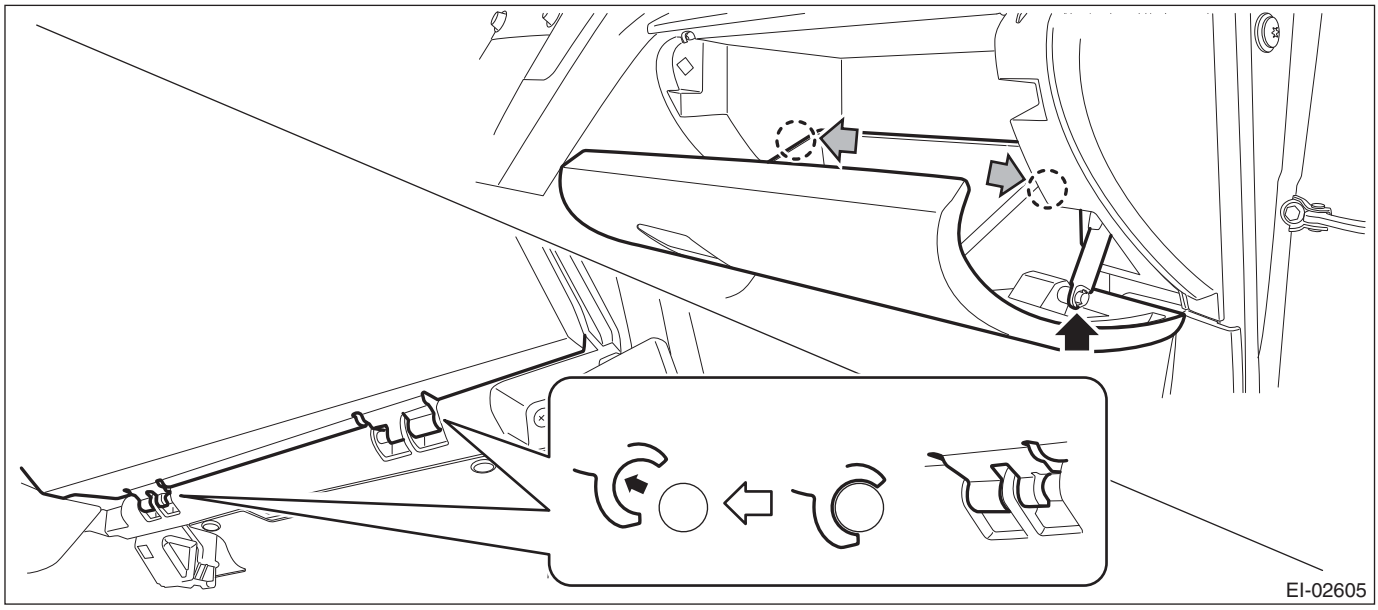
B: INSTALLATION

Install each part in the reverse order of removal.

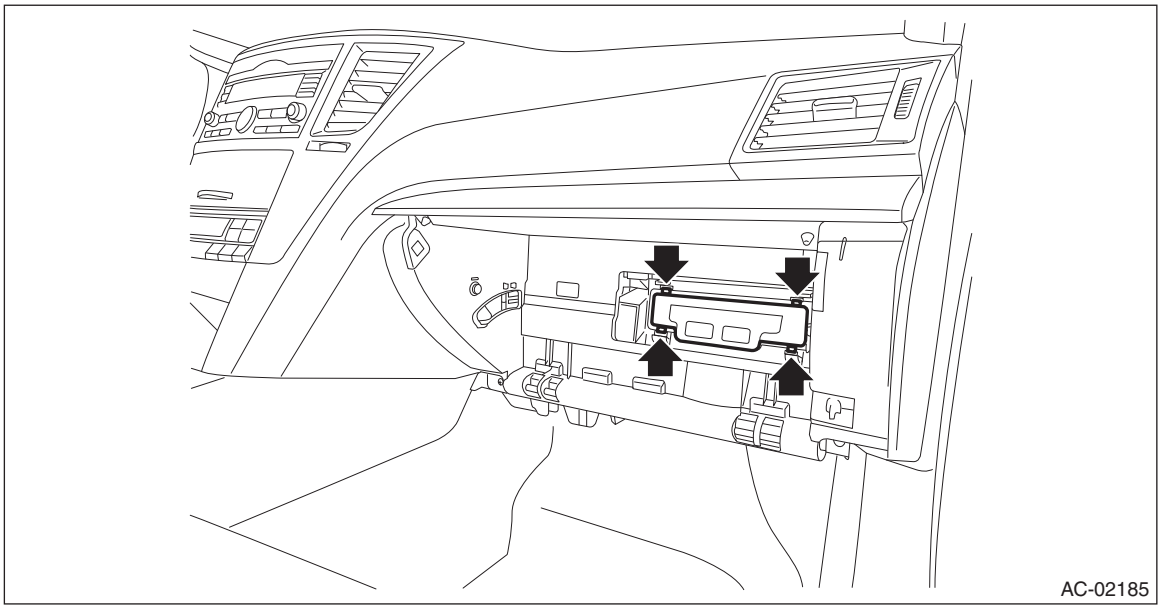
27.A/C Filter

A: REPLACEMENT

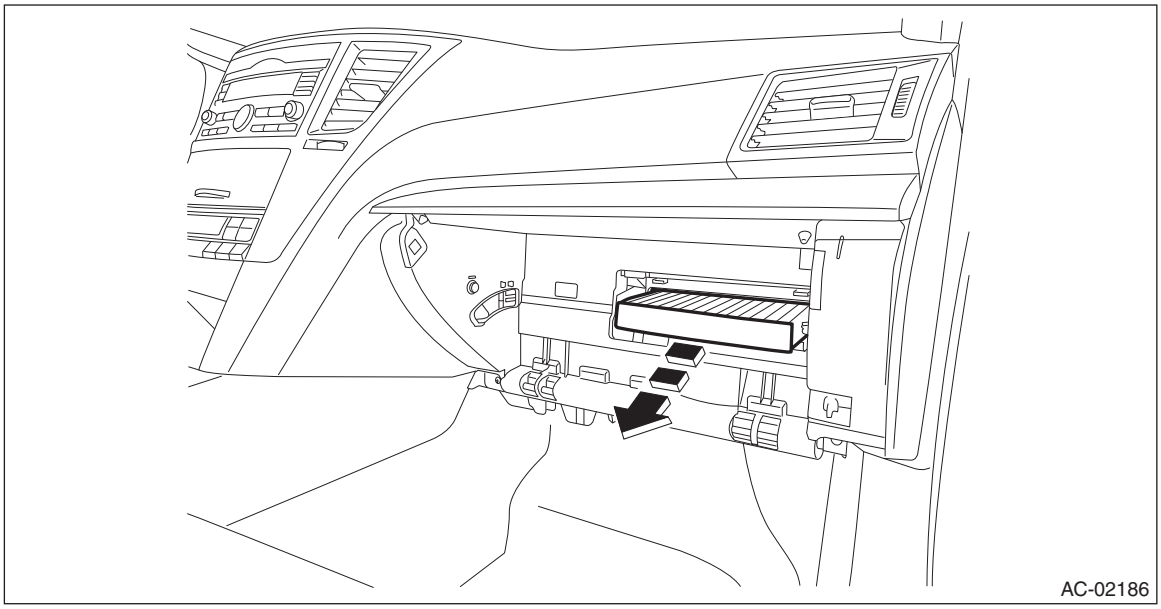
1) Remove the glove box lid assembly.
   (1) Remove the glove box damper.
   (2) Release the stoppers and remove the glove box lid assembly by pulling it toward you.



2) Remove the A/C filter.
   (1) Release the lock and remove the A/C filter cover.



(2) Remove the A/C filter.



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

28.General Diagnostic Table

A: INSPECTION

Refer to HVAC SYSTEM (AUTO A/C) (DIAGNOSTICS). <Ref. to AC(diag)-68, INSPECTION, Diagnostics with Phenomenon.>

1. Basic Diagnostic Procedure

A: PROCEDURE

Step		Check	Yes	No
1	**START INSPECTIONS.** 1) Perform the pre-inspection. <Ref. to AC(diag)-3, INSPECTION, General Description.> 2) Perform the self-diagnosis. <Ref. to AC(diag)-13, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Does the self-diagnosis operate?	Go to step **2**.	<Ref. to AC(diag)-16, A/C OR SELF-DIAGNOSIS SYSTEMS DO NOT OPERATE, Diagnostics for A/C System Malfunction.>
2	**CHECK DTC.** Read the DTC using Subaru Select Monitor. <Ref. to AC(diag)-26, OPERATION, Read Diagnostic Trouble Code (DTC).> NOTE: When freeze frame data is displayed with DTC, record all the data.	Is DTC displayed?	Perform the diagnosis according to DTC. <Ref. to AC(diag)-31, LIST, List of Diagnostic Trouble Code (DTC).>	Go to step **3**.
3	**CHECK COMPARTMENT TEMPERATURE.** 1) Turn the A/C switch to ON. 2) Turn the temperature control switch at maximum cool position. 3) Check the compartment temperature change.	Does the compartment temperature change?	Go to step **4**.	<Ref. to AC(diag)-21, COMPARTMENT TEMPERATURE DOES NOT CHANGE, OR A/C SYSTEM DOES NOT RESPOND PROMPTLY, Diagnostics for A/C System Malfunction.>
4	**CHECK A/C SYSTEM RESPONSE.** Change the temperature setting, and check the response of A/C system.	Does the A/C system respond quickly?	A/C system is normal.	<Ref. to AC(diag)-21, COMPARTMENT TEMPERATURE DOES NOT CHANGE, OR A/C SYSTEM DOES NOT RESPOND PROMPTLY, Diagnostics for A/C System Malfunction.>

2. General Description

A: CAUTION

1) Never connect the battery in reverse polarity.
• Doing so may immediately damage the A/C control module.
2) Do not disconnect the battery terminals while the engine is running.
• A large counter electromotive force will be generated in the generator, and this voltage may damage electronic parts such as A/C control module etc.
3) Before disconnecting the connectors of sensors and the A/C control module, be sure to turn off the ignition switch.
• A/C control module may be damaged.
4) Every A/C-related part is a precision part. Do not drop them.
5) Airbag system wiring harness is routed near the A/C control panel and junction box.

CAUTION:
• Do not use electrical test devices on airbag system wiring harnesses or connectors.
• Be careful not to damage the airbag system wiring harness when servicing the A/C control panel and junction box.

B: INSPECTION

Before performing the diagnosis, check the following items which may cause problems in the A/C system.

1. BATTERY

1) Measure the battery voltage and specific gravity of the electrolyte.

Standard voltage:
12 V

Specific gravity:
1.260 or more

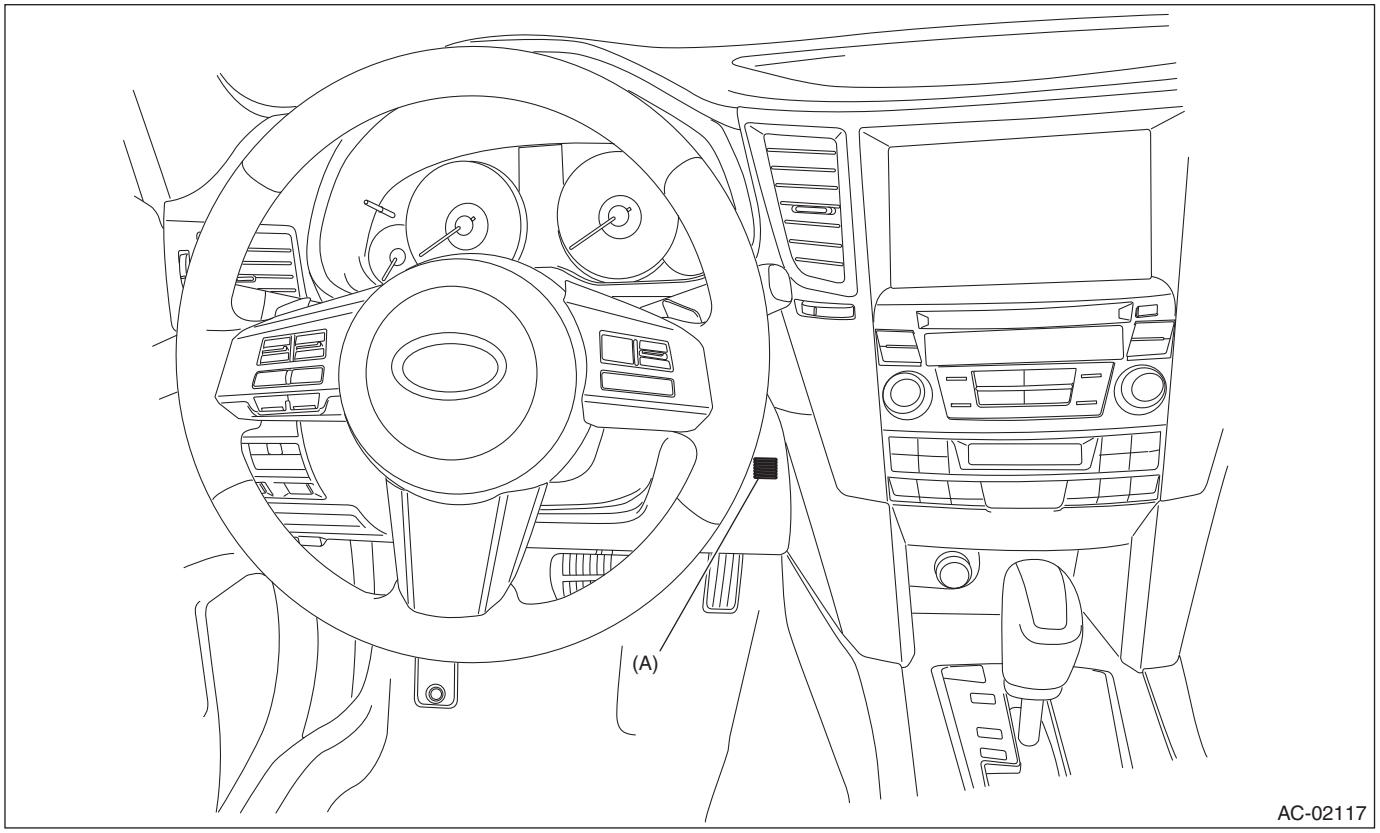
2) Check the condition of the fuses for A/C system power supply and other fuses.
3) Check the condition of harness and harness connector connections.

2. ASPIRATOR HOSE

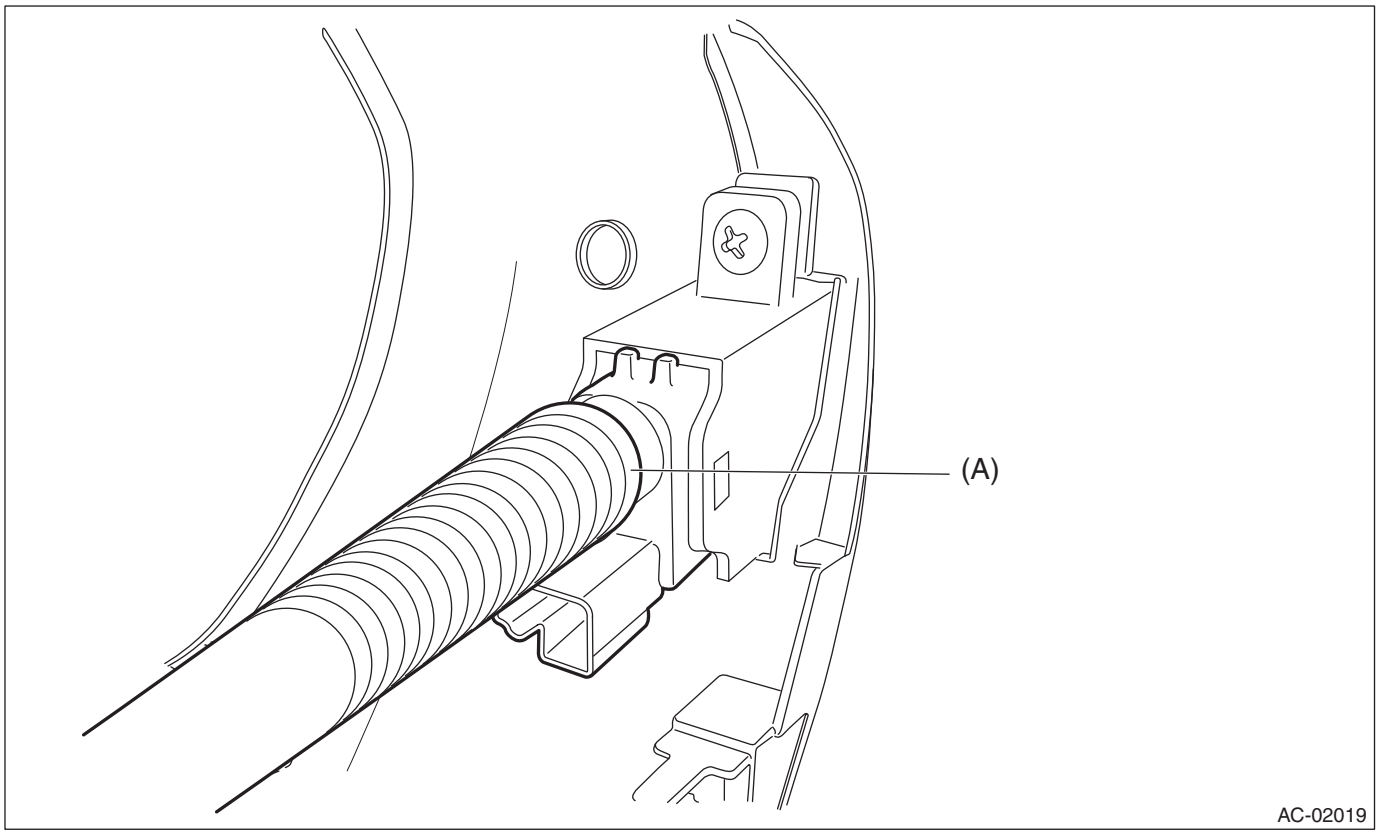
1) Turn the ignition switch to ON, and press the A/C switch.
2) Turn the temperature control switch to maximum hot position.
3) Set the blow vents to the DEF position.
4) Set the FAN switch to the MAX position.

5) Put a strip of paper close to the front side of in-vehicle sensor suction port (A) located in the instrument panel lower cover, and check that air is being sucked into the port by seeing the paper moving towards the port.

NOTE:
Be careful not to let the paper get sucked into the port.

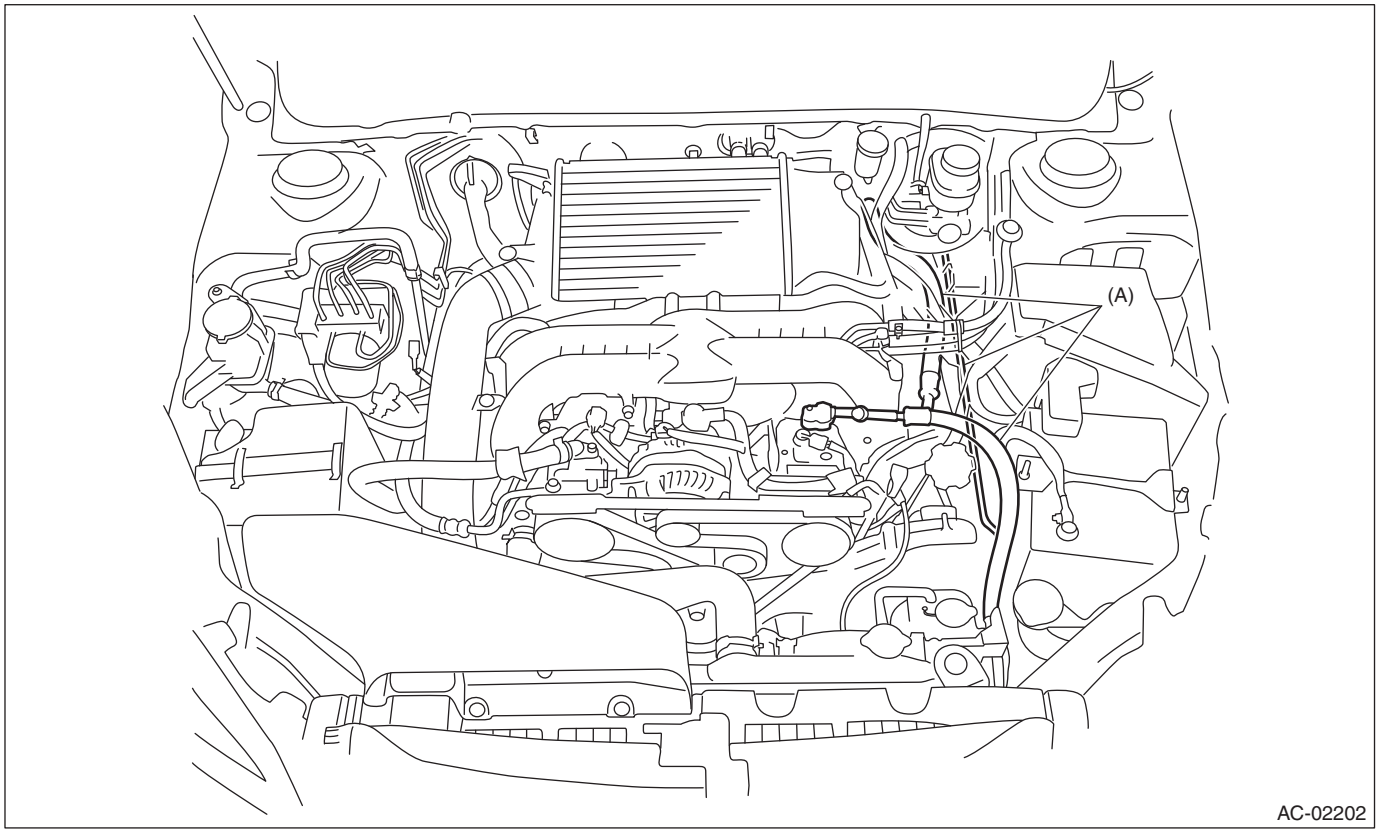


6) If the paper does not move at all, remove the instrument panel lower cover <Ref. to EI-63, REMOVAL, Instrument Panel Lower Cover.> and check for poor connection of the aspirator hose (A), in-vehicle sensor and heater unit, and repair them if necessary.



3. A/C LINE

Check the connection for A/C line (A) and lower side high-pressure pipe.



4. CONTROL LINKAGE

1) Check the state of mode door linkage.
2) Check the state of air mix door linkage.
3) Check the state of FRESH/RECIRC door linkage.

5. CONTROL SWITCHES

Start the engine and warm up completely.

1) Inspection using switches

No.	Point to check	Switch operation	Judgment standard
1	OFF switch	Press the OFF switch.	Setting temperature display goes out. • Blower fan: OFF • Inlet opening: FRESH • Compressor: OFF
2	AUTO switch, driver's side temperature control switch, and passenger's side temperature control switch	1) Press the AUTO switch. 2) Press the temperature control switch to set to LO (maximum cool position).	FULL AUTO display illuminates. • Outlet air temperature: COOL • Blower fan: HI (AUTO) • Outlet opening: FACE • Inlet opening: AUTO • Compressor: AUTO
		3) Press the temperature control switch to change the setting from LO (maximum cool position) to HI.	• Outlet air temperature: COOL → HOT • Blower fan: AUTO • Outlet opening: FACE → B/L → FOOT • Inlet opening: AUTO • Compressor: AUTO
		4) Press the temperature control switch to set to HI (maximum hot position).	• Outlet air temperature: HOT • Blower fan: HI (AUTO) • Outlet opening: FOOT • Inlet opening: FRESH (AUTO) • Compressor: AUTO
3	Defroster switch	Press the defroster switch.	Defroster switch indicator illuminates. • Outlet air temperature: AUTO • Blower fan: AUTO • Outlet opening: DEF • Inlet opening: FRESH • Compressor: ON
4	FRESH/RECIRC switch	Press the FRESH/RECIRC switch.	Inlet opening switches RECIRC → FRESH or FRESH → RECIRC each time pressing the switch.
5	MODE switch	Press the MODE switch.	Outlet opening switches FACE → B/L → FOOT → F/D each time pressing the switch.
6	FAN switch	Press the FAN (+) switch.	Blower fan switches LO → M1 → M2 → M3 → M4 → HI each time pressing the switch.

2) Inspection of compressor operation

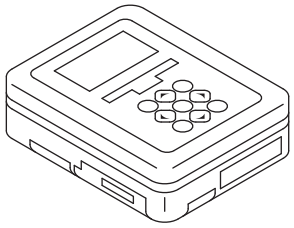
No.	Point to check	Switch operation	Judgment standard
1	Compressor	1) Turn the A/C switch to ON. 2) Set the FAN switch between LO and HI.	Compressor: ON

3) Inspection of illumination control

No.	Point to check	Switch operation	Judgment standard
1	Illumination	Turn the lighting switch to ON.	Illumination comes 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.

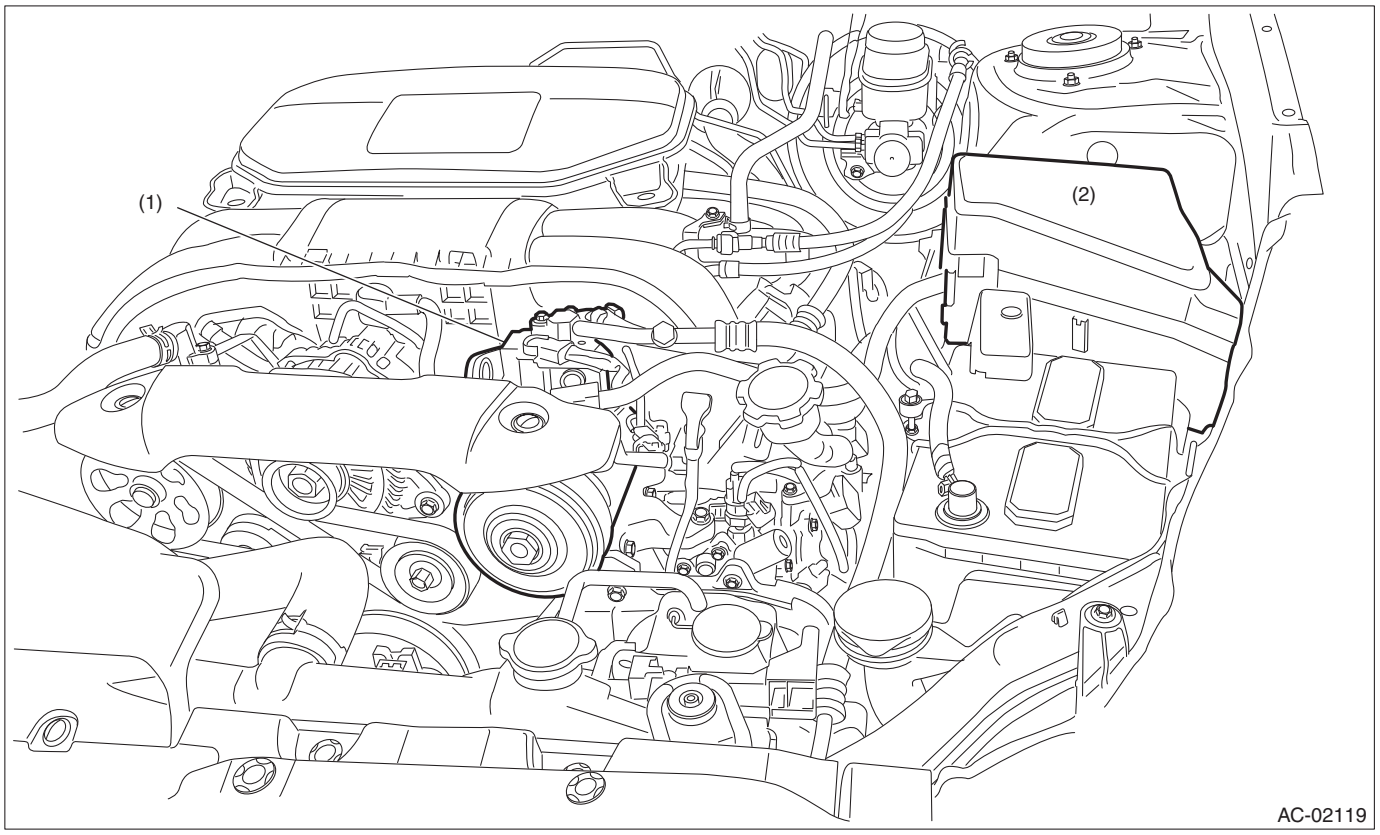
2. GENERAL TOOL

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

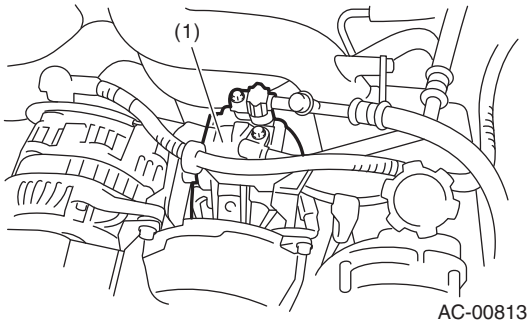
3. Electrical Component Location

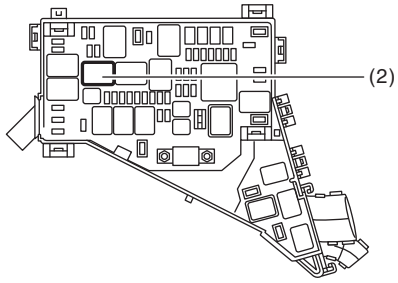
A: LOCATION

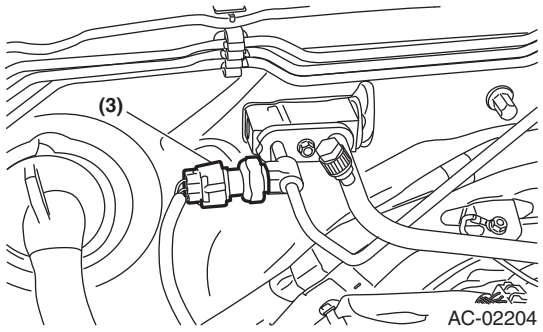
1. ENGINE COMPARTMENT

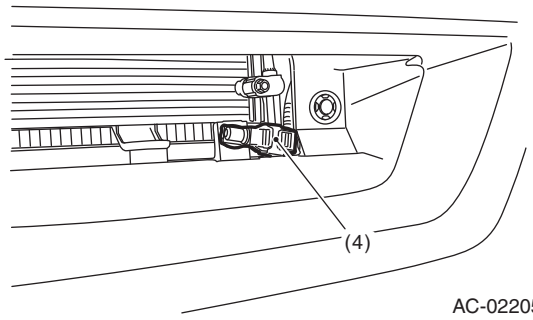


(1) A/C compressor
(2) A/C relay
(3) Pressure sensor
(4) Ambient sensor

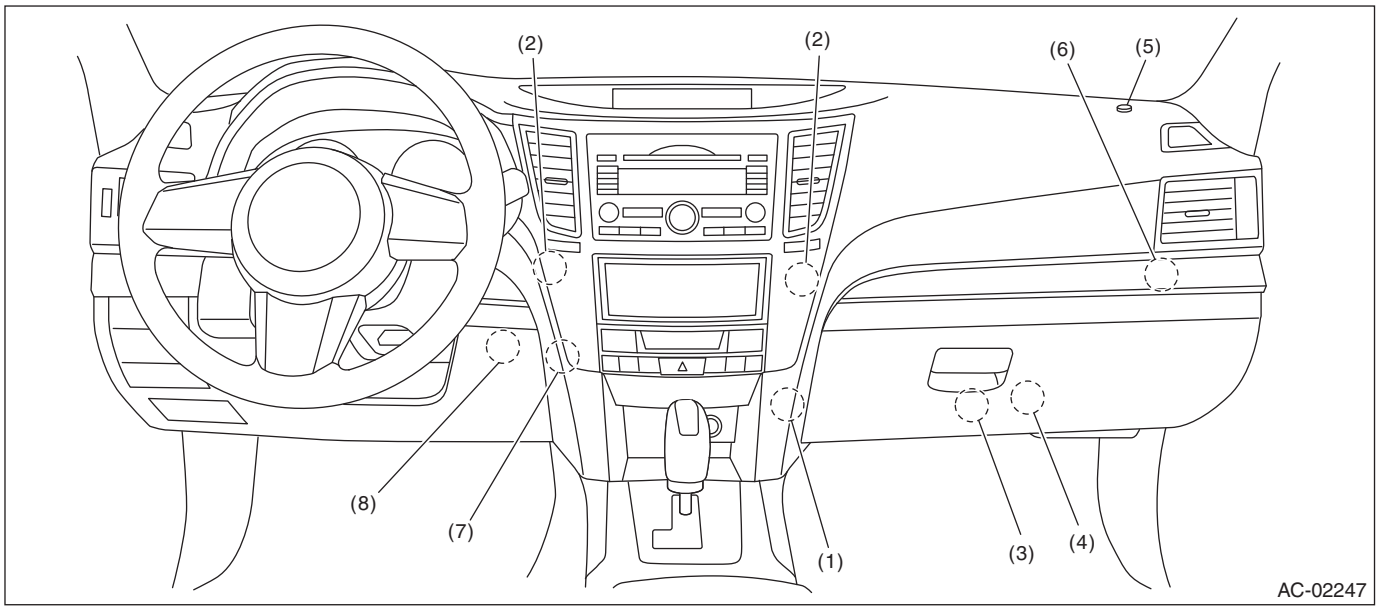




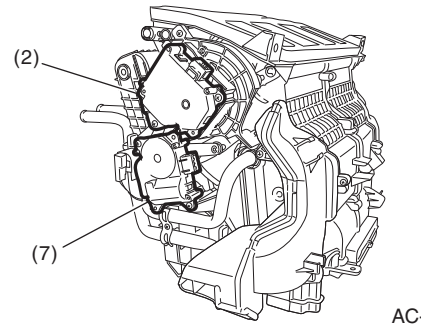


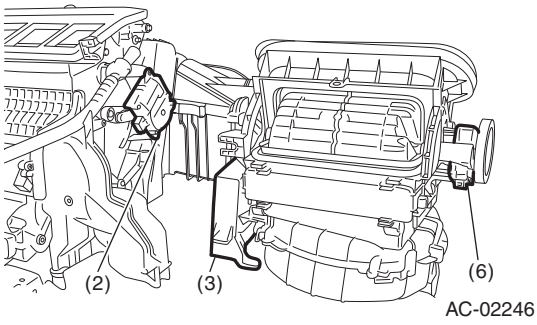


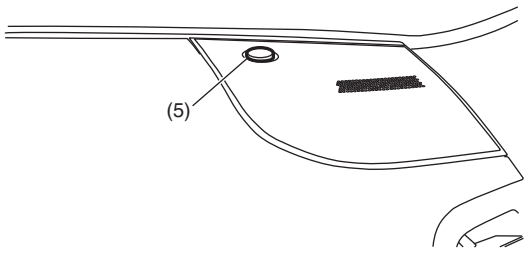
2. PASSENGER COMPARTMENT



(1) Evaporator sensor
(2) Air mix door actuator
(3) A/C control module
(4) Blower motor
(5) Sunload sensor
(6) Intake door actuator
(7) Mode door actuator
(8) In-vehicle sensor

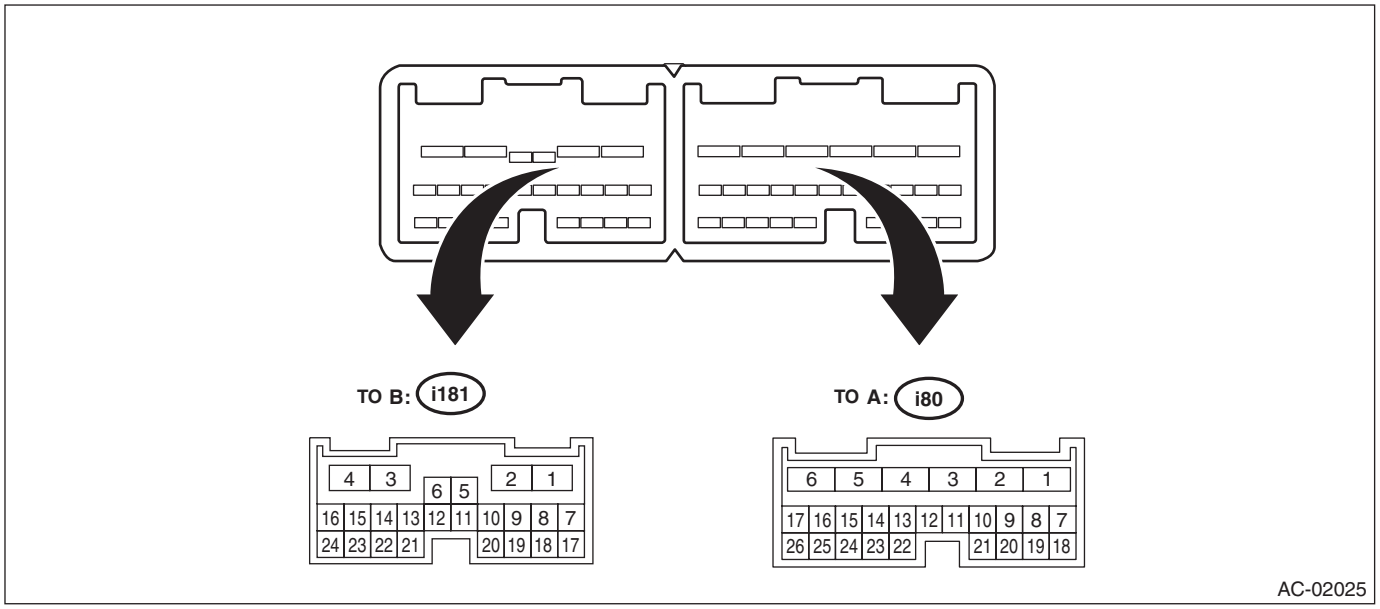






4. Auto A/C Control Module I/O Signal

A: ELECTRICAL SPECIFICATION



Terminal No.	Description	Measuring condition	Standard
A1	Battery power supply	Ignition switch: OFF	Battery voltage
A2	Ignition power supply	Ignition switch: ON	Battery voltage
A3	ACC power supply	Ignition switch: ACC	Battery voltage
A4	CAN communication (Hi)	Digital signal; can not be measured	*1
A5	CAN communication (Lo)	Digital signal; can not be measured	*1
A6	Ground	Always	0 V
A7	A/C control panel communication	Digital signal; can not be measured	*1
A11	In-vehicle sensor	Ignition switch: ON	25°C: Approx. 1.5 V 40°C: Approx. 1.0 V
A13	Flow sensor	Ignition switch: ON	0.3 — 4.7 V
A14	Air mix door (driver's seat) position signal	Ignition switch: ON, Air mix door: maximum cool position	4 V
		Ignition switch: ON, Air mix door: maximum hot position	1 V
A16	Each potentiometer and sensor power supply	Ignition switch: ON	5 V
A18	A/C control panel communication	Digital signal; can not be measured	*1
A19	Pressure switch signal	Ignition switch: ON	Normal: ON Abnormal: OFF
A21	After-evaporator sensor signal	Ignition switch: ON, fluctuates depending on temperature after the evaporator.	1 — 4.5 V
A22	Pressure sensor	Ignition switch: ON	0.5 — 4.9 V
A23	Sunload sensor	Ignition switch: ON (0 V: No sunload)	0 — 4.9 V
A24	Sunload sensor (with automatic light)	Ignition switch: ON (0 V: No sunload)	0 — 4.9 V
A25	Air mix door actuator (passenger's seat) position signal	Ignition switch: ON, Air mix door: maximum cool position	4 V
		Ignition switch: ON, Air mix door: maximum hot position	1 V
A26	Mode door actuator position signal	Ignition switch: ON, Mode door: FACE position	4 V
		Ignition switch: ON, Mode door: DEF position	1 V
B1	Sensor GND	Always	Less than 0.5 V

Terminal No.	Description	Measuring condition	Standard
B2	Variable compressor solenoid valve	Ignition switch: ON, Blower switch: ON, A/C switch: ON	2 — 12 V
B3	Intake door actuator drive signal (FRESH)	Intake door actuator operating on the FRESH side	0.7 V or less
B4	Air mix door actuator (passenger's seat) drive signal (HOT)	Turning towards HOT side: B4 is 12 V, B16 is GND	While operating: 12 V While not operating: 0 V
B16	Air mix door actuator (passenger's seat) drive signal (COOL)	Turning towards COOL side: B16 is 12 V, B4 is GND	
B6	Intake door actuator drive signal (RECIRC)	Intake door actuator operating on the RECIRC side	0.7 V or less
B8	Blower motor voltage feedback	Ignition switch: ON, Blower switch: ON	0.45 — 10 V
B9	Blower motor control signal	Ignition switch: ON, Blower switch: ON	9.05 V
B11	Mode servo drive signal (FACE)	When turning towards FACE side: B11 is 12 V, B13 is GND	While operating: 12 V While not operating: 0 V
B13	Mode servo drive signal (DEF)	When turning towards DEF side: B11 is GND, B13 is 12 V	
B20	Heater main relay drive signal	Ignition switch: ON, Blower switch: ON	0.7 V or less
B21	Air mix door actuator (driver's seat) drive signal (COOL)	Turning towards COOL side: B21 is 12 V, B22 is GND	While operating: 12 V While not operating: 0 V
B22	Air mix door actuator (driver's seat) drive signal (HOT)	Turning towards HOT side: B22 is 12 V, B21 is GND	

*1: Battery voltage cannot be measured because of digital signal.

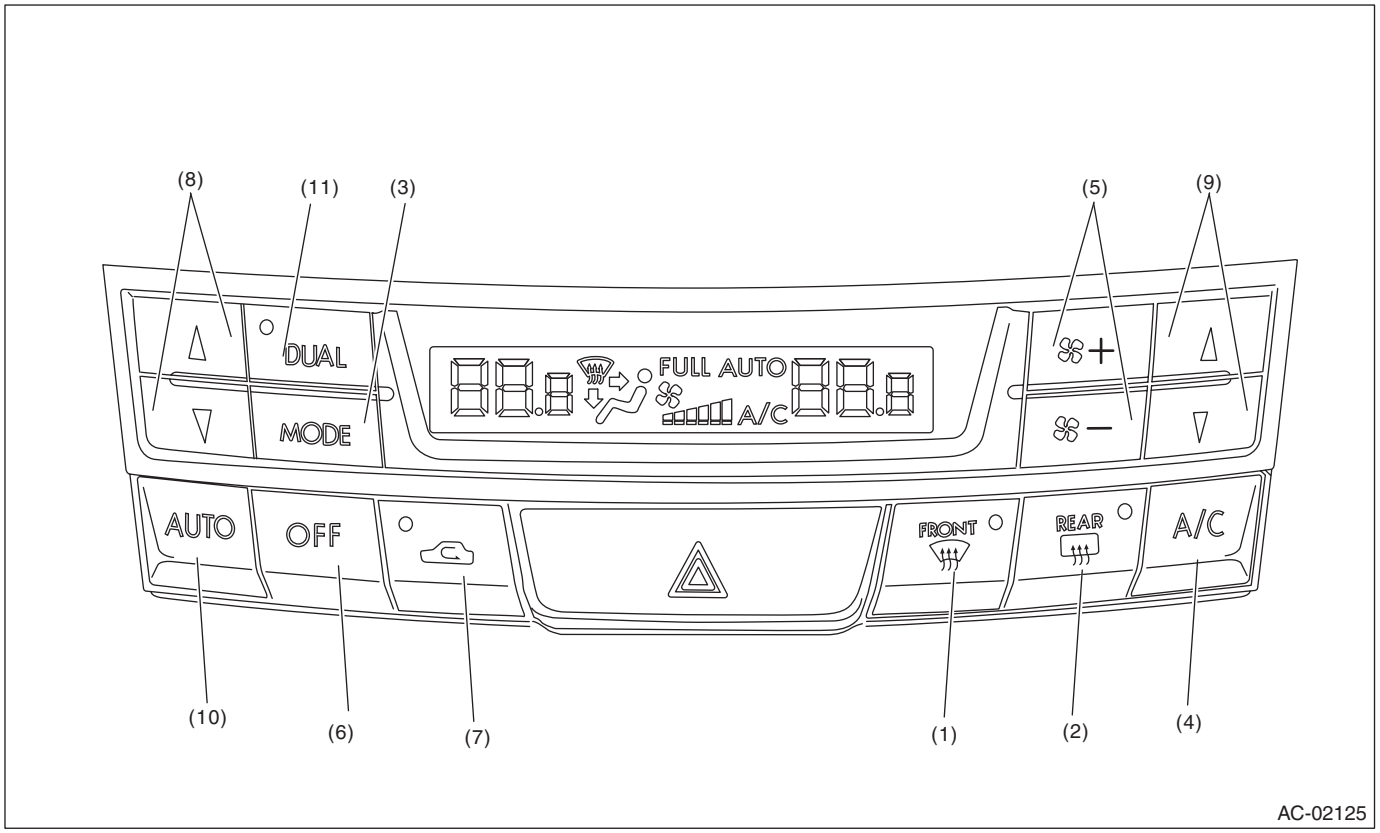
B: WIRING DIAGRAM

1. AIR CONDITIONER A/C MODEL

<Ref. to WI-41, WIRING DIAGRAM, Air Conditioning System.>

5. Diagnostic Chart for Self-Diagnosis

A: OPERATION



(1) Defroster switch
(2) Rear window defogger switch
(3) Air flow control switch
(4) A/C switch
(5) FAN switch
(6) OFF switch
(7) FRESH/RECIRC switch
(8) Temperature control switch (for driver's seat)
(9) Temperature control switch (for passenger's seat)
(10) AUTO switch
(11) DUAL switch

1. A/C CONTROL SYSTEM SELF-DIAGNOSIS

	Step	Check	Yes	No
1	**SET SELF-DIAGNOSIS MODE BY OPERATING A/C CONTROL PANEL.** 1) Turn the ignition switch to OFF. 2) Start the engine while holding down the AUTO switch and FRESH/RECIRC switch. NOTE: Self-diagnosis can also be performed with ignition switch ON, but start the engine because observing the compressor operation is difficult. 3) All the indicators blink four times.	Does the self-diagnosis function operate?	Go to step **2**.	<Ref. to AC(diag)-16, A/C OR SELF-DIAGNOSIS SYSTEMS DO NOT OPERATE, Diagnostics for A/C System Malfunction.>
2	**CHECK EACH SENSOR AND POTENTIOMETER.** 1) After the indicators stop blinking, automatically change to the Inspection Mode of sensor and potentiometer. NOTE: Display items can be changed each time the A/C switch is pressed. (Step Operation) 2) When malfunction occurs in each sensor and potentiometer, codes are displayed on the screen. When no malfunction occurs in each sensor and potentiometer, code “20” is displayed on the screen. 3) Identify defective sensors according to the sensor check table. <Ref. to AC(diag)-15, SENSOR CHECK TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Are other codes except “20” displayed?	Repair the defective sensor.	Go to step **3**.
3	**CHECK EACH ACTUATOR, BLOWER FAN AND COMPRESSOR.** 1) After completing each sensor and potentiometer inspection, change to the Inspection Mode of actuator, blower fan and compressor by pressing the defroster switch. 2) Each mode will change and operate automatically every four seconds. NOTE: Operation mode items can be changed each time the A/C switch is pressed. (Step Operation) 3) Check the operation of actuator, blower fan and compressor in each mode according to the operating mode table. <Ref. to AC(diag)-15, OPERATING MODE TABLE, OPERATION, Diagnostic Chart for Self-Diagnosis.>	Do the actuator, blower fan and compressor operate as described in the operating mode table?	A/C control system is normal. Press the OFF switch and complete the self-diagnosis function.	Repair the defective part in accordance with each diagnostic chart. <Ref. to AC(diag)-16, Diagnostics for A/C System Malfunction.>

2. SENSOR CHECK TABLE

NOTE:
When the sunload sensor check is performed indoors or in the shade, it could be diagnosed as having an open circuit. Always check the sunload sensor with the sun shining on it.

Display screen (Malfunction at present)	SENSOR	Trouble contents
21/AUTO blinking	In-vehicle sensor	Open
–21/AUTO blinking		Short
22/AUTO blinking	Ambient sensor	Sensor trouble or communication failure
23/AUTO blinking	Evaporator sensor	Open
–23/AUTO blinking		Short
24/AUTO blinking	Engine coolant temperature sensor	Sensor trouble or communication failure
25 blinking	Sunload sensor	Open *1
–25/AUTO blinking		Short
26/AUTO blinking	Air mix door actuator — potentiometer (driver's)	COOL
–26/AUTO blinking	Air mix door actuator — potentiometer (passenger's)	COOL
27/AUTO blinking	Air mix door actuator — potentiometer (driver's)	HOT
–27/AUTO blinking	Air mix door actuator — potentiometer (passenger's)	HOT
28/AUTO blinking	Mode door actuator — potensiometer	FACE
29/AUTO blinking		DEF
42/AUTO blinking	Pressure sensor	Open *1
–42/AUTO blinking		Short circuit *1
43/AUTO blinking	Flow sensor	Open *1
–43/AUTO blinking		Short circuit *1
44/AUTO blinking		Faulty
45/AUTO blinking	Sunload sensor	Open
–45/AUTO blinking		Short
46/AUTO blinking	Variable valve	Open or short circuit *1
47/AUTO blinking	Air mix door actuator (driver's)	Lock
48/AUTO blinking	Air mix door actuator (passenger's)	Lock
49/AUTO blinking	Mode door actuator	Lock
53/AUTO blinking	Control panel communication	Faulty
54/AUTO blinking	CAN communication	Bus off
55/AUTO blinking	CAN communication	Communication error
20 blinking	When all conditions are normal	

*1: Displays current malfunction only.

3. OPERATING MODE TABLE

Display screen	Blower fan	Mode door	FRESH/RECIRC door	A/C compressor	Air mix door
31	LO	FACE	FRESH	OFF	Cold air
32	LO	FACE	RECIRC	ON	Cold air
33	M1	FACE	RECIRC	ON	Cold air
34	M1	B/L	FRESH	ON	Middle temperature air
35	M1	FOOT	FRESH	ON	Middle temperature air
36	M3	FOOT	FRESH	ON	Hot air
37	M3	F/D	FRESH	ON	Hot air
38	HI	DEF	FRESH	ON	Hot air

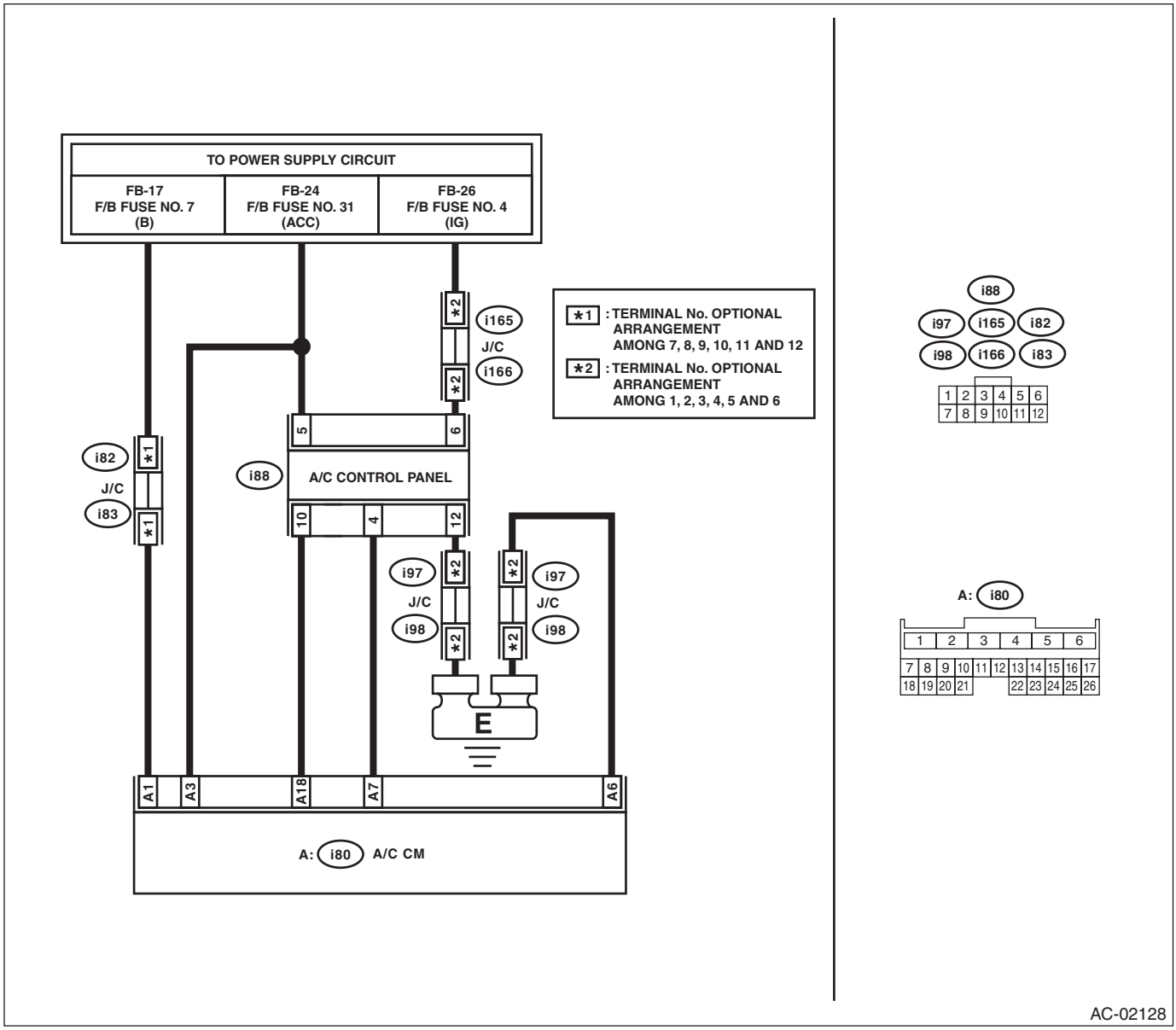
6. Diagnostics for A/C System Malfunction

A: A/C OR SELF-DIAGNOSIS SYSTEMS DO NOT OPERATE

TROUBLE SYMPTOM:

- Set temperature is not indicated on the display, switch LEDs are faulty and switches do not operate.
- Self-diagnosis system does not operate.

WIRING DIAGRAM:



AC-02128

	Step	Check	Yes	No
1	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse No. 7 from main fuse box. 3) Check the condition of fuse.	Is the fuse blown out?	Replace the fuse.	Go to step **2**.
2	**CHECK FUSE.** 1) Turn the ignition switch to OFF. 2) Remove the fuse No. 12 and No. 31 from fuse & relay box. 3) Check the condition of fuse.	Is the fuse blown out?	Replace the fuse.	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK A/C CONTROL PANEL POWER CIRCUIT.** 1) Remove the A/C control panel. 2) Disconnect the A/C control panel harness connector. 3) Turn the ignition switch to ACC, and measure the voltage between A/C control panel harness connector terminal and chassis ground. ***Connector & terminal*** ***(i88) No. 5 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **4**.	Check for open or short circuit in the harness between A/C control panel and fuse.
4	**CHECK A/C CONTROL PANEL POWER CIRCUIT.** Measure the voltage between A/C control panel harness connector terminal and chassis ground after turning the ignition switch to ON. ***Connector & terminal*** ***(i88) No. 6 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **5**.	Check for open or short circuit in the harness between A/C control panel and fuse.
5	**CHECK A/C CONTROL PANEL GROUND POWER CIRCUIT.** Measure the resistance of harness between A/C control panel and chassis ground after turning the ignition switch to OFF. ***Connector & terminal*** ***(i88) No. 12 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **6**.	Repair the harness for ground line.
6	**CHECK A/C CONTROL MODULE POWER CIRCUIT.** Measure the voltage between A/C control module connector terminal and chassis ground after turning the ignition switch to OFF. ***Connector & terminal*** ***(i80) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **7**.	Check for open or short circuit in the harness between A/C control module and fuse.
7	**CHECK A/C CONTROL MODULE POWER CIRCUIT.** Measure the voltage between A/C control module connector terminal and chassis ground after turning the ignition switch to ON. ***Connector & terminal*** ***(i80) No. 3 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **8**.	Check for open or short circuit in the harness between A/C control module and fuse.
8	**CHECK A/C CONTROL MODULE GROUND CIRCUIT.** Measure the resistance of harness between A/C control module and chassis ground. ***Connector & terminal*** ***(i80) No. 6 — Chassis ground:***	Is the resistance less than 5 Ω?	Go to step **9**.	Repair the harness for ground line.
9	**CHECK COMMUNICATION CIRCUIT.** Measure the resistance of harness between A/C control panel and A/C control module. ***Connector & terminal*** ***(i88) No. 10 — (i80) No. 10:*** ***(i88) No. 4 — (i80) No. 7:***	Is the resistance less than 1 Ω?	Go to step **10**.	Repair the harness.
10	**CHECK COMMUNICATION CIRCUIT HARNESS.** Measure the resistance between communication circuit harness and chassis ground. ***Connector & terminal*** ***(i80) No. 18 — Chassis ground:*** ***(i80) No. 7 — Chassis ground:***	Is the resistance 1 MΩ or more?	Repair or replace the short circuit of the harness.	Go to step **11**.

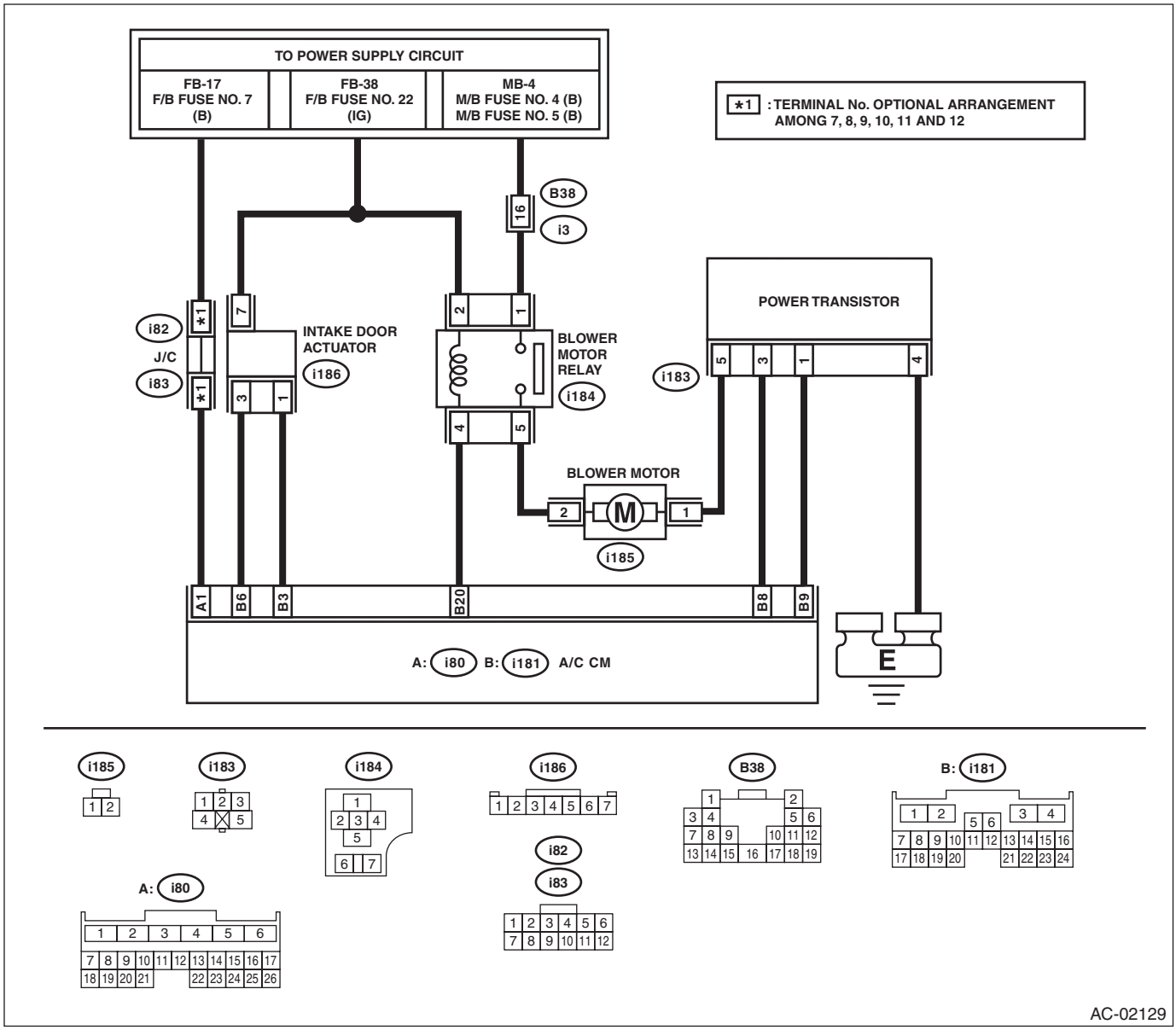
Step		Check	Yes	No
11	**CHECK FOR POOR CONTACT.** Check poor contact of A/C control module connector.	Is there poor contact of connector?	Repair the connector.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

B: BLOWER MOTOR DOES NOT ROTATE

TROUBLE SYMPTOM:

- Blower motor does not rotate.
- Blower motor does not rotate in “HI”.

WIRING DIAGRAM:



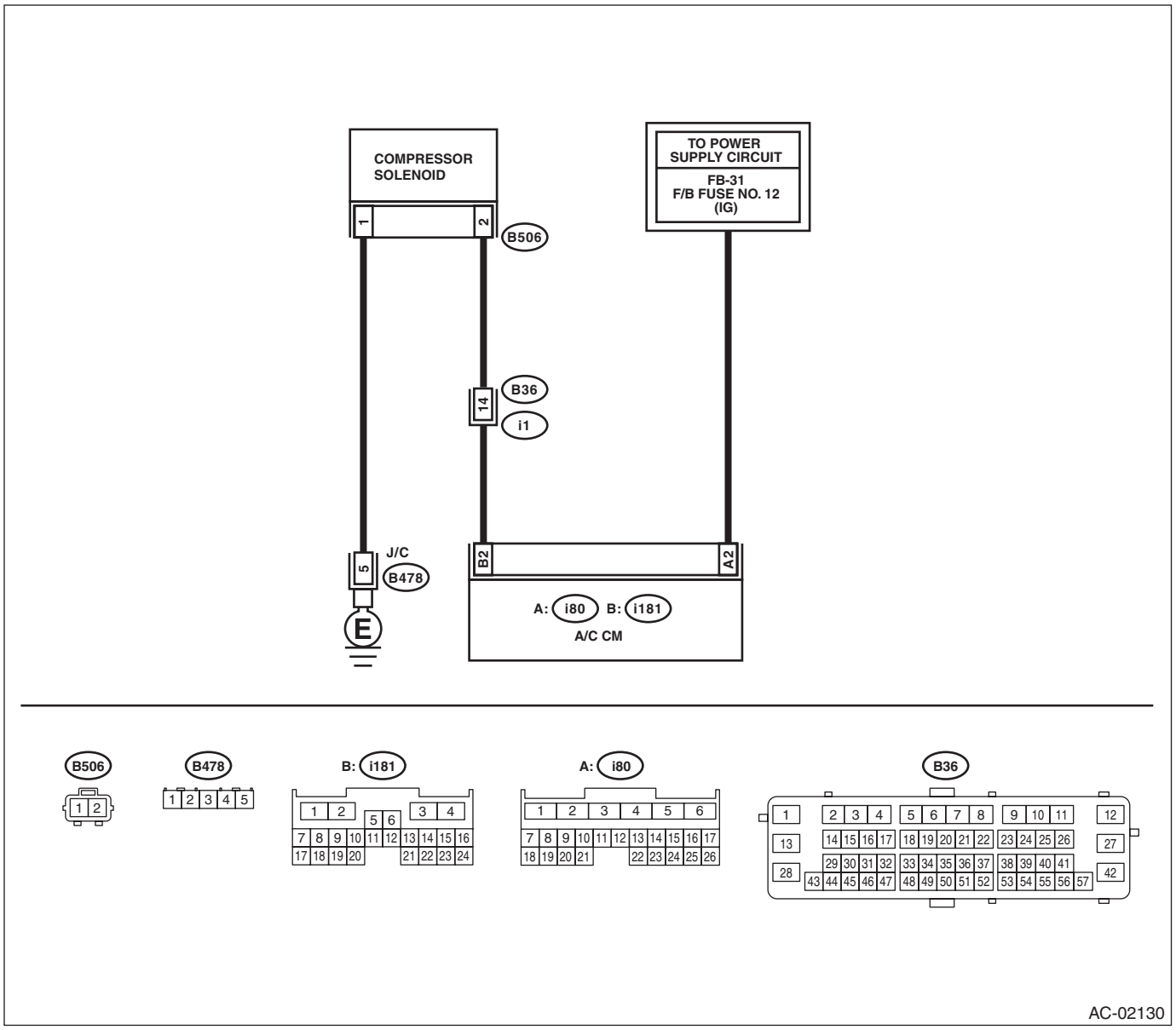
AC-02129

Step		Check	Yes	No
1	**CHECK FUSE.** 1) Remove fuse No. 22 and 7 from fuse & relay box, and fuse No. 4 and 5 from the main fuse box. 2) Check the condition of fuse.	Is any fuse blown out?	Replace the fuse.	Go to step **2**.
2	**CHECK POWER SUPPLY FOR BLOWER MOTOR.** 1) Turn the ignition switch to ON. 2) Turn the blower switch to ON. 3) Measure the voltage between blower motor and chassis ground. ***Connector & terminal*** ***(i185) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Repair the open circuit of blower motor power supply line harness.

	Step	Check	Yes	No
3	**CHECK BLOWER MOTOR RELAY.** 1) Turn the ignition switch to OFF. 2) Remove the blower motor relay. 3) Connect battery terminals to the blower motor relay. ***Terminals*** ***No. 2 — No. 4:*** 4) Measure the resistance between terminals. ***Terminals*** ***No. 1 — No. 5:***	Is the resistance less than 1 Ω?	Go to step **4**.	Replace the blower motor relay.
4	**CHECK BLOWER MOTOR.** 1) Disconnect the connector from blower motor. 2) Connect the battery positive (+) terminal to terminal No. 2 of blower motor connector, and negative (–) terminal to terminal No. 1. 3) Make sure the blower motor runs.	Does the blower motor run?	Go to step **5**.	Replace the blower motor.
5	**CHECK FOR POOR CONTACT.** Check poor contact of A/C control module connector.	Is there poor contact of connector?	Repair the connector.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

C: COMPARTMENT TEMPERATURE DOES NOT CHANGE, OR A/C SYSTEM DOES NOT RESPOND PROMPTLY

WIRING DIAGRAM:



AC-02130

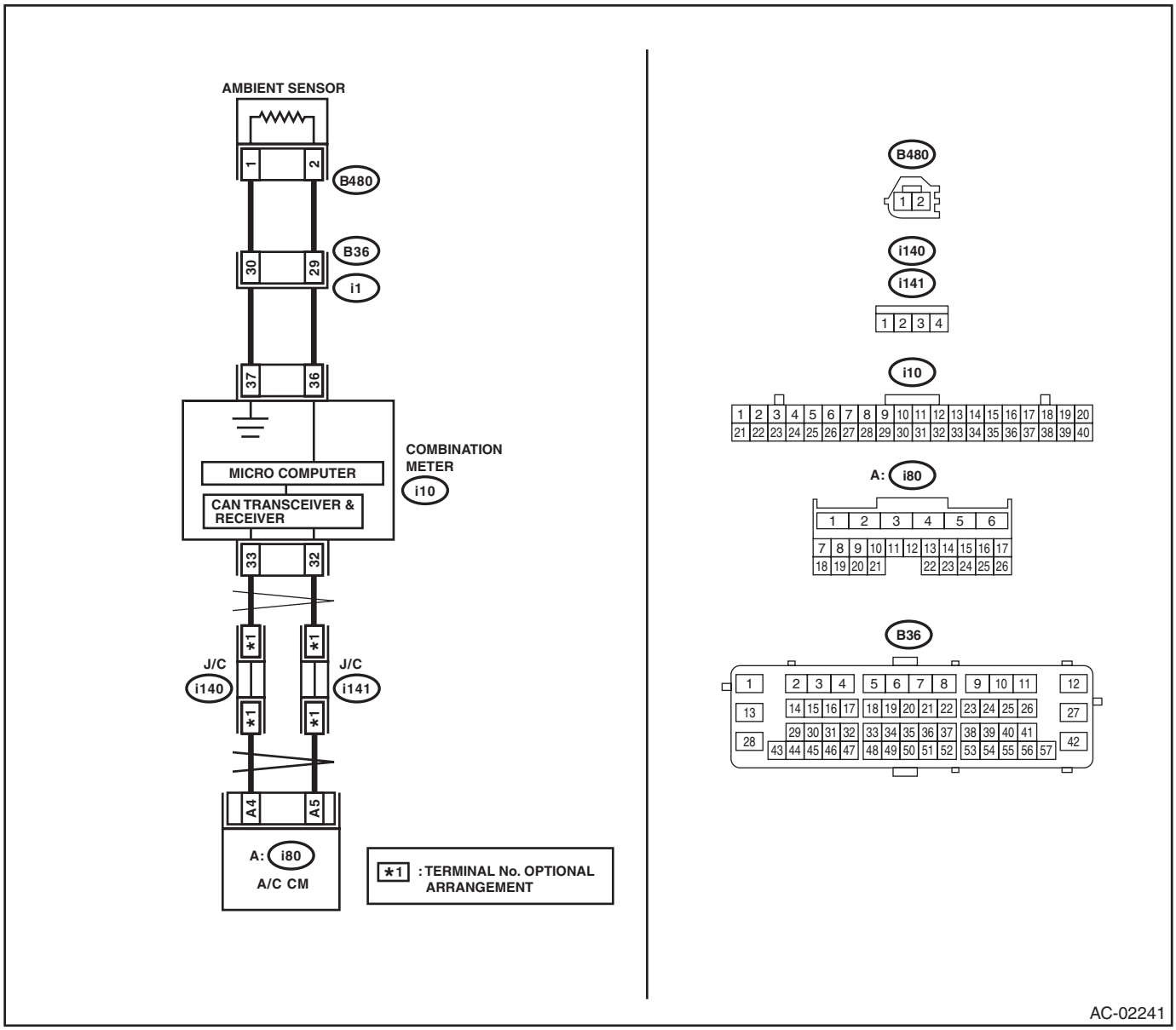
Step		Check	Yes	No
1	**CHECK DTC.** 1) Turn the ignition switch to ON. 2) Read the DTC of the A/C system using the Subaru Select Monitor.	Is DTC detected?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK AMOUNT OF REFRIGERANT.** Check the refrigerant pressure. <Ref. to AC-17, PROCEDURE, Refrigerant Pressure with Manifold Gauge Set.>	Is the refrigerant pressure within the standard?	Go to step **3**.	Check and repair the refrigerant leakage.

	Step	Check	Yes	No
3	**CHECK POWER SUPPLY OF CONTROL MODULE.** 1) Disconnect the A/C CM connector. 2) Turn the ignition switch to ON. 3) Using a tester, measure the voltage between the connector terminal and chassis ground. ***Connector & terminal*** ***(i80) No. 2 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **4**.	Repair the defective power supply circuit.
4	**CHECK CONTROL MODULE.** 1) Disconnect the compressor solenoid connector. 2) Turn the ignition switch to ON. 3) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i81) No. 2 — Chassis ground:***	Is the voltage 10 V or more?	Go to step **5**.	Repair the defective harness.
5	**CHECK HARNESS.** 1) Disconnect the A/C CM connector. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B506) No. 2 — (i181) No. 2:***	Is there continuity?	Go to step **6**.	Repair or replace the open circuit.
6	**CHECK GROUND.** Using a tester, check the continuity between the connector terminal and chassis ground. ***Connector & terminal*** ***(B506) No. 1 — Chassis ground:***	Is there continuity?	Check the compressor solenoid.	Repair or replace the open circuit.

7. Diagnostic Procedure for Sensors

A: AMBIENT SENSOR

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK AMBIENT SENSOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from ambient sensor. 3) Measure the resistance between terminals of ambient sensor. ***Terminals*** ***No. 1 — No. 2:***	Is the resistance approximately 2.2 kΩ at 25°C (77°F)?	Go to step **2**.	Replace the ambient sensor. <Ref. to AC-68, REMOVAL, Ambient Sensor (Auto A/C Model).>

	Step	Check	Yes	No
2	**CHECK INPUT SIGNAL FOR AMBIENT SENSOR.** 1) Turn the ignition to ON. 2) Measure the voltage between connector (F138) terminals. ***Connector & terminal*** ***(F138) No. 1 (+) — No. 2 (–):***	Is the voltage approx. 5 V?	Go to step **6**.	Go to step **3**.
3	**CHECK COMBINATION METER OUTPUT SIGNAL.** 1) Turn the ignition switch to OFF. 2) Pull out the combination meter. 3) Disconnect the connector from ambient sensor. 4) Turn the ignition switch to ON. 5) Measure the voltage between the combination meter connector terminals. ***Connector & terminal*** ***(i10) No. 36 (+) — No. 37 (–):***	Is the voltage approx. 5 V?	Go to step **4**.	Go to step **6**.
4	**CHECK HARNESS CONNECTOR BETWEEN COMBINATION METER AND AMBIENT SENSOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector from the combination meter. 3) Measure the resistance of harness between combination meter and ambient sensor. ***Connector & terminal*** ***(F138) No. 2 — (i10) No. 36:***	Is the resistance less than 10 Ω?	Go to step **5**.	Repair the open circuit of the harness between the combination meter and ambient sensor.
5	**CHECK HARNESS CONNECTOR BETWEEN COMBINATION METER AND AMBIENT SENSOR.** Measure the resistance of harness between combination meter and ambient sensor. ***Connector & terminal*** ***(F138) No. 2 — (i10) No. 36:*** ***(F138) No. 1 — (i10) No. 37:***	Is the resistance less than 1 Ω?	Go to step **6**.	Repair the open circuit of the harness between the combination meter and ambient sensor.
6	**CHECK DTC.** 1) Connect the disconnected connectors. 2) Read the DTC of the CAN system using the Subaru Select Monitor.	Is DTC for CAN system displayed?	Perform the diagnosis according to DTC. <Ref. to LAN(diag)-31, List of Diagnostic Trouble Code (DTC).>	Go to step **7**.
7	**CHECK CAN COMMUNICATION CIRCUIT.** Check the CAN communication circuit. <Ref. to LAN(diag)-12, CAN Communication Circuit Check.>	Is the CAN communication circuit normal?	Go to step **8**.	Repair the CAN communication circuit. <Ref. to LAN(diag)-4, LAN SYSTEM, CAUTION, General Description.>
8	**CHECK FOR POOR CONTACT.** Check poor contact of A/C CM connector.	Is there poor contact of connector?	Repair the connector.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

8. Subaru Select Monitor

A: OPERATION

For details of basic operations, refer to “PC application help for Subaru Select Monitor”.

9. Read Diagnostic Trouble Code (DTC)

A: OPERATION

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

10.Clear Memory Mode

A: OPERATION

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

11.Read Current Data

A: OPERATION

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

B: LIST

Display item	Unit of measure	Description	Reference
Trouble Code	—	DTC recorded in A/C CM	—
Engine Speed	rpm	Data value received by CAN	—
Heater Control Panel Setting Value (Driver’s)	LO: 18°C (64°F) HI: 32°C (90°F)	Control panel display value	—
Heater Control Panel Setting Value (Passenger’s)	LO: 18°C (64°F) HI: 32°C (90°F)	Control panel display value	—
Blower outlet Door Request Temperature	°C (°F)	A/C CM internal setting value	—
Blower outlet request temperature (Driver’s)	°C (°F)	A/C CM internal setting value	—
Blower outlet request temperature (Passenger’s)	°C (°F)	A/C CM internal setting value	—
Blower Fan Operating Condition	MANU/AUTO	A/C CM input value	—
A/C Operating Condition	MANU/AUTO	A/C CM input value	—
Fresh/Recircle Air Operating Condition	MANU/AUTO	A/C CM input value	—
Mode Operating Condition	MANU/AUTO	A/C CM input value	—
Rear Defogger	ON/OFF	A/C CM input value	—
In-vehicle Sensor Temperature	°C (°F)	A/C CM input value	—
Evaporator Temp.	°C (°F)	A/C CM input value	—
Quantity of Sunload	W/m^2	A/C CM input value	—
Refrigerant Pressure	MPa	A/C CM input value	—
Refrigerant Flow	kg/h	A/C CM input value	—
Airmix Door Actuator Position (Driver’s)	%	A/C CM input value	—
Airmix Door Actuator Position (Passenger’s)	%	A/C CM input value	—
Fresh/Recircle Air Door Actuator Position	%	A/C CM input value	—
Mode Door Actuator Position	%	A/C CM input value	—
Heater Water Temperature	°C (°F)	Data value received by CAN	—
Ambient Air Temperature	°C (°F)	Data value received by CAN	—
Vehicle Speed	km/h	Data value received by CAN	—
Accel. Opening Angle	%	Data value received by CAN	—
Airmix Actuator Position Target (Driver’s)	%	A/C CM input value	—
Airmix Actuator Position Target (Passenger’s)	%	A/C CM input value	—
Fresh/Recircle Air Door Actuator Position Target	%	A/C CM input value	—
Mode Door Actuator Position Target	%	A/C CM input value	—
Blower Fan Level	Level	A/C CM output value	—
Variable Flow Change Solenoid Duty	%	A/C CM output value	—
Evaporator Temperature Target	°C (°F)	A/C CM input value	—
Variable Load Compressor Torque Value	Nm	A/C CM input value	—
Request idle engine speed	rpm	A/C CM output value	—

Display item	Unit of measure	Description	Reference
Request engine speed	0: No request 1: Cooling H 2: Heating H 3: Cooling L 4: Heating L	A/C CM output value	—
Discharge pressure	MPa	A/C CM input value	—
Intake pressure	MPa	A/C CM input value	—
Cooler request distinction	No request/Request	A/C CM output value	—
Heater request distinction	No request/Request	A/C CM output value	—
Break-in variable compressor drive, finish status	Not completed/Completed	A/C CM input value	—

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

12.Diagnostic Procedure for Subaru Select Monitor Communication

A: COMMUNICATION FOR INITIALIZING IMPOSSIBLE

DIAGNOSIS:
Defective CAN communication circuit
TROUBLE SYMPTOM:
- LAN system is abnormal.
- Communication failure between Subaru Select Monitor and A/C CM

	Step	Check	Yes	No
1	**CHECK POWER SUPPLY CIRCUIT.** Connect SDI (Subaru Diagnosis Interface) to the data link connector.	Is SDI powered on?	Go to step **4**.	Go to step **2**.
2	**CHECK POWER SUPPLY CIRCUIT..** Measure the voltage between data link connector and chassis ground. ***Connector & terminal*** ***(B40) No. 16 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **3**.	Repair the power supply circuit. NOTE: In this case, repair the following items: • Open or short circuit in the harness between the battery and data link connector • Blown out of fuse (M/B No. 13)
3	**CHECK HARNESS BETWEEN DATA LINK CONNECTOR AND CHASSIS GROUND.** 1) Turn the ignition switch to OFF. 2) Measure the resistance of harness between data link connector and chassis ground. ***Connector & terminal*** ***(B40) No. 4 — Chassis ground:*** ***(B40) No. 5 — Chassis ground:***	Is the resistance less than 5 Ω?	Repair the poor contact of data link connector.	Repair the harness and connector.
4	**CHECK SUBARU SELECT MONITOR.** 1) Connect the Subaru Select Monitor to a normal vehicle. 2) Start the engine and perform communication between the Subaru Select Monitor and vehicle.	Is communication possible?	Go to step **5**.	Use another Subaru Select Monitor because the CAN communication circuit of the Subaru Select Monitor is faulty.
5	**CHECK CAN COMMUNICATION CIRCUIT.** Check the CAN communication circuit. <Ref. to LAN(diag)-10, OPERATION, Read Diagnostic Trouble Code (DTC).>	Is the CAN communication circuit normal?	Check the connection between the data link connector and Subaru Select Monitor.	Repair the CAN communication circuit.

13.List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Contents	Content of diagnosis	Index
B1601	In-Vehicle Sensor Short	In-vehicle air temperature sensor circuit is shorted.	<Ref. to AC(diag)-33, DTC B1601 IN-VEHICLE SENSOR SHORT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1602	In-Vehicle Sensor Open	In-vehicle air temperature sensor circuit is open.	<Ref. to AC(diag)-34, DTC B1602 IN-VEHICLE SENSOR OPEN, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1603	Evaporator Sensor Circuit Short	Evaporator sensor circuit is shorted.	<Ref. to AC(diag)-35, DTC B1603 EVAPORATOR SENSOR SHORT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1604	Evaporator Sensor Circuit Open	Evaporator sensor circuit is open.	<Ref. to AC(diag)-36, DTC B1604 EVAPORATOR SENSOR OPEN, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1605	Refrigerant Pressure Sensor Circuit Open	Pressure sensor circuit is open.	Displays current malfunction only. <Ref. to AC(diag)-37, DTC B1605 REFRIGERANT FLOW SENSOR CIRCUIT OPEN, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1606	Refrigerant Pressure Sensor Circuit Short	Pressure sensor circuit is shorted.	Displays current malfunction only. <Ref. to AC(diag)-38, DTC B1606 REFRIGERANT FLOW SENSOR CIRCUIT SHORT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1607	Sunload Sensor Short	• Sunload sensor circuit is shorted. • No sunload	<Ref. to AC(diag)-39, DTC B1607 SUNLOAD SENSOR SHORT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1608	Sunload Sensor Open	Sunload sensor circuit is open.	<Ref. to AC(diag)-40, DTC B1608 SUNLOAD SENSOR OPEN, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1610	Airmix Door Actuator Potentiometer Circuit Open (Driver's)	Airmix door actuator — potentiometer circuit is open.	<Ref. to AC(diag)-41, DTC B1610 AIRMIX DOOR ACTUATOR POTENTIOMETER CIRCUIT OPEN (DRIVER'S), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1611	Airmix Door Actuator Potentiometer Circuit Short (Driver's)	Airmix door actuator — potentiometer circuit is shorted.	<Ref. to AC(diag)-43, DTC B1611 AIRMIX DOOR ACTUATOR POTENTIOMETER CIRCUIT SHORT (DRIVER'S), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1612	Airmix Door Actuator Lock (Driver's)	Mode door actuator is locked.	<Ref. to AC(diag)-45, DTC B1612 AIRMIX DOOR ACTUATOR LOCK (DRIVER'S), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1613	Airmix Door Actuator Potentiometer Circuit Open (Passenger's)	Airmix door actuator — potentiometer circuit is open.	<Ref. to AC(diag)-47, DTC B1613 AIRMIX DOOR ACTUATOR POTENTIOMETER CIRCUIT OPEN (PASSENGER'S), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1614	Airmix Door Actuator Potentiometer Circuit Short (Passenger's)	Airmix door actuator — potentiometer circuit is shorted.	<Ref. to AC(diag)-49, DTC B1614 AIRMIX DOOR ACTUATOR POTENTIOMETER CIRCUIT SHORT (PASSENGER'S), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1615	Airmix Door Actuator Lock (Passenger's)	Mode door actuator is locked.	<Ref. to AC(diag)-51, DTC B1615 AIRMIX DOOR ACTUATOR LOCK (PASSENGER'S), Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

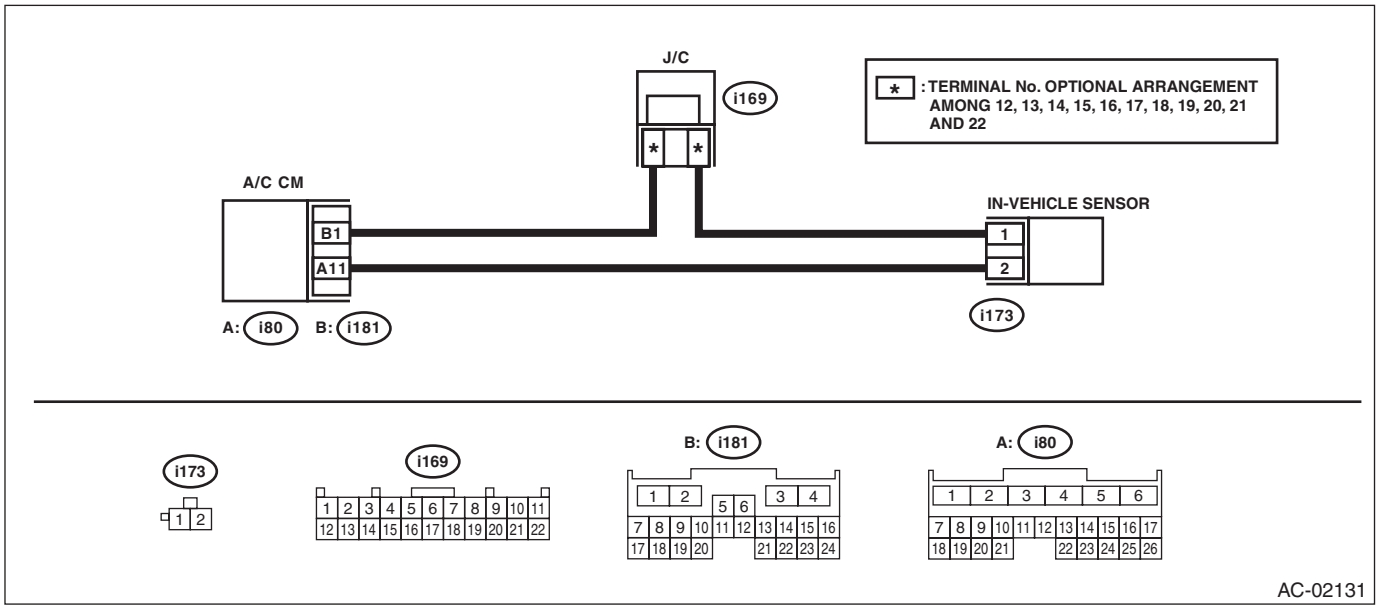
DTC	Contents	Content of diagnosis	Index
B1620	Mode Door Actuator Potentiometer Circuit Open	Mode door actuator — potentiometer circuit is open.	<Ref. to AC(diag)-53, DTC B1620 MODE DOOR ACTUATOR POTENTIOMETER CIRCUIT OPEN, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1621	Mode Door Actuator Potentiometer Circuit Short	Mode door actuator — potentiometer circuit is shorted.	<Ref. to AC(diag)-55, DTC B1621 MODE DOOR ACTUATOR POTENTIOMETER CIRCUIT SHORT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1622	Mode Door Actuator Lock	Mode door actuator is locked.	<Ref. to AC(diag)-57, DTC B1622 MODE DOOR ACTUATOR LOCK, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0001	CAN Communication Bus Off	CAN communication bus off	Displays current malfunction only. <Ref. to AC(diag)-60, DTC U0001 CAN COMMUNICATION BUS OFF, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0002	CAN Communication Error	CAN communication error	Displays current malfunction only. <Ref. to AC(diag)-60, DTC U0002 CAN COMMUNICATION ERROR, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
U0028	Heater Control Panel Communication Error	Communication with heater control panel is faulty.	Displays current malfunction only. <Ref. to AC(diag)-59, DTC U0028 HEATER CONTROL PANEL COMMUNICATION ERROR, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1641	Refrigerant Flow Sensor Circuit Short	Refrigerant flow sensor circuit is shorted.	Displays current malfunction only. <Ref. to AC(diag)-61, DTC B1641 REFRIGERANT FLOW SENSOR CIRCUIT SHORT, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1642	Refrigerant Flow Sensor Circuit Open	Refrigerant flow sensor circuit is open.	Displays current malfunction only. <Ref. to AC(diag)-63, DTC B1642 REFRIGERANT FLOW SENSOR CIRCUIT OPEN, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1643	Variable Flow Change Solenoid Duty Circuit abnormal	Variable flow change solenoid duty circuit is open or shorted.	Displays current malfunction only. <Ref. to AC(diag)-65, DTC B1643 VARIABLE FLOW CHANGE SOLENOID DUTY CIRCUIT ABNORMAL, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
B1644	Refrigerant not sealed drive error	Compressor is rotated before filling refrigerant.	<Ref. to AC(diag)-67, DTC B1644 REFRIGERANT NOT SEALED DRIVE ERROR, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

14.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC B1601 IN-VEHICLE SENSOR SHORT

DTC DETECTING CONDITION:
In-vehicle sensor circuit is shorted.
TROUBLE SYMPTOM:
- Auto A/C does not operate. (Manual operation is possible)
- In-vehicle temperature is falsely recognized as high, and the compartment temperature is adjusted.

WIRING DIAGRAM:



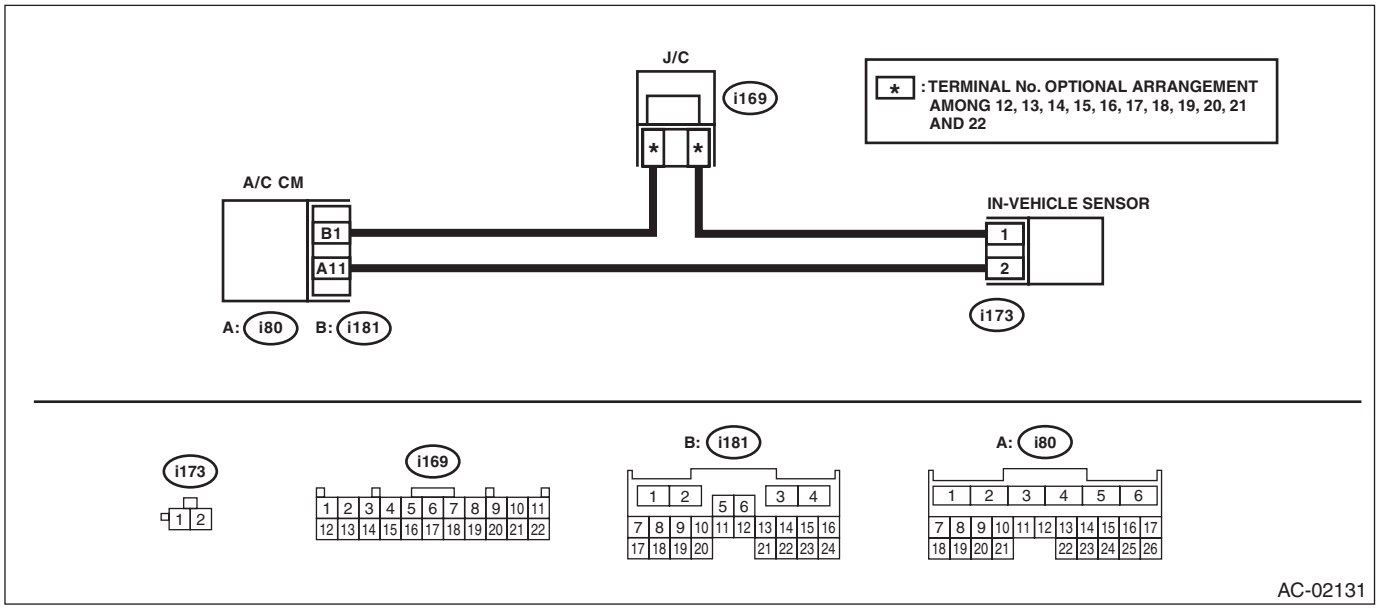
	Step	Check	Yes	No
1	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, check "In-vehicle Sensor Temperature" of the current data from the A/C diagnosis.	Is the current data exceeding 25°C (77°F)?	Go to step **2**.	Check the connection of the in-vehicle sensor circuit.
2	**CHECK IN-VEHICLE SENSOR.** 1) Disconnect the in-vehicle sensor. <Ref. to AC-71, REMOVAL, In-Vehicle Sensor (Auto A/C Model).> 2) Using the Subaru Select Monitor, check "In-vehicle Sensor Temperature" of the current data from the A/C diagnosis.	Is the current data exceeding 25°C (77°F)?	Go to step **3**.	Replace the in-vehicle sensor. <Ref. to AC-71, REMOVAL, In-Vehicle Sensor (Auto A/C Model).>
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal (i173) No. 1 — No. 2:***	Is the voltage 4.5 — 5.0 V?	Check the connection of the in-vehicle sensor circuit.	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal (i173) No. 1 — No. 2:***	Is there continuity?	Repair or replace the short circuit of the harness.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

B: DTC B1602 IN-VEHICLE SENSOR OPEN

DTC DETECTING CONDITION:
In-vehicle sensor circuit is open.

TROUBLE SYMPTOM:
In-vehicle air temperature is falsely recognized as 25°C (77°F), and the compartment temperature is adjusted.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, check "In-vehicle Sensor Temperature" of the current data from the A/C diagnosis.	Does the current data display 25°C (77°F)?	Go to step **2**.	Check the connection of the in-vehicle sensor circuit.
2	**CHECK IN-VEHICLE SENSOR.** 1) Disconnect the in-vehicle sensor. 2) Short the i173 connector. 3) Using the Subaru Select Monitor, check "In-vehicle Sensor Temperature" of the current data from the A/C diagnosis.	Does the current data display 25°C (77°F)?	Go to step **3**.	Replace the in-vehicle sensor. <Ref. to AC-71, REMOVAL, In-Vehicle Sensor (Auto A/C Model).>
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i173) No. 1 — No. 2:***	Is the voltage 4.5 — 5.0 V?	Go to step **4**.	Repair or replace the open circuit of harness.
4	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i173) No. 1 — (i81) No. 1:*** ***(i173) No. 2 — (i80) No. 11:***	Is there continuity?	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>	Repair or replace the open circuit of harness.

C: DTC B1603 EVAPORATOR SENSOR SHORT

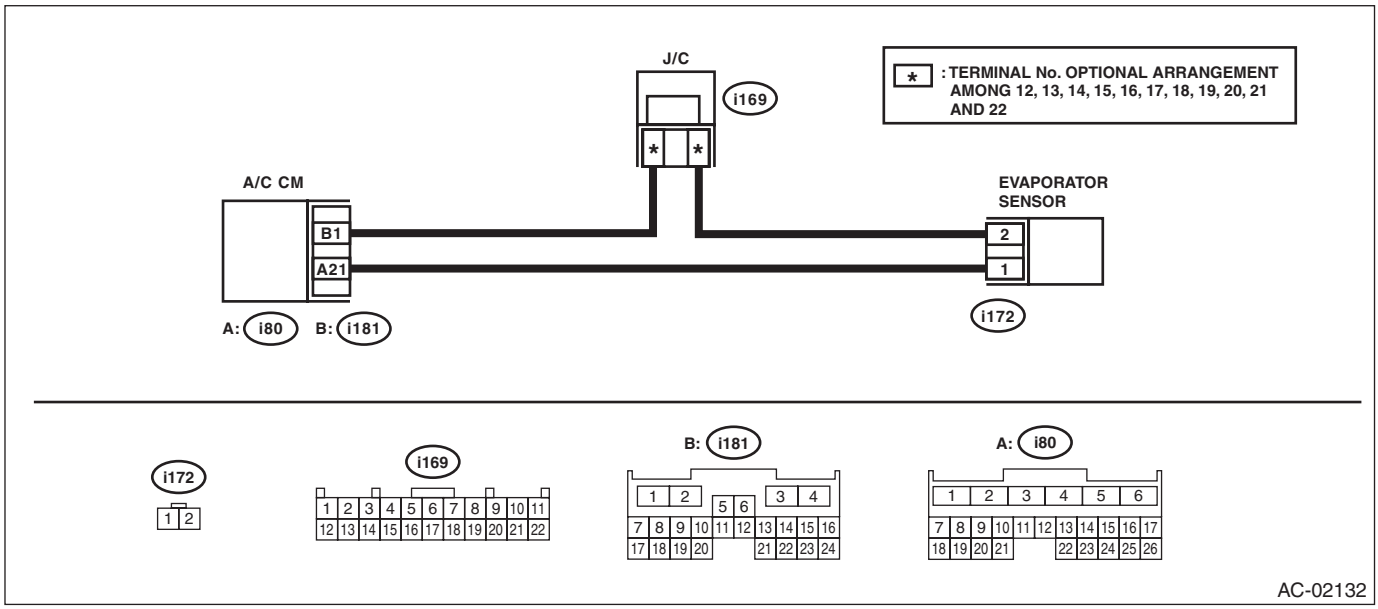
DTC DETECTING CONDITION:

Evaporator sensor circuit is shorted.

TROUBLE SYMPTOM:

- Compressor does not operate.
- Evaporator temperature is falsely recognized as high, and the compartment temperature is adjusted.

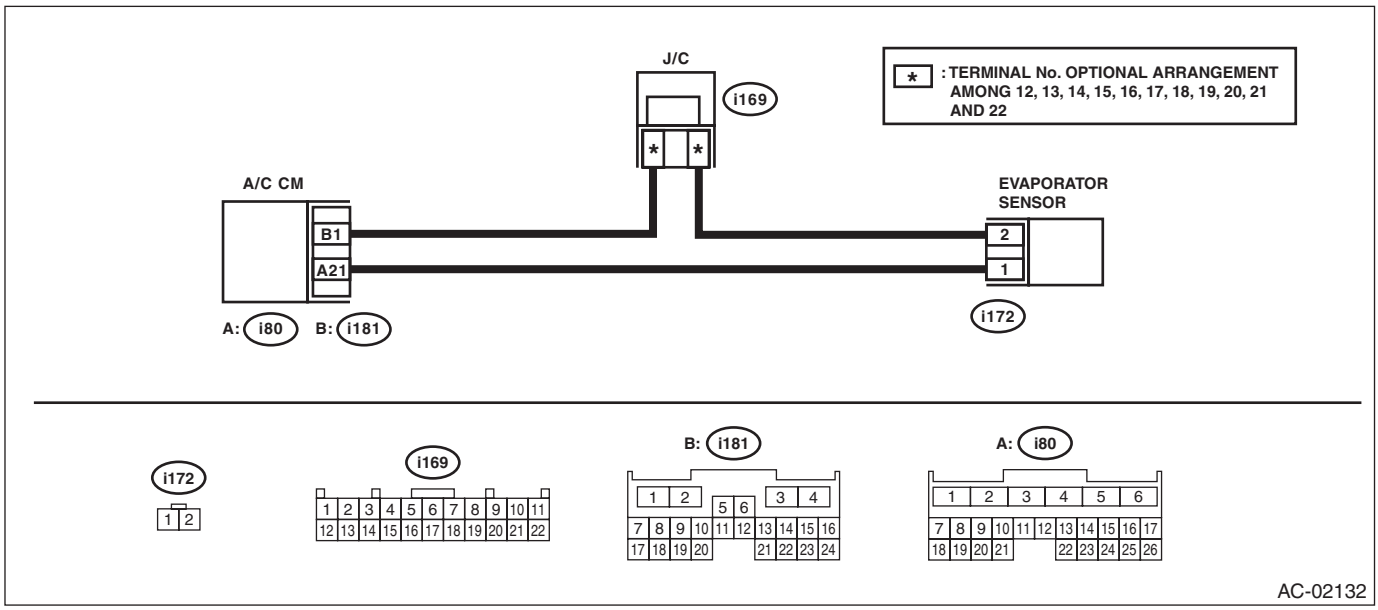
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, check "Evaporator Temperature" of the current data from the A/C diagnosis.	Is the current data exceeding 50°C (90°F)?	Go to step **2**.	Check the connection of the evaporator sensor circuit.
2	**CHECK EVAPORATOR SENSOR.** 1) Disconnect the evaporator sensor. 2) Using the Subaru Select Monitor, check "Evaporator Temperature" of the current data from the A/C diagnosis.	Is the current data exceeding 50°C (90°F)?	Go to step **3**.	Replace the evaporator sensor. <Ref. to AC-57, REMOVAL, Evaporator.>
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i172) No. 1 — No. 2:***	Is the voltage 4.5 — 5.0 V?	Check the connection of the evaporator sensor circuit.	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i172) No. 1 — No. 2:***	Is there continuity?	Repair or replace the short circuit of the harness.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

D: DTC B1604 EVAPORATOR SENSOR OPEN

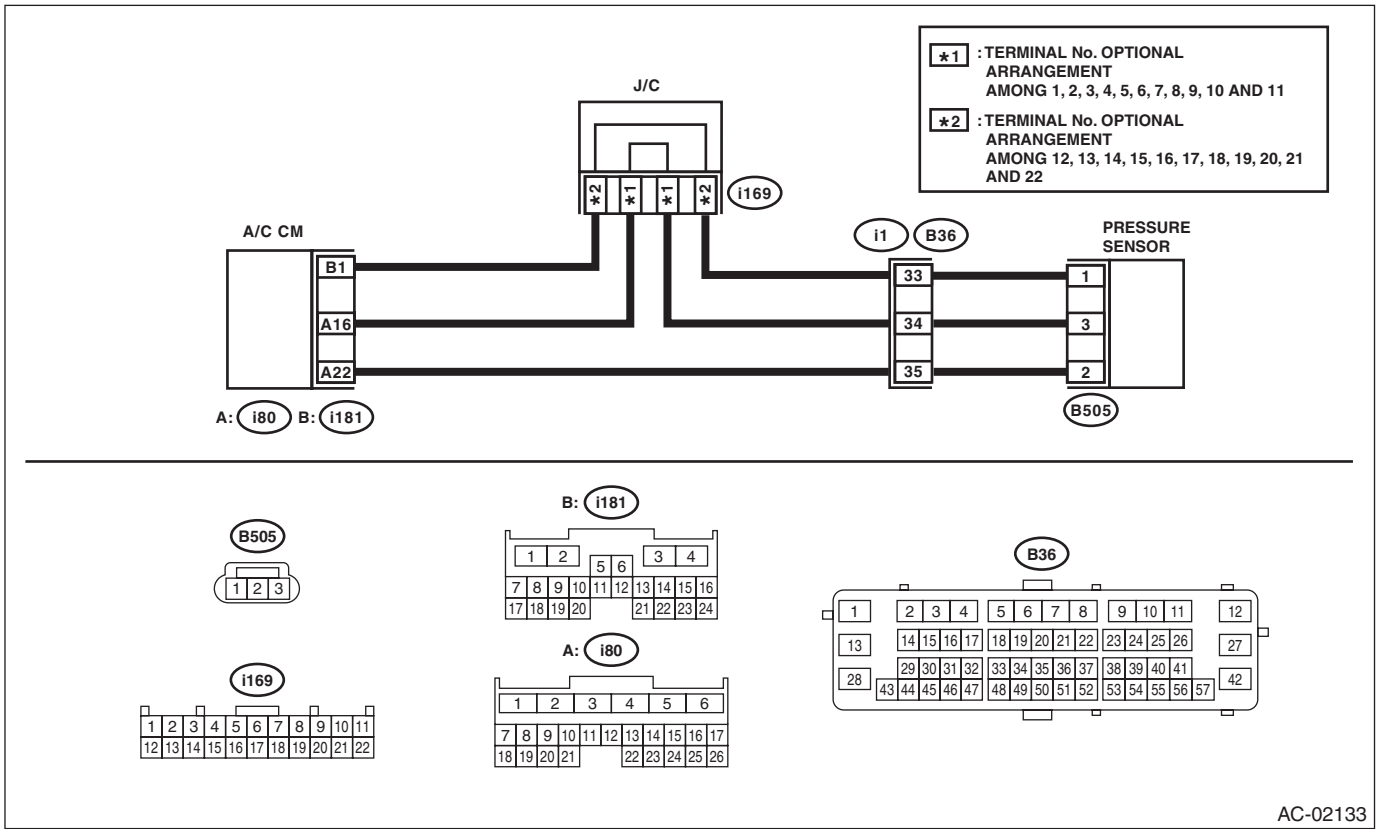
DTC DETECTING CONDITION:
Evaporator sensor circuit is open.
TROUBLE SYMPTOM:
Compressor does not operate.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, check "Evaporator Temperature" of the current data from the A/C diagnosis.	Is the current data lower than –30°C (–54°F)?	Go to step **2**.	Check the connection of the evaporator sensor circuit.
2	**CHECK EVAPORATOR SENSOR.** 1) Disconnect the evaporator sensor. 2) Short the i172 connector. 3) Using the Subaru Select Monitor, check "Evaporator Temperature" of the current data from the A/C diagnosis.	Is the current data lower than –30°C (–54°F)?	Go to step **3**.	Replace the evaporator sensor. <Ref. to AC-57, REMOVAL, Evaporator.>
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i172) No. 1 — No. 2:***	Is the voltage 4.5 — 5.0 V?	Check the connection of the evaporator sensor circuit.	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i172) No. 1 — (i80) No. 21:*** ***(i172) No. 2 — (i81) No. 1:***	Is there continuity?	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>	Repair or replace the open circuit of harness.

E: DTC B1605 REFRIGERANT FLOW SENSOR CIRCUIT OPEN

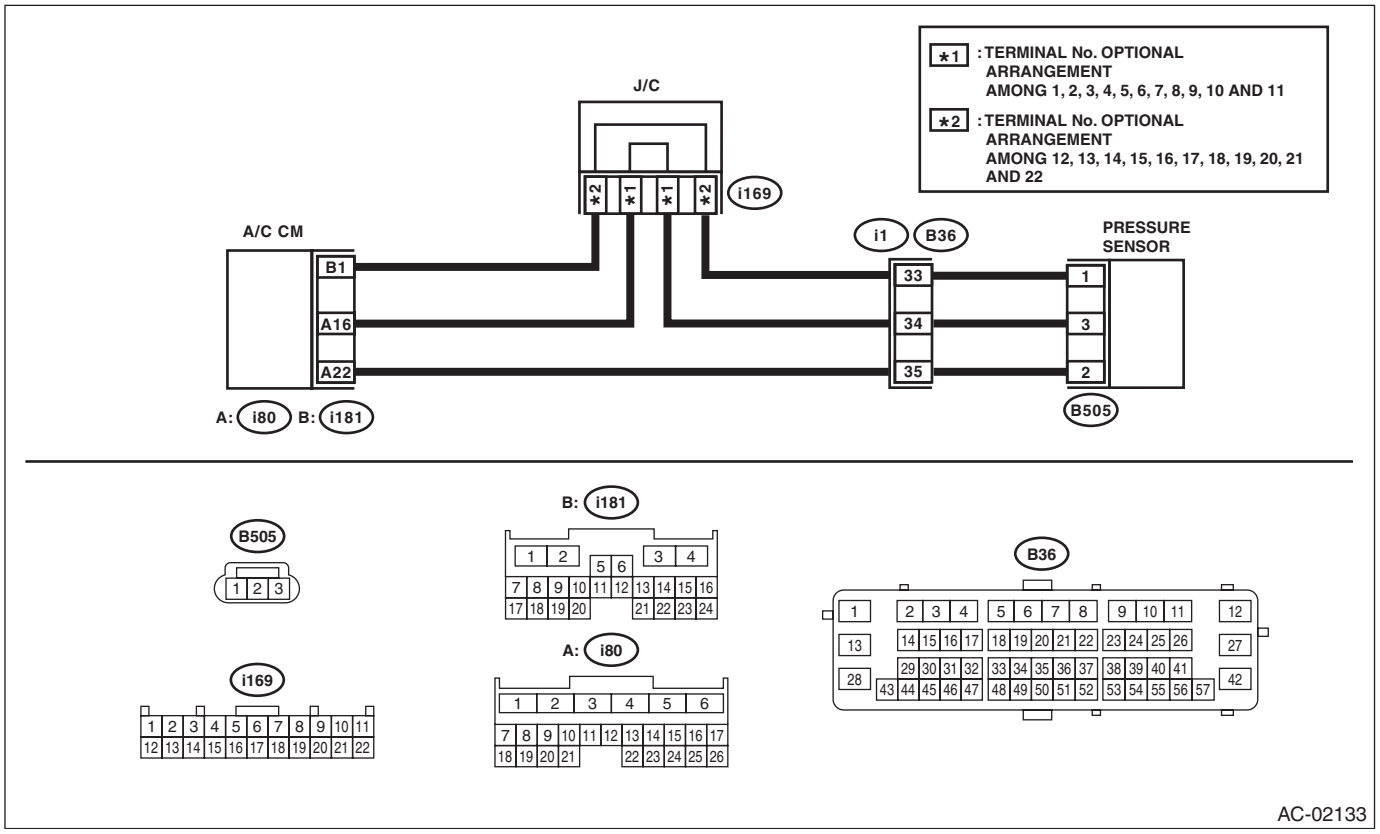
DTC DETECTING CONDITION:
Refrigerant pressure sensor circuit is open.
TROUBLE SYMPTOM:
Compressor does not operate.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, check "Refrigerant Pressure" of the current data from the A/C diagnosis.	Does the current data display 3.19 MPa?	Go to step **2**.	Check the connection of the refrigerant pressure sensor circuit.
2	**CHECK PRESSURE SENSOR.** 1) Disconnect the pressure sensor. 2) Short No. 2 and No. 3 of B505 connector. 3) Using the Subaru Select Monitor, check "Refrigerant Pressure" of the current data from the A/C diagnosis.	Does the current data display 3.19 MPa?	Go to step **3**.	Replace the refrigerant pressure sensor. <Ref. to AC-57, REMOVAL, Evaporator.>
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B505) No. 1 — No. 3:***	Is the voltage 4.5 — 5.0 V?	Go to step **4**.	Repair or replace the open circuit of harness.
4	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B505) No. 1 — (i81) No. 1:*** ***(B505) No. 2 — (i80) No. 22:*** ***(B505) No. 3 — (i80) No. 16:***	Is there continuity?	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>	Repair or replace the open circuit of harness.

F: DTC B1606 REFRIGERANT FLOW SENSOR CIRCUIT SHORT

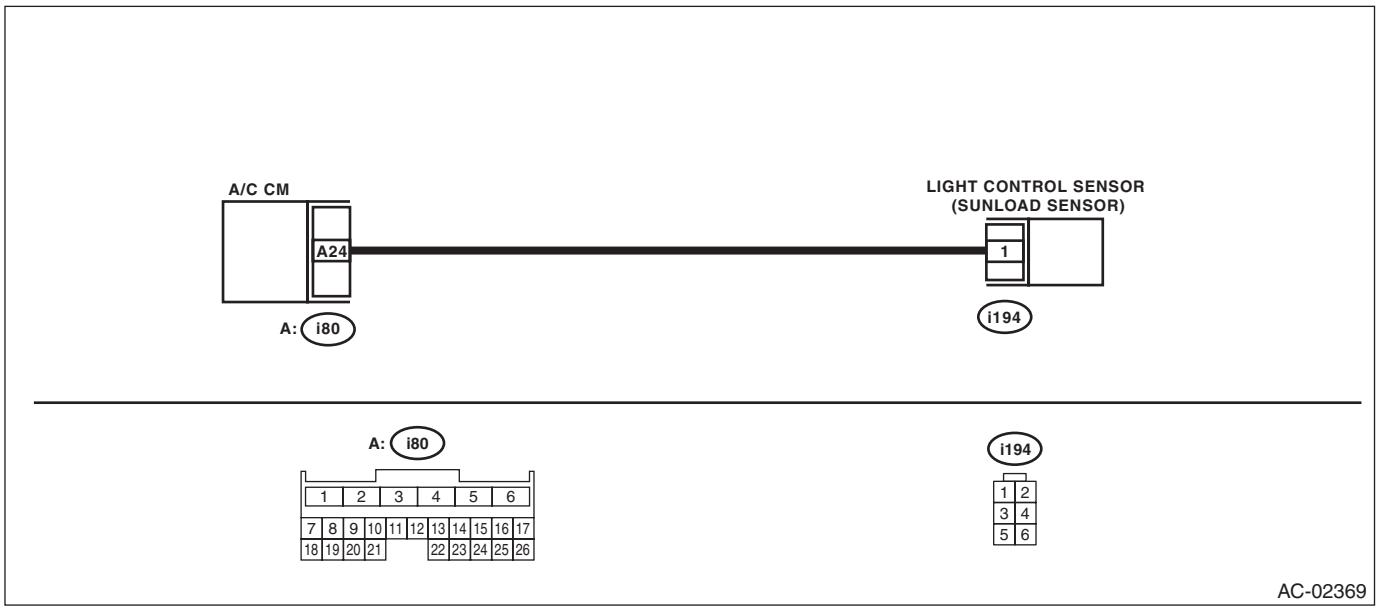
DTC DETECTING CONDITION:
Refrigerant pressure sensor circuit is shorted.
TROUBLE SYMPTOM:
Compressor does not operate.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, check "Refrigerant Pressure" of the current data from the A/C diagnosis.	Does the current data display 0 MPa?	Go to step **2**.	Check the connection of the refrigerant pressure sensor.
2	**CHECK REFRIGERANT PRESSURE SENSOR.** 1) Disconnect the refrigerant pressure sensor. 2) Using the Subaru Select Monitor, check "Refrigerant Pressure" of the current data from the A/C diagnosis.	Does the current data display 0 MPa?	Go to step **3**.	Replace the refrigerant pressure sensor. <Ref. to AC-57, REMOVAL, Evaporator.>
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B505) No. 1 — No. 3:***	Is the voltage 4.5 — 5.0 V?	Go to step **4**.	Repair or replace the open circuit of harness.
4	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B505) No. 1 — No. 2:*** ***(B505) No. 2 — No. 3:*** ***(B505) No. 3 — No. 1:***	Is there continuity?	Repair or replace the short circuit of the harness.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

G: DTC B1607 SUNLOAD SENSOR SHORT

DTC DETECTING CONDITION:
Sunload sensor circuit is shorted.
TROUBLE SYMPTOM:
Control is performed as no sunload.
WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, check "Quantity of Sunload" of the current data from the A/C diagnosis.	Does the current data display 0 W/m^2?	Go to step **2**.	Check the connection of the sunload sensor circuit.
2	**CHECK SUNLOAD SENSOR.** 1) Disconnect the sunload sensor. 2) Short the i194 connector to chassis ground. 3) Using the Subaru Select Monitor, check "Quantity of Sunload" of the current data from the A/C diagnosis.	Does the current data display 0 W/m^2?	Go to step **3**.	Replace the sunload sensor. <Ref. to AC-57, REMOVAL, Evaporator.>
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i194) No. 1 — Chassis ground:***	Is the voltage 4.5 — 5.0 V?	Check the connection of the sunload sensor circuit.	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i194) No. 1 — Chassis ground:***	Is there continuity?	Repair or replace the short circuit of the harness.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

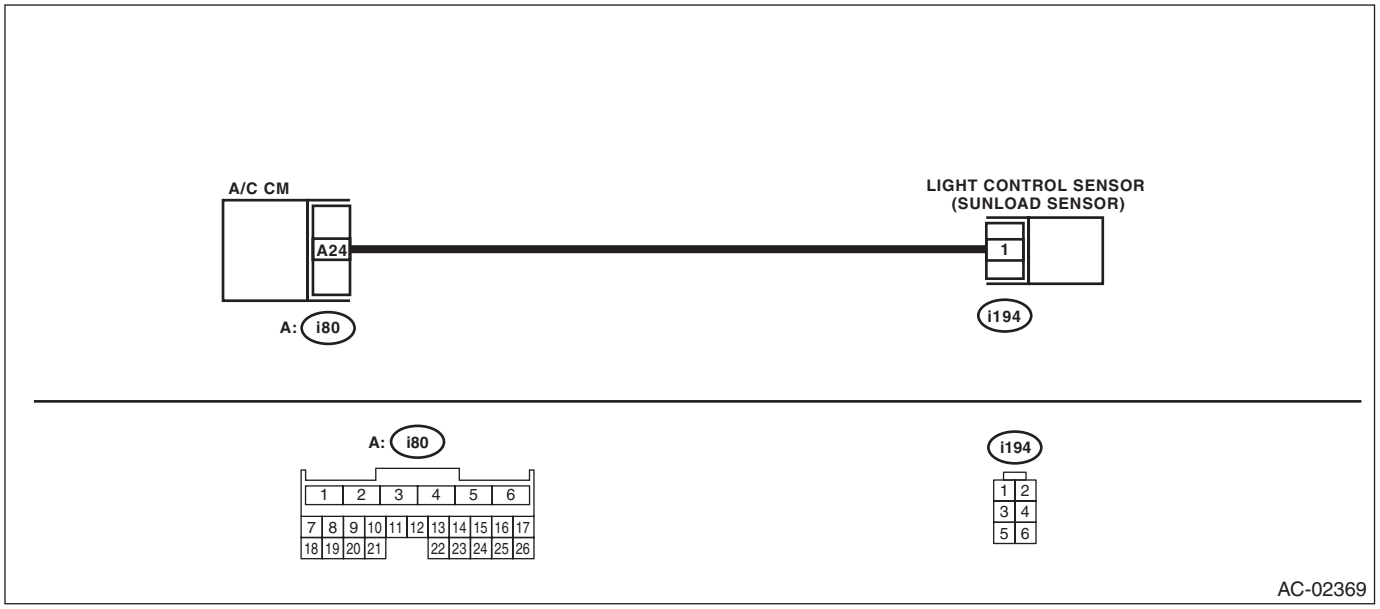
H: DTC B1608 SUNLOAD SENSOR OPEN

DTC DETECTING CONDITION:
Sunload sensor circuit is open. (Displayed for current malfunction)

NOTE:
When the sunload sensor check is performed indoors or in the shade, it could be diagnosed as having an open circuit. Always check the sunload sensor with the sun shining on it.

TROUBLE SYMPTOM:
Control is performed as no sunload.

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, check "Quantity of Sunload" of the current data from the A/C diagnosis.	Does the current data display 0 W/m^2?	Go to step **2**.	Check the connection of the sunload sensor circuit.
2	**CHECK SUNLOAD SENSOR.** 1) Disconnect the sunload sensor. 2) Short the i194 connector to chassis ground. 3) Using the Subaru Select Monitor, check "Quantity of Sunload" of the current data from the A/C diagnosis.	Does the current data display 0 W/m^2?	Go to step **3**.	Replace the sunload sensor. <Ref. to AC-57, REMOVAL, Evaporator.>
3	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i194) No. 1 — Chassis ground:***	Is the voltage 4.5 — 5.0 V?	Check the connection of the sunload sensor circuit.	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i194) No. 1 — (i80) No. 24:***	Is there continuity?	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>	Repair or replace the open circuit of harness.

I: DTC B1610 AIRMIX DOOR ACTUATOR POTENTIOMETER CIRCUIT OPEN (DRIVER'S)

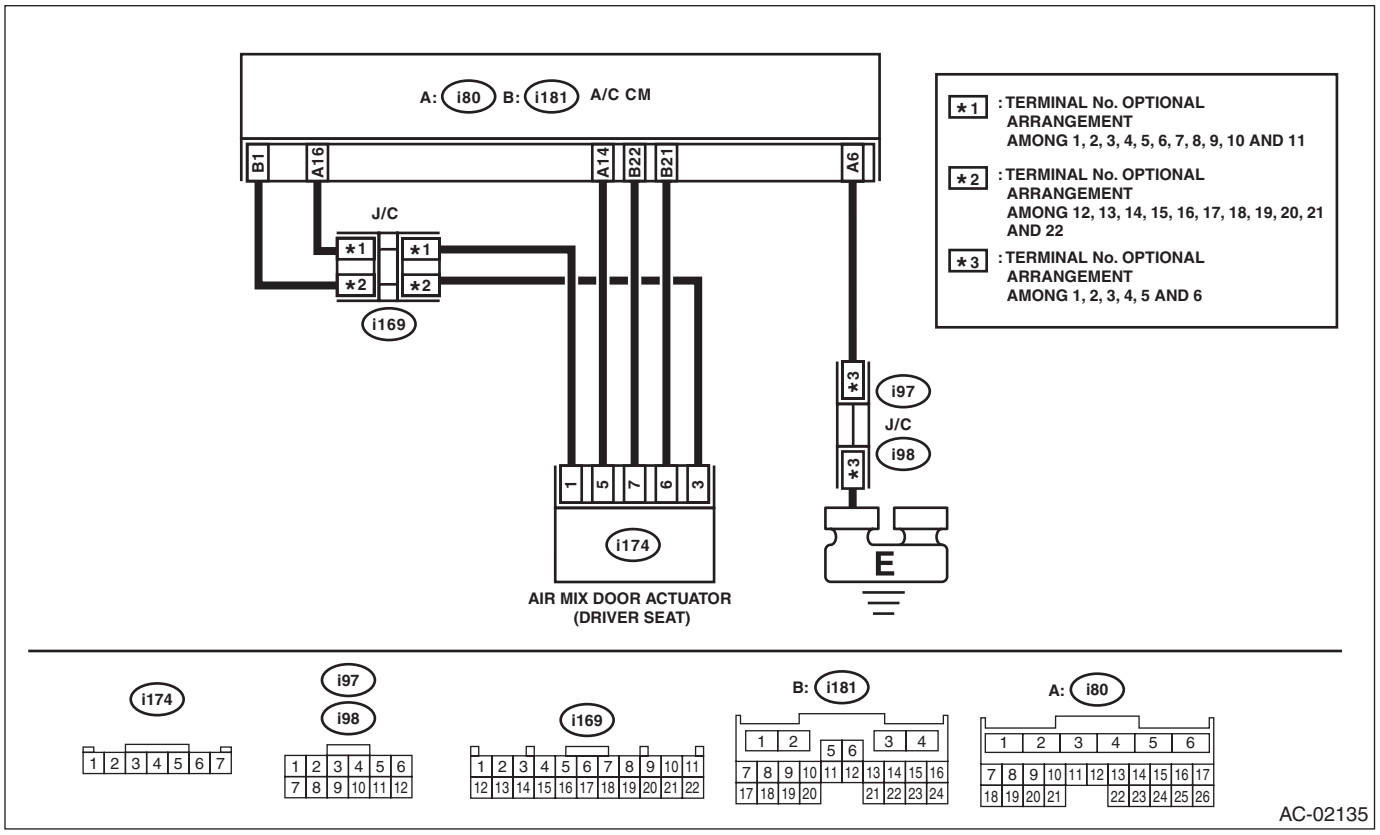
DTC DETECTING CONDITION:

Air mix door actuator — potentiometer circuit is open.

TROUBLE SYMPTOM:

- Temperature cannot be adjusted.
- Temperature of the driver's dual air conditioner cannot be adjusted.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1610 displayed?	Go to step **2**.	Repair poor contact of the air mix door actuator circuit.
2	**CHECK ACTUATOR.** 1) Disconnect the air mix door actuator (driver's). 2) Short No. 1 and No. 5 of i174 connector. 3) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1611 displayed?	Replace the air mix door actuator (driver's). <Ref. to AC-54, REMOVAL, Heater and Cooling Unit.>	Go to step **3**.
3	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i174) No. 1 — (i80) No. 16:*** ***(i174) No. 3 — (i181) No. 1:*** ***(i174) No. 5 — (i80) No. 14:***	Is there continuity?	Go to step **4**.	Repair or replace the open circuit of harness.

	Step	Check	Yes	No
4	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i174) No. 1 — (i174) No. 3:*** ***(i174) No. 3 — (i174) No. 5:*** ***(i174) No. 5 — (i174) No. 1:***	Is there continuity?	Repair or replace the open circuit of harness.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

J: DTC B1611 AIRMIX DOOR ACTUATOR POTENTIOMETER CIRCUIT SHORT (DRIVER'S)

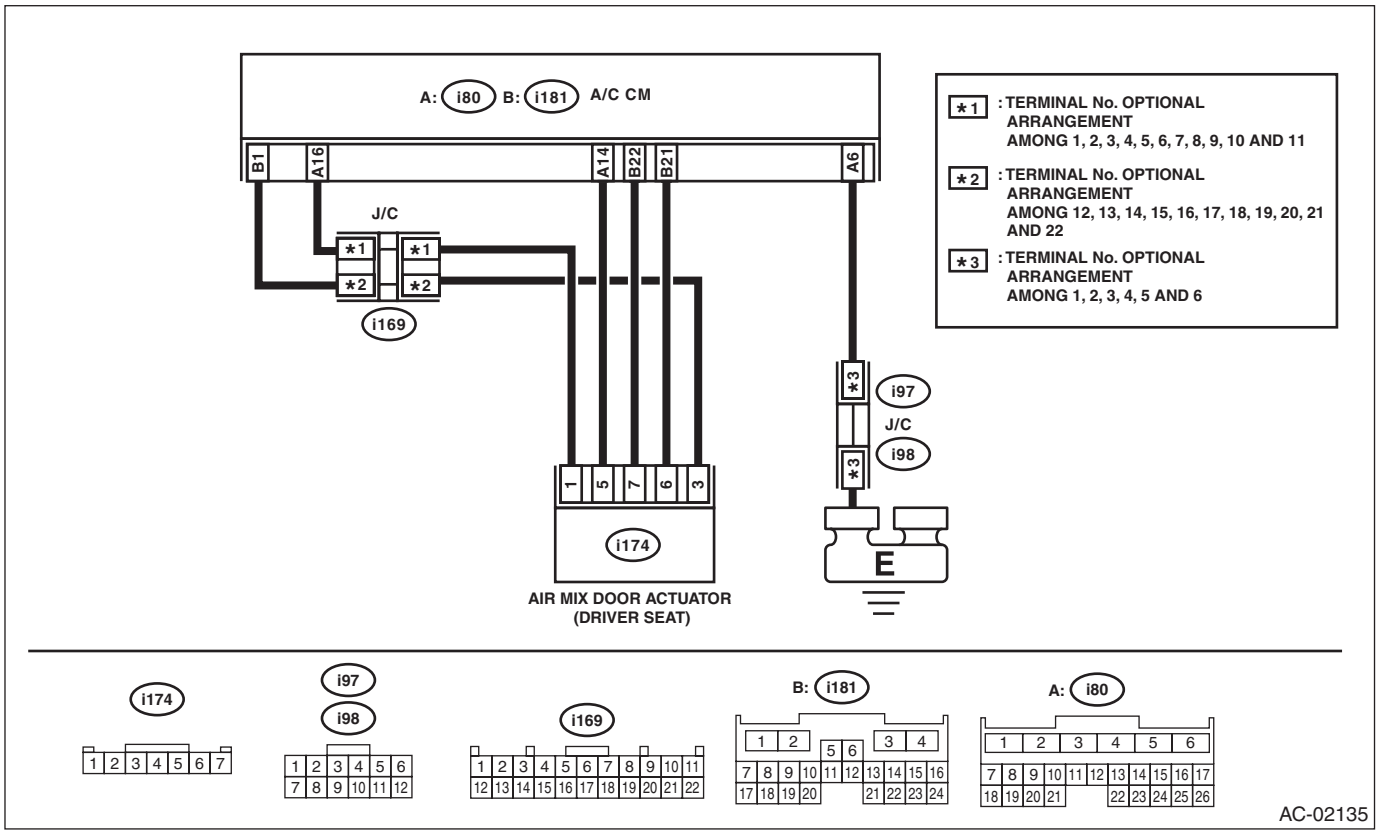
DTC DETECTING CONDITION:

Air mix door actuator — potentiometer circuit is shorted.

TROUBLE SYMPTOM:

- Temperature cannot be adjusted.
- Temperature of the driver's dual air conditioner cannot be adjusted.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1611 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK ACTUATOR.** 1) Disconnect the air mix door actuator (driver's). 2) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1610 displayed?	Replace the air mix door actuator (driver's).	Go to step **3**.
3	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i174) No. 1 — (i174) No. 3:*** ***(i174) No. 3 — (i174) No. 5:*** ***(i174) No. 5 — (i174) No. 1:***	Is there continuity?	Repair or replace the short circuit of the harness.	Go to step **4**.

	Step	Check	Yes	No
4	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i174) No. 1 — (i80) No. 16:*** ***(i174) No. 3 — (i181) No. 1:*** ***(i174) No. 5 — (i80) No. 14:***	Is there continuity?	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>	Repair or replace the short circuit of the harness.

K: DTC B1612 AIRMIX DOOR ACTUATOR LOCK (DRIVER'S)

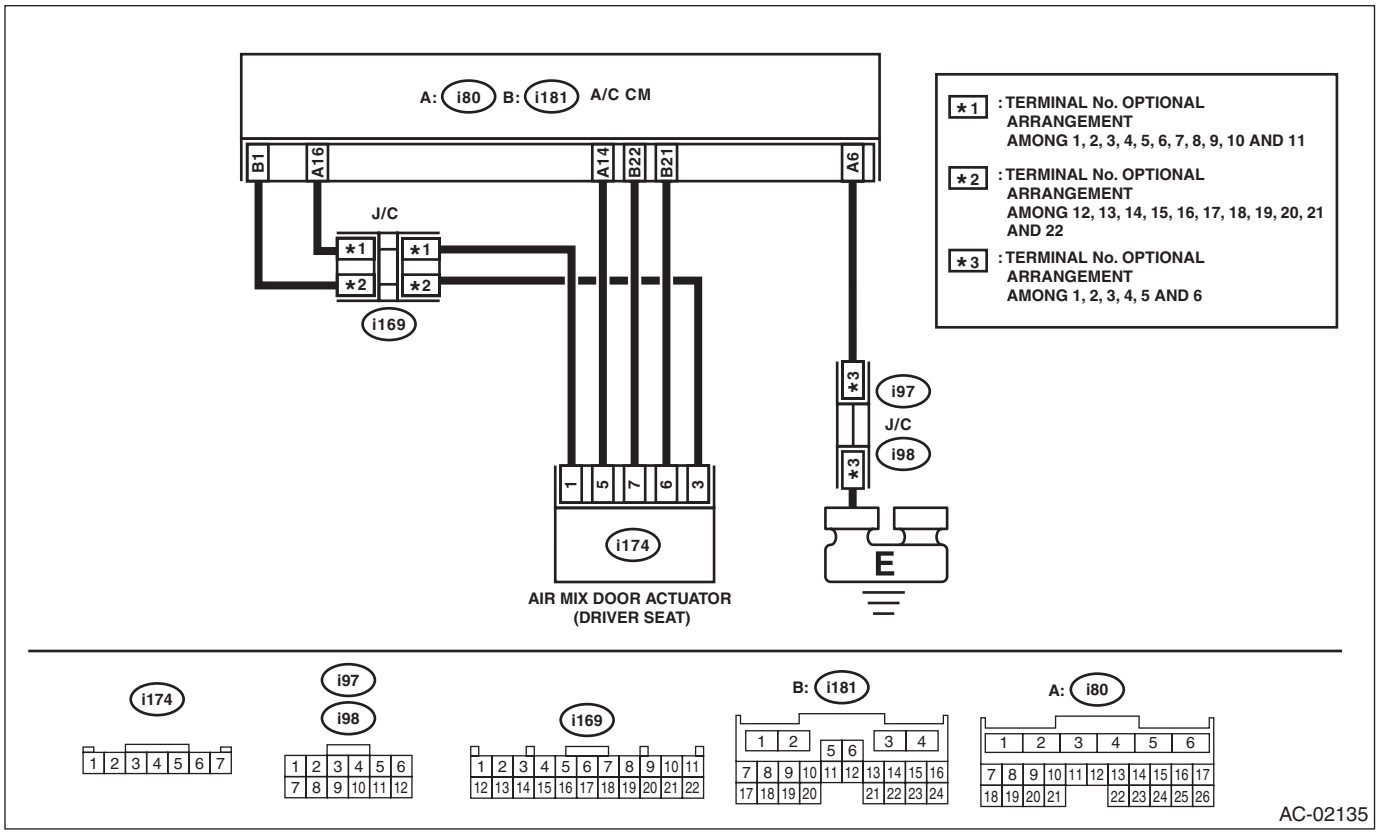
DTC DETECTING CONDITION:

- Air mix door actuator — driver's seat is locked.
- The potentiometer value of the actuator does not change.

TROUBLE SYMPTOM:

Temperature of the driver's dual air conditioner cannot be adjusted.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1612 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, change the setting of "Airmix Dr Act Trgt Open Angle (Driver's)" from the A/C diagnosis and perform the active test.	Did the actuator move to the specified target opening angle?	Air mix door actuator circuit is normal.	Go to step **3**.
3	**CHECK AIR MIX DOOR ACTUATOR — POTENTIOMETER.** 1) Using the temperature control button, change the set temperature. 2) Using the Subaru Select Monitor, check "Airmix Door Actuator Position (Driver's)" of the current data from the A/C diagnosis.	Does the current data change?	Go to step **4**.	Replace the air mix door actuator (driver's). <Ref. to AC-54, REMOVAL, Heater and Cooling Unit.>
4	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal (i174) No. 1 — No. 3:***	Is the voltage 4.5 — 5.0 V?	Check the connection of the air mix door actuator position circuit.	Go to step **5**.

	Step	Check	Yes	No
5	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i174) No. 5 — (i80) No. 14:***	Is there continuity?	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>	Repair or replace the open circuit of harness.

L: DTC B1613 AIRMIX DOOR ACTUATOR POTENTIOMETER CIRCUIT OPEN (PASSENGER'S)

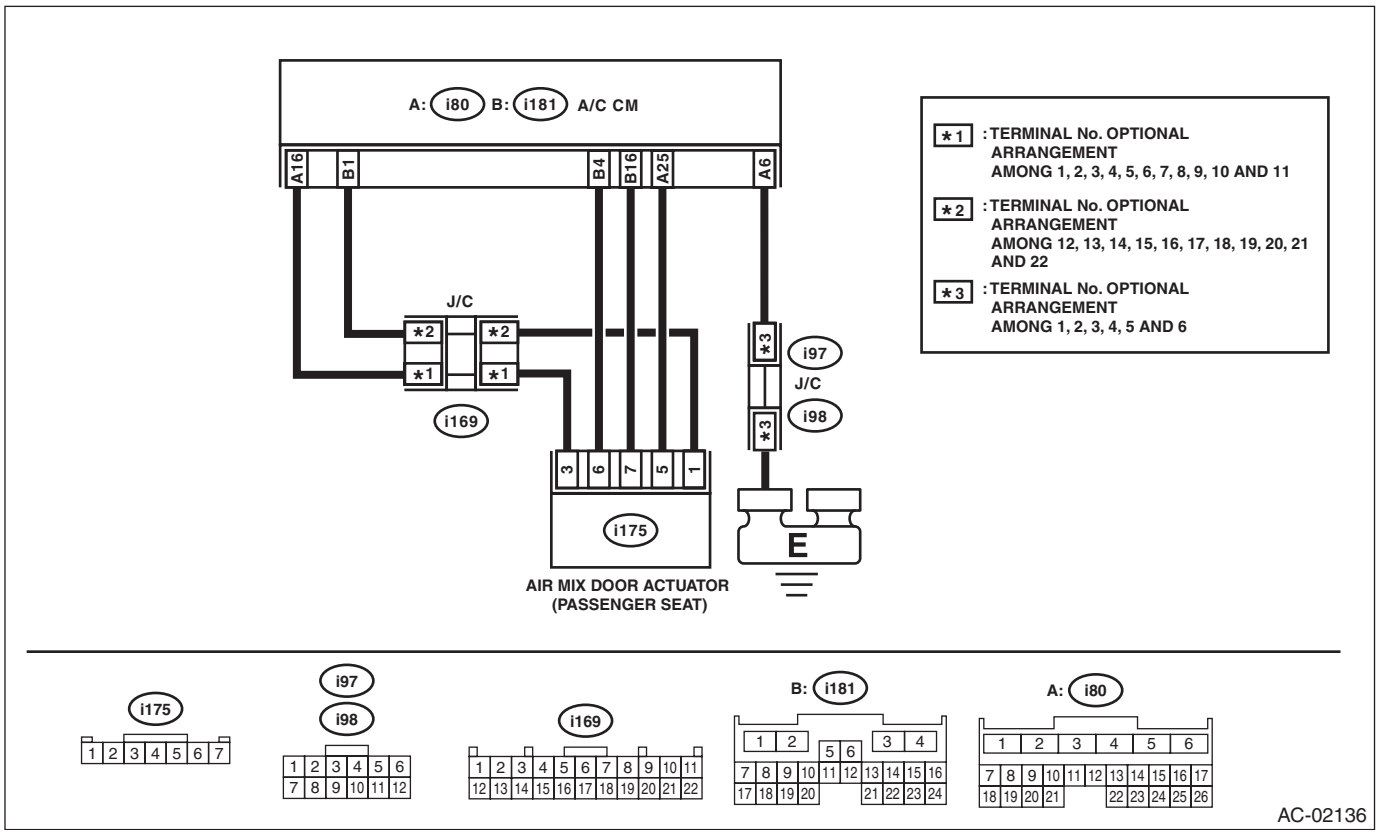
DTC DETECTING CONDITION:

Air mix door actuator — potentiometer circuit is open.

TROUBLE SYMPTOM:

Temperature of the passenger's dual air conditioner cannot be adjusted.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1613 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK ACTUATOR.** 1) Disconnect the air mix door actuator (passenger's). 2) Short No. 3 and No. 5 of i175 connector. 3) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1614 displayed?	Go to step **3**.	Replace the air mix door actuator (passenger's). <Ref. to AC-54, REMOVAL, Heater and Cooling Unit.>
3	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i175) No. 1 — (i181) No. 1:*** ***(i175) No. 3 — (i80) No. 16:*** ***(i175) No. 5 — (i80) No. 25:***	Is there continuity?	Go to step **4**.	Repair or replace the open circuit of harness.

	Step	Check	Yes	No
4	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i175) No. 1 — (i175) No. 3:*** ***(i175) No. 3 — (i175) No. 5:*** ***(i175) No. 5 — (i175) No. 1:***	Is there continuity?	Repair or replace the open circuit of harness.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

M: DTC B1614 AIRMIX DOOR ACTUATOR POTENTIOMETER CIRCUIT SHORT (PASSENGER'S)

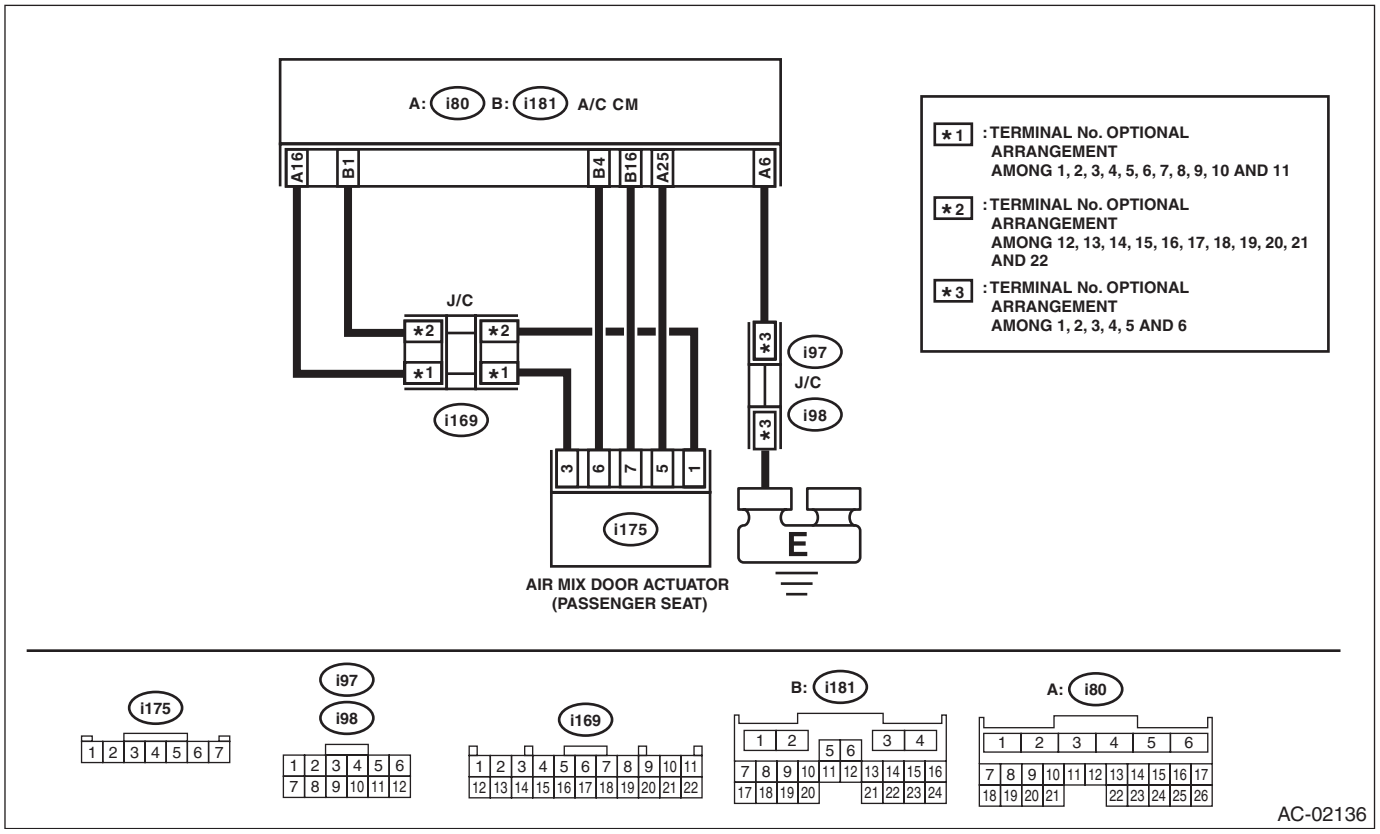
DTC DETECTING CONDITION:

Air mix door actuator — potentiometer circuit is shorted.

TROUBLE SYMPTOM:

Temperature of the passenger's dual air conditioner cannot be adjusted.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1614 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK ACTUATOR.** 1) Disconnect the air mix door actuator. 2) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1614 displayed?	Go to step **3**.	Replace the air mix door actuator position (passenger's).
3	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i175) No. 1 — (i175) No. 3:*** ***(i175) No. 3 — (i175) No. 5:*** ***(i175) No. 5 — (i175) No. 1:***	Is there continuity?	Repair or replace the short circuit of the harness.	Go to step **4**.

	Step	Check	Yes	No
4	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i175) No. 1 — (i181) No. 1:*** ***(i175) No. 3 — (i80) No. 16:*** ***(i175) No. 5 — (i80) No. 25:***	Is there continuity?	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>	Repair or replace the short circuit of the harness.

N: DTC B1615 AIRMIX DOOR ACTUATOR LOCK (PASSENGER'S)

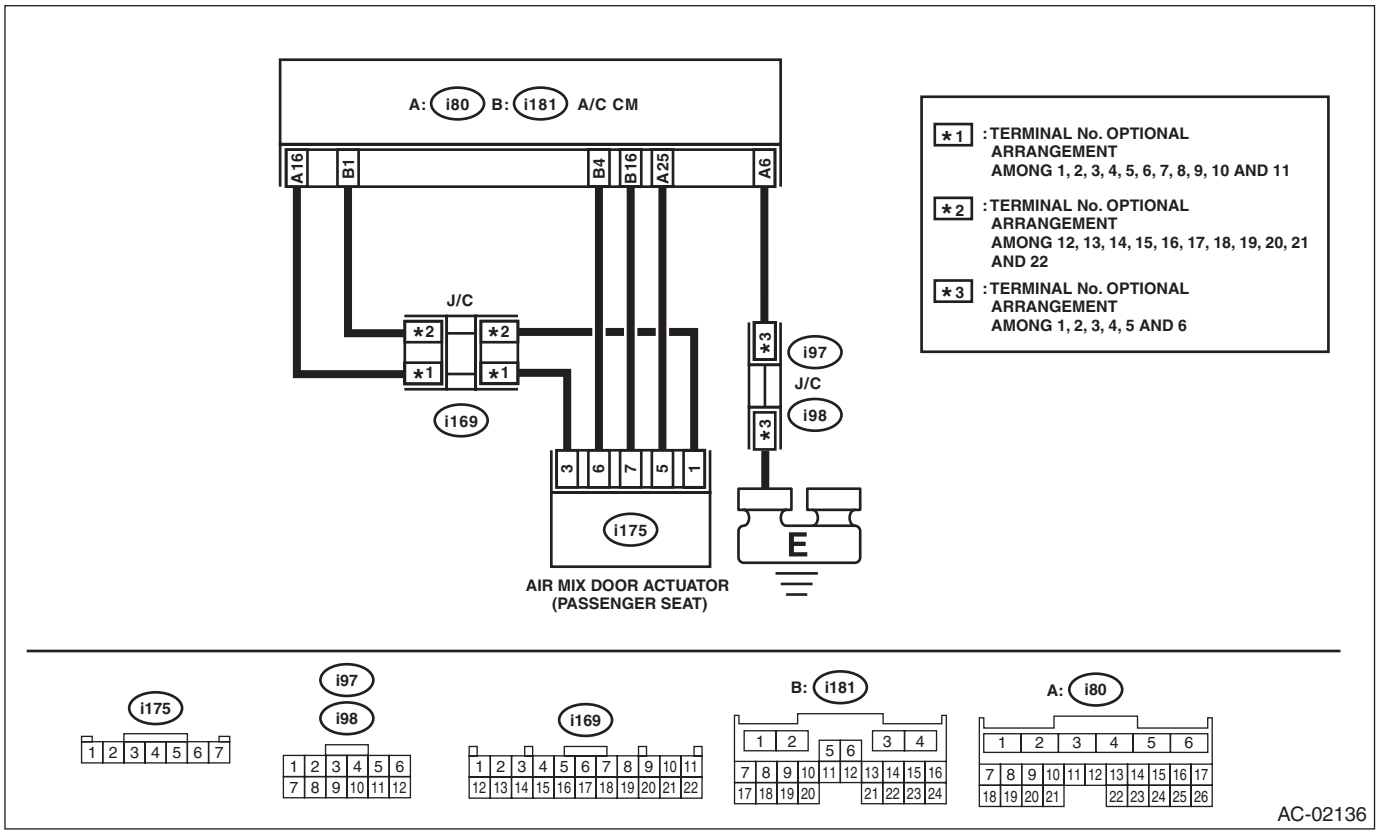
DTC DETECTING CONDITION:

- Passenger's air mix door actuator is locked.
- The potentiometer value of the actuator does not change.

TROUBLE SYMPTOM:

Temperature of the passenger's dual air conditioner cannot be adjusted.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1615 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, change the setting of "Airmix Dr Act Trgt Open Angle (Pas's)" from the A/C diagnosis and perform the active test.	Did the actuator move to the specified target opening angle?	Air mix door actuator circuit is normal.	Go to step **3**.
3	**CHECK AIR MIX DOOR ACTUATOR — POTENTIOMETER.** 1) Using the temperature control button, change the set temperature. 2) Using the Subaru Select Monitor, check "Airmix Door Actuator Position (Passenger's)" of the current data from the A/C diagnosis.	Does the current data change?	Go to step **4**.	Replace the air mix door actuator (passenger's). <Ref. to AC-54, REMOVAL, Heater and Cooling Unit.>
4	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal (i175) No. 1 — No. 3:***	Is the voltage 4.5 — 5.0 V?	Check the connection of the air mix door actuator position circuit.	Go to step **5**.

	Step	Check	Yes	No
5	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i175) No. 5 — (i181) No. 25:***	Is there continuity?	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>	Repair or replace the open circuit of harness.

O: DTC B1620 MODE DOOR ACTUATOR POTENTIOMETER CIRCUIT OPEN

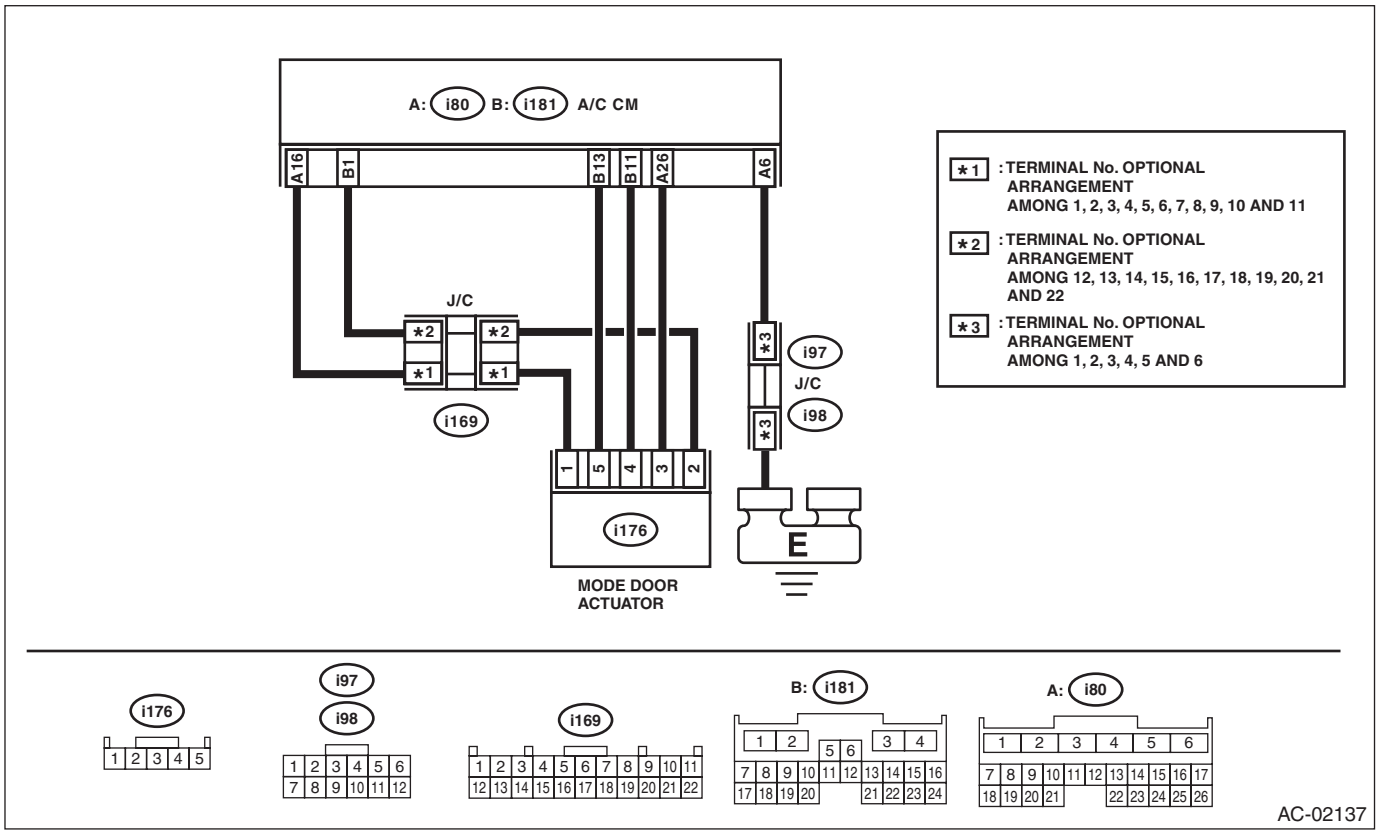
DTC DETECTING CONDITION:

- Mode door does not move.
- The potentiometer value of the actuator does not change.

TROUBLE SYMPTOM:

Vent does not change.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1620 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK ACTUATOR.** 1) Disconnect the mode door actuator. 2) Short No. 2 and No. 3 of (i176) connector. 3) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1621 displayed?	Replace the mode door actuator. <Ref. to AC-54, REMOVAL, Heater and Cooling Unit.>	Go to step **3**.
3	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(i176) No. 1 — (i80) No. 16:*** ***(i176) No. 2 — (i181) No. 1:*** ***(i176) No. 3 — (i80) No. 26:***	Is the voltage 4.5 — 5.0 V?	Go to step **4**.	Repair the open circuit of harness.

	Step	Check	Yes	No
4	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i176) No. 1 — (i176) No. 2:*** ***(i176) No. 2 — (i176) No. 3:*** ***(i176) No. 3 — (i176) No. 1:***	Is there continuity?	Repair or replace the short circuit of the harness.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

P: DTC B1621 MODE DOOR ACTUATOR POTENTIOMETER CIRCUIT SHORT

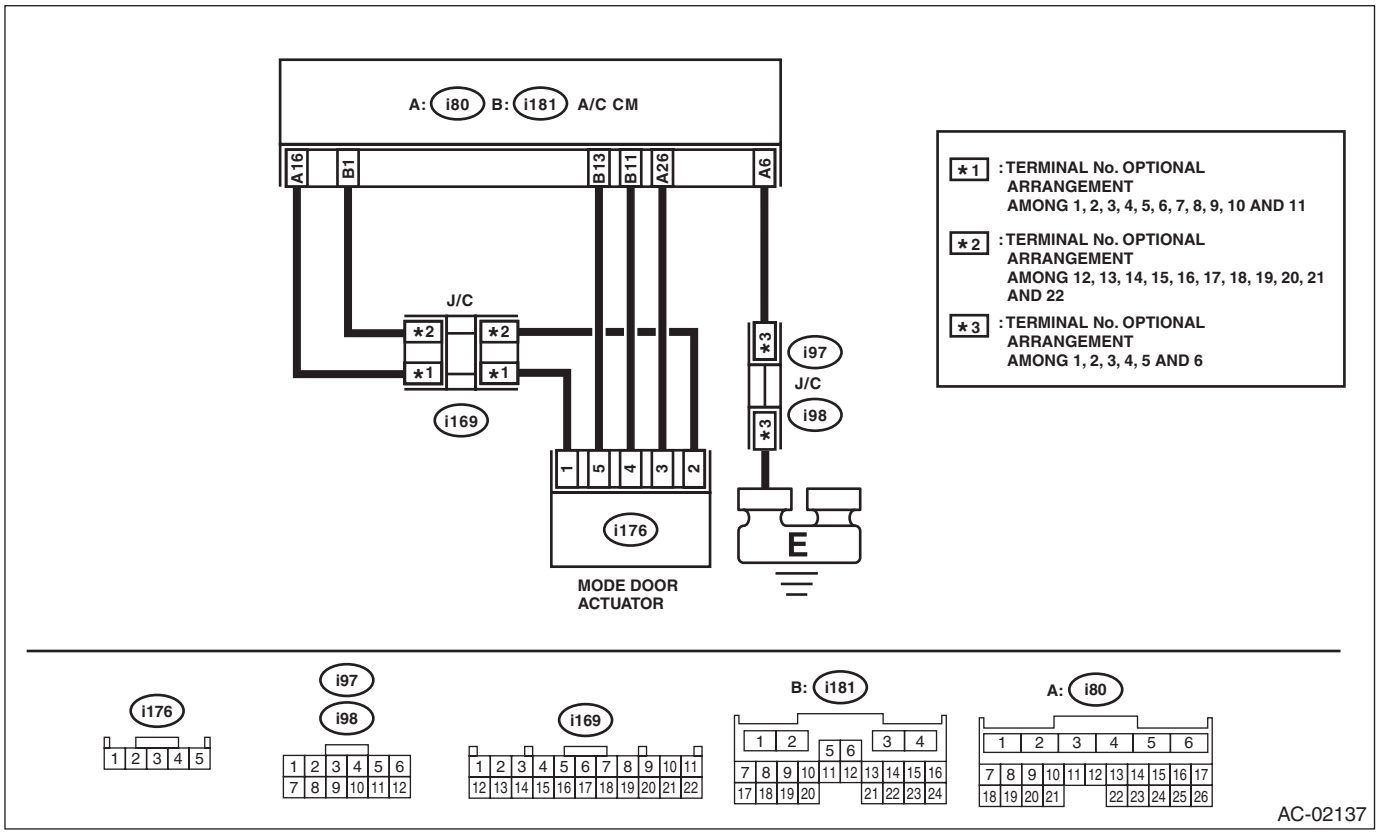
DTC DETECTING CONDITION:

- Mode door does not move.
- The potentiometer value of the actuator does not change.

TROUBLE SYMPTOM:

Vent does not change.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1621 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK ACTUATOR.** 1) Disconnect the mode door actuator. 2) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1620 displayed?	Go to step **3**.	Replace the mode door actuator. <Ref. to AC-54, REMOVAL, Heater and Cooling Unit.>
3	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i176) No. 1 — (i176) No. 2:*** ***(i176) No. 2 — (i176) No. 3:*** ***(i176) No. 3 — (i176) No. 1:***	Is there continuity?	Repair or replace the short circuit of the harness.	Go to step **4**.

	Step	Check	Yes	No
4	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i176) No. 1 — (i80) No. 16:*** ***(i176) No. 2 — (i181) No. 1:*** ***(i176) No. 3 — (i80) No. 26:***	Is there continuity?	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>	Repair or replace the open circuit of harness.

Q: DTC B1622 MODE DOOR ACTUATOR LOCK

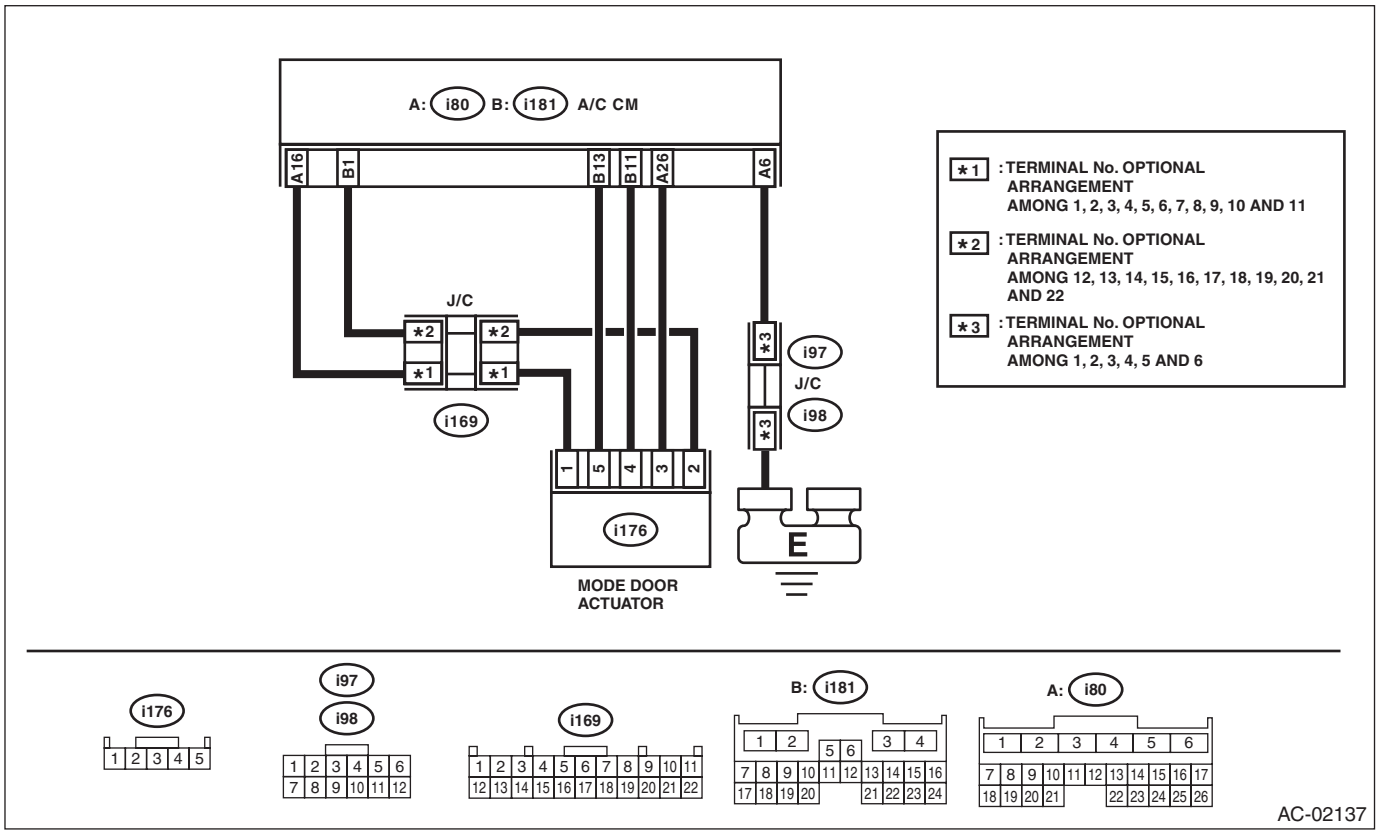
DTC DETECTING CONDITION:

- Mode door does not move.
- The potentiometer value of the actuator does not change.

TROUBLE SYMPTOM:

Vent does not change.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CONNECTOR.** 1) Check the condition of connector connection. 2) Read the DTC of the A/C CM using the Subaru Select Monitor.	Is B1622 displayed?	Go to step **2**.	Repair the poor contact of connector.
2	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, change the setting of “Mode Door Actuator Position Target” from the A/C diagnosis and perform the active test.	Did the actuator move to the specified target opening angle?	Mode door actuator circuit is normal.	Go to step **3**.
3	**CHECK MODE DOOR ACTUATOR — POTENTIOMETER.** 1) Using the temperature control button, change the set temperature. 2) Using the Subaru Select Monitor, check “Mode Door Actuator Position” of the current data from the A/C diagnosis.	Does the current data change?	Go to step **4**.	Replace the mode door actuator (passenger’s). <Ref. to AC-54, REMOVAL, Heater and Cooling Unit.>
4	**CHECK HARNESS.** 1) Turn the ignition switch to ON. 2) Using the tester, measure the voltage between terminals. ***Connector & terminal (i176) No. 1 — No. 2:***	Is the voltage 4.5 — 5.0 V?	Check the connection of the mode door actuator position circuit.	Go to step **5**.

	Step	Check	Yes	No
5	**CHECK HARNESS.** 1) Disconnect the connector from A/C CM. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i176) No. 3 — (i80) No. 26:***	Is there continuity?	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>	Repair or replace the open circuit of harness.

R: DTC U0028 HEATER CONTROL PANEL COMMUNICATION ERROR

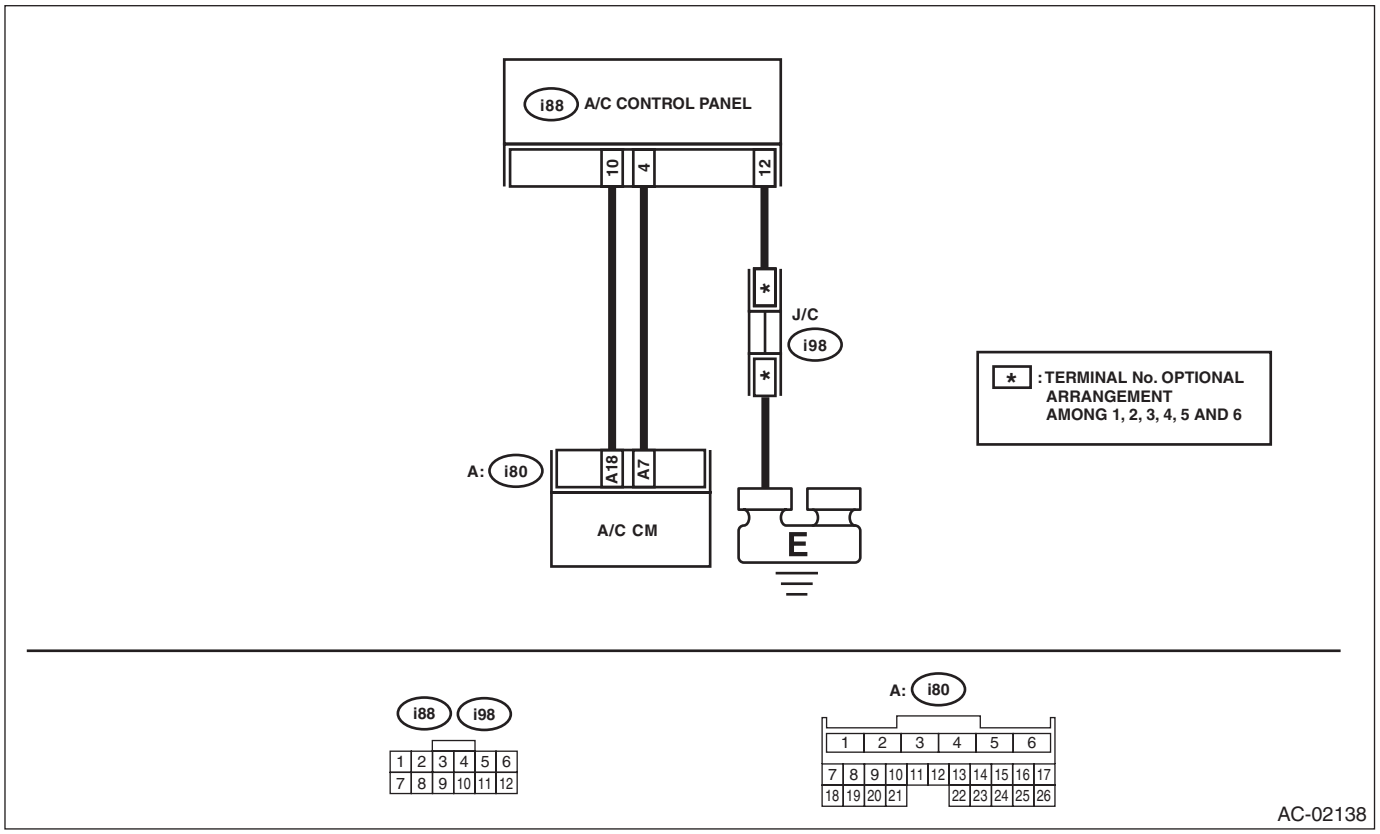
DTC DETECTING CONDITION:

- Heater and A/C do not operate.
- A/C panel display does not change even though being operated.

TROUBLE SYMPTOM:

Unable to operate A/C.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK HARNESS.** 1) Disconnect the connector from A/C control panel and A/C CM. 2) Using a tester, check for continuity between the harness terminals. ***Connector & terminal*** ***(i80) No. 18 — (i88) No. 10:*** ***(i80) No. 7 — (i88) No. 4:***	Is there continuity?	Go to step **2**.	Repair or replace the open circuit of harness.
2	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal*** ***(i80) No. 18 — No. 7:***	Is there continuity?	Repair or replace the short circuit of the harness.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

S: DTC U0001 CAN COMMUNICATION BUS OFF

DTC DETECTING CONDITION:

- Data to be received via CAN communication do not arrive.
- A/C cooperation control does not operate.

TROUBLE SYMPTOM:

A/C does not operate fully automatically.

Step		Check	Yes	No
1	**CHECK DTC.** Read the DTC of the CAN system using the Subaru Select Monitor.	Is a DTC of the CAN system detected?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK A/C CM.** 1) Replace with a normally operating A/C CM. 2) Read the DTC of the A/C system using the Subaru Select Monitor.	Is U0001 detected?	Go to step **3**.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>
3	**CHECK CAN COMMUNICATION CIRCUIT.** Check the CAN communication circuit. <Ref. to LAN(diag)-13, LIST, CAN Communication Circuit Check.>	Is the CAN communication circuit normal?	It is possible that temporary poor communication occurs. Clear the memory.	Repair or replace the CAN communication circuit.

T: DTC U0002 CAN COMMUNICATION ERROR

DTC DETECTING CONDITION:

- Data to be received via CAN communication do not arrive.
- A/C cooperation control does not operate.

TROUBLE SYMPTOM:

A/C does not operate fully automatically.

Step		Check	Yes	No
1	**CHECK CURRENT DATA.** Read the DTC of the CAN system using the Subaru Select Monitor.	Is a DTC of the CAN system detected?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK A/C CM.** 1) Replace with a normally operating A/C CM. 2) Read the DTC of the A/C system using the Subaru Select Monitor.	Is U0002 detected?	Go to step **3**.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>
3	**CHECK CAN COMMUNICATION CIRCUIT.** Check the CAN communication circuit. <Ref. to LAN(diag)-13, LIST, CAN Communication Circuit Check.>	Is the CAN communication circuit normal?	It is possible that temporary poor communication occurs. Clear the memory.	Repair or replace the CAN communication circuit.

U: DTC B1641 REFRIGERANT FLOW SENSOR CIRCUIT SHORT

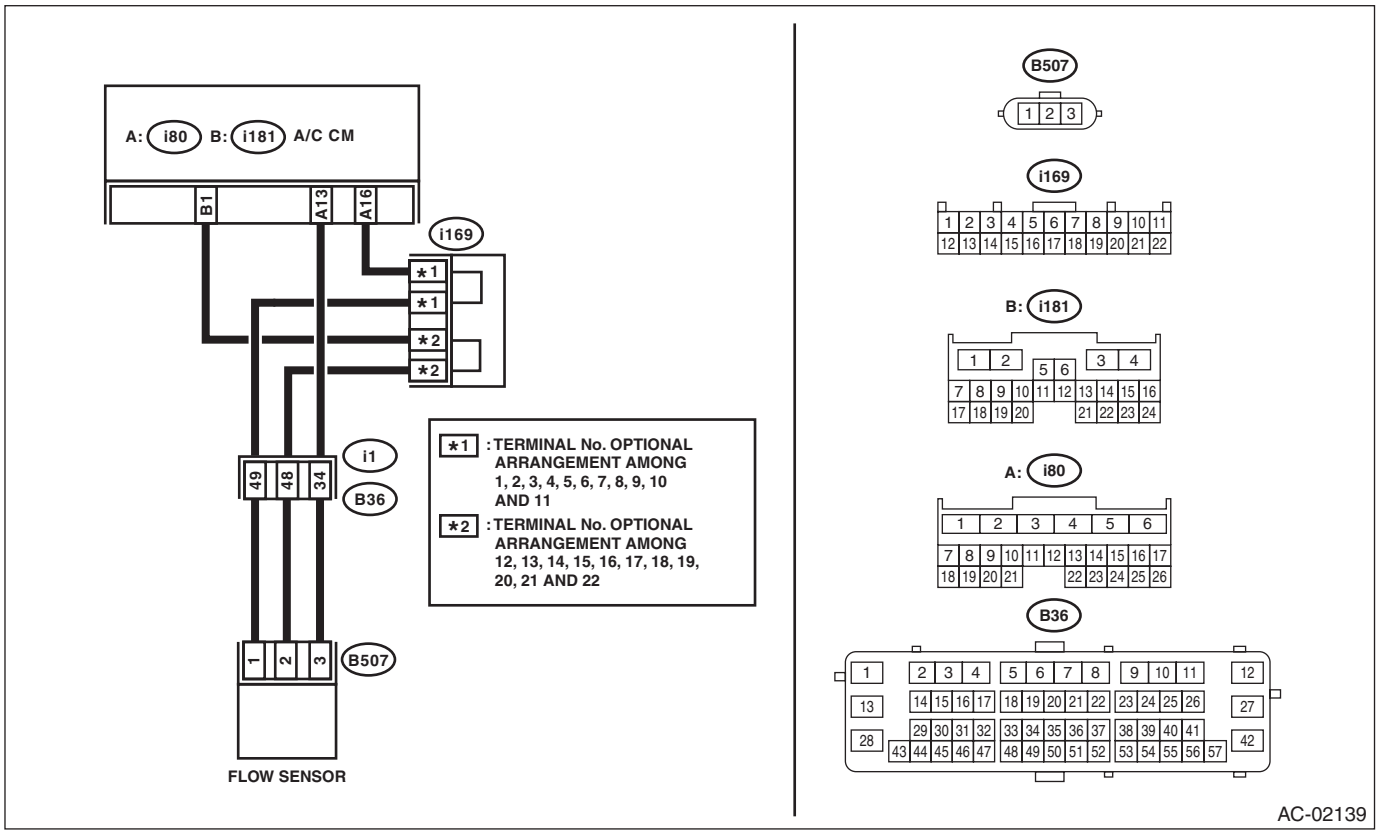
DTC DETECTING CONDITION:

- The voltage of the sensor signal line decreased to 0.3 V or less.
- The circuit is open or shorted.

TROUBLE SYMPTOM:

A/C does not function because refrigerant flow amount cannot be measured.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK SENSOR POWER SUPPLY.** 1) Disconnect the refrigerant flow sensor connector. 2) Turn the ignition switch to ON. 3) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B507) No. 1 — No. 2:***	Is the voltage 4.5 — 5.0 V?	Go to step **5**.	Go to step **2**.
2	**CHECK HARNESS.** 1) Disconnect the A/C CM connector. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B507) No. 3 — (i80) No. 13:*** ***(B507) No. 2 — (i181) No. 1:*** ***(B507) No. 1 — (i80) No. 16:***	Is there continuity?	Go to step **3**.	Repair or replace the open circuit of harness.
3	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B507) No. 1 — Chassis ground:*** ***(B507) No. 2 — Chassis ground:*** ***(B507) No. 3 — Chassis ground:***	Is there continuity?	Repair or replace the short circuit of the harness.	Go to step **4**.

	Step	Check	Yes	No
4	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B507) No. 1 — No. 2:*** ***(B507) No. 1 — No. 3:*** ***(B507) No. 2 — No. 3:***	Is there continuity?	Repair or replace the short circuit of the harness.	Go to step **5**.
5	**CHECK A/C CM.** 1) Replace the A/C CM with a normal part. 2) Read the DTC using Subaru Select Monitor.	Is B1641 detected?	Replace refrigerant flow sensor.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

V: DTC B1642 REFRIGERANT FLOW SENSOR CIRCUIT OPEN

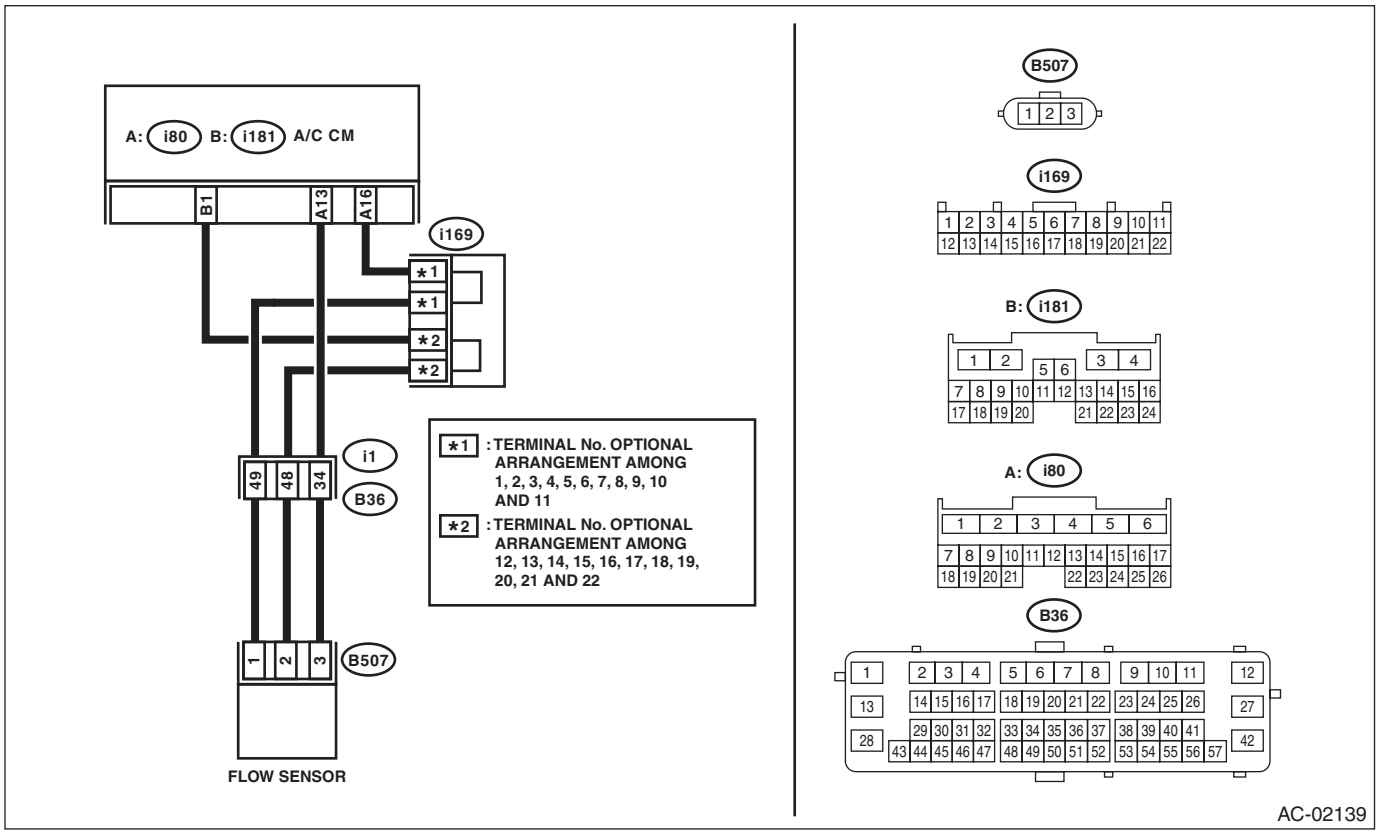
DTC DETECTING CONDITION:

- The voltage of the sensor signal line increased to 4.7 V or more.
- The circuit is open or shorted.

TROUBLE SYMPTOM:

A/C does not function because refrigerant flow amount cannot be measured.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK CURRENT DATA.** Using the Subaru Select Monitor, check "Refrigerant Flow".	Is the value 3.2 MPa or more?	Go to step **2**.	Refrigerate flow sensor circuit is normal.
2	**CHECK SENSOR POWER SUPPLY.** 1) Disconnect the refrigerant flow sensor connector. 2) Turn the ignition switch to ON. 3) Using the tester, measure the voltage between terminals. ***Connector & terminal*** ***(B507) No. 1 — No. 2:***	Is the voltage 4.5 — 5.0 V?	Go to step **6**.	Go to step **3**.
3	**CHECK HARNESS.** 1) Disconnect the A/C CM connector. 2) Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B507) No. 3 — (i80) No. 13:*** ***(B507) No. 2 — (i181) No. 1:*** ***(B507) No. 1 — (i80) No. 16:***	Is there continuity?	Go to step **4**.	Repair or replace the open circuit of harness.

	Step	Check	Yes	No
4	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B507) No. 1 — Chassis ground:*** ***(B507) No. 2 — Chassis ground:*** ***(B507) No. 3 — Chassis ground:***	Is there continuity?	Repair or replace the short circuit of the harness.	Go to step **5**.
5	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B507) No. 1 — No. 2:*** ***(B507) No. 1 — No. 3:*** ***(B507) No. 2 — No. 3:***	Is there continuity?	Repair or replace the short circuit of the harness.	Go to step **6**.
6	**CHECK A/C CM.** 1) Replace the A/C CM with a normal part. 2) Read the DTC using Subaru Select Monitor.	Is B1641 detected?	Replace refrigerant flow sensor.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

W: DTC B1643 VARIABLE FLOW CHANGE SOLENOID DUTY CIRCUIT ABNORMAL

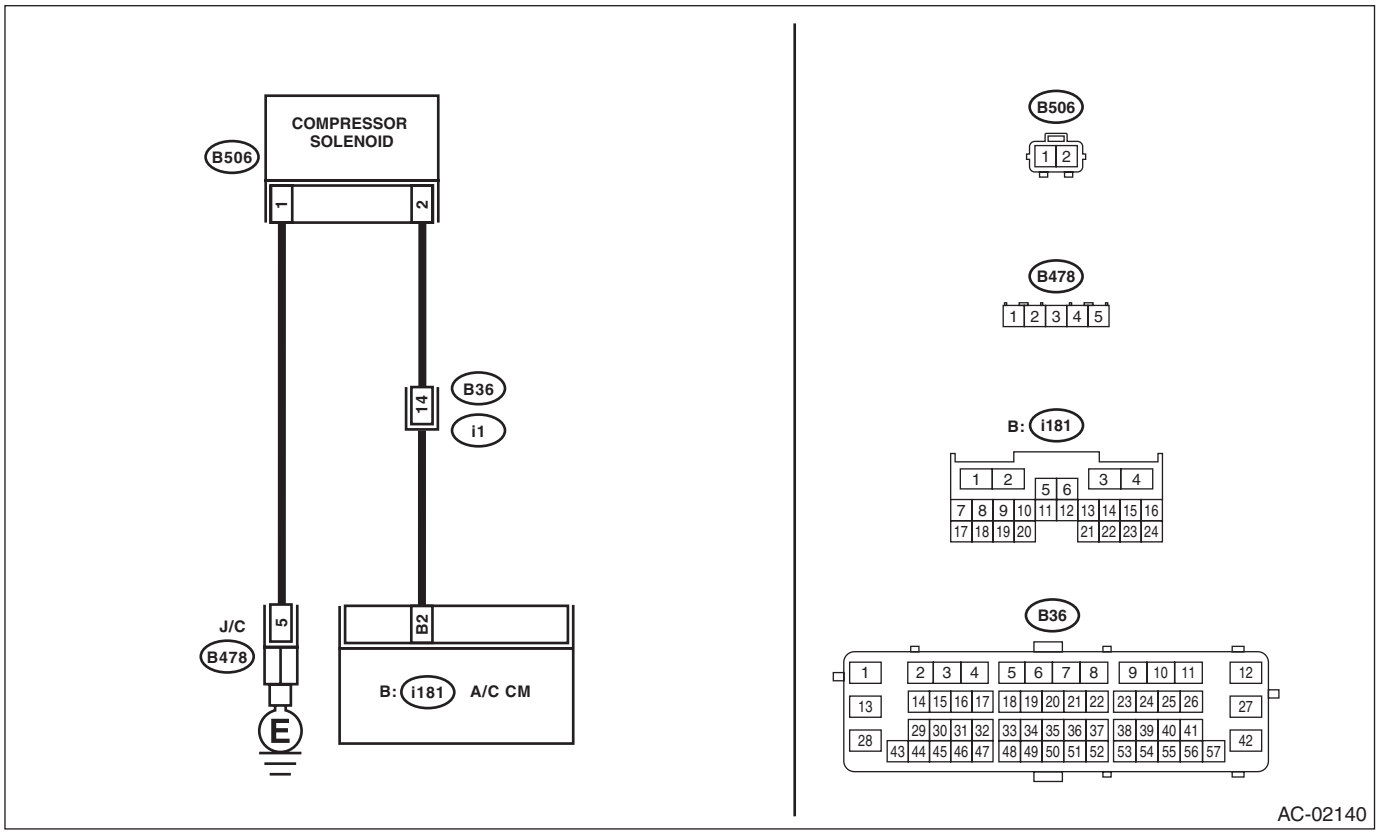
DTC DETECTING CONDITION:

- A/C does not operate.
- Refrigerant pressure does not increase or decrease.

TROUBLE SYMPTOM:

Refrigerant pressure cannot be changed.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**ACTIVE TEST.** 1) Attach the manifold gauge. 2) Using the Subaru Select Monitor, change the setting of “Variable Solenoid Output Duty” from the A/C diagnosis and perform the active test.	Did the actuator operate to the specified target, and the pressure change?	Variable flow change solenoid circuit is normal.	Go to step **2**.
2	**CHECK VARIABLE FLOW CHANGE SOLENOID.** 1) Disconnect the variable flow change solenoid connector. 2) Using a tester, measure the resistance of the solenoid. ***Connector & terminal*** ***(B506) No. 1 — No. 2:***	Is the resistance between 10 — 12 Ω?	Go to step **3**.	Replace the variable flow change solenoid. <Ref. to AC-54, REMOVAL, Heater and Cooling Unit.>
3	**CHECK HARNESS.** 1) Disconnect the A/C CM connector. 2) Using a tester, check for continuity between the harness terminals. ***Connector & terminal*** ***(B506) No. 2 — (i181) No. 2:*** ***(B506) No. 1 — Chassis ground:***	Is there continuity?	Go to step **4**.	Repair or replace the open circuit of harness.

Step		Check	Yes	No
4	**CHECK HARNESS.** Using a tester, check continuity between terminals. ***Connector & terminal*** ***(B506) No. 2 — Chassis ground:***	Is there continuity?	Repair or replace the short circuit of the harness.	Replace the A/C CM. <Ref. to AC-46, REMOVAL, Control Unit.>

X: DTC B1644 REFRIGERANT NOT SEALED DRIVE ERROR

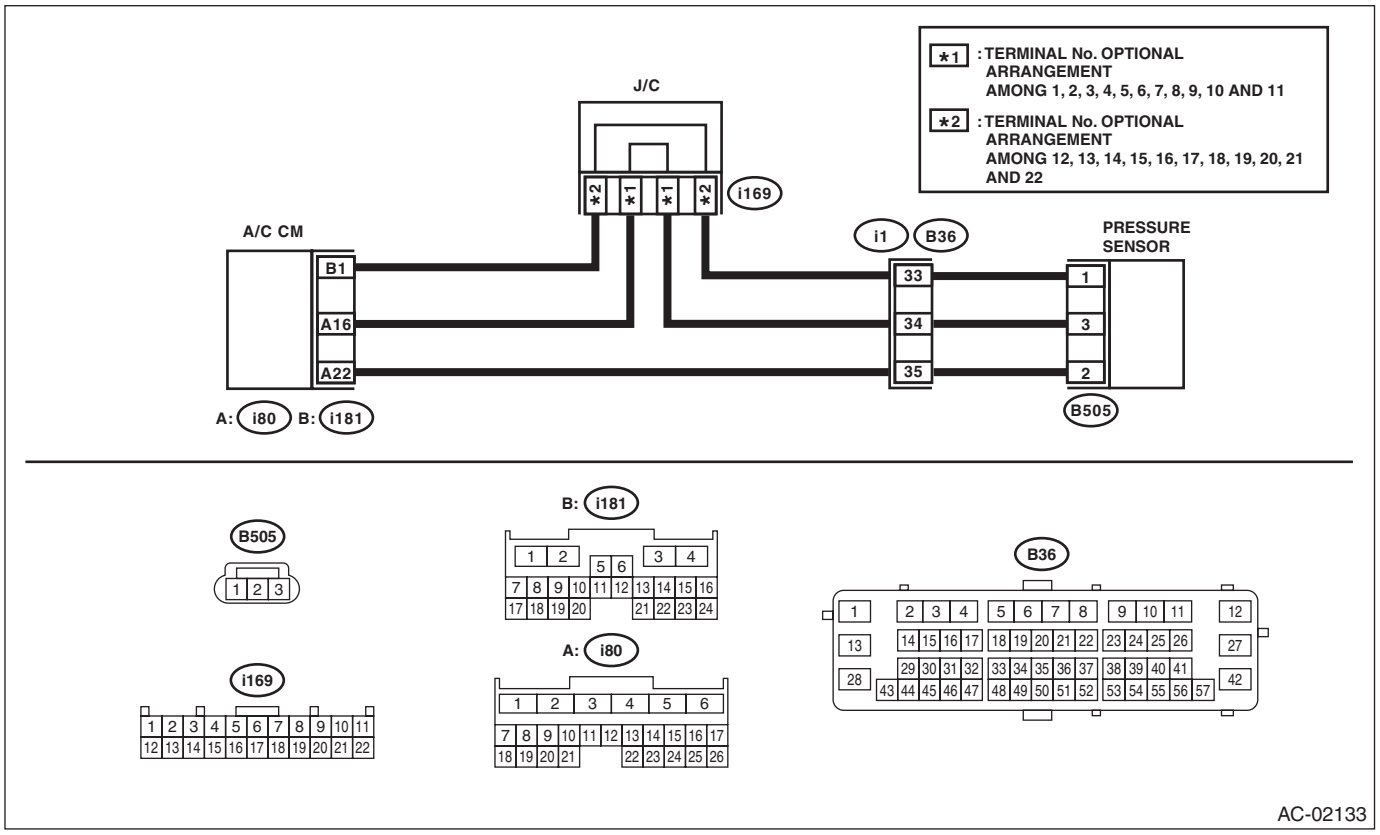
DTC DETECTING CONDITION:

- Compressor was operated while refrigerant was low.
- Compressor was operated while refrigerant pressure was extremely low.

TROUBLE SYMPTOM:

A/C does not operate.

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK AMOUNT OF REFRIGERANT.** Check the refrigerant pressure and filling amount. <Ref. to AC-17, PROCEDURE, Refrigerant Pressure with Manifold Gauge Set.>	Is the filling amount a standard value?	Check the refrigerant pressure sensor or refrigerant flow sensor for defect.	Replace the compressor.

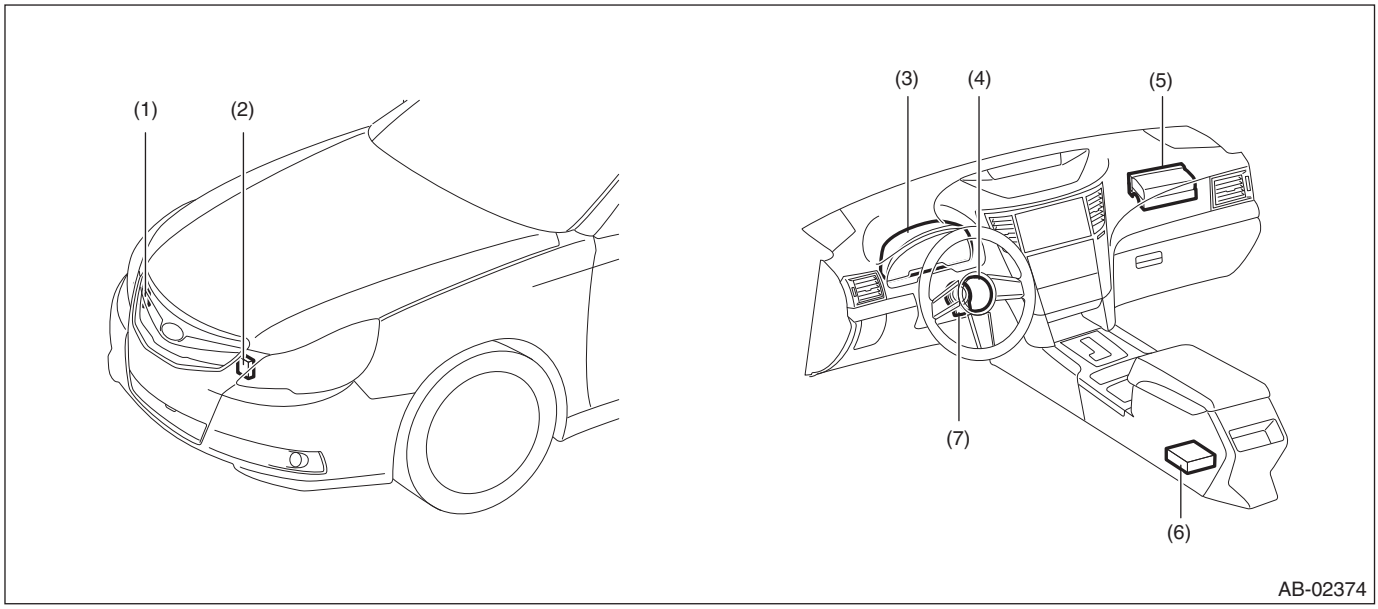
15.Diagnostics with Phenomenon

A: INSPECTION

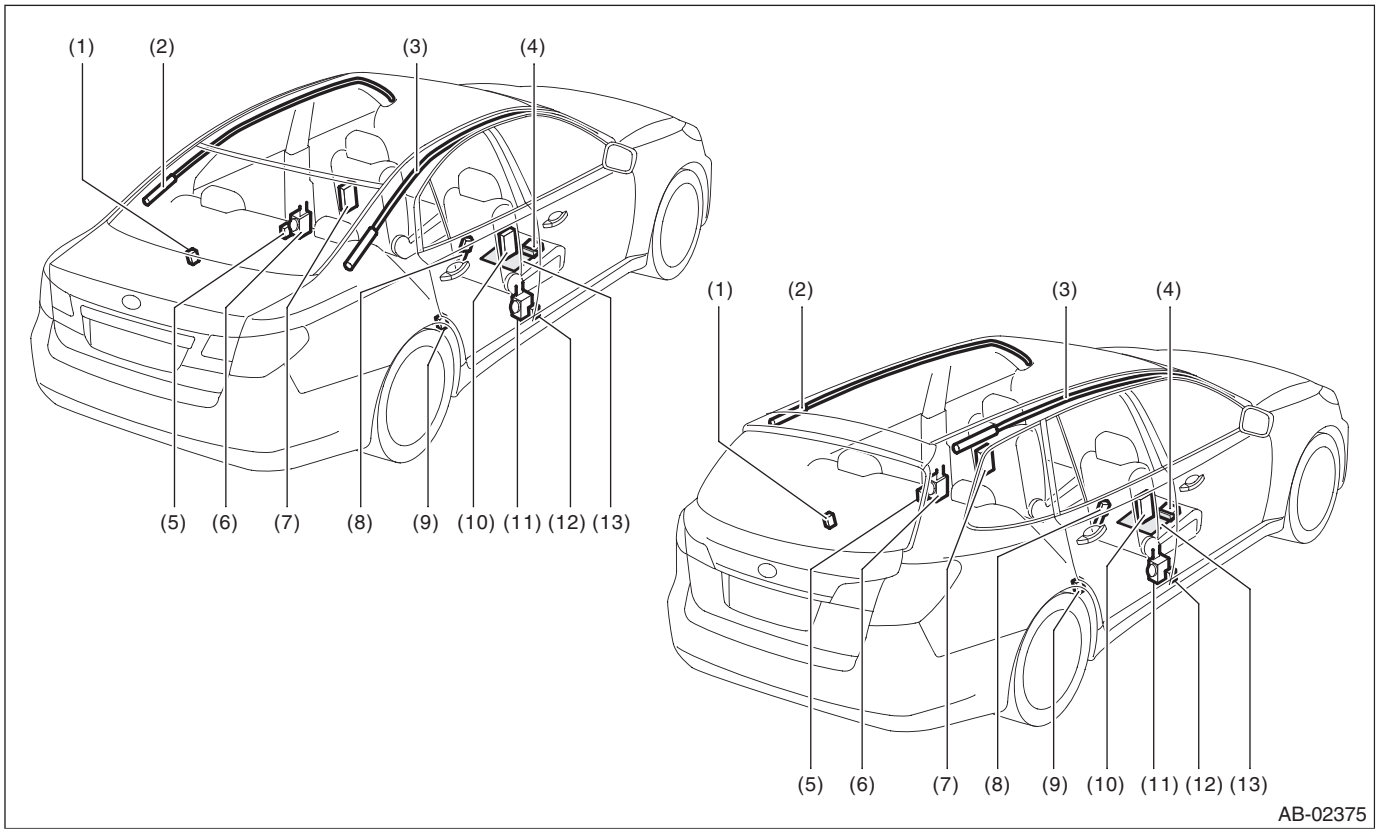
Symptoms	Problem parts
A/C system fails to operate.	• Fuse • Connector (Poor contact) • Ground • A/C control module • Blower fan motor • Blower fan relay • A/C relay • Compressor • Compressor variable solenoid • Evaporator sensor
Fuse is blown out.	• Fuse • Connector (Poor contact) • Harness shorted
Illumination cannot dim.	• Fuse • Connector (Poor contact) • A/C control module
Blower fan does not rotate or fan speed cannot be controlled.	• Fuse • Connector (Poor contact) • Ground • A/C control module • Blower fan motor • Blower fan relay
Unable to switch suction vents.	• Connector (Poor contact) • A/C control module • Intake door actuator
Unable to switch vents.	• Connector (Poor contact) • A/C control module • Mode door actuator
Compartment temperature does not rise. (Warm air does not come out.)	• Connector (Poor contact) • A/C control module • Air mix door actuator • In-vehicle sensor, ambient sensor, evaporator sensor and sunload sensor • In-vehicle sensor aspirator hose
Compartment temperature does not lower. (Cold air does not come out.)	• Connector (Poor contact) • A/C control module • Air mix door actuator • A/C relay • Compressor • Compressor variable solenoid • Radiator fan motor • Radiator fan relay • In-vehicle sensor, ambient sensor, evaporator sensor and sunload sensor • In-vehicle sensor aspirator hose
Compartment temperature is higher or lower than setting temperature.	• A/C control module • Air mix door actuator • In-vehicle sensor, ambient sensor, evaporator sensor and sunload sensor • In-vehicle sensor aspirator hose
Compartment temperature does not quickly respond to setting temperature.	• Air mix door actuator • In-vehicle sensor, ambient sensor, evaporator sensor and sunload sensor • In-vehicle sensor aspirator hose
Radiator fan does not rotate during A/C operation.	• Radiator fan motor • Radiator fan relay

1. General Description

A: COMPONENT

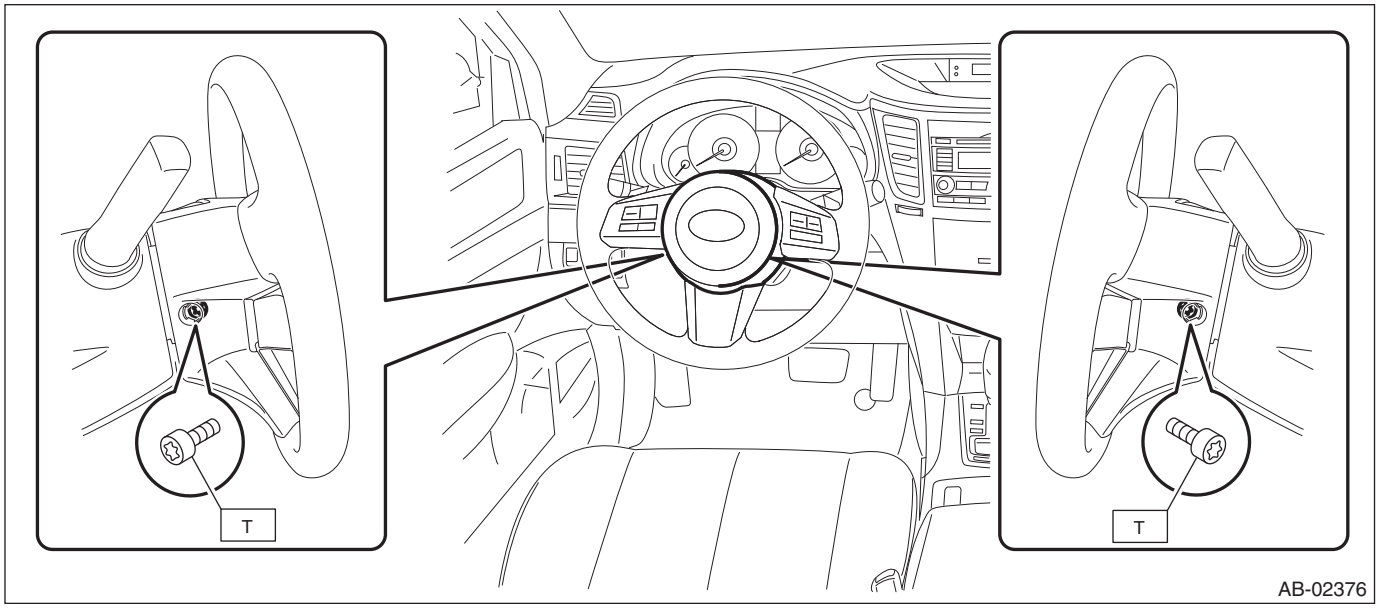


(1) Front sub sensor RH
(2) Front sub sensor LH
(3) Airbag warning light (in combination meter)
(4) Airbag module ASSY (driver)
(5) Airbag module ASSY (passenger)
(6) Airbag control module
(7) Steering roll connector



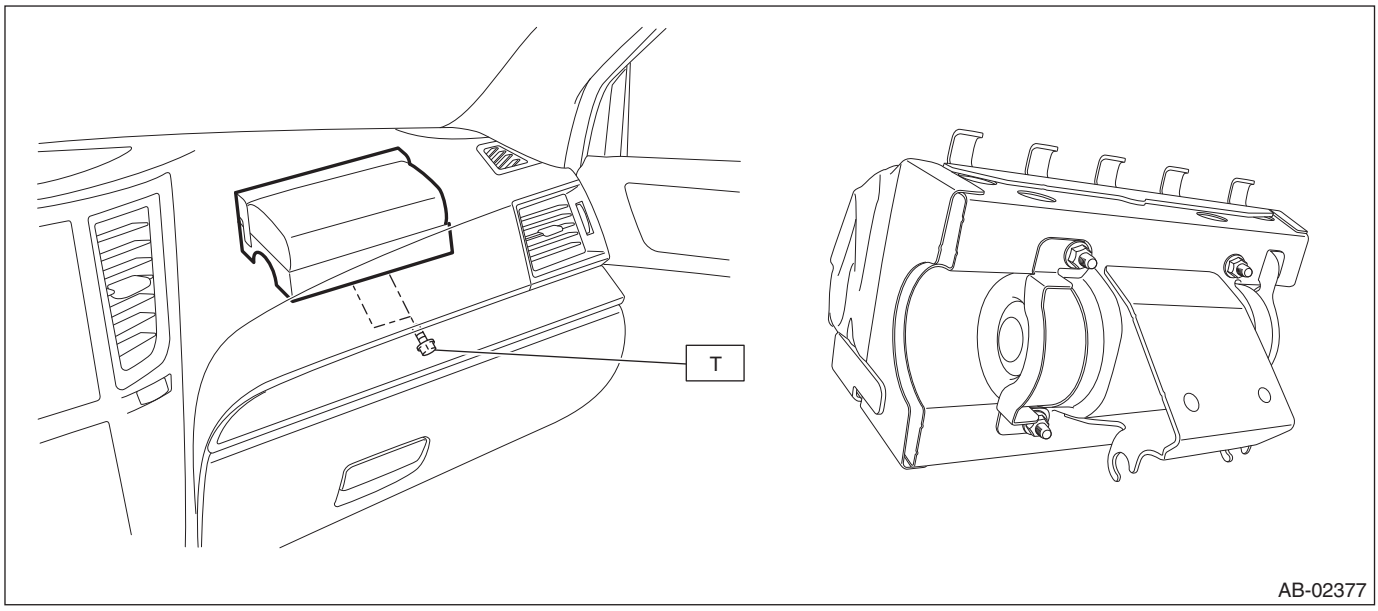
(1) Curtain airbag sensor LH
(2) Curtain airbag module LH
(3) Curtain airbag module RH
(4) Occupant detection control module
(5) Side airbag sensor LH
(6) Seat belt pretensioner LH
(7) Side airbag module LH
(8) Buckle switch RH
(9) Curtain airbag sensor RH
(10) Side airbag module RH
(11) Seat belt pretensioner RH
(12) Side airbag sensor RH
(13) Occupant detection sensor

1. DRIVER'S AIRBAG MODULE



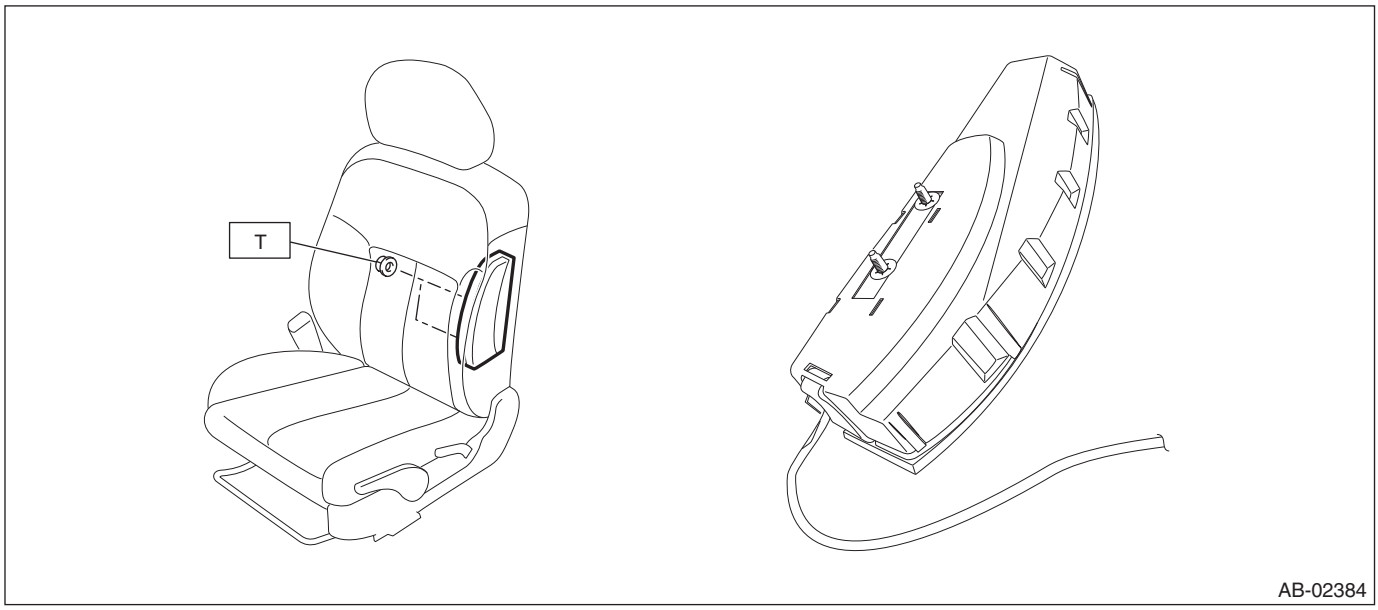
Tightening torque:
10 N·m (1.0 kgf-m, 7.4 ft-lb)

2. PASSENGER'S AIRBAG MODULE



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

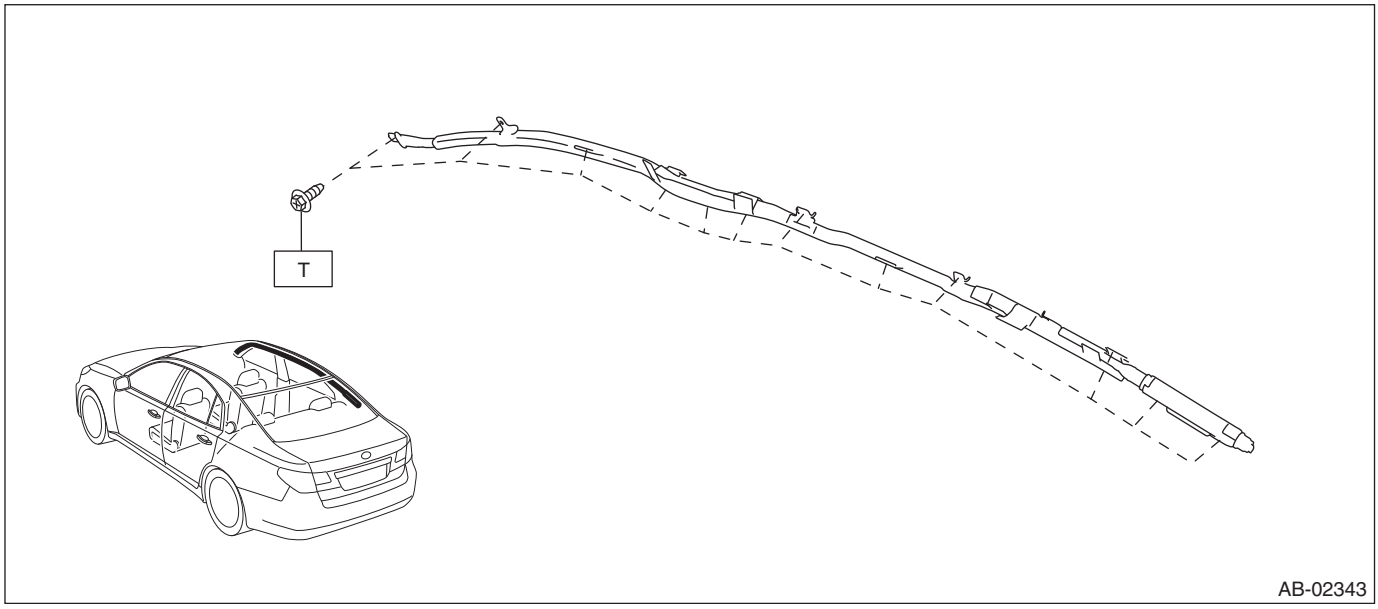
3. SIDE AIRBAG MODULE



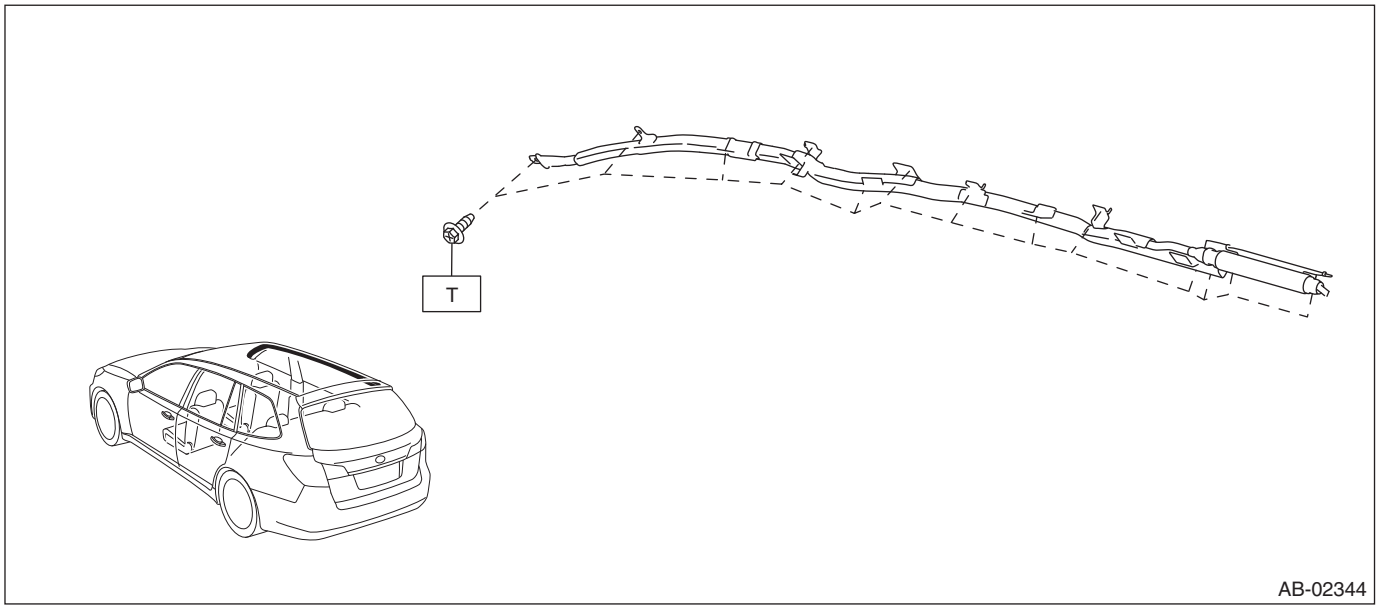
Tightening torque:
6 N·m (0.61 kgf-m, 4.4 ft-lb)

4. CURTAIN AIRBAG MODULE

- Sedan model



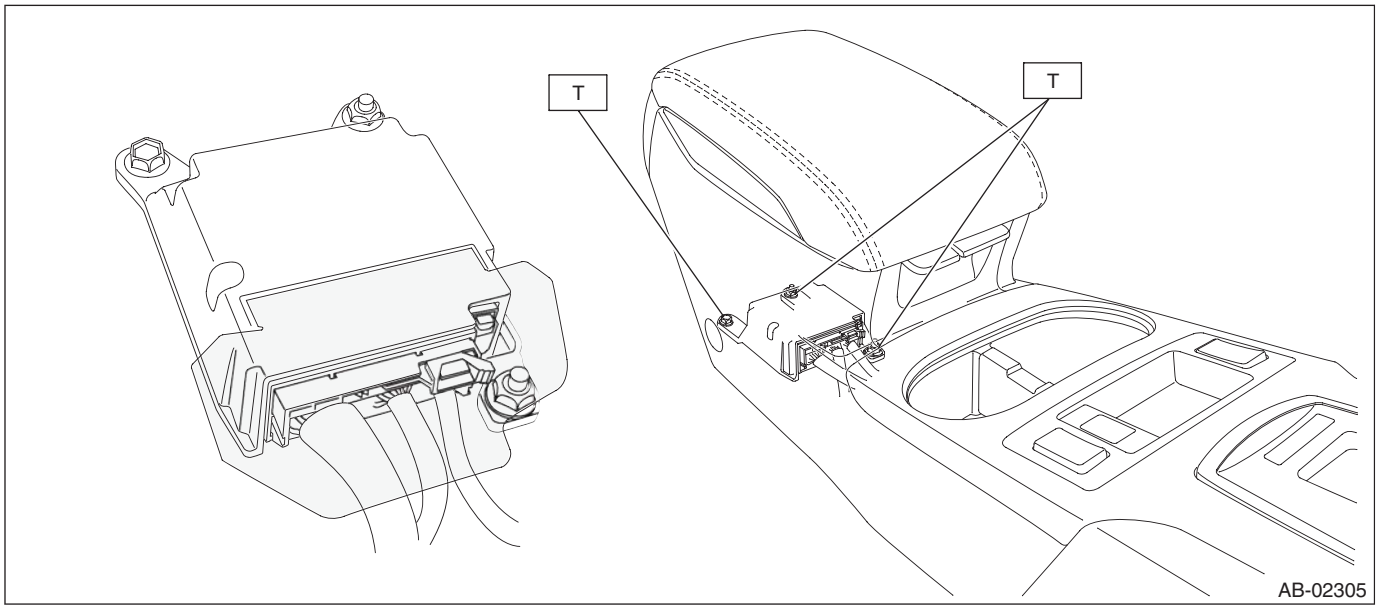
- OUTBACK model



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

5. AIRBAG CONTROL MODULE

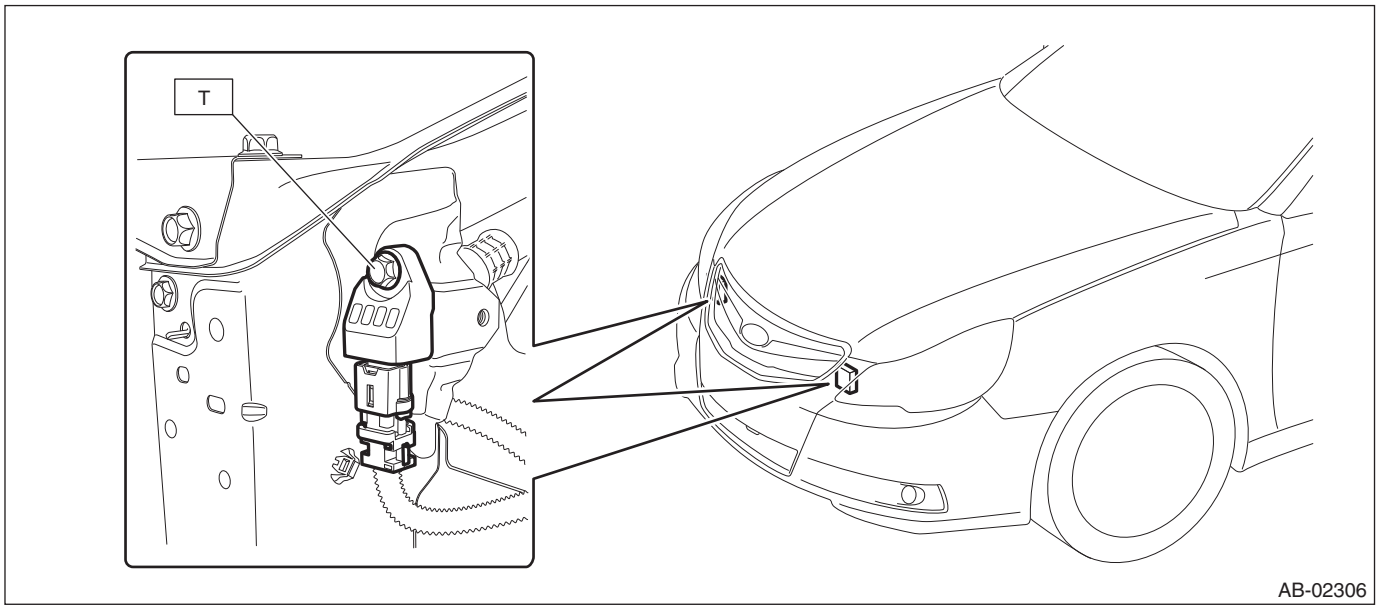
CAUTION:
Do not reuse mounting bolts and nuts.



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

6. FRONT SUB SENSOR

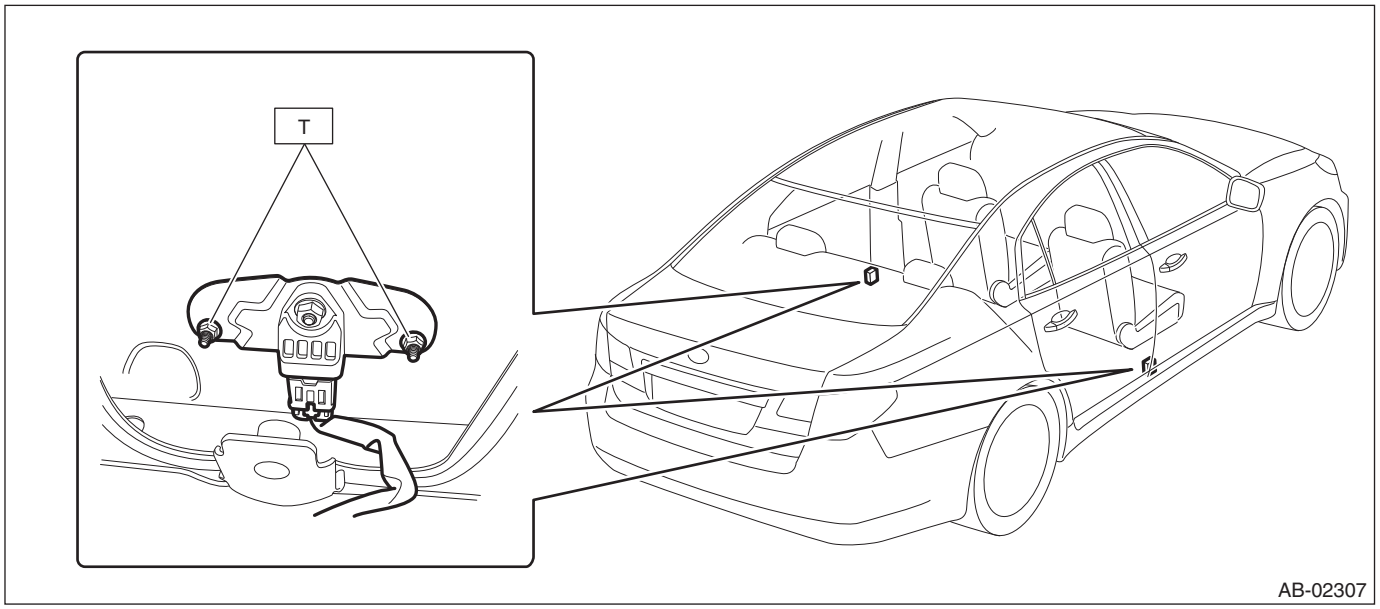
CAUTION:
Do not reuse mounting bolts and nuts.



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

7. SIDE AIRBAG SENSOR

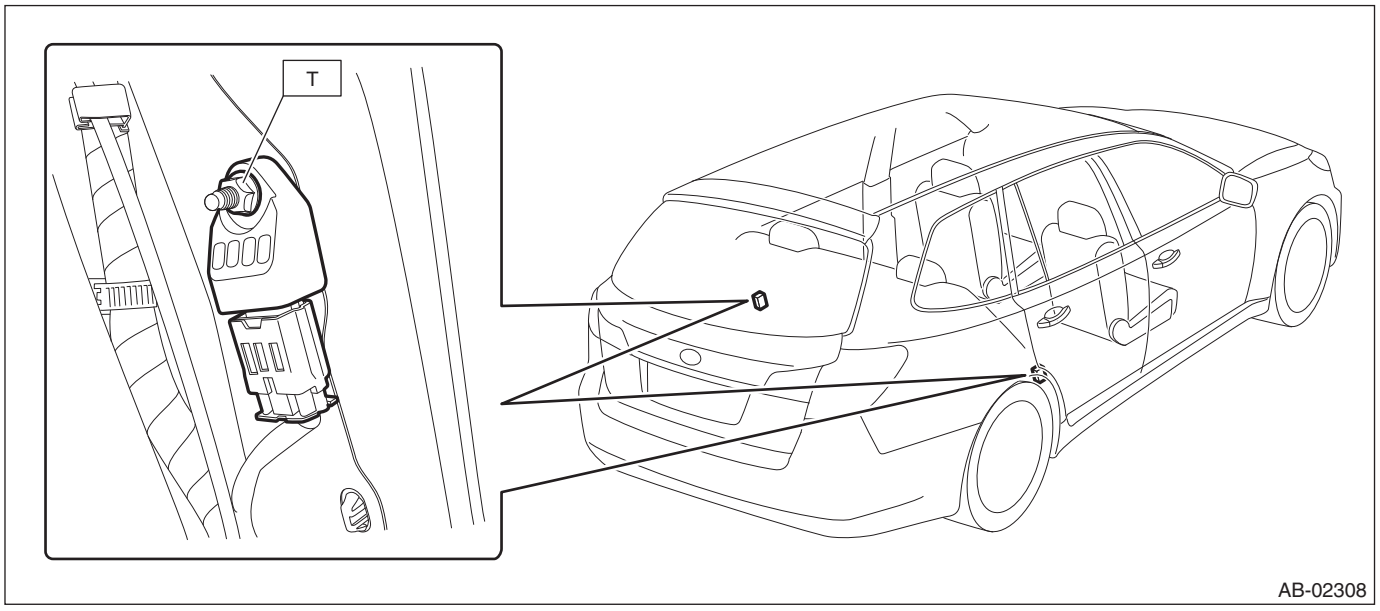
CAUTION:
Do not reuse mounting bolts and nuts.



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

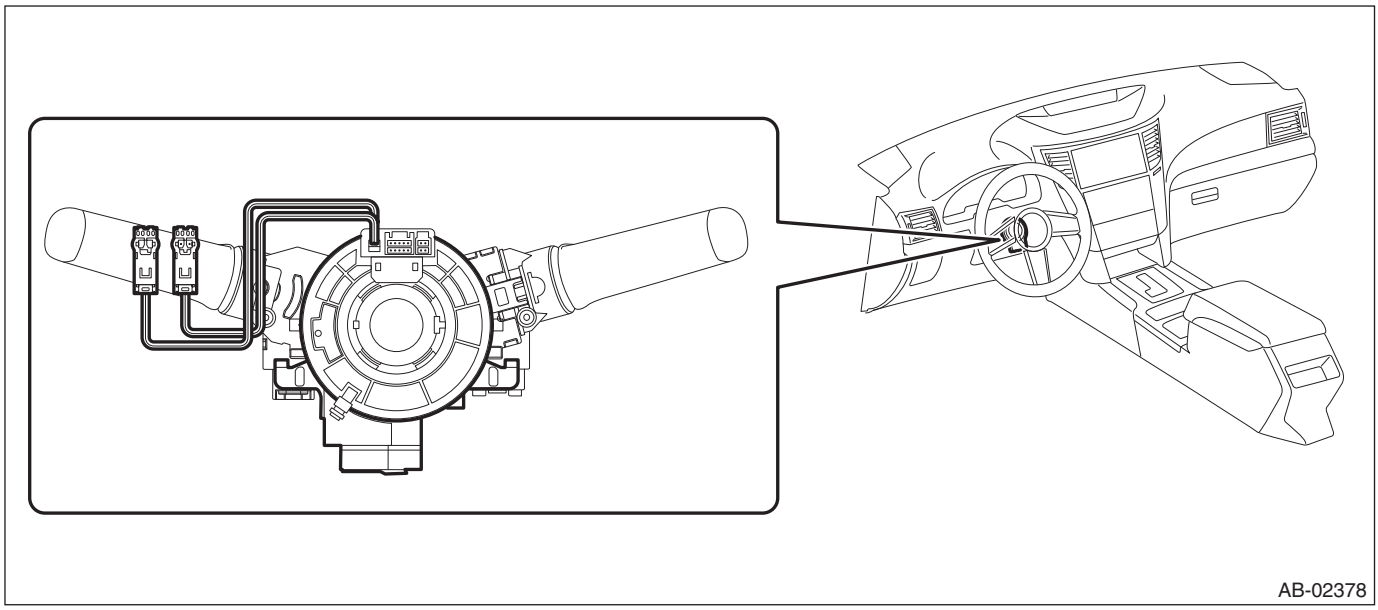
8. CURTAIN AIRBAG SENSOR

CAUTION:
Do not reuse mounting bolts and nuts.



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

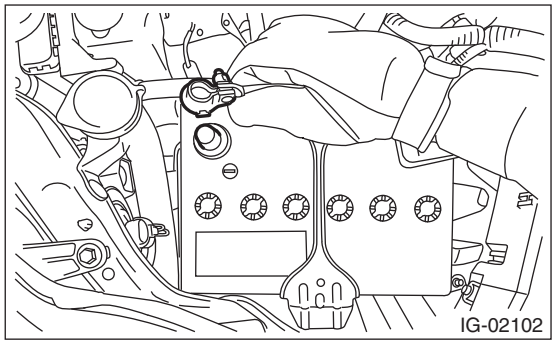
9. STEERING ROLL CONNECTOR



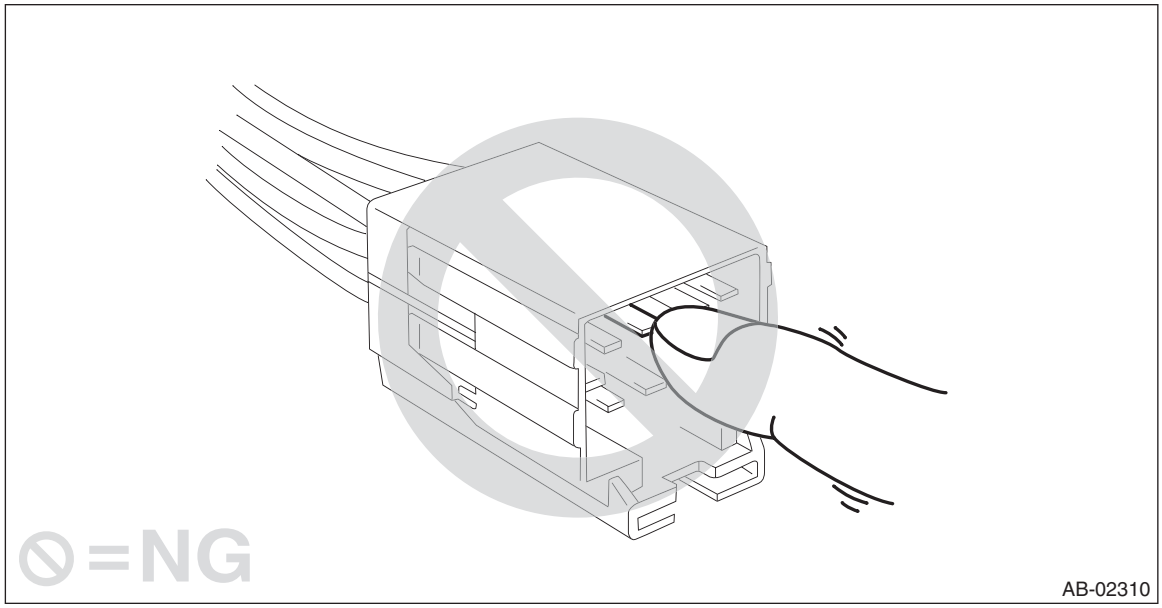
B: CAUTION

1. BEFORE STARTING ALL WORKS

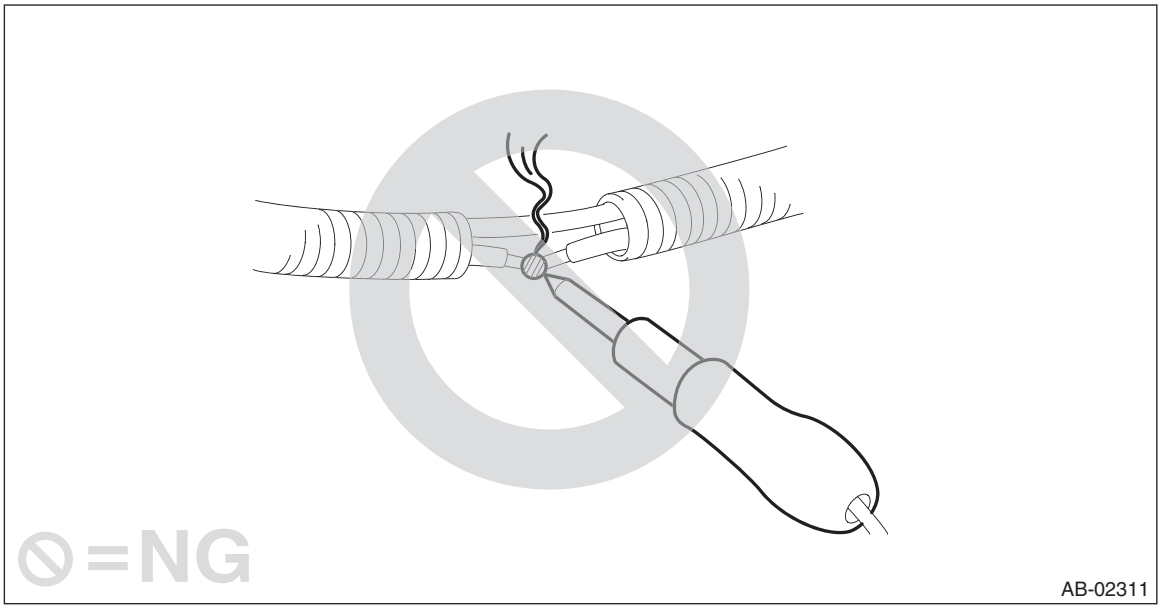
• The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may operate if you do not wait for 60 seconds or more before starting the service of airbag system.



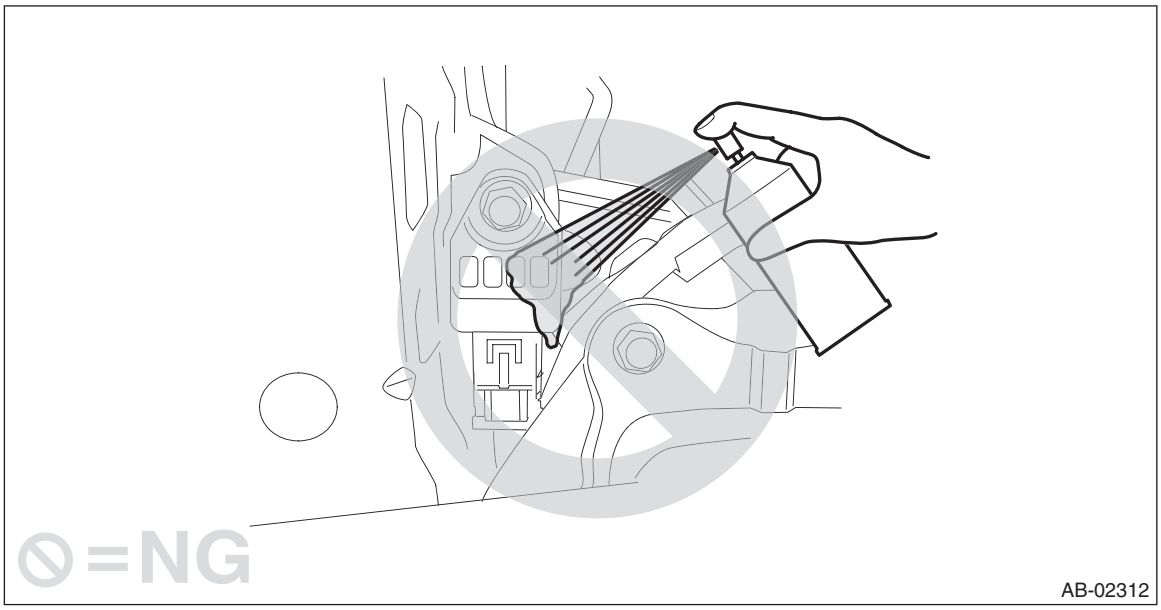
• When servicing a vehicle, be sure to turn the ignition switch to OFF, disconnect the ground cable from battery, and wait for 60 seconds or more before starting work.
• Once the airbag warning light lights up, immediately inspect or repair the vehicle. Otherwise, the airbag system may malfunction.
•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



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



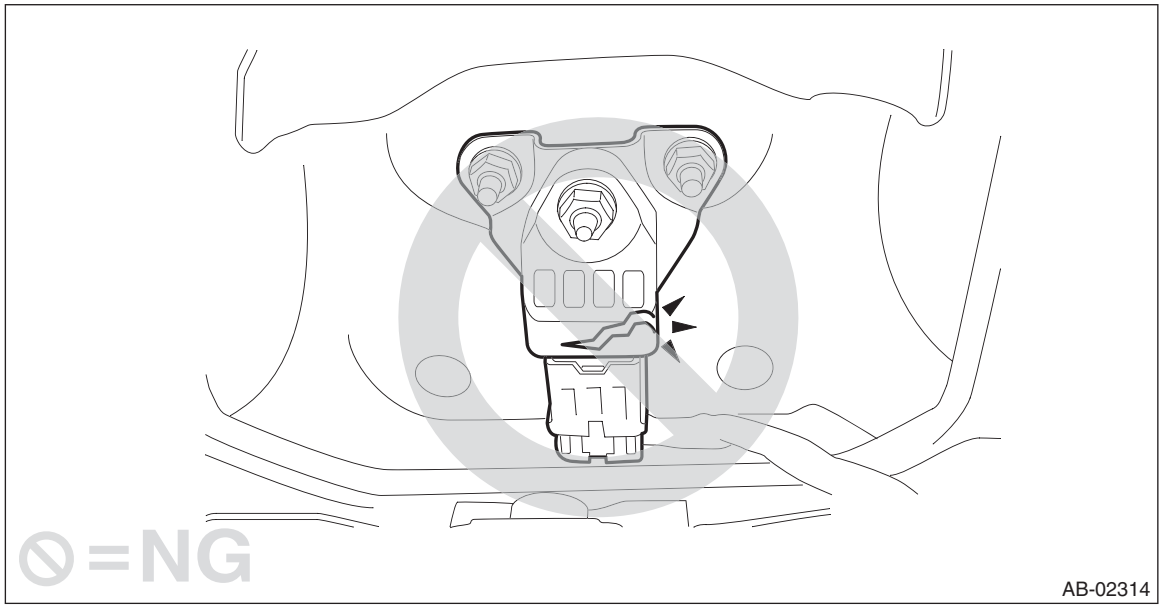
• When painting or performing sheet metal work on the front part of the vehicle, including the front wheel apron, front fender and radiator panel side, remove the front sub sensors and wiring harness of airbag system.
• When painting or performing sheet metal work on the side of the vehicle, including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



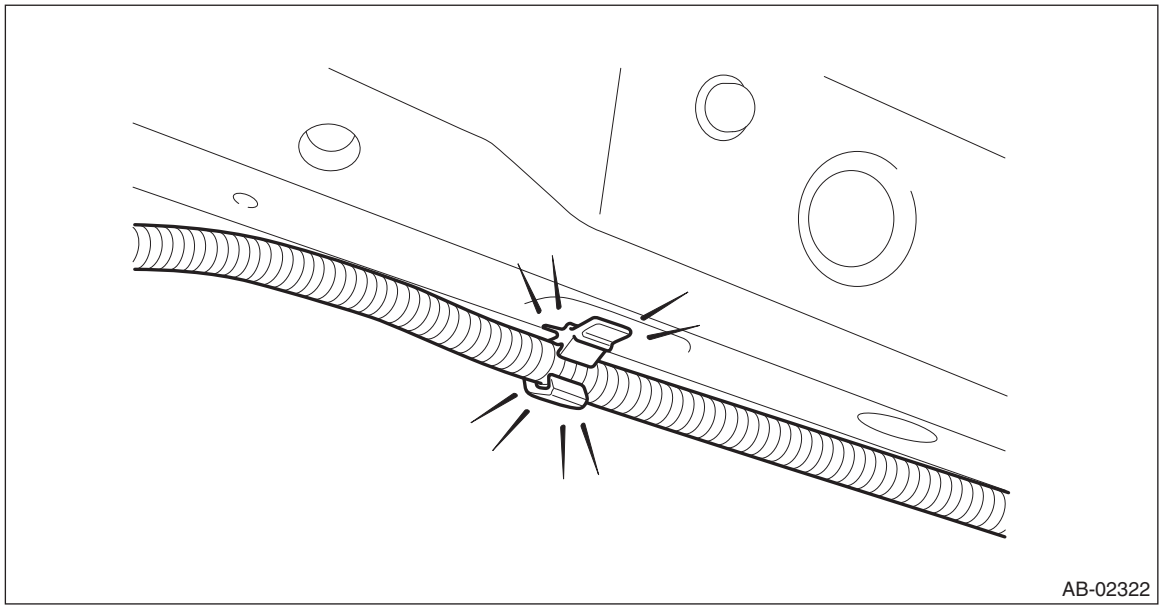
• When installing steering wheel and steering roll connector, be sure to adjust the steering roll connector.

2. BEFORE STARTING PARTS REPLACEMENT

• If airbag sensors, airbag module, airbag control module, pretensioners, or harnesses are deformed or damaged, replace with new parts.

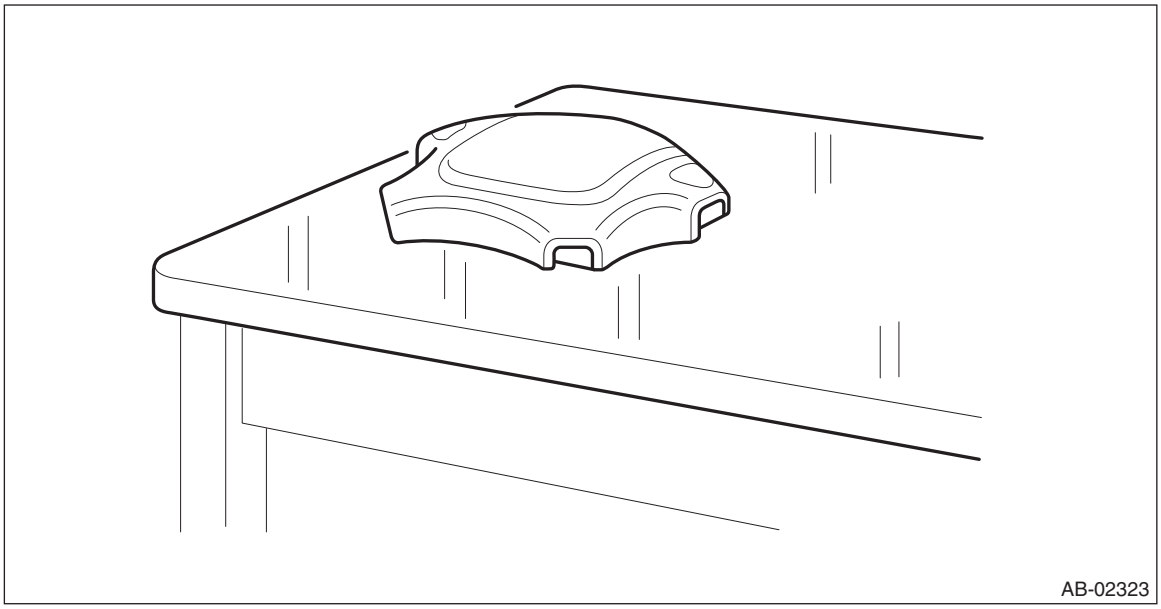


• Install the wiring harness securely with the specified clips to avoid interference or tangled with other parts.

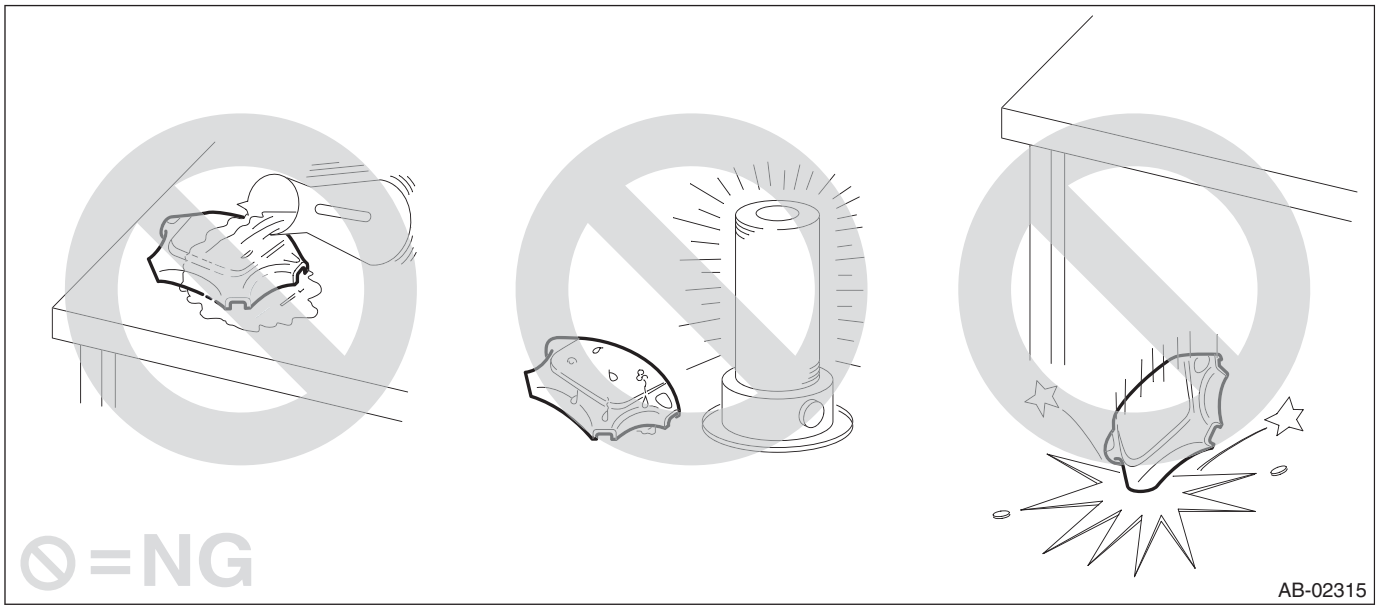


• Do not use the airbag or pretensioner parts from other vehicles. Always replace the defective parts with new parts.
• Never reuse any activated airbag module and pretensioner.
• Do not discard undeployed airbag or pretensioner.
• When airbag control module, front sub sensor, side airbag sensor and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

• After removal of each parts for airbag system, keep them with the pad facing upward on a dry, clean and flat surface without heat, light sources, moisture and dust.

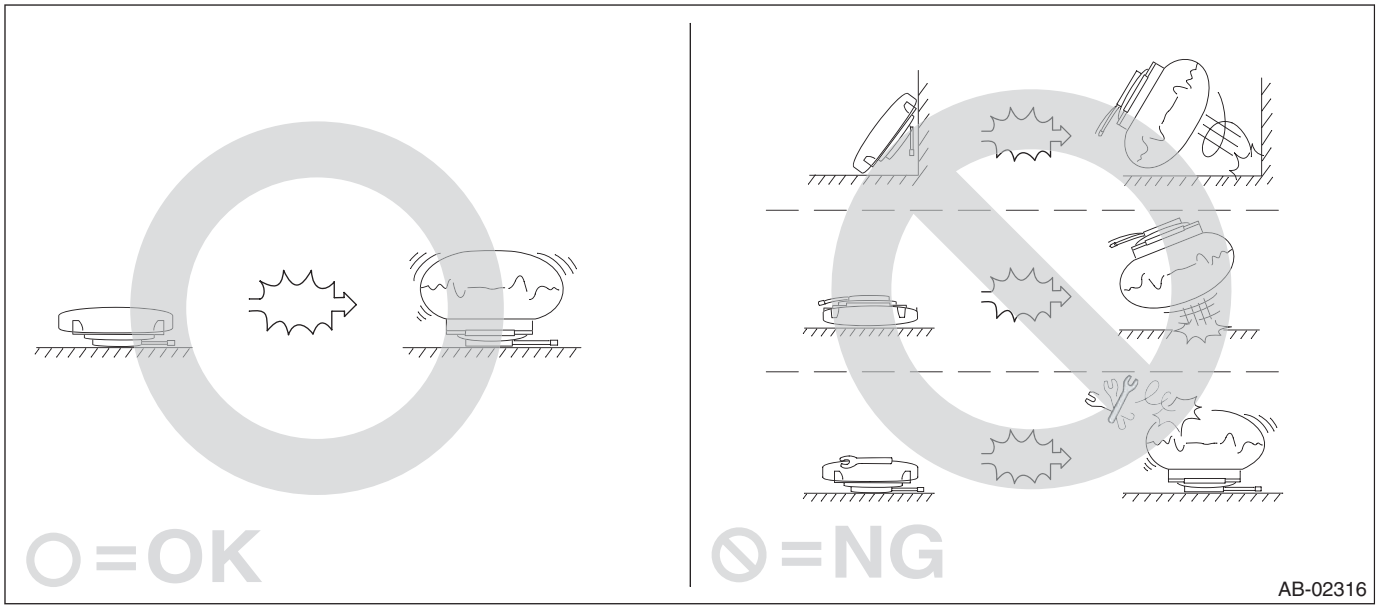


• Do not drop any airbag component, store them under high temperature of 85°C (185°F) or more, or let water, oil or grease get on them; the internal parts may be damaged or the reliability may be greatly lowered.

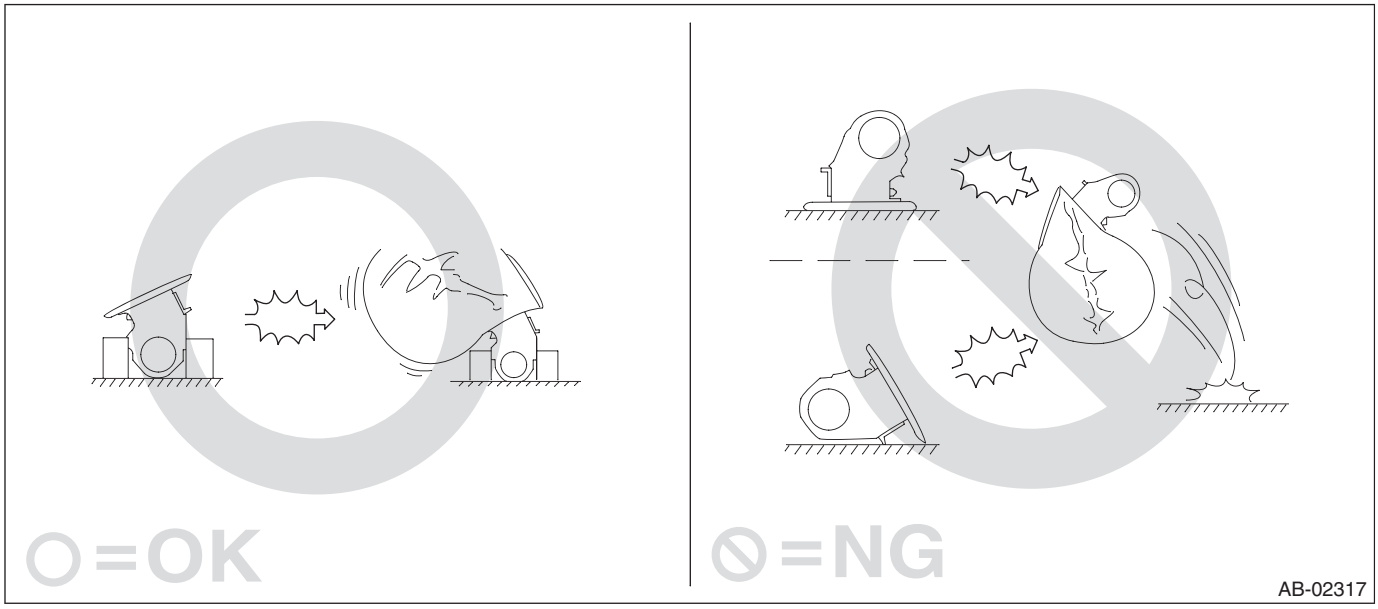


• When storing a removed airbag module, do not place it with the pad side of airbag facing downward. Do not place any objects on the airbag module. Do not pile up the airbag module. If the pad of the airbag module is in contact with other objects, it may cause a serious accident if the airbag accidentally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

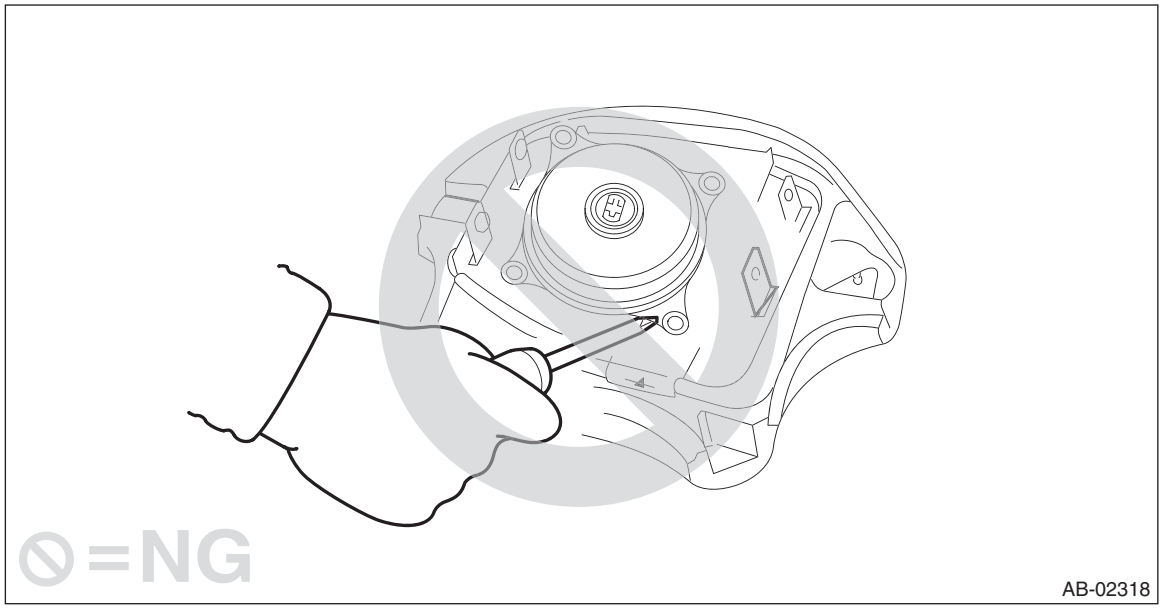
- Driver's airbag module



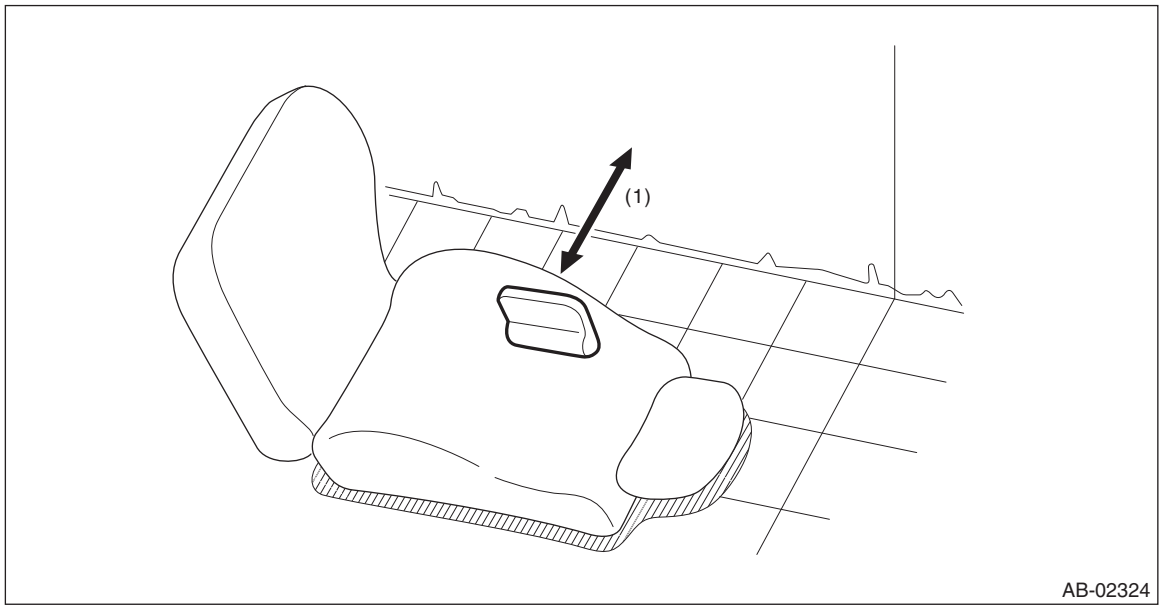
- Passenger's airbag module & side airbag module



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



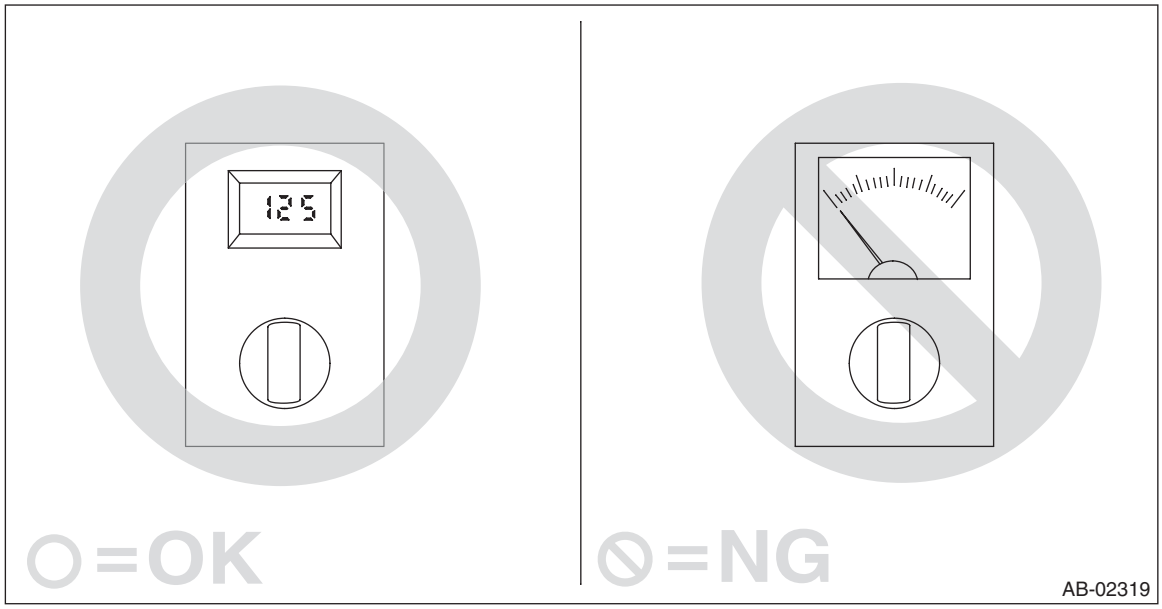
• The removed front seat with airbag module must be kept at least 200 mm (8 in) away from walls and other objects.



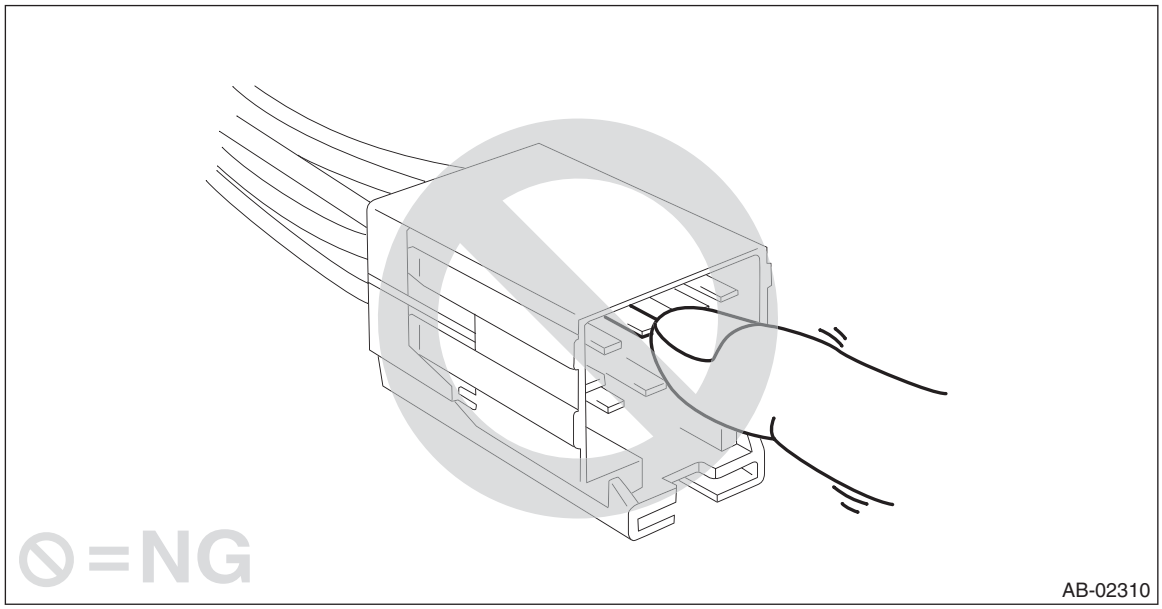
(1) 200 mm (8 in) or more

3. BEFORE STARTING TROUBLESHOOTING

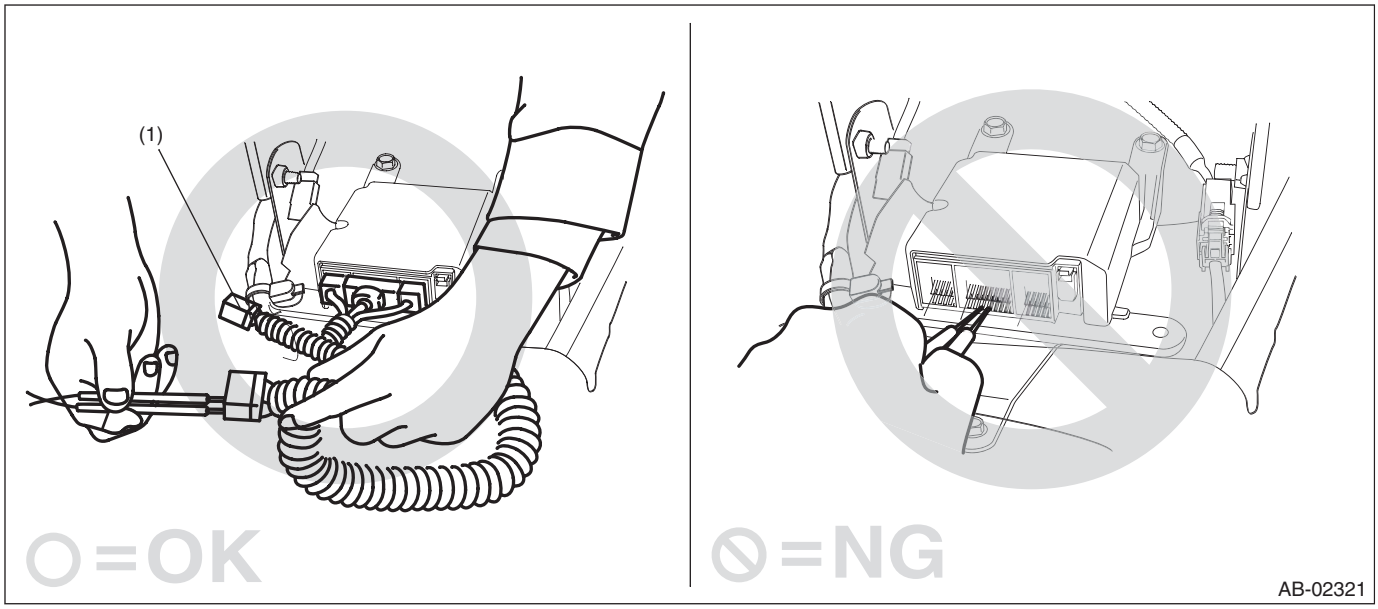
• Even if any part is to be replaced as the result of diagnosis, do not use airbag parts or pretensioner parts from other vehicles. Always replace the defective parts with new parts.
• When checking the airbag system, be sure to use a digital circuit tester. Use of an analog circuit tester may cause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



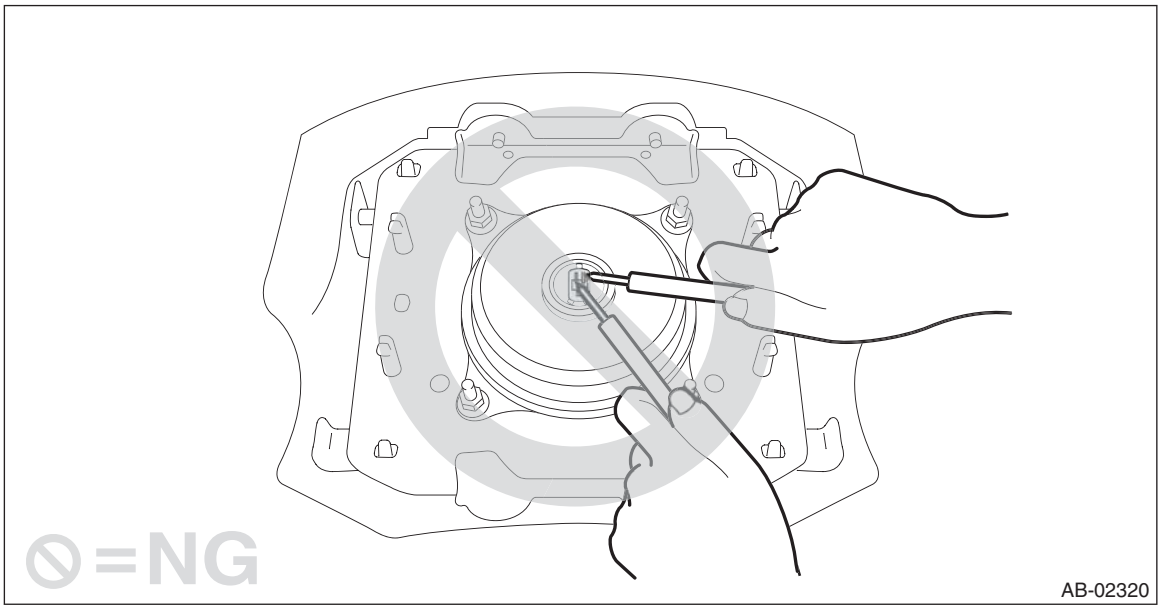
• Do not allow water or oil to come in contact with the connector terminals. Also, do not touch the connector terminals directly.



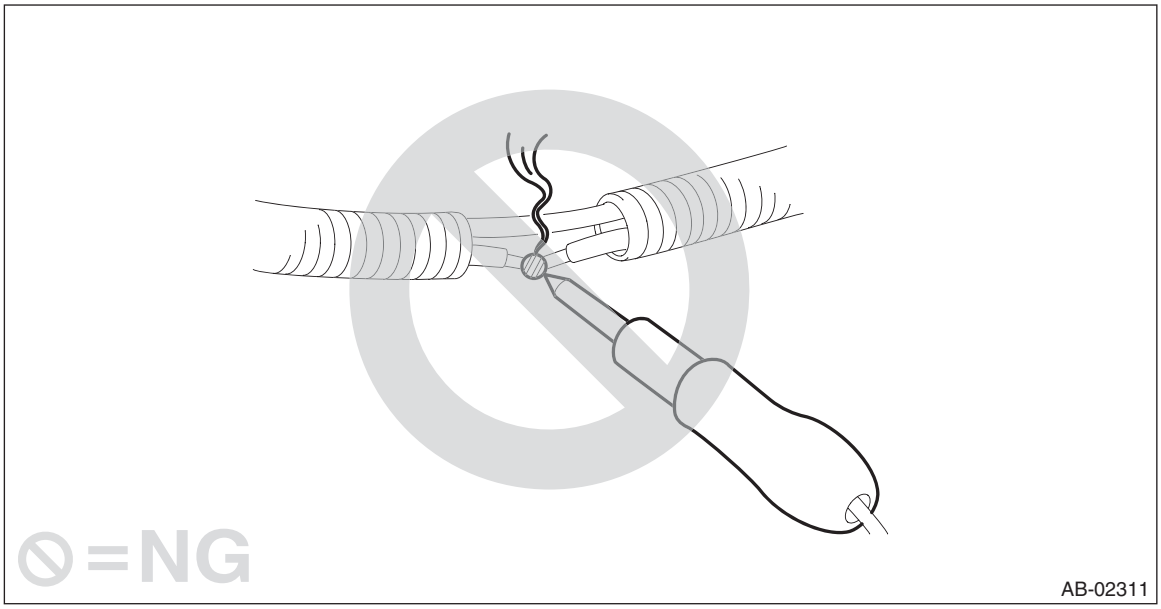
• When checking, use a test harness (1). Damage to connector terminal cause malfunction. Do not directly apply the tester probe to connector terminal of airbag.



• Do not check continuity of the airbag modules for driver's side, passenger's side and curtain, or the pretensioner.

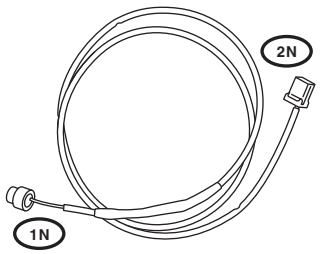
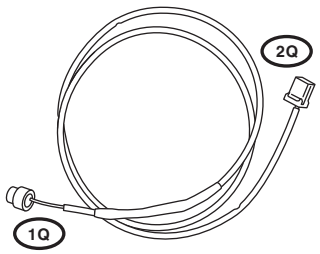


• If damage, open circuit or rust is found on airbag system wiring harness, do not repair the harness. Always replace the faulty harness with a new genuine part.



C: PREPARATION TOOL

1. SPECIAL TOOL

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

2. GENERAL TOOL

TOOL NAME	REMARKS
TORX® T30	Used for removing/installing driver's airbag module.
STEERING WHEEL PULLER	Used for removing the steering wheel.

2. Airbag Connector

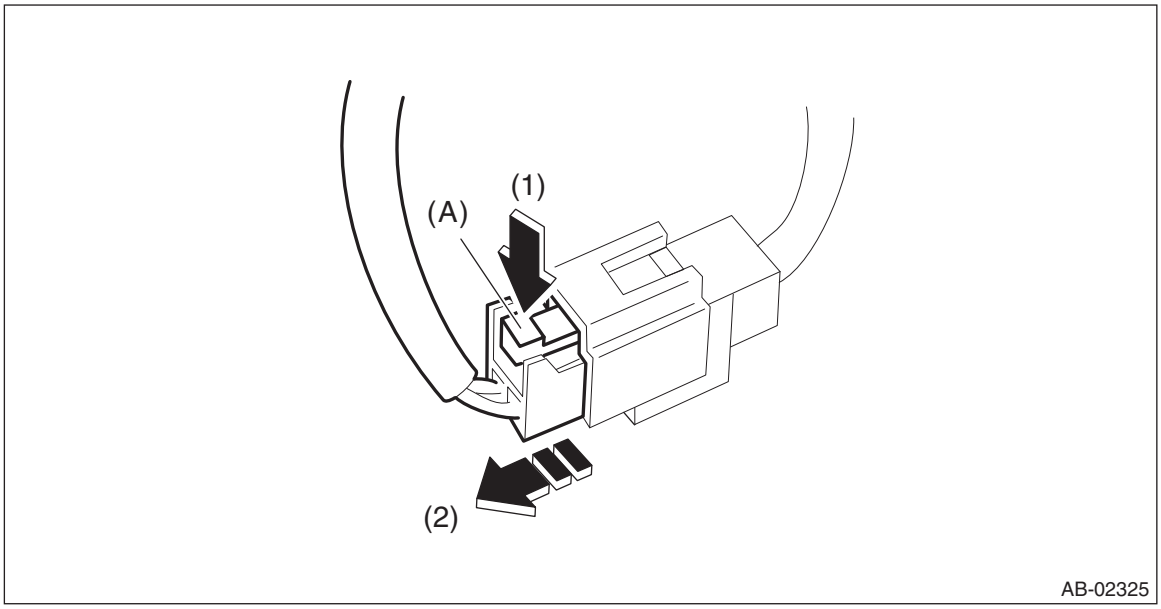
A: PROCEDURE

1. POWER SUPPLY

1) How to disconnect:

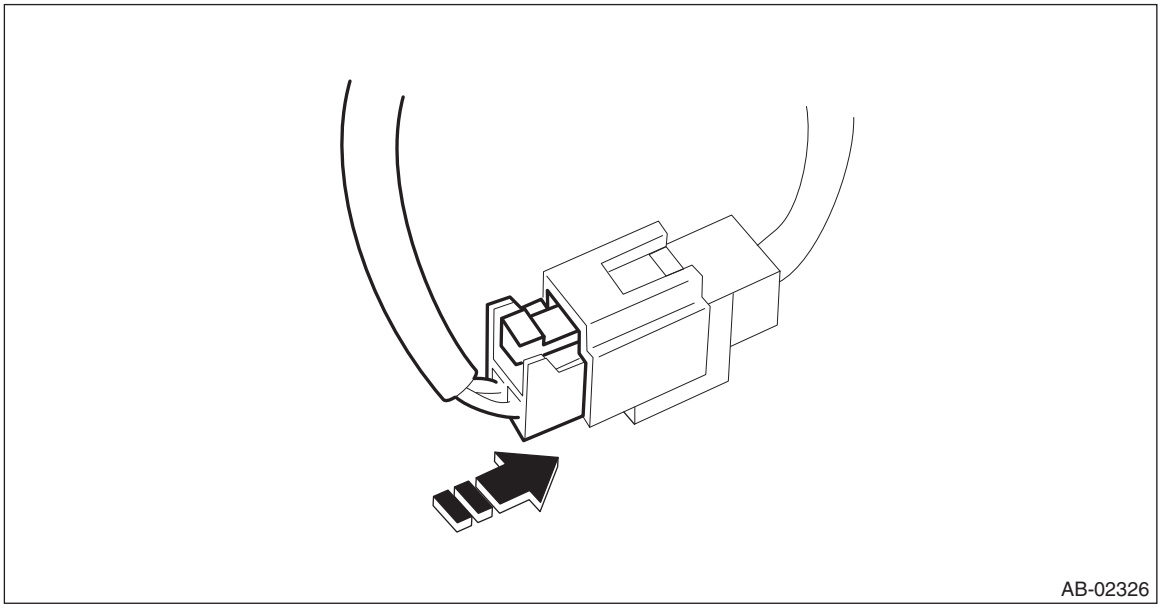
CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.

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



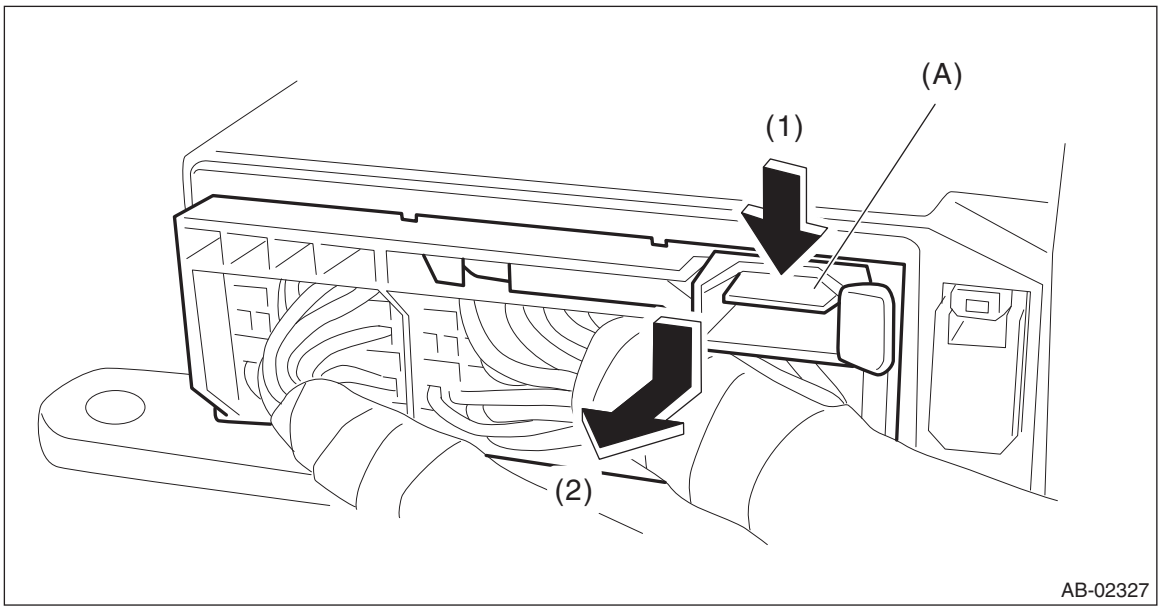
2) How to connect:

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



2. AIRBAG CONTROL MODULE

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



2) How to connect:

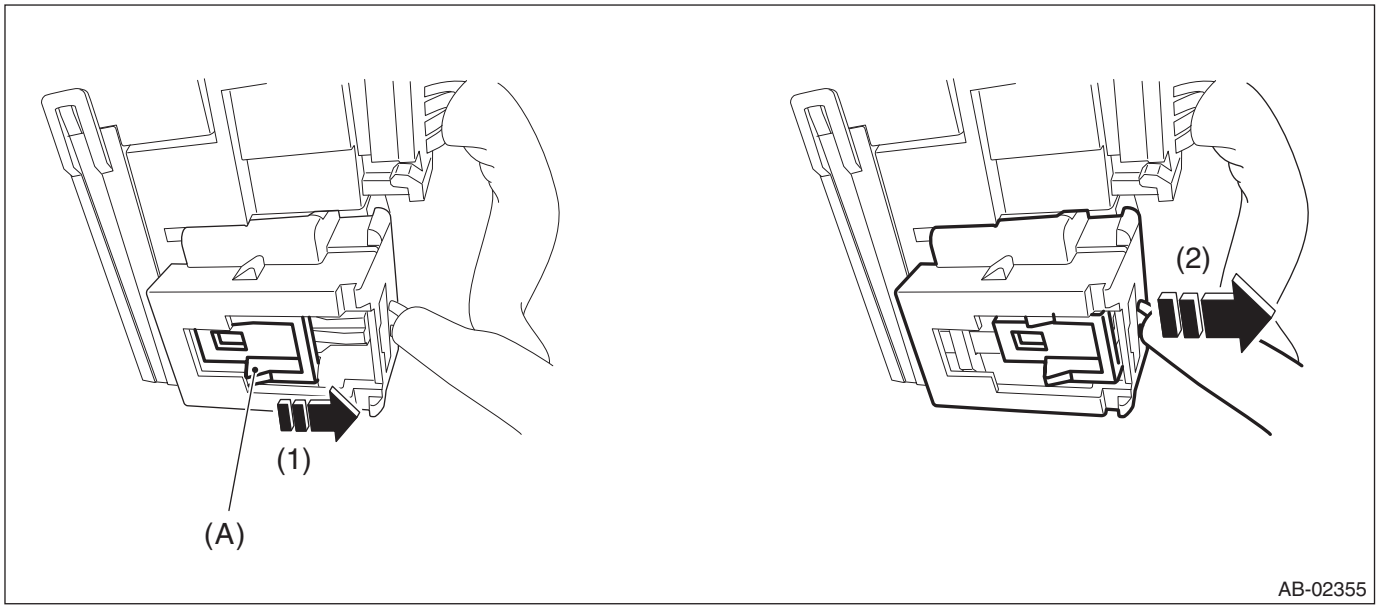
CAUTION:
Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.
Insert the connector and push the lock lever in securely.

3. DRIVER'S AIRBAG MODULE (ROLL CONNECTOR)

1) How to disconnect:

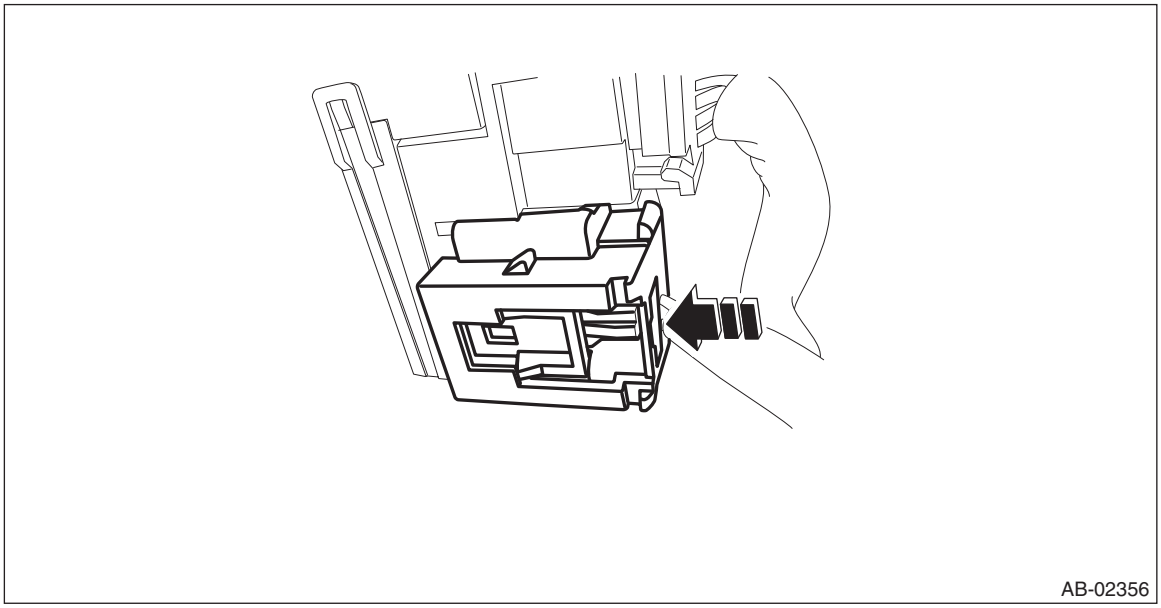
CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.

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



2) How to connect:

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

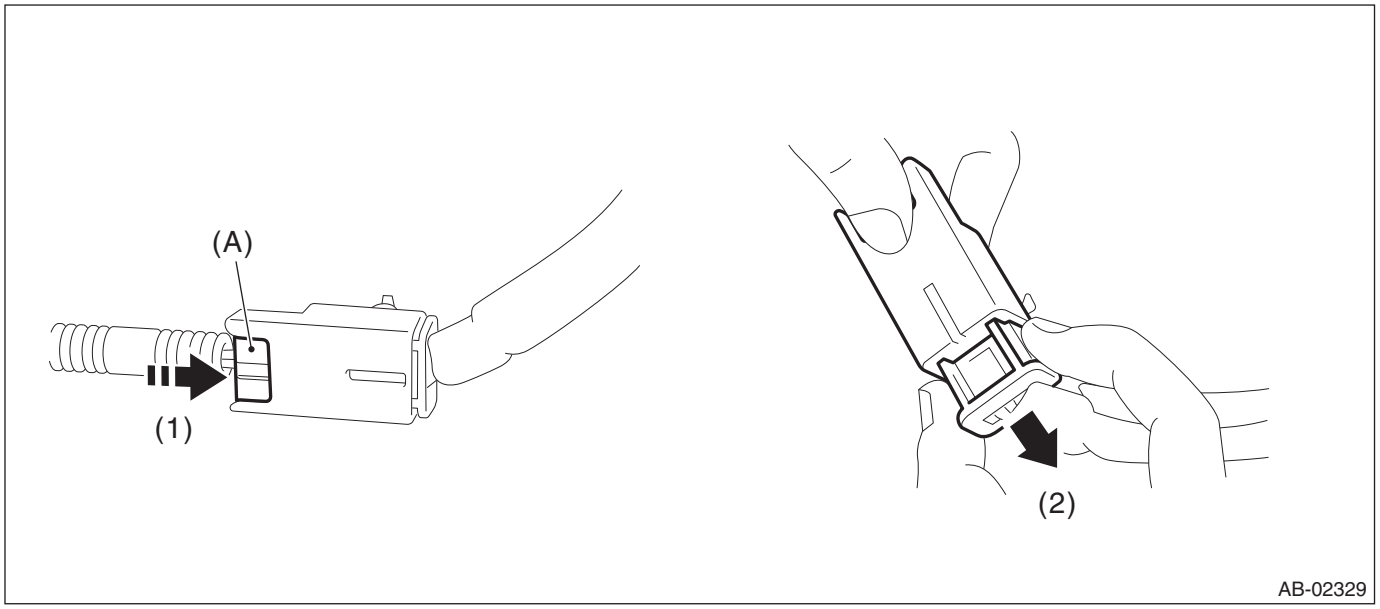


4. PASSENGER'S AIRBAG MODULE

1) How to disconnect:

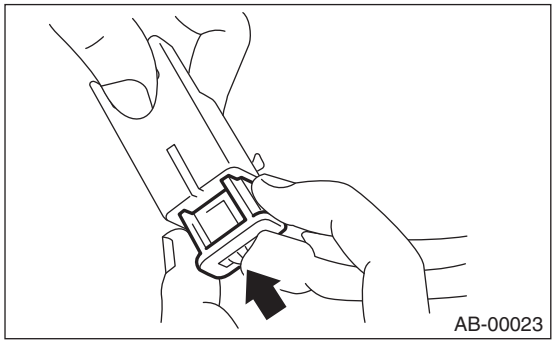
CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.

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



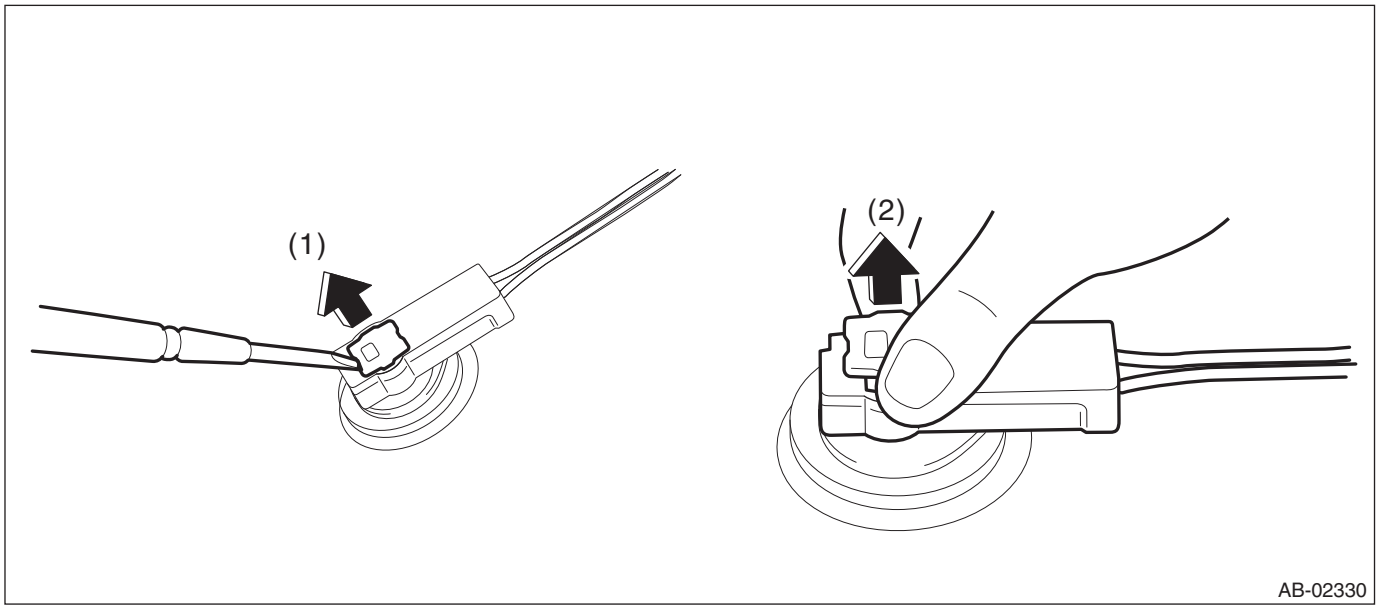
2) How to connect:

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



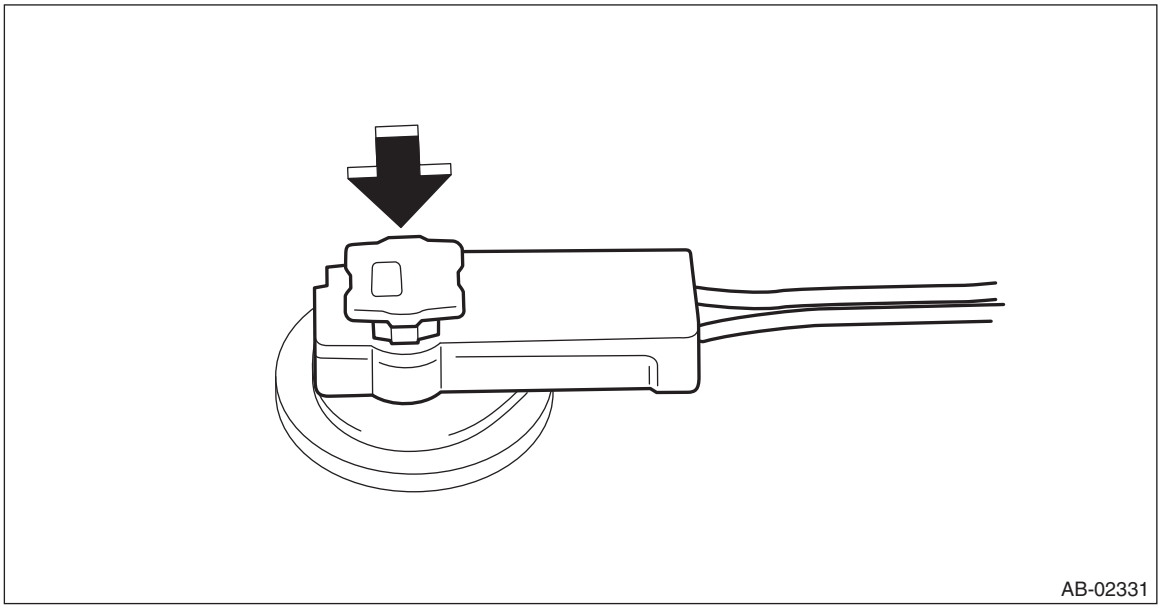
5. DRIVER'S AIRBAG MODULE, CURTAIN AIRBAG MODULE & PRETENSIONER

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



2) How to connect:

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

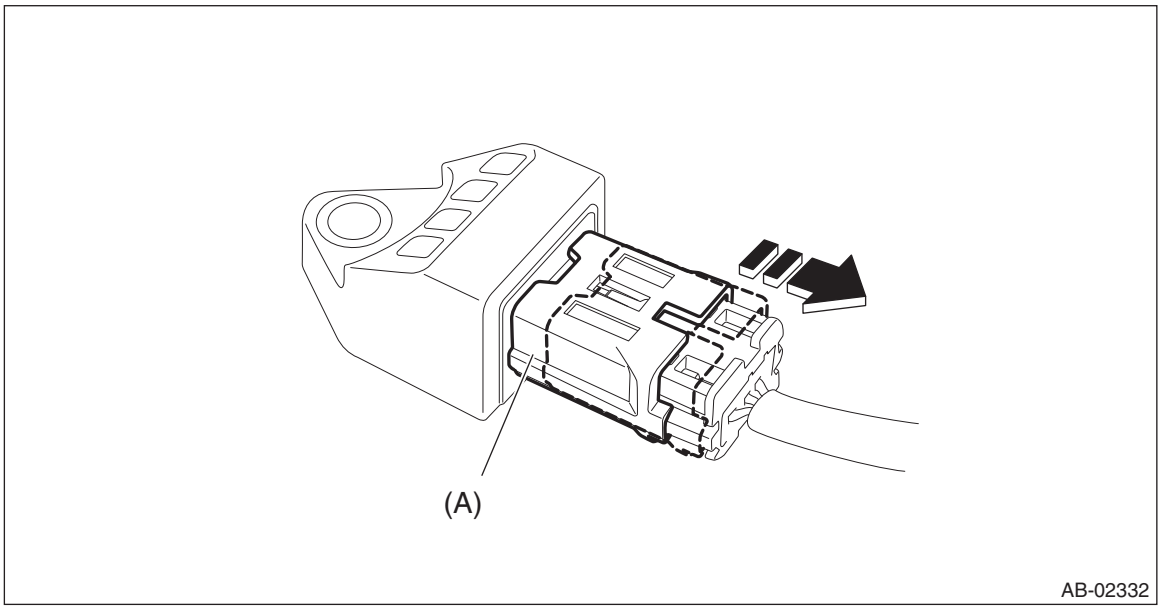


Connect the connector in the reverse order of disconnecting. At this time, be sure to insert it until a clicking sound is heard.

6. FRONT SUB SENSOR, SIDE AIRBAG SENSOR, CURTAIN AIRBAG SENSOR

1) How to disconnect:

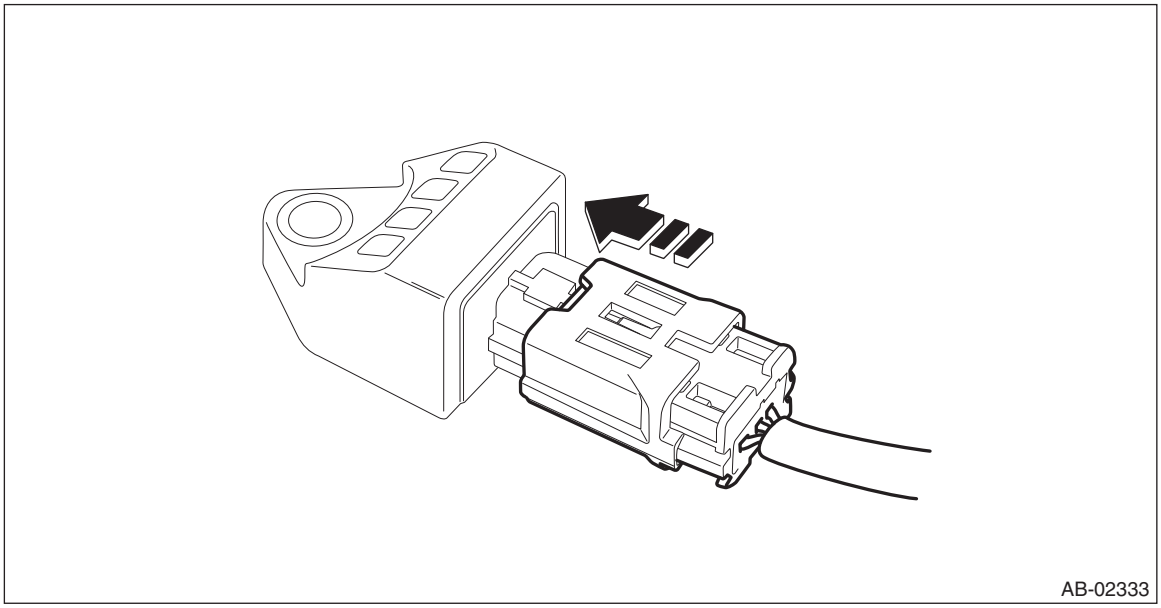
CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.
Holding outer part (A), pull it in the direction of arrow.



2) How to connect:

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

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

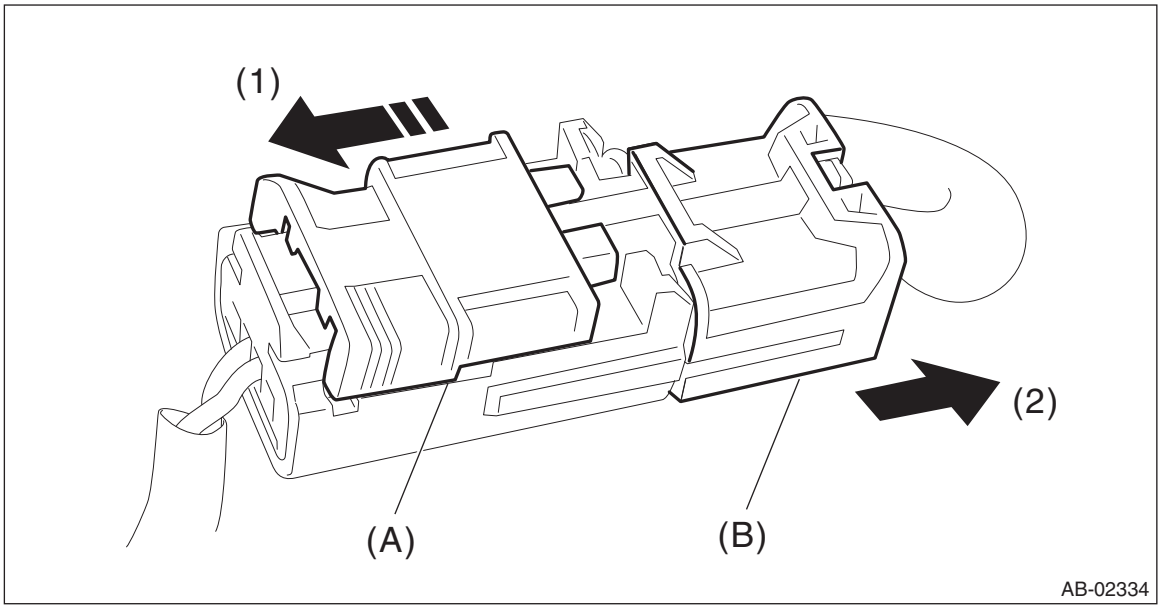


7. SIDE AIRBAG MODULE

1) How to disconnect:

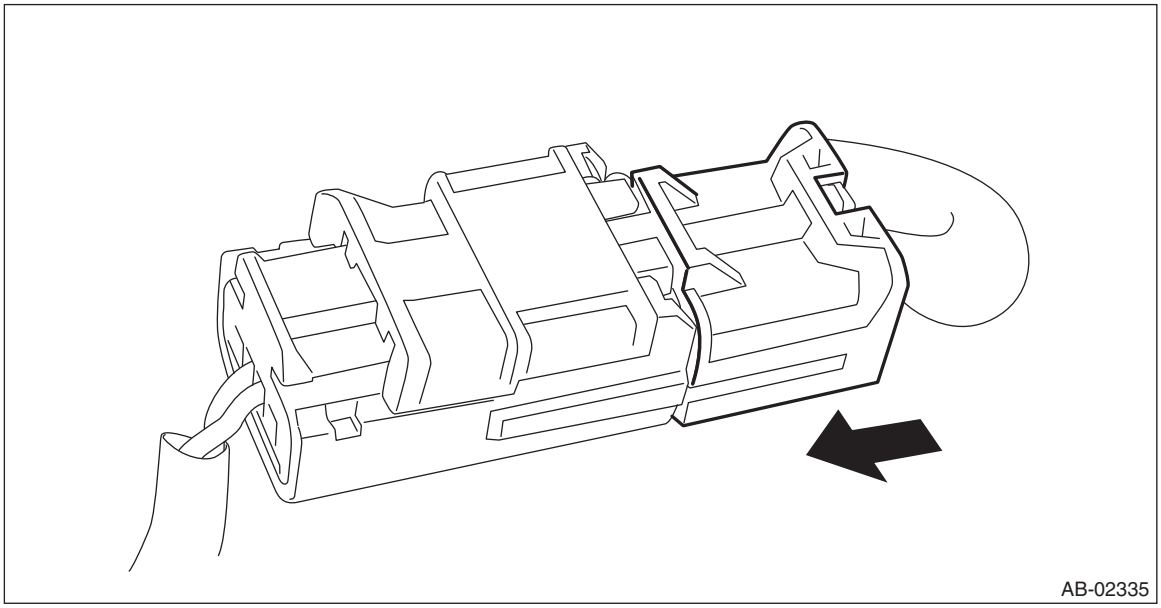
CAUTION:
When pulling the slide lock or disconnecting connector, be sure to hold the connector, not the harness.

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



2) How to connect:

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

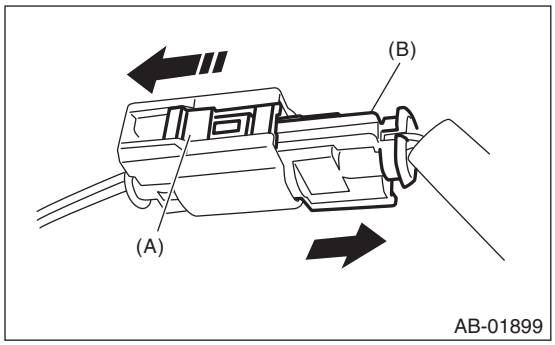


8. BUCKLE SWITCH RH

1) How to disconnect:

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

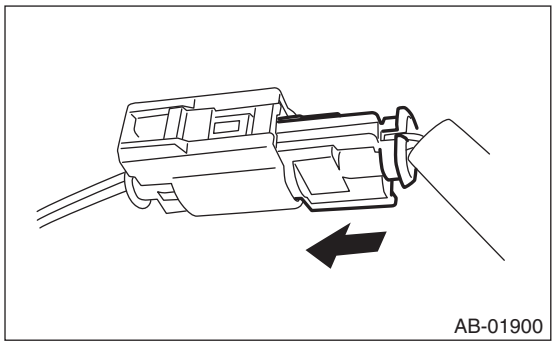
(1) Move the slide lock (A) in the direction of arrow and hold it.
(2) While holding the slide lock (A) in place, pull the connector (B) to the direction of arrow.



2) How to connect:

CAUTION:
Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.

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



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

Refer to “Occupant Detection System”. <Ref. to OD(diag)-8, OCCUPANT DETECTION SYSTEM (BETWEEN AIRBAG REAR HARNESS AND SEAT HARNESS), PROCEDURE, Airbag Connector.>

3. Inspection Locations After a Collision

A: REPLACEMENT

Replace the following parts if the airbag has been activated.

1. FRONT COLLISION

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

2. SIDE COLLISION

1) Airbag control module
2) Side airbag module (operating side)
3) Side airbag sensor (operating side)
4) Curtain airbag module (operating side)
5) Curtain airbag sensor (operating side)

3. INSPECTION OF OTHER PARTS

Check for the following parts, and replace the damaged parts with new parts.
1) Steering wheel and steering shaft
Check the steering shaft for mounting conditions and deflection of front and rear, upward and downward directions, and deflection of front and rear direction with tilt lever released. (After a collision, absorbing part of steering shaft may have been operated.)
2) Check the direct type connector of driver's airbag module, curtain airbag module, and pretensioner for damage, and also check each harness for pinching and connector damage. Replace the main harness as an assembly if damage is found.
3) Check the seat cushion, backrest, seat rail and headrest for installing condition and play.
4) If any break or fray is found in the backrest cover of the driver's seat or passenger's seat, replace the backrest cover with a new part because the side airbag system may not operate normally if no care is made.
5) For the passenger's seat, replace the seat cushion pad frame assembly with a new part if the seat cushion frame assembly is deformed or cracked.
6) If there are tears or loosening in the passenger side seat cushion cover, it may interfere with the proper operation of the occupant detection system. Replace with a new cushion cover.
7) Be sure to perform the system calibration for the occupant detection system after removing or replacing the passenger seat cushion cover. If system adjustment is not performed, the occupant detection system may not function properly. <Ref. to OD(diag)-15, OPERATION, System Calibration (Rezeroing).>
8) Use the Subaru Select Monitor to check the front right seat belt buckle switch is operating normally.

B: INSPECTION

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

1. DRIVER'S AIRBAG MODULE

1) Frontal collision (driver's airbag module activated)
1. Replace the following parts with new ones.
   - Airbag control module
   - Driver's airbag module ASSY
   - Passenger's airbag module assembly
   - Seat belt pretensioner assembly (left and right)
   - Front sub sensor (right and left)
   - Sensor cover plate (left and right)

- Steering shaft assembly

2. Visually inspect the following items and replace any damaged part with a new one.
   - Steering wheel assembly
   - Steering support beam assembly
   - Instrument panel harness and connector on body side

2) Frontal collision (driver's airbag module not activated)
Visually inspect the following items and replace any damaged or cracked part with a new one.
Specially inspect the damage of airbag module body, mounting bracket and harness connector.
- Driver's airbag module assembly
- Passenger's airbag module assembly
- Seat belt pretensioner assembly (left and right)
- Front sub sensor (right and left)
- Sensor cover plate (left and right)
- Instrument panel assembly (because it is integrated with passenger's airbag module)

3) No frontal collision
Visually inspect the airbag modules for damage or contamination and replace any faulty part with a new one.

2. PASSENGER'S AIRBAG MODULE

1) Frontal collision (passenger's airbag module activated)
1. Replace the following parts with new ones.
   - Airbag control module
   - Driver's airbag module assembly
   - Passenger's airbag module assembly
   - Seat belt pretensioner assembly (left and right)
   - Front sub sensor (right and left)
   - Sensor cover plate (left and right)
   - Instrument panel assembly (because it is integrated with passenger's airbag module)
2. Visually inspect the following items and replace any damaged part with a new one.
   - Steering support beam assembly
   - Instrument panel harness and connector on body side

2) Frontal collision (passenger's airbag module not activated)
Visually inspect the following items and replace any damaged or cracked part with a new one.
Specially inspect the damage of airbag module body, mounting bracket and harness connector.
- Driver's airbag module assembly
- Passenger's airbag module assembly
- Seat belt pretensioner assembly (left and right)
- Front sub sensor (right and left)
- Sensor cover plate (left and right)
- Instrument panel assembly (because it is integrated with passenger's airbag module)

3) No frontal collision
Visually inspect the airbag modules for damage or contamination and replace any faulty part with a new one.

3. SIDE AIRBAG MODULE

1) Side impact (side airbag activated)
1. Replace the following parts with new ones.
   - Airbag control module
   - Side airbag module assembly
   - Side airbag sensor
   - Curtain airbag module assembly
   - Curtain airbag sensor
   - Backrest pad assembly
   - Backrest frame assembly
   - Backrest cover assembly
2. Visually inspect the following items and replace any damaged part with a new one.
   - Headrest assembly

- Headrest lock bushing
- Outer slide rail
- Inner slide rail
- Seat hinge cover
- Seat lifter lever
- Reclining lever
- Side airbag harness and connector on body side

2) Side impact (side airbag not activated)
Visually inspect the following items and replace any damaged or cracked part with a new one.
Specially inspect the damage of airbag module body, mounting bracket and harness connector.
- Backrest pad assembly
- Backrest frame assembly
- Backrest cover assembly
- Side airbag module assembly
- Side airbag sensor
- Curtain airbag module assembly
- Curtain airbag sensor

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

4. CURTAIN AIRBAG MODULE

1) Side impact (curtain airbag activated)
1. Replace the following parts with new ones.
   - Airbag control module
   - Curtain airbag module assembly
   - Side airbag sensor
   - Curtain airbag sensor
   - Roof trim
   - Each pillar trim
   - Airbag bracket (models with sunroof)
2. Visually inspect the following items and replace any damaged part with a new one.
   - Assist grip
   - Assist grip bracket
   - Curtain airbag harness and connector on body side.

2) Side impact (side airbag not activated)
Visually inspect the following items and replace any damaged or cracked part with a new one.
Specially inspect the damage of airbag module body, mounting bracket and harness connector.
- Roof trim
- Each pillar trim
- Curtain airbag module assembly
- Side airbag sensor
- Curtain airbag sensor

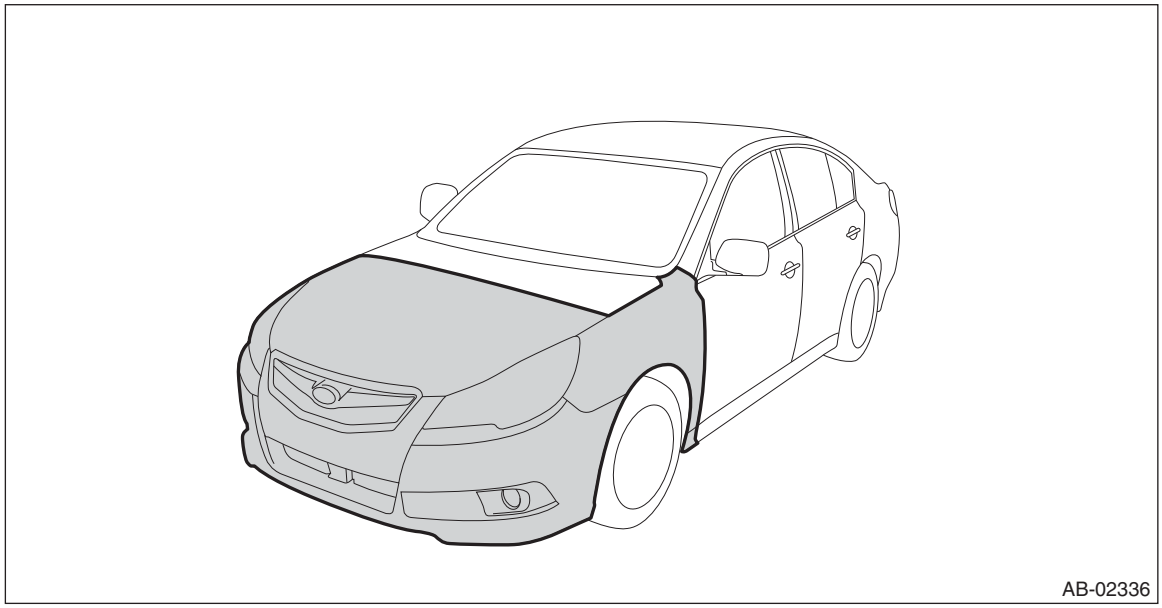
3) No side impact
Visually inspect the airbag covers for damage or contamination and replace any faulty part with a new one.

5. AIRBAG CONTROL MODULE

Check for the following, and replace the damaged parts with new parts.
- Control module is cracked or deformed.
- Mounting bracket is cracked or deformed.
- Connector is scratched, cracked or deformed.
- Driver's airbag has been activated.
- Passenger's airbag has been activated.
- Side airbag has been activated.
- Curtain airbag has been activated.
- Seat belt pretensioner has been activated.

6. FRONT SUB SENSOR

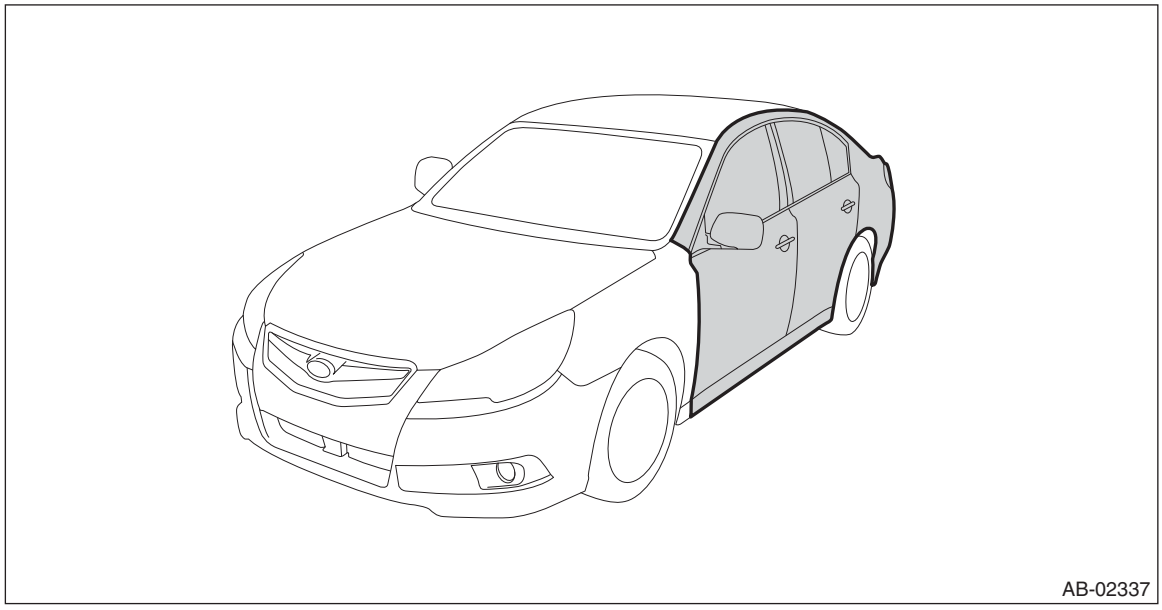
If the section of vehicle as shown in the figure is damaged, check the following items and replace the damaged parts with new parts.



- Front sub sensor is cracked or deformed.
- Connector is scratched, cracked or deformed.
- Airbag has been activated.

7. SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR

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



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

8. ROLL CONNECTOR

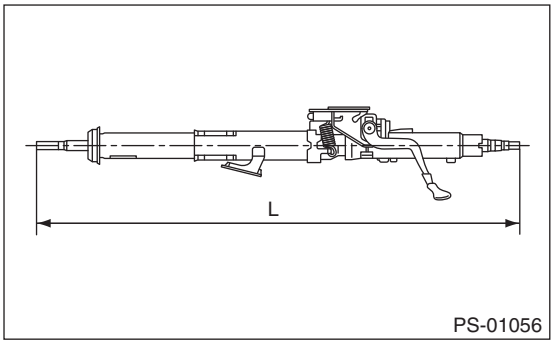
Check the following items and replace any damaged, cracked, or deformed parts with new parts.
- Combination switch
- Steering roll connector

9. STEERING SHAFT

Measure the overall length of steering column.
If the length is not within the specification, the steering column may be damaged. Replace it with a new part.

Standard: Overall length L

Tilt and telescopic column (measure while minimized)
$816.9^{+1.5}_{-1.5}$ mm ($32.16^{+0.059}_{-0.059}$ in)



10.PASSENGER'S SEAT

1) Check for the following, and replace the damaged parts with new parts.
- Seat belt buckle body or bracket is scratched, cracked or deformed.
- Backrest frame for crack or deformation
- Headrest for deformation or play
- If the seat cushion cover and seat backrest cover is scratched or coming loose, replace with a new cover and readjust the system. <Ref. to OD(diag)-15, OPERATION, System Calibration (Rezeroing).>

CAUTION:
If any of the following applies, replace the seat cushion pad and frame assembly. Do not disassemble.
- **Cracks or deformation found in the seat cushion frame or seat cushion pad.**
- **Scratches, cracks, or deformation found on the occupant detection system sensor mat or occupant detection control module, or attachment brackets of the control module.**
- **Harness and/or connector is cracked, deformed or open. Harness wire is exposed.**

2) After checking the installing condition of passenger's seat, perform the system adjustment of occupant detection system. <Ref. to OD(diag)-15, OPERATION, System Calibration (Rezeroing).>

4. Driver's Airbag Module

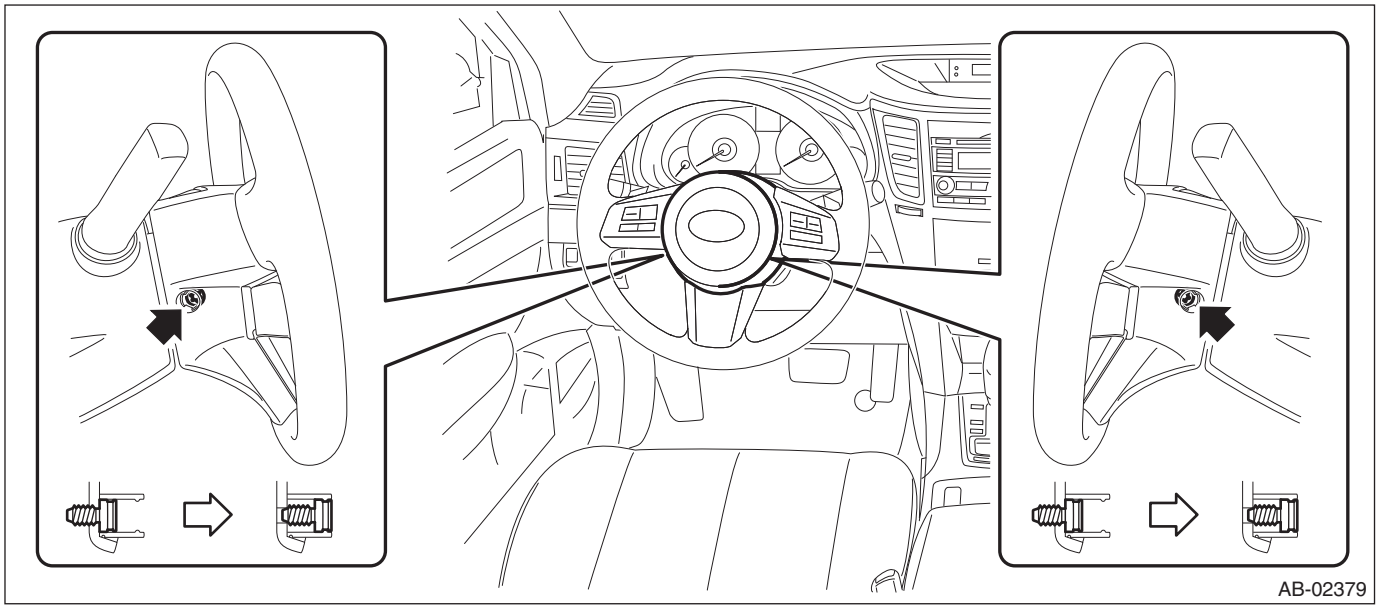
A: REMOVAL

CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>

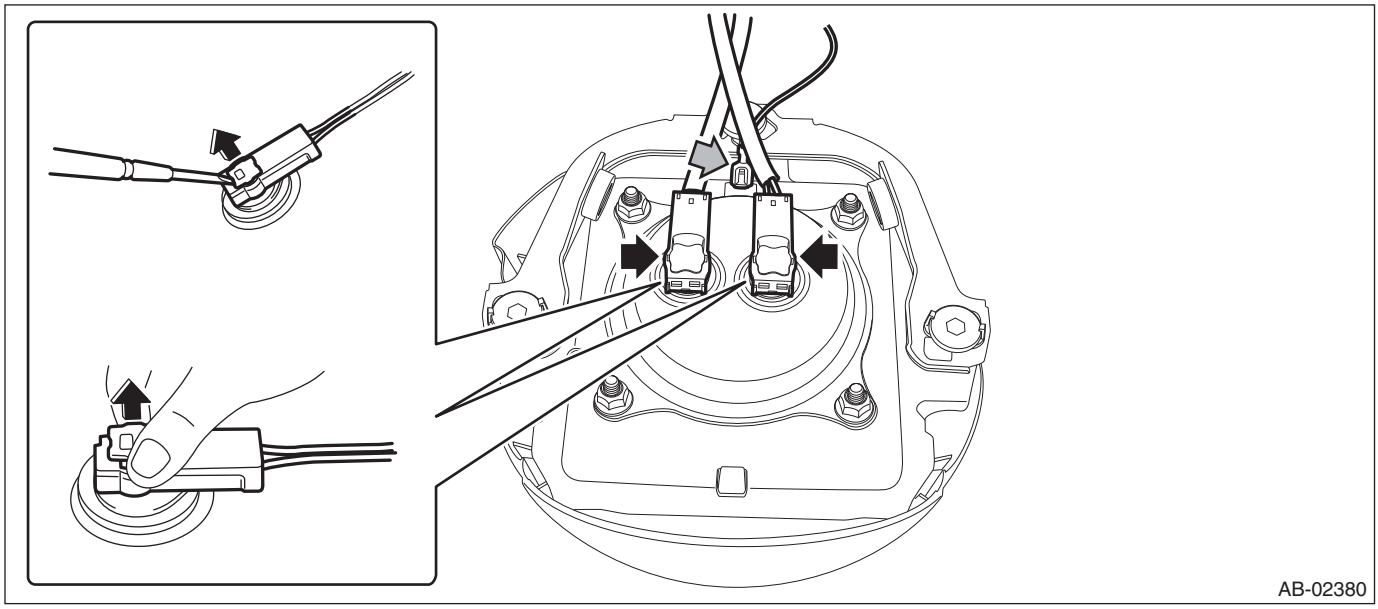
1) Position the front wheels straight ahead. (After moving a vehicle 5 m (16 ft) or more with front wheels positioned straight ahead, make sure that the vehicle moves straight ahead).
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before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

Preparation tool: TORX® T30

(1) Loosen the two TORX® bolts on the sides of the steering wheel.



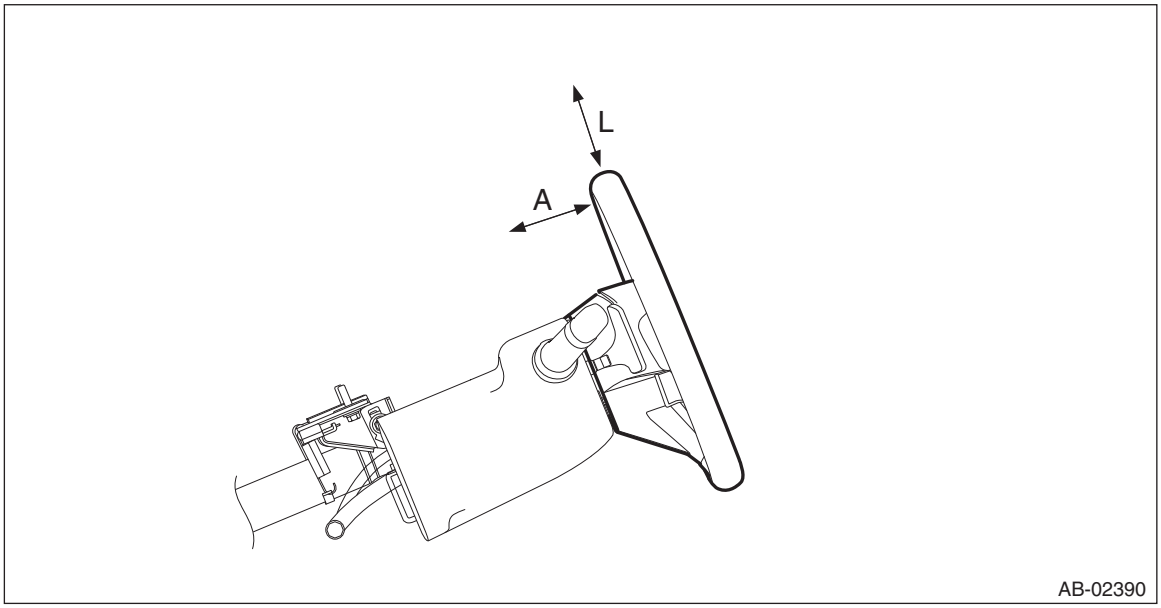
(2) Disconnect the airbag connector and remove the airbag module assembly. <Ref. to AB-22, DRIVER'S AIRBAG MODULE, CURTAIN AIRBAG MODULE & PRETENSIONER, PROCEDURE, Airbag Connector.>
(3) Disconnect the horn harness.



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

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



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

Tightening torque:
10 N·m (1.0 kgf-m, 7.4 ft-lb)

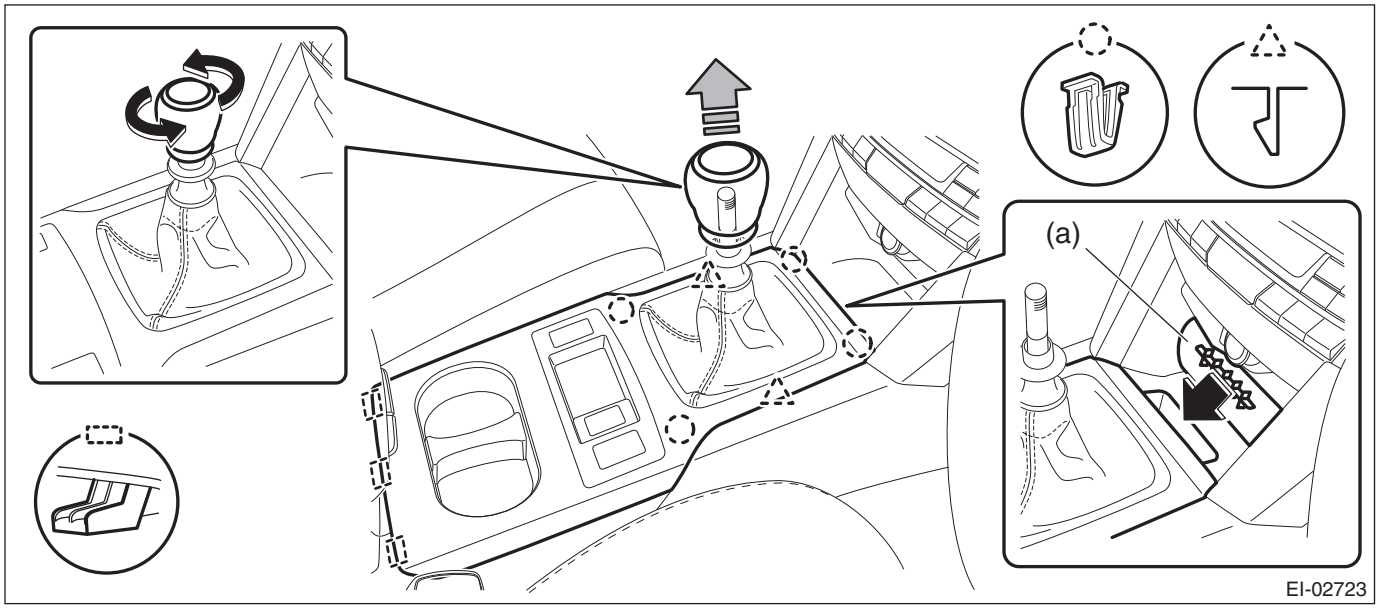
5. Passenger's Airbag Module

A: REMOVAL

CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>

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

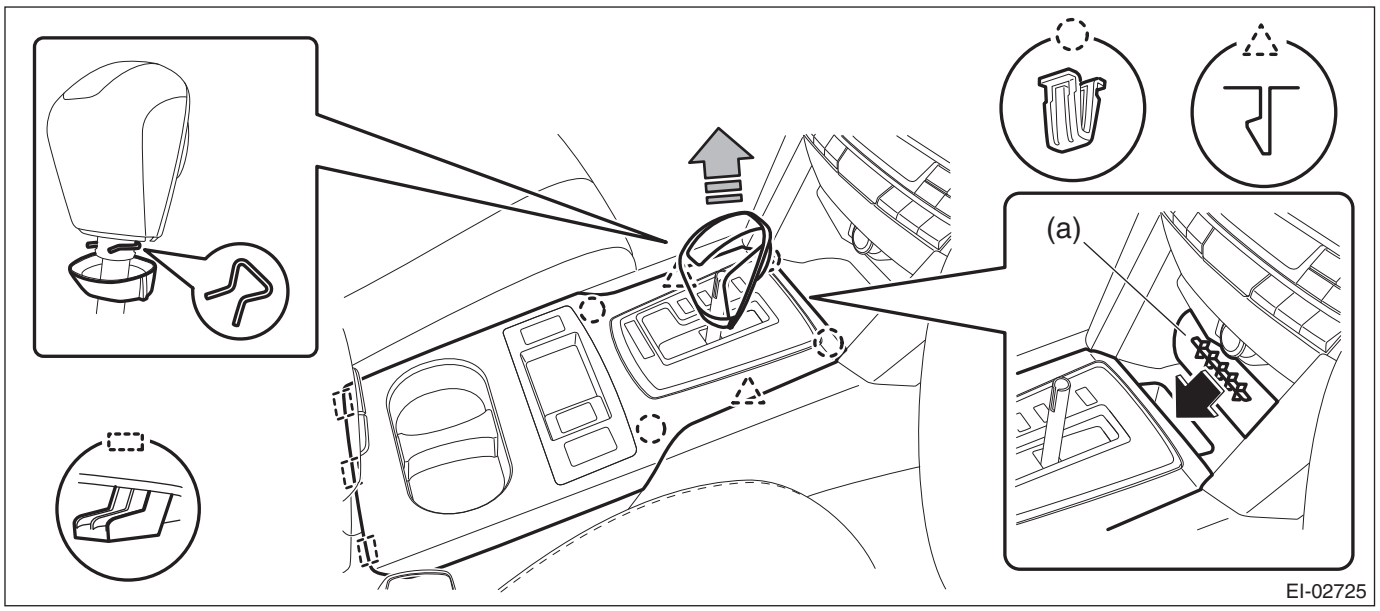


NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

  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.

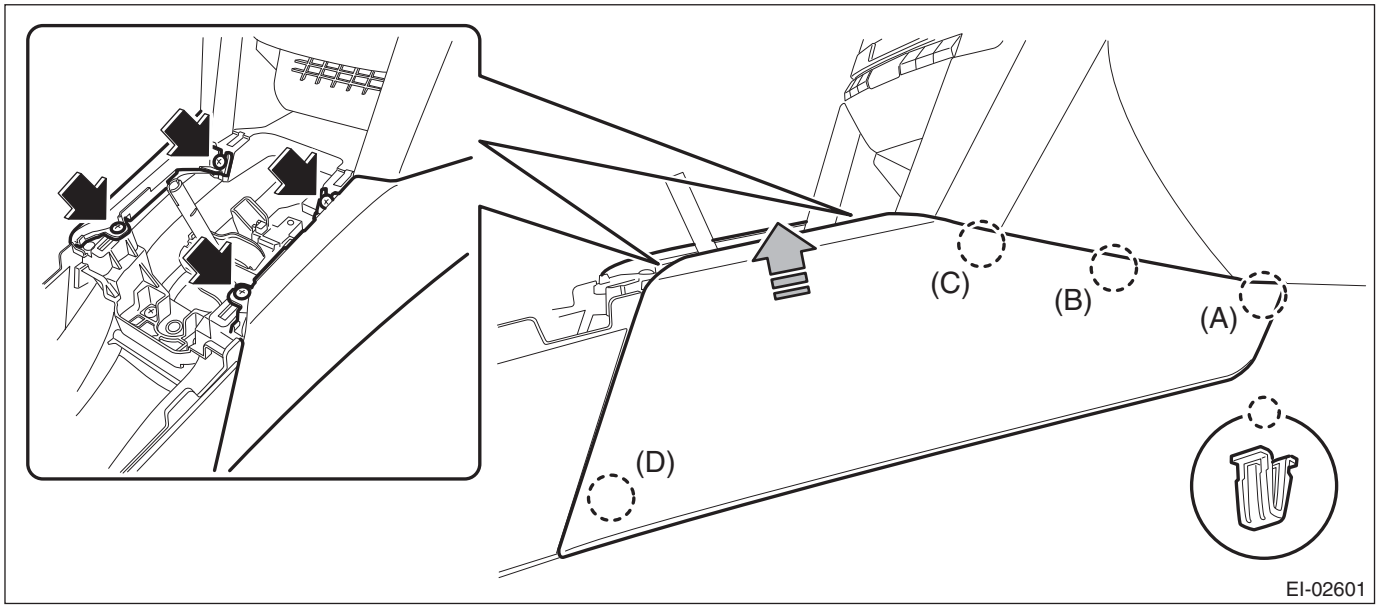
2. Release the clips and claws, then pull up the console front cover assembly.



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.

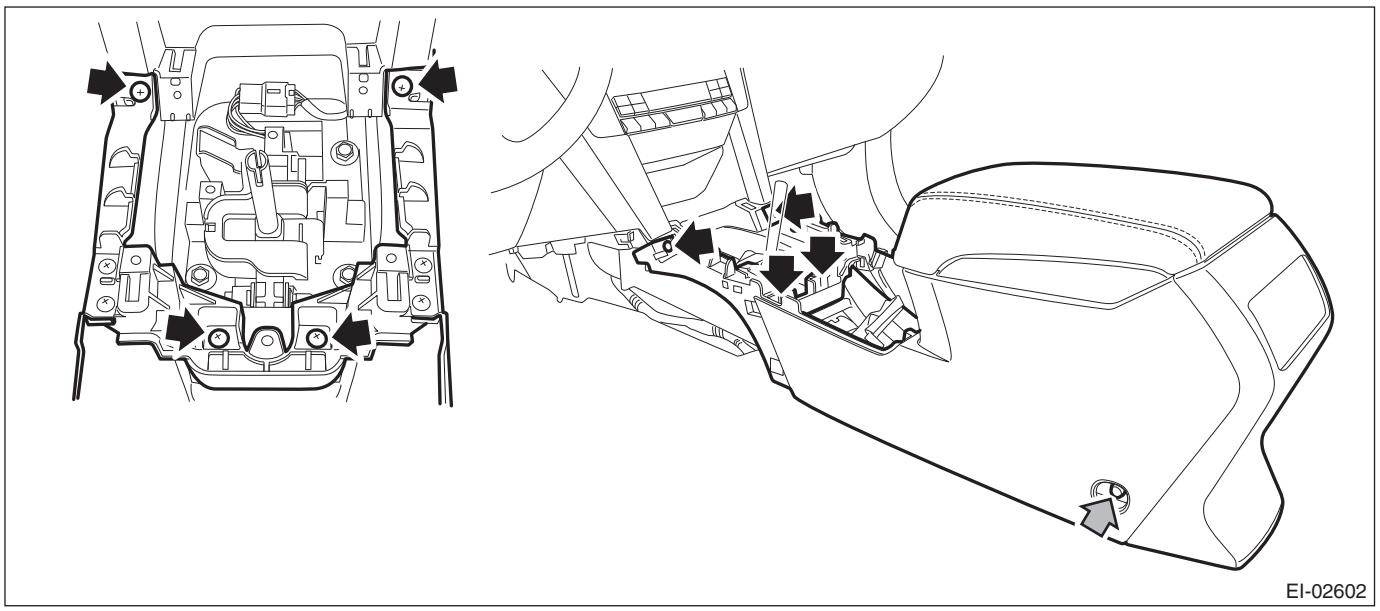
4) Remove the left and right console front side cover assembly.
   (1) Remove the screws and release the clips (A) to (D) in order.
   (2) Remove the console front side cover assembly by pulling it up.



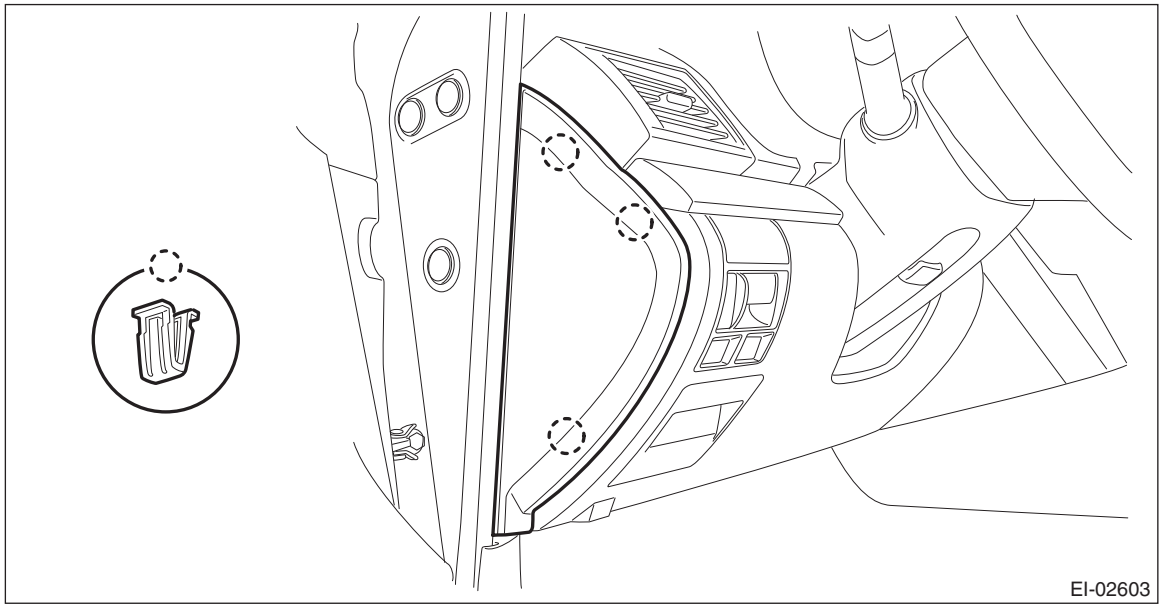
5) Remove the console box assembly.
   (1) Move the seat forward, and remove the bolts after detaching the left and right caps.

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.

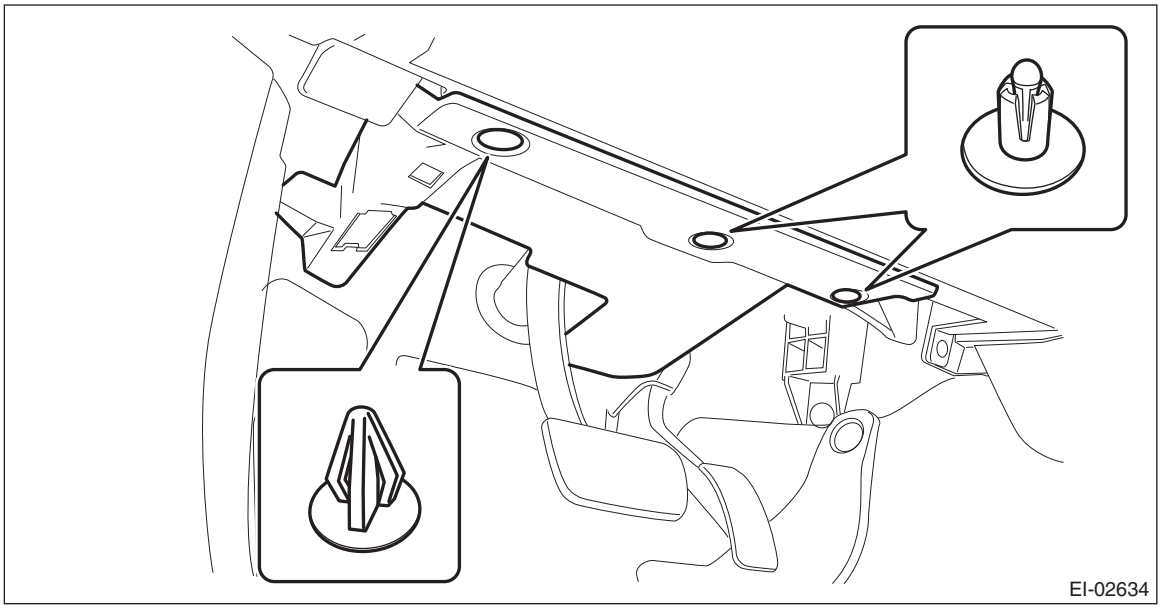


6) Remove the clips, and remove the instrument panel side cover LH.

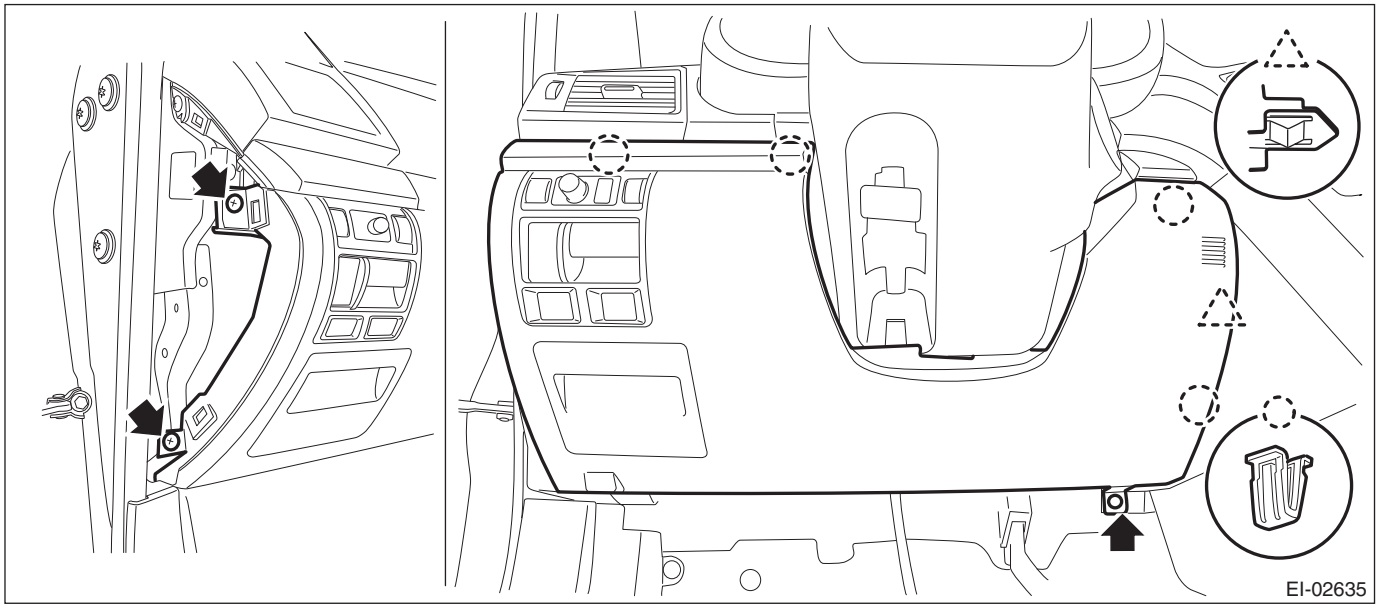


7) Remove the instrument panel lower cover.

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



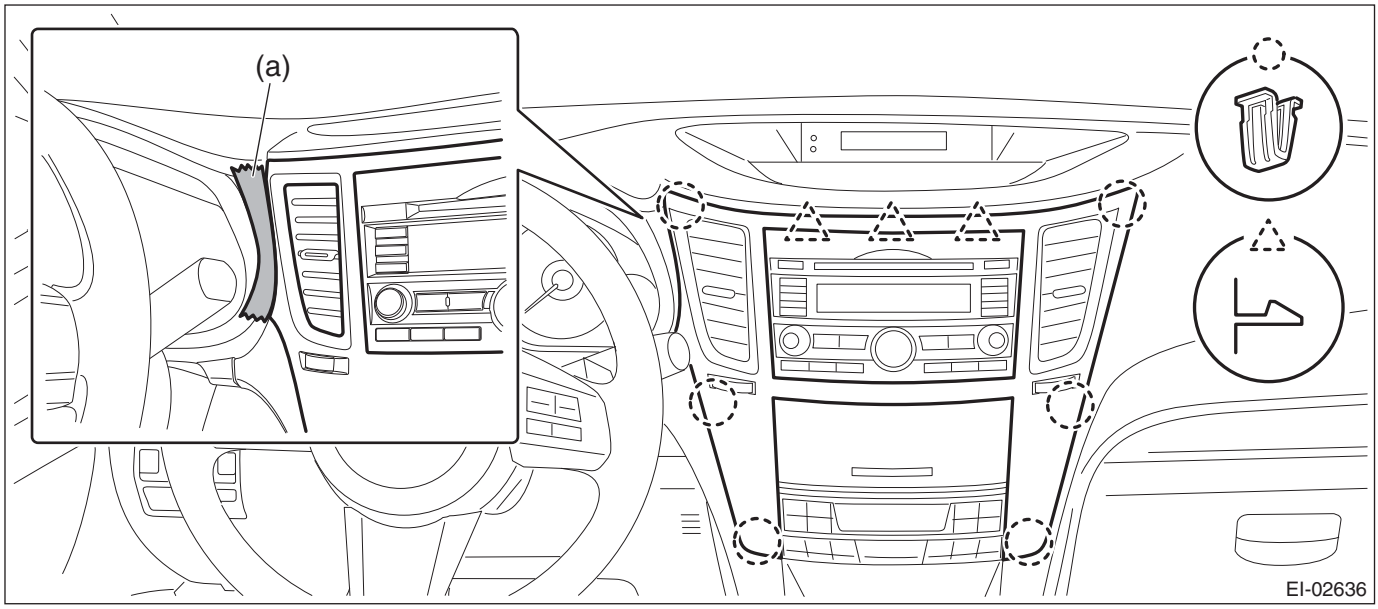
(2) Remove the screws and clips and release the claws, and remove the instrument panel lower cover while disconnecting the harness connectors.



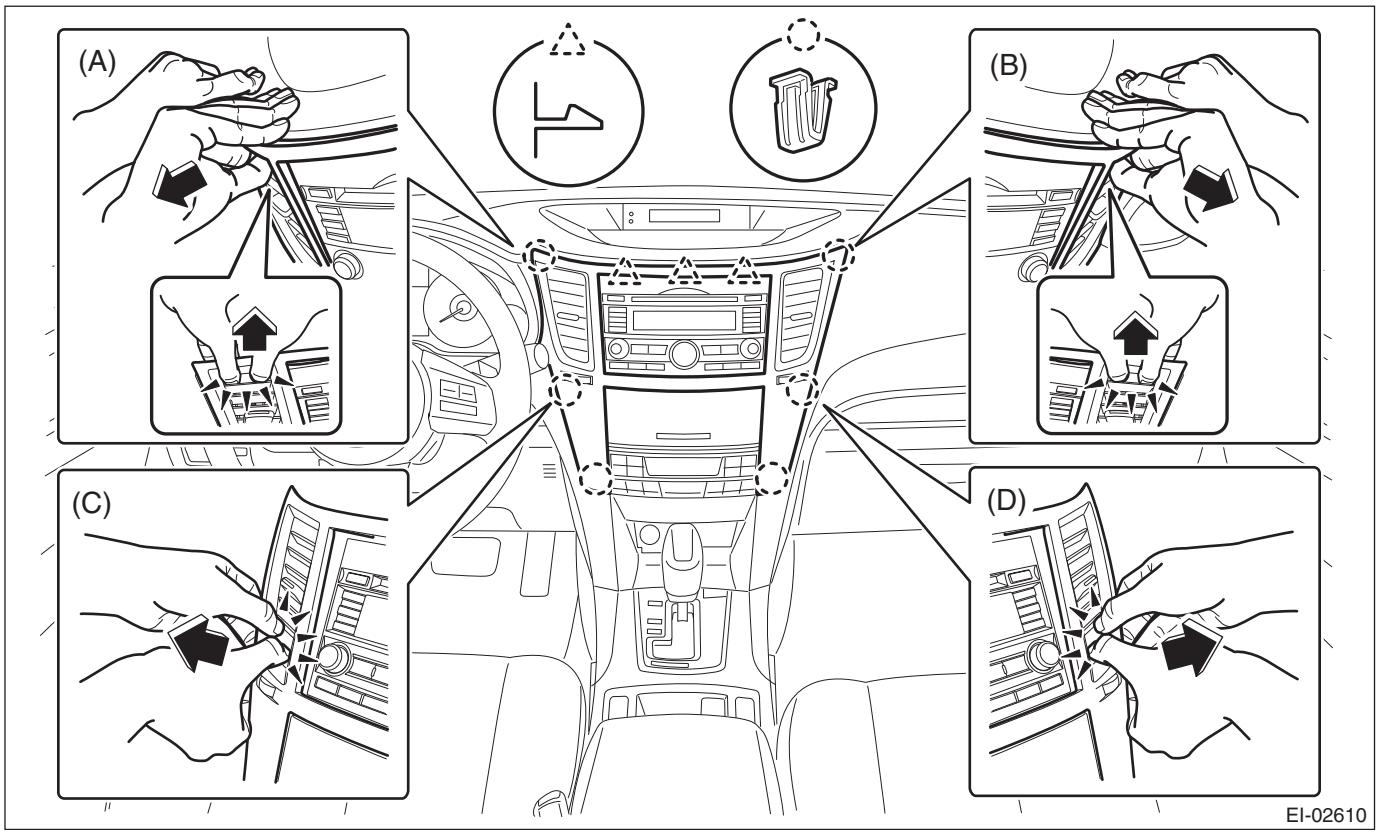
8) Remove the center panel assembly.

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.



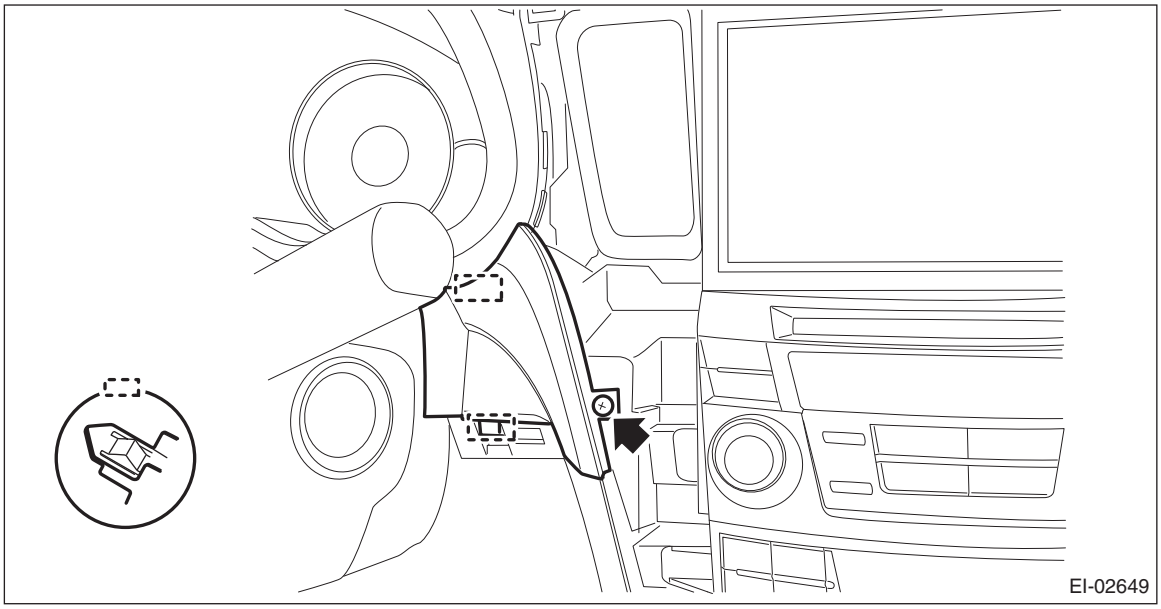
(2) Insert a finger into the air vent grille and release the left and right clips at the top of the center panel. (A), (B)
(3) Insert a finger into the air vent grille and release the left and right clips at the center of the center panel. (C), (D)
(4) Release the clips at the bottom of the center panel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



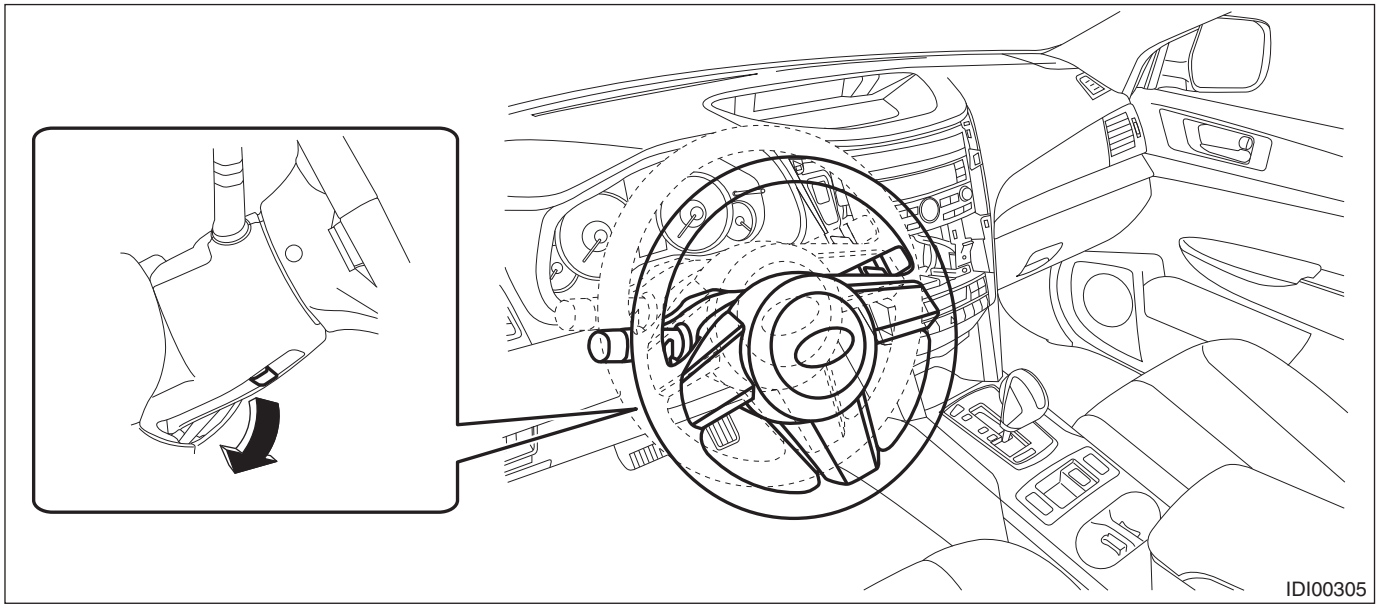
9) Remove the combination meter assembly.

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

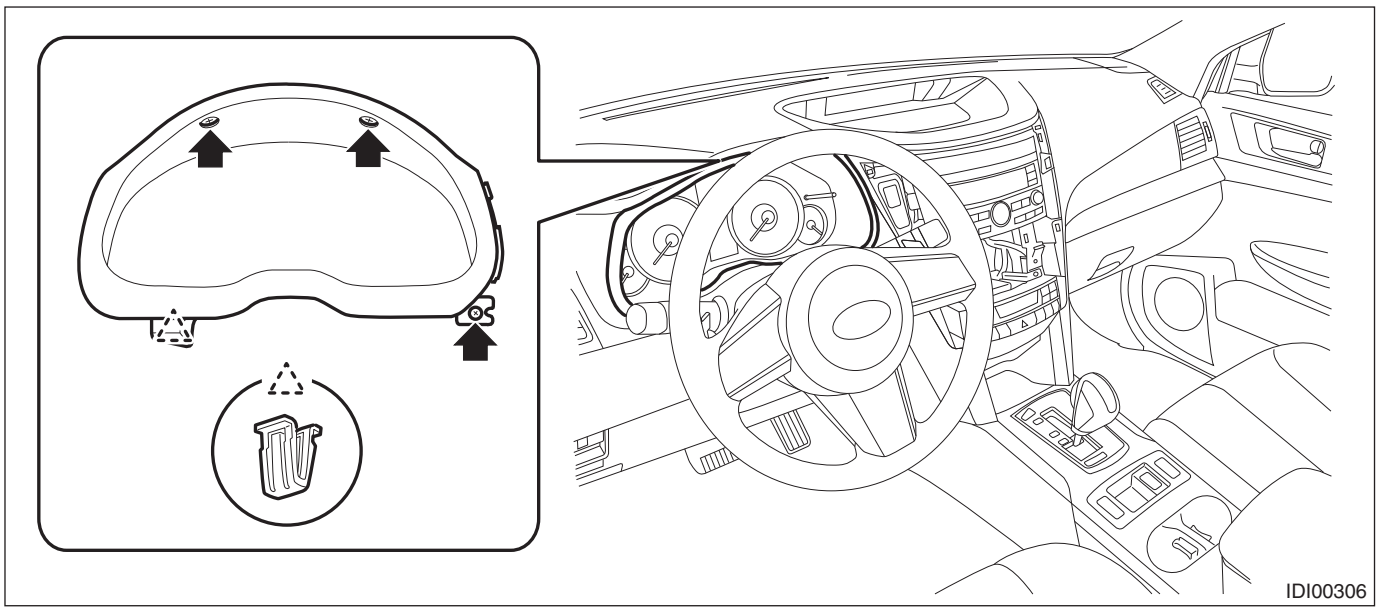
(1) Remove the screws and release the claws, then detach the starter cover assembly.



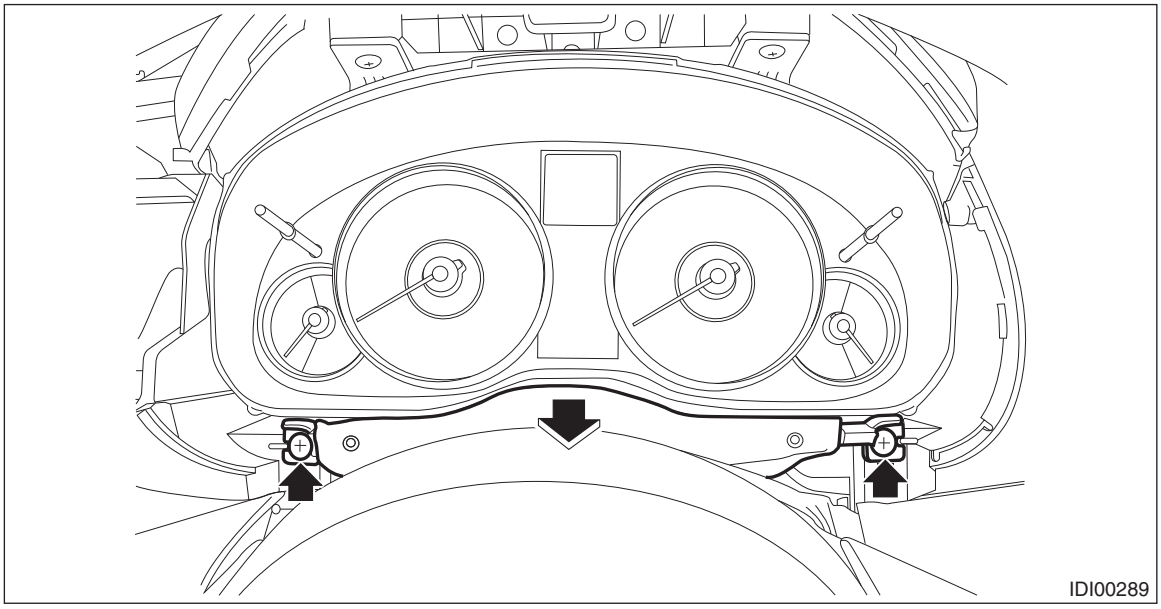
(2) Release the lock, tilt the steering column to the lowest end and fully extend the column by the telescopic system.



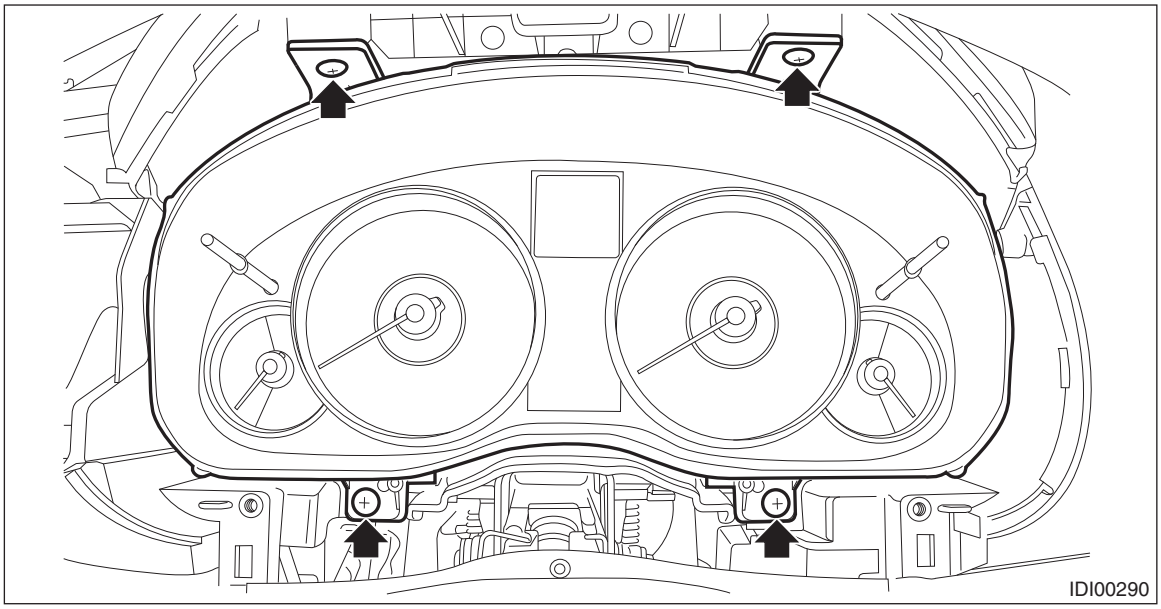
(3) Release the screws and clips, then detach the meter visor assembly.



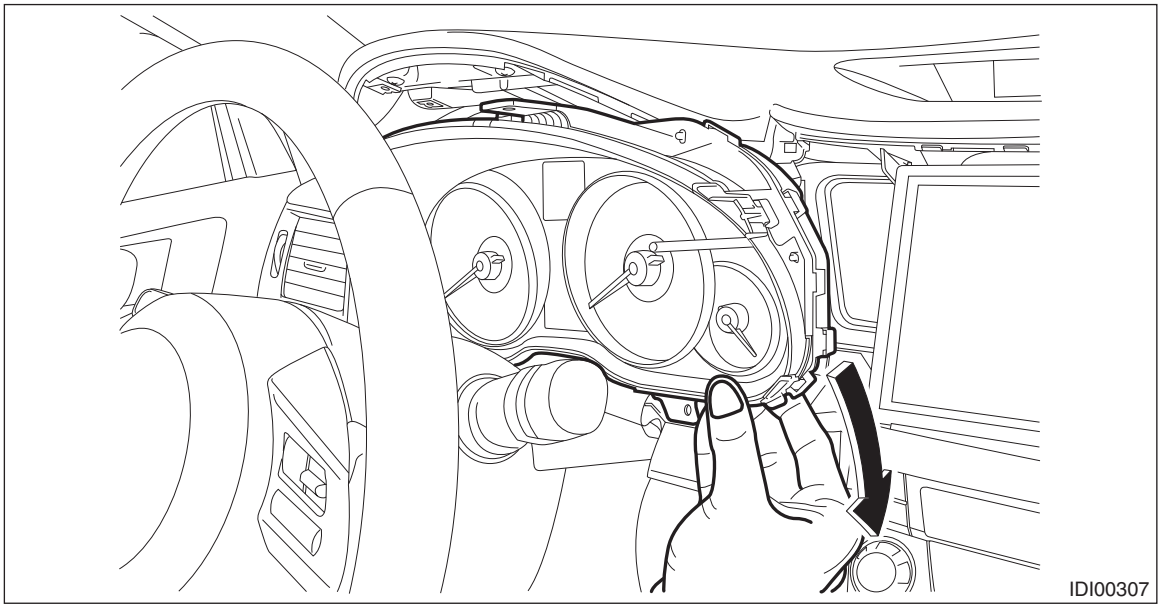
(4) Remove the screws and pull the steering COMPL upper cover toward you.



(5) Remove the screws and pull out the combination meter toward you to disconnect the connectors.



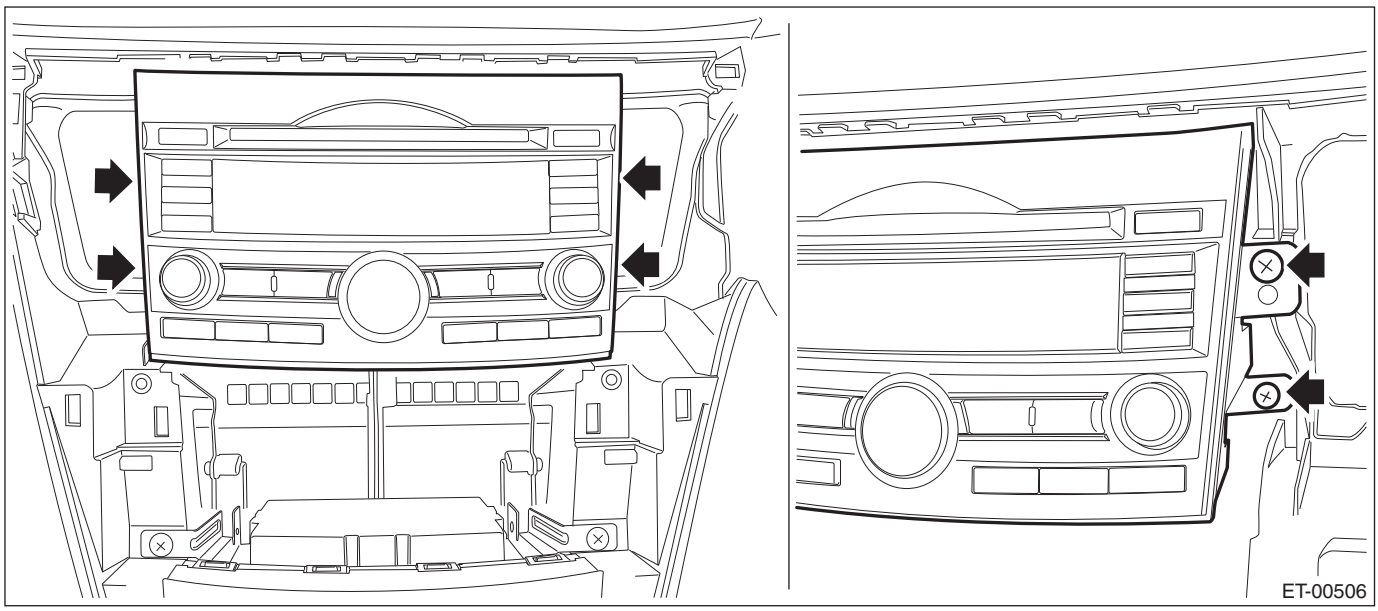
(6) Remove the combination meter assembly as shown in the figure.



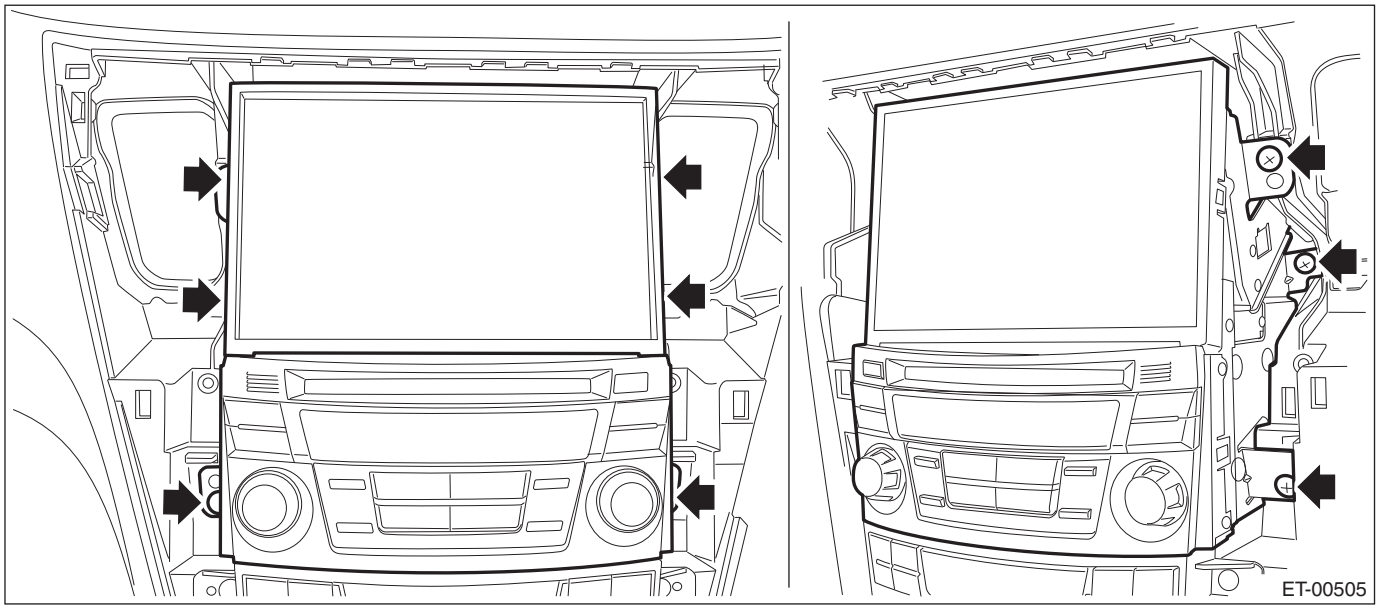
10) Remove the audio assembly.

(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.

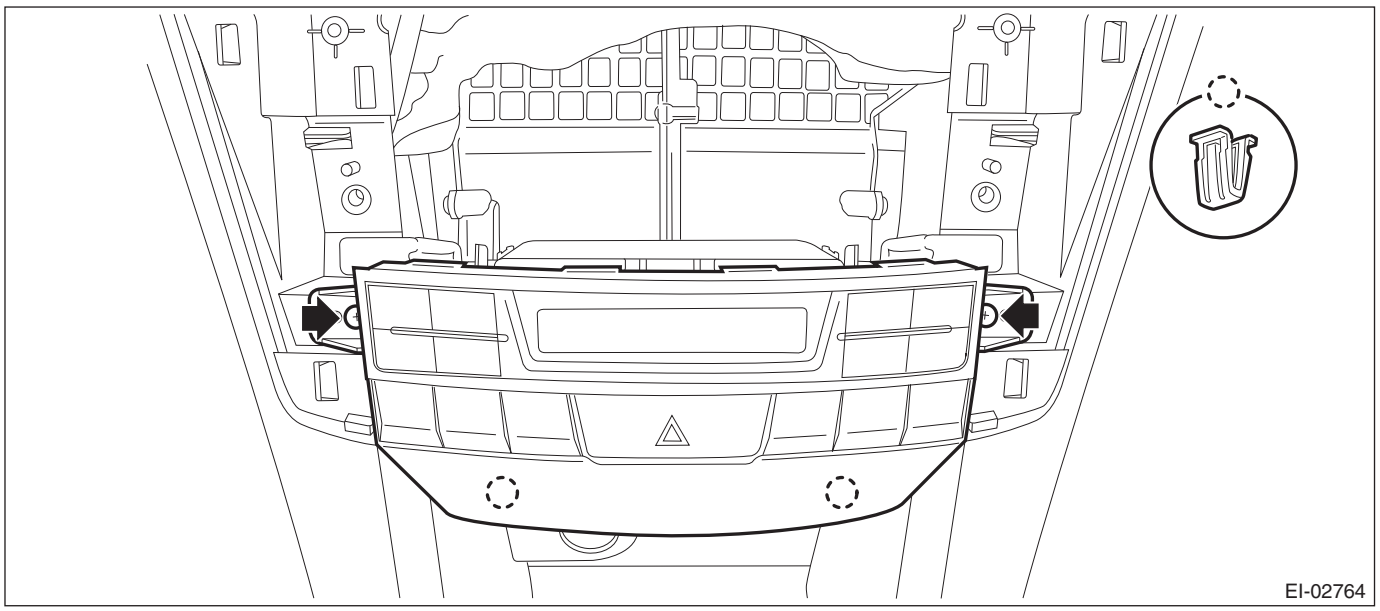


11) Remove the navigation assembly. (model with navigation)
(1) Remove the left and right screws.
(2) Disconnect the connectors, and remove the navigation assembly.



12) Remove the control panel assembly.
(1) Remove the screws, and pull out the control panel assembly toward you.

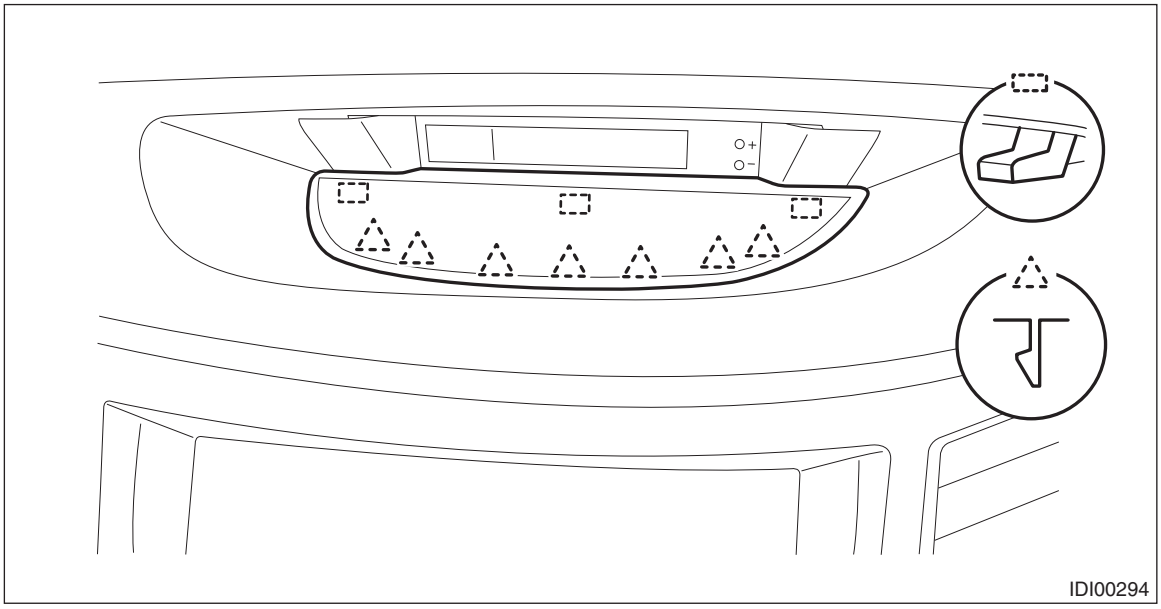
(2) Disconnect the connector, and remove the control panel assembly.



13) Remove the multi display assembly.

CAUTION:
Be careful not to damage the multi display or instrument panel.

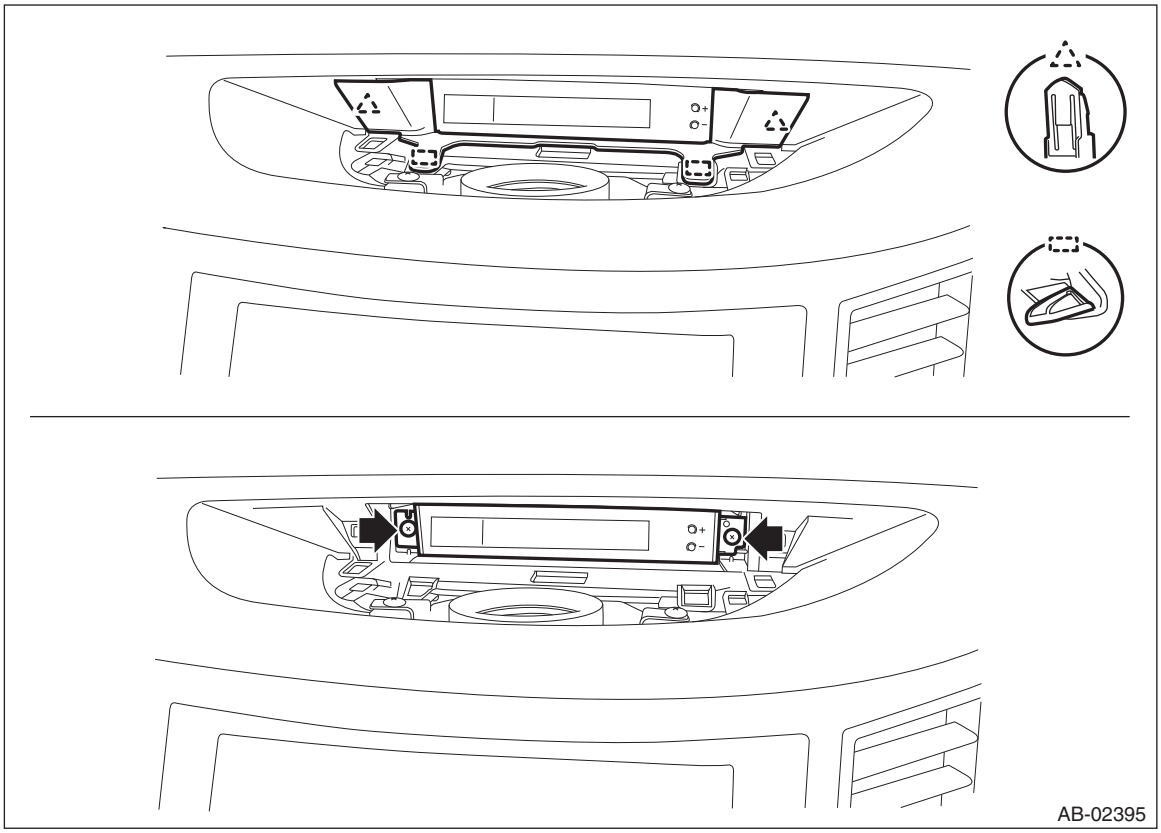
(1) Detach the center speaker cover by releasing the claws and hooks.



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.



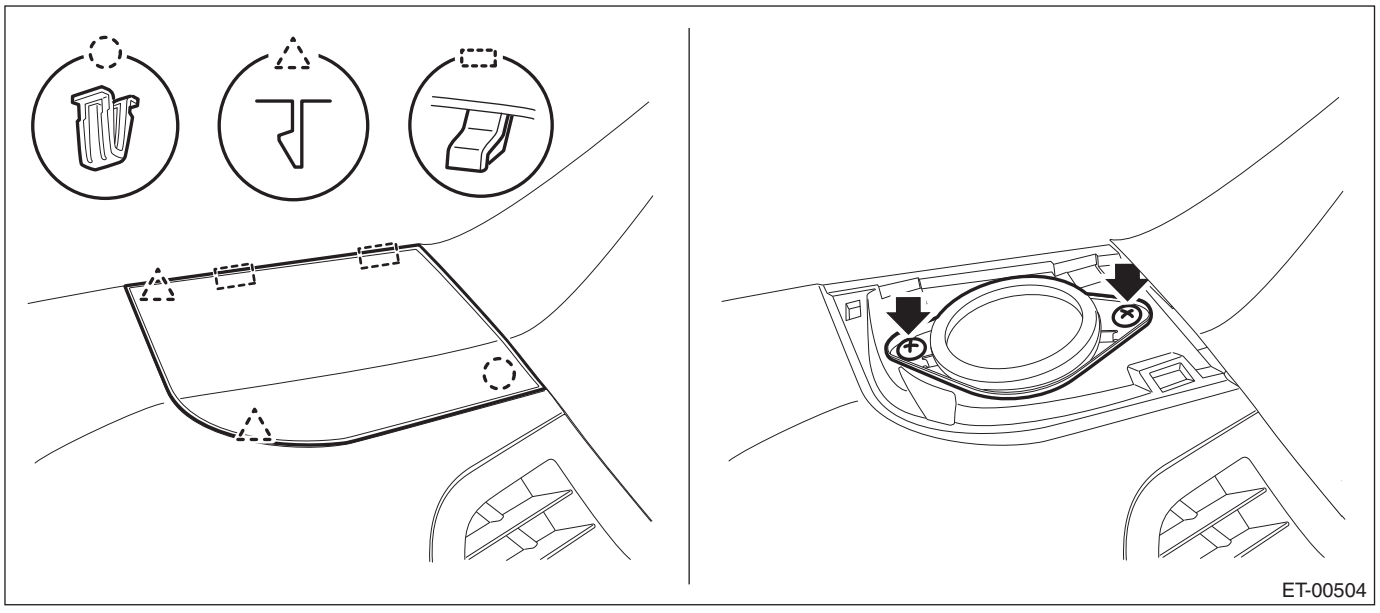
14) Remove the left and right front side speaker assembly. (Models with front side speaker)
(1) Release the clips and claws, then detach the side speaker cover.

CAUTION:
To remove the cover, use a plastic clip remover or equivalent tool.

(2) Remove the screws.

Preparation tool: Stubby screwdriver

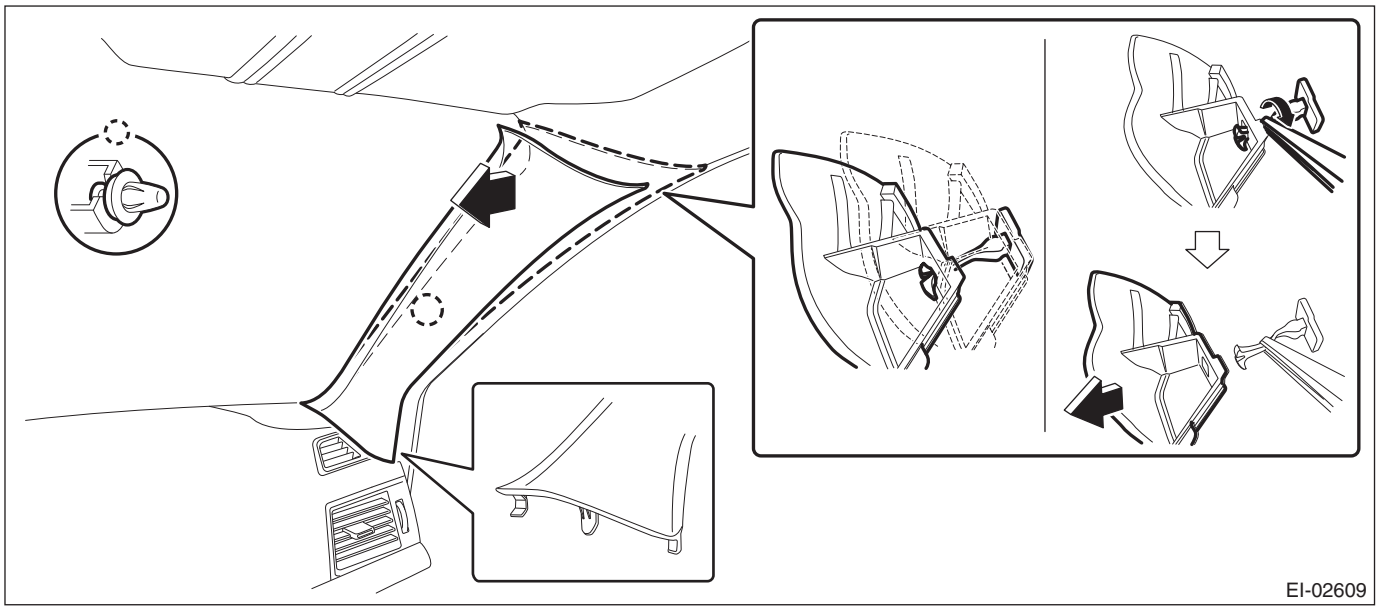
(3) Disconnect the connector and remove the front side speaker assembly.



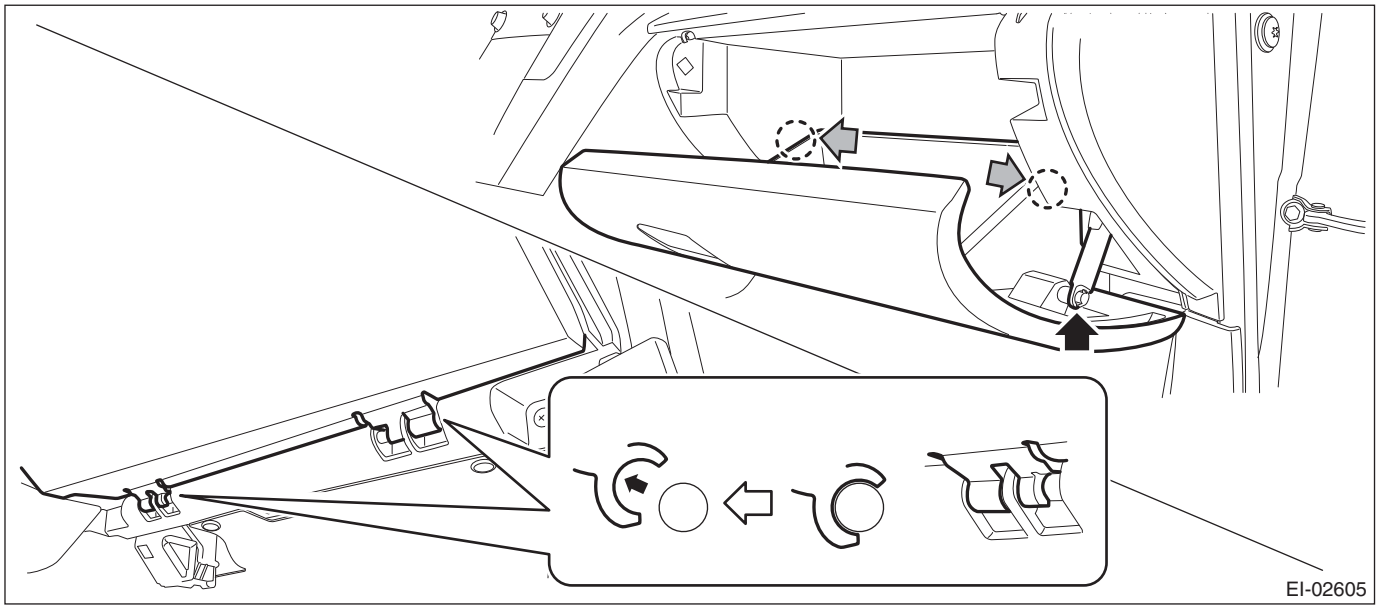
NOTE:
On the passenger's side, also disconnect the sunload sensor connector.

15) 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.

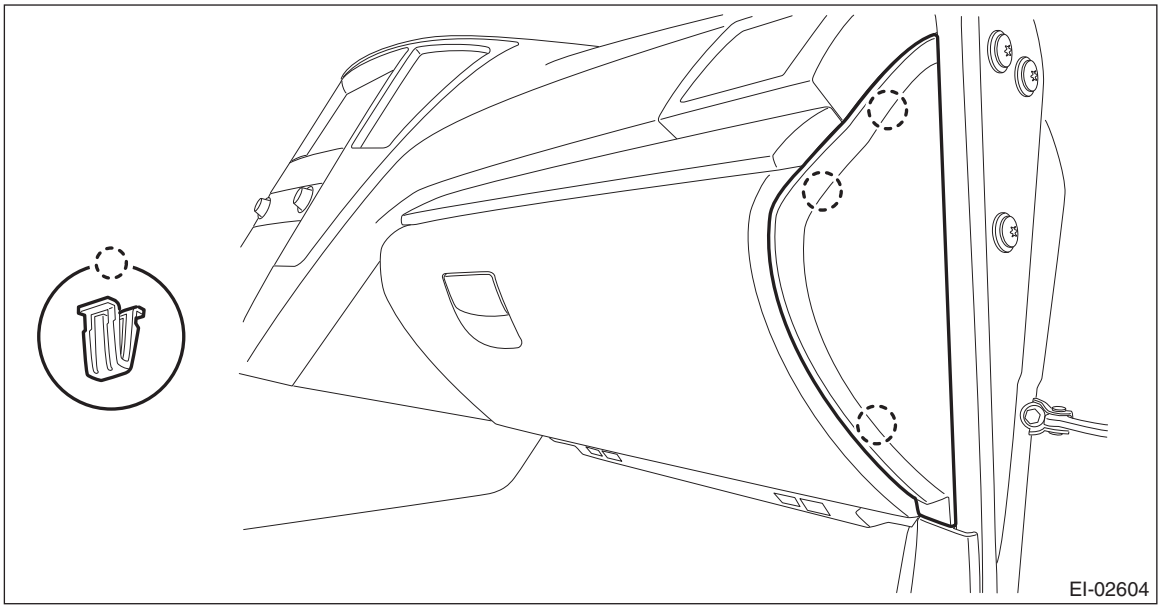
CAUTION:
Be careful not to damage the pillar trim surface and curtain airbag module when inserting the pliers.
(3) Holding the clip twisted as in the previous step, remove the front pillar trim from the clip.
(4) Remove the clip and the front pillar trim.


EI-02609

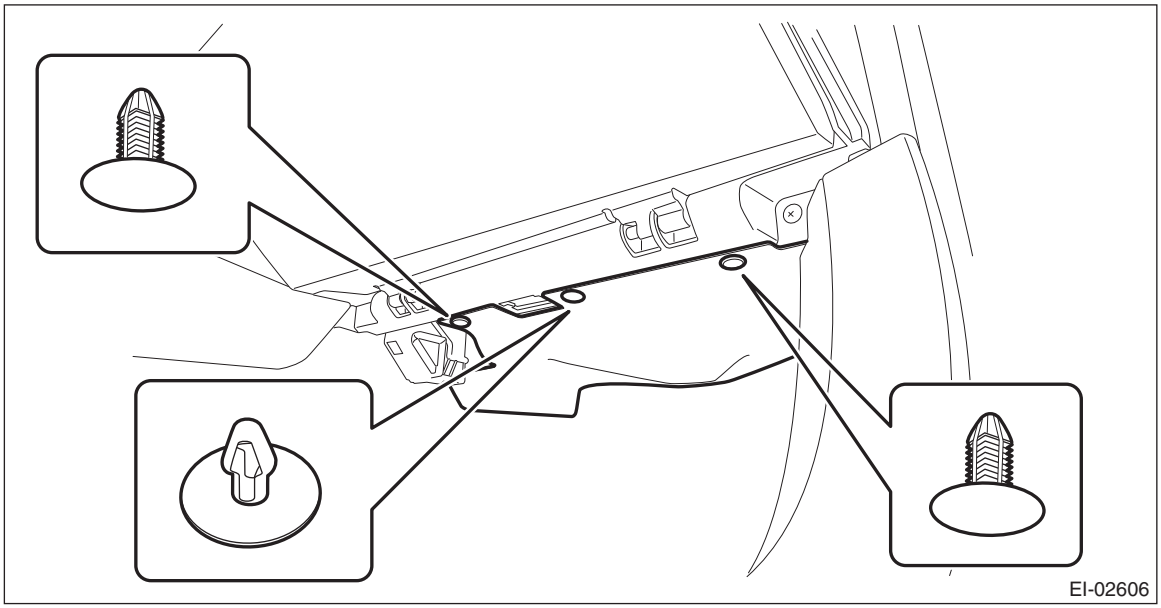
16) Remove the glove box lid assembly.
(1) Remove the glove box damper.
(2) Release the stoppers and remove the glove box lid assembly by pulling it toward you.


EI-02605

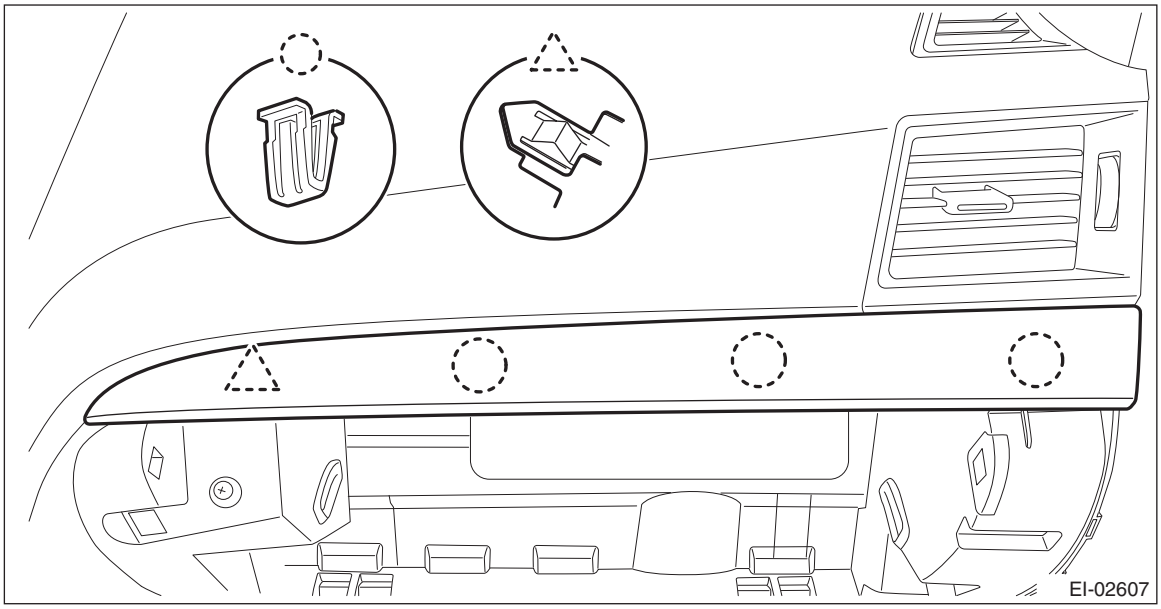
17) Release the clips, and remove the instrument panel side cover RH.



18) Remove the glove box back panel.
(1) Release the clips, and remove the glove box under cover.

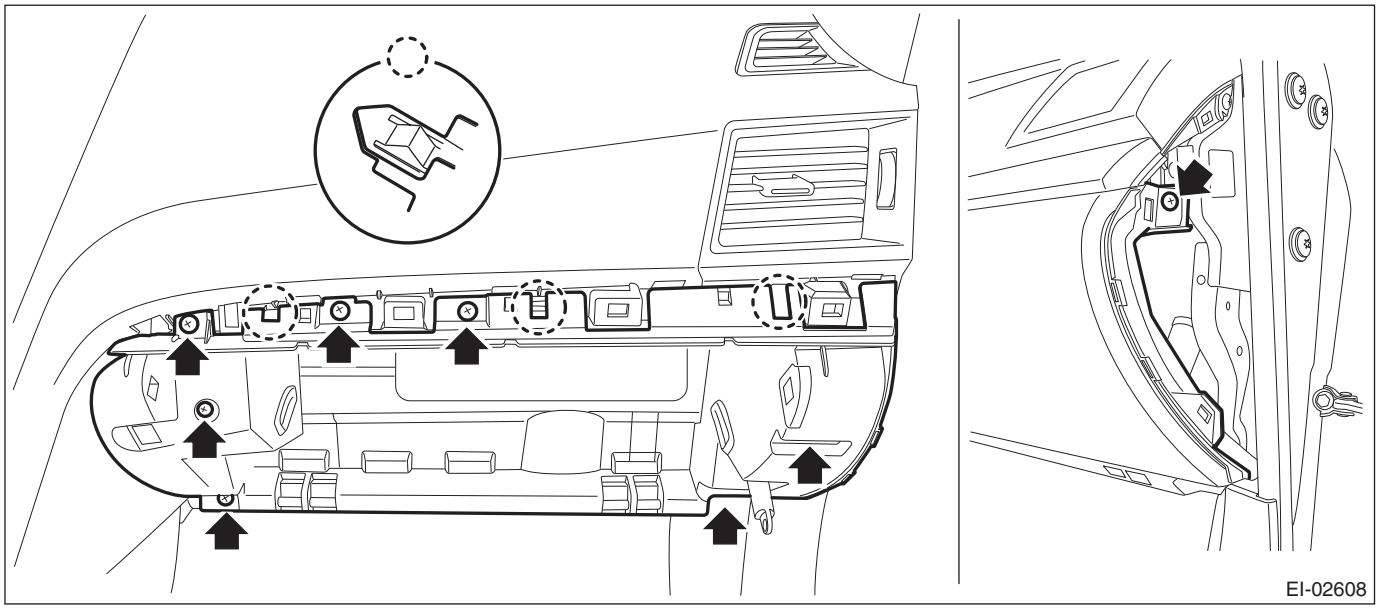


(2) Release the clips and claws, and remove the ornament panel assembly P.



(3) Remove the screws and release the claws, then detach the glove box back panel.

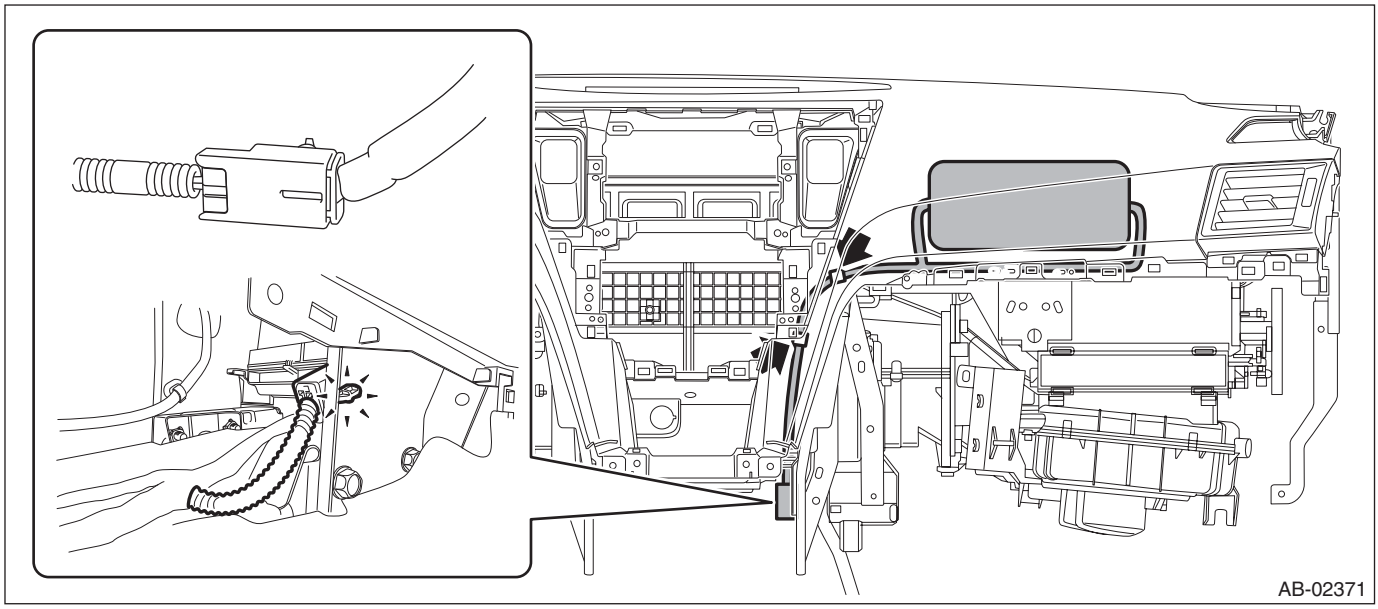
CAUTION:
Pay attention to the glove box light LED harness.



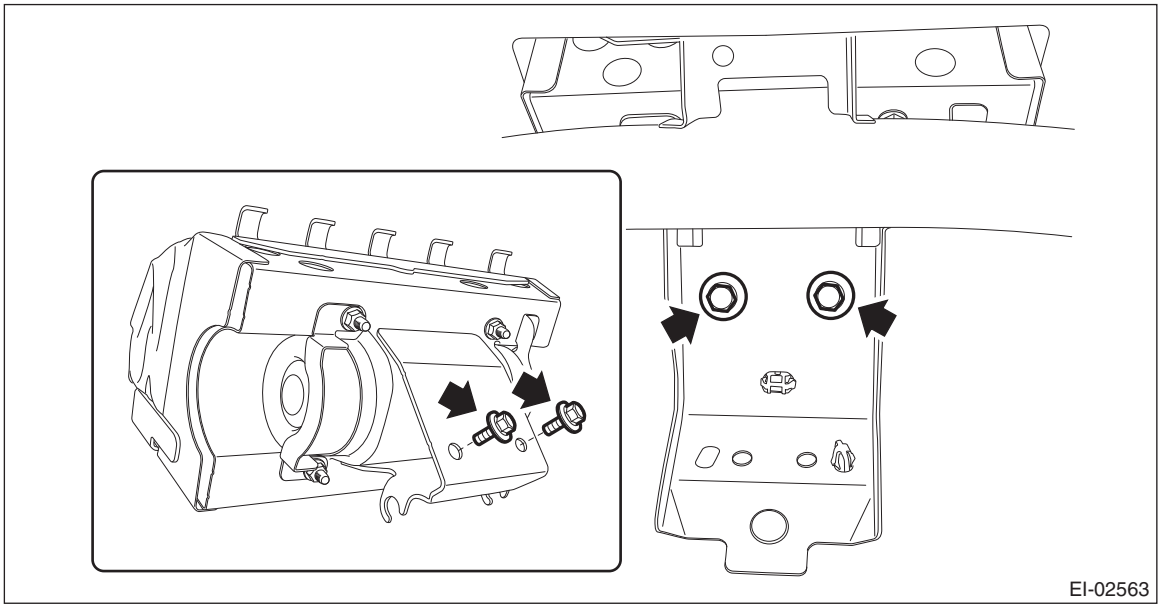
(4) Disconnect the glove box light LED connector.

19) 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.

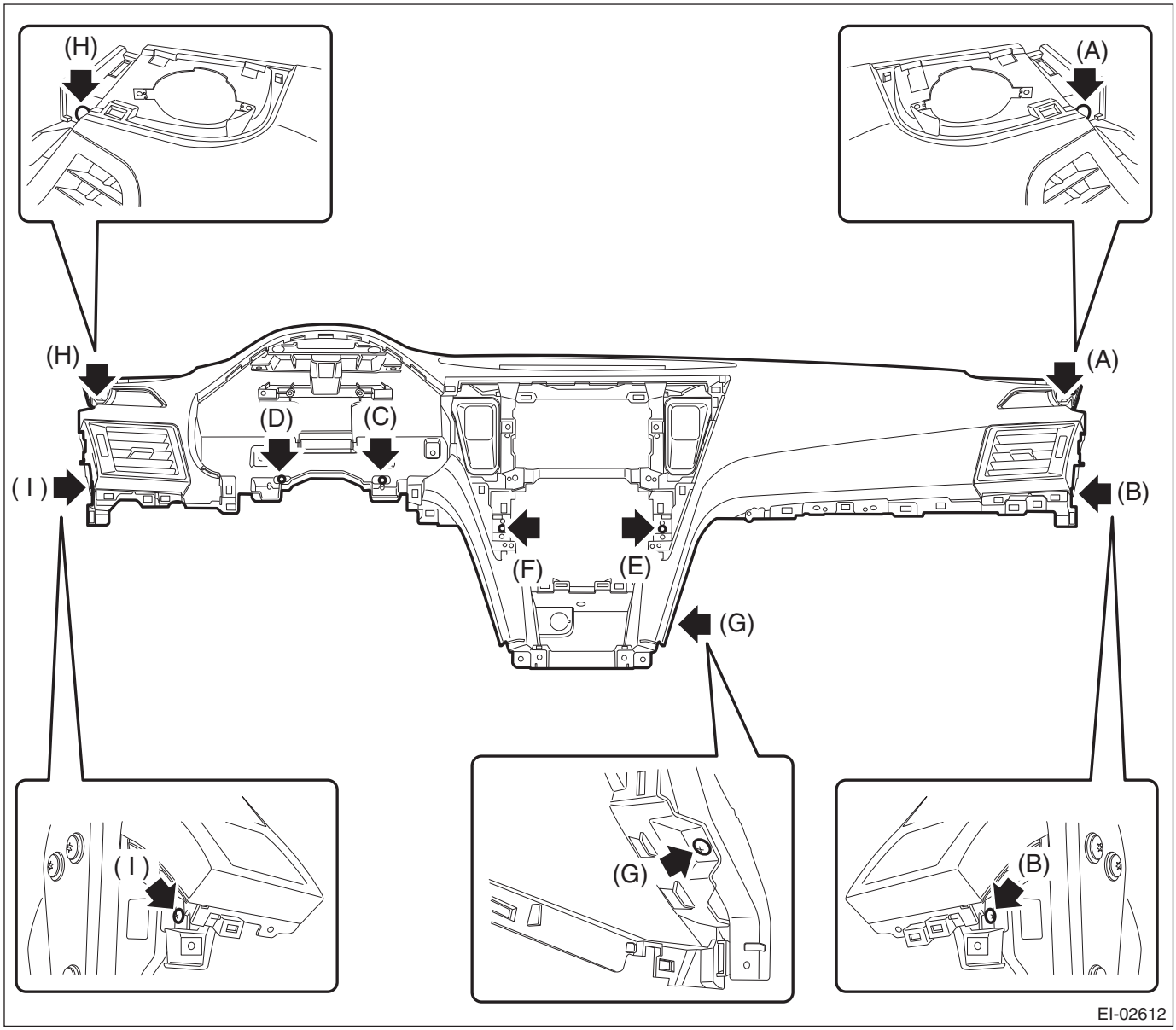


(2) Remove passenger's airbag module assembly bolts.



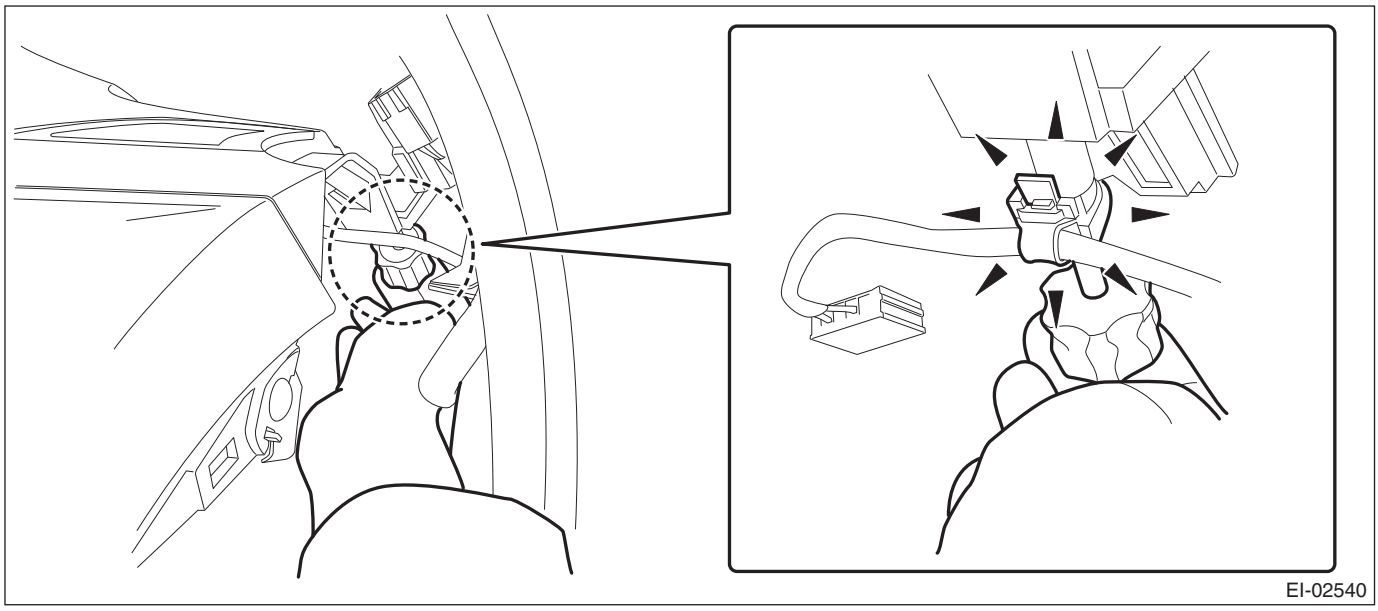
20) Remove the steering shaft assembly. <Ref. to PS-20, REMOVAL, Steering Column.>
21) Remove the instrument panel assembly.

(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.

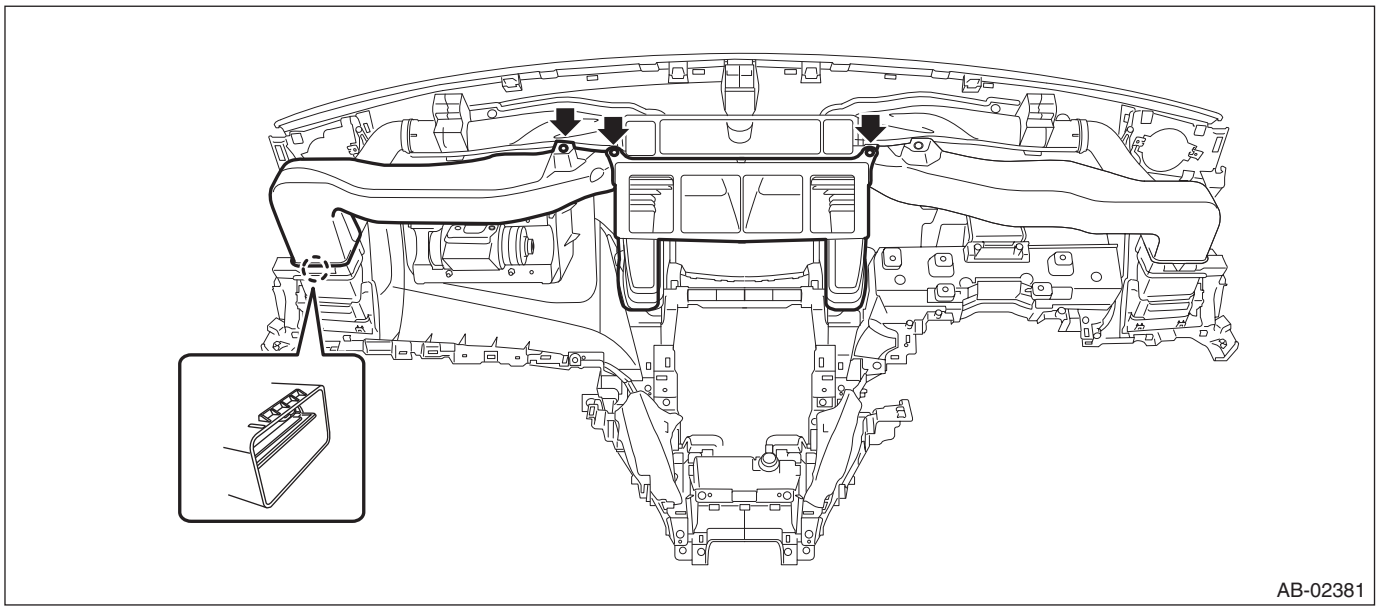
Preparation tool: Stubby screwdriver


EI-02540

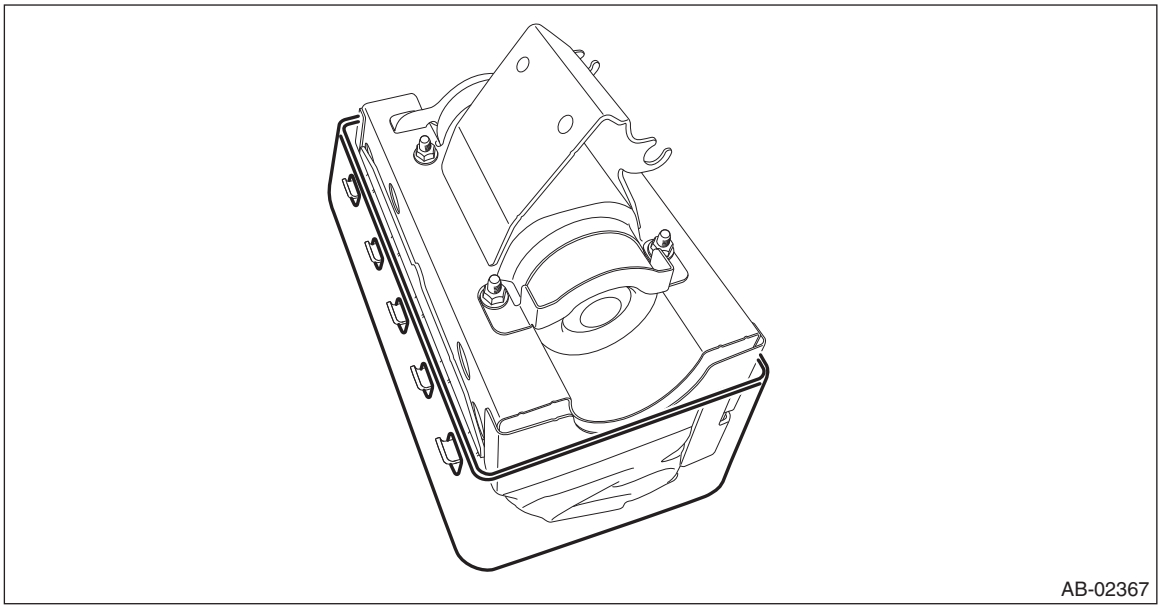
(3) After checking that all harness clamps and connectors are released and disconnected, remove the instrument panel assembly.

CAUTION:
Be careful not to damage the instrument panel surface and interior trims.

22) Remove the heater vent duct.
(1) Remove the screws, and remove the center vent duct.
(2) Release the claws and remove the screws, then detach the side vent duct RH.


AB-02381

23) Release the claws, and remove the passenger's airbag module.



24) Refer to "CAUTION" for handling of a removed airbag module. <Ref. to AB-9, CAUTION, General Description.>

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.
• 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.

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

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

Tightening torque:
Passenger's airbag module: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)
Console box: 6.5 N·m (0.66 kgf-m, 4.8 ft-lb)

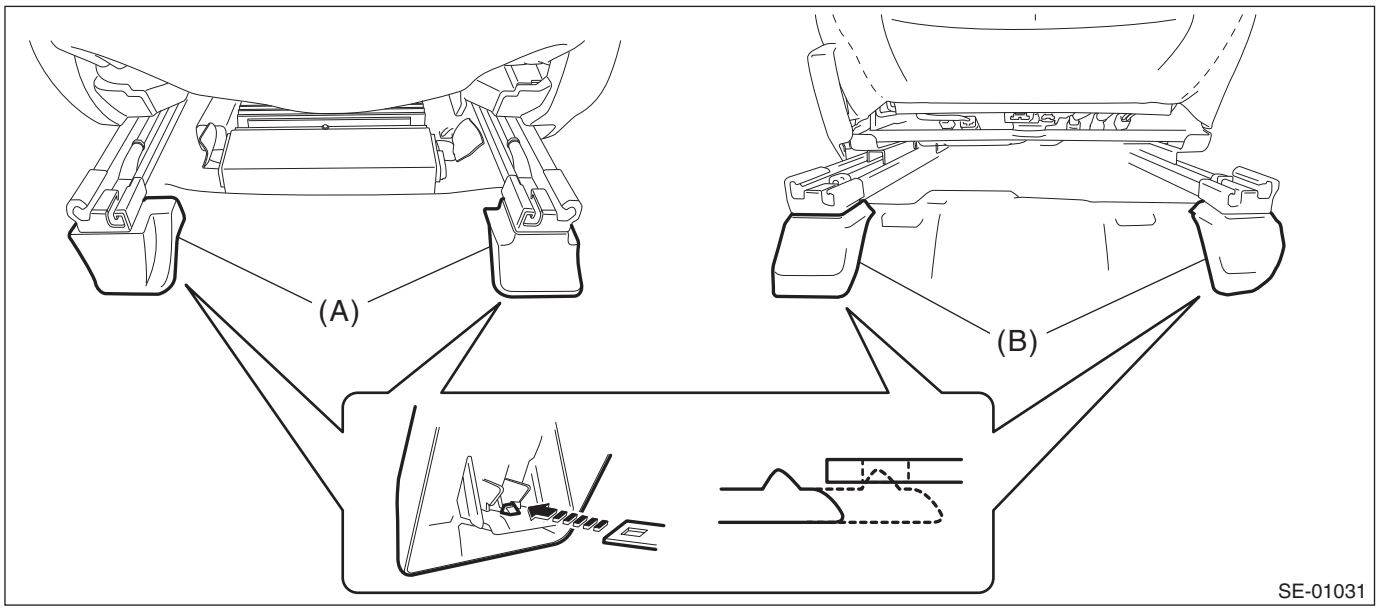
6. Side Airbag Module

A: REMOVAL

CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>

NOTE:
Remove the passenger's side by referring to driver's side.
1) Turn the ignition switch to OFF.
2) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

NOTE:
For the power seat, remove the slide rail installing bolt before removing the battery ground terminal.
3) 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.



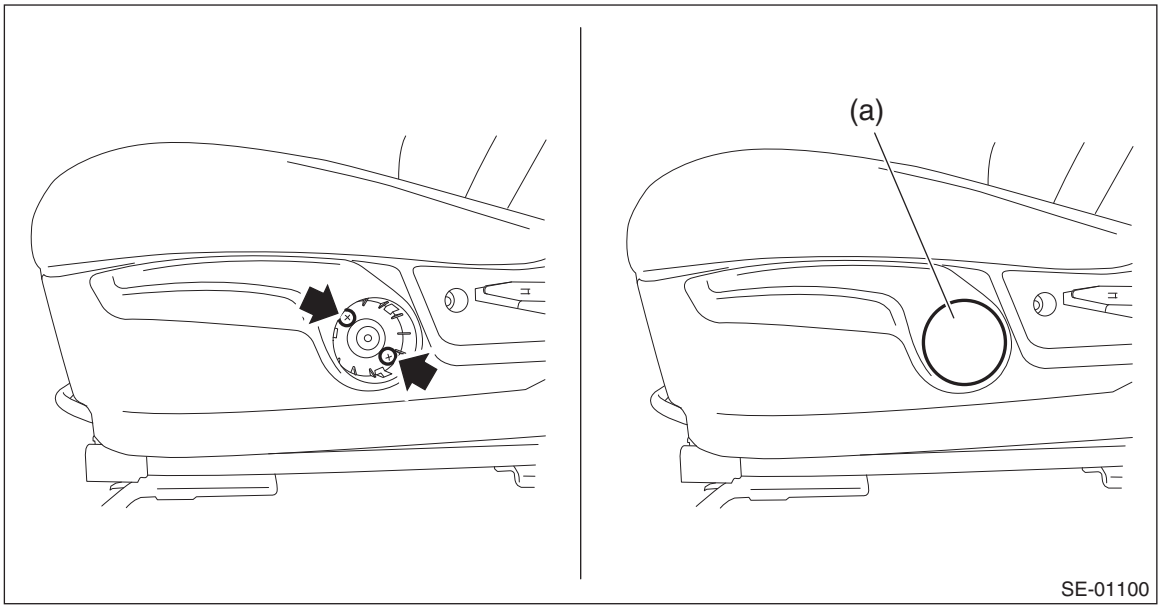
   (2) Disconnect the connector under the seat.

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)

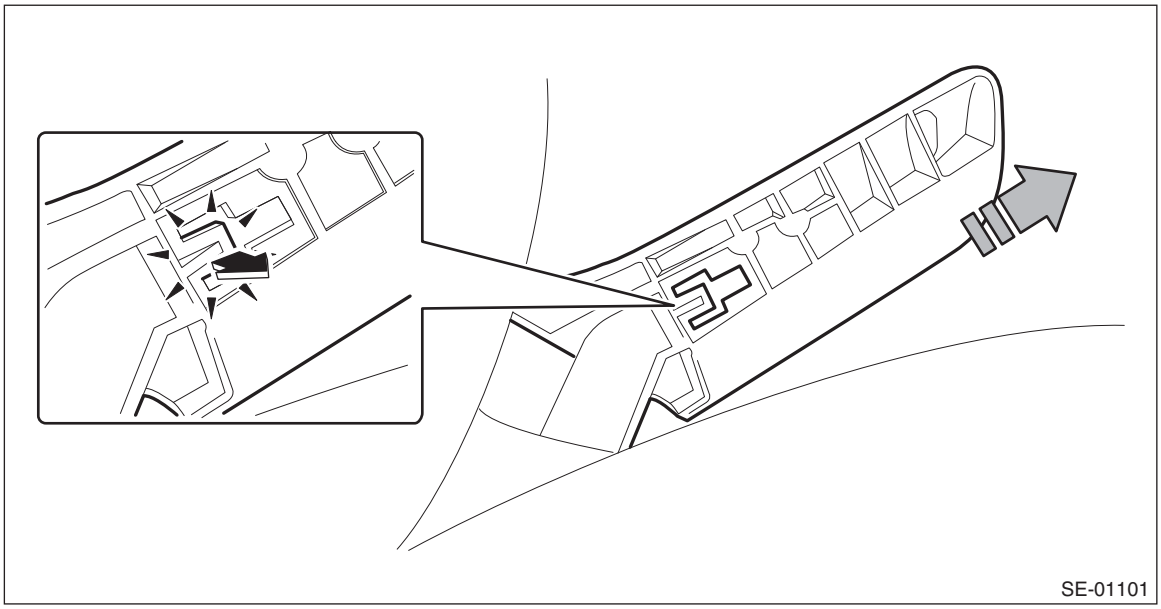
   (3) Take out the front seat from the vehicle.

CAUTION:
Be careful not to damage the body.
4) Remove the seat lifter lever. (Manual seat)
   (1) Using a flat tip screwdriver, remove the seat lifter lever cover (a).

(2) Remove the screw and remove the seat lifter lever.



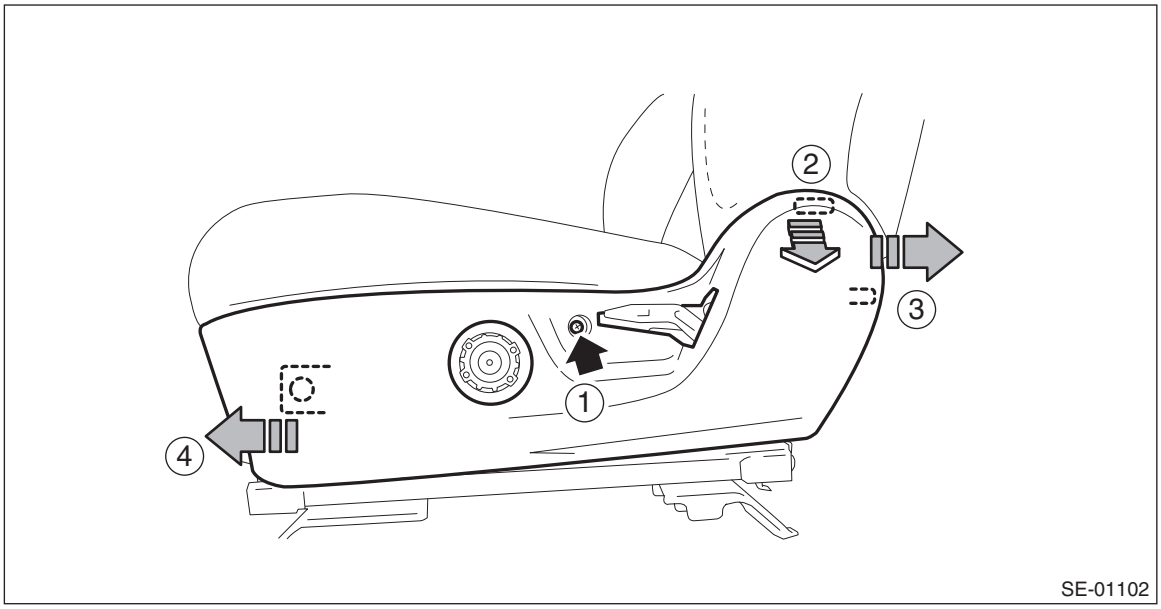
5) Remove the reclining lever cover. (Manual seat)
(1) Pull up the reclining lever and release the claws on the back.
(2) Pull out the reclining lever cover.



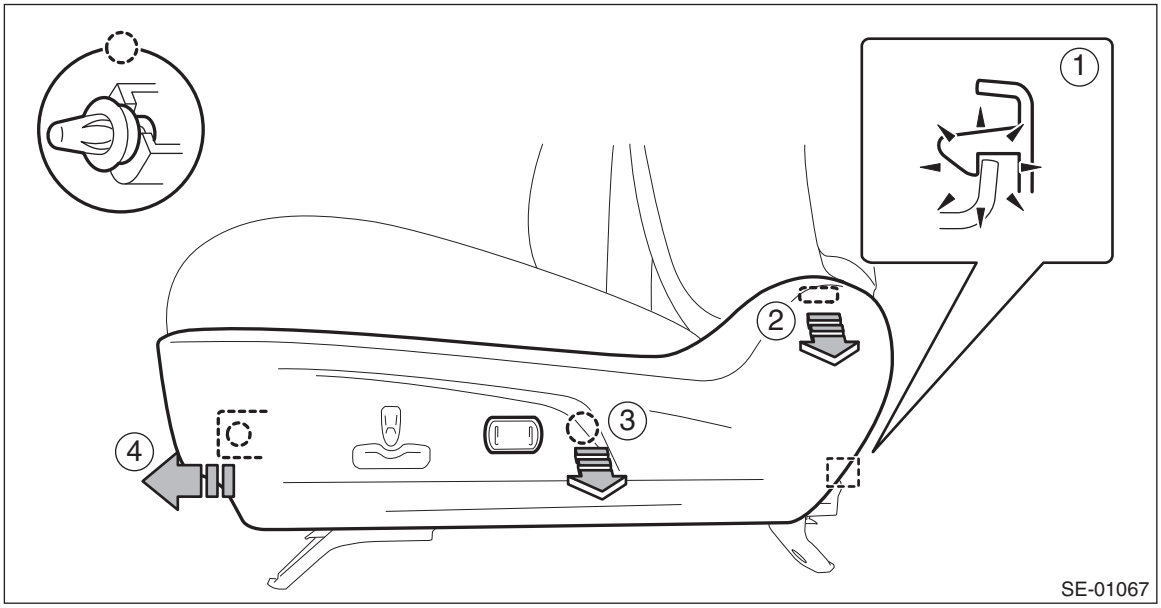
6) Remove the seat side cover OUT.

- MANUAL SEAT
  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.

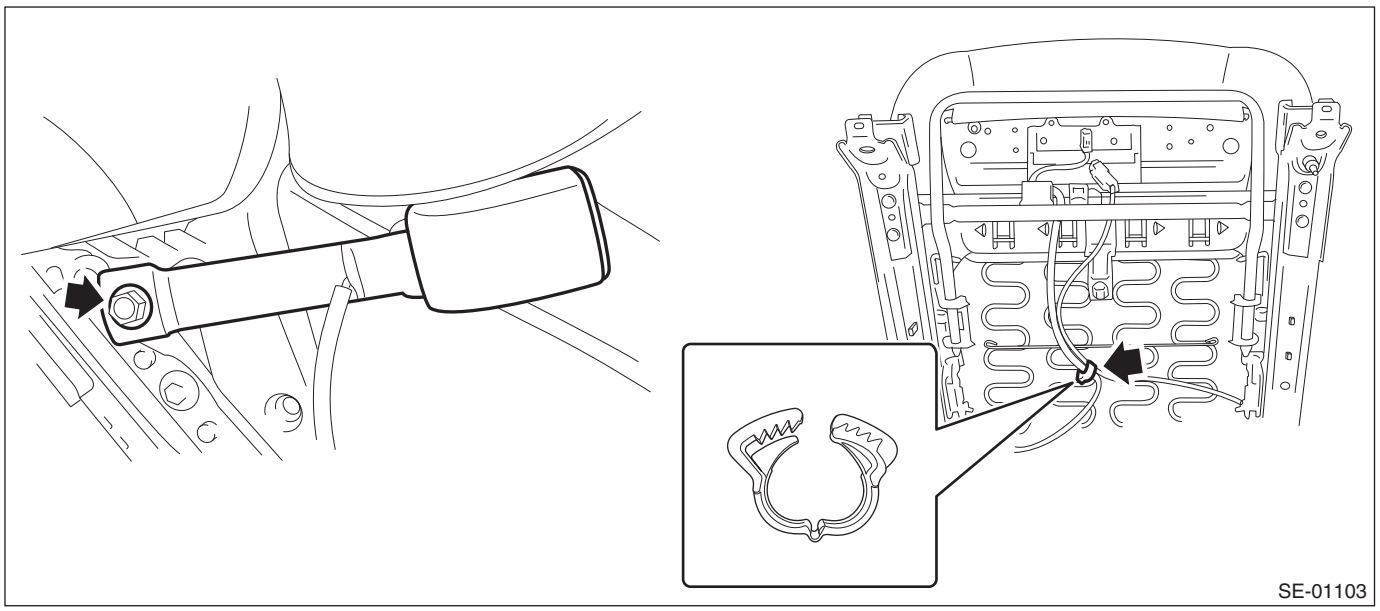


- POWER SEAT
  1. Release the claw in the rear section of the seat side cover.
  2. Release the claw in the upper section of the seat side cover.
  3. Remove the clip and release the claw in the front section of the seat side cover
  4. Disconnect the power seat switch connector and remove the seat side cover OUT.



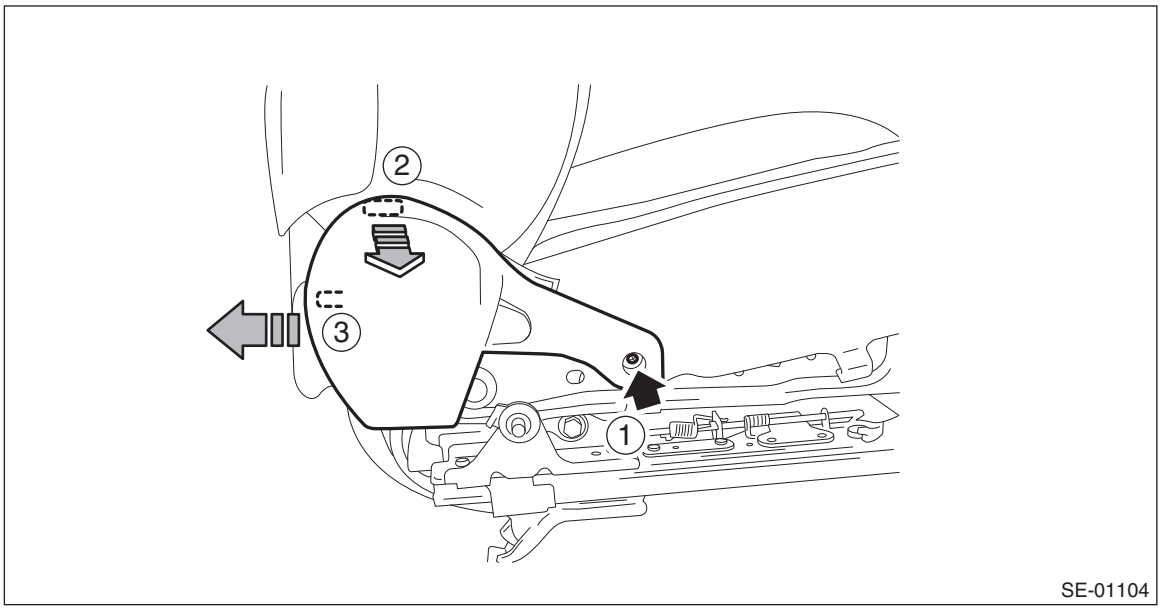
7) Remove the inner seat belt assembly.
   (1) Remove the nut and remove the inner seat belt assembly.

(2) Remove the clip for the inner seat belt harness located under the seat cushion.



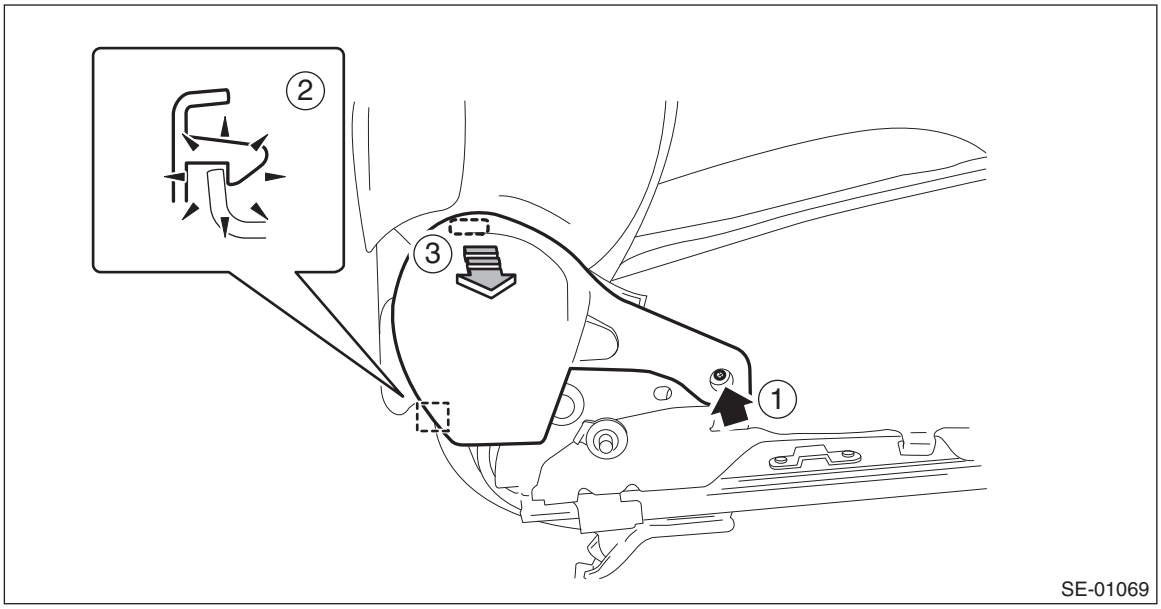
8) Remove the seat side cover IN.

- MANUAL SEAT
  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.

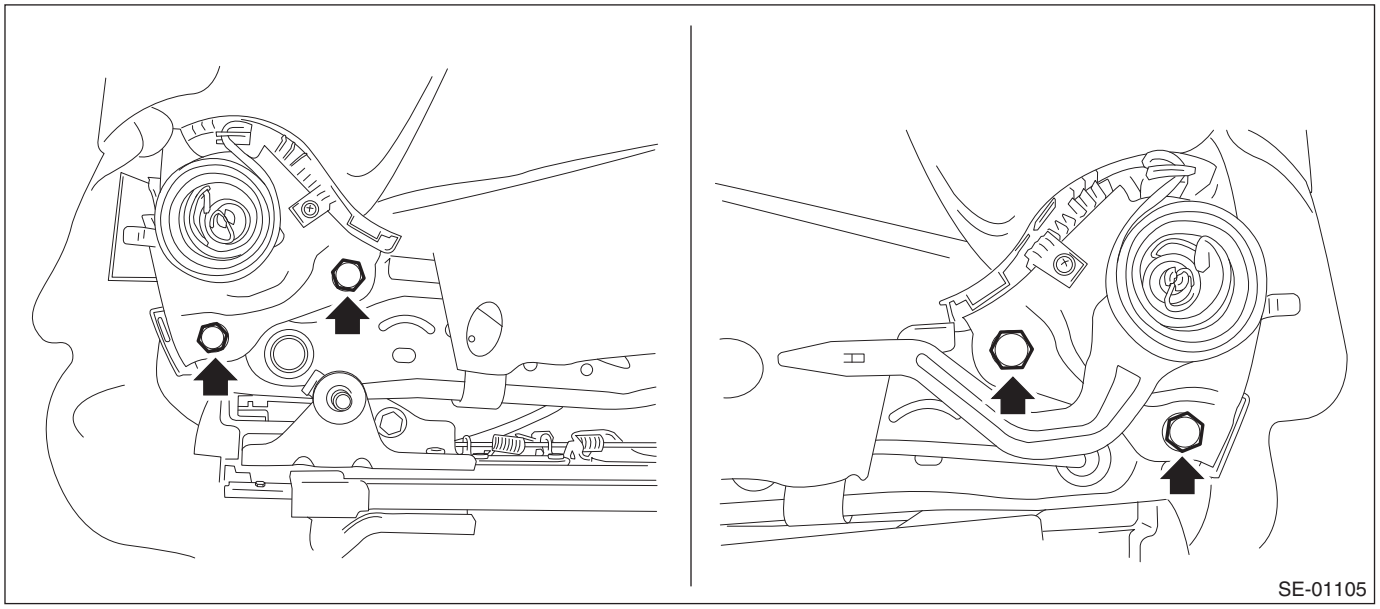


- POWER SEAT
  1. Remove the screws.
  2. Release the claw in the rear section of the seat side cover.

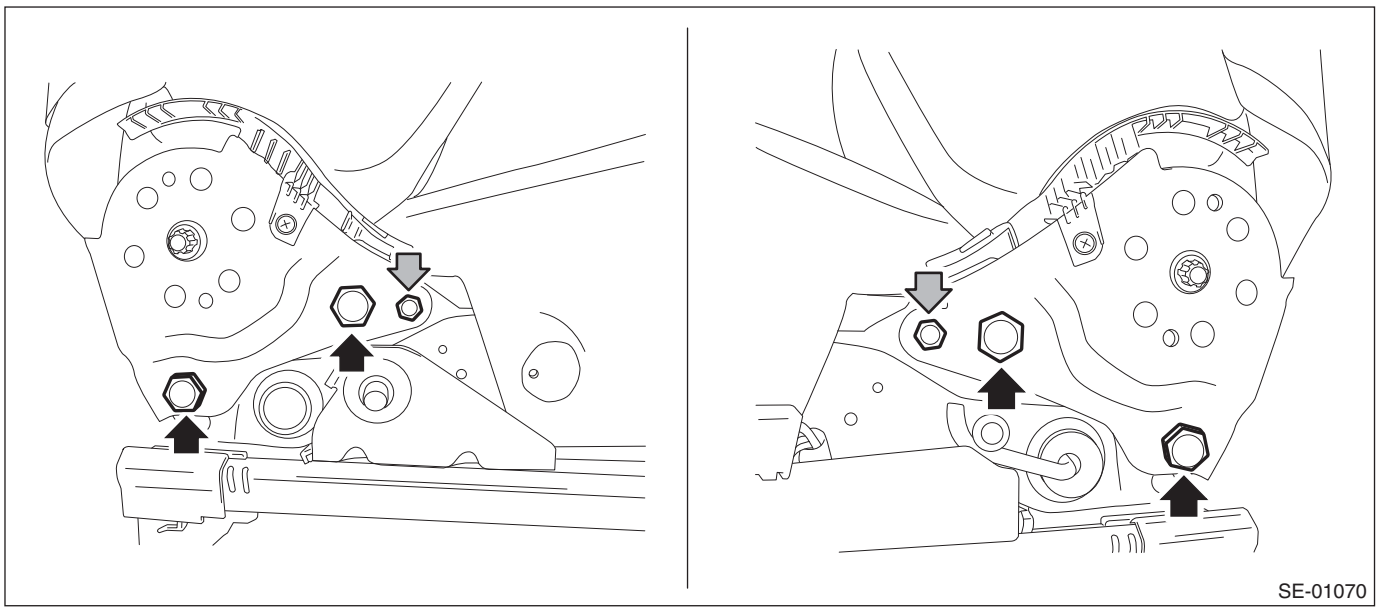
3. Release the claw in the upper section of the seat side cover, then remove the seat side cover IN.



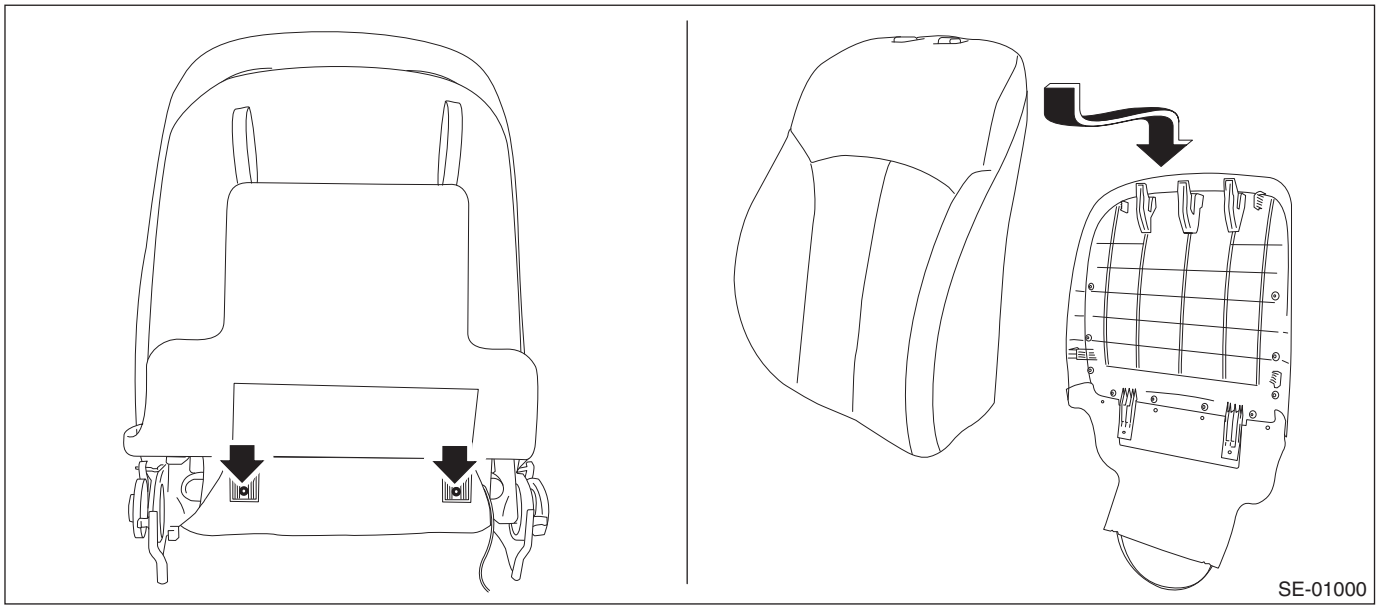
9) Separate the backrest assembly and the seat cushion assembly.
(1) Remove the clip for the side airbag harness located under the seat cushion.
(2) Remove the bolts from the right and left reclining hinges.
(3) While taking care not to damage the airbag harness, separate the backrest assembly and the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



- POWER SEAT



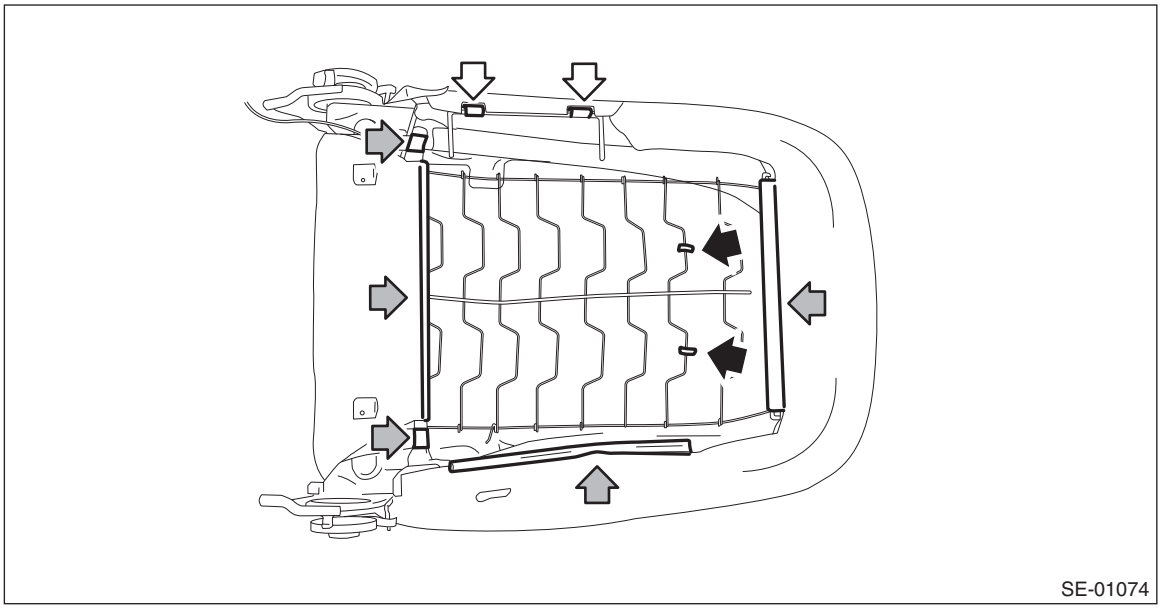
10) Remove the backrest back cover.
(1) Remove the screws.
(2) Release the hooks by pulling down the back cover and remove the backrest back cover.



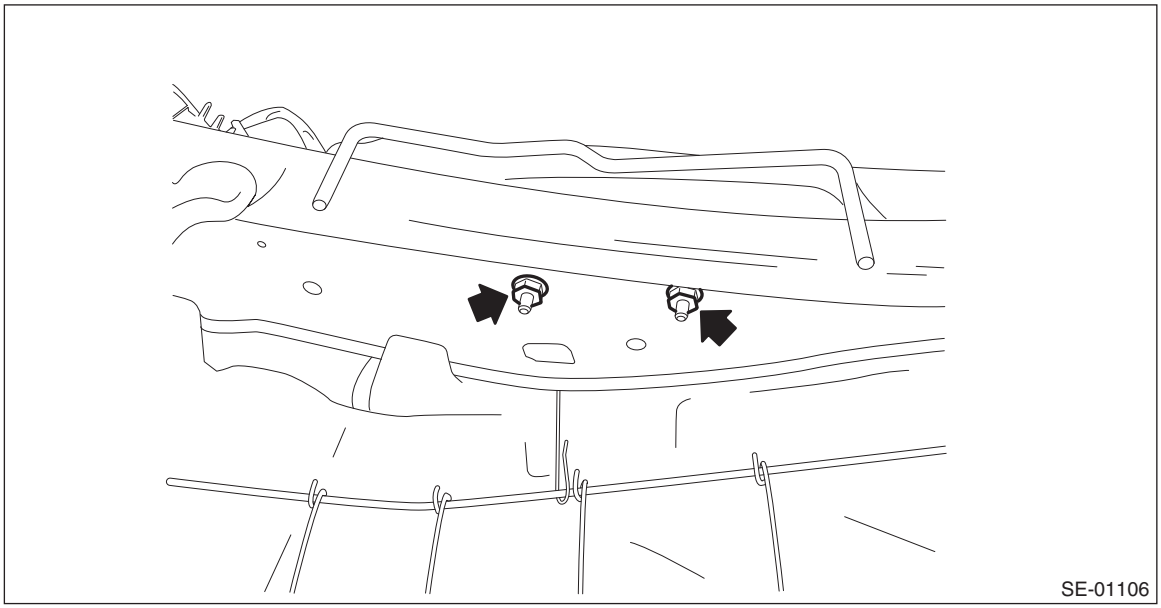
11) Remove the side airbag module assembly.

CAUTION:
• When removing the hog rings, be careful not to tear the vinyl sheet within the seat. If the sheet has torn, replace it with a new sheet.
• 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 hooks and hog rings.



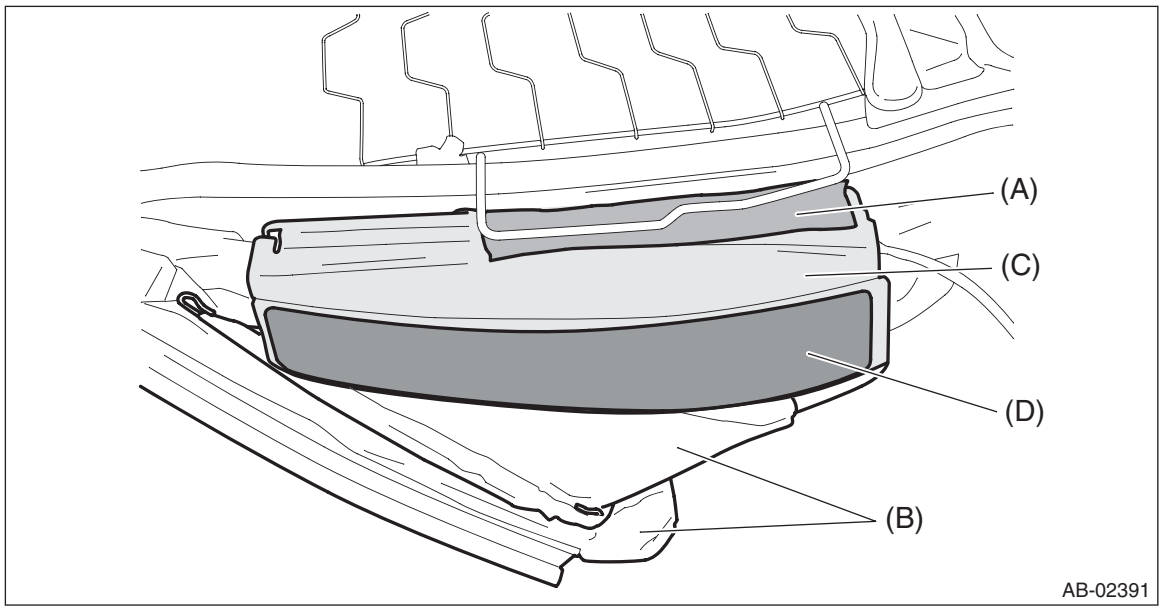
(2) Remove the backrest pad & cover from backrest assembly.
(3) Remove the mounting nuts of the side airbag module.



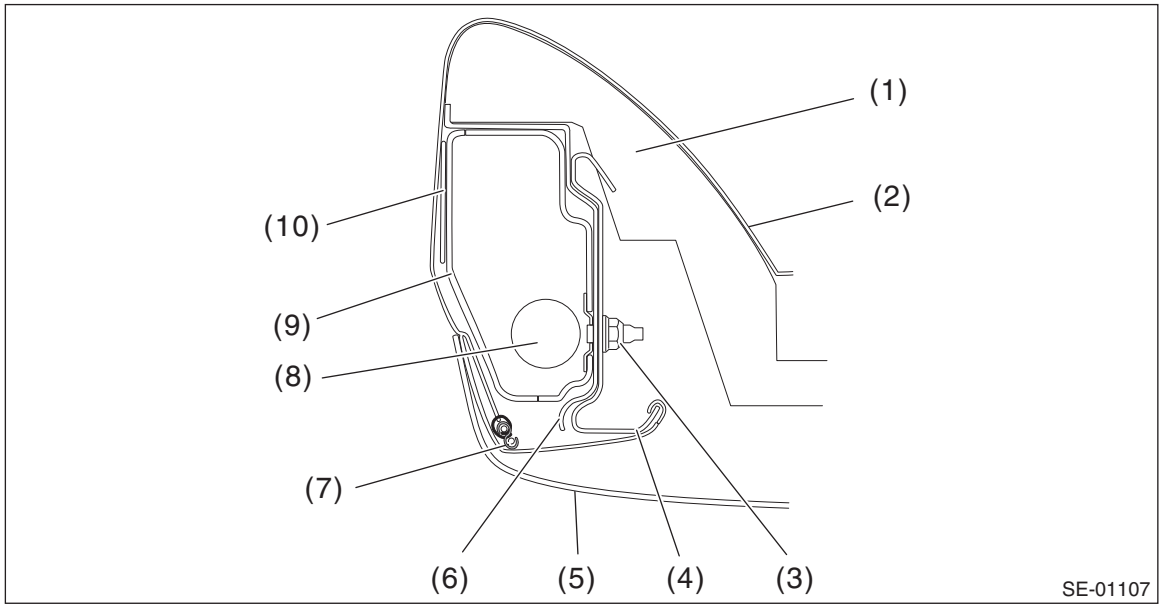
(4) Remove the side airbag harness from backrest frame assembly.
(5) While taking care not to damage the airbag (plastic) protective cover, remove the side airbag module assembly.

B: INSTALLATION

CAUTION:
• Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>
• Be sure to perform the system calibration for occupant detection system after passenger's seat installation. <Ref. to OD(diag)-15, OPERATION, System Calibration (Rezeroing).>
• 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 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.

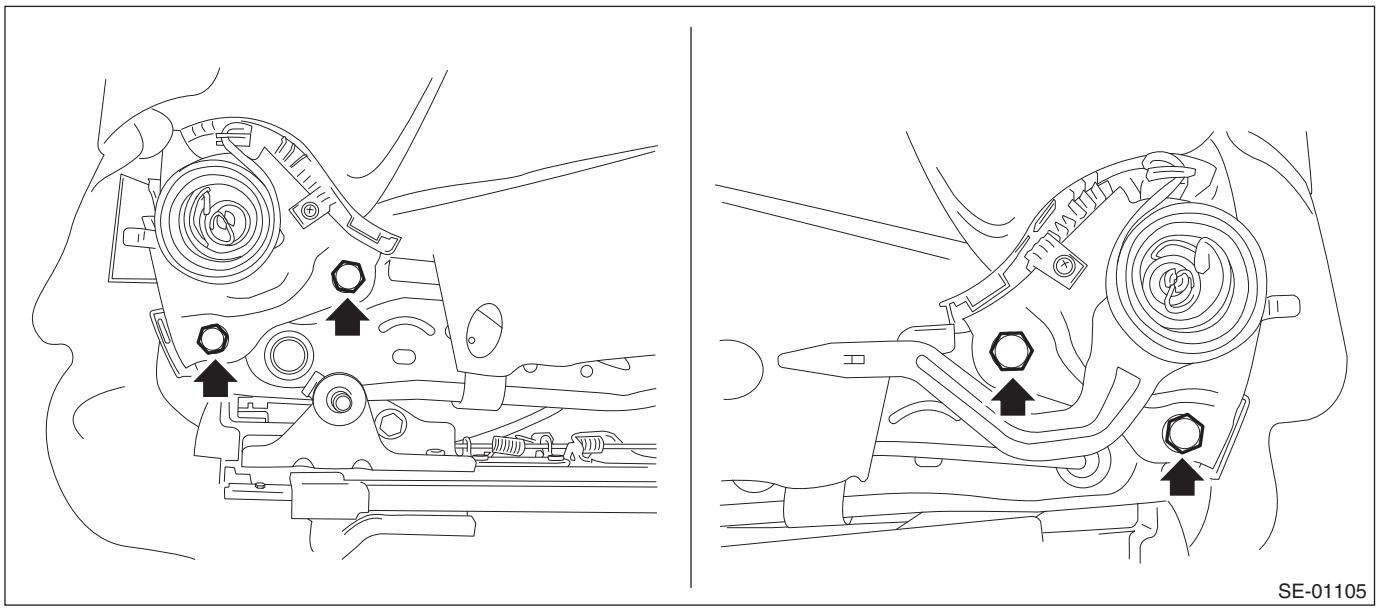
- **Do not reuse hog rings and S hooks.**
- **Secure the hog ring using hog ring pliers.**
- **Install the hog rings to the specified points securely and make sure that no wrinkle or twisting on backrest cover.**

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

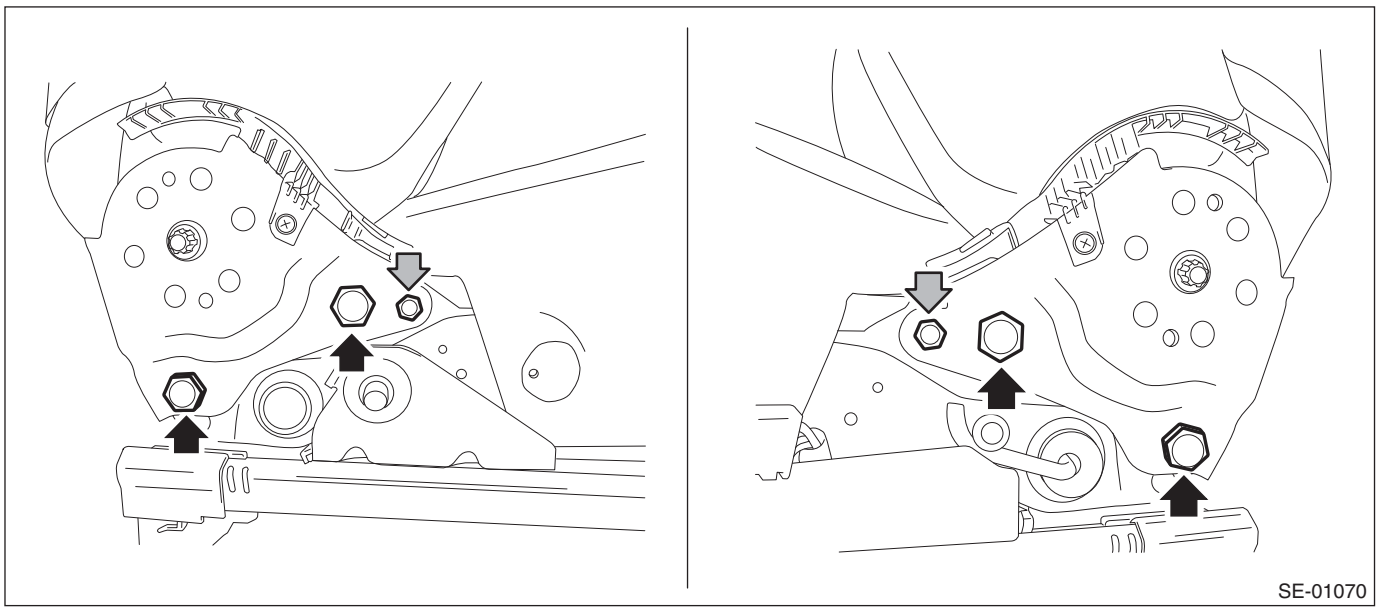
2) Install the side airbag module to the backrest frame assembly.

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

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


SE-01105

- POWER SEAT


SE-01070

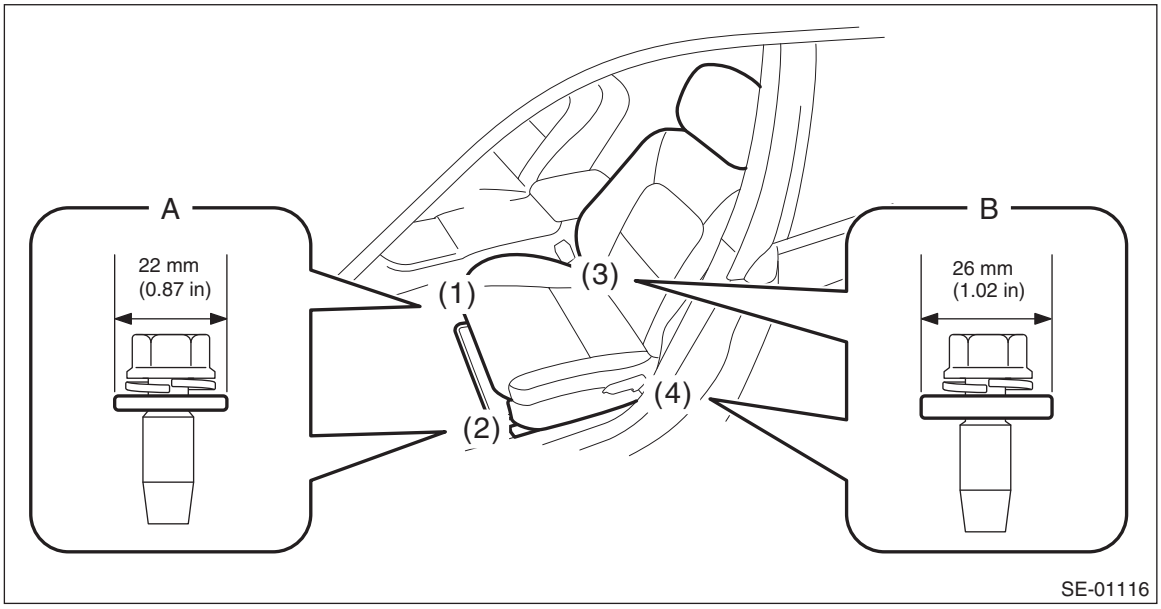
Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to SE-2, FRONT SEAT, COMPONENT, General Description.>

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

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

7) Install the front seat to the body.

CAUTION:
• The seat mounting bolts differ between the front mounting points and the rear mounting points. Make sure that you are using correct bolts at correct positions.
• Tighten the slide rail installing 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)

7. Curtain Airbag Module

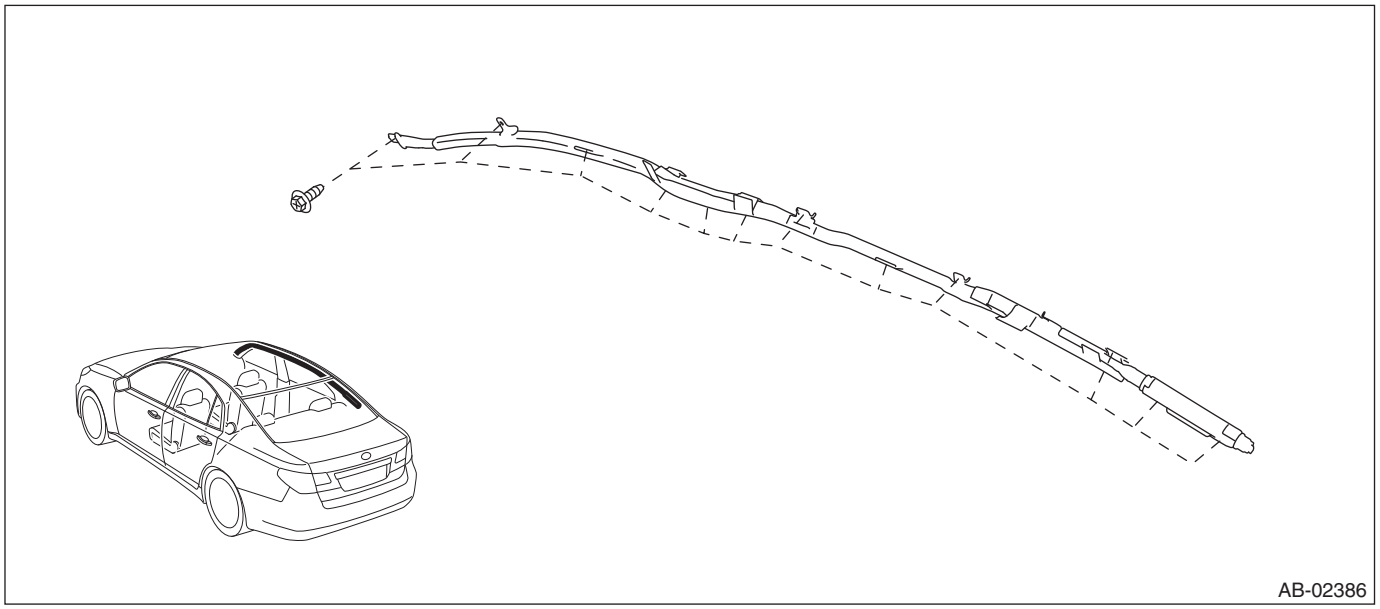
A: REMOVAL

1. SEDAN MODEL

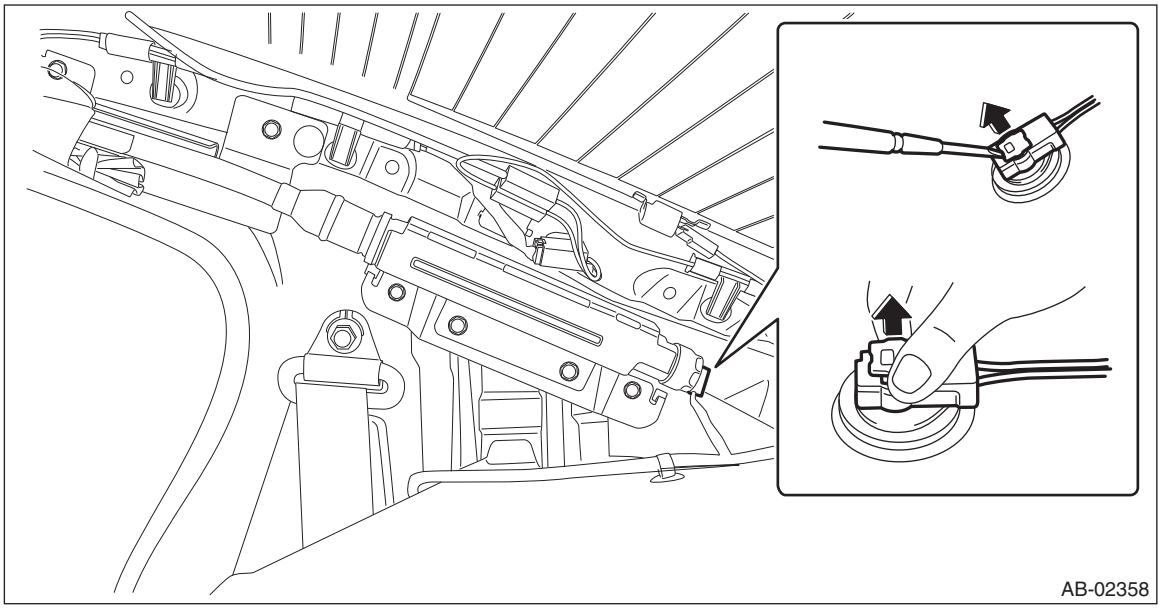
CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>
1) Turn the ignition switch to OFF.
2) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
3) Remove the roof trim. <Ref. to EI-131, SEDAN MODEL, REMOVAL, Roof Trim.>
4) Remove the curtain airbag module assembly.

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

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



(2) Disconnect the curtain airbag module connector.



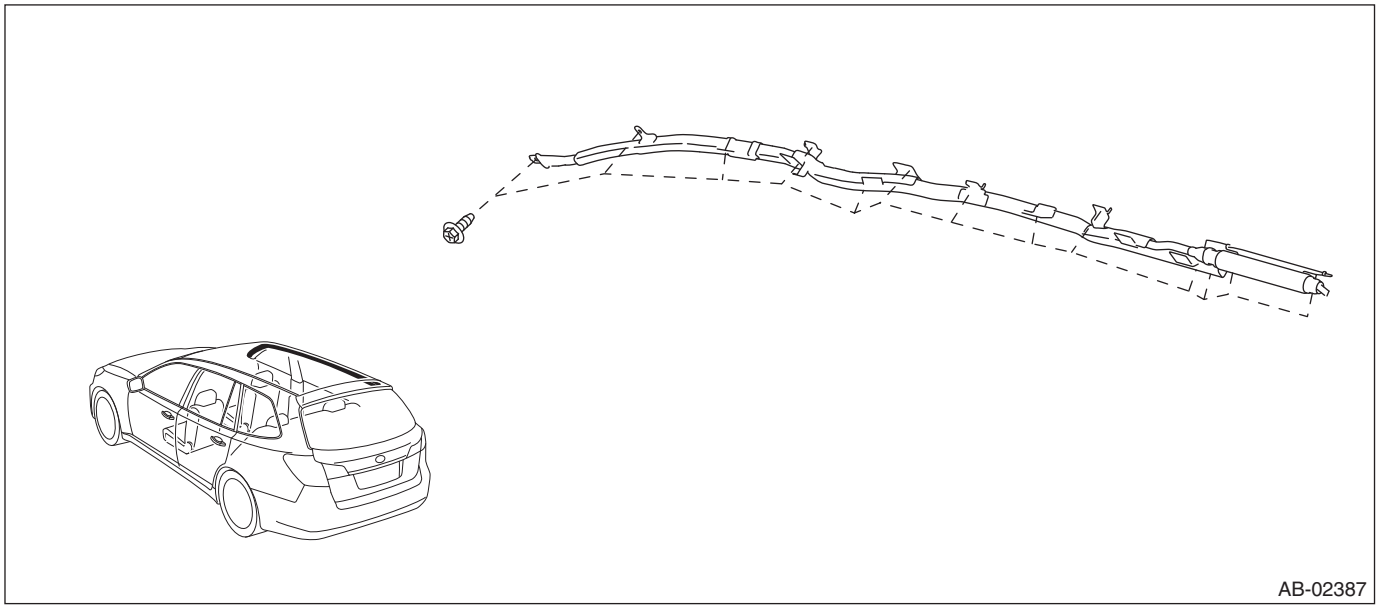
2. OUTBACK MODEL

CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>

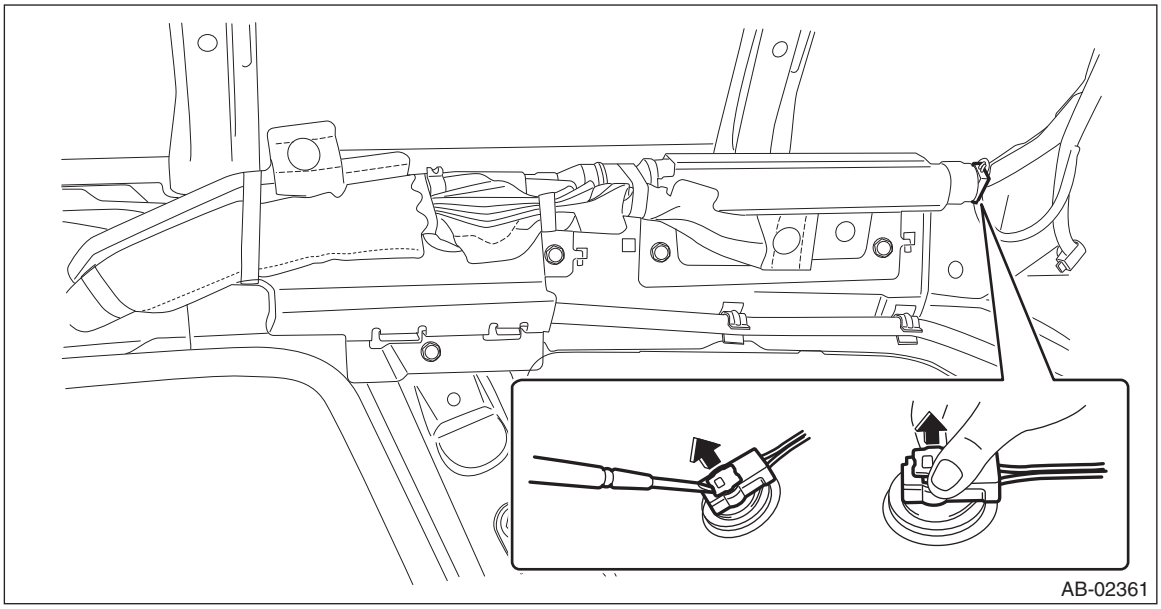
1) Turn the ignition switch to OFF.
2) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
3) Remove the roof trim. <Ref. to EI-146, OUTBACK MODEL, REMOVAL, Roof Trim.>
4) Remove the curtain airbag module assembly.

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

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



(2) Disconnect the curtain airbag module connector.



B: INSTALLATION

CAUTION:
• Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>
• When installing the curtain airbag module, install a specified part at specified place.
• Be careful not to damage the curtain airbag module during removal.
• Never open the curtain airbag module before activation. Never reuse the deployed curtain airbag module.
• Make sure that there are no foreign matter on airbag module.

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

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

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

8. Airbag Control Module

A: REMOVAL

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

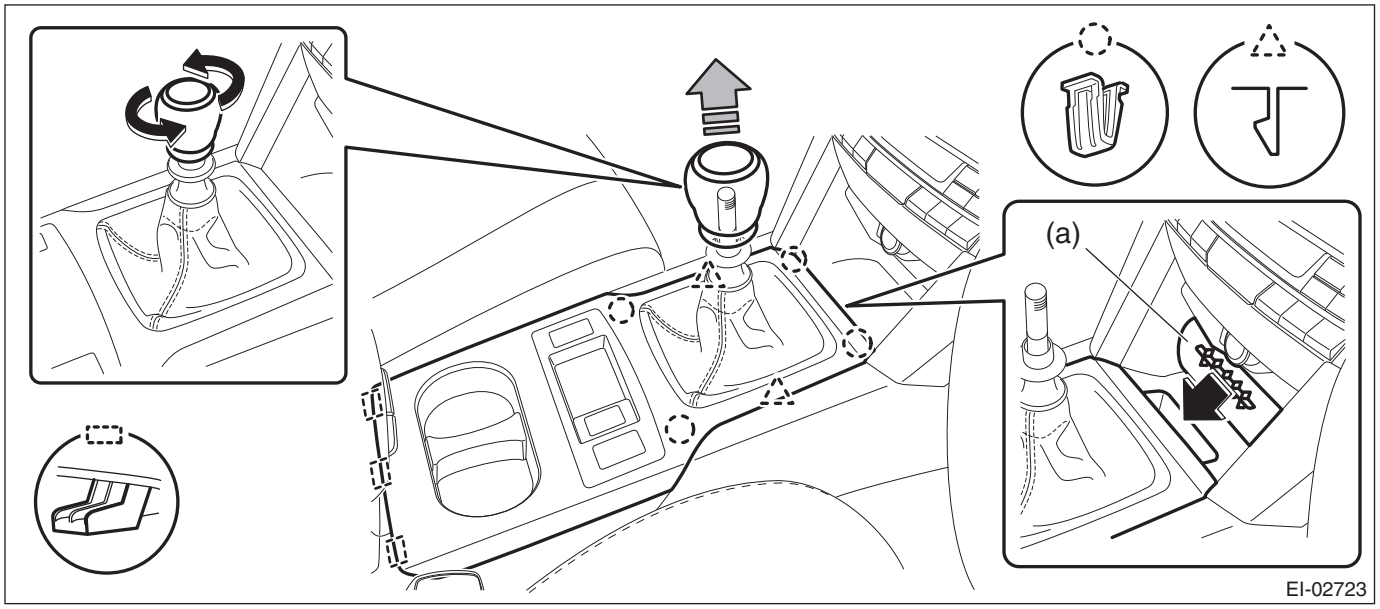
1) Turn the ignition switch to OFF.

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

NOTE:
For a model with power seat, remove the console box assembly before disconnecting the battery ground cable.

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.

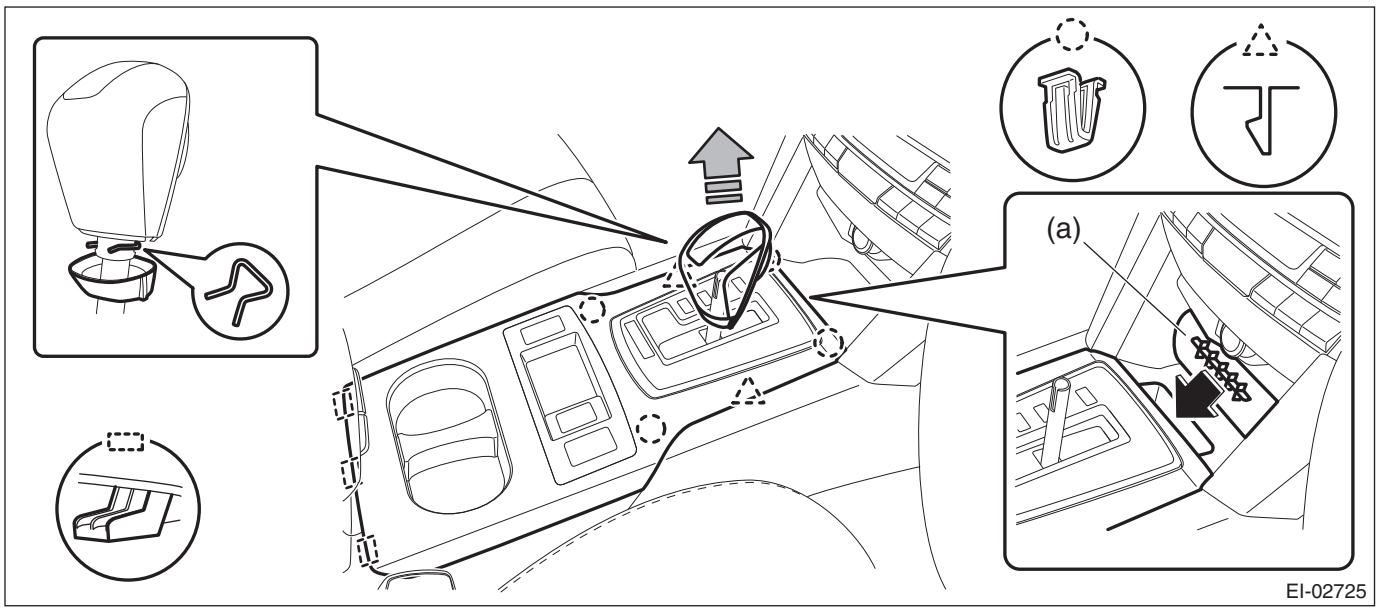


NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

  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.

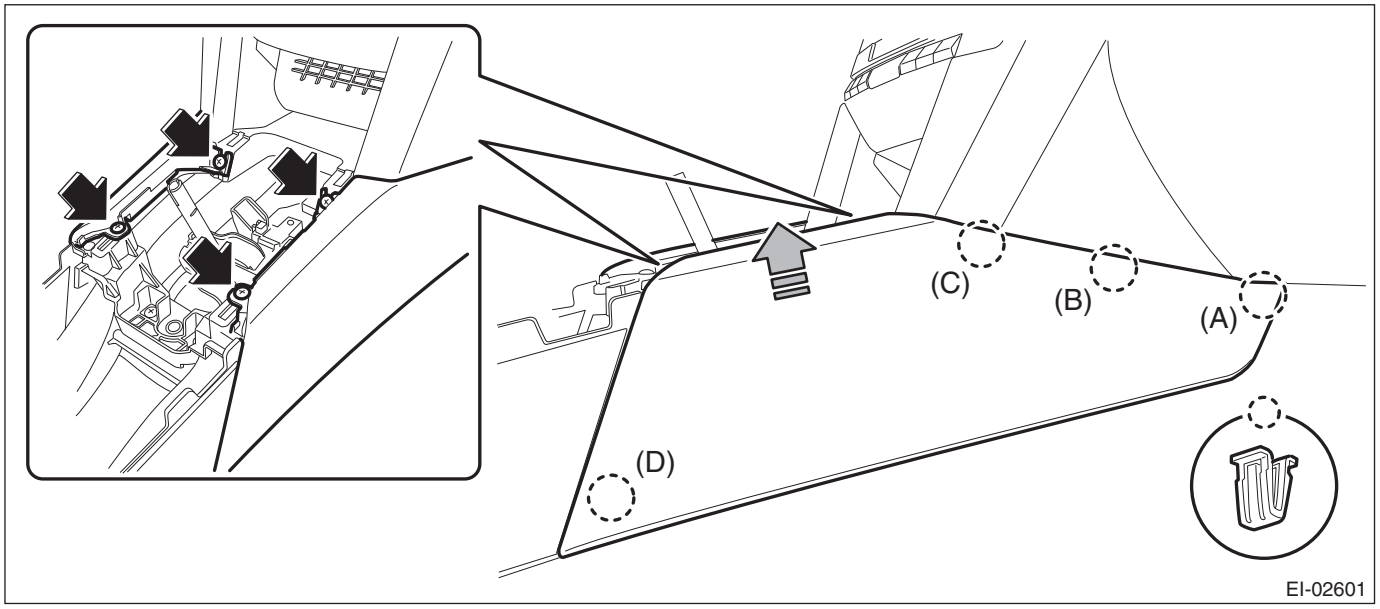
2. Release the clips and claws, then pull up the console front cover assembly.



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.

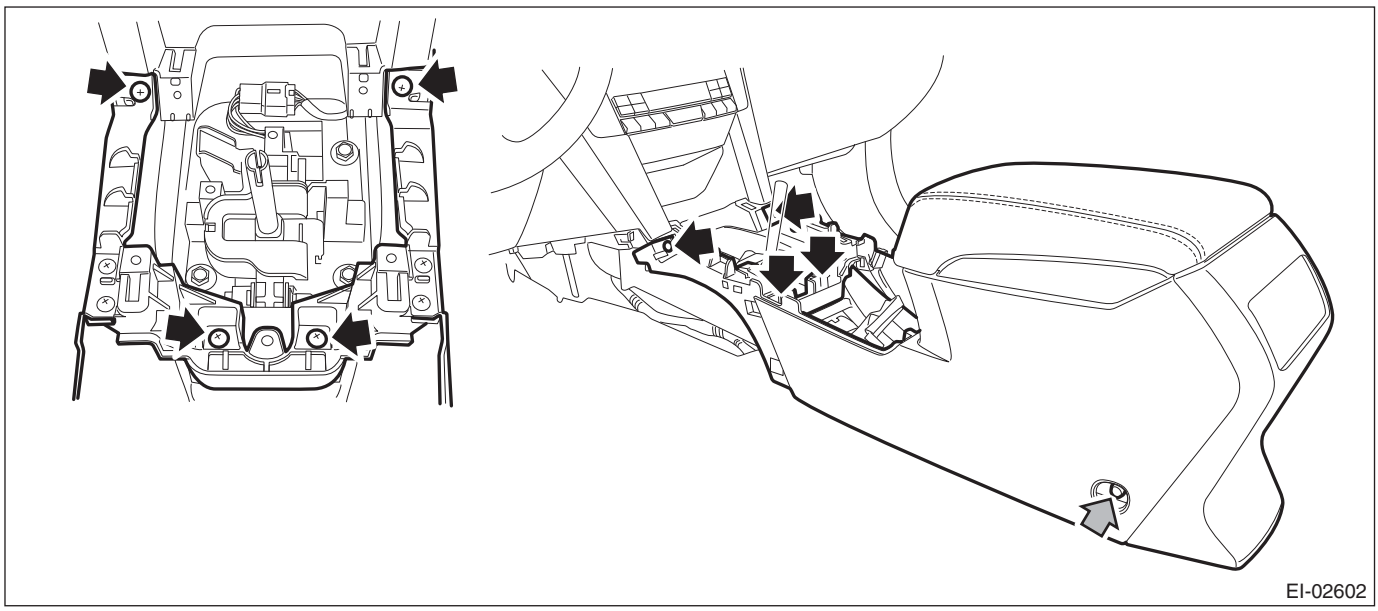
3) Remove the left and right console front side cover assembly.
(1) Remove the screws and release the clips (A) to (D) in order.
(2) Remove the console front side cover assembly by pulling it up.



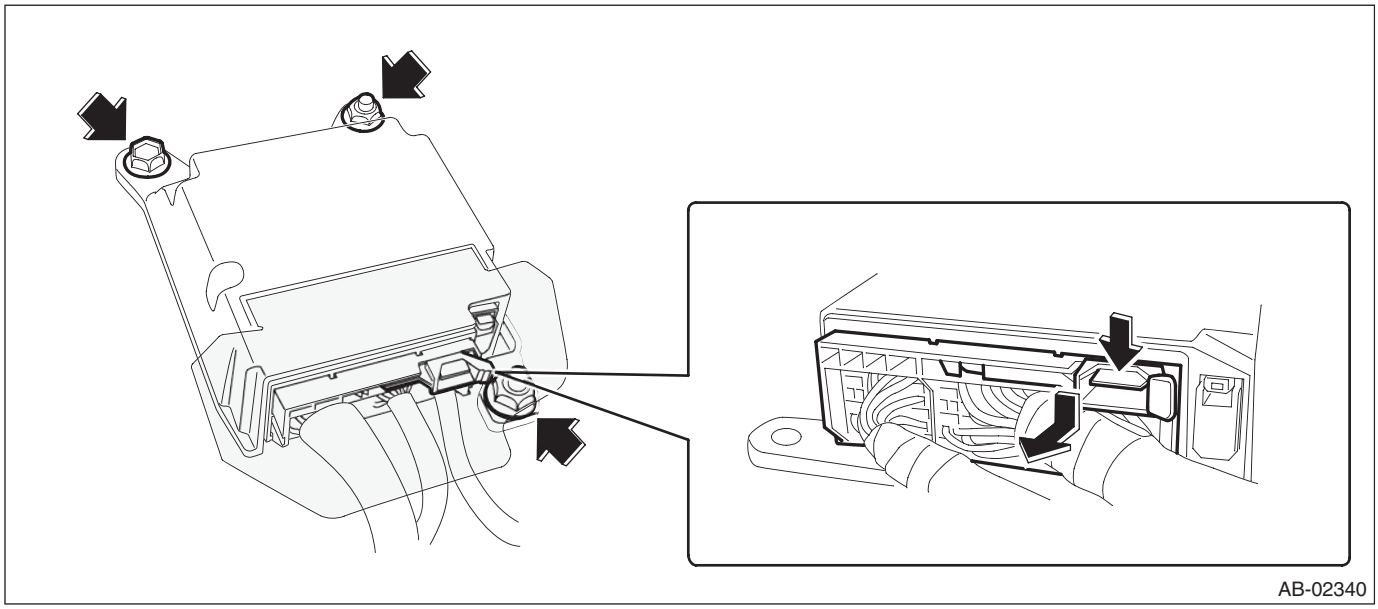
4) Remove the console box assembly.
(1) Move the seat forward, and remove the bolts after detaching the left and right caps.

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.


EI-02602

5) Remove the airbag control module.
(1) Disconnect the connector from airbag control module.
(2) Remove the bolt and nuts and remove the airbag control module.


AB-02340

B: INSTALLATION

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

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

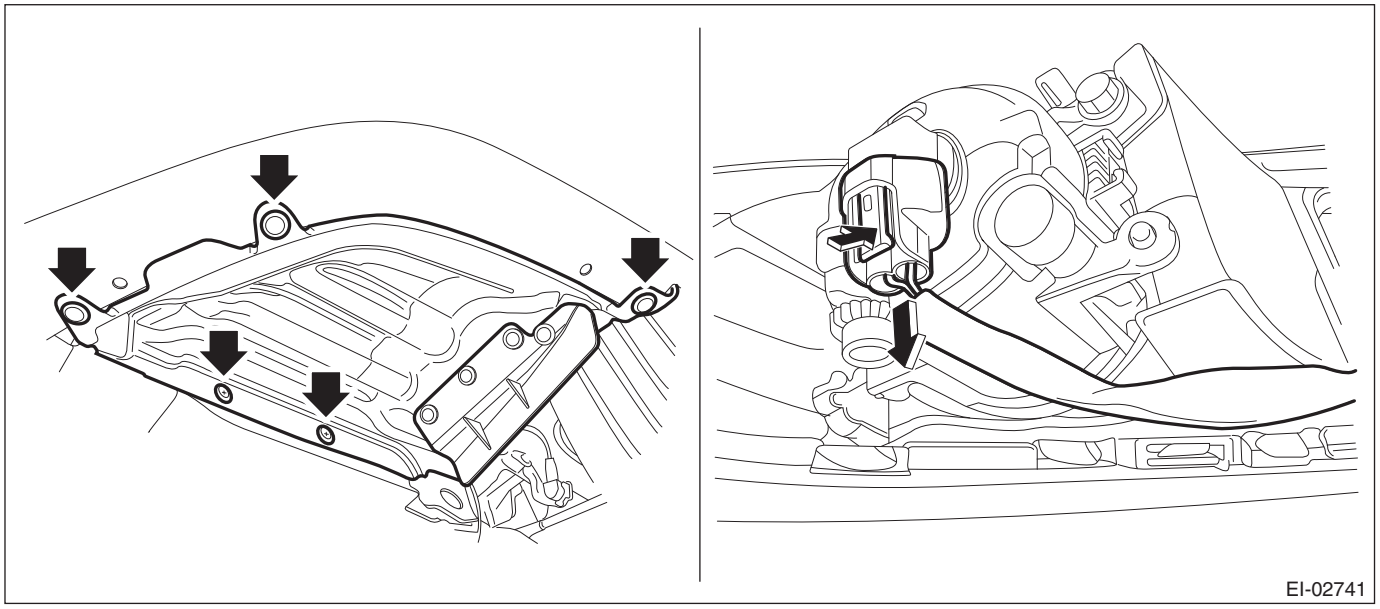
2) Install each part in the reverse order of removal.

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

9. Front Sub Sensor

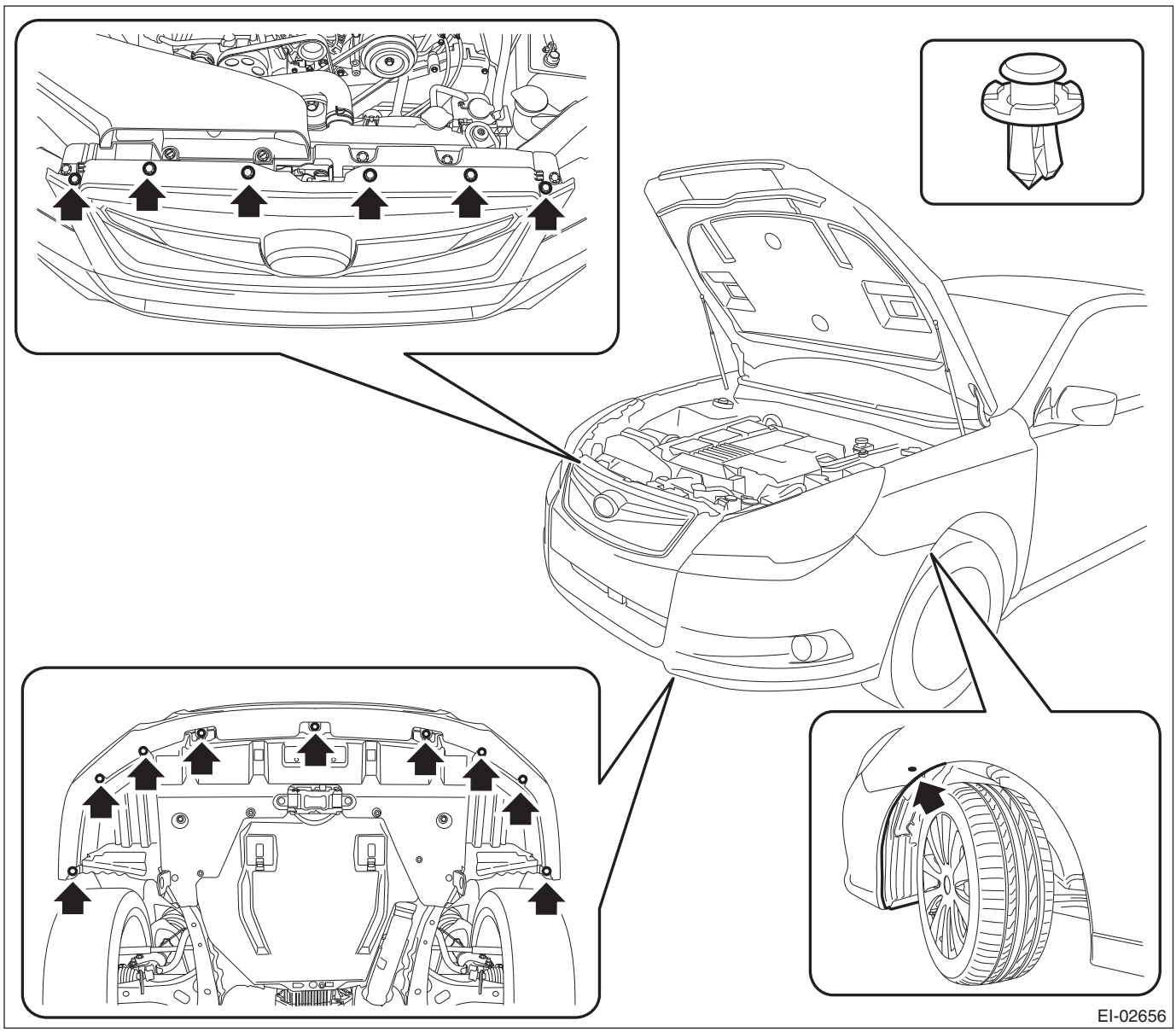
A: REMOVAL

1) Turn the ignition switch to OFF.
2) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
3) 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)



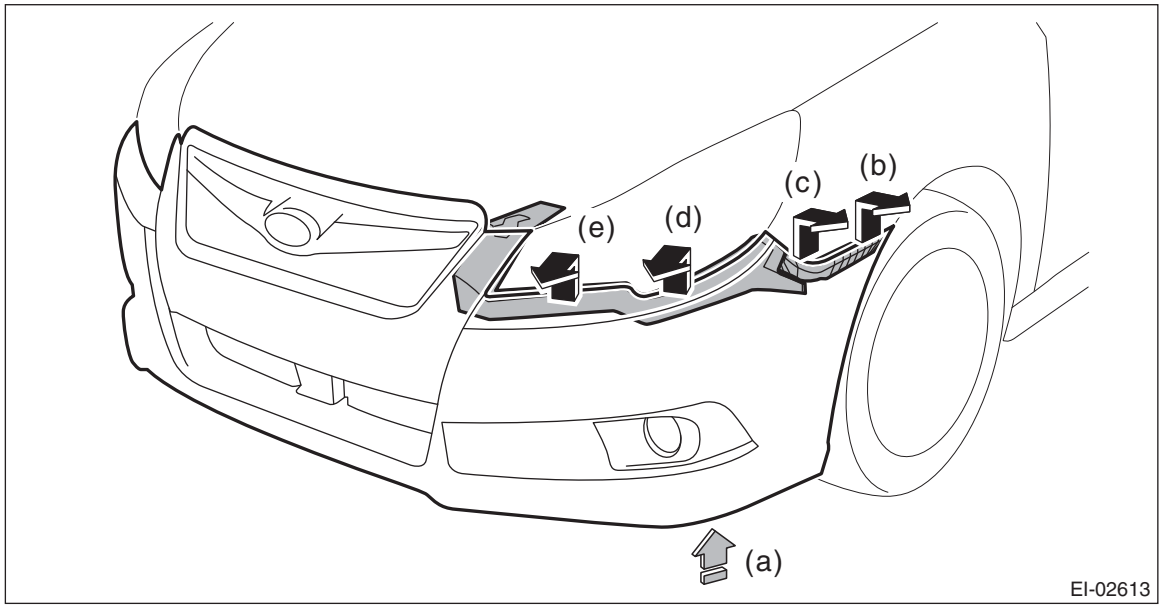
   (2) Remove the clips at the upper side of the bumper.
   (3) Remove the clips from the fender.

(4) Remove the clips at the lower side of bumper.



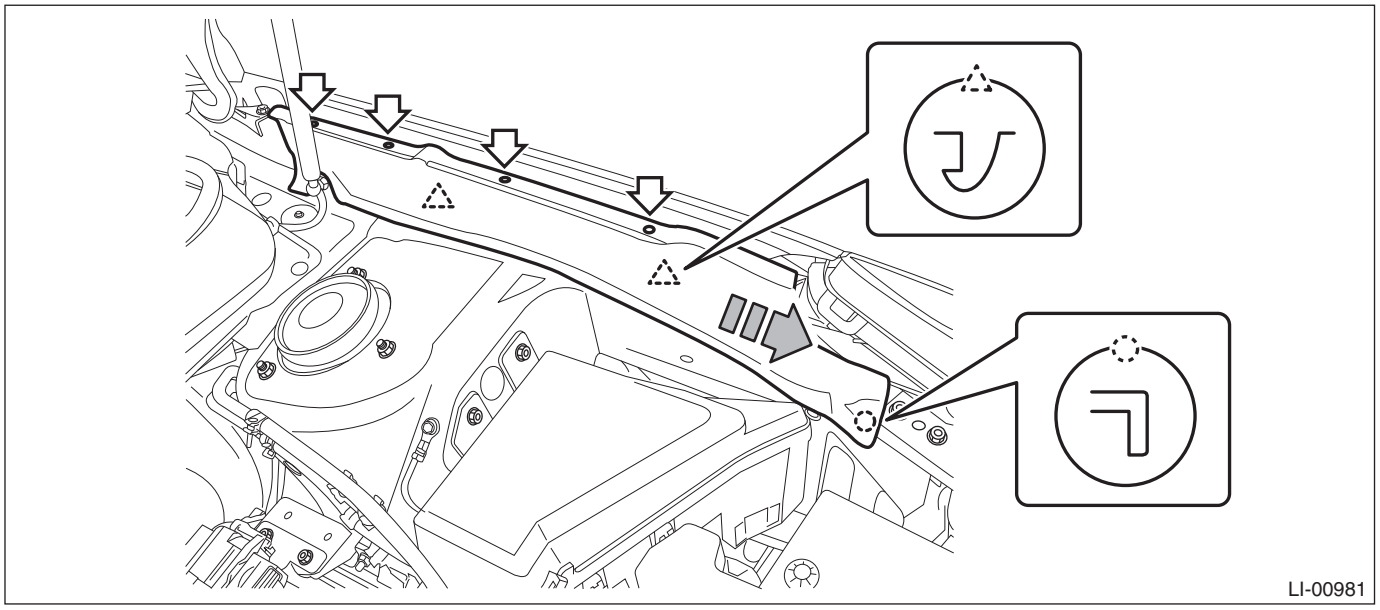
(5) Detach the flange section on the bumper face side from the bracket side front UPR.

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



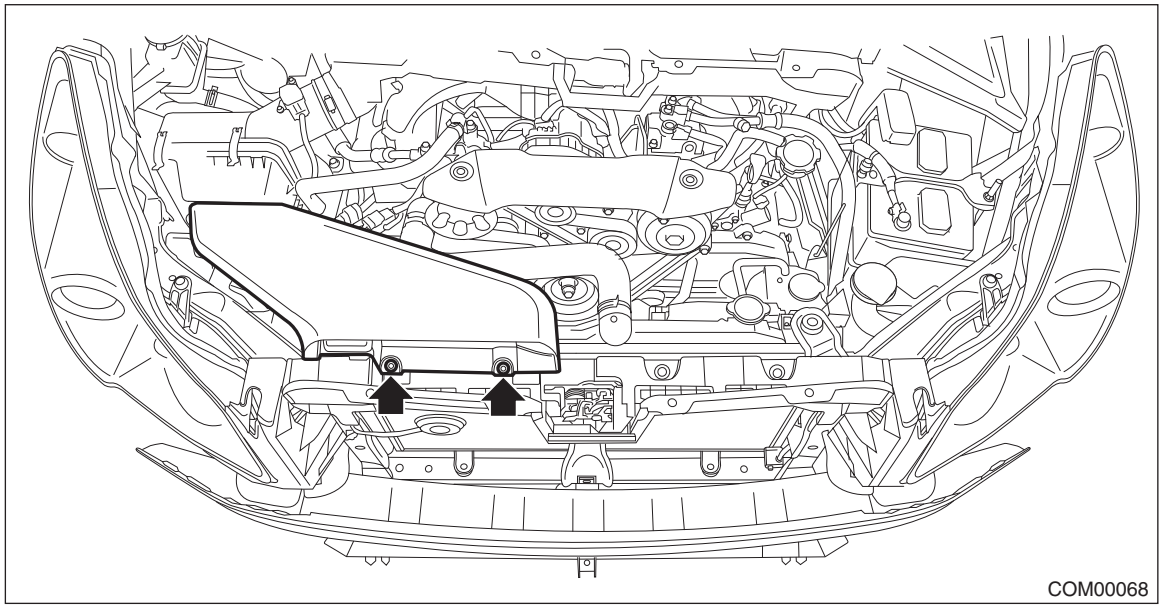
NOTE:
While pushing upward the underside of the fog light (a), remove from (b) through (e) in order.
Detach the opposite side in the same manner.

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.

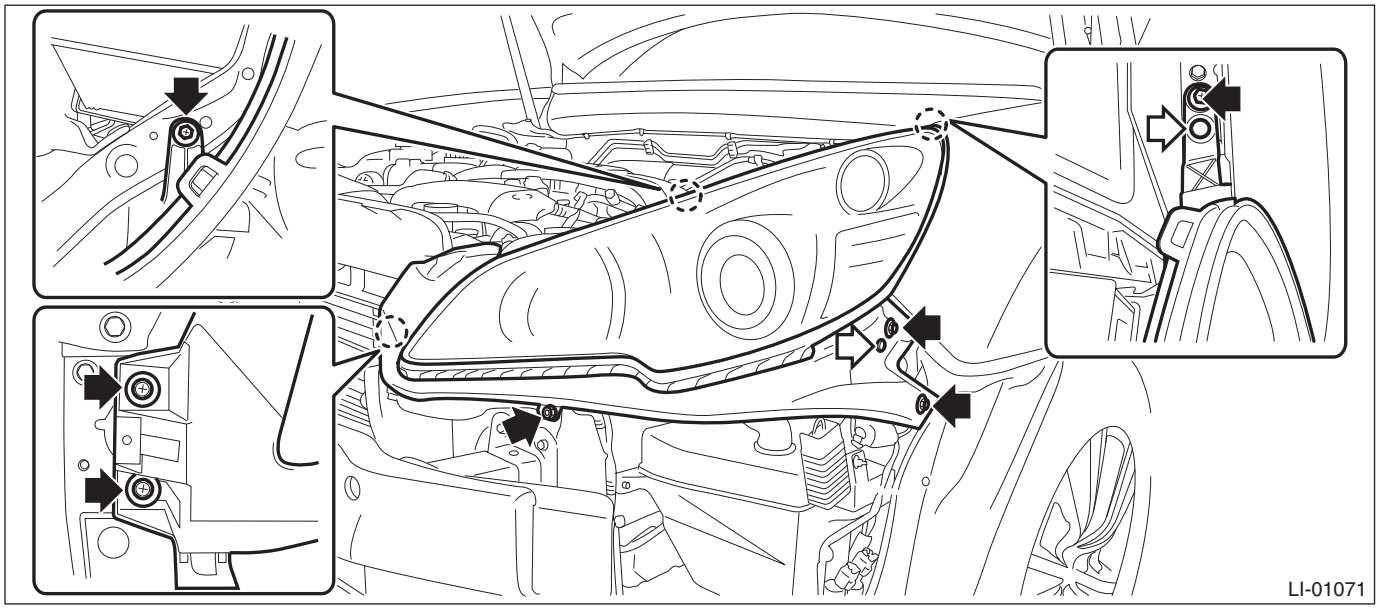


(2) Remove the headlight assembly.

NOTE:
When removing the RH headlight, remove the air intake duct.

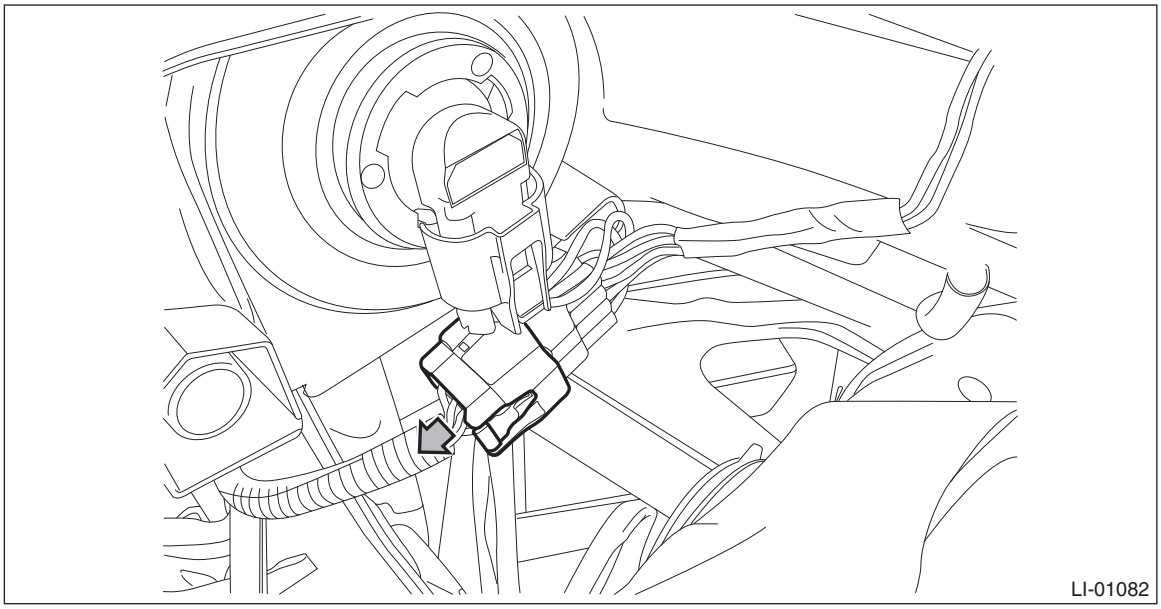


a) Remove the bolts and clips, and pull out the headlight assembly to the front of the vehicle.

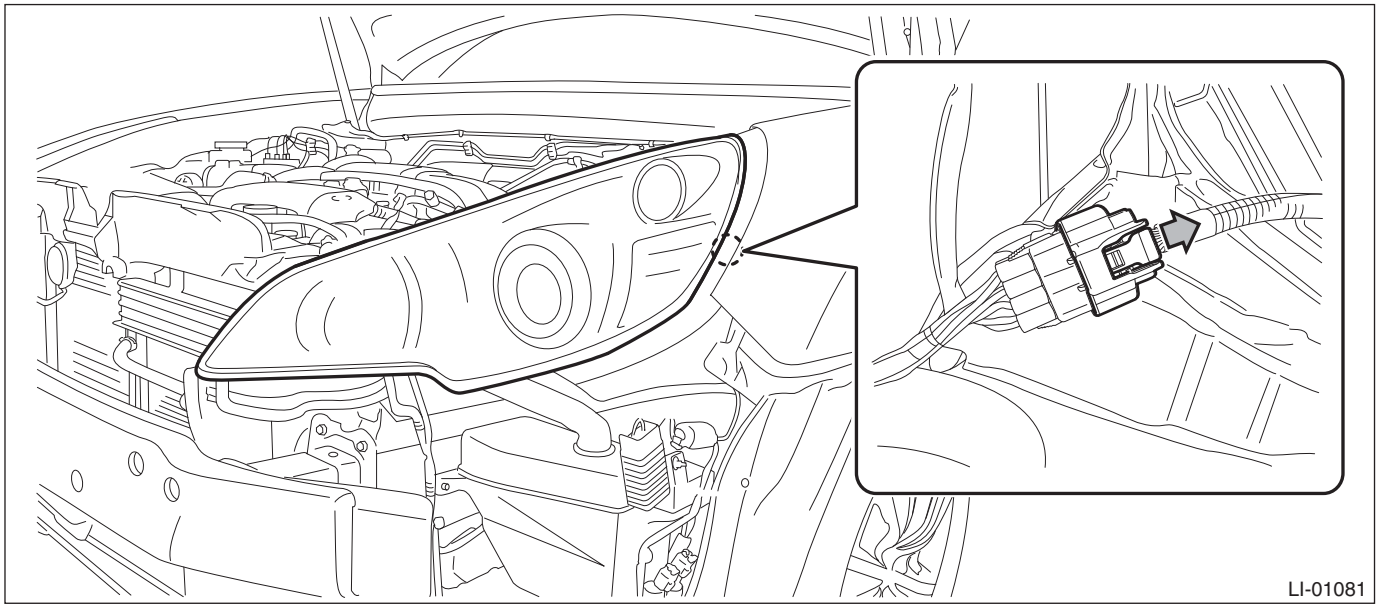


b) Disconnect the connector and remove the headlight assembly.

- RH headlight connector

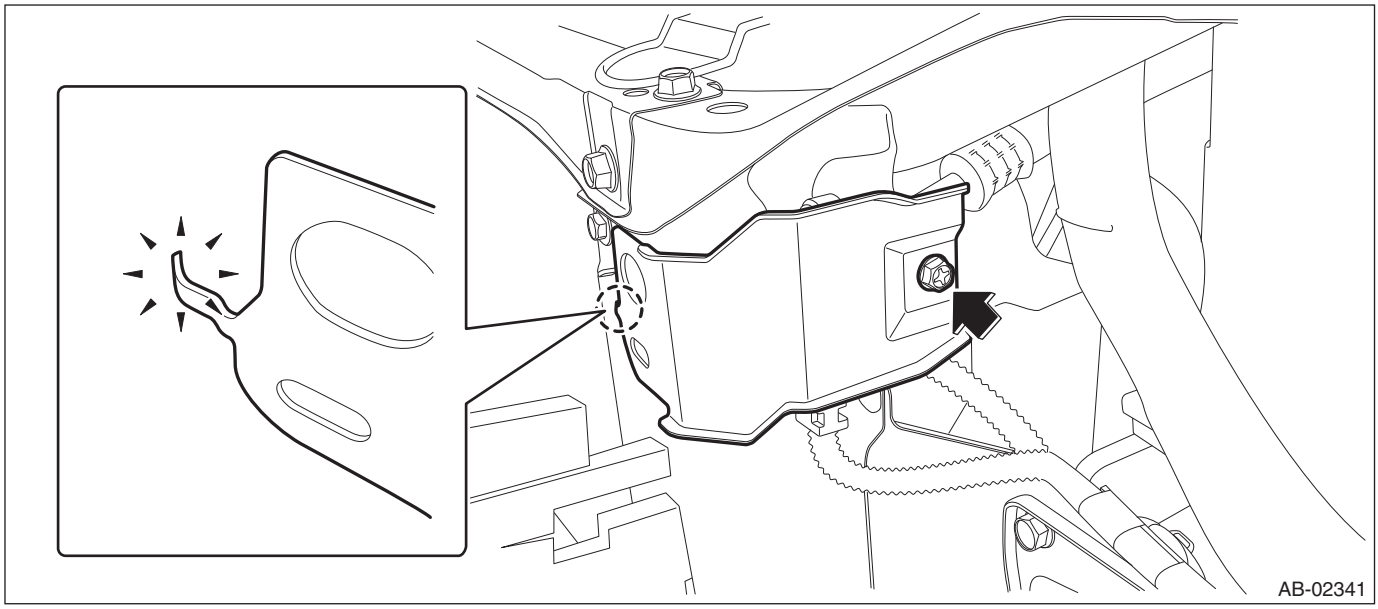


- LH headlight connector

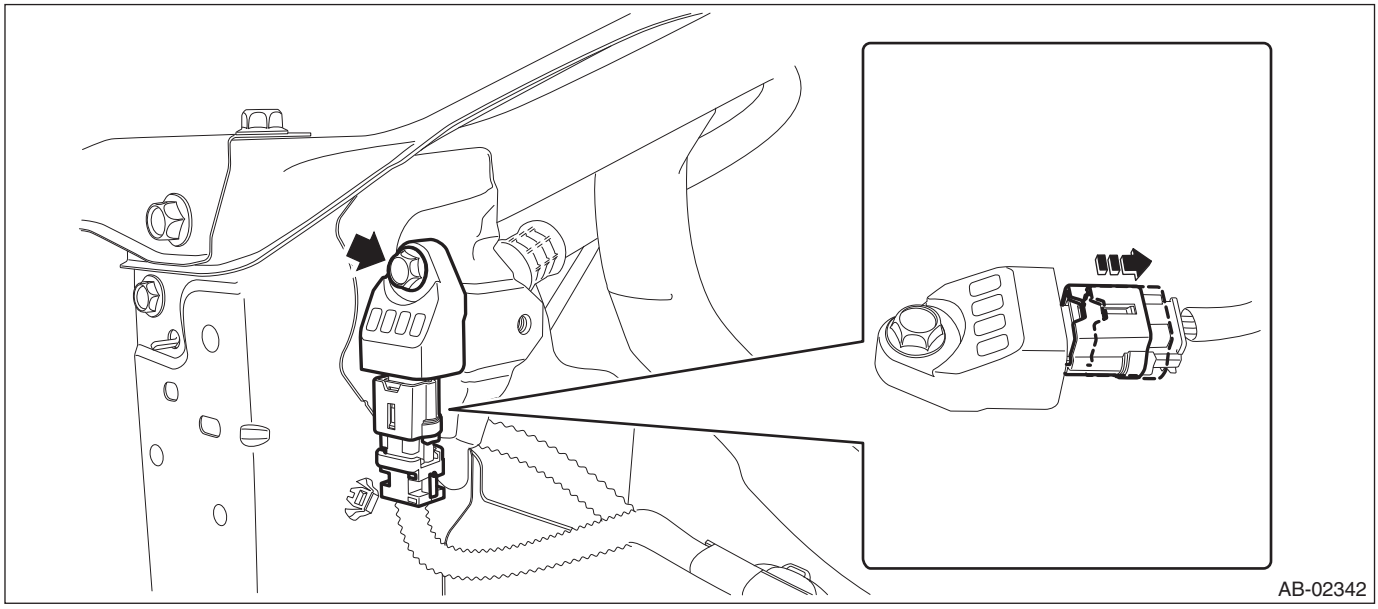


5) Remove the front sub sensor assembly.

(1) Remove the bolt, and remove the sensor cover plate.



(2) Remove the front sub sensor by removing the bolt and disconnect the connector.



B: INSTALLATION

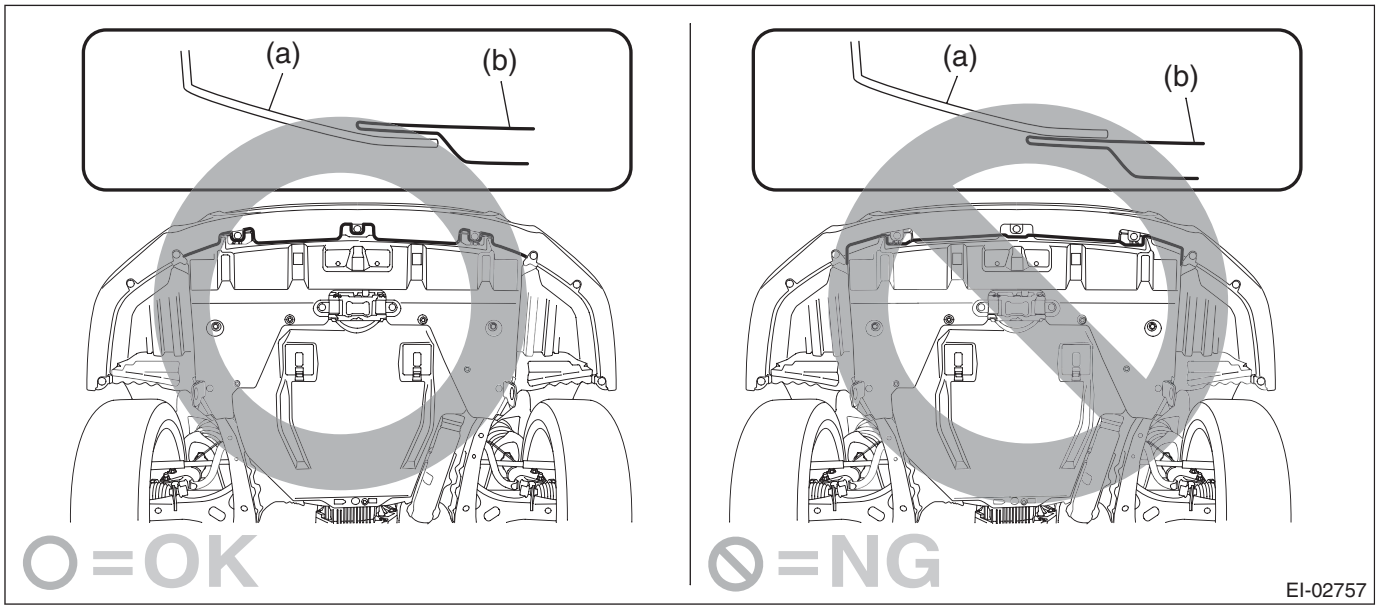
CAUTION:
- **If the airbag has been activated, replace the front sub sensor assembly with a new part.**
- **Do not reuse the bolt and nut.**

Always use new bolts and nuts for them.
- **When installing the sensor, securely insert the arrest pin on the back side of sensor into the mounting hole on the body.**
- **After installing the headlight assembly, be sure to perform headlight beam adjustment.**

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

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

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



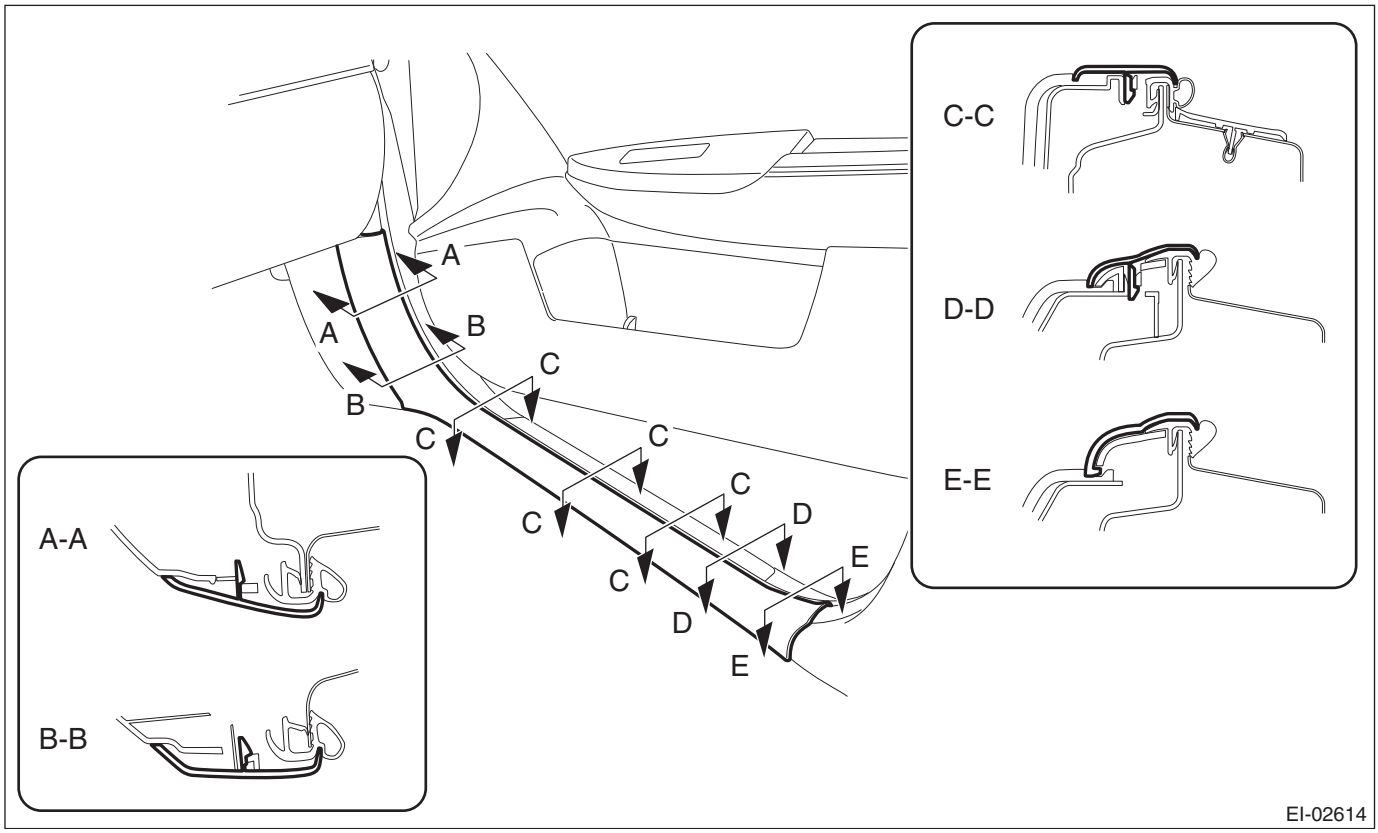
Tightening torque:
Front sub sensor: 13 N·m (1.33 kgf-m, 9.6 ft-lb)
Headlight assembly: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

10.Side Airbag Sensor

A: REMOVAL

1) Move the seat all the way forward, from which the airbag sensor is to be removed.

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

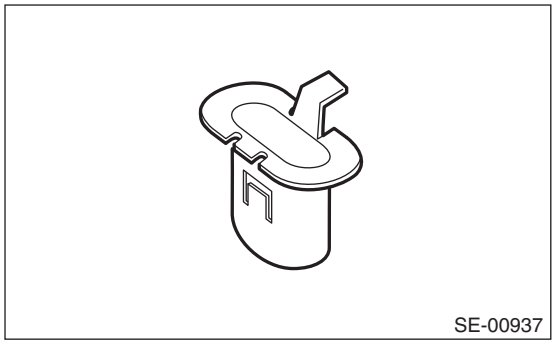


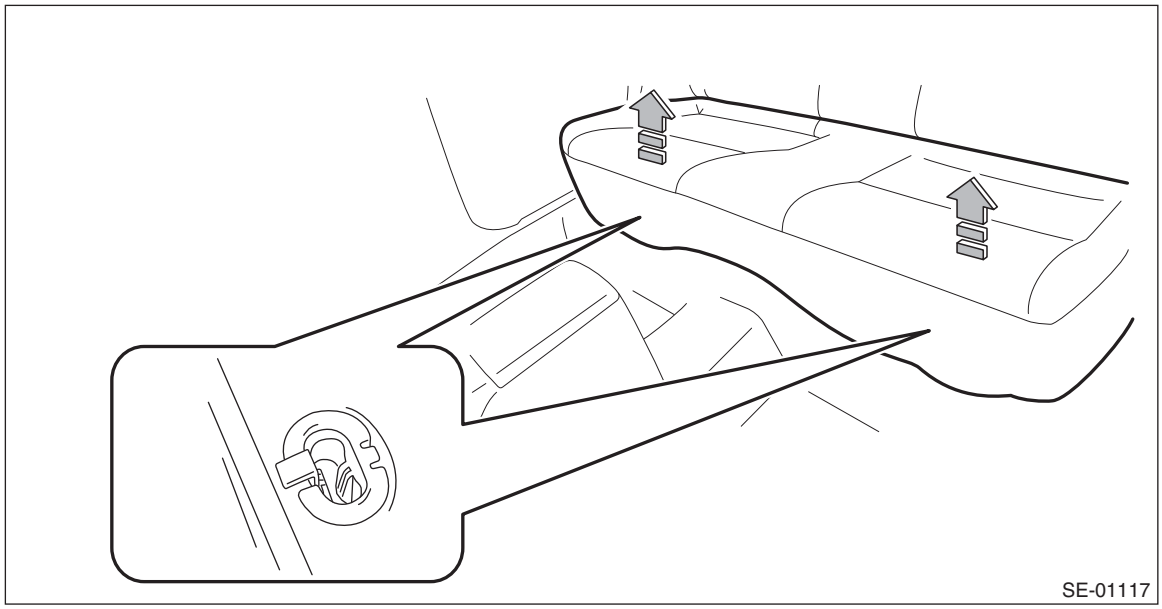
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

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.

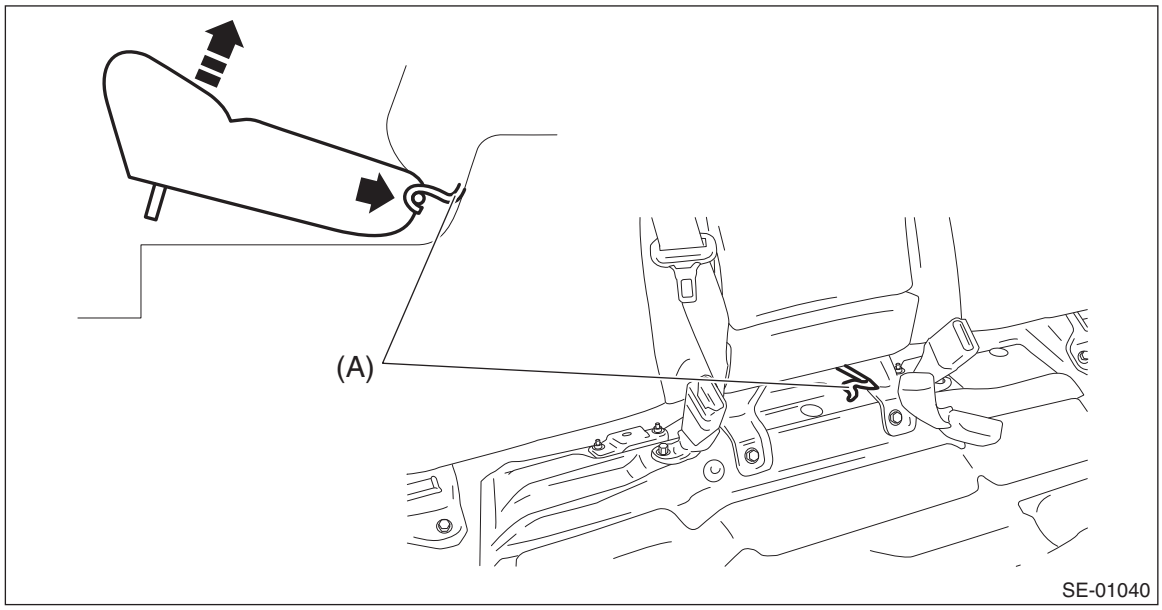
5) Remove the rear seat cushion assembly.
(1) Pull up the seat cushion and release the hook.

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

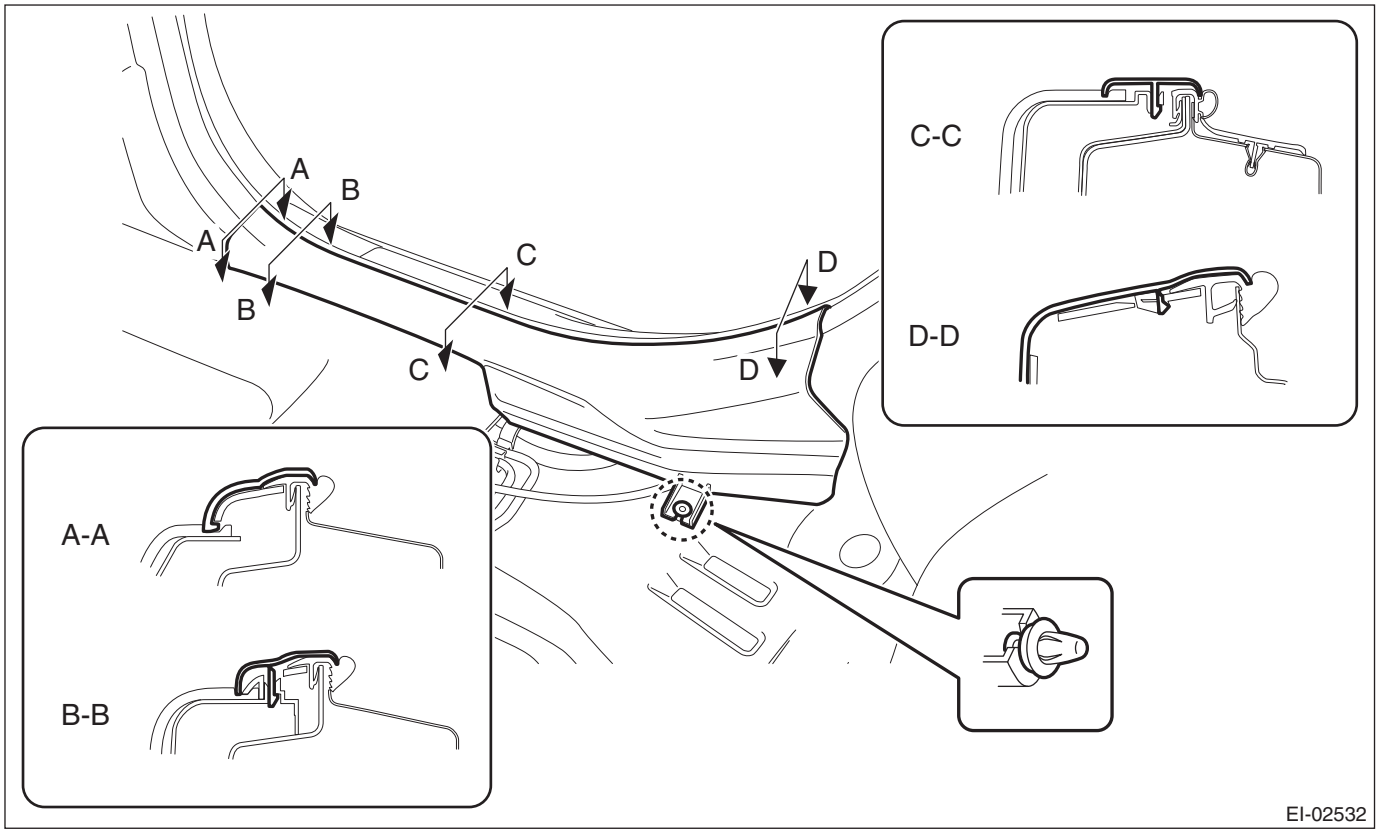

SE-01117

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



SE-01040

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

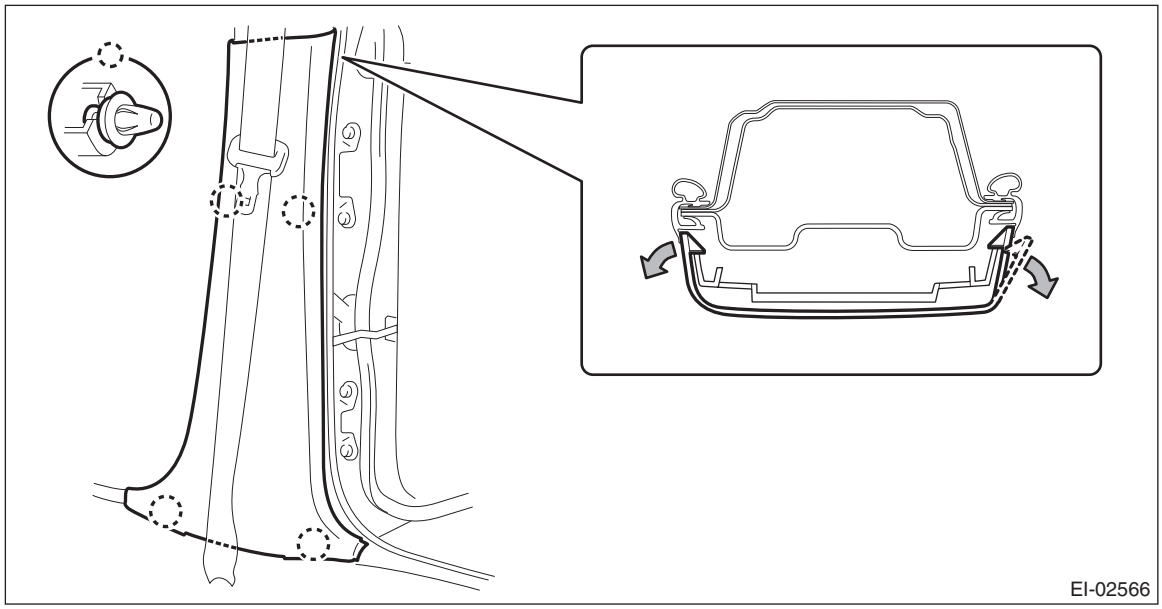


CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

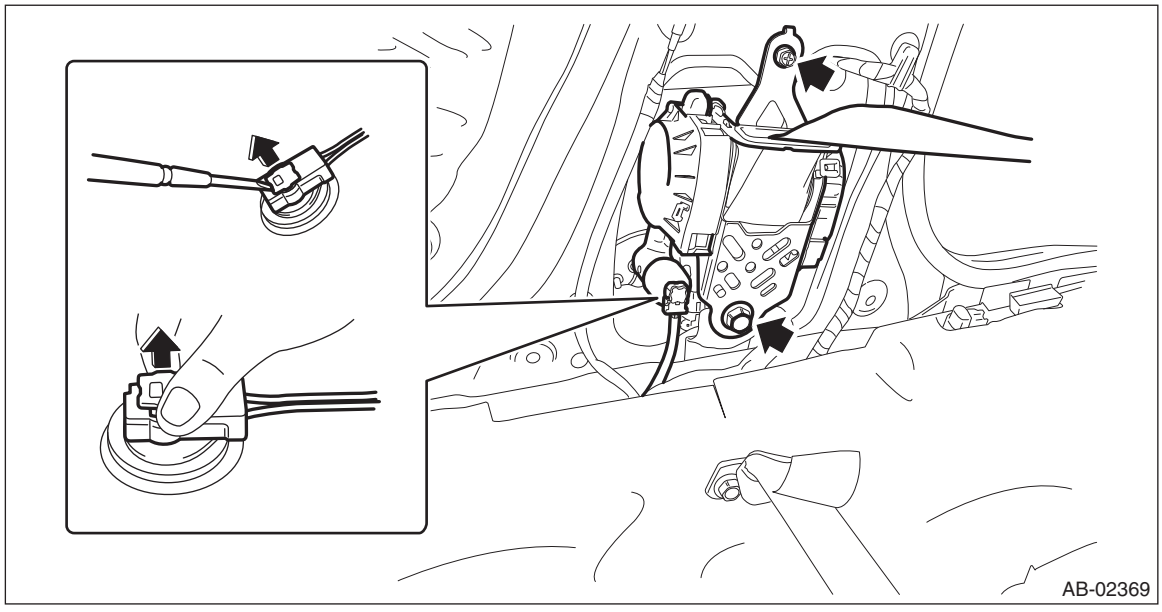
NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claws (C) and (D) by accessing from behind the side sill cover INN.

7) Remove the center pillar trim LWR. (On the side where airbag sensor is removed)
(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.
8) Remove the seat belt retractor. (On the side where airbag sensor is removed)
(1) Turn over the floor mat to disconnect the belt tension sensor connector.
(2) Remove the bolt to remove the seat belt retractor.

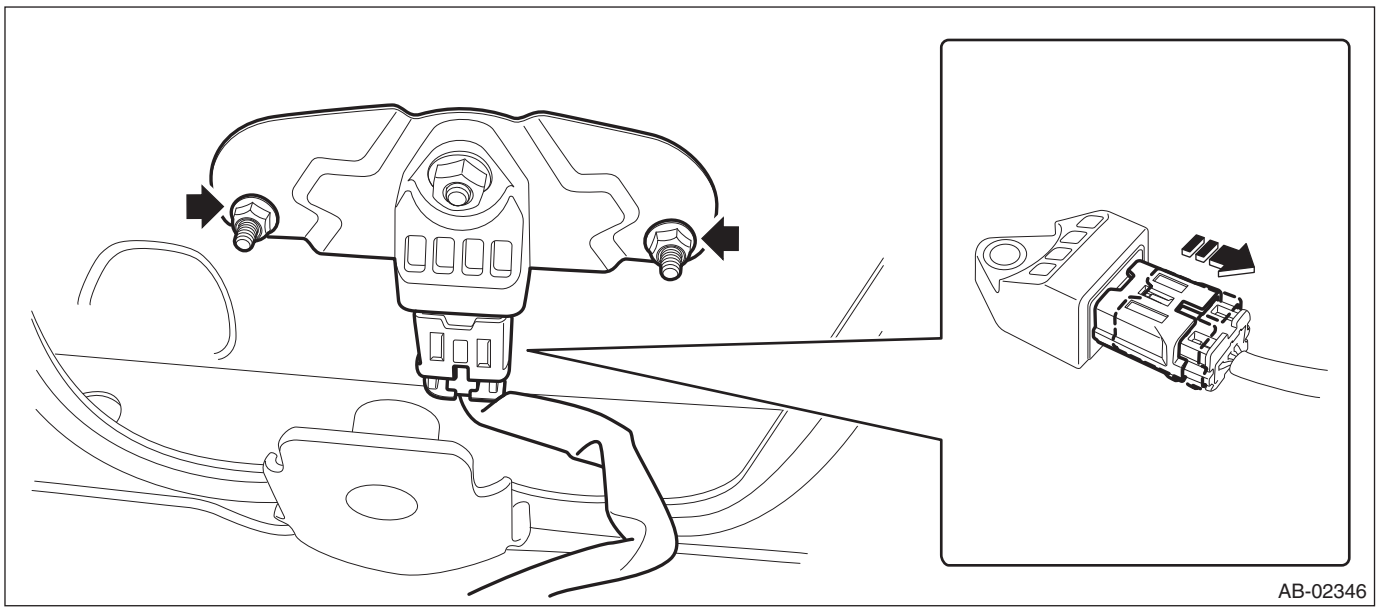

AB-02369

9) Remove the side airbag sensor assembly.

CAUTION:
- **Do not separate the side airbag sensor and bracket. It causes the airbag system malfunction.**
- **Always replace the new parts when removed the sensors from the bracket.**

(1) Remove the nuts.

(2) Disconnect the airbag connector and remove the side airbag sensor assembly.



B: INSTALLATION

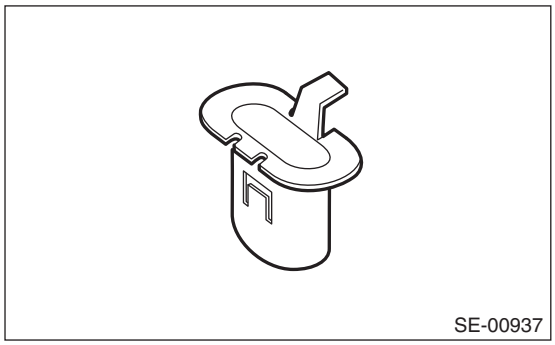
CAUTION:
Do not reuse the bolt and nut.
Always use new bolts and nuts for them.

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

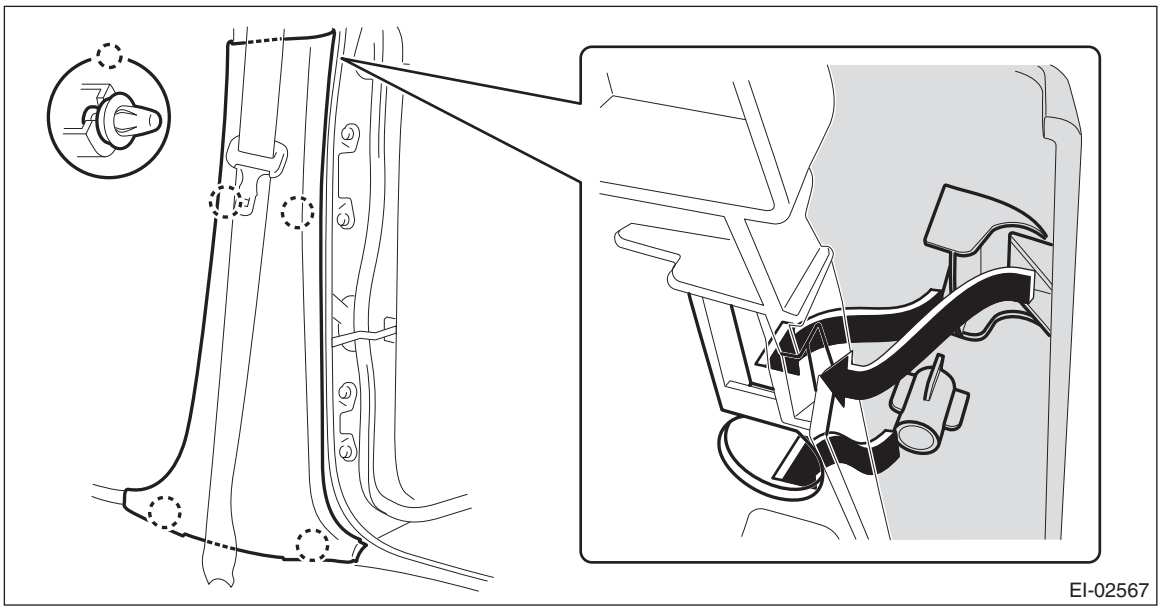
Tightening torque:
Side airbag sensor: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

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

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.



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

11.Curtain Airbag Sensor

A: REMOVAL

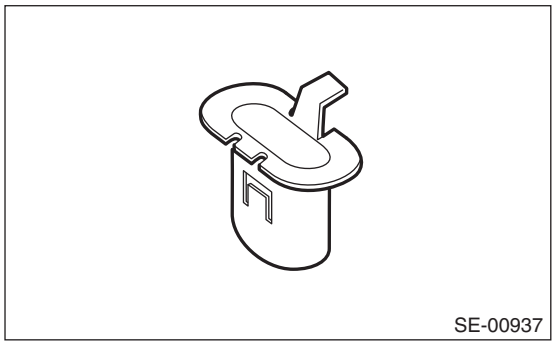
1. SEDAN MODEL

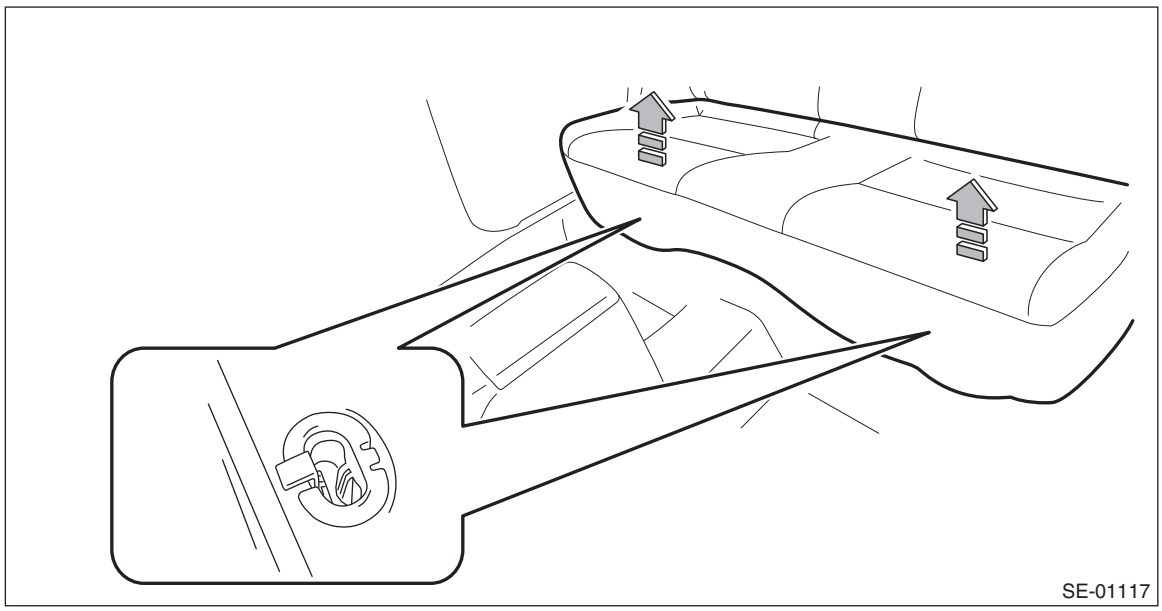
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

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

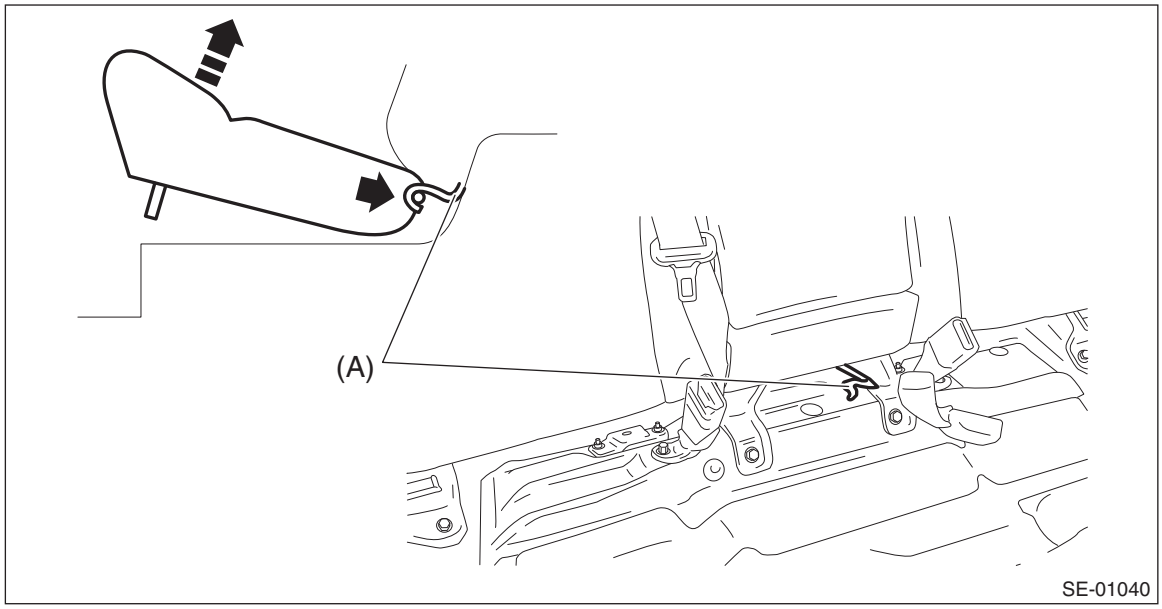
2) Remove the rear seat cushion assembly.
   (1) Pull up the seat cushion and release the hook.

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

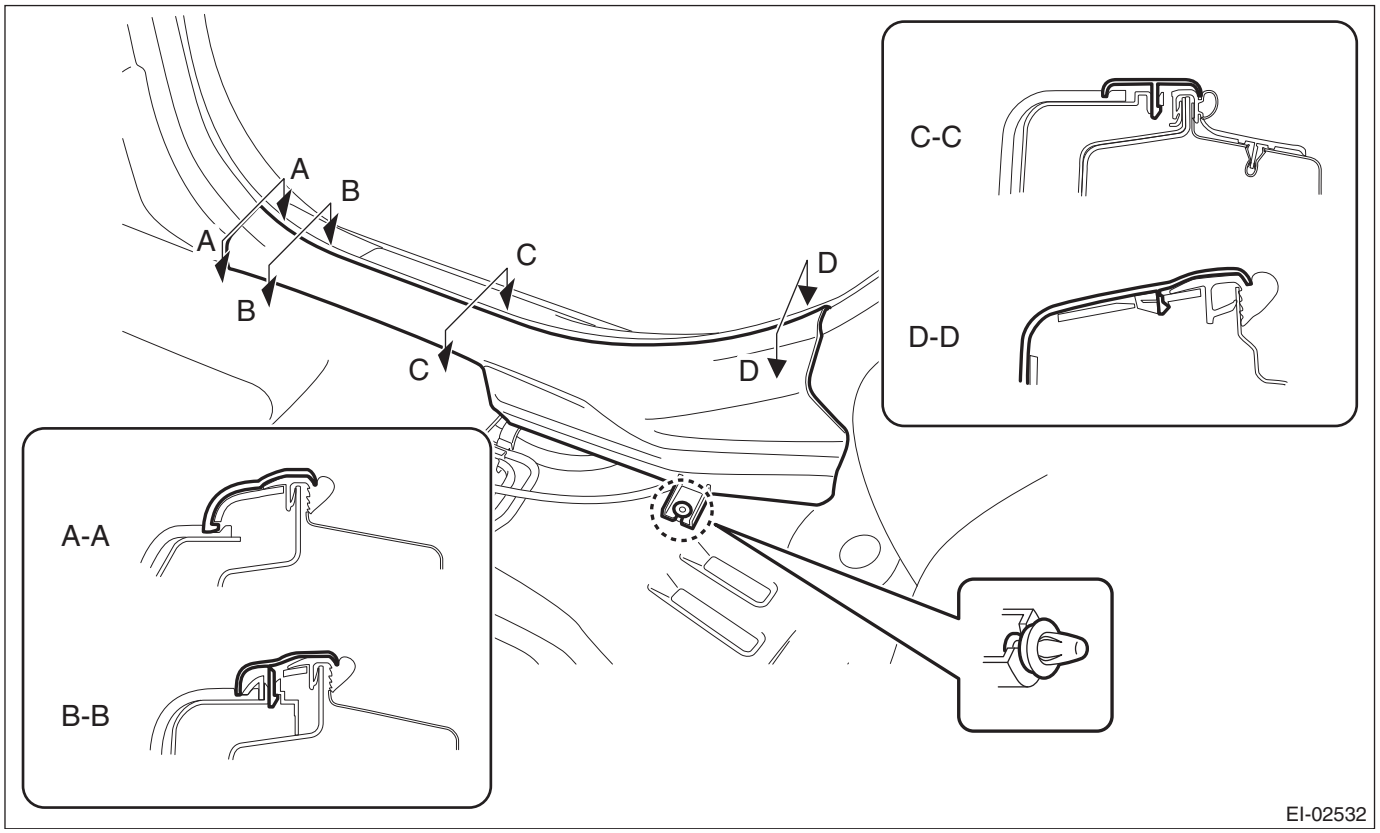

SE-00937


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 assembly.



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



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

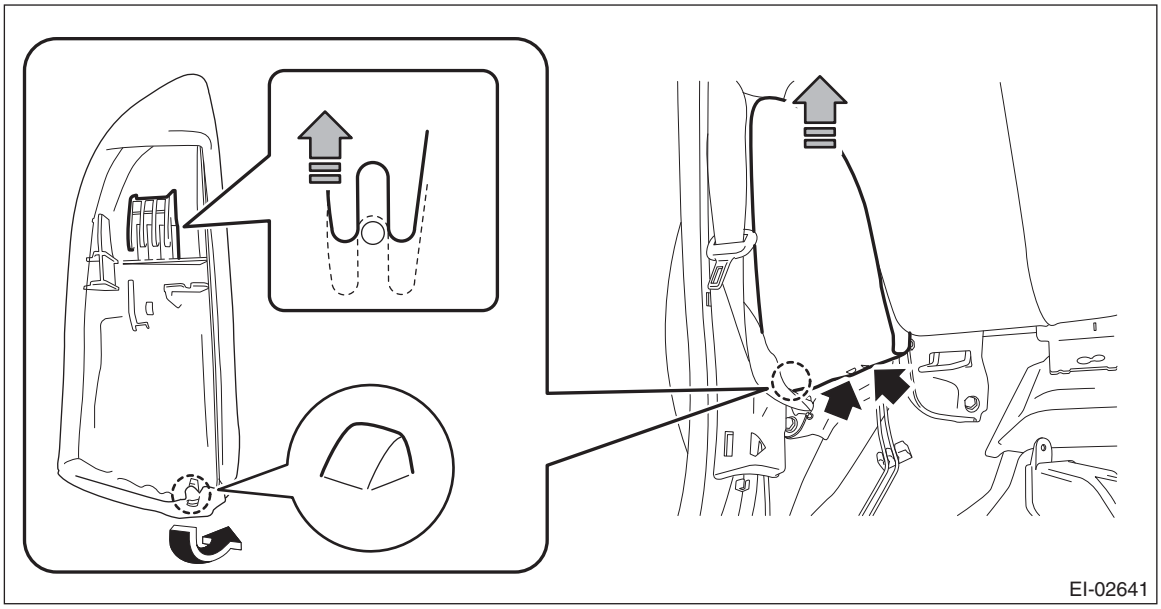
NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claws (C) and (D) by accessing from behind the side sill cover INN.

4) Remove the rear quarter trim LWR. (On the side where airbag sensor is removed)

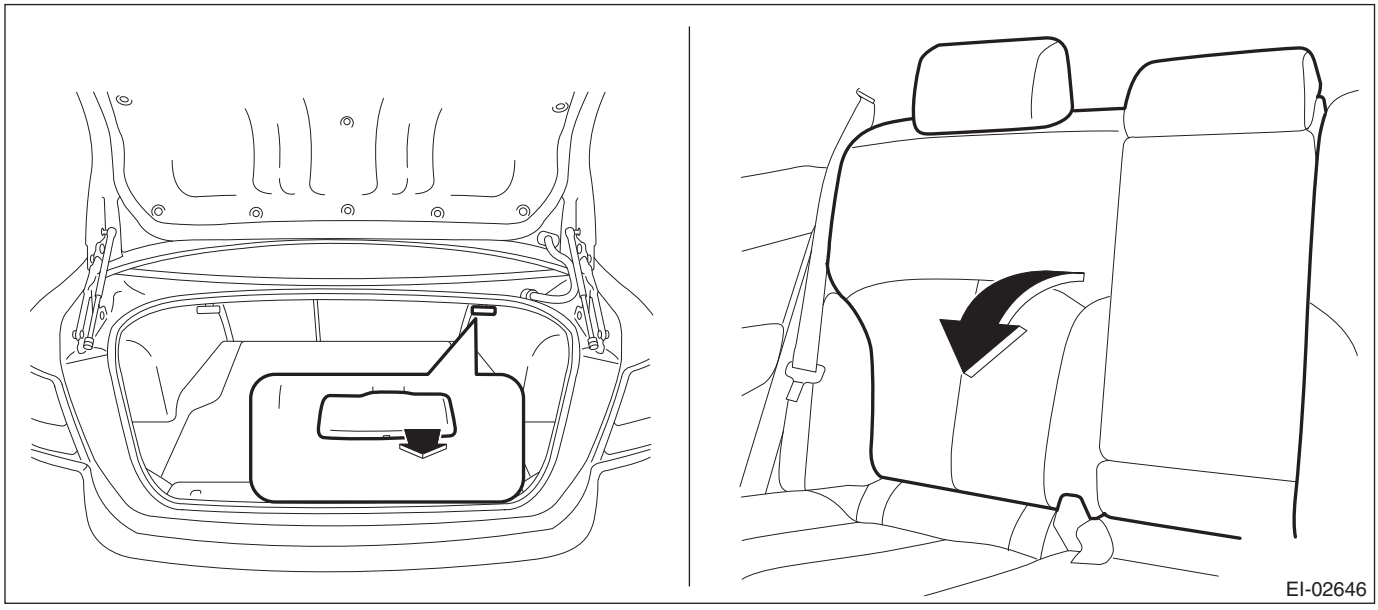
(1) Remove the backrest side pad.
a) Remove the screws.

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.

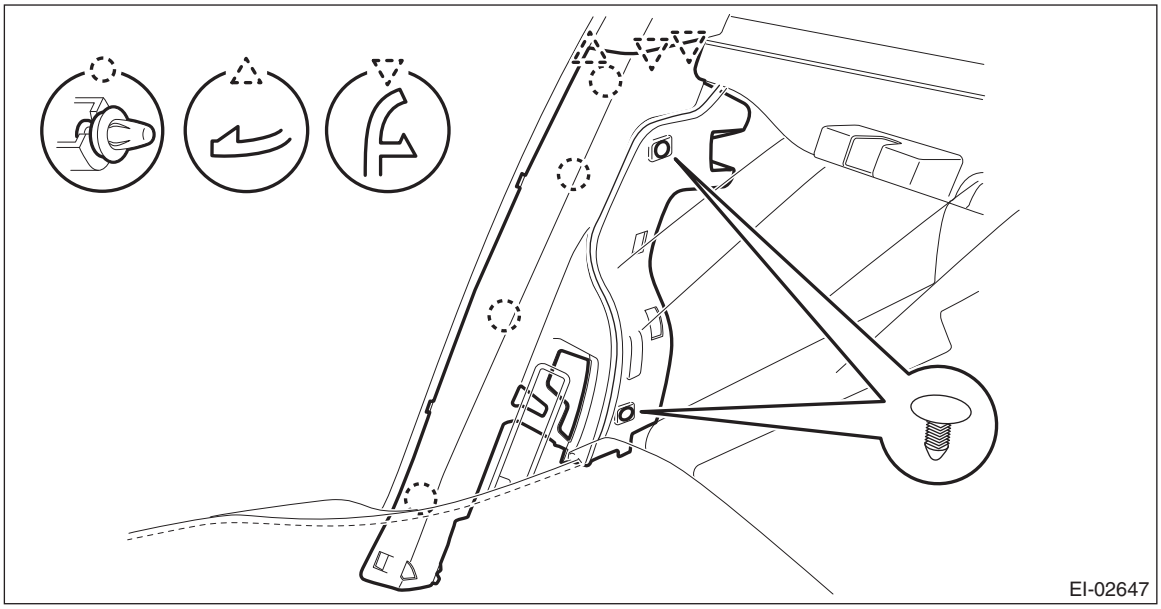


(2) Pull the release lever in the trunk room, and then tilt the backrest forward.

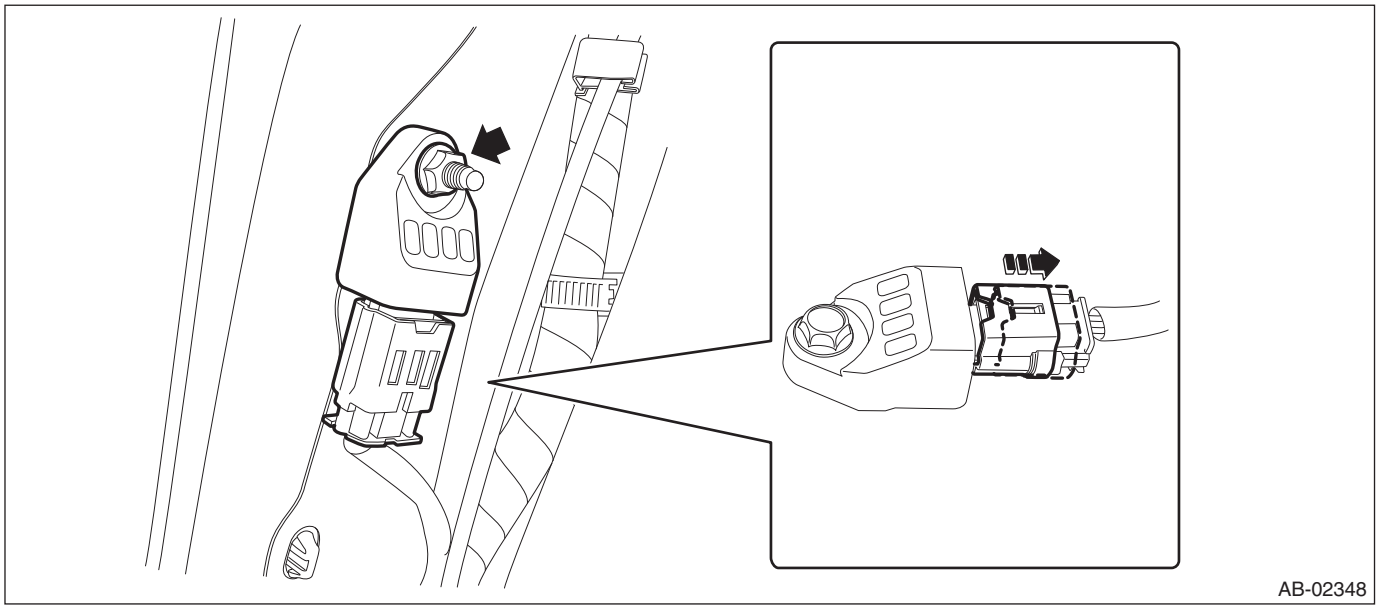


(3) Release the clips of the trunk trim panel assembly-side.

(4) Remove the clips, and remove the rear quarter trim LWR.



5) Remove the curtain airbag sensor assembly.
(1) Remove the nuts.
(2) Disconnect the airbag connector and remove the curtain airbag sensor assembly.



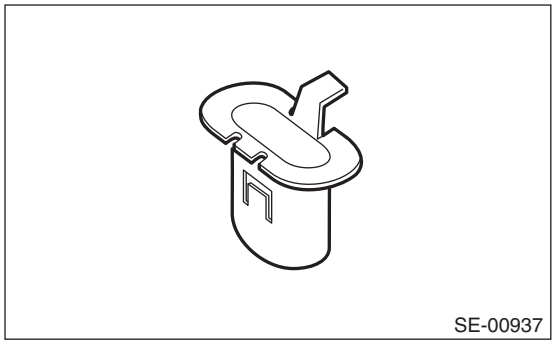
2. OUTBACK MODEL

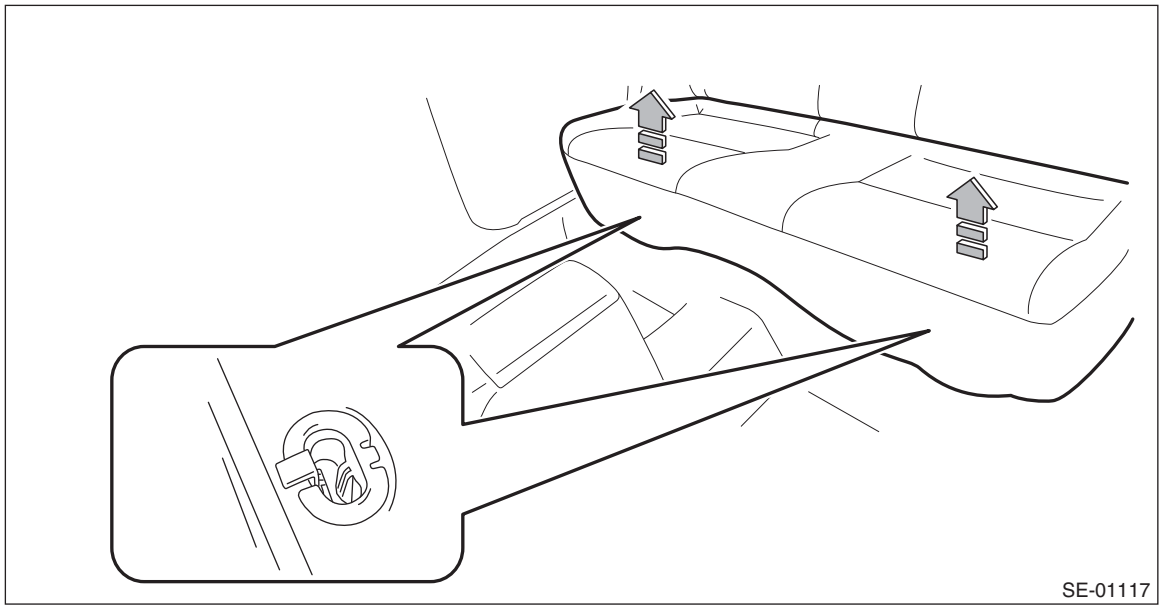
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

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

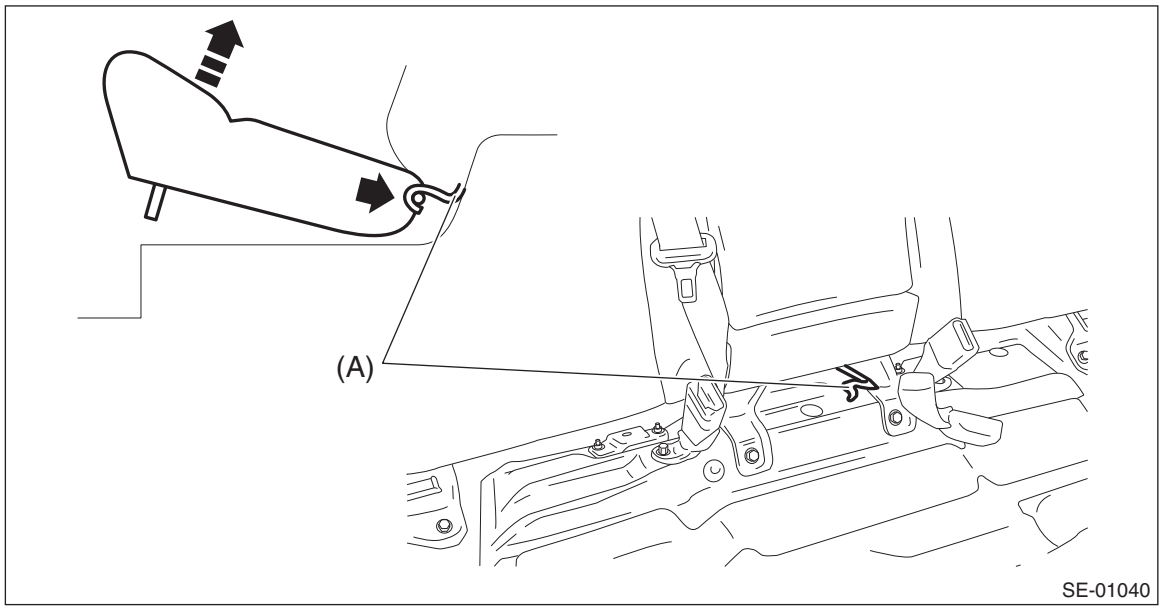
2) Remove the rear seat cushion assembly.
(1) Pull up the seat cushion and release the hook.

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

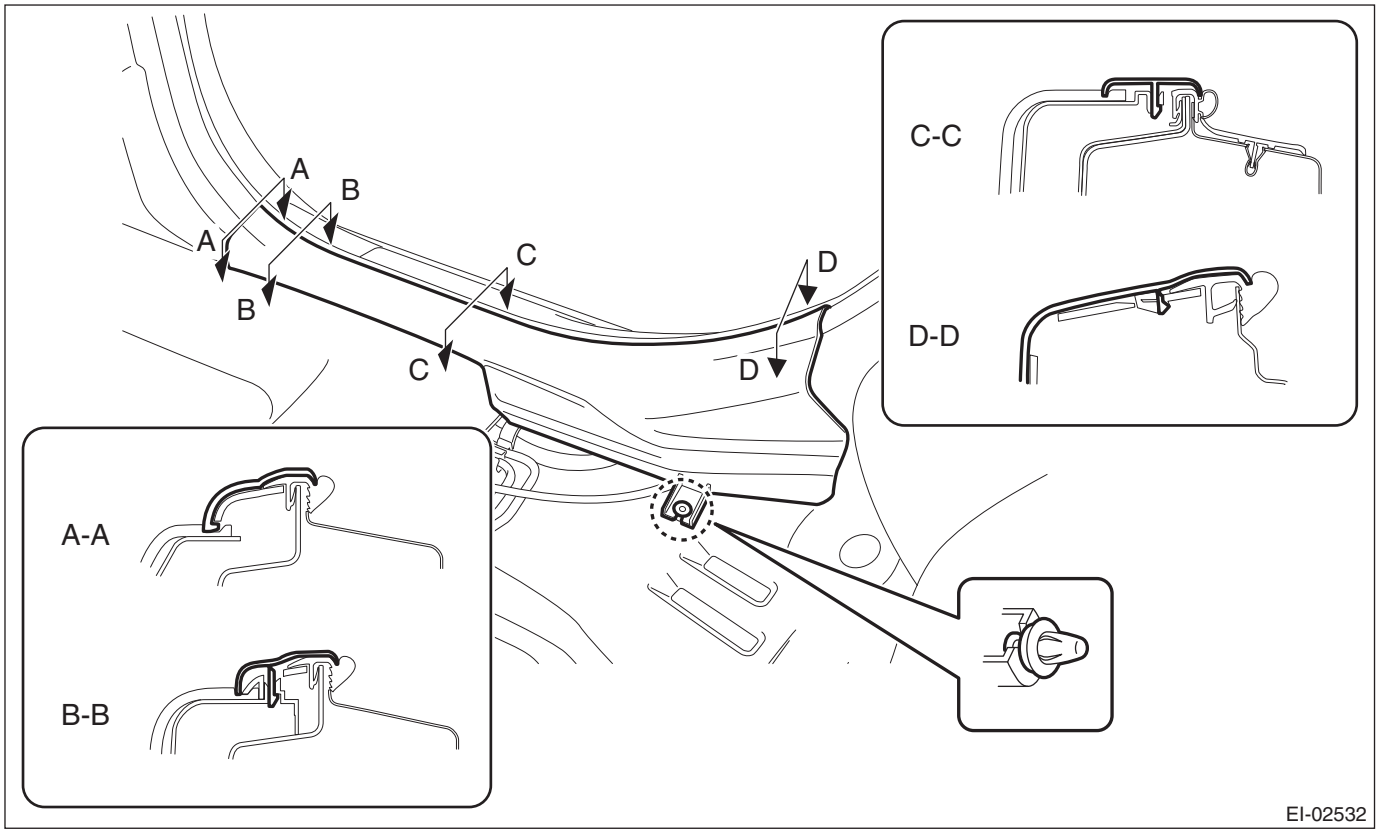

SE-01117

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



SE-01040

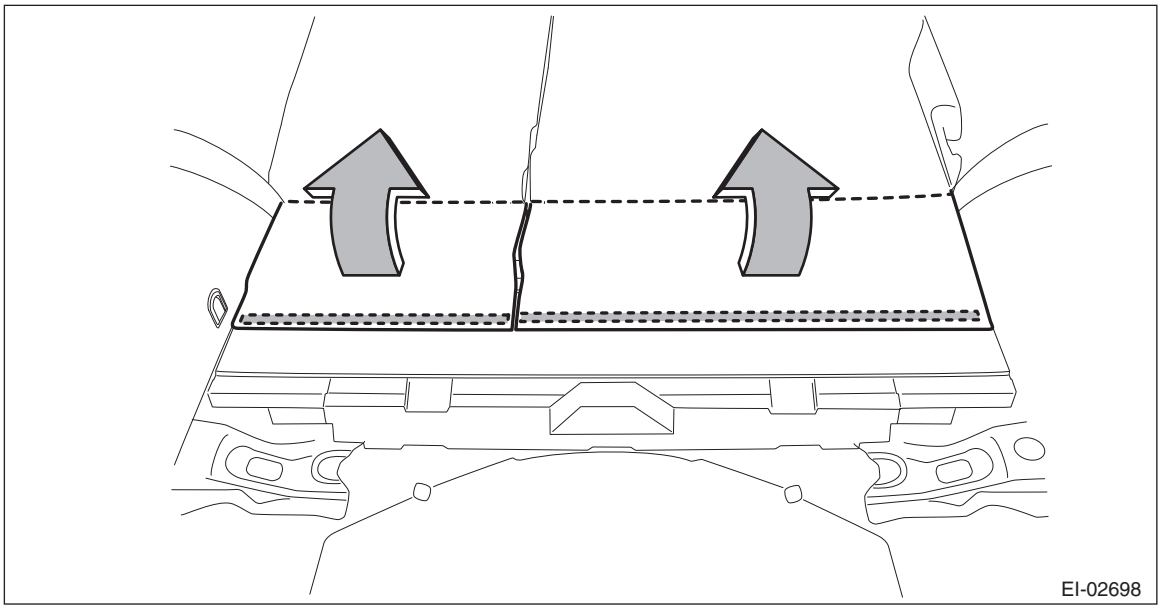
3) Release the clips and claws, and then remove the side sill cover - rear INN. (On the side where airbag sensor is removed)



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.

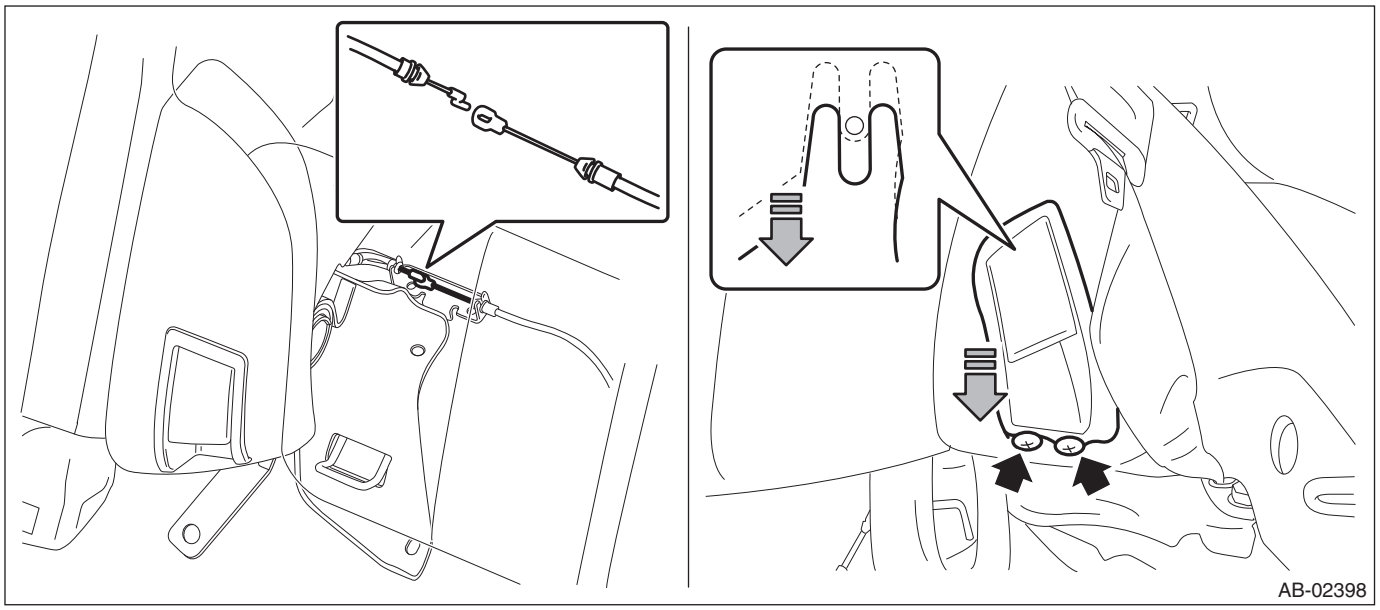
4) Tilt the backrest forward, and then turn over the backrest backside mat.



5) Remove the backrest side pad assembly. (On the side where airbag sensor is removed)
(1) Disconnect the backrest cable and reclining lever cable.

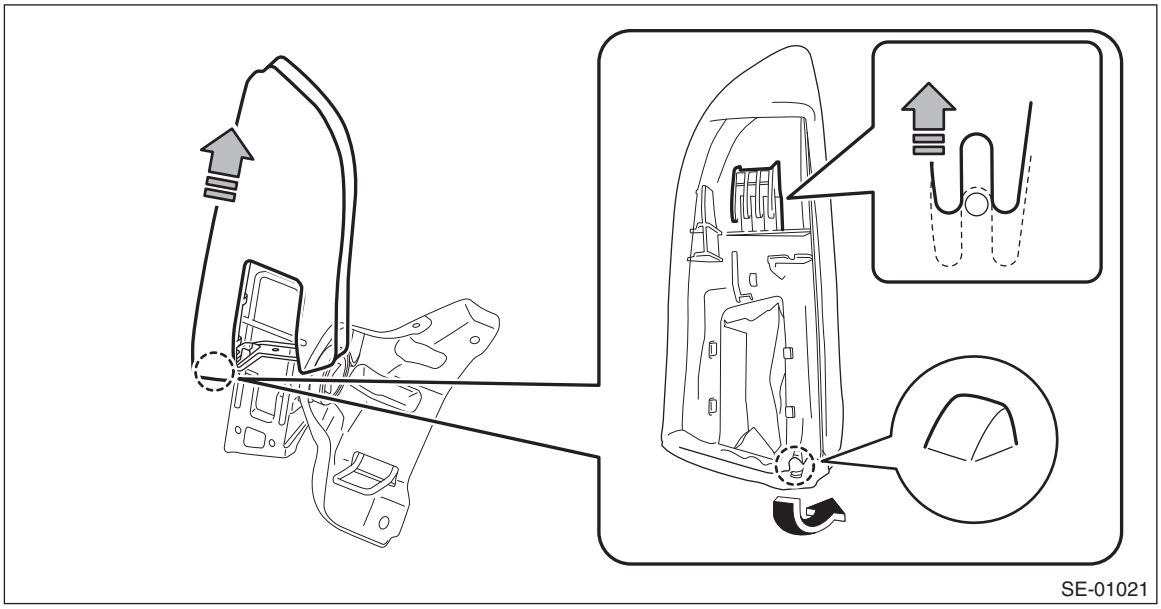
(2) Remove the screws and remove the reclining lever assembly by pulling it downward.

Preparation tool: Stubby screwdriver

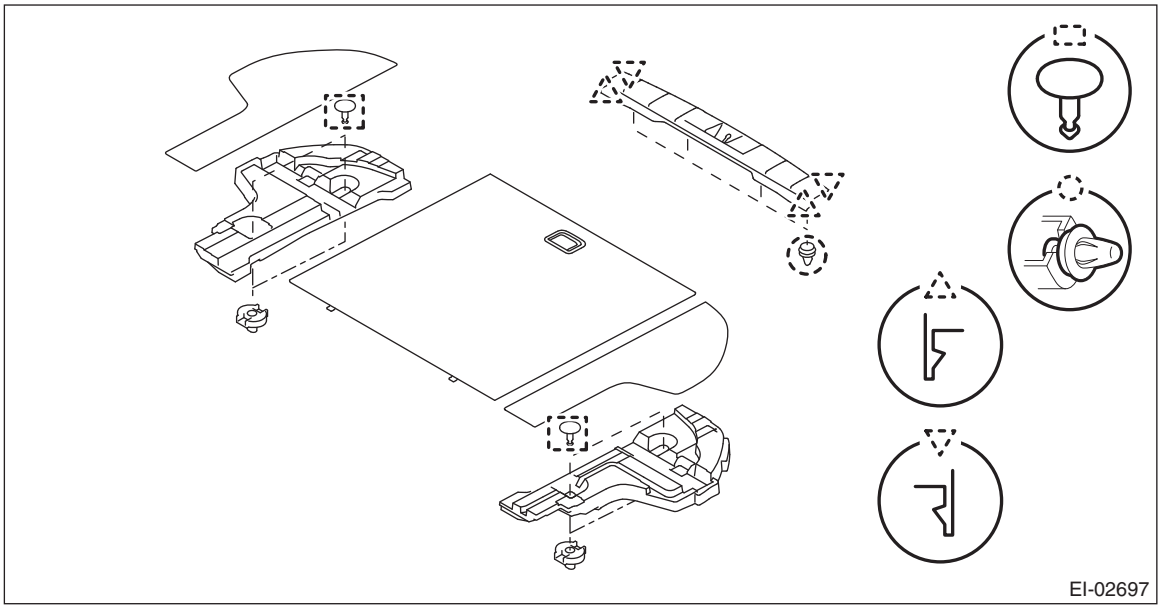


(3) Turn over the bottom end of the backrest side pad in the forward direction so that the claws are released.

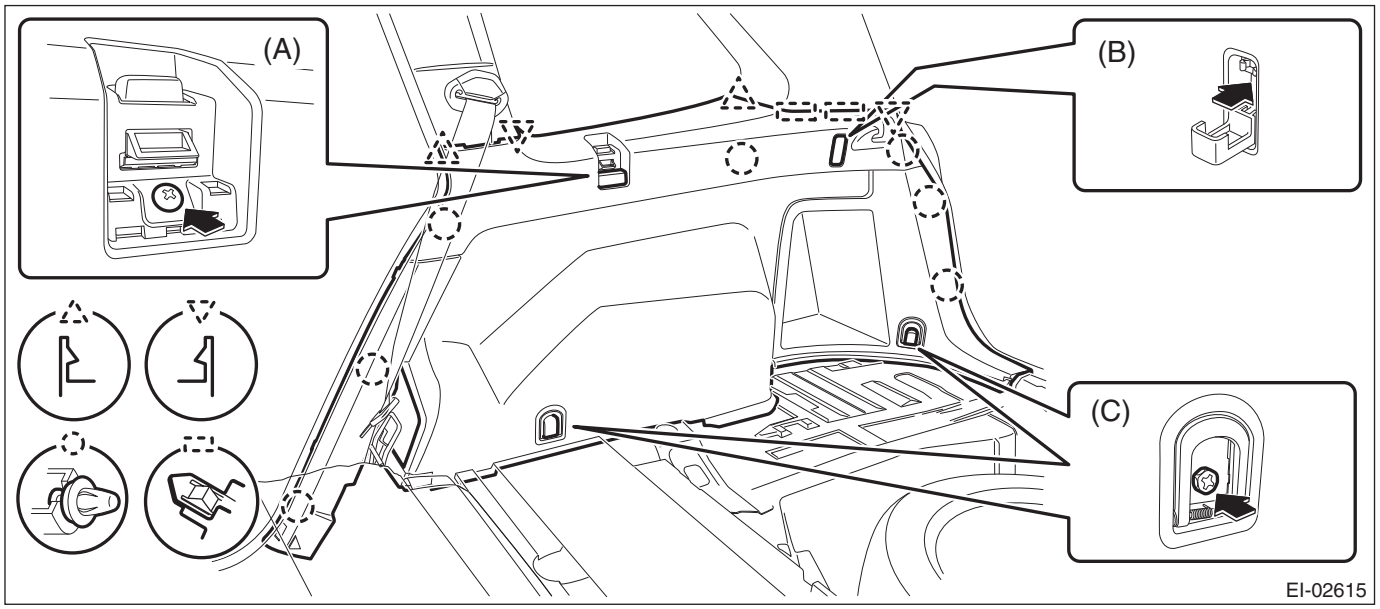
(4) Remove the backrest side pad by pulling it up.



6) Remove the clips, and remove the luggage floor box and rear floor edge cover.

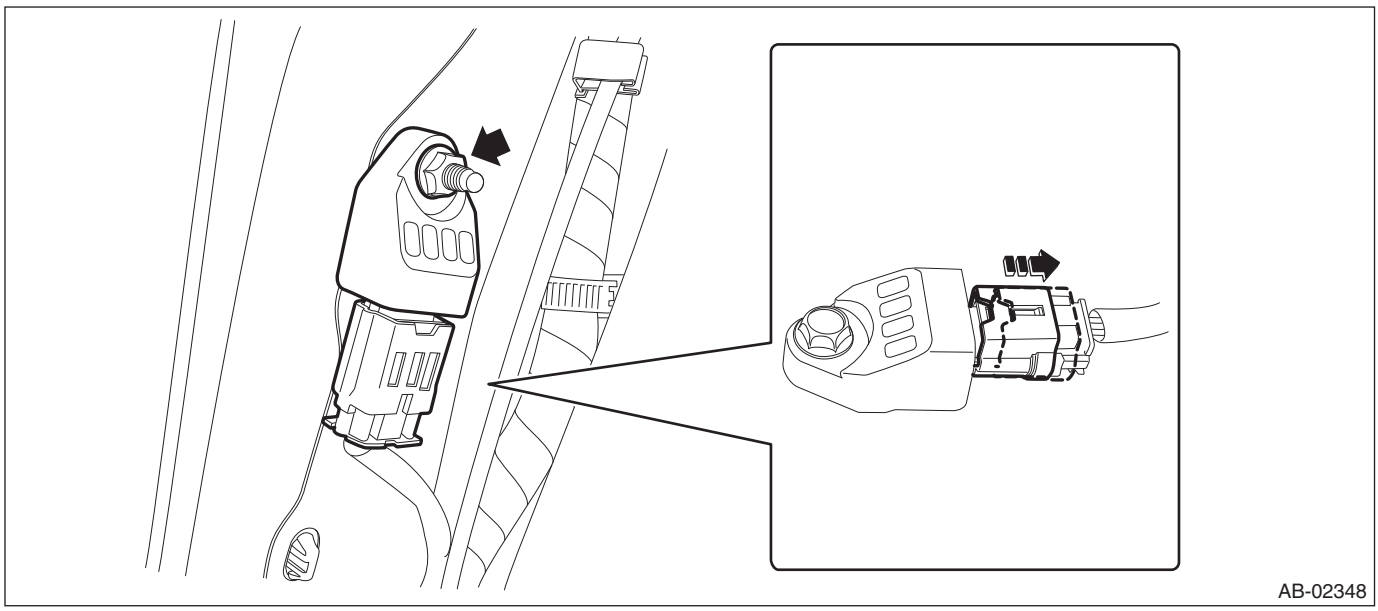


7) Remove the rear quarter trim LWR. (On the side where airbag sensor is removed)
   (1) Remove the caps, screws, and bolts. (A), (C)
   (2) Take out the hook and remove the screw inside. (B)
   (3) Remove the clips, and remove the rear quarter trim LWR.



8) Remove the curtain airbag sensor assembly.
   (1) Remove the nuts.

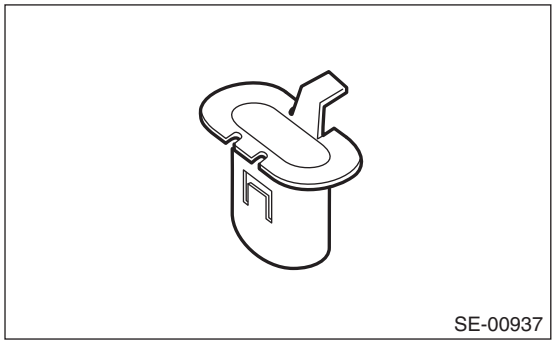
(2) Disconnect the airbag connector and remove the curtain airbag sensor assembly.



B: INSTALLATION

CAUTION:
• Do not reuse the bolt and nut.
Always use new bolts and nuts for them.
• When installing the sensor, securely insert the arrest pin on the back side of sensor into the mounting hole on the body.
1) Before installation, inspect the following items and replace any faulty part with a new one.
• The curtain airbag sensor or connector are damaged.
• Curtain airbag is deployed.
2) 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:
Curtain airbag sensor: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

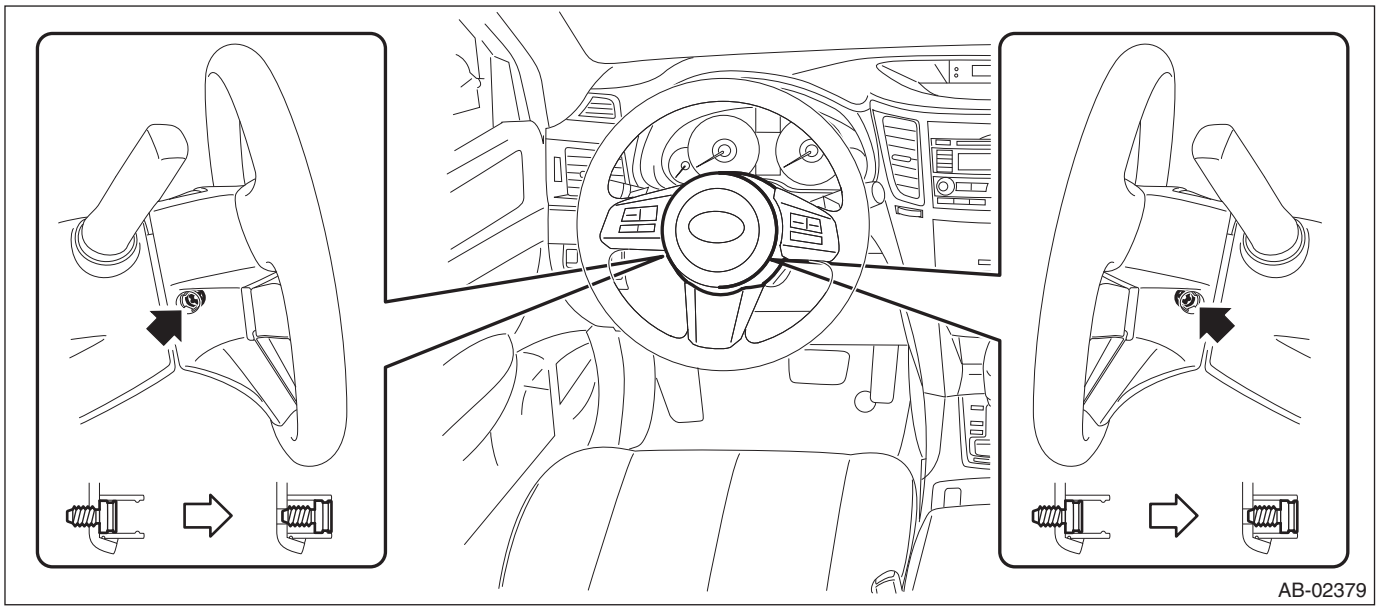
12.Roll Connector

A: REMOVAL

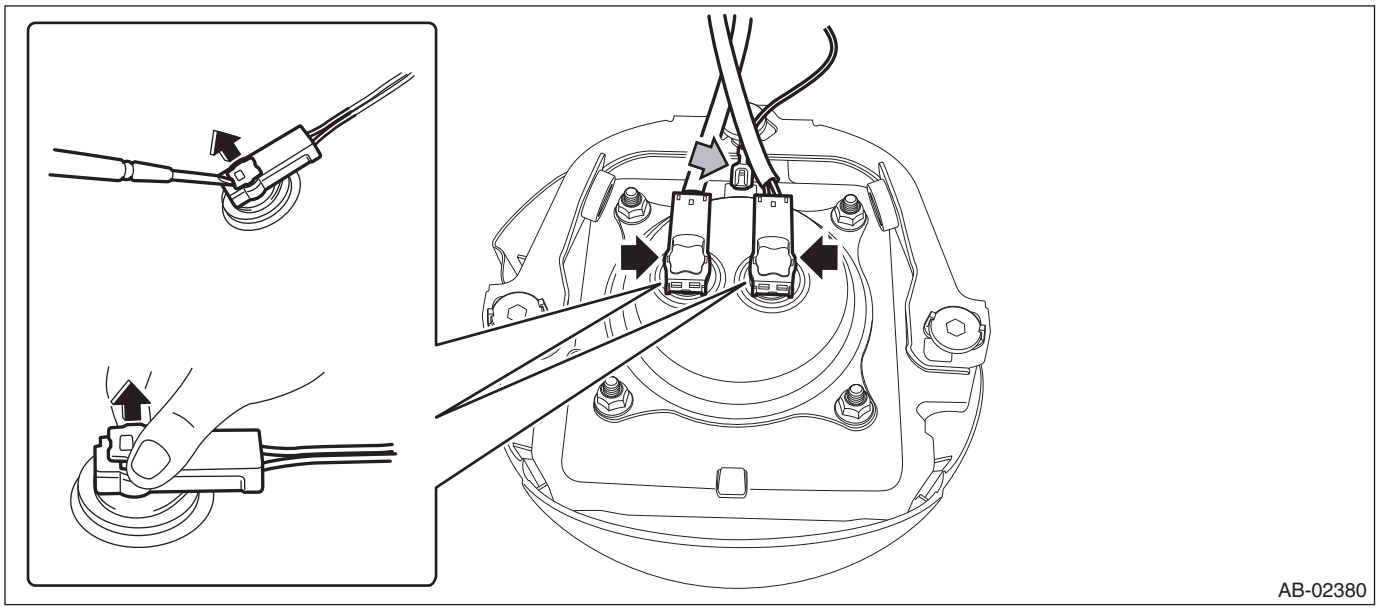
1) Position the front wheels straight ahead. (After moving a vehicle 5 m (16 ft) or more with front wheels positioned straight ahead, make sure that the vehicle moves straight ahead.)
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before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

Preparation tool: TORX® T30

(1) Loosen the TORX® bolts located on the sides of the steering wheel.



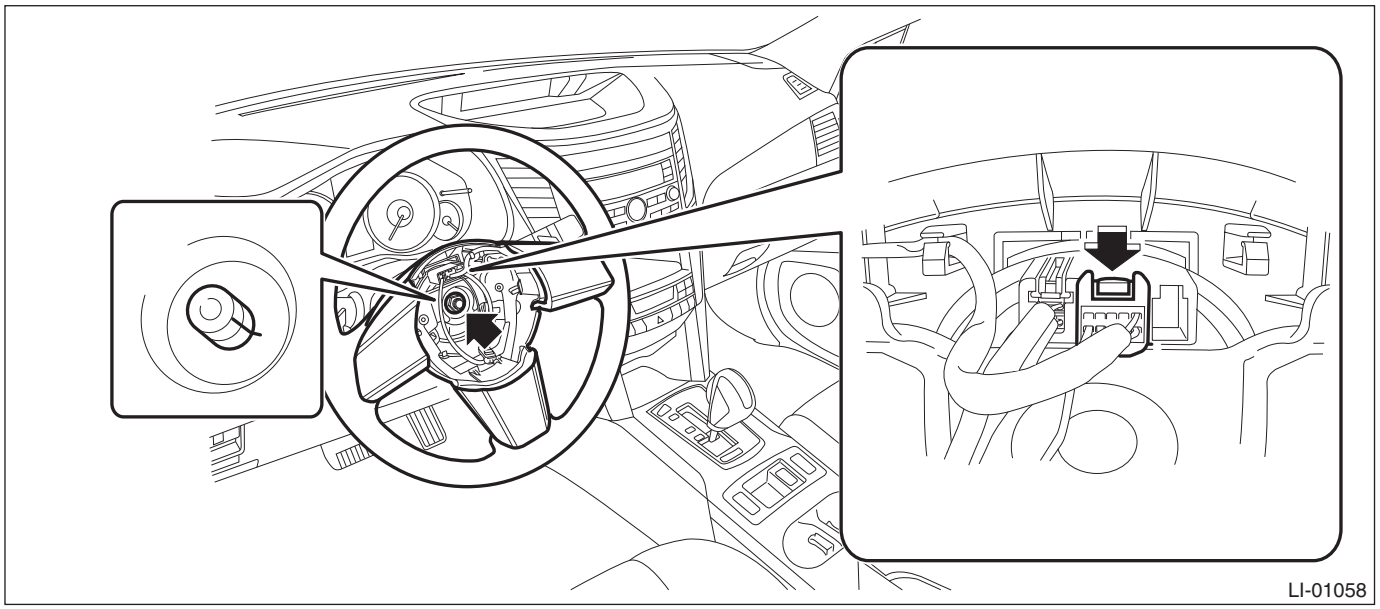
(2) Disconnect the airbag connector and remove the airbag module assembly. <Ref. to AB-18, PROCEDURE, Airbag Connector.>
(3) Disconnect the horn harness.



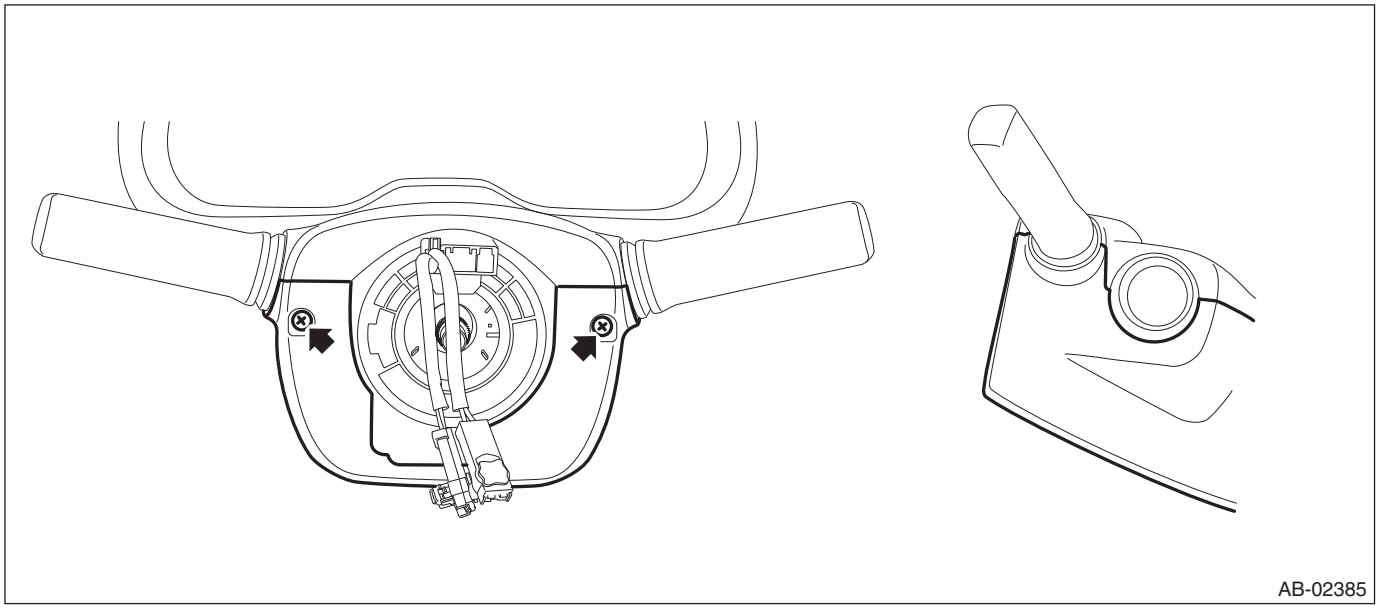
5) Remove the steering wheel.

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

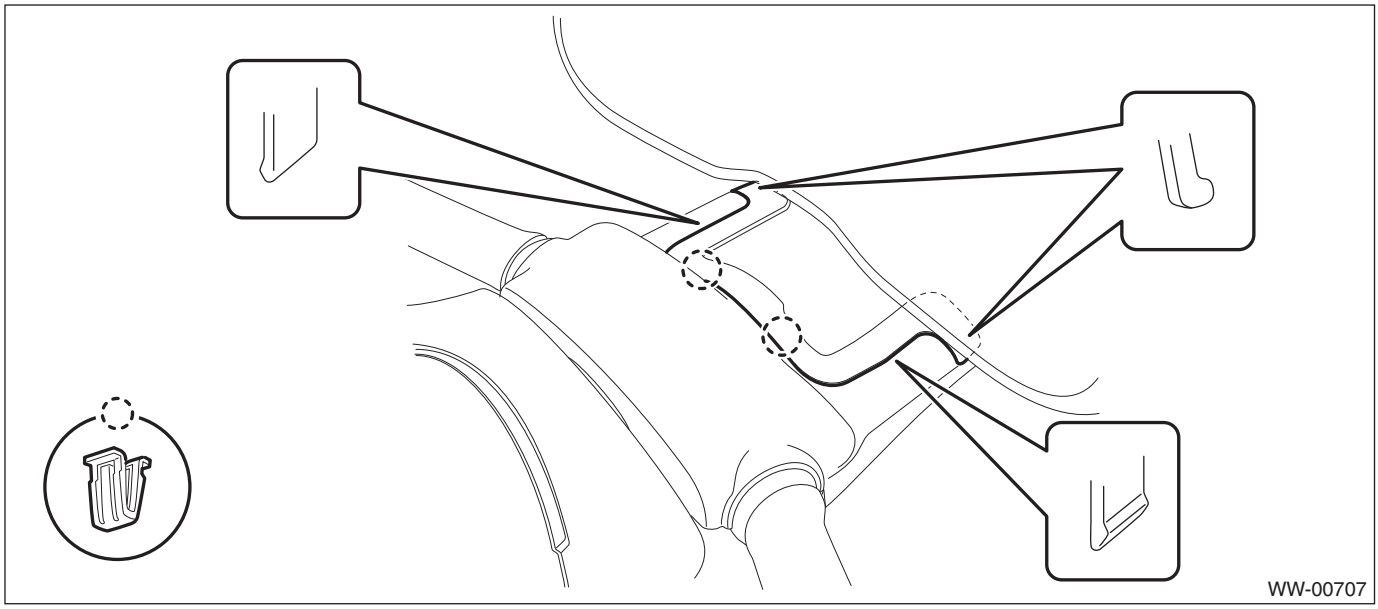
(1) Disconnect the connector and remove the nut.
(2) Put alignment marks and remove the steering wheel.



6) Remove the steering column cover.
(1) Lower the lever of the steering column.
(2) Release the claws and remove the screws, then detach the steering column lower cover.



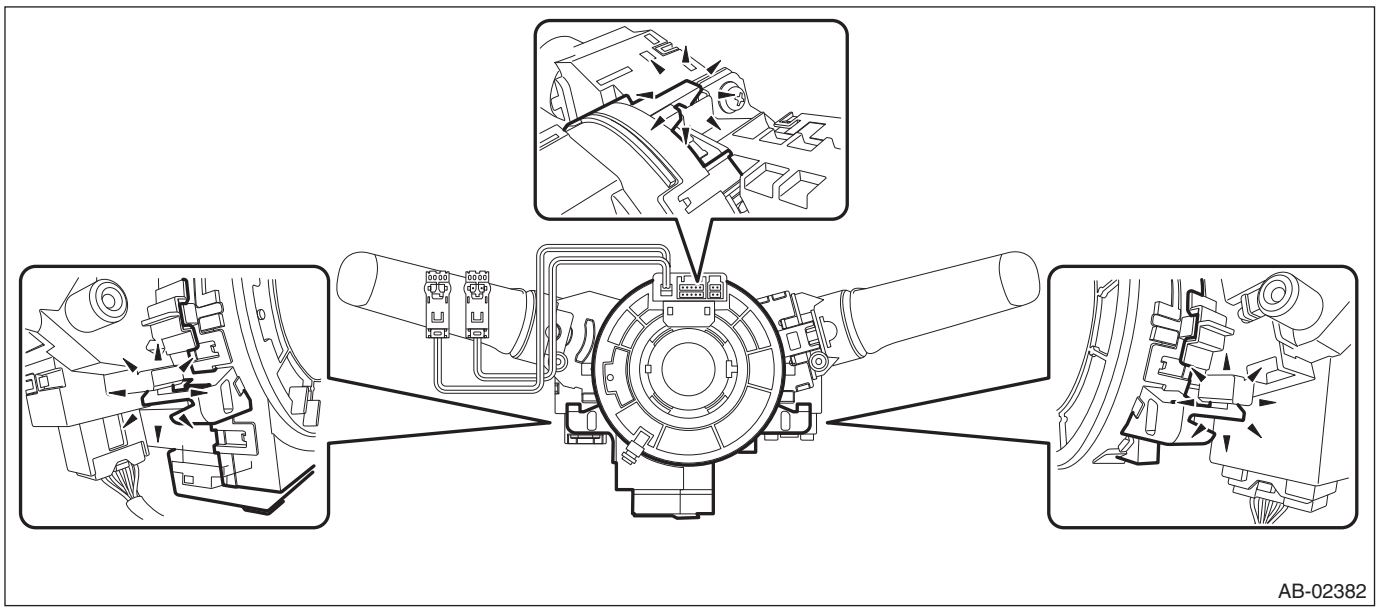
(3) Separate the steering column upper cover and steering upper cover, and remove the steering column upper cover.



7) Remove the roll connector.

CAUTION:
Make sure that the roll connector is not turned from the original position.

(1) Disconnect the connector under the roll connector.
(2) Release the claws and remove the roll connector.



B: INSTALLATION

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

Tightening torque:
Airbag module: 10 N·m (1.0 kgf-m, 7.4 ft-lb)

2) Before installing steering wheel, be sure to adjust the direction of roll connector with steering. <Ref. to AB-93, ADJUSTMENT, Roll Connector.>

Tightening torque:
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. VISUAL INSPECTION

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

2. UNIT INSPECTION OF ROLL CONNECTOR

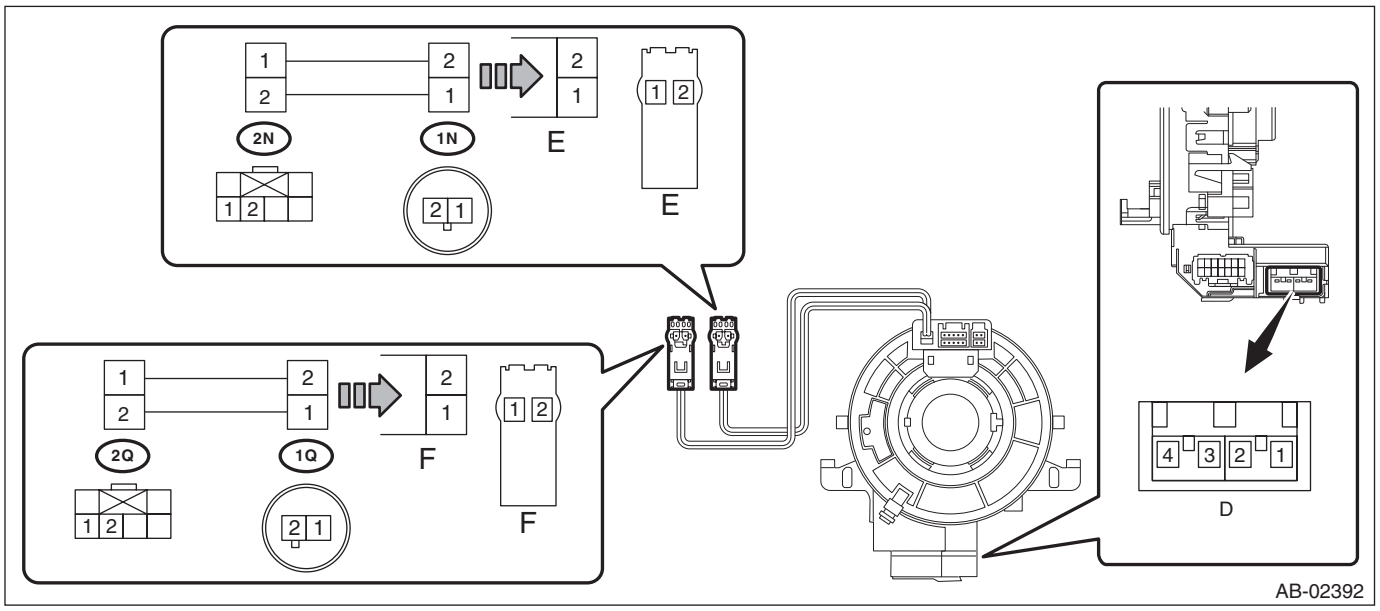
CAUTION:
- **Do not rotate the roll connector to more than the specified number of turns. Otherwise, the roll connector internal wire may be broken.**
- **When determining the end stop, rotate the connector slowly without applying excessive force. Applying excessive force at the end stop may break the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

1) Adjust the roll connector. <Ref. to AB-93, ADJUSTMENT, Roll Connector.>
2) Set the roll connector to the central position.
3) Connect the test harness to the connector E and connector F.

Preparation tool: Test harness N (98299SA000), Test harness Q (98299SA040)
- Connector E - Test harness N (1N)
- Connector F - Test harness Q (1Q)

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

Preparation tool: Circuit tester



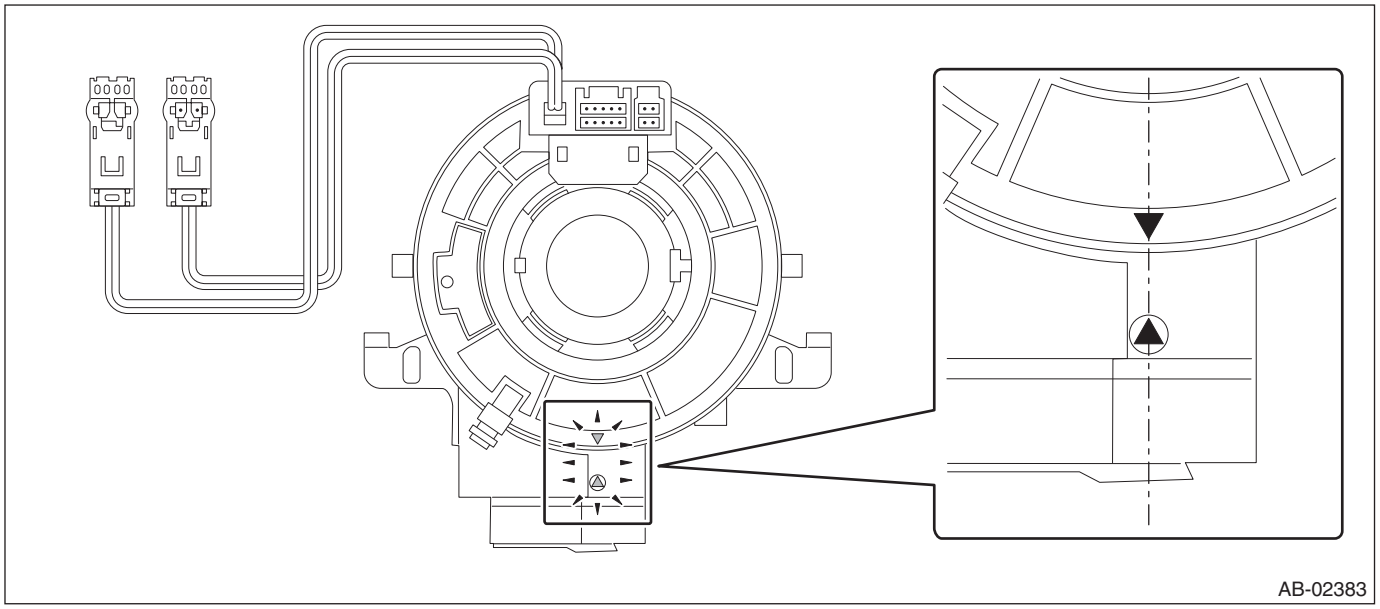
Terminal No.	Inspection conditions	Standard
(2N) No. 1 — (2N) No. 2	Always	Less than 1 Ω
(2Q) No. 1 — (2Q) No. 2	Always	Less than 1 Ω

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

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

D: ADJUSTMENT

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



1. Basic Diagnostic Procedure

A: PROCEDURE

	Step	Check	Yes	No
1	**CHECK WARNING LIGHT.** Check whether the airbag warning light in the combination meter is lit.	Does the airbag warning light illuminate?	Go to step **2**.	Perform the diagnosis according to phenomenon of the problem.
2	**READ DTC.** 1) Turn the ignition switch to OFF. 2) Connect the Subaru Select Monitor to data link connector. 3) Turn the ignition switch to ON and run the Subaru Select Monitor. 4) Read the DTC. <Ref. to AB(diag)-29, OPERATION, Read Diagnostic Trouble Code (DTC).> NOTE: If the communication function of the Subaru Select Monitor cannot be executed normally, check the communication circuit. <Ref. to AB(diag)-26, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, INSPECTION, Subaru Select Monitor.> 5) Record all DTCs and freeze frame data.	Is DTC displayed?	Go to step **3**.	Go to “Airbag warning light failure”<Ref. to AB(diag)-34, Airbag Warning Light Failure.>.
3	**PERFORM DIAGNOSIS.** 1) Determine the possible cause “List of Diagnostic Trouble Code (DTC)”<Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>. 2) Inspect the DTC using “List of Diagnostic Trouble Code (DTC)”. 3) Repair the trouble cause. 4) Perform the Clear Memory Mode. <Ref. to AB(diag)-31, Clear Memory Mode.> 5) Perform the Inspection Mode. <Ref. to AB(diag)-30, Inspection Mode.> 6) Read any other DTCs displayed.	Is DTC displayed?	Perform the procedure 1) to 5) in step 3.	Finish the diagnosis.

2. Check List for Interview

A: CHECK

Customer's Name		Inspector's Name	
Date Vehicle Brought in	/ /	Registration No.	
Odometer Reading	km miles	V.I.N.	
Date Problem Occurred	/ /	Registration Year	/ /
Weather	❑ Fine ❑ Cloudy ❑ Rainy ❑ Snowy ❑ Others:		
Temperature	°C (°F)		
Road Condition	❑ Flat road ❑ Uphill ❑ Downhill ❑ Gravel road ❑ Others:		
Vehicle Operation	❑ Starting ❑ Idling ❑ Driving ❑ Constant speed ❑ Accelerating ❑ Decelerating ❑ Turning ❑ Others:		
Details of Problem			
Airbag Warning Light Operation	❑ Normal (After turning the ignition switch to ON, lit for approximately 6 seconds and goes off.) ❑ Remains ON ❑ Remains OFF		
DTC output	❑ OK code ❑ DTC: (Code:)		

3. General Description

A: CAUTION

Refer to “CAUTION” in “General Description” in Air-bag System. <Ref. to AB-9, CAUTION, General Description.>

B: INSPECTION

Measure the battery voltage and check electrolyte.

Standard voltage: 12 V

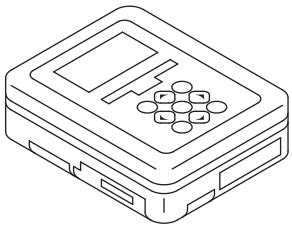
Specific gravity: 1.260 or more

C: PREPARATION TOOL

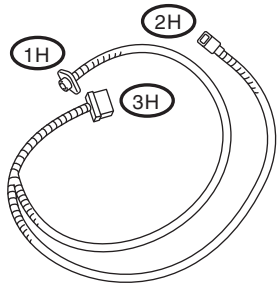
CAUTION:
To measure the voltage and resistance of airbag system component, be sure to use the specified test harness.

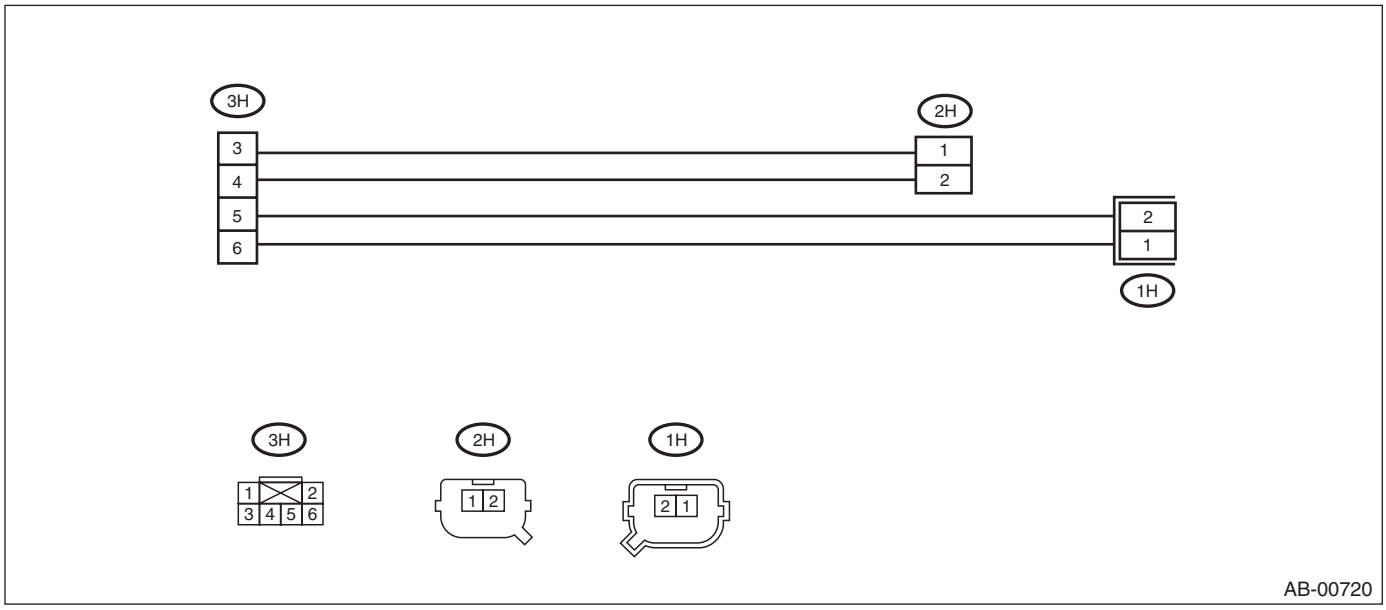
1. SPECIAL TOOL

- Subaru Select Monitor

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

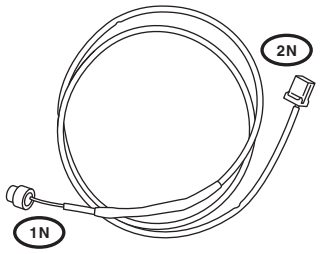
- TEST HARNESS H

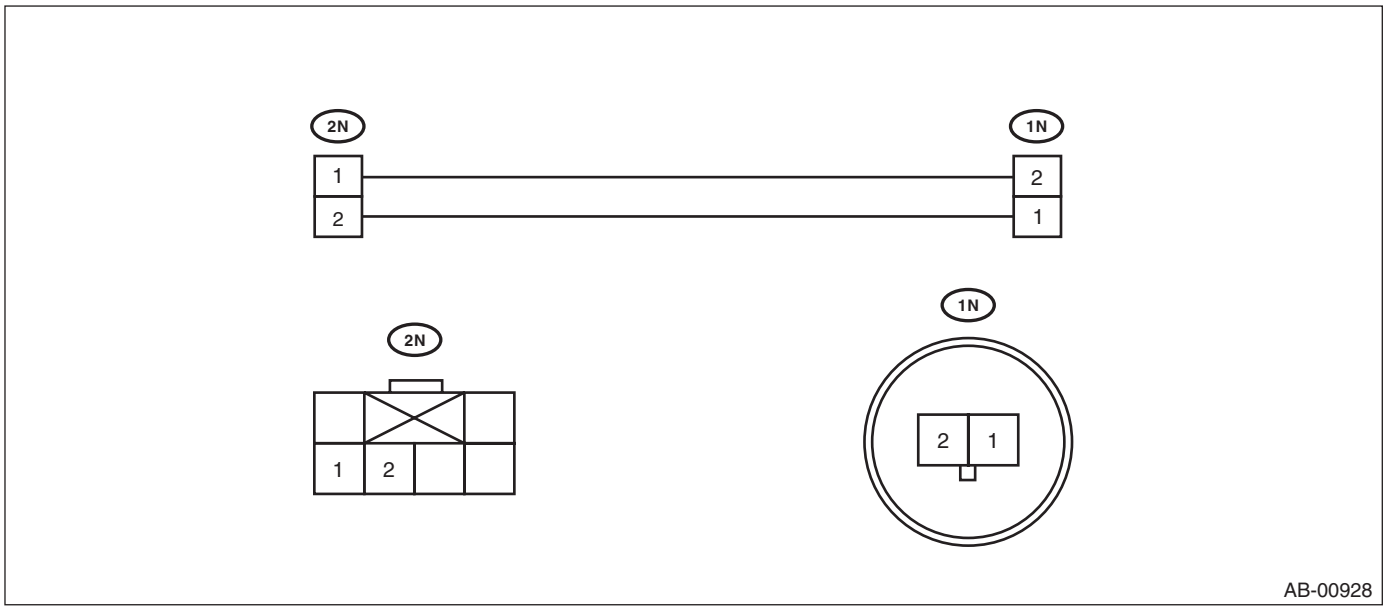
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299FA030	98299FA030	TEST HARNESS H	Used when measuring voltage and resistance of the front sub sensor.



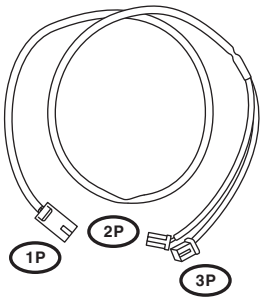
AB-00720

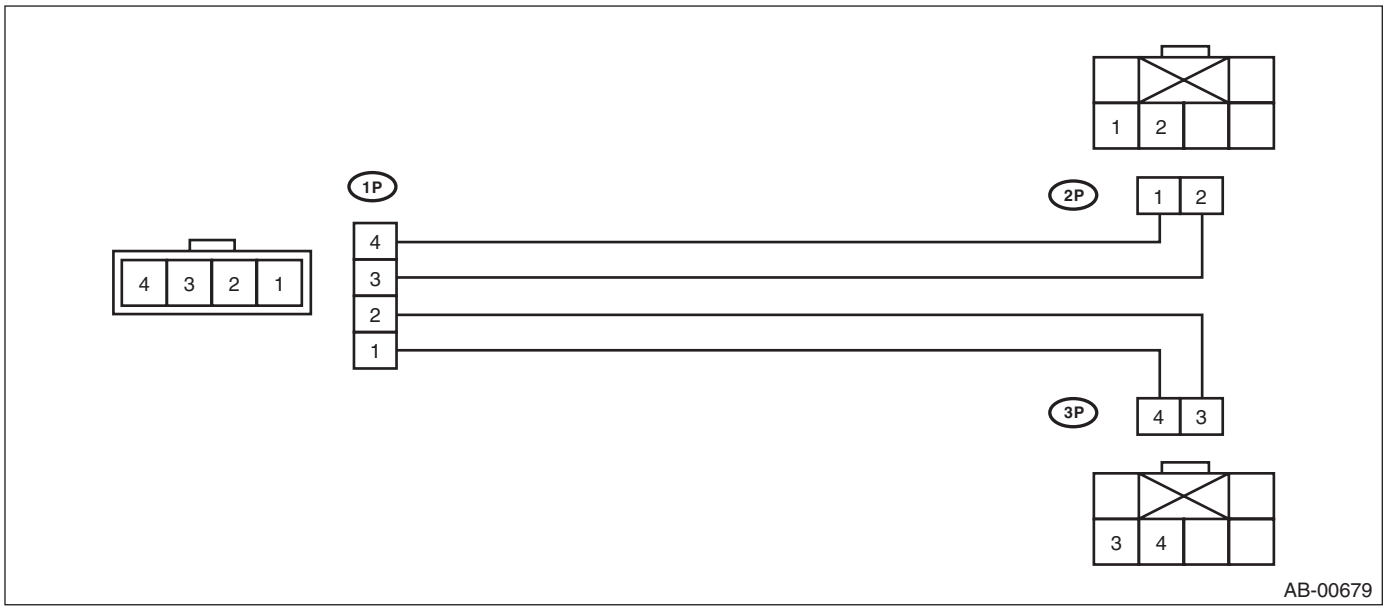
- TEST HARNESS N

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



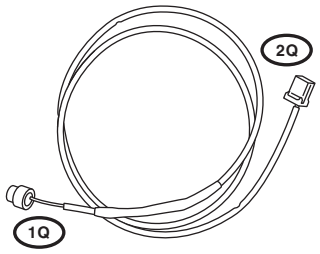
- TEST HARNESS P

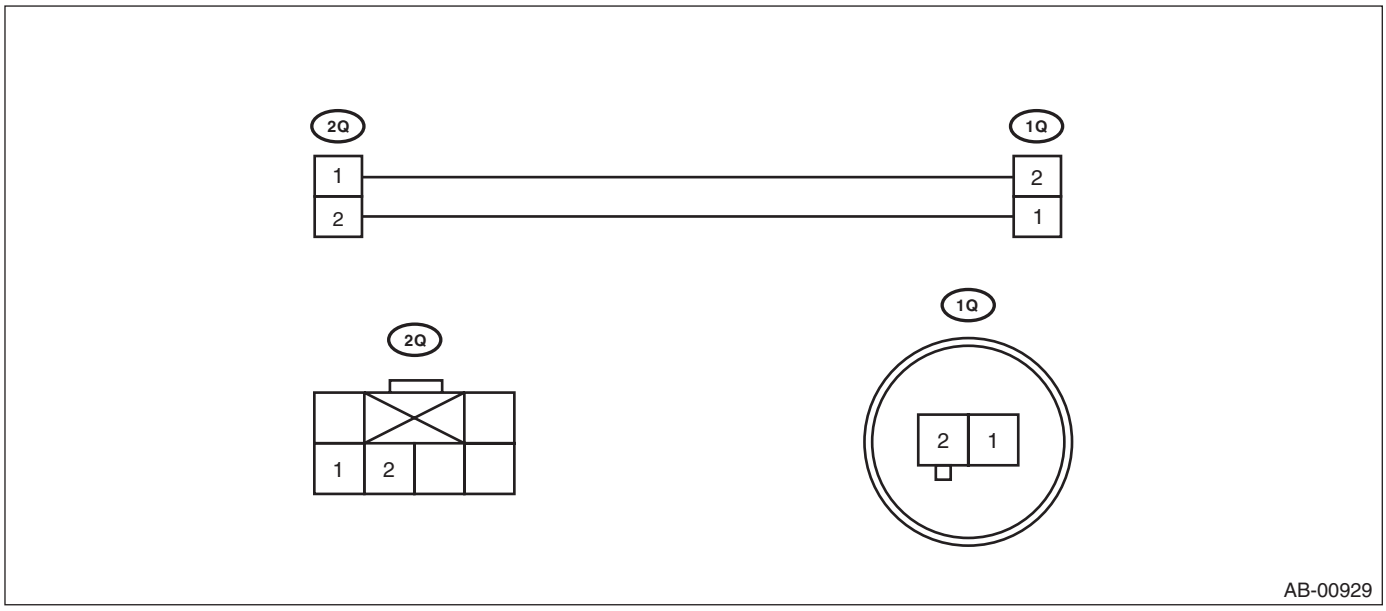
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299SA020	98299SA020	TEST HARNESS P	Used when measuring voltage and resistance of passenger's airbag module harness.



AB-00679

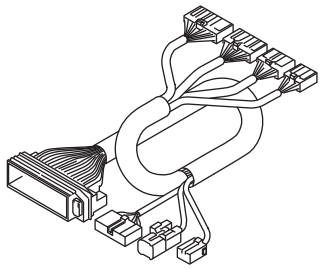
- TEST HARNESS Q

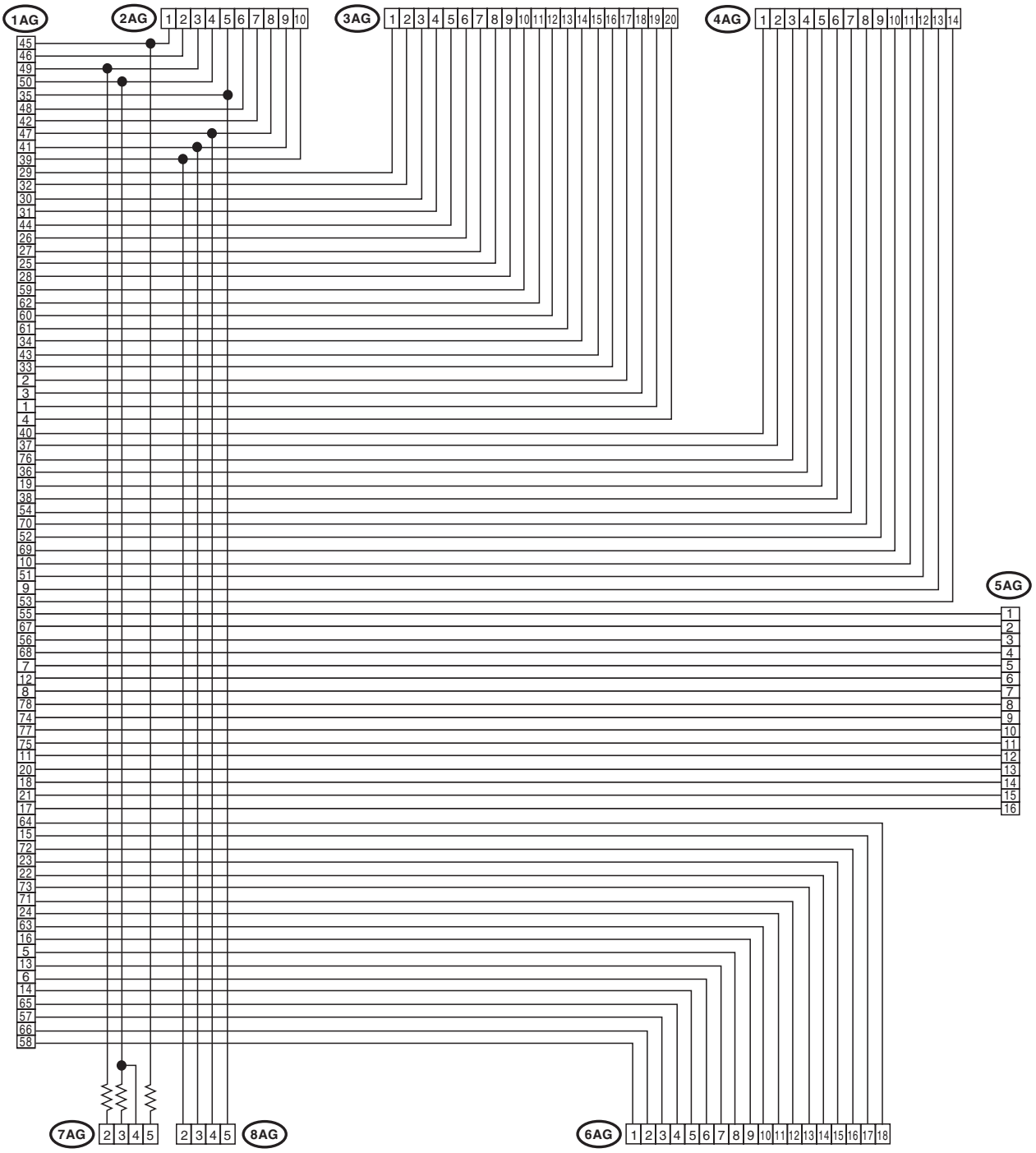
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299SA040	98299SA040	TEST HARNESS Q	Used when measuring voltage and resistance of driver's airbag module.



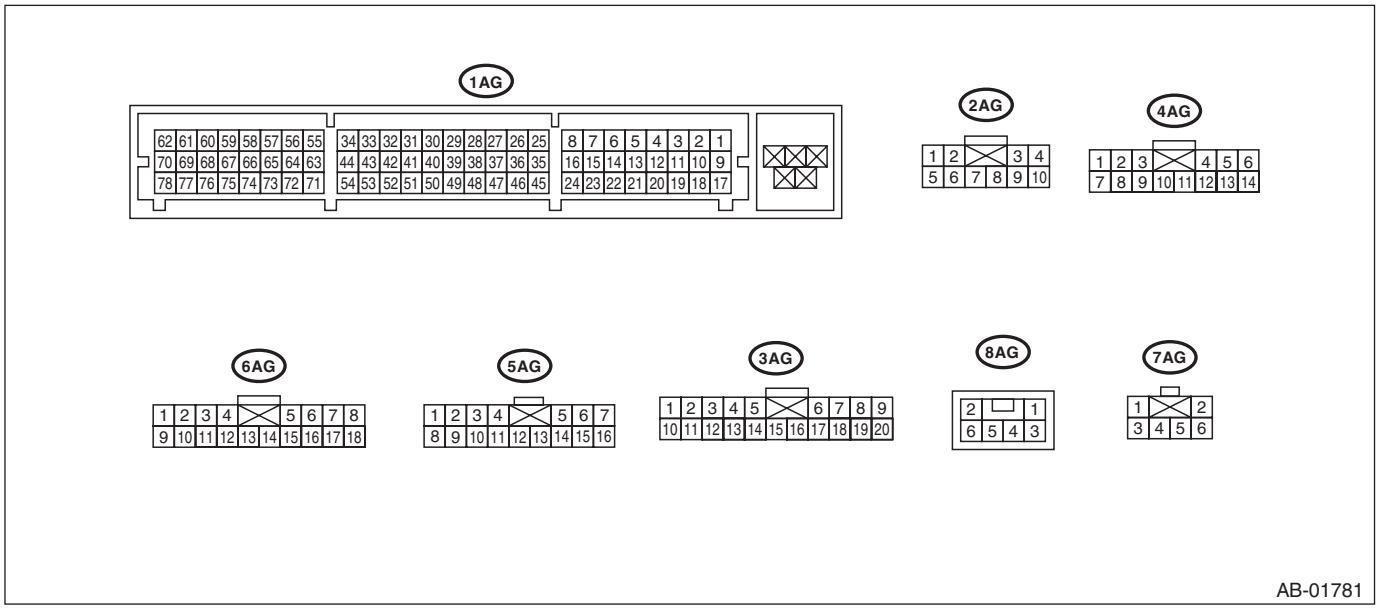
AB-00929

- TEST HARNESS AG

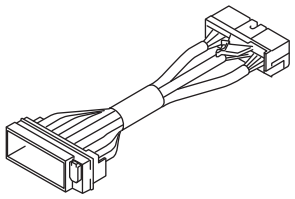
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299AG070	98299AG070	TEST HARNESS AG	Used when measuring voltage and resistance of airbag control module.

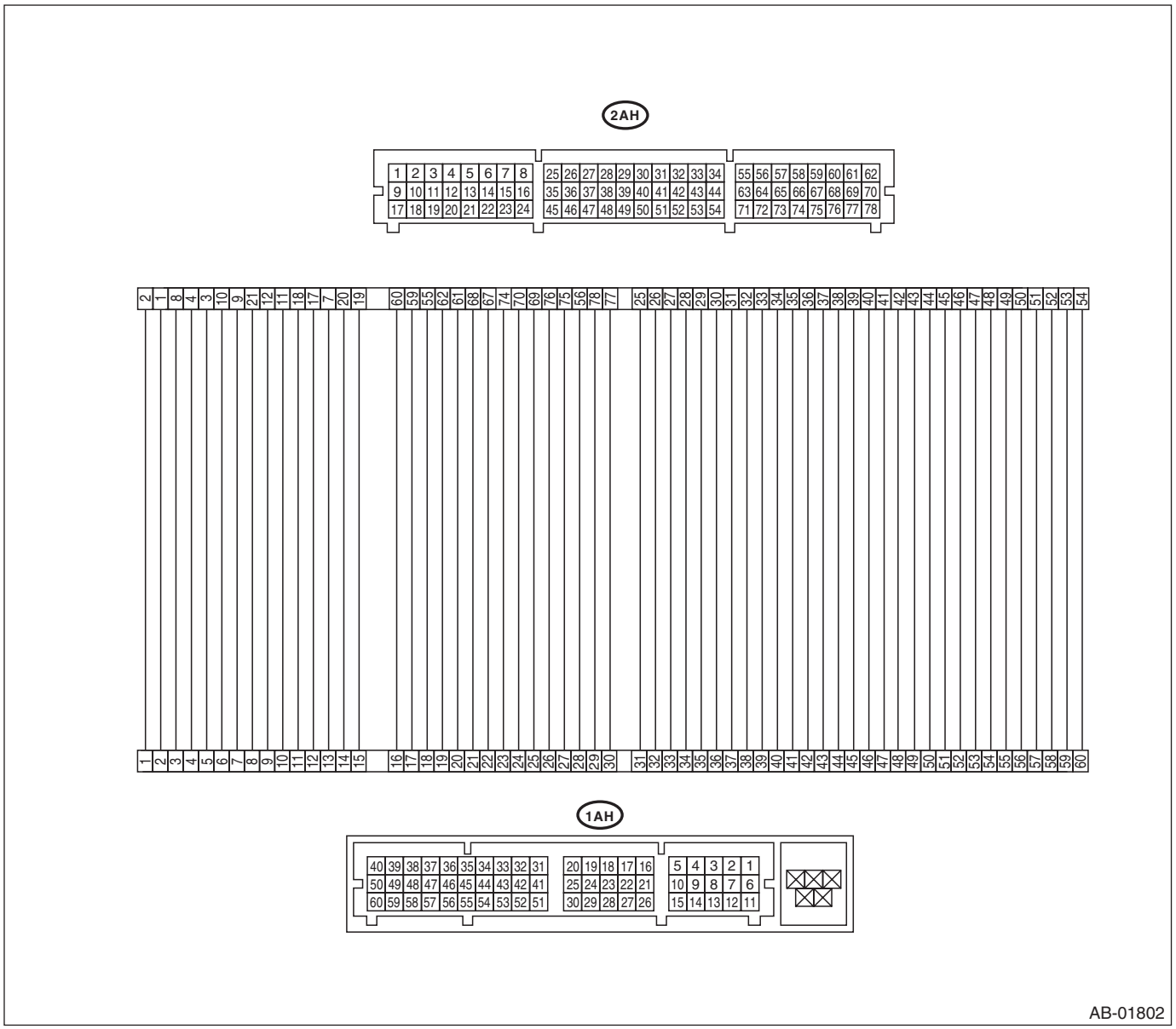

1AG
2AG
1 2 3 4 5 6 7 8 9 10
3AG
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
4AG
1 2 3 4 5 6 7 8 9 10 11 12 13 14
5AG
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
45 46 49 50 35 48 42 47 41 39 29 32 30 31 44 26 27 25 28 59 62 60 61 34 43 33 2 3 1 4 40 37 76 36 19 38 54 70 52 69 10 51 9 53 55 67 56 68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

AB-01902

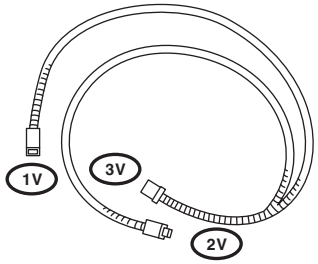

1AG
62 61 60 59 58 57 56 55
70 69 68 67 66 65 64 63
78 77 76 75 74 73 72 71
34 33 32 31 30 29 28 27 26 25
44 43 42 41 40 39 38 37 36 35
54 53 52 51 50 49 48 47 46 45
8 7 6 5 4 3 2 1
16 15 14 13 12 11 10 9
24 23 22 21 20 19 18 17
2AG
1 2 3 4
5 6 7 8 9 10
4AG
1 2 3 4 5 6
7 8 9 10 11 12 13 14
6AG
1 2 3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

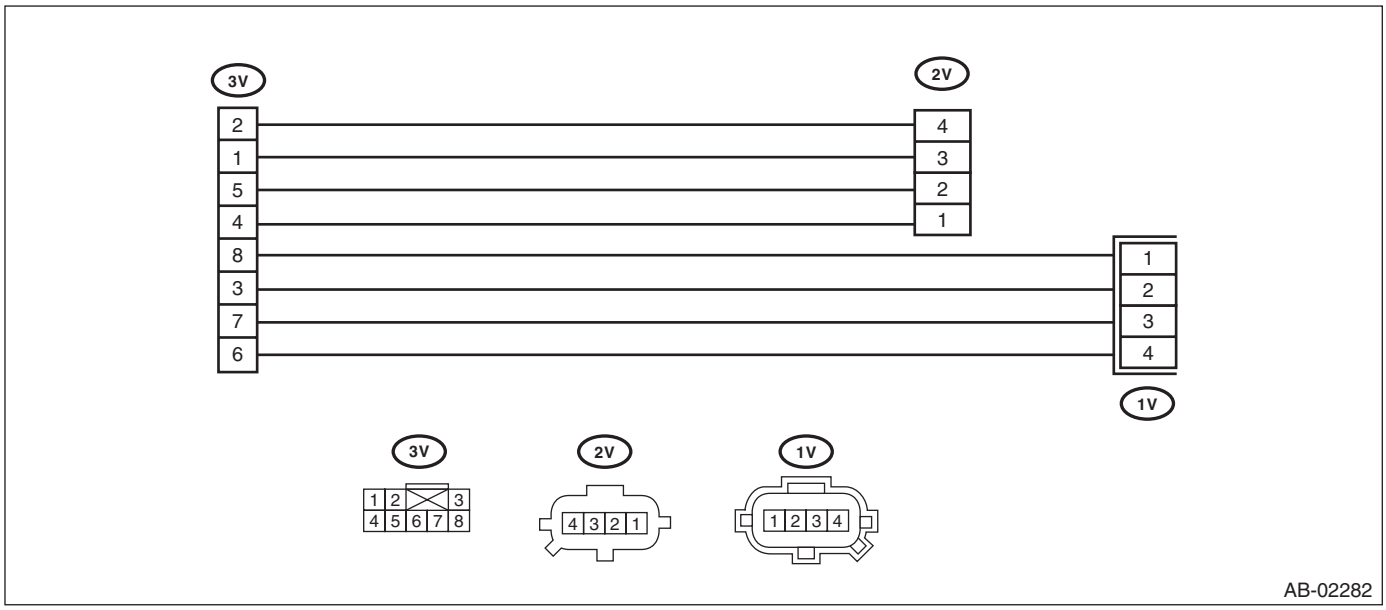
- TEST HARNESS AH

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



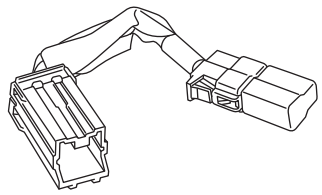
- TEST HARNESS V

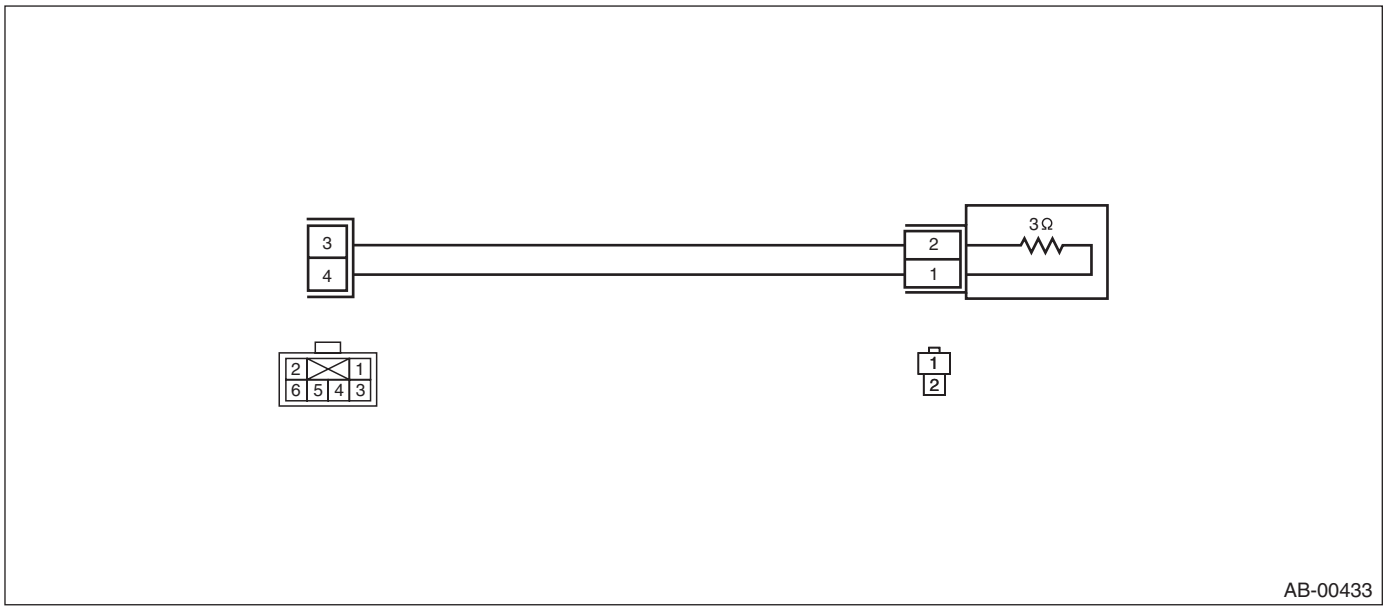
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299AG010	98299AG010	TEST HARNESS V	Used when measuring voltage and resistance of side airbag sensor and curtain airbag sensor.



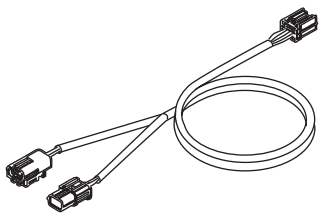
AB-02282

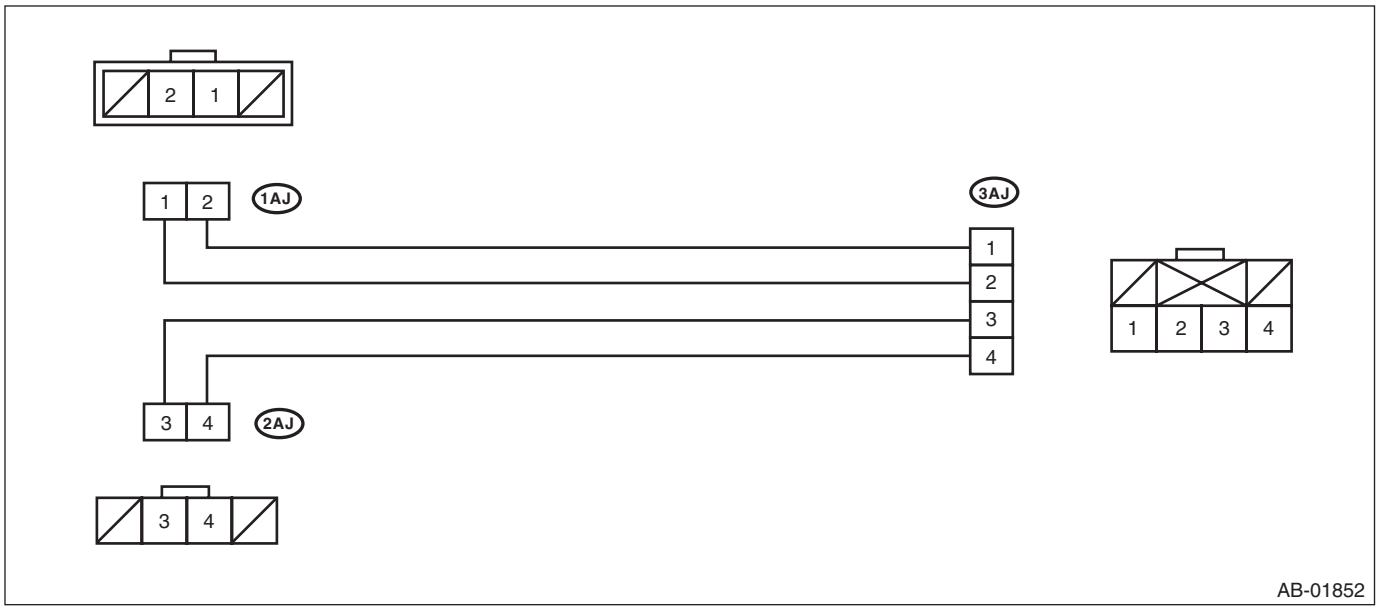
- AIRBAG RESISTOR

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

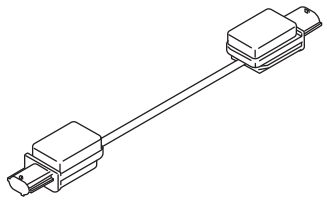


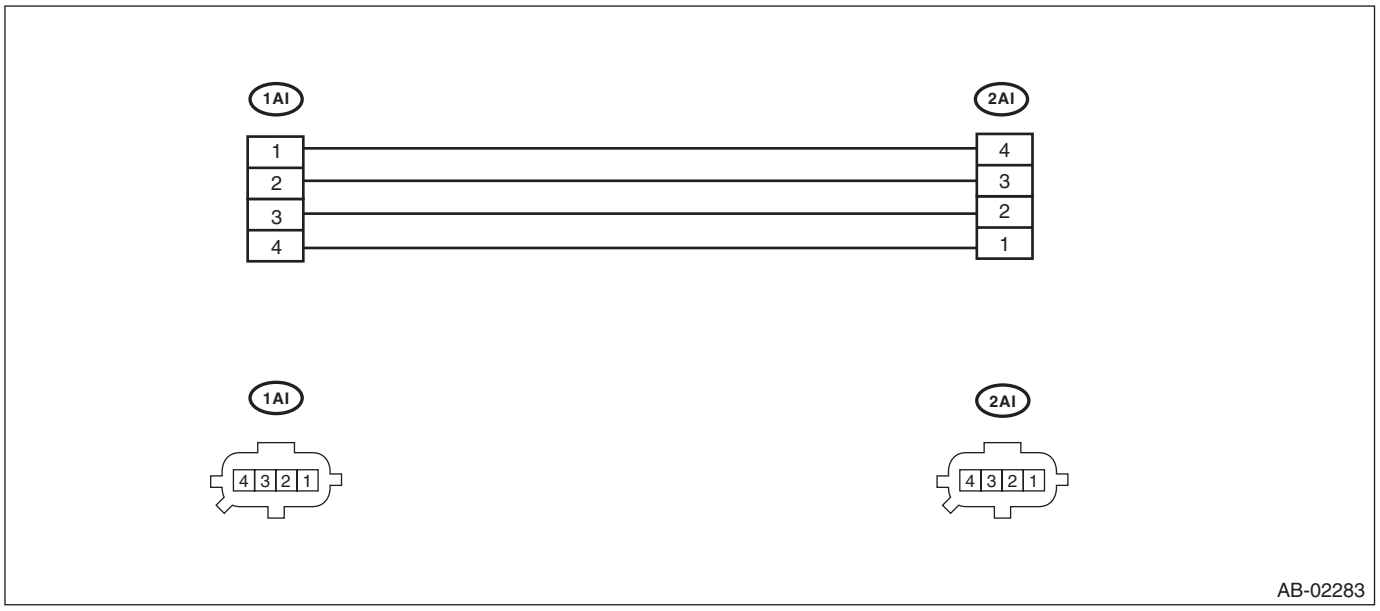
- TEST HARNESS AJ

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

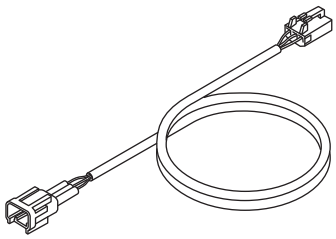


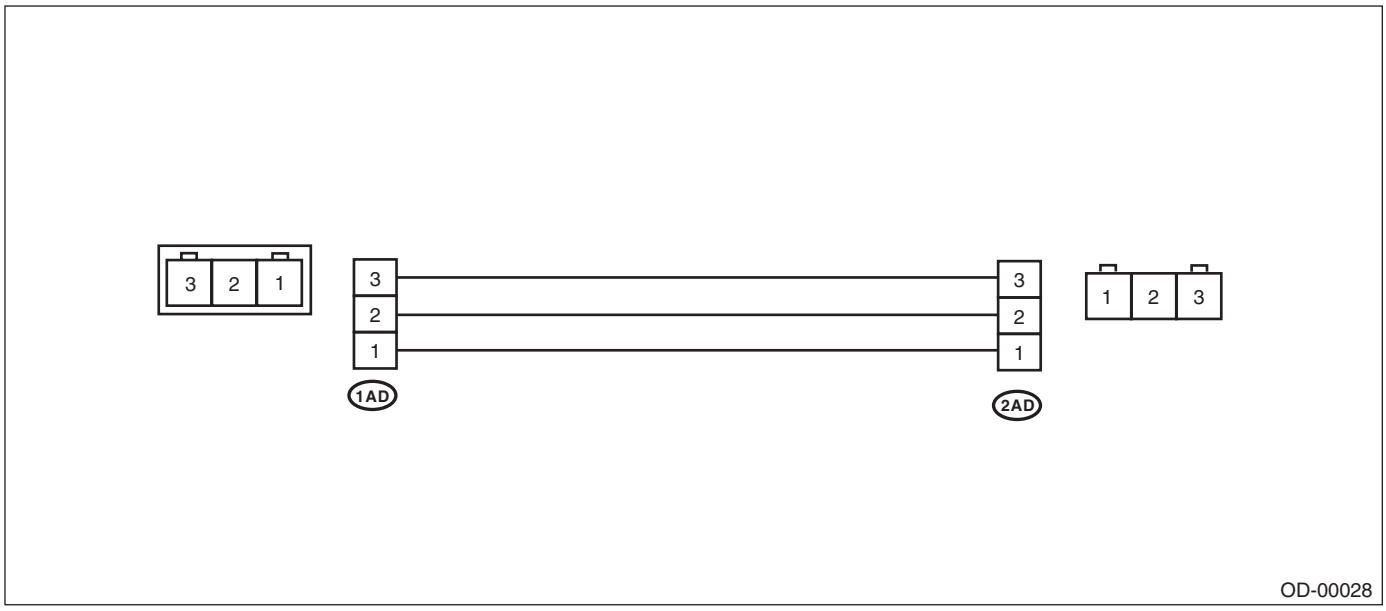
- TEST HARNESS AI

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



- TEST HARNESS AD

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299XA020	98299XA020	TEST HARNESS AD	Used when measuring voltage and resistance of the occupant detection system.



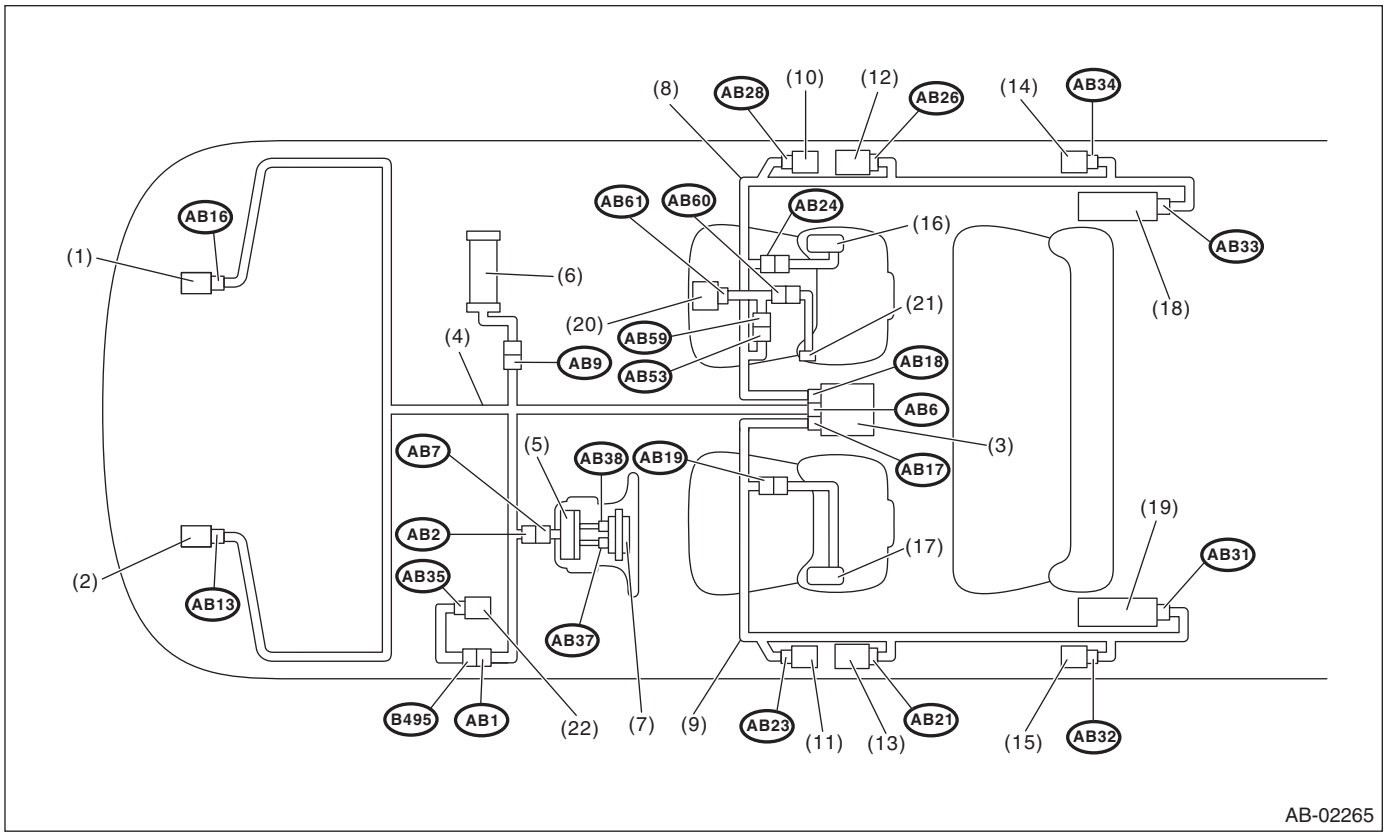
2. GENERAL TOOL

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

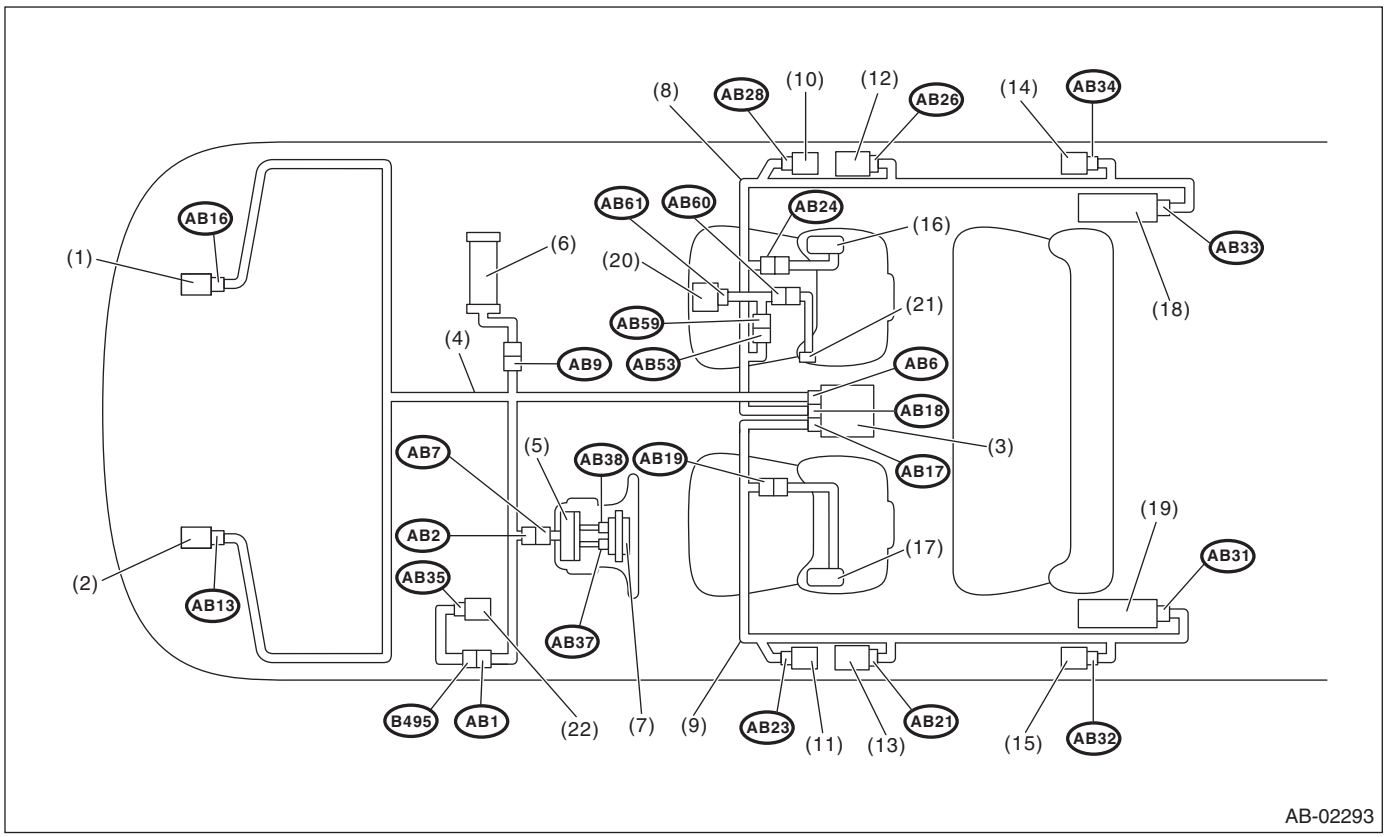
4. Electrical Component Location

A: LOCATION

- OUTBACK model



- Sedan model



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

Connector No.	(AB1)	(AB2)	(AB6)	(AB7)	(AB9)	(AB13)	(AB16)	(AB17)	(AB18)	(AB19)	(AB21)	(AB23)
Pin	10	4	30	4	4	2	2	15 or 24	15 or 24	4	2	4
Color	Gray	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Black	Yellow
Male/Female	Female	Female	Female	Male	Female	Female	Female	Female	Female	Female	Female	Female
Connector No.	(AB24)	(AB26)	(AB28)	(AB31)	(AB32)	(AB33)	(AB34)	(AB35)	(AB37)	(AB38)	(AB53)	(AB59)
Pin	4	2	4	2	4	2	4	2	2	2	3	3
Color	Yellow	Black	Yellow	Black	Yellow	Black	Yellow	★	Orange	Black	Brown	Brown
Male/Female	Female	Female	Female	Female	Female	Female	Female	Female	Female	Female	Female	Male
Connector No.	(AB60)	(AB61)										
Pin	2	10										
Color	Yellow	Black										
Male/Female	Male	Female										

★: White or natural

5. Airbag Connector

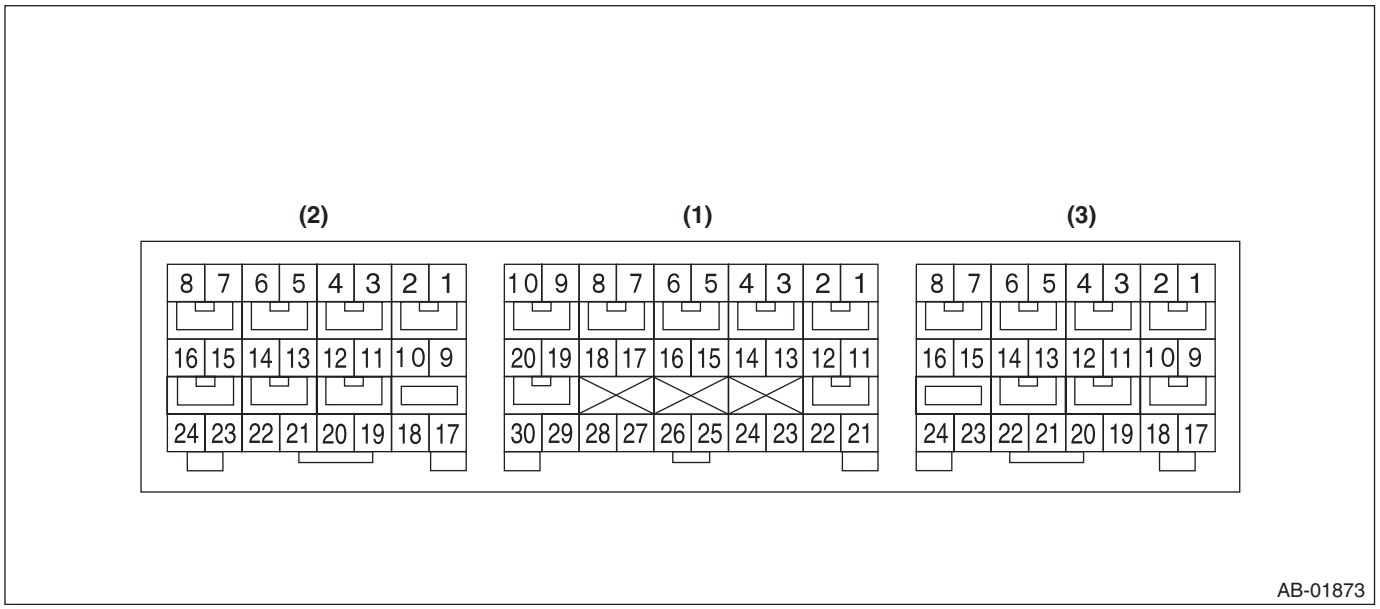
A: PROCEDURE

For operation procedures, refer to “Airbag Connector”. <Ref. to AB-18, Airbag Connector.>

6. Airbag Control Module I/O Signal

A: ELECTRICAL SPECIFICATION

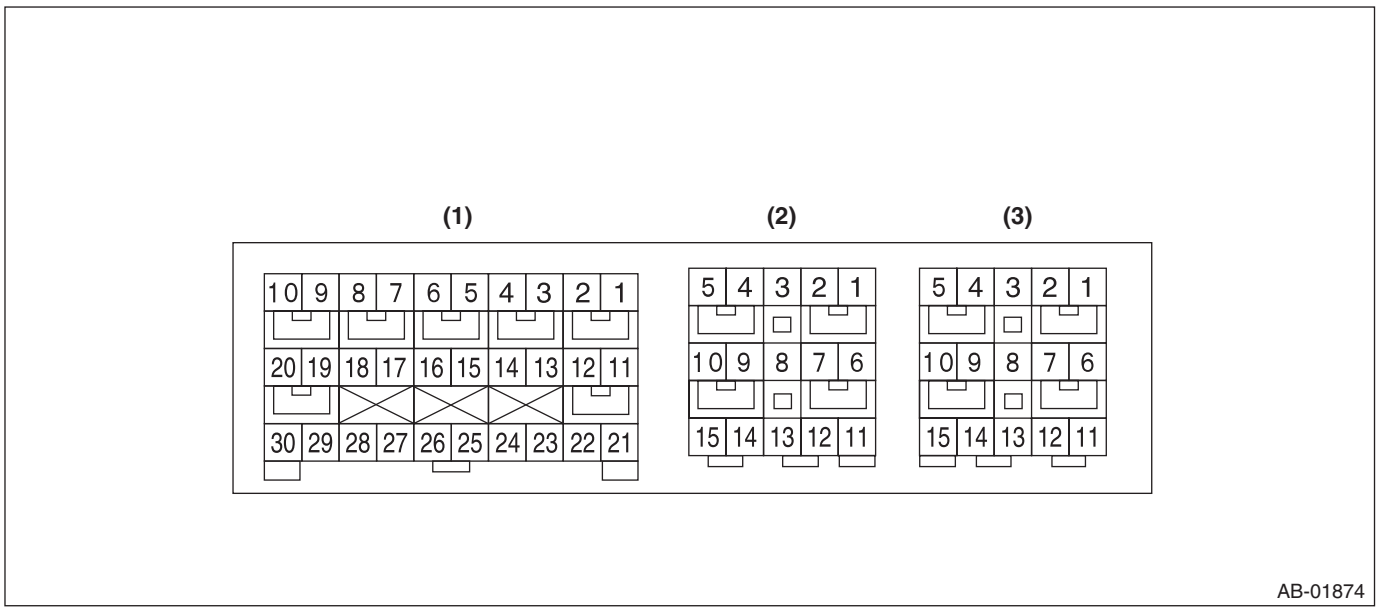
- OUTBACK model



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

Item		Control module terminal No.
Data link connector		(1) — 16
Combination meter		(1) — 11
Ignition power supply	Dedicated fuse	(1) — 21
Passenger's airbag module level one	+	(1) — 4
	–	(1) — 3
Passenger's airbag module level two	+	(1) — 1
	–	(1) — 2
Driver's airbag module level one	+	(1) — 5
	–	(1) — 6
Driver's airbag module level two	+	(1) — 8
	–	(1) — 7
Front sub sensor LH	+	(1) — 30
	–	(1) — 28
Front sub sensor RH	+	(1) — 29
	–	(1) — 27
Ground line (GND)		(1) — 25
		(1) — 26
Passenger's airbag ON indicator		(1) — 23
Passenger's airbag OFF indicator		(1) — 17
Passenger's seat belt warning		(1) — 15
Side airbag sensor LH Curtain airbag sensor LH	+	(3) — 17
	–	(3) — 18
Side airbag module LH	+	(3) — 8
	–	(3) — 7
Curtain airbag module LH	+	(3) — 5
	–	(3) — 6
Seat belt pretensioner LH	+	(3) — 4
	–	(3) — 3
Side airbag sensor RH Curtain airbag sensor RH	+	(2) — 24
	–	(2) — 23
Seat belt pretensioner RH	+	(2) — 5
	–	(2) — 6
Side airbag module RH	+	(2) — 1
	–	(2) — 2
Curtain airbag module RH	+	(2) — 4
	–	(2) — 3
Occupant detection control module	+	(2) — 9
	–	(2) — 17

- Sedan model



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

Item		Control module terminal No.
Data link connector		(1) — 16
Combination meter		(1) — 11
Ignition power supply	Dedicated fuse	(1) — 21
Passenger's airbag module level one	+	(1) — 4
	–	(1) — 3
Passenger's airbag module level two	+	(1) — 1
	–	(1) — 2
Driver's airbag module level one	+	(1) — 5
	–	(1) — 6
Driver's airbag module level two	+	(1) — 8
	–	(1) — 7
Front sub sensor LH	+	(1) — 30
	–	(1) — 28
Front sub sensor RH	+	(1) — 29
	–	(1) — 27
Ground line (GND)		(1) — 25
		(1) — 26
Passenger's airbag ON indicator		(1) — 23
Passenger's airbag OFF indicator		(1) — 17
Passenger's seat belt warning		(1) — 15
Seat belt pretensioner LH	+	(3) — 4
	–	(3) — 5
Side airbag sensor LH Curtain airbag sensor LH	+	(3) — 8
	–	(3) — 11
Side airbag module LH	+	(3) — 7
	–	(3) — 6
Curtain airbag module LH	+	(3) — 9
	–	(3) — 10
Seat belt pretensioner RH	+	(2) — 2
	–	(2) — 1
Side airbag sensor RH Curtain airbag sensor RH	+	(2) — 8
	–	(2) — 15
Side airbag module RH	+	(2) — 9
	–	(2) — 10
Curtain airbag module RH	+	(2) — 7
	–	(2) — 6
Occupant detection control module	+	(2) — 14
	–	(2) — 13

B: WIRING DIAGRAM

Refer to the WI section wiring diagram. <Ref. to WI-37, WIRING DIAGRAM, Airbag System.>

7. Subaru Select Monitor

A: OPERATION

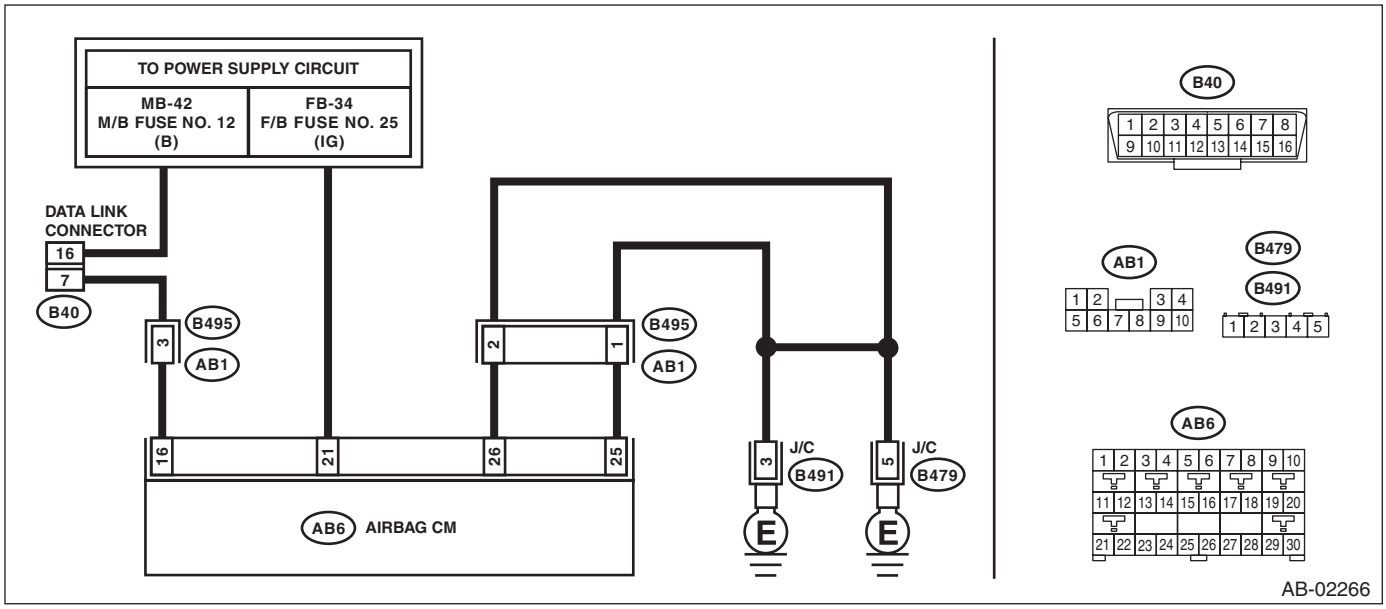
For operation procedures, refer to the “PC application help for Subaru Select Monitor”.

B: INSPECTION

1. COMMUNICATION FOR INITIALIZING IMPOSSIBLE

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

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



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

	Step	Check	Yes	No
6	**CHECK FUSE.** Remove fuse No. 12 from the fuse & relay box, and perform visual inspection.	Is the fuse OK?	Repair the harness between the battery and the data link connector.	Replace the fuse. If the fuse is blown out again, check the power supply circuit.
7	**CHECK AIRBAG CONTROL MODULE CONNECTOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Confirm that the connectors of airbag control module (AB6, AB17, and AB18) are securely connected.	Is the connector of the airbag control module securely connected?	Go to step **8**.	Connect the connector of the airbag control module.
8	**CHECK SUBARU SELECT MONITOR COMMUNICATION.** 1) Disconnect the airbag control module connector. 2) Connect the battery ground terminal. 3) Turn the ignition switch to ON. 4) Check whether communication to other systems can be executed normally.	Is the system name displayed on Subaru Select Monitor?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **9**.
9	**CHECK HARNESS CONNECTOR BETWEEN EACH CONTROL MODULE AND DATA LINK CONNECTOR.** 1) Turn the ignition switch to OFF. 2) Disconnect the airbag control module, VDCCM&H/U, body integrated unit, impact sensor, TPMS CM, power steering CM, ECM and TCM. 3) Measure the resistance between data link connector and chassis ground. ***Connector & terminal*** ***(B40) No. 7 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **10**.	Repair the harness and connector between each control module and data link connector. (Replace the entire harness if repair is necessary for airbag harness.
10	**CHECK OUTPUT SIGNAL TO AIRBAG CONTROL MODULE.** 1) Turn the ignition switch to ON in the condition of step 9. 2) Measure the voltage between data link connector and chassis ground. ***Connector & terminal*** ***(B40) No. 7 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Repair each control module.	Repair the harness and connector between each control module and data link connector. (Replace the entire harness if repair is necessary for airbag harness.
11	**CHECK FUSE.** Remove fuse No. 25 from the fuse & relay box, and perform visual inspection.	Is the fuse OK?	Go to step **12**.	Replace the fuse. If the fuse is blown out again, check the power supply circuit.
12	**CHECK AIRBAG CONTROL MODULE CONNECTOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Confirm that the connectors of airbag control module (AB6, AB17, AB18) are securely connected.	Is the connector of the airbag control module securely connected?	Go to step **13**.	Connect the connector of the airbag control module.

	Step	Check	Yes	No
13	**CHECK HARNESS BETWEEN AIRBAG CONTROL MODULE AND DATA LINK CONNECTOR.** 1) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 2) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 3) Measure the resistance between connector (4AG) in the test harness AG and the data link connector. ***Connector & terminal*** ***(4AG) No. 1 — (B40) No. 7:***	Is the resistance less than 10 Ω?	Go to step **14**.	Repair the harness between the airbag control module and the data link connector. Or replace the airbag main harness along with the bulkhead harness.
14	**CHECK POWER SUPPLY CIRCUIT.** 1) Turn the ignition switch to ON. 2) Measure the voltage between connector (2AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(2AG) No. 1 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **15**.	Repair the harness between the airbag control module and the battery. Or replace the airbag main harness along with the bulkhead harness.
15	**CHECK BETWEEN AIRBAG CONTROL MODULE AND CHASSIS GROUND.** 1) Turn the ignition switch to OFF. 2) Measure the resistance between connector (2AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(2AG) No. 4 — Chassis ground:*** ***(2AG) No. 3 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **16**.	Repair the harness between the airbag control module and the chassis ground. Or replace the airbag main harness along with the bulkhead harness.
16	**CHECK POOR CONTACT OF CONNECTOR.**	Is there poor contact of the control module power supply, ground circuit and data link connector?	Repair the connector. (For airbag system connectors, do not repair but replace the entire harness.)	Replace the airbag control module. <Ref. to AB-64, REMOVAL, Airbag Control Module.>

8. Read Diagnostic Trouble Code (DTC)

A: OPERATION

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

NOTE:
For details concerning DTCs, refer to List of Diagnostic Trouble Codes (DTC). <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>

9. Inspection Mode

A: PROCEDURE

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

10.Clear Memory Mode

A: OPERATION

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

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

11.Display of Status Information

A: OPERATION

When seat belt buckle switch malfunction occurs, or when seat belt buckle switch is replaced, check operation status of each sensor.
1) On «Main Menu» display, select {Each System Check}.
2) On «System Selection Menu» display, select {Airbag System}.
3) On «Airbag System» display, select {Status Data}.
The following table is for support data.

Item	Display Contents
Seat position sensor LH	—*2
Seat position sensor RH	—*2
Seat belt buckle switch LH	—*6
Seat belt buckle switch RH	Fastened*3/Not fastened*4/Other*5/Initial Setting*1/—*6
Passenger's airbag control status	ON*7/OFF*8/Initial Setting*1

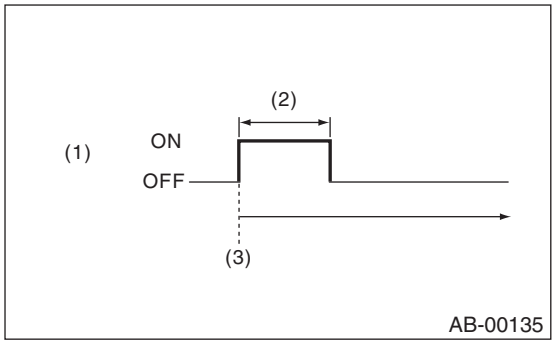
*1: Displayed when it is initial
*2: Seat position sensor not supported
*3: Seat belt fastened
*4: Seat belt not fastened
*5: Displayed when data other than belt fastened or not fastened, such as breakdown, is input
*6: Seat belt buckle switch not supported
*7: Passenger's airbag operating state
*8: Passenger's airbag non-operating state

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

12. Airbag Warning Light Illumination Pattern

A: INSPECTION

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



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

13.Airbag Warning Light Failure

A: AIRBAG WARNING LIGHT REMAINS ON

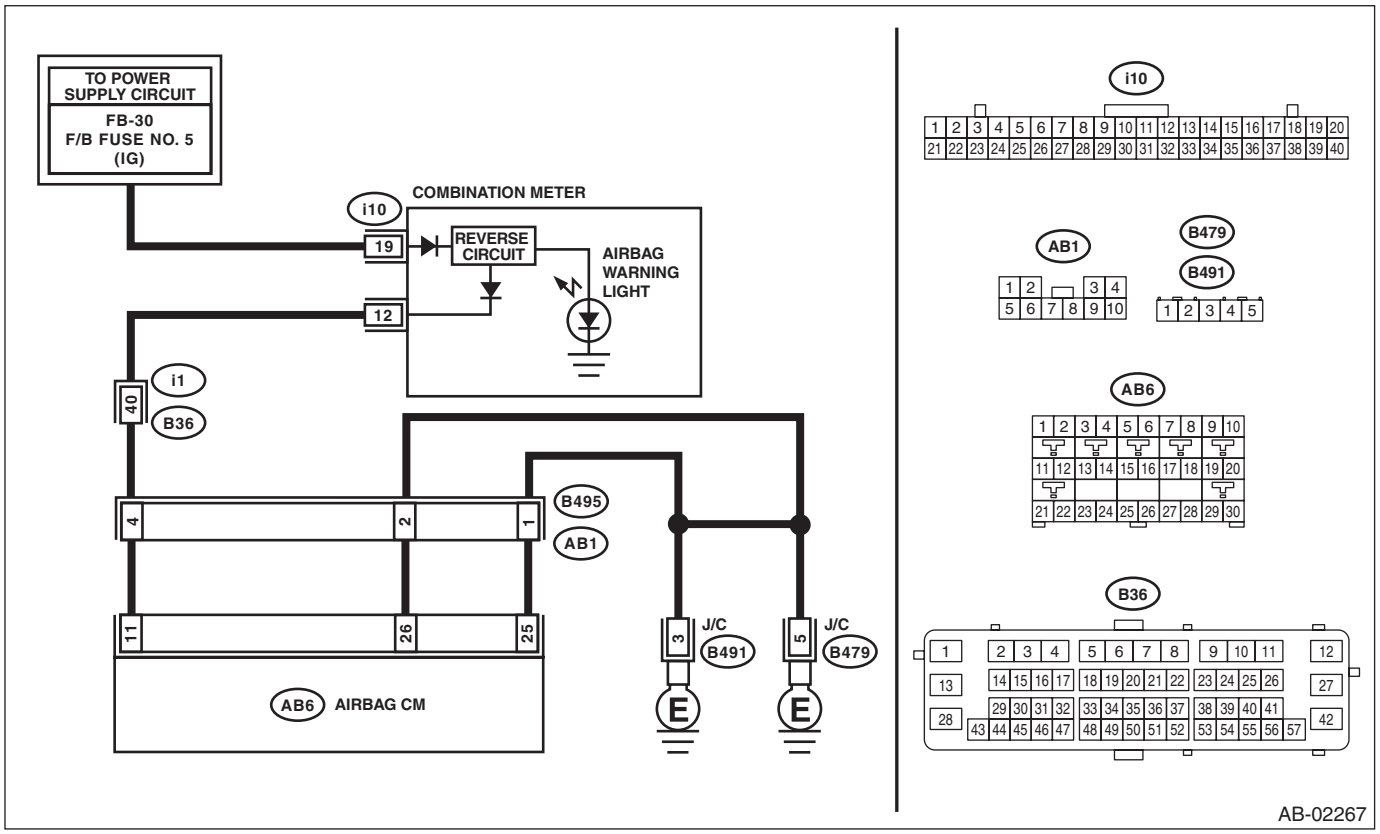
DETECTING CONDITION:

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

CAUTION:

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

WIRING DIAGRAM:



Step		Check	Yes	No
1	**READ DTC.** Read the DTC. <Ref. to AB(diag)-29, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed?	Go to step **2**.	Go to step **3**.
2	**CHECK DTC.**	Is the displayed DTC 2D?	Go to step **3**.	Perform the diagnosis according to DTC.

	Step	Check	Yes	No
3	**CHECK FOR POOR CONTACT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Confirm that the connectors of airbag control module (AB6, AB17, and AB18) are securely connected.	Is there poor contact of connectors (AB6, AB17, and AB18)?	If the poor contact of the connector is not fixed, replace the airbag main harness along with body harness or replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **4**.
4	**CHECK AIRBAG MAIN HARNESS.** 1) Remove the instrument panel lower cover and column cover, and disconnect the connectors (AB7) and (AB2). 2) Remove the console front panel and disconnect the connector (AB9). 3) Disconnect the connectors (AB6, AB17, and AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 4) Connect the battery ground terminal and turn the ignition switch to ON. 5) Connect the connectors (7AG) and (8AG) in the test harness AG. NOTE: After the fault has been cleared, disconnect the connectors (7AG) and (8AG).	Does the airbag warning light go off?	Go to step **5**.	Go to step **6**.
5	**CHECK GROUND CIRCUIT.** Measure the resistance between connector (2AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(2AG) No. 4 — Chassis ground:*** ***(2AG) No. 3 — Chassis ground:***	Is the resistance less than 10 Ω?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Repair the chassis ground circuit.
6	**CHECK AIRBAG MAIN HARNESS AND BULKHEAD HARNESS.** 1) Disconnect the connectors (7AG) and (8AG). 2) Remove the combination meter. 3) Measure the resistance between the combination meter connector and test harness AG connector (2AG). ***Connector & terminal*** ***(2AG) No. 5 — (i10) No. 12:***	Is the resistance less than 10 Ω?	Check the combination meter.	Go to step **7**.
7	**CHECK POOR CONTACT OF CONNECTOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground terminal, and wait 60 seconds or more. 2) Confirm that there is a firm contact between connectors (AB1) and (B495).	Is there poor contact of connector?	Repair the bulkhead harness or replace the airbag main harness along with bulkhead harness.	Go to step **8**.
8	**CHECK AIRBAG MAIN HARNESS.** Check the airbag main harness for defect.	Is there any defect in the airbag main harness?	Replace the airbag main harness along with bulkhead harness.	Repair the bulkhead harness.

B: AIRBAG WARNING LIGHT REMAINS OFF

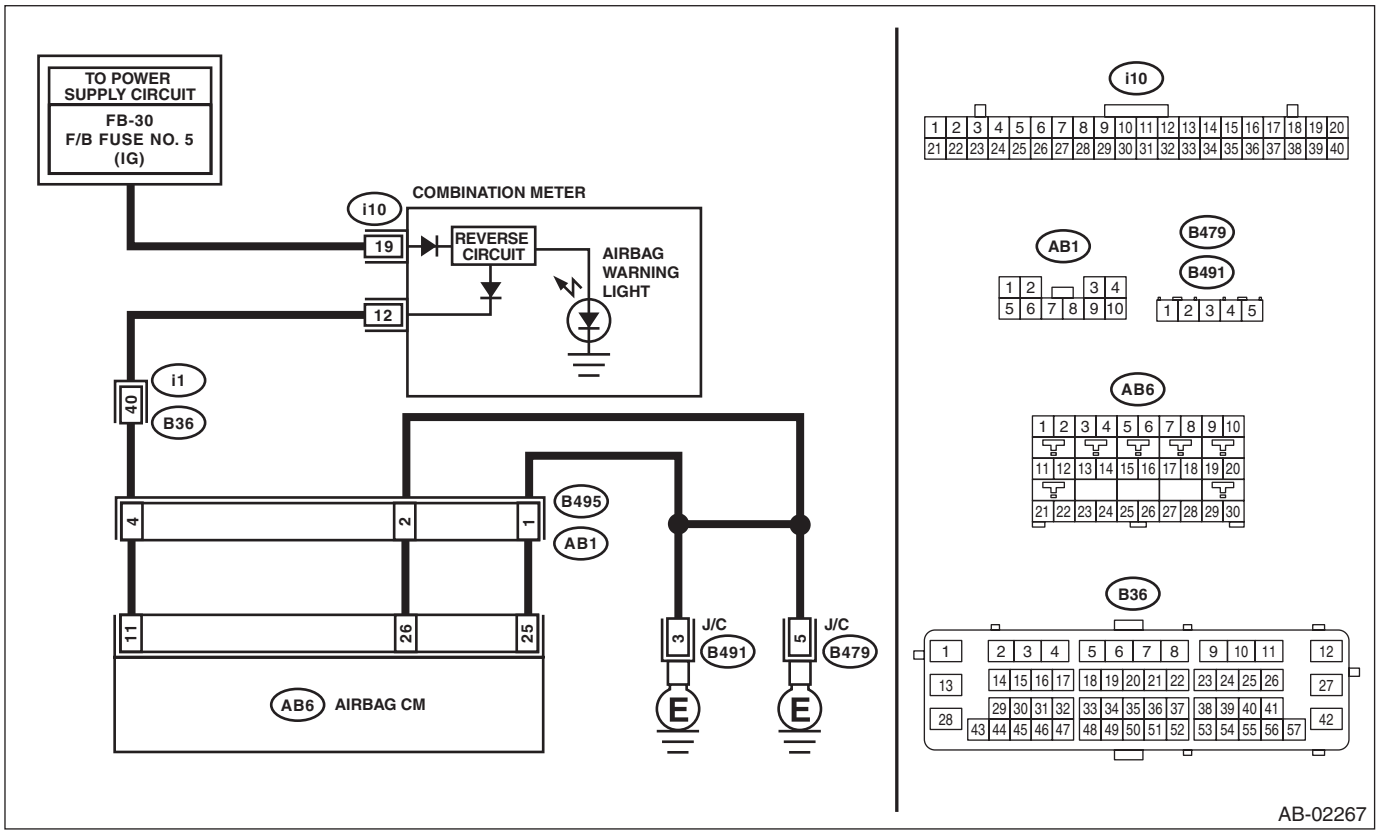
DETECTING CONDITION:

- Fuse No. 5 (in fuse & relay box) is blown out.
- Body harness circuit is open.
- Airbag warning light is faulty.
- Airbag main harness is faulty.
- Airbag control module is faulty.

CAUTION:

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

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK COMBINATION METER.** Turn the ignition switch to ON, and confirm that warning lights of combination meter illuminate.	Do warning lights except for airbag illuminate?	Go to step **2**.	Check the combination meter.
2	**CHECK DTC.** Read the DTC. <Ref. to AB(diag)-29, Read Diagnostic Trouble Code (DTC).>	Is DTC displayed?	Perform the diagnosis according to DTC.	Go to step **3**.
3	**CHECK FUSE.** Remove fuse No. 5 from the fuse & relay box, and perform visual inspection.	Is the fuse OK?	Go to step **4**.	Replace the fuse. If the fuse is blown out again, go to step 4.
4	**CHECK AIRBAG WARNING LIGHT CIRCUIT (IN COMBINATION METER).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (i1) and (B36). 3) Connect the battery ground terminal and turn the ignition switch to ON.	Does airbag warning light illuminate?	Go to step **5**.	Check the combination meter and instrument panel harness.

Step		Check	Yes	No
5	**CHECK AIRBAG MAIN HARNESS.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Connect the connectors (i1) and (B36). 3) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does airbag warning light illuminate?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Replace the airbag main harness along with bulkhead harness.

14.List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Display	Content of diagnosis	Reference
11	Driver's Airbag failure	• Airbag main harness circuit is shorted to ground. • Airbag module harness (driver's side) circuit is shorted to ground. • Roll connector circuit is shorted to ground. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-46, DTC 11 DRIVER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
12	Passenger's Airbag failure	• Airbag main harness circuit is shorted to ground. • Airbag module harness (passenger's side) circuit is shorted to ground. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-48, DTC 12 PASSENGER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
15	Driver's Airbag failure	• Airbag main harness circuit is shorted to power supply. • Airbag module harness circuit (driver's side) is shorted to power supply. • Roll connector circuit is shorted to power supply. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-50, DTC 15 DRIVER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
16	Passenger's Airbag failure	• Airbag main harness circuit is shorted to power supply. • Airbag module harness (passenger's side) circuit is shorted to power supply. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-52, DTC 16 PASSENGER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
1A	Driver's Airbag failure	• Airbag main harness circuit is shorted. • Airbag module harness (driver's side) circuit is shorted. • Roll connector circuit is shorted. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-54, DTC 1A DRIVER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
1B	Passenger's Airbag failure	• Airbag main harness circuit is shorted. • Airbag module harness circuit (passenger's side) is shorted. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-56, DTC 1B PASSENGER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
1D	Driver's Airbag failure	• Airbag main harness circuit is open. • Airbag module harness circuit (driver's side) is open. • Roll connector circuit is open. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-58, DTC 1D DRIVER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
1E	Passenger's Airbag failure	• Airbag main harness circuit is open. • Airbag module harness circuit (passenger's side) is open. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-60, DTC 1E PASSENGER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
21	Airbag ECU failure	Airbag control module is faulty.	<Ref. to AB(diag)-62, DTC 21 AIRBAG ECM FAILURE, Diagnostic Chart with Trouble Code.>

DTC	Display	Content of diagnosis	Reference
22	Front Airbag: Firing output	Front airbag module and seat belt pretensioner (LH/RH) are inflated.	<Ref. to AB(diag)-62, DTC 22 FRONT AIR-BAG FIRING OUTPUT, Diagnostic Chart with Trouble Code.>
26	Passenger's Airbag Indicator Failure	• Passenger's airbag indicator is faulty. • Airbag control module is faulty. • Airbag main harness circuit is open, shorted or shorted to ground. • Body harness circuit is open.	<Ref. to AB(diag)-63, DTC 26 PASSENGER'S AIRBAG INDICATOR FAILURE, Diagnostic Chart with Trouble Code.>
27	ODS Communication Error	• Occupant detection control module communication is faulty. • Airbag rear harness circuit is open, shorted, shorted to ground or shorted to power supply. • Occupant detection harness is faulty. • Airbag control module is faulty. • Occupant detection system is faulty.	<Ref. to AB(diag)-65, DTC 27 ODS COMMU-NICATION ERROR, Diagnostic Chart with Trouble Code.>
29	ODS Failure	• Occupant detection sensor is faulty. • Occupant detection control module is faulty. • Occupant detection harness is faulty. • Fuse is blown.	<Ref. to OD(diag)-19, DTC 29 ODS FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
2A	ODS Calibration Error	• Occupant detection control module is faulty. • Calibration of occupant detection control module is initial setting or faulty.	<Ref. to AB(diag)-67, DTC 2A ODS CALIBRA-TION ERROR, Diagnos-tic Chart with Trouble Code.>
2B	ODS System Wrong Parts	• Specification of occupant detection control module is improper. • Occupant detection control module is faulty.	<Ref. to AB(diag)-67, DTC 2B ODS SYSTEM WRONG PARTS, Diag-nostic Chart with Trouble Code.>
2D	Airbag Warning Indicator Failure	• Airbag warning light is faulty. • Open or short circuit in harness between airbag control module and airbag warning light. • Poor contact of airbag main harness and instrument panel harness. • Ground circuit is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-67, DTC 2D AIRBAG WARNING INDICATOR FAILURE, Diagnostic Chart with Trouble Code.>
33	Front Sub Sensor RH failure	Front sub sensor (RH) is faulty.	<Ref. to AB(diag)-67, DTC 33 FRONT SUB SENSOR RH FAILURE, Diagnostic Chart with Trouble Code.>
34	Front Sub Sensor LH failure	Front sub sensor (LH) is faulty.	<Ref. to AB(diag)-67, DTC 34 FRONT SUB SENSOR LH FAILURE, Diagnostic Chart with Trouble Code.>
37	Buckle Switch RH Failure	• Passenger's buckle switch circuit is open, shorted or shorted to ground. • Occupant detection system is faulty. • Occupant detection harness is faulty.	<Ref. to OD(diag)-21, DTC 37 BUCKLE SWITCH RH FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

DTC	Display	Content of diagnosis	Reference
39	Seat Belt Warning Failure	• Airbag control module is faulty. • Body integrated unit is faulty. • Harness circuits between body integrated unit and airbag control module are open, shorted or shorted to ground.	<Ref. to AB(diag)-68, DTC 39 SEAT BELT WARNING FAILURE, Diagnostic Chart with Trouble Code.>
3A	Front Sub Sensor RH false installation	• Front sensor (RH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-70, DTC 3A FRONT SUB SENSOR RH FALSE INSTALLATION, Diagnostic Chart with Trouble Code.>
3B	Front Sub Sensor LH false installation	• Front sensor (LH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-70, DTC 3B FRONT SUB SENSOR LH FALSE INSTALLATION, Diagnostic Chart with Trouble Code.>
41	Side Airbag RH failure	• Side airbag harness (RH) circuit is shorted to ground. • Side airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-71, DTC 41 SIDE AIRBAG RH FAILURE, Diagnostic Chart with Trouble Code.>
42	Side Airbag LH failure	• Side airbag harness (LH) circuit is shorted to ground. • Side airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-73, DTC 42 SIDE AIRBAG LH FAILURE, Diagnostic Chart with Trouble Code.>
45	Side Airbag RH failure	• Side airbag harness (RH) circuit is shorted to power supply. • Side airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-75, DTC 45 SIDE AIRBAG RH FAILURE, Diagnostic Chart with Trouble Code.>
46	Side Airbag LH failure	• Side airbag harness (LH) circuit is shorted to power supply. • Side airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-77, DTC 46 SIDE AIRBAG LH FAILURE, Diagnostic Chart with Trouble Code.>
4A	Side Airbag RH failure	• Side airbag harness (RH) circuit is shorted. • Side airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-79, DTC 4A SIDE AIRBAG RH FAILURE, Diagnostic Chart with Trouble Code.>
4B	Side Airbag LH failure	• Side airbag harness (LH) circuit is shorted. • Side airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-81, DTC 4B SIDE AIRBAG LH FAILURE, Diagnostic Chart with Trouble Code.>
4D	Side Airbag RH failure	• Side airbag harness (RH) circuit is open. • Side airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-83, DTC 4D SIDE AIRBAG RH FAILURE, Diagnostic Chart with Trouble Code.>
4E	Side Airbag LH failure	• Side airbag harness (LH) circuit is open. • Side airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-85, DTC 4E SIDE AIRBAG LH FAILURE, Diagnostic Chart with Trouble Code.>

DTC	Display	Content of diagnosis	Reference
53	Side Airbag Sensor RH failure	Side airbag sensor (RH) is faulty.	<Ref. to AB(diag)-87, DTC 53 SIDE AIRBAG SENSOR RH FAILURE, Diagnostic Chart with Trouble Code.>
54	Side Airbag Sensor LH failure	Side airbag sensor (LH) is faulty.	<Ref. to AB(diag)-87, DTC 54 SIDE AIRBAG SENSOR LH FAILURE, Diagnostic Chart with Trouble Code.>
55	Side/Curtain Airbag: Firing output	• Side airbag module and curtain airbag module are deployed. • Curtain airbag module is deployed.	<Ref. to AB(diag)-87, DTC 55 SIDE CURTAIN AIRBAG FIRING OUTPUT, Diagnostic Chart with Trouble Code.>
58	Curtain Airbag Sensor RH failure	Curtain airbag sensor (RH) is faulty.	<Ref. to AB(diag)-87, DTC 58 CURTAIN AIRBAG SENSOR RH FAILURE, Diagnostic Chart with Trouble Code.>
59	Curtain Airbag Sensor LH failure	Curtain airbag sensor (LH) is faulty.	<Ref. to AB(diag)-87, DTC 59 CURTAIN AIRBAG SENSOR LH FAILURE, Diagnostic Chart with Trouble Code.>
5A	Side Airbag Sensor RH false installation	• Side airbag sensor (RH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-87, DTC 5A SIDE AIRBAG SENSOR RH FALSE INSTALLATION, Diagnostic Chart with Trouble Code.>
5B	Side Airbag Sensor LH false installation	• Side airbag sensor (LH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-88, DTC 5B SIDE AIRBAG SENSOR LH FALSE INSTALLATION, Diagnostic Chart with Trouble Code.>
5C	Curtain Airbag Sensor RH false installation	• Curtain airbag sensor (RH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-88, DTC 5C CURTAIN AIRBAG SENSOR RH FALSE INSTALLATION, Diagnostic Chart with Trouble Code.>
5D	Curtain Airbag Sensor LH false installation	• Curtain airbag sensor (LH) is misinstalled. • Airbag control module is faulty.	<Ref. to AB(diag)-88, DTC 5D CURTAIN AIRBAG SENSOR LH FALSE INSTALLATION, Diagnostic Chart with Trouble Code.>
61	Belt Pretensioner RH failure	• Seat belt pretensioner (RH) circuit is shorted to ground. • Pretensioner (RH) is faulty. • Pretensioner harness is shorted to ground. • Airbag control module is faulty.	<Ref. to AB(diag)-89, DTC 61 BELT PRETENSIONER RH FAILURE, Diagnostic Chart with Trouble Code.>
62	Belt Pretensioner LH failure	• Seat belt pretensioner (LH) circuit is shorted to ground. • Pretensioner (LH) is faulty. • Pretensioner harness is shorted to ground. • Airbag control module is faulty.	<Ref. to AB(diag)-91, DTC 62 BELT PRETENSIONER LH FAILURE, Diagnostic Chart with Trouble Code.>

DTC	Display	Content of diagnosis	Reference
65	Belt Pretensioner RH failure	• Seat belt pretensioner (RH) circuit is shorted to power supply. • Pretensioner (RH) is faulty. • Pretensioner harness is shorted to power supply. • Airbag control module is faulty.	<Ref. to AB(diag)-93, DTC 65 BELT PRETENSIONER RH FAILURE, Diagnostic Chart with Trouble Code.>
66	Belt Pretensioner LH failure	• Seat belt pretensioner (LH) circuit is shorted to power supply. • Pretensioner (LH) is faulty. • Pretensioner harness is shorted to power supply. • Airbag control module is faulty.	<Ref. to AB(diag)-95, DTC 66 BELT PRETENSIONER LH FAILURE, Diagnostic Chart with Trouble Code.>
6A	Belt Pretensioner RH failure	• Seat belt pretensioner (RH) circuit is shorted. • Pretensioner (RH) is faulty. • Pretensioner harness is shorted. • Airbag control module is faulty.	<Ref. to AB(diag)-97, DTC 6A BELT PRETENSIONER RH FAILURE, Diagnostic Chart with Trouble Code.>
6B	Belt Pretensioner LH failure	• Seat belt pretensioner (LH) circuit is shorted. • Pretensioner (LH) is faulty. • Pretensioner harness is shorted. • Airbag control module is faulty.	<Ref. to AB(diag)-99, DTC 6B BELT PRETENSIONER LH FAILURE, Diagnostic Chart with Trouble Code.>
6D	Belt Pretensioner RH failure	• Seat belt pretensioner (RH) circuit is open. • Pretensioner (RH) is faulty. • Pretensioner harness is open. • Airbag control module is faulty.	<Ref. to AB(diag)-101, DTC 6D BELT PRETENSIONER RH FAILURE, Diagnostic Chart with Trouble Code.>
6E	Belt Pretensioner LH failure	• Seat belt pretensioner (LH) circuit is open. • Pretensioner (LH) is faulty. • Pretensioner harness is open. • Airbag control module is faulty.	<Ref. to AB(diag)-103, DTC 6E BELT PRETENSIONER LH FAILURE, Diagnostic Chart with Trouble Code.>
71	Driver's Airbag failure	• Airbag main harness circuit is shorted to ground. • Airbag module harness (driver's side) circuit is shorted to ground. • Roll connector circuit is shorted to ground. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-105, DTC 71 DRIVER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
72	Passenger's Airbag failure	• Airbag main harness circuit is shorted to ground. • Airbag module harness (passenger's side) circuit is shorted to ground. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-107, DTC 72 PASSENGER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
75	Driver's Airbag failure	• Airbag main harness circuit is shorted to power supply. • Airbag module harness circuit (driver's side) is shorted to power supply. • Roll connector circuit is shorted to power supply. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-109, DTC 75 DRIVER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
76	Passenger's Airbag failure	• Airbag main harness circuit is shorted to power supply. • Airbag module harness (passenger's side) circuit is shorted to power supply. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-111, DTC 76 PASSENGER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>

DTC	Display	Content of diagnosis	Reference
7A	Driver's Airbag failure	• Airbag main harness circuit is shorted. • Airbag module harness (driver's side) circuit is shorted. • Roll connector circuit is shorted to power supply. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-113, DTC 7A DRIVER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
7B	Passenger's Airbag failure	• Airbag main harness circuit is shorted. • Airbag module harness circuit (passenger's side) is shorted. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-115, DTC 7B PASSENGER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
7D	Driver's Airbag failure	• Airbag main harness circuit is open. • Airbag module harness circuit (driver's side) is open. • Roll connector circuit is open. • Driver's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-117, DTC 7D DRIVER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
7E	Passenger's Airbag failure	• Airbag main harness circuit is open. • Airbag module harness circuit (passenger's side) is open. • Passenger's airbag module is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-119, DTC 7E PASSENGER'S AIRBAG FAILURE, Diagnostic Chart with Trouble Code.>
91	Curtain Airbag Module RH Failure	• Curtain airbag harness (RH) circuit is shorted to ground. • Curtain airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-121, DTC 91 CURTAIN AIRBAG MODULE RH FAILURE, Diagnostic Chart with Trouble Code.>
92	Curtain Airbag Module LH Failure	• Curtain airbag harness (LH) circuit is shorted to ground. • Curtain airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-123, DTC 92 CURTAIN AIRBAG MODULE LH FAILURE, Diagnostic Chart with Trouble Code.>
95	Curtain Airbag Module RH Failure	• Curtain airbag harness (RH) is shorted to power supply. • Curtain airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-125, DTC 95 CURTAIN AIRBAG MODULE RH FAILURE, Diagnostic Chart with Trouble Code.>
96	Curtain Airbag Module LH Failure	• Curtain airbag harness (LH) is shorted to power supply. • Curtain airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-127, DTC 96 CURTAIN AIRBAG MODULE LH FAILURE, Diagnostic Chart with Trouble Code.>
9A	Curtain Airbag Module RH Failure	• Curtain airbag harness (RH) circuit is shorted. • Curtain airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-129, DTC 9A CURTAIN AIRBAG MODULE RH FAILURE, Diagnostic Chart with Trouble Code.>
9B	Curtain Airbag Module LH Failure	• Curtain airbag harness (LH) circuit is shorted. • Curtain airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-131, DTC 9B CURTAIN AIRBAG MODULE LH FAILURE, Diagnostic Chart with Trouble Code.>
9D	Curtain Airbag Module RH Failure	• Curtain airbag harness (RH) circuit is open. • Curtain airbag module (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-133, DTC 9D CURTAIN AIRBAG MODULE RH FAILURE, Diagnostic Chart with Trouble Code.>

DTC	Display	Content of diagnosis	Reference
9E	Curtain Airbag Module LH Failure	• Curtain airbag harness (LH) circuit is open. • Curtain airbag module (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-135, DTC 9E CURTAIN AIRBAG MODULE LH FAILURE, Diagnostic Chart with Trouble Code.>
A1	Front Sensor Bus Communication error	• Open or short circuit in harness between airbag control module and front sub sensor. • Front sub sensor is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-137, DTC A1 FRONT SENSOR BUS COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>
BB	Roll Over: Firing Output	Curtain airbag module (LH/RH) and seat belt pretensioner (LH/RH) are deployed.	<Ref. to AB(diag)-139, DTC BB ROLL OVER:FIRING OUTPUT, Diagnostic Chart with Trouble Code.>
E3 E4	Front Sensor Bus RH Communication error	• Open or short circuit in harness (RH) between airbag control module and front sub sensor. • Front sub sensor (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-139, DTC E3 FRONT SENSOR BUS RH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.> <Ref. to AB(diag)-139, DTC E4 FRONT SENSOR BUS RH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>
E7 E8	Front Sensor Bus LH Communication error	• Open or short circuit in harness (LH) between airbag control module and front sub sensor. • Front sub sensor (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-140, DTC E7 FRONT SENSOR BUS LH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.> <Ref. to AB(diag)-142, DTC E8 FRONT SENSOR BUS LH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>
E9	Side Sensor Bus RH Communication error	• Open or short circuit in harness (RH) between airbag control module and curtain airbag sensor. • Side airbag sensor (RH) is faulty. • Curtain airbag sensor (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-142, DTC E9 SIDE SENSOR BUS RH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>
EB EC	Side Sensor Bus RH Communication error	• Open or short circuit in harness (RH) between airbag control module and side airbag sensor. • Side airbag sensor (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-142, DTC EB SIDE SENSOR BUS RH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.> <Ref. to AB(diag)-143, DTC EC SIDE SENSOR BUS RH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>

DTC	Display	Content of diagnosis	Reference
ED EE	Side Sensor Bus RH Communication error	• Open or short circuit in harness (RH) between airbag control module and curtain airbag sensor. • Side airbag sensor (RH) is faulty. • Curtain airbag sensor (RH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-146, DTC ED SIDE SENSOR BUS RH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.> <Ref. to AB(diag)-147, DTC EE SIDE SENSOR BUS RH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>
F1	Side Sensor Bus LH Communication error	• Open or short circuit in harness (LH) between airbag control module and curtain airbag sensor. • Side airbag sensor (LH) is faulty. • Curtain airbag sensor (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-150, DTC F1 SIDE SENSOR BUS LH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>
F3 F4	Side Sensor Bus LH Communication error	• Open or short circuit in harness (LH) between airbag control module and side airbag sensor. • Side airbag sensor (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-150, DTC F3 SIDE SENSOR BUS LH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.> <Ref. to AB(diag)-151, DTC F4 SIDE SENSOR BUS LH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>
F5 F6	Side Sensor Bus LH Communication error	• Open or short circuit in harness (LH) between airbag control module and curtain airbag sensor. • Side airbag sensor (LH) is faulty. • Curtain airbag sensor (LH) is faulty. • Airbag control module is faulty.	<Ref. to AB(diag)-154, DTC F5 SIDE SENSOR BUS LH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.> <Ref. to AB(diag)-155, DTC F6 SIDE SENSOR BUS LH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>

15.Diagnostic Chart with Trouble Code

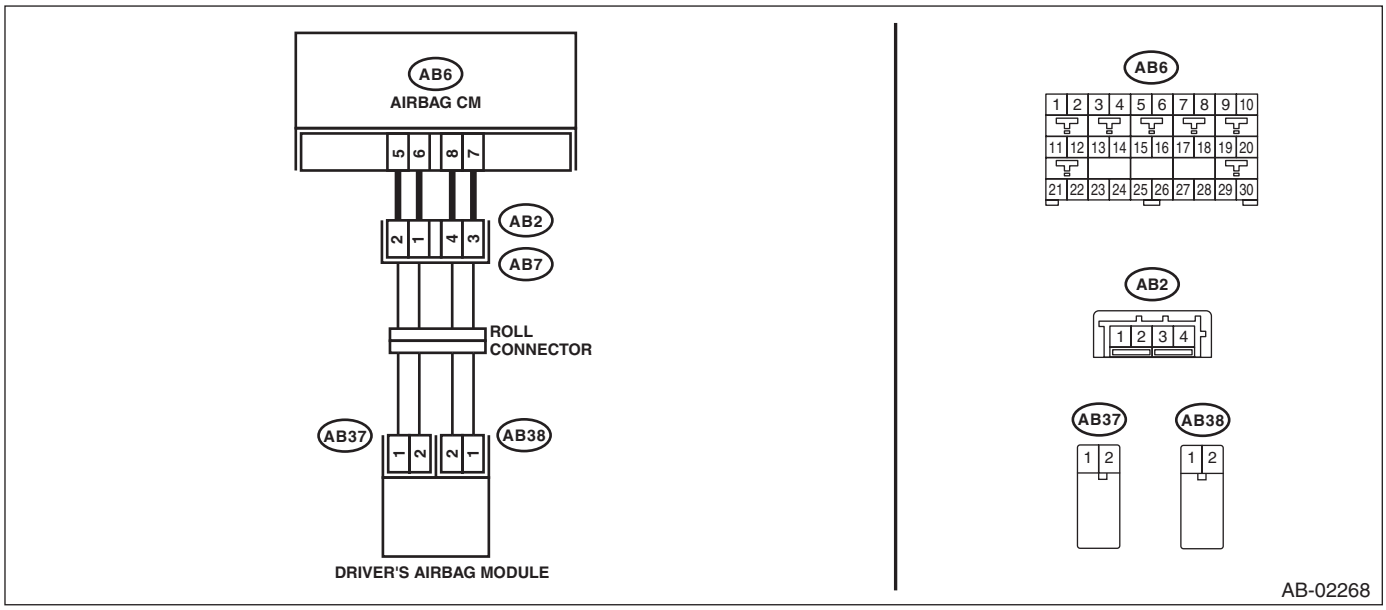
A: DTC 11 DRIVER'S AIRBAG FAILURE

DTC DETECTING CONDITION:

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

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

NOTE:
Prior to starting work, prepare two airbag resistors (98299PA040).
WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-31, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 3) Disconnect the airbag resistor from the connector (2N) in test harness N and from the connector (2Q) in test harness Q. 4) Measure the resistance between connector (2Q) in the test harness Q and chassis ground. ***Connector & terminal*** ***(2Q) No. 1 — Chassis ground:*** ***(2Q) No. 2 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the roll connector. <Ref. to AB-89, Roll Connector.>
4	**CHECK AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Disconnect the test harness N from connector (AB38). 2) Disconnect test harness Q from connector (AB37). 3) Remove the console front panel and disconnect the connector (AB9). 4) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Measure the resistance between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 1 — Chassis ground:*** ***(3AG) No. 3 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **5**.	Replace the airbag main harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

B: DTC 12 PASSENGER'S AIRBAG FAILURE

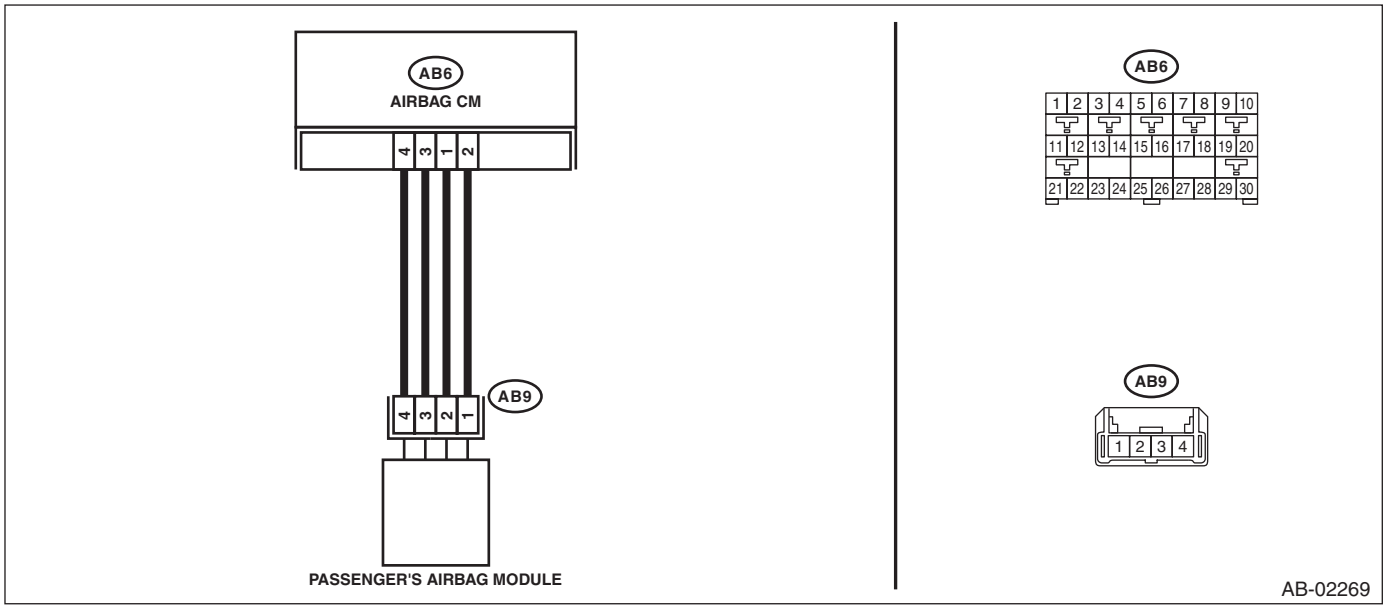
DTC DETECTING CONDITION:

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

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

NOTE:
Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect (AB9). 3) Connect the connector (1P) in the test harness P to connector (AB9). 4) Connect the airbag resistor to the connectors (2P) and (3P) of test harness P. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the passenger's airbag module. <Ref. to AB-33, Passenger's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connectors (2P) and (3P) of test harness P. 3) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 4) Disconnect the connectors (AB6, AB17, and AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Measure the resistance between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 9 — Chassis ground:*** ***(3AG) No. 7 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

C: DTC 15 DRIVER'S AIRBAG FAILURE

DTC DETECTING CONDITION:

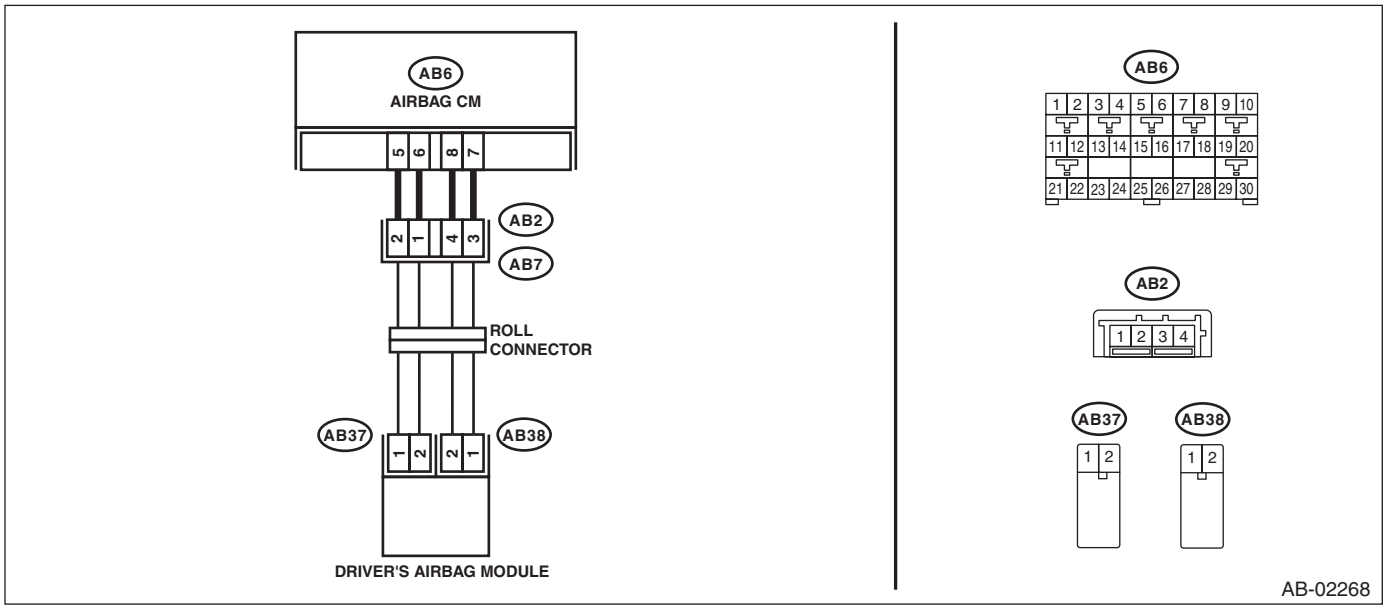
- Airbag main harness circuit is shorted to power supply.
- Airbag module harness (driver's side) circuit is shorted to power supply.
- Roll connector circuit is shorted to power supply.
- Driver's airbag module is faulty.
- Airbag control module is faulty.

CAUTION:

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

NOTE:
Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-31, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 3) Disconnect the airbag resistor from the connector (2N) in test harness N and from the connector (2Q) in test harness Q. 4) Measure the voltage between connector (2Q) in the test harness Q and chassis ground. ***Connector & terminal*** ***(2Q) No. 1 (+) — Chassis ground (–):*** ***(2Q) No. 2 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the roll connector. <Ref. to AB-89, Roll Connector.>
4	**CHECK AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Disconnect the test harness N from connector (AB38). 2) Disconnect test harness Q from connector (AB37). 3) Remove the console front panel and disconnect the connector (AB9). 4) Disconnect the connectors (AB6, AB17, and AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Connect the battery ground terminal and turn the ignition switch to ON. (engine OFF) 6) Measure the voltage between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 1 (+) — Chassis ground (–):*** ***(3AG) No. 3 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **5**.	Replace the airbag main harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

D: DTC 16 PASSENGER'S AIRBAG FAILURE

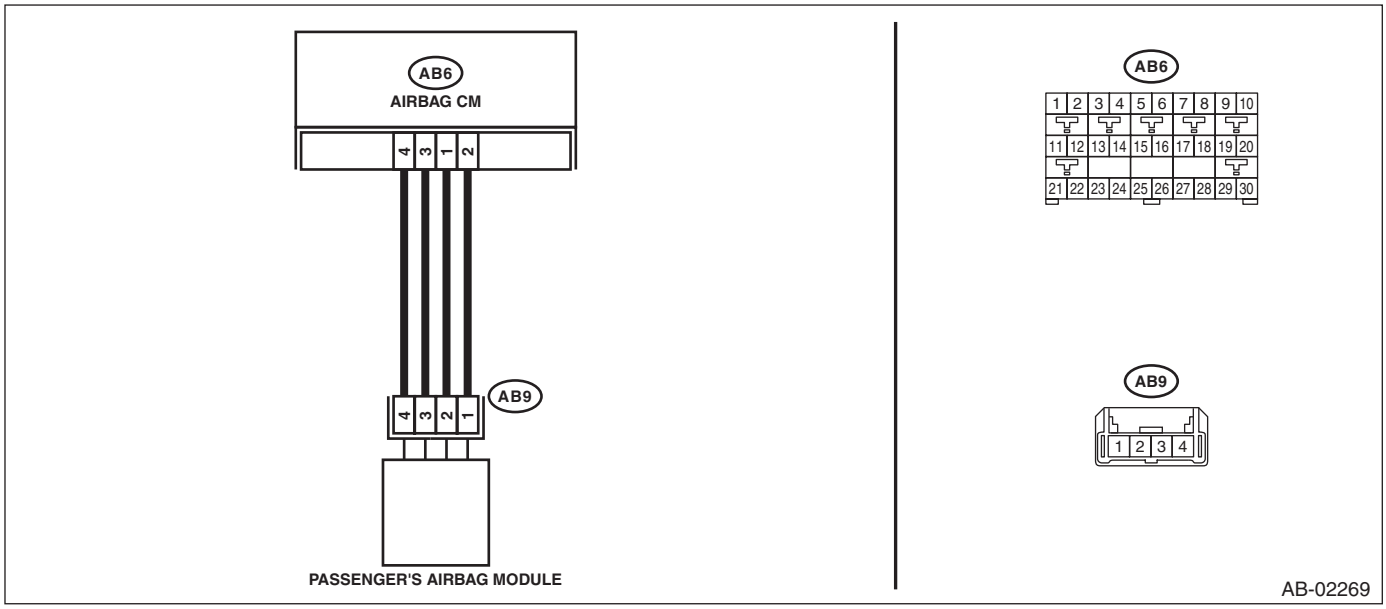
DTC DETECTING CONDITION:

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

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

NOTE:
Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness along with chassis harness.	Go to step **2**.
2	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Connect the connector (1P) in the test harness P to connector (AB9). 4) Connect the airbag resistor to the connectors (2P) and (3P) of test harness P. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the passenger's airbag module. <Ref. to AB-33, Passenger's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connectors (2P) and (3P) of test harness P. 3) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 4) Disconnect the connectors (AB6, AB17, and AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Connect the battery ground terminal and turn the ignition switch to ON. (engine OFF) 6) Measure the voltage between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 9 (+) — Chassis ground (–):*** ***(3AG) No. 7 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

E: DTC 1A DRIVER'S AIRBAG FAILURE

DTC DETECTING CONDITION:

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

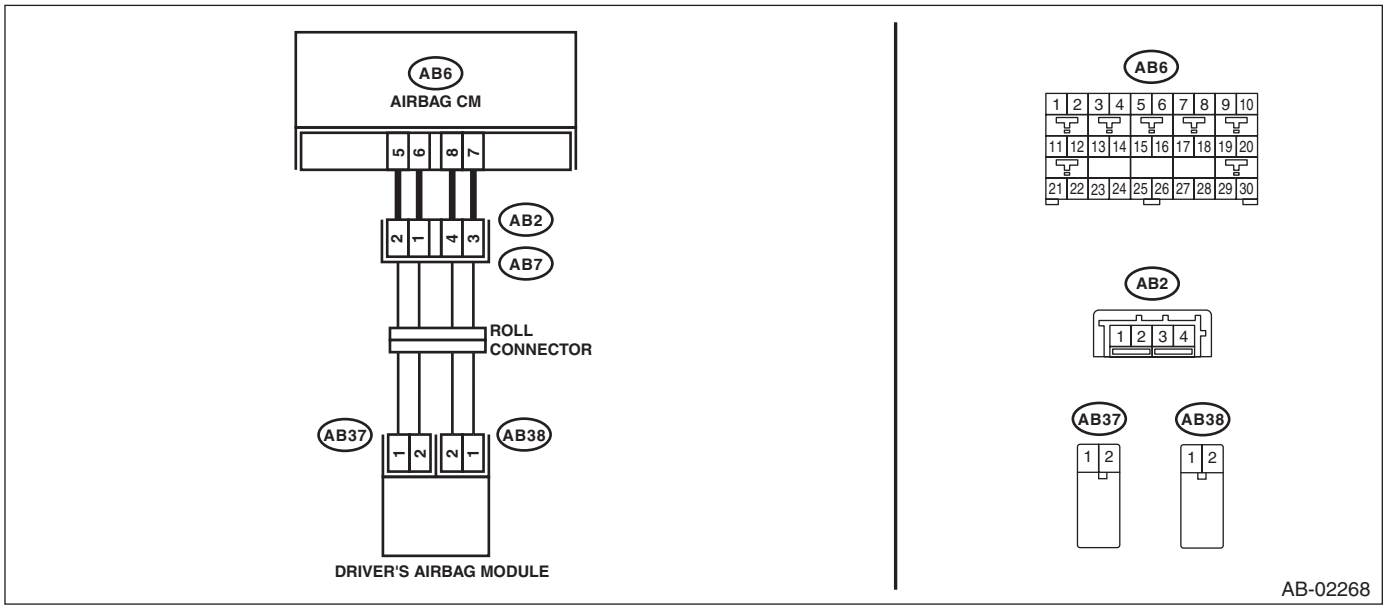
CAUTION:

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

NOTE:

Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-31, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR AND AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Disconnect the airbag resistor from the connector (2N) in test harness N and from the connector (2Q) in test harness Q. 4) Disconnect the connectors (AB6, AB17, and AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Measure the resistance between connector (2Q) terminals in test harness Q. ***Connector & terminal*** ***(2Q) No. 1 — (2Q) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **5**.	Go to step **4**.
4	**CHECK AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 2) Measure the resistance between connector (3AG) terminals in test harness AG. ***Connector & terminal*** ***(3AG) No. 1 — (3AG) No. 3:***	Is the resistance 1 MΩ or more?	Replace the roll connector. <Ref. to AB-89, Roll Connector.>	Replace the airbag main harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

F: DTC 1B PASSENGER'S AIRBAG FAILURE

DTC DETECTING CONDITION:

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

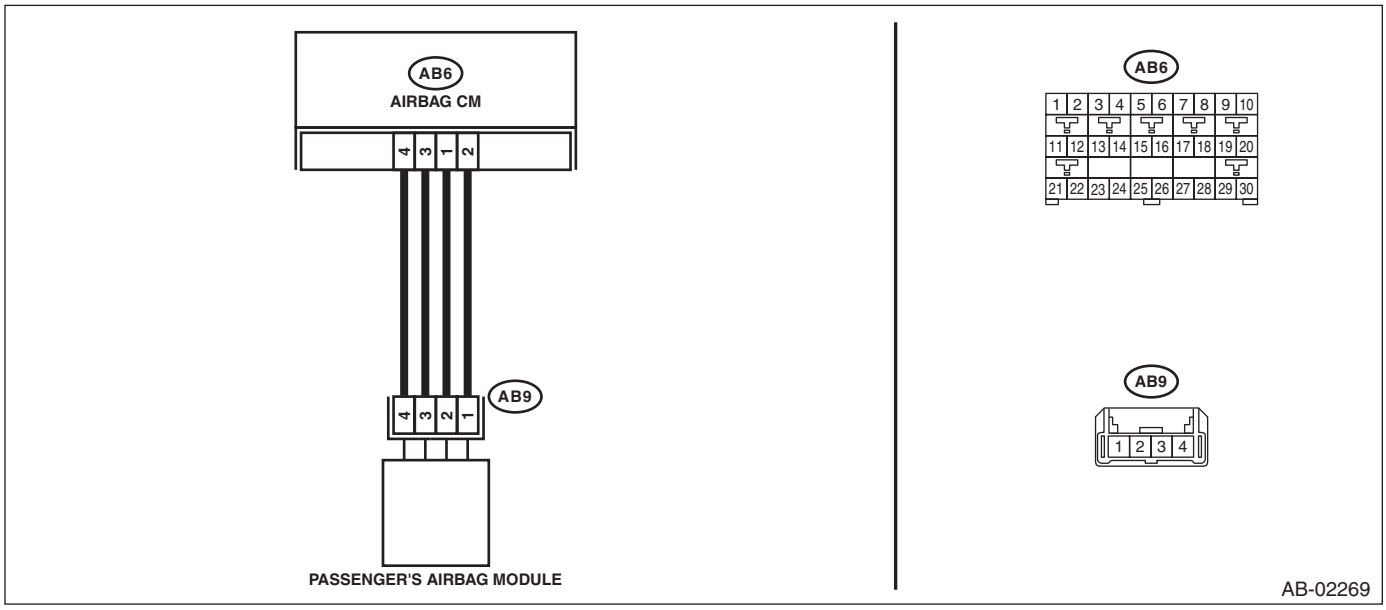
CAUTION:

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

NOTE:

Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Connect the connector (1P) in the test harness P to connector (AB9). 4) Connect the airbag resistor to the connectors (2P) and (3P) of test harness P. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the passenger's airbag module. <Ref. to AB-33, Passenger's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connectors (2P) and (3P) of test harness P. 3) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 4) Disconnect the connectors (AB6, AB17, and AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Measure the resistance between connector (3AG) terminals in test harness AG. ***Connector & terminal*** ***(3AG) No. 7 — (3AG) No. 9:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

G: DTC 1D DRIVER'S AIRBAG FAILURE

DTC DETECTING CONDITION:

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

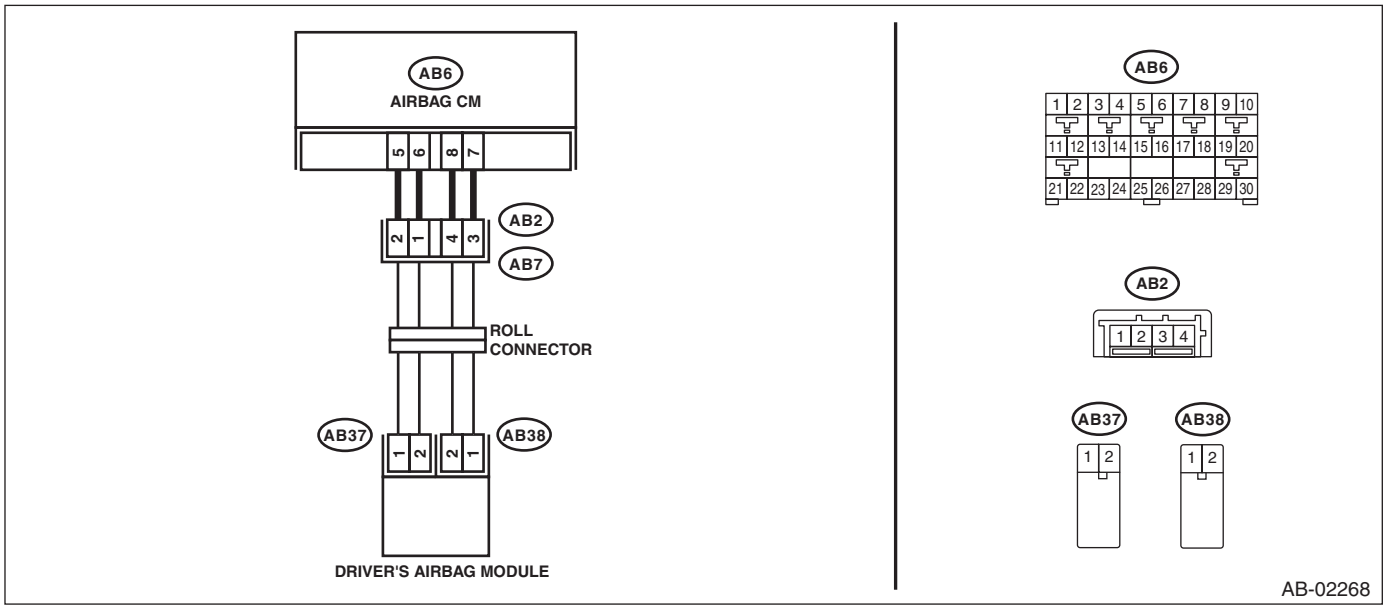
CAUTION:

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

NOTE:

Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-31, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR AND AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Disconnect the airbag resistor from the connector (2N) in test harness N. 4) Disconnect the airbag resistor from the connector (2Q) of test harness Q. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Measure the resistance between connector (2Q) terminals in test harness Q. ***Connector & terminal*** ***(2Q) No. 1 — (2Q) No. 2:***	Is the resistance less than 10 Ω?	Go to step **5**.	Go to step **4**.
4	**CHECK ROLL CONNECTOR.** 1) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 2) Measure the resistance between connector (2Q) terminals in test harness Q. ***Connector & terminal*** ***(2Q) No. 1 — (2Q) No. 2:***	Is the resistance less than 10 Ω?	Replace the airbag main harness along with body harness.	Replace the roll connector. <Ref. to AB-89, Roll Connector.>
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

H: DTC 1E PASSENGER'S AIRBAG FAILURE

DTC DETECTING CONDITION:

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

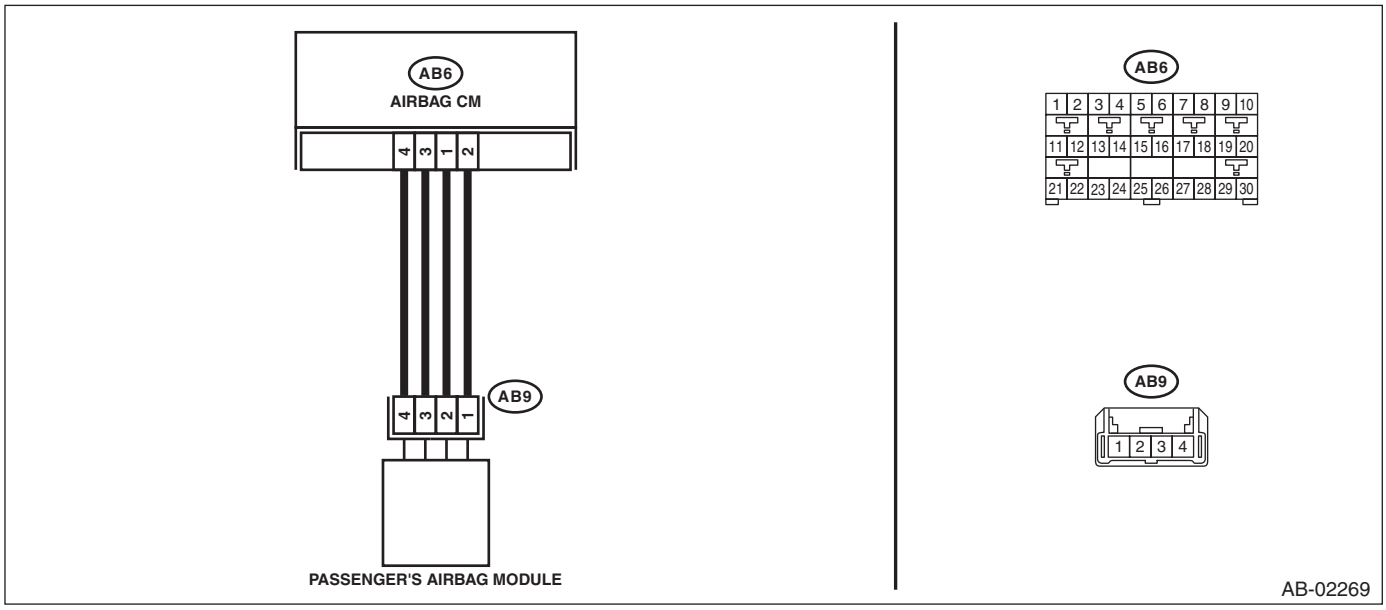
CAUTION:

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

NOTE:

Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Connect the connector (1P) in the test harness P to connector (AB9). 4) Connect the airbag resistor to the connectors (2P) and (3P) of test harness P. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the passenger's airbag module. <Ref. to AB-33, Passenger's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connectors (2P) and (3P) of test harness P. 3) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 4) Disconnect the connectors (AB6, AB17, and AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Measure the resistance between connector (3AG) of test harness AG and connector (2P) of test harness P. ***Connector & terminal*** ***(3AG) No. 9 — (2P) No. 1:*** ***(3AG) No. 7 — (2P) No. 2:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

I: DTC 21 AIRBAG ECM FAILURE

DTC DETECTING CONDITION:
Airbag control module is faulty.

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

	Step	Check	Yes	No
1	**CHECK IF DTC 21 IS INDICATED.** Read the DTC. <Ref. to AB(diag)-29, Read Diagnostic Trouble Code (DTC).>	Does the Subaru Select Monitor display DTC21?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Perform the Clear Memory Mode. <Ref. to AB(diag)-31, Clear Memory Mode.>

J: DTC 22 FRONT AIRBAG FIRING OUTPUT

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

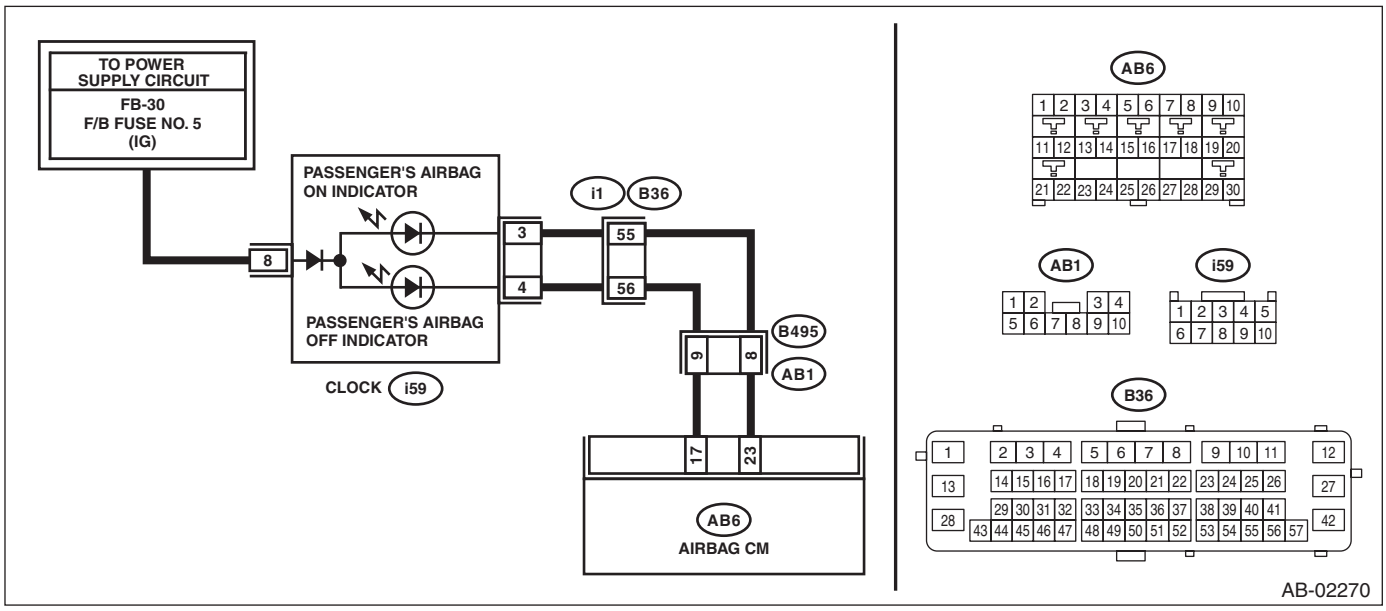
- Airbag control module <Ref. to AB-64, Airbag Control Module.>
- Driver's airbag module <Ref. to AB-31, Driver's Airbag Module.>
- Passenger's airbag module <Ref. to AB-33, Passenger's Airbag Module.>
- Front sub sensor of both sides <Ref. to AB-67, Front Sub Sensor.>
- Front outer seat belt with pretensioner of both sides <Ref. to SB-17, Front Seat Belt.>
- Steering roll connector <Ref. to AB-89, Roll Connector.>
- Occupant detection system (passenger's seat cushion & frame assembly) <Ref. to SE-10, Front Seat.>

K: DTC 26 PASSENGER'S AIRBAG INDICATOR FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK FOR POOR CONTACT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Check that the connector between the airbag control module and the clock is securely connected.	Is there poor contact of connector?	Replace the airbag harness connector.	Go to step **2**.
2	**CHECK AIRBAG MAIN HARNESS.** 1) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 2) Connect the battery ground terminal and turn the ignition switch to ON. NOTE: If the condition is normal, neither ON nor OFF illuminate.	Does the passenger's airbag indicator illuminate?	Go to step **3**.	Go to step **4**.

	Step	Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS.** 1) Turn the ignition switch to OFF. 2) Remove the clock, and disconnect the connector (i59). 3) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 4) Measure the resistance between connector (2AG) in the test harness AG and chassis ground, and between connector (2AG) terminals. ***Connector & terminal*** ***(2AG) No. 9 — (2AG) No. 8:*** ***(2AG) No. 9 — Chassis ground:*** ***(2AG) No. 8 — Chassis ground:***	Is the resistance 1 MΩ or more?	Replace the clock.	Repair the bulkhead harness. Or replace the airbag main harness along with the body harness.
4	**CHECK AIRBAG HARNESS.** 1) Connect the connectors (7AG) and (8AG) in the test harness AG. 2) Connect the battery ground terminal and turn the ignition switch to ON.	Does the passenger's airbag indicator illuminate?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK AIRBAG HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the connectors (7AG) and (8AG) in the test harness AG. 3) Measure the resistance between connector (2AG) in the test harness AG and connector (i59). ***Connector & terminal*** ***(2AG) No. 9 — (i59) No. 4:*** ***(2AG) No. 8 — (i59) No. 3:***	Is the resistance less than 10 Ω?	Go to step **6**.	Repair the bulkhead harness. Or replace the airbag main harness along with the body harness.
6	**CHECK BODY HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between connector (i59) and chassis ground. ***Connector & terminal*** ***(i59) No. 8 — Chassis ground:***	Is the voltage 10 V or more?	Replace the clock.	Check the power supply circuit of the clock.

L: DTC 27 ODS COMMUNICATION ERROR

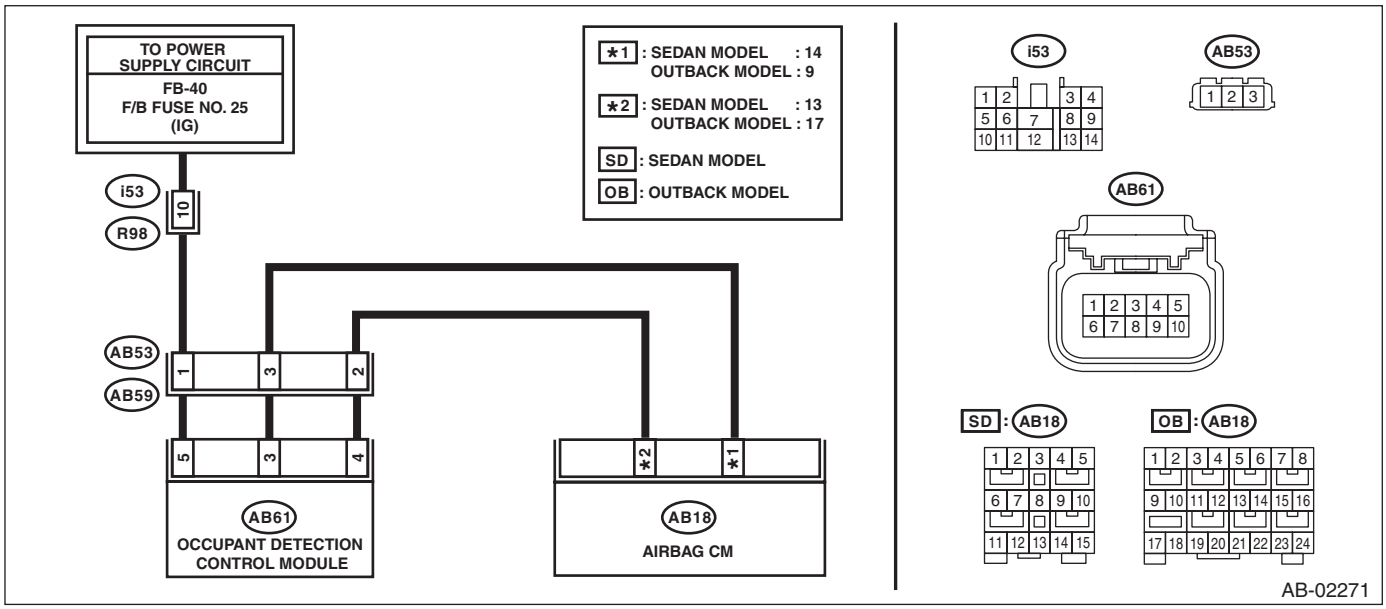
DTC DETECTING CONDITION:

- Occupant detection control module communication is faulty.
- Airbag rear harness circuit is open, shorted, shorted to ground, or shorted to power supply.
- Occupant detection harness (seat harness) is faulty.
- Occupant detection system is faulty.
- Airbag control module is faulty.

CAUTION:

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

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connector between the airbag control module and the occupant detection control module.	Is there poor contact?	Reconnect the connector. If the fault is not fixed, replace the airbag rear harness along with body harness or replace the occupant detection harness (seat harness).	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG HARNESS.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 3) Disconnect connectors (AB59) and (AB53) below the passenger seat. 4) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Connect the connector (1AD) in the test harness AD to the connector (AB53). 6) Measure the resistance between connector (6AG) or (5AG) in the test harness AG and connector (2AD) in the test harness AD. ***Connector & terminal*** ***Sedan model*** ***(5AG) No. 3 — (2AD) No. 2:*** ***(5AG) No. 8 — (2AD) No. 3:*** ***OUTBACK model*** ***(6AG) No. 10 — (2AD) No. 3:*** ***(6AG) No. 12 — (2AD) No. 2:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag rear harness along with body harness.
3	**CHECK AIRBAG HARNESS.** Measure the resistance between connector (2AD) in the test harness AD and chassis ground, and between connector (2AD) terminals. ***Connector & terminal*** ***(2AD) No. 2 — Chassis ground:*** ***(2AD) No. 3 — Chassis ground:*** ***(2AD) No. 2 — (2AD) No. 3:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG HARNESS.** 1) Turn the ignition switch to ON. 2) Measure the voltage between connector (2AD) in the test harness AD and chassis ground. ***Connector & terminal*** ***(2AD) No. 1 — Chassis ground:***	Is the voltage 9 V or more?	Replace the occupant detection harness (seat harness). If the fault is not fixed, replace the occupant detection system (seat cushion & frame assembly) and airbag control module in this order.	Check the battery voltage and fuse. If there is no fault, replace the airbag rear harness along with body harness or replace the body harness.

M: DTC 29 ODS FAILURE

NOTE:
Refer to “Occupant Detection System” for details on DTC 29. <Ref. to OD(diag)-19, DTC 29 ODS FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

N: DTC 2A ODS CALIBRATION ERROR

NOTE:
Refer to “Occupant Detection System” for details on DTC 2A. <Ref. to OD(diag)-20, DTC 2A ODS CALIBRATION ERROR, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

O: DTC 2B ODS SYSTEM WRONG PARTS

NOTE:
Refer to “Occupant Detection System” for details on DTC 2B. <Ref. to OD(diag)-20, DTC 2B ODS SYSTEM WRONG PARTS, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

P: DTC 2D AIRBAG WARNING INDICATOR FAILURE

DTC DETECTING CONDITION:

- Airbag warning light is faulty.
- Harness between airbag control module and airbag warning light is shorted or open.
- Connection of airbag main harness and instrument panel harness is improper.
- Grounding circuit is faulty.
- Airbag control module is faulty.

NOTE:
For the diagnostic procedure, refer to “Airbag Warning Light Failure”. <Ref. to AB(diag)-34, Airbag Warning Light Failure.>

Q: DTC 33 FRONT SUB SENSOR RH FAILURE

DTC DETECTING CONDITION:

Front sub sensor (RH) is faulty.
If DTC 33 is displayed, the circuit within the front sub sensor (RH) is faulty.
Replace the front sub sensor (RH). <Ref. to AB-67, Front Sub Sensor.>

R: DTC 34 FRONT SUB SENSOR LH FAILURE

DTC DETECTING CONDITION:

Front sub sensor (LH) is faulty.
If DTC 34 is displayed, the circuit within the front sub sensor (LH) is faulty.
Replace the front sub sensor (LH). <Ref. to AB-67, Front Sub Sensor.>

S: DTC 37 BUCKLE SWITCH RH FAILURE

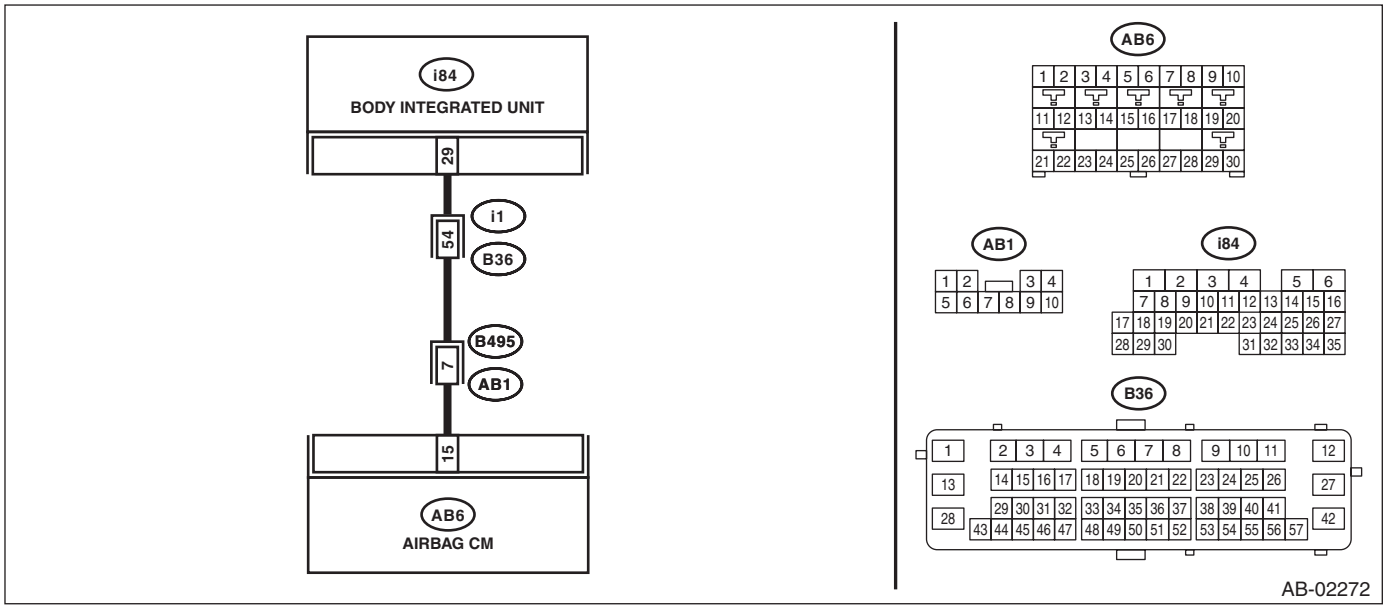
NOTE:
Refer to “Occupant Detection System” for details on DTC 37. <Ref. to OD(diag)-21, DTC 37 BUCKLE SWITCH RH FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

T: DTC 39 SEAT BELT WARNING FAILURE

DTC DETECTING CONDITION:

- Airbag control module is faulty.
- Body integrated unit is faulty.
- Harness circuit between the body integrated unit and airbag control module is open, shorted or shorted to ground.

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



Step		Check	Yes	No
1	**CHECK AIRBAG HARNESS.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 3) Connect the battery ground terminal and turn the ignition switch to ON.	Does the passenger's seat belt warning light blink for six seconds, and then go off?	Go to step **3**.	Go to step **2**.
2	**CHECK AIRBAG HARNESS.** 1) Turn the ignition switch to OFF. 2) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 3) Measure the resistance between connector (2AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(2AG) No. 10 — Chassis ground:***	Is the resistance 1 MΩ or more?	Replace the body integrated unit.	Repair the bulkhead harness and instrument panel harness. Or replace the airbag main harness along with the body harness.
3	**CHECK AIRBAG HARNESS.** 1) In the condition of step 2, connect the connectors (7AG) and (8AG) in the test harness AG. 2) Turn the ignition switch to ON.	Does the passenger's seat belt warning light blink for six seconds, and then repeat illuminating/blinking?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **4**.

	Step	Check	Yes	No
4	**CHECK AIRBAG HARNESS.** 1) In the condition of step 3, disconnect the connectors (7AG) and (8AG) in the test harness AG. 2) Measure the resistance between connector (2AG) in the test harness AG and connector (i84). ***Connector & terminal*** ***(2AG) No. 10 — (i84) No. 29:***	Is the resistance less than 10 Ω?	Replace the body integrated unit.	Repair the bulk-head harness and instrument panel harness. Or replace the airbag main harness along with the body harness.

U: DTC 3A FRONT SUB SENSOR RH FALSE INSTALLATION

DTC DETECTING CONDITION:

Front sub sensor (RH) is misinstalled.

	Step	Check	Yes	No
1	**REPLACE FRONT SUB SENSOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the front sub sensor (RH) with a genuine sensor. <Ref. to AB-67, REMOVAL, Front Sub Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-64, REMOVAL, Airbag Control Module.>

V: DTC 3B FRONT SUB SENSOR LH FALSE INSTALLATION

DTC DETECTING CONDITION:

Front sub sensor (LH) is misinstalled.

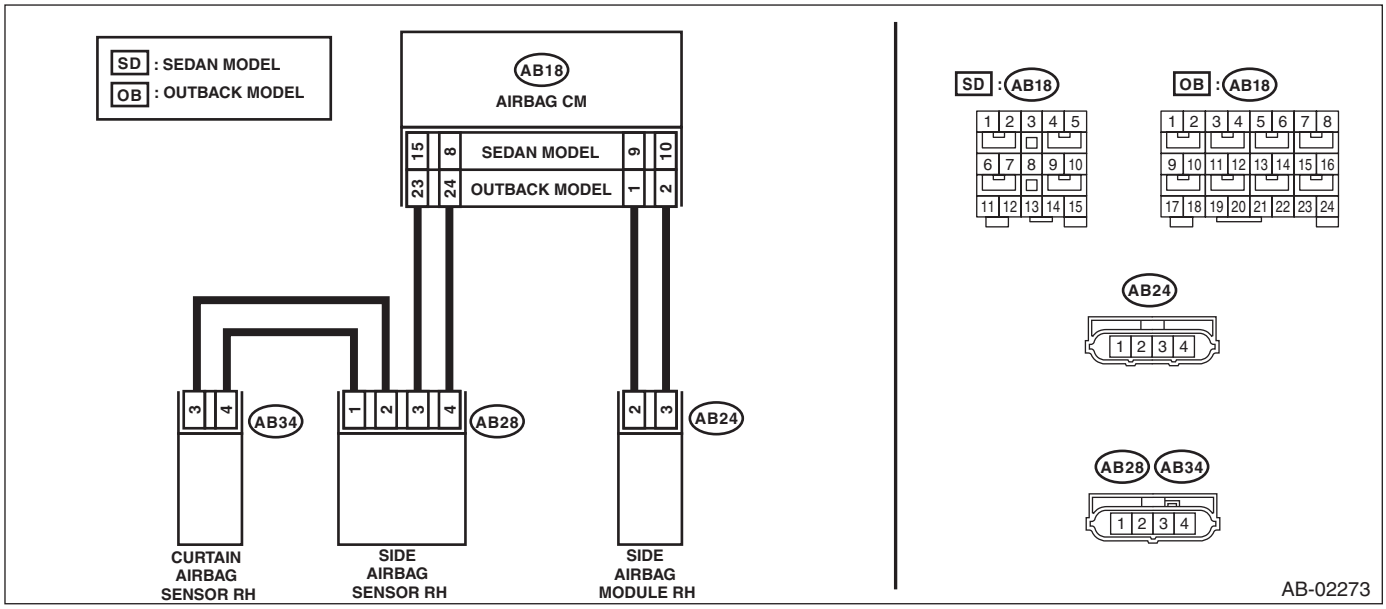
	Step	Check	Yes	No
1	**REPLACE FRONT SUB SENSOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the front sub sensor (LH) with a genuine sensor. <Ref. to AB-67, REMOVAL, Front Sub Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-64, REMOVAL, Airbag Control Module.>

W: DTC 41 SIDE AIRBAG RH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module RH and the side airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB24) from the side airbag module (RH), and connect the connector (1AJ) in the test harness AJ to connector (AB24). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the side airbag module (RH). <Ref. to AB-51, REMOVAL, Side Airbag Module.>	Go to step **3**.

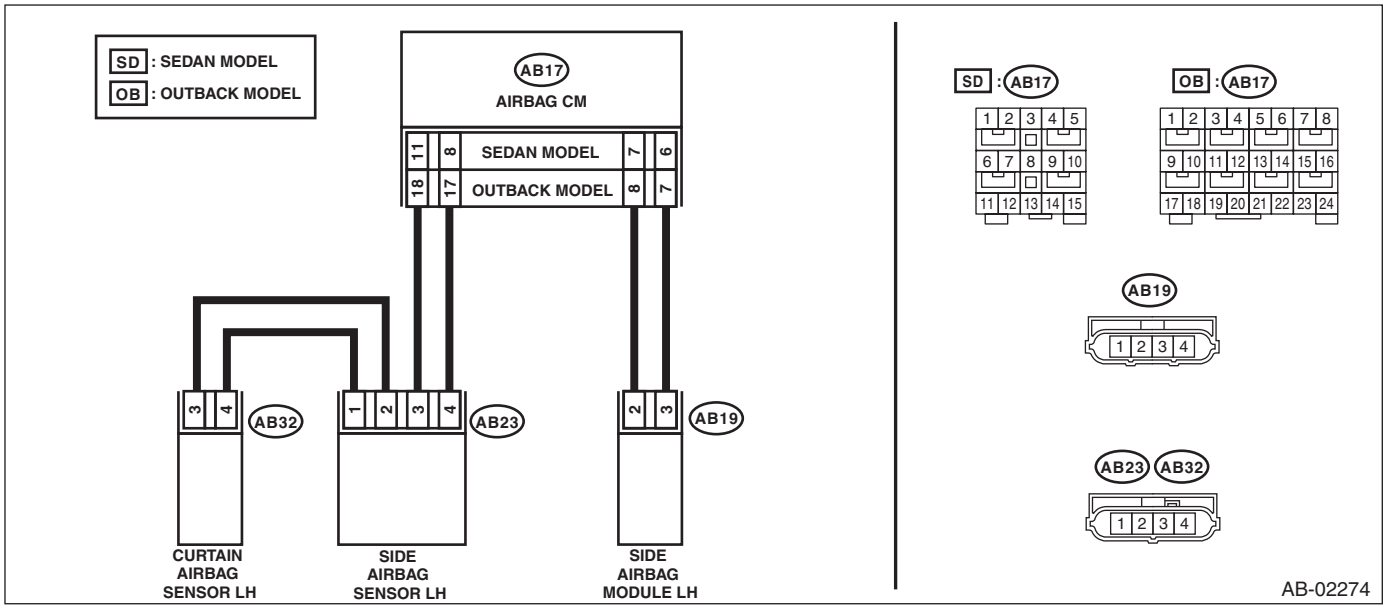
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect the airbag resistor from test harness AJ. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (3AJ) in the test harness AJ and chassis ground. ***Connector & terminal*** ***(3AJ) No. 1 — Chassis ground:*** ***(3AJ) No. 2 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

X: DTC 42 SIDE AIRBAG LH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module LH and the side airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB19) from the side airbag module (LH), and connect the connector (1AJ) in test harness AJ to the connector (AB19). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the side airbag module (LH). <Ref. to AB-51, REMOVAL, Side Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect the airbag resistor from test harness AJ. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (3AJ) in the test harness AJ and chassis ground. ***Connector & terminal*** ***(3AJ) No. 1 — Chassis ground:*** ***(3AJ) No. 2 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

Y: DTC 45 SIDE AIRBAG RH FAILURE

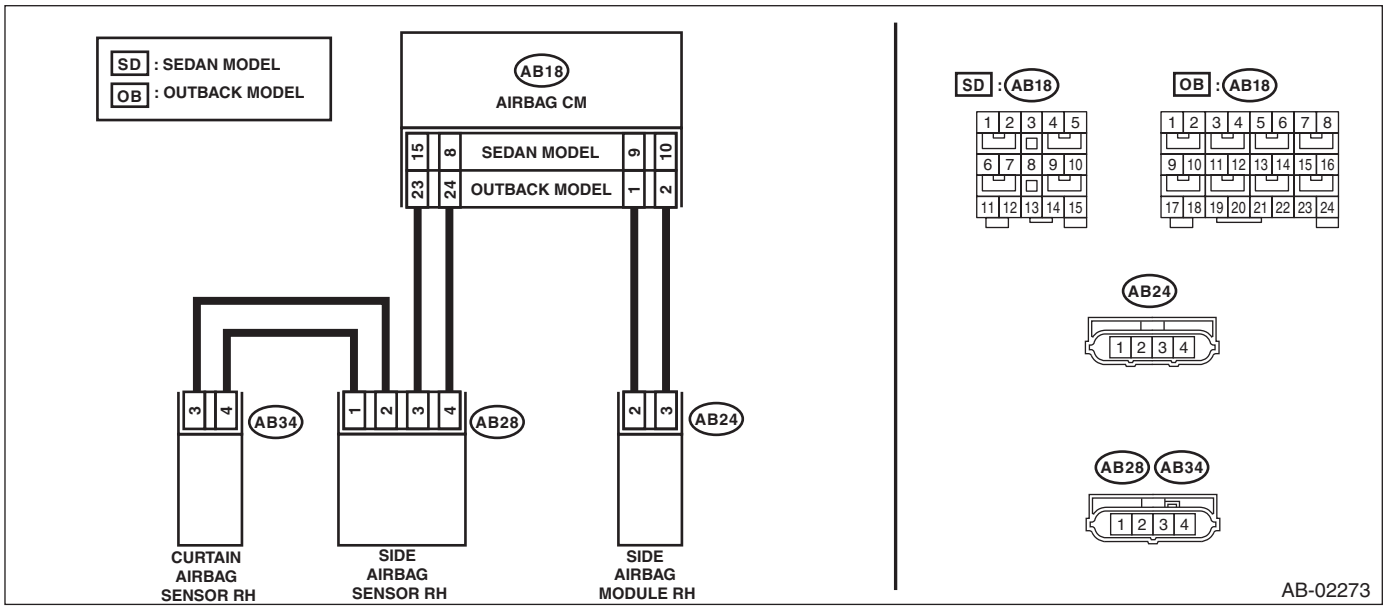
DTC DETECTING CONDITION:

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

CAUTION:

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

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module RH and the side airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB24) from the side airbag module (RH), and connect the connector (1AJ) in the test harness AJ to connector (AB24). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the side airbag module (RH). <Ref. to AB-51, REMOVAL, Side Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect the airbag resistor from test harness AJ. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Connect the battery ground terminal and turn the ignition switch to ON. 8) Measure the voltage between connector (3AJ) in the test harness AJ and chassis ground. ***Connector & terminal*** ***(3AJ) No. 1 (+) — Chassis ground (–):*** ***(3AJ) No. 2 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

Z: DTC 46 SIDE AIRBAG LH FAILURE

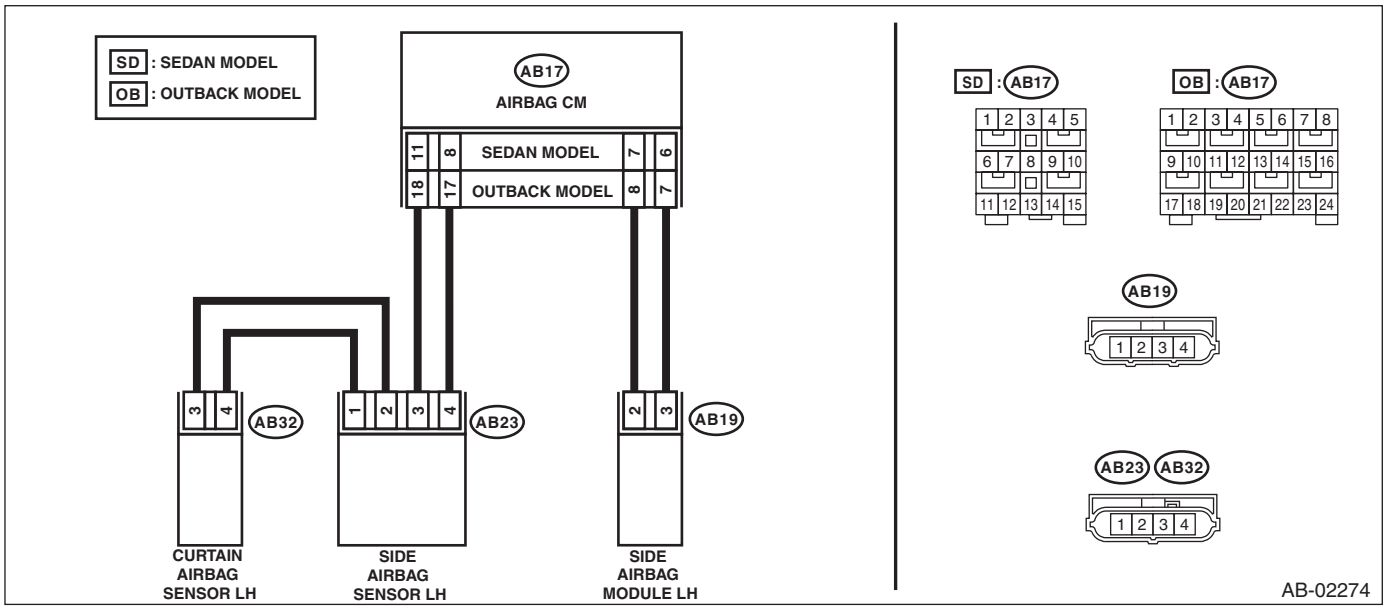
DTC DETECTING CONDITION:

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

CAUTION:

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

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module LH and the side airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB19) from the side airbag module (LH), and connect the connector (1AJ) in test harness AJ to the connector (AB19). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the side airbag module (LH). <Ref. to AB-51, REMOVAL, Side Airbag Module.>	Go to step **3**.

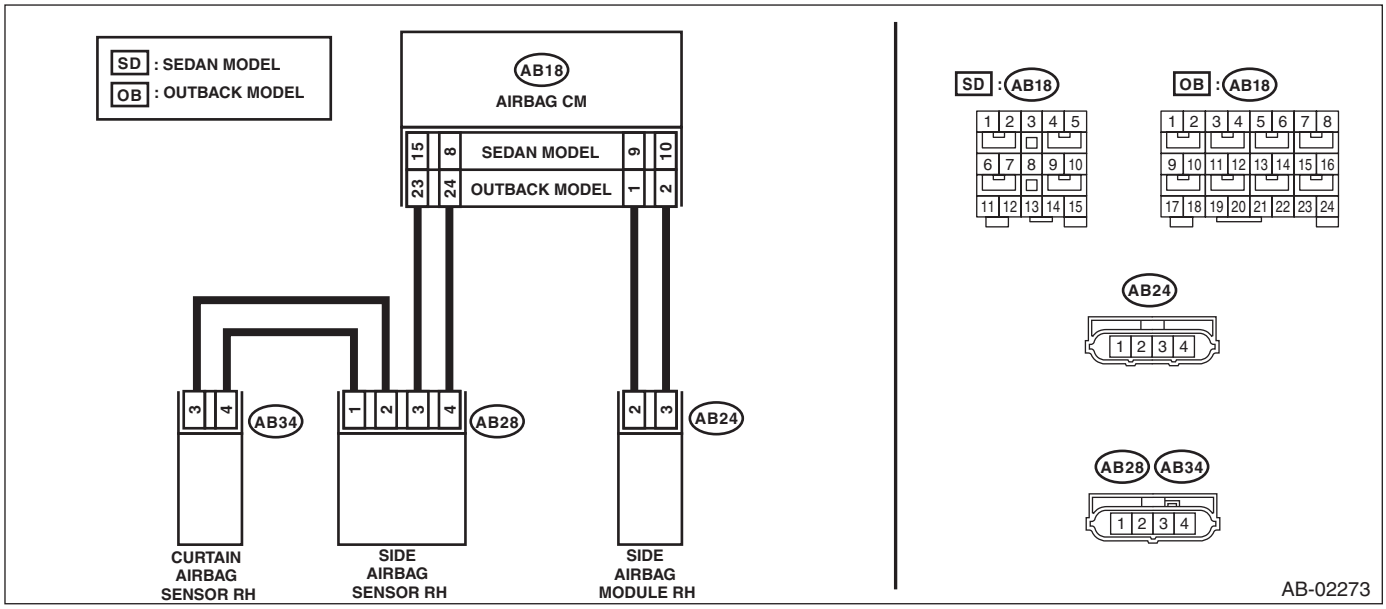
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect the airbag resistor from test harness AJ. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Connect the battery ground terminal and turn the ignition switch to ON. 8) Measure the voltage between connector (3AJ) in the test harness AJ and chassis ground. ***Connector & terminal*** ***(3AJ) No. 1 (+) — Chassis ground (–):*** ***(3AJ) No. 2 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AA:DTC 4A SIDE AIRBAG RH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module RH and the side airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB24) from the side airbag module (RH), and connect the connector (1AJ) in the test harness AJ to connector (AB24). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the side airbag module (RH). <Ref. to AB-51, REMOVAL, Side Airbag Module.>	Go to step **3**.

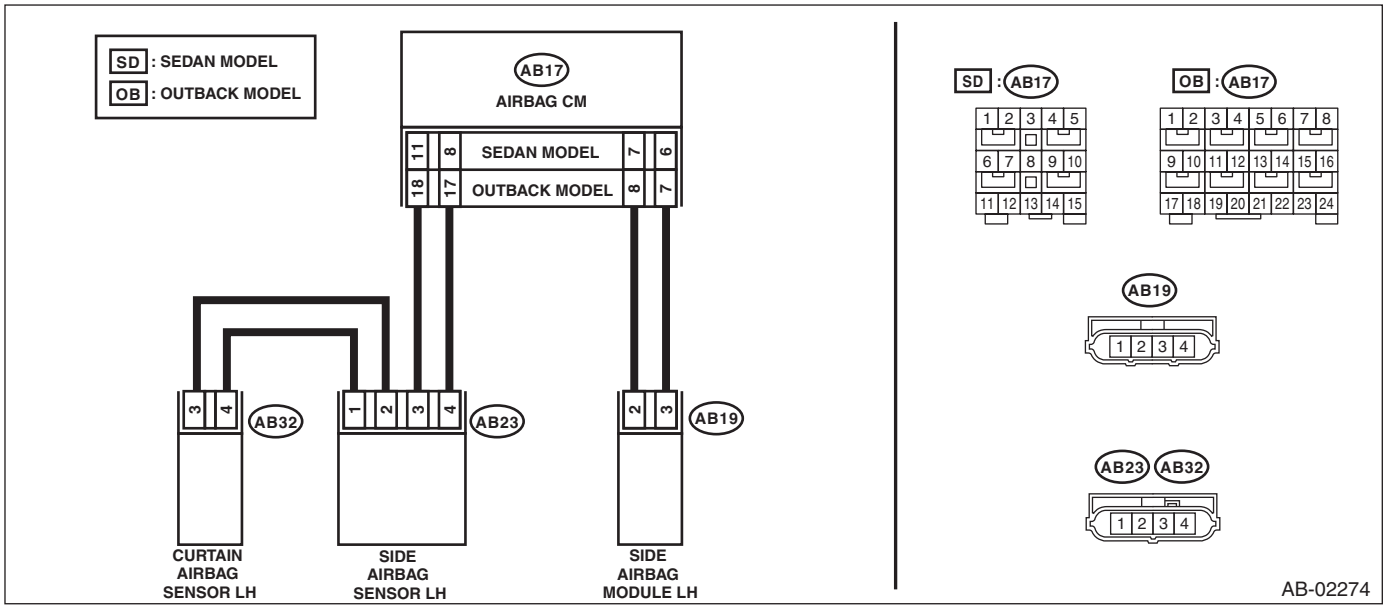
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect the airbag resistor from test harness AJ. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (3AJ) terminals in test harness AJ. ***Connector & terminal*** ***(3AJ) No. 1 — (3AJ) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AB:DTC 4B SIDE AIRBAG LH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module LH and the side airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB19) from the side airbag module (LH), and connect the connector (1AJ) in test harness AJ to the connector (AB19). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the side airbag module (LH). <Ref. to AB-51, REMOVAL, Side Airbag Module.>	Go to step **3**.

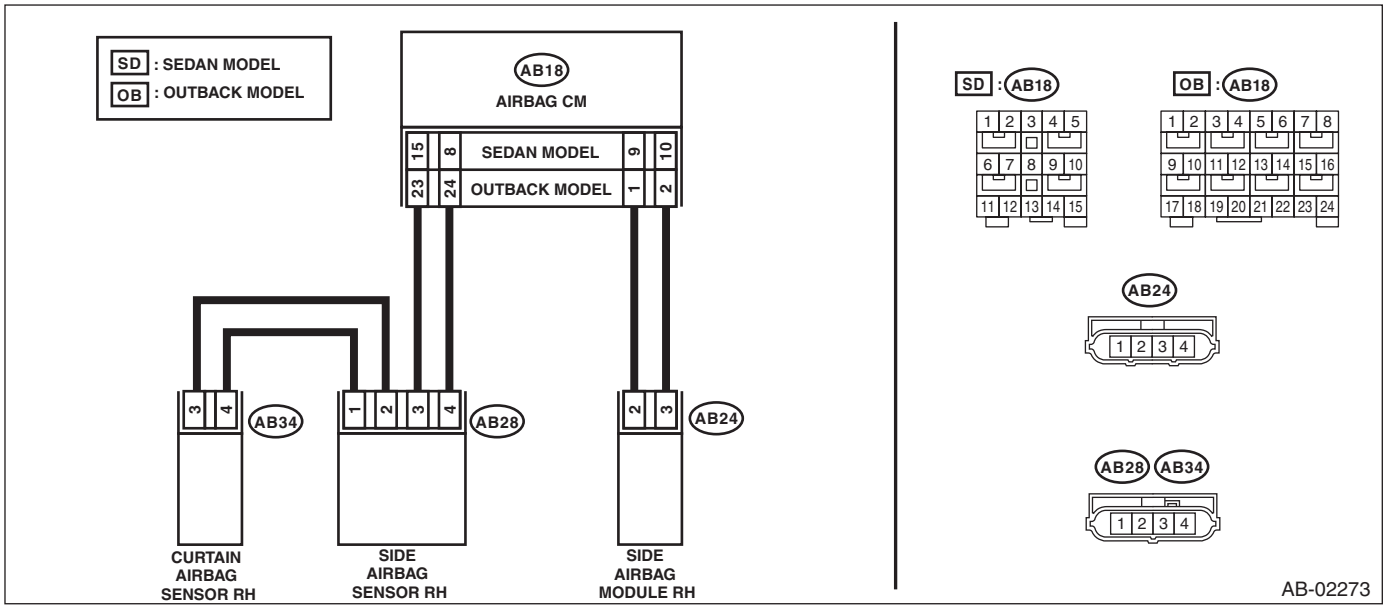
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect the airbag resistor from test harness AJ. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (3AJ) terminals in test harness AJ. ***Connector & terminal*** ***(3AJ) No. 1 — (3AJ) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AC:DTC 4D SIDE AIRBAG RH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module RH and the side airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB24) from the side airbag module (RH), and connect the connector (1AJ) in the test harness AJ to connector (AB24). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the side airbag module (RH). <Ref. to AB-51, REMOVAL, Side Airbag Module.>	Go to step **3**.

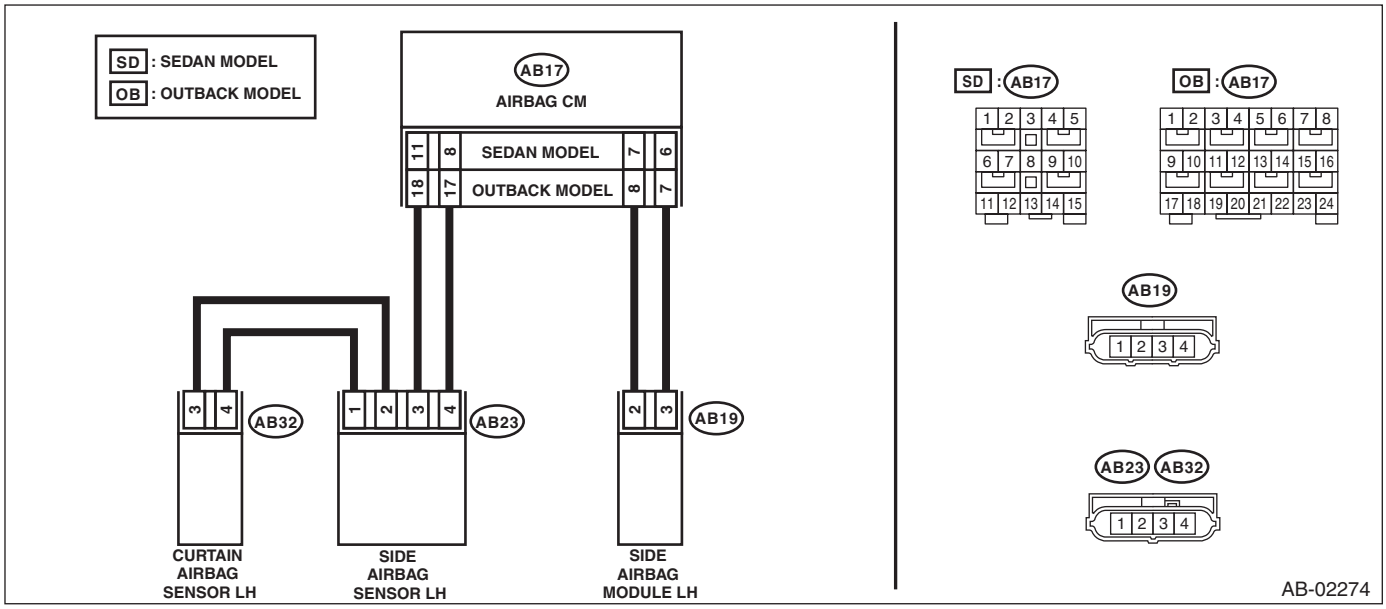
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect the airbag resistor from test harness AJ. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (4AG) or (5AG) in the test harness AG and connector (3AJ) in the test harness AJ. ***Connector & terminal*** ***Sedan model*** ***(4AG) No. 8 — (3AJ) No. 2:*** ***(4AG) No. 10 — (3AJ) No. 1:*** ***OUTBACK model*** ***(5AG) No. 1 — (3AJ) No. 2:*** ***(5AG) No. 3 — (3AJ) No. 1:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AD:DTC 4E SIDE AIRBAG LH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, side airbag module LH and the side airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB19) from the side airbag module (LH), and connect the connector (1AJ) in test harness AJ to the connector (AB19). 3) Connect the airbag resistor to the test harness AJ connector (3AJ). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the side airbag module (LH). <Ref. to AB-51, REMOVAL, Side Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (SIDE AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect the airbag resistor from test harness AJ. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (4AG) or (5AG) in the test harness AG and connector (3AJ) in the test harness AJ. ***Connector & terminal*** ***Sedan model*** ***(4AG) No. 11 — (3AJ) No. 1:*** ***(4AG) No. 13 — (3AJ) No. 2:*** ***OUTBACK model*** ***(5AG) No. 5 — (3AJ) No. 1:*** ***(5AG) No. 7 — (3AJ) No. 2:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AE:DTC 53 SIDE AIRBAG SENSOR RH FAILURE

DTC DETECTING CONDITION:
Side airbag sensor (RH) is faulty.
When DTC 53 is displayed, the circuit within the side airbag sensor (RH) is faulty.
Replace the side airbag sensor (RH). <Ref. to AB-74, Side Airbag Sensor.>

AF:DTC 54 SIDE AIRBAG SENSOR LH FAILURE

DTC DETECTING CONDITION:
Side airbag sensor (LH) is faulty.
When DTC 54 is displayed, the circuit within the side airbag sensor (LH) is faulty.
Replace the side airbag sensor (LH). <Ref. to AB-74, Side Airbag Sensor.>

AG:DTC 55 SIDE CURTAIN AIRBAG FIRING OUTPUT

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

- Airbag control module <Ref. to AB-64, Airbag Control Module.>
- Side airbag module (operating side) <Ref. to AB-51, Side Airbag Module.>
- Side airbag sensor (operating side) <Ref. to AB-74, Side Airbag Sensor.>
- Curtain airbag module (operating side) <Ref. to AB-61, Curtain Airbag Module.>
- Curtain airbag sensor (operating side) <Ref. to AB-80, Curtain Airbag Sensor.>

AH:DTC 58 CURTAIN AIRBAG SENSOR RH FAILURE

DTC DETECTING CONDITION:
Curtain airbag sensor (RH) is faulty.
If DTC 58 is displayed, the circuit within the curtain airbag sensor (RH) is faulty.
Replace the curtain airbag sensor (RH). <Ref. to AB-80, Curtain Airbag Sensor.>

AI: DTC 59 CURTAIN AIRBAG SENSOR LH FAILURE

DTC DETECTING CONDITION:
Curtain airbag sensor (LH) is faulty.
If DTC 59 is displayed, the circuit within the curtain airbag sensor (LH) is faulty.
Replace the curtain airbag sensor (LH). <Ref. to AB-80, Curtain Airbag Sensor.>

AJ:DTC 5A SIDE AIRBAG SENSOR RH FALSE INSTALLATION

DTC DETECTING CONDITION:
Side A/B sensor RH is misinstalled.

	Step	Check	Yes	No
1	**REPLACE SIDE AIRBAG SENSOR (RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side A/B sensor (RH) with a genuine sensor. <Ref. to AB-74, REMOVAL, Side Airbag Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-64, REMOVAL, Airbag Control Module.>

AK:DTC 5B SIDE AIRBAG SENSOR LH FALSE INSTALLATION

DTC DETECTING CONDITION:

Side A/B sensor LH is misinstalled.

	Step	Check	Yes	No
1	**REPLACE SIDE AIRBAG SENSOR (LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side A/B sensor (LH) with a genuine sensor. <Ref. to AB-74, REMOVAL, Side Airbag Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-64, REMOVAL, Airbag Control Module.>

AL:DTC 5C CURTAIN AIRBAG SENSOR RH FALSE INSTALLATION

DTC DETECTING CONDITION:

Curtain side airbag sensor RH is misinstalled.

	Step	Check	Yes	No
1	**REPLACE CURTAIN AIRBAG SENSOR (RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the curtain A/B sensor (RH) with a genuine sensor. <Ref. to AB-80, REMOVAL, Curtain Airbag Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-64, REMOVAL, Airbag Control Module.>

AM:DTC 5D CURTAIN AIRBAG SENSOR LH FALSE INSTALLATION

DTC DETECTING CONDITION:

Curtain side airbag sensor LH is misinstalled.

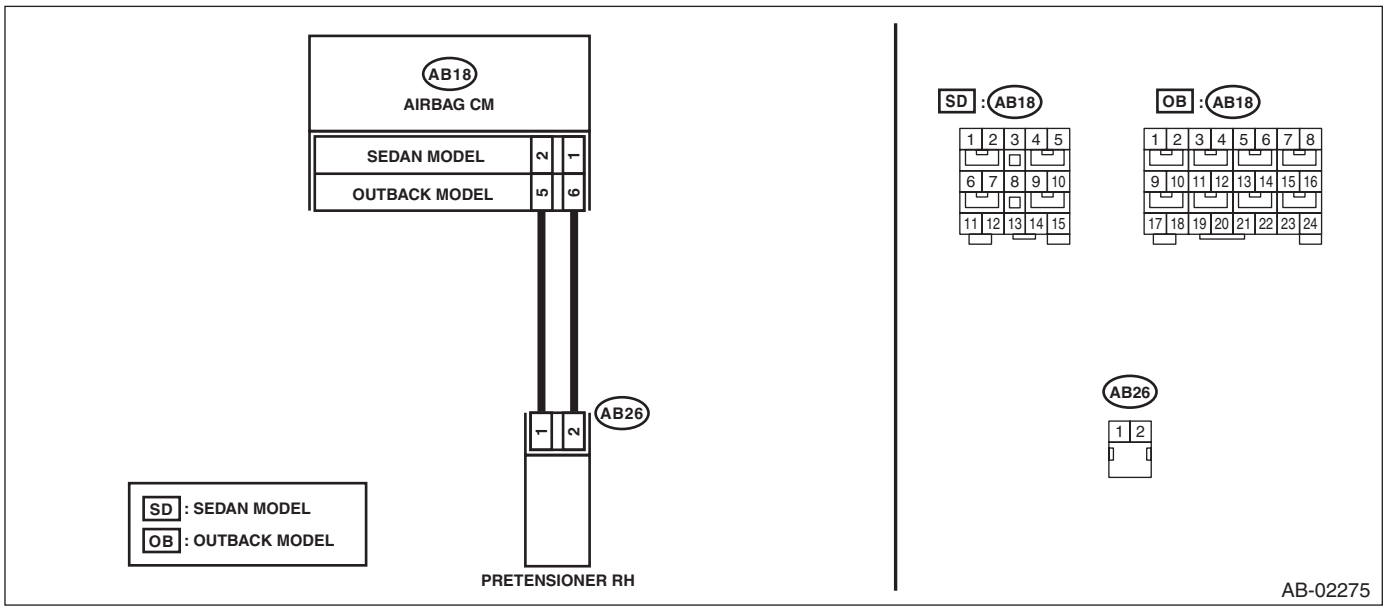
	Step	Check	Yes	No
1	**REPLACE CURTAIN AIRBAG SENSOR (LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the curtain A/B sensor (LH) with a genuine sensor. <Ref. to AB-80, REMOVAL, Curtain Airbag Sensor.>	Does the warning light go off?	Finish the diagnosis.	Replace the airbag control module. <Ref. to AB-64, REMOVAL, Airbag Control Module.>

AN:DTC 61 BELT PRETENSIONER RH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Connect the connector (1N) in the test harness N to the connector (AB26). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the seat belt pretensioner (RH). <Ref. to SB-17, Front Seat Belt.>	Go to step **3**.

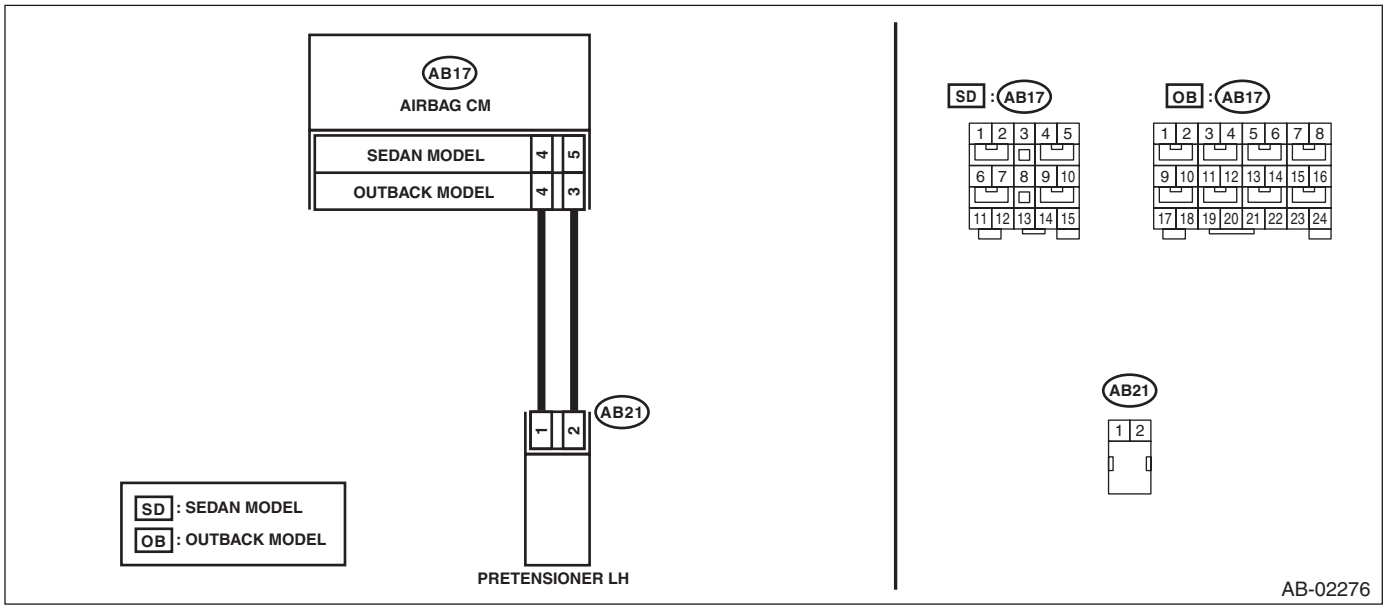
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from test harness N. 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the connector (AB33) from curtain airbag module (RH). 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 10 — Chassis ground:*** ***(3AG) No. 12 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AO:DTC 62 BELT PRETENSIONER LH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Connect the connector (1N) in the test harness N to the connector (AB21). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the seat belt pretensioner (LH). <Ref. to SB-17, Front Seat Belt.>	Go to step **3**.

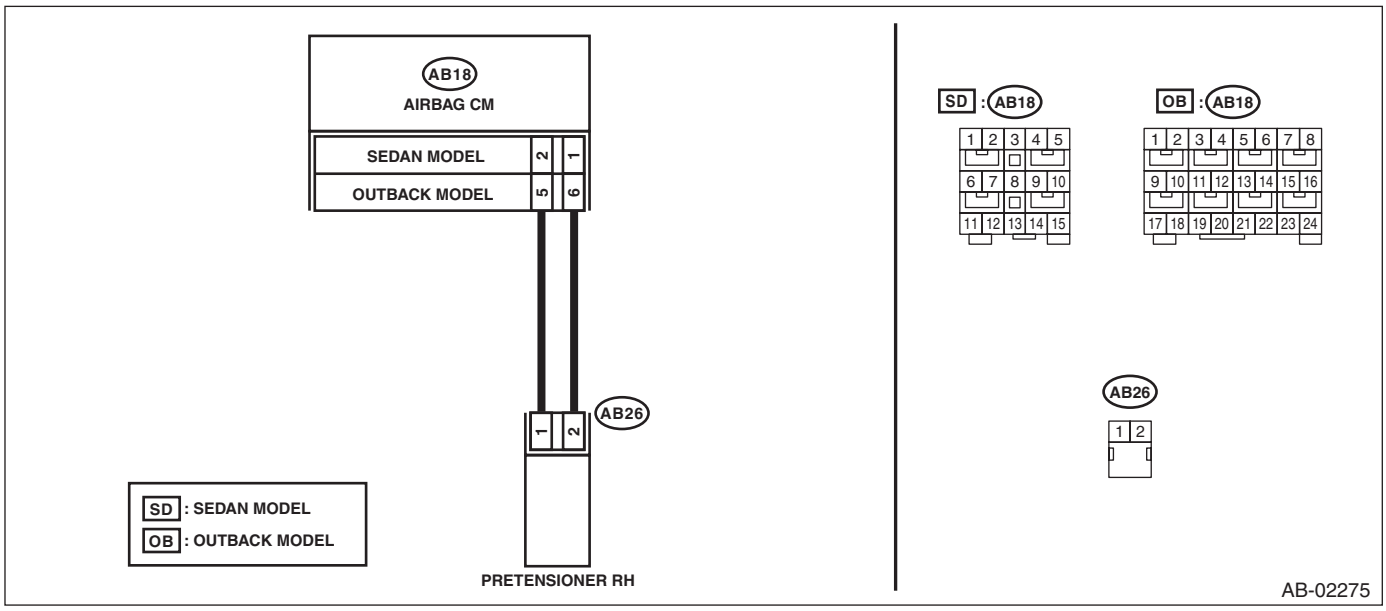
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from test harness N. 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the connector (AB31) from curtain airbag module (LH). 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 18 — Chassis ground:*** ***(3AG) No. 20 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AP:DTC 65 BELT PRETENSIONER RH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Connect the connector (1N) in the test harness N to the connector (AB26). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the seat belt pretensioner (RH). <Ref. to SB-17, Front Seat Belt.>	Go to step **3**.

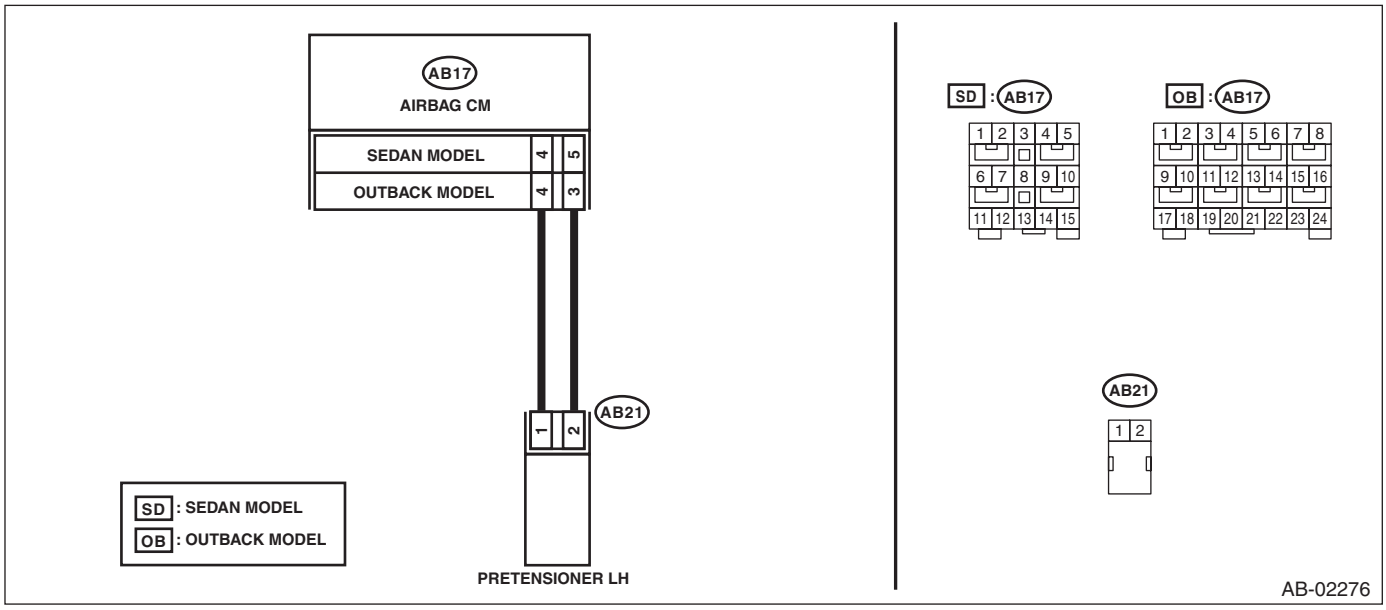
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from test harness N. 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the connector (AB33) from curtain airbag module (RH). 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Connect the battery ground terminal and turn the ignition switch to ON. 8) Measure the voltage between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 10 (+) — Chassis ground (–):*** ***(3AG) No. 12 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AQ:DTC 66 BELT PRETENSIONER LH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Connect the connector (1N) in the test harness N to the connector (AB21). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the seat belt pretensioner (LH). <Ref. to SB-17, Front Seat Belt.>	Go to step **3**.

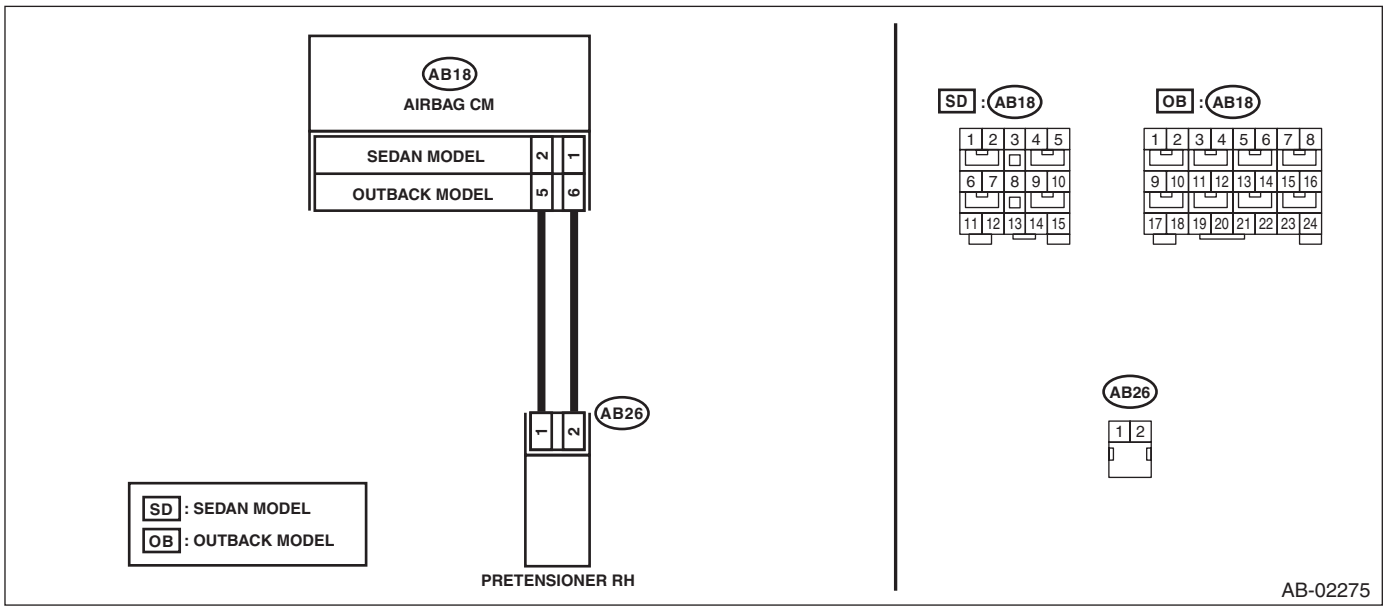
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from test harness N. 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the connector (AB31) from curtain airbag module (LH). 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Connect the battery ground terminal and turn the ignition switch to ON. 8) Measure the voltage between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 18 (+) — Chassis ground (–):*** ***(3AG) No. 20 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AR:DTC 6A BELT PRETENSIONER RH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Connect the connector (1N) in the test harness N to the connector (AB26). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the seat belt pretensioner (RH). <Ref. to SB-17, Front Seat Belt.>	Go to step **3**.

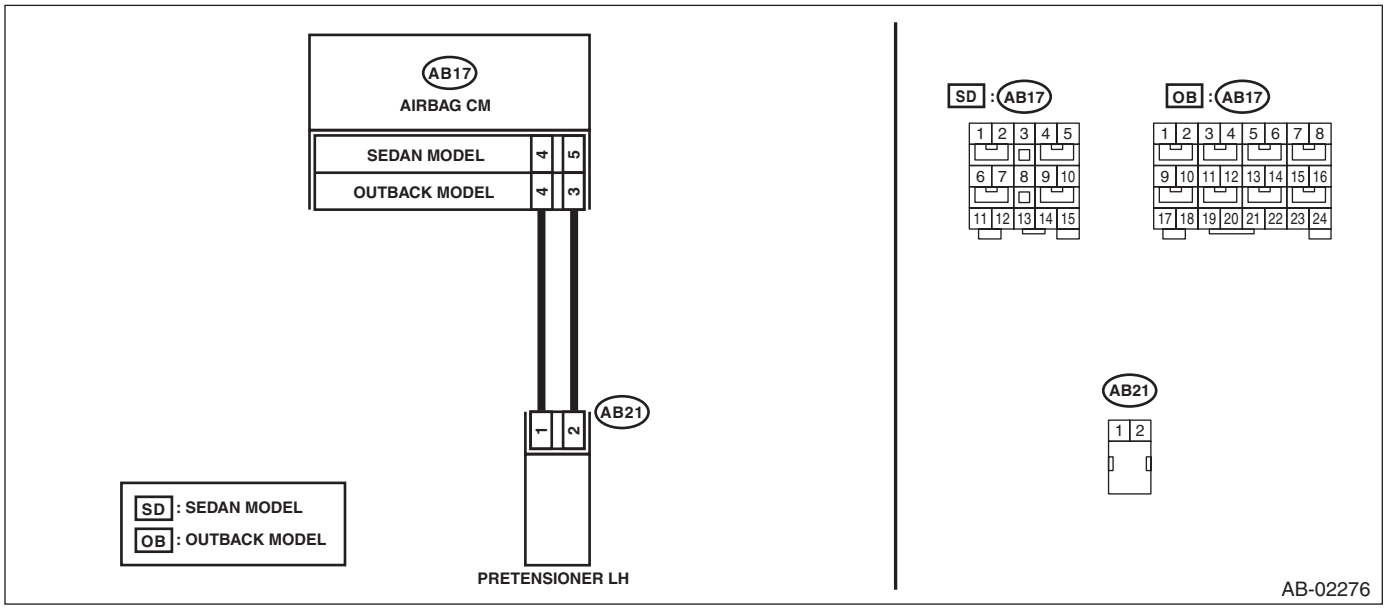
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from test harness N. 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the connector (AB33) from curtain airbag module (RH). 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (3AG) terminals in test harness AG. ***Connector & terminal (3AG) No. 10 — (3AG) No. 12:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AS:DTC 6B BELT PRETENSIONER LH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Connect the connector (1N) in the test harness N to the connector (AB21). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the seat belt pretensioner (LH). <Ref. to SB-17, Front Seat Belt.>	Go to step **3**.

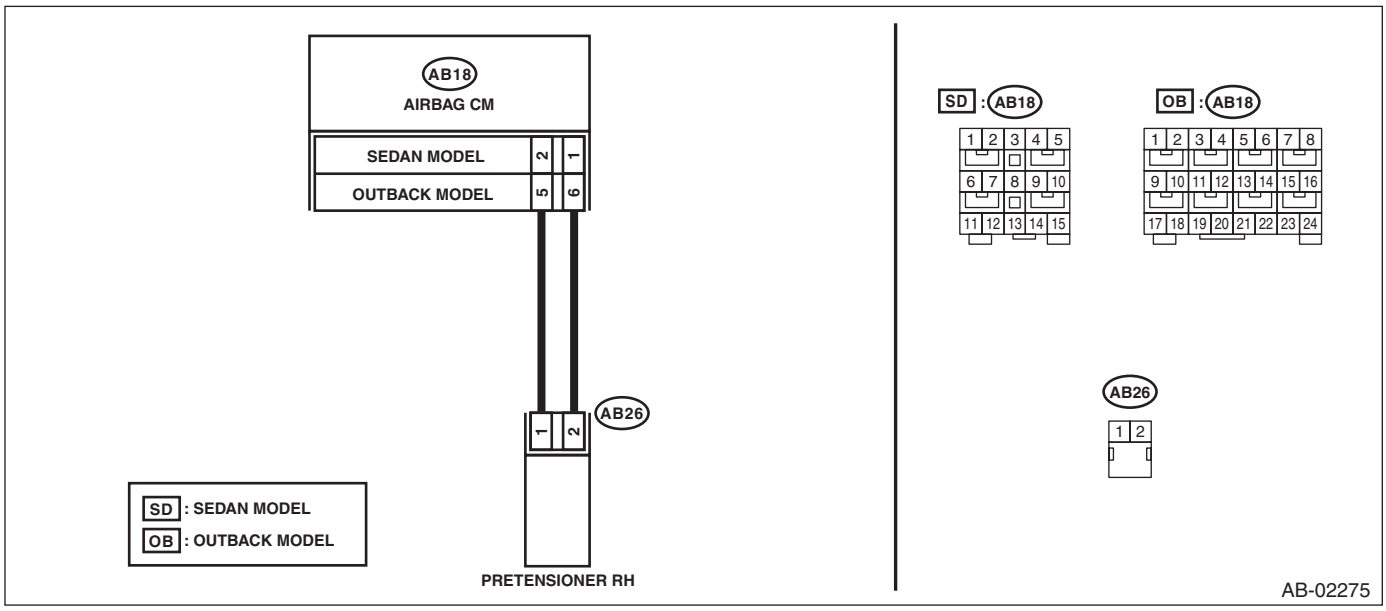
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from test harness N. 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the connector (AB31) from curtain airbag module (LH). 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (3AG) terminals in test harness AG. ***Connector & terminal*** ***(3AG) No. 18 — (3AG) No. 20:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AT:DTC 6D BELT PRETENSIONER RH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Connect the connector (1N) in the test harness N to the connector (AB26). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the seat belt pretensioner (RH). <Ref. to SB-17, Front Seat Belt.>	Go to step **3**.

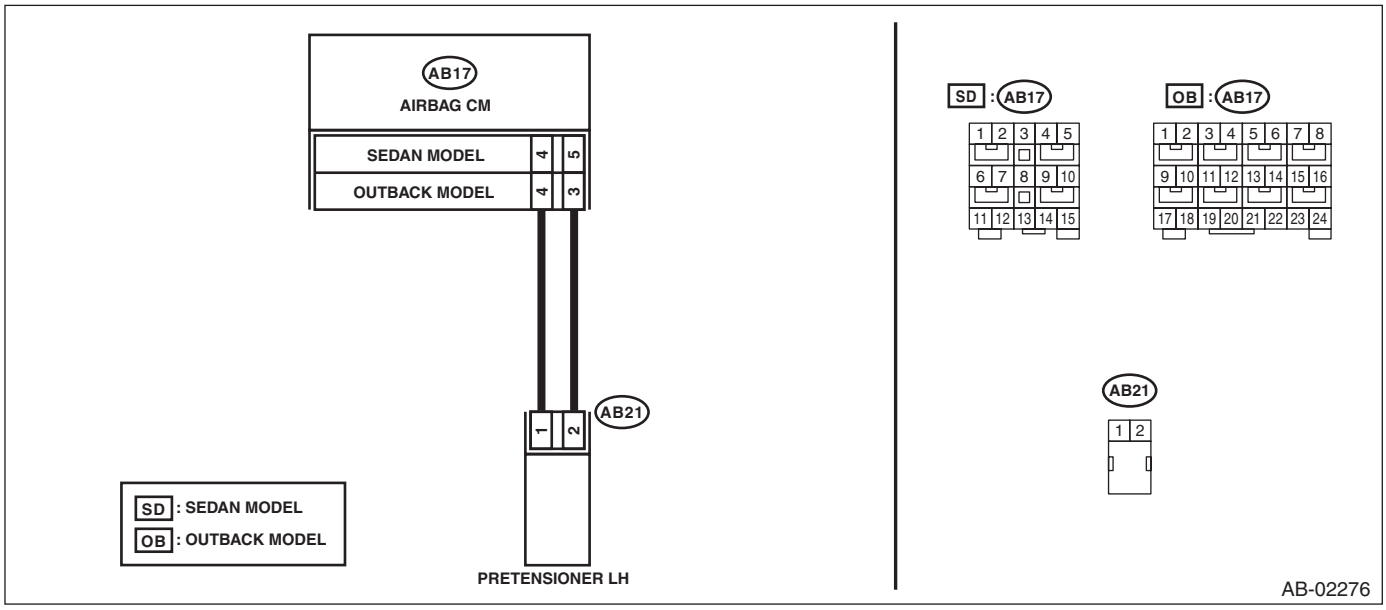
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from test harness N. 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the connector (AB33) from curtain airbag module (RH). 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (3AG) in the test harness AG and connector (2N) in the test harness N. ***Connector & terminal*** ***(3AG) No. 10 — (2N) No. 2:*** ***(3AG) No. 12 — (2N) No. 1:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AU:DTC 6E BELT PRETENSIONER LH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the seat belt pretensioner LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SEAT BELT PRETENSIONER.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Connect the connector (1N) in the test harness N to the connector (AB21). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the seat belt pretensioner (LH). <Ref. to SB-17, Front Seat Belt.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (PRETENSIONER HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from test harness N. 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the connector (AB31) from curtain airbag module (LH). 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (3AG) in the test harness AG and connector (2N) in the test harness N. ***Connector & terminal*** ***(3AG) No. 18 — (2N) No. 1:*** ***(3AG) No. 20 — (2N) No. 2:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AV:DTC 71 DRIVER'S AIRBAG FAILURE

DTC DETECTING CONDITION:

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

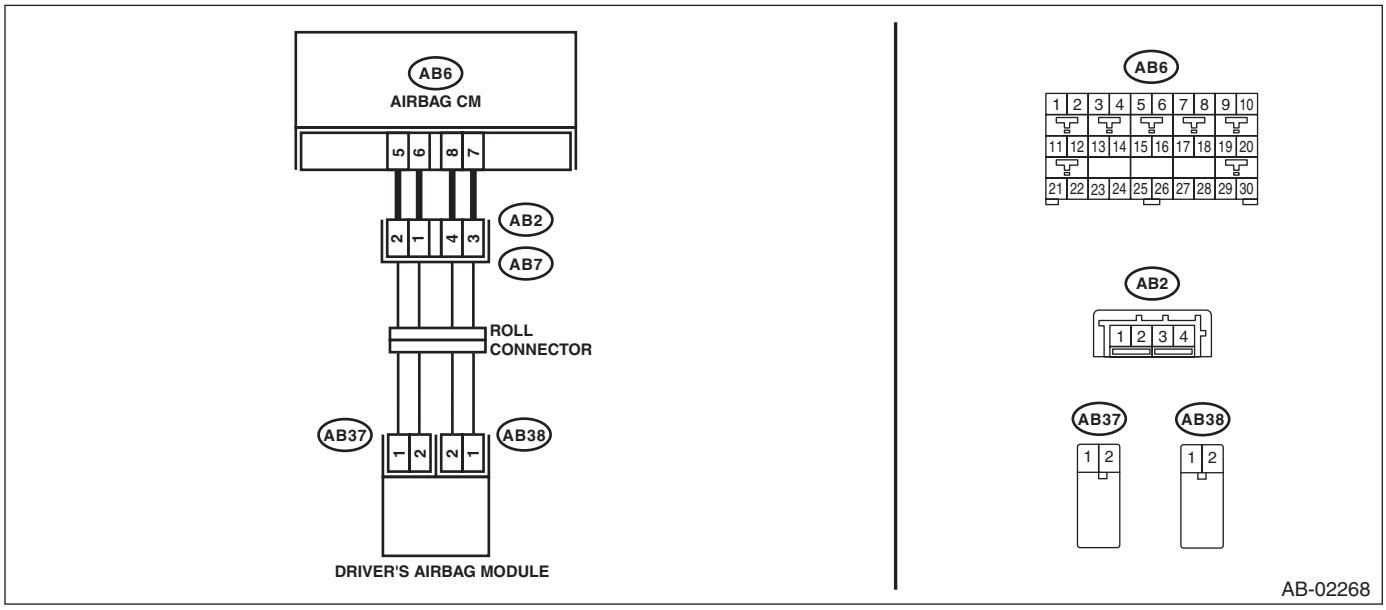
CAUTION:

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

NOTE:

Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-31, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 3) Disconnect the airbag resistor from the connector (2N) in test harness N and from the connector (2Q) in test harness Q. 4) Measure the resistance between connector (2N) in the test harness N and chassis ground. ***Connector & terminal*** ***(2N) No. 1 — Chassis ground:*** ***(2N) No. 2 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the roll connector. <Ref. to AB-89, Roll Connector.>
4	**CHECK AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Disconnect the test harness N from connector (AB38). 2) Disconnect test harness Q from connector (AB37). 3) Remove the console front panel and disconnect the connector (AB9). 4) Disconnect the connectors (AB6, AB17, AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Measure the resistance between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 2 — Chassis ground:*** ***(3AG) No. 4 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **5**.	Replace the airbag main harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AW:DTC 72 PASSENGER'S AIRBAG FAILURE

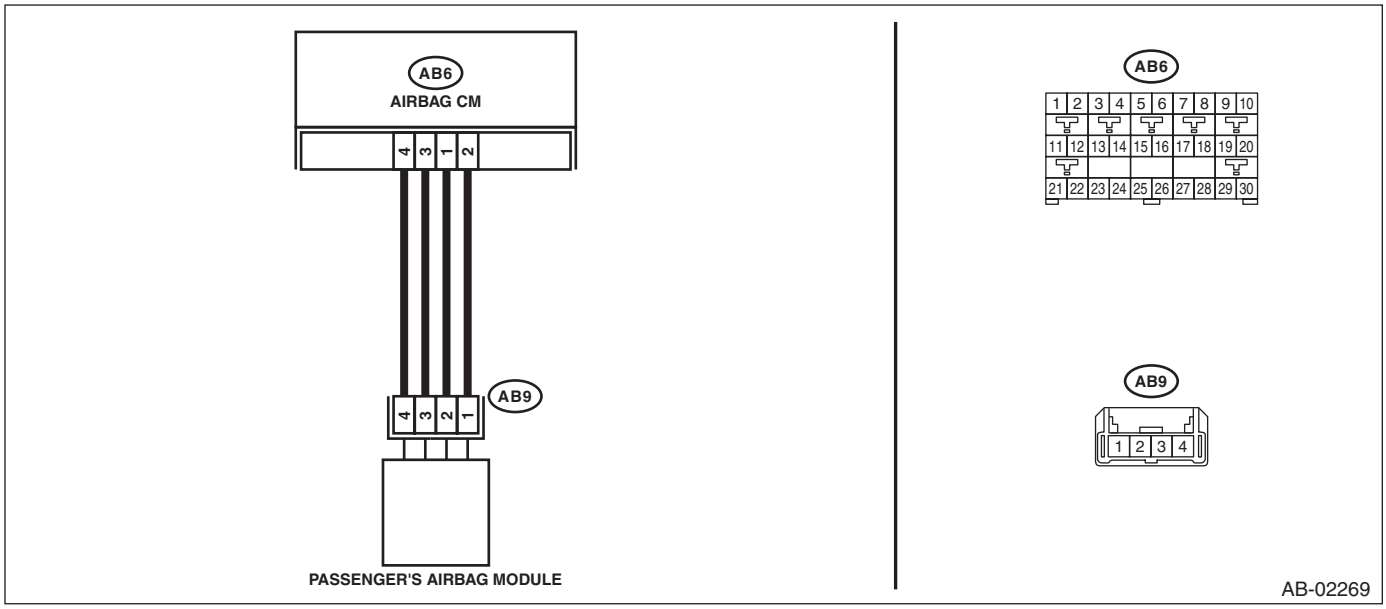
DTC DETECTING CONDITION:

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

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

NOTE:
Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Connect the connector (1P) in the test harness P to connector (AB9). 4) Connect the airbag resistor to the connectors (2P) and (3P) of test harness P. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the passenger's airbag module. <Ref. to AB-33, Passenger's Airbag Module.>	Go to step **3**.

Step		Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connectors (2P) and (3P) of test harness P. 3) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 4) Disconnect the connectors (AB6, AB17, and AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Measure the resistance between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 8 — Chassis ground:*** ***(3AG) No. 6 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AX:DTC 75 DRIVER'S AIRBAG FAILURE

DTC DETECTING CONDITION:

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

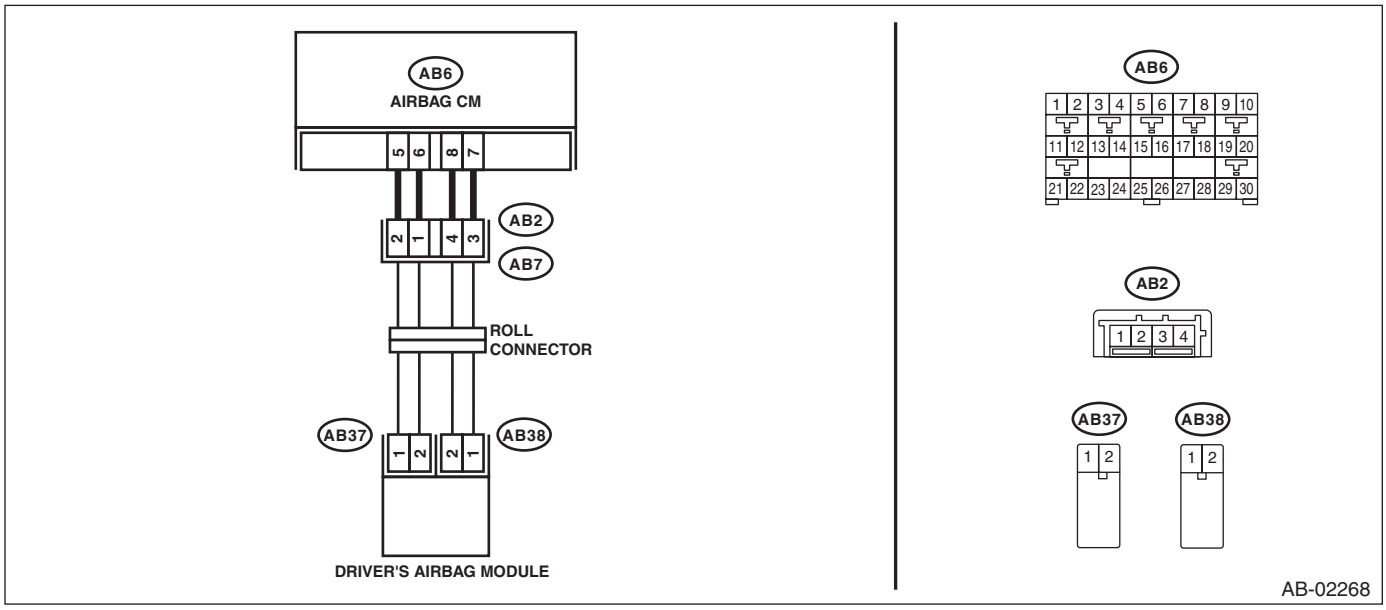
CAUTION:

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

NOTE:

Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-31, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 3) Disconnect the airbag resistor from the connector (2N) in test harness N and from the connector (2Q) in test harness Q. 4) Measure the voltage between connector (2N) in the test harness N and chassis ground. ***Connector & terminal*** ***(2N) No. 1 (+) — Chassis ground (–):*** ***(2N) No. 2 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the roll connector. <Ref. to AB-89, Roll Connector.>
4	**CHECK AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Disconnect the test harness N from connector (AB38). 2) Disconnect test harness Q from connector (AB37). 3) Remove the console front panel and disconnect the connector (AB9). 4) Disconnect the connectors (AB6, AB17, and AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Measure the voltage between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 2 (+) — Chassis ground (–):*** ***(3AG) No. 4 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **5**.	Replace the airbag main harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AY:DTC 76 PASSENGER'S AIRBAG FAILURE

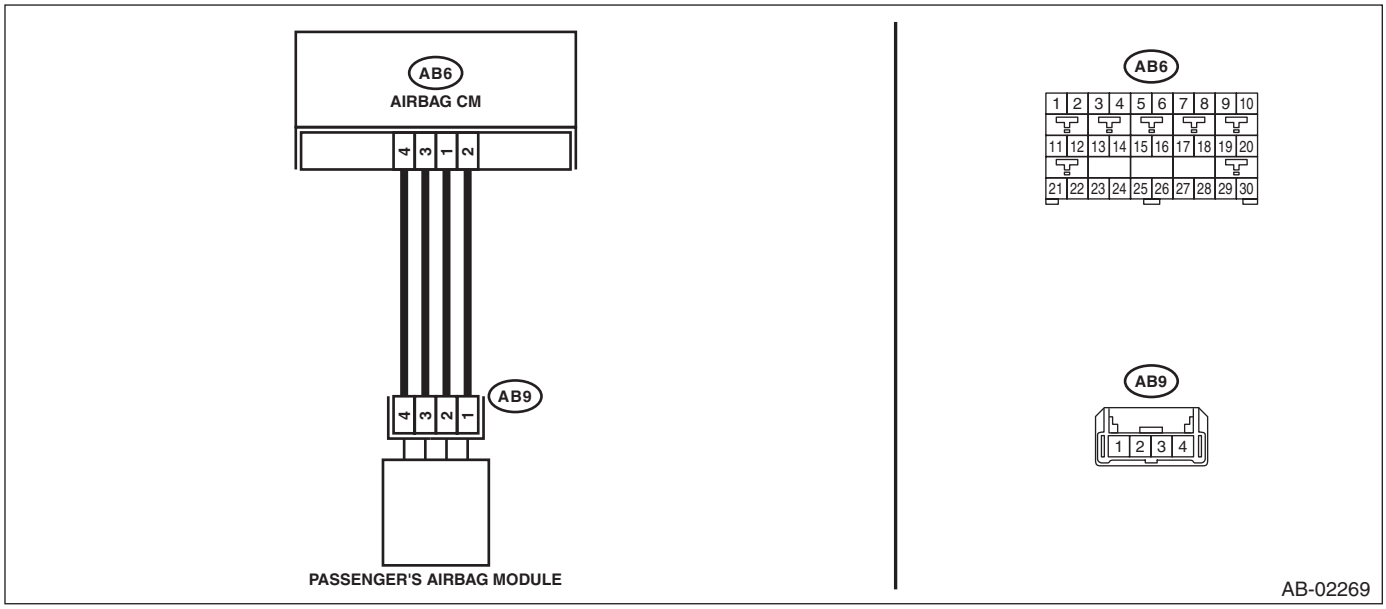
DTC DETECTING CONDITION:

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

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

NOTE:
Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness along with chassis harness.	Go to step **2**.
2	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Connect the connector (1P) in the test harness P to connector (AB9). 4) Connect the airbag resistor to the connectors (2P) and (3P) of test harness P. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the passenger's airbag module. <Ref. to AB-33, Passenger's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connectors (2P) and (3P) of test harness P. 3) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 4) Disconnect the connectors (AB6, AB17, and AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Measure the voltage between connector (3AG) in the test harness AG and chassis ground. ***Connector & terminal*** ***(3AG) No. 8 (+) — Chassis ground (–):*** ***(3AG) No. 6 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

AZ:DTC 7A DRIVER'S AIRBAG FAILURE

DTC DETECTING CONDITION:

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

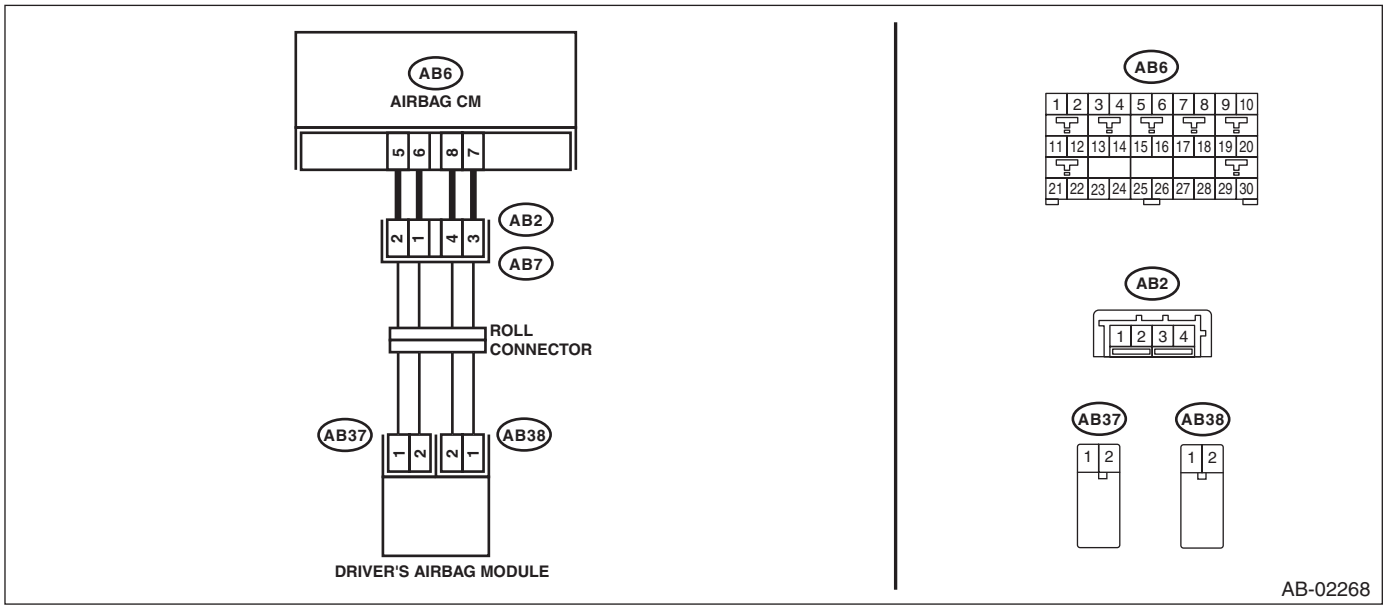
CAUTION:

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

NOTE:

Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-31, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR AND AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Disconnect the airbag resistor from the connector (2N) in test harness N and from the connector (2Q) in test harness Q. 4) Disconnect the connectors (AB6, AB17, and AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Measure the resistance between connector (2N) terminals in test harness N. ***Connector & terminal (2N) No. 1 — (2N) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **5**.	Go to step **4**.
4	**CHECK AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 2) Disconnect test harness Q from connector (AB37). 3) Measure the resistance between connector (3AG) terminals in test harness AG. ***Connector & terminal (3AG) No. 2 — (3AG) No. 4:***	Is the resistance 1 MΩ or more?	Replace the roll connector. <Ref. to AB-89, Roll Connector.>	Replace the airbag main harness along with body harness.
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BA:DTC 7B PASSENGER'S AIRBAG FAILURE

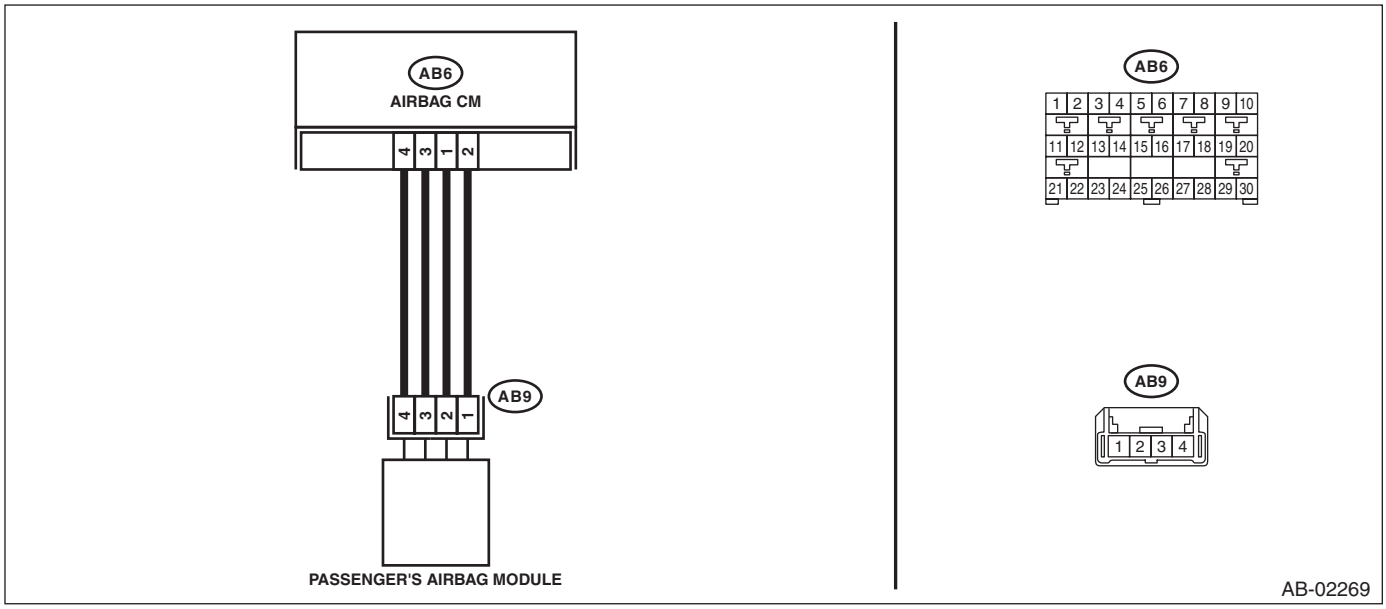
DTC DETECTING CONDITION:

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

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

NOTE:
Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Connect the connector (1P) in the test harness P to connector (AB9). 4) Connect the airbag resistor to the connectors (2P) and (3P) of test harness P. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the passenger's airbag module. <Ref. to AB-33, Passenger's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connectors (2P) and (3P) of test harness P. 3) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 4) Disconnect the connectors (AB6, AB17, and AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Measure the resistance between connector (3AG) terminals in test harness AG. ***Connector & terminal*** ***(3AG) No. 6 — (3AG) No. 8:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BB:DTC 7D DRIVER'S AIRBAG FAILURE

DTC DETECTING CONDITION:

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

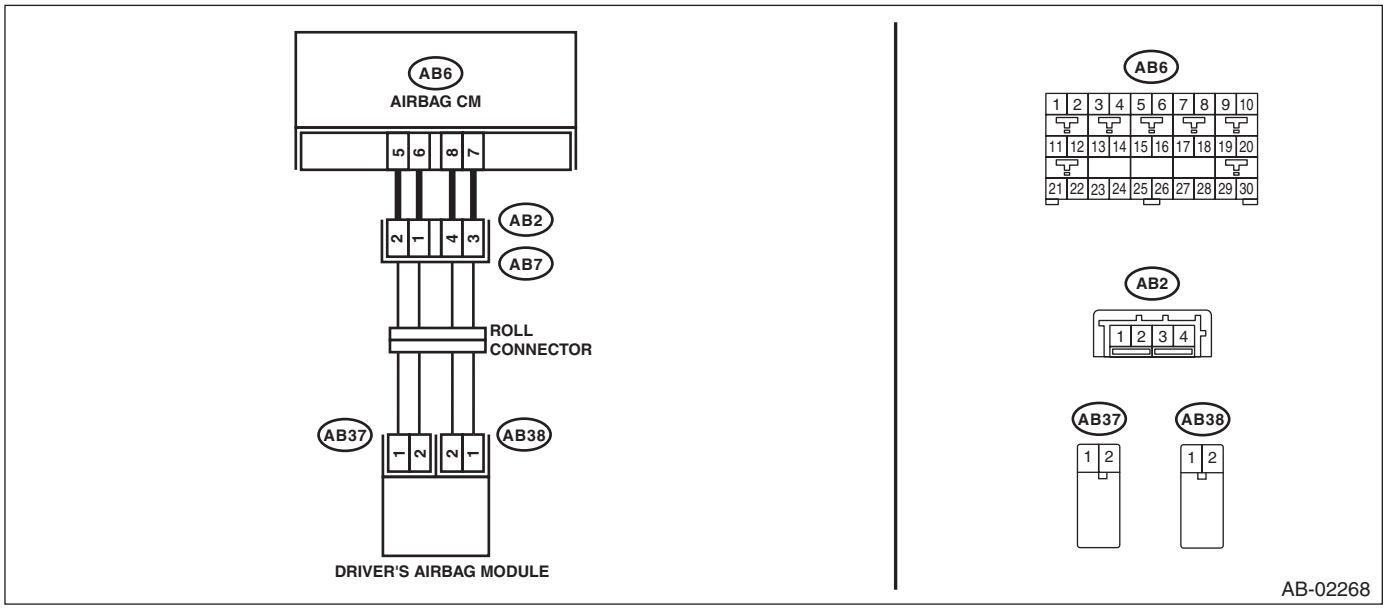
CAUTION:

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

NOTE:

Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the driver's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK DRIVER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the driver's airbag module. 3) Connect the connector (1N) in the test harness N to the connector (AB38). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the connector (1Q) in the test harness Q to connector (AB37). 6) Connect the airbag resistor to the connector (2Q) in the test harness Q. 7) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the driver's airbag module. <Ref. to AB-31, Driver's Airbag Module.>	Go to step **3**.

	Step	Check	Yes	No
3	**CHECK ROLL CONNECTOR AND AIRBAG MAIN HARNESS (DRIVER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Disconnect the airbag resistor from the connector (2N) in test harness N. 4) Disconnect the airbag resistor from the connector (2Q) of test harness Q. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Measure the resistance between connector (2N) terminals in test harness N. ***Connector & terminal*** ***(2N) No. 1 — (2N) No. 2:***	Is the resistance less than 10 Ω?	Go to step **5**.	Go to step **4**.
4	**CHECK ROLL CONNECTOR.** 1) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 2) Measure the resistance between connector (2N) terminals in test harness N. ***Connector & terminal*** ***(2N) No. 1 — (2N) No. 2:***	Is the resistance less than 10 Ω?	Replace the airbag main harness along with body harness.	Replace the roll connector. <Ref. to AB-89, Roll Connector.>
5	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **6**.
6	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BC:DTC 7E PASSENGER'S AIRBAG FAILURE

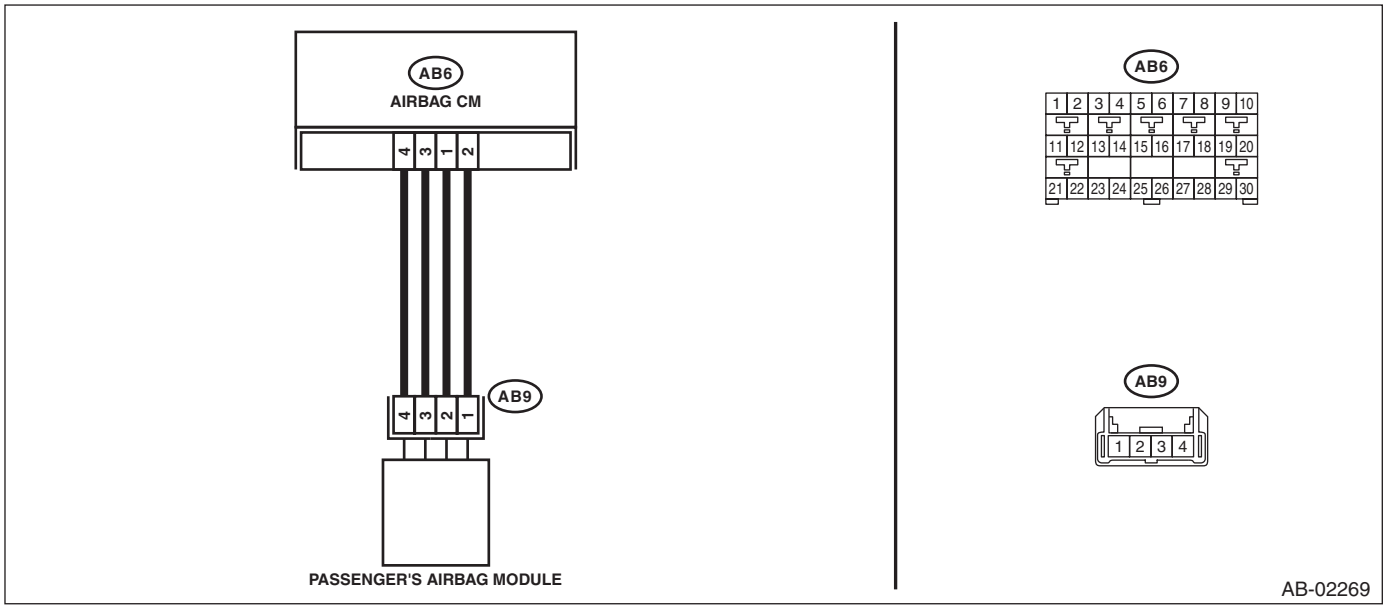
DTC DETECTING CONDITION:

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

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

NOTE:
Prior to starting work, prepare two airbag resistors (98299PA040).

WIRING DIAGRAM:



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module and the passenger's airbag module.	Is there poor contact?	Replace the airbag harness.	Go to step **2**.
2	**CHECK PASSENGER'S AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the console front panel and disconnect the connector (AB9). 3) Connect the connector (1P) in the test harness P to connector (AB9). 4) Connect the airbag resistor to the connectors (2P) and (3P) of test harness P. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the passenger's airbag module. <Ref. to AB-33, Passenger's Airbag Module.>	Go to step **3**.

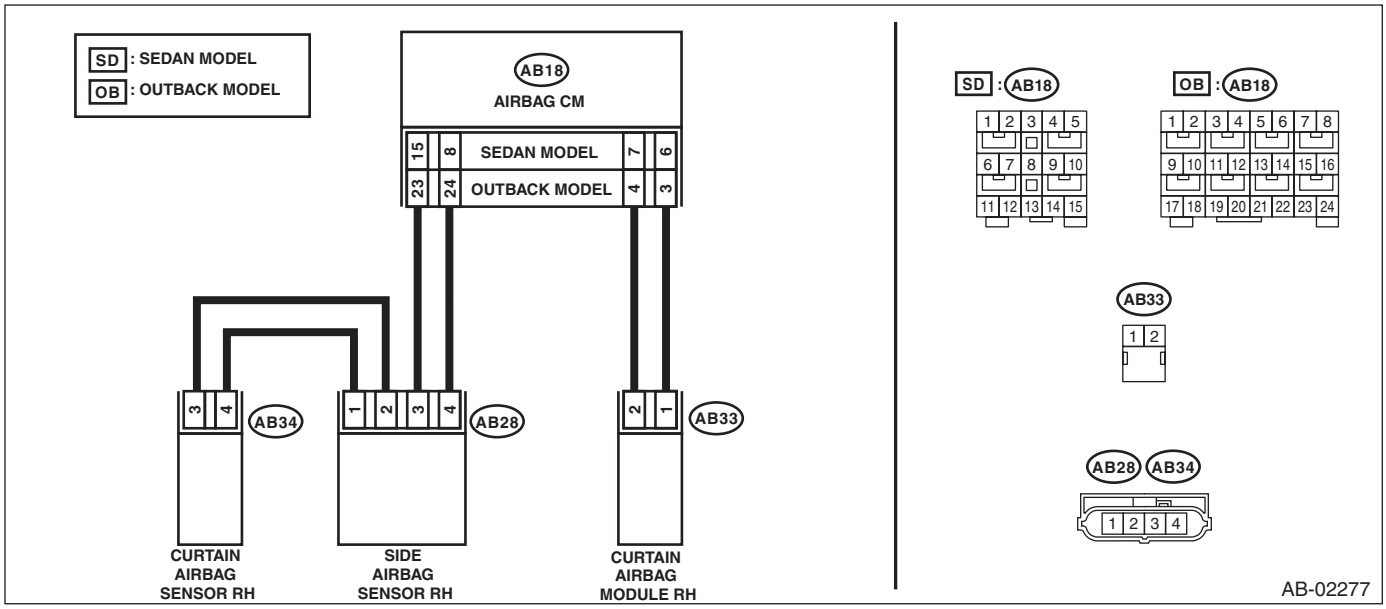
	Step	Check	Yes	No
3	**CHECK AIRBAG MAIN HARNESS (PASSENGER'S AIRBAG HARNESS).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the airbag resistor from the connectors (2P) and (3P) of test harness P. 3) Remove the instrument panel lower cover and column cover, and disconnect the connector (AB7) from (AB2). 4) Disconnect the connectors (AB6, AB17, and AB18) from the airbag control module, and connect the connector (1AG) in the test harness AG. NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 5) Measure the resistance between connector (3AG) of test harness AG and connector (3P) of test harness P. ***Connector & terminal*** ***(3AG) No. 6 — (3P) No. 4:*** ***(3AG) No. 8 — (3P) No. 3:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BD:DTC 91 CURTAIN AIRBAG MODULE RH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module RH and the curtain airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB33) from curtain airbag module (RH). 3) Connect the connector (1N) in the test harness N to the connector (AB33). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the curtain airbag module (RH). <Ref. to AB-61, Curtain Airbag Module.>	Go to step **3**.

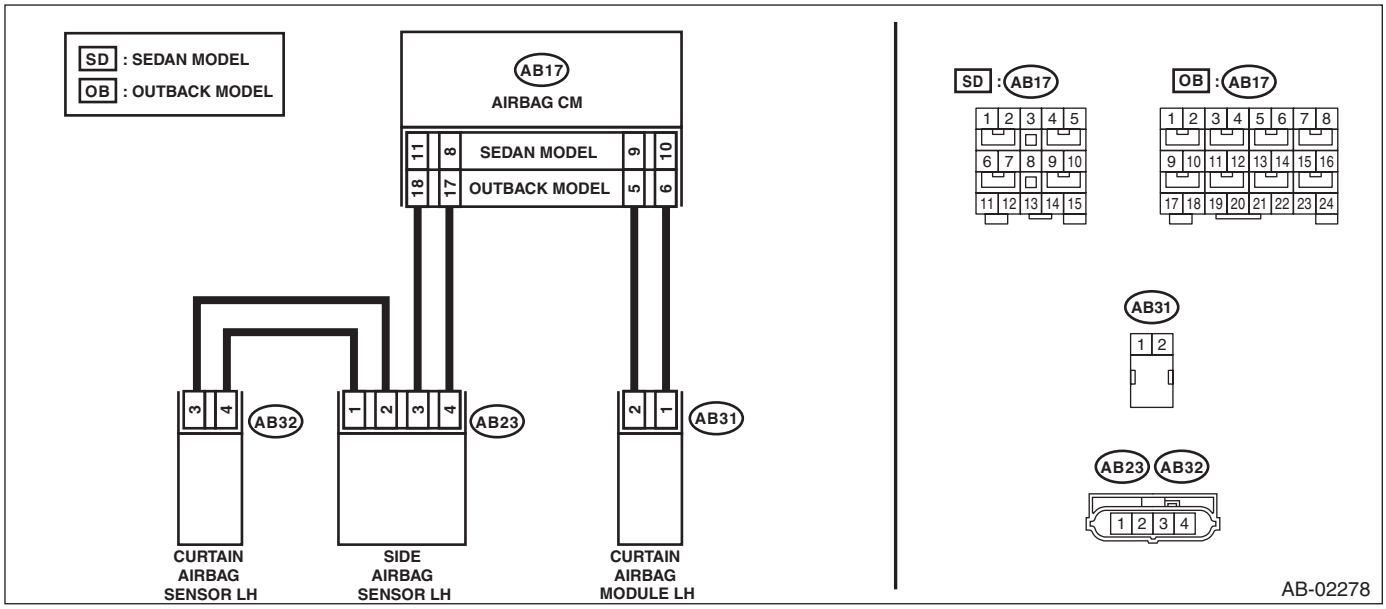
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (2N) in the test harness N and chassis ground. ***Connector & terminal*** ***(2N) No. 1 — Chassis ground:*** ***(2N) No. 2 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BE:DTC 92 CURTAIN AIRBAG MODULE LH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module LH and the curtain airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB31) from curtain airbag module (LH). 3) Connect the connector (1N) in the test harness N to the connector (AB31). 4) Connect the airbag resistor to the connector (2N) of test harness N. 5) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the curtain airbag module (LH). <Ref. to AB-61, Curtain Airbag Module.>	Go to step **3**.

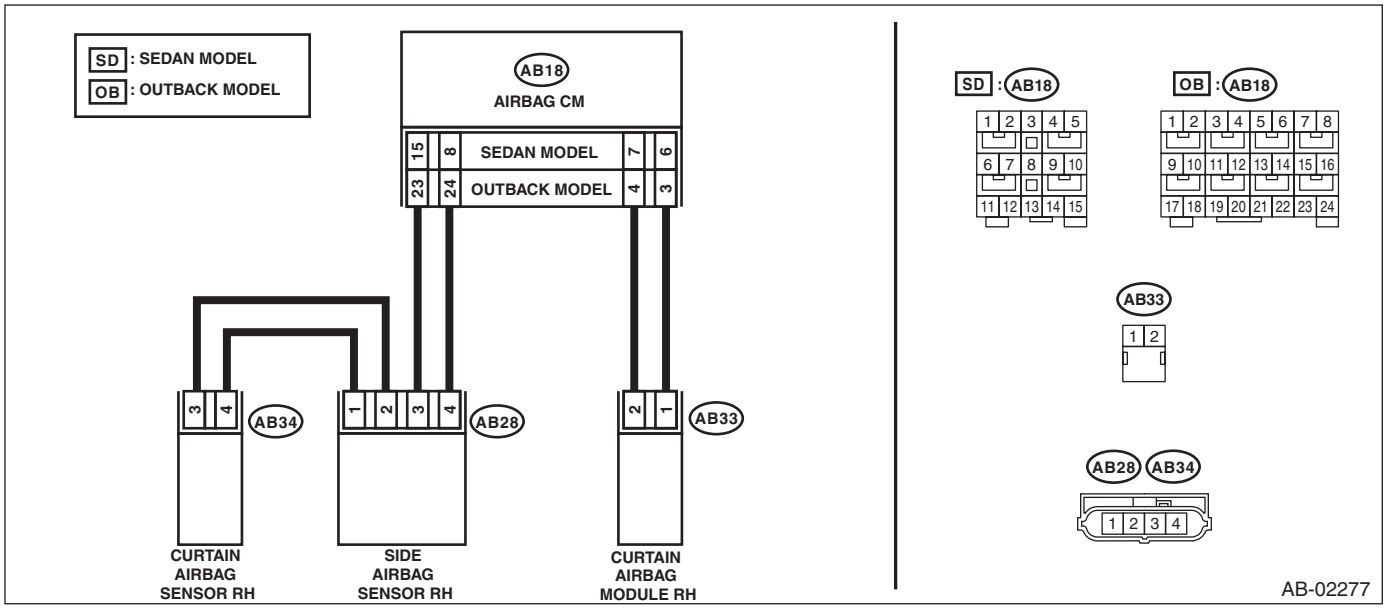
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (2N) in the test harness N and chassis ground. ***Connector & terminal*** ***(2N) No. 1 — Chassis ground:*** ***(2N) No. 2 — Chassis ground:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BF:DTC 95 CURTAIN AIRBAG MODULE RH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module RH and the curtain airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB33), and connect the connector (1N) in test harness N to connector (AB33). 3) Connect the airbag resistor to the connector (2N) of test harness N. 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the curtain airbag module (RH). <Ref. to AB-61, Curtain Airbag Module.>	Go to step **3**.

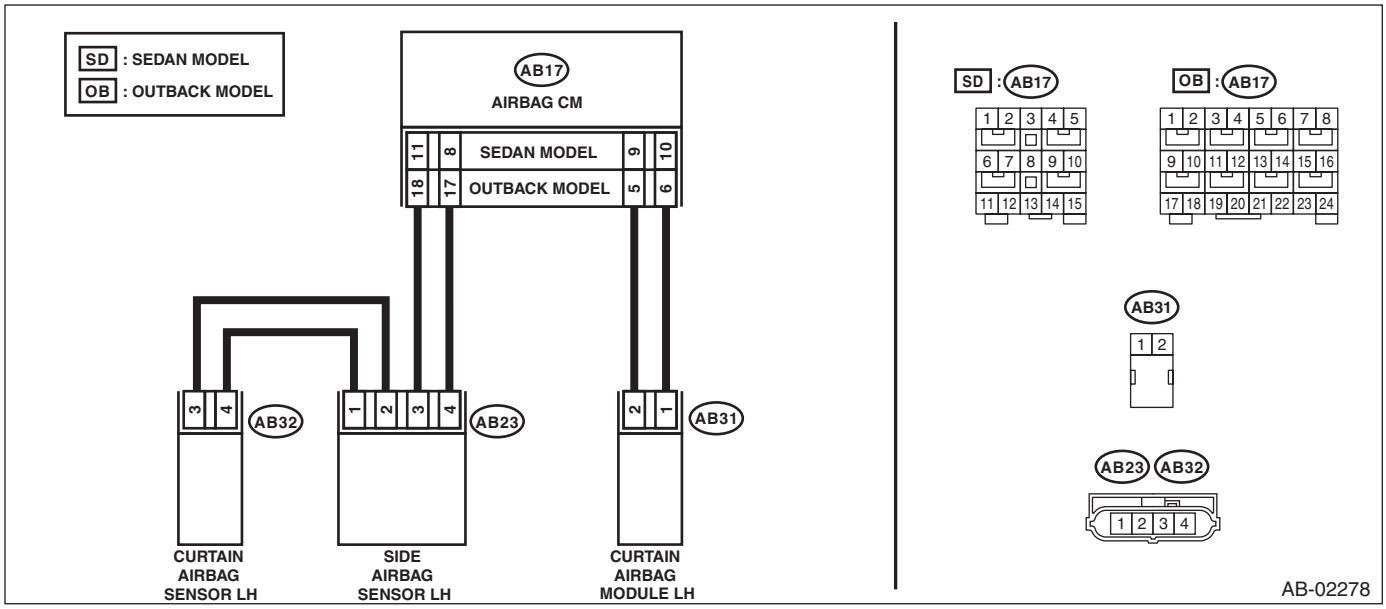
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Connect the battery ground terminal and turn the ignition switch to ON. 8) Measure the voltage between connector (2N) in the test harness N and chassis ground. ***Connector & terminal*** ***(2N) No. 1 (+) — Chassis ground (–):*** ***(2N) No. 2 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BG:DTC 96 CURTAIN AIRBAG MODULE LH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module LH and the curtain airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK SIDE AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB31), and connect the connector (1N) in test harness N to connector (AB31). 3) Connect the airbag resistor to the connector (2N) of test harness N. 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the curtain airbag module (LH). <Ref. to AB-61, Curtain Airbag Module.>	Go to step **3**.

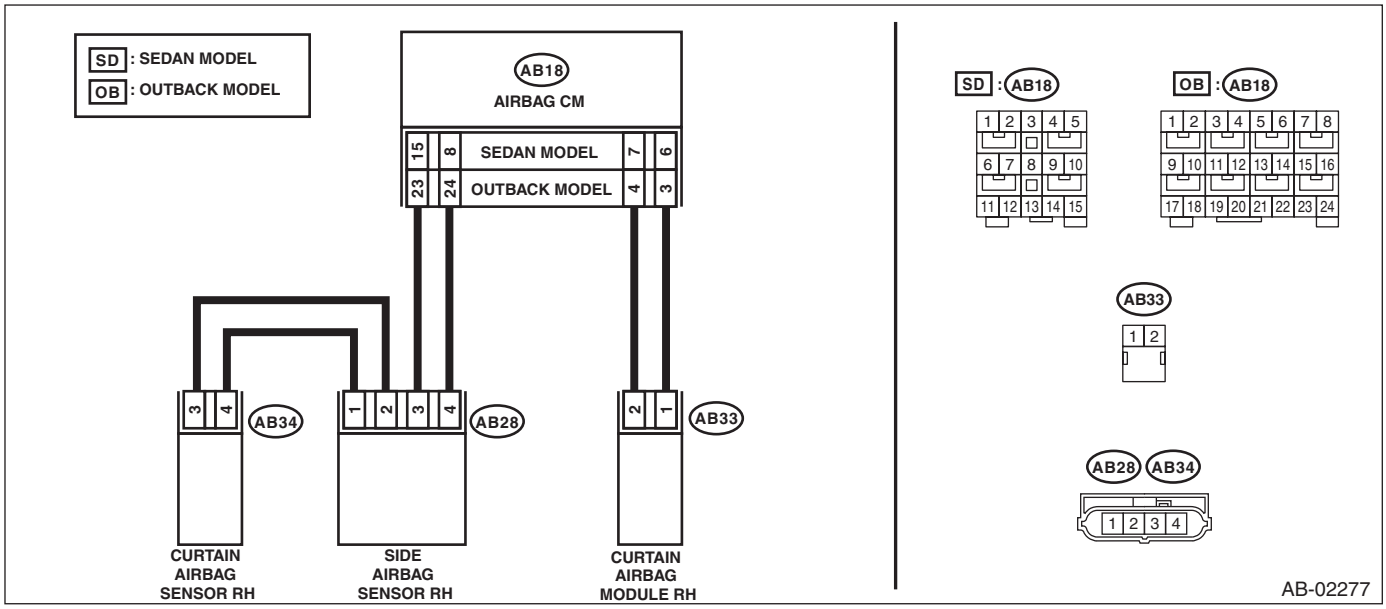
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Connect the battery ground terminal and turn the ignition switch to ON. 8) Measure the voltage between connector (2N) in the test harness N and chassis ground. ***Connector & terminal*** ***(2N) No. 1 (+) — Chassis ground (–):*** ***(2N) No. 2 (+) — Chassis ground (–):***	Is the voltage less than 1 V?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BH:DTC 9A CURTAIN AIRBAG MODULE RH FAILURE

DTC DETECTING CONDITION:

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

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



	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module RH and the curtain airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB33) from curtain airbag module (RH), and connect the connector (1N) in test harness N to connector (AB33). 3) Connect the airbag resistor to the connector (2N) of test harness N. 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the curtain airbag module (RH). <Ref. to AB-61, Curtain Airbag Module.>	Go to step **3**.

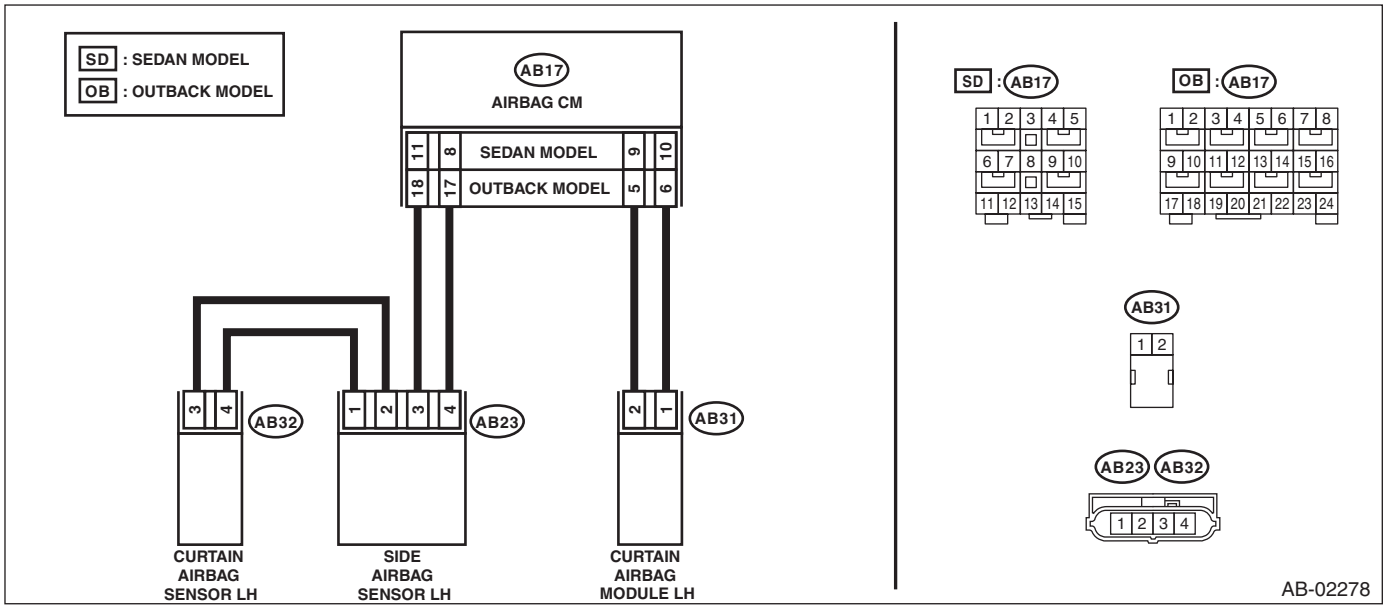
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (2N) terminals in test harness N. ***Connector & terminal (2N) No. 1 — (2N) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BI: DTC 9B CURTAIN AIRBAG MODULE LH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module LH and the curtain airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB31) from curtain airbag module (LH), and connect the connector (1N) in test harness N to connector (AB31). 3) Connect the airbag resistor to the connector (2N) of test harness N. 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the curtain airbag module (LH). <Ref. to AB-61, Curtain Airbag Module.>	Go to step **3**.

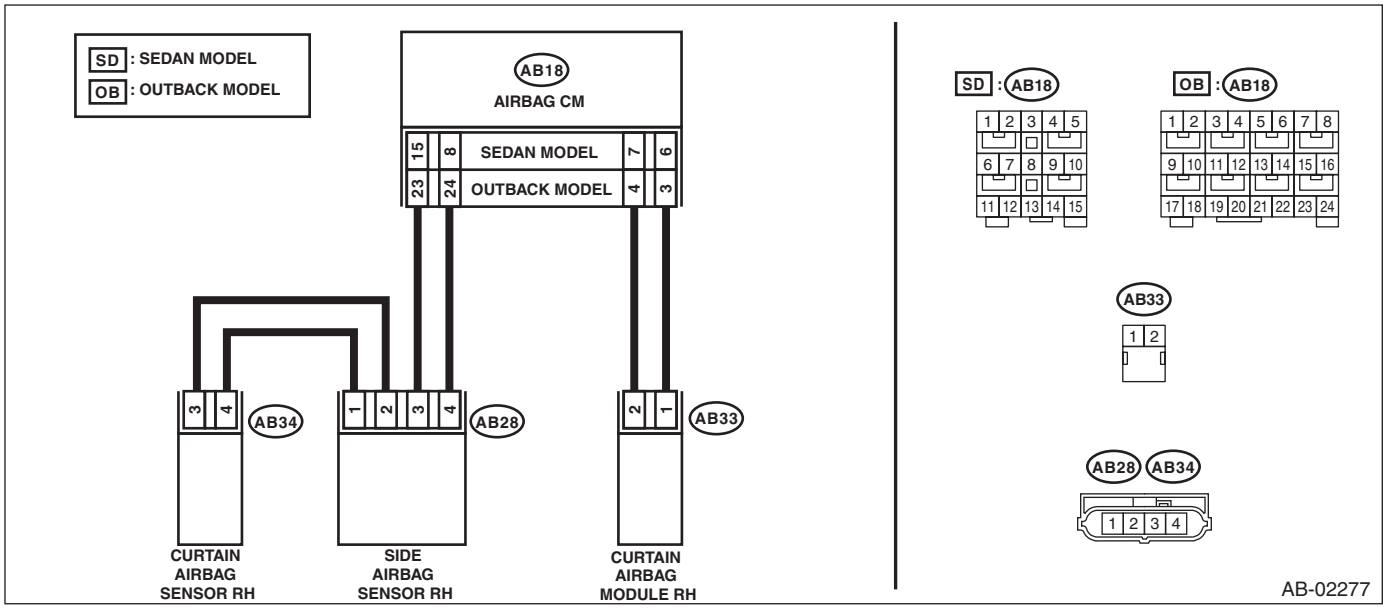
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (2N) terminals in test harness N. ***Connector & terminal (2N) No. 1 — (2N) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BJ:DTC 9D CURTAIN AIRBAG MODULE RH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module RH and the curtain airbag sensor RH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB33) from curtain airbag module (RH), and connect the connector (1N) in test harness N to connector (AB33). 3) Connect the airbag resistor to the connector (2N) of test harness N. 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the curtain airbag module (RH). <Ref. to AB-61, Curtain Airbag Module.>	Go to step **3**.

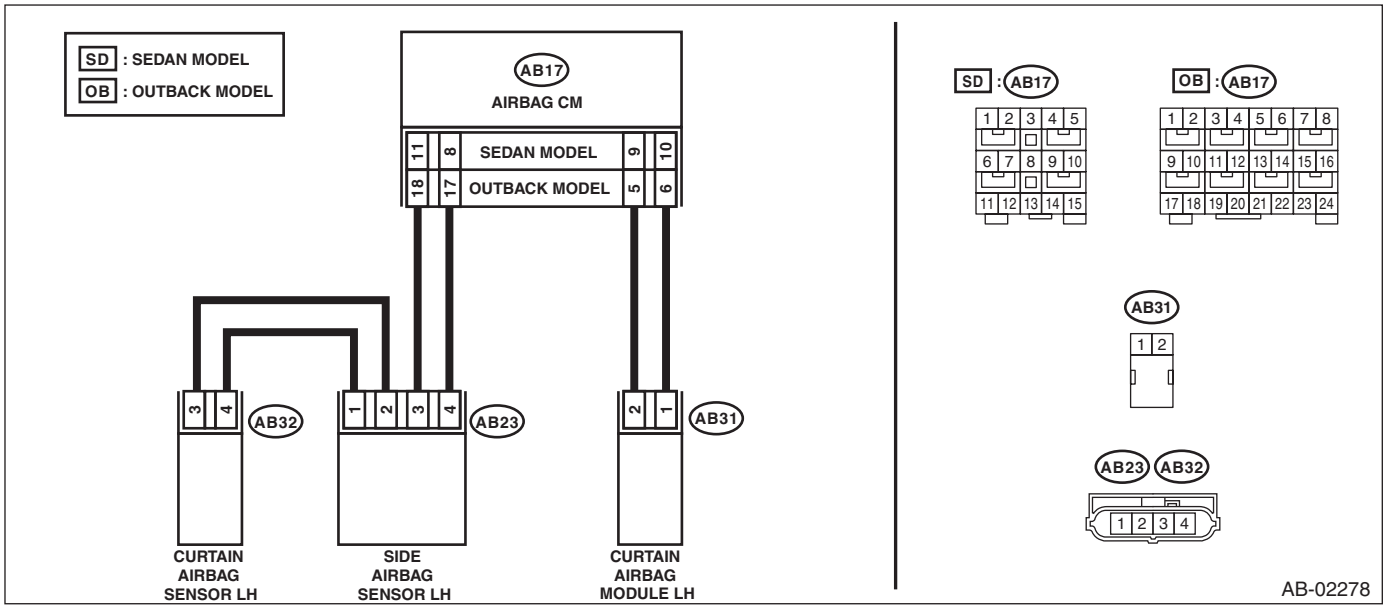
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect connector (AB24) from side airbag module (RH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (5AG) or (6AG) in the test harness AG and connector (2N) in the test harness N. ***Connector & terminal*** ***Sedan model*** ***(5AG) No. 2 — (2N) No. 1:*** ***(5AG) No. 4 — (2N) No. 2:*** ***OUTBACK model*** ***(6AG) No. 1 — (2N) No. 1:*** ***(6AG) No. 3 — (2N) No. 2:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BK:DTC 9E CURTAIN AIRBAG MODULE LH FAILURE

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the airbag control module, curtain airbag module LH and the curtain airbag sensor LH.	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.
2	**CHECK CURTAIN AIRBAG MODULE.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB31) from curtain airbag module (LH), and connect the connector (1N) in test harness N to connector (AB31). 3) Connect the airbag resistor to the connector (2N) of test harness N. 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for six seconds and go off?	Replace the curtain airbag module (LH). <Ref. to AB-61, Curtain Airbag Module.>	Go to step **3**.

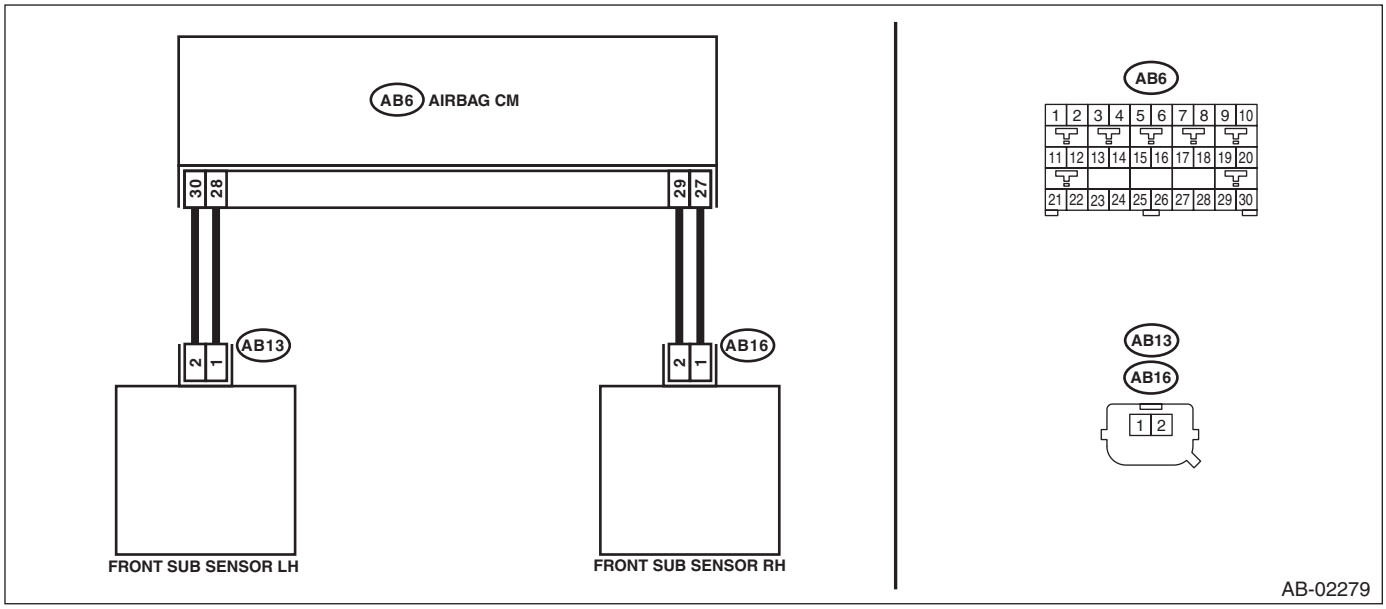
	Step	Check	Yes	No
3	**CHECK AIRBAG REAR HARNESS (CURTAIN AIRBAG MODULE HARNESS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect connector (AB19) from side airbag module (LH). 4) Disconnect the airbag resistor from test harness N. 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Measure the resistance between connector (5AG) or (6AG) in the test harness AG and connector (2N) in the test harness N. ***Connector & terminal*** ***Sedan model*** ***(5AG) No. 6 — (2N) No. 1:*** ***(5AG) No. 12 — (2N) No. 2:*** ***OUTBACK model*** ***(6AG) No. 8 — (2N) No. 1:*** ***(6AG) No. 6 — (2N) No. 2:***	Is the resistance less than 10 Ω?	Go to step **4**.	Replace the airbag rear harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the airbag control module. <Ref. to AB-64, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BL:DTC A1 FRONT SENSOR BUS COMMUNICATION ERROR

DTC DETECTING CONDITION:

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

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



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

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

	Step	Check	Yes	No
5	**CHECK AIRBAG MAIN HARNESS (FRONT SENSOR BUS RH).** Measure the resistance between connector (4AG) in the test harness AG and chassis ground, and the resistance between connector (4AG) terminals in the test harness AG. ***Connector & terminal*** ***(4AG) No. 12 — Chassis ground:*** ***(4AG) No. 14 — Chassis ground:*** ***(4AG) No. 12 — (4AG) No. 14:***	Is the resistance 1 MΩ or more?	Go to step **6**.	Replace the airbag rear harness along with body harness.
6	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the front sub sensor (LH) and front sub sensor (RH). <Ref. to AB-67, REMOVAL, Front Sub Sensor.> Replace the airbag control module if not operating normally even after replacing the sensor. <Ref. to AB-64, REMOVAL, Airbag Control Module.>	Go to step **7**.
7	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BM:DTC BB ROLL OVER:FIRING OUTPUT

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

- Airbag control module <Ref. to AB-64, Airbag Control Module.>
- Curtain airbag module (operating side) <Ref. to AB-61, Curtain Airbag Module.>
- Curtain airbag sensor (operating side) <Ref. to AB-80, Curtain Airbag Sensor.>
- Front outer seat belt with pretensioner (operating side) <Ref. to SB-17, Front Seat Belt.>

BN:DTC E3 FRONT SENSOR BUS RH COMMUNICATION ERROR

NOTE:
Refer to DTC A1 for DTC E3. <Ref. to AB(diag)-137, DTC A1 FRONT SENSOR BUS COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>

BO:DTC E4 FRONT SENSOR BUS RH COMMUNICATION ERROR

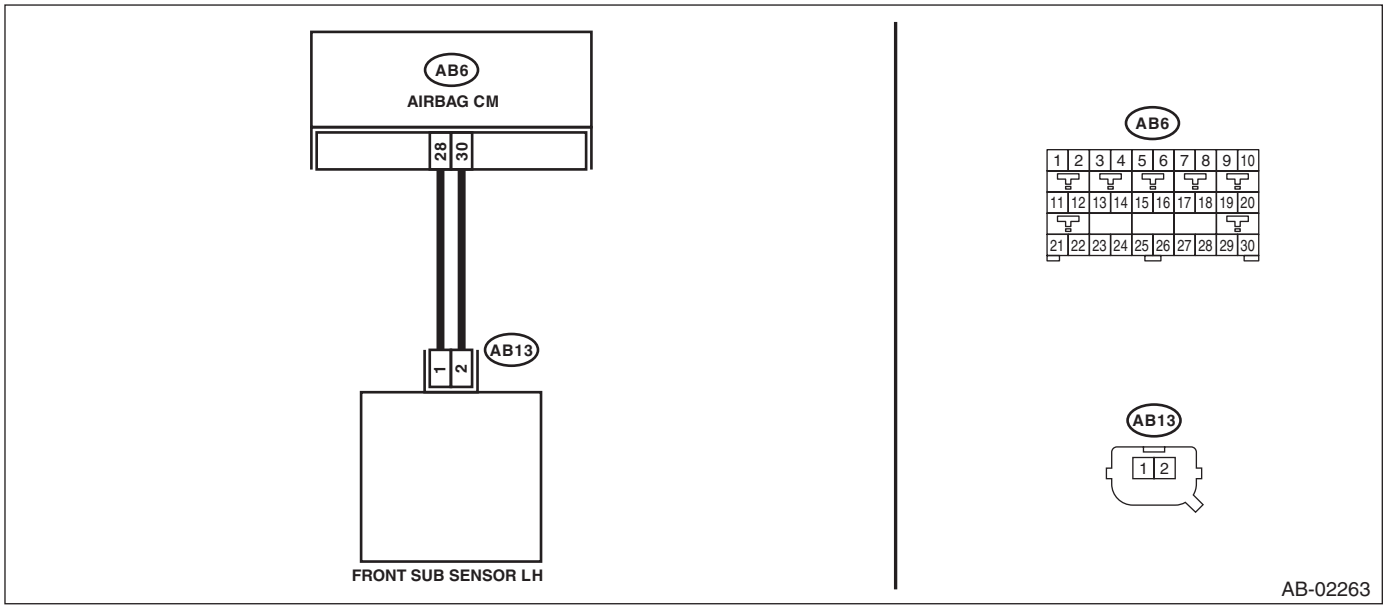
NOTE:
Refer to DTC A1 for DTC E4. <Ref. to AB(diag)-137, DTC A1 FRONT SENSOR BUS COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>

BP:DTC E7 FRONT SENSOR BUS LH COMMUNICATION ERROR

DTC DETECTING CONDITION:

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

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



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

	Step	Check	Yes	No
2	**CHECK AIRBAG MAIN HARNESS (FRONT SENSOR BUS LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Remove the instrument panel lower cover and column cover, and disconnect the connectors (AB7) and (AB2). 3) Remove the console front panel and disconnect the connector (AB9). 4) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 5) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 6) Disconnect the front sub sensor (LH), and then connect the connector (1H) in the test harness H to connector (AB13). 7) Measure the resistance between connector (4AG) in the test harness AG and connector (3H) in the test harness H. ***Connector & terminal*** ***(4AG) No. 7 — (3H) No. 5:*** ***(4AG) No. 9 — (3H) No. 6:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag main harness along with body harness.
3	**CHECK AIRBAG MAIN HARNESS (FRONT SENSOR BUS LH).** Measure the resistance between connector (4AG) in the test harness AG and chassis ground, and the resistance between connector (4AG) terminals in the test harness AG. ***Connector & terminal*** ***(4AG) No. 7 — Chassis ground:*** ***(4AG) No. 9 — Chassis ground:*** ***(4AG) No. 7 — (4AG) No. 9:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag main harness along with body harness.
4	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Replace the front sub sensor (LH). <Ref. to AB-67, REMOVAL, Front Sub Sensor.> Replace the airbag control module if not operating normally even after replacing the sensor. <Ref. to AB-64, REMOVAL, Airbag Control Module.>	Go to step **5**.
5	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code”. <Ref. to AB(diag)-38, LIST, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BQ:DTC E8 FRONT SENSOR BUS LH COMMUNICATION ERROR

NOTE:
Refer to DTC E7 for DTC E8. <Ref. to AB(diag)-140, DTC E7 FRONT SENSOR BUS LH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>

BR:DTC E9 SIDE SENSOR BUS RH COMMUNICATION ERROR

NOTE:
Refer to DTC EC for details on DTC E9. <Ref. to AB(diag)-143, DTC EC SIDE SENSOR BUS RH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>

BS:DTC EB SIDE SENSOR BUS RH COMMUNICATION ERROR

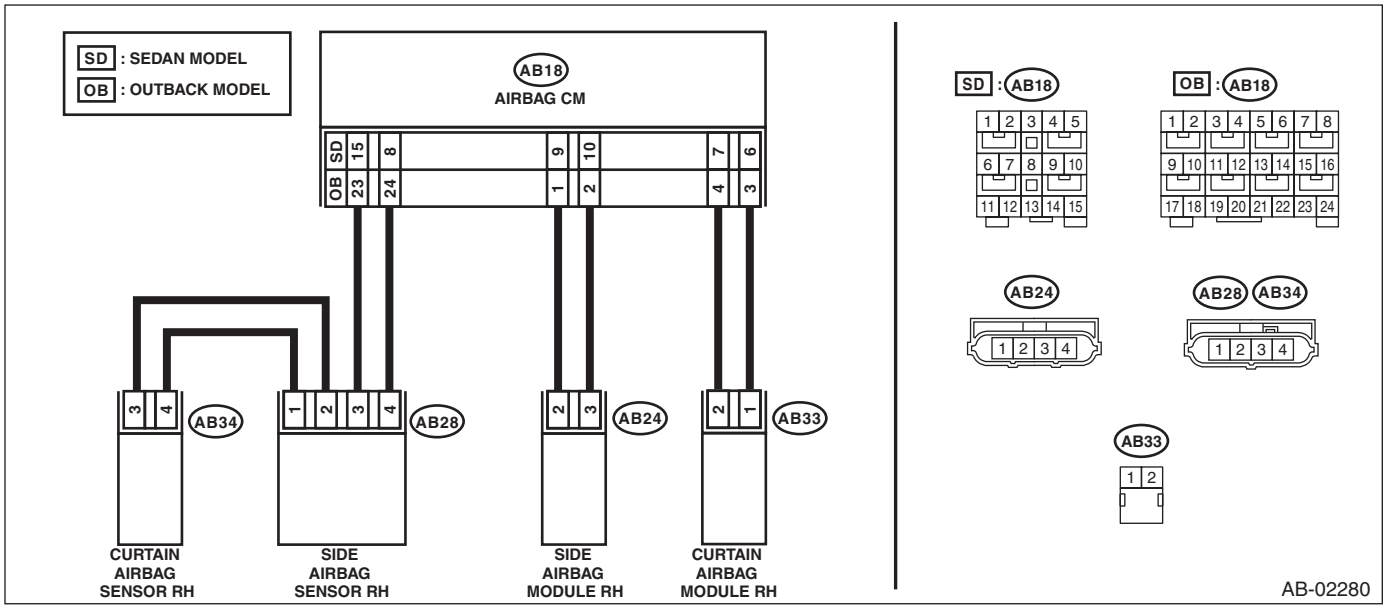
NOTE:
Refer to DTC EC for details on DTC EB. <Ref. to AB(diag)-143, DTC EC SIDE SENSOR BUS RH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>

BT:DTC EC SIDE SENSOR BUS RH COMMUNICATION ERROR

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors (AB18, AB28, AB34) between the airbag control module and the curtain airbag sensor (RH).	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR RH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect connectors (AB25) and (AB24) from side airbag module (RH). 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Disconnect the connector (AB28) from side airbag sensor (RH), and connect the connector (2V) in test harness V to connector (AB28). 8) Measure the resistance between connector (5AG) in the test harness AG and connector (3V) in the test harness V. ***Connector & terminal*** ***Sedan model*** ***(5AG) No. 9 — (3V) No. 2:*** ***(5AG) No. 10 — (3V) No. 1:*** ***OUTBACK model*** ***(5AG) No. 8 — (3V) No. 2:*** ***(5AG) No. 10 — (3V) No. 1:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag rear harness along with body harness.
3	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR RH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals. ***Connector & terminal*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.

	Step	Check	Yes	No
4	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR RH).** 1) Disconnect the connector (2V) in the test harness V from the connector (AB28) of side airbag sensor (RH). 2) Connect the connector (AB28) of side airbag sensor (RH) and the connector (1AI) in the test harness AI. 3) Connect the connector (2AI) in the test harness AI and the connector (1V) in the test harness V. 4) Disconnect the connector (AB34) from curtain airbag sensor (RH), and connect the connector (2V) in test harness V to connector (AB34). 5) Measure the resistance between connector (3V) terminals in the test harness V. ***Connector & terminal*** ***(3V) No. 2 — (3V) No. 6:*** ***(3V) No. 1 — (3V) No. 7:***	Is the resistance less than 10 Ω?	Go to step **5**.	Replace the airbag rear harness along with body harness.
5	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR RH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals in test harness V. ***Connector & terminal*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **6**.	Replace the airbag rear harness along with body harness.
6	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Go to step **7**.	Go to step **8**.
7	**REPLACE SIDE AIRBAG SENSOR (RH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side airbag sensor (RH). <Ref. to AB-74, REMOVAL, Side Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC.	Is the system normal?	Go to step **8**.	Replace the curtain airbag sensor (RH). <Ref. to AB-80, REMOVAL, Curtain Airbag Sensor.> Replace the airbag control module if not operating normally even after replacing the sensor. <Ref. to AB-64, REMOVAL, Airbag Control Module.>
8	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BU:DTC ED SIDE SENSOR BUS RH COMMUNICATION ERROR

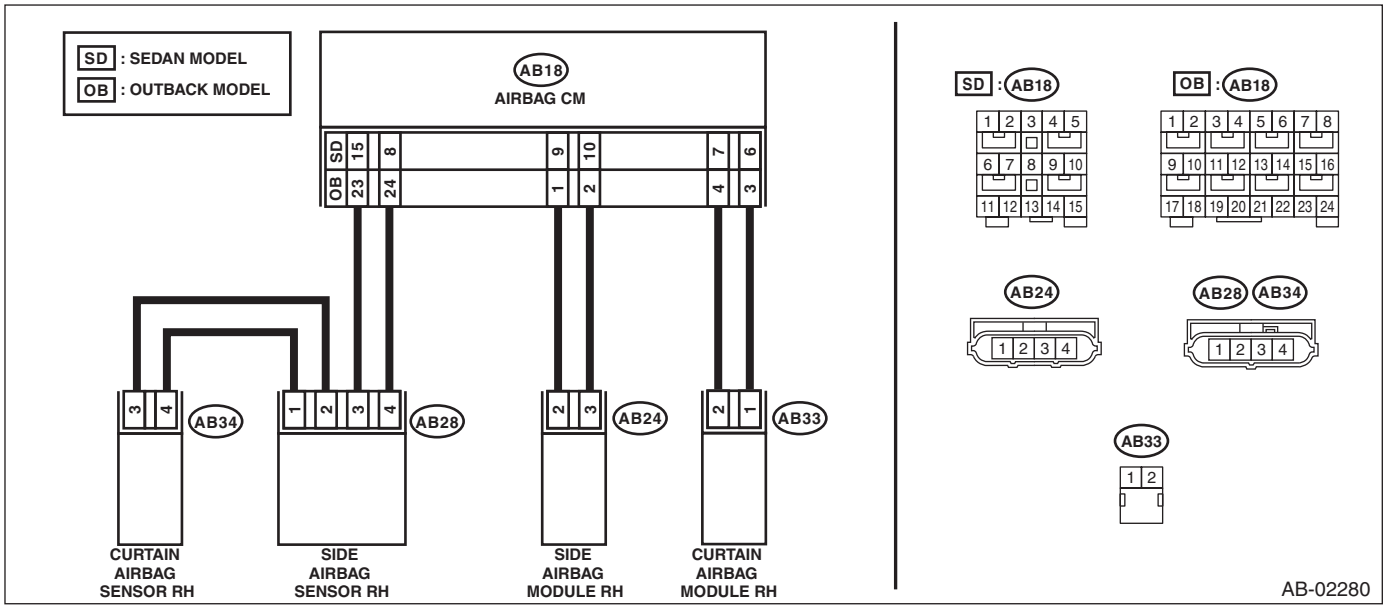
NOTE:
Refer to DTC EE for details on DTC ED. <Ref. to AB(diag)-147, DTC EE SIDE SENSOR BUS RH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>

BV:DTC EE SIDE SENSOR BUS RH COMMUNICATION ERROR

DTC DETECTING CONDITION:

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

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



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors (AB18, AB28, AB34) between the airbag control module and the curtain airbag sensor (RH).	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR (RH) AND CURTAIN AIRBAG SENSOR (RH)).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB26) from seat belt pretensioner (RH). 3) Disconnect the connector (AB33) from curtain airbag module (RH). 4) Disconnect connectors (AB25) and (AB24) from side airbag module (RH). 5) Disconnect connector (AB28) from side airbag sensor (RH). 6) Connect the connector (AB28) of side airbag sensor (RH) and the connector (1AI) in the test harness AI. 7) Connect the connector (2AI) in the test harness AI and the connector (1V) in the test harness V. 8) Disconnect the connector (AB34) from curtain airbag sensor (RH), and connect the connector (2V) in test harness V to connector (AB34). 9) Measure the resistance between connector (3V) terminals in the test harness V. ***Connector & terminal*** ***(3V) No. 2 — (3V) No. 6:*** ***(3V) No. 1 — (3V) No. 7:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag rear harness along with body harness.
3	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR RH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals in test harness V. ***Connector & terminal*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.

	Step	Check	Yes	No
4	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR (RH)).** 1) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 2) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 3) Disconnect the connector (AB28) in the side airbag sensor (RH) from the connector (1AI) in the test harness AI. 4) Disconnect the connector (2AI) in the test harness AI from the connector (1V) in the test harness V. 5) Connect the connector (AB28) of side airbag sensor (RH) and the connector (2V) in the test harness V to the connector (AB28). 6) Measure the resistance between connector (5AG) in the test harness AG and connector (3V) in the test harness V. ***Connector & terminal*** ***Sedan model*** ***(5AG) No. 9 — (3V) No. 2:*** ***(5AG) No. 10 — (3V) No. 1:*** ***OUTBACK model*** ***(5AG) No. 8 — (3V) No. 2:*** ***(5AG) No. 10 — (3V) No. 1:***	Is the resistance less than 10 Ω?	Go to step **5**.	Replace the airbag rear harness along with body harness.
5	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR RH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals. ***Connector & terminal*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **6**.	Replace the airbag rear harness along with body harness.
6	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Go to step **7**.	Go to step **8**.

	Step	Check	Yes	No
7	**REPLACE SIDE AIRBAG SENSOR (RH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side airbag sensor (RH). <Ref. to AB-74, REMOVAL, Side Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC.	Is the system normal?	Go to step **8**.	Replace the curtain airbag sensor (RH). <Ref. to AB-80, REMOVAL, Curtain Airbag Sensor.> Replace the airbag control module if not operating normally even after replacing the sensor. <Ref. to AB-64, REMOVAL, Airbag Control Module.>
8	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BW:DTC F1 SIDE SENSOR BUS LH COMMUNICATION ERROR

NOTE:
Refer to DTC F4 for details on DTC F1. <Ref. to AB(diag)-151, DTC F4 SIDE SENSOR BUS LH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>

BX:DTC F3 SIDE SENSOR BUS LH COMMUNICATION ERROR

NOTE:
Refer to DTC F4 for details on DTC F3. <Ref. to AB(diag)-151, DTC F4 SIDE SENSOR BUS LH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>

BY:DTC F4 SIDE SENSOR BUS LH COMMUNICATION ERROR

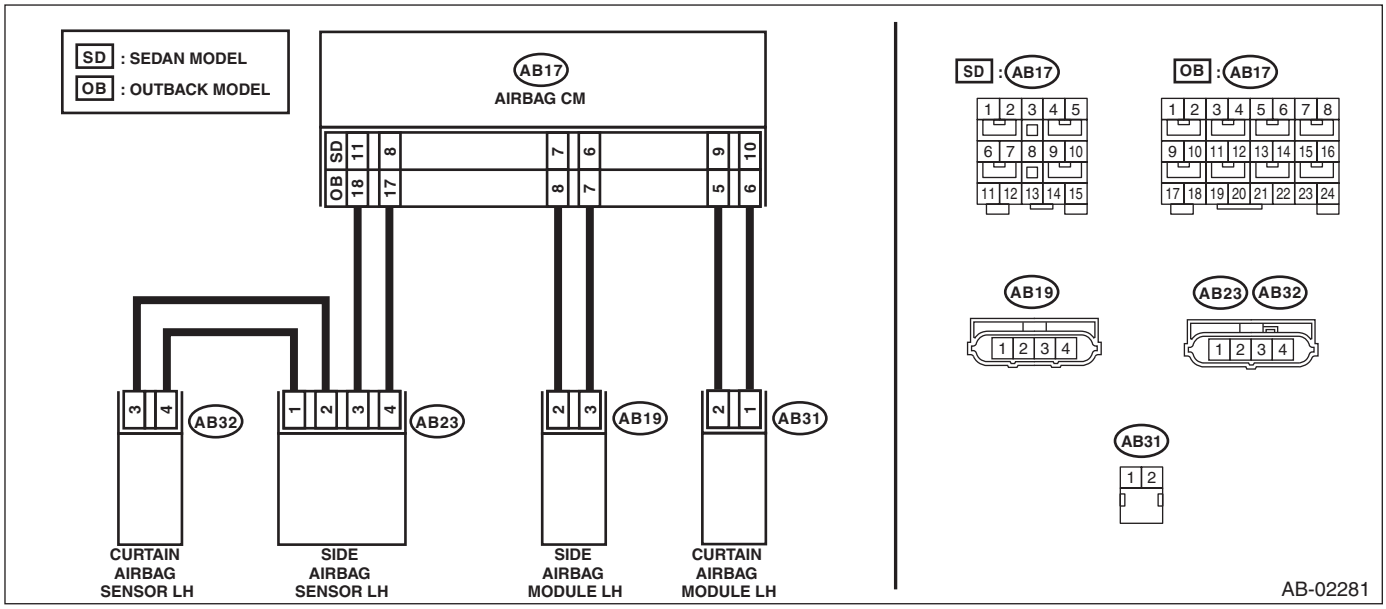
DTC DETECTING CONDITION:

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

CAUTION:

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

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors (AB17, AB23, AB32) between the airbag control module and the curtain airbag sensor (LH).	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect connectors (AB19) and (AB20) from side airbag module (LH). 5) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 6) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 7) Disconnect the connector (AB23) from side airbag sensor (LH), and connect the connector (2V) in test harness V to connector (AB23). 8) Measure the resistance between connector (5AG) in the test harness AG and connector (3V) in the test harness V. ***Connector & terminal*** ***Sedan model*** ***(5AG) No. 14 — (3V) No. 1:*** ***(5AG) No. 15 — (3V) No. 2:*** ***OUTBACK model*** ***(5AG) No. 14 — (3V) No. 1:*** ***(5AG) No. 16 — (3V) No. 2:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag rear harness along with body harness.
3	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR LH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals. ***Connector & terminal*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.

	Step	Check	Yes	No
4	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR LH AND CURTAIN AIRBAG SENSOR LH).** 1) Disconnect the connector (2V) in the test harness V from the connector (AB23) of side airbag sensor (LH). 2) Connect the connector (AB23) of side airbag sensor (LH) and the connector (1AI) in the test harness AI. 3) Connect the connector (2AI) in the test harness AI and the connector (1V) in the test harness V. 4) Disconnect the connector (AB32) from curtain airbag sensor (LH), and connect the connector (2V) in test harness V to connector (AB32). 5) Measure the resistance between connector (3V) terminals in the test harness V. ***Connector & terminal*** ***(3V) No. 2 — (3V) No. 6:*** ***(3V) No. 1 — (3V) No. 7:***	Is the resistance less than 10 Ω?	Go to step **5**.	Replace the airbag rear harness along with body harness.
5	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR LH AND CURTAIN AIRBAG SENSOR LH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) in test harness V. ***Connector & terminal*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **6**.	Replace the airbag rear harness along with body harness.
6	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Go to step **7**.	Go to step **8**.
7	**REPLACE SIDE AIRBAG SENSOR (LH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side airbag sensor (LH). <Ref. to AB-74, REMOVAL, Side Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC.	Is the system normal?	Go to step **8**.	Replace the curtain airbag sensor (LH). <Ref. to AB-80, REMOVAL, Curtain Airbag Sensor.> Replace the airbag control module if not operating normally even after replacing the sensor. <Ref. to AB-64, REMOVAL, Airbag Control Module.>
8	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using "List of Diagnostic Trouble Code (DTC)". <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

BZ:DTC F5 SIDE SENSOR BUS LH COMMUNICATION ERROR

NOTE:
Refer to DTC F6 for details on DTC F5. <Ref. to AB(diag)-155, DTC F6 SIDE SENSOR BUS LH COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>

CA:DTC F6 SIDE SENSOR BUS LH COMMUNICATION ERROR

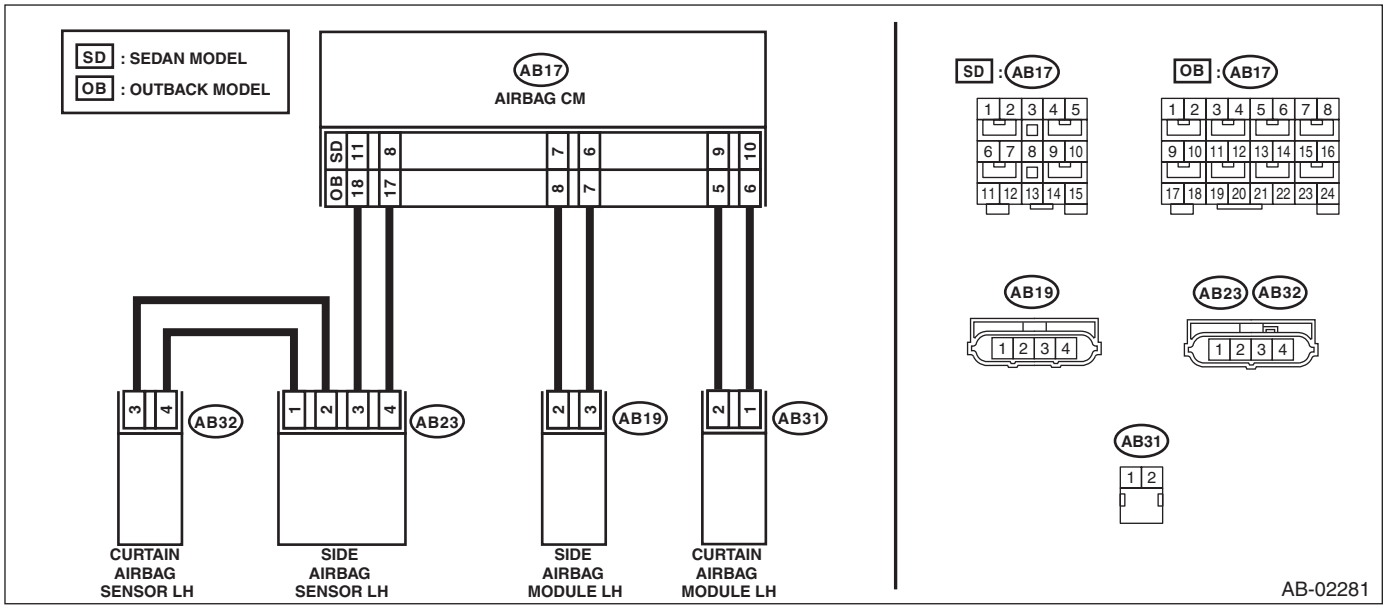
DTC DETECTING CONDITION:

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

CAUTION:

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

WIRING DIAGRAM:



Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors (AB17, AB23, AB32) between the airbag control module and the curtain airbag sensor (LH).	Is there poor contact?	Replace the airbag rear harness along with body harness.	Go to step **2**.

	Step	Check	Yes	No
2	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR LH AND CURTAIN AIRBAG SENSOR LH).** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Disconnect the connector (AB21) from seat belt pretensioner (LH). 3) Disconnect the connector (AB31) from curtain airbag module (LH). 4) Disconnect connectors (AB19) and (AB20) from side airbag module (LH). 5) Disconnect the connector (AB23) in the side airbag sensor (LH). 6) Connect the connector (AB23) of side airbag sensor (LH) and the connector (1AI) in the test harness AI. 7) Connect the connector (2AI) in the test harness AI and the connector (1V) in the test harness V. 8) Disconnect the connector (AB32) from curtain airbag sensor (LH), and connect the connector (2V) in test harness V to connector (AB32). 9) Measure the resistance between connector (3V) terminals in the test harness V. ***Connector & terminal*** ***(3V) No. 2 — (3V) No. 6:*** ***(3V) No. 1 — (3V) No. 7:***	Is the resistance less than 10 Ω?	Go to step **3**.	Replace the airbag rear harness along with body harness.
3	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR AND CURTAIN AIRBAG SENSOR LH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals in test harness V. ***Connector & terminal*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **4**.	Replace the airbag rear harness along with body harness.

	Step	Check	Yes	No
4	**CHECK AIRBAG REAR HARNESS (BETWEEN AIRBAG CONTROL MODULE AND SIDE AIRBAG SENSOR LH).** 1) Disconnect the connectors (AB17, AB6, and AB18) from airbag control module. 2) Connect the connector (1AG) in the test harness AG to the connectors (AB6, AB17, and AB18). NOTE: For sedan models, connect test harness AH between the connectors (AB6, AB17, AB18) and (1AG). 3) Disconnect the connector (AB23) in the side airbag sensor (LH) from the connector (1AI) in the test harness AI. 4) Disconnect the connector (2AI) in the test harness AI from the connector (1V) in the test harness V. 5) Connect the connector (2V) in the test harness V to the connector (AB23). 6) Measure the resistance between connector (5AG) in the test harness AG and connector (3V) in the test harness V. ***Connector & terminal*** ***Sedan model*** ***(5AG) No. 14 — (3V) No. 1:*** ***(5AG) No. 15 — (3V) No. 2:*** ***OUTBACK model*** ***(5AG) No. 14 — (3V) No. 1:*** ***(5AG) No. 16 — (3V) No. 2:***	Is the resistance less than 10 Ω?	Go to step **5**.	Replace the airbag rear harness along with body harness.
5	**CHECK AIRBAG REAR HARNESS (BETWEEN SIDE AIRBAG SENSOR LH AND CURTAIN AIRBAG SENSOR LH).** Measure the resistance between connector (3V) in test harness V and chassis ground, and the resistance between connector (3V) terminals in test harness V. ***Connector & terminal*** ***(3V) No. 1 — Chassis ground:*** ***(3V) No. 2 — Chassis ground:*** ***(3V) No. 1 — (3V) No. 2:***	Is the resistance 1 MΩ or more?	Go to step **6**.	Replace the airbag rear harness along with body harness.
6	**CHECK AIRBAG CONTROL MODULE.** 1) Connect all connectors. 2) Clear the memory. 3) Perform the Inspection Mode. 4) Read the DTC.	Is the same DTC displayed?	Go to step **7**.	Go to step **8**.
7	**REPLACE SIDE AIRBAG SENSOR (LH) AND CHECK AIRBAG CONTROL MODULE AFTER REPLACEMENT.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more. 2) Replace the side airbag sensor (LH). <Ref. to AB-74, REMOVAL, Side Airbag Sensor.> 3) Connect all connectors. 4) Clear the memory. 5) Perform the Inspection Mode. 6) Read the DTC.	Is the system normal?	Go to step **8**.	Replace the curtain airbag sensor (LH). <Ref. to AB-80, REMOVAL, Curtain Airbag Sensor.> Replace the airbag control module if not operating normally even after replacing the sensor. <Ref. to AB-64, REMOVAL, Airbag Control Module.>

Step		Check	Yes	No
8	**CHECK FOR ANY OTHER DTC ON DISPLAY.**	Is any other DTC displayed?	Check DTC using “List of Diagnostic Trouble Code (DTC)”. <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).>	Finish the diagnosis.

1. Basic Diagnostic Procedure

A: PROCEDURE

Step		Check	Yes	No
1	**CHECK WARNING LIGHT.** Check whether the airbag warning light in the combination meter is lit.	Does the airbag warning light illuminate?	Go to step **2**.	Perform the diagnosis according to phenomenon of the problem.
2	**READ DTC.** 1) Turn the ignition switch to OFF. 2) Connect the Subaru Select Monitor to data link connector. 3) Turn the ignition switch to ON and run the Subaru Select Monitor. 4) Read the DTC. <Ref. to OD(diag)-11, OPERATION, Read Diagnostic Trouble Code (DTC).> NOTE: If the communication function of the Subaru Select Monitor cannot be executed normally, check the communication circuit. <Ref. to AB(diag)-26, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, INSPECTION, Subaru Select Monitor.> 5) Record all DTCs and freeze frame data.	Is DTC displayed?	Go to step **3**.	Go to “Airbag Warning Light Failure”<Ref. to AB(diag)-34, Airbag Warning Light Failure.>.
3	**PERFORM DIAGNOSIS.** 1) Determine the possible cause “List of Diagnostic Trouble Code (DTC)”<Ref. to OD(diag)-18, List of Diagnostic Trouble Code (DTC).>. 2) Inspect the DTC using “List of Diagnostic Trouble Code (DTC)”. 3) Repair the trouble cause. 4) Perform the Clear Memory Mode. <Ref. to OD(diag)-13, Clear Memory Mode.> 5) Perform the Inspection Mode. <Ref. to OD(diag)-12, Inspection Mode.> 6) Read any other DTCs displayed.	Is DTC displayed?	Perform the procedure 1) to 5) in step 3.	Finish the diagnosis.

2. Check List for Interview

A: CHECK

Customer's name		Inspector's name	
Date vehicle brought in	/ /	Registration No.	
Odometer reading	km miles	V.I.N.	
Date problem occurred	/ /	Registration year	/ /
Weather	❑ Fine ❑ Cloudy ❑ Rainy ❑ Snowy ❑ Others :		
Temperature	°C (°F)		
Road condition	❑ Flat road ❑ Uphill ❑ Downhill ❑ Gravel road ❑ Others :		
Vehicle operation	❑ Starting ❑ Idling ❑ Driving ❑ Constant speed ❑ Accelerating ❑ Decelerating ❑ Turning ❑ Others :		
Details of problem			
Airbag warning light operation	❑ Normal (After turning the ignition switch to ON, illuminates for 6 seconds then goes off.) ❑ Remains ON ❑ Remains OFF		
Passenger's airbag ON/OFF indicator does not operate.	❑ Normal (After turning the ignition switch to ON, illuminates for 6 seconds then goes off for 2 seconds; Lights ON (adult) or OFF (children/unoccupied).) ❑ Both remain ON ❑ Both remain OFF		
DTC output	❑ OK code ❑ DTC: (Code:)		

3. General Description

A: CAUTION

1) If the seat cushion cover is removed or replaced, make sure to perform the occupant detection system adjustment after installing the seat to the vehicle. <Ref. to OD(diag)-15, System Calibration (Rezeroing).> Failure to do so may cause improper operation of the occupant detection system.
2) The occupant detection system (passenger seat only) control module and the occupant detection sensor are fixed to the seat cushion frame. Never remove the occupant detection control module or the occupant detection sensor from the seat cushion frame.
3) Do not replace the seat cushion pad by itself. Always replace the seat cushion pad & frame assembly as a set. The seat cushion pad and cushion frame are adjusted as a set at the time of manufacture. If cushion pads and cushion frames are combined from those of other vehicles or other sets, the occupant detection system may not operate properly.
4) If the seat cushion cover is removed, make sure to replace the hang wire on the seat cushion cover side with a new wire.
5) Never connect the battery in reverse polarity. Occupant detection system may be destroyed instantly.
6) Do not disconnect the battery terminals while the engine is running. A large counter electromotive force will be generated in the generator, and this voltage may damage electronic parts such as occupant detection control module.
7) Before disconnecting the connectors of each sensor and control module, be sure to turn the ignition switch to OFF and wait for 60 seconds or more. Occupant detection control module may be damaged.
8) Every occupant detection system-related part is a precision part. Do not drop them.

CAUTION:
• Do not use electrical test devices on airbag system wiring harnesses or connector circuits.
• Be careful not to damage the airbag system wiring harness, when servicing the occupant detection system.
• Refer to CAUTION in Airbag System when repairing occupant detection system. <Ref. to AB-9, CAUTION, General Description.>

B: INSPECTION

Measure the battery voltage and check electrolyte.

Standard voltage:
12 V

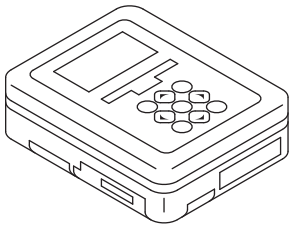
Specific gravity:
1.260 or more

Fluid level:
Between the upper level and lower level

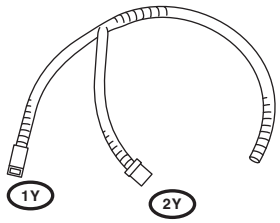
C: PREPARATION TOOL

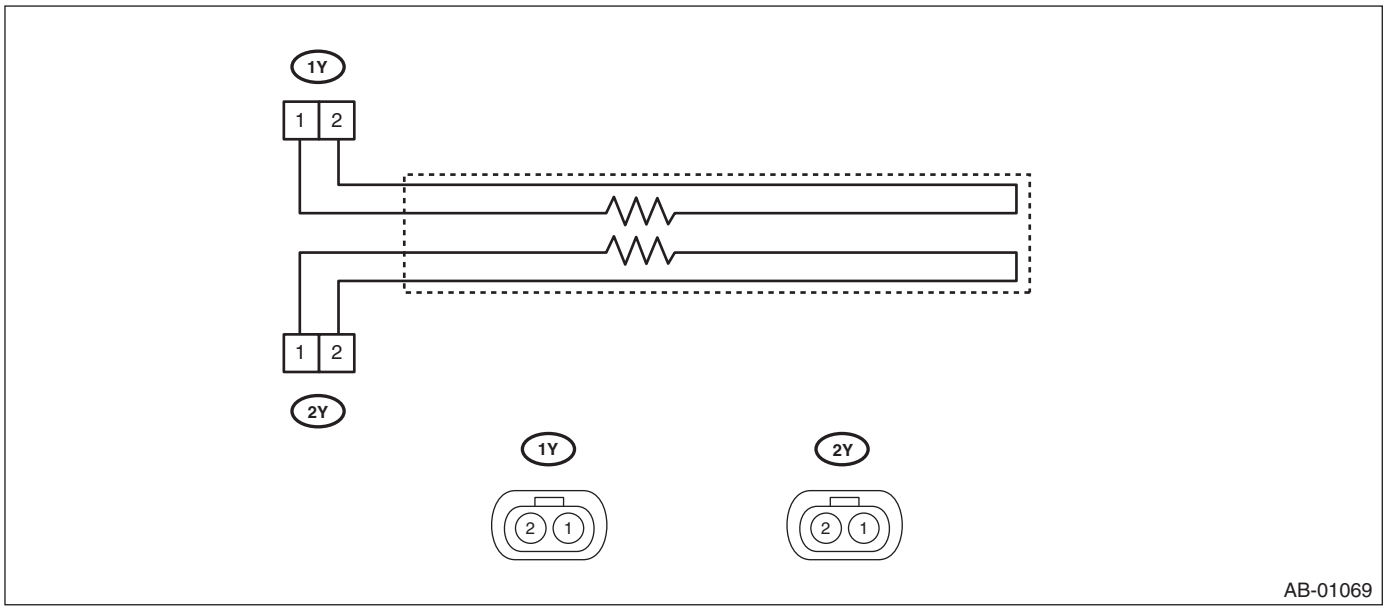
CAUTION:
To measure the voltage and resistance of airbag system and occupant detection system components, be sure to use the specified test harness.

1. SPECIAL TOOL

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

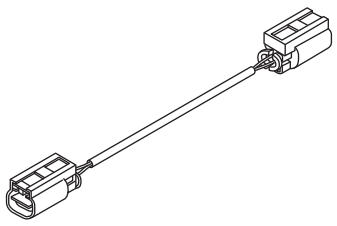
- TEST HARNESS Y

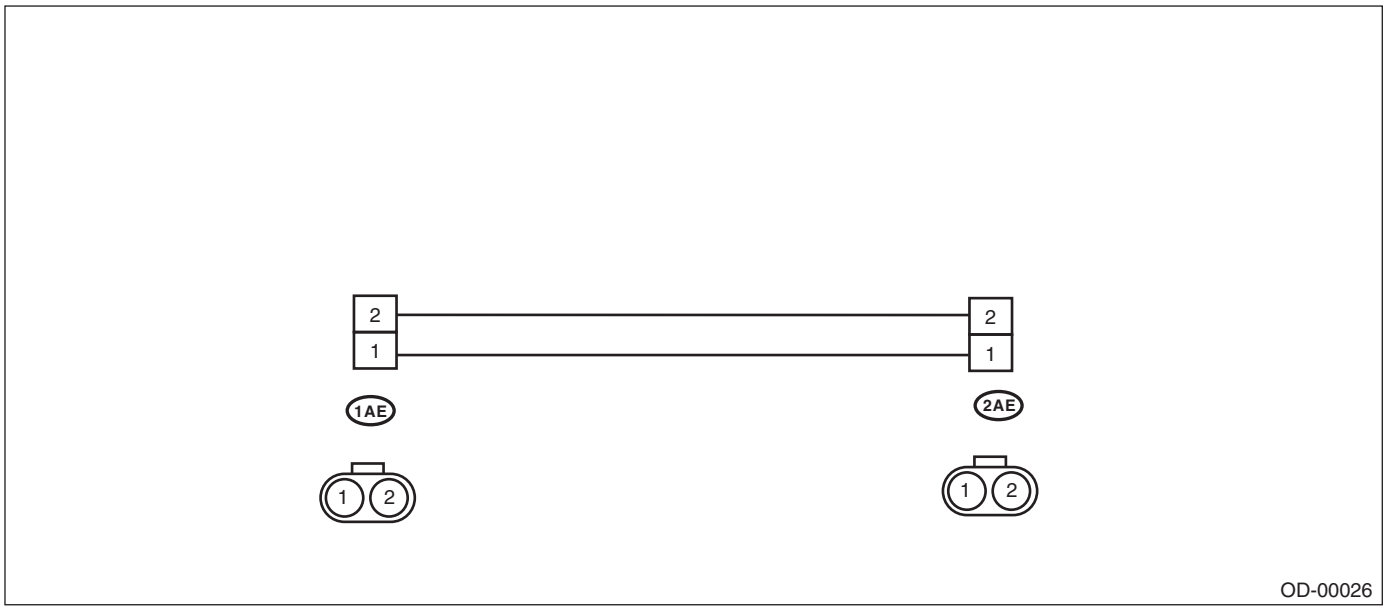
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299AG040	98299AG040	TEST HARNESS Y	Used for troubleshooting seat belt buckle switch.



AB-01069

- TEST HARNESS AE

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299XA030	98299XA030	TEST HARNESS AE	TEST HARNESS Y ADAPTER HARNESS Used for troubleshooting seat belt buckle switch.

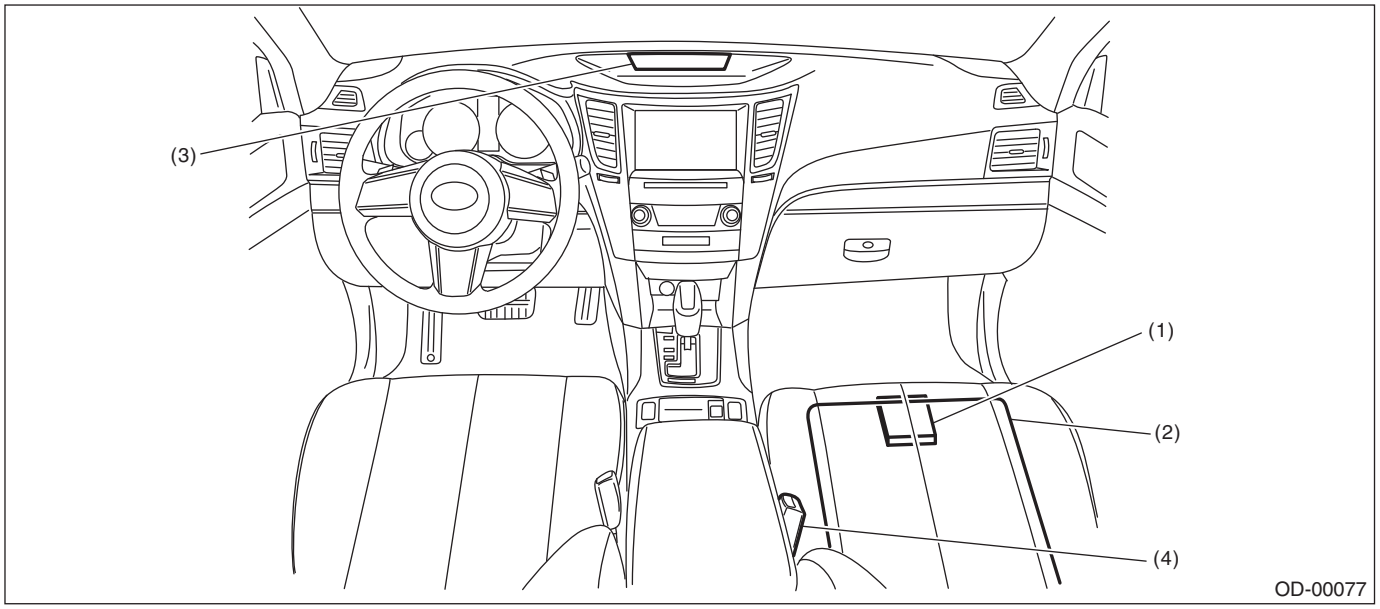


2. GENERAL TOOL

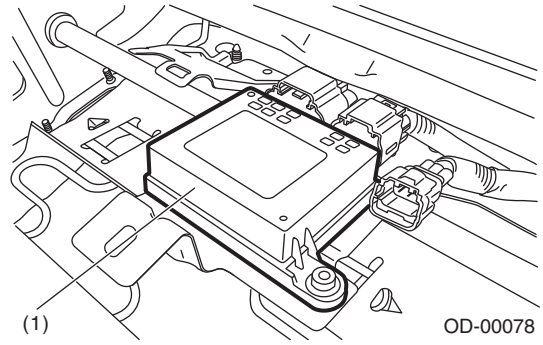
TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance, voltage and current.

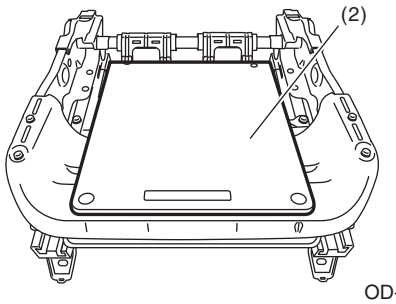
4. Electrical Component Location

A: LOCATION



(1) Occupant detection control module
(2) Occupant detection sensor
(3) Airbag ON/OFF indicator light
(4) Buckle switch (passenger's side)





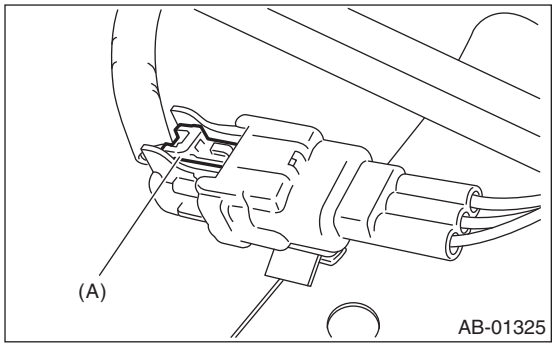
5. Airbag Connector

A: PROCEDURE

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

1) How to disconnect:
Push the lock arm (A), and disconnect the connector.

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



2) How to connect:
Holding the connector, push it in securely until a clicking sound is heard.

CAUTION:
Be sure to insert the connector in until it is locked. Then pull it gently to make sure that it is locked.

2. AIRBAG CONTROL MODULE

Refer to Airbag System section. <Ref. to AB-19, AIRBAG CONTROL MODULE, PROCEDURE, Airbag Connector.>

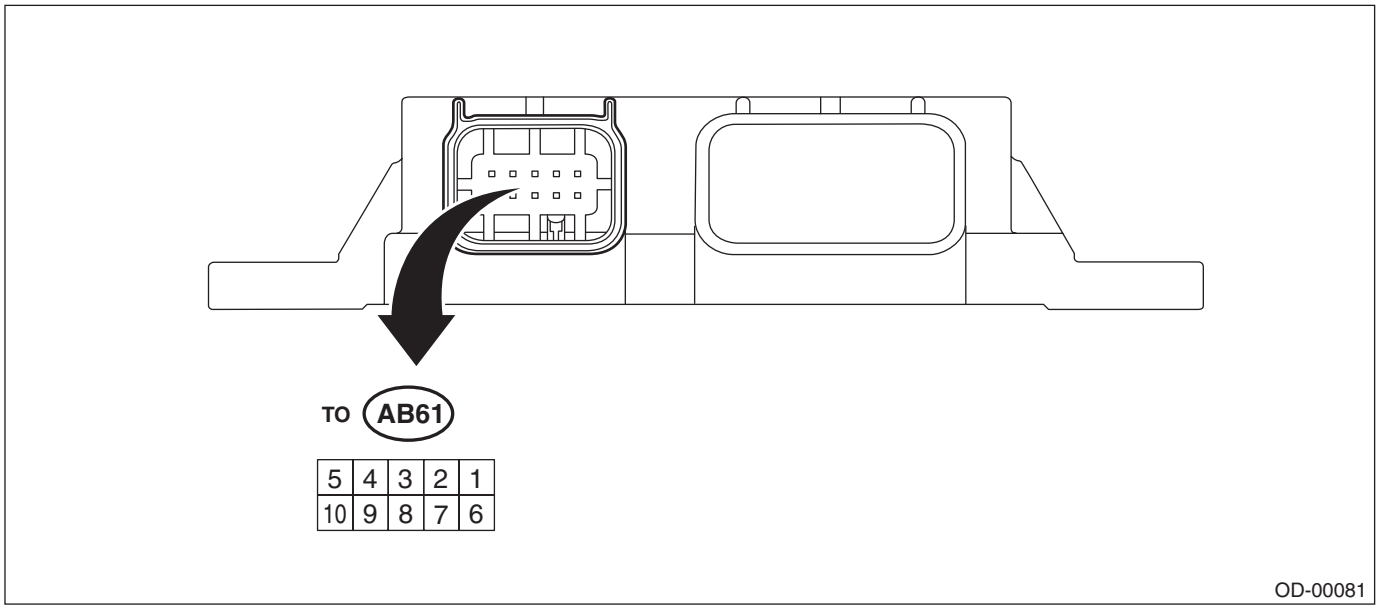
3. BUCKLE SWITCH RH

Refer to Airbag System section. <Ref. to AB-25, BUCKLE SWITCH RH, PROCEDURE, Airbag Connector.>

6. Control Module I/O Signal

A: ELECTRICAL SPECIFICATION

CAUTION:
Never remove the occupant detection control module, occupant detection sensor or seat frame, because they are integrated into one unit.



Terminal name	Terminal No.	Input/output value	Remarks
IG – power supply	5	9 — 16 V	When ignition switch is ON
Airbag control module communication (COM)	3	Open collector terminal	Communication line
Airbag control module communication (GND)	4	0 V	Ground
Buckle switch	9	0 — IG voltage	Ignition voltage when switch is ON
Buckle switch (GND)	8	0 V	Switch ground

B: WIRING DIAGRAM

Refer to the electrical wiring diagram. <Ref. to WI-172, WIRING DIAGRAM, Occupant Detection System.>

7. Subaru Select Monitor

A: OPERATION

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

B: INSPECTION

1. COMMUNICATION FOR INITIALIZING IMPOSSIBLE

DETECTING CONDITION:
Defective harness connector
TROUBLE SYMPTOM:
Communication is impossible between the airbag control module and the Subaru Select Monitor.
Refer to “Communication for Initializing Impossible” in AIRBAG SYSTEM (DIAGNOSTICS). <Ref. to AB(diag)-26, COMMUNICATION FOR INITIALIZING IMPOSSIBLE, INSPECTION, Subaru Select Monitor.>

8. Read Diagnostic Trouble Code (DTC)

A: OPERATION

Read out the DTC stored in airbag control module. For operation procedures, refer to AIRBAG SYSTEM (DIAGNOSTICS). <Ref. to AB(diag)-29, OPERATION, Read Diagnostic Trouble Code (DTC).>

NOTE:
For details concerning DTCs, refer to the List of Diagnostic Trouble Code (DTC) (airbag system, occupant detection system). <Ref. to AB(diag)-38, List of Diagnostic Trouble Code (DTC).> <Ref. to OD(diag)-18, List of Diagnostic Trouble Code (DTC).>

9. Inspection Mode

A: PROCEDURE

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

10.Clear Memory Mode

A: OPERATION

For operation procedures, refer to AIRBAG SYSTEM (DIAGNOSTICS). <Ref. to AB(diag)-31, OPERATION, Clear Memory Mode.>

11.Display of Status Information

A: OPERATION

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

Items	Display
Seat position sensor LH	—*2
Seat position sensor RH	—*2
Seat belt buckle switch LH	—*6
Seat belt buckle switch RH	Fastened*3/Not fastened*4/Other*5/Initial setting*1/—*6
Passenger's airbag control status	ON*7/OFF*8/Initial setting*1

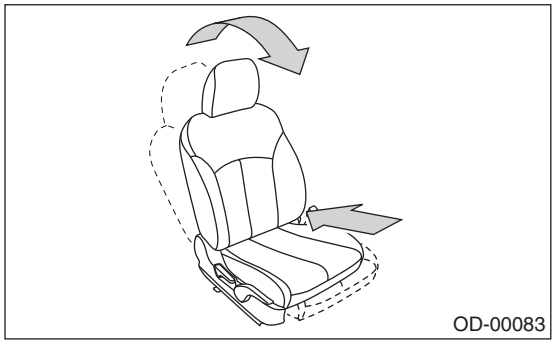
*1: Displayed when it is initial
*2: Seat position sensor not supported
*3: Seat belt fastened
*4: Seat belt not fastened
*5: Displayed when data other than belt fastened or not fastened, such as breakdown, is input
*6: Seat belt buckle switch not supported
*7: Passenger's airbag operating state
*8: Passenger's airbag non-operating state

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

12.System Calibration (Rezeroing)

A: OPERATION

NOTE:
When replacing the occupant detection system, or removing and disassembling the passenger seat, always perform the system calibration after installing a seat to the vehicle.
1) Park empty vehicle on a level surface.
2) On «Main Menu» display, select {Each System Check}.
3) On «System Selection Menu» display, select {Occupant Detection System}.
4) On {Occupant Detection System} display, select {Re-zeroing}.
5) «See service manual. And check vehicle condition for successfully completing the rezeroing» is displayed. Check the following to adjust the condition of the vehicle.
• Adjust the seat backrest to be fully upright. (For models with power seats, press the power seat button until the backrest comes to a stop.)
• Adjust the seat slide position all the way back. (For models with power seats, press the power seat button until the seat slide does not move any further.)
• Do not place anything on the top of the seat cushion.
• Sit on the seat cushion to smooth the seat surface.
• Check that the passenger's seat belt is not inserted into the buckle, not tense or not stuck.
• Check that ambient temperature is in a range from 0 to 40°C.
6) When the «Re-zeroing Adjust the passenger seat to the condition shown in service manual» is displayed, slide the passenger seat all the way to the back, check that the backrest is adjusted to all the way up, and select the [OK].



7) When «Re-zeroing Unbelt the passenger seat belt Continue: OK, Quit: NO» is displayed, make sure that the passenger's seat belt is disconnected from the buckle, and select [OK].
8) When «Re-zeroing Empty the passenger seat Continue: OK, Quit: NO» is displayed, make sure that the passenger seat is empty, airbag OFF indicator illuminates and airbag ON indicator does not illuminate, and select [OK].

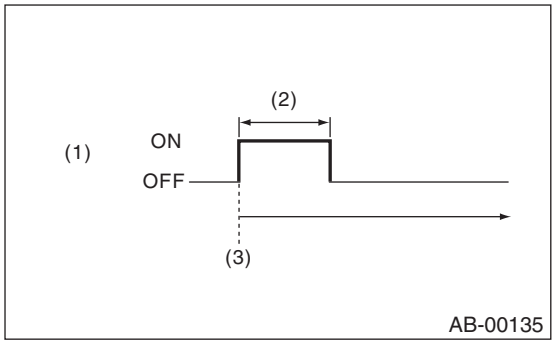
NOTE:
• After selecting [OK], «In process...Please wait for a while without touching vehicle» is displayed. Do not touch or rock the vehicle while the message is displayed.
• During the system calibration process, if «Re-zeroing is unsuccessful See service manual Press "OK" to END» is displayed, go to step 10).
9) When the re-zeroing is ended normally, «Re-zeroing is successfully completed Press "OK" to END» is displayed. And then turn the ignition switch OFF to end.
10) During the system calibration process, if «Re-zeroing is unsuccessful See service manual Press "OK" to END» is displayed, turn the ignition switch to OFF once and turn it to ON again, then read the DTC of the airbag system. <Ref. to OD(diag)-11, Read Diagnostic Trouble Code (DTC).>
When DTC is input, fix the fault and then perform the system calibration. When DTC is not input, check the seat and vehicle status, and then perform the system calibration again. <Ref. to OD(diag)-15, System Calibration (Rezeroing).>

NOTE:
When the re-zeroing is unsuccessful, there could be occupant detection system failure or improper seat and vehicle status. When the airbag warning light illuminates, read the DTC of the airbag system, and perform the diagnosis while referring to List of Diagnostic Trouble Code (DTC). <Ref. to OD(diag)-11, Read Diagnostic Trouble Code (DTC).> <Ref. to AB(diag)-38, LIST, List of Diagnostic Trouble Code (DTC).>

13. Airbag Warning Light Illumination Pattern

A: INSPECTION

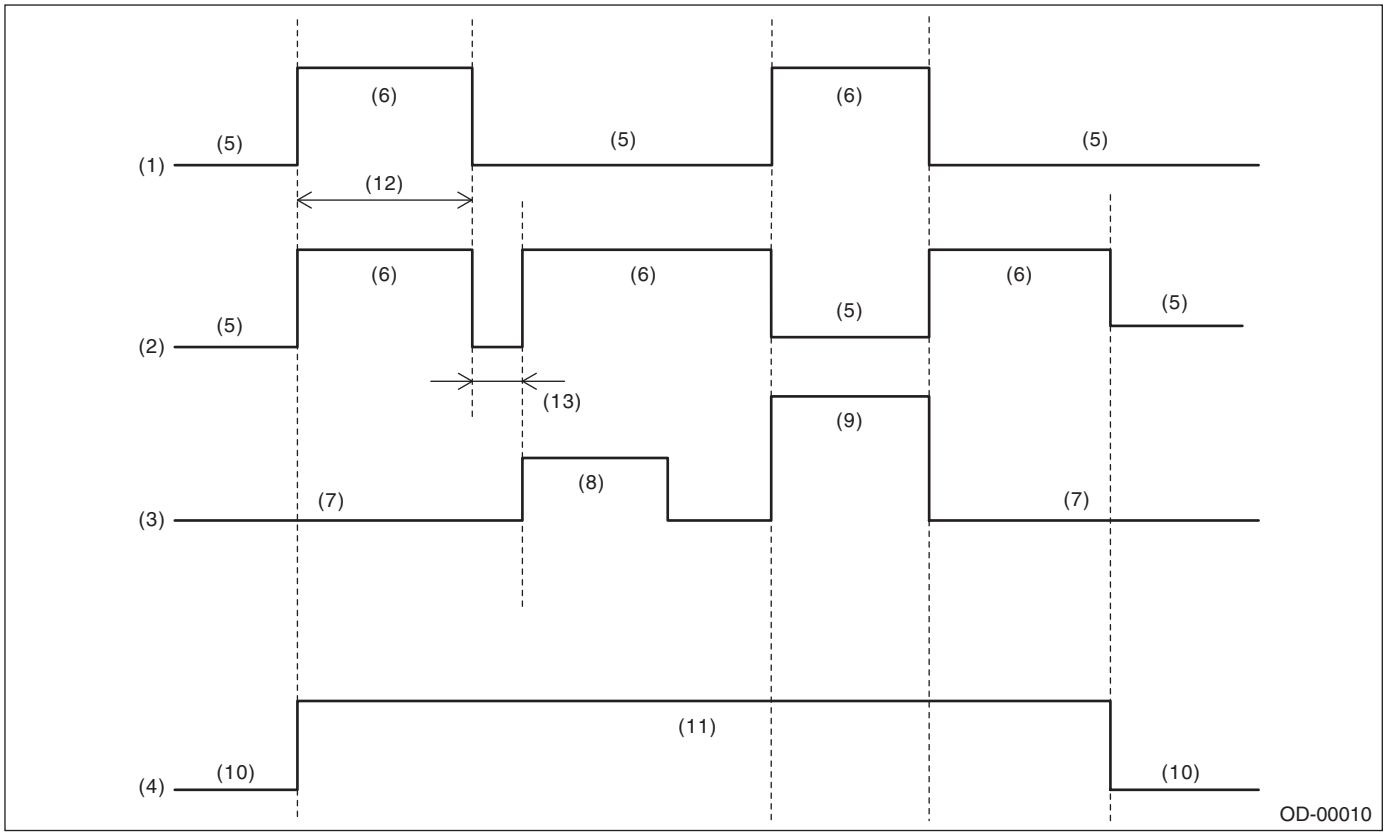
Turn the ignition switch to ON, and confirm that the airbag warning light remains on for approx. 6 seconds and then goes off afterwards.



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

14.Passenger's Airbag ON/OFF Indicator Light Illumination Pattern

A: INSPECTION



(1)	Passenger's airbag ON indicator light	(6)	Light ON	(10)	OFF
(2)	Passenger's airbag OFF indicator light	(7)	Empty	(11)	ON
(3)	Occupant seating	(8)	Child	(12)	Approx. 6 sec.
(4)	Ignition switch	(9)	Adult	(13)	Approx. 2 sec.
(5)	Light OFF				

15.List of Diagnostic Trouble Code (DTC)

A: LIST

DTC	Display	Content of diagnosis	Reference
27	ODS Communication Error	• Occupant detection control module and airbag control module communication is faulty. • Airbag rear harness circuit is open, shorted, shorted to ground or shorted to power supply. • Occupant detection harness is faulty. • Occupant detection system is faulty. • Airbag control module is faulty.	<Ref. to OD(diag)-19, DTC 27 ODS COMMUNICATION ERROR, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
29	ODS Failure	• Occupant detection sensor is faulty. • Occupant detection control module is faulty. • Occupant detection harness is faulty. • Fuse No. 25 (in joint box) is blown.	<Ref. to OD(diag)-19, DTC 29 ODS FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
2A	ODS Calibration Error	• Occupant detection control module is faulty. • Calibration of occupant detection control module is initial setting or faulty.	<Ref. to OD(diag)-20, DTC 2A ODS CALIBRATION ERROR, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
2B	ODS System Wrong Parts	• Specification of occupant detection control module is improper. • Occupant detection control module is faulty.	<Ref. to OD(diag)-20, DTC 2B ODS SYSTEM WRONG PARTS, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>
37	Buckle Switch RH Failure	• Passenger's buckle switch circuit is open, shorted or shorted to ground. • Occupant detection system is faulty. • Occupant detection harness is faulty.	<Ref. to OD(diag)-21, DTC 37 BUCKLE SWITCH RH FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>

16.Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: DTC 27 ODS COMMUNICATION ERROR

Perform the diagnosis following diagnostic procedures for the airbag system. <Ref. to AB(diag)-65, DTC 27 ODS COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>

B: DTC 29 ODS FAILURE

DTC DETECTING CONDITION:

- Occupant detection sensor is faulty.
- Occupant detection control module is faulty.
- Occupant detection harness is faulty.
- Rear airbag harness (RH) is faulty.
- Fuse No. 25 (in fuse box) is blown out.

	Step	Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the occupant detection control module and the airbag control module.	Is there poor contact?	Reconnect the connectors. If the fault is not fixed, replace the airbag harness.	Go to step **2**.
2	**CHECK DIAGNOSTIC TROUBLE CODE (DTC).** Read DTC of the airbag system.	Is another DTC displayed?	Perform the diagnosis according to DTC.	Check the seat harness, and if any fault is found, replace the seat harness. If the fault is not fixed, replace the occupant detection system. <Ref. to SE-21, DRIVER SEAT (POWER SEAT), DISASSEMBLY, Front Seat.>

C: DTC 2A ODS CALIBRATION ERROR

DTC DETECTING CONDITION:

- Calibration of occupant detection control module is initial setting or faulty.
- Occupant detection control module is faulty.

	Step	Check	Yes	No
1	**CHECK DIAGNOSTIC TROUBLE CODE (DTC).** Read the DTC of the airbag system using the Subaru Select Monitor.	Is DTC other than 2A displayed?	Perform the diagnosis according to the displayed DTC.	Go to step **2**.
2	**PERFORM RE-ZEROING.** Perform system calibration using the Subaru Select Monitor. <Ref. to OD(diag)-15, System Calibration (Rezeroing).>	Did the system calibration complete properly?	Go to step **3**.	Replace the occupant detection system. <Ref. to SE-21, DRIVER SEAT (POWER SEAT), DISASSEMBLY, Front Seat.>
3	**CHECK DIAGNOSTIC TROUBLE CODE (DTC).** 1) Turn the ignition switch to OFF and wait for at least 60 seconds. 2) Turn the ignition switch to ON, and then read the DTC of the airbag system.	Is DTC other than DTC 2A displayed?	Perform the diagnosis according to the displayed DTC.	When DTC is 2A, replace the occupant detection system. <Ref. to SE-21, DRIVER SEAT (POWER SEAT), DISASSEMBLY, Front Seat.> When DTC is not displayed, end the diagnosis.

CAUTION:
When DTC other than DTC 2A is present, system calibration (re-zeroing) cannot be completed normally.
When occupant detection system DTC other than DTC 2A is present (27, 29, 2B, 37), perform the diagnosis of the DTCs other than 2A first.

D: DTC 2B ODS SYSTEM WRONG PARTS

DTC DETECTING CONDITION:

- Wrong occupant detection control module is installed.
- Occupant detection control module is faulty.

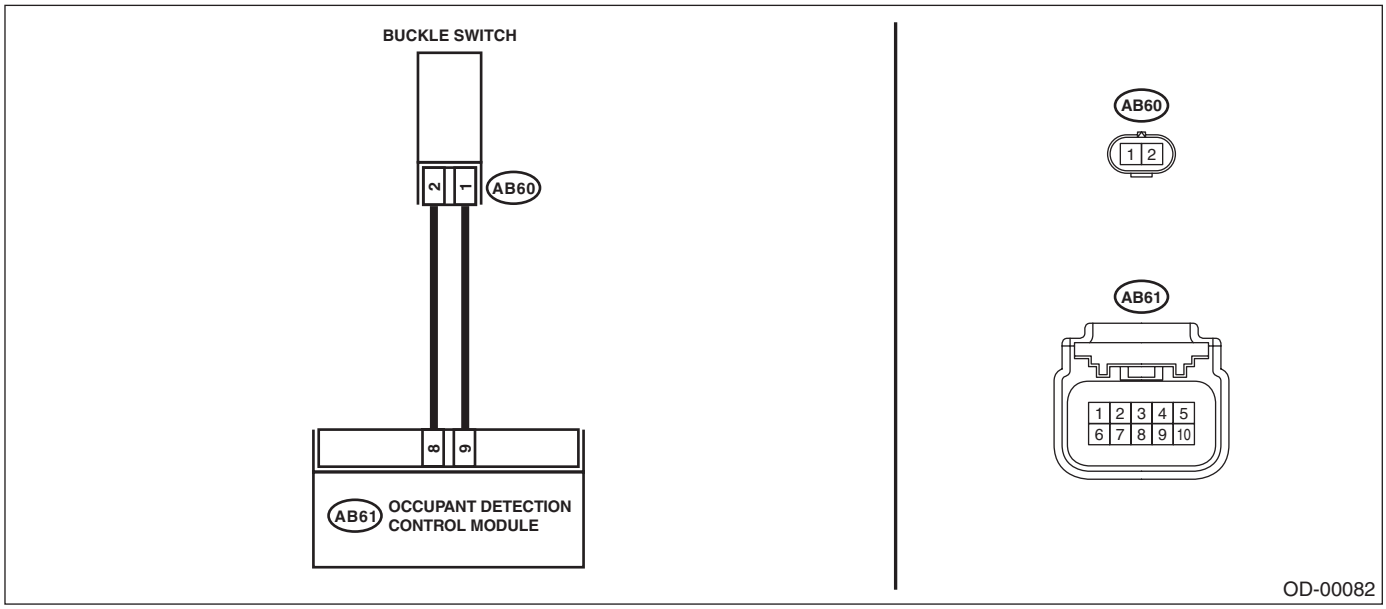
When DTC 2B is displayed, the occupant detection control module is faulty.
Replace the occupant detection control module with a genuine occupant detection control module.

E: DTC 37 BUCKLE SWITCH RH FAILURE

DTC DETECTING CONDITION:

- Passenger's buckle switch circuit is open, shorted or shorted to ground.
- Seat harness circuit is open, shorted or shorted to ground.
- Occupant detection control module is faulty.

WIRING DIAGRAM:

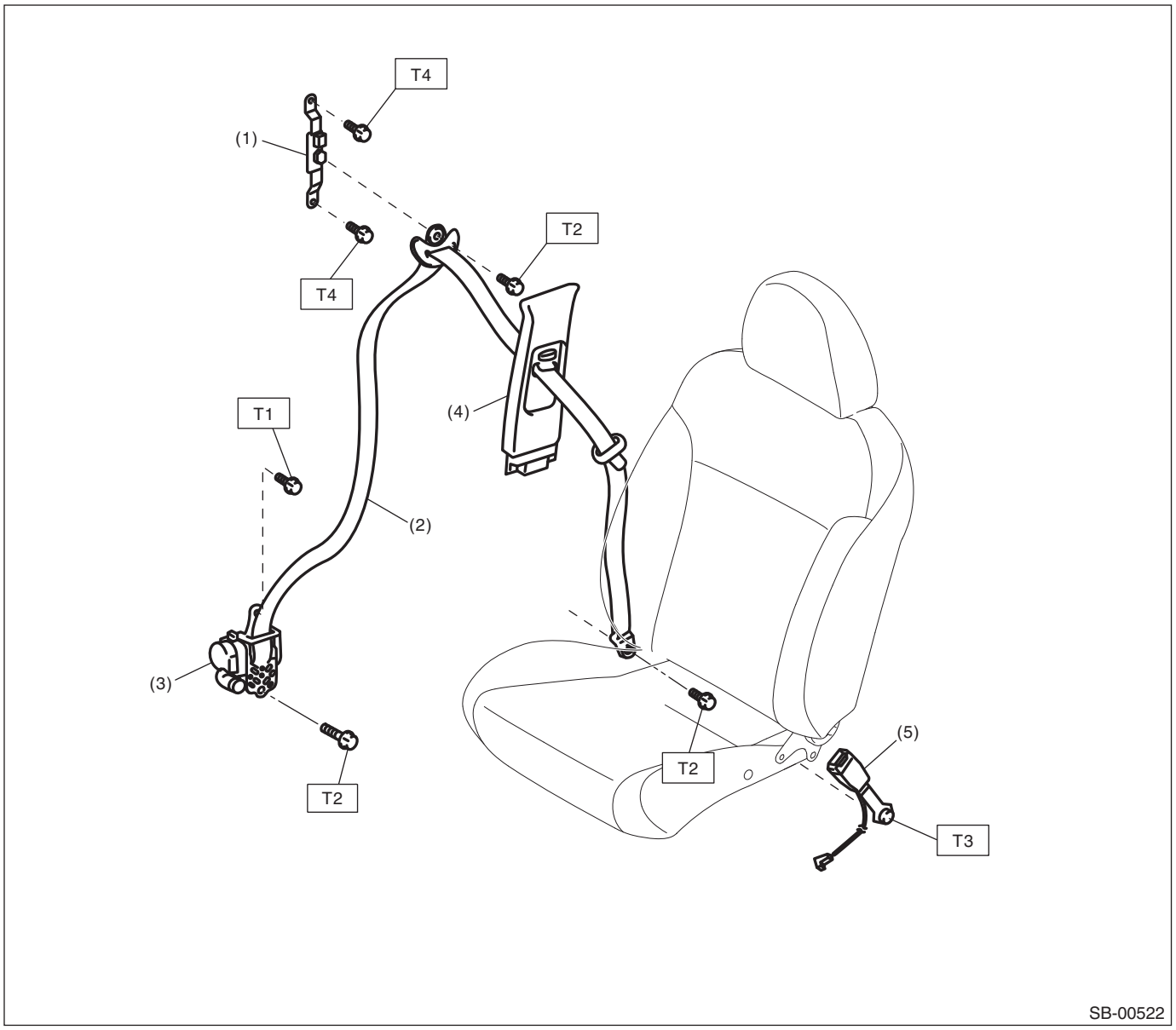


Step		Check	Yes	No
1	**CHECK POOR CONTACT OF CONNECTORS.** Check for poor contact of the connectors between the occupant detection control module and buckle switch.	Is there poor contact?	Reconnect the connectors. If the fault is not fixed, replace the airbag harness.	Go to step **2**.
2	**CHECK BUCKLE SWITCH.** 1) Turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds. 2) Disconnect the buckle switch connector (AB60). 3) Connect the test harness AE and test harness connector Y to buckle switch connector (AB60). 4) Connect the battery ground terminal and turn the ignition switch to ON.	Does the airbag warning light illuminate for 6 seconds and go off?	Replace the buckle switch. <Ref. to SB-17, OUTER BELT ASSY, REMOVAL, Front Seat Belt.>	Check the seat harness, and if any fault is found, replace the seat harness. If the fault is not fixed, replace the occupant detection system.

1. General Description

A: COMPONENT

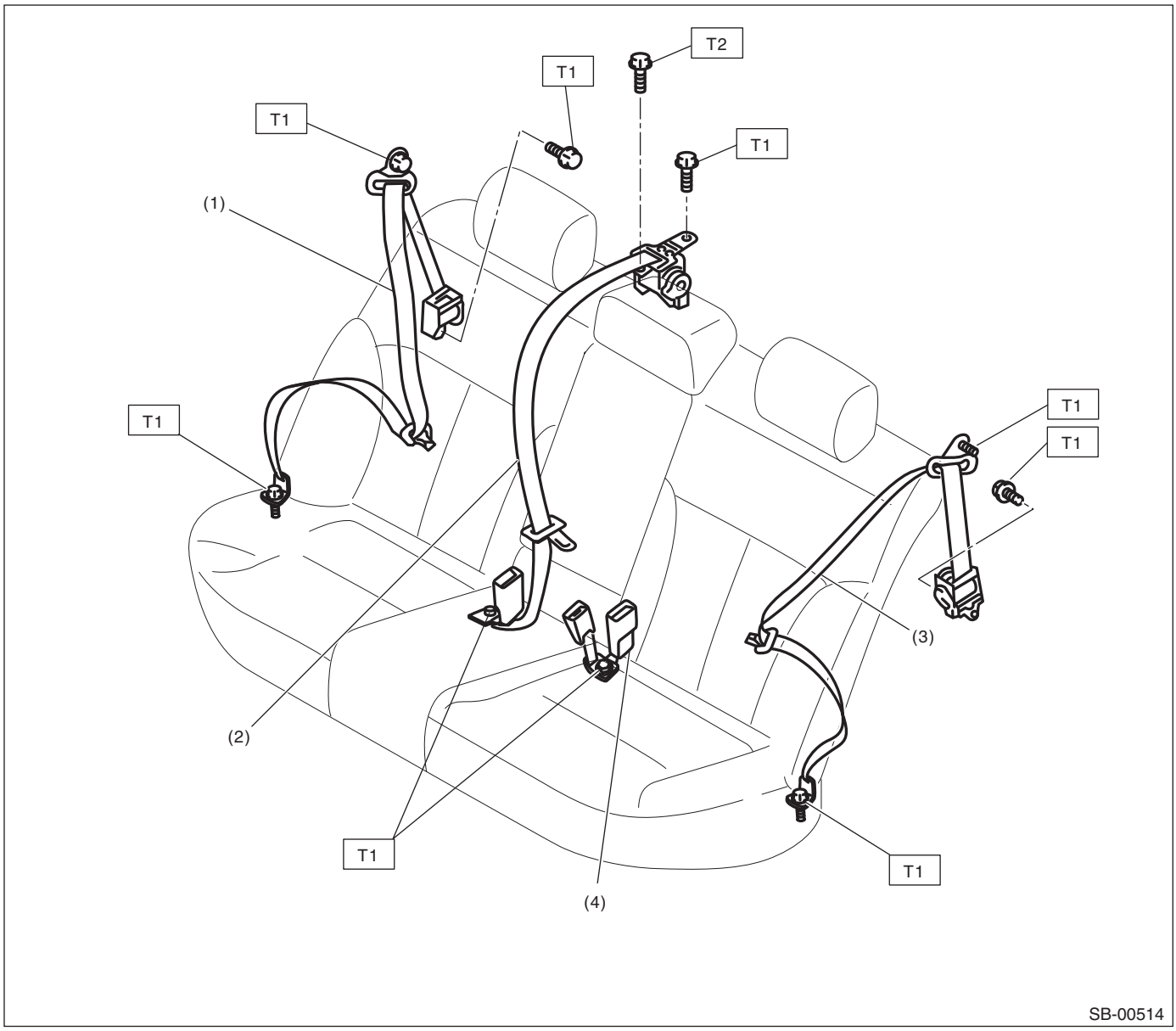
1. FRONT SEAT BELT



(1) Adjustable anchor ASSY
(2) Outer belt ASSY
(3) Seat belt retractor ASSY (Outer belt ASSY)
(4) Center pillar trim UPR
(5) Inner belt ASSY

Tightening torque:N·m (kgf-m, ft-lb)
T1: 7.5 (0.76, 5.5)
T2: 30 (3.06, 22.1)
T3: 38 (3.87, 28.0)
T4: 53 (5.4, 39.1)

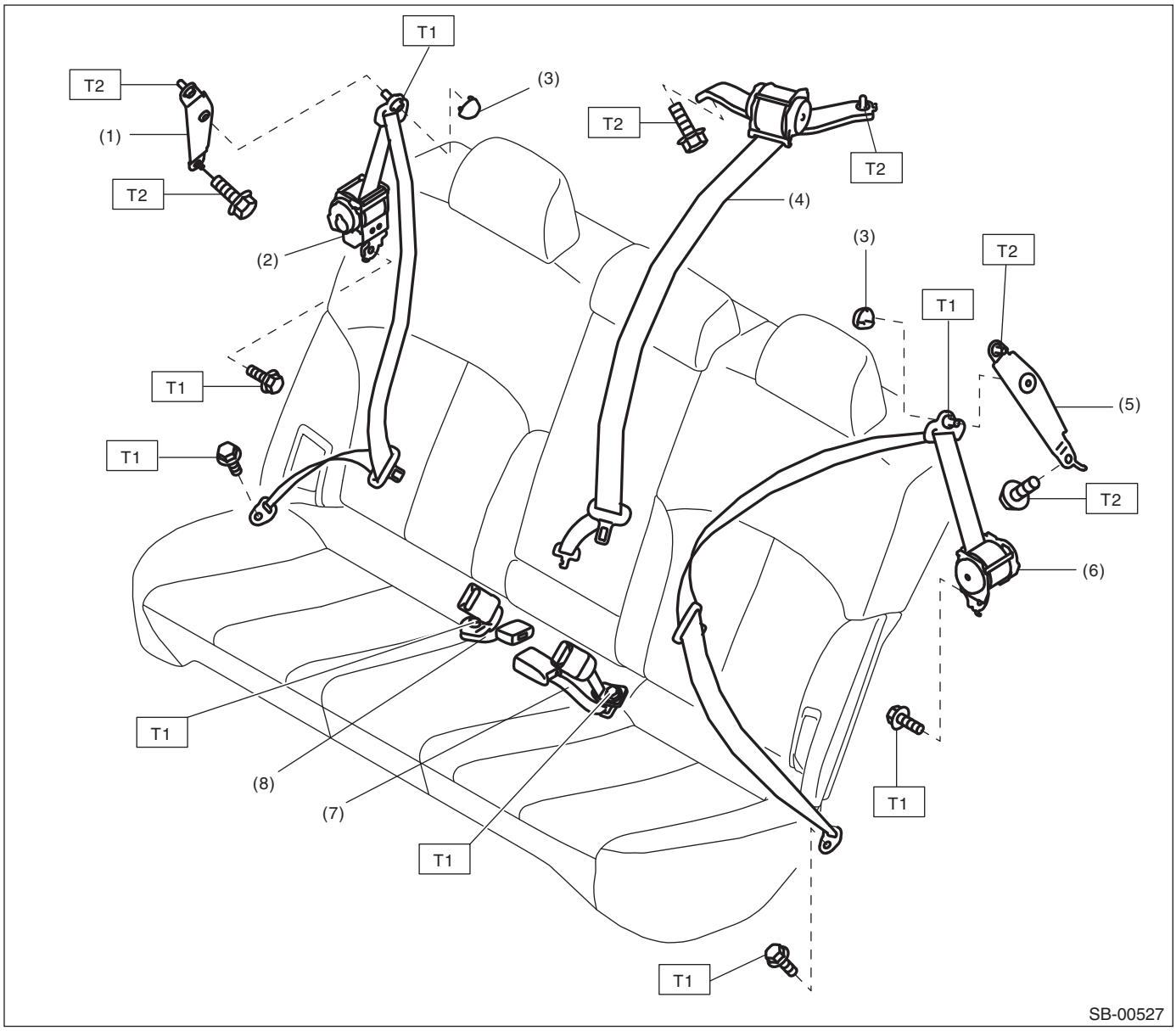
2. REAR SEAT BELT (SEDAN MODEL)



(1) Outer belt ASSY RH
(2) Shoulder belt ASSY CTR
(3) Outer belt ASSY LH
(4) Center belt ASSY LH

Tightening torque:N·m (kgf-m, ft-lb)
T1: 30 (3.06, 22.1)
T2: 53 (5.4, 39.1)

3. REAR SEAT BELT (OUTBACK MODEL)



(1) Shoulder anchor bracket RH
(2) Outer belt ASSY RH
(3) Shoulder anchor cover
(4) Shoulder belt ASSY CTR
(5) Shoulder anchor bracket LH
(6) Outer belt ASSY LH
(7) Center belt ASSY LH
(8) Center belt ASSY RH

Tightening torque:N·m (kgf-m, ft-lb)
T1: 30 (3.06, 22.1)
T2: 53 (5.4, 39.1)

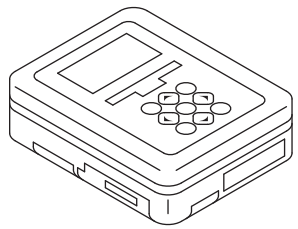
B: CAUTION

- Before starting the work, turn the ignition switch to OFF, disconnect the battery ground cable and wait for 60 seconds or more.
- The pretensioner system is fitted with a backup power supply. After disconnecting the battery ground cable, the pretensioner may operate if you do not wait for 60 seconds or more before starting pretensioner system servicing.
- Do not drop or apply any impact to the pretensioner.
- If oil, grease or water gets on the pretensioner, wipe it off immediately with a dry cloth.
- Do not expose the pretensioner to high temperature or flame.
- Do not allow current to flow through or voltage to reach the pretensioner. Do not use a circuit tester to check resistance of the pretensioner.
- Do not disassemble or attempt to repair the pretensioner. If it is dented, cracked or deformed, replace it with a new genuine part.
- Do not use the airbag or pretensioner parts from other vehicles. Always use a new genuine part for replacement.
- When handling a seat belt with deployed pretensioner, wear gloves and goggles. Wash your hands afterwards.
- Do not reuse a seat belt with deployed pretensioner.
- Before disposal, make sure to perform an operation process to the pretensioners.
- If material from the pretensioner enters the eyes or contacts skin during operation process, wash it away with clean water, and then consult a doctor.

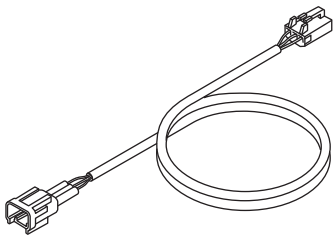
C: PREPARATION TOOL

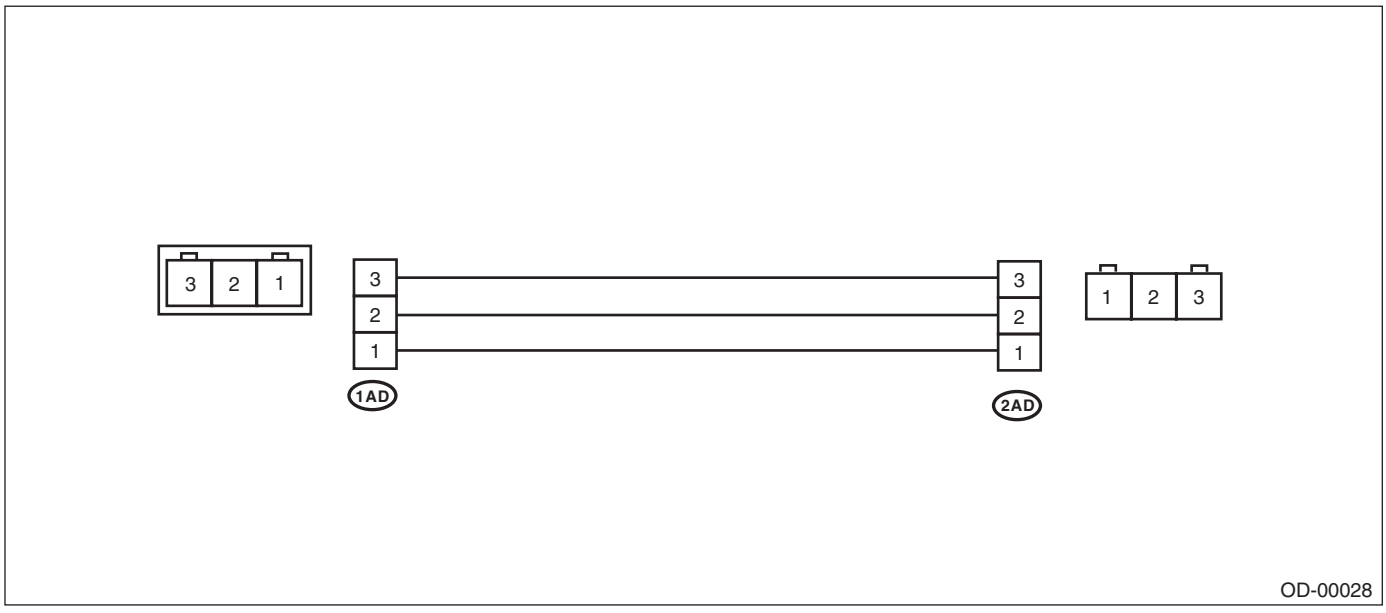
1. SPECIAL TOOL

- Subaru Select Monitor

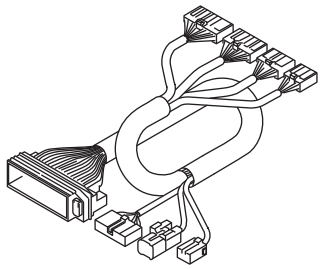
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST1B022XU0	1B022XU0	SUBARU SELECT MONITOR III KIT	Used for setting of each function and trouble-shooting for electrical system.

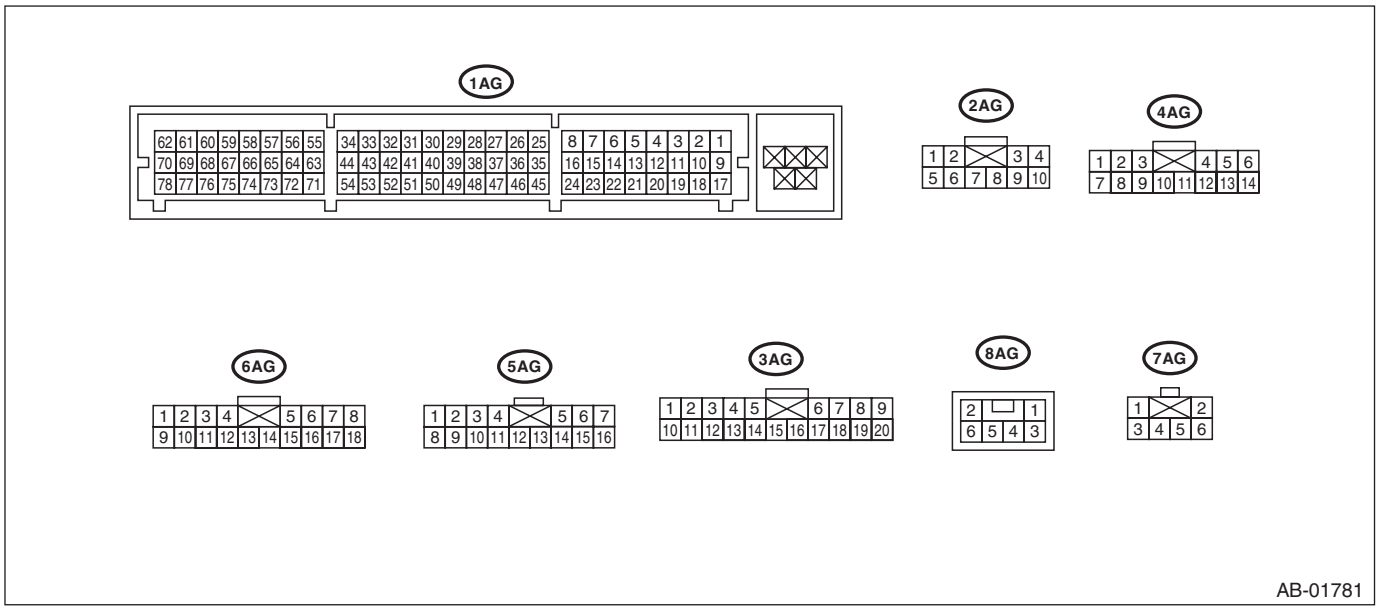
- TEST HARNESS AD

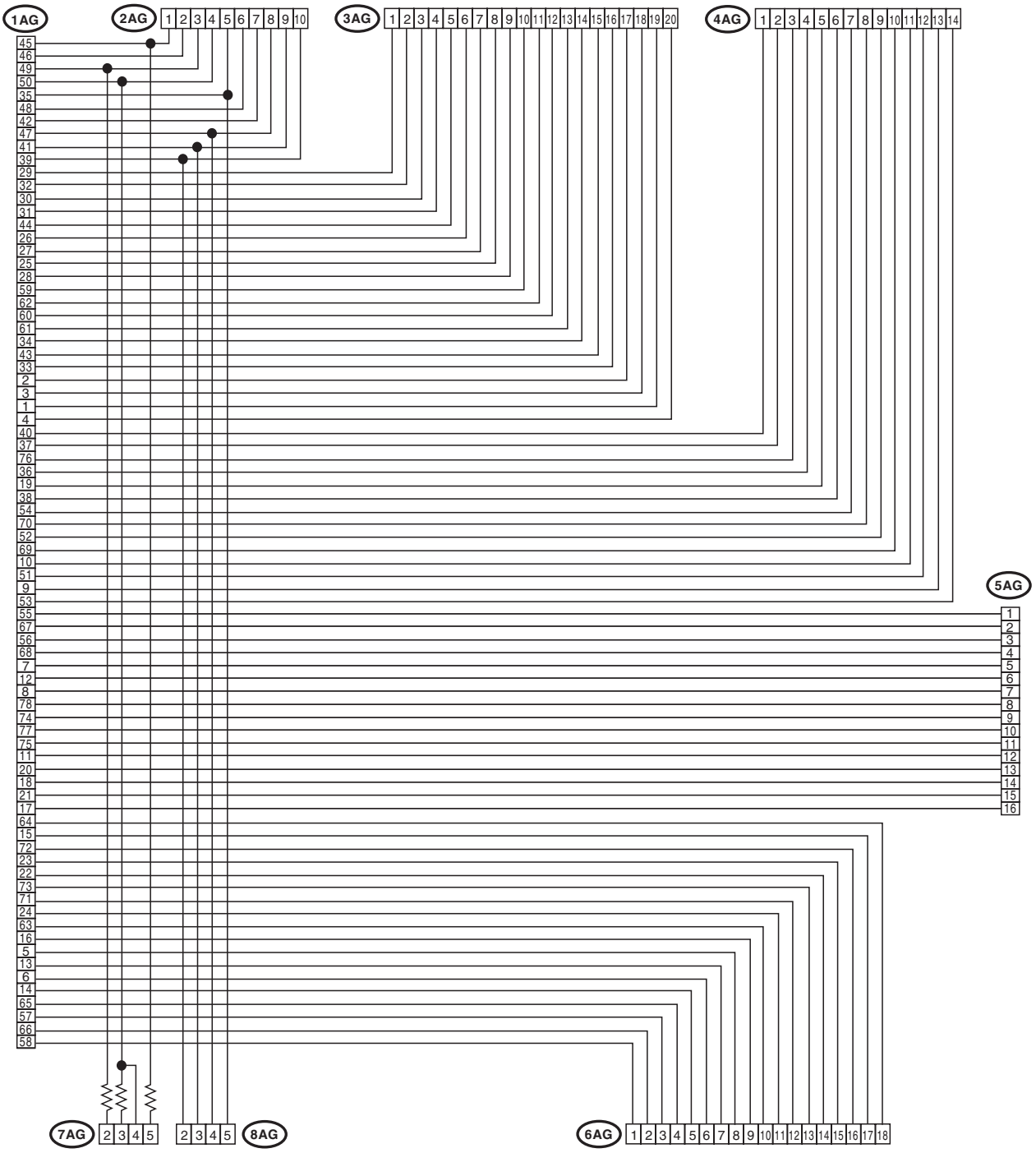
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299XA020	98299XA020	TEST HARNESS AD	Used when measuring voltage and resistance of the occupant detection system.



- TEST HARNESS AG

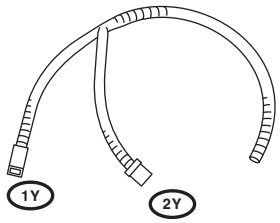
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299AG070	98299AG070	TEST HARNESS AG	Used when measuring voltage and resistance of airbag control module.

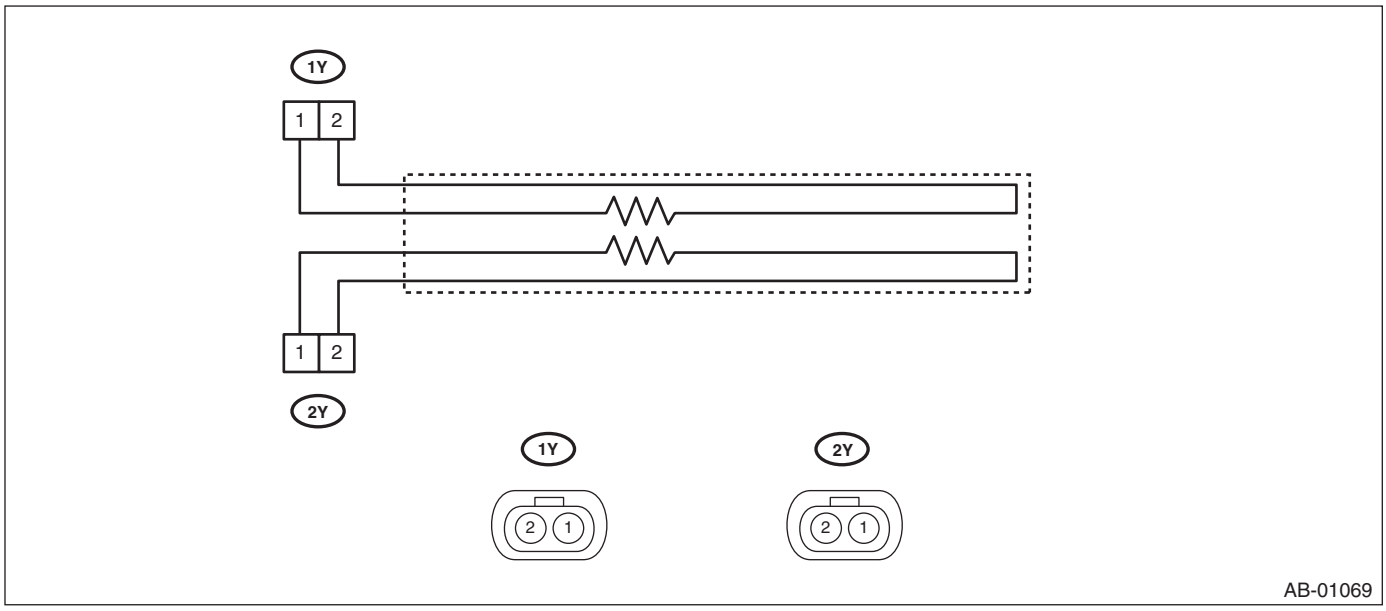




AB-01902

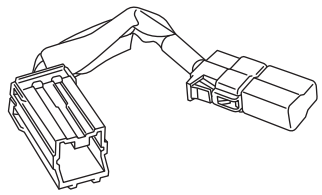
- TEST HARNESS Y

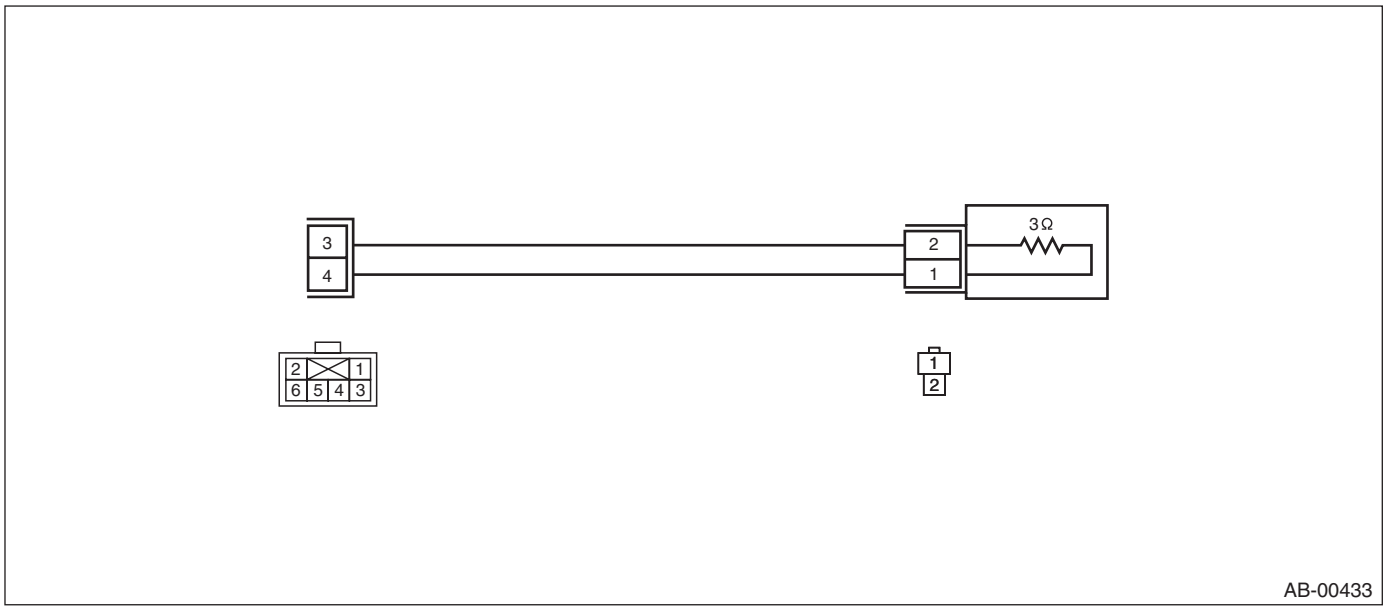
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST98299AG040	98299AG040	TEST HARNESS Y	Used for troubleshooting seat belt buckle switch.



AB-01069

- AIRBAG RESISTOR

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



2. GENERAL TOOL

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

2. Pretensioner Connector

A: PROCEDURE

For connectors of seat belt pretensioner and buckle switch RH, refer to “Airbag System” or “Occupant Detection System”.

- Airbag system: <Ref. to AB-18, PROCEDURE, Airbag Connector.>
- Occupant detection system: <Ref. to OD(diag)-8, PROCEDURE, Airbag Connector.>

3. Inspection Locations After a Collision

A: INSPECTION

Refer to “Inspection Locations After a Collision” in the AIRBAG SYSTEM section. <Ref. to AB-26, Inspection Locations After a Collision.>

4. Seat Belt Warning System

A: WIRING DIAGRAM

Refer to “Seat Belt Warning System” in the wiring diagram. <Ref. to WI-203, WIRING DIAGRAM, Seat Belt Warning System.>

B: INSPECTION

CAUTION:
• Before diagnosing the airbag system, always turn the ignition switch to OFF, disconnect the battery ground cable, and then wait for 60 seconds or more.
• When replacing the airbag module, seat belt pretensioner, roll connector, control module, or sensors, reconnect the replacement part and check that the warning light operates normally.
• Before inspecting the airbag main harness, disconnect the driver’s side and passenger’s side airbag module connectors to ensure safety.
• Before inspecting the airbag rear harness, disconnect the side airbag module connectors, curtain airbag module connectors and seat belt pretensioner connectors to ensure safety.

	Step	Check	Yes	No
1	**CHECK CURRENT SETTINGS.** 1) Prepare the Subaru Select Monitor. 2) Turn the ignition switch to ON (engine OFF) and run the “PC application for Subaru Select Monitor”. 3) Select “Current Data Display” and read the data of “Belt Warning Switch”.	Is the belt warning display ON?	Go to step **2**.	Turn the belt warning ON with unit customization.
2	**CHECK CURRENT DATA.** 1) Select “Current Data Display” and read the data of “IG power supply voltage”. 2) Turn the ignition switch ON ←→ OFF.	Does the voltage change between 10 V or higher ←→ less than 1.5 V, matching the ignition switch ON ←→ OFF operation?	Go to step **3**.	Check the ignition switch circuit.
3	**CHECK FUNCTION.** 1) Sit in the driver’s seat and passenger’s seat, and disconnect the seat belts of both seats. 2) Turn the ignition switch to ON (engine OFF). 3) Check the illumination of the driver’s seat belt warning light in the combination meter and the passenger’s seat belt warning light in the clock, and the sounding of the buzzer.	Do the driver’s and passenger’s warning lights flash, and does the buzzer sound while the warning lights are flashing?	Go to step **4**.	• Malfunction of the driver’s seat belt warning light →Go to step **10**. • Malfunction of the passenger’s seat belt warning light →Go to step **16**. • The buzzer does not sound. →Go to step **6**.
4	**CHECK FUNCTION.** 1) Wait until the buzzer sound stops in step 3. (Approximately 6 seconds from starting to sound) 2) Fasten and detach the driver’s and passenger’s seat belts. 3) Check the illumination of the driver’s seat belt warning light in the combination meter and the passenger’s seat belt warning light in the clock.	Do each seat belt warning light illuminate ←→ turn off according to the action?	Go to step **5**.	• Malfunction of the driver’s seat belt warning light →Go to step **6**. • Malfunction of the passenger’s seat belt warning light →Go to step **12**.

Step		Check	Yes	No
5	**CHECK FUNCTION.** 1) Wait until the buzzer sound stops in step 3. (Approximately 6 seconds from starting to sound) 2) Start the engine, and set the vehicle speed to 15 km/h (9 MPH) or faster. 3) Check the driver's and passenger's seat belt warning lights, and sounding of the alarm buzzer.	Do the driver's and passenger's warning lights flash, and does the buzzer sound while the warning lights are flashing?	The seat belt warning system is normal.	Go to step **20**.
6	**CHECK CURRENT DATA.** 1) Select "Current Data Display" and read the data of the driver's seat belt switch. 2) Fasten and detach the seat belt buckle.	Does the seat belt SW display turn ON ←→ OFF according to the operation?	Go to step **10**.	Go to step **7**.
7	**CHECK HARNESS.** 1) Disconnect the negative terminal from the battery, and wait for 20 seconds or more. 2) Disconnect the connectors of the body integrated unit and the seat belt buckle switch. 3) Check for a short circuit to battery, open circuit or short circuit to ground between the body integrated unit and the seat belt buckle switch LH. ***Connector & terminal*** ***MANUAL SEAT*** ***(i84) No. 30 — (R108) No. 1:*** ***POWER SEAT*** ***(i84) No. 30 — (R381) No. 1:***	Is the harness normal?	Go to step **8**.	Repair or replace the harness.
8	**CHECK HARNESS.** Measure the resistance between the seat belt buckle switch LH and chassis ground. ***Connector & terminal*** ***MANUAL SEAT*** ***(R108) No. 2 — Chassis ground:*** ***POWER SEAT*** ***(R381) No. 2 — Chassis ground:***	Is the resistance less than 10 Ω?	Go to step **9**.	Repair or replace the harness.
9	**CHECK SEAT BELT BUCKLE SWITCH LH.** Measure the resistance between the connector terminals of the driver's seat belt switch when the driver's seat belt is fastened and detached. ***Connector & terminal*** ***MANUAL SEAT*** ***(R108) No. 1 — (R108) No. 2:*** ***POWER SEAT*** ***(R381) No. 1 — (R381) No. 2:***	Is the resistance when the belt is fastened 1 MΩ or more, and less than 10 Ω when the belt is detached?	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>	Replace the inner belt assembly LH. <Ref. to SB-17, OUTER BELT ASSY, REMOVAL, Front Seat Belt.>
10	**CHECK DTC.** Read the DTC using Subaru Select Monitor.	Are any body CAN related DTC detected?	Check the CAN according to DTC.	Go to step **11**.
11	**CHECK COMBINATION METER.** Perform the self-diagnosis of combination meter. <Ref. to IDI-6, SELF-DIAGNOSIS DISPLAY MODE, OPERATION, Combination Meter System.>	At the start of combination meter self diagnosis, did the buzzer sound and the seat belt warning light illuminate?	Replace the body integrated unit or the combination meter. Or, replace both. There may be a communication malfunction of the body integrated unit, or a reception malfunction of the combination meter.	Replace the combination meter. <Ref. to IDI-20, REMOVAL, Combination Meter.>

	Step	Check	Yes	No
12	**CHECK CURRENT DATA.** 1) Sit in the passenger's seat. 2) Select "Current Data Display" and display the data of "P seatbelt SW input". 3) Fasten and detach the passenger's side seat belt buckle, and read the data of the seat belt switch. <Ref. to BC(diag)-15, OPERATION, Read Current Data.>	Does the seat belt switch display turn ON ←→ OFF according to the operation of the seat belt buckle?	Go to step **16**.	Go to step **13**.
13	**CHECK AIRBAG SYSTEM AND OCCUPANT DETECTION SYSTEM.** Perform the check in accordance with the diagnostic procedure DTC 27 of the airbag system. <Ref. to AB(diag)-65, DTC 27 ODS COMMUNICATION ERROR, Diagnostic Chart with Trouble Code.>	Is there any problem on the inspection result?	Go to step **14**.	Repair or replace the harness.
14	**CHECK BUCKLE SWITCH RH.** Perform the check in accordance with the diagnostic procedure DTC 37 of the occupant detection system. <Ref. to OD(diag)-21, DTC 37 BUCKLE SWITCH RH FAILURE, Diagnostic Procedure with Diagnostic Trouble Code (DTC).>	Is there any problem on the inspection result?	Go to step **15**.	Repair or replace the harness.
15	**CHECK AIRBAG CONTROL MODULE AND BODY INTEGRATED UNIT.** Check the airbag control module, occupant detection sensor and seat belt buckle switch RH. Perform the check in accordance with the diagnostic procedure DTC 39 of the airbag system. <Ref. to AB(diag)-68, DTC 39 SEAT BELT WARNING FAILURE, Diagnostic Chart with Trouble Code.>	Is there any problem on the inspection result?	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>	Repair or replace the harness.
16	**CHECK HARNESS.** 1) Disconnect the clock connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between the ignition power supply and the clock. ***Connector & terminal*** ***(i59) No. 8 (+) — Chassis ground (–):***	Is the voltage 10 V or more?	Go to step **17**.	Repair or replace the harness.
17	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector. 3) Check for a short circuit to battery, open circuit or short circuit to ground between the clock and chassis ground. ***Connector & terminal*** ***(i59) No. 6 — Chassis ground:***	Is the harness normal?	Go to step **18**.	Repair or replace the harness.
18	**CHECK HARNESS.** 1) Turn the ignition switch to OFF. 2) Disconnect the connector of combination meter. 3) Check for a short circuit to battery, open circuit or short circuit to ground between the clock and combination meter. ***Connector & terminal*** ***(i59) No. 5 — (i10) No. 3:***	Is the harness normal?	Go to step **19**.	Repair or replace the harness.

Step		Check	Yes	No
19	**CHECK CLOCK.** 1) Connect the clock connector. 2) Turn the ignition switch to ON. 3) Short the circuit between clock and chassis ground using a wire harness. ***Connector & terminal*** ***(i59) No. 6 — Chassis ground:***	Does passenger's seat belt warning light in the clock illuminate?	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>	Replace the clock. <Ref. to IDI-30, REMOVAL, Multi Display.>
20	**CHECK DTC.** Read the DTCs for all systems using the Subaru Select Monitor.	Is a DTC detected?	Perform a check according to the DTC.	Go to step **21**.
21	**CHECK CURRENT DATA.** Select "Current Data Display" and read the data of the "Front Wheel Speed". <Ref. to BC(diag)-15, OPERATION, Read Current Data.>	Does the data indicate the normal vehicle speed?	Go to step **11**.	Check the following items. • LAN system <Ref. to BC(diag)-2, Basic Diagnostic Procedure.> • VDC <Ref. to VDC(diag)-2, Basic Diagnostic Procedure.>

5. Front Seat Belt

A: REMOVAL

1. OUTER BELT ASSY

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.
• Do not drop or subject the pretensioner to any impact.
• Since the pretensioner and bracket are integrated as a unit, do not disassemble them.

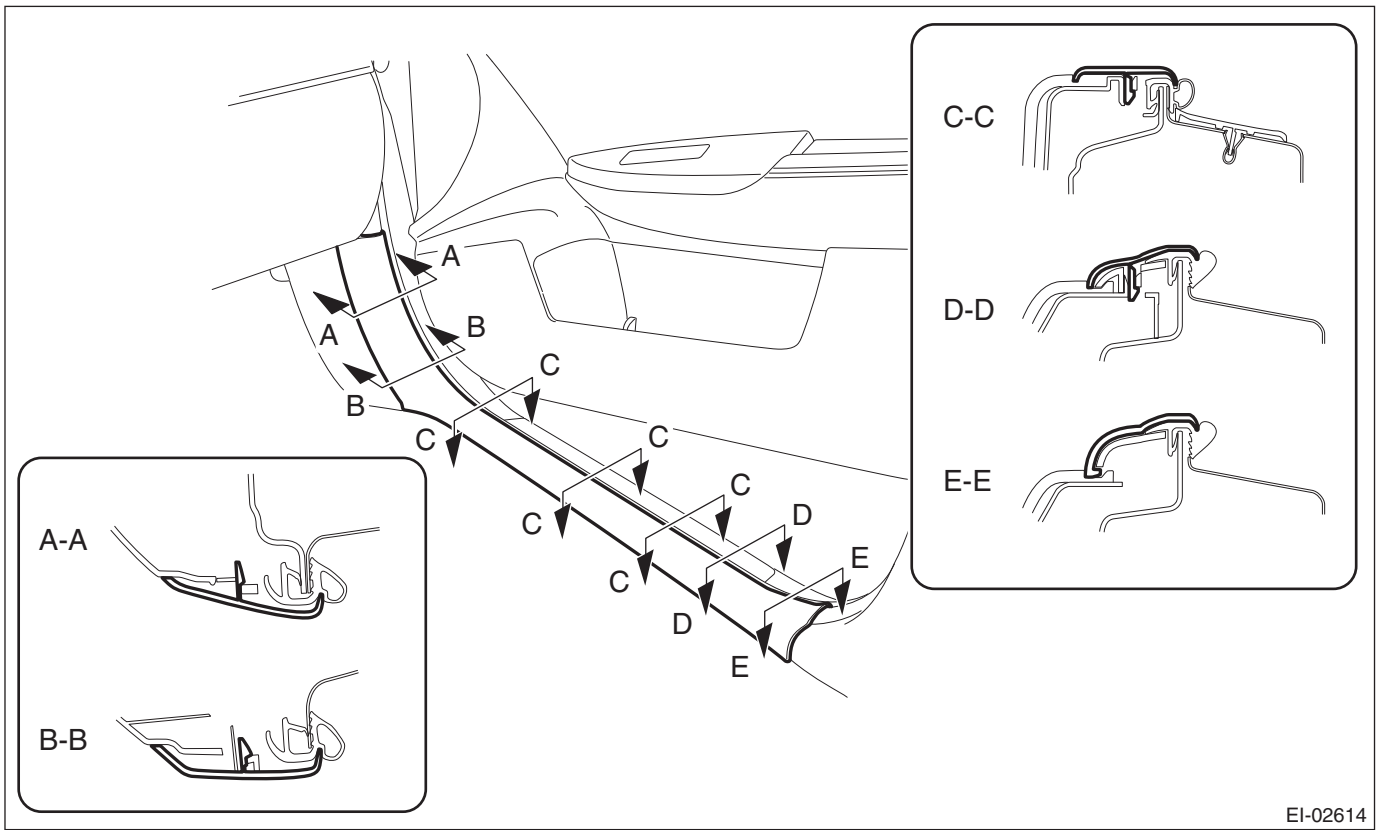
1) Before working, turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more.

NOTE:
Remove the front and rear bolts from the slide rail of the power seat before removing the battery ground terminal.

2) Tilt the backrest forward and move the seat to the front most position.

CAUTION:
For the power seat, after moving the seat, check that the battery ground has been removed. If not, disconnect the battery ground cable and wait for 60 seconds or more.

3) Release the claws, and then remove the side sill cover-front INN. (On the side where seat belt assembly is removed)

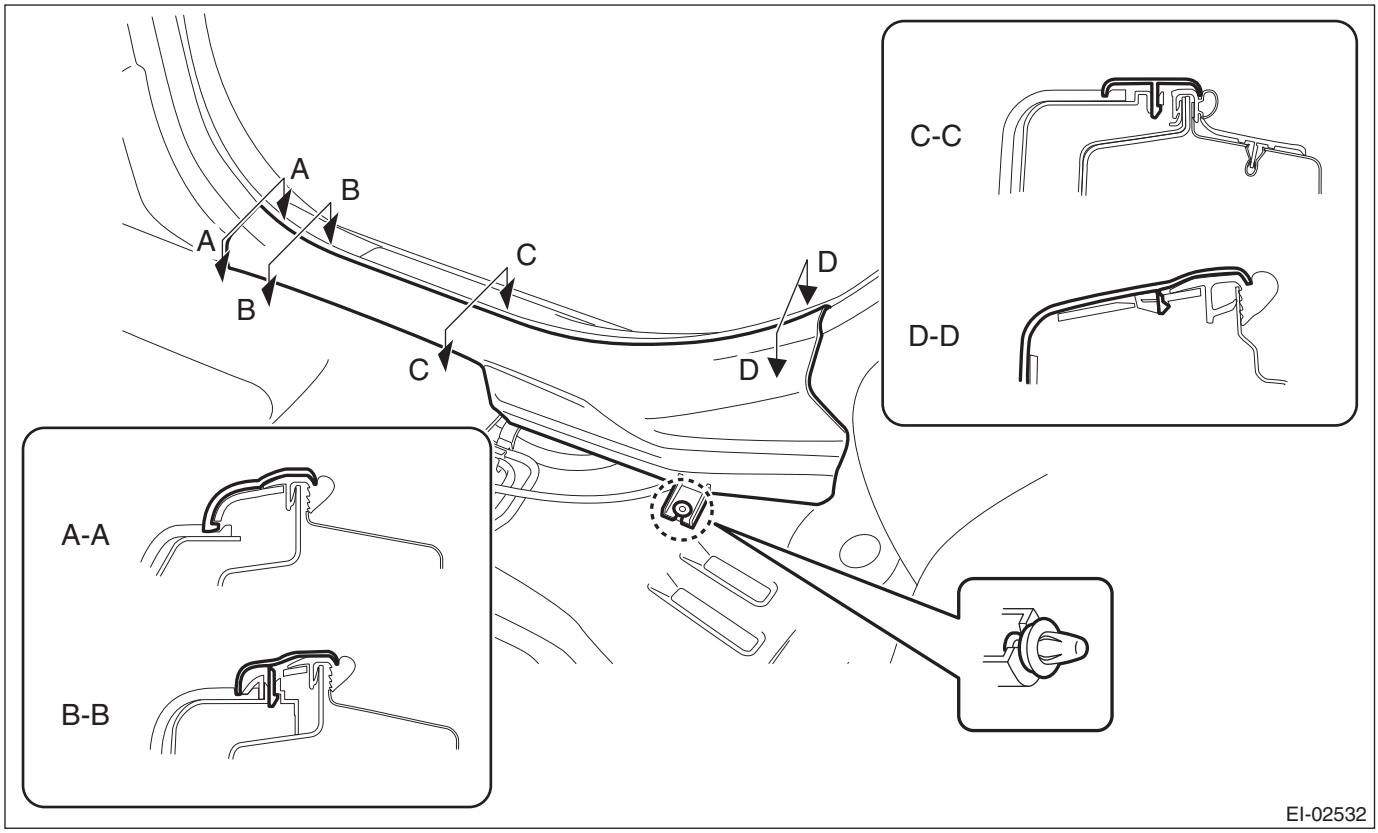


CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

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) Release the clips and claws, and then remove the side sill cover - rear INN. (On the side where seat belt assembly is removed)

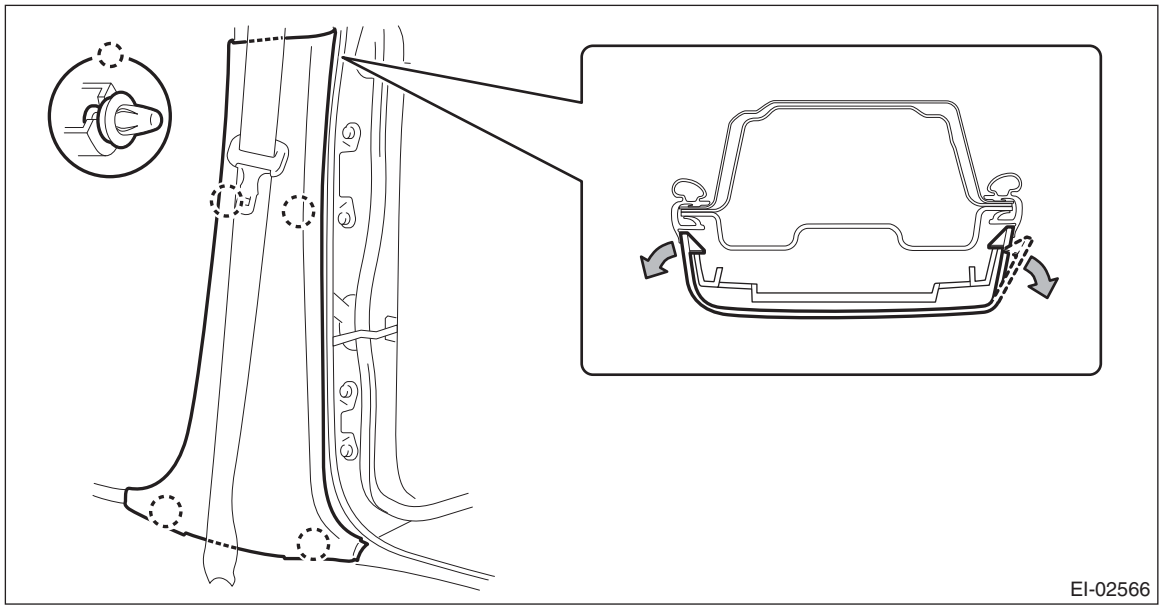


CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

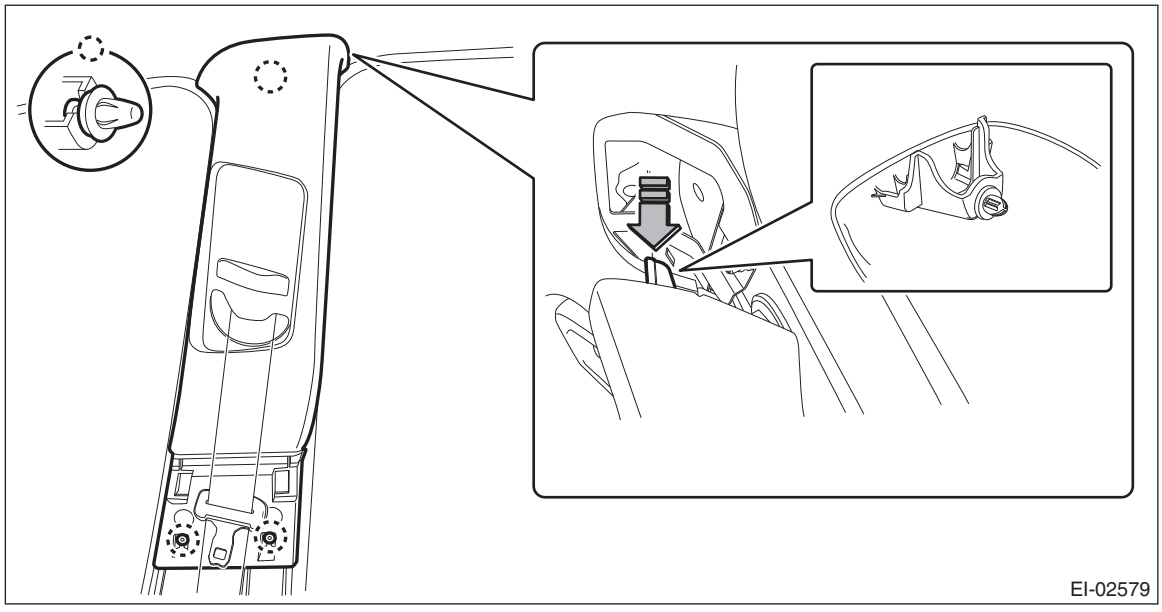
NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claws (C) and (D) by accessing from behind the side sill cover INN.

5) Remove the center pillar trim LWR. (On the side where seat belt assembly is removed)
(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.

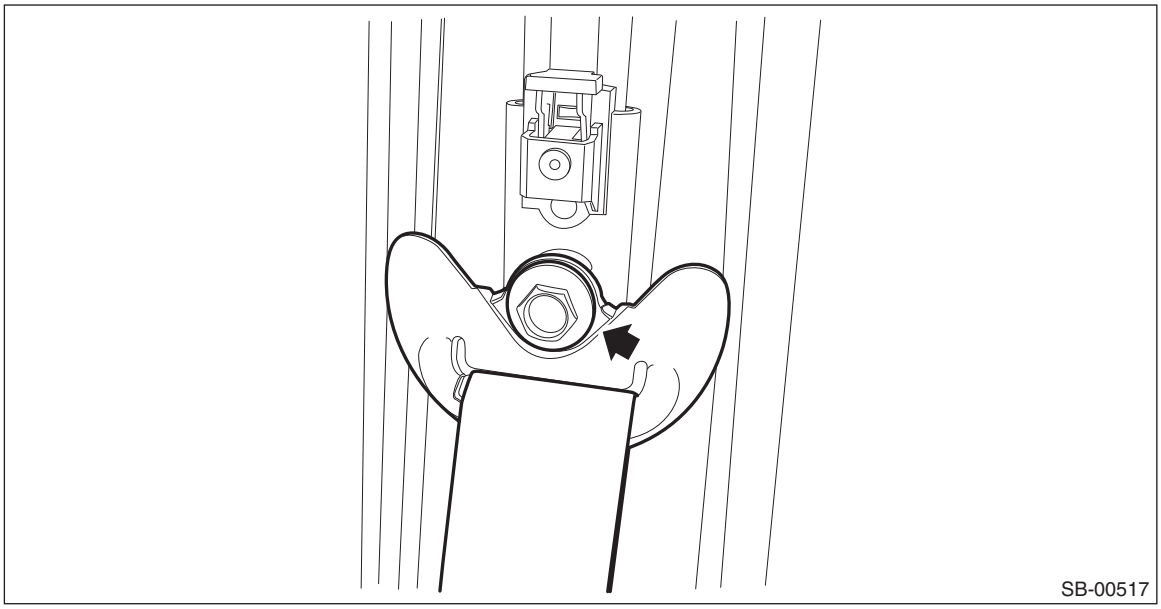
CAUTION:
Do not expand the center pillar trim LWR excessively. Doing so may damage the trim.


EI-02566

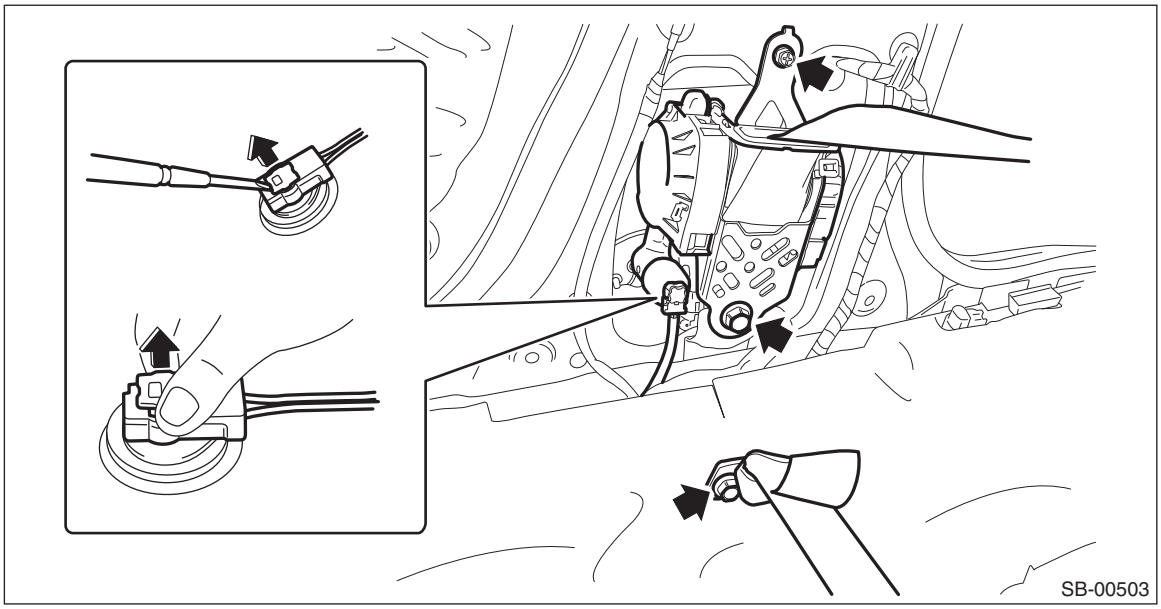
NOTE:
First release the claw located to the rear of the vehicle.
6) Remove the center pillar trim UPR. (On the side where seat belt assembly is removed)
(1) Release the clip by pulling the center pillar trim UPR toward you.
(2) Remove the center pillar trim UPR by lowering the entire trim.


EI-02579

(3) Remove the shoulder anchor bolt.



7) Remove the seat belt assembly.
(1) Turn over the floor mat to disconnect the belt tension sensor connector.
(2) Remove the bolt to remove the seat belt retractor and lower anchor bolt.



(3) Pull out the seat belt from the center pillar trim UPR.

2. INNER BELT ASSY

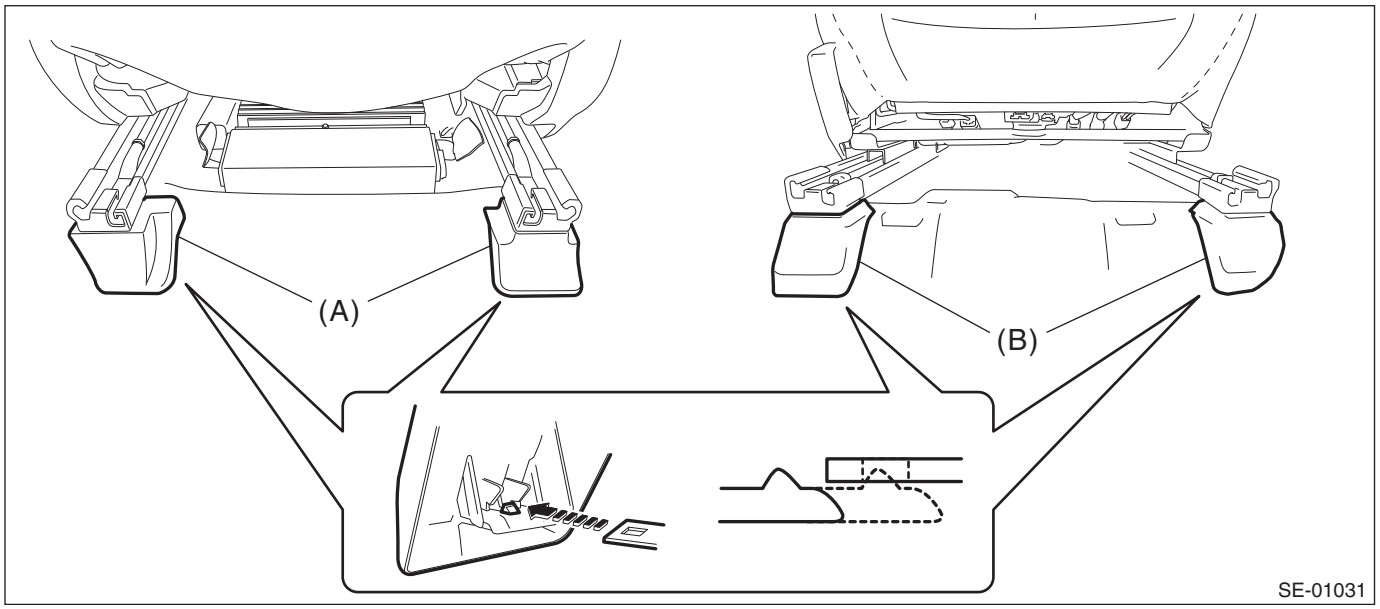
CAUTION:
The airbag system is fitted with a backup power supply. After disconnecting the battery ground cable, the airbag may deploy if you do not wait for 60 seconds before starting the service of airbag system.

1) Turn the ignition switch to OFF.
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 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.

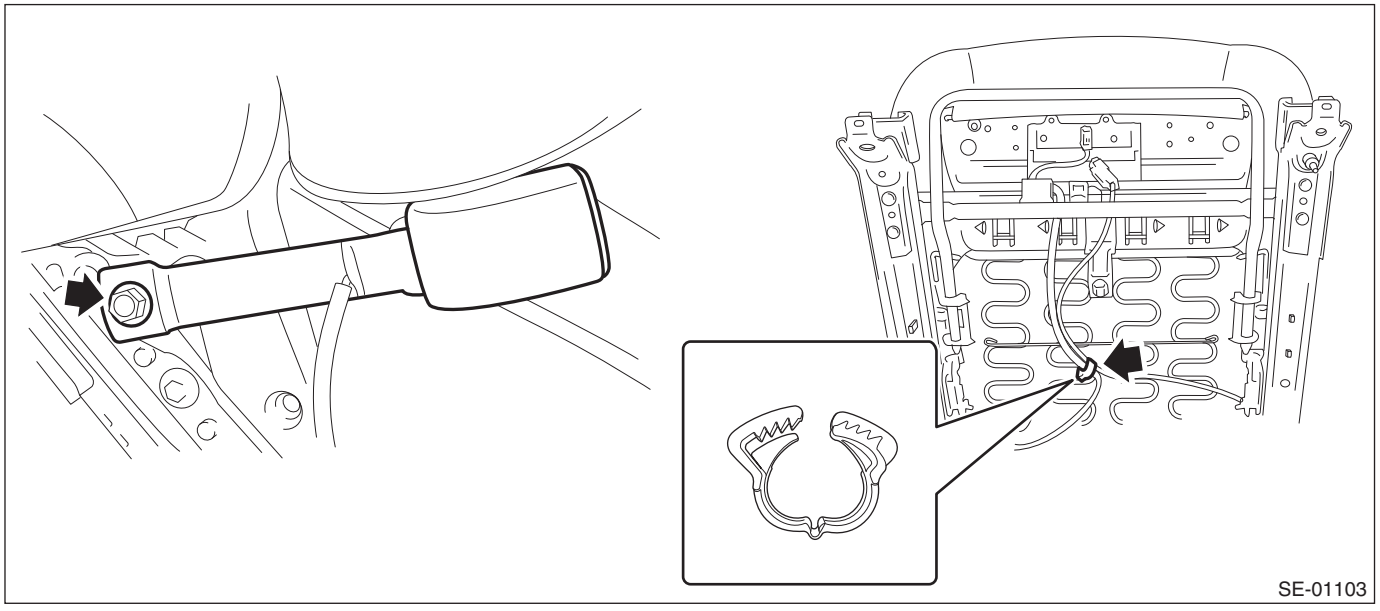


(2) Disconnect the connector under the seat.

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)

4) 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.



3. ADJUSTABLE ANCHOR ASSY

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.
• Do not drop or subject the pretensioner to any impact.
• Since the pretensioner and bracket are integrated as a unit, do not disassemble them.

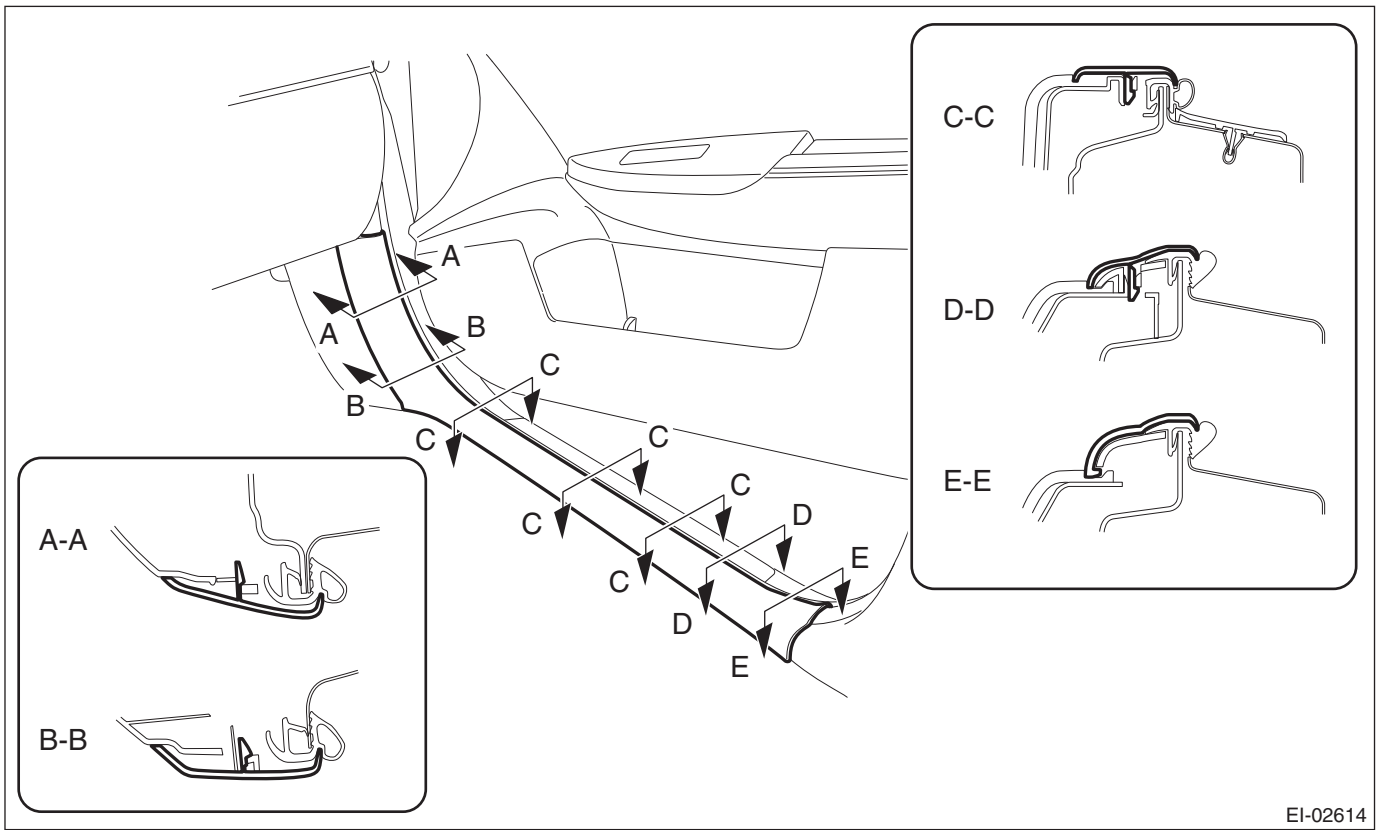
1) Before working, turn the ignition switch to OFF, disconnect the battery ground cable, and wait for 60 seconds or more.

NOTE:
For the power seat model, move the seat all the way forward before removing the battery ground terminal.

2) Tilt the backrest forward and move the seat to the front most position.

CAUTION:
For the power seat, after moving the seat, check that the battery ground has been removed. If not, disconnect the battery ground cable and wait for 60 seconds or more.

3) Release the claws, and then remove the side sill cover-front INN. (On the side where seat belt assembly is removed)

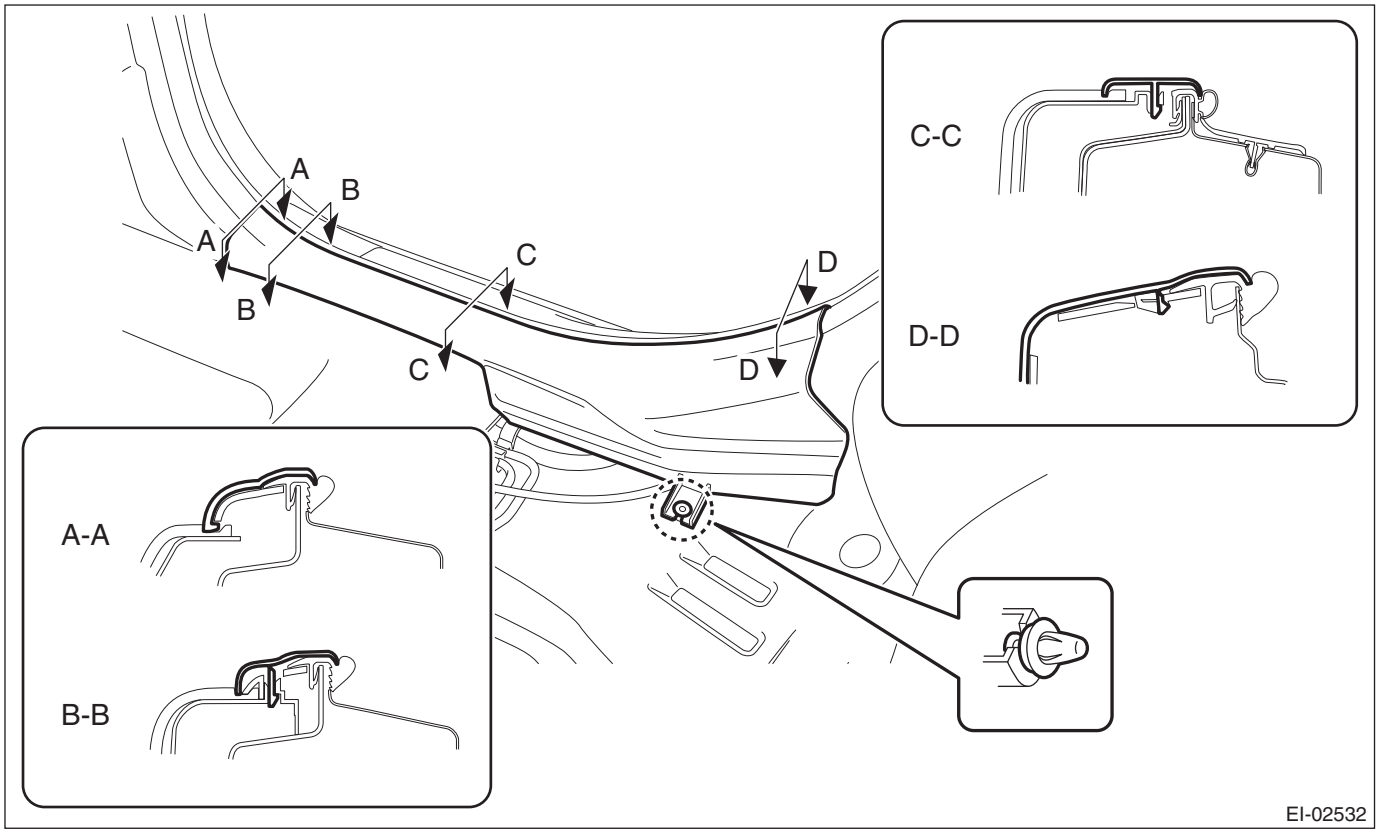


CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

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) Release the clips and claws, and then remove the side sill cover - rear INN. (On the side where seat belt assembly is removed)

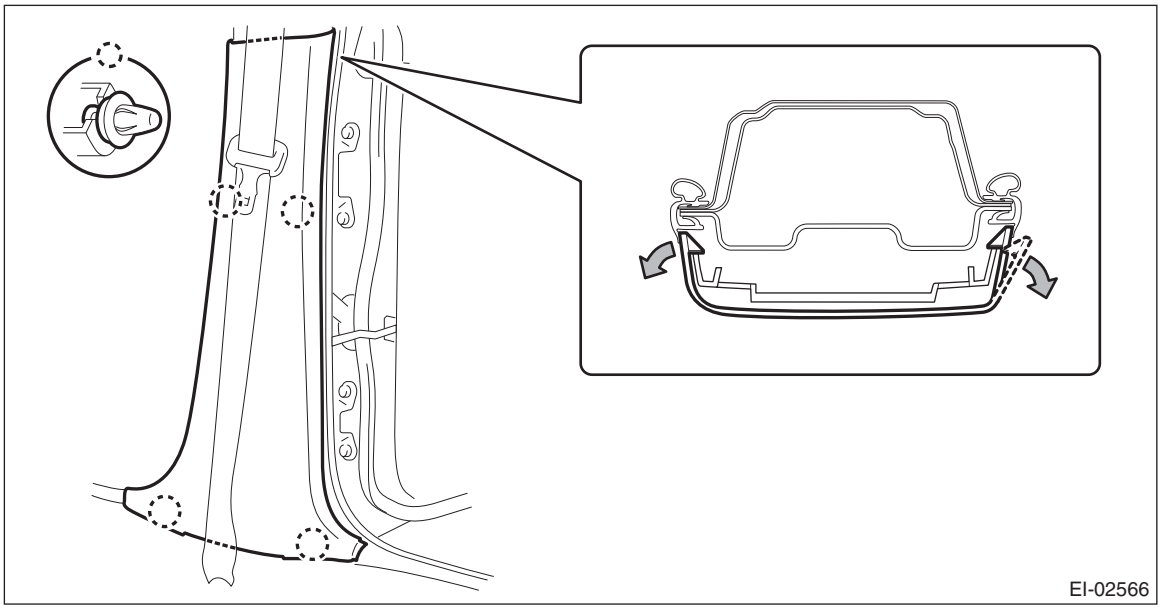


CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

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.

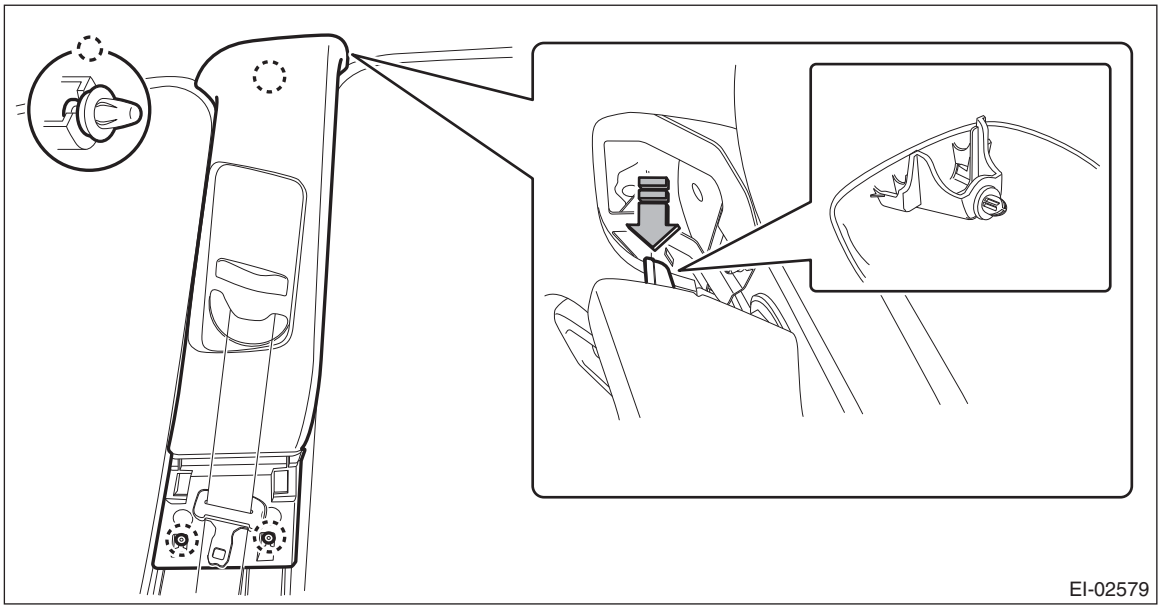
5) Remove the center pillar trim LWR. (On the side where seat belt assembly is removed)
   (1) Release the clip by pulling the center pillar trim LWR toward you.
   (2) Expand the claws of center pillar trim LWR outward and remove it from the center pillar trim UPR.

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

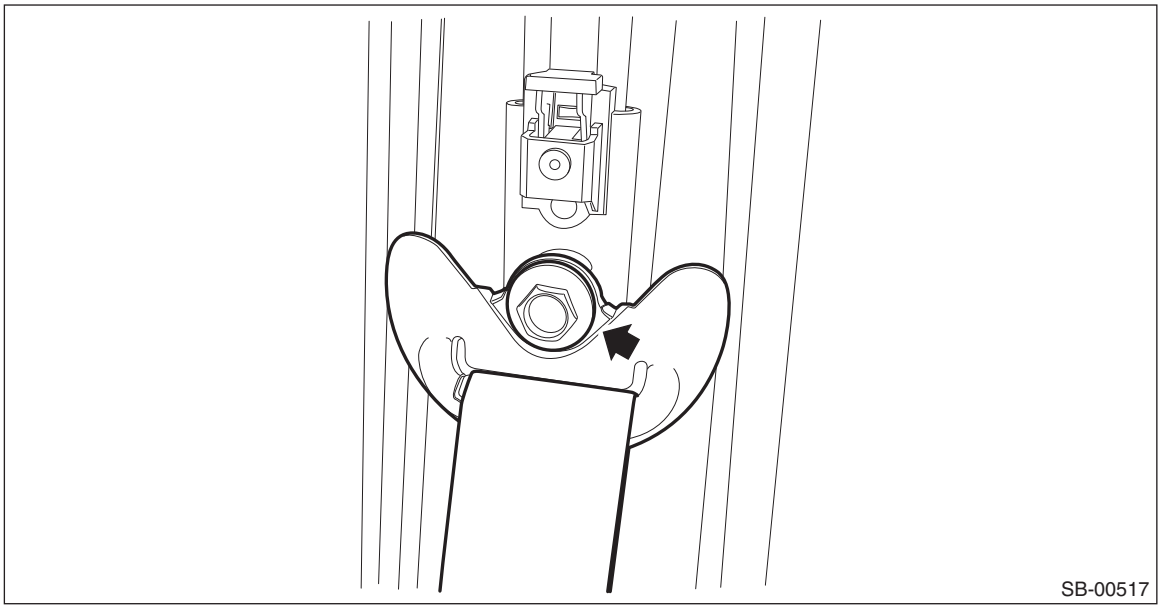

EI-02566

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

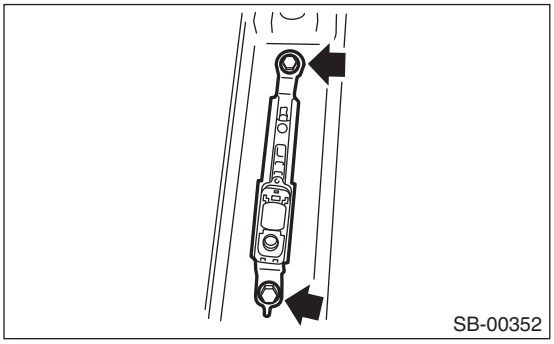
6) Remove the center pillar trim UPR. (On the side where seat belt assembly is removed)
   (1) Release the clip by pulling the center pillar trim UPR toward you.
   (2) Remove the center pillar trim UPR by lowering the entire trim.


EI-02579

(3) Remove the shoulder anchor bolt.



7) Remove the two bolts to remove the adjustable anchor assembly.

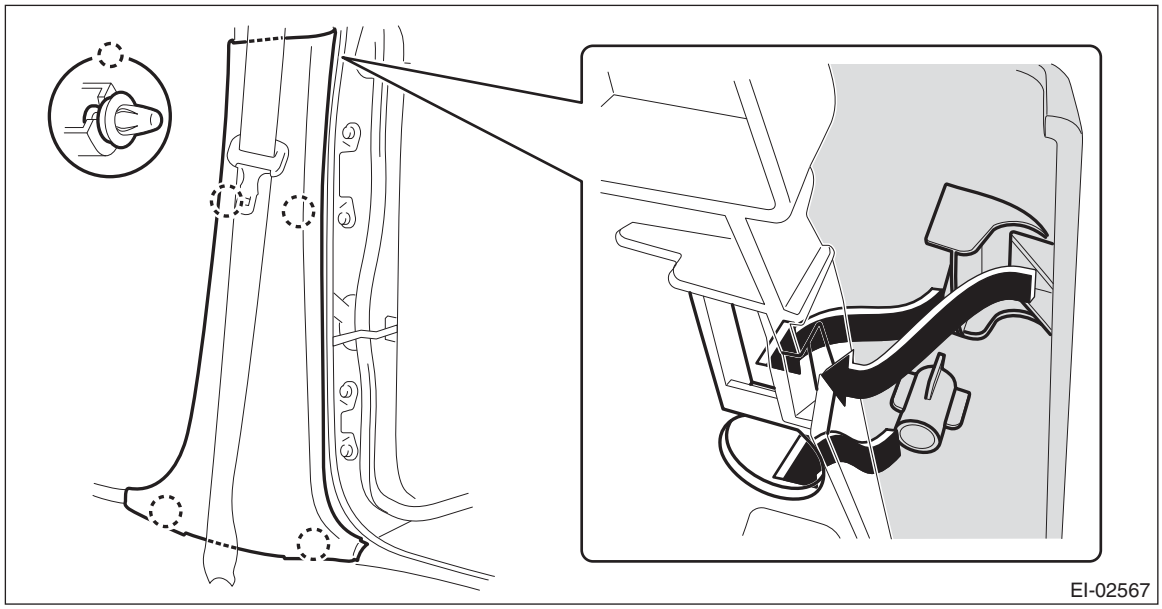


B: INSTALLATION

1. OUTER BELT ASSY

CAUTION:
• The parts of driver's seat and those of passenger's seat are not the same. Before installation, make sure that the correct part is used.
• During installation, make sure that the seat belts are not twisted.
• After installation, make sure that the seat belt can be pulled out and retracted smoothly.
• Make sure that the seat belt harness is not caught. Wrong routing of harnesses may cause short circuits because of getting caught.
• 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.
1) Assemble the center pillar trim LWR to the center pillar trim UPR securely.

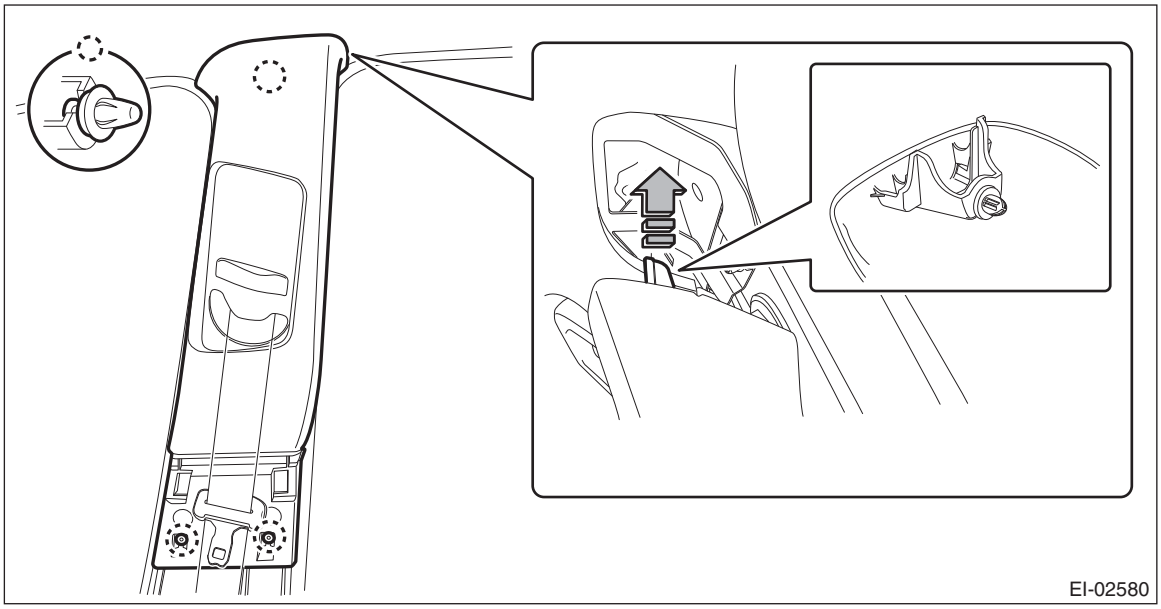
CAUTION:
Do not forget to install the seat belt.



2) 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.



3) Install the remaining parts in the reverse order of removal.

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

4) After installation, check the following points.
- The seat belt is not twisted.
- The seat belt can be pulled out and retracted smoothly.
- The adjustable anchor can be moved smoothly.
- Check that the airbag warning light lights up for approximately 6 seconds and then turns off when connecting the battery ground cable and turning the ignition switch to ON.

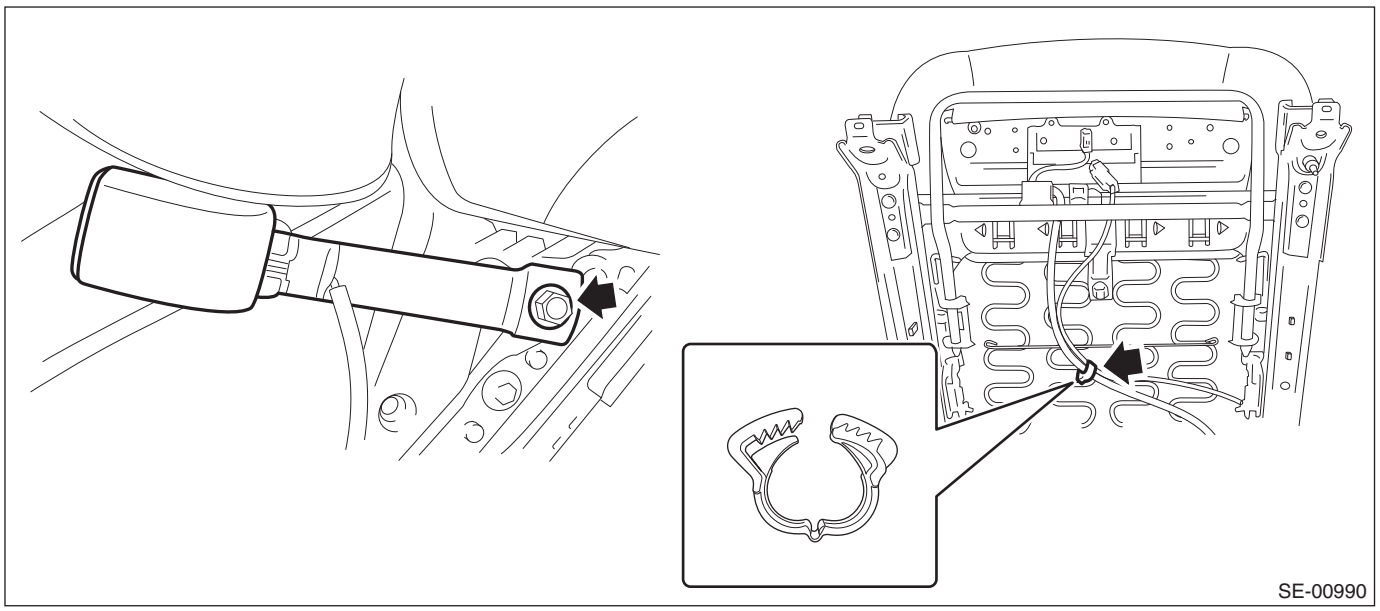
2. INNER BELT ASSY

CAUTION:
- **Before installation, make sure that the correct part is used.**
- **During installation, make sure that the seat belts are not twisted.**
- **Make sure that the seat belt harness is not caught. Wrong routing of harnesses may cause short circuits because of getting caught.**

1) Install the inner belt assembly.

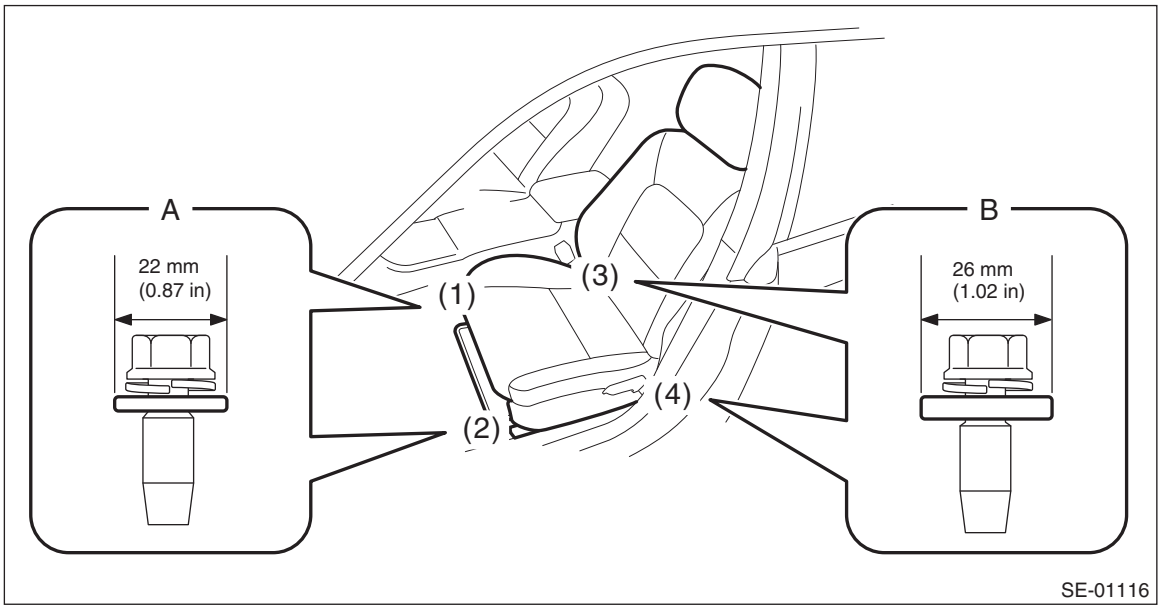
Tightening torque:
Front seat belt: <Ref. to SB-2, FRONT SEAT BELT, COMPONENT, General Description.>

2) Locate the seat belt harness and retain it with a harness clip.



3) Install the seat assembly to the body.

CAUTION:
• The seat mounting bolts differ between the front mounting points and the rear mounting points. Make sure that you are using correct bolts at correct positions.
• Tighten the slide rail installing 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)

4) Check that no harness is caught by sliding the seat back and forth.

3. ADJUSTABLE ANCHOR ASSY

Referring to the installation procedure for outer belt ASSY, install the parts in the reverse order of removal.

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

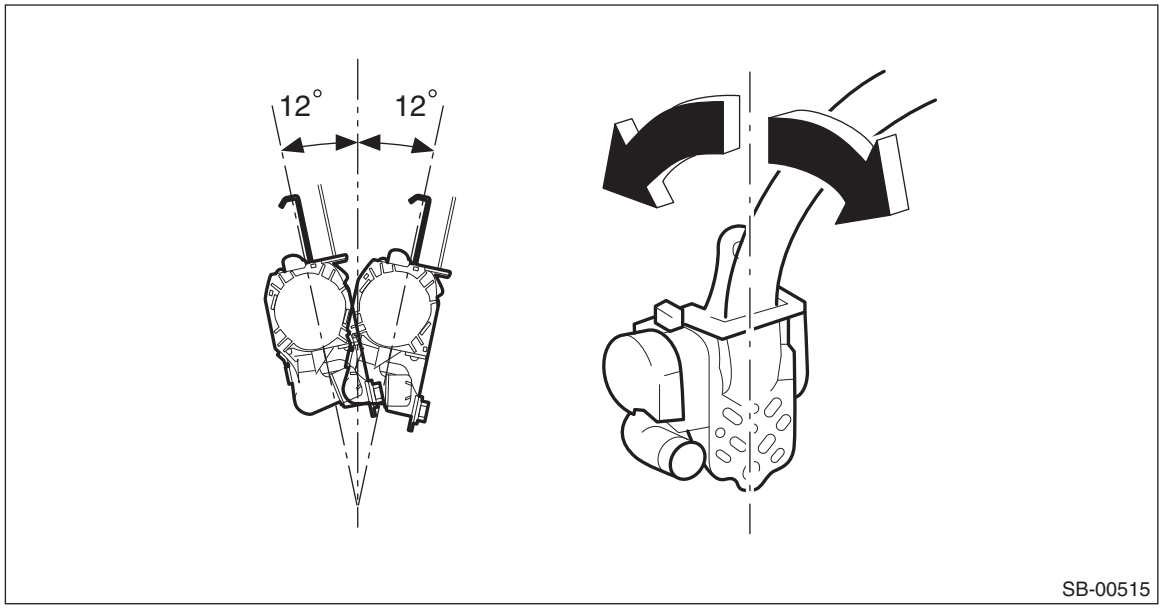
C: INSPECTION

1. VISUAL INSPECTION

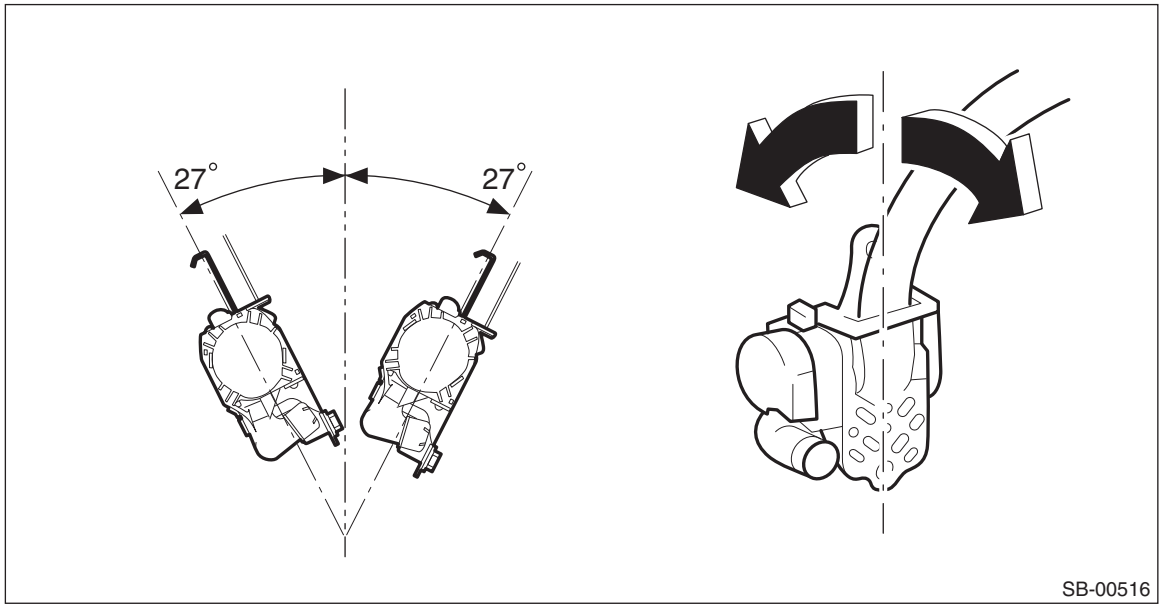
Check for the following, and replace with new parts if necessary.
- Pretensioner is cracked or deformed.
- Belt tension sensor is cracked or deformed.
- Adjustable anchor assembly is cracked or deformed.
- Seat belt is slackened, bent or worn.
- Seat belt is abnormally wound or extended.
- Inner belt ASSY is deformed or damaged.
- Seat belt buckle cannot be engaged properly.

2. ELR LOCK MECHANISM INSPECTION

1) Hold the retractor upright (as installed in the vehicle) and check the ELR lock mechanism.
2) Tilt the retractor from the upright posture and check the following points.
- It does not lock if the inclination angle is 12° or less.



- It remains locked if the inclination angle is 27° or more.



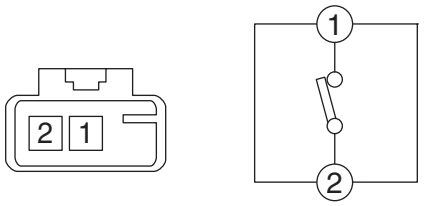
3) If the ELR lock mechanism does not operate correctly, replace the outer belt assembly with a new part.

3. SEAT BELT SWITCH INSPECTION

Preparation tool: Circuit tester

- Driver's side

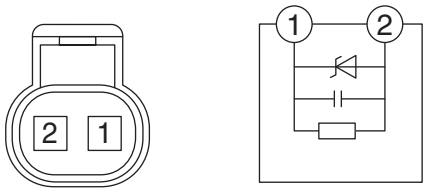
Check the resistance between the terminals when the inner belt ASSY is in each of the following operation conditions.

Terminal No.	Inspection conditions	Standard	Circuit
1 — 23	Tongue plate inserted	Less than 1 Ω	 SB-00523
1 — 2	Tongue plate detached	10 kΩ or more	

Replace the inner belt assembly if the inspection result is not within the standard value.

- Passenger's side

Check the current value between the terminals when the inner belt ASSY is in each of the following operation conditions.

Terminal No.	Inspection conditions	Standard	Circuit
1 — 2	Tongue plate inserted	12 — 18 mA	 SB-00524
1 — 2	Tongue plate detached	4 — 7 mA	

Replace the inner belt assembly if the inspection result is not within the standard value.

6. Rear Seat Belt

A: REMOVAL

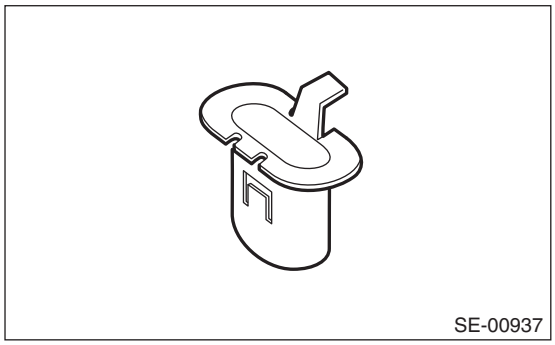
1. OUTER BELT ASSEMBLY RH & LH (SEDAN MODEL)

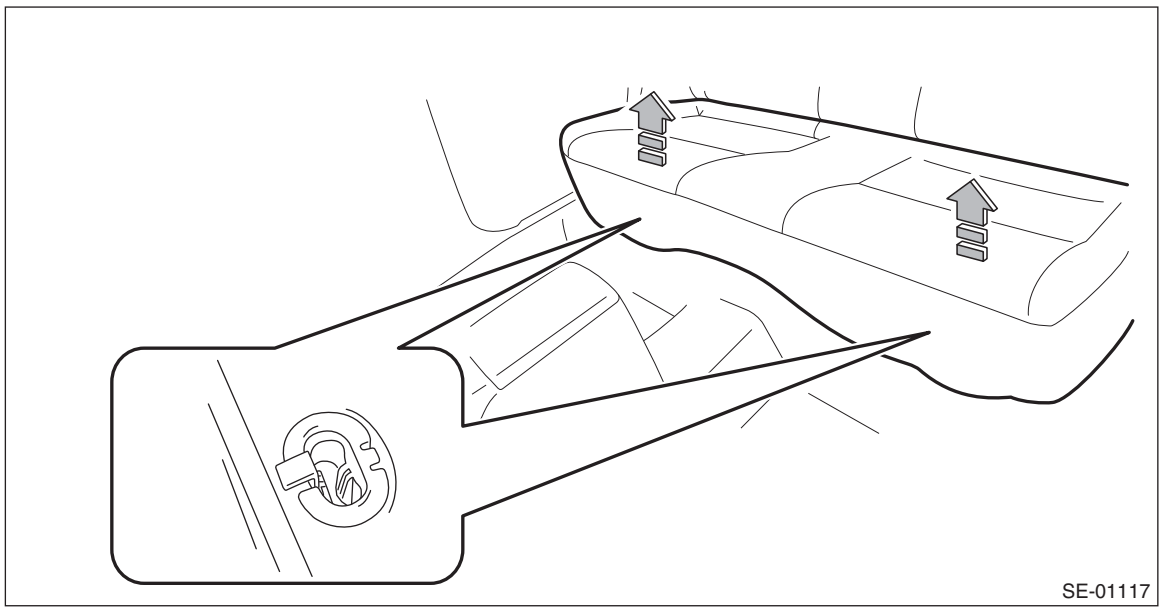
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

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

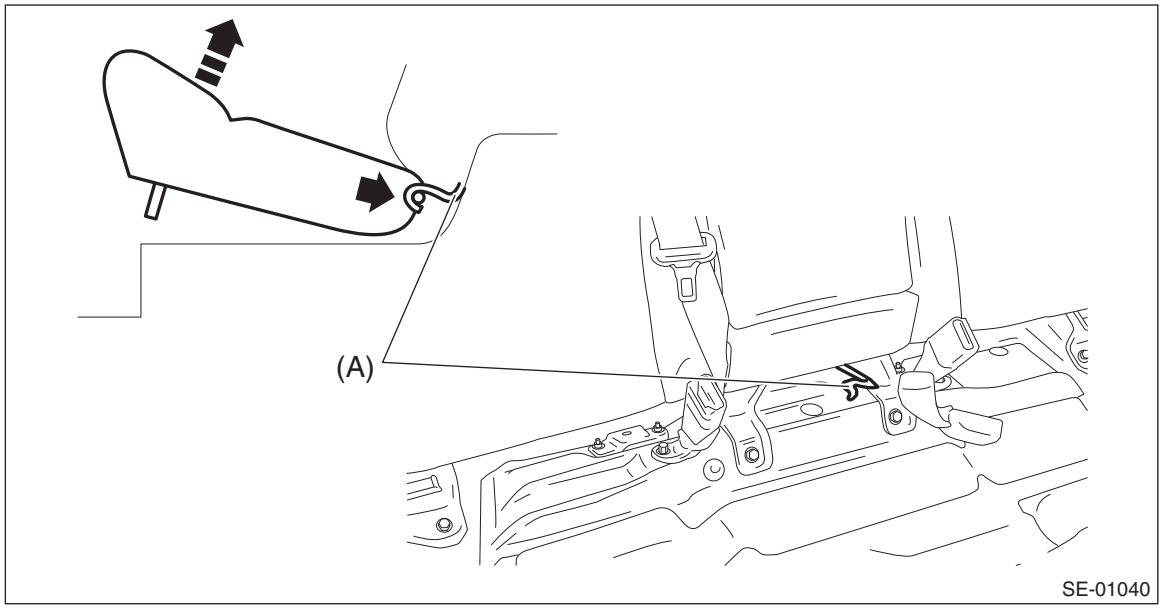
2) Remove the rear seat cushion.
   (1) Pull up the seat cushion and release the hook.

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

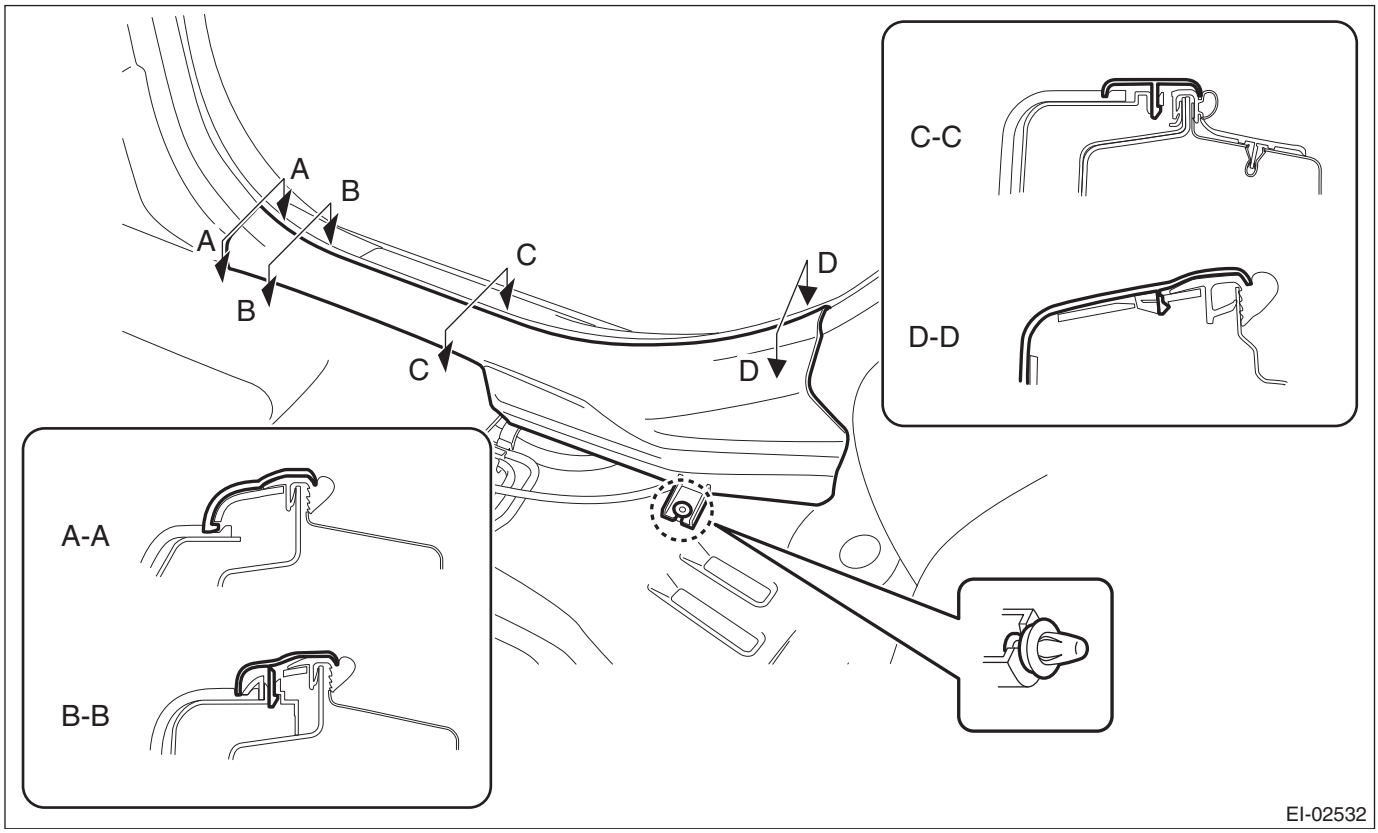

SE-00937


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) Release the clips and claws, and then remove the side sill cover - rear INN. (On the side where seat belt assembly is removed)



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

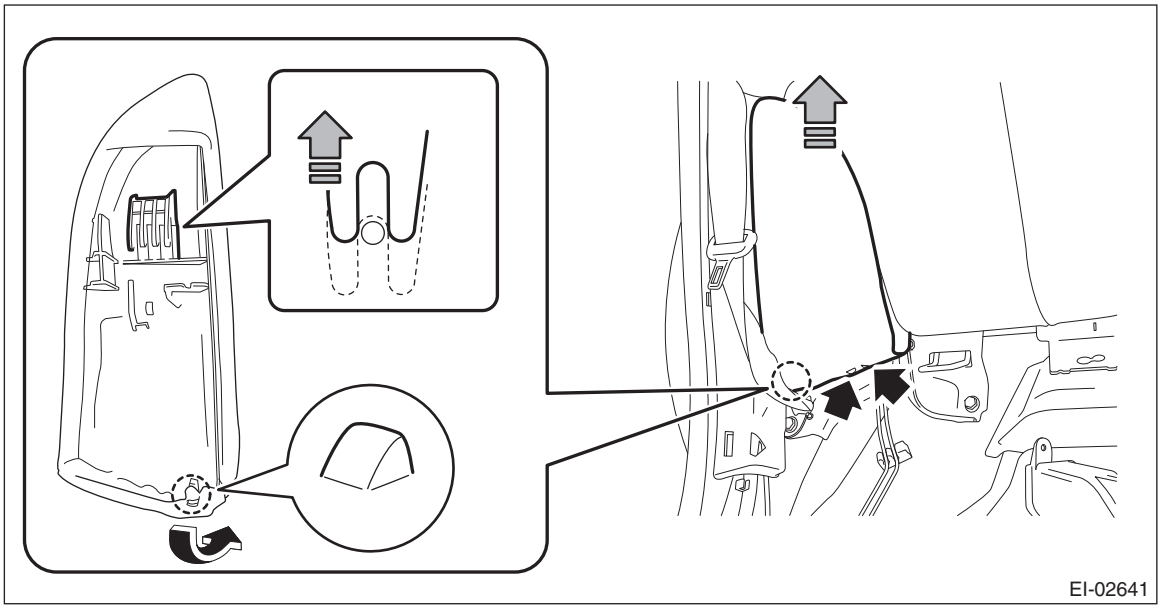
NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claws (C) and (D) by accessing from behind the side sill cover INN.

4) Remove the rear quarter trim LWR. (On the side where seat belt assembly is removed)

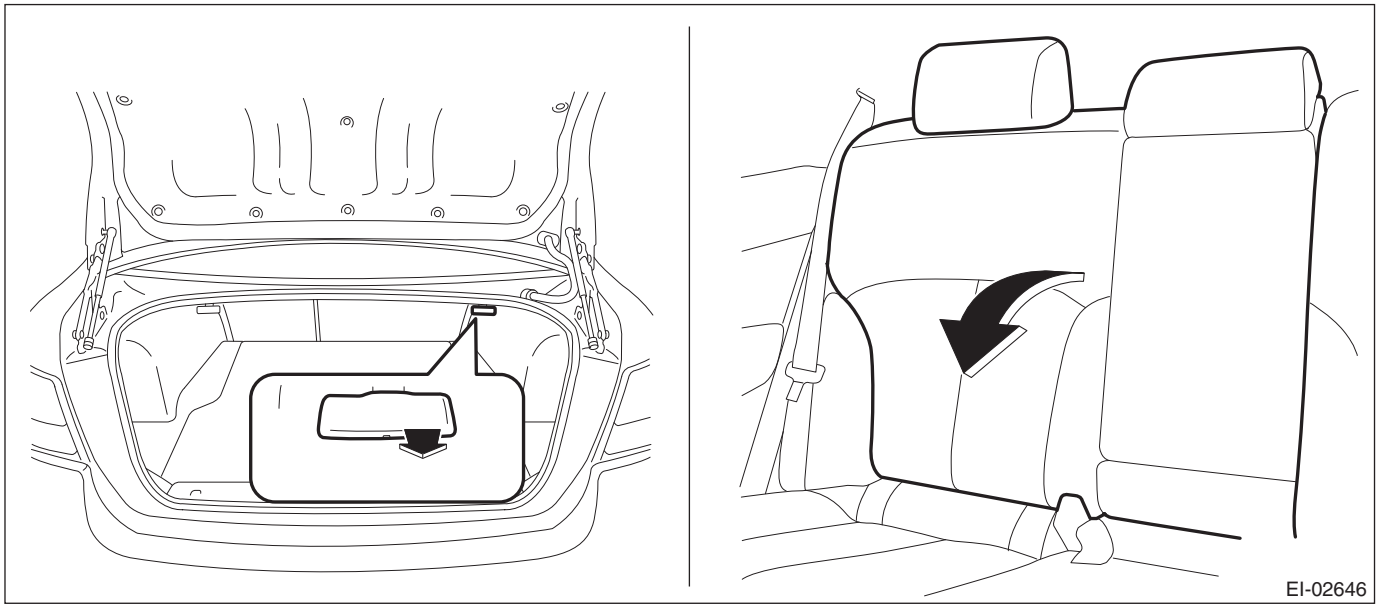
(1) Remove the backrest side pad assembly.
a) Remove the screws.

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.

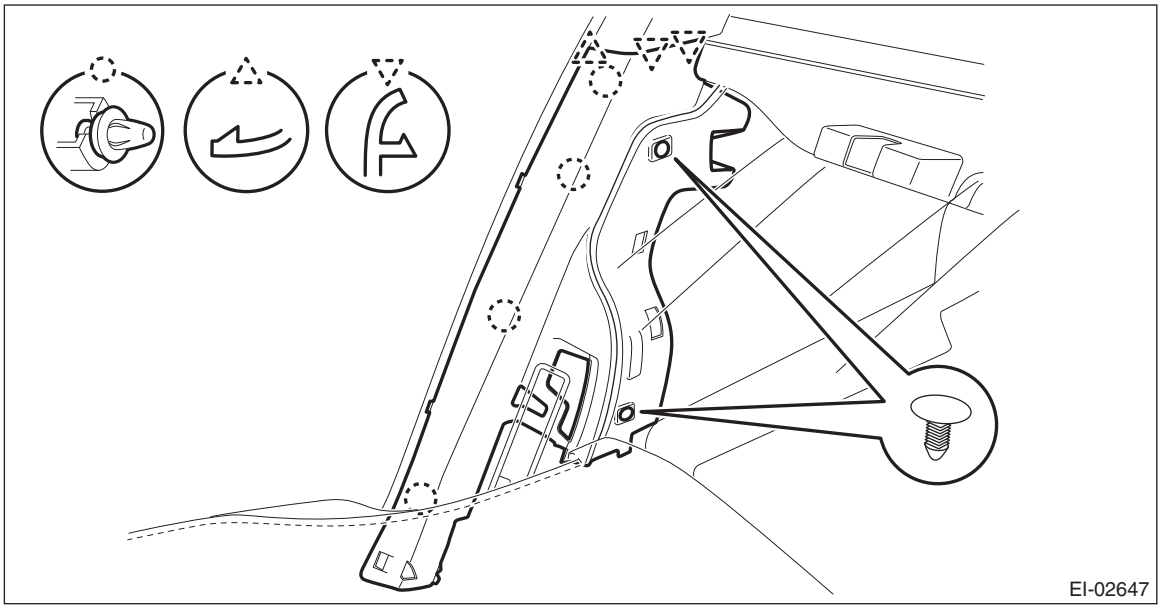


(2) Pull the release lever in the trunk room, and then tilt the backrest forward.

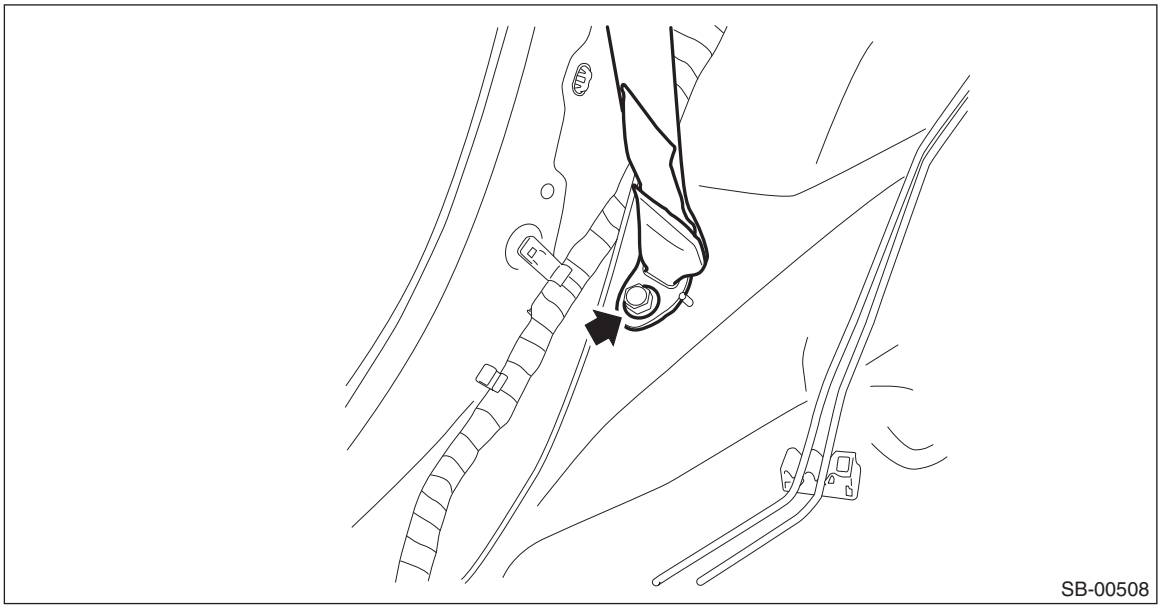


(3) Release the clips of the trunk trim panel assembly-side.

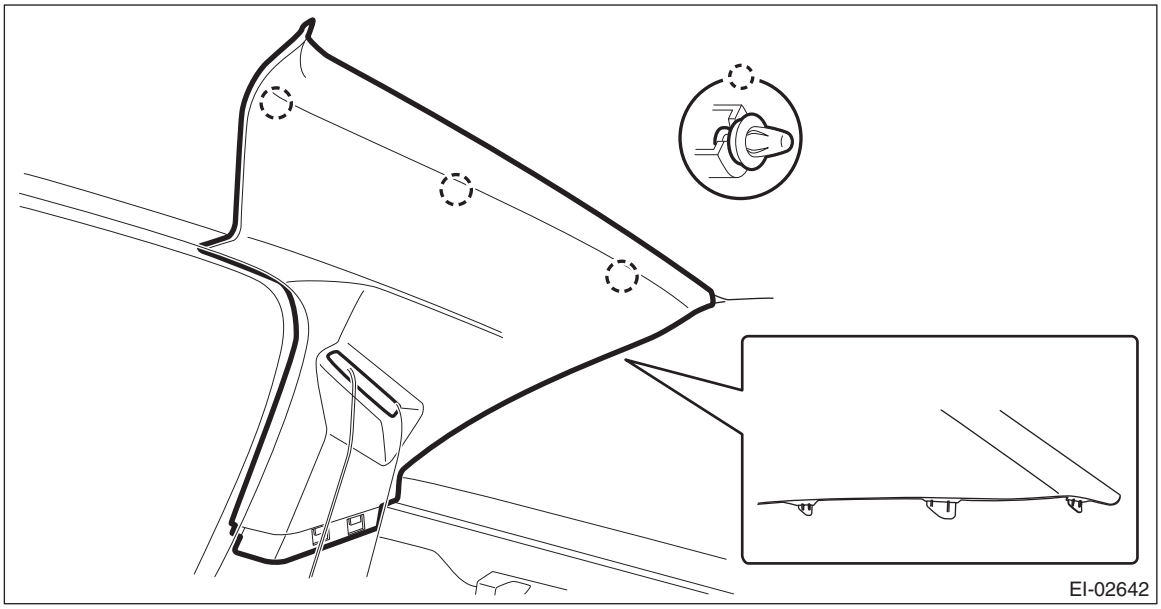
(4) Remove the clips, and remove the rear quarter trim LWR.



5) Remove the rear quarter trim UPR. (On the side where seat belt assembly is removed)
(1) Remove the lower anchor bolt of the outer belt assembly.



(2) Release the clips, and remove the rear quarter trim UPR.

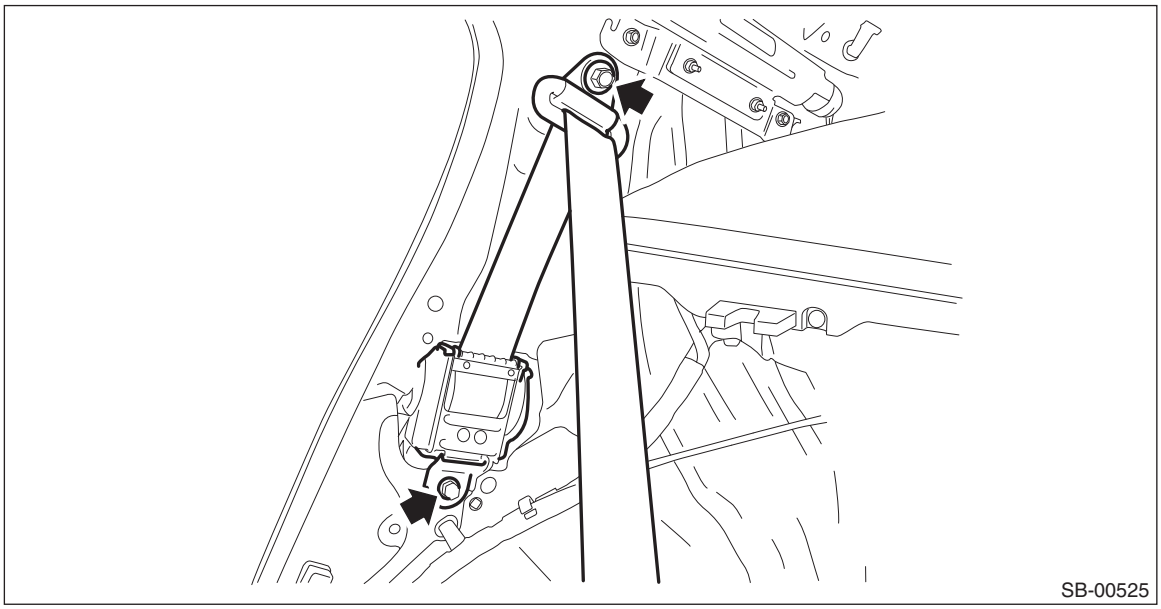


(3) Pull out the seat belt and remove the rear quarter trim UPR.

6) Remove the outer belt assembly.

(1) Remove the bolts and remove the seat belt anchor.

(2) Remove the bolts, and remove the seat belt retractor assembly.



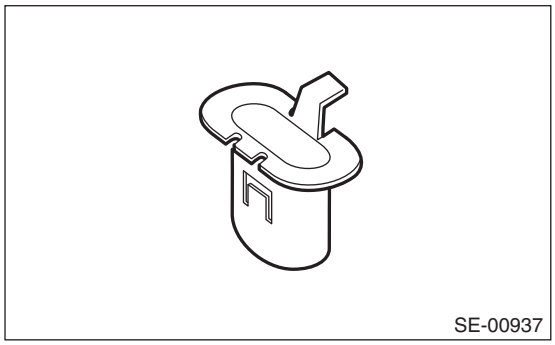
2. OUTER BELT ASSEMBLY RH & LH (OUTBACK MODEL)

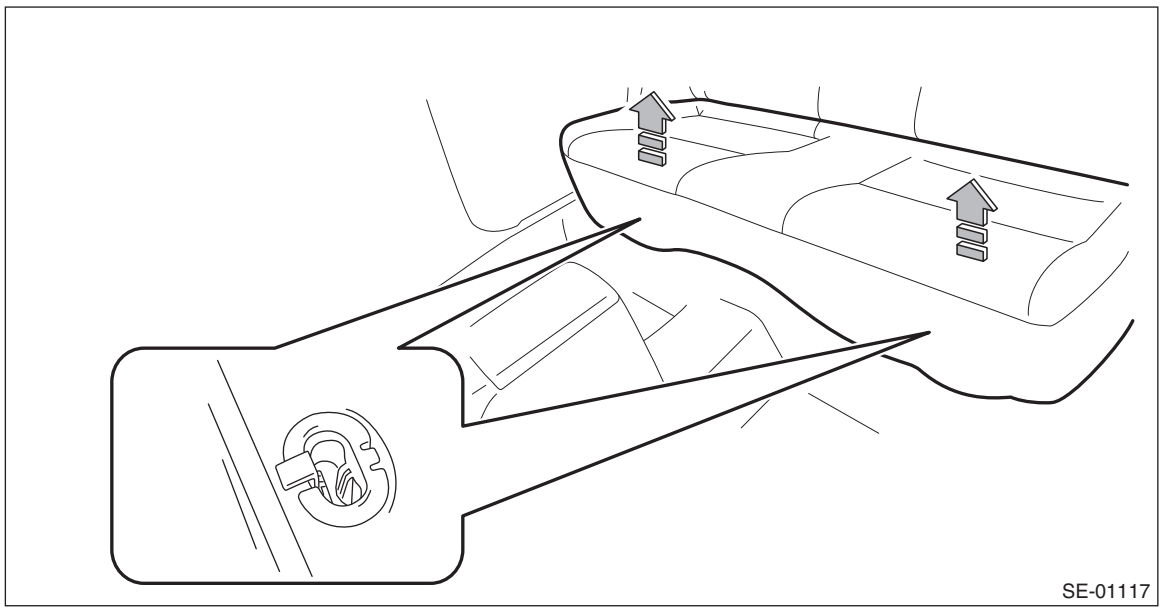
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

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

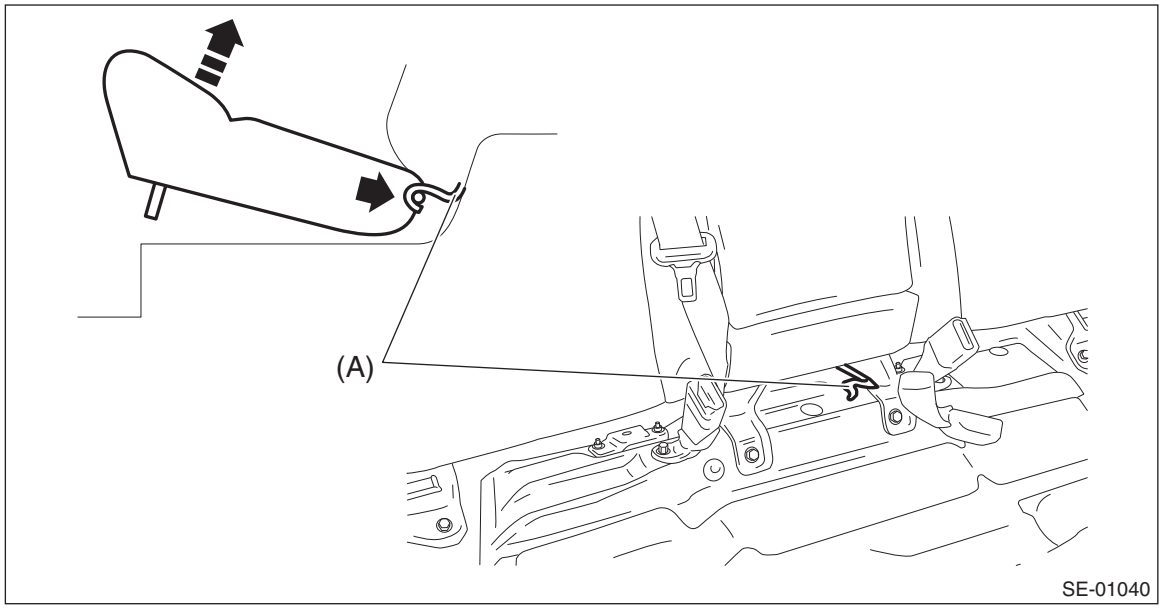
2) Remove the rear seat cushion.
   (1) Pull up the seat cushion and release the hook.

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

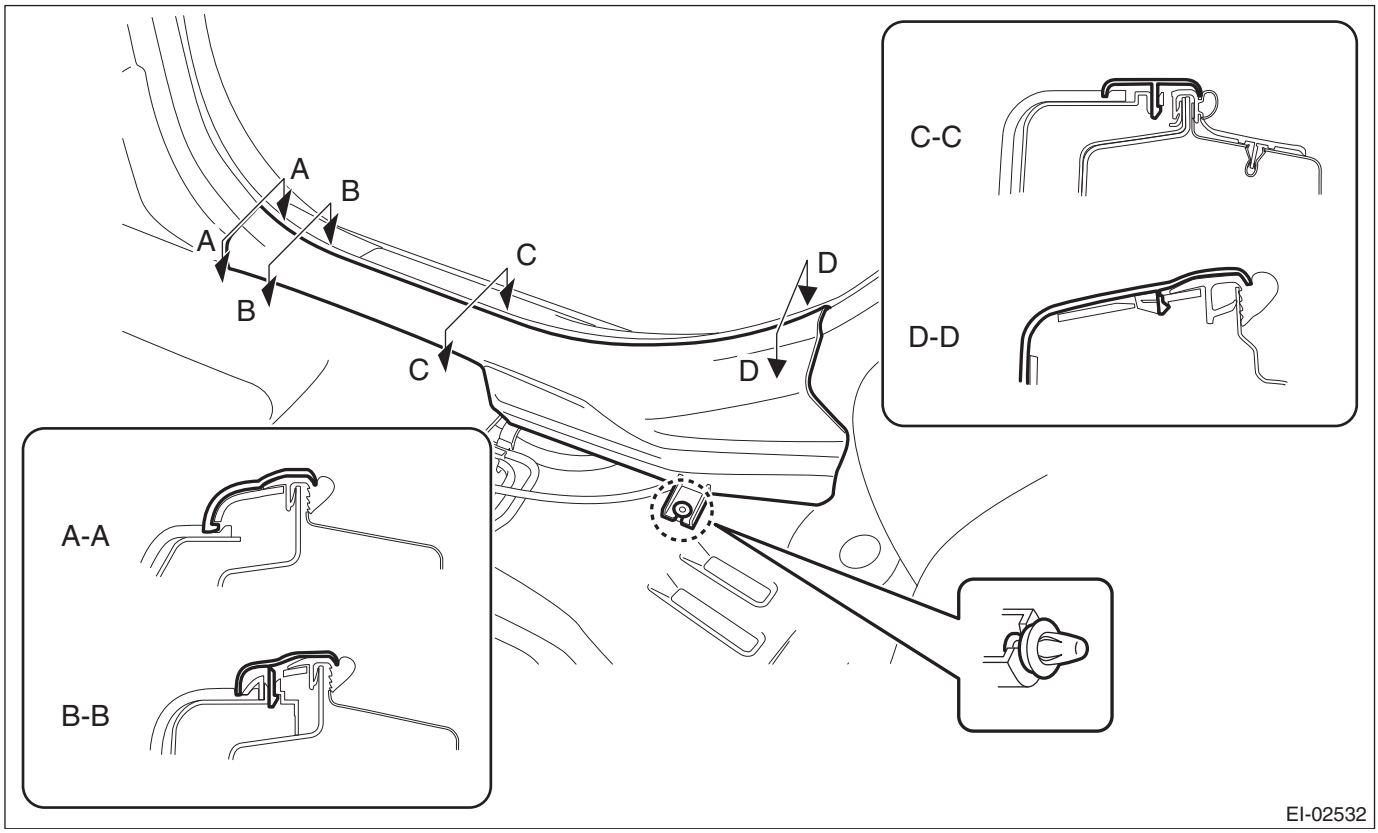

SE-00937


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.



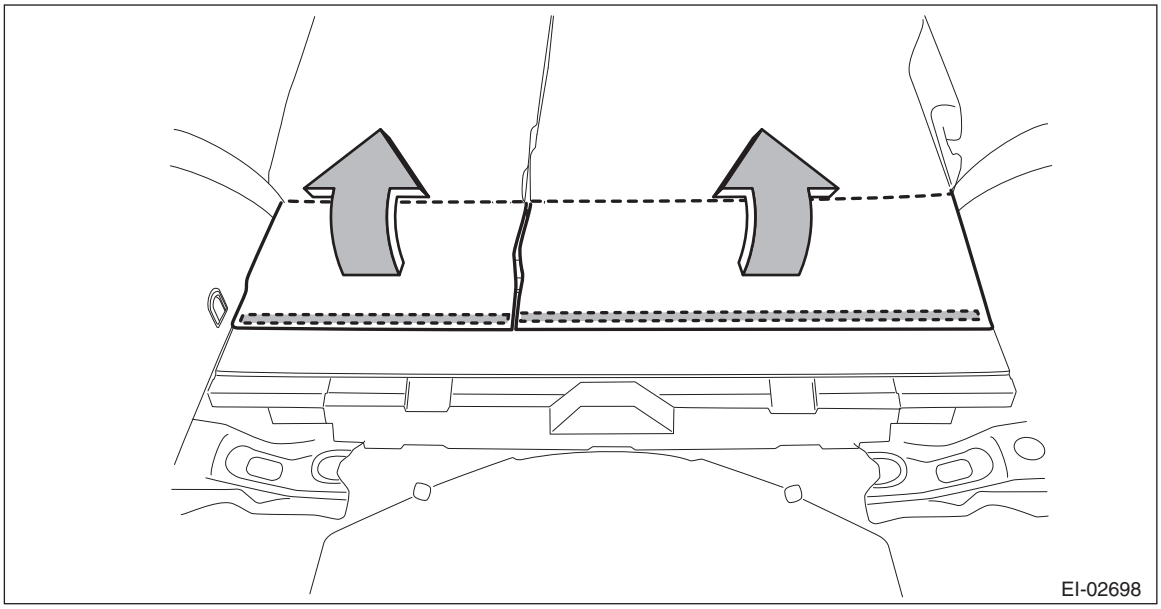
3) Release the clips and claws, and then remove the side sill cover - rear INN. (On the side where seat belt assembly is removed)



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

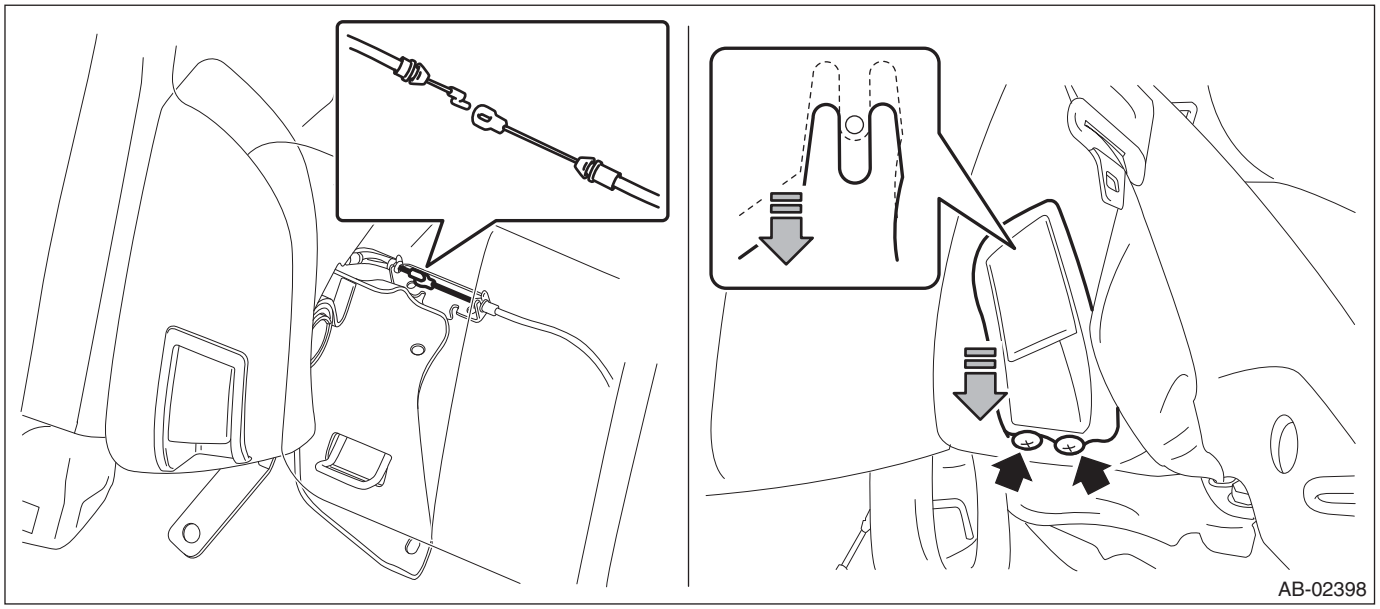
NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claws (C) and (D) by accessing from behind the side sill cover INN.

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



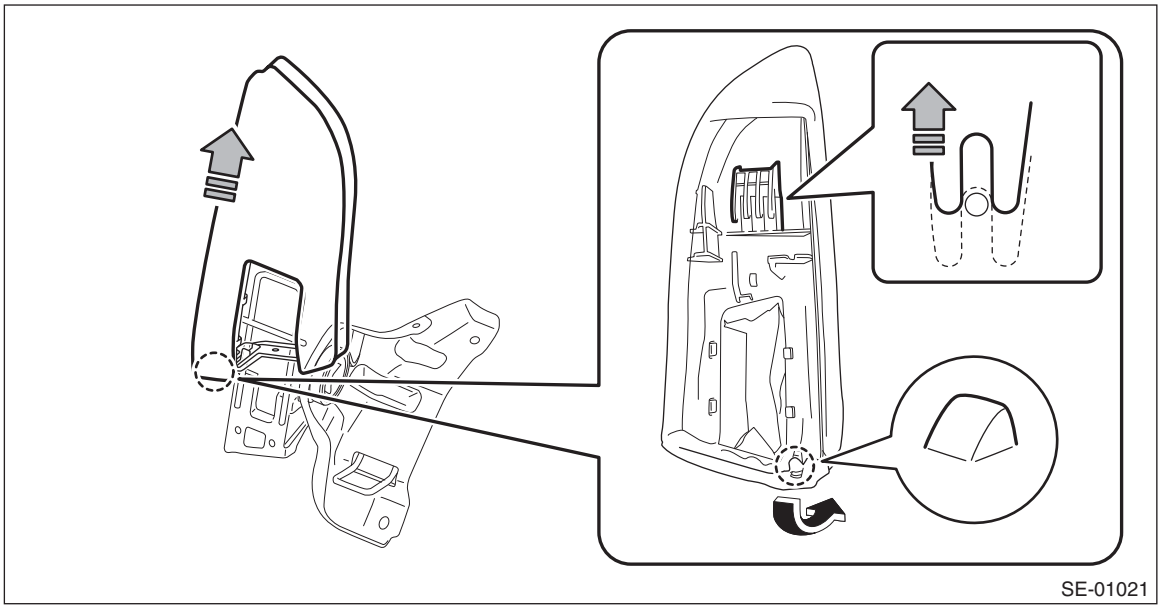
5) Remove the backrest side pad assembly. (On the side where seat belt assembly is removed)
   (1) Disconnect the backrest cable and reclining lever cable.
   (2) Remove the screws and remove the reclining lever assembly by pulling it downward.

Preparation tool: Stubby screwdriver

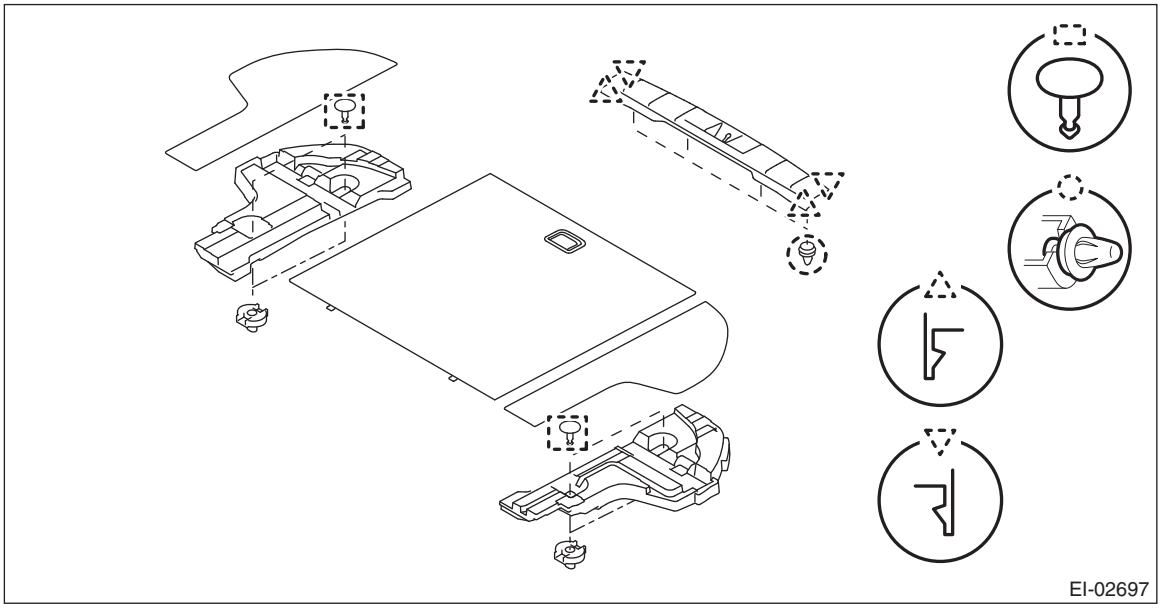


   (3) Turn over the bottom end of the backrest side pad in the forward direction so that the claws are released.

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

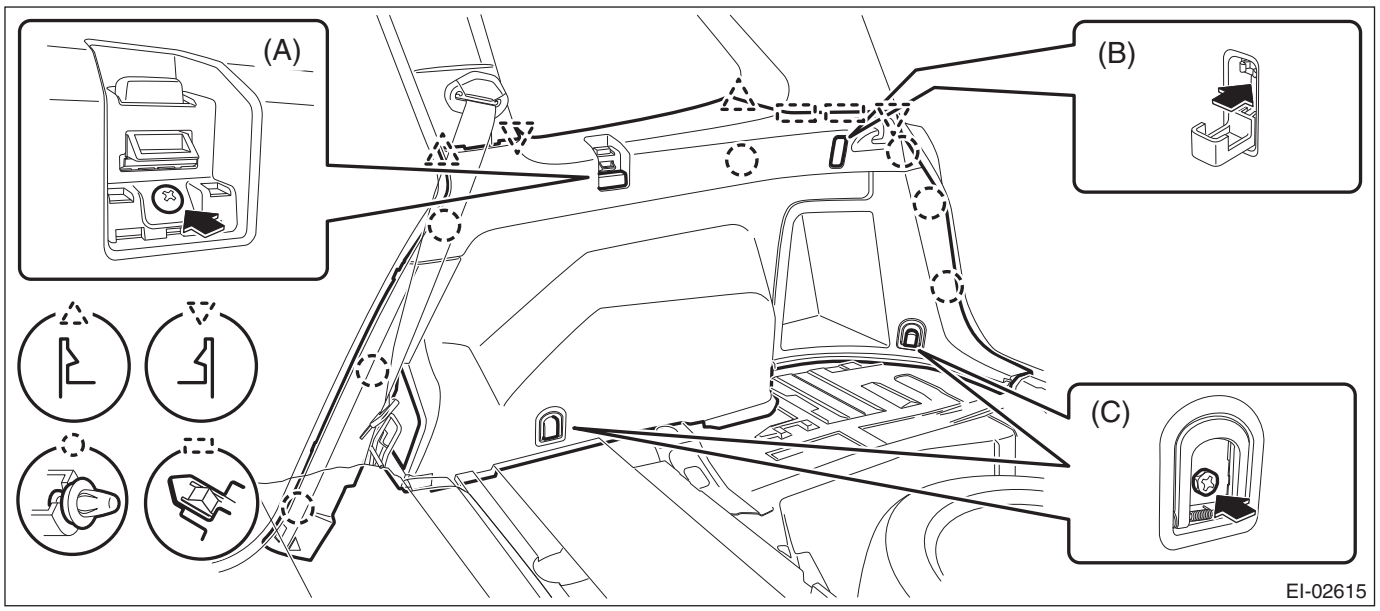


6) Remove the clips, and remove the luggage floor box and rear floor edge cover.

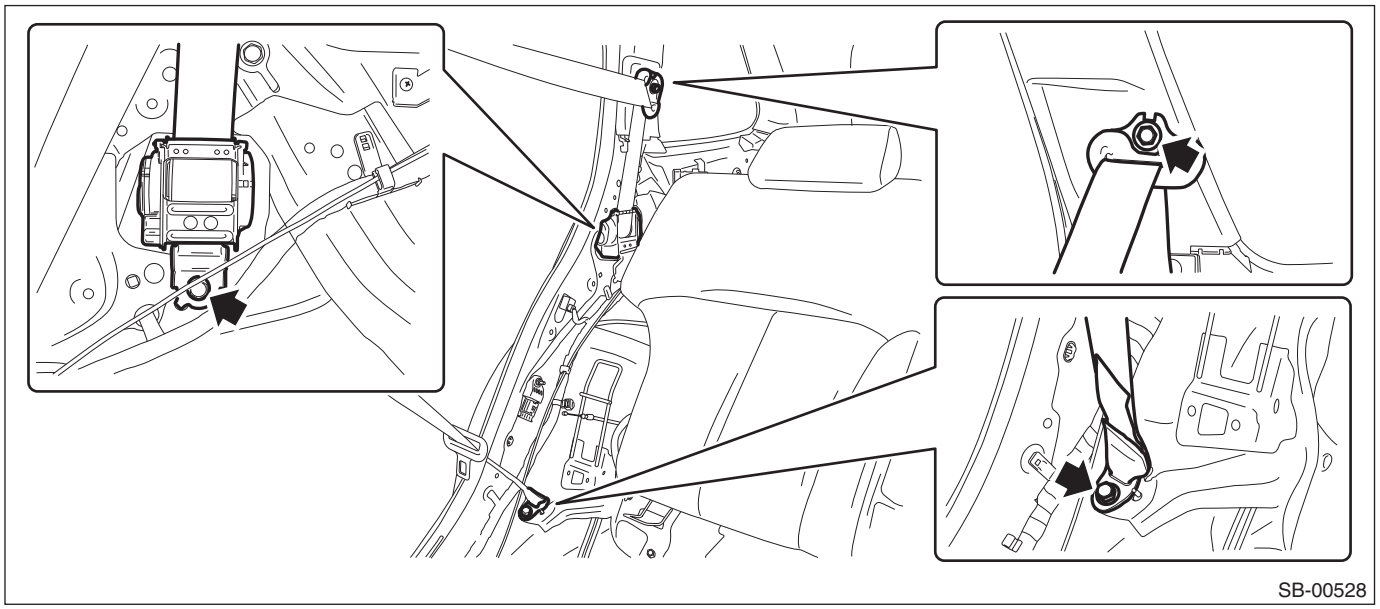


7) Remove the rear quarter trim LWR. (On the side where seat belt assembly is removed)
(1) Remove the caps, screws, and bolts. (A), (C)
(2) Take out the hook and remove the screw inside. (B)

(3) Remove the clips, and remove the rear quarter trim LWR.



8) Remove the outer belt assembly.
(1) Remove the seat belt lower anchor bolt.
(2) Open the cap and remove the bolt to remove the seat belt anchor.
(3) Remove the bolts, and remove the seat belt retractor assembly.



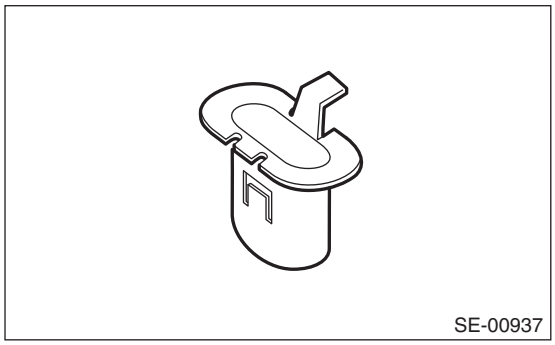
3. SHOULDER BELT ASSEMBLY CTR (SEDAN MODEL)

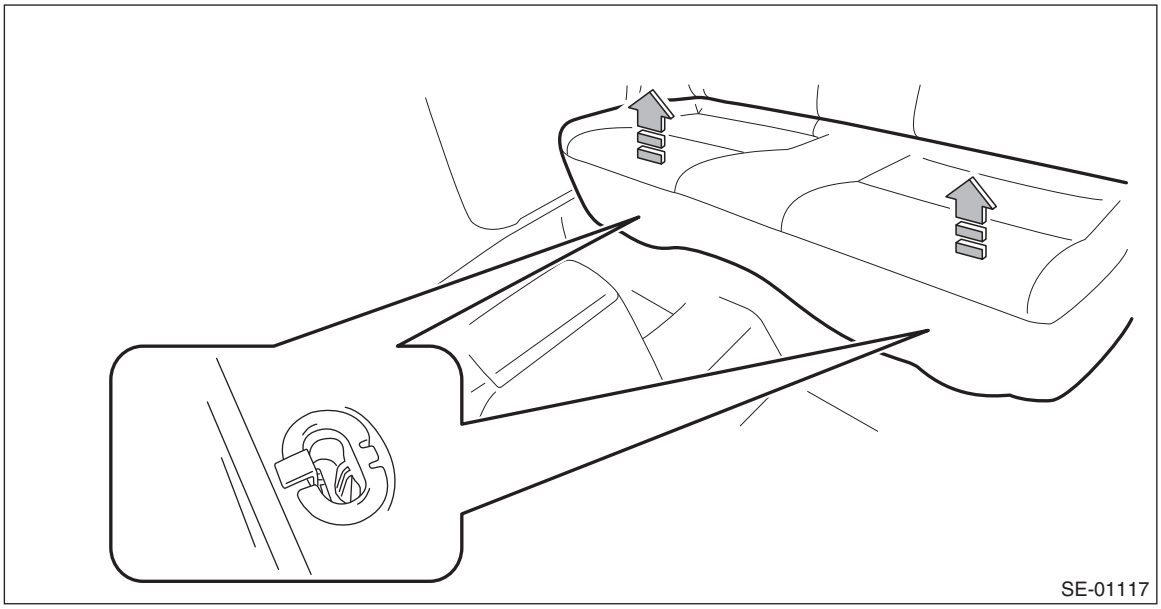
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

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

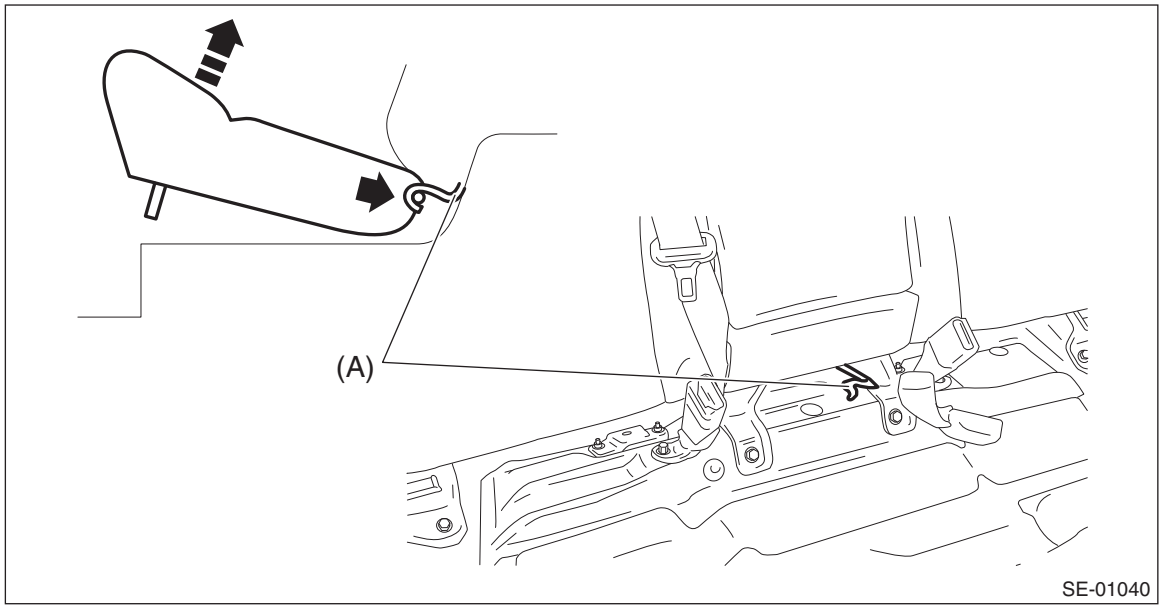
2) Remove the rear seat cushion.
   (1) Pull up the seat cushion and release the hook.

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

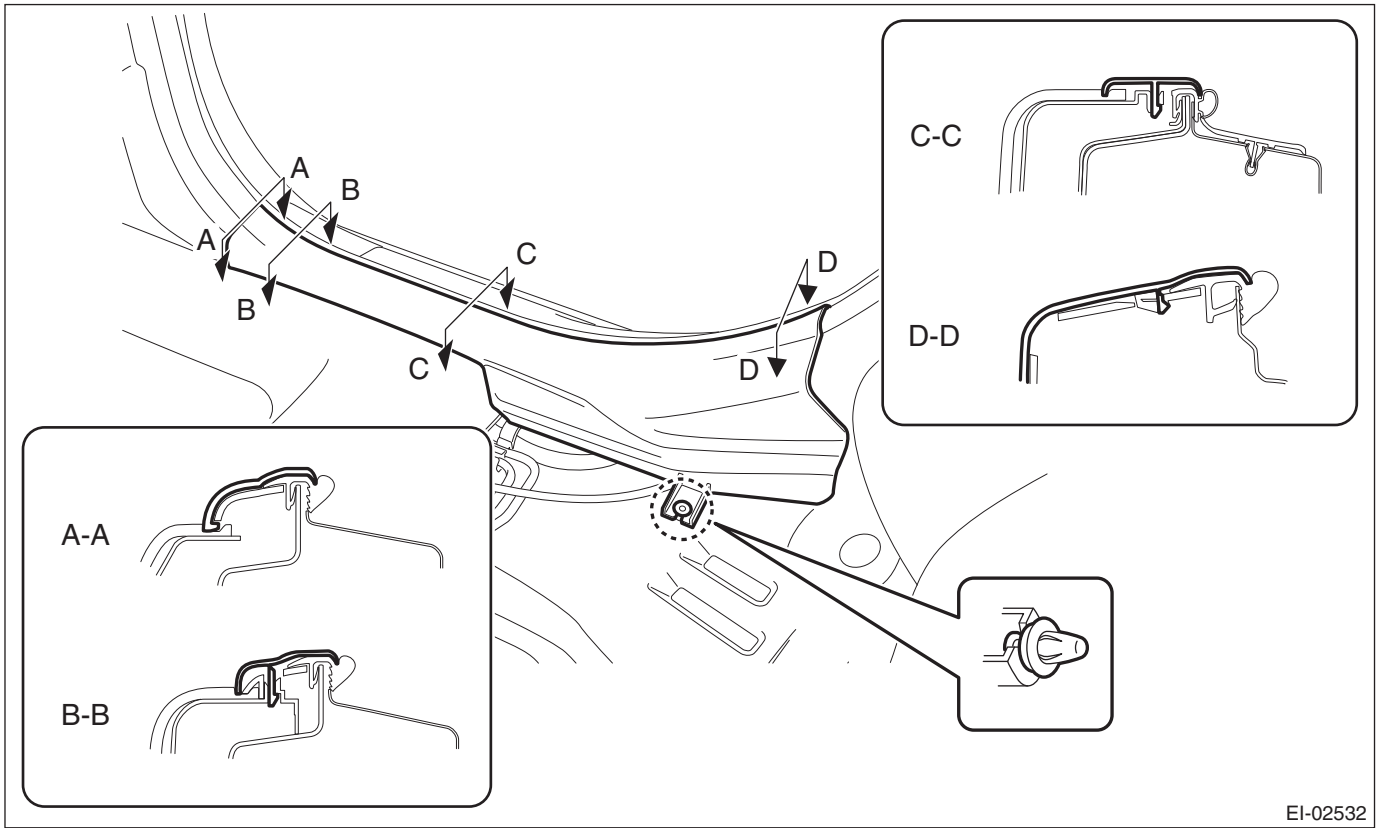

SE-00937


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) Release the clips and claws, and then remove the left and right side sill covers-rear INN.



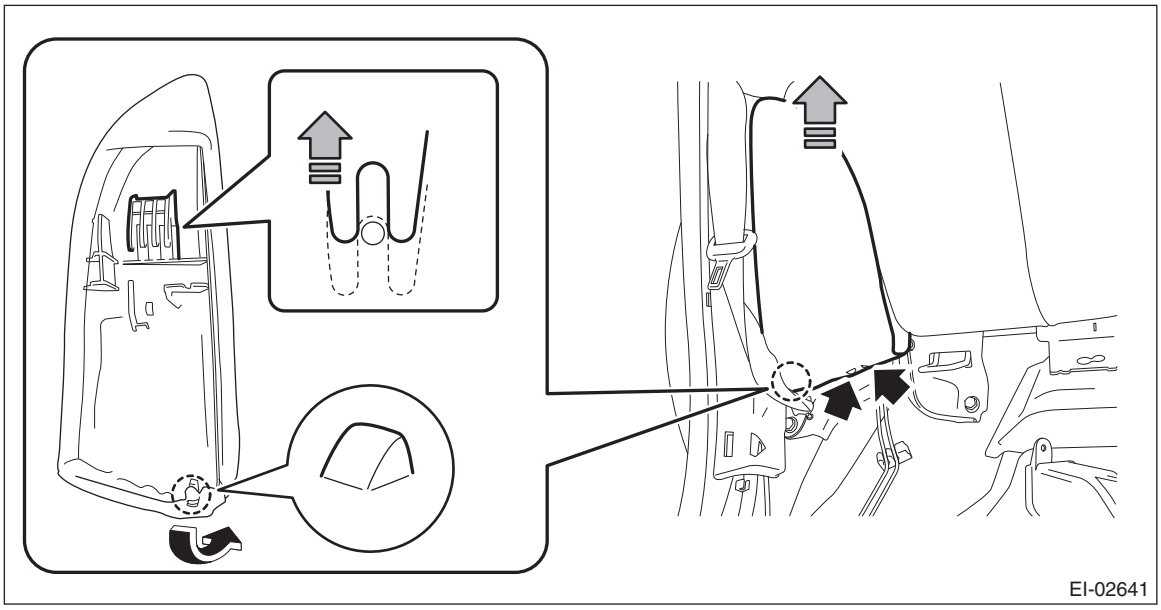
CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

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.

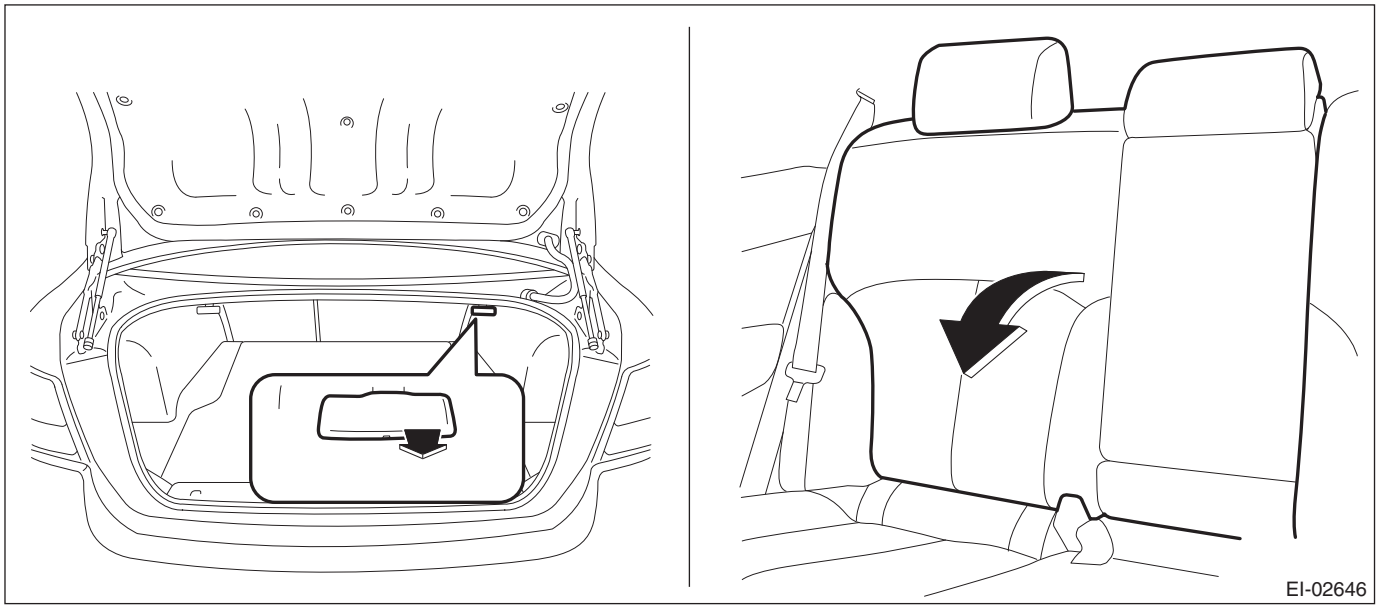
4) Remove the left and right rear quarter trim LWR.
(1) Remove the left and right backrest side pad.
a) Remove the screws.

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.

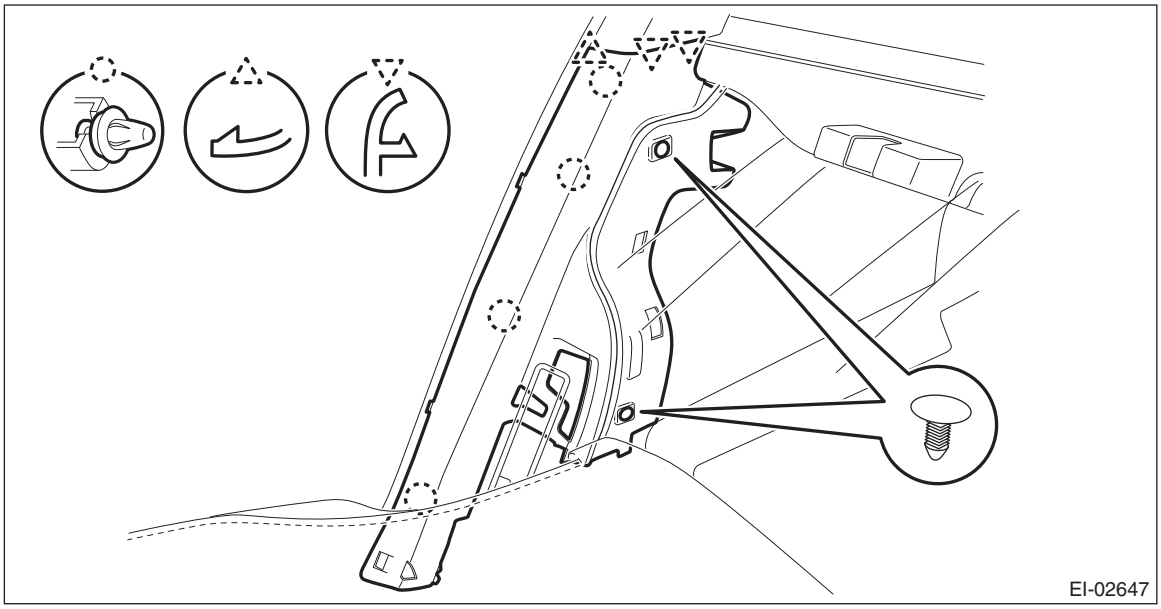


(2) Pull the release lever in the trunk room, and then tilt the left and right backrest forward.

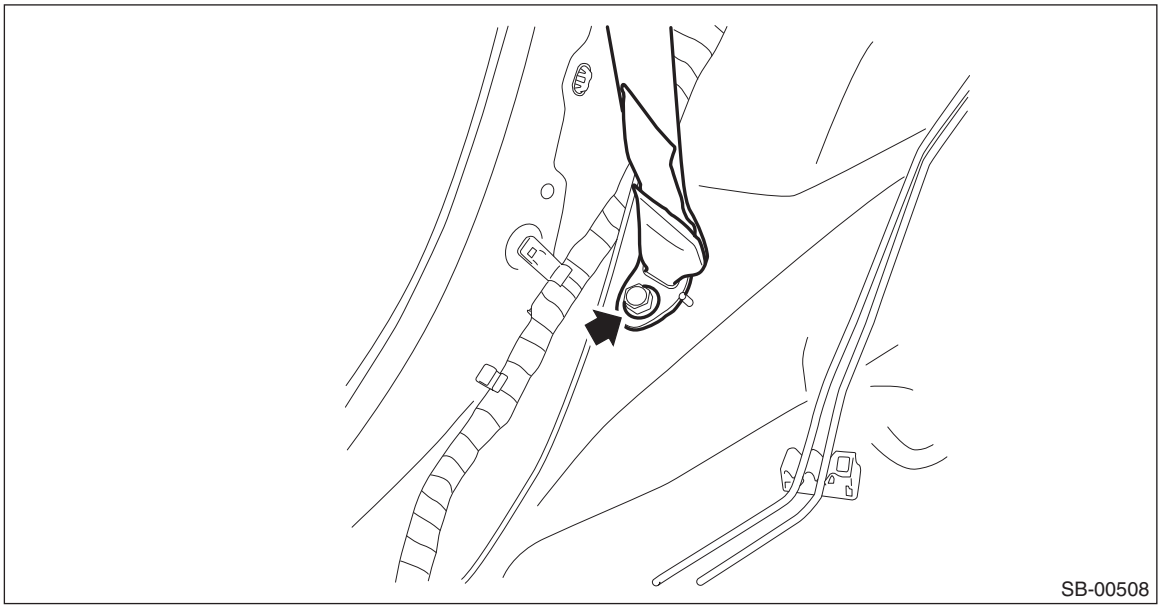


(3) Release the clips of the trunk trim panel assembly-side.

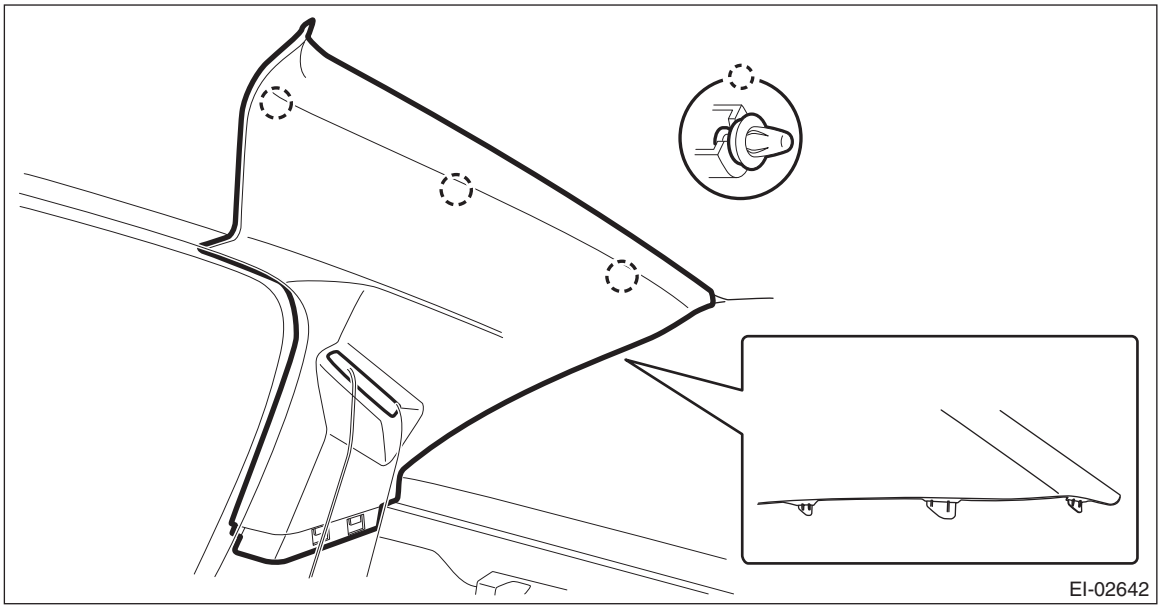
(4) Remove the clips, and remove the left and right rear quarter trim LWR.



5) Remove the left and right rear quarter trim UPR.
(1) Remove the lower anchor bolt of the outer belt assembly.

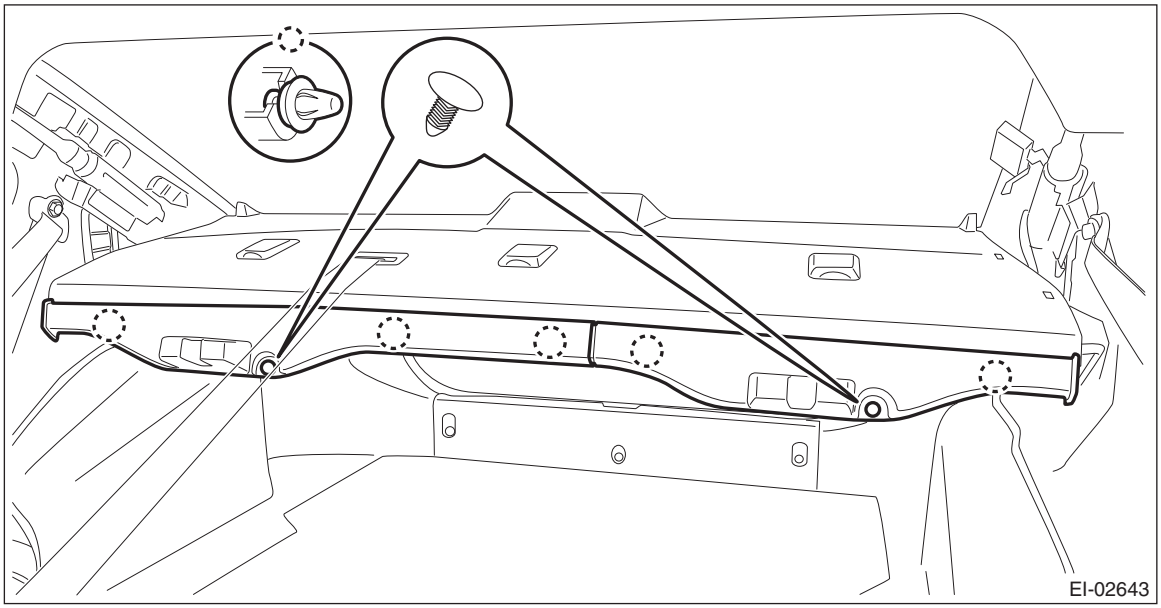


(2) Release the clips, and remove the rear quarter trim UPR.



(3) Pull out the seat belt and remove the rear quarter trim UPR.

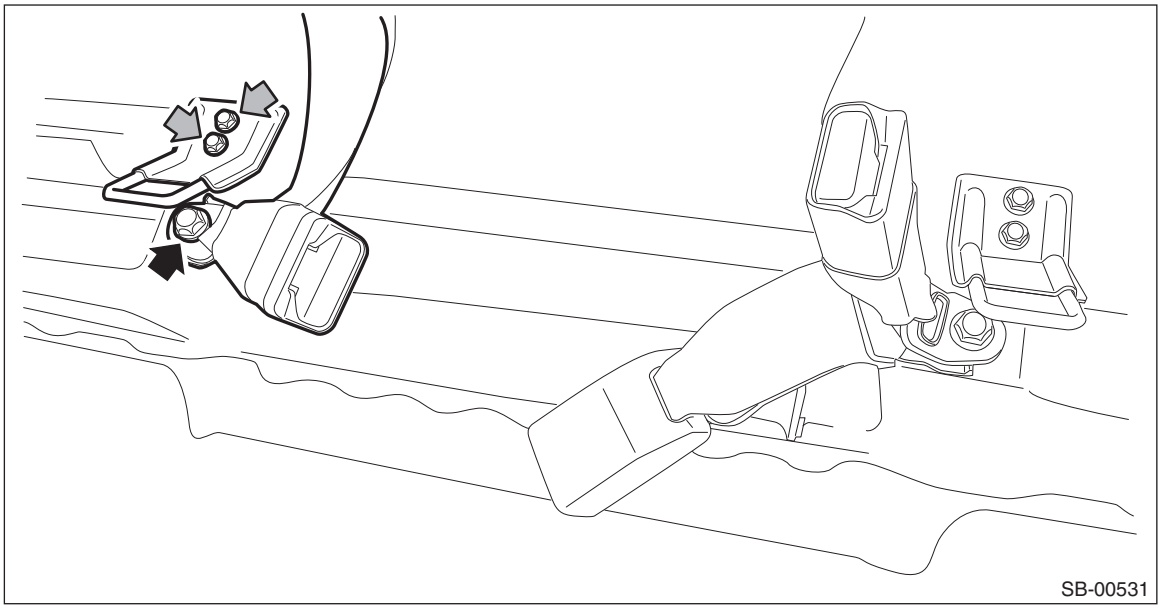
6) Release the clips and remove the left and right trunk trim panel assembly-front.



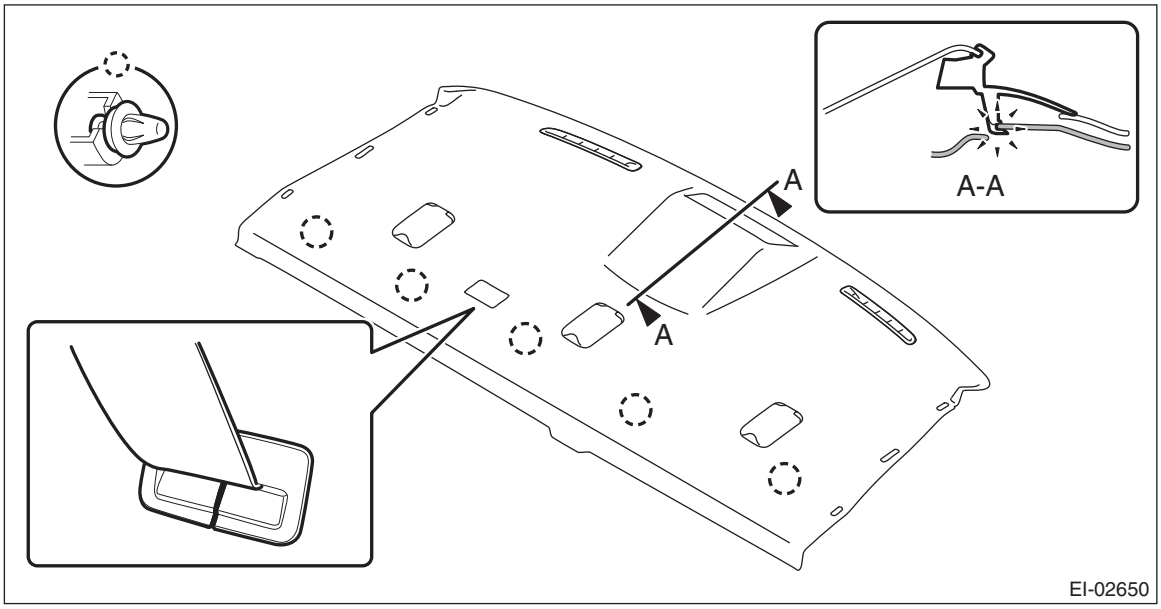
7) Remove the lower anchor of the shoulder belt assembly CTR.

(1) Remove the nuts and remove the ISO-FIX anchor.

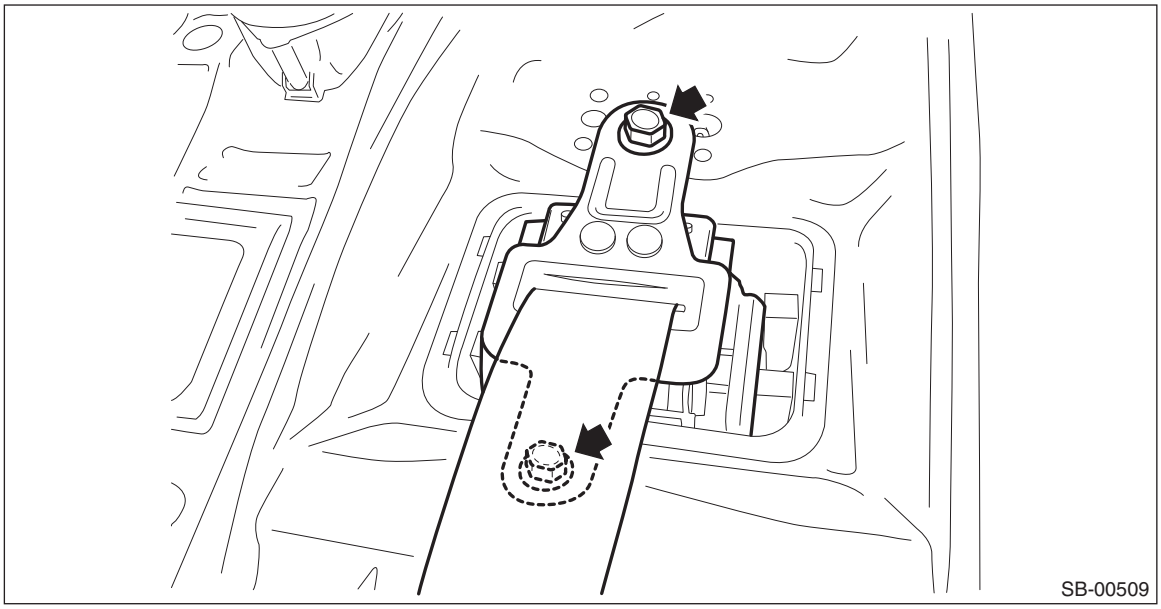
(2) Remove the bolts, and remove the lower anchor of shoulder belt assembly CTR.



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.



9) Remove the bolts, and remove the shoulder belt assembly CTR.



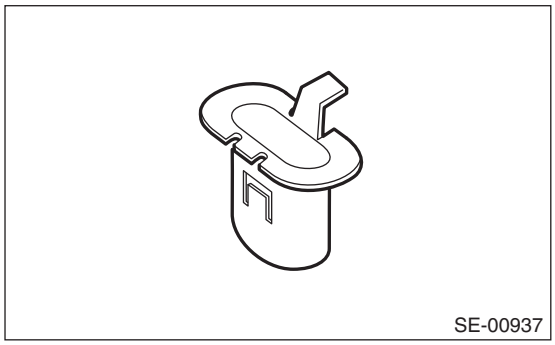
4. SHOULDER BELT ASSEMBLY CTR (OUTBACK MODEL)

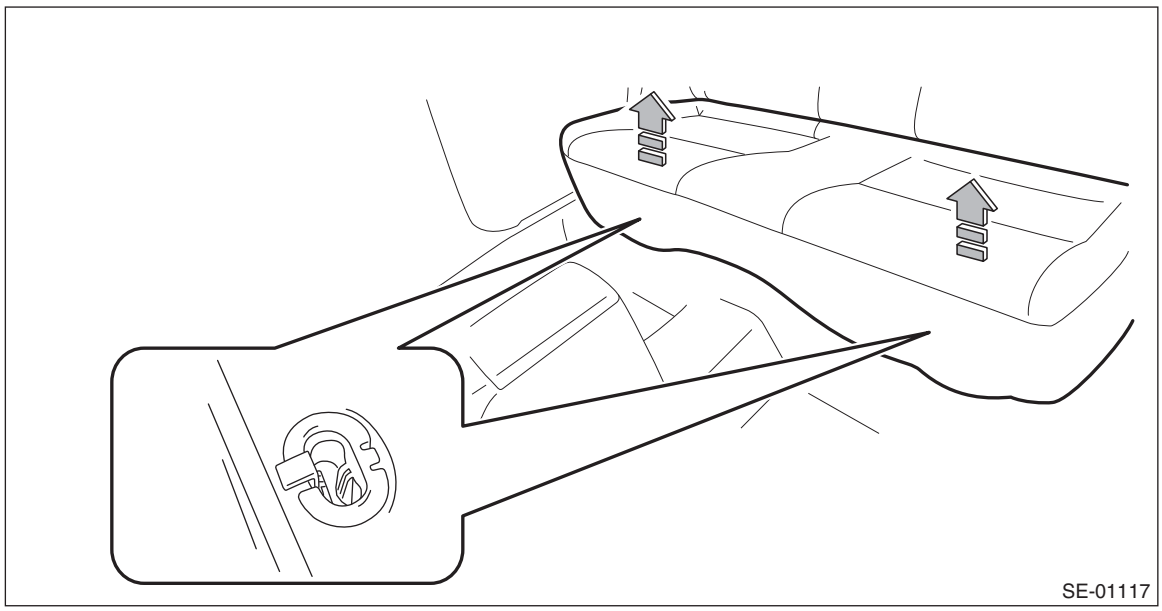
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

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

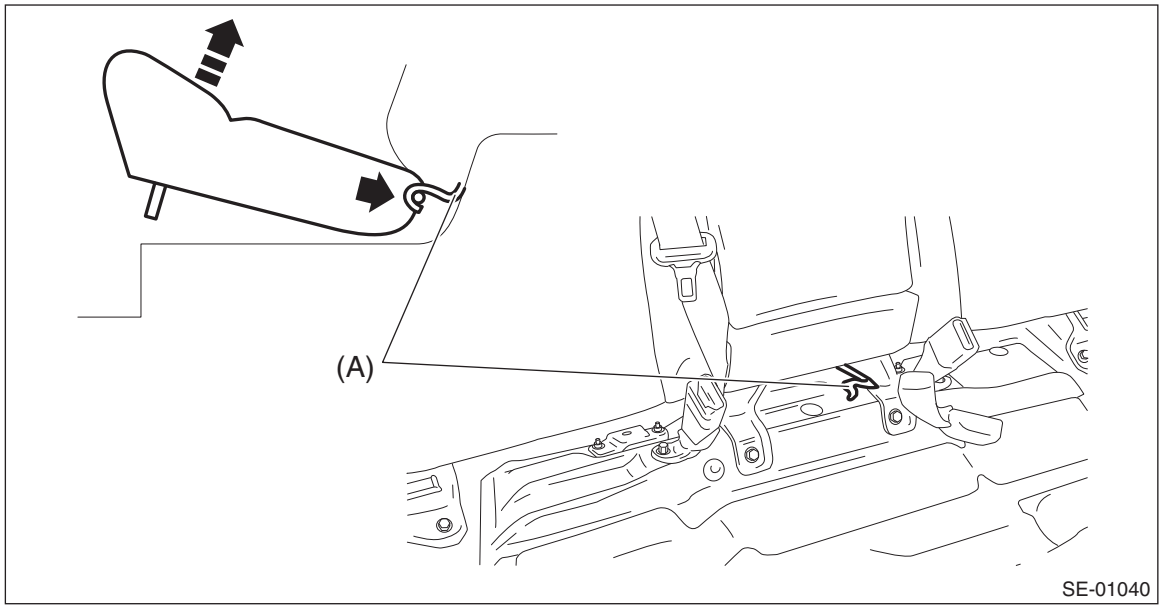
2) Remove the rear seat cushion.
   (1) Pull up the seat cushion and release the hook.

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

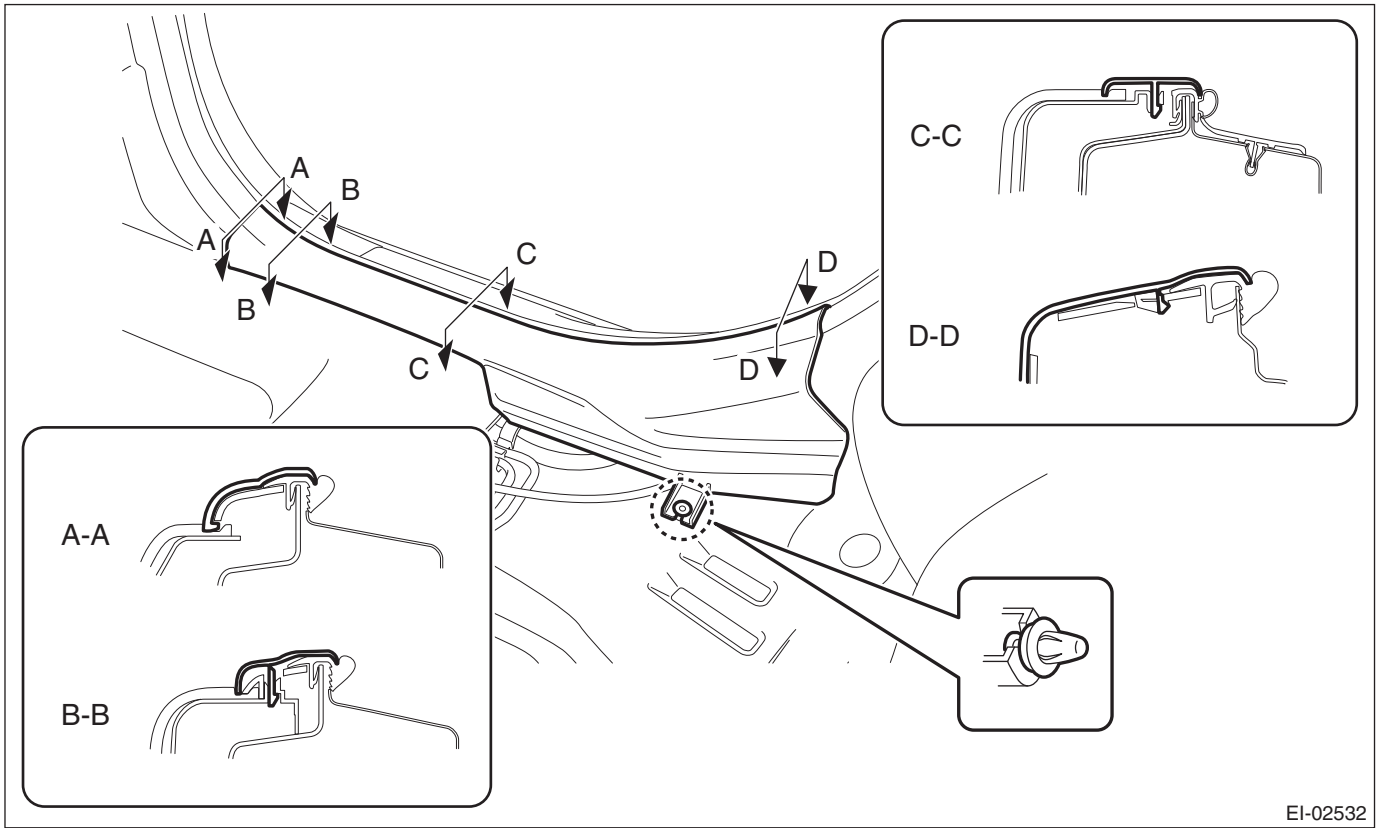

SE-00937


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.



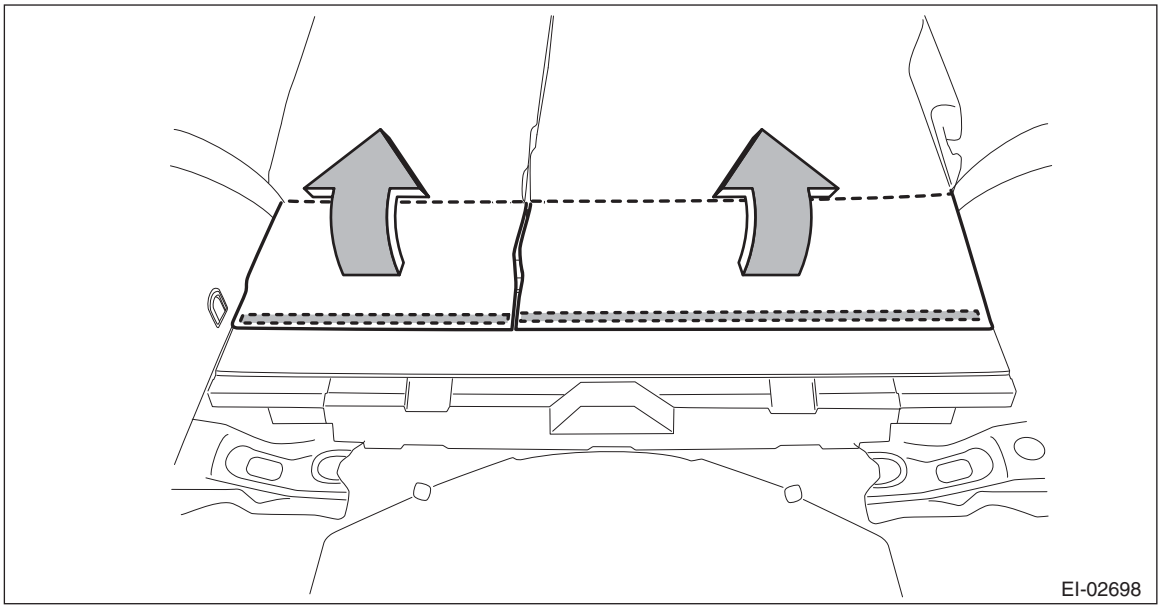
3) Release the clips and claws, and then remove the left and right side sill covers-rear INN.



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

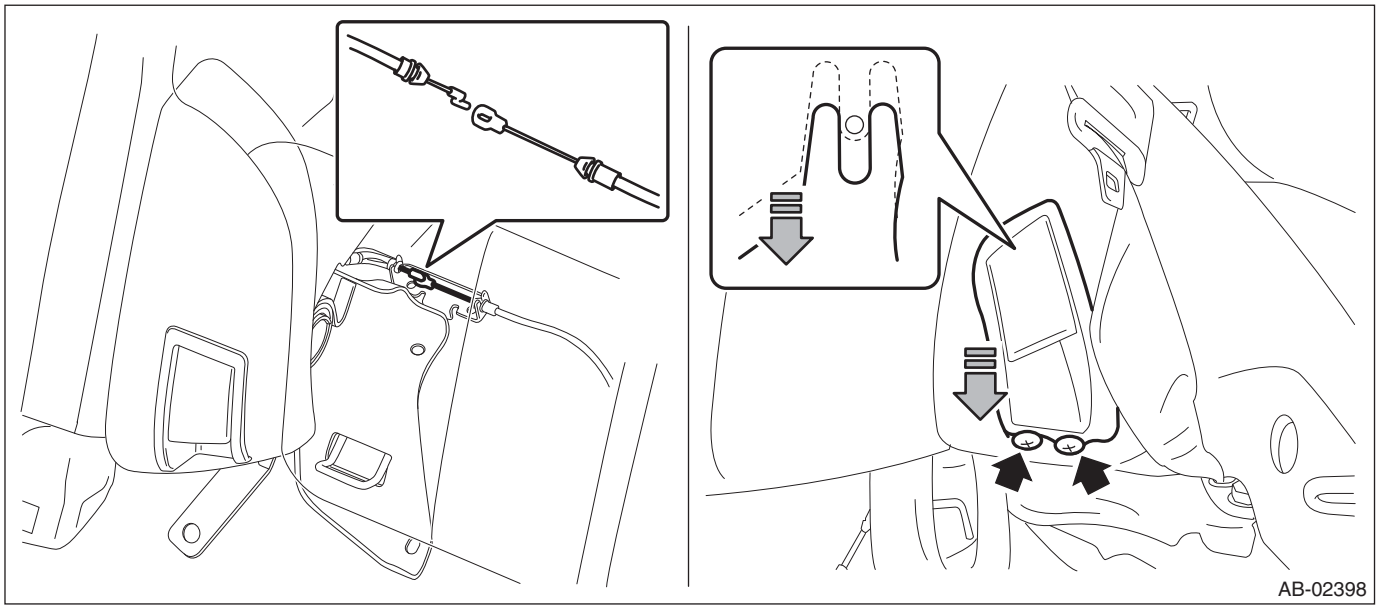
NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claws (C) and (D) by accessing from behind the side sill cover INN.

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



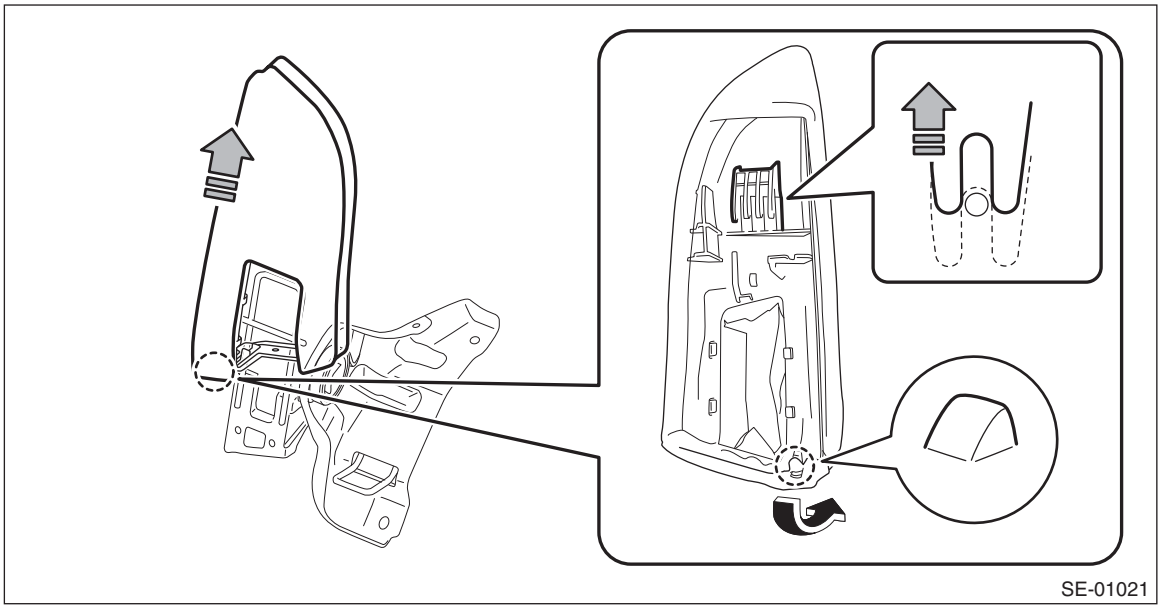
5) Remove the left and right backrest side pad assembly.
   (1) Disconnect the backrest cable and reclining lever cable.
   (2) Remove the screws and remove the reclining lever assembly by pulling it downward.

Preparation tool: Stubby screwdriver

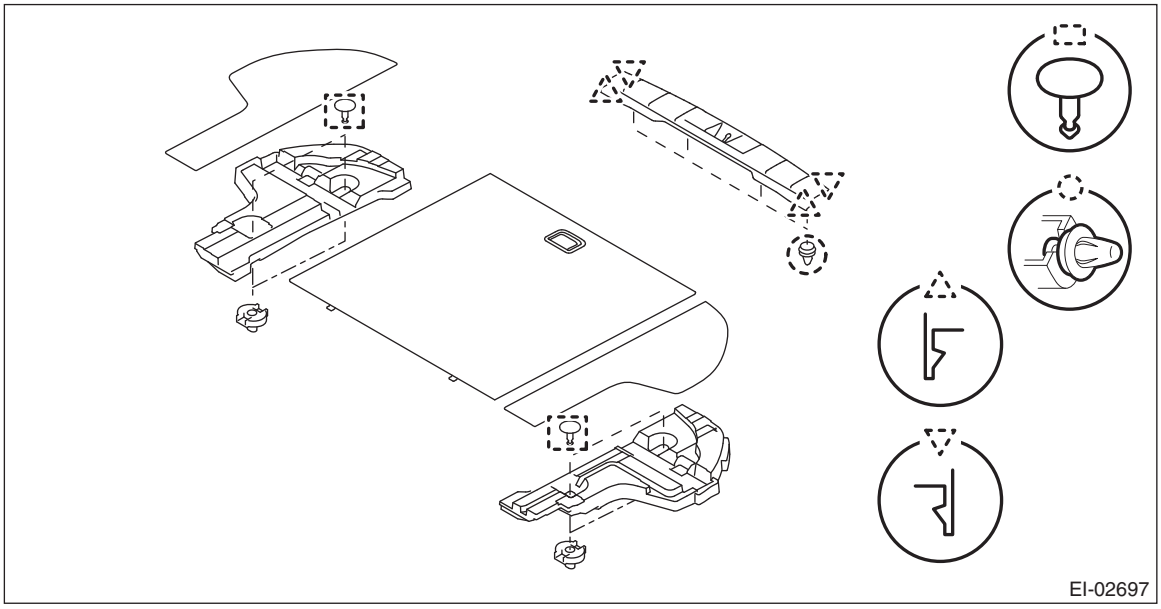


   (3) Turn over the bottom end of the backrest side pad in the forward direction so that the claws are released.

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

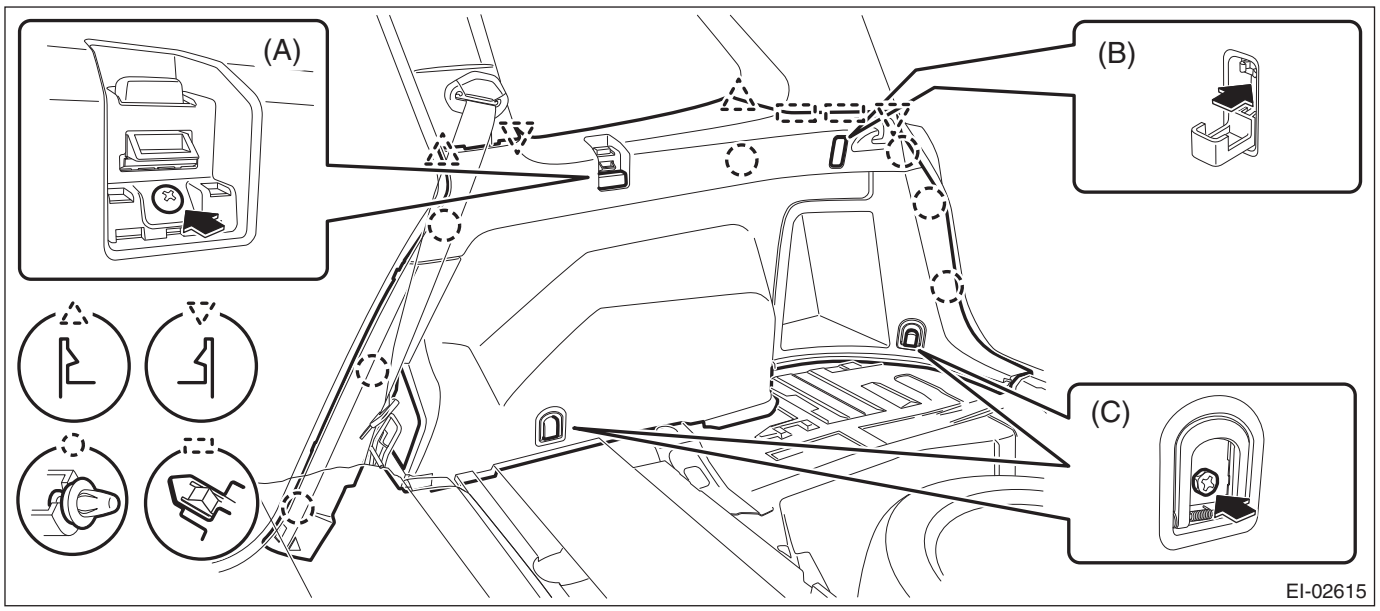


6) Remove the clips, and remove the luggage floor box and rear floor edge cover.

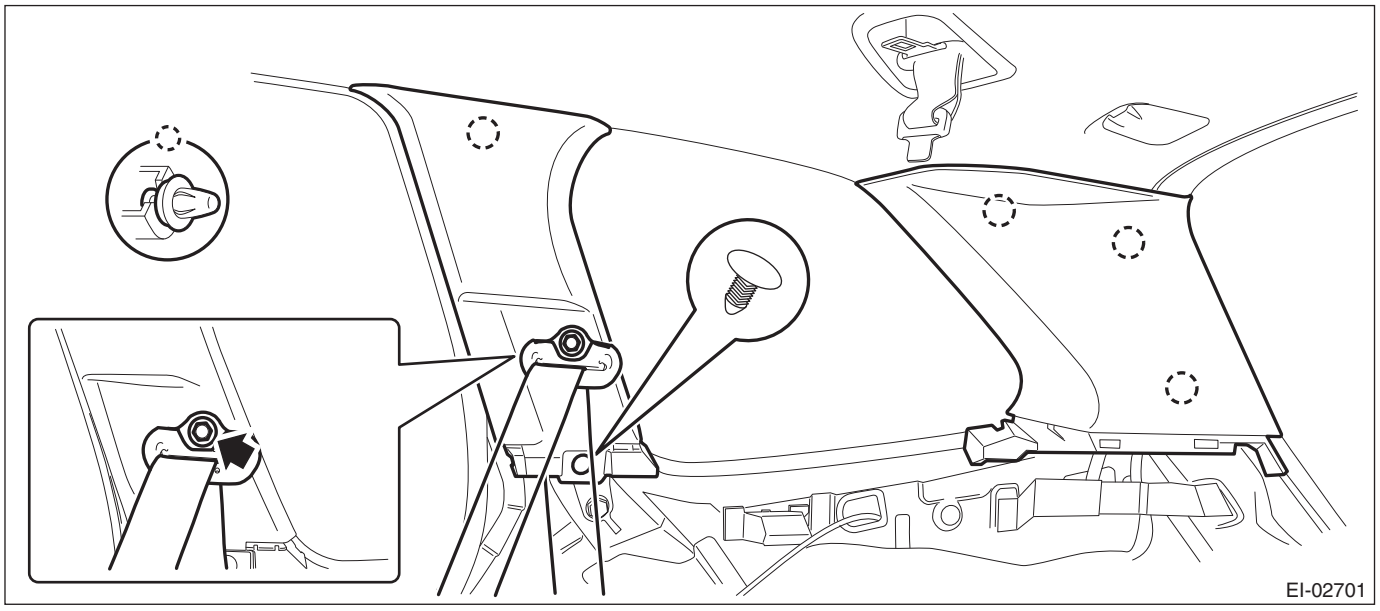


7) Remove the left and right rear quarter trim LWR.
(1) Remove the caps, screws, and bolts. (A), (C)
(2) Take out the hook and remove the screw inside. (B)

(3) Remove the clips, and remove the rear quarter trim LWR.



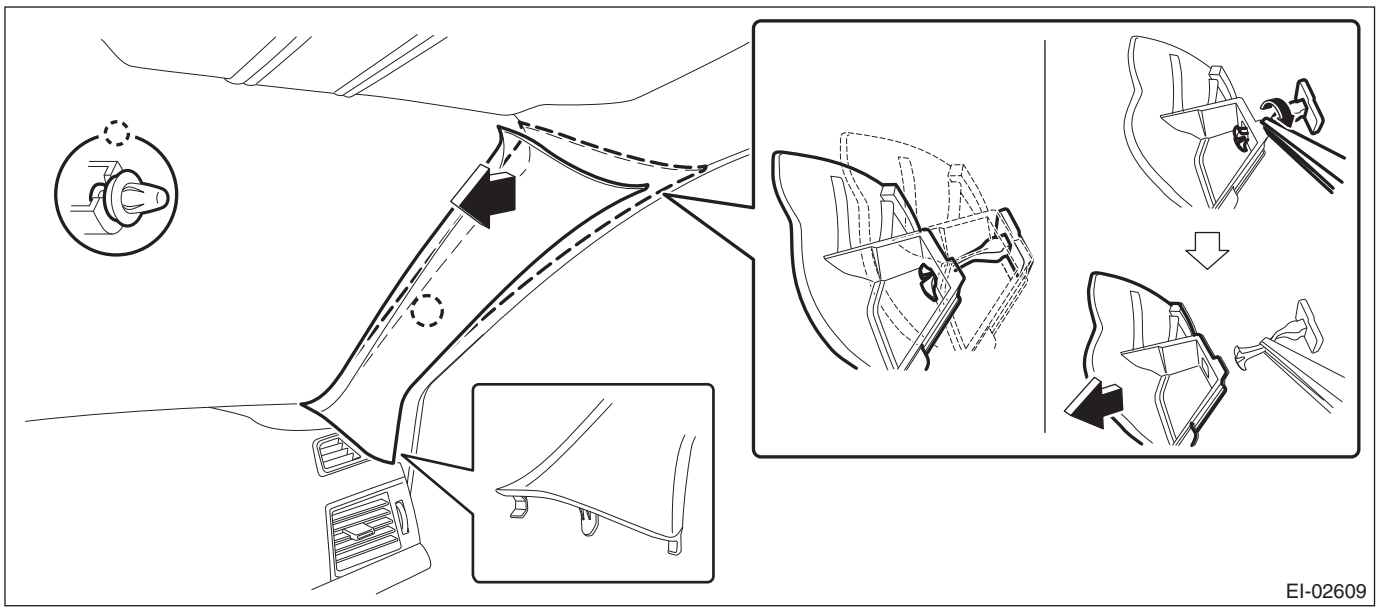
8) Remove the left and right rear quarter trim UPR.
(1) Open the cap and remove the bolt to remove the seat belt anchor.
(2) Remove the clips, and remove the rear quarter trim UPR-front.
(3) Remove the clips, and remove the rear quarter trim UPR-rear.



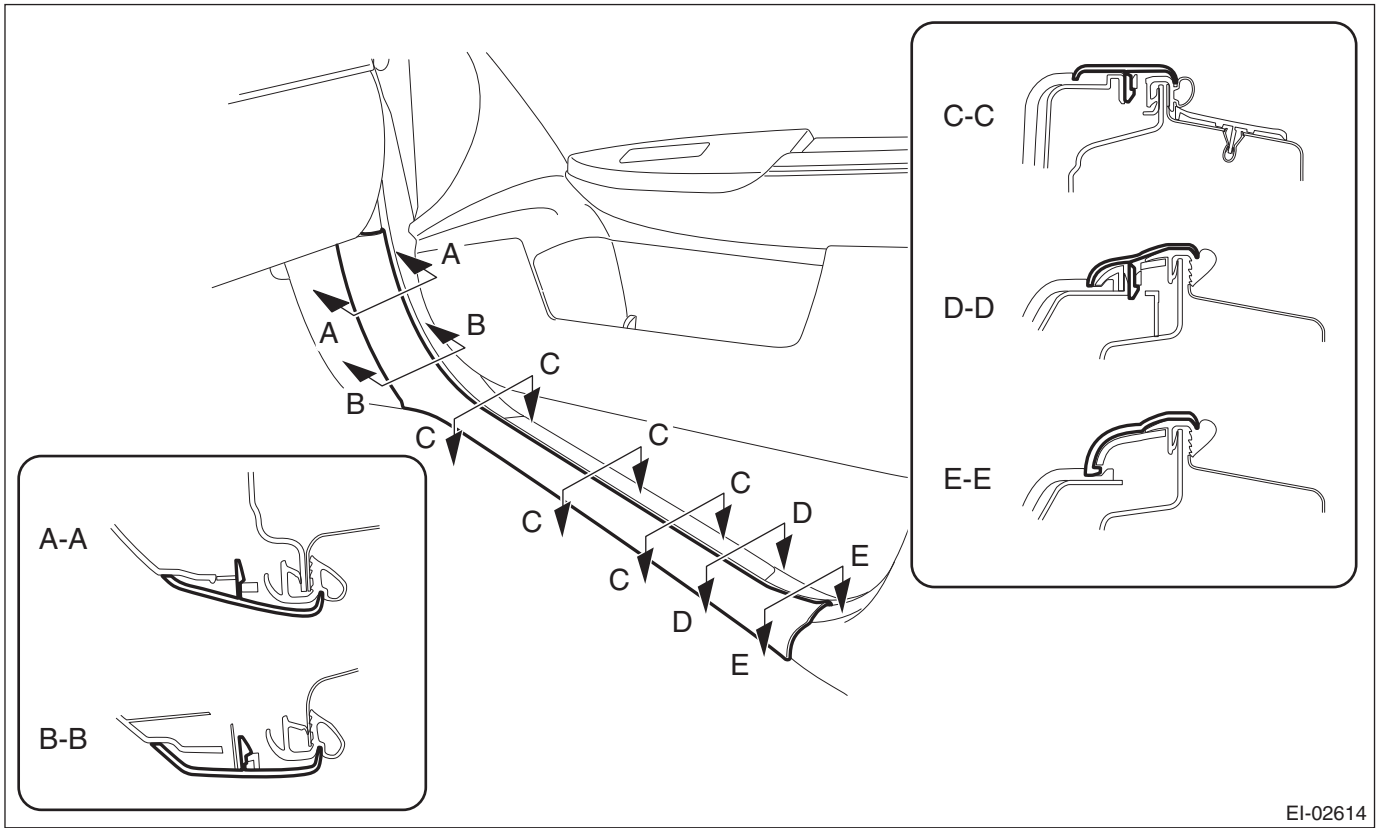
9) Remove the left and right front pillar trims.
(1) Pull the upper part of the front pillar trim towards the center of the vehicle.
(2) Insert long-nose pliers into the top part of the trim, grip the clip with the pliers and twist 90° in that position.

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.

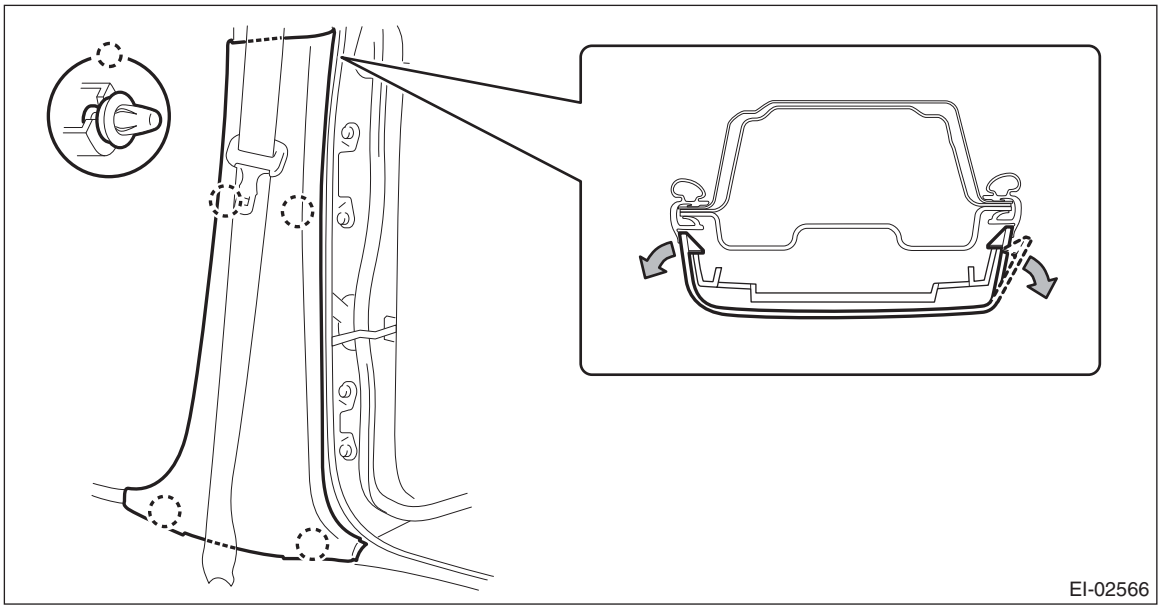


CAUTION:
Do not pull with excessive force. Doing so may damage the claws of the side sill cover INN.

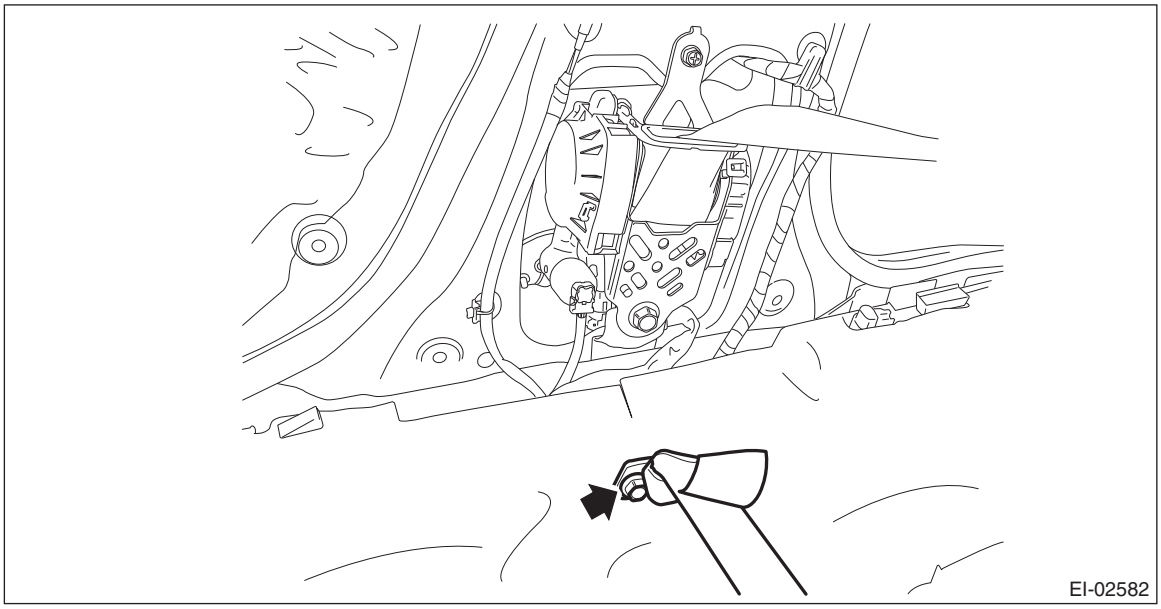
NOTE:
To release the claws of the side sill cover INN, the following steps are recommended.
1. Take out the weather strip from under the side sill cover INN.
2. Turn over the floor mat and release the claw (C) by accessing from behind the side sill cover INN.

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.

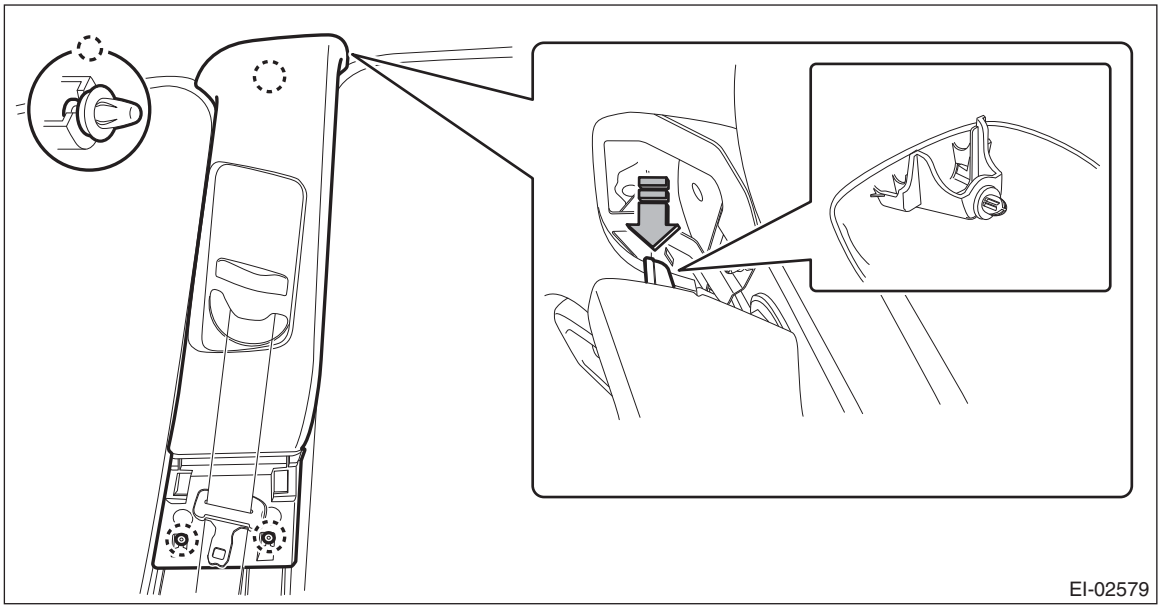

EI-02566

NOTE:
First release the claw located to the rear of the vehicle.
12) Remove the left and right center pillar trim UPR.
(1) Remove the seat belt lower anchor bolt.


EI-02582

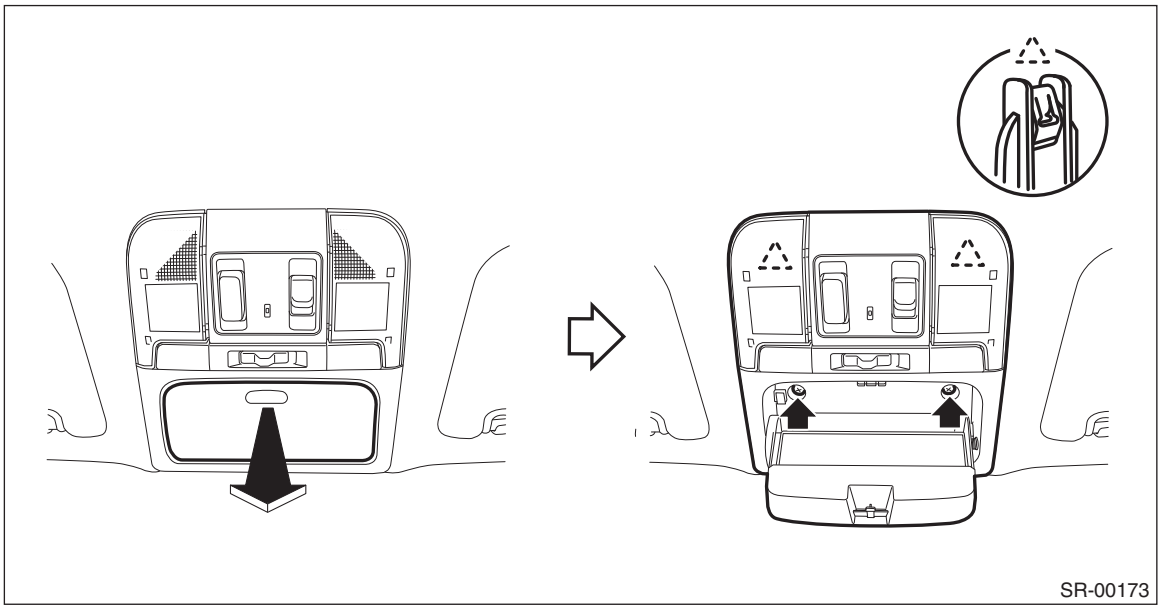
(2) Release the clip by pulling the center pillar trim UPR toward you.

(3) Remove the center pillar trim UPR by lowering the entire trim.



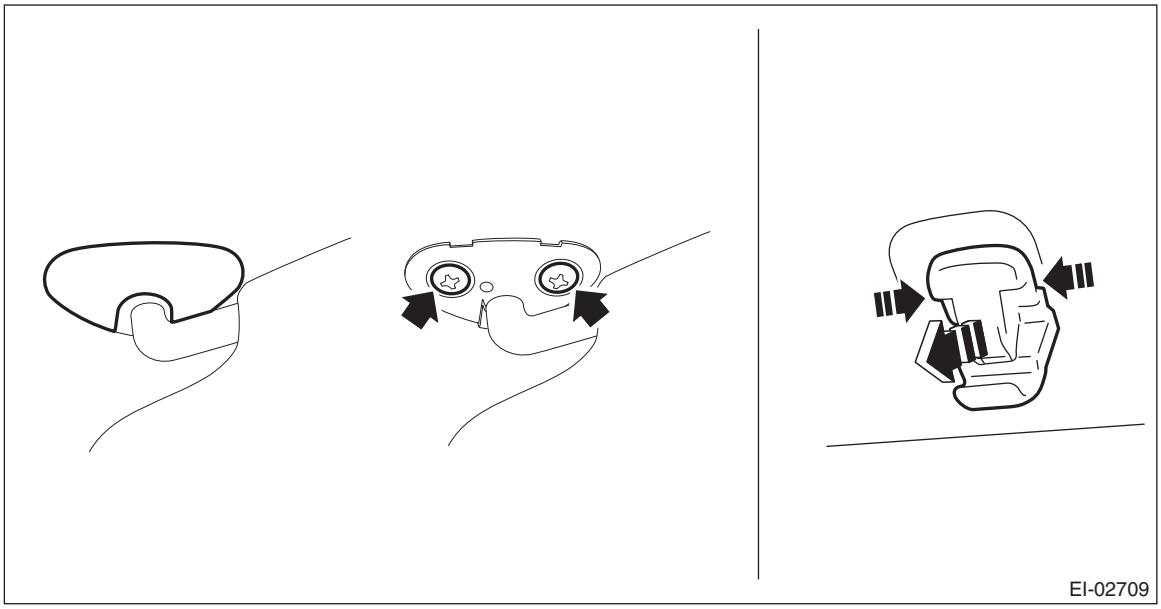
(4) Pull out the seat belt from the center pillar trim UPR.

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.

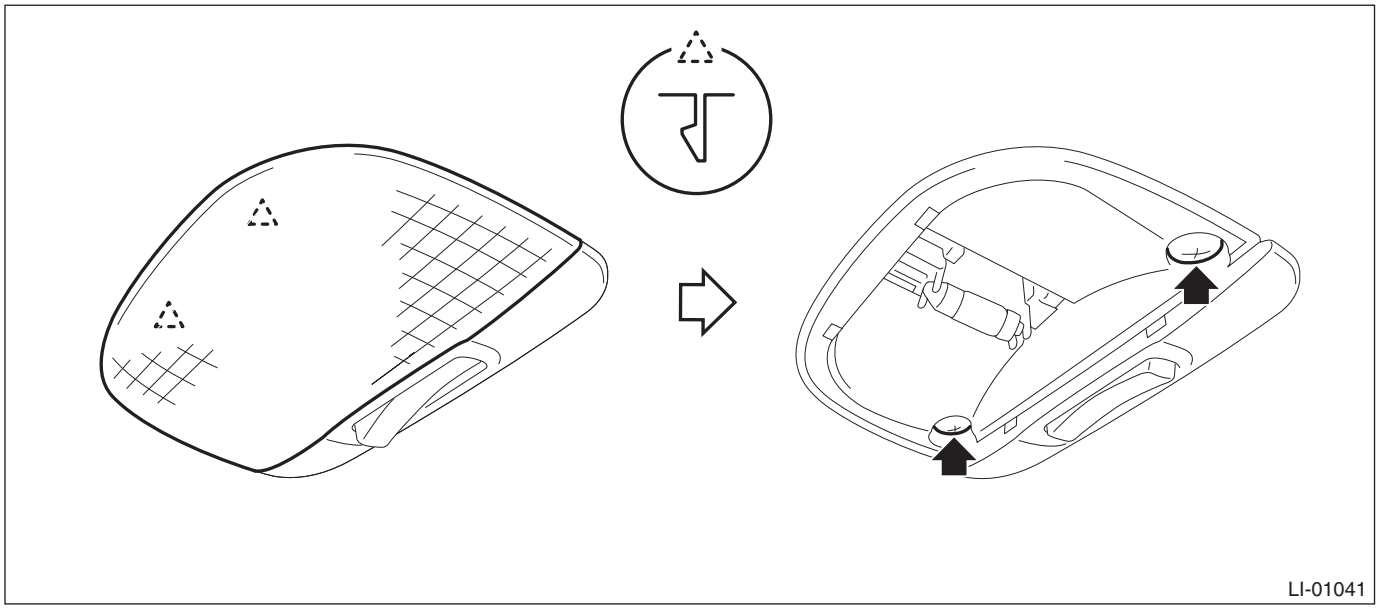


14) Remove the left and right sun visor assembly.
(1) Remove the cover, loosen the screws, and remove the sun visor assembly.
(2) Press the both sides of the sun visor hook using a flat tip screwdriver.

(3) Remove the sun visor hook by pulling toward you.

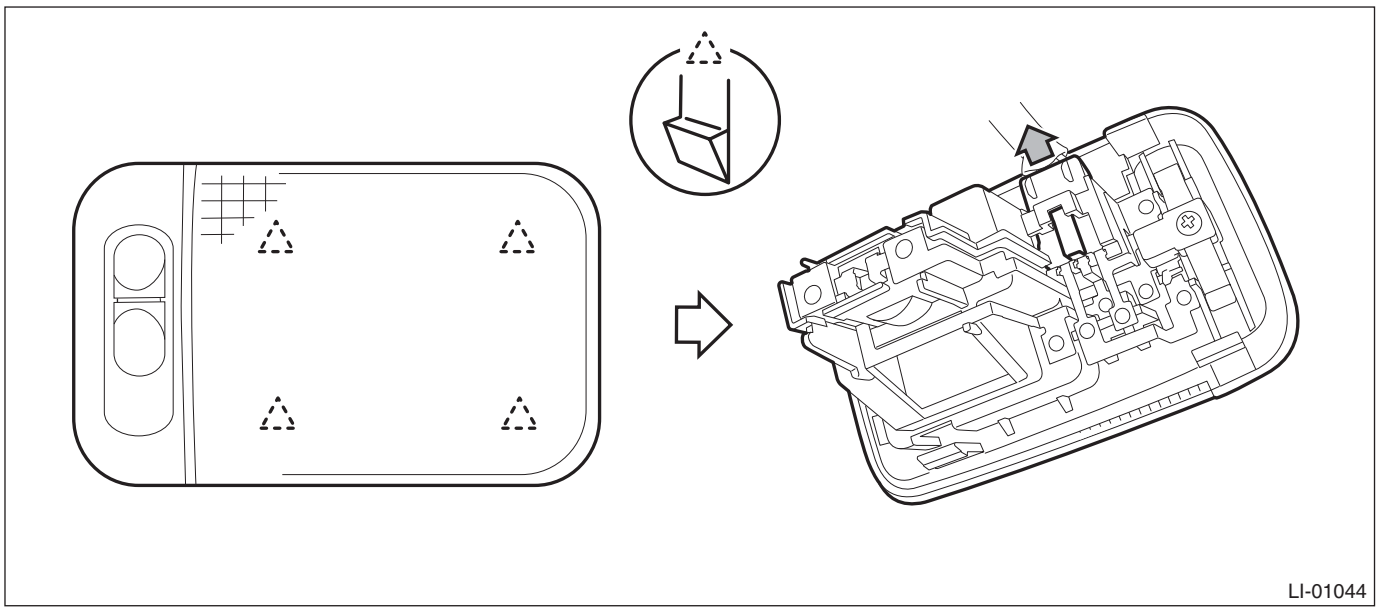


15) Remove the room light assembly.
(1) Release the claws and remove the cover.
(2) Remove the two screws.

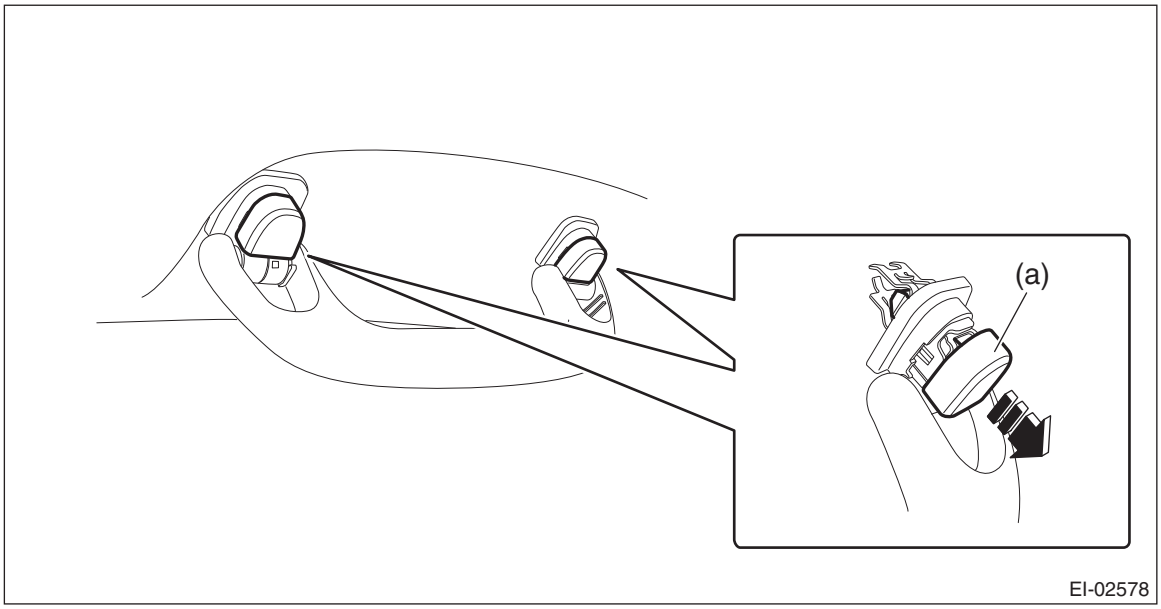


(3) Disconnect the connector and remove the room light assembly.
16) Remove the luggage room light.
(1) Release the claws and remove the luggage room light main body.

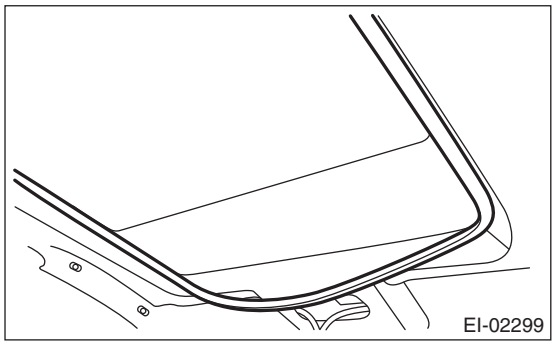
(2) Disconnect the connector and remove the luggage room light.



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.

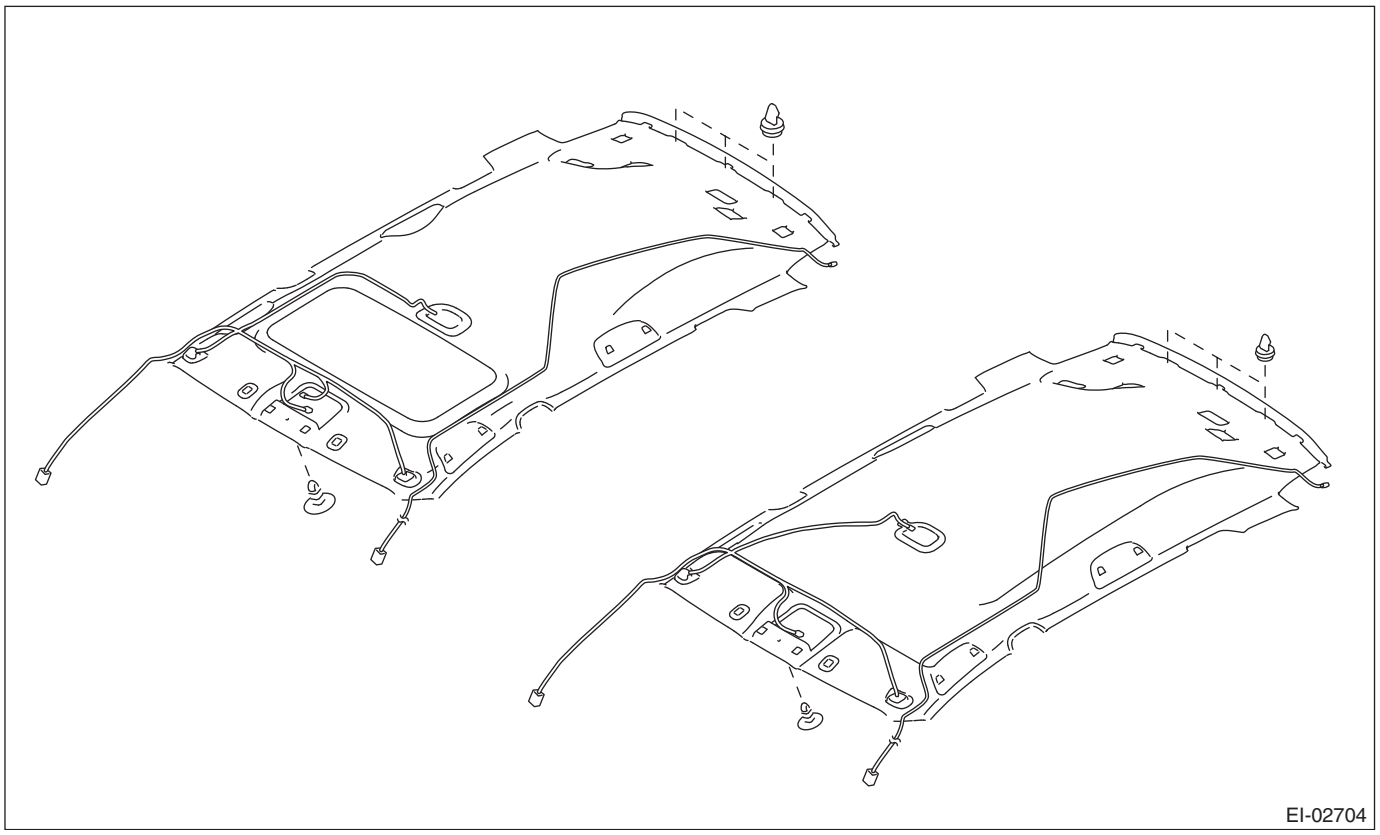


18) Remove the sun roof garnish. (Model with sunroof)

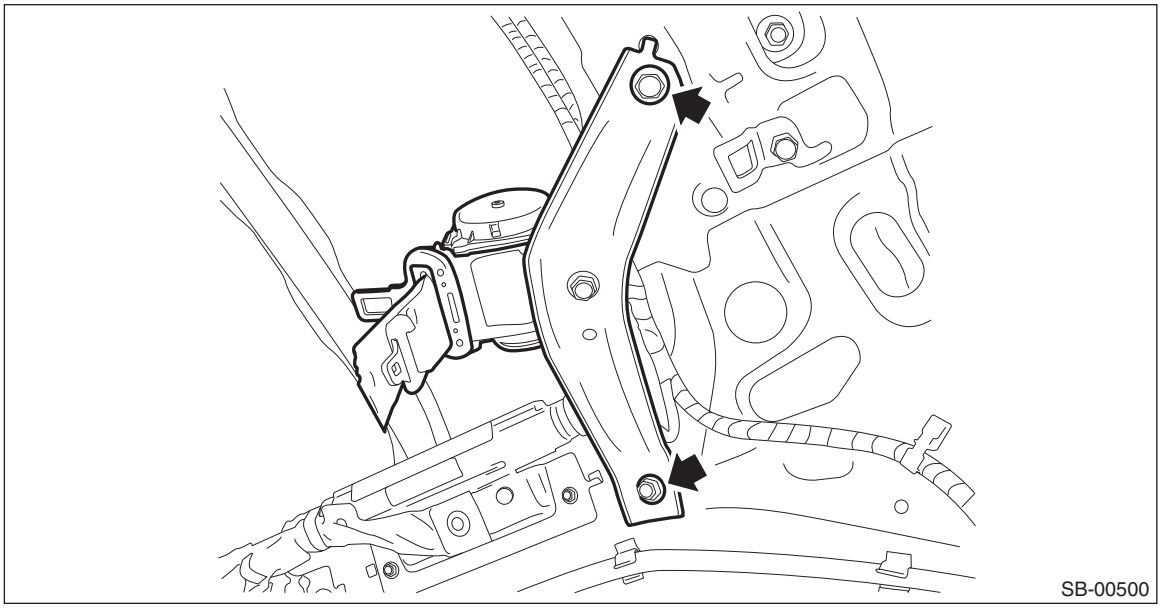


19) Disconnect the roof harness connector at the front pillar RH.
20) Remove the roof trim assembly.

(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.



21) Remove the bolts, and remove the shoulder belt assembly CTR.



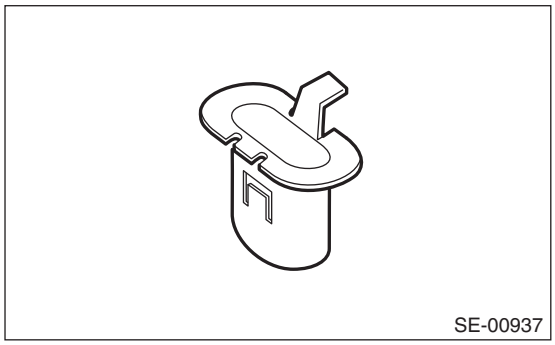
5. CENTER BELT RH ASSEMBLY & LH ASSEMBLY

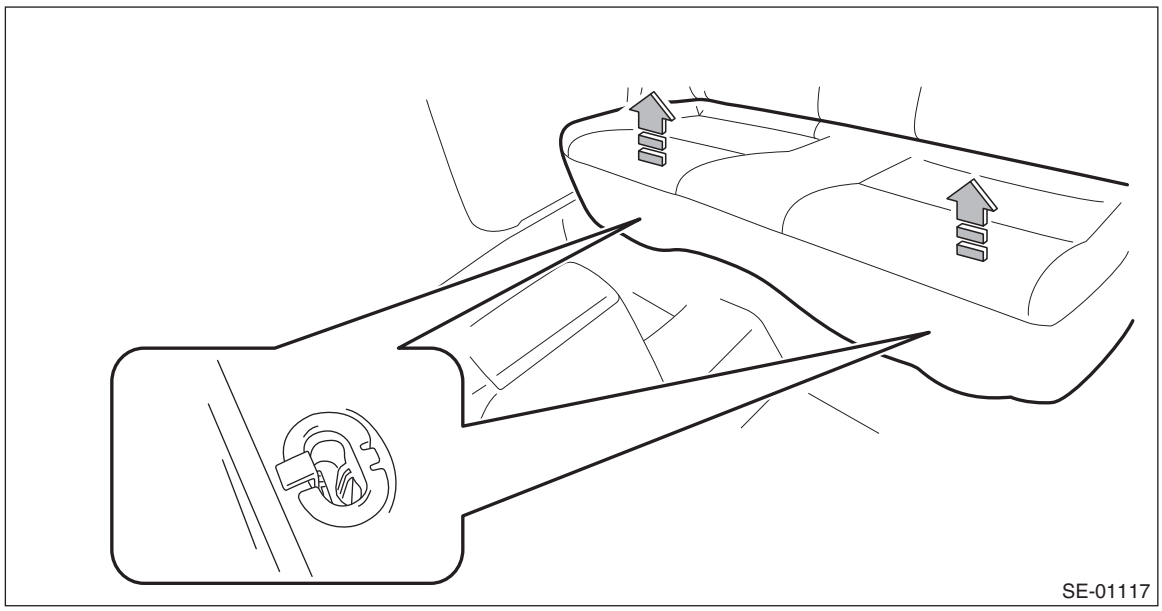
1) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.

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

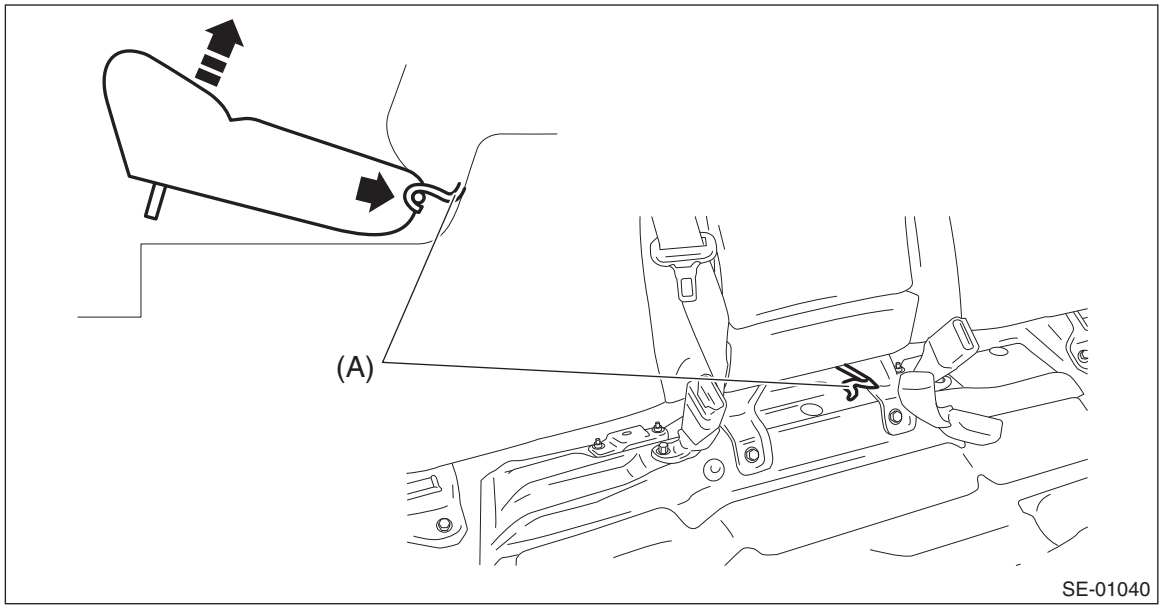
2) Remove the rear seat cushion.
   (1) Pull up the seat cushion and release the hook.

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

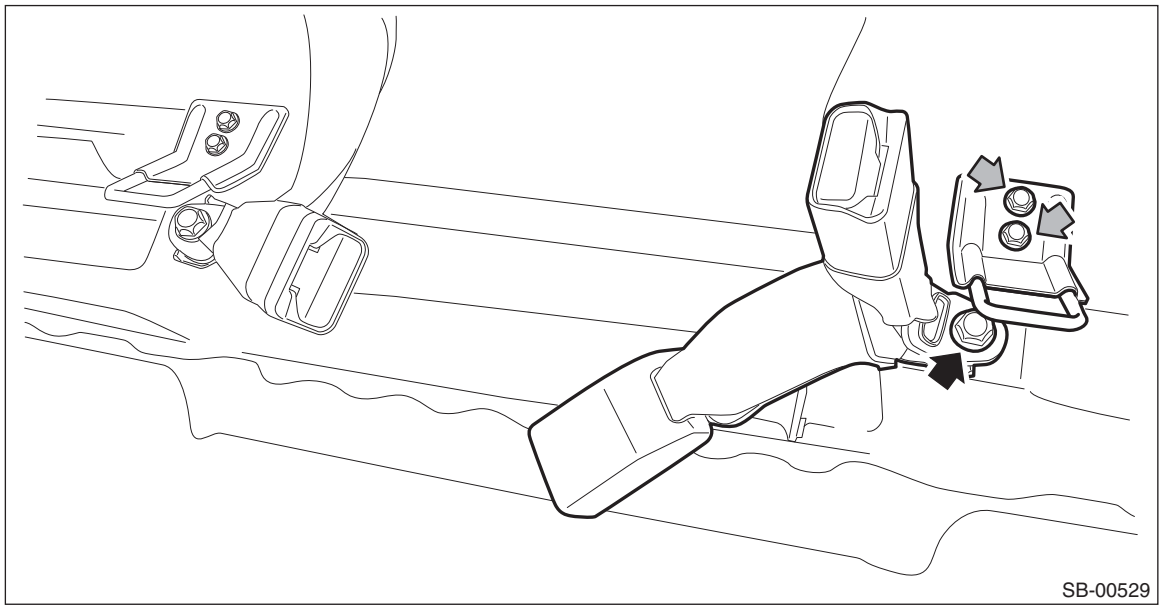

SE-00937


SE-01117

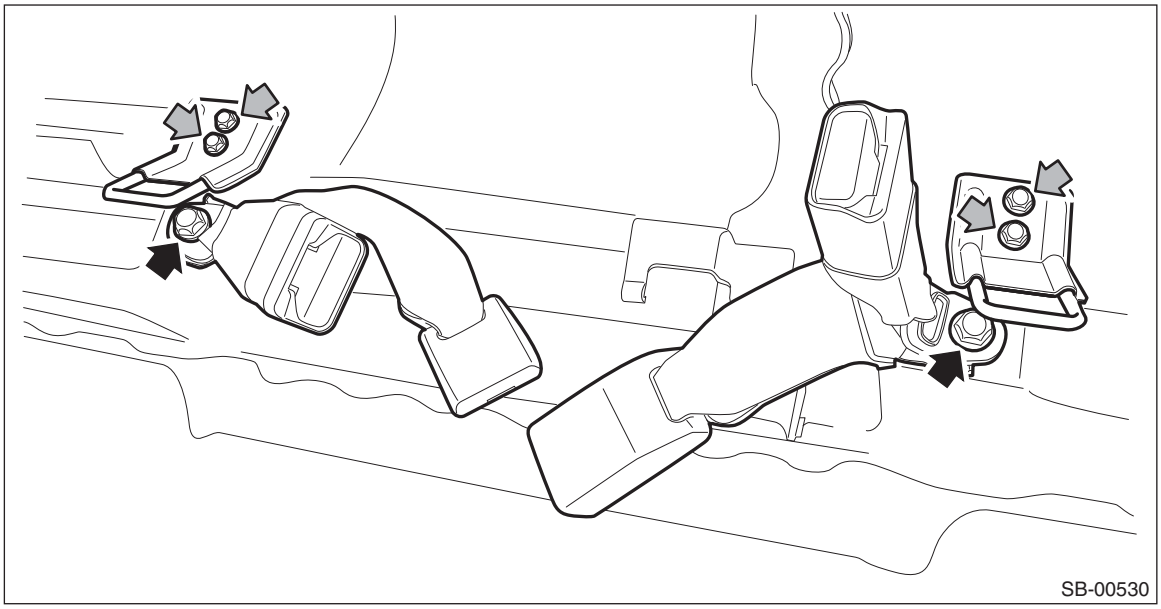
(2) Remove the hook (A) by pushing it back while lifting the front side of the seat cushion, and remove the seat cushion.



3) Remove the center belt RH assembly & LH assembly.
(1) Remove the bolts and remove the ISO-FIX anchor.
(2) Remove the bolts, then remove the center belt RH assembly & LH assembly.
• Sedan model



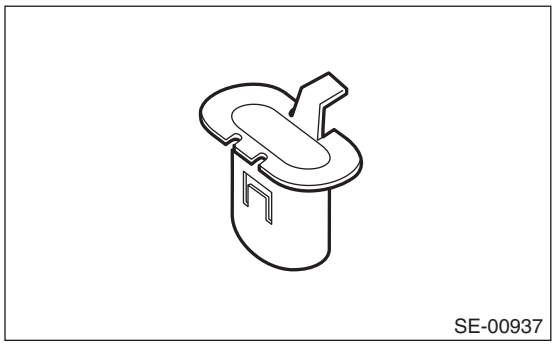
- OUTBACK model



B: INSTALLATION

1. OUTER BELT RH ASSEMBLY & LH ASSEMBLY (SEDAN MODEL)

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



1) Install the outer belt assembly.

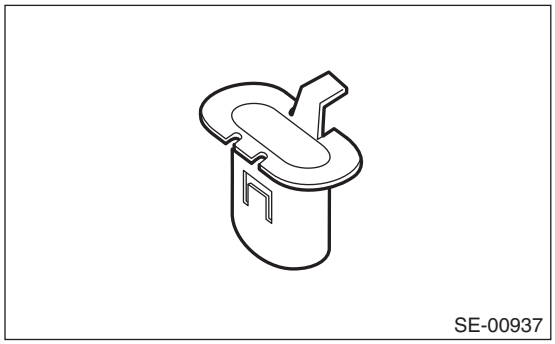
CAUTION:
- **During installation, make sure that the seat belts are not twisted.**
- **After installation, make sure that the seat belts are smoothly extended and wound.**

Tightening torque:
REAR SEAT BELT (SEDAN MODEL): <Ref. to SB-3, REAR SEAT BELT (SEDAN MODEL), COMPONENT, General Description.>

2) Install the remaining parts in the reverse order of removal.
3) After installation, check the following points.
- The seat belt is not twisted.
- The seat belt can be pulled out and retracted smoothly.

2. OUTER BELT RH ASSEMBLY & LH ASSEMBLY (OUTBACK MODEL)

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

1) Install the outer seat belt retractor.

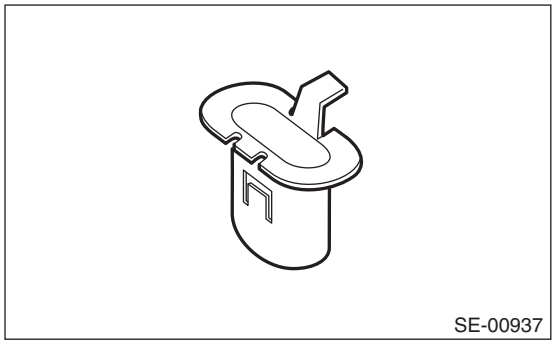
Tightening torque:
Rear seat belt (OUTBACK model): <Ref. to SB-4, REAR SEAT BELT (OUTBACK MODEL), COMPONENT, General Description.>
2) Install the rear quarter trim UPR.
3) Install the outer belt shoulder anchor.
4) Install the outer belt lower anchor.

CAUTION:
- **During installation, make sure that the seat belts are not twisted.**
- **After installation, make sure that the seat belts are smoothly extended and wound.**

Tightening torque:
Rear seat belt (OUTBACK model): <Ref. to SB-4, REAR SEAT BELT (OUTBACK MODEL), COMPONENT, General Description.>
5) Install the remaining parts in the reverse order of removal.
6) After installation, check the following points.
- The seat belt is not twisted.
- The seat belt can be pulled out and retracted smoothly.

3. SHOULDER BELT CTR ASSEMBLY (SEDAN MODEL)

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

1) Install the shoulder belt retractor.

Tightening torque:
REAR SEAT BELT (SEDAN MODEL): <Ref. to SB-3, REAR SEAT BELT (SEDAN MODEL), COMPONENT, General Description.>
2) Install the rear shelf trim.

3) Install the shoulder belt lower anchor.

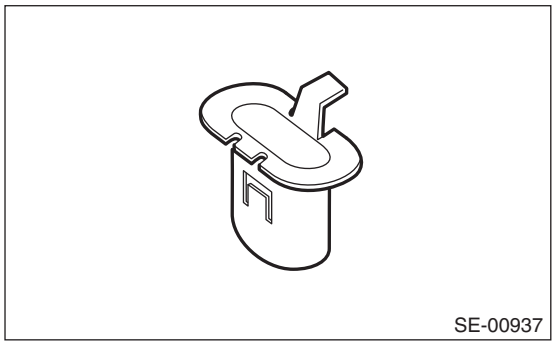
CAUTION:
- **During installation, make sure that the seat belts are not twisted.**
- **After installation, make sure that the seat belts are smoothly extended and wound.**

Tightening torque:
REAR SEAT BELT (SEDAN MODEL): <Ref. to SB-3, REAR SEAT BELT (SEDAN MODEL), COMPONENT, General Description.>

4) Rear quarter upper trim
5) Install the remaining parts in the reverse order of removal.
6) After installation, check the following points.
- The seat belt is not twisted.
- The seat belt can be pulled out and retracted smoothly.

4. SHOULDER BELT CTR ASSEMBLY (OUTBACK MODEL)

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

1) Install the shoulder belt retractor.

Tightening torque:
Rear seat belt (OUTBACK model): <Ref. to SB-4, REAR SEAT BELT (OUTBACK MODEL), COMPONENT, General Description.>

2) Install the roof trim.
3) Install the remaining parts in the reverse order of removal.
4) After installation, check the following points.
- The seat belt is not twisted.
- The seat belt can be pulled out and retracted smoothly.

5. CENTER BELT ASSEMBLY RH & LH

1) Install the center belt assembly.

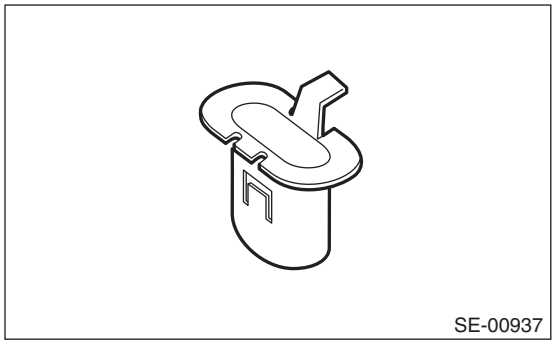
Tightening torque:
REAR SEAT BELT (SEDAN MODEL): <Ref. to SB-3, REAR SEAT BELT (SEDAN MODEL), COMPONENT, General Description.>
Rear seat belt (OUTBACK model): <Ref. to SB-4, REAR SEAT BELT (OUTBACK MODEL), COMPONENT, General Description.>

2) Install the ISO-FIX anchor.

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

3) Install the rear seat cushion.

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

4) Install the remaining parts in the reverse order of removal.
5) After installation, check the following points.
- The seat belt is not twisted.
- Check that the airbag warning light lights up for approximately 6 seconds and then turns off when connecting the battery ground cable and turning the ignition switch to ON.

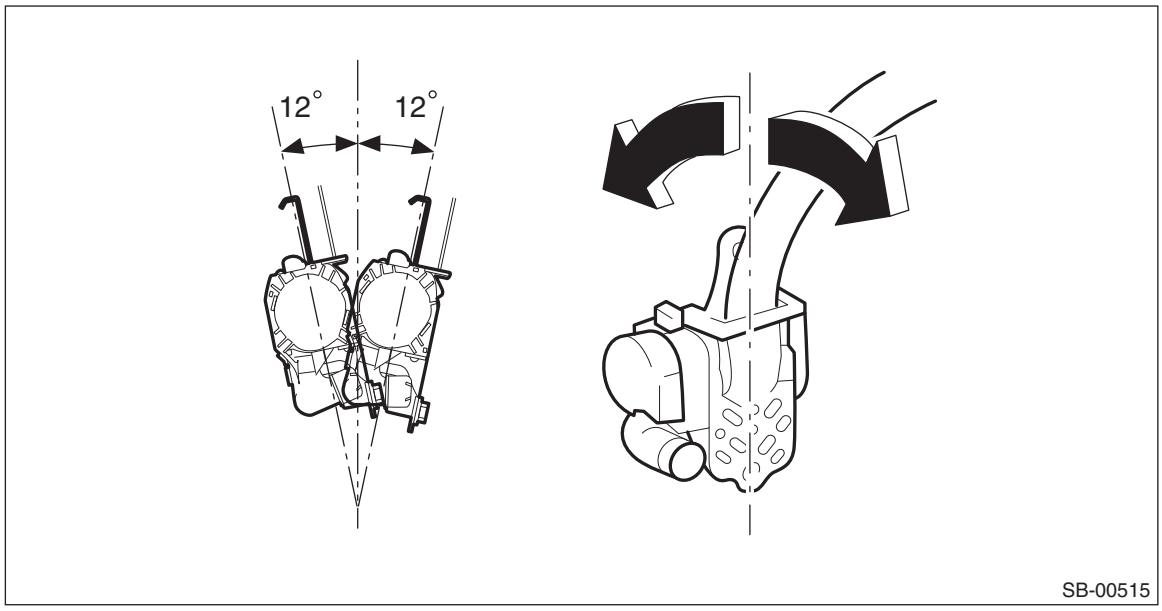
C: INSPECTION

1. VISUAL INSPECTION

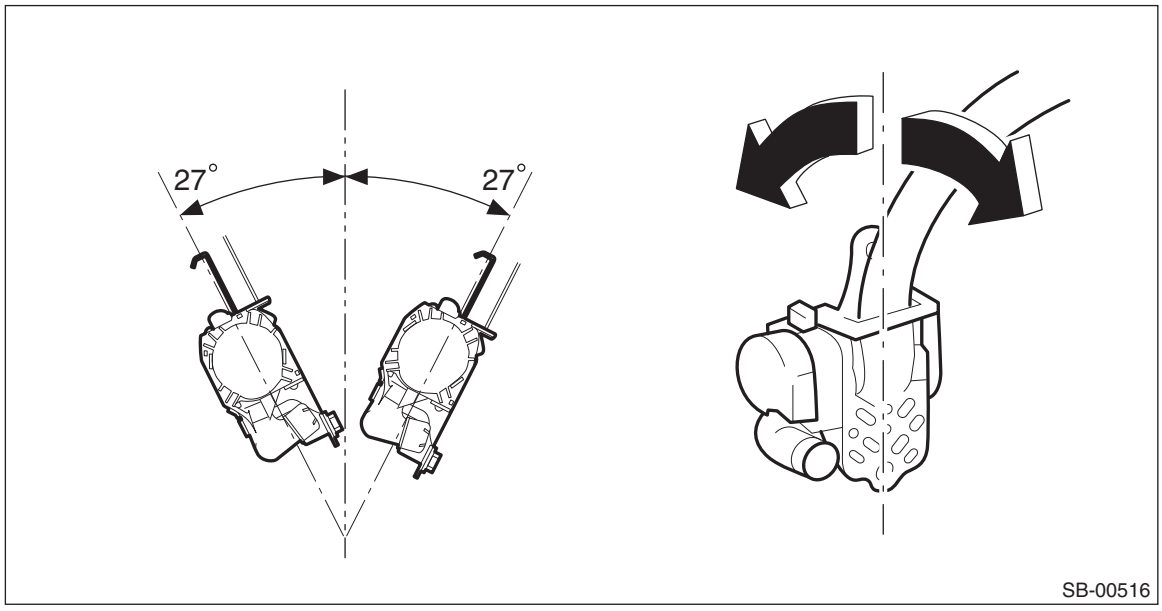
Check for the following, and replace with new parts if necessary.
- Seat belt is slackened, bent or worn.
- Seat belt is abnormally wound or extended.
- Inner belt ASSY is deformed or damaged.
- Seat belt buckle cannot be engaged properly.

2. ELR LOCK MECHANISM INSPECTION

1) Hold the retractor upright (as installed in the vehicle) and check the ELR lock mechanism.
2) Tilt the retractor from the upright posture and check the following points.
- It does not lock if the inclination angle is 12° or less.



- It remains locked if the inclination angle is 27° or more.



3) If the ELR lock mechanism does not operate correctly, replace the outer belt assembly with a new part.

1. General Description

A: SPECIFICATION

Headlight		High beam	12 V — 55 W
		Low beam	12 V — 60 W
Front turn signal light			12 V — 21 W
Clearance/parking light			12 V — 5 W
Side marker light			12 V — 5 W
Front fog light			12 V — 55 W
Side turn signal light (C6 model)			12 V — 1.4 W (LED)
Rear combination light	Sedan	Tail/stop light	12 V — 5/21 W
		Turn signal light	12 V — 21 W
		Back-up light	12 V — 16 W
	OUT-BACK	Tail light	12 V — 5 W
		Stop light	12 V — 21 W
		Turn signal light	12 V — 21 W
Rear finisher light	Sedan	Tail light	12 V — 5 W
	OUT-BACK	Tail light	12 V — 5 W
		Back-up light	12 V — 16 W
License plate light			12 V — 5 W
High-mounted stop light	Sedan		12 V — 1 W (LED)
	OUTBACK		12 V — 2.1 W (LED)
Room light			12 V — 8 W
Spot map light			12 V — 8 W
Luggage room light			12 V — 5 W
Trunk room light			12 V — 5 W
Glove box light			12 V — 1.4 W
Door step light			12 V — 5 W

B: CAUTION

- Before removing or installing parts, always disconnect the battery ground cable from battery. When replacing the audio, control module and other parts provided with memory functions, record the memory contents before disconnecting the battery ground cable. Otherwise, the memory is cleared.
- Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
- Adjust parts to the given specifications.
- Connect the connectors securely when reassembling.
- After reassembly, make sure that the functional parts operate normally.
- The airbag system wiring harness is routed near electrical parts and switches. Color of the airbag system wiring harness and connector is yellow. Do not use electrical test equipment on these circuits.
- Be careful not to damage the airbag system wiring harness when servicing electrical parts and switches.

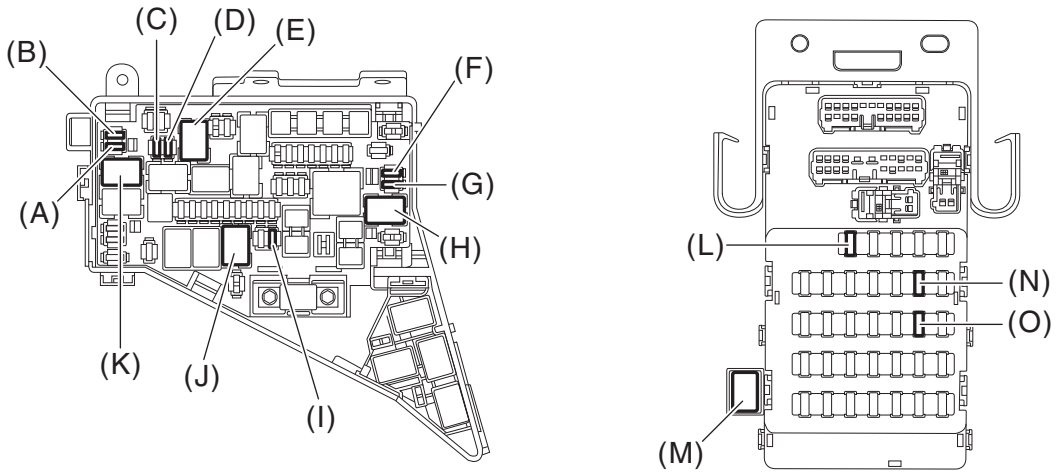
C: PREPARATION TOOL

1. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
TORX® T30	Used for removing/installing driver's airbag module.

2. Relay and Fuse

A: LOCATION



Main Fuse Box	Fuse 15A (front combination light RH)	(A)
	Fuse 15A (front combination light LH)	(B)
	Fuse 10A (front combination light LH)	(C)
	Fuse 10A (front combination light RH)	(D)
	Headlight relay (Hi)	(E)
	Fuse 10A (front fog light LH)	(F)
	Fuse 10A (front fog light RH)	(G)
	Front fog light relay	(H)
	Fuse 10 A (rear combination light)	(I)
	Tail and illumination relay	(J)
	Headlight relay (Lo)	(K)
Relay & fuse box	Fuse 15A (trailer connector)	(L)
	Back-up light relay	(M)
	Fuse 7.5A (turn signal & hazard unit)	(N)
	Fuse 7.5A (inhibitor switch, back-up light relay)	(O)

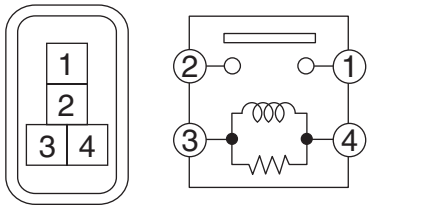
B: INSPECTION

1. CHECK FUSE.

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

2. CHECK RELAY

1) Check the resistance between relay terminals.

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

2) Replace the relay if it is found defective.

3. Headlight System

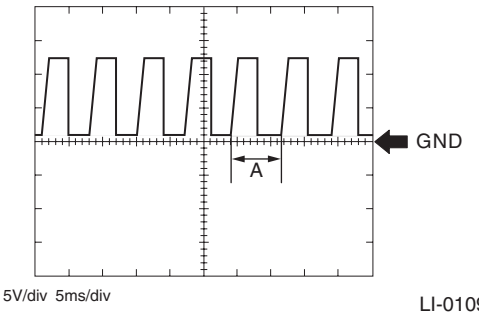
A: WIRING DIAGRAM

Refer to “Headlight System” in the WIRING DIAGRAM. <Ref. to WI-154, WIRING DIAGRAM, Headlight System.>

B: INSPECTION

1. AUTO HEADLIGHT SYSTEM CHECK

	Step	Check	Yes	No
1	**CHECK HEADLIGHT ILLUMINATION.** Set the lighting switch to the switch 1 (TAIL) and switch 2 (HEAD).	Do the tail and headlight illuminate?	Go to step **2**.	Check the combination switch (light) and headlight bulb.
2	**CHECK INPUT SIGNAL.** 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 {Lighting AUTO input} from {Current Data Display & Save}.	Does the display switch between OFF ⇔ ON when the lighting switch is moved to AUTO position?	Go to step **3**.	Go to step **7**.
3	**CHECK INPUT SIGNAL.** 1) From {Current Data Display & Save}, select {Illumination Sensor Output}. 2) Light up the darkness around light control sensor.	Is the value depending on the brightness output? (darkness: 47 — 53 Hz)	Check and replace the body integrated unit. • Inspection:<Ref. to BC(diag)-2, Basic Diagnostic Procedure.> • Replacement:<Ref. to SL-72, Body Integrated Unit.>	Go to step **4**.
4	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector and light control sensor connector. 2) Check the continuity between body integrated unit connector and light control sensor connector. ***Connector & terminal*** ***(B280) No. 9 — (i194) No. 6:*** ***(B280) No. 19 — (i194) No. 4:*** ***(B280) No. 29 — (i194) No. 3:***	Is there continuity?	Go to step **5**.	Repair or replace the harness.
5	**CHECK BODY INTEGRATED UNIT.** 1) Connect the body integrated unit connector. 2) Turn the ignition switch to ON. 3) Measure the voltage between the body integrated unit. ***Connector & terminal*** ***(B280) No. 9 (+) — No. 29 (–):***	Is the voltage 10 V or more?	Go to step **6**.	Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>

Step		Check	Yes	No
6	**CHECK LIGHT CONTROL SENSOR.** 1) Connect the light control sensor connector. 2) Turn the ignition switch to ON. 3) Set the lighting switch to AUTO position. 4) Connect the Subaru Select Monitor, and read the waveform data between light control sensor connector. ***Connector & terminal*** ***(i194) No. 5 — No. 3:***  	Is waveform normal? (Interval of A becomes shorter as the surrounding becomes brighter.)	Go to step **7**.	Replace the light control sensor.
7	**CHECK COMBINATION SWITCH (LIGHT).** Check the combination switch (light). <Ref. to LI-23, INSPECTION, Combination Switch (Light).>	Is the combination switch (light) normal?	Go to step **8**.	Replace the combination switch (light).
8	**CHECK HARNESS.** 1) Disconnect the body integrated unit connector and light control sensor connector. 2) Check the continuity between body integrated unit connector and light control sensor connector. ***Connector & terminal*** ***(B71) No. 14 — (B281) No. 16:***	Is there continuity?	Check and replace the body integrated unit. • Inspection:<Ref. to BC(diag)-2, Basic Diagnostic Procedure.> • Replacement:<Ref. to SL-72, Body Integrated Unit.>	Repair or replace the harness.

2. CHECK LIGHTING SWITCH

Measure the resistance between lighting switch terminals. <Ref. to LI-23, INSPECTION, Combination Switch (Light).>

3. CHECK DIMMER & PASSING SWITCH

Measure the resistance between dimmer & passing switch terminals. <Ref. to LI-23, INSPECTION, Combination Switch (Light).>

C: NOTE

For operation procedures of each component of the headlight system, refer to the respective section.
- Headlight Assembly:<Ref. to LI-26, Headlight Assembly.>
- Headlight bulb:<Ref. to LI-31, Headlight Bulb.>
- Combination switch (light):<Ref. to LI-19, Combination Switch (Light).>
- Light control sensor:<Ref. to LI-24, Light Control Sensor.>

4. Day Time Running Light System

A: WIRING DIAGRAM

Refer to “Headlight System” in the WIRING DIAGRAM. <Ref. to WI-154, WIRING DIAGRAM, Headlight System.>

B: INSPECTION

1. DAYTIME RUNNING LIGHT SYSTEM CHECK

	Step	Check	Yes	No
1	**CHECK 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 displayed?	Perform the diagnosis according to DTC.	Go to step **2**.
2	**CHECK INPUT SIGNAL.** 1) From the state in step 1), select {Integ. unit mode}. 2) Select the following input signals. (1) Parking Brake Switch Input (2) Shift Position (3) Lighting II Switch Input	Is the input signal normal?	Go to step **3**.	Check the defective part.
3	**CHECK RELAY.** Check the daytime running light relay.	Is the relay OK?	Go to step **4**.	Replace the relay.
4	**CHECK HARNESS.**	Is harness normal?	Replace the body integrated unit. <Ref. to SL-72, REMOVAL, Body Integrated Unit.>	Repair or replace the harness.

C: NOTE

For operation procedures of each component of the daytime running light system, refer to the respective section.

- Headlight Assembly:<Ref. to LI-74, Day Time Running Resistor.>
- Daytime running resistor:<Ref. to LI-74, Day Time Running Resistor.>

5. Clearance Light and Illumination Light System

A: WIRING DIAGRAM

Refer to “Clearance Light and Illumination Light System” in the WIRING DIAGRAM. <Ref. to WI-73, WIRING DIAGRAM, Clearance Light and Illumination Light System.>

B: INSPECTION

1. CHECK LIGHTING SWITCH

Measure the resistance between lighting switch terminals. <Ref. to LI-23, INSPECTION, Combination Switch (Light).>

C: NOTE

For operation procedures of each component of the clearance light & illumination light system, refer to the respective sections.

- Combination switch (light):<Ref. to LI-19, Combination Switch (Light).>
- Clearance light/parking light bulb:<Ref. to LI-37, Clearance/Parking Light Bulb.>
- License plate light:<Ref. to LI-58, License Plate Light.>
- Ignition switch illumination:<Ref. to LI-71, Ignition Switch Illumination.>

6. Front Fog Light System

A: WIRING DIAGRAM

Refer to “Front Fog Light System” in the WIRING DIAGRAM. <Ref. to WI-149, WIRING DIAGRAM, Front Fog Light System.>

B: INSPECTION

1. CHECK FRONT FOG LIGHT SWITCH

Measure the resistance between front fog light switch terminals. <Ref. to LI-23, INSPECTION, Combination Switch (Light).>

C: NOTE

For operation procedures of each component of the front fog light system, refer to the respective section.

- Combination switch (light):<Ref. to LI-19, Combination Switch (Light).>
- Front fog light assembly:<Ref. to LI-40, Front Fog Light Assembly.>
- Front fog light bulb:<Ref. to LI-43, Front Fog Light Bulb.>

7. Turn Signal Light and Hazard Light System

A: WIRING DIAGRAM

Refer to “Turn Signal and Hazard Light System” in the WIRING DIAGRAM. <Ref. to WI-221, WIRING DIAGRAM, Turn Signal Light and Hazard Light System.>

B: INSPECTION

1. CHECK TURN SIGNAL SWITCH

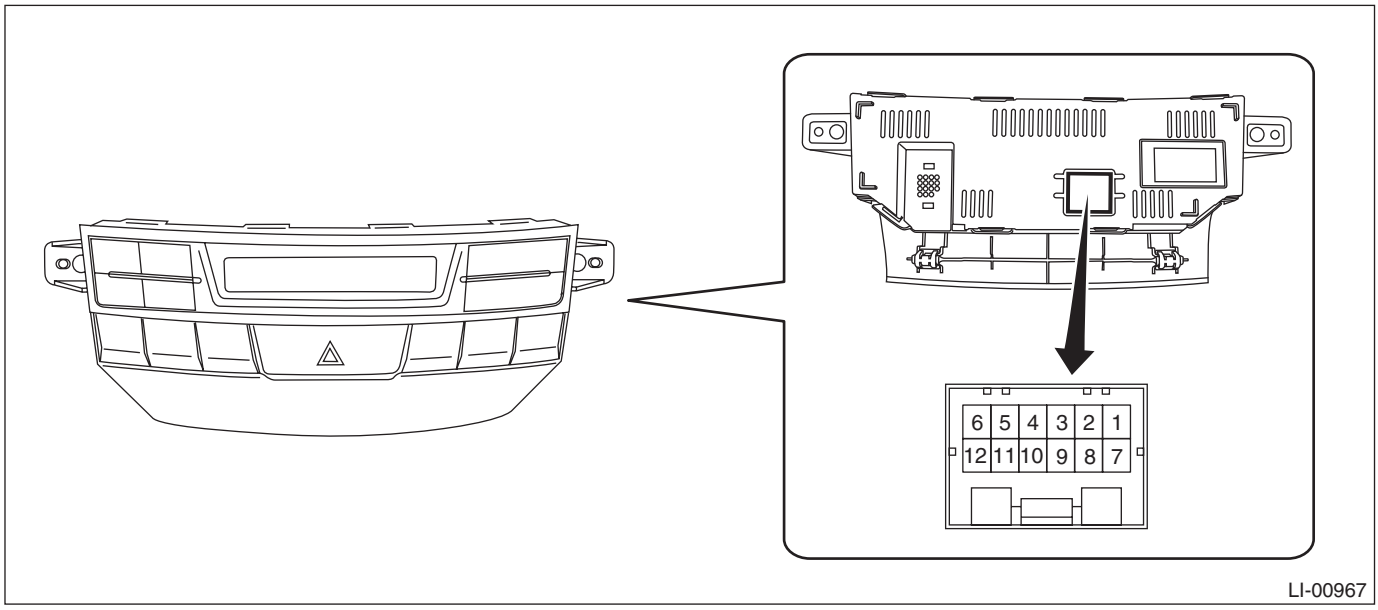
Measure the resistance between turn signal switch terminals. <Ref. to LI-23, INSPECTION, Combination Switch (Light).>

2. CHECK HAZARD SWITCH

1) Remove the A/C control panel.
- Manual A/C model:<Ref. to AC-42, MANUAL A/C MODEL, REMOVAL, Control Panel.>
- Auto A/C model:<Ref. to AC-39, AUTO A/C MODEL, REMOVAL, Control Panel.>

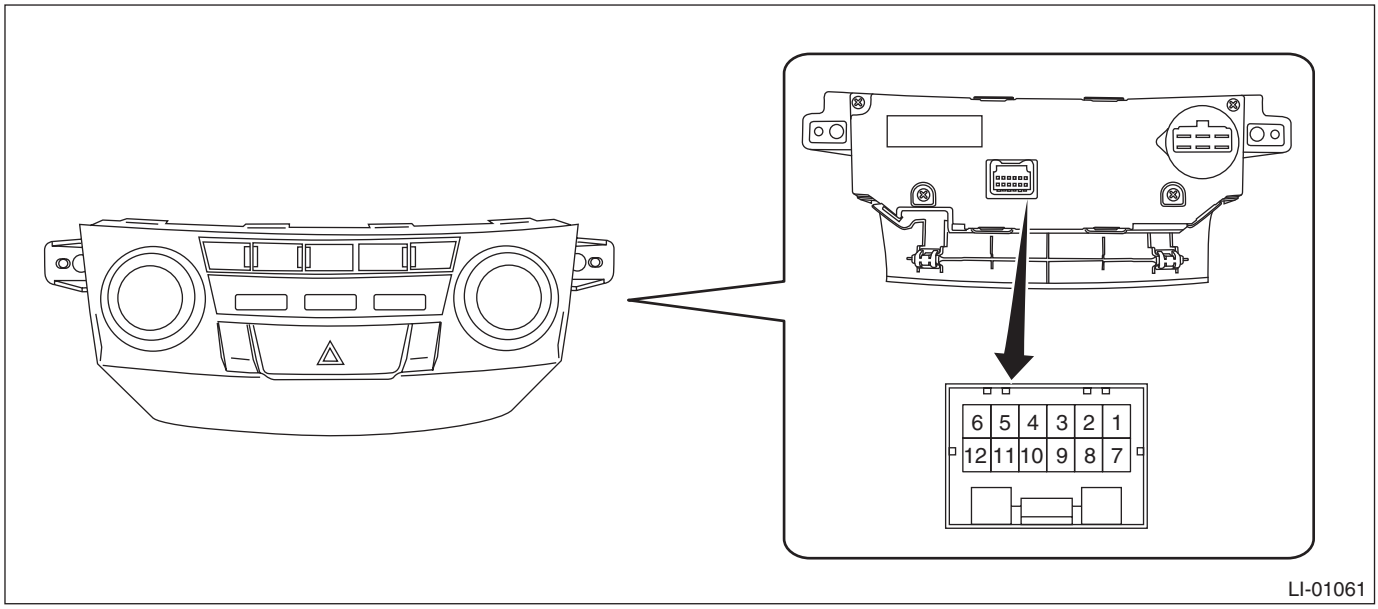
2) Measure the resistance between hazard switch terminals.

Preparation tool: Circuit tester
- AUTO A/C MODEL



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

- MANUAL A/C MODEL



Terminal No.	Inspection conditions	Specification
4 — 5	Switch OFF	1 MΩ or more
	Switch ON	Less than 1 Ω

3) Replace the A/C control panel if the inspection result is not within the standard value.

3. CHECK TURN SIGNAL AND HAZARD MODULE

1) Measure the voltage between turn signal & hazard module connector and chassis ground.

Preparation tool: Circuit tester
Connector

Terminal No.	Input/Output	Inspection conditions	Standard
6 ←→ Chassis ground	Input	Turn signal switch (Right) OFF → ON	9 V or more → less than 1 V
5 ←→ Chassis ground	Input	Turn signal switch (Left) OFF → ON	9 V or more → less than 1 V
8 ←→ Chassis ground	Input	Hazard switch OFF → ON	9 V or more → less than 1 V
2 ←→ Chassis ground	Output	Turn signal switch (Right) OFF → ON	Repeat less than 1 V → less than 1 V ←→ 9 V or more at 60 to 120 times per minute.
3 ←→ Chassis ground	Output	Turn signal switch (Left) OFF → ON	Repeat less than 1 V → less than 1 V ←→ 9 V or more at 60 to 120 times per minute.
2 ←→ Chassis ground	Output	Hazard switch OFF → ON	Repeat less than 1 V → less than 1 V ←→ 9 V or more at 60 to 120 times per minute.
3 ←→ Chassis ground	Output	Hazard switch OFF → ON	Repeat less than 1 V → less than 1 V ←→ 9 V or more at 60 to 120 times per minute.

2) Replace the turn signal and hazard module if the inspection result is not within the standard value.

C: NOTE

For operation procedures of each component of the turn signal and hazard light system, refer to the respective sections.

- Combination switch (light):<Ref. to LI-19, Combination Switch (Light).>
- Front turn signal light bulb:<Ref. to LI-35, Front Turn Signal Light Bulb.>
- Side turn signal light assembly:<Ref. to LI-44, Side Turn Signal Light Assembly.>
- Rear combination light assembly:<Ref. to LI-45, Rear Combination Light Assembly.>
- Rear turn signal light bulb:<Ref. to LI-51, Rear Turn Signal Light Bulb.>

8. Back-up Light System

A: WIRING DIAGRAM

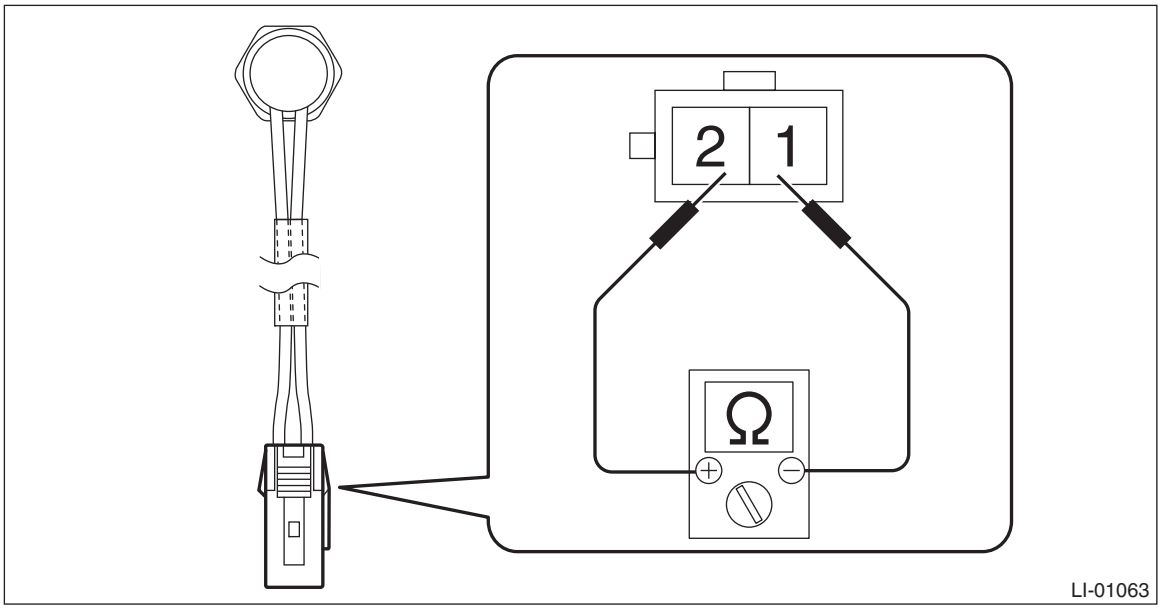
Refer to “Back-up Light System” in the WIRING DIAGRAM. <Ref. to WI-66, WIRING DIAGRAM, Back-up Light System.>

B: INSPECTION

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

1) Disconnect the back-up light switch connector.
2) Measure the resistance between back-up light switch terminals.

Preparation tool: Circuit tester



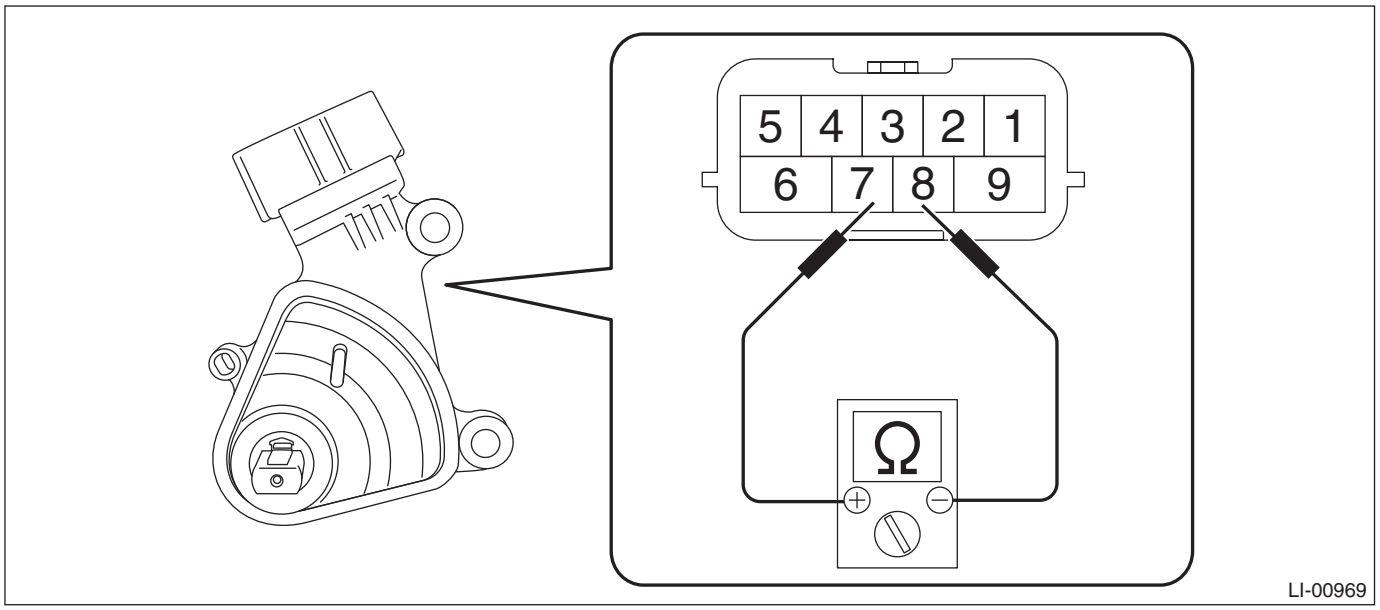
Terminal No.	Inspection conditions	Specification
1 — 2	When shift lever is set in reverse position	Less than 1 Ω
	Other positions	1 MΩ or more

3) Replace the back-up light switch if the inspection result is not within the standard value.

2. CHECK INHIBITOR SWITCH (CVT MODEL)

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

Preparation tool: Circuit tester



Terminal No.	Inspection conditions	Specification
7 — 8	When the selector lever is in the “R” range	Less than 1 Ω
	Other positions	1 MΩ or more

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

C: NOTE

For operation procedures of each component of the back-up light system, refer to the respective section.
- Rear combination light assembly:<Ref. to LI-45, Rear Combination Light Assembly.>
- Rear finisher light assembly:<Ref. to LI-54, Rear Finisher Light Assembly.>
- Back-up light bulb:<Ref. to LI-56, Back-up Light Bulb.>

9. Stop Light System

A: WIRING DIAGRAM

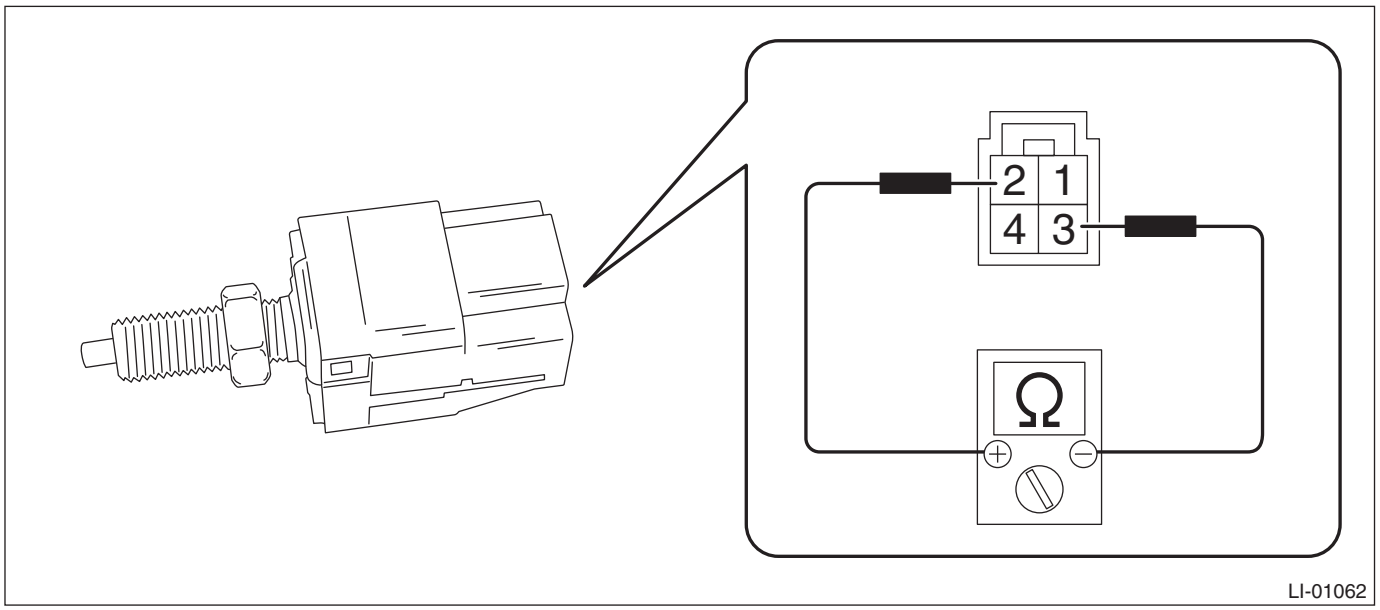
Refer to “Stop Light System” in the WIRING DIAGRAM. <Ref. to WI-216, WIRING DIAGRAM, Stop Light System.>

B: INSPECTION

1. CHECK STOP LIGHT SWITCH

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

Preparation tool: Circuit tester



Terminal No.	Inspection conditions	Specification
2 — 3	When brake pedal is depressed	Less than 1 Ω
	When brake pedal is released	1 MΩ or more

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

C: NOTE

For operation procedures of each component of the stop light system, refer to the respective section.

- Rear combination light assembly:<Ref. to LI-45, Rear Combination Light Assembly.>
- Rear finisher light assembly:<Ref. to LI-54, Rear Finisher Light Assembly.>
- Tail light/stop light bulb:<Ref. to LI-47, Tail/Stop Light Bulb.>
- High-mounted stop light:<Ref. to LI-60, High-mounted Stop Light.>

10.Interior Light System

A: WIRING DIAGRAM

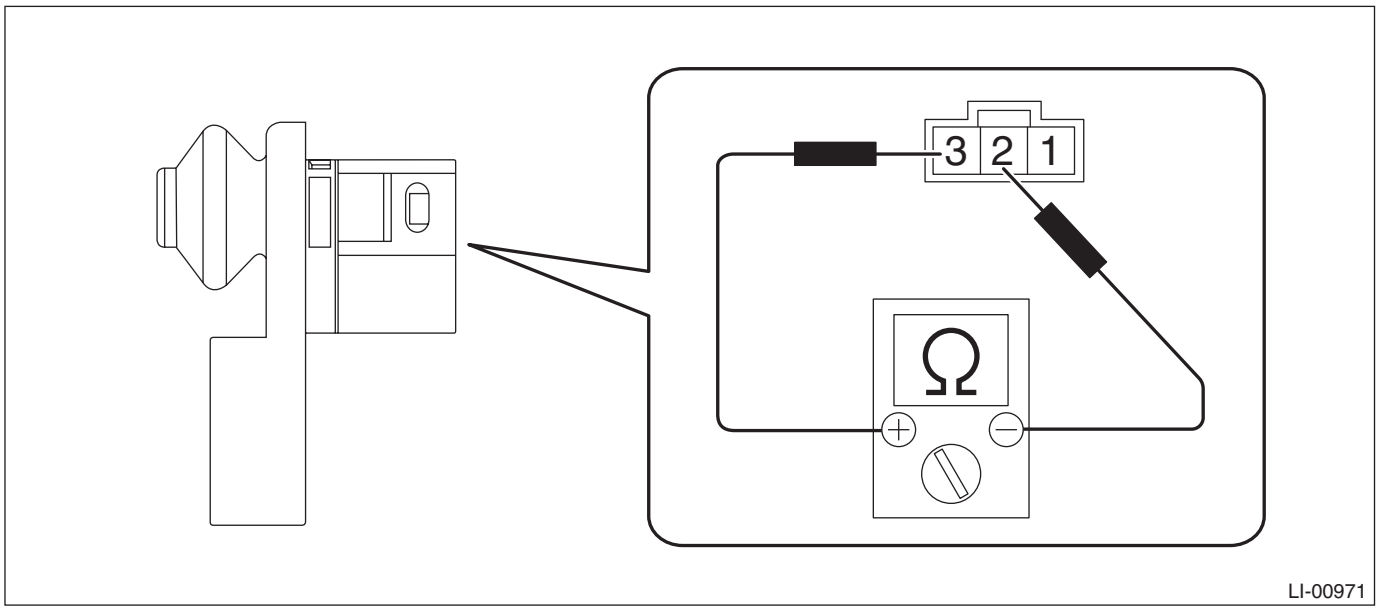
Refer to “Interior Light System” in the WIRING DIAGRAM. <Ref. to WI-159, WIRING DIAGRAM, Interior Light System.>

B: INSPECTION

1. CHECK DOOR SWITCH.

1) Remove the door switch.
2) Measure the resistance between door switch terminals.

Preparation tool: Circuit tester



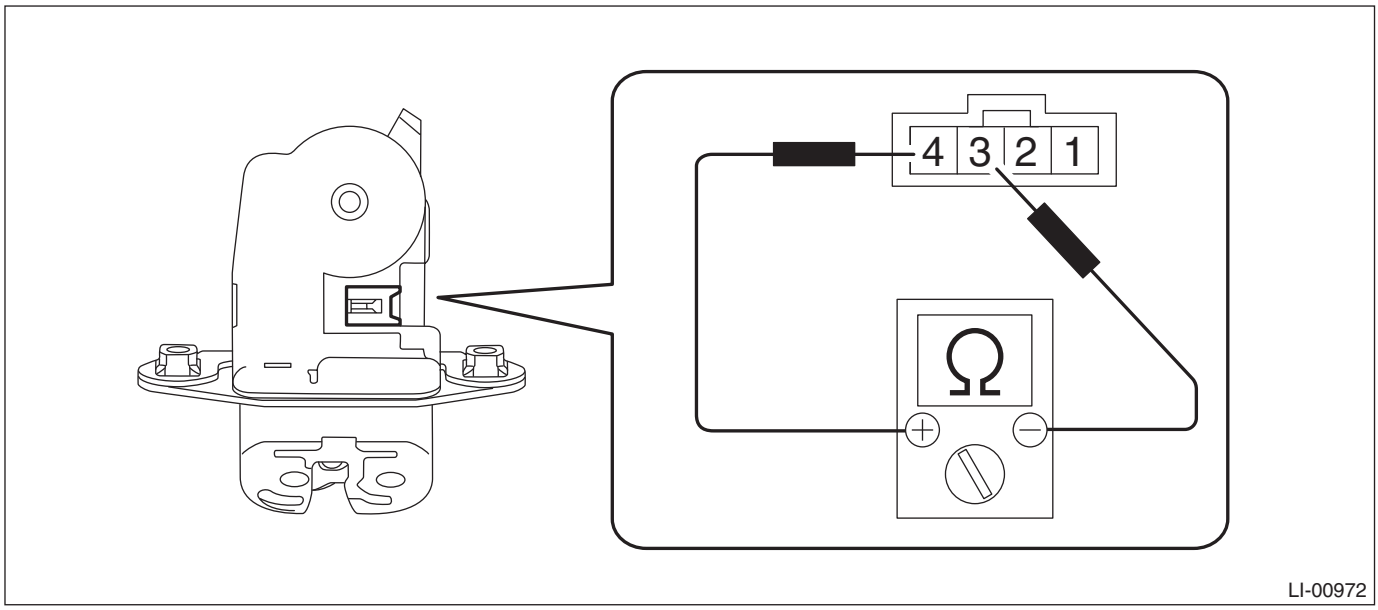
Terminal No.	Inspection conditions	Specification
2 — 3	When door is opened	Less than 1 Ω
	When door is closed	1 MΩ or more

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

2. CHECK REAR GATE LATCH SWITCH

1) Disconnect the rear gate latch switch connector.
2) Measure the resistance between rear gate latch switch terminals.

Preparation tool: Circuit tester



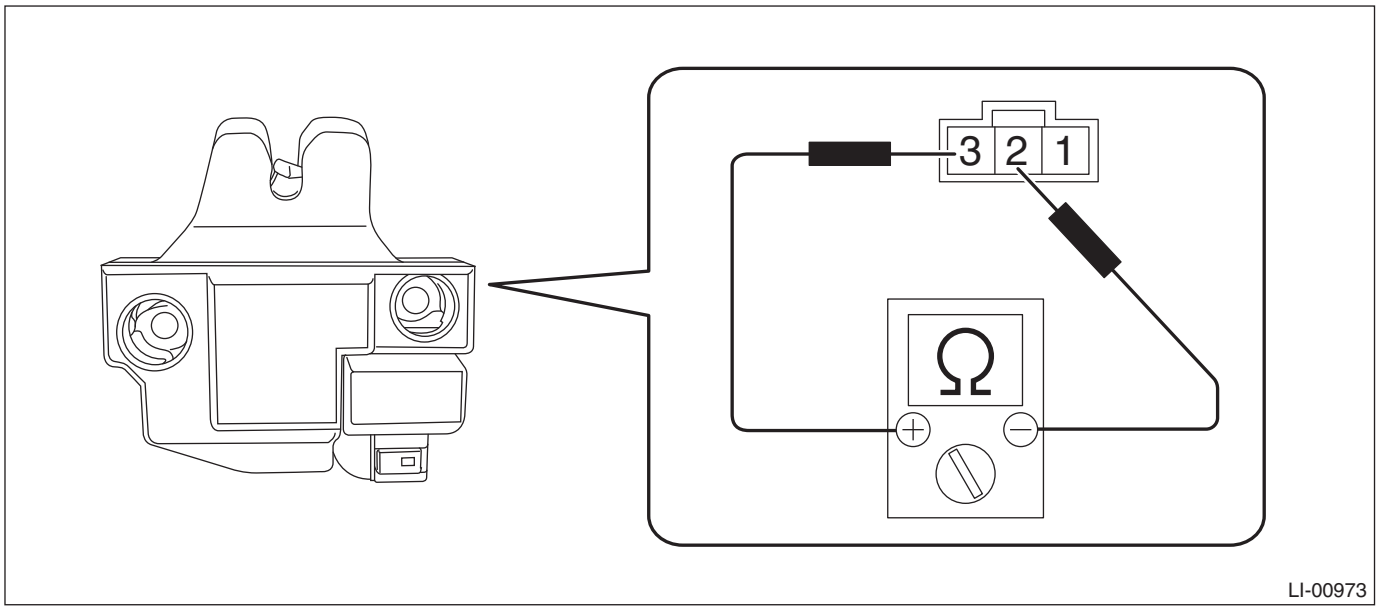
Terminal No.	Inspection conditions	Specification
3 — 4	When rear gate is opened	Less than 1 Ω
	When rear gate is closed	1 MΩ or more

3) If the inspection result is not within the standard value, replace the rear gate latch and actuator assembly.

3. CHECK TRUNK LID SWITCH

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

Preparation tool: Circuit tester



Terminal No.	Inspection conditions	Specification
2 — 3	When trunk lid is opened	Less than 1 Ω
	When trunk lid is closed	1 MΩ or more

3) If the inspection result is not within the standard value, replace the trunk lid latch and actuator assembly.

C: NOTE

For operation procedures of each component of the interior light system, refer to the respective section.
- Spot map light:<Ref. to LI-62, Spot Map Light.>
- Room light:<Ref. to LI-64, Room Light.>
- Luggage room light:<Ref. to LI-66, Luggage Room Light.>
- Trunk room light:<Ref. to LI-68, Trunk Room Light.>
- Glove box light:<Ref. to LI-69, Glove Box Light.>
- Door step light:<Ref. to LI-70, Door Step Light.>
- Door switch:<Ref. to LI-76, Door Switch.>

11.Combination Switch (Light)

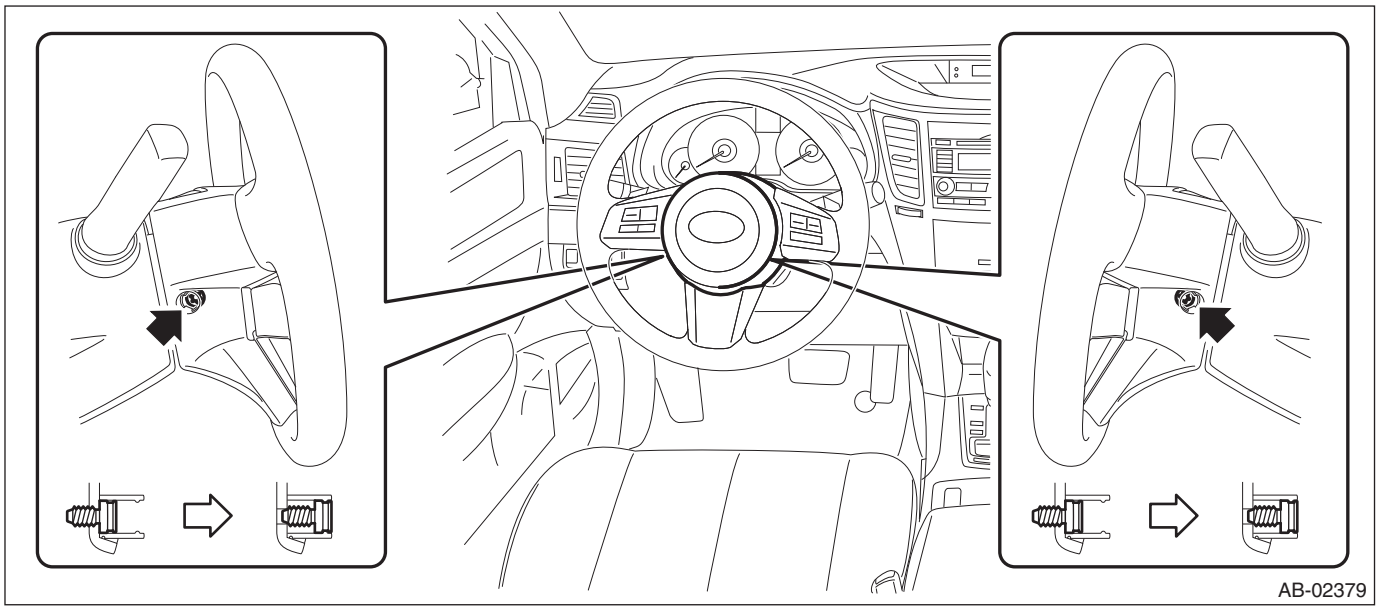
A: REMOVAL

CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>

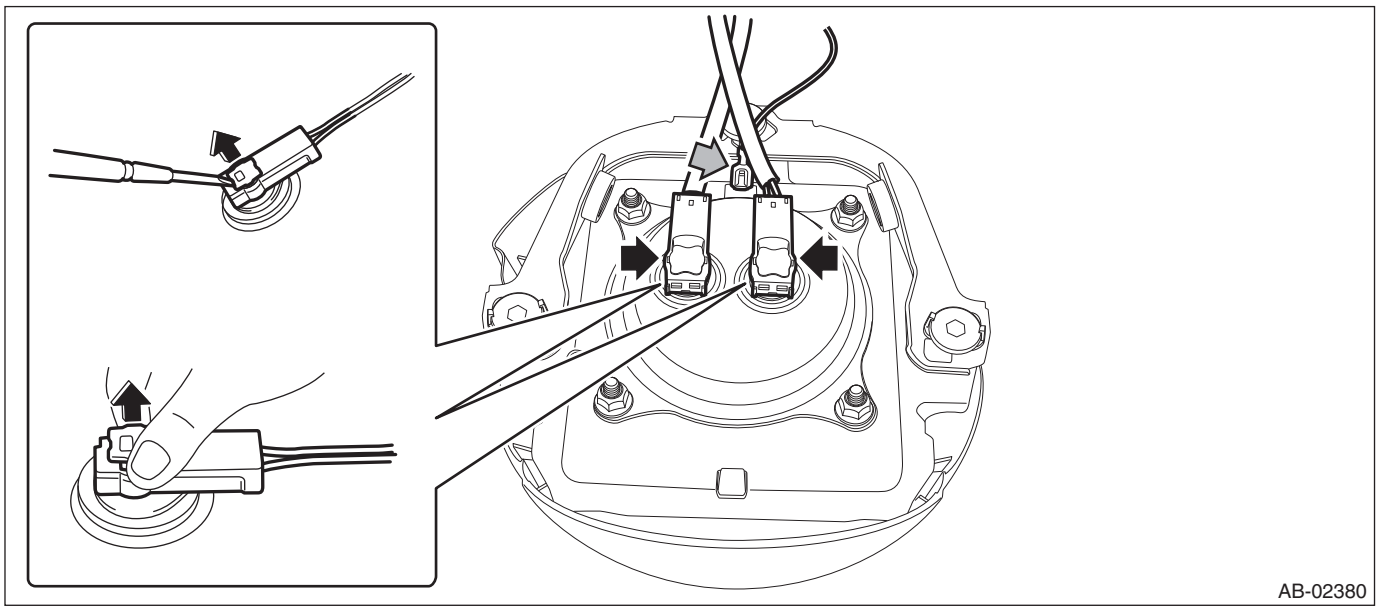
1) Set the front wheels in straight ahead position.
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
4) Remove the driver's airbag module assembly.

Preparation tool: TORX® T30

(1) Loosen the TORX® bolts located on the sides of the steering wheel.



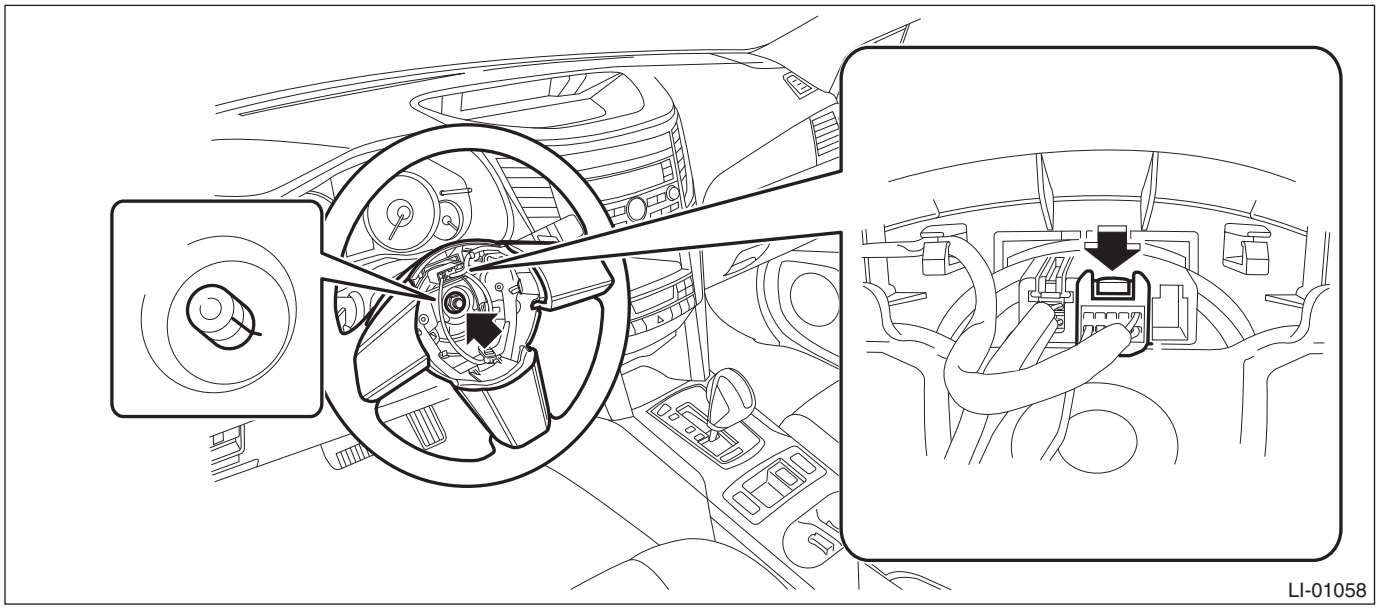
(2) Disconnect the horn harness and airbag connector and remove the airbag module assembly. <Ref. to AB-18, PROCEDURE, Airbag Connector.>



5) Remove the steering wheel.

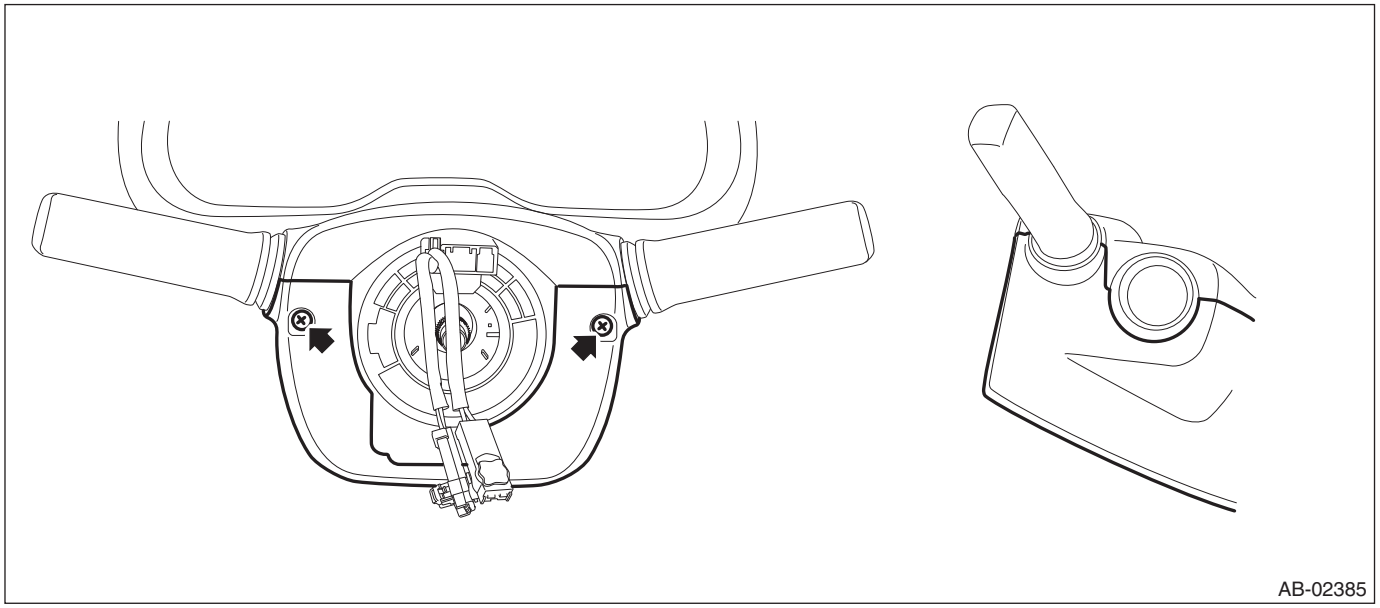
CAUTION:
If the steering wheel has been removed, make sure that the roll connector is not turned from the original position.

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

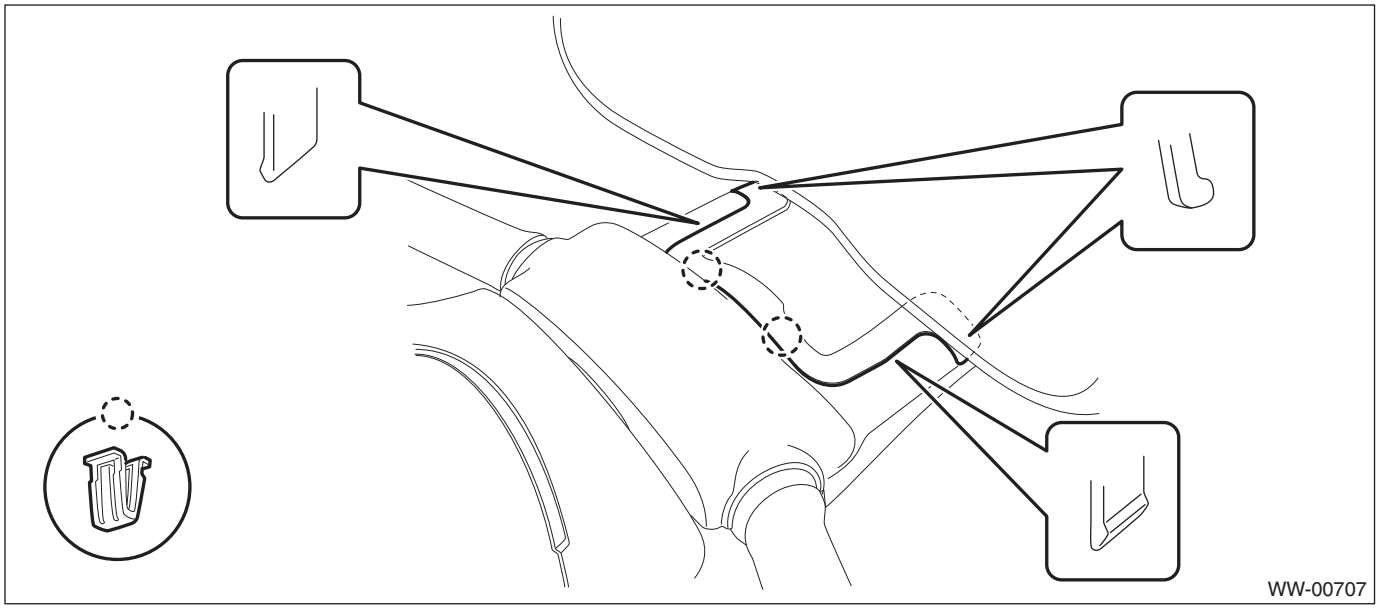


6) Remove the steering column cover.

(1) Lower the lever of the steering column.
(2) Release the claws and remove the screws, then detach the steering column lower cover.

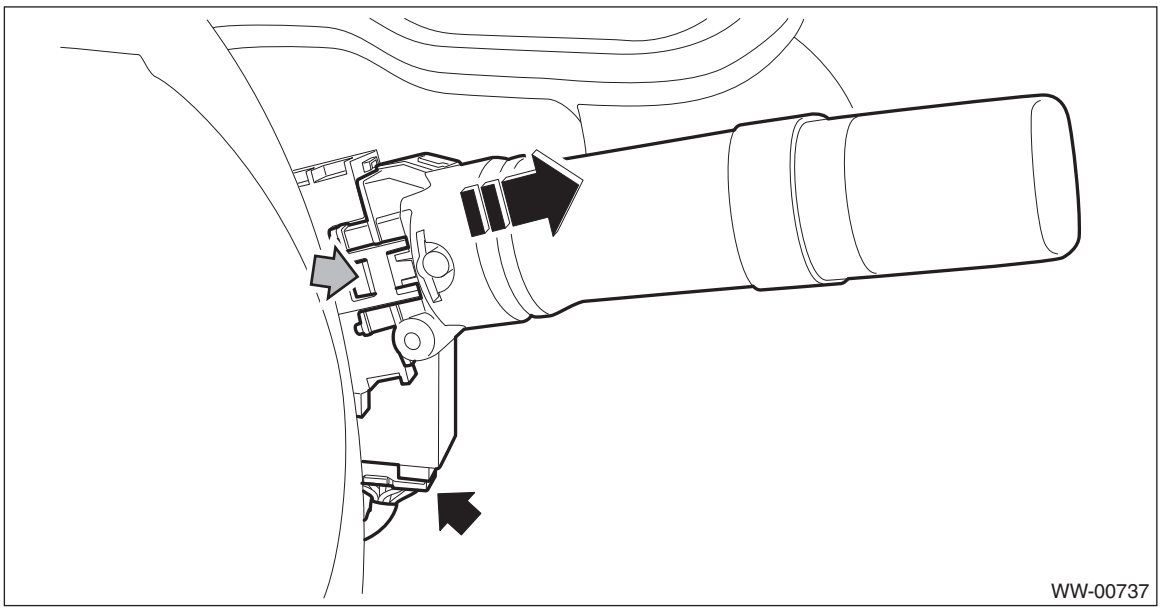


(3) Separate the steering column upper cover and steering upper cover, and remove the steering column upper cover.



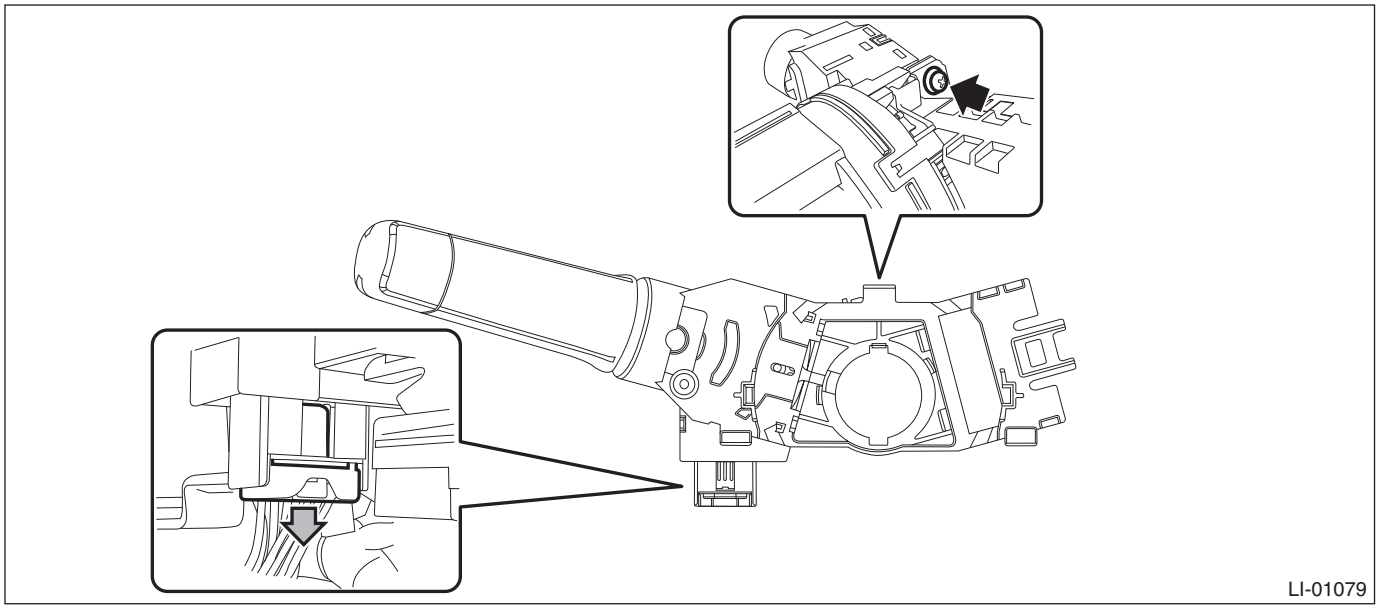
7) Remove the wiper switch assembly.
(1) Disconnect the connector from the wiper switch.
(2) Release the claws, and pull out the wiper switch assembly.

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



8) Remove the combination switch (light).
(1) Disconnect the connector.

(2) Remove the screws and detach the combination switch (light).



B: INSTALLATION

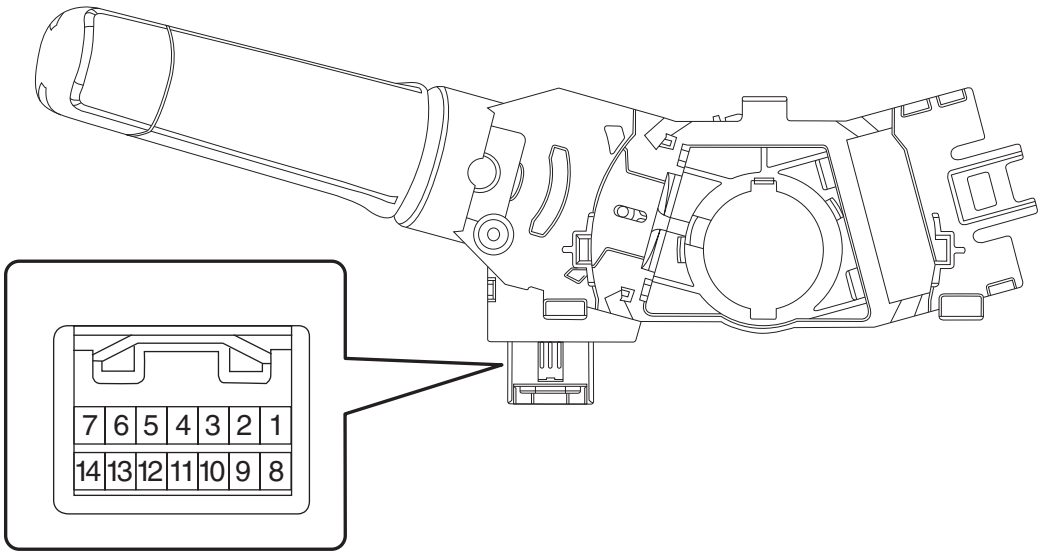
CAUTION:
• Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>
• Do not allow harness and connectors to interfere or get tangled up with other parts.
1) Align the center position of the roll connector. <Ref. to AB-93, ADJUSTMENT, 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:
Combination switch (light): 3.5 N·m (0.36 kgf-m, 2.6 ft-lb)
Driver's 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 combination switch (light) connector.
2) Measure the resistance between combination switch (light) connector terminals.

Preparation tool: Circuit tester



3) Replace the combination switch (light) if the inspection result is not within the standard value.

1. LIGHTING SWITCH

Terminal No.	Inspection Conditions	Specification
—	Switch OFF	1 MΩ or more
5 — 7	Switch 1 (TAIL)	Less than 1 Ω
6,5 — 7	Switch 2 (HEAD)	Less than 1 Ω
14 — 7	Switch AUTO	Less than 1 Ω

2. DIMMER & PASSING SWITCH

Terminal No.	Inspection Conditions	Specification
4,3 — 7	Switch PASS	Less than 1 Ω
4 — 7	Switch UP	Less than 1 Ω

3. TURN SIGNAL SWITCH

Terminal No.	Inspection Conditions	Specification
1 — 7	Switch TURN (RH)	Less than 1 Ω
2 — 7	Switch TURN (LH)	Less than 1 Ω

4. FRONT FOG LIGHT SWITCH

Terminal No.	Inspection Conditions	Specification
12 — 11	Switch OFF	1 MΩ or more
	Switch ON	Less than 1 Ω

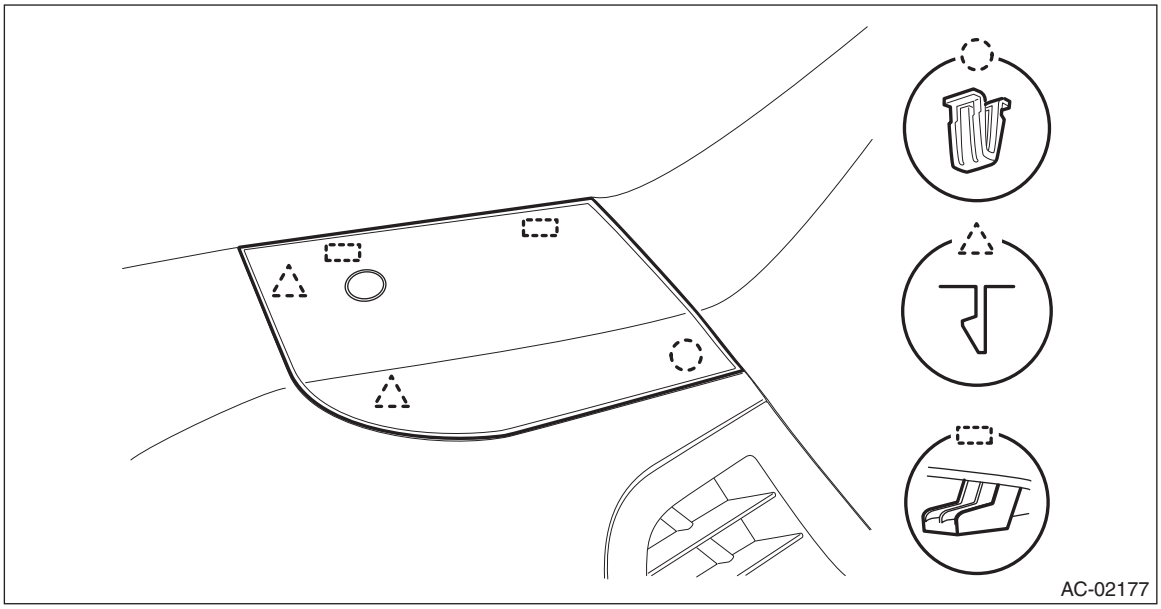
12.Light Control Sensor

A: REMOVAL

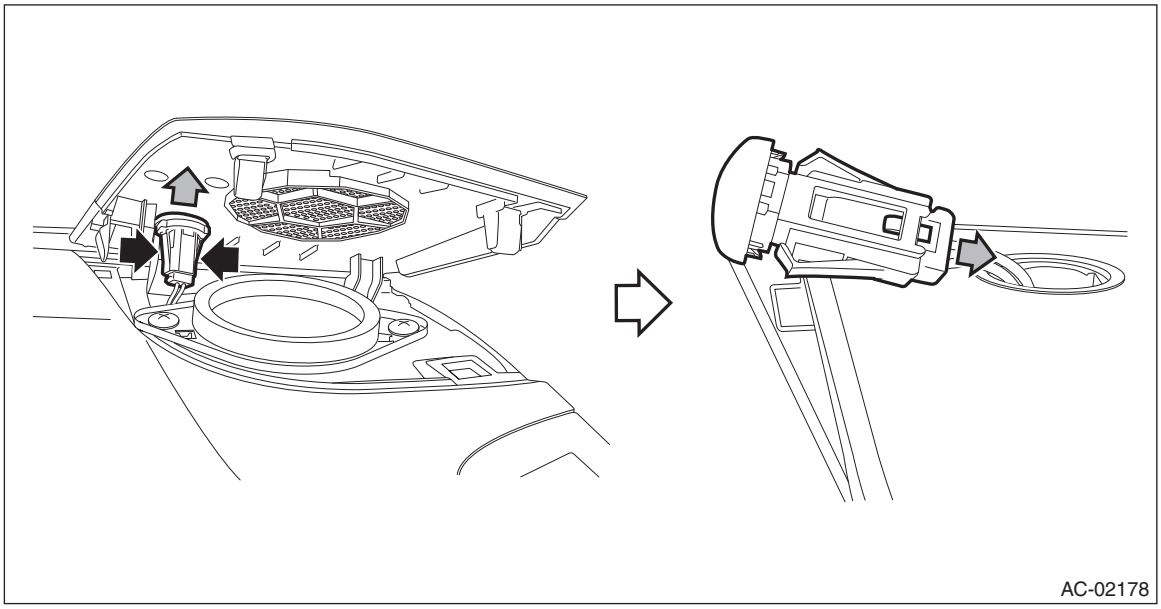
NOTE:
The light control sensor is integrated with the sunload sensor.
1) Disconnect the ground cable from battery.
2) Remove the light control sensor.

CAUTION:
Be careful not to damage the sensors and interior trims when removing.

(1) Release the claws and clips, then detach the side speaker cover (RH).



(2) Push out the light control sensor by pressing the left and right claws.
(3) Disconnect the connector, and remove the light control sensor.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

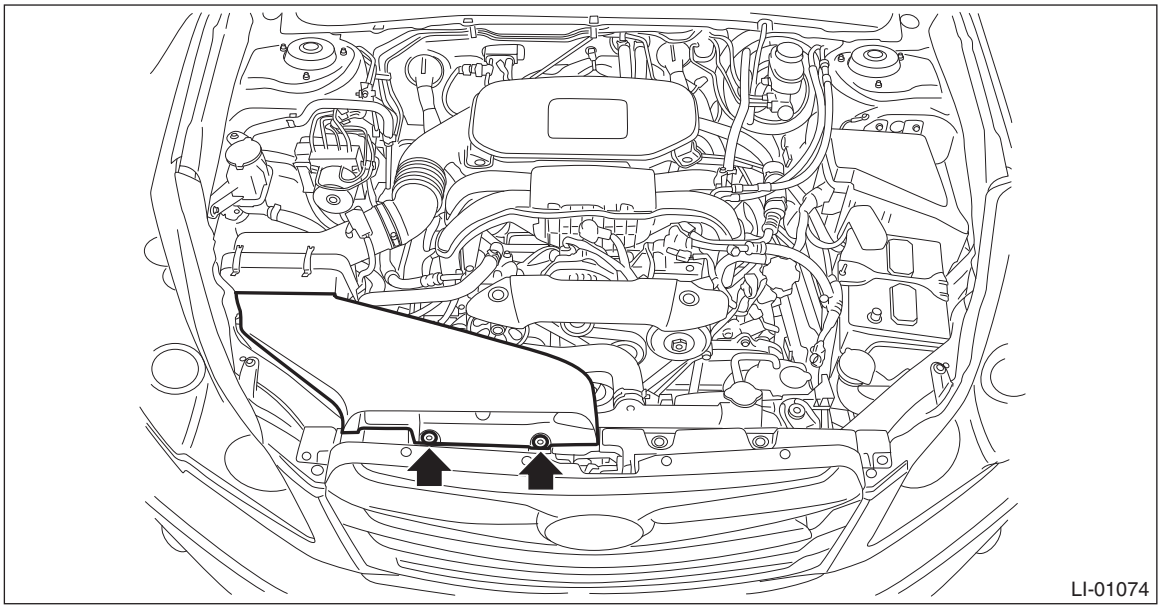
For the inspection of the light control sensor, refer to AUTO HEADLIGHT SYSTEM CHECK of Headlight System. <Ref. to LI-5, AUTO HEADLIGHT SYSTEM CHECK, INSPECTION, Headlight System.>

13.Headlight Assembly

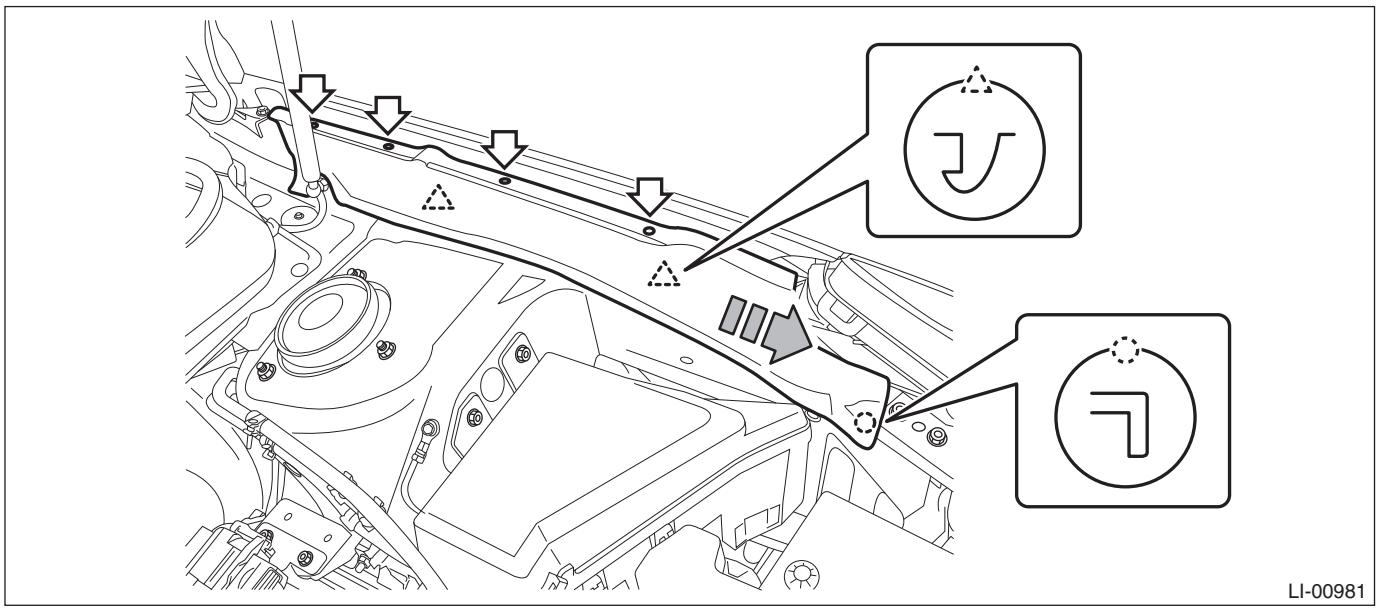
A: REMOVAL

CAUTION:
Do not perform work with wet hands.

1) Disconnect the ground cable from battery.
2) Remove the clips and remove the air intake duct. (When removing the headlight RH).

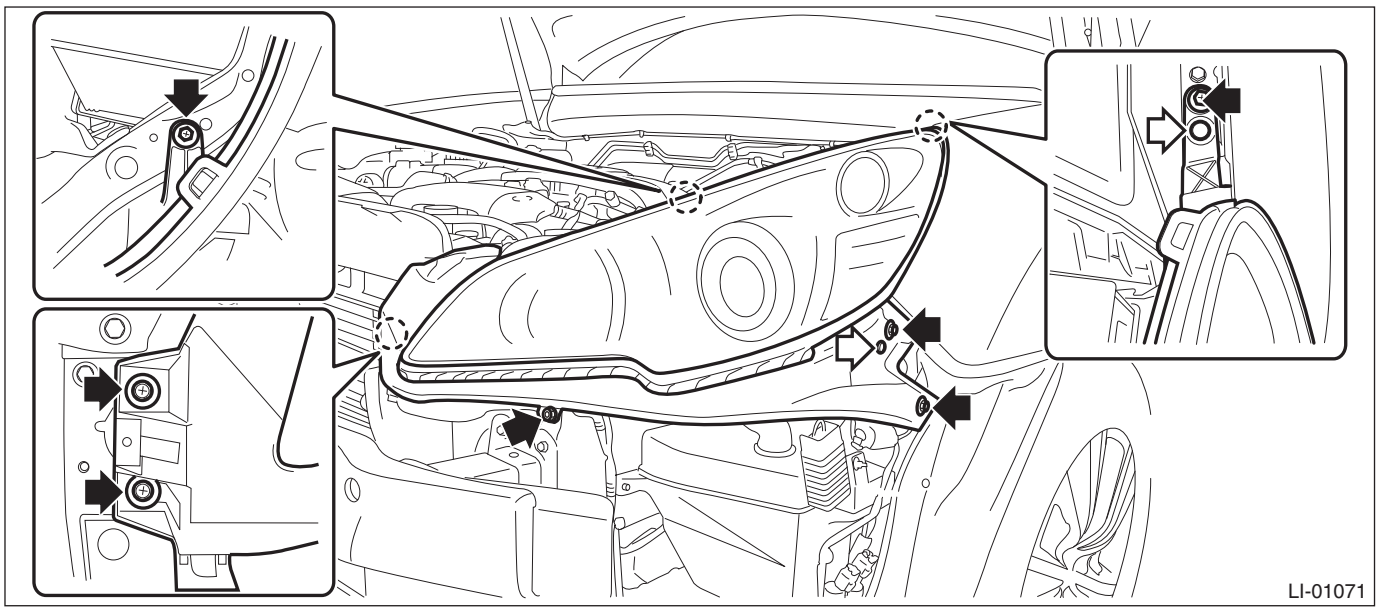


3) Remove the front bumper face assembly. <Ref. to EI-39, REMOVAL, Front Bumper.>
4) Remove the fender cover assembly UPR.
   (1) Remove the clip.
   (2) Release the claws of the fender cover assembly UPR by pulling it forward and remove the fender cover.



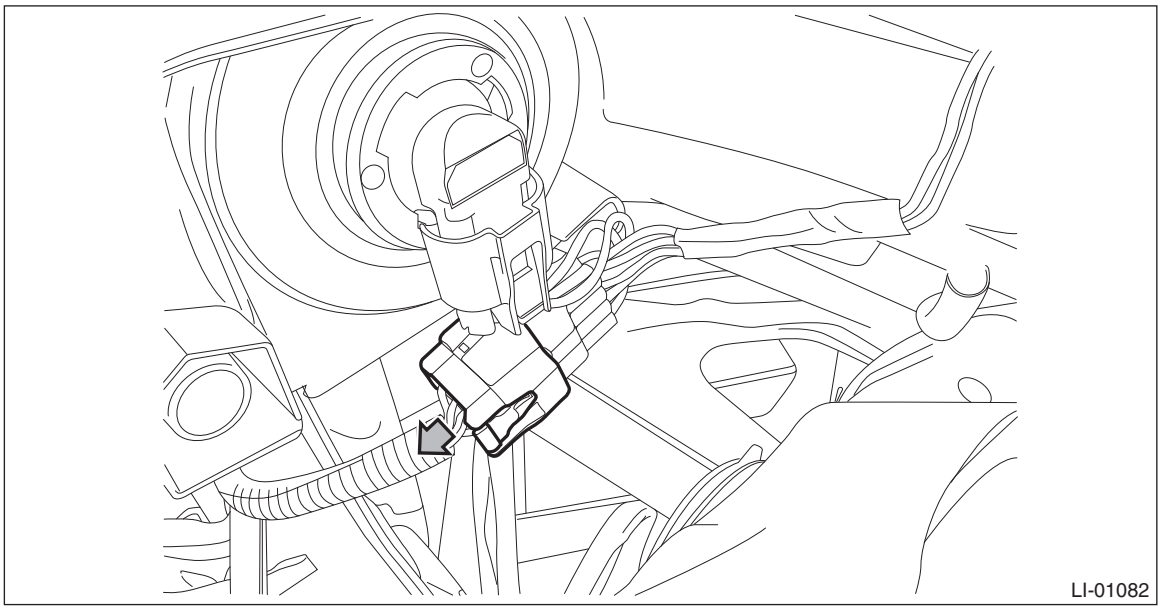
5) Remove the headlight assembly.

(1) Remove the bolts and clips, and pull out the headlight assembly to the front of the vehicle.

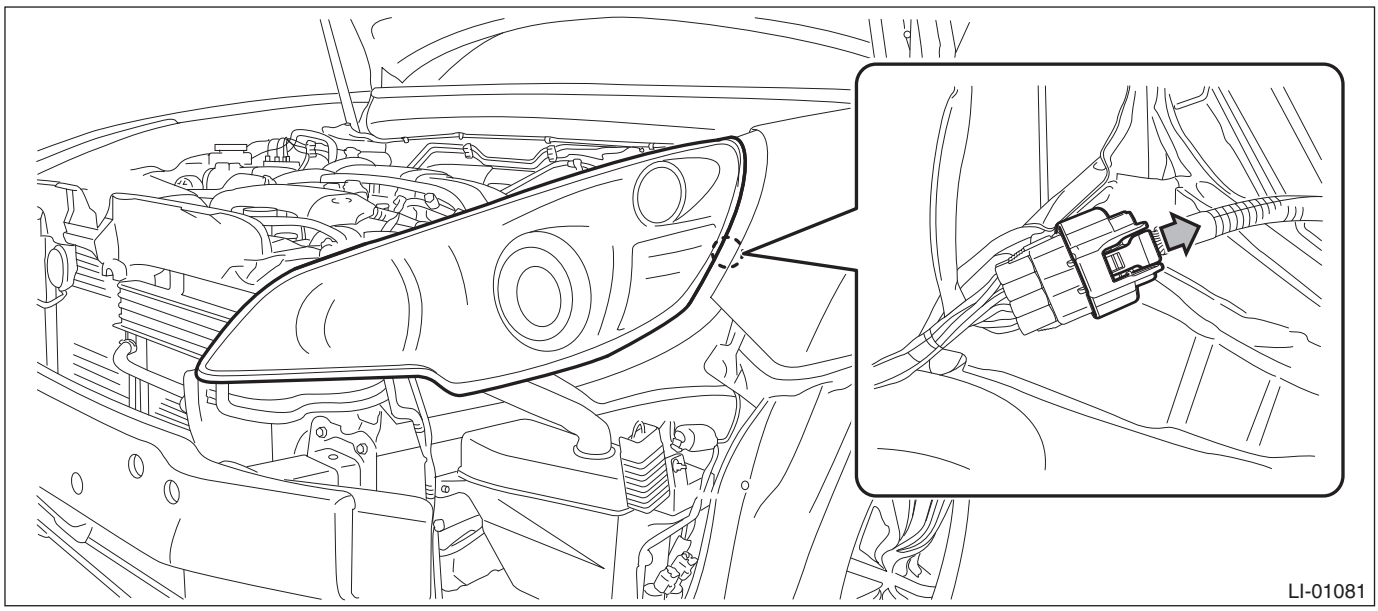


(2) Disconnect the connector and remove the headlight assembly.

- Headlight connector RH



- Headlight connector LH



B: INSTALLATION

Install each part in the reverse order of removal.

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

C: ADJUSTMENT

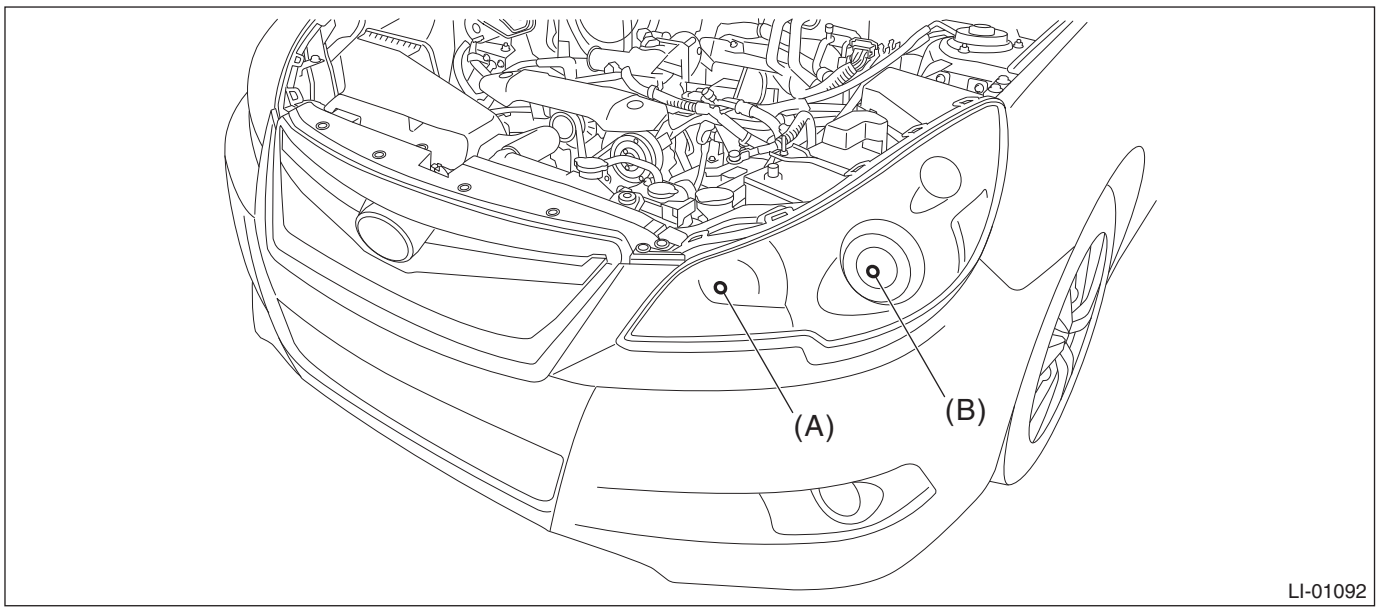
1. HEADLIGHT BEAM ADJUSTMENT

CAUTION:
Turn off the light before adjusting the headlight beam level. If it is necessary to inspect the beam level, do not keep the light on for two minutes or more.

1) Before checking the headlight beam level, be sure of the following:
- the area around the headlight has not sustained any scratches, damage or other type of deformation.
- Vehicle is parked on a level surface.
- The inflation pressure of tires is correct.
- Vehicle's fuel tank is fully filled.

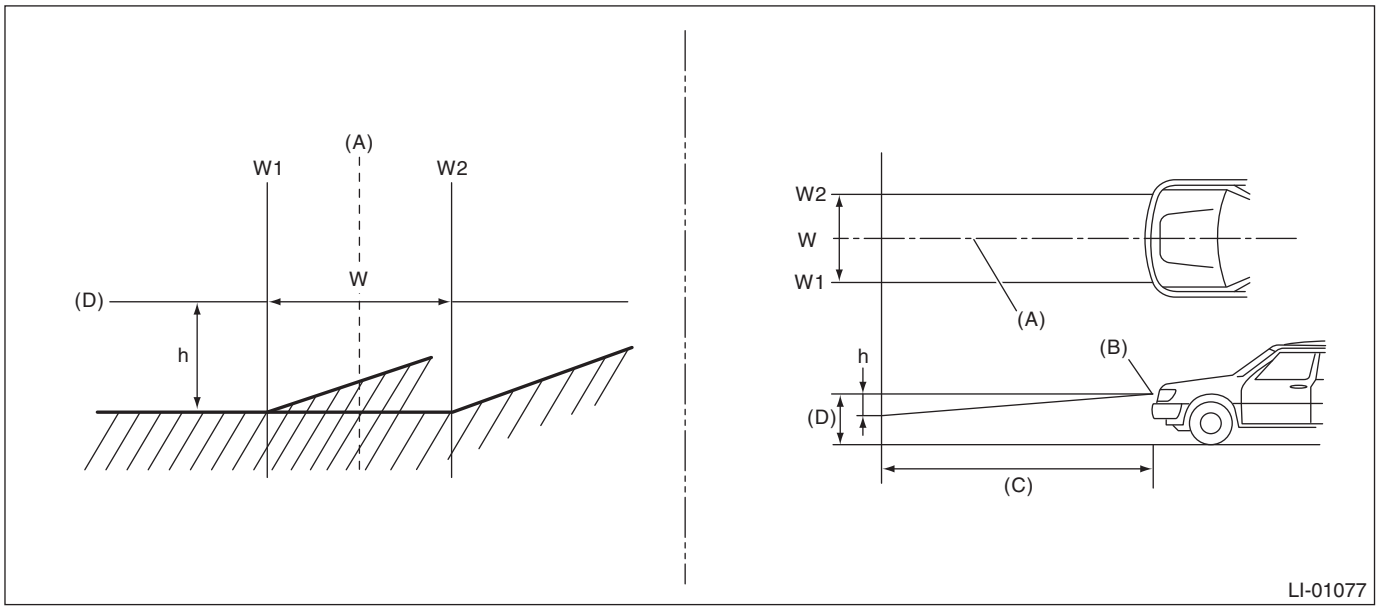
2) For vehicle with a manual leveler, set the headlight beam leveler switch to the "0" position.
3) Bounce the vehicle several times to normalize the suspension.
4) Make certain that someone is seated in the driver's seat.

5) Measure the distance between the low beam bulb centers, and the height of the bulb center.



(A) High beam (B) Low beam

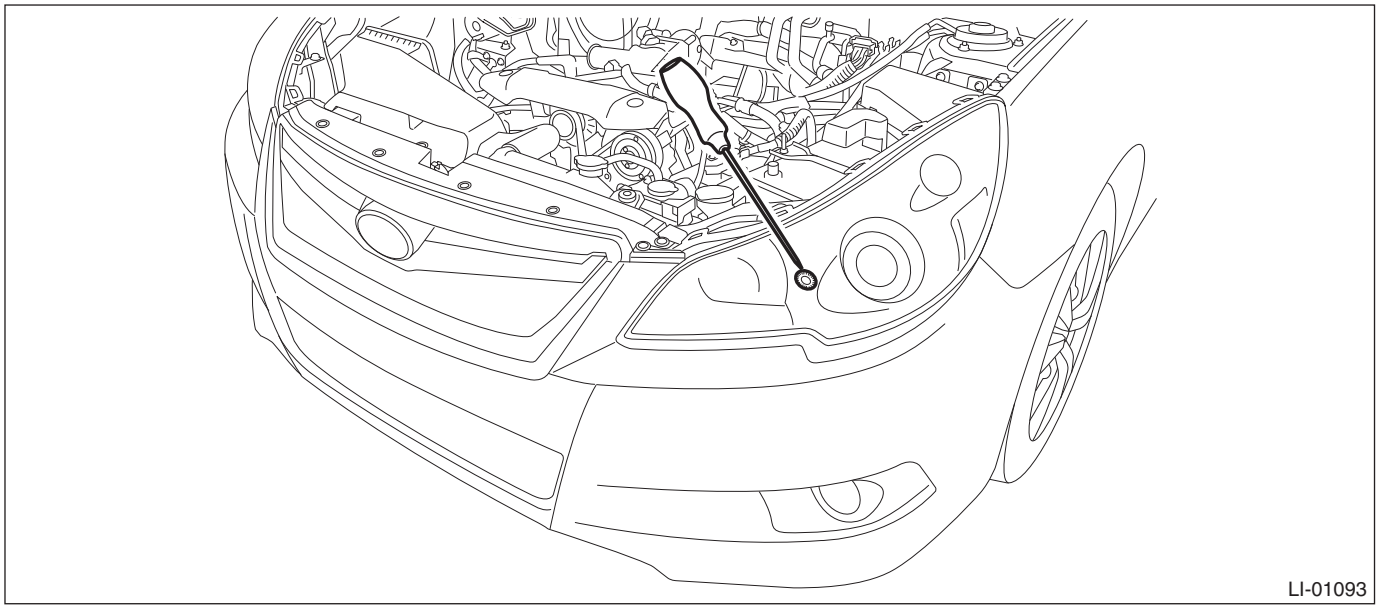
6) Place the vehicle with the front end facing to the measurement panel.



(A) Vehicle center (C) 3 m (10 ft) (D) Height of headlight center
(B) Bulb center marking

W mm (in)	h mm (in) at 3 m (10 ft)
1,404 (55.28)	21 (0.83)

7) Adjust the headlight low beam by turning the aiming screw.



NOTE:
When using a tester, follow the instructions of the tester manual.

14.Headlight Bulb

A: REMOVAL

1. HIGH BEAM

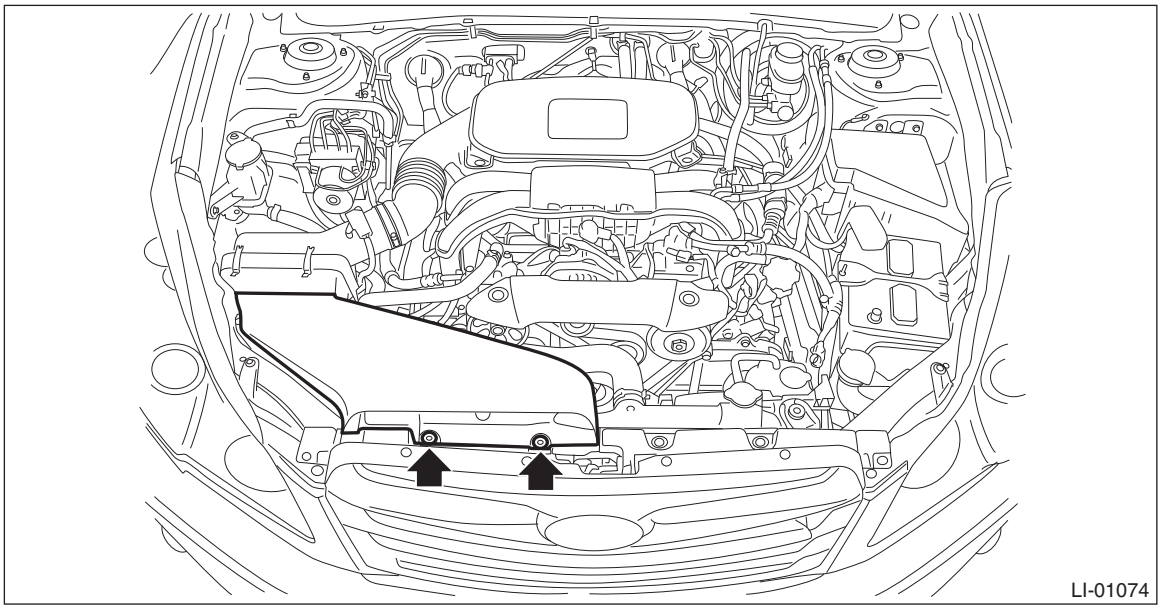
CAUTION:

• Because the halogen bulb operates at a high temperature, dirt and oil on the bulb surface reduces the bulb's service life. Hold the flange portion when replacing the bulb. Never touch the glass portion.

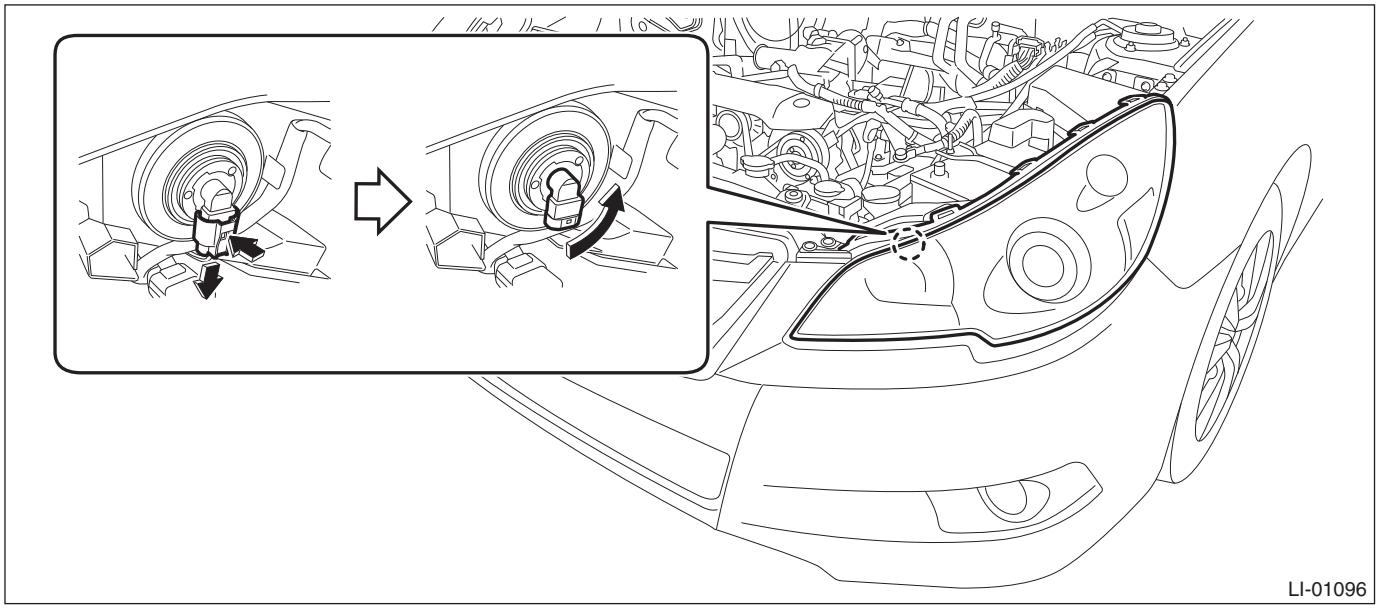
• Do not leave the headlight without a bulb for a long time. Dust, moisture, etc. entering the headlight may affect its performance.

1) Disconnect the ground cable from battery.

2) Remove the clips and remove the air intake duct. (When removing the headlight high beam bulb RH)



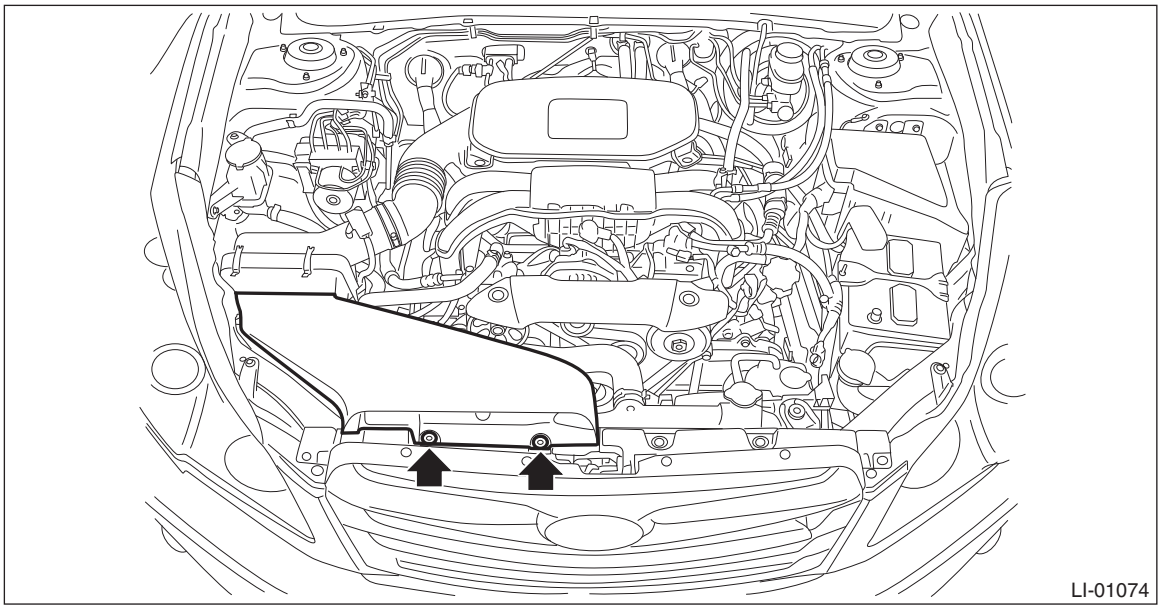
3) Disconnect the connector and remove the headlight high beam bulb.



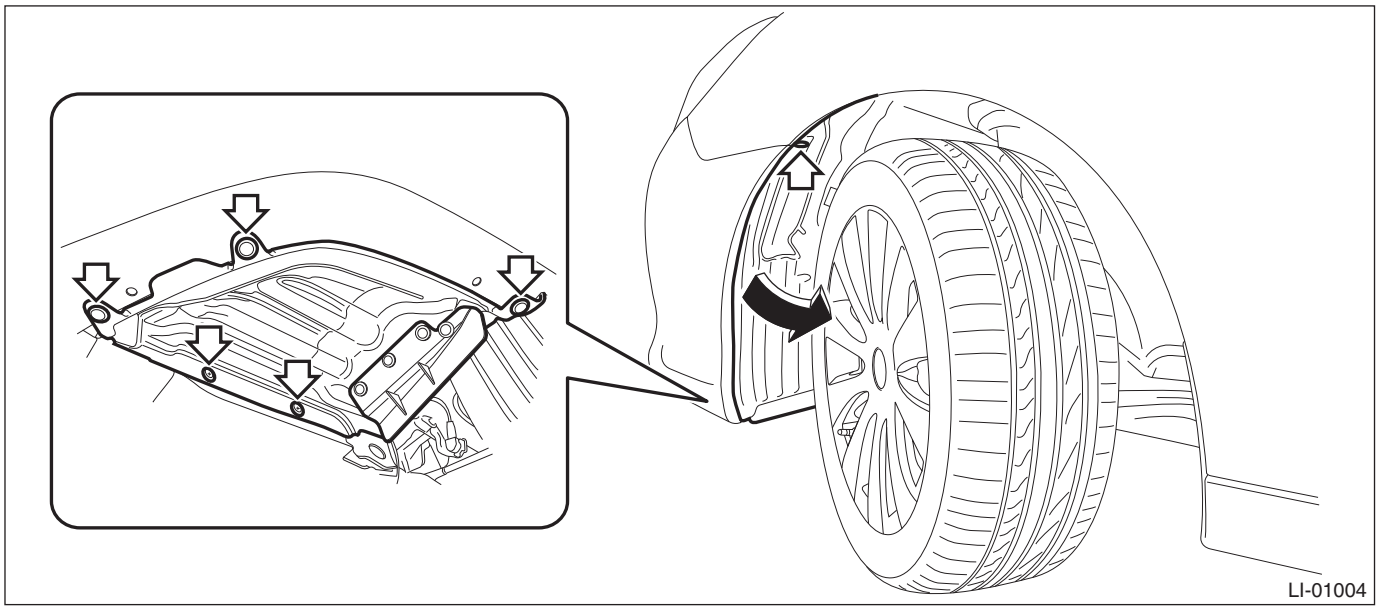
2. LOW BEAM

CAUTION:
• Because the halogen bulb operates at a high temperature, dirt and oil on the bulb surface reduces the bulb's service life. Hold the flange portion when replacing the bulb. Never touch the glass portion.
• Do not leave the headlight without a bulb for a long time. Dust, moisture, etc. entering the headlight may affect its performance.

1) Disconnect the ground cable from battery.
2) Remove the clips and remove the air intake duct. (When removing the headlight low beam bulb RH)

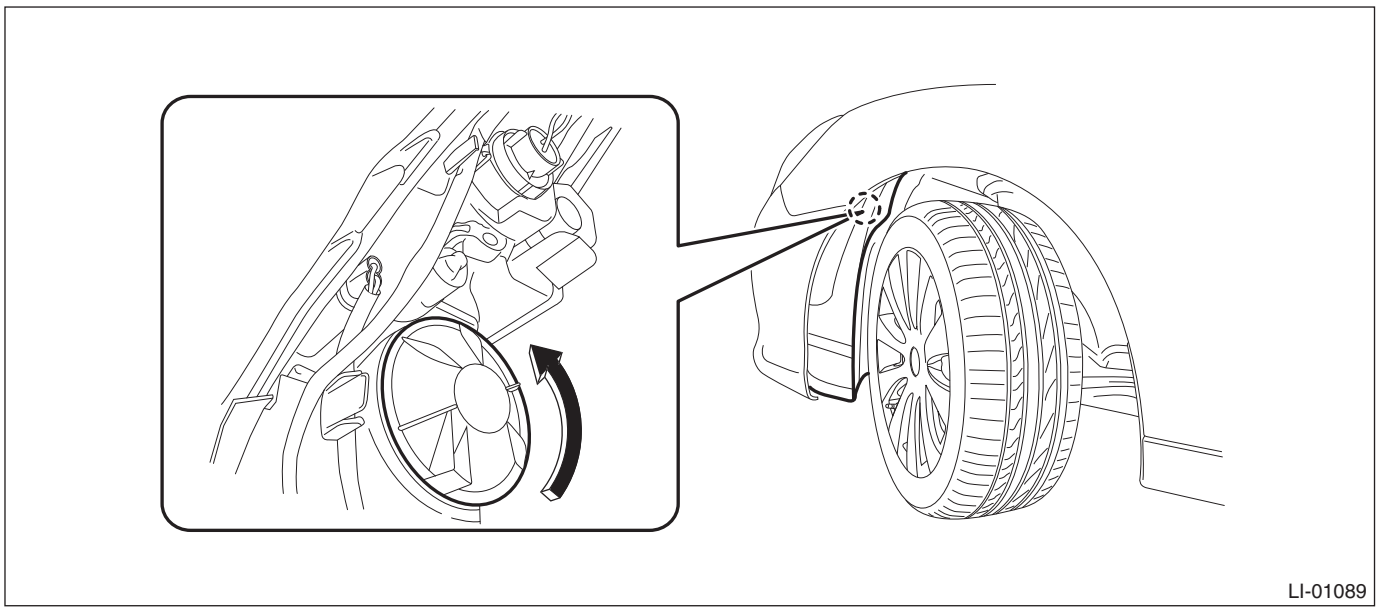


3) Turn the steering wheel in the opposite direction to the headlight to be removed. Then remove the clips and turn over the mud guard.

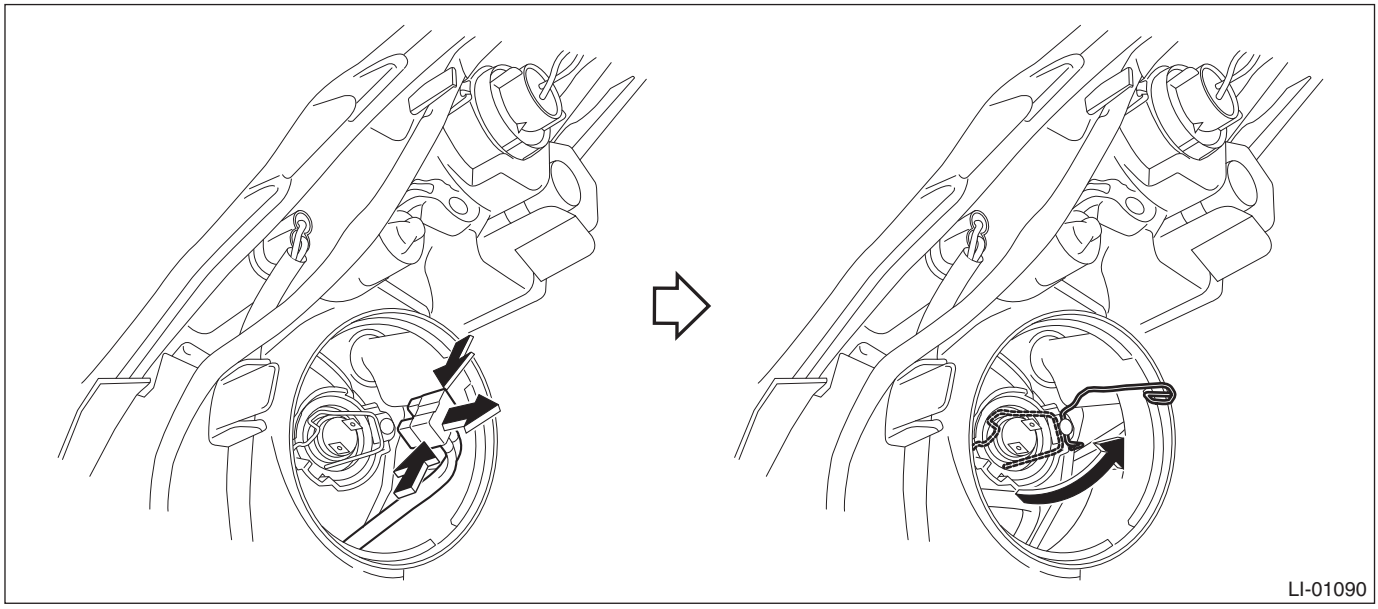


4) Remove the headlight low beam bulb.

(1) Remove the back cover.

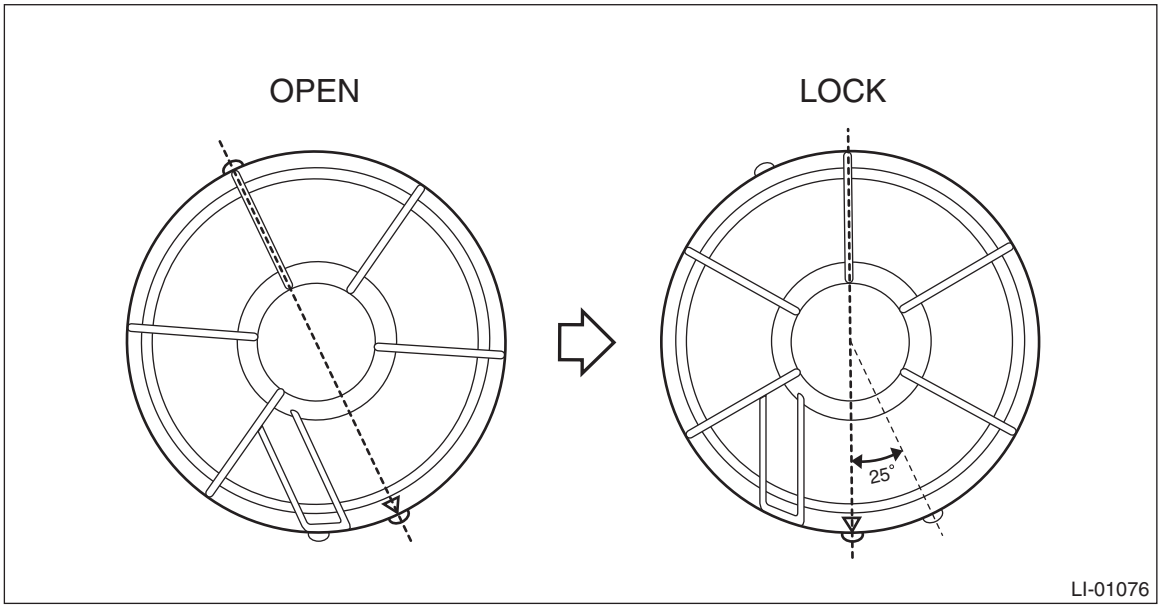


(2) Unlock the bulb socket and bulb spring, and remove the headlight low beam bulb.



B: INSTALLATION

NOTE:
When installing the back cover, turn it to the position shown in the figure to lock while pressing the entire periphery of the cover.



Install each part in the reverse order of removal.

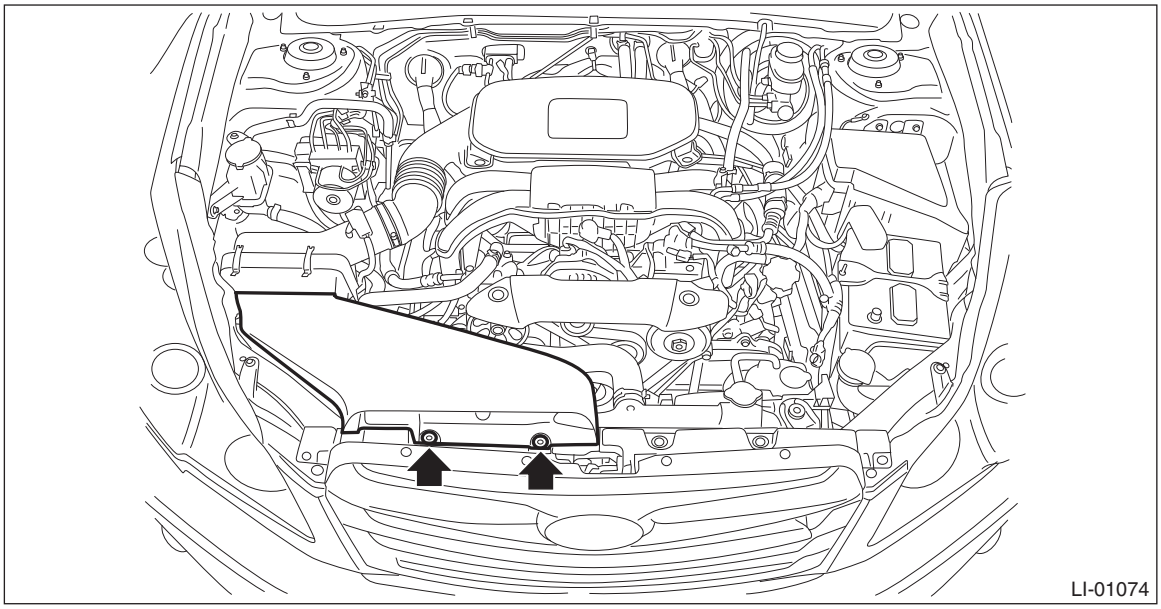
C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

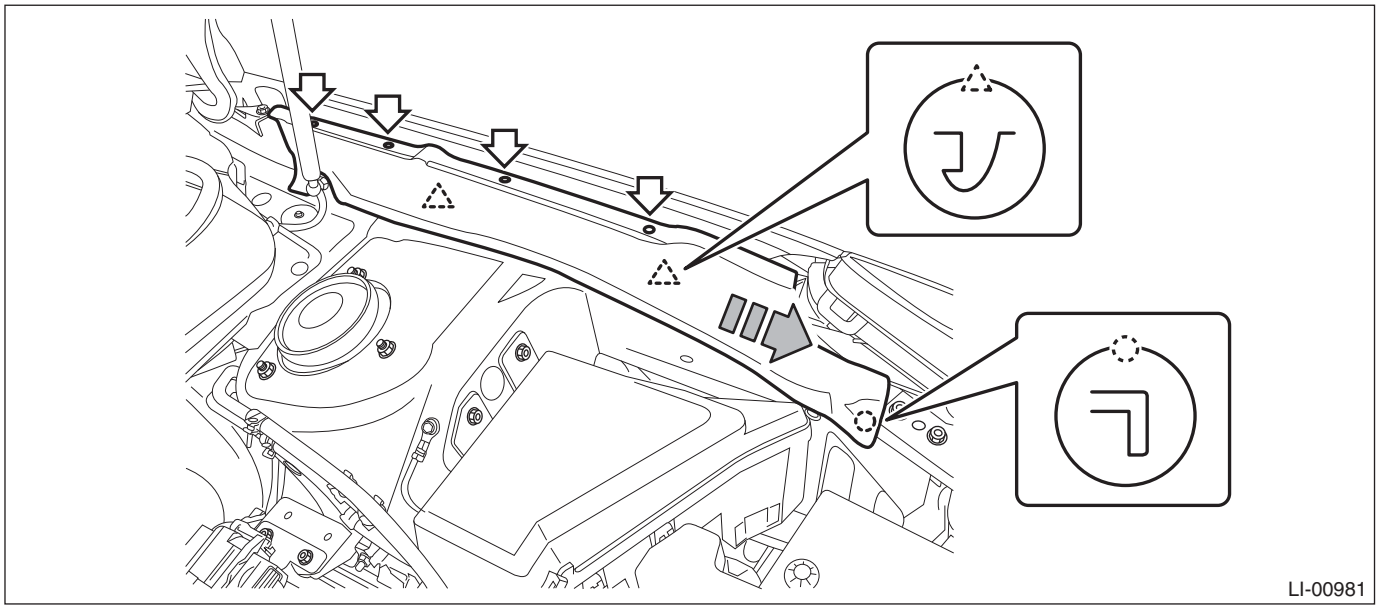
15.Front Turn Signal Light Bulb

A: REMOVAL

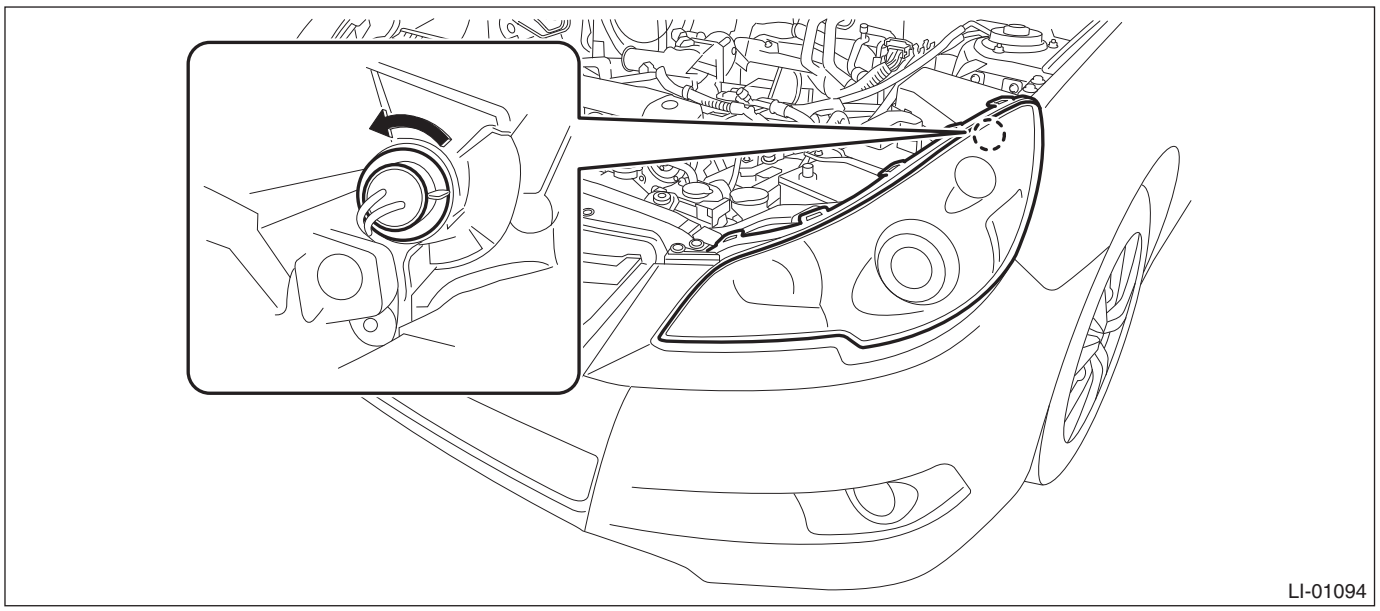
1) Disconnect the ground cable from battery.
2) Remove the clips and remove the air intake duct. (When removing the front turn signal light bulb RH)



3) 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.



4) Remove the bulb socket and turn signal light bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

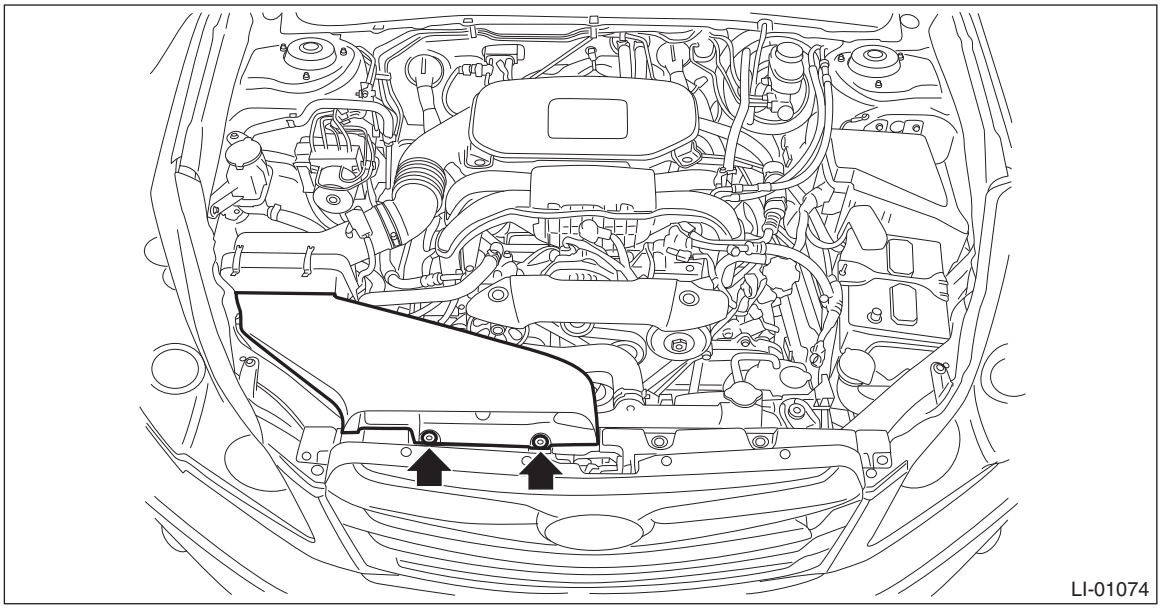
C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) If NG, replace the bulb with a new part.

16.Clearance/Parking Light Bulb

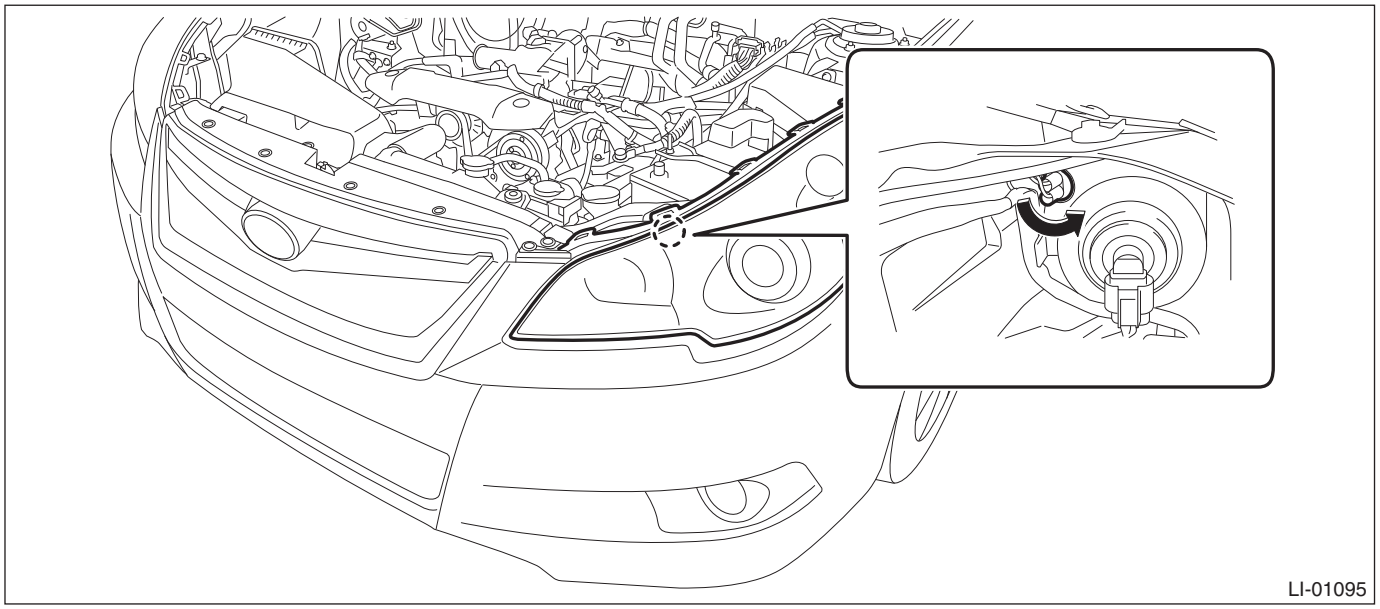
A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the clips and remove the air intake duct. (When removing the front clearance light bulb RH)



3) Remove the bulb socket and clearance light bulb.

NOTE:
Move the battery rearward as required. (When removing the front clearance light bulb LH)



B: INSTALLATION

Install each part in the reverse order of removal.

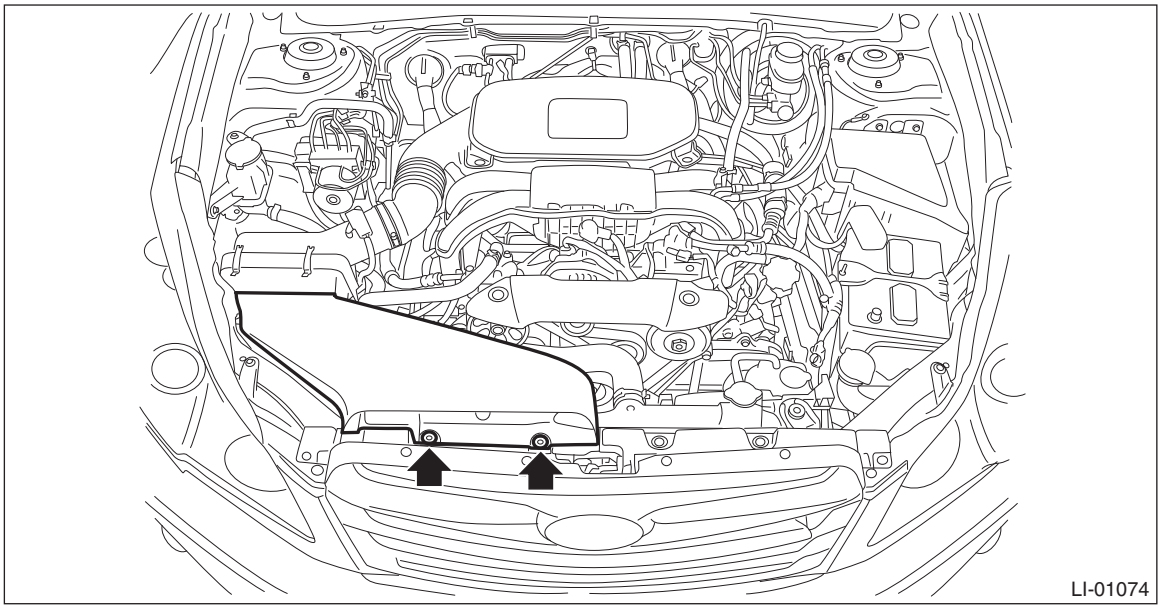
C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

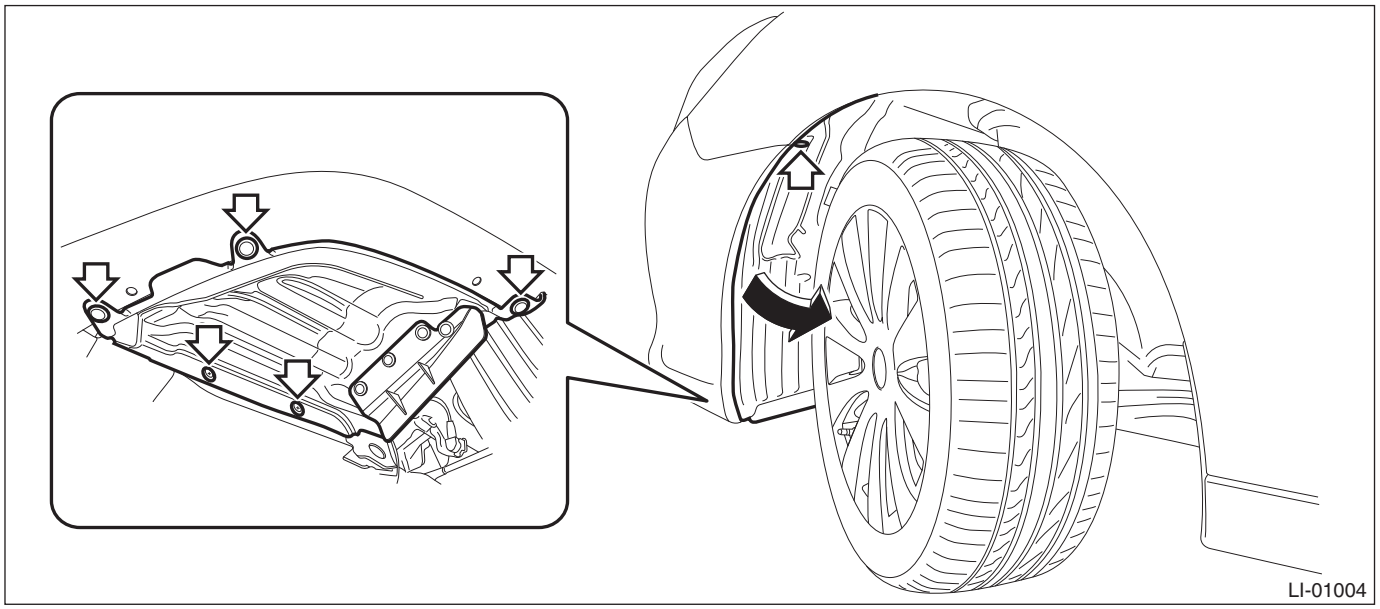
17.Front Side Marker Light Bulb

A: REMOVAL

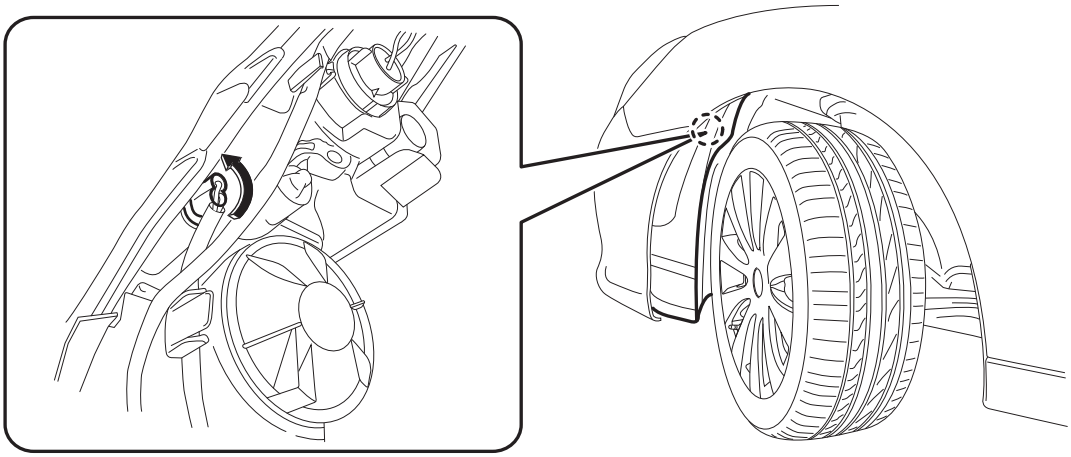
1) Disconnect the ground cable from battery.
2) Remove the clips and remove the air intake duct. (When removing the front turn signal light bulb RH)



3) Turn the steering wheel in the opposite direction to the headlight to be removed. Then remove the clips and turn over the mud guard.



4) Remove the bulb socket and turn signal light bulb.



LI-01091

B: INSTALLATION

Install each part in the reverse order of removal.

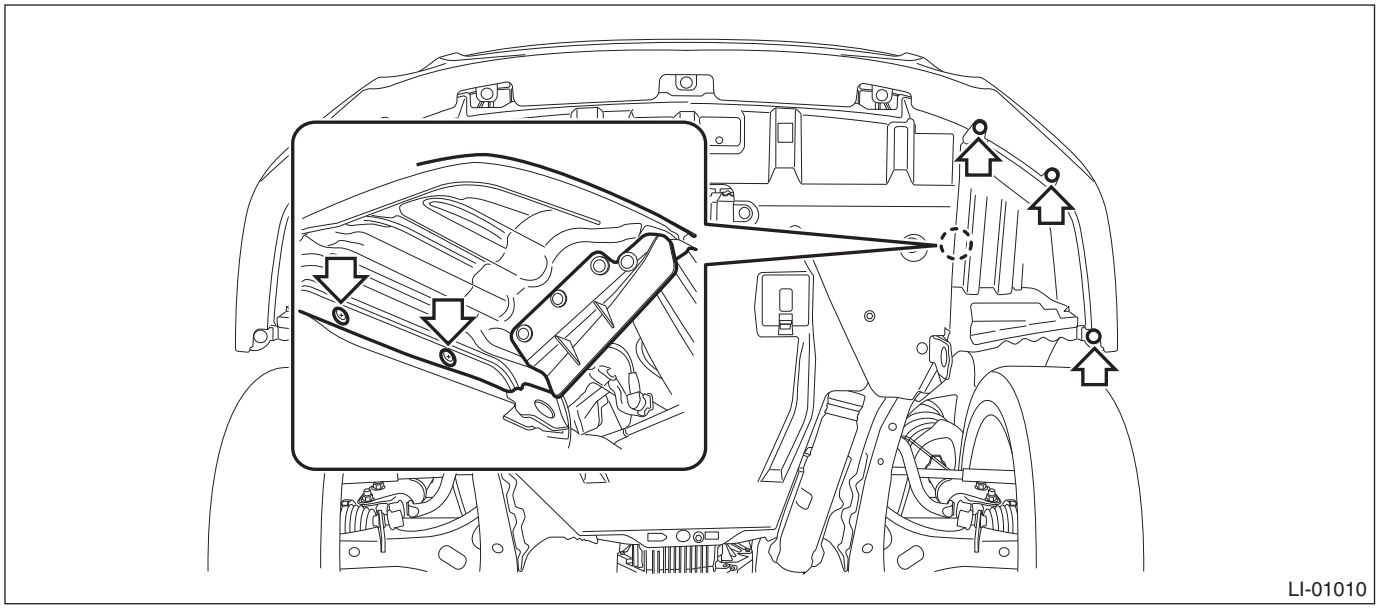
C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) If NG, replace the bulb with a new part.

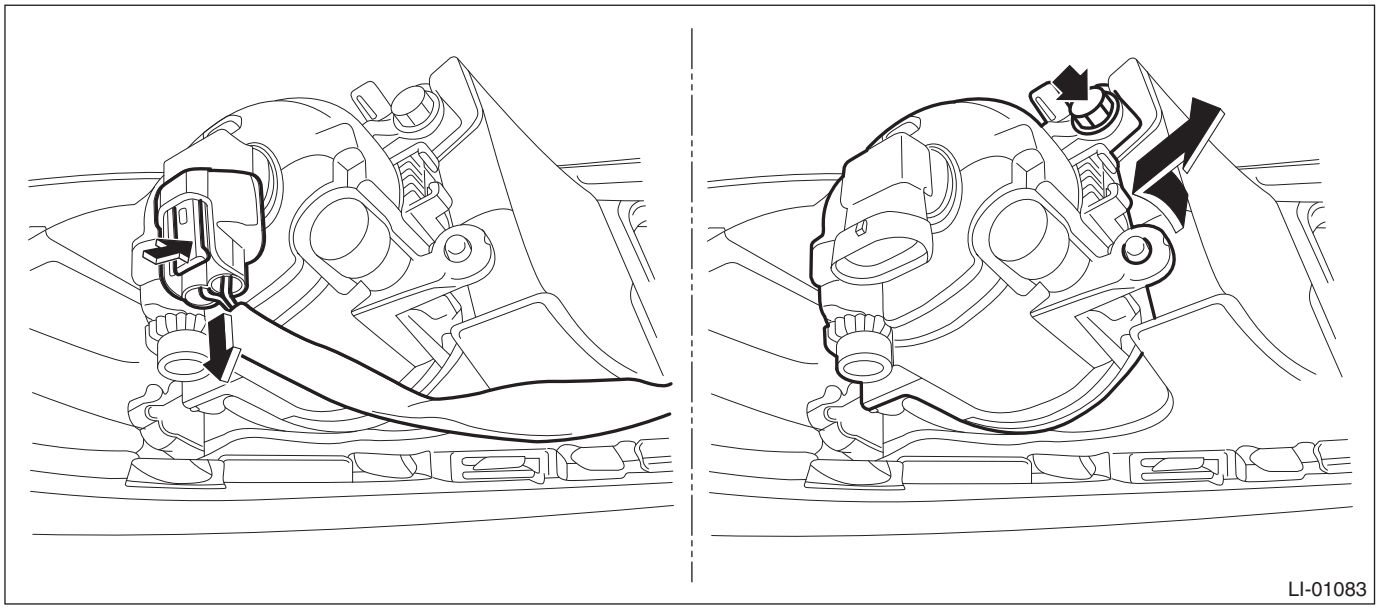
18.Front Fog Light Assembly

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the clips and turn over the front end of front mud guard.



3) From the bottom of bumper face, remove the front fog light assembly.
   (1) Disconnect the connector.
   (2) Remove the bolts, and remove the front fog light assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

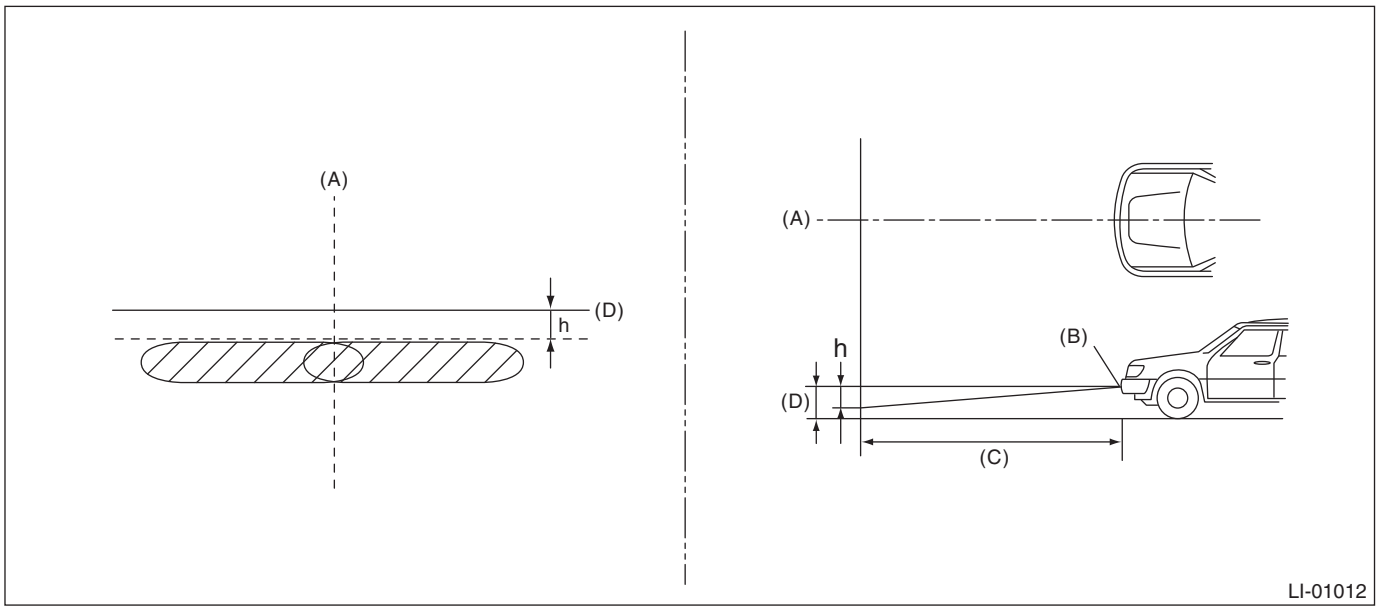
Tightening torque:
Front fog light assembly: 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

C: ADJUSTMENT

1. FOG LIGHT AIMING

1) Before checking the fog light beam level, be sure of the following:
- The area around the fog light has not sustained any accident, damage or other type of deformation.
- Vehicle is parked on a level surface.
- The inflation pressure of tires is correct.
- Vehicle's fuel tank is fully filled.

2) Bounce the vehicle several times to normalize the suspension.
3) Make certain that someone is seated in the driver's seat.
4) Place the vehicle with the front end facing to the measurement panel.

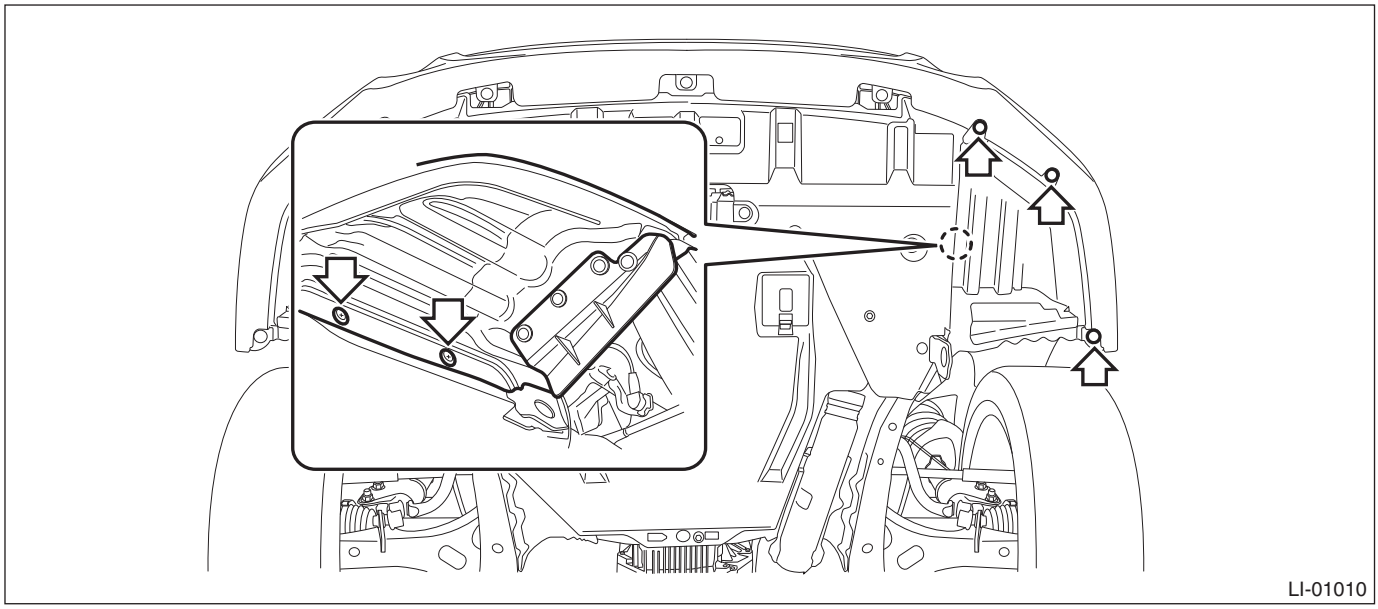


(A) Vehicle center
(B) Bulb center marking
(C) 3 m (10 ft)
(D) Height of fog light center

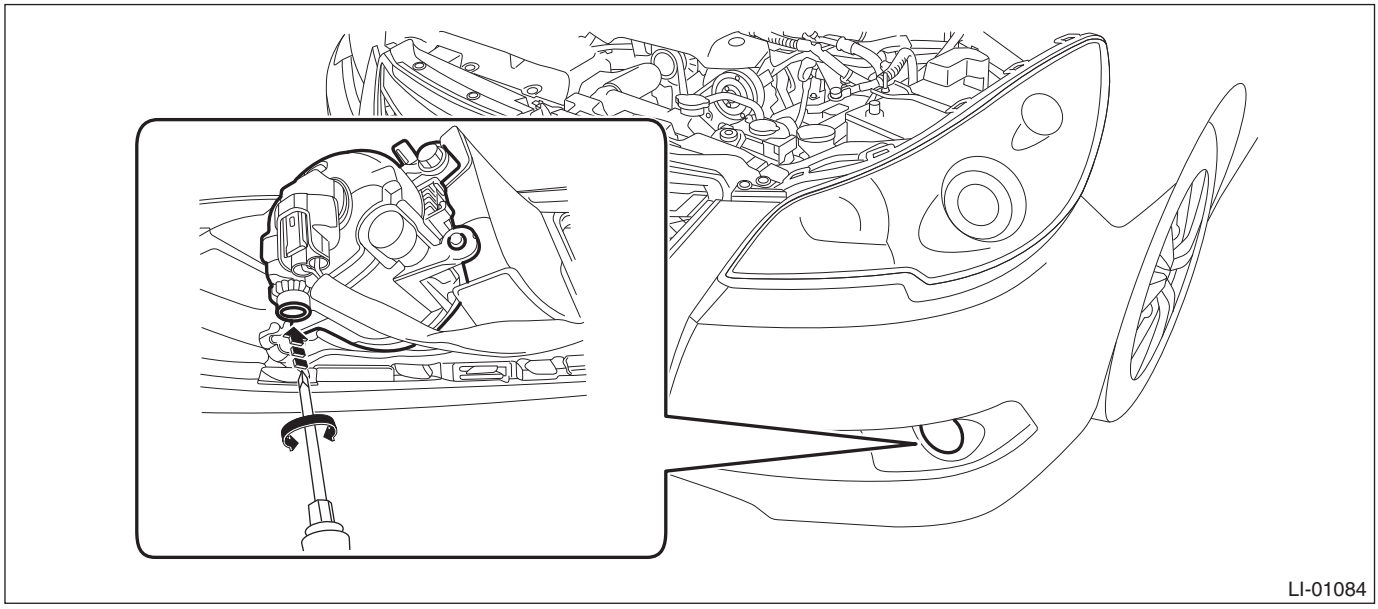
h mm (in) at 3 m (10 ft)
40 (1.58)

5) Adjust the fog light beam.

(1) Remove the clips and turn over the front end of front mud guard.



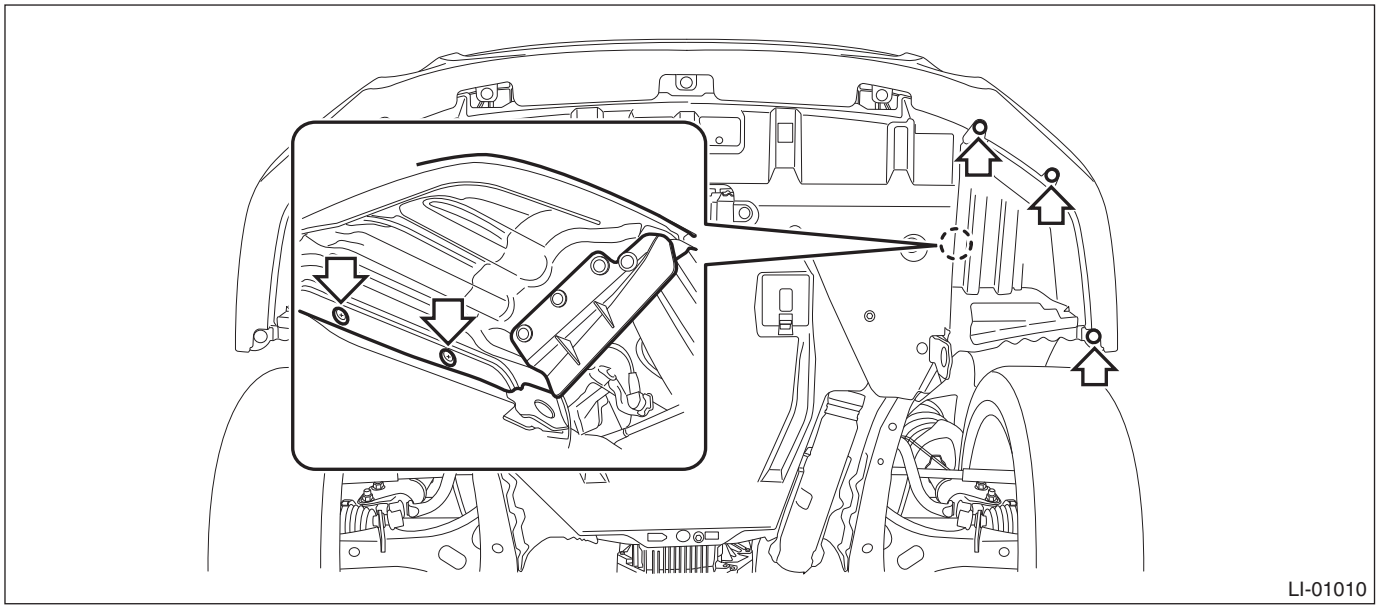
(2) Adjust the beam direction by turning the aiming screw from the bottom of front bumper face.



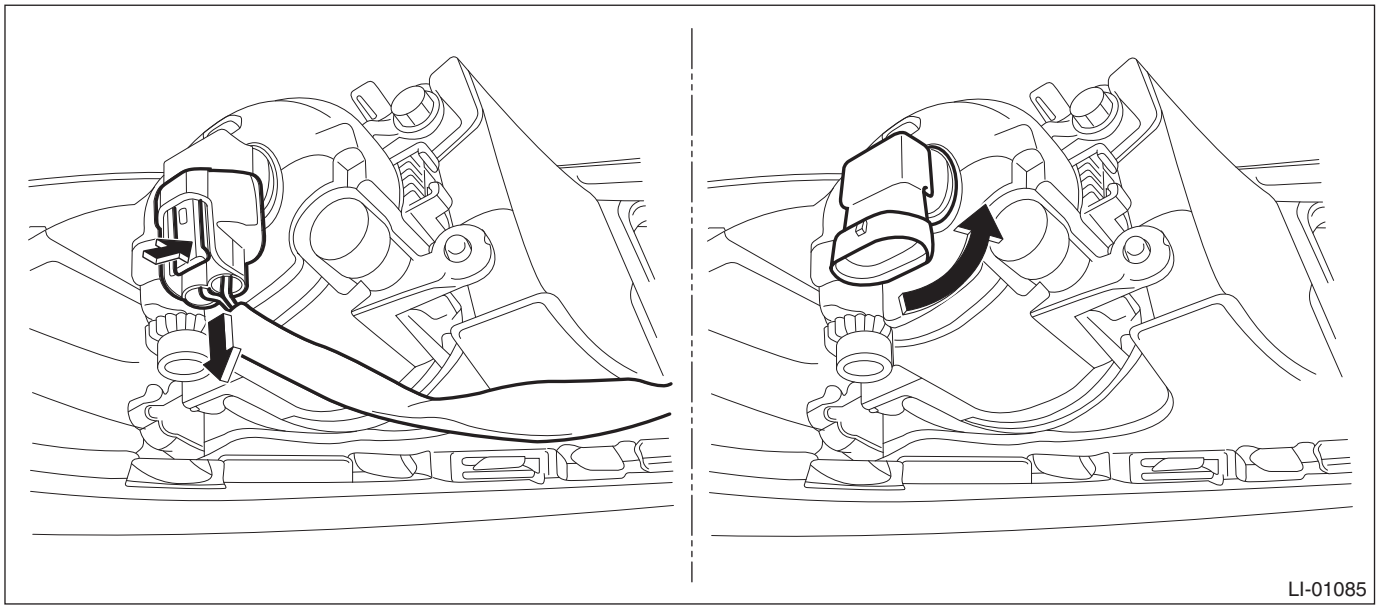
19.Front Fog Light Bulb

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the clips and turn over the front end of front mud guard.



3) From the bottom of bumper face, remove the front fog light bulb.
   (1) Disconnect the connector.
   (2) Remove the bulb.



B: INSTALLATION

CAUTION:
After connecting the connector, make sure that the bulb is locked securely.
Install each part in the reverse order of removal.

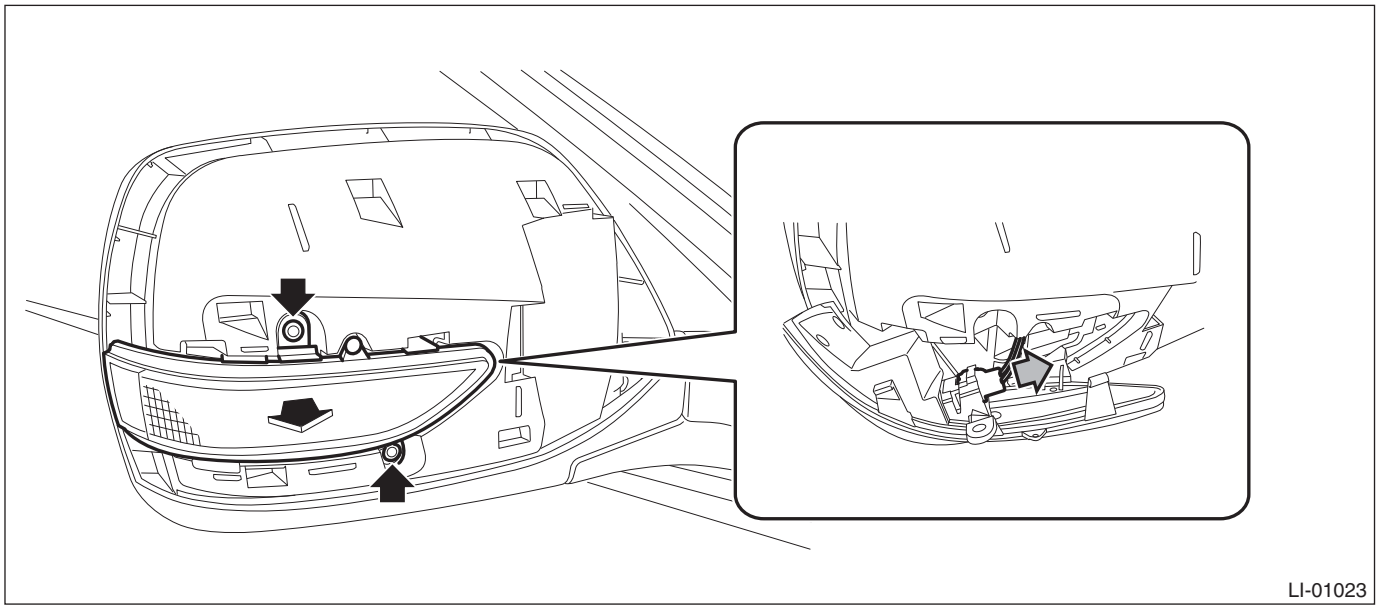
C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) If NG, replace the bulb with a new part.

20.Side Turn Signal Light Assembly

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the mirror. <Ref. to GW-27, REPLACEMENT, Outer Mirror.>
3) Remove the scalp cap. <Ref. to GW-21, REPLACEMENT, Scalp Cap.>
4) Remove the side turn signal light assembly.
   (1) Remove the screws and pull out the side turn signal light assembly.
   (2) Disconnect the connector and remove the side turn signal light assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1) Install the side turn signal light assembly and check that it blinks normally.
2) If it is found not to blink normally, replace the side turn signal light assembly with a new part.

NOTE:
Since LED (Light Emitting Diode) is used for the side turn signal light, replace the side turn signal light assembly if the LED burns out.

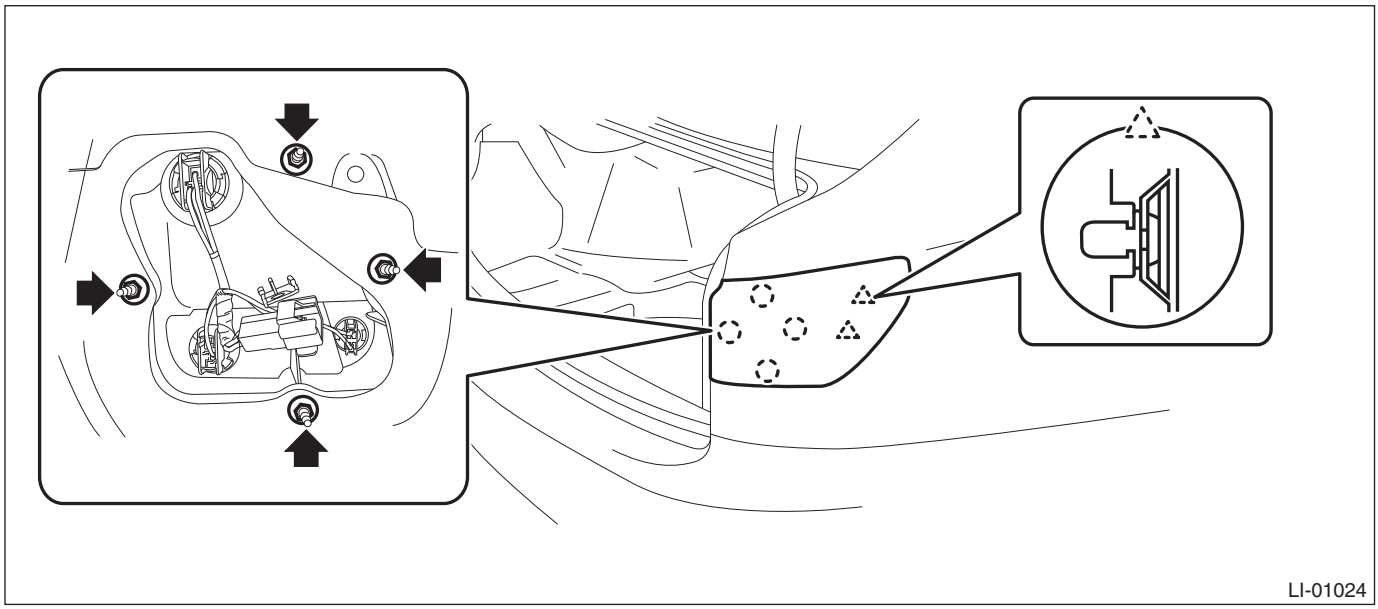
21.Rear Combination Light Assembly

A: REMOVAL

1. SEDAN MODEL

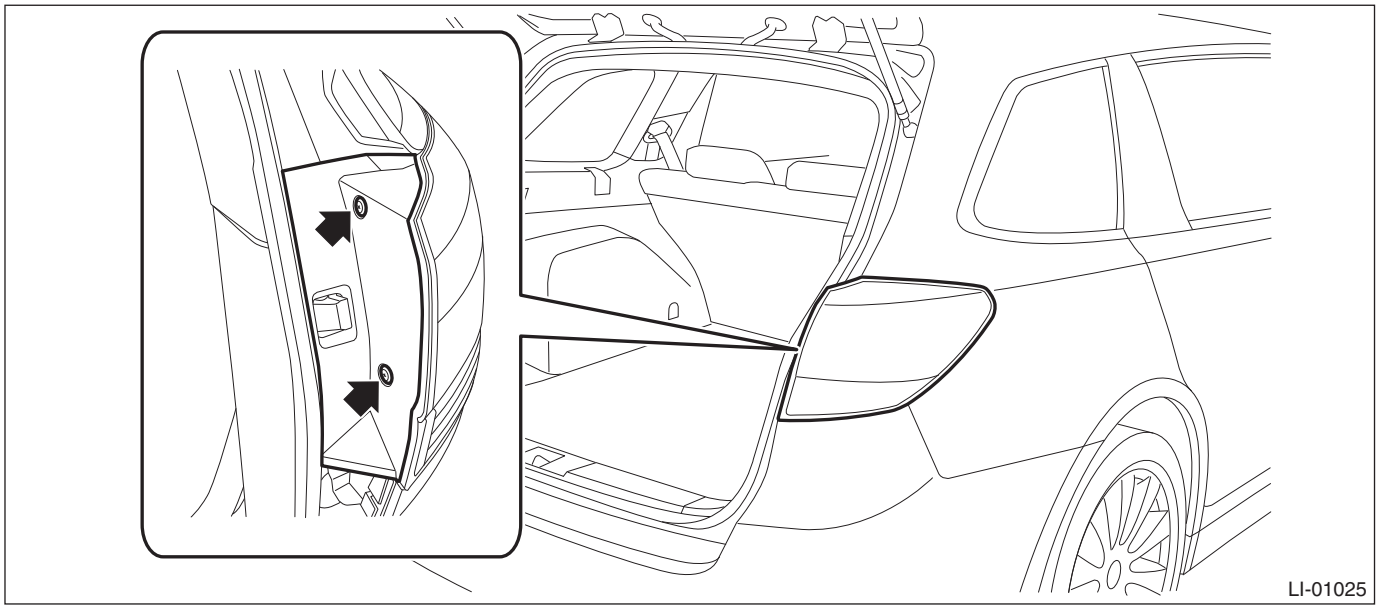
1) Disconnect the ground cable from battery.
2) Remove the trunk room trim. <Ref. to EI-127, REMOVAL, Trunk Room Trim.>
3) Remove the rear combination light assembly.
   (1) Disconnect the connector.
   (2) Release the nuts and clips, then remove the rear combination light assembly.

CAUTION:
Be careful not to damage the clips.



2. OUTBACK MODEL

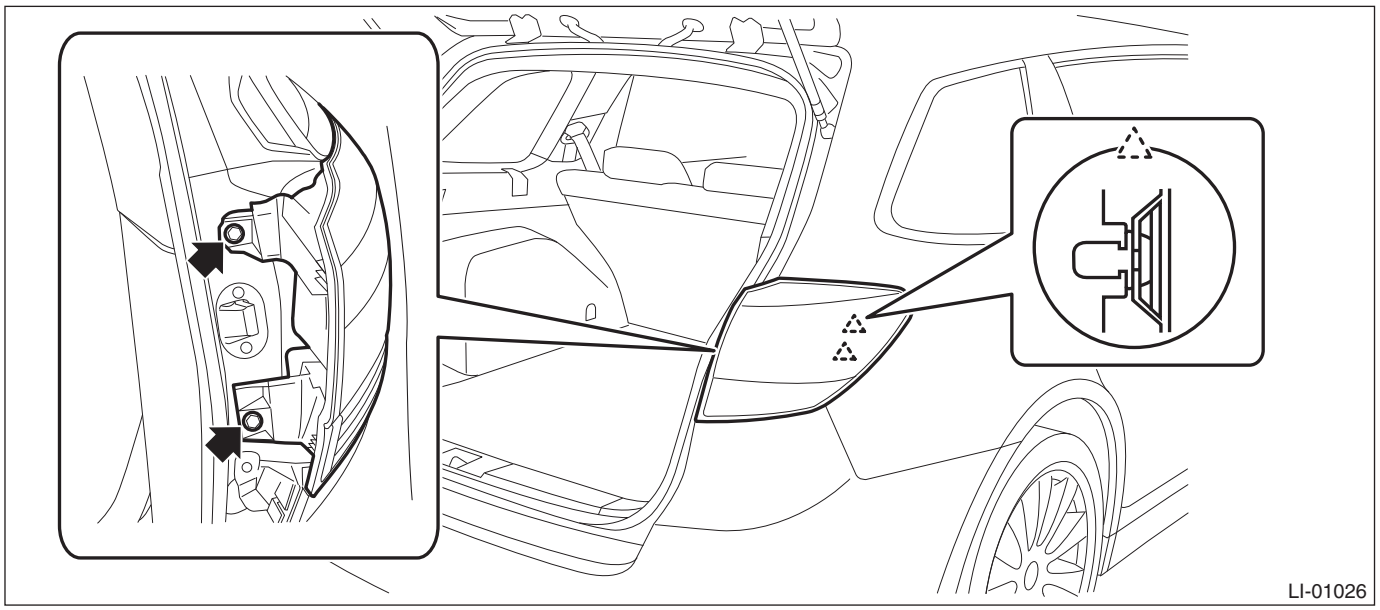
1) Disconnect the ground cable from battery.
2) Remove the clips and detach the rear combination light covers.



3) Remove the rear combination light assembly.

CAUTION:
Be careful not to damage the clips.

(1) Release the bolts and clips, then pull out the rear combination light assembly to the vehicle rear.
(2) Disconnect the connector and remove the rear combination light assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

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

C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

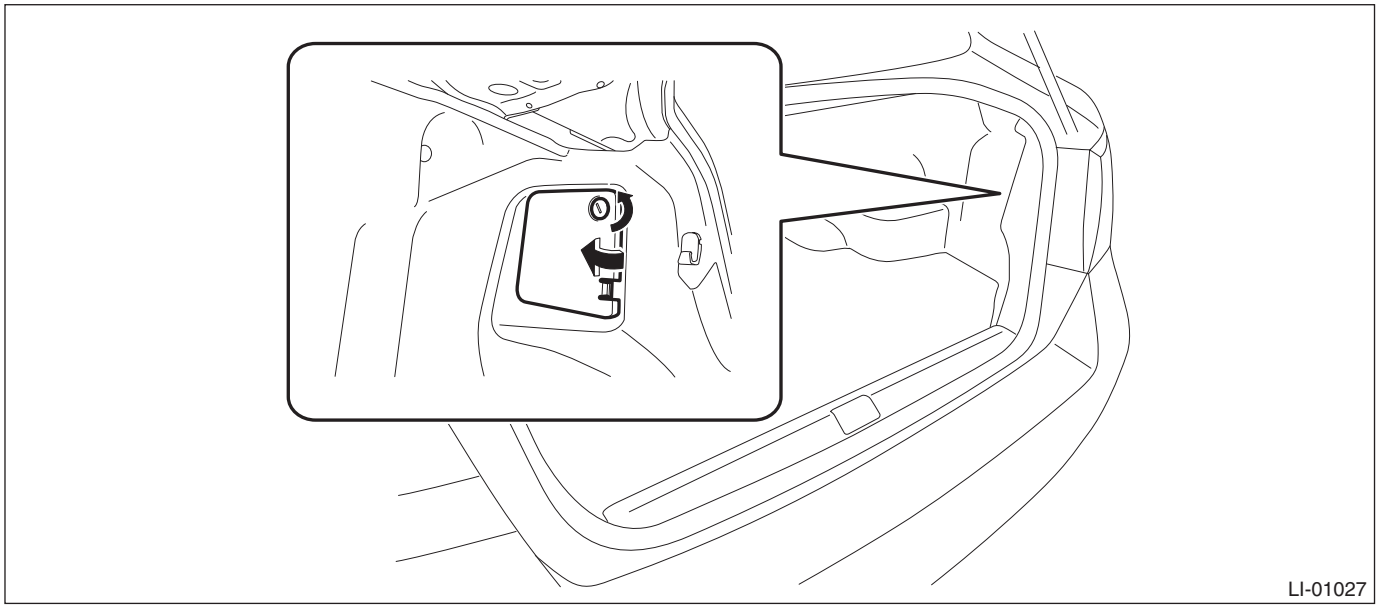
22.Tail/Stop Light Bulb

A: REMOVAL

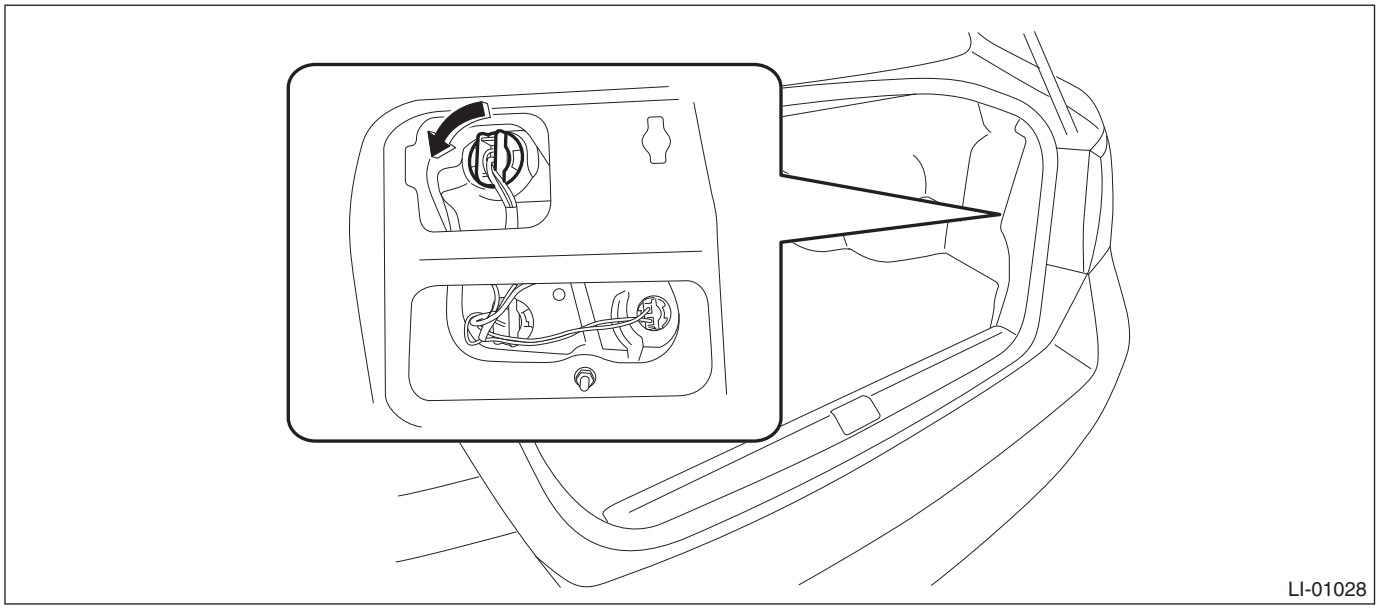
1. SEDAN MODEL

• Rear combination light side

1) Disconnect the ground cable from battery.
2) Release the lock and remove the bulb inspection cover of trunk room trim.

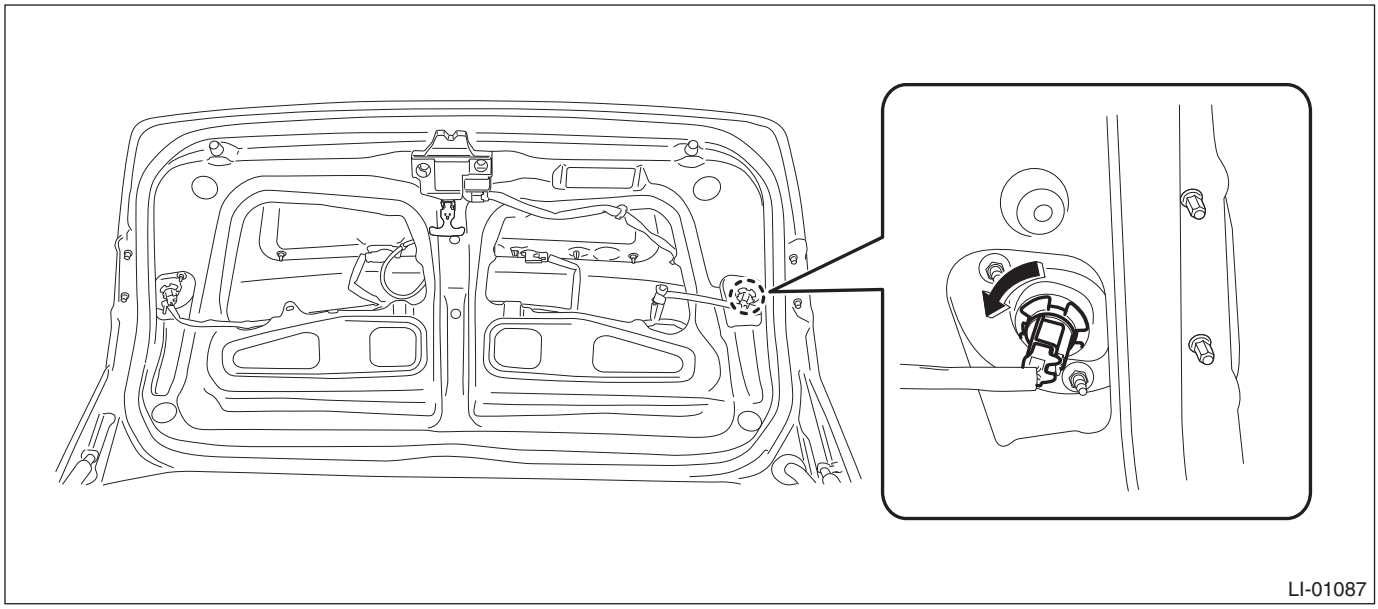


3) Remove the bulb socket and tail light/stop light bulb.



• **Rear finisher light side**

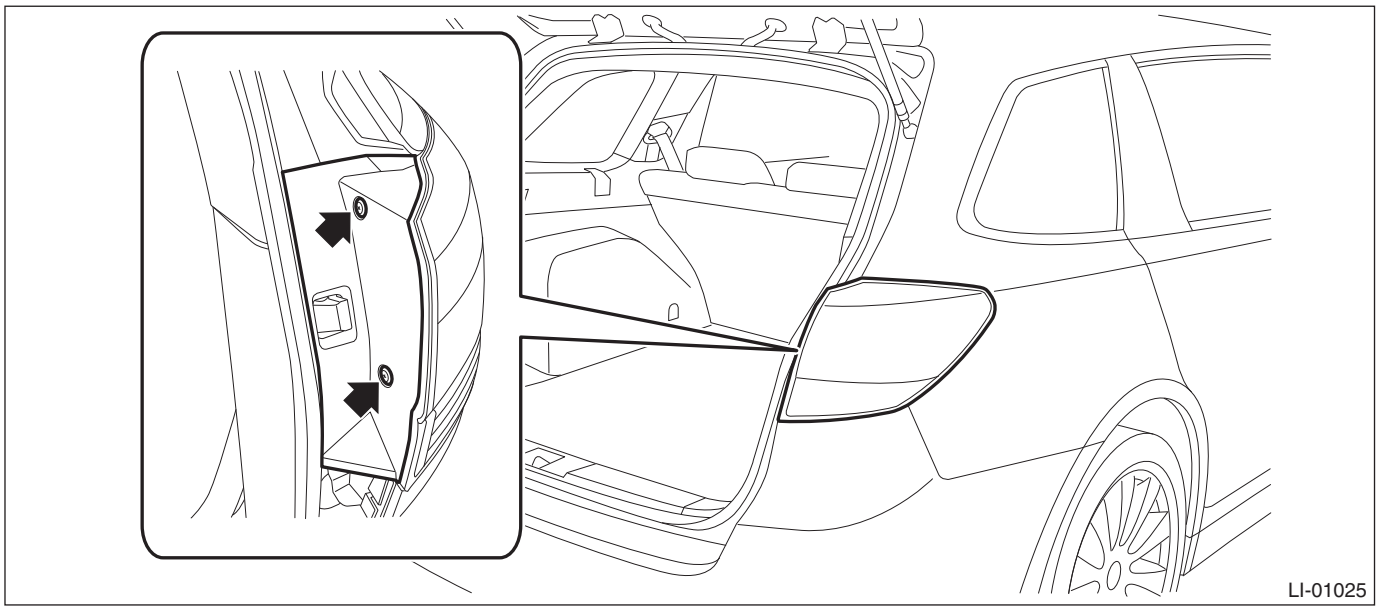
1) Disconnect the ground cable from battery.
2) Remove the trunk lid trim. <Ref. to EI-127, TRUNK LID TRIM, REMOVAL, Trunk Room Trim.>
3) Remove the bulb socket and tail light bulb.


LI-01087

2. OUTBACK MODEL

• **Rear combination light side**

1) Disconnect the ground cable from battery.
2) Remove the clips and detach the rear combination light covers.

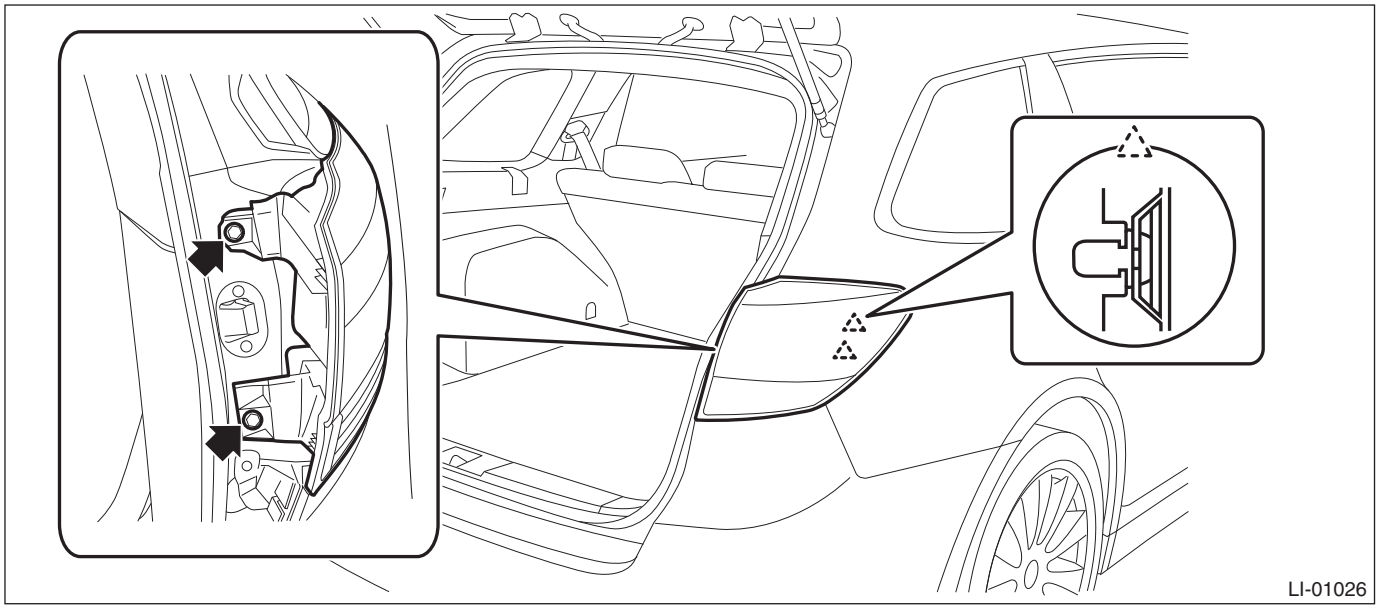

LI-01025

3) Remove the rear combination light assembly.

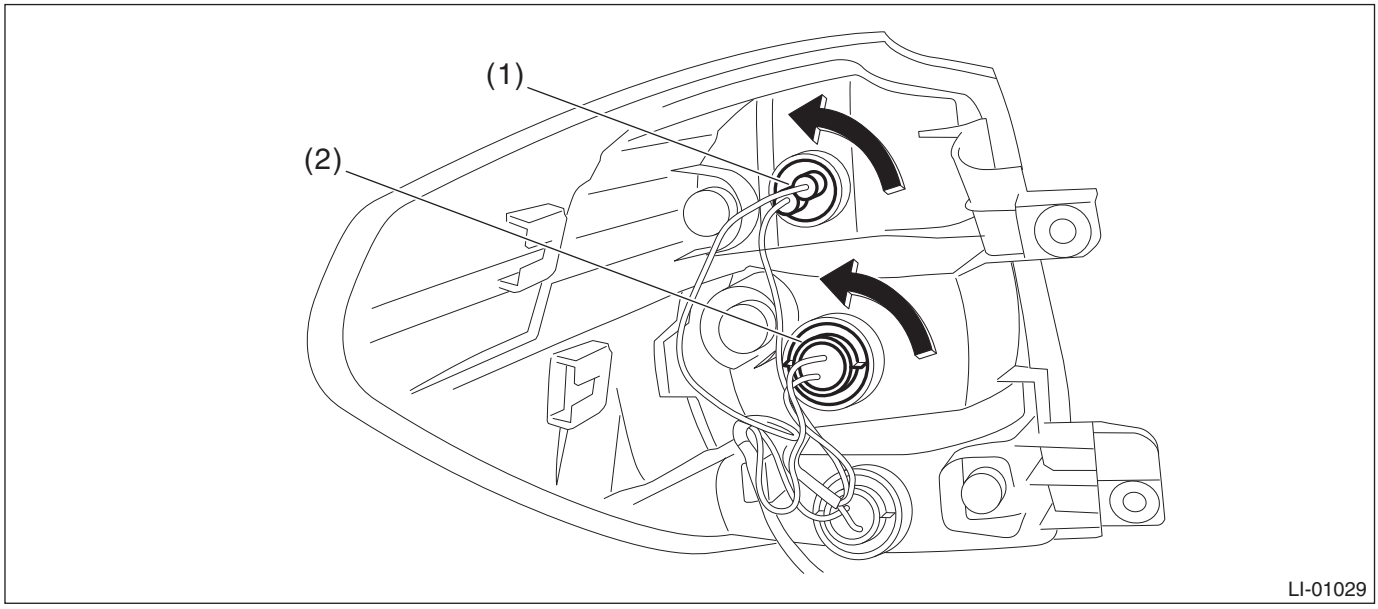
CAUTION:
Be careful not to damage the clips.

(1) Release the bolts and clips, then pull out the rear combination light assembly to the vehicle rear.

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



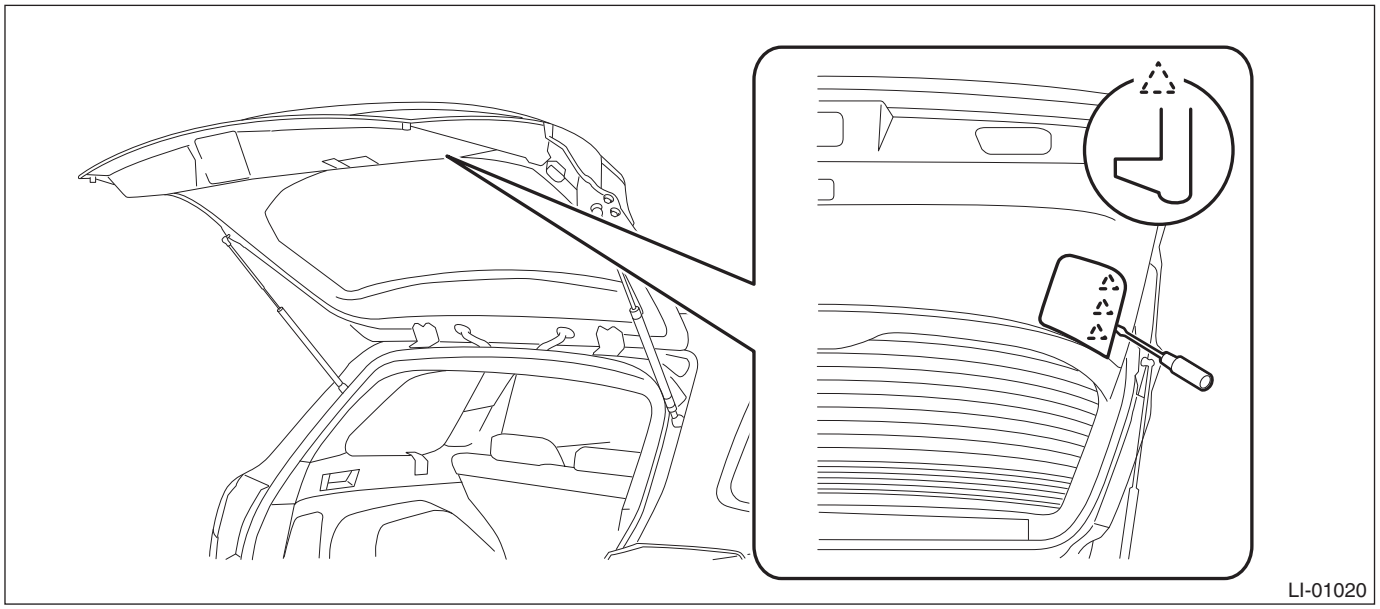
4) Remove the bulb sockets and bulbs.



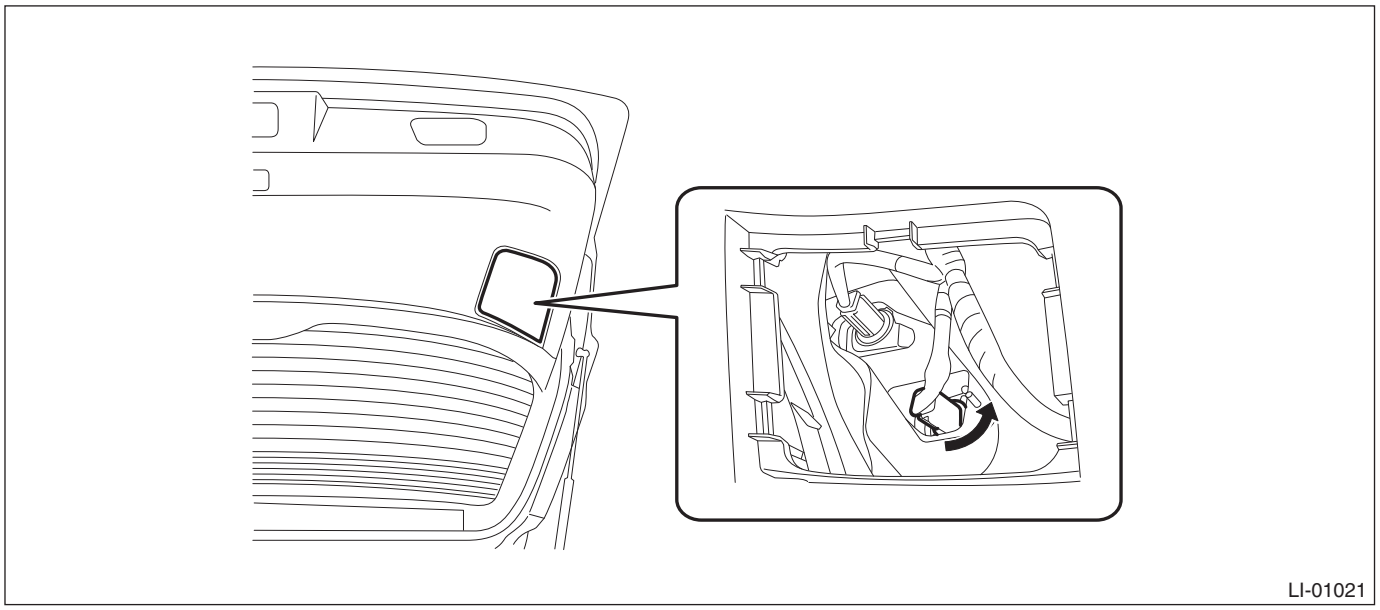
(1) Tail light bulb
(2) Stop light bulb

- **Rear finisher light side**

1) Release the claws and remove the bulb inspection cover of rear gate trim



2) Remove the bulb socket and tail light bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

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

C: INSPECTION

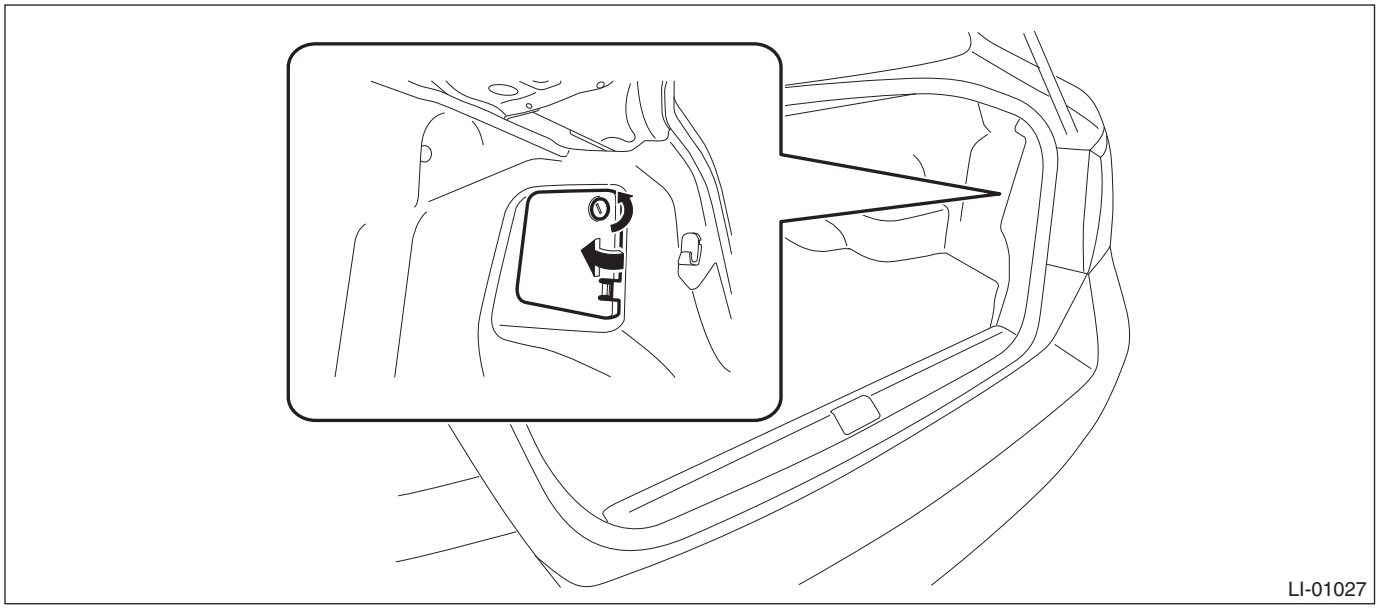
1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) If NG, replace the bulb with a new part.

23.Rear Turn Signal Light Bulb

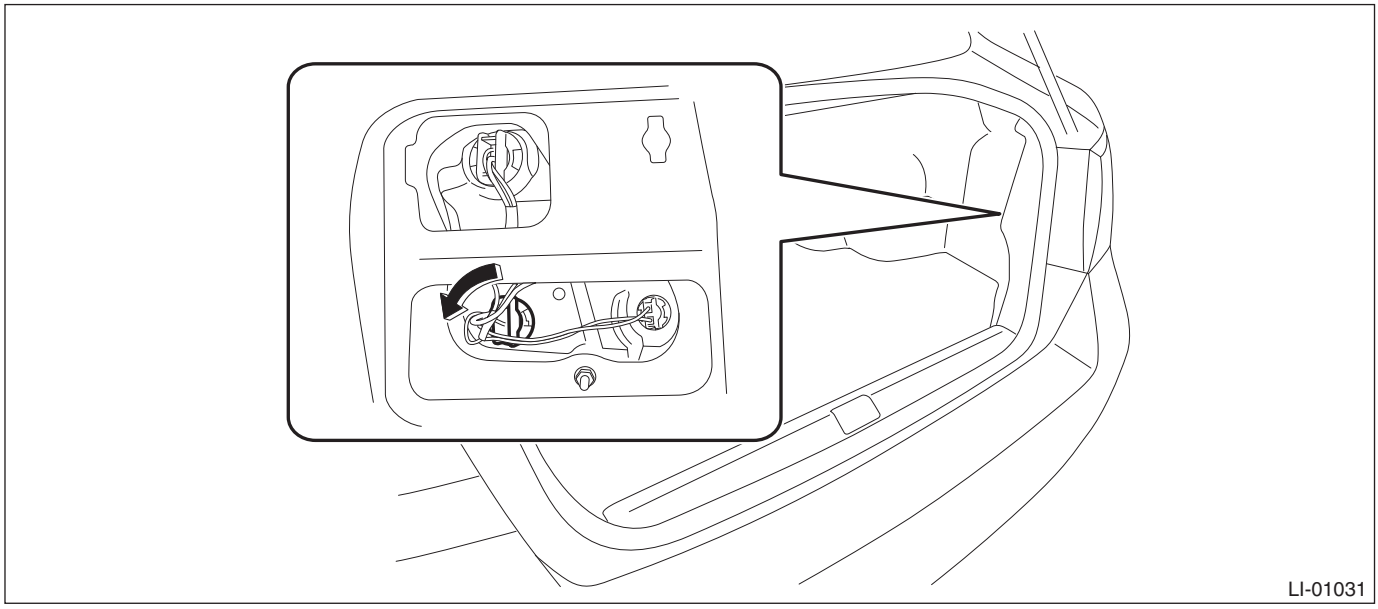
A: REMOVAL

1. SEDAN MODEL

1) Disconnect the ground cable from battery.
2) Release the lock and remove the bulb inspection cover of trunk room trim.

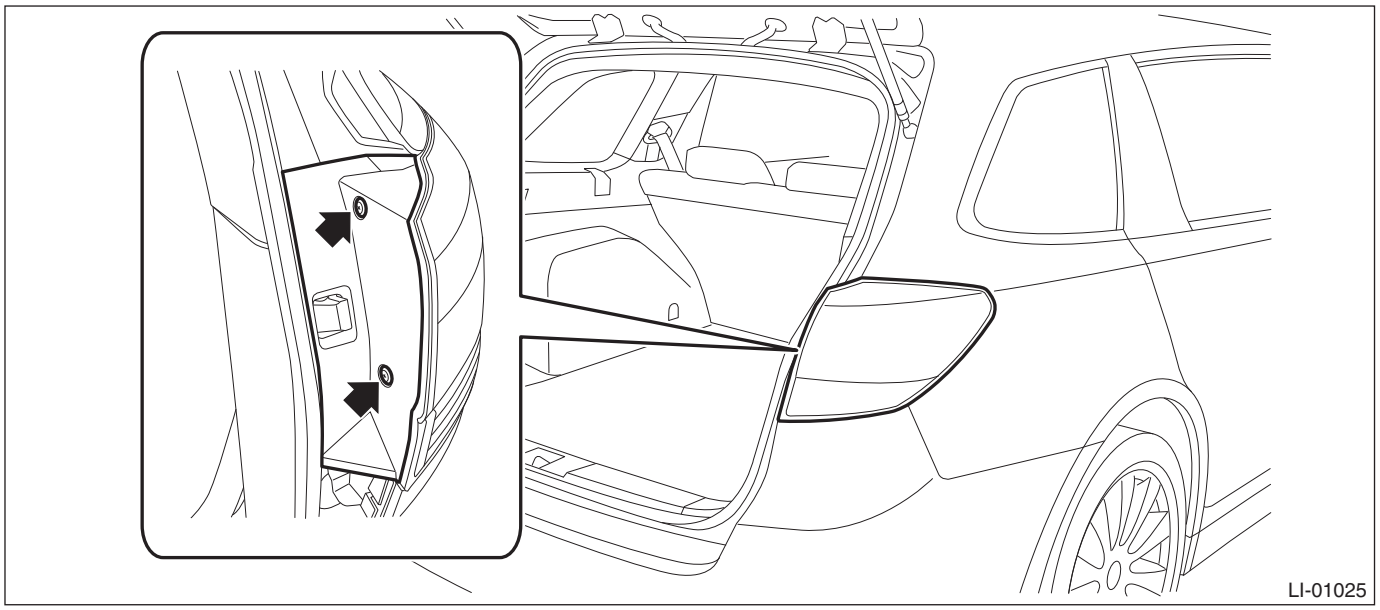


3) Remove the bulb socket and rear turn signal light bulb.



2. OUTBACK MODEL

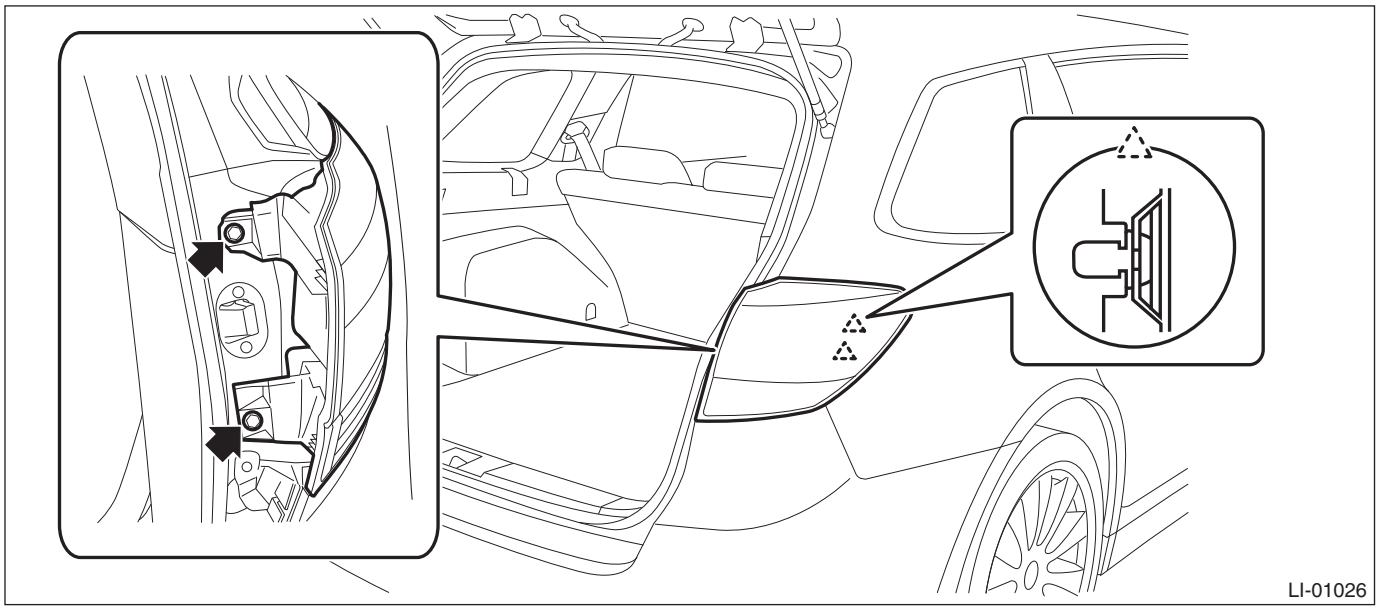
1) Disconnect the ground cable from battery.
2) Remove the clips and detach the rear combination light covers.



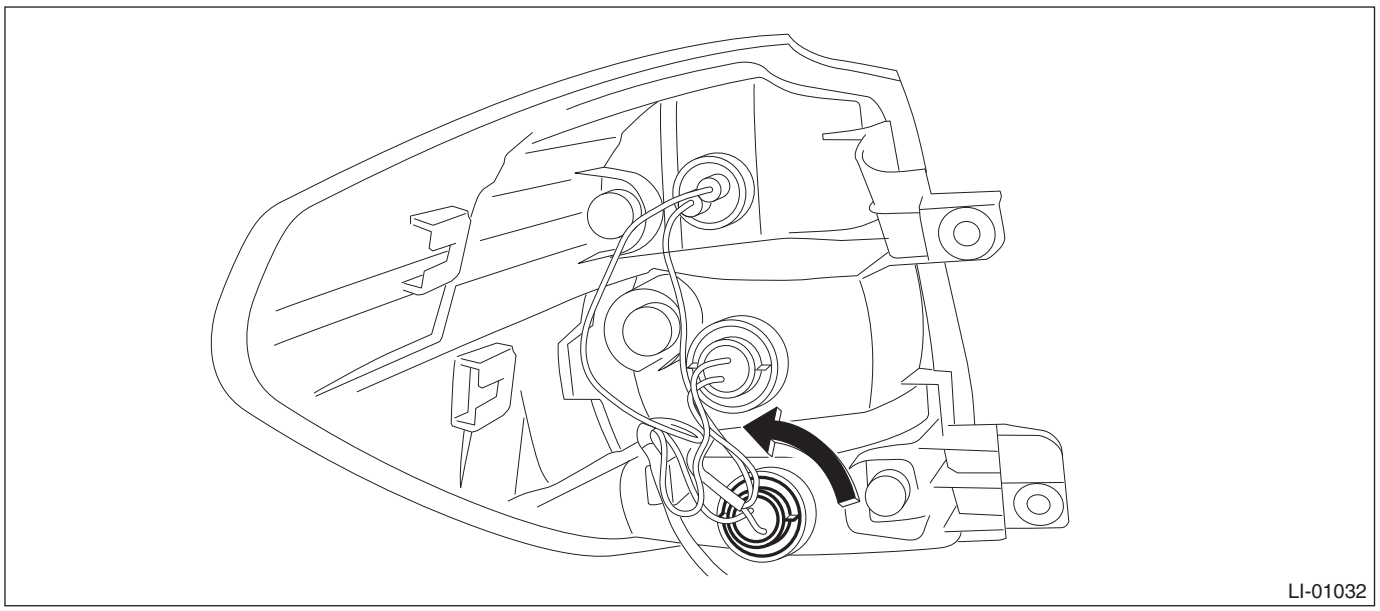
3) Remove the rear combination light assembly.

CAUTION:
Be careful not to damage the clips.

(1) Release the bolts and clips, then pull out the rear combination light assembly to the vehicle rear.
(2) Disconnect the connector and remove the rear combination light assembly.



4) Remove the bulb socket and rear turn signal light bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

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

C: INSPECTION

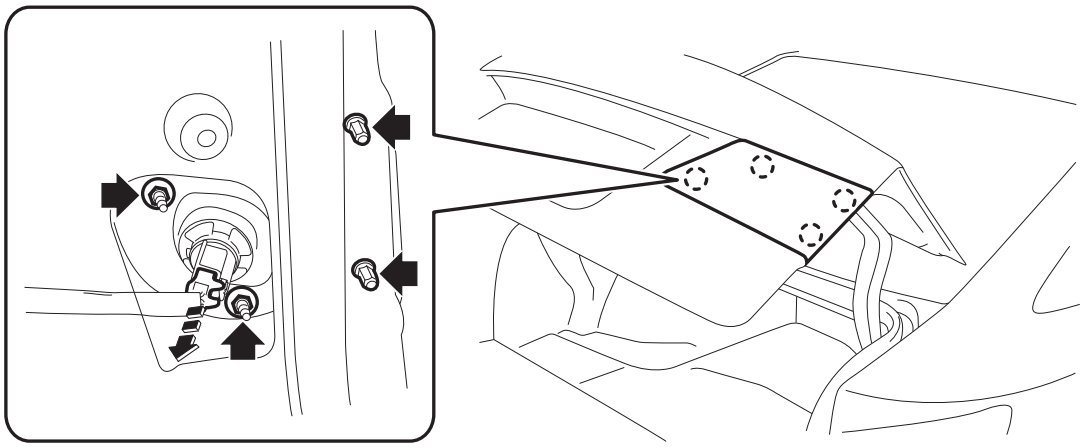
1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) If NG, replace the bulb with a new part.

24.Rear Finisher Light Assembly

A: REMOVAL

1. SEDAN MODEL

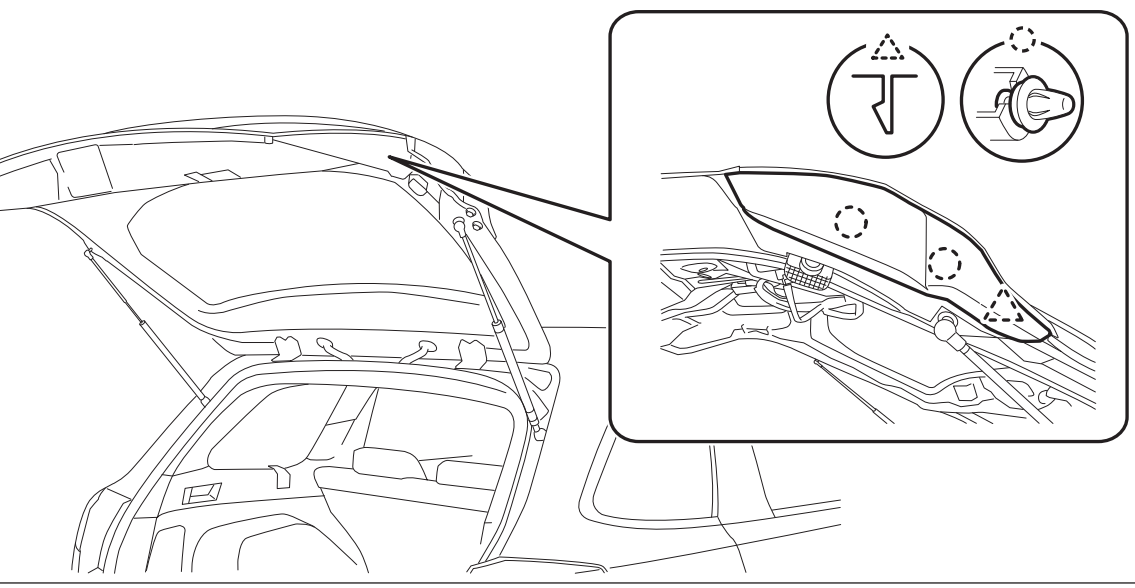
1) Disconnect the ground cable from battery.
2) Remove the trunk lid trim. <Ref. to EI-127, REMOVAL, Trunk Room Trim.>
3) Remove the rear finisher light assembly.
   (1) Disconnect the connector.
   (2) Remove the nuts and bolts and remove the rear finisher light assembly.



LI-01015

2. OUTBACK MODEL

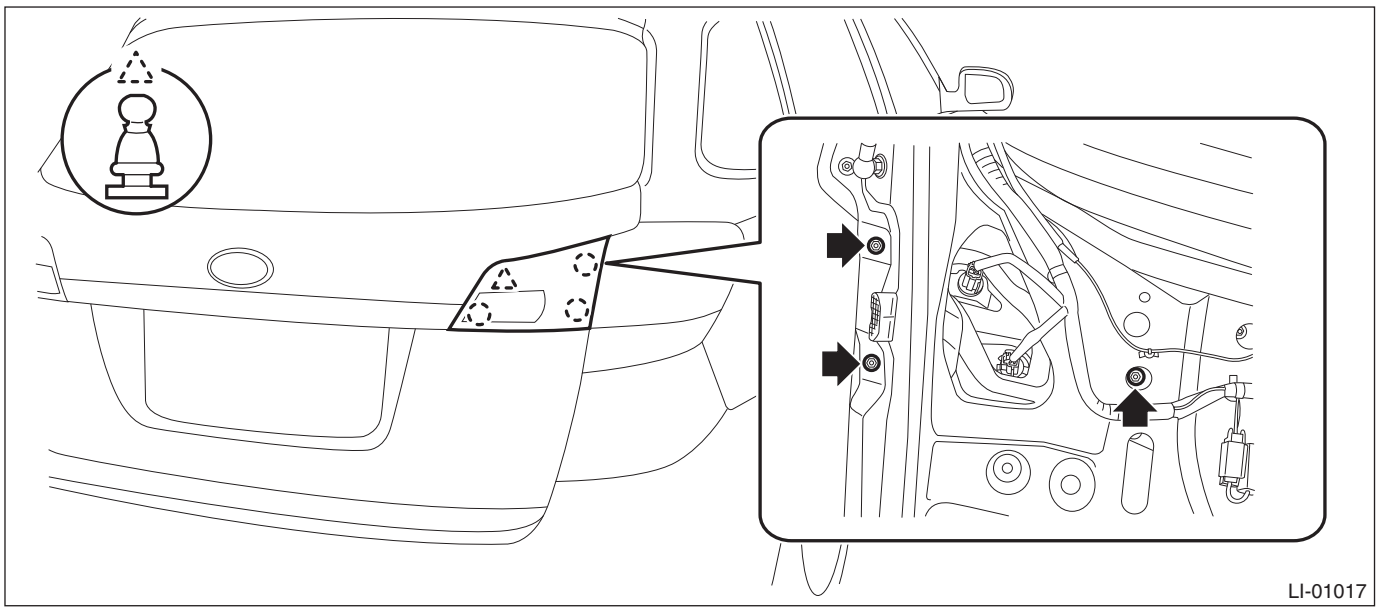
1) Disconnect the ground cable from battery.
2) Remove the rear gate trim. <Ref. to EI-157, REMOVAL, Rear Gate Trim.>
3) Remove the rear gate garnish. <Ref. to EI-161, REMOVAL, Rear Gate Garnish.>
4) Release the clips and claws, then detach the rear finisher light side cover.



LI-01016

5) Remove the rear finisher light assembly.
   (1) Disconnect the connector.

(2) Remove the nuts and release the pin, then remove the rear finisher light assembly.



B: INSTALLATION

CAUTION:
Replace the body seal gasket with a new part.
Install each part in the reverse order of removal.

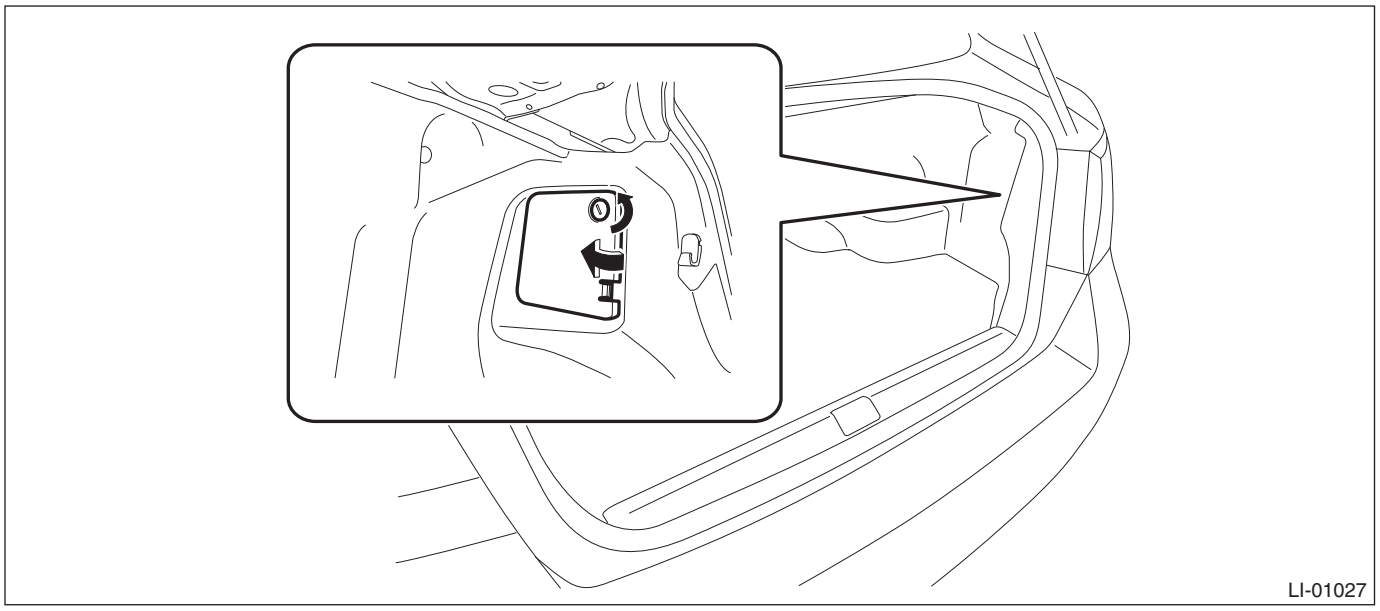
Tightening torque:
Rear finisher light assembly: 4.5 N·m (0.45 kgf-m, 3.3 ft-lb)

25.Back-up Light Bulb

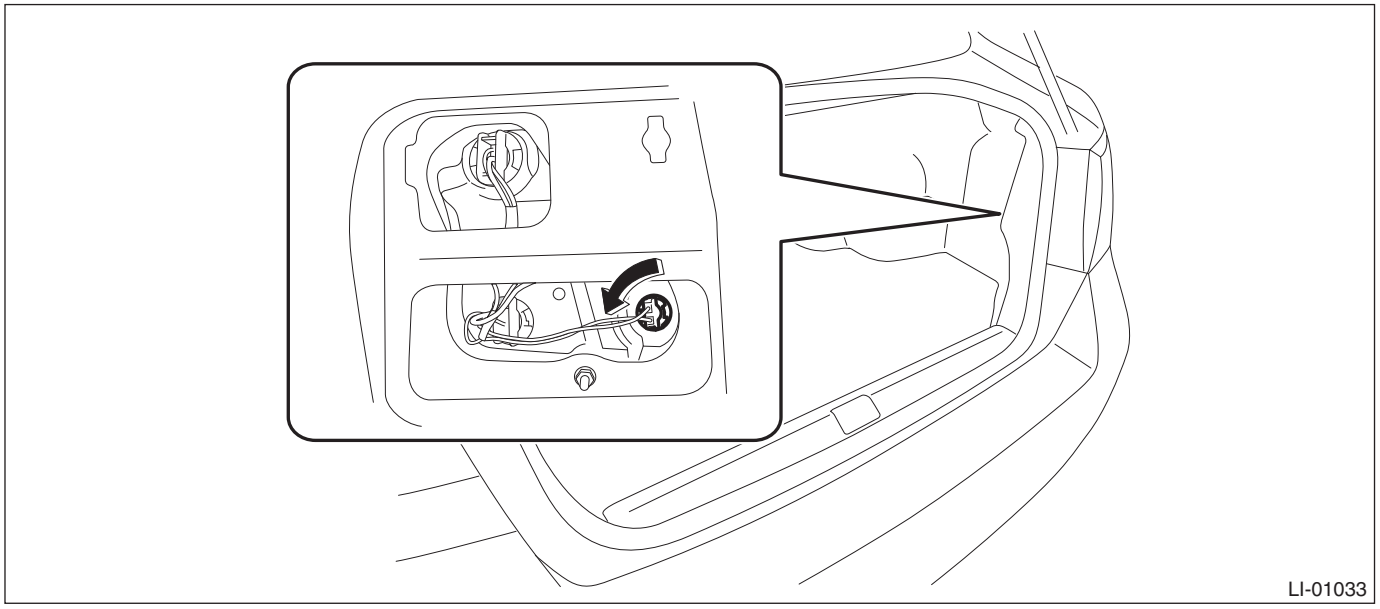
A: REMOVAL

1. SEDAN MODEL

1) Disconnect the ground cable from battery.
2) Release the lock and remove the bulb inspection cover of trunk room trim.

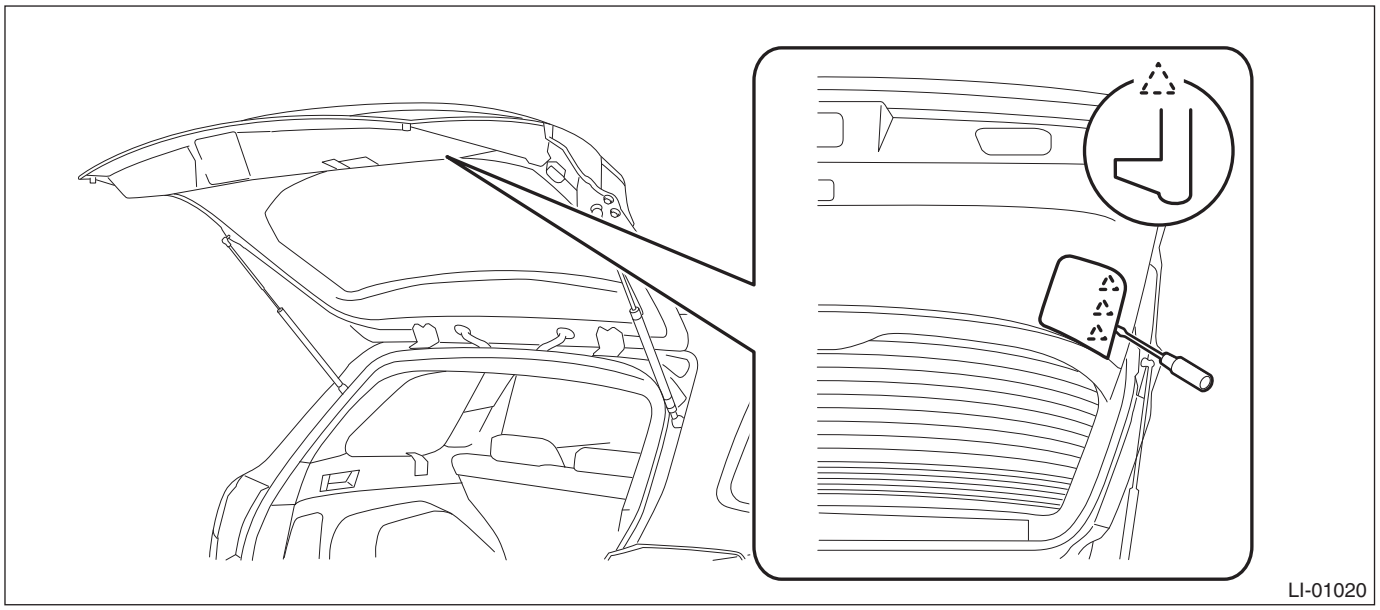


3) Remove the bulb socket and back-up light bulb.

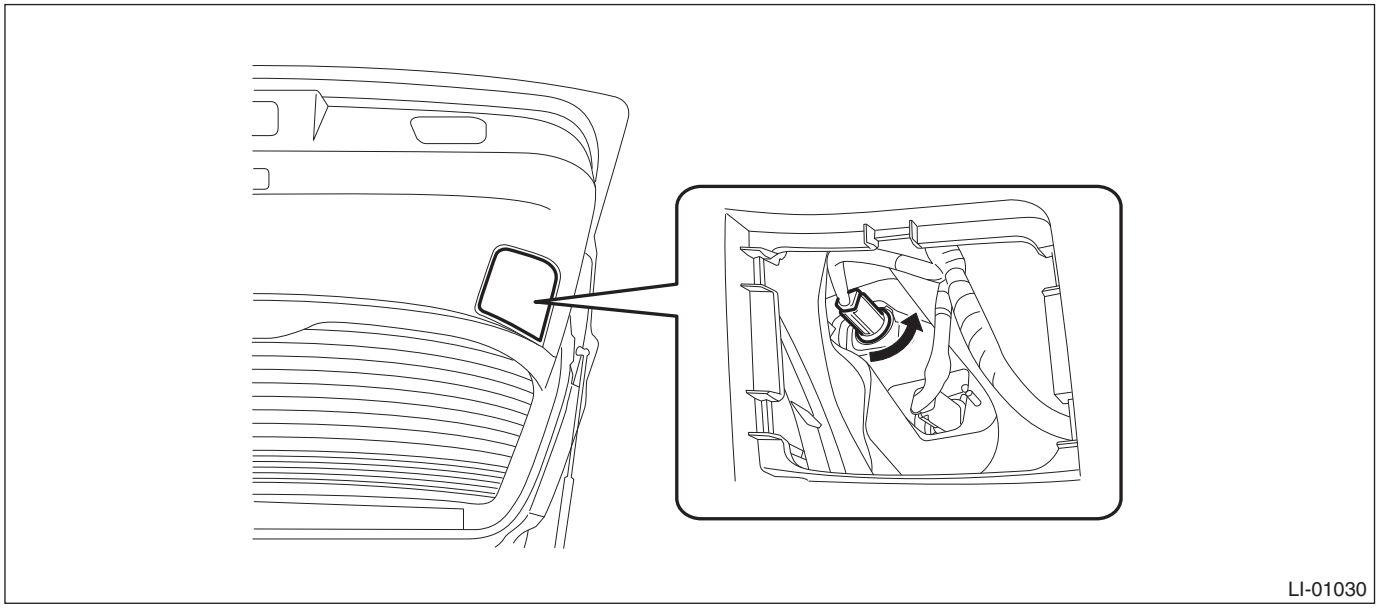


2. OUTBACK MODEL

1) Disconnect the ground cable from battery.
2) Release the claws and remove the bulb inspection cover of rear gate trim



3) Remove the bulb socket and back-up light bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

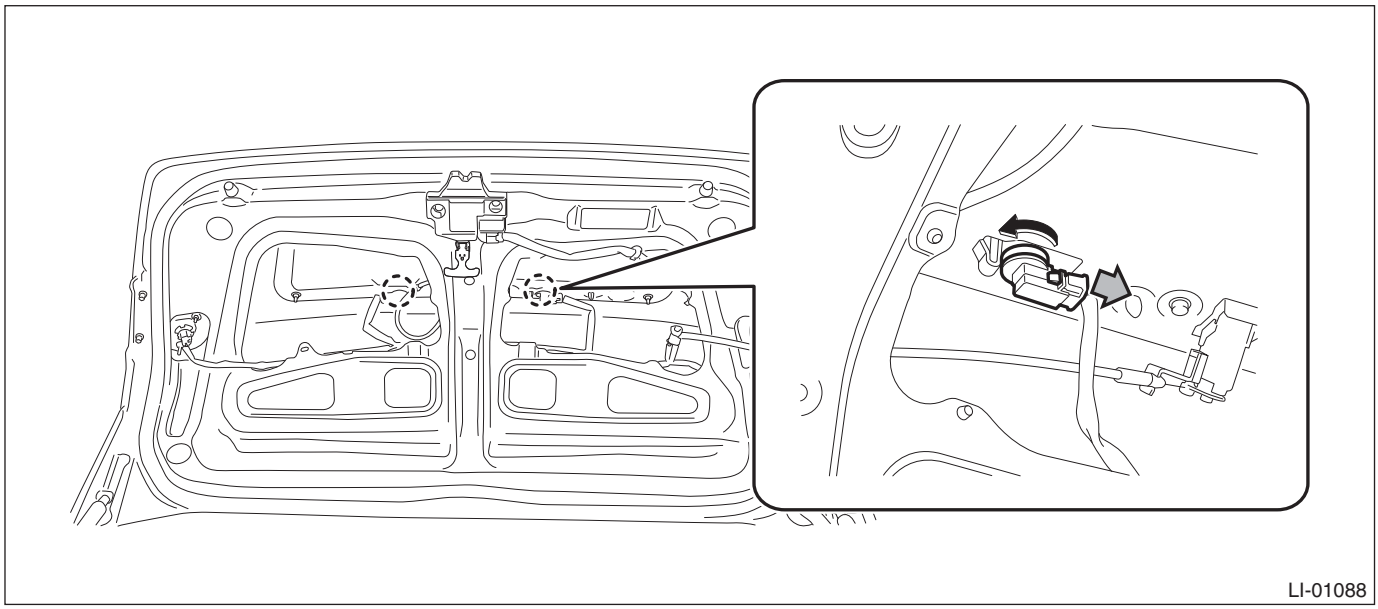
1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) If NG, replace the bulb with a new part.

26.License Plate Light

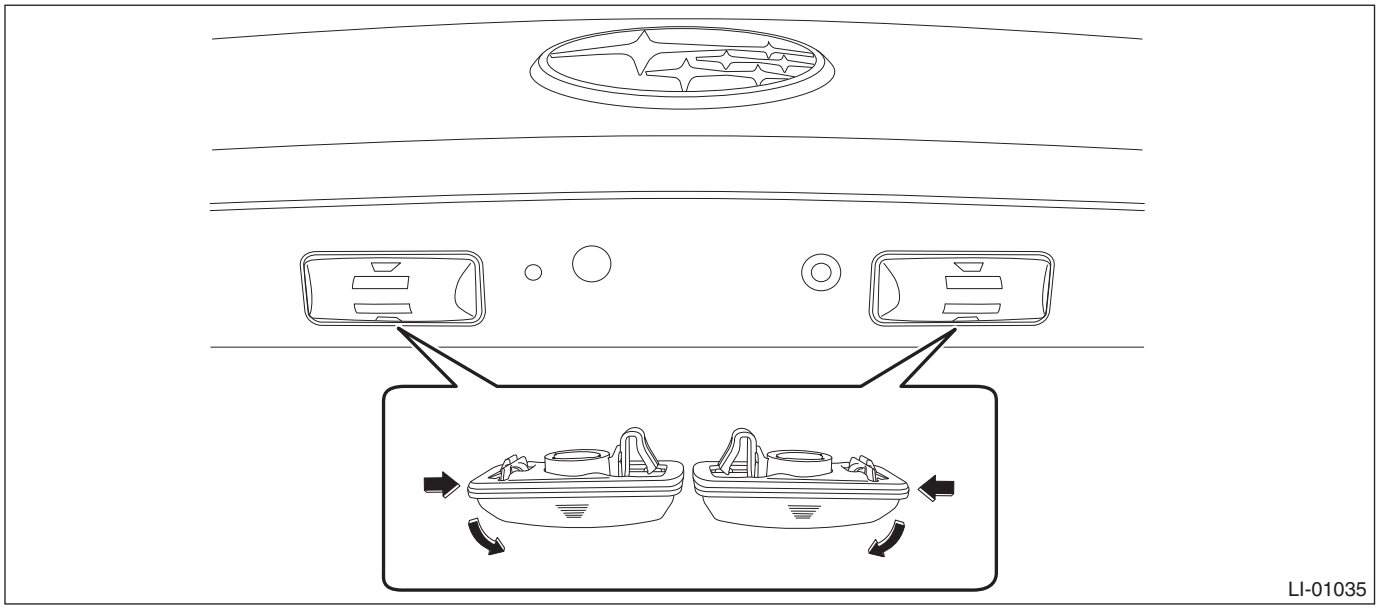
A: REMOVAL

1. SEDAN MODEL

1) Disconnect the ground cable from battery.
2) Remove the trunk lid trim. <Ref. to EI-127, TRUNK LID TRIM, REMOVAL, Trunk Room Trim.>
3) Remove the trunk lid garnish. <Ref. to EI-160, REMOVAL, Trunk Lid Garnish.>
4) Disconnect the connector and remove the bulb socket.

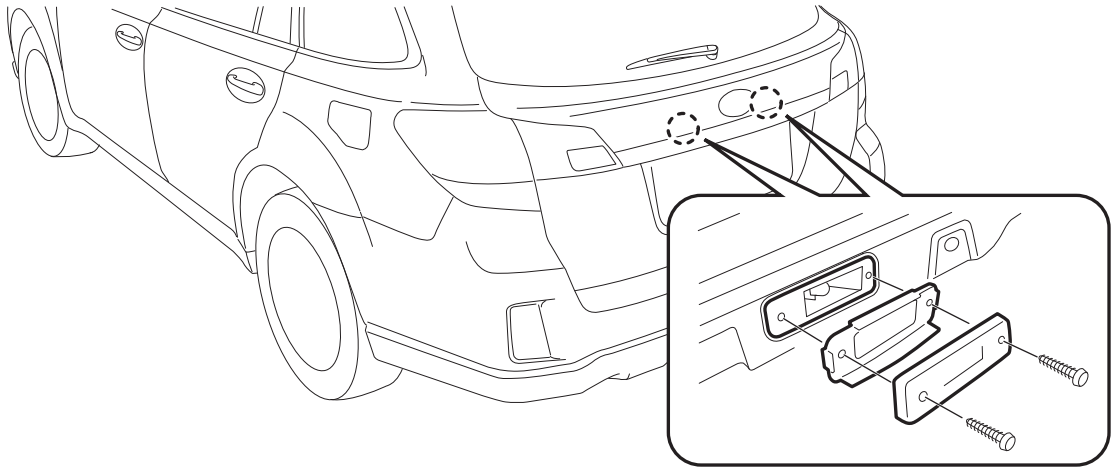


5) Remove the license plate light.



2. OUTBACK MODEL

1) Disconnect the ground cable from battery.
2) Remove the screws and remove the license plate light.



NOTE:
When removing the license plate light assembly harness, remove the following parts.
- Rear gate garnish:<Ref. to EI-161, REMOVAL, Rear Gate Garnish.>
- Rear gate opener button:<Ref. to SL-44, REMOVAL, Rear Gate Opener Button.>

B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

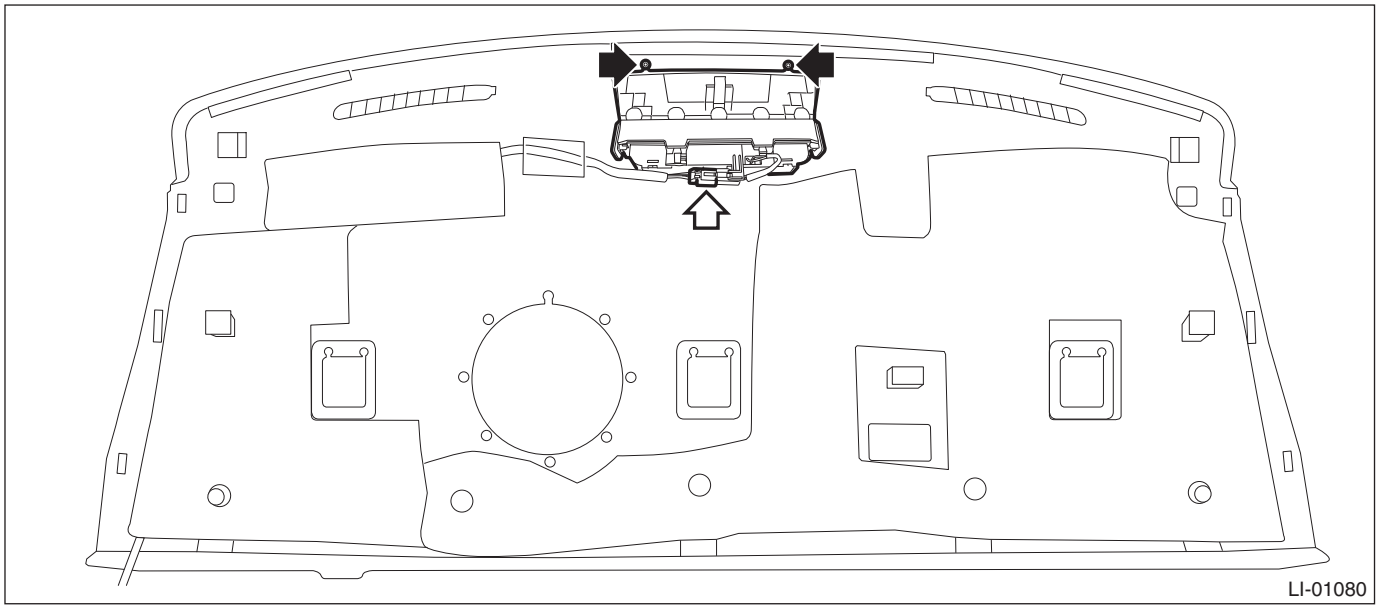
1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) If NG, replace the bulb with a new part.

27.High-mounted Stop Light

A: REMOVAL

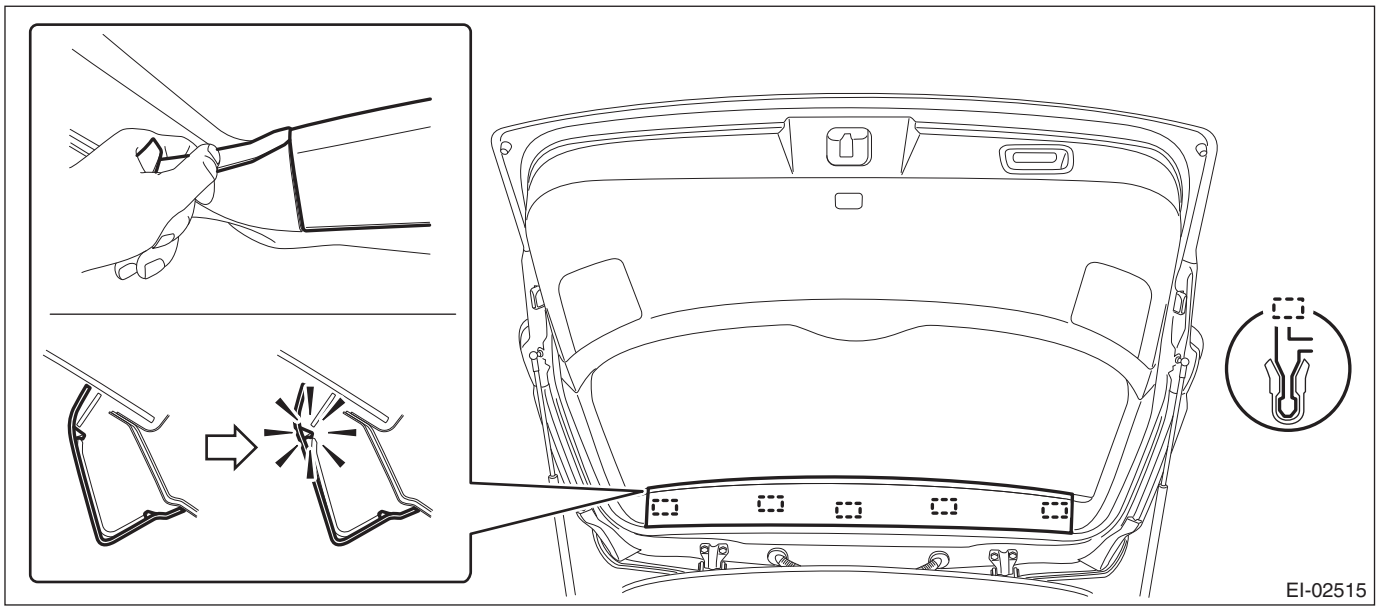
1. SEDAN MODEL

1) Disconnect the ground cable from battery.
2) Remove the rear shelf trim. <Ref. to EI-120, REMOVAL, Rear Shelf Trim.>
3) Remove the high-mounted stop light.
   (1) Disconnect the connector.
   (2) Remove the lock washers and remove the high-mounted stop light.



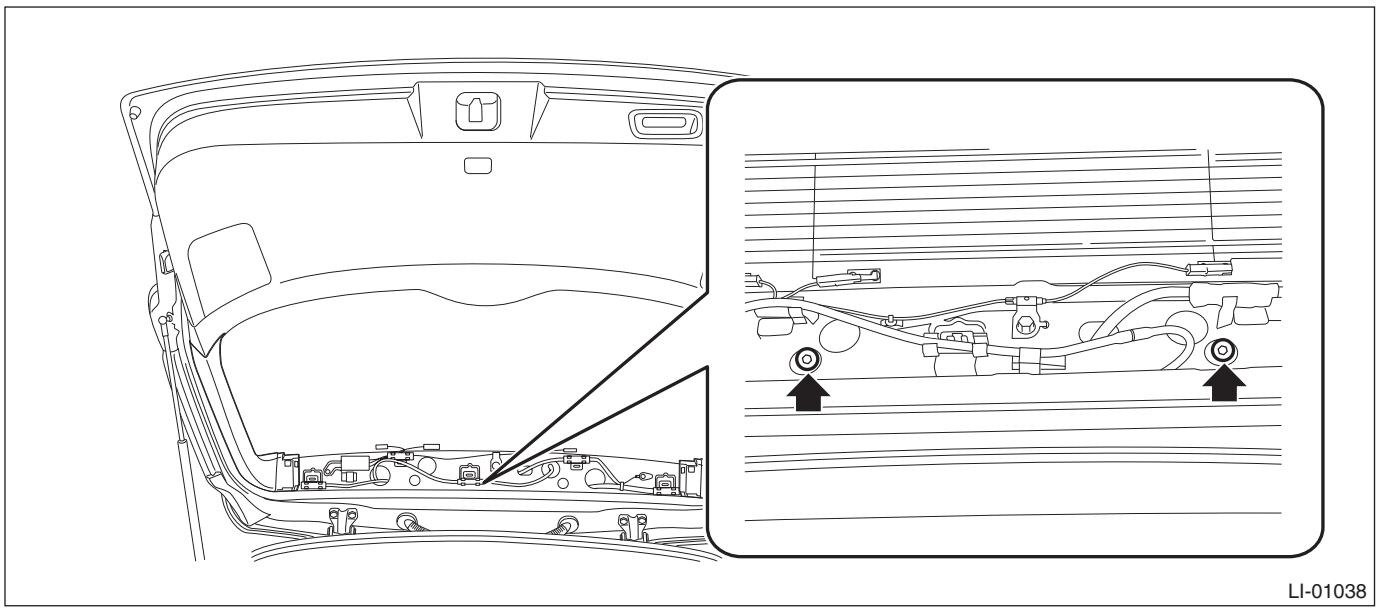
2. OUTBACK MODEL

1) Disconnect the ground cable from battery.
2) Remove the rear gate upper trim.
   (1) Release the claws in the trim end.
   (2) Disconnect the claws in the center of trim, and remove the rear gate upper trim.

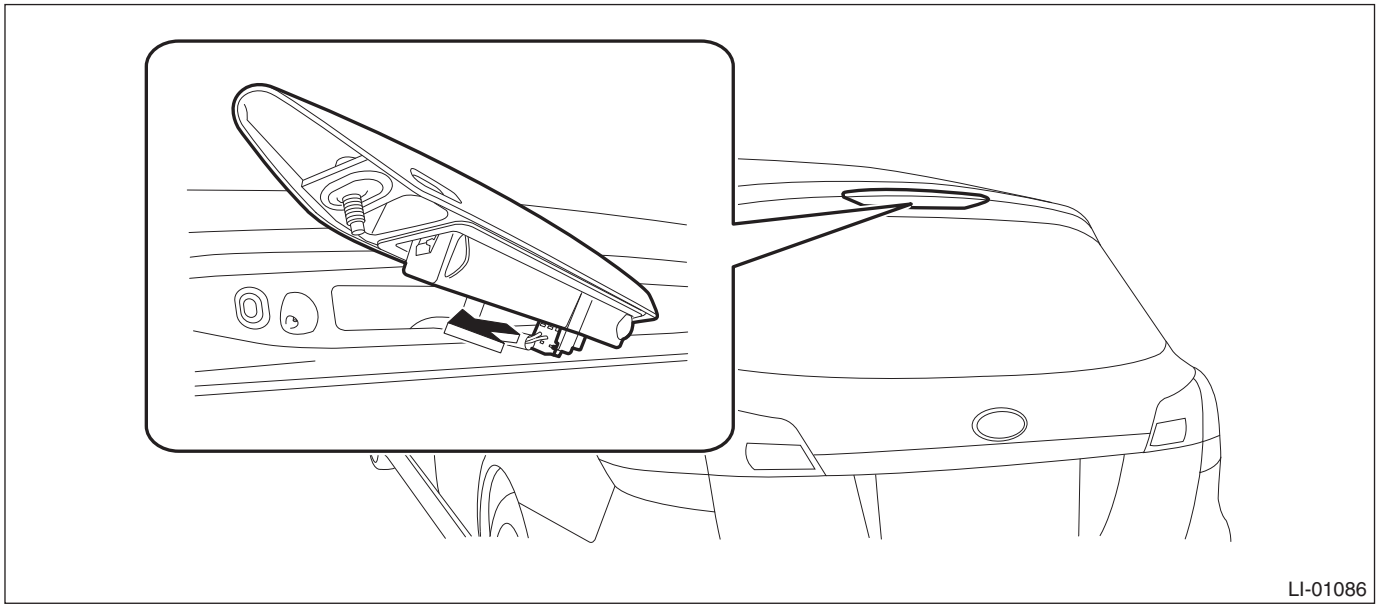


3) Remove the high-mounted stop light.

(1) Remove the nuts and take out the high-mounted stop light toward vehicle rear.



(2) Disconnect the connector and remove the high-mounted stop light.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
High-mounted stop light: 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)

C: INSPECTION

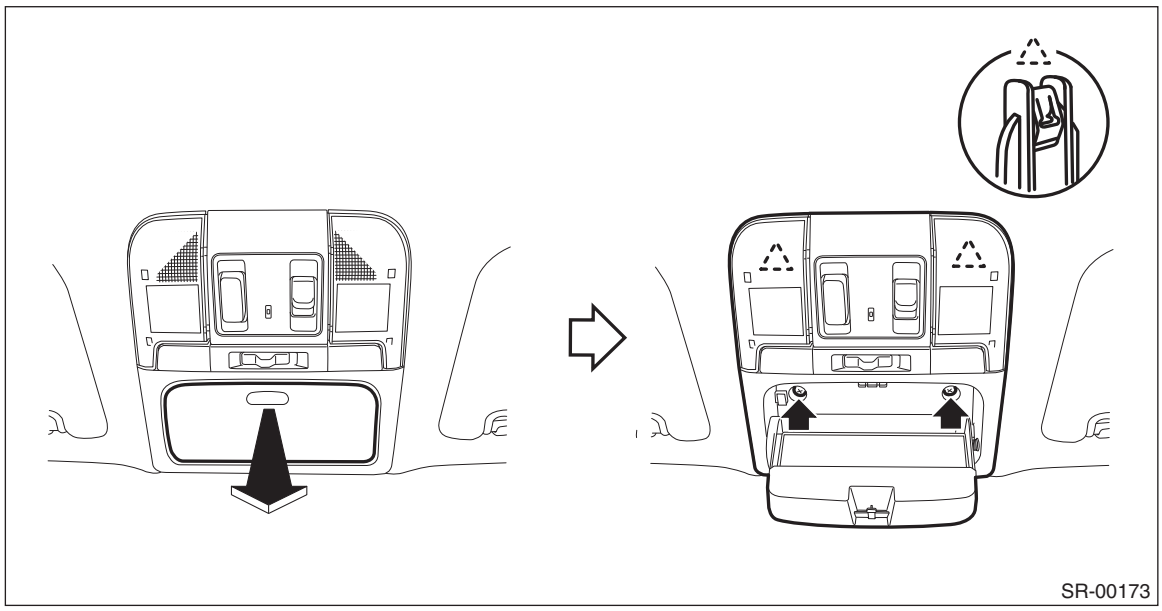
1) Install the high-mounted stop light to test if it illuminates normally.
2) If the high-mounted stop light does not illuminate, replace it with a new part.

NOTE:
Since LED (Light Emitting Diode) is used for the high-mounted stop light, replace the high-mounted stop light assembly if the LED burns out.

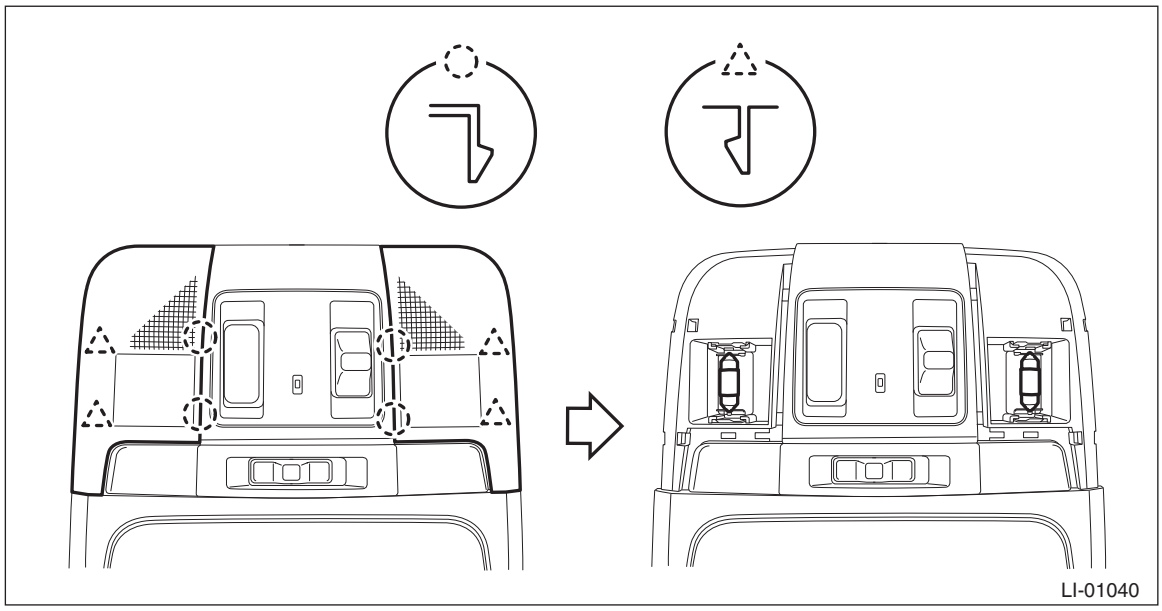
28.Spot Map Light

A: REMOVAL

NOTE:
The spot map light is a single unit with the overhead console.
1) Disconnect the ground cable from battery.
2) Remove the overhead console assembly.
   (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, then detach the spot map light cover and bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

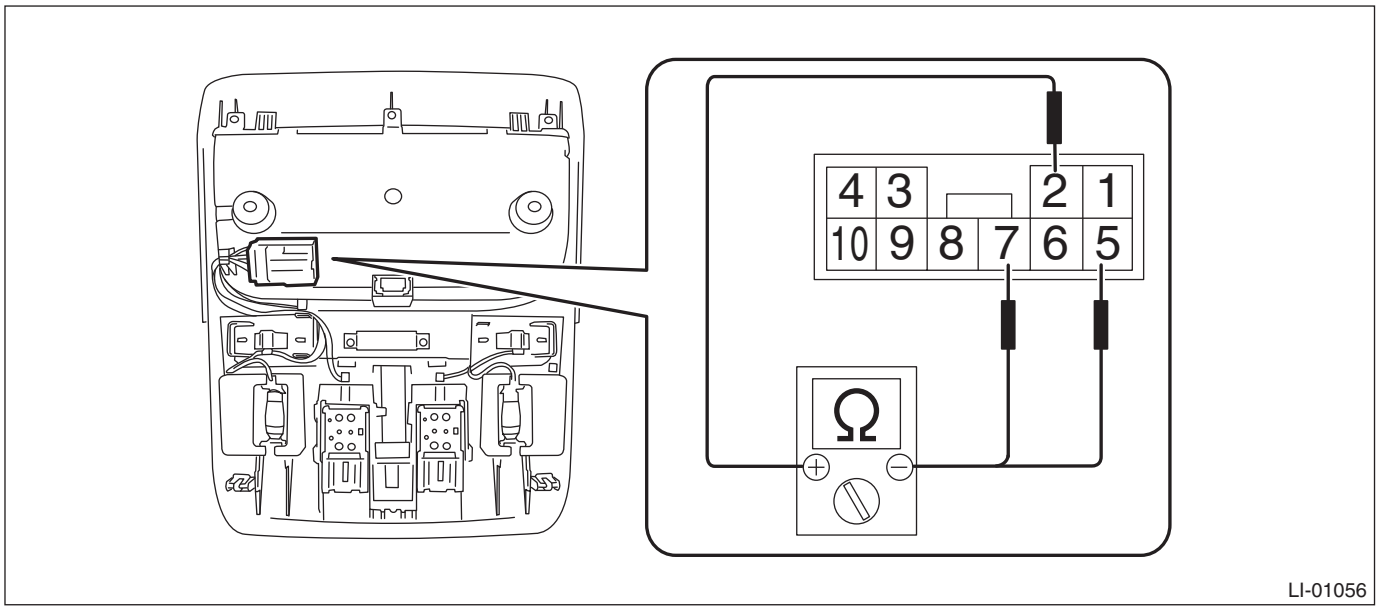
1. SPOT MAP LIGHT BULB

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) Replace the bulb if it is found defective.

2. SPOT MAP LIGHT SWITCH

1) Remove the overhead console assembly.
2) Measure the resistance between spot map light switch terminals.

Preparation tool: Circuit tester



Terminal No.	Inspection Conditions	Specification
—	Switch OFF	1 MΩ or more
6 — 5	Switch ON	Less than 1 Ω
6 — 7	Switch door	Less than 1 Ω

3) Replace the overhead console assembly if the inspection result is not within the standard value.

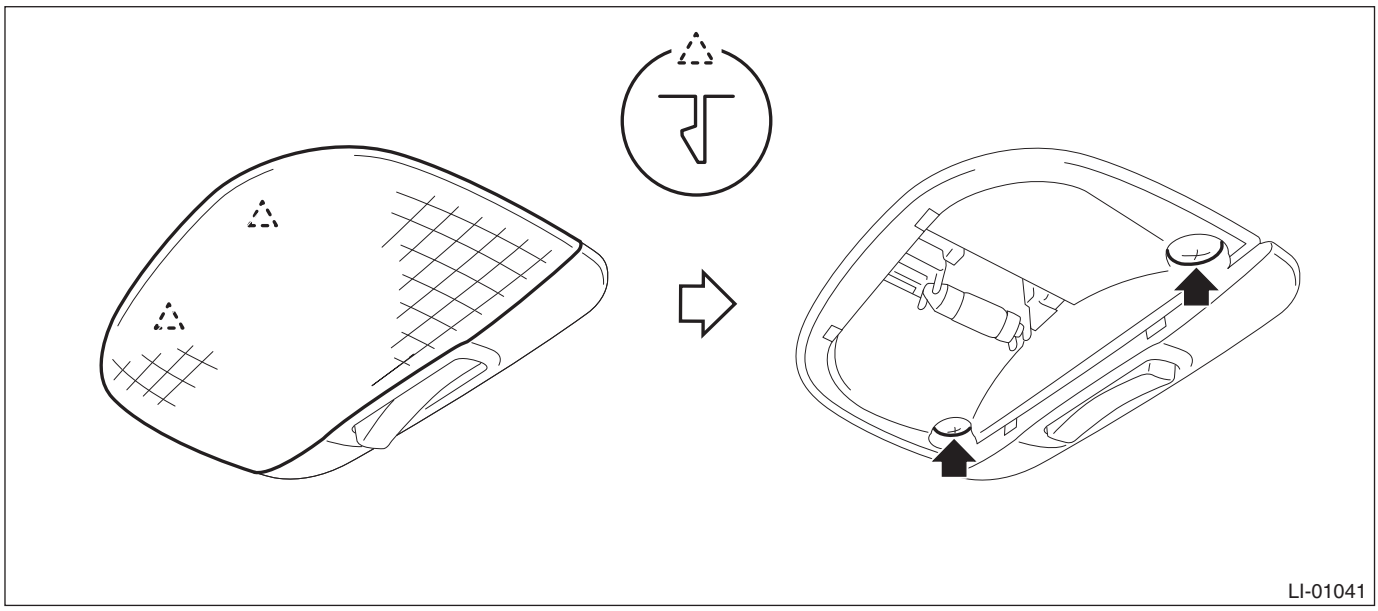
3. OVERHEAD CONSOLE ILLUMINATION LIGHT BULB

NOTE:
Since LEDs (Light Emitting Diode) are used for the overhead console illumination light bulb, replace the overhead console assembly if an LED burns out.

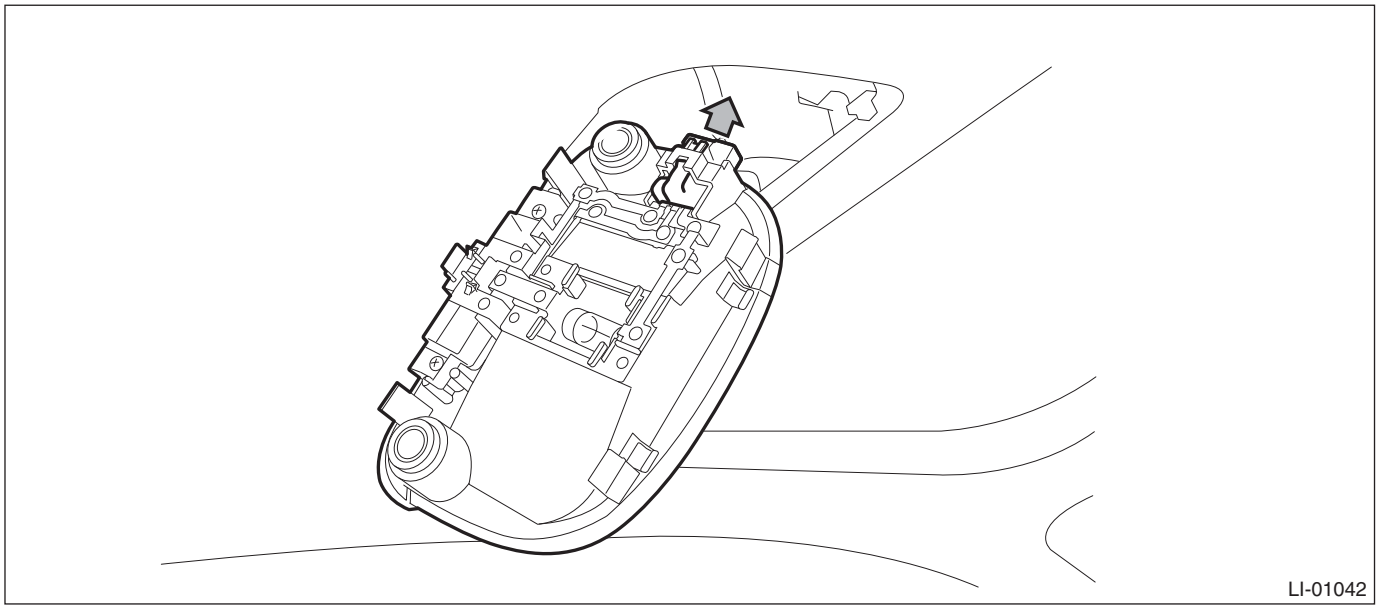
29.Room Light

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the room light.
   (1) Release the claws and remove the cover.
   (2) Remove the screws.



   (3) Disconnect the connector and remove the room light and bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

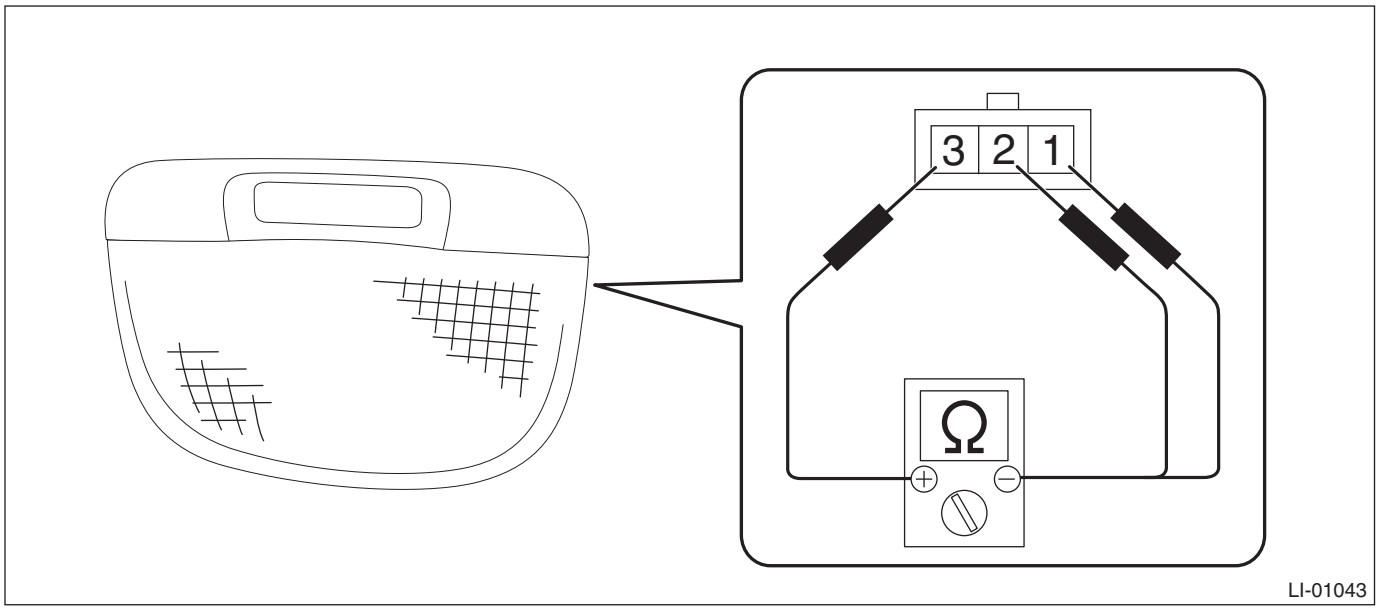
1. ROOM LIGHT BULB

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) If NG, replace the bulb with a new part.

2. ROOM LIGHT SWITCH

1) Remove the room light.
2) Measure the resistance between room light switch terminals.

Preparation tool: Circuit tester



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

3) Apply battery voltage to check the lighting condition of room light.

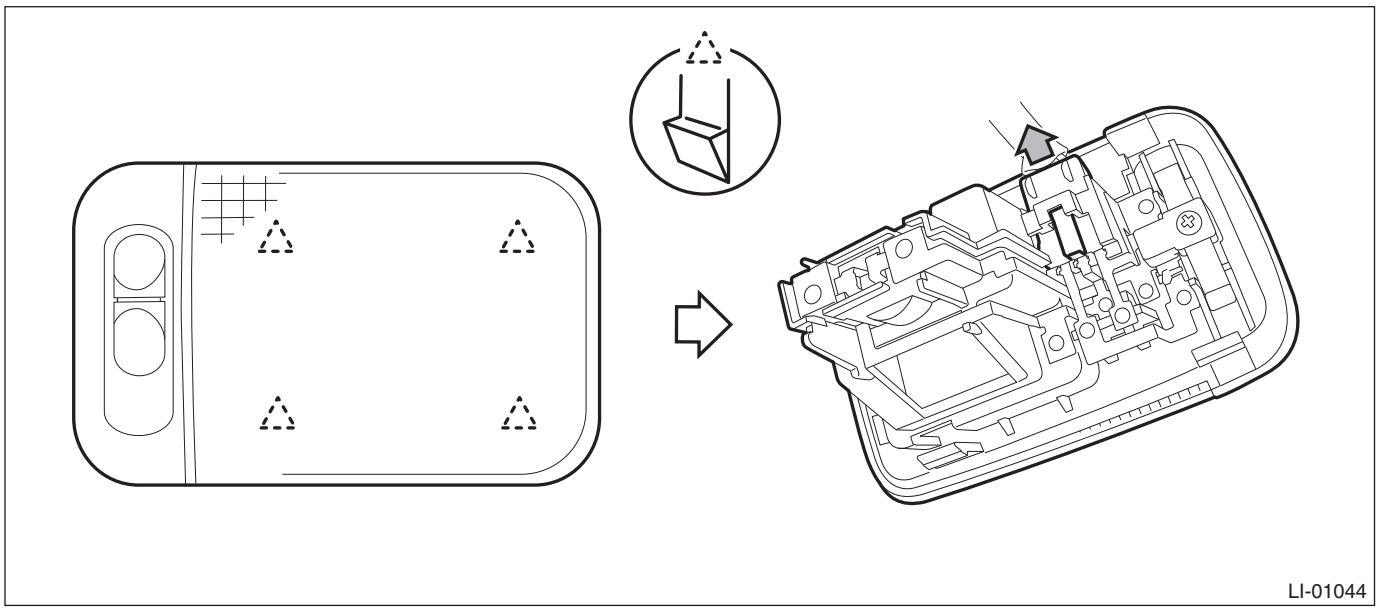
Terminal No.	Inspection Conditions	Specification
3 (+) — 1,2 (–)	Switch OFF	Light OFF
	Switch ON	Light ON
	Switch door	Light ON

4) Replace the spot map light switch if the inspection result is not within the standard value.

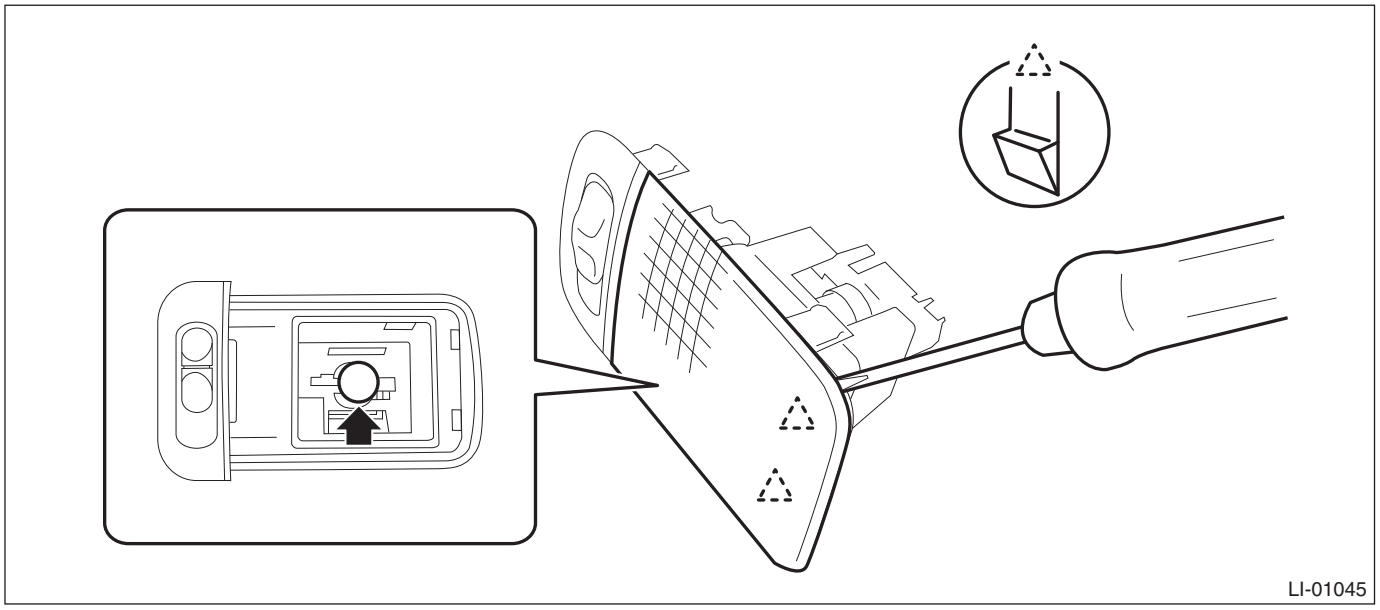
30.Luggage Room Light

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the luggage room light.
   (1) Release the claws and remove the luggage room light main body.
   (2) Disconnect the connector and remove the luggage room light.



3) Release the claws, and detach the luggage room light cover and bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

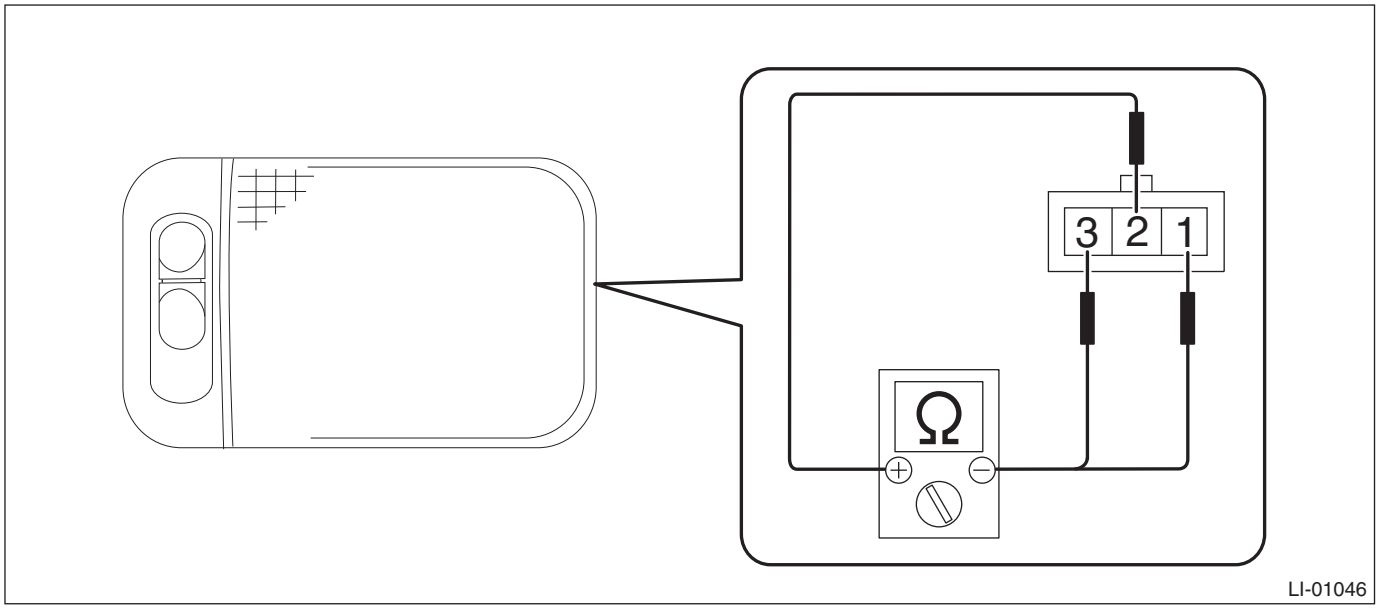
1. LUGGAGE ROOM LIGHT BULB

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) If NG, replace the bulb with a new part.

2. LUGGAGE ROOM LIGHT SWITCH

1) Remove the luggage room light.
2) Measure the resistance between luggage room light switch terminals.

Preparation tool: Circuit tester



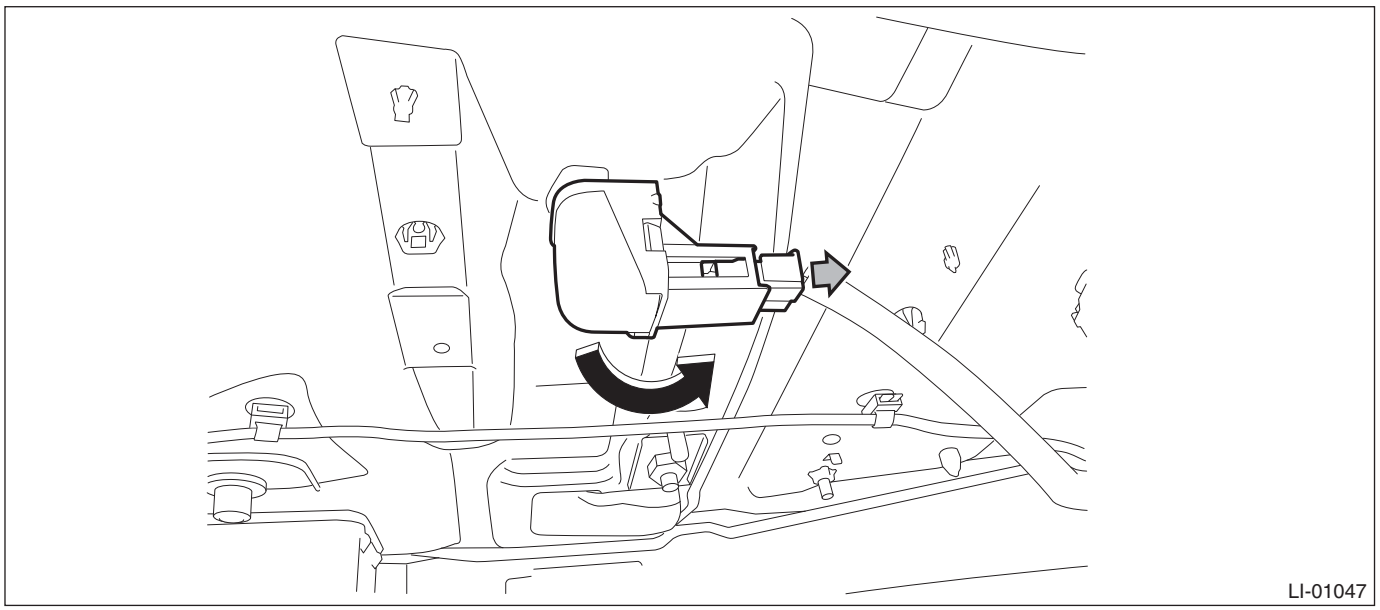
Terminal No.	Inspection Conditions	Specification
—	Switch OFF	1 MΩ or more
1 — 2	Switch ON	Less than 1 Ω
2 — 3	Switch door	Less than 1 Ω

3) Replace the luggage room light if the inspection result is not within the standard value.

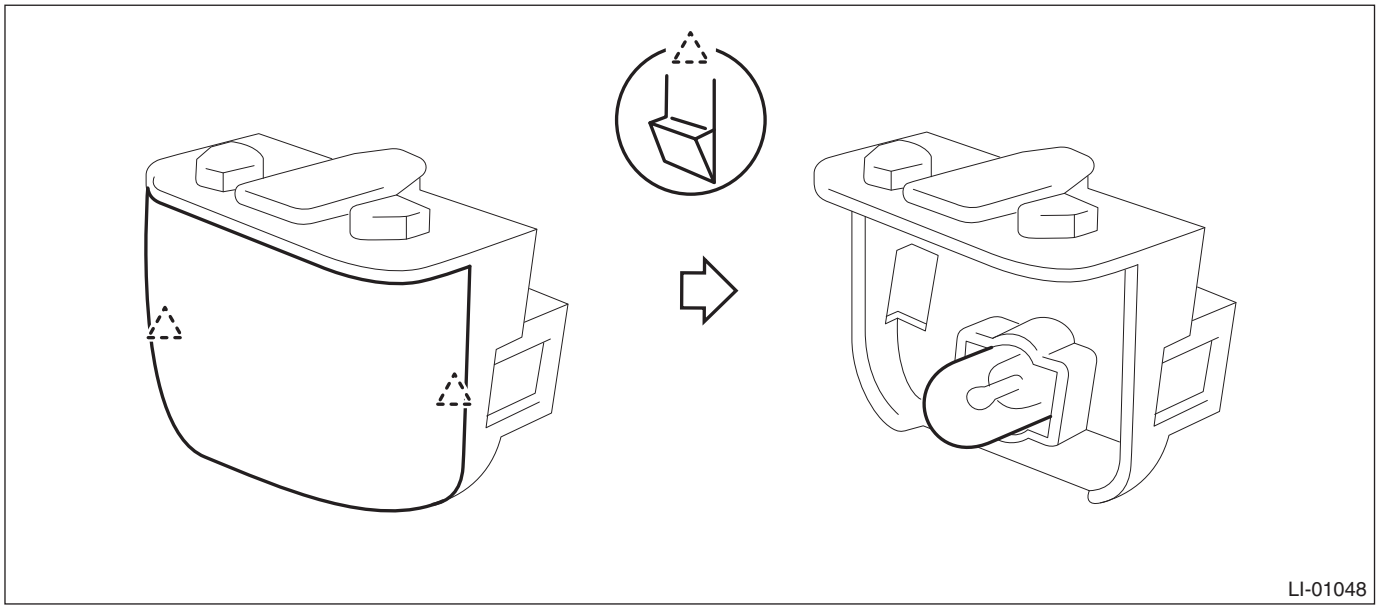
31.Trunk Room Light

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the trunk room light
   (1) Disconnect the connector.
   (2) Turn the trunk room light counterclockwise to 60° and remove the light.



3) Release the claws, and detach the trunk room light cover and bulb.



B: INSTALLATION

Install each part in the reverse order of removal.

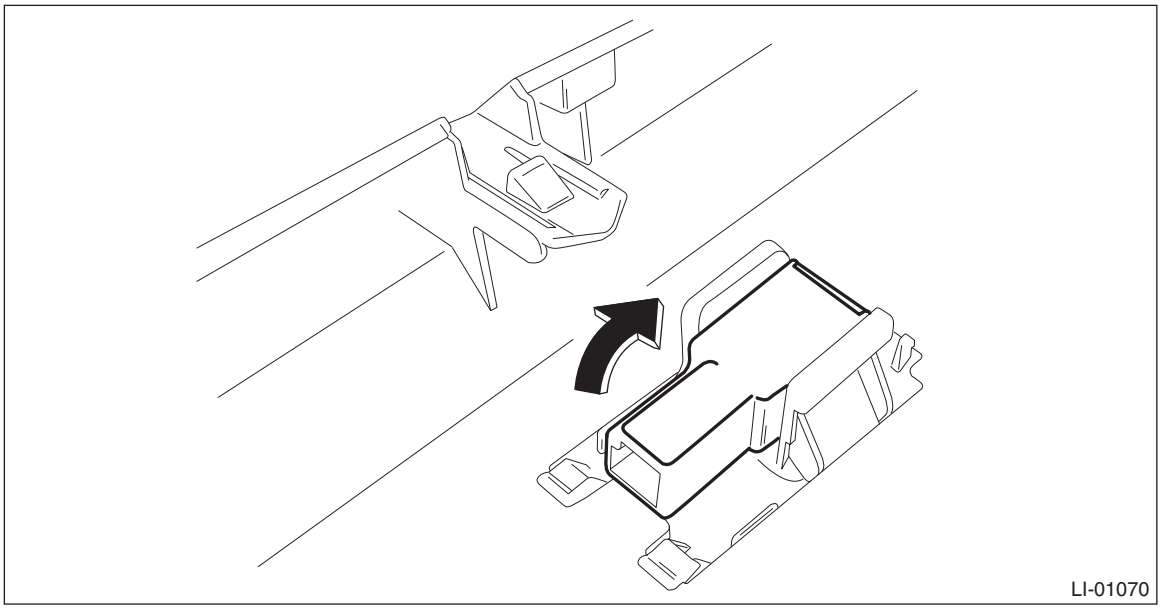
C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) If NG, replace the bulb with a new part.

32.Glove Box Light

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the glove box. <Ref. to EI-65, REMOVAL, Glove Box.>
3) Remove the glove box light from the glove box back panel.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1) Install the glove box light and test if it illuminates normally.
2) If it is found not to illuminate normally, replace the glove box light with a new part.

NOTE:
Since LED (Light Emitting Diode) is used for the glove box light, replace the glove box light assembly if the LED burns out.

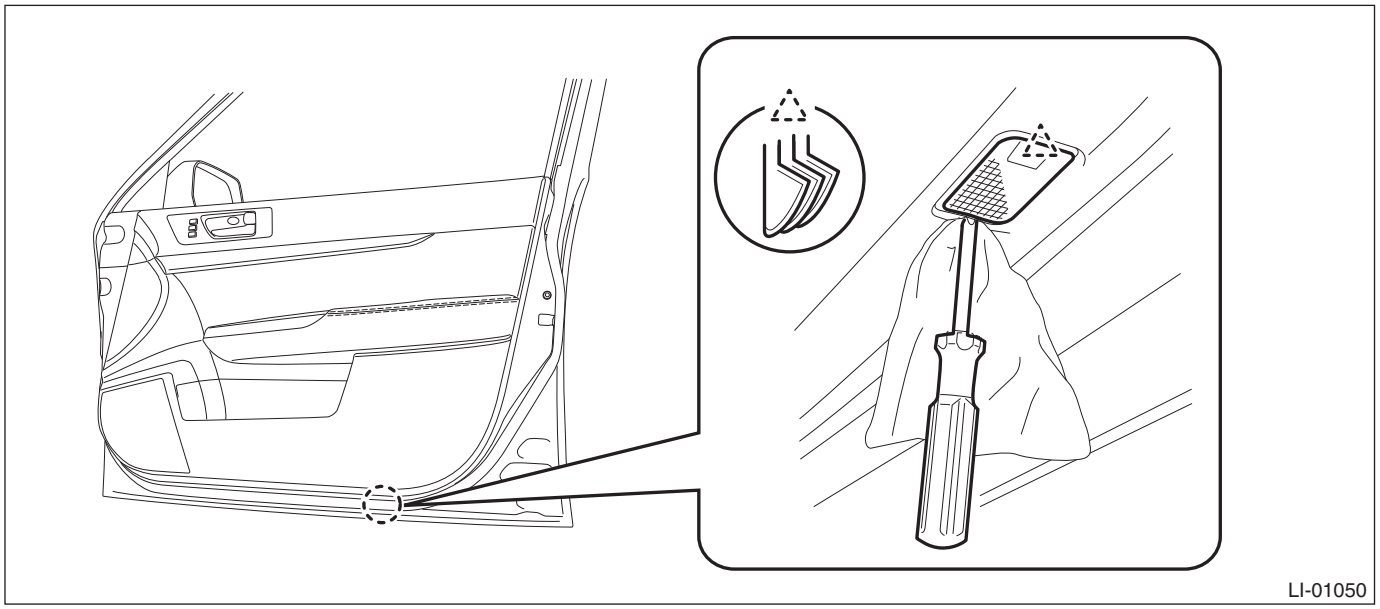
33.Door Step Light

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the door step light.

CAUTION:
Be careful not to damage light and door trim.

(1) Insert a flat tip screwdriver into the slit of the door step light to release the claw.
(2) Disconnect the connector and remove the door step light.



B: INSTALLATION

Install each part in the reverse order of removal.

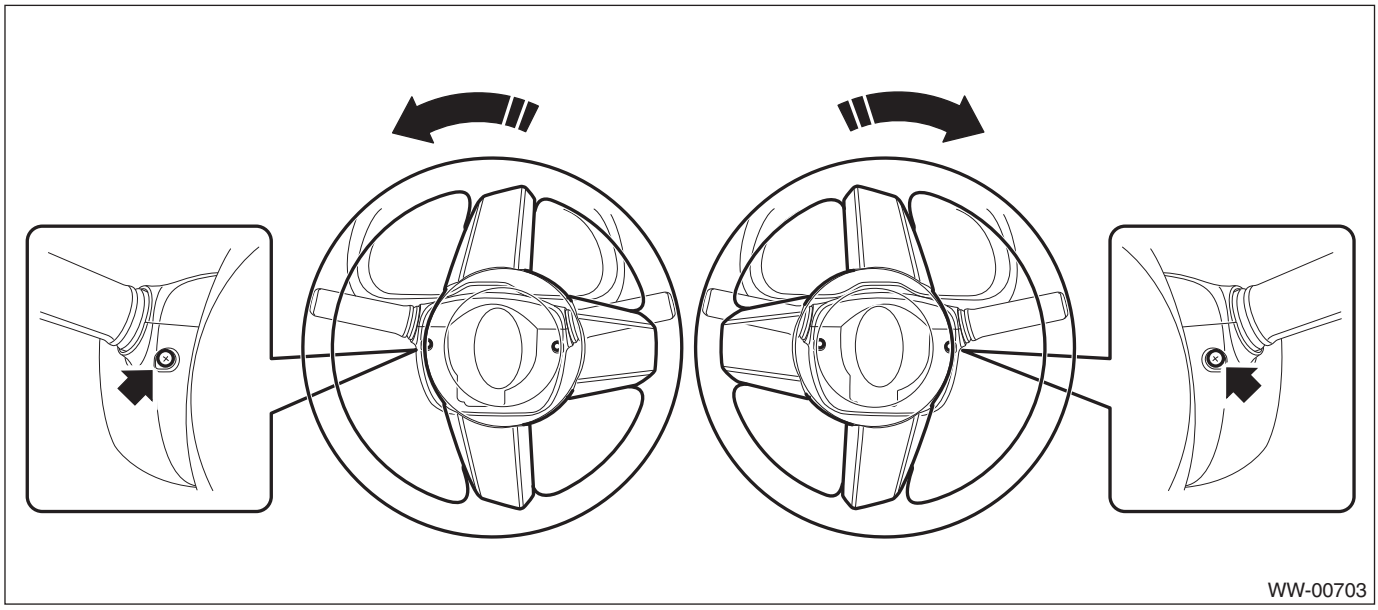
C: INSPECTION

1) Visually check the bulb for blow out.
2) Check the bulb specification. <Ref. to LI-2, SPECIFICATION, General Description.>
3) If NG, replace the bulb with a new part.

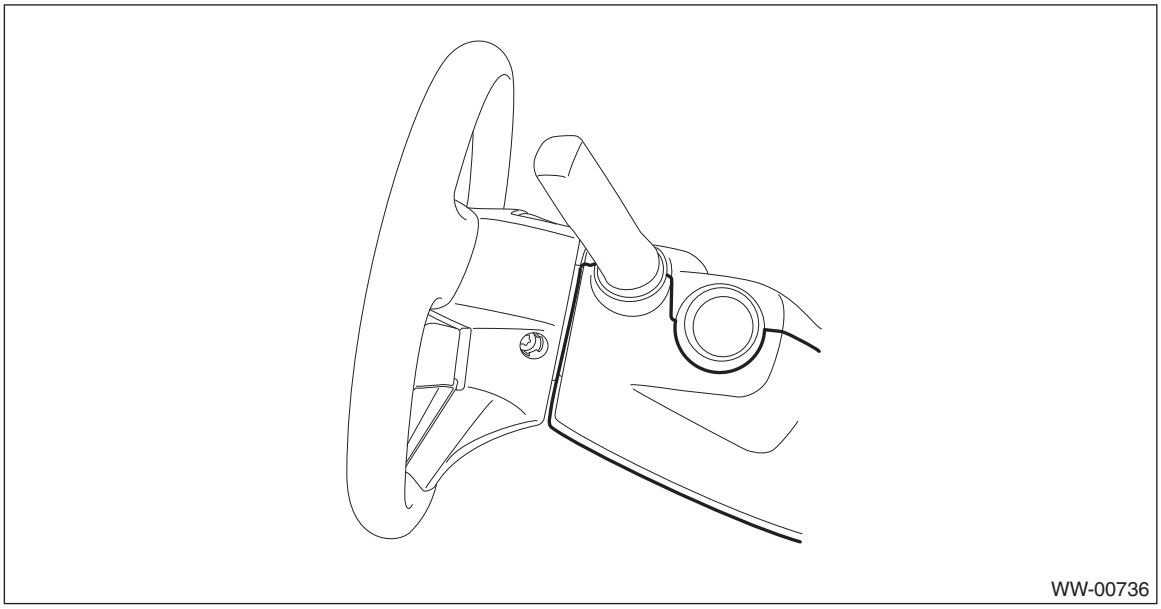
34.Ignition Switch Illumination

A: REMOVAL

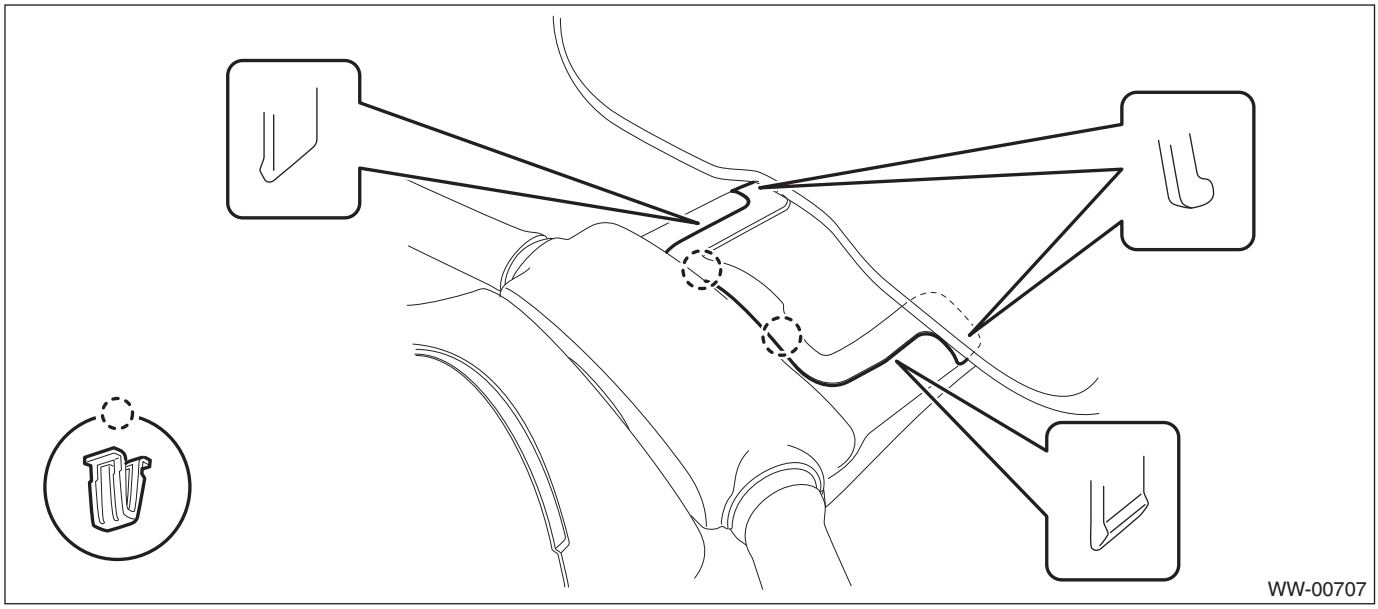
1) Disconnect the ground cable from battery.
2) Remove the steering column cover.
   (1) Remove the screws by turning the steering wheel to right and left.



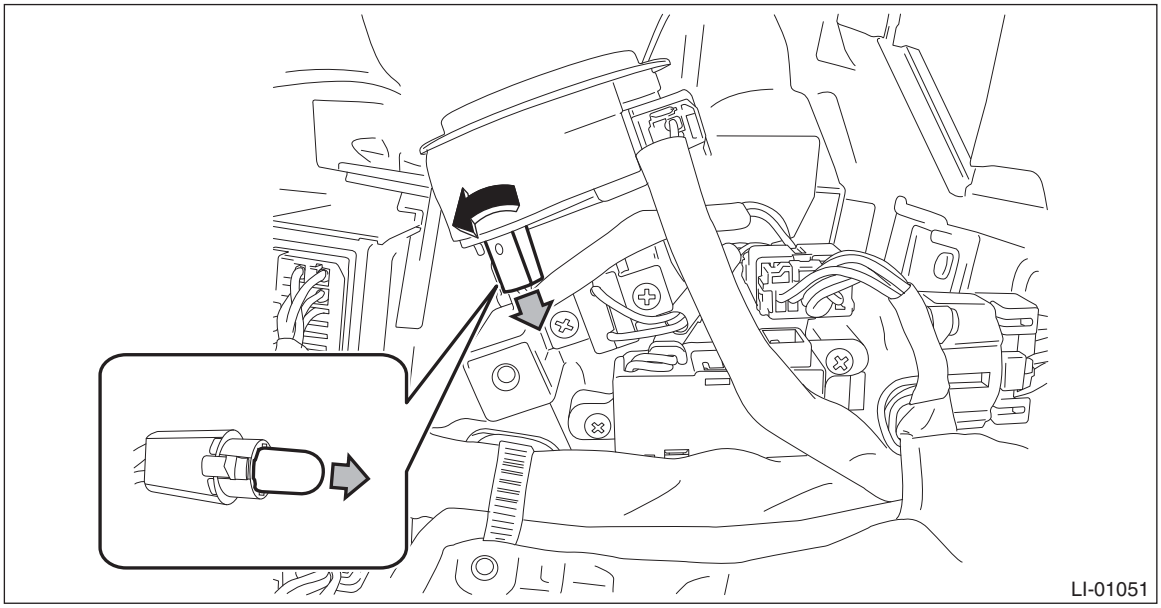
   (2) Release the claws and remove the steering column lower cover.



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



3) Remove the bulb socket and ignition switch illumination bulb.



NOTE:
If the bulb socket is faulty, replace the ignition key lock. <Ref. to SL-59, Ignition Key Lock.>

B: INSTALLATION

Install each part in the reverse order of removal.

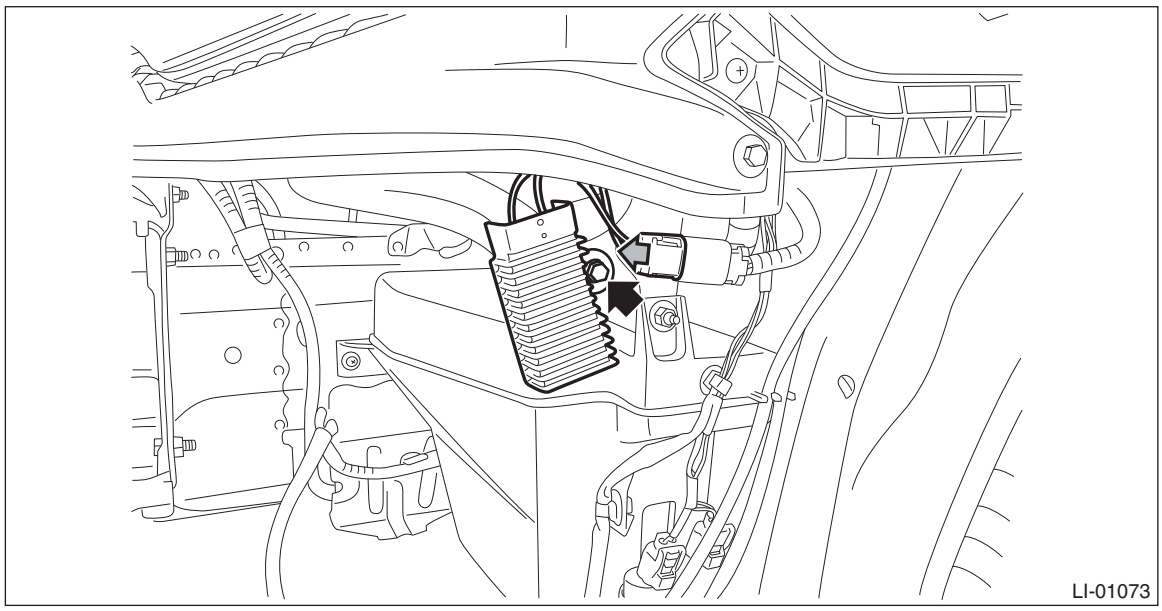
C: INSPECTION

Step		Check	Yes	No
1	**CHECK IGNITION SWITCH ILLUMINATION.** Make sure the ignition switch illumination illuminates when driver's side door is open.	Does the ignition switch illumination illuminate?	Ignition switch illumination is normal.	Go to step **2**.
2	**CHECK IGNITION SWITCH ILLUMINATION.** Make sure the ignition switch illumination blinks when the ignition switch is turned to ON.	Does the ignition switch illumination blink?	Check the function setting of the body integrated unit. <Ref. to LAN(diag)-2, Basic Diagnostic Procedure.>	Check the ignition switch illumination circuit. <Ref. to SL-26, CHECK IGNITION SWITCH ILLUMINATION, INSPECTION, Keyless Entry System.>

35.Day Time Running Resistor

A: REMOVAL

1) Remove the front bumper face assembly. <Ref. to EI-39, REMOVAL, Front Bumper.>
2) Remove the daytime running resistor.
   (1) Disconnect the connector.
   (2) Remove the bolt, and remove the daytime running resistor.



B: INSTALLATION

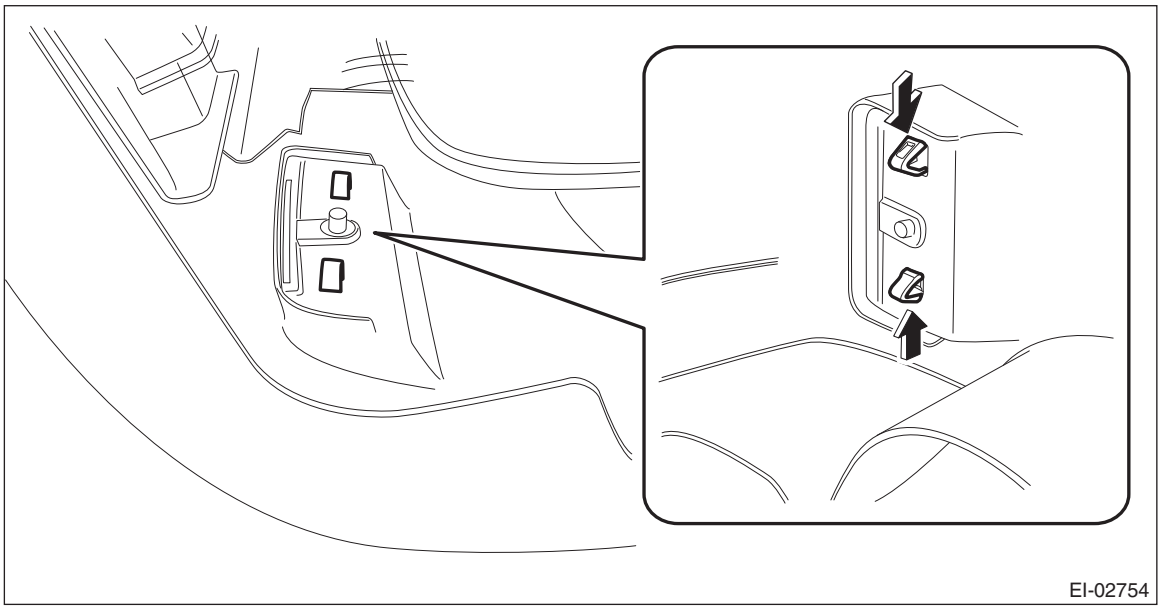
Install each part in the reverse order of removal.

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

36.Reflex Reflector

A: REMOVAL

From behind the bumper, release the claws and remove the reflex reflector.



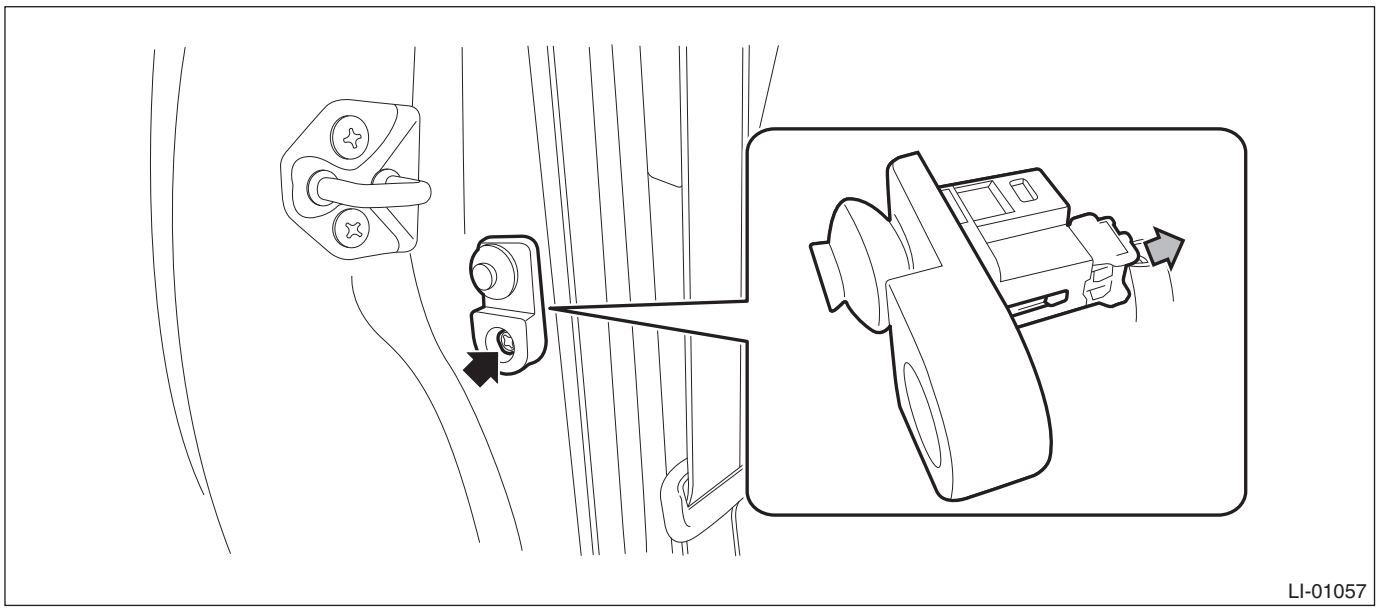
B: INSTALLATION

Install each part in the reverse order of removal.

37.Door Switch

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the door switch.
   (1) Remove the screws, and pull out the door switch.
   (2) Disconnect the connector and remove the door switch.



B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

Refer to DOOR SWITCH CHECK of Interior Light System. <Ref. to LI-16, CHECK DOOR SWITCH., INSPECTION, Interior Light System.>

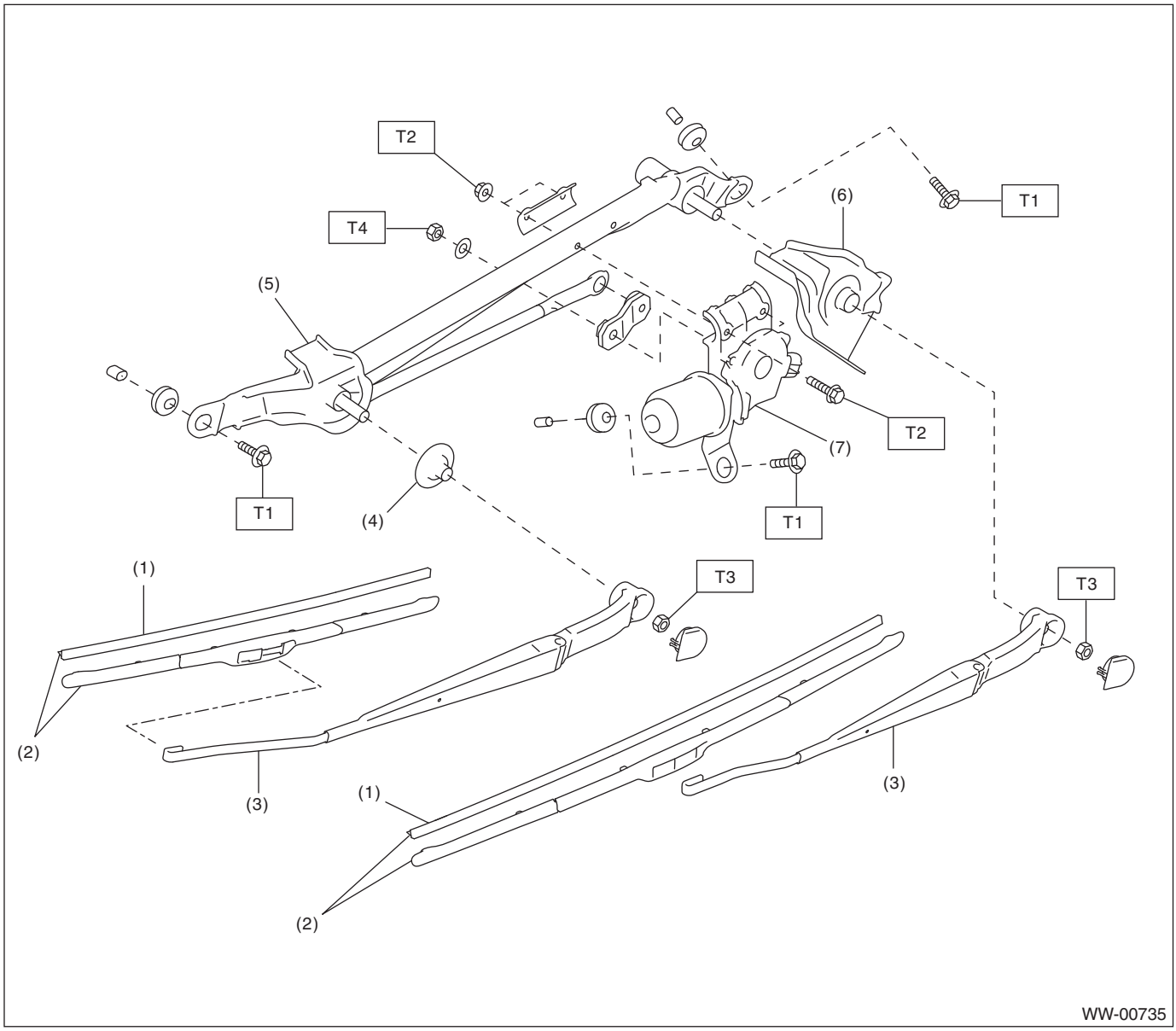
1. General Description

A: SPECIFICATION

Front wiper motor	Input	12 V — 72 W or less
Rear wiper motor	Input	12 V — 42 W or less
Front washer motor	Pump type	Centrifugal
	Input	12 V — 36 W or less
Rear washer motor	Pump type	Centrifugal
	Input	12 V — 36 W or less

B: COMPONENT

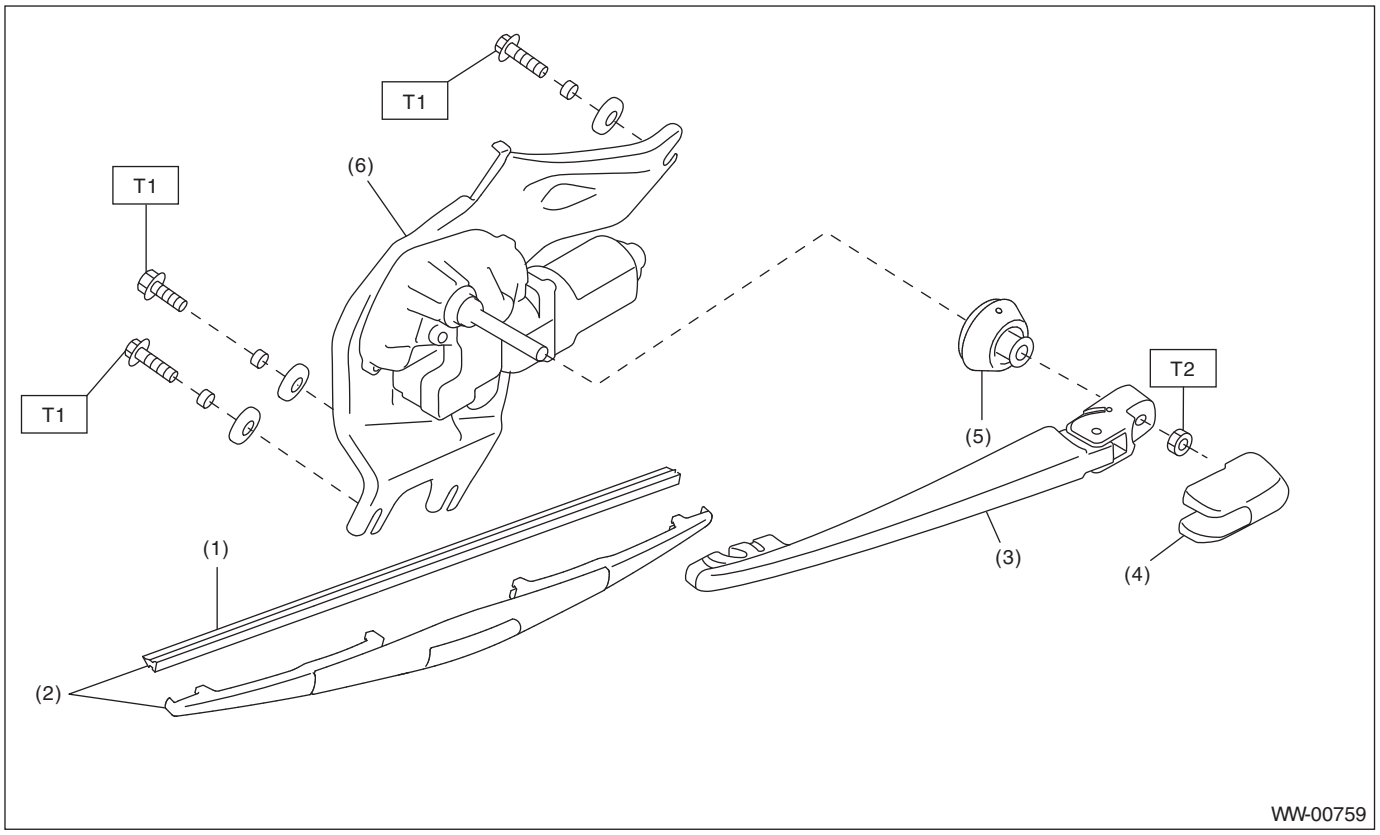
1. FRONT WIPER



(1) Wiper rubber
(2) Wiper blade ASSY
(3) Wiper arm ASSY
(4) Pivot cover B
(5) Wiper link ASSY
(6) Pivot cover C
(7) Wiper motor ASSY

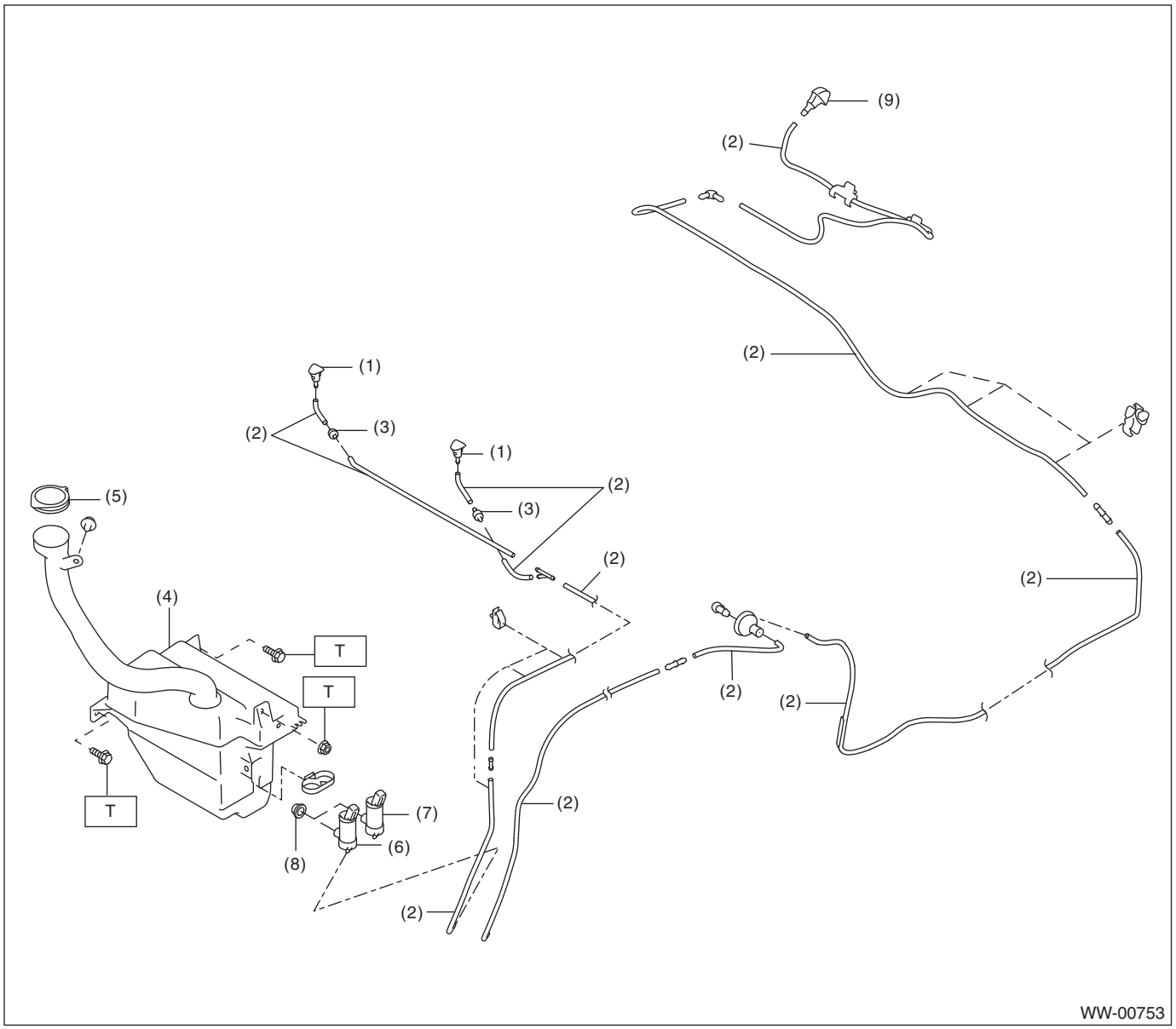
Tightening torque:N·m (kgf-m, ft-lb)
T1: 6 (0.61, 4.4)
T2: 7.5 (0.76, 5.5)
T3: 22 (2.24, 16.2)
T4: 32.1 (3.20, 23.2)

2. REAR WIPER



(1)	Wiper rubber	(4)	Wiper arm cover	***Tightening torque:N·m (kgf-m, ft-lb)***
(2)	Wiper blade ASSY	(5)	Pivot cap	***T1: 7 (0.71, 5.2)***
(3)	Wiper arm	(6)	Wiper motor ASSY	***T2: 8 (0.82, 5.9)***

3. WASHER TANK



(1) Front washer nozzle
(2) Washer hose
(3) Check valve
(4) Washer tank
(5) Washer tank cap
(6) Front washer motor
(7) Rear washer motor (OUTBACK model only)
(8) Grommet
(9) Rear washer nozzle (OUTBACK model only)

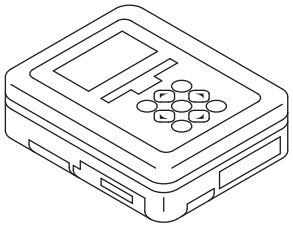
Tightening torque:N·m (kgf-m, ft-lb)
T: 6 (0.61, 4.4)

C: CAUTION

- Connect the connectors and hoses securely during reassembly.
- After reassembly, ensure each function operates properly.
- Be careful with the airbag system wiring harness which passes near electrical parts and switches.
- Yellow connectors and harnesses with yellow tapes around them are the connectors and harnesses for the airbag system. Using a tester above such circuits may cause malfunction of airbag system. Follow the cautions for the airbag system in this case. <Ref. to AB-9, CAUTION, General Description.>
- When connecting the pipe hoses, be careful not to cause bend or blockage.
- If even a small amount of silicon oil or grease enters tank and washer fluid passages, an oil film will be formed on the glass and will cause the wiper to chatter and judder. Make sure that no oil comes into contact with the system.

D: PREPARATION TOOL

1. SPECIAL TOOL

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

2. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for checking voltage and continuity.

2. Wiper and Washer System

A: WIRING DIAGRAM

1. WIPER AND WASHER (FRONT)

Refer to “Front Wiper and Washer System” in the wiring diagram. <Ref. to WI-151, WIRING DIAGRAM, Front Wiper and Washer System.>

2. WIPER AND WASHER (REAR)

Refer to “Rear Wiper and Washer System” in the wiring diagram. <Ref. to WI-196, WIRING DIAGRAM, Rear Wiper and Washer System.>

B: INSPECTION

Symptoms	Repair order
Wiper and washers do not operate.	1. Wiper fuse (F/B No. 14, 15) 2. Combination switch 3. Wiper motor assembly 4. Wiring harness
Wipers do not operate in LO or HI.	1. Combination switch 2. Wiper motor assembly 3. Wiring harness
Wipers do not operate in INT.	1. Combination switch 2. Wiper motor assembly 3. Wiring harness
Washer motor does not operate.	1. Washer switch 2. Washer motor 3. Wiring harness
Wipers do not operate when washer switch is ON.	1. Wiper motor assembly 2. Wiring harness
Washer fluid spray does not operate properly.	1. Washer motor 2. Washer hose and nozzle

C: NOTE

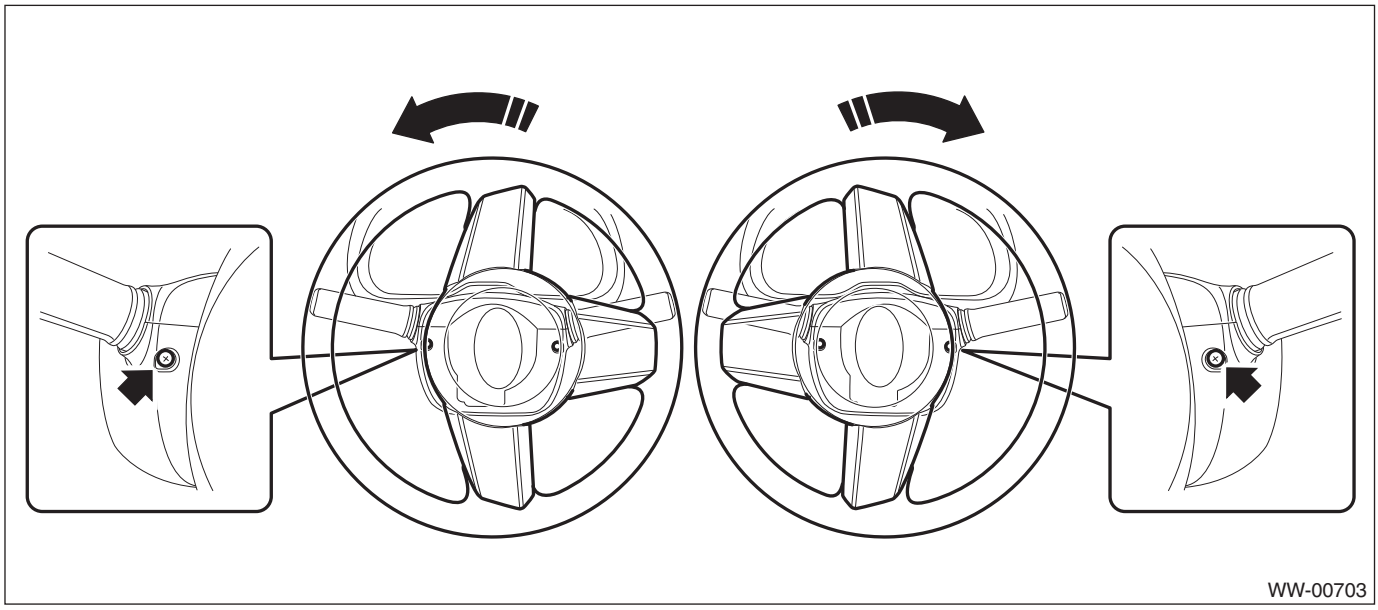
For operation procedures of each component of the wiper and washer system, refer to the respective sections.

- Combination switch (Wiper):<Ref. to WW-8, Combination Switch (Wiper).>
- Wiper blade:<Ref. to WW-15, Wiper Blade.>
- Front wiper arm:<Ref. to WW-23, Front Wiper Arm.>
- Front wiper motor and link:<Ref. to WW-25, Front Wiper Motor and Link.>
- Rear wiper arm:<Ref. to WW-35, Rear Wiper Arm.>
- Rear wiper motor:<Ref. to WW-37, Rear Wiper Motor.>
- Washer tank and motor:<Ref. to WW-18, Washer Tank and Motor.>
- Front washer nozzle:<Ref. to WW-31, Front Washer Nozzle.>
- Rear washer nozzle:<Ref. to WW-42, Rear Washer.>

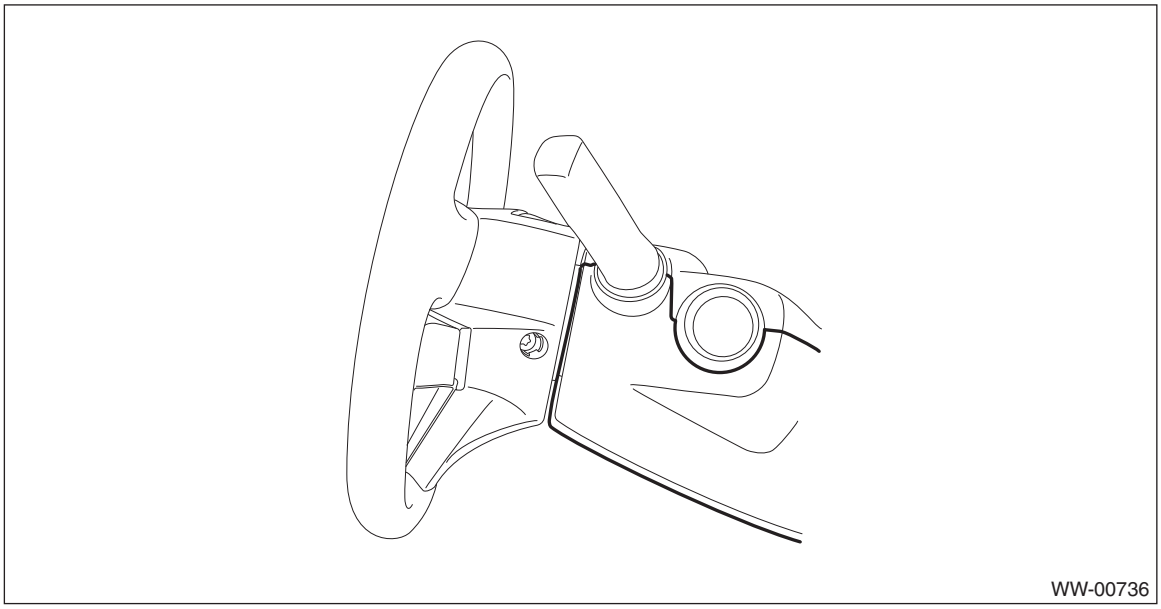
3. Combination Switch (Wiper)

A: REMOVAL

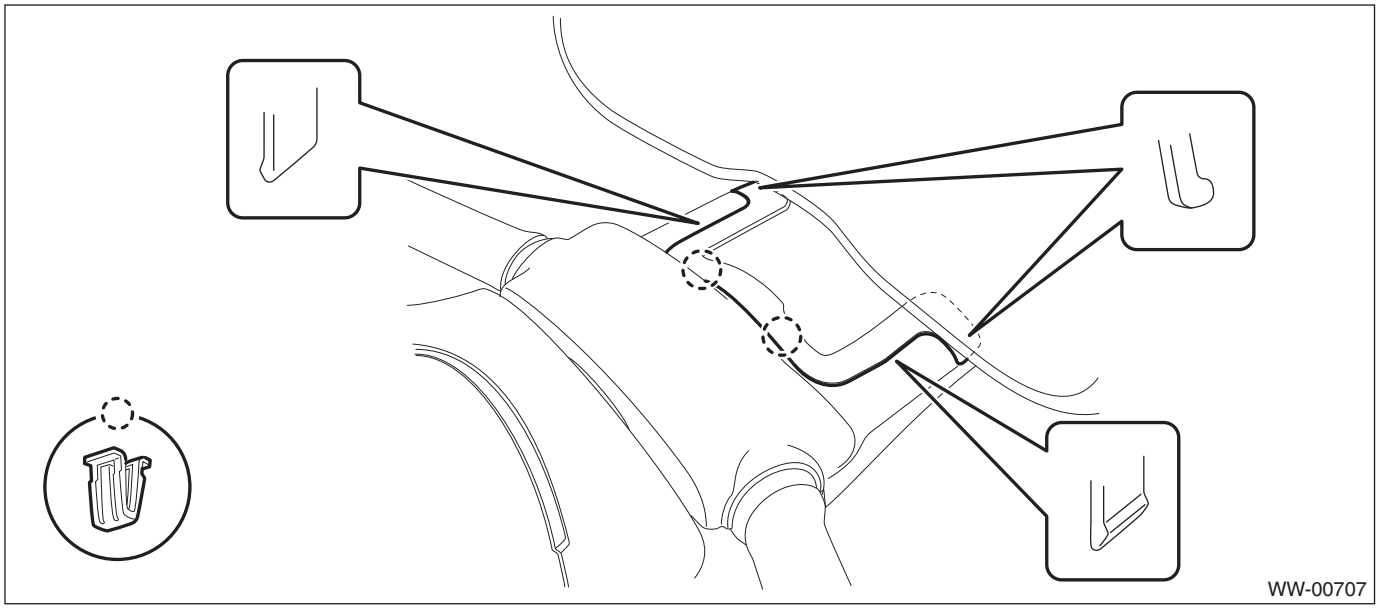
1) Disconnect the ground cable from battery.
2) Remove the steering column cover.
   (1) Remove the screws by turning the steering wheel to right and left.



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

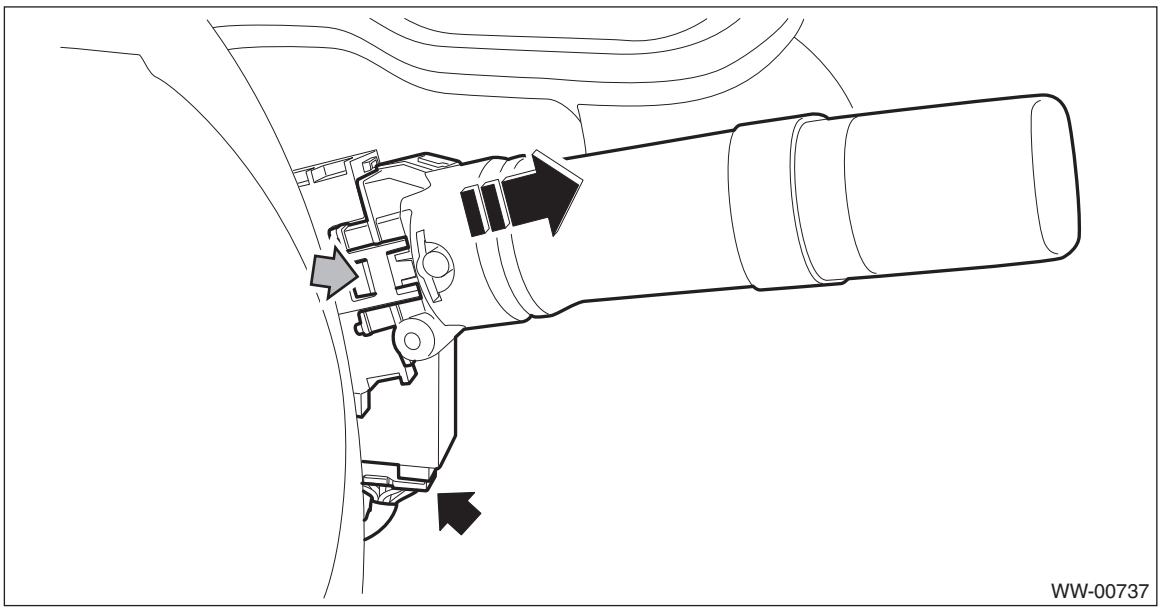


(3) Separate the steering column upper cover and steering upper cover, and remove the steering column upper cover.



3) Remove the wiper switch assembly.
(1) Disconnect the connector from the wiper switch.
(2) Release the claws, and pull out the wiper switch assembly.

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



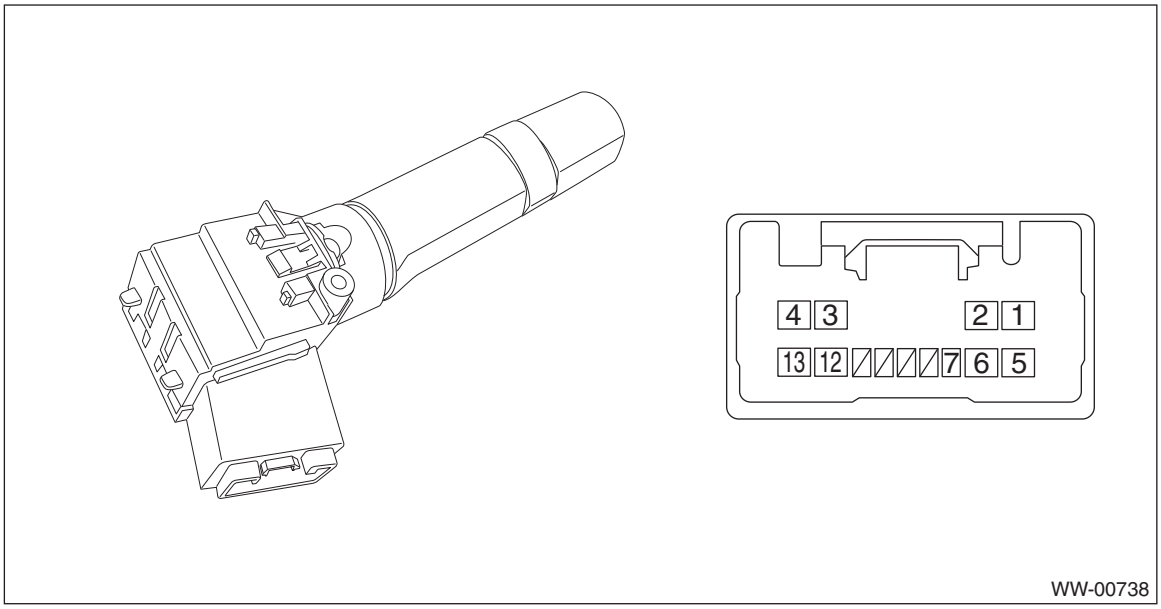
B: INSTALLATION

Install each part in the reverse order of removal.

C: INSPECTION

1. INSPECTION OF SWITCH UNIT

1) Operate the switches to check the continuity between terminals.



	Switch position	Terminal No.	Specification
Front	OFF	3 and 12	Less than 1 Ω
	INT	3 and 12	Less than 1 Ω
	LO	3 and 4	Less than 1 Ω
	HI	4 and 13	Less than 1 Ω
	Washer ON	1 and 2	Less than 1 Ω
REAR	OFF	5 and 2 5 and 6 2 and 6	1 MΩ or more
	ON	2 and 6	Less than 1 Ω
	INT	2 and 7	Less than 1 Ω
	Washer ON	5 and 2 5 and 6 2 and 6	Less than 1 Ω

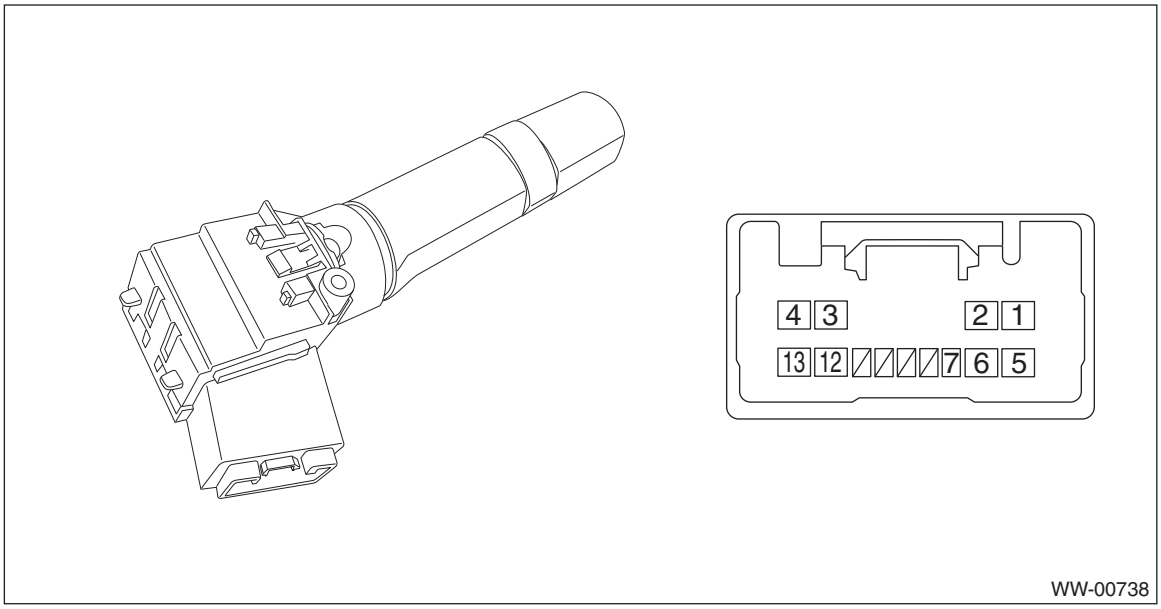
2) Replace the switch if the inspection result is not within the standard value.

2. FRONT WIPER

1) CHECK WITH SUBARU SELECT MONITOR
   (1) Check the input signal when the front wiper switch is turned to LO or HI, using the current data display of body integrated unit.
   (2) Does the input signal change corresponding to the switch operation?
   - **Yes** → Finish the diagnosis.
   - **No** →
     1. Check the harness.
     2. Check the input voltage of body integrated unit.

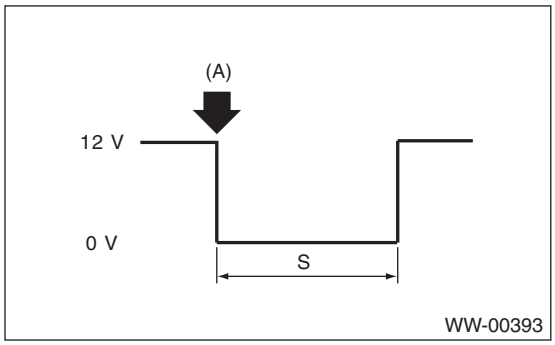
Connector & terminal
(B280) No. 2 (+) — Chassis ground (–):
     3. Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>

2) Check the intermittent operation (inspection of the wiper switch alone)



(1) Set the voltmeter between terminal No. 1 (+) — No. 8 (–).
(2) Connect the battery to connector. (terminal No. 1 (+), terminal No. 2 & No. 8 (–))
(3) Turn the front wiper switch to INT.
(4) Connect the battery (+) to the terminal No. 1 for 5 seconds.
(5) Connect the battery (–) to the terminal No. 2 and check the voltage between terminal No. 1 — terminal No. 8 during intermittent operation.
(6) Perform step (1) to (5) when intermittent control switch is in MIN or MAX, and replace the switch if the operation is not as specified.

Intermittent stationary time
MIN: Approx. 4 seconds
MAX: Approx. 19 seconds

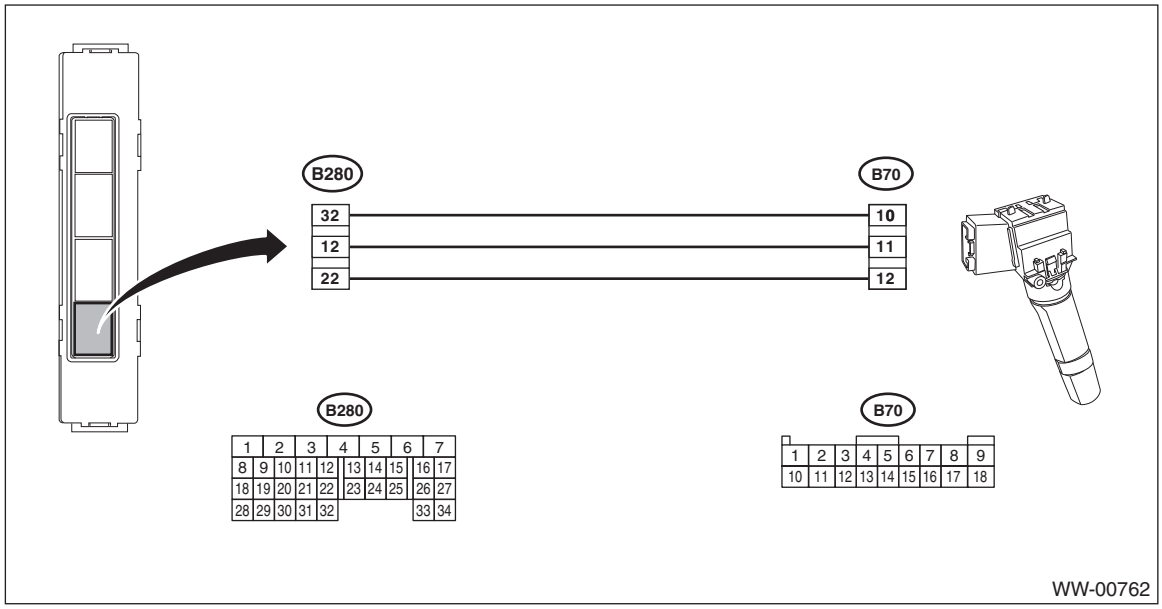


(A): Connect the battery (–) to the terminal No. 12
S: Intermittent downtime (sec.)

3. REAR WIPER

1) CHECK INPUT OF BODY INTEGRATED UNIT
Check the input signal when the rear wiper switch is operated using Subaru Select Monitor.
(1) Turn the ignition switch to ON.
(2) Operate the rear wiper switch to each position of ON, INT and Washer ON.
(3) Does the input signal change corresponding to the switch operation?
- **Yes** → Go to step 4.
- **No** → Go to step 2.

2) CHECK HARNESS.
(1) Turn the ignition switch to OFF and disconnect the ground cable from battery.
(2) Disconnect the connector of body integrated unit and wiper switch.
(3) Measure the resistance between body integrated unit and wiper switch.



Connector & terminal
(B280) No. 32 — (B70) No. 10:
(B280) No. 12 — (B70) No. 11:
(B280) No. 22 — (B70) No. 12:
(4) Is the resistance less than 10 Ω?
- **Yes** → Go to step 3.
- **No** → Repair the harness between the body integrated unit and wiper switch.

3) CHECK INPUT VOLTAGE OF BODY INTEGRATED UNIT.
(1) Connect the ground cable to battery.
(2) Turn the ignition switch to ON and check the input voltage of body integrated unit.

Connector & terminal
(B280) No. 5 (+) — Chassis ground (–):
(i171) No. 17 (+) — Chassis ground (–):
(3) Is the voltage 10 V or more?
- **Yes** → Go to step 4.
- **No** → Check the harness and fuse.

4) CHECK OUTPUT OF BODY INTEGRATED UNIT.
Check the output signal when the rear wiper switch is operated using Subaru Select Monitor.
(1) Turn the ignition switch to ON.
(2) Operate the rear wiper switch to ON and Washer ON.
(3) When the operation in step (2) is performed, check the output signal of body integrated unit to rear wiper motor.
(4) When the rear wiper switch is set to ON, is ON output continuous? Also, when the washer is set to ON, is ON output?
- **Yes** → Go to step 5.
- **No** → Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>

5) CHECK OUTPUT OF BODY INTEGRATED UNIT.
Check the output signal when the rear wiper switch is operated using Subaru Select Monitor.
(1) Turn the ignition switch to ON.
(2) Set the rear wiper switch to INT.
(3) When the operation in step (2) is performed, check the output signal of body integrated unit.
(4) When the rear wiper switch is set to INT, is ON/OFF output repeated? (INT OFF time (when vehicle parked): 12 seconds)
- **Yes** → Go to step 8.
- **No** → Go to step 6.

6) CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND REAR WIPER MOTOR.
(1) Turn the ignition switch to OFF and disconnect the ground cable from battery.
(2) Disconnect the connector of body integrated unit and wiper switch.
(3) Measure the resistance between the harness connector terminals of the body integrated unit and rear wiper motor.

Connector & terminal
(B280) No. 6 — (D43) No. 2:
(4) Is the resistance less than 10 Ω?
- **Yes** → Go to step 7.
- **No** → Repair the open circuit of the harness between body integrated unit and rear wiper motor.

7) Check stop position circuit of the rear wiper motor
(1) Disconnect the harness connector of the rear wiper motor.
(2) Check the continuity of the circuit of rear wiper motor stop position.

Connector & terminal
(D43) No. 1 (+) — (D43) No. 4 (–):
(3) Is there continuity between terminals?
- **Yes** → Go to step 8.
- **No** → Replace the rear wiper motor assembly.

8) CHECK POWER SUPPLY CIRCUIT OF THE REAR WIPER MOTOR.
(1) Disconnect the harness connector of the rear wiper motor.
(2) Turn the ignition switch to ON.
(3) Measure the voltage between the rear wiper motor harness connector terminal and chassis ground.

Connector & terminal
(D43) No. 3 (+) — Chassis ground (–):
(4) Is the voltage 10 V or more?
- **Yes** → Go to step 9.
- **No** → Check the fuse (No. 27 in main fuse box).

9) CHECK GROUND CIRCUIT OF REAR WIPER MOTOR.
(1) Turn the ignition switch to OFF.
(2) Measure the resistance between the rear wiper motor harness connector terminal and chassis ground.

Connector & terminal
(D43) No. 4 — Chassis ground:
(3) Is the resistance less than 10 Ω?
- **Yes** → Go to step 10.
- **No** → Repair the open circuit of the rear wiper motor ground circuit.

10) CHECK HARNESS BETWEEN BODY INTEGRATED UNIT AND REAR WIPER MOTOR.
(1) Turn the ignition switch to OFF.
(2) Disconnect the harness connector of body integrated unit.
(3) Disconnect the harness connector of the rear wiper motor.
(4) Measure the resistance between the harness connector terminals of the body integrated unit and rear wiper motor.

Connector & terminal
(B280) No. 7 — (D43) No. 1:
(5) Is the resistance less than 10 Ω?
- **Yes** → Go to step 11.
- **No** → Repair the open circuit of the harness between body integrated unit and rear wiper motor.

11) CHECK OUTPUT OF BODY INTEGRATED UNIT.
(1) Connect the harness connector of body integrated unit.
(2) Disconnect the connector of the rear wiper motor.
(3) Turn the ignition switch to ON.
(4) Measure the voltage between rear wiper motor connector and chassis ground.

Connector & terminal
(D43) No. 2 (+) — Chassis ground (–):
(5) Is the voltage less than 1.5 V when rear wiper switch is OFF, and is the voltage 10 V or more when rear wiper switch is ON?
- **Yes** → Go to step 12.
- **No** → Replace the body integrated unit. <Ref. to SL-72, Body Integrated Unit.>

12) CHECK OPERATION OF REAR WIPER MOTOR.
(1) Remove the rear wiper motor.
(2) Check the rear wiper motor. <Ref. to WW-41, INSPECTION, Rear Wiper Motor.>
(3) Does the rear wiper motor rotate normally?
- **Yes** → Finished.
- **No** → Replace the rear wiper motor assembly.

NOTE:
Rear wiper intermittent time

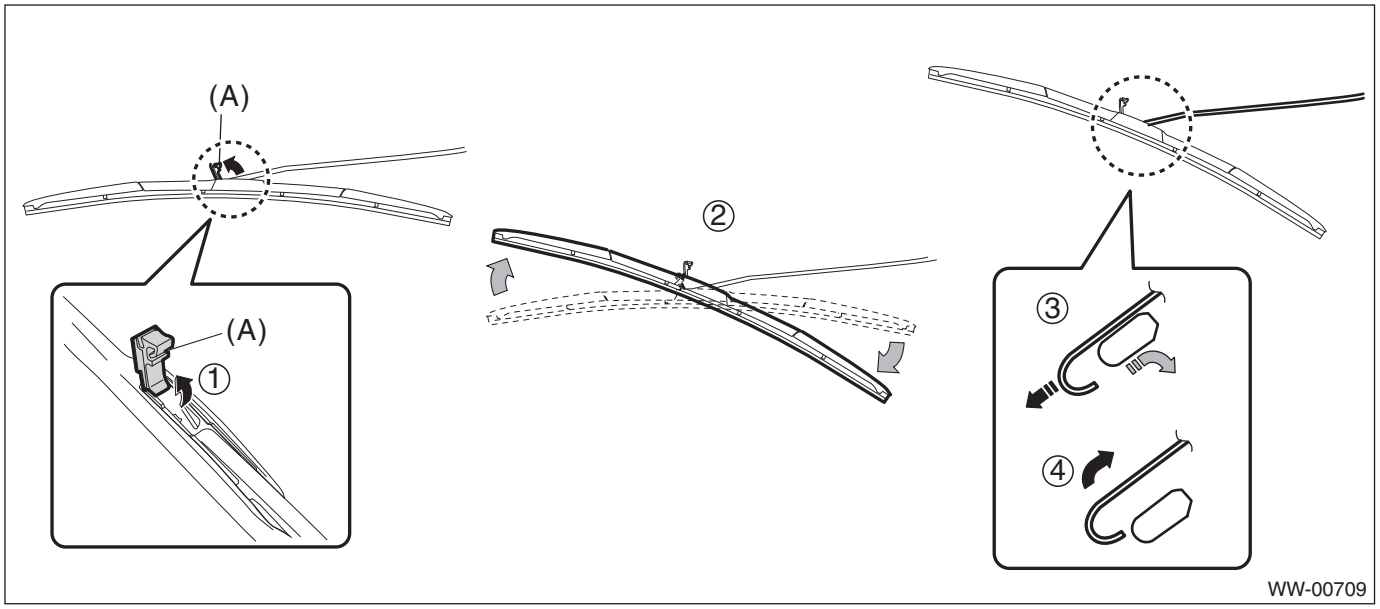
Select lever position	Vehicle speed (km/h (MPH))	Intermittent stopping time (sec.)
Reverse	—	Continuous operation
Except for reverse mode	80 — (50 —)	3
	50 — 80 (31 — 50)	6
	20 — 50 (12 — 31)	9
	0 — 20 (0 — 12)	12

4. Wiper Blade

A: REMOVAL

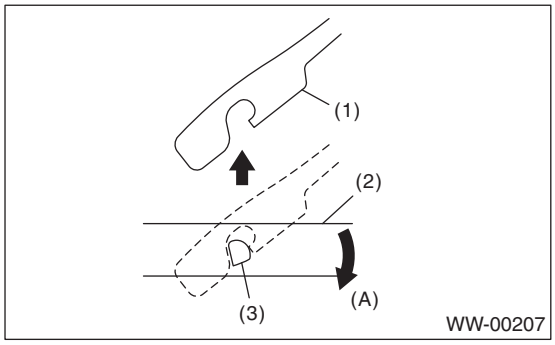
1. FRONT

Remove the blade assembly.
1) Lift up the locking clip (A).
2) Turn the blade assembly in the arrow direction.
3) Press the arm in.
4) Pull out the arm while lifting it, and remove the blade assembly from the arm.



2. REAR

Turn the blade in the direction of arrow (A) and remove it from arm.



(A) Turn the wiper blade.

(1) Wiper arm
(2) Wiper blade
(3) Wiper blade attachment section

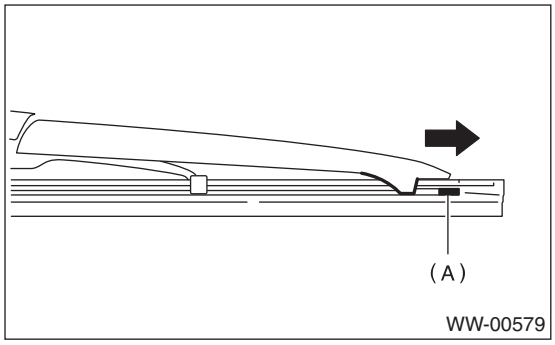
B: INSTALLATION

1) Install in the reverse order of removal.
2) Confirm that the clip is locked securely.

C: DISASSEMBLY

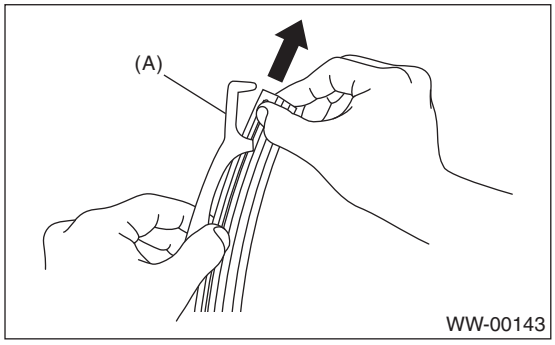
1. FRONT

Pull side (A) of the wiper rubber stopper and remove the rubber from the blade assembly.



2. REAR

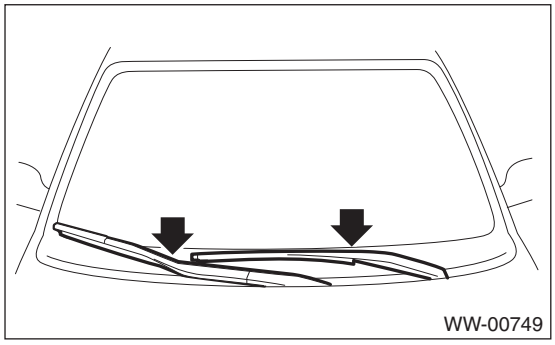
Pull the wiper rubber top slightly from stopper (A) and pull out completely.



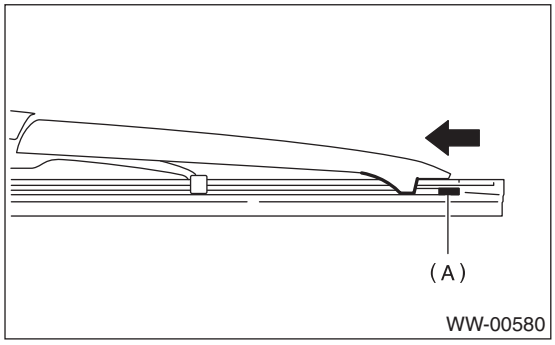
D: ASSEMBLY

1. FRONT

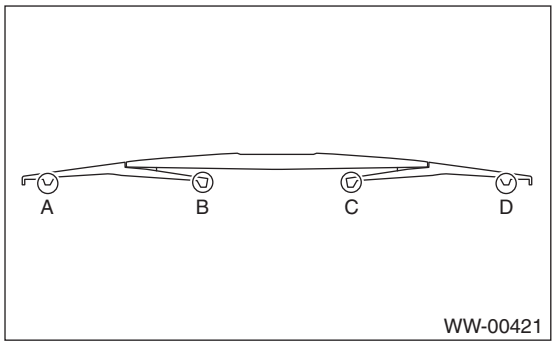
1) Insert the wiper rubber onto the blade so that the stopper is in the position shown in the figure.



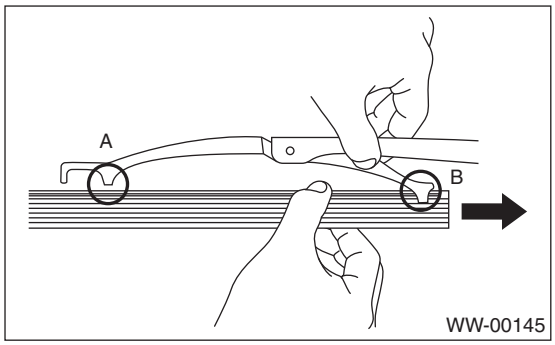
2) Make sure the wiper rubber is securely fastened to the pull stopper (A).



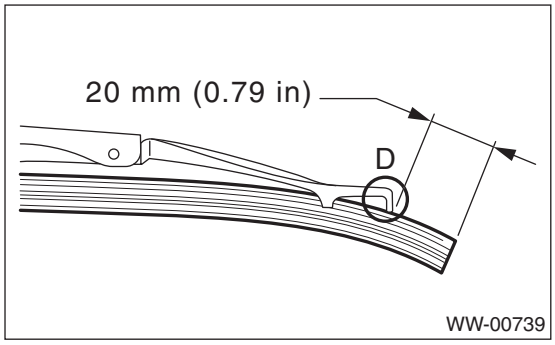
2. REAR



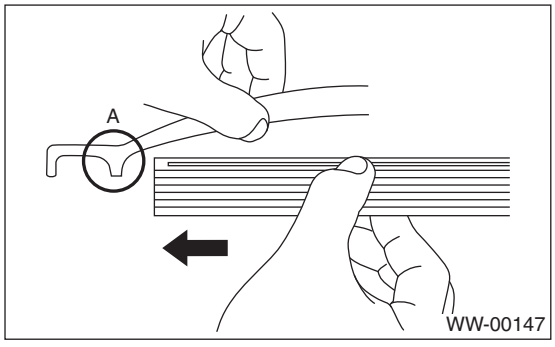
1) Insert the wiper rubber into claw (B).



2) Insert the wiper rubber until its top end protrudes approx. 20 mm (0.79 in) from stopper (D).



3) Insert the wiper rubber into claw (A).



E: INSPECTION

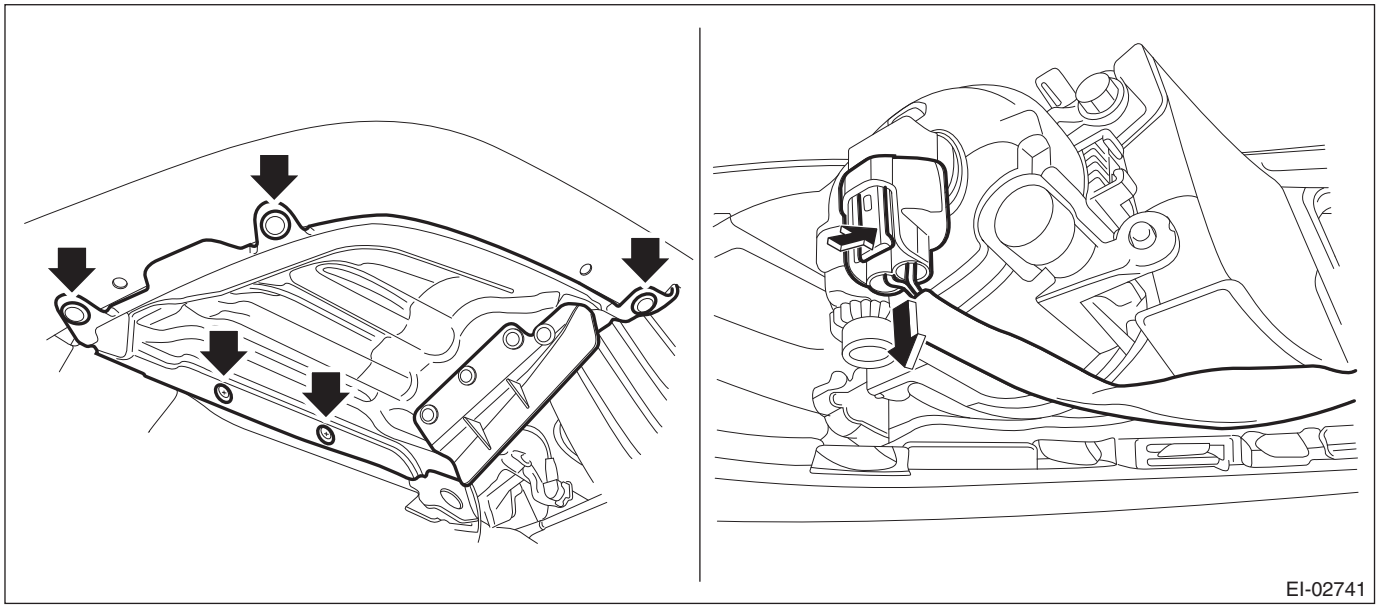
1) When the wiper does not operate properly, inspect the following item.
- Make sure that the movable part of blade assembly moves smoothly.
- Make sure the wiper rubber is not deformed or damaged.

2) If damaged, replace with a new part.

5. Washer Tank and Motor

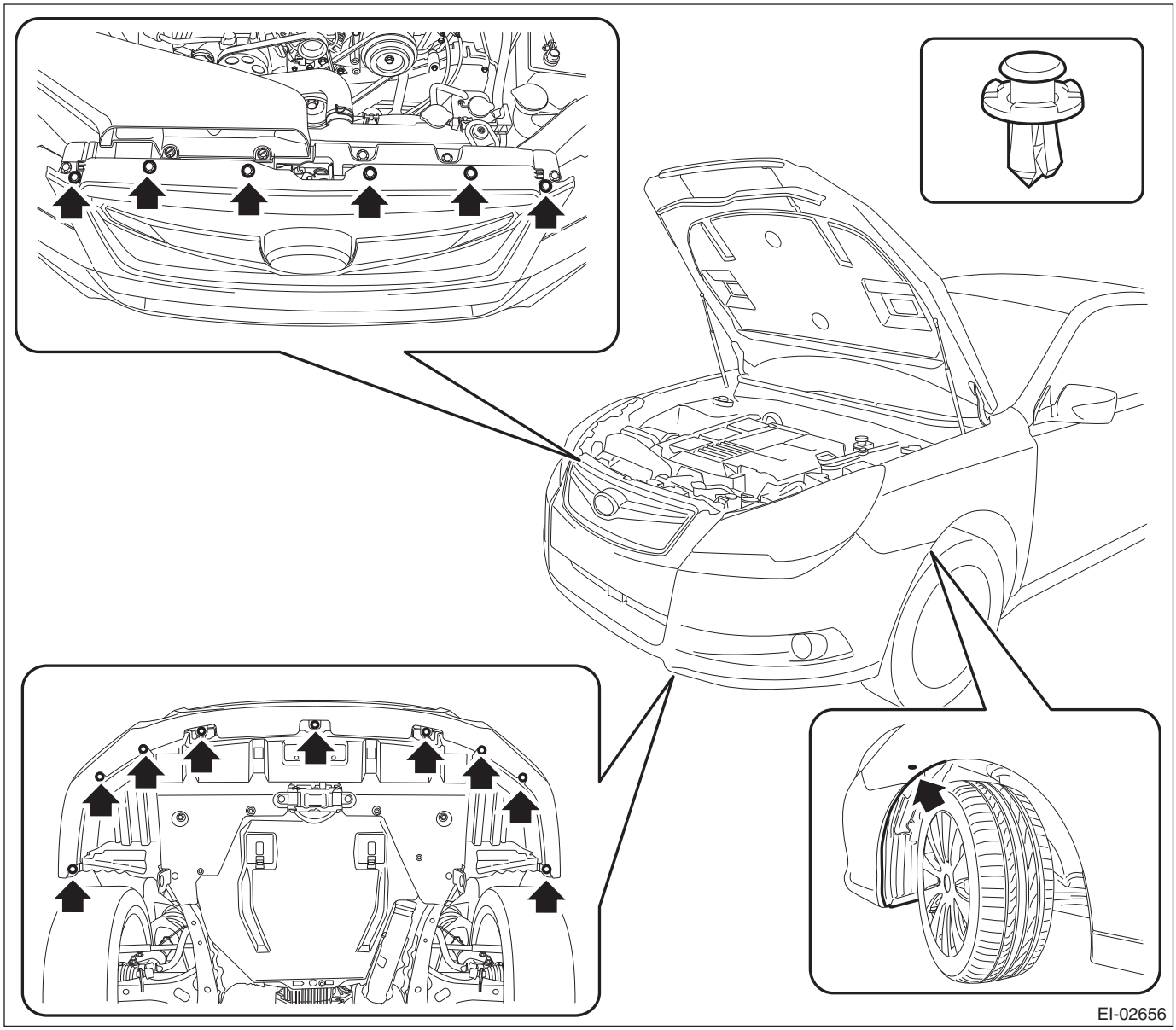
A: REMOVAL

1) Open the front hood.
2) Disconnect the ground cable from battery.
3) Remove the bumper face.
   (1) Remove the clips, turn over the front mud guard, and disconnect the fog light connector. (Model with fog light)



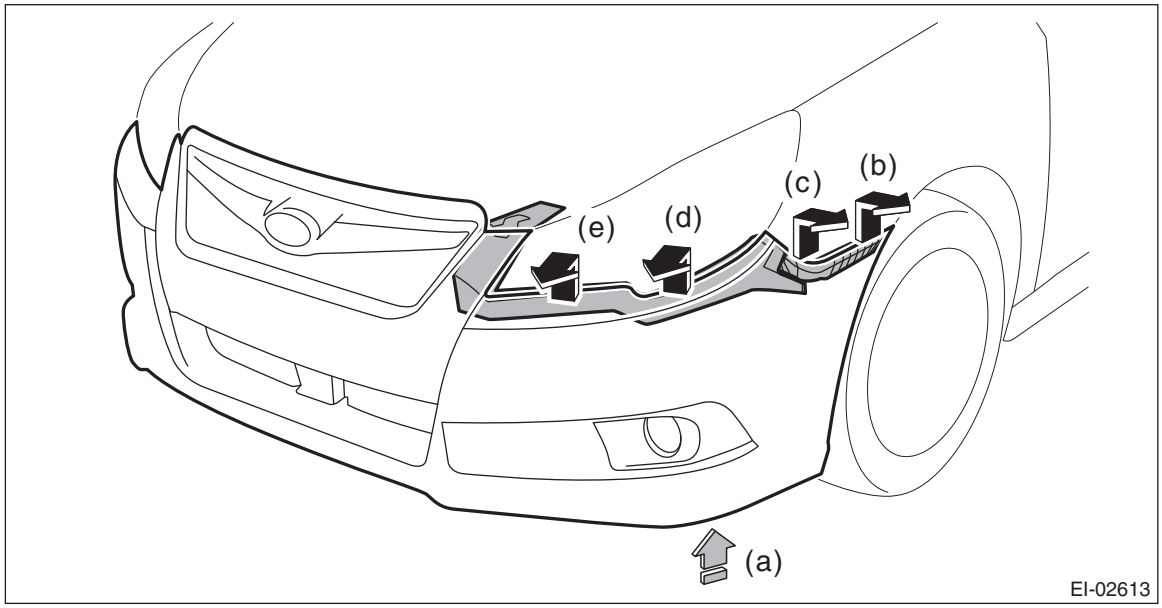
   (2) Remove the clips at the upper side of the bumper.
   (3) Remove the clips from the fender.

(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.

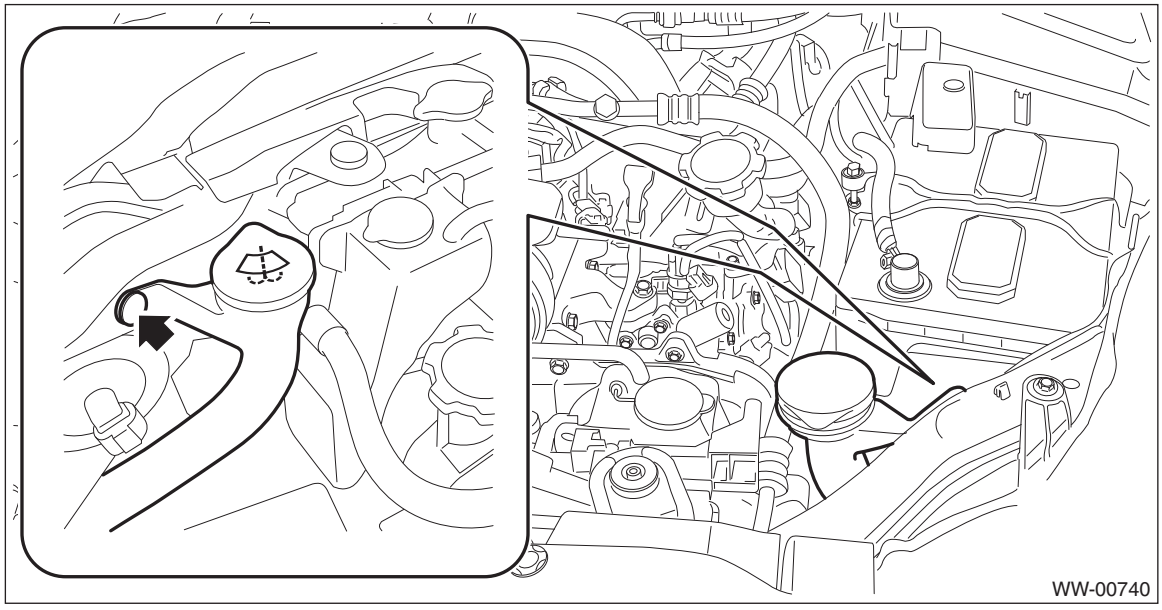
CAUTION:
Do not pull forcibly. Doing so may damage the flange sections on the bumper face side.



NOTE:
Pushing up the lower side (a) of the fog light, remove from (b) to (e).
Detach the opposite side in the same manner.

4) Remove the washer tank assembly.

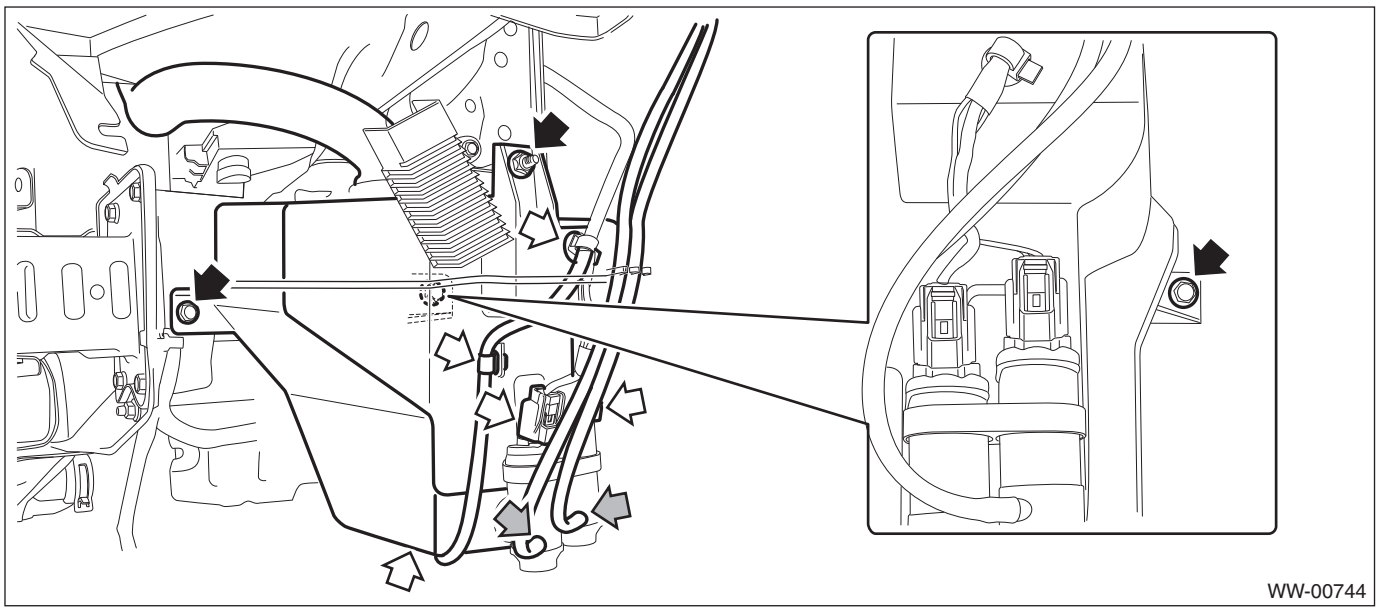
(1) Remove the clip of the washer tank duct.



(2) Prepare a container before disconnecting the washer hose and drain all washer fluid in the tank.

(3) Disconnect the connector from the washer motor and washer tank level sensor, and then remove the harness clip.

(4) Remove the bolt and nuts and remove the washer tank assembly.

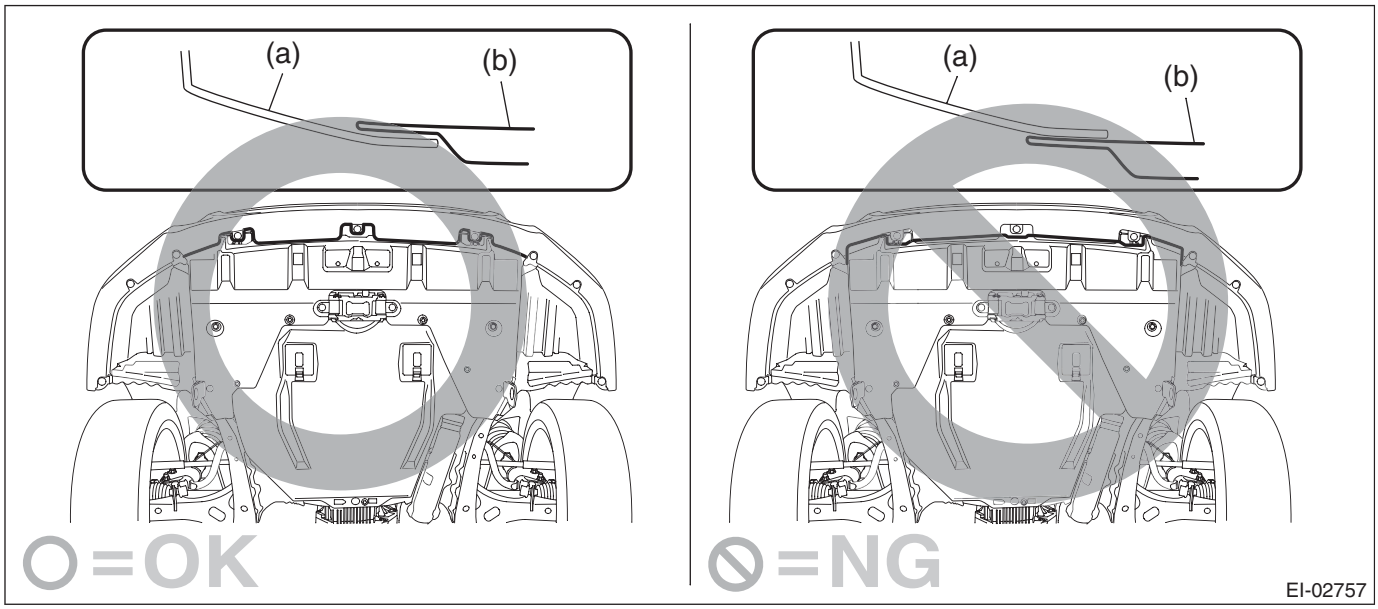


5) Remove the washer motor from the tank.

B: INSTALLATION

1) 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).

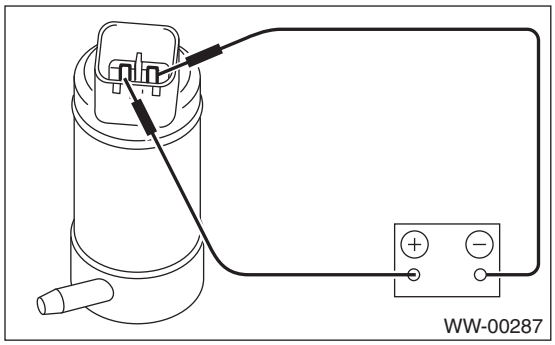


2) Add new washer fluid.

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

C: INSPECTION

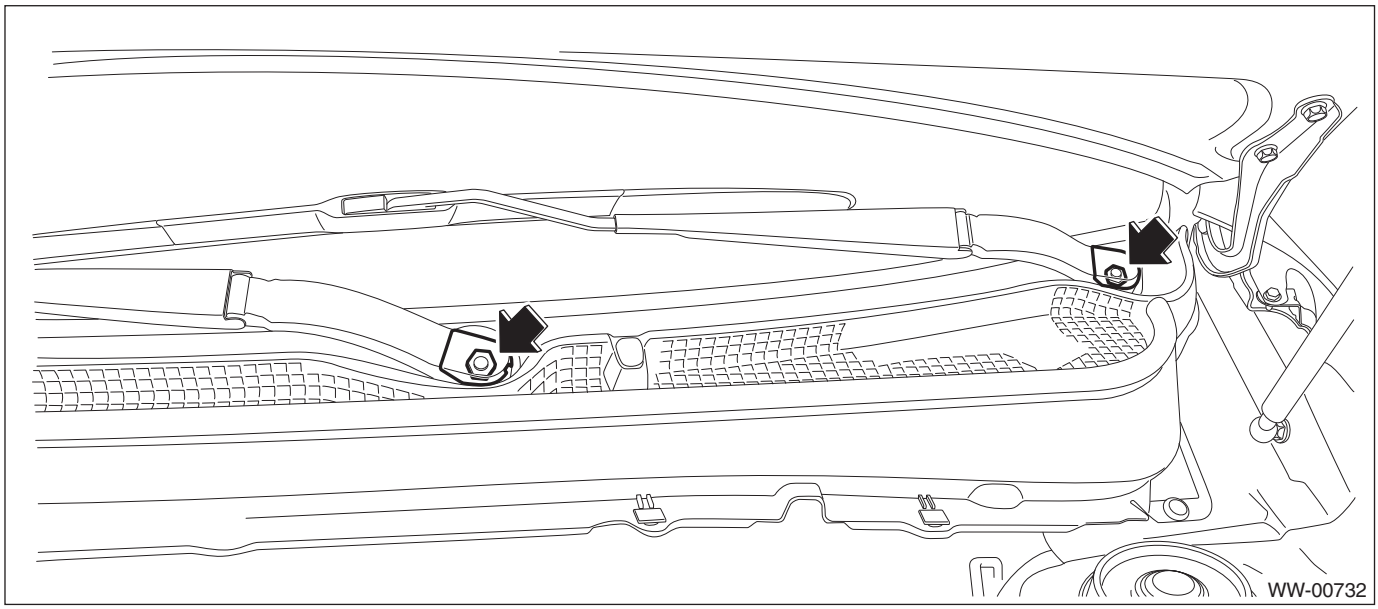
Apply battery voltage to the connector terminal of the washer motor and make sure that the motor operates.



6. Front Wiper Arm

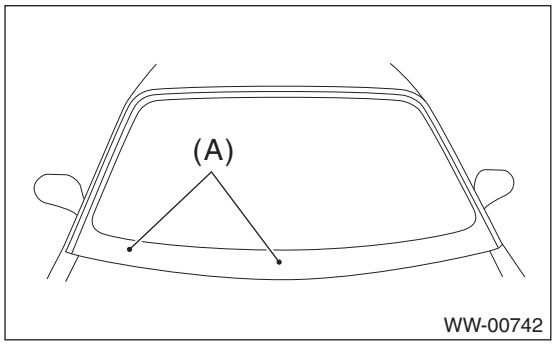
A: REMOVAL

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) Open the front hood.
2) Remove the front wiper arm assembly.
   (1) Remove the cap.
   (2) Remove the nuts, and remove the front wiper arm assembly.



B: INSTALLATION

CAUTION:
Follow the steps below when tilting the wiper arm. Not following the steps may cause contacting of wiper arms and damages of wiper arms.
1. Tilt the passenger's side wiper arm.
2. Tilt the driver's side wiper arm.
1) Install the wiper arm assembly.



Tightening torque:
22 N·m (2.24 kgf-m, 16.2 ft-lb)
(1) Install the wiper arm assembly so that the wiper blade aligns with the ceramic print point mark (A) on windshield glass.
(2) Tighten the wiper arm assembly to specified torque and install the cap.
2) Operate the wiper to check whether the wiper blade aligns with the point mark. If not, perform installation over again.

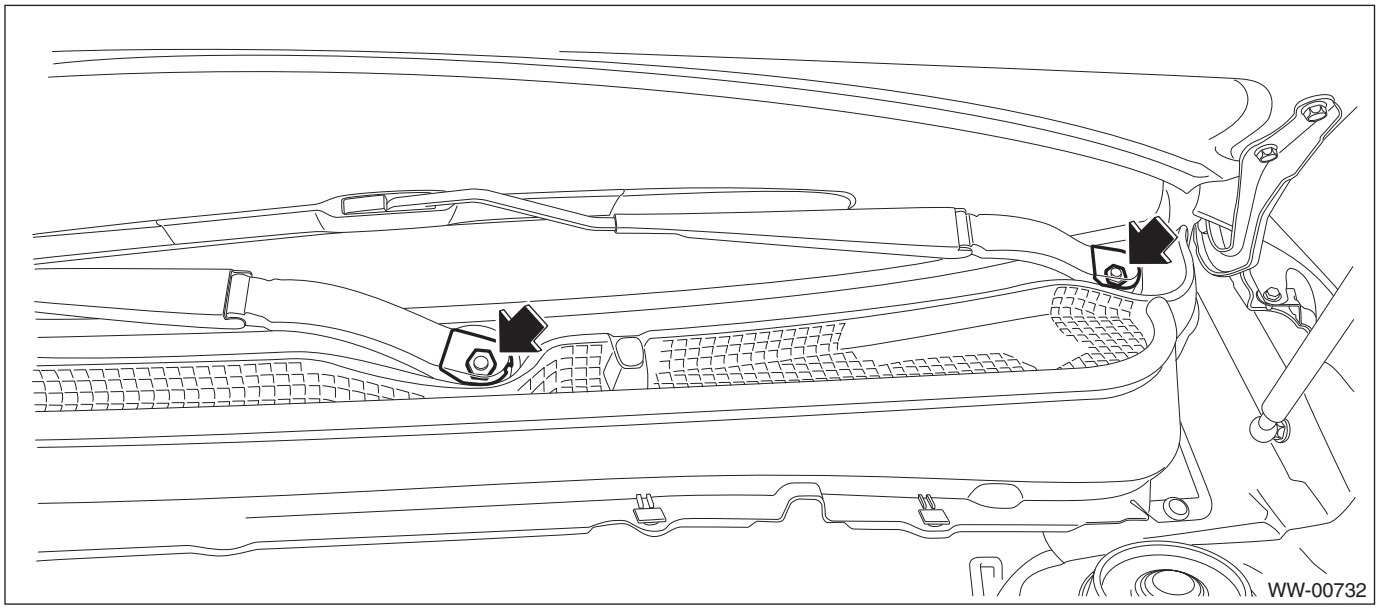
7. Front Wiper Motor and Link

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the front wiper arm assembly.

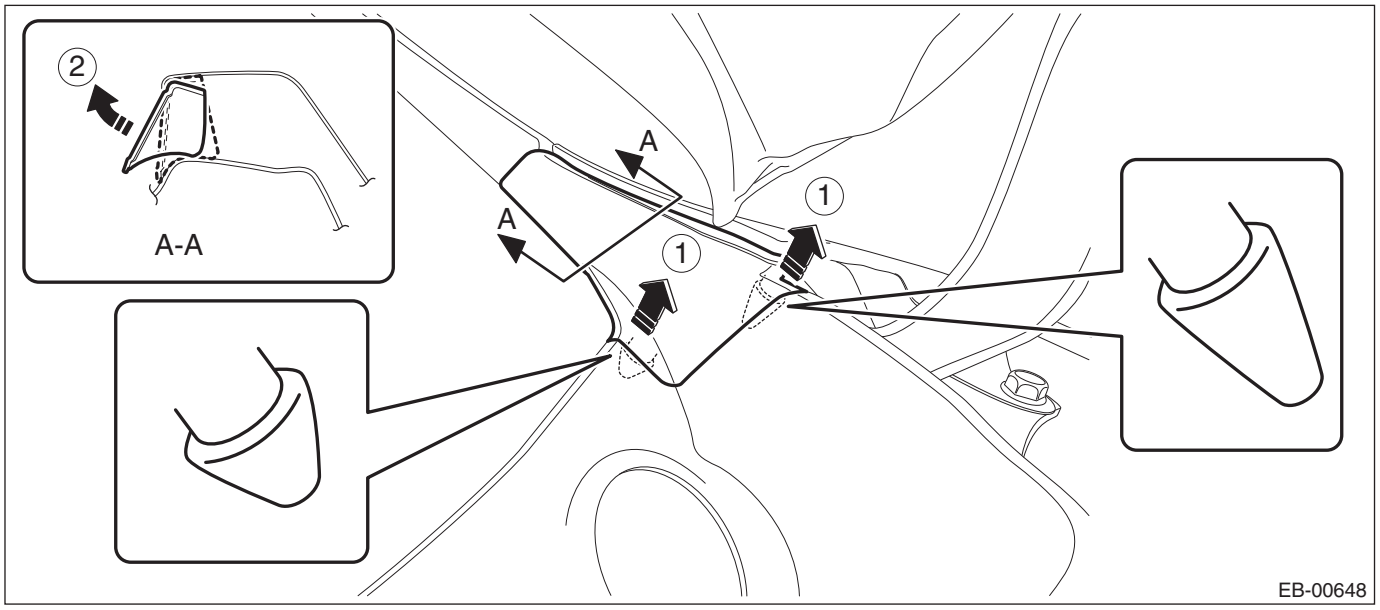
CAUTION:
Follow the steps below when standing up the wiper arm. Not following the steps may cause contacting of wiper arms and damages of wiper arms.
1. Stand up the driver's side wiper arm.
2. Stand up the passenger's side wiper arm.
Fold the wiper arms in the reverse order.

(1) Remove the cap.
(2) Remove the nuts, and remove the front wiper arm assembly.



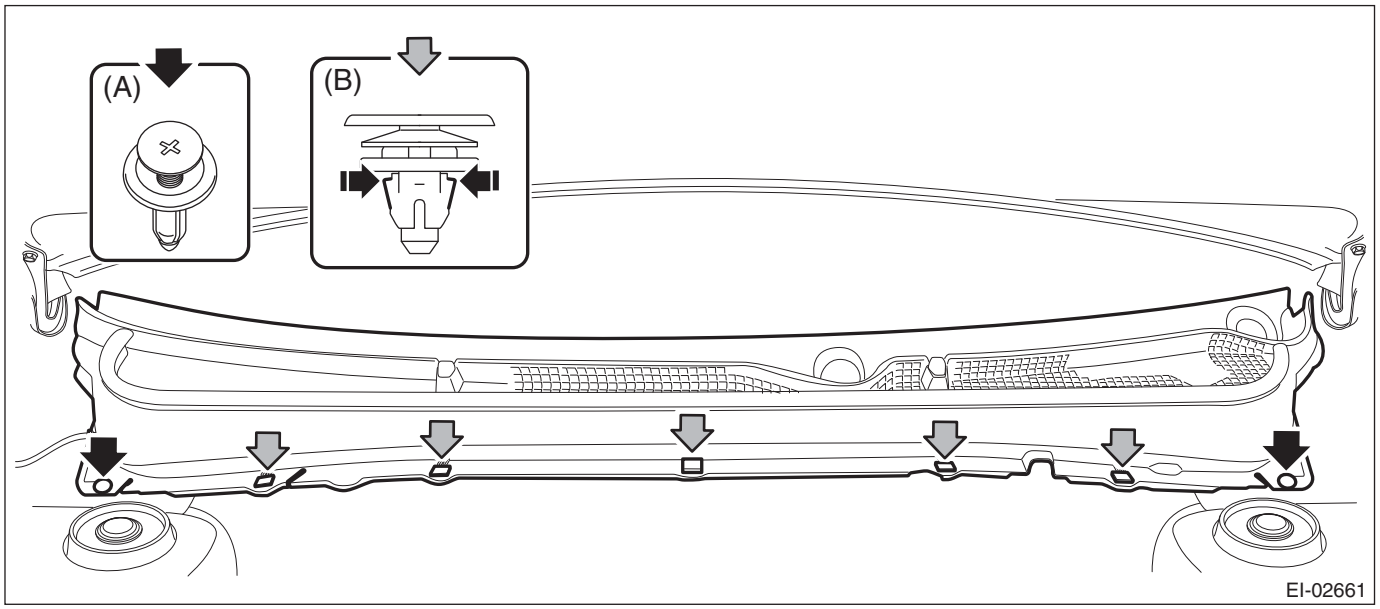
3) Remove the cowl panel side.
   (1) Detach the pins of the cowl panel side.
   (2) Remove the cowl panel side from inside the fender panel by pulling it.

CAUTION:
Applying excessive pulling force may damage the cowl panel side. If it is difficult to remove, use a plastic remover or equivalent tool.

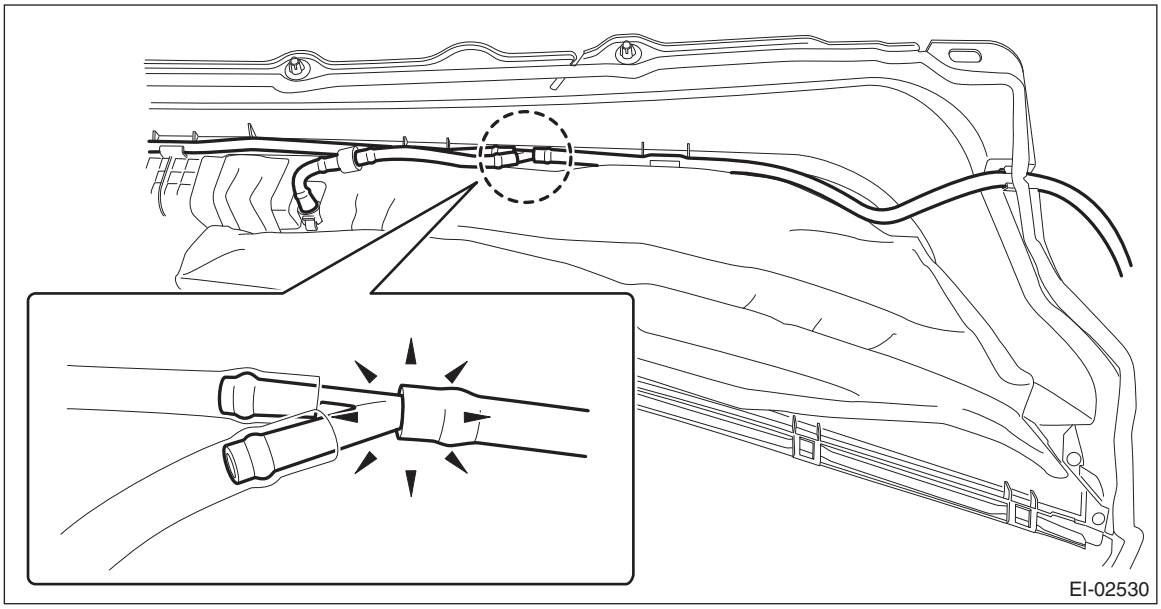


4) Remove the cowl panel.
   (1) Release the clip (A).
   (2) Push the claw of the clip (B) from both sides to remove it.

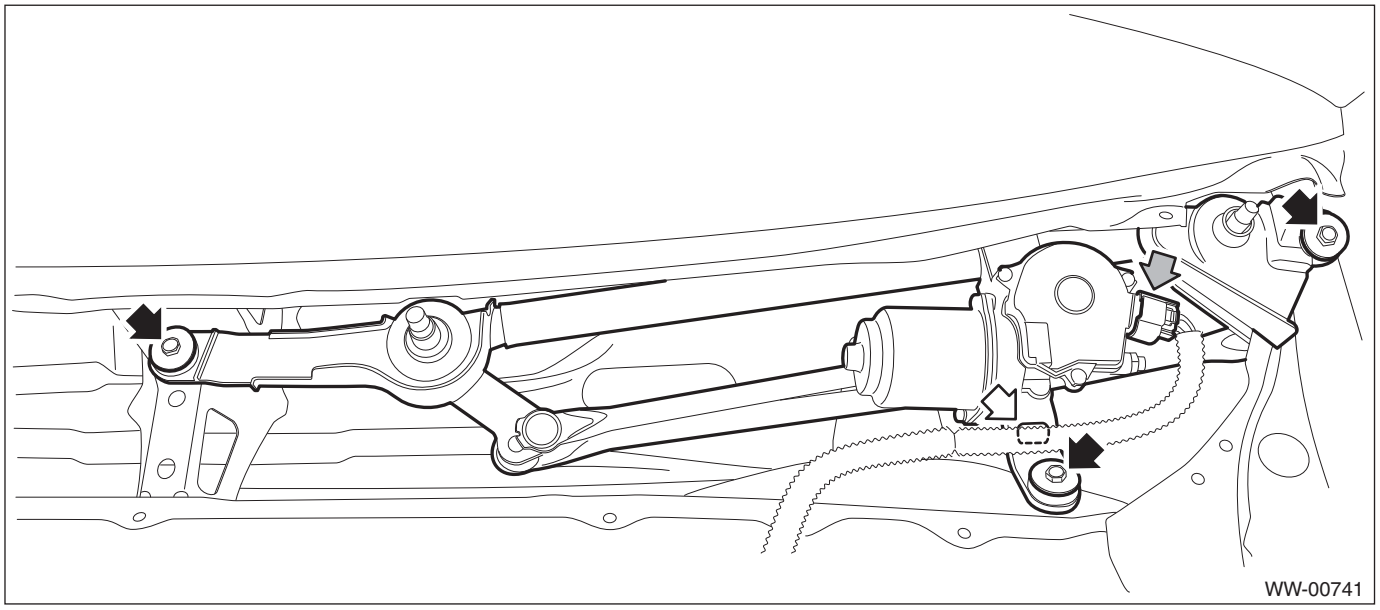
CAUTION:
When removing the clip (B), push the claw of the clip from both sides.
The clip may be damaged if forcibly pulled.



(3) Disconnect the washer hose.

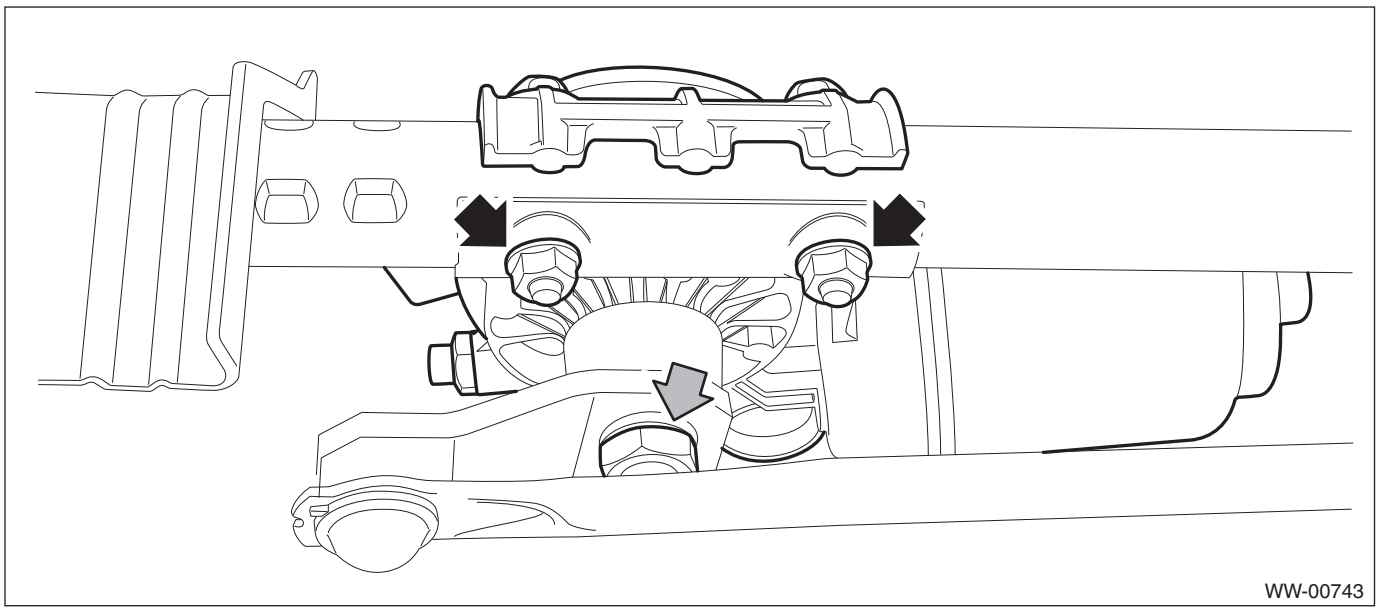


5) Remove the wiper link assembly.
(1) Disconnect the motor connector.
(2) Remove the bolts and harness clips and remove the wiper link assembly.



6) Remove the wiper motor assembly.
(1) Remove the nuts on the link plate and motor assembly to be disconnected from the link assembly.

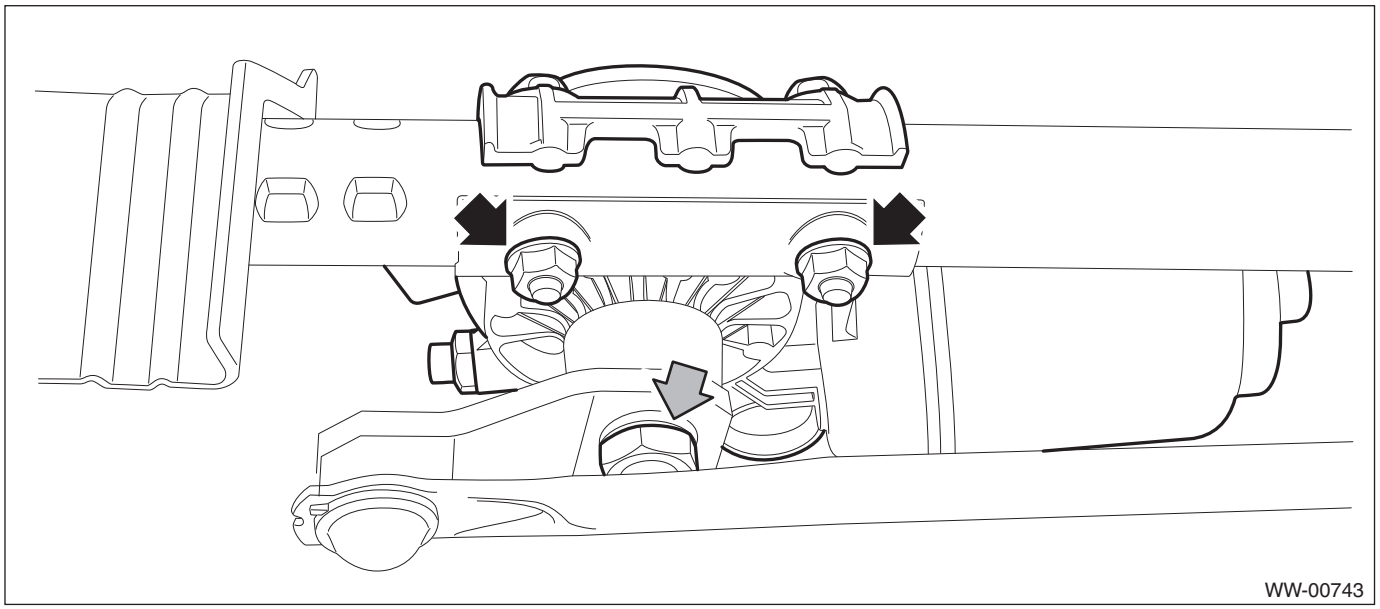
(2) Remove the nuts and remove the wiper motor assembly.

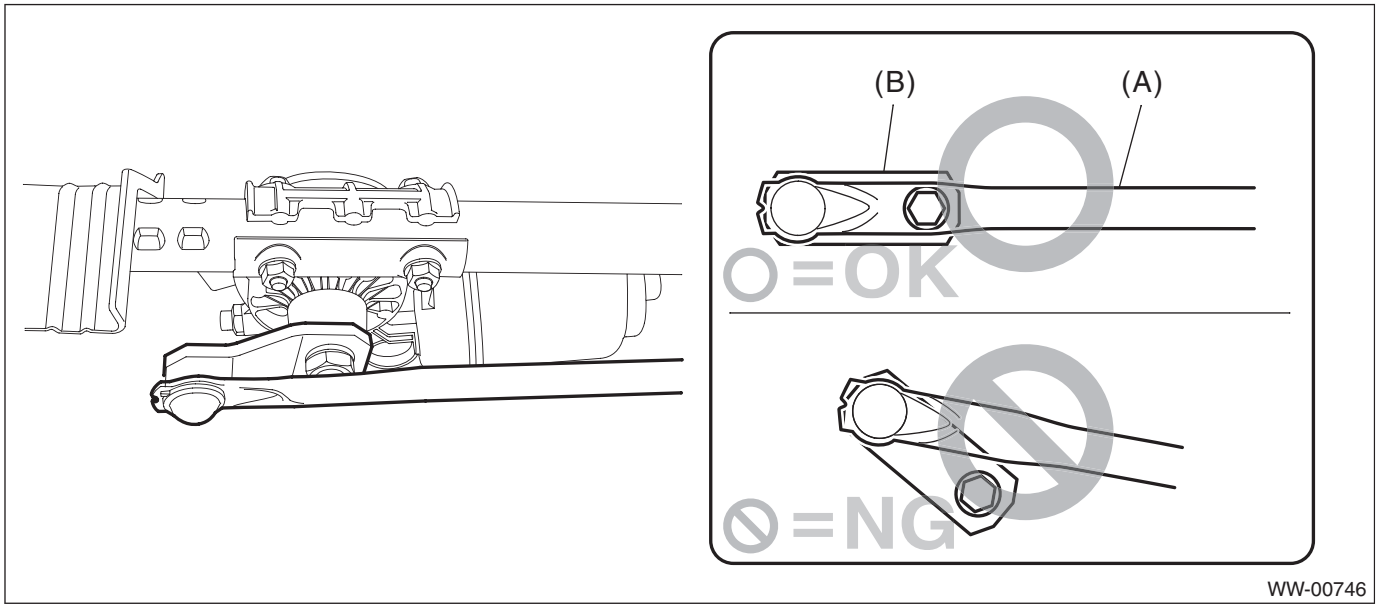


B: INSTALLATION

1) Connect the ground cable to battery.
2) To check whether the motor is at the automatic stop position, connect the harness to the motor and switch the wiper switch to ON/OFF.
3) Disconnect the ground cable from battery.
4) Install the wiper motor assembly.

CAUTION:
Tighten the nuts so that the rod (A) and link plate (B) align.


WW-00743



WW-00746

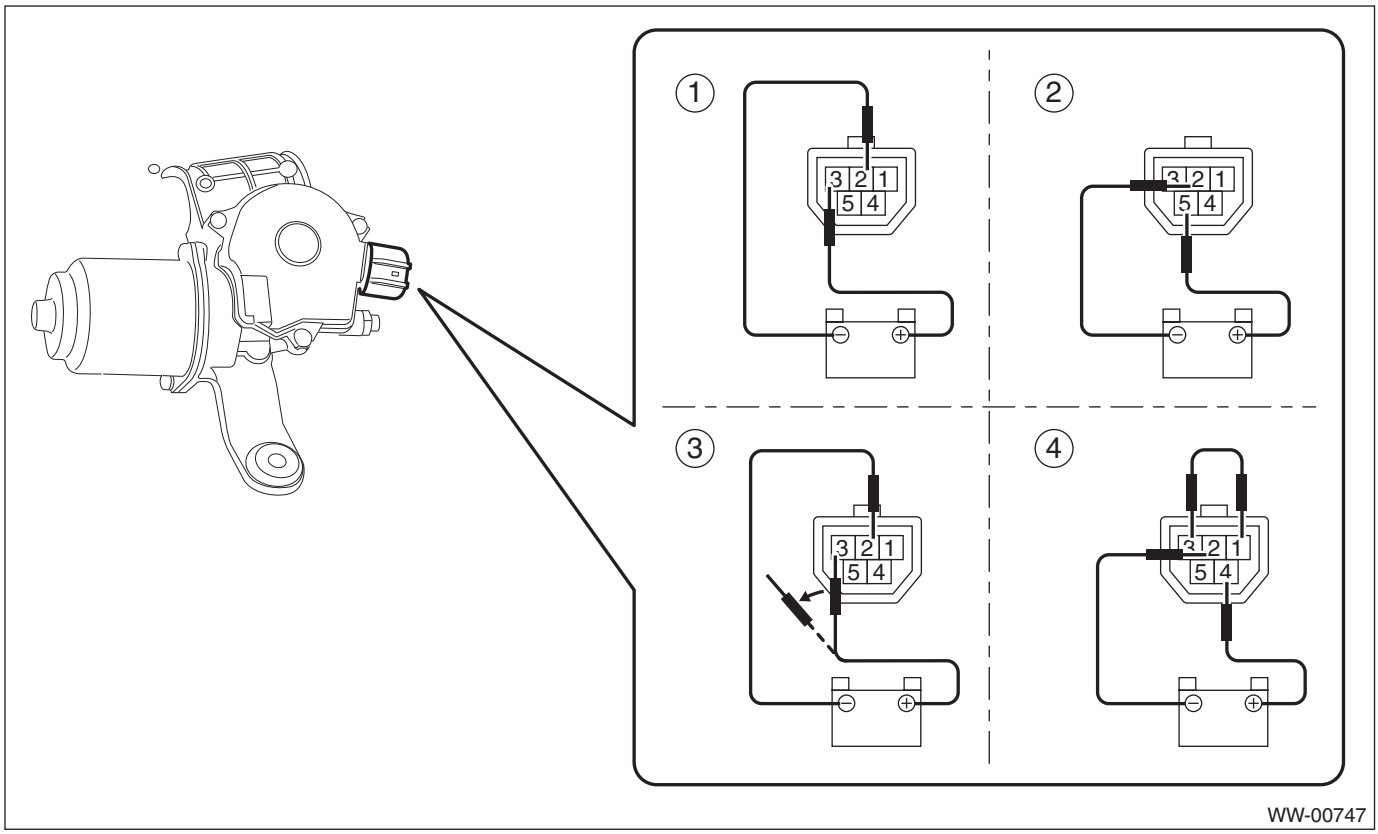
Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to WW-3, FRONT WIPER, COMPONENT, General Description.>

5) Install the wiper link assembly and cowl panel in the reverse order of removal.

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to WW-3, FRONT WIPER, COMPONENT, General Description.>

C: INSPECTION

1) When the battery is connected to the terminal of connectors, confirm that the motor operates at low speed.
2) When the battery is connected to the terminal of connectors, confirm that the motor operates at high speed.
3) Connect the battery to the terminals of connector, then run the motor at low speed and disconnect the terminal in mid motion.
4) Connect the battery and confirm that the motor stops at the automatic stop position after the motor operates at low speed again.



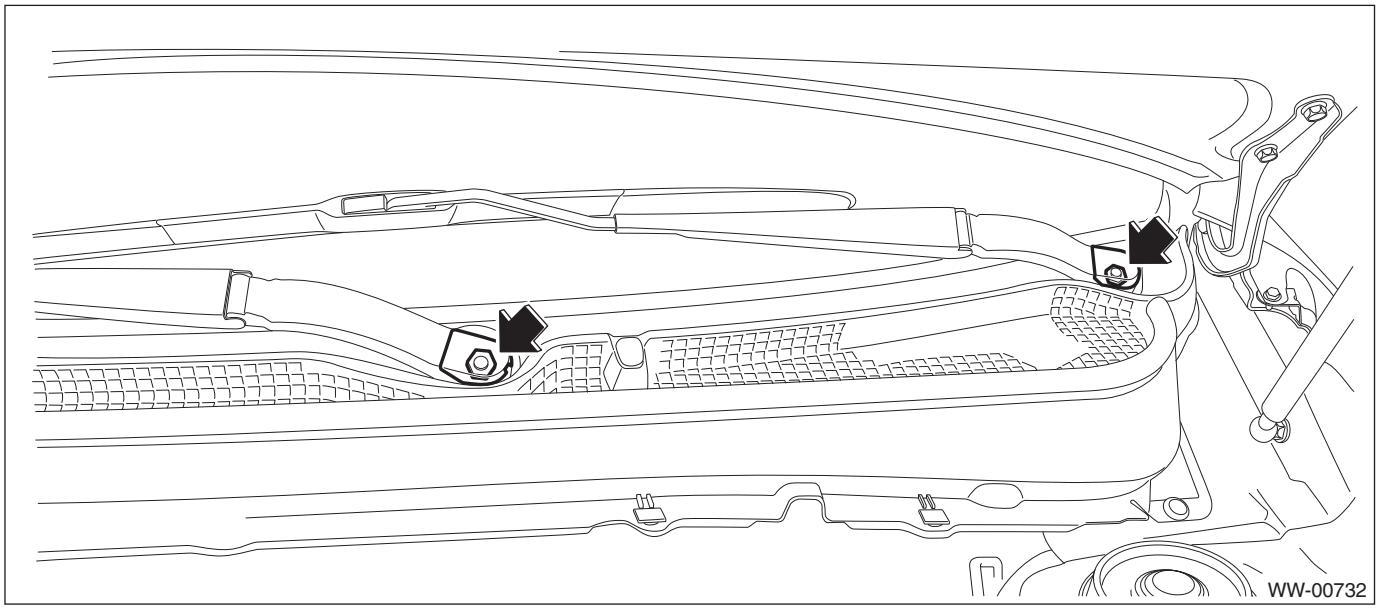
8. Front Washer Nozzle

A: REMOVAL

1) Disconnect the ground cable from battery.
2) Remove the front wiper arm assembly.

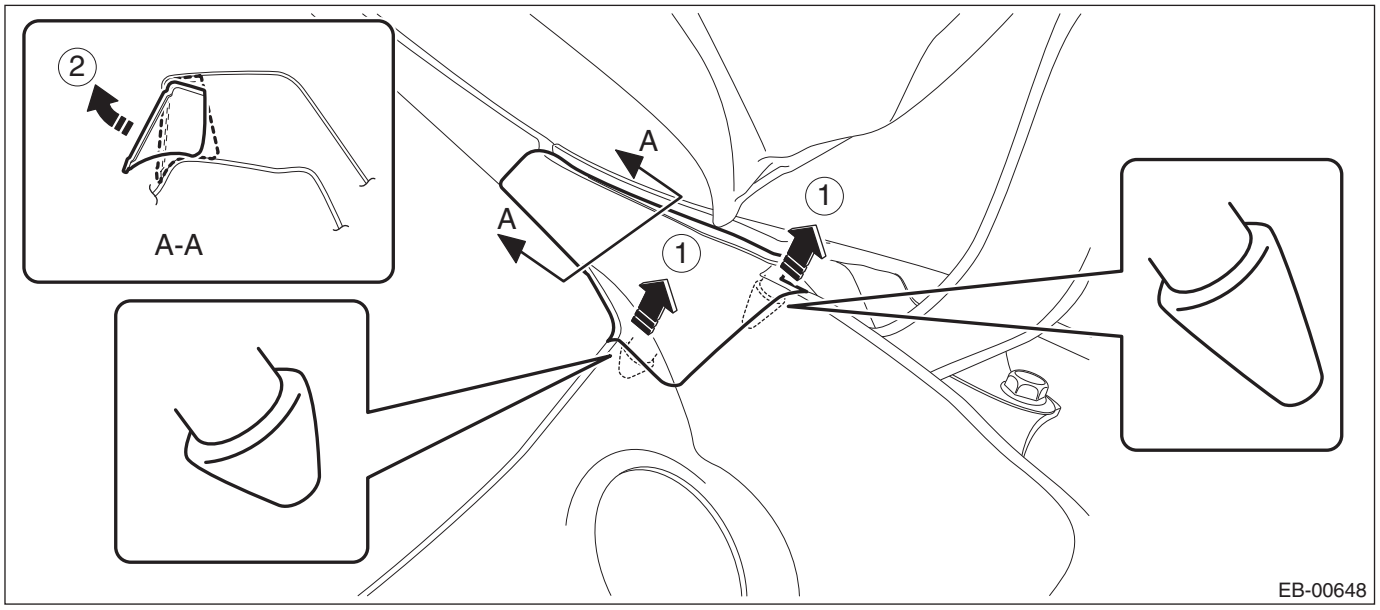
CAUTION:
Follow the steps below when standing up the wiper arm. Not following the steps may cause contacting of wiper arms and damages of wiper arms.
1. Stand up the driver's side wiper arm.
2. Stand up the passenger's side wiper arm.
Fold the wiper arms in the reverse order.

(1) Remove the cap.
(2) Remove the nuts, and remove the front wiper arm assembly.



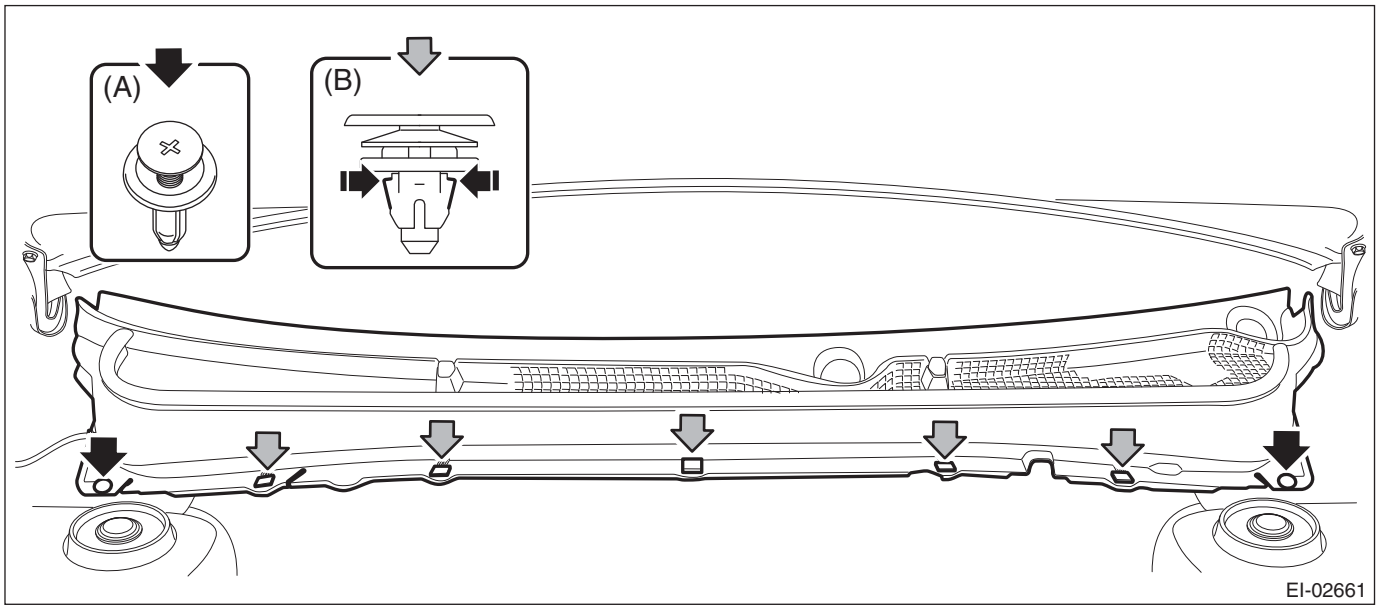
3) Remove the cowl panel side.
   (1) Detach the pins of the cowl panel side.
   (2) Remove the cowl panel side from inside the fender panel by pulling it.

CAUTION:
Applying excessive pulling force may damage the cowl panel side. If it is difficult to remove, use a plastic remover or equivalent tool.

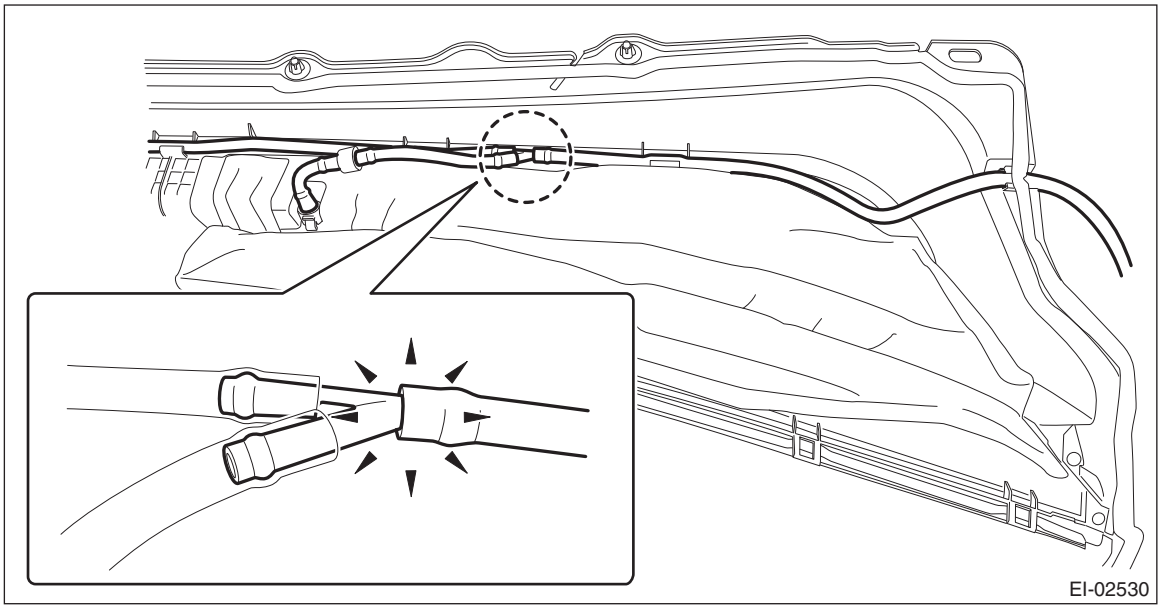


4) Remove the cowl panel.
   (1) Release the clip (A).
   (2) Push the claw of the clip (B) from both sides to remove it.

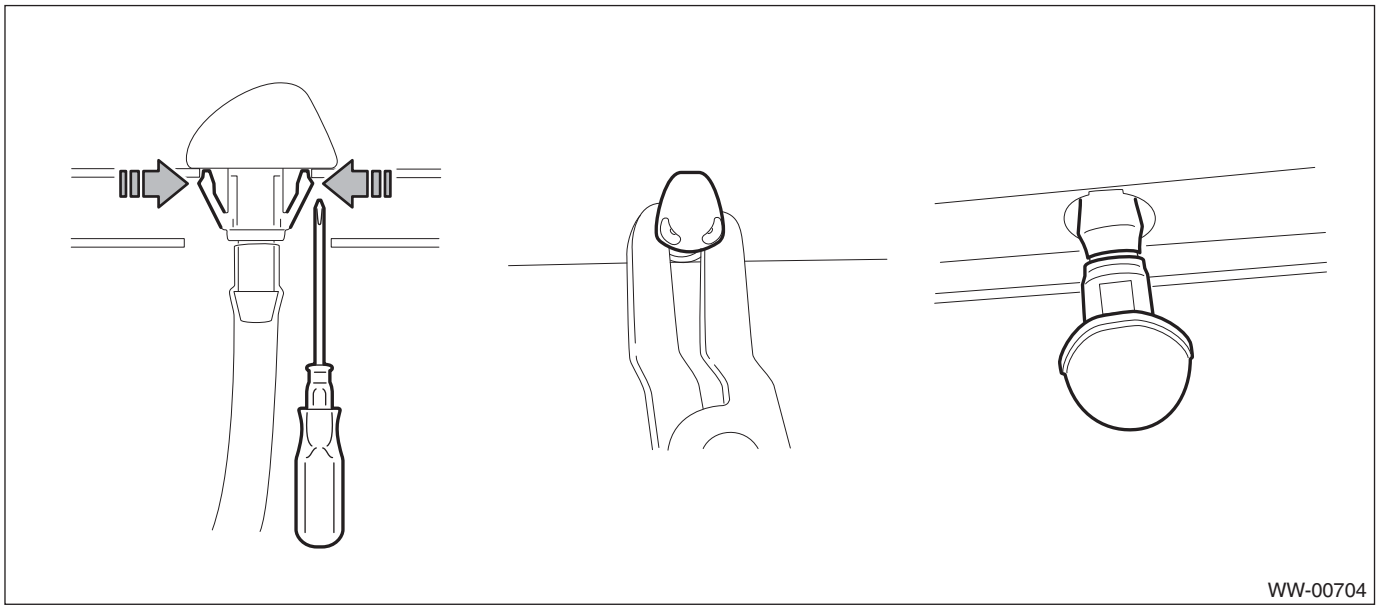
CAUTION:
When removing the clip (B), push the claw of the clip from both sides.
The clip may be damaged if forcibly pulled.



(3) Disconnect the washer hose.



5) Remove the front washer nozzle.
(1) Push the claw using a flat tip screwdriver, etc.
(2) When the washer nozzle lifts up, pull out the nozzle using a clip remover, etc.
(3) Disconnect the washer hose and remove the washer nozzle.



B: INSTALLATION

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

Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to WW-3, FRONT WIPER, COMPONENT, General Description.>

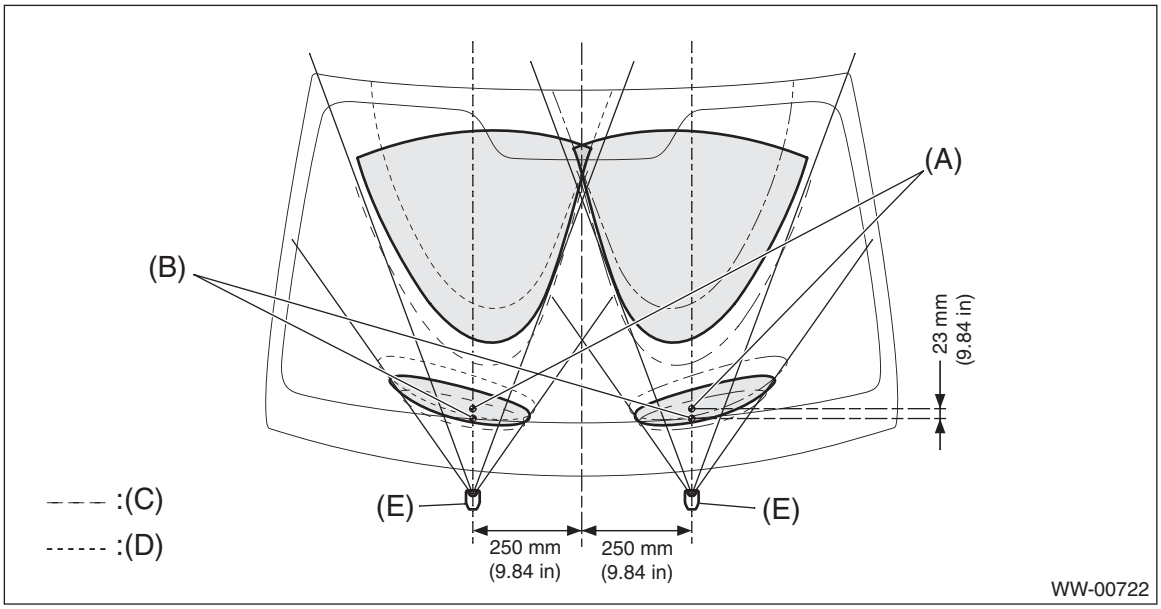
2) Adjust the washer nozzle position. <Ref. to WW-34, ADJUSTMENT, Front Washer Nozzle.>

C: INSPECTION

- Make sure the nozzle and hose are not clogged.
- Make sure the hose is not bent.

D: ADJUSTMENT

1) Turn the wiper switch to OFF position.
2) While the vehicle is at a standstill, adjust the washer injection position as shown in the figure.

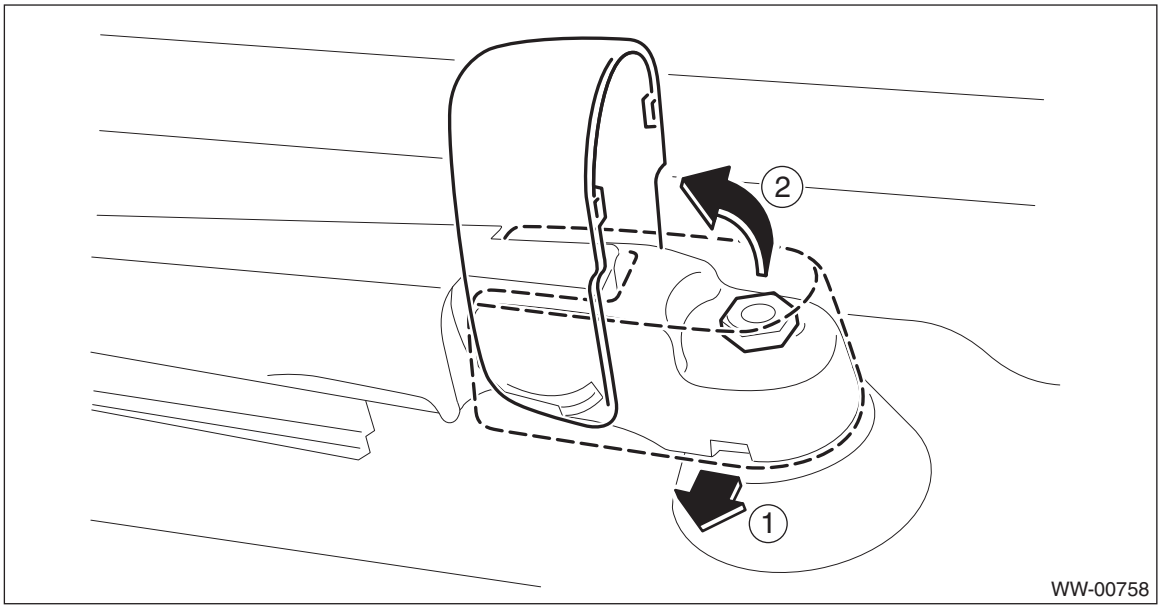


(A) Hitting point center
(B) Lower-side spray position center
(C) Washer fluid elevation angle/dispersal angle lower limit
(D) Washer fluid elevation angle/dispersal angle upper limit
(E) Upper spray nozzle center of washer nozzle

9. Rear Wiper Arm

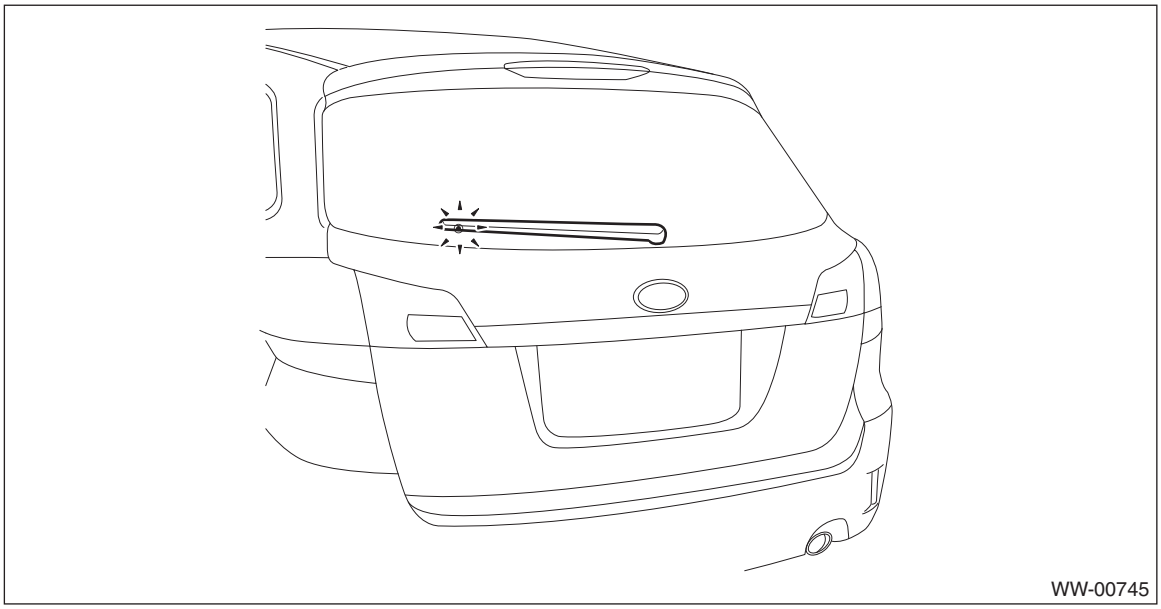
A: REMOVAL

1) Pull up the wiper arm cover.
2) Remove the nut and remove the wiper arm.



B: INSTALLATION

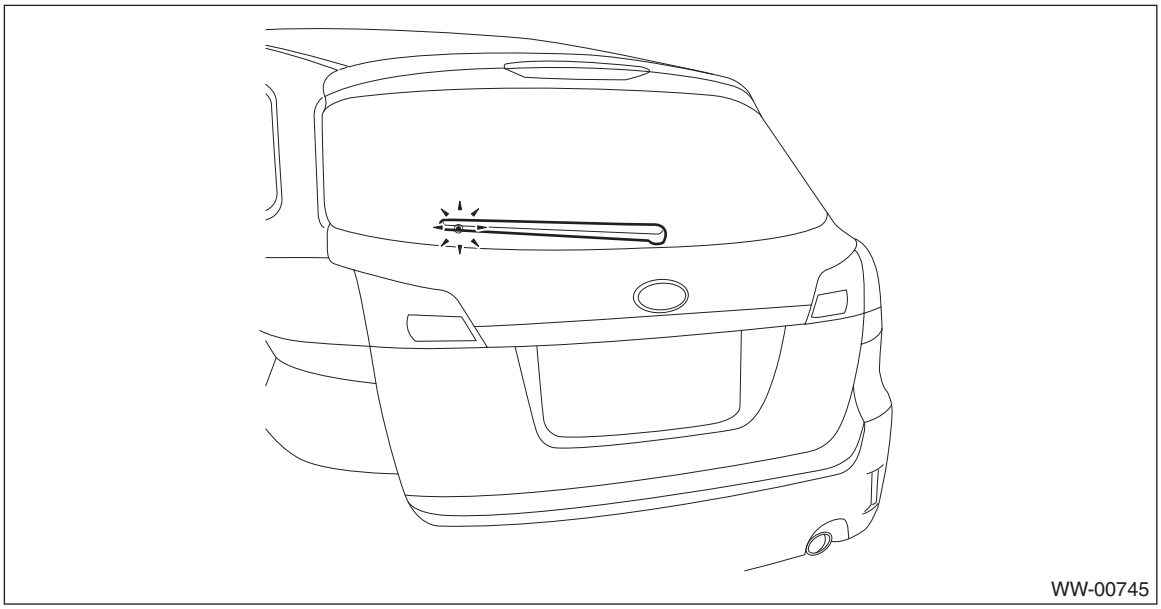
1) Install in the reverse order of removal.
2) Operate the rear wiper once.
3) Align the blade with the marking on the glass.



Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to WW-4, REAR WIPER, COMPONENT, General Description.>

C: ADJUSTMENT

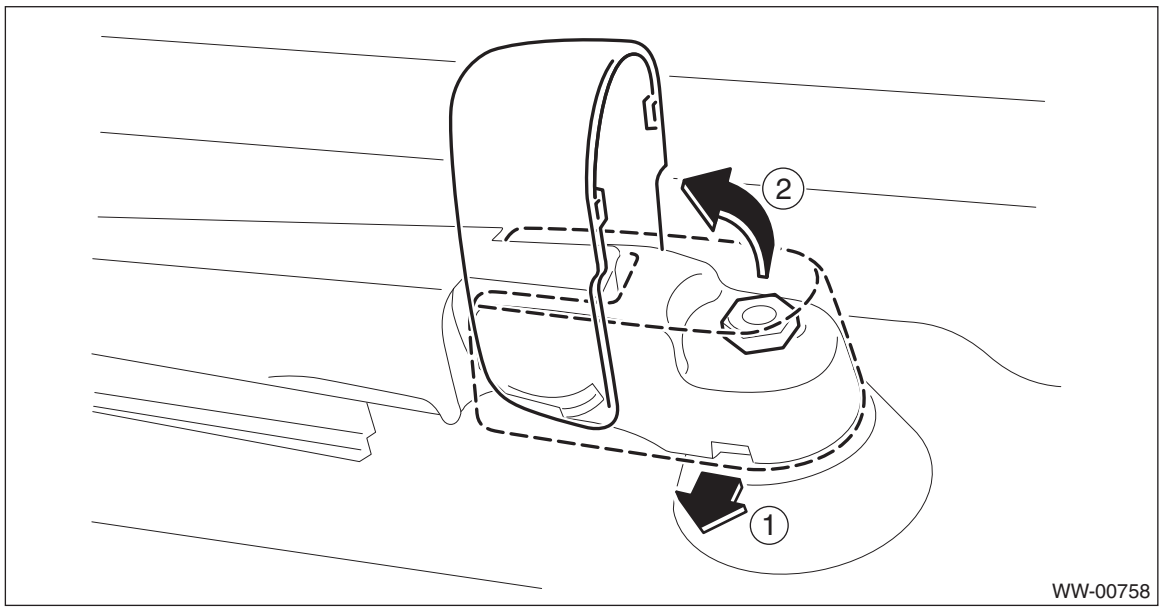
1) Operate the rear wiper once.
2) Align the blade with the marking on the glass.



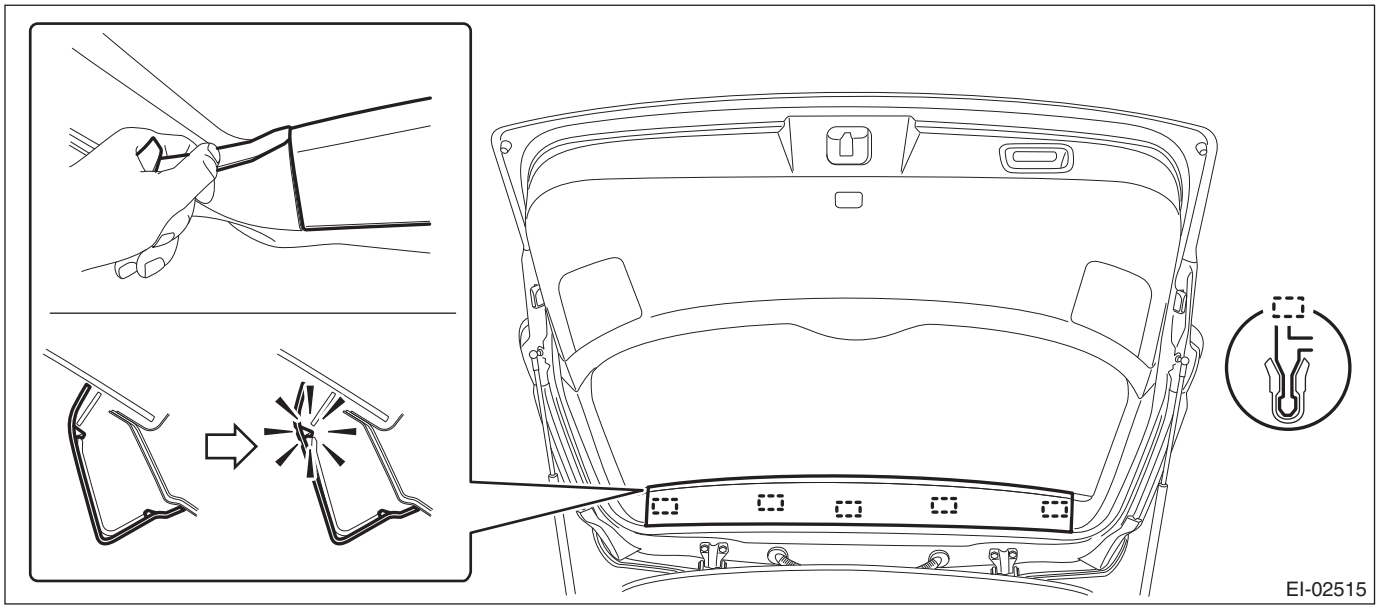
10.Rear Wiper Motor

A: REMOVAL

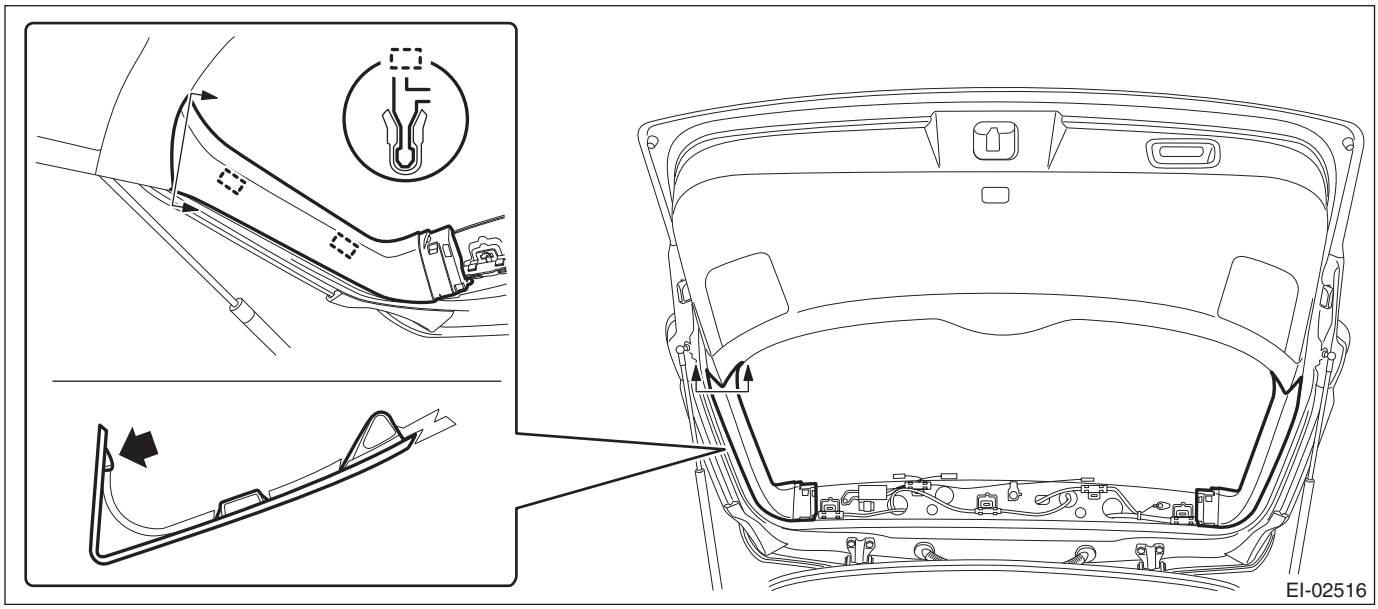
1) Disconnect the ground cable from battery.
2) Remove the rear wiper arm assembly.
   (1) Remove the wiper arm cover.
   (2) Remove the nut and remove the wiper arm.



3) 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.



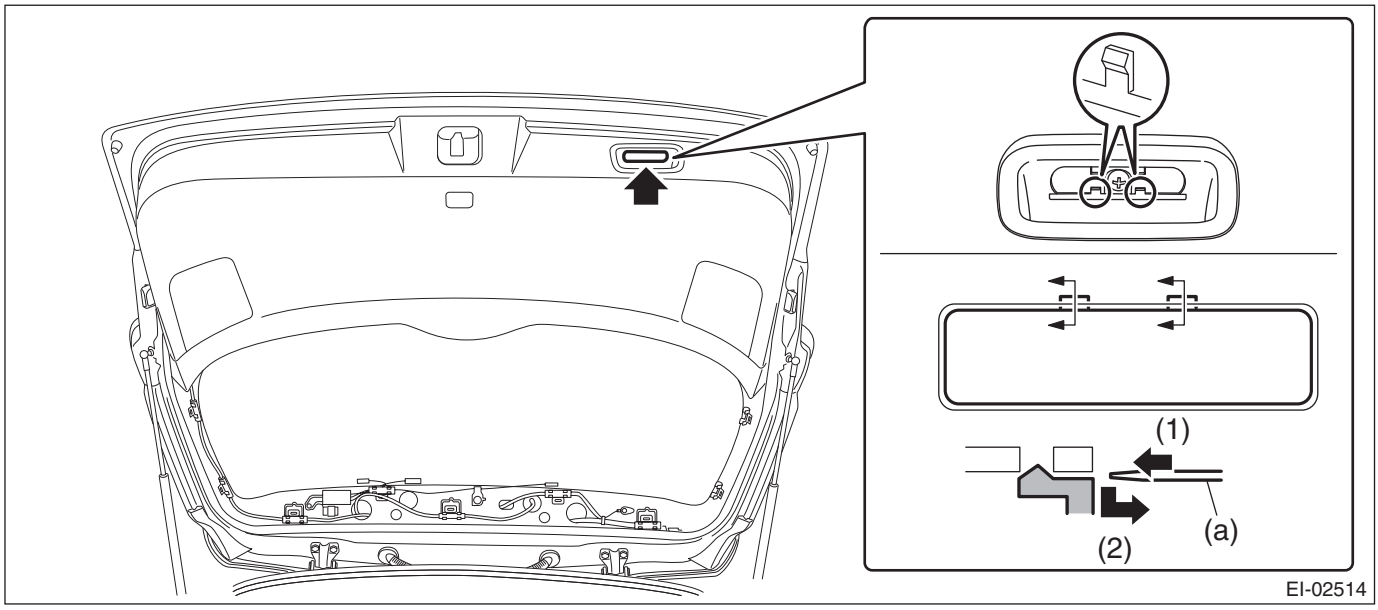
(2) Remove the rear gate pillar trim.
a) Release the claws.
b) Remove the claws on the bottom of trim, and remove the rear gate pillar trim.



(3) Remove the hand grip of rear gate.

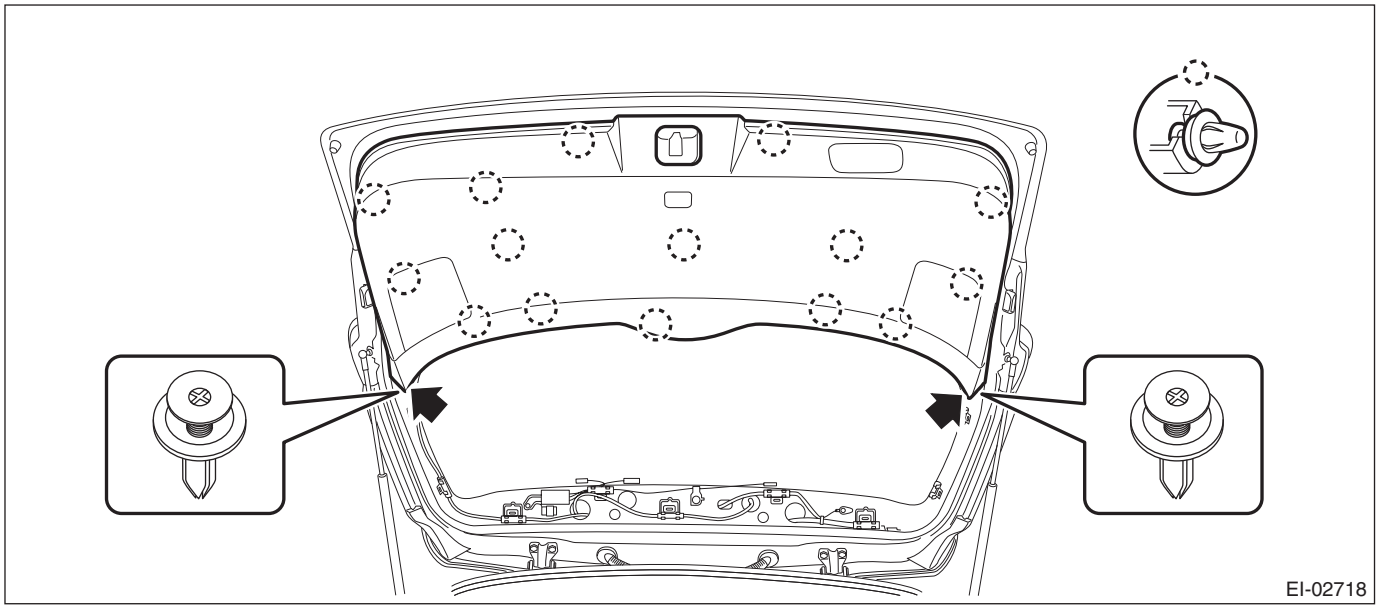
CAUTION:
- **Be careful not to scratch the trim.**
- **To protect the trim from damage, attach a protective tape to the tool in use.**

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.

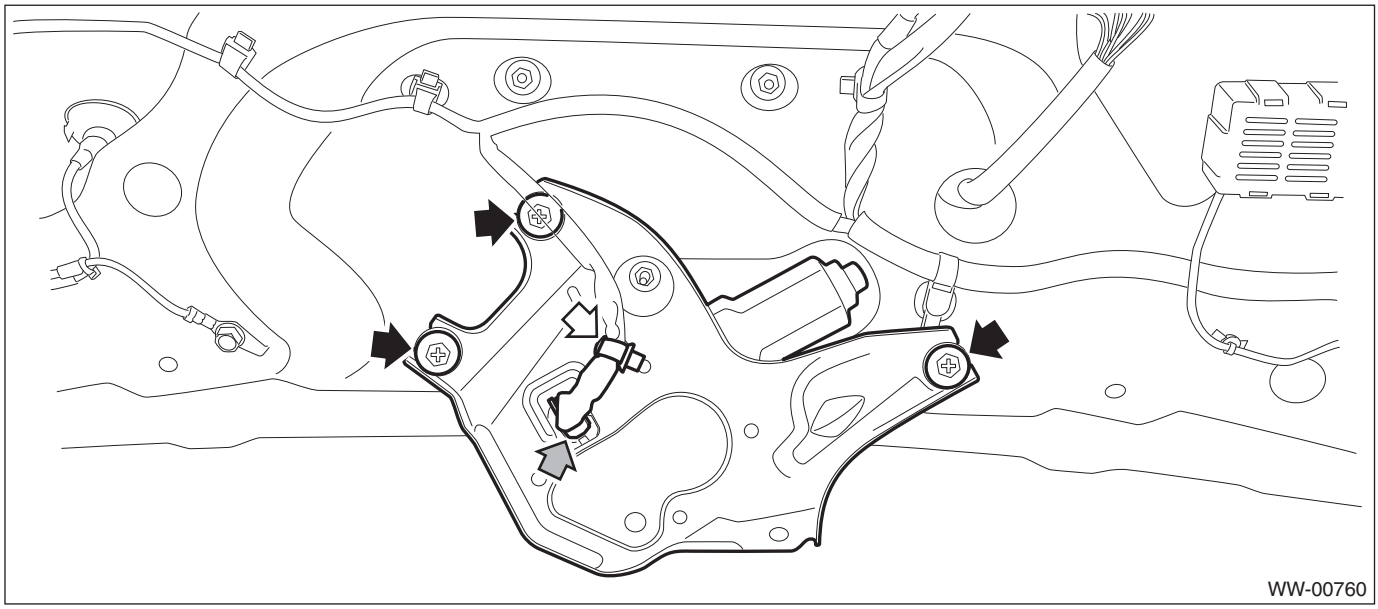


(4) Remove the rear gate lower trim.
a) Remove the clips on both ends.

b) Release the clips and remove the rear gate lower trim.

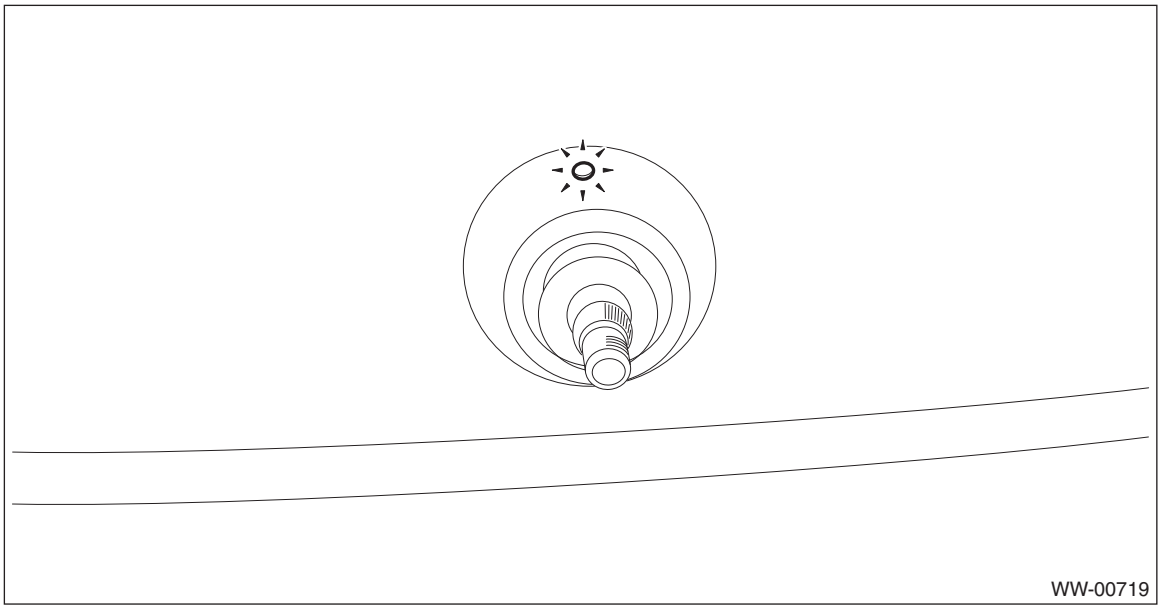


4) Remove the rear wiper motor assembly.
(1) Remove the harness clamp, and disconnect the harness connector of the wiper motor assembly.
(2) Remove the bolts, and then remove the wiper motor assembly.



B: INSTALLATION

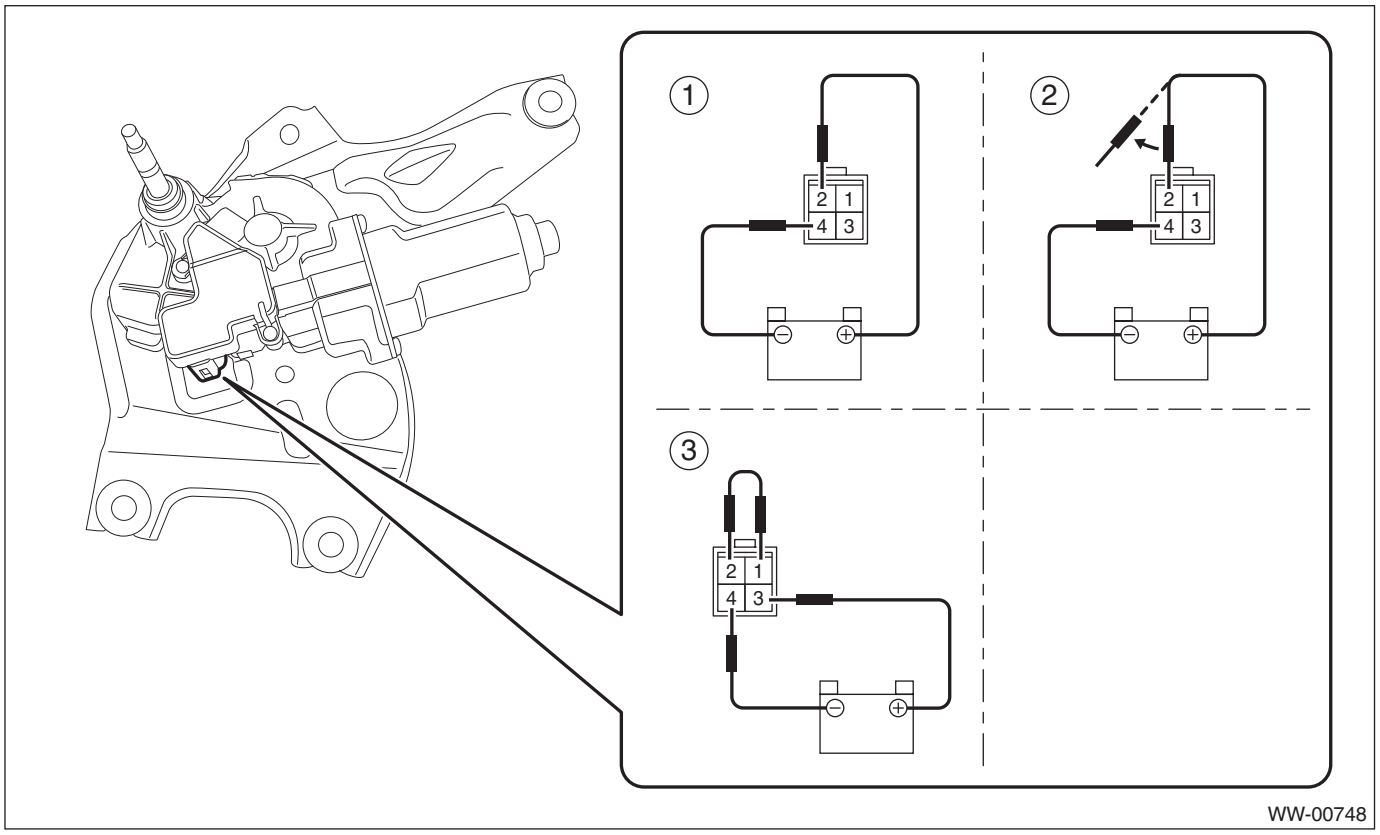
1) Install each part in the reverse order of removal.
2) Make sure that the ❍ mark on the pivot cap faces up, as shown in the figure.



Tightening torque:
Refer to "COMPONENT" of "General Description". <Ref. to WW-4, REAR WIPER, COMPONENT, General Description.>

C: INSPECTION

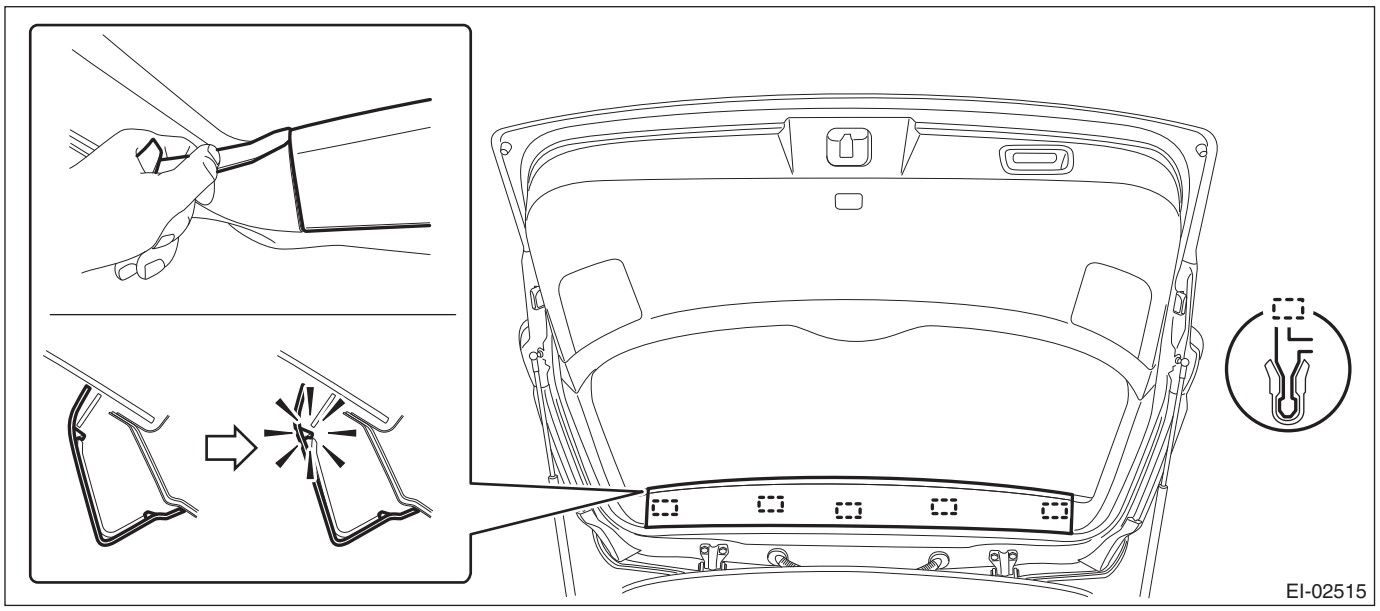
1) Connect the battery to the wiper motor connector and confirm that wiper motor operates.
2) Connect the battery to the terminals of connector, then run the motor and disconnect the terminal in mid motion.
3) Connect the battery and confirm that the motor stops at the automatic stop position after the motor operates at low speed again.



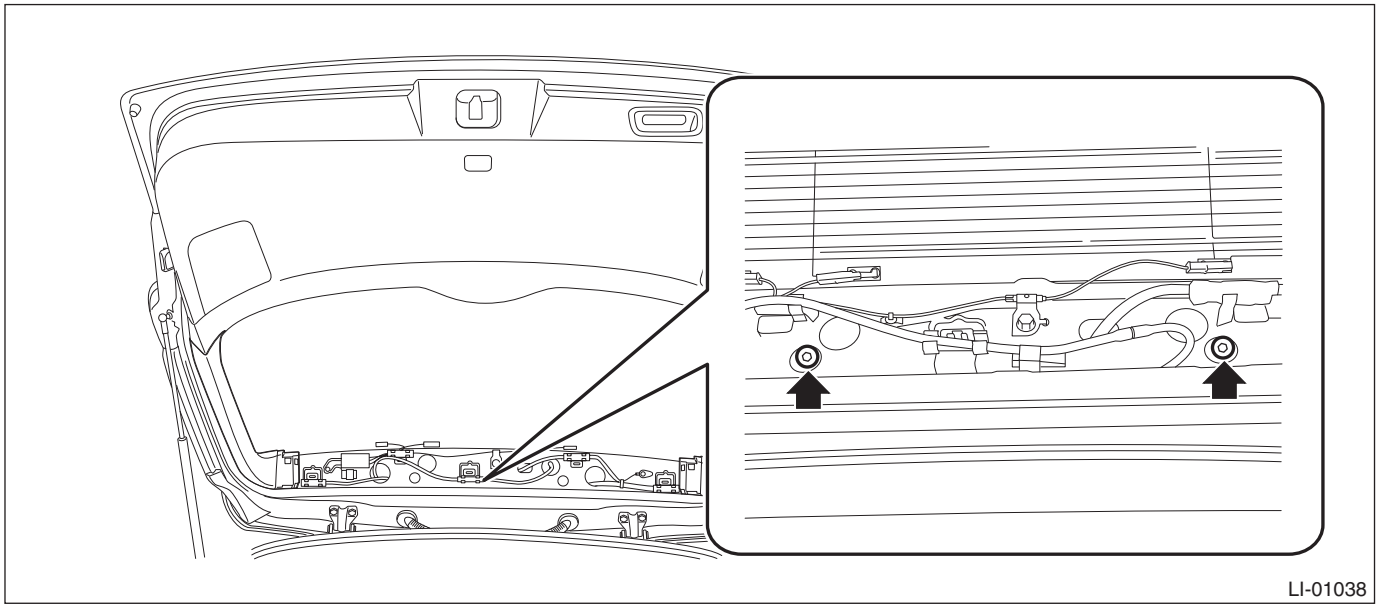
11.Rear Washer

A: REMOVAL

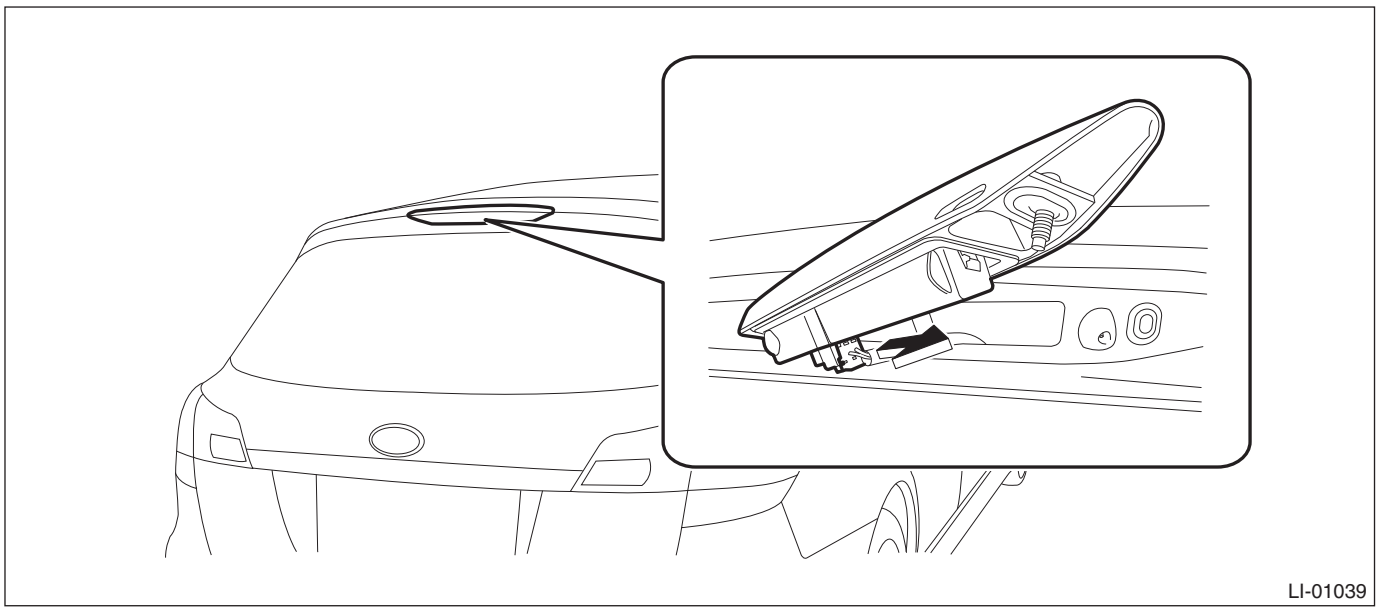
1) Disconnect the ground cable from battery.
2) Remove the rear gate upper trim.
   (1) Remove the claws on the trim edge.
   (2) Disconnect the claws in the center of trim, and remove the rear gate upper trim.



3) Remove the high-mounted stop light.
   (1) Remove the nuts.



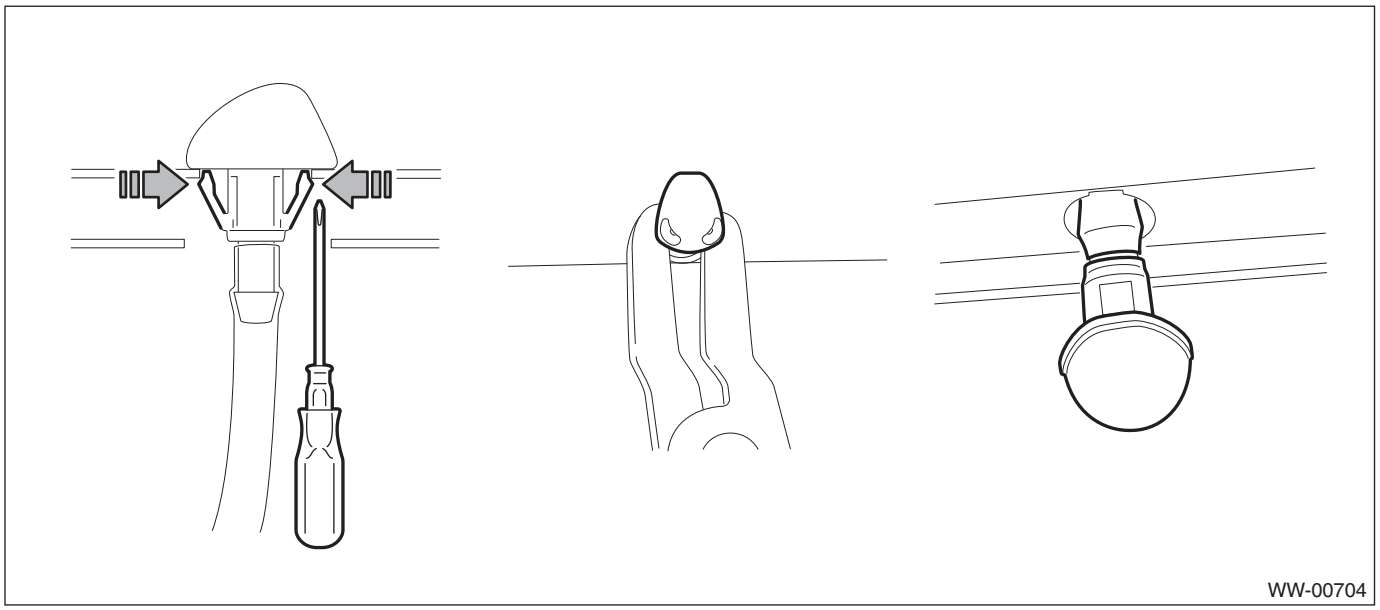
(2) Disconnect the connector and remove the high-mounted stop light.


LI-01039

4) Remove the rear washer nozzle.

CAUTION:
Before removing, apply protective tape to the body panel and used tools not to damage the rear gate panel.

(1) Push the claw using a flat tip screwdriver, etc.
(2) When the washer nozzle lifts up, pull out the nozzle using a clip remover, etc.
(3) Disconnect the washer hose and remove the washer nozzle.


WW-00704

B: INSTALLATION

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

Tightening torque:
High-mounted stop light assembly: 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)

2) Check the washer nozzle position. <Ref. to WW-44, VISUAL INSPECTION, INSPECTION, Rear Washer.>

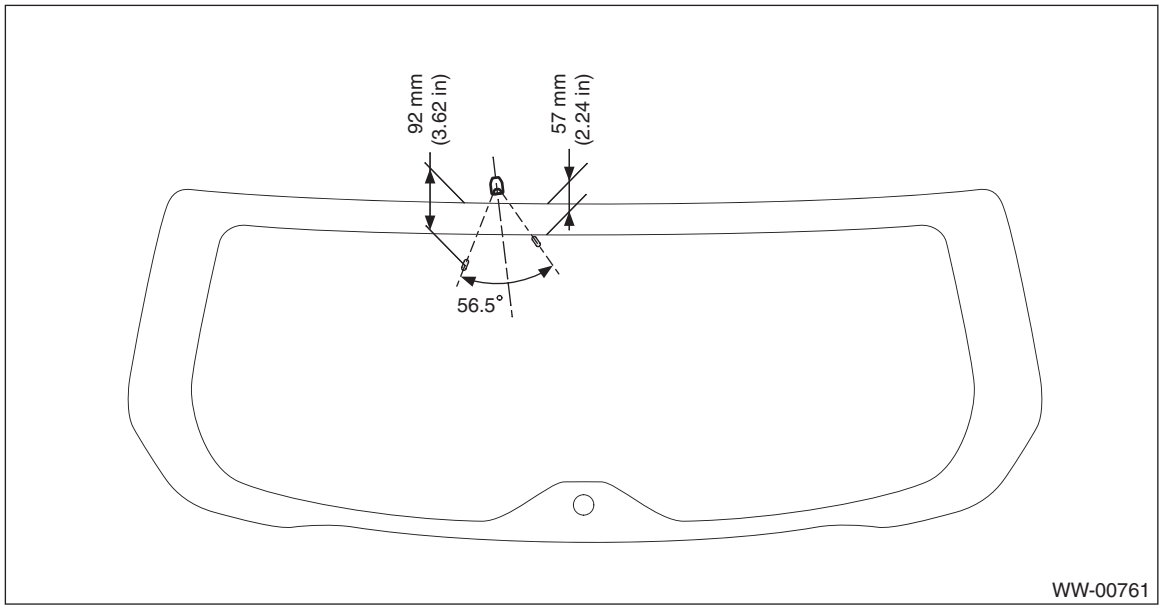
C: INSPECTION

1. VISUAL INSPECTION

Check for the following items, and if any malfunction is found, replace the corresponding part.
- Make sure the nozzle and hose are not clogged.
- Make sure the hose is not bent.

2. INSPECTING THE SPRAY POSITION

1) Turn the wiper switch to OFF position.
2) While the vehicle is stopped, check that the washer spray position is as shown in the figure.
3) After inspection, if the spray position is out of the specified range, adjust the position or replace with the new washer nozzle.



1. General Description

A: CAUTION

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

B: PREPARATION TOOL

1. GENERAL TOOL

DESCRIPTION	REMARKS
Circuit tester	Used for measuring resistance and voltage.
STEERING WHEEL PULLER	Used for removing the steering wheel.

2. Audio System

A: WIRING DIAGRAM

1. AUDIO

Refer to “Audio System” in the wiring diagram. <Ref. to WI-58, WIRING DIAGRAM, Audio System.>

B: INSPECTION

Symptoms	Repair order
No power coming in. (No display and no sound from speakers)	1. Check the fuse and power supply for audio. 2. Check the audio ground. 3. Remove the audio and repair them.
A specific speaker does not operate.	1. Check the speaker. 2. Check the output circuit between audio and speaker.
Audio generates noise with engine running.	1. Check the audio ground. 2. Check the generator. 3. Check the ignition coil. 4. Remove the audio and repair them.
Volume is low in AM and FM modes or interference noise occurs.	1. Check the antenna. 2. Check the antenna amplifier. 3. Check the rear window defogger. 4. Check the noise suppressor. 5. Check the audio ground. 6. Remove the audio and repair them.
Rear window defogger generates noise when it operate.	1. Check the rear window defogger.

C: NOTE

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

- Audio unit: <Ref. to ET-8, Audio.>
- Power amplifier: <Ref. to ET-17, Power Amplifier.>
- Front side speaker: <Ref. to ET-10, FRONT SIDE SPEAKER, REMOVAL, Front Speaker.>
- Front door speaker: <Ref. to ET-11, FRONT DOOR SPEAKER, REMOVAL, Front Speaker.>
- Rear door speaker: <Ref. to ET-13, Rear Speaker.>
- Woofer: <Ref. to ET-15, Woofer.>
- Antenna: <Ref. to ET-18, Antenna.>
- Steering satellite switch: <Ref. to ET-28, Steering Satellite Switch.>

3. Navigation System

A: WIRING DIAGRAM

Refer to “Navigation System” in the wiring diagram. <Ref. to WI-167, WIRING DIAGRAM, Navigation System.>

B: INSPECTION

NOTE:
If no problems are found in “CHECK NAVIGATION OPERATION”, “CHECK EACH CONNECTION” and “CHECK EACH VEHICLE SIGNAL” as described below, check the navigation system circuit. <Ref. to WI-167, WIRING DIAGRAM, Navigation System.>

1. CHECK NAVIGATION OPERATION

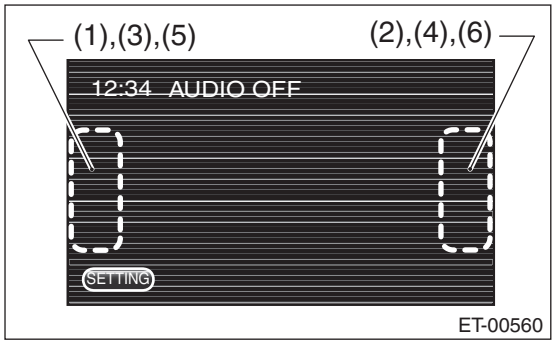
Start the engine and check that the opening screen is displayed.
Standard: Opening screen is displayed.
OK: Normal.
NG: If the screen is not displayed, check the following items.

- The map disk (DVD-ROM) is set in the navigation system unit
- Check the connection of the power supply connector at the backside of the navigation unit. If wire connection is correct or has got repaired, check again that the opening screen is displayed.

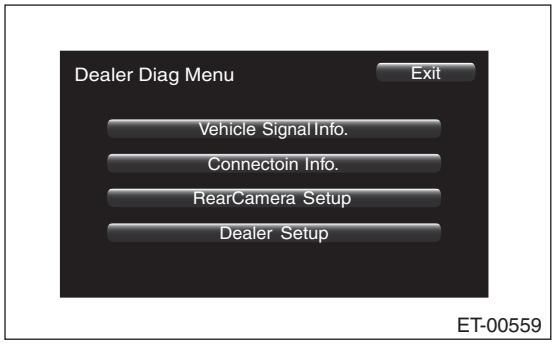
If it is not displayed at this time, it indicates the navigation unit trouble.

2. CHECK EACH CONNECTION

1) Press the «Audio» key to display the AUDIO OFF screen.
2) Touch the screen in the order of (1) to (6) shown in the figure.



3) The display will switch to the Dealer Diag Menu screen.



• CHECK MICROPHONE, AUX AND REARVIEW CAMERA

NOTE:
Before starting inspections, check the safety around the rear end of the vehicle and then turn the ignition switch to ON.
1) Touch {Connection Info.} on the «Dealer Diag Menu» screen.
2) Check that “Connect” is displayed in all the MIC, AUX and Camera items.

NOTE:
{AUX} item is not displayed, if the suitable mini jack is not inserted in the AUX terminal in the console box.
Connect: Normal.
NC: Abnormal. Check the signal line connection. If there are no problems, the unit could be faulty.

• CHECK GPS ANTENNA

NOTE:
When checking the GPS antenna, perform the check operation outdoors to improve the receiver sensitivity.
1) Touch {Vehicle Signal Info.} on the «Dealer Diag Menu» screen.
2) Check that “Connect” is displayed in the GPS Antenna item.
Connect: Normal.
NC: Abnormal. Check the GPS antenna connection.

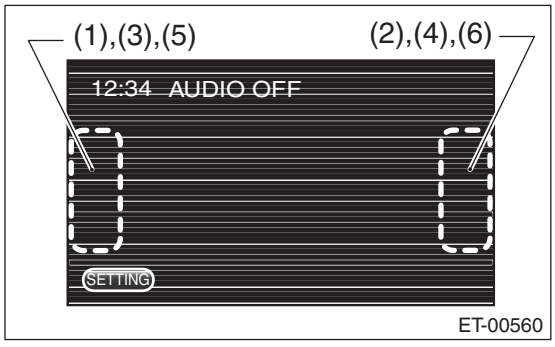
• CHECK UART COMMUNICATION

NOTE:
When checking the GPS antenna, perform the check operation outdoors to improve the receiver sensitivity.
1) Touch {Vehicle Signal Info.} on the «Dealer Diag Menu» screen.
2) Check that “ON” is displayed in the UART signal item.
OK: Normal.
NG: Abnormal. Check the signal line connection. If there are no problems, the unit could be faulty.

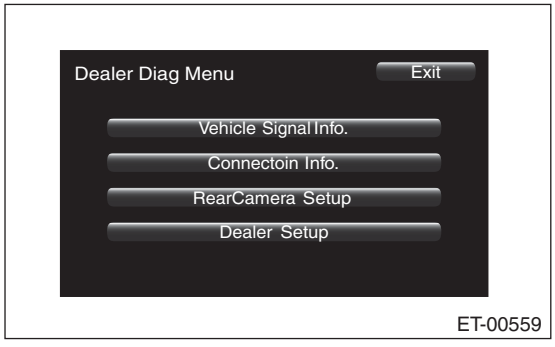
NOTE:
If the UART signal line connector is not connected, the marker line is not displayed when the rearview camera image is displayed.

3. CHECK EACH VEHICLE SIGNAL

1) Press the «Audio» key to display the AUDIO OFF screen.
2) Touch the screen in the order of (1) to (6) shown in the figure.



3) The display will switch to the Dealer Diag Menu screen.



• CHECK BACK SENSOR

1) Touch {Vehicle Signal Info.} on the «Dealer Diag Menu» screen.
2) Pull the parking brake and depress the brake pedal, then put the gear in reverse.
3) Make sure that “ON” is displayed in the Reverse item.
ON: Normal.
OFF: Abnormal. Check the signal line connection. If there are no problems, the unit could be faulty.

• CHECK IGNITION SWITCH

1) Touch {Vehicle Signal Info.} on the «Dealer Diag Menu» screen.
2) Make sure that “ON” lights in the IGN item and then the screen becomes dim.
ON: Normal.
OFF: Abnormal. Check the signal line connector. If there are no problems, the unit could be faulty.

• CHECK SPEED SENSOR

NOTE:
- Before starting inspections, check the safety around the vehicle.
- Lift up the vehicle as necessary.
- When the diagnostic trouble code is input in the VDC CM, perform the clear memory operation.

1) Touch {Vehicle Signal Info.} on the «Dealer Diag Menu» screen.
2) Move the vehicle 2 to 3 meters (6.6 to 9.8 ft).
3) Check that “ON” is displayed in the Speed item.
ON: Normal.
OFF: Abnormal. Check the signal line connection. If there are no problems, the unit could be faulty.

• CHECK PARKING BRAKE

1) Touch {Vehicle Signal Info.} on the «Dealer Diag Menu» screen.
2) Check the safety around the vehicle and depress the brake pedal.
3) Release the parking brake.
4) Apply the parking brake.
5) Check that “ON” is displayed in the Parking item.
ON: Normal.
OFF: Abnormal. Check the signal line connection. If there are no problems, the unit could be faulty.

4. CHECK DVD-ROM

Insert a DVD-ROM (region code 1) into the navigation unit and play it, and the screen switches to the image from DVD.

NOTE:
Region code 1 is the code for DVD-ROM designated for United States of America and Territories of the United States, Canada, Bermuda islands. DVD-ROMs of different region code cannot be played.
Standard: DVD images are displayed.
OK: Normal.
NG: If DVD images are not displayed, check the following points. If no problems are found, the navigation unit is faulty.
- Is a DVD-ROM set in the navigation unit?
- Is the DVD-ROM set in the unit properly?
- Is a correct type of DVD (DVD-VIDEO only) used?
- Is the playing side dirty or damaged?

NOTE:
- DVD images cannot be displayed while driving or the parking brake is not applied.
- The rear entertainment system cannot play MP3 files and DVD-Audio.

5. MESSAGE LIST

Message	Cause	Action
CHECK DISC	A nonconforming or unsupported disk or a disk with no data recorded is used, or the disk cannot be read due to damage, dirt, etc.	1. Is the playing side of the disk dirty or damaged? Check whether the disk conforming to the standard is used or the disk is set properly in the unit. 2. Check whether the disk is a playable data format.
REGION CODE ERROR	DVD region code mismatch.	Use a DVD with region code 1 displayed. (United States of America and Territories of the United States, Canada, Bermuda islands = Region code 1)
PARENTAL ERROR	Cannot play due to parental level setting.	Change the parental level set in the navigation unit.
PUSH EJECT	An error (including a high temperature error) occurred in the disk playback mechanism in the navigation unit while playing a CD (CDDA, MP3 or WMA).	1. Eject the CD and then insert again. 2. Turn the ignition switch to OFF and leave the device until the temperature lowers enough. If the message still appears after the step 1. above is performed, the unit could be faulty. 3. Turn the ignition switch to ACC/ON again and start DVD. 4. If the message still appears after the above-mentioned step is performed, the unit could be faulty.
PUSH EJECT	An error occurred in the disk playback mechanism in the navigation unit while playing a DVD.	1. Eject the DVD and then insert again. 2. Turn the ignition switch to OFF and leave the device until the temperature lowers enough. If the message still appears after the step 1. above is performed, the unit could be faulty. 3. Turn the ignition switch to ACC/ON again and start DVD. 4. If the message still appears after the above-mentioned step is performed, the unit could be faulty.

C: NOTE

For operation procedures of each component of the navigation system, refer to the respective section.
- Navigation unit <Ref. to ET-33, Navigation Body.>
- GPS antenna <Ref. to ET-35, GPS Antenna.>

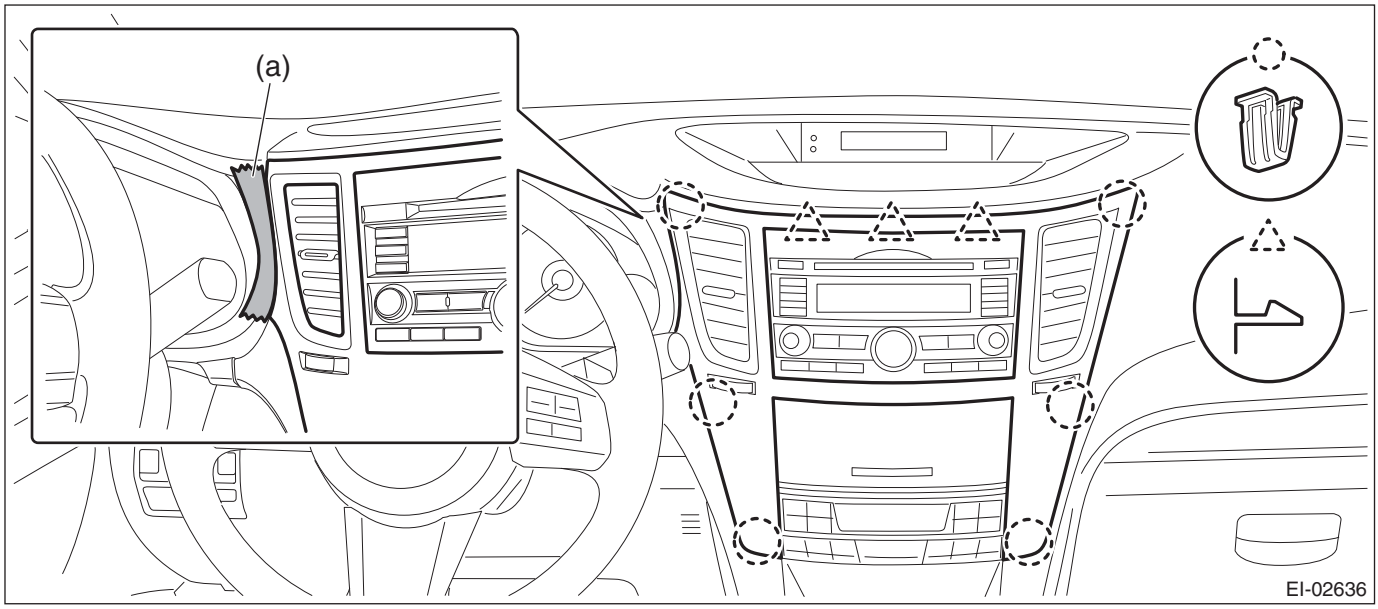
4. Audio

A: REMOVAL

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

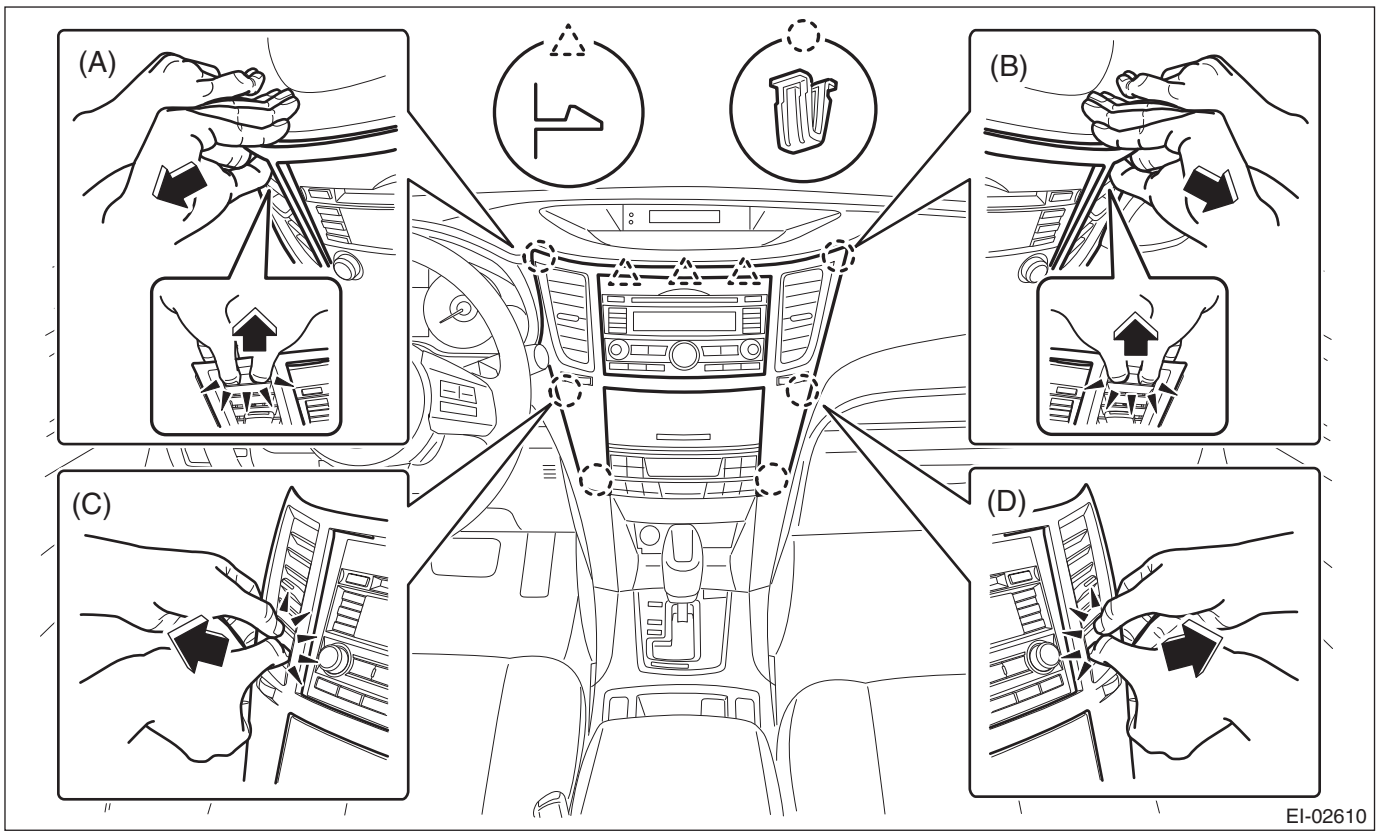
CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

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

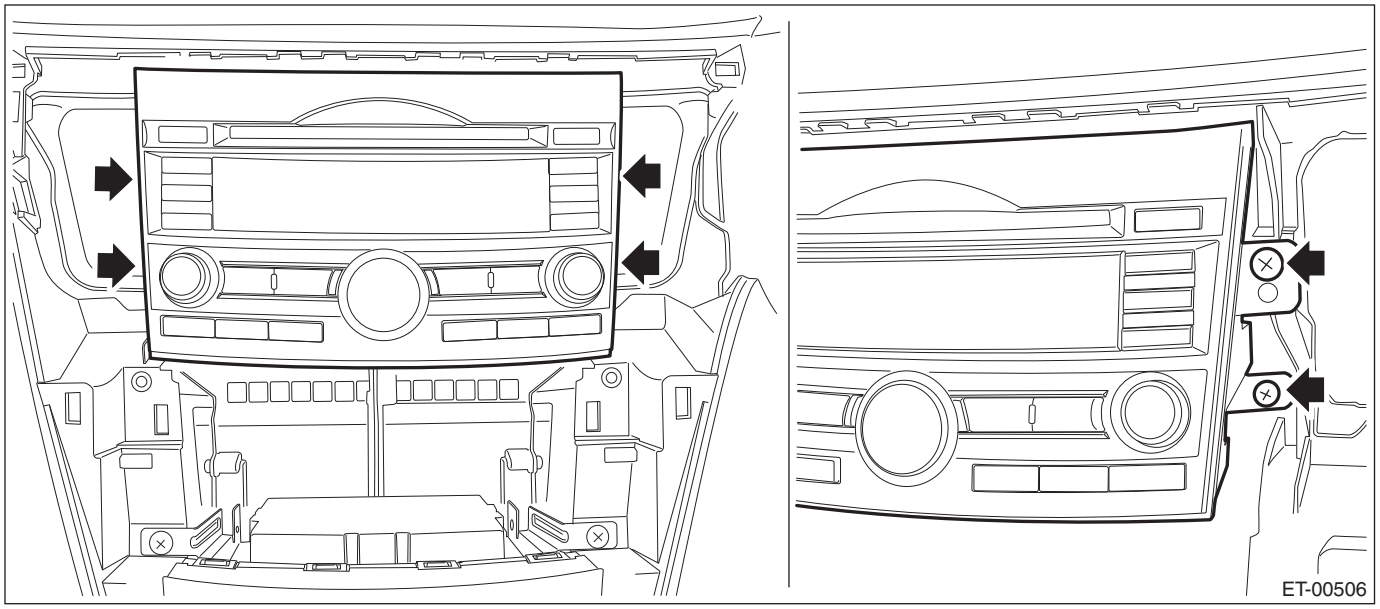


(2) Insert a finger into the air vent grille and release the left and right clips at the top of the center panel. (A), (B)
(3) Insert a finger into the air vent grille and release the left and right clips at the center of the center panel. (C), (D)

(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.



B: INSTALLATION

Install each part in the reverse order of removal.

5. Front Speaker

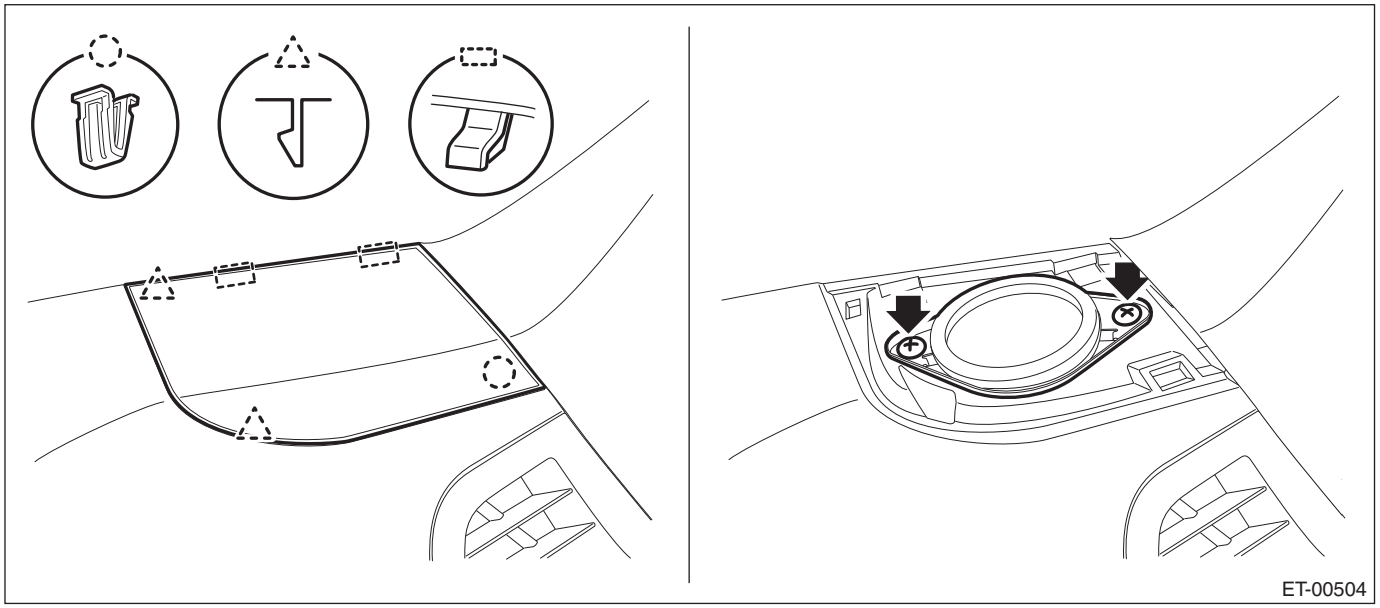
A: REMOVAL

1. FRONT SIDE SPEAKER

NOTE:
harman/kardon® audio system only.
1) Disconnect the ground cable from battery.
2) Remove the front side speaker.
(1) Release the clips and claws, then detach the speaker cover.

CAUTION:
Use a plastic clip remover for removal.
(2) Remove the screws.

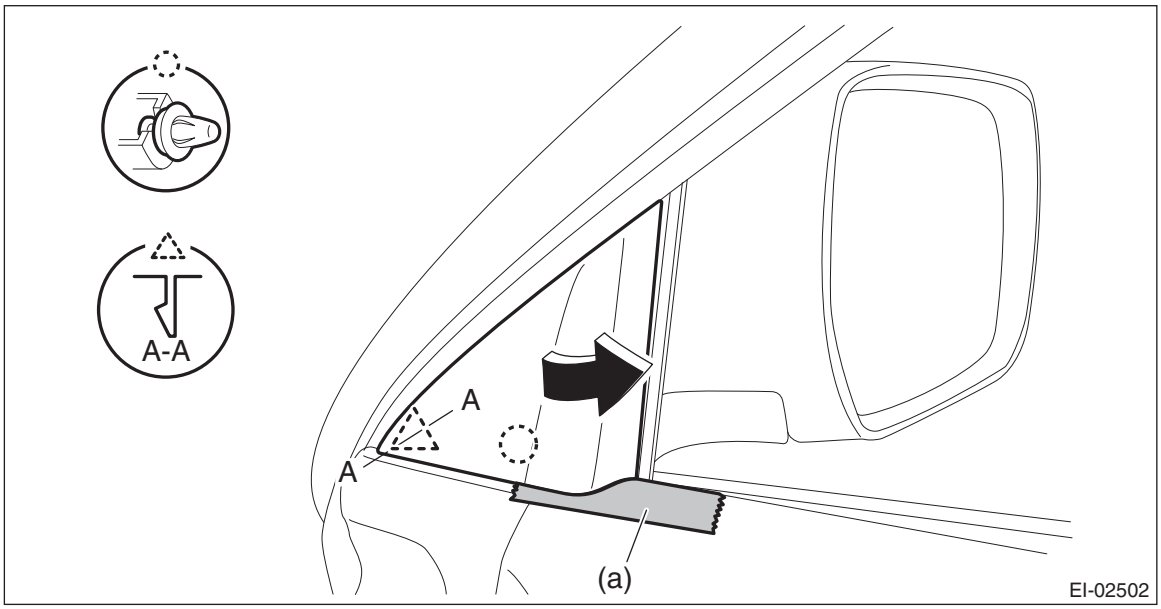
Preparation tool: Stubby screwdriver
(3) Disconnect the connector and remove the front side speaker assembly.



NOTE:
On the passenger's side, also disconnect the sunload sensor connector.

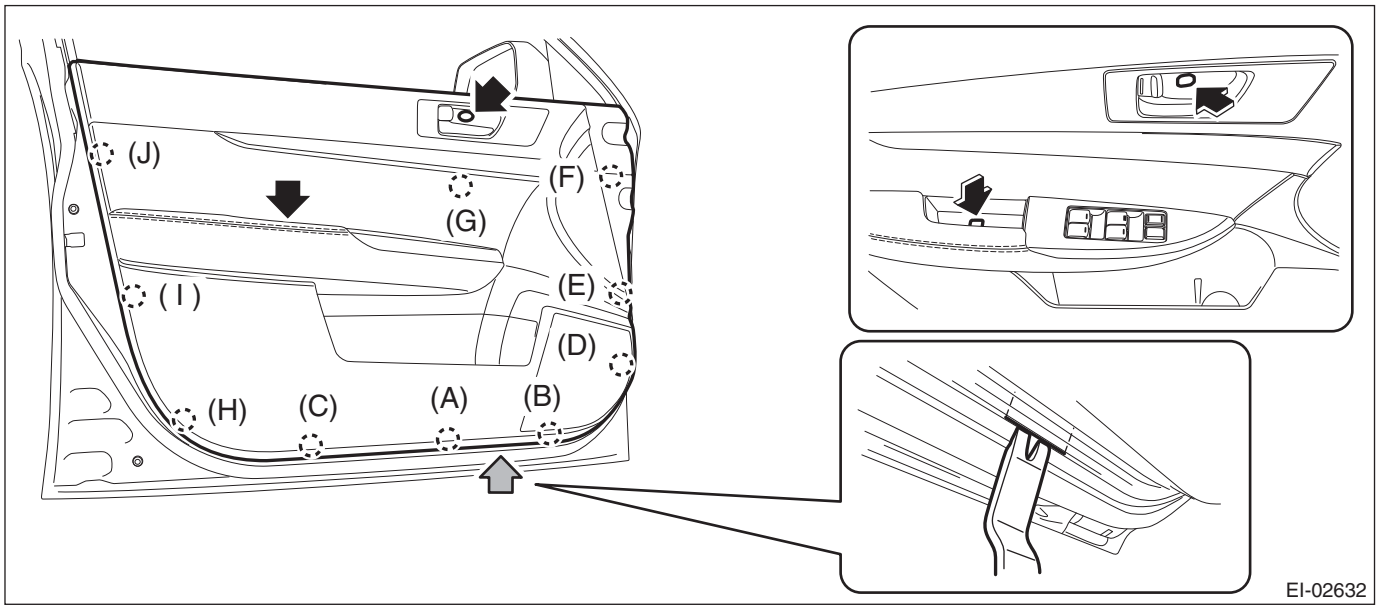
2. FRONT DOOR SPEAKER

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.



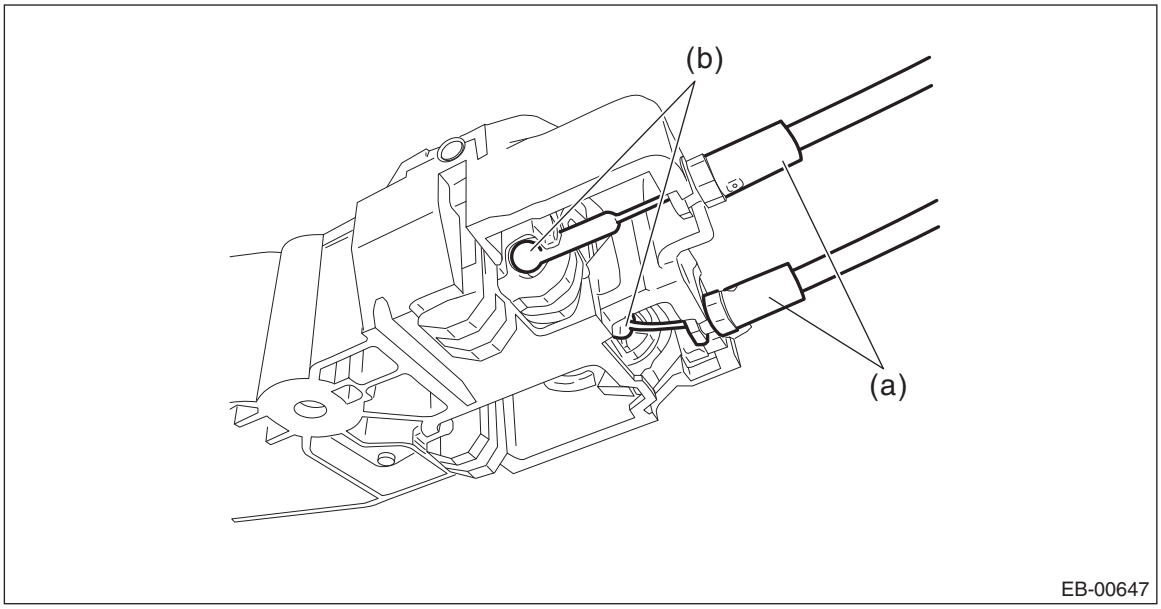
3) Remove the door trim assembly.
   (1) Open the cover and remove the screw.
   (2) Remove the clips in the order of (A) to (J) and remove the door trim assembly from the door panel.

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.

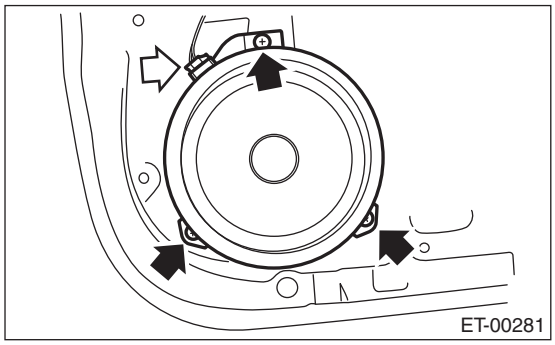


(4) Disconnect the harness connector and remove the door trim assembly.

4) Remove the front door speaker assembly.

(1) Remove the screws.

(2) Disconnect the harness connector and remove the front door speaker assembly.



B: INSTALLATION

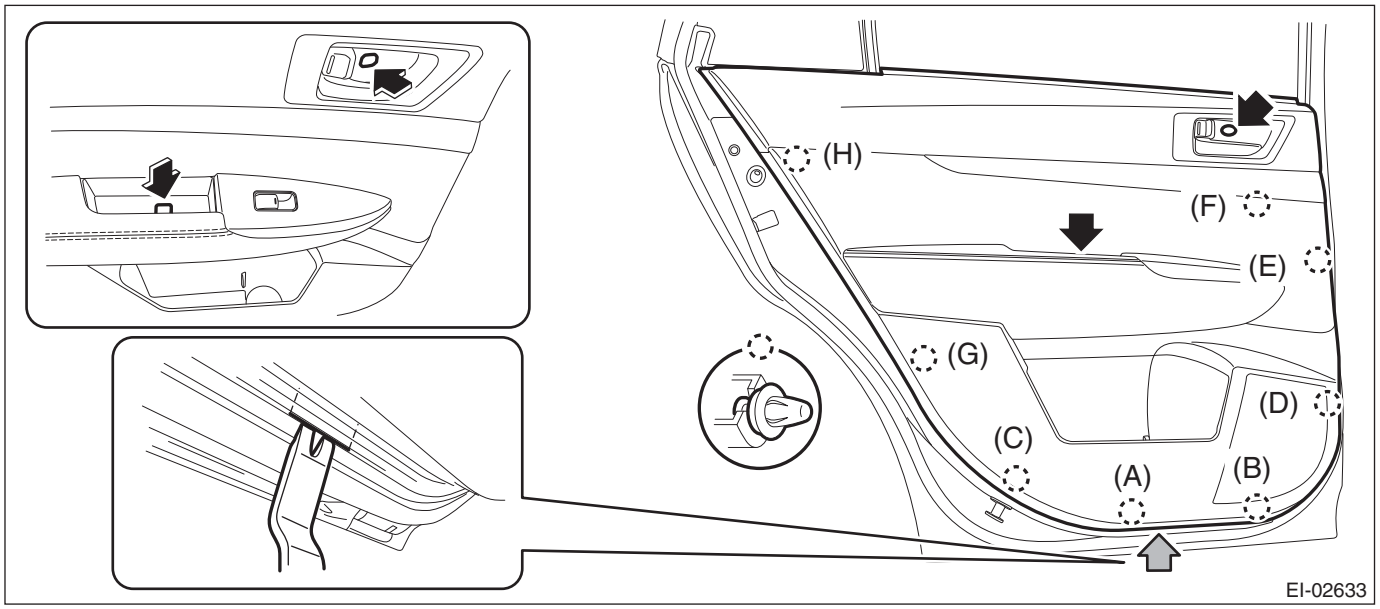
Install each part in the reverse order of removal.

6. Rear Speaker

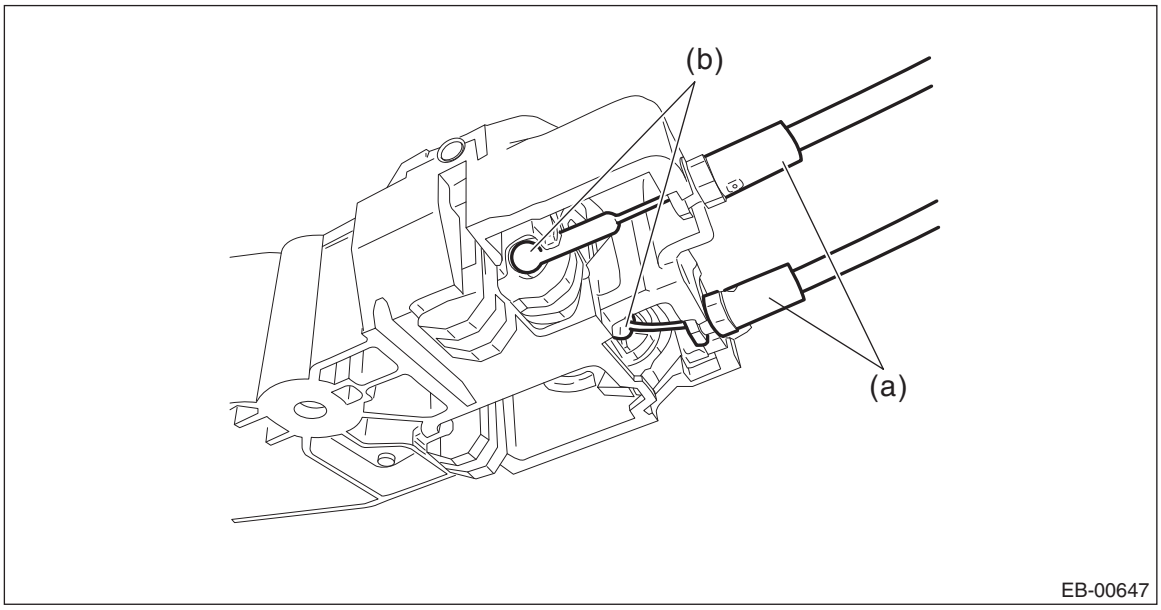
A: REMOVAL

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.

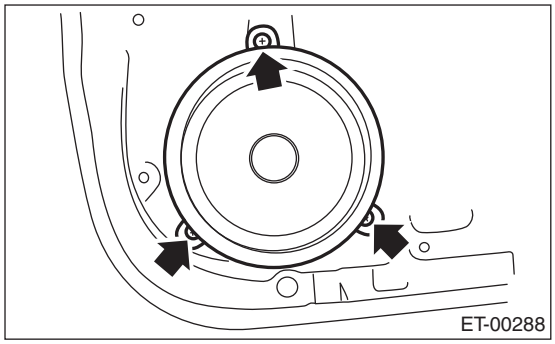


NOTE:
Insert a plastic clip remover into the slit at the bottom edge of the door trim and lift the door trim.
   (3) Remove the cables (a) and (b) from the cable holder of inner remote.



   (4) Disconnect the harness connector and remove the door trim.
3) Remove the rear speaker assembly.
   (1) Remove the screws.

(2) Disconnect the harness connector and remove the rear speaker assembly.



B: INSTALLATION

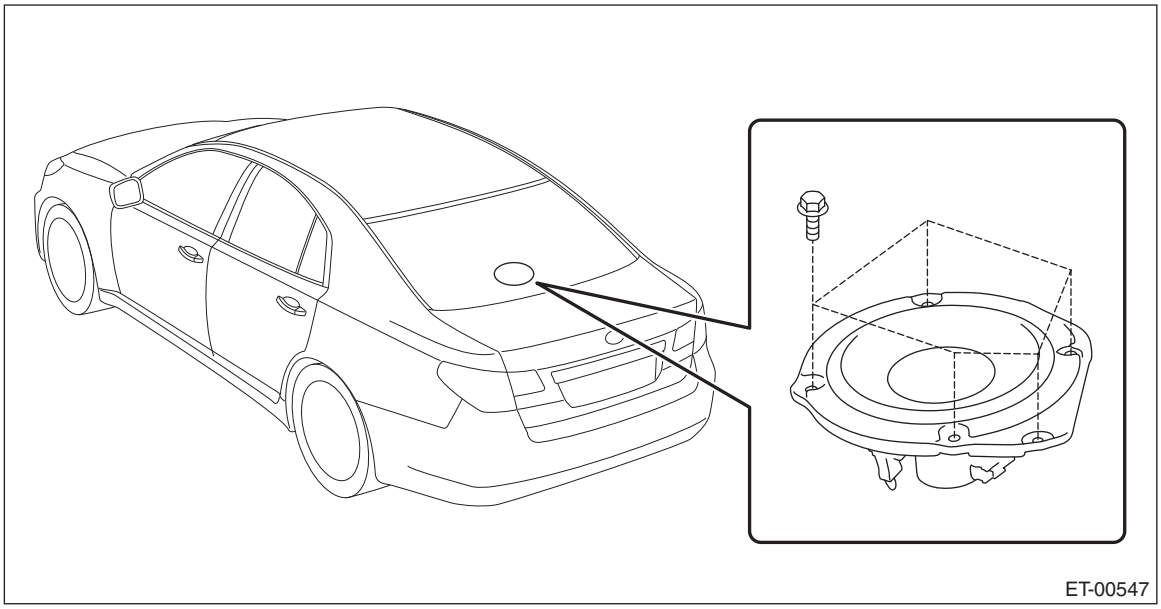
Install each part in the reverse order of removal.

7. Woofer

A: REMOVAL

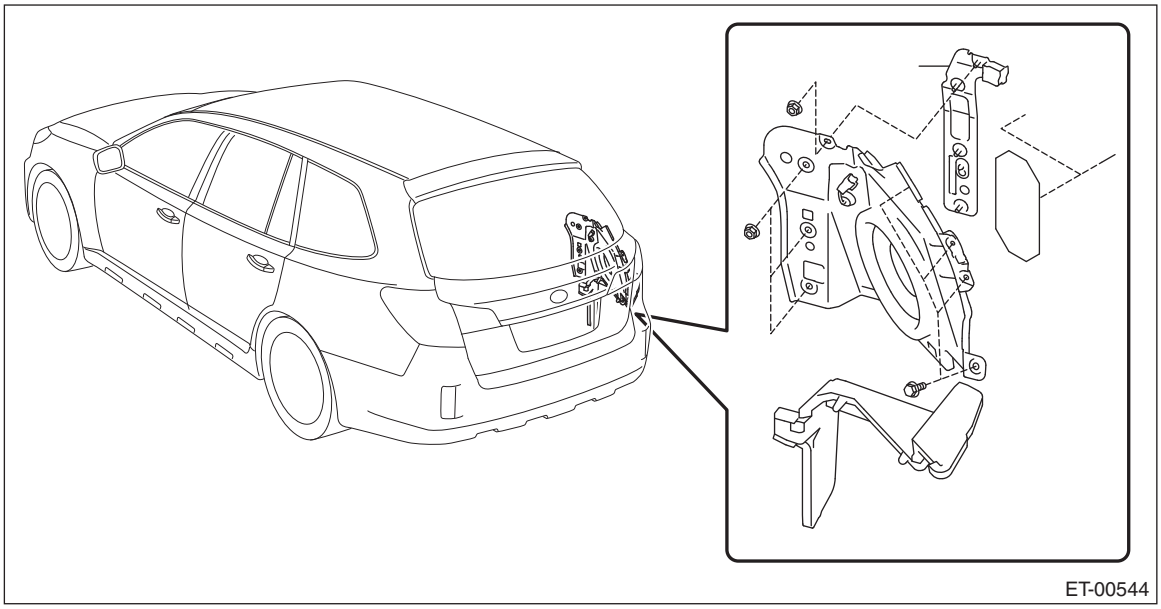
1. SEDAN MODEL

NOTE:
harman/kardon® audio system only.
1) Disconnect the ground cable from battery.
2) Remove the rear shelf trim. <Ref. to EI-120, REMOVAL, Rear Shelf Trim.>
3) Remove the woofer.
    (1) Remove the screws.
    (2) Disconnect the harness connector and remove the woofer assembly.



2. OUTBACK MODEL

NOTE:
harman/kardon® audio system only.
1) Disconnect the ground cable from battery.
2) Remove the rear quarter trim LWR. <Ref. to EI-114, OUTBACK MODEL, REMOVAL, Rear Quarter Trim.>
3) Remove the woofer.
   (1) Remove the woofer bracket mounting clips and screws, then remove the woofer bracket.
   (2) Disconnect the harness connector and remove the woofer assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

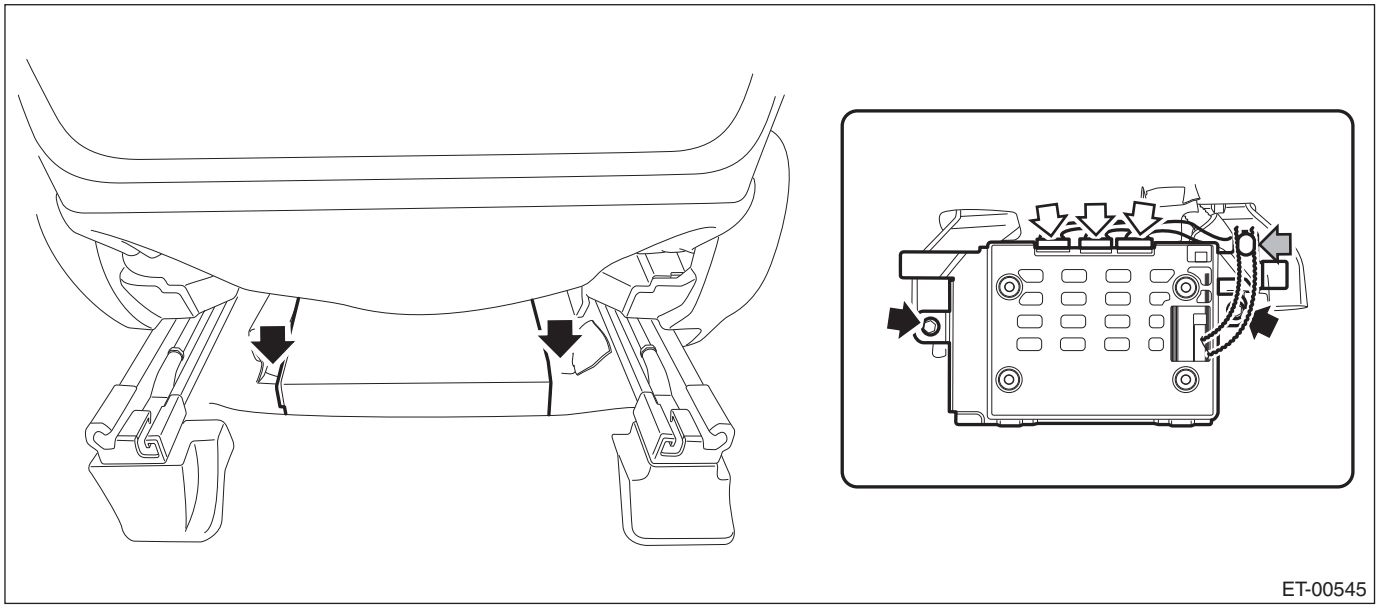
Tightening torque:
7.5 N·m (0.76 kgf-m, 5.5 ft-lb)

8. Power Amplifier

A: REMOVAL

NOTE:
harman/kardon® audio system only.
1) Disconnect the ground cable from battery.

NOTE:
For the power seat, move the seat before removing the battery ground terminal.
2) Move the passenger's seat to the front-most position.
3) Remove the power amplifier.
   (1) Disconnect the harness connector.
   (2) Remove the nut and remove the power amplifier.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
4.5 N·m (0.46 kgf-m, 3.32 ft-lb)

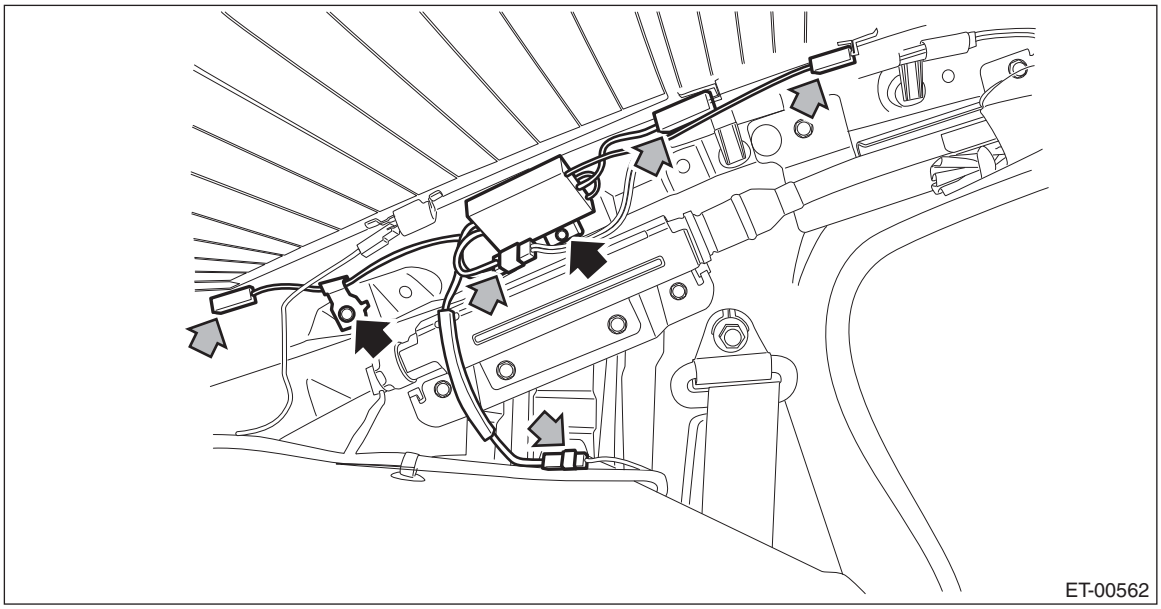
9. Antenna

A: REMOVAL

1. RADIO ANTENNA AMPLIFIER

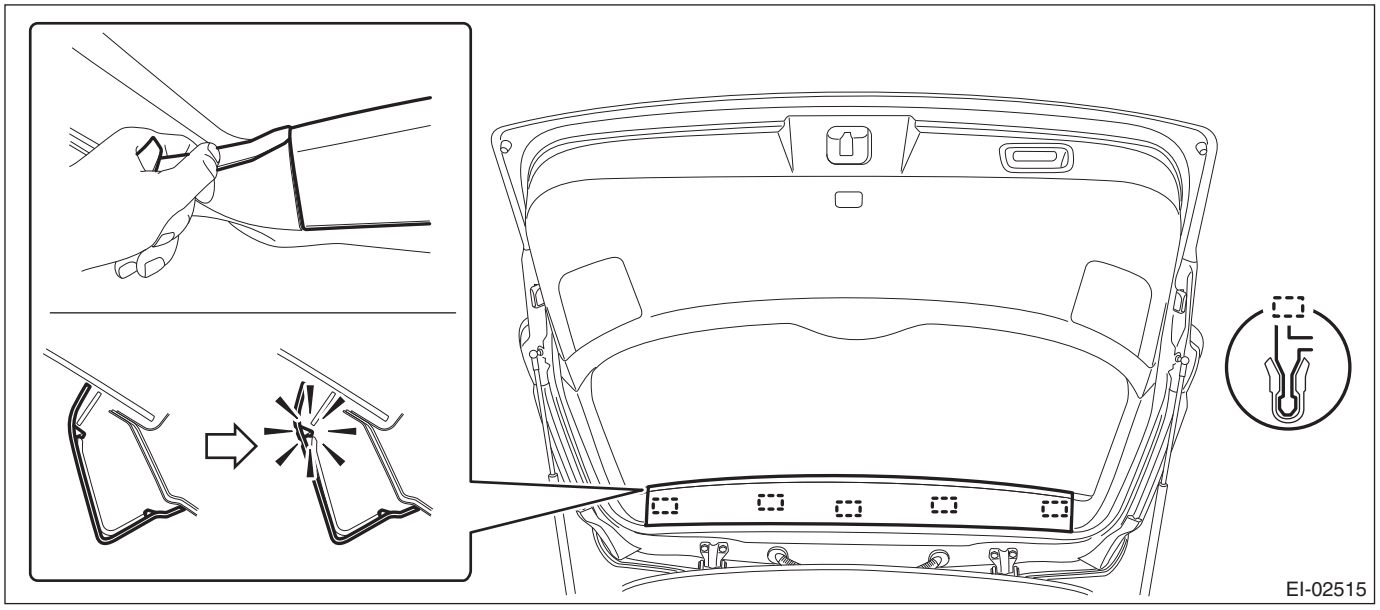
• Sedan model

1) Remove the rear quarter trim LH. <Ref. to EI-109, SEDAN MODEL, REMOVAL, Rear Quarter Trim.>
2) Remove the radio antenna amplifier assembly.
   (1) Disconnect the connector.
   (2) Remove the bolts, and then remove the radio antenna amplifier assembly.



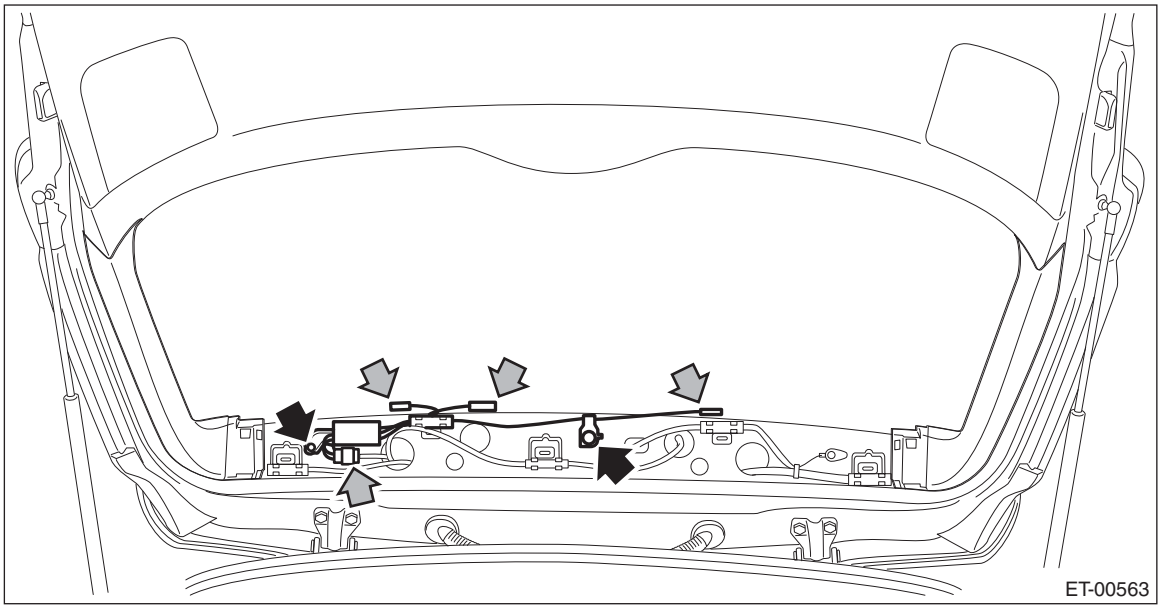
• OUTBACK model

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 radio antenna amplifier assembly.
   (1) Disconnect the connector.

(2) Remove the bolts, and then remove the radio antenna amplifier assembly.



B: INSTALLATION

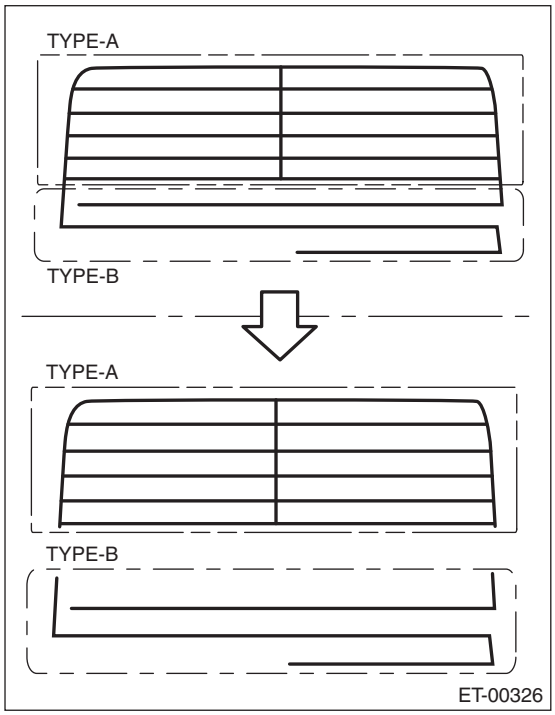
Install each part in the reverse order of removal.

Tightening torque:
12 N·m (1.22 kgf-m, 8.9 ft-lb)

C: INSPECTION

CAUTION:
When wiping dirt off of the glass to avoid heat wire damage, be careful of the following.
- **Use a dry and soft cloth.**
- **Move the cloth along the heat wire.**

Inspection method of antenna, it is different from printing pattern of antenna.

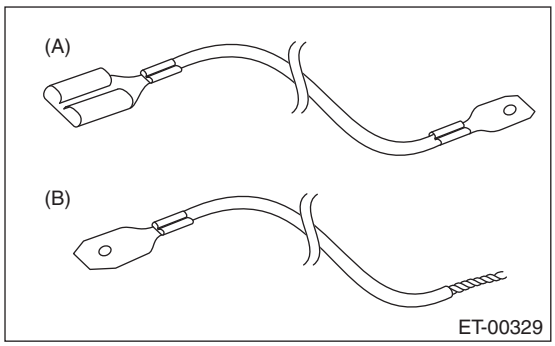


TYPE-A Printing pattern of grid
TYPE-B Printing pattern of straight

1. TYPE A

1) Disconnect the ground cable from battery.
2) Remove the trim.
Sedan model: Remove the rear quarter trim rear on both sides. <Ref. to EI-109, SEDAN MODEL, REMOVAL, Rear Quarter Trim.>
OUTBACK model: Remove the rear gate trim. <Ref. to EI-157, REMOVAL, Rear Gate Trim.>
3) Disconnect the antenna harness connector and antenna terminals.

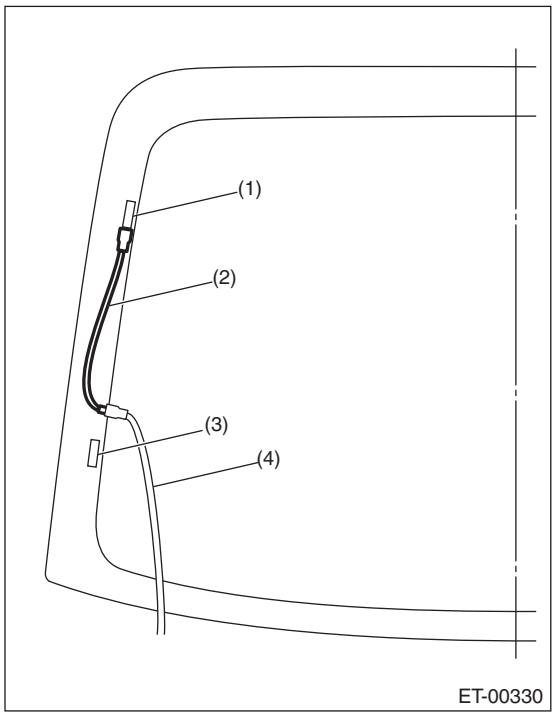
4) Prepare the extension harness (A), (B).



(A) Attach the flat terminals (male and female) to both ends of the harness of 2,000 mm (78.7 in) length (electrical wire unit dimensions approx. 2.0 mm^2 (0.0032 sq in)).

(B) Attach the flat terminal (female) to one side of the harness, another side to twist the harness of 2,000 mm (78.7 in) length (electrical wire unit dimensions approx. 2.0 mm^2 (0.0032 sq in)).

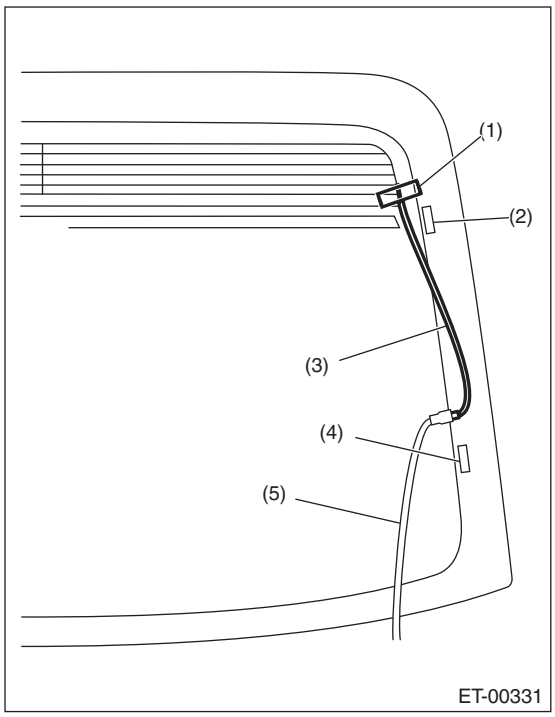
5) Connect the extension harness (A) to rear defogger harness (power supply side) terminal and antenna terminal.



(1) Antenna terminal
(2) Extension harness (A)
(3) Rear defogger terminal
(4) Rear defogger harness (power supply side - red blue)

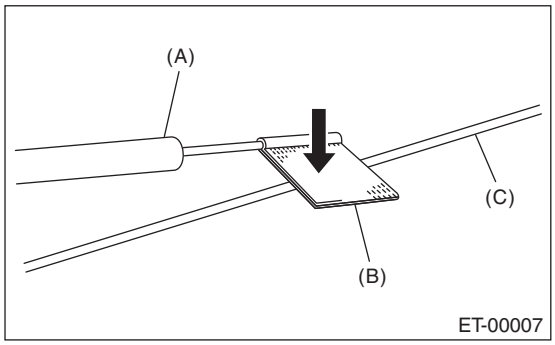
6) Connect the extension harness (B) to rear defogger harness (ground side) terminal.

7) Fasten the another side of extension harness (B) to end of antenna pattern of grid with tape.



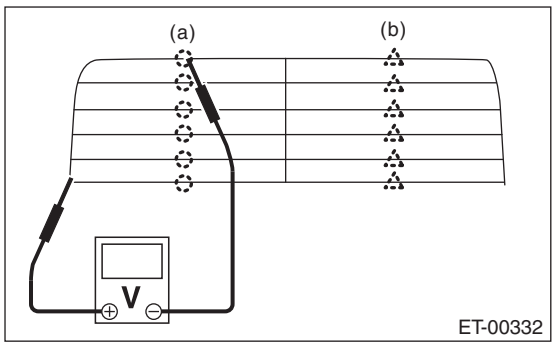
(1) Tape
(2) Antenna terminal
(3) Extension harness (B)
(4) Rear defogger terminal
(5) Rear defogger harness (ground side - black)

8) Connect the ground cable to battery.
9) Turn the ignition switch to ON.
10) Turn the rear defogger switch to ON.
11) Wrap a piece of aluminum foil around the tip of tester probe and press foil against antenna wire with your finger.



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

12) Measure the voltage around an antenna wire (a) and (b).

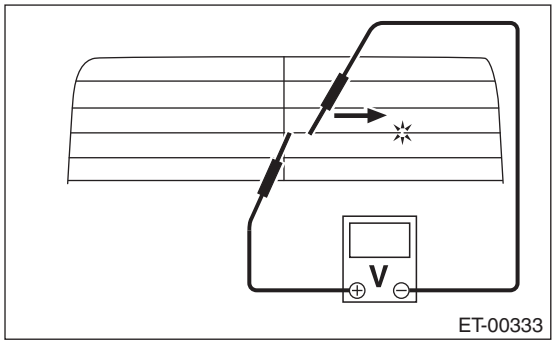


	Measured voltage value	Criteria
(a)	Approx. 3 V (standard value)	Normal
	Approx. 6 V or 0 V	Open
(b)	Approx. 9 V (standard value)	Normal
	Approx. 12 V or 6 V	Open

NOTE:
Measuring point (a)
• If the measured value is 6 V, heat wire is open between antenna wire center and positive (+) terminal of probe.
• If it is 0 V, the circuit is open between antenna wire center and ground.
Measuring point (b)
• If the measured value is 12 V, heat wire is open between antenna wire center and positive (+) terminal of probe.
• If it is 6 V, the circuit is open between antenna wire center and ground.

13) Fasten the voltmeter positive (+) side and negative (–) side to end of open harness positive side of step 12).

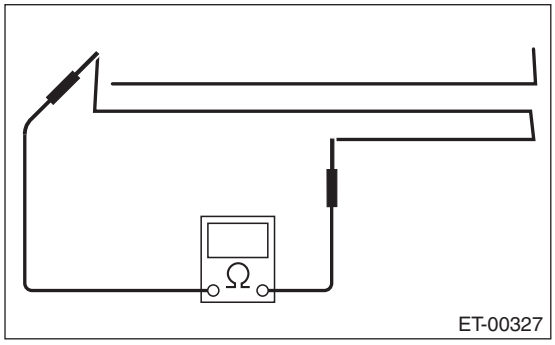
14) Search a point the voltage changes from 0 V, and move the negative (–) probe along antenna wire slowly.



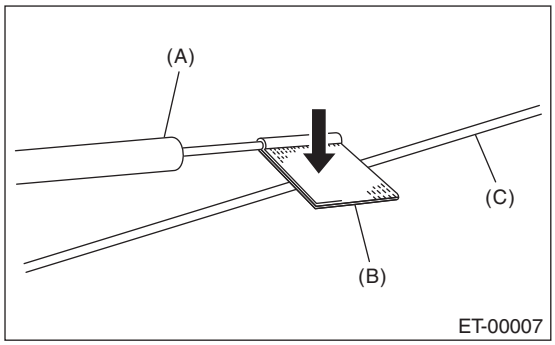
15) Repair the antenna wire if the place of the open circuit is identified. <Ref. to ET-25, REPAIR, Antenna.>

2. TYPE B

Measure the resistance between the antenna terminal and each antenna wire.

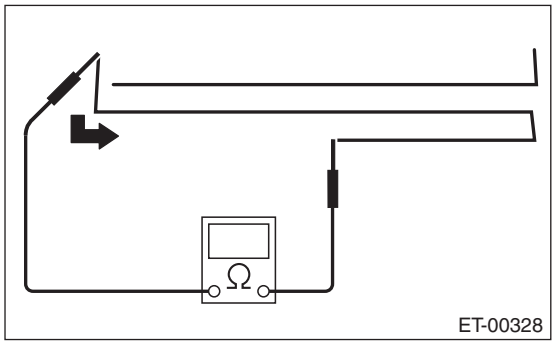


1) Disconnect the ground cable from battery.
2) Wrap a piece of aluminum foil around the tip of probe and press foil against antenna wire with your finger.



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

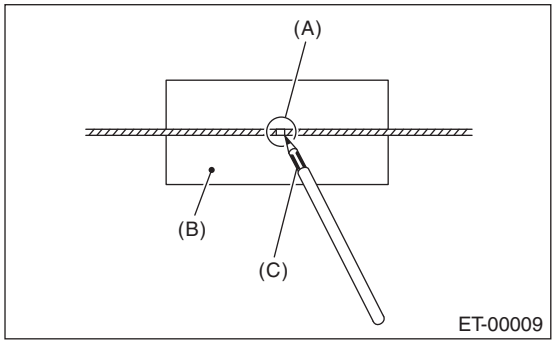
3) To locate the broken point, move the probe along antenna wire.



NOTE:
If an antenna wire is OK, resistance will be less than 20 Ω.
If an antenna wire is broken, resistance will be more than 1 MΩ.
4) Repair the antenna wire if the place of the open circuit is identified. <Ref. to ET-25, REPAIR, Antenna.>

D: REPAIR

1) Clean the external circumference of antenna wire and around with alcohol or white gasoline.
2) Paste a thin masking film on the glass along broken wire.
3) Apply the conductive silver composition (DUPONT No. 4817) on the broken portion with a drawing pen.



(A) Broken portion
(B) Masking film
(C) Conductive silver composition

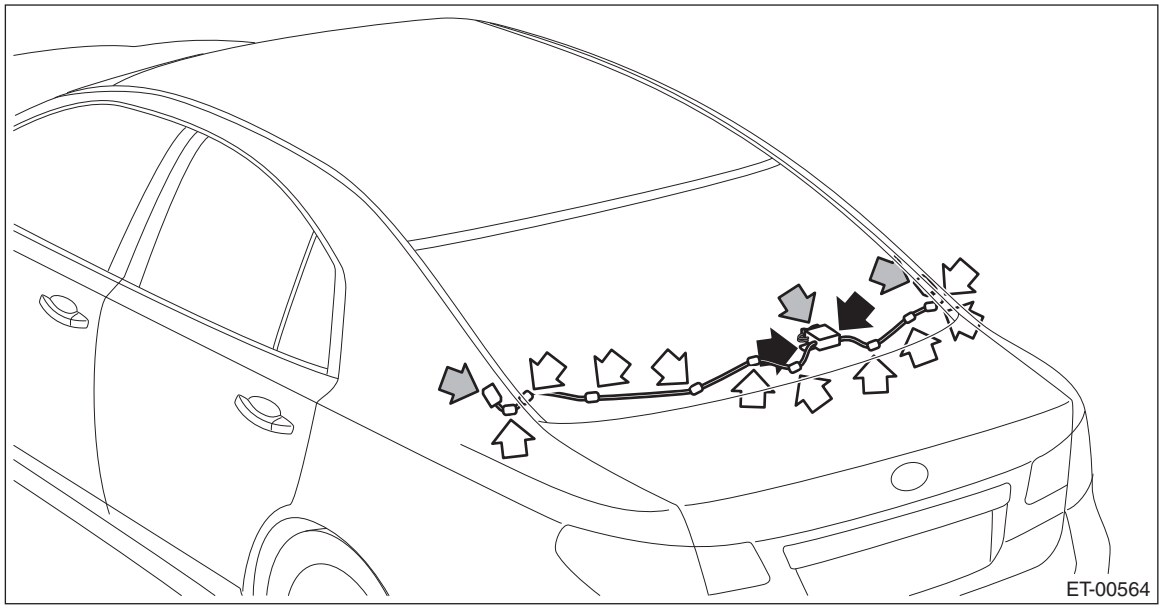
4) Dry out the deposited portion.
5) After repair has been completed, measure the resistance in repaired wire.

10.Noise Suppressor

A: REMOVAL

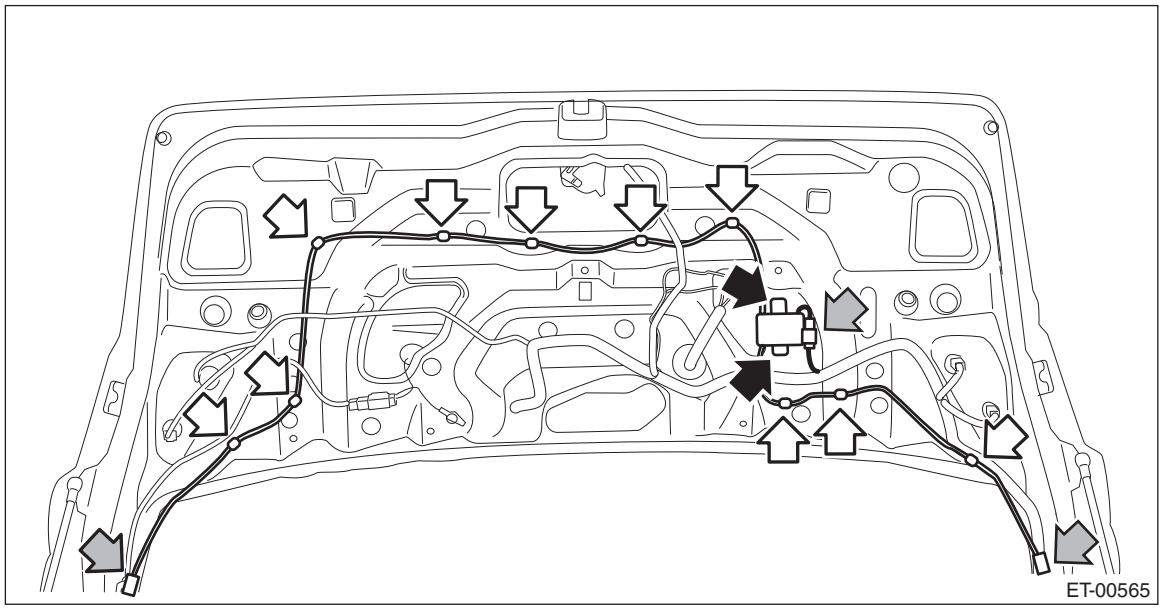
1. SEDAN MODEL

1) Disconnect the ground cable from battery.
2) Remove the rear shelf trim. <Ref. to EI-120, REMOVAL, Rear Shelf Trim.>
3) Remove the noise suppressor.
   (1) Disconnect harness connector from noise suppressor.
   (2) Remove the harness clamps and bolts and detach the noise suppressor.



2. OUTBACK MODEL

1) Disconnect the ground cable from battery.
2) Remove the rear gate trim. <Ref. to EI-157, REMOVAL, Rear Gate Trim.>
3) Remove the noise suppressor.
   (1) Disconnect harness connector from noise suppressor.
   (2) Remove the harness clamps and bolts and detach the noise suppressor.



B: INSTALLATION

Install each part in the reverse order of removal.

Tightening torque:
Noise suppressor: 12 N·m (1.22 kgf-m, 8.9 ft-lb)

11.Steering Satellite Switch

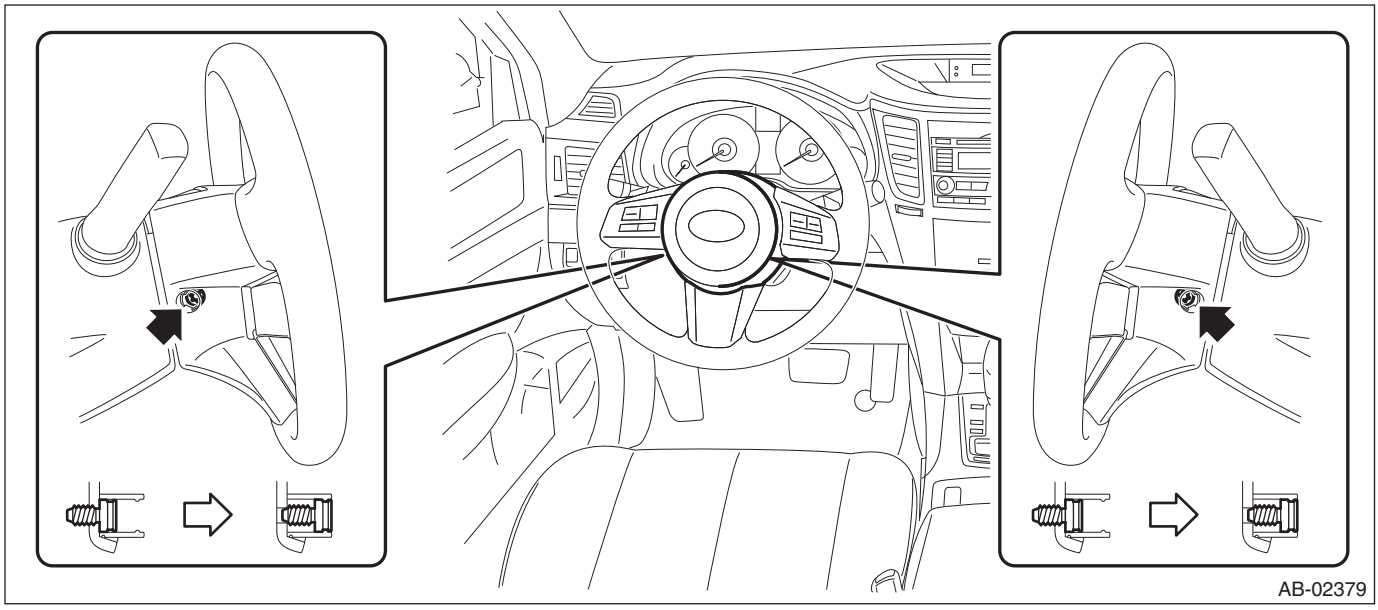
A: REMOVAL

CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>

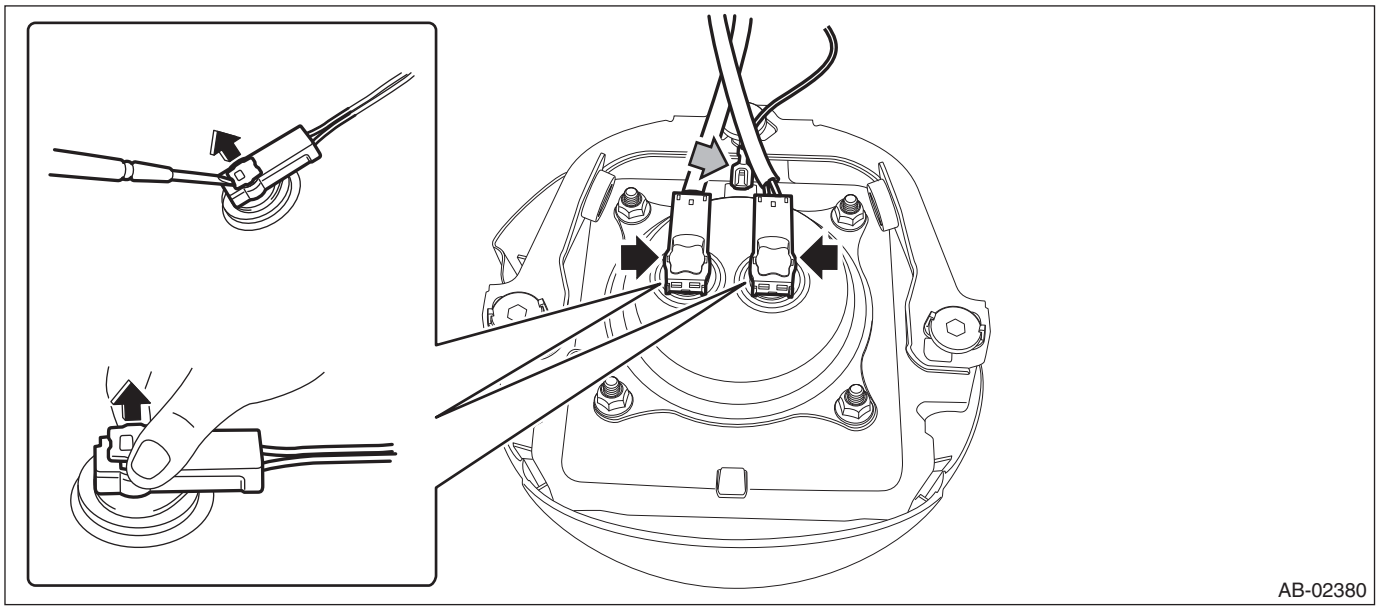
1) Position the front wheels straight ahead. (After moving a vehicle 5 m (16 ft) or more with front wheels positioned straight ahead, make sure that the vehicle moves straight ahead.)
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 20 seconds before 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.



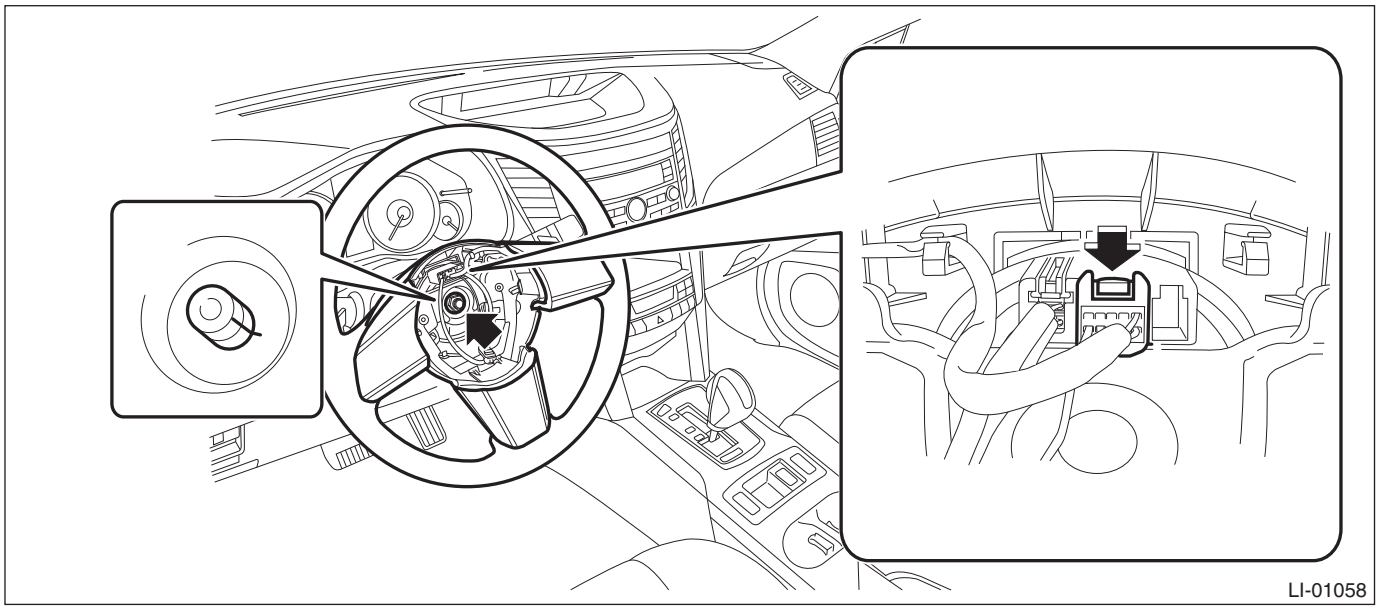
(2) Disconnect the airbag connector and remove the airbag module assembly. <Ref. to AB-18, PROCEDURE, Airbag Connector.>
(3) Disconnect the horn harness.



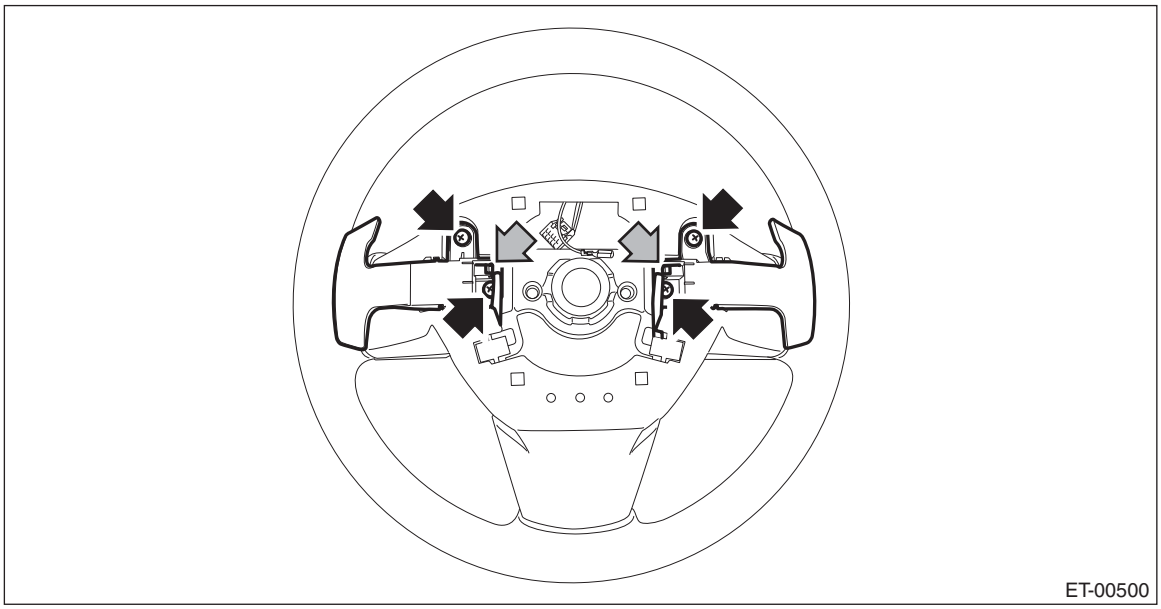
5) Remove the steering wheel.

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

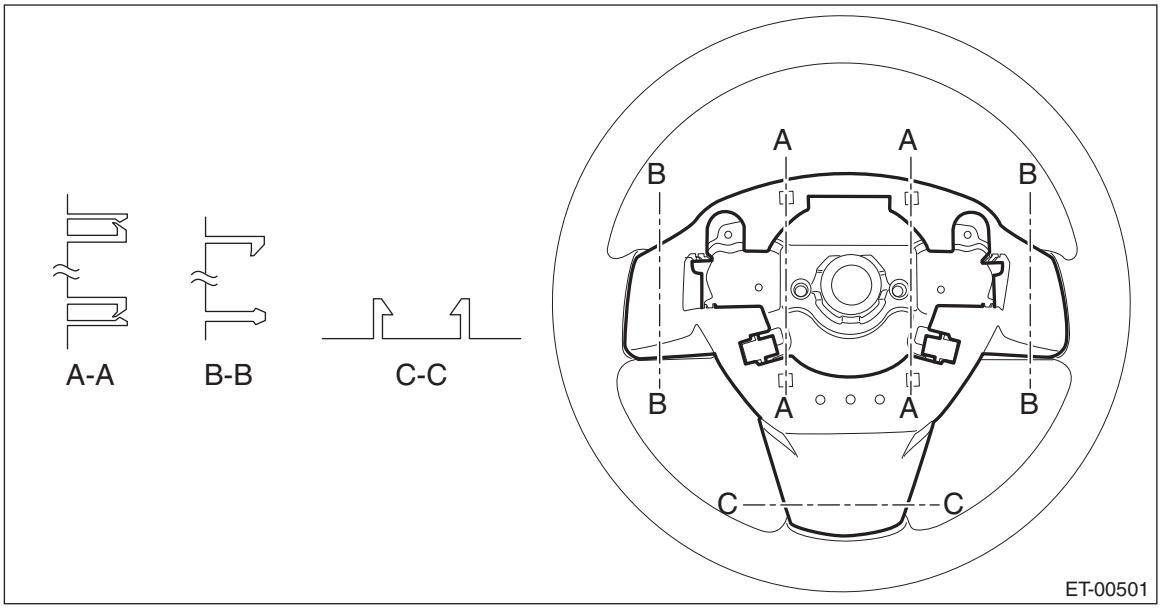
(1) Disconnect the connector and remove the nut.
(2) Put alignment marks and remove the steering wheel.



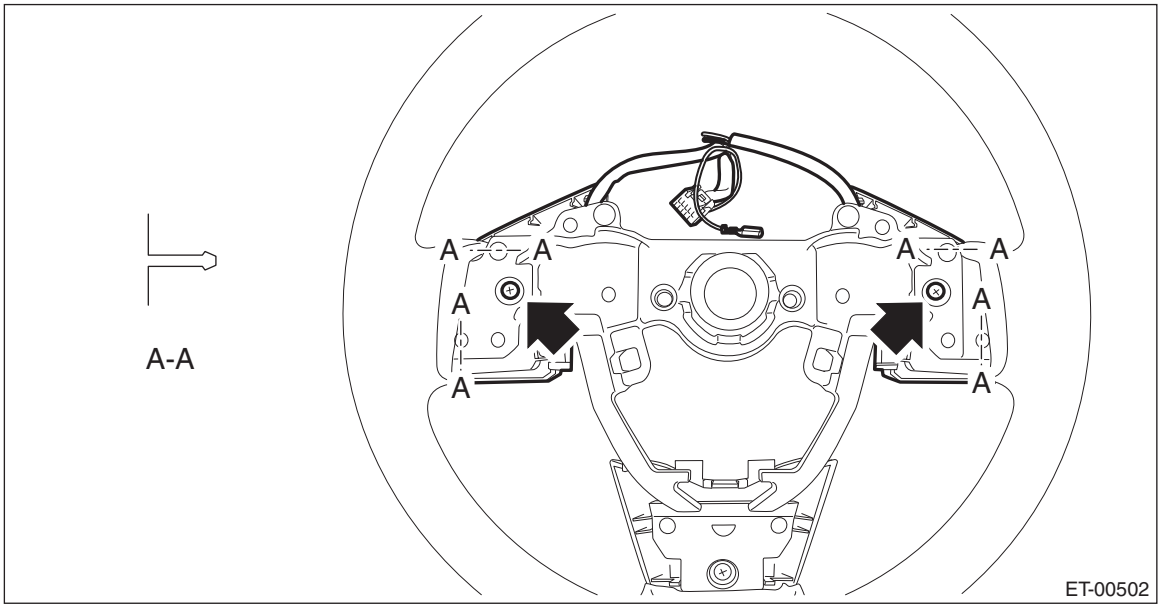
6) Remove the satellite switch.
(1) Remove the screw, disconnect the connector and remove the paddle shift switch. (Model with paddle shift)



(2) Disconnect the claws and then remove the lower cover.



(3) Remove the screws and then remove the satellite switch assembly.



B: INSTALLATION

Install each part in the reverse order of removal.

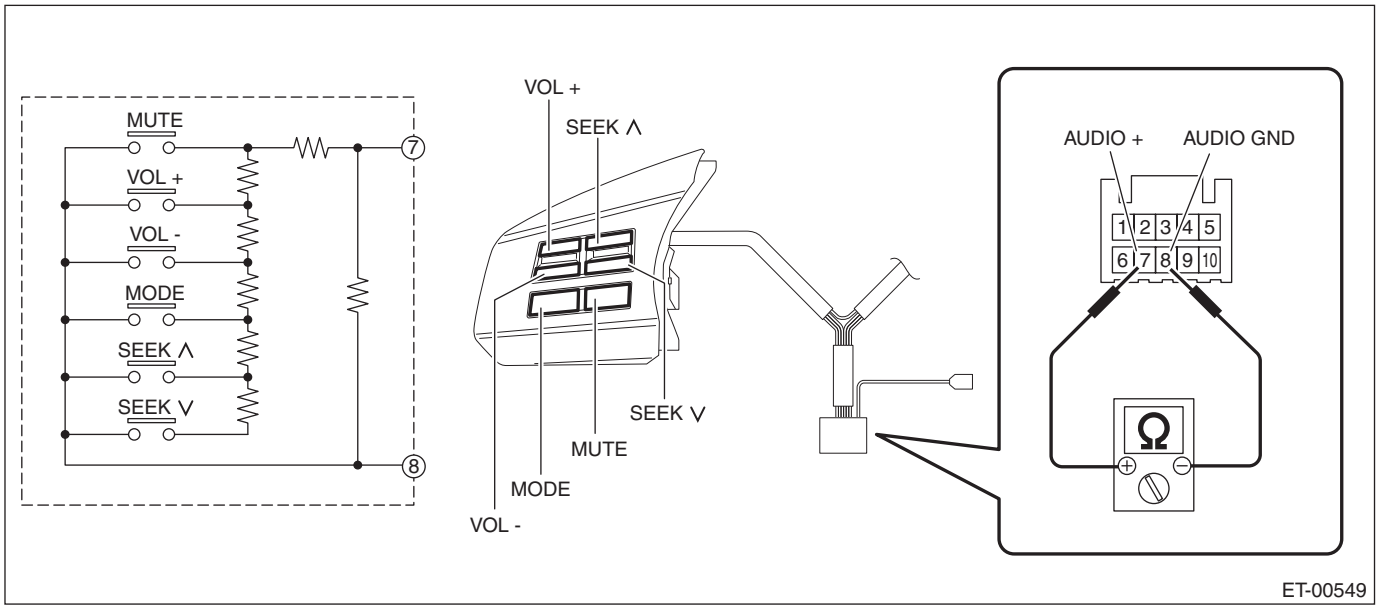
Tightening torque:

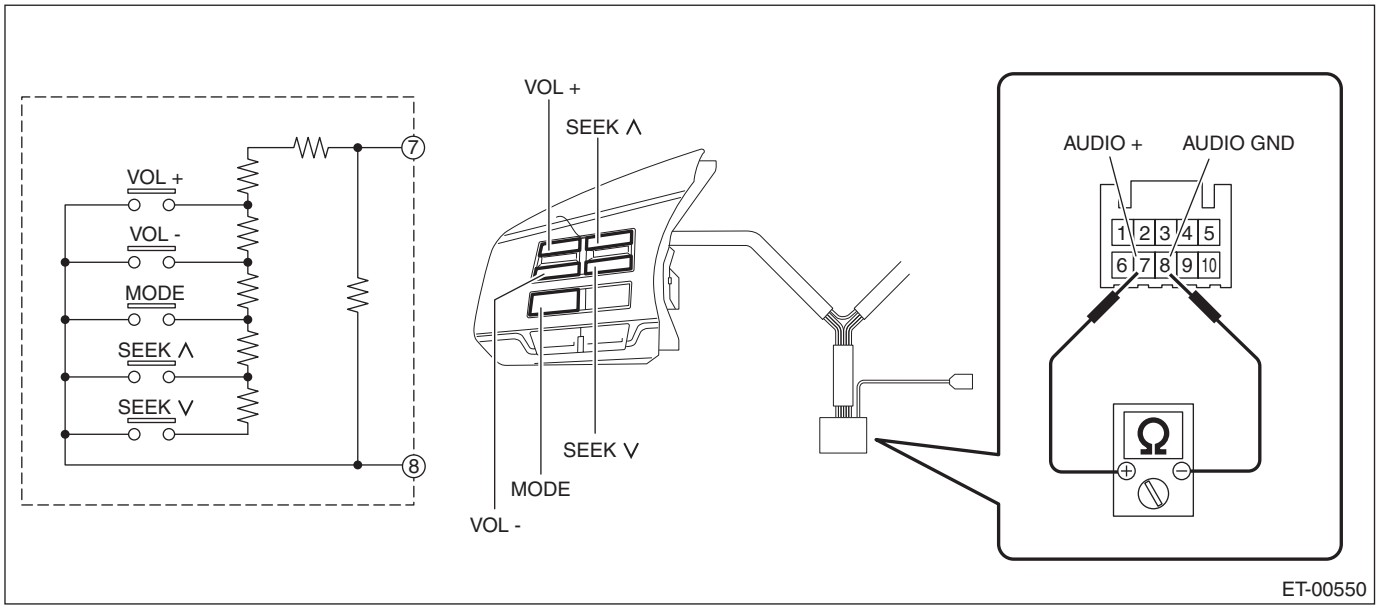
Airbag module: 10 N·m (1.0 kgf-m, 7.4 ft-lb)
Steering wheel: 39 N·m (4.0 kgf-m, 28.8 ft-lb)
Clearance between column cover and steering wheel: 2 — 4 mm (0.08 — 0.16 in)

C: INSPECTION

1) Measure the resistance between satellite switch connector terminals.

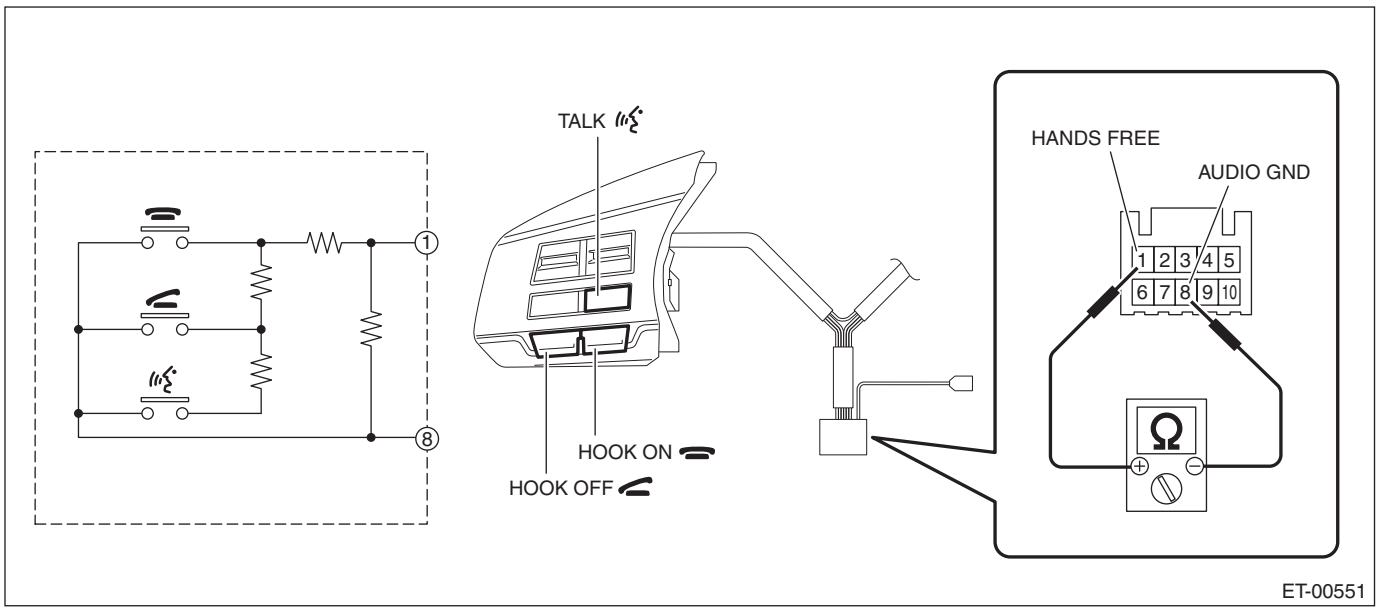
- Audio operation





Switch	Switch operation	Terminal No.	Standard
Mute Volume (+) Volume (–) Mode Seek (/\) Seek (\/)	All OFF	7 and 8	Approx. 4.7 kΩ
Mute	ON	7 and 8	Approx. 22 Ω
Volume (+)	ON	7 and 8	Approx. 90 Ω
Volume (–)	ON	7 and 8	Approx. 200 Ω
Mode	ON	7 and 8	Approx. 360 Ω
Preset CH UP/Seek (/\)	ON	7 and 8	Approx. 690 Ω
Preset CH DOWN/Seek (\/)	ON	7 and 8	Approx. 1.5 kΩ

- Handsfree operation (Models with handsfree feature)



Switch	Switch operation	Terminal No.	Standard
HOOK ON HOOK OFF TALK	All OFF	1 and 8	Approx. 100 kΩ
HOOK ON	ON	1 and 8	Approx. 330 Ω
HOOK OFF	ON	1 and 8	Approx. 1 kΩ
TALK	ON	1 and 8	Approx. 3.2 kΩ

2) Replace the satellite switch if the measurement result is not within the standard value.

12.Navigation Body

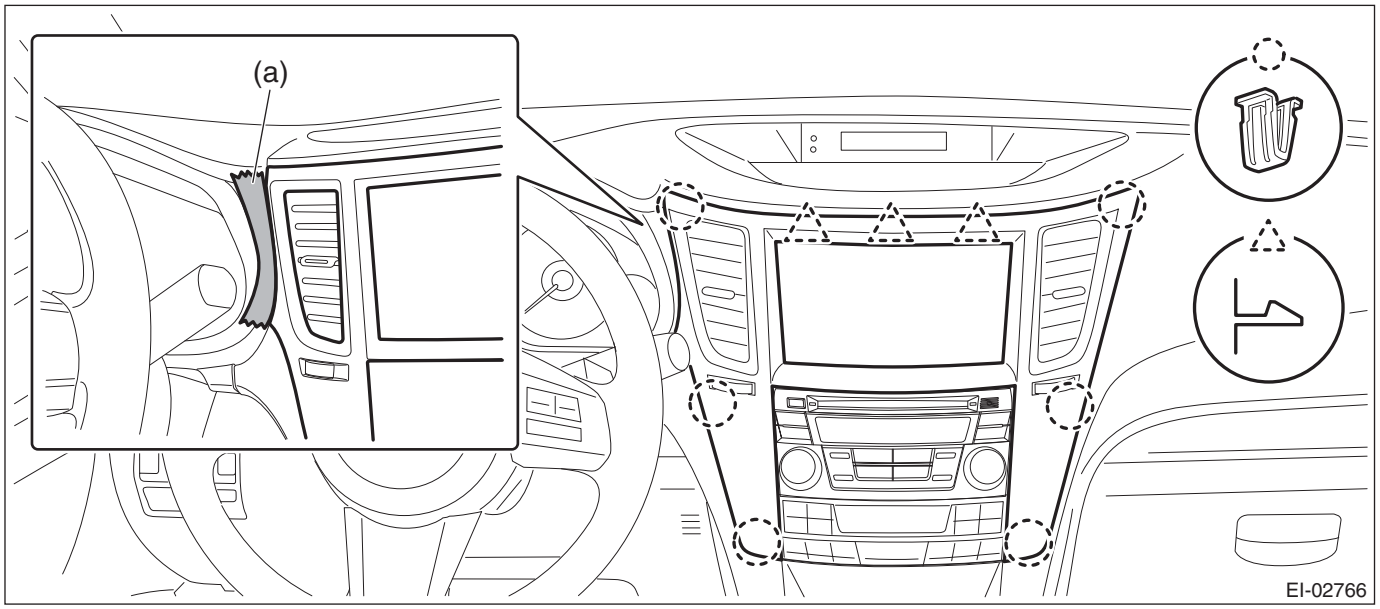
A: REMOVAL

CAUTION:
• When replacing the navigation unit, be sure to replace with specified navigation unit. The marker adjustment can not be performed correctly if replacing with unspecified navigation unit.
• After replacing the navigation unit, be sure to check that the rearview camera images and the marker line are displayed.

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

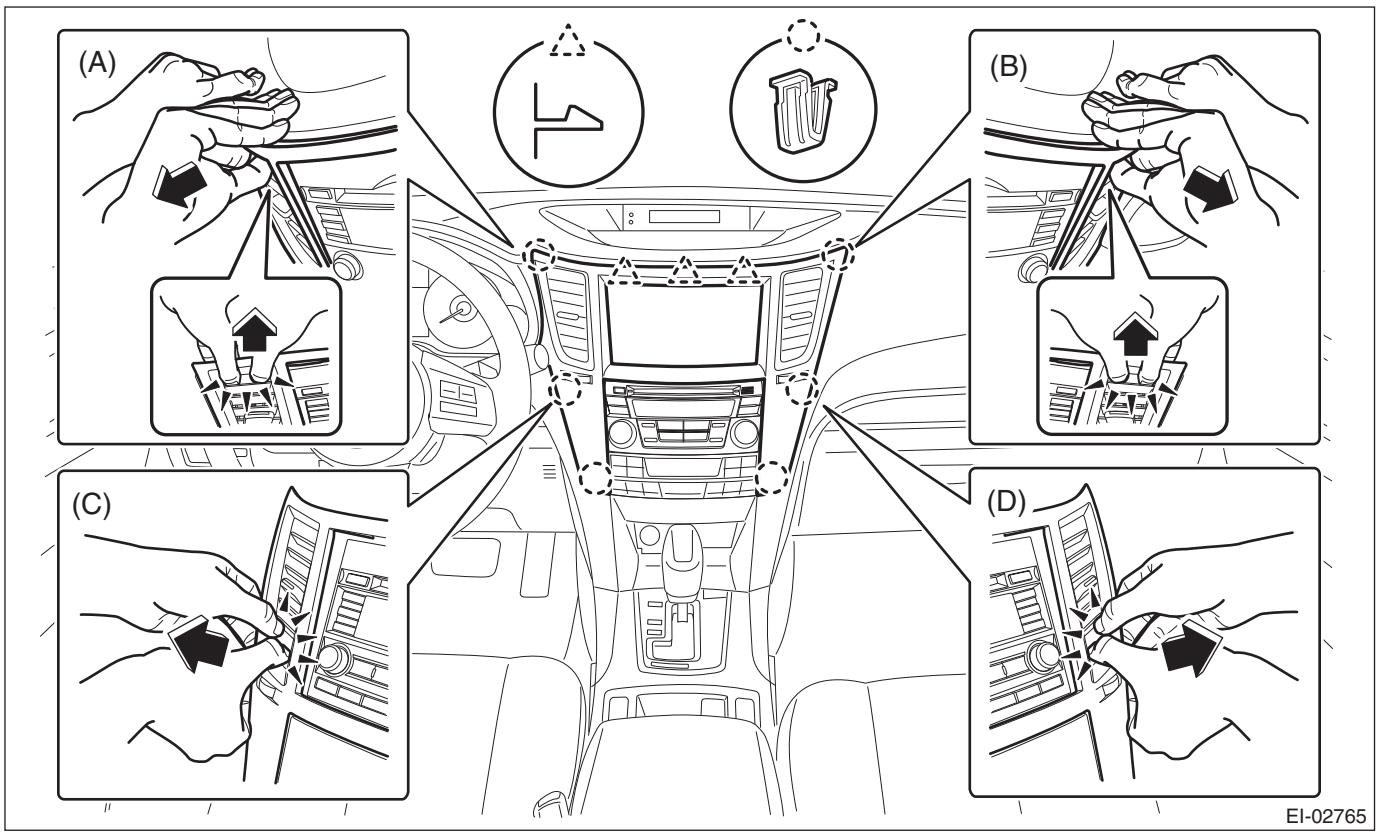
CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

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

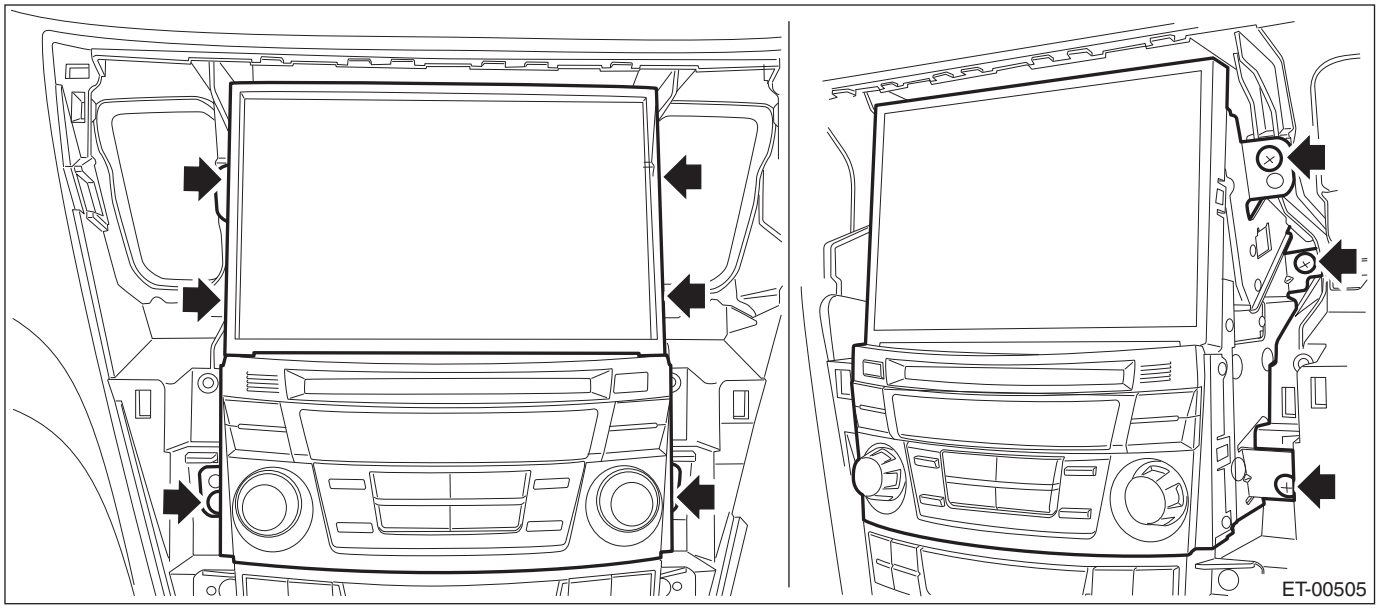


(2) Insert a finger into the air vent grille and release the left and right clips at the top of the center panel. (A), (B)
(3) Insert a finger into the air vent grille and release the left and right clips at the center of the center panel. (C), (D)

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



3) Remove the navigation assembly.
(1) Remove the left and right screws.
(2) Disconnect the connector and remove the navigation assembly.



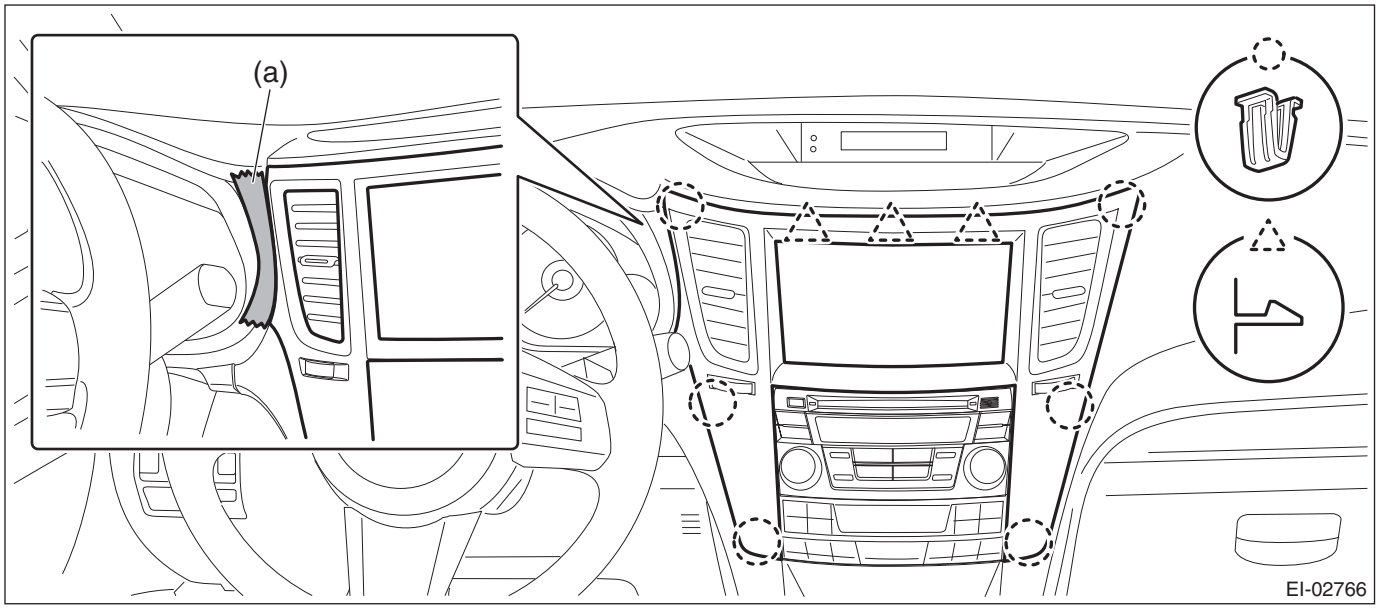
13.GPS Antenna

A: REMOVAL

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

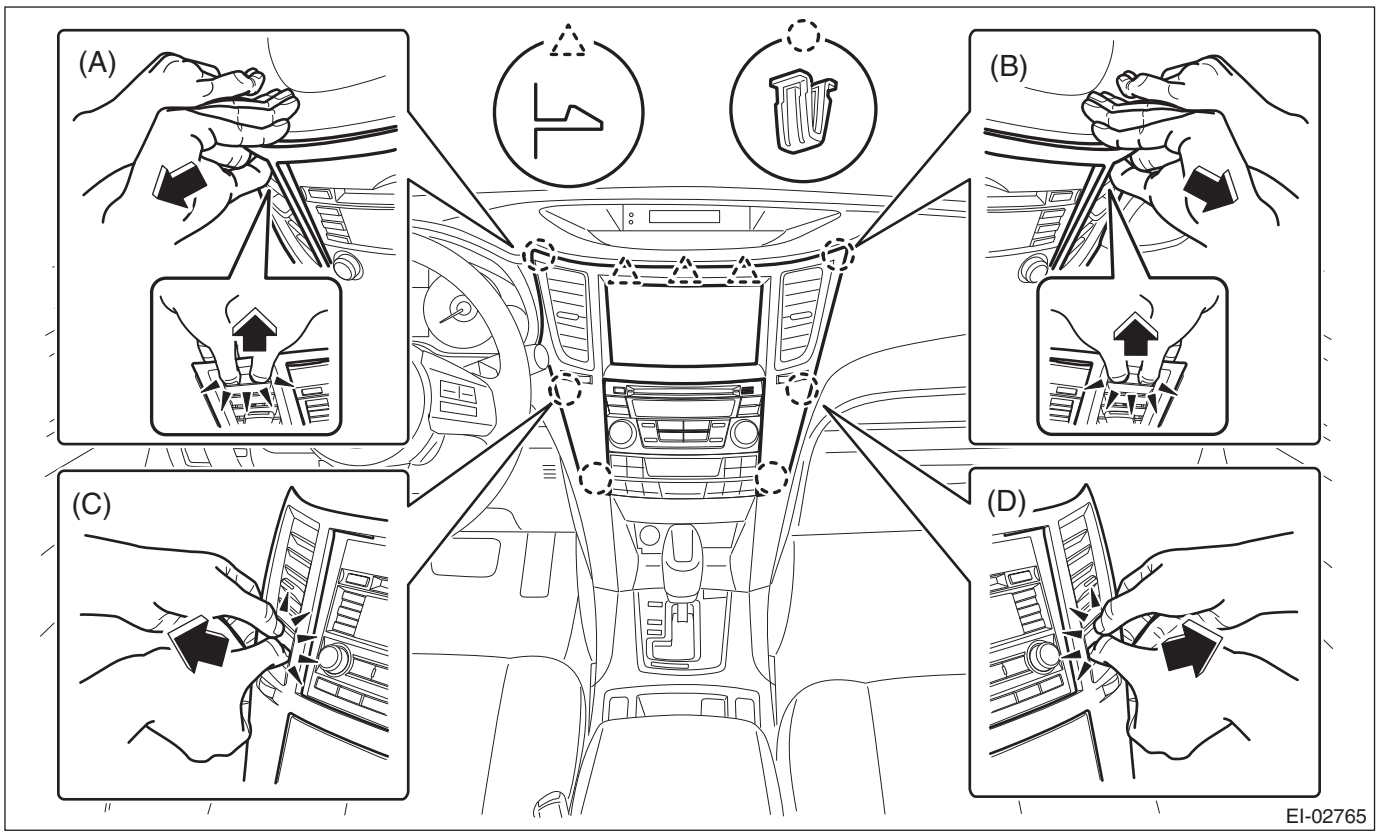
CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

(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)

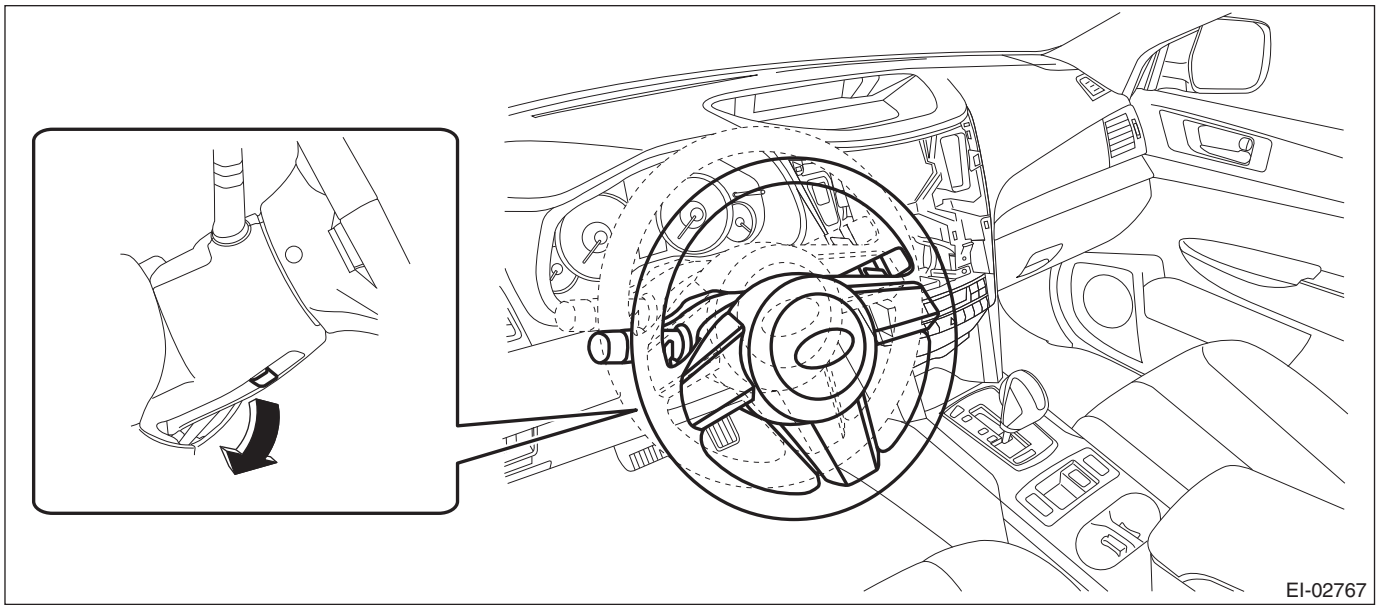
(4) Release the clips at the bottom of the center panel and remove the center panel assembly.



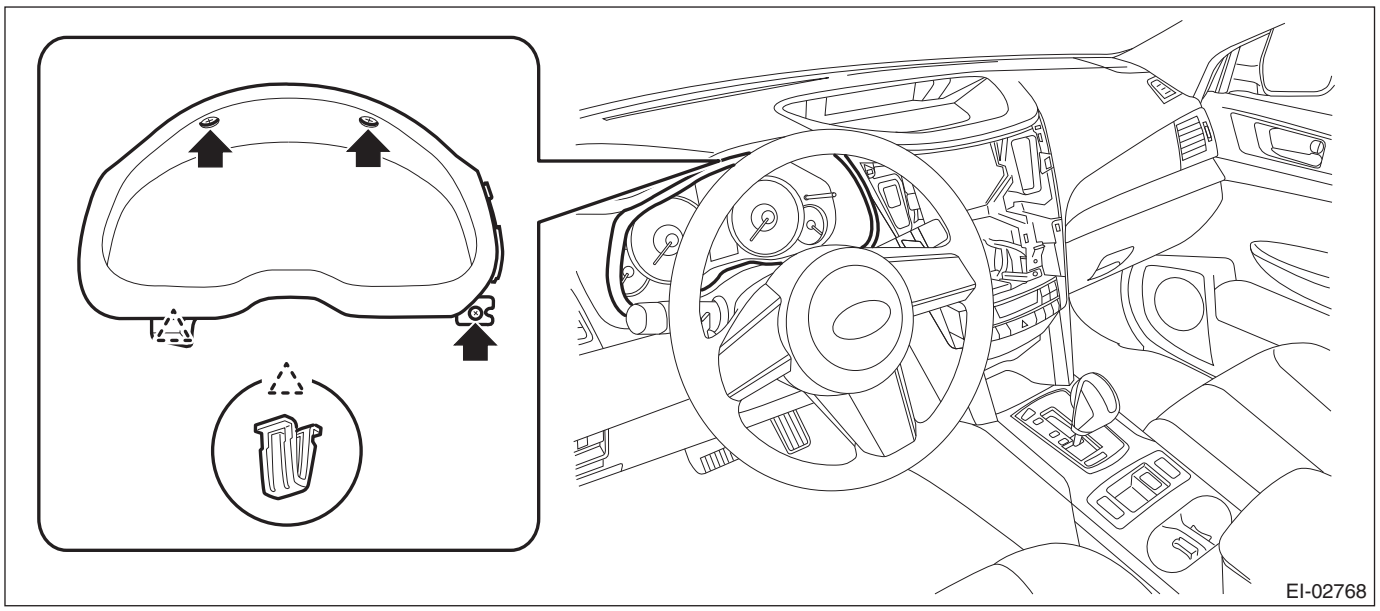
3) Remove the combination meter assembly.

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

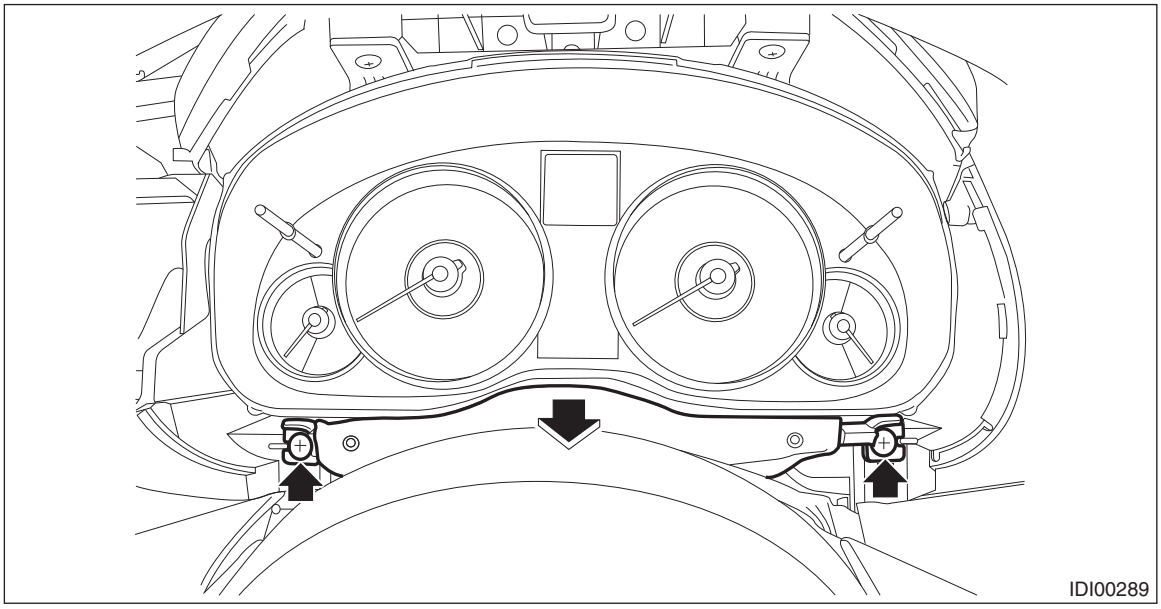
(1) Release the lock, tilt the steering column to the lowest end and fully extend the column by the telescopic system.



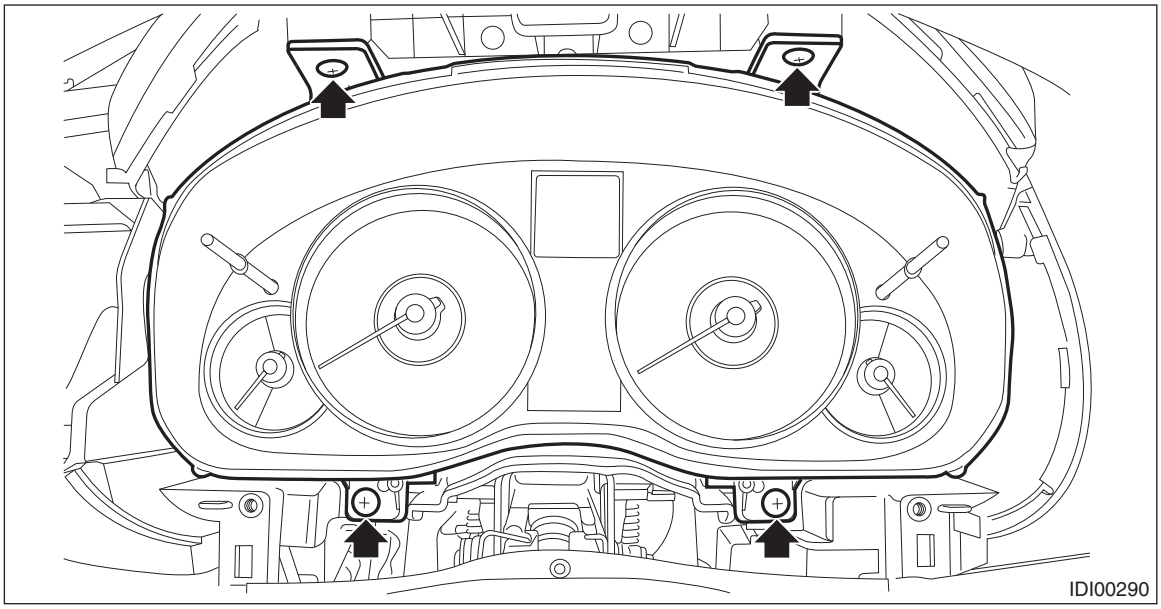
(2) Release the screws and clips, then detach the meter visor assembly.



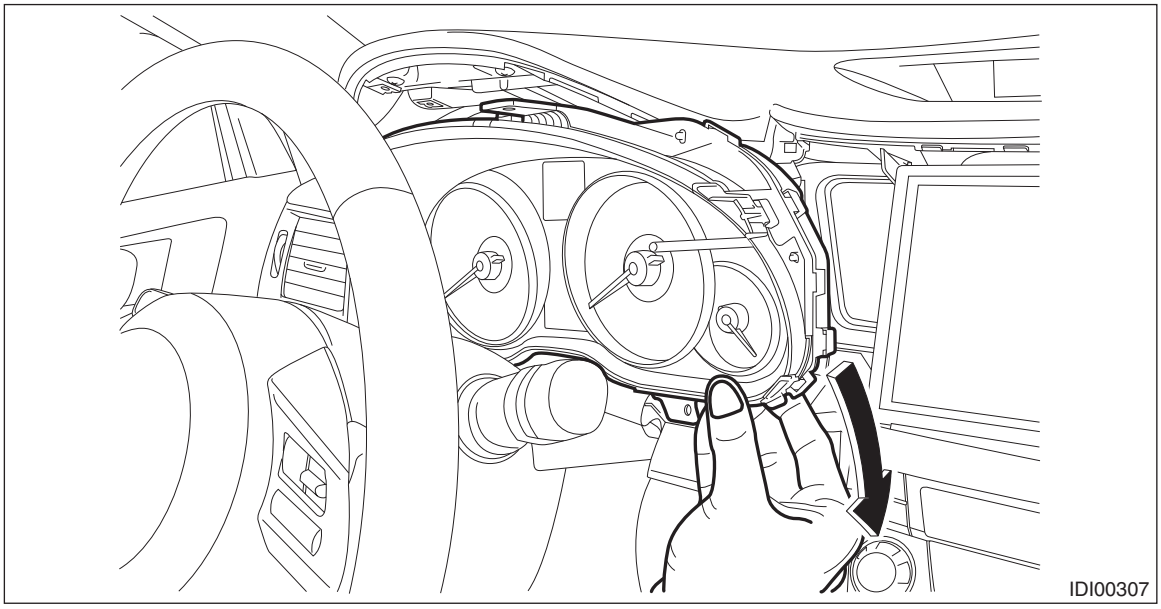
(3) Remove the screws and pull the steering COMPL upper cover toward you.



(4) Remove the screws and pull out the combination meter toward you to disconnect the connectors.

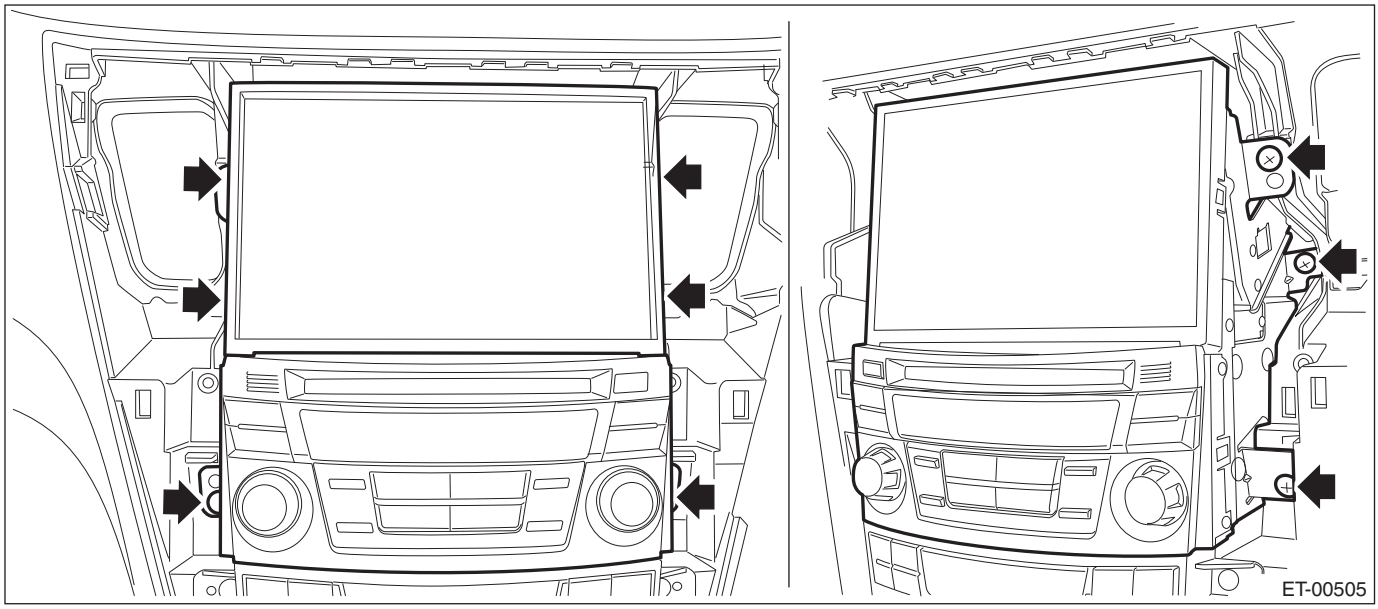


(5) Remove the combination meter assembly as shown in the figure.

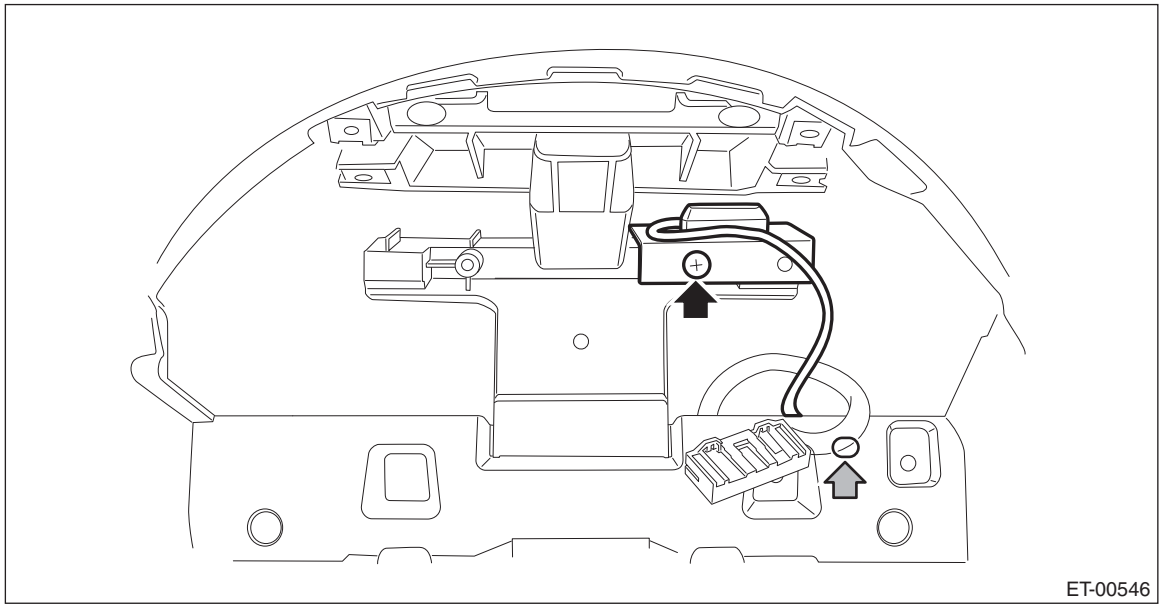


4) Remove the navigation assembly.
(1) Remove the left and right screws.

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



5) Remove the GPS antenna.



(1) Tie a string to the GPS antenna harness connector on the navigation assembly side.

NOTE:
A string makes operation easier during installation.

(2) Remove the screw and harness clamp to remove the GPS antenna.

(3) When the GPS antenna is pulled out, remove the string attached to the connector in step (1).

B: INSTALLATION

Install each part in the reverse order of removal.

14.Rearview Camera System

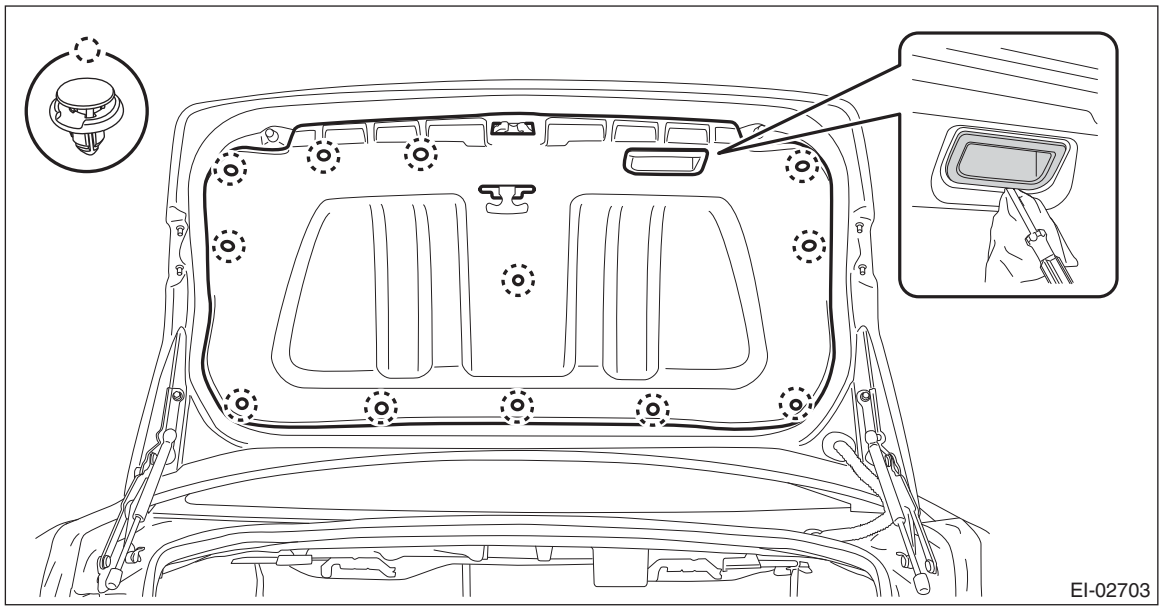
A: WIRING DIAGRAM

Refer to “Rearview Camera System” in the wiring diagram. <Ref. to WI-193, WIRING DIAGRAM, Rearview Camera System.>

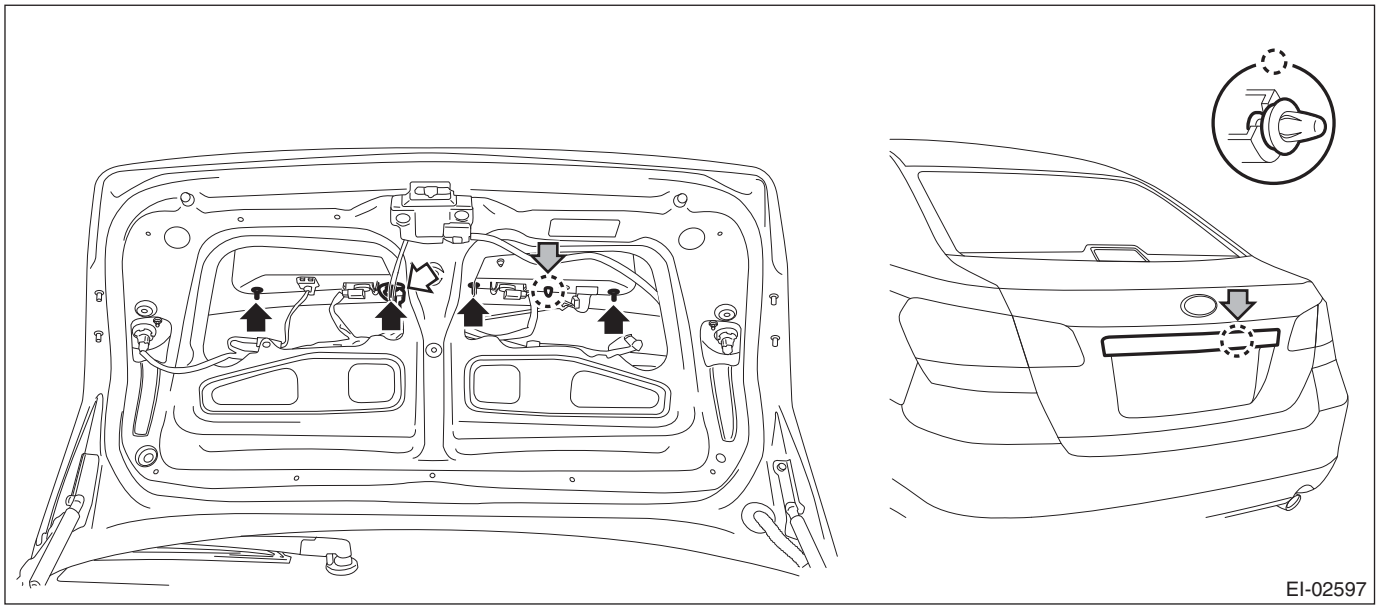
B: REMOVAL

1. SEDAN MODEL

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.



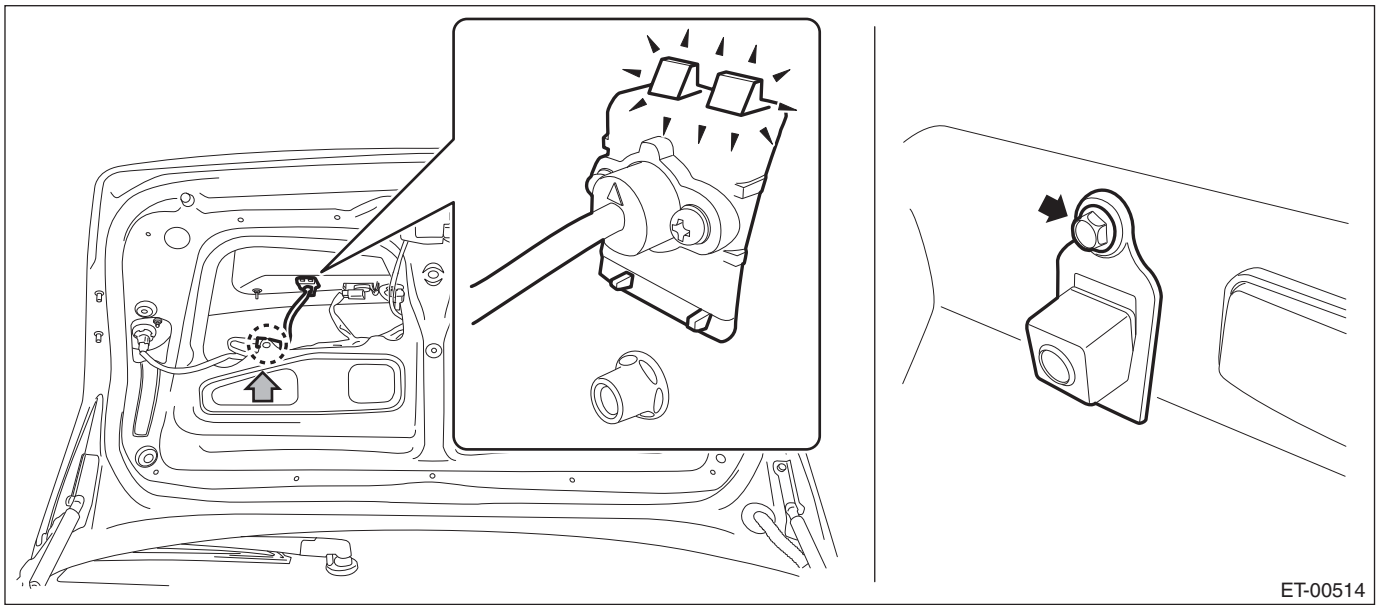
3) Remove the trunk lid garnish.
   (1) Remove the nuts.
   (2) Remove the clips and the trunk lid garnish.



4) Remove the rearview camera.

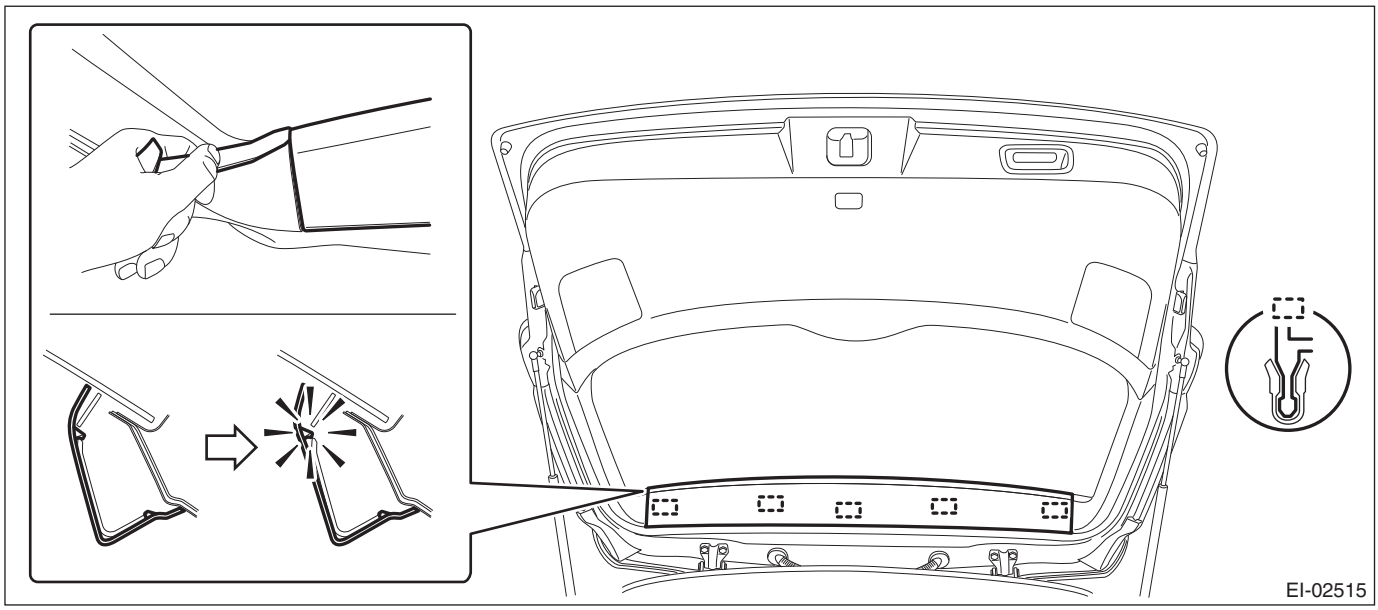
CAUTION:
Do not drop or apply any impact to the rearview camera because it is a precision equipment.

(1) Disconnect the rearview camera connector.
(2) Remove the bolt from the face of trunk.
(3) Disconnect the claws and then remove the rearview camera assembly.



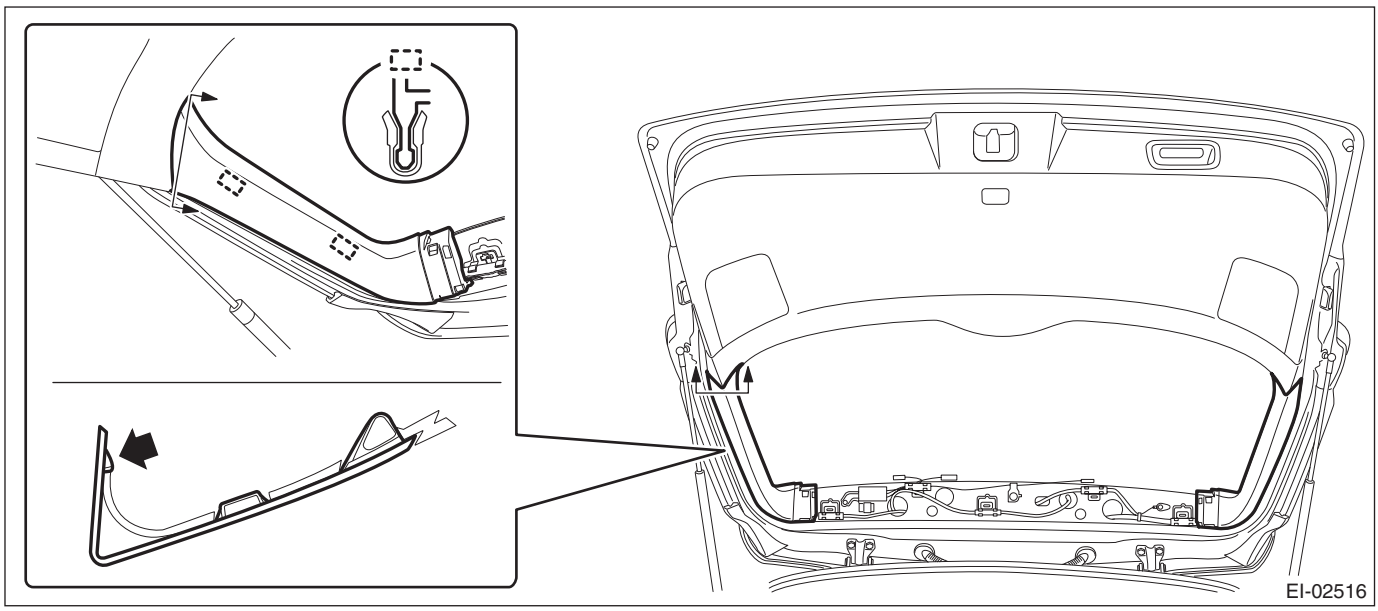
2. OUTBACK MODEL

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.

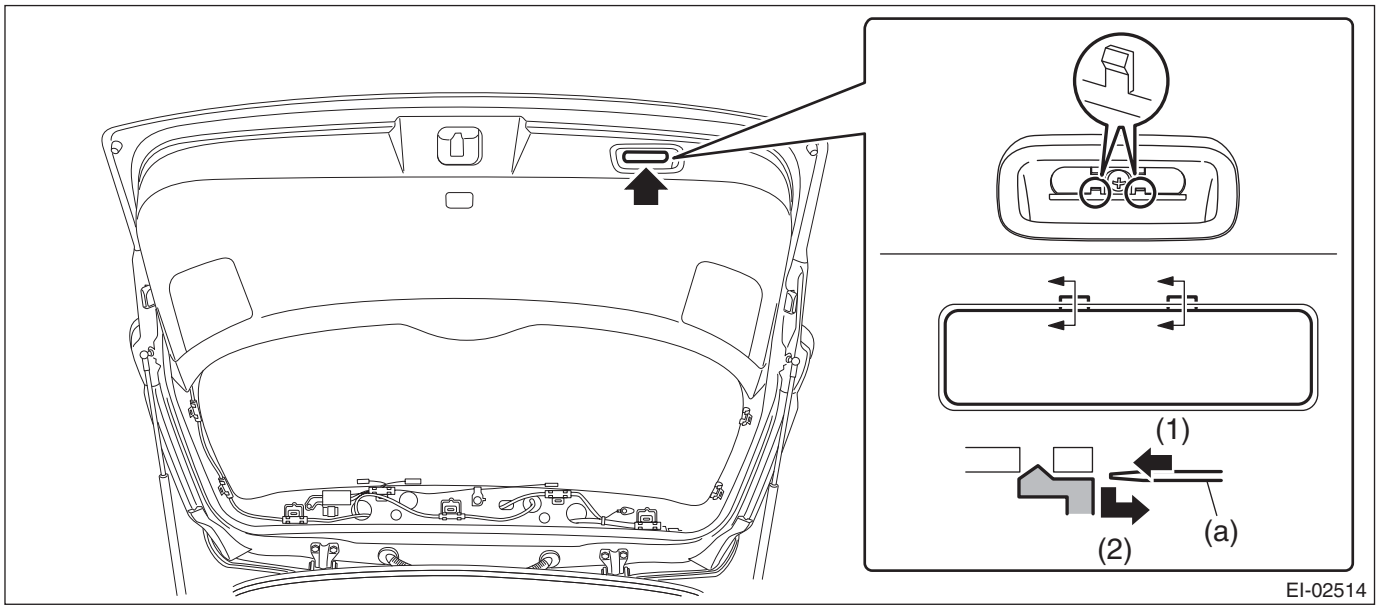
b) Remove the claws on the bottom of trim, and remove the rear gate pillar trim.



(3) Remove the hand grip of rear gate.

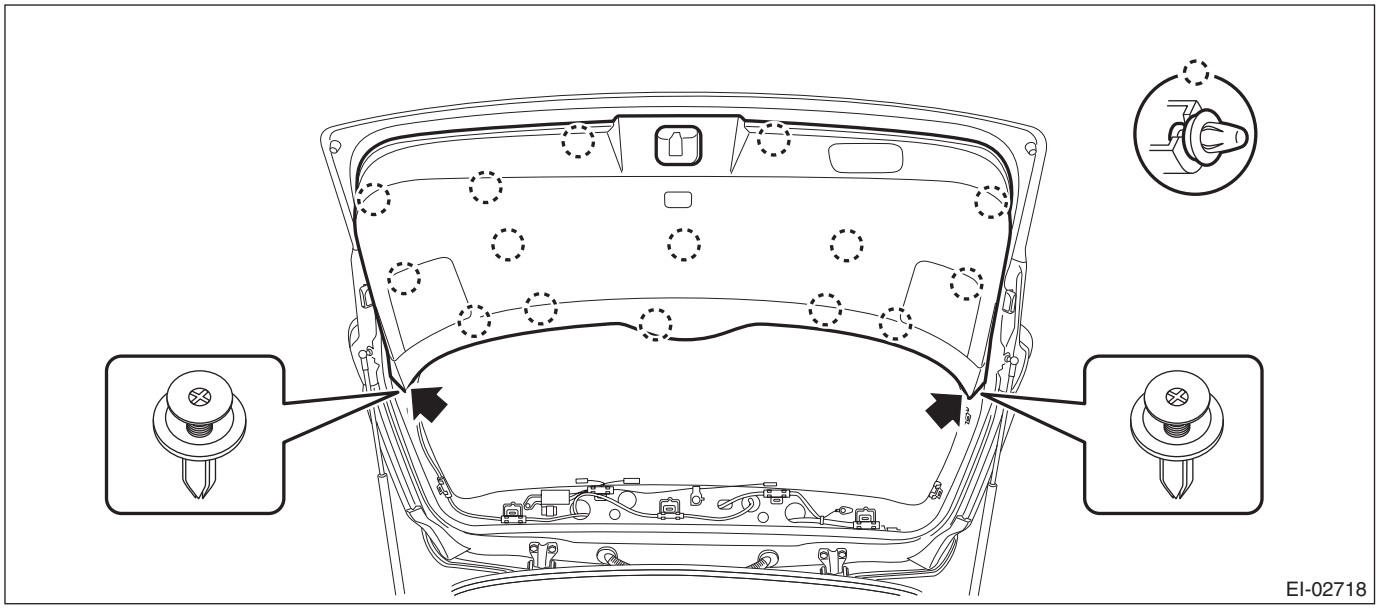
CAUTION:
- **Be careful not to scratch the trim.**
- **To protect the trim from damage, attach a protective tape to the tool in use.**

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.

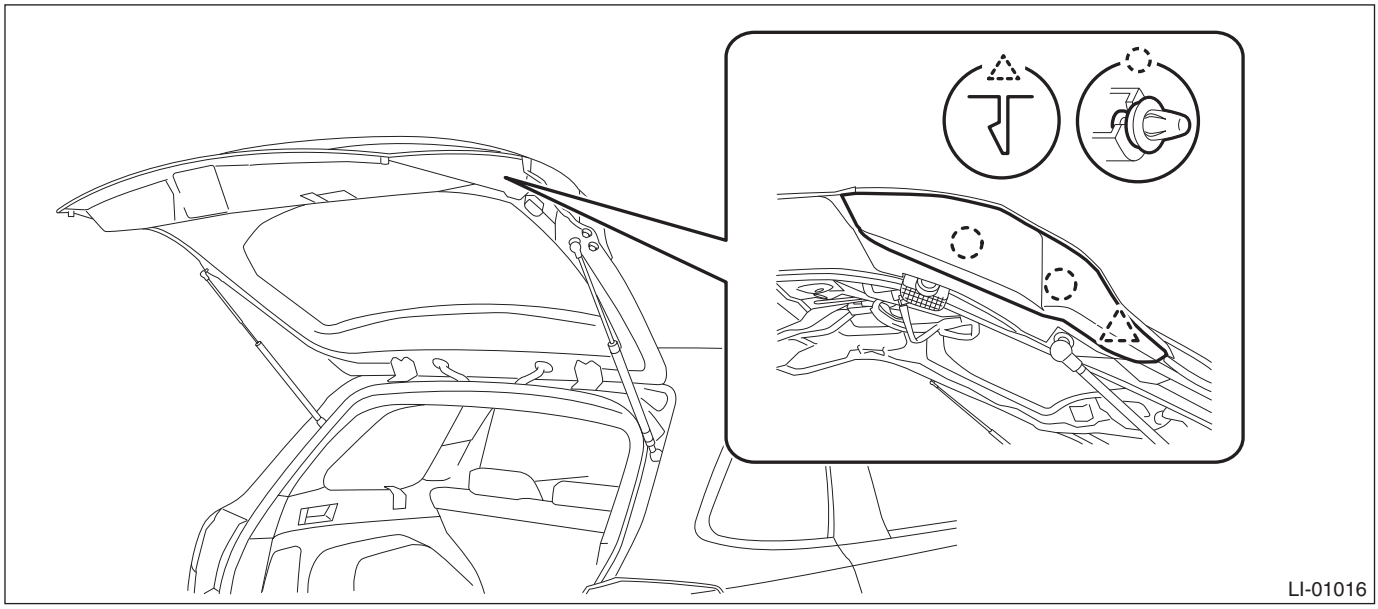


(4) Remove the rear gate lower trim.
a) Remove the clips on both ends.

b) Release the clips and remove the rear gate lower trim.

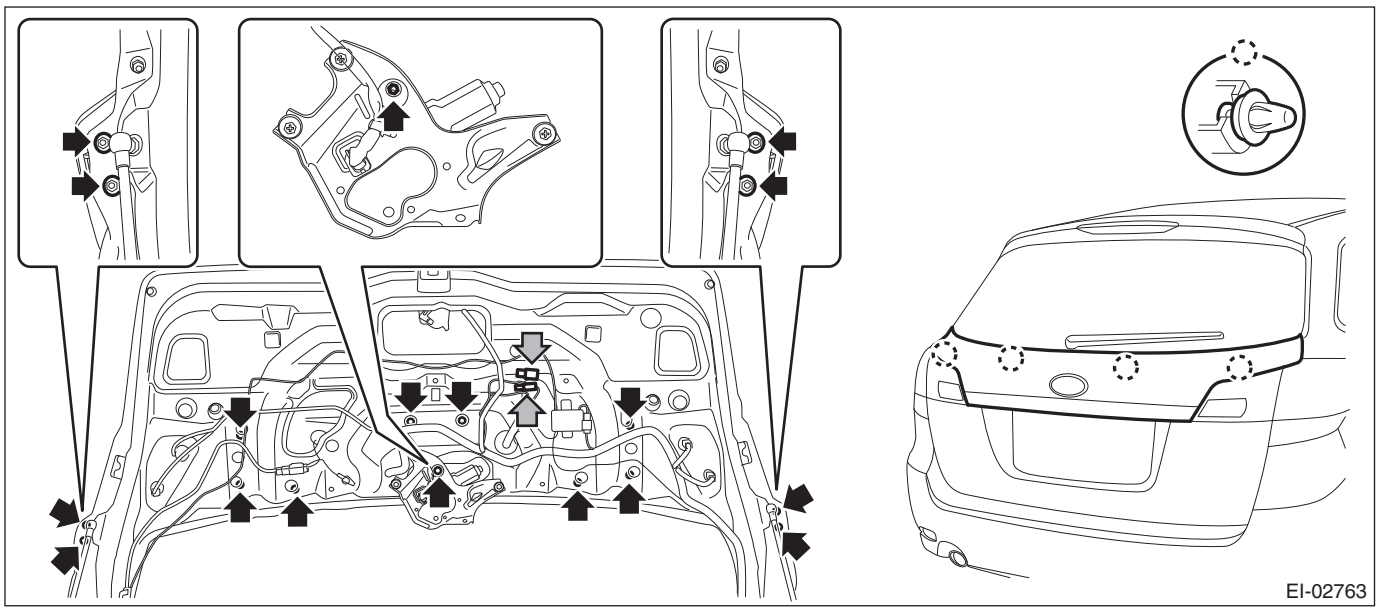


3) Remove the rear gate garnish.
(1) Release the clips and claws, then detach the rear finisher light side cover.



(2) Disconnect the harness connector of license plate light assembly.
(3) Remove the nuts.

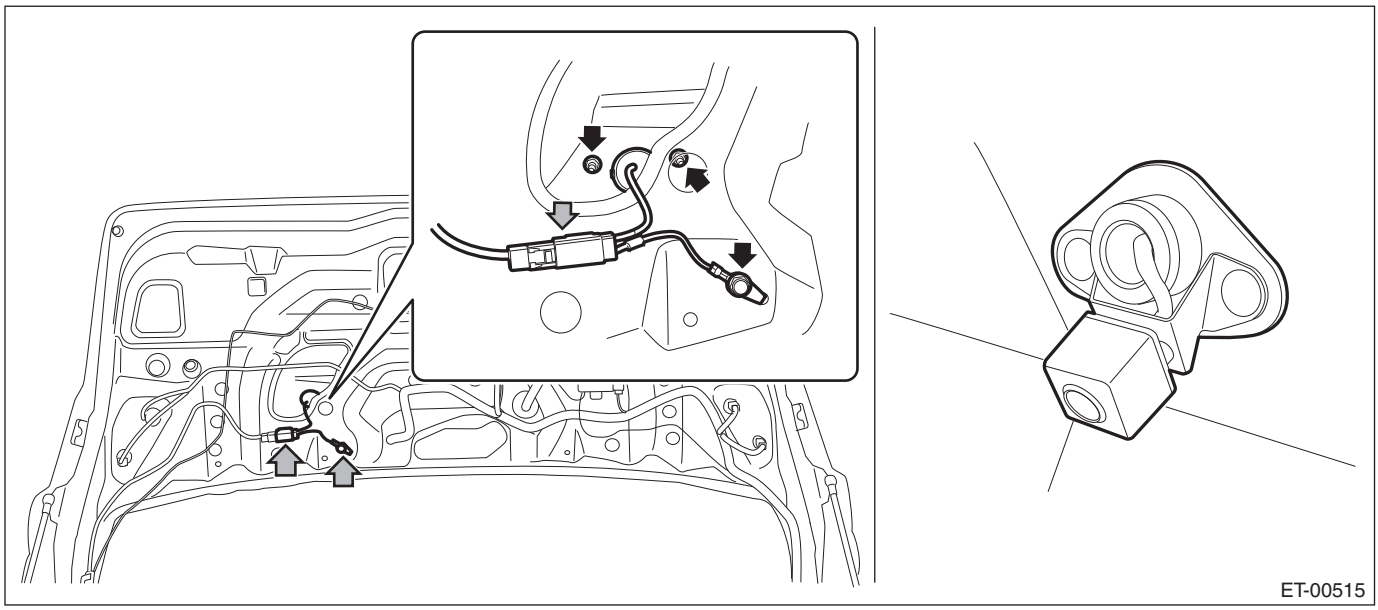
(4) Remove the clips and the rear gate garnish.



4) Remove the rearview camera assembly.

CAUTION:
Do not drop or apply any impact to the rearview camera because it is a precision equipment.

(1) Disconnect the rearview camera connector.
(2) Remove the nut and bolt on the back side of rear gate.
(3) Disconnect the claws (for temporary fastening) and remove the rearview camera assembly.



C: INSTALLATION

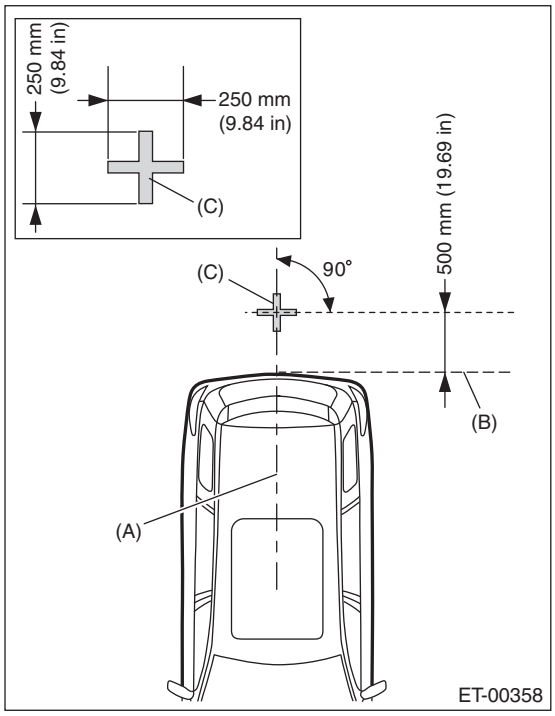
CAUTION:
Be sure to confirm the marker position, whenever the rearview camera is removed/installed/replaced.
Install each part in the reverse order of removal.

Tightening torque:
Sedan model
Rearview camera (bracket): 7.5 N·m (0.76 kgf-m, 5.5 ft-lb)
Trunk lid garnish: 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)
OUTBACK model
Rearview camera (bracket (nut)): 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)
Rearview camera (ground (bolt)): 13 N·m (1.33 kgf-m, 9.6 ft-lb)
Rear gate garnish: 4.5 N·m (0.46 kgf-m, 3.3 ft-lb)
Rear wiper motor & wiper arm: <Ref. to WW-4, REAR WIPER, COMPONENT, General Description.>

D: INSPECTION

1) Park the vehicle at the level place where there are enough area at the rear of the vehicle.
2) Attache the tape as the target point for standard at the floor rearward of the vehicle as shown in the figure below.

NOTE:
Standard tape width is about 30 — 50 mm (1.18 — 1.97 in) and brilliant color shall be used.



(A) Vehicle body center line
(B) Rear edge of bumper
(C) Target point

3) Confirm the following before checking the corresponding items.
- If the display is blank.

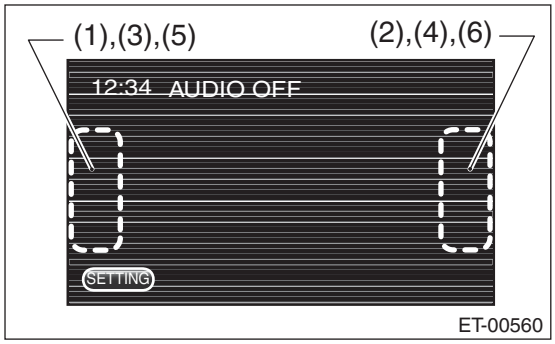
Rearview camera image is not displayed. (Navigation screen is displayed normally.)
1. Check the condition of back sensor connection. <Ref. to ET-5, CHECK EACH VEHICLE SIGNAL, INSPECTION, Navigation System.>
2. Check the condition of rearview camera connection. <Ref. to ET-4, CHECK EACH CONNECTION, INSPECTION, Navigation System.>

- If the marker is not displayed.
  1. Check the UART communication. <Ref. to ET-4, CHECK EACH CONNECTION, INSPECTION, Navigation System.>
- If the marker position is not aligned.
  1. Adjust the marker position according to the MARKER ADJUSTMENT MODE. <Ref. to ET-46, MARKER ADJUSTMENT MODE, ADJUSTMENT, Rearview Camera System.>

E: ADJUSTMENT

1. MARKER ADJUSTMENT MODE

1) Prepare the target point. <Ref. to ET-45, INSPECTION, Rearview Camera System.>
2) Display the audio OFF screen by turning the ignition switch to ON, then touch the screen in the order of (1) — (6).

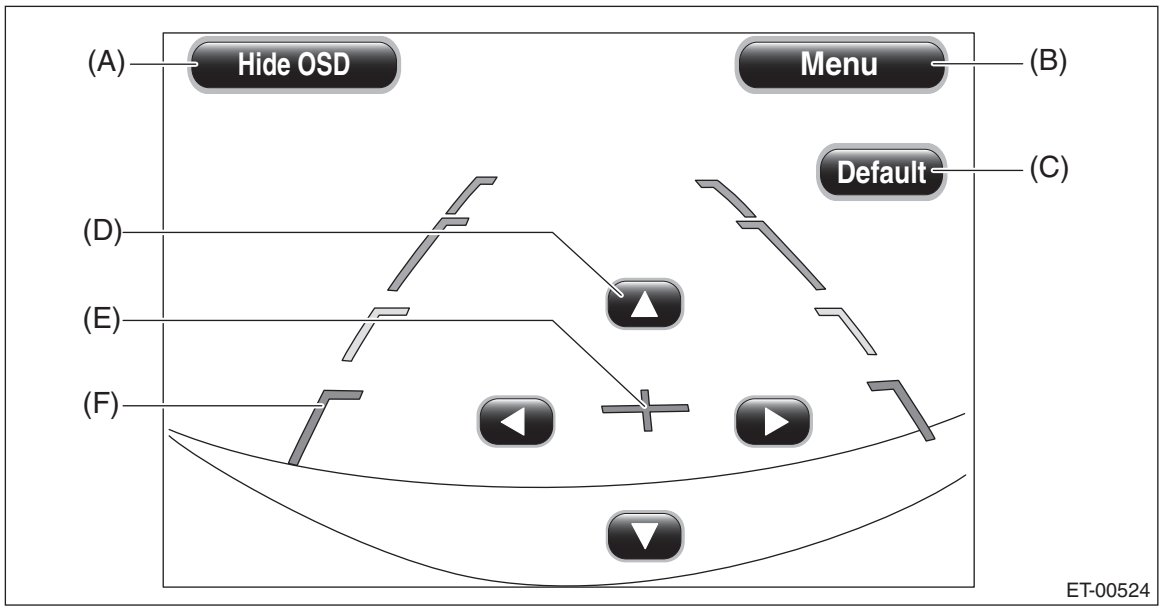


3) When the Dealer Diag menu screen is displayed, touch the “RearCamera Setup” from the items.

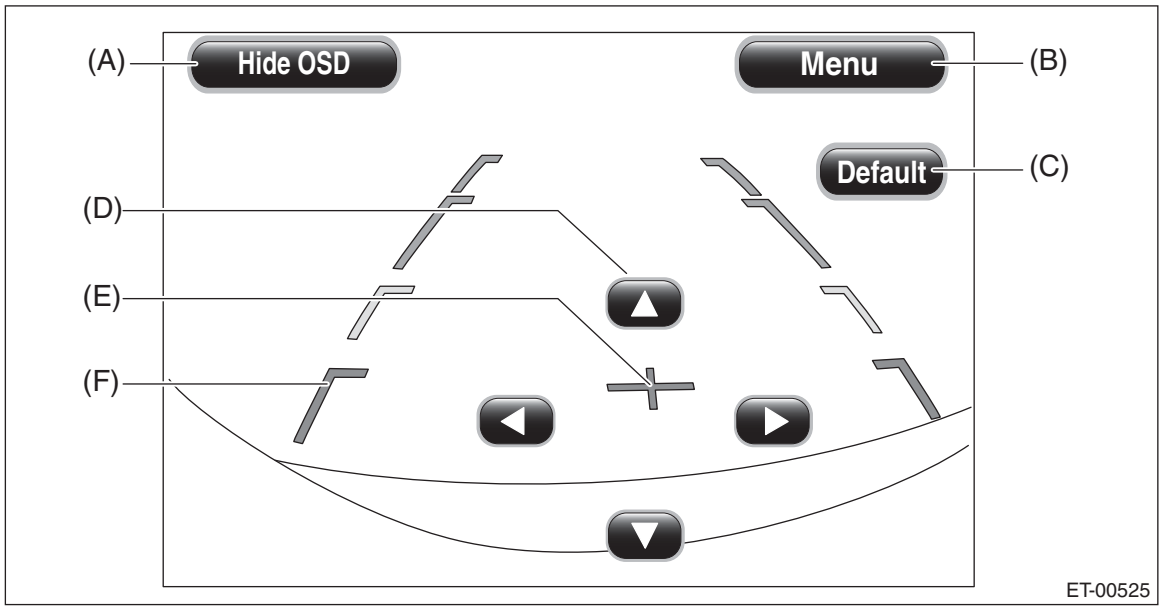
CAUTION:
Do not select the item other than “RearCamera Setup”. The navigation system can not operate normally.
4) Shift the select lever to the “R” position to display the image of the rearview camera.

5) Touch the adjustment keys on the display screen to adjust the marker line.

- Sedan model



- OUTBACK model



(A)	Hide OSD key	(C)	Default key	(E)	Cross line
(B)	Menu key	(D)	Adjustment keys	(F)	Vehicle width and distance reference line

(1) Confirm that the target point position in the display screen is identified.
(2) Adjust by touching the adjustment keys so that the cross line (E) and target point join together.

NOTE:

- Hide OSD key: Touching the Hide OSD key hides the operation keys. When the operation keys are not displayed, touching the display screen displays the operation keys again.
- Menu key: Touching this key shifts to the Dealer Diag Menu screen.
- Default key: Touching this key resets the adjustment values to the default condition.

6) Turn the ignition switch to OFF and wait for 60 seconds or more before turning the ignition switch to ON again.

CAUTION:
If the ignition switch is turned to OFF, be sure to wait for 60 seconds or more before turning the ignition switch to ON again.
If turning the ignition switch to ON again or disconnecting the ground cable from battery within 60 seconds after turning the ignition switch to OFF, the navigation unit data updating can not be performed correctly.

7) Shift the select lever to the “R” position to display the image of the rearview camera.
8) Confirm that the marker line position is correctly adjusted before turning the ignition switch to OFF, then finish the procedures.

15.Front Accessory Power Supply Socket

A: WIRING DIAGRAM

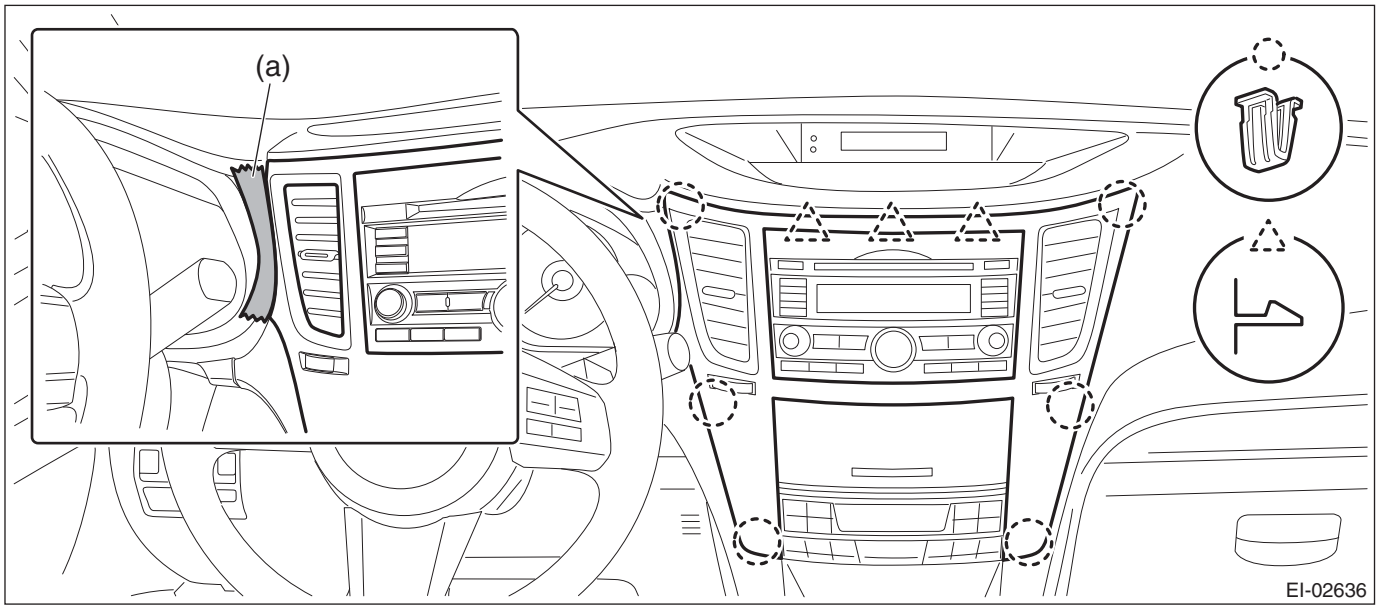
Refer to “Front Accessory Power Supply Socket System” in the wiring diagram. <Ref. to WI-148, WIRING DIAGRAM, Front Accessory Power Supply Socket System.>

B: REMOVAL

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

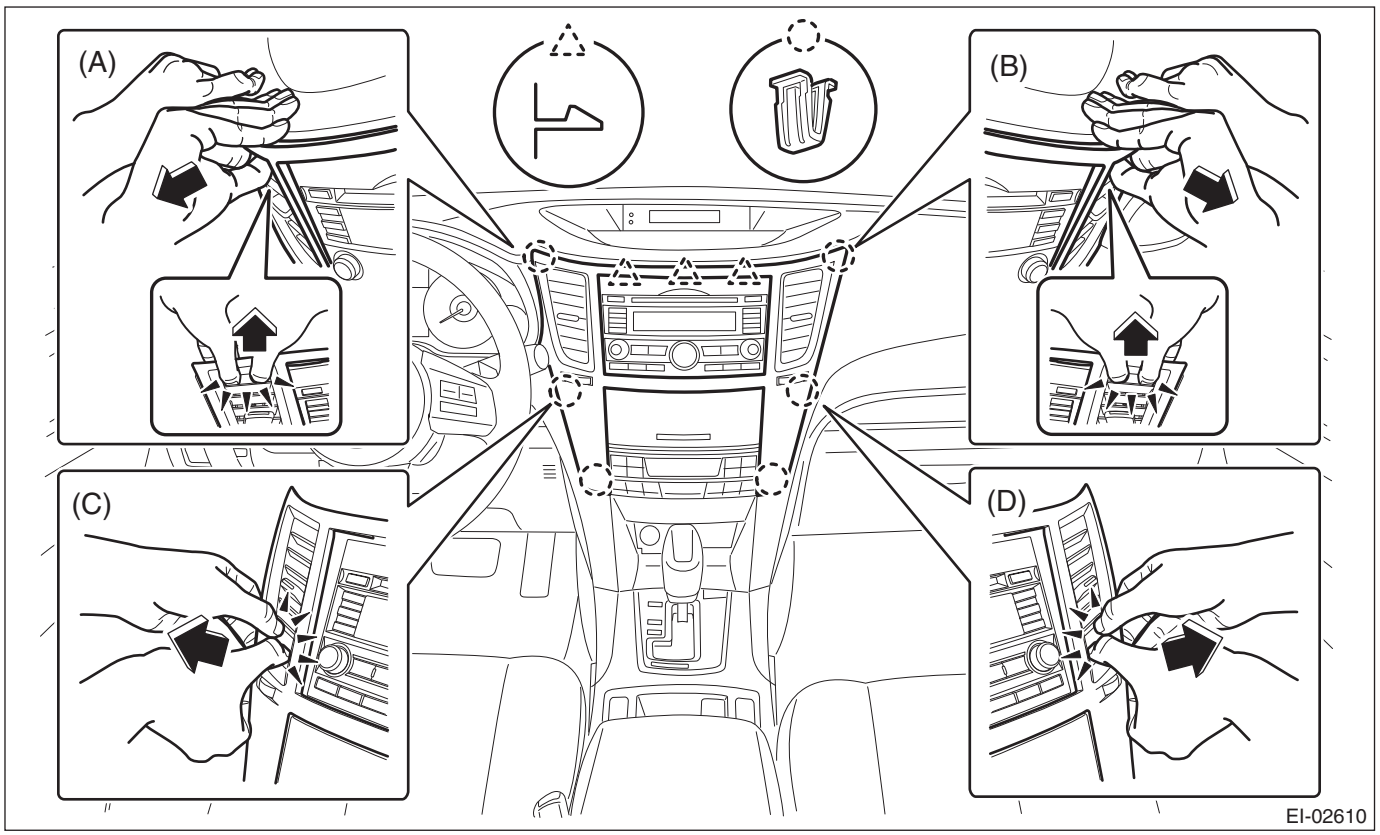
CAUTION:
Do not put your finger on the fin of the air vent grille. Doing so may damage the fin.

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

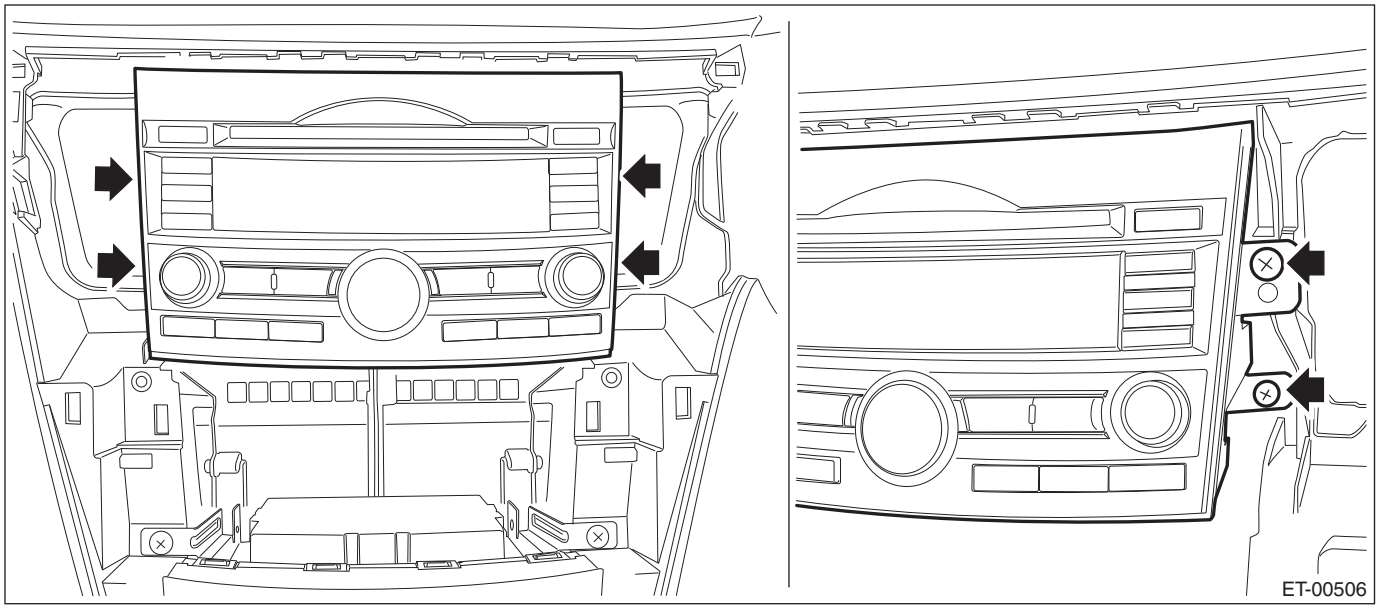


(2) Insert a finger into the air vent grille and release the left and right clips at the top of the center panel. (A), (B)
(3) Insert a finger into the air vent grille and release the left and right clips at the center of the center panel. (C), (D)

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

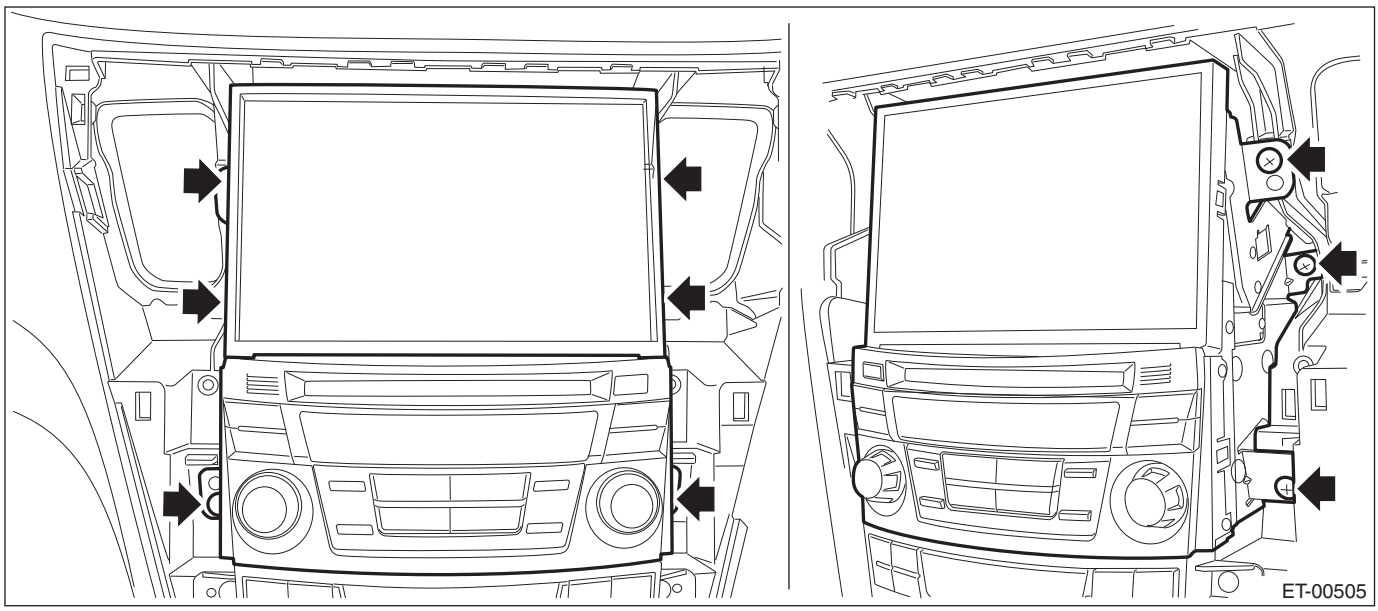


3) Remove the audio assembly.
(1) Remove the left and right screws, and partially pull the audio out from center console.
(2) Disconnect the connectors, and remove the audio assembly.

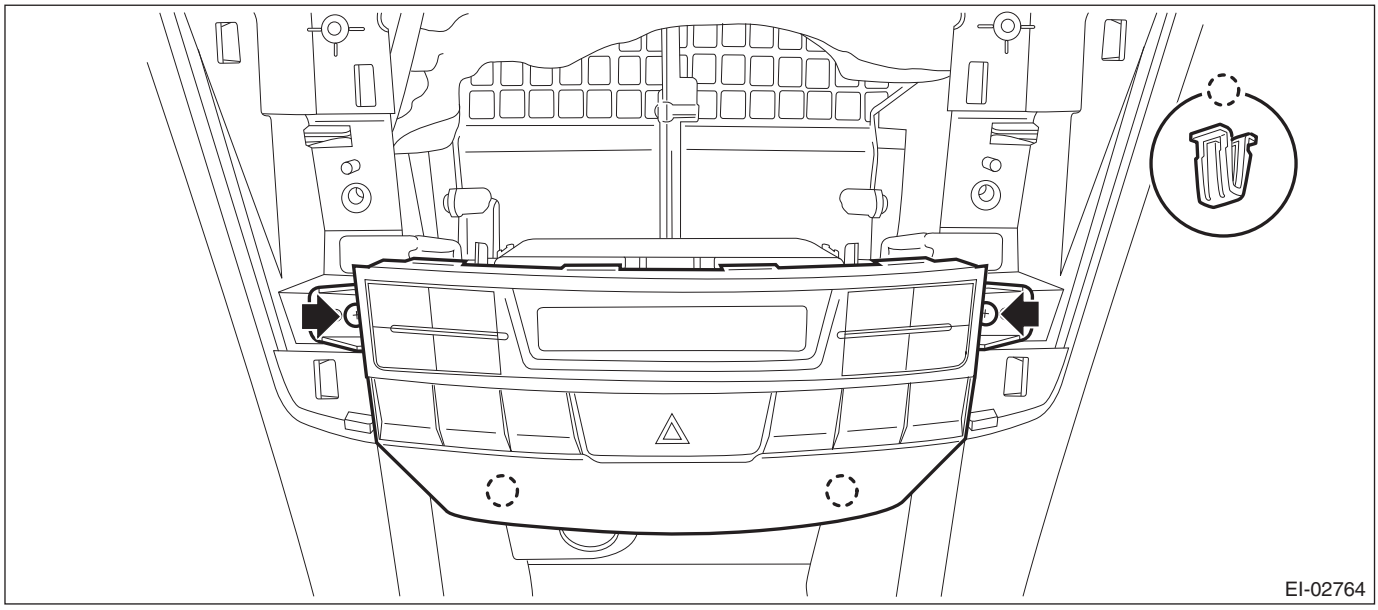


4) Remove the navigation assembly. (model with navigation)
(1) Remove the left and right screws.

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

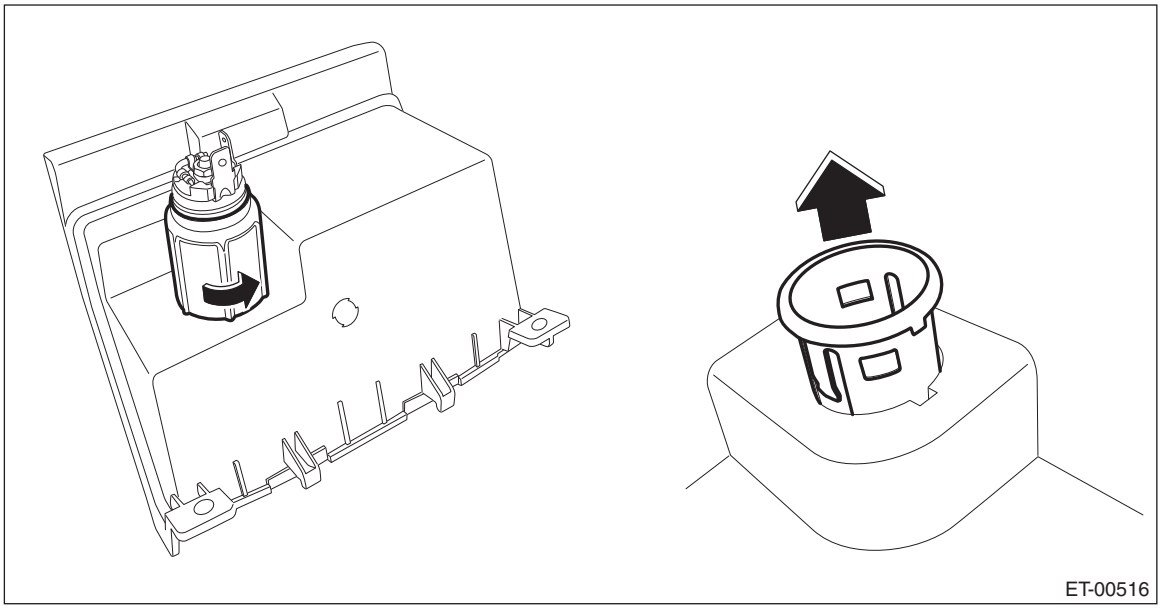


5) Remove the control panel assembly.
(1) Remove the screws, and pull out the control panel assembly toward you.
(2) Disconnect the connector, and remove the control panel assembly.



6) Remove the front accessory power supply socket.
(1) Disconnect the connector and turn the securing cover to remove it.

(2) Pull the accessory power supply socket out to remove.



C: INSTALLATION

Install each part in the reverse order of removal.

16.Rear Accessory Power Supply Socket

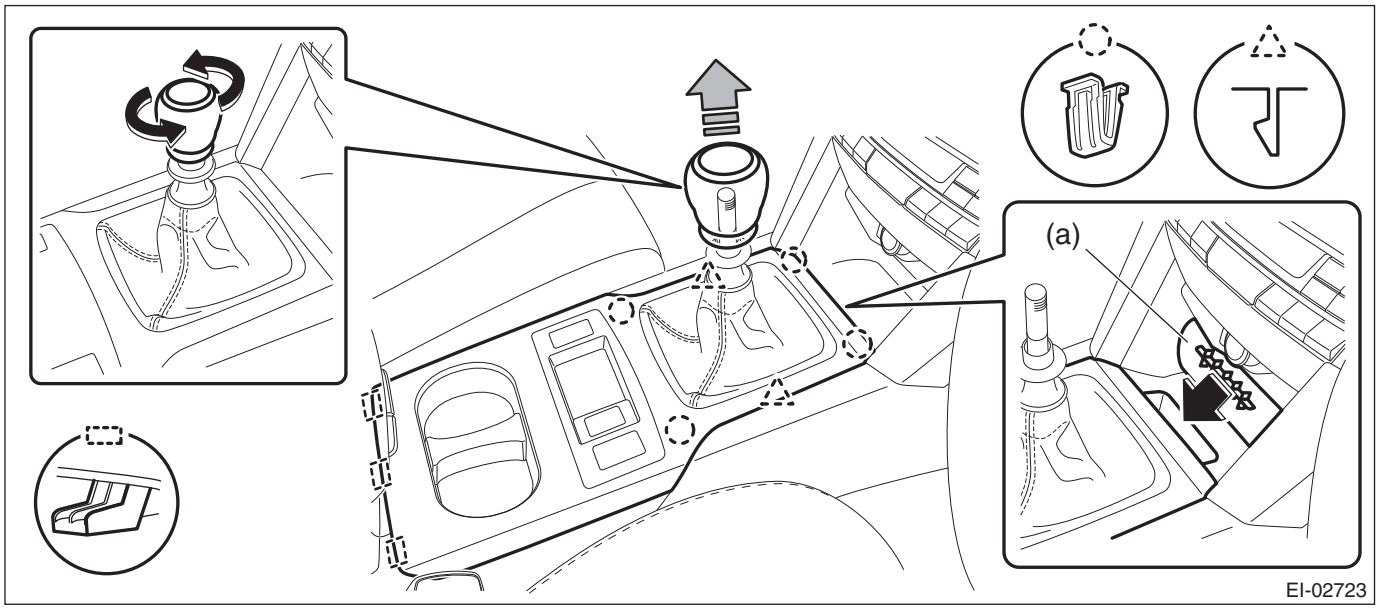
A: WIRING DIAGRAM

Refer to “Rear Accessory Power Supply Socket System” in the wiring diagram. <Ref. to WI-191, WIRING DIAGRAM, Rear Accessory Power Supply Socket System.>

B: 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.

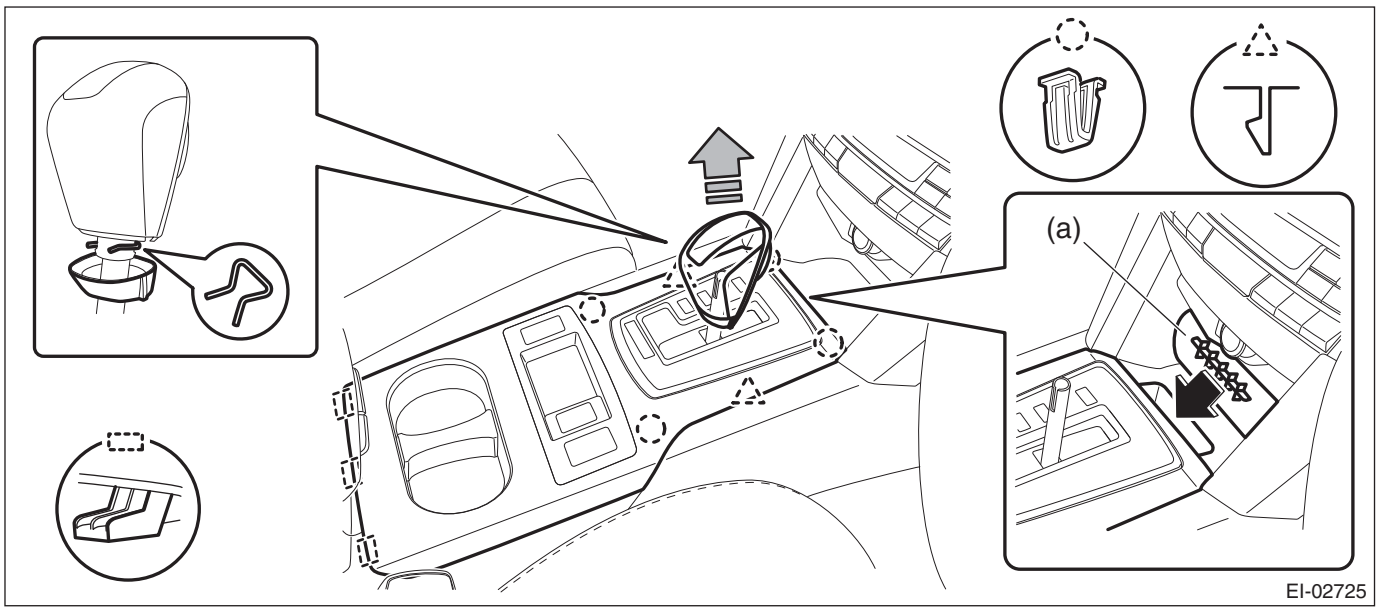


NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

  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.

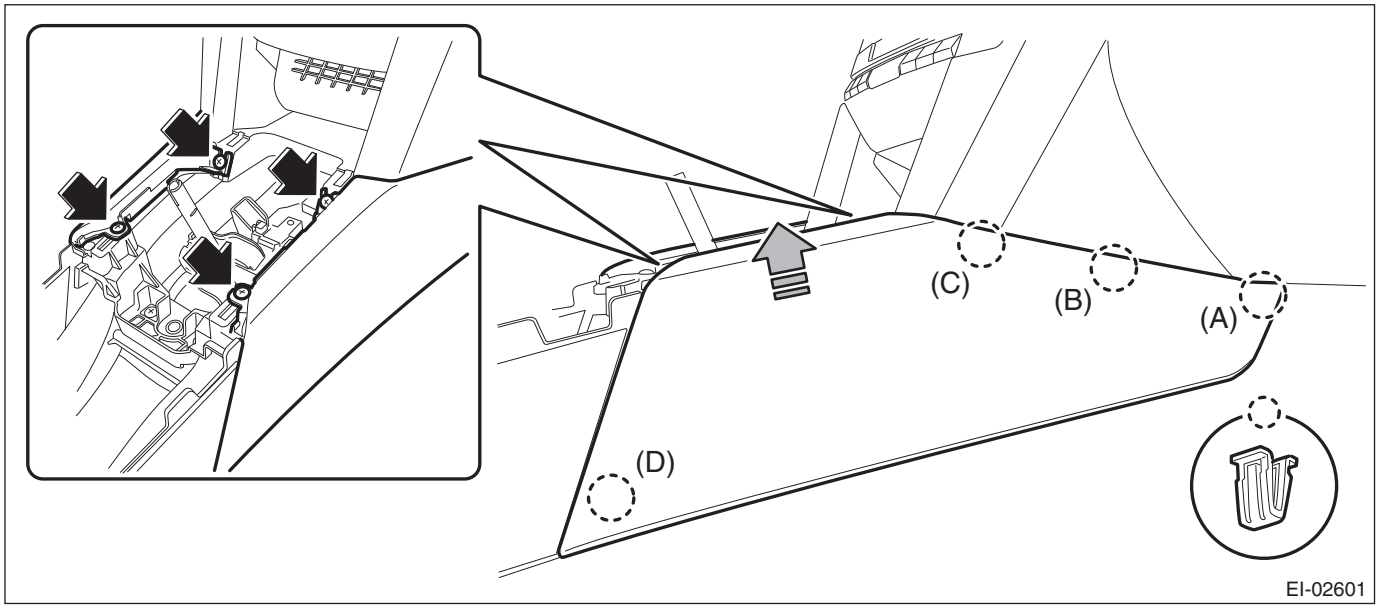
2. Release the clips and claws, then pull up the console front cover assembly.



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.

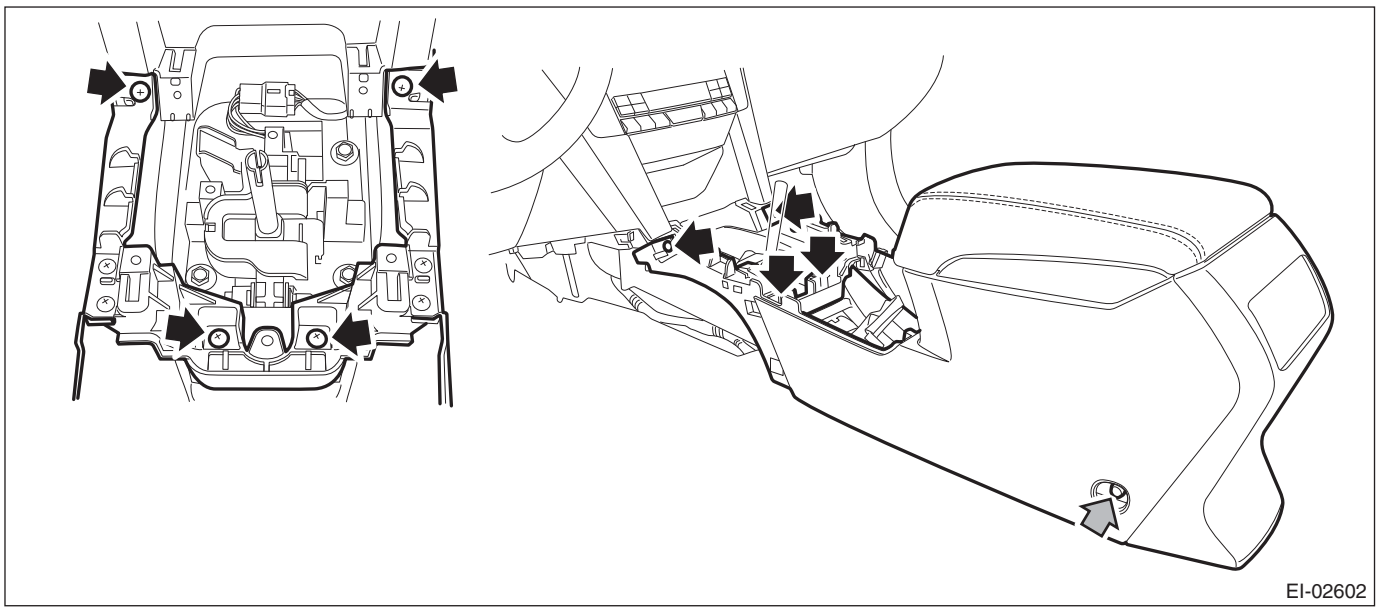
2) Remove the console front side cover assembly.
(1) Remove the screws and release the clips (A) to (D) in order.
(2) Remove the console front side cover assembly by pulling it up.



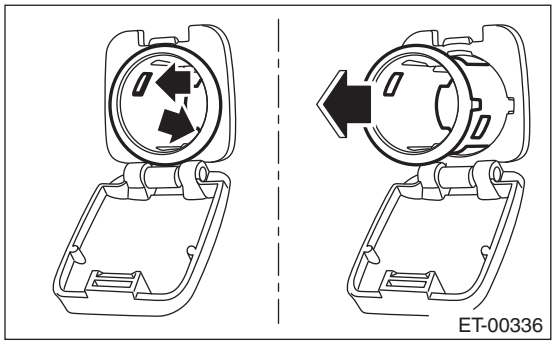
3) Remove the console box assembly.
(1) Move the seat forward, and remove the bolts after detaching the left and right caps.

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.



4) Remove the front accessory power supply socket.
(1) Remove the claws (two) in accessory power supply socket.
(2) Pull the accessory power supply socket out to remove.



C: INSTALLATION

Install in the reverse order of removal.

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

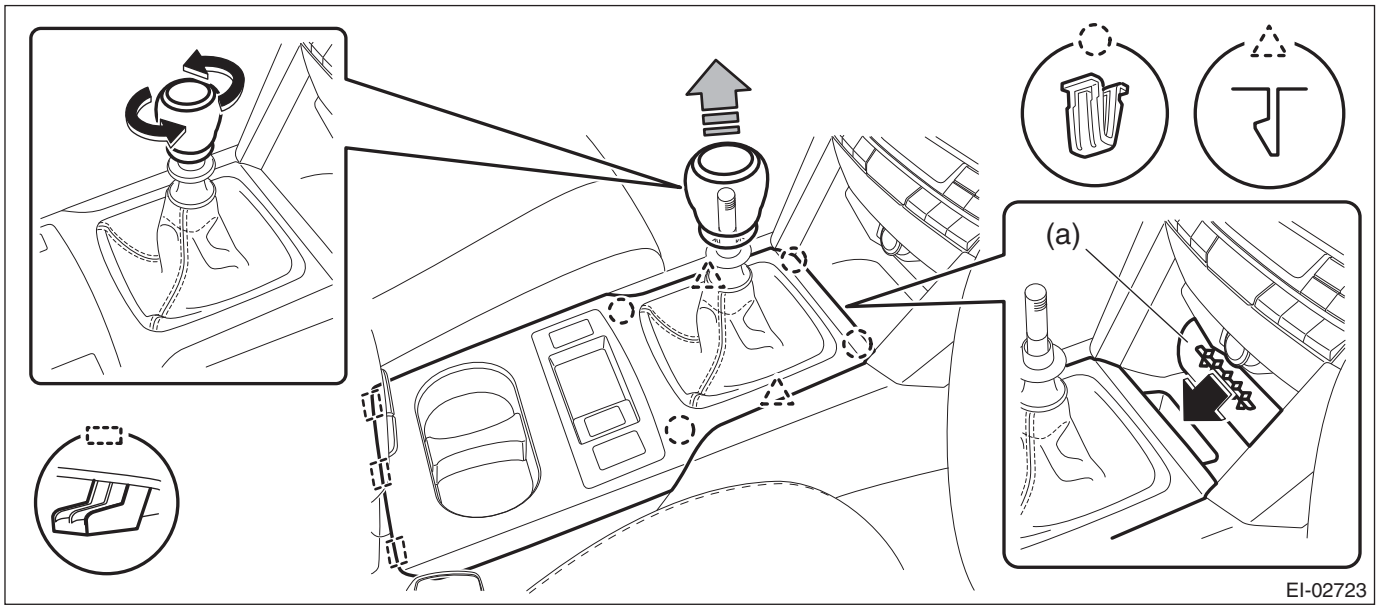
17.AUX Input Terminal

A: REMOVAL

1. AUX INPUT TERMINAL

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

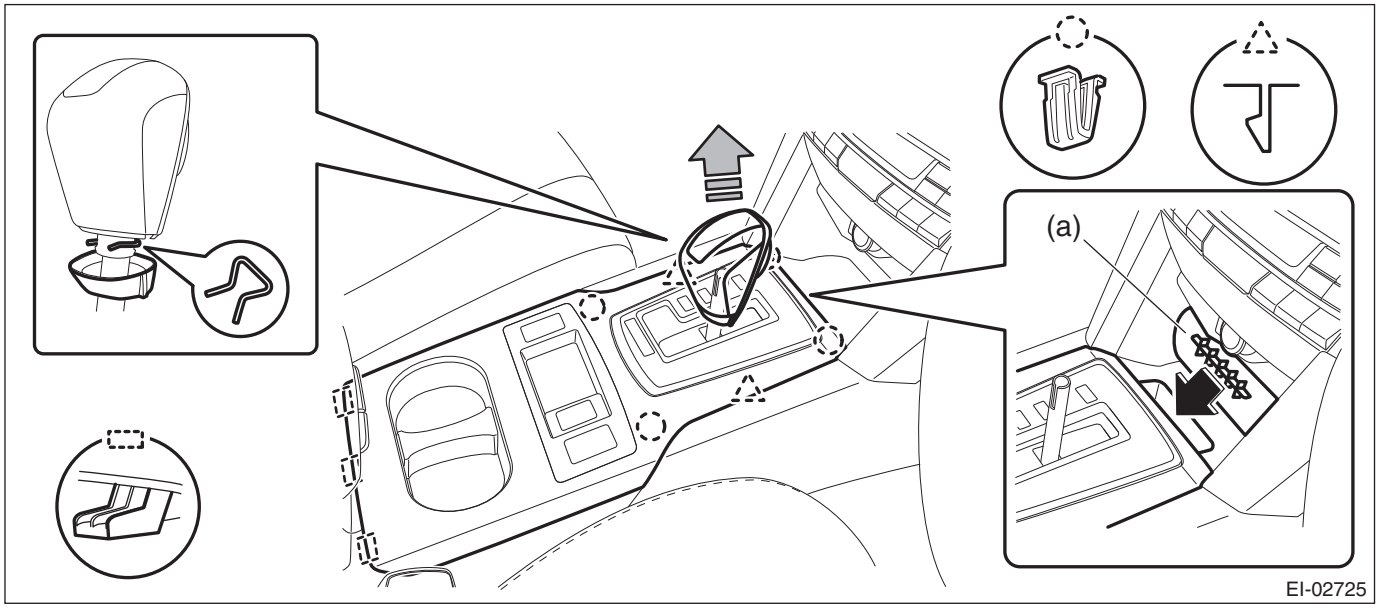
- MT model
  1. Remove the shift knob.
  2. Release the clips and claws, then pull up the console front cover assembly.



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.

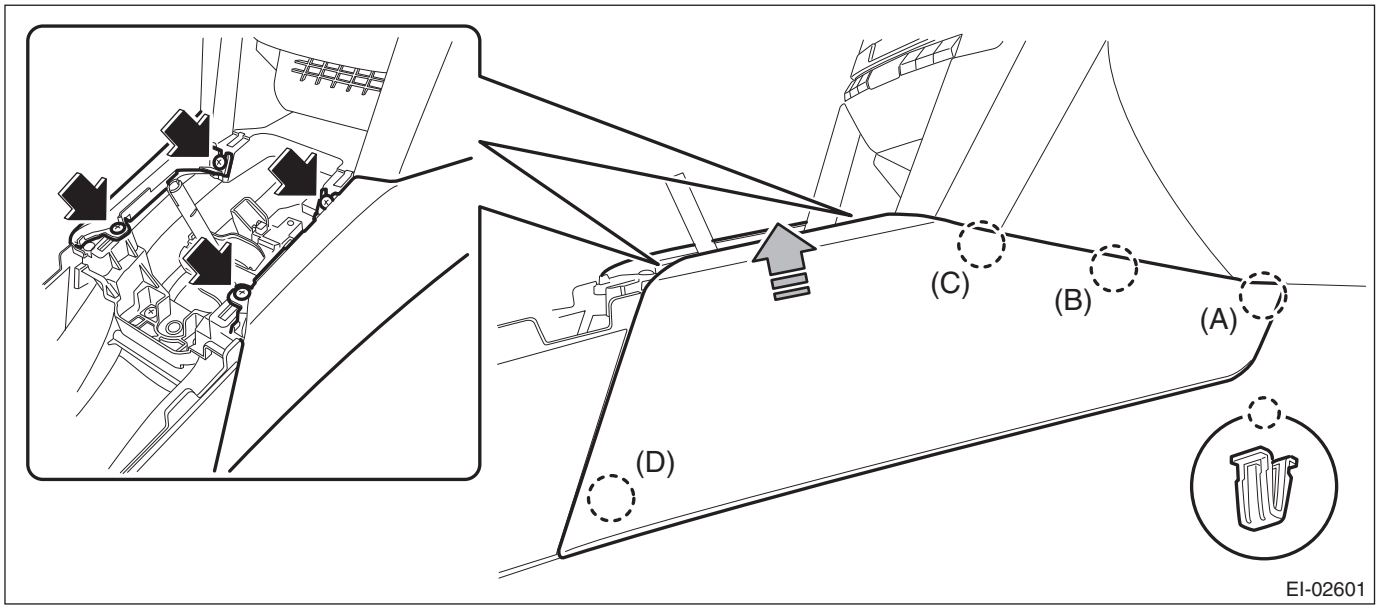
- AT model
  1. Remove the select lever knob.
     a. Lower the cover grip AT.
     b. Remove the clamp grip pin, then remove the select lever knob.
  2. Release the clips and claws, then pull up the console front cover assembly.



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.

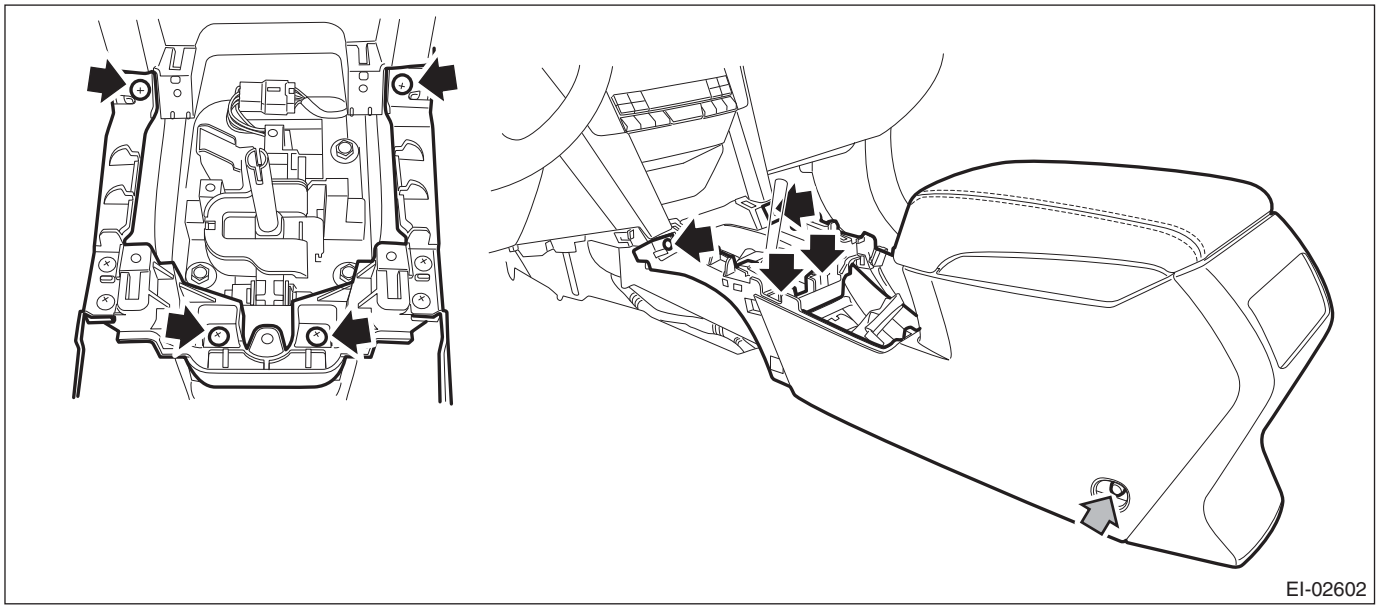
3) Remove the console front side cover assembly.
   (1) Remove the screws and release the clips (A) to (D) in order.
   (2) Remove the console front side cover assembly by pulling it up.



4) Remove the console box assembly.
   (1) Move the seat forward, and remove the bolts after detaching the left and right caps.

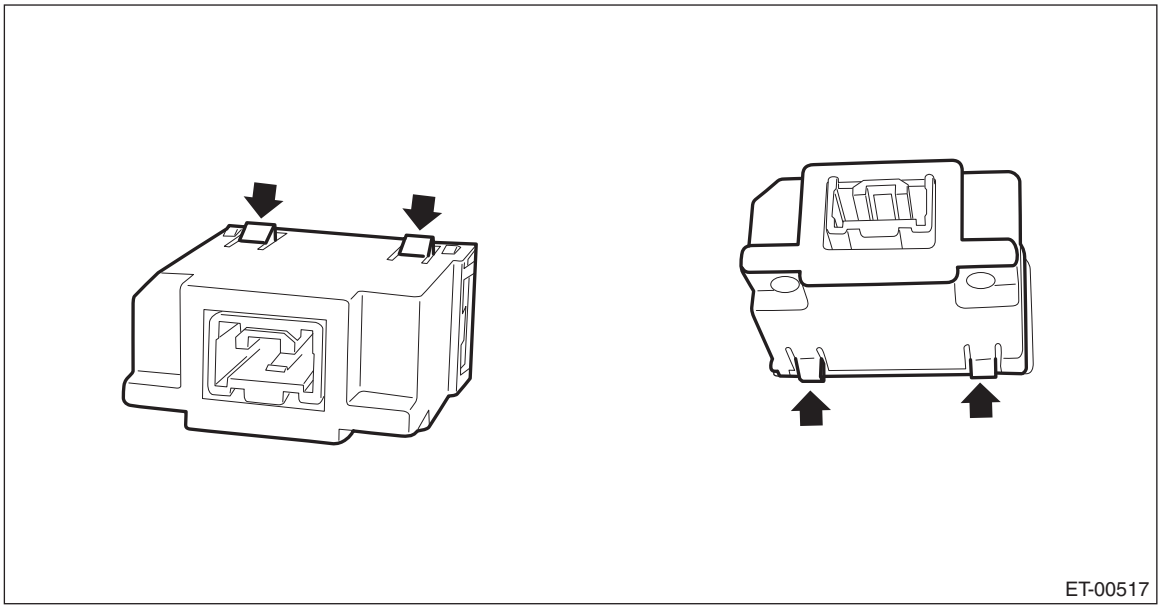
NOTE:
For a model with power seat, connect the battery ground cable and move the seat. Then, disconnect the battery ground cable again and wait for 60 seconds at least before restarting the work.

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



5) Remove the AUX input terminal.
   (1) Remove the claws at four locations.

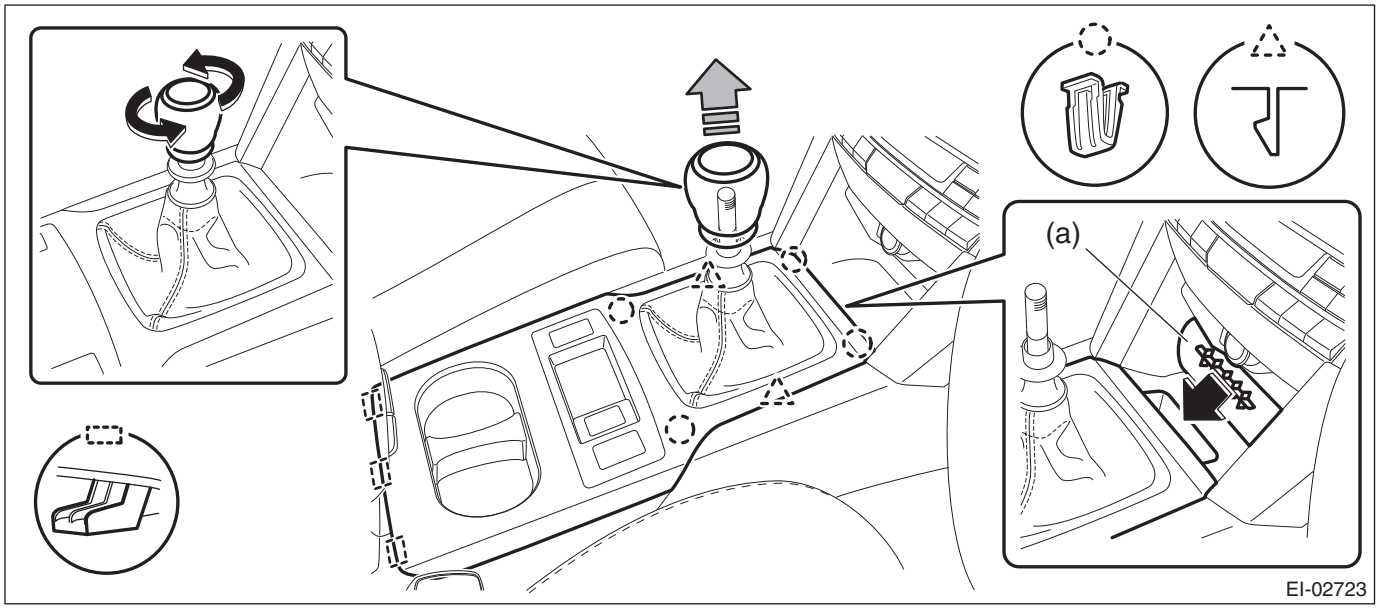
(2) Remove the AUX input terminal assembly by pushing it into the console box.



2. AUX TERMINAL HARNESS

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.

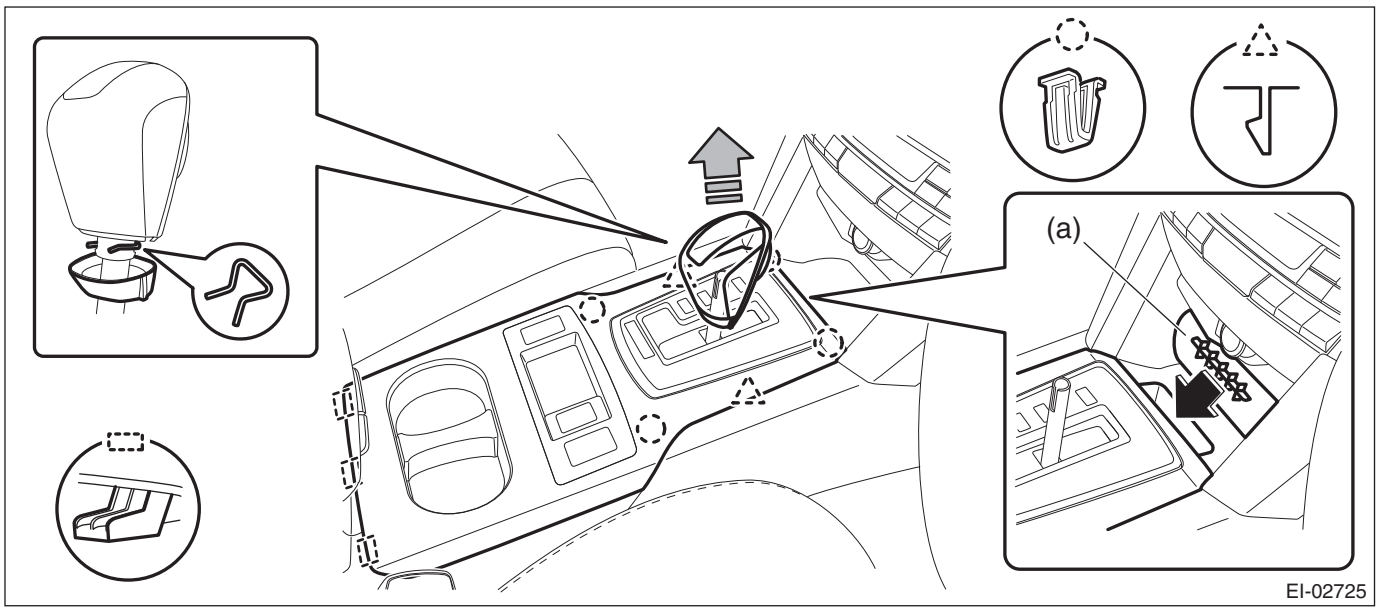


NOTE:
Turn over the front center pocket mat (a) and pull up the console front cover from the slit.

  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.

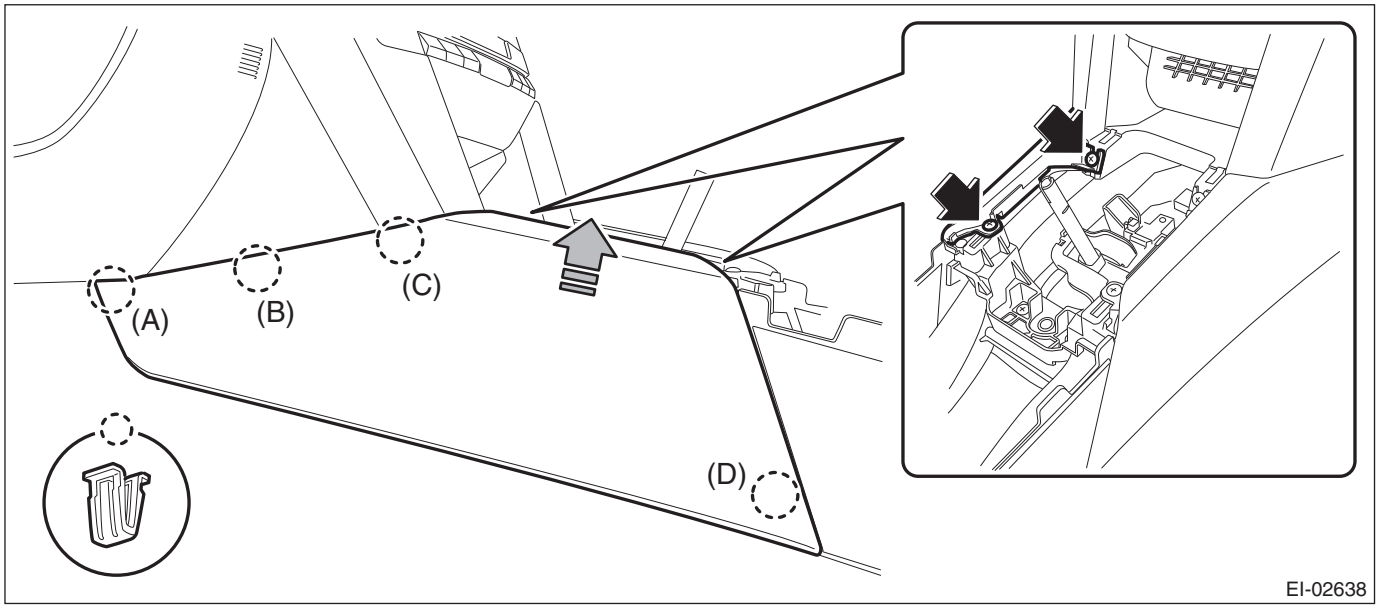
2. Release the clips and claws, then pull up the console front cover assembly.



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.

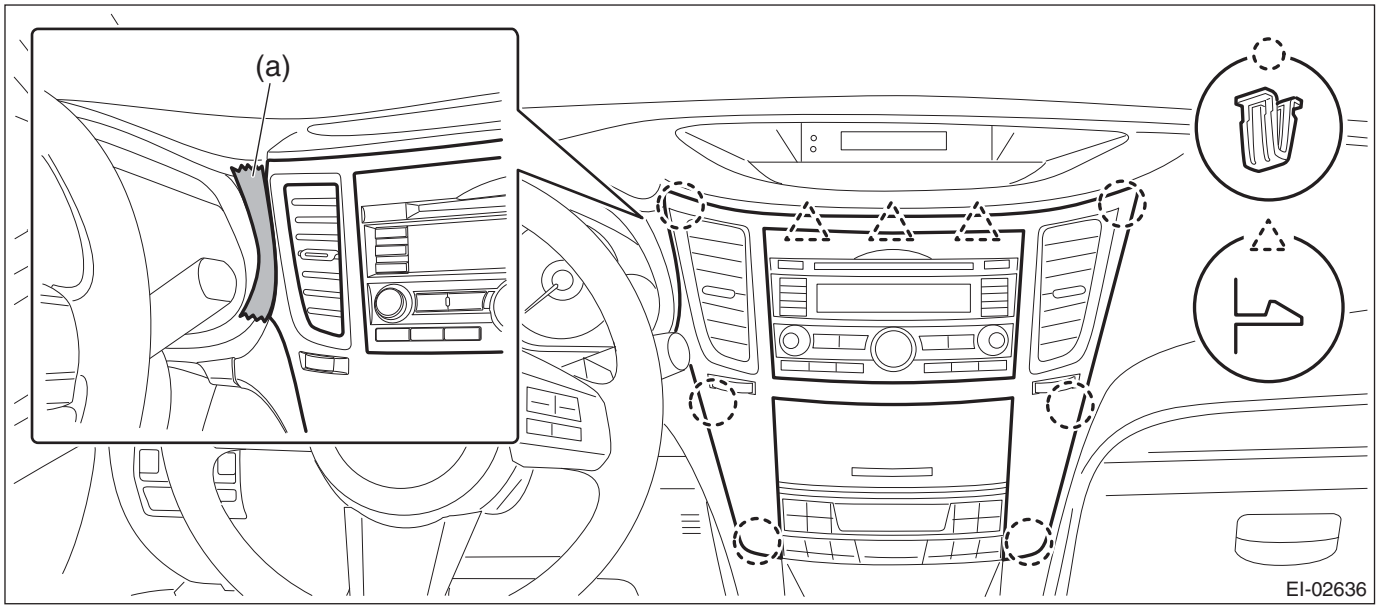
3) Remove the console front side cover assembly LH.
(1) Remove the screws and release the clips (A) to (D) in order.
(2) Remove the console front side cover assembly by pulling it up.



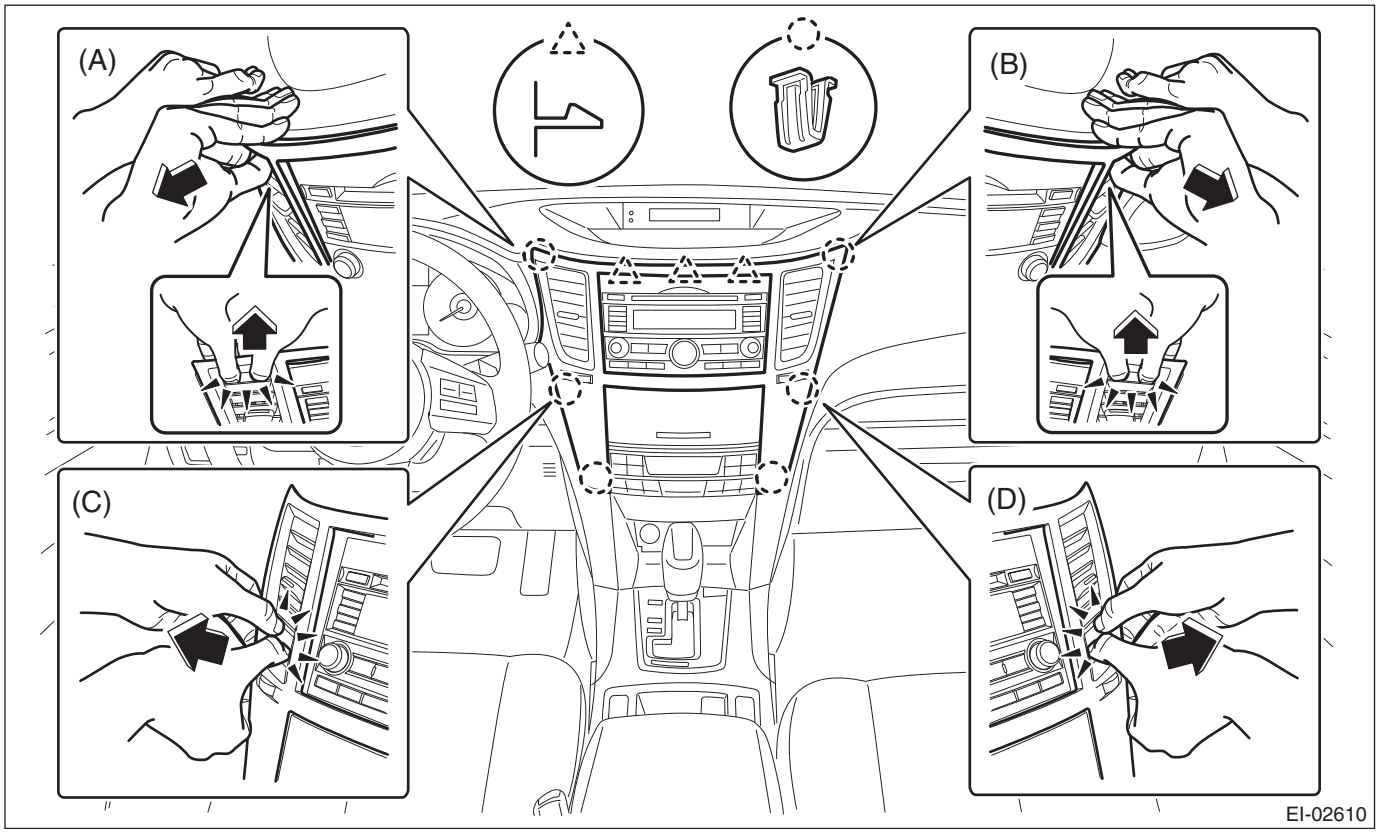
4) Remove the center panel assembly.

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.

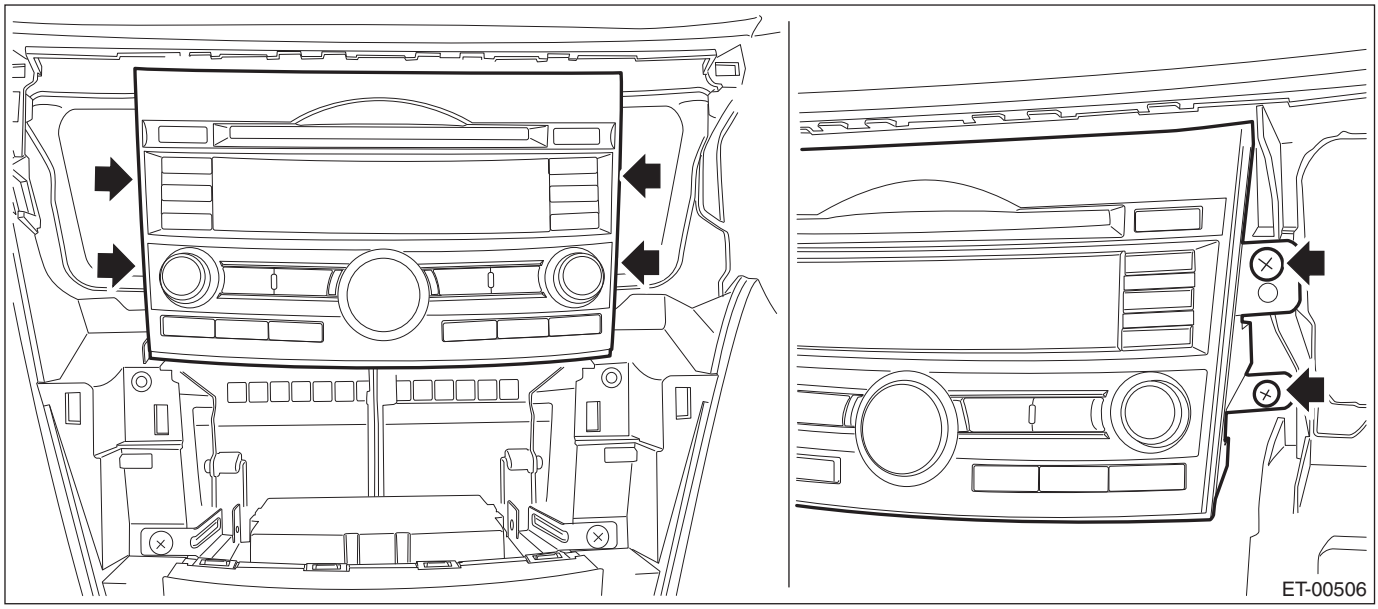


(2) Insert a finger into the air vent grille and release the left and right clips at the top of the center panel. (A), (B)
(3) Insert a finger into the air vent grille and release the left and right clips at the center of the center panel. (C), (D)
(4) Release the clips at the bottom of the center panel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

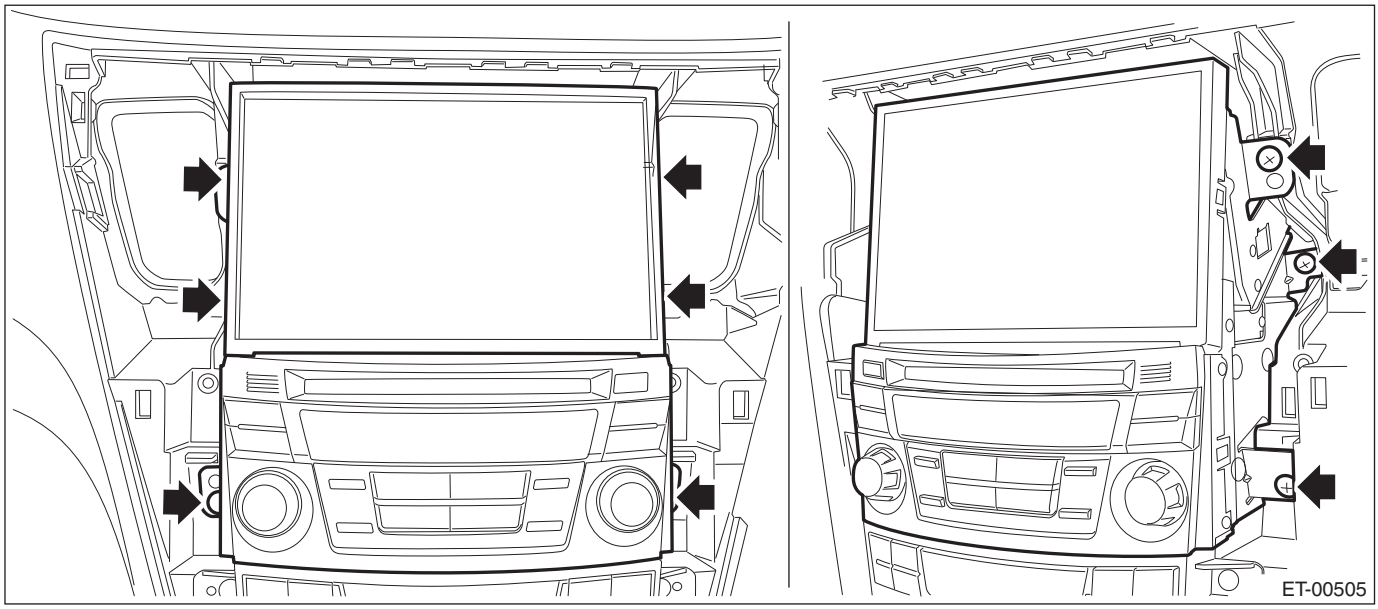


5) Remove the audio assembly.
(1) Remove the left and right screws, and partially pull the audio out from center console.

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

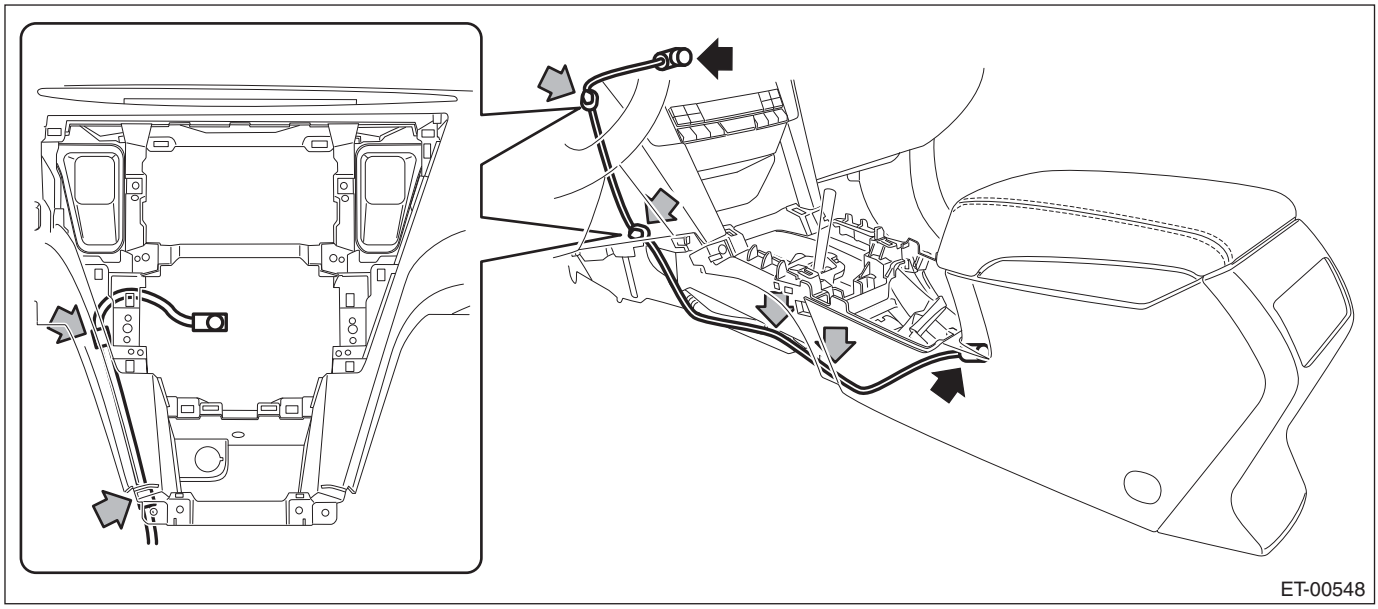


6) Remove the navigation assembly. (model with navigation)
(1) Remove the left and right screws.
(2) Disconnect the connectors, and remove the navigation assembly.



7) Remove the AUX terminal harness.
(1) Remove the harness clamp.

(2) Disconnect the connector from the AUX input terminal assembly, and remove the AUX terminal harness.



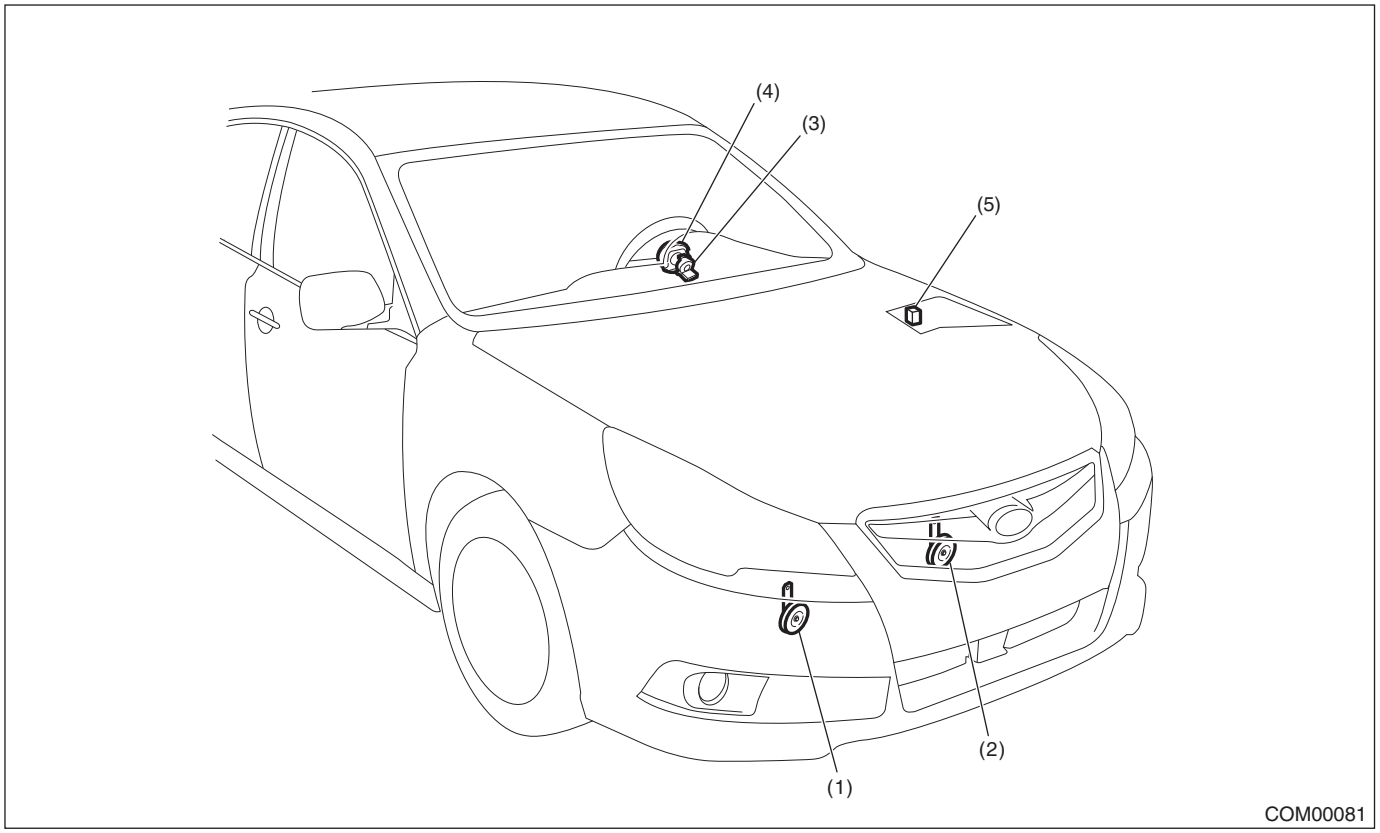
B: INSTALLATION

Install each part in the reverse order of removal.

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

1. General Description

A: COMPONENT



(1) Hi pitch side horn
(2) Lo pitch side horn
(3) Roll connector
(4) Horn switch (driver's airbag module ASSY)
(5) HORN RELAY

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.
• Reassemble the parts in the reverse order of disassembly procedure unless otherwise indicated.
• Connect the connectors securely when reassembling.
• After reassembly, make sure that the functional parts operate normally.

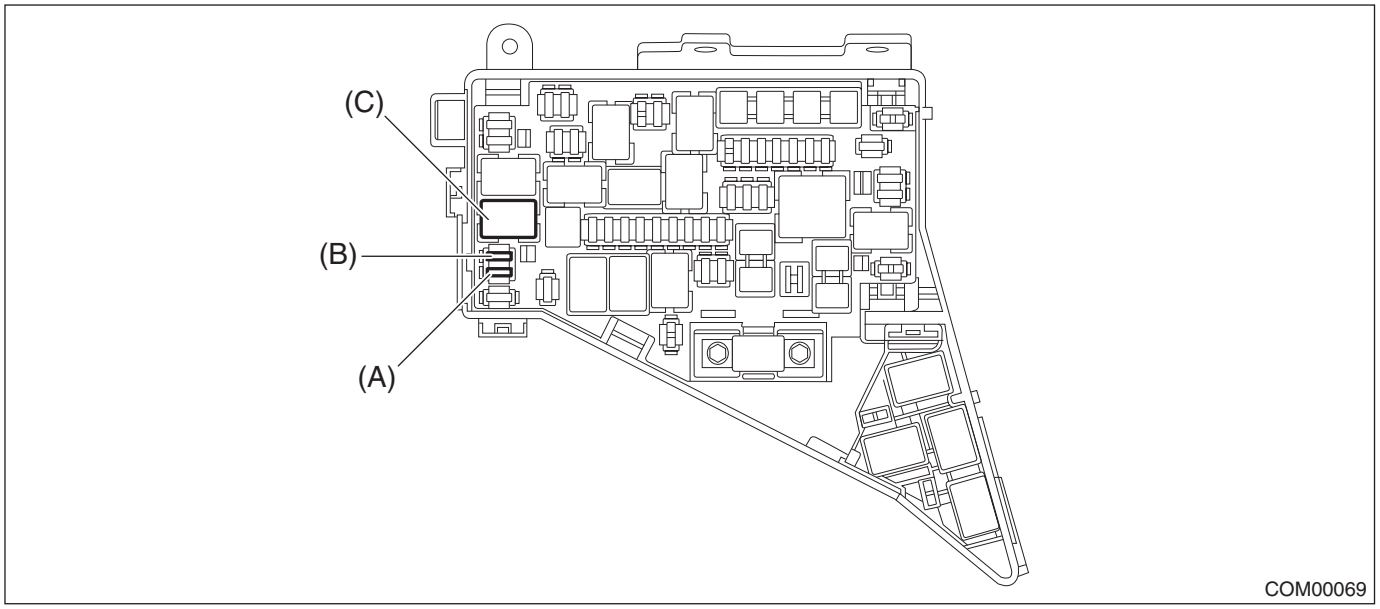
C: PREPARATION TOOL

1. GENERAL TOOL

TOOL NAME	REMARKS
Circuit tester	Used for measuring resistance and voltage.
TORX® T30	Used for removing/installing driver's airbag module.

2. Relay and Fuse

A: LOCATION



Main Fuse Box	Fuse 7.5 A (Hi pitch side horn)	(A)
	Fuse 7.5 A (Lo pitch side horn)	(B)
	HORN RELAY	(C)

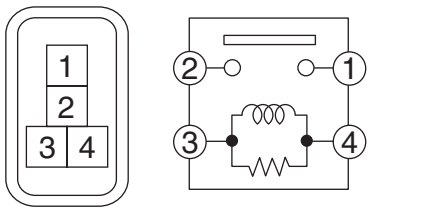
B: INSPECTION

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. Horn System

A: WIRING DIAGRAM

Refer to “Horn System” in the wiring diagram. <Ref. to WI-157, WIRING DIAGRAM, Horn System.>

B: INSPECTION

Symptoms	Inspection steps
Horn does not sound.	1. Check the fuse.
	2. Check the horn relay.
	3. Check the roll connector.
	4. Check the horn switch.
	5. Check the horn assembly.
	6. Check the harness.

C: NOTE

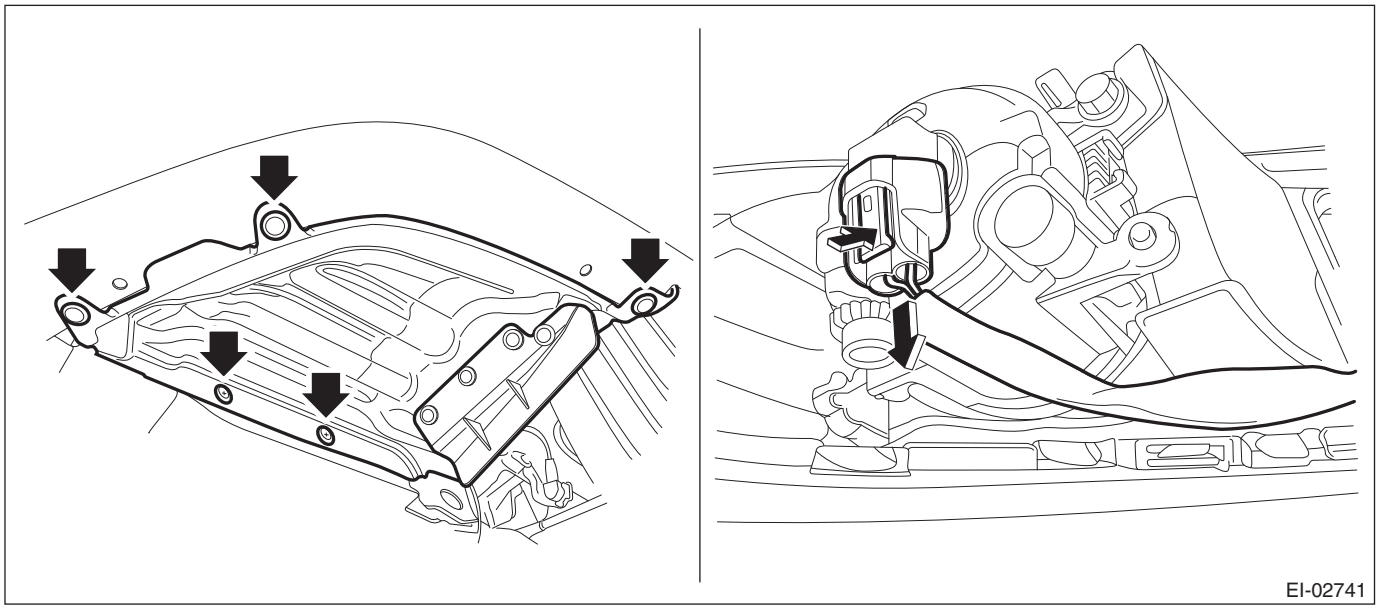
For operation procedures of each component of the horn system, refer to the respective section.

- Horn ASSY:<Ref. to COM-5, Horn.>
- Horn switch:<Ref. to COM-11, Horn Switch.>

4. Horn

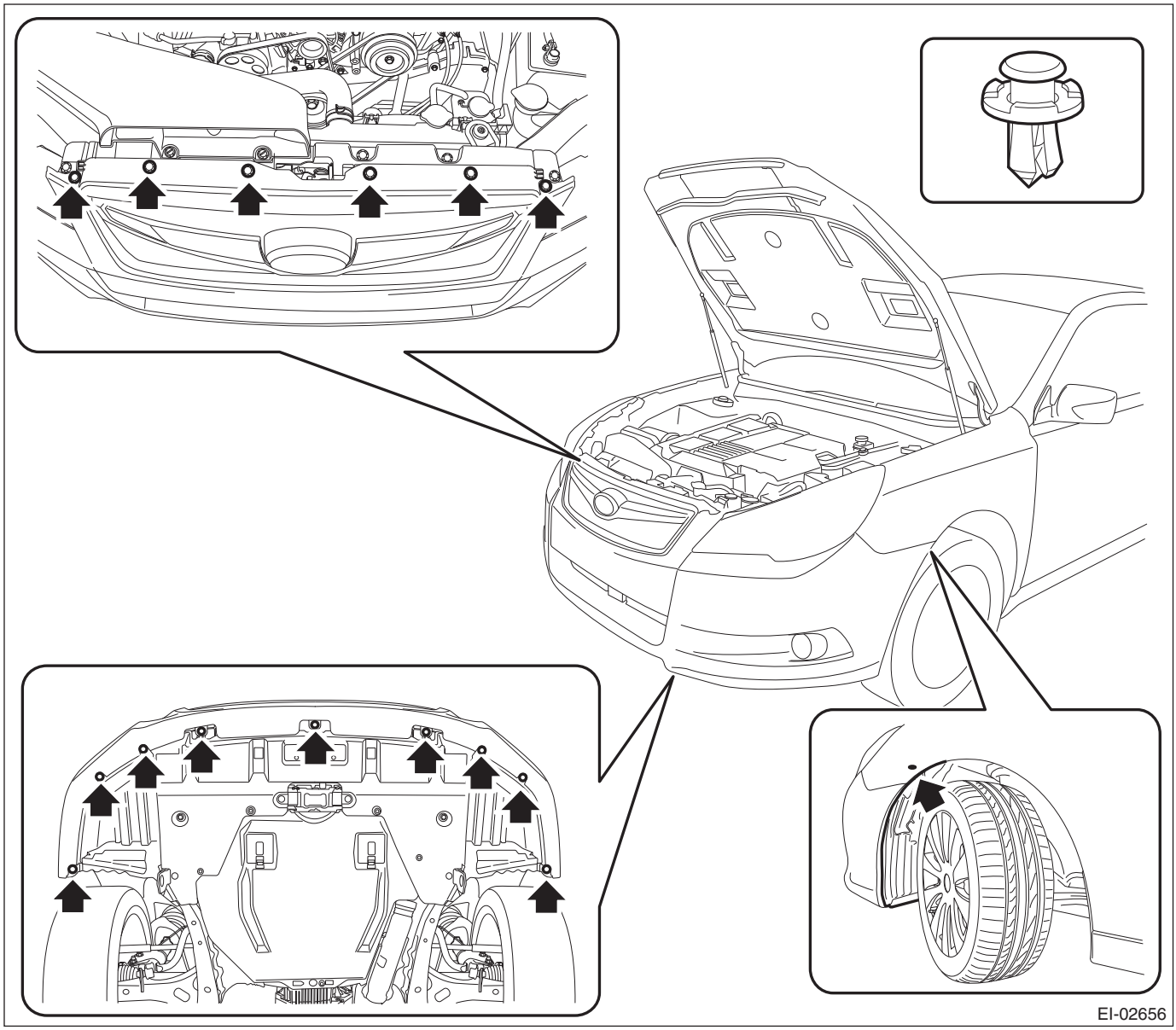
A: REMOVAL

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)



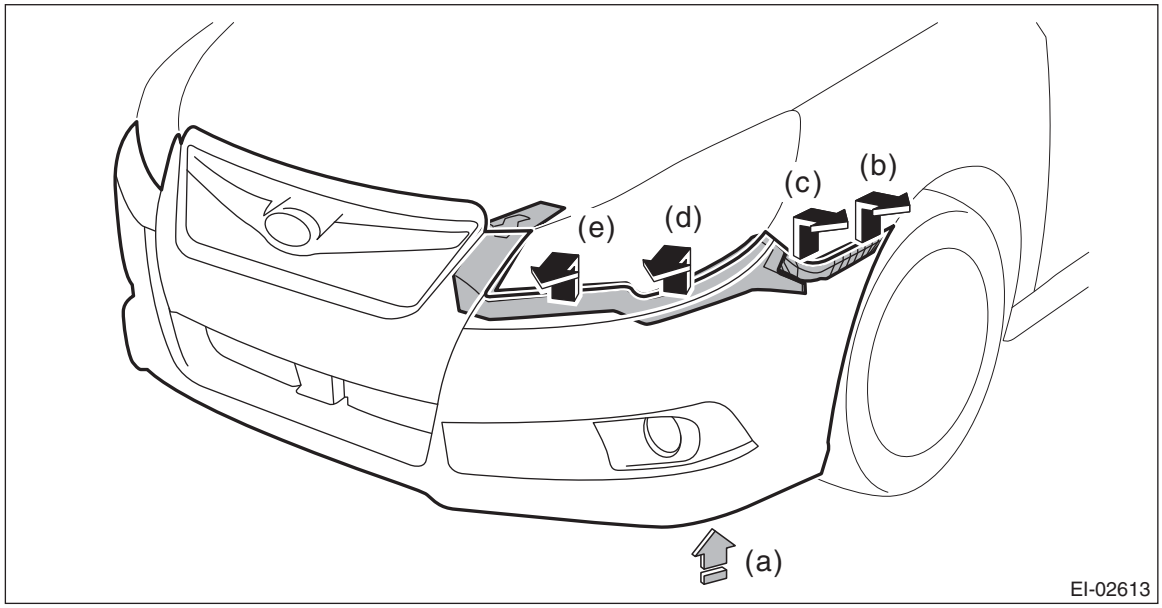
   (2) Remove the clips at the upper side of the bumper.
   (3) Remove the clips from the fender.

(4) Remove the clips at the lower side of bumper.



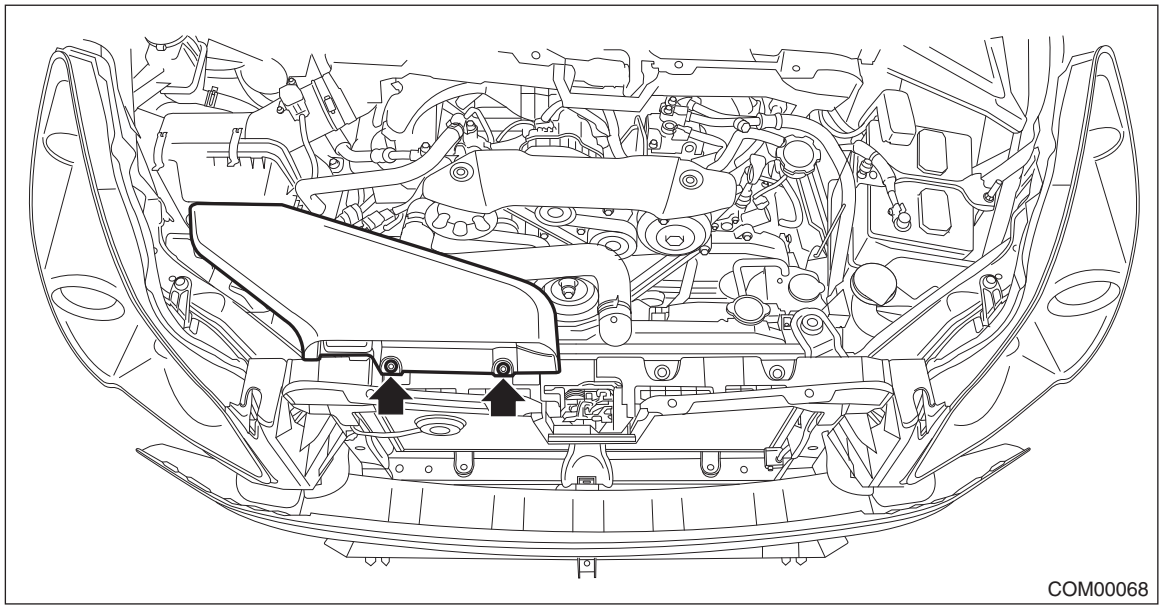
(5) Detach the flange section on the bumper face side from the bracket side front UPR.

CAUTION:
Do not pull forcibly. Doing so may damage the flange sections on the bumper face side.

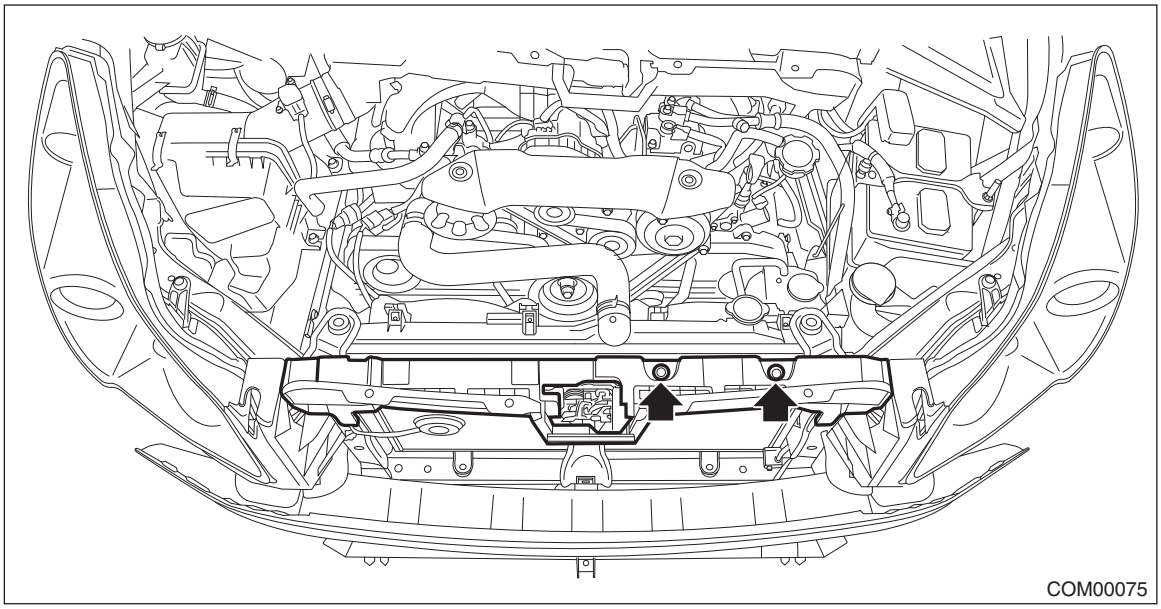


NOTE:
While pushing upward with the underside (a) of the fog light, remove (b) to (e) in order.
Detach the opposite side in the same manner.

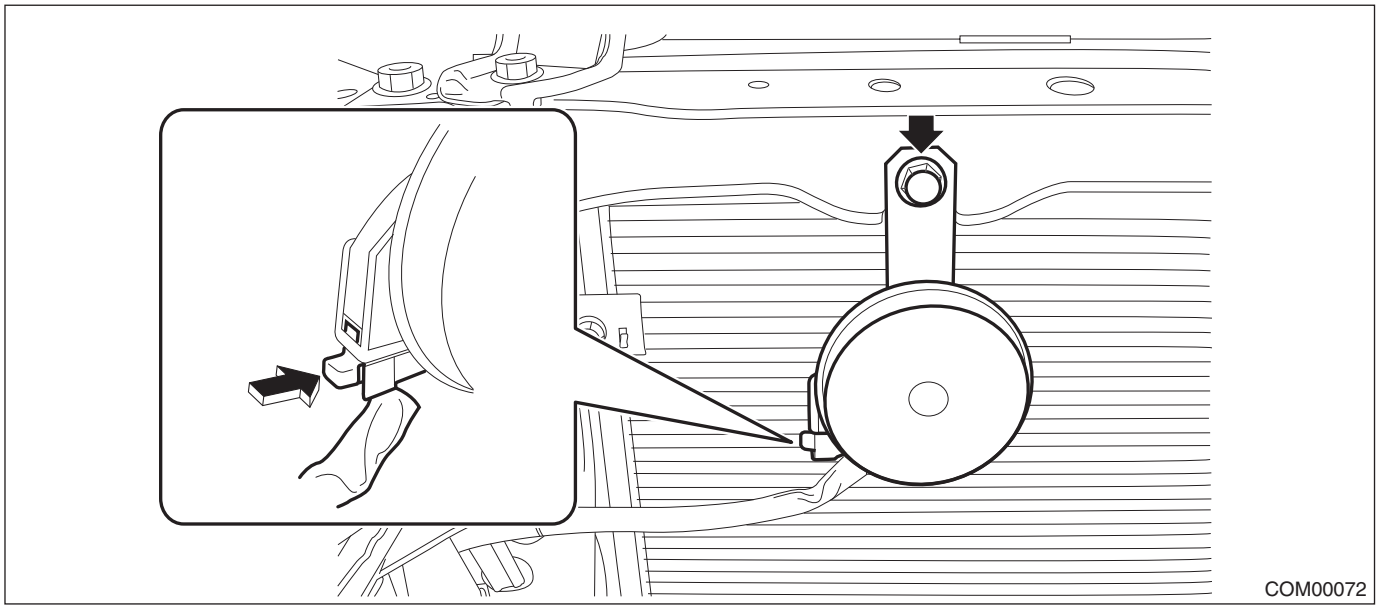
3) Remove the clips and remove the air intake duct.



4) Remove the clips and remove the grille bracket.

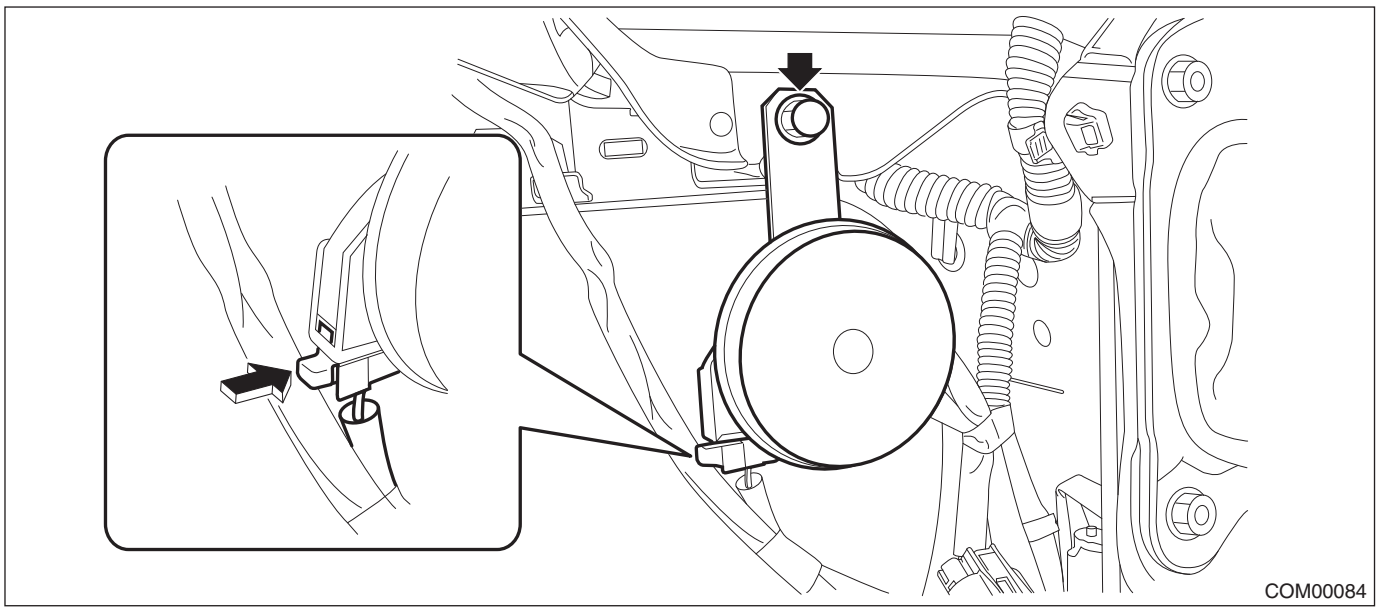


5) Remove the Lo pitch side horn.
   (1) Disconnect the connector.
   (2) Remove the horn bracket mounting bolt and remove the Lo pitch side horn.



6) Remove the Hi pitch side horn.
   (1) Disconnect the connector.

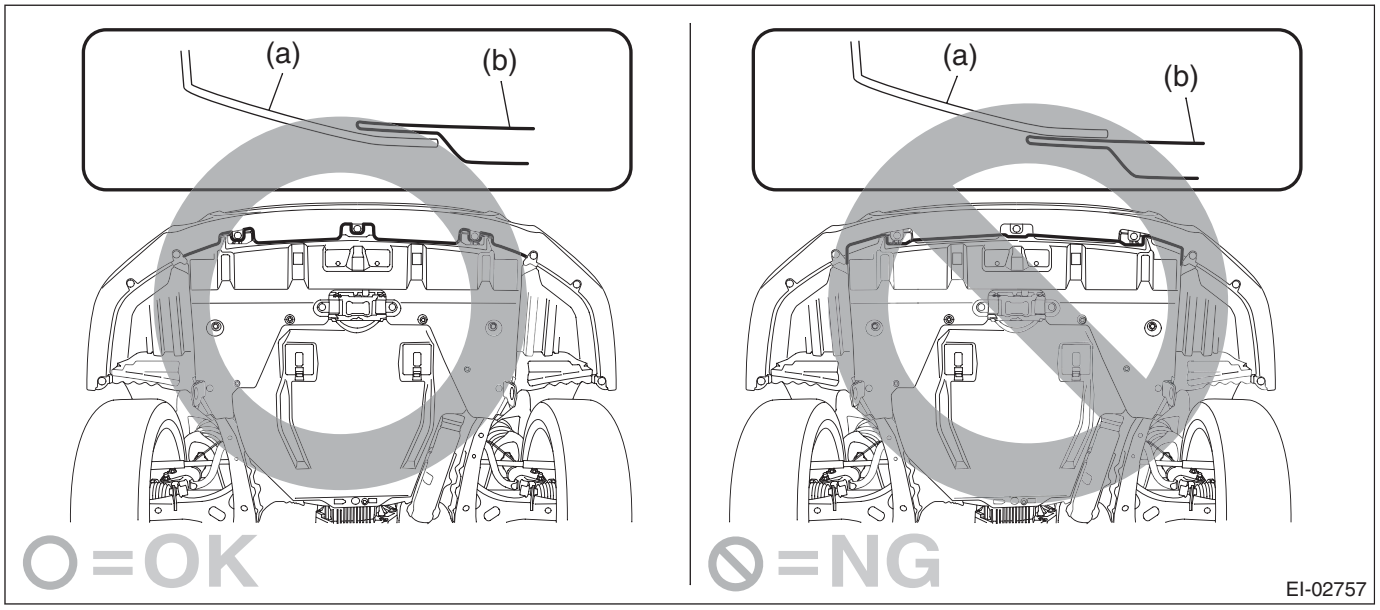
(2) Remove the horn bracket mounting bolt and remove the Hi pitch side horn.



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).

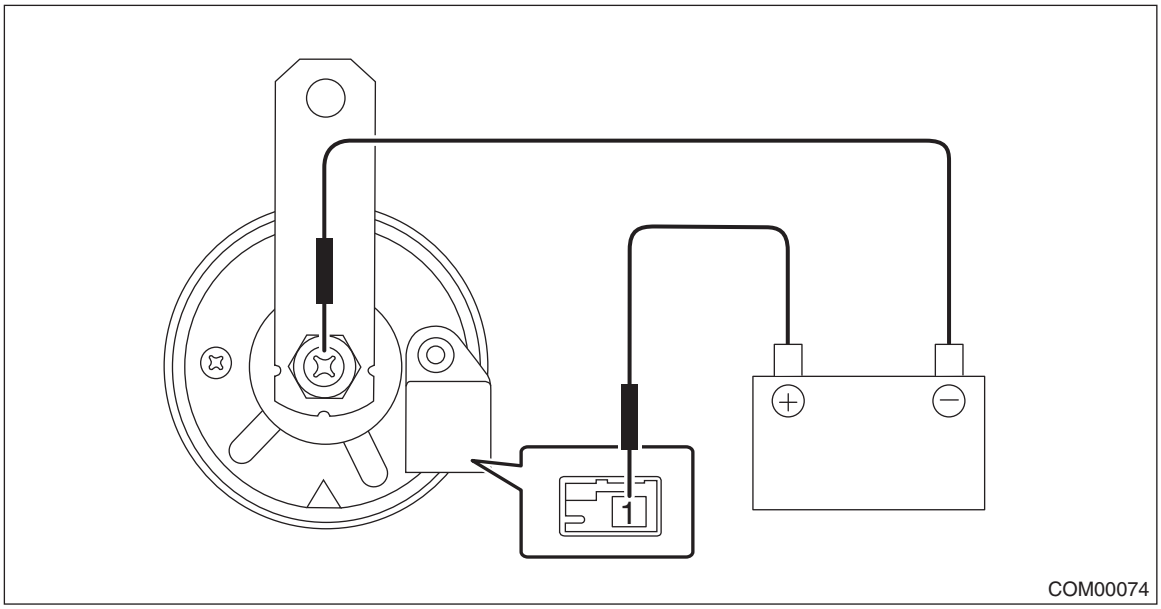


Tightening torque:
Horn assembly: 18 N·m (1.84 kgf-m, 13.3 ft-lb)

C: INSPECTION

1. CHECK HORN ASSEMBLY.

1) Remove the horn assembly (Hi pitch side and Lo pitch side). <Ref. to COM-5, REMOVAL, Horn.>
2) Check the horn sounds when applying the battery voltage to the horn assembly.



Terminal No.	Inspection conditions	Specification
1 (+) — horn case (–)	Connect battery to the terminals	Sound

3) If it does not operate normally by the inspection, replace the horn assembly.

5. Horn Switch

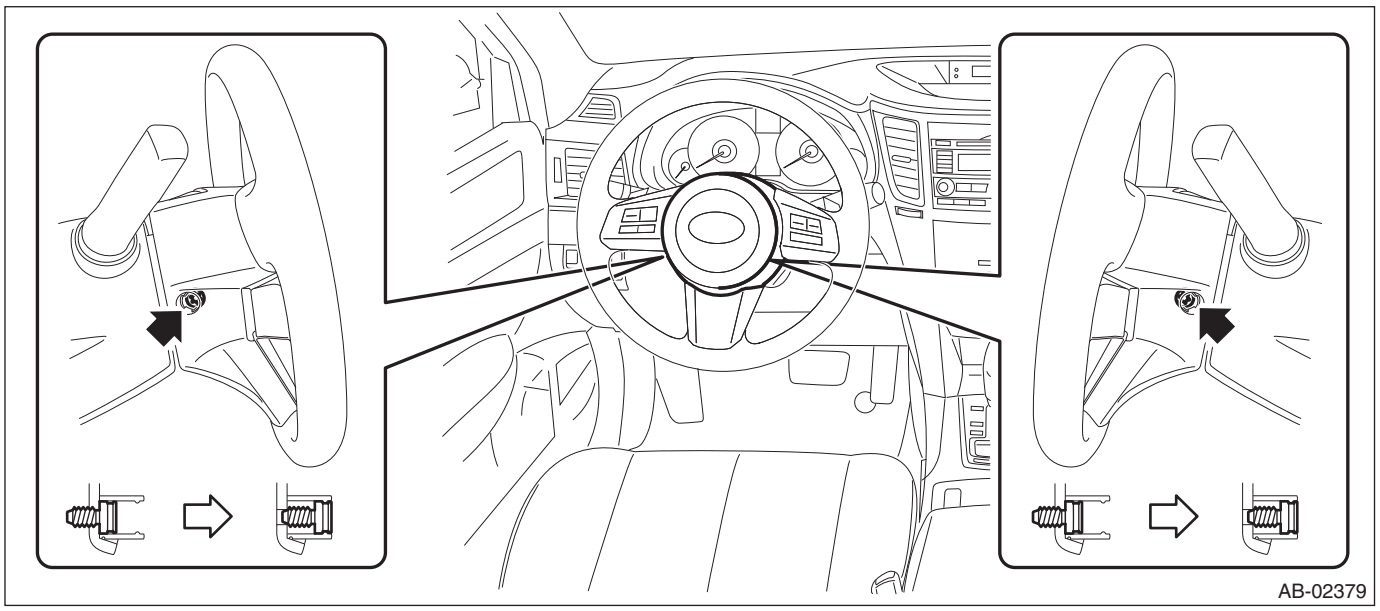
A: REMOVAL

CAUTION:
Refer to "CAUTION" of "General Description" before handling the airbag module. <Ref. to AB-9, CAUTION, General Description.>

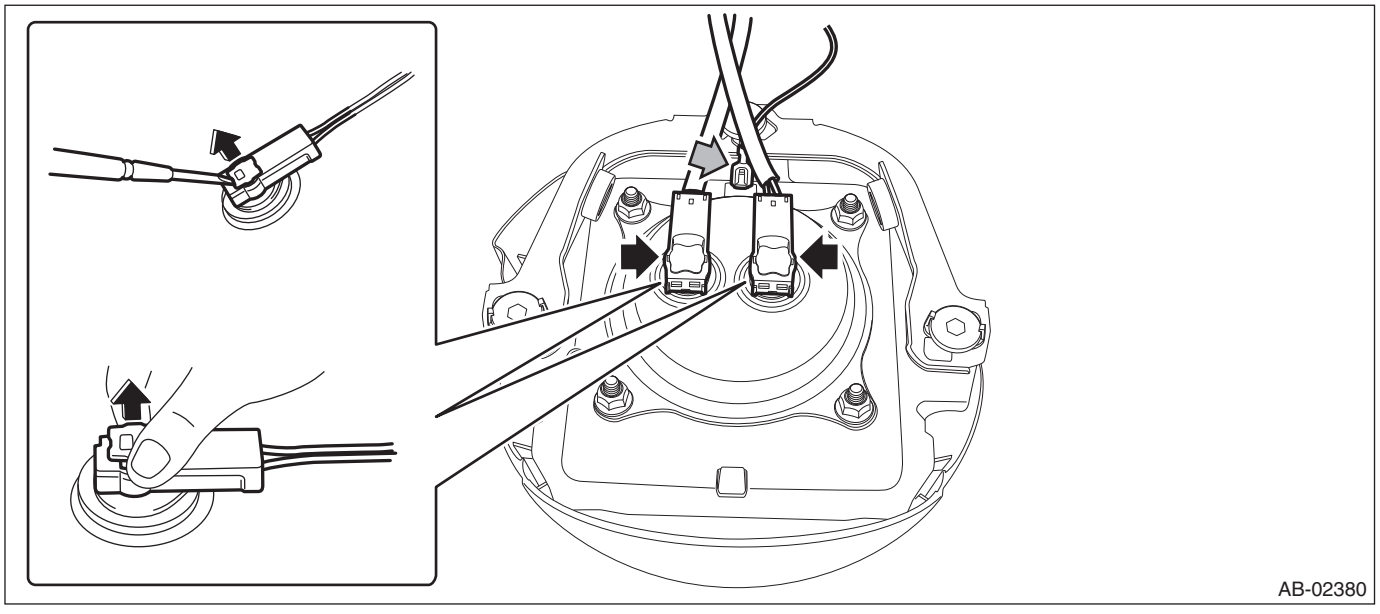
NOTE:
Horn switch is a unit with the driver's airbag module.
1) Position the front wheels straight ahead. (After moving a vehicle 5 m (16 ft) or more with front wheels positioned straight ahead, make sure that the vehicle moves straight ahead.)
2) Turn the ignition switch to OFF.
3) Disconnect the ground cable from battery and wait for at least 60 seconds before starting work.
4) Remove the driver's airbag module assembly.

Preparation tool: TORX® T30

(1) Loosen the TORX® bolts located on the sides of the steering wheel.



(2) Disconnect the horn harness and airbag connector and remove the airbag module assembly.



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) Install the driver's airbag module. <Ref. to AB-32, INSTALLATION, Driver's Airbag Module.>
2) Install each part in the reverse order of removal.

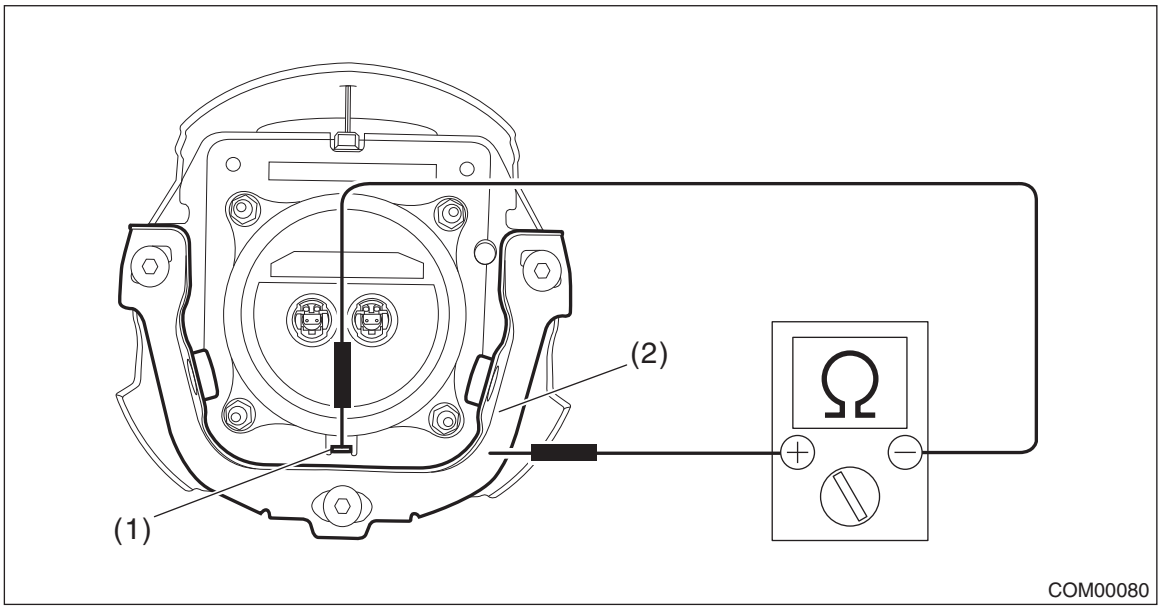
Tightening torque:
Driver's airbag module: 10 N·m (1.02 kgf-m, 7.4 ft-lb)

C: INSPECTION

1. CHECK HORN SWITCH.

1) Remove the horn switch. <Ref. to COM-11, REMOVAL, Horn Switch.>
2) Measure the resistance between horn switch terminal and airbag module bracket.

Preparation tool: Circuit tester



(1) Horn switch terminal (2) Airbag module bracket

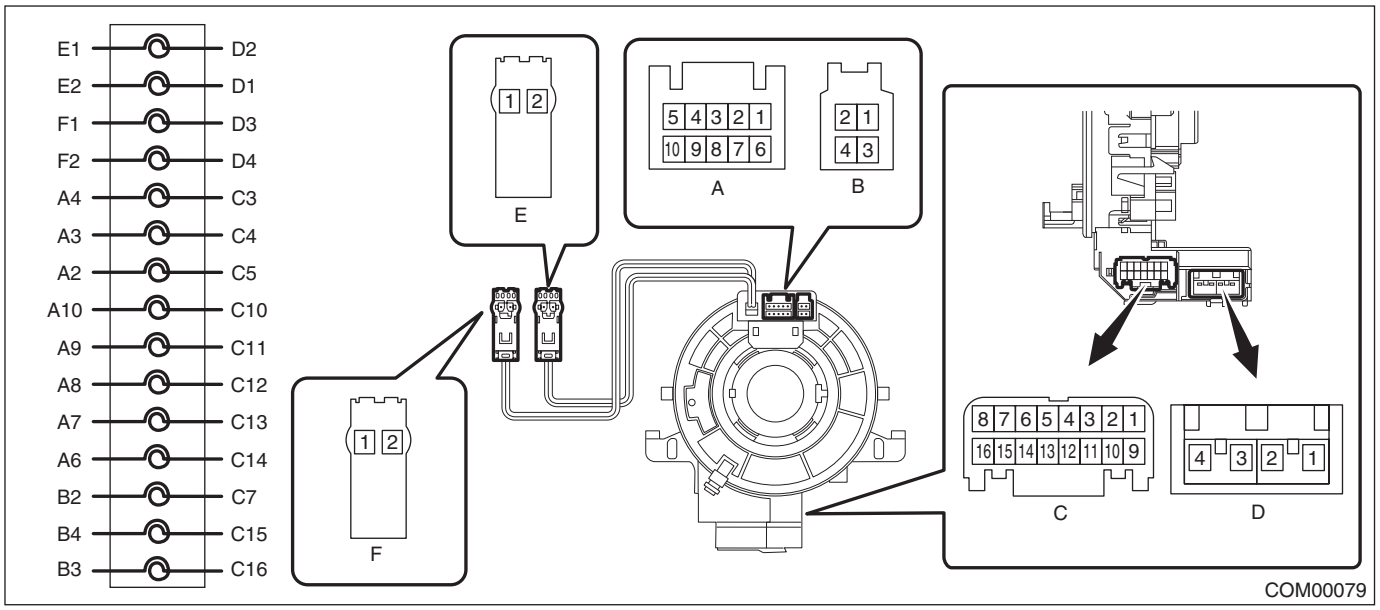
Terminal No.	Inspection conditions	Specification
Horn switch terminal — airbag module bracket	The airbag module bracket being pushed	Less than 1 Ω
	The airbag module bracket being separated	1 MΩ or more

3) If it is out of the standard value by the inspection, replace the driver's airbag module.

2. CHECK ROLL CONNECTOR.

1) Remove the roll connector. <Ref. to AB-89, REMOVAL, Roll Connector.>
2) Measure the resistance between roll connector terminals.

Preparation tool: Circuit tester



Terminal No.	Inspection conditions	Specification
A10 — C10	Always	Less than 1 Ω

3) If it is out of the standard value by the inspection, replace the roll connector.