

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES) *EC(H4DOTC)*

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General Description

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

1. General Description

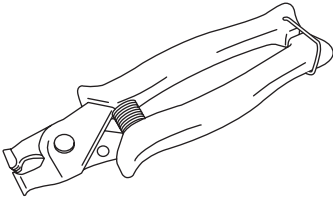
A: CAUTION

- Wear work clothing, including a cap, protective goggles and protective shoes during operation.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust and dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly and replacement.

B: PREPARATION TOOL

1. SPECIAL TOOL

- Be careful not to burn yourself, because each part on the vehicle is hot after running.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or rigid racks at the specified points.
- Before disconnecting electrical connectors of sensors or units, be sure to disconnect the ground cable from battery.

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST18353AA000	18353AA000	CLAMP PLIERS	• Used for removing and installing PCV hose. • This tool is the general purpose tool from CAILLAU in France. (code) 54.0.000.205 For the same availability as Subaru genuine part, tool No. is established.

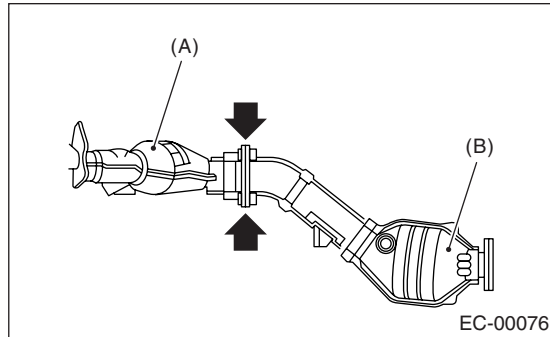
Front Catalytic Converter

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

2. Front Catalytic Converter

A: REMOVAL

- 1) Remove the center exhaust pipe.
<Ref. to EX(H4DOTC)-8, REMOVAL, Center Exhaust Pipe.>
- 2) Separate the front catalytic converter (A) from rear catalytic converter (B).



B: INSTALLATION

Install in the reverse order of removal.

NOTE:

Always use new gasket.

C: INSPECTION

- 1) Make sure there are no exhaust leaks from connections and welds.
- 2) Make sure there are no holes or rusting.

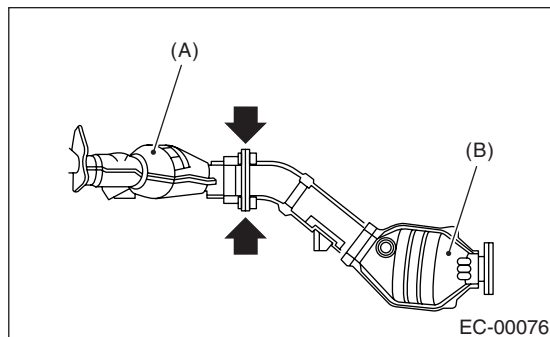
Rear Catalytic Converter

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3. Rear Catalytic Converter

A: REMOVAL

- 1) Remove the center exhaust pipe.
<Ref. to EX(H4DOTC)-8, REMOVAL, Center Exhaust Pipe.>
- 2) Separate the rear catalytic converter (B) from front catalytic converter (A).



B: INSTALLATION

Install in the reverse order of removal.

NOTE:

Always use new gasket.

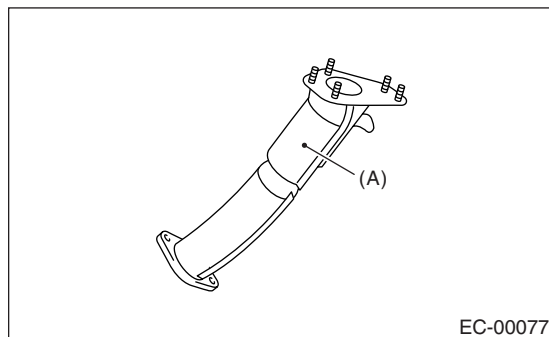
C: INSPECTION

- 1) Make sure there are no exhaust leaks from connections and welds.
- 2) Make sure there are no holes or rusting.

4. Precatalytic Converter

A: REMOVAL

Precatalytic converter (A) is built in the joint pipe. Refer to the removal of joint pipe for removal procedure. <Ref. to EX(H4DOTC)-11, REMOVAL, Joint Pipe.>



B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

- 1) Make sure there are no exhaust leaks from connections and welds.
- 2) Make sure there are no holes or rusting.

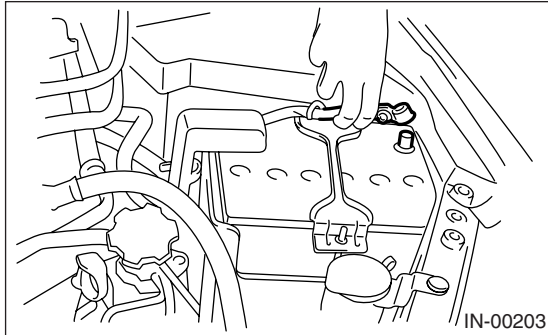
Canister

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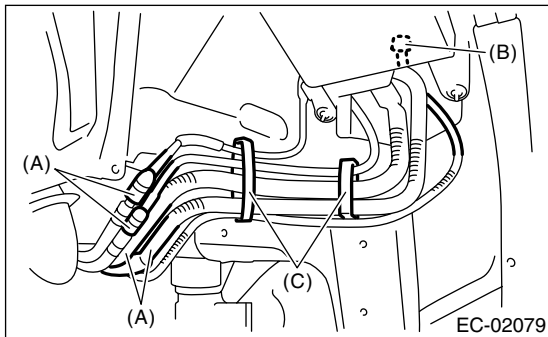
5. Canister

A: REMOVAL

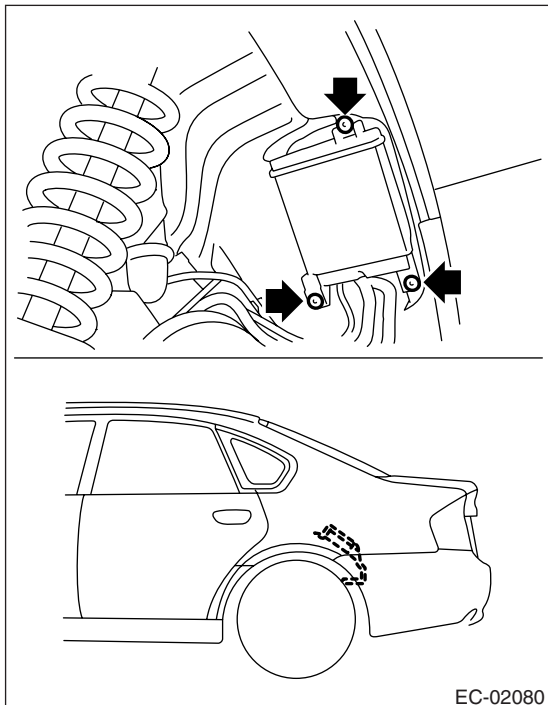
- 1) Disconnect the ground cable from battery.



- 2) Lift-up the vehicle.
3) Remove the rear wheel LH.
4) Remove the mud guard LH.
5) Disconnect the quick connector (A).
6) Disconnect the drain valve connector (B).
7) Remove the clamp (C).



- 8) Remove the canister from body.



B: INSTALLATION

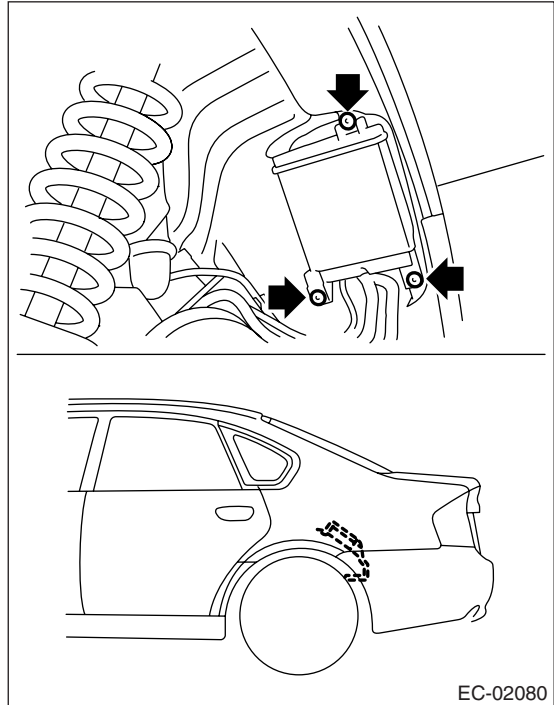
Install in the reverse order of removal.

NOTE:

Make sure there are no damage or dust on the connection of quick connector. If necessary, clean the seal surface of pipe.

Tightening torque:

8 N·m (0.8 kgf-m, 5.9 ft-lb)



C: INSPECTION

Make sure the canister and canister hoses are not cracked or loose.

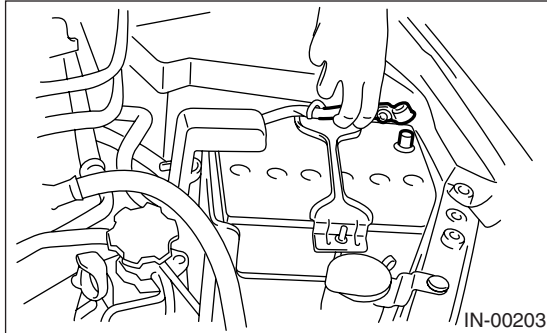
Purge Control Solenoid Valve

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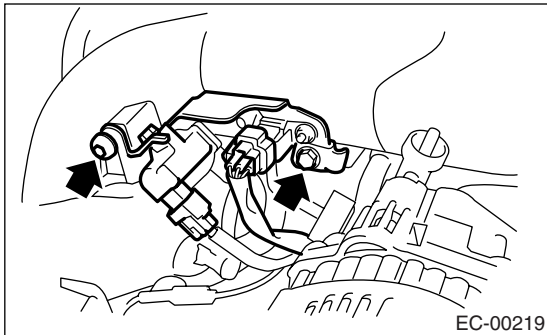
6. Purge Control Solenoid Valve

A: REMOVAL

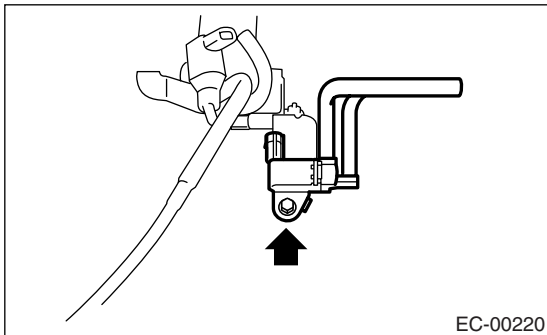
- 1) Remove the collector cover.
- 2) Disconnect the ground cable from battery.



- 3) Remove the solenoid valve bracket assembly from intake manifold.



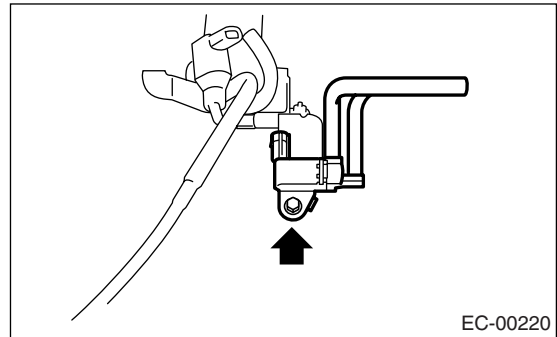
- 4) Disconnect the connector from purge control solenoid valve.
- 5) Disconnect the evaporation hose from the intake manifold and fuel pipe assembly.
- 6) Remove the purge control solenoid valve from solenoid valve bracket assembly.



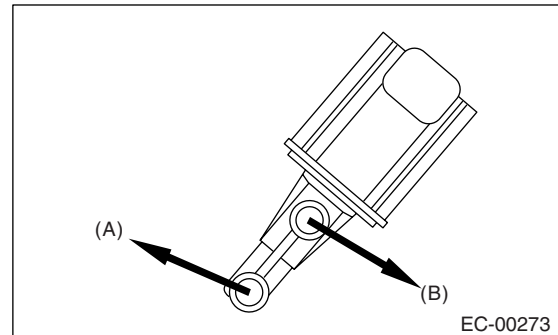
B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:
19 N·m (1.9 kgf-m, 14 ft-lb)

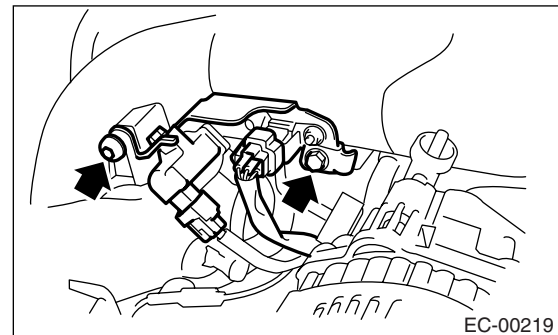


NOTE:
Connect the evaporation hose as shown in the figure.



- (A) To intake manifold
(B) To fuel pipe ASSY

Tightening torque:
19 N·m (1.9 kgf-m, 14 ft-lb)



C: INSPECTION

Make sure the hoses are not cracked or loose.

Fuel Level Sensor

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7. Fuel Level Sensor

A: REMOVAL

For removal procedure, refer to “FU(H4DOTC)” section. <Ref. to FU(H4DOTC)-56, REMOVAL, Fuel Level Sensor.>

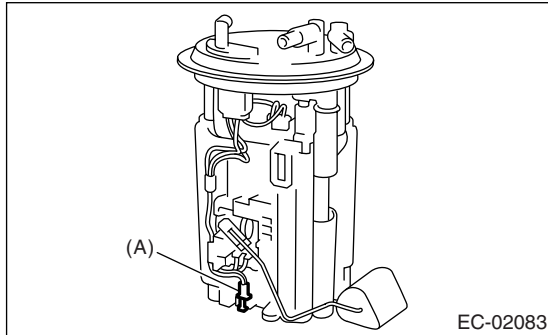
B: INSTALLATION

For installation procedure, refer to “FU(H4DOTC)” section. <Ref. to FU(H4DOTC)-56, INSTALLATION, Fuel Level Sensor.>

8. Fuel Temperature Sensor

A: REMOVAL

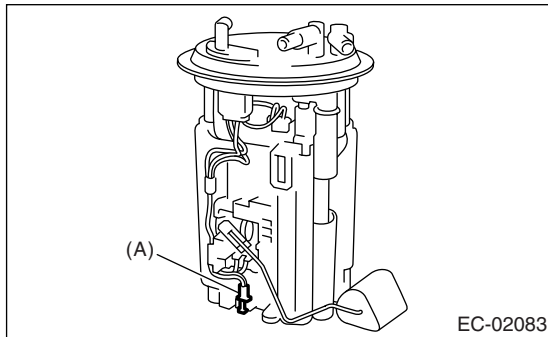
Fuel temperature sensor and fuel level sensor are integrated into one unit; therefore, the removal procedure is the same as that for fuel level sensor.
<Ref. to FU(H4DOTC)-56, REMOVAL, Fuel Level Sensor.>



(A) Fuel temperature sensor

B: INSTALLATION

Fuel temperature sensor and fuel level sensor are integrated into one unit; therefore, the installation procedure is the same as that for fuel level sensor.
<Ref. to FU(H4DOTC)-56, INSTALLATION, Fuel Level Sensor.>



(A) Fuel temperature sensor

9. Fuel Sub Level Sensor

A: REMOVAL

For removal procedure, refer to “FU(H4DOTC)” section. <Ref. to FU(H4DOTC)-57, REMOVAL, Fuel Sub Level Sensor.>

B: INSTALLATION

For installation procedure, refer to “FU(H4DOTC)” section. <Ref. to FU(H4DOTC)-57, INSTALLATION, Fuel Sub Level Sensor.>

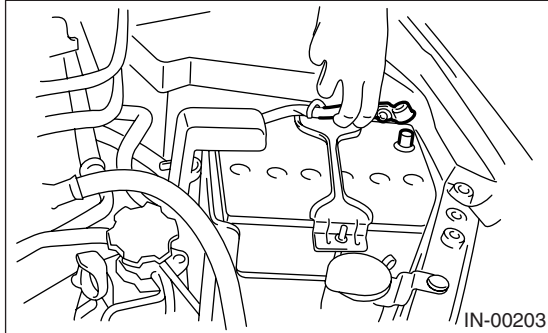
Fuel Tank Pressure Sensor

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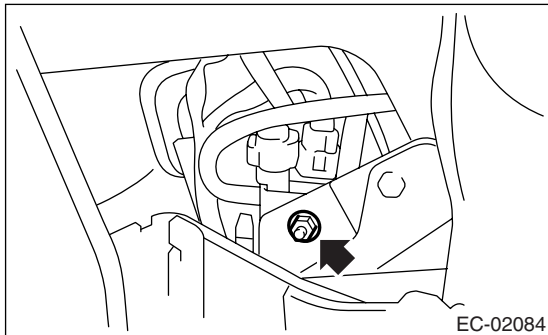
10. Fuel Tank Pressure Sensor

A: REMOVAL

- 1) Set the vehicle on the lift.
- 2) Open fuel filler flap lid, and remove fuel filler cap.
- 3) Disconnect the battery ground cable.

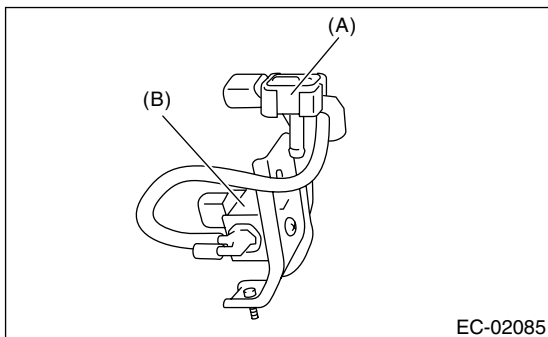


- 4) Lift-up the vehicle.
- 5) Disconnect the connector from fuel tank pressure sensor and fuel tank sensor control valve.
- 6) Disconnect the pressure hose from fuel tank pressure sensor.
- 7) Remove fuel tank pressure sensor and fuel tank sensor control valve with bracket.



NOTE:

Replace the fuel tank pressure sensor and fuel tank sensor control valve as a unit.



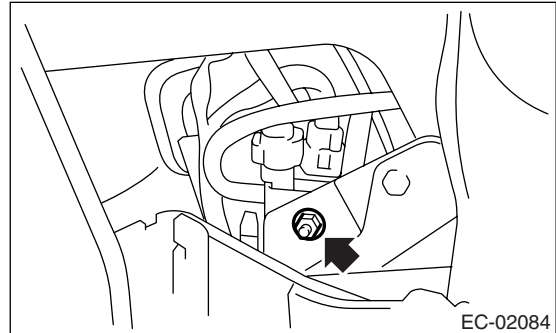
- (A) Fuel tank pressure sensor
(B) Fuel tank sensor control valve

B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

7.4 N·m (0.75 kgf-m, 5.4 ft-lb)



C: INSPECTION

Make sure that hoses are not cracked or loose.

11. Fuel Tank Sensor Control Valve

A: REMOVAL

Fuel tank sensor control valve and fuel tank pressure sensor are integrated into one unit; therefore, the removal procedure is the same as that for fuel tank pressure sensor. <Ref. to EC(H4DOTC)-11, REMOVAL, Fuel Tank Pressure Sensor.>

B: INSTALLATION

Fuel tank sensor control valve and fuel tank pressure sensor are integrated into one unit; therefore, the installation procedure is the same as that for fuel tank pressure sensor. <Ref. to EC(H4DOTC)-11, INSTALLATION, Fuel Tank Pressure Sensor.>

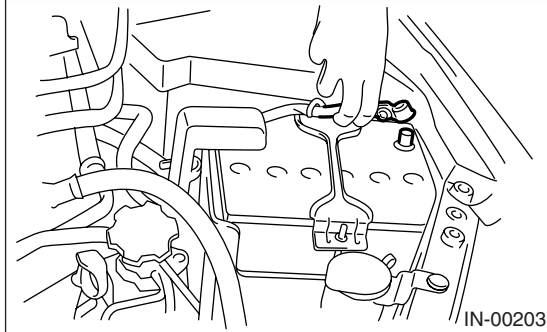
C: INSPECTION

Make sure the hoses are not cracked or loose.

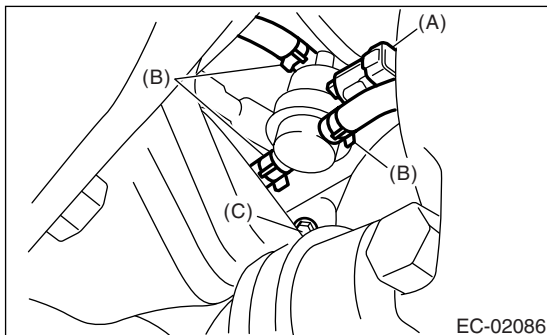
12. Pressure Control Solenoid Valve

A: REMOVAL

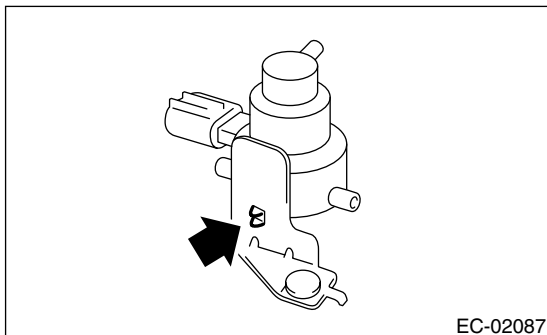
- 1) Set the vehicle on the lift.
- 2) Disconnect the battery ground cable.



- 3) Lift-up the vehicle.
- 4) Disconnect the connector from pressure control solenoid valve.
- 5) Disconnect the evaporation hose (B) from pressure control solenoid valve.
- 6) Remove the bolt (C) which holds the bracket to fuel tank.



- 7) Remove the pressure control solenoid valve from bracket.



B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

17.6 N·m (1.8 kgf-m, 13.0 ft-lb)

C: INSPECTION

Make sure the hoses are not cracked or loose.

13.Drain Filter

A: SPECIFICATION

Canister is a non-disassembled part, so do not remove the drain filter from canister.

Refer to “Canister” for removal and installation procedures. <Ref. to EC(H4DOTC)-6, REMOVAL, Canister.> <Ref. to EC(H4DOTC)-6, INSTALLATION, Canister.>

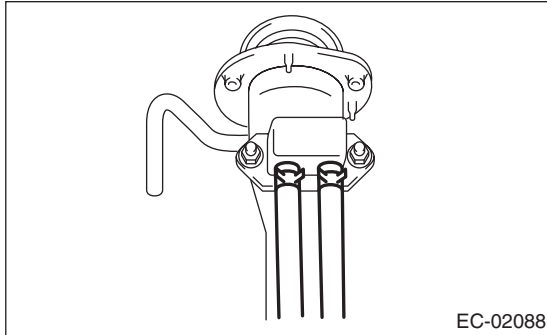
Shut Valve

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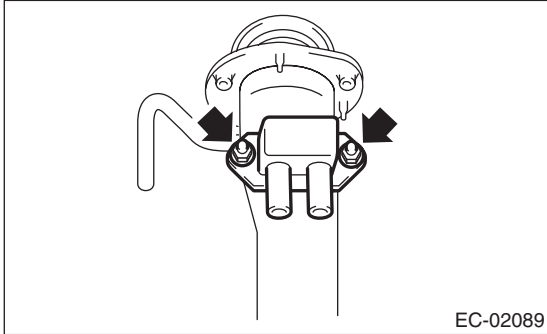
14. Shut Valve

A: REMOVAL

- 1) Remove the fuel filler pipe.
<Ref. to FU(H4DOTC)-51, REMOVAL, Fuel Filler Pipe.>
- 2) Disconnect the evaporation hoses from shut valve.



- 3) Remove the shut valve from fuel filler pipe.

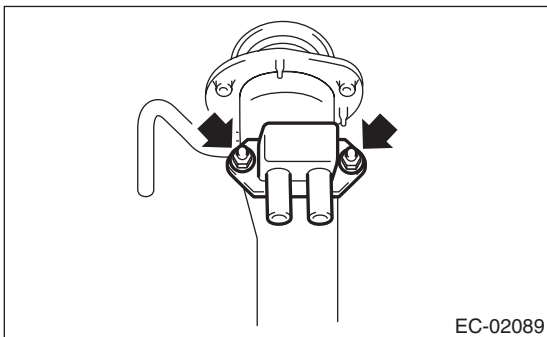


B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

4.5 N·m (0.46 kgf-m, 3.3 ft-lb)



C: INSPECTION

Make sure the hoses are not cracked or loose.

15.Drain Valve

A: SPECIFICATION

Canister is a non-disassembled part, so do not remove the drain valve from canister.

Refer to "Canister" for removal and installation procedures. <Ref. to EC(H4DOTC)-6, REMOVAL, Canister.> <Ref. to EC(H4DOTC)-6, INSTALLATION, Canister.>

16.PCV Hose Assembly

A: REMOVAL

CAUTION:

Do not remove the PCV hose assembly except when the PCV hose, diagnosis connector or PCV valve is damaged.

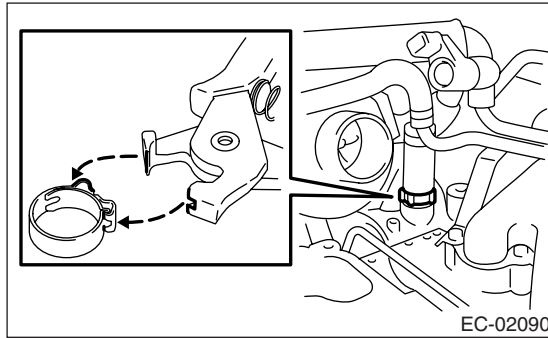
1) Remove the intake manifold.

<Ref. to FU(H4DOTC)-12, REMOVAL, Intake Manifold.>

2) Clip the protrusion of clamp by aligning it with the concave portion of ST to unlock.

3) Remove the PCV hose assembly.

ST 18353AA000 CLAMP PLIERS



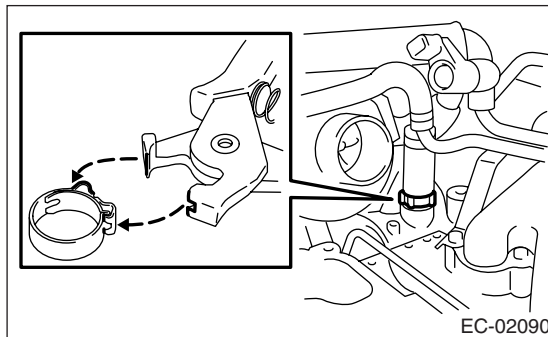
B: INSTALLATION

NOTE:

Replace the clamp with a new one.

1) Install the PCV hose assembly, and then lock the clamp by clipping the protrusion of clamp using ST.

ST 18353AA000 CLAMP PLIERS



2) Install the intake manifold.

<Ref. to FU(H4DOTC)-14, INSTALLATION, Intake Manifold.>

PCV Hose Assembly

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