

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

EC(H4SO)

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GENERAL DESCRIPTION

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

1. General Description

A: CAUTION

- Wear working 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 or dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly, and replacement.
- Be careful not to burn your hands, 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 safety stands at the specified points.
- Before disconnecting electrical connectors of sensors or units, be sure to disconnect ground cable from battery.

FRONT CATALYTIC CONVERTER

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2. Front Catalytic Converter

A: REMOVAL

1. EXCEPT U5 MODEL

Front catalyst is built in center exhaust pipe. Therefore, the removal procedure is the same as that for the center exhaust pipe. <Ref. to EX(H4SO)-8, REMOVAL, Center Exhaust Pipe.>

2. U5 MODEL

Front catalyst is built in front exhaust pipe. Therefore, the removal procedure is the same as that for the front exhaust pipe. <Ref. to EX(H4SO U5)-5, REMOVAL, Front Exhaust Pipe.>

B: INSTALLATION

1. EXCEPT U5 MODEL

Front catalyst is built in center exhaust pipe. Therefore, the installation procedure is the same as that for the center exhaust pipe. <Ref. to EX(H4SO)-8, INSTALLATION, Center Exhaust Pipe.>

2. U5 MODEL

Front catalyst is built in front exhaust pipe. Therefore, the installation procedure is the same as that for the front exhaust pipe. <Ref. to EX(H4SO U5)-6, INSTALLATION, Front Exhaust Pipe.>

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. EXCEPT U5 MODEL

Rear catalyst is built in center exhaust pipe. Therefore, the removal procedure is the same as that for the center exhaust pipe. <Ref. to EX(H4SO)-8, REMOVAL, Center Exhaust Pipe.>

2. U5 MODEL

Rear catalyst is built in front exhaust pipe. Therefore, the removal procedure is the same as that for the front exhaust pipe. <Ref. to EX(H4SO U5)-5, REMOVAL, Front Exhaust Pipe.>

B: INSTALLATION

1. EXCEPT U5 MODEL

Rear catalyst is built in center exhaust pipe. Therefore, the installation procedure is the same as that for the center exhaust pipe.<Ref. to EX(H4SO)-8, INSTALLATION, Center Exhaust Pipe.>

2. U5 MODEL

Rear catalyst is built in front exhaust pipe. Therefore, the installation procedure is the same as that for the front exhaust pipe. <Ref. to EX(H4SO U5)-6, INSTALLATION, Front Exhaust Pipe.>

C: INSPECTION

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

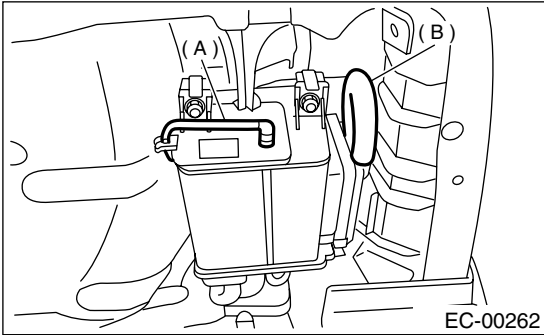
CANISTER

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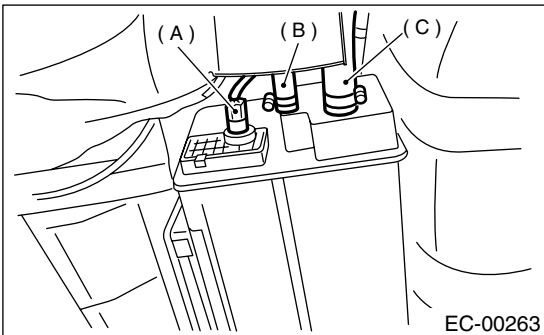
4. Canister

A: REMOVAL

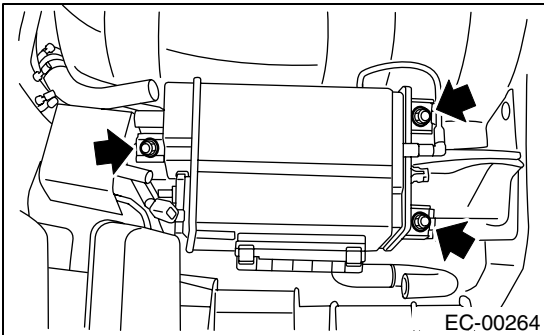
- 1) Lift-up the vehicle.
- 2) Disconnect connector (A) from drain valve.
- 3) Disconnect evaporation hoses (B) and (C) from canister.



- 4) Disconnect quick connector (A) from canister.
- 5) Disconnect evaporation hoses (B) and (C) from canister.



- 6) Remove the canister from vehicle.

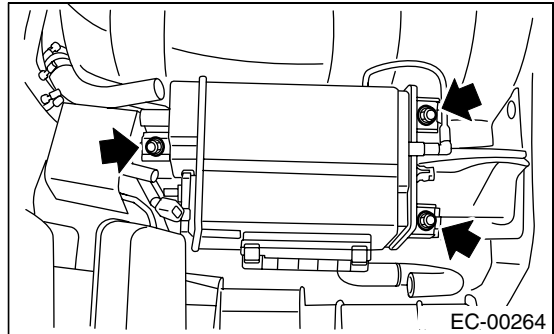


B: INSTALLATION

- 1) Install in the reverse order of removal.

Tightening torque:

23 N·m (2.3 kgf-m, 17 ft-lb)



C: INSPECTION

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

PURGE CONTROL SOLENOID VALVE

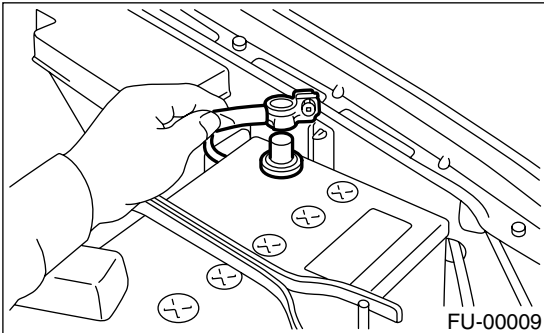
EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

5. Purge Control Solenoid Valve

A: REMOVAL

1. EXCEPT U5 MODEL

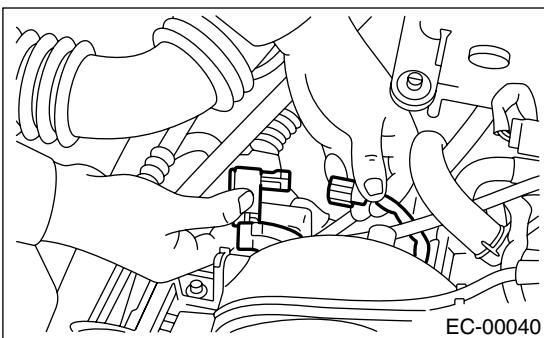
- 1) Disconnect battery ground cable.



- 2) Remove bolt which installs purge control solenoid valve onto intake manifold.

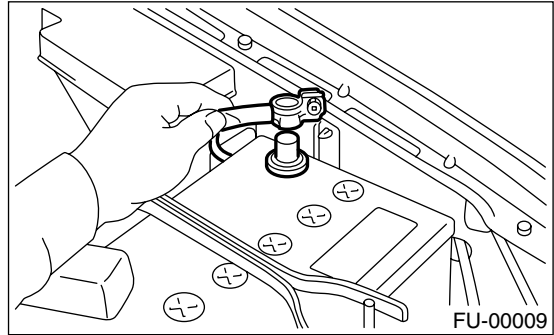


- 3) Take out purge control solenoid valve through the bottom of the intake manifold.
- 4) Disconnect connector and hoses from purge control solenoid valve.

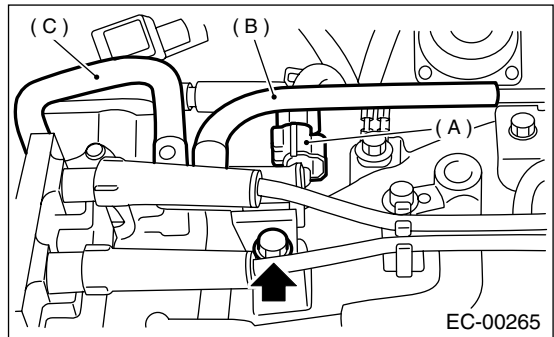


2. U5 MODEL

- 1) Disconnect battery ground cable.



- 2) Disconnect connector (A) from purge control solenoid valve.
- 3) Disconnect evaporation hoses (B) and (C), and remove purge control solenoid valve.



B: INSTALLATION

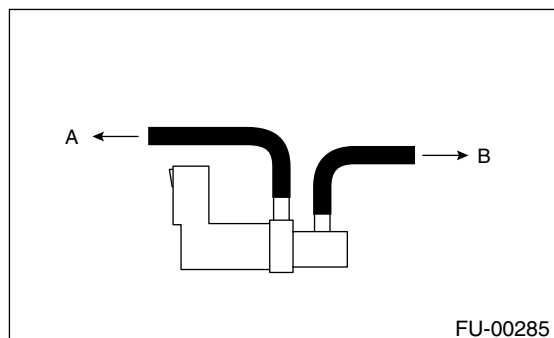
- 1) Install in the reverse order of removal.

Tightening torque:

19 N·m (1.9 kgf·m, 14 ft·lb)

CAUTION:

Connect the evaporation hoses as shown in the illustration.



(A) To fuel pipe

(B) To intake manifold

C: INSPECTION

Make sure hoses are not cracked or loose.

EGR VALVE

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6. EGR Valve

A: REMOVAL

For work procedures, refer to "FU(H4SO)" section.
<Ref. to FU(H4SO)-37, REMOVAL, EGR Valve.>

B: INSTALLATION

For work procedures, refer to "FU(H4SOH4SO)" section.
<Ref. to FU(H4SO)-37, INSTALLATION, EGR Valve.>

MAIN FUEL LEVEL SENSOR

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7. Main Fuel Level Sensor

A: REMOVAL

For work procedures, refer to "FU(H4SO)" section.
<Ref. to FU(H4SO)-68, REMOVAL, Fuel Level Sensor.>

B: INSTALLATION

For work procedures, refer to "FU(H4SO)" section.
<Ref. to FU(H4SO)-68, INSTALLATION, Fuel Level Sensor.>

FUEL TEMPERATURE SENSOR

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8. Fuel Temperature Sensor

A: REMOVAL

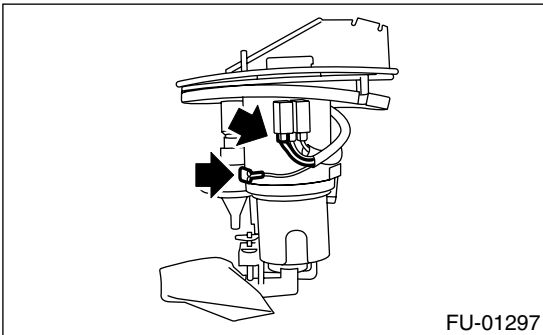
WARNING:

During work procedures, if fuel tank is more than 3/4 full, be careful because fuel may spill.

NOTE:

Fuel temperature sensor is built in fuel pump assembly.

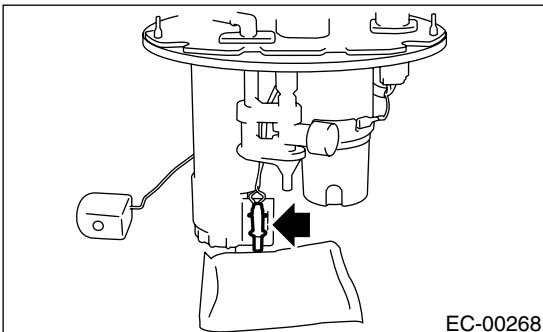
- 1) Remove fuel pump assembly. <Ref. to FU(H4SO)-66, REMOVAL, Fuel Pump.>
- 2) Disconnect connector from fuel pump bracket.



- 3) Remove fuel temperature sensor.

NOTE:

When replacing fuel temperature sensor, also replace fuel level sensor. <Ref. to FU(H4SO)-68, REMOVAL, Fuel Level Sensor.>

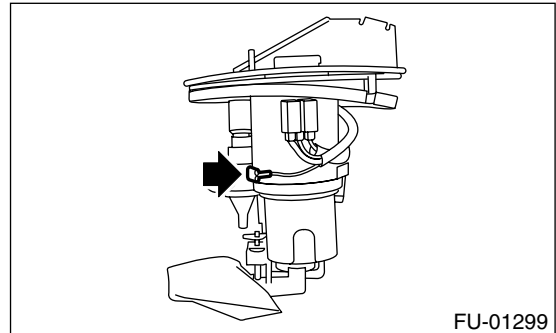


B: INSTALLATION

- 1) Install in the reverse order of removal.

WARNING:

- Ground cable must be connected.
- Spark may occur and ignite if fuel is nearby.



SUB FUEL LEVEL SENSOR

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9. Sub Fuel Level Sensor

A: REMOVAL

For work procedures, refer to "FU(H4SO)" section.
<Ref. to FU(H4SO)-69, REMOVAL, Fuel Sub Level Sensor.>

B: INSTALLATION

For work procedures, refer to "FU(H4SO)" section.
<Ref. to FU(H4SO)-69, INSTALLATION, Fuel Sub Level Sensor.>

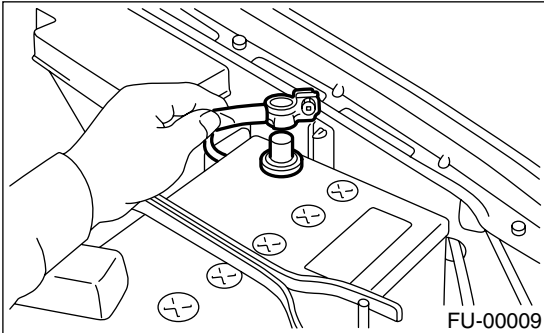
FUEL TANK PRESSURE SENSOR

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

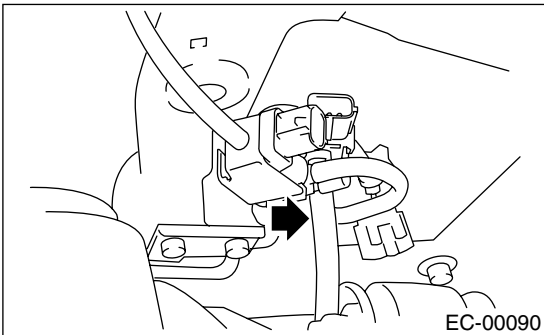
10. Fuel Tank Pressure Sensor

A: REMOVAL

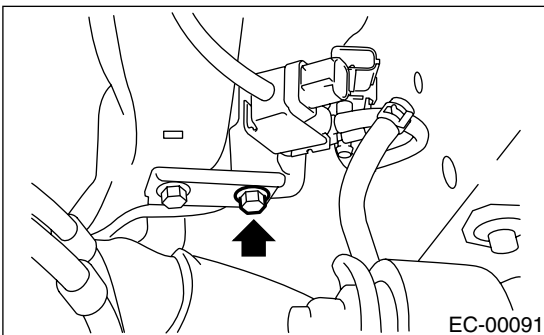
- 1) Set the vehicle on the lift.
- 2) Open fuel flap lid, and remove fuel filler cap.
- 3) Disconnect battery ground cable.



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



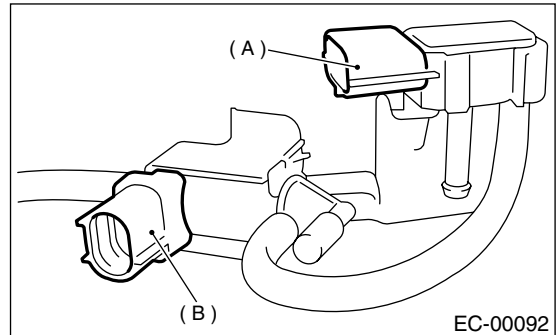
- 7) Remove fuel tank pressure sensor and fuel tank sensor control valve with bracket.



- 8) Remove fuel tank sensor control valve from bracket.

NOTE:

Fuel tank pressure sensor cannot be removed because it is integral with bracket.



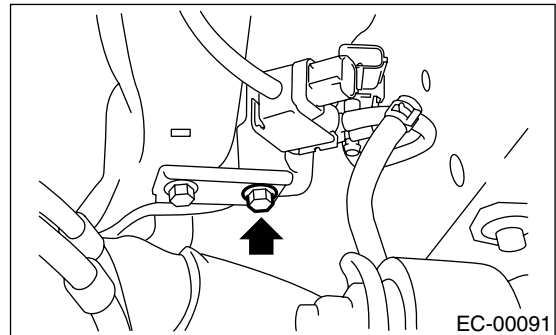
- (A) Fuel tank pressure sensor
(B) Fuel tank sensor control valve

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.

FUEL TANK SENSOR CONTROL VALVE

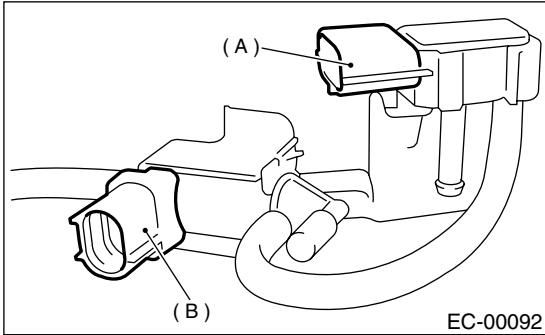
EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

11. Fuel Tank Sensor Control Valve

A: REMOVAL

1) Remove fuel tank pressure sensor. <Ref. to EC(H4SO)-11, REMOVAL, Fuel Tank Pressure Sensor.>

2) Remove fuel tank sensor control valve from bracket.



- (1) Fuel tank pressure sensor
- (2) Fuel tank sensor control valve

B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

Make sure that hoses are not cracked or loose.

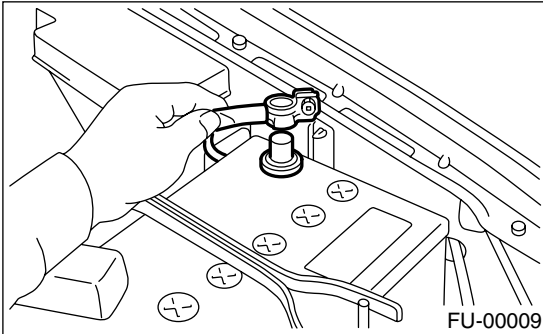
PRESSURE CONTROL SOLENOID VALVE

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

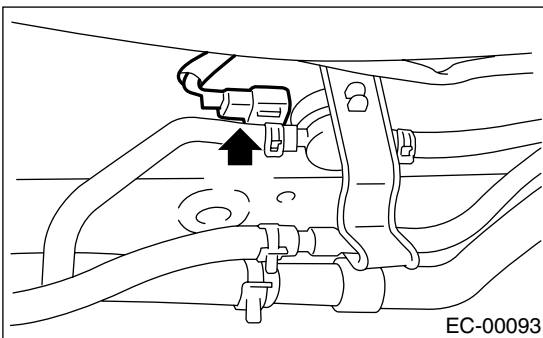
12. Pressure Control Solenoid Valve

A: REMOVAL

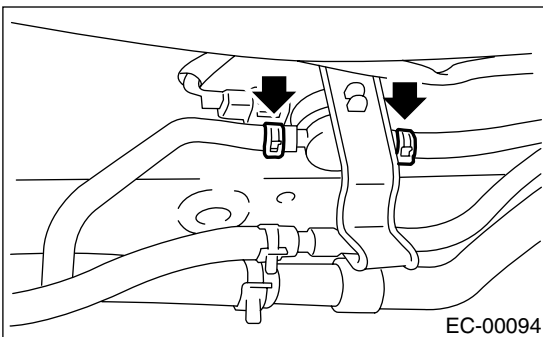
- 1) Set the vehicle on the lift.
- 2) Disconnect battery ground cable.



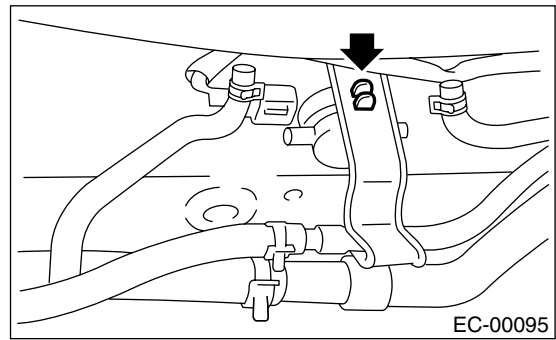
- 3) Lift-up the vehicle.
- 4) Disconnect connector from pressure control solenoid valve.



- 5) Disconnect two evaporation hoses from pressure control solenoid valve.



- 6) Remove pressure control solenoid valve from bracket.



B: INSTALLTION

Install in the reverse order of removal.

C: INSPECTION

Make sure that hoses are not cracked or loose.

DRAIN FILTER

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

13.Drain Filter

A: SPECIFICATIONS

Drain filter is built in the canister, and it is a part which cannot be disassembled.

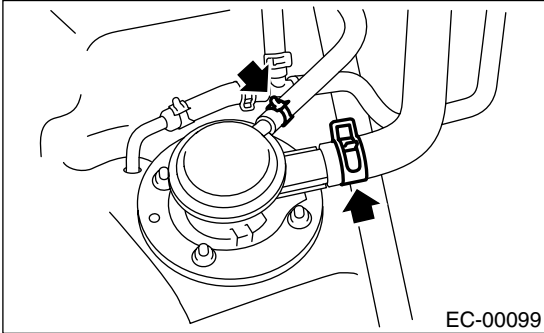
VENT VALVE

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

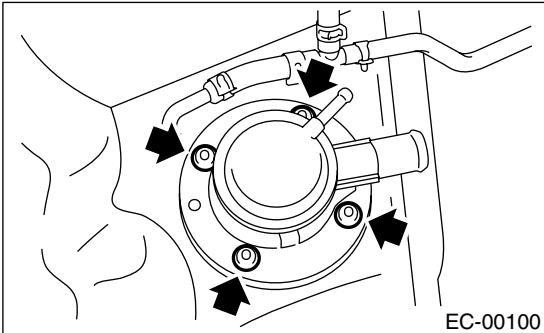
14. Vent Valve

A: REMOVAL

- 1) Remove fuel tank. <Ref. to FU(H4SO)-51, REMOVAL, Fuel Tank.>
- 2) Move clips, and disconnect hoses from vent valve.



- 3) Remove nuts which install vent valve on fuel tank.



B: INSTALLATION

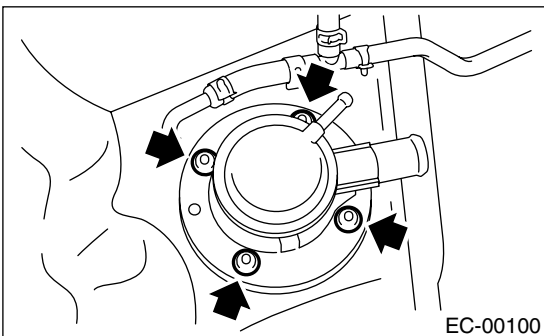
Install in the reverse order of removal.

NOTE:

Replace rubber seat with a new one.

Tightening torque:

4.4 N·m (0.45 kgf-m, 3.3 ft-lb)



C: INSPECTION

Make sure that hoses are not cracked or loose.

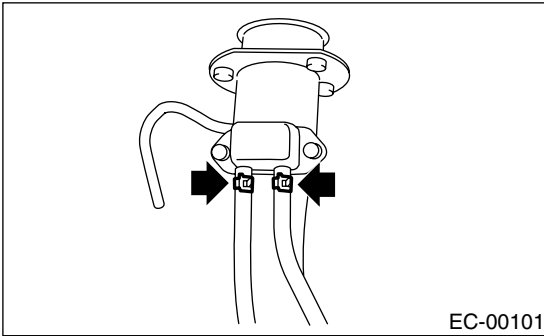
SHUT VALVE

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

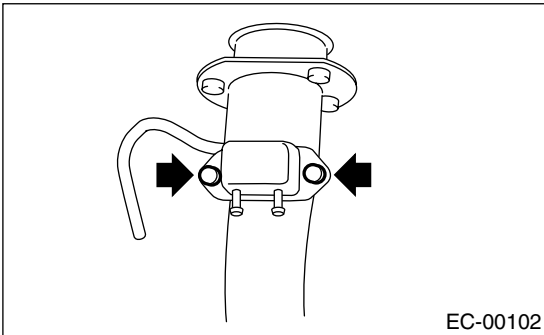
15. Shut Valve

A: REMOVAL

- 1) Drain fuel from fuel tank. <Ref. to FU(H4SO)-51, REMOVAL, Fuel Tank.>
- 2) Remove fuel filler pipe. <Ref. to FU(H4SO)-59, REMOVAL, Fuel Filler Pipe.>
- 3) Disconnect evaporation hoses from shut valve.



- 4) Remove shut valve from fuel filler pipe.

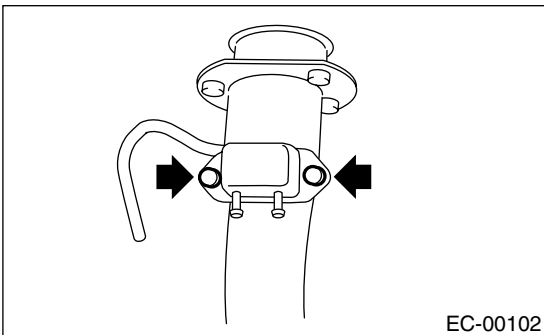


B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

4.4 N·m (0.45 kgf·m, 3.3 ft·lb)



C: INSPECTION

Make sure that hoses are not cracked or loose.

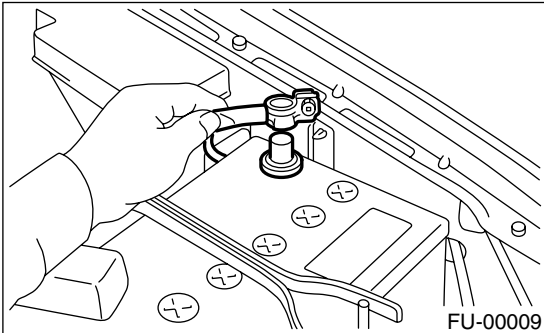
DRAIN VALVE

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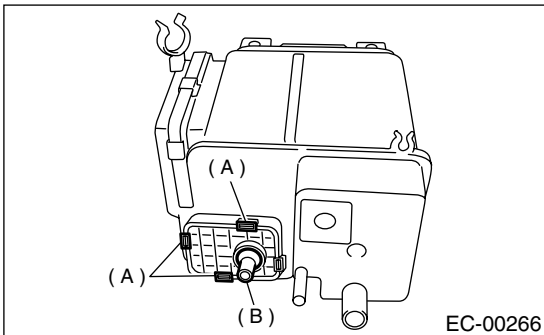
16. Drain Valve

A: REMOVAL

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



- 3) Lift-up the vehicle.
- 4) Remove canister. <Ref. to EC(H4SO)-5, REMOVAL, Canister.>
- 5) Remove clip (A), and then remove drain valve (B) from canister.



B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

- 1) Make sure that all hoses are installed correctly.
- 2) Make sure that hoses are not cracked or loose.

DRAIN VALVE

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

MEMO: