

EMISSION CONTROL

(AUX. EMISSION CONTROL DEVICES)

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.
- 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.

2. Front Catalytic Converter

A: REMOVAL

Front and rear catalytic converters and center exhaust pipe are integrated into one unit; therefore, the removal procedure is the same as that for center exhaust pipe. <Ref. to EX(H4SO)-7, REMOVAL, Center Exhaust Pipe.>

B: INSTALLATION

Front and rear catalytic converters and center exhaust pipe are integrated into one unit; therefore, the installation procedure is the same as that for center exhaust pipe. <Ref. to EX(H4SO)-7, INSTALLATION, Center 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.

3. Rear Catalytic Converter

A: REMOVAL

Front and rear catalytic converters and center exhaust pipe are integrated into one unit; therefore, the removal procedure is the same as that for front catalytic converter. <Ref. to EX(H4SO)-7, REMOVAL, Center Exhaust Pipe.>

B: INSTALLATION

Front and rear catalytic converters and center exhaust pipe are integrated into one unit; therefore, the installation procedure is the same as that for front catalytic converter. <Ref. to EX(H4SO)-7, INSTALLATION, Center 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.

4. EGR Valve

A: SPECIFICATION

Refer to "EGR Valve" for removal and installation.

<Ref. to FU(H4SO)-29, EGR Valve.>

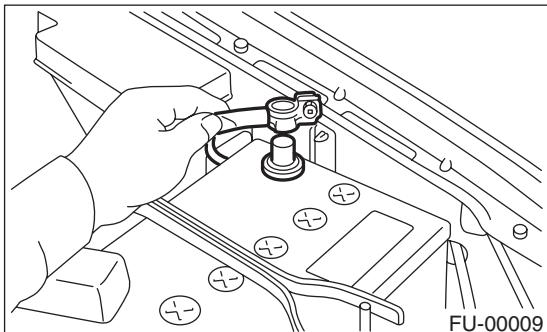
Canister

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

5. Canister

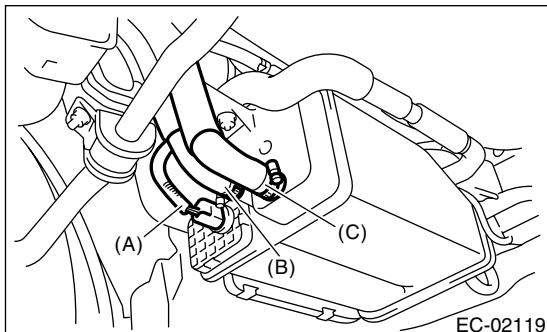
A: REMOVAL

- 1) Disconnect the ground cable from battery.

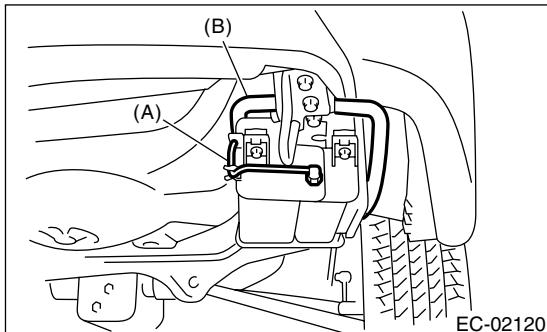


- 2) Lift up the vehicle.

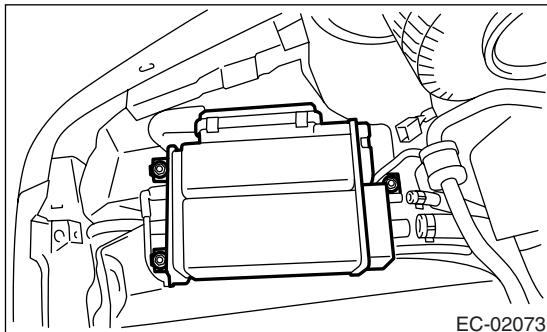
- 3) Disconnect connector (A) from drain valve.
- 4) Disconnect evaporation hoses (B) and (C) from canister.



- 5) Disconnect quick connector (A) from canister.
- 6) Disconnect drain hoses (B) from canister.



- 7) Remove the canister from vehicle.

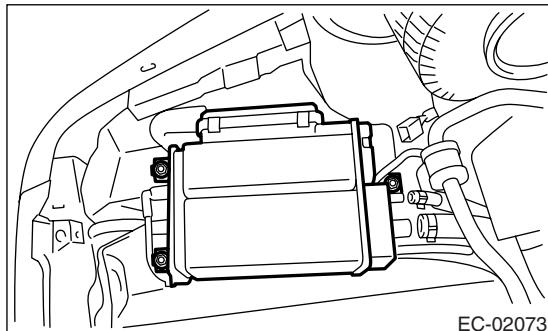


B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

23 N·m (2.3 kgf·m, 17 ft-lb)



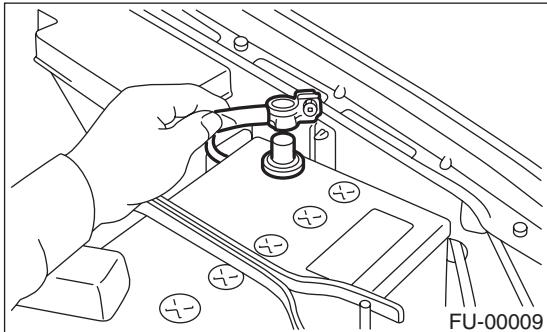
C: INSPECTION

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

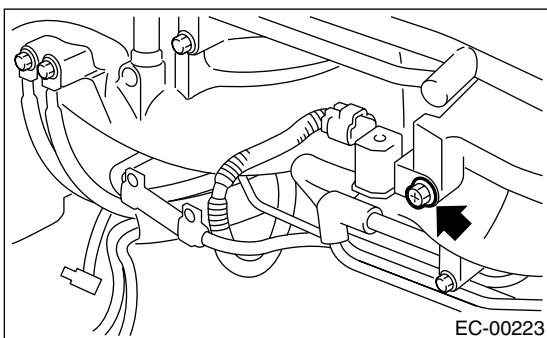
6. Purge Control Solenoid Valve

A: REMOVAL

- 1) Disconnect the ground cable from battery.



- 2) Disconnect the connector and hoses of purge control solenoid valve, and then remove the purge control solenoid valve.

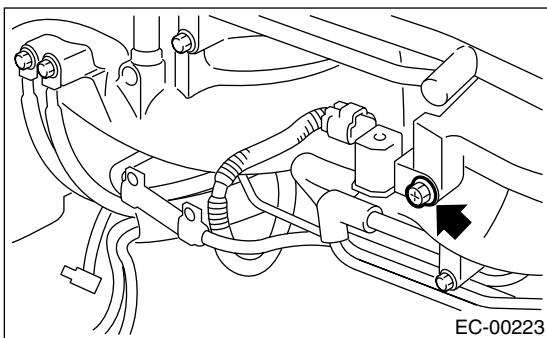


B: INSTALLATION

Install in the reverse order of removal.

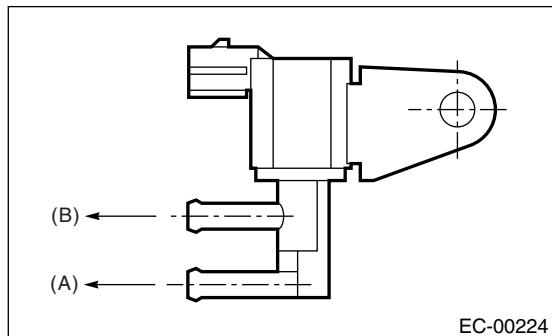
Tightening torque:

19 N·m (1.9 kgf·m, 14.0 ft-lb)



NOTE:

Connect the evaporation hose as shown in the figure.



(A) To fuel pipe (Evaporation line)

(B) To intake manifold

C: INSPECTION

Make sure the hoses are not cracked or loose.

7. Fuel Level Sensor

A: REMOVAL

For removal procedure, refer to “FU” section. <Ref. to FU(H4SO)-51, REMOVAL, Fuel Level Sensor.>

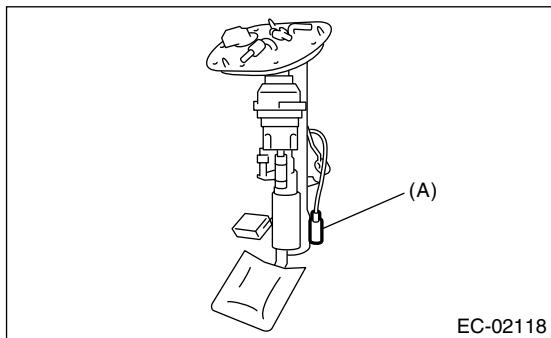
B: INSTALLATION

For installation procedure, refer to “FU” section. <Ref. to FU(H4SO)-51, INSTALLATION, Fuel Level Sensor.>

8. Fuel Temperature Sensor

A: REMOVAL

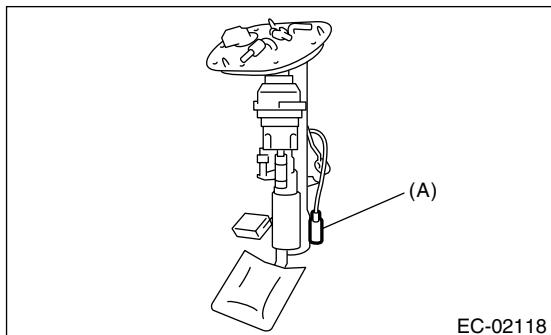
Fuel temperature sensor and fuel level sensor are integrated into one unit; therefore, the removal procedure is the same as that for fuel level sensor.
<Ref. to FU(H4SO)-51, REMOVAL, Fuel Level Sensor.>



(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(H4SO)-51, INSTALLATION, Fuel Level Sensor.>



(A) Fuel temperature sensor

9. Fuel Sub Level Sensor

A: REMOVAL

For removal procedure, refer to “FU” section. <Ref. to FU(H4SO)-52, REMOVAL, Fuel Sub Level Sensor.>

B: INSTALLATION

For installation procedure, refer to “FU” section. <Ref. to FU(H4SO)-52, INSTALLATION, Fuel Sub Level Sensor.>

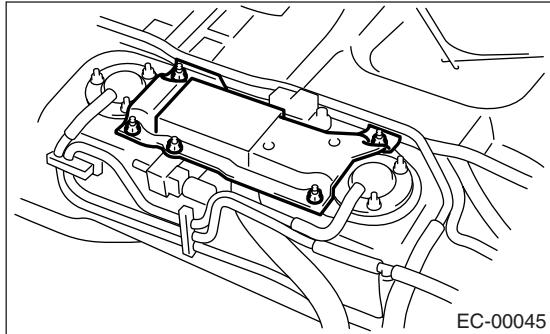
10. Fuel Tank Pressure Sensor

A: REMOVAL

WARNING:

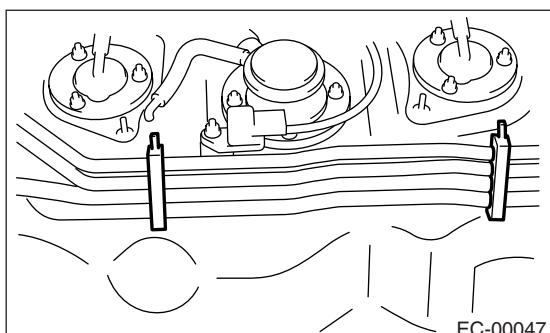
- Place “NO FIRE” signs near the working area.
- Be careful not to spill fuel.

- 1) Remove the fuel tank. <Ref. to FU(H4SO)-42, REMOVAL, Fuel Tank.>
- 2) Remove the protector cover.



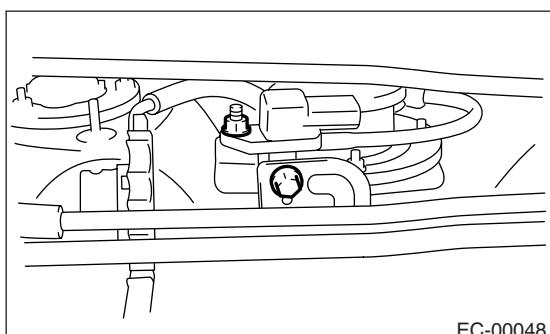
EC-00045

- 3) Disconnect the connector from fuel tank pressure sensor.
- 4) Release the clips which hold the fuel pipes onto fuel tank.



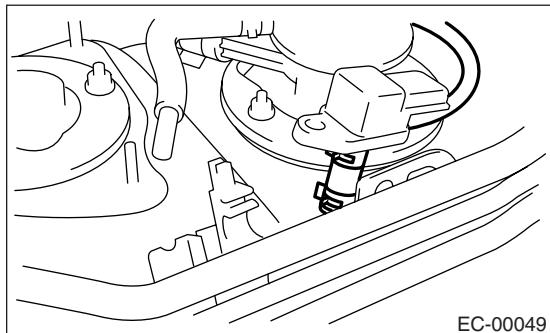
EC-00047

- 5) Remove the nuts and bolts which install the fuel tank pressure sensor on bracket.



EC-00048

- 6) Disconnect the pressure hose from fuel tank pressure sensor.



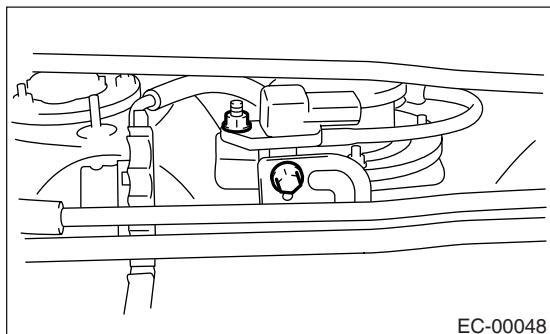
EC-00049

B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

7.4 N·m (0.75 kgf-m, 5.4 ft-lb)

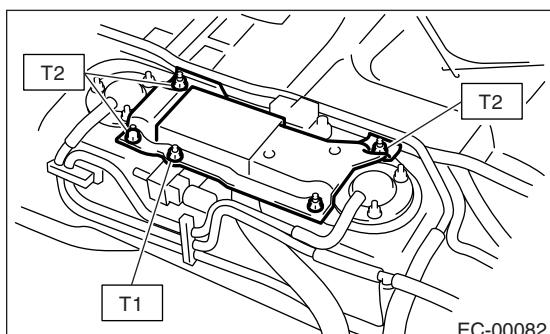


EC-00048

Tightening torque:

T1: 7.4 N·m (0.75 kgf-m, 5.4 ft-lb)

T2: 4.4 N·m (0.45 kgf-m, 3.3 ft-lb)



EC-00082

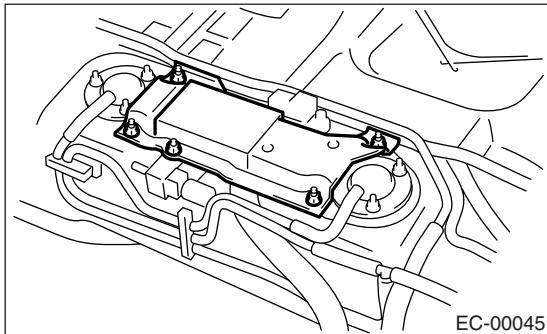
C: INSPECTION

Make sure the hoses are not cracked or loose.

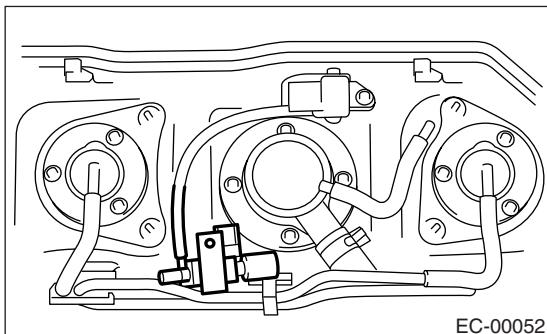
11. Fuel Tank Sensor Control Valve

A: REMOVAL

- 1) Remove the fuel tank. <Ref. to FU(H4SO)-42, REMOVAL, Fuel Tank.>
- 2) Remove the protector cover.



- 3) Disconnect the connector from fuel tank sensor control valve.
- 4) Disconnect the hose, and then remove the fuel tank sensor control valve.

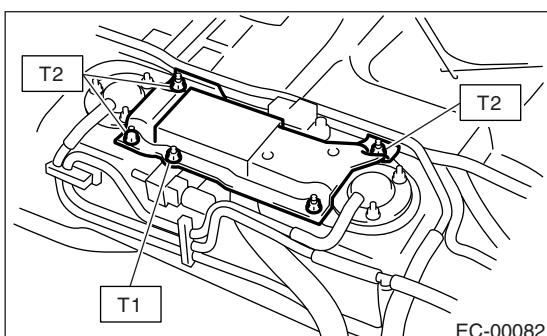


B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

T1: 7.4 N·m (0.75 kgf·m, 5.4 ft-lb)
T2: 4.4 N·m (0.45 kgf·m, 3.3 ft-lb)



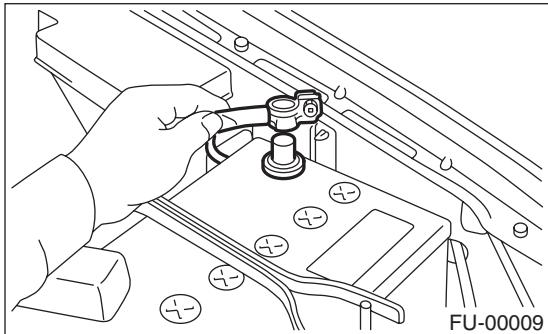
C: INSPECTION

Make sure the hoses are not cracked or loose.

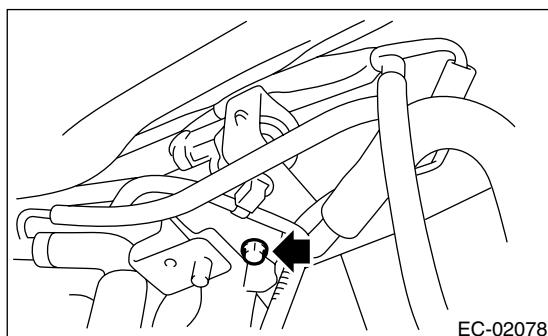
12. Pressure Control Solenoid Valve

A: REMOVAL

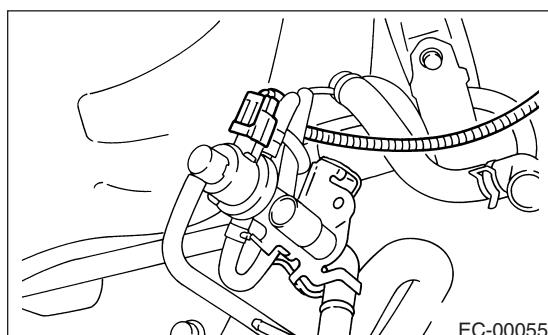
- 1) Set the vehicle on a lift.
- 2) Disconnect the ground cable from battery.



- 3) Lift up the vehicle.
- 4) Remove the canister. <Ref. to EC(H4SO)-6, REMOVAL, Canister.>
- 5) Remove the bolt which installs the pressure control solenoid valve holding bracket on body.

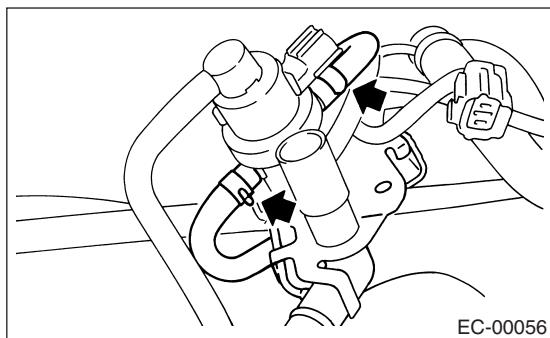


- 6) Disconnect the connector from pressure control solenoid valve.

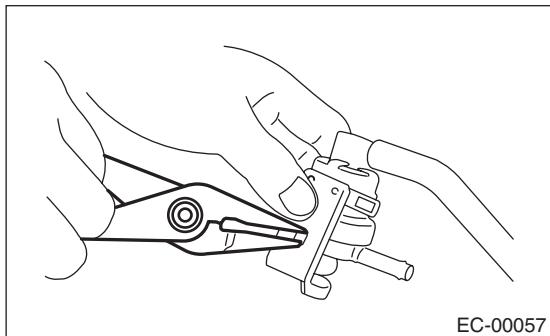


- 7) Disconnect the two evaporation hoses from pressure control solenoid valve.

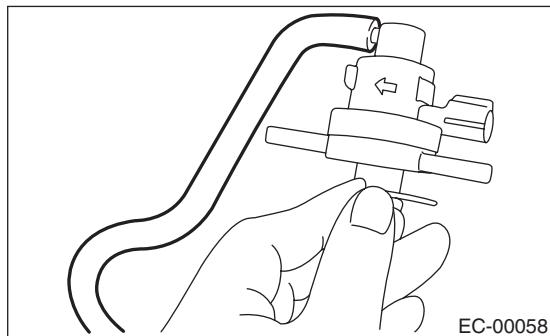
- 8) Remove the pressure control solenoid valve with bracket.



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



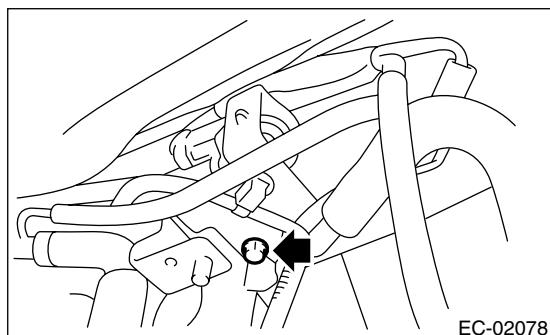
- 10) Disconnect the vacuum hose from pressure control solenoid valve.



B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:
 $17.6 \text{ N}\cdot\text{m} (1.8 \text{ kgf}\cdot\text{m}, 13.0 \text{ ft-lb})$



Pressure Control Solenoid Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

C: INSPECTION

Make sure the hoses are not cracked or loose.

13.Drain Filter

A: SPECIFICATION

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

Vent Valve

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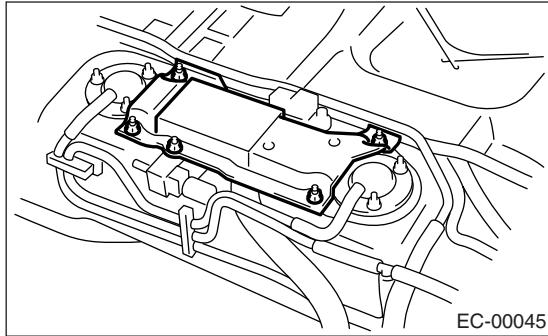
14. Vent Valve

A: REMOVAL

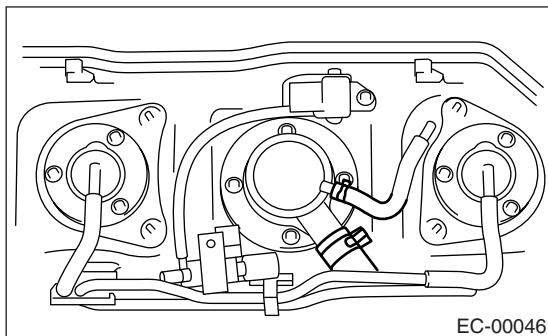
WARNING:

- Place "NO FIRE" signs near the working area.
- Be careful not to spill fuel.

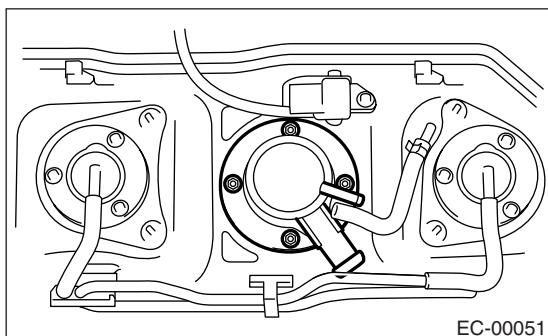
- 1) Remove the fuel tank. <Ref. to FU(H4SO)-42, REMOVAL, Fuel Tank.>
- 2) Remove the protector cover.



- 3) Remove the clips, and disconnect the hoses from vent valve.



- 4) Remove the nuts, and then remove the vent valve.



B: INSTALLATION

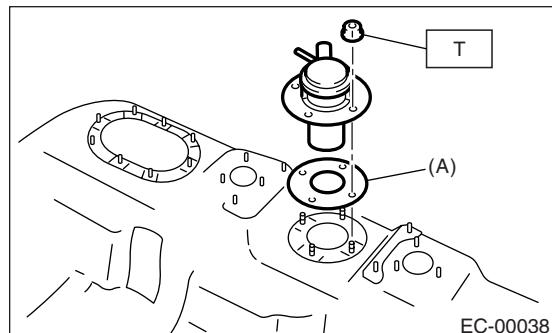
Install in the reverse order of removal.

NOTE:

Replace the rubber seat with a new one.

Tightening torque:

T: 4.4 N·m (0.45 kgf-m, 3.3 ft-lb)

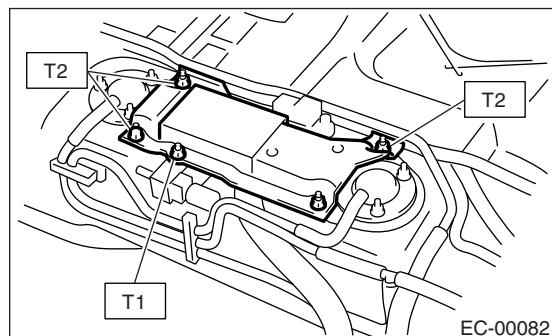


(A) Rubber seat

Tightening torque:

T1: 7.4 N·m (0.75 kgf-m, 5.4 ft-lb)

T2: 4.4 N·m (0.45 kgf-m, 3.3 ft-lb)



C: INSPECTION

Make sure the hoses are not cracked or loose.

15. Shut Valve

A: REMOVAL

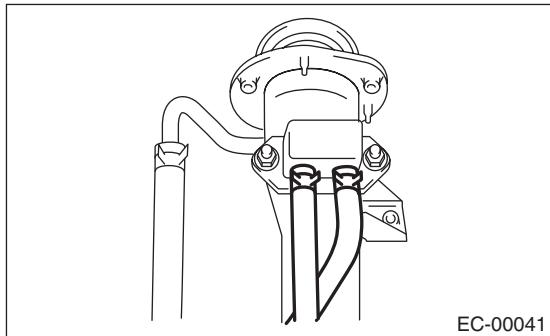
WARNING:

- Place “NO FIRE” signs near the working area.
- Be careful not to spill fuel.

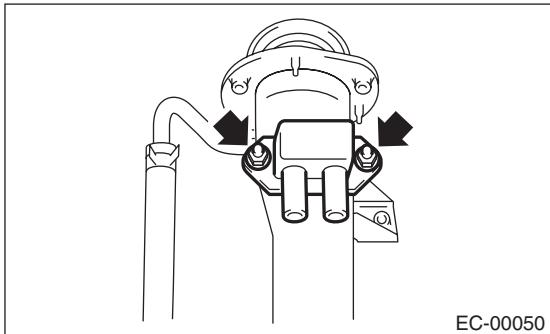
1) Remove the fuel filler pipe.

<Ref. to FU(H4SO)-45, REMOVAL, Fuel Filler Pipe. >

2) Disconnect the evaporation hoses from shut valve.



3) Remove the shut valve from fuel filler pipe.

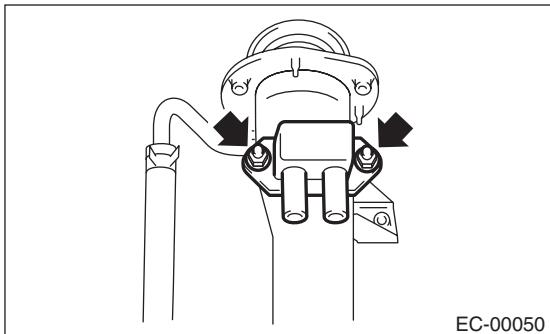


B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

4.5 N·m (0.46 kgf·m, 3.3 ft-lb)



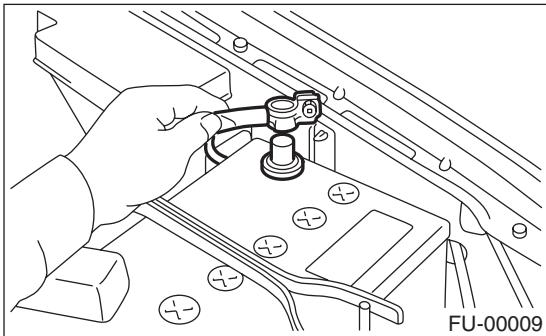
C: INSPECTION

Make sure the hoses are not cracked or loose.

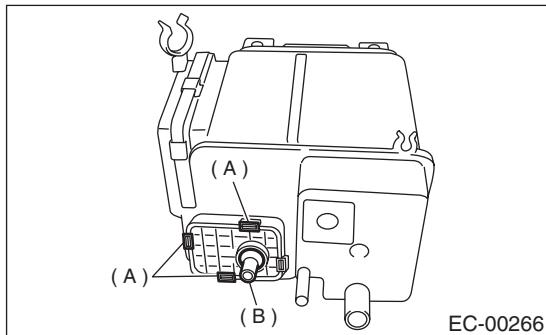
16.Drain Valve

A: REMOVAL

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



- 3) Lift up the vehicle.
- 4) Remove the canister. <Ref. to EC(H4SO)-6, REMOVAL, Canister.>
- 5) Remove clip (A), and then remove drain valve (B) from canister.
- 6) Remove the filter from drain valve (B).



B: INSTALLATION

Install in the reverse order of removal.

CAUTION:

- Assemble the drain valve filter without any clearance.
- Make sure the packing in the groove before assembling drain valve to canister.
- Replace the clip with new one.

C: INSPECTION

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