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EMISSION CONTROL

(AUX. EMISSION CONTROL DEVICES)

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 the ground cable from battery.

Front Catalytic Converter

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

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.

Rear Catalytic Converter

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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.

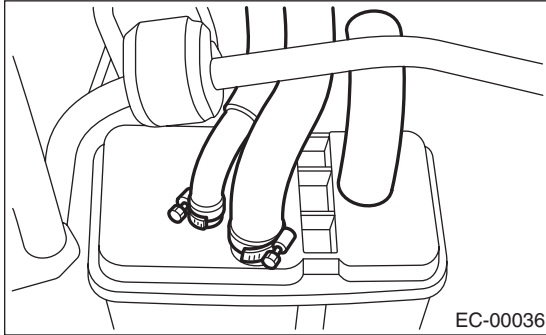
Canister

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

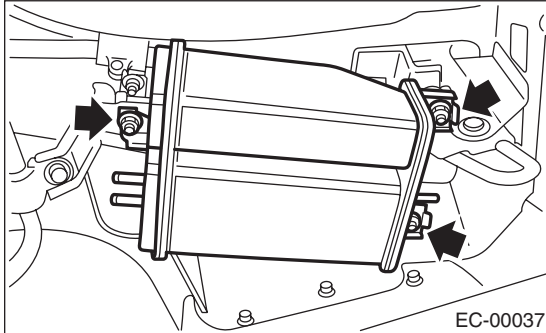
4. Canister

A: REMOVAL

- 1) Lift up the vehicle.
- 2) Loosen the two clamps which hold two canister hoses, and disconnect the evaporation hose from canister.



- 3) Remove the canister from body.

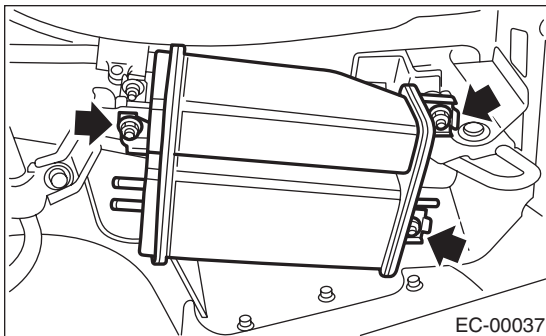


B: INSTALLATION

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.

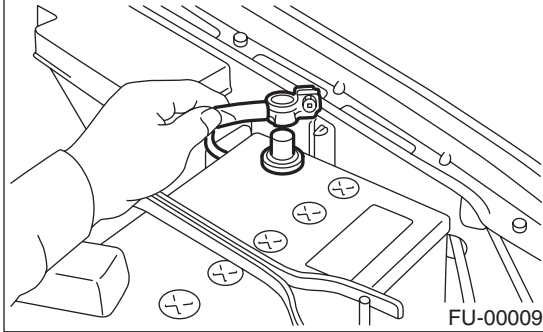
Purge Control Solenoid Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

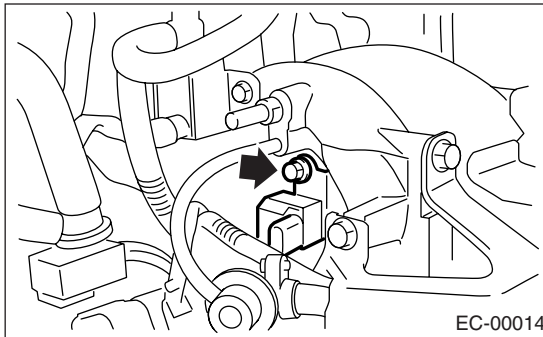
5. Purge Control Solenoid Valve

A: REMOVAL

1) Disconnect the ground cable from battery.



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

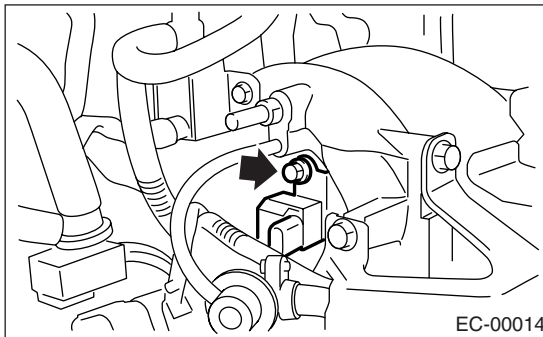


B: INSTALLATION

Install in the reverse order of removal.

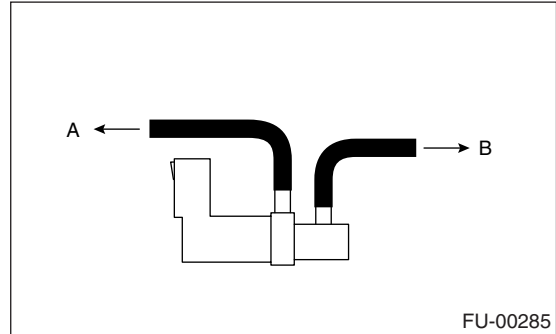
Tightening torque:

19 N·m (1.9 kgf·m, 14.0 ft·lb)



NOTE:

Connect the evaporation hose as shown in the following figure.



(A) To fuel pipe

(B) To intake manifold

C: INSPECTION

Make sure the hoses are not cracked or loose.

Fuel Level Sensor

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6. Fuel Level Sensor

A: REMOVAL

For removal procedure, refer to "FU" section. <Ref. to FU(H4SO)-57, REMOVAL, Fuel Level Sensor.>

B: INSTALLATION

For installation procedure, refer to "FU" section. <Ref. to FU(H4SO)-57, INSTALLATION, Fuel Level Sensor.>

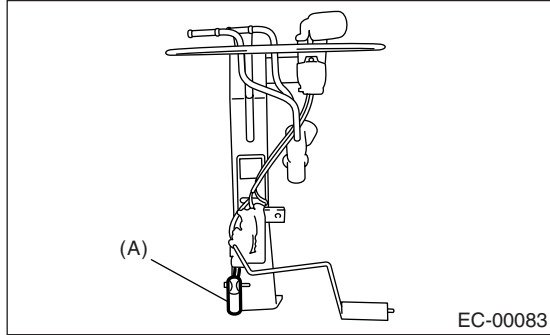
Fuel Temperature Sensor

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

7. Fuel Temperature Sensor

A: REMOVAL

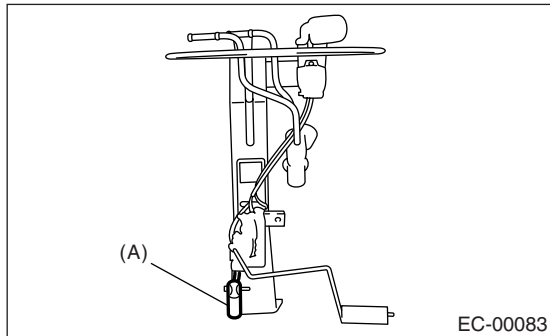
Fuel temperature sensor and fuel level sensor are integrated into one unit; therefore, the removal procedure is the same as that for fuel level sensor. <Ref. to FU(H4SO)-57, REMOVAL, Fuel Level Sensor.>



(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)-57, INSTALLATION, Fuel Level Sensor.>



(A) Fuel temperature sensor

Fuel Sub Level Sensor

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8. Fuel Sub Level Sensor

A: REMOVAL

For removal procedure, refer to "FU" section. <Ref. to FU(H4SO)-58, REMOVAL, Fuel Sub Level Sensor.>

B: INSTALLATION

For installation procedure, refer to "FU" section. <Ref. to FU(H4SO)-58, INSTALLATION, Fuel Sub Level Sensor.>

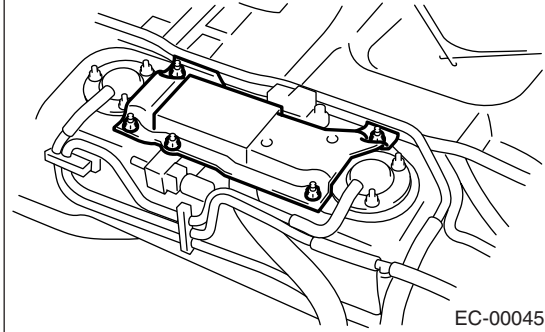
Fuel Tank Pressure Sensor

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

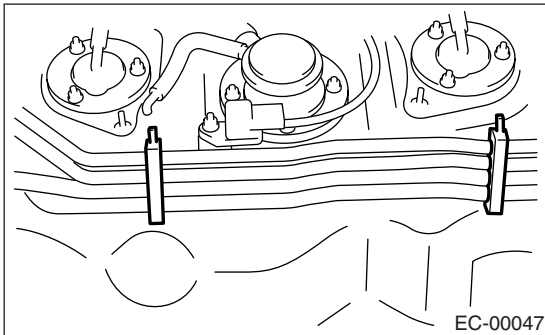
9. Fuel Tank Pressure Sensor

A: REMOVAL

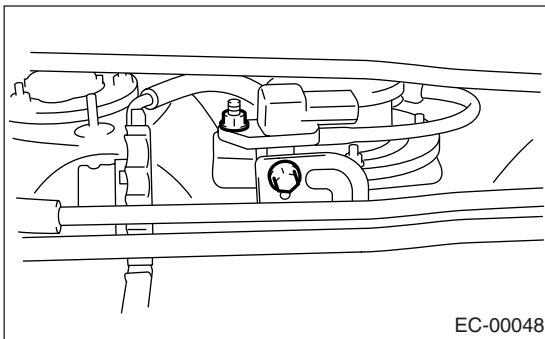
- 1) Remove the fuel tank. <Ref. to FU(H4SO)-48, REMOVAL, Fuel Tank.>
- 2) Remove the protector cover.



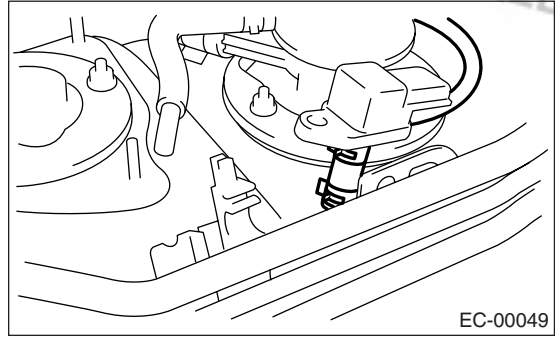
- 3) Disconnect the connector from fuel tank pressure sensor.
- 4) Release the clips which hold the fuel pipes onto fuel tank.



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



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

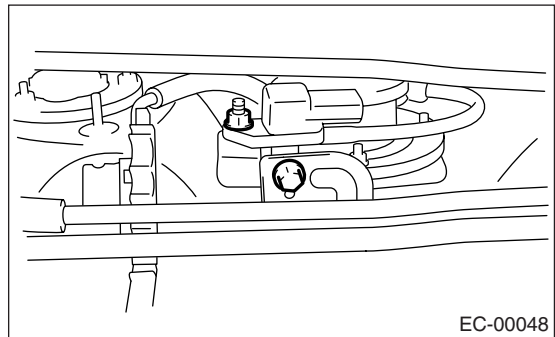


B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

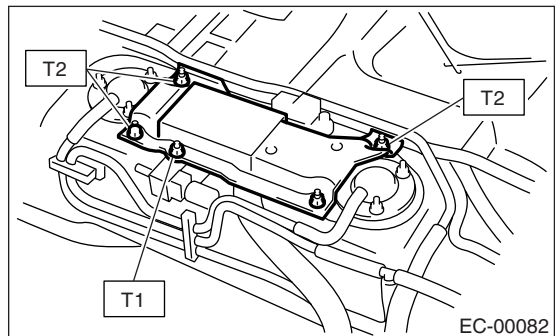
7.4 N·m (0.75 kgf-m, 5.4 ft-lb)



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)



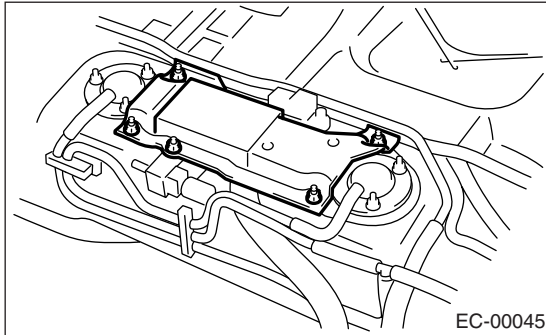
C: INSPECTION

Make sure the hoses are not cracked or loose.

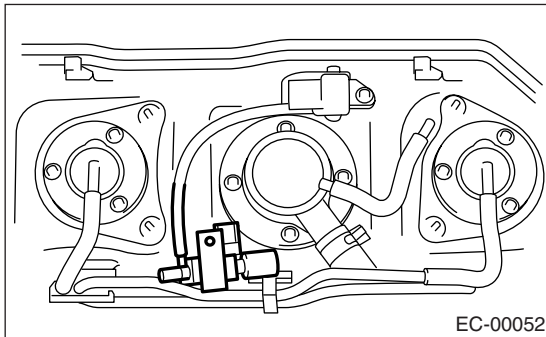
10. Fuel Tank Sensor Control Valve

A: REMOVAL

- 1) Remove the fuel tank. <Ref. to FU(H4SO)-48, 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.



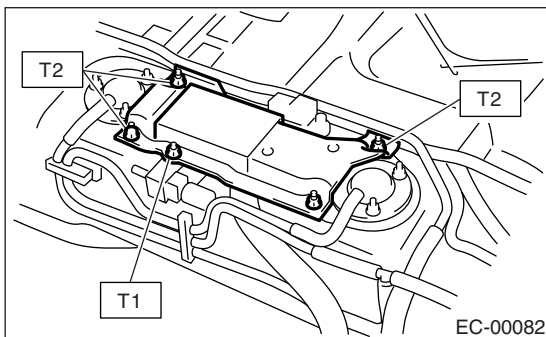
B: INSTALLATION

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.

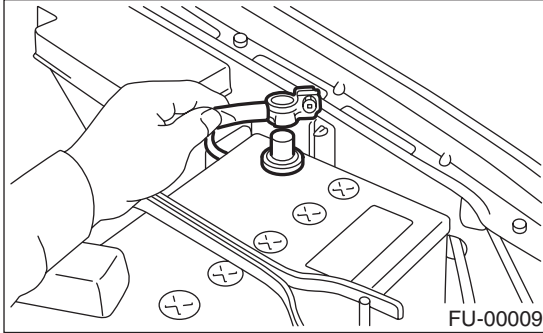
Pressure Control Solenoid Valve

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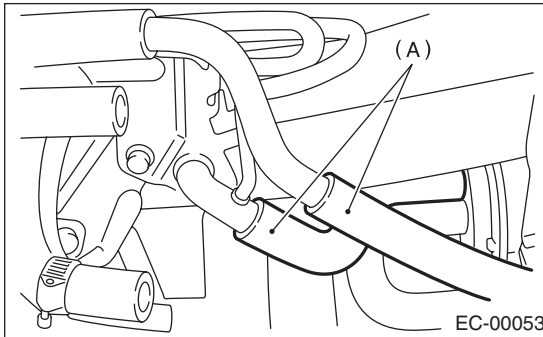
11. Pressure Control Solenoid Valve

A: REMOVAL

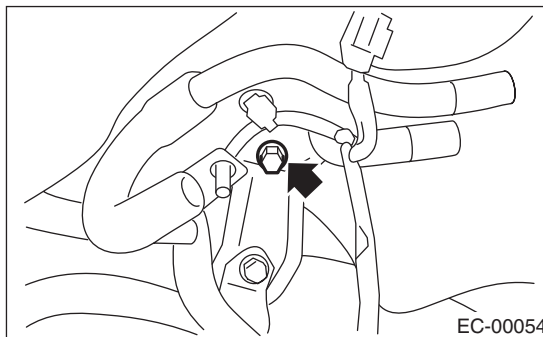
- 1) Set the vehicle on a lift.
- 2) Disconnect the ground cable from battery.



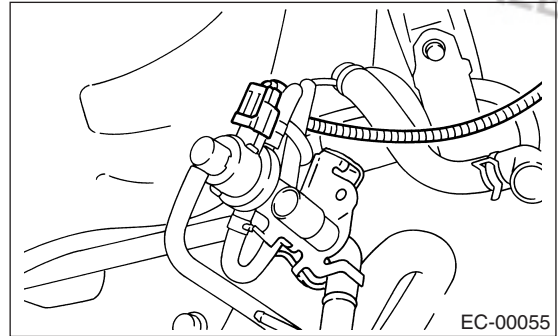
- 3) Lift up the vehicle.
- 4) Remove the canister. <Ref. to EC(H4SO)-5, REMOVAL, Canister.>
- 5) Disconnect the evaporation hoses (A) from joint pipes.



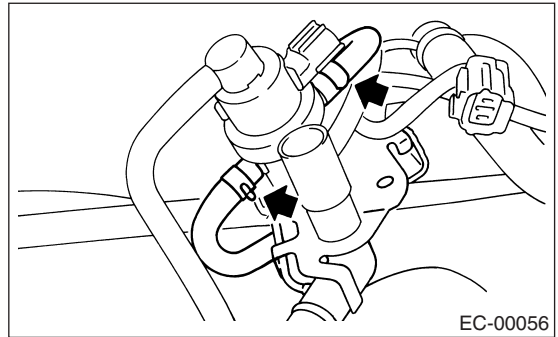
- 6) Remove the bolt which installs the pressure control solenoid valve holding bracket on body.



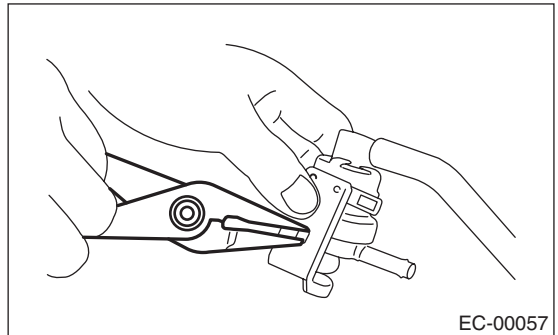
- 7) Disconnect the connector from pressure control solenoid valve.



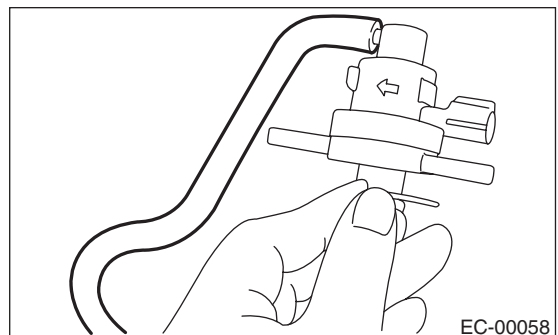
- 8) Disconnect the two evaporation hoses from pressure control solenoid valve.
- 9) Remove the pressure control solenoid valve with bracket.



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



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



Pressure Control Solenoid Valve

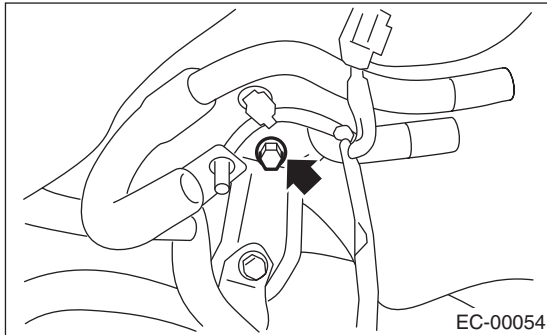
EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

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.

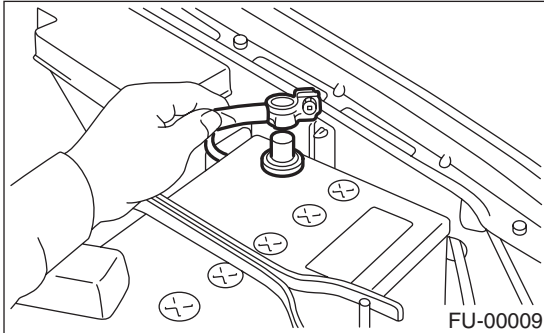
Drain Filter

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

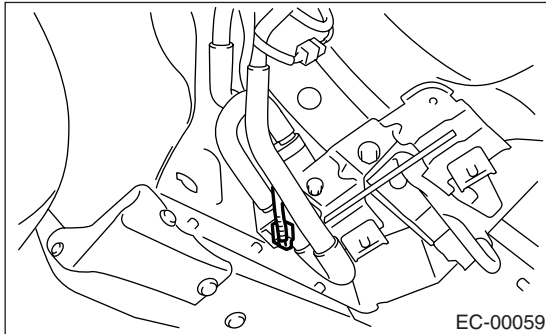
12. Drain Filter

A: REMOVAL

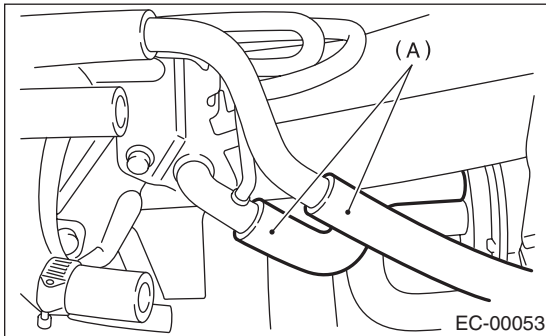
- 1) Set the vehicle on a lift.
- 2) Disconnect the ground cable from battery.



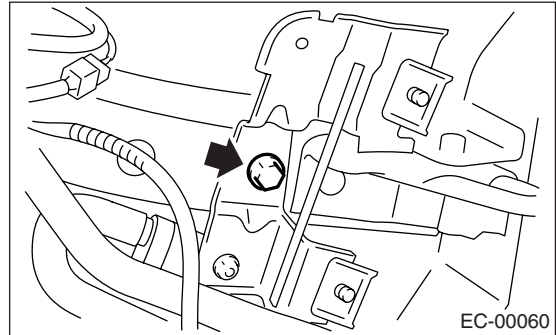
- 3) Lift up the vehicle.
- 4) Remove the canister. <Ref. to EC(H4SO)-5, REMOVAL, Canister.>
- 5) Disconnect the connector from drain valve.



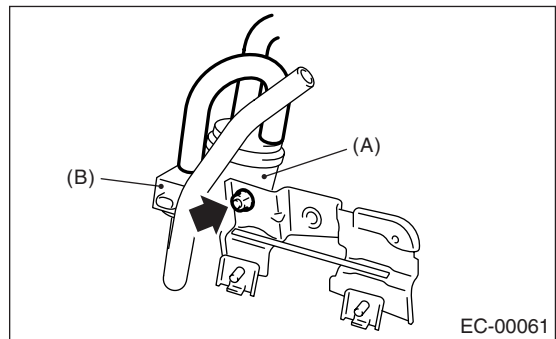
- 6) Disconnect the evaporation hoses (A) from joint pipes.



- 7) Remove the bolt which installs the drain filter and drain valve brackets on body, and remove them as a unit.



- 8) Disconnect the evaporation hoses from drain filter.
- 9) Remove the nuts, and then remove the drain filter.



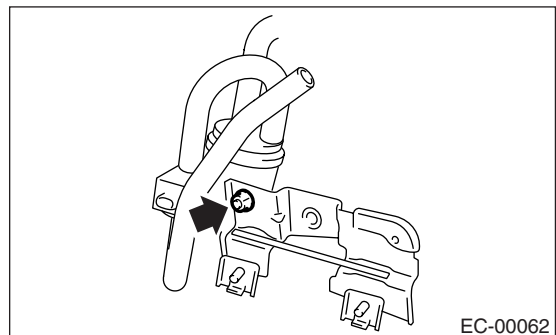
- (A) Drain filter
(B) Drain valve

B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

23 N·m (2.3 kgf-m, 16.6 ft-lb)

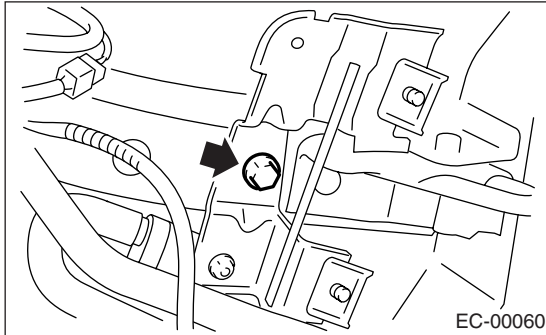


Drain Filter

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

Tightening torque:

33 N·m (3.4 kgf·m, 25 ft·lb)



C: INSPECTION

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

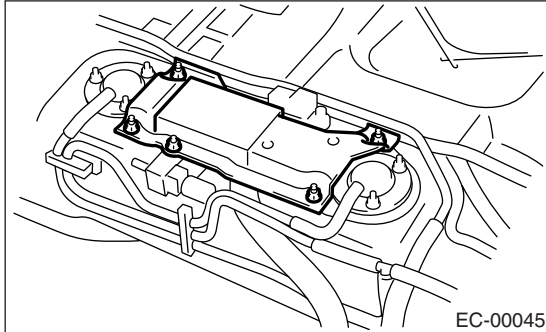
Vent Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

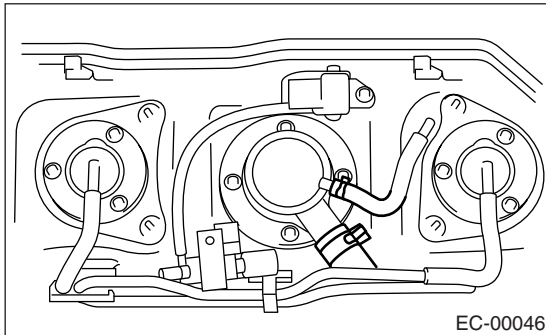
13. Vent Valve

A: REMOVAL

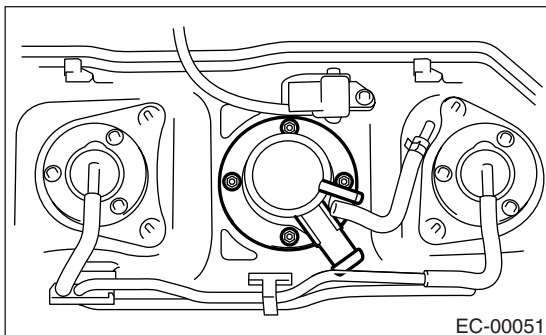
- 1) Remove the fuel tank. <Ref. to FU(H4SO)-48, REMOVAL, Fuel Tank.>
- 2) Remove the protector cover.



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



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



B: INSTALLATION

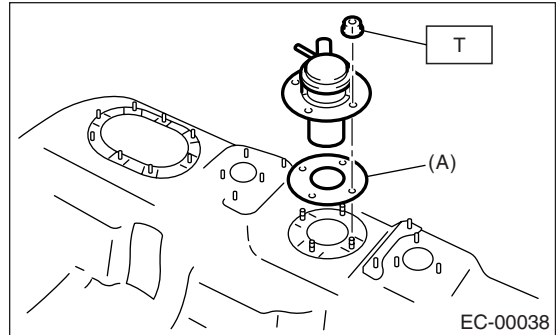
Install in the reverse order of removal.

NOTE:

Replace the rubber seat with a new one.

Tightening torque:

T: 4.4 N·m (0.45 kgf-m, 3.3 ft-lb)

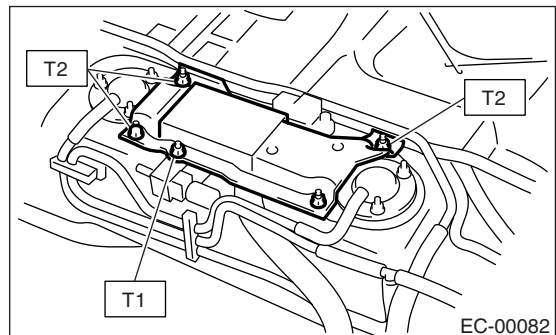


(A) Rubber seat

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.

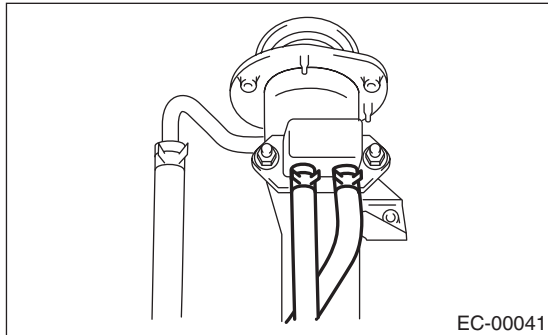
Shut Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

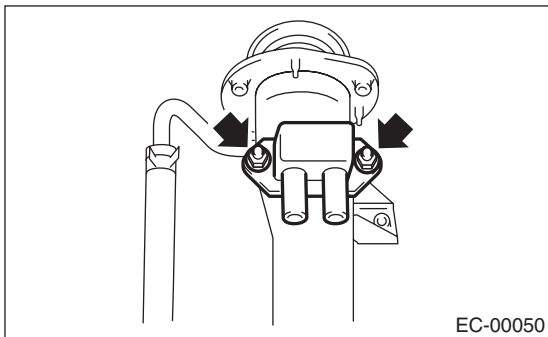
14. Shut Valve

A: REMOVAL

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



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

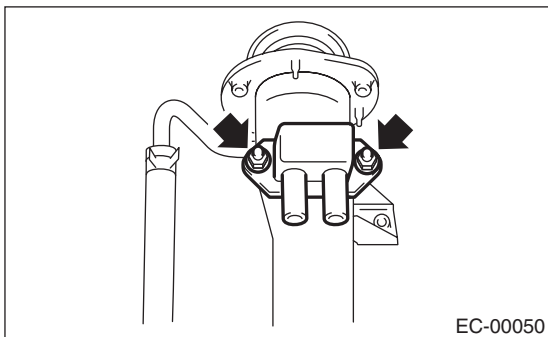


B: INSTALLATION

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.

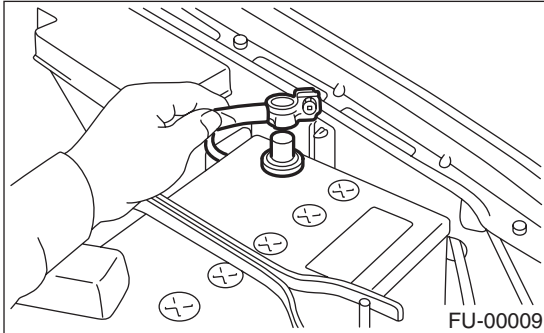
Drain Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

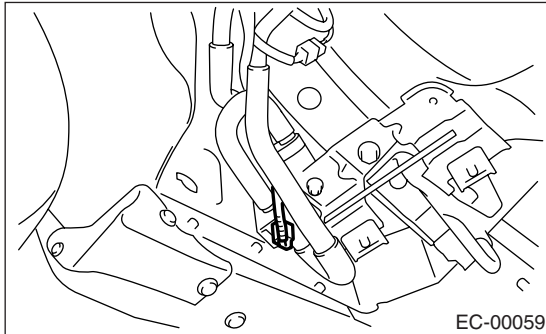
15. Drain Valve

A: REMOVAL

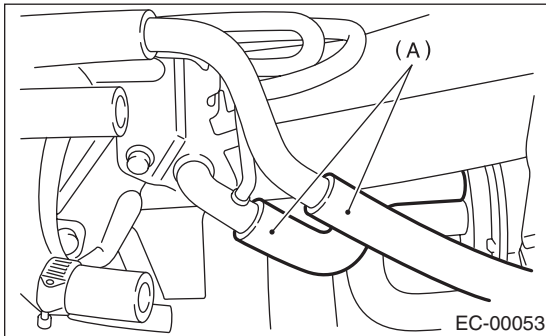
- 1) Set the vehicle on a lift.
- 2) Disconnect the ground cable from battery.



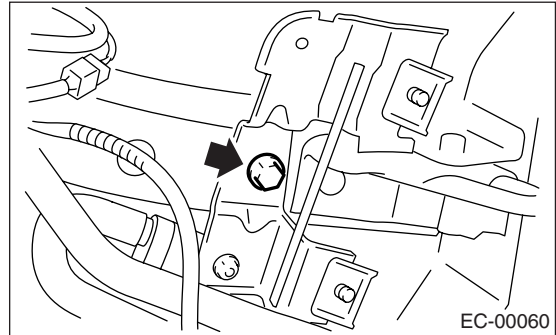
- 3) Lift up the vehicle.
- 4) Remove the canister. <Ref. to EC(H4SO)-5, REMOVAL, Canister.>
- 5) Disconnect the connector from drain valve.



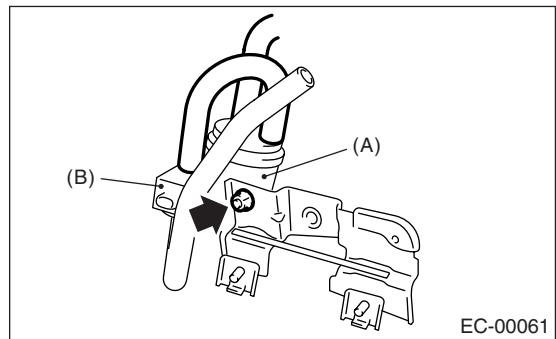
- 6) Disconnect the evaporation hoses (A) from joint pipes.



- 7) Remove the bolt which installs the drain filter and drain valve brackets on body, and remove them as a unit.



- 8) Disconnect the evaporation hoses from drain valve.
- 9) Remove the nuts, and then remove the drain valve.



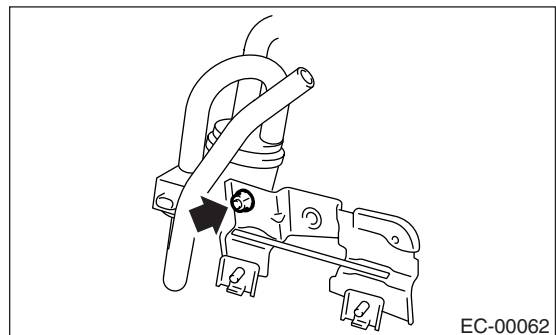
- (A) Drain filter
(B) Drain valve

B: INSTALLATION

Install in the reverse order of removal.

Tightening torque:

23 N·m (2.3 kgf-m, 16.6 ft-lb)

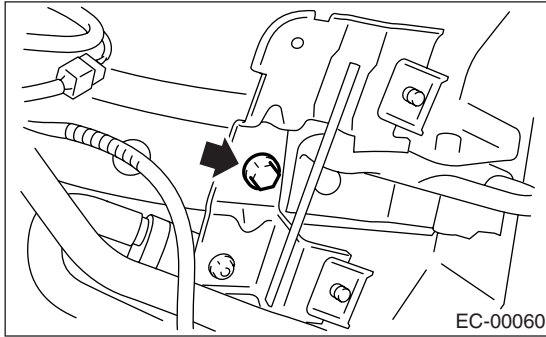


Drain Valve

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Tightening torque:

33 N·m (3.4 kgf·m, 25 ft·lb)



C: INSPECTION

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

Drain Valve

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EC(H4SO)-20