

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

EC(H4DO)

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General Description

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

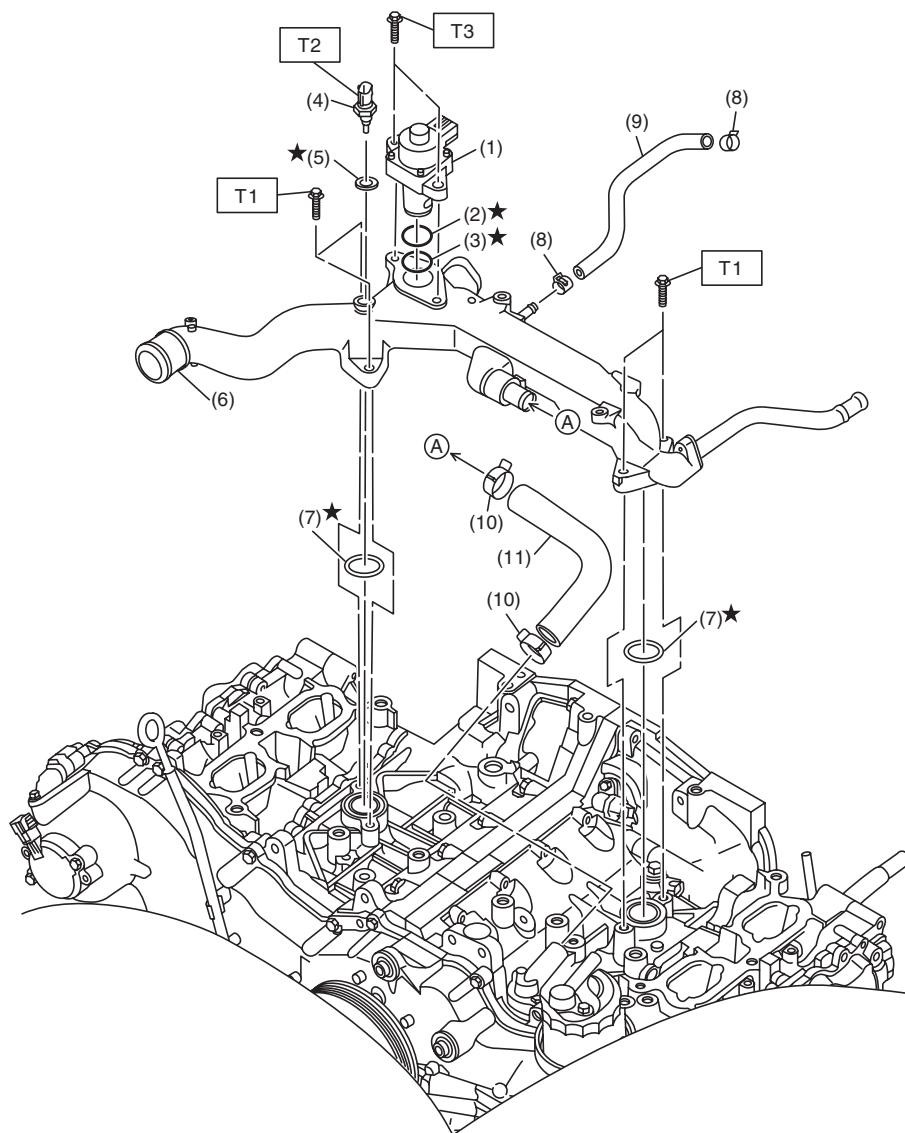
1. General Description

A: COMPONENT

1. CANISTER, PURGE CONTROL SOLENOID VALVE, AND LEAK CHECK VALVE ASSEMBLY

For structures of the canister, purge control solenoid valve, and leak check valve assembly, refer to FU (H4DO). <Ref. to FU(H4DO)-3, COMPONENT, General Description.>

2. EGR SYSTEM 1



EC-03300

- | | |
|---------------------------------------|-----------------------|
| (1) EGR control valve | (7) O-ring |
| (2) O-ring | (8) Clip |
| (3) Gasket | (9) Preheater hose A |
| (4) Engine coolant temperature sensor | (10) Clip |
| (5) Gasket | (11) Preheater hose B |
| (6) Water pipe ASSY | |

Tightening torque: N·m (kgf-m, ft-lb)

T1: 6.4 (0.7, 4.7)

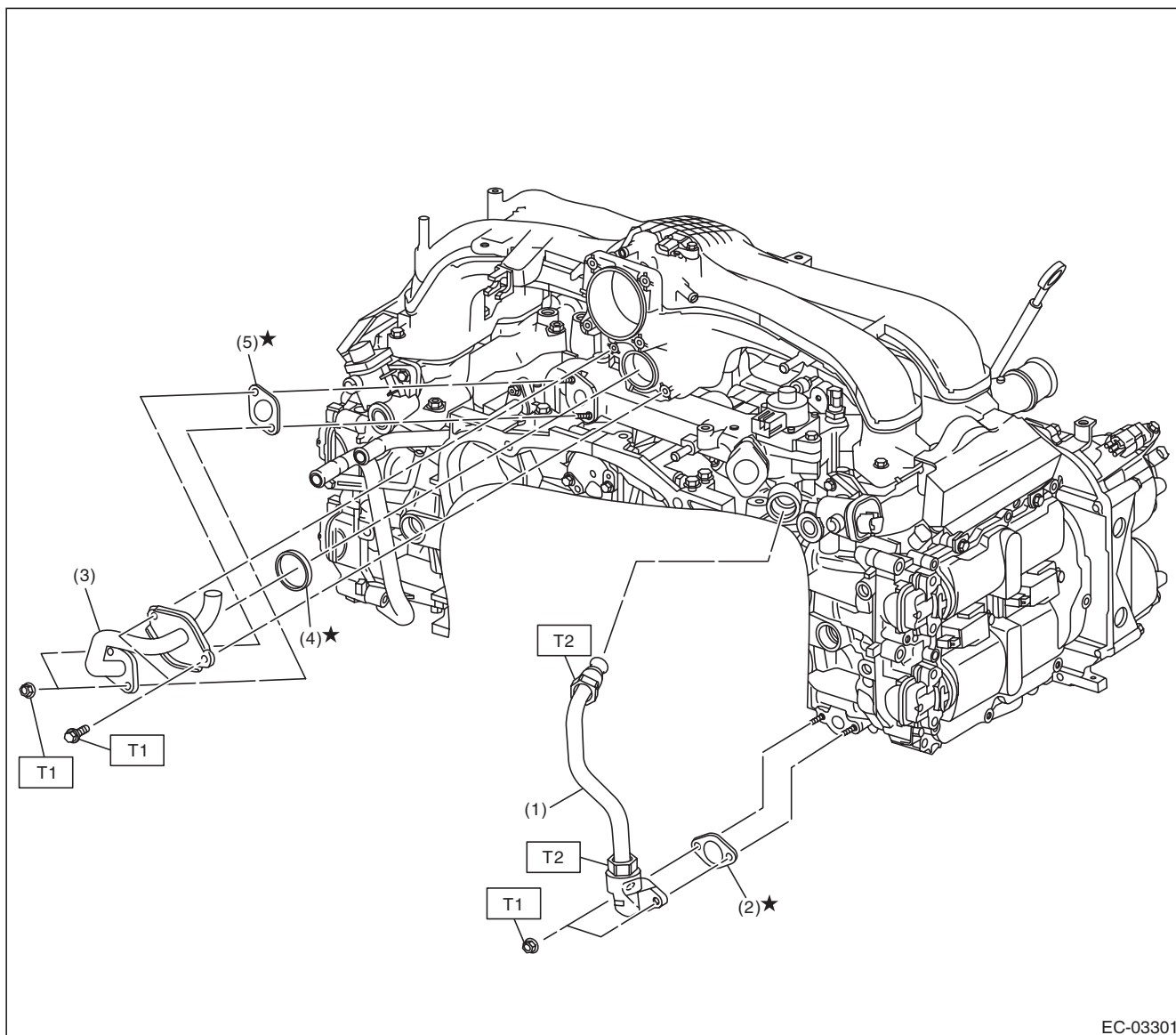
T2: 18 (1.8, 13.3)

T3: 22 (2.2, 16.2)

General Description

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

3. EGR SYSTEM 2



EC-03301

(1) EGR pipe ASSY

(2) Gasket

(3) EGR pipe

(4) Gasket

(5) Gasket

Tightening torque: N·m (kgf-m, ft-lb)

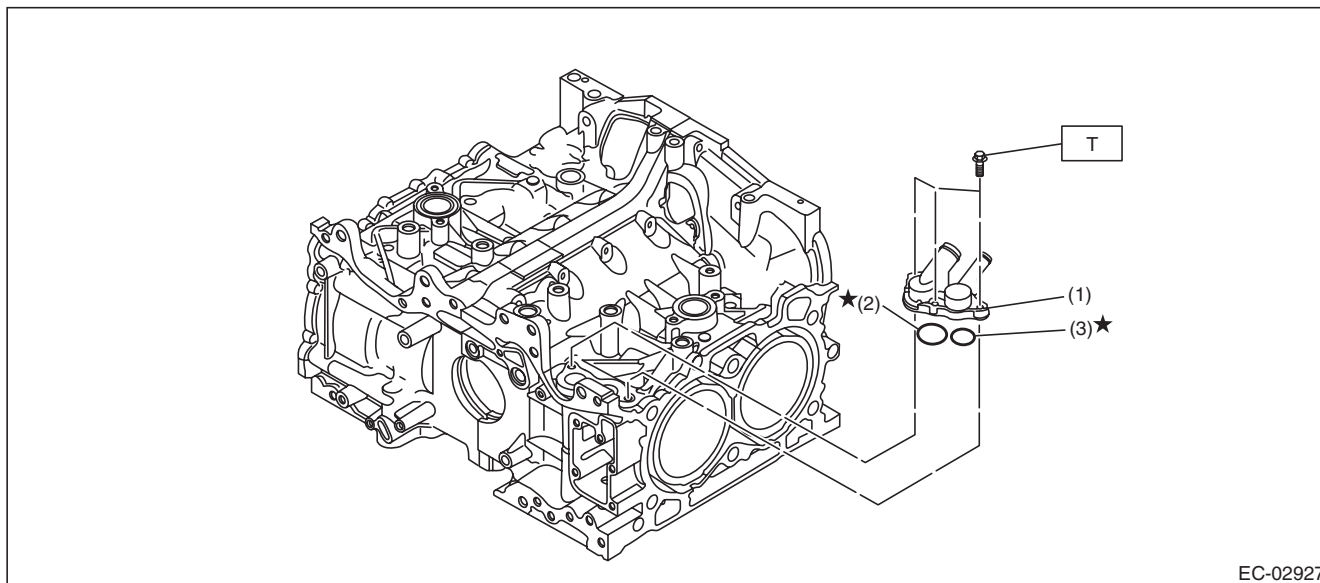
T1: <Ref. to EC(H4DO)-29, INSTALLATION, EGR Pipe.>

T2: <Ref. to EC(H4DO)-29, INSTALLATION, EGR Pipe.>

General Description

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

4. PCV SYSTEM 1



(1) PCV connector

(3) O-ring

(2) O-ring

Tightening torque: N·m (kgf-m, ft-lb)

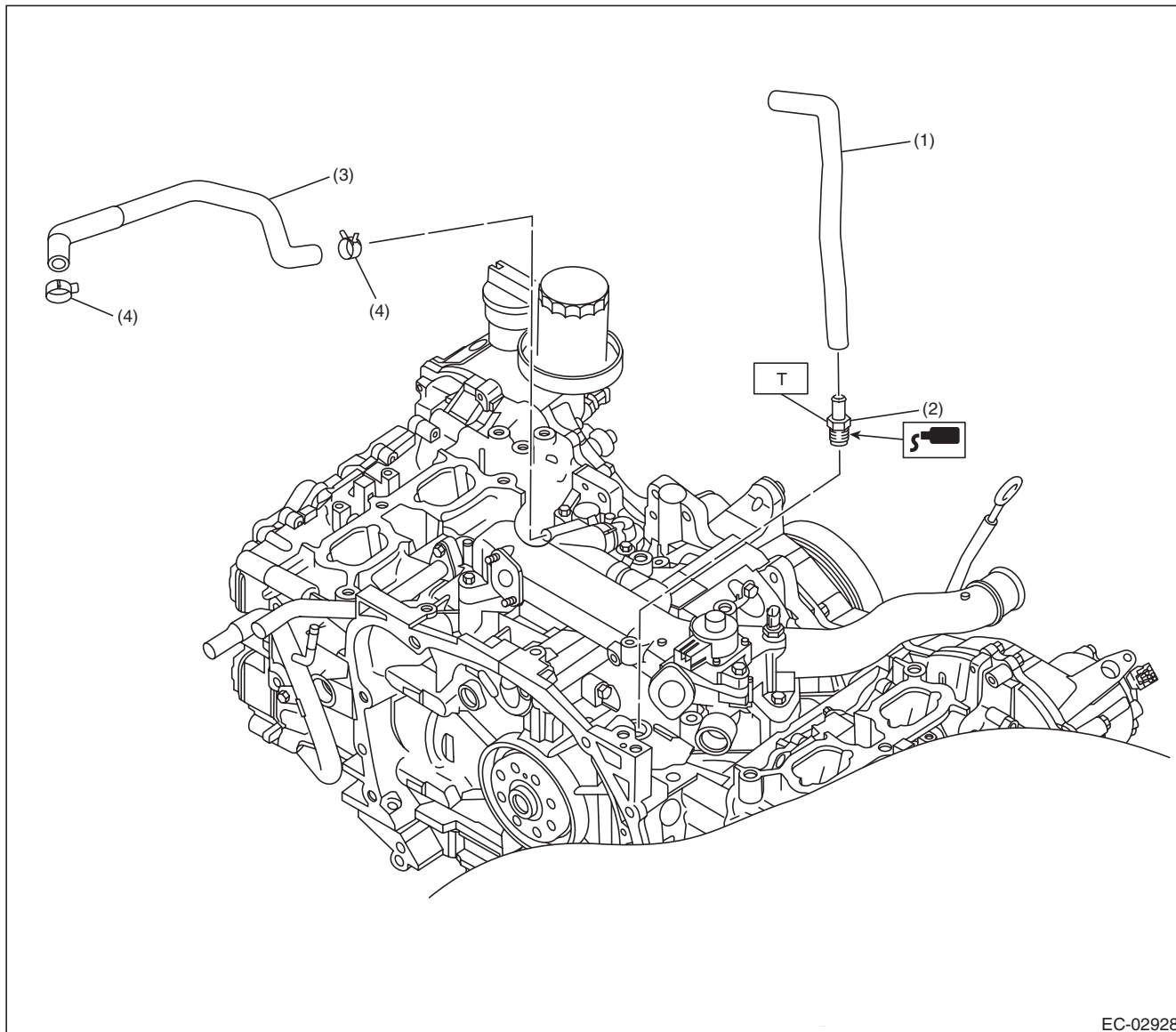
T: 6.4 (0.7, 4.7)



General Description

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

5. PCV SYSTEM 2



(1) PCV hose A

(2) PCV valve

(3) PCV hose B

(4) Clip

Tightening torque: N·m (kgf-m, ft-lb)

T: 23 (2.3, 17.0)

General Description

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

B: CAUTION

- Prior to starting work, pay special attention to the following:
 1. Always wear work clothes, a safety cap, protective shoes. Additionally, wear a helmet, protective goggles, etc. if necessary.
 2. Protect the vehicle using a seat cover, fender cover, etc.
 3. Prepare the service tools, clean cloth, containers to catch grease and oil, etc.
- Vehicle components are extremely hot immediately after driving. Be wary of receiving burns from heated parts.
- When performing a repair, identify the cause of trouble and avoid unnecessary removal, disassembly and replacement.
- Before disconnecting connectors of sensors or units, be sure to disconnect the ground cable from battery.
- Always use the jack-up point when the shop jacks or rigid racks are used to support the vehicle.
- Remove contamination including dirt and corrosion before removal, installation, disassembly or assembly.
- Keep the removed parts in order and protect them from dust and dirt.
- All removed parts, if to be reused, should be reinstalled in the original positions with attention to the correct directions, etc.
- Bolts, nuts and washers should be replaced with new parts as required.
- Be sure to tighten the fasteners including bolts and nuts to the specified torque.

C: PREPARATION TOOL

1. GENERAL TOOL

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



Front Catalytic Converter

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

2. Front Catalytic Converter

A: REMOVAL

The front catalytic converter is integrated into the front exhaust pipe; therefore, refer to "Front Exhaust Pipe" for the removal procedure. <Ref. to EX(H4DO)-6, REMOVAL, Front Exhaust Pipe.>

B: INSTALLATION

The front catalytic converter is integrated into the front exhaust pipe; therefore, refer to "Front Exhaust Pipe" for the installation procedure. <Ref. to EX(H4DO)-8, INSTALLATION, Front Exhaust Pipe.>

C: INSPECTION

- 1) Check the connections and welded parts for exhaust leaks.
- 2) Make sure there are no holes or rusting.



Rear Catalytic Converter

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

3. Rear Catalytic Converter

A: REMOVAL

The rear catalytic converter is integrated into the center exhaust pipe; therefore, refer to "Center Exhaust Pipe" for the removal procedure. <Ref. to EX(H4DO)-14, REMOVAL, Center Exhaust Pipe.>

B: INSTALLATION

The rear catalytic converter is integrated into the center exhaust pipe; therefore, refer to "Center Exhaust Pipe" for the installation procedure. <Ref. to EX(H4DO)-15, INSTALLATION, Center Exhaust Pipe.>

C: INSPECTION

- 1) Check the connections and welded parts for exhaust leaks.
- 2) Make sure there are no holes or rusting.



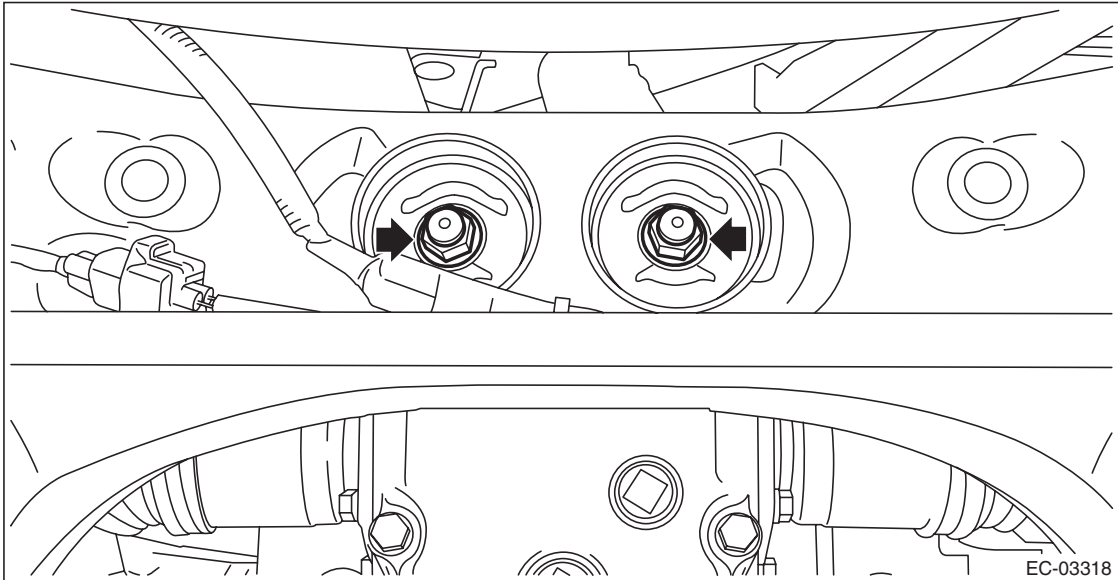
Canister

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

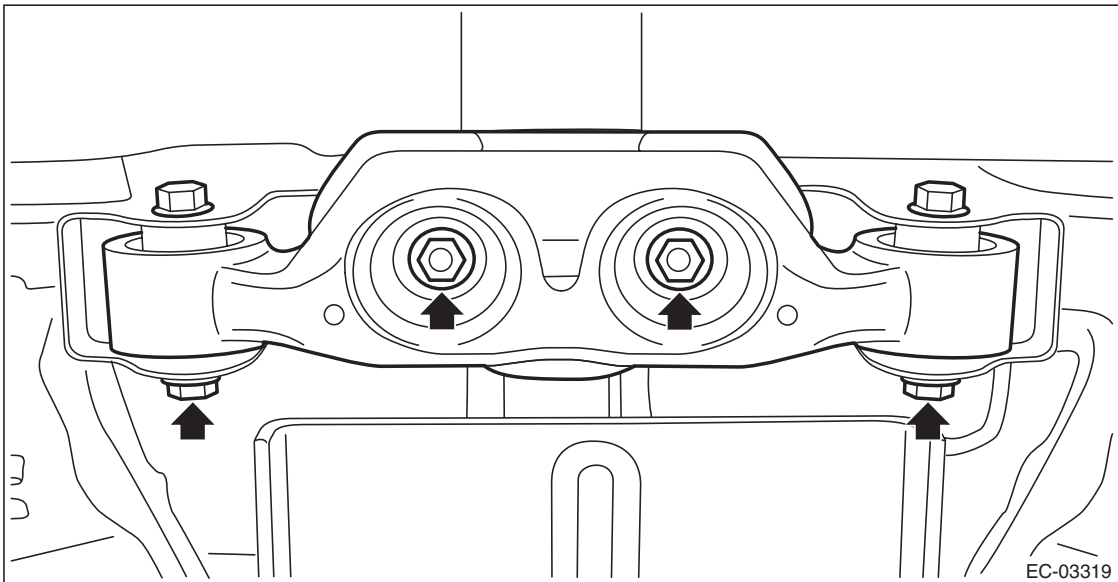
4. Canister

A: REMOVAL

- 1) Lift up the vehicle.
- 2) Remove the rear exhaust pipe. <Ref. to EX(H4DO)-18, REMOVAL, Rear Exhaust Pipe.>
- 3) Remove the propeller shaft. <Ref. to DS-11, REMOVAL, Propeller Shaft.>
- 4) Support the rear differential with the transmission jack.
- 5) Remove the self-locking nuts which hold the rear differential to the rear sub frame assembly.



- 6) Remove the rear differential member from the rear sub frame assembly and the rear differential.



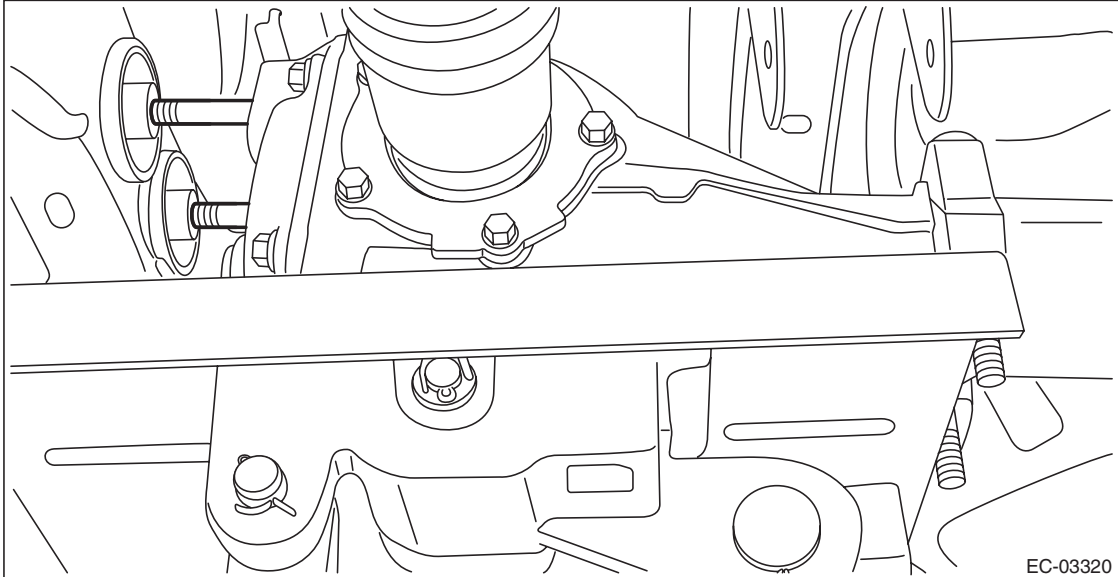
Canister

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

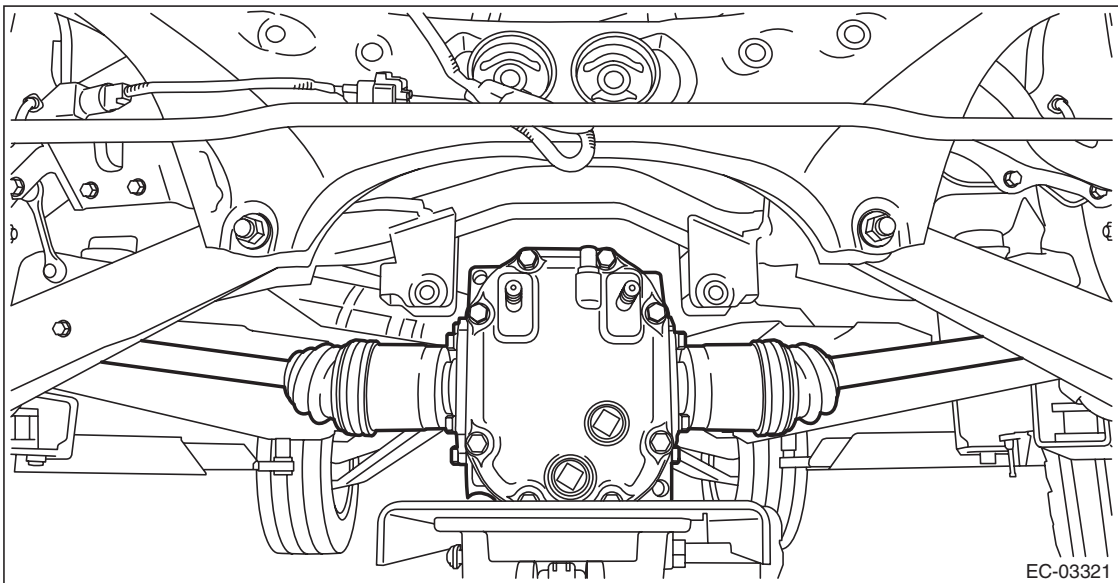
7) Lower the transmission jack gradually until the rear differential is at the position shown in the figure.

NOTE:

- When pulling out the stud bolt from the bushing portion of the rear sub frame assembly, adjust the angle and location of transmission jack and jack stand.



- Do not lower the rear differential excessively. Doing so may add extra load to the drive shaft or cause the falling-off of the drive shaft.



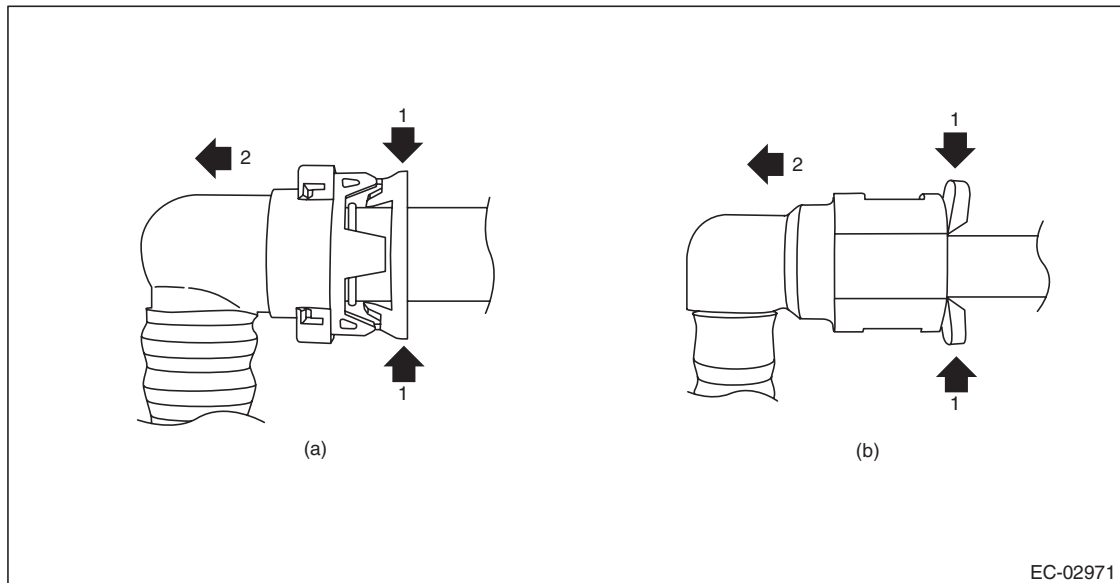
Canister

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

8) Disconnect the drain tube (A), vent tube (B) and purge tube (C) from the canister.

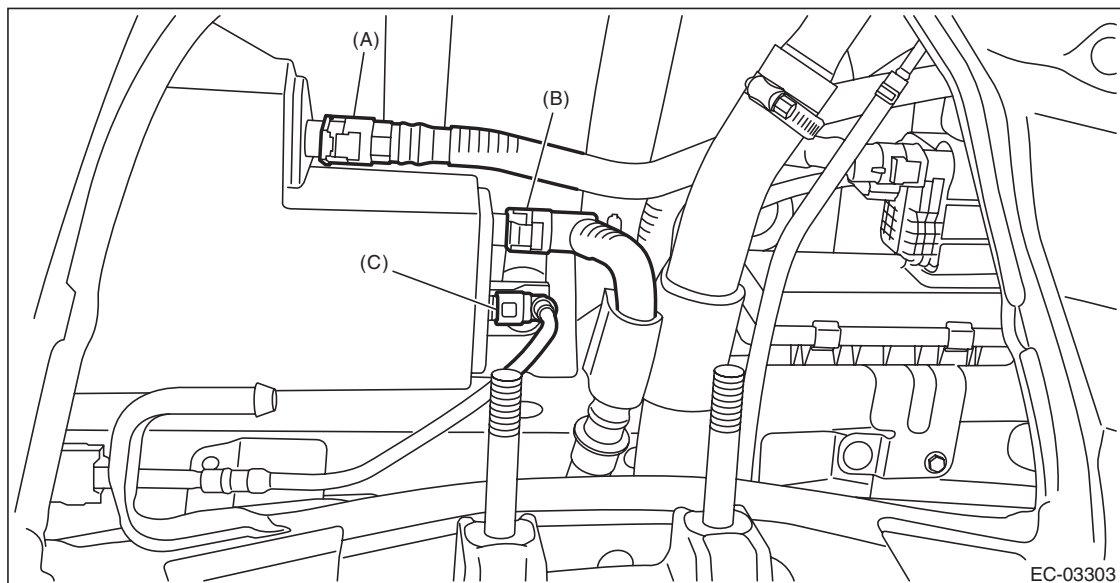
NOTE:

Disconnect the quick connector as shown in the figure.



(a) Drain tube and vent tube

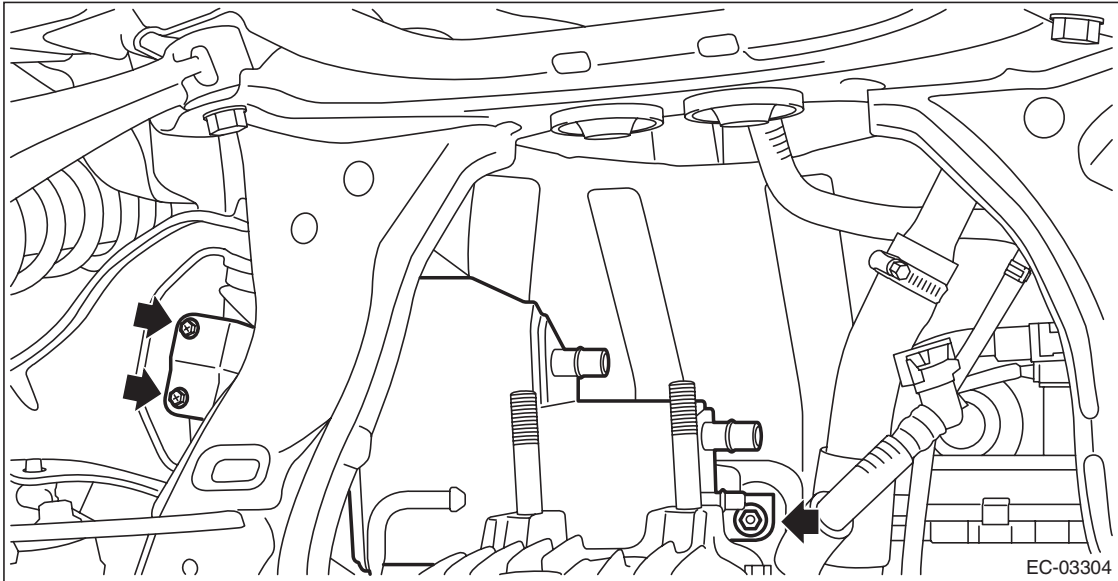
(b) Purge tube



Canister

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

9) Remove the canister from vehicle.

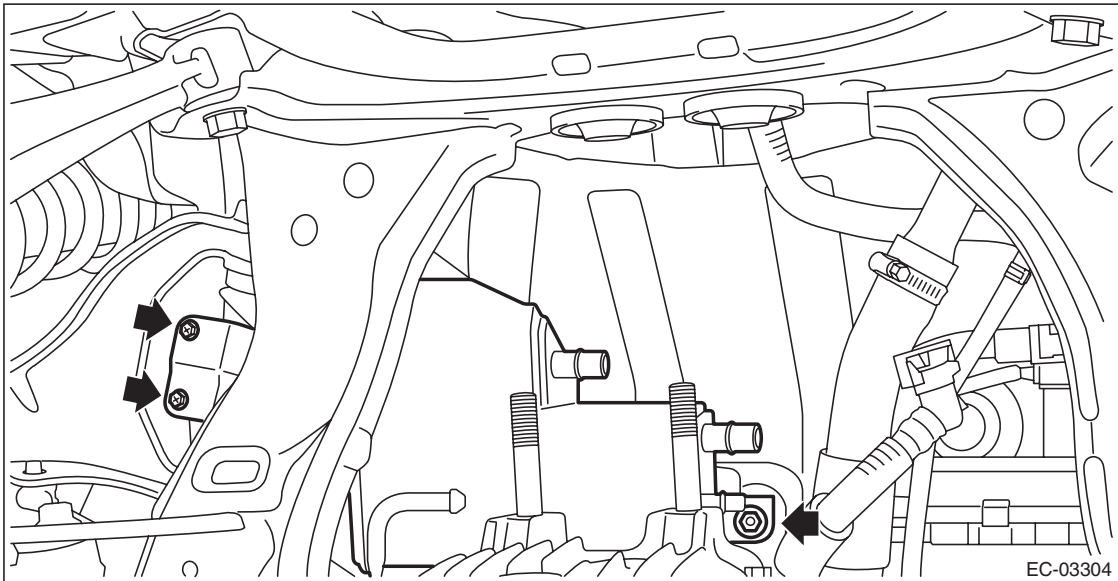


B: INSTALLATION

1) Install the canister to the vehicle.

Tightening torque:

7.5 N·m (0.8 kgf-m, 5.5 ft-lb)



Canister

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

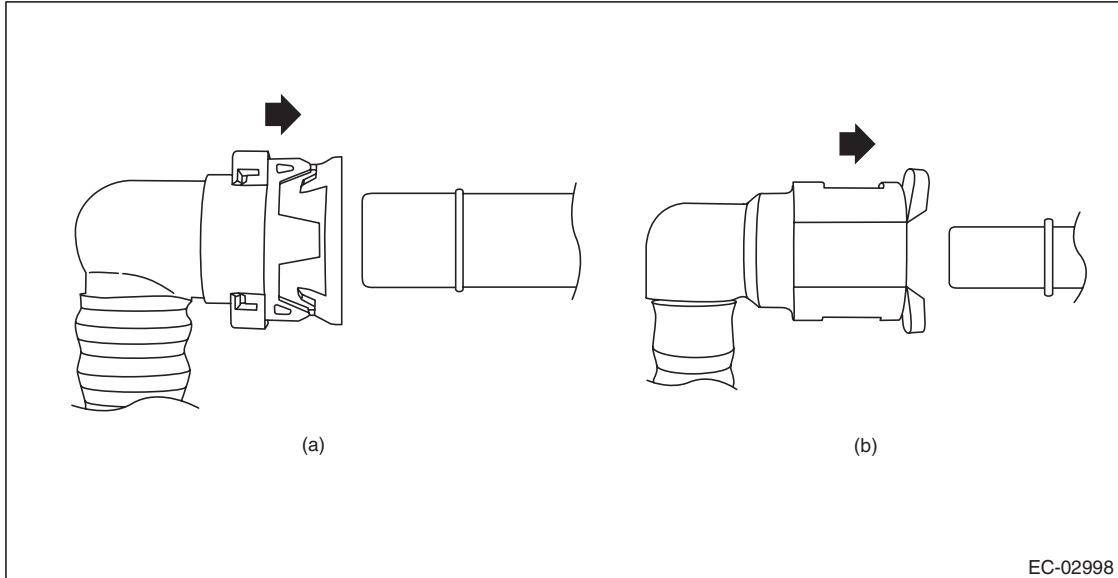
2) Install the drain tube (A), vent tube (B) and purge tube (C) to the canister.

CAUTION:

- Check that there is no damage or dust on the quick connector. If necessary, clean the seal surface of the pipe.
- Make sure that the quick connector is securely connected.

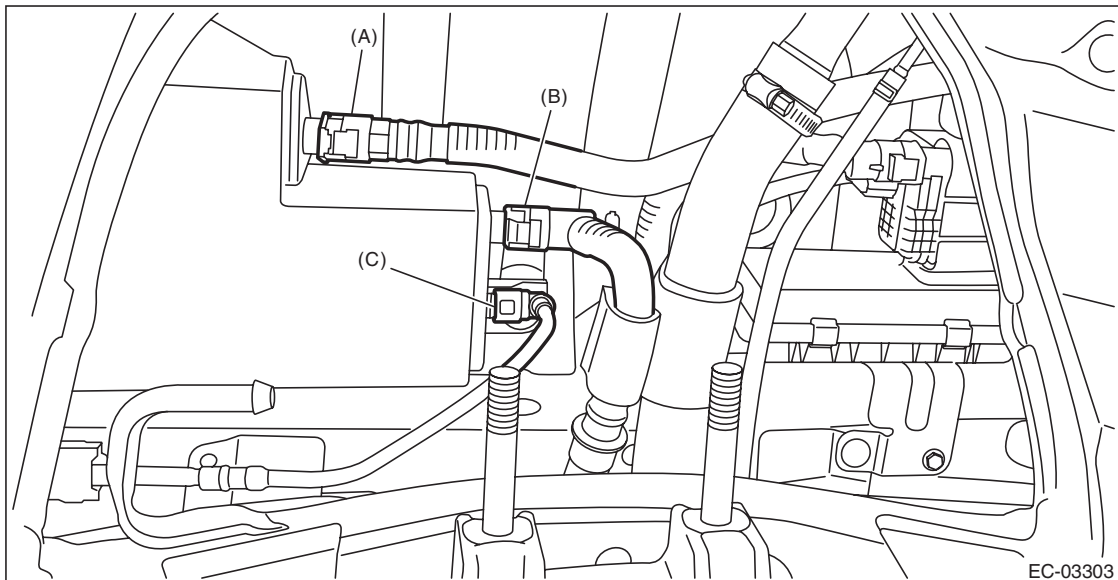
NOTE:

Install the quick connector as shown in the figure.



(a) Drain tube and vent tube

(b) Purge tube



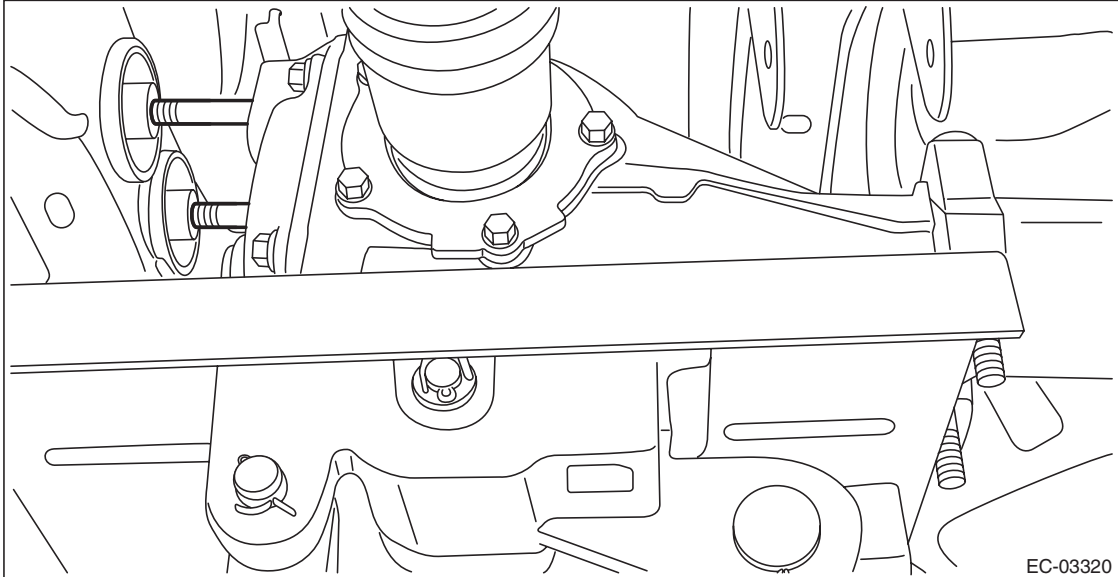
Canister

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

3) Lift up the transmission jack gradually, and set the rear differential to the rear sub frame assembly.

NOTE:

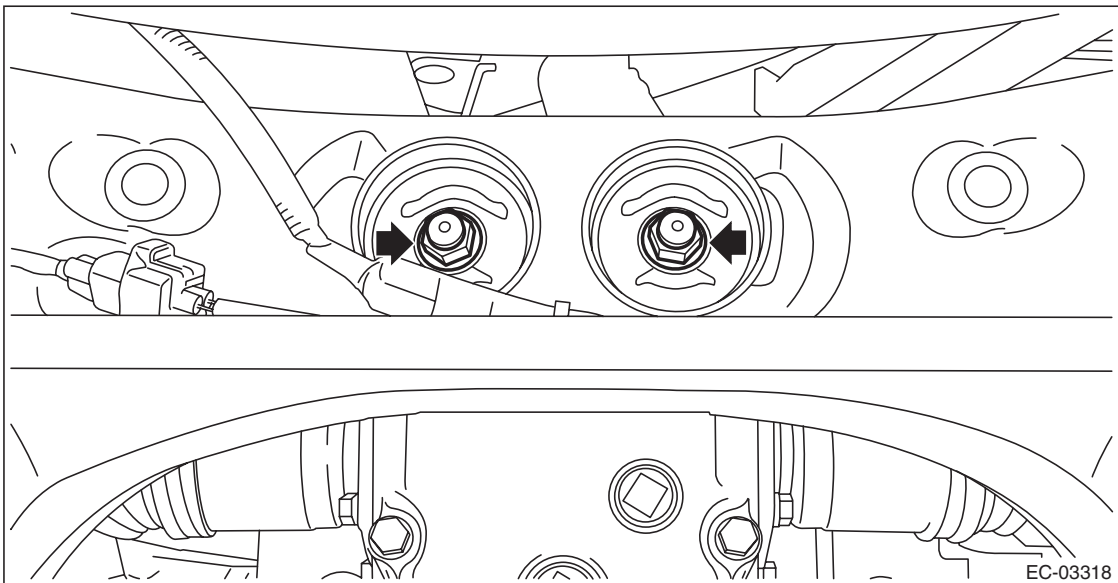
When inserting the stud bolt into the bushing portion of the rear sub frame assembly, adjust the angle and location of transmission jack and jack stand.



4) Temporarily tighten the self-locking nuts which hold the rear differential to the rear sub frame assembly.

NOTE:

Use a new self-locking nut.



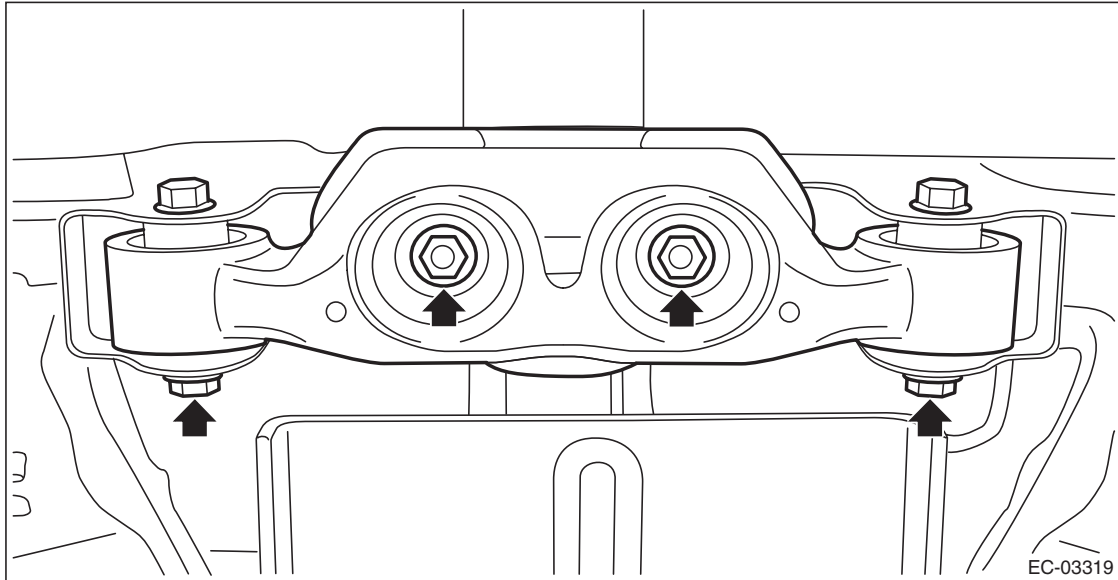
Canister

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

5) Set the rear differential member to the rear sub frame assembly and rear differential, and temporarily tighten the self-lock nuts which secure the rear differential member to the rear sub frame assembly and rear differential.

NOTE:

Use a new self-locking nut.



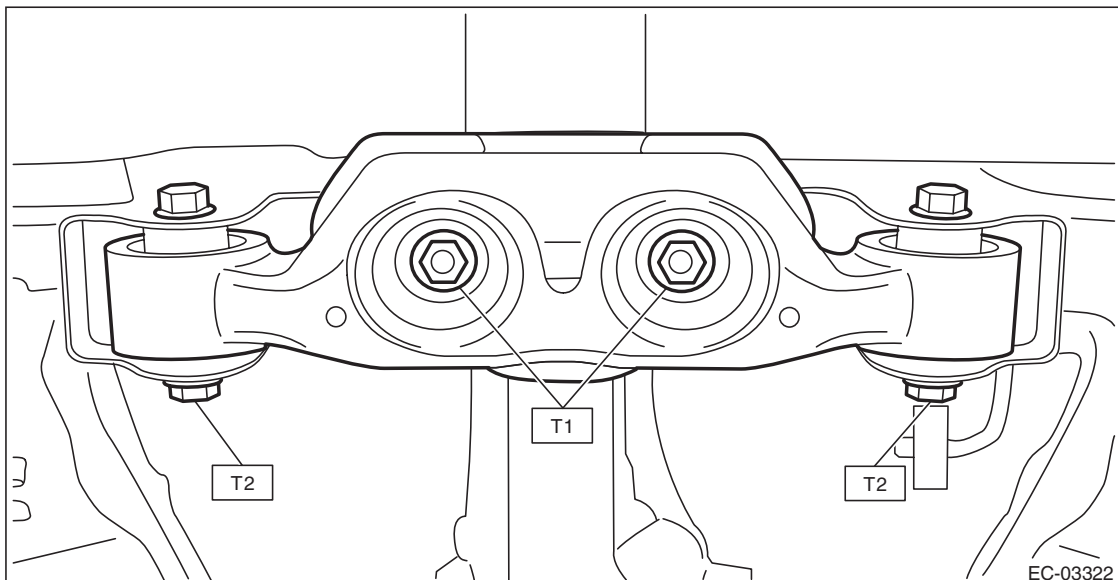
6) Remove the transmission jack from the rear differential.

7) Tighten the self-locking nuts which secure the rear differential member to the rear sub frame assembly and rear differential.

Tightening torque:

T1: 50 N·m (5.1 kgf-m, 36.9 ft-lb)

T2: 110 N·m (11.2 kgf-m, 81.1 ft-lb)



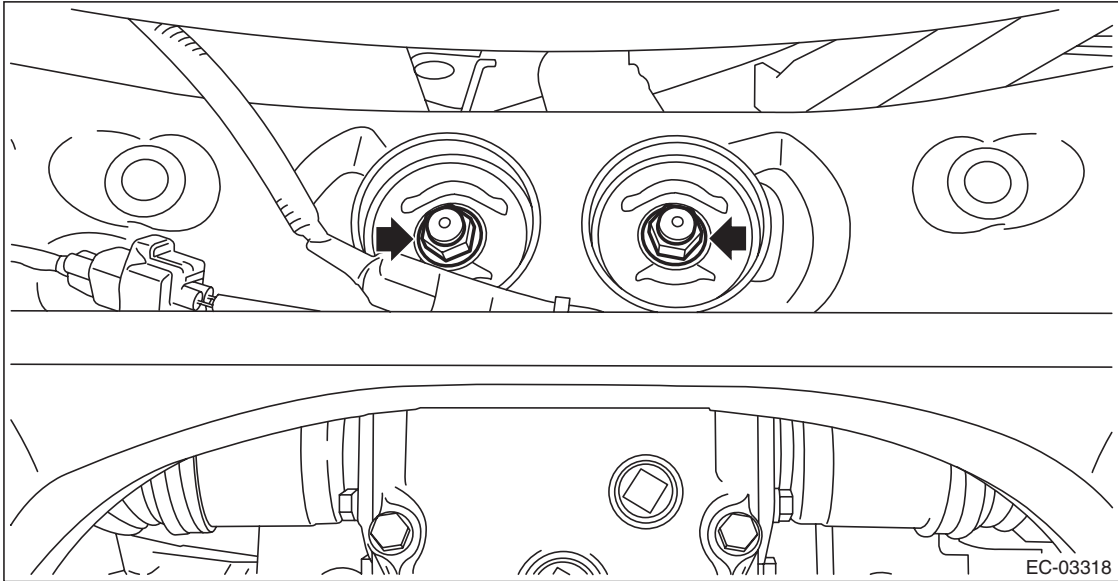
Canister

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

8) Tighten the self-locking nuts which secure the rear differential to the rear sub frame assembly.

Tightening torque:

70 N·m (7.1 kgf-m, 51.6 ft-lb)



9) Install the propeller shaft. <Ref. to DS-13, INSTALLATION, Propeller Shaft.>

10) Install the rear exhaust pipe. <Ref. to EX(H4DO)-19, INSTALLATION, Rear Exhaust Pipe.>

11) Lower the vehicle.

C: INSPECTION

- 1) Check that the canister has no deformation, cracks or other damages.
- 2) Check that the tube has no cracks, damage or loose part.

Purge Control Solenoid Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

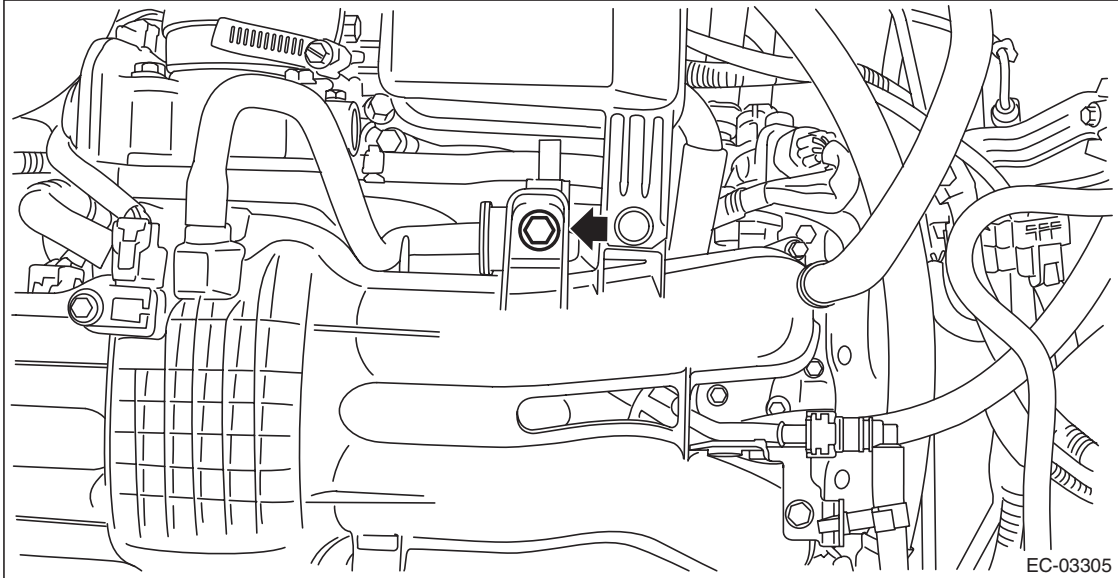
5. Purge Control Solenoid Valve

A: REMOVAL

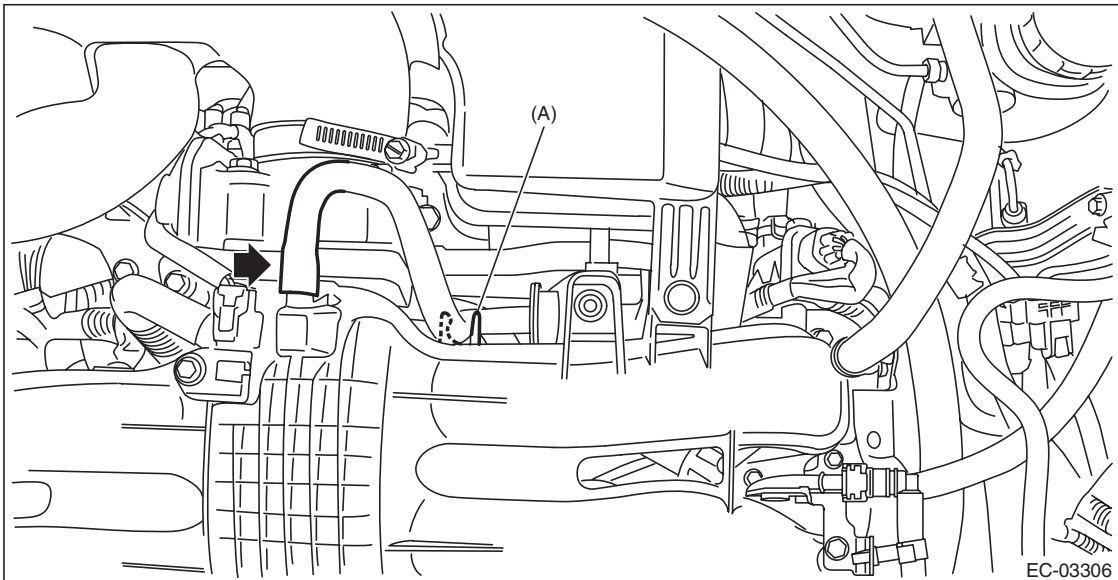
- 1) Disconnect the ground cable from battery.
- 2) Remove the bolt which holds the purge control solenoid valve onto intake manifold.

NOTE:

Hold the purge control solenoid valve unit by hand to prevent it from rotating together.



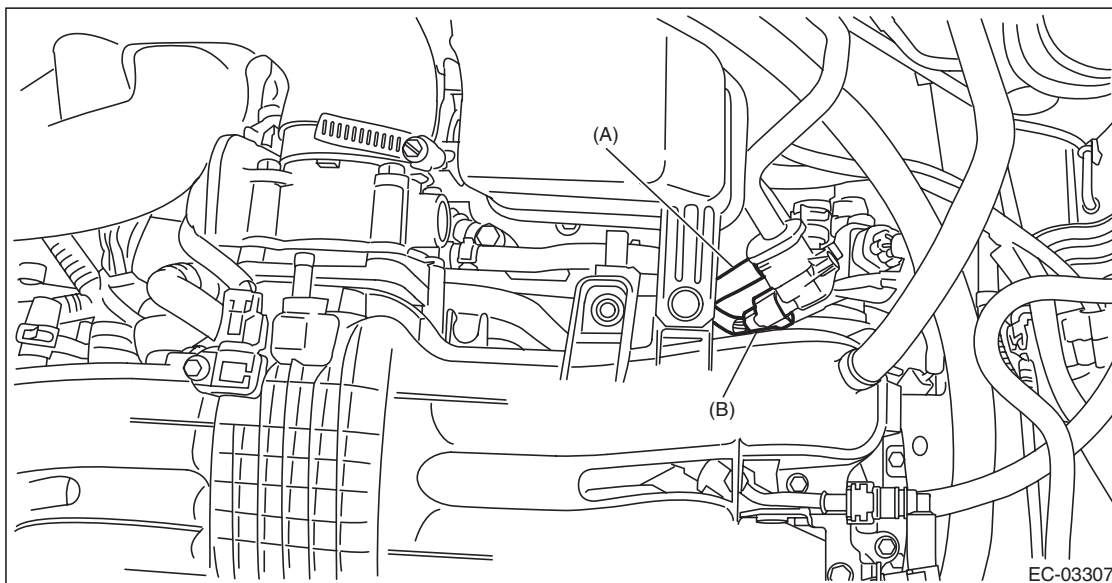
- 3) Disconnect the vacuum hose from the intake manifold and intake manifold clip (A).



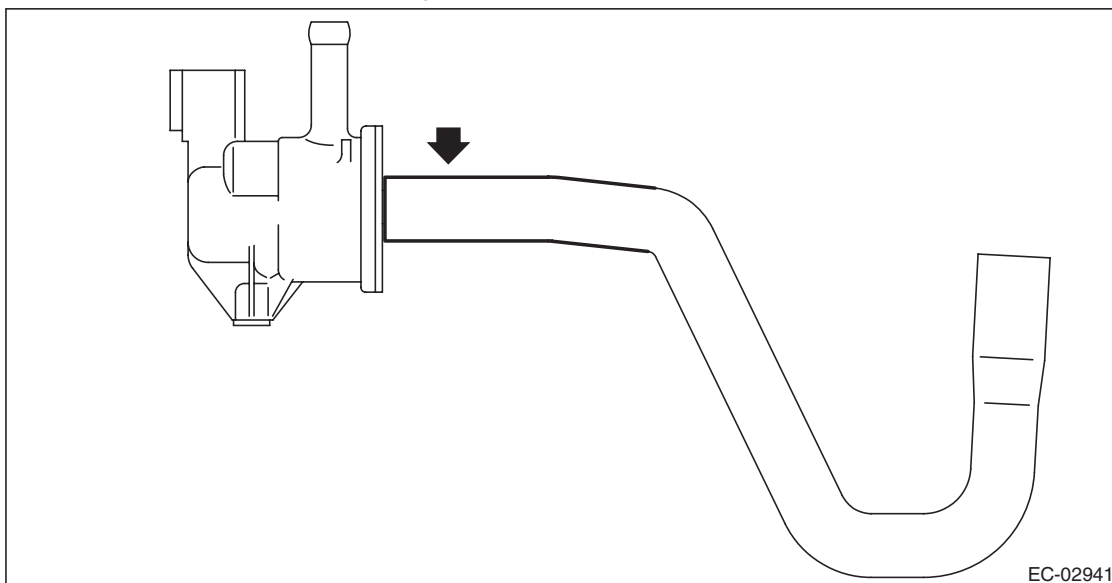
Purge Control Solenoid Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

4) Disconnect the vacuum hose (A) and connector (B) from the purge control solenoid valve, and remove the purge control solenoid valve.



5) Remove the vacuum hose from the purge control solenoid valve.



Purge Control Solenoid Valve

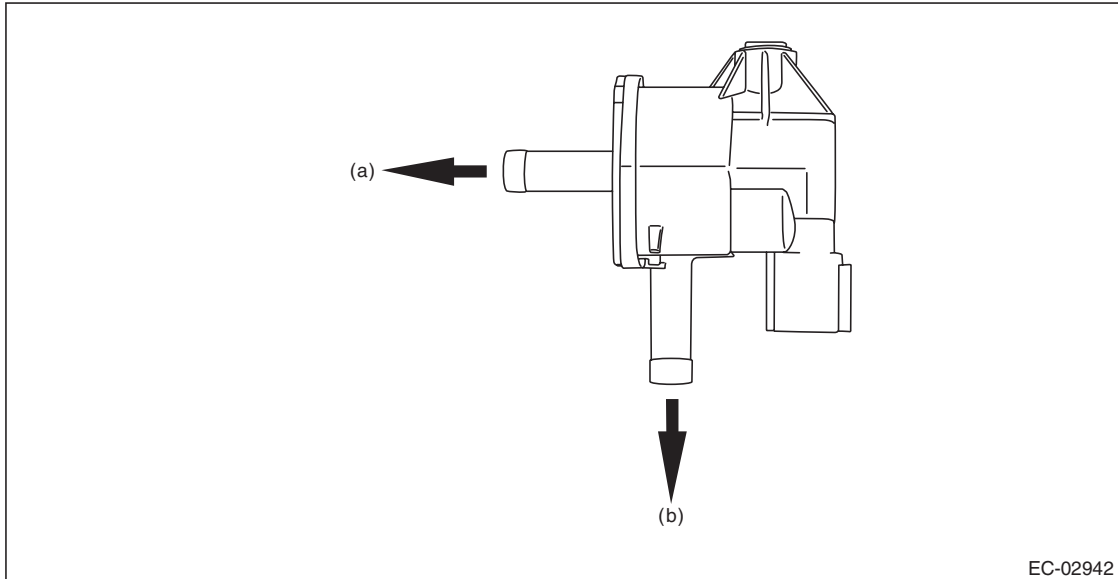
EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

B: INSTALLATION

Install in the reverse order of removal.

NOTE:

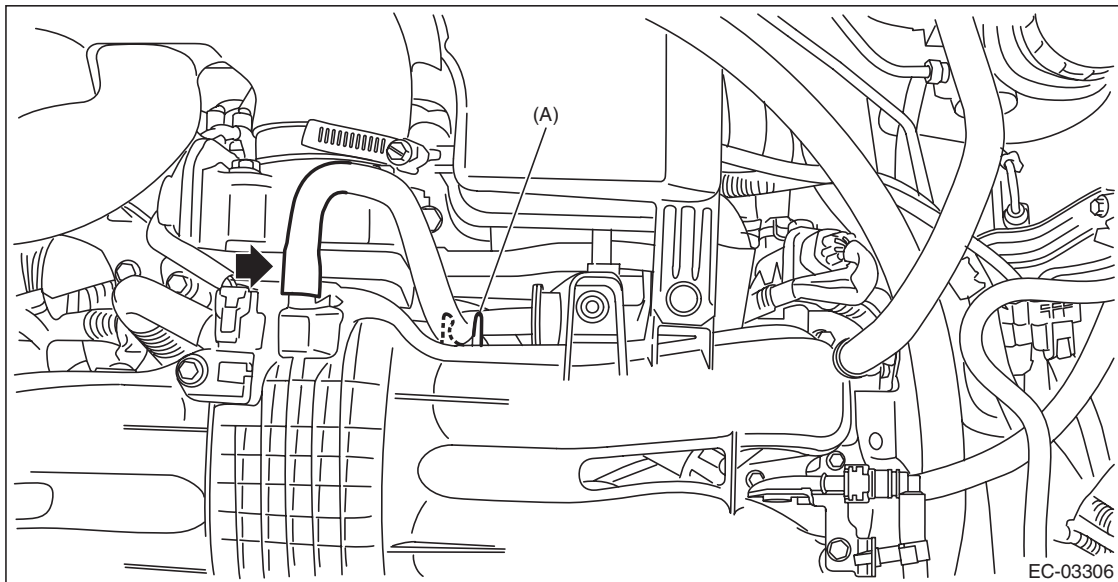
- Hold the purge control solenoid valve unit by hand to prevent it from rotating together.
- Connect the vacuum hose as shown in the figure.



(a) To intake manifold

(b) To fuel pipe

- Check that the vacuum hose is securely held to the intake manifold and intake manifold clip (A).



Tightening torque:
3.4 N·m (0.3 kgf-m, 2.5 ft-lb)

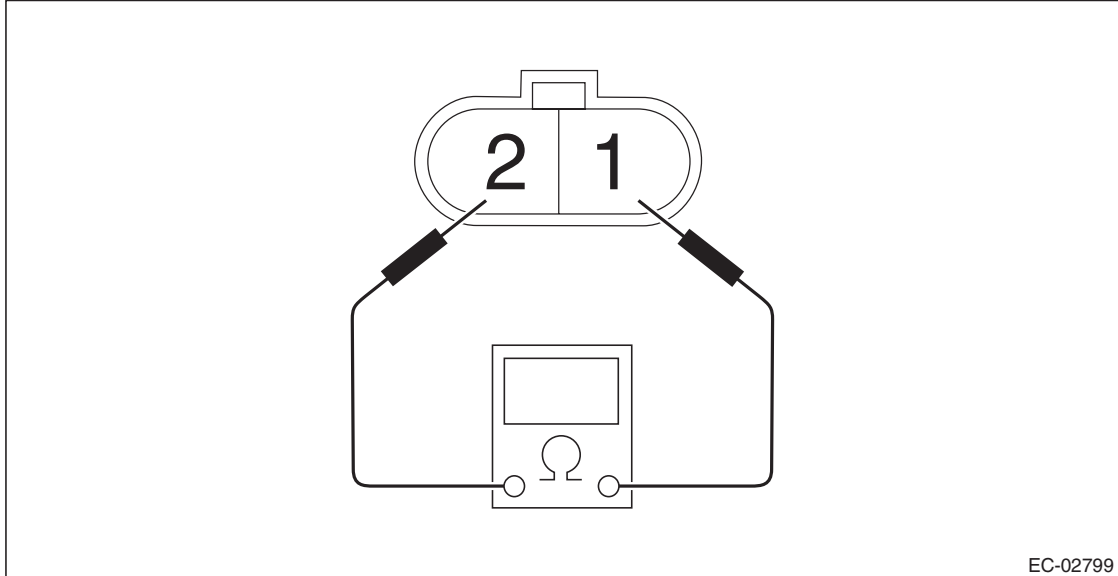
Purge Control Solenoid Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

C: INSPECTION

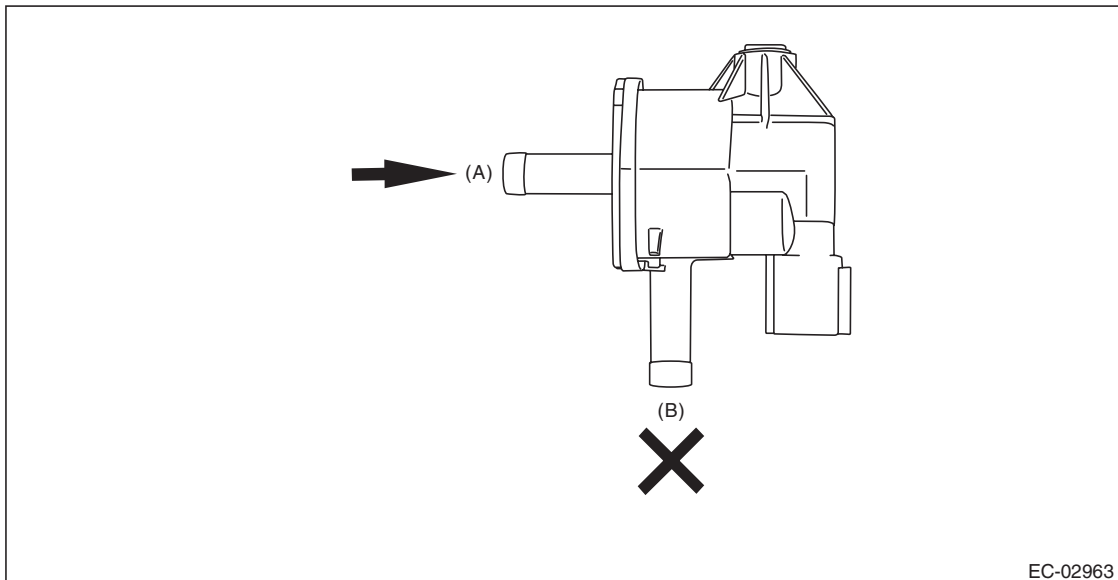
1. PURGE CONTROL SOLENOID VALVE

- 1) Check that the purge control solenoid valve has no deformation, cracks or other damages.
- 2) Measure the resistance between the purge control solenoid valve terminals.



Terminal No.	Standard
1 and 2	$24 \pm 3 \Omega$ (20°C (68°F))

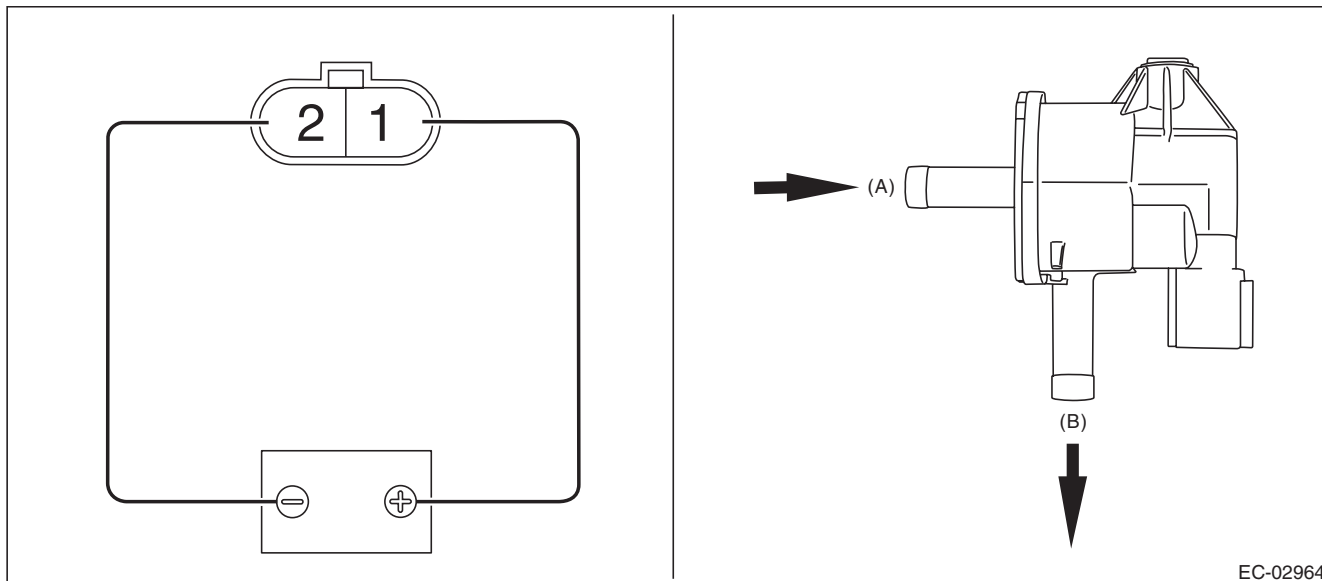
- 3) Check that air does not come out from (B) when air is blown into (A).



Purge Control Solenoid Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

4) Connect the battery positive terminal to the terminal No. 1 and the battery negative terminal to the terminal No. 2. Check that air is discharged from (B), when supplying air to (A).



2. OTHER INSPECTIONS

Check the vacuum hose for cracks, damage or looseness.



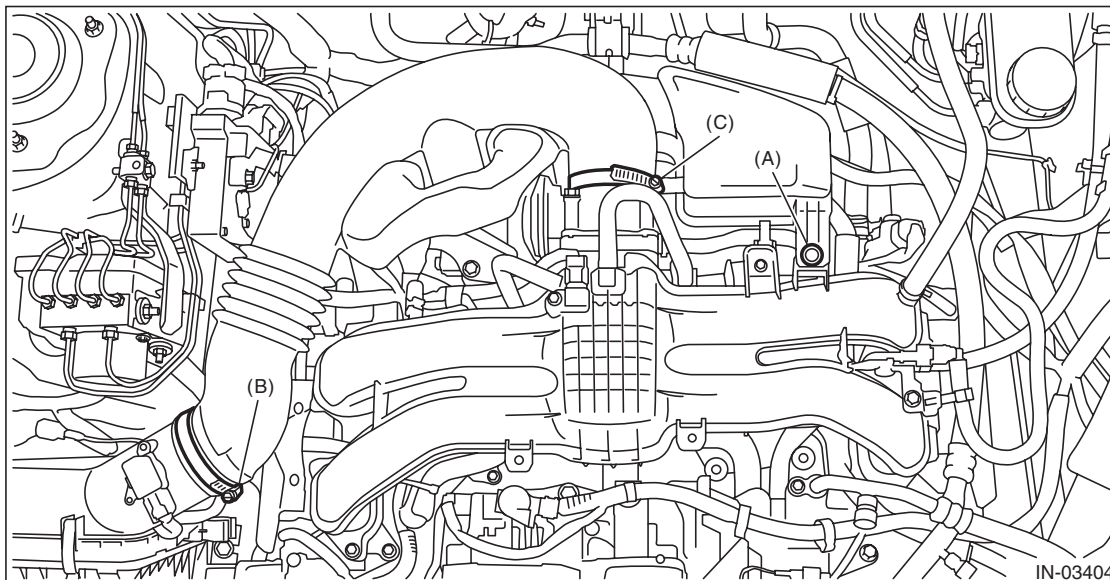
EGR Control Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

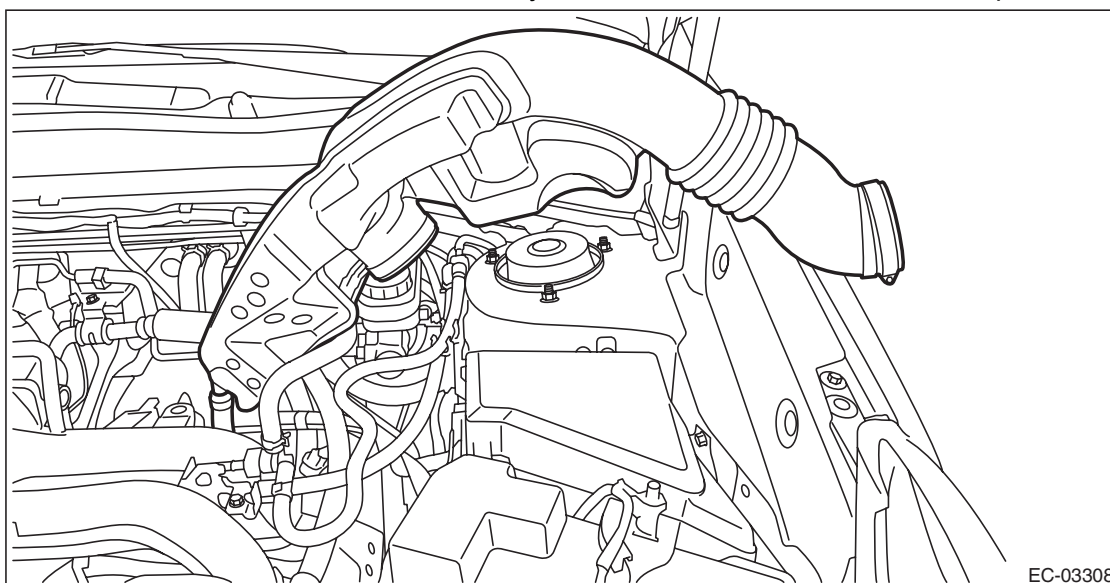
6. EGR Control Valve

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the clip (A) from the air intake boot.
- 3) Loosen the clamp (B) securing the air cleaner case (rear) to the air intake boot.
- 4) Loosen the clamp (C) which secures the throttle body to the air intake boot.



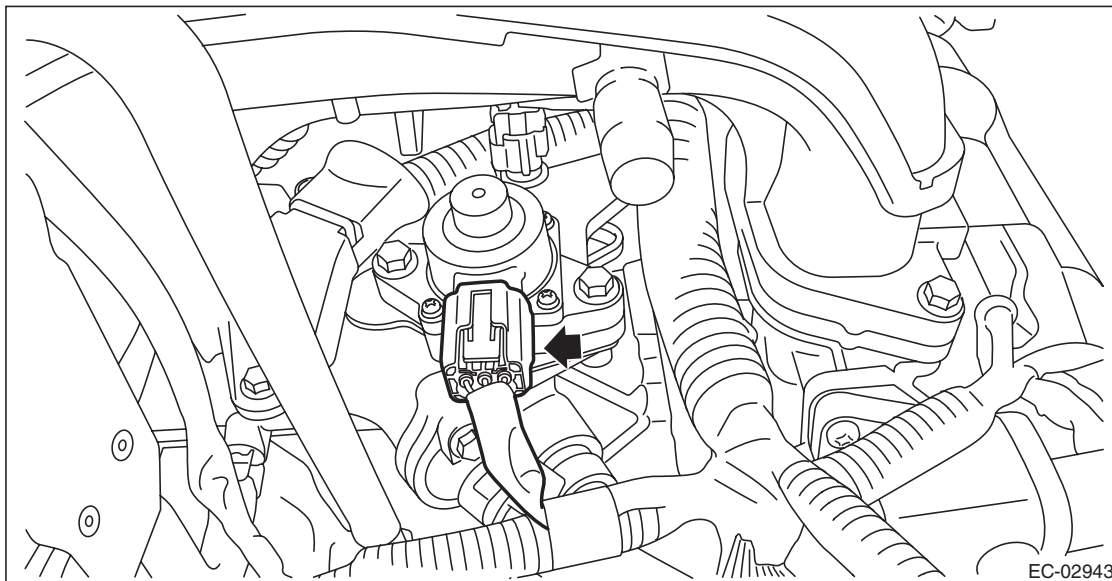
- 5) Remove the air intake boot from the throttle body, and move it to the left side wheel apron.



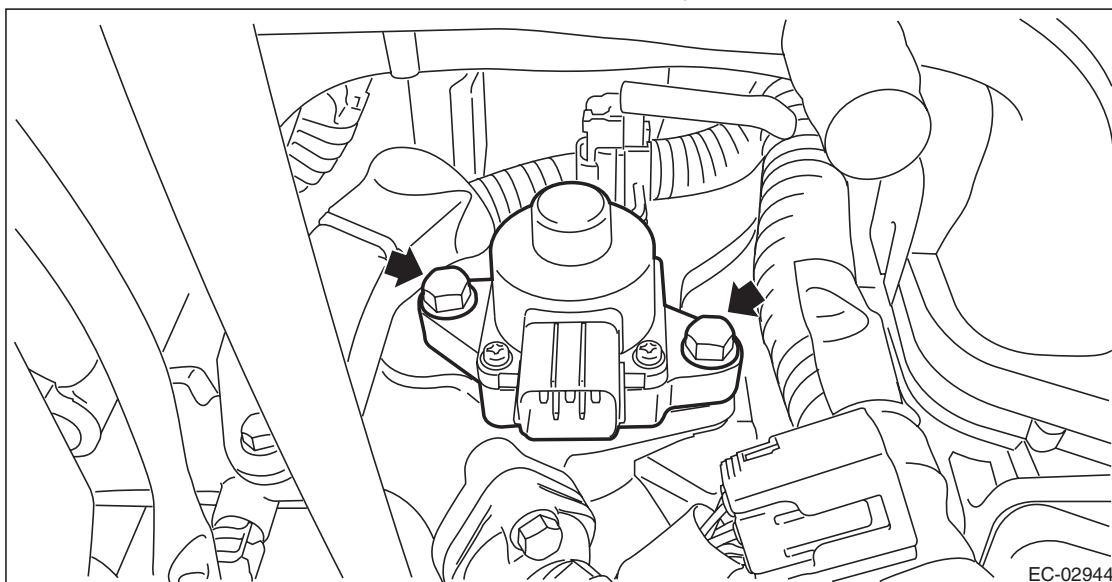
EGR Control Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

- 6) Disconnect the connector from the EGR control valve.



- 7) Remove the EGR control valve from the water pipe assembly.



EGR Control Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

B: INSTALLATION

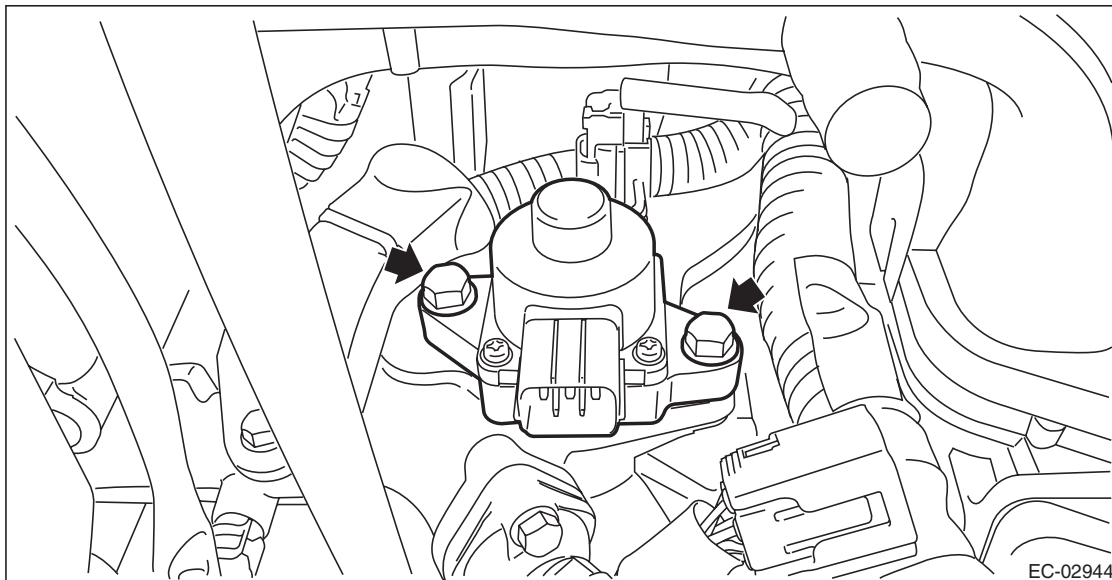
Install in the reverse order of removal.

NOTE:

Use new O-rings and gaskets.

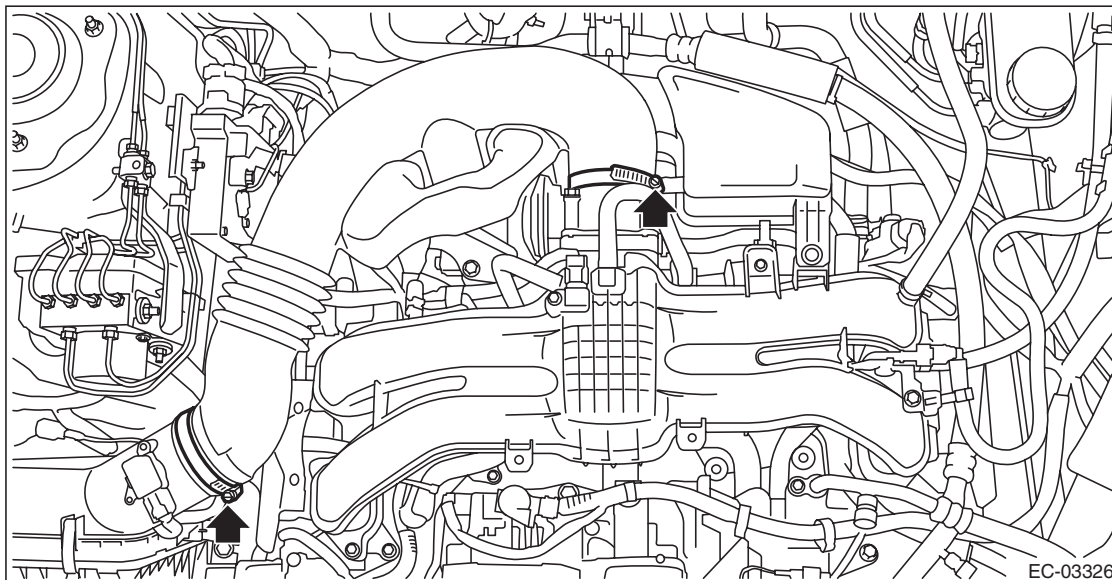
Tightening torque:

22 N·m (2.2 kgf-m, 16.2 ft-lb)



Tightening torque:

3 N·m (0.3 kgf-m, 2.2 ft-lb)

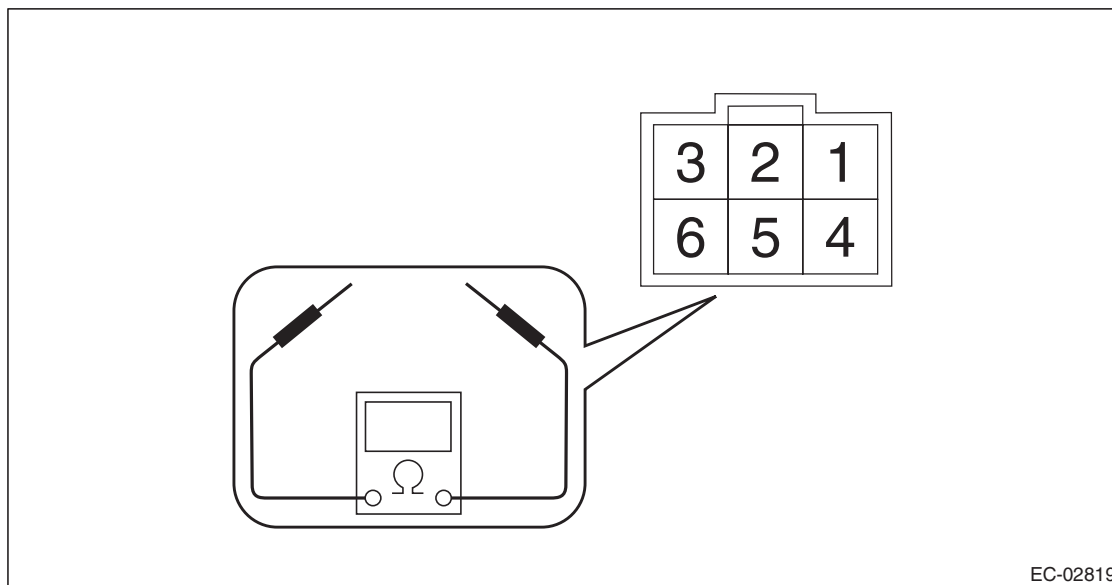


EGR Control Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

C: INSPECTION

- 1) Check that the EGR control valve has no deformation, cracks or other damages.
- 2) Measure the resistance between EGR control valve terminals.



Terminal No.	Standard
2 and 1	22±2 Ω
2 and 3	22±2 Ω
5 and 4	22±2 Ω
5 and 6	22±2 Ω



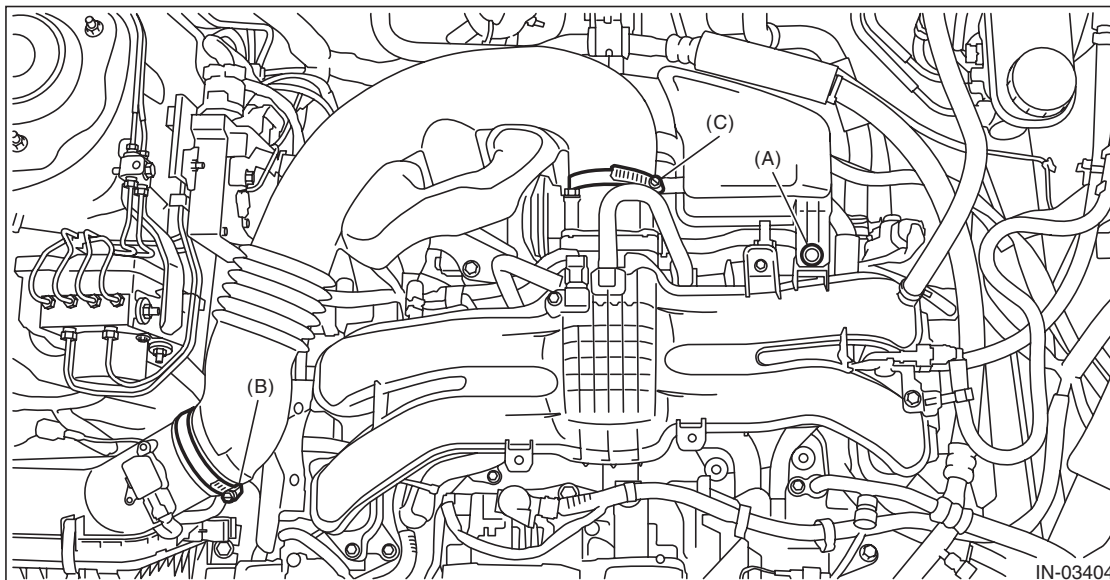
EGR Pipe

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

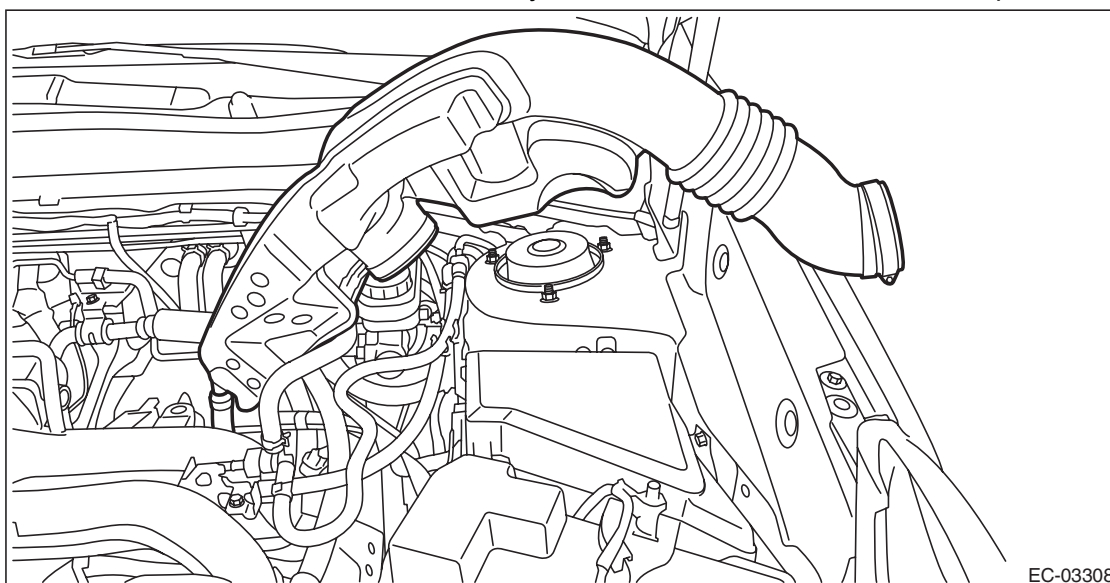
7. EGR Pipe

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Remove the clip (A) from the air intake boot.
- 3) Loosen the clamp (B) securing the air cleaner case (rear) to the air intake boot.
- 4) Loosen the clamp (C) which secures the throttle body to the air intake boot.



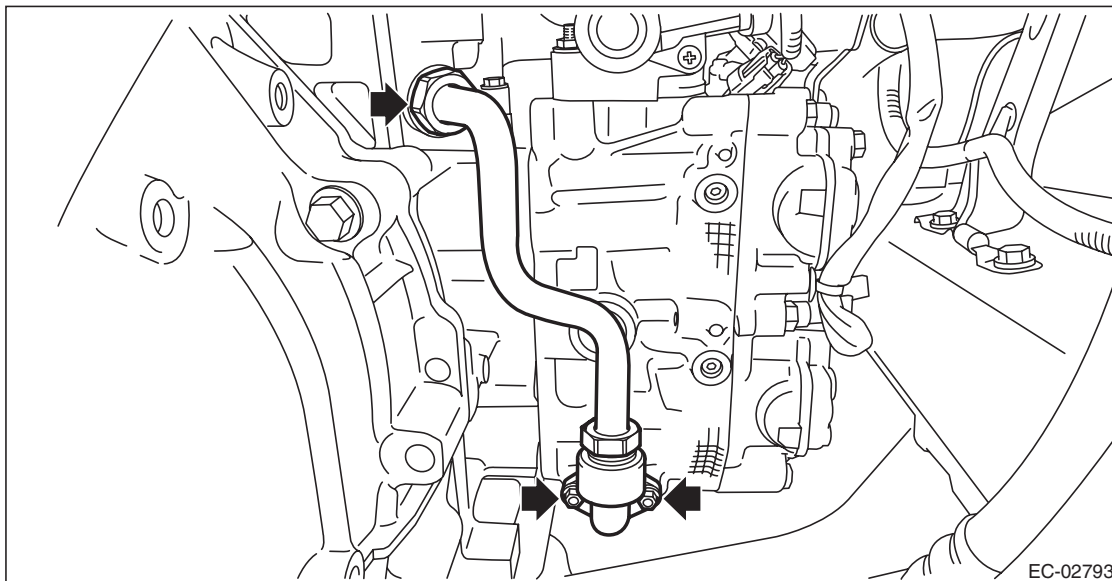
- 5) Remove the air intake boot from the throttle body, and move it to the left side wheel apron.



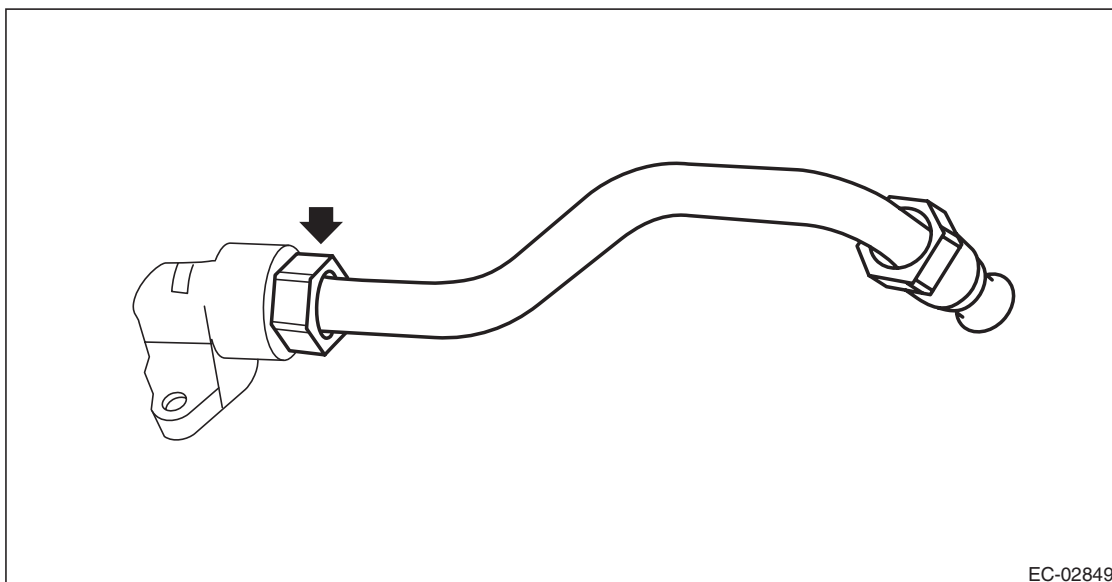
EGR Pipe

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

- 6) Remove the EGR pipe assembly from the water pipe assembly and the cylinder head RH.



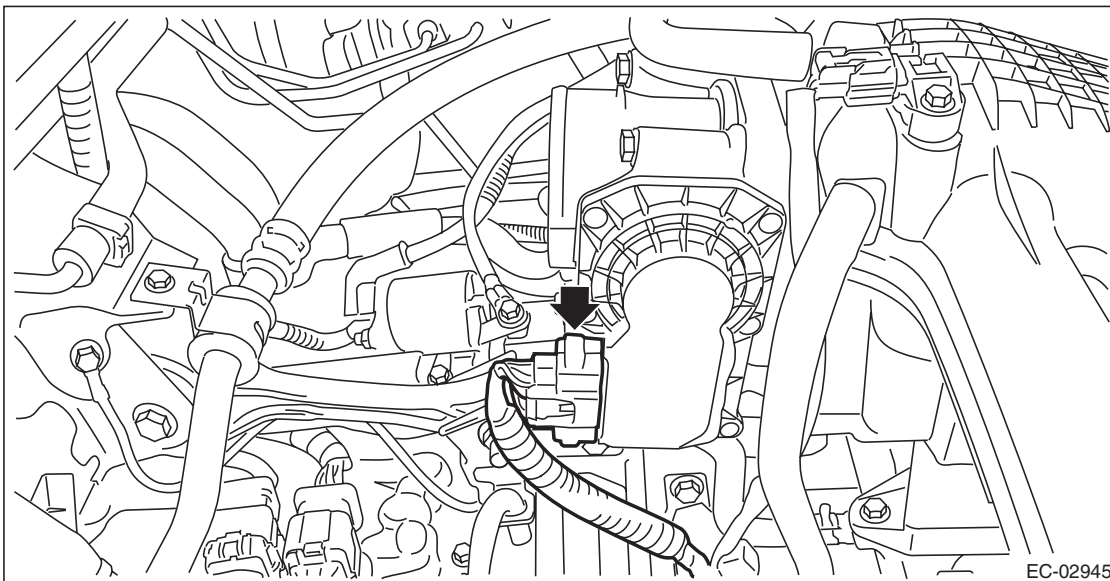
- 7) Remove the EGR pipe from EGR pipe adapter.



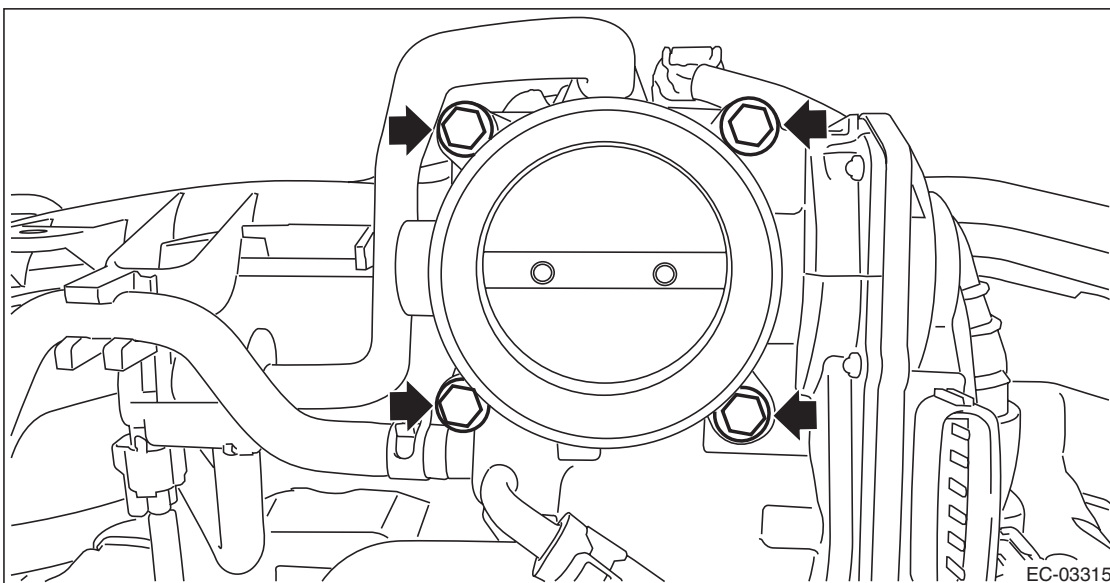
EGR Pipe

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

8) Disconnect the connector from the throttle body.



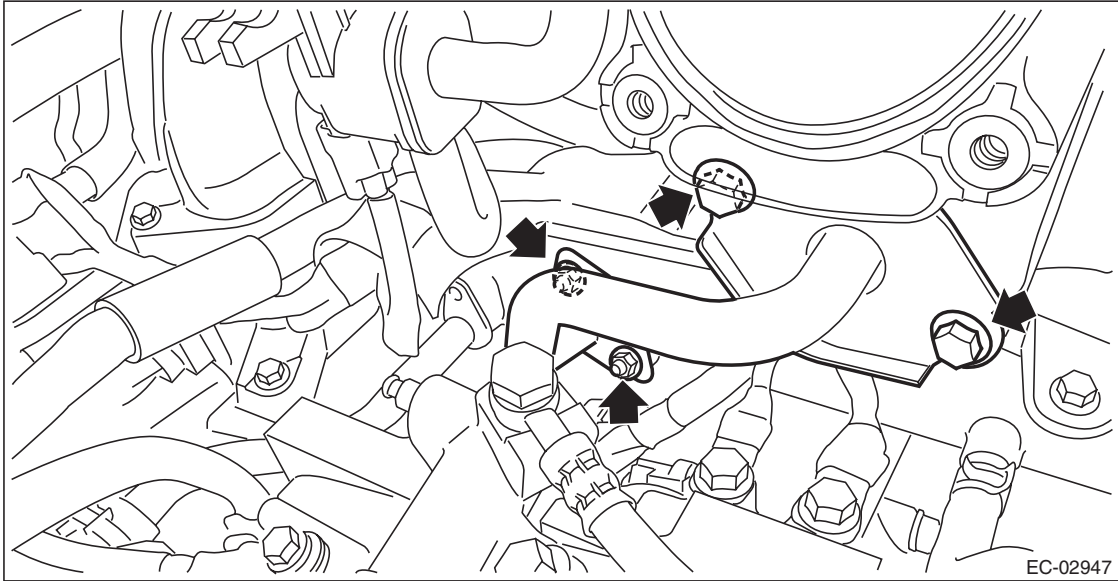
9) Remove the bolts which secure the throttle body to the intake manifold, and tilt the throttle body to the rear side of vehicle.



EGR Pipe

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

10) Remove the bolts and nuts that hold the EGR pipe to the intake manifold and the water pipe assembly, and remove the EGR pipe.



B: INSTALLATION

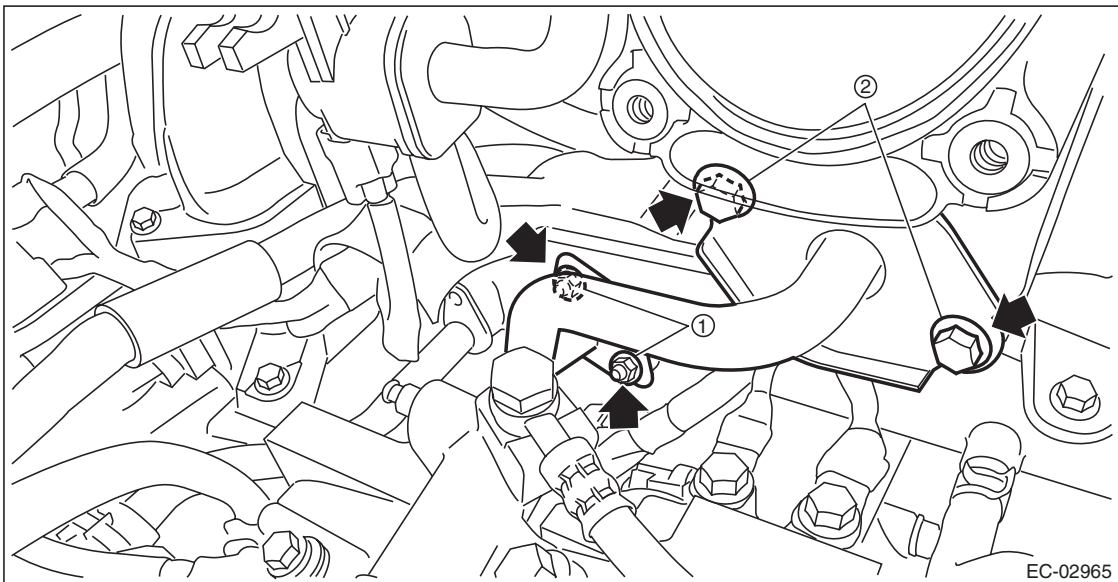
1) Temporarily install the EGR pipe to the intake manifold and water pipe assembly, and tighten the EGR pipe in numerical order as shown in the figure.

NOTE:

Use a new gasket.

Tightening torque:

6.4 N·m (0.7 kgf-m, 4.7 ft-lb)



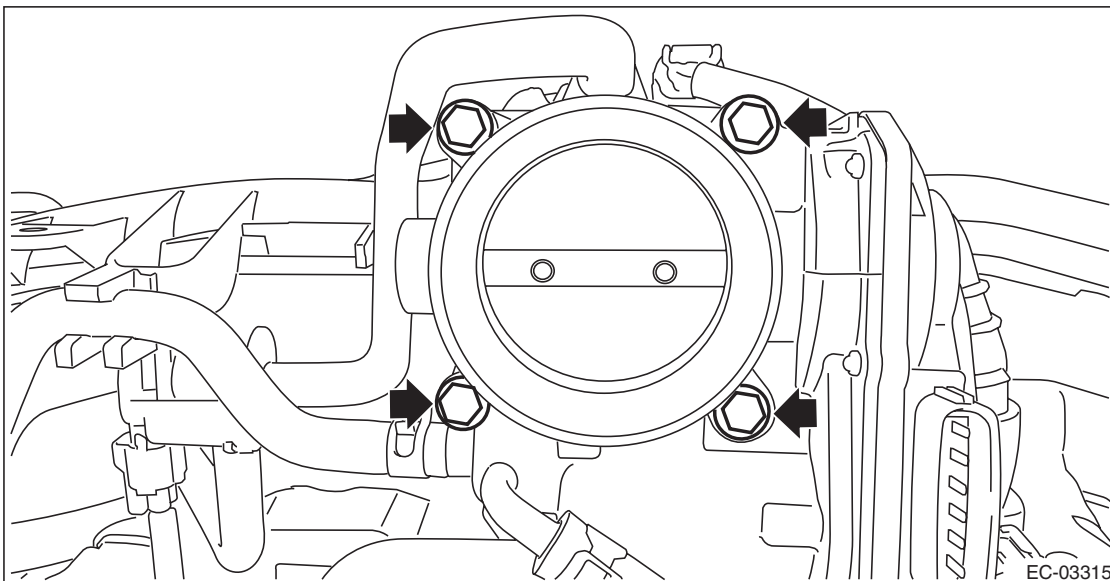
EGR Pipe

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

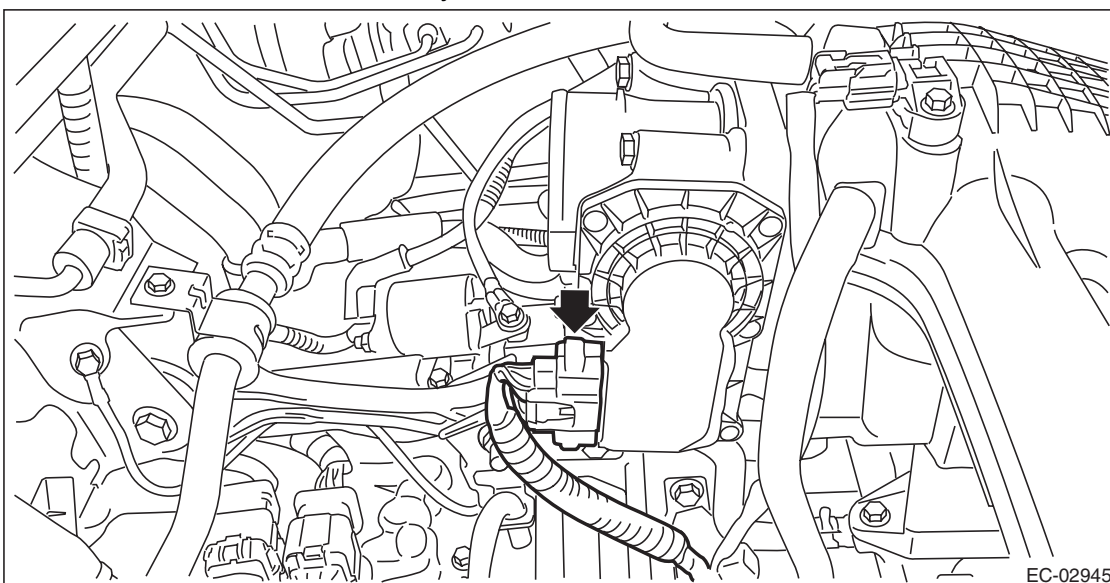
2) Install the throttle body to the intake manifold.

Tightening torque:

8 N·m (0.8 kgf-m, 5.9 ft-lb)



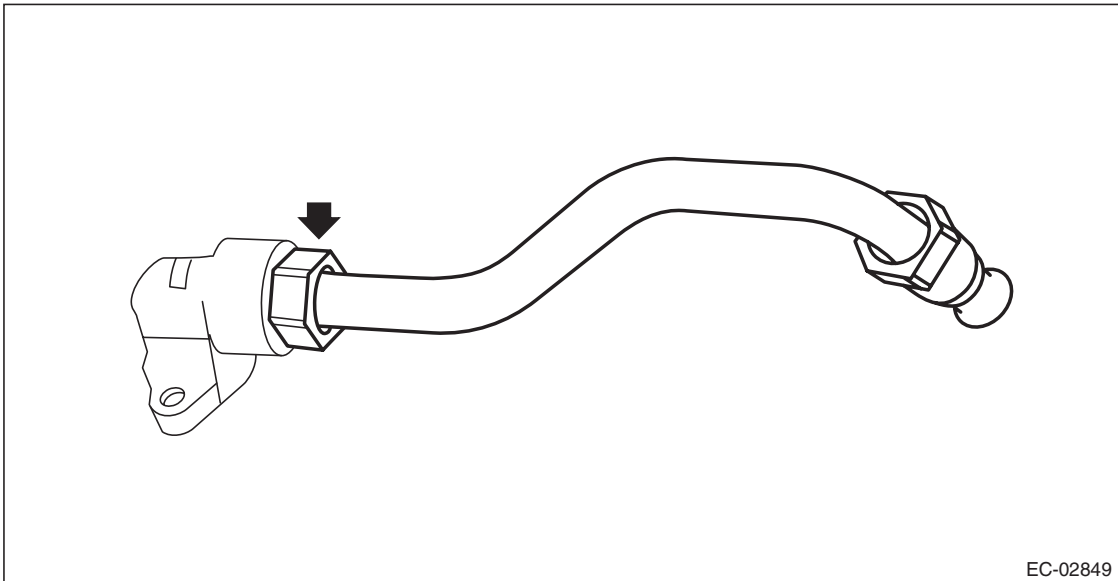
3) Connect the connector to the throttle body.



EGR Pipe

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

- 4) Temporarily install the EGR pipe to EGR pipe adapter.

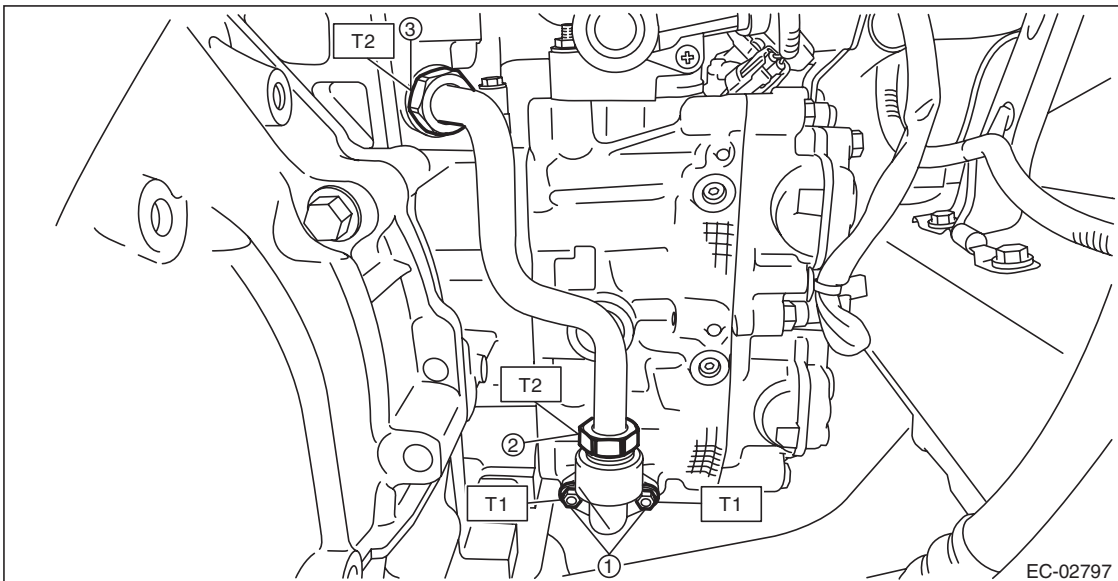


- 5) Temporarily install the EGR pipe assembly to the water pipe assembly and cylinder head assembly, and tighten the EGR pipe assembly in numerical order as shown in the figure.

Tightening torque:

T1: 6.4 N·m (0.7 kgf-m, 4.7 ft-lb)

T2: 51 N·m (5.2 kgf-m, 37.6 ft-lb)



- 6) Install the air intake boot. <Ref. to IN(H4DO)-11, INSTALLATION, Air Intake Boot.>
7) Connect the battery ground terminal.

C: INSPECTION

Check that the EGR pipe assembly and EGR pipe have no deformation, cracks or other damages.

Fuel Level Sensor

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

8. Fuel Level Sensor

A: REMOVAL

For removal procedures, refer to the "FU(H4DO)" section. <Ref. to FU(H4DO)-141, REMOVAL, Fuel Level Sensor.>

B: INSTALLATION

For installation procedures, refer to the "FU(H4DO)" section. <Ref. to FU(H4DO)-142, INSTALLATION, Fuel Level Sensor.>

C: INSPECTION

For inspection procedures, refer to the "FU(H4DO)" section. <Ref. to FU(H4DO)-143, INSPECTION, Fuel Level Sensor.>

Fuel Sub Level Sensor

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

9. Fuel Sub Level Sensor

A: REMOVAL

For removal procedures, refer to the "FU(H4DO)" section. <Ref. to FU(H4DO)-144, REMOVAL, Fuel Sub Level Sensor.>

B: INSTALLATION

For installation procedures, refer to the "FU(H4DO)" section. <Ref. to FU(H4DO)-148, INSTALLATION, Fuel Sub Level Sensor.>

C: INSPECTION

For inspection procedures, refer to the "FU(H4DO)" section. <Ref. to FU(H4DO)-150, INSPECTION, Fuel Sub Level Sensor.>



Drain Filter

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

10.Drain Filter

A: SPECIFICATION

The leak check valve assembly is a non-disassembled part. Do not remove the drain filter from the leak check valve assembly. Refer to "Leak Check Valve Assembly" for removal and installation procedures. <Ref. to EC(H4DO)-35, REMOVAL, Leak Check Valve Assembly.> <Ref. to EC(H4DO)-41, INSTALLATION, Leak Check Valve Assembly.>

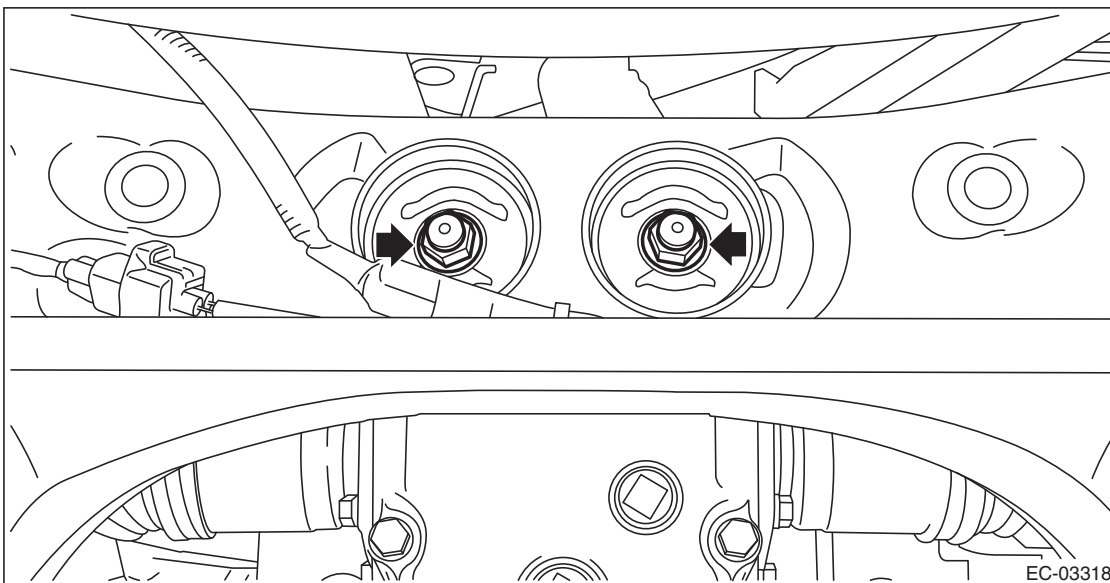
Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

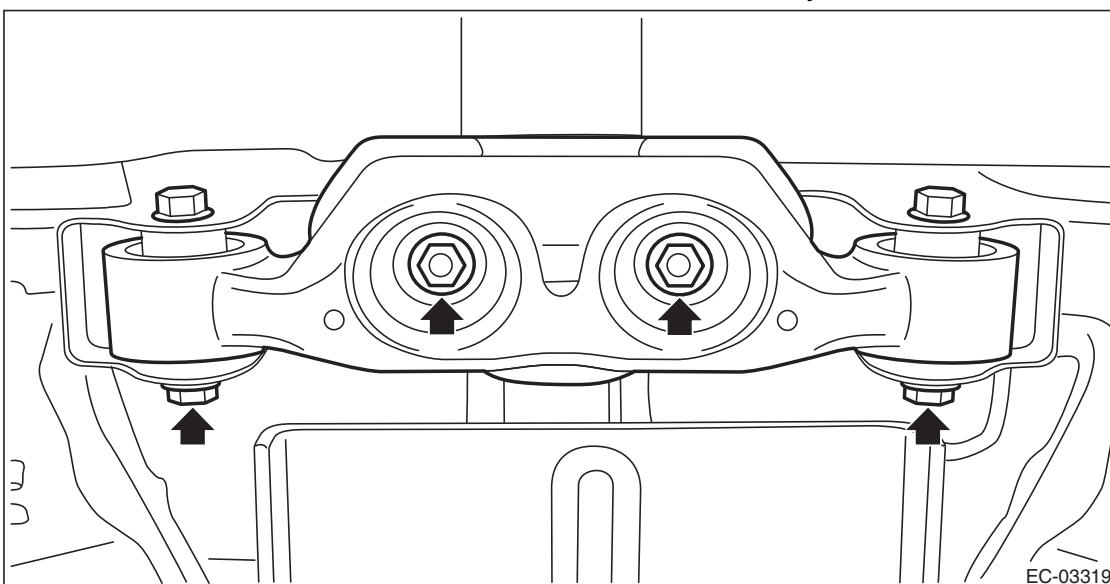
11. Leak Check Valve Assembly

A: REMOVAL

- 1) Disconnect the ground cable from battery.
- 2) Lift up the vehicle.
- 3) Remove the rear exhaust pipe. <Ref. to EX(H4DO)-18, REMOVAL, Rear Exhaust Pipe.>
- 4) Remove the propeller shaft. <Ref. to DS-11, REMOVAL, Propeller Shaft.>
- 5) Support the rear differential with the transmission jack.
- 6) Remove the self-locking nuts which hold the rear differential to the rear sub frame assembly.



- 7) Remove the rear differential member from the rear sub frame assembly and the rear differential.



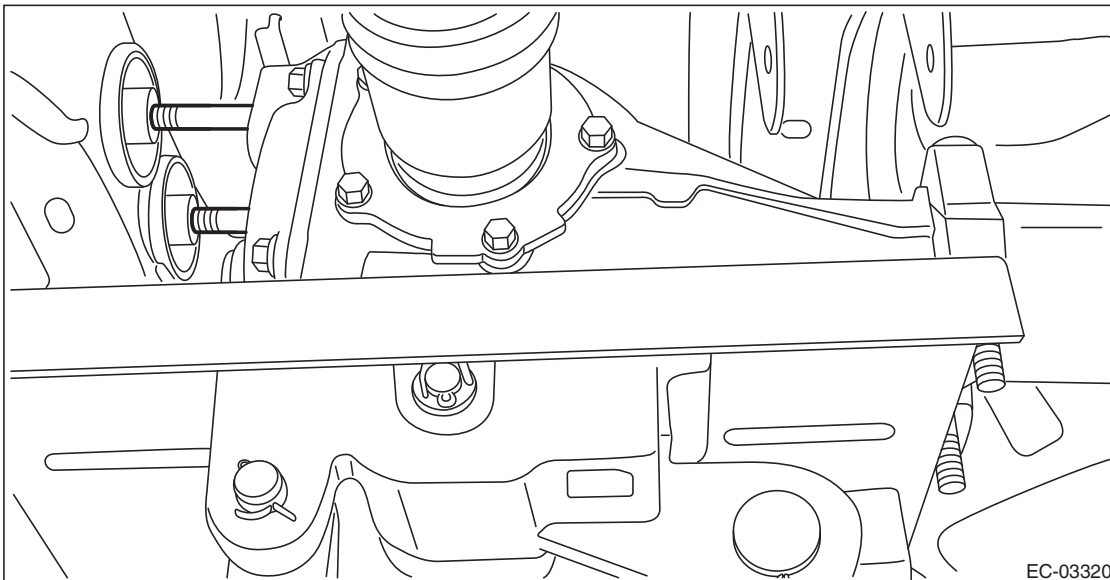
Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

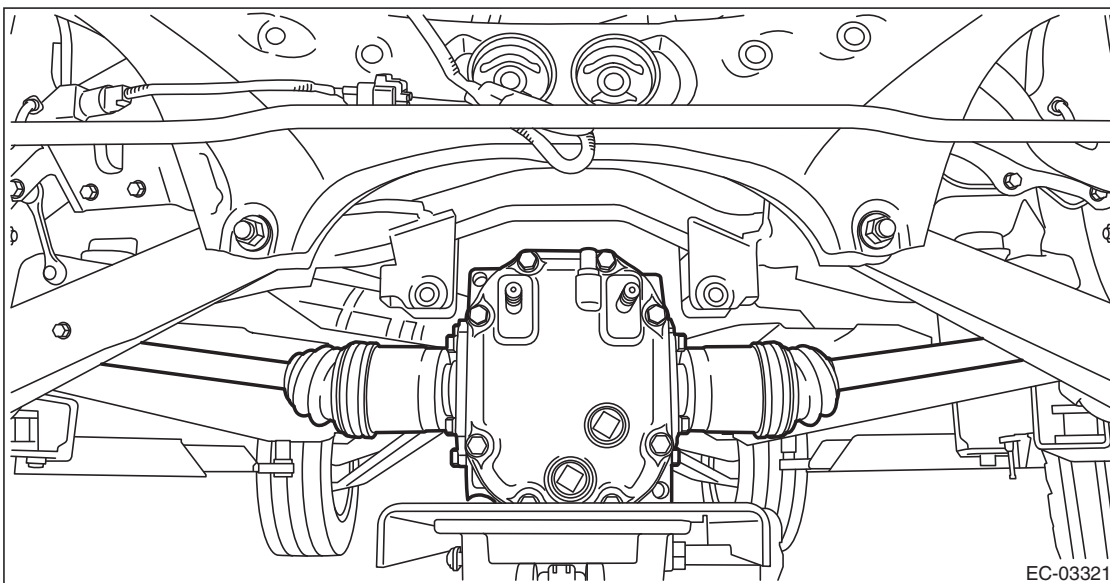
8) Lower the transmission jack gradually until the rear differential is at the position shown in the figure.

NOTE:

- When pulling out the stud bolt from the bushing portion of the rear sub frame assembly, adjust the angle and location of transmission jack and jack stand.



- Do not lower the rear differential excessively. Doing so may add extra load to the drive shaft or cause the falling-off of the drive shaft.



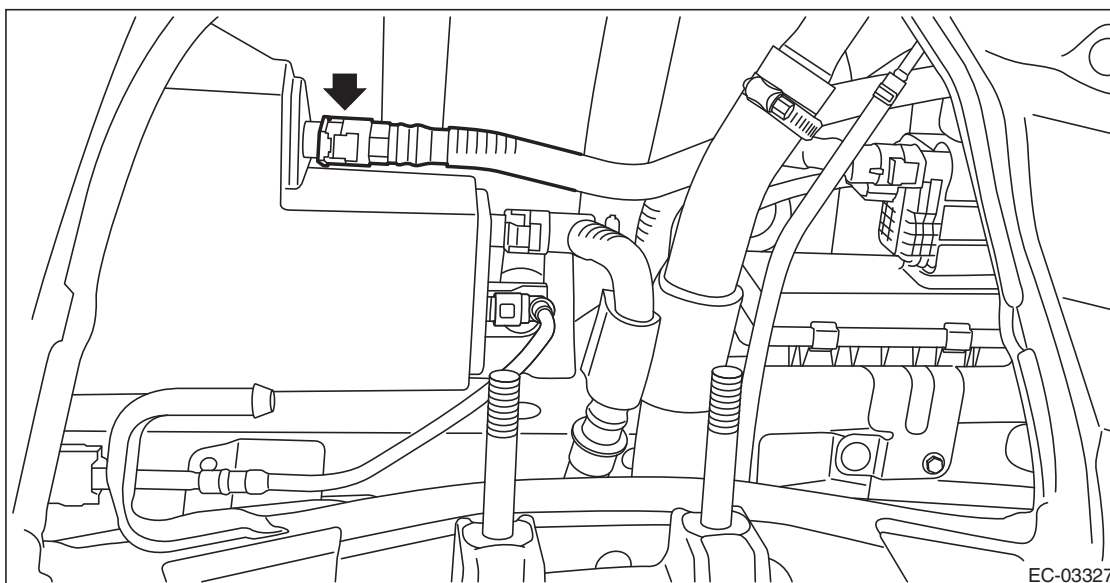
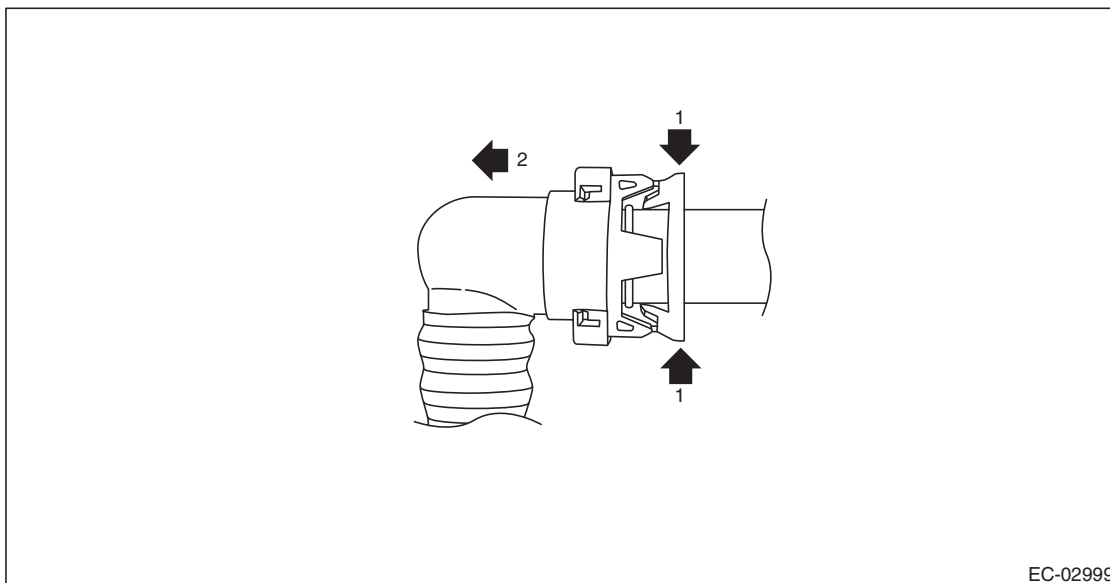
Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

9) Disconnect the drain tube from the canister.

NOTE:

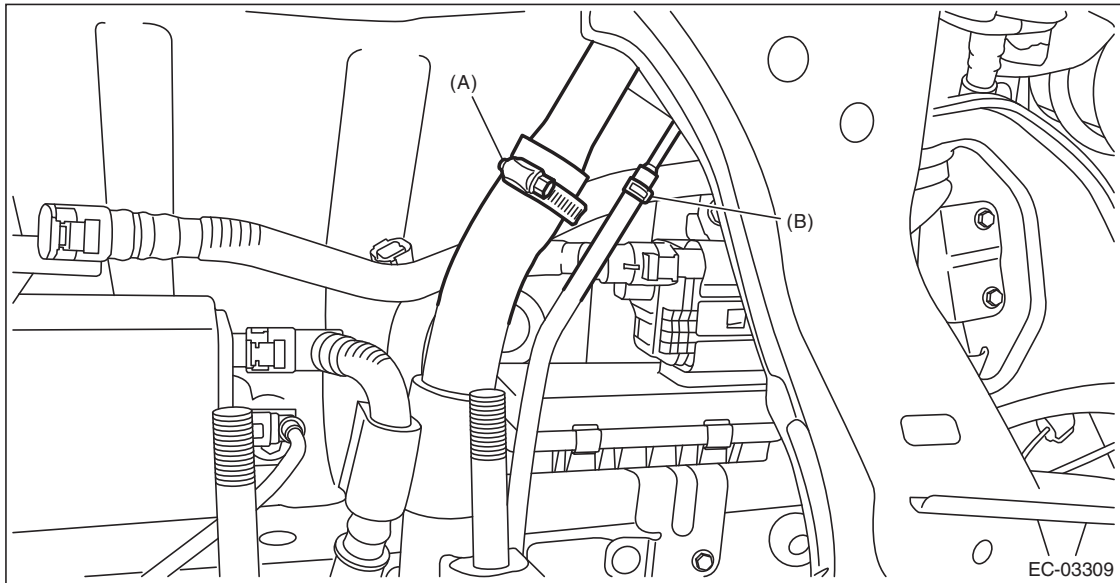
Disconnect the quick connector as shown in the figure.



Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

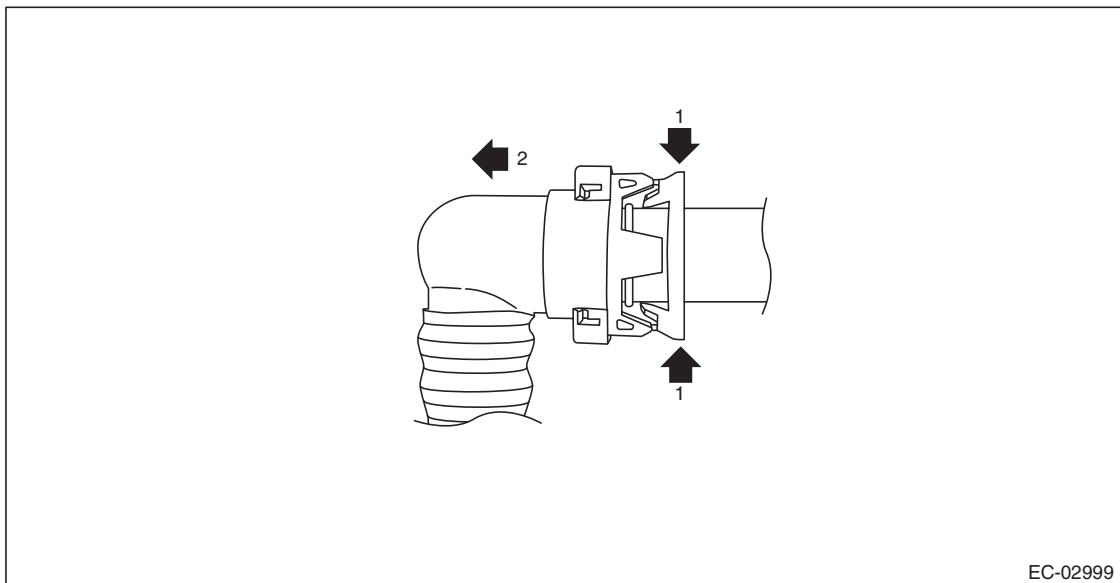
10) Disconnect the fuel filler hose (A) and evaporation hose (B).



11) Disconnect the drain tube from the drain pipe of the fuel filler pipe assembly.

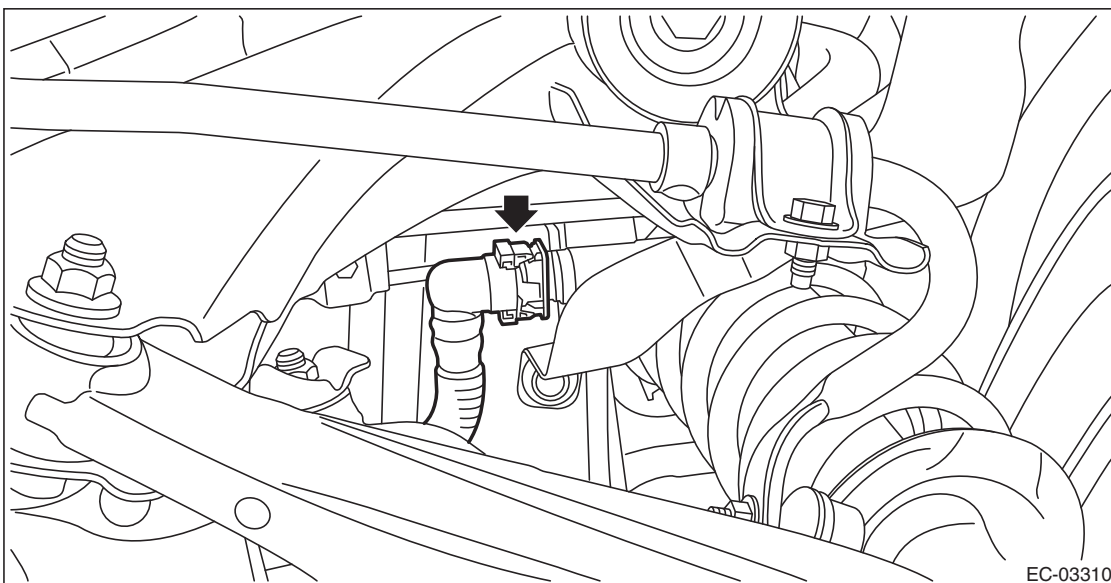
NOTE:

Disconnect the quick connector as shown in the figure.

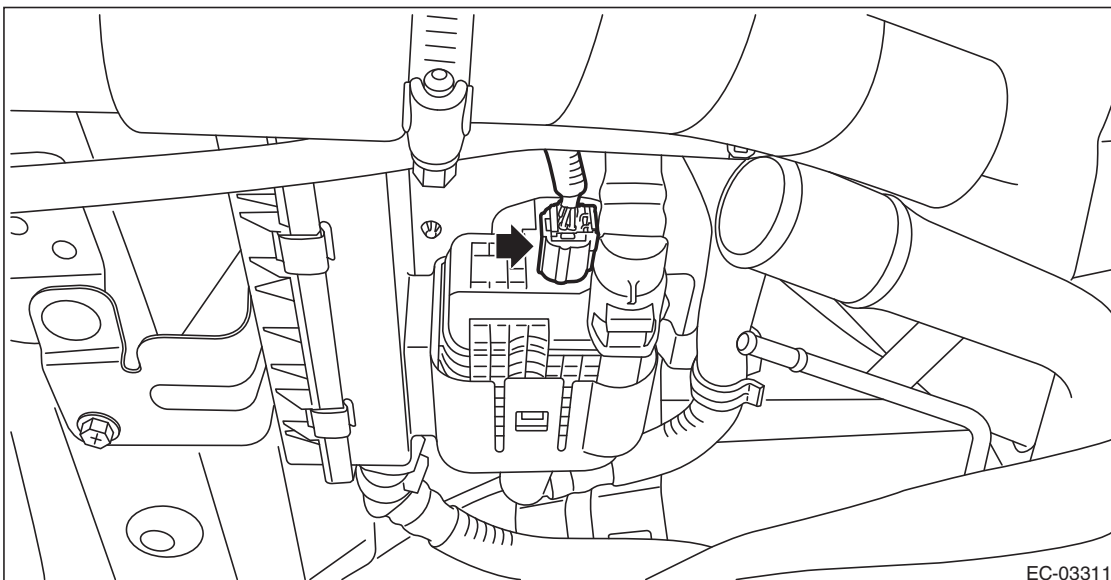


Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)



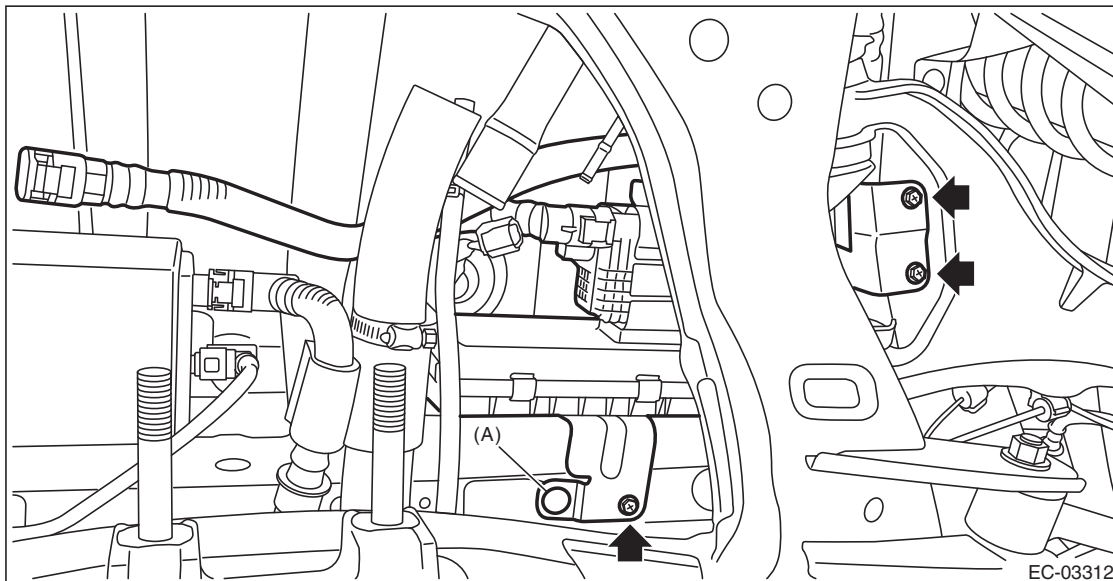
12) Disconnect the connector from the leak check valve assembly.



Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

13) Remove the bolt and clip (A) which secure the leak check valve assembly to the vehicle, and remove the leak check valve assembly.



Leak Check Valve Assembly

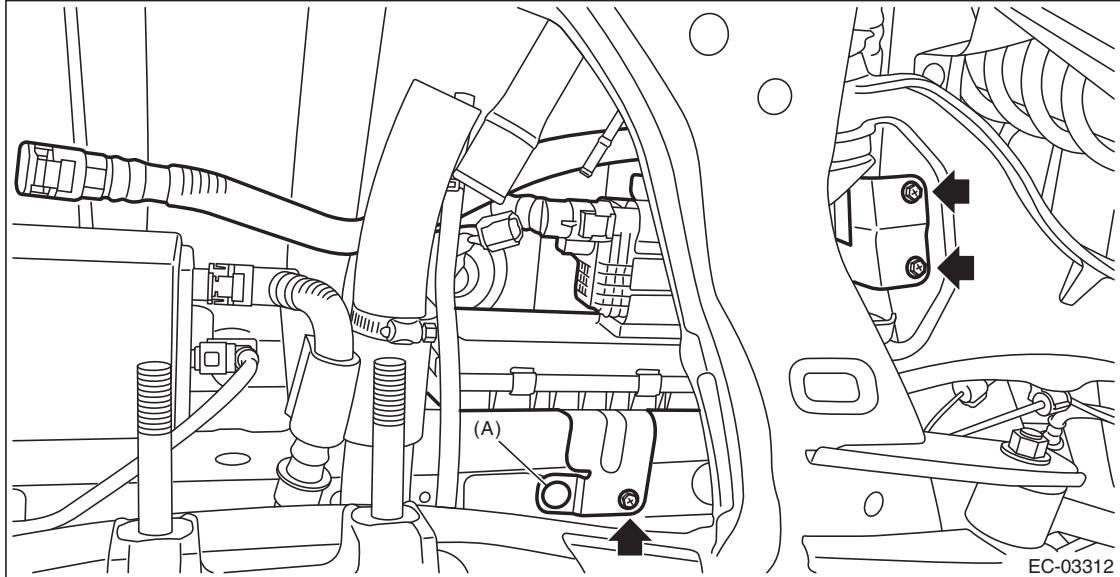
EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

B: INSTALLATION

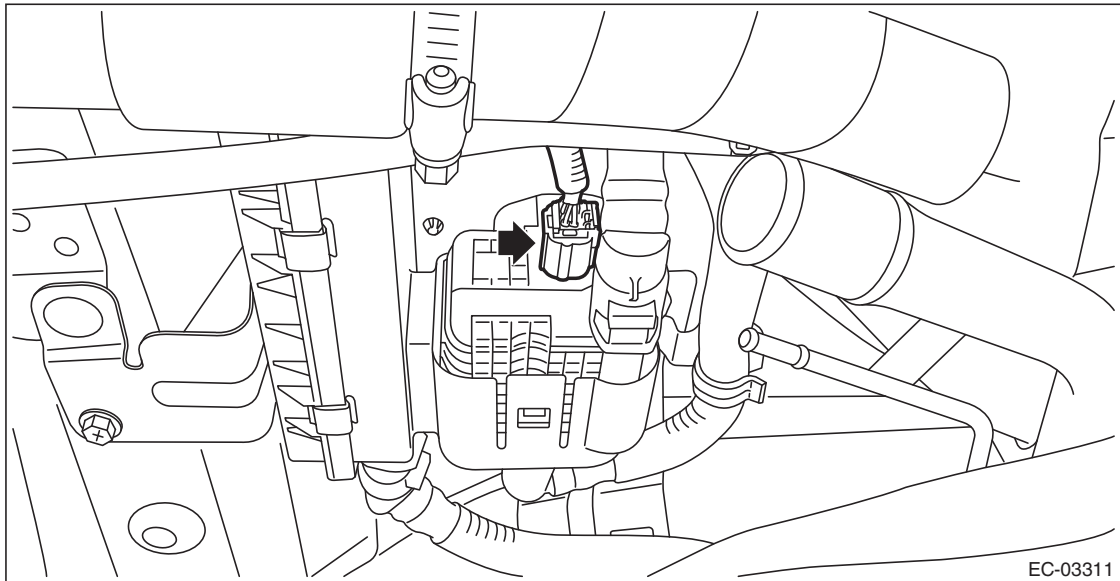
1) Install the leak check valve assembly to the vehicle with the bolt and clip (A).

Tightening torque:

7.5 N·m (0.8 kgf-m, 5.5 ft-lb)



2) Connect the connector to the leak check valve assembly.



Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

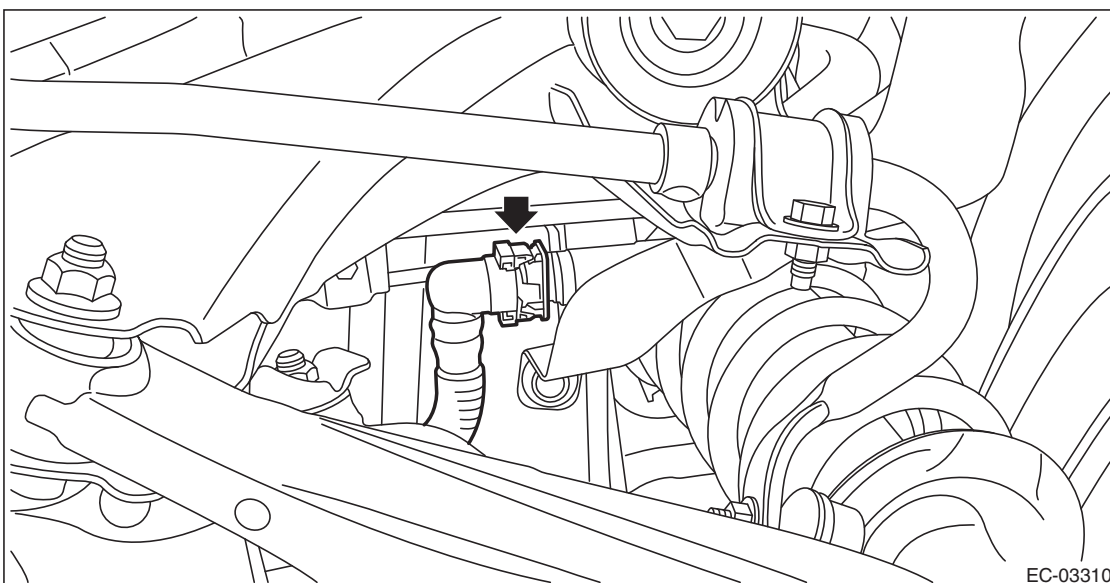
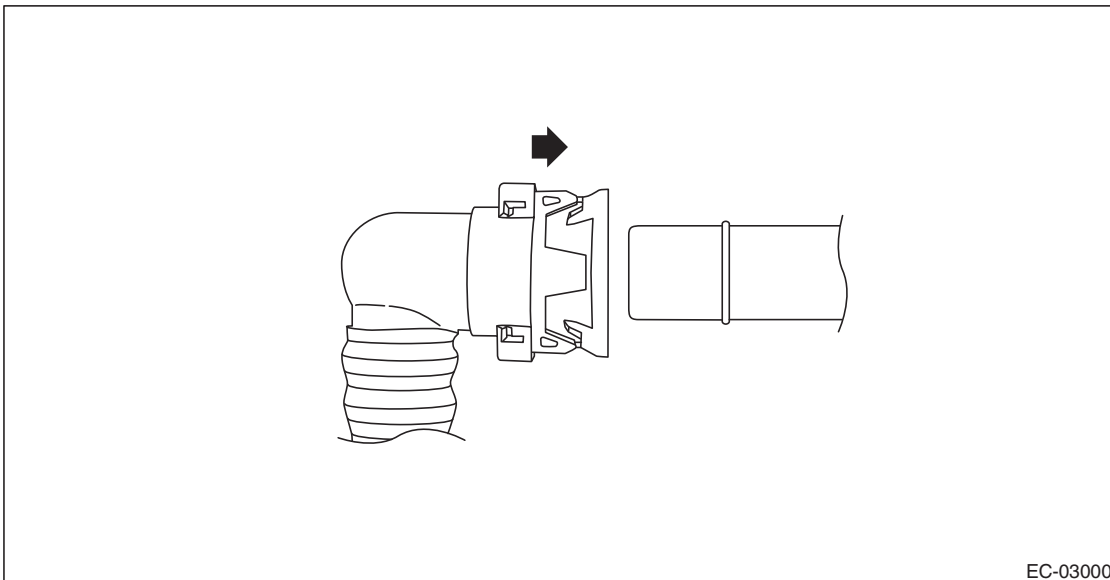
3) Connect the drain tube to the drain pipe of the fuel filler pipe assembly.

CAUTION:

- Check that there is no damage or dust on the quick connector. If necessary, clean the seal surface of the pipe.
- Make sure that the quick connector is securely connected.

NOTE:

Connect the quick connector as shown in the figure.



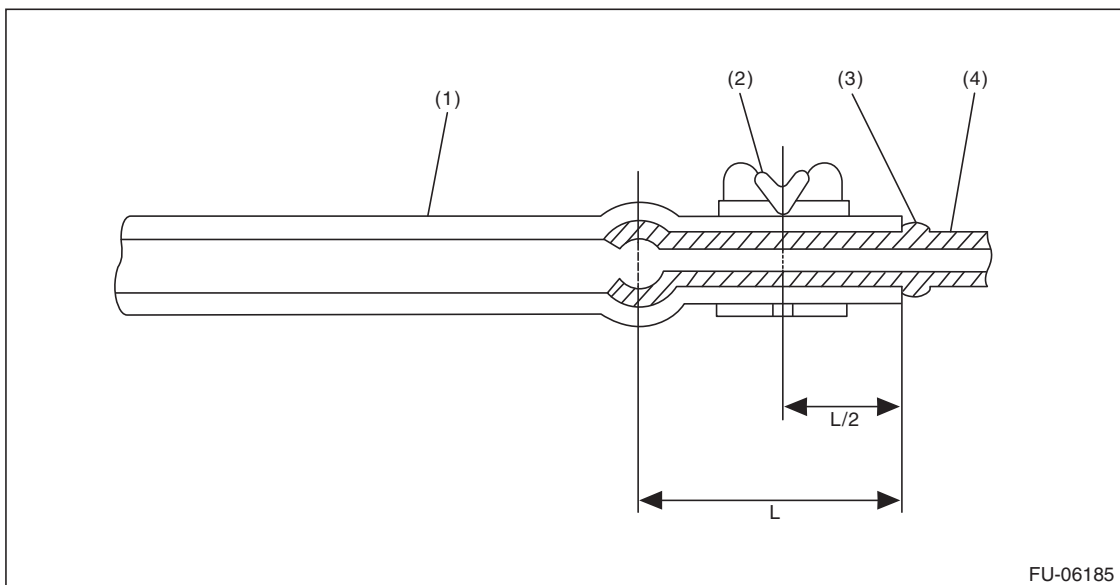
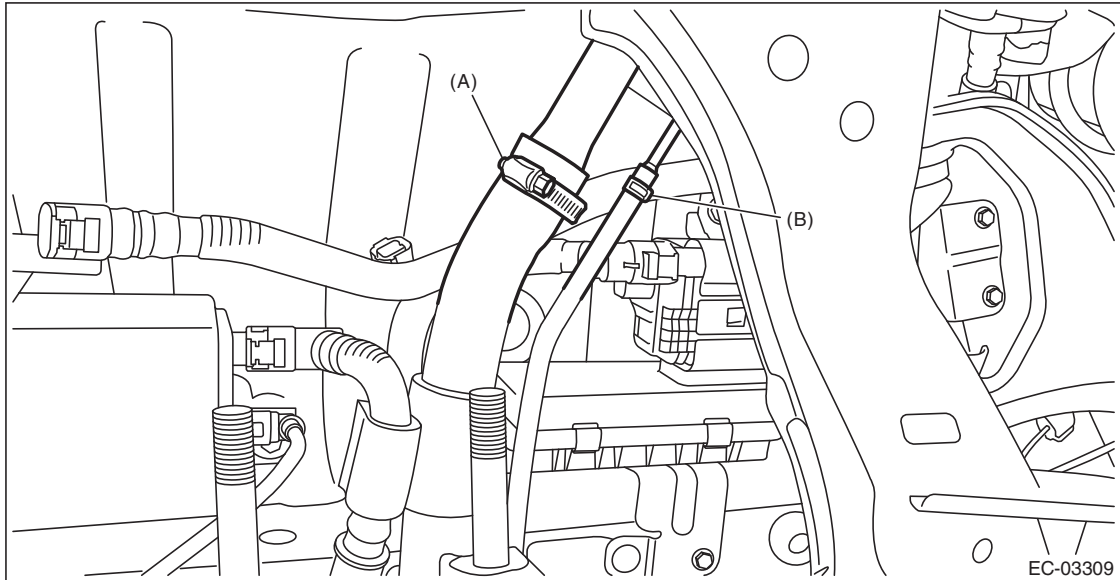
Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

4) Securely insert the fuel filler hose (A) and evaporation hose (B) until the hose end contacts the spool, then attach the clamp and clip as shown in the figure.

Tightening torque:

2.5 N·m (0.3 kgf-m, 1.8 ft-lb)



(1) Hose

(3) Spool

(4) Pipe

(2) Clamp and clip

Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

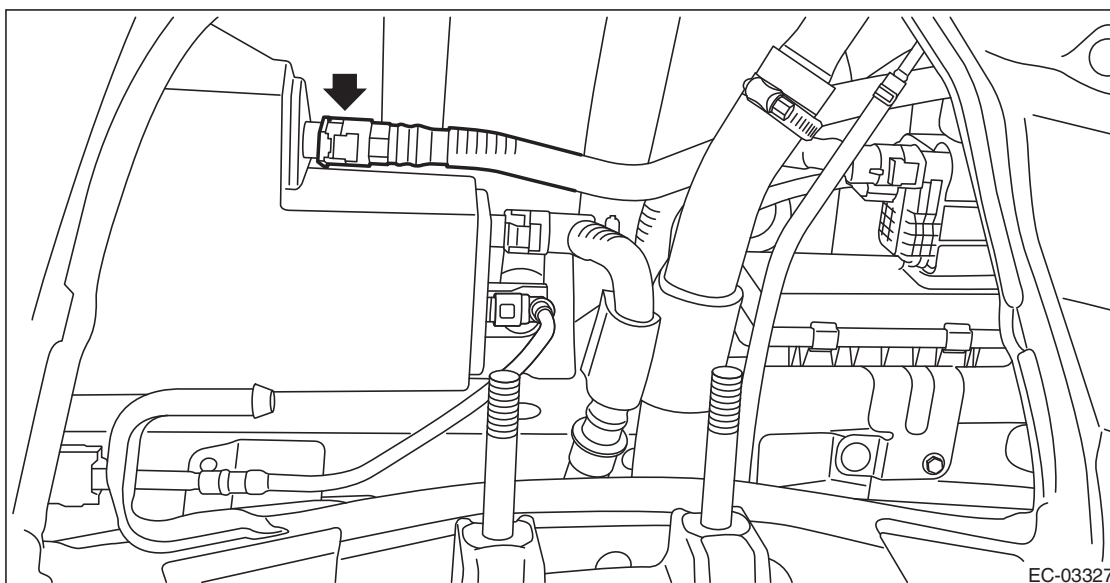
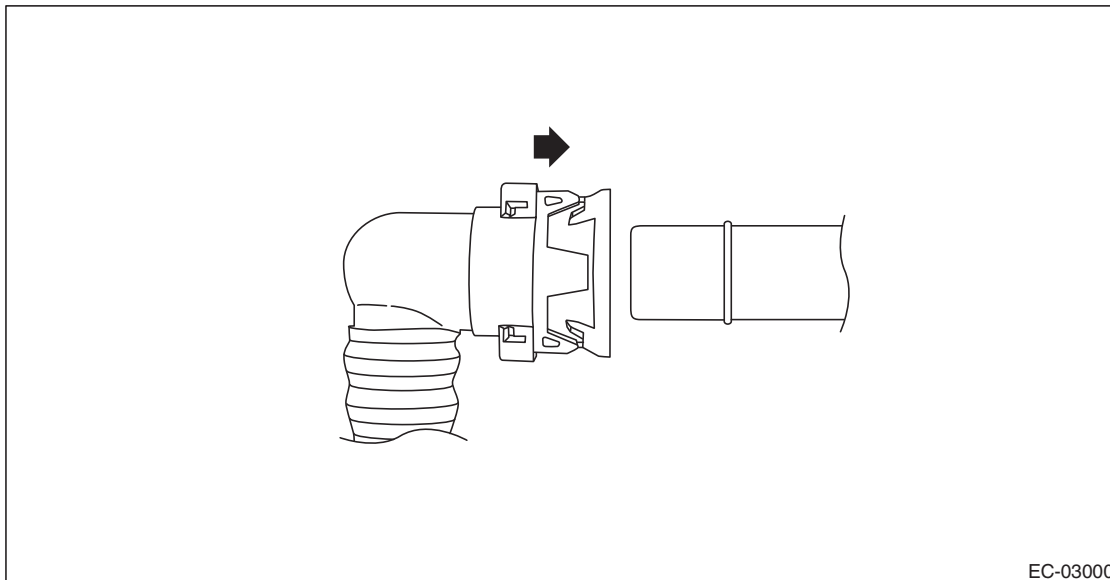
5) Connect the drain tube to the canister.

CAUTION:

- Check that there is no damage or dust on the quick connector. If necessary, clean the seal surface of the pipe.
- Make sure that the quick connector is securely connected.

NOTE:

Connect the quick connector as shown in the figure.



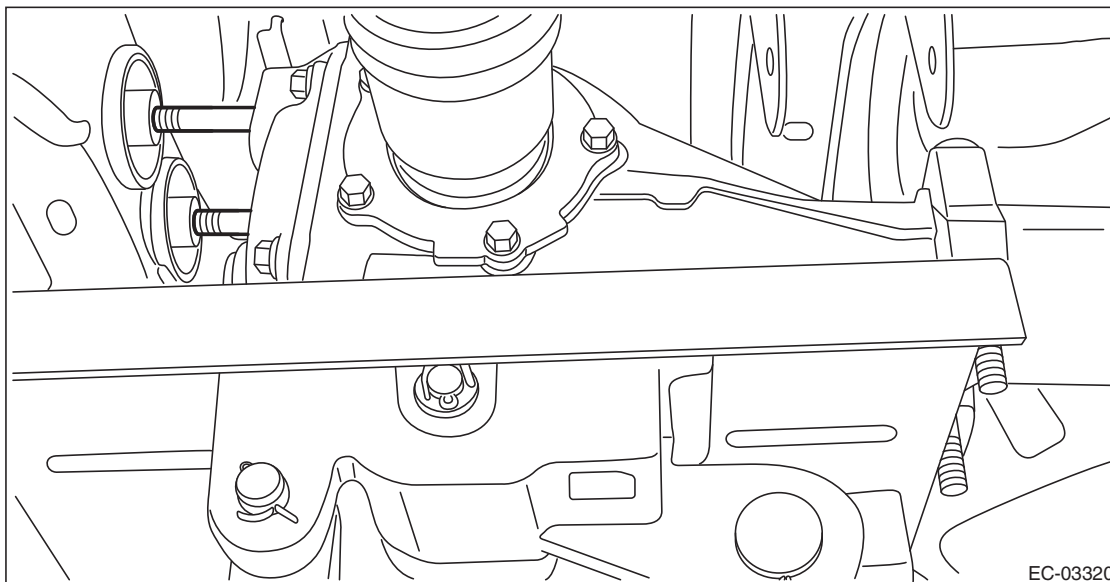
Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

6) Lift up the transmission jack gradually, and set the rear differential to the rear sub frame assembly.

NOTE:

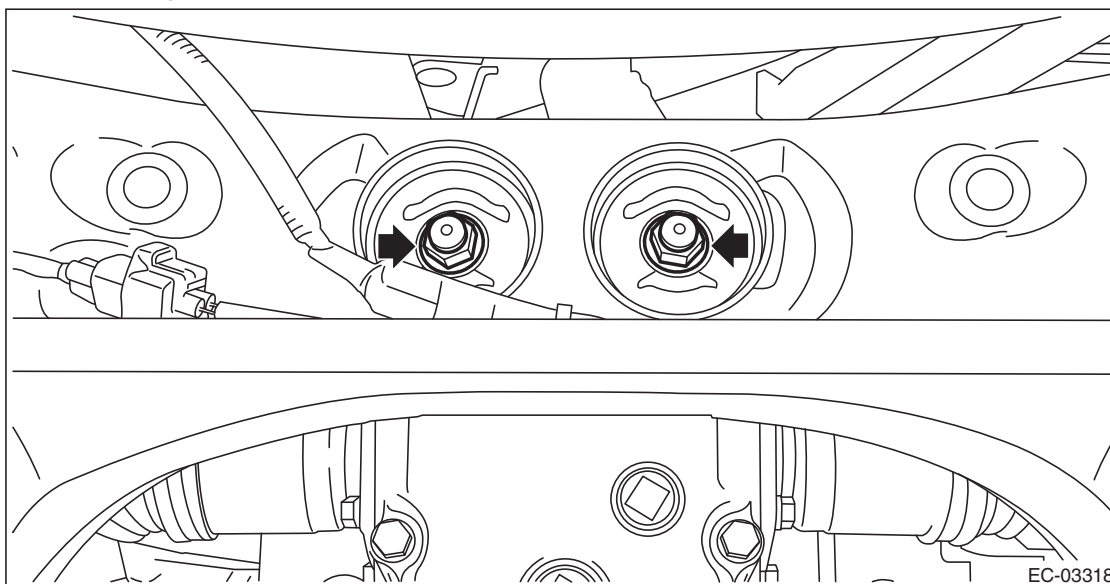
When inserting the stud bolt into the bushing portion of the rear sub frame assembly, adjust the angle and location of transmission jack and jack stand.



7) Temporarily tighten the self-locking nuts which hold the rear differential to the rear sub frame assembly.

NOTE:

Use a new self-locking nut.



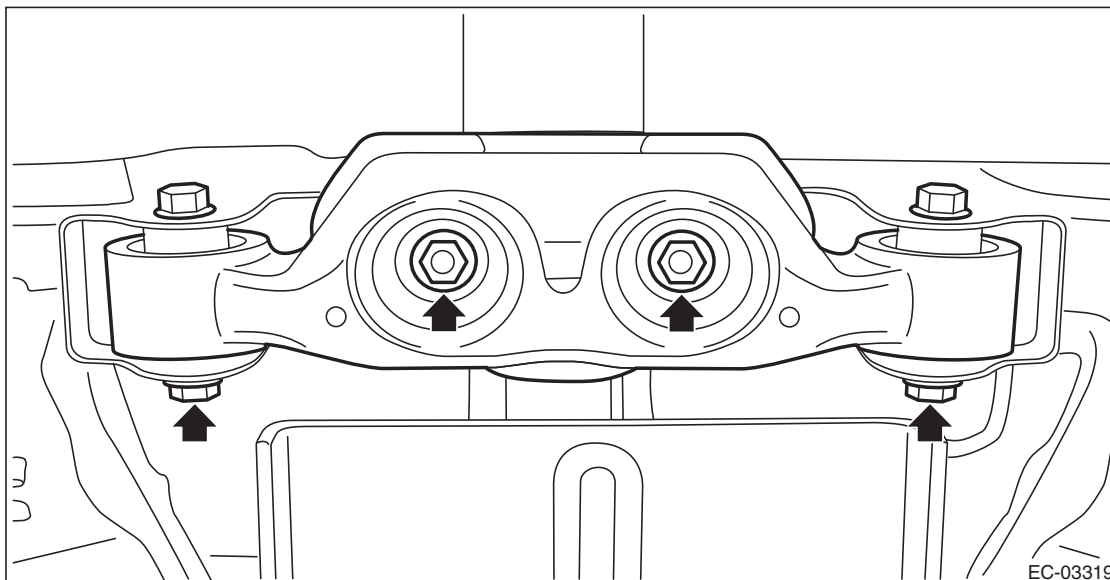
Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

8) Set the rear differential member to the rear sub frame assembly and rear differential, and temporarily tighten the self-lock nuts which secure the rear differential member to the rear sub frame assembly and rear differential.

NOTE:

Use a new self-locking nut.



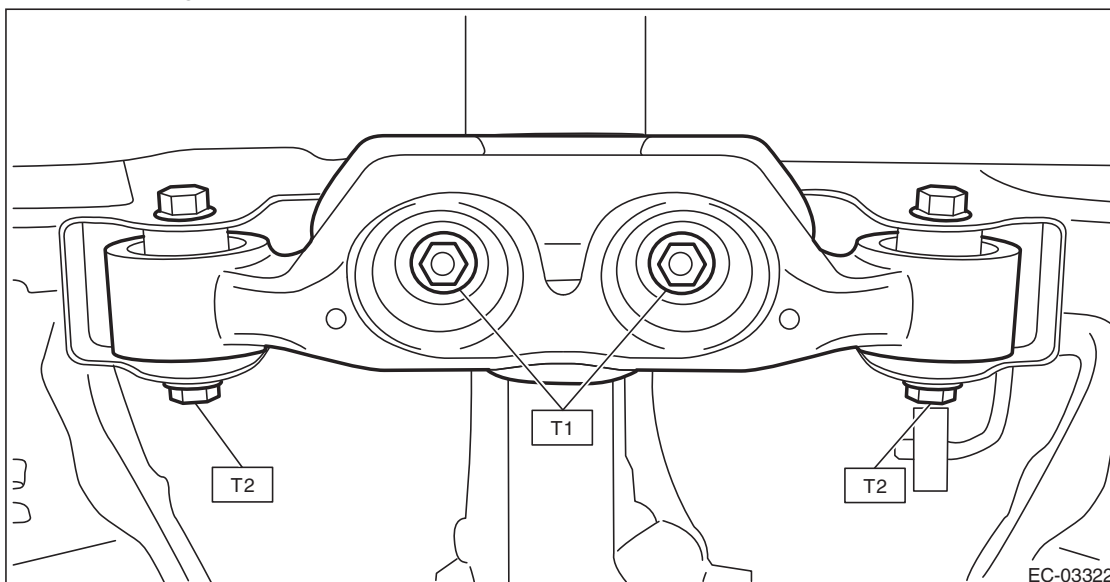
9) Remove the transmission jack from the rear differential.

10) Tighten the self-locking nuts which secure the rear differential member to the rear sub frame assembly and rear differential.

Tightening torque:

T1: 50 N·m (5.1 kgf-m, 36.9 ft-lb)

T2: 110 N·m (11.2 kgf-m, 81.1 ft-lb)



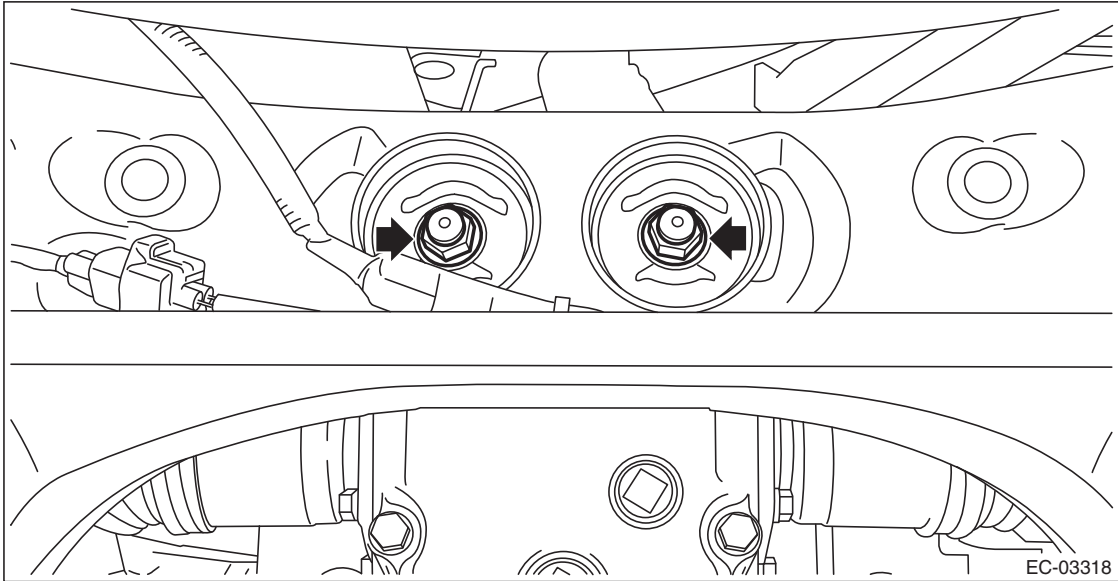
Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

11) Tighten the self-locking nuts which secure the rear differential to the rear sub frame assembly.

Tightening torque:

70 N·m (7.1 kgf-m, 51.6 ft-lb)



12) Install the propeller shaft. <Ref. to DS-13, INSTALLATION, Propeller Shaft.>

13) Install the rear exhaust pipe. <Ref. to EX(H4DO)-19, INSTALLATION, Rear Exhaust Pipe.>

14) Lower the vehicle.

15) Connect the battery ground terminal.



Leak Check Valve Assembly

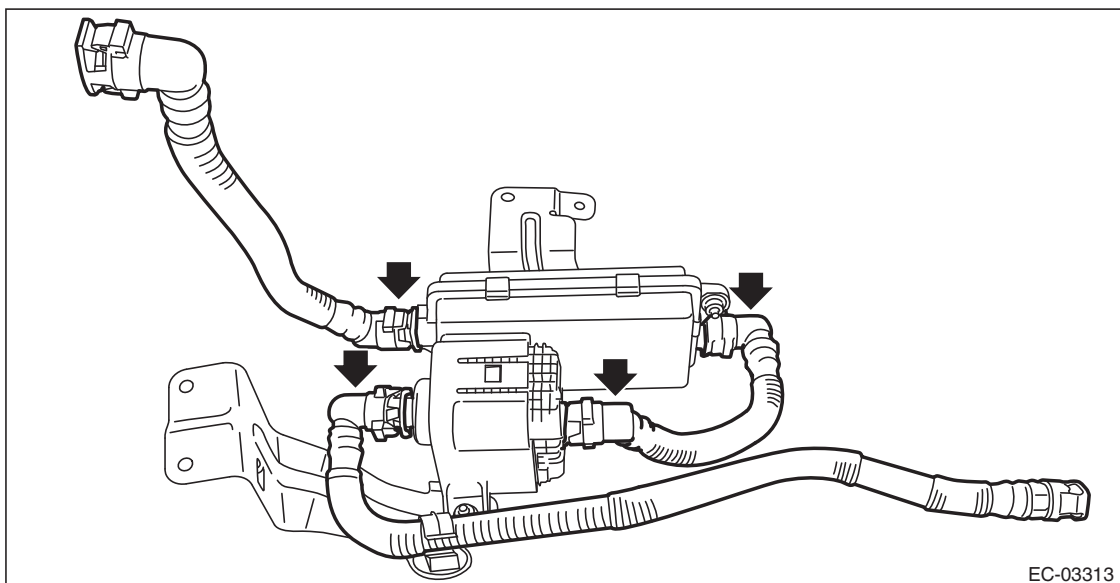
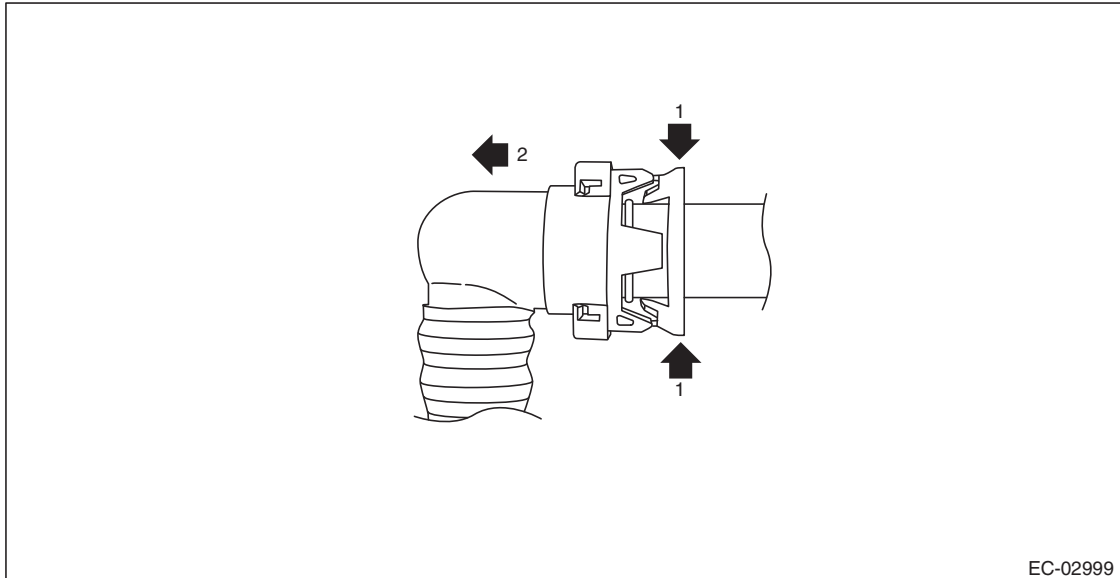
EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

C: DISASSEMBLY

1) Disconnect the drain tube from the leak check valve assembly.

NOTE:

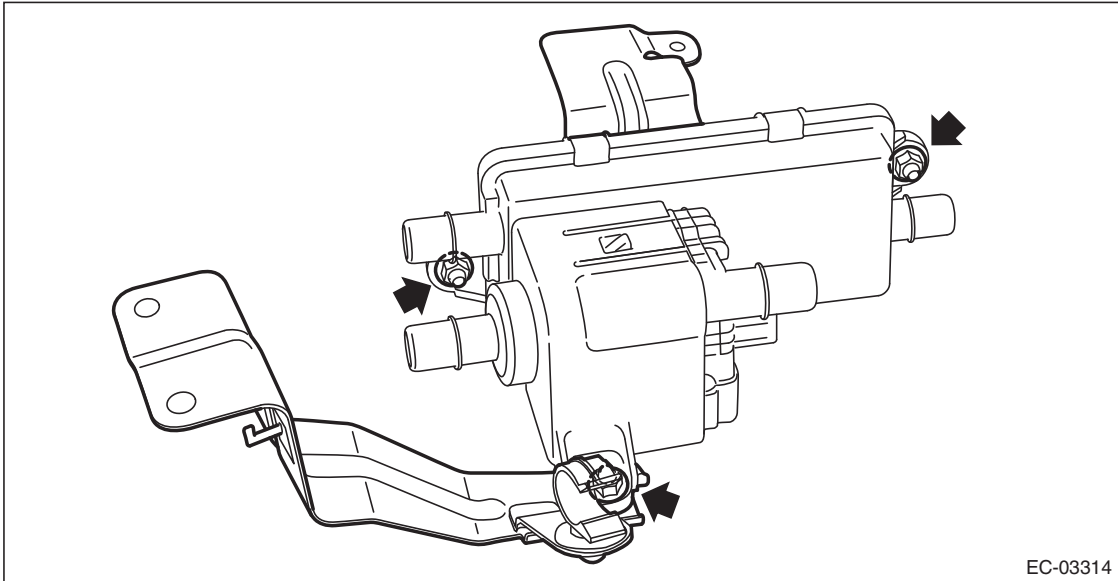
Disconnect the quick connector as shown in the figure.



Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

- 2) Remove the bracket from the leak check valve assembly.



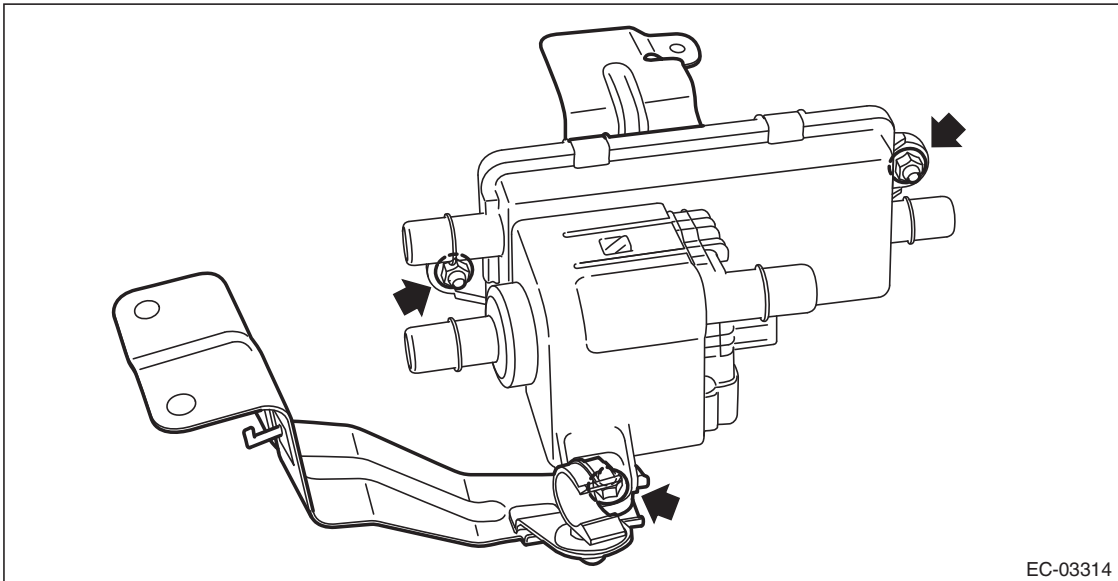
EC-03314

D: ASSEMBLY

- 1) Install the bracket to the leak check valve assembly.

Tightening torque:

18 N·m (1.8 kgf-m, 13.3 ft-lb)



EC-03314

Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

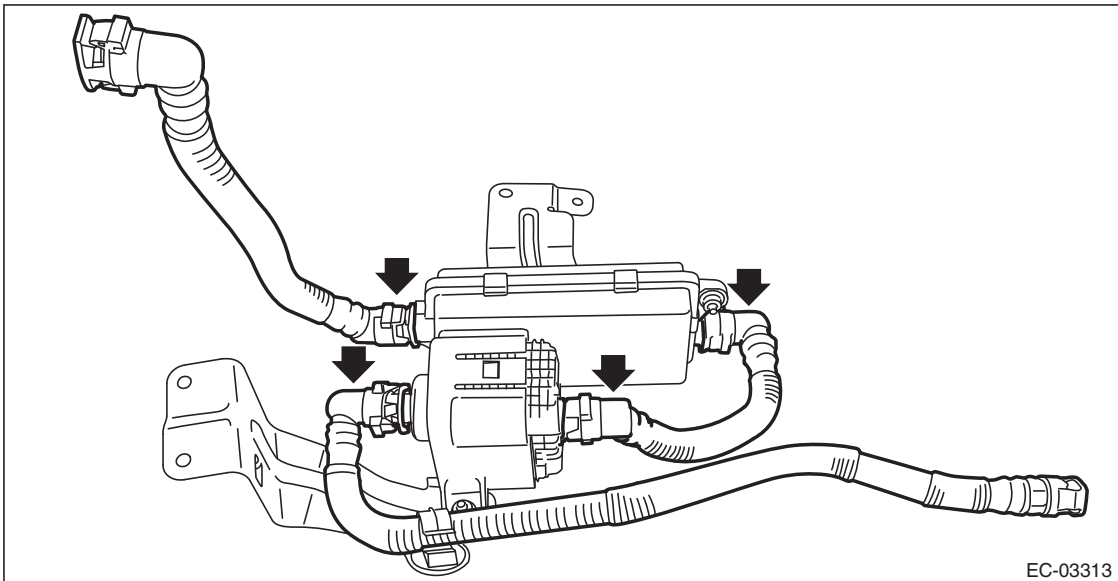
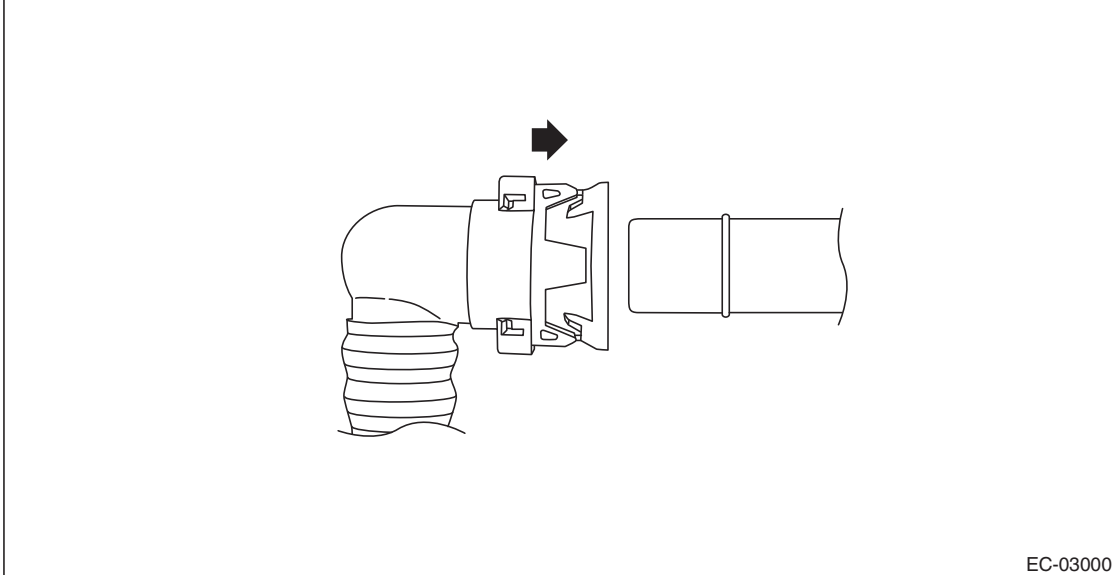
2) Install the drain tube to the leak check valve assembly.

CAUTION:

- Check that there is no damage or dust on the quick connector. If necessary, clean the seal surface of the pipe.
- Make sure that the quick connector is securely connected.

NOTE:

Connect the quick connector as shown in the figure.



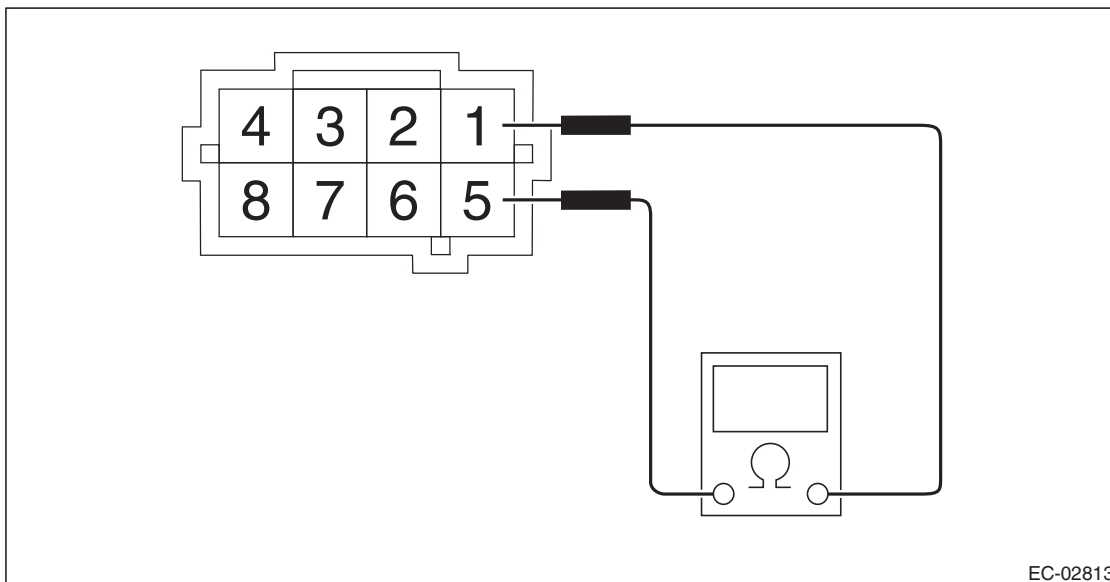
Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

E: INSPECTION

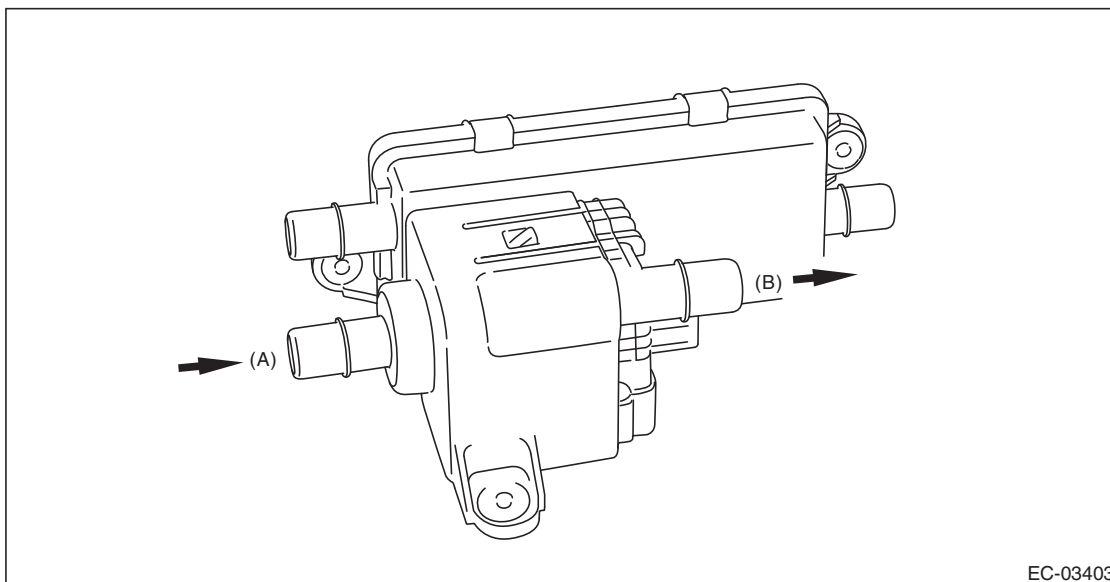
1. CHECK SWITCHING VALVE

1) Check the resistance between switching valve terminals.



Terminal No.	Standard
1 and 5	$27^{+3}_{-2} \Omega$ (when 20°C (68°F))
	$31 \pm 4 \Omega$ (60°C (140°F))

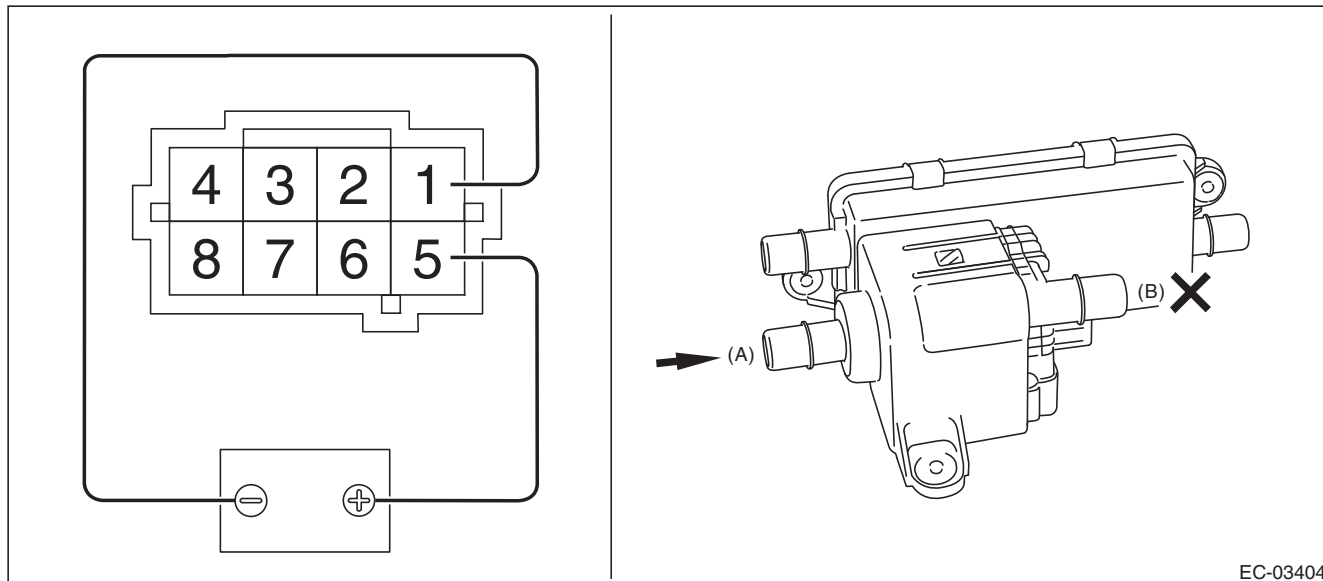
2) Check that air is discharged from (B) when air is blown into (A).



Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

3) Connect the battery positive terminal to the terminal No. 5 and the battery negative terminal to the terminal No. 1. Check that air does not come out from (B) when air is blown into (A).

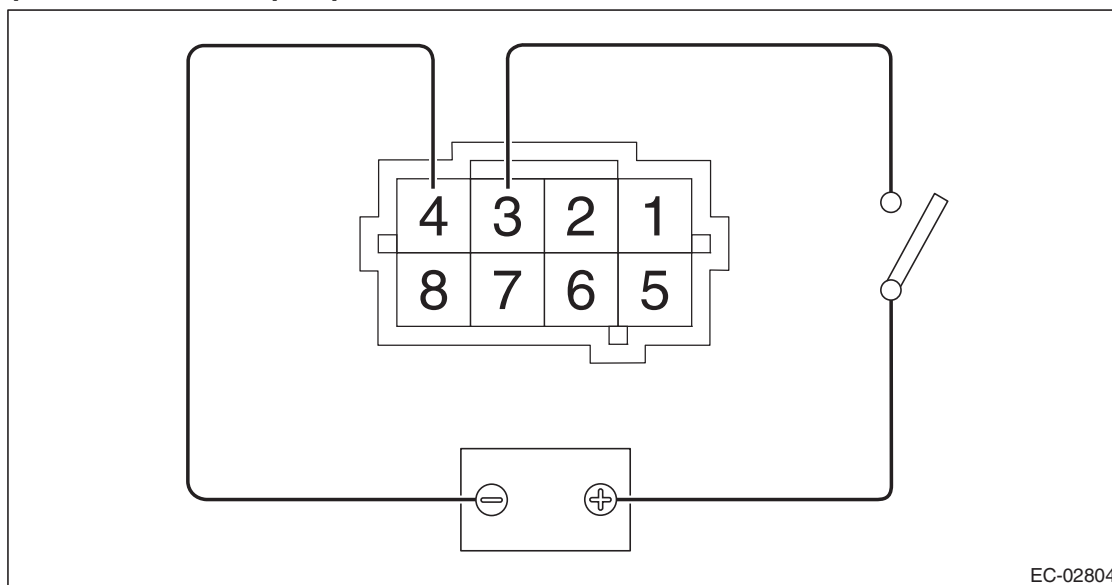


2. CHECK VACUUM PUMP

1) Connect the battery positive terminal to terminal No. 3 and the battery ground terminal to terminal No. 4, and inspect the vacuum pump operation.

CAUTION:

Do not operate the vacuum pump for 5 minutes or more.



3. CHECK PRESSURE SENSOR

1) Connect dry-cell battery positive terminal to terminal No. 6 and dry-cell battery ground terminal to terminal No. 8, circuit tester positive terminal to terminal No. 7 and the circuit tester negative terminal to terminal No. 8.

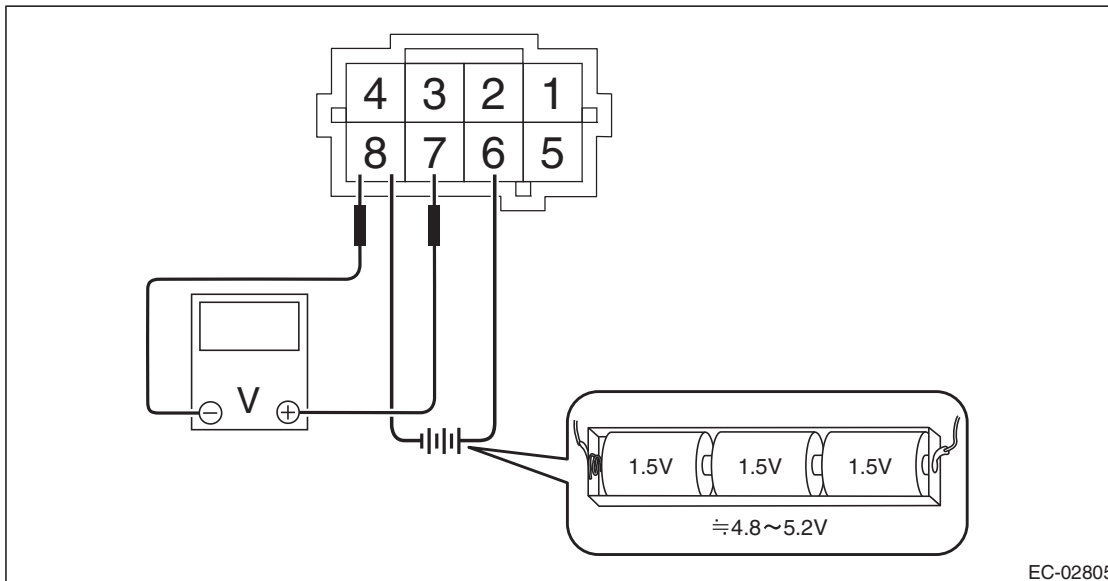
NOTE:

- Use new dry-cell batteries.

Leak Check Valve Assembly

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

- Using circuit tester, check the voltage of a single dry-cell battery is 1.6 V or more. And also check the voltage of three batteries in series is between 4.8 V and 5.2 V.



EC-02805

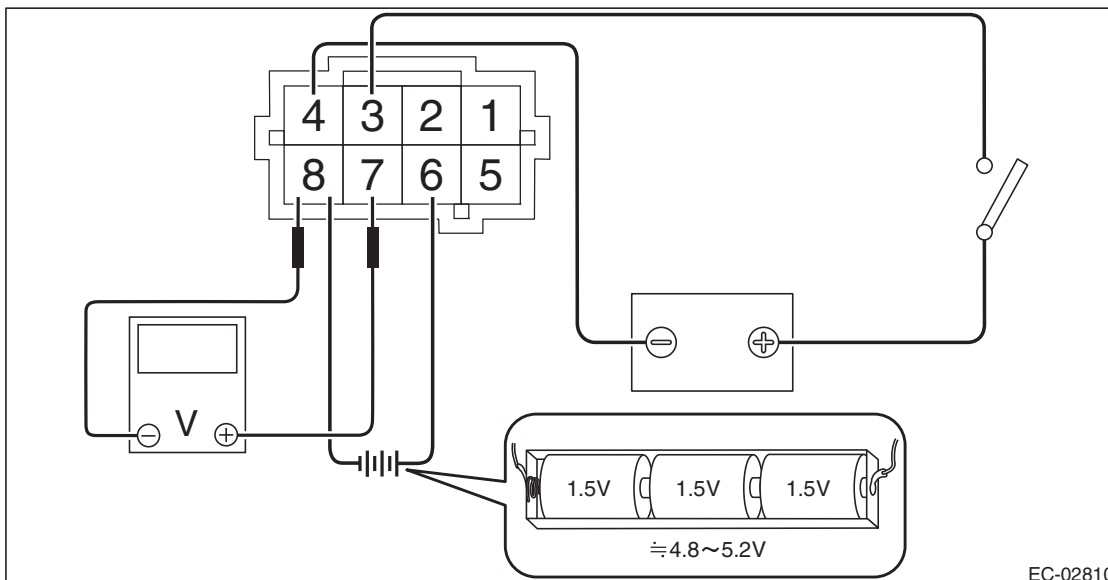
2) Check the voltage at a normal atmospheric pressure.

NOTE:

The atmospheric pressure at higher altitude is lower than normal. Therefore, the voltage is lower than the standard value.

Terminal No.	Standard
7 (+) and 8 (-)	Approx. 3.5 V (when 25°C (77°F))

3) Connect the battery positive terminal to terminal No. 3 and the battery ground terminal to terminal No. 4, and check that there is a voltage drop from the voltage measured in step 2) when the vacuum pump is operated.



EC-02810

4. OTHER INSPECTIONS

- Check that the leak check valve assembly has no deformation, cracks or other damages.
- Check that the tube or hose have no cracks, damage or loose part.

PCV Hose

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

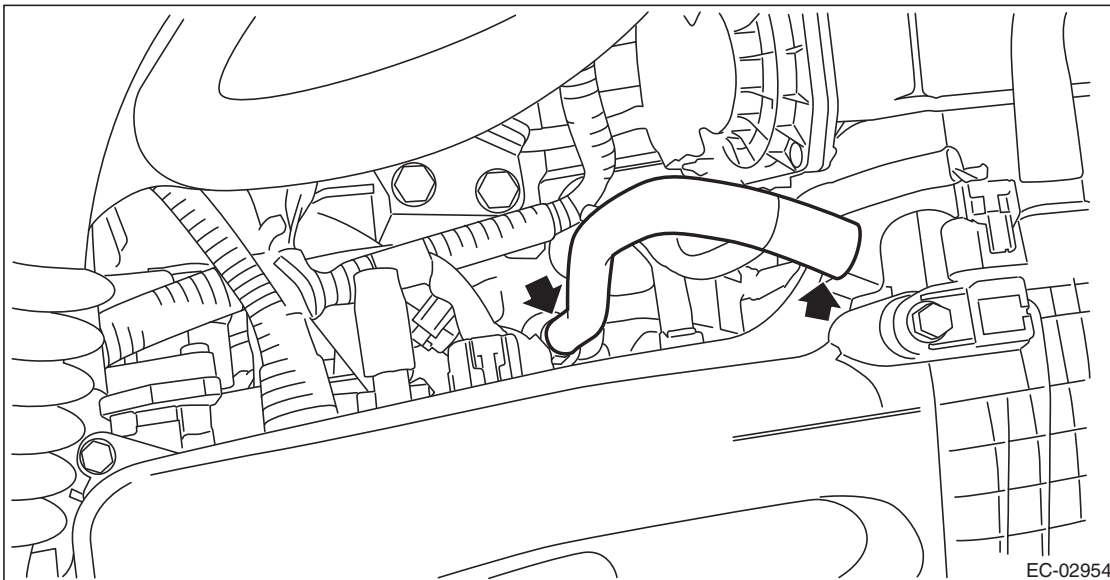
12.PCV Hose

A: REMOVAL

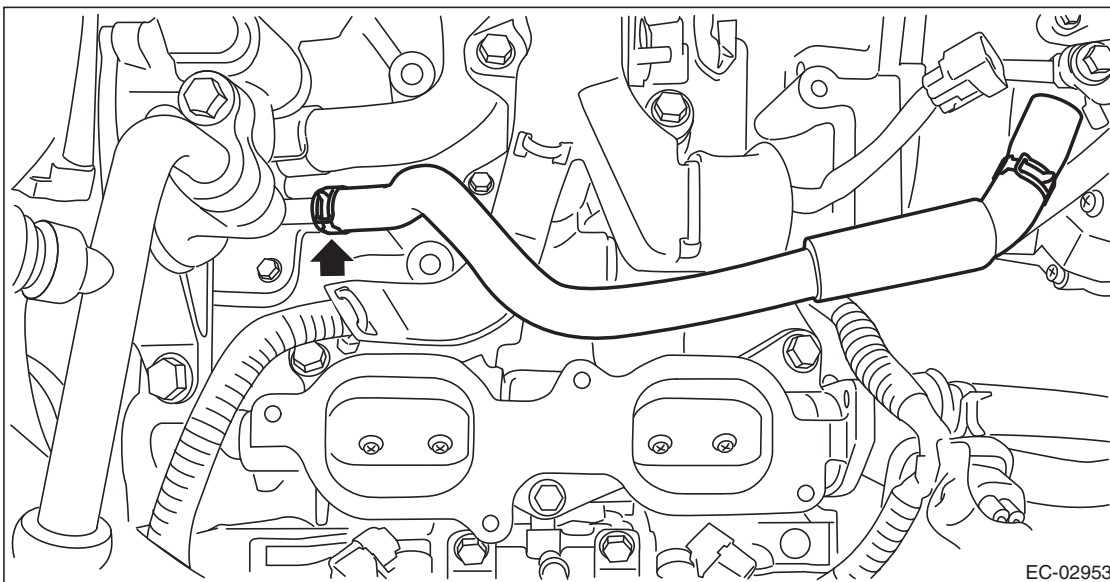
CAUTION:

Do not remove except when the PCV hose is broken.

- 1) Disconnect the PCV hose A from the intake manifold and the PCV valve, and then remove the PCV hose A.



- 2) Remove the intake manifold. <Ref. to FU(H4DO)-19, REMOVAL, Intake Manifold.>
- 3) Remove the PCV hose B from the PCV connector.



B: INSTALLATION

Install in the reverse order of removal.

C: INSPECTION

Check that the PCV hose has no cracks, damage or loose part.

PCV Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

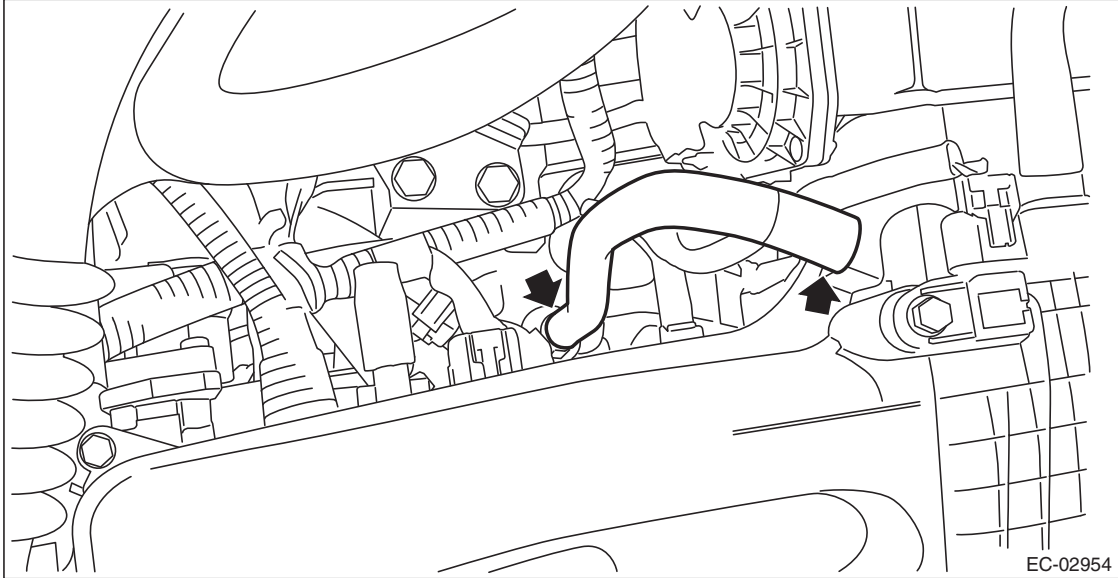
13.PCV Valve

A: REMOVAL

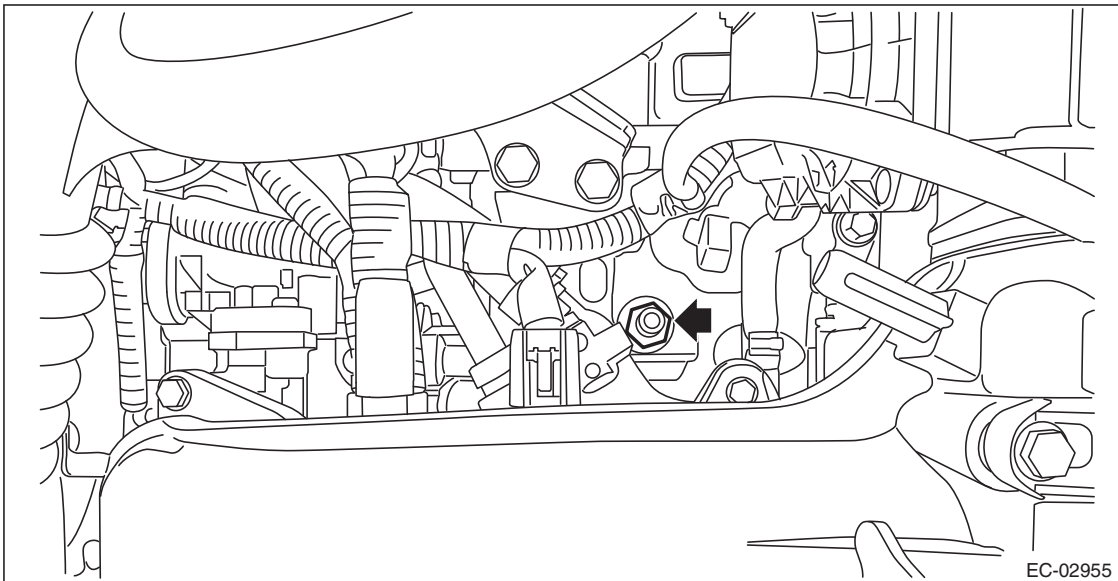
CAUTION:

Do not remove unless the PCV valve is broken.

- 1) Disconnect the PCV hose from the intake manifold and the PCV valve, and then remove the PCV hose.



- 2) Remove the PCV valve from the cylinder block RH.



B: INSTALLATION

Install in the reverse order of removal.

NOTE:

Apply liquid gasket to the bolt threads of PCV valve.

Liquid gasket:

THREE BOND 1324 (Part No. 004403042) or equivalent

Tightening torque:

23 N·m (2.3 kgf-m, 17.0 ft-lb)

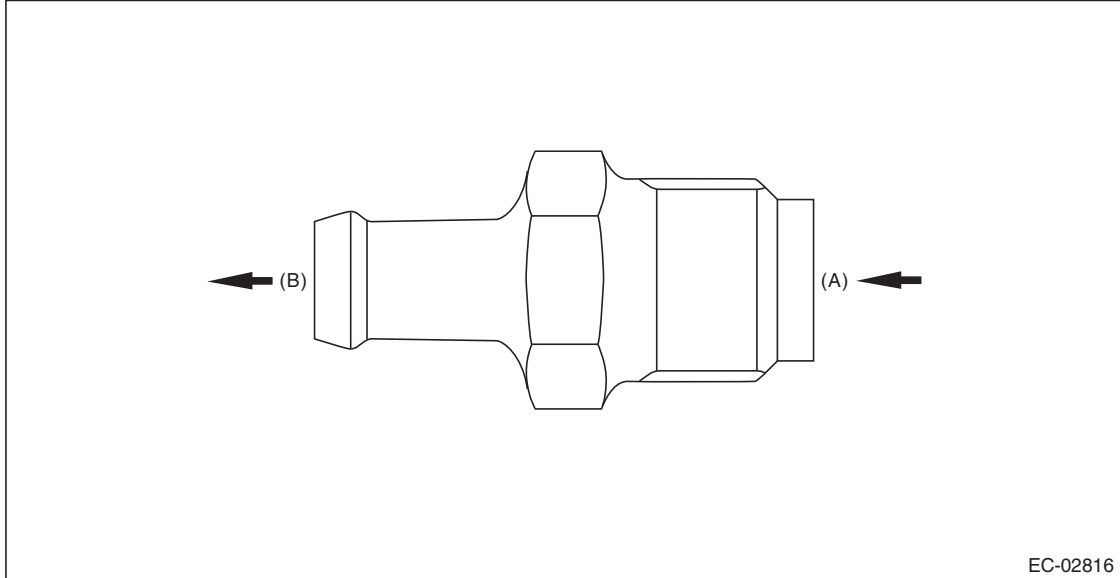
PCV Valve

EMISSION CONTROL (AUX. EMISSION CONTROL DEVICES)

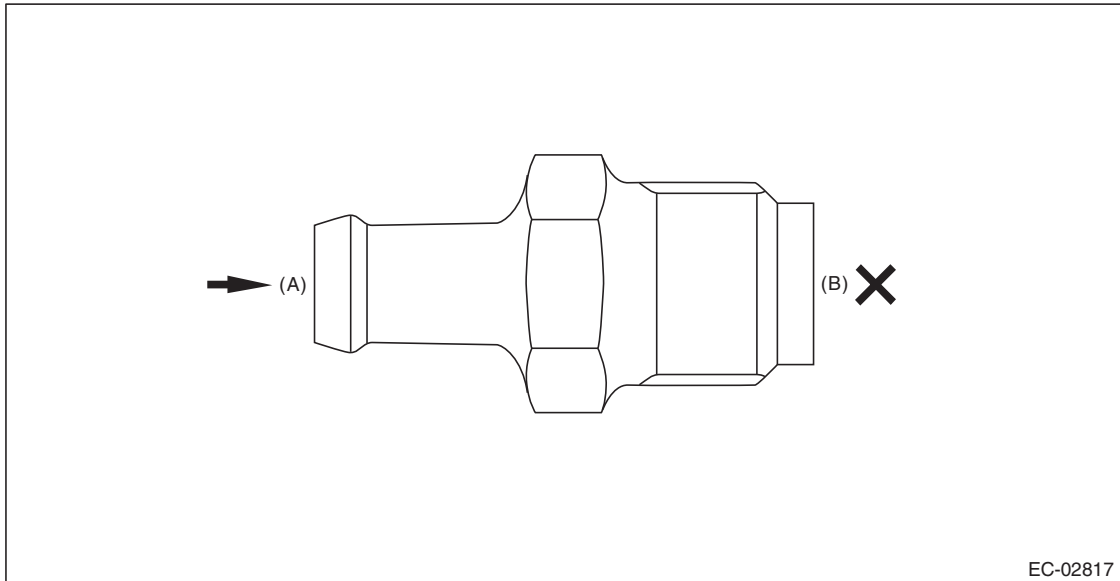
C: INSPECTION

1. PCV VALVE

- 1) Check that the PCV valve has no deformation, cracks or other damages.
- 2) Check that air is discharged from (B) when air is blown into (A).



- 3) Check that air does not come out from (B) when air is blown into (A).



2. OTHER INSPECTIONS

Check that the PCV hose has no cracks, damage or loose part.

