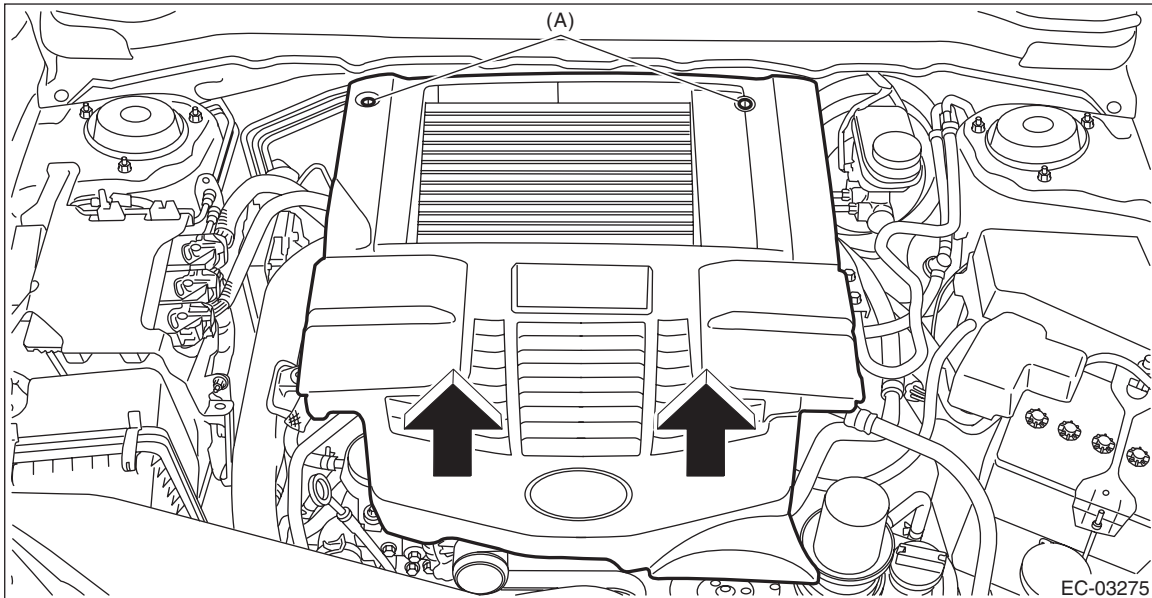


3. Intake Manifold

A: REMOVAL

1) Remove the clip (A), lift the front of the collector cover in the direction of arrow, and then remove the collector cover.



2) Release the fuel pressure. <Ref. to FU(H4DOTC)-151, RELEASING OF FUEL PRESSURE, PROCEDURE, Fuel.>

3) Disconnect the ground cable from battery.

4) Open the fuel filler lid and remove the fuel filler cap.

5) Lift up the vehicle.

6) Remove the under cover. <Ref. to EI-22, REMOVAL, Front Under Cover.>

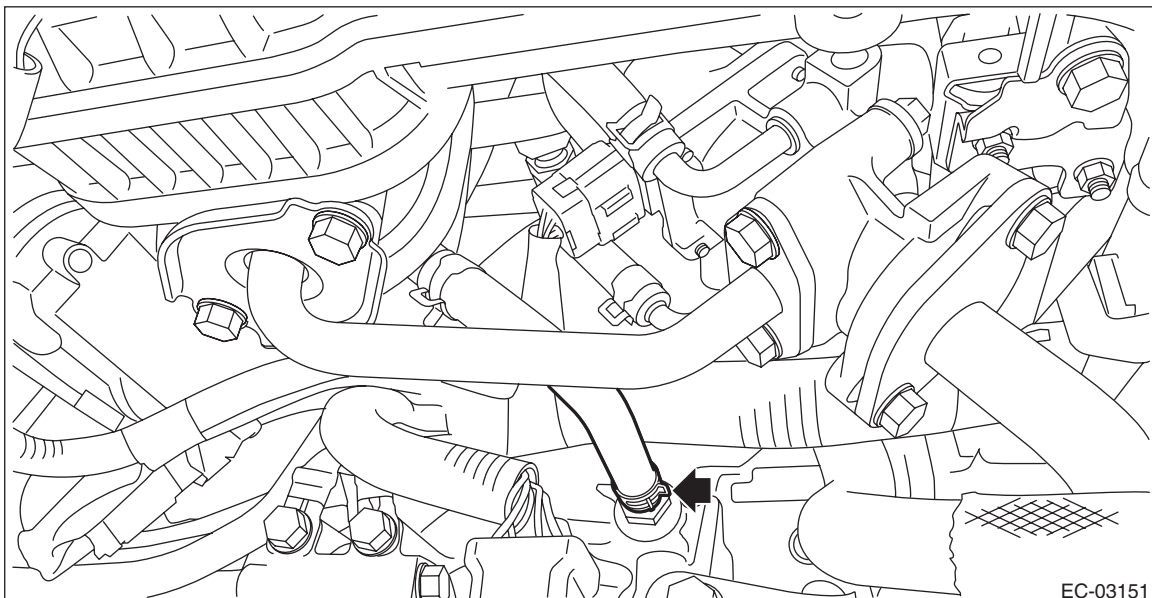
7) Drain approximately 3.0 L (3.2 US qt, 2.6 Imp qt) of coolant. <Ref. to CO(H4DOTC)-13, DRAINING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>

8) Remove the intercooler. <Ref. to IN(H4DOTC)-35, REMOVAL, Intercooler.>

9) Remove the intake duct No. 2. <Ref. to IN(H4DOTC)-20, REMOVAL, Intake Duct.>

10) Remove the intake duct No. 3. <Ref. to IN(H4DOTC)-20, REMOVAL, Intake Duct.>

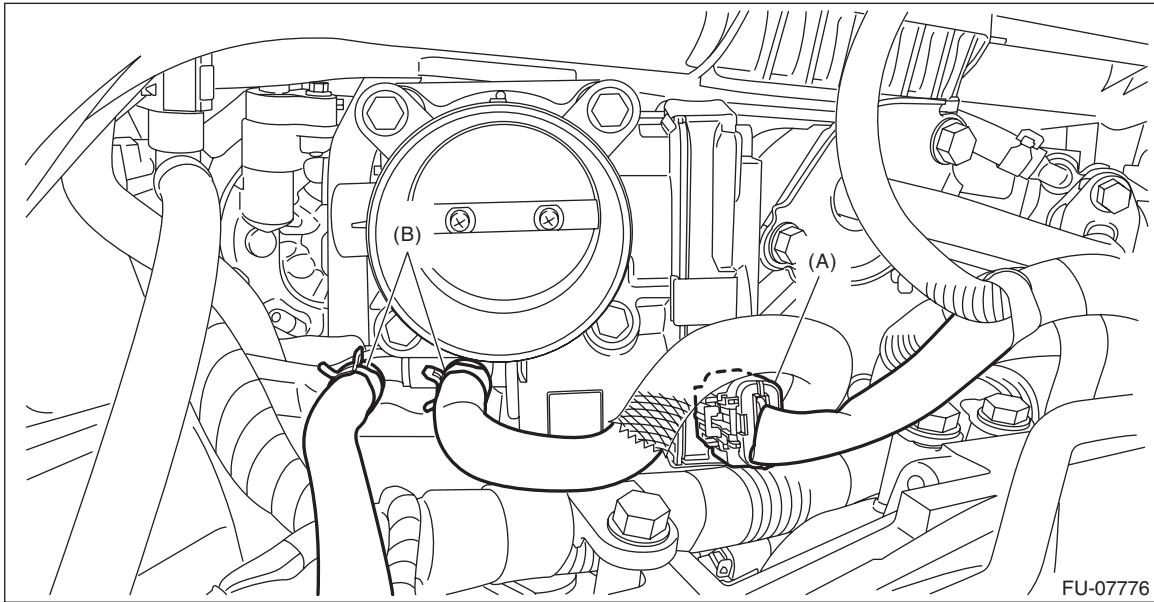
11) Disconnect the PCV hose from the PCV valve.



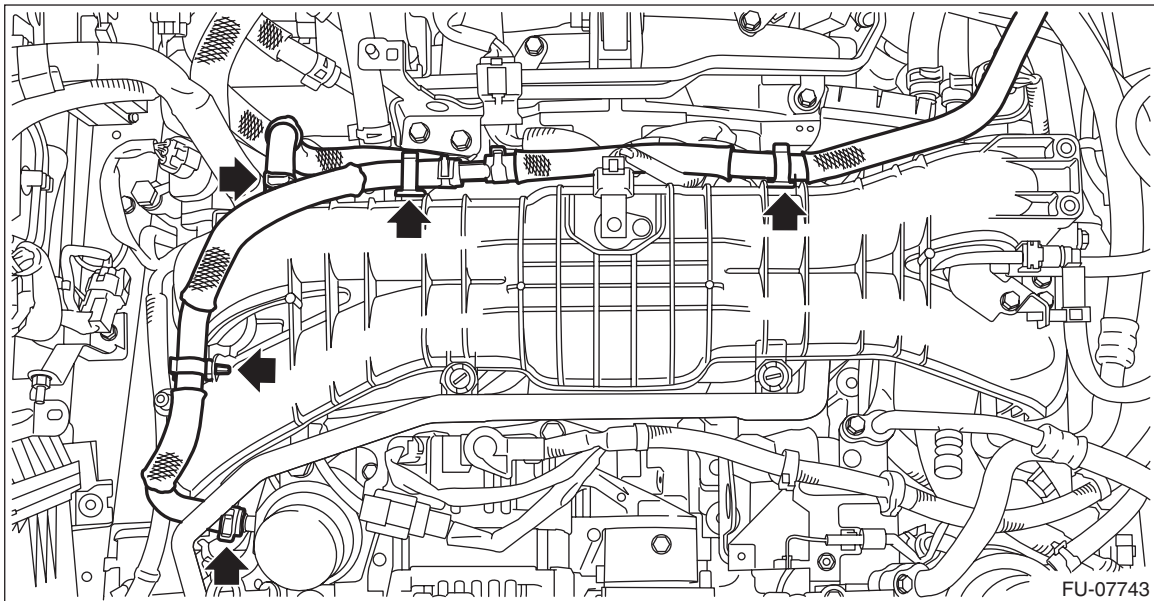
Intake Manifold

FUEL INJECTION (FUEL SYSTEMS)

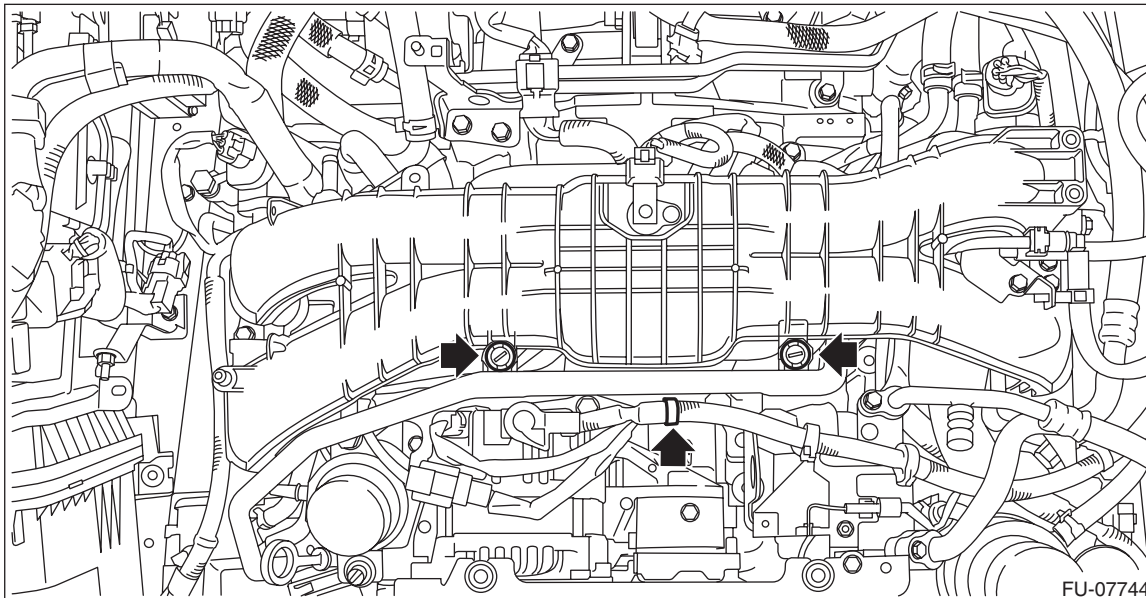
12) Disconnect the connector (A) from the throttle body, and disconnect the preheater hose (B) from the throttle body.



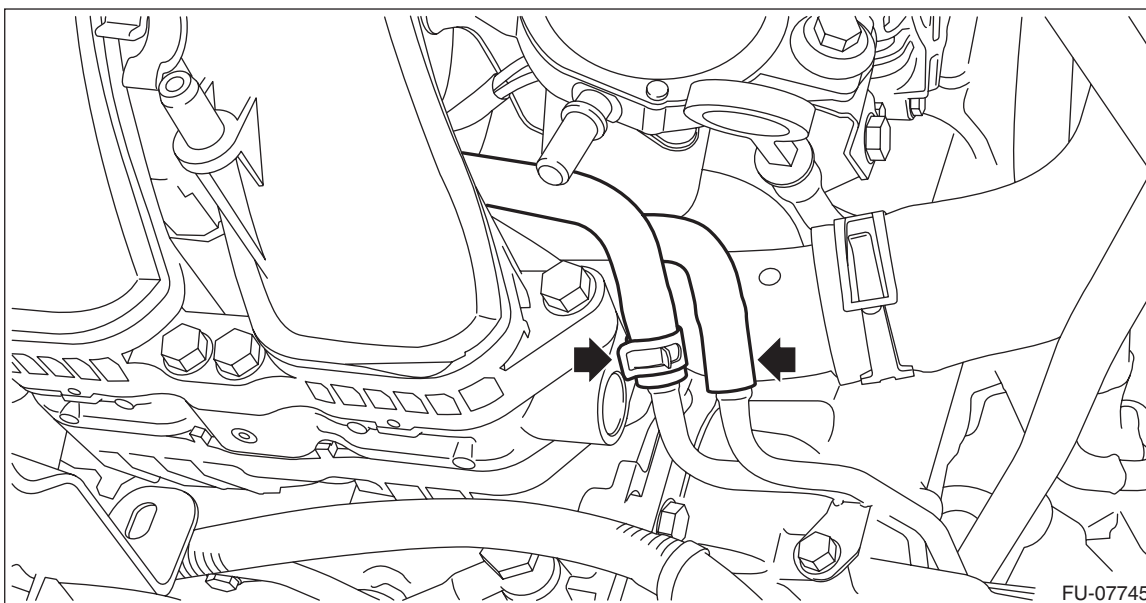
13) Remove the clip, and disconnect the brake booster vacuum hose from the intake manifold.



- 14) Remove the clips securing the PCV pipe and generator cord to the intake manifold.



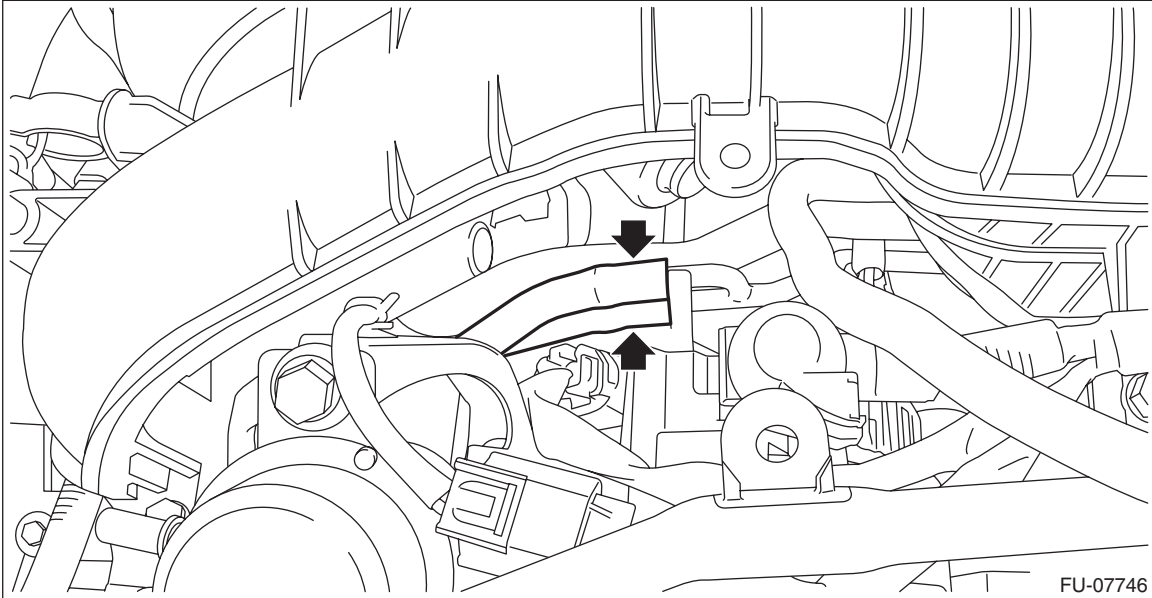
- 15) Disconnect the vacuum control hose and vacuum hose from the vacuum pipe assembly.



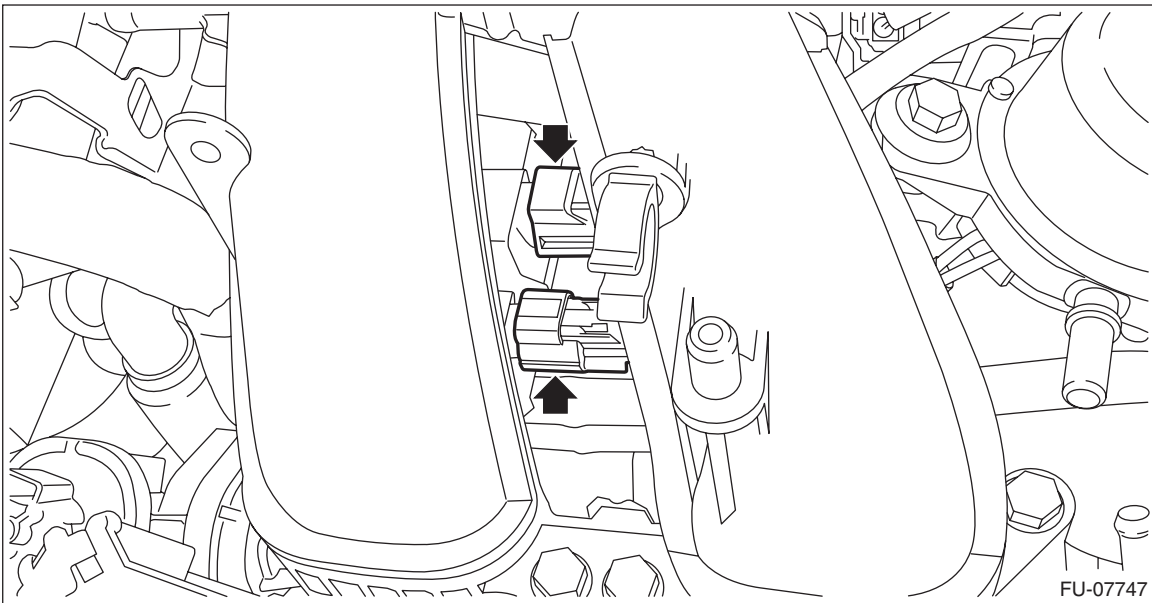
Intake Manifold

FUEL INJECTION (FUEL SYSTEMS)

- 16) Disconnect two vacuum hoses from the canister pipe.



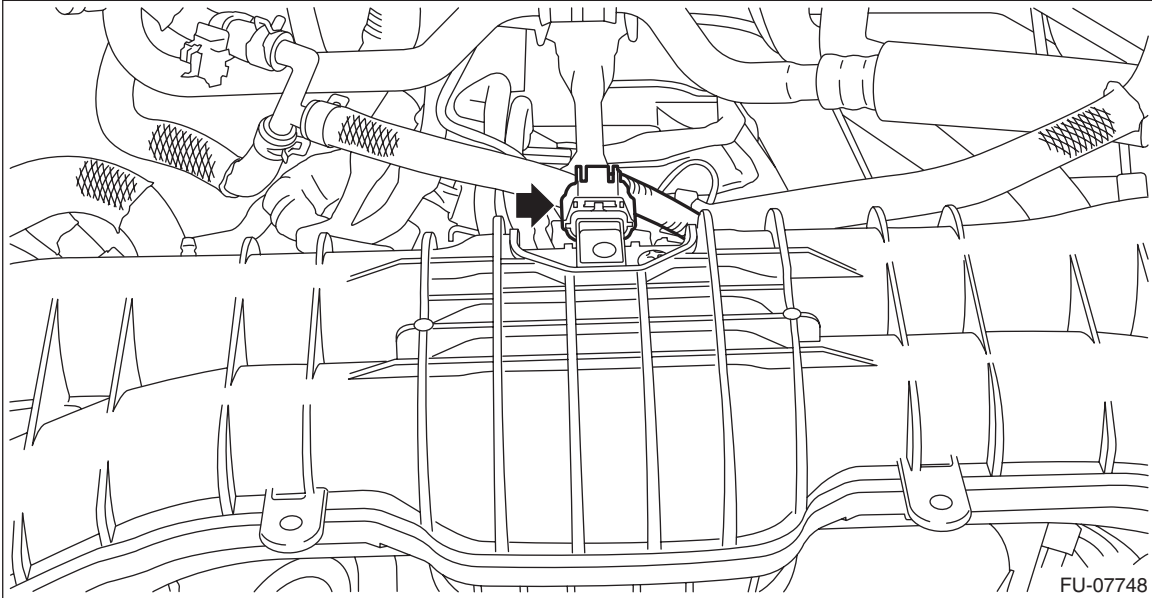
- 17) Disconnect the connector from the purge control solenoid valve.



Intake Manifold

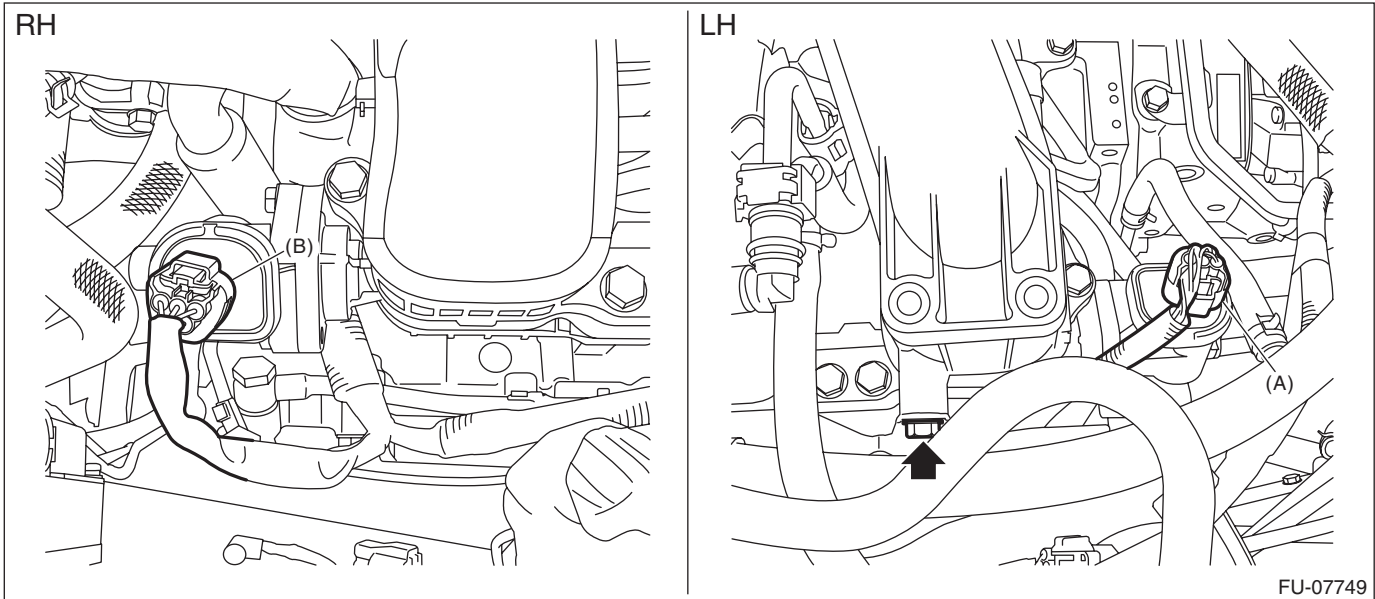
FUEL INJECTION (FUEL SYSTEMS)

- 18) Disconnect the connector from the manifold absolute pressure and intake air temperature sensor.



- 19) Disconnect the connector (A) from the tumble generator valve LH, and remove the bolt securing the fuel pipe protector to the intake manifold.

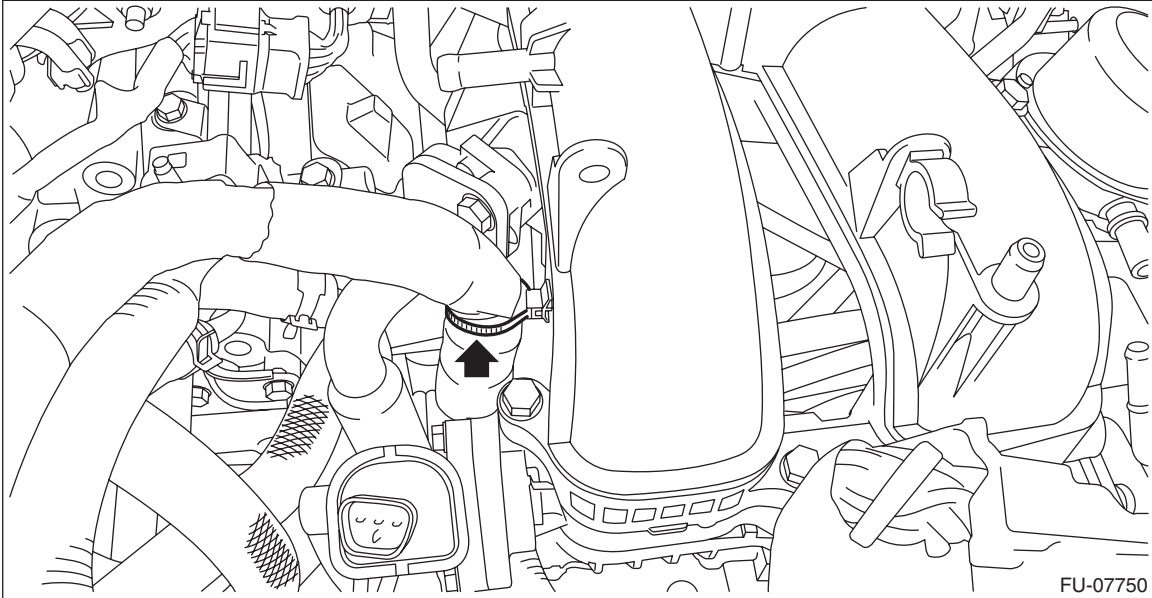
- 20) Disconnect the connector (B) from the tumble generator valve RH.



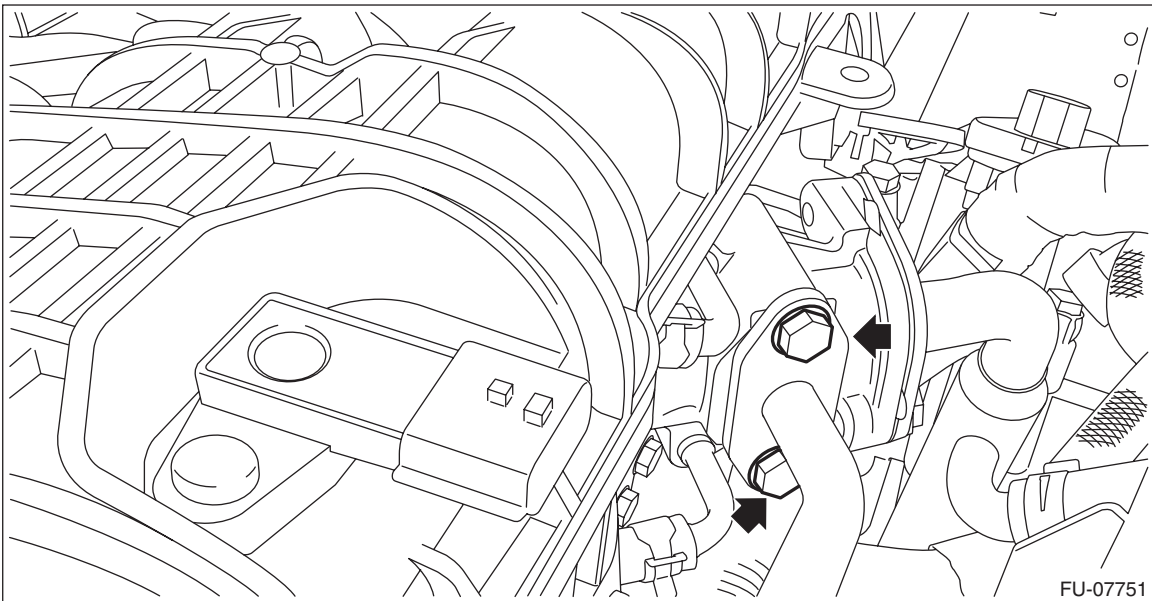
Intake Manifold

FUEL INJECTION (FUEL SYSTEMS)

21) Remove the engine harness clip from the intake manifold.



22) Remove the bolt securing the EGR pipe to the EGR valve.



23) Disconnect the fuel delivery tube and evaporation hose.

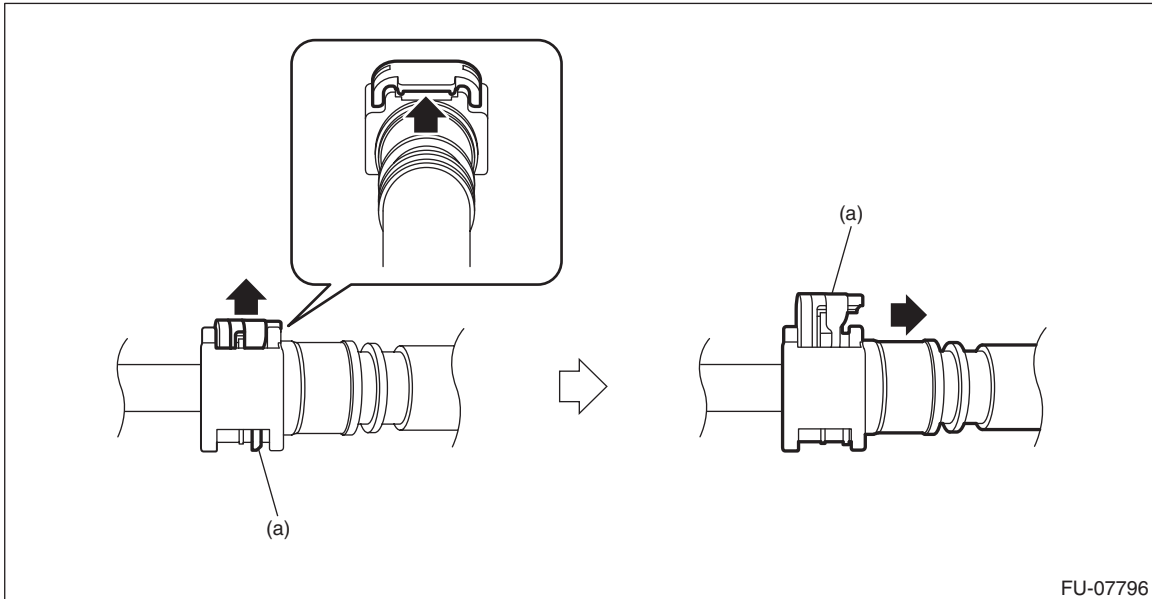
CAUTION:

- Be careful not to spill fuel.
- Catch the fuel from the tubes using a container or cloth.

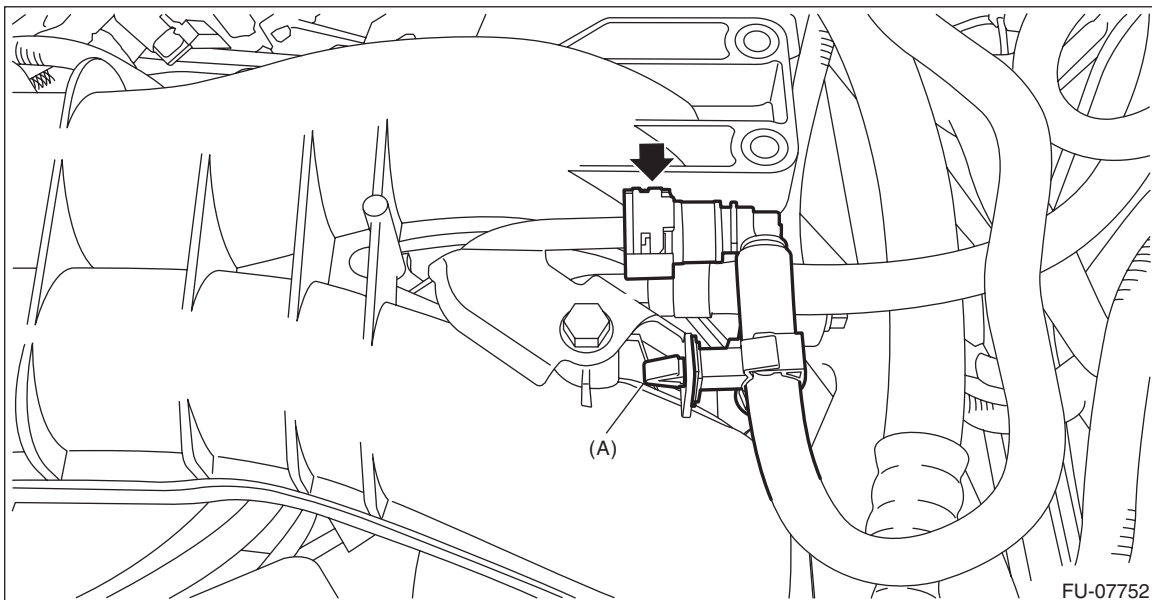
(1) Disconnect the quick connector on the fuel delivery tube from the fuel pipe assembly, and remove the clip (A) securing the fuel delivery tube.

NOTE:

Disconnect the quick connector as shown in the figure.



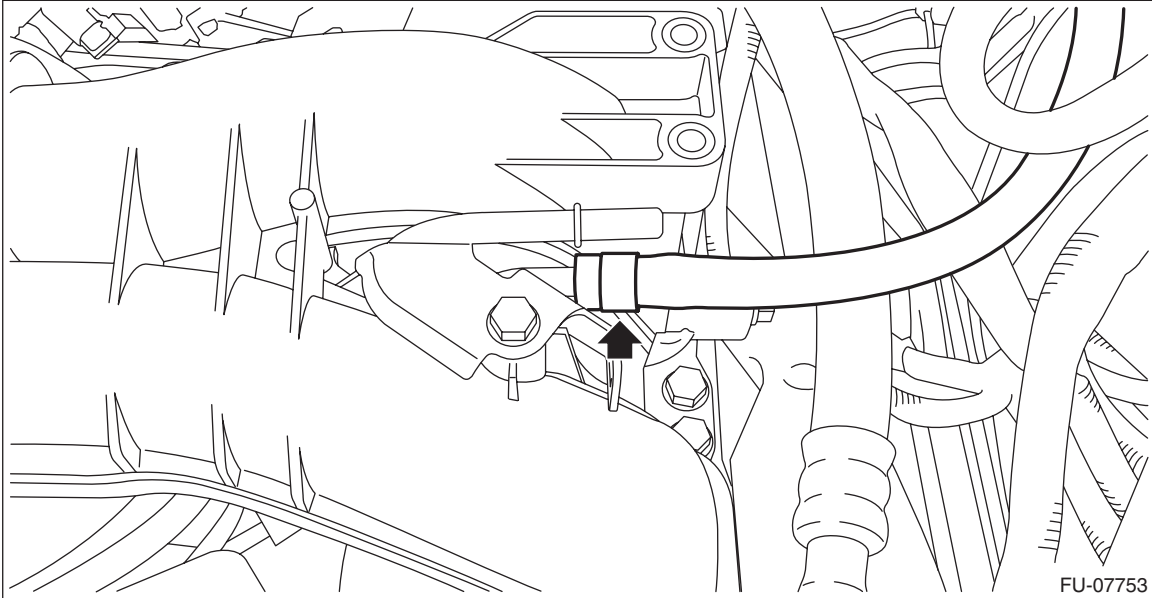
(a) Slider



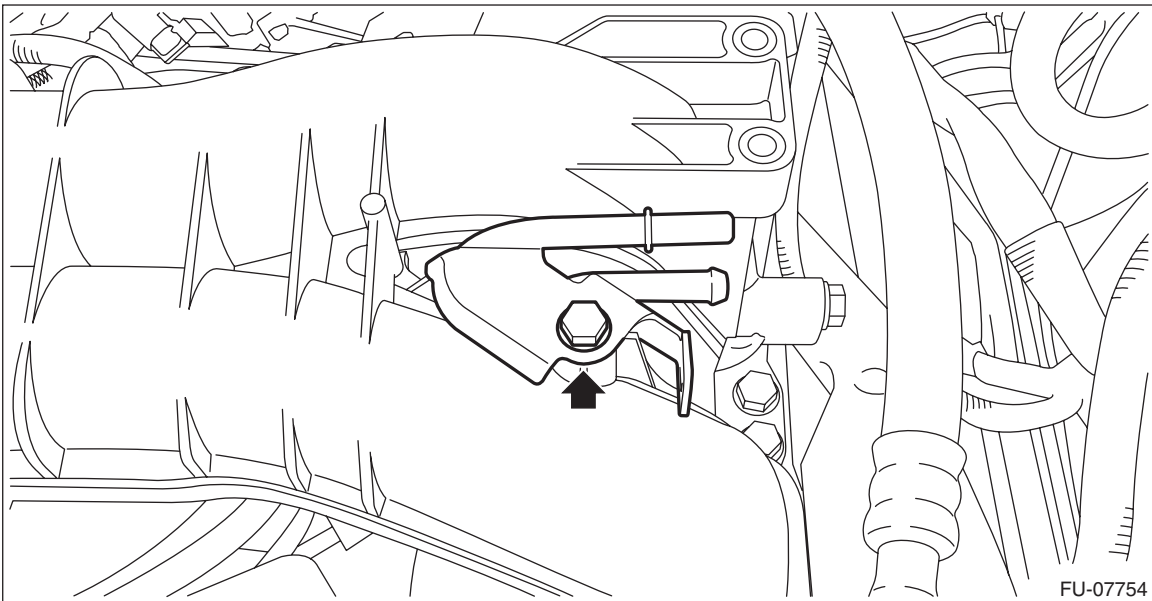
Intake Manifold

FUEL INJECTION (FUEL SYSTEMS)

- (2) Disconnect the evaporation hose from the fuel pipe assembly.



- 24) Remove the bolts securing the fuel pipe assembly to the intake manifold.



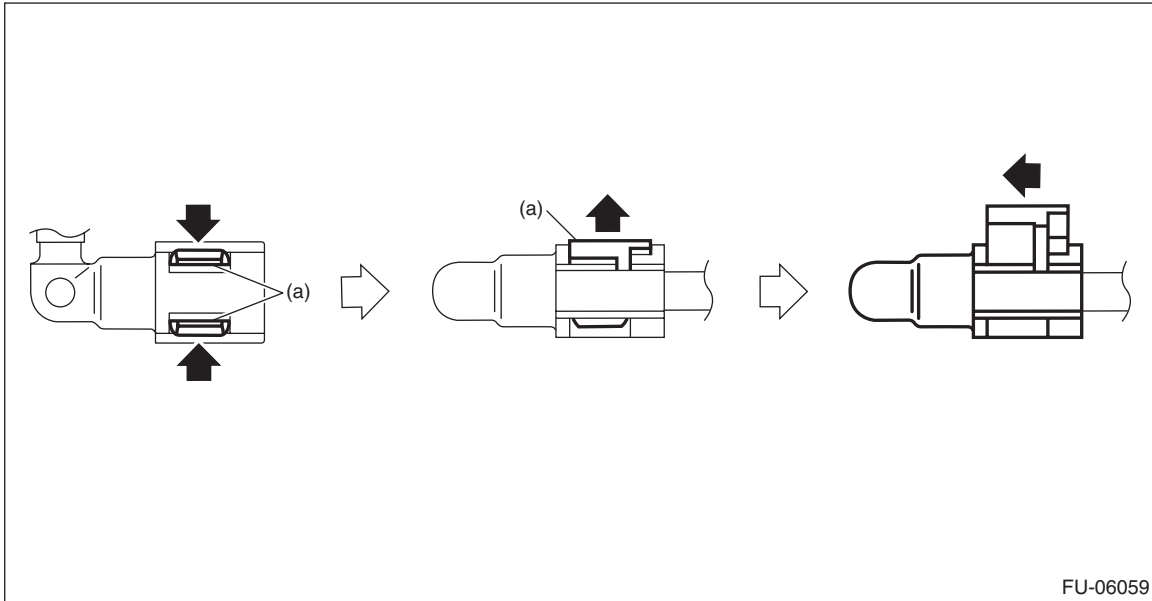
25) Disconnect the fuel delivery pipe (A) and vacuum hose (B), and remove the fuel pipe assembly.

CAUTION:

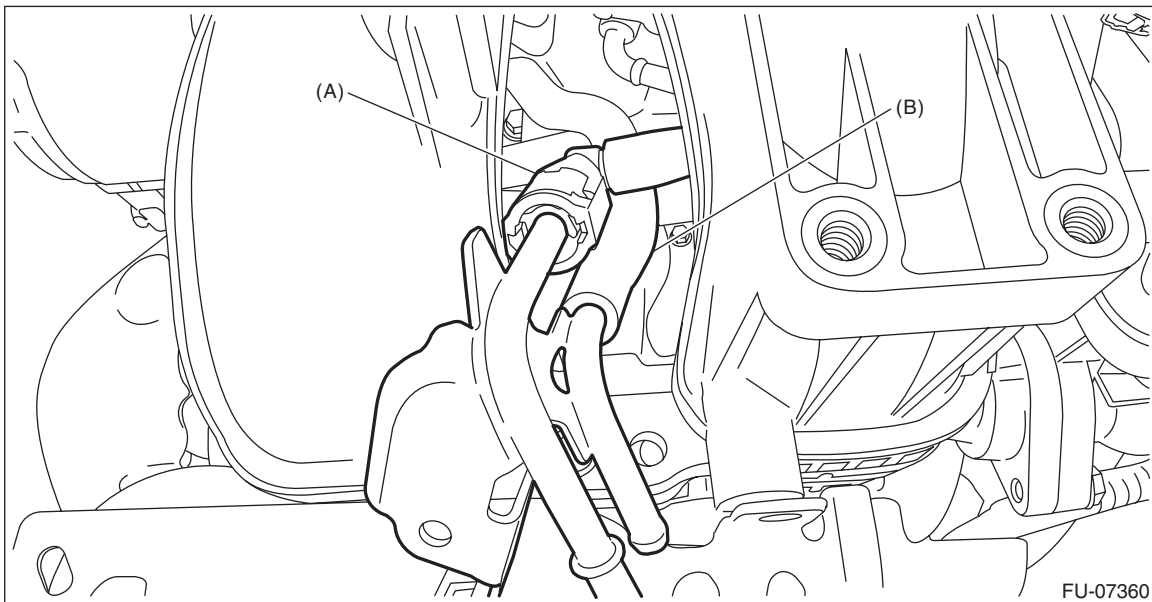
- Be careful not to spill fuel.
- Catch the fuel from the pipes using a container or cloth.

NOTE:

Disconnect the quick connector as shown in the figure.



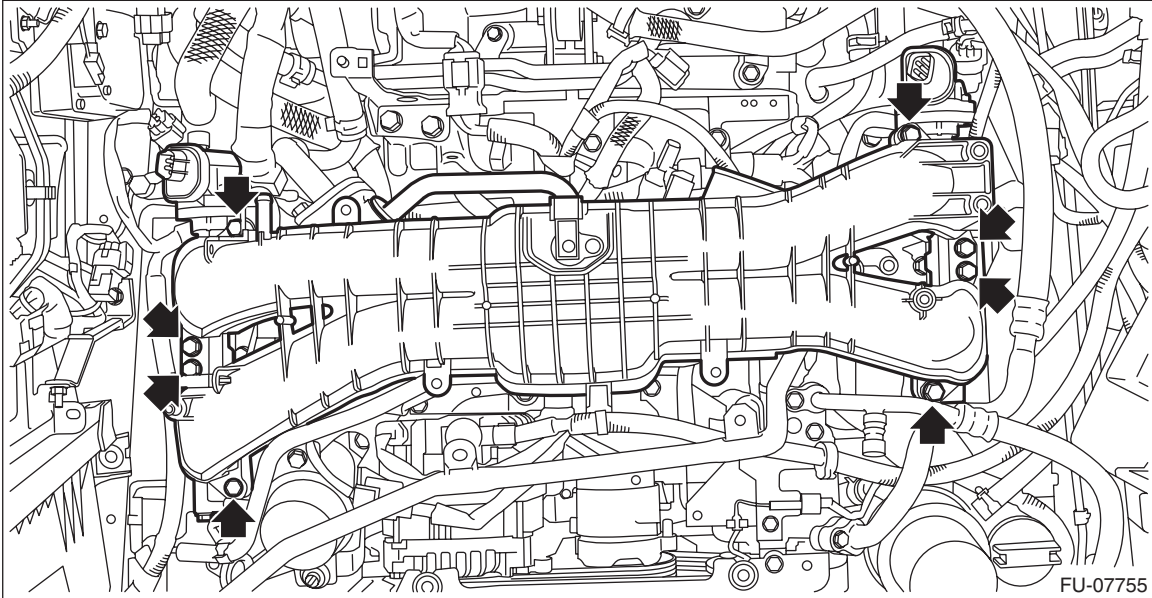
(a) Slider



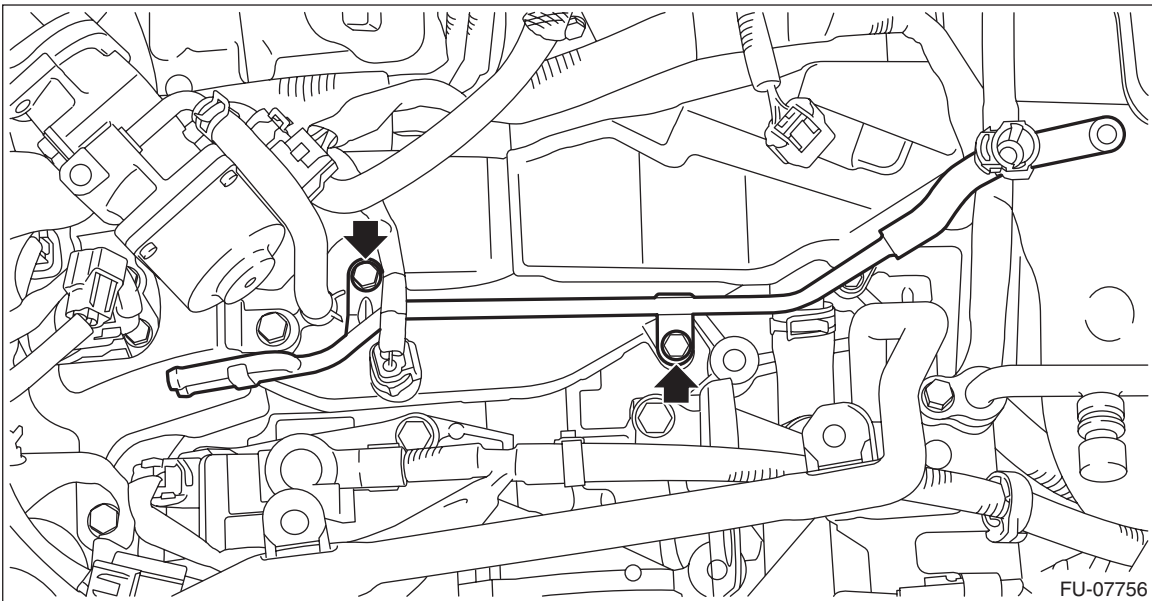
Intake Manifold

FUEL INJECTION (FUEL SYSTEMS)

26) Remove the intake manifold from the cylinder head together with the tumble generator valve assembly.



27) Remove the vacuum hose assembly from the cylinder block.

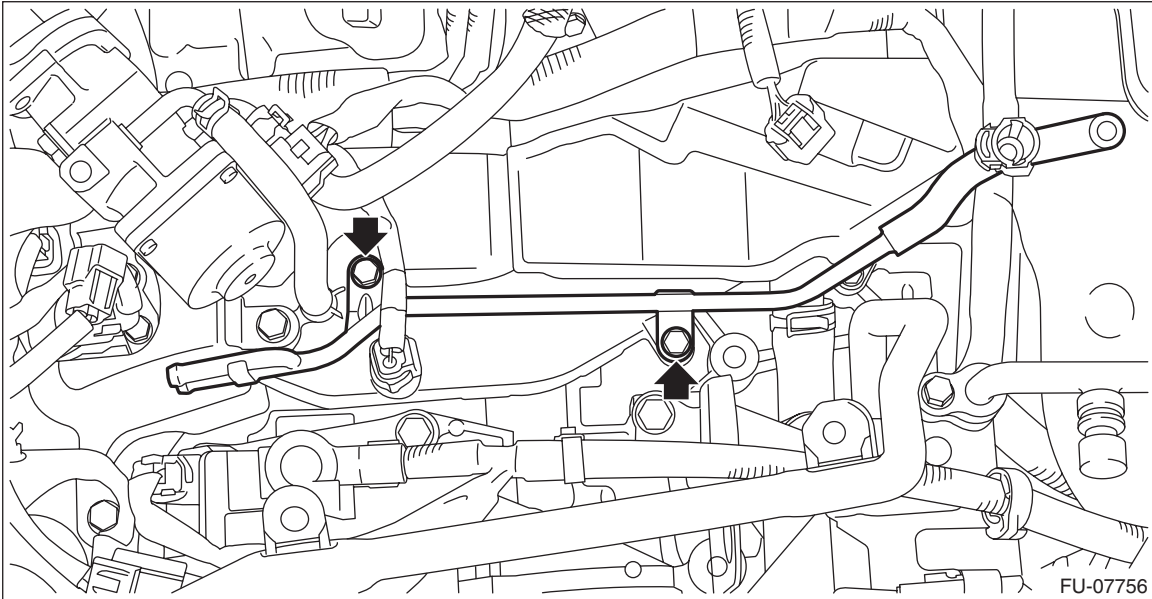


B: INSTALLATION

1) Install the vacuum hose assembly to the cylinder block.

Tightening torque:

6.4 N·m (0.7 kgf-m, 4.7 ft-lb)



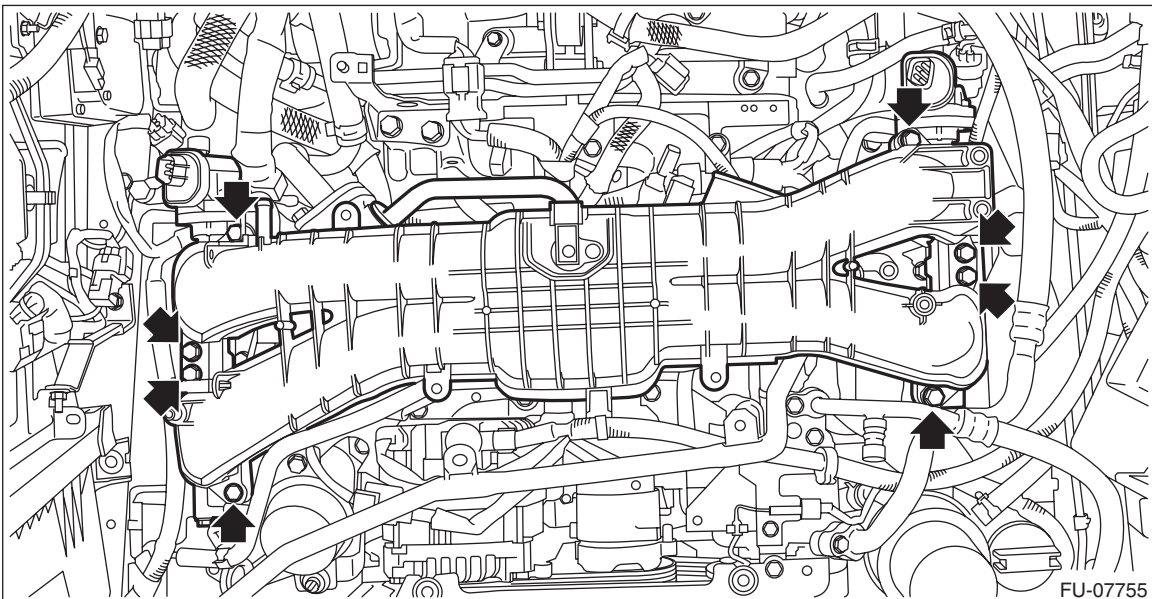
2) Install the tumble generator valve assembly to the cylinder head.

NOTE:

Use a new gasket.

Tightening torque:

25 N·m (2.5 kgf-m, 18.4 ft-lb)



Intake Manifold

FUEL INJECTION (FUEL SYSTEMS)

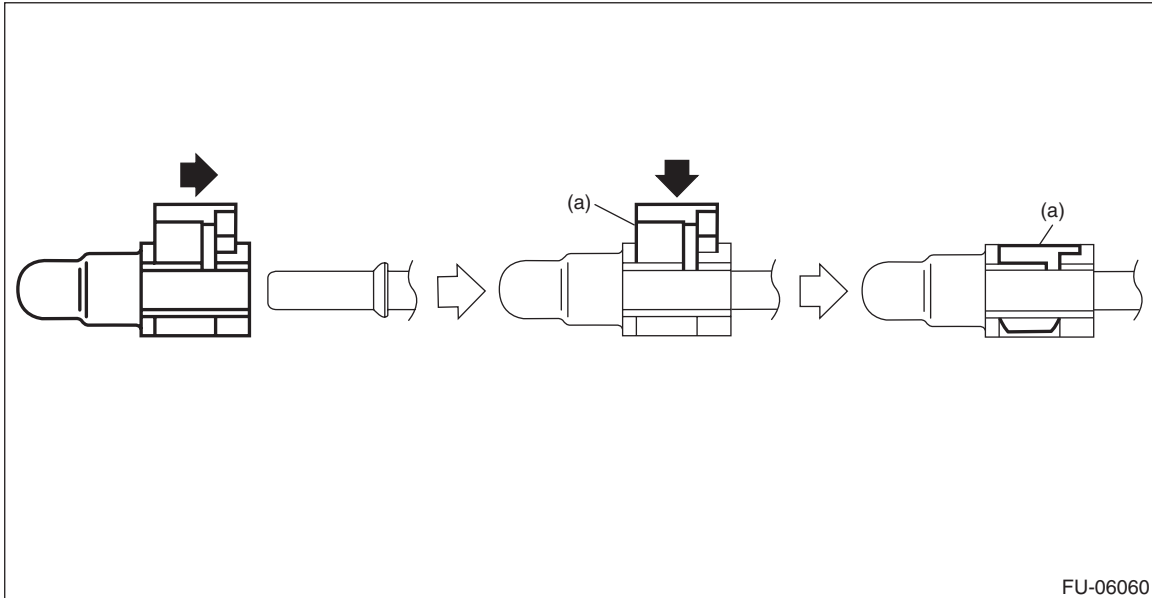
3) Connect the fuel delivery pipe (A) and vacuum hose (B) to the fuel pipe assembly.

CAUTION:

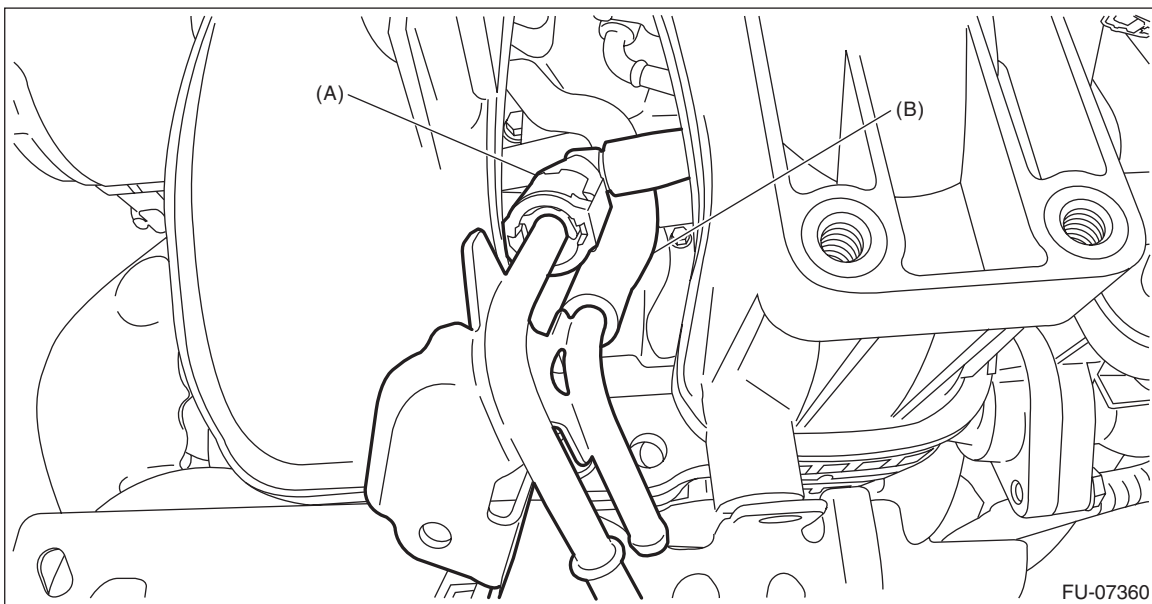
- Check that there is no damage or dust on the quick connector. If necessary, clean the seal surface of the pipe.
- When connecting the quick connector, make sure to insert the pipe all the way in before locking the slider.
- When it is difficult to lock the slider, check that the pipe is fully inserted.
- Make sure that the quick connector is securely connected.

NOTE:

Connect the quick connector as shown in the figure.



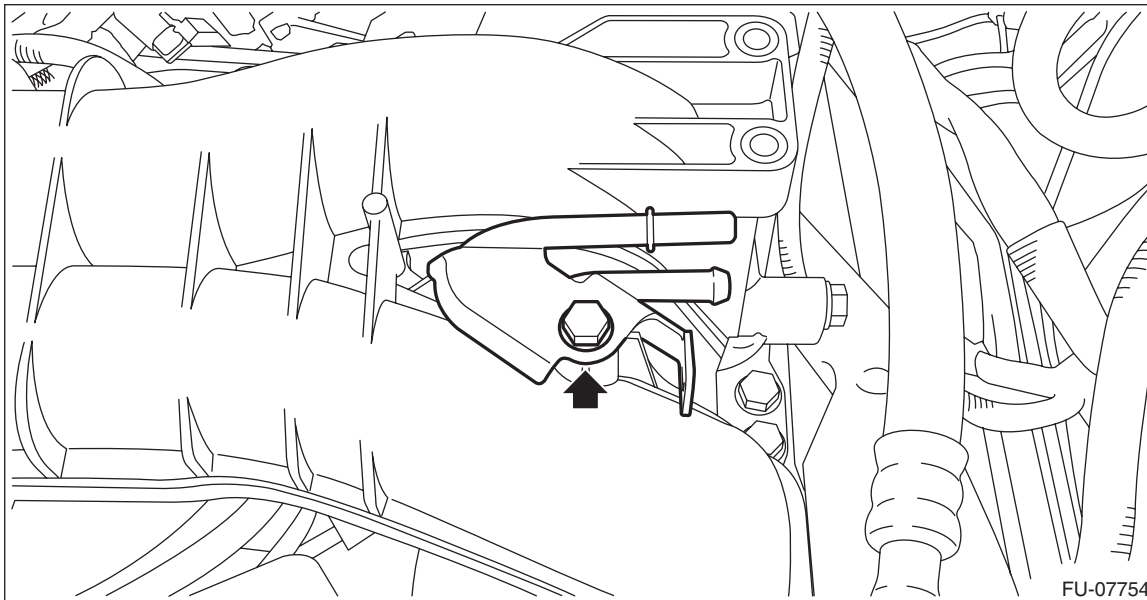
(a) Slider



4) Install the fuel pipe assembly to the intake manifold.

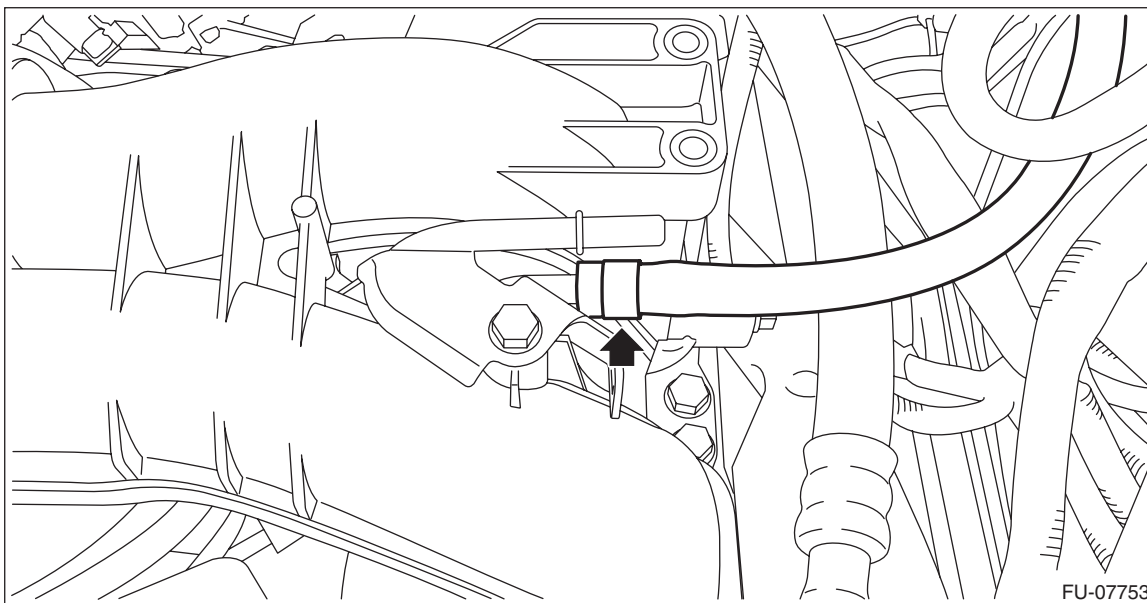
Tightening torque:

6.4 N·m (0.7 kgf-m, 4.7 ft-lb)



5) Connect the fuel delivery tube and evaporation hose.

(1) Connect the evaporation hose to fuel pipe assembly.



Intake Manifold

FUEL INJECTION (FUEL SYSTEMS)

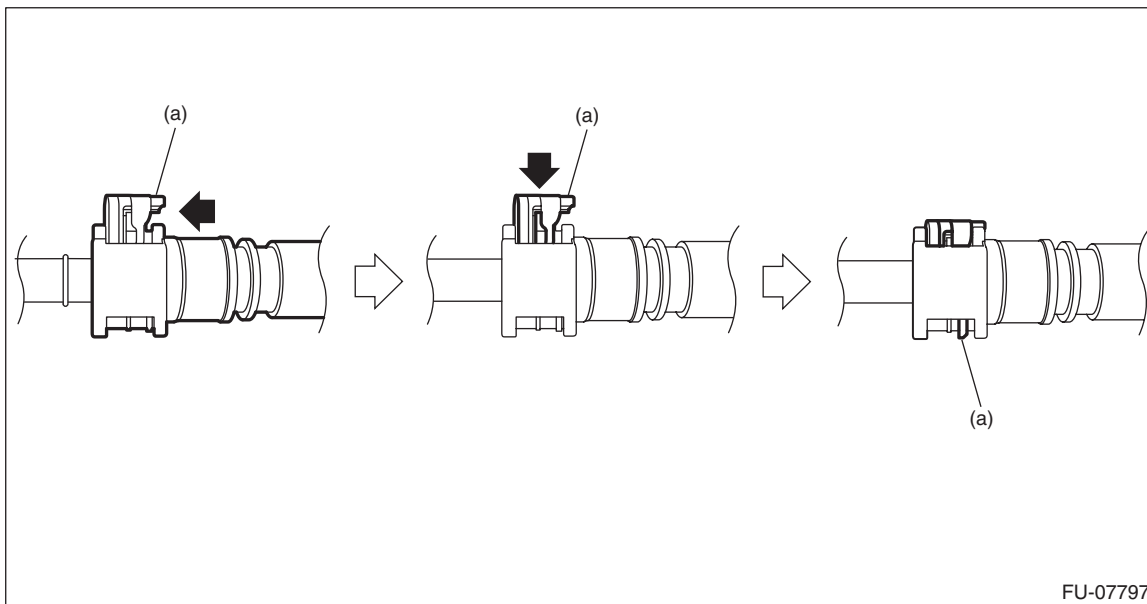
(2) Connect the connector on the fuel delivery tube to the fuel pipe assembly, and secure the fuel delivery tube using clip (A).

CAUTION:

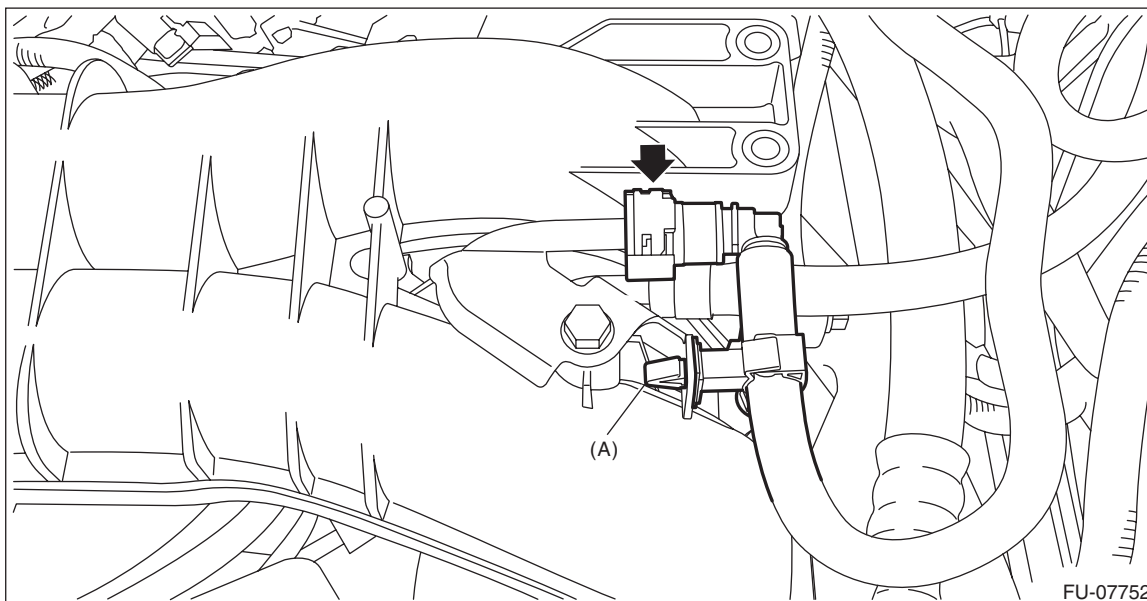
- Check that there is no damage or dust on the quick connector. If necessary, clean the seal surface of the pipe.
- When connecting the quick connector, make sure to insert the pipe all the way in before locking the slider.
- When it is difficult to lock the slider, check that the pipe is fully inserted.
- Make sure that the quick connector is securely connected.

NOTE:

Connect the quick connector as shown in the figure.

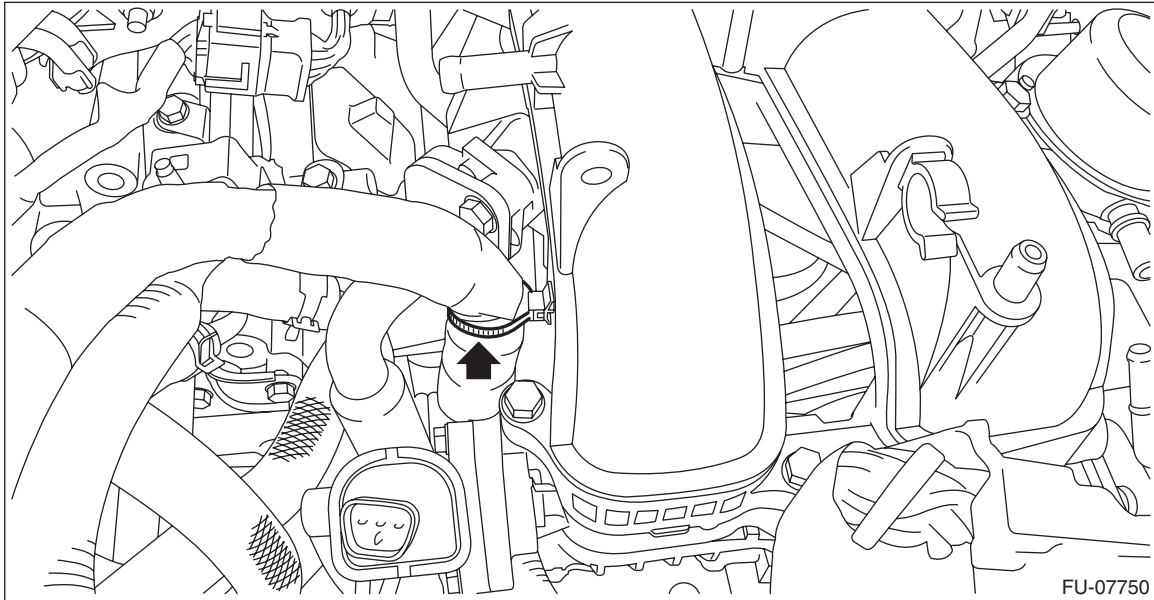


(a) Slider



6) Install the EGR pipe. <Ref. to EC(H4DOTC)-27, INSTALLATION, EGR Pipe.>

- 7) Secure the engine harness to the intake manifold using clip.

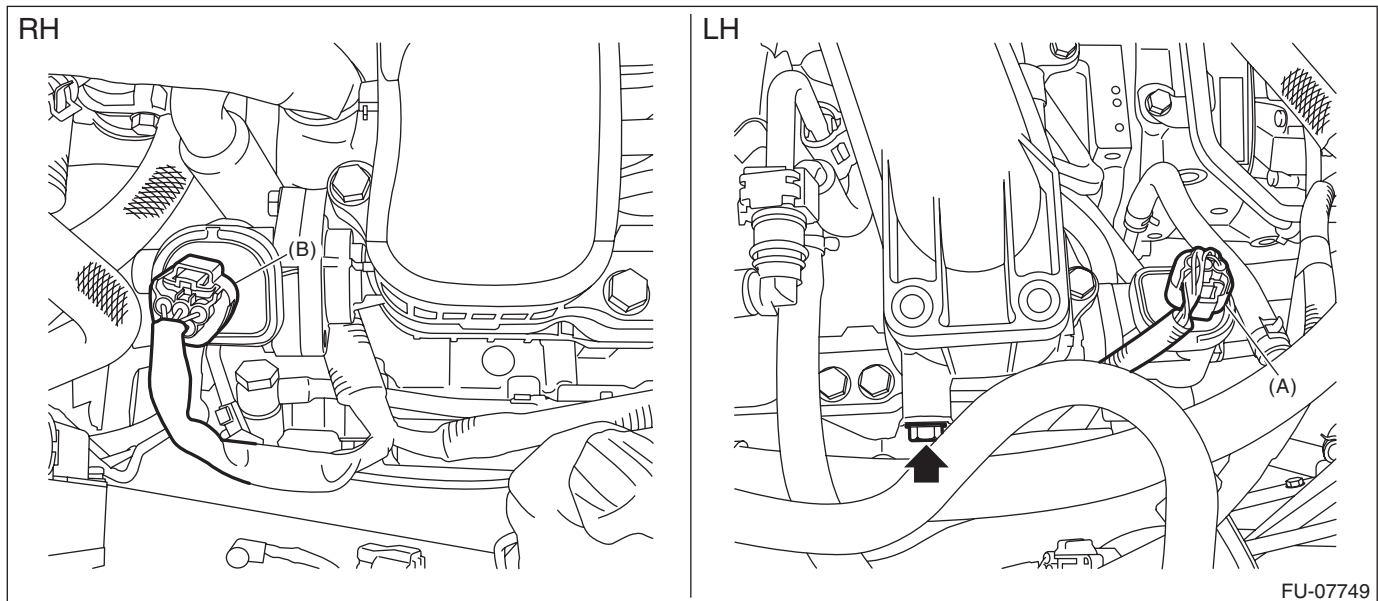


- 8) Connect the connector (B) to the tumble generator valve RH.

- 9) Connect the connector (A) to the tumble generator valve LH, and secure the fuel pipe protector to the intake manifold.

Tightening torque:

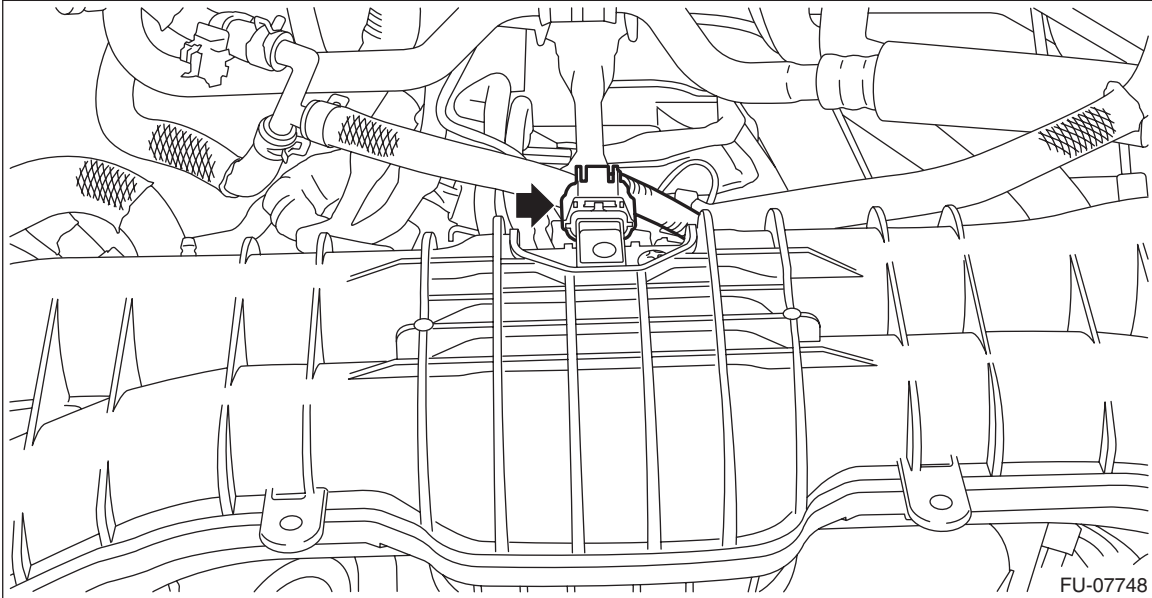
19 N·m (1.9 kgf-m, 14.0 ft-lb)



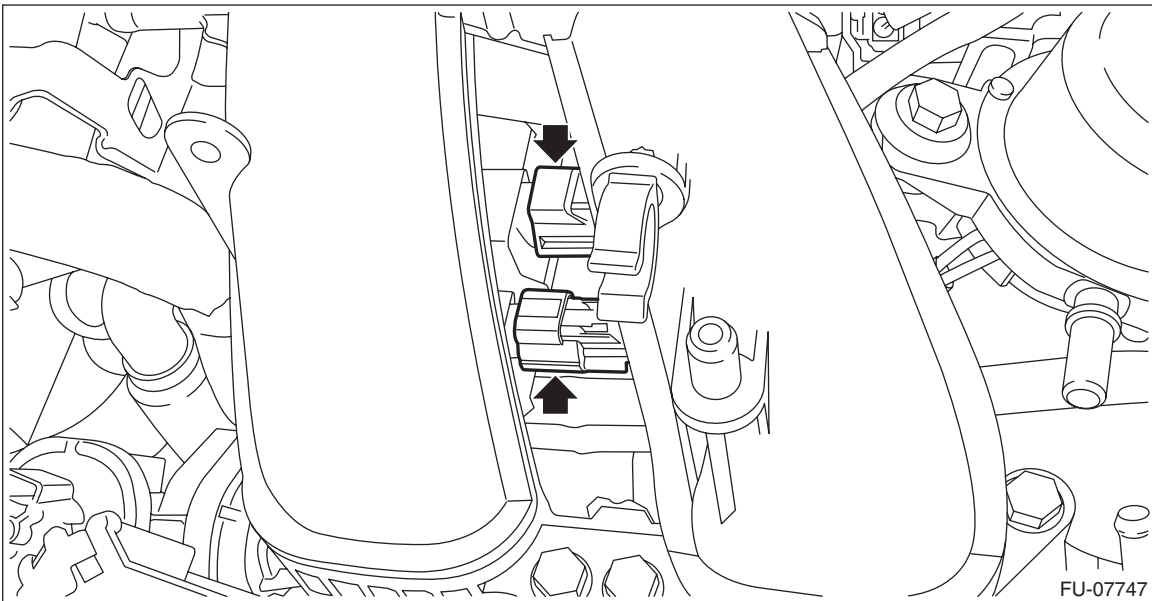
Intake Manifold

FUEL INJECTION (FUEL SYSTEMS)

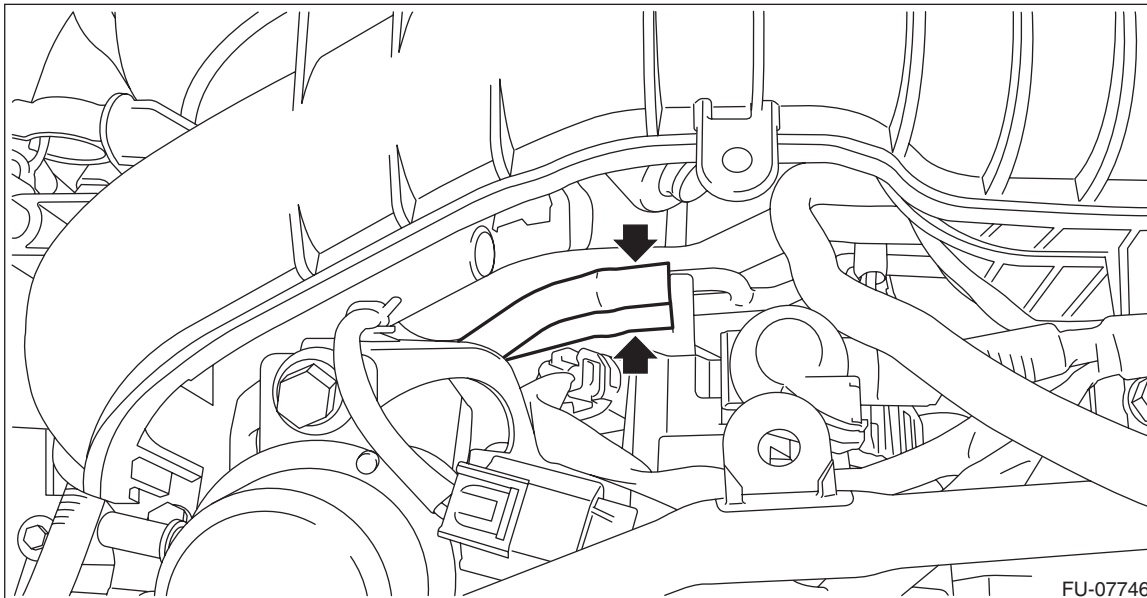
- 10) Connect connectors to the manifold absolute pressure & intake air temperature sensor.



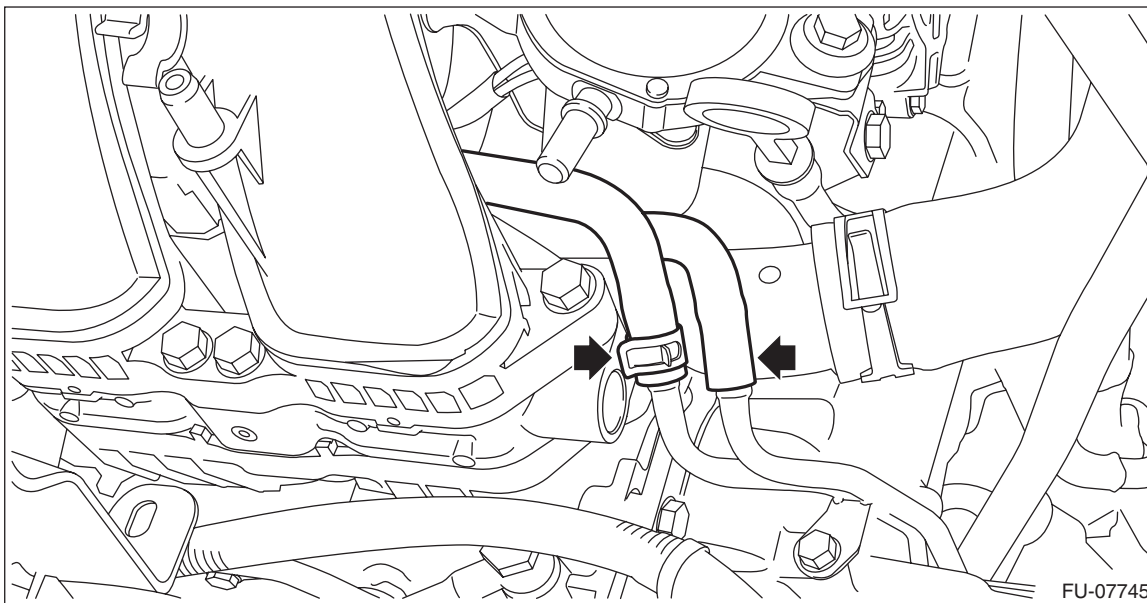
- 11) Connect the connector to the purge control solenoid valve.



12) Connect the vacuum hose to the canister pipe.



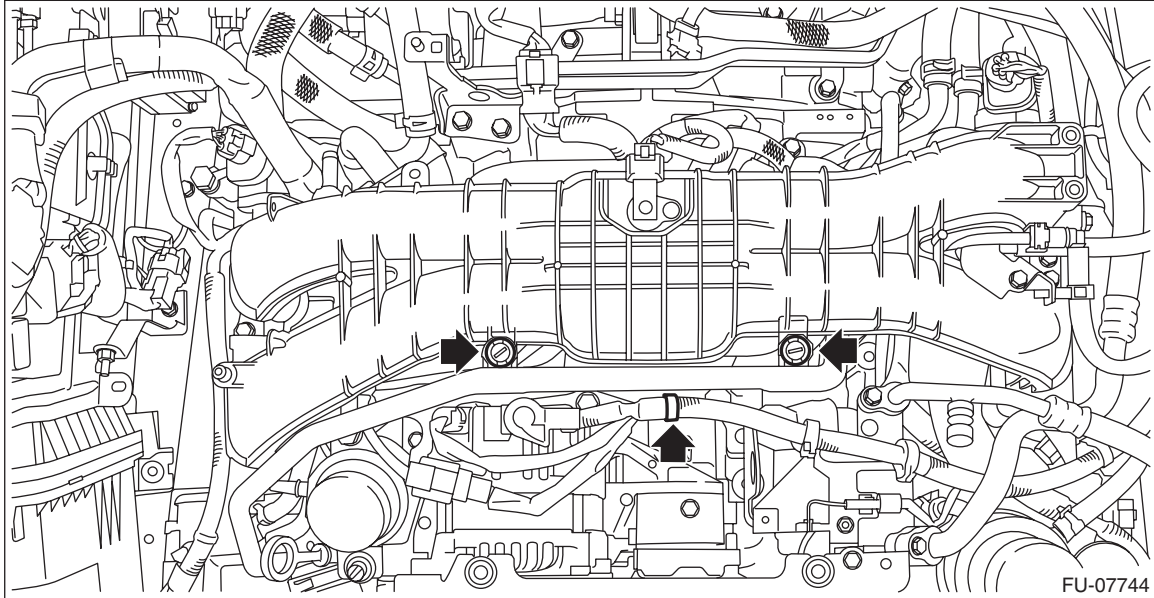
13) Connect the vacuum control hose and vacuum hose to the vacuum pipe assembly.



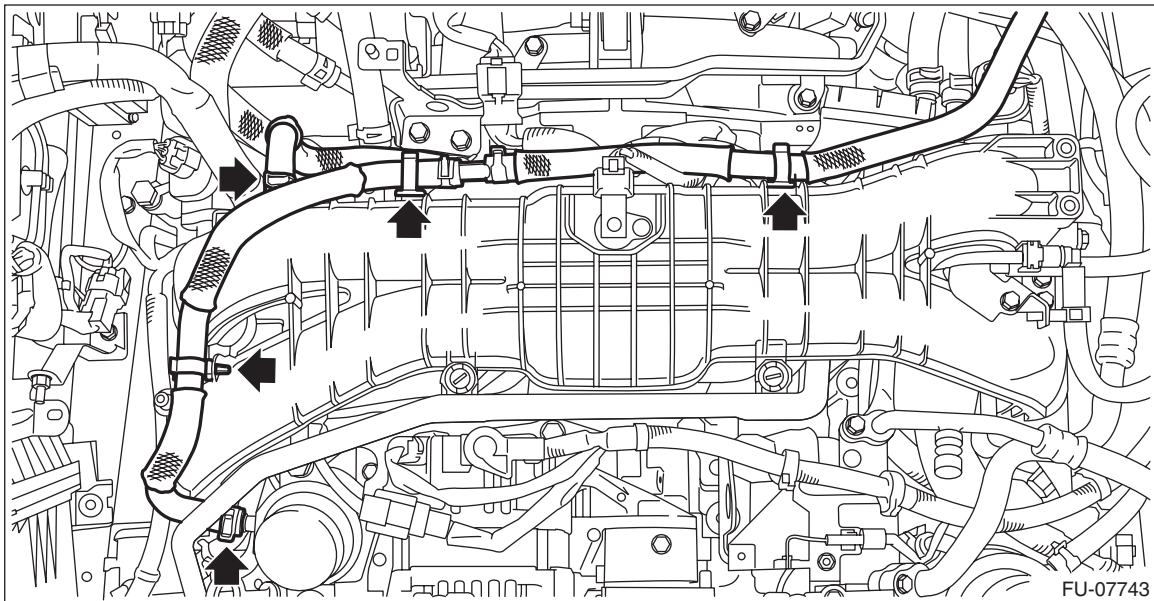
Intake Manifold

FUEL INJECTION (FUEL SYSTEMS)

- 14) Secure the PCV pipe and generator cord to the intake manifold using the clip.



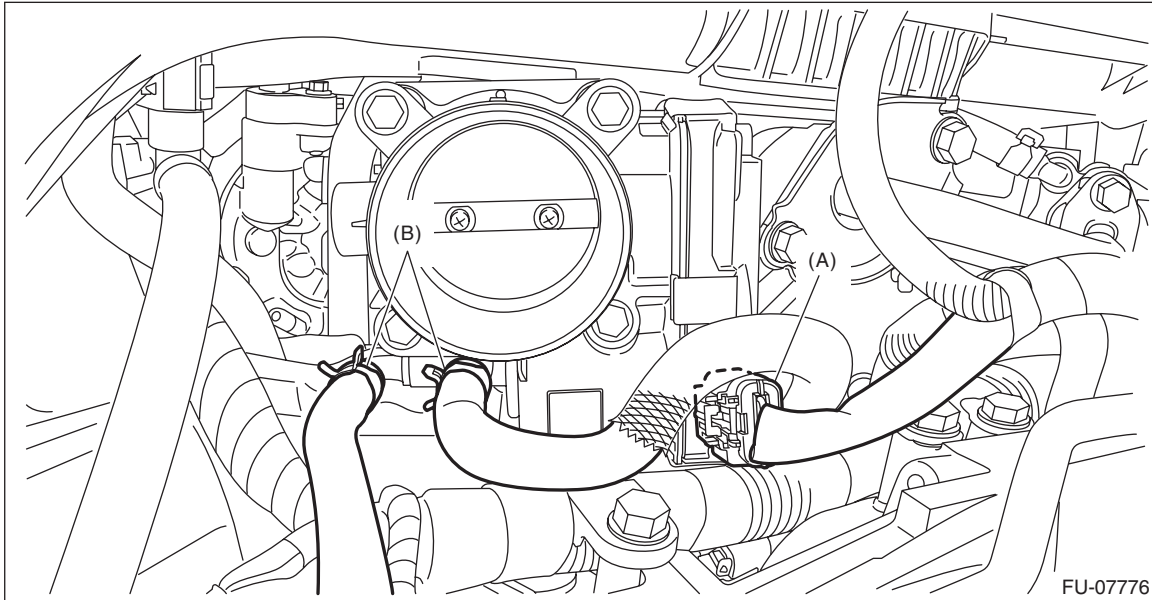
- 15) Connect the brake booster vacuum hose to the intake manifold.



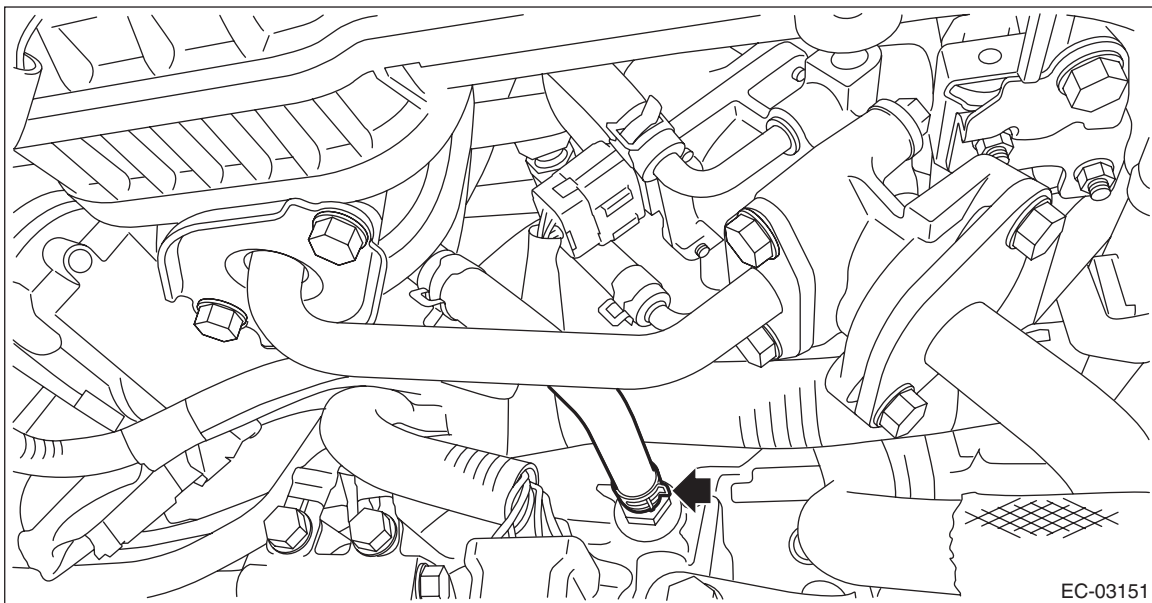
Intake Manifold

FUEL INJECTION (FUEL SYSTEMS)

- 16) Connect the preheater hose (B) to the throttle body, and connect the connector (A) to the throttle body.



- 17) Connect the PCV hose to the PCV valve.



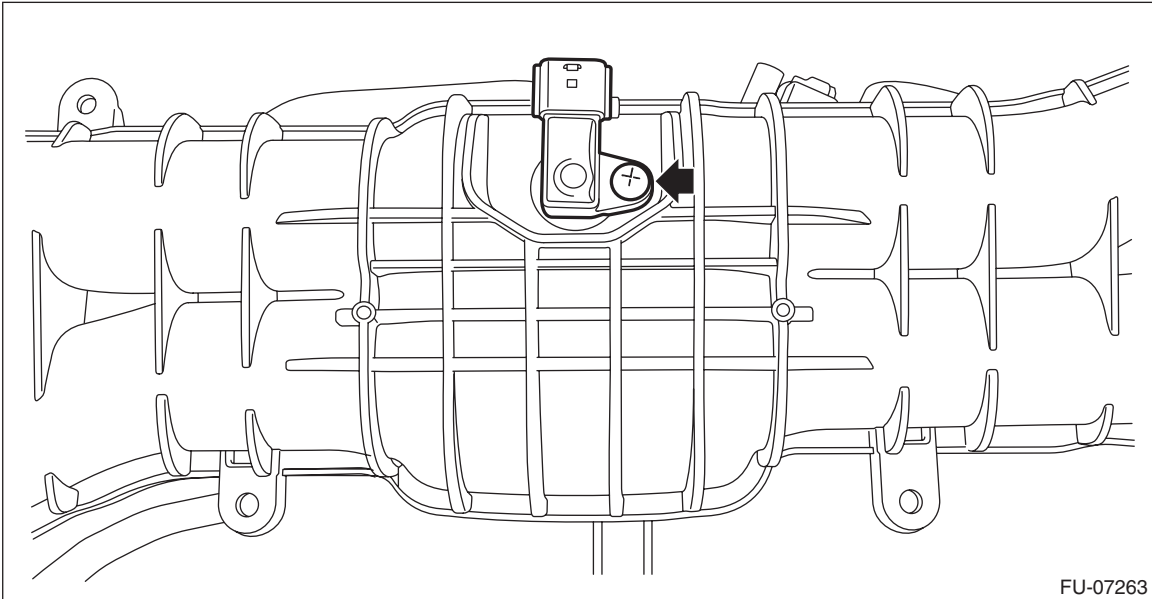
- 18) Install the intake duct No. 3. <Ref. to IN(H4DOTC)-31, INTAKE DUCT NO. 3, INSTALLATION, Intake Duct.>
19) Install the intake duct No. 2. <Ref. to IN(H4DOTC)-29, INTAKE DUCT NO. 2, INSTALLATION, Intake Duct.>
20) Install the intercooler. <Ref. to IN(H4DOTC)-37, INSTALLATION, Intercooler.>
21) Install the air intake duct (rear). <Ref. to IN(H4DOTC)-19, INSTALLATION, Air Intake Duct.>
22) Fill engine coolant. <Ref. to CO(H4DOTC)-14, FILLING OF ENGINE COOLANT, REPLACEMENT, Engine Coolant.>
23) Install the under cover. <Ref. to EI-22, INSTALLATION, Front Under Cover.>
24) Lower the vehicle.
25) Connect the battery ground terminal.
26) Install the collector cover.

Intake Manifold

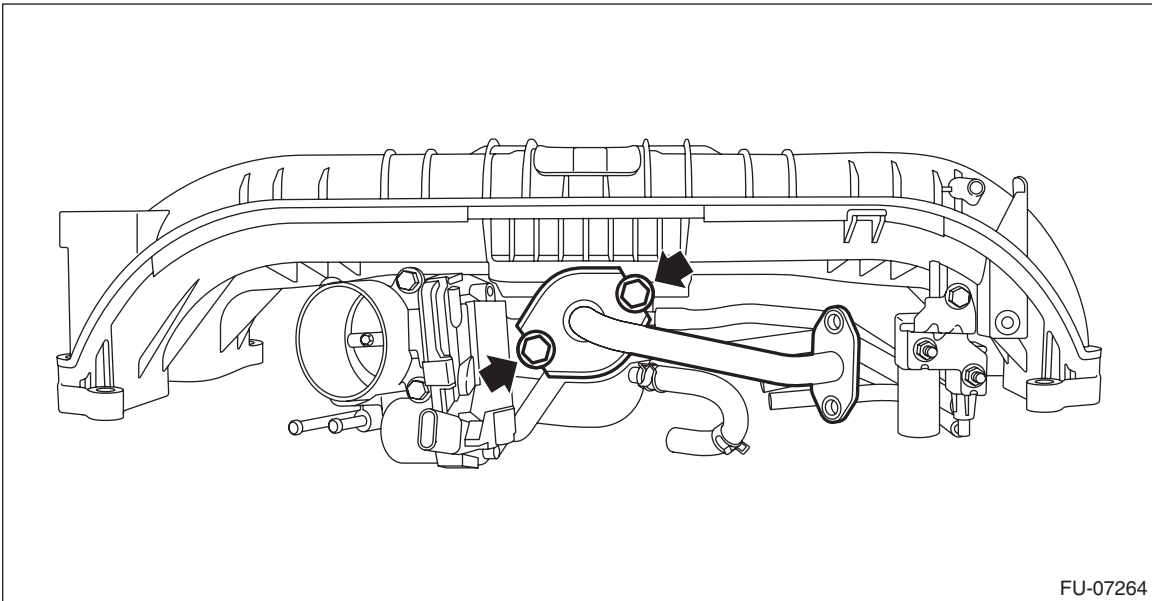
FUEL INJECTION (FUEL SYSTEMS)

C: DISASSEMBLY

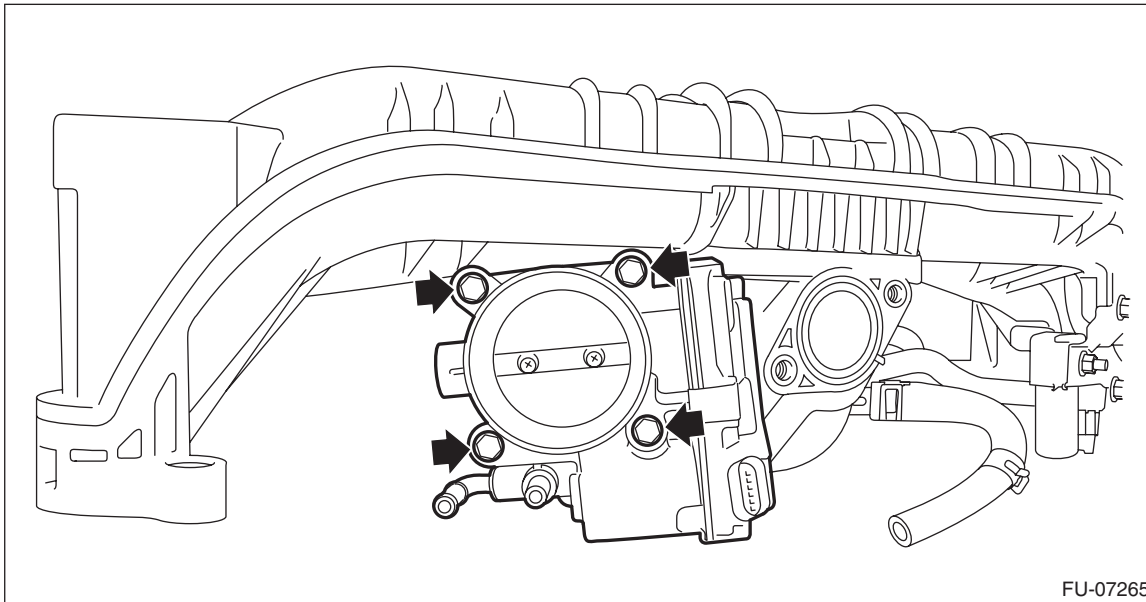
- 1) Remove the manifold absolute pressure & intake air temperature sensor from the intake manifold.



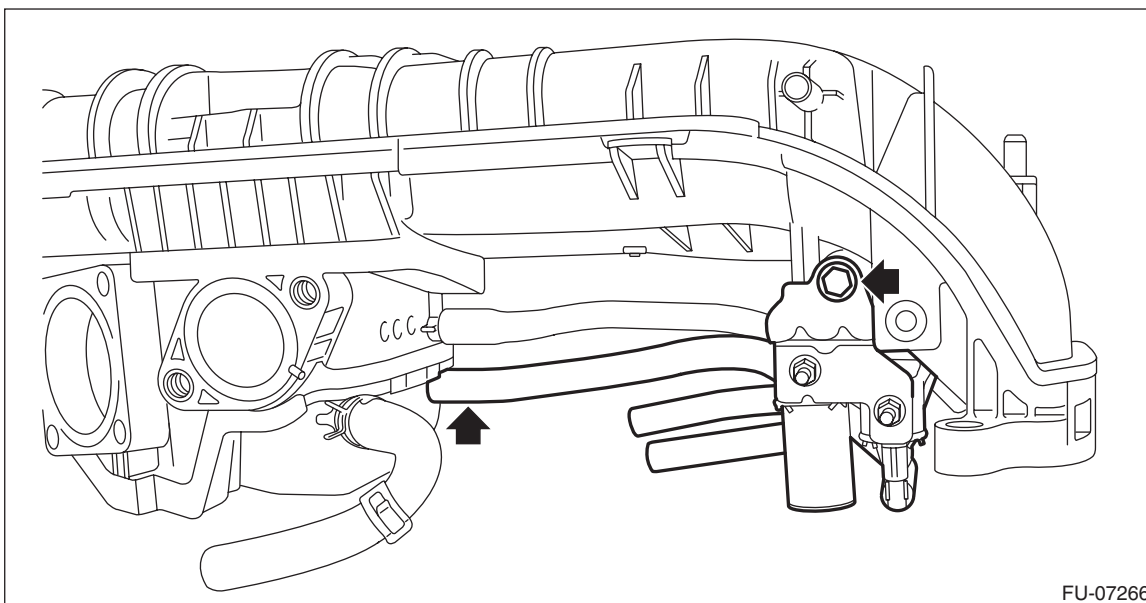
- 2) Remove the EGR pipe from intake manifold.



- 3) Remove the throttle body from the intake manifold.



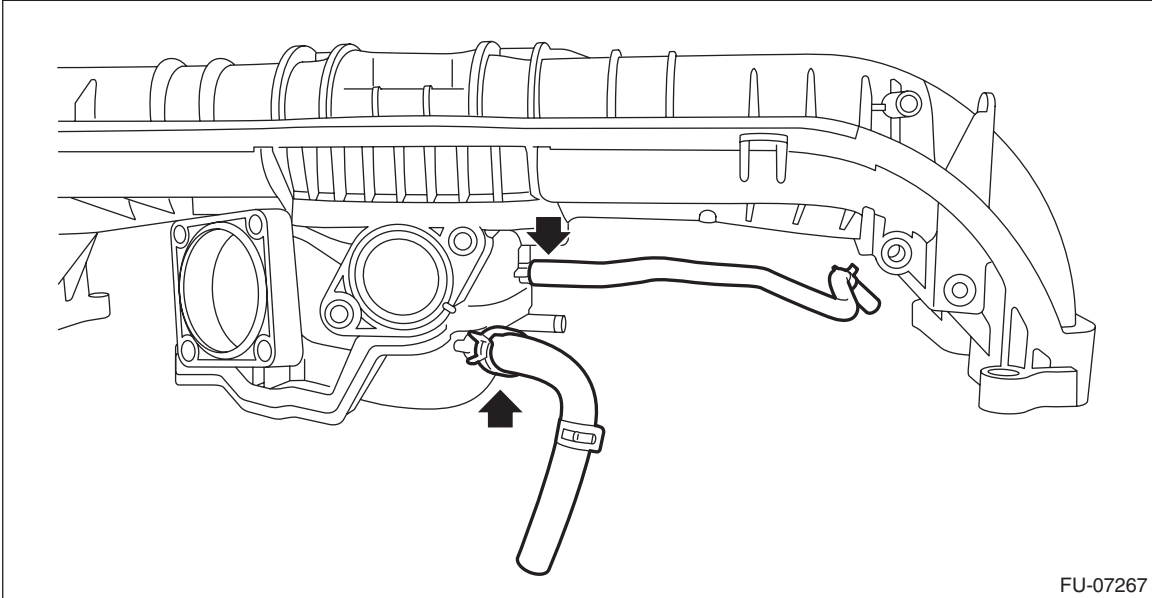
- 4) Disconnect the vacuum hose from the intake manifold, and remove the purge control solenoid valve.



Intake Manifold

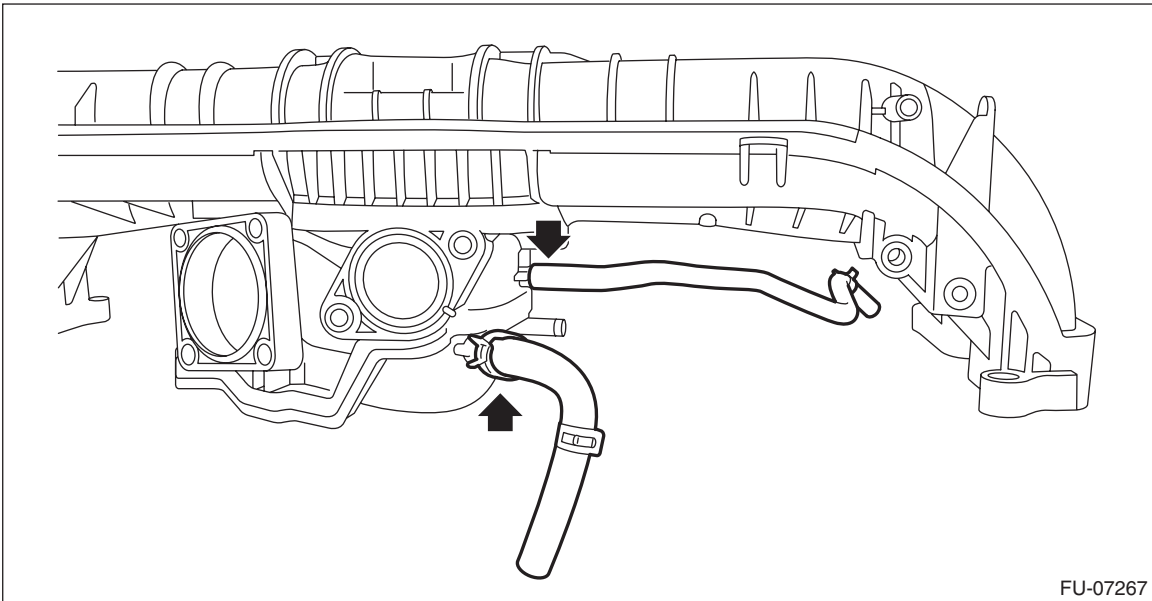
FUEL INJECTION (FUEL SYSTEMS)

- 5) Disconnect the PCV hose and vacuum control hose from the intake manifold.



D: ASSEMBLY

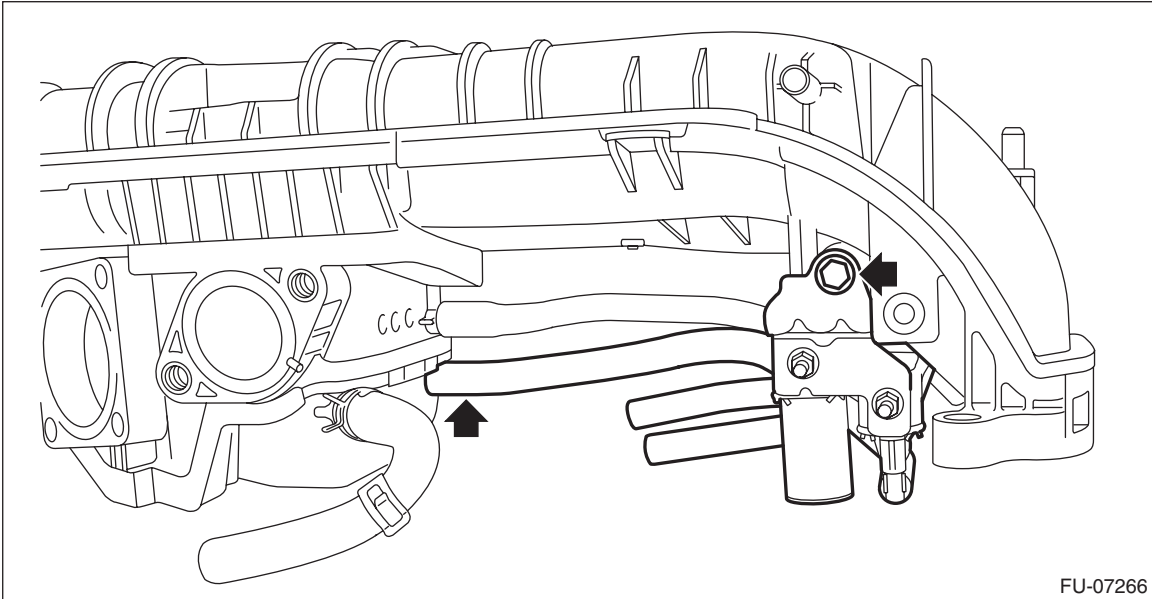
- 1) Connect the PCV hose and vacuum control hose to intake manifold.



- 2) Connect the vacuum hose to the intake manifold, and install the purge control solenoid valve.

Tightening torque:

19 N·m (1.9 kgf-m, 14.0 ft-lb)



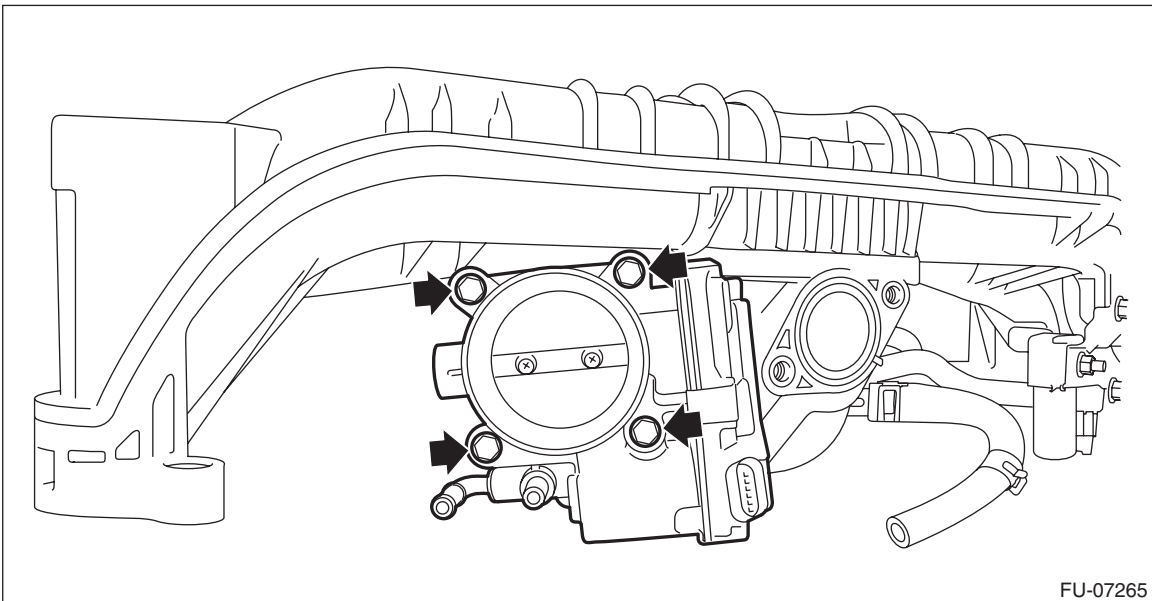
- 3) Install the throttle body to the intake manifold.

NOTE:

Use a new gasket.

Tightening torque:

8 N·m (0.8 kgf-m, 5.9 ft-lb)



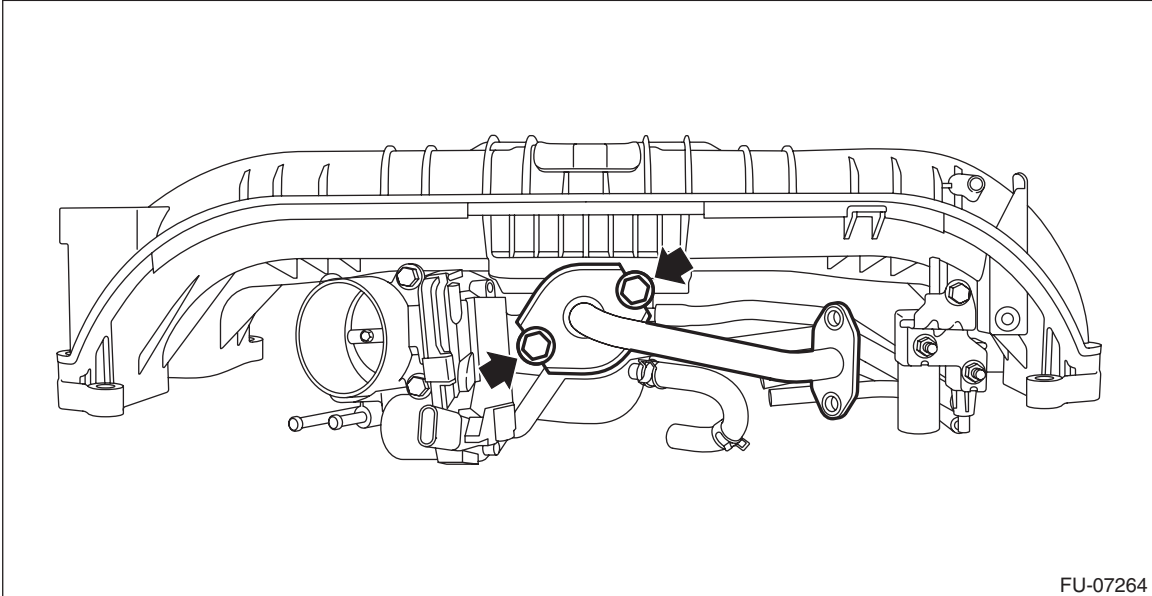
Intake Manifold

FUEL INJECTION (FUEL SYSTEMS)

4) Temporarily install the EGR pipe to the intake manifold.

NOTE:

- Use new O-rings.
- Tighten the EGR pipe when installing the intake manifold. <Ref. to EC(H4DOTC)-27, INSTALLATION, EGR Pipe.>



FU-07264

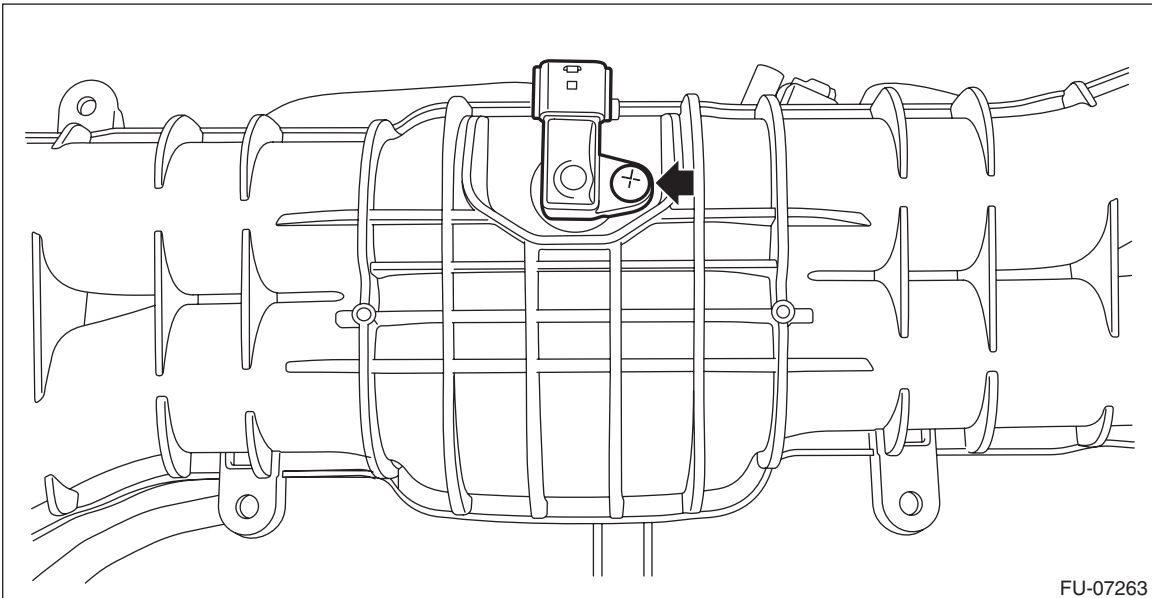
5) Install the manifold absolute pressure & intake air temperature sensor to the intake manifold.

NOTE:

Use new O-rings.

Tightening torque:

3.5 N·m (0.3 kgf-m, 2.5 ft-lb)



FU-07263

E: INSPECTION

- 1) Check that the intake manifold and fuel pipe have no deformation, cracks and other damages.
- 2) Check that the hose has no cracks, damage or loose part.