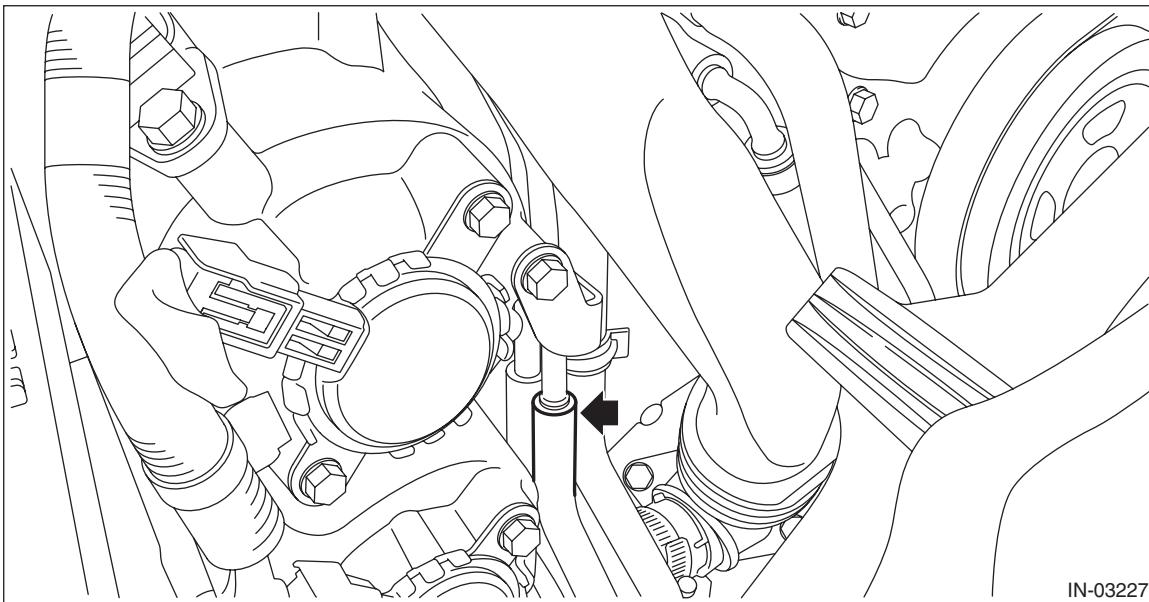


6. Intake Duct

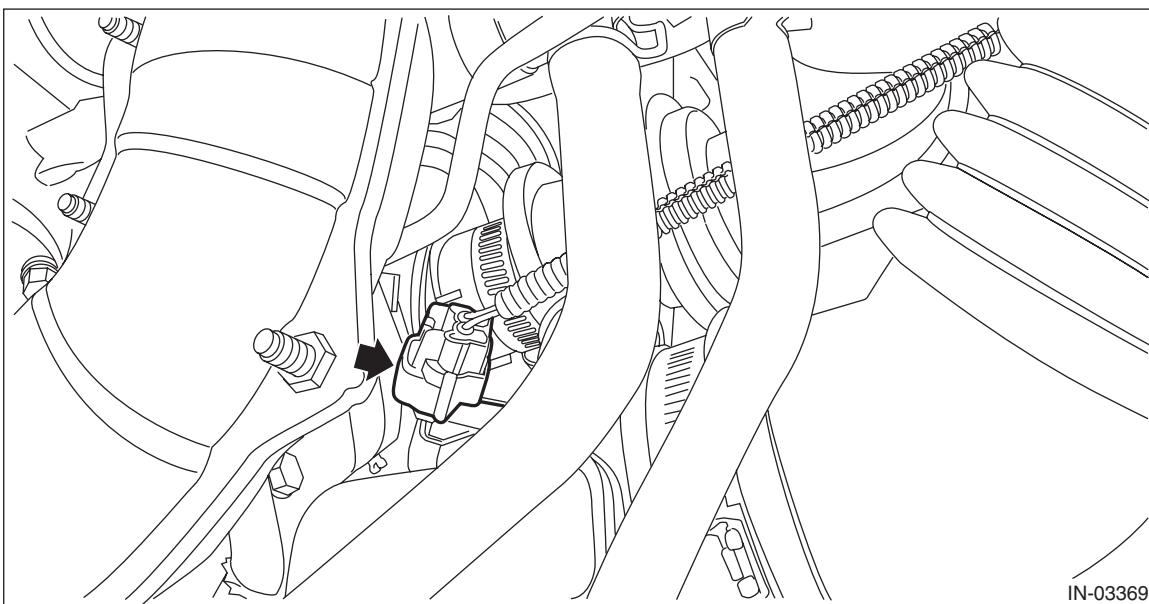
A: REMOVAL

1. INTAKE DUCT NO. 1

- 1) Disconnect the ground cable from battery.
- 2) Remove the air intake duct (rear). <Ref. to IN(H4DOTC)-19, REMOVAL, Air Intake Duct.>
- 3) Disconnect the vacuum hose from vacuum pipe.



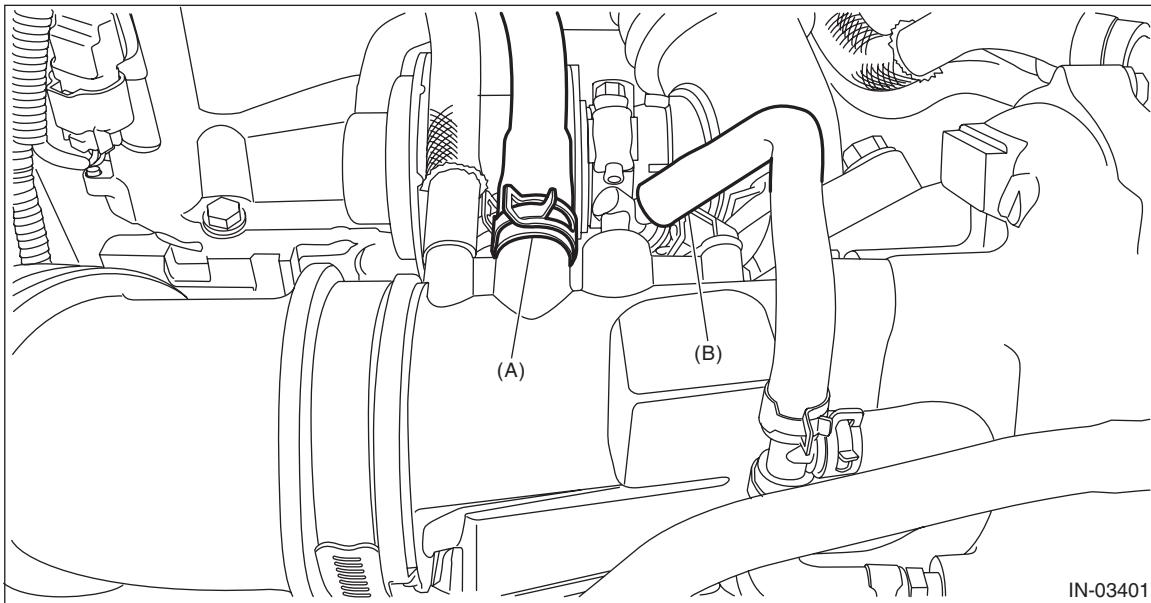
- 4) Lift up the vehicle.
- 5) Remove the under cover. <Ref. to EI-22, REMOVAL, Front Under Cover.>
- 6) Disconnect the connector from the wastegate control solenoid valve.



Intake Duct

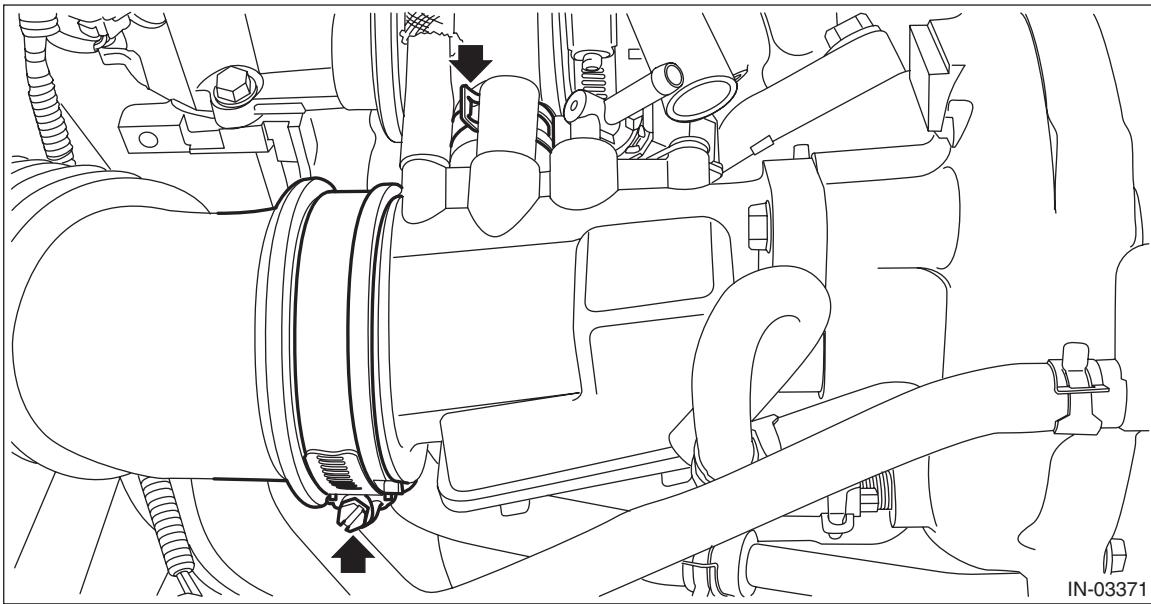
INTAKE (INDUCTION)

7) Disconnect the PCV pipe (A) from the intake duct No. 1, and disconnect the vacuum control hose (B) from the wastegate control solenoid valve.



IN-03401

8) Remove the air intake boot from the intake duct No. 1, and disengage the clip which secures the air bypass valve to the intake duct No. 1.

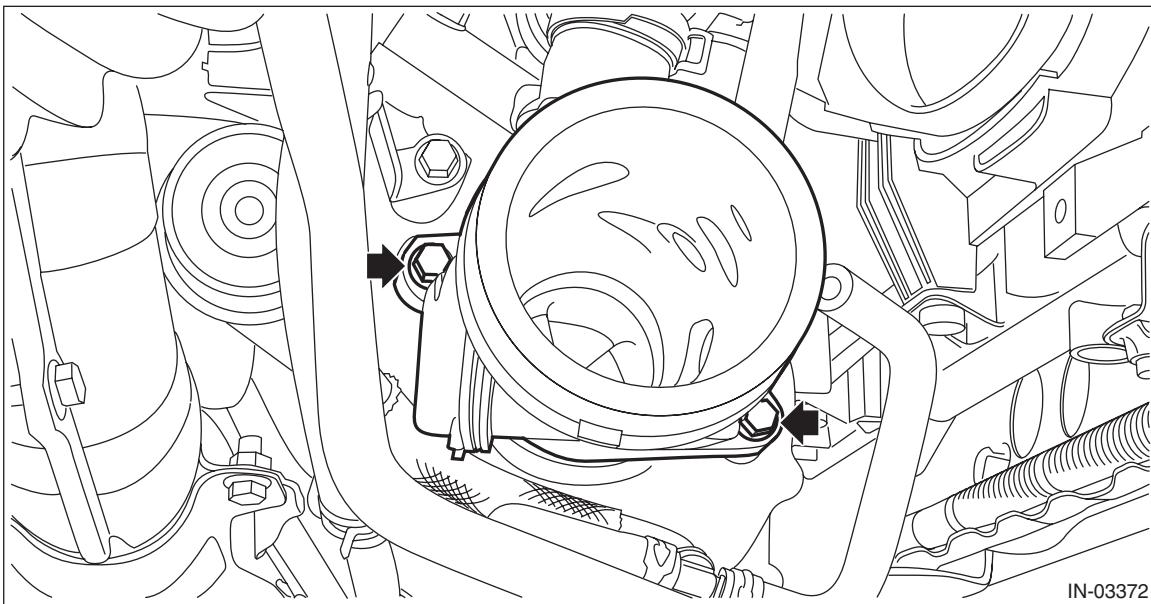


IN-03371

Intake Duct

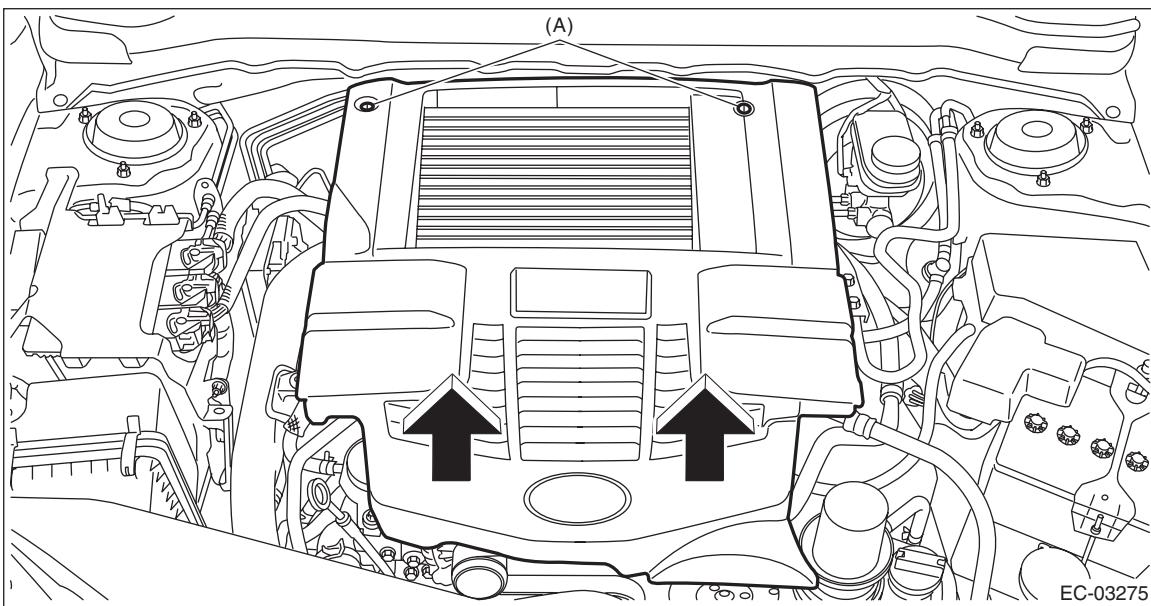
INTAKE (INDUCTION)

9) Remove the bolts which secure the intake duct No. 1 to the turbocharger, and remove the intake duct No. 1.



2. INTAKE DUCT NO. 2

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

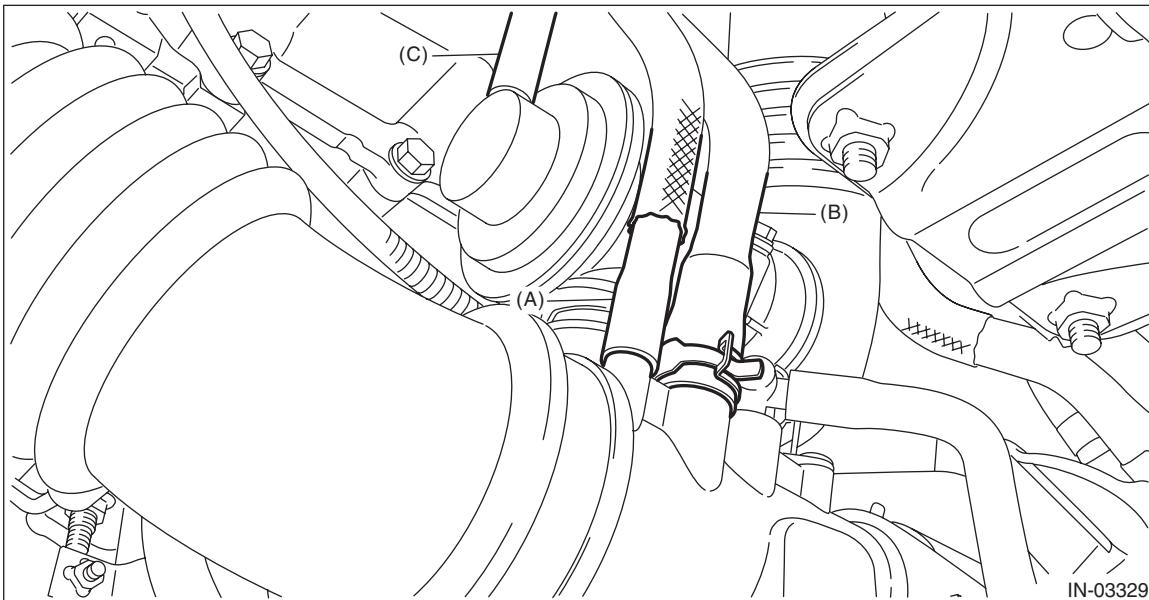


- 2) Disconnect the ground cable from battery.
- 3) Remove the air intake duct (rear). <Ref. to IN(H4DOTC)-19, REMOVAL, Air Intake Duct.>
- 4) Remove the intercooler. <Ref. to IN(H4DOTC)-35, REMOVAL, Intercooler.>
- 5) Remove the radiator sub fan and fan motor assembly. <Ref. to CO(H4DOTC)-55, REMOVAL, Radiator Sub Fan and Fan Motor.>
- 6) Lift up the vehicle.
- 7) Remove the under cover. <Ref. to EI-22, REMOVAL, Front Under Cover.>

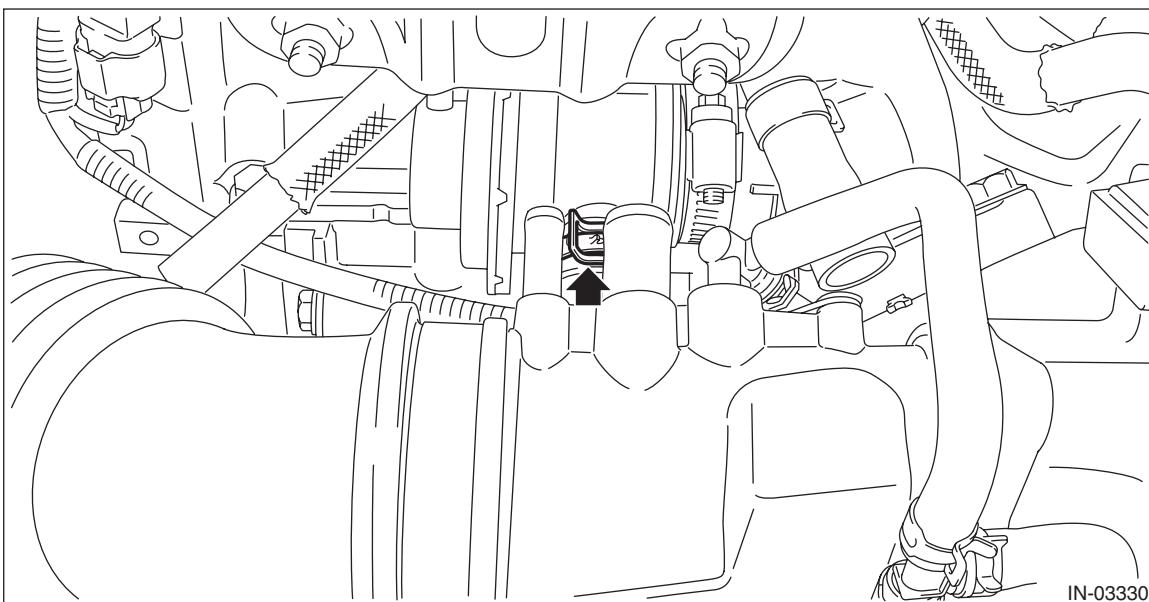
Intake Duct

INTAKE (INDUCTION)

8) Disconnect the PCV pipe (A) and vacuum hose (B) from the intake duct No. 1, and disconnect the vacuum hose (C) from the air by-pass valve.



9) Disengage the clip which secures the air by-pass valve to the intake duct No. 1.

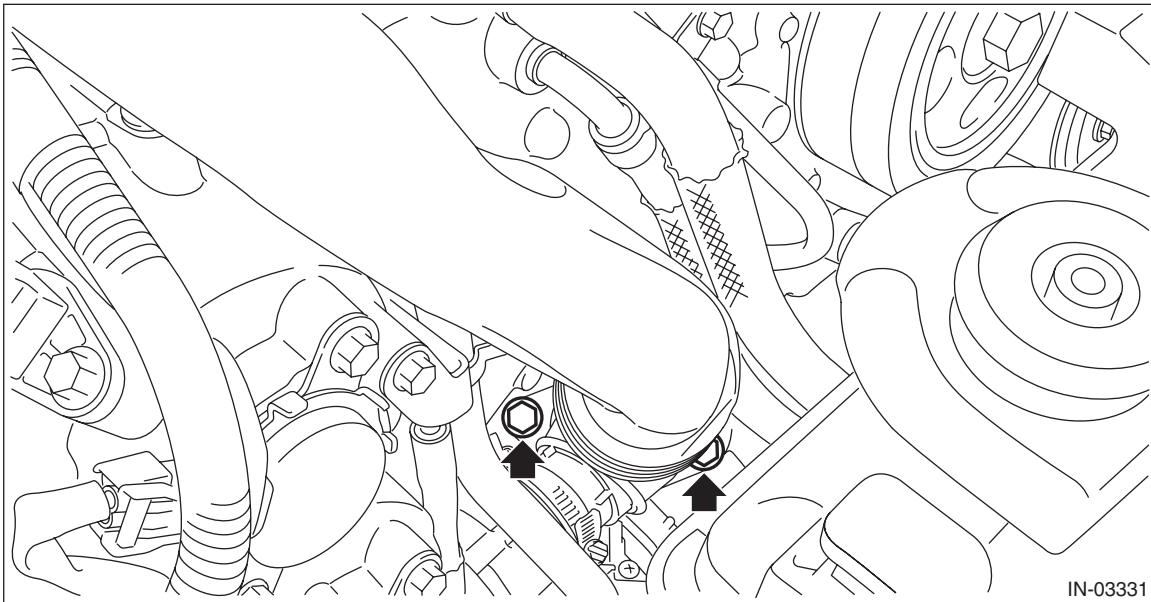


10) Lower the vehicle.

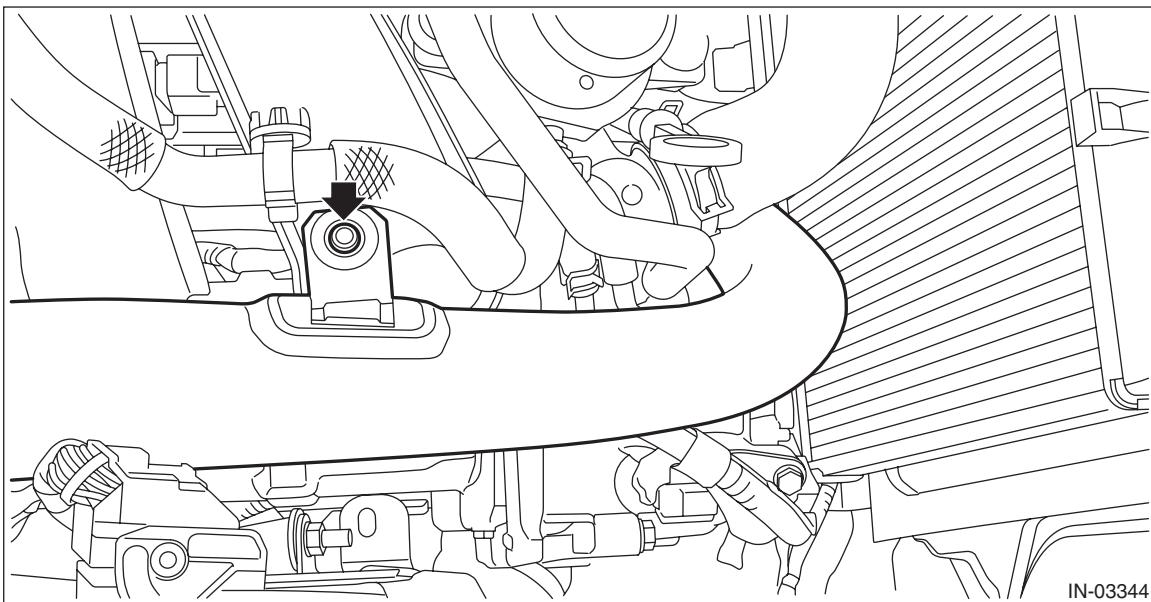
Intake Duct

INTAKE (INDUCTION)

11) Remove the bolts which secure the intake duct No. 2 to the turbocharger.

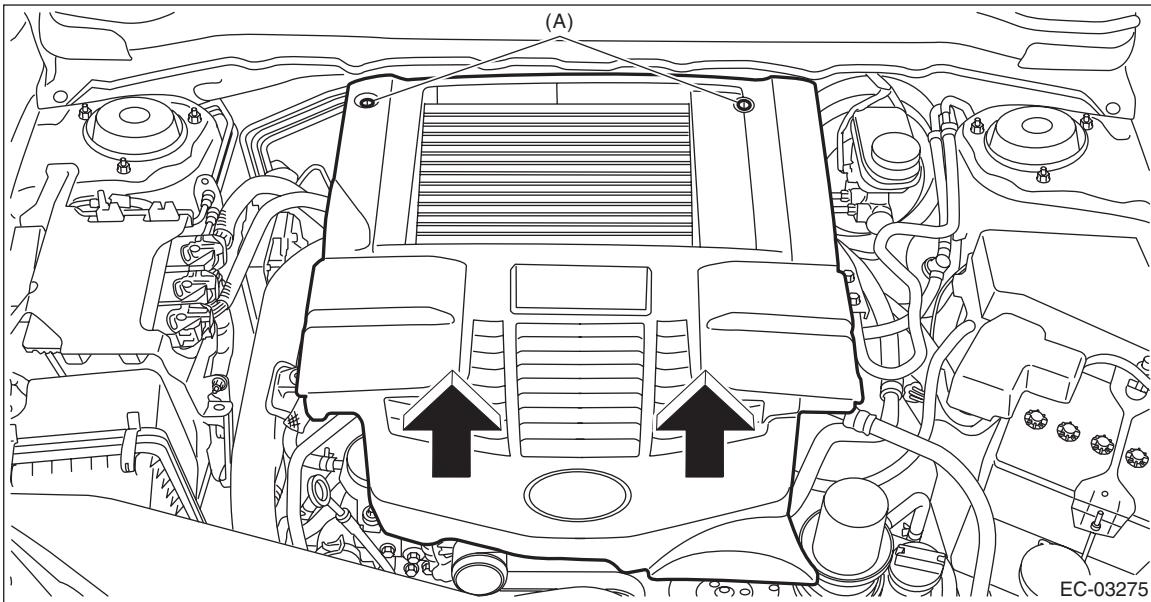


12) Pull out the air by-pass valve from the intake duct No. 1, and remove the intake duct No. 2 from the intake manifold.

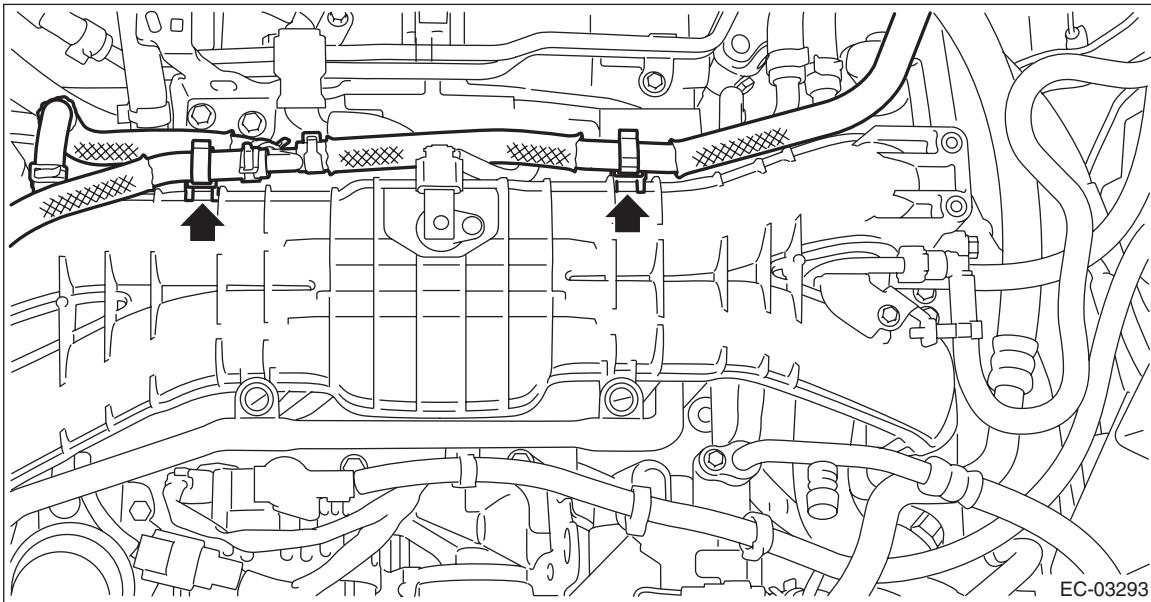


3. INTAKE DUCT NO. 3

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



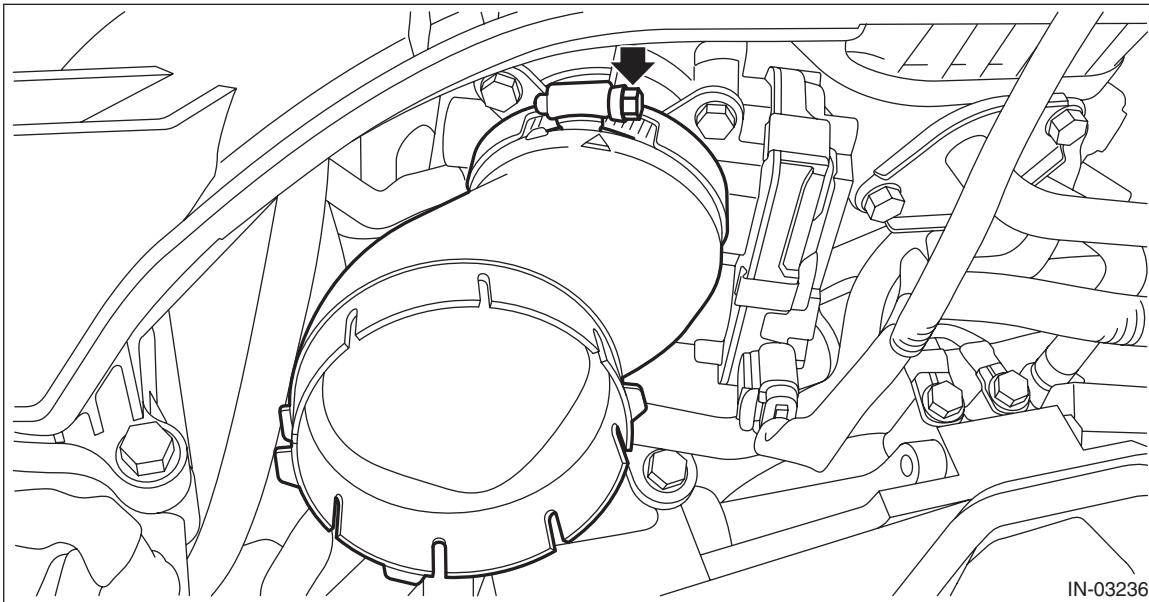
- 2) Disconnect the ground cable from battery.
- 3) Remove the intercooler. <Ref. to IN(H4DOTC)-35, REMOVAL, Intercooler.>
- 4) Remove the clip securing the brake booster vacuum hose to the intake manifold, and move the brake booster vacuum hose at the locations that do not interfere operation.



Intake Duct

INTAKE (INDUCTION)

5) Remove the intake duct No. 3 from the throttle body.



B: INSTALLATION

1. INTAKE DUCT NO. 1

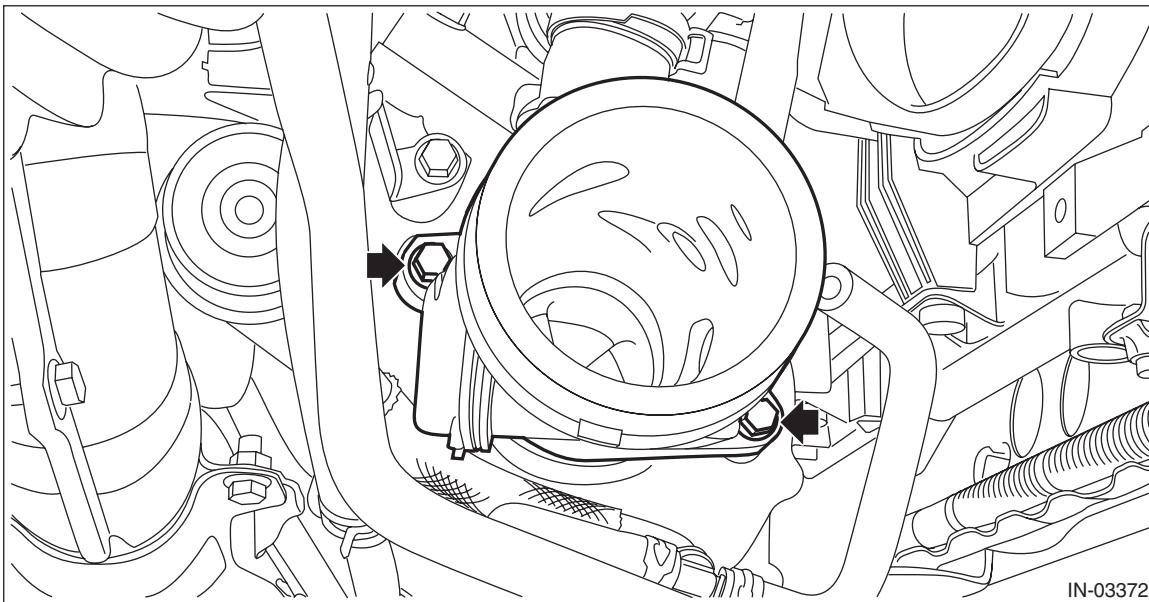
1) Install the intake duct No. 1 to the turbocharger.

NOTE:

- Use new O-rings.
- Be careful not to pinch the O-ring.
- Check that the air by-pass valve is firmly inserted into the intake duct No. 1.

Tightening torque:

6.4 N·m (0.7 kgf·m, 4.7 ft-lb)



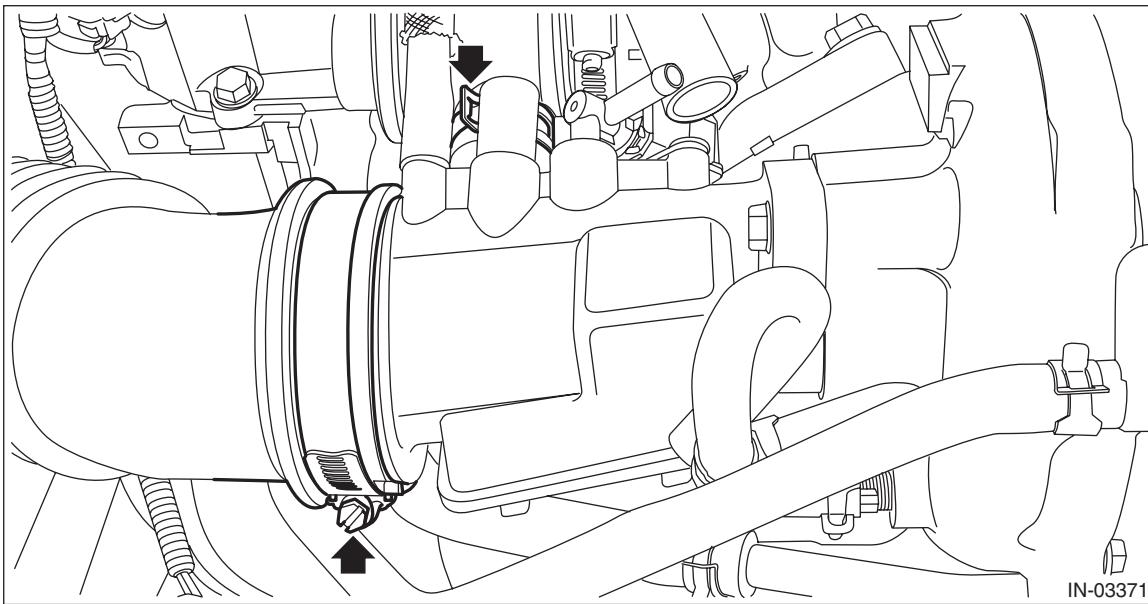
Intake Duct

INTAKE (INDUCTION)

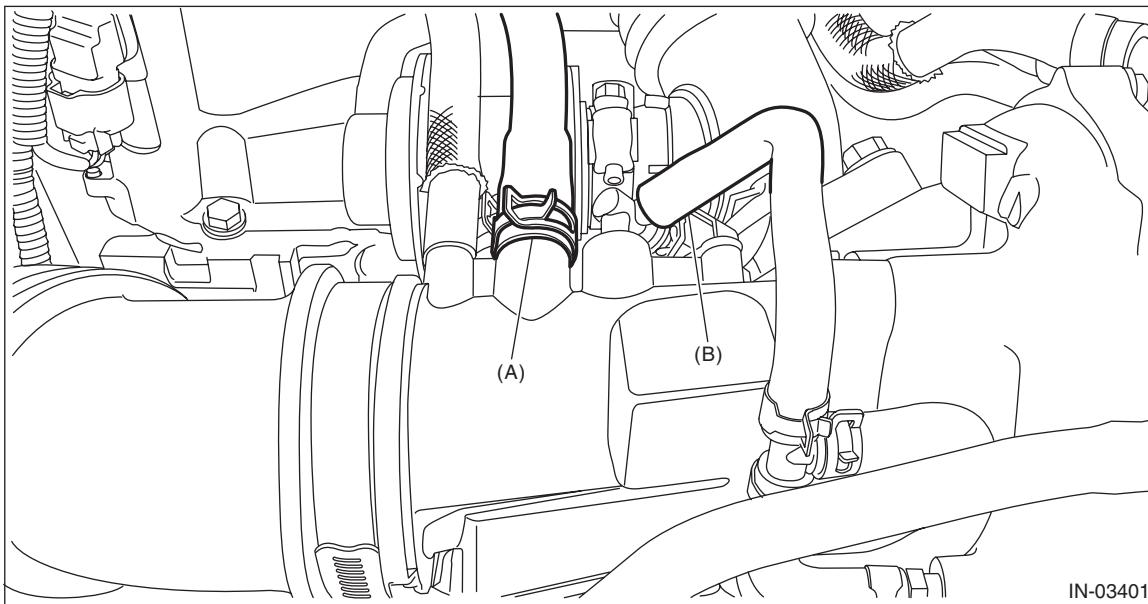
2) Engage the clip which secures the air by-pass valve to the intake duct No. 1, and install the air intake boot to the intake duct No. 1.

Tightening torque:

2.5 N·m (0.3 kgf·m, 1.8 ft-lb)



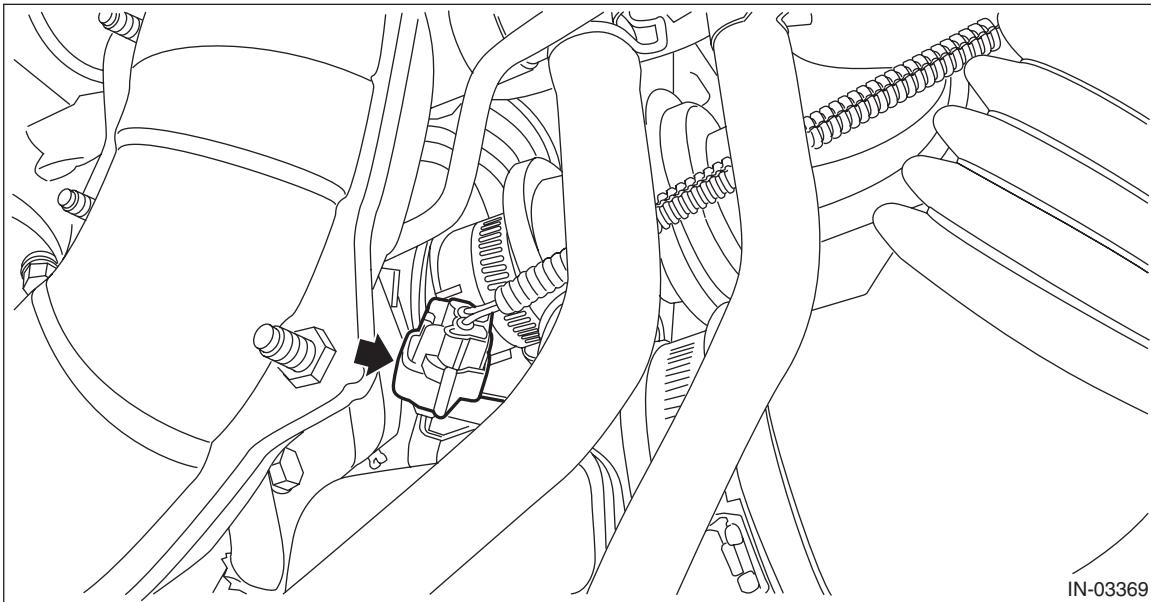
3) Connect the PCV pipe (A) to the intake duct No. 1, and connect the vacuum control hose (B) to the waste-gate control solenoid valve.



Intake Duct

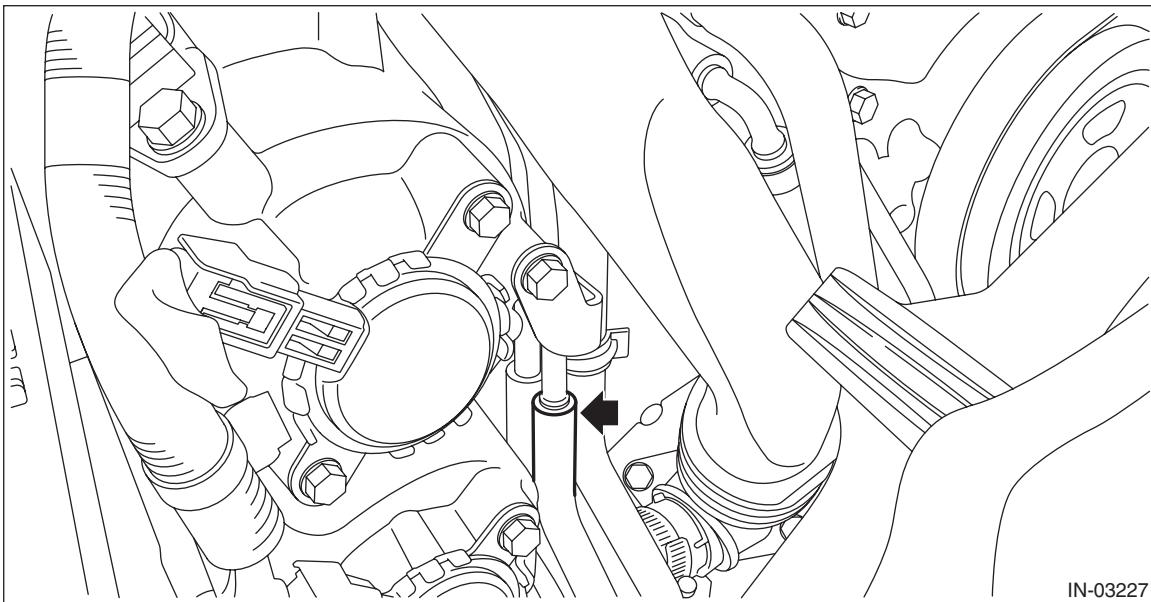
INTAKE (INDUCTION)

- 4) Connect the connector to the wastegate control solenoid valve.



IN-03369

- 5) Install the under cover. <Ref. to EI-22, INSTALLATION, Front Under Cover.>
- 6) Lower the vehicle.
- 7) Connect the vacuum hose to the vacuum pipe.

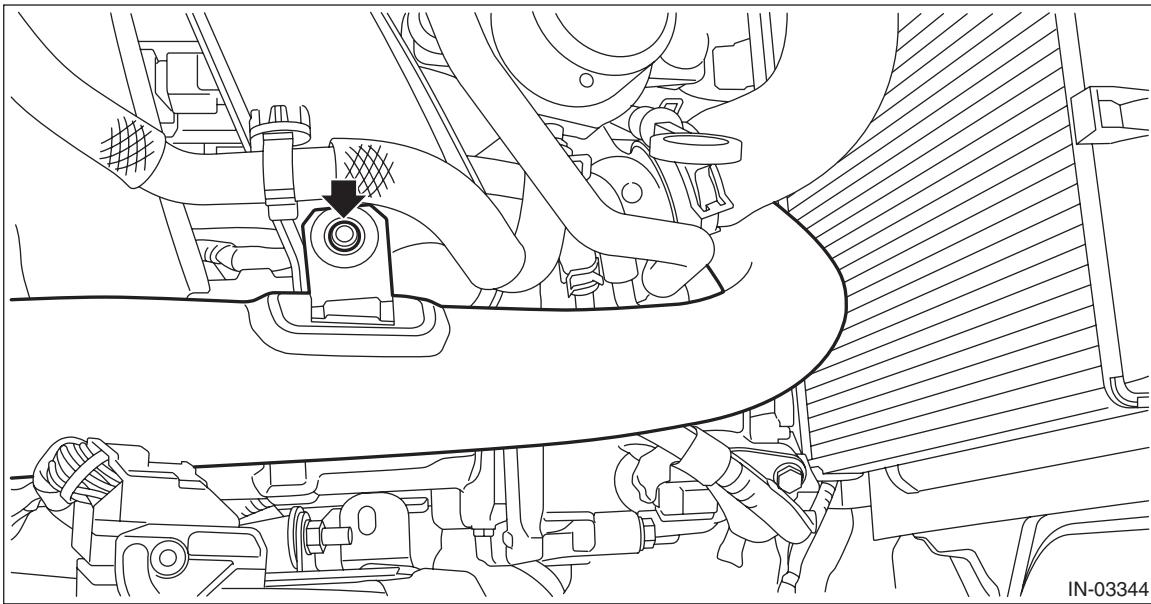


IN-03227

- 8) Install the air intake duct (rear). <Ref. to IN(H4DOTC)-19, INSTALLATION, Air Intake Duct.>
- 9) Connect the battery ground terminal.
- 10) Install the collector cover.

2. INTAKE DUCT NO. 2

1) Set the air by-pass valve to the intake duct No. 1, and install the intake duct No. 2 to the intake manifold.



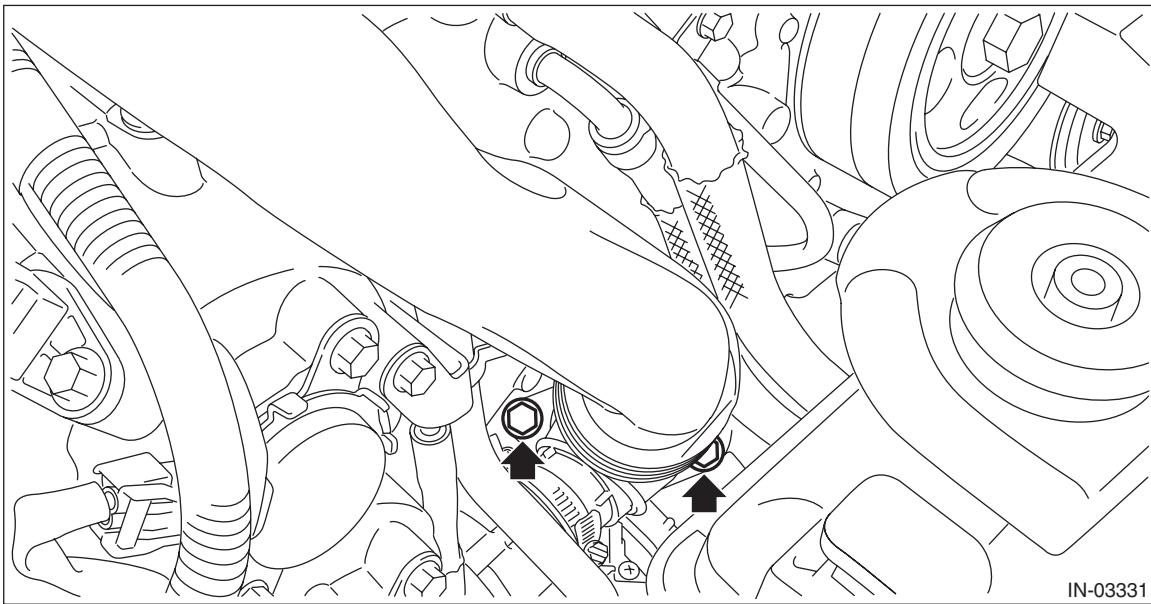
2) Install the bolt which secure the intake duct No. 2 to the turbocharger.

NOTE:

- Use new O-rings.
- Be careful not to pinch the O-ring.
- Check that the air by-pass valve is firmly inserted into the intake duct No. 1.

Tightening torque:

16 N·m (1.6 kgf·m, 1.8 ft-lb)

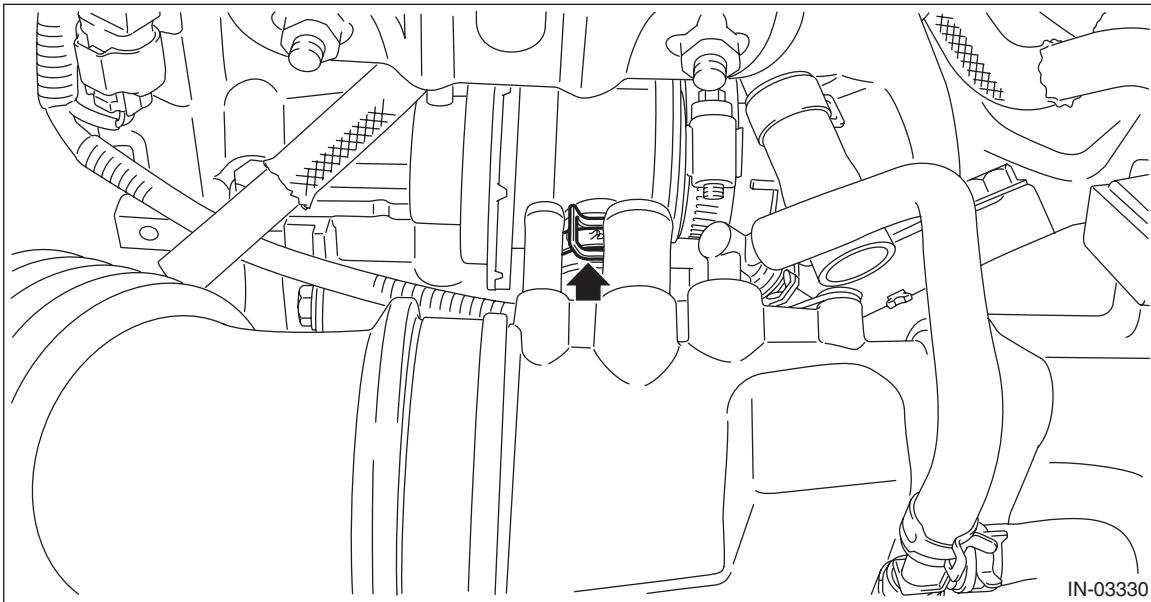


3) Lift up the vehicle.

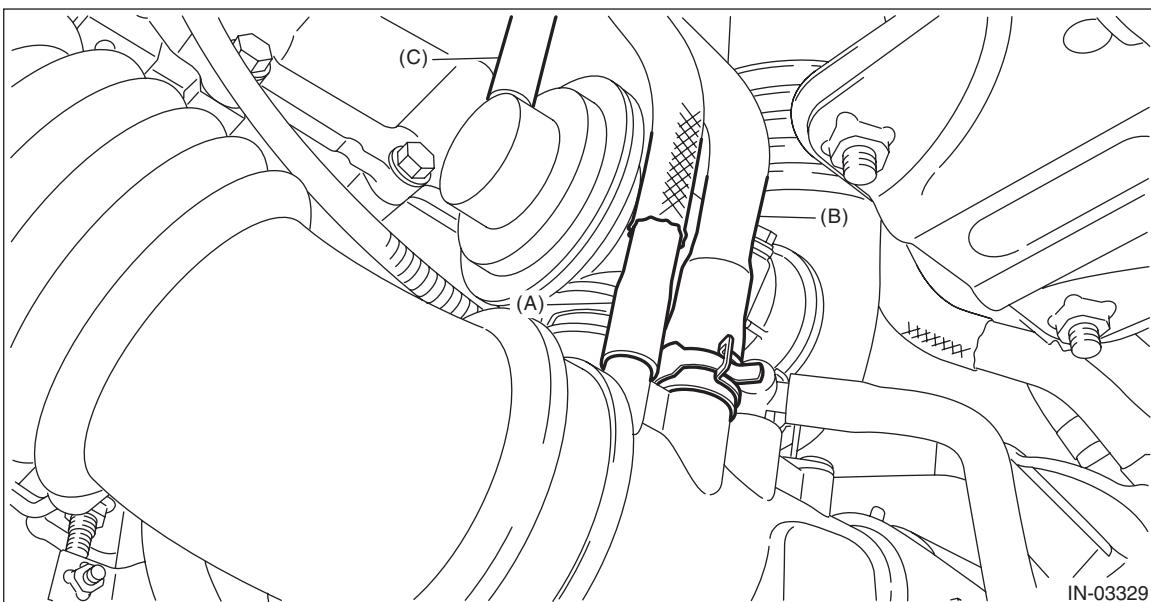
Intake Duct

INTAKE (INDUCTION)

4) Engage the clip which secures the air by-pass valve to the intake duct No. 1.



5) Connect the PCV pipe (A) and vacuum hose (B) to the intake duct No. 1, and connect the vacuum hose (C) to the air by-pass valve.



- 6) Install the under cover. <Ref. to EI-22, INSTALLATION, Front Under Cover.>
- 7) Lower the vehicle.
- 8) Install the radiator sub fan and fan motor assembly. <Ref. to CO(H4DOTC)-55, INSTALLATION, Radiator Sub Fan and Fan Motor.>
- 9) Install the intercooler. <Ref. to IN(H4DOTC)-37, INSTALLATION, Intercooler.>
- 10) Install the air intake duct (rear). <Ref. to IN(H4DOTC)-19, INSTALLATION, Air Intake Duct.>
- 11) Connect the battery ground terminal.
- 12) Install the collector cover.

3. INTAKE DUCT NO. 3

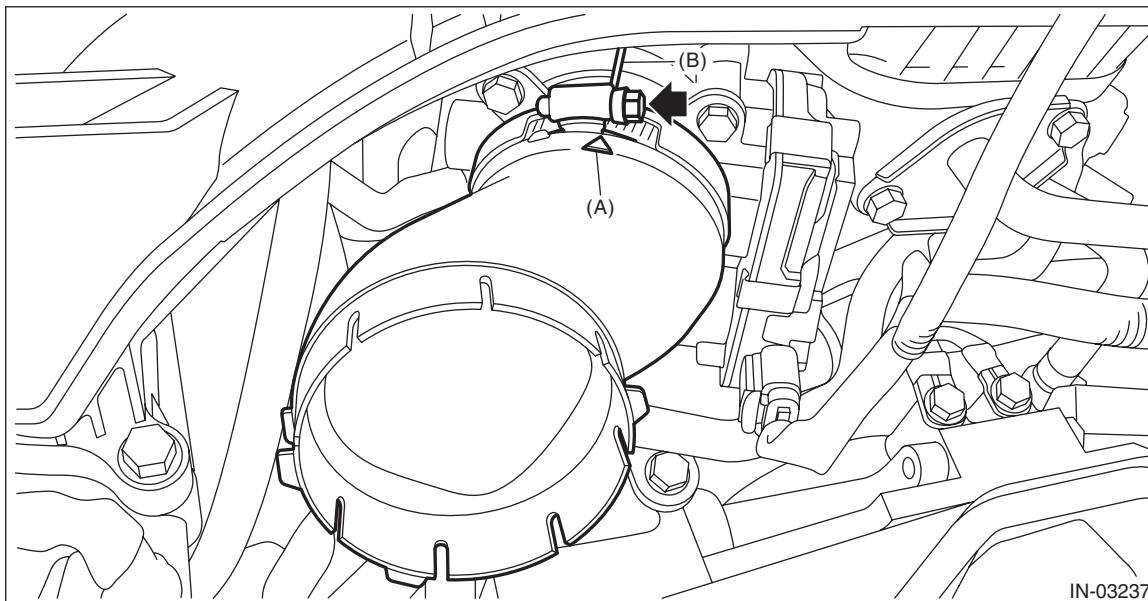
1) Align the triangle mark (A) on the intake duct No. 3 to the rib (B) on the throttle body, and install the intake duct No. 3 to the throttle body.

NOTE:

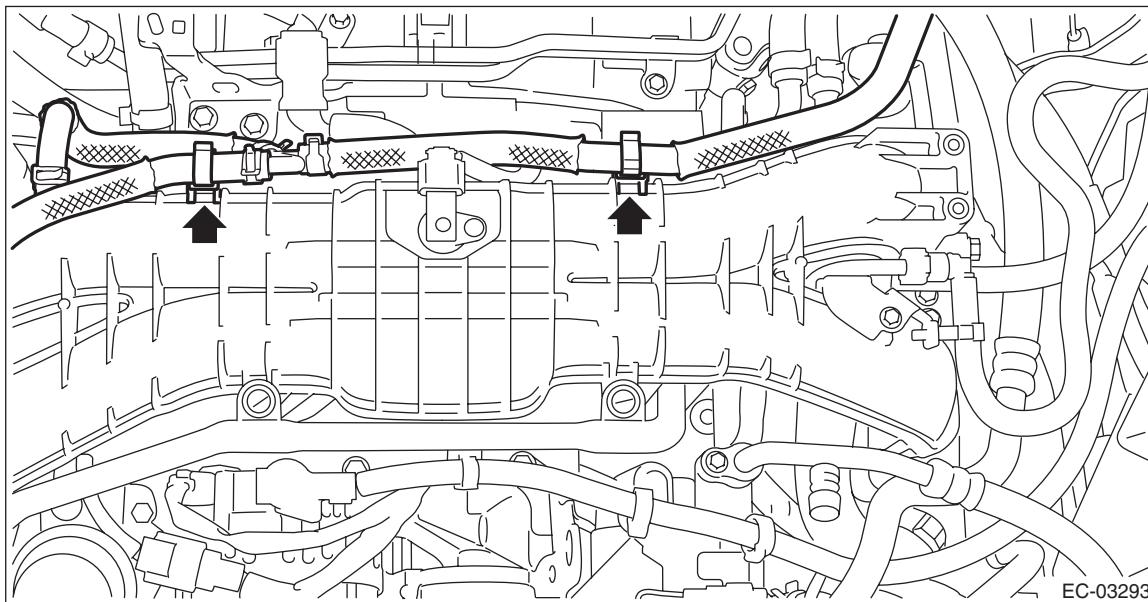
- Use a new insulator.
- Apply a thin coat of SUBARU PS fluid (K0515YA000) or liquid paraffin to the inner periphery of the insulator.
- When inserting the intake duct No. 3 to the throttle body, be careful that the insulator is not turned over.

Tightening torque:

3 N·m (0.3 kgf·m, 2.2 ft-lb)



2) Install the clip which secures the brake booster vacuum hose to the intake manifold.



3) Install the intercooler. <Ref. to IN(H4DOTC)-37, INSTALLATION, Intercooler.>

4) Connect the battery ground terminal.

5) Install the collector cover.

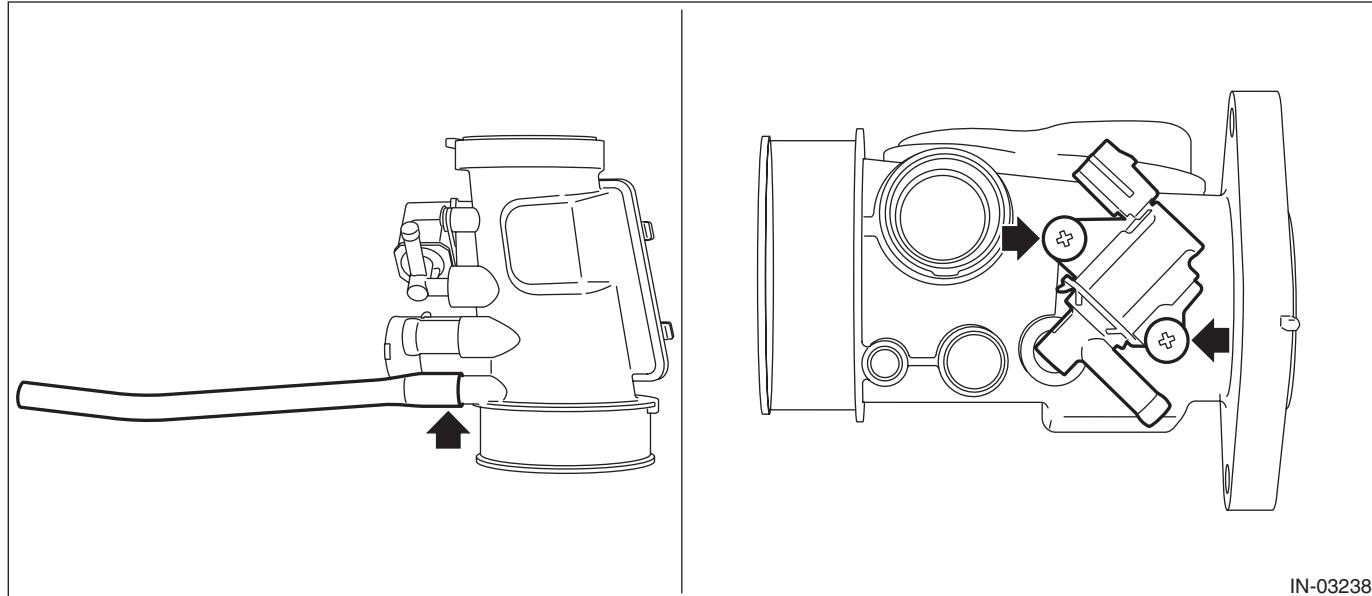
Intake Duct

INTAKE (INDUCTION)

C: DISASSEMBLY

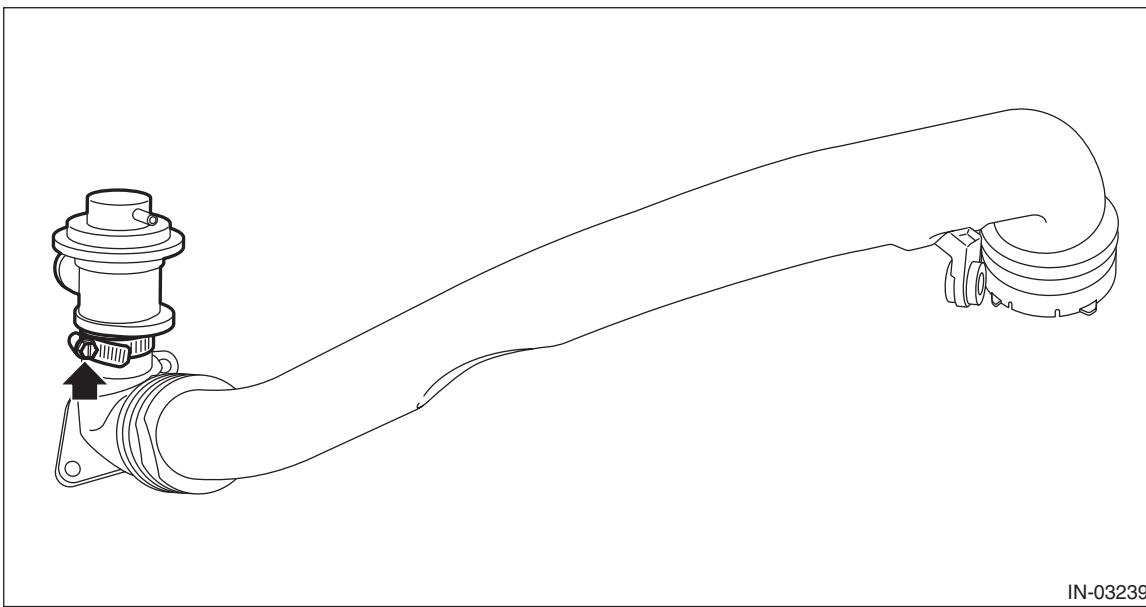
1. INTAKE DUCT NO. 1

Remove the vacuum hose and wastegate control solenoid valve from the intake duct.



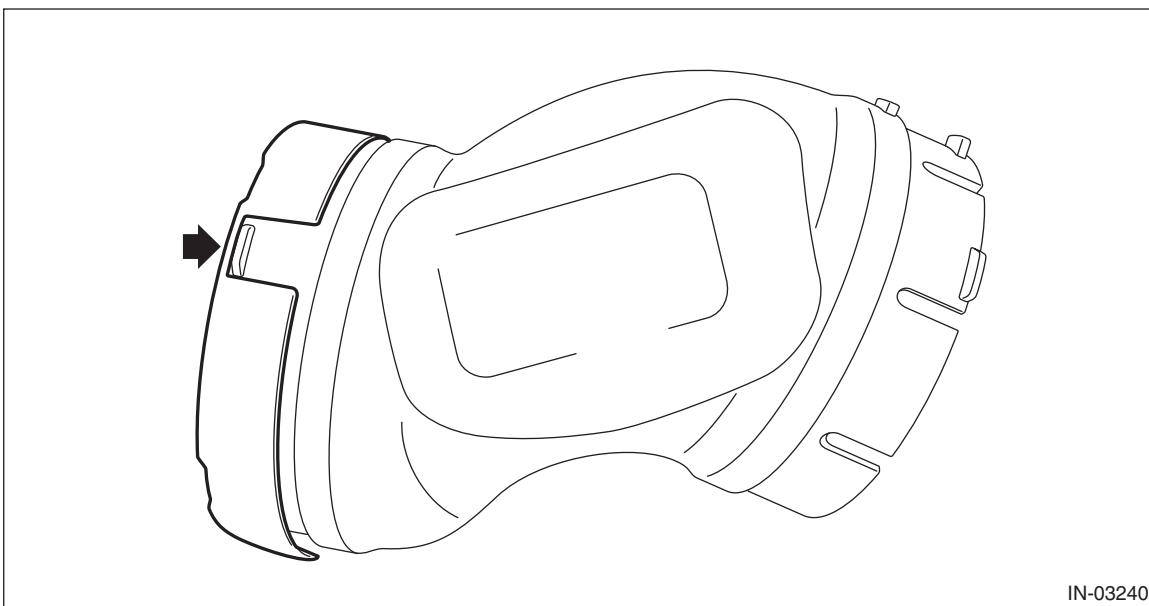
2. INTAKE DUCT NO. 2

Remove the air by-pass valve from the intake duct No. 2.



3. INTAKE DUCT NO. 3

Remove the insulator from the intake duct No. 3.



D: ASSEMBLY

1. INTAKE DUCT NO. 1

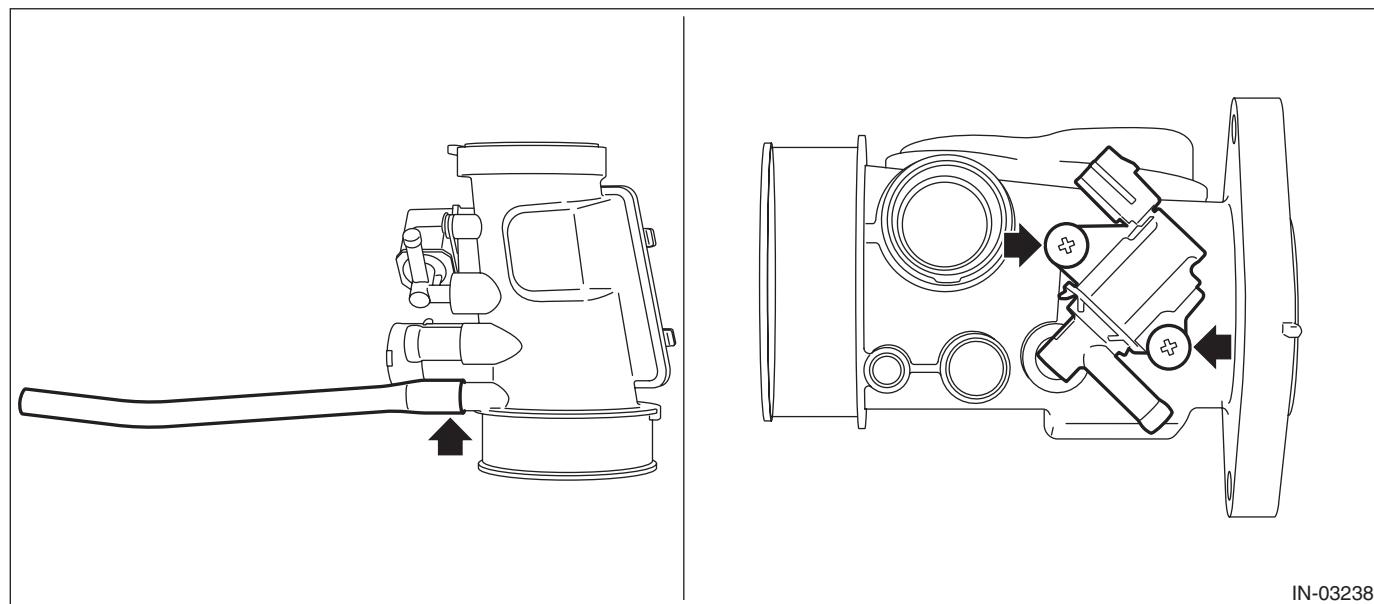
Install the vacuum hose and wastegate control solenoid valve to the intake duct No. 1.

NOTE:

- Use new O-rings.
- When tightening the boost control solenoid valve, check that it is securely seated.

Tightening torque:

2.8 N·m (0.3 kgf-m, 2.1 ft-lb)



2. INTAKE DUCT NO. 2

Assemble in the reverse order of disassembly.

Tightening torque:

3 N·m (0.3 kgf-m, 2.2 ft-lb)

Intake Duct

INTAKE (INDUCTION)

3. INTAKE DUCT NO. 3

Assemble in the reverse order of disassembly.

NOTE:

Use a new insulator.

E: INSPECTION

- 1) Check that the intake duct has no deformation, cracks or other damages.
- 2) Check the vacuum hose for cracks, damage or looseness.