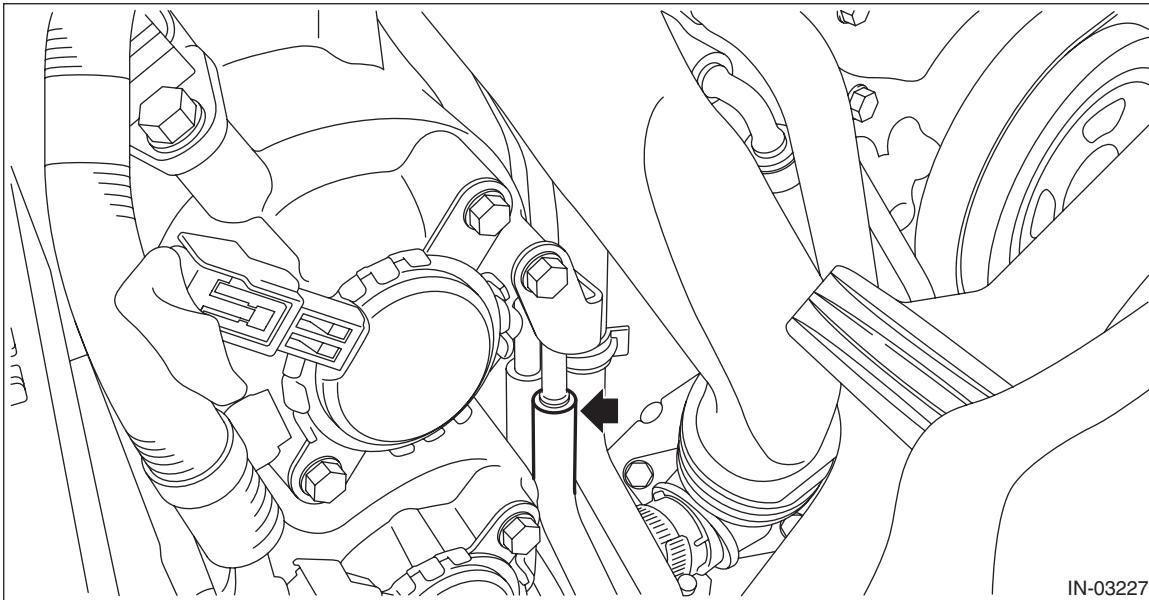


### 6. Intake Duct

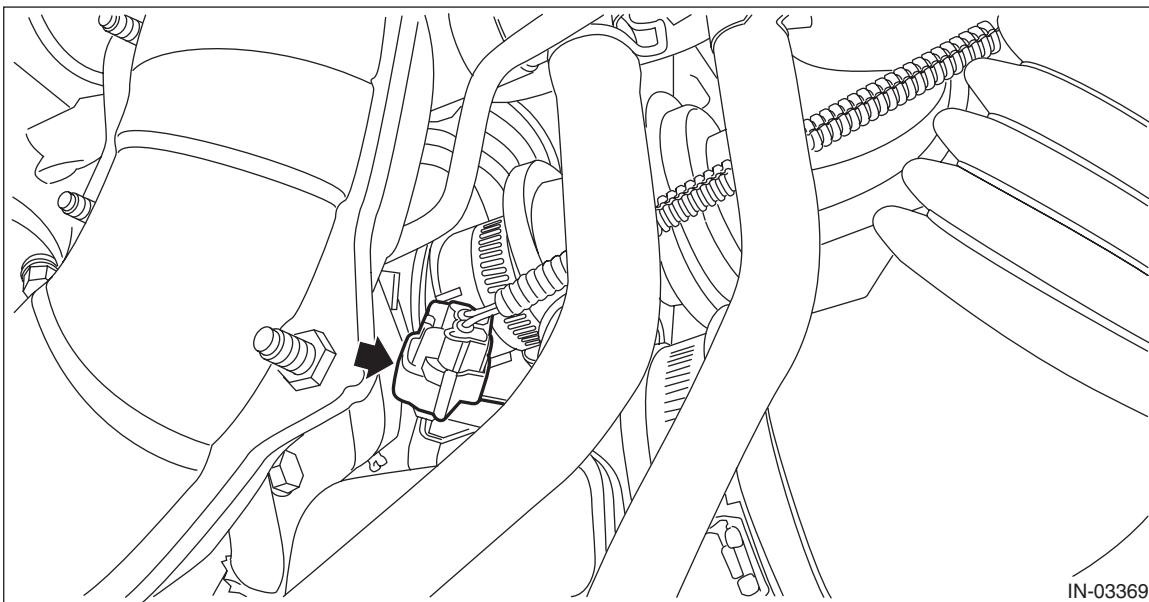
#### A: REMOVAL

##### 1. INTAKE DUCT NO. 1

- 1) Disconnect the ground terminal from battery sensor. <Ref. to NT-5, BATTERY, NOTE, Note.>
- 2) Remove the air intake duct. <Ref. to IN(w/o STI)-22, REMOVAL, Air Intake Duct.>
- 3) Disconnect the vacuum hose from vacuum pipe.



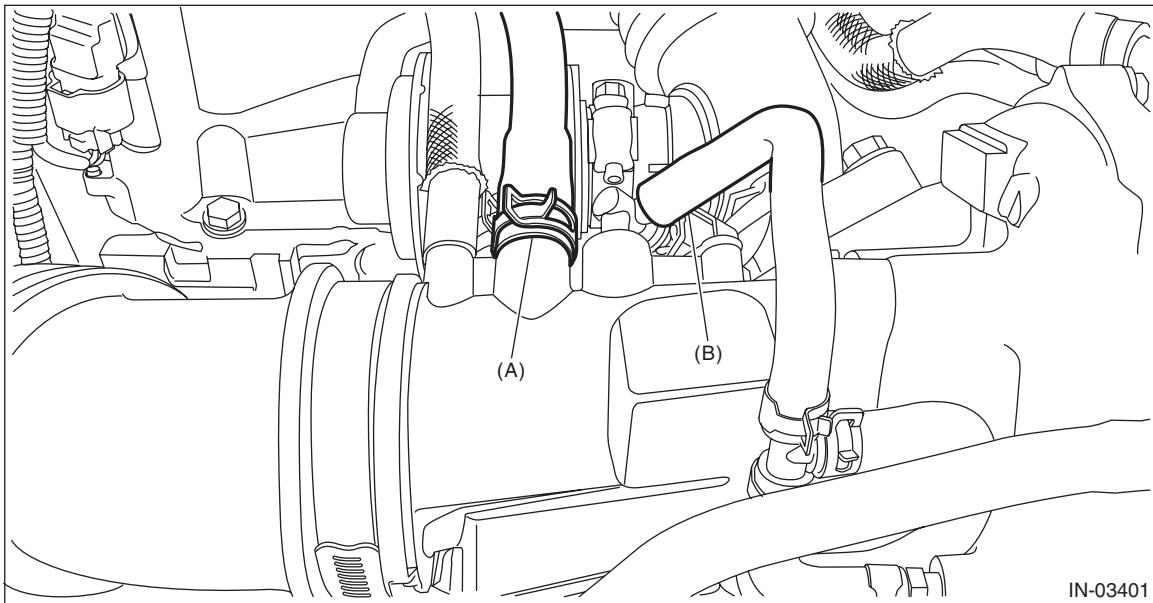
- 4) Lift up the vehicle.
- 5) Remove the under cover. <Ref. to EI-21, REMOVAL, Front Under Cover.>
- 6) Disconnect the connector from the wastegate control solenoid valve.



## Intake Duct

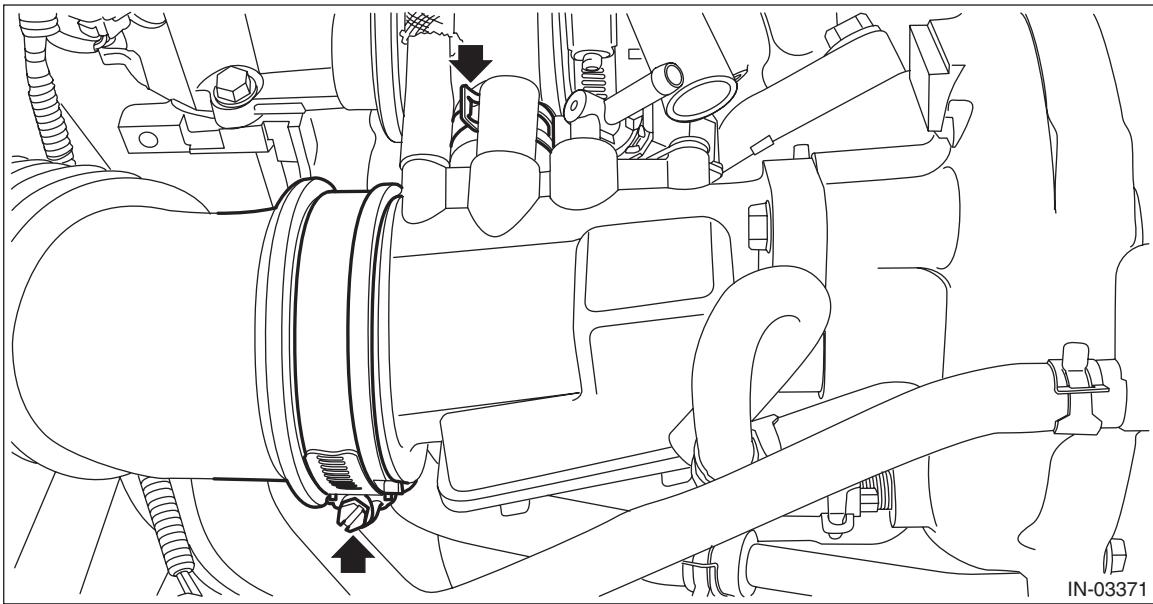
### INTAKE (INDUCTION)

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.



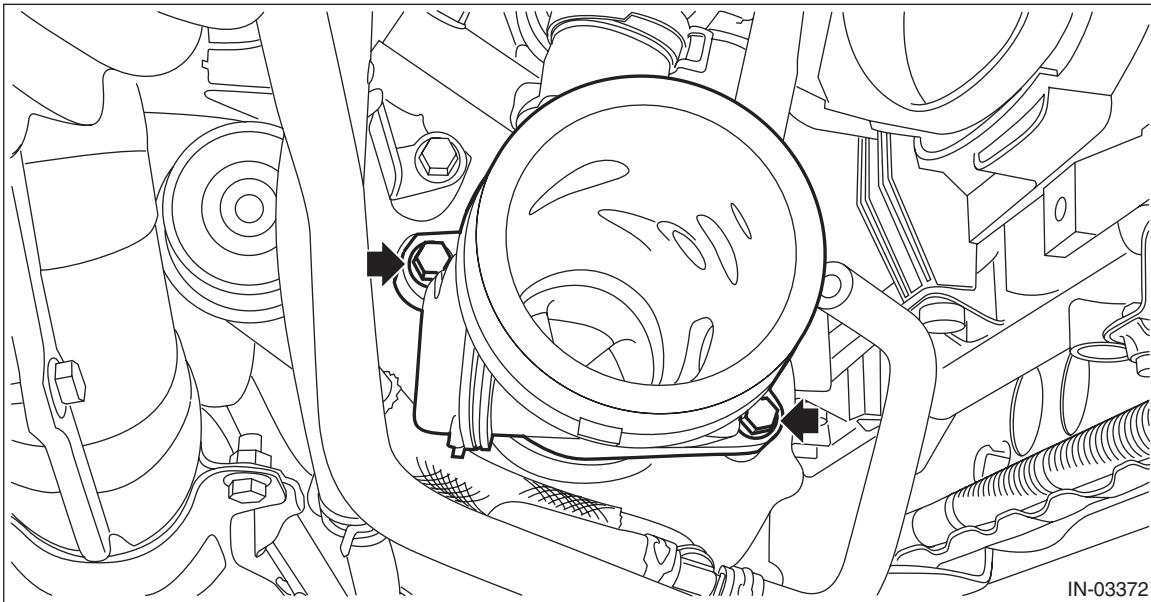
IN-03401

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

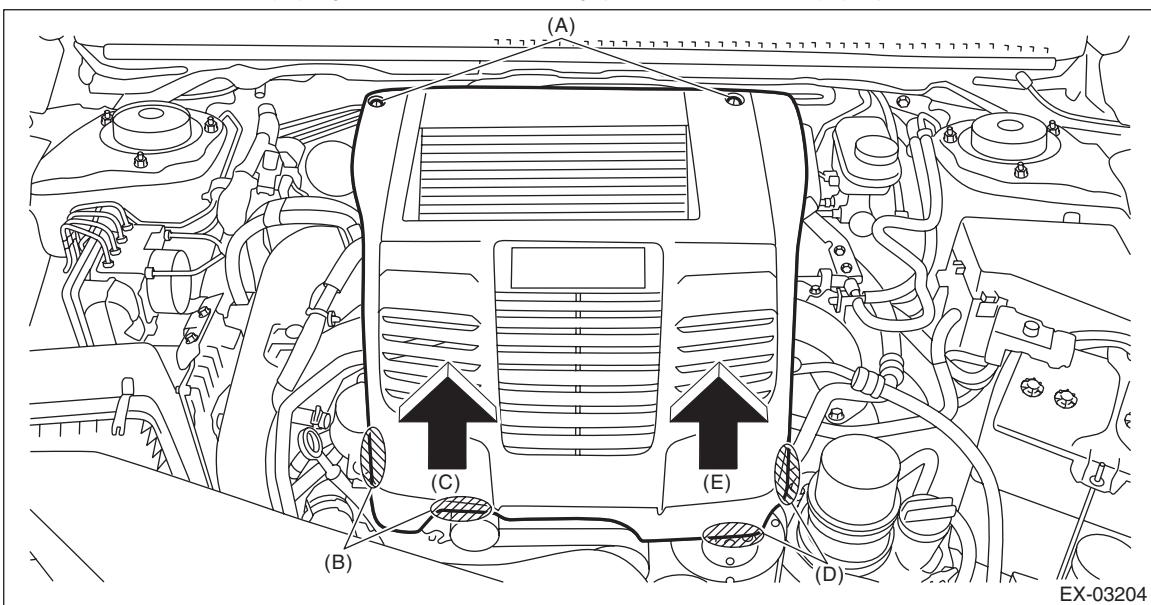
9) Remove the bolts which secure the intake duct No. 1 to the turbocharger, and remove the intake duct No. 1.



## 2. INTAKE DUCT NO. 2

1) Remove the collector cover.

- (1) Remove the clips (A).
- (2) Hold the shaded area (B) by hand and carefully pull the RH side (C) upward.
- (3) Hold the shaded area (D) by hand and carefully pull the LH side (E) upward.

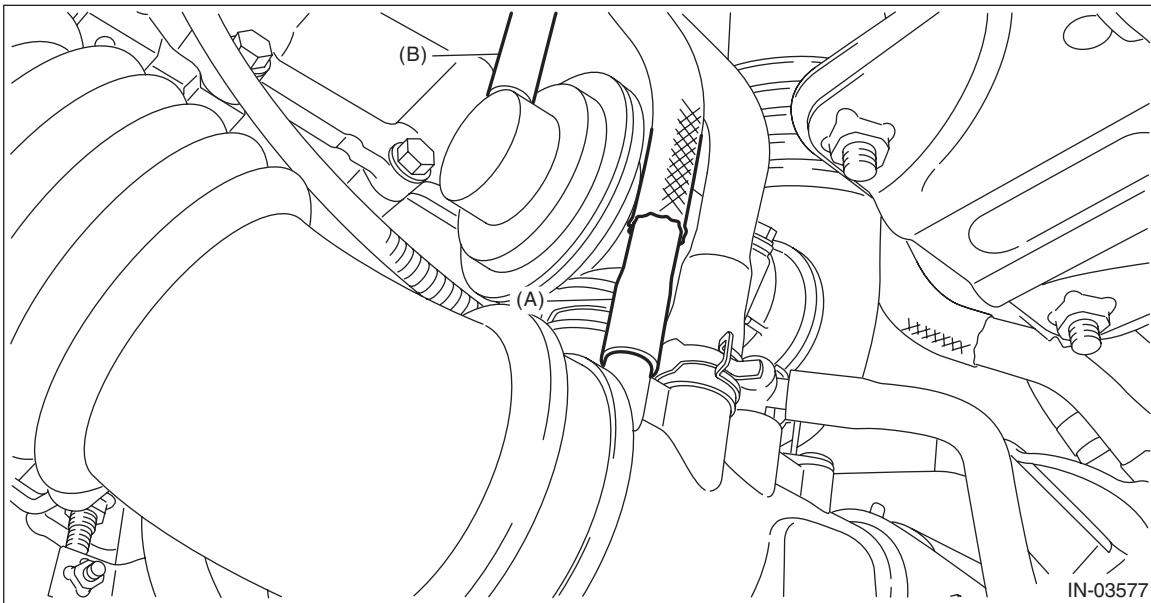


- 2) Disconnect the ground terminal from battery sensor. <Ref. to NT-5, BATTERY, NOTE, Note.>
- 3) Remove the air intake duct. <Ref. to IN(w/o STI)-22, REMOVAL, Air Intake Duct.>
- 4) Remove the intercooler. <Ref. to IN(w/o STI)-38, REMOVAL, Intercooler.>
- 5) Remove the radiator sub fan and fan motor assembly. <Ref. to CO(w/o STI)-49, REMOVAL, Radiator Sub Fan and Fan Motor.>
- 6) Lift up the vehicle.
- 7) Remove the under cover. <Ref. to EI-21, REMOVAL, Front Under Cover.>

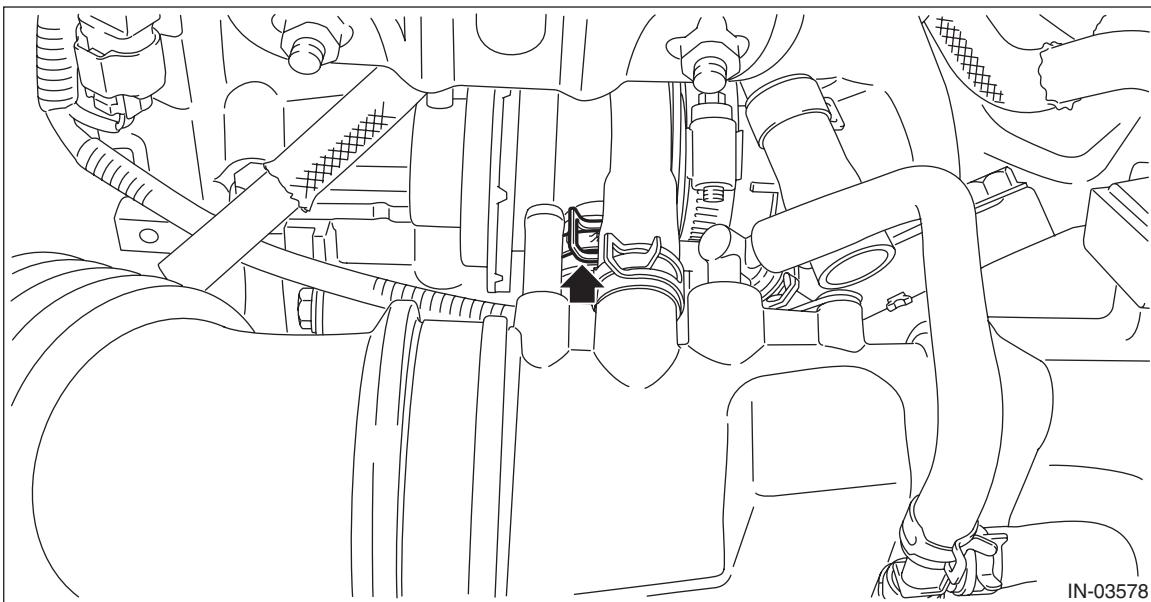
## Intake Duct

### INTAKE (INDUCTION)

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



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

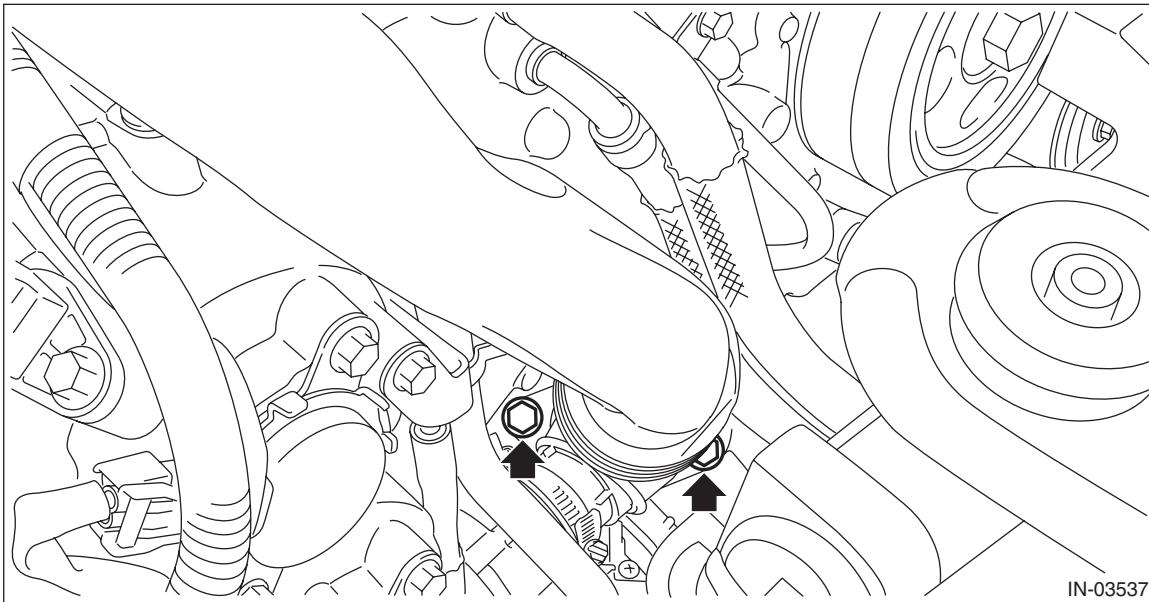


10) Lower the vehicle.

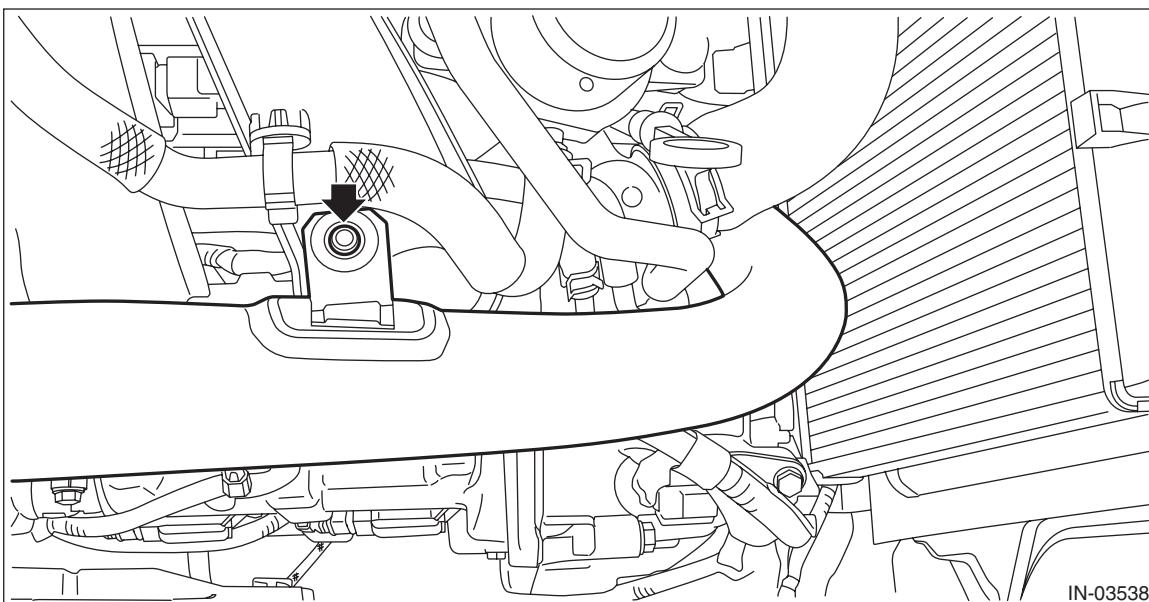
## Intake Duct

### 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.



# Intake Duct

## INTAKE (INDUCTION)

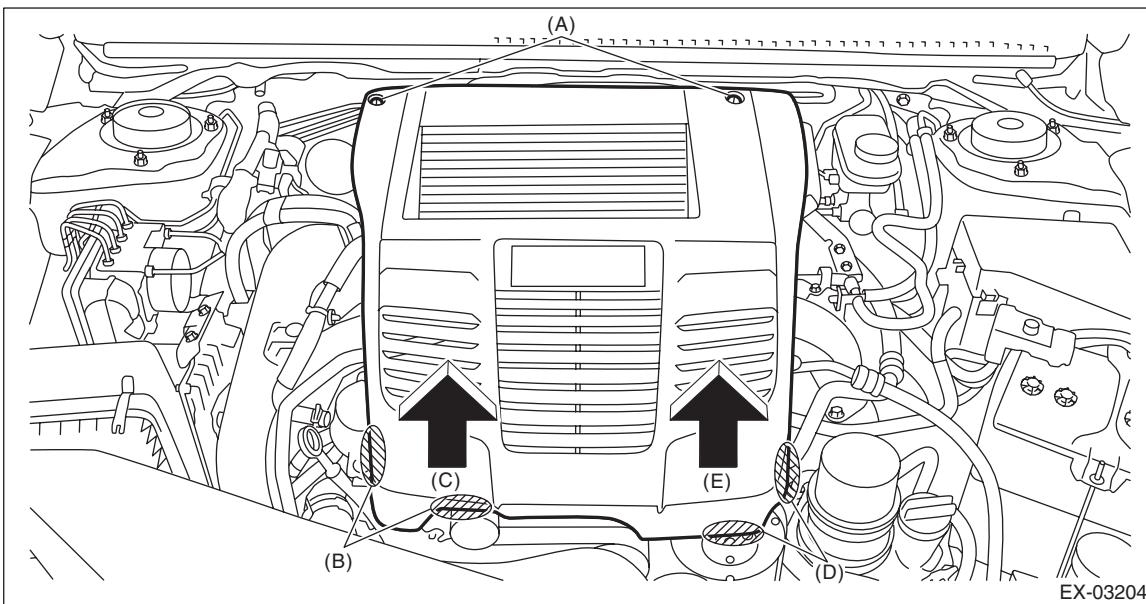
### 3. INTAKE DUCT NO. 3

1) Remove the collector cover.

(1) Remove the clips (A).

(2) Hold the shaded area (B) by hand and carefully pull the RH side (C) upward.

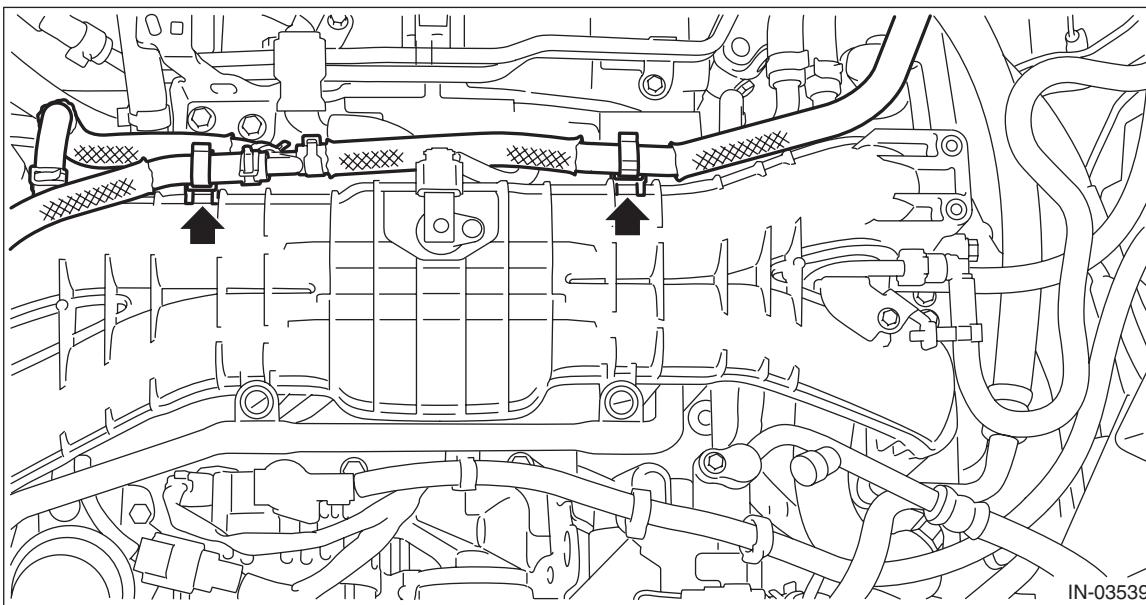
(3) Hold the shaded area (D) by hand and carefully pull the LH side (E) upward.



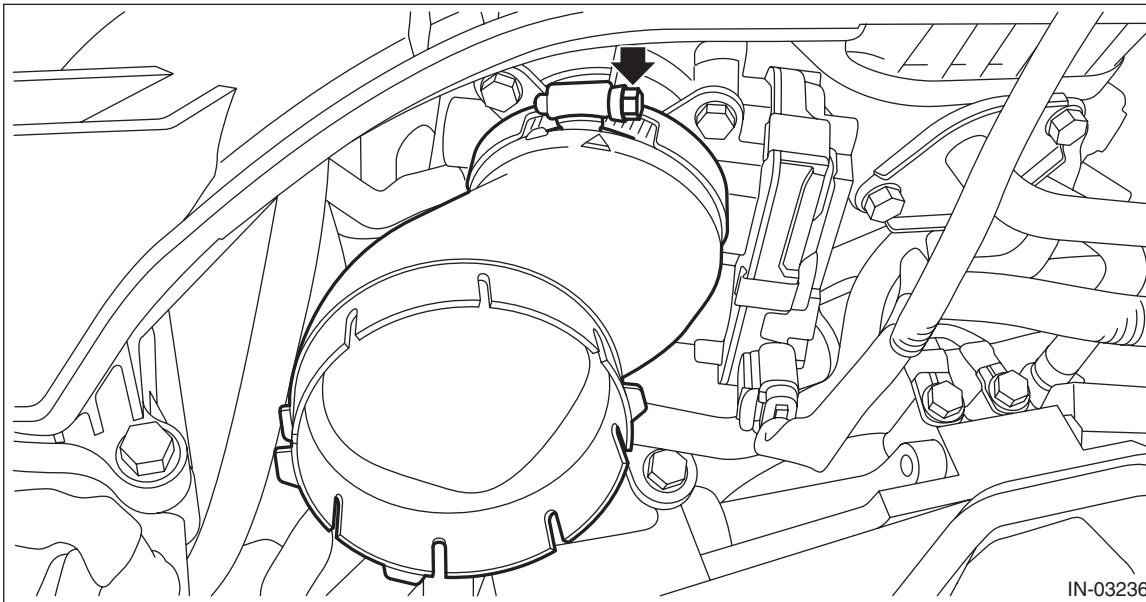
2) Disconnect the ground terminal from battery sensor. <Ref. to NT-5, BATTERY, NOTE, Note.>

3) Remove the intercooler. <Ref. to IN(w/o STI)-38, 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.



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



## B: INSTALLATION

### 1. INTAKE DUCT NO. 1

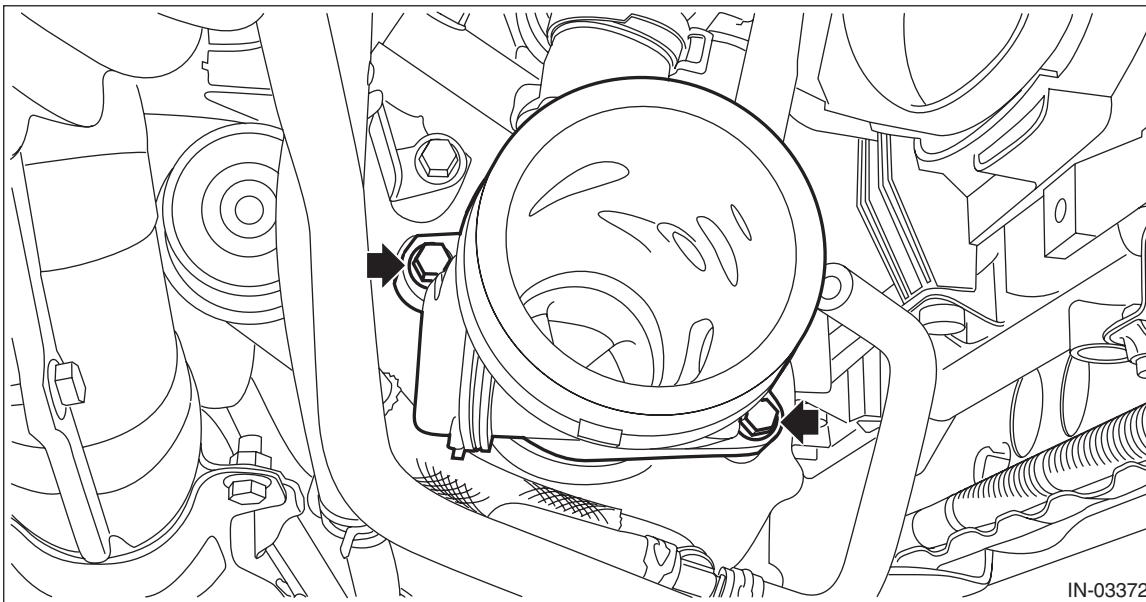
1) Install the intake duct No. 1 to the turbocharger.

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)**



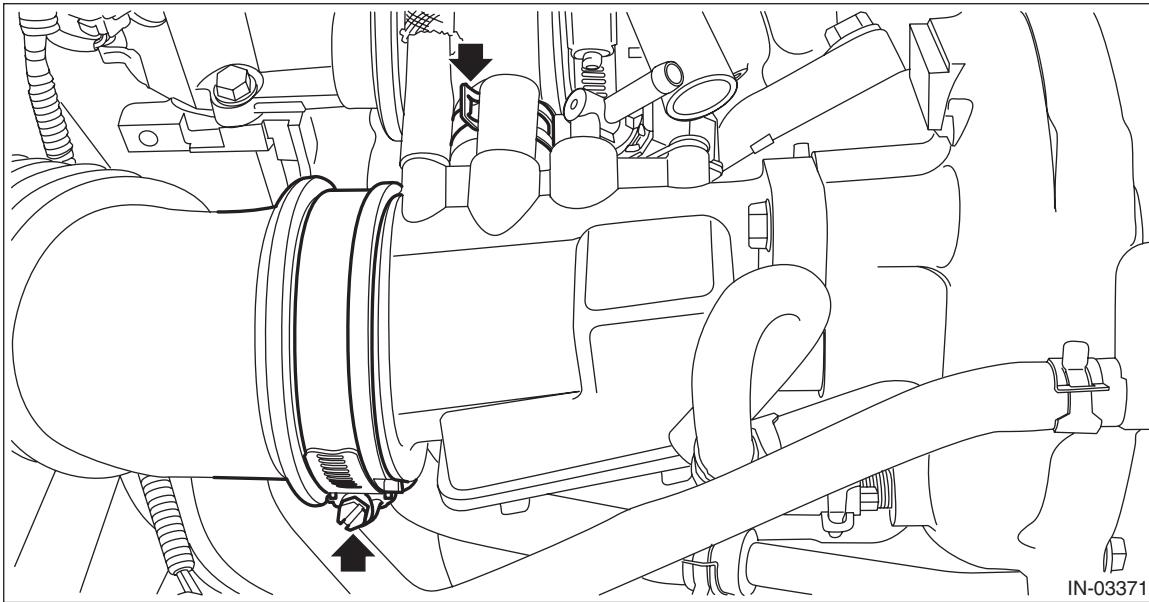
## Intake Duct

### INTAKE (INDUCTION)

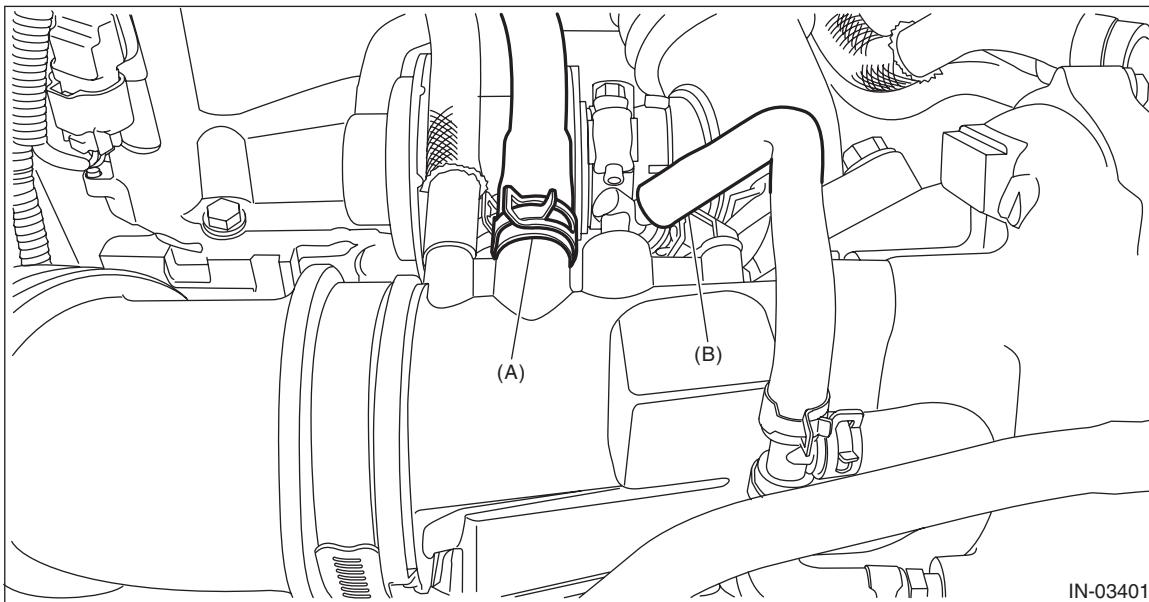
2) Engage the clip which secures the air by-pass valve to the intake duct No. 1, and install the air intake boot to the intake duct No. 1.

#### **Tightening torque:**

**2.5 N·m (0.3 kgf·m, 1.8 ft-lb)**



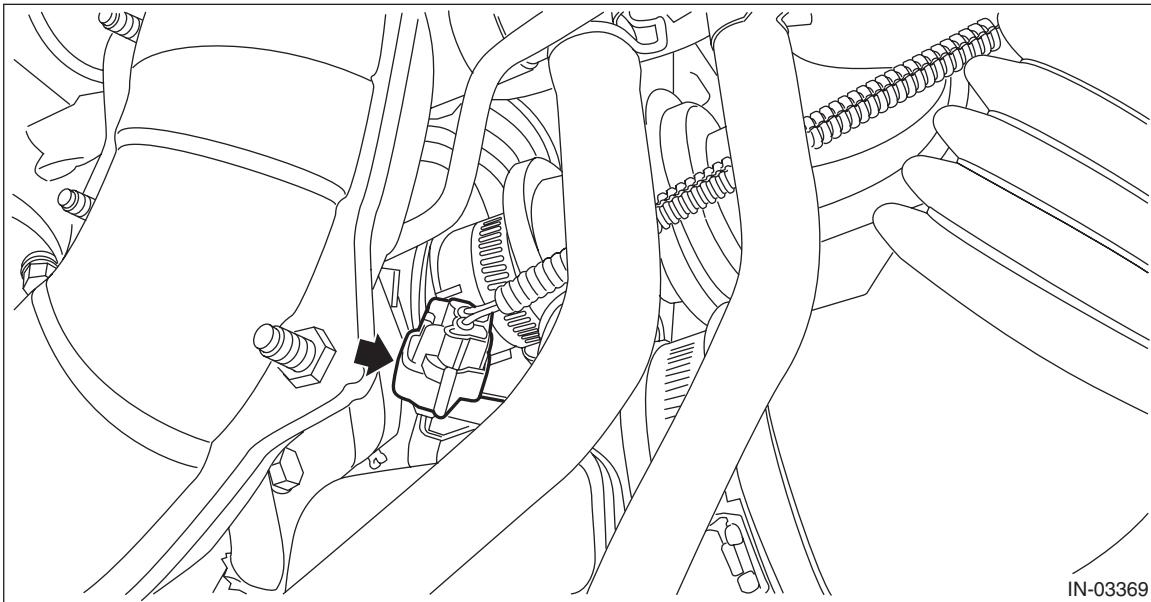
3) Connect the PCV pipe (A) to the intake duct No. 1, and connect the vacuum control hose (B) to the waste-gate control solenoid valve.



# Intake Duct

## INTAKE (INDUCTION)

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

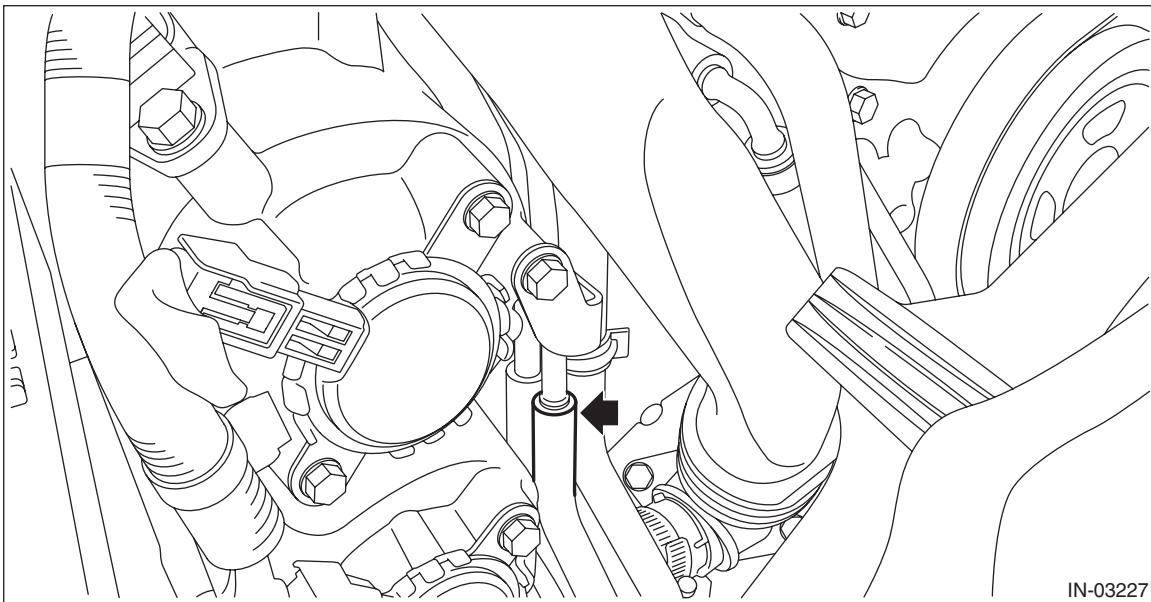


IN-03369

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. <Ref. to IN(w/o STI)-22, INSTALLATION, Air Intake Duct.>

9) Connect the ground terminal to battery sensor. <Ref. to NT-5, BATTERY, NOTE, Note.>

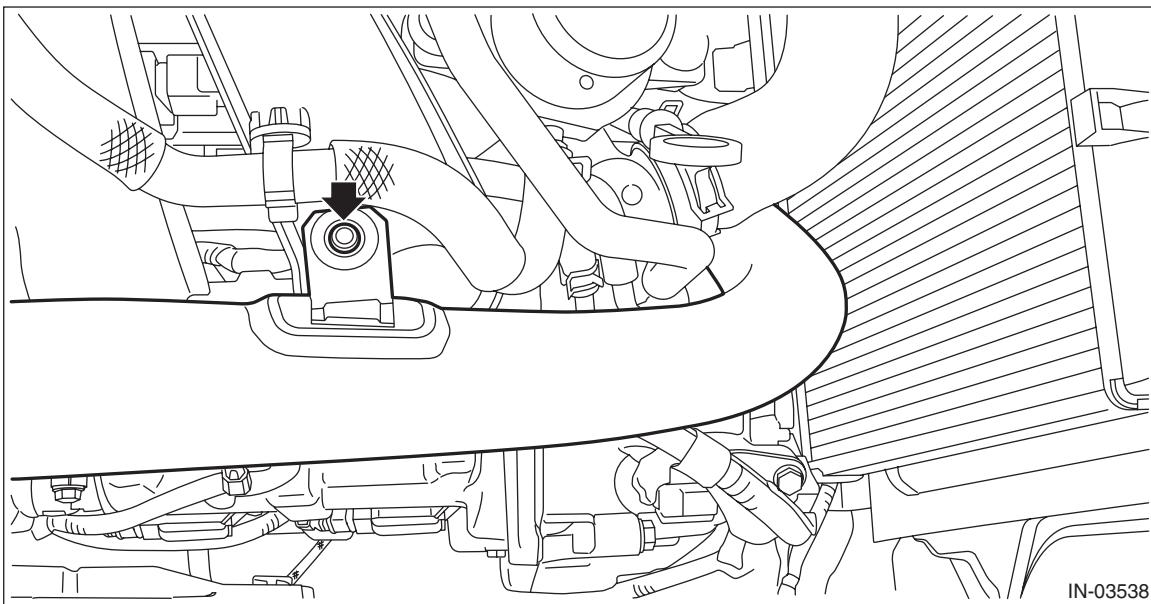
10) Install the collector cover.

# Intake Duct

## INTAKE (INDUCTION)

### 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.



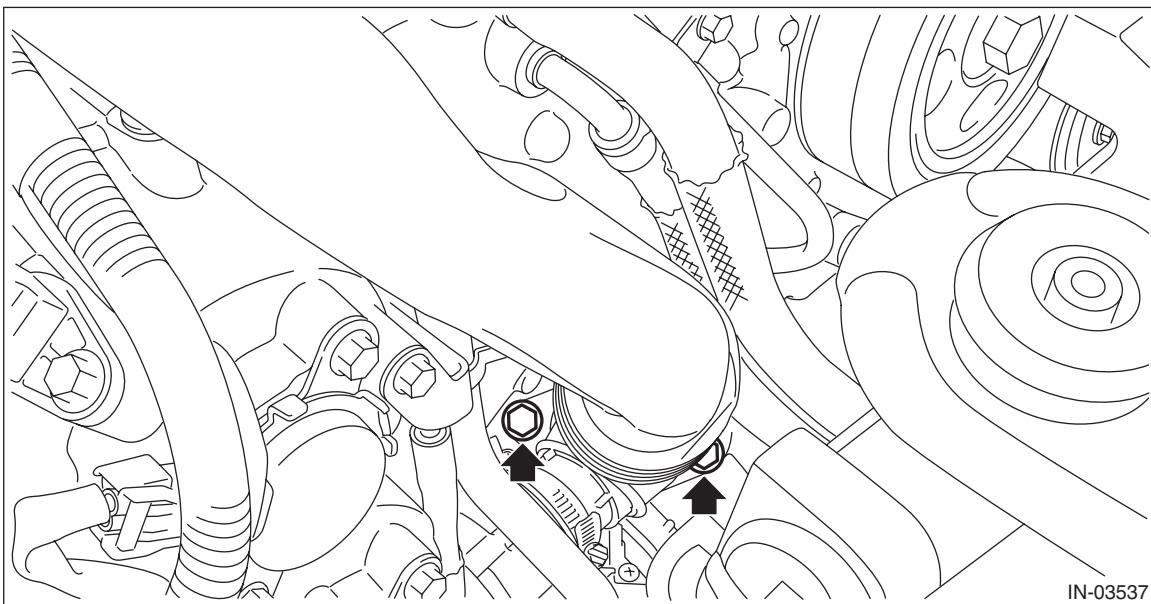
2) Install the bolt which secures the intake duct No. 2 to the turbocharger.

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)**

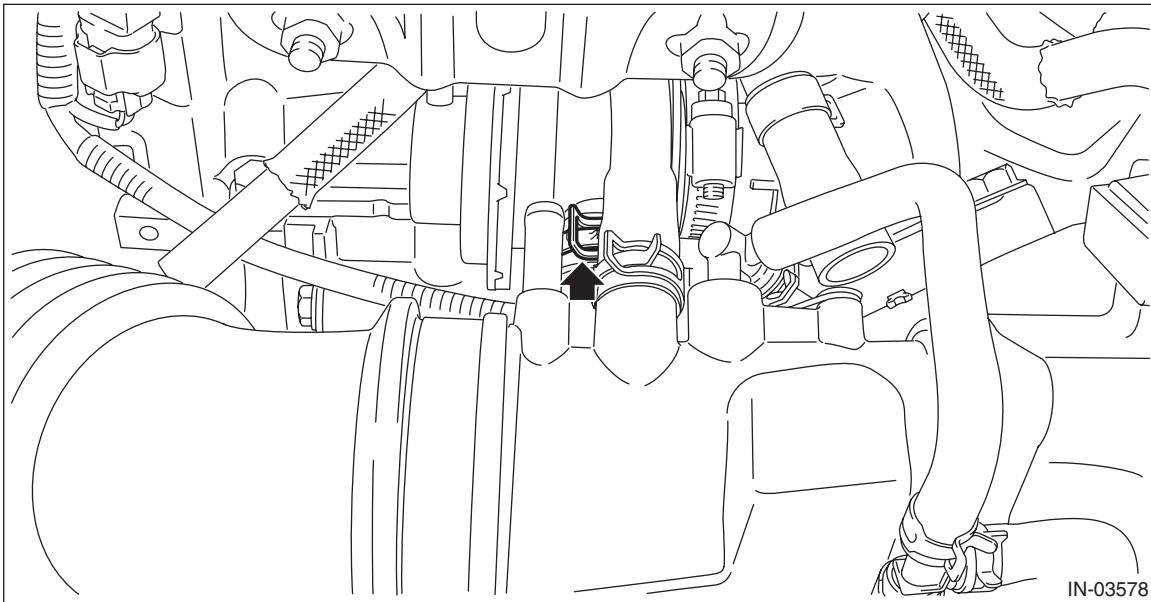


3) Lift up the vehicle.

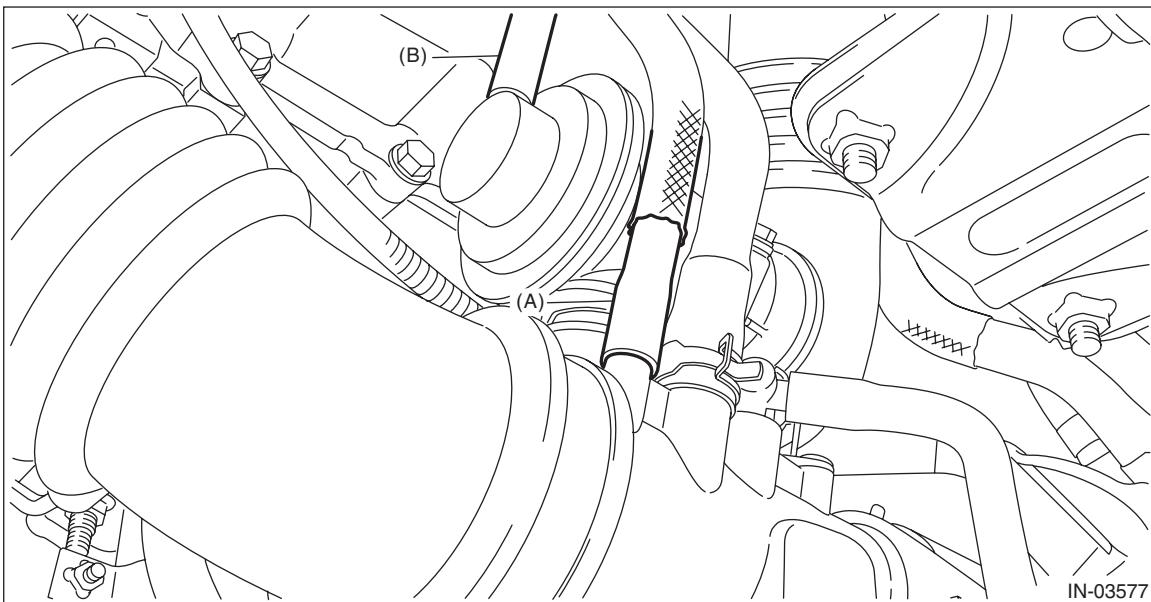
# Intake Duct

## INTAKE (INDUCTION)

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



5) Connect the vacuum hose (A) to the intake duct No. 1, and connect the vacuum hose (B) 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(w/o STI)-49, INSTALLATION, Radiator Sub Fan and Fan Motor.>
- 9) Install the intercooler. <Ref. to IN(w/o STI)-41, INSTALLATION, Intercooler.>
- 10) Install the air intake duct. <Ref. to IN(w/o STI)-22, INSTALLATION, Air Intake Duct.>
- 11) Connect the ground terminal to battery sensor. <Ref. to NT-5, BATTERY, NOTE, Note.>
- 12) Install the collector cover.

# Intake Duct

## INTAKE (INDUCTION)

### 3. INTAKE DUCT NO. 3

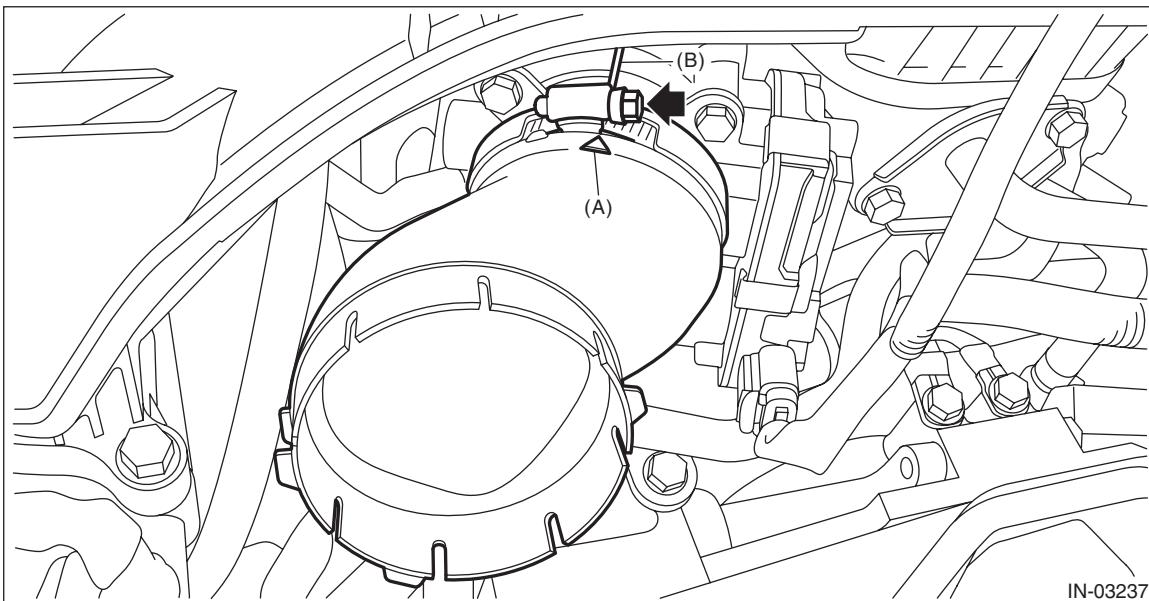
1) Align the triangle mark (A) on the intake duct No. 3 to the rib (B) on the throttle body, and install the intake duct No. 3 to the throttle body.

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:**

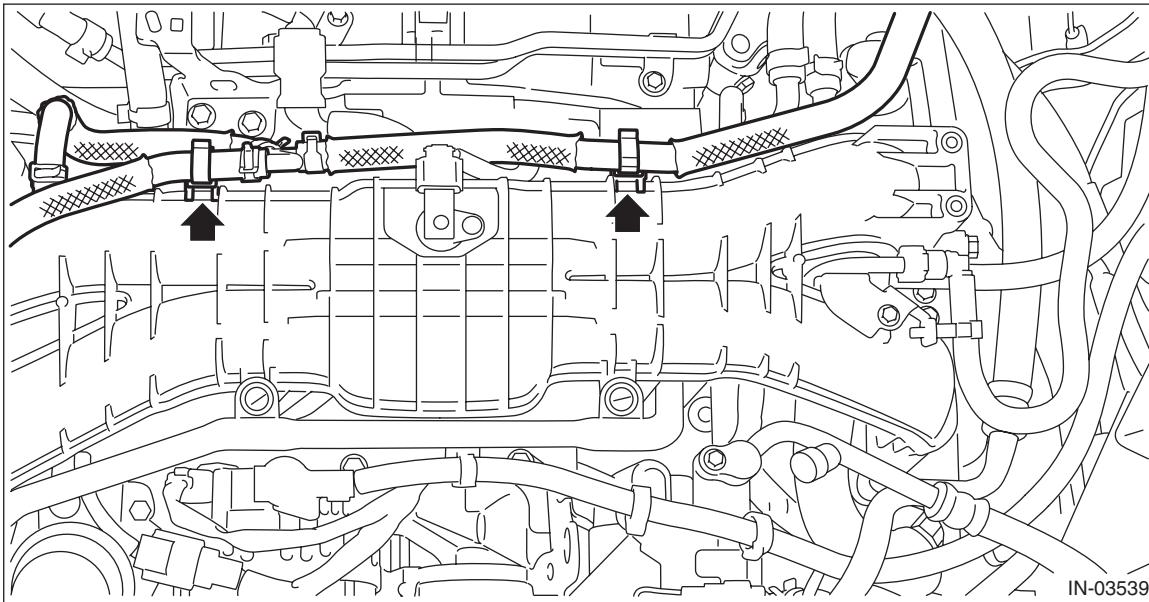
3 N·m (0.3 kgf·m, 2.2 ft-lb)



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

NOTE:

Install the clip to the position of alignment mark ▼ of intake manifold.



3) Install the intercooler. <Ref. to IN(w/o STI)-41, INSTALLATION, Intercooler.>

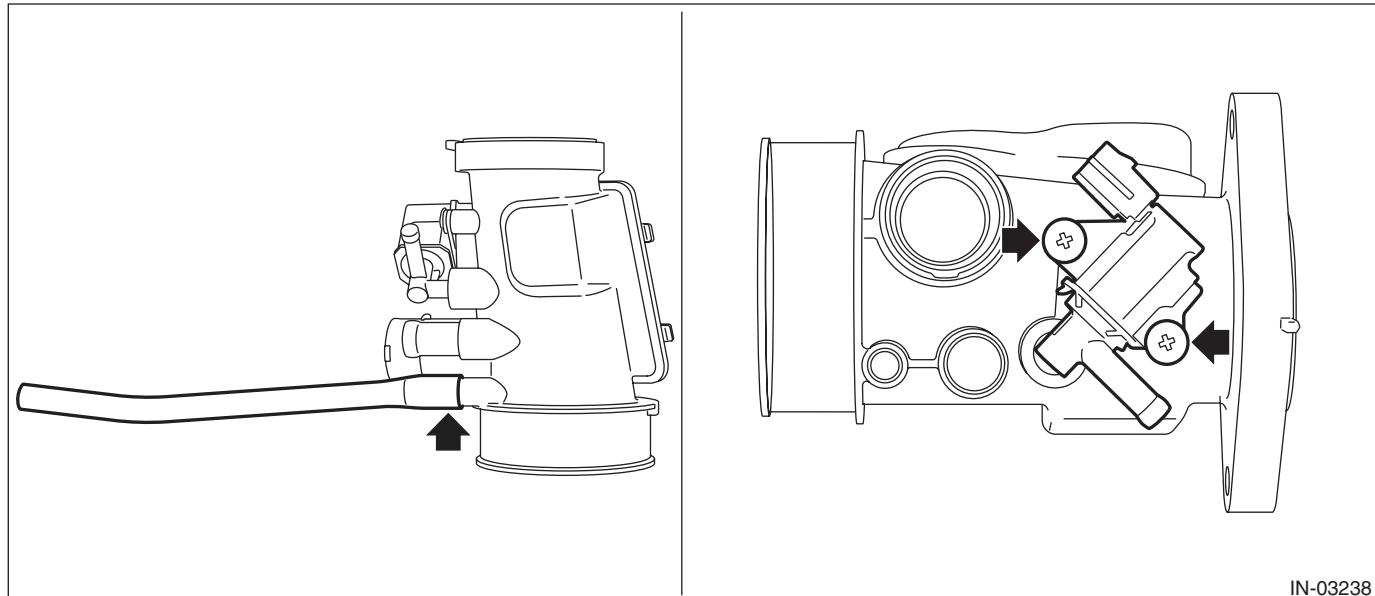
4) Connect the ground terminal to battery sensor. <Ref. to NT-5, BATTERY, NOTE, Note.>

5) Install the collector cover.

### C: DISASSEMBLY

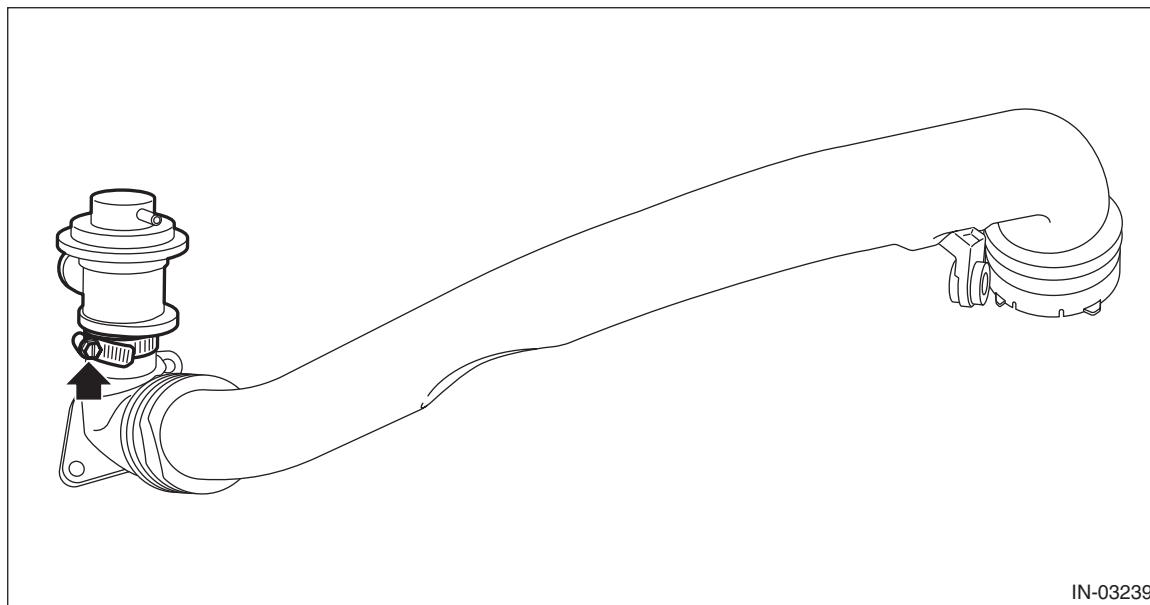
#### 1. INTAKE DUCT NO. 1

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.

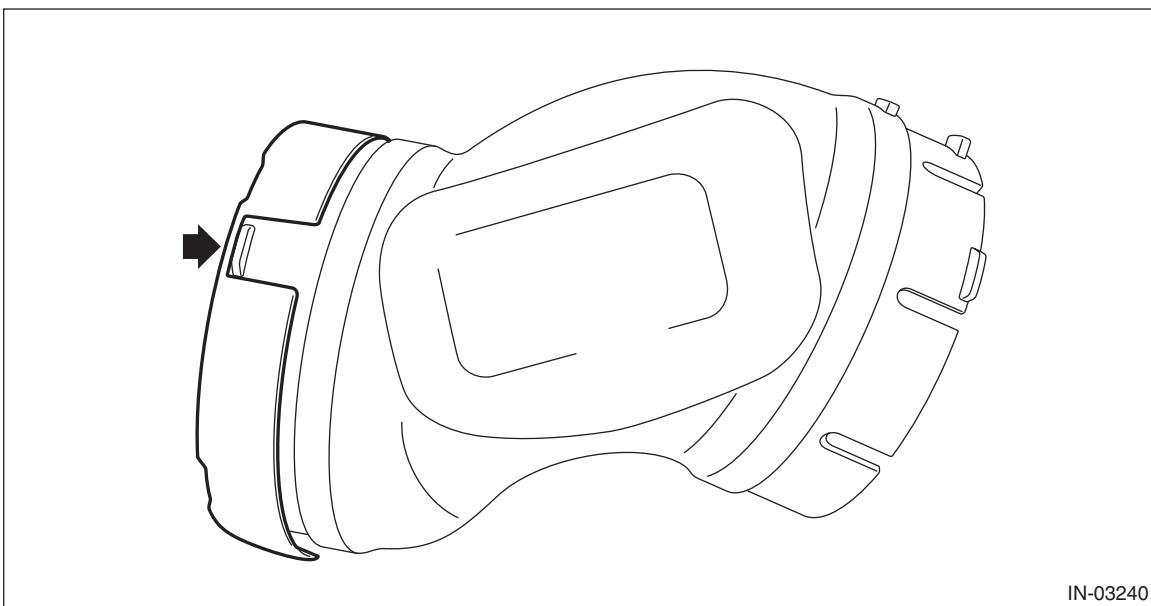


# Intake Duct

## INTAKE (INDUCTION)

### 3. INTAKE DUCT NO. 3

Remove the insulator from the intake duct No. 3.



## D: ASSEMBLY

### 1. INTAKE DUCT NO. 1

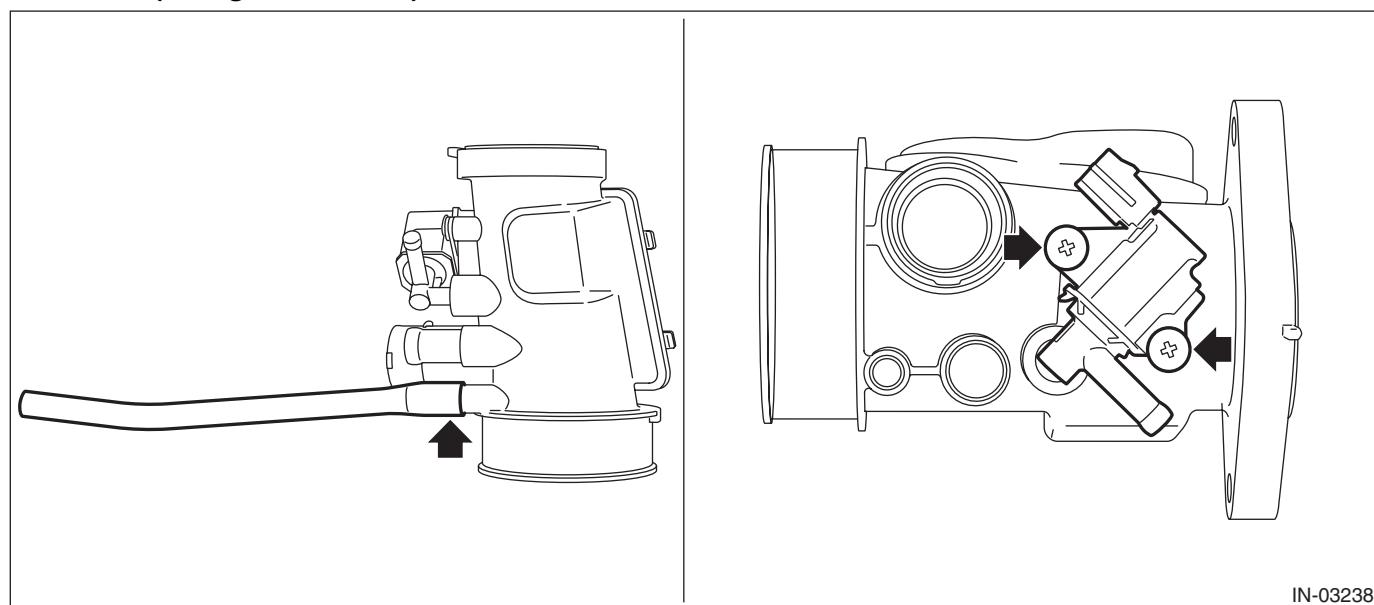
Install the vacuum hose and wastegate control solenoid valve to the intake duct No. 1.

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)**

### 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.