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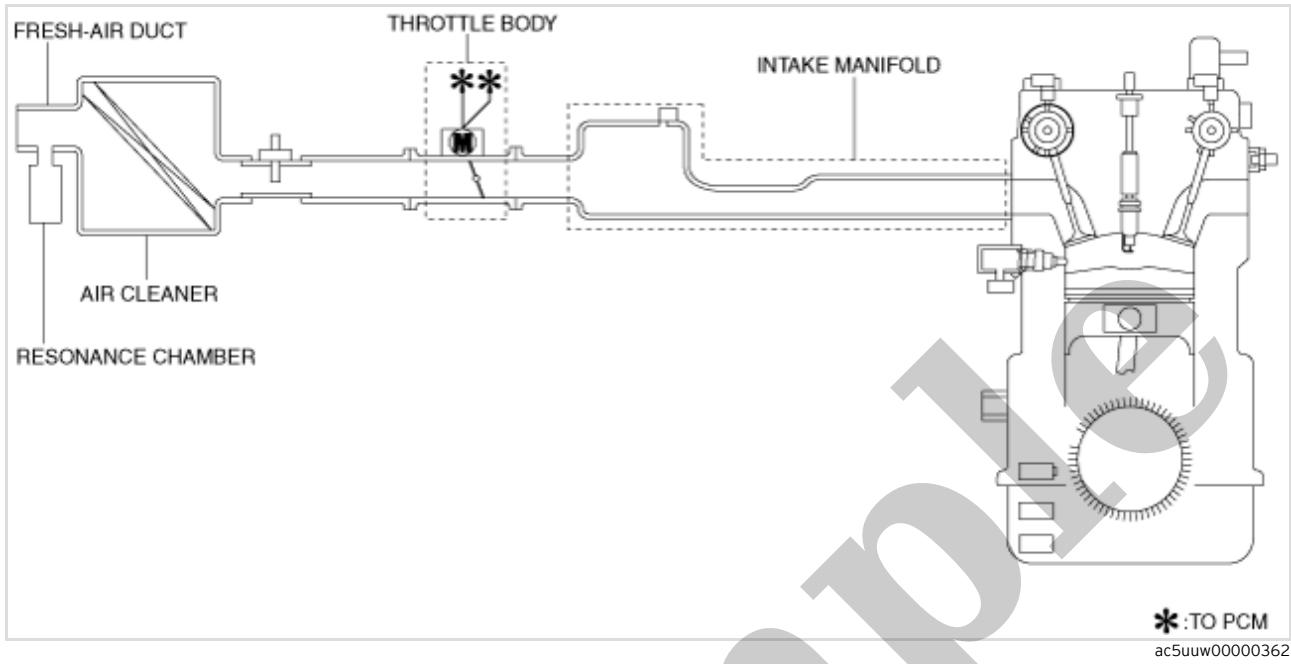
2007 MAZDA 3 / Axela Sedan OEM Service and Repair Workshop Manual

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INTAKE-AIR SYSTEM DIAGRAM [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)]

SM2897402

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INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)]

SM2897404

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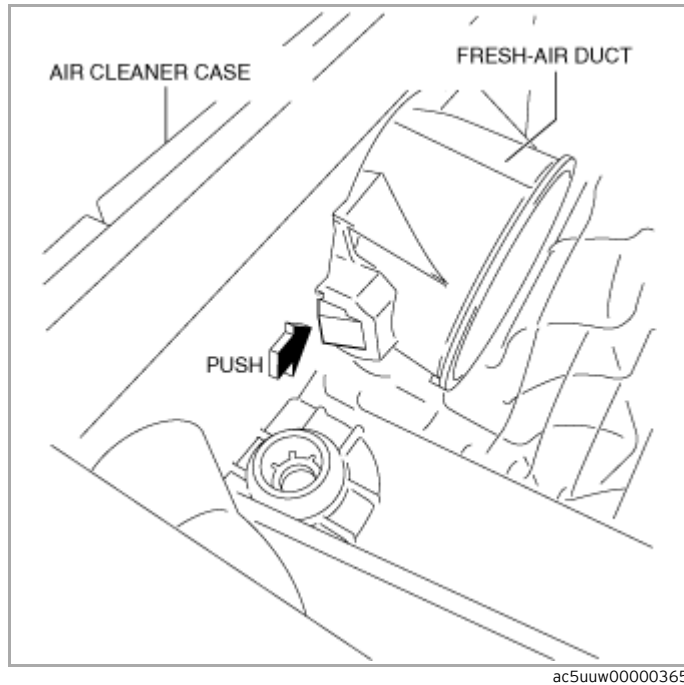
Replacement Part

Intake manifold gasket	Throttle body gasket
Quantity: 4	Quantity: 1
Location of use: Intake manifold	Location of use: Throttle body

Warning

- A hot engine and intake air system can cause severe burns. Turn off the engine and wait until they are cool before removing the intake air system.

- 1.Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))
- 2.Remove in the order indicated in the table.
- 3.Install in the reverse order of removal.



Throttle body Removal Note

1.Remove the upper radiator hose bracket installation bolt. (See [COOLING FAN MOTOR REMOVAL/INSTALLATION \[SKYACTIV-G 2.5 \(WITHOUT CYLINDER DEACTIVATION\)\]](#).)

2.Remove the throttle body.

Vacuum Hose (between intake manifold and vacuum pump) Removal Note

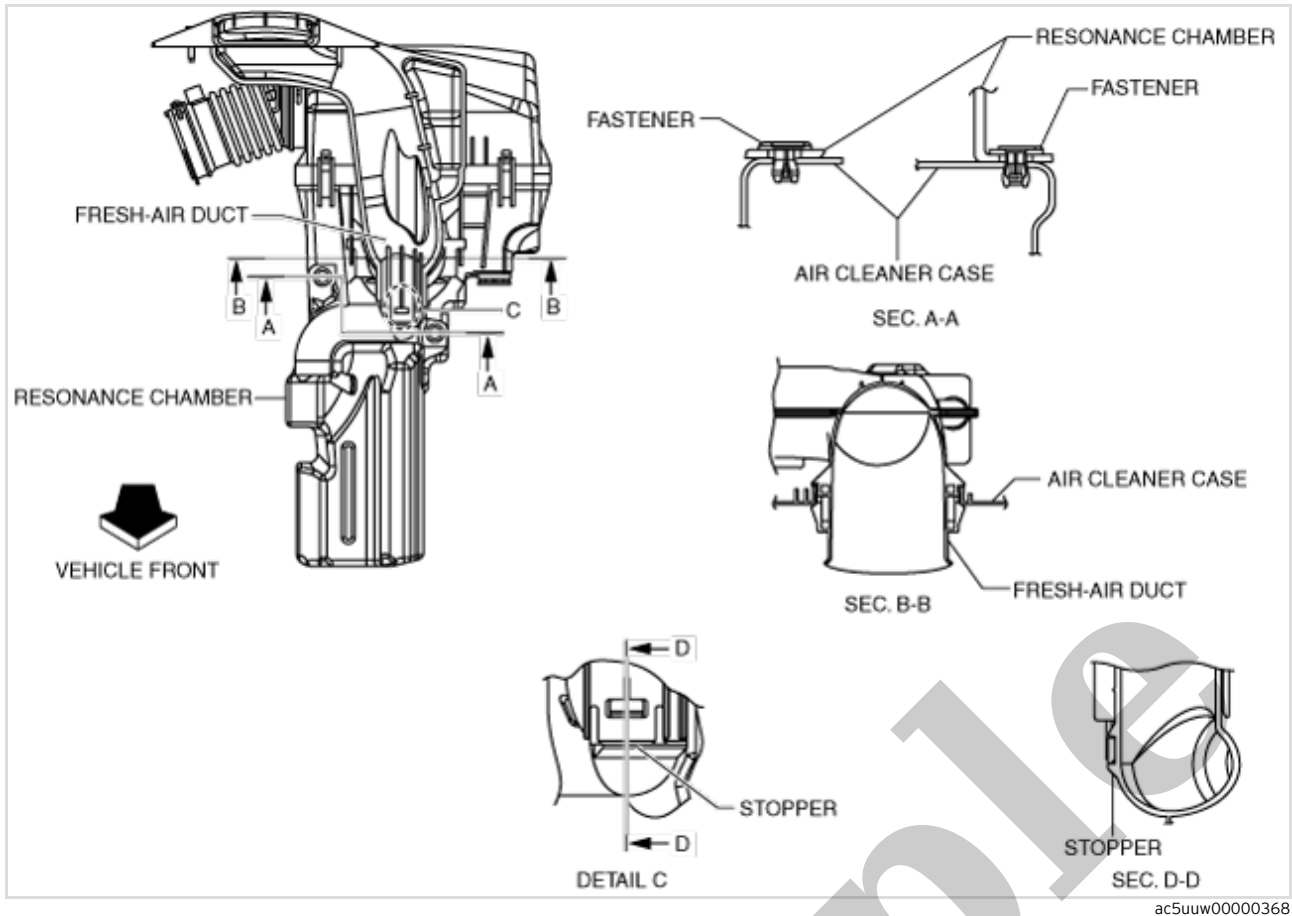
1.Remove the plug hole plate. (See [PLUG HOLE PLATE REMOVAL/INSTALLATION \[SKYACTIV-G 2.5 \(WITHOUT CYLINDER DEACTIVATION\)\]](#).)

2.Remove the vacuum hose.

Intake Manifold Removal Note

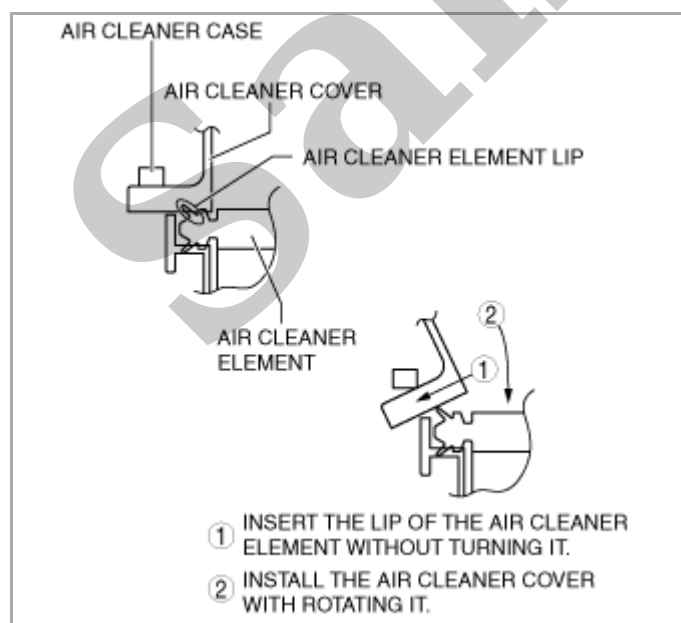
1.Remove the MAP sensor/IAT sensor No.2. (See [MANIFOLD ABSOLUTE PRESSURE \(MAP\) SENSOR/INTAKE AIR TEMPERATURE \(IAT\) SENSOR NO.2 REMOVAL/INSTALLATION \[SKYACTIV-G 2.5 \(WITHOUT CYLINDER DEACTIVATION\)\]](#).)

2.Disconnect the harness clip from the intake manifold as shown in the figure.



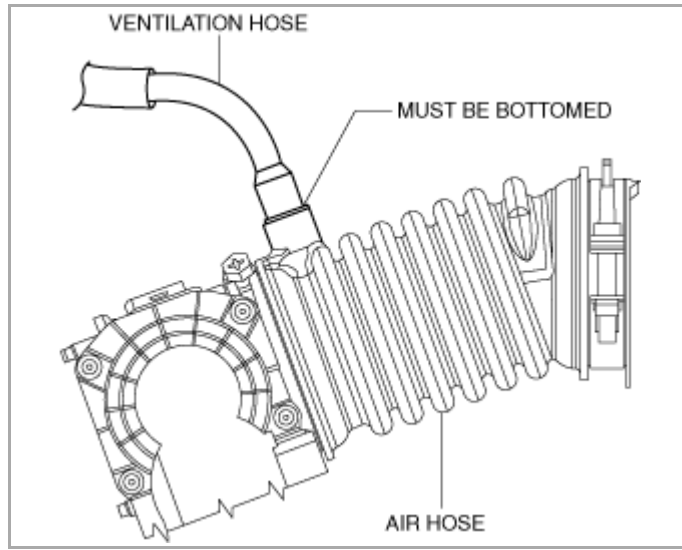
Air Cleaner Cover Installation Note

1. Install the air cleaner cover as shown in the figure.



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2. Secure the air cleaner cover and the air cleaner case with the clip.



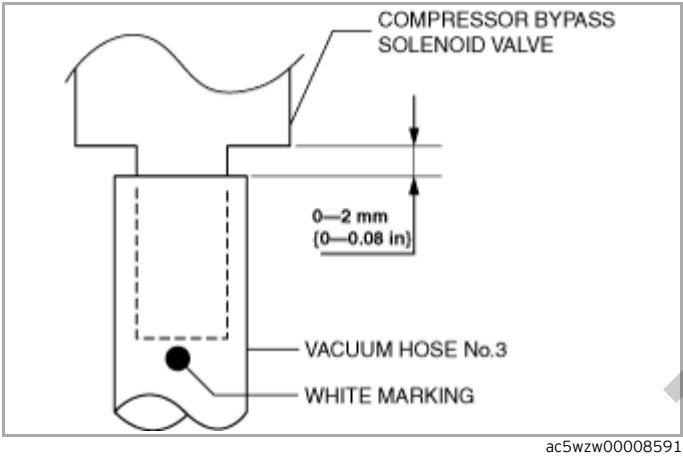
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Sample

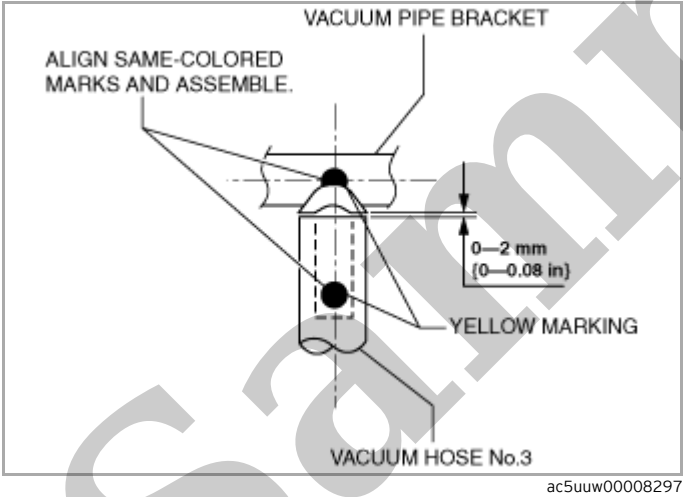
Vacuum Hose No.3 Installation Note

1.Install vacuum hose No.3 as shown in the figure.

Compressor bypass solenoid valve side



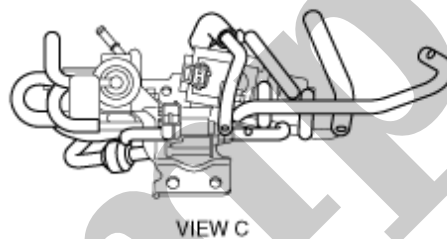
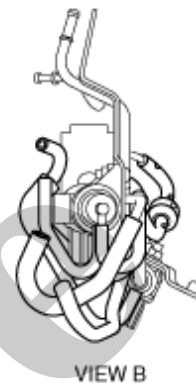
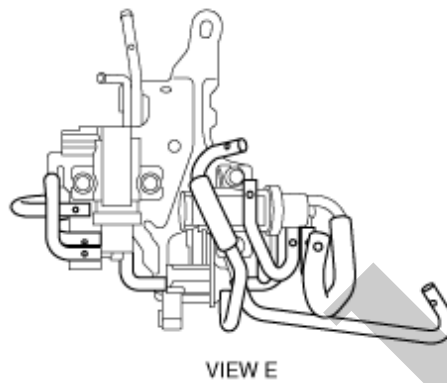
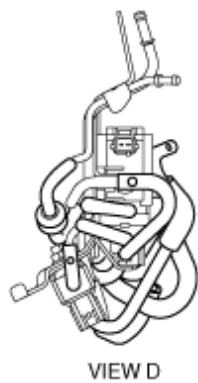
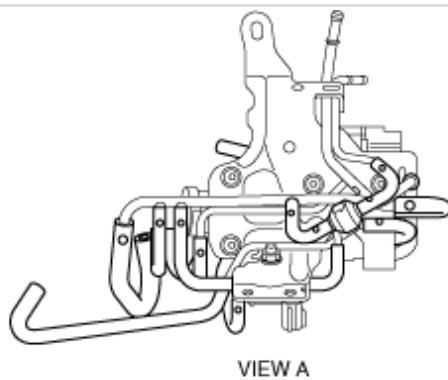
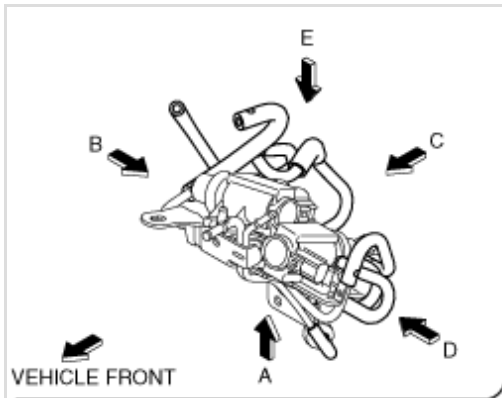
Vacuum pipe bracket side



Vacuum Hose No.2 Installation Note

1.Install vacuum hose No.2 as shown in the figure.

Compressor bypass solenoid valve side



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Compressor bypass solenoid valve side

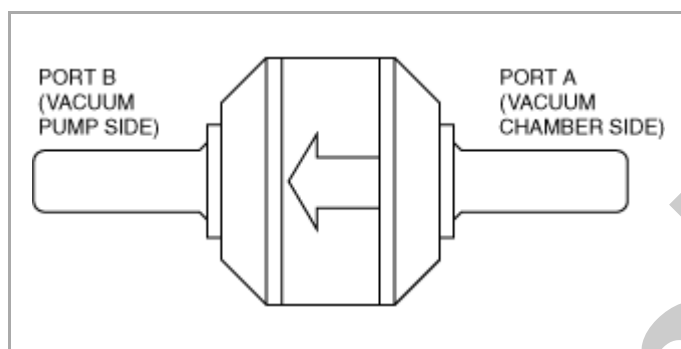
CHECK VALVE INSPECTION [SKYACTIV-D 2.2]

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1.Remove the check valve. (See [CHECK VALVE REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\]](#).)

2.Verify that there is airflow through port B when pressure is applied from port A.

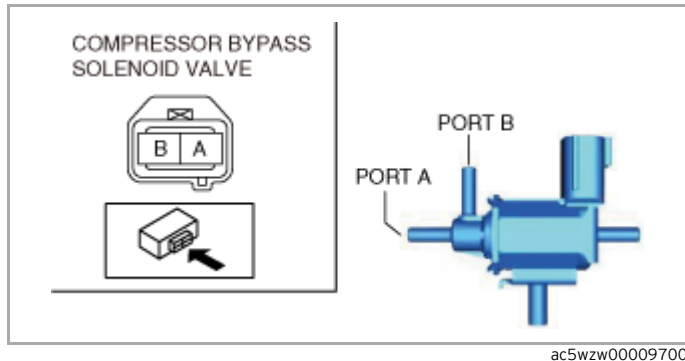


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- If there is no airflow, replace the check valve. (See [CHECK VALVE REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\]](#).)

3.Verify that there is no airflow through port A when pressure is applied from port B.

- If there is airflow, replace the check valve. (See [CHECK VALVE REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\]](#).)



Measured condition	Continuity between ports A–B
When voltage is not applied between terminals A and B	No airflow
When voltage is applied between terminals A and B	Airflow detected

- If not as specified, replace the compressor bypass solenoid valve. (See [COMPRESSOR BYPASS SOLENOID VALVE REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\]](#).)

PID/DATA Monitor Inspection

- 1.Connect the M-MDS to the DLC-2.
- 2.Start the engine and warm it up completely.
- 3.Using the M-MDS, display the simulation item COMP_BPV. (See [ON-BOARD DIAGNOSTIC TEST \[PCM \(SKYACTIV-D 2.2\)\]](#).)
- 4.Verify that the PID COMP_BPV value goes from Off to On when the engine is raced at an engine speed of 3,500 rpm.

- If not as verified, replace the compressor bypass solenoid valve. (See [COMPRESSOR BYPASS SOLENOID VALVE REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\]](#).)