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2007 MAZDA 3 MPS / MAZDASPEED3 OEM Service and Repair Workshop Manual

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REGULATING SOLENOID VALVE REMOVAL/INSTALLATION [SKYACTIV-D 2.2]

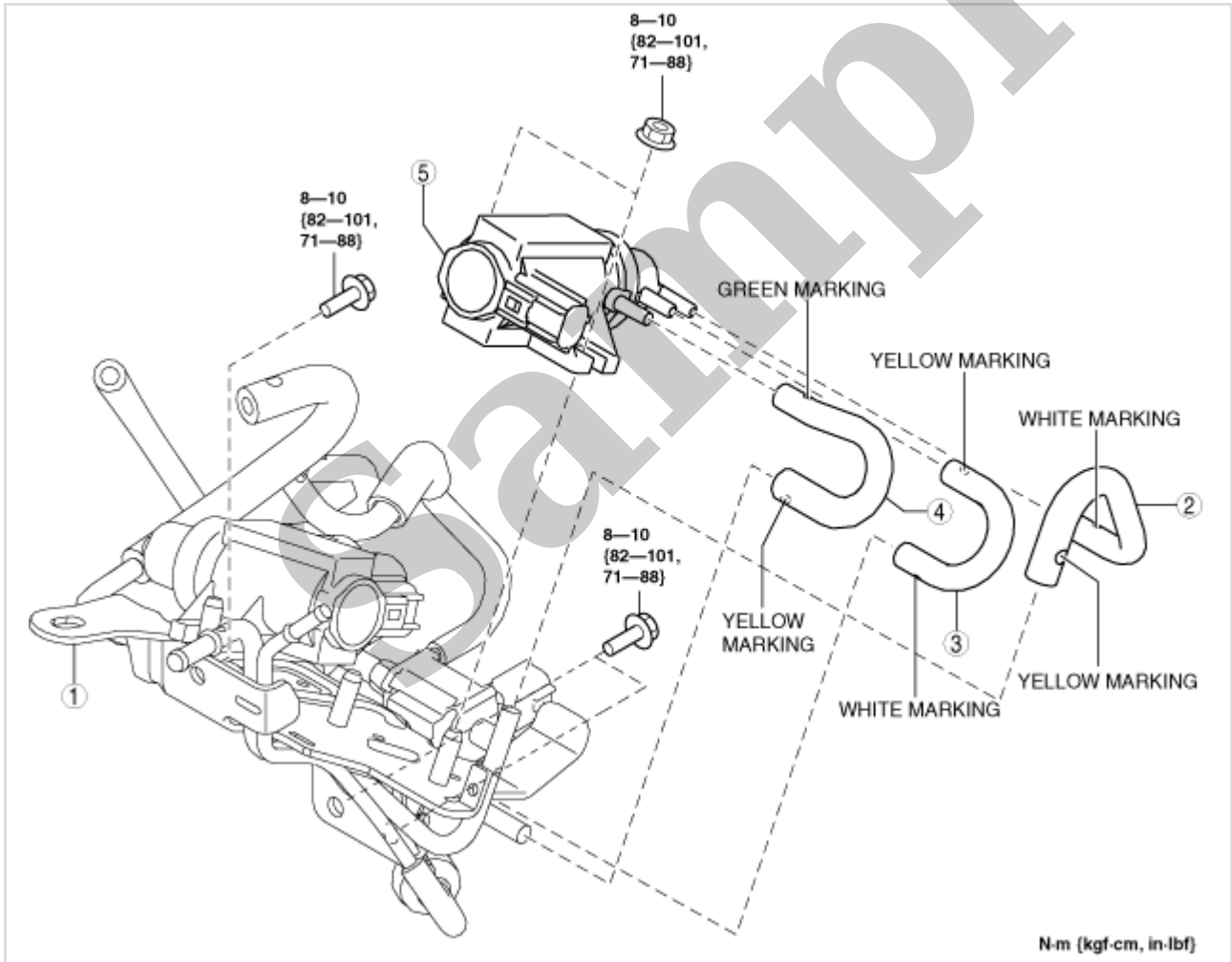
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Caution

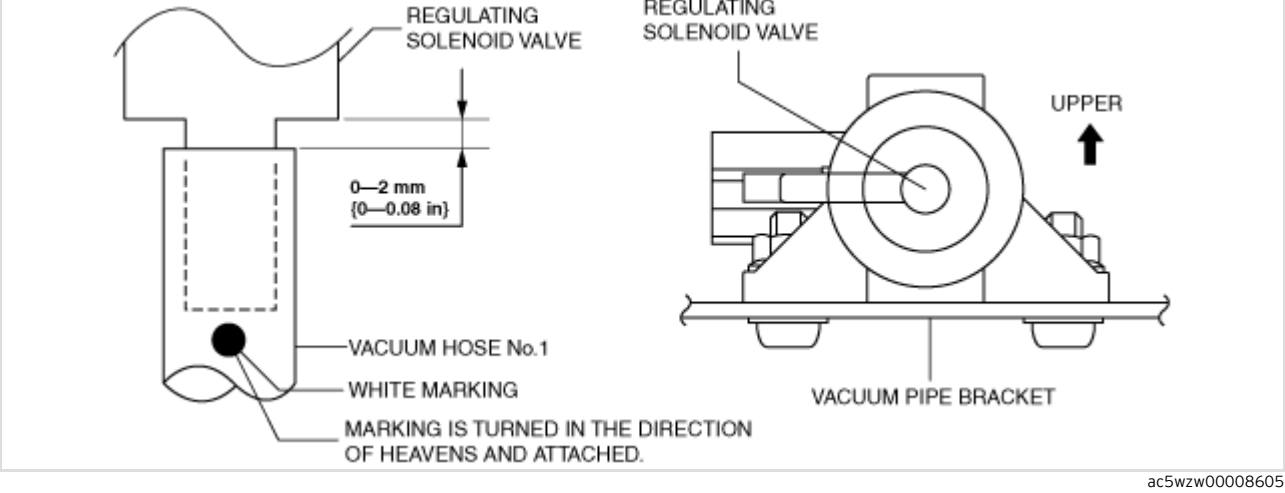
- If the vacuum hose is installed incorrectly, it could cause a vehicle malfunction. To prevent this, refer to “VACUUM HOSE STRUCTURAL VIEW” and install the vacuum hose correctly. (See [Vacuum hose structural view.](#))

- 1.Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))
- 2.Remove the battery and the battery tray. (See [BATTERY REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- 3.Remove in the order shown in the figure.

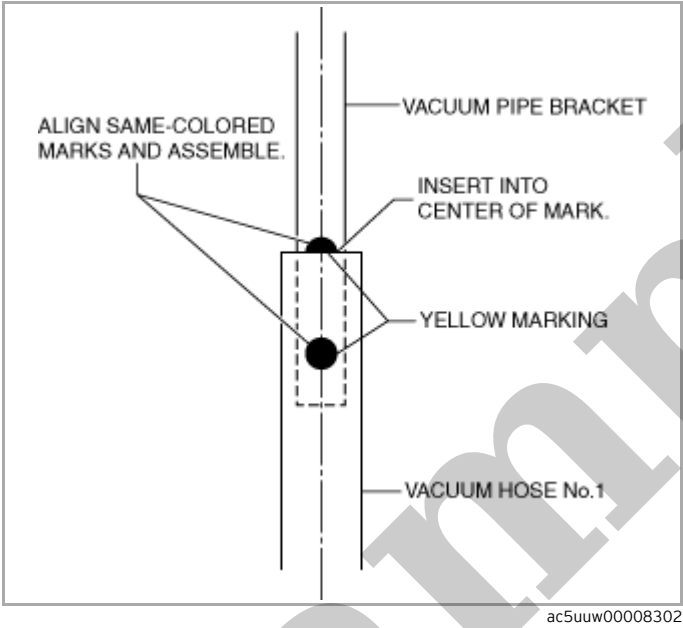


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1	Vacuum pipe bracket
2	Vacuum hose No.1 (See Vacuum Hose No.1 Installation Note.)
3	Vacuum hose No.2 (See Vacuum Hose No.2 Installation Note.)



Vacuum pipe bracket side



Vacuum hose structural view

1.Verify that the vacuum hose is installed correctly as shown in the figure.

Whole figure

WASTEGATE SOLENOID VALVE REMOVAL/INSTALLATION [SKYACTIV-D 2.2]

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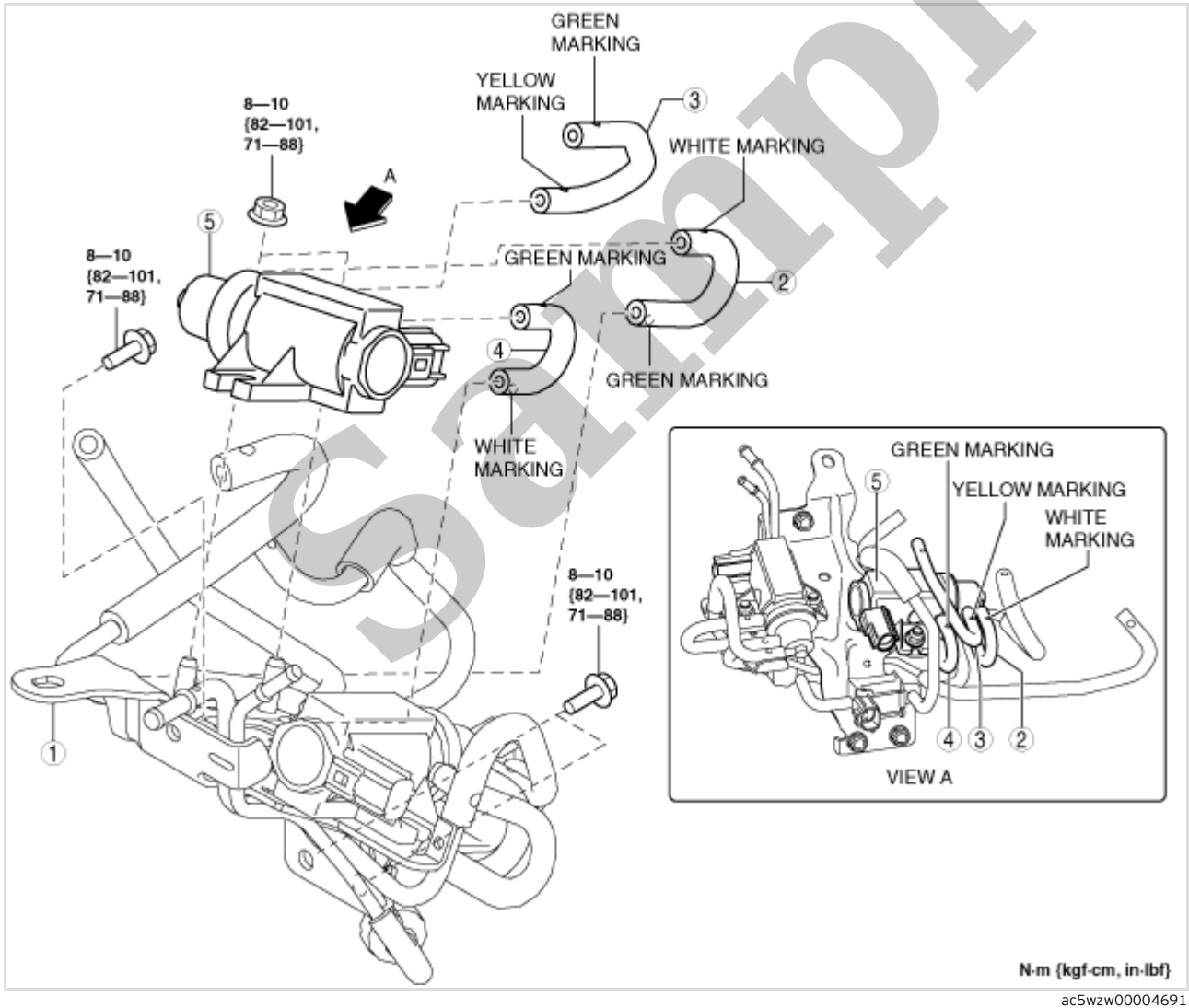
Caution

• If the vacuum hose is installed incorrectly, it could cause a vehicle malfunction. To prevent this, refer to “VACUUM HOSE STRUCTURAL VIEW” and install the vacuum hose correctly. (See [Vacuum hose structural view.](#))

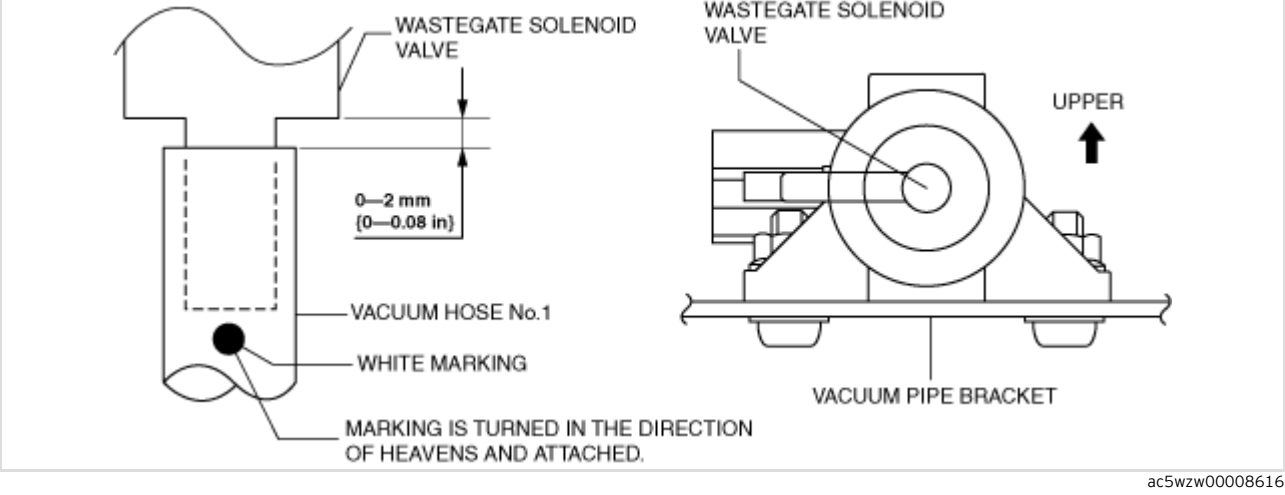
1.Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))

2.Remove the battery and the battery tray. (See [BATTERY REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))

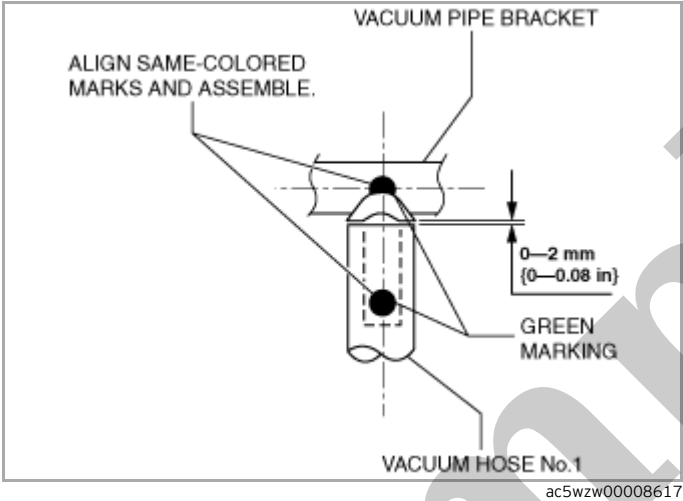
3.Remove in the order shown in the figure.



1	Vacuum pipe bracket
2	Vacuum hose No.1 (See Vacuum Hose No.1 Installation Note.)



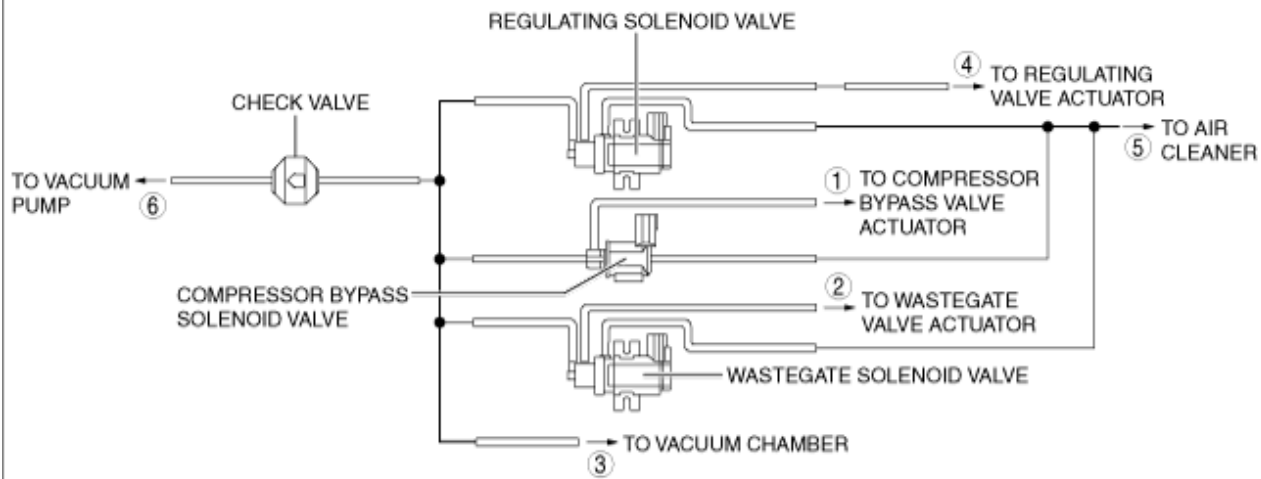
Vacuum pipe bracket side



Vacuum hose structural view

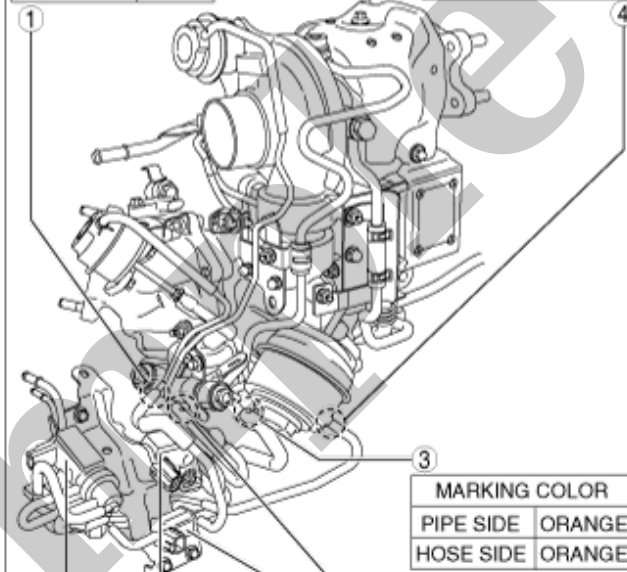
- 1.Verify that the vacuum hose is installed correctly as shown in the figure.

Whole figure



MARKING COLOR	
PIPE SIDE	WHITE
HOSE SIDE	WHITE

MARKING COLOR	
PIPE SIDE	RED
HOSE SIDE	RED



REGULATING SOLENOID VALVE

COMPRESSOR BYPASS SOLENOID VALVE

WASTEGATE SOLENOID VALVE

MARKING COLOR	
PIPE SIDE	ORANGE
HOSE SIDE	ORANGE

MARKING COLOR	
PIPE SIDE	GREEN
HOSE SIDE	GREEN

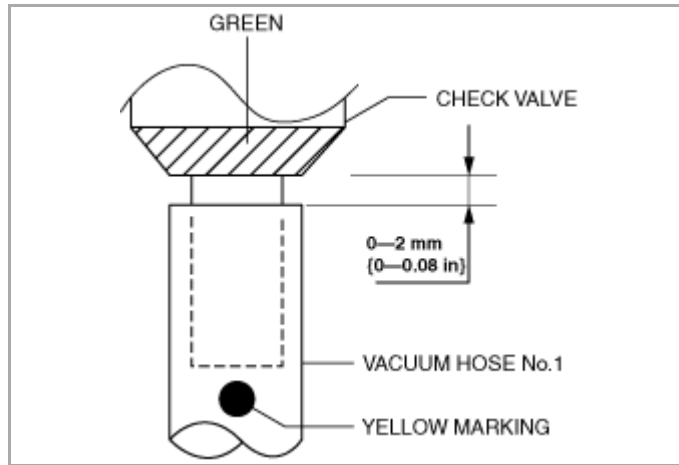
6.Connect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))

7.Start the engine.

8.Using the M-MDS, display the simulation item WGV. (See [ON-BOARD DIAGNOSTIC TEST \[PCM \(SKYACTIV-D 2.2\)\].](#))

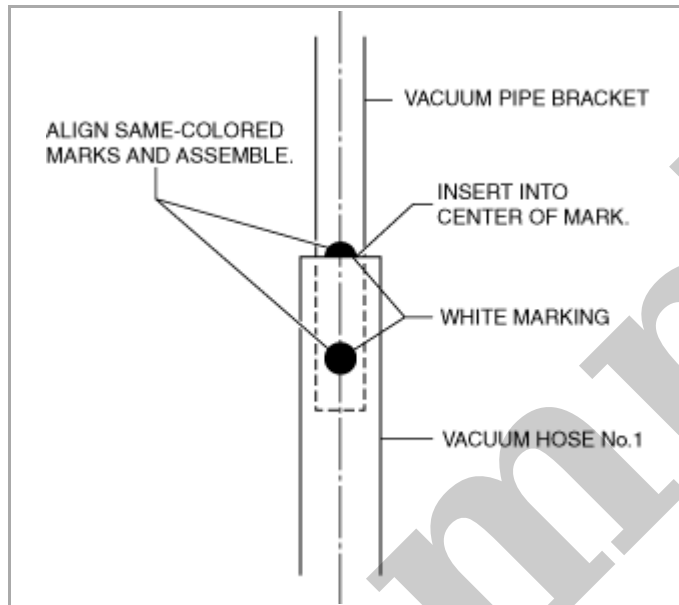
9.Verify that there is vacuum in the hose inserted into the wastegate solenoid valve when the simulation item WGV is changed from 0 % to 100 %.

- If vacuum cannot be verified, replace the wastegate solenoid valve. (See [WASTEGATE SOLENOID VALVE REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))



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Vacuum pipe bracket side



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Vacuum hose structural view

1. Verify that the vacuum hose is installed correctly as shown in the figure.

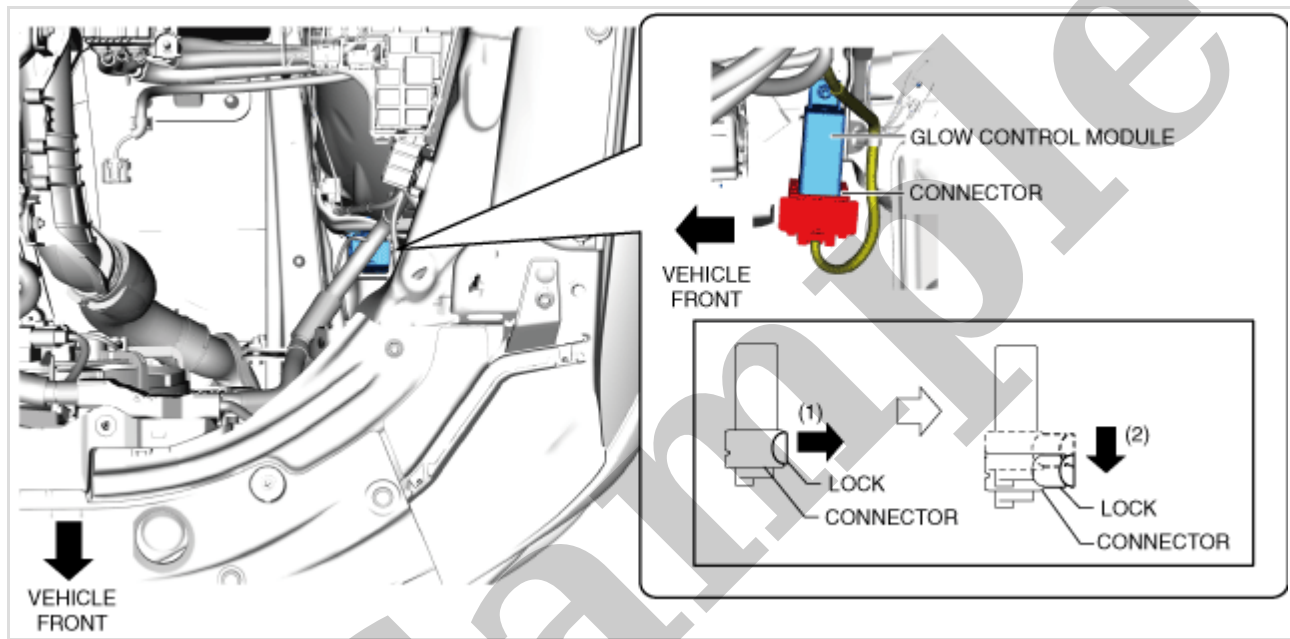
Whole figure

GLOW PLUG CONTROL MODULE REMOVAL/INSTALLATION [SKYACTIV-D 2.2]

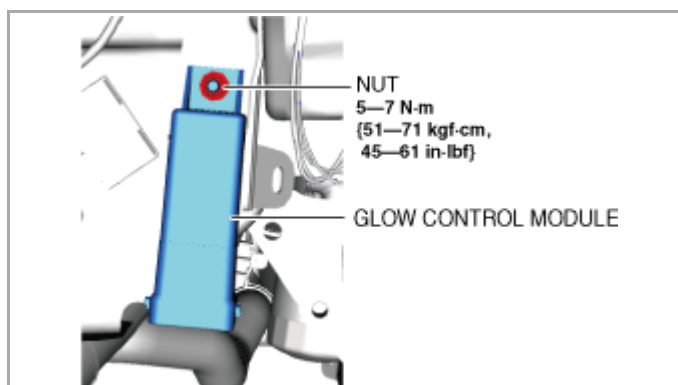
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1. Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))
2. Remove the air cleaner. (See [INTAKE-AIR SYSTEM REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
3. Pull out the lock of the glow control module connector in the direction of arrow (1) shown in the figure.



4. Move the connector in the direction of arrow (2) shown in the figure to disconnect it.
5. Remove the nut.



6. Remove the glow control module.

CHARGE AIR COOLER REMOVAL/INSTALLATION [SKYACTIV-D 2.2]

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Replacement Part

O-ring	O-ring
Quantity: 1	Quantity: 1
Location of use: Charge air cooler air outlet pipe	Location of use: Charge air cooler air inlet pipe

Oil and Chemical Type

Engine oil
Type: Recommended oil

- 1.Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))
- 2.Remove the front bumper. (See [FRONT BUMPER REMOVAL/INSTALLATION.](#))
- 3.Remove the front under cover No.1. (See [FRONT UNDER COVER No.1 REMOVAL/INSTALLATION.](#))
- 4.Remove the boost air temperature sensor. (See [BOOST AIR TEMPERATURE SENSOR REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- 5.Remove the IAT sensor No.2. (See [INTAKE AIR TEMPERATURE \(IAT\) SENSOR NO.2 REMOVAL/INSTALLATION \[SKYACTIV-D 2.2\].](#))
- 6.Remove in the order shown in the figure.
- 7.Install in the reverse order of removal.