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2007 MAZDA RX-8 OEM Service and Repair Workshop Manual

[Go to manual page](#)

FUEL INJECTOR REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)]

SM2897478

id0114s180060

Special Service Tool (SST)

1: 49 D013 1A0 2: -	
Injector seal installer set	

Replacement Part

Spacer	Stopper ring	O-ring
Quantity: 4	Quantity: 4	Quantity: 4
Location of use: Fuel injector	Location of use: Fuel injector	Location of use: Fuel injector
Back-up ring	Teflon seal	
Quantity: 4	Quantity: 4	-
Location of use: Fuel injector	Location of use: Fuel injector	

Oil and Chemical Type

Engine oil
Type: Recommended oil

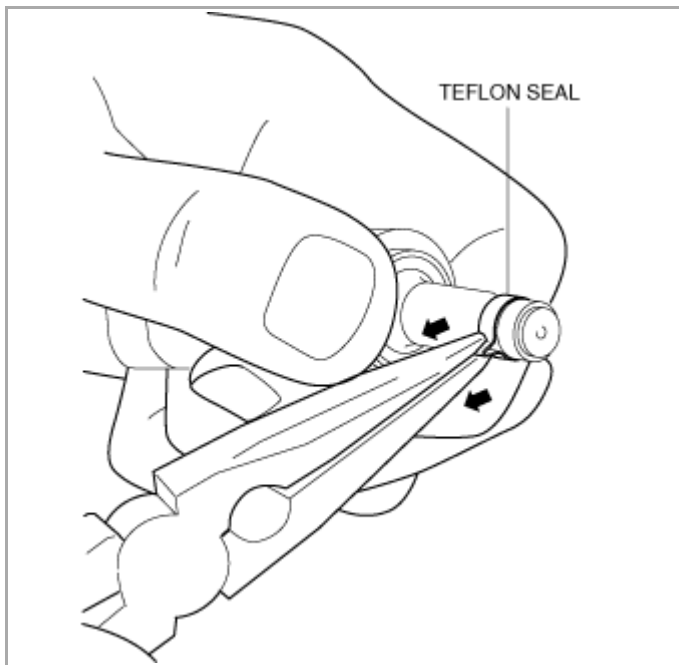
Warning

- Highly pressurized fuel may spray out if the fuel line is cut. Due to the following dangers occurring with a fuel spray, always complete the “Fuel Line Safety Procedure” to prevent the fuel from spraying.
 - Fuel may cause irritation if it comes in contact with skin and eyes.
 - If fuel ignites and causes a fire, it may lead to serious injury or death, and damage to property and facilities.
- A person charged with static electricity could cause a fire or explosion, resulting in death or serious injury. Before performing work on the fuel system, discharge static electricity by touching the vehicle body.

Caution

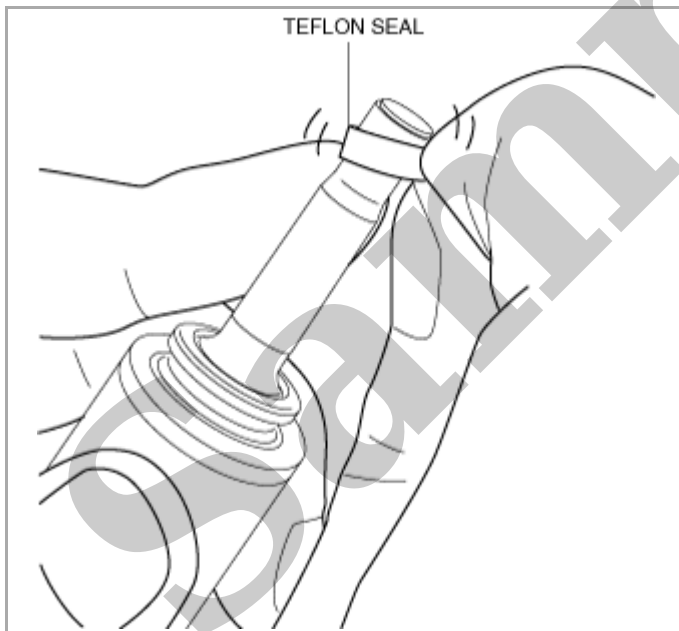
- Touching the end of the fuel injector by hand or pressing it to an object may cause a malfunction. Be very careful when handling the end of the fuel injector.
- When the fuel distributor is removed, air tightness of the fuel injectors will be lost. Always replace the stopper ring, O-ring, back-up ring, spacer, and teflon seal on all four fuel injectors with new ones when the fuel distributor is removed.
- Do not remove the fuel pressure sensor from the fuel distributor.

1.Complete the “BEFORE SERVICE PRECAUTION”. (See [BEFORE SERVICE PRECAUTION \[SKYACTIV-G 2.5 \(WITHOUT CYLINDER DEACTIVATION\)\]](#).)



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2.Remove the teflon seal as shown in the figure.



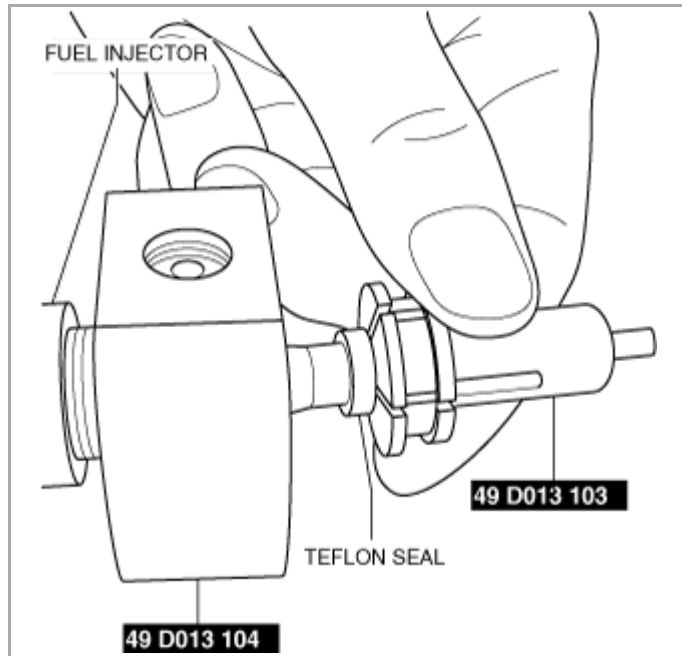
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Teflon Seal Installation Note

Note

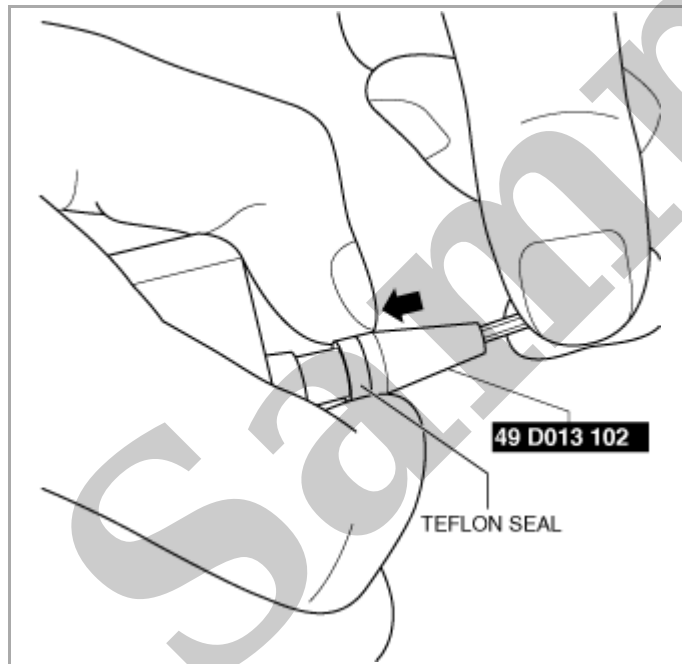
- 49 D013 102, 49 D013 103, and 49 D013 104 are component parts for 49 D013 1A0.

1.Apply engine oil to the SST.



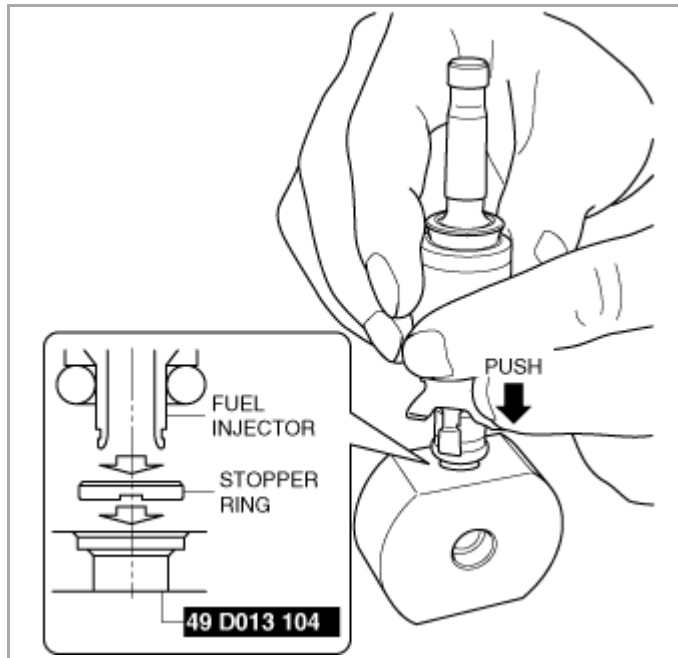
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7. Install the teflon seal to the fuel injector by hand and remove the SST.



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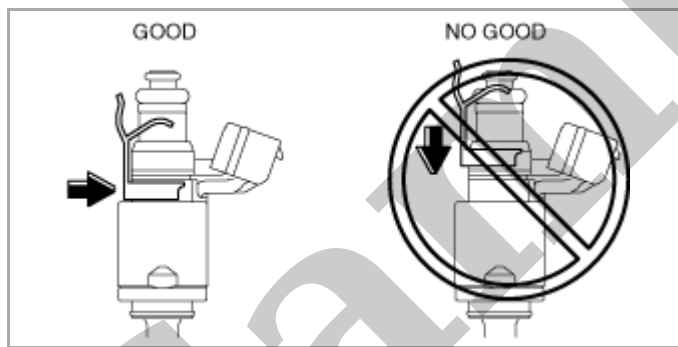
8. Slide the SST to the end of the fuel injector.



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Spacer Installation Note

1. Install the spacer to the fuel injector while being careful of the spacer installation direction and position.



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Fuel Injector Installation Note

Caution

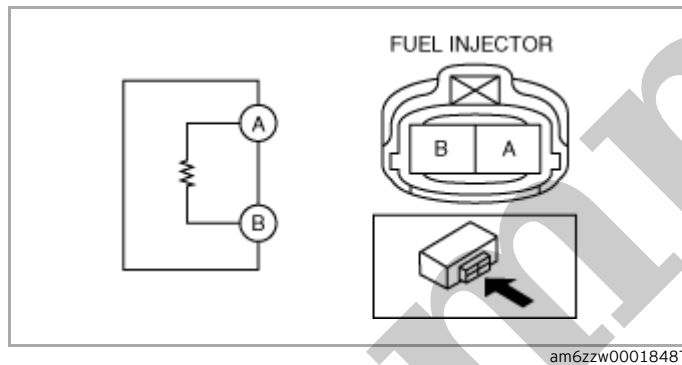
- If engine oil is applied to the fuel injector, it could adhere to the injection holes and inhibit the fuel injector function. To prevent this, apply engine oil to the cylinder head side.

1. Apply engine oil to the fuel injector installation holes.

2. Insert the fuel injectors to the installation holes one by one, being careful of the direction the fuel injectors are pointed.

Resistance Inspection

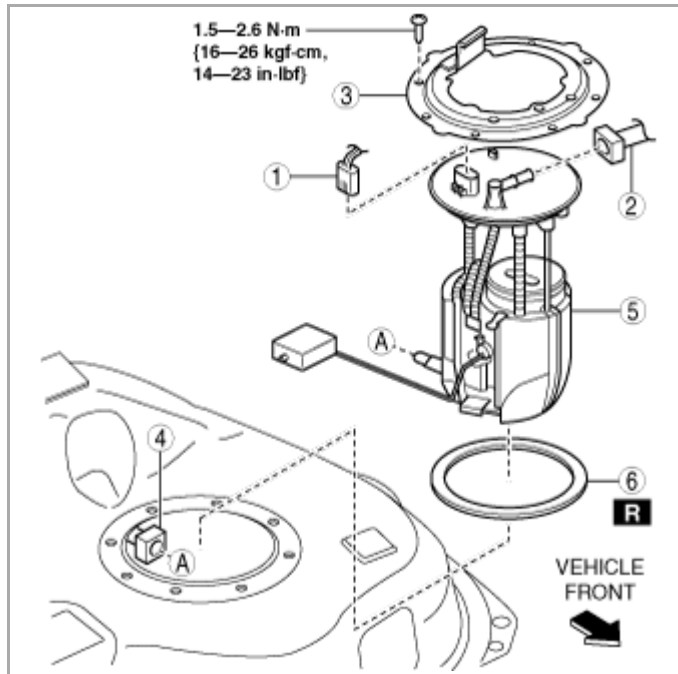
1. Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION](#).)
2. Disconnect the fuel injector connector. (See [FUEL INJECTOR REMOVAL/INSTALLATION \[SKYACTIV-G 2.5 \(WITHOUT CYLINDER DEACTIVATION\)\]](#).)
3. Inspect the resistance between fuel injector terminals A and B.



Fuel injector resistance

1.23–2.03 ohms [Surrounding temperature: 0–80 °C {32–176 °F}]

- If not within the specification, replace the fuel injector. (See [FUEL INJECTOR REMOVAL/INSTALLATION \[SKYACTIV-G 2.5 \(WITHOUT CYLINDER DEACTIVATION\)\]](#).)



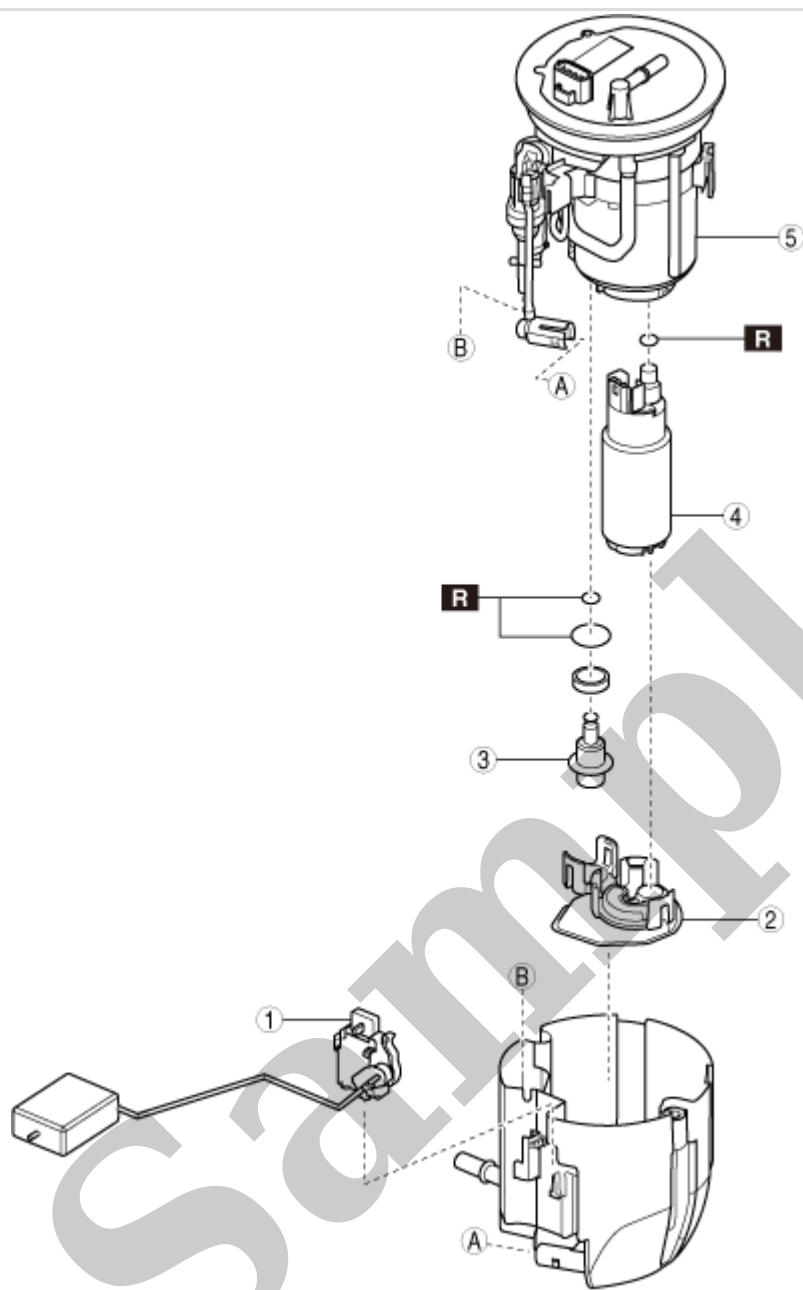
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1	Fuel pump unit connector
2	Quick release connector (See QUICK RELEASE CONNECTOR (FUEL SYSTEM) REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)] .)
3	Set plate
4	Quick release connector (See QUICK RELEASE CONNECTOR (FUEL SYSTEM) REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)] .)
5	Fuel pump unit
6	Packing

6. Install in the reverse order of removal.

7. Complete the "AFTER SERVICE PRECAUTION". (See **AFTER SERVICE PRECAUTION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)]**.)

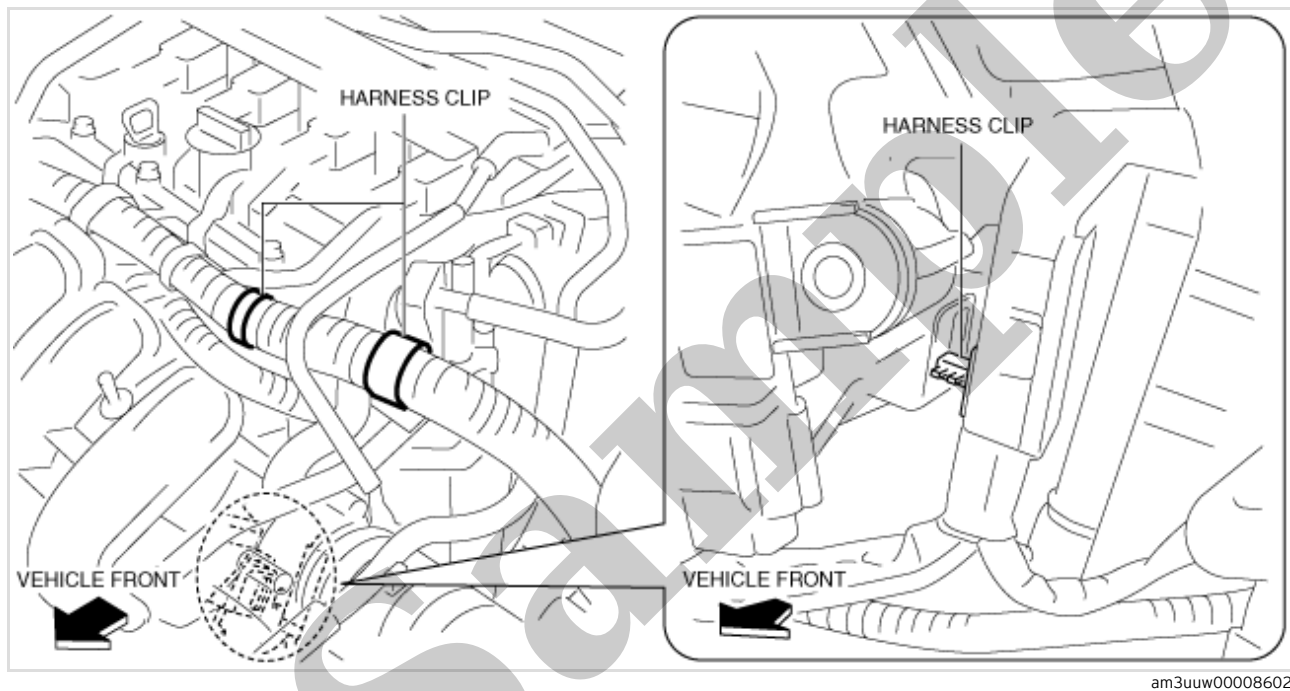
AWD



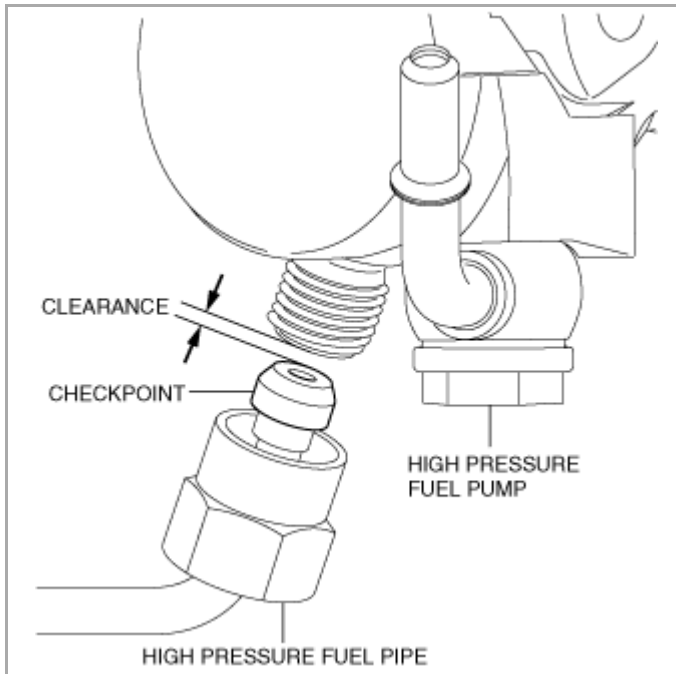
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1	Fuel gauge sender unit
2	Fuel filter (low-pressure)
3	Pressure regulator
4	Fuel pump
5	Fuel filter (high-pressure)

1. Complete the "BEFORE SERVICE PRECAUTION". (See **BEFORE SERVICE PRECAUTION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)]**.)
2. Disconnect the negative battery terminal. (See **NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION**.)
3. Remove the plug hole plate. (See **PLUG HOLE PLATE REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)]**.)
4. Remove the air cleaner and air hose as a single unit. (See **INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)]**.)
5. Disconnect the harness clip as shown in the figure.



6. Disconnect the hoses as shown in the figure.



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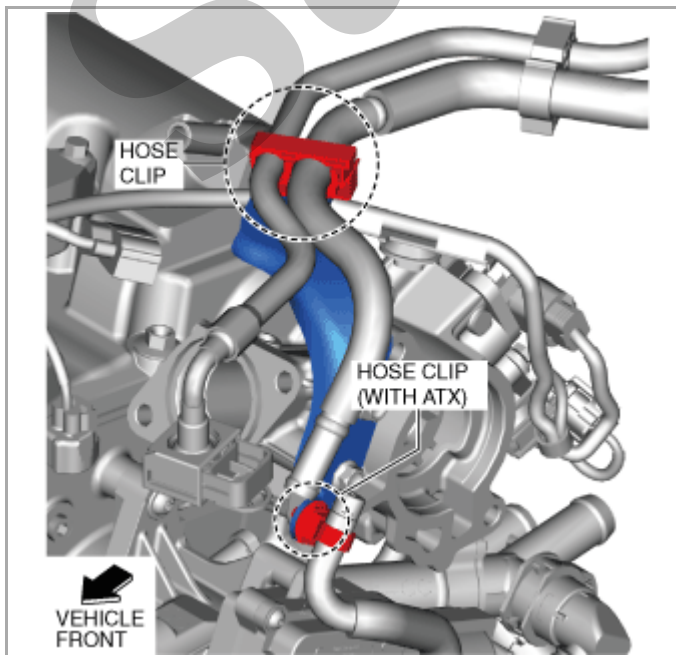
- If the high pressure fuel pump is removed with the high pressure fuel pipe installed, the high pressure fuel pipe and fuel distributor may be damaged because of the excessive force caused by the spring force of the high pressure fuel pump. The high pressure fuel pipe and fuel distributor must be replaced if they are damaged. Always remove the high pressure fuel pipe before removing the high pressure fuel pump.

1.Remove the high pressure fuel pipe.

Rear Housing Removal Note

1.Remove the vacuum pump. (See [VACUUM PUMP REMOVAL/INSTALLATION \[SKYACTIV-G 2.5 \(WITHOUT CYLINDER DEACTIVATION\)\]](#).)

2.Disconnect the hose clips shown in the figure.



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