

FUEL INJECTOR REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5]

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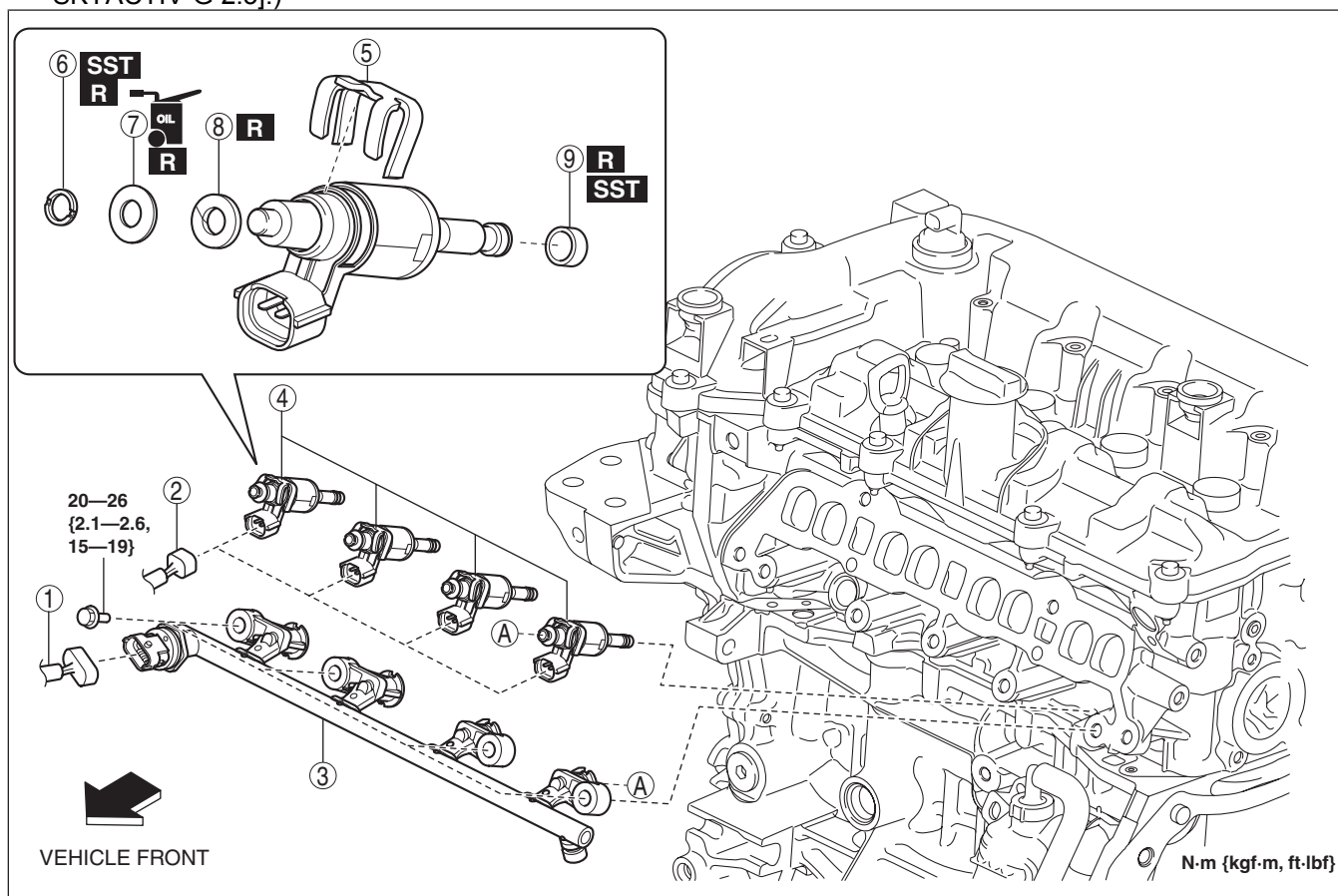
Warning

- Fuel is very flammable liquid. If fuel spills or leaks from the pressurized fuel system, it will cause serious injury or death and facility breakage. Fuel can also irritate skin and eyes. To prevent this, always complete the “Fuel Line Safety Procedure”, while referring to the “BEFORE SERVICE PRECAUTION”.
- A person charged with static electricity could cause a fire or explosion, resulting in death or serious injury. Before draining fuel, make sure to 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 injector will be lost. Always replace the stopper ring, O-ring, back-up ring, and teflon seal of the fuel injector with new ones.
- Do not remove the fuel pressure sensor from the fuel distributor.

1. Complete the “BEFORE SERVICE PRECAUTION”. (See BEFORE SERVICE PRECAUTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
2. Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].)
3. Remove the plug hole plate. (See PLUG HOLE PLATE REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
4. Remove the intake manifold. (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
5. Remove in the order indicated in the table.
6. Install in the reverse order of removal.
7. Complete the “AFTER SERVICE PRECAUTION”. (See AFTER SERVICE PRECAUTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)



1	Fuel pressure sensor connector
2	Fuel injector connector

3	Fuel distributor (See Fuel Distributor Removal Note.) (See Fuel Distributor Installation Note.)
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4	Fuel injector (See Fuel Injector Installation Note.)
5	Spacer
6	Stopper ring (See Stopper Ring Removal Note.) (See Stopper Ring Installation Note.)
7	O-ring

8	Back-up ring (See Back-up Ring Installation Note.)
9	Teflon seal (See Teflon Seal Removal Note.) (See Teflon Seal Installation Note.)

Fuel Distributor Removal Note

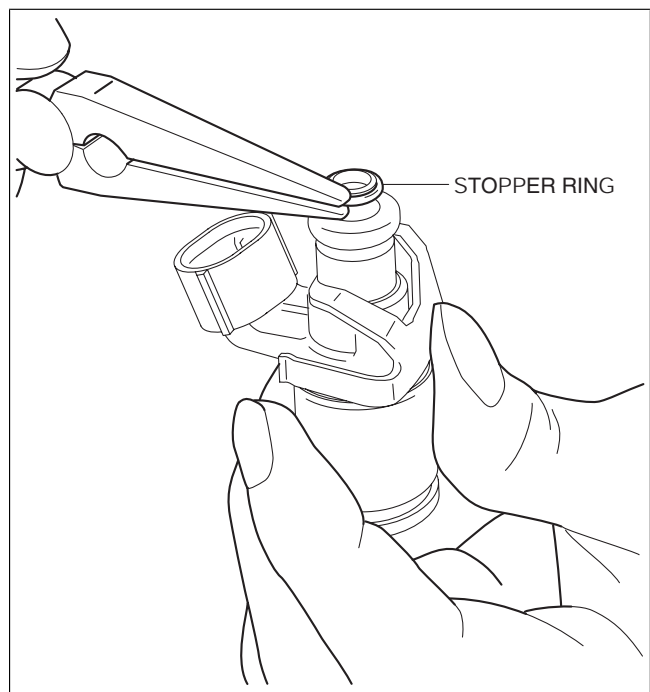
1. Remove the high pressure fuel pipe. (See HIGH PRESSURE FUEL PUMP REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].)
2. Remove the fuel distributor.

Stopper Ring Removal Note

Note

- When removing the stopper ring, do not damage the fuel injector with the tool.

1. Remove the stopper ring as shown in the figure.



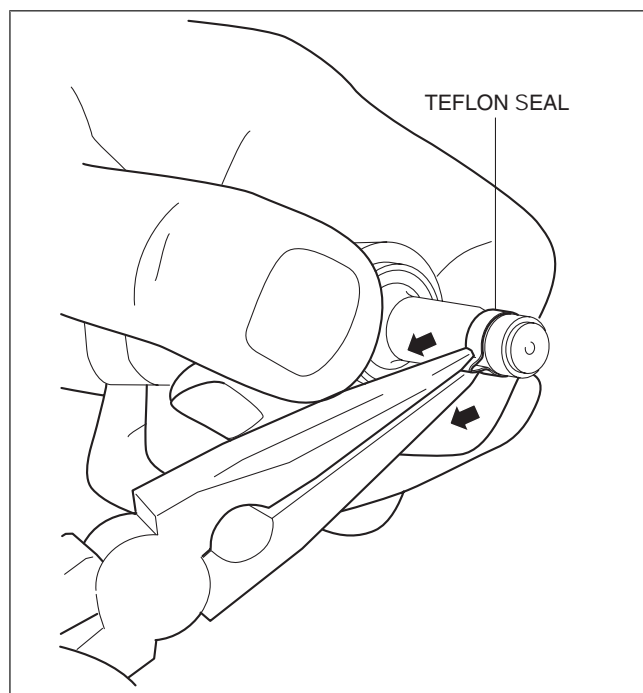
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Teflon Seal Removal Note

Note

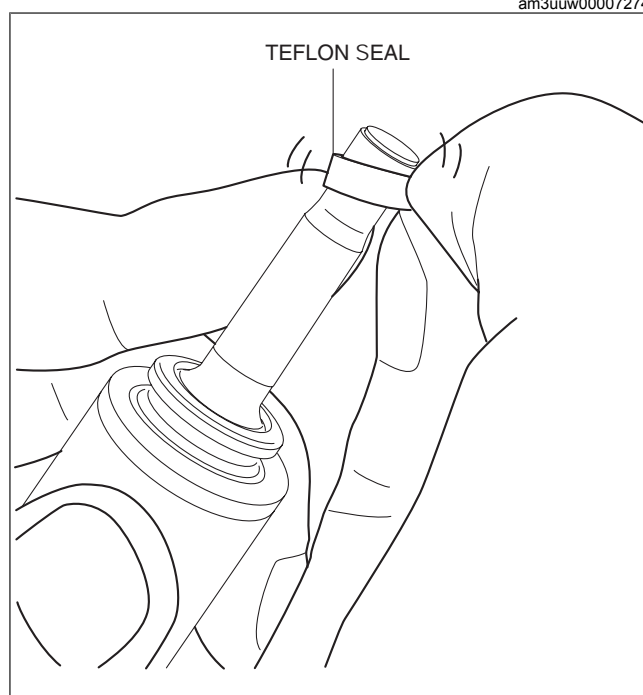
- When stretching the teflon seal, do not damage the fuel injector with the tool.

1. Stretch the teflon seal as shown in the figure.



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



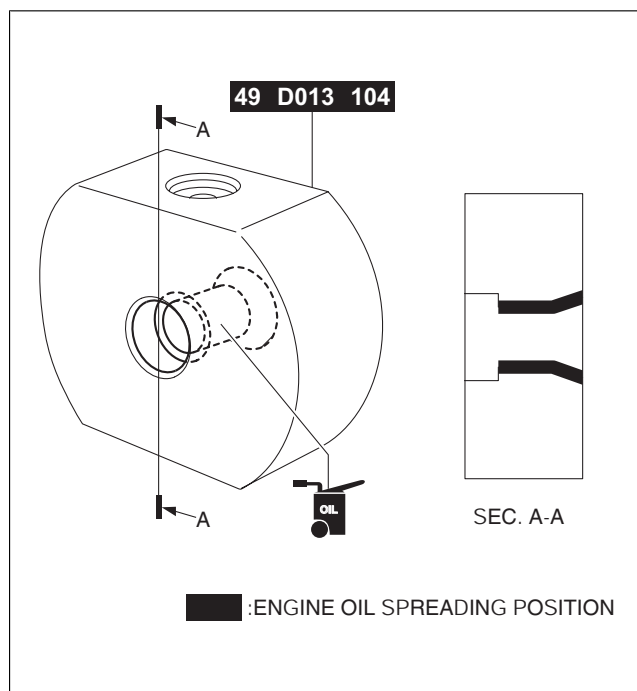
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Teflon Seal Installation Note

Note

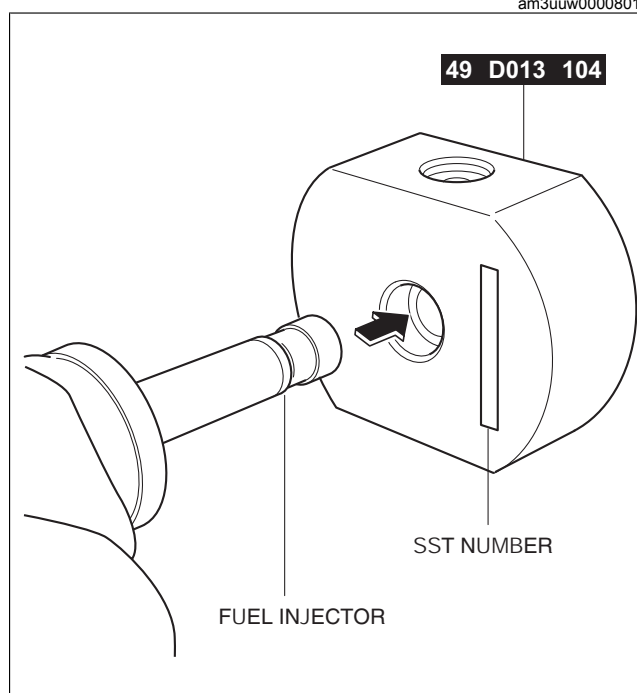
- 49 D013 102, 49 D013 103, and 49 D013 104 are component parts for 49 D013 1A0.

1. Apply engine oil to the **SST**.



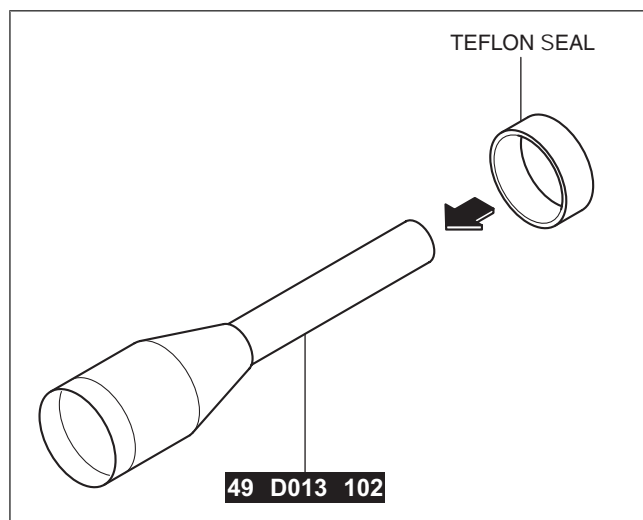
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2. Install the **SST** with the mark on the **SST** facing the fuel injector.



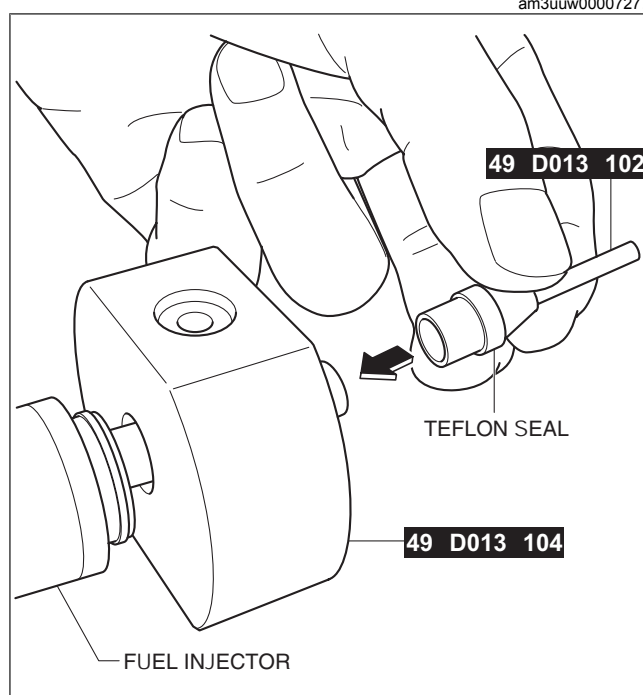
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3. Insert a new teflon seal onto the **SST**.



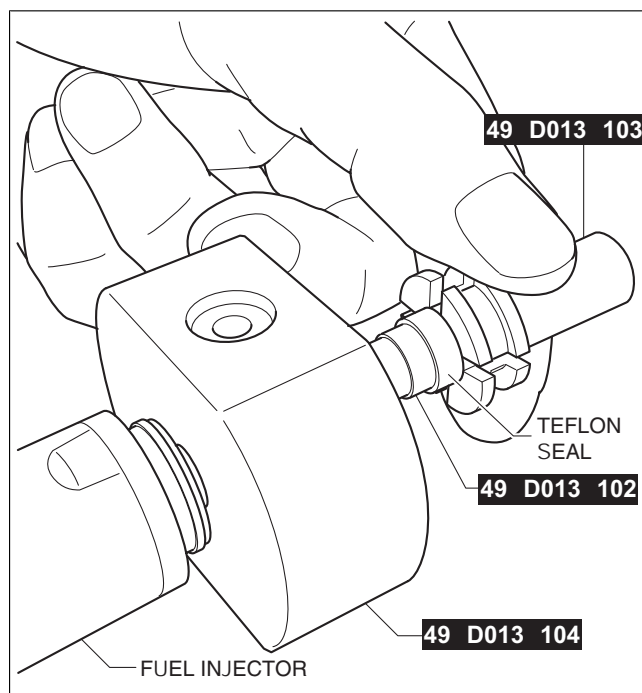
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4. Install the **SST** equipped with the teflon seal to the end of the fuel injector.



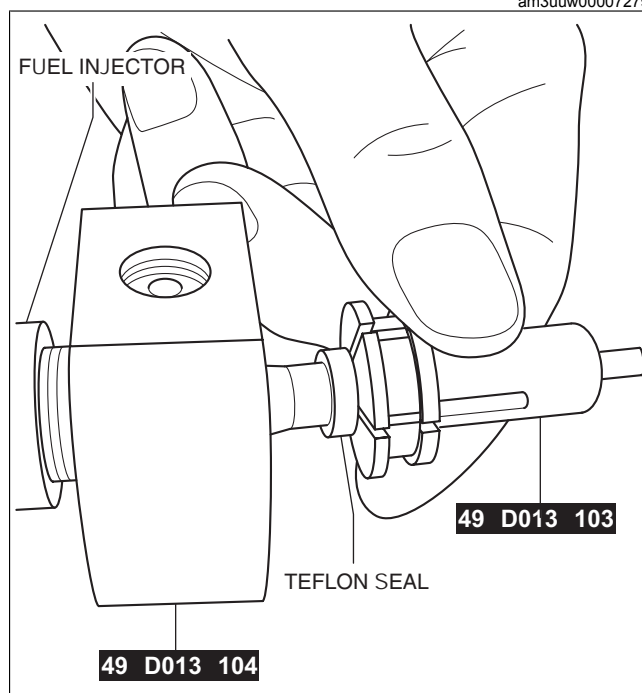
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5. Using the **SST**, press on the teflon seal to the fuel injector side.



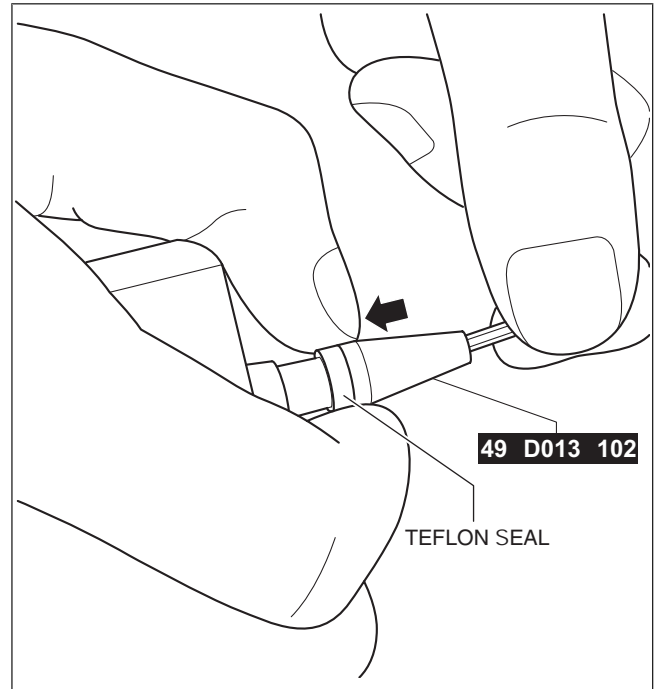
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6. Press on the teflon seal to the position indicated in the figure, then remove the **SST**.



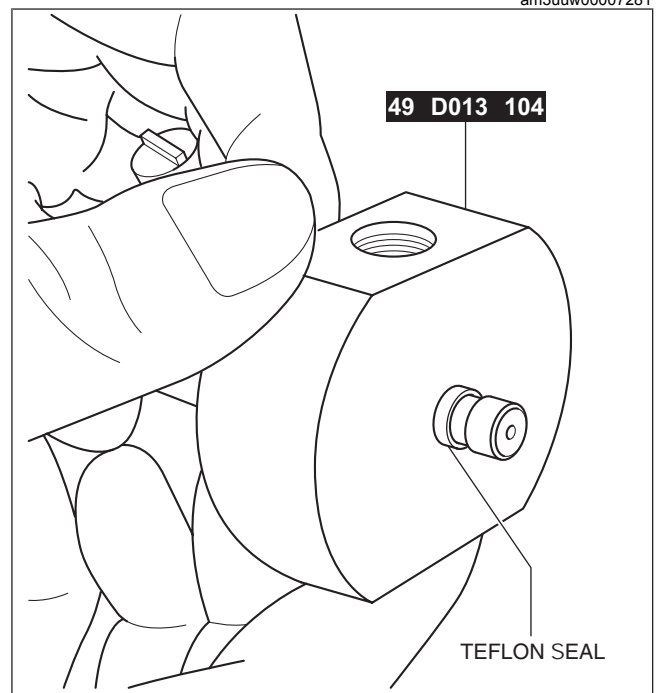
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7. Install the teflon seal to the fuel injector by hand and remove the **SST**.



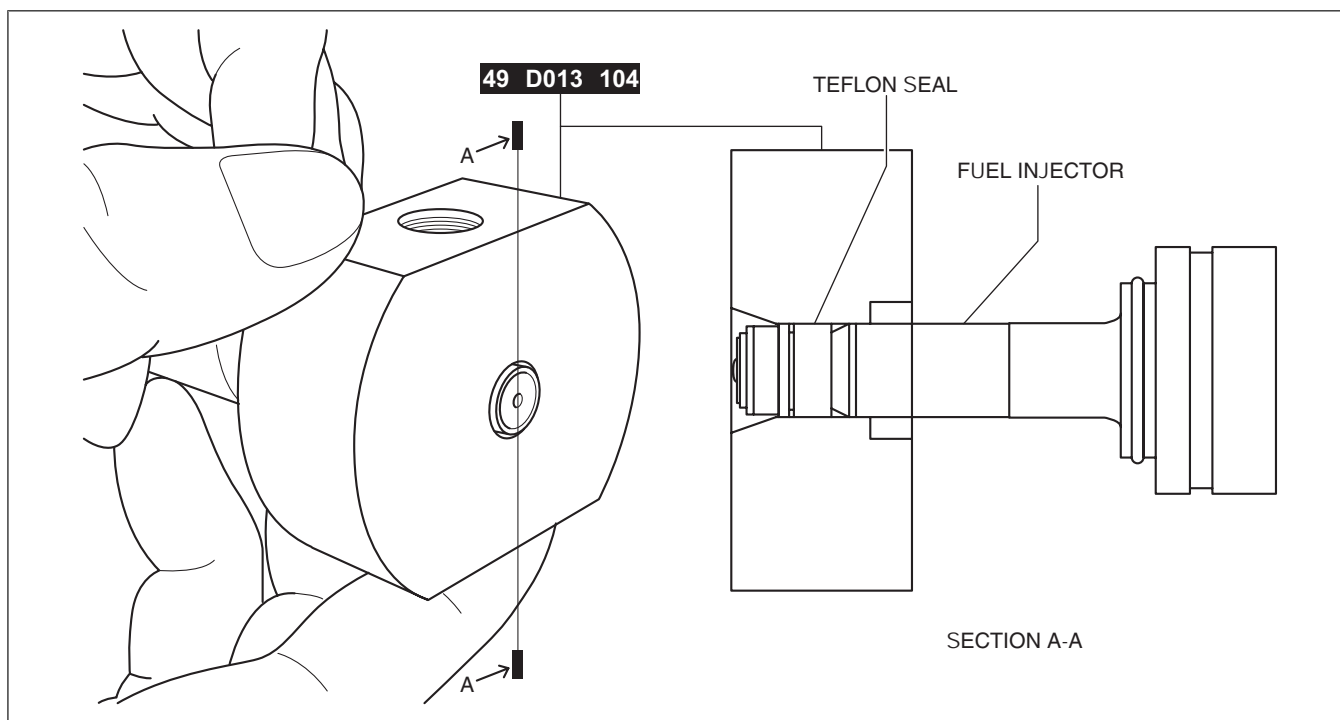
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8. Slide the **SST** to the end of the fuel injector.



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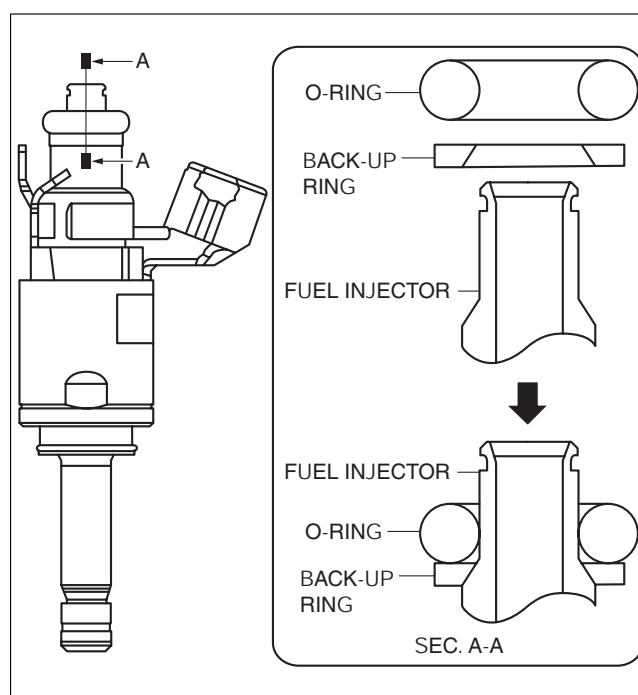
9. Hold the **SST** at the position shown in the figure and correctly position the teflon seal for more than 30 sec.



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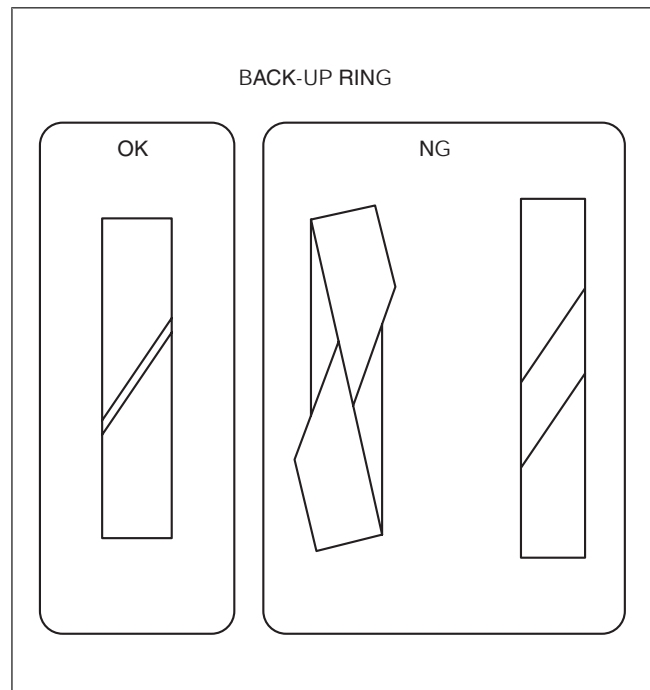
Back-up Ring Installation Note

1. Install the back-up ring, making sure it is installed in the right direction.



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2. After installing the back-up ring, verify that it is installed correctly.



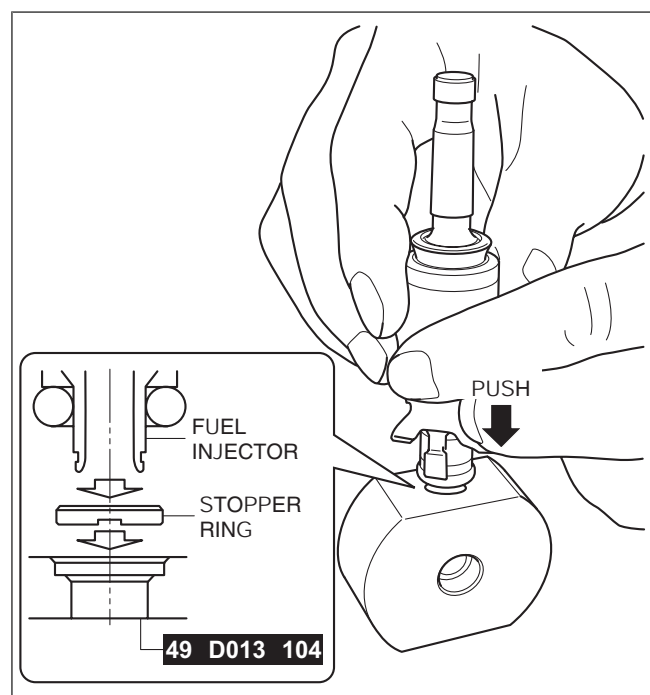
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Stopper Ring Installation Note

Note

- Do not insert the stopper ring at an angle, and always press it on straight to the SST.

1. Set a new stopper ring on the **SST** as shown in the figure being careful of the stopper ring orientation, and press down the fuel injector until a click sound is heard.



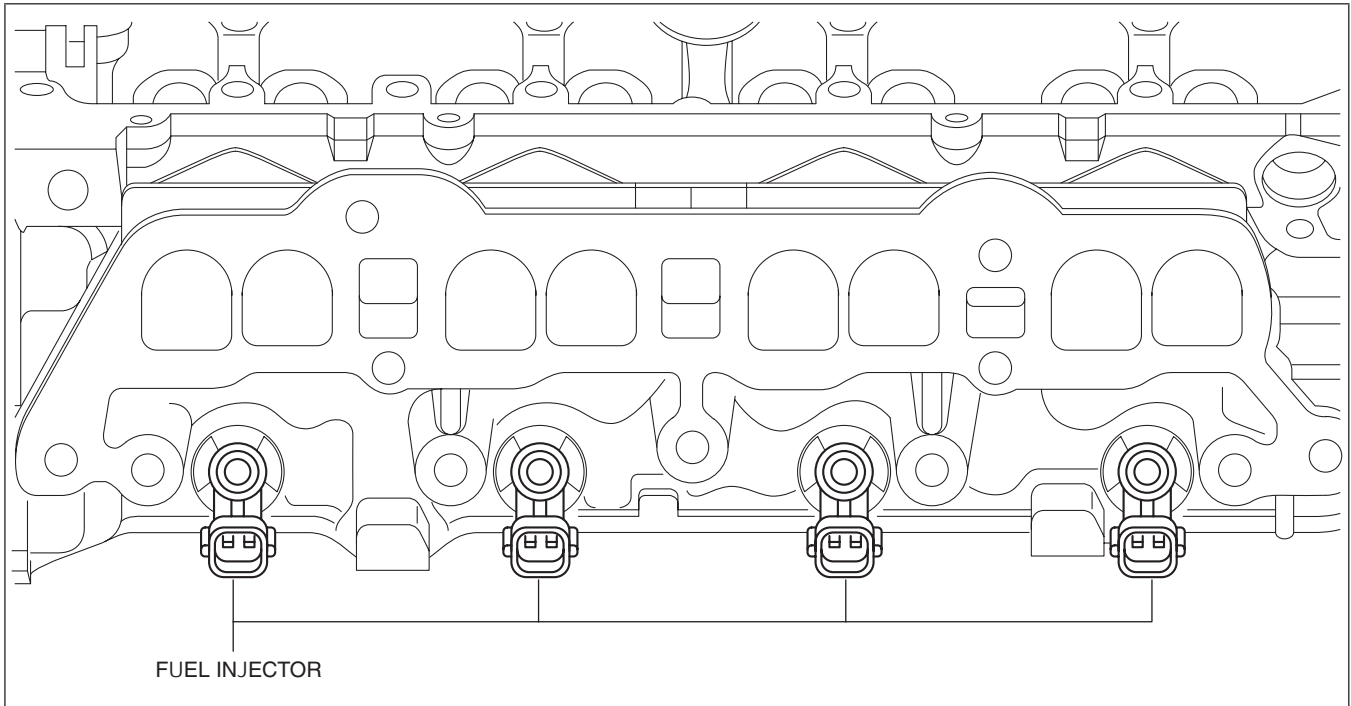
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Fuel Injector Installation Note

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.

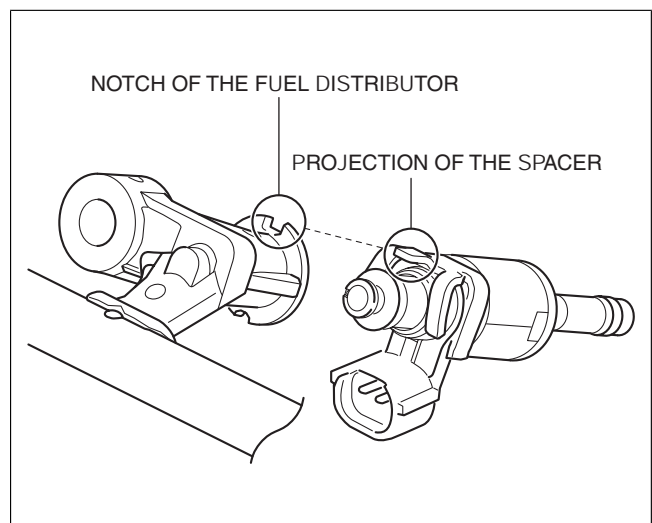
1. Apply engine oil to the fuel injector installation holes.
2. Insert the fuel injectors to the installation holes one by one, being careful of the direction the fuel injectors are pointed.



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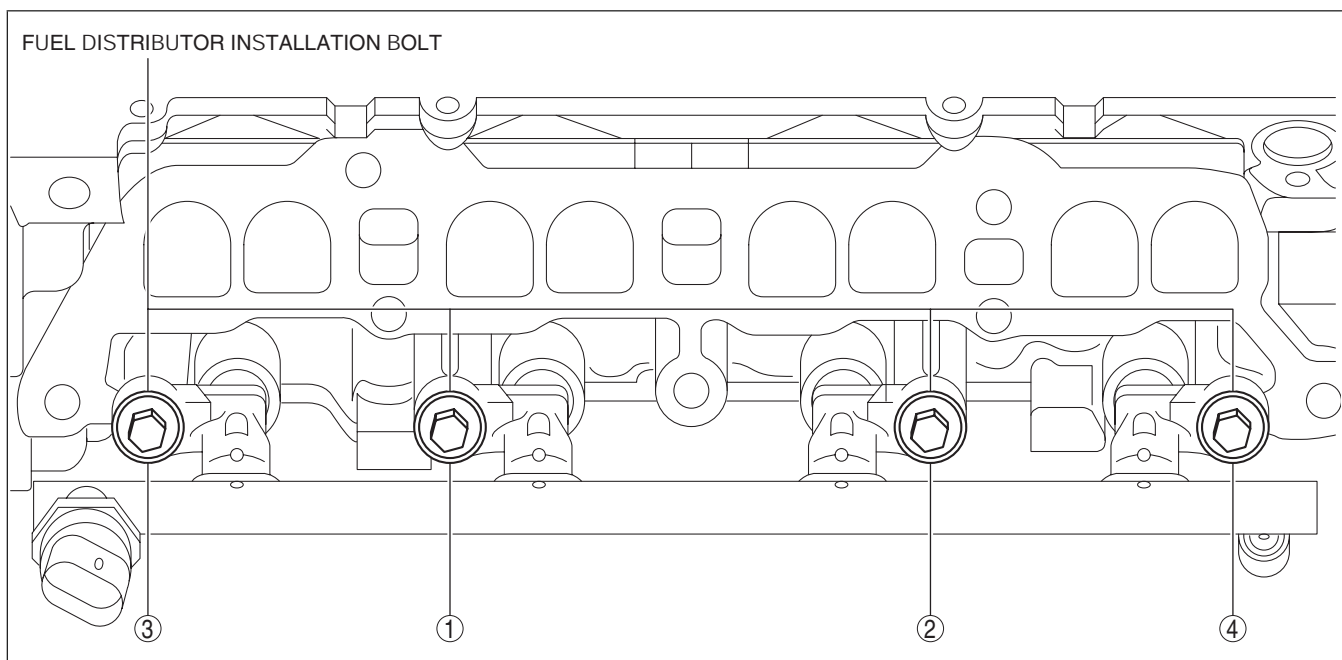
Fuel Distributor Installation Note

1. Install the fuel distributor to the fuel injectors while aligning the projection of the spacer to the notch of the fuel distributor.
2. Temporarily tighten the fuel distributor installation bolts until their heads contact the fuel distributors.



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3. Turn the fuel distributor installation bolts a half a turn in the order shown in the figure.



4. Turn the fuel distributor installation bolts another half a turn in the order shown in the figure (one turn including the half turn in Step 3).
5. Tighten the fuel distributor installation bolts in the order shown in the figure.

Fuel distributor installation bolt tightening torque
20—26 N·m {2.1—2.6 kgf·m, 15—19 ft·lbf}