

Removal

⚠ WARNING

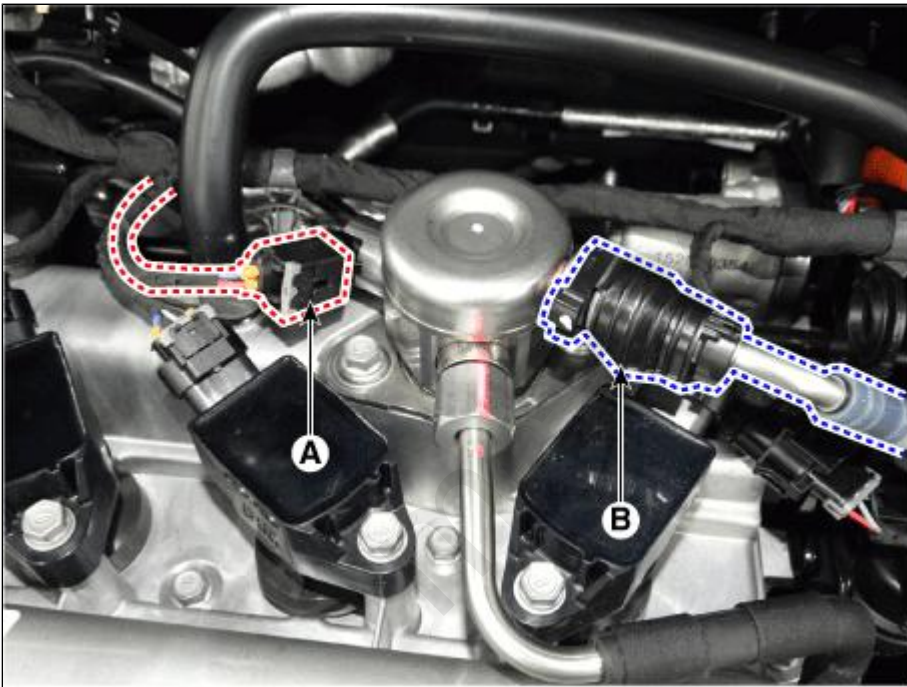
In case of removing the high pressure fuel pump, high pressure fuel pipe, delivery pipe, and injector, there may be injury caused by leakage of the high pressure fuel. So don't do any repair work right after engine stops.

1. Turn the ignition switch OFF and disconnect the battery negative (-) cable.
2. Release the residual pressure in fuel line.
(Refer to Fuel Delivery System - "Release Residual Pressure in Fuel Line")

⚠ CAUTION

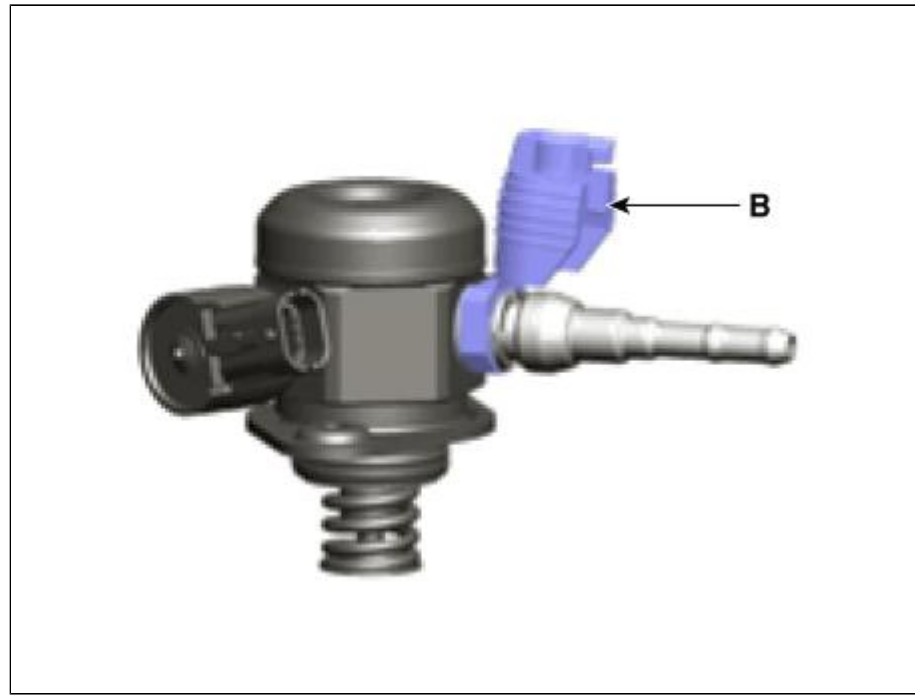
When removing the fuel pump fuse, a Diagnostic Trouble Code (DTC) may occur.
Delete the code with the Diagnostic tool after completion of "Release Residual Pressure in Fuel Line" work.

3. Remove the air cleaner and intake hose.
(Refer to Engine Mechanical System - "Air Cleaner")
4. Disconnect the fuel pressure control valve connector (A).
5. Disconnect the fuel feed tube quick-connector (B).



NOTICE

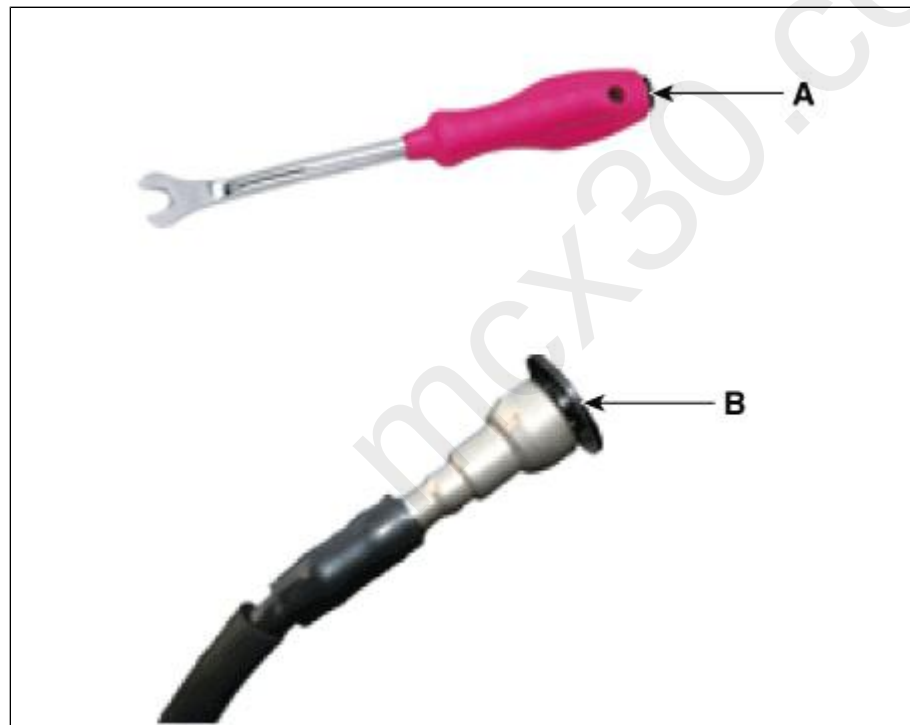
Open the clamp cover (B) before disconnect the quick connector. (If the clip is applied)



⚠ CAUTION

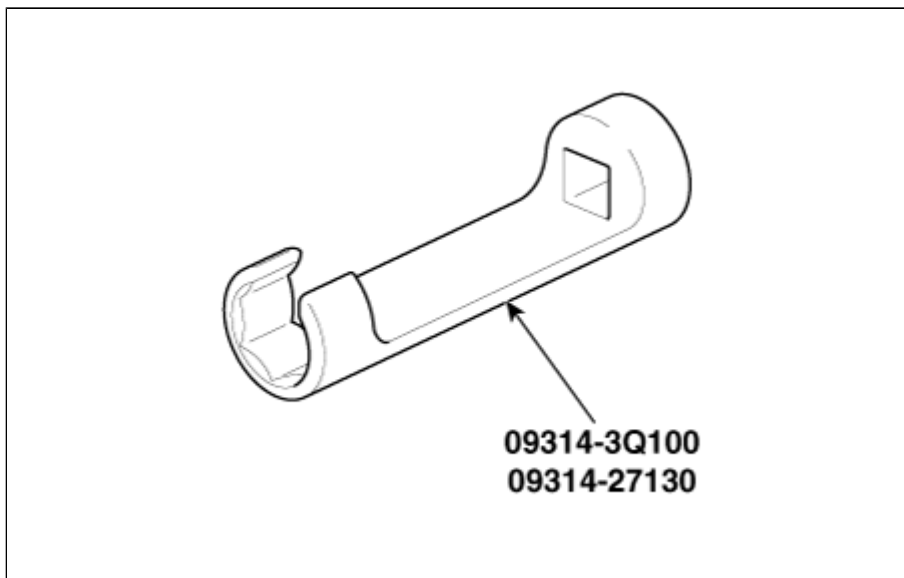
When removing the quick-connector with the clip removing tool (A), be careful not to damage the plastic clip (B).

If the clip is damaged, fuel line leak can be occurred due to a bad connection.



6. Remove the high pressure fuel pipe.

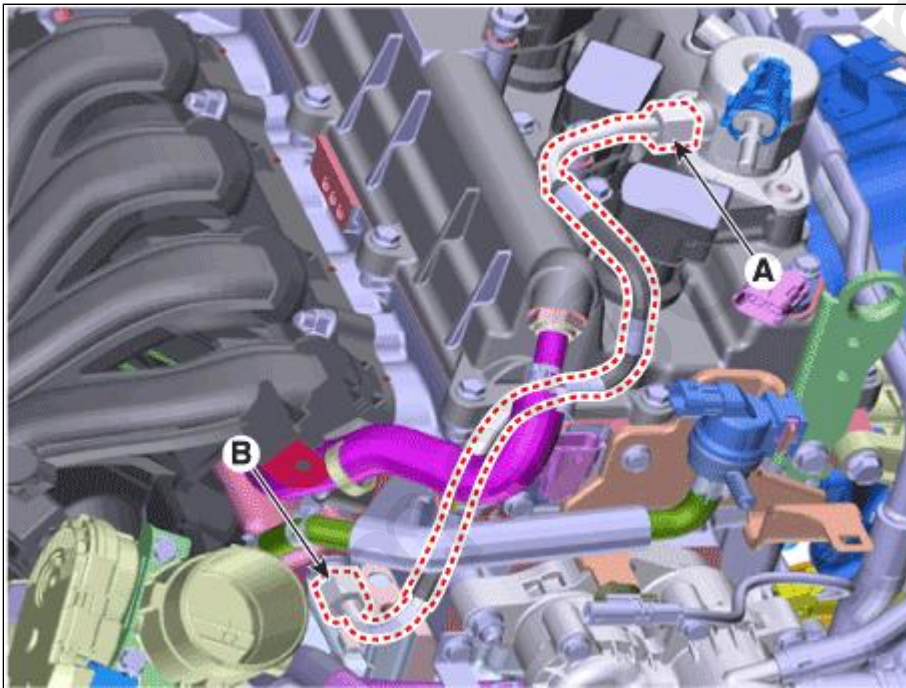
(1) Remove the installation nut (A) from the high pressure fuel pump with the special service tool [SST No.: 09314-3Q100 or 09314-27130].



(2) Remove the installation nut (B) from the delivery pipe with the special service tool [SST No.: 09314-3Q100]

Tightening torque :

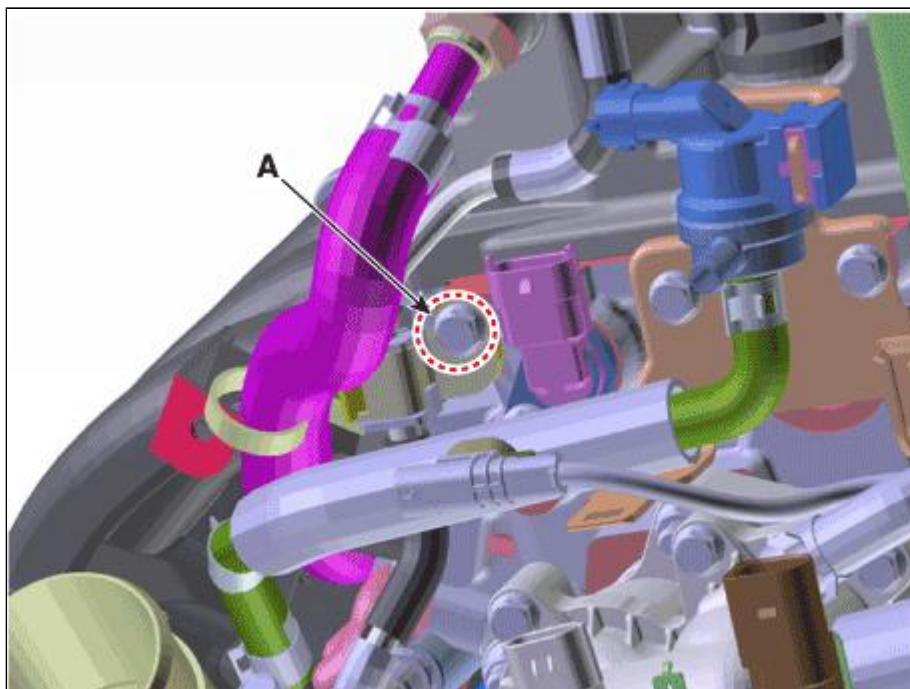
26.5 - 32.4 N.m (2.7 - 3.3 kgf.m, 19.5 - 23.9 lb-ft)



(3) Remove the function block (A), and then remove the high pressure fuel pipe.

Tightening torque :

7.8 - 11.8 N.m (0.8 - 1.2 kgf.m, 5.8 - 8.7 lb-ft)



7. Remove the installation bolts (E), and then remove the high pressure fuel pump from the cylinder head assembly.

Tightening torque :

12.8 - 14.7 N.m (1.3 - 1.5 kgf.m, 9.4 - 10.9 lb-ft)

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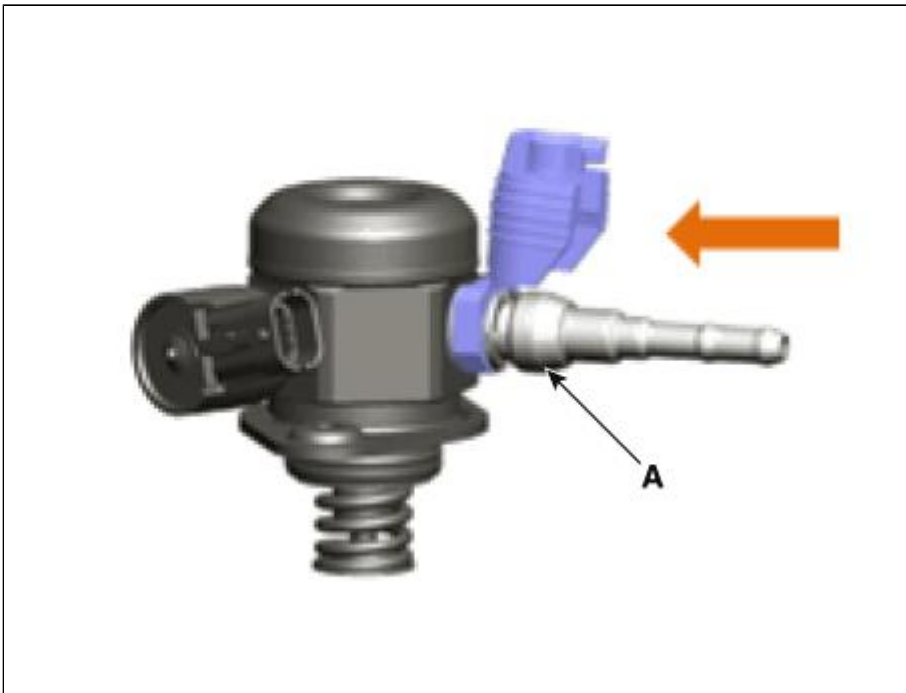
Unscrew in turn the two bolts in small step (0.5 turns). In case of fully unscrewing one of the two bolts with the other bolt installed, the housing surface of the cylinder head may be broken because of tension of the pump spring.



Installation

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Be sure to check the low pressure fuel hose quick-connector (A) is completely connected to the high pressure fuel pump until a confirmation 'click' sound is heard.

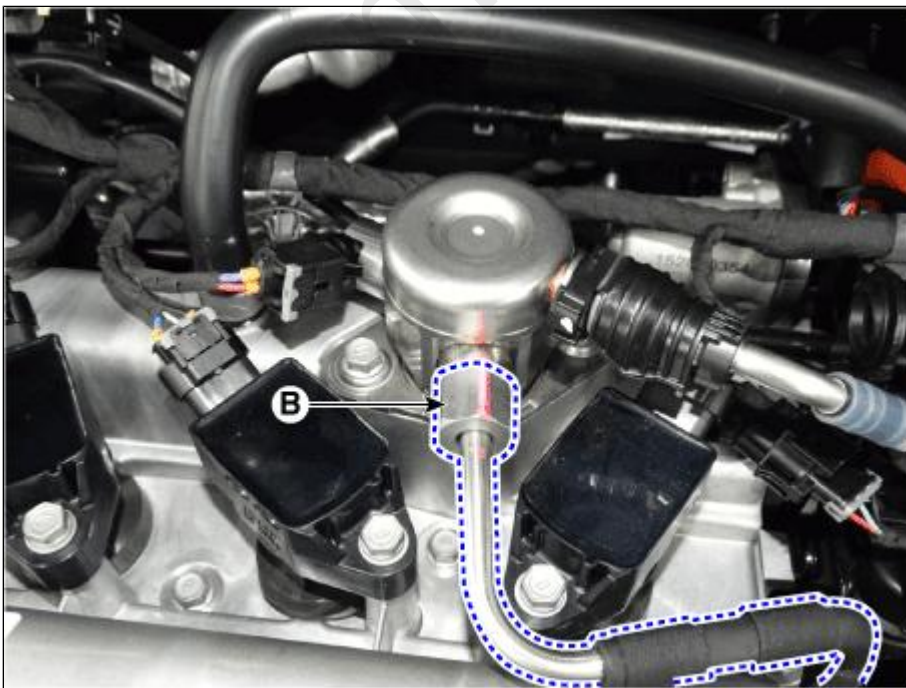


Be sure to re-check the low pressure fuel hose is completely connected to the high pressure fuel pump by pulling it after connecting.

Install the clamp cover (A) to tighten the quick-connector completely.



Be sure to install the high pressure fuel pipe (B) with the specified torques.



Securely inspect leakage of all fuel line connection parts at engine start condition.

⚠ CAUTION

Before installing the high pressure fuel pump, position the roller tappet in the lowest position by rotating the crankshaft. Otherwise the installation bolts may be broken because of tension of the pump spring.

⚠ CAUTION

Do not reuse the used bolt.

⚠ CAUTION

Do not reuse the used high pressure fuel pipe.

⚠ CAUTION

When tightening the installation bolts of the high pressure fuel pump, tighten in turn the bolts in small step (0.5 turns) after tightening them with hand-screwed torque.

⚠ CAUTION

Install the component with the specified torques.

First hand-tighten the fasteners fully until they are not fastened any more in order to have them inserted in place and then completely tighten to the specified torque using a torque wrench.

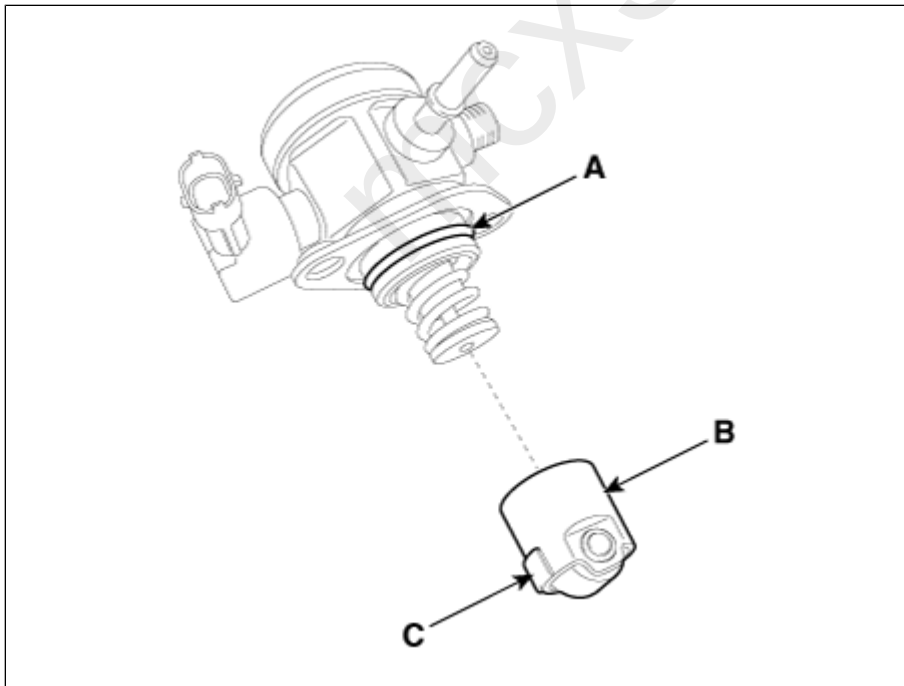
If not tightening the bolts or nuts in a straight line with the mating bolt holes or fittings, it may cause a fuel leak due to broken threads.

⚠ CAUTION

Note that internal damage may occur when the component is dropped. In this case, use it after inspecting.

⚠ CAUTION

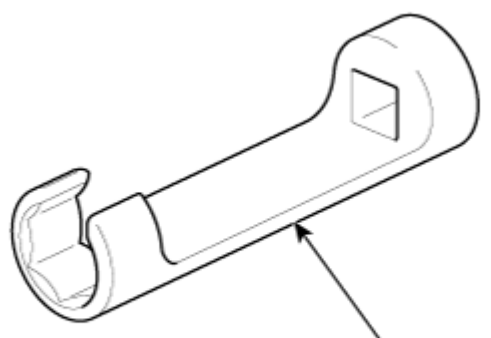
Apply engine oil to the O-ring (A) of the high pressure fuel pump, the roller tappet (B), and the protrusion (C). Also apply engine oil to the groove on the location where the protrusion (C) is installed.



1. Install in the reverse order of removal.

NOTICE

Use the special service tool [SST No.: 09314-3Q100 or 09314-27130] to install the high pressure fuel pipe.



09314-3Q100
09314-27130

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