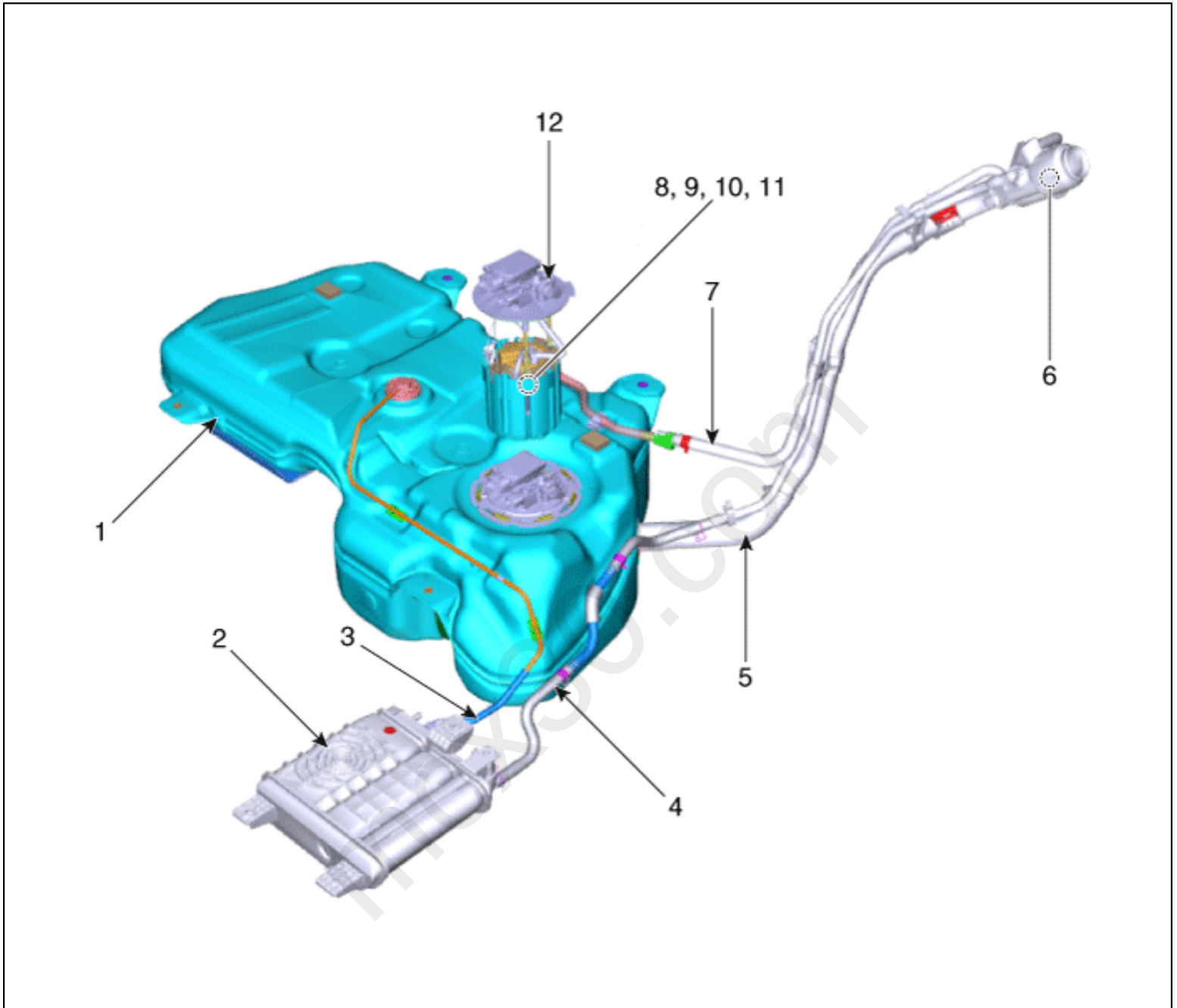


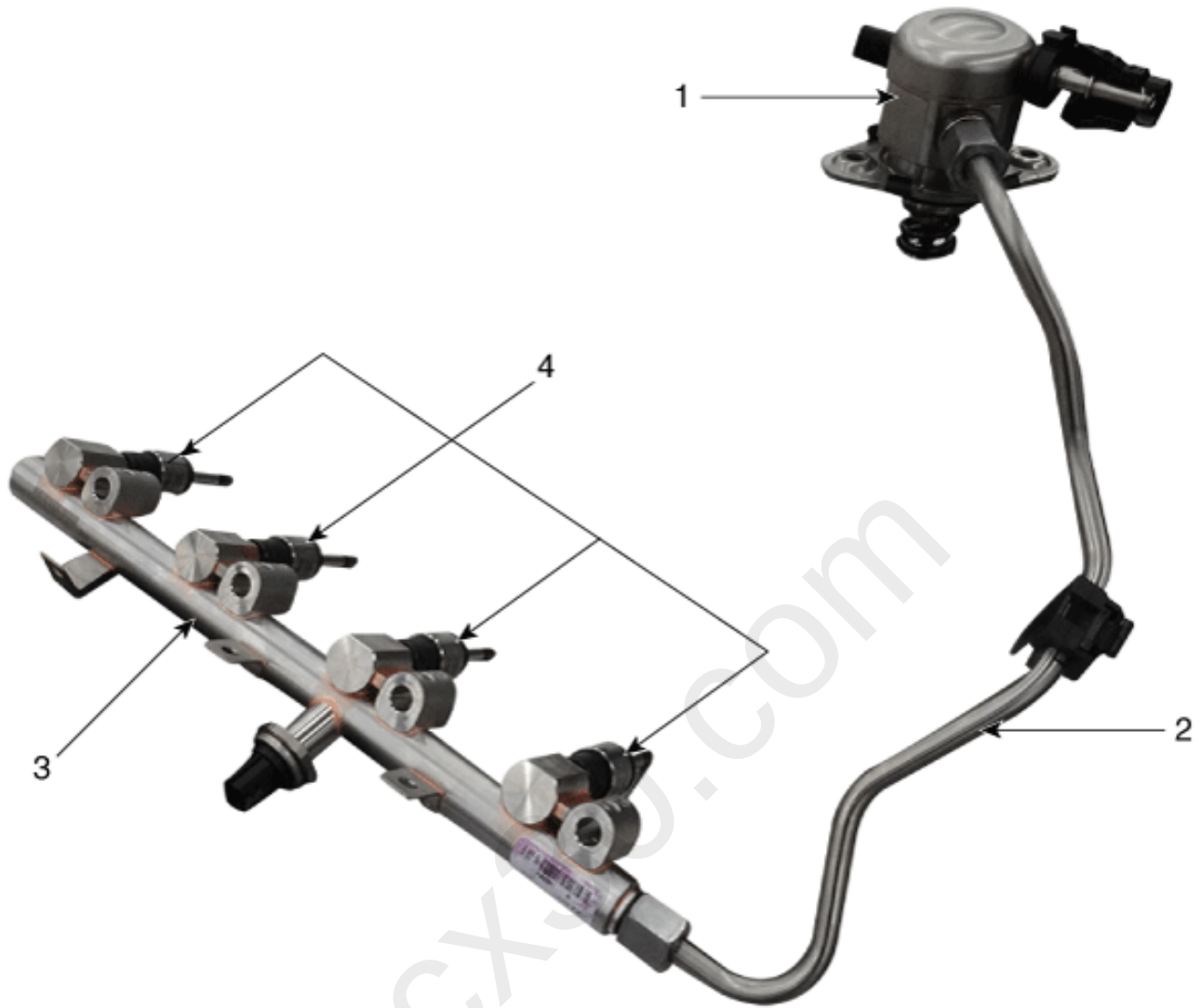
Component
Location

[Fuel Tank]



- | | |
|-------------------------|--------------------------------|
| 1. Fuel tank | 7. Leveling hose |
| 2. Canister | 8. Fuel Level Sender (FLS) |
| 3. Vapor hose | 9. Fuel pump |
| 4. Ventilation hose | 10. Fuel filter |
| 5. Fuel filler hose | 11. Fuel pressure regulator |
| 6. Fuel tank air filter | 12. Fuel Pressure Sensor (FPS) |

[High Pressure Fuel Line]



1. High Pressure Fuel Pump
2. High Pressure Fuel Pipe

3. Delivery Pipe
4. Injector



•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.

Fuel Pressure Test

1. Release the residual pressure in fuel line.

(Refer to Fuel Delivery System - "Release Residual Pressure in Fuel Line")



- When removing the fuel pump relay, the Diagnostic Trouble Code (DTC) will be occurred. Therefore delete the code with the diagnostic tool after "Release Residual Pressure in Fuel Line" work.

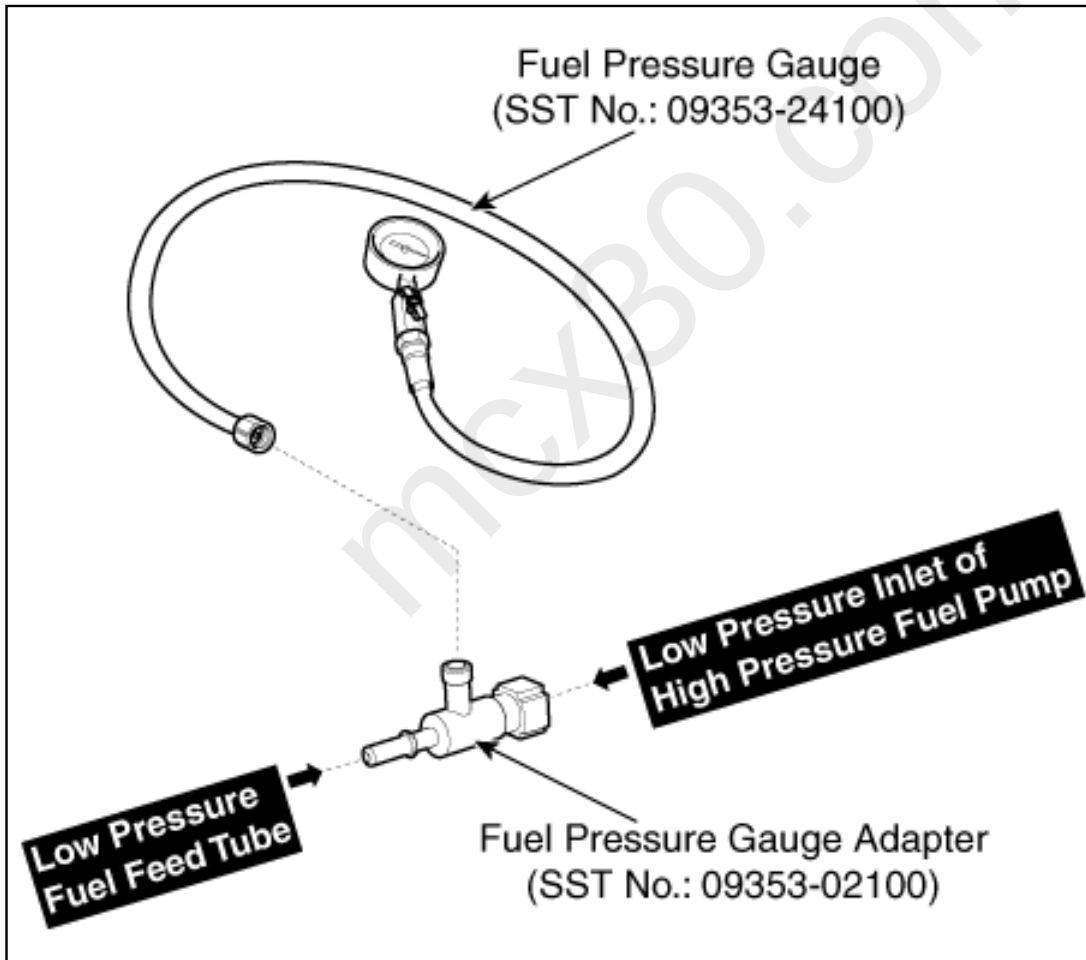
2. Install the Special Service Tool (SST).

- (1) Disconnect the fuel feed tube from the delivery pipe.



- There may be some residual pressure even after "Release Residual Pressure in Fuel Line" work, so cover the hose connection with a shop towel to prevent residual fuel from spilling out before disconnecting any fuel connection.

- (2) Install the special service tool for measuring the fuel pressure in between the fuel feed tube and the fuel delivery pipe (Refer to the figure below).



3. Inspect fuel leakage on connections among the fuel feed tube, the delivery pipe, and the SST components with IG ON.

4. Measure Fuel Pressure

- (1) Start the engine and measure the fuel pressure at idle.

Fuel Pressure :

480 - 520 kPa (4.9 - 5.3 kgf/cm , 69.6 - 75.4 psi)



- If the fuel pressure differs from the standard value, repair or replace the related part (Refer to the table below).

Fuel Pressure	Cause	Related Part
Too Low	Fuel filter clogged	Fuel Filter
	Fuel leakage	Fuel Pressure Regulator
Too High	Fuel pressure regulator valve stuck	Fuel Pressure Regulator

- (2) Stop the engine, and then check for the change in the fuel pressure gauge reading.

Standard Value : The gauge reading should hold for about 5 minutes after the engine stops



- If the gauge reading should not be held, repair or replace the related part (Refer to the table below).

Fuel Pressure (After Engine Stops)	Cause	Related Part
Fuel Pressure Drops Slowly	Leakage on injector	Injector
Fuel Pressure Drops Immediately	Check valve of fuel pump open stuck	Fuel Pump

- (3) Turn the ignition switch OFF.

5. Release the residual pressure in fuel line.

(Refer to Fuel Delivery System - "Release Residual Pressure in Fuel Line")



- When removing the fuel pump relay, the Diagnostic Trouble Code (DTC) will be occurred. Therefore delete the code with the diagnostic tool after "Release Residual Pressure in Fuel Line" work.

6. Test End

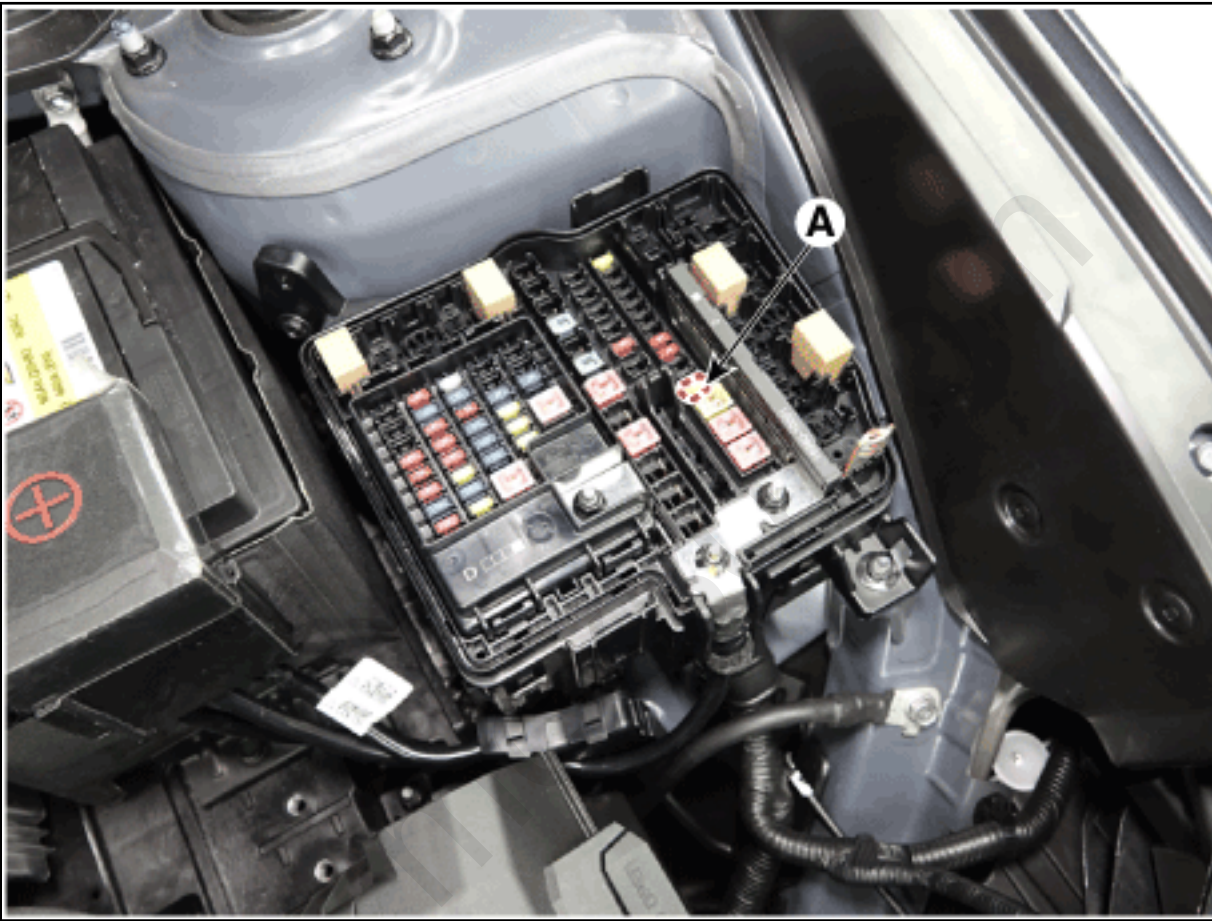
- (1) Remove the Special Service Tool (SST) from the fuel feed tube and the delivery pipe.
- (2) Connect the fuel feed tube and the delivery pipe.

Release Residual Pressure in Fuel Line



- There may be some residual pressure even after "Release Residual Pressure in Fuel Line" work, so cover the hose connection with a shop towel to prevent residual fuel from spilling out before disconnecting any fuel connection.

1. Turn the ignition switch OFF and disconnect the battery (-) cable.
2. Remove the fuel pump fuse (A).



- When removing the fuel pump relay, the Diagnostic Trouble Code (DTC) will be occurred. Therefore delete the code with the diagnostic tool after "Release Residual Pressure in Fuel Line" work.

3. Connect the battery (-) cable.
4. Start the engine and let idle, and then turn the ignition switch OFF after the engine has stopped on its own.
5. Disconnect the battery (-) cable, and then install the fuel pump relay (A).
6. Connect the battery (-) cable.
7. Delete the Diagnostic Trouble Code (DTC) related the fuel pump relay with the diagnostic tool.

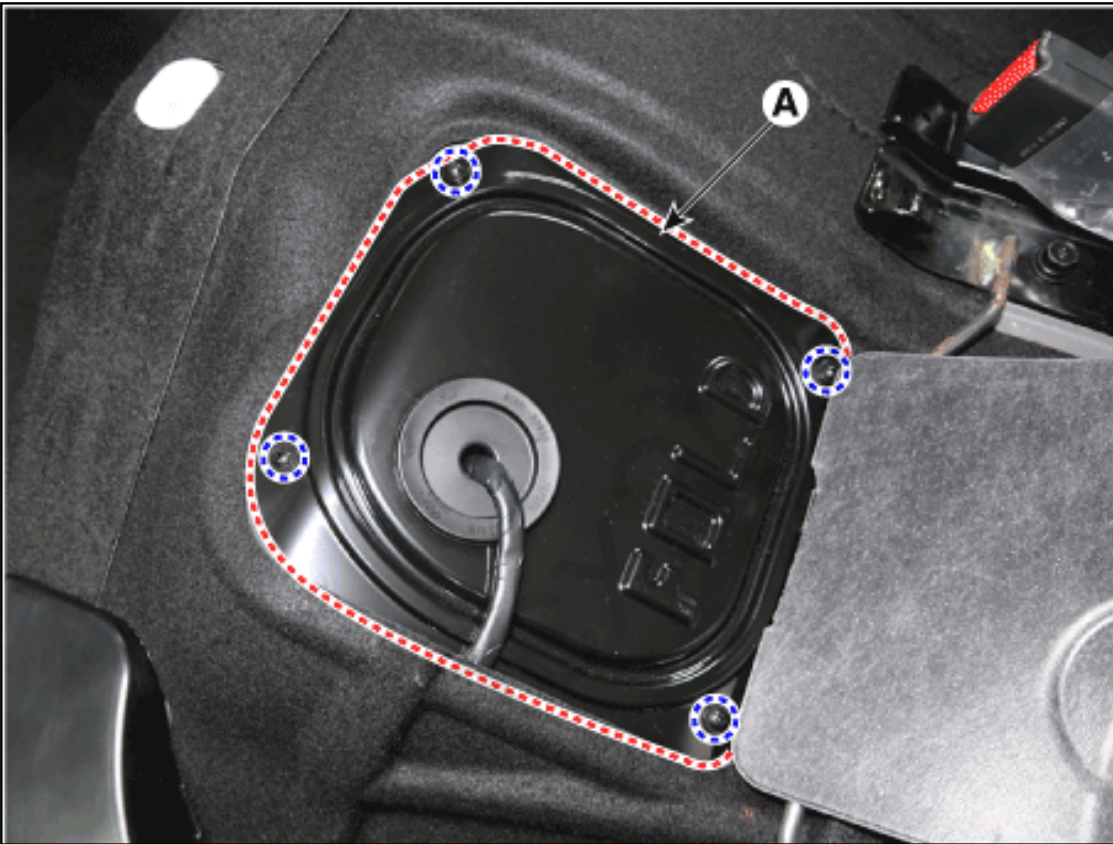
Removal



- Be careful not to damage the parts located under the vehicle (floor under cover, canister, fuel tank) when raising the vehicle using the lift.

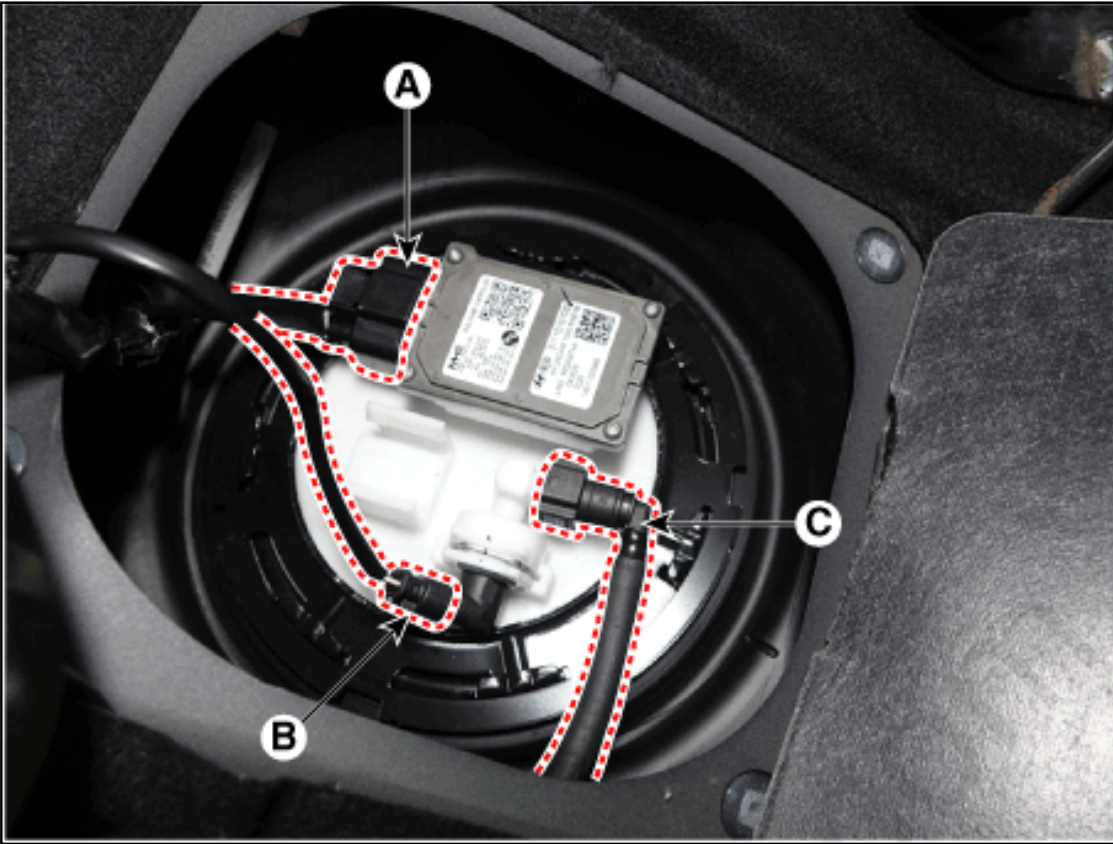
(Refer to General Information - "Lift and Support Points")

1. Release the residual pressure in fuel line.
(Refer to Fuel Delivery System - "Release Residual Pressure in Fuel Line")
2. Turn the ignition switch OFF and disconnect the battery (-) terminal.
3. Remove the rear seat cushion.
(Refer to Body - "Rear Seat Assembly")
4. Remove the fuel pump service cover (A) after loosening the screw.



5. Disconnect the Fuel Pump Control Module (FPCM) connector (A).
6. Disconnect the Fuel Pressure Sensor (FPS) connector (B).

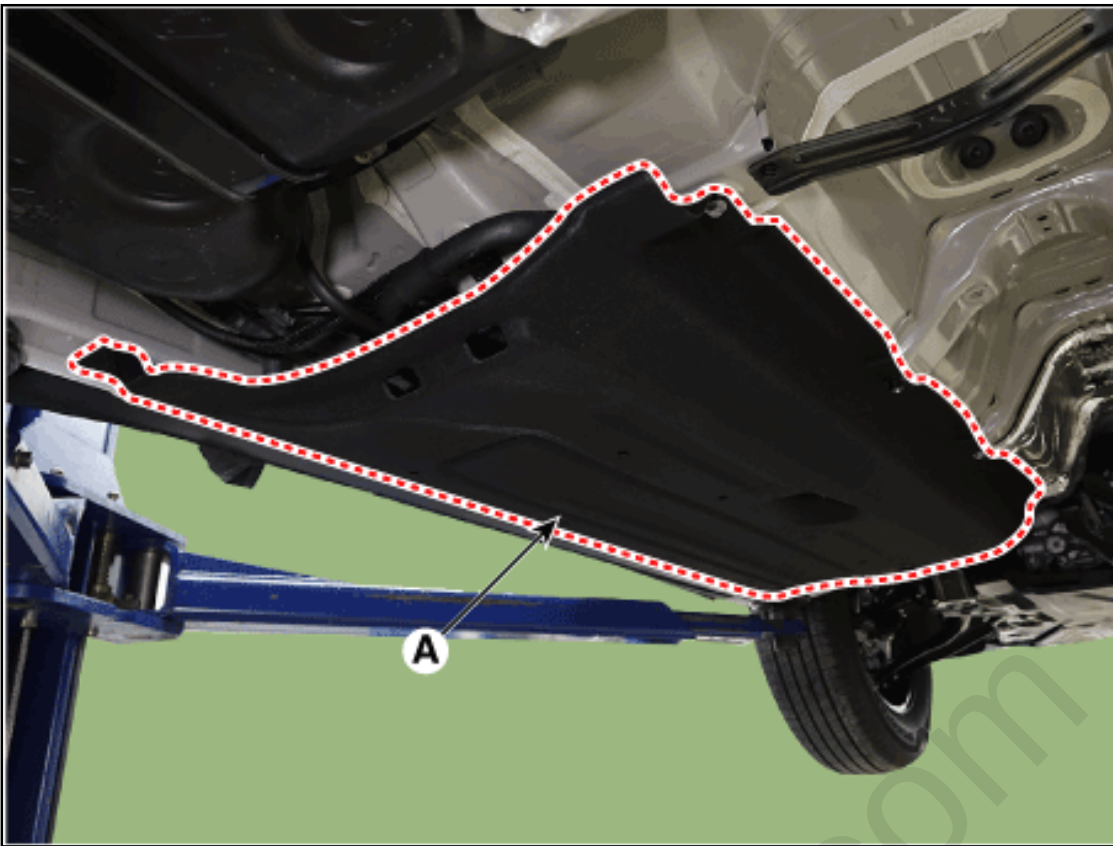
7. Disconnect the fuel feed tube quick-connector (C).



8. Lift the vehicle.
9. Remove the propeller shaft assembly [4WD].
(Refer to Driveshaft and Axle - "Propeller shaft Assembly")
10. Remove the center muffler.
(Refer to Engine Mechanical System - "Muffler")
11. Remove the floor under cover (A).

Tightening torque :

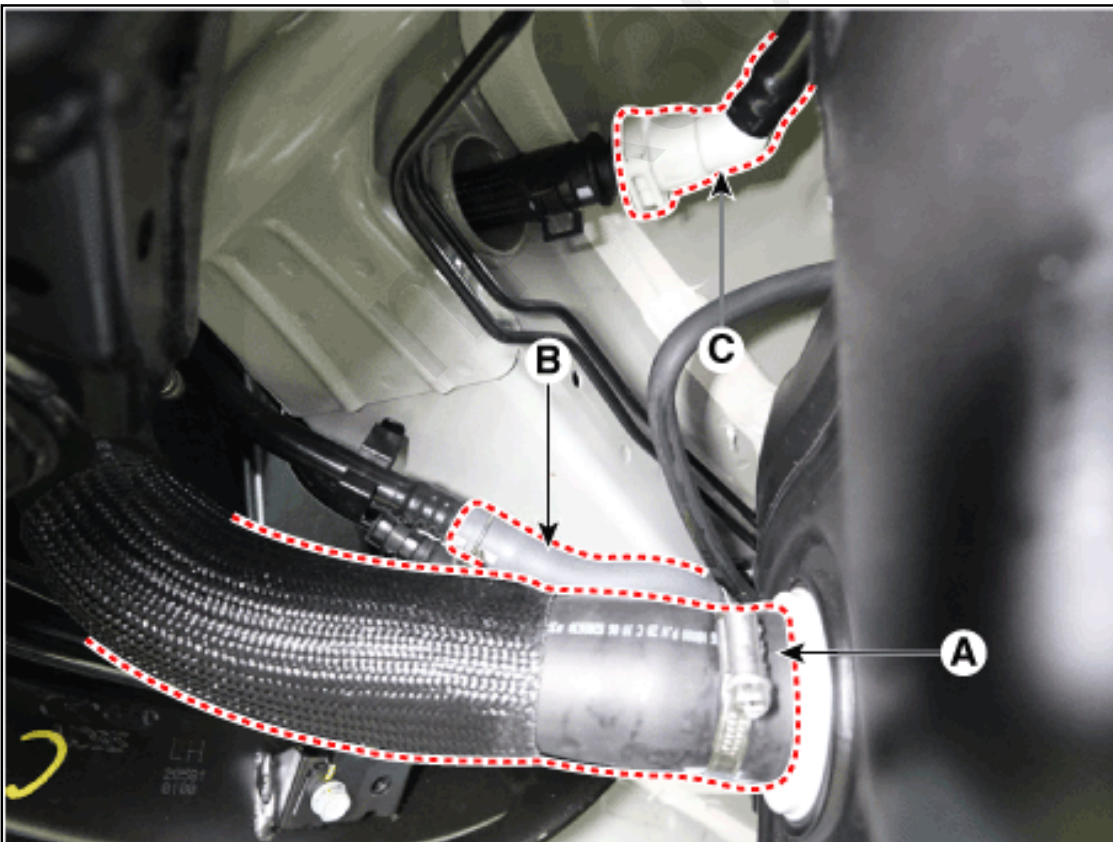
7.9 - 11.8 N·m (0.8 - 1.2 kgf·m, 5.8 - 8.7 lb·ft)



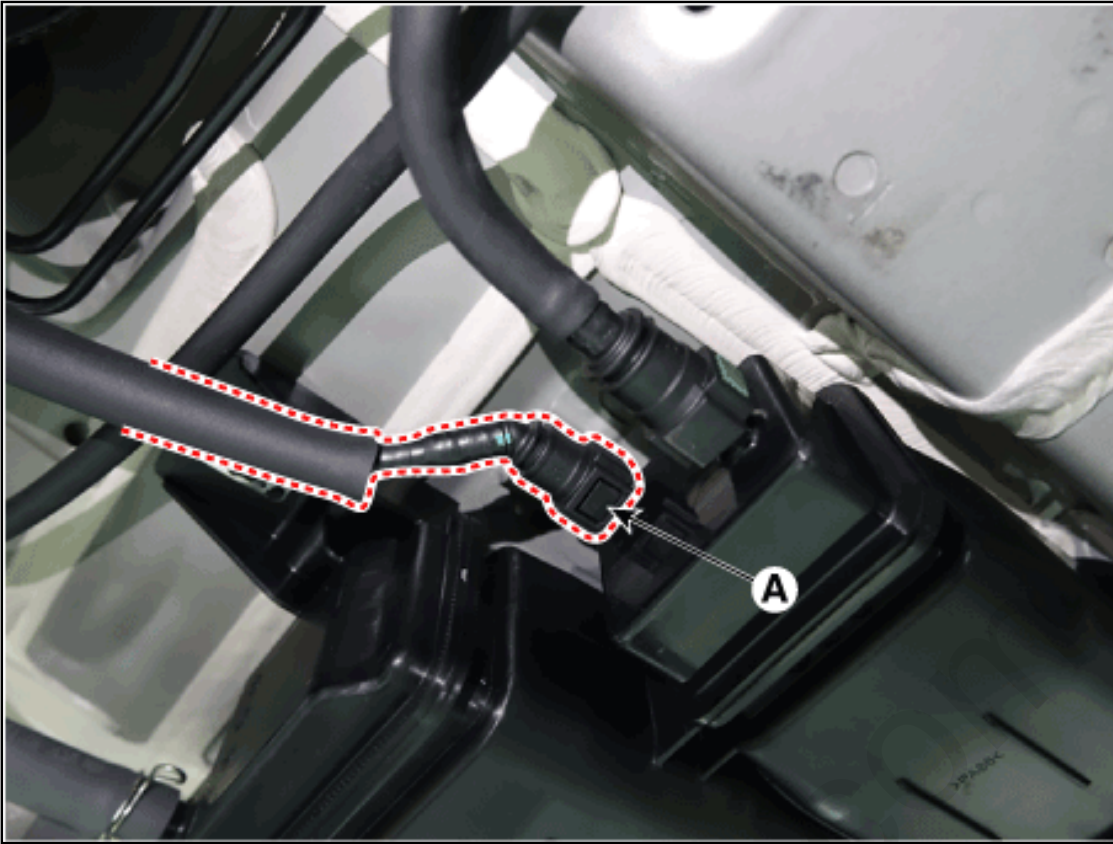
12. Separate the fuel filler hose (A).

13. Separate the fuel ventilation hose (B) and then remove the fixing clip (D).

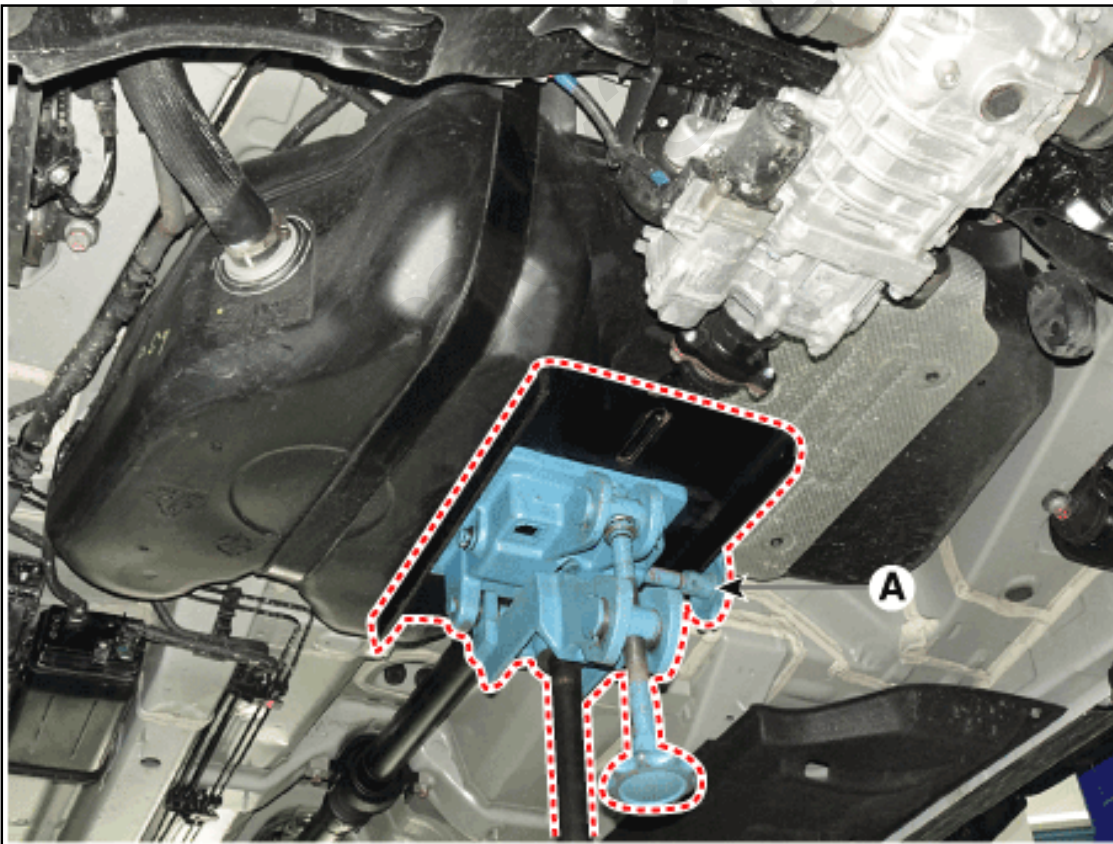
14. Disconnect the levelling hose quick-connector (C).



15. Disconnect the vapor hose quick-connector (A).



16. Support the fuel tank with a jack (A).

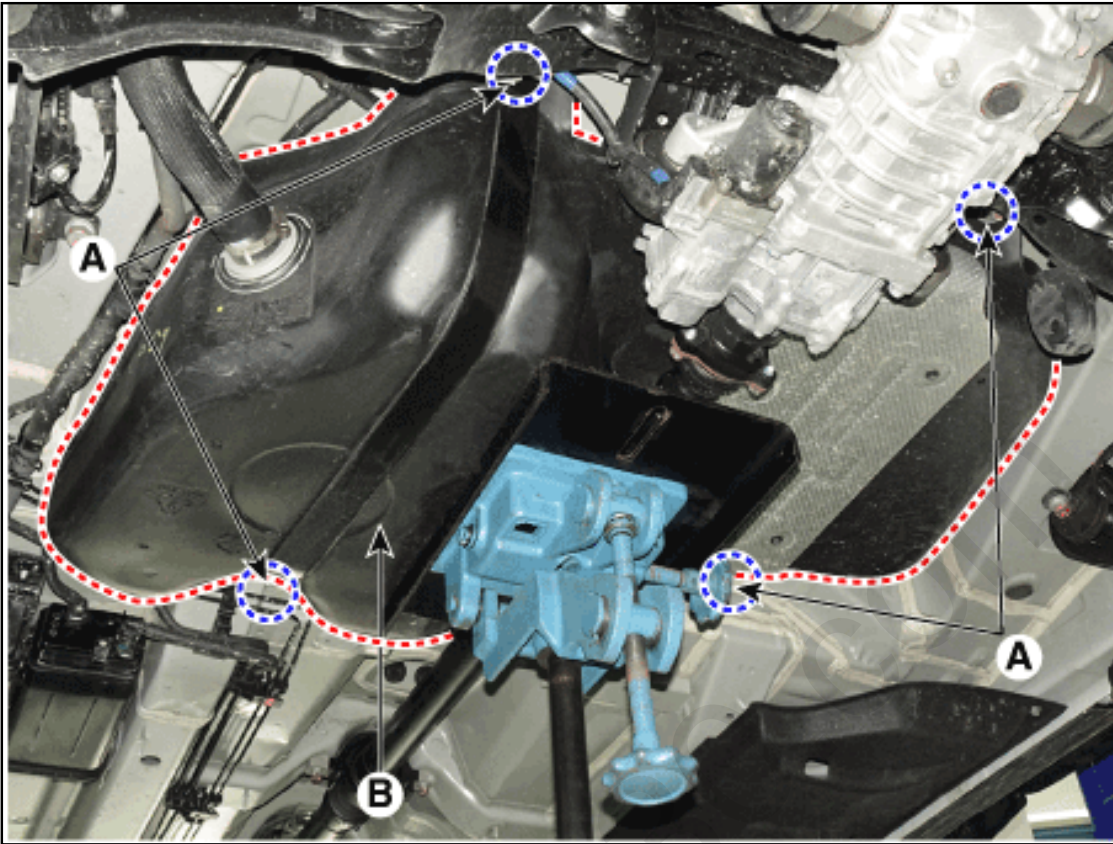


•Insert the rubber block between the fuel tank and jack to prevent damage to the fuel tank.

17. Remove the fuel tank (B) after loosening the mounting bolt (A).

Tightening Torque :

39.2 - 53.9 N.m (4.0 - 5.5 kgf.m, 28.9 - 39.8 lb-ft)

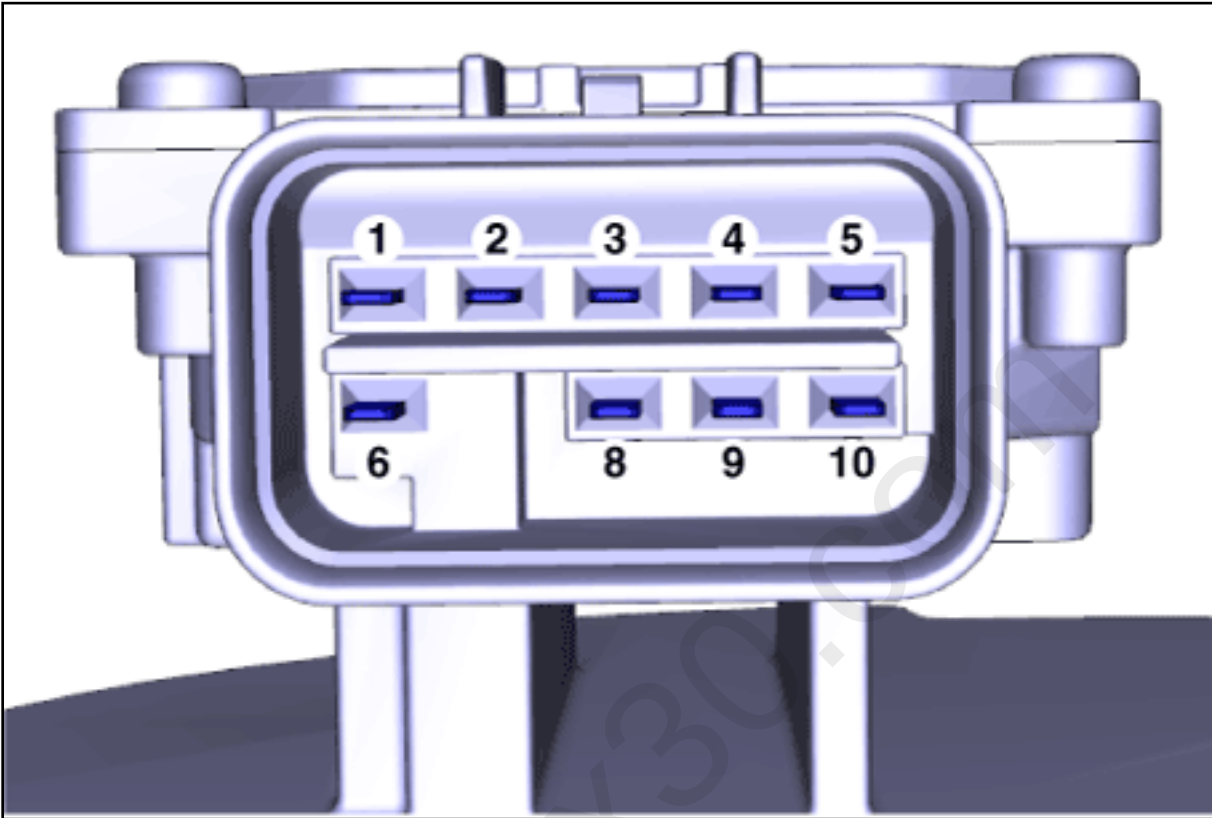


Installation

1. Install in the reverse order of removal.

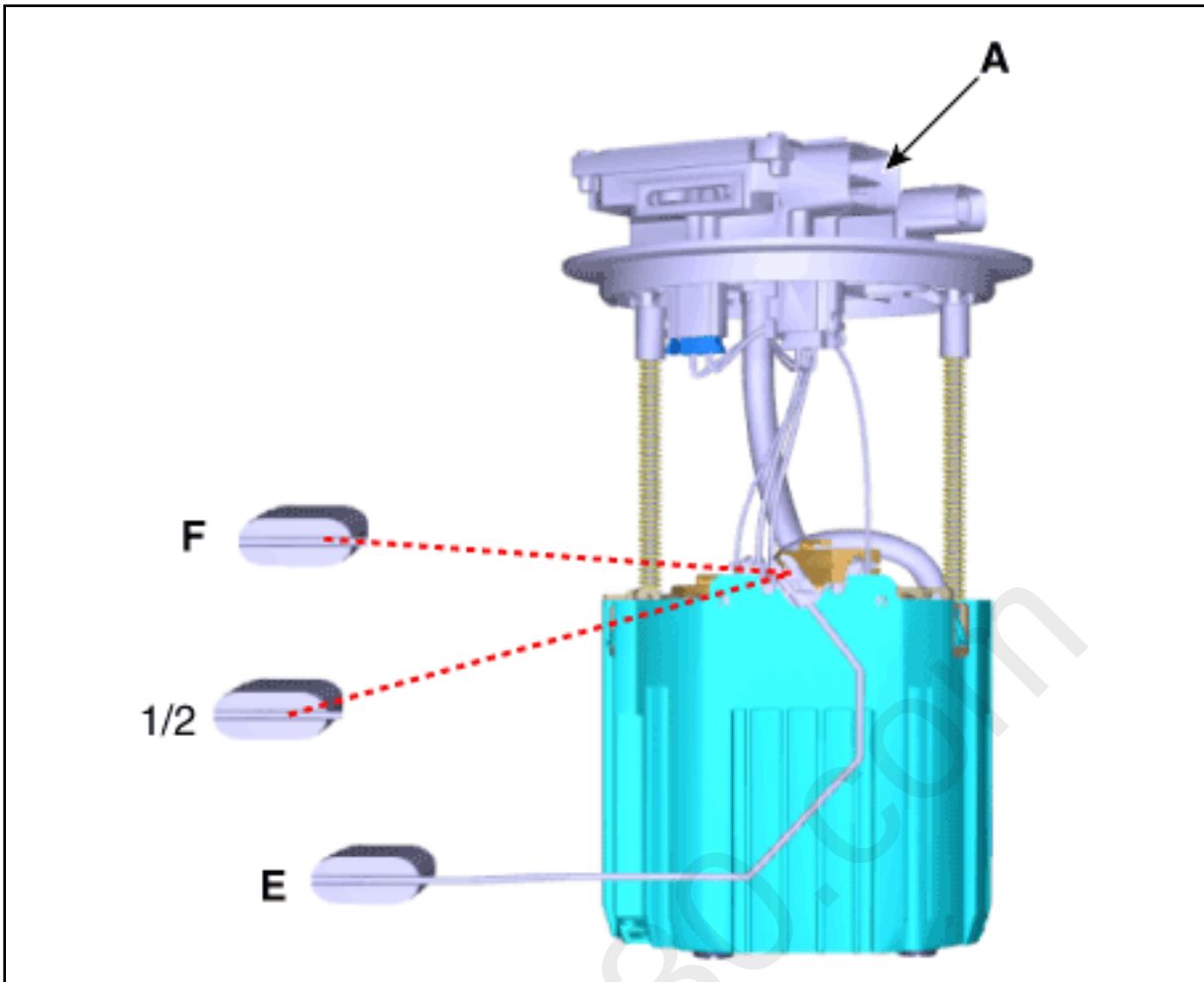
Inspection

1. Turn the ignition switch OFF and disconnect the battery (-) terminal.
2. Remove the fuel pump assembly.
(Refer to - "Removal" Procesures)
3. Using an ohmmeter, measure the resistance between terminals 1 and 6 of sender connector (A) at each float level.



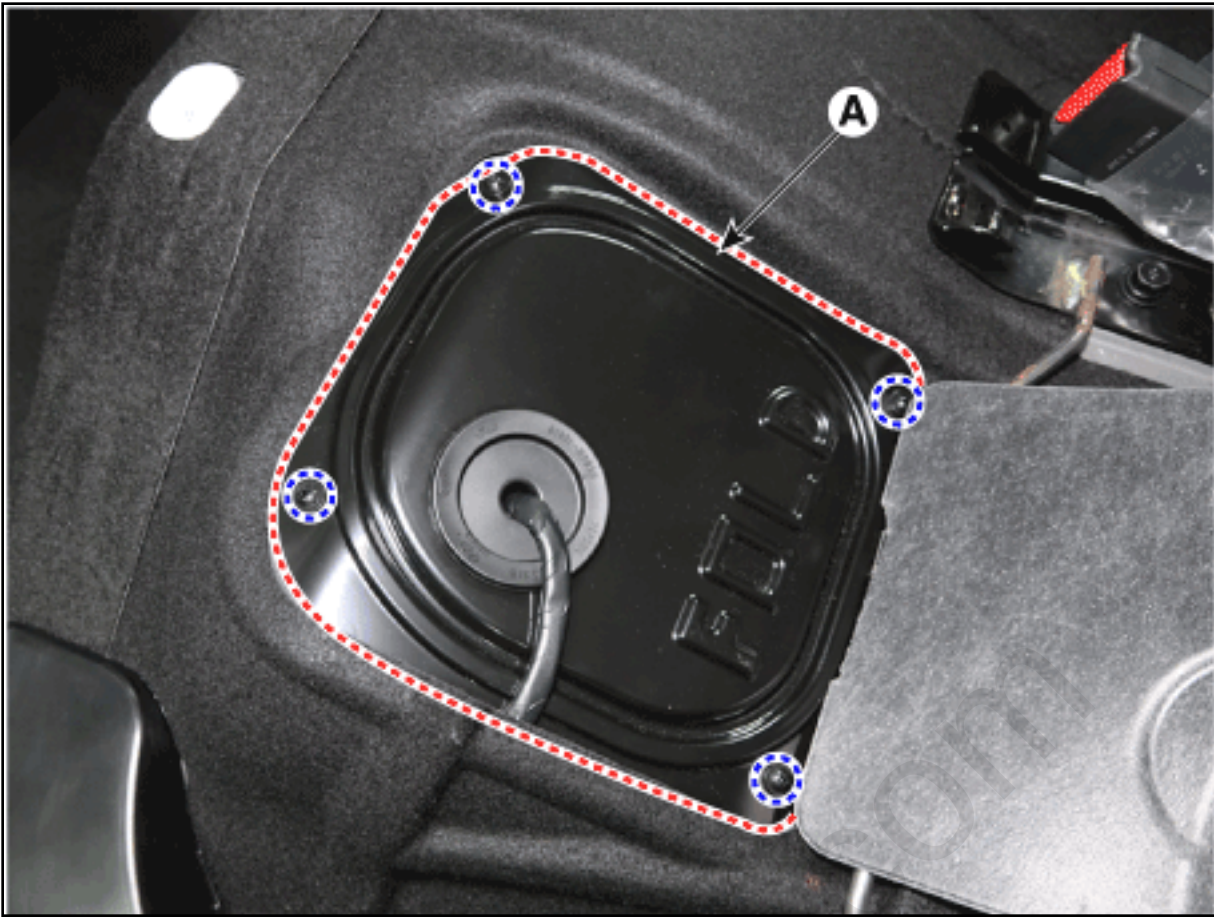
Pin No	Description
1	Fuel sender ground (-)
2	Fuel pressure sensor (FPS) signal input
3	Fuel pressure sensor (FPS) ground (-)
4	Ground
5	CAN [Low]
6	Fuel sender signal (+)
7	-
8	Fuel pressure sensor (FPS) power supply (+5V)
9	CAN [High]
10	Battery power (B+)

- Also, check that the resistance changes smoothly when the float moves from "E" to "F".

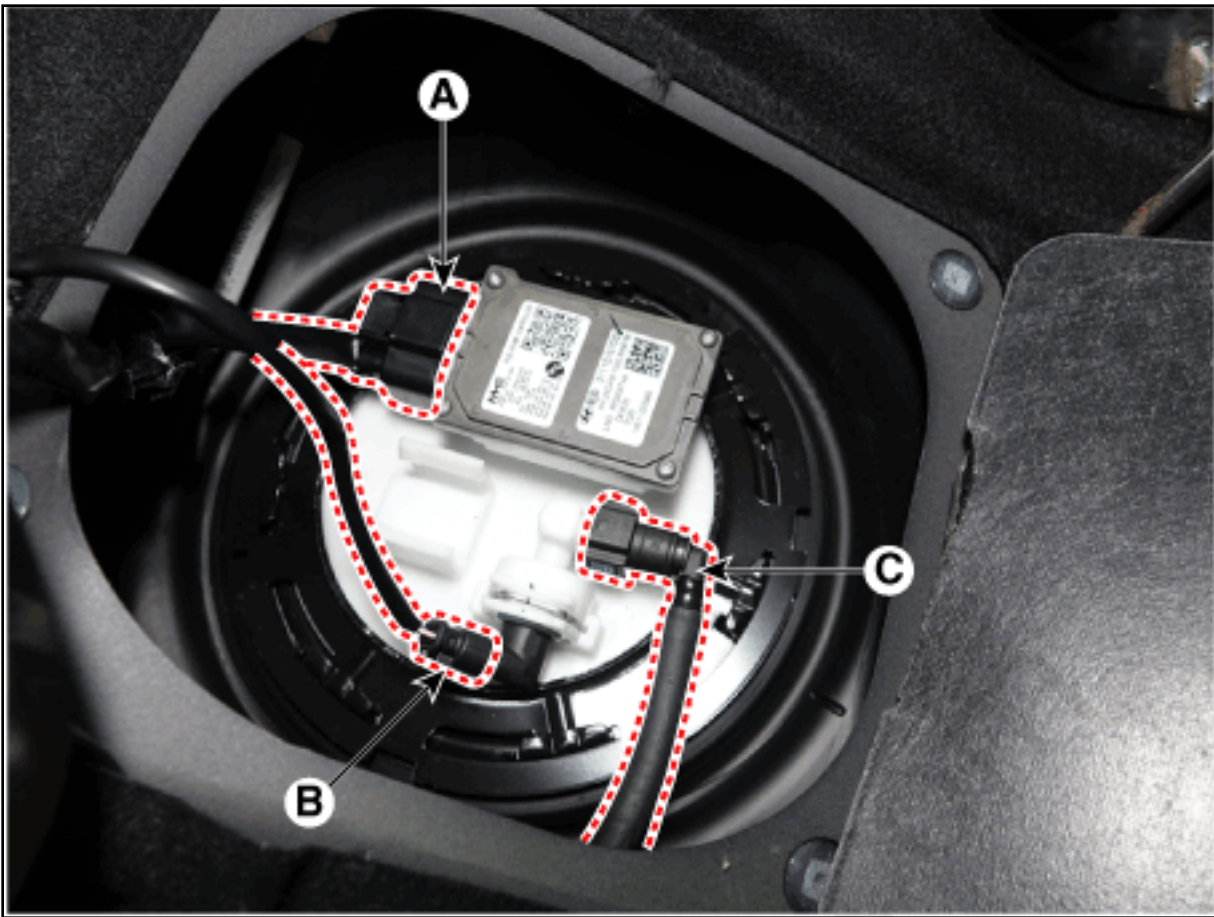


Removal

- Release the residual pressure in fuel line.
(Refer to Fuel Delivery System - "Release Residual Pressure in Fuel Line")
- Turn the ignition switch OFF and disconnect the battery (-) terminal.
- Remove the rear seat cushion.
(Refer to Body - "Rear Seat Assembly")
- Remove the fuel pump service cover (A) after loosening the screw.



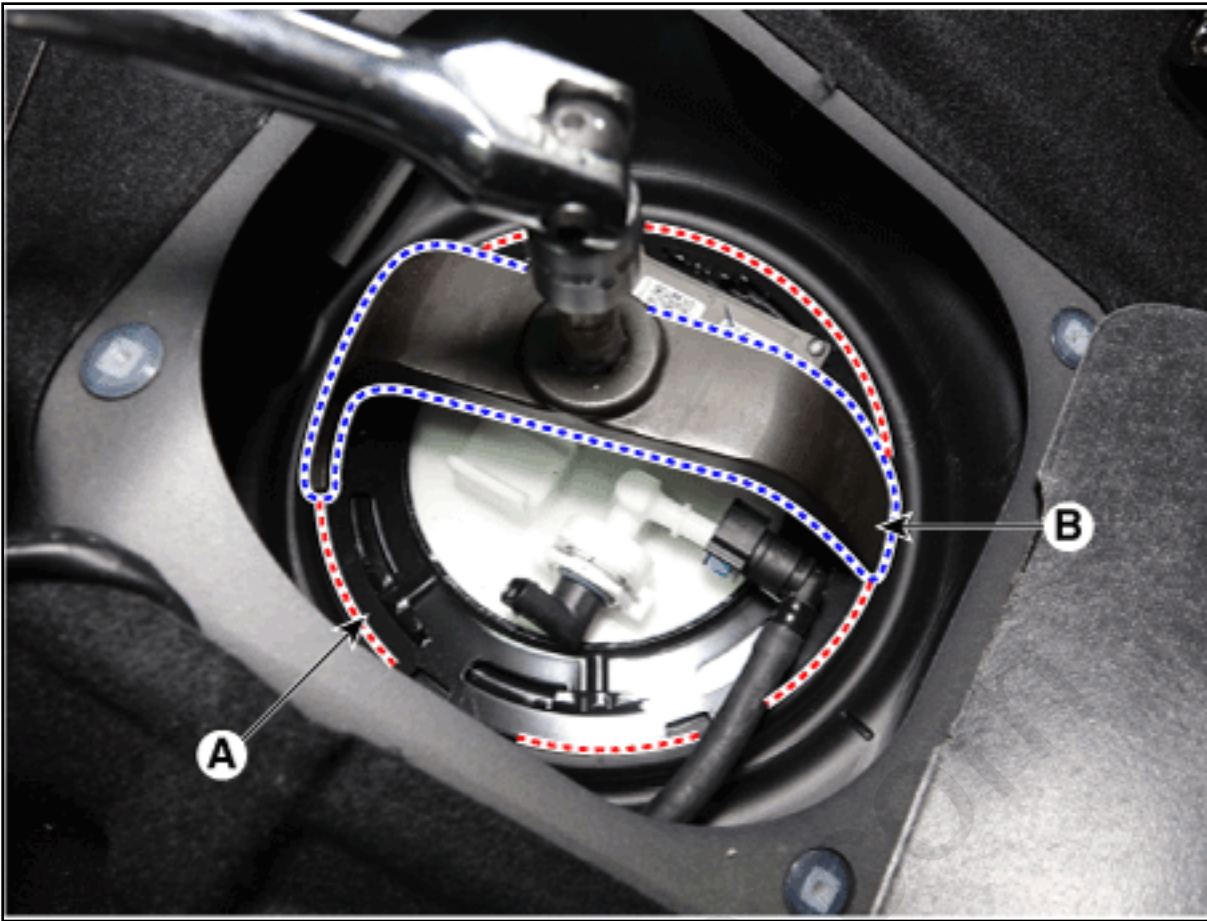
5. Disconnect the Fuel Pump Control Module (FPCM) connector (A).
6. Disconnect the Fuel Pressure Sensor (FPS) connector (B).
7. Disconnect the fuel feed tube quick-connector (C).



8. Remove the locking ring (A) by using the special service tool (B) [No.: 09310-B8100].



- When removing the plate cover, be careful not to damage the fuel tank and fuel pump.
- When removing the plate cover, press the upper area with hand and rotate the wrench counter clockwise.

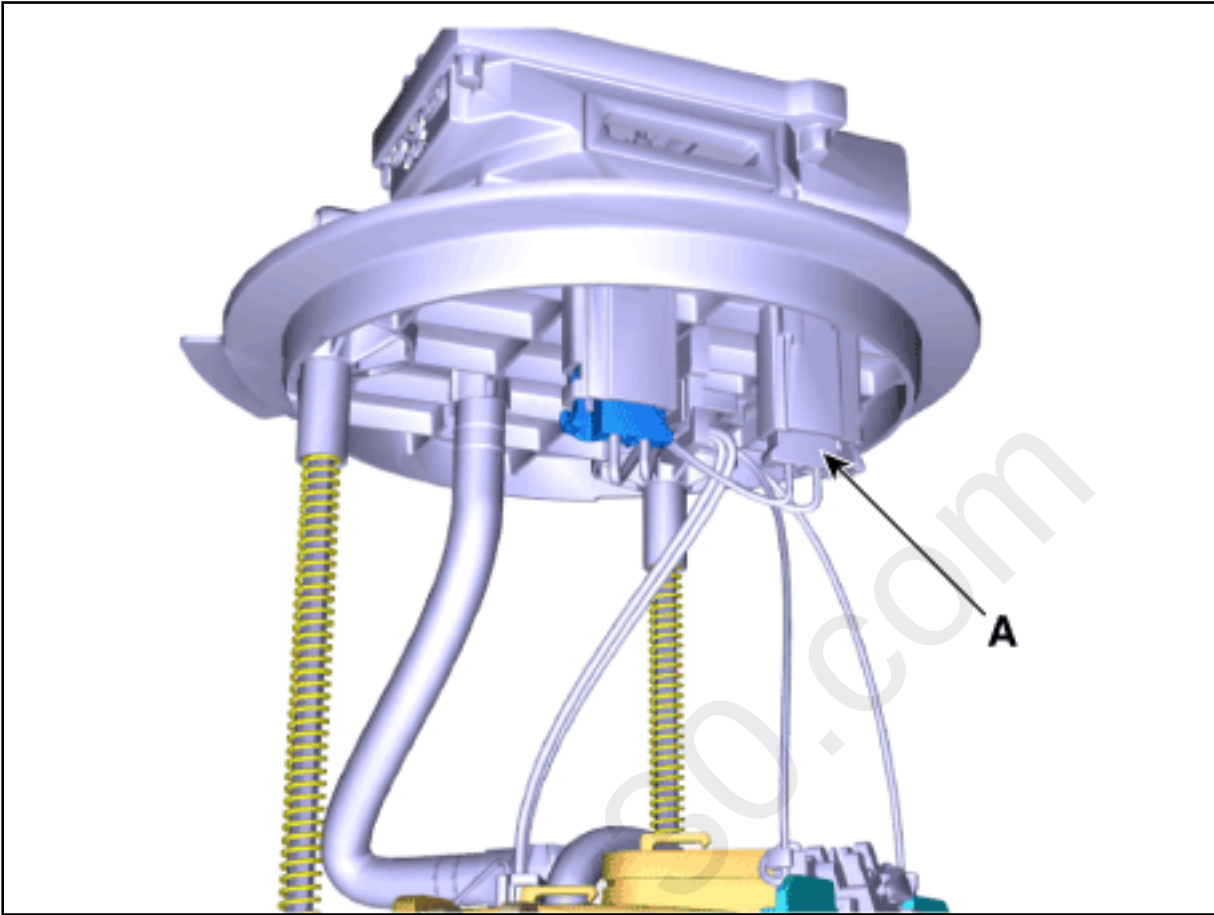


Installation

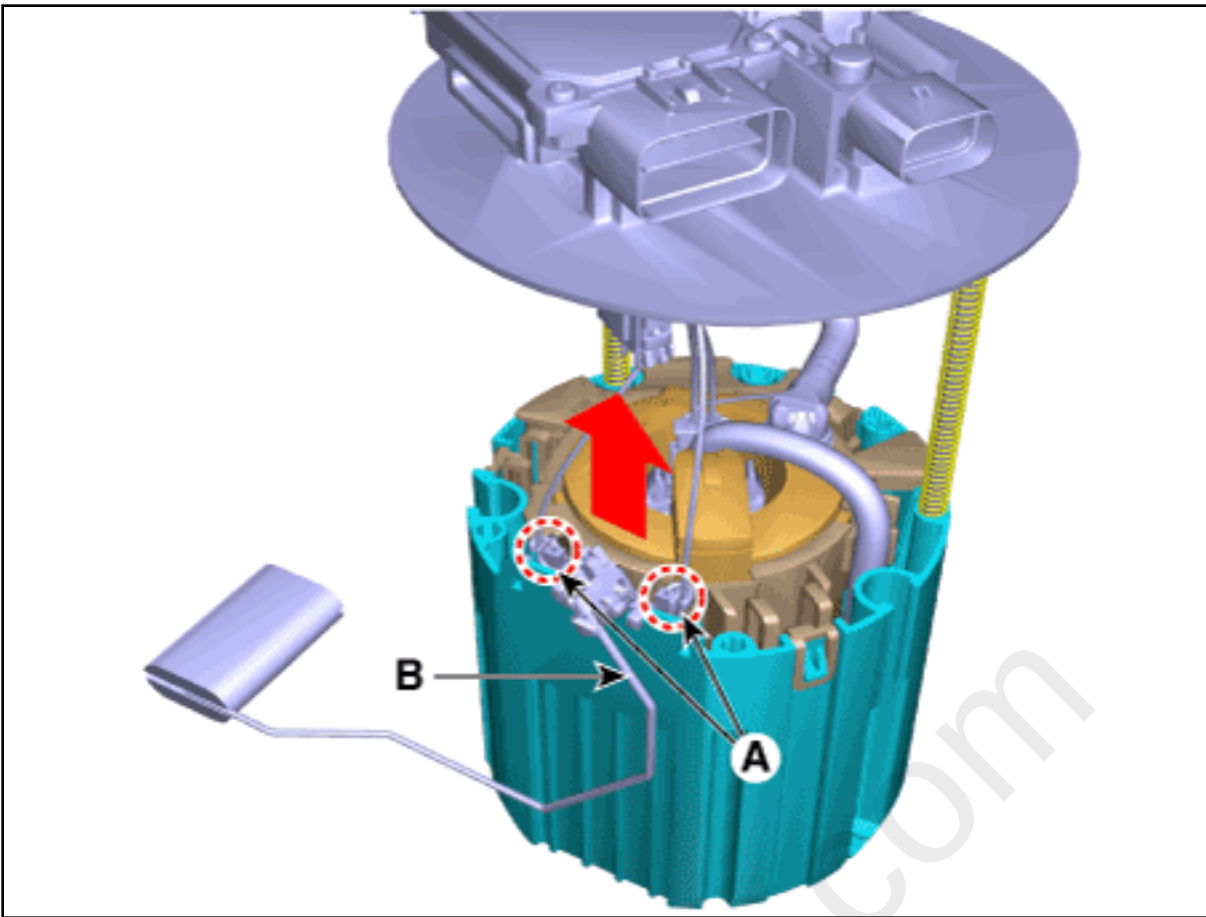
1. Install in the reverse order of removal.

Removal

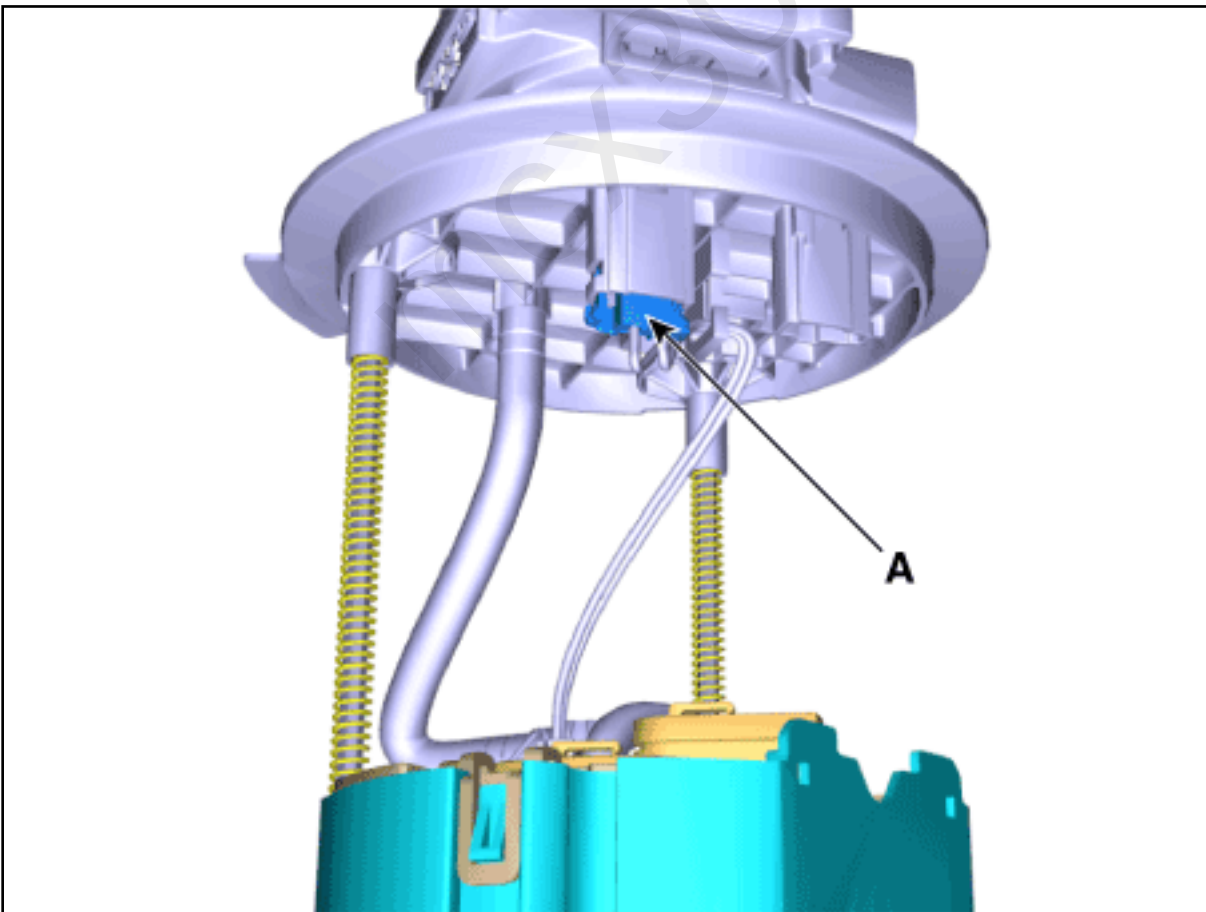
1. Remove the fuel pump.
(Refer to Fuel Delivery System - "Fuel Pump")
2. Disconnect the fuel sender connector (A).



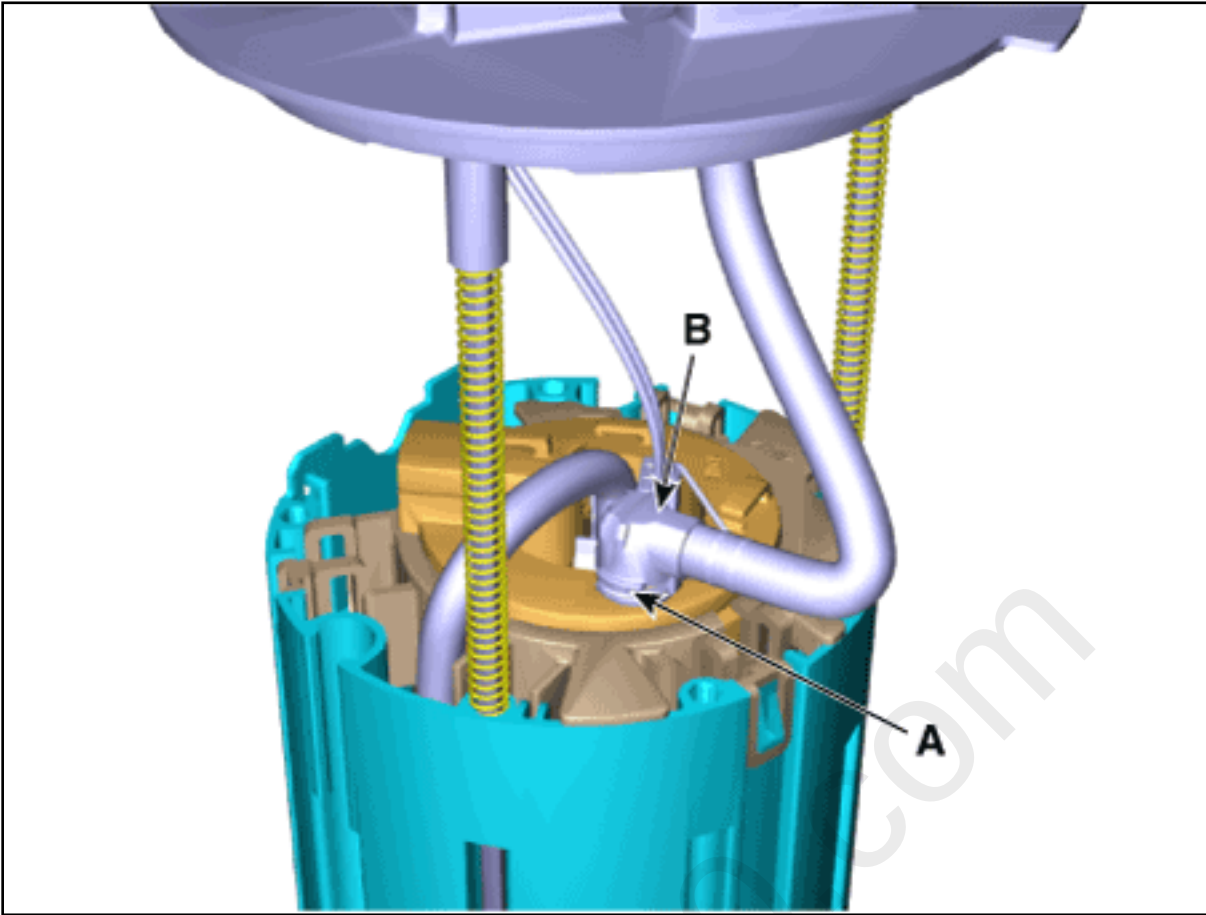
3. Release the fixing hook (A) and then remove fuel sender (B) in the arrow direction.



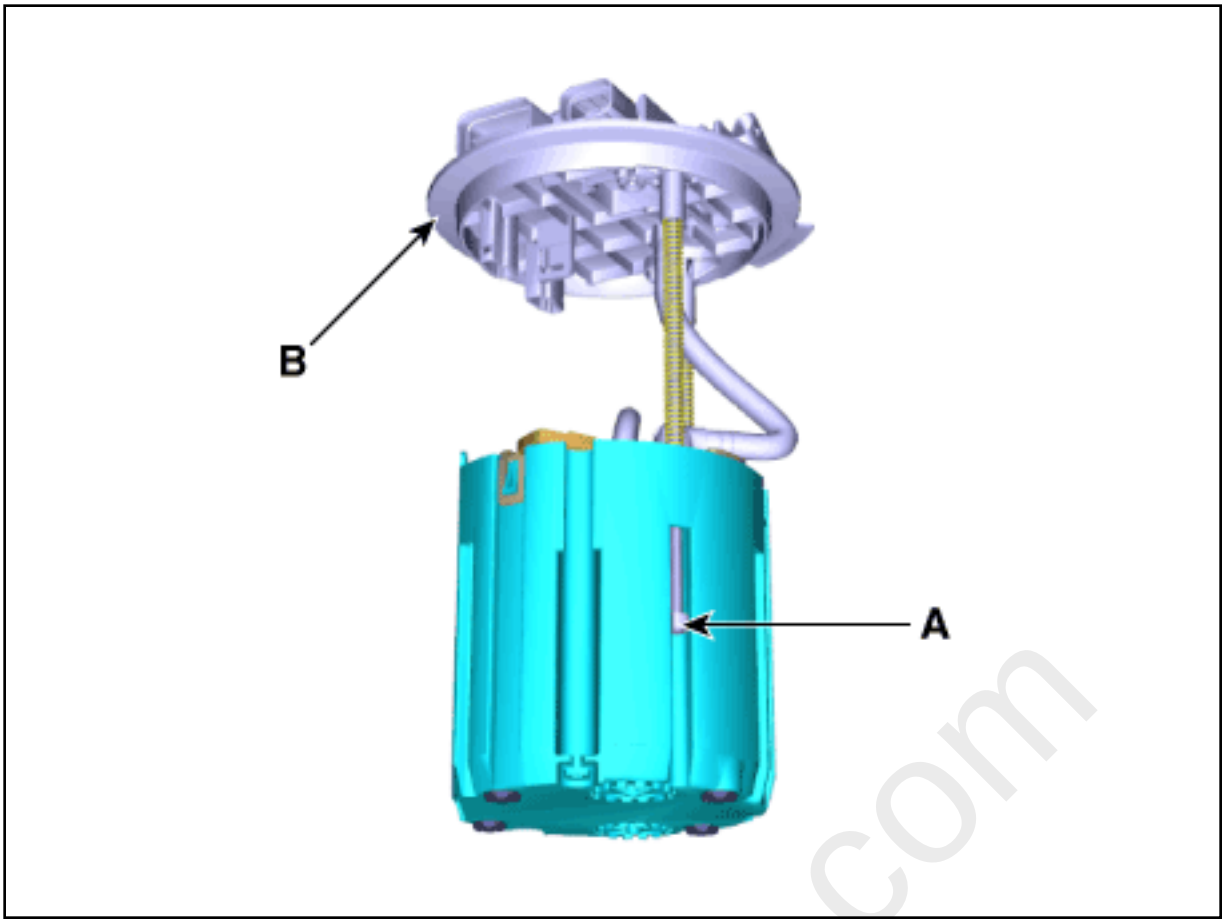
4. Disconnect the fuel pump motor connector (A).



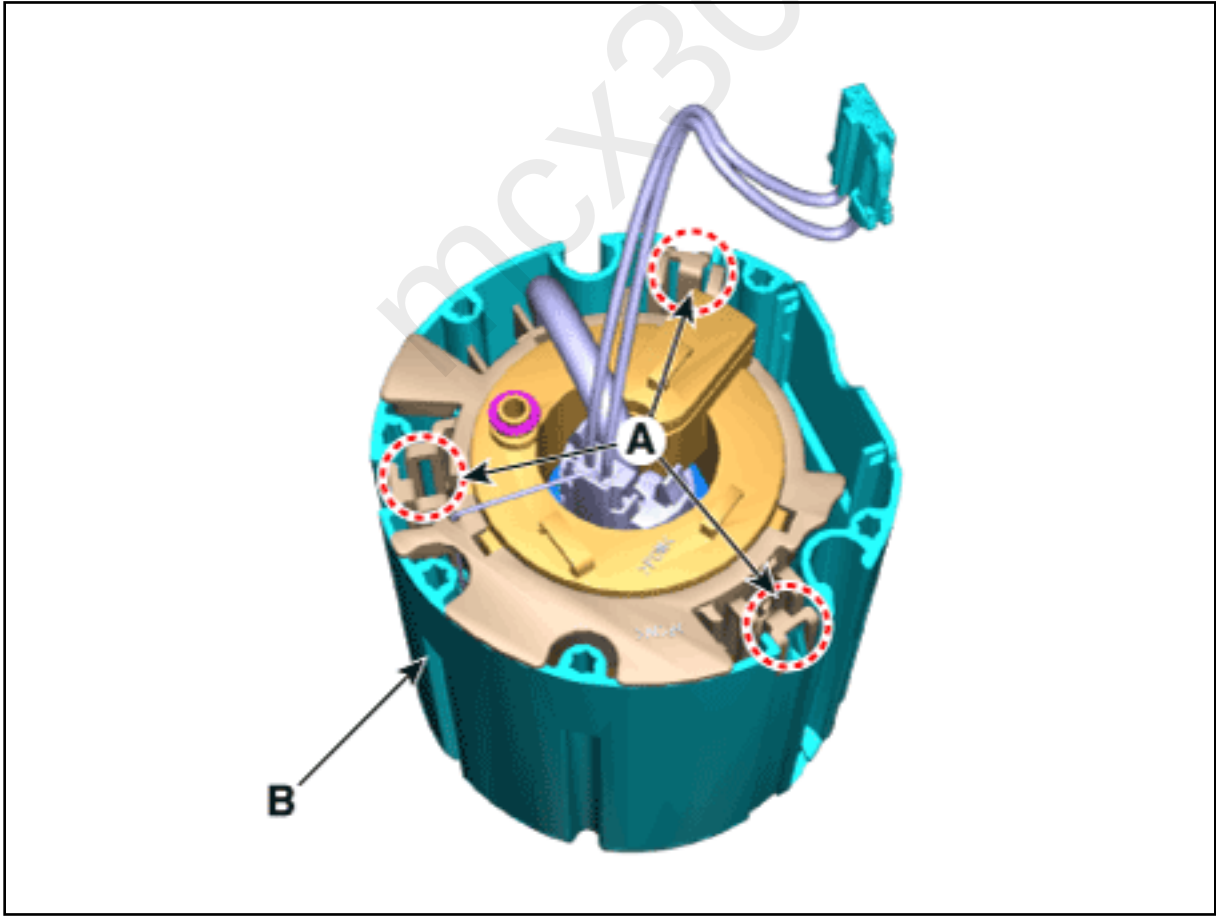
5. Remove the fixing pin (A) and then disconnect the fuel feed tube (B).



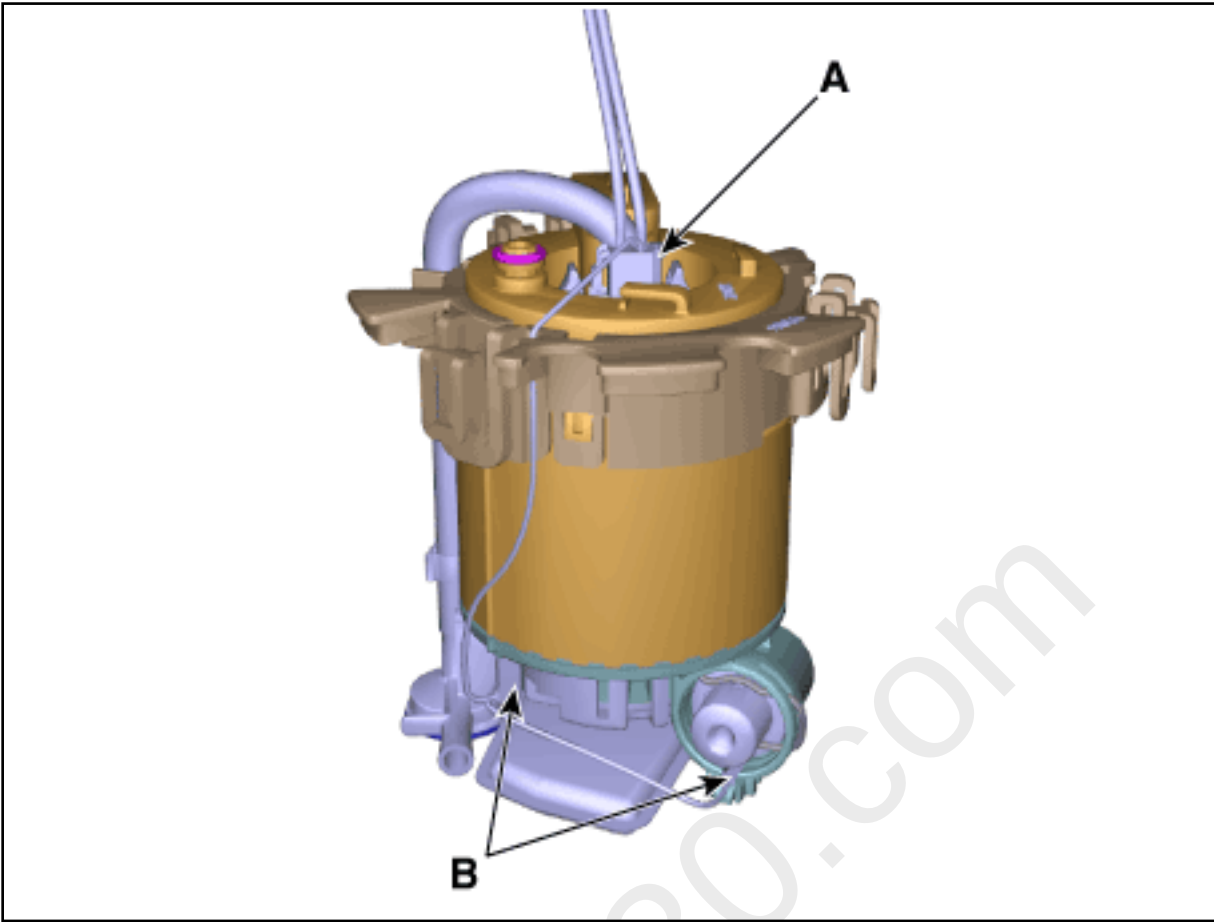
6. Release the fixing hook (A) and then remove the head assembly (B).



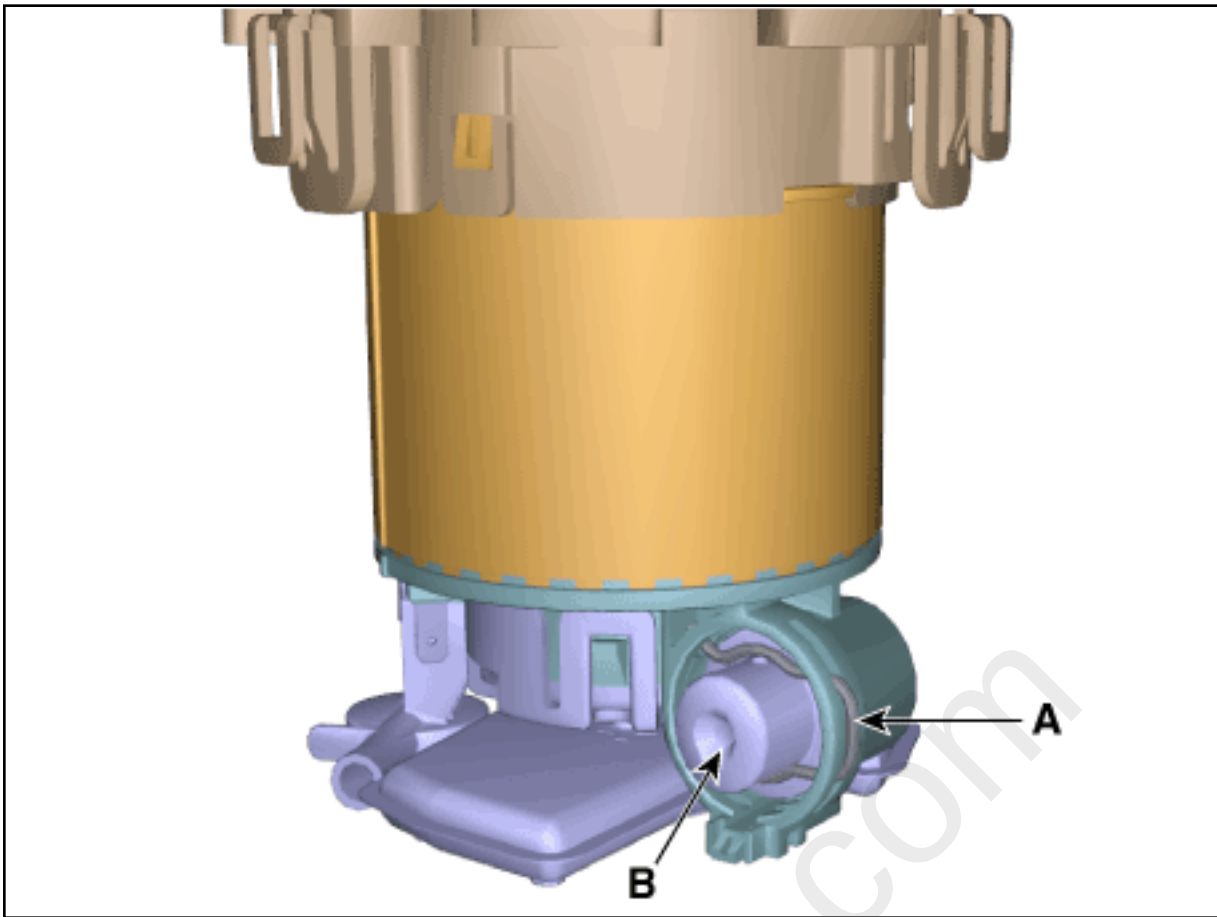
7. Release the fixing hook (A) and then remove the reservoir-cup (B).



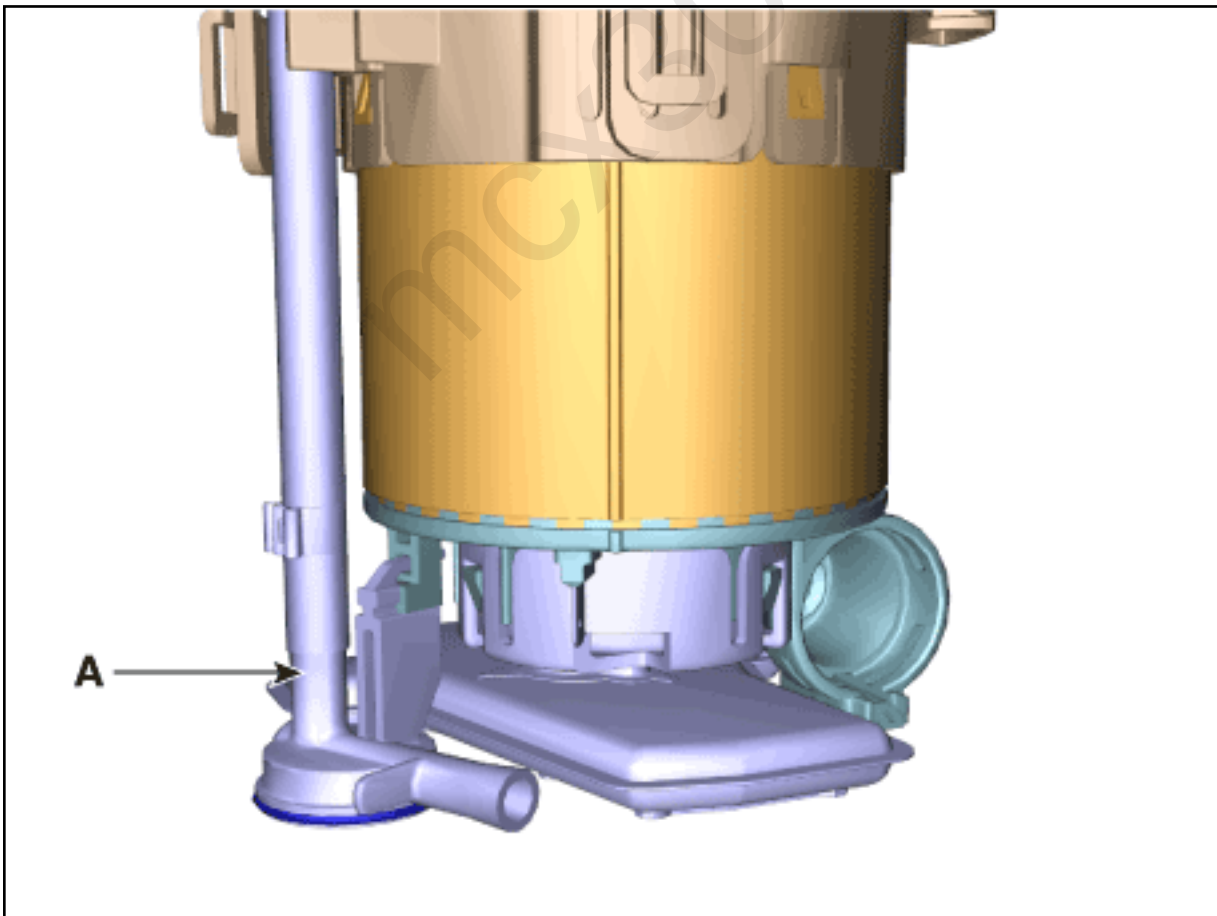
8. Disconnect the fuel pump motor connector (A).
9. Disconnect the ground cable (B).



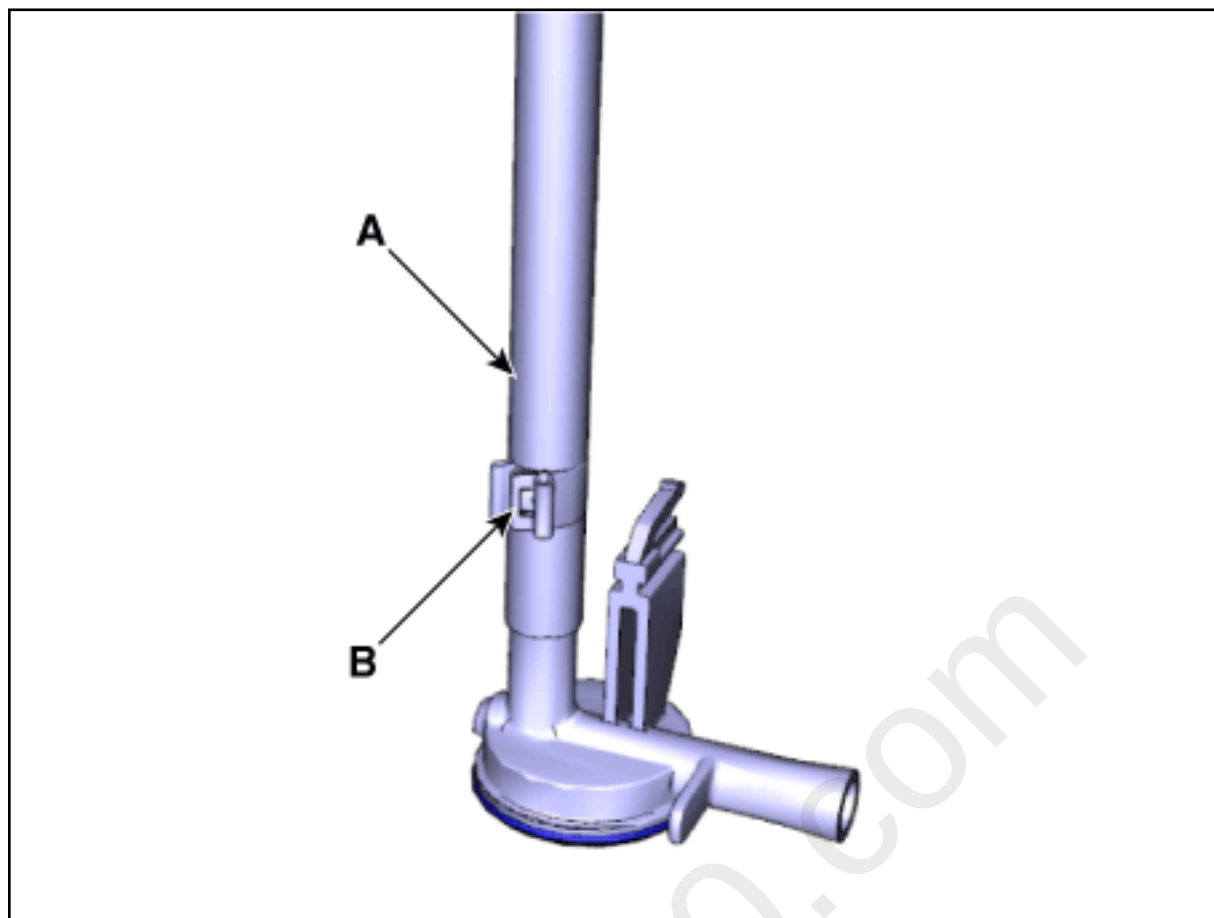
10. Remove the fixing pin (A) and then disconnect the fuel pressure regulator (B).



11. Release the fixing hook and then remove the assist pump (A).

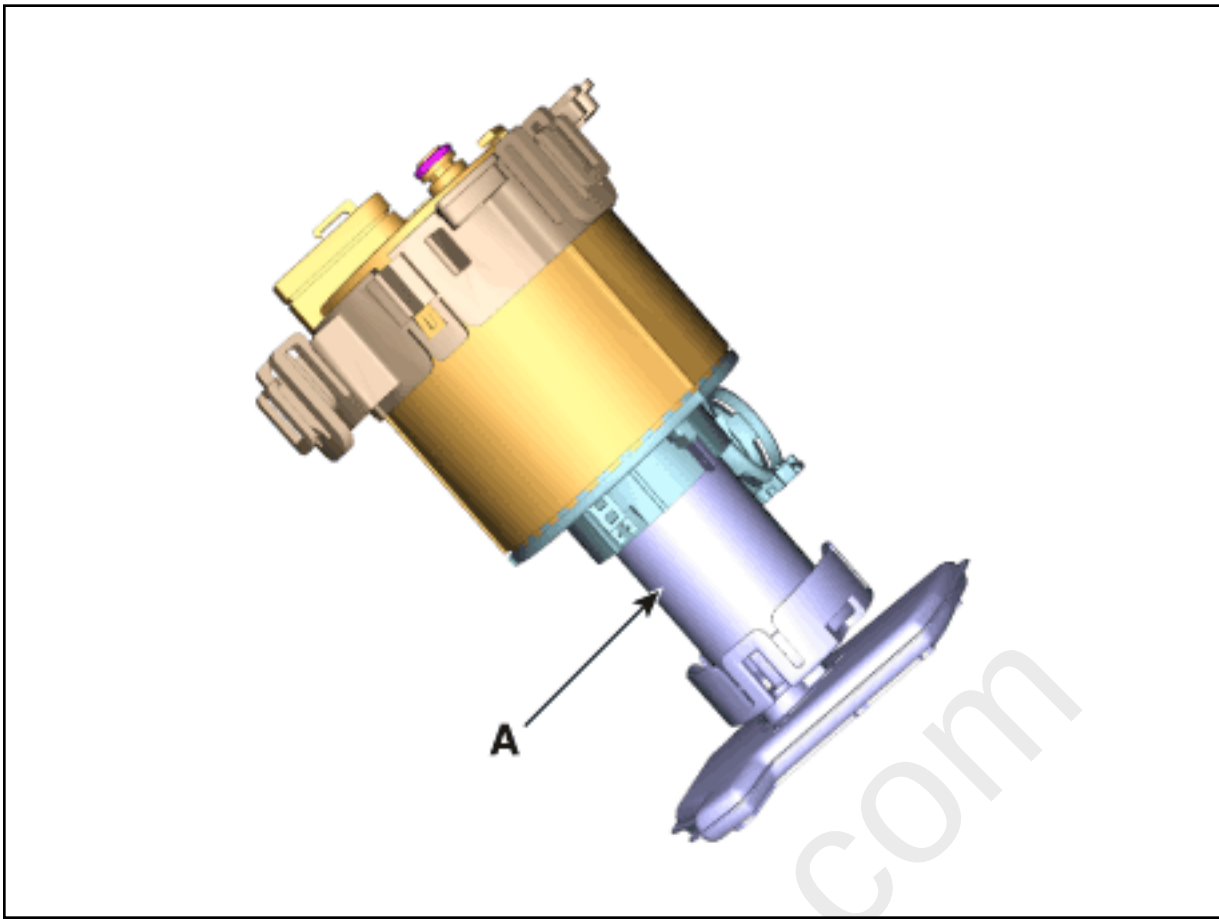


12. Separate the fuel pump hose (A) after releasing the clamp (B).

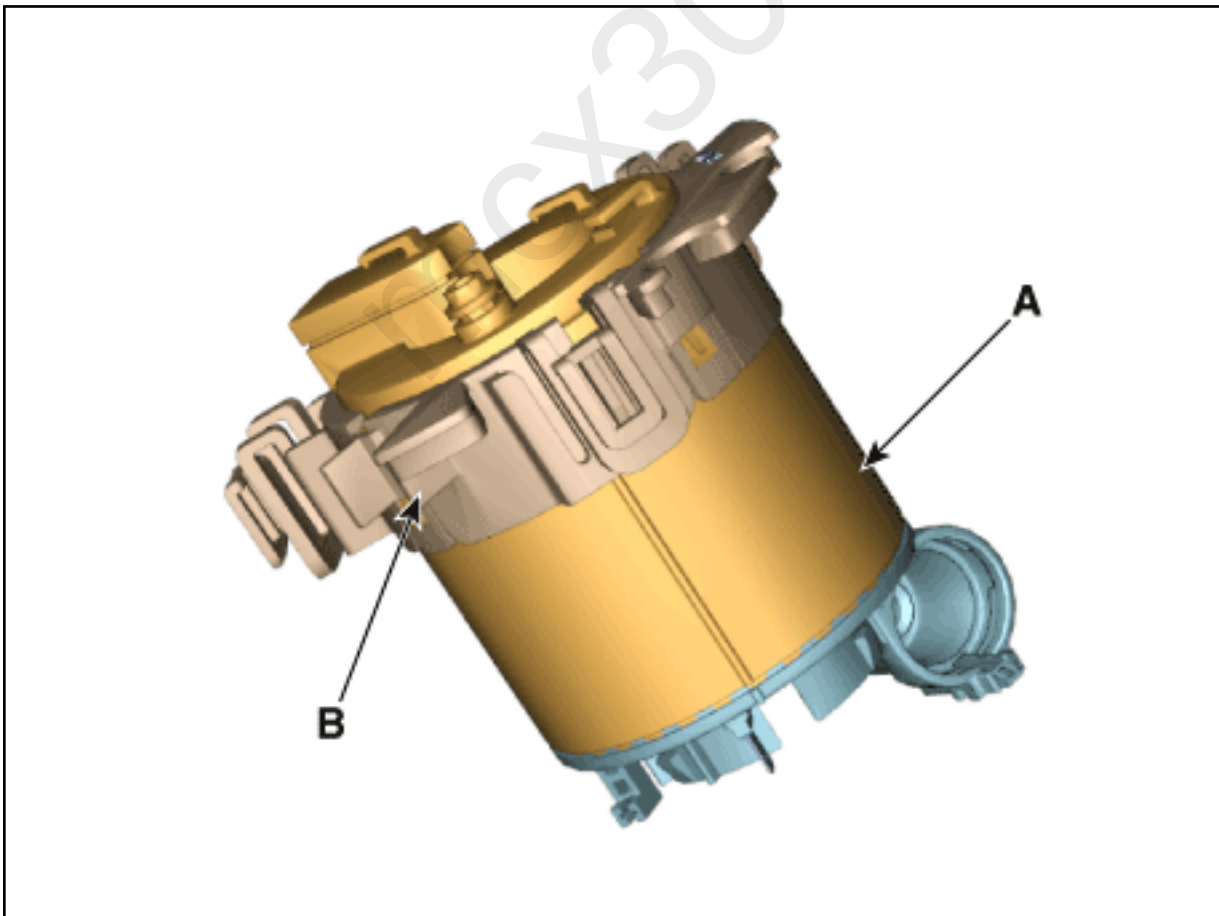


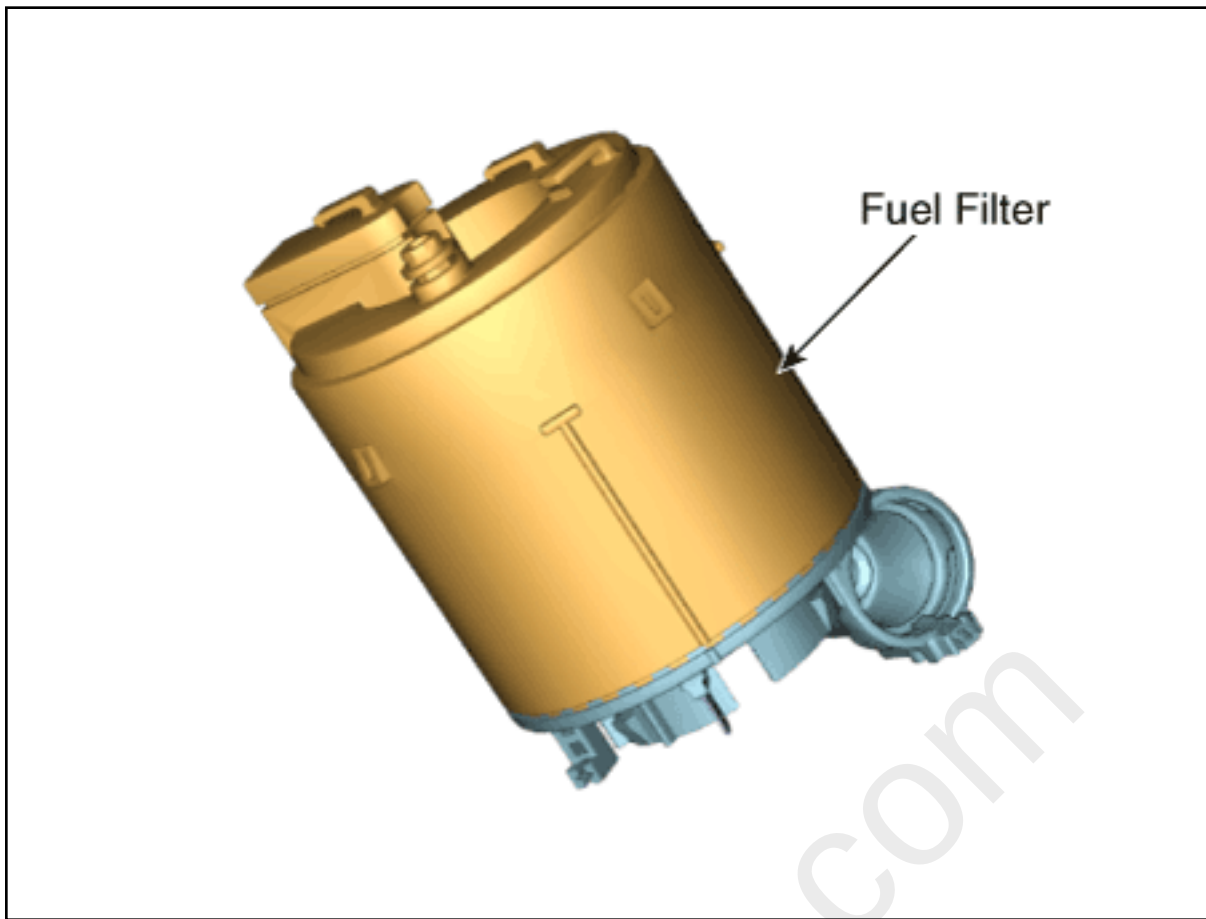
- Replace the clamp with a new one when reinstalling the clamp.

13. Remove the pump filter & fuel pump (A) after releasing the hooks.



14. Release the fixing hook and then remove the fuel filter (A) from the bracket (B).



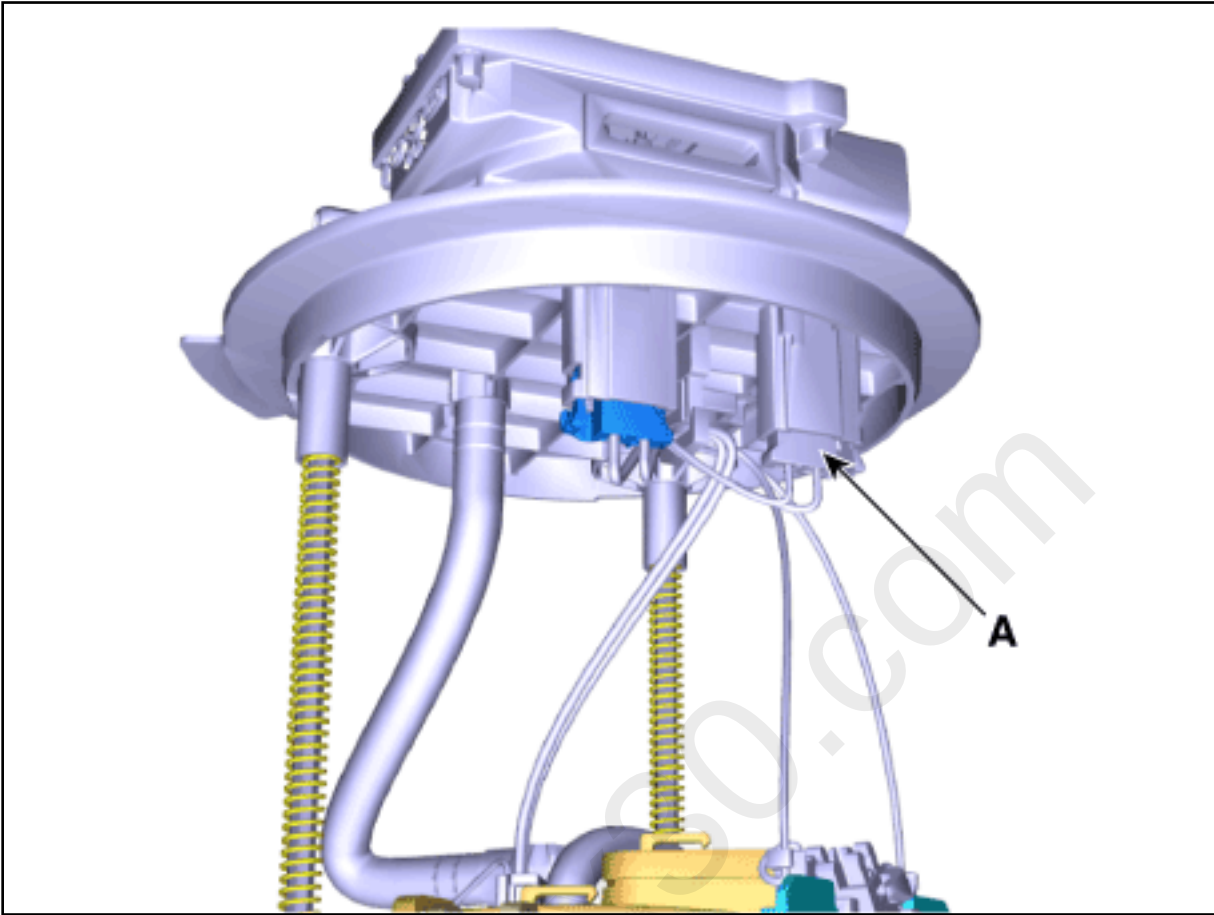


Installtion

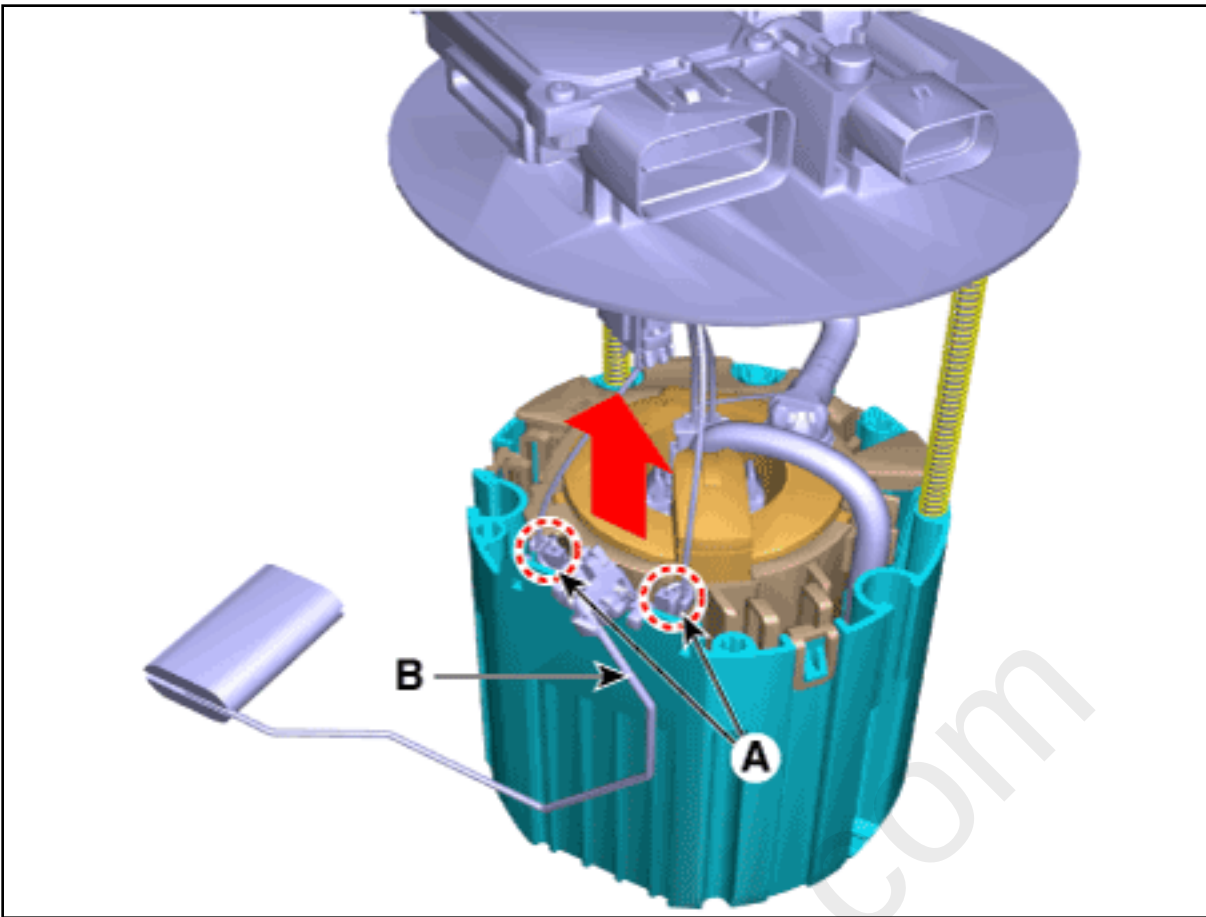
1. Install in the reverse order of removal.

Removal

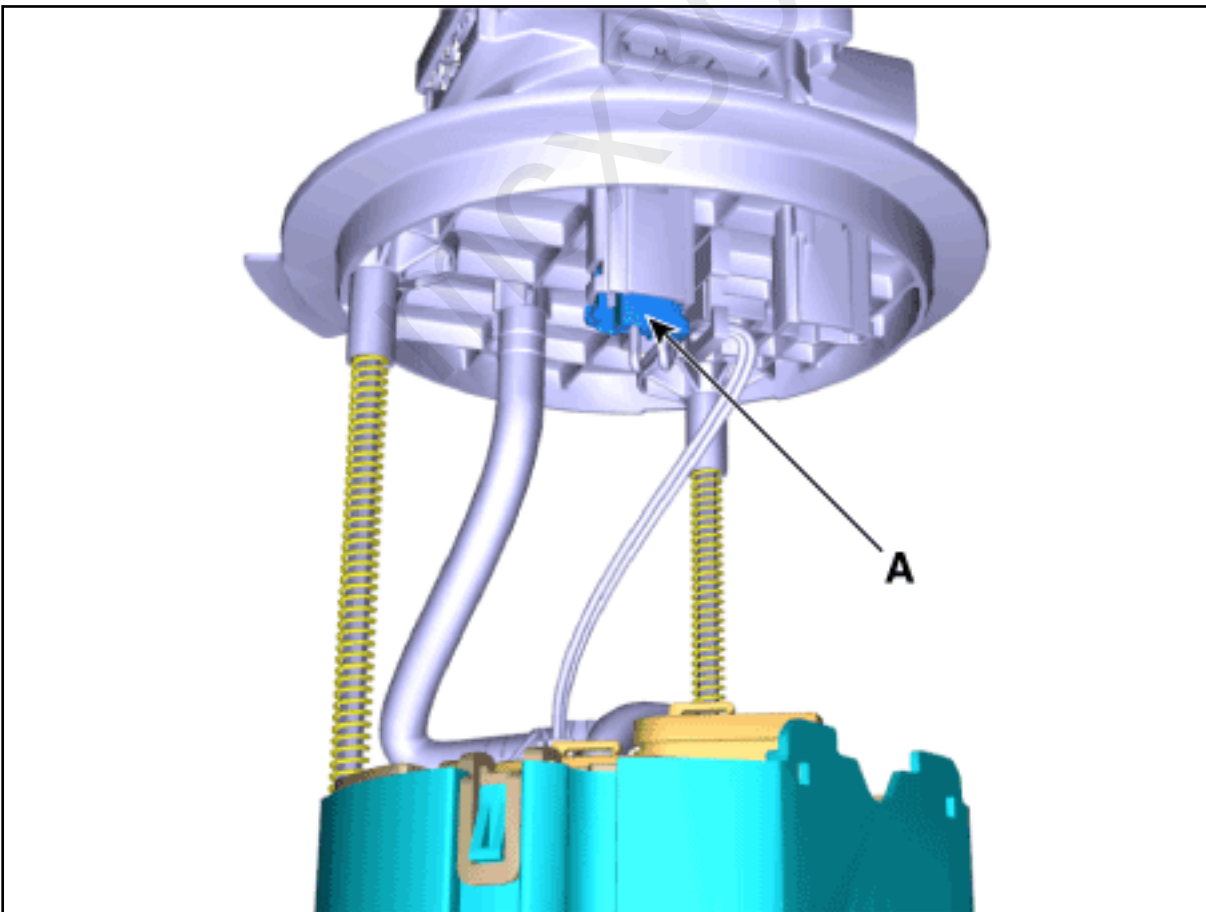
1. Remove the fuel pump.
(Refer to Fuel Delivery System - "Fuel Pump")
2. Disconnect the fuel sender connector (A).



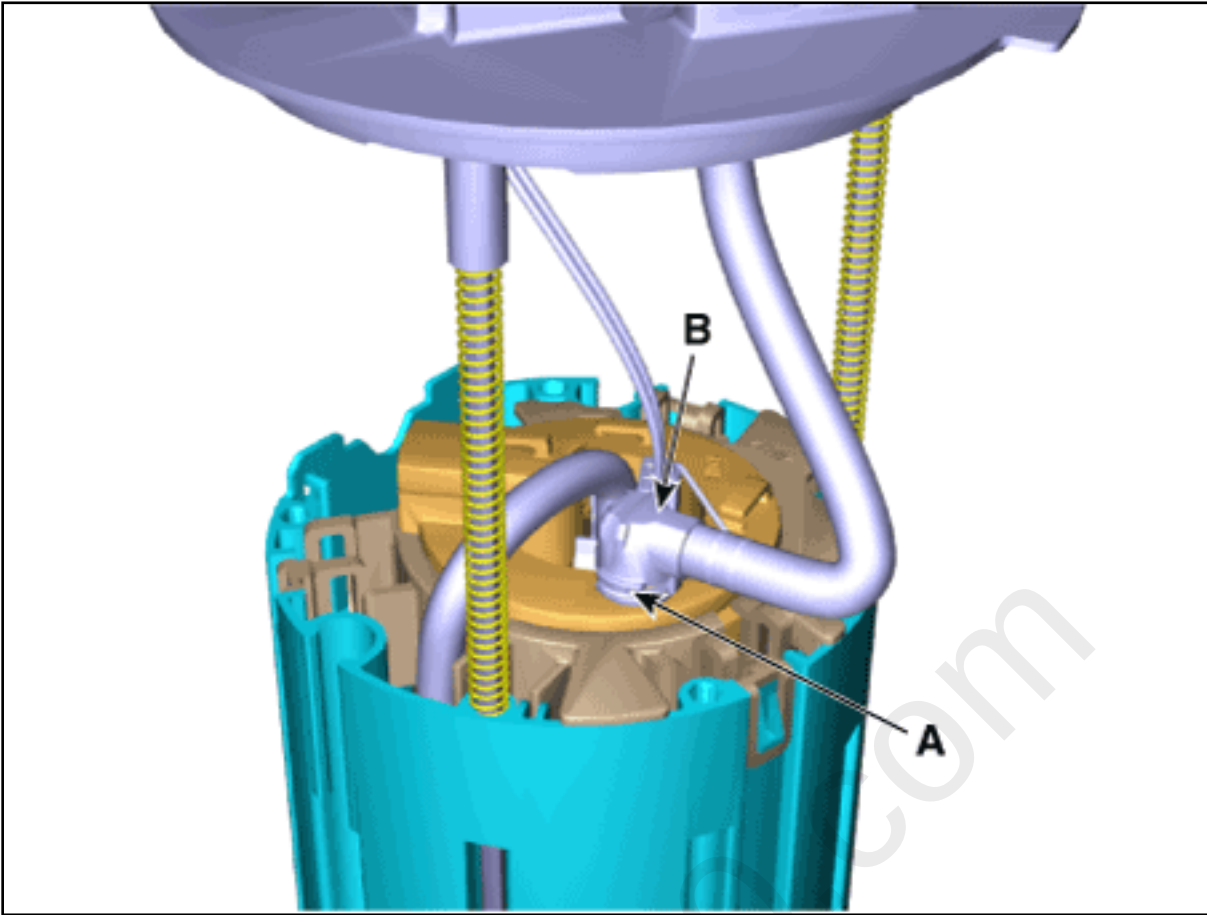
3. Release the fixing hook (A) and then remove fuel sender (B) in the arrow direction.



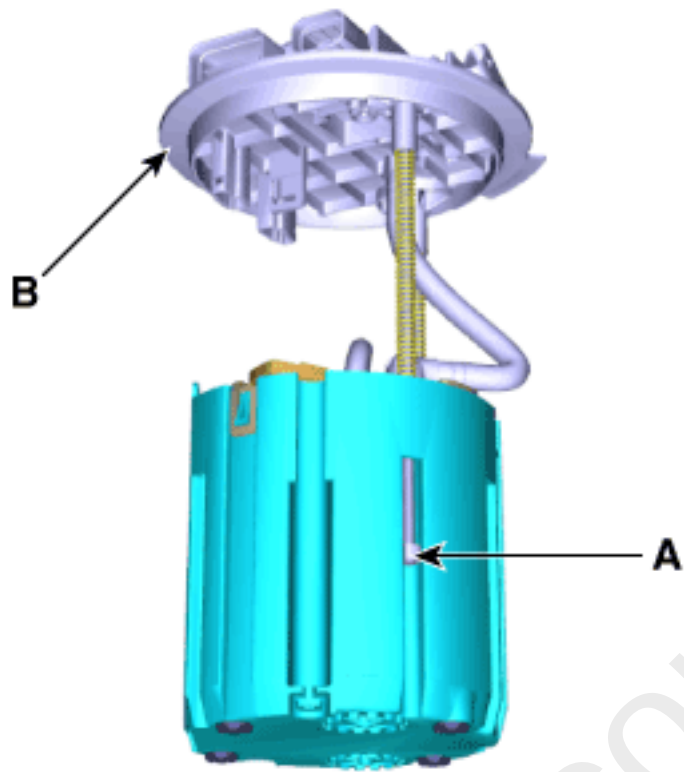
4. Disconnect the fuel pump motor connector (A).



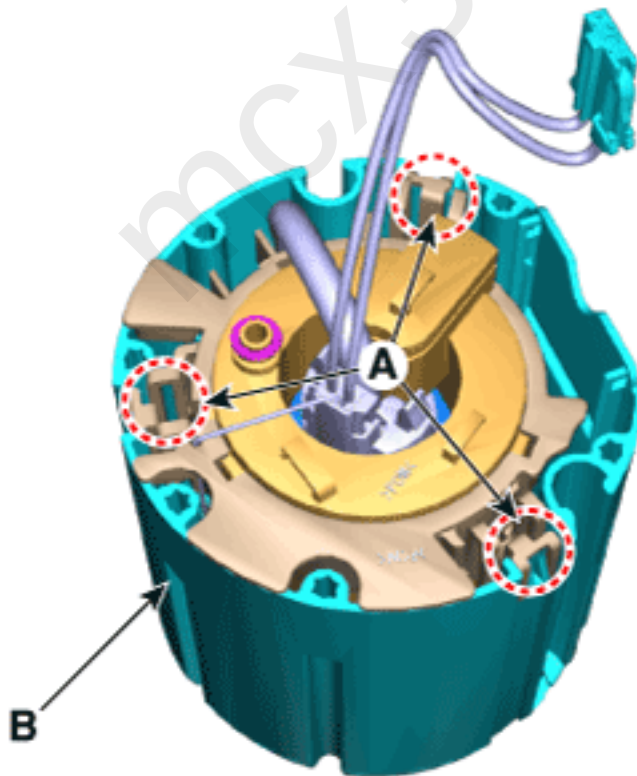
5. Remove the fixing pin (A) and then disconnect the fuel feed tube (B).



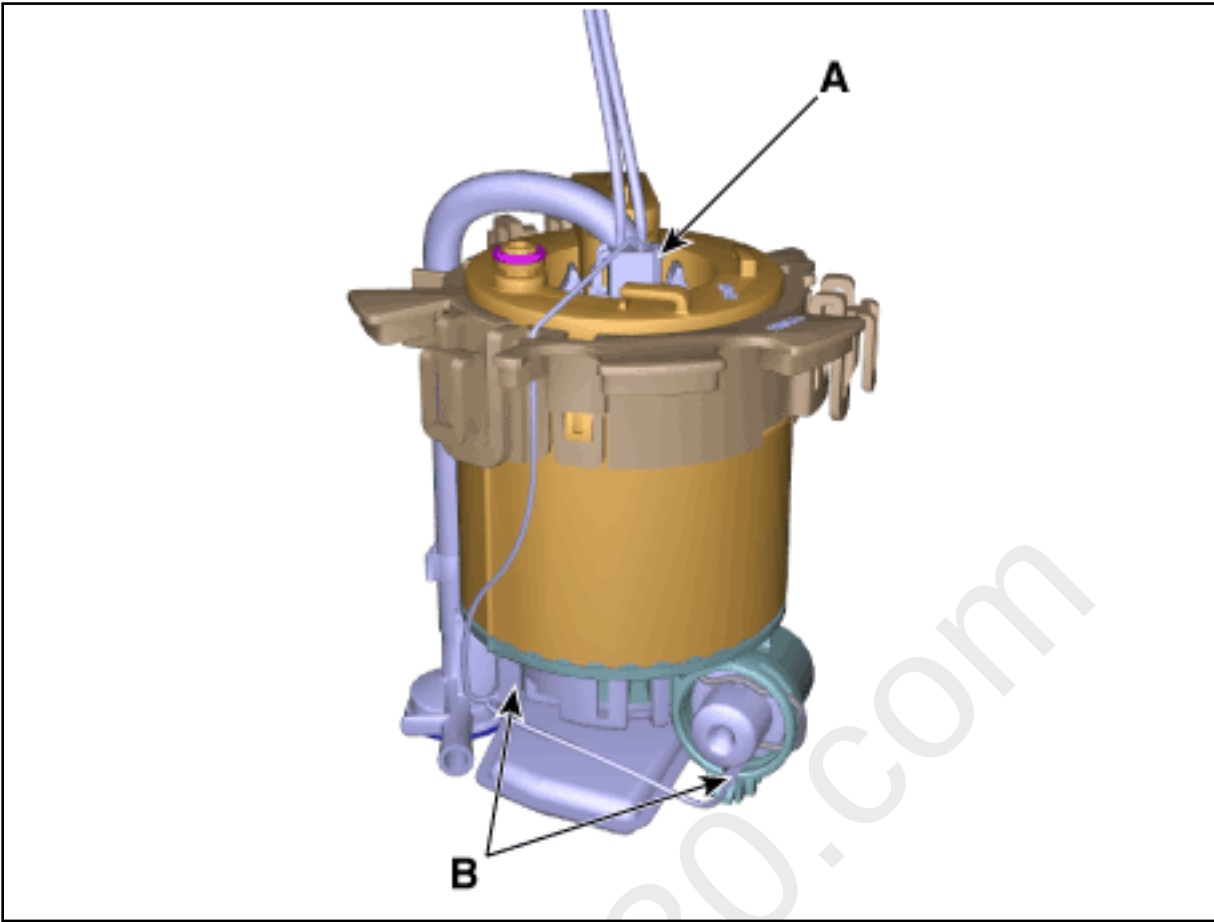
6. Release the fixing hook (A) and then remove the head assembly (B).



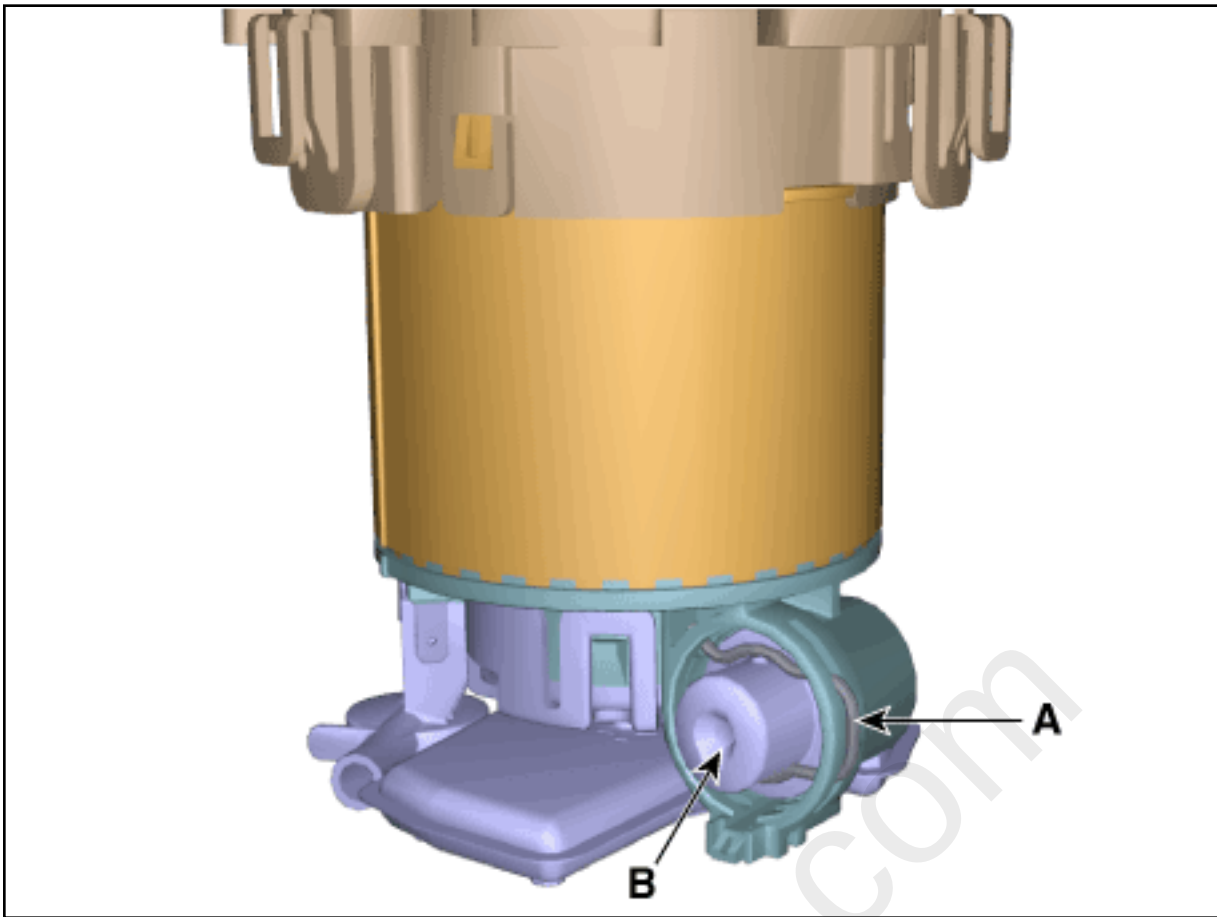
7. Release the fixing hook (A) and then remove the reservoir-cup (B).



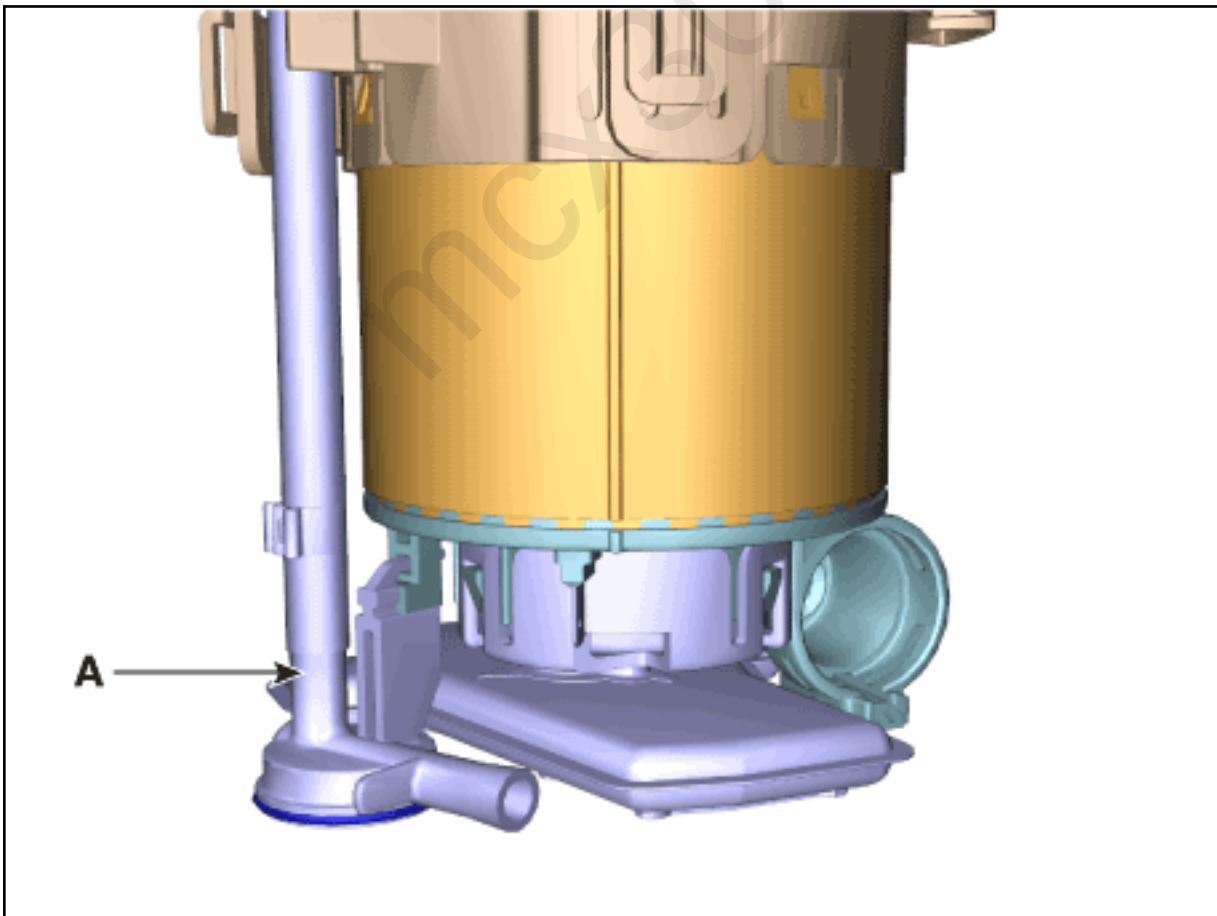
8. Disconnect the fuel pump motor connector (A).
9. Disconnect the ground cable (B).



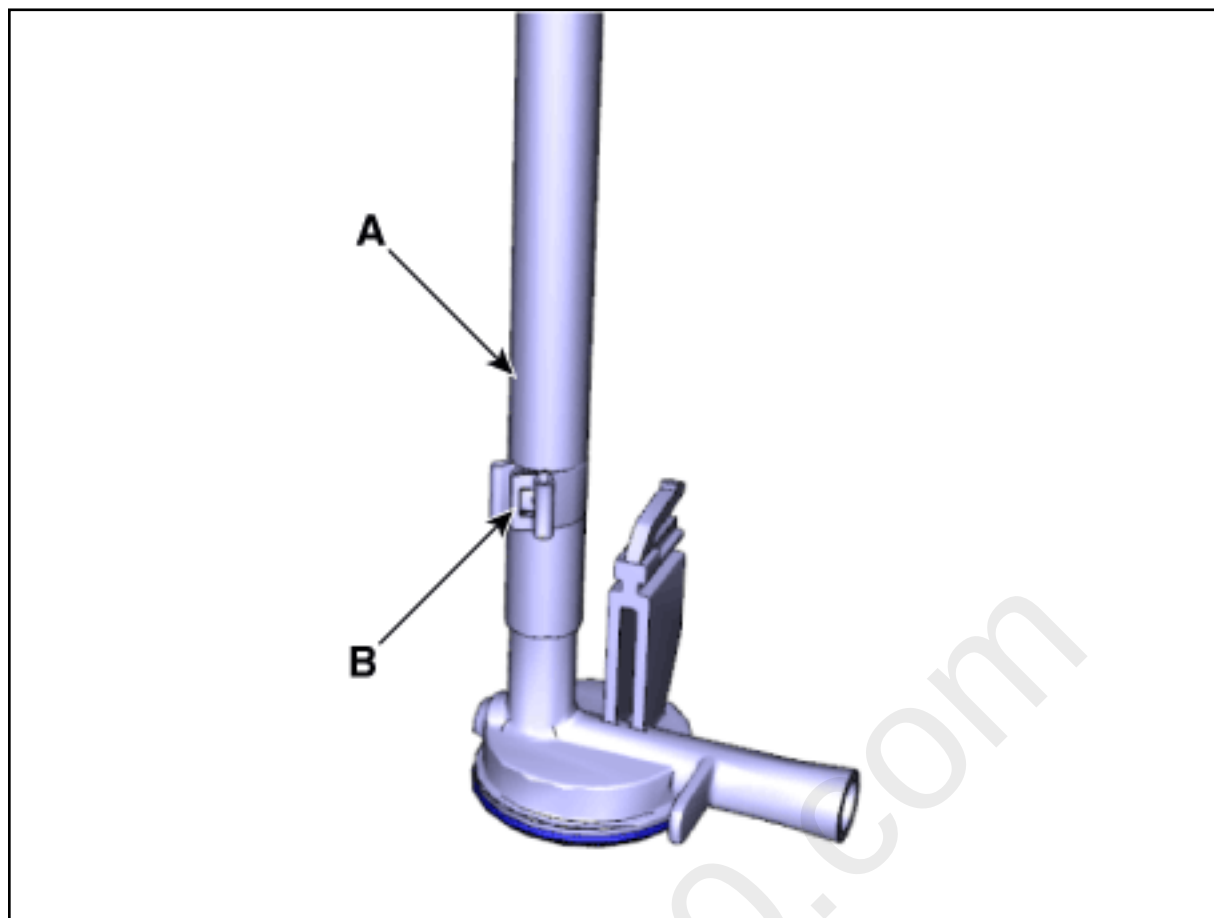
10. Remove the fixing pin (A) and then disconnect the fuel pressure regulator (B).



11. Release the fixing hook and then remove the assist pump (A).

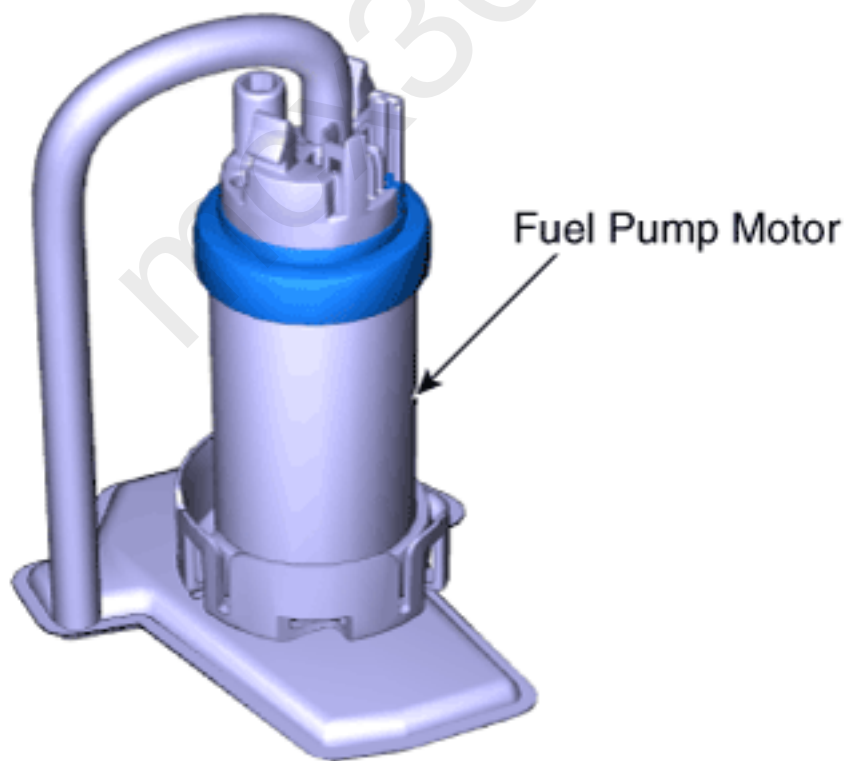
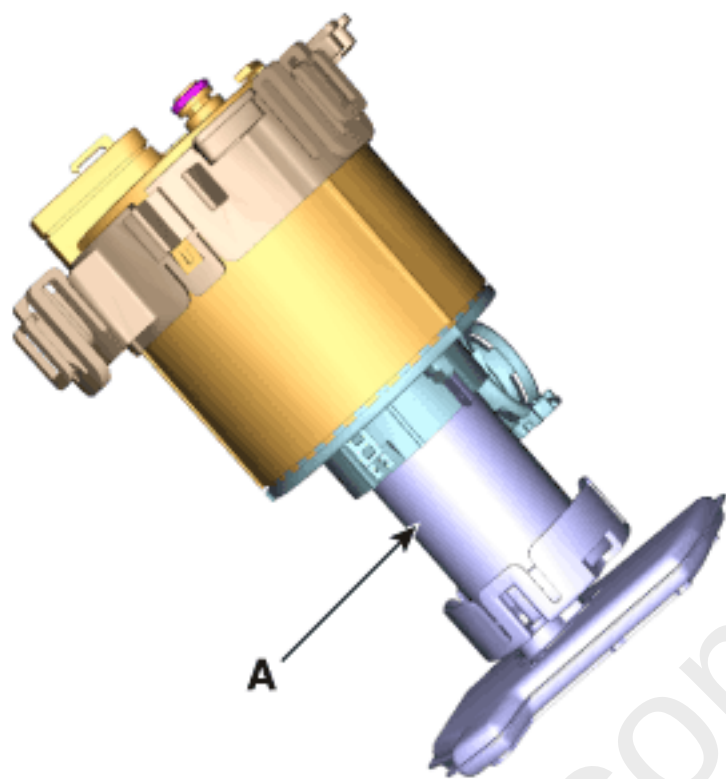


12. Separate the fuel pump hose (A) after releasing the clamp (B).



•Replace the clamp with a new one when reinstalling the clamp.

13. Remove the pump filter & fuel pump (A) after releasing the hooks.



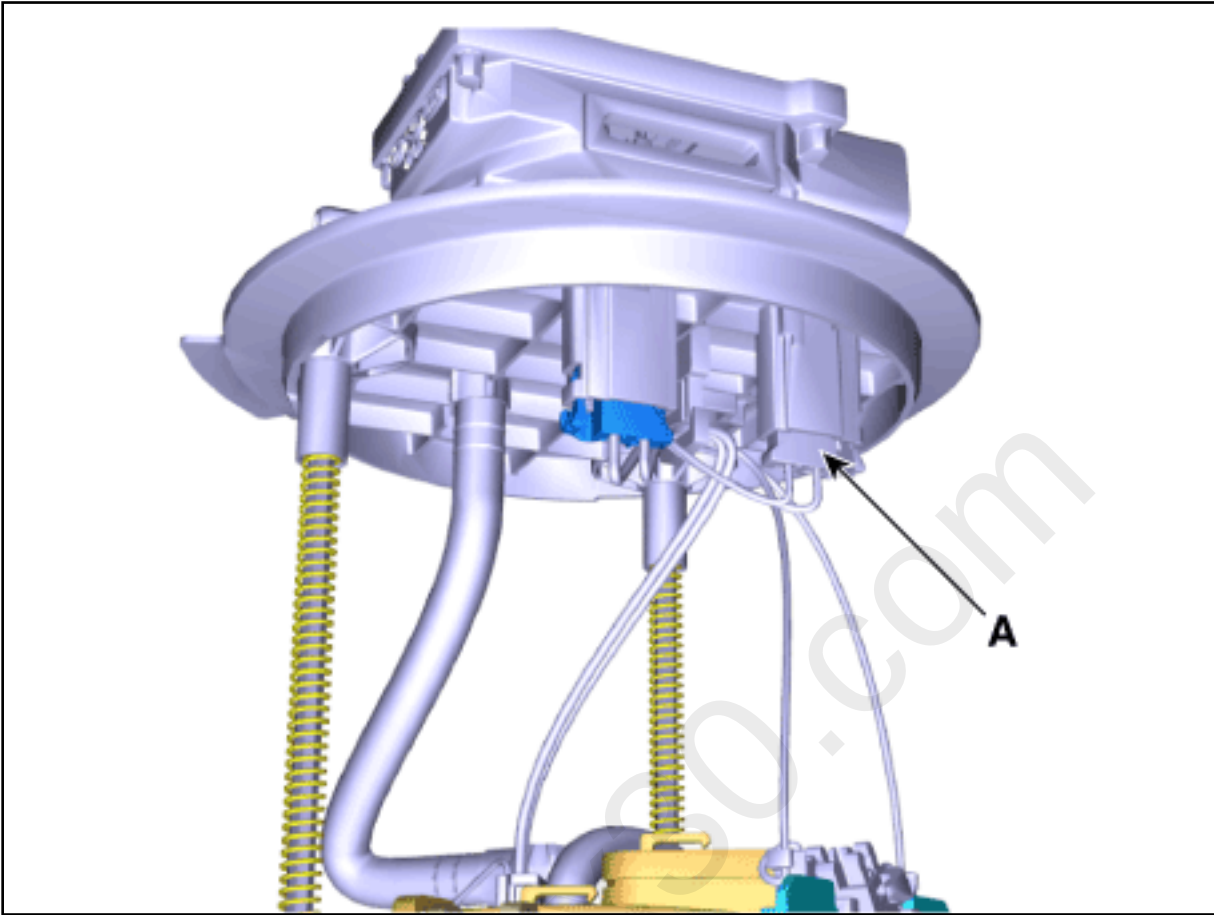
Installation

1. Install in the reverse order of removal.

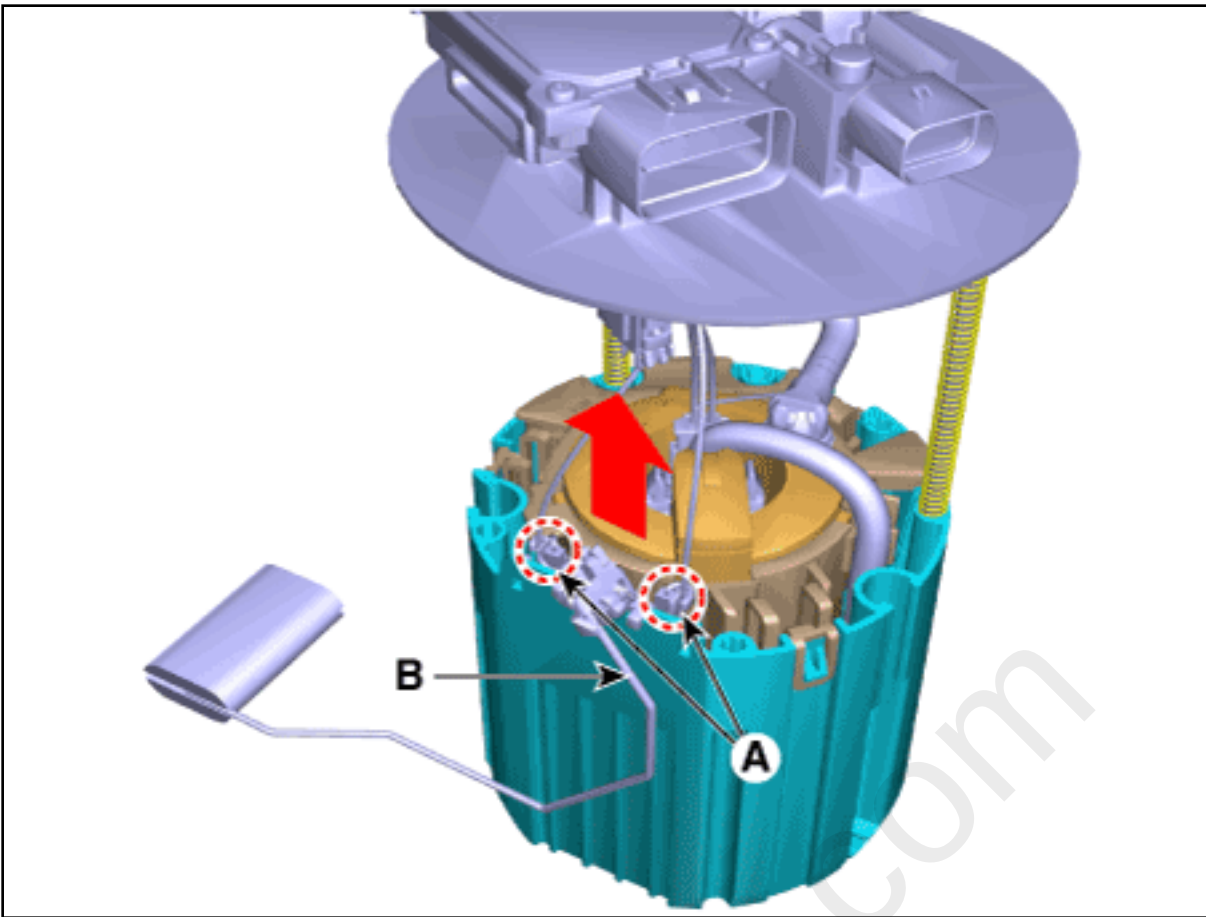
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Removal

1. Remove the fuel pump.
(Refer to Fuel Delivery System - "Fuel Pump")
2. Disconnect the fuel sender connector (A).



3. Release the fixing hook (A) and then remove fuel sender (B) in the arrow direction.

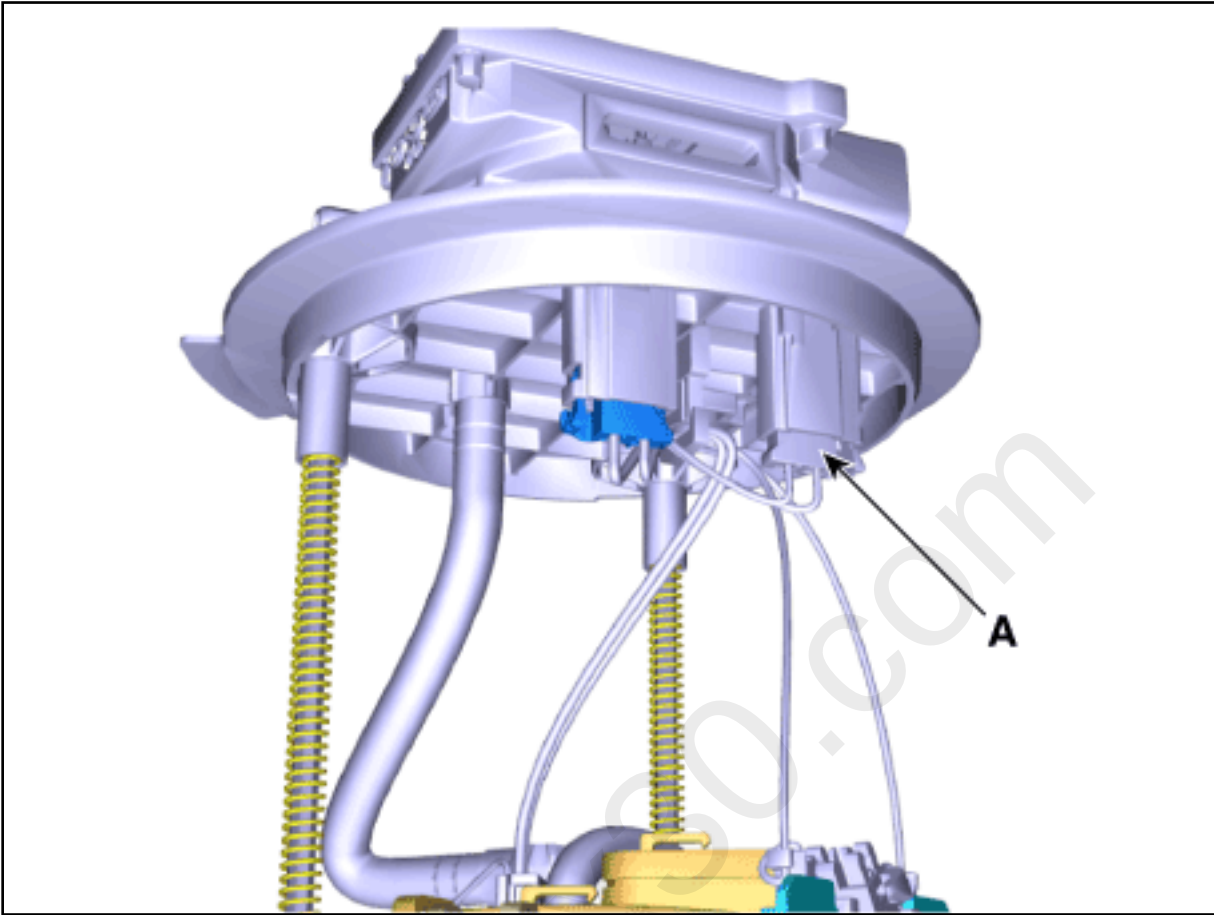


Installation

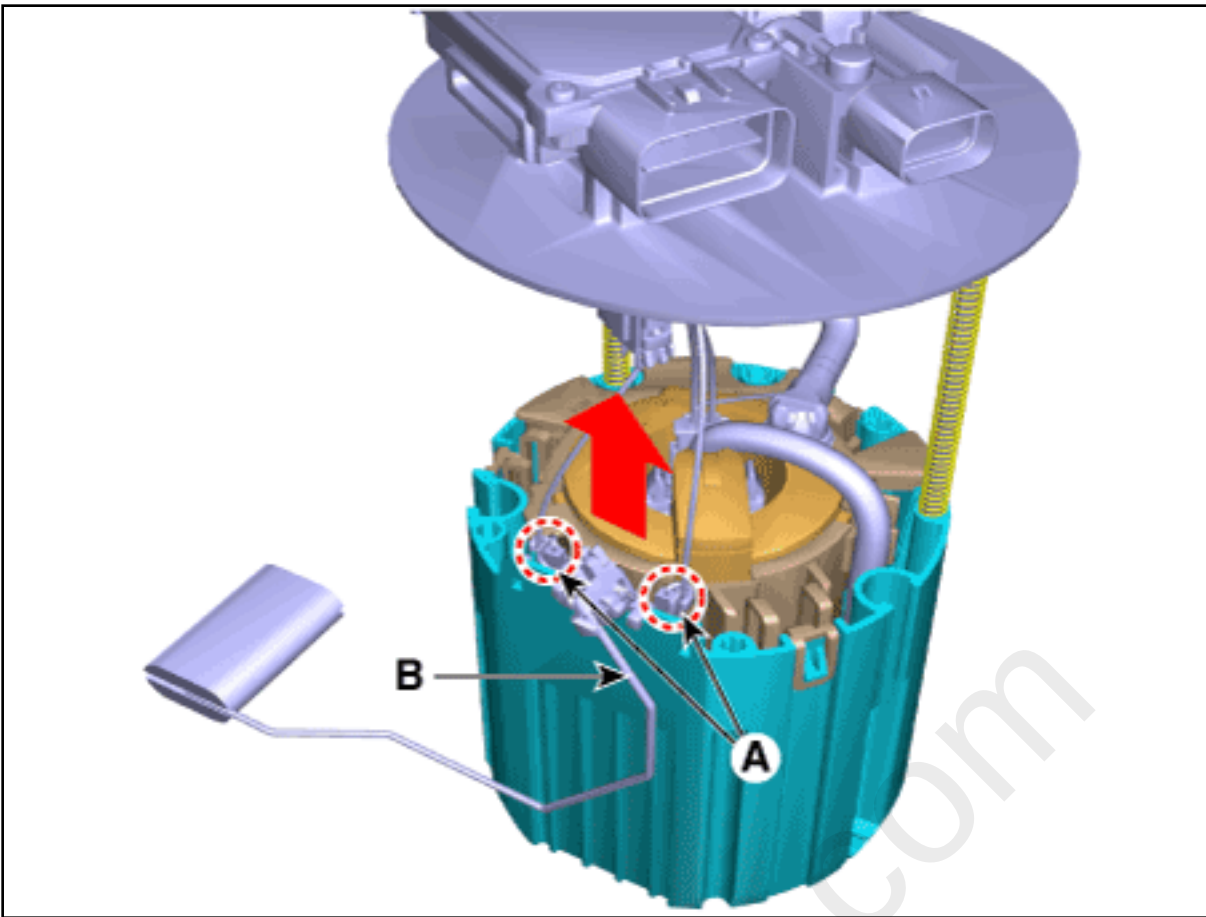
1. Install in the reverse order of removal.

Removal

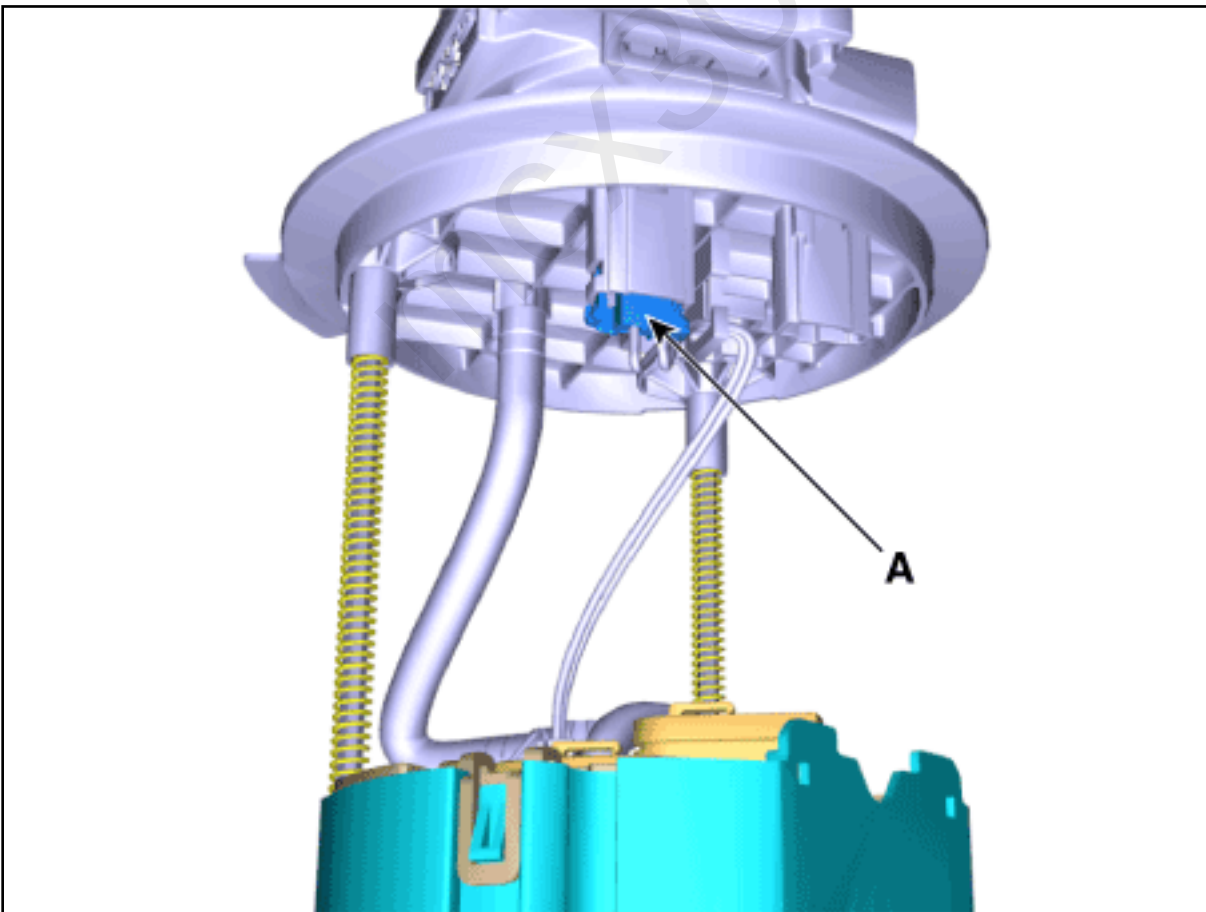
1. Remove the fuel pump.
(Refer to Fuel Delivery System - "Fuel Pump")
2. Disconnect the fuel sender connector (A).



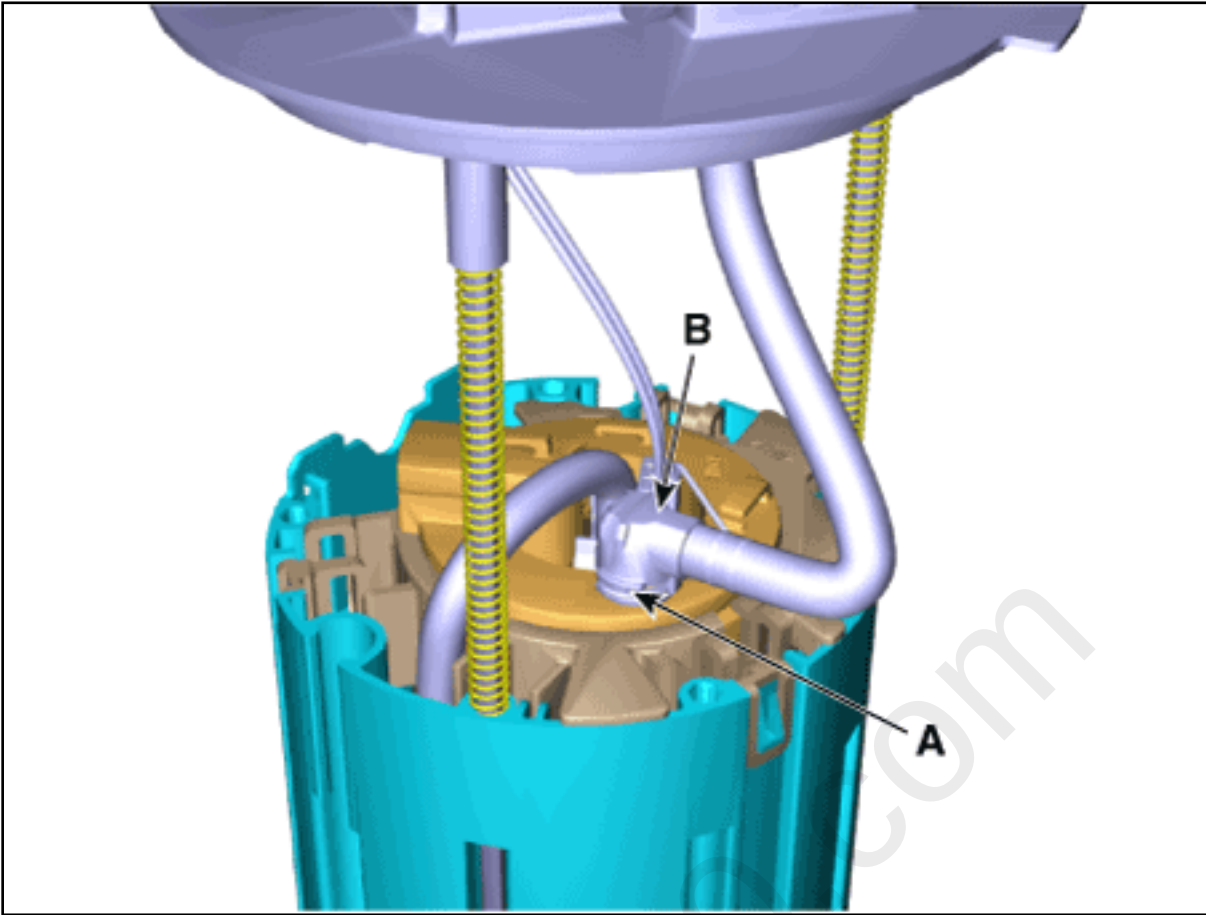
3. Release the fixing hook (A) and then remove fuel sender (B) in the arrow direction.



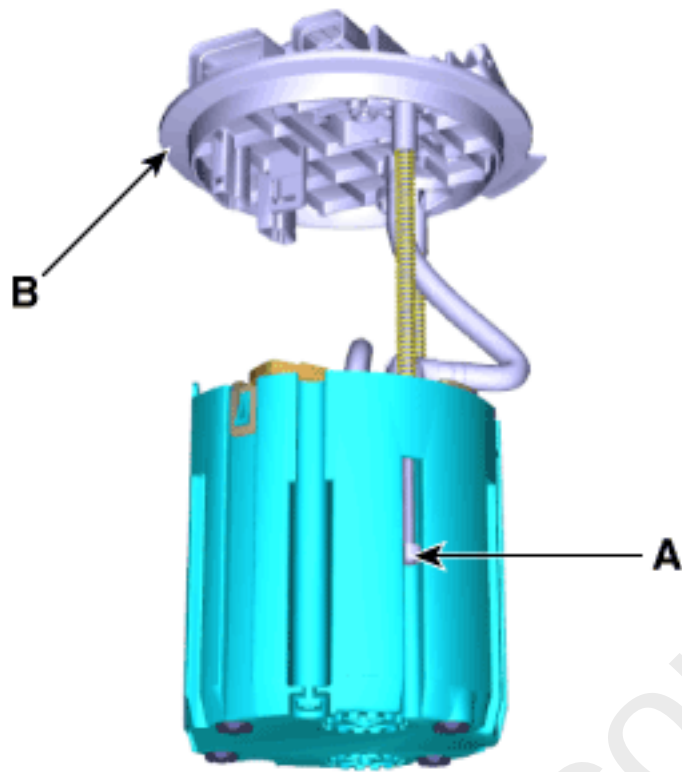
4. Disconnect the fuel pump motor connector (A).



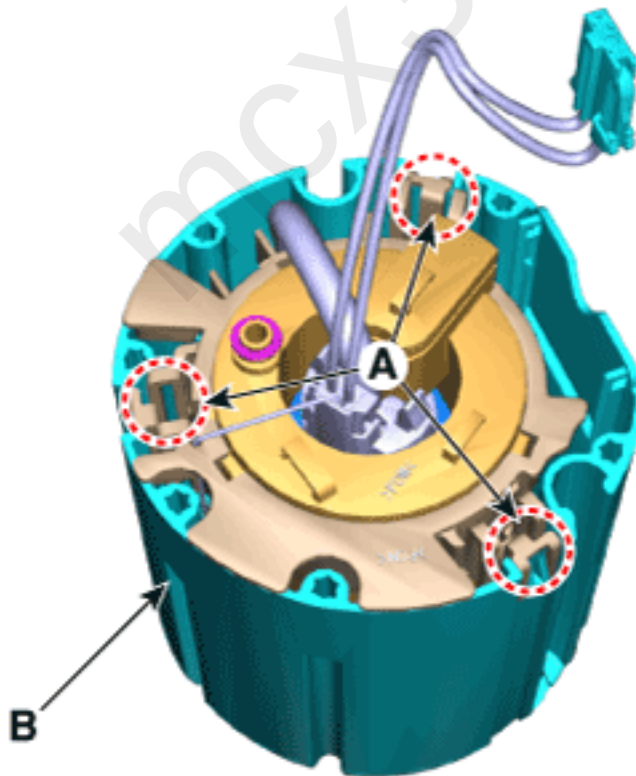
5. Remove the fixing pin (A) and then disconnect the fuel feed tube (B).



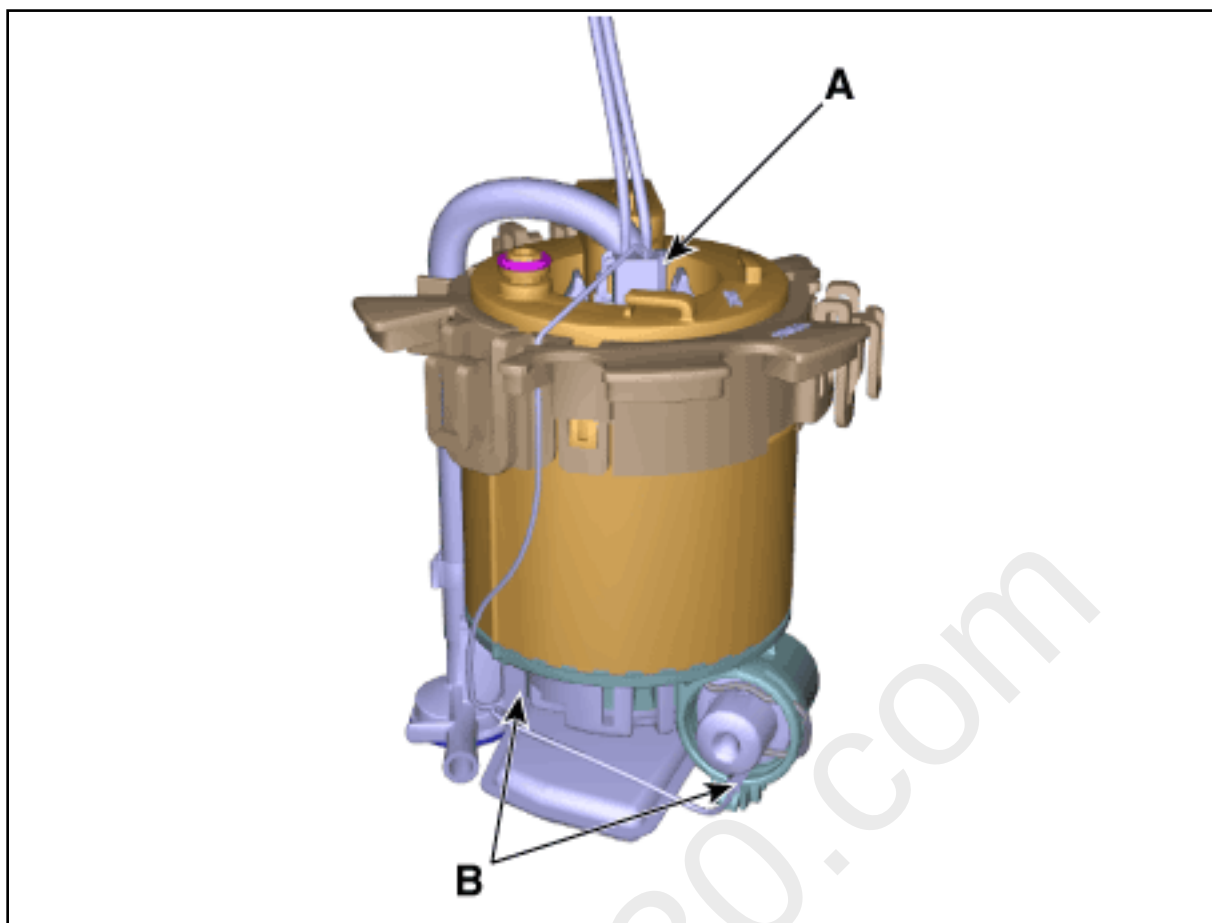
6. Release the fixing hook (A) and then remove the head assembly (B).



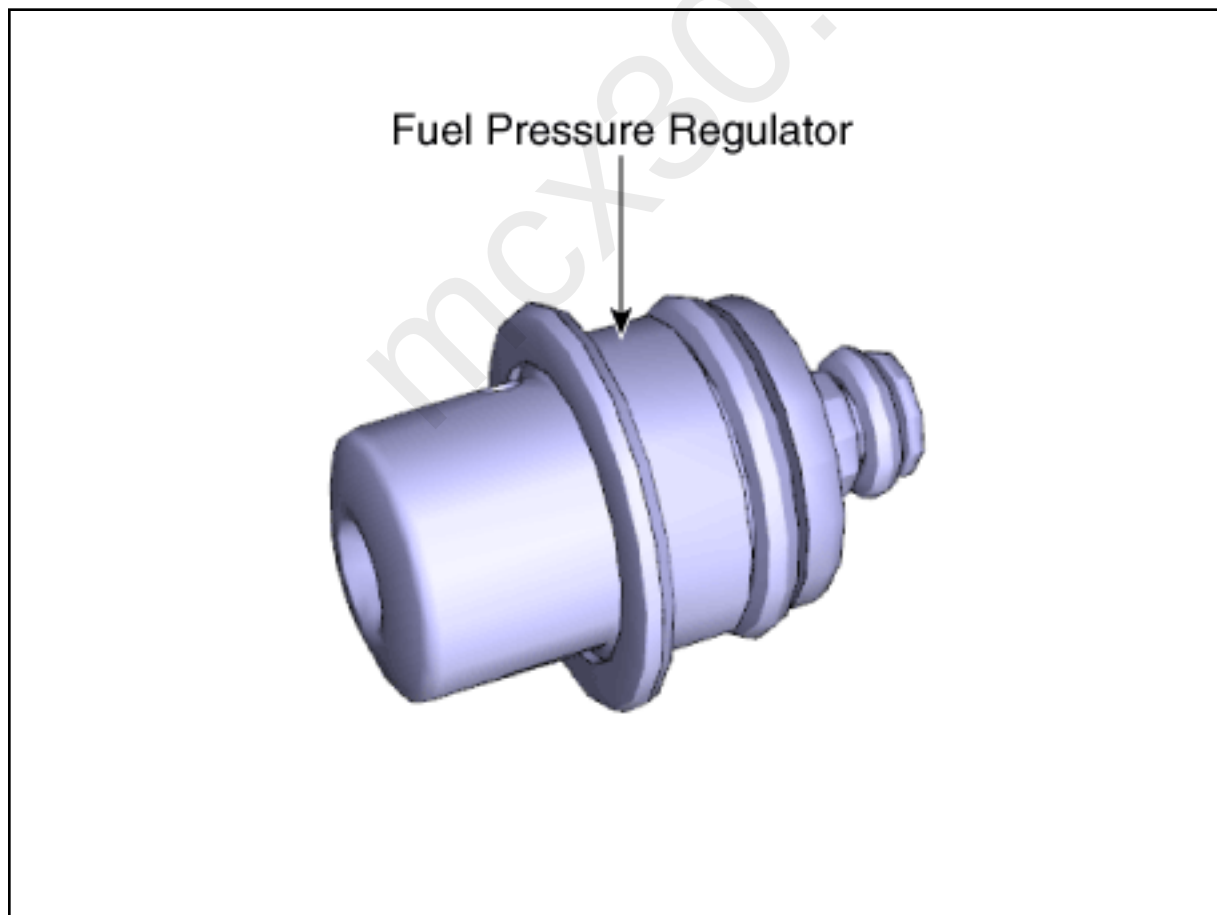
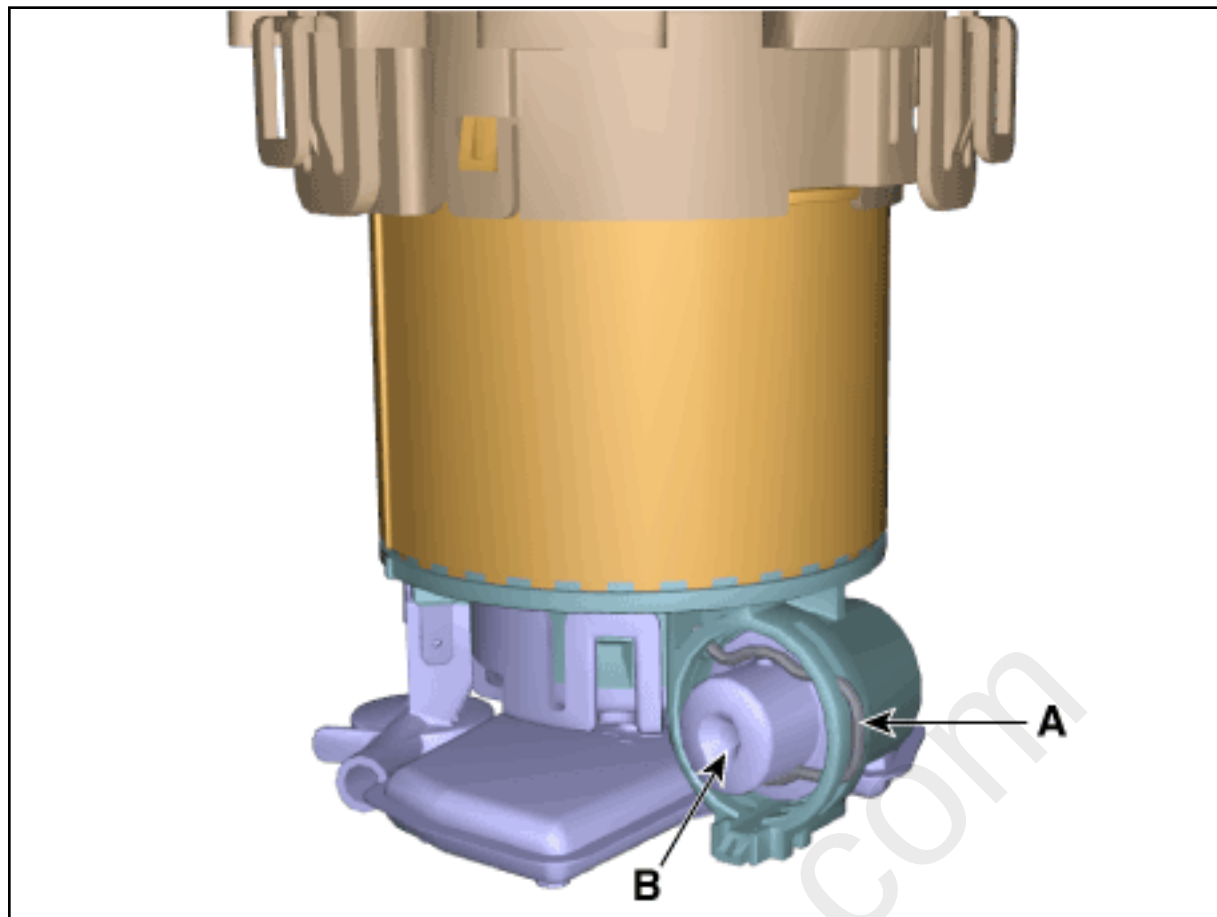
7. Release the fixing hook (A) and then remove the reservoir-cup (B).



8. Disconnect the fuel pump motor connector (A).
9. Disconnect the ground cable (B).



10. Remove the fixing pin (A) and then disconnect the fuel pressure regulator (B).



Installation

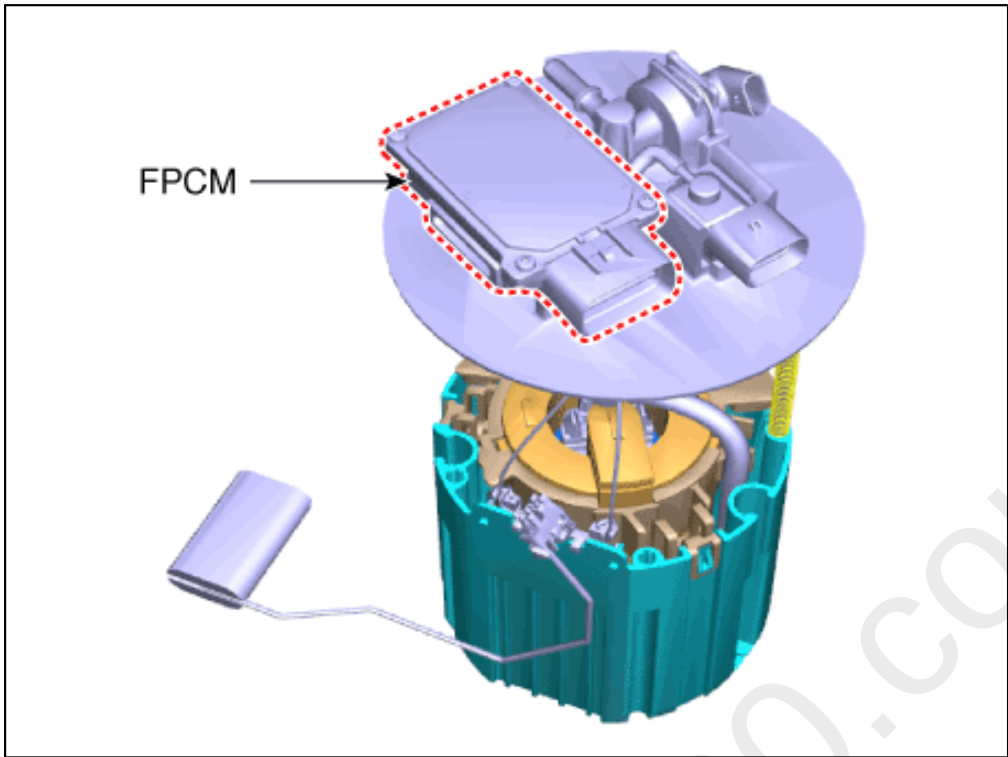
1. Install in the reverse order of removal.

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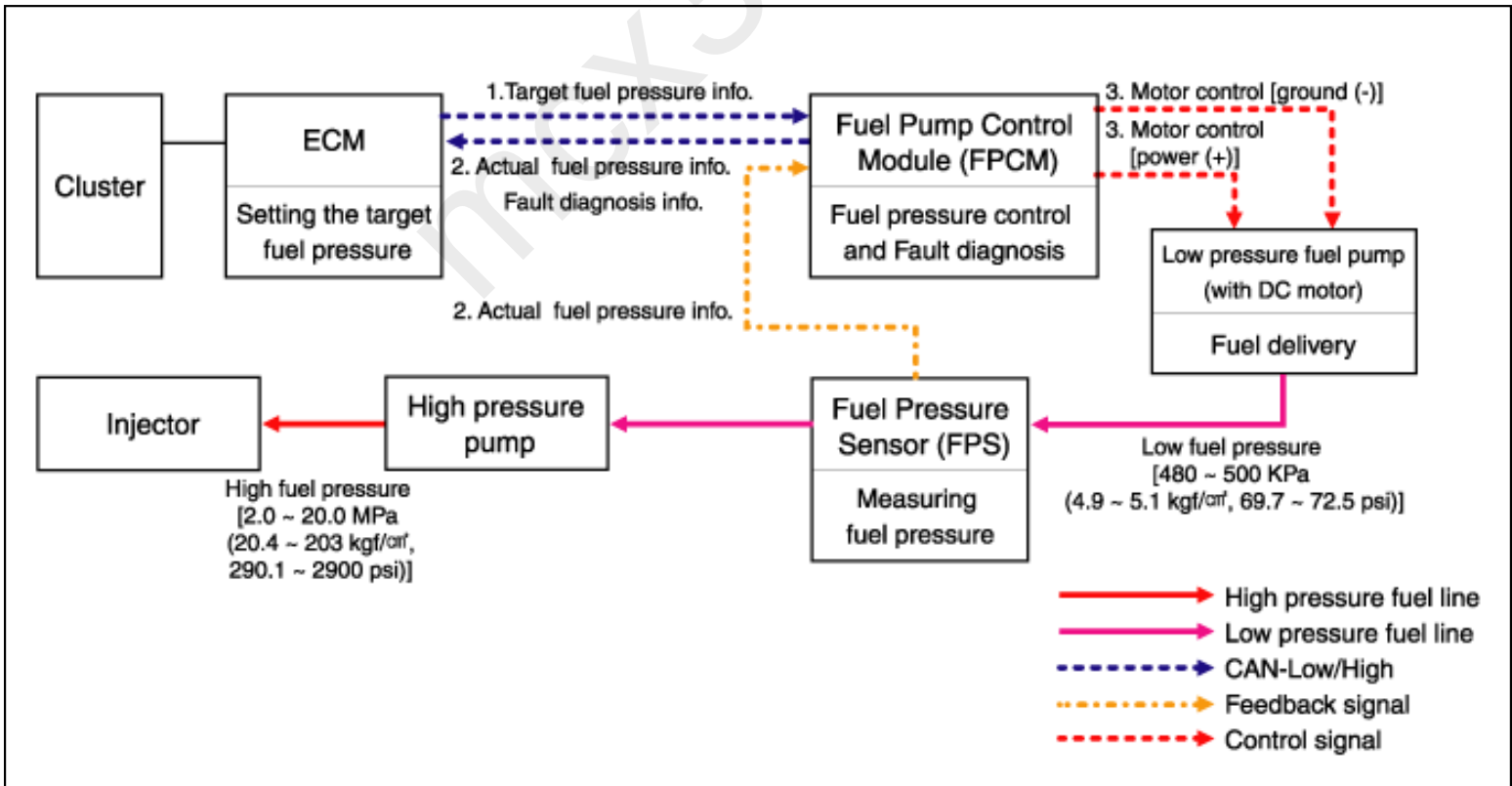
Description

The fuel pump control module (FPCM) is installed on the right side of the fuel tank and controls the DC motor mounted inside the low pressure fuel pump.

The module compares instantaneous fuel pressure information measured by the fuel pressure sensor (FPS) with target fuel pressure information provided by the ECM and generates the desired target fuel pressure by controlling the fuel pump motor and regulating fuel flow rate in the low pressure fuel line between the low and high pressure fuel pumps.



Operation

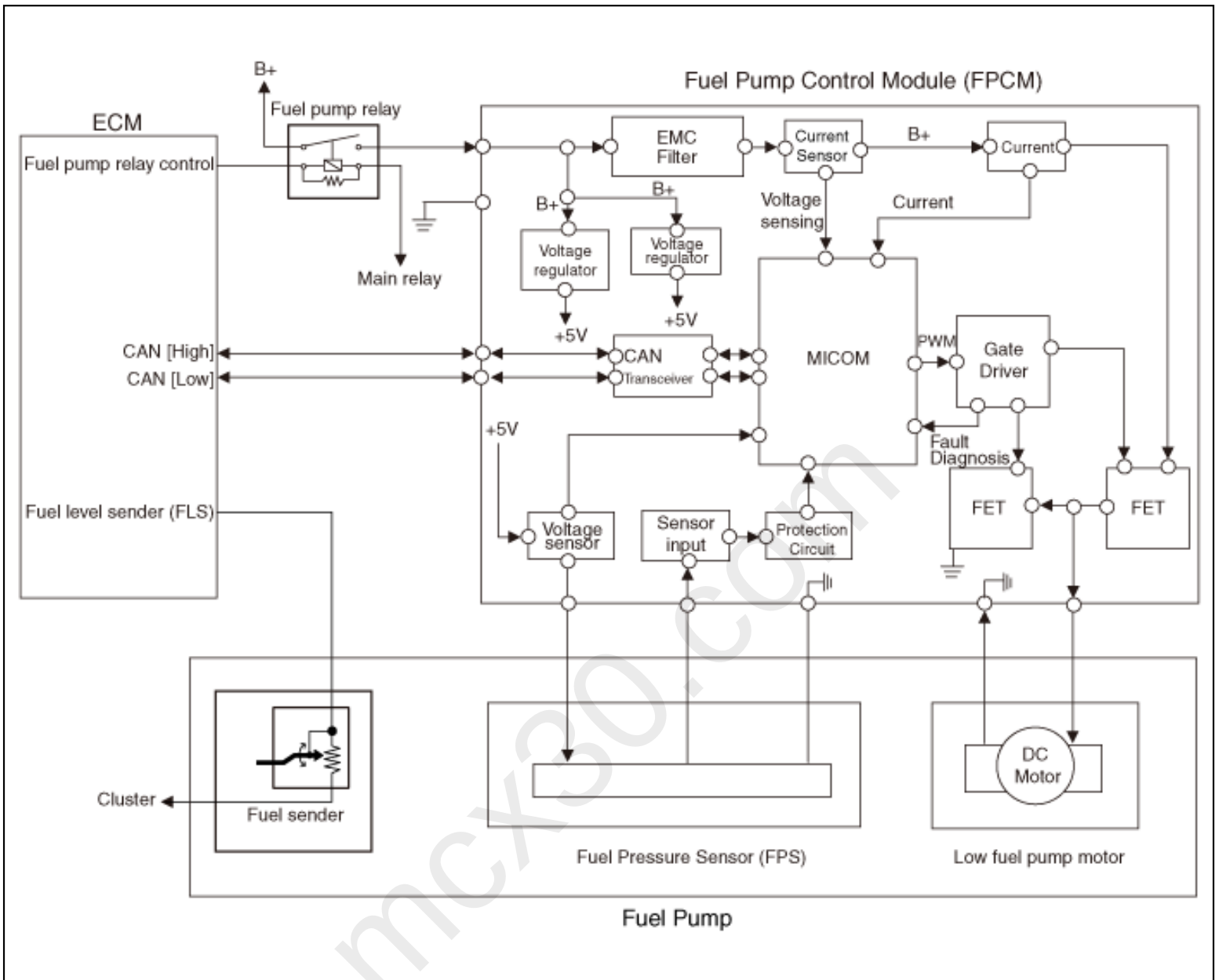


1. The ECM provides target fuel pressure information to the FPCM via CAN network.

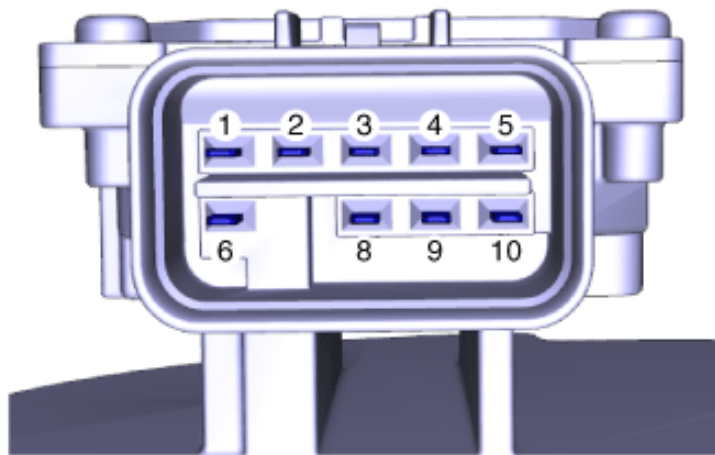
2. The FPS provides the FPCM with actual pressure information of the low pressure fuel line between the low and high pressure fuel pumps, and the FPCM forwards the information to the ECM. Also, the FPCM diagnoses faults in the FPCM, fuel pump motor and FPS and then provides the diagnosis information to the ECM.
3. The FPCM compares the actual fuel pressure information measured by the FPS with the target fuel pressure information provided by the ECM and controls the voltage that is provided to the low pressure fuel pump motor. The FPCM keeps regulating fuel flow rate by controlling the low pressure fuel pump, depending on engine speed (rpm) and vehicle loads.

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Circuit Diagram



Fuel Pressure Control Module (FPCM) Terminal And Input/Output signal

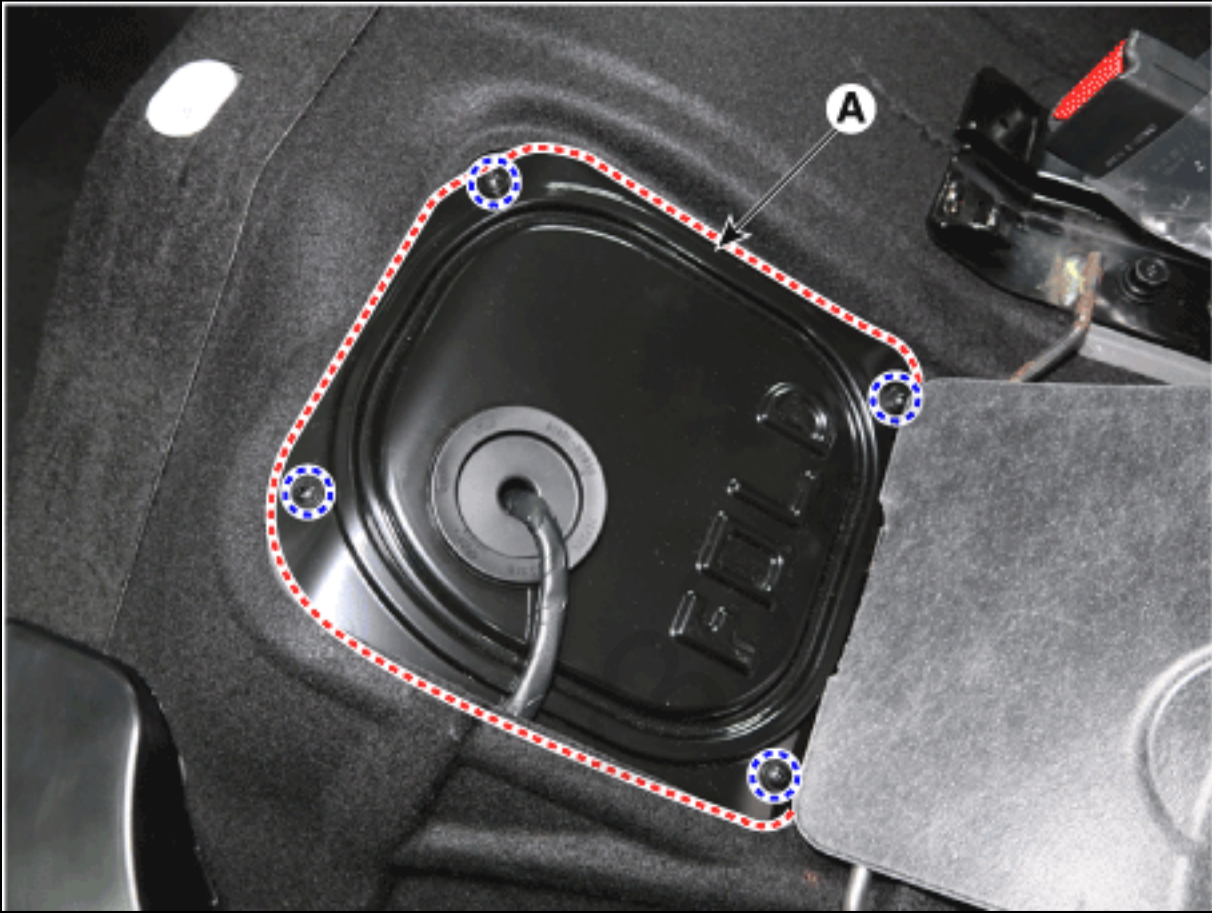


FPCM Terminal Function

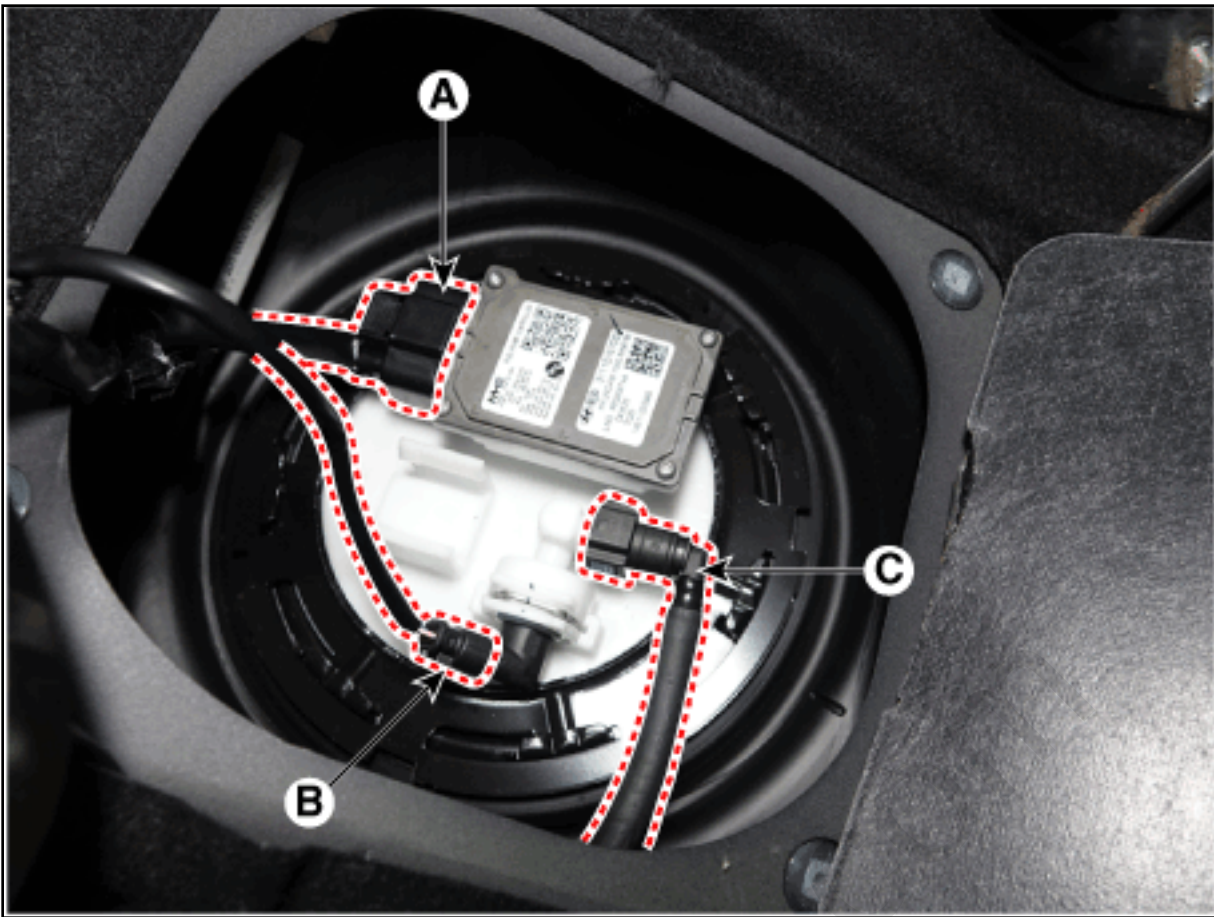
Pin No	Discription	Connected to
1	Fuel sender (-)	Fuel pump
2	Fuel pressure sensor (FPS) signal input	Fuel pressure sensor (FPS)
3	Fuel pressure sensor (FPS) ground	Fuel pressure sensor (FPS)
4	Ground	Chassis ground
5	CAN [Low]	ECM
6	Fuel sender (+)	Fuel pump
7	-	-
8	Fuel pressure sensor (FPS) power [+5V]	Fuel pressure sensor (FPS)
9	CAN [High]	ECM
10	Battery power (B+)	Fuel pump relay

Removal

1. Release the residual pressure in fuel line.
(Refer to Fuel Delivery System - "Release Residual Pressure in Fuel Line")
2. Turn the ignition switch OFF and disconnect the battery (-) terminal.
3. Remove the rear seat cushion.
(Refer to Body - "Rear Seat Assembly")
4. Remove the fuel pump service cover (A) after loosening the screw.



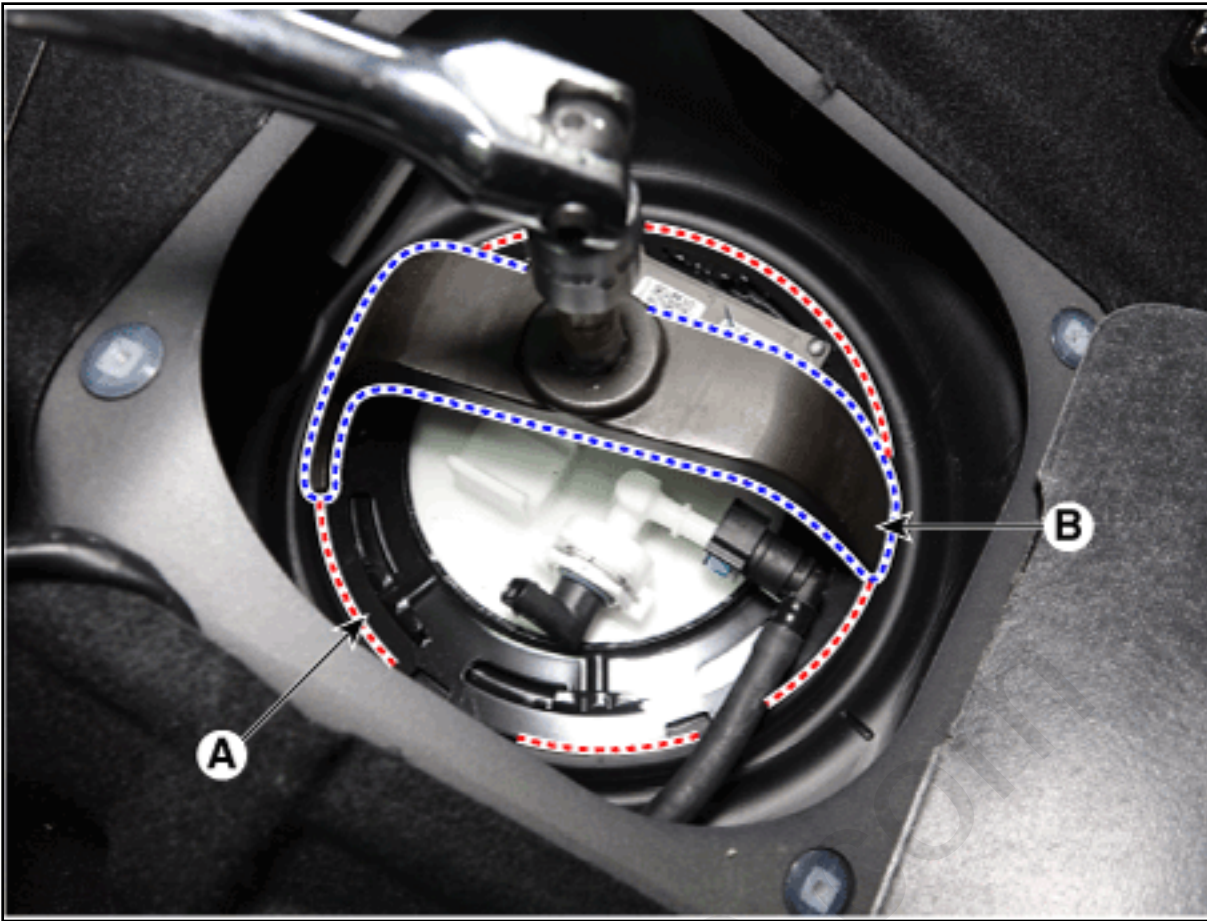
5. Disconnect the Fuel Pump Control Module (FPCM) connector (A).
6. Disconnect the Fuel Pressure Sensor (FPS) connector (B).
7. Disconnect the fuel feed tube quick-connector (C).



8. Remove the locking ring (A) by using the special service tool (B) [No.: 09310-B8100].



- When removing the plate cover, be careful not to damage the fuel tank and fuel pump.
- When removing the plate cover, press the upper area with hand and rotate the wrench counter clockwise.

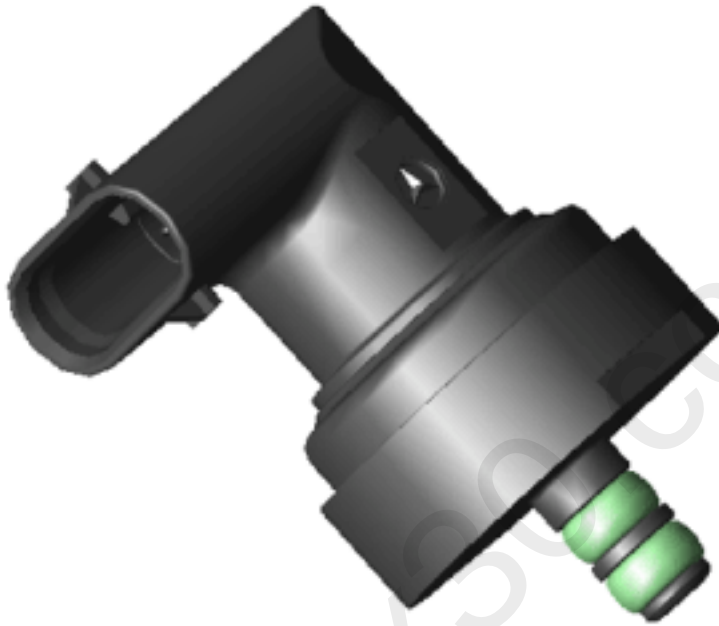


Installation

1. Install in the reverse order of removal.

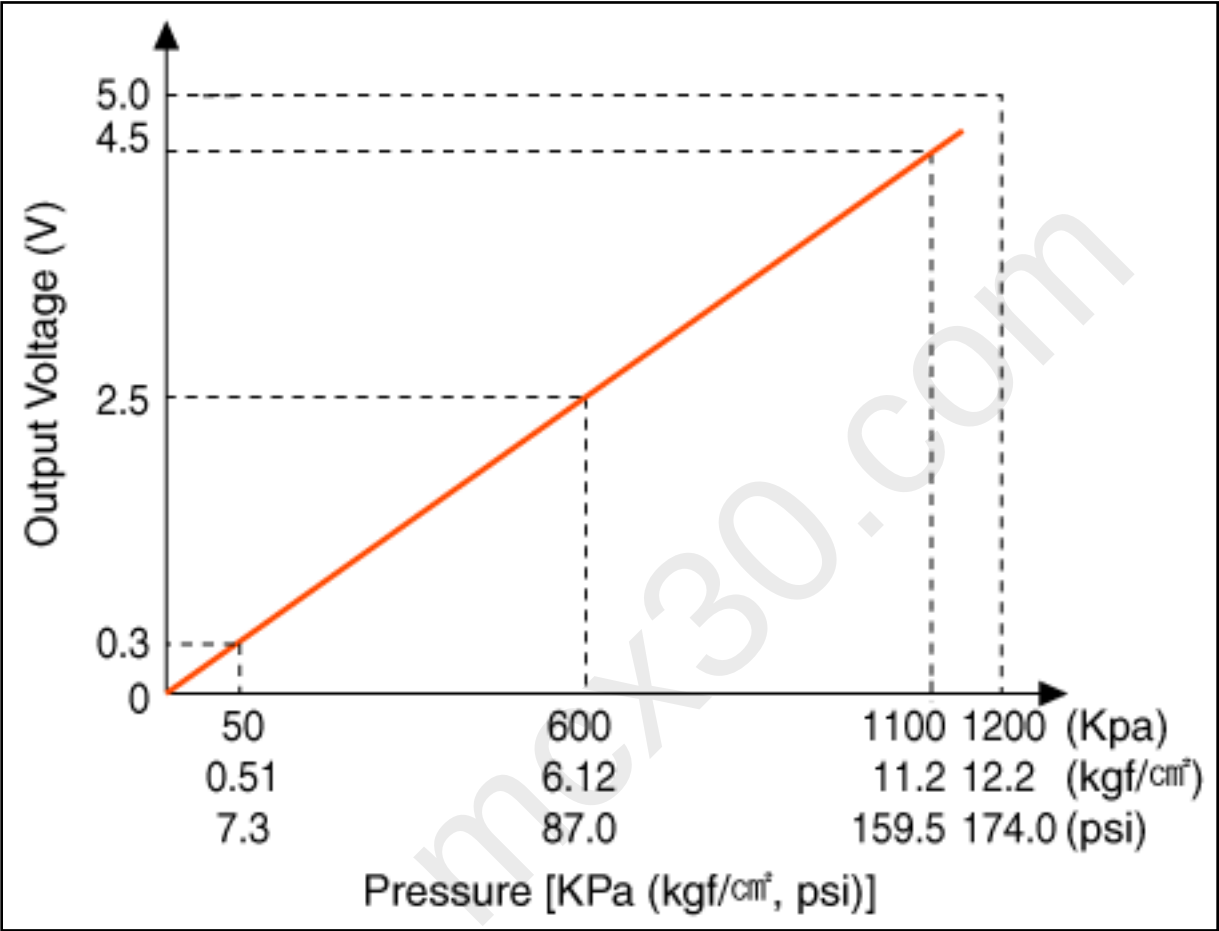
Description

The fuel pressure sensor (FPS) is installed on the top of the low pressure fuel pump and measures the pressure in the low pressure fuel line. Based on the fuel pressure measured by the FPS and the amount of fuel consumed, the fuel pump control module (FPCM) determines whether to activate the low pressure fuel pump. After activating the low pressure fuel pump, the FPS continues to provide the fuel pressure information to the FPCM and the FPCM keeps controlling the fuel flow rate using the feedback information from the FPS.

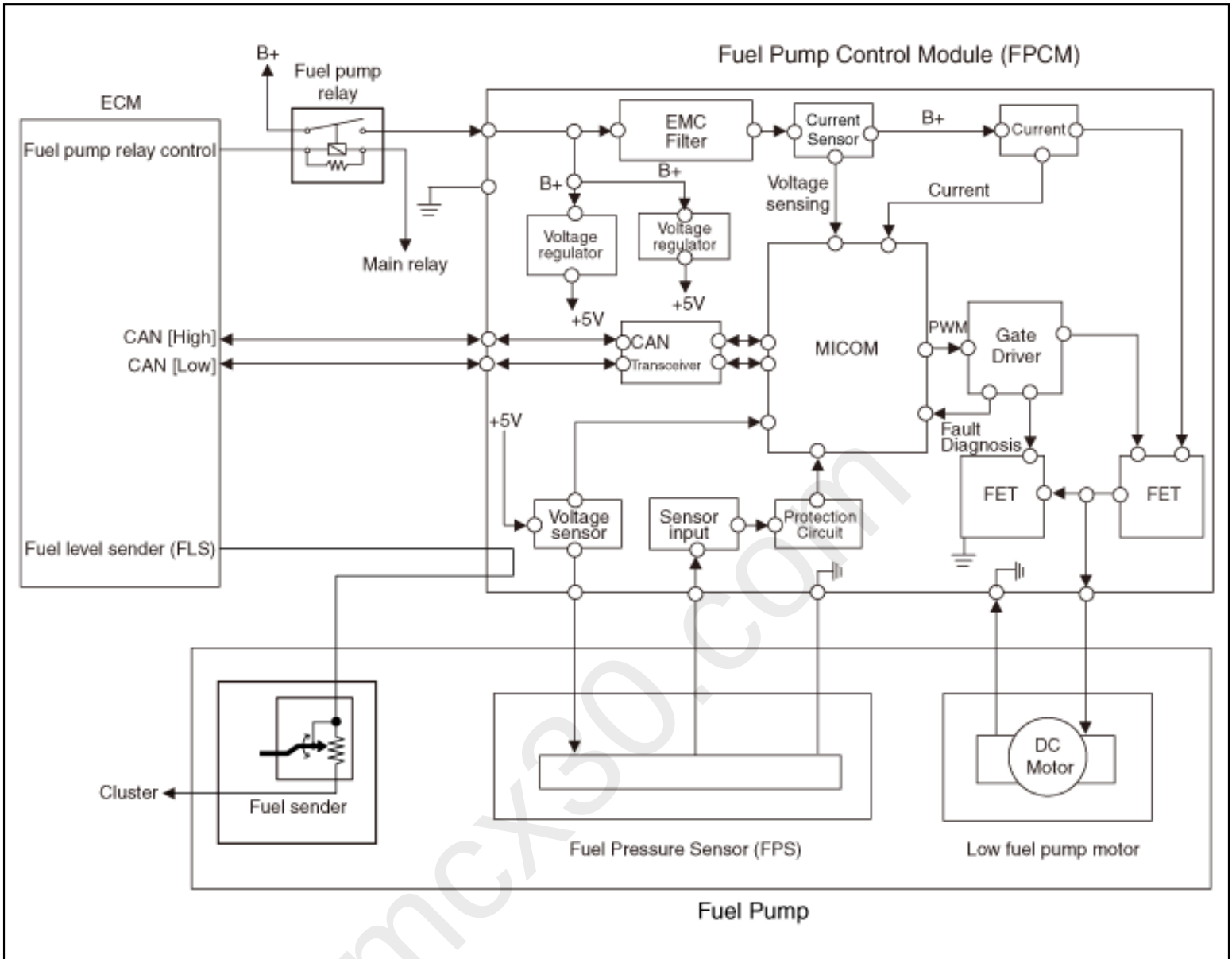


Specification

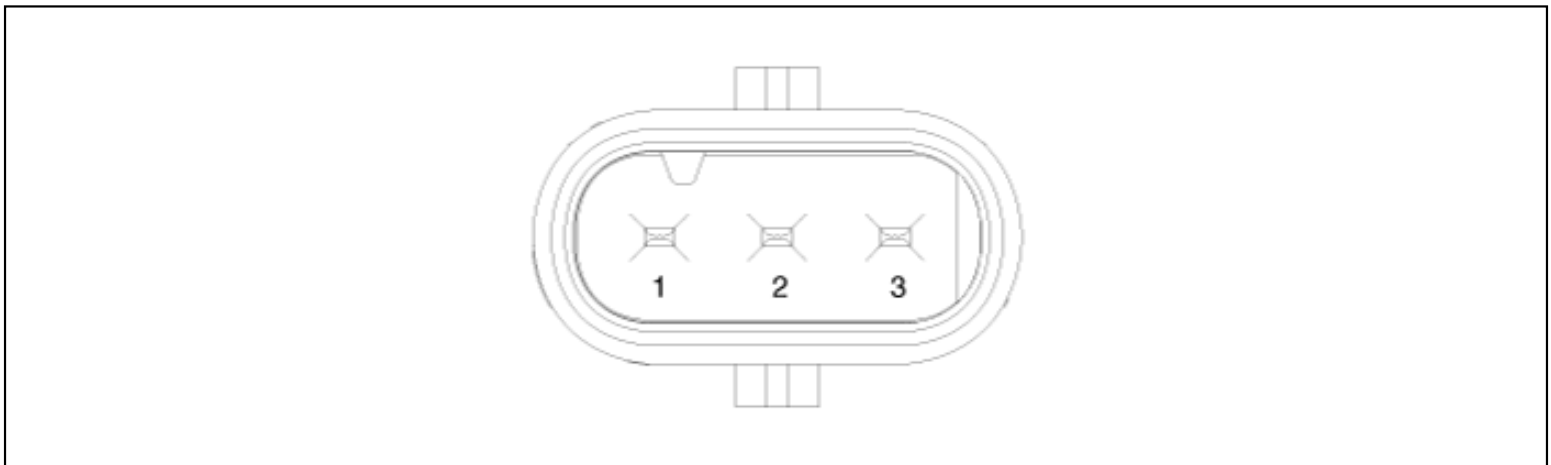
Pressure [kPa (kgf/cm ² , psi)]	Output Voltage (V)
50 (0.51, 7.3)	0.3
600 (6.12, 87.0)	2.5
1100 (11.2, 159.5)	4.5



Circuit
Diagram



Terminal
Illustration



Terminal Function

No	Function	Connected to
1	Fuel pressure sensor (FPS) Power supply (+5V)	Fuel Pump Control Module (FPCM)
2	Fuel pressure sensor (FPS) signal input	Fuel Pump Control Module (FPCM)
3	Fuel pressure sensor (FPS) ground (-)	Fuel Pump Control Module (FPCM)

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Inspection

- 1. Connect the diagnostic tool on the Data Link Connector (DLC).
- 2. Check the output voltage of fuel pressure sensor (FPS).

Specification : Refer to "Specification"

Fail Safe Mode

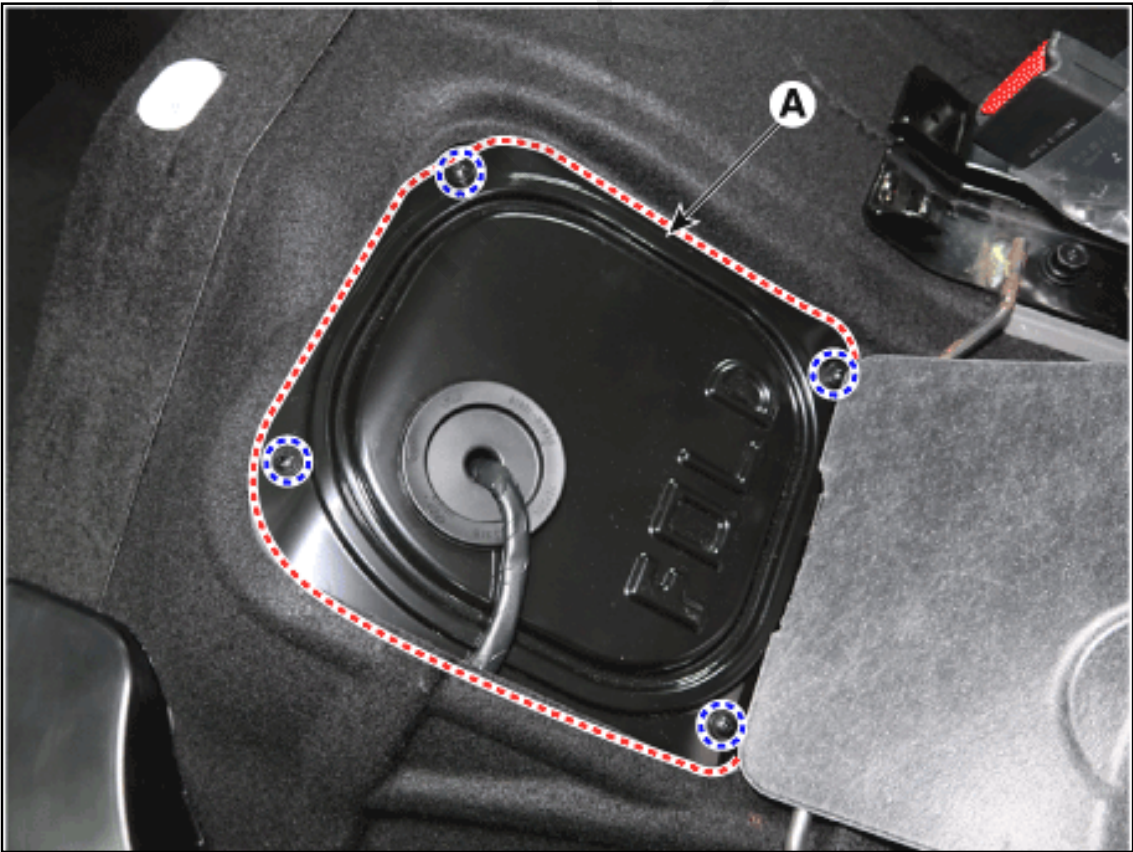
Item	Fail Safe
Output Voltage (V)	12

•If the fuel pressure sensor get defective, it enters fail safe mode. As the current value increases, the fuel pressure also increases, and the low pressure fuel line pressure is maintained at the elevated fuel pressure.

The output voltage is fixed at 12V.

Removal

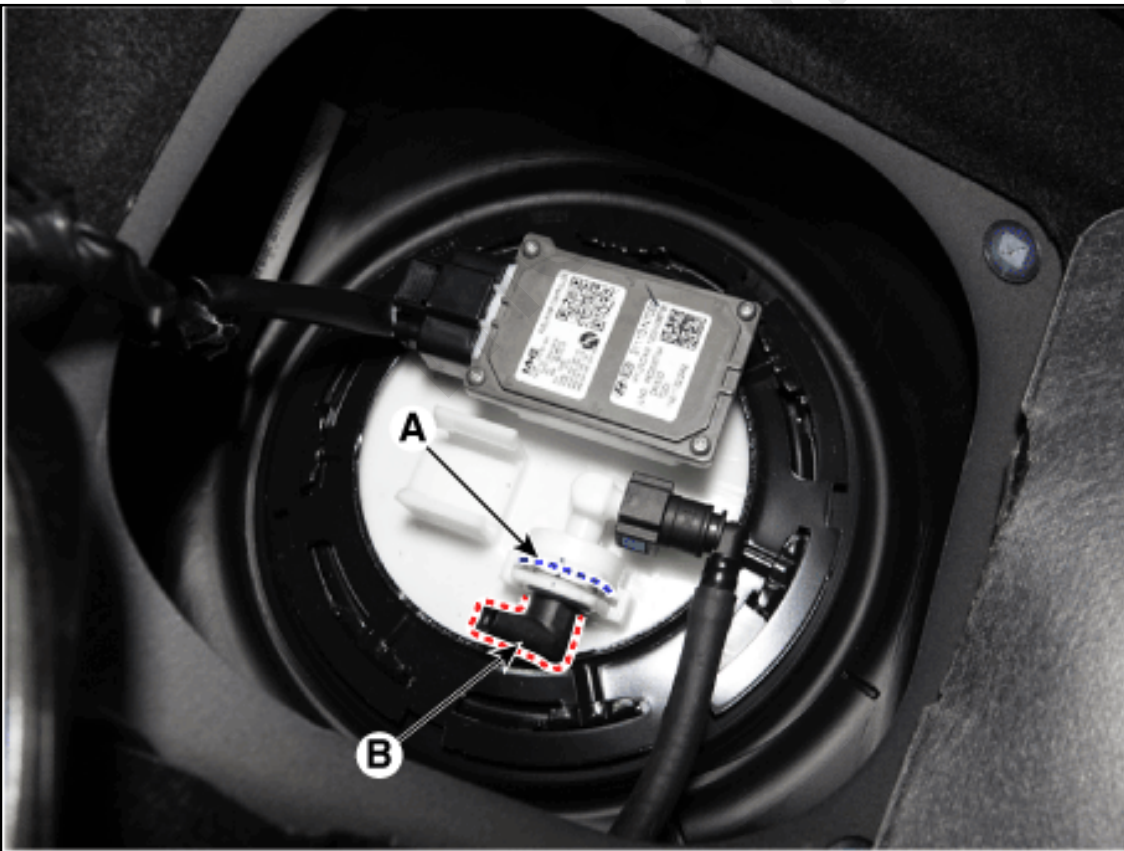
- 1. Release the residual pressure in fuel line.
(Refer to Fuel Delivery System - "Release Residual Pressure in Fuel Line")
- 2. Turn the ignition switch OFF and disconnect the battery (-) terminal.
- 3. Remove the rear seat cushion.
(Refer to Body - "Rear Seat Assembly")
- 4. Remove the fuel pump service cover (A) after loosening the screw.



5. Disconnect the Fuel Pressure Sensor (FPS) connector (A).



6. Remove the fixing pin (A) and then remove the Fuel Pressure Sensor (FPS) (B).



Installation

1. Install in the reverse order of removal.

Removal

[Low Pressure Fuel Line]



- Be careful not to damage the parts located under the vehicle (floor under cover, canister, fuel tank) when raising the vehicle using the lift.

(Refer to General Information - "Lift and Support Points")

1. Release the residual pressure in fuel line.
(Refer to Fuel Delivery System - "Release Residual Pressure in Fuel Line")
2. Turn the ignition switch OFF and disconnect the battery (-) terminal.
3. Remove the air cleaner assembly.
(Refer to Engine Mechanical System - "Air Cleaner")
4. Remove the battery and battery tray.
(Refer to Engine Electrical System - " Battery")
5. Remove the engine cover.
(Refer to Engine Mechanical System - "Engine Cover")
6. Separate the breather hose (A).



7. Remove the high pressure fuel pump foam (A).

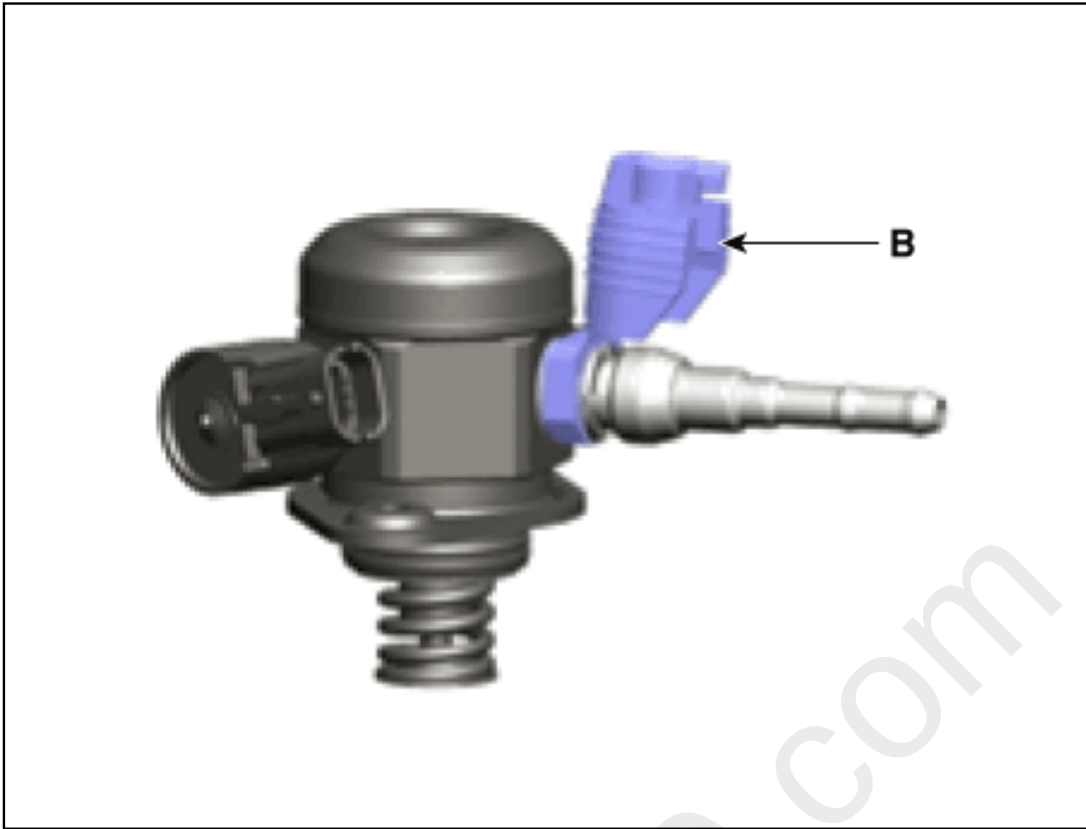


8. Disconnect the fuel feed line quick-connector (A).

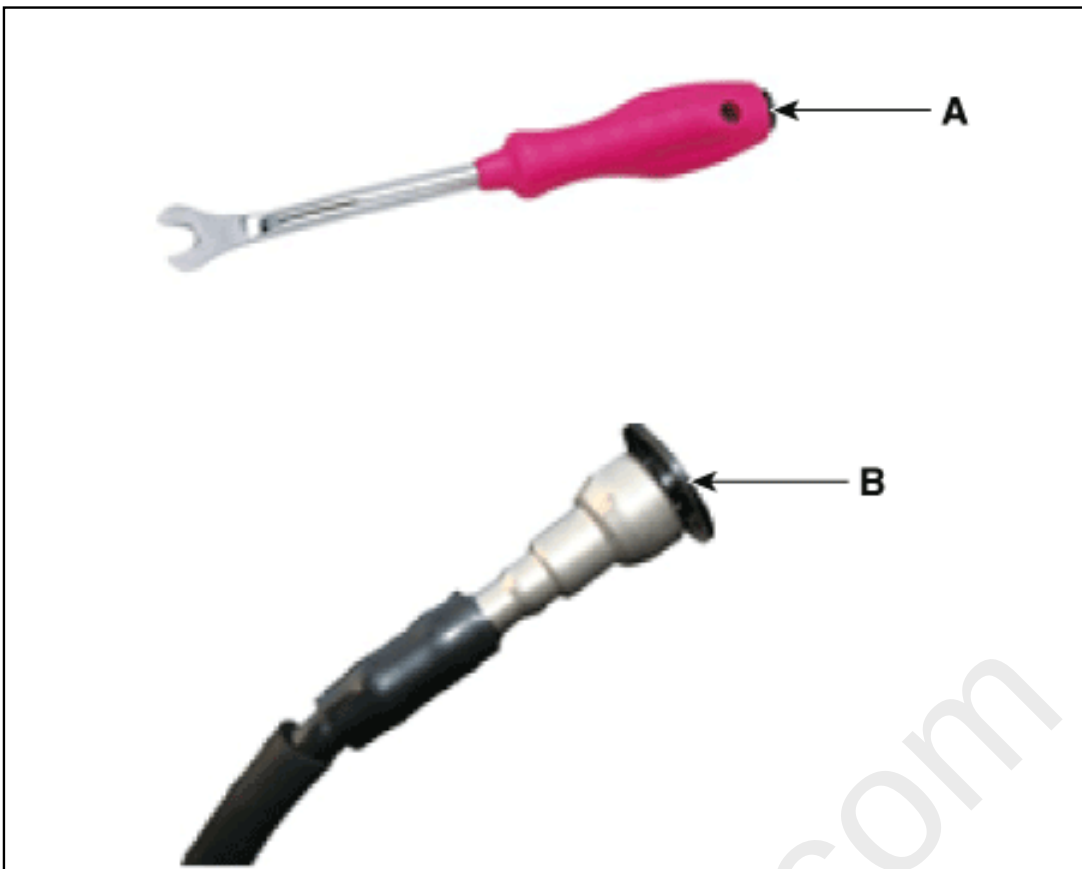




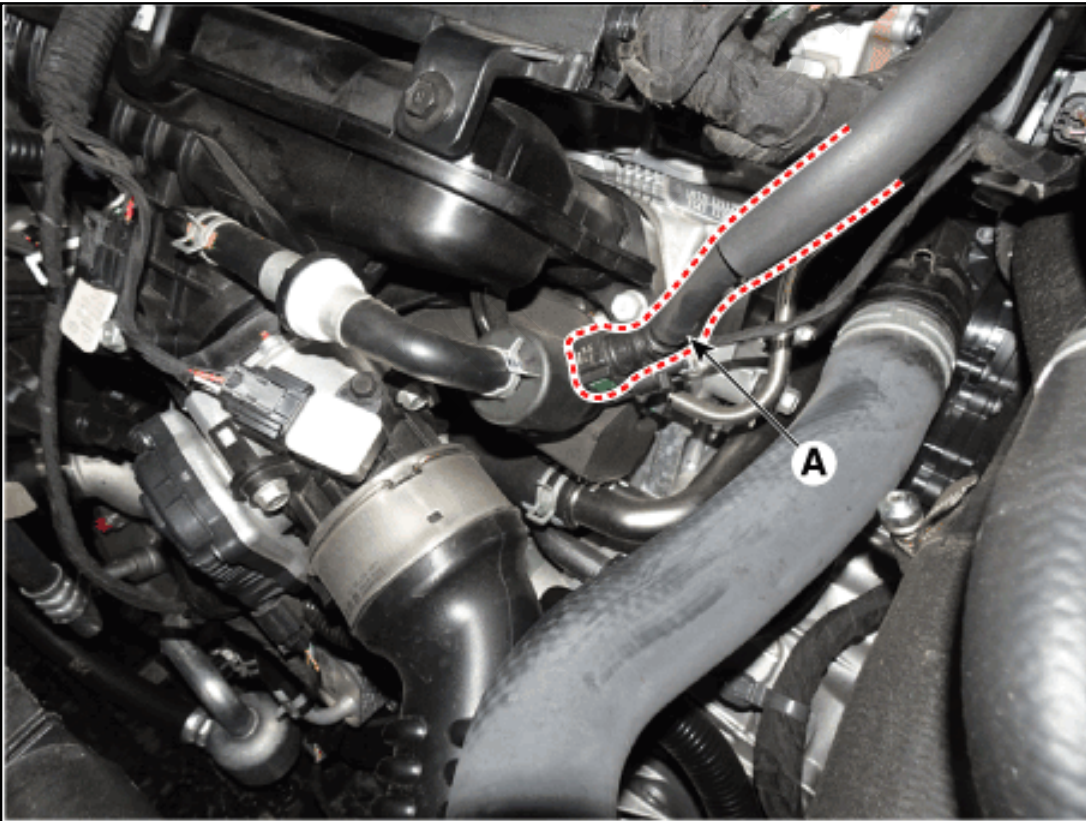
- Open the clamp cover (B) before disconnect the quick connector. (If the clip is applied)



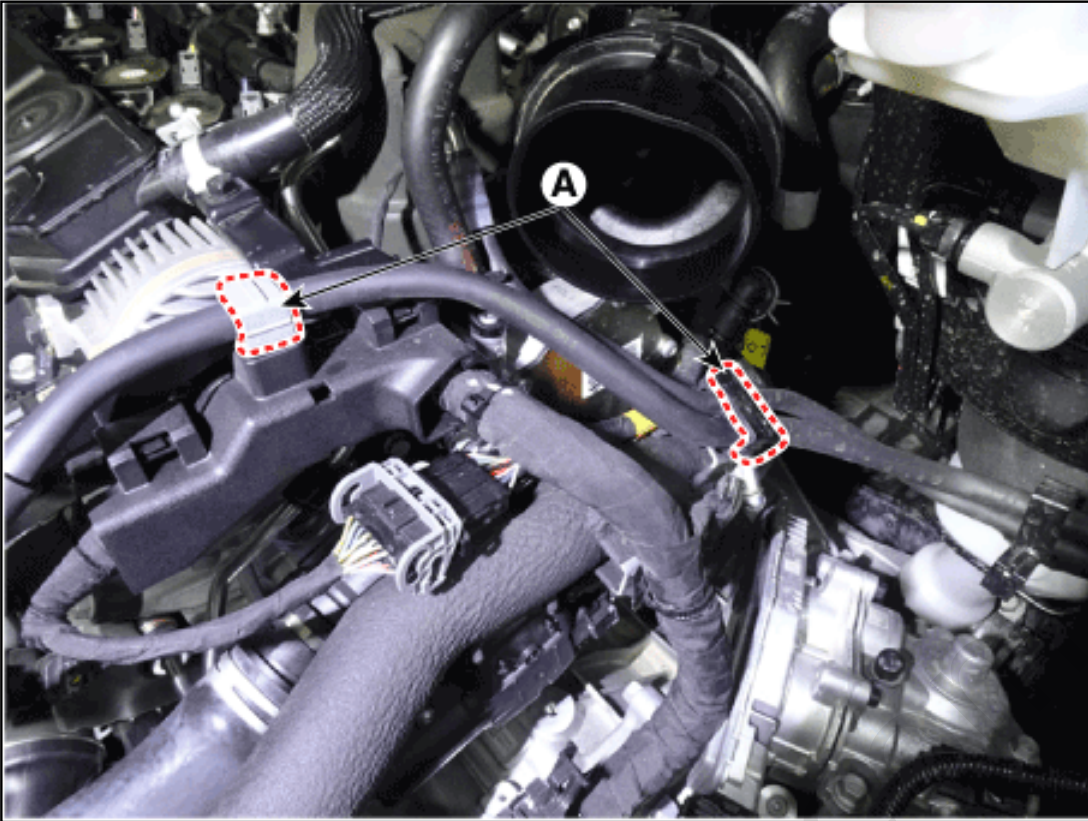
- When removing the quick-connector with the clip removing tool (A), be careful not to damage the plastic clip (B).
- If the clip is damaged, fuel line leak can be occurred due to a bad connection.



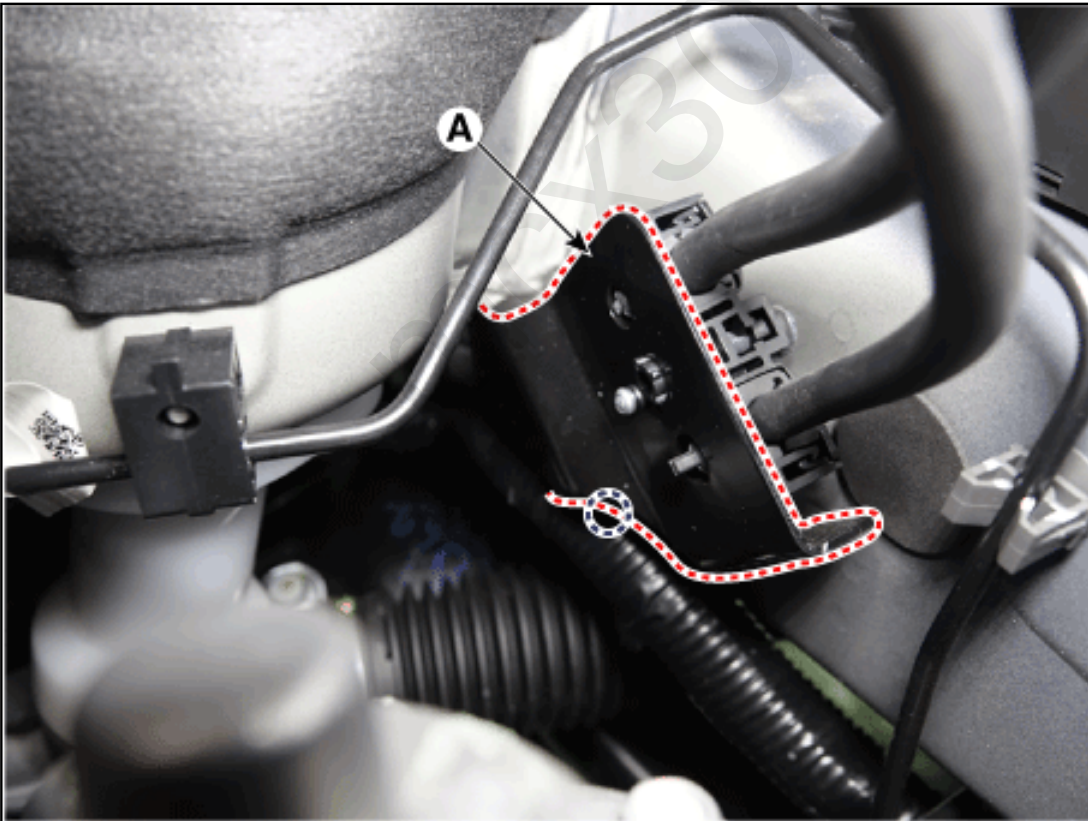
9. Disconnect the vapor hose quick-connector (A) which is connected from the purge control solenoid valve.



10. Separate the vapor tube and fuel feed tube line fixing clips (A).



11. Remove the fuel line protector (A).



12. Remove the rear seat cushion.
(Refer to Body - "Rear Seat Assembly")

13. Remove the fuel pump service cover (A) after loosening the screw.



14. Disconnect the fuel feed tube quick-connector (A).

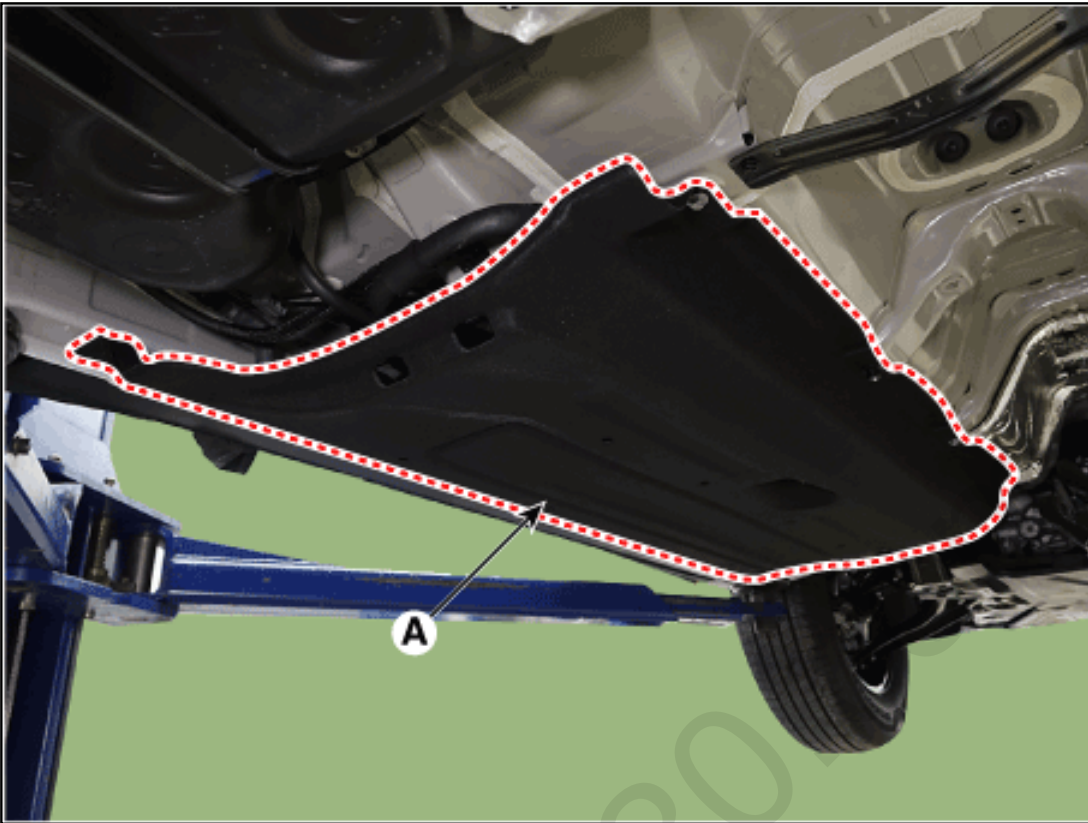


15. Lift the vehicle.

16. Remove the floor under cover (A).

Tightening Torque :

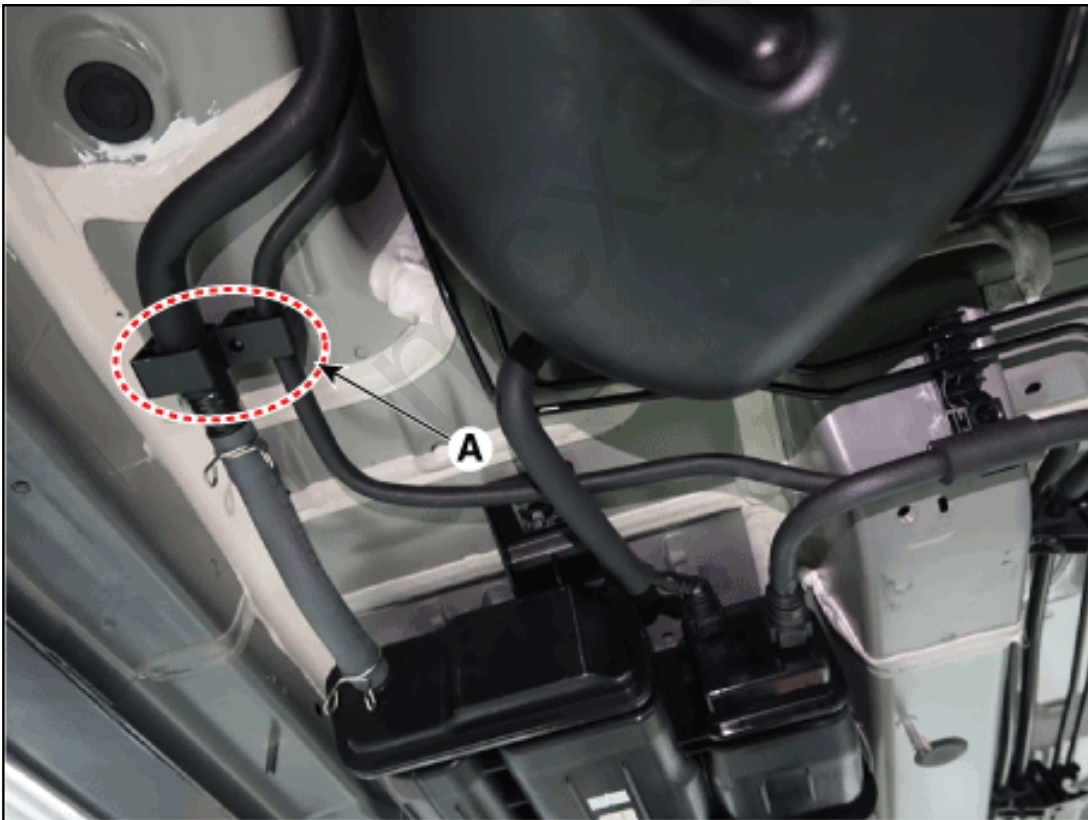
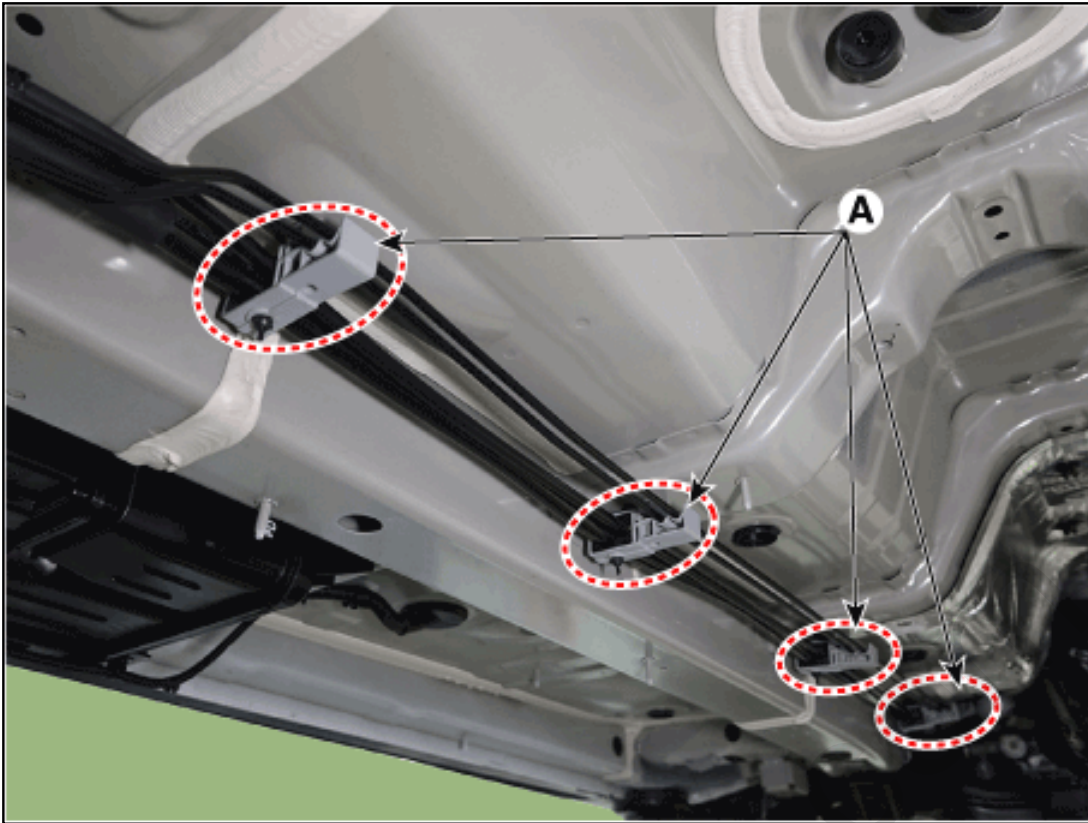
7.9 - 11.8 N·m (0.8 - 1.2 kgf·m, 5.8 - 8.7 lb·ft)

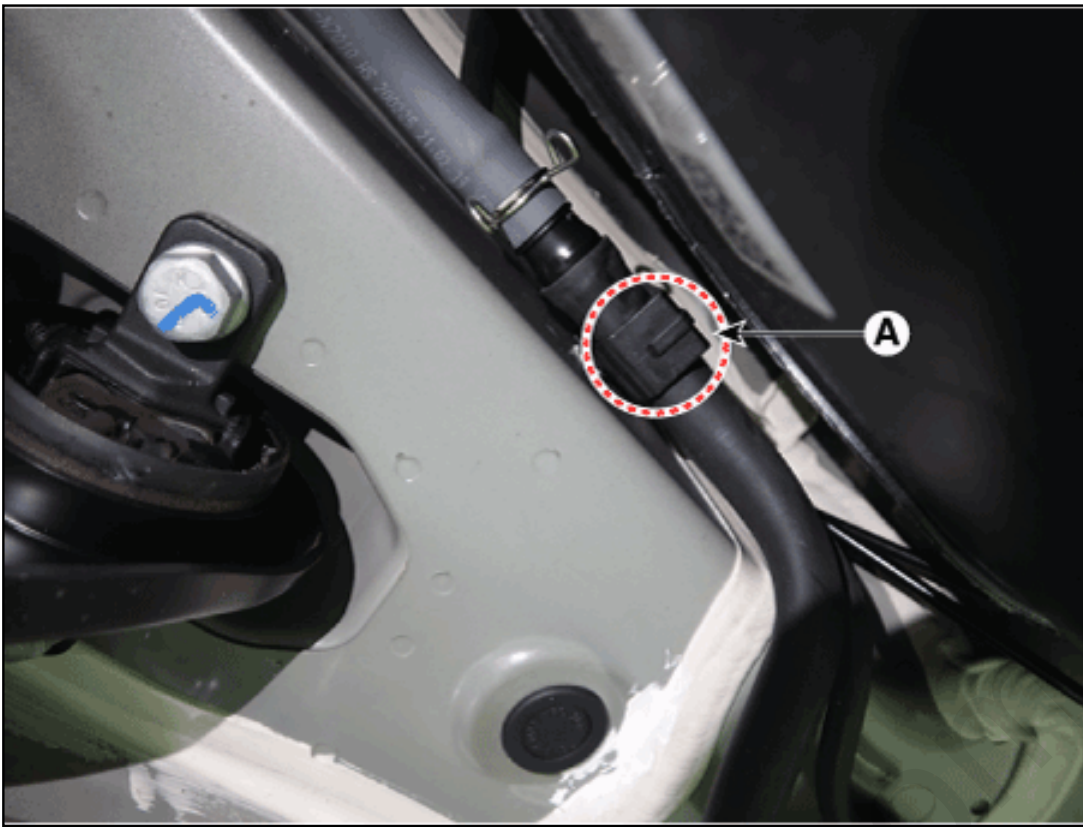


17. Disconnect the vapor hose quick-connector (A).



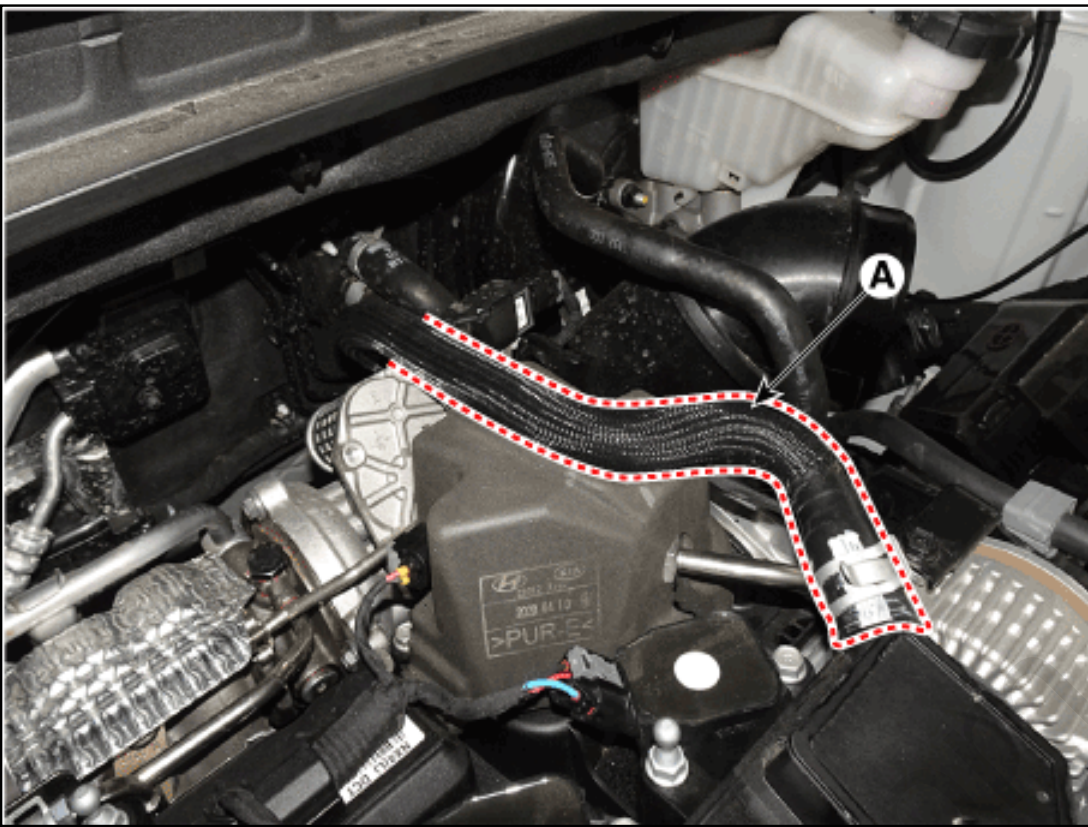
18. Release the fixing clip (A) of the vapor and fuel feed tube line using a driver.
19. Remove the fuel line from the bottom of the vehicle.





[High Pressure Fuel Line]

1. Release residual pressure in fuel line.
(Refer to Fuel Delivery System - "Release Residual Pressure in Fuel Line")
2. Turn the ignition switch OFF and disconnect the battery (-) terminal.
3. Remove the air cleaner assembly.
(Refer to Engine Mechanical System - "Air Cleaner")
4. Remove the engine cover.
(Refer to Engine Mechanical System - "Engine Cover")
5. Remove the Purge Control Solenoid Valve (PCSV).
(Refer to Engine Control System - "Purge Control Solenoid Valve (PCSV)")
6. Separate the breather hose (A).



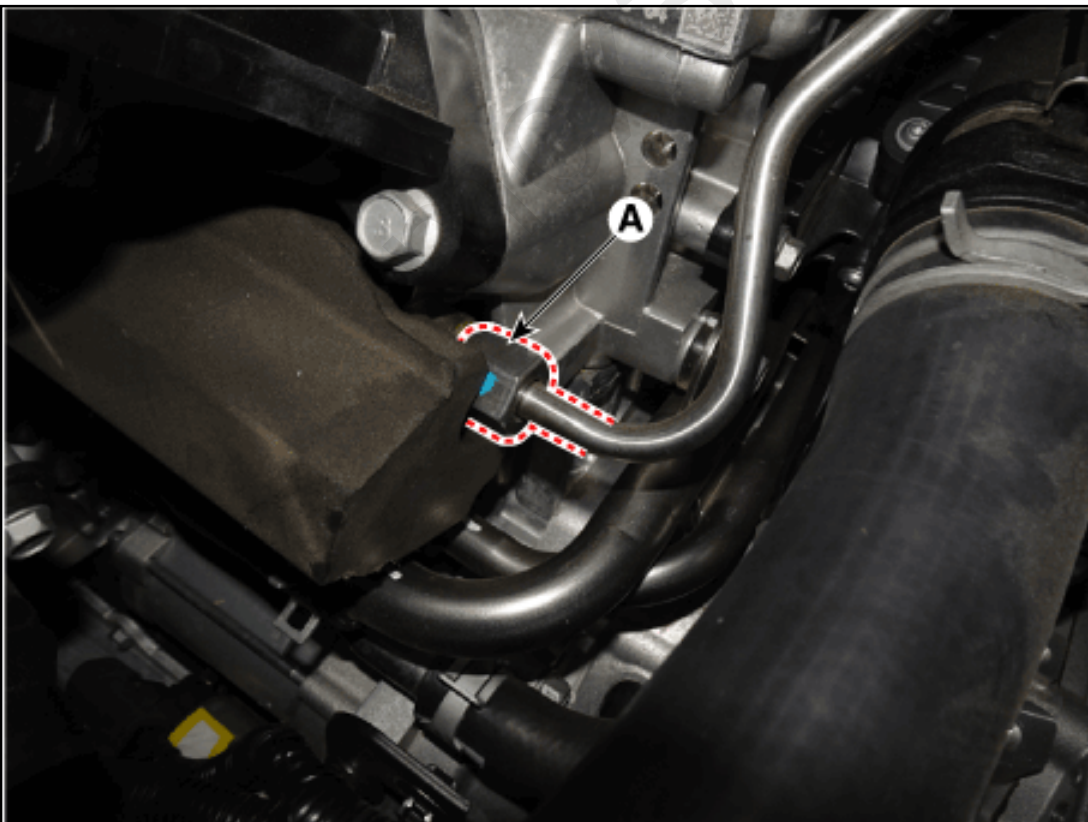
7. Remove the high pressure fuel pump foam (A).



8. Loosen the high pressure fuel pipe flange nut (A).

Tightening Torque :

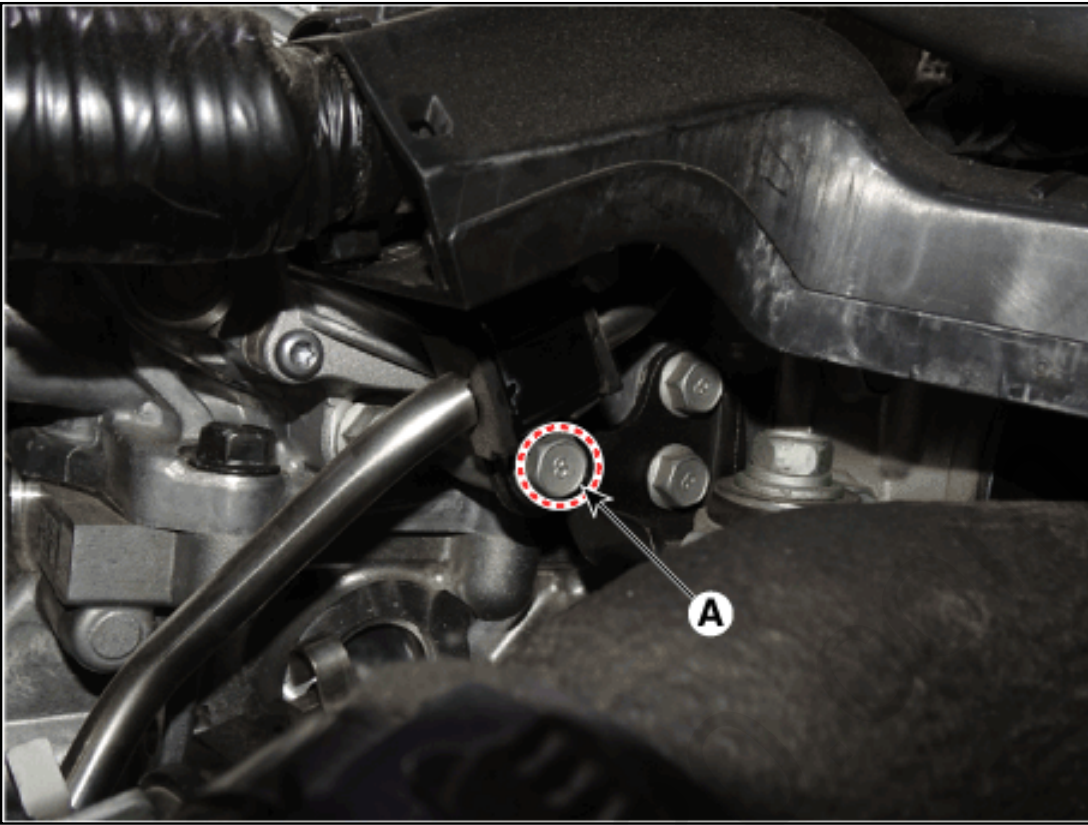
29.4 - 35.3 N.m (3.0 - 3.6 kgf.m, 21.7 - 26.0 lb-ft)



9. Loosen the function block mounting bolt (A).

Tightening Torque :

9.8 - 11.8 N.m (1.0 - 1.2 kgf.m, 7.2 - 8.7 lb.ft)



Installation

1. Install in the reverse order of removal.
2. Install the high pressure fuel pipe as follows.
 - (1) Completely pre-tighten the both side nuts (A) on high pressure tightening area of high pressure fuel pipe while keeping them vertically.
 - (2) Tighten the high pressure fuel pipe function block mounting bolt (B).

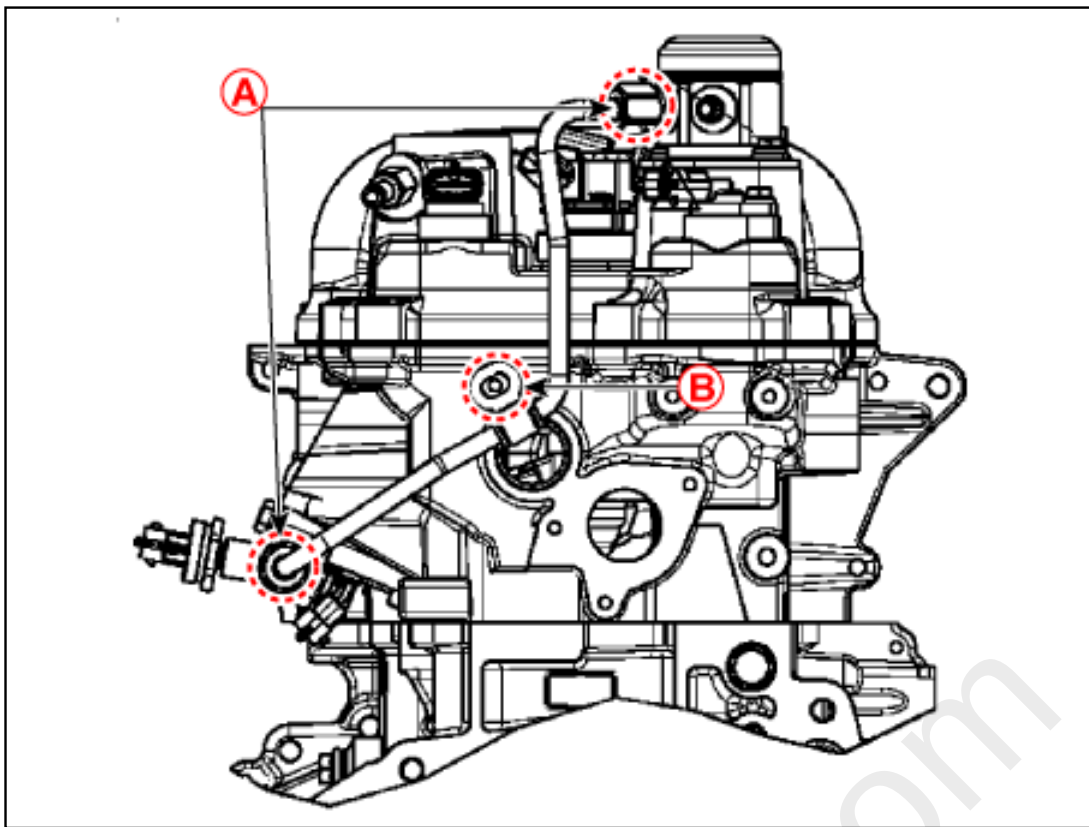
Tightening torque :

9.8 - 11.8 N.m (1.0 - 1.2 kgf.m, 7.2 - 8.7 lb.ft)

- (3) Completely tighten the both side nuts (A) on high pressure tightening area of high pressure fuel pipe.

Tightening torque :

29.4 - 35.3 N.m (3.0 - 3.6 kgf.m, 21.7 - 26.0 lb-ft)



- Do not reuse the high pressure fuel pipe.
- Be careful not to transform the shape of the high pressure fuel pipe.
- Torque wrench should not be tilt when you tighten the nut.
- Follow the order and the tightening torque when you assemble.
- Inspect fuel leakage after high pressure fuel pipe assembly.

Removal



- Be careful not to damage the parts located under the vehicle (floor under cover, canister, fuel tank) when raising the vehicle using the lift.

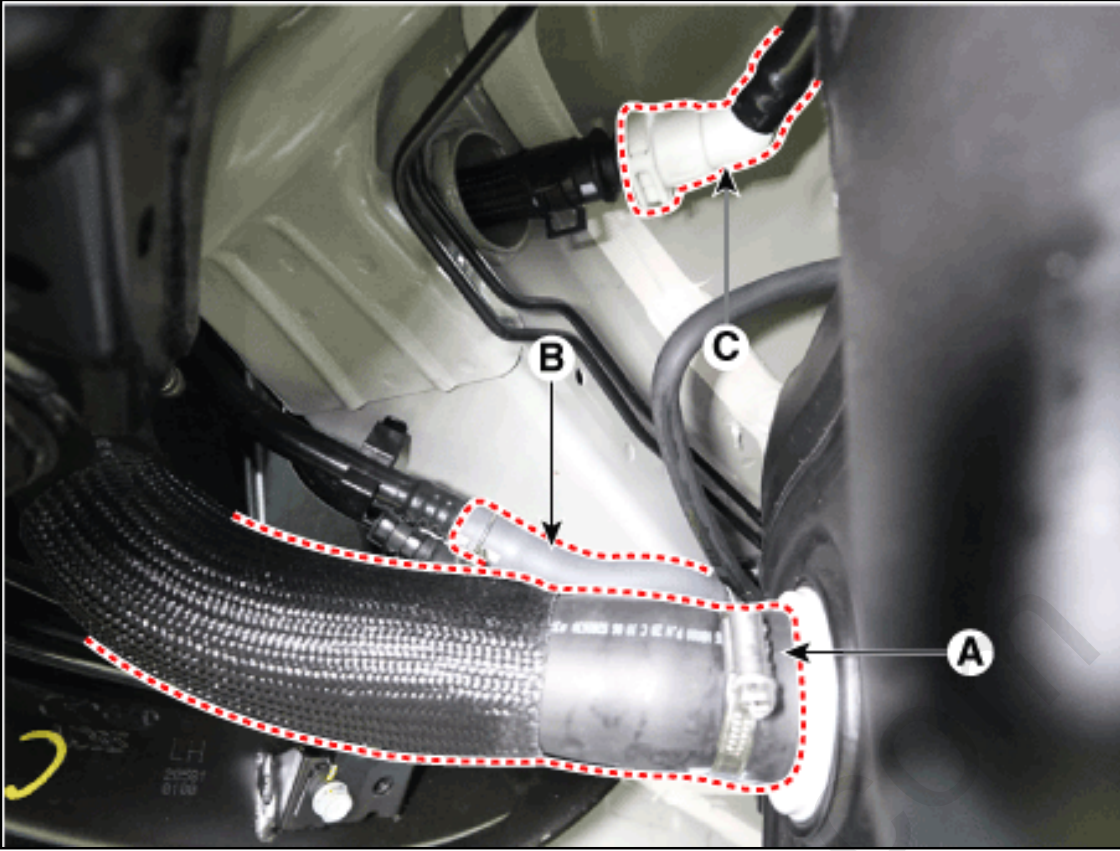
(Refer to General Information - "Lift and Support Points")

1. Turn the ignition switch OFF and disconnect the battery (-) terminal.
2. Lift the vehicle.
3. Remove the rear-left wheel & tire and wheel house cover.
4. Open the fuel filler cap (A) by turning it in the counterclockwise.



5. Remove the LH rear wheel guard.
(Refer to Body (Interior and Exterior) - "Rear Wheel Guard")
6. Separate the fuel filler hose (A).
7. Separate the fuel ventilation hose (B) and then remove the fixing clip (D).

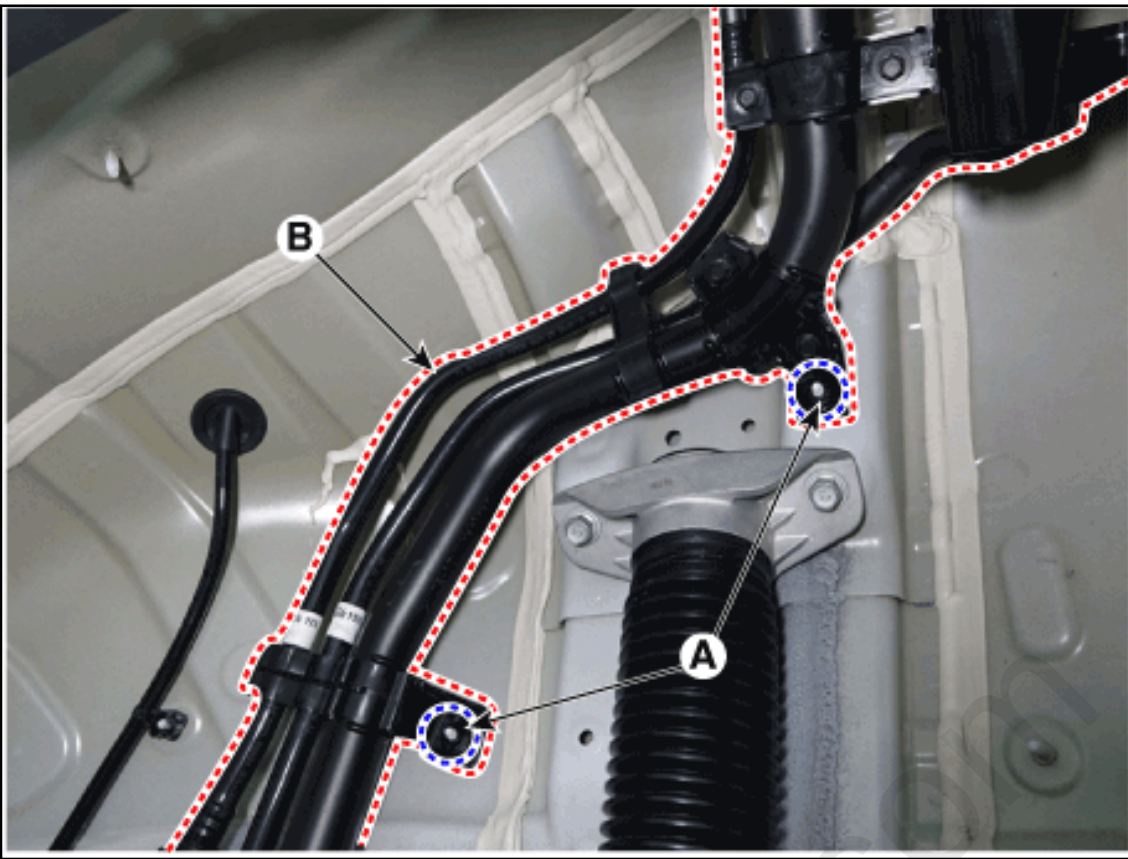
8. Disconnect the levelling hose quick-connector (C).



9. Remove the filler-neck assembly (A) after loosening the mounting nut (B).

Tightening Torque :

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



Installation

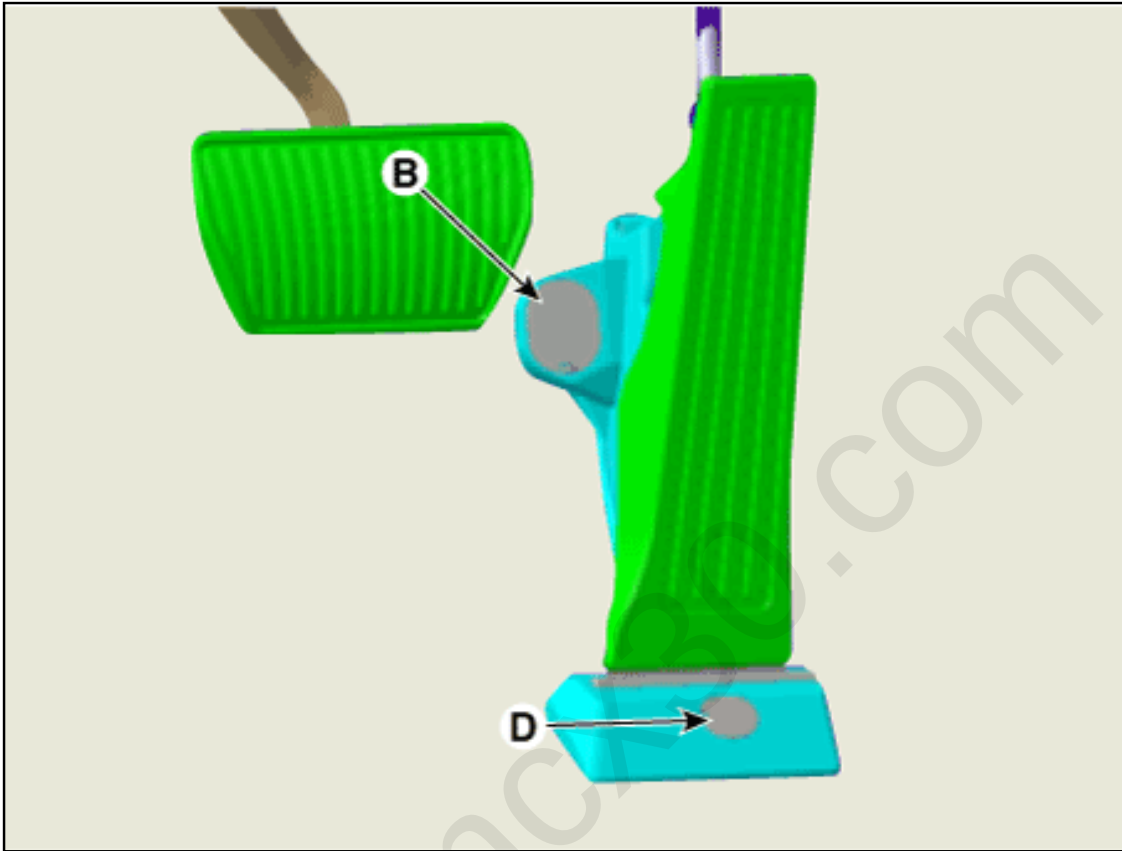
1. Install in the reverse order of removal.

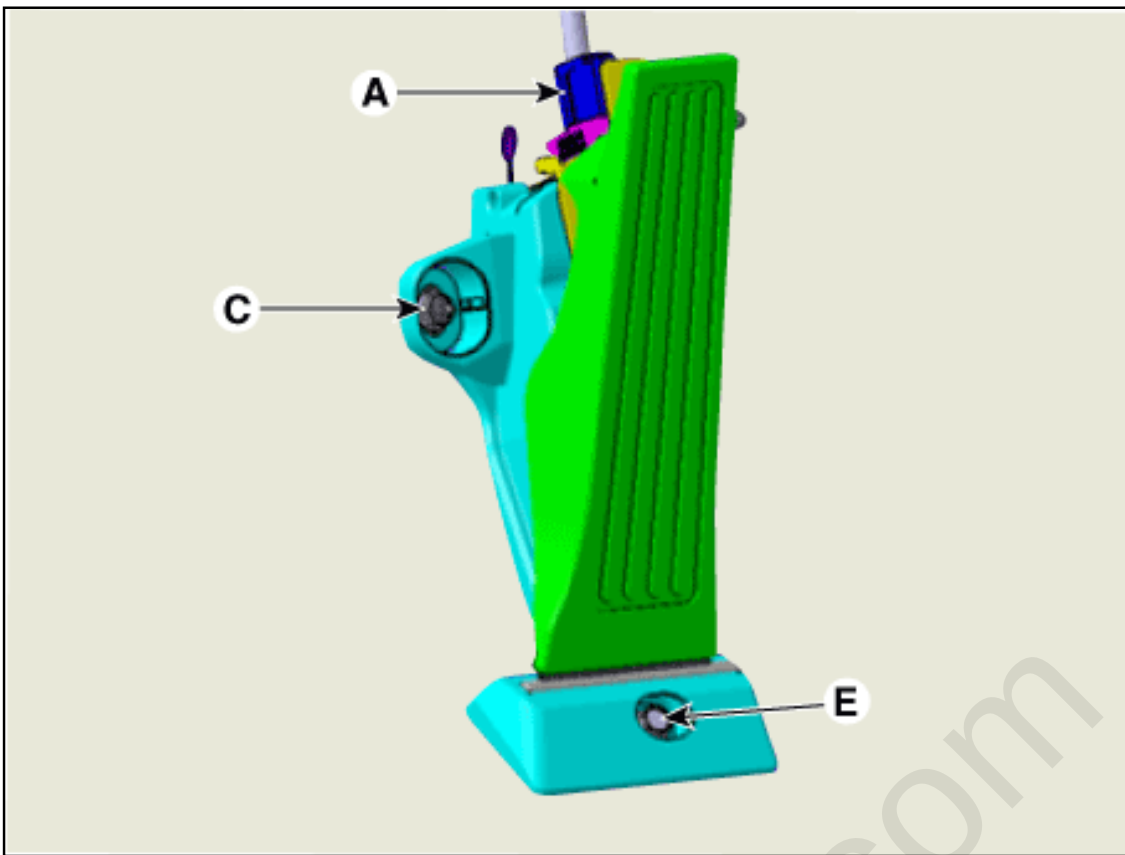
Removal

1. Turn the ignition switch OFF and disconnect the battery (-) terminal.
2. Disconnect the accelerator position sensor connector (A).
3. Remove the upper mounting cap (B) and the loosen the mounting nut (C).
4. Remove the lower mounting cap (D) and the loosen the mounting bolt (E).

Tightening Torque :

8.8 - 13.7 N.m (0.9 - 1.4 kgf.m, 6.5 - 10.1 lb.ft)





Installation

1. Install in the reverse order of removal.

Removal



- 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. Release residual pressure in fuel line.
(Refer to Fuel Delivery System - "Release Residual Pressure in Fuel Line")
2. Turn the ignition switch OFF and disconnect the battery (-) terminal.
3. Remove the air cleaner assembly.
(Refer to Engine Mechanical System - "Air Cleaner")
4. Remove the engine cover.
(Refer to Engine Mechanical System - "Engine Cover")
5. Remove the intake manifold.
(Refer to Engine Mechanical System - "Intake Manifold")
6. Separate the breather hose (A).



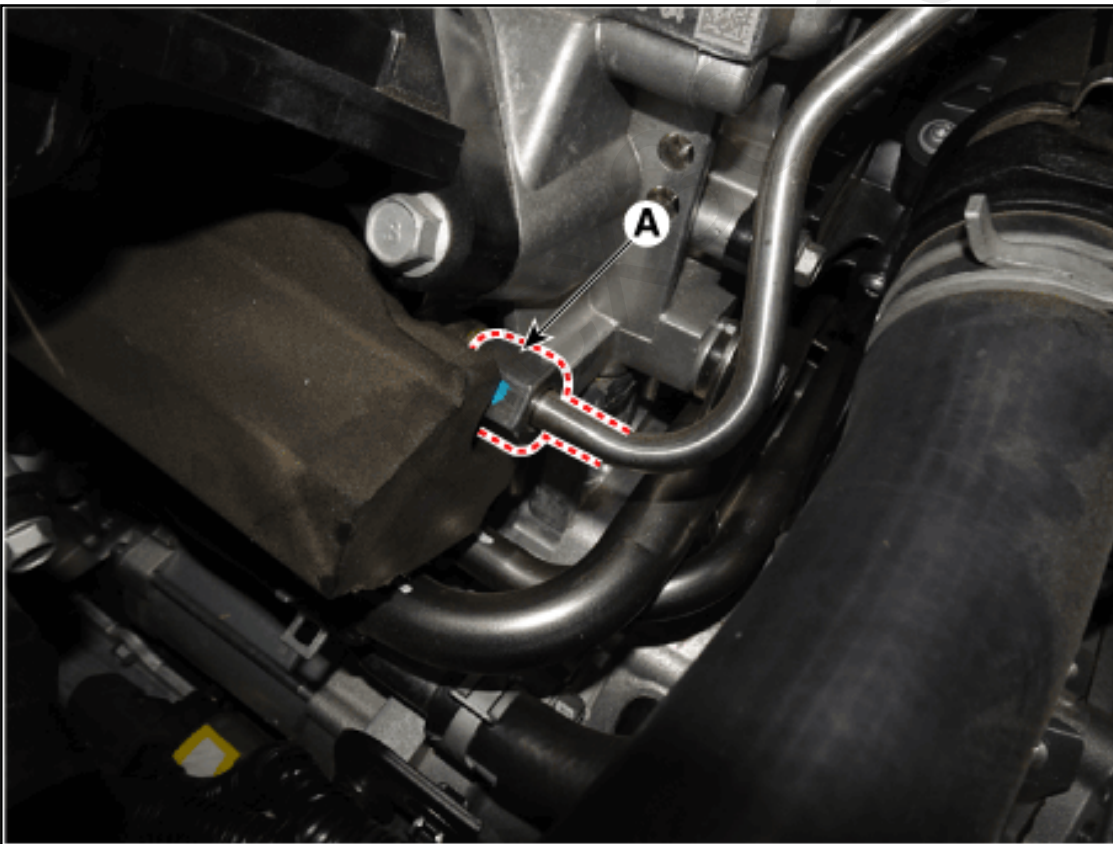
7. Remove the high pressure fuel pump foam (A).



8. Loosen the high pressure fuel pipe flange nut (A).

Tightening Torque :

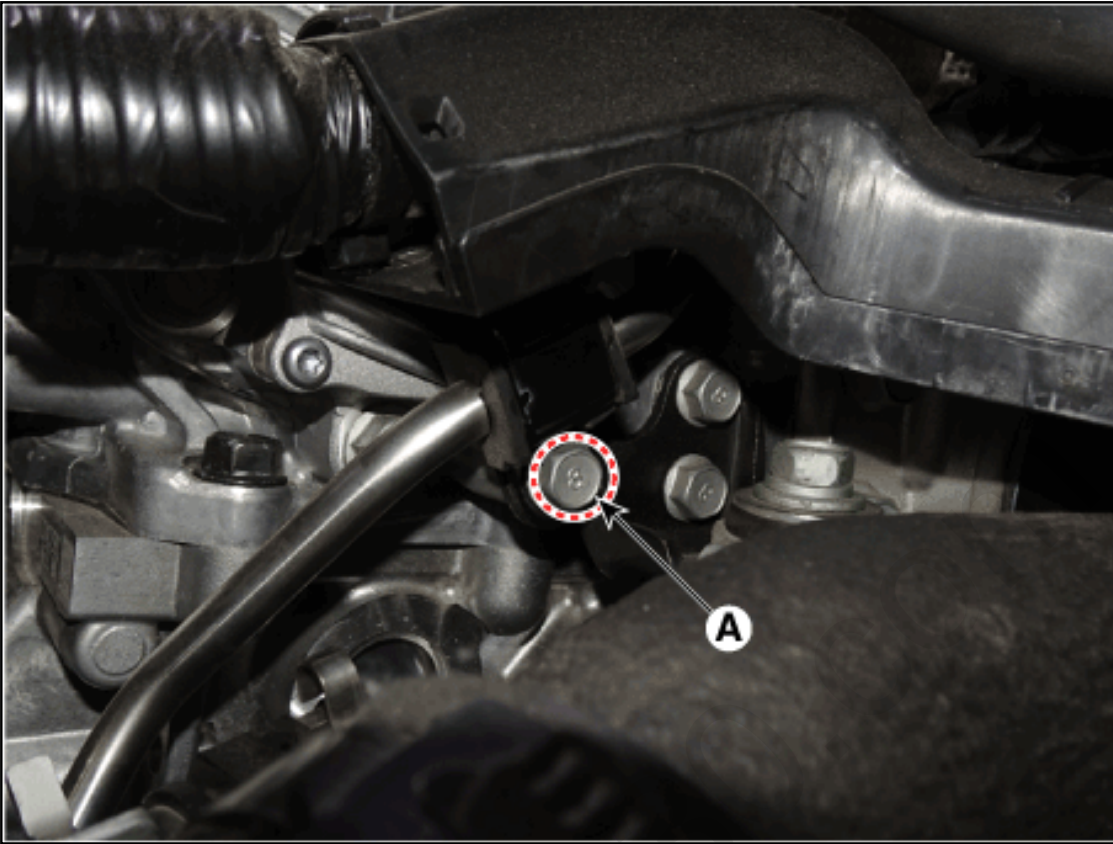
29.4 - 35.3 N.m (3.0 - 3.6 kgf.m, 21.7 - 26.0 lb-ft)



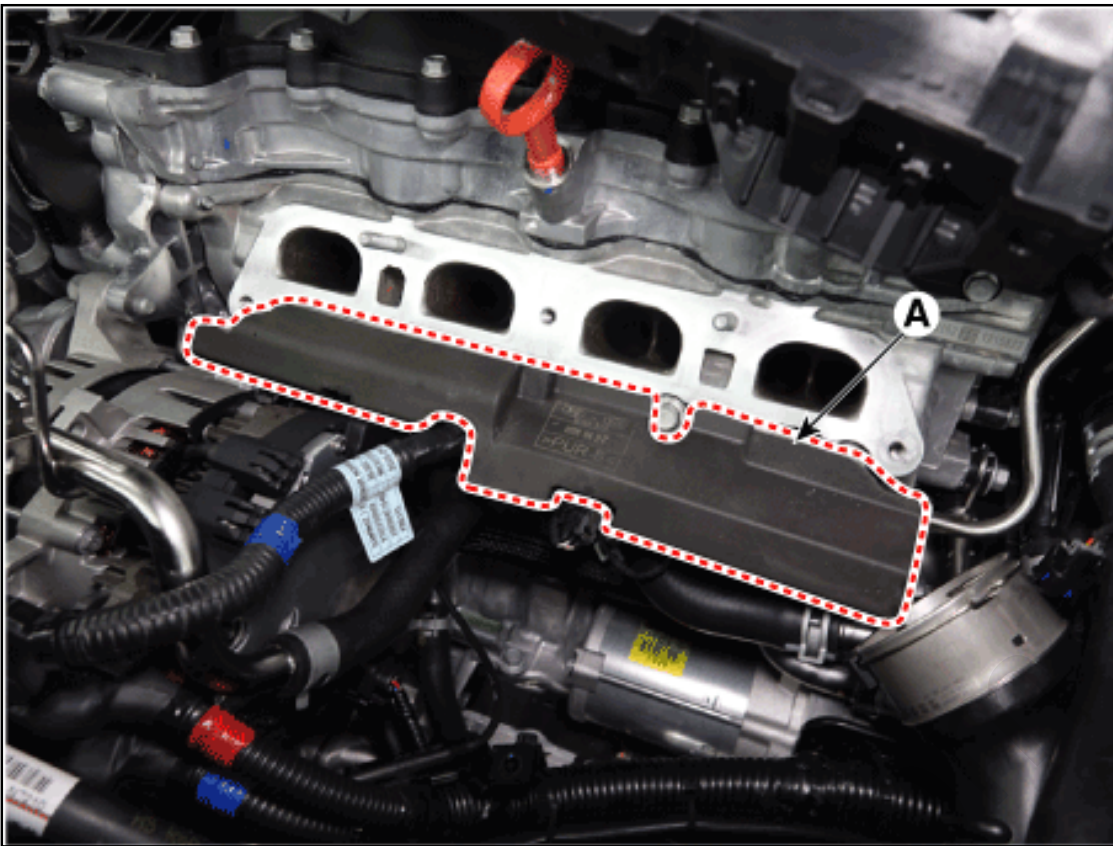
- Loosen the function block mounting bolt (A).

Tightening torque :

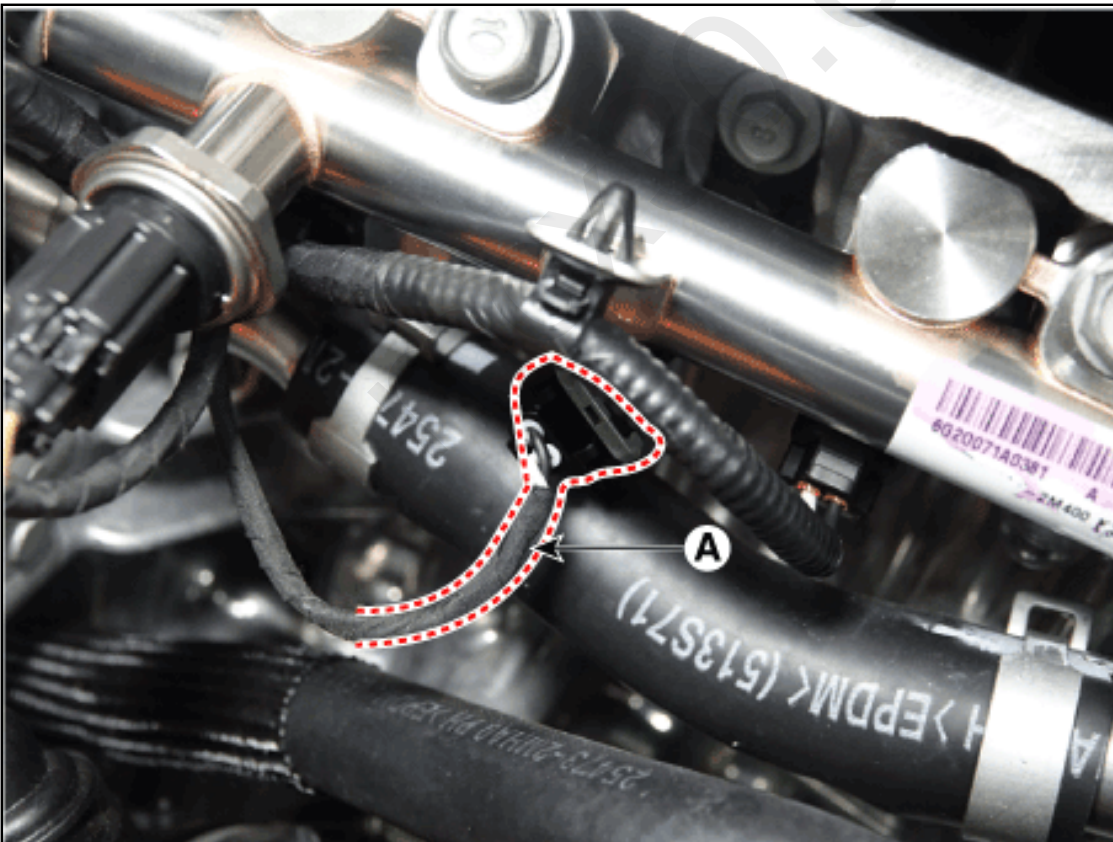
9.8 - 11.8 N.m (1.0 - 1.2 kgf.m, 7.2 - 8.7 lb.ft)



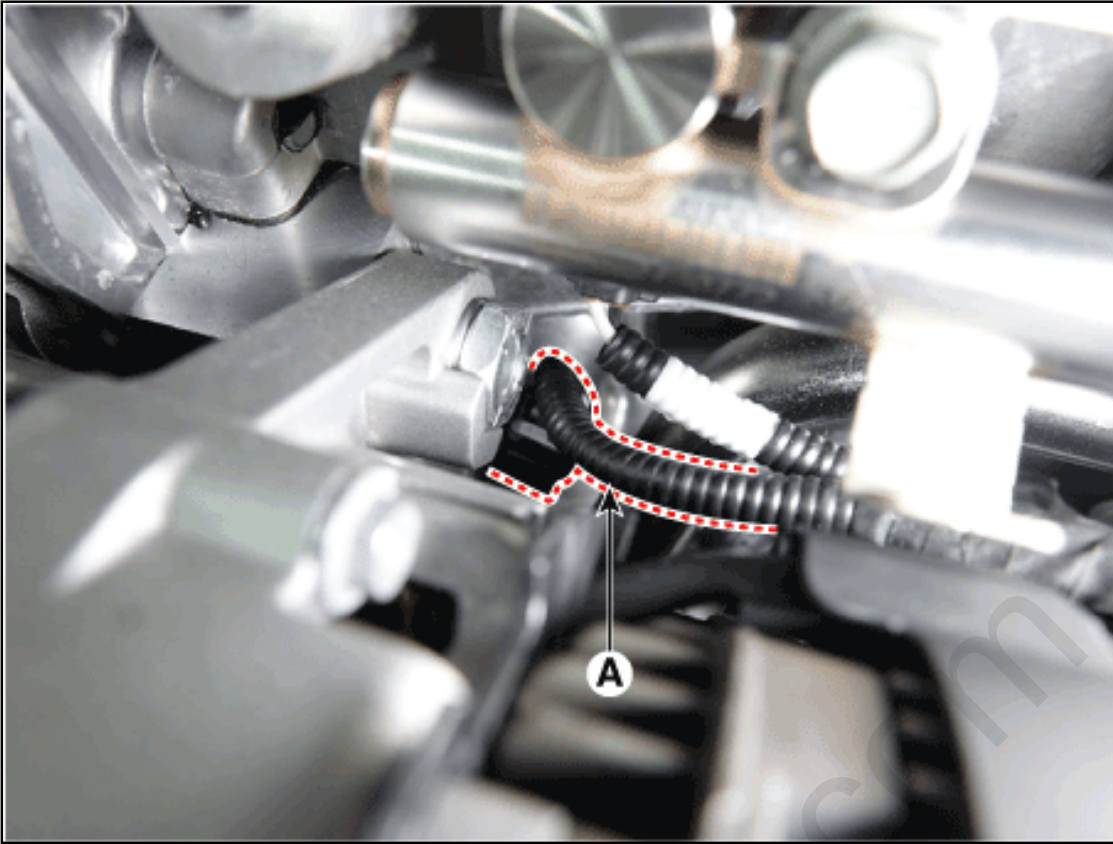
- Remove the injector foam (A).



11. Disconnect the engine coolant temperature sensor (ECTS) #1 connector (A).



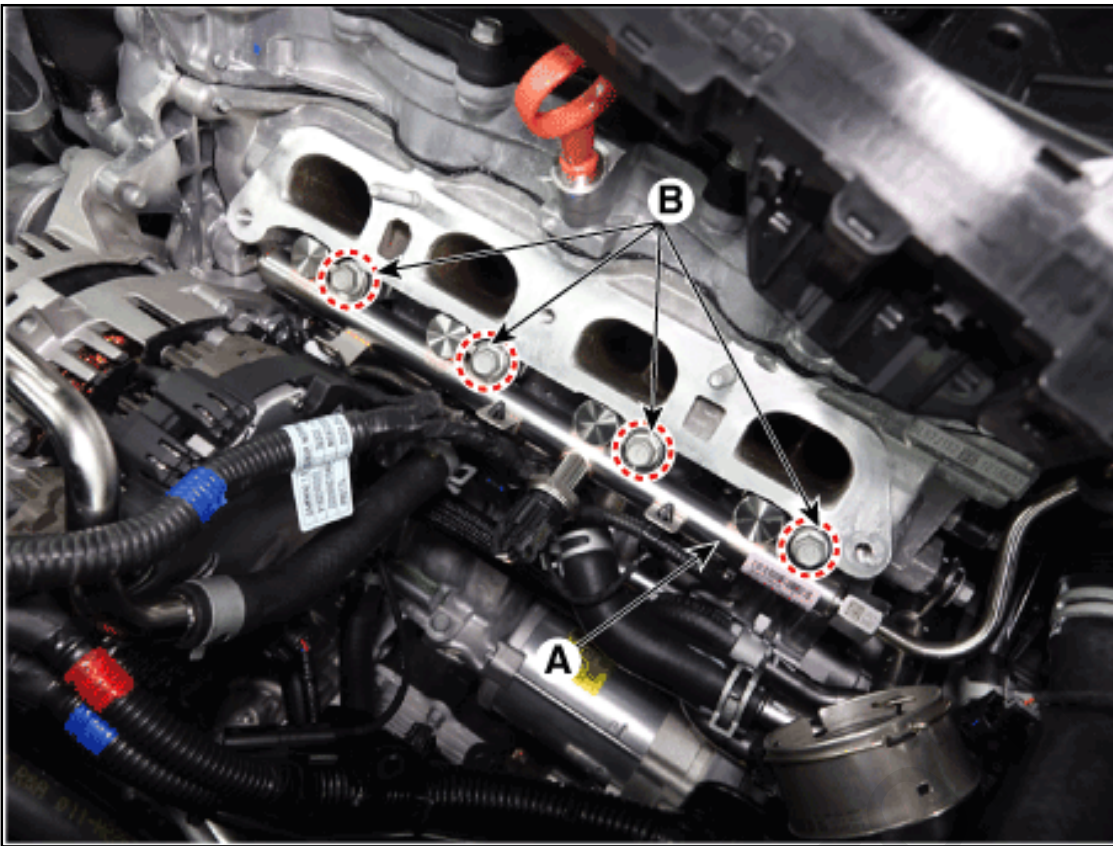
12. Disconnect the engine coolant temperature sensor (ECTS) #2 connector (A).



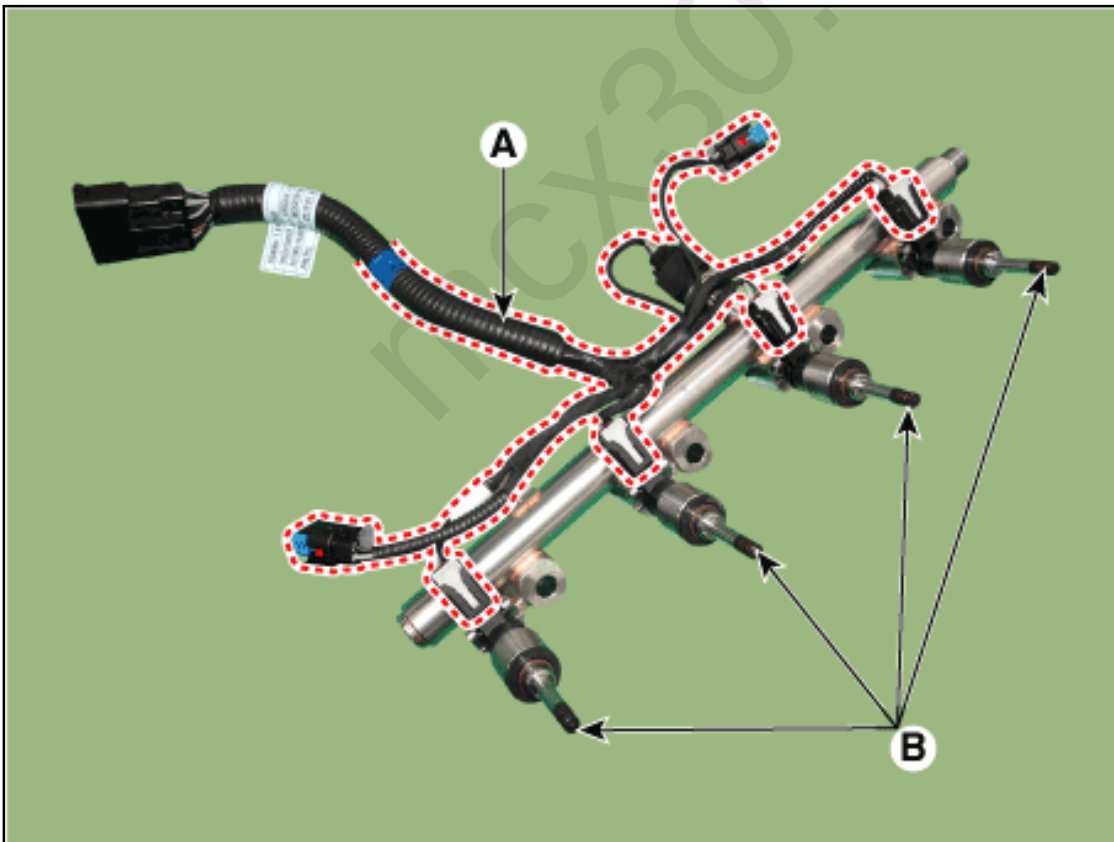
13. Remove the delivery pipe & injector (A) assembly after loosening the bolts (B).

Tightening torque :

18.6 - 23.5 N.m (1.9 - 2.4 kgf.m, 13.7 - 17.4 lb-ft)



14. Disconnect the injector & rail pressure sensor connector (A).
15. Release the fixing clip and then remove the injector (B) from delivery pipe.



Installation

1. Install in the reverse order of removal.



- Do not reuse the high pressure fuel pipe.
- Do not deforming the high pressure fuel pipe.
- When tightening the nut, do not tilt the torque wrench.
- Install the component with the specified torques.
- Install the high pressure fuel pipe and then check the oil leakage.

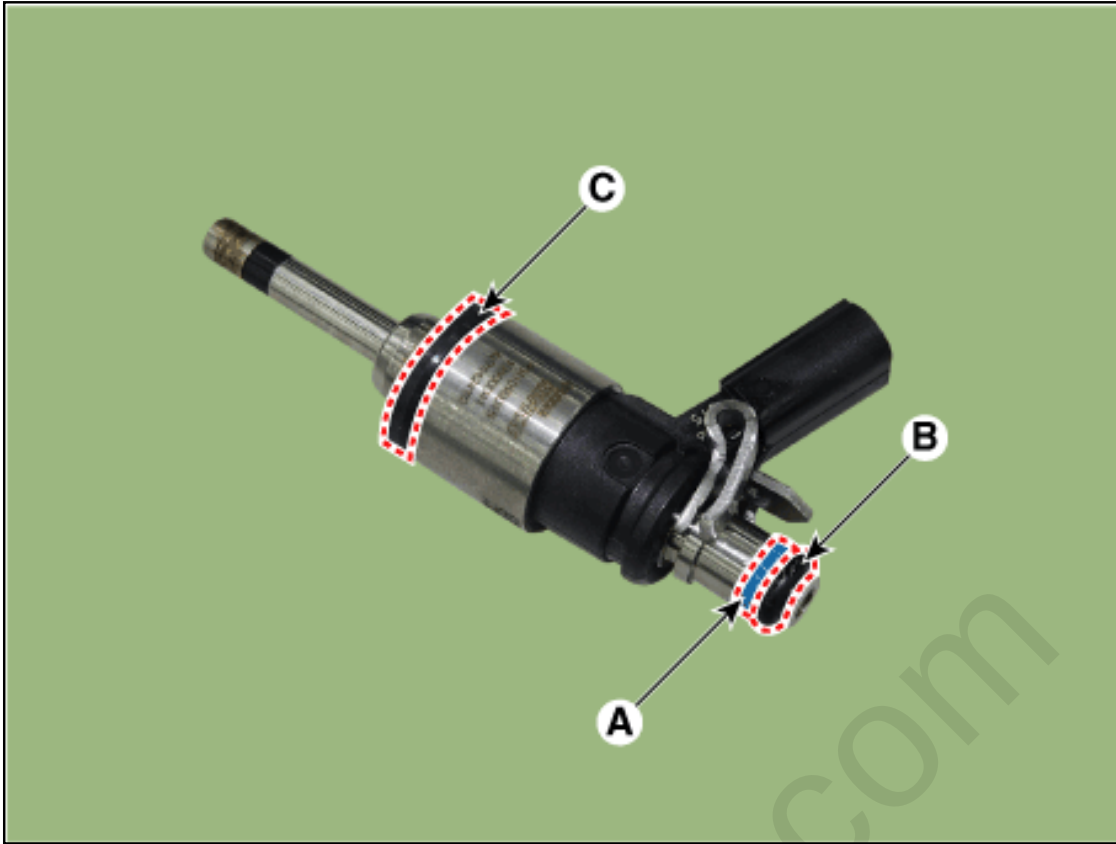


- Do not reuse the mounting bolt.
- Do not reuse the injector fixing clip.
- Do not reuse the combustion seal (A).



- Be careful not to apply oil to combustion seal.

- Do not reuse the O-ring (A), support disk (B), rubber washer (C).



- When replacing the rubber washer, the steel plate part should be faced the cylinder installation part and the rubber plate part should be faced the injector body part.
- Apply the engine oil to the injector O-ring.
- When inserting the injector, be careful not to damage the injector tip.

Removal



- 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. Release residual pressure in fuel line.
(Refer to Fuel Delivery System - "Release Residual Pressure in Fuel Line")
2. Turn the ignition switch OFF and disconnect the battery (-) terminal.
3. Remove the air cleaner assembly.
(Refer to Engine Mechanical System - "Air Cleaner")
4. Remove the engine cover.
(Refer to Engine Mechanical System - "Engine Cover")
5. Remove the Purge Control Solenoid Valve (PCSV).
(Refer to Engine Control System - "Purge Control Solenoid Valve (PCSV)")
6. Separate the breather hose (A).



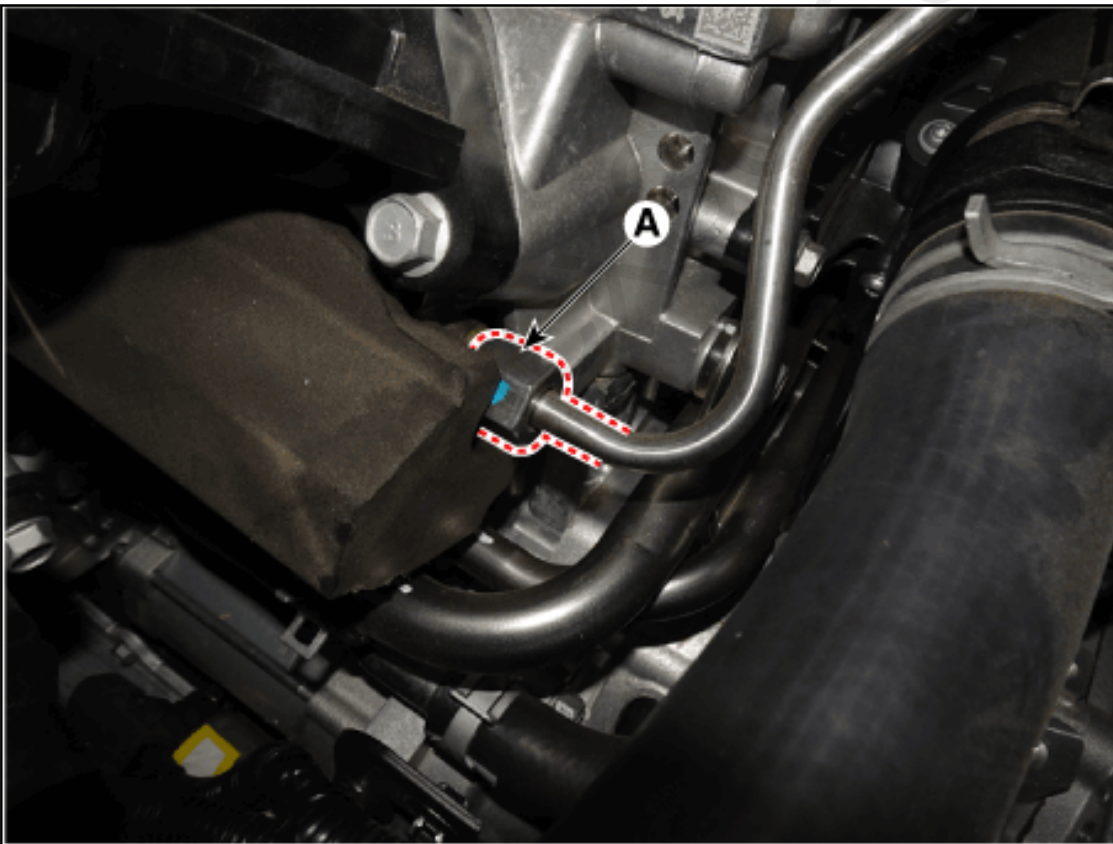
7. Remove the high pressure fuel pump foam (A).



8. Loosen the high pressure fuel pipe flange nut (A).

Tightening Torque :

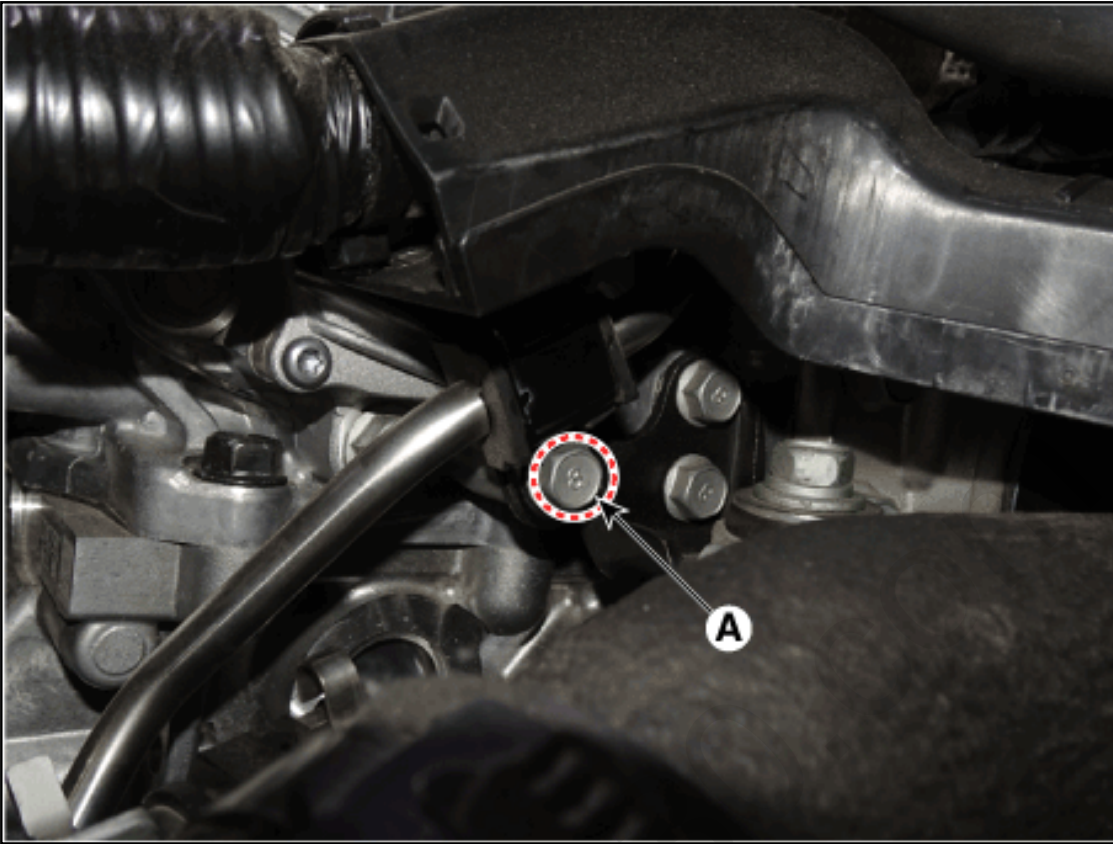
29.4 - 35.3 N.m (3.0 - 3.6 kgf.m, 21.7 - 26.0 lb-ft)



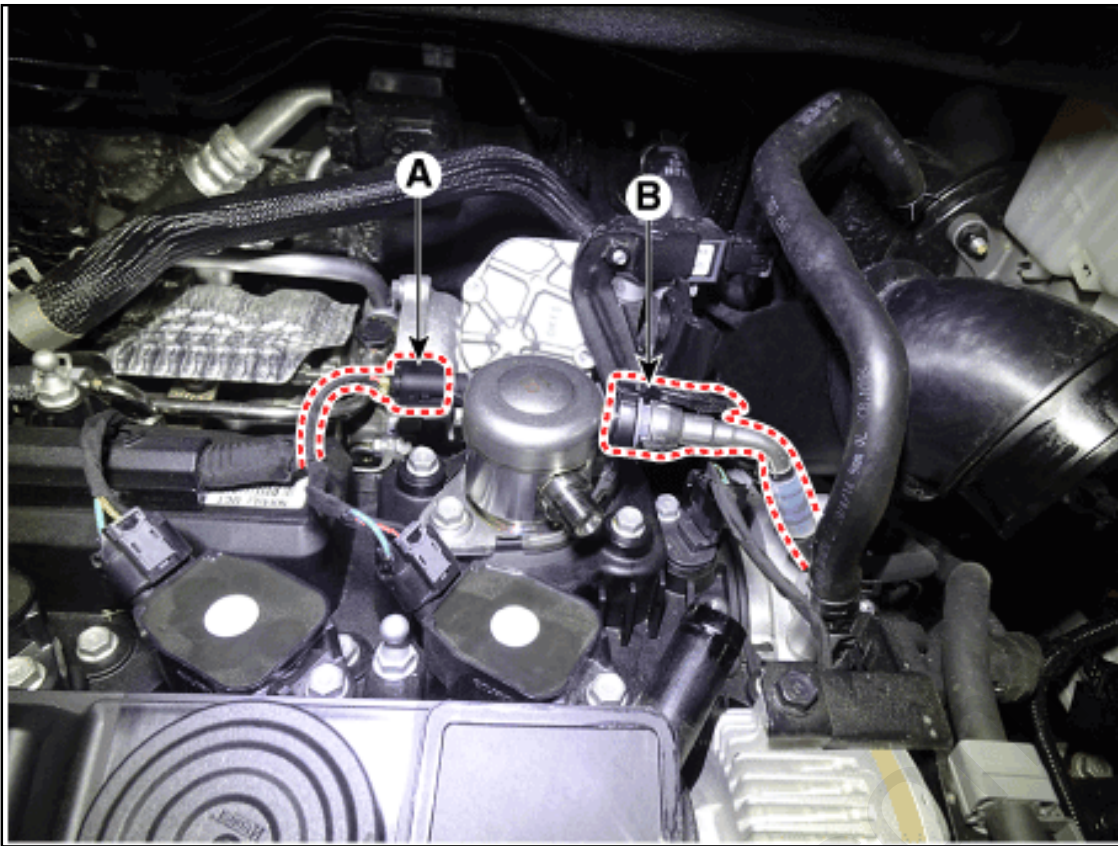
9. Loosen the function block mounting bolt (A).

Tightening Torque :

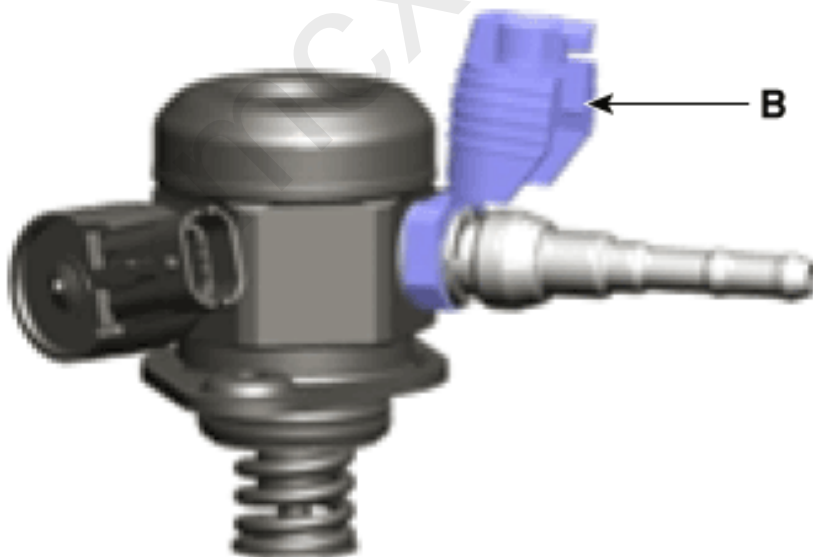
9.8 - 11.8 N.m (1.0 - 1.2 kgf.m, 7.2 - 8.7 lb.ft)



10. Disconnect the fuel pressure control valve connector (A).
11. Disconnect the fuel feed line quick-connector (B).

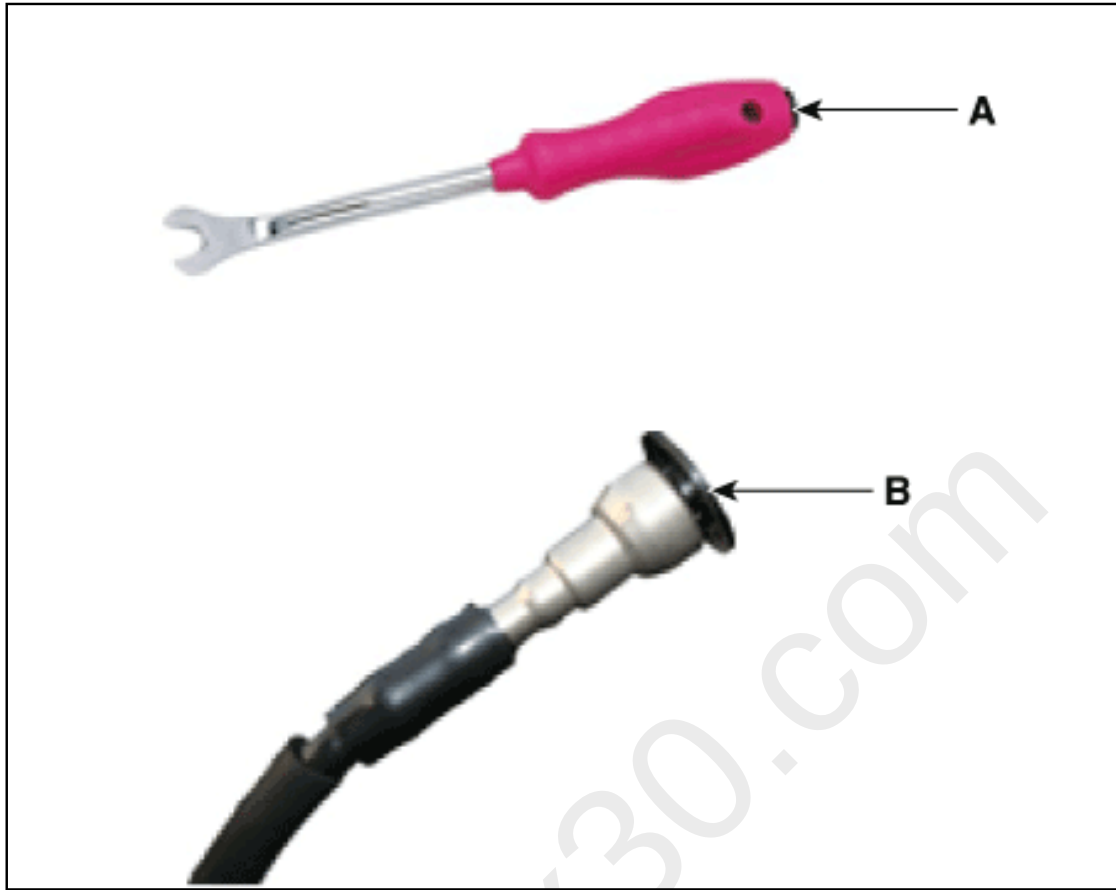


- Open the clamp cover (B) before disconnect the quick connector. (If the clip is applied)





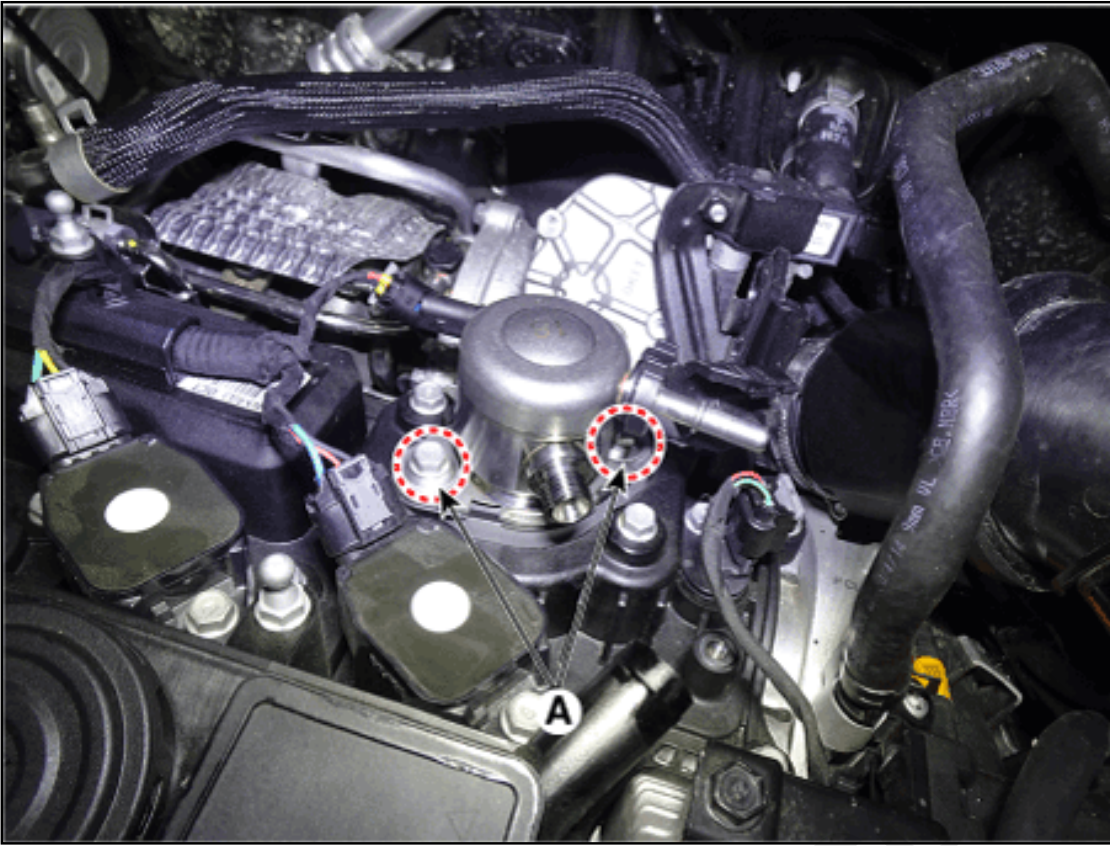
- When removing the quick-connector with the clip removing tool (A), be careful not to damage the plastic clip (B).
- If the clip is damaged, fuel line leak can be occurred due to a bad connection.



12. Remove the high pressure fuel pump from the cylinder head assembly after loosening mounting bolt (A).

Tightening Torque :

12.7 - 14.7 N.m (1.3 - 1.5 kgf.m, 9.4 - 10.8 lb.ft)



Installation

1. Install in the reverse order of removal.



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



- Do not reuse the high pressure fuel pipe.
- Do not deforming the high pressure fuel pipe.
- When tightening the nut, do not tilt the torque wrench.
- Install the component with the specified torques.
- Install the high pressure fuel pipe and then check the oil leakage.



- 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.
- Do not reuse the mounting bolt.
- Install the component with the specified torques.
- Note that internal damage may occur when the component is dropped. In this case, use it after inspecting.

- Apply engine oil to the O-ring (A) of the high pressure fuel pump, the roller tappet (B), and the protrusion (C).

