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Service Information Bulletin

SUBJECT	DATE
High Pressure Fuel Pump - Two-Filter System	January 2015

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0082 DDC-SVC-MAN-0182 DDC-SVC-MAN-S182	DD Platform Euro IV	Removal of the High Pressure Fuel Pump - Two-Filter System	Revised procedure
		Installation of the High Pressure Fuel Pump - Two-Filter System	Revised procedure

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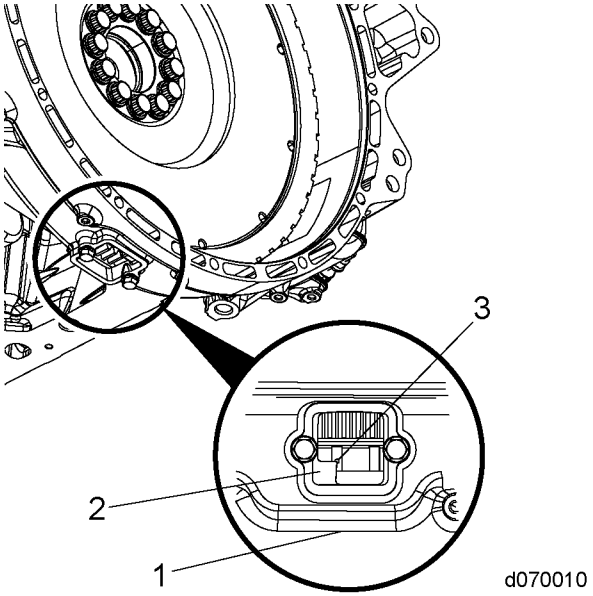
2 Removal of the High Pressure Fuel Pump – Two-Filter System

Remove as follows:

1. Shut off the engine, apply the parking brake, chock the wheels, and perform any other applicable safety steps.
2. Disconnect the batteries. Refer to OEM procedures.
3. Open the hood.
4. If needed, remove the bumper. Refer to OEM procedures.
5. If needed, remove the splash shield. Refer to OEM procedures.
6. Remove the air filter housing. Refer to OEM procedure.
7. Remove the cold boost pipe. Refer to section "Removal of the Cold Boost Pipe (Charge Air Pipe)".
8. Remove the two bolts from the inspection cover on the bottom of the flywheel housing.
9. Install an engine barring tool (J-46392 or W904589046300) to the flywheel housing (1).



NOTE: When the flywheel dot is aligned with the edge of the pointer, the engine is at TDC.

10. Rotate the flywheel until the dot located on the inside tooth (2) of the flywheel is aligned with the edge of pointer (3).
11. Remove the Crankshaft Position (CKP) sensor.

NOTE: The crankshaft locking tool (W470589001500) MUST sit flush with the flywheel housing to be correctly installed.

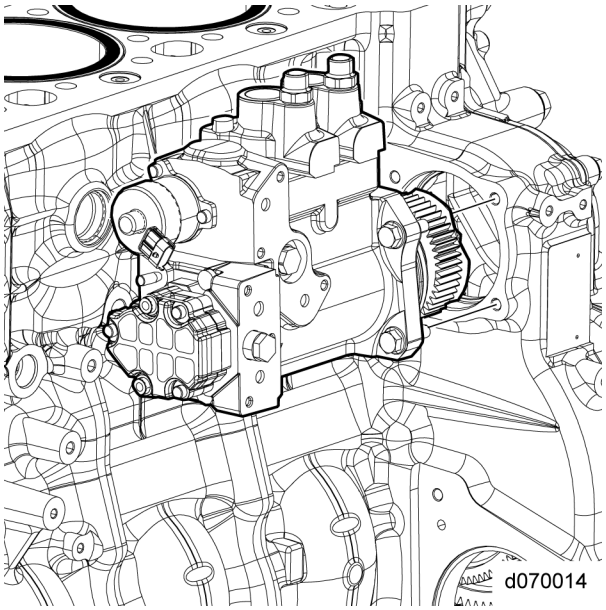
NOTE: If the crankshaft locking tool (W470589001500) does not sit flush with the flywheel housing, slowly rotate engine using barring tool until the tool is flush with the flywheel housing.

12. Install the crankshaft locking tool (W470589001500) into the CKP hole.
13. Remove the fuel filter module. Refer to section "Removal of the Fuel Filter Module – Two-Filter System".

NOTICE: The high pressure fuel rail feed lines, vibration dampers, mounting bracket and hardware are one-time-use components and MUST be replaced any time they are removed.

14. Remove the high pressure fuel rail feed lines from the high pressure pump to the fuel rail. Refer to section "Removal of the High Pressure Fuel Rail Feed Lines - Two-Filter System".
15. Remove the high pressure fuel flange from the high pressure fuel pump. Refer to section "Removal of the High Pressure Fuel Flange - Two-Filter System"
16. Disconnect the quantity control valve electrical harness connector.
17. Disconnect the plastic clip from the high pressure fuel pump mounting bracket.

18. Remove the coolant line from the cylinder block and air compressor.
19. Remove the high pressure fuel pump mounting bracket.
20. Remove the four bolts attaching the high pressure fuel pump to the cylinder block (KM59 GEN1 shown, KM63 GEN2 similar).



21. Remove the high pressure fuel pump from the cylinder block.
22. Remove and discard the high pressure fuel pump O-ring seal.
23. If the high pressure fuel pump is being replaced, remove the high pressure fuel pump drive gear. Refer to section "Removal of the High Pressure Fuel Pump Drive Gear -Two-Filter System"Refer to section "Removal of the High Pressure Fuel Pump Drive Gear -Two-Filter System".

3 Installation of the High Pressure Fuel Pump – Two Filter System

Install as follows:

NOTE: KM59 GEN1 high pressure fuel pump is equipped with a two-stage valve and a low pressure relief valve.

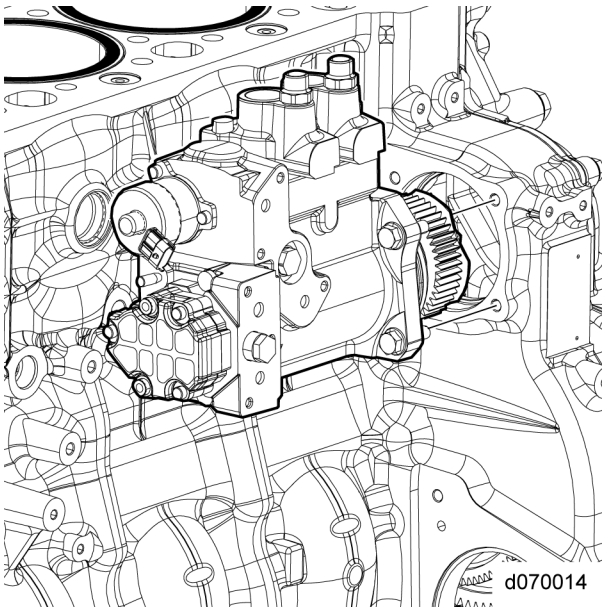
NOTE: KM63 GEN2 high pressure fuel pump is equipped with a two-stage valve.

1. Ensure flywheel is positioned at Top Dead Center (TDC) on cylinder number one.
2. If a new or remanufactured high pressure fuel pump is being installed, install the high pressure fuel pump drive gear on to the high pressure fuel pump. Refer to section "Installation of the High Pressure Fuel Pump Drive Gear - Two-Filter System".
3. If the high pressure fuel pump is being reused, clean mounting surface of high pressure fuel pump and O-ring groove.
4. If the high pressure fuel pump is being reused, install a new O-ring seal on to the high pressure fuel pump.
5. Lightly lubricate the high pressure fuel pump O-ring seal with clean engine oil.
6. Clean and inspect the flywheel housing bore for any burrs or other sharp edges; remove as necessary.

NOTE: The high pressure fuel pump should slide into the flywheel housing without binding. The mounting bolt holes on the high pressure fuel pump housing should align closely with the mounting holes on the flywheel housing.

NOTE: If high pressure fuel pump binds when being installed or if there is misalignment in the mounting bolt holes, remove the high pressure fuel pump and verify the timing mark is at the 12 o'clock position and the engine is at number one cylinder TDC.

7. Install the high pressure fuel pump to the cylinder block (KM59 GEN1 shown, KM63 GEN2 similar).



NOTICE: Ensure the correct bolt length is used when installing the high pressure pump. If an incorrect bolt length (long) is used, the cup plugs installed in the cylinder block can be pushed out into the gear train causing severe damage to the gear train. The correct bolt size is M10 X 35 mm (1.37 in.).

8. Install the four mounting bolts securing the high pressure pump to the cylinder block. Torque to 60 N·m (44 lb·ft).
9. Install the coolant line on to the cylinder block and air compressor.
10. Loosely install the high pressure pump bracket, and install the two nuts securing the high pressure fuel pump to the bracket. Torque to 30 N·m (22 lb·ft).

11. Install the two bolts securing the high pressure fuel pump bracket to the cylinder block. Torque to 100 N·m (74 lb·ft).
12. Connect the plastic clip on to the high pressure fuel pump mounting bracket.
13. Connect the quantity control valve electrical harness connector.
14. Install the high pressure fuel flange on to the high pressure fuel pump. Refer to section "Installation of the High Pressure Fuel Flange – Two-Filter System"

NOTICE: The high pressure fuel rail feed lines, vibration dampers, mounting bracket and hardware are one-time-use components and MUST be replaced any time they are removed.

15. Install the two new high-pressure lines on to the high pressure pump and the fuel rail. Refer to section "Installation of the High Pressure Fuel Rail Feed Lines - Two-Filter System"

NOTICE: When installing the Fuel Filter Module, do not attempt to prime or start the engine.

16. Install the fuel filter module. Refer to section "Installation of the Fuel Filter Module – Two Filter System"
17. Remove the crankshaft locking tool (W470589001500) from the CKP hole.
18. Install the Crankshaft Position (CKP) sensor.
19. Remove the engine barring tool (J-46392 or W904589046300) from the flywheel housing.
20. Install the inspection cover on the bottom of the flywheel housing. Torque to 30 N·m (22 lb·ft).
21. Install the cold boost pipe. Refer to section "Installation of the Cold Boost Pipe (Charge Air Pipe)".
22. Install the air filter housing assembly. Refer to OEM procedure.
23. If removed, install the splash shield. Refer to OEM procedures.
24. If removed, install the bumper. Refer to OEM procedures.
25. Connect the batteries. Refer to OEM procedures.
26. Prime the fuel system. Refer to section "Priming the Fuel System Using ESOC 350 Fuel Priming Pump - Two-Filter System"

WARNING: ENGINE EXHAUST

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

WARNING: PERSONAL INJURY

To avoid injury before starting and running the engine, ensure the vehicle is parked on a level surface, parking brake is set, and the wheels are blocked.

27. Start and run the engine.
28. When the engine has reached operating temperature of 60°C (140°F), observe high pressure fuel pump for any performance problems or leaks.

