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Service Information Bulletin

SUBJECT	DATE
Contaminated Fluids	January 2016

Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0084	EPA10/ GHG14 DD Platform	Metal in the Fuel System - Two-Filter Fuel System	Revision of existing procedure.
DDC-SVC-MAN-0191	GHG17 DD Platform		

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2 Metal in the Fuel System – Two-Filter Fuel System

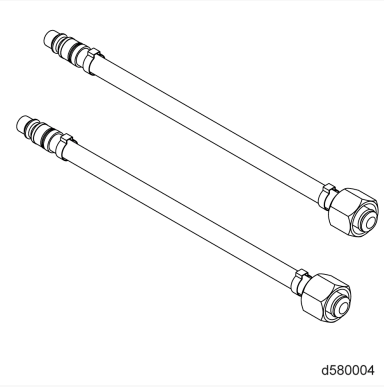
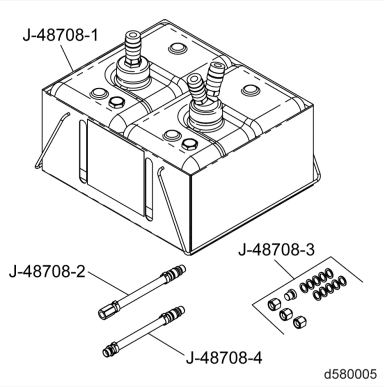
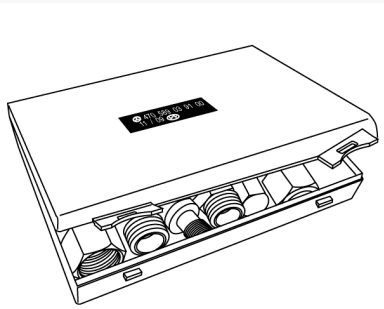
Description:

The fuel filter function is to remove impurities from the fuel before the fuel reaches the high pressure fuel pump. These contaminates often originate from fuel storage tanks and the fuel island transfer pump.

With a cartridge-type filter, it is possible to visually see debris on the filter media and in the fuel filter housing. Debris of any kind found in the fuel filter module or fuel filter media during a service/maintenance event should be considered normal.

The amount and type of debris can depend on the quality of the fuel, where and how the fuel is stored, and the transfer system being used.

Table 1.

Service Tools Used in the Procedure		
Tool Number	Tool Description	Tool Graphic
J-48707	Fuel Filter Module Inlet Outlet Hose	 d580004
J-48708-1	Fuel Flow Tool	 d580005
W470589039100	Fuel System Tool Update Kit Without Motor Control Module (MCM) Cooler	 d580142

Check as follows:

NOTE: The following troubleshooting procedure should only be used if there is a fuel system fault code and/ or excessive noise from the high pressure fuel pump.

NOTE: The purpose of the fuel filter(s) is to prevent particulate contaminants from entering the fuel system. It is normal to find some debris on or in the fuel filters.

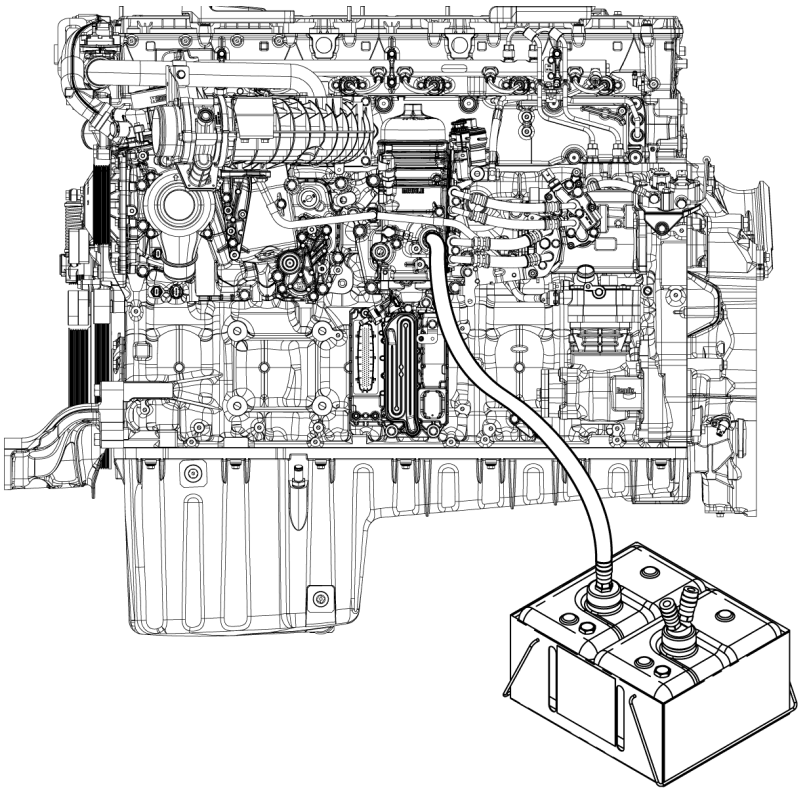
WARNING: PERSONAL INJURY

To avoid injury, never remove any engine component while the engine is running.

WARNING: PERSONAL INJURY

To avoid injury from hot surfaces, wear protective gloves, or allow engine to cool before removing any component.

1. Remove the chassis return line from the fuel filter module.
2. Clean Fuel Filter Module Inlet/Outlet Hoses (J-48707) and Fuel Flow Tool (J-48708-1) with clean diesel fuel.
3. Install the Fuel Filter Module Inlet/Outlet Hose tool (J-48707) and the Fuel System Tool Update Kit without Motor Control Module (MCM) Cooler (W470589039100) on to the chassis return line fitting on the fuel filter module.
4. Install the opposite end of the Fuel Filter Module Inlet/Outlet Hose (J-48707) onto the Fuel Flow Tool (J-48708-1).



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5. Start and run the engine at idle until the fuel flow tool (J-48708-1) is full of fuel (about 9 liters or 2 ¼ gallons).
6. Use a magnet to check for magnetic metallic debris in the Fuel Flow Tool. Is there magnetic metallic debris present?
   a. Yes; replace the following components:
      - High pressure fuel pump. Refer to section "Removal of the High Pressure Fuel Pump – Two-Filter System".
      - Fuel filter module. Refer to section "Removal of the Fuel Filter Module – Two-Filter System".
      - High pressure fuel rail feed lines. Refer to section "Removal of the High Pressure Fuel Rail Feed Lines - Two-Filter System".
      - High pressure flange. Refer to section "Removal of the High Pressure Fuel Flange - Two-Filter System".
      - Frame-mounted filter (if equipped).

      Clean the following components:
      - Fuel tank(s). Refer to OEM procedures.
      - Low pressure lines. Refer to section "Removal of the Low Pressure Fuel Pump Lines - Two-Filter System".
      - Doser supply line.

- Return lines. Refer to section "Removal of the Needle, Amplifier, and Pressure Limiting Valve (PLV) Return Lines – Two-Filter System".
- Frame-mounted filter housing (if equipped).
- OEM Supply and return lines. Refer to OEM procedures.

b. No; this procedure has verified that there is no metal in the filtered side fuel system, return to the diagnostic that lead you to this section.. Remove the tools and reinstall the chassis fuel return line onto the module. Refer to OEM procedures for debris in fuel tanks.

3 Metal in the Fuel System – Two-Filter Fuel System

Description:

The fuel filter function is to remove impurities from the fuel before the fuel reaches the high pressure fuel pump. These contaminates often originate from fuel storage tanks and the fuel island transfer pump.

With a cartridge-type filter, it is possible to visually see debris on the filter media and in the fuel filter housing. Debris of any kind found in the fuel filter module or fuel filter media during a service/maintenance event should be considered normal.

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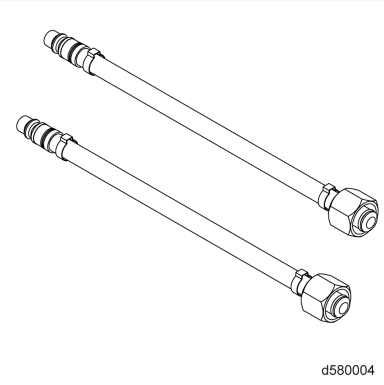
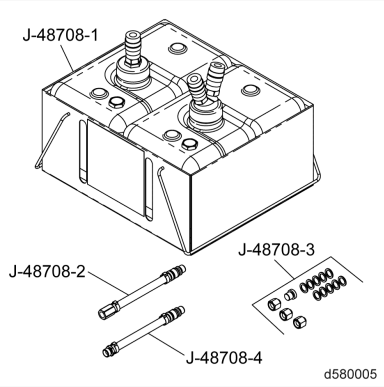
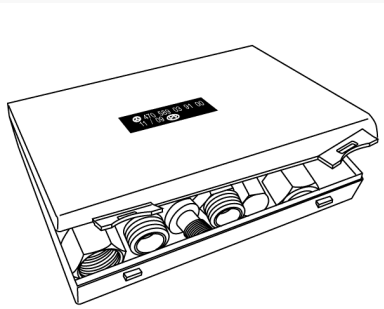
Table 2.

Service Tools Used in the Procedure		
Tool Number	Tool Description	Tool Graphic
J-48707	Fuel Filter Module Inlet Outlet Hose	 d580004
J-48708-1	Fuel Flow Tool	 d580005
W470589039100	Fuel System Tool Update Kit Without Motor Control Module (MCM) Cooler	 d580142

Check as follows:

NOTE: The following troubleshooting procedure should only be used if there is a fuel system fault code and/ or excessive noise from the high pressure fuel pump.

NOTE: The purpose of the fuel filter(s) is to prevent particulate contaminants from entering the fuel system. It is normal to find some debris on or in the fuel filters.

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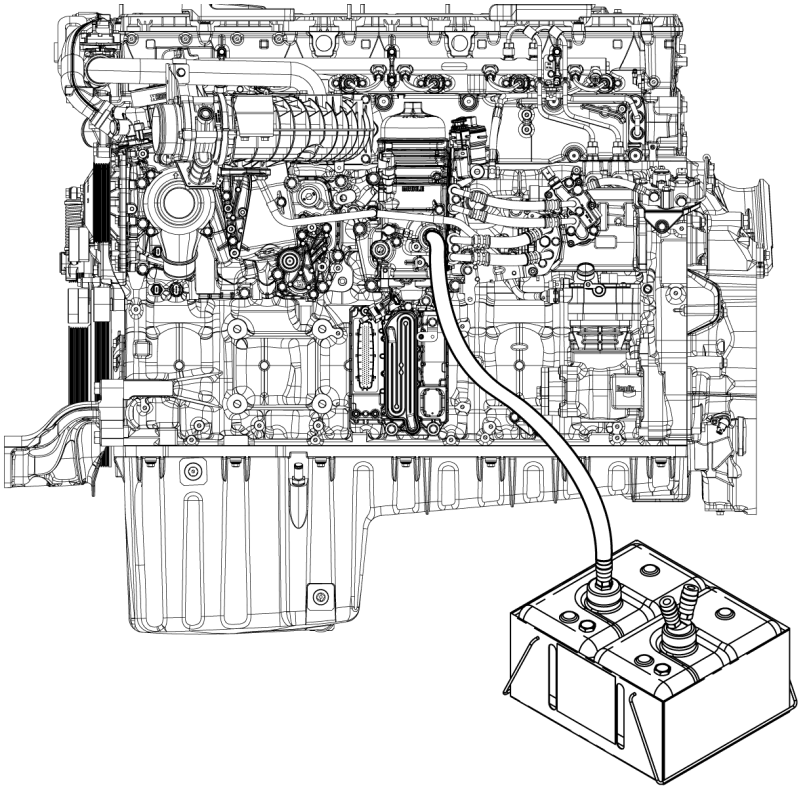
WARNING: PERSONAL INJURY

To avoid injury from hot surfaces, wear protective gloves, or allow engine to cool before removing any component.

1. Remove the chassis return line from the fuel filter module.
2. Clean Fuel Filter Module Inlet/Outlet Hoses (J-48707) and Fuel Flow Tool (J-48708-1) with clean diesel fuel.
3. Install the Fuel Filter Module Inlet/Outlet Hose tool (J-48707) and the Fuel System Tool Update Kit without Motor Control Module (MCM) Cooler (W470589039100) on to the chassis return line fitting on the fuel filter module.
4. Install the opposite end of the Fuel Filter Module Inlet/Outlet Hose (J-48707) onto the Fuel Flow Tool (J-48708-1).



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5. Start and run the engine at idle until the fuel flow tool (J-48708-1) is full of fuel (about 9 liters or 2 ¼ gallons).
6. Use a magnet to check for magnetic metallic debris in the Fuel Flow Tool. Is there magnetic metallic debris present?
   a. Yes; replace the following components:
      - High pressure fuel pump. Refer to section "Removal of the High Pressure Fuel Pump - Two-Filter System".
      - Fuel filter module. Refer to section "Removal of the Fuel Filter Module - Two-Filter System".
      - High pressure fuel rail feed lines. Refer to section "Removal of the High Pressure Fuel Rail Feed Lines - Two-Filter System".
      - High pressure flange. Refer to section "Removal of the High Pressure Fuel Flange - Two-Filter System".
      - Frame-mounted filter (if equipped).

      Clean the following components:
      - Fuel tank(s). Refer to OEM procedures.
      - Low pressure lines. Refer to section "Removal of the Low Pressure Fuel Pump Lines - Two-Filter System".
      - Doser supply line.

- Return lines. Refer to section "Removal of the Needle, Amplifier, and Pressure Limiting Valve Return Lines - Two-Filter System".
- Frame-mounted filter housing (if equipped).
- OEM Supply and return lines. Refer to OEM procedures.

b. No; this procedure has verified that there is no metal in the filtered side fuel system, return to the diagnostic that lead you to this section. Remove the tools and reinstall the chassis fuel return line onto the module. Refer to OEM procedures for debris in fuel tanks.

