



# Technical Service Bulletin

Technical Service Bulletin: TSB210184	Released Date: 25-Aug-2021
Remote Mount Fuel Line Replacement Procedure: External Fuel Leaks, Fault Codes 559 and 4691	

## Remote Mount Fuel Line Replacement Procedure: External Fuel Leaks, Fault Codes 559 and 4691

### Warranty Statement

The information in this document has no effect on present warranty coverage or repair practices, nor does it authorize TRP or Campaign actions.

### Contents

#### Product Affected

- L9 CM2350 L133C
- L9 CM2450 L126B

#### Issue Summary

Symptoms:

- External fuel leak
- Loss of fuel pressure
- FC559
- FC4691
- Crank no start
- Engine shutdown

Root Cause:

- The fuel line clamps do **not** provide adequate sealing pressure on the quick disconnect line barb for the joint to remain sealed properly in service. Additionally, the fuel line is prone to kinking when forced into a tight bend radius and flexing when pressurized during start up.

#### Verification

**Note :** The new fuel lines are approximately 3.5 mm [ 0.137 in ] smaller in diameter and may require a different support solution or a modification to the existing supports to provide the appropriate clamping pressure. Verify the fuel line is held firm and **not** able to move within the clamp to minimize risk to other failure modes.

This issue is **only** for remote mount stage 2 fuel filter to fuel pump supply and return fuel lines. The remote mount stage 2 fuel filter is mounted off-engine. The mounting location for the fuel filter head assembly varies depending on vehicle type. Examples of possible mounting locations included in Figure 1 below.

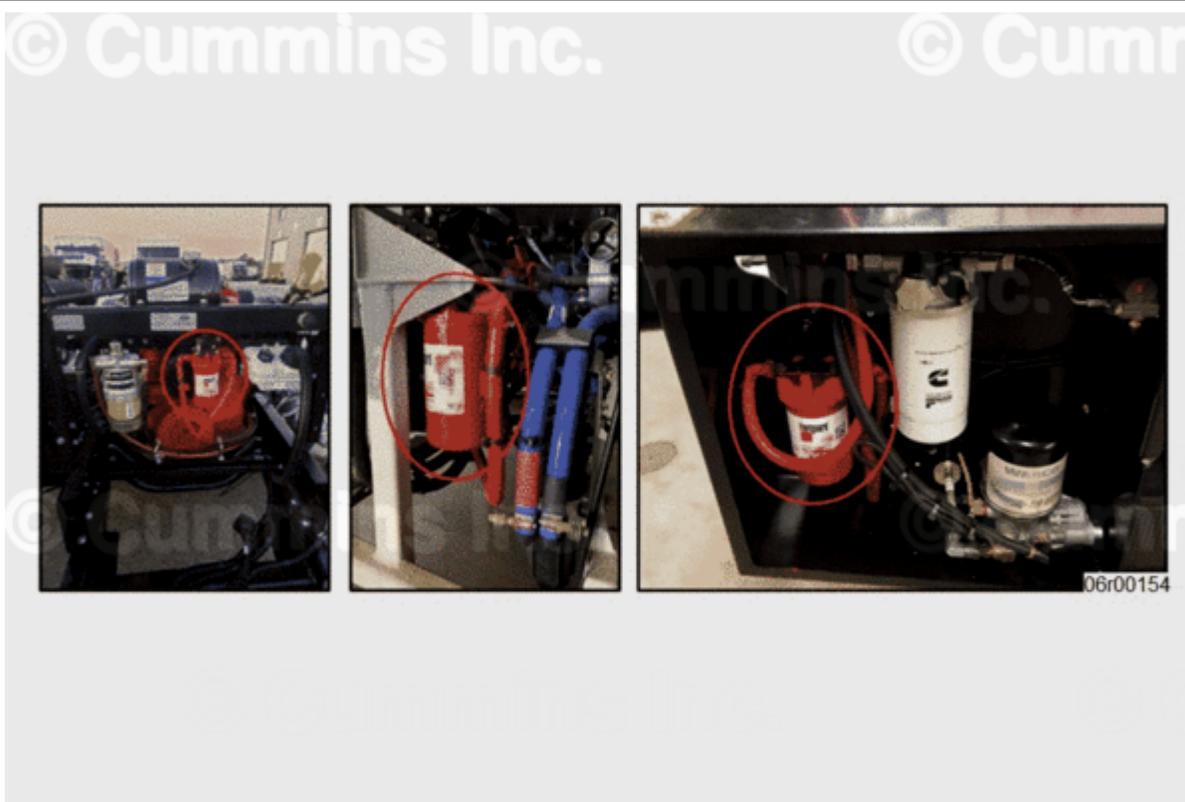


Figure 1, Example Locations of the Remote Mount Stage 2 Fuel Filter.

Prior to installation of all fuel lines, verify both ends of the fuel lines are capped or protected from the ingress of debris. Verify the fuel lines do **not** contact the floor during any portion of the assembly process.

Identify stage 2 fuel supply and return fuel lines.

- One fuel line runs from the stage 2 fuel filter head quick connect fitting to the fuel pump inlet quick connect fitting.
- The second fuel line will run from the fuel pump outlet quick connect fitting to the stage 2 fuel filter head return quick connect fitting.
- Figure 2 below indicates the fuel filter head outlet and fuel pump inlet connection points.
- Figure 3 below indicates the fuel pump outlet and fuel filter head return connection points.
- Verify the fuel lines are routed correctly between the outlet of the filter head to the inlet of the pump and outlet of pump to the fuel filter head return or premature fuel pump wear can occur.

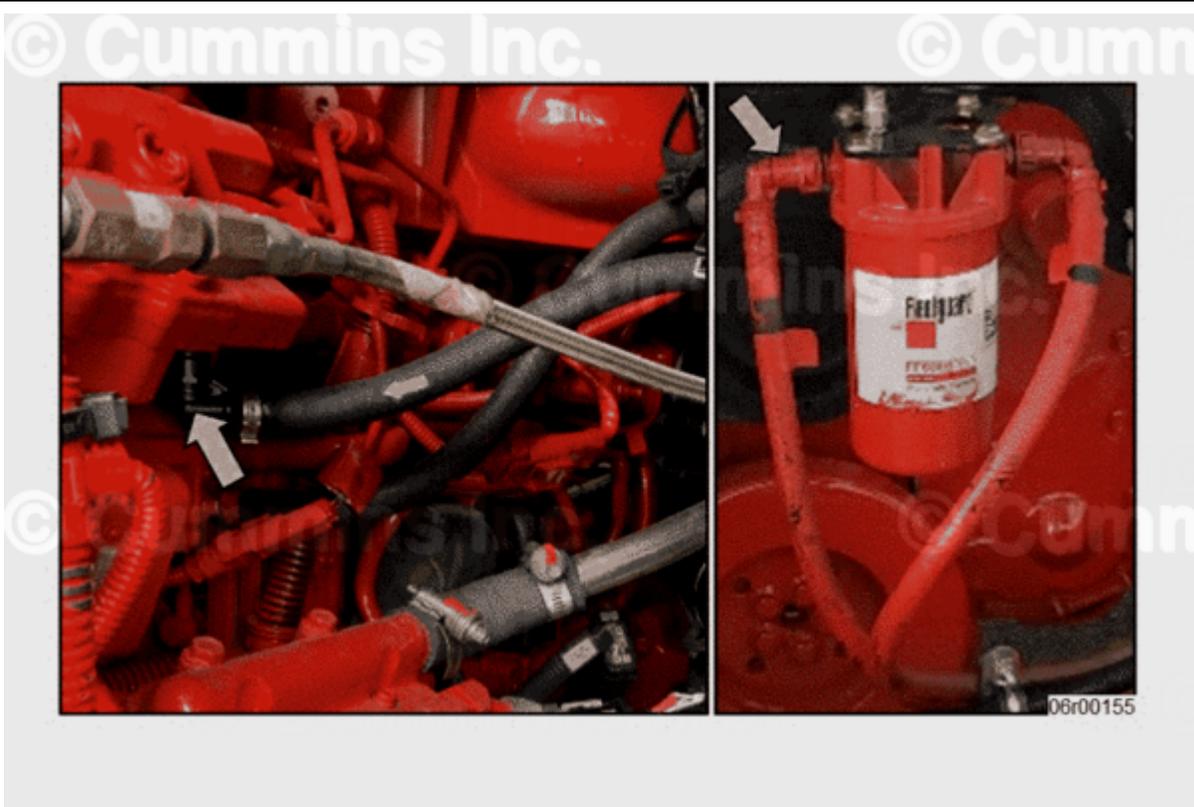


Figure 2, Indication of Fuel Pump Inlet and Fuel Filter Outlet Quick Connect Fitting Locations.

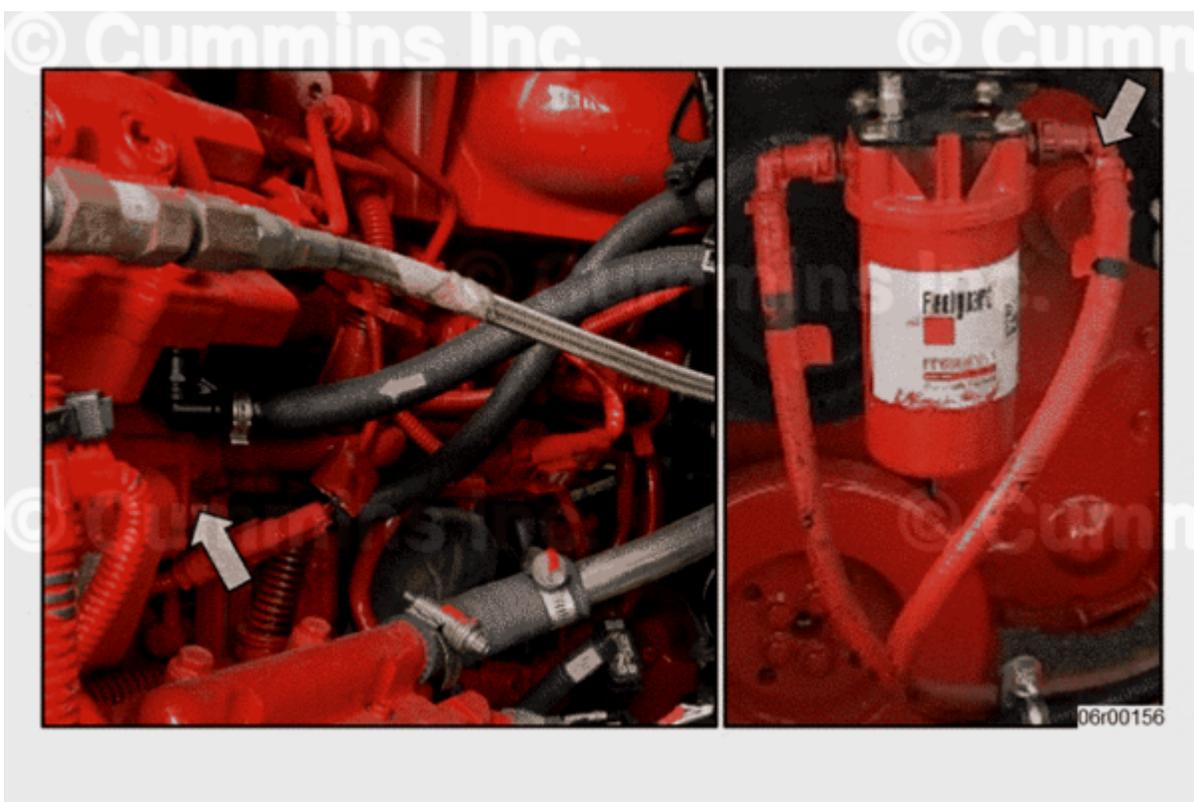


Figure 3, Indication of Fuel Pump Outlet and Fuel Filter Return Quick Connect Fitting Locations.

**Resolution**

- See corresponding Service Manual. Reference 006-024 in Section 6 for guidance on the initial checks, preparatory steps, and instructions on removing the fuel line quick disconnects.
- As part of the fuel line removal process, support clips, clamps, or ties may need to be removed. The style of fuel line support could vary by vehicle model. Additionally, the removal of adjacent components may be required to route the fuel line appropriately. See equipment manufacturer service information for the component(s) at issue prior to such removal.
- Replace the low-pressure fuel supply and return lines with the appropriate new fuel lines. Table 1 indicates the relationship between the existing fuel line part number and the new fuel line part number.
- Install new fuel lines in the same routing and orientation as the existing lines and verify all support and tie locations are installed appropriately.
- Fuel lines should be routed such that fuel could **not** leak onto hot piping under any operating conditions.
- Fuel lines **must** be run at least 5 cm [ 2 in ] from hot components.
- Fuel supply lines are to be routed as directly as possible from the tank to the engine, avoiding both upward and downward loops. Upward loops can act as air traps, which can cause erratic engine operation, and downward loops can act as water traps, which can freeze and block fuel flow.
- The fuel lines **must** be routed to avoid kinking.
- After completing the fuel line replacement, see corresponding Service Manual. Reference procedure 006-024 in Section 6 for finishing steps.

<b>Table 1, Service Parts</b>			
<b>Existing Part Number</b>	<b>Obsolete and Superseded</b>	<b>New Part Number</b>	<b>Line Length Meters [ ft ]</b>
5563641	Yes	5717302	1.22 meters [ 4 ]
5563642	Yes	5717303	1.83 meters [ 6 ]
5563643	Yes	5717304	0.61 meters [ 2 ]

## Document History

<b>Date</b>	<b>Details</b>
2021-8-20	Module Created

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**Last Modified: 25-Aug-2021**

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