

INSTALLATION INSTRUCTIONS

PRODUCT: AUXILIARY HEATED FUEL FILTER KIT FOR 2011-2016 LML DURAMAX

FPE-2022-81
November, 2022

FITMENT: 2011-2016 LML 6.6L Duramax

P/N: FPE-DMAX-HFFBA-1116

EST. INST. TIME: 2-3 Hours

KIT CONTENTS:

Item	Description	Qty
1	Heated fuel filter base assembly	1
2	Fuel inlet hose	1
3	Fuel outlet hose	1
4	Hose clamps – SAE #6	4
5	Donaldson Fuel Filter	1
6	Donaldson Water-In-Fuel (WIF) sensor	1
7	WIF sensor adapter harness	1
8	Fuel heater wiring harness	1
9	Mini fuse tap (for MY 2011-2014)	1
10	Micro fuse tap (for MY 2015-2016)	1
11	M8-25mm mounting bolts	2



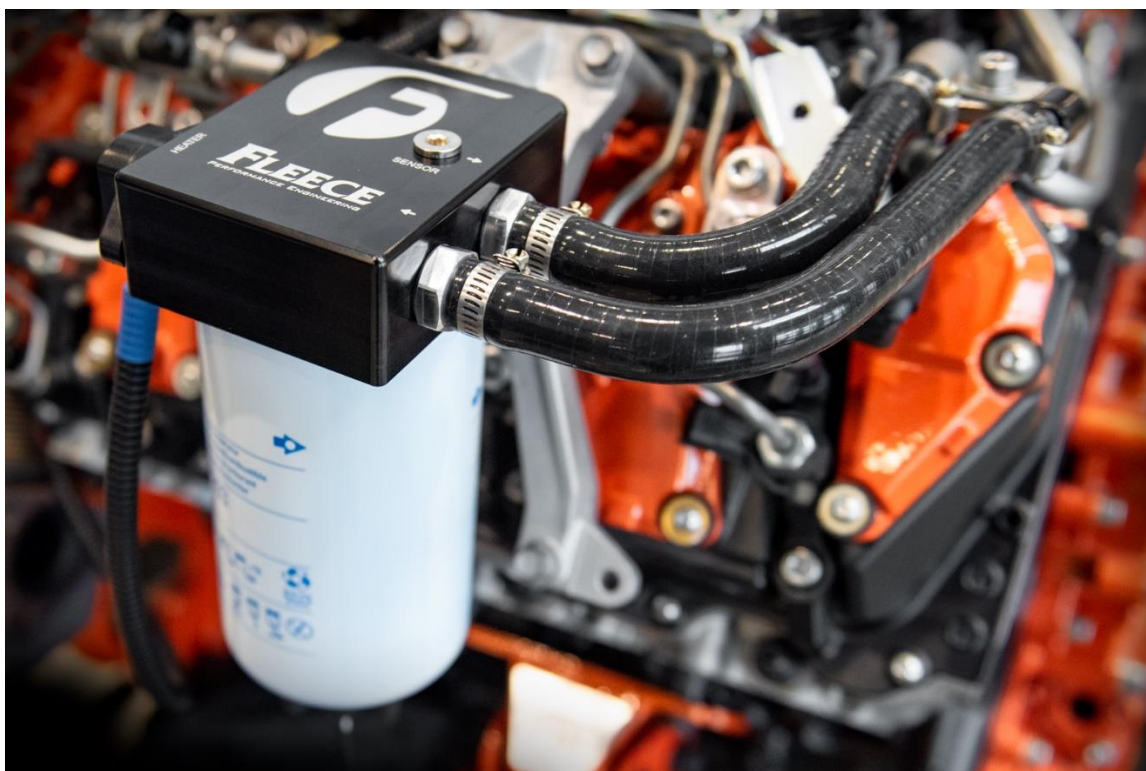
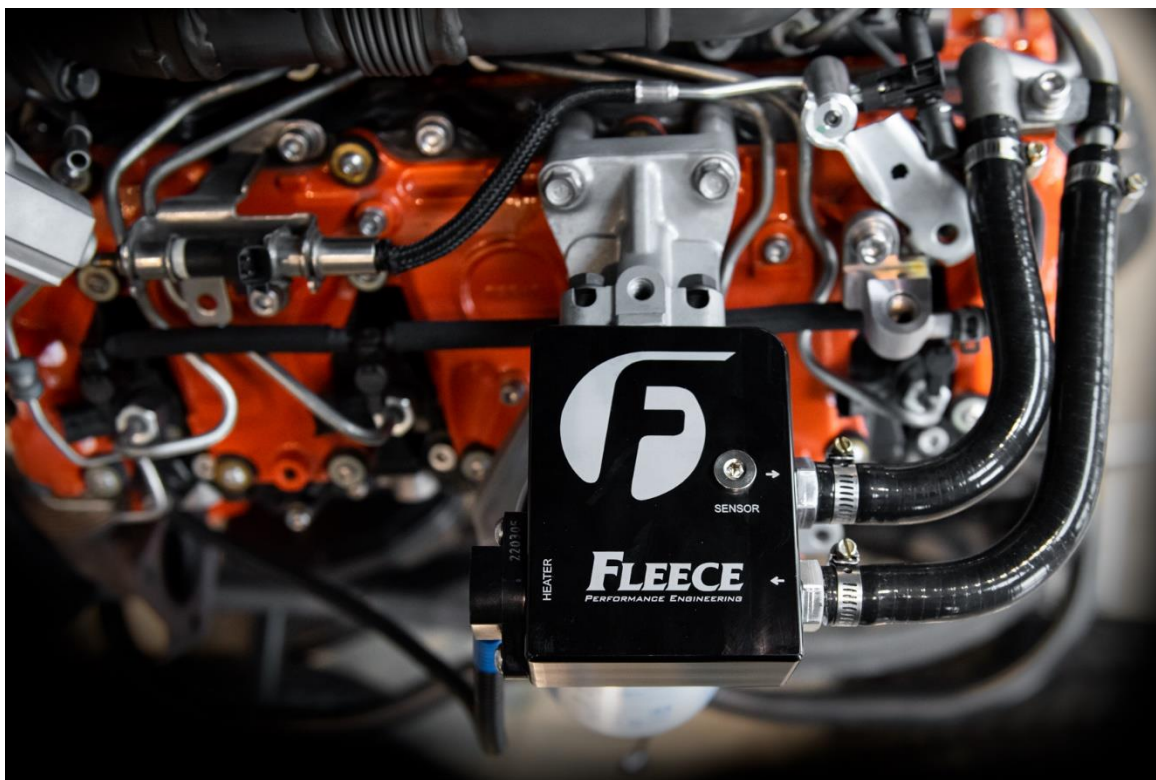
IMPORTANT:

- This kit is intended only for use in combination with a positive pressure lift pump such as the Fleece Performance PowerFlo (P/N's: FPE-34563 or FPE-35464) or alternative auxiliary pump.

WARNINGS:

- Clean all fuel lines before installation.
- The purchaser and end user releases, indemnifies, discharges, and holds harmless Fleece Performance Engineering, Inc. from any and all claims, damages, causes of action, injuries, or expenses resulting from or relating to the use or installation of this product that is in violation of the terms and conditions on this page, the product disclaimer, and/or the product installation instructions. Fleece Performance Engineering, Inc. will not be liable for any direct, indirect, consequential, exemplary, punitive, statutory, or incidental damages or fines cause by the use or installation of this product.

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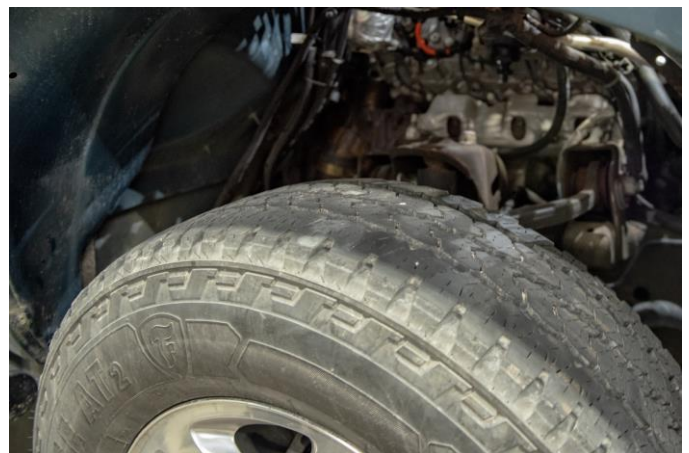
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STEP 1: Disconnect the main battery positive terminal

STEP 2: Disconnect the Mass Air Flow and Air Intake Temperature sensors. Remove the airbox and intake hose by loosening the two hose clamps on both ends of the intake hose. Remove the air box by loosening and removing the two Phillips screws that retain the airbox cover.

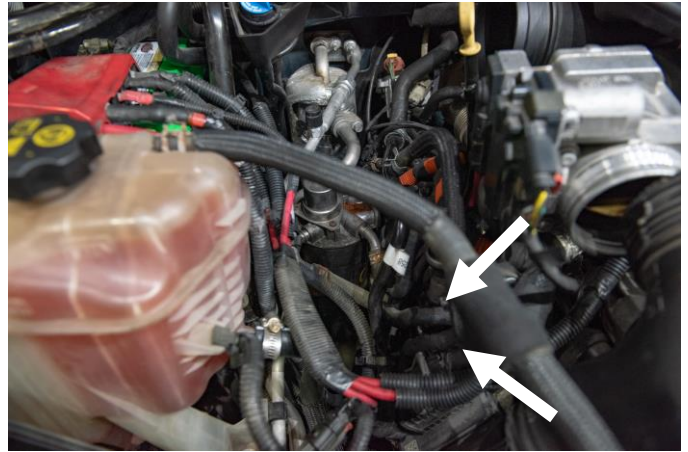


STEP 3: Remove the inner passenger side fender liner to allow for easier access in the removal of the factory fuel filter house.

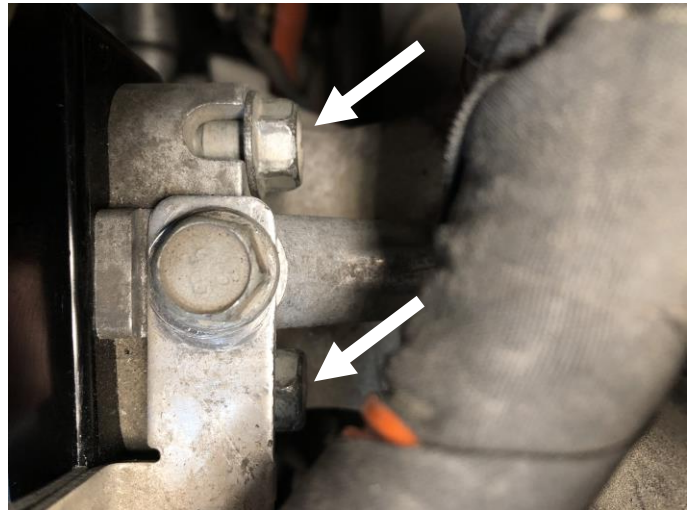


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STEP 4: Unplug the electrical connectors for the water in fuel (WIF) sensor. Remove the fuel filter fuel supply lines from the inlet and outlet of the fuel filter housing and from the hard lines located toward the front of the engine. Have a clean bucket or pan ready to drain the residual fuel into.



STEP 5: Remove the two 8 mm bolts with a 13mm socket that retain the factory fuel filter housing to the mounting bracket attached to the engine.

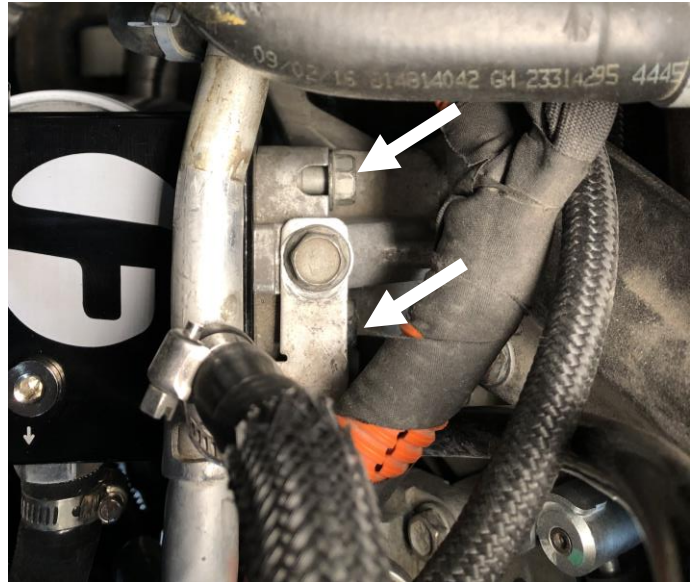


STEP 6: Remove the water drain from the new Donaldson filter and install the WIF/drain sensor into the base of the filter. Install the fuel filter onto the new heated fuel filter base assembly.

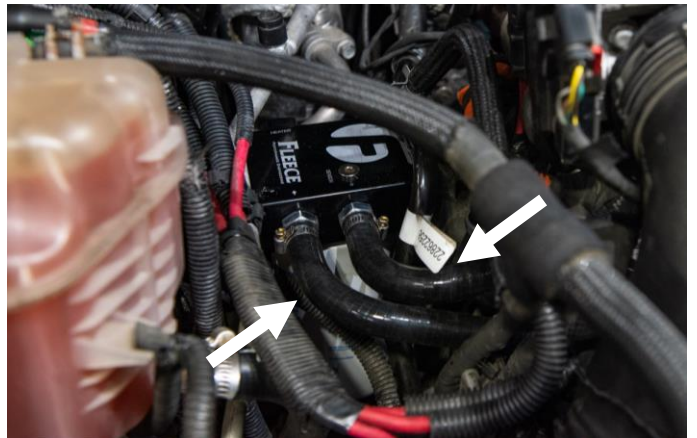


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STEP 7: Using the new M8 bolts provided in the kit, mount the filter block to the same bracket location where the original filter housing was removed from.



STEP 8: Install the two new preformed fuel hoses and retain them at each end with hose clamps provided. The short hose (fuel outlet) is installed closest to the engine. The longer hose (fuel inlet) is closest to the coolant tank. Reference the images on page 2 for a clearer image of the fuel hose connection points on the engine.

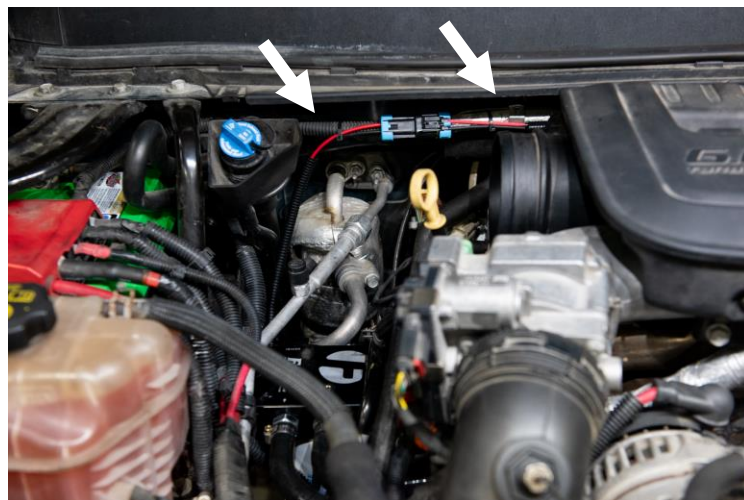


STEP 9: Connect the Water-In-Fuel sensor extension harness to the bottom of the filter and connect it to the chassis harness. This is most easily accessed from passenger side wheel well.



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STEP 10: Connect the fuel heater to the supplied harness. Route the harness along the top of the firewall to the driver's side of the vehicle to the battery. Use the provided zip ties to securely retain it.



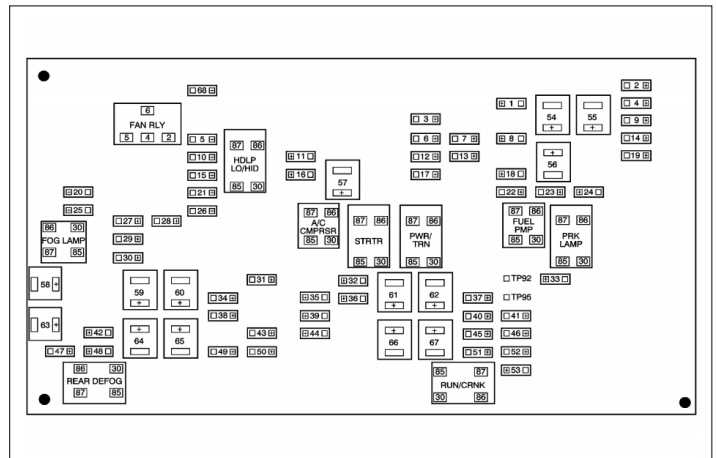
STEP 11: BATTERY CONNECTIONS: Route the harness to the battery. Connect the red lead directly to the battery (+) terminal and the black lead directly to the battery (-) terminal. Mount or secure the relay in the engine bay.



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MY 2011-2014 Fuse Box Layout

Fuse Block - Underhood Top View - Diesel



STEP 12: FUSE BLOCK CONNECTIONS FOR SWITCHED IGNITION SOURCE

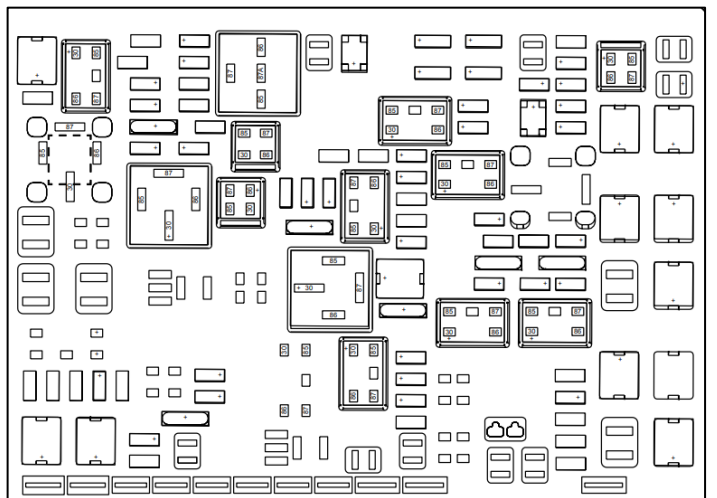
Remove the fuse box cover.

For MY 11-14: Using the MINI fuse tap, select any SWITCHED IGNITION source with a 5A rating. Remove the 5A fuse from the fuse block and install the removed fuse into the fuse tap on the fuse tap. Insert the mini fuse tap into the same location as the 5A fuse was removed. Connect the fuse tap lead to the red spade terminal of the heater harness.

For MY 15-16: Using the MICRO fuse tap, select any SWITCHED IGNITION source with a 5A rating. Remove the 5A fuse from the fuse block and install the removed fuse into the fuse tap on the fuse tap. Insert the mini fuse tap into the same location as the 5A fuse was removed. Connect the fuse tap lead to the red spade terminal of the heater harness.

STEP 13: Reinstall passenger side fender liner. Reinstall air intake box and reconnect all sensors. Turn on ignition and allow lift pump to pressurize the fuel system. Cycle the ignition off, then on again after 10 seconds. Check for any fuel leaks prior to cranking and starting the engine.

MY 2015-2016 Fuse Box Layout



The fuel heater will automatically turn ON and OFF at the following temperature points:

ON: 28.4F +/-5.4F

OFF: 48.2F +/- 5.4F

At typical fuel flow, a temperature increase of between 4-8F will occur across the heating element.

