

## INSTALLATION INSTRUCTIONS

### PRODUCT: LLY/LBZ/LMM DURAMAX POWERFLO LIFT PUMP

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**FITMENT:** 2004.5-2010 Duramax equipped Chevy/GMC trucks

**KIT P/N:** FPE-34789, FPE-34790

**ESTIMATED INSTALLATION TIME:** 2-3 Hours

**TOOLS REQUIRED:** 1/4" drive ratchet, 1/4" drive 8mm socket, 1/2" drive impact or ratchet, 1/2" drive 15mm socket, side cutters, large hammer, and punch or chisel.

#### KIT CONTENTS:

Item	Description
1	PowerFlo lift pump with float arm
2	Wiring harness with zip ties
3	O-ring
4	Warranty registration card



#### WARNINGS:

- Fuel lines must be clean before installation.
- Never run the fuel pump dry, always ensure there is fuel in the tank before powering the pump on for the first time.
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## INSTALLATION PROCEDURE:

STEP 1: Disconnect batteries and block the tires.

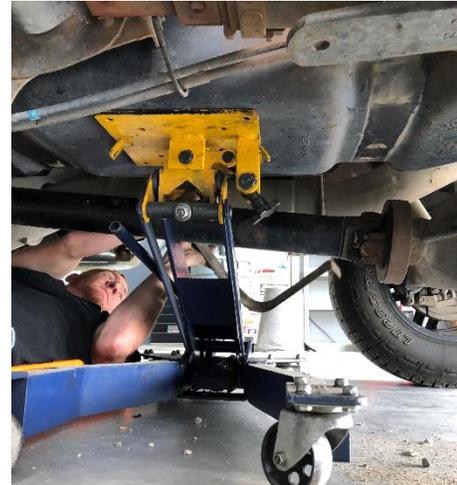
STEP 2: Disconnect the fuel filler line from the top of the fuel tank with an 8 mm socket.

STEP 3: Disconnect the fuel supply and return lines from the fuel cooler located on the front side of the fuel tank.

STEP 4: Support the tank with an adequate lift and remove the two, 15 mm bolts that retain the tank straps.

STEP 5: Lower the fuel tank to the ground. Disconnect the electrical connector from the top of the sending unit.

Move the tank into an area where you have clear access to the tank.



STEP 5: Clean all debris from the top of the tank around the sending unit.



STEP 6: Remove the fuel line quick disconnects from the sending unit using a 1/2" and 3/8" fuel line disconnect tool.

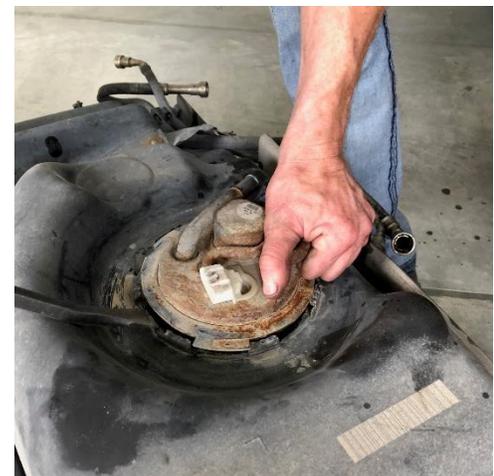


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*NOTE: Mark the orientation of the sending unit relative to the tank to ensure proper orientation of the PowerFlo pump during installation.*

STEP 7: Using a hammer and punch, rotate the retaining ring counter clockwise. Remove the retaining ring that holds the OEM sending unit into the tank and remove the sending unit from the tank by lifting it upward. Remove the sealing o-ring from the tank.



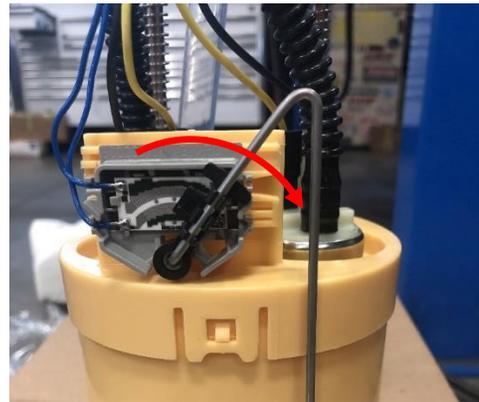
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STEP 8: Clean all debris from around the o-ring groove and tank sealing surface. Place your new o-ring supplied in the kit for the PowerFlo lift pump onto the top of the tank.



STEP 9: Install the fuel level float arm onto the PowerFlo lift pump by gently clipping the arm into the fuel level sensor. With the pump resting on a flat surface, press down on the cap to simulate the installed position of the cap - move the float arm up and down and ensure that the arm does not contact the pump wires or fuel tubes in the full up or full down position. If the tubes or wires contact the float arm, this will affect the fuel gauge reading. Check and confirm clearance before installing.



STEP 10: Install the PowerFlo pump assembly into the tank, use caution with the float arm and do not over-rotate the pump once installed.

*NOTE: Use caution when installing the pump to not damage the float arm. Do not rotate the pump once installed in the tank, you may damage the float arm or sending unit – align the pump before you place it into the tank.*



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STEP 11: Reinstall the original retaining ring using your hammer and punch by rotating it clockwise to the fully engaged position.

STEP 12: Install the fuel supply and return lines to the PowerFlo fittings.



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## WIRING HARNESS OVERVIEW:

Black Wire – To Battery negative (-) terminal  
Orange Wire – To Battery positive (+) terminal  
Red Wire – To Switched Ignition (+) in Fuse Block

The Switched Ignition line includes a fuse tap.

Gray Connector – To PowerFlo Lift Pump  
Black Connector – To OEM harness  
Relay – Provides switched 12v power to the PowerFlo pumps.

STEP 13: With the fuel tank out of the truck, neatly route the wiring harness from the engine bay to the OEM pump connection. Route the harness in a manner that it will not interfere with any moving parts and retain it with zip ties.

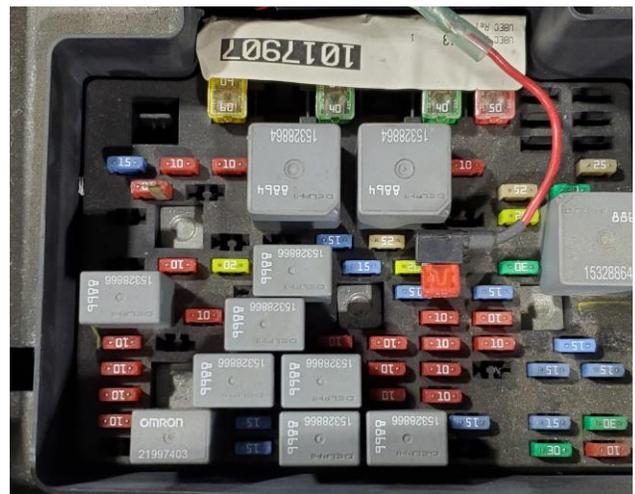
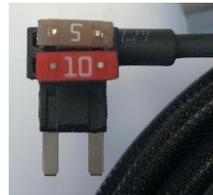
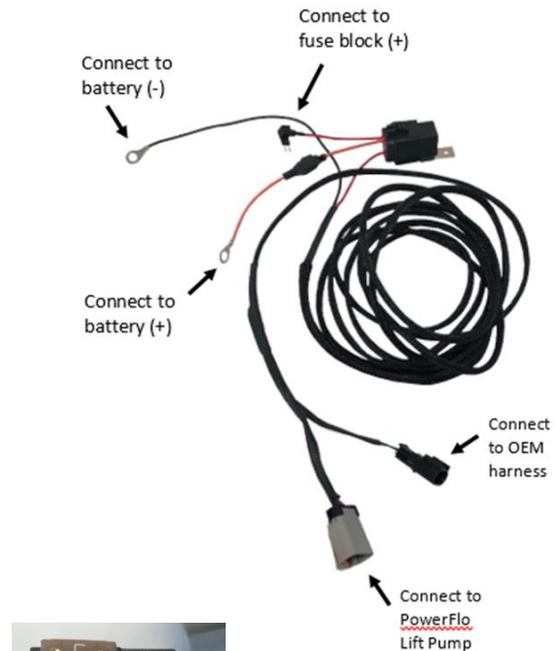
Mount or secure the relay in the engine bay near the fuse block.

*NOTE: Leave sufficient slack on the harness at the pump end to allow for plugging in the connection at the pump before raising the tank back up into position.*

STEP 14: BATTERY AND FUSE BOX CONNECTIONS  
Run the orange fused line to the positive (+) terminal of the battery. Run the black line to the negative (-) terminal of the battery.

*IMPORTANT: Never use a higher rated fuse than provided with the harness. If you experience a blown fuse always troubleshoot the problem before replacing the fuse. A blown fuse can be an indication of a short to ground in the harness, the relay, or inside the pump assembly.*

Select a 10A SWITCHED IGNITION source in the fuse block. Remove the 10 A fuse from the switched source and install the Fleece harness. Insert the fuse tap into the same location as the 10A fuse was removed. Install the 10A fuse that was removed from the panel into the lower location of the fuse tap.



STEP 15: Connect the electrical wiring harness to the OEM harness and PowerFlo lift pump.

STEP 16: Reinstall the fuel tank. Make the proper connections for the fuel lines, vent, fill tube, and electrical connection. Make sure the quick disconnect fuel lines are fully seated with retaining clips in place. When the quick disconnect fitting is fully seated you will not be able to pull it back off the pump fitting without releasing the retaining clip.

STEP 17: Reinstall all vehicle battery connections. The fused lead from the Fleece supplied harness should be connected to the positive (+) battery terminal and the black lead will should be connected to the negative (-) battery terminal.

STEP 18: Add sufficient fuel back into the tank to submerge the pump bucket.

*CAUTION: Never run the pump dry or without fuel in the tank.*

Visit <http://fleeceperformance.com/resources/> for the latest installation instructions.

For Technical Assistance contact Fleece Performance Engineering at 855-839-5040.