

## INSTALLATION INSTRUCTIONS

### PRODUCT: POWERFLO® LIFT PUMP FOR 2005-2024 RAM 2500/3500 PICKUPS

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**FITMENT:** 2005–2024 Dodge/Ram pickup models with Cummins 5.9/6.7

**KIT P/N:** FPE-34560 (MY2005-2009), FPE-34561 (MY2010 only),  
FPE-34562 (MY2011-2022) \*For MY 2020 and up; this pump will not work with the  
factory installed 50-Gallon fuel tank option – USE FPE-PF-CUMM-2024-50

**TOOLS REQUIRED:** 1/4" drive ratchet, 1/4" drive 8mm socket, 1/4" drive 9/32 socket, 1/4" drive 10mm socket, 1/2" drive impact or ratchet, 15mm 1/2" drive swivel or box end wrench, 1/2" drive 16mm deep socket, large hammer, large pry bar, punch and/or chisel.

#### KIT CONTENTS:

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



#### WARNINGS:

- Use of this product may void or nullify the vehicle's factory warranty.
- User assumes sole responsibility for the safe & proper use of the vehicle at all times.
- 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.
- All fuel lines must be clean before installation including return fuel lines to the tank.
- Ensure fuel tank is clean. If any debris is observed during installation the tank must be drained and cleaned prior to operation.
- Never run the pump dry or outside of fuel tank or submerged in fuel bucket. Operation of the pump without fluid to lubricate the pump gears will result in a pump failure.
- California residents: Affix the CARB EO decal included with the kit in a clearly visible location in the engine bay.

# INSTALLATION INSTRUCTIONS

THE FOLLOWING INSTRUCTION STEPS OUTLINE REPLACEMENT OF THE FUEL PUMP BY REMOVING THE BED. FOR INSTRUCTIONS ON INSTALLING BY REMOVING THE FUEL TANK, SEE INSTALLATION INSTRUCTION FPE-2018-1.

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## INSTALLATION PROCEDURE:

**STEP 1:** Disconnect batteries and block the tires.

**STEP 2:** Remove the tailgate, rear bumper, and taillights from the vehicle.



**STEP 3:** Remove the bolts that retain the bed of the truck to the frame. For the short bed model, there will be 6 fasteners. For the long bed model, there will be 8 fasteners.

*NOTE: Remove any other components that may be attached to the bed at this time, this includes gooseneck chain perch, electrical trailer harnessing, ground straps, etc.*



**STEP 4:** Disconnect the fuel filler neck from the bed.

**STEP 5:** Ensure any remaining items connected to the bed are removed and remove the bed from the frame.





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**STEP 6:** Clean the area around the sending unit with pressurized air or a vacuum to remove debris. Wipe the area around the pump with a clean rag. *during installation.*

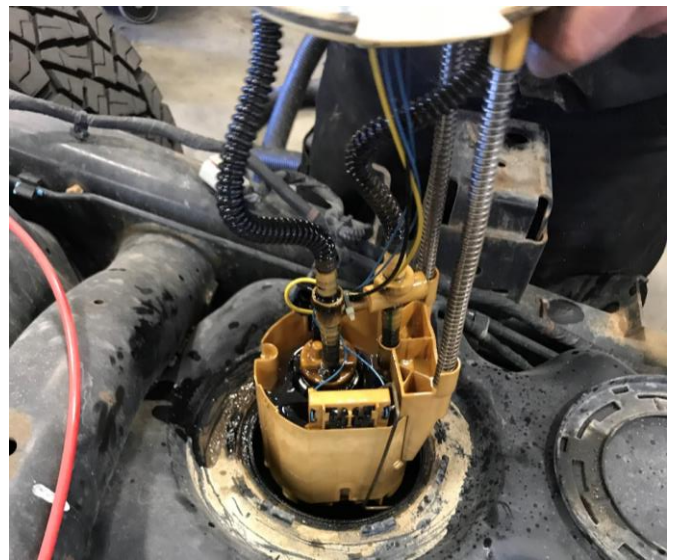
**STEP 7:** Remove the fuel supply and return lines by releasing the retaining clip and disconnect the electrical connector.

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

**STEP 8:** Using a hammer and punch, rotate the retaining ring counterclockwise. Remove the retaining ring that holds the OEM pump into the tank and remove the sending unit from the tank by lifting it upward. Remove the sealing O-ring from the tank and discard it. O-ring from the tank and discard it.

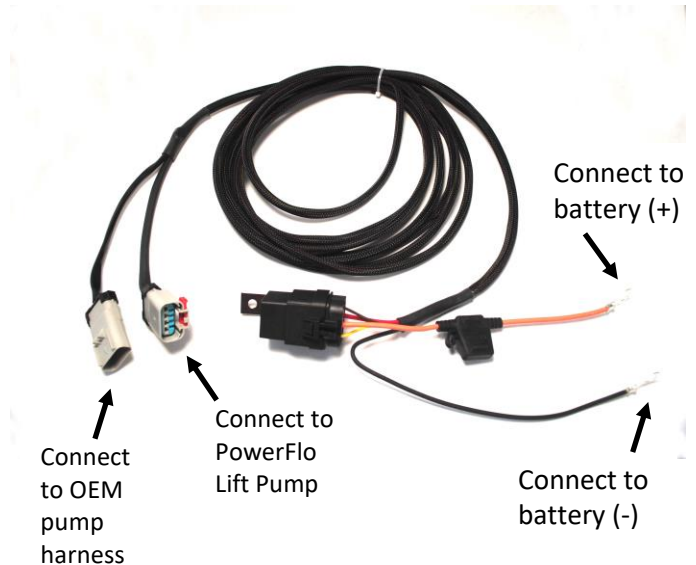
**STEP 10:** Clean the tank sealing surface and place your new O-ring supplied in the kit for the PowerFlo lift pump onto the top of the tank.

**STEP 11:** Connect the PowerFlo wiring harness to the factory harness.



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**STEP 12:** Neatly route the wiring harness from the driver side battery compartment 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 along the main electrical harness of the truck routed to the rear of the truck.

*NOTE: The Fleece supplied wiring harness is required to power the secondary pump and handle the additional current draw. Do not attempt to power the pump with the stock harness.*

*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.*

**STEP 13:** Connect the wiring harness leads to the proper battery terminals. The fused lead from the supplied harness should be connected to the positive (+) battery terminal and the black lead will should be connected to the negative (-) battery terminal. Securely mount the relay.

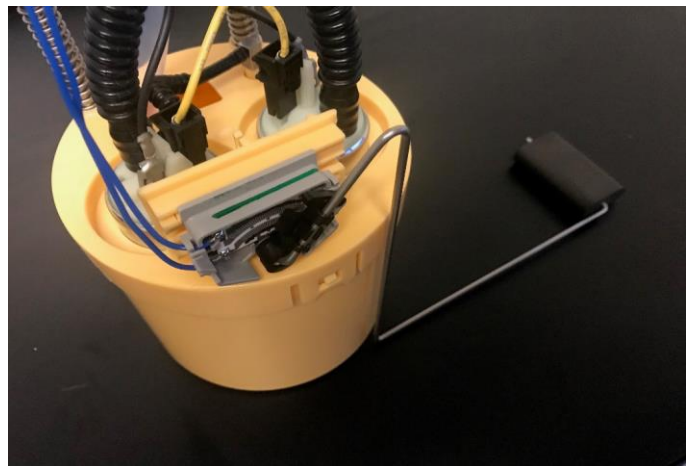
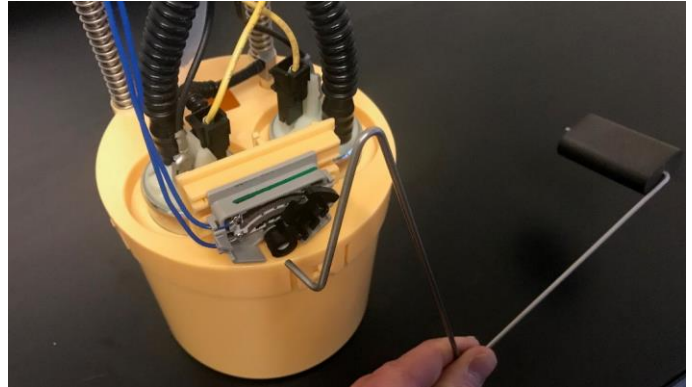




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**STEP 14:** Install the fuel level float arm onto the PowerFlo lift pump by gently clipping the arm into the fuel level sensor. Slightly compress the sending unit assembly downward to simulate it's installed position in the fuel tank. With the top slightly depressed, move the float arm up and down, ensure that the arm does not contact the pump wires in the full up or full down position.



**STEP 15:** Ensure proper orientation of the pump by aligning the alignment tab on the PowerFlo with its final position in the tank. Align it prior to installation to avoid need to rotate the pump after installation. Install the PowerFlo lift pump assembly into the tank and depress it by hand to allow for reinstallation of the retaining ring. Using your hammer and punch or chisel, rotate the retaining ring clockwise to the fully engaged position.

*NOTE: Use caution when installing the pump to not damage the float arm.*



**STEP 16:** 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:** Re-install the truck bed

**STEP 18:** Re-install the bolts that retain the bed of the truck to the frame. For the short bed model, there will be 6 fasteners. For the long bed model, there will be 8 fasteners.

**STEP 19:** Re-install the fuel filler neck to the truck bed.

**STEP 20:** Re-install any remaining items connected to the truck bed that were removed. Re-install the tailgate, rear bumper, and taillights.

**STEP 21:** Re-connect the battery.

**STEP 22:** Add sufficient fuel back into the tank to submerge the pump bucket. Prime the fuel system by turning the key (or cycling the start button to “RUN” without your foot on the brake) to “RUN” (not “START”). This will turn the lift pump on. Let the lift pump run for 10-15 seconds or until it turns off. Repeat this process 3-4 times to prime the system. Start the truck (it may crank a little longer than usual before starting). Check for leaks.

Operating pressure at idle will be 18-20 psi when measured at the CP3.

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

**STEP 23:** Affix the CARB EO decal included with the kit in a clearly visible location in the engine bay.



## WARRANTY REGISTRATION

Buyer MUST complete Warranty Registration Form within 30 days of purchase or warranty will be VOID. To complete the registration, go to: [www.fleeceperformance.com/resources/reg.html](http://www.fleeceperformance.com/resources/reg.html) . Buyer must accept the terms of the Limited Warranty including coverages and exclusions provided by Fleece Performance Engineering.