

## INSTALLATION INSTRUCTIONS

**SUBJECT: PowerFlo® Lift Pump for 2001 – 2004 LB7 Duramax**

FPE-2021-58  
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**FITMENT:** 2001–2004 LB7 6.6L Duramax Equipped Chevy and GMC 2500/3500 Pickups

**KIT P/N:** FPE-PF-GM-0104

**EST. INST. TIME:** 3 hours

**TOOLS REQ'D:** 1/2" and 3/8" fuel disconnect tools (included), 15mm deep socket and ratchet, 8 mm socket and ratchet, hammer, chisel or drift.

**SPECIFICATIONS:**

Replaces OE Part Number: AC Delco 89060639

Operating pressure: 6-8 psi at idle

**KIT CONTENTS:**

Item	Description	Qty
1	PowerFlo lift pump	1
2	Chassis harness	1
3	Tank flange seal	1
4	Level sender float	1
5	3/8" Fuel line disconnect tool	1
6	1/2" Fuel line disconnect tool	1



**WARNINGS:**

- Fuel system, including fuel tank, fuel supply, and fuel return lines must be clean before installation.
- Use of this product may void or nullify the vehicle’s factory warranty.
- 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.

## PROCEDURE:

**STEP 1:** Ensure that there is 1/4 tank or less of fuel in the fuel tank to allow for the tank to be easily lowered and maneuvered. Leave enough fuel in the tank to allow for the pump to draw fuel in immediately once installed.

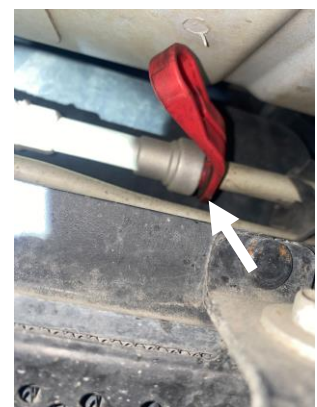
**CAUTION: NEVER RUN SENDING UNIT DRY OR WITHOUT FUEL IN THE TANK.**

**STEP 2:** Disconnect the electrical connector from the fuel level sending unit.

**STEP 3:** Loosen the 8mm hose clamp on the filler neck and remove the filler neck from the tank.

**STEP 4:** Remove the fuel lines at the front of the tank, and at the fuel cooler with a 3/8" and 1/2" fuel line disconnect tool.

*NOTE: Thoroughly clean the fuel line connection prior to removal with a rust preventative such as WD-40 or PB Blaster. Clean the connection with compressed air or a pick to ensure debris does not become lodged in the fuel line during removal. Have a drain pan or bucket ready to capture the fuel that will drain from the system when the lines are disconnected.*



**STEP 5:** Place a transmission jack or floor jack below the fuel tank and lightly support it. Remove the tank straps using a 15mm deep socket. With the tank straps removed, carefully support the fuel tank and lower it down to the ground.



**STEP 6:** Thoroughly clean off the top side of the tank around the sending unit to avoid getting any debris inside the fuel tank when the sending unit is removed.

**STEP 7:** Remove the fuel lines at the sending unit with the quick disconnect tools.

**STEP 8:** Using a hammer and a chisel or punch, remove the locking ring by tapping the ring counterclockwise.



**STEP 9:** With the fuel lines and retaining ring removed, clean any remaining debris away from the sending unit with a vacuum and rag and avoid debris entering the fuel tank when the sending unit is removed. Take note of the orientation tab on the sending unit cap, the new lift pump will orient in the same manner as the original.



**STEP 10:** Remove the OE sending unit and sealing flange from the tank. Discard the original seal ring.

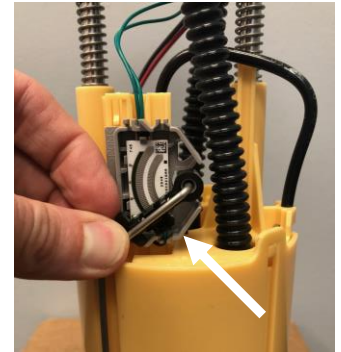
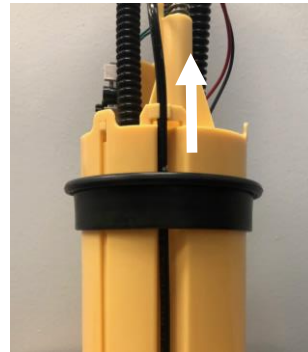
**STEP 11:** Thoroughly clean the tank surface where the new lift pump will be installed. Inspect the inside of the fuel tank for any debris. If any debris is present, the tank must be cleaned.



*NOTE: Debris related failures are **NOT** covered under warranty by Fleece Performance.*

**STEP 12:** Install the new flange seal included with the lift pump. Slide it up from the bottom of the pump - sliding it all the way up to the flange. Perform this step **before** installing the fuel level float arm.

Install the fuel level float arm onto the lift pump by gently clipping the arm into the fuel level sensor.



**STEP 13:** Install the PowerFlo pump assembly into the tank and reinstall the retaining ring using a hammer and punch by rotating it clockwise to the fully engaged position. Ensure proper orientation of the pump and fitting by aligning the alignment tab on the lift pump cap with the marks on the fuel tank.



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

**STEP 14:** Reconnect the fuel lines to the lift pump feed and return quick disconnect fittings. Connect the new wiring harness supplied with the lift pump to the original OEM harness connector and the other end to the PowerFlo lift pump.

**STEP 15:** Route the wiring harness along the frame rail of the truck to the engine compartment. Route the harness in a manner that it will not interfere with any moving parts and retain it with zip ties.

*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 16:** Raise the fuel tank back into its mounting location. Install the fuel tank hangers, reconnect the fuel lines at the front of the tank by the fuel cooler, and install the vent tube and tighten the hose clamp.

**STEP 17:** Complete the wiring harness installation in the engine bay. Mount or secure the relay. Connect the orange wire to the driver's side battery (+) OR to the Positive terminal for the jump start connection. Connect the black wire to the driver's side battery (-). Route and install the red wire and fuse tap as shown on the WIRING OVERVIEW and FUSE TAP LOCATIONS pages.

*NOTE: Install the relay in a location that will protect it from exposure to direct water spray.*



**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.

**STARTUP :** Turn the ignition key to RUN, but do not start the engine. Verify the lift pump is running and that there are no fuel leaks. Allow the pump to prime the system for 20-30 seconds prior to starting the engine.

## WIRING OVERVIEW:

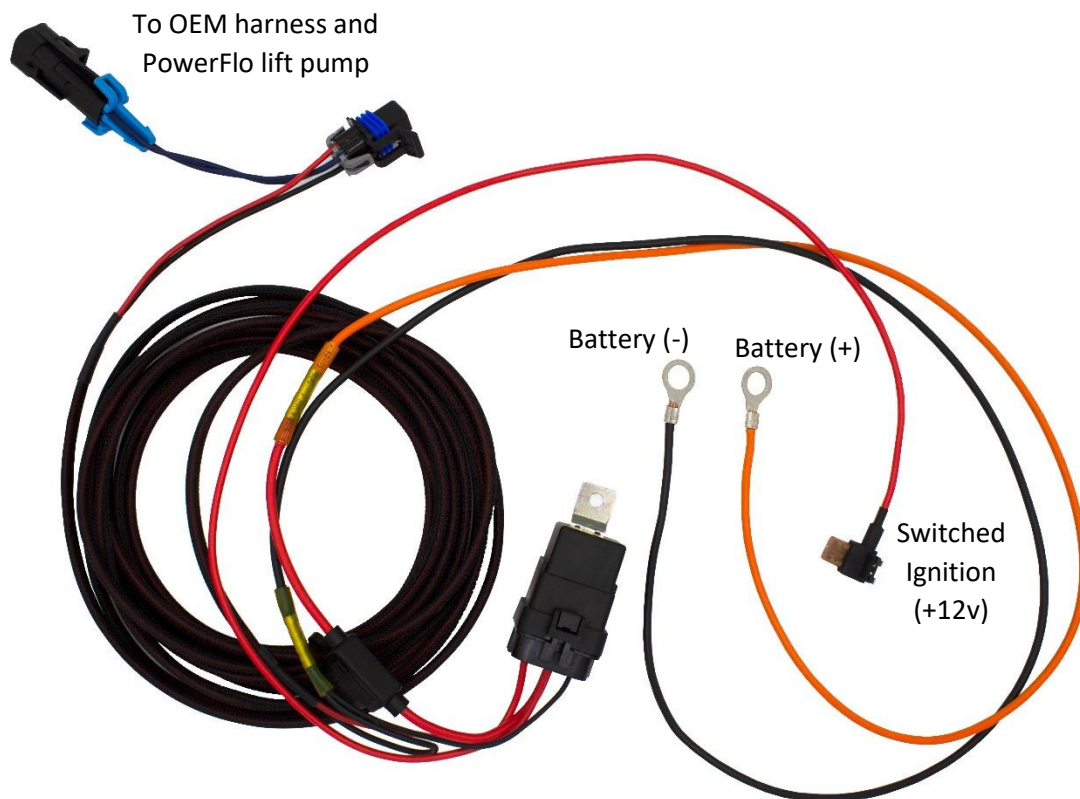
**Black Wire** – To Battery negative (-) terminal

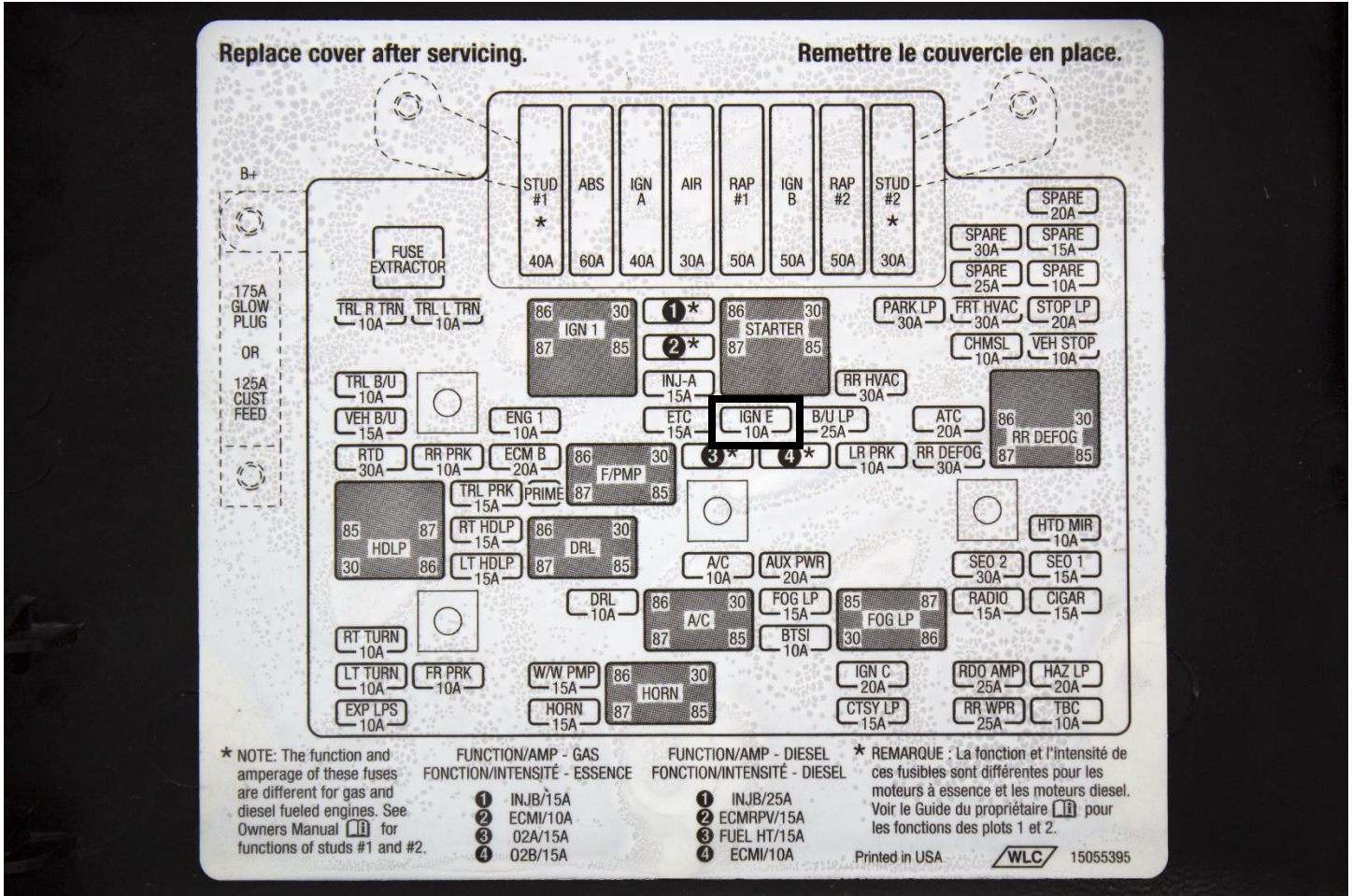
**Orange Wire** – To Battery positive (+) terminal

**Red Wire** – To Switched Ignition (+) in Fuse Block

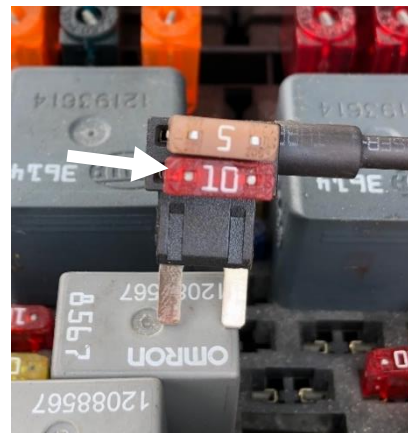
**Black Connectors** – To OEM harness and PowerFlo lift pump

**Relay** – Provides switched 12v power to the PowerFlo pump





Insert the original fuse from the fuse block into the relay tap below the 5A fuse that is provided in the fuse tap. Both fuses are required for the tap and existing circuit to function properly.



## WARRANTY REGISTRATION

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