

INSTALLATION INSTRUCTIONS

SUBJECT: SUREFLO® SENDING UNIT FOR 1999 – 2007 FORD POWERSTROKE

FPE-2024-126
October, 2024
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FITMENT: 1999–2007 Ford F250/350 7.3L and 6.0L Powerstroke equipped pickups

KIT P/N: FPE-SF-FMC-9907-SB and FPE-SF-FMC-9907-LB

EST. INST. TIME: 3 hours

TOOLS REQ'D: 10mm socket or wrench, 13mm socket or wrench, socket extension, 3/8" QD tool, 5/16" QD tool, Matco FTR 730 locking ring removal tool (or similar)

KIT CONTENTS:

Item	Description	Qty
1	SureFlo sending unit	1
2	Tank flange square cut O-ring	1
3	Level sender float	1
4	90 deg -8AN to hose barb fitting	2
5	-8AN to 3/4"-16 adapter fitting	2
6	90 deg -10AN to hose barb fitting	1
7	-10AN to 3/4"-16 adapter fitting	1
8	Adapter harness	1



IMPORTANT: SureFlo performance sending units are designed for use in conjunction with an aftermarket externally mounted fuel pump OR as a replacement sending unit for trucks originally equipped without an in-tank low pressure lift pump. SureFlo units do not contain a pump.

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 the fuel tank is at most $\frac{1}{4}$ full. If necessary, drain the tank to $\frac{1}{4}$ full and then proceed to reduce the weight of the fuel tank.

STEP 2: Park the vehicle on a flat and level surface. Disconnect the battery terminals.

STEP 3: Loosen the hose clamps on the fuel filler and breather tubes. Disconnect both tubes.

STEP 4: Remove the skid plate below the fuel tank (if equipped). See the image to the right for bolt/nut locations. Use a 10 mm socket or wrench.



STEP 5: Place a transmission jack or floor jack under the fuel tank to lightly support it. Remove the two bolts retaining the tank straps using a 13mm socket or wrench.



STEP 6: Lower the tank five to six inches and disconnect the electrical harness connector for the sending unit. Using a 3/8" quick disconnect tool, remove the fuel feed connector (blue quick connect fitting shown at right). Using a 5/16" quick disconnect tool, remove the fuel return connector (white quick connect fitting shown at right).

NOTE: Image shown with bed removed for clarity. Bed removal is not necessary to complete this installation.

STEP 7: Fully lower the tank and remove it from the vehicle.

STEP 8: Thoroughly clean off the top side of the tank around the sending unit to avoid getting any debris inside the fuel tank when the OE unit is removed.

STEP 9: Using a tank ring removal tool such as a Matco FTR 730, remove the locking ring from the top of the fuel tank. Remove the OE sending unit.

STEP 10: Remove and discard the existing O-ring from the tank and replace it with the new O-ring included in the kit.



STEP 11: Install the included fuel level float arm onto the new Fleece Performance SureFlo sending unit by gently clipping the arm into the fuel level sensor.

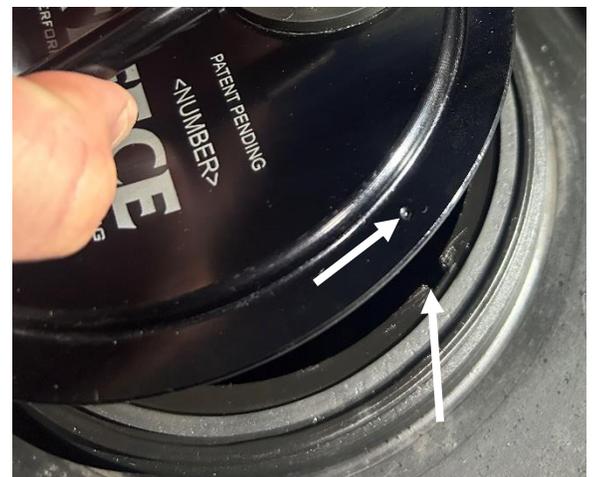


STEP 12: Install the new SureFlo sending unit into the tank as shown at right. See the application specific instructions below for proper clocking of your sending unit. Reinstall the locking ring.

NOTE: Use caution when installing the sending unit to not damage the float arm or put stress on the resistor card element. Do not unnecessarily rotate the sending unit once installed.



Model Years 1999-2003 7.3L Powerstroke: Orient the SureFlo sending unit to where the indented mark on the cap lines up with the notch in the tank flange as shown at right.



Model Years 2004-2007 6.0L Powerstroke: Orient the SureFlo sending unit to where the indented mark on the cap lines up with the dot on the tank as shown at right.



STEP 13: Place the tank back on the jack and lift the tank until it reaches around five to six inches short of its installed position. Reconnect the fuel lines. Connect the harness adapter to the SureFlo sending unit. Connect the OE electrical harness connector to the end of the adapter.

NOTE: REFER TO THE GUIDES ON PAGES 6-9 FOR PLUMBING AND FUEL ROUTINGS FOR YOUR SPECIFIC APPLICATION

STEP 15: Fully raise the tank to its installed position and reinstall the tank straps using a 13mm socket or wrench.

STEP 16: Reinstall the skid plate (if equipped) using a 13mm socket or wrench.

STEP 17: Reconnect the fuel filler and breather tubes and tighten the hose clamps.

STEP 18: Reconnect the battery terminals and cycle the ignition to on to draw fuel through the sending unit. Start the engine and check for leaks.



CONNECTING A FLEECE PERFORMANCE SUREFLO SENDING UNIT TO OE AND AFTERMARKET LIFT PUMPS

OE LIFT PUMP:

If you are utilizing the OE lift pump, all connections to the Fleece Performance SureFlo sending unit will be the same as the OE sending unit. Refer to the graphic on page 7 for connections made with the OE lift pump.

FASS FUEL SYSTEMS LIFT PUMPS:

If you are utilizing a Fass lift pump, you will need to remove both the feed fitting and auxiliary return plug. In the feed port (arrow pointing out from center of cap), install the -10AN to $\frac{3}{4}$ "-16 adapter (item #7) and the 90-degree -10AN to hose barb fitting (item #6). The pump feed will connect using the hose supplied in your kit from Fass. In the auxiliary return port, install the -8AN to $\frac{3}{4}$ "-16 adapter (item #5) and then the 90-degree -8AN to hose barb fitting (item #4). The pump return will connect using the return hose provided in your kit from FASS. Refer to the graphic on page 8 for connections made with a Fass Fuel Systems lift pump.

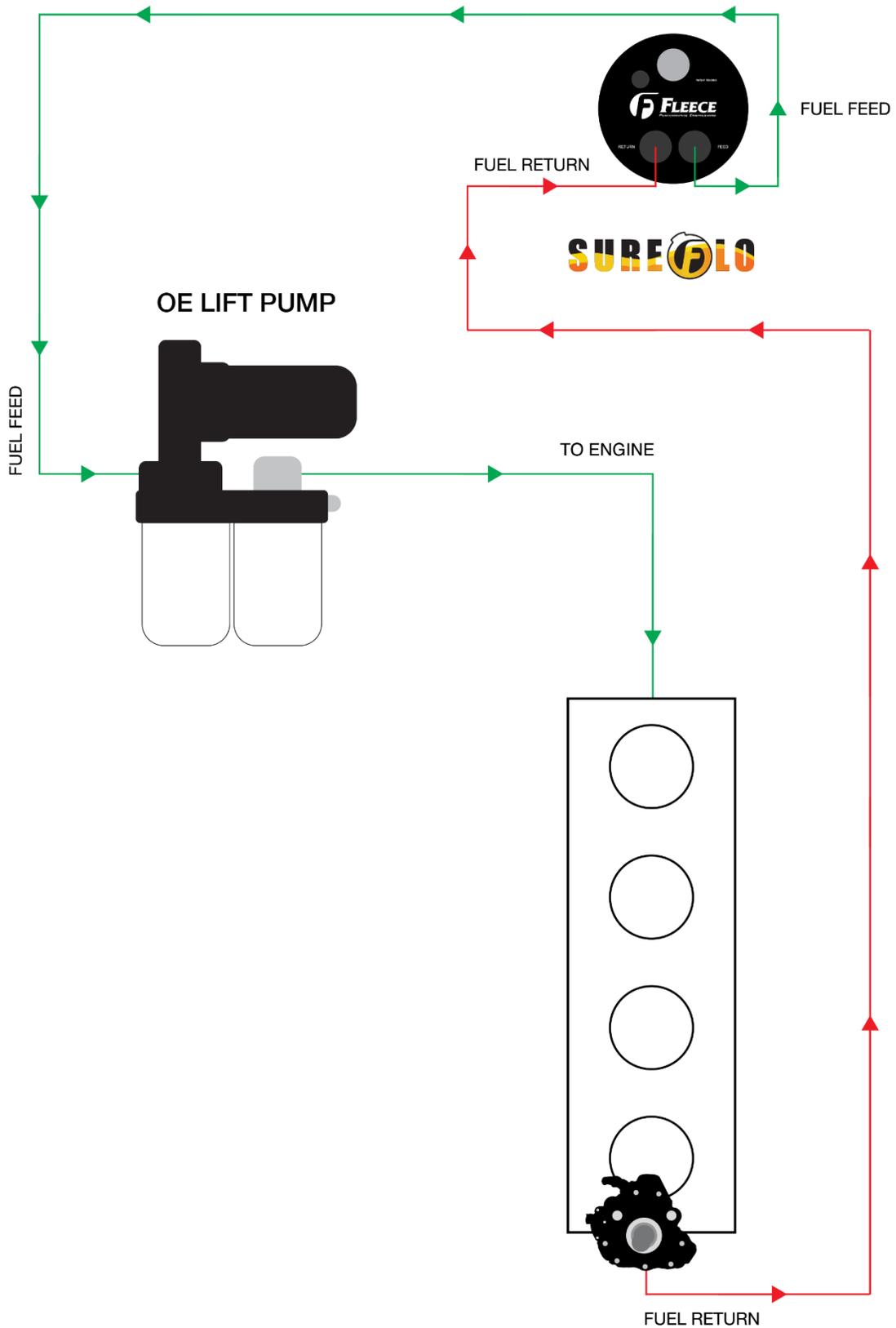
AIRDOG LIFT PUMPS:

If you are utilizing an AirDog lift pump, all connections to the Fleece Performance SureFlo sending unit will be the same as the OE sending unit. Although it is not required, the feed to the lift pump can be connected directly from the sending unit using the included AN fittings. If desired, remove the fitting from the feed port (arrow pointing out from center of cap) of the SureFlo and install the -8AN to $\frac{3}{4}$ "-16 adapter (item #5). Install the 90-degree -8AN to hose barb fitting onto the adapter (item #4). Using the hose supplied in your AirDog kit, connect the pump feed to the lift pump. Refer to the graphic on page 9 for connections made with an AirDog lift pump.

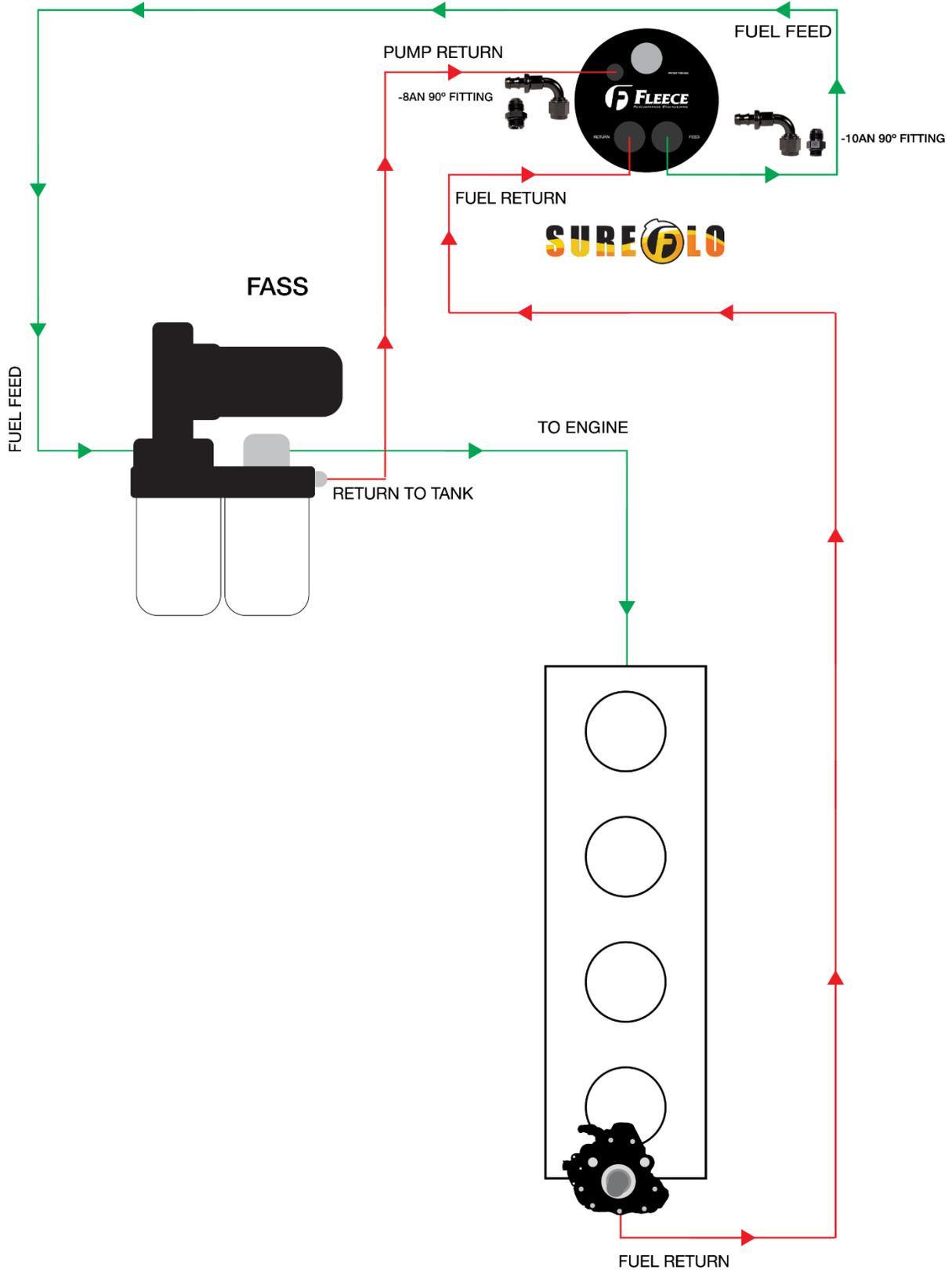
**AUXILIARY
RETURN**



FLEECE PERFORMANCE SUREFLO SENDING UNIT AND OE LIFT PUMP CONNECTIONS



FLEECE PERFORMANCE SUREFLO SENDING UNIT AND FASS FUEL SYSTEMS LIFT PUMP CONNECTIONS



FLEECE PERFORMANCE SUREFLO SENDING UNIT AND AIRDOG LIFT PUMP CONNECTIONS

