CNC Fabrication, LLC Fuel Bowl Relocation Kit 98.5-03 7.3L Powerstroke Installation Instructions.

PN: 422100

IMPORTANT

*Please read these instructions first to give you an overview, and continue to refer to the pictures as a reference guide. If you feel uncomfortable doing this install, please seek out a professionally trained diesel mechanic or someone very knowledgeable with hydraulics.

CONTENTS: PIC 1 Below

- 2qty 5/16" quick connect to 3/8" barb fittings (1 installs on the pump, other one on the return line)
- 1qty 1/2" barb to 1/2" AN/JIC brass fitting (installs on the OUTLET side of the fuel regulator to the engine)
- 1qty 3/8" JIC to -06 O-ring boss 90* fitting (installs on the return port on the bottom of the regulator)
- 1qty 3/8" barb to 3/8" AN/JIC brass fitting (installs on the 90* fitting on the bottom of the regulator)
- 1qty ½" JIC to ½" NPT Male fitting (installs on the OUTLET of the fuel filter head)
- 1qty -10 O-ring boss to ½" Female JIC fitting (installs on 1 side of the fuel regulator)
- 1qty -10 O-ring boss to ½" Male JIC fitting (installs on the other side of the fuel regulator)
- 2qty ½" NPT pipe plugs (these install into 2 of the 4 ports on the filter head depending on how you install)
- 1qty 3/8" brass barb to 1/2" Male NPT 90* fitting (installs on the INLET side of the fuel filter head)
- 1qty Fuel Regulator
- 1qty Fuel Filter
- 1qty 5/16" Quick Disconnect Fuel Line Tool
- 1qty Fuel filter mounting head
- 3qty 8mm X 20mm fuel filter mount head bolts
- 4qty 8mm X 100mm frame mount bolts with top lock nuts
- 1qty Fuel filter head frame mounting plate
- 1qty Frame mount back plate
- 10ft of 3/8" fuel/transmission rated hose
- 10ft of 1/2" fuel/transmission rated hose
- Zip ties

Tools needed:

2 small to medium adjustable (Crescent) wrenches or applicable end wrenches (preferred), hose cutter (PEX hose cutters work great), fuel/oil filter wrench, applicable allen wrench set.

NOTE:

It is recommended that you use Loctite brand 545, or natural gas/propane rated thread sealant ONLY on the fittings with NPT pipe threads. You can use Teflon tape but be very careful not to get any tape over the opening of the fitting, and make sure you wrap the tape on the fittings in the correct direction as IT DOES MATTER. Thread sealant does NOT go on AN/JIC/O-ring boss threads. Use WD-40 or some type of light oil to lubricate the o-rings on the applicable fittings before installing. Do not over tighten any fittings to risk cracking the filter housing, or the swivel nuts on the ends of the brass fittings.

You can mount this kit on the inside or outside of the frame rail. Depending on what fuel tank you have, whether 4WD or a 2WD truck will determine if you have enough room on the inside of the frame rail. The example pictures shown in the instructions is a

4WD Regular Cab Long bed truck with factory fuel tank, so the mount had to be on the outside of the frame rail because the transfer case is too close to the fuel tank to allow enough room to mount this kit.

The fittings on the fuel filter head can be installed a few different ways, so be sure you follow the arrows marked on the top of the fuel filter head to make sure the fuel flows in the proper direction through the filter. These pictures in these instructions are just one example. If you have any questions, please contact us at orders@ohmotorsports.com or by phone 419-636-0000 option #2.

INSTALLATION INSTRUCTIONS

1. Chock the tires and remove the battery ground clamps for safety.

2. Disconnect the fuel supply hose off of the factory fuel pump outlet side by using the fuel disconnect tool. There is a check valve on the inlet of the pump so minimal fuel will come out of the hose once disconnected. Next, use one of the 5/16" quick connect by 3/8" barb 90* fittings and push it onto the fuel pump outlet port and be sure you hear the ***click*** when it's pressed onto the outlet port of the fuel pump. The factory fuel supply line from the pump to the engine is no longer used. It can be left on the truck or removed. See PIC 4 for reference.

3. Disconnect the factory return line (typically the one with the gray plastic loom) using the 5/16" fuel line disconnect tool. There will be some residual fuel spill out of the line once disconnected. Be careful while bending it so you DO NOT kink the factory tubing. Carefully bend the factory hard line to about a 90* bend so you will have easier access during assembly. Install the other 5/16" quick connect by 3/8" 90* barb fitting onto the end of the factory return line. Be sure you hear the ***click*** when the fitting is pressed onto the line. The factory return line from the engine down towards the pump is no longer used. It can be left on the truck or removed. See PIC 3 for reference. Don't worry about installing the new hose at this point.

4. Determine if you are going to install this kit on the inside or the outside of the truck's frame rail. Some fittings may have to be in a different port due to where you install it. Assemble the fuel filter head with the supplied fittings and use Either PIC 2 (outside of the frame rail) or PIC 6 (inside of frame rail) for reference. Install the inlet brass 90* fitting into the filter head before you install the straight outlet fitting. If you don't do this, the 90* fitting will hit the straight fitting. When installing the o-ring boss fitting on the bottom of the regulator, ONLY turn the fitting into the regulator 3-4 turns, orient the fitting in the direction that makes the most sense, then use the jam nut to seat the o-ring. You may have to hold the fitting while tightening the jam nut so the fitting does not rotate. Note if you are installing the kit on the outside, rotate the regulator 90* so the hose coming off the return port is easier to route.

5. Now that you have all the fittings installed on the filter mount and regulator, use the 8mm X 20mm bolts to fasten the filter head assembly to the mounting block that is welded onto the bracket.

6. Put 2 (of the 4) 8mm X 100mm long bolts through the top 2 holes of the bracket without the nuts, and set on the top of the frame rail. This will help you stabilize the assembly so you can put the backing plate on and then hand thread on the nuts. Do not tighten the nuts yet. Now install the bottom bolts and nuts. Due to the frame being tapered, and it is also wider on the top vs the bottom, use the bottom holes that will align the bolts to level as close as possible. Now tighten the nuts evenly, but do not overtighten and severely bend the brackets. The nuts are "top lock" style, so they will feel like they are starting to cross-thread. These are better than Nylok nuts as the Nylok will loosen and wear out if they are removed a few times.

7. Install the 3/8" hose onto the 90* Pushlok barb fitting that was installed in step 2 coming off of the fuel pump. Use some WD-40 or PB Blaster to spray a small amount inside the end of the hose and some on the brass hose barb to help slide the hose onto the barb. Route the hose appropriately to avoid kinking. Hold the other end of the hose up to the 90* brass Pushlok barb fitting to mark your cut. Cut the hose, and do the same as above to push the hose onto the brass Pushlok barb fitting. Refer to PIC 4

8. Install the 3/8" hose onto the 90* Pushlok fitting that was installed in step 3 for the return line in the same way as step 7. Refer to PIC 3

9. Install the 1/2" hose onto the brass outlet fitting and route the hose along the frame rail up into the engine bay to the 90* Pushlok barb fitting supplied with the valley mount line kit in the same way as step 7 and 8. Be sure to route the hose away from the exhaust manifold and steering shaft and fasten with zip ties. You can use wire loom, or cut some of the left over

½” hose length way to open it up like wire loom and zip tie onto the supply hose to protect it if needed. Use the supplied zip ties to hold the fuel lines to the brake or stock hard fuel lines to keep them from rubbing. Refer to PIC 7

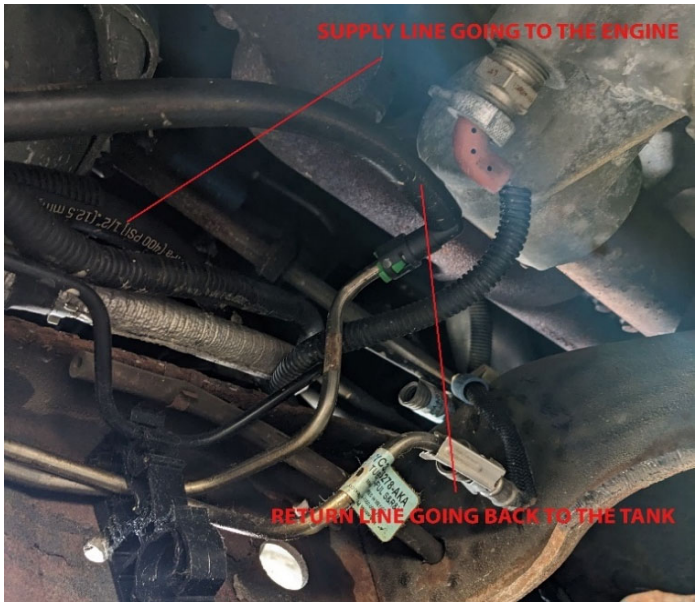
10. Before re-connecting the batteries and turning on the fuel pump, be sure the hoses are bottomed out on the Pushlok fittings to avoid the hose popping off. You may have to crack open the 90* fitting at the valley mount block to bleed any extra air out of the line to be sure most of the air is out. Any other air will quickly get purged through the injectors within the first seconds upon startup. Before installing the fuel filter, be sure to fill the filter up with fuel and lubricate the o-ring on the filter.

11. Follow the instructions that came with the regulator to set the fuel pressure by installing a gauge in the test port on the regulator. If you already have a fuel pressure gauge installed on your truck, then use that to set your pressure. Set the pressure somewhere between 60-65psi. The boost reference port will need to have the supplied barb fitting installed and we recommend (not necessary) you cut about a 12” piece of hose to go on the barb to keep any water or debris from going into the back side of the diaphragm inside of the regulator to avoid any debris getting up into the regulator. Refer to PIC 6 or PIC 2

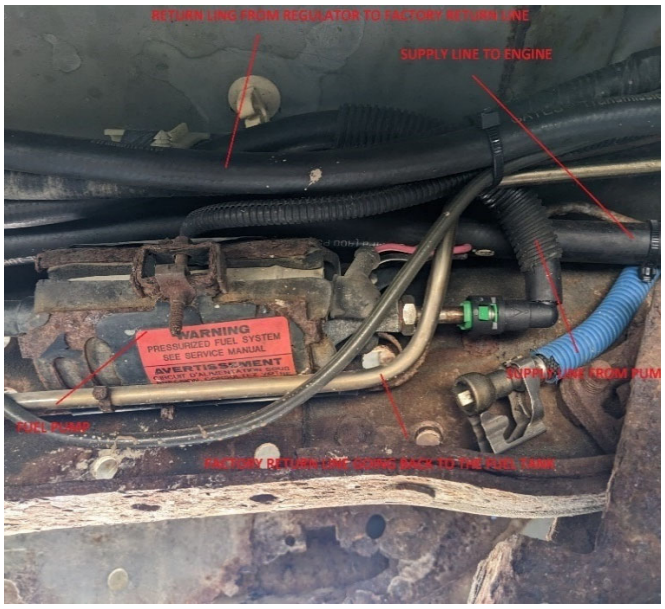
PIC 1

PIC 2

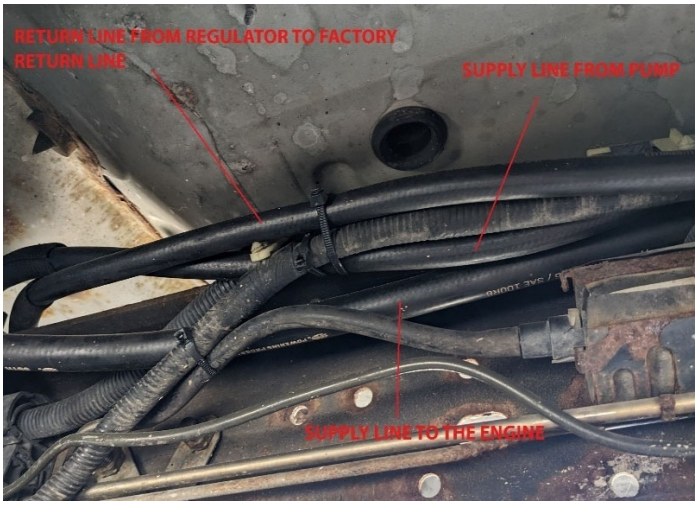
PIC 3



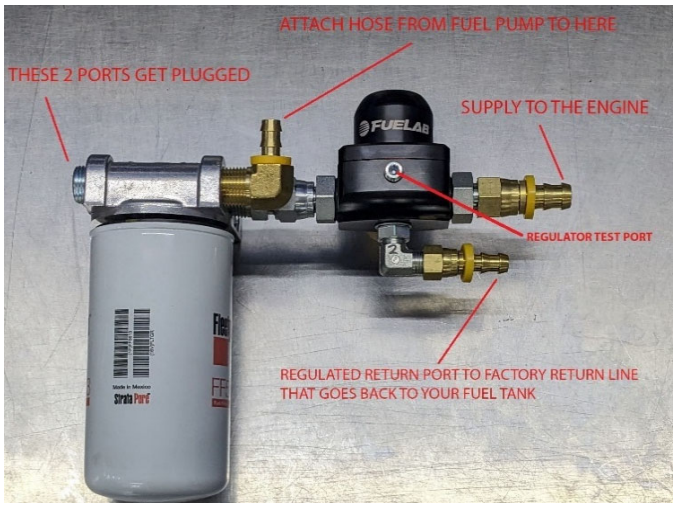
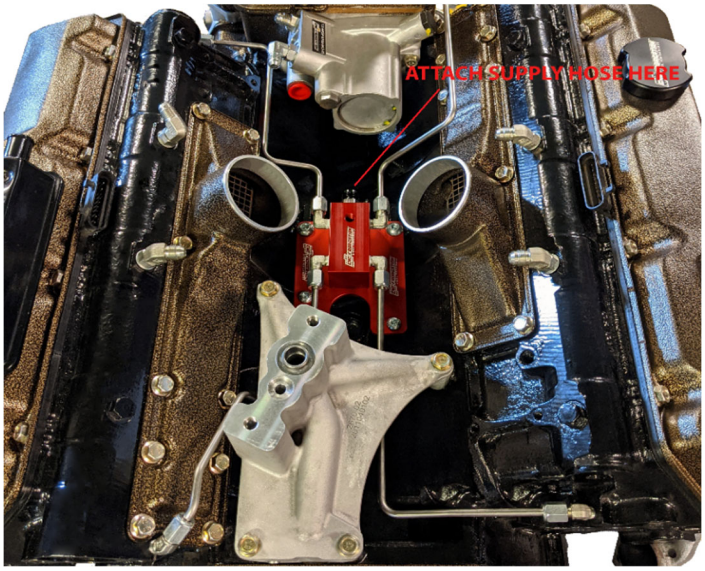
PIC 4



PIC 5



PIC 6



PIC 7