

INSTALLATION MANUAL

ADJ FUEL PUMP SERIES

Standard Pickup Truck



APPLICATION:

FA F17 220G (220GPH @ 55psi)

Ford Powerstroke 6.7L
bypassing the factory Lift Pump
Standard Pickup Truck
2011-2012



PICKUP

FASS[®]

Diesel Fuel Systems

ENGINEERED EXCELLENCE

Dear Valued Customer,

“Made in the USA” is not just a slogan at FASS; it’s what we live by! FASS is not only assembled in the USA but 98%+ of the FASS product is manufactured in the USA, helping to employ Americans and strengthen America. At FASS, we scrutinize our suppliers and demand the highest quality American-made components. However, this does come at a price, which is one of the main reasons FASS products are more expensive than the competition. Remember price does not dictate quality but quality does dictate price! Here at FASS, we believe it’s worth the commitment and will continue this practice to support America! Our competition is doing exactly the opposite by using foreign-made components.

Building extremely “High-Quality” fuel products is our business. We concentrate all of our efforts in this arena. No one else is as specialized as FASS in what we do! This is one of the ingredients to insure you are running with the “Highest-Quality” fuel system in the world! We have implemented very rigorous testing procedures to provide the “Highest Quality” we have become known for. Not only is our product superior, but customer satisfaction is #1 at FASS. It is our goal to provide the best service possible. Our confidence is evident in the products we make as each product is backed by an industry leading warranty!

Our R & D department, in conjunction with our Dealer Support department, is continually searching for ways to improve quality, expand our product line, and provide superb support to our network of dealers so our customers’ needs and expectations will be exceeded.

To help insure you receive the proper system and customer support at the local level, FASS has a VIP and Authorized Dealer network representing FASS products. This is one reason you must purchase through a dealer to comply with our warranty policies. **If you do not, there is no warranty!** We recommend you go to www.FASSride.com, click “Find A Dealer”, put in their ZIP code, select the type of dealer, and see if the company you purchased from is listed. If they are not, put their phone number in the field below the ZIP code field to see if they are listed. Below these two fields is a list of “Terminated/Unauthorized” dealers. You may want to review this list. If the company is not listed or is on the “Terminated/Unauthorized” list, we suggest you return the product immediately to that dealer and call FASS. We’ll recommend you to the nearest dealer.

VERY IMPORTANT: Make sure to fill out your product registration form and return the original form to FASS Fuel Systems within 30 days of purchase accompanied with a copy of the purchase receipt. Complying with these guidelines will qualify you for the Extended Warranty!

See the back of Installation Manual for full Limitation of Warranty. In the event that the buyer does not agree with this agreement: the buyer may promptly return this product, in a new and unused condition, with a dated receipt, to the place of purchase within thirty (30) days from date of purchase for a full refund less shipping.

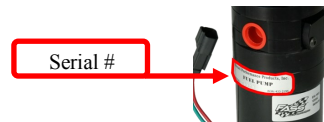
The installation of this product indicates that the buyer has read and understands the Limitation of Warranty agreement and accepts its terms and conditions.

!WARNINGS!

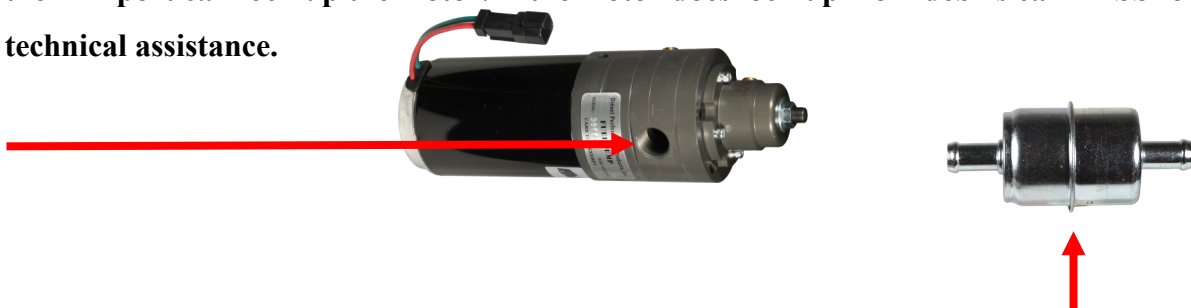
- Read all instructions before starting installation of this product!
- Installing the improper FASS Pump can cause *severe* engine damage.

FASS	Recommended Application
FA F17 220G	Powerstroke (6.7L) 2011 - 2016 with extreme horsepower modifications

- Secure vehicle from ROLLING!
- Use caution when drilling. Steer clear of any electrical wires , air lines or other damageable components.
- Consult vehicle's manufacturers' instructions concerning the electrical system before attempting any electrical connections.
- Be sure that the serial # on this installation manual matches that of the outside of the box.



- Flush and clean all brass fittings and fuel line from debris.
- Keep debris from entering the internals of the system during installation. Getting debris in the "T" port can lock up the motor. If the motor does lock up from debris call FASS for technical assistance.



- Be sure to utilize the inline fuel filter included in this kit, or the equivalent, to prevent a motor lock up.
- Wear safety glasses when operating power tools such as drills and grinders or when using a punch or chisel.
- Properly secure lines to prevent chaffing.

**BEFORE STARTING THE INSTALLATION PROCESS LUBRICATE THE
BED BOLT WITH WD-40 TO HELP WITH INSTALLATION**

INSTALLATION MANUAL

Follow these steps to ensure a simple installation of your new FASS ADJUSTABLE FUEL PUMP

1. *Read the installation manual completely before attempting installation. The installation of this product indicates that the buyer has read and understands the limitations of the FASS manufacturers warranty agreement and accepts the responsibility of its terms and conditions.*
2. Inventory the package components. Notify the place of purchase immediately of any parts missing or damaged.
3. The installation recommendations contained herein are guidelines. Use good judgment and take into consideration your vehicles' accessories.
4. For best results in accuracy and efficiency (due to training, communication, and our relationship with our dealer network), we recommend a ViP FASS dealer for the installation. They are prepared to install the FASS fuel pumps with the most efficiency. If a situation/problem arises during the installation, they are the most prepared for that situation/problem. DPPI is not responsible for any installation mistakes.
5. If you have any questions or concerns that can not be addressed with your dealer, email or call FASS.
6. If any installation procedure is uncertain, contact FASS technical support.

Email techsupport@FASSride.com with the following information:

- Your Name, address and daytime phone number
- Model **(FA F17 220G)**
- Serial Number
- Last 6 of vehicles' VIN
- Date of purchase
- Nature of Your Concern

Call customer service; [636-433-5410](tel:636-433-5410) with the following information:

- Model **(FA F17 220G)**
- Serial Number
- Last 6 of vehicles' VIN
- Date of purchase



ADJUSTABLE FUEL PUMP SERIES

220 GPH

55 PSI (APPROXIMATELY)

A fuel pressure gauge is highly recommended to identify fuel filter life and to prevent engine damage!



INSTALLATION

- Step 1: Install Electrical Harness
- Step 2: Prepare Suction Line
- Step 3: Mount Fuel Pump
- Step 4: Install Fuel Line
- Step 5: Check/Set Pressure
- Step 6: Check Installation

CONTENTS



FF-3248



THB-1001

BHB-1001



MP-9071



FPB-2005



FL-1002 x9'



WH-1005

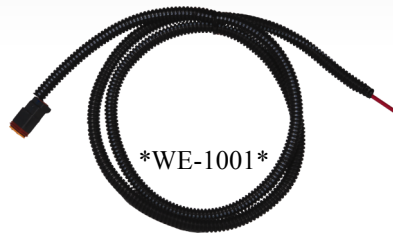
MOUNTING PACKAGE CONTENTS



RS-1002



BHF-1002



WE-1001



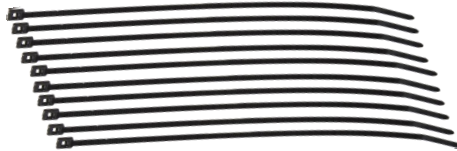
46044



RVC-38



10-300



Cable Ties



PL-1005



RVC-12



DB-4646



PLB-1212



PL-1004



1/2" Plug



Ring Terminal



① Hex Bolt 1/2" -20 x 1 1/2"



BHN-1001



LW-1001



OR-223



HC-1001



① 1/2" Washers



46260



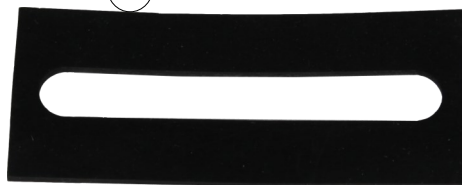
ST-1005Px16"



④ 1/4 - 20x1.75"



1/4" Nut



RS-2001



1/4" washer



② 1/4 - 20x1.5"

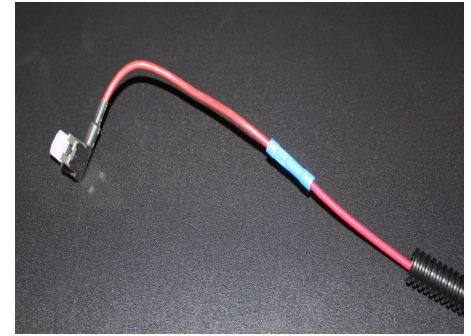
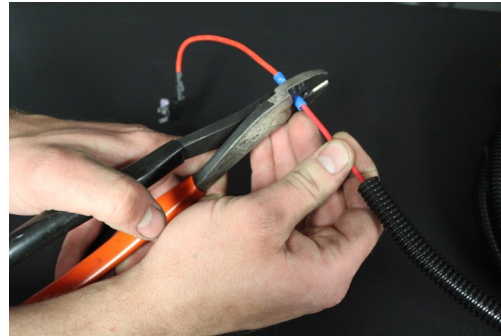
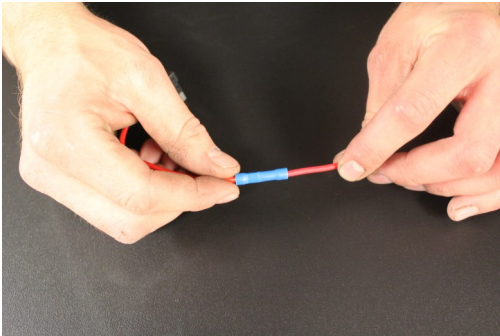
STEP 1: INSTALL ELECTRICAL HARNESS

The installation of the electrical harness is done first, allowing power to be applied to the pump for lubrication purposes later in the installation.

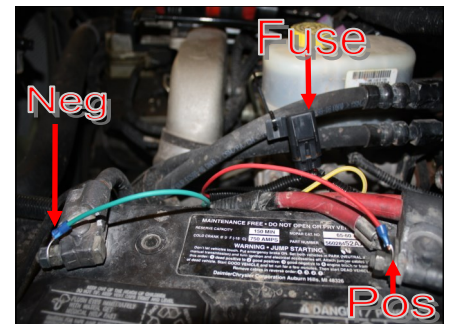
- A. Using wire stripping tool remove excess insulation off the 46044 and the WE-1001.



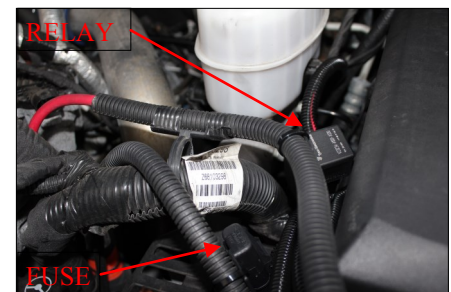
- B. Place wire from 46044 and WE-1001 into butt connector. Using crimping tool connect 46044 and WE-1001 with butt connector. Install 46260 to 46044 bottom slot (opening that is near the spade). Route 46044 lead through the fire wall using existing grommet.



- C. Crimp the ring terminals to the red and green wires of the WH-1005 Wire Harness. Attach red wire to the positive terminal of the battery and the green terminal to the negative terminal. **The use of a corrosion preventative on electrical connections is recommended.**



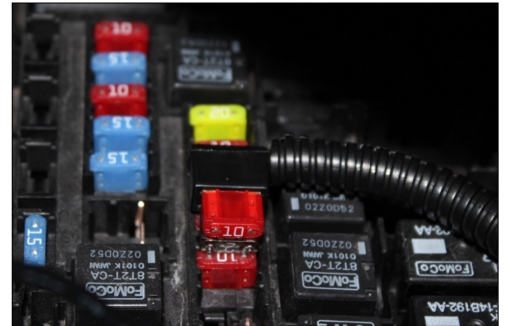
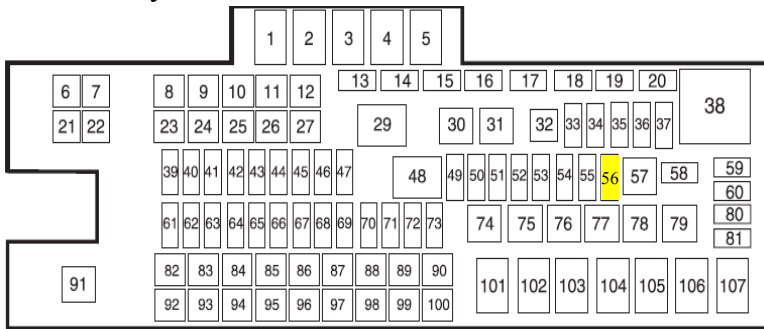
- D. Secure relay and fuse in an upright position, as shown, to prevent moisture from entering. Di-electric grease may be applied to prevent corrosion.



STEP 1: INSTALL ELECTRICAL HARNESS

The installation of the electrical harness is done first, allowing power to be applied to the pump for lubrication purposes.

- E. Connect the WE-1001 Extension to the WH-1005's shorter relay branch. Route the extension to the engine bay fuse panel. Remove a fuse (maximum of 10A) that is "hot" when the key is on. Example: #54 or #55. **Use a test probe to locate the "hot side" of the circuit in the fuse block.** Install the fuse tap into the open location. Install the pulled fuse into the open space on the fuse tap. Disconnect the vehicles' battery and continue installation.



- F. Route WH-1005 wire harness along frame rail to mounting location of pump. **Completion of this step will be addressed in the mounting step.**

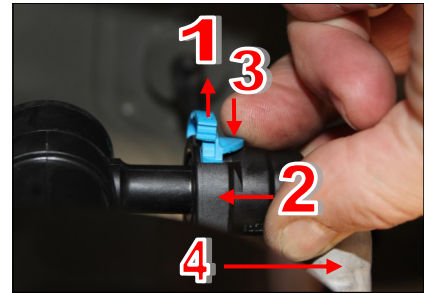
STEP 2: PREPARE SUCTION LINE

Some of the photo's are of a different application, procedures are the same.

NOTE: Before installing fittings make sure to inspect for burrs or flare imperfections. When cutting fuel line make sure to blow out line to keep debris from moving forward.

Helpful Hint: Directions for removing factory lines.

1. Pull up on the locking tab (either blue or yellow),
2. Push in slightly on the connector,
3. Press down on the release tab,
4. Pull the connector straight off,



- A. Very Important: Before removing the fuel tank identify “ALL” areas of clearance between the tank and bed to install the draw tube assembly. The closer the suction tube is placed to the fuel sending unit, front to back and left to right, the more usable fuel there will be!



- B. Remove the filler neck and overflow tubes from the truck by loosening the clamps at both ends.



Helpful Hints: If more space is required to access the top of the fuel tank, loosen the strap nuts to the end of the stud. This will gain you about 3” more working room.

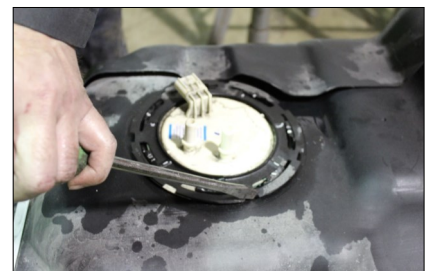
- C. Disconnect factory suction and return lines. Refer to diagram at the beginning of Step 2



- D. With the fuel tank empty of fuel, unbolt the tank straps and remove it from the vehicle.



- E. Clean the fuel module area then remove the lock ring on the top of the fuel tank. **This is spring loaded, so, holding it down while removing the ring will prevent the sending unit from popping up and possibly causing damage.**

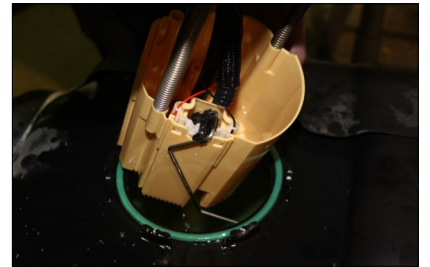


STEP 2: PREPARE SUCTION LINE

- F. Note the location of the tab and arrow. Re-install the sending unit in the same location to prevent the fuel level arm from binding.



- G. Once the lock ring is removed, carefully remove pick up module from fuel tank without bending fuel level arm.



- H. Place the tank on blocks to simulate the tank hanging. **Failure to do this step may result in the draw tube being cut too short.**

NOTE: Hose clamps are not recommended for push lock fittings. They will hold up to 300psi! Use oil on fittings and inside fuel line when installing Push-Lok fittings



- I. Assemble the BHF-1002 with a PL-1004 in 'S' using thread tape. Insert 1/2" brass plug into the 'R' port. Torque both to 40 lb./ft.² Push the ST-1005P onto the barbed portion of the BHF-1002. Insert O-ring into groove.



- J. Place the lock ring back on the tank and locate the BHF-1002 bulkhead fitting on the tank with enough clearance for the fuel line and fittings. **Keep in mind the bulkhead must also clear the bottom of the bed support structure.** The fiberglass protective shell will have to be trimmed as necessary for clearance.



STEP 2: PREPARE SUCTION LINE

- K. Once location has been established, **double check! Make sure the fuel line and fittings will clear the trimmed protective shell.** Mark location and drill 1 1/2" hole with hole saw. Hold a cup or catch can inside the tank while drilling to catch any debris. Place a rag over the opening to prevent tank contamination. Double check for debris around the ring and inside tank.



- L. De-burr hole and check for fit.



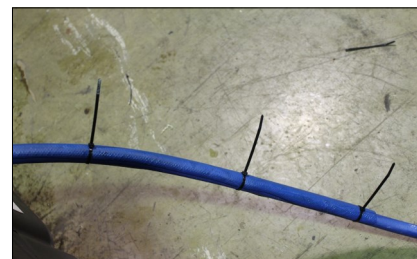
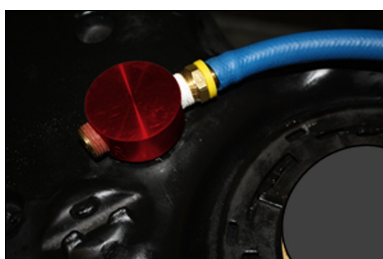
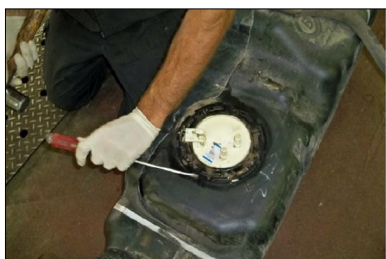
- M. Place the bulk head assembly into the drilled hole, take measurements so the bottom of the suction tube is only 1/8" (no more than 2 quarters stacked) from the bottom of the fuel tank. **Measure twice and cut once!** Using a razor knife, cut to proper length. If unsure of correct length, make small cuts until proper length is achieved.



- N. Install Bulkhead with lock washer and nut. Tighten nut securely with a 1-7/8" socket or wrench. Make sure the fittings are unobstructed.



- O. Carefully reinstall install pick up module making sure the leveling arm is not obstructed by the suction tube. Reinstall factory lock ring. Push one end of fuel line onto 'S' port of suction tube assy. Loop fuel line over frame. Do not cut at this time. Reinstall fuel tank making sure to reconnect factory suction, return, electrical connections, and filler neck tubes. Torque hanger bolts to factory specifications.



STEP 3: MOUNT FUEL PUMP

Some of the photo's are of a different application, procedures are the same.

- A. Insert PFB-2001C in to bed channel align the nut with the opening on the channel.

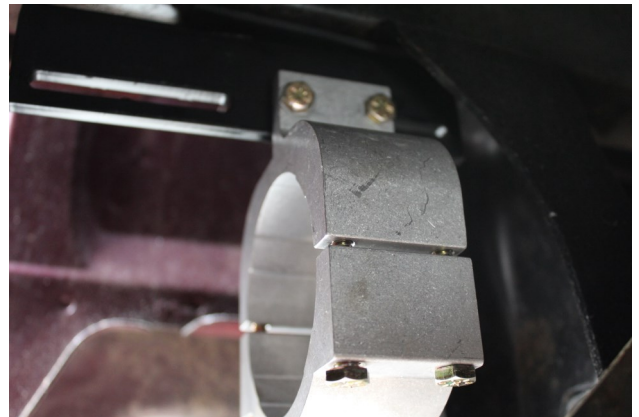
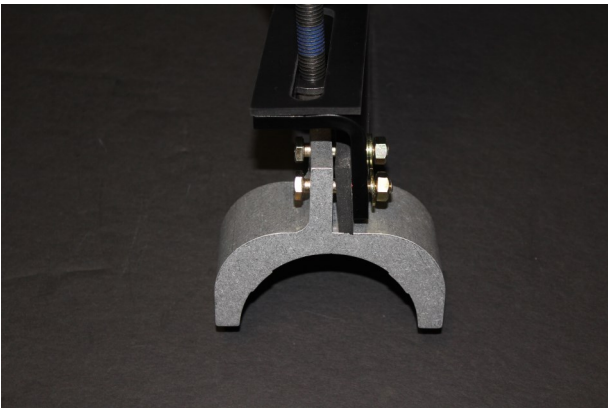


- B. Secure PFB-2002 and RS-2001 with (1) hex bolt 1/2" -20 x 1 1/2" and (1) 1/2" washer to FPB-2005



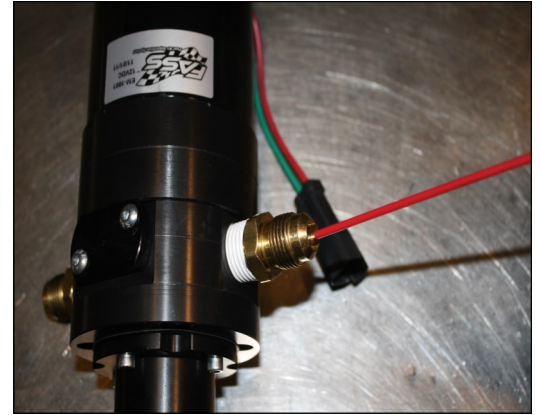
- C. Secure THB-1001 to bolt on bracket with the RS-1002 and the (5)-1/4-20x1 bolts, 1/4 washers, and 1/4 nuts. With the (4)-1/4-20x 1.75" bolts thread the BHB-10001 to the THB-1001.

Note: Use of Anti-seize compound is highly recommended.

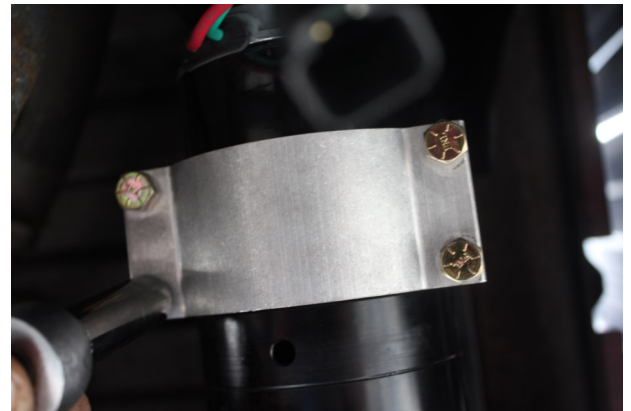


STEP 3: MOUNT FUEL PUMP

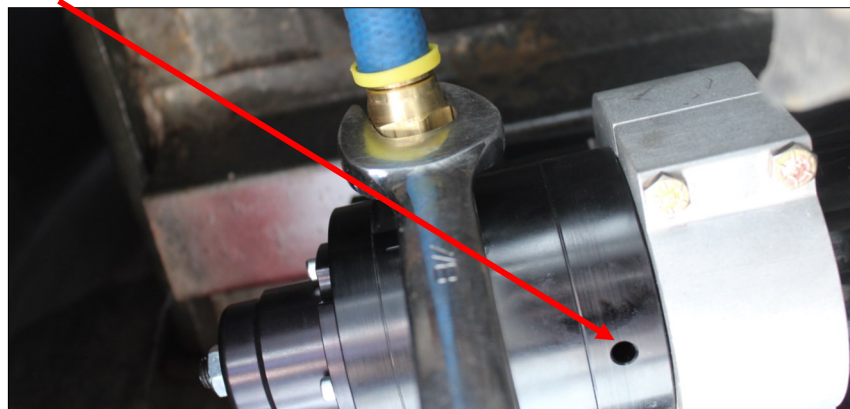
- D. Using thread tape, install the 2 10-300 into the “T” & “E” ports. Torque to 40 ft./lbs. Connect the male end of the wire harness to the female electrical connector on the FASS pump. Reconnect the battery. Turn key to the “On” position. With the FASS pump on, squirt a liberal amount of WD-40 or other lubricant into the “T” port. This procedure will “wet” the Gerotor and allow for better suction during initial priming. **Note: Do Not Put Thread Tape on Flare of Fitting**



- E. Slid the FASS pump into mounting brackets with the weep hole facing down. Torque (4) bolts to 110 inch pounds.



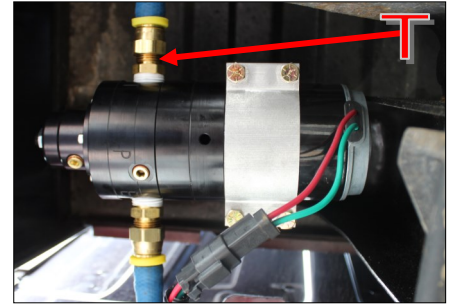
VERY IMPORTANT: REMEMBERING THE POSITION OF THE “T” PORT, THERE IS A SMALL WEEP HOLE IN THE BASE DIRECTLY NEXT TO THE ELECTRIC MOTOR, THIS HOLE MUST AIM DIRECTLY TO THE GROUND!! IMPROPER INSTALLATION OF THE PUMP CAN CAUSE PREMATURE WEAR AND VOID MANUFACTURES WARRANTY.



STEP 4: INSTALL FUEL LINE

Do Not use sealant on AN (Male Flare) fittings. Only use sealant on threads installed into pump assembly.

- A. Route suction line from the suction tube assembly to the 'T' port on the FASS pump. Cut the fuel line and insert PL-1005 using oil. Attach to 10-300 in 'T' port. Torque to 18 lb./ft.²

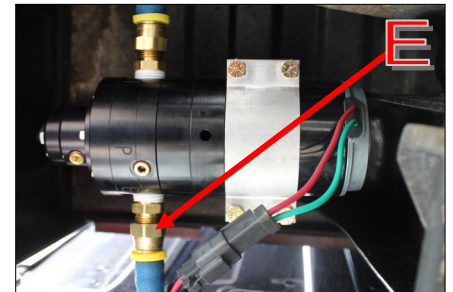


- B. Install in-line fuel filter in an accessible location in the suction line using the HC-1001's. Make sure the arrow is in the direction of the fuel flow. .



Note: Inline filter will need to be replaced every 6,000 miles.

- C. Insert PL-1005 into fuel line using oil. Attach to 10-300 located in the port labeled 'E'.. Torque to 18 lb./ft.² Route this line to the engine side of the factory lift pump.



BYPASSING FACTORY FUEL PUMP

- D. Disconnect factory power to the lift pump. Drain fuel from factory lift pump.



- E. Disconnect the yellow-clipped factory feed at the factory lift pump. Refer to diagram at the beginning of Step 2.

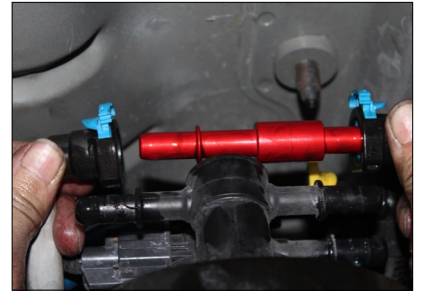


STEP 4: INSTALL FUEL LINE

- F. Using oil, insert PLB-1212 into one end of FL-1002 fuel line. Oil the PLB and slide into the yellow-clipped factory **feed** fitting until you hear a click. Push down the locking tab.



- G. Disconnect both factory return lines from the factory lift pump (Refer to diagram at the beginning of Step 2). Insert DB-4646 into each return line fitting until you hear a click and tabs lock.



- H. Clean and cap off the factory return ports with the two RVC-38 caps. Clean and cap off the factory feed port with the RVC-12 cap. Seal factory electrical connection with di-electric grease or similar to prevent corrosion.

Note: Secure all fuel lines with cable ties. Cable ties are an economical way to prevent the possibility of problems occurring!

STEP 5: CHECK/SETTING PRESSURE

The preset pressure is approximately 55 psi. Follow these steps to check or reset the fuel pressure. The port with 1/8" Allen plug marked with the letter "P" is your fuel pressure port. **Exceeding factory fuel pressure may result in severe engine damage. Consult with engine manufacture before adjusting pressure!**

With the pump running –

- Loosen the lock nut
- Turn the adjustment screw clock wise to increase pressure and counter clock wise to decrease pressure.
- Once desired fuel pressure is obtained, tighten lock nut.

STEP 6: REVIEW INSTALLATION

- Blow out any open lines/cover any open ports
- Bolts and fasteners properly tightened?
- Electrical harness and fuel lines secured and properly tightened?
- Has the system been primed?
 1. Turn key to the ignition position, turning on the FASS pump for 15 sec..
 2. Crank engine and allow to run for at least 1 minute.
- Recheck all fluid and filter connections for leaks (with engine running).
- This pump comes with a 1 Year Manufacturer's Warranty based on the date it has been manufactured. To receive your extended Lifetime Warranty, you have 30 days from date of purchase to send the completed warranty information along with a copy of the purchase receipt in to Diesel Performance Products, Inc. Att: Warranty 16240 Hwy O Suite B Marthasville, MO 63357

LIMITATION OF LIFETIME WARRANTY

Disclaimer: To help insure you receive the proper system and customer support at the local level, FASS has a VIP and Authorized Dealer network representing FASS products. This is one reason you must purchase through a dealer to comply with our warranty policies. If you do not, there is no warranty! We recommend you go to www.FASSride.com, click "Find a Dealer", put in their ZIP code, select the type of dealer, and see if the company you purchased from is listed. If they are not, put their phone number in the field below the ZIP code field to see if they are listed. Below these two fields is a list of "Terminated/Unauthorized" dealers. You may want to review this list. If the company is not listed or is on the "Terminated/Unauthorized" list, we suggest you return the product immediately to that dealer and call FASS. We'll recommend you to the nearest dealer.

Diesel Performance Products, Inc. (hereafter "SELLER") gives Limited Warranty as to description, quality, merchantability, fitness for any product's purpose, productiveness, or any other matter of SELLER'S product sold herewith. The SELLER shall be in no way responsible for the product's open use and service and the BUYER hereby waives all rights other than those expressly written herein. This Warranty shall not be extended or varied except by a written instrument signed by SELLER and BUYER.

When MANUFACTURER receives the "ORIGINAL" PRODUCT REGISTRATION form with a copy of the "BILL OF SALE/SALES RECEIPT" within 30 days of the sale, then the following applies! The Warranty will then and only then be validated to that of which typically accompanies your unit for your specific application from the date of sale or for recommended service life and limited solely to the original purchaser and/or vehicle and parts contained within the product's kit. This warranty does not cover normal wear on consumable items such as but not limited to filters, fuel line, wire harness & etc. The warranty does not cover seized gears due to lack of filtration or fatty acid build up on the gears. Returned items will arrive prepaid to the place of purchase. Diesel Performance Products, Inc. will repair, without cost, any product found to be defective during the warranty period; parts only, or at its option, will replace such products in exchange for the product. Repair or replacements are warranted for the remainder of the original warranty period. All Warranty claims are subject to approval by Diesel Performance Products, Inc.

A Return Material Authorization (RMA) number must be obtained before any product is to be returned to Diesel Performance Products, Inc. for warranty consideration, repair or product return. Requests for product returns must be offset by an equal value order. Return parts must be completed and in resalable condition. No returns after 30 days.

The following information is required to obtain a RMA number before returning product:

Your Name, Address, and Phone Number's
Model and Serial Number (Not Motor Number) Example: Model HD Series, Serial: 00125966
VIN Number of Vehicle
Date of Purchase
Nature of Problem

RMA and Product Serial Number must be on all paperwork and correspondence. Failure to obtain the required information or paperwork will result in \$25.00/item penalty and delay or denial of any warranty claim.

Under no circumstances shall the SELLER and/or MANUFACTURER be liable for any labor charged or travel time incurred in diagnosis for defects, removal, or reinstallation of this product, or any other contingent expenses.

Under no circumstances shall the SELLER and/or MANUFACTURER be liable for any damage or expenses insured by reason of the use or sale of any such equipment. This warranty does not apply to products which Diesel Performance Products, Inc. has determined to have been misused or abused, improperly maintained by the user, or where the malfunction or defect can be attributed to the use of non-genuine Diesel Performance Products, Inc. parts.

IN THE EVENT THAT THE BUYER DOES NOT AGREE WITH THIS AGREEMENT: THE BUYER MAY PROMPTLY RETURN THIS PRODUCT, IN A NEW AND UNUSED CONDITION, WITH A DATED PROOF OF PURCHASE, TO THE PLACE OF PURCHASE WITHIN THIRTY (30) DAYS FROM DATE OF PURCHASE FOR A FULL REFUND LESS SHIPPING.

THE INSTALLATION OF THIS PRODUCT INDICATES THAT THE BUYER HAS READ AND UNDERSTANDS THIS AGREEMENT AND ACCEPTS ITS TERMS AND CONDITIONS.

Technical Support:

Diesel Performance Products, Inc.
16240 State Hwy O Suite B
Marthasville, MO 63357