

# INSTALLATION MANUAL

## ADJ FUEL PUMP SERIES



### APPLICATION:

FAS C09 250G  
(250GPH @ 12-14psi)

FAS C09 290G  
(290GPH @ 12-14psi)

**Standard Pickup Truck**  
Duramax 2500 & 3500

2001-2014



PICKUP



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](http://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.

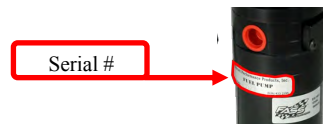
**The installation of this product indicates that the buyer has read and understands the Limitation of Warranty agreement and accepts its terms and conditions.**

# !WARNINGS!

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

<u>FASS</u>	<u>Recommended Application</u>
FAS C09 250G	Duramax 2001-2016 with extreme horsepower modifications
FAS C09 290G	Duramax 2001-2016 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

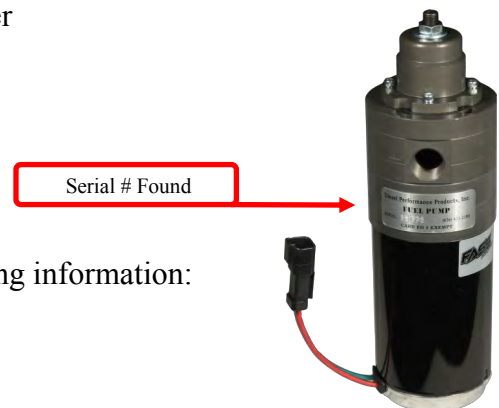
1. *Read the installation manual completely before attempting installation. The installation of this product indicates that the buyer has read and understands the limitations of the FASS manufacturers warranty agreement and accepts the responsibility of its terms and conditions.*
2. Inventory the package 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](mailto:techsupport@FASSride.com) with the following information:

- Your Name, address and daytime phone number
- Model (**FAS C09 250G or FAS C09 290G**)
- 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:

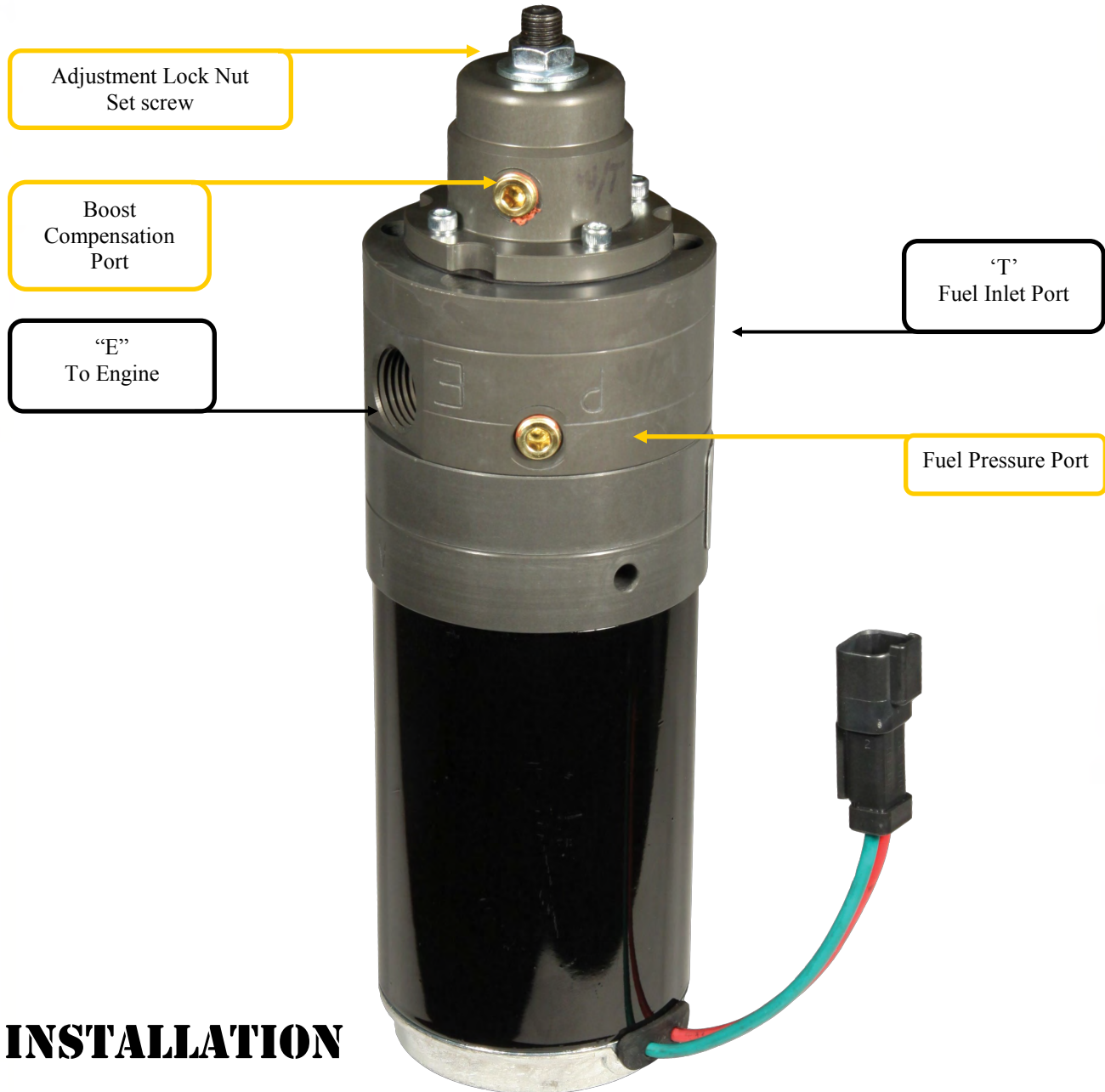
- Model (**FAS C09 250G or FAS C09 290G**)
- Serial Number
- Last 6 of vehicles' VIN
- Date of purchase



# ADJUSTABLE FUEL PUMP SERIES

**250 OR 290 GPH  
12-14 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 & Return Lines
- Step 3: Mount Fuel System
- Step 4: Install Fuel Line
- Step 5: Check/Set Pressure
- Step 6: Rewiew Installation

# CONTENTS



FF-3248



FAB-1001



Dielectric Grease



FPB-2005



MP-9038



FL-1002 x14'



WH-1006-3

# MOUNTING PACKAGE CONTENTS



RS-1002



BHF-1002



\*Cable Ties\*



46177



PL-1005



10-300



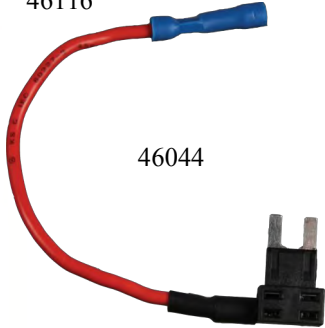
PL-1004



QD-1002



46116



46044



1/2" Plug



Ring Terminal



46260



BHN-1001



LW-1001



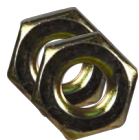
OR-223



HC-1001



ST-1005Px16"



1/4" Nut



1/4" washer



2 1/4 - 20x0.75"



RS-2001



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.

**NOTE: BE SURE TO INSTALL THE SUPPLIED  
30 AMP FUSE INTO THE FASS WIRING  
HARNESS!!**





Before starting installation please review contents page to insure all necessary parts are included. Please call Diesel Performance Products for any missing or incorrect items. 636-433-5410

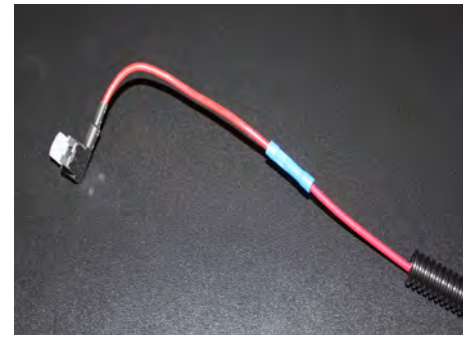
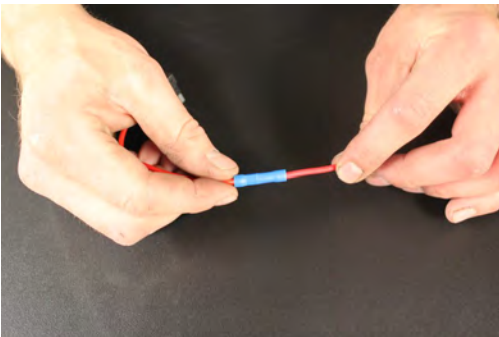
## STEP 1: INSTALL ELECTRICAL HARNESS

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

- A. Using wire stripping tool remove excess insulation off the add-a-fuse (for 2001-2014 use 46044, for 2015-2016 use 46177) and the WH-1006-3.



- B. Place wire from add-a-fuse and WH-1006-3 into butt connector. Using crimping tool connect 46044 and WH-1006-3 with butt connector. Install 46260 to add-a-fuse bottom slot (opening that is near the spade).



- C. Crimp the ring terminals to the red and green wires of the WH-1006-3 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.



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## STEP 1: INSTALL ELECTRICAL HARNESS

E. If fuse panel is located in the cab it will be necessary to guide the single red wire from the relay through the fire wall grommet to access the fuse panel.



F. Locate fuse box under hood and select ignition hot fuse. Remove fuse and put Add-A-Fuse in place. Install fuse previously removed. **The use of a corrosion preventative on electrical connections is recommended.**



G. Route WH-1006-3 wire harness along frame rail to mounting location of pump. **Completion of this step will be addressed in the Mounting Step 3.**

**Note: The FASS harness provided has a 15 amp fuse and the 30 amp fuse provided loose in the kit is to be installed on the wiring harness due to the volume and torque the FASS pump is producing.**

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## **STEP 2: PREPARE SUCTION & RETURN 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.**

- 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 center of the fuel tank, front to back and left to right, the more usable fuel there will be!

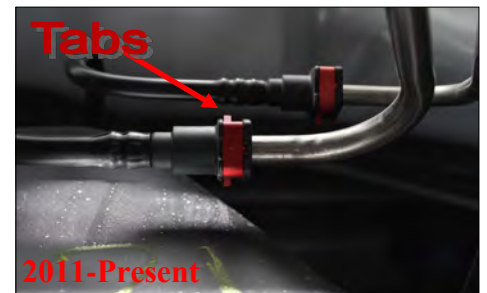


- B. If necessary, carefully bend the sheet metal down that is covering the side.



- C. This step can be omitted on 2011+ models. Remove the 3 bolts holding the fuel cooler to the mounting bracket. The fuel cooler is located in front of the fuel tank.

- D. Using a fuel line disconnect tool, disconnect the factory suction line located above the fuel cooler. Place the disconnect tool around the fuel tube and slide the tool under the fuel line connection to re-



- E. Remove filler neck tube and over-flow tube from the top of the fuel tank by loosening clamp. Some models have an integrated filler neck. If your over-flow is integrated, be careful not to hang up the internal flow tube when lowering the tank.

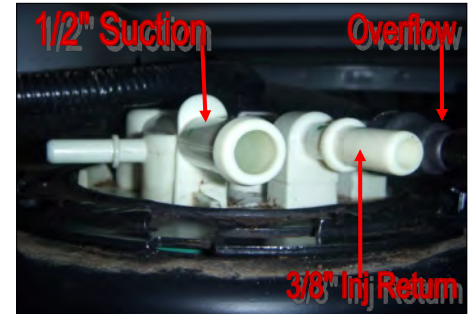
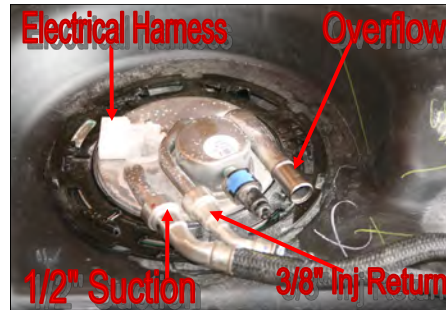


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## STEP 2: PREPARE SUCTION & RETURN LINES

**Do Not use sealant on AN (male flare) fittings.**

- F. Disconnect electrical harness. Using disconnect tools, remove factory suction & return lines from fuel module. Pinch in tabs on 2011-. Disconnect overflow tube. You can now remove the fuel tank.



- G. Check fuel tank for good installation location of the suction tube assembly. Remove the lock ring on top. Mark location of Fuel Module in relation to the tank. Remove Fuel Module. Be careful not to bend the Fuel Level Arm.



- H. Using a cup, reach inside the tank under the hole location to catch debris. Drill a 1 3/8" hole. Remove debris from top of tank. **Use blocks or something similar to support tank during measurement simulating tank "hanging" by the straps.** Failure to do so may result in a short draw tube.



**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 the PL-1004 in port "S", install 1/2" plug into the "R" port. Push the ST-1005P onto the barb portion of the BHF-1002. Insert O-ring into groove. Torque to 20 ft./lbs.

**\*\*\*PL-1004 DOES NOT REQUIRE THREAD TAPE\*\*\***



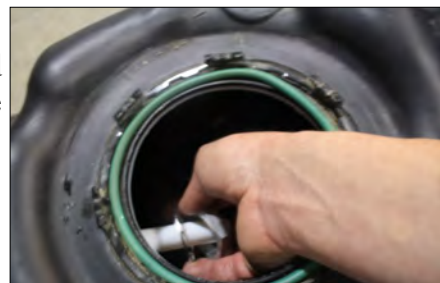
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## STEP 2: PREPARE SUCTION & RETURN LINES

- J. Place the suction tube assembly into the 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. Before cutting the suction tube, triple check the measurements. It is more efficient to cut the tube too long and then correct to proper length than it would be to cut too short.



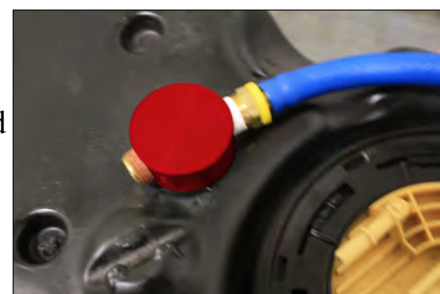
- K. With proper length being obtained with the suction tube, de-bur and flush assembly. Slide tube through hole, lock washer, and nut. Make sure O-ring on bottom of bulkhead fitting remains in its groove. With BHF-1002 properly seated against tank, tighten nut.



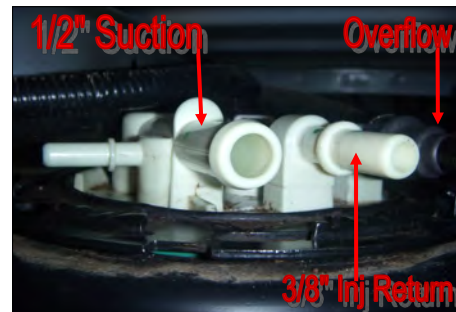
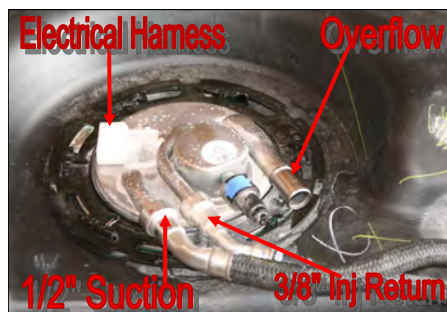
- L. Carefully re-install pick up module. **Do not bend Fuel Level Arm.**



- M. Attach fuel line to Push-Lok fitting. Remember to oil the fitting and fuel line. Route fuel line over frame rail when reinstalling fuel tank.



- N. Reinstall fuel tank. Remember to reconnect factory suction line, return line and electrical harness. Torque tank hanger bolts to proper specifications. Reattach filler neck and clamps.



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## STEP 3: MOUNT FUEL PUMP

- A. Locate bed bolt and remove the bolt. Position RS-2001 between FPB-2005 and truck bed, install FPB-2005 onto frame with original bolt and tighten as necessary.



- B. Secure FAB-1001 onto the FA assembly with supplied 1/4-20x0.75 bolts.

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



- C. 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: PL-1004 DOES NOT REQUIRE THREAD TAPE**



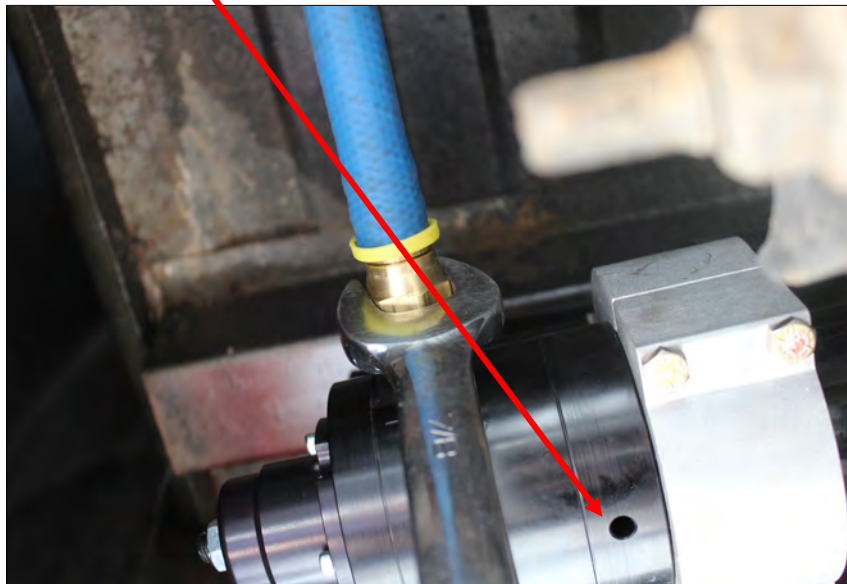
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## **STEP 3: MOUNT FUEL PUMP**

D. Install FA onto FPB-2005 using the 1/4-20x1.25 bolts and washers, be sure the weep hole facing down. Tighten mounting bolts to 110 in./lbs.



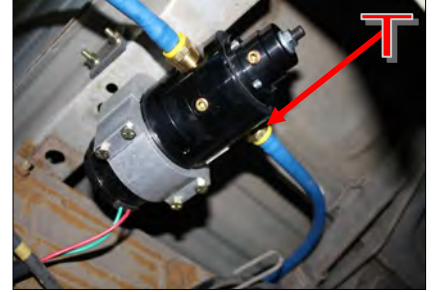
**VERY IMPORTANT: REMEMBERING THE POSITION OF THE "T" PORT, THERE IS A SMALL WEEP HOLE IN THE BASE DIRECTLY NEXT TO THE ELECTRIC MOTOR, THIS HOLE MUST AIM DIRECTLY TO THE GROUND!! IMPROPER INSTALLATION OF THE PUMP CAN CAUSE PREMATURE WEAR AND VOID MANUFACTURES WARRANTY.**



Before starting installation please review contents page to insure all necessary parts are included. Please call Diesel Performance Products for any missing or incorrect items. 636-433-5410

## STEP 4: INSTALL FUEL LINES

- A. Route suction line from Step 2L to port 'T'. Cut FL-1002 to needed length. Using oil, insert PL-1005 and connect to 10-300 in port 'T'. Torque to 18 ft./lbs.

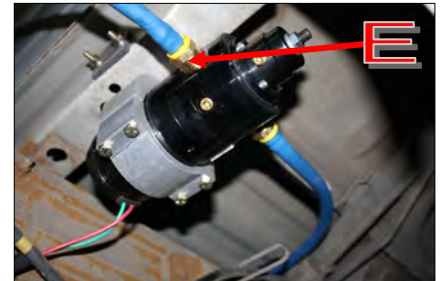


- B. Install in-line fuel filter in an accessible location in the suction line using the HC-1001's. Making sure the fuel flow travels the direction of the arrow on the canister.



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

- C. Using oil, insert PL-1005 into FL-1002 fuel line. Connect to the 'E' port of the FASS pump. Torque to 18 ft./lbs. Measure fuel line to the factory feed line disconnected in Step 2c and cut.



- D. Using an HC-1001 hose clamp, insert the QD-1002 into the other end of the provided FL-1002 fuel line and secure. Oil the rings inside the QD-1002 and slide over the factory feed line until you hear a click. Cap factory suction line and secure.



- E. Reassemble fuel cooler on 2001-2010 models.



Before starting installation please review contents page to insure all necessary parts are included. Please call Diesel Performance Products for any missing or incorrect items. 636-433-5410

## STEP 4: INSTALL FUEL LINES

- F. Carefully re-bend sheet metal back to original shape to protect fuel tank, if needed.
- G. Re-install driveshaft



**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 10 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.
- Check for leaks.
- Start the engine
- Recheck all fluid and filter connections for leaks
- 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 16234 Hwy O 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](http://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.  
16234 State Hwy O  
Marthasville, MO 63357  
636-433-5410