INSTALLATION MANUAL

ADJ FUEL PUMP SERIES



APPLICATION:

FAS D08 250G (250GPH @ 16-18psi)
FAS D08 290G (290GPH @16-18psi)

Cummins 5.9L 24 Valve

1998.5-2004

DODGE

LIFETIME WARRANTY AVAILABLE

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 Install manual for full Limitations 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.

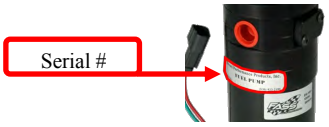
The installation of this product indicates that the buyer has read and understands the Limitation of Warranty agreement and accepts its terms and conditions.

¡WARNINGS!

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

FASS	Recommended Application
FAS D08 250G	Cummins (24 Valve) 1998.5-2004 with extreme horsepower modifications
FAS D08 290G	Cummins (24 Valve) 1998.5-2004 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 at-tempting 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.**

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 **(FAS D08 250G or FAS D08 290G)**
   - Serial Number
   - Last 6 of vehicles' VIN
   - Date of purchase
   - Nature of Your Concern

   Call customer service; 636-433-5410 with the following information:

   - Model **(FAS D08 250G or FAS D08 290G)**
   - Serial Number
   - Last 6 of vehicles' VIN
   - Date of purchase



ADJUSTABLE FUEL PUMP SERIES

250 OR 290 GPH
16-18 PSI (APPROXIMATELY)

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

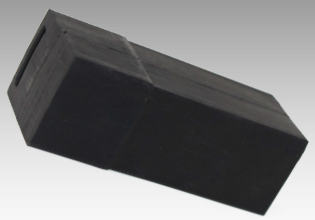


INSTALLATION

Step 1: Install Electrical Harness
Step 2: Prepare Suction and Return Lines
Step 3: Mount Fuel System
Step 4: Install Fuel Line
Step 5: Check/Set Pressure
Step 6: Review Installation

CONTENTS





RELAY COVER



FF-3248



FAB-1001



FPB-2005



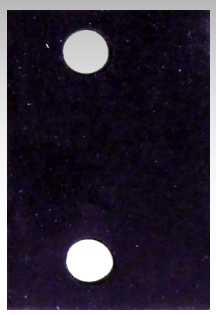


FL-1002 x14’



WH-1006-3

MOUNTING PACKAGE CONTENTS



RS-1002



BHF-1002



Cable Ties



PL-1005



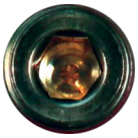
10-300



PL-1004



PL-2003



1/2” Plug



FP-1001



Ring Terminal



DIPF-1003



ST-1005Px16”



BHN-1001



LW-1001



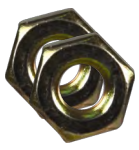
OR-223



HC-1001



Dielectric Grease



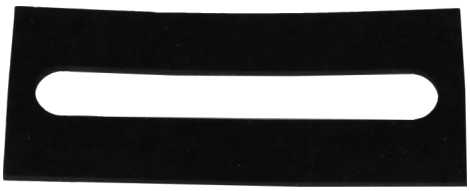
1/4” Nut



1/4” washer



(2) 1/4 - 20x0.75”



RS-2001



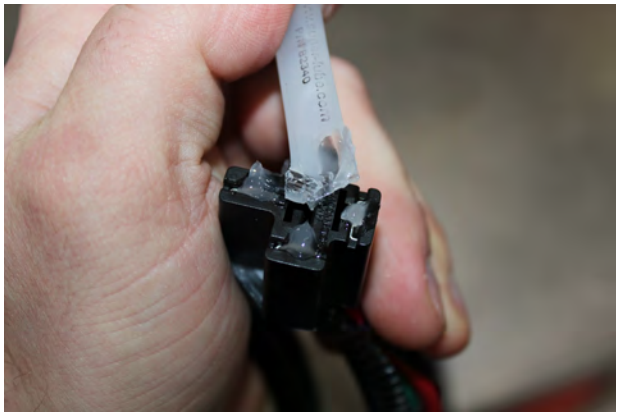
(2) 1/4 - 20x1.5”

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: USE SUPPLIED DIELECTRIC GREASE SPARINGLY ON ALL ELECTRICAL CONNECTIONS! BE SURE TO GREASE RELAY PIGTAIL!



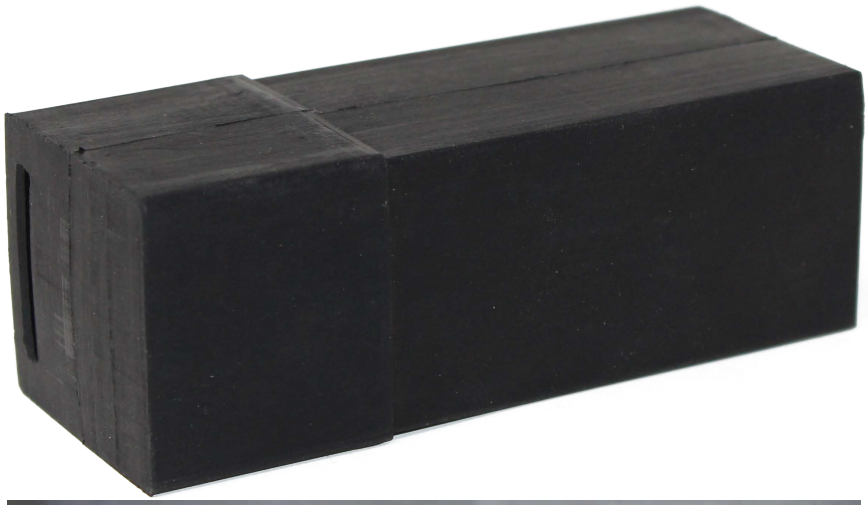


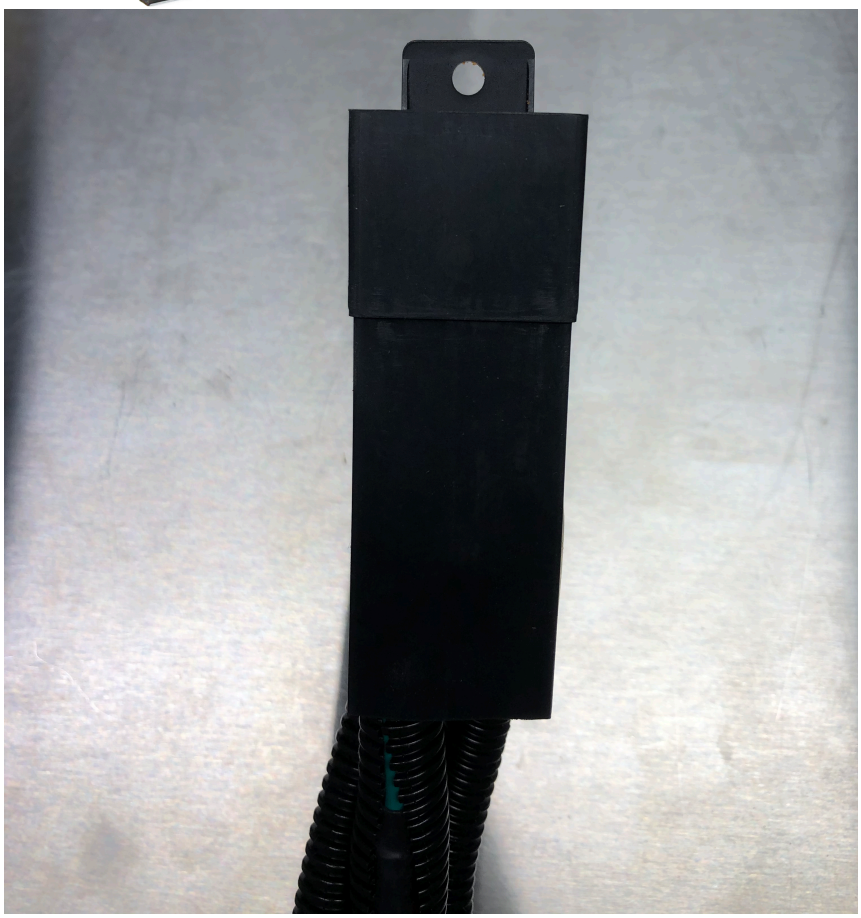


STEP 1:
INSTALL ELECTRICAL HARNESS

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

Install the Relay Cover onto the relay on the FASS harness.



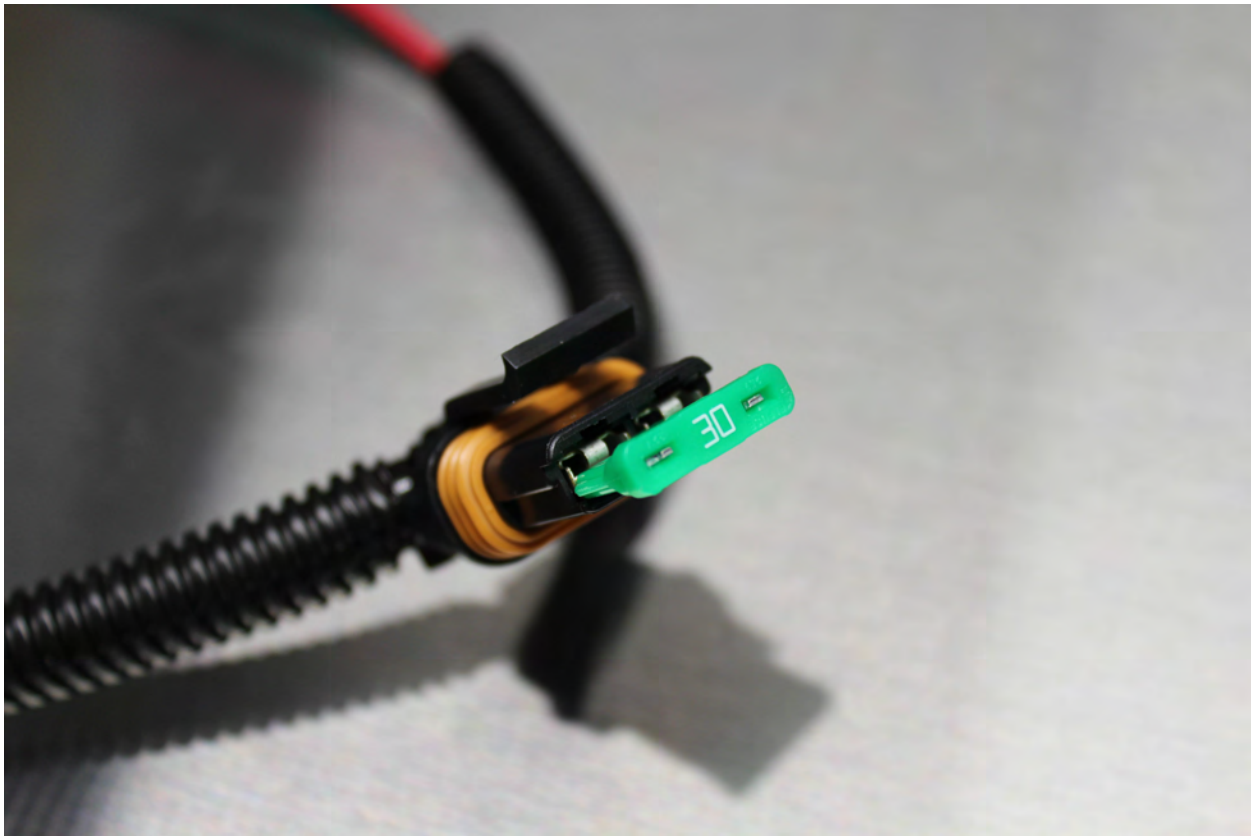


STEP 1:
INSTALL ELECTRICAL HARNESS

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!!



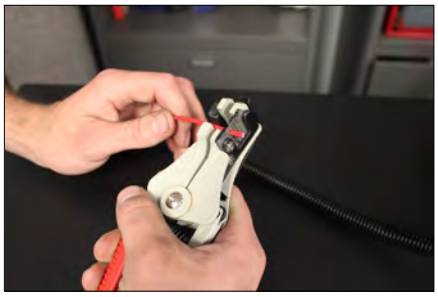


Before starting installation please review contents page to insure all necessary parts are included. Please call Diesel Performance Products for any missing or incorrect items. 636-433-5410

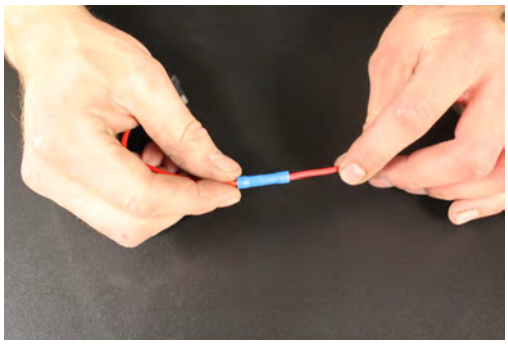
STEP 1: INSTALL ELECTRICAL HARNESS

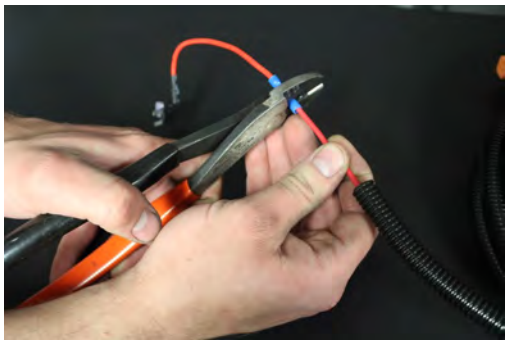
The installation of the electrical harness is done first, allowing power to be applied to the pump for lubrication purposes later in the installation.

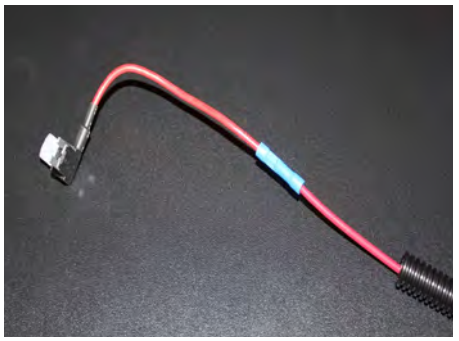
A. Using wire stripping tool remove excess insulation off the add-a-fuse and the WH-1006-3.



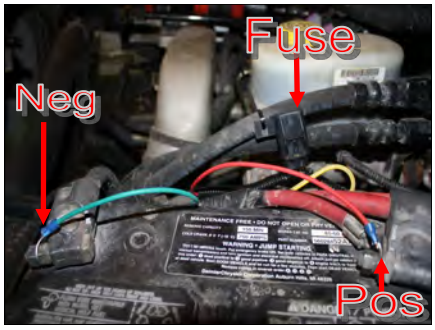
B. Place wire from 46044 and WH-1006-3 into butt connector. Using crimping tool connect 46044 and WH-1006-3 with butt connector. Install 46260 to 46044 bottom slot (opening that is near the spade). Route Add-a-fuse lead through the fire wall using existing grommet. **The use of corrosion preventative spray is recommended.**







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.



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

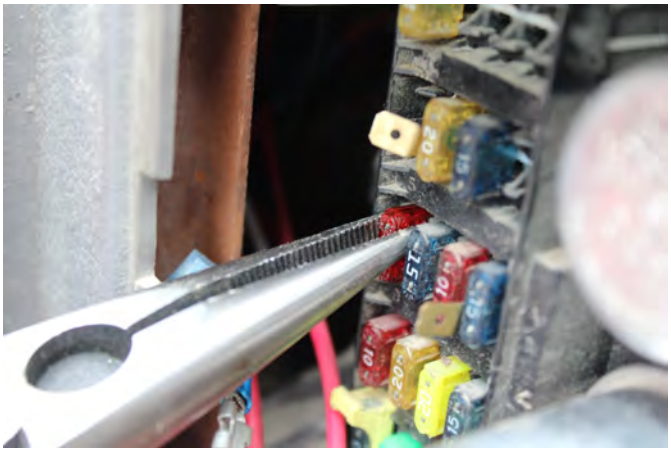
STEP 1: INSTALL ELECTRICAL HARNESS



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 or inside of the cab 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.**

STEP 2: PREPARE SUCTION LINE

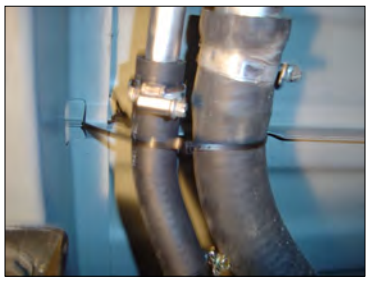
Some of the photo's are of a different application, procedures are the same.

NOTE: Before installing fittings make sure to inspect for burs 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!

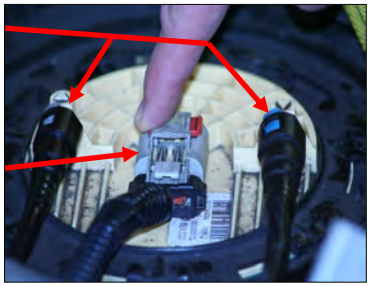


B. Remove the filler neck and overflow tubes from the truck by loosening the clamps at both ends.



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 the factory suction and return line. The factory lines are removed by pressing in on the two tabs located in the connecting fuel line. Keep the tab on the factory fuel lines.



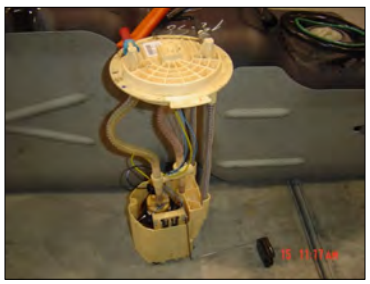
D. Disconnect the factory electrical harness on top of the fuel tank.

E. With the fuel tank empty of fuel, remove it from the vehicle.



F. Clean the fuel module area then remove the lock ring on the top of the fuel tank.

G. Once the lock ring is removed, remove pick up module from fuel tank. Be careful not to bend the fuel sending arm.

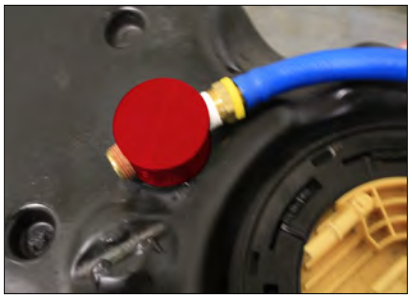


NOTE: Hose clamps are not recommended for push lock fittings. They will hold up to 300psi! Use oil on fittings and inside fuel line when installing Push-Lok fittings

STEP 2: PREPARE SUCTION LINE



H. Assemble the BHF-1002 with the PL-1004 in port "S", the 1/2" plug in port "R" along with pushing the ST-1005P onto the barb portion of the BHF-1002. Insert O-ring into groove. Torque to 20 ft/lbs. ****THESE FITTINGS ARE EQUIPPED WITH THREAD SEALANT****



I. Before drilling marked location, clean area of debris. Using the photo, double check area selected for any interference including the fuel level



J. Drill a 1 3/8" hole, catching all debris. De-bur hole and remove any missed debris in the fuel tank.



K. ***VERY IMPORTANT:*** Support fuel tank on both ends allowing the natural formation of the tank to take place. Failure to perform this step can and will create an issue with less usable fuel!



L. 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. Using a razor knife make multiple cuts to insure proper length, it is easy to shave the suction tube with the razor.



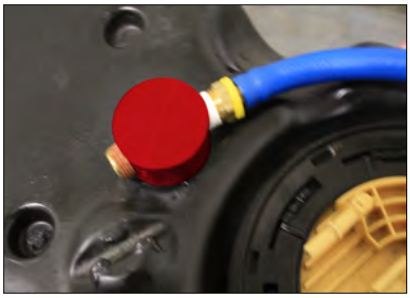
M. With proper length being obtained, place the assembly into the drilled hole securing the assembly using the lock washer & nut. Tighten Nut. Loctite may be applied to the threads of the BHF-1002 for added insur-

STEP 2: PREPARE SUCTION LINE

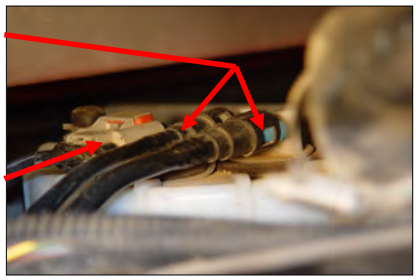
N. Carefully reinstall install pick up module making sure the leveling arm is not obstructed by the suction tube. Reinstall factory lock ring.



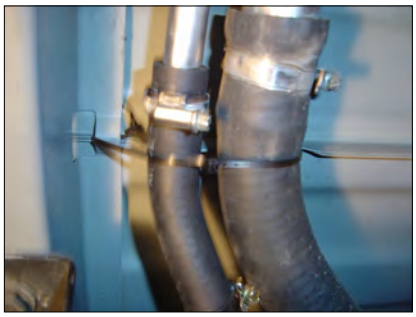
O. Connect end of the fuel line (supplied in kit) to the push lock fitting in the BHF-1002. Remember to oil the fitting and fuel line. Route fuel line over frame rail.



P. Place the fuel line over the frame rail while reinstalling the fuel tank. Remember to connect factory fuel lines and wire harness. Torque tank hanger bolts to proper specifications.



Q. Reattach filler neck and clamp. Torque to proper specifications.



STEP 3: MOUNT FUEL PUMP

A. Locate bed bolt and remove the bolt. Position RS-2001 between FPB-2005 and truck bed.



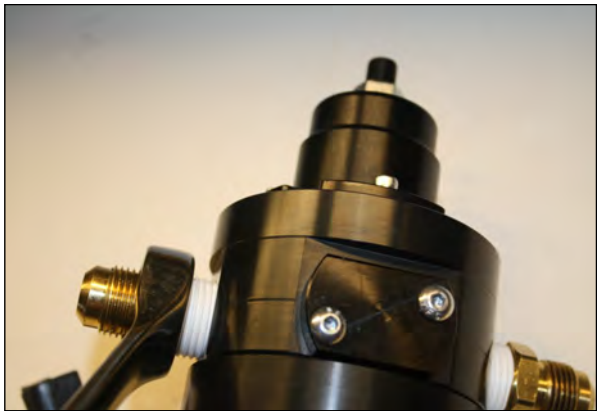


B. Secure FAB-1001 onto the FA assembly with supplied 1/4-20x0.75 bolts.

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



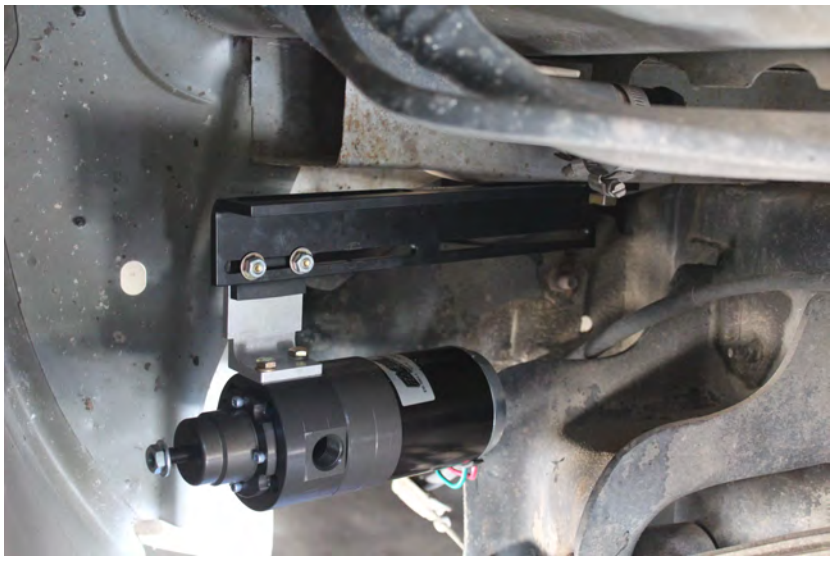
C. Install the 2 10-300 into the "T" & "E" ports. Torque to 20 ft./lbs. Connect the male end of the wire harness to the female electrical connector on the FASS pump. Reconnect the battery. Turn key to the "On" position. With the FASS pump on, squirt a liberal amount of WD-40 or other lubricant into the "T" port. This procedure will "wet" the Gerotor and allow for better suction during initial priming. **NOTE: 10-300 DOES NOT REQUIRE THREAD TAPE**



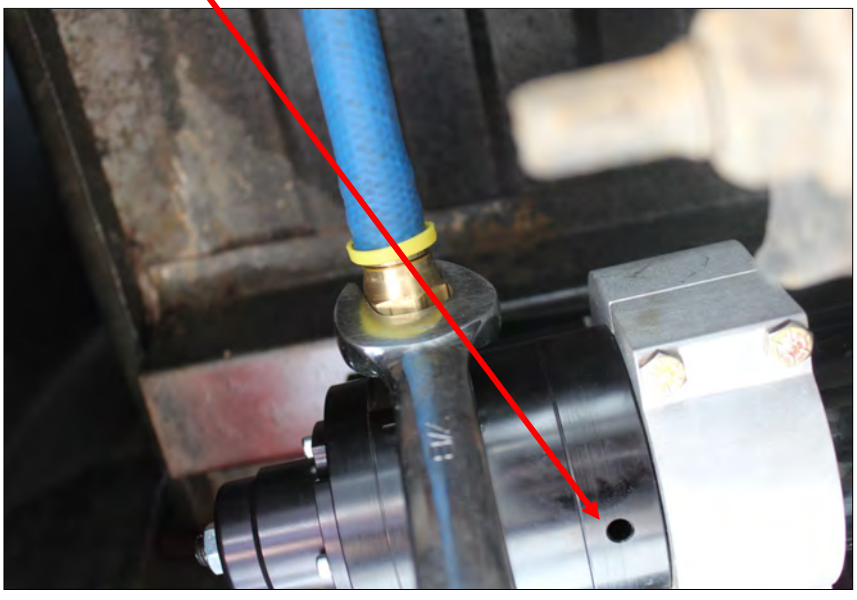


STEP 3: MOUNT FUEL PUMP

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.

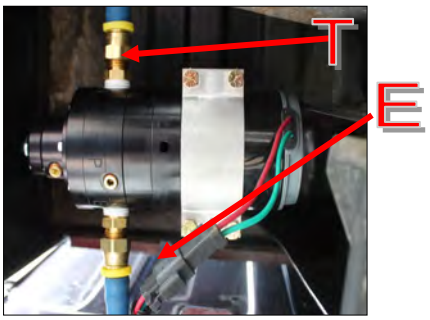


VERY IMPORTANT: REMEMBERING THE POSITION OF THE "T" PORT, THERE IS A SMALL WEEP HOLE IN THE BASE DIRECTLY NEXT TO THE ELECTRIC MOTOR, THIS HOLE MUST AIM DIRECTLY TO THE GROUND!! IMPROPER INSTALLATION OF THE PUMP CAN CAUSE PREMATURE WEAR AND VOID MANUFACTURES WARRANTY.



STEP 4: INSTALL FUEL LINE

A. Route suction line to port ‘T’. Cut FL-1002 to needed length and connect to 10-300 in port ’T’ using the PL-1005. Be sure to oil both before attaching.



B. Using a PL-1005, connect remaining fuel line to the “E” port. Be sure to oil both before attaching. Route fuel line to engine compartment.

C. 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.

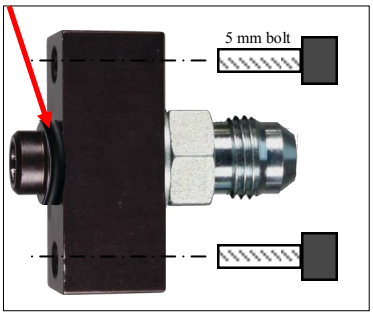
D. Route the fuel line to the inlet port of the factory filter housing. Refer to your vehicles application:

2003-2004



E. Disconnect factory fuel pump from the side of the factory fuel filter using a 5mm Allen head socket. Keep the Allen bolts and the o-ring from the inlet port.

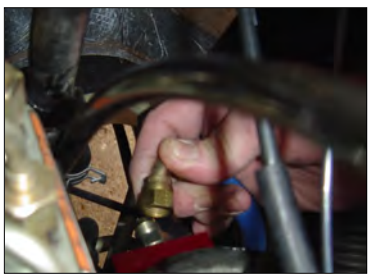
F. Assemble the DIPF-1003 into the FP-1001. Reuse the o-ring from the previous step.



G. Insert the Filter Plate assembly in place of the factory fuel pump using 2 of the 4 Allen head bolts. Torque to 8ft/lbs.



H. Measure and cut fuel line. Insert PL-2003 90° Push-Lok fitting using oil. Install fitting to fuel plate. Torque to 18 ft/lbs.



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

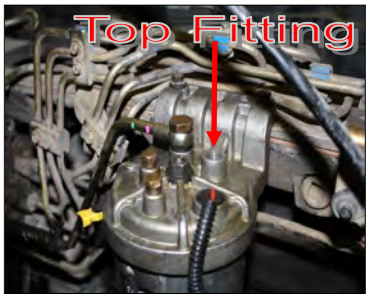
STEP 4: INSTALL FUEL LINE

1998.5-2002

These models can have the inlet fitting on top of the filter canister or on the side.

TOP

E. Disconnect inlet fuel line to the filter housing. Install DIPF-1003. Torque to 18 ft/lbs.



F. Measure and cut fuel line. Insert PL-1003 90° Push-Lok fitting using oil. Install fitting to DIPF-1003. Torque to 18 ft/lbs.

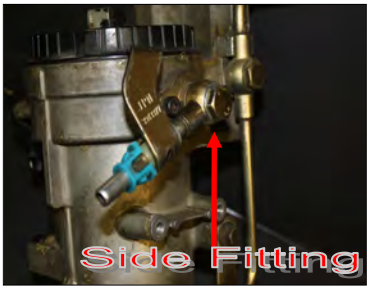




Note: Secure all fuel lines with cable ties. Cable ties are an economical way to prevent the possibility of problems occurring!

SIDE

E. Disconnect factory fuel line bracket from inlet side of the factory fuel filter and install the DIPF-1003 injection pump o-ring fuel fitting into this inlet port.



F. Measure and cut fuel line. Insert PL-1003 90° Push-Lok fitting using oil. Install fitting to DIPF-1003. Torque to 18 ft/lbs.





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 16 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

HARD STARTS (DODGE '98.5 – '02)

Answer the following questions:

- Did the vehicle start fine without the FASS or HPFP? Do you have high mileage on the VP44? If yes, have your VP44 checked. Has the VP44 been subjected to a PSI of 5 or less? Has the VP44 been subject to a failing lift pump? Does it occur more frequently when the conditions are warm? Have you recently replaced your VP44? Was it used?

  If yes to any of these questions, Start vehicle as soon as you enter the key (*do not wait for the "wait to start" light to go out*) If the vehicle starts it suggest that the problem lies with the VP44.

- Is the fuel pressure where it should be?
- Has the truck had an ECM re-flash? If not, contact your dealer to find the most current flash for your truck.
- Do you have a WH-1002? If yes, refer to the "WH-1002" section located in "Electrical"

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 PROMPLY 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

NOTES

NOTES