INSTALLATION MANUAL

TITANIUM SERIES

ALL 1/2" FUEL PORTS AND FUEL LINE!

APPLICATION:

T D07 095G (95GPH @ 16-18psi)
T D07 150G (150GPH @ 16-18psi)

Cummins 5.9L/6.7L 24 Valve
Standard Pickup Truck
2005-2016

1998.5-2004
with In-tank Lift Pump

****Note: Cab and Chassis may require modifications****

LIFETIME WARRANTY AVAILABLE

PICKUP

FASS Diesel Fuel Systems
ENGINEERED EXCELLENCE

Revision Date: 10/12/2015

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 Owner's Manual online at www.FASSride.com 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.

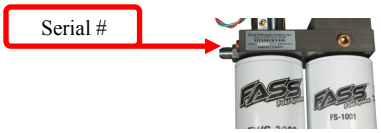
The installation of this product indicates that the buyer has read and understands the Limitation of Warranty agreement and accepts its terms and conditions.

¡WARNINGS!

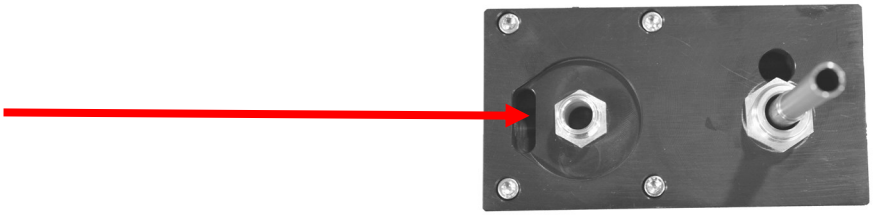
- **Read all instructions before starting installation of this product!**
- **Installing the improper FASS Pump can cause *severe* engine damage.**

FASS	Recommended Application
T D07 095G	Cummins 2005-2016 with stock - moderate horsepower modifications
T D07 150G	Cummins 2005-2016 with moderate - extreme horsepower modifications
Note: This kit may also be used on 1998.5-2004 Cummins with in-tank lift pump modifications	

- **Secure vehicle from ROLLING!**
- **Cab and Chassis may require modifications**
- **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 water separator nipple can lock up the motor. If the motor does lock up from debris call FASS for technical assistance.**



- **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 TITANIUM FUEL SYSTEM

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 **(T D07 095G or T D07 150G)**
- Serial Number
- Last 6 of vehicles' VIN
- Date of purchase
- Nature of Your Concern

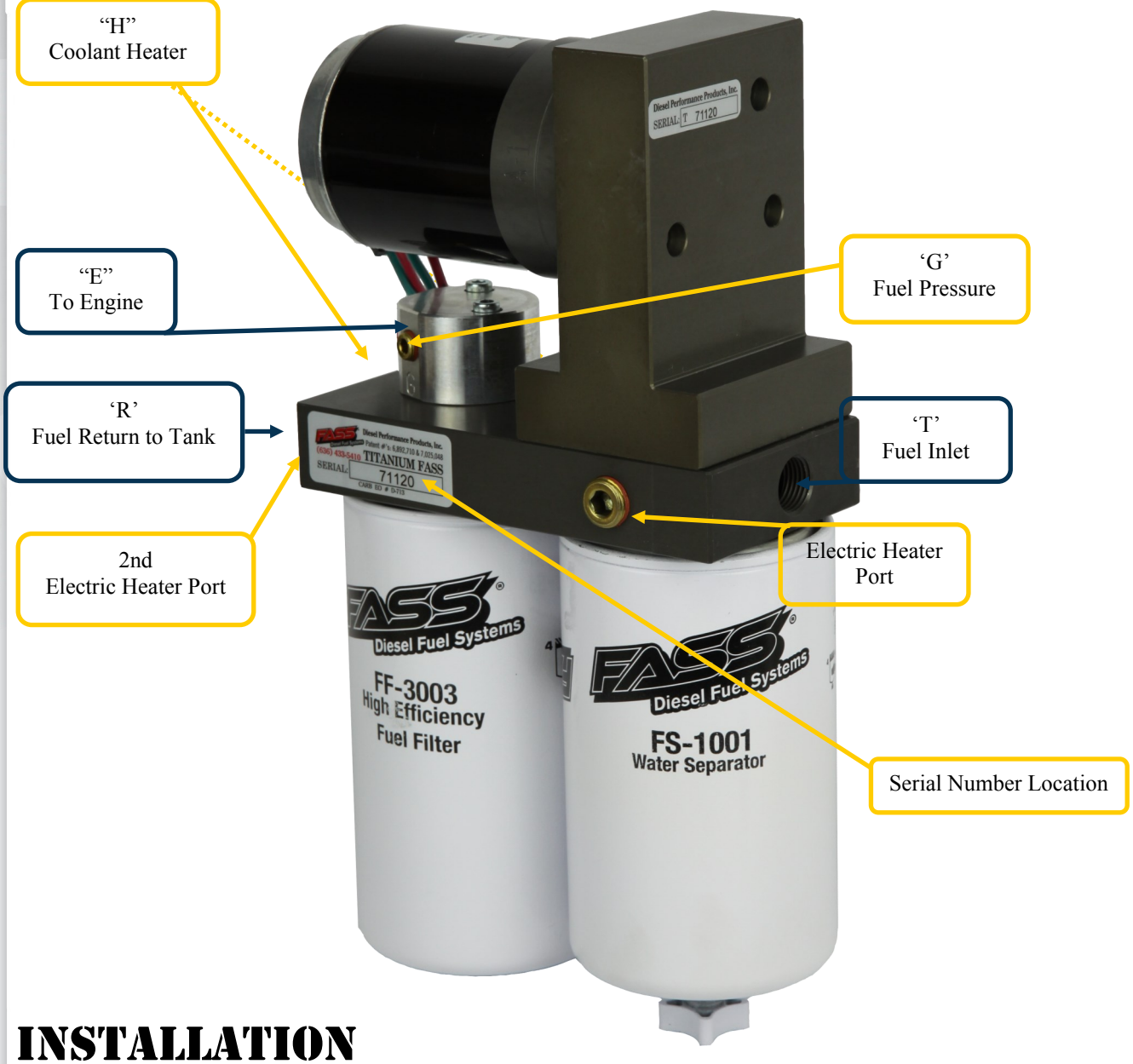
Call customer service; 636-433-5410 with the following information:

- Model **(T D07 095G or T D07 150G)**
- Serial Number
- Last 6 of vehicles' VIN
- Date of purchase

TITANIUM SERIES

95 OR 150 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 Installation

CONTENTS

Owners Manual Available for Download at www.FASSride.com

MP-9018

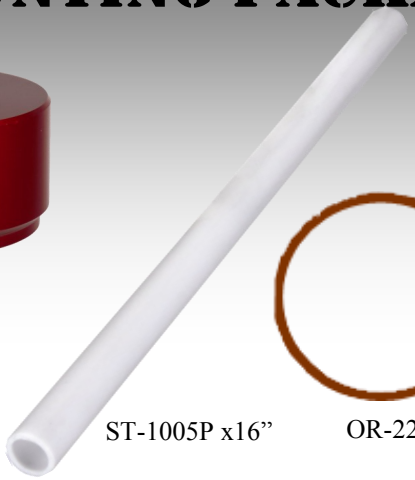
WH-1004

PBR-2001 PFB-2002

FL-1002 x17’

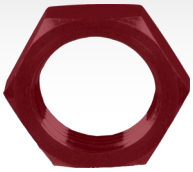
MOUNTING PACKAGE CONTENTS

BHF-1002



ST-1005P x16”

OR-223

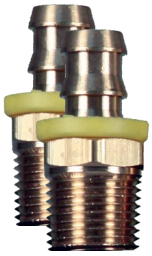


BHN-1001

LW-1001

Ring Terminal

PL-1005



PL-1004

10-301

PL-2003

10-300

DIPF-1003

(4) Hex Bolt 3/8” -16x 1 1/2”

(3) Hex Bolt 1/4”-20x1 3/4”

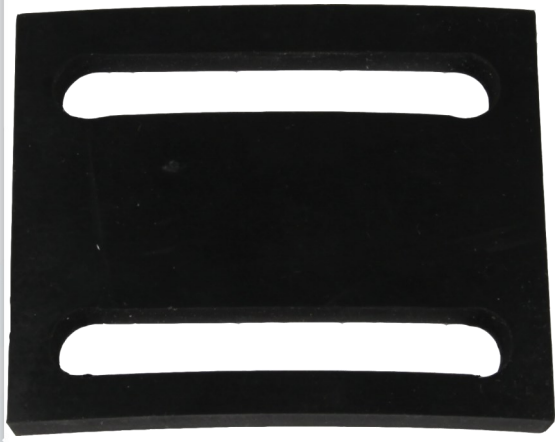
(4) Locking Nut 3/8”

(3) WA-1001D

(4) 3/8” Washers

(1) 1/2” Washers

(1) Hex Bolt M12-1.75x45MM



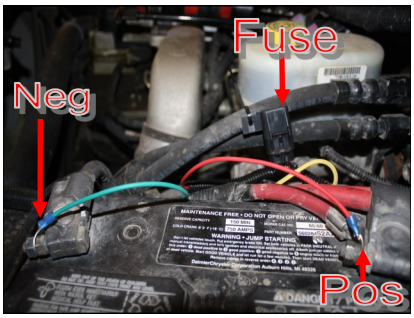
RS-2002

RS-2001

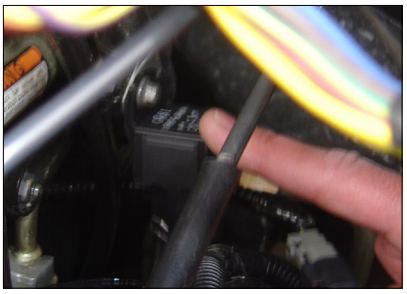
STEP 1: INSTALL ELECTRICAL HARNESS

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 ring terminals, attach red wire of the WH-1004 to the positive battery terminal. Attach green wire to a clean ground, preferably the negative battery terminal. Secure fuse block in a location protected from outside elements. **The use of corrosion preventative spray is recommended.**



B. Secure Relay in an upright position, as shown, to prevent moisture from entering. Di-electric grease may be applied to prevent corrosion. Examples of locations to secure relay:



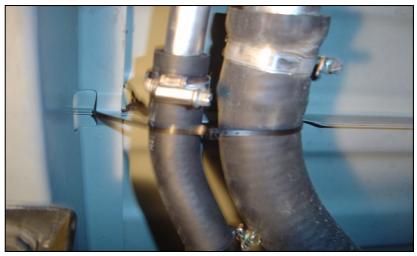
C. Route wire harness along frame to the approximate mounting location near the fuel tank. **Completion of this step will be addressed in the Step 3.**

STEP 2: PREPARE SUCTION & RETURN LINES

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

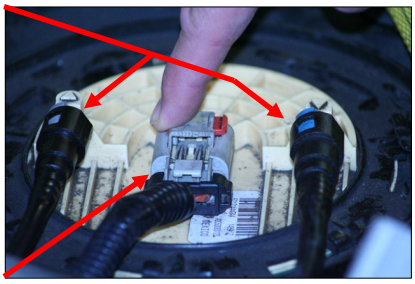
A. Before tank is removed or moved, identify ALL areas of clearance between the tank and the truck's bed for the best location to install the BHF assembly. With proper clearance, you want to install it as close to the Fuel sending unit as possible.

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



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 return.

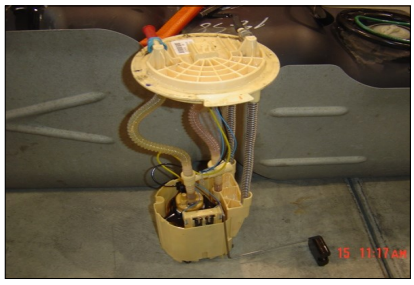
D. Disconnect the factory electrical harness on top of the fuel tank.



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

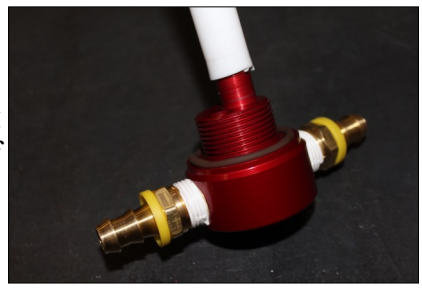
F. Clean the fuel module area then remove the lock ring on the top of the fuel tank.

G. Once the lock ring is removed, remove pick up module from fuel tank.



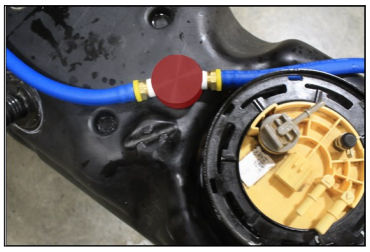
NOTE: Hose clamps are not recommended for push lock fittings. They will hold up to 300psi! Use oil on fittings and inside fuel line when installing Push-Lok fittings

H. Assemble the BHF-1002 with the PL-1004 in ports "S" and "R" using thread tape, along with pushing the ST-1005P onto the barb portion of the BHF-1002, Insert O-ring into groove. Torque to 40 ft./lbs.



STEP 2: PREPARE SUCTION & RETURN LINES

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

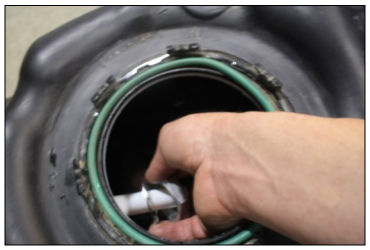


J. Drill a 1 3/8" hole, catching all debris. De-bur hole and remove any missed debris in the fuel tank.

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!

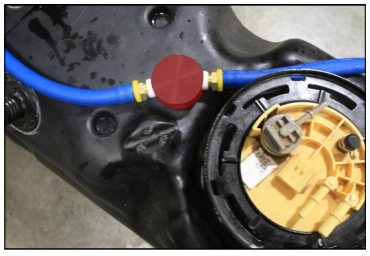
L. Place the bulk head assembly into the drilled hole, take measurements so the bottom of the suction tube is only 1/8" (no more than 2 quarters stacked) from the bottom of the fuel tank. Using a razor knife, make multiple cuts to insure proper length, it is easy to shave the suction tube with the razor.

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 insurance.



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

O. Attach FL-1002 to the Push-Lok PL-1004 fitting to "R" port and FL-1002 to the Push-Lok PL-1004 to "S" port of the BHF-1002. Remember to oil the fitting and fuel line. Route fuel line over frame rail when reinstalling fuel tank.

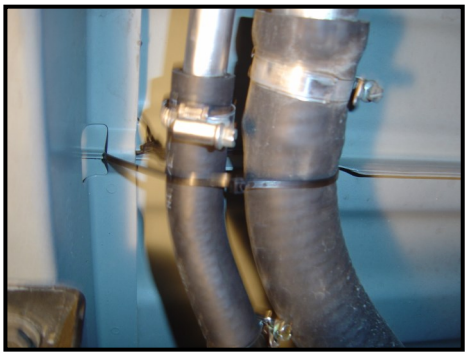


STEP 2: PREPARE SUCTION AND RETURN LINES

P. Place the loop of fuel line over the frame rail while reinstalling the fuel tank. Torque tank hanger bolts to proper specifications.

Q. Connect WH-1004 (addressed in Step 1) to the fuel module along with the factory fuel lines

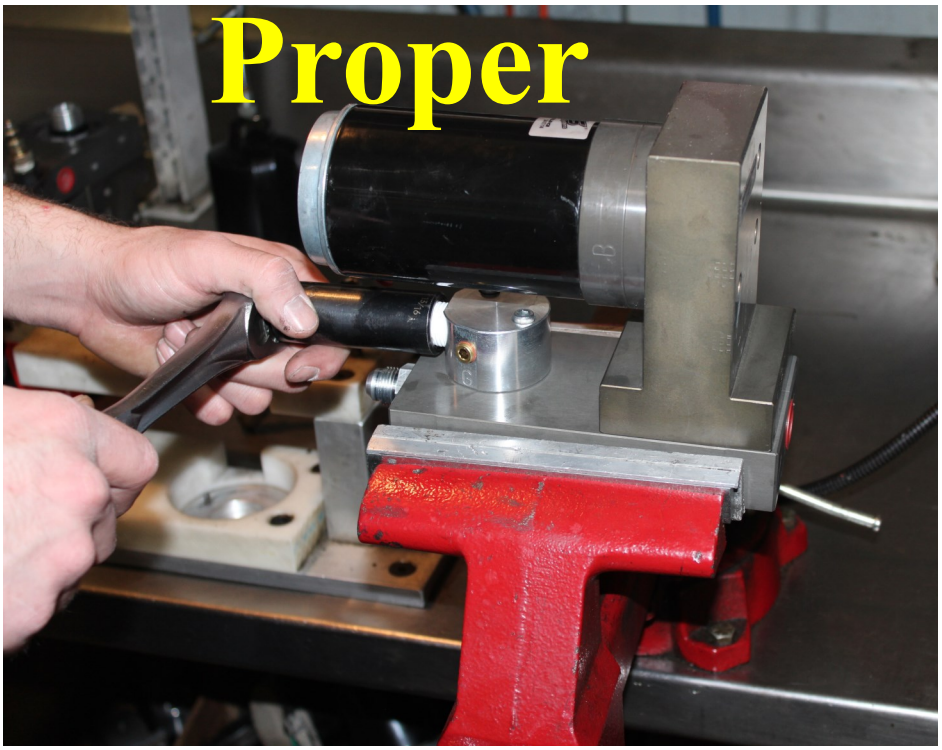
R. Connect factory wire harness to the WH-1004.

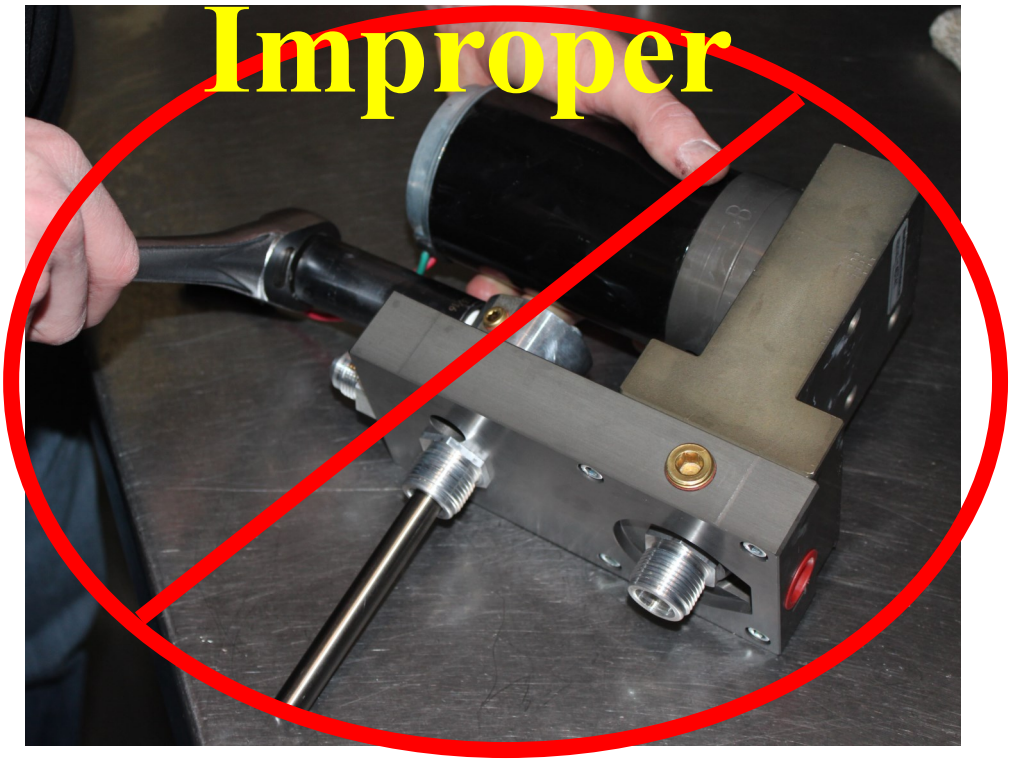


S. Reattach filler neck and clamps.

NOTE

ATTENTION: While installing fittings into Titanium pump **DO NOT** Apply side pressure to draw tube of pump

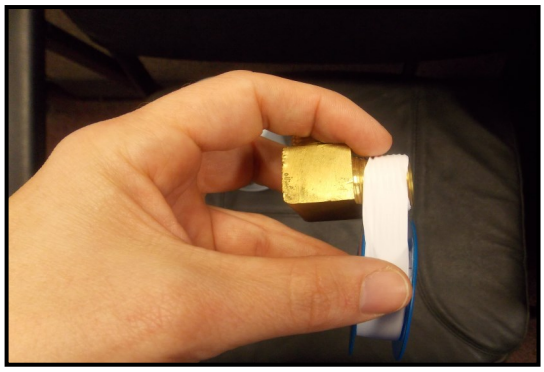


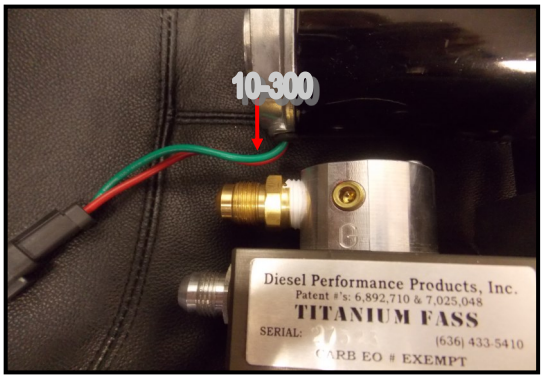


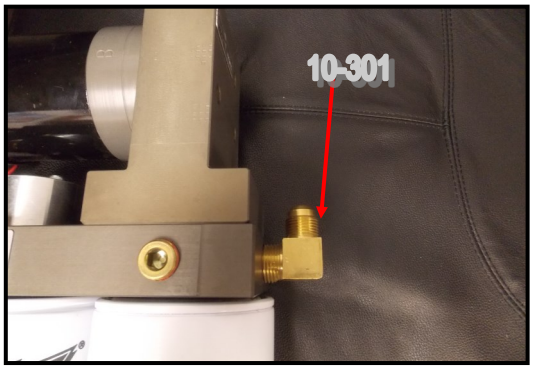
STEP 3: MOUNT FUEL SYSTEM

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.

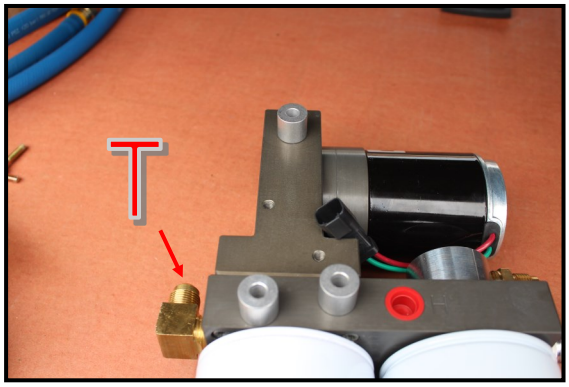
A. Using thread tape, install the 10-300 into "E" and the 10-301 into the "T" port (on opposite end). Torque to 40 lb./ft.² **Note: Do Not Put Thread Tape on Flare of Fitting**. ***The use of thread sealant is not recommended***

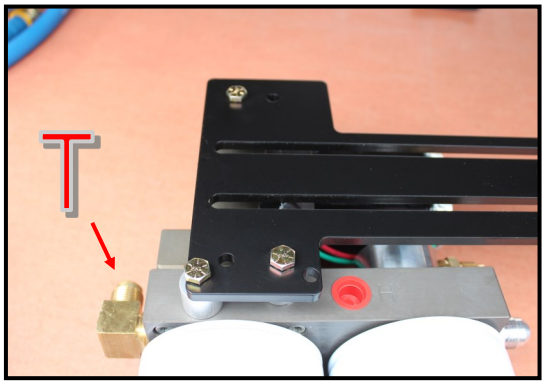






B. For fitting purposes. Secure PBR-2001 to pump assembly lightly with (3) 1/4"-20x1 3/4 bolts and (3) WA-1001D. This will assembly will be used in future steps for correct fitting of brackets. **(Note: Bracket maybe flipped to accommodate your application.)**

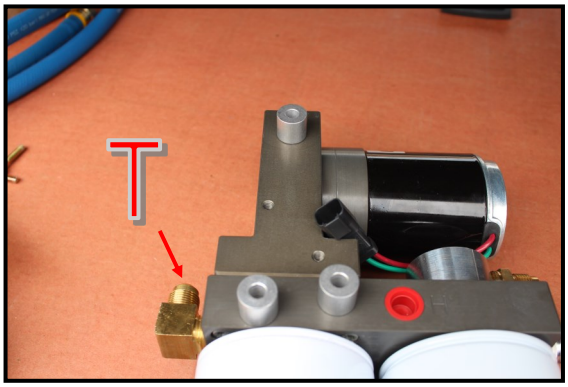


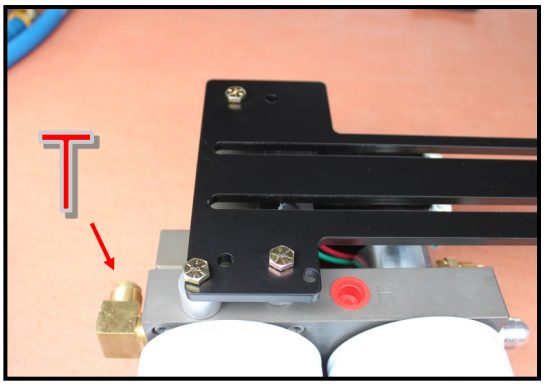


STEP 3: MOUNT FUEL SYSTEM

1998.5-2013 Dodge Installation

B. For fitting purposes. Secure PBR-2001 to pump assembly lightly with (3) 1/4”-20x1 3/4 bolts and (3) WA-1001D. This will assembly will be used in future steps for correct fitting of brackets. **(Note: Bracket maybe flipped to accommodate your application.)**





C. Unbolt driver side front bed bolt from bed retain bolt for future use. Align RS-2001 with PFB-2002.

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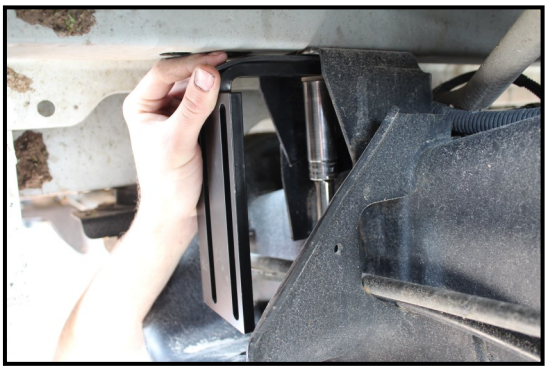
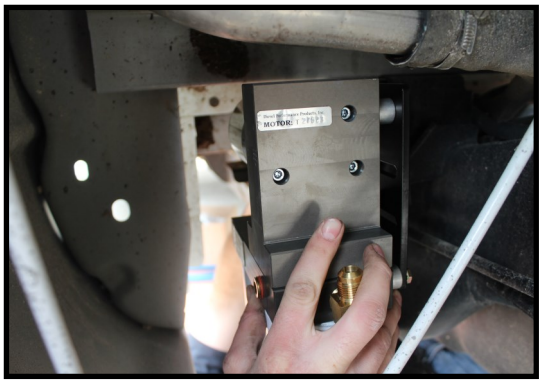
D. Secure PFB-2002 and RS-2001 with bed bolt in previous step.



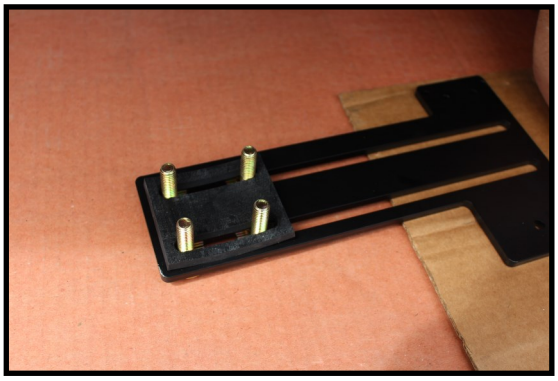
STEP 3: MOUNT FUEL SYSTEM

1998.5-2013 Dodge Installation

E. Position the PBR-2001 to the PFB-2002 pump assembly at the mounting location and check for fit. Once location is established mark location for mounting in next step.



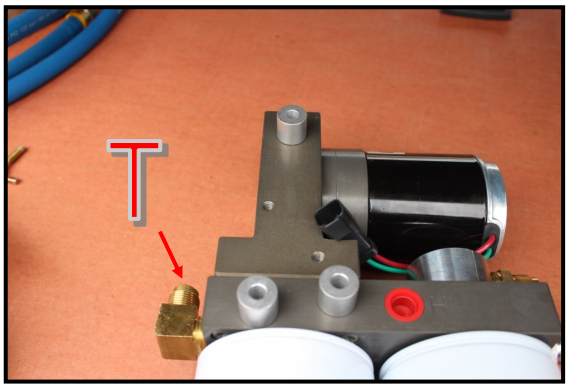
F. Assemble the FASS pump bracket PBR-2001 using the RS-2002 spacer between PFB-2002 and PBR-2001 bracket with 4-3/8 bolts, nuts, and washers. **Note: Torque bolts not flange nut.**

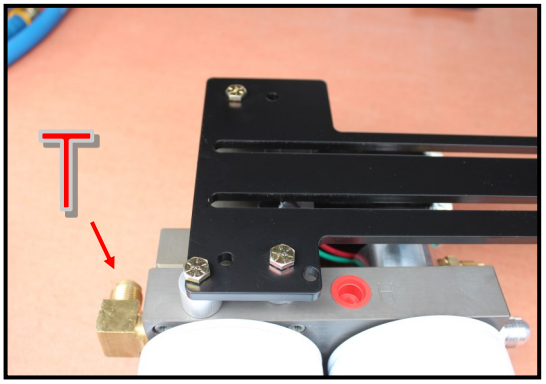


STEP 3: MOUNT FUEL SYSTEM

2014 Dodge Installation

B. For fitting purposes. Secure PBR-2001 to pump assembly lightly with (3) 1/4”-20x1 3/4 bolts and (3) WA-1001D. This will assembly will be used in future steps for correct fitting of brackets. **(Note: Bracket maybe flipped to accommodate your application.)**





C. Using Bolt and Washer provided align the RS-2001 with the PFB-2002.

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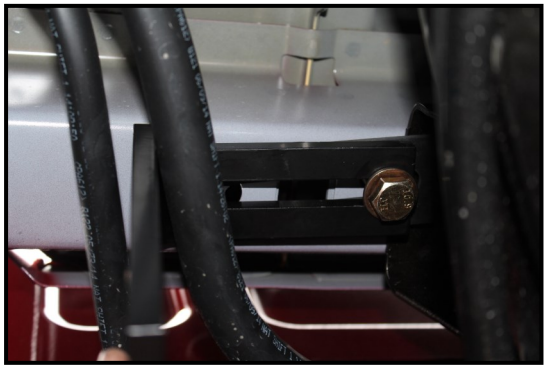
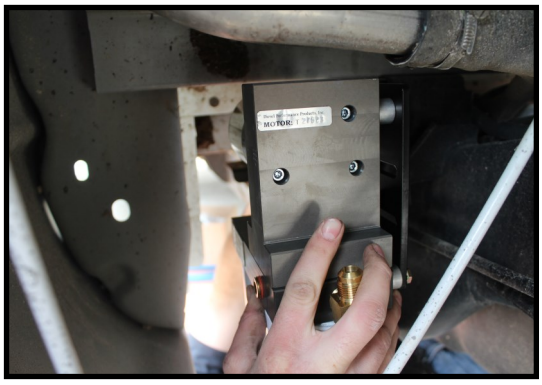
D. Route PFB-2002 in between the DEF lines and secure PFB-2002 and RS-2001 with bed bolt in previous step.

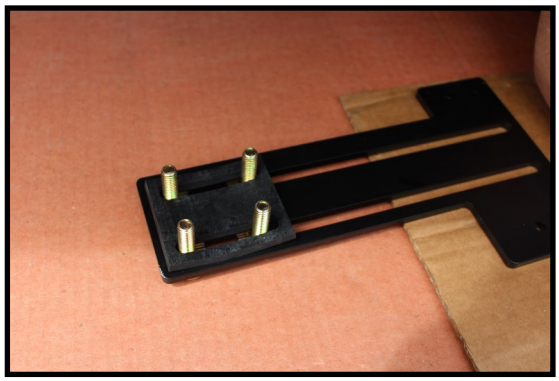


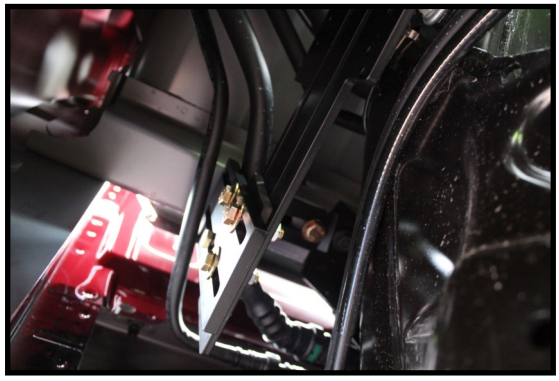
STEP 3: MOUNT FUEL SYSTEM
2014 Dodge Installation

E. Position the PBR-2001 to the PFB-2002 pump assembly at the mounting location and check for fit. **NOTE: PBR-2001 will go on the back side of PFB-2002.** Once location is established mark location for mounting in next step.



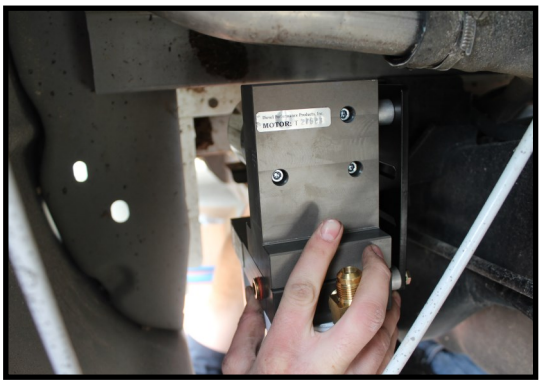
F. Assemble the FASS pump bracket PBR-2001 using the RS-2002 spacer (**NOTE: PBR-2001 will go on the back side of PFB-2002)**between PFB-2002 and PBR-2001 bracket with 4-3/8 bolts, nuts, and washers. **Note: Torque bolts not flange nut.**



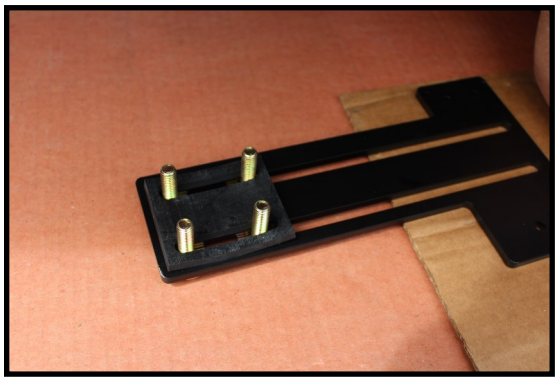


STEP 3: MOUNT FUEL SYSTEM

F. Position the PBR-2001 to the PFB-2002 pump assembly at the mounting location and check for fit. Once location is established mark location for mounting in next step.

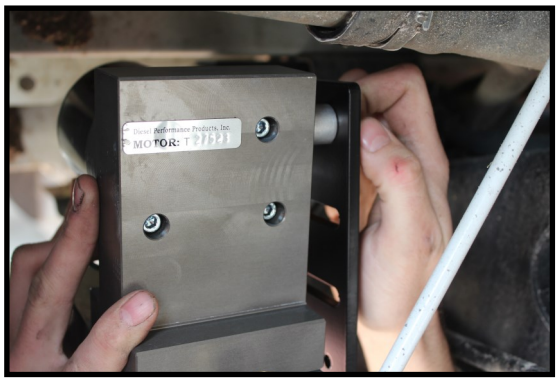
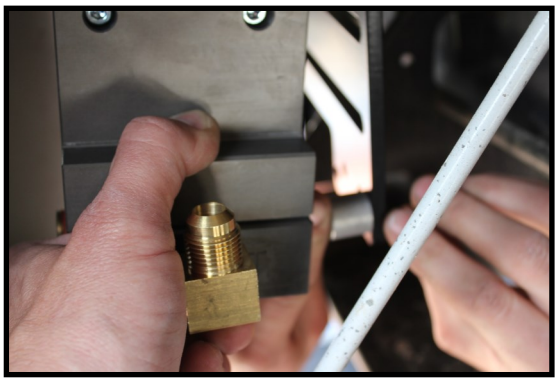
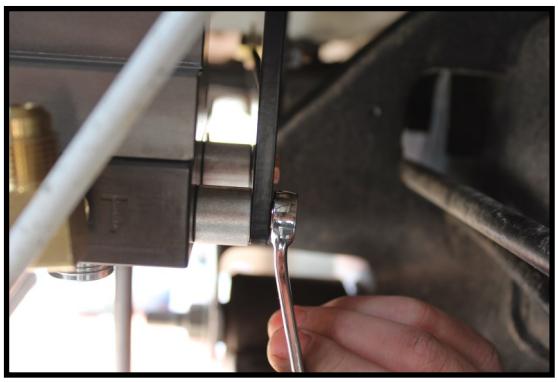


G. Assemble the FASS pump bracket PBR-2001 using the RS-2002 spacer between PFB-2002 and PBR-2001 bracket with 4-3/8 bolts, nuts, and washers. **Note: Torque bolts not flange nut.**

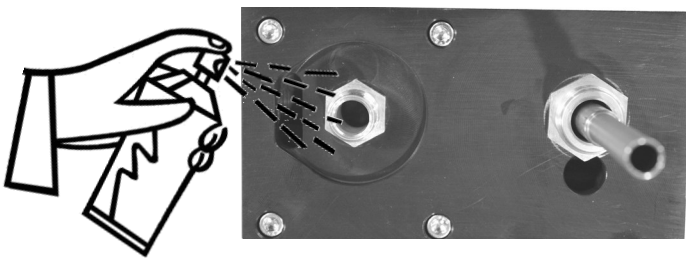


STEP 3: MOUNT FUEL SYSTEM

G. Once secure use (3) 1-3/4 bolts and (3) WA-1001D spacers to mount the pump to the bracket.

H. Connect factory plug into the FASS harness. Plug FASS harness into the fuel module in tank. Make sure to lock red slide tab. Connect female plug of the FASS harness into pump. Turn key to "on". With pump operating (you may have to bump the starter), turn pump over, liberally spray WD-40 (or equivalent) into water separator nipple lubricating Gerotor.

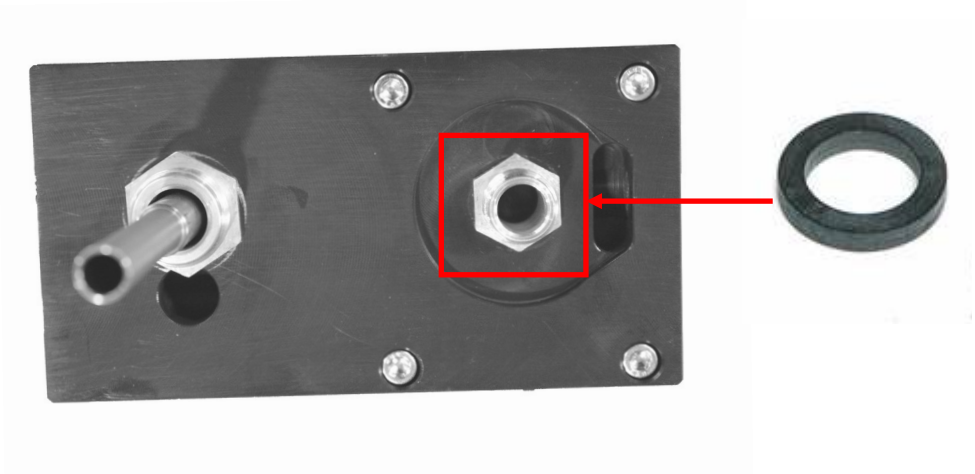


I. Apply motor oil to gasket located on filters. Attach to system and hand tighten.

STEP 3: MOUNT FUEL SYSTEM

Fuel Filter –Install FF-3003 on side of pump with draw tube in the middle of the filter nipple.

Water Separator Filter –Install FS-1001 on water separator nipple without the draw tube. Make sure to insert O-Ring provided on nipple.

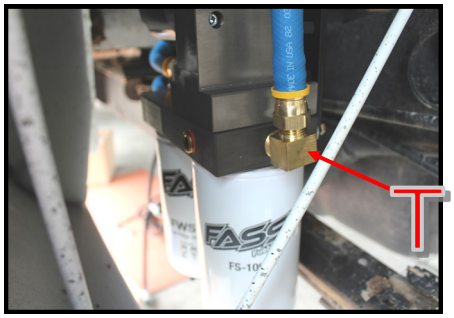


Note: O-Ring must be put back on suction side of pump. Failure to do so can result in priming issues, cavitation, or pressure loses.

STEP 4: INSTALL FUEL LINE

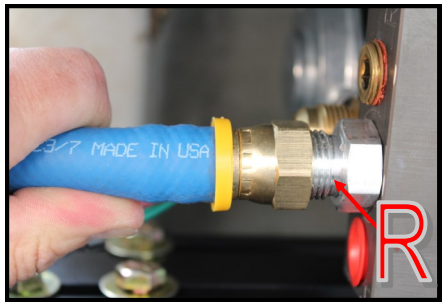
Caution: Do not use sealant on AN fittings. Only use sealant on threads going into the FASS pump.

A. Route suction line to 'T' port . Cut FL-1002 to length. Insert PL-1005 in line using oil. Attach to 10-301. Torque to 18 ft./lbs.

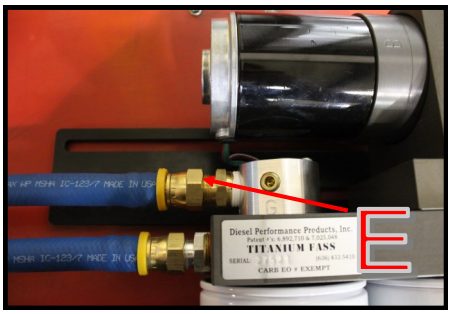


NOTE: Hose clamps are not recommended for push lock fittings and can damage the strength of hose. They will hold up to 300psi! Use oil on fittings and inside fuel line when installing Push-Lok fittings

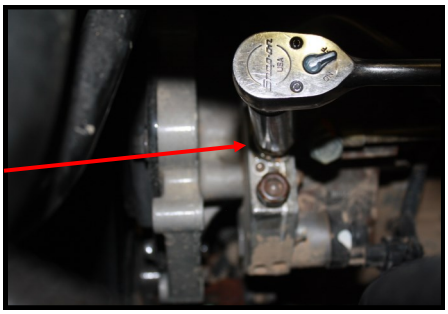
B. Route fuel line from the 'R' fitting of the suction tube assembly to the 'R' port on the FASS system with a gentle bend. Cut and insert the PL-1005 fitting to the hose. Use oil. Attach fitting to the 'R' port. Torque to 18 ft/lbs.



C. Insert PL-1005 in remaining fuel line. Connect to the 'E'' port of the FASS system. Use oil. Torque to 18 ft./lbs. Route this line up to the injection pump.

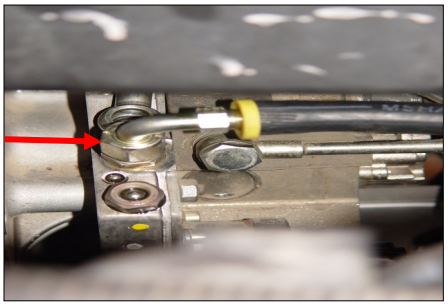


D. Disconnect factory fuel line from inlet side of the factory injection pump and install the DIPF-1003 fuel fitting. **(Note: This is where the fuel line from the fuel filter housing enters the injection pump.)** Torque to 18 ft./lbs.



NOTE: Photo shows the common rail system on the 2003 through 2007 trucks. For 2007.5-newer please skip to F.

E. Cut fuel line to length and insert PL-2003 90° (or PL-1005 for 2008 - 2011) fitting using oil. Attach to DIPF-1003. Torque to 18 ft./lbs.

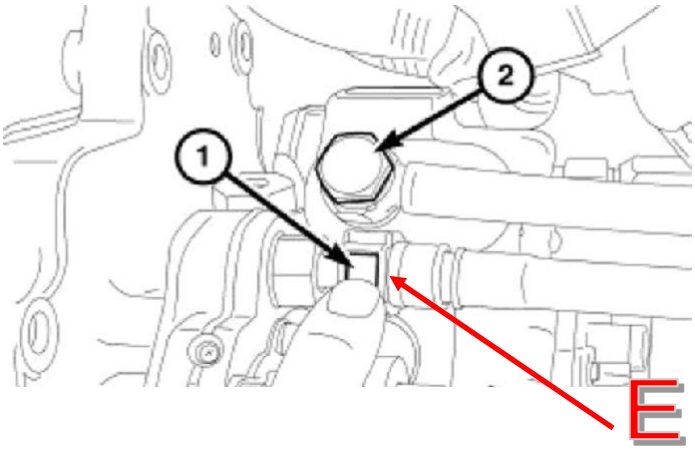


Note: Secure all fuel lines with cable ties. Cable ties are an economical way to prevent the possibility of problems occurring!

STEP 4: INSTALL FUEL LINE

NOTE: Photo shows the common rail system on the 2007.5 through 2015 trucks.

F. Cut fuel line and insert PL-1005 fitting using oil. Attach to DIPF-1003 fitting (Number 1) on the injection pump. Torque to 18 lb./ft.²



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

STEP 5: 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? Reconnect the battery.
- 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 16240 Hwy O Suite B Marthasville, MO 63357

STEP 5: REVIEW INSTALLATION

The factory suction line can be capped off or removed from the truck. The openings on the filter and tank will need to be capped off to keep debris from getting into lines or canister.

To assist with priming your FASS pump crack the FF-3003. Put power to the FASS pump to activate the pump. When the tone of the pump changes you can tighten up the fuel filter. If you need a video of the priming process go to www.FASSride.com.

Note: The Red Plastic Plugs located in the "H" ports can stay in place fuel will not flow through these ports. Coolant can be plumbed into these ports to heat the fuel in the Winter months.

Filter Cross References

TITANIUM SERIES

(Currently in use)

- Fuel (FWS-3003)
- Water (FS-1001)

Fuel Filter (Micron Rating)	Water Separator (Micron Rating)
Thread Size (1-14)	**Thread Size (1-14)**
Baldwin BF7633 (2M)	Baldwin BF 1258 (10M)
Carquest 86528 (2M)	Baldwin BF1214
CAT 1P2299 (6M)	Baldwin BF7546 (10M)
CAT 1R0750 (2M)	Donaldson P558000 (20M)
Donaldson P551025(4M)	Donaldson P551000 (10M)
Donaldson P551311 (3M)	Donaldson P551001(10M)
Donaldson P551313 (3M)	Fleetguard FS1282 (14M)
Donaldson P553203(3M)	Fleetguard FS-1000 (10M)
Donaldson P557440 (6M)	Fleetguard FS-1001 (10M)
Fleetguard FF5320(2M)	Fleetguard FS-1009(14M)
Fram P8334 (2M)	Fleetguard FS-1212(14M)
Hastings FF1079 (2M)	LuberFiner LFF8011
Wix 33352 (6M)	LuberFiner LFF8000
Wix 33528 (2M)	Motorcraft FD818 (14M)
Wix 33674 (2M)	Wix 33405(14M)
	Wix 33522 (10M)

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. Warranty is voided if used with other than diesel fuel. 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.
16240 State Hwy O Suite B
Marthasville, MO 63357
636-433-5410

NOTES