

INSTALLATION MANUAL

TITANIUM SERIES



APPLICATION:

T D07 220G (220gph @ 16psi)
T D07 260G (260gph @ 16psi)

Cummins 5.9L /6.7L 24Valve

2005-2012

1998.5-2004

with In-tank Lift Pump



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, 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 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!

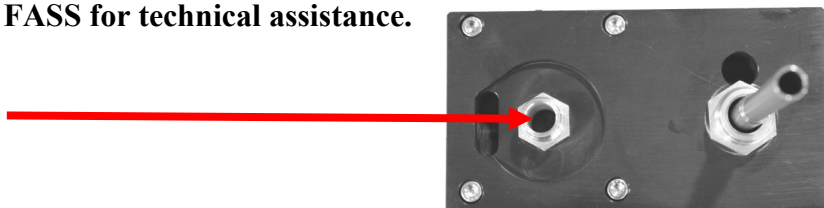
- Read all instructions before starting installation of this product!
- Installing the improper FASS Pump can cause *severe* engine damage.

FASS	Recommended Application
T D07 220G	Cummins 2005-2012 with super extreme horsepower modifications
T D07 260G	Cummins 2005-2012 with super 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!**
- 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 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.

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 220G)**
- Serial Number
- Last 6 of vehicles' VIN
- Date of purchase
- Nature of Your Concern

Serial # Found

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

- Model **(T D07 220G)**
- Serial Number
- Last 6 of vehicles' VIN
- Date of purchase



TITANIUM SERIES

**220 GPH OR 260GPH
16 PSI (APPROXIMATELY)**

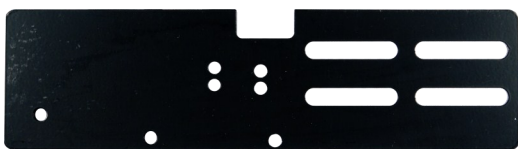
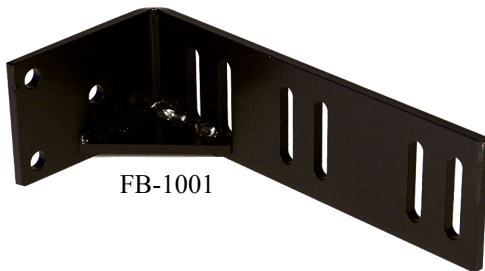
A fuel pressure gauge is highly recommended to identify fuel filter life and to prevent engine damage!



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

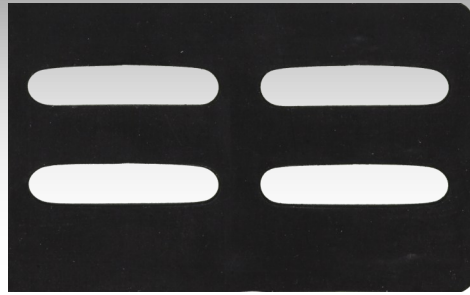
CONTENTS



MOUNTING PACKAGE CONTENTS



BHF-1002



RS-1001



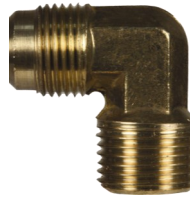
ST-1005P x14"



PL-1005



PL-1004



10-301



PL-2003



10-300



DIPF-1003



7 Hex Bolt 3/8" -16x 1 1/4"



5 Hex Bolt 1/4"-20x1.25"



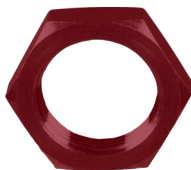
7 Locking Nut 3/8"



5 WA-2001



Ring Terminal



BHN-1001

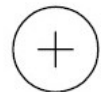


OR-223



LW-1001

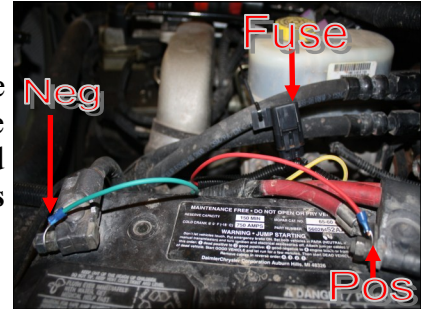
MOUNTING TEMPLATE



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.**

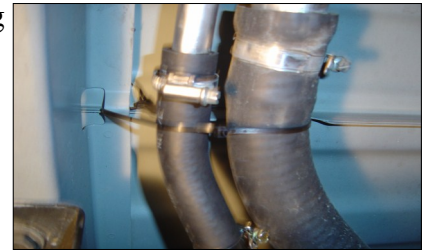
STEP 2: PREPARE SUCTION & RETURN LINES

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.

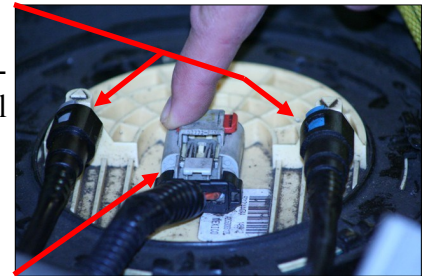


- B. Remove the filler neck and overflow tubes from the truck by loosening the clamps at both ends.



Helpful Hint: 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 return.



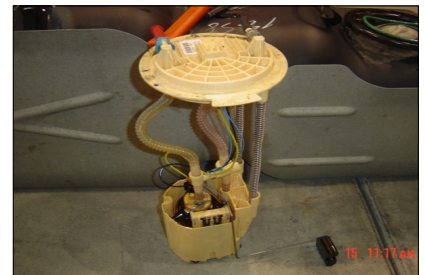
- D. Disconnect the factory electrical harness on top of the fuel tank.

- 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.



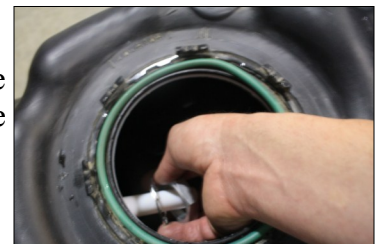
- K. **VERY IMPORTANT:** Support fuel tank on both ends allowing the natural formation of the tank to take place. Failure to perform this step can and will create an issue with less usable fuel!



- 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 both end of the FL-1002 to the Push-Lok fittings 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

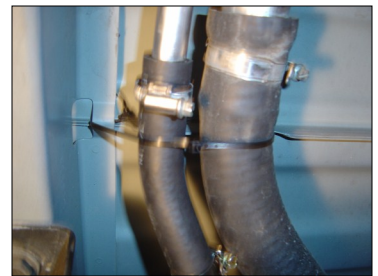
P. Place the loop of fuel line over the frame rail while reinstalling the fuel tank. Torque tank hanger bolts to proper specifications.

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



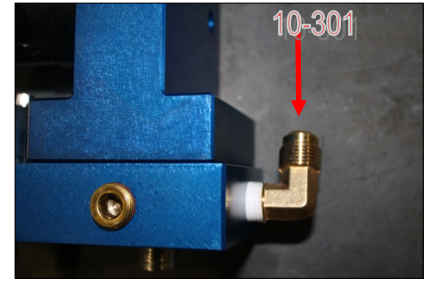
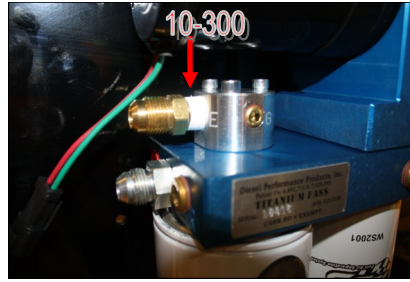
R. Connect factory wire harness to the WH-1004.

S. Reattach filler neck and clamps.

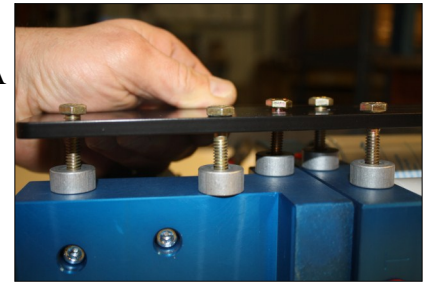


STEP 3: MOUNT FUEL SYSTEM

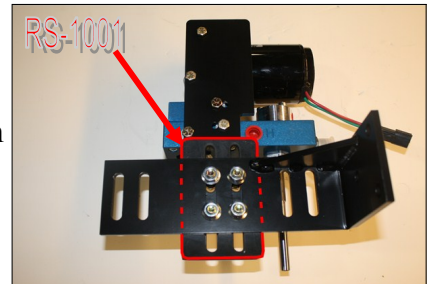
- A. Using thread tape, install the 10-300 into “E” and the 10-301 into the “T” port (on opposite end). Torque to 40 lb./ft.²



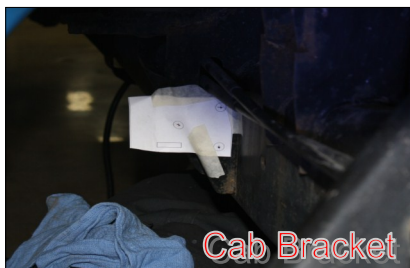
- B. Attach BR-2001 to back of system using five 1 1/4” Hex bolts and WA-2001 spacers. Torque to 10 lb./ft.²



- C. Assemble the FASS pump brackets using the RS-1001 spacer between brackets. Hold pump up to the mounting location for rough fitting.



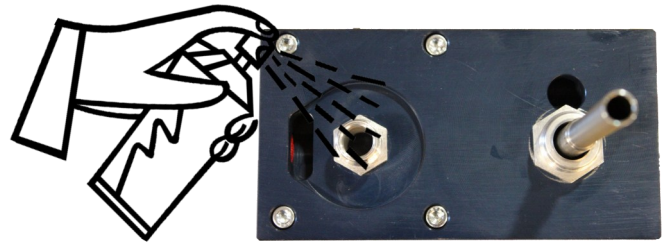
- D. Position the pump assembly at the mounting location and check for fit. Once location is established, **use the template located on the contents page to mark drill points.** Mount to bed support, cab bracket or leaf hanger.



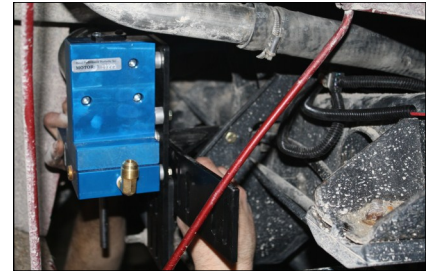
- E. Pre-drill holes. Final drill with 3/8” bit.

STEP 3: MOUNT FUEL SYSTEM

- F. 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.



- G. Using the 3/8” bolts secure FASS with brackets to previously drilled mounting holes.



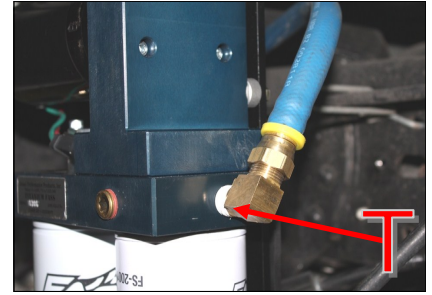
- H. Apply motor oil to gasket located on filters. Attach to system and hand tighten.



STEP 4: INSTALL FUEL LINE

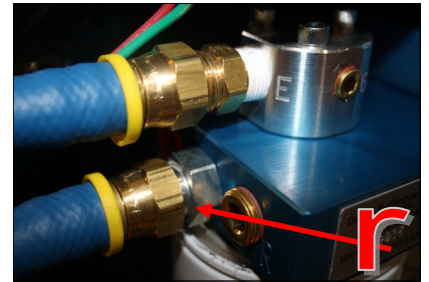
Caution: Do not use sealant on AN fittings. Only use sealant on threads going into the FASS pump.

- 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.

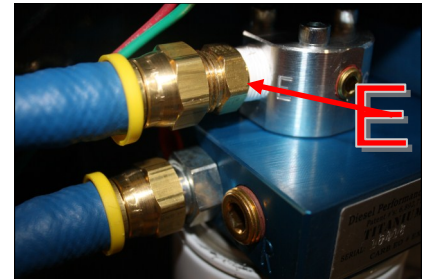


NOTE: Hose clamps are not recommended for push lock fittings. They will hold up to 300psi! Use oil on fittings and inside fuel line when installing Push-Lok fittings

- 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.

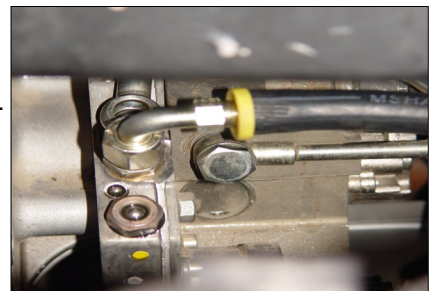


- D. Disconnect factory fuel line from inlet side of the factory injection pump and install the DIPF-1003 fuel fitting. (**Note: This is where the fuel line from the fuel filter housing enters the injection pump.**) Torque to 18 ft./lbs.



NOTE: Photo shows the common rail system on the 2003 through 2007 trucks.

- 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 2012 trucks.

- F. Cut fuel line and insert PL-1005 fitting using oil. Attach to DIPF-1003 fitting 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