

# TITANIUM SERIES

T C12 095G or T C12 165G

www.FASSride.co

## LIMITED LIFETIME WARRANTY

**MANUFACTURED DATE: MOTOR NO: SERIAL NO:** Provide your pump's serial #

#### **WARRANTY STIPULATIONS:**

- Copy of sales receipt mailed with this form
- All warranty information, located on the front & back, filled out
- FASS products and/or paperwork must not be tampered with
- Warranties are non-transferable
- Warranty is only available if purchased through FASS ViP Dealer! There is "NO Warranty" on FASS Products purchased through unauthorized dealers.
- Warranty Registration must be received by FASS within 30 days of purchase.

#### **SEND CORRESPONDENCE TO:**

FASS Fuel Systems Attn: Warranty 16234 State Hwy O Marthasville, MO. 63357 techsupport@fassride.com

#### **DPP INC. OFFICE USE ONLY:**

Date Received: _				
Purchase Receipt:	Yes (Receipt Date:	)	□ No	

Dealer Purchased From :		Date:
New FASS Owner Name:		
Company/Organization:		
Phone:		
Email:		
Street:		
City, State & Zip:		
Vehicle Year/ Make/ Model:		
Color:		
Vin Number:		
	Quality Of Product	
Excellent	Quality Of Product Good Fair	Poor
	Good Fair  How did you hear about us?	Poor
Excellent	Good Fair  How did you hear about us?	Poor
Dealer	Good Fair  How did you hear about us?	
Dealer	Good Fair  How did you hear about us?  Magazine	
Dealer	Good Fair  How did you hear about us?  Magazine	
DealerShow	Good Fair  How did you hear about us?  Magazine	
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DealerShow	Good Fair  How did you hear about us?  Magazine	

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 <a href="https://www.FASSride.com">www.FASSride.com</a>, 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.

<u>VERY IMPORTANT</u>: 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.



## INSTALLATION MANUAL



**APPLICATION:** 

T C12 95G - T C12 165G

2015-2016 GM DURAMAX



FASS DIESEL FUEL SYSTEMS® / ENGINEERED EXCELLENCE

# WARNINGS!

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

FASS	Recommended Application	
T C12 095G	Duramax 2015-2016 with stock - moderate horse power modifications	
T C12 165G	Duramax 2015-2016 with moderate - extreme horsepower modifications	
	of the higher fuel flow these systems have to offer, you may encounter the stock fuel module. FASS can solve this with a Suction Tube Kit.	

- Secure vehicle from ROLLING!
- Cab and Chassis may require modifications
- 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.

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 C12 095G or T C12 165G)
  - Serial Number
  - Vin Number of Vehicle
  - Date of purchase
  - Nature of Your Concern

Serial # Found Here....

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

- Model (T C12 095G or T C12 165G)
- Serial Number
- Vin Number of Vehicle
- Date of purchase



#### TITANIUM SERIES

#### 95 OR 165 GPH 8-10 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





#### 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 and the WH-1006.



B. Place wire from 46177 and WH-1006 into butt connector. Using crimping tool connect 46177 and WH-1006 with butt connector. Install 46116 to 46177 bottom slot (opening that is near the spade).







C. Crimp the ring terminals to the red and green wires of the WH-1006 Wire Harness. Attach red wire to the positive terminal of the battery and the green terminal to the negative terminal. The use of a corrosion preventative on electrical connections is recommended.



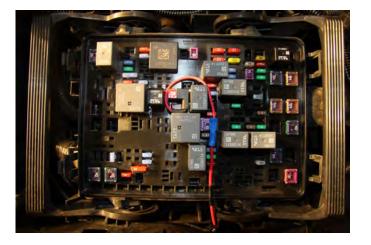
D. Secure relay and fuse in an upright position, as shown, to prevent moisture from entering. Di-electric grease may be applied to prevent corrosion.



## STEP 1: INSTALL ELECTRICAL HARNESS

E. Locate fuse box under hood, remove fuse #11, and put Add-A-Fuse in place. Install fuse previously removed into Add-A-Fuse. **The use of a corrosion preventative on electrical connections is recommended.** 







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

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. Remove the filler neck and overflow tubes from the truck by loosening the clamps at the fuel tank and fuel tank module. Disconnect electrical connector on top of fuel tank module.



B. Disconnect factory suction and return lines (located in front of fuel tank).



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







D. Mark the location to mount the BHF-1004 assembly. Be sure there is adequate amount of clearance for the BHN-1004. Using a 7/8" hole saw, carefully drill marked location.







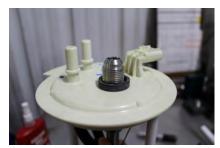
E. Using a Dremel, pencil grinder or similar precision grinding tool, carefully remove electrical connector webbing and raised collar (remains from hole saw location). Be sure to create a smooth, burr-free sealing surface for OR-212.







F." Install BHF-1004 into the hole drilled in previous step, install OR-212 onto fitting along with BHN-1004. Be sure to apply red LocTite or equivalent onto threads of BHF-1004 as this will ensure a leak free seal. Use channellock pliers to tighten nut to approximately 10 ft/lbs, be careful not to over-torque nut as this can damage fuel tank module.







G. Using a 7/8" hole saw, drill a hole directly beneath BHF-1004 to allow ST-1005P to draw fuel from the bottom of the fuel tank module."Be sure to remove all debris from fuel tank module after drilling.



H." VERY IMPORTANT: Support fuel tank on both ends allowing the natural formation of the tank to take place. Failure to perform this step will hinder precision installation.



#### **FUEL TANK SUPPORTS**

I. Using a tape measure, measure from the bottom of the fuel tank to the top of the o-ring sealing surface where the fuel tank module makes contact and take note of the measurement. Compress fuel tank module to the exact height measurement taken in previous step, measure and mark ST-1005P with 1/2" clearance from bottom of fuel tank module. Cut ST-1005P to length and install onto BHF-1004 with hose clamp HC-1001.

#### NOTE: ACTUAL MEASUREMENTS WILL VARY FROM IMAGES!













J." Using a razor knife, remove and discard the OEM convoluted tubing from the factory suction line on fuel tank module. **BE SURE YOU'DO NOT DAMAGE THE PLASTIC BARBED FITTING THAT'SECURES TUBING!** Install the provided 5/16" Viton tubing in place of the factory convoluted tubing. Trim the Viton tubing to length as necessary.





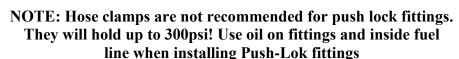


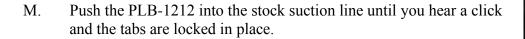
Some of the photo's are of a different application, procedures are the same.

K. Carefully reinstall fuel tank module into fuel tank, reinstall locking ring. Install 10-304 onto BHF-1004, fitting must be oriented facing FASS mounting location and free from obstruction. While tightening fitting nut, hold opposing end with a wrench to prevent damage to fuel module. Install PL-1005 onto 10-304 and torque with the same method used in previous step. Lubricate PL-1005 and push FL-1002 onto barb portion of fitting. Reinstall fuel tank into vehicle, reconnect electrical connector and factory fuel return line. Leave factory suction line disconnected as this is now the location for the FASS return, reconnect fill and vent tubes.



L. Using oil, insert PLB-1212 into one end of the provided FL-1002 fuel line. Feed line over frame to the stock fuel connection.









N. Using a HC-1001 hose clamp, insert the QD-1002 into the other end of the provided FL-1002 fuel line and secure. Loop this end over the frame to the factory steel fuel line disconnected in Step 2a. Oil the rings inside the QD-1002 and slide over the line until you hear a click.



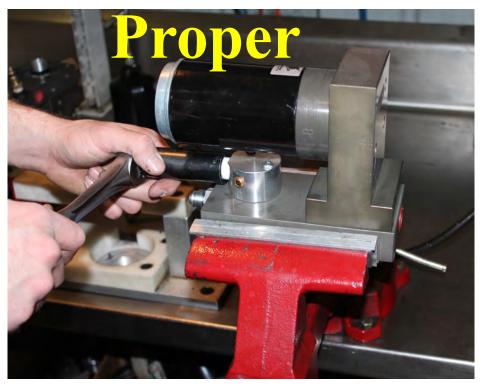


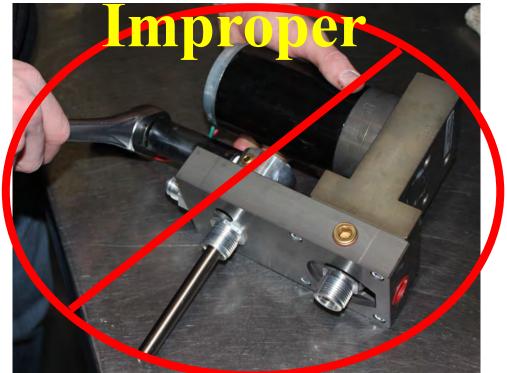
## NOTE

ATTENTION: While installing fittings into Titanium pump

DO NOT Apply side pressure to draw

tube of pump





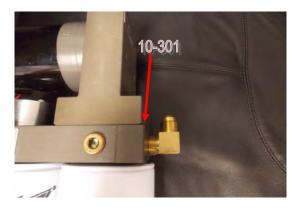
## STEP 3: MOUNT FUEL SYSTEM

#### NOTE: Before installing fittings make sure to inspect for burs or flare imperfections.

A. Install 10-300 into the "E" port and 10-301 into the "T" port of the FASS, torque to 20 ft./lbs.

## \*\*\*FITTINGS COME EQUIPPED WITH THREAD SEALANT, DO NOT USE THREAD TAPE\*\*\*







B. For fitting purposes. Secure PBR-2002 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

C. 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.

Remove the bed bold directly in front of the drivers side fender well, this bolt can be discarded. Align



E. Secure PFB-2002 and RS-2001 with 12mm bolt and flat washer supplied in the kit.

D.



F. Position the PBR-2002 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.



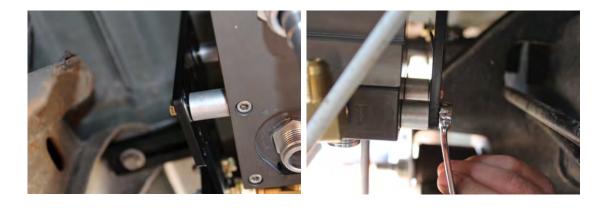


## STEP 3: MOUNT FUEL SYSTEM

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



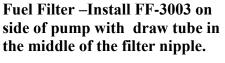
H. Once secure use 3-1 1/2 bolts and 3-WA-1001D spacers to mount the pump to the bracket.



#### STEP 3: MOUNT FUEL SYSTEM

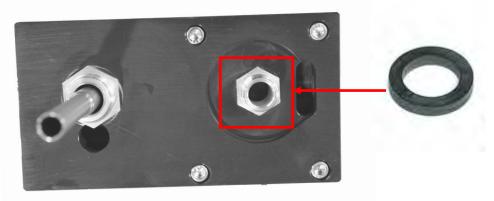
I. Apply motor oil to gasket located on filters. Attach to system and hand tighten.







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 LINES

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

A. Route suction line from BHF-1004/10-304/PL-1005 assembly to the 'T' port of the FASS. Cut FL-1002 to length. (measure twice cut once) Insert PL-1005 using oil and attach to 10-301. Torque to 18 ft./lbs.



B. Measure from the factory feed connection from Step 2M to the 'E' port of the FASS system. Cut and insert PL-1005. Connect to the 10-300 in the 'E' port of the FASS system. Torque to 18 ft./lbs.



C. Using oil, insert a PL-1005 into the remaining fuel line from step 2L. Connect to the 'R' port fitting on the FASS system, and torque to 18 ft./lbs. The FASS will now be utilizing the factory feed line on top of fuel tank for the FASS return line. If necessary, re-bend sheet metal that allowed access to fuel tank.





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

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.

#### **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 com-pleted warranty information along with a copy of the purchase receipt in to Diesel Performance Prod-ucts, Inc. Att: Warranty 16234 State 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 <u>must</u> purchase through a dealer to comply with our warranty policies. If you do not, there is no warranty! We recommend you go to <u>www.FASSride.com</u>, 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. 16234 State Hwy O Marthasville, MO 63357 636-433-5410