



# TITANIUM SIGNATURE SERIES INSTALLATION MANUAL

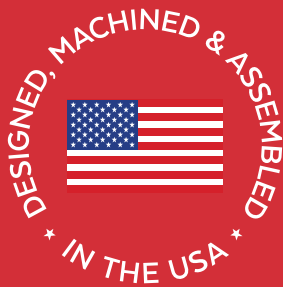
## ALL 1/2" FUEL PORTS



### APPLICATION:

**TS-100G**  
(100GPH @ 16-18psi)

**TS-165G**  
(165GPH @ 16-18 psi)



**CLASS 1-8 / SEMI**

### NOTE:

Fuel Lines NOT Included  
Visit [www.FASSride.com](http://www.FASSride.com) for  
application chart





[www.fassride.com](http://www.fassride.com)

(866) 769.3747

## **Thank you for choosing FASS, from Diesel Performance Products, Inc.**

FASS specializes in building extremely high-quality fuel products. We have earned an unsurpassed reputation for excellence in our industry by using only the highest-quality American-made components. In order to support our American workers and our American economy, more than 98+ percent of our products are manufactured completely in the United States.

Of course, that dedication to excellence comes at a price, but it is important to remember that price does not dictate quality—quality dictates price! We will never compromise by using cheaper, foreign-made components, like so many of our competitors do.

Customer satisfaction is our top priority and we strive always to provide outstanding customer service. Our Research and Development department, in conjunction with our Dealer Support Department, continually searches for ways to improve quality, expand our product line, and provide superb support. Our exclusive ViP Network ensures that customers receive the proper products and support at the local level. The extended four-year warranty is only available on products purchased from the network. There is no warranty on products not purchased outside the network.

### **IMPORTANT:**

*In order to qualify for the Four-year extended warranty, your product registration form and proof of purchase from an authorized dealer must be submitted to FASS Fuel Systems within 30 days of purchase. Failure to comply will void the warranty. We have the right to deny any warranty believed to be false, altered or purchased through an unauthorized or terminated dealer. A current list of authorized dealers can be found on our website, FASSRide.com.*

The complete conditions of the Limitation of Warranty can be found in the back of this manual, and FASSRide.com.

The installation of this product indicates that the buyer has read and understands the Warranty agreement and accepts its terms and conditions. In the event that the buyer does not agree with the terms, the product—in new, unused condition—along with the dated receipt should be returned within thirty (30) days of the date of purchase for a full refund less shipping costs.

**For more information,  
contact Technical Support:  
Diesel Performance Products, Inc.  
16234 State Hwy O.  
Marthasville, MO 63357  
636-433-5410**



**WARNING!**

**This product has NO WARRANTY unless:**

**1. It has been purchased from an **Authorized** or **ViP FASS Dealer**. If in doubt, check [www.FASSRide.com](http://www.FASSRide.com). (If your purchase was made on Amazon.com, the warranty is void. Return the FASS product to the seller and get a refund).**

**2. It is registered within thirty (30) days of purchase.**

***Other conditions may apply. Please see full warranty information.***

**ATTENTION!**

**Before you begin installation**

**Register for your Warranty ONLINE at [https://  
www.fassride.com/register-a-warranty/](https://www.fassride.com/register-a-warranty/)**

**No online access, call our TECH Support at**

**1-866-769-3747**

**(Fuel Line Not Included See Below)**

Before proceeding with the installation, **BE SURE** to identify that you have the proper **FASS System and Fuel Line Kit/Kits** by using our **Product Finder** at [www.FASSride.com](http://www.FASSride.com). Follow the instructions for proper identification.

**IDENTIFY FUEL LINE CONFIGURATION**

**NOTE:** Below is a chart of available fuel line kits FASS has to offer. Using one of these kits will make the installation cost effective and easier. This manual will refer to these **FLK (Fuel Line Kit)** numbers:

Be sure to identify the proper fuel line configuration. (For help, our product finder can be found at [www.FASSride.com](http://www.FASSride.com). Follow the instructions to see fuel line detail).

<b>#10 Fuel Feed Line (From FASS to Engine 5')</b>	<b>FLK-S01</b>
<b>Double Pickup/Return (15')</b> Double Return Line Kit (For Tanks With Extra Ports)	<b>FLK-S03</b>
<b>Double Vent Return Line Kit (15')</b> Double Vent Return Line Kit Dual Fuel Tanks (With No Extra Ports)	<b>FLK-S06</b>
<b>DD15 Complete Fuel Line Kit (15')</b> DD15 Supply/Double Return Fuel Line Kit	<b>FLK-S07</b>
<b>Single Pickup/Single Return (10')</b> Single Vented/Unvented Return line Kit (with & without extra ports)	<b>FLK-S08</b>

For any questions regarding proper identification, please call **FASS Tech Support at (636) 433- 5410** prior to proceeding with installation.

**Warning: If the fuel pressures of the FASS System are adjusted or altered from the recommended PSI your warranty is VOID.**

# FOLLOW THESE STEPS TO ENSURE A SIMPLE, CORRECT INSTALLATION OF YOUR NEW TITANIUM FUEL SYSTEM

## ATTENTION:

**Be sure to identify the proper FASS System and fuel line configuration. For help, our product finder can be found at [www.FASSride.com](http://www.FASSride.com). Follow the instructions to see fuel line detail.**

- 1** Be sure the serial number on this installation manual matches that on the outside of the box.
- 2** Pay close attention to ALL WARNINGS
- 3** Read all instructions before starting installation of this product.
- 4** Inventory the package components. Notify the place of purchase immediately of any parts missing or damaged.
- 5** The installation recommendations contained herein are guidelines. Use good judgment and take into consideration your vehicles' accessories.
- 6** 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 or problem arises during the installation, the dealer is prepared to handle it. Diesel Performance Products, Inc. is not responsible for any installation mistakes.
- 7** If you have any questions or concerns that cannot be addressed with your dealer, email or call FASS.

---

**If any installation procedure is uncertain, contact FASS technical support.  
Call customer service at 636-433-5410,  
or send us an e-mail: [techsupport@FASSride.com](mailto:techsupport@FASSride.com)  
with the following information:**

---

Your name, address and daytime phone number

Model **(TS-100G OR TS-165G)**

Serial Number

Last 6 digits of vehicles' VIN

Date of purchase

Nature of Your Concern

Serial number .....



# INSTALLATION MANUAL

## TS-100G OR TS-165G

(Installation Videos are available at [www.fassride.com](http://www.fassride.com))

### **Recommended Application**

Class 8, Agricultural, Industrial, Recreational, Highway and Off-road Applications require fuel flow demands of 16-18 psi and less than 95 gph or 165 gph. (For Applications, go to our Product Finder at [www.FASSride.com](http://www.FASSride.com))

**NOTE: This unit was not designed to be used on Unit Injected Mechanical Engines. Refer to the FASS kits with UIME in the model number. Installing the improper FASS Pump can cause severe engine damage.**

**NOTE: A fuel pressure gauge is highly recommended to identify fuel filter condition and prevent engine damage.**

**WARNING! Do not tie FASS Return in with engine return. Back pressure can cause damage to engine.**

**NOTE: Do Not Remove any factory installed secondary fuel filter. Removal of a factory installed secondary fuel filter may void the engine manufacturer's warranty. This is the fuel filter between the engine's fuel pump and the injectors.**

1.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.

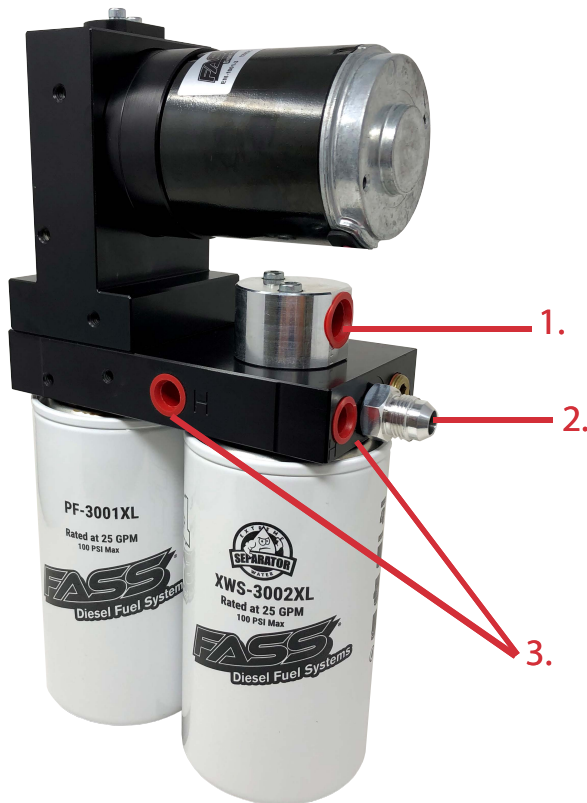
2.Properly secure lines to prevent chaffing.

**NOTE: Use caution when drilling. Steer clear of any electrical wires, air lines, or other components that can be damaged.**



**TITANIUM**  
**SIGNATURE SERIES**  
**100 GPH or 165 GPH**  
**16-18 psi (Approximately)**

Rear View



Front View



**PUMP GUIDE:**

- 1. "E" To Engine**
- 2. "R" Return to Tank**
- 3. "H" Coolant Heater Ports**
- 4. Serial Number**
- 5. "T" Fuel Inlet**
- 6. Electric Heater Ports**
- 7. "G" Gauge Port**

**INSTALLATION GUIDE:**

- Step 1. Install Electrical Harness**
- Step 2. Prep the FASS**
- Step 3. Mount the FASS**
- Step 4. Fuel Line Supply**
- Step 5. Review Installation**

**TITANIUM  
SIGNATURE SERIES  
100 GPH or 165 GPH**

**16-18 PSI (Approximately)**

**Note: Going over 30 PSI WILL void warranty.**

**NOTE: WARRANTY MAY BE VOID IF SILICONE  
BAND IS REMOVED FROM MOTOR!!**

*The silicone band is in place to retain motor  
wires, preventing damage to the electric motor.*





## CONTENTS

**NOTE:** Owner's Manual available for download on our website,  
[www.FASSride.com](http://www.FASSride.com)



**MP-9026**



**BR-2001**



**WH-1006-3**



**DIELECTRIC GREASE**



**TWO (2)  
OR-017**



**OR-030**

**NOTE: THESE SPARE BASE O-RINGS ARE INCLUDED WITH THE KIT IN THE EVENT OF A PINCHED O-RING DURING ASSEMBLY**

# MOUNTING PACKAGE CONTENTS



10-273



RS-2684



RS-1001

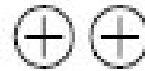


Spade Terminal



Four (4) Locking Nuts  
3/8"

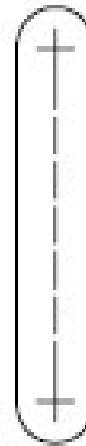
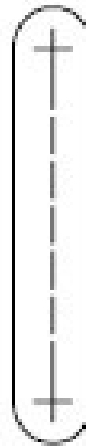
Mounting template



Four (4) Hex Bolts  
3/8-16" x 1/2"



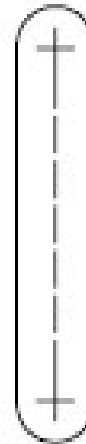
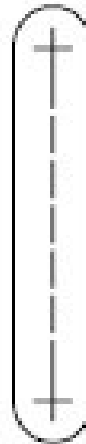
Three (3) Hex bolts  
1/4-20 1 3/4"



Three (3) WA-1001D



Ring Terminal



**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.

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





## **STEP 1: INSTALL ELECTRICAL HARNESS**

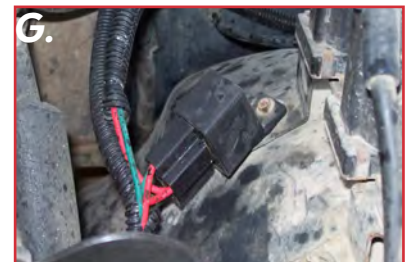
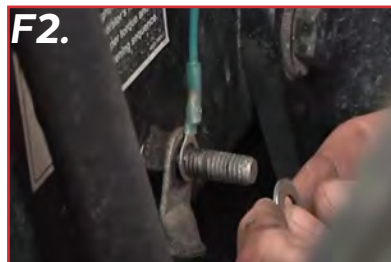
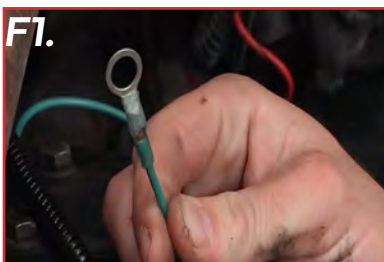
**The installation of the electrical harness should be completed first.  
This will allow power to be applied to the pump during installation.**

- A.** Select best location in firewall for passage of wiring harness from cab to engine compartment.
- B.** Use an existing hole in the firewall or drill a 7/8" hole in the firewall and install RS-2684 grommet for ease of installation and protection of wire harness.
- C.** Route red wire/ loom of the wire harness through the grommet in the firewall to the ignition or fuse panel.
- D.** Connect the "Red" lead to the "ON" terminal of the ignition switch or a terminal on the circuit breaker or a terminal on the circuit breaker board that is "hot" when the key is on.

**NOTE: Use a test probe to locate the "hot side" of the circuit in the fuse block**

**Do not attach ground bolt to a painted, rusted, or corroded surface. This could shorten the life of the FASS motor.**

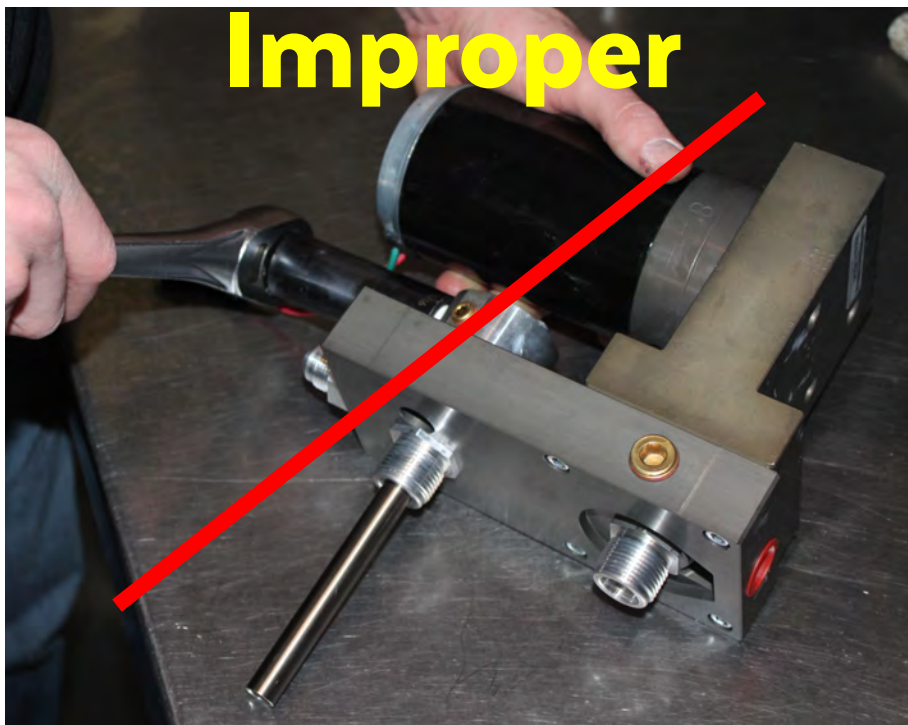
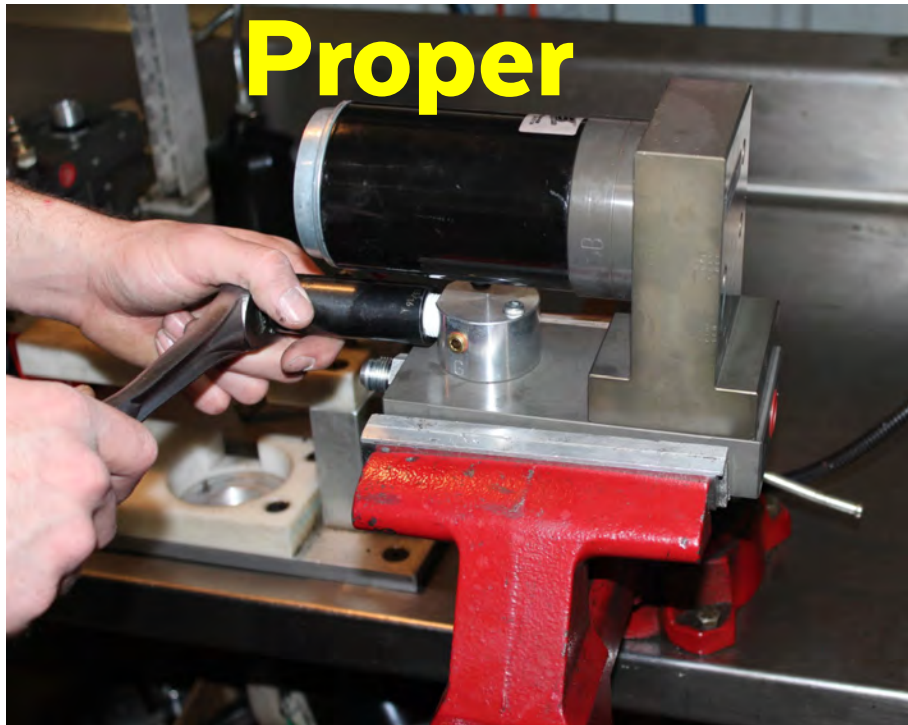
- F.** Attach a ring terminal to the red and green wire. Connect the red wire to the positive battery terminal, connect the green wire to the negative battery terminal.
- G.** Secure relay in an upright position, preferably on the firewall out of the weather.
- H.** Properly secure all electrical leads and harness.





# NOTE:

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



## **STEP 2: MOUNTING THE FASS**

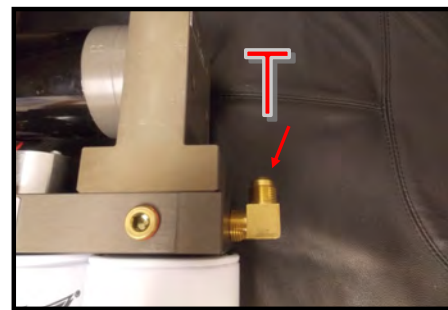
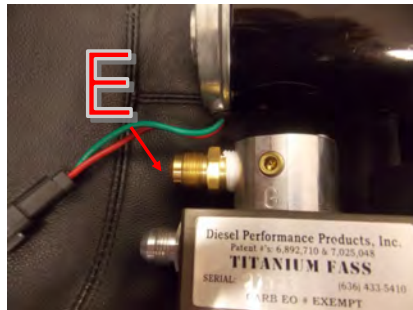
- A.** Remove primary fuel and/or water separator. If primary filter is part of the fuel pump, ignore this step.



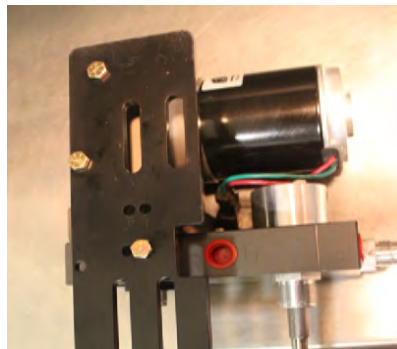
**NOTE: Before installing fittings make sure to inspect for burs or flare imperfections. When cutting fuel line make sure to blow out line to keep debris from moving forward.**

- B.** Install 10-273 into the "T" port and the "E" port of the FASS, torque to 18 ft./lbs.

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



- C.** Attach BR-2001 to back of system using the spacers and 1/4" bolts. Use the two bottom bolts and the very top one bolt opening.

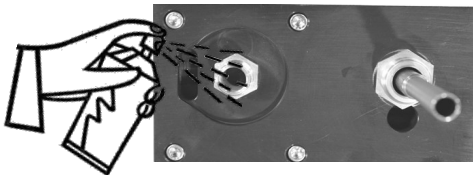


## **STEP 2: MOUNTING THE FASS**

**D.** Position system where it will be mounted. Mark the (4) mounting points (using the template located on the contents page). Prior holes may be used. Drill these marked locations with a 13/32 bit.



**E.** Connect factory plug into the FASS harness. Turn key to "on". With pump operating, turn pump over, liberally spray WD-40 (or equivalent) into water separator nipple lubricating the Gerotor.



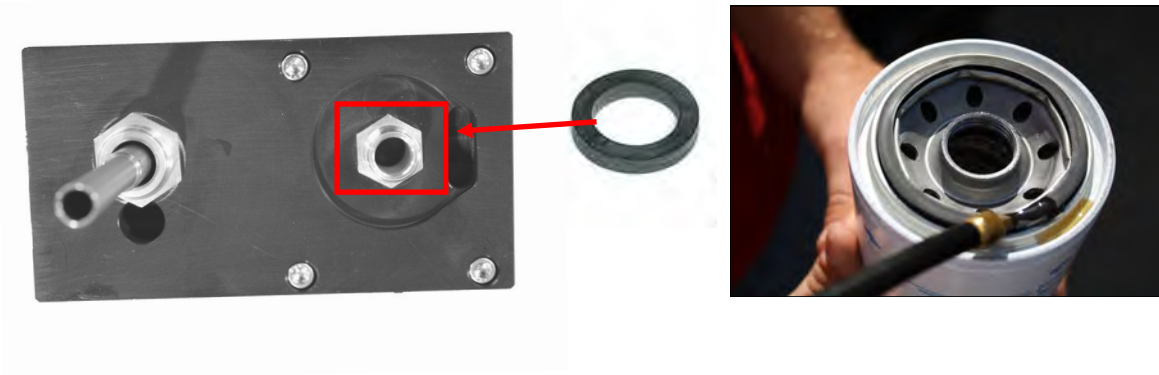
**F.** Assemble to frame using the (4) - 3/8" bolts & flange nuts placing the RS-1001 between the frame and bracket. An optional accessory is SFB-1001.





## **STEP 2:** **MOUNTING THE FASS**

**G.** Apply motor oil to O-rings located on filters. Attach to system and tighten appropriately.



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

## REVIEW INSTALLATION AND SECURE CONNECTIONS

1. Submit the product registration via web or mail
2. Are the bolts and fasteners properly tightened?
3. Are both the electrical harness and the fuel lines properly tightened?
4. Has the system been primed? (Refer to owner's manual.)

**If the above have been properly completed, then:**

5. Check for leaks.
6. Start the engine
7. Recheck all fluid and filter connections for leaks

To assist with priming your FASS pump, with the FASS operating, crack the XWS-3002XL. When the tone of the pump changes, quickly tighten the fuel filter. If you need a video of the priming process go to [www.FASSride.com](http://www.FASSride.com).

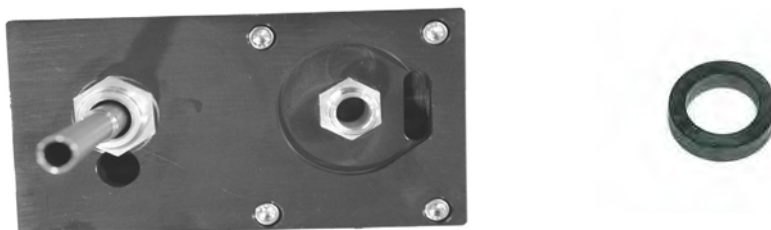
**NOTE: Fuel may leak out during this process**

**NOTE: The red plastic plugs located in the "H" ports can stay in place. Fuel does not flow through these ports.**

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

**Extreme Water Separator -Install XWS-3002XL on side of pump with draw tube in the middle of the filter nipple.**

**Particulate Filter-Install PF-3001XL on water separator nipple without the draw tube. Make sure to insert O-Ring provided on nipple.**







[www.fassride.com](http://www.fassride.com)

(866) 769.3747

## LIMITATION OF FOUR-YEAR FASS WARRANTY

**DISCLAIMER:** To insure that you receive the proper system and customer support at the local level, FASS has established a VIP and Authorized Dealer network to represent FASS products. You must purchase through a network dealer to be eligible for our Four-year Extended Warranty. If you do not, there is no warranty! To make certain your dealer is part of the network, go to [www.FASSride.com](http://www.FASSride.com), click "Find a Dealer," enter the dealer's ZIP code, and select the type of dealer. If the company is part of the network, it will be listed. If it is not, enter their phone number in the field below the ZIP code field to see if they are listed that way. If it still is not listed, check the list of "Terminated Dealers." If the dealer is not listed, or is on the "Terminated..." list, return the product immediately to that dealer and call FASS. We will recommend the nearest authorized dealer so you can be eligible for the Warranty.

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 with 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 and others. The warranty does not cover seized gears due to lack of filtration. Warranty is voided if used with other than diesel fuel. Returned items must 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, or 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. Returned parts must be complete and in resalable condition. No returns after 30 days.

The following information is required to obtain an RMA number before returning the product:  
Your Name, Address & 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 complete the proper paperwork will result in \$25.00 per /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 of 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 incurred 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.

The installation of this product indicates that the buyer has read and understands the Warranty agreement and accepts its terms and conditions. In the event that the buyer does not agree with the terms, the product—in new, unused condition—along with the dated receipt should be returned within thirty (30) days of the date of purchase for a full refund less shipping costs.

For more information, contact:  
Technical Support:

Diesel Performance Products, Inc. 16240  
State Hwy O Suite B  
Marthasville, MO 63357  
636-433-5410