

“HIGH PERFORMANCE FUEL DELIVERY SYSTEM”



FROM: Diesel Performance Products, Inc.
SUBJECT: Welcome/Thank You
TO: Valued Customer

We at Diesel Performance Products, Inc. (DPP) would like to thank you for your confidence in purchasing one of the FASS Products. Building a quality product and providing excellent customer service is # 1 at DPP. Behind each fuel system/fuel pump are many years of design experience. We have implemented very rigorous testing procedures before bringing any item to the market along with very strict manufacturing procedures to provide a superb product. Our confidence is evident in the products we make as each product is backed by an industry leading warranty.

We, Diesel Performance Products, promote “ALL” retail business through our dealer network to provide better customer service! We are confident that everyone involved is best serviced in this manner. We have given our dealer network proper knowledge and support to promote and service our line of products.

Dealers receive appropriate troubleshooting guides to refer to. These have proven to be excellent references for those who choose to use them. We provide excellent assistance to our dealers so they in turn can assist their customers. DPP has decided to place this information on our website to accommodate all of our customers needs.

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 they can support their customers.

Please make sure to fill out your product registration form and return the original form to Diesel Performance Products, Inc. within 30 days of purchase accompanied with a copy of the purchase receipt. Doing so will qualify you for the Limited Lifetime Warranty!

Steps to customer satisfaction can be found on the next page.

STEPS TO CUSTOMER SATISFACTION

We want you to be happy with your FASS Fuel System. Customer satisfaction, your satisfaction, is the all-important ingredient for success in our business, as it is in any other.

Normally, warranty problems can be resolved by your Dealer's sales or service departments. That's why you should always talk to your Dealer's Service department first. If you're not satisfied with the dealership's response at this level, Diesel Performance Products, Inc. (DPP) recommends that you follow these steps, in order:

- STEP 1:** Discuss the problem with the owner or General Manager of the dealership.
- STEP 2:** If your dealership is unable to resolve the problem, contact Diesel Performance Products, Inc. Customer Care Center in writing; the address is located on page 14 of this manual or fax it to 636-433-5913. Be prepared to provide the Customer Center with the following information:
- Your Name, address and daytime phone number
 - Model and Serial Number (Not Model Number)
 - Dealer, contact name and phone number
 - Date of purchase
 - Nature of Problem

Once you have followed the two steps described, a DPP representative will review your situation. DPP will then follow up by contacting the dealer for more information. Depending on the situation a representative from the selling dealer or a representative of DPP may elect to contact you.

Thank you for your business, from the men and women of Diesel Performance Products, Inc.

FILTER CROSS REFERENCE SHEET

Cross Reference List for the FASS 95 Series Fuel Filter

Recommended Fuel Filter Media: Stratapore™ or Microglass

<u>BRAND</u>	<u>Part #</u>	<u>Micron Rating</u>	<u>Material</u>
FASS	FF-2003	3	Stratapore™
Fleetguard	FF5712	3	Stratapore™

Cross Reference List for the FASS 95 Series Water Separator

Recommended Water Filter Media: Stainless Steel/Water Separator

<u>BRAND</u>	<u>Part #</u>	<u>Micron Rating</u>	<u>Material</u>
FASS	WS-2001	144	Stainless Steel/Water Separator
Fleetguard	FS19768	144	Stainless Steel/Water Separator

NOTE: The use of a hydraulic fuel filter is because the canister is much thicker and provides more durability than a fuel filter canister.

WARNING!!

Installing the improper FASS Fuel System or installation kit can cause severe engine damage.

This installation manual applies to the FASS-95/90-1010@45psi contained in the same package. The serial number on the installation/owners manual package should match the serial number on the outside of the box. If it doesn't, call your dealer.

This FASS-95/90-1010@45psi (90gph):

Recommendation: FASS-95/90-1010@45psi - the Dodge Cummins Truck 1994-1998, with stock to moderate horsepower modifications.

Warning: This 90gph system may encounter problems with the stock fuel module. Installing the STK-1001 kit, purchased from your FASS dealer, will correct this problem.

SAFETY GUIDELINES AND WARNINGS!

TIP! Flush and clean all brass fittings and fuel line free from debris.

WARNING! ***SECURE VEHICLE FROM ROLLING!***

WARNING! Use care not to drill into any electrical wires, air lines or other damageable components when drilling.

WARNING! Consult vehicle manufacturer's instructions concerning the electrical system before attempting any electrical connections.

CAUTION: Wear safety glasses when operating power tools such as drills and grinders or when using a punch or chisel.

CAUTION: Properly secure lines to prevent chaffing.

VERY IMPORTANT: THE RETURN FUEL FITTING LOCATED IN THE BASE OF THE FASS FUEL SYSTEM SHOULD NOT BE REMOVED. THERE IS A SPECIAL CUT IN THIS FITTING THAT ASSISTS IN REGULATING PRESSURE. ALSO, DO NOT REMOVE ANY STEEL ALLEN HEAD FITTINGS. THESE PORTS WERE USED IN THE MACHINING PROCESS.

INSTALLATION MANUAL

Welcome to the **FASS Fuel/Air Separation System**.

The installation of the **FASS FUEL SYSTEM** can be relatively simple when the following steps are followed.

1. Inventory the package components completely. Notify place of purchase immediately of any parts missing or damaged.
2. We have invested many hours into the development of the installation and owner's manual's to simplify the installation and operation of the **FASS Fuel System**. Please read the owner's manual and the installation manual completely before attempting installation. Understand how the system operates and installation recommendations before beginning installation. Most of the questions that you will have will be answered in one of these manuals. If you have a question please review the installation or owner's manual.
3. The installation recommendations contained herein are suggested installation guidelines only. Each installation can and may vary considerably because of the many options and accessories available to the truck market.

Installation personnel should use good judgment and common sense when installing the FASS Fuel System.







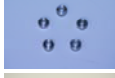










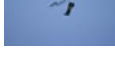
If any installation procedure is uncertain, contact place of purchase.

Due to training, communication and our relationship we have with our authorized dealers we recommend an authorized FASS Fuel Systems dealer for the installation of the FASS System. They are prepared to install the FASS System with the most efficiency. If a situation/problem arises during the installation they are most prepared for that situation/problem. It may take more time for an unauthorized shop to address the situation/problem. We will not be responsible.





NOTE: The use of a hydraulic fuel filter is because the canister is much thicker and provides more durability than a fuel filter canister. The element inside a hydraulic filter filters fuel exceptionally well!

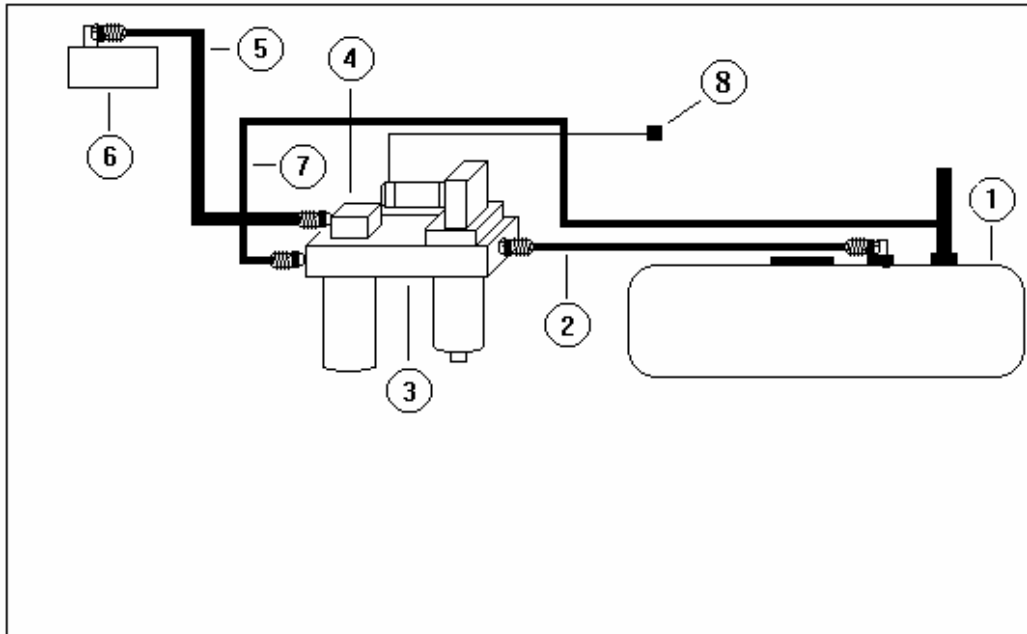
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Contents Include:

	Description					Quantity		Part #	
1.	Pump/Filtration Unit	--	--	--	--	1	--	FASS-95	
2.	Fuel Pump Bracket	--	--	--	--	1	--	BR-2001	
3.	Owners Manual	--	--	--	--	1	--	OM-1003	
4.	Electrical Harness	--	--	--	--	1	--	WH-1002	
5.	3/8" Fuel Line	--	--	--	--	17'	--	FL-1001	
6.	1/4 "mounting bolt	--	--	--	--	5	--	--	
7.	3/8" Thick Washer	--	--	--	--	5	--	WA-2001	
8.	3/8" mounting bolt and flanged nut	--	--	--	--	6 ea.	--	--	
9.	Return Manifold	--	--	--	--	1	--	RM-1003	
10.	3/8" x 3/8" (Push Lock x M PT)	--	--	--	--	2	--	PL-1006	
11.	3/8" x 1/2" (Push Lock x Female Flare)	--	--	--	--	1	--	PL-1002	
12.	3/8" Quick Disconnect	--	--	--	--	1	--	QD-1001	
13.	3/8" x 3/8" (Push Lock x 90° Female Flare)	--	--	--	--	1	--	PL-1003	
14.	Injection Pump Fuel Line Fitting (O-ring)	--	--	--	--	1	--	DIPF-1002	
15.	3/8" Line Hose Clamp	--	--	--	--	2	--	HC-1001	
16.	1 3/4" Line Hose Clamp	--	--	--	--	2	--	HC-1004	
17.	Frame Bracket ("L" Shaped)	--	--	--	--	1	--	FB-1001	
18.	Fuse Tap	--	--	--	--	1	--	MBFT	

Contents Include: continued

	Description					Quantity		Part #	
19.	Flag Terminal Female	--	--	--	--	1	--	187F1AG	
20.	Ring Terminal	--	--	--	--	2	--	NRB516-K	
21.	Wire Extension	--	--	--	--	1	--	WE-1001	
22.	Rubber Spacer	--	--	--	--	1	--	RS-1001	



1. FUEL TANK
2. FUEL SUPPLY LINE TO PUMP UNIT
3. PUMP/FILTRATION UNIT
4. FUEL TO ENGINE MANIFOLD
5. FUEL SUPPLY LINE TO ENGINE FUEL PUMP
6. ENGINE FUEL PUMP
7. RETURN LINE
8. IGNITION
9. FIREWALL
10. DASHBOARD
11. STAND PIPE/DRAW TUBE

INLET/OUTLET PORTS USED FOR PLUMBING ARE MARKED AS FOLLOWED:

“T” – the fuel line from the fuel tank enters this port.

“R” – this is the return port back to the fuel tank.

“H” – these are the heater ports for coolant, unidirectional. These ports do not have to be hooked up.

“G” – this port is for a pressure (0 – 100psi) gauge reading.

Block Labeled #4 – this 3/8” port is leading to the engine’s lift pump.

Please Note: The 2 – 3/8” allen head plugs located in the main base of the unit have no function except to close off passages that were needed for machining purposes.

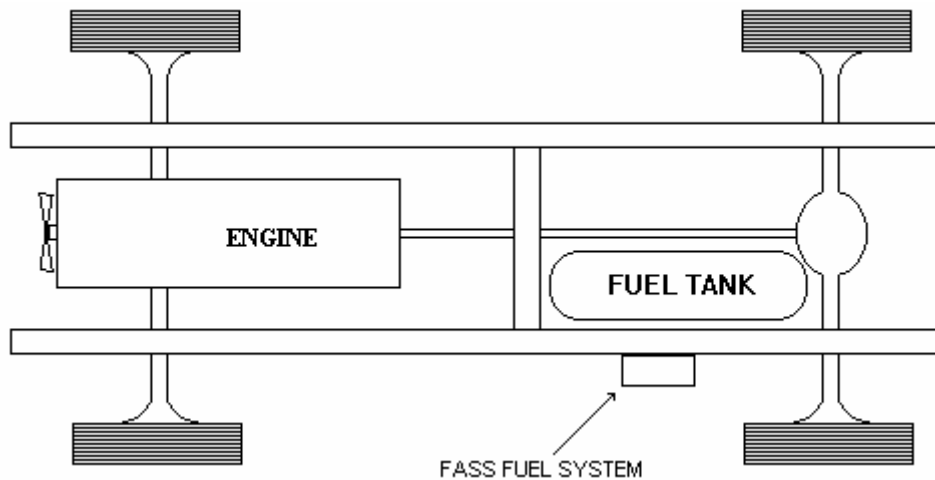
Location of the FASS FUEL SYSTEM PUMP/FILTRATION UNIT

The proper location of the **FASS Fuel System** on the vehicle is most important.

- Best performance
- Protection from the elements and road debris
- Ease of service

Suggested location:

(Hint: The best place we have found on the Dodge $\frac{3}{4}$ and 1 ton trucks is on the driver's side frame rail up underneath the bed of the truck and in front of the rear tire.)



NOTE: Throughout this manual there are photos of the FASS 150, (the FASS 150 is slightly larger than the FASS 95). Mounting, fuel line & wire harness connections are the same except for the mounting of the BR-2001 to the FASS 95.

BEGIN INSTALLATION

STEP 1: **Preparing Suction Line and Return Line:** Use the following photo's to complete this step.



Photo 1A



Photo 1B



Photo 1C



Photo 1D

NOTE: **IT IS NOT NECESSARY TO REMOVE THE BED OF THE TRUCK. REMOVED TRUCK BED FOR PHOTO.**

1. Remove the filler neck tube from the truck by loosening the clamps at both ends.
2. Disconnect the factory suction line and clip as seen in photo 1B. The factory line is removed by pressing in on the two tabs located in the connecting harness. These tabs are opposite of each other.
3. Attach fuel line to quick disconnect fitting using a 3/8" hose clamp as seen in photo 1A. Torque to proper specifications.
4. Connect the quick disconnect fitting to the suction port on the fuel tank. As seen in photo 1B and 1C. Pull back on the black plastic in the quick disconnect as you slide it onto the fuel supply line. It will lock into place.

STEP 1: Preparing Suction Line and Return Line: Continued

5. Review photo 1D and the location of the return manifold before completing this step. Cut the filler tube to allow the return manifold to junction with the filler tube. When assembling the return manifold into the filler tube position it to where the 3/8" junction pipe aims to the outside of the bed. It may be necessary to remove approximately 1/2" – 3/4" of the rubber where the 3/8" junction tube exits the manifold.
6. Assemble the return manifold using the 2 – 1 3/4" hose clamps. Do not tighten at this time.
7. Reinstall the filler tube.
8. Connect the opposite end of the 17' fuel line addressed in step 4 of this section to the 3/8" junction pipe of the return manifold using a 3/8" hose clamp.
9. Now torque all hose clamps to proper specifications.

NOTE: **YES THE FUEL LINE MAKES A LOOP FROM THE TANK TO THE FILLER TUBE. THIS WILL BE ADDRESSED LATER.**

STEP 2: **Mounting FASS System:** Use the following photo's to complete this step:



Photo 2A



Photo 2B



Photo 2C



Photo 2D

1. Assemble the fuel pump bracket to the FASS System, with the 3/8" thick washers between the bracket and fuel system, using the 5 - 1/4" x 1 1/4" bolts. Refer to photo 2A. Torque to proper specifications.
2. Assemble 3/8" x 3/8" (push lock x mpt) fittings into port label with the letter "T" and the fuel to engine manifold port, **using tread tape**. Torque to proper specifications.

Note: The FB-1001 (frame bracket) now has multiple slots, use the slots at the end of the bracket

3. Assemble the FASS System with bracket to the frame bracket, while placing the rubber spacer between these two points, as seen in photo 2B using the 4 - 3/8" bolts and flanged nuts. (NOTE: This photo is from a different make of truck but the bracket assembly is the same.)

NOTE: **The "L" shaped bracket attaches to the cab support on the short beds and to the bed support on the long beds.**

STEP 2: Mounting FASS System: Continued

4. Using photo's 2C and 2D as a guide hold the FASS System (as high as possible) with both brackets attached into the mounting location.
5. While holding to the mounting location mark the mounting points.
6. Using a center punch, mark the center of each bolt location.
7. Drill 2 – 13/32 holes as seen in photo 2C to mount the frame bracket.
8. Using the 2 – 3/8" bolts and flanged nuts mount the frame bracket to the proper support. Torque to proper specifications.
9. Torque the 3/8" bolts attaching the frame bracket to the fuel pump bracket to proper specifications.
10. Located on the filters, apply motor oil to the o-rings. Attach fuel filter and water separator. Torque to proper specifications.

STEP 3: **Installing Fuel Line:** Use the following photo to complete this step:



Photo 3A



Photo 3B



Photo 3C

1. Route fuel line from the suction port of the fuel tank to the port of the FASS System labeled with the letter "T". Cut and attach to the push lock fitting. Remember to oil the fitting and fuel line before connecting.
2. Route the fuel line from the return manifold to the port on the FASS System labeled with the letter "R". Cut fuel line and insert the 3/8" x 1/2" (push lock x female flare) fitting. Remember to oil the fitting and fuel line.
3. Connect the female flare to the male flared fitting marked with the letter "R". Torque to proper specifications.
4. Disconnect factory fuel line from inlet side of the P7100 Injection Pump and install the DIPF-1002, as seen in photo 3A & 3B.
5. Install the PL-1003 3/8" x 3/8" (push lock x 90° female flare) fitting into the fuel line. Remember to use oil.
6. Attach 3/8" x 3/8" (push lock x 90°female flare) fitting to the injection pump fitting. Torque to 18ft lbs. As seen in photo 3C.
7. Connect the remaining fuel line to the push lock fitting located in the fuel to engine manifold port on the FASS System. Remember to use oil.
8. The return line from the injectors must be "T" into the return line of the P7100 injection pump.

STEP 4: **Installing Electrical Harness:** Use the following photo to complete this step.



1. Connect the male end of the wire harness to the female electrical connector on the FASS System.
2. Route the wire harness along the frame rail and into the engine compartment and connect the wire extension (part #WE-1001) to the female end of the WH-1002.cab.
3. Rout the red wire of the wire extension through rubber grommet located in the fire wall.
4. Using the fuse tap & flag terminal connect the “Red” lead from the wire extension to a terminal on the circuit breaker board that is “hot” when the key is on. **Note: Connect the fuse tap to the hot side of the fuse.**
5. Using the ring terminals connect the green wire, of the WH-1002 wire harness, to the negative post and the red wire to the positive post of the battery.
6. Secure the relay in an upright position.
7. Properly secure the wire harness and fuel lines with wire ties.

STEP 5: FINAL CHECK:

1. Bolts and fasteners properly tightened?
2. Electrical Harness and Fuel Lines secured or properly tightened?
3. Prime the fuel system! (Refer to owner's manual)!
4. Check for leaks.
5. Start the engine!
6. Recheck all fluid connections and filters for leaks.

NOTE: The electric fuel pump runs continuously while the engine is running. The fuel pump on the FASS System will feel warm or hot to the touch.

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