INSTALLATION MANUAL

TITANIUM SERIES

APPLICATION:

T D02 095G (95gph @ 8psi)
T D02 150G (150gph @ 8psi)

Cummins 5.9L 12 Valve
with VE Pump

1989-1993

DODGE

LIFETIME WARRANTY AVAILABLE

PICKUP

FASS® Fuel Air Separation System

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.

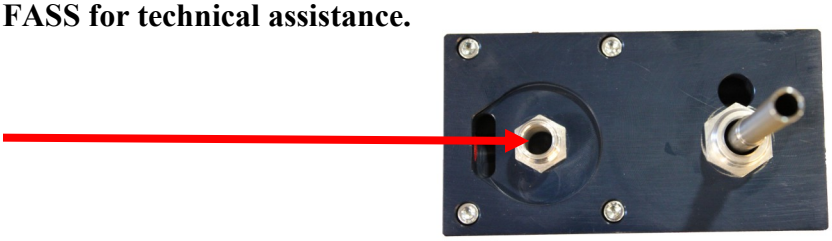
¡WARNINGS!

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

FASS	Recommended Application
T D02 095G	Cummins 1989-1993 with stock - moderate horsepower modifications
T D02 150G	Cummins 1989-1993 with moderate - extreme horsepower modifications
Note: Because of the higher fuel flow these systems have to offer, you may encounter problems with the stock fuel module. FASS can solve this issue with a Suction Tube Kit.	

- **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 an Authorized or ViP FASS Fuel Systems 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 D02 095G or T D02 150G)**
- Serial Number
- Last 6 of vehicles' VIN
- Date of purchase
- Nature of Your Concern

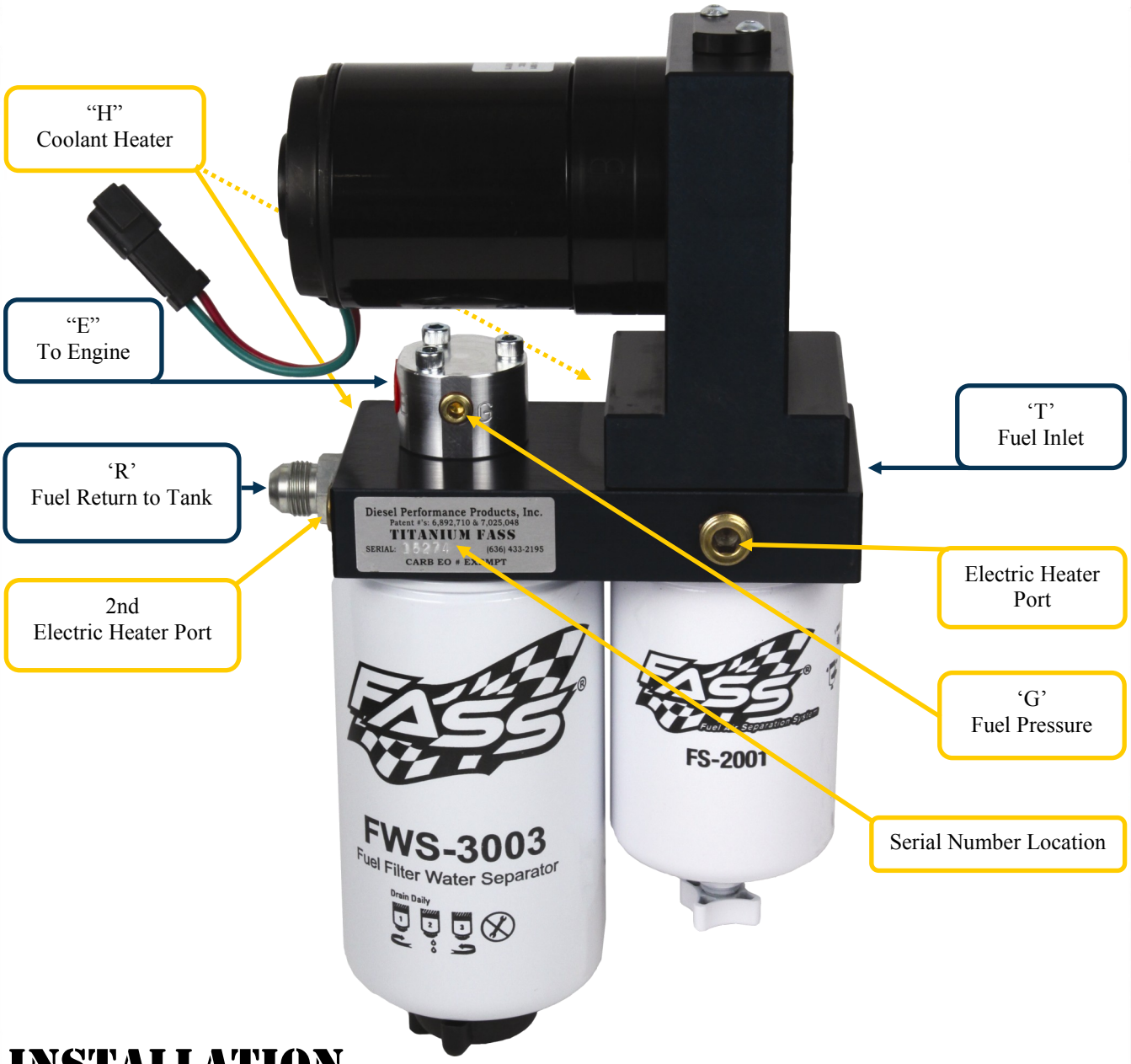
Call customer service; 636-433-5410 with the following information:

- Model **(T D02 095G or T D02 150G)**
- Serial Number
- Last 6 of vehicles' VIN
- Date of purchase

TITANIUM SERIES

95 OR 150 GPH
8 PSI (APPROXIMATELY)

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



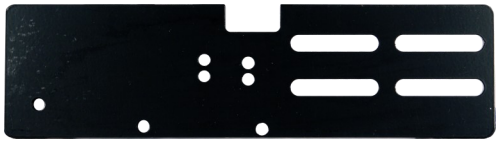
INSTALLATION

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

Owner's Manual
Titanium

MP-9019



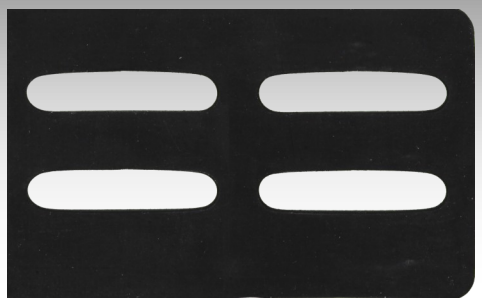
BR-2001

WE-1001

FL-1001 x17'

WH-1002

MOUNTING PACKAGE CONTENTS



RS-1001

RM-1003

PL-1002

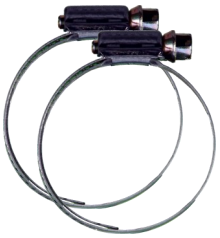
10-299

10-298

QD-1001

DIPF-1001

PL-1003



HC-1004

HC-1001

Flag Terminal

Fuse Tap

4 3/8” Self Threading Bolts

5 WA-2001

Ring Terminal

5 WA-1001D

5 Hex Bolt 1/4”-20x2.25”

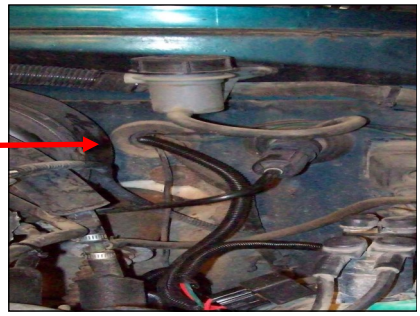
5 Hex Bolt 1/4”-20x1.25”

MOUNTING TEMPLATE

STEP 1: Install Electrical Harness

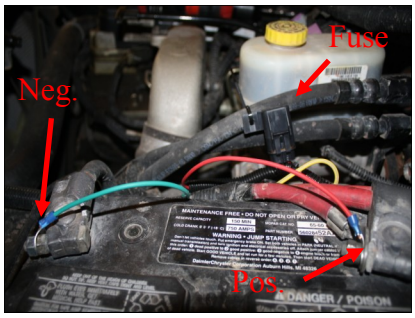
Note: The installation of the electrical harness is done first, allowing power to be applied to the pump for lubrication purposes. See Step 3.

a. Attach WE-1001 to the WH-1002 Wiring Harness. Route WE-1001 red lead through the fire wall using existing grommet.



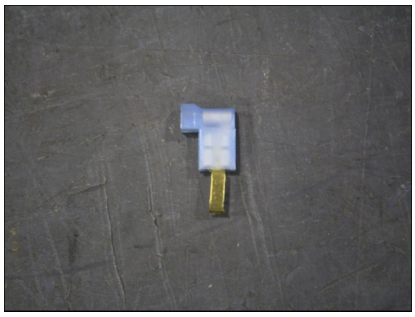
Note: Use of corrosion preventative spray is recommended.

b. Using ring terminals, attach red wire of the WH-1002 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.

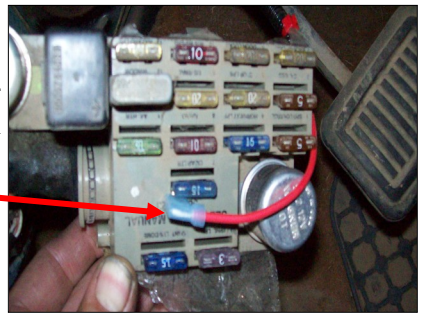


c. Secure Relay in an upright position, as shown, to prevent moisture from entering. Di-electric grease may be applied to prevent corrosion.

d. Connect the fuse tap to the hot leg of the fuse.



e. Using the flag terminal and fuse tap, connect the “Red” lead, of the WE-1001, to the “hot side” of a terminal in the fuse box which is “hot” when the key is in the on position.



Note: Completion of this step will be addressed in the Mounting Step.

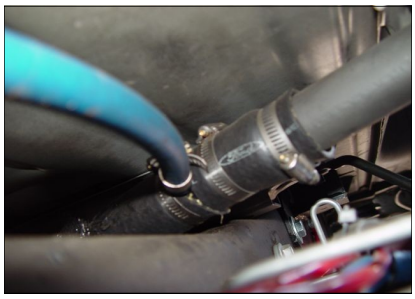
STEP 2: Prepare Suction and Return Line

Note: The installation of the electrical harness is done first, allowing power to be applied to the pump for lubrication purposes. See Step 3.

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

a. Prepare FASS return line by cutting rubber junction connecting the two halves of the filler neck. Loosen the factory clamps at the tank. Push the lower half filler neck into the tank enough to insert RM-1003. As seen in the following photo.

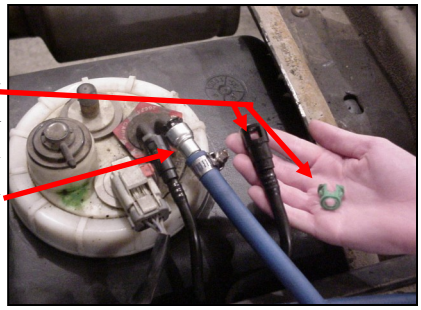
Filler neck removed for clarity. Position RM-1003 with the 3/8" junction pipe aiming to outside of bed. Clamp rubber and RM-1003 using both HC-1004's and factory clamps.



b. Using a HC-1001 connect FL-1001 Fuel Line to the junction of RM-1003.

c. Using a 3/8" hose clamp install the QD-1001 into the opposite end of the fuel line addressed in the previous step. Oil o-rings inside Quick Disconnect.

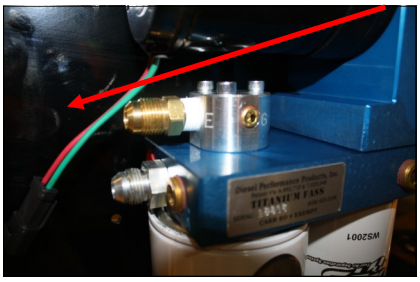
Note: Bed is removed for clarity.

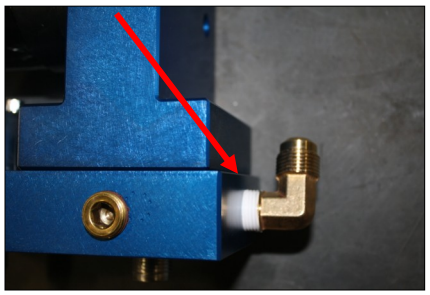


d. Disconnect factory suction line clip by pressing in on the two tabs located on either side in the connection fitting. Once removed, clean the suction tube and connect the QD-1001 addressed in the previous step. Loop fuel line over frame, will be addressed in step Installing Fuel Line. Plug or seal factory line or remove.

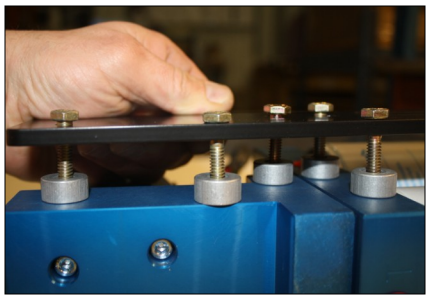
STEP 3: Mount Fuel System

a. Using thread tape, install the 10-298 into "E" and the 10-299 into the "T" port (on opposite end).





b. Attach BR-2001 to back of system using 5 1 1/4" Hex bolts and WA-2001 spacers. Torque to 110in/lbs. Use the Hex Bolt 1/4"-20x2 1/4"+WA-1001D spacers on top of the WA-2001 spacers if you need more space between pump and the frame.



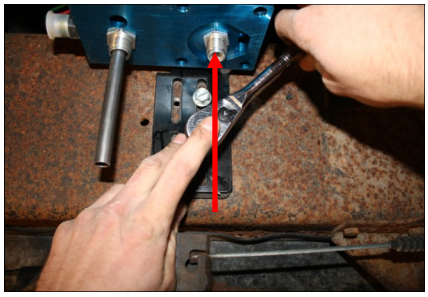
Caution: Make note of wire harness on opposite side of frame rail.

c. Position system to mounting location, drivers side below the bed in front of the axle. Make sure to mark these drill points at least 1" from radial bend of the frame. The radial bend is both the top and bottom of the frame. **Use of the template located on the contents page to accurately mark the mounting holes.**

d. Drill 4 pilot holes then drill those holes out with a 5/16" bit for the self threading bolts.

Note - Before Mounting in Position: Route wire harness along frame rail to mounting location connecting to FASS. Turn key on, with pump operating liberally spray WD-40 (or equivalent) into "T" port lubricating gear.

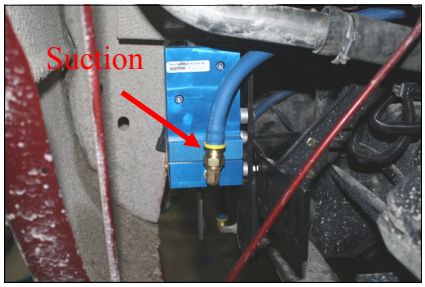
e. Using the 4 - 3/8" Self Threading bolts, attach the pump to the frame making sure to place the rubber isolator between the frame and bracket.



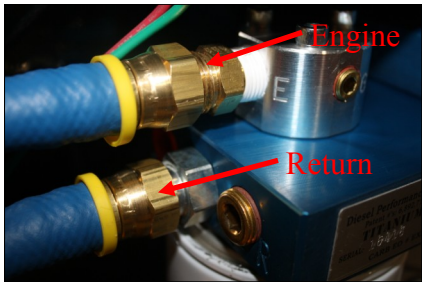
f. Apply motor oil to o-rings located on filters. Attach to system and hand tighten.

STEP 4: Installing Fuel Line

Caution: Do Not use sealant on AN fittings. Only use sealant on threads installed into pump assembly.

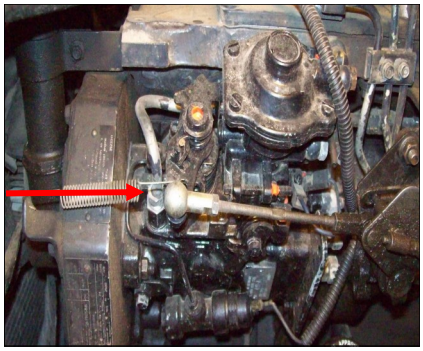


a. Route suction line to port 'T'. Cut FL-1001 to needed length and connect to 10-299 in port 'T' using the PL-1002. Be sure to oil both before attaching.

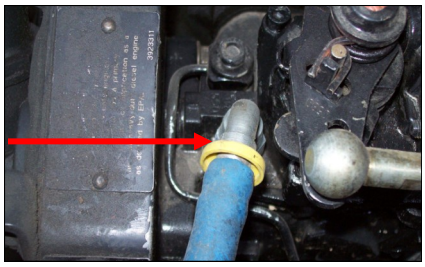


b. Route fuel line from the Return Manifold in the filler neck to the 'R' port on the FASS system with a gentle bend. Cut and attach the PL-1002 fitting to the hose. Use oil. Attach fitting to the 'R' port. Do not use any sealant. Torque to 18 ft/lbs.

c. Connect remaining fuel line to the 'E'' port of the FASS system using a PL-1002. Use oil. route this line up to the VE Injection pump. Do not cut at this time. Connect the WH-1001 Wire Harness to the plug on the FASS system and route with fuel line to the engine bay.

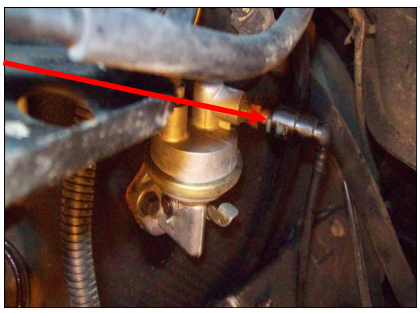


d. Remove the tension spring. Remove inlet fuel line to VE Pump. Remove the adapter nut below that. If you want to remove this line from the system, remove outlet feed on the factory filter housing, feed the line forward and twist as you pull it through. Make sure to plug the open port on the filter housing.



e. Install DIPF-1001 Diesel Injection Pump Fitting. Torque to 18 ft./lbs. Measure fuel line to the inlet port. Install PL-1003 90° Push-Lok into fuel line using oil. Attach PL-1003 to the DIPF-1001. Torque to 18 ft/lbs. Re-install tension spring.

OPTIONAL: REMOVING FACTORY LIFT PUMP



Remove inlet fuel line from the factory filter housing. Pinch in tabs and pull off factory fitting on the inlet side. Unbolt and remove the factory lift pump. Use a Big Block Chevy block off plate to seal engine block. Drain filter, blow out fuel lines and cover or plug any open ends.

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?
- Has the system been primed?
    1. Turn key to the ignition position, turning on the FASS pump.
    2. While the pump is running, loosen the fuel filter just enough to break the gasket seal. Once the tone of the pump changes, quickly retighten filter.
- Check for leaks.
- Start the engine (you will hear the system running)
- Recheck all fluid and filter connections for leaks
- Fill out product registration, attach receipt of purchase and mail to:

FASS Fuel Systems
16240 State Hwy O, Suite B
Marthasville, MO 63357

NOTES