



## ***FASS High Performance Fuel Pump***



*4220 B West Willard Rd  
Springfield, MO 65803  
Phone: 417.869.6316  
Fax: 417.8696316*

## TABLE OF CONTENTS

### GOLDEN FUEL SYSTEMS FASS SVO HPFP INSTRUCTIONS

|   |          |
|---|----------|
| <b>CHAPTER ONE – OVERVIEW OF COMPONENTS</b> | <b>3</b> |
| 1.1 Necessary Tools                         | 3        |
| 1.2 Preparing Installation                  | 3        |
| 1.3 Components                              | 4        |
| 1.3a FASS HPFP                              | 4        |
| <b>CHAPTER TWO---PLUMBING</b>               | <b>5</b> |
| 2.0 General Schematic                       | 5        |
| 2.1 FASS Pump Mounting                      | 6        |
| <b>CHAPTER THREE---WIRING</b>               | <b>7</b> |
| 3.0 General Schematic                       | 8        |
| <b>CHAPTER FOUR – ADJUSTING PRESSURE</b>    |          |
| 4.0 Adjusting Pressure                      | 9        |
| <b>CHAPTER FIVE – FINISHING UP</b>          |          |
| 5.0 Checklist                               | 11       |

## Chapter One – Overview of Components

Thank you for your purchase of a FASS High Performance Fuel Pump for SVO. Please make sure to fill out your product registration form and return the original form to Diesel Performance Products within 30 days of purchase accompanied with a copy of the purchase receipt. Doing so will qualify your product for the warranty.

This guide will cover the FASS 1004, Adjustable 1004 and Adjustable 1002 models. Please follow the instructions for your pump and if you have any questions, please contact the Golden Fuel Systems purchase location.

### 1.1 Necessary Tools

To start your installation it will be beneficial to have a few tools and supplies handy:

- A good sharp knife or hose cutter to cut the flexible fuel hose.
- Vacuum Gauge to install permanently to measure restriction
- Pressure Gauge to calibrate fuel pump (HPFP ADJ 1002 needs pressure gauge up to 20 psi, HPFP ADJ 1004 needs pressure gauge contingent on desired pressure)
- 3/16" Allen Wrench (adjustable series pumps only)
- Adjustable Wrench (adjustable series pumps only)
- A small tubing cutter for stock steel fuel lines.



- Fuel Line Disconnect Set to disconnect fuel lines and fittings (not necessary on every vehicle so check your fuel line connections and plumbing prior to purchasing a set or keep your receipt.)



*Quick Disconnect Sets*

- Some rags or shop towels to keep things wiped up and clean.
- Although you can use screwdrivers for the hose clamps it is highly recommended to purchase some nut drivers to tighten the hose clamps. They don't slip off and will be a great addition to your toolbox. You will need 1/4" and 5/16" nut drivers. They are cheap and easy to find at any hardware or automotive store.
- A tube of Teflon Pipe Joint Compound (also known as *pipe thread sealant*). *Special note: We do not recommend the use of Teflon tape in place of pipe joint compound. Teflon tape is much more likely to leak (either air in or fluid out.) We like the fool-proof 'smear-n-go' philosophy of the pipe joint compound.*
- Digital Volt/Ohm meter. These are less than 20 dollars at most auto part stores and far superior to a test light. We do not recommend a test light because of its potential to damage complex computer circuits.

### 1.2 Preparing the Installation

The first step to ensure your installation will be as clean as possible is to study your stock fuel configuration. Please follow the specific plumbing diagram if provided for your vehicle.

## 1.3 Components

### 1.3a FASS High Performance Fuel Pump



**FASS HPFP ADJ 1004** (Figure 2)

The FASS HPFP is equipped with a drain hole. It is very important to observe the mounting orientation of the pump. Please ensure that the drain hole is facing downwards. If the pump is not installed as such, water may accumulate inside the pump, permanently damaging the pump and voiding the warranty. There is a pressure port that allows one to manually adjust the pressure on the pumps (if applicable.) The FASS ADJ 1002 may be adjusted from 8-20 psi and the FASS ADJ 1004 may be adjusted from 20-135 psi. We recommend adjusting the pumps to the following psi for these specific vehicles:

| Vehicle              | Pressure Setting Recommendation  |
|----------------------|--|
| Chevy/GMC Duramax    | 5-10 psi   |
| 2003-Newer Dodge     | 12-15 psi  |
| 1999-Newer Ford      | 60-80 psi (it may be tuned higher, but the pressure regulator in the stock fuel filter will keep it regulated to about 60-65 psi unless it is upgraded for performance reasons.) |
| 2000-older Chevy/GMC | 5-10psi  |
| 1998-Older Dodge     | 8-12 psi   |
| 1997-older Ford      | 8-12 psi   |

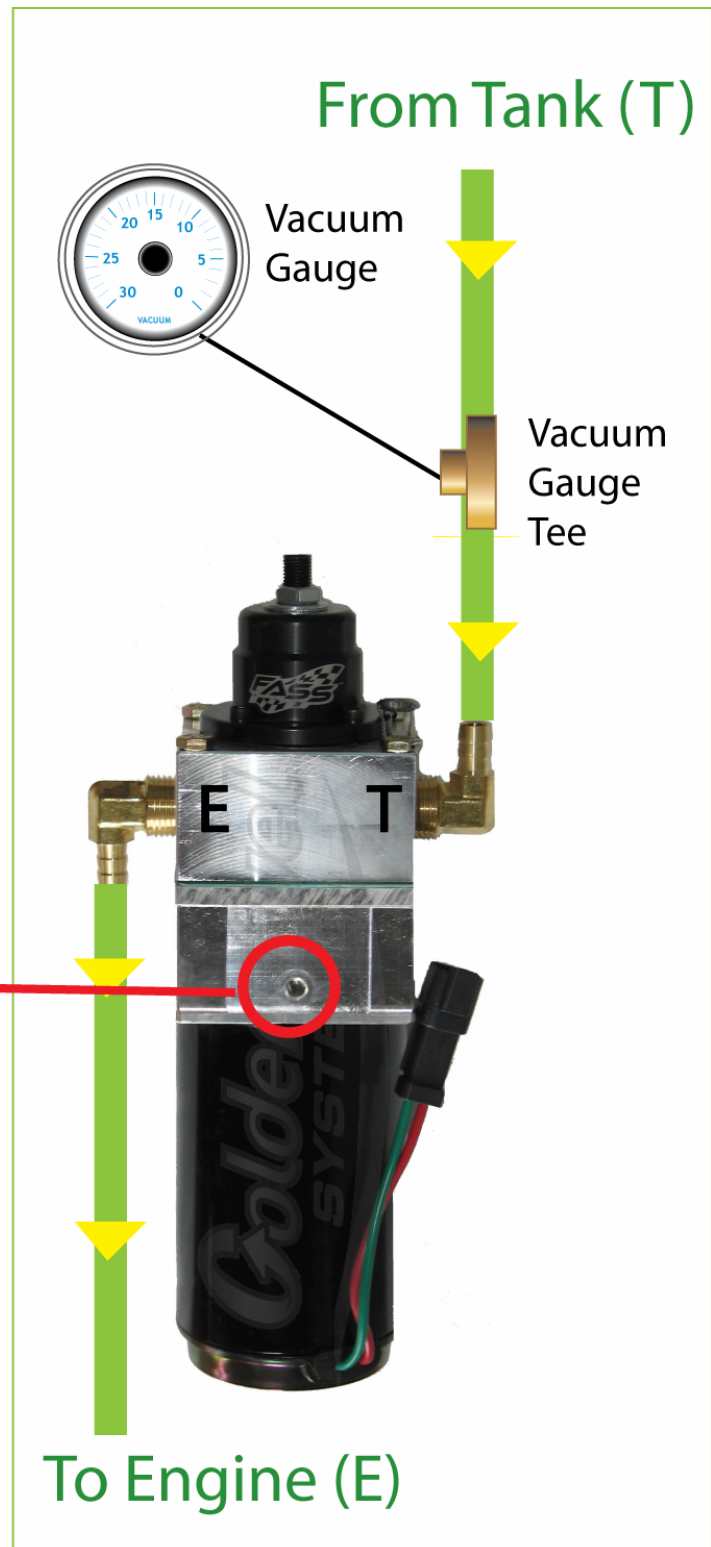
## Chapter Two - Plumbing and Mounting

You will find the recommended plumbing diagram attached with the Fuel System Instructions. Please follow the plumbing diagram appropriate for your vehicle. Below is a general plumbing diagram.

### 2.0 FASS HPFP Plumbing

A Vacuum Gauge Tee **must** be installed on the suction side of the pump. Please change in-line fuel filter or diagnose any issue before the Gauge hits 15 in Hg (restriction.) This is to prevent stress on the pump. If the vehicle starts to hesitate or show signs of fuel restriction before 15 in Hg, please change the in-line filter or diagnose the issue. Not all vehicles will tolerate 15 in Hg.

Weep Hole **must** always be installed so it is facing down to the ground.

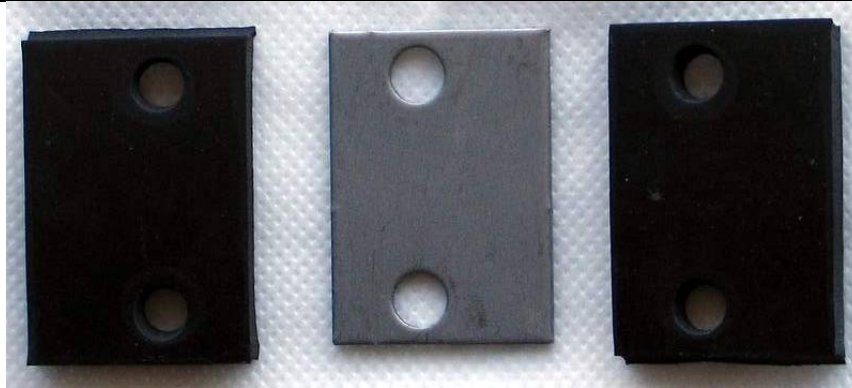


General Plumbing Schematic

## 2.1 FASS HPFP Mounting

When mounting the FASS HPFP, please ensure that the mounting surface will be able to withstand the heavier weight of the Pump. Good places to mount the pump are on the frame-rail with the FASS Aluminum Brackets or 10 gauge angle iron. Please use the included FASS bolts to secure the pump. Do not use self-drilling screws or Zip Ties or Cable Ties. This pump must be secured with Bolts.

With the purchase of the FASS mounting Brackets, (2) Black Insulating Pads and (1) Metal Washer are included. These reduce vibrational noise issues. These should be placed between the Top Hanging Bracket and the frame-rail. Place (1) pad between the mounting tab of the THB-1001 and frame-rail. Install the 1/4" Mounting Bolts, second pad and the metal back-up washer. Install the nuts and tighten.



(2) Insulation Pads and (1) Metal Washer



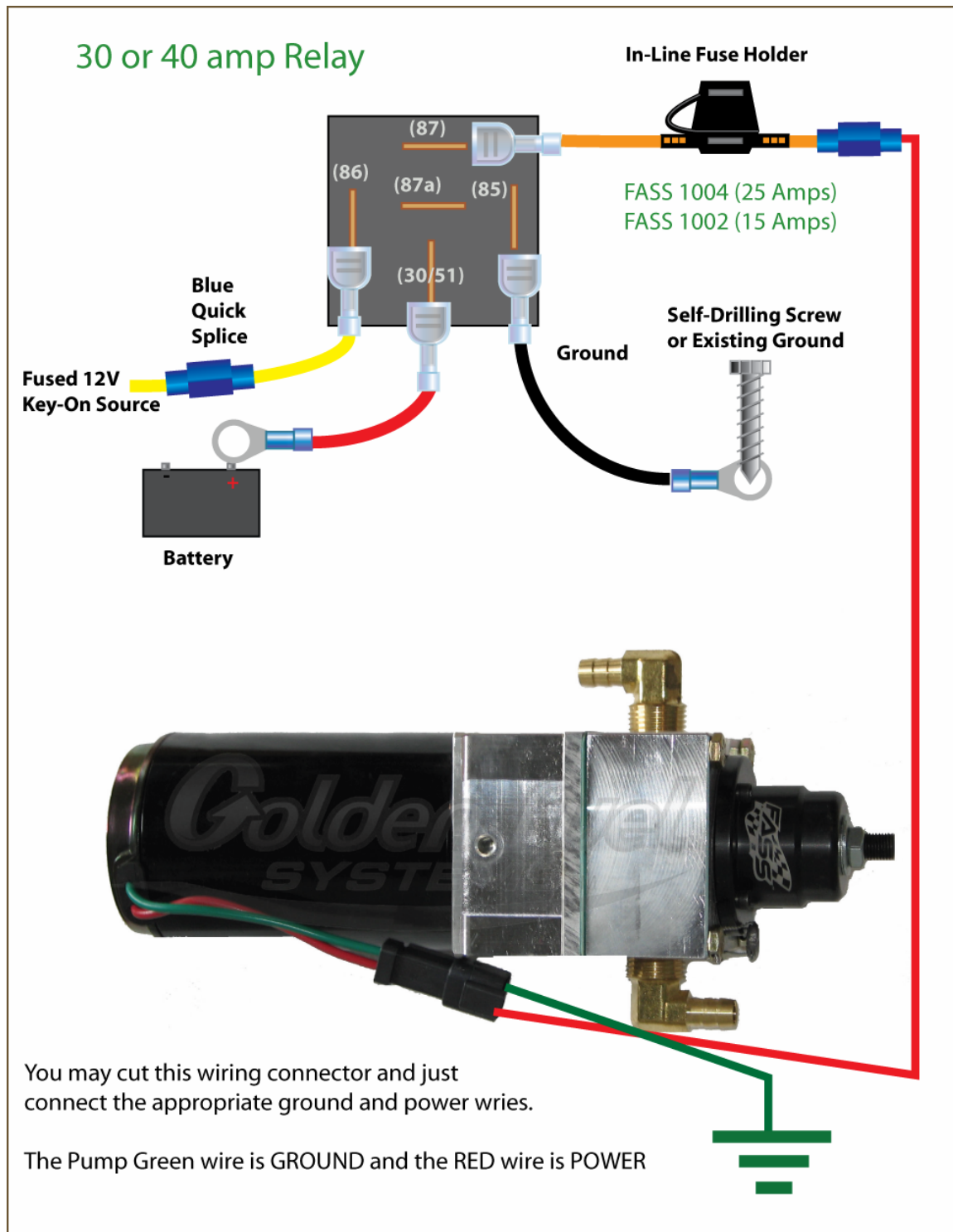
THB-1001 Bracket (Left) and BHB-1001 Bracket (Right)



## Chapter 3 – FASS HPFP Wiring

This general diagram will be applicable to all HPFP SVO Pumps. Please ensure that the correct fuse is installed for the pumps amperage. HPFP ADJ 1002 models require a 15 amp fuse. HPFP ADJ 1004 models require a 30 amp fuse. HPFP 1004 models require a 30 amp fuse.

### 3.0 FASS HPFP Wiring

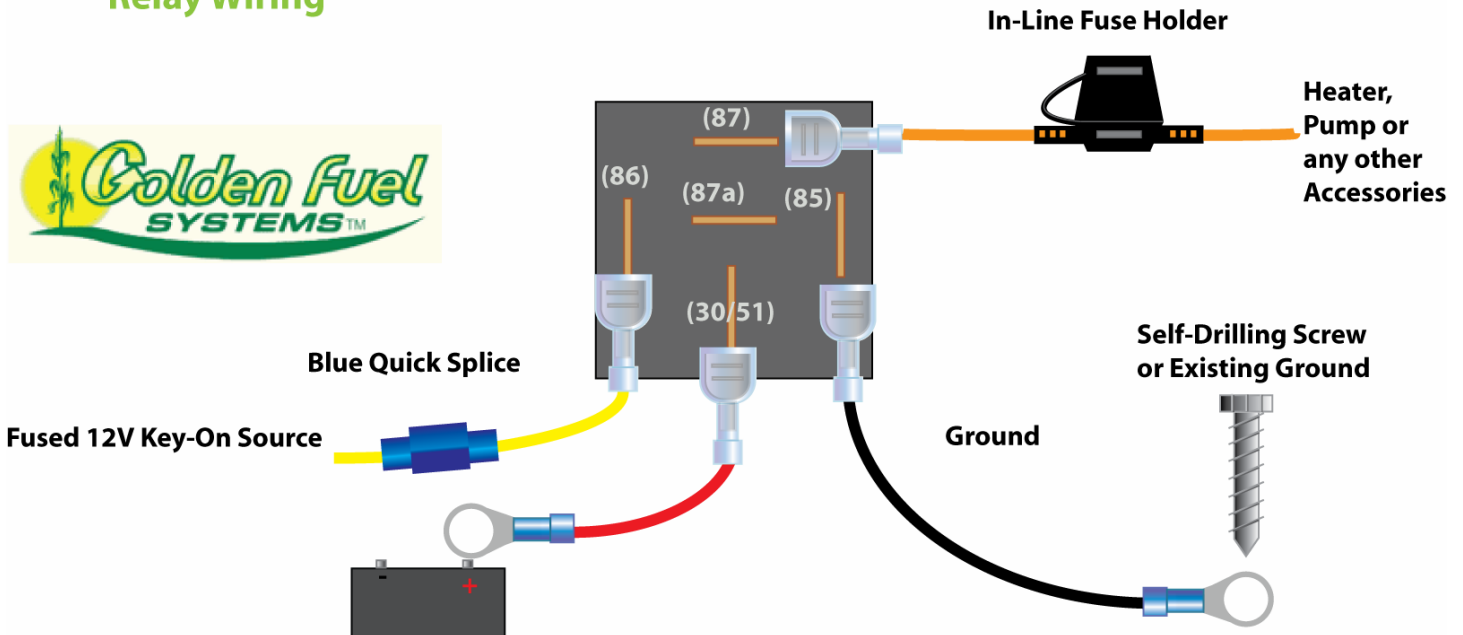


### 3.1 Finding a 12 volt “key on” source

You will need a Digital Volt/Ohm meter (DVOM). You need to find a wire under the dash that only has 12 volts when the key is in the “RUN” position. It will not have power in the “OFF” position or the “ACCESSORY” position. You accomplish this by back-probing the wire with the red lead and then grounding the black lead. It should read 0.0 volts when the key is off but will read approximately 12 volts when you turn the key forward to the “RUN” position. This is two clicks forward, just before you begin operating the starter, when the dash lights and buzzers come on. **Please use a Digital Volt/Ohm meter, NOT a test light.** There have been countless issues of incorrect 12 Volt key-on Sources being found with test lights. Voltmeters are less than 30 dollars at most auto part stores and far superior to a test light. We also do not recommend a test light because of its potential to damage complex computer circuits.

### 3.1 Wiring Relays

#### Relay Wiring



When wiring the relay, label the relay with the accessory that it controls. Make a note of the wire colors and their respective functions, as well. Installing the relay on the driver’s side fire wall is usually the most convenient location. Note: Relays may have 4 or 5 posts.





## Chapter 4 – Setting the Pressure

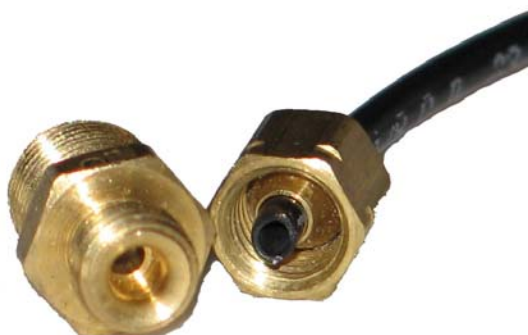
### 4.0 Adjustable Pressure Setting

The suggested pressures for the respective vehicles are shown below:

| Vehicle              | Pressure Setting Recommendation  |
|----------------------|--|
| Chevy/GMC Duramax    | 5-10 psi   |
| 2003-Newer Dodge     | 12-15 psi  |
| 1999-Newer Ford      | 60-80 psi (it may be tuned higher, but the pressure regulator in the stock fuel filter will keep it regulated to about 60-65 psi unless it is upgraded for performance reasons.) |
| 2000-older Chevy/GMC | 5-10 psi   |
| 1998-Older Dodge     | 8-12 psi   |
| 1997-older Ford      | 8-12 psi   |

To adjust the pump, please follow these steps:

1. With the vehicle off, remove the 1/8" plug on the "P" port on the FASS HPFP.
2. Thread the 1/8" fitting on the pressure gauge that connects the vacuum/pressure line to the gauge into the "P" port.



#### Pressure Fittings

3. Plug the hole on the vacuum gauge tee with the 1/8" plug so that no air is introduced into the fuel system.
4. Start the vehicle.
5. Use the Allen Wrench and Adjustable Wrench to adjust the pressure to desired setting.
6. Once the desired pressure is reached, turn the vehicle off and plug the "P" port with 1/8" plug and move vacuum/pressure gauge fitting into vacuum tee on the suction side of the pump.





Loosen nut with Adjustable Wrench.



Proceed to reduce or increase pressure by turning hex head fitting with Allen Wrench until desired pressure is achieved. Then tighten down nut.

*Golden Fuel*  
SYSTEMS™

## Chapter 5 – Finishing up

So you think you're all set and ready for a test drive? Let's run through this checklist to highlight the critical points of finishing the conversion.

- Make sure all Hose Clamps are tight.
- Check the grounds from relays and pump to ensure metal contact.
- Insert all the fuses at this point.
- Remember to prime Filters and fuel line with diesel or veggie (we recommend using the Mity-vac Hand Pump to pull fuel through or using the fuel pumps.) You may fill the filter with clean fuel to speed up the priming process, Remember, if using the FASS HPFP to prime, don't let it run dry for too long.
- Remember to prime the lines with diesel or veggie (we recommend using the Mity-vac Hand Pump to Pull fuel through and check for air bubbles or use the fuel pumps to prime.)
- Change your stock filter so you know everything in the fuel line is new.
- Ensure that the weep hole is facing downwards so moisture can escape.

## Troubleshooting

### Pump Activates and Fuel Flow is Reversed

If the pump activates and runs backwards, please check the wiring. If the ground and power are swapped the pump will push fuel out the "T" side and suck fuel from the "E" side. Check the wiring harness if applicable to ensure that the prongs aren't reversed, either.

### Fuel Regulator Doesn't Regulate Fuel

Take the 1/8" plug off of the regulator. If you see fuel in the regulator, the diaphragm will need to be replaced. Please contact GFS.

