



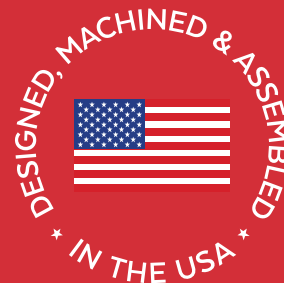
# FLK-S07 INSTALLATION MANUAL

## DD15 SUPPLY/DOUBLE RETURN FUEL LINE KIT



### APPLICATION:

*Detroit Diesel / DD15*





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

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

# FLK-SO7 MOUNTING PACKAGE CONTENTS

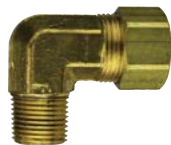
**NOTE:** Owner's Manual available for download on our website, [www.FASSride.com](http://www.FASSride.com)



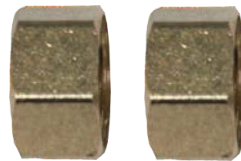
(2) 69722  
3/8" NPT To  
5/8" Tube



CA-1001  
1/2" JIC To 5/8"  
Tube



69749  
3/8" NPT to 5/8"  
Tube 90°



(2) 00061-10  
1/2"  
COMPRESSION  
FITTING  
TO 1/2" NPT



(2) 00060-10  
1/2"  
COMPRESSION  
FITTING SLEEVE



(4) 00068-1008  
1/2" NPT To 5/8"  
Tube



8-250  
3/8" NPT "T"



(2) 06101-12  
3/4" NPT "T"



(2) 5/8" Tube  
Clamps -  
(2) Self-Tapping  
Screws



(2) 06123-1208  
1/2" NPT TO  
3/4" NPT



(4) 06110-1208  
1/2" NPT TO  
3/4" NPT

## PREPARING FUEL FITTINGS

**NOTE:** Wrap 4 rounds of thread tape on Male Pipe Thread portion of the fittings.

(Repeat step for ALL FITTINGS in the kit.)

**Note:** No tape on flared portion of the fitting

**DO NOT** use sealant on AN fittings. Only use on threads installed into pump assembly or joint fittings



## ASSEMBLING THE 3/8" "T"

Attach 90 fitting on the side and the 2 straight fitting on each end. Properly torque each fitting. Be sure the 90 is angled off to one side of the "T".

**3/8" NPT to 5/8" Tube 90\***

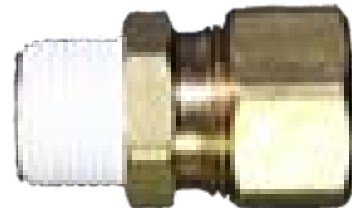


**3/8" NPT to 5/8" Tube**



**3/8 NPT "T"**

**3/8" NPT to 5/8" Tube**



## ASSEMBLING DOUBLE VENT RETURN “T”

### IMPORTANT NOTICE:

CHECK TO SEE THAT YOUR FUEL TANK VENT IS VERTICAL BEFORE INSTALLING FLK-S07 FUEL LINE KIT. IF THE TANK HAS BEEN “ROLLED” OR THE TANK VENT IS AT ANY ANGLE COMING OUT OF THE TANK, PLEASE CONTACT FASS TECHNICAL SUPPORT AT 636-433-5410 FOR AN ALTERNATE RETURN LINE INSTALLATION METHOD.

Install first bushing in the side.  
Properly torque in place.  
Install second bushing in the top.  
Properly torque in place.

Install ½ NPT to 5/8" tube fitting into bushing and tighten accordingly.

Fuel Tank Vent Line

FASS Return

Fuel Tank

Now install reducer into bottom of the “T”. This will install in the top of the tank.

Disconnect existing vent from top of tank. Install Double Vent Return “T” into top of tank. Insert tank vent into top of Double Vent Return “T” and Properly torque.



## ***DOUBLE VENT LINE RETURN SYSTEM***

If you have clearance issues above the tank it is recommended that you connect the tank vent to the top of The Double Vent Return "T" at the vice then connect to top of tank and properly torque. Reinstall line to hose barb on vent.



## ***PREPARING AND INSTALLING FUEL LINES***

***Pay close attention to details of this portion of the install.  
This part of the installation is where most mistakes are made.***

When assembling compression fittings, be sure fuel line is fully seated into the compression fitting before tightening the compression nut. See example below:





## ***DOUBLE VENT LINE RETURN SYSTEM***

Place the already assembled "T" in the **EXACT MIDDLE** of the cross member, located as central as possible to both fuel tanks.



Install CA-1001/00060-10/00061-10 as an assembly onto the "R" port of the FASS. Insert FL-1005 into CA-1001 assembly, route fuel line along frame rail to the 3/8" "T". Properly torque compression nut 00061-10.



Run the fuel line up to the 90 degree fitting and hold in place and measure to the center of the "T".

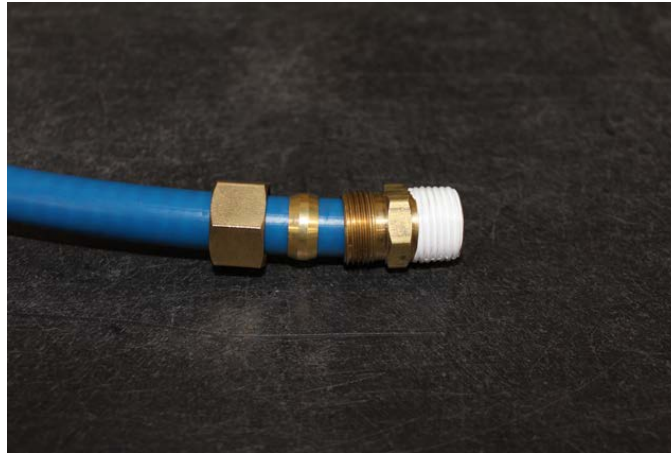


Cut the fuel line at the "T" to the correct length.



## DOUBLE VENT LINE RETURN SYSTEM

Install collar and straight fitting to the end of measured fuel line. Install the straight fitting and properly torque.



**NOTE:** It may vary in length from the "T" located in the center of the cross member to the return port of the fuel tank vs. side to side so measure the one with the longest path first.

From underneath the truck, insert FL-1005 into Double Vent Return "T". Route fuel line to the 3/8 "T" on the cross member. Mark and cut the fuel line to the appropriate length.



**It is critical that these lines are EXACTLY the same length. Uneven fuel lines can result in uneven fuel levels in tanks**

Holding the remaining fuel line next to the fuel line that has been cut to proper length.  
Mark where to make the necessary cut to insure both lines are the same length.





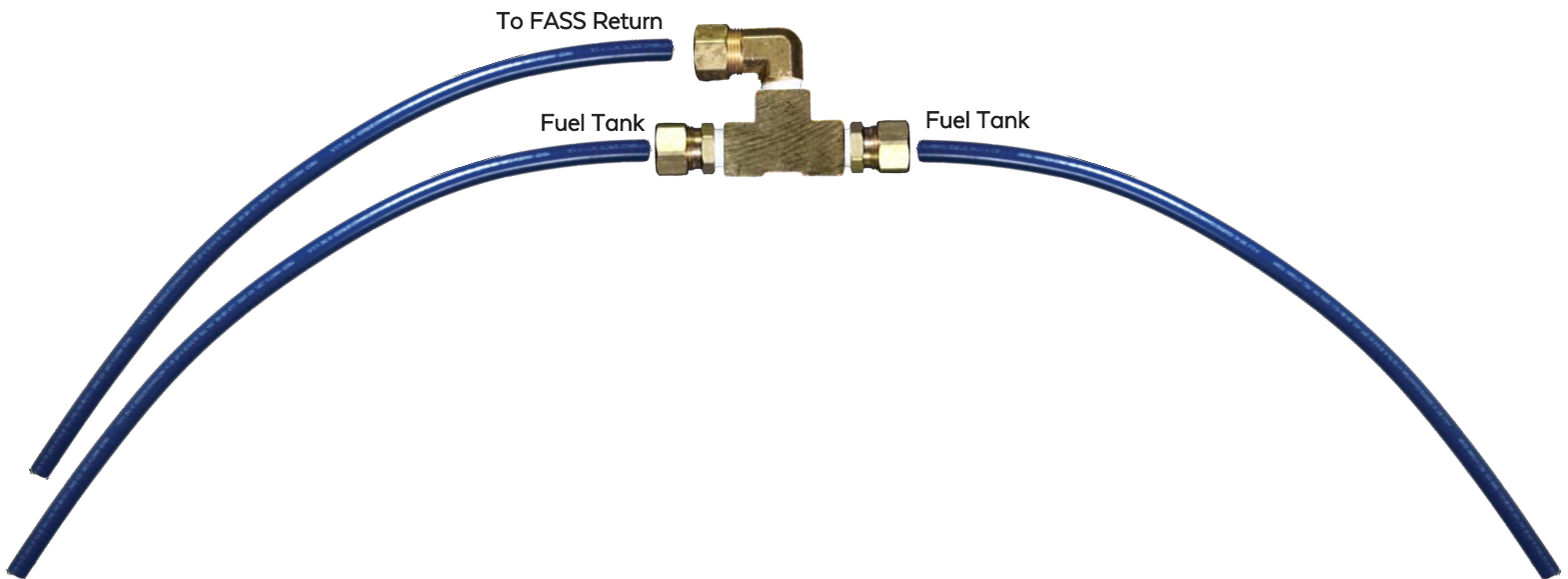
## ***DOUBLE VENT LINE RETURN SYSTEM***

***An important step at this time is to blow out all fuel lines. Removing any debris that may have accumulated in the lines.***

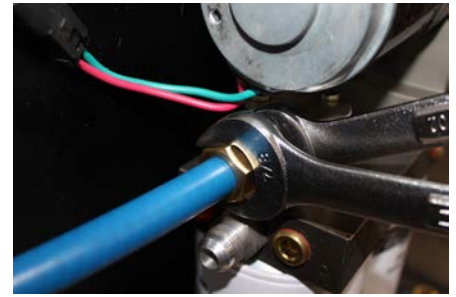
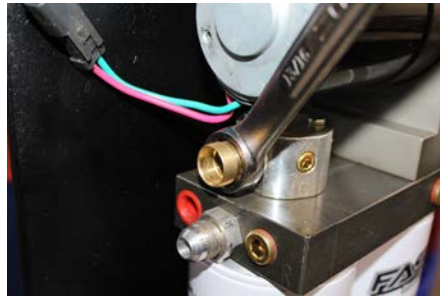
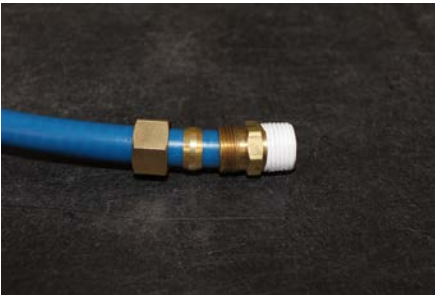
Connect the (2) even length fuel lines to the Double Vent Returns on top of the tanks and properly torque.



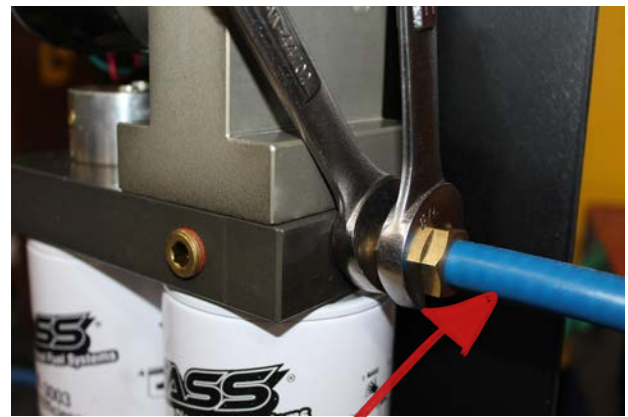
Connect the fuel lines to the straight fitting of the "T" on top of the cross member. Install the straight fitting of the return line that is returning from the "R" Port of the FASS, to the 90 degree fitting of the "T" on top of the cross member. Properly Torque.



Thread tape compression fittings that thread into FASS suction and supply on filter base.



Disconnect fuel line running from fuel tank to engine fuel filters at the OEM filter base. This line will need to be shorted and then connected the the "T" port of the FASS using compression fitting on 00068-1008.



**OEM Suction Line**

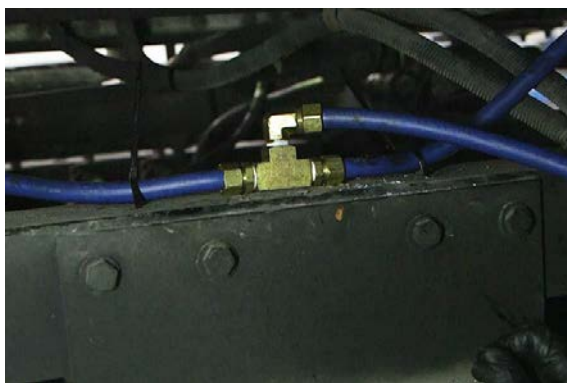
## ***DOUBLE VENT LINE RETURN SYSTEM***

Secure 3/8" "T" to cross member with the supplied tube clamps and self-tapping screws.

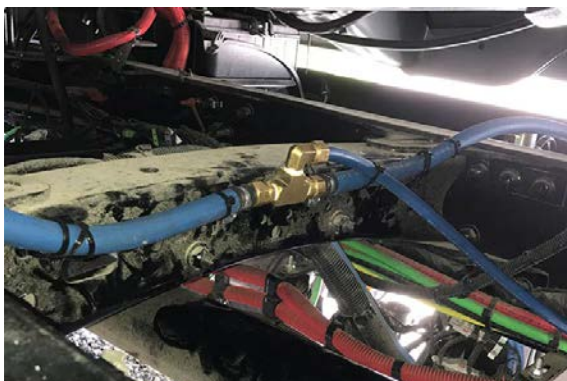
Be sure "T" fitting is secured to the exact middle of the cross member.



"T" fitting can be secured to cross member with zip ties if necessary.



Optional: FASS suggests utilizing an isolator where fuel line contacts frame or other surfaces to prevent fuel line abrasion damage. Example below-



## REVIEW INSTALLATION AND SECURE CONNECTIONS

- 1. Are the bolts and fasteners properly tightened?**
- 2. Are the electrical harness and fuel lines secured and properly tightened?**
- 3. Has the system been primed? (Refer to owner's manual.)**

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

- 4. Check for leaks.**
- 5. Start the engine**
- 6. Recheck all fluid and filter connections for leaks**

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## **OPTION:** **TWO OPTIONS TO PRODUCE EXTRA PORTS** (Bung fitting)

### **1. Most preferred and easiest**

- a. Drill and tap a 3/8" fpt in the thicker band of aluminum, as shown.**
- b. If possible, install the fuel tank vent in this port and connect the FASS.**

### **2. Weld a Bung Fitting**

**NOTE:** Welding a Bung Fitting is a fire hazard and should be done only by a professional.

