

# INSTALLATION MANUAL

## STK-1002



### **ACCESSORY:**

Suction Tube Kit

Dodge Cummins 1989 - 2012  
Ford Powerstroke 1999 - 2012  
GM Duramax 2001 - 2012



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. We recommend you go to [www.FASSride.com](http://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.

# INSTALLATION MANUAL

## Follow these steps to ensure a simple installation of your new FASS ACCESSORY

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](mailto:techsupport@FASSride.com) with the following information:

- Your Name, address and daytime phone number
- Model
- Serial Number
- Last 6 of vehicles' VIN
- Date of purchase
- Nature of Your Concern

Call customer service; [636-433-5410](tel:636-433-5410) with the following information:

- Model
- Serial Number
- Last 6 of vehicles' VIN
- Date of purchase



# CONTENTS



ST-1005P x14"



1/2" Plug



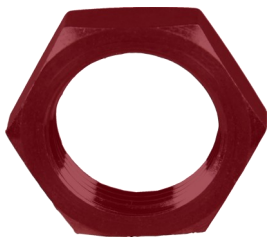
BHF-1002



PL-1001



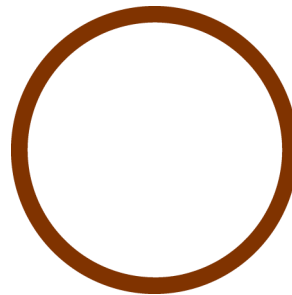
PL-1004



BHN-1001



LW-1001



OR-223

**Note: Refer to Step 1, pages 5-7 when installing on Dodge and Ford pickup truck applications and Step 2, pages 8-10 when installing on GM pickup truck applications.**

# Dodge & Ford Applications

***Very Important: Before removing the fuel tank identify “ALL” areas of clearance between the tank and bed to install the draw tube assembly.***

***The closer the suction tube is placed to the center of the fuel tank, front to back and left to right, the more usable fuel there will be!***

Helpful Hints: If more space is required to access the top of the fuel tank, loosen the strap nuts to the end of the stud. This will gain you about 3” more working

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

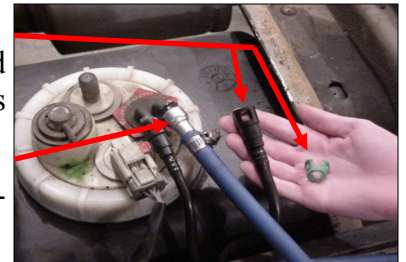
- a. Remove the filler neck and overflow tubes from the truck by loosening the clamps at both ends.



- b. Disconnect the factory suction and return line. The factory lines are removed by pressing in on the two tabs located in the connecting harness. These tabs are opposite of each other.

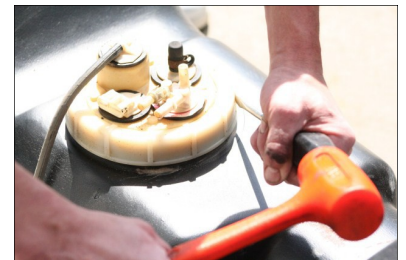


- c. Disconnect the factory electrical harness located between the suction and return lines on top of the fuel tank.



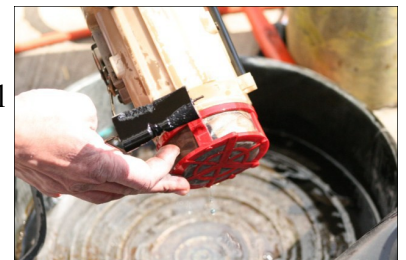
- d. With the fuel tank empty of fuel, remove it from the vehicle.

- e. Clean the fuel module area then remove the lock ring on the top of the fuel tank. Mark the location in relation to the tank for re-installation.



**Caution: Be careful not to bend the Fuel Level Arm during removal.**

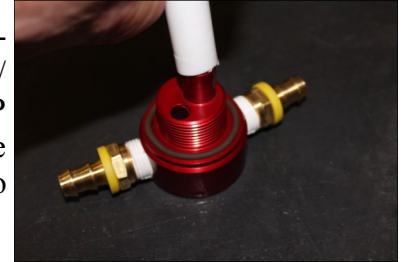
- f. Once the lock ring is removed, carefully remove pick up module from fuel tank while making note of fuel level arm.



## Dodge & Ford Applications, Continued

**Note: If your current FASS pump returns fuel to the filler neck, re-route this line to the “R” port of the new BHF-1002 Bulkhead Fitting (remove manifold or plug the angled tube off the Return Manifold located in your filler neck) or Insert supplied plug into “R” port of BHF-1002 and maintain your return to the filler neck.**

- g. Assemble the BHF-1002 with the PL-1004's for 1/2" fuel line or the PL-1001's for 3/8" fuel line in port "S" & "R" using thread tape. Torque to 40ft/lbs. (Use the 1/2" plug in port "R" when using this kit for FO/FA/HPFP pumps or when maintaining your current return to the filler neck.). Push the ST-1005P tube onto the barb portion of the BHF-1002. Insert O-ring into groove.



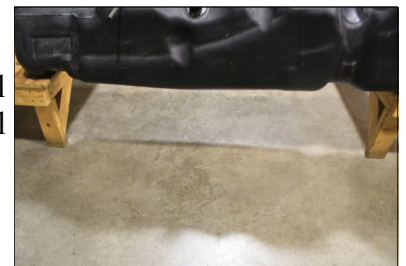
- h. Before drilling marked location, clean area of debris. Using the photo, double check area selected for any interference including the fuel level arm.



- i. Drill a 1 1/2" hole, catching all debris. De-bur hole and remove any missed debris in the fuel tank.



- j. **VERY IMPORTANT:** Support fuel tank on both ends allowing the natural formation of the tank to take place. Failure to perform this step can and will create an issue with less usable fuel!



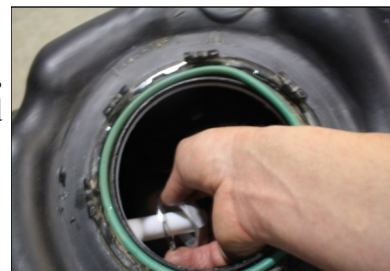
- k. Place the bulk head assembly into the drilled hole, take measurements so the bottom of the suction tube is only 1/8" (no more than 2 quarters stacked) from the bottom of the fuel tank. Using a razor knife make multiple cuts to insure proper length, it is easy to shave the suction tube with the razor.



**It is more efficient to cut the tube too long and then correct to proper length than it would be to cut too short.**

## Dodge & Ford Applications, Continued

- l. With proper length being obtained, place the assembly into the drilled hole, securing the assembly using the lock washer & nut. Loctite may be applied to the threads of the BHF-1002 for added insurance.



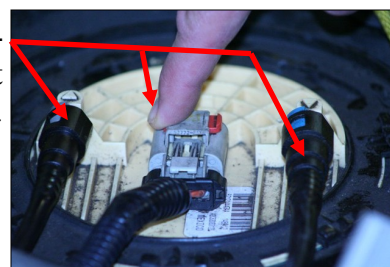
- m. Carefully reinstall install pick up module making sure the leveling arm is not obstructed by the suction tube. Reinstall factory lock ring.



- n. Connect end of the FASS suction line to the Push-Lok fitting in the "S" port of the BHF-1002. Remember to oil the fitting and fuel line. Connect the end of the FASS return line to the Push-Lok in the "R" port. Route fuel line over frame rail.



- o. Place the fuel line over the frame rail while reinstalling the fuel tank. Remember to reconnect factory return fuel line and wire harness. Reconnect factory suction line or plug port to prevent debris from infiltrating the tank. Torque tank hanger bolts to proper specifications.



- p. Reattach filler neck and clamps. Tighten.



# Duramax

**Very Important:** Before removing the fuel tank identify “ALL” areas of clearance between the tank and bed to install the draw tube assembly. The closer the suction tube is placed to the center of the fuel tank, front to back and left to right, the more usable fuel there will be!



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

- a. Remove the drive shaft to gain access to the top of the fuel tank.

**Note:** This step is not necessary for 2011.

- b. Remove the 3 bolts holding the fuel cooler to the mounting bracket. The fuel cooler is located in front of the fuel tank.

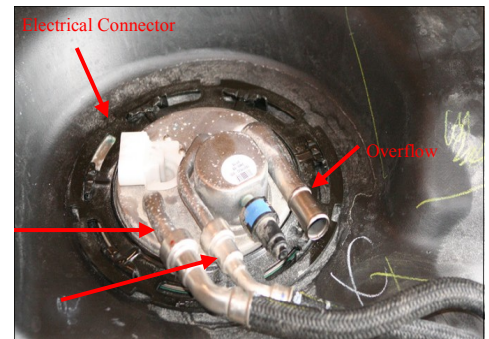


**Note:** If necessary to gain access to the top of the fuel tank, carefully bend the sheet metal down that is covering the side.

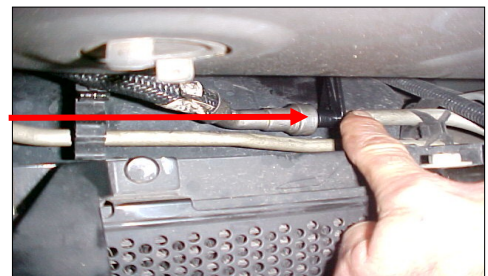
- c. Disconnect electrical harness. Using disconnect tools, remove factory suction & return lines from fuel module. Disconnect overflow tube. You can now remove the fuel tank.

1/2" Suction

3/8" Inj. Return



- d. Using a fuel line disconnect tool, disconnect the factory suction & return located above and connecting to the fuel cooler. Place the disconnect tool around the fuel tube and slide the tool under the fuel line connection to release the fuel line.



- e. Remove filler neck tube from the top of the fuel tank by loosening clamp. Disconnect overflow tube from the fuel tank if separate. If your over-flow is integrated, be careful not to hang up the internal over-flow tube when lowering the tank.

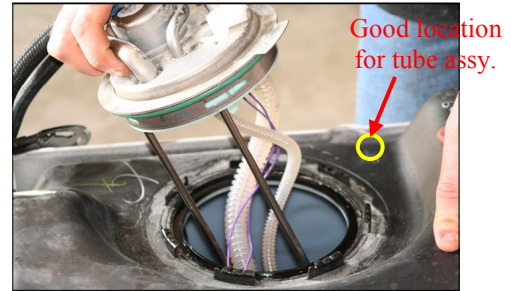




# Duramax, Continued

**Note: Before completing the next step, check your fuel tank for a good location for the installation of the suction tube assembly.**

- f. Remove the lock ring on top. Remove Fuel Module. Now is a good time to find a cap to cover the 1/2" suction port on the Fuel Module.



- g. Using a cup, reach inside the tank under the hole location to catch debris. Drill a 1 1/2" hole. Remove debris from top of tank.



**Note: Use blocks or similar to support tank during measurement simulating tank "hanging" by the straps. Failure to do so may result in a short draw tube.**



**Note: If your current FASS pump returns fuel to the filler neck, re-route this line to the "R" port of the new BHF-1002 Bulkhead Fitting (remove manifold or plug the angled tube off the Return Manifold located in your filler neck) or Insert supplied plug into "R" port of BHF-1002 and maintain your return to the filler neck.**

- h. Assemble the BHF-1002 with the PL-1004 in port "S" using thread tape, the 1/2" plug in port "R" along with pushing the ST-1005P onto the barb portion of the BHF-1002, Insert O-ring into groove. Torque to 40ft/lbs.



## Duramax, Continued

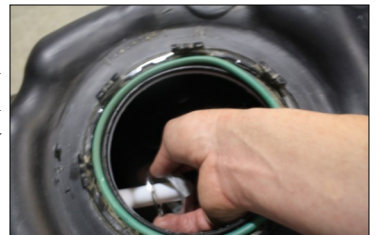
- i. Place the suction tube assembly into hole, take measurements so the bottom of the suction tube is only 1/8" (no more than 2 quarters stacked) from the bottom of the fuel tank.



- j. Before cutting the suction tube, triple check the measurements. It is more efficient to cut the tube too long and then correct to proper length than it would be to cut too short.



- j. With proper length being obtained with the suction tube kit, de-bur and flush assembly. Slide tube through hole, lock washer, and nut. Make sure O-ring on bottom of bulkhead fitting remains in its groove. With BHF-1002 properly seated against tank, tighten nut.



- l. Carefully reinstall install pick up module.



- m. Connect end of the FASS suction line to the Push-Lok fitting in the "S" port of the BHF-1002. Remember to oil the fitting and fuel line. Connect the end of the FASS return line to the Push-Lok in the "R" port. Route fuel line over frame rail.



- n. Cap factory suction line. Reinstall fuel tank. Remember to connect factory return line and electrical harness. Torque tank hanger bolts to proper specifications. Reattach filler neck and clamps.

# NOTES