INSTALLATION MANUAL

STK-5500B

Patent Pending

ACCESSORY:
Suction Tube Kit to be used with existing FASS BHF Assembly

FASS® Diesel Fuel Systems

ENGINEERED EXCELLENCE

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, 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

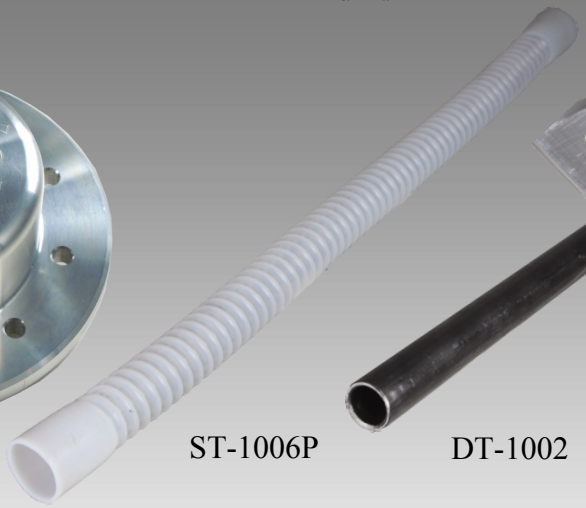
Follow these steps to ensure a simple installation of your new FASS ACCESSORY

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, i.e. empty fuel tank before beginning installation of this product.
4. For best results in accuracy and efficiency (due to training, communication, and our relationship with our dealer network), we recommend a ViP FASS 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.

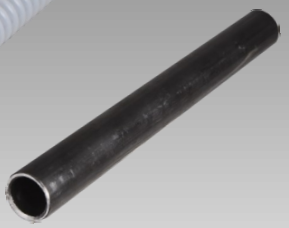
Email techsupport@FASSride.com or call customer service; 636-433-5410

STK-5500B CONTENTS

SP-5500



ST-1006P



DT-1002

SC-5500

PL-1001

PL-1004

SB-5500

1/2” Plug

HC-1001

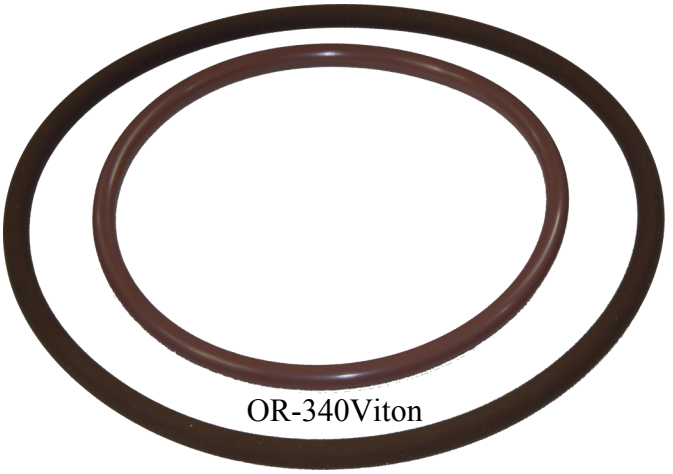
SHCS14Z015Z (10)
1/4”-20 x 1 1/2”

SSSCP1420112 (4)
1/4-20x1 1/2

Nylon Washer
11107655 (10)

BHSCS11Z4040Z

Set Screw



OR-340Viton

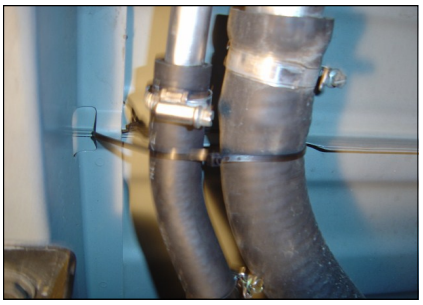
OR-350Viton

STEP 1: REMOVING FUEL SENDING UNIT

Some of the photo's are of a different application, refer to the photos that resemble your application.

A. Disconnect the vehicles battery. Remove the filler neck and overflow tubes from the truck by loosening the clamps.

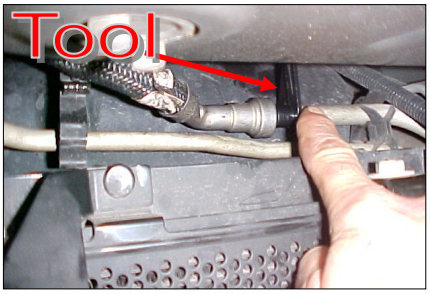
Possible Variations
Clamps will be located at both ends
Clamps will be located at the tank. Some applications have an integrated overflow/inner tube assembly. If so, then make sure the inner tube does not hang-up in the tank.

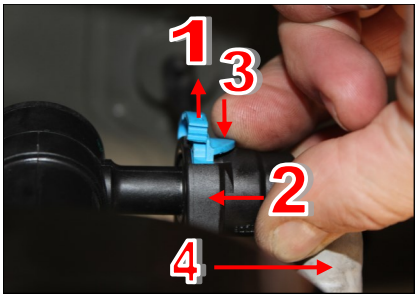


B. Before tank is removed or moved, identify ALL areas of clearance between the tank and the truck's bed for the best location to install the BHF assembly. With proper clearance, you want to install it as close to the Fuel sending unit as possible.

C. Disconnect the factory suction and return line. 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 room.

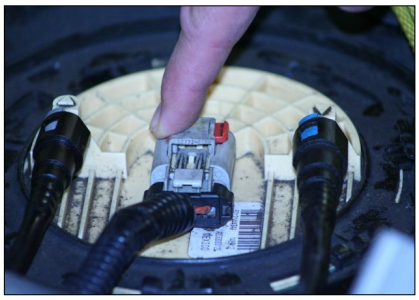
Possible Variations
Press in on the 2 blue tabs and pull off the black fuel connector. The blue tabs will stay on the factory ports.
1. Pull up on the locking tab (either blue or yellow), 2. Push in slightly on the connector, 3. Press down on the release tab, 4. Pull the connector straight off,
Pinch in red tabs, pull out locking collar. You may have use a Fuel Line Disconnect tool and lower the Fuel Cooler to access the Suction line.





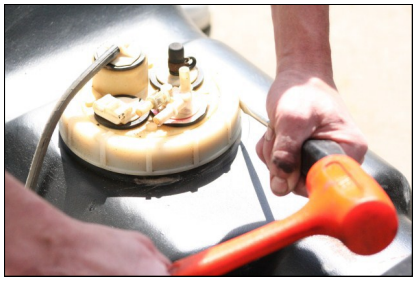
STEP 1: REMOVING FUEL SENDING UNIT

D. Disconnect the factory electrical harness.

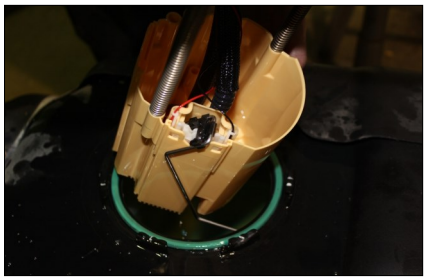


E. Unbolt the tank and remove it from vehicle. Clean all fittings and save for reinstallation.

F. Clean the fuel module area then remove the lock ring/nut. Note/Mark the location of the fuel sending unit in relation the top of the fuel tank fro re-installation. FORD applications will be spring loaded, hold the unit down while removing ring to prevent it from popping up and possibly causing damage.



G. Carefully remove fuel sending unit from tank making note of the fuel level arm. Do not bend the arm.


STEP 2: PREPARING SUMP

A. Locate the lowest point of the fuel tank, which is typically below the factory fuel module. On some applications there is a dimple you can use for a center point reference and it has the flattest surface for sealing the sump.

B. Using the center point, drill a small hole to drain the remaining fuel. Recommend having a container large enough to retain the remain fuel. Allow fuel to drain completely.

C. Drill out a 2 3/4” hole using the center point and a hole saw.

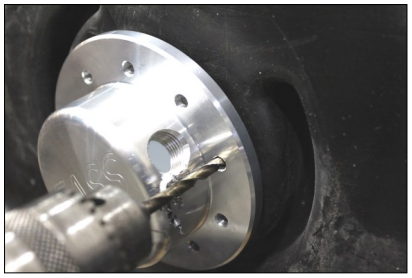
D. De-burr hole and remove all shavings.

E. Place sump (SP-5500) into place, using 1 of the 10 mounting holes in the sump drill 1 hole smaller than the 1/4” bolts. This will allow temporary placement of 1 bolt.

STEP 2: PREPARING SUMP

F. Using a 1/4 - 20 x 1 1/2” SHCS bolt the sump into place. Opposite the previously drilled hole drill an identical hole and insert bolt. This will hold the sump in place to continue the next step.

G. Using the sump mounting holes as your guide, drill out the remaining 8 holes with a 1/4” drill bit. Then remove the sump and drill out the 2 smaller temporary holes (used for holding the sump) with the 1/4” drill bit.

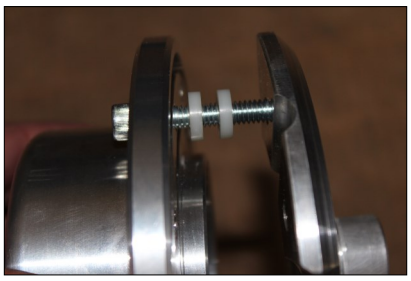


H. De-burr holes and remove all shavings.

PREPARING SUMP BRIDGE

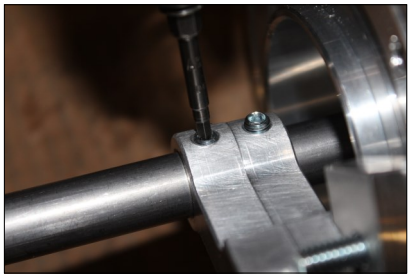
I. Attach SB-5500 (sump bridge) to the SC-5500 (sump clamp).

J. Attach SC-5500 (sump clamp) to the SP-5500 (sump). Note: Stacking 2 nylon washers around the 1/4 - 20 1 1/2” SHCS should give you the thickness of the fuel tank.

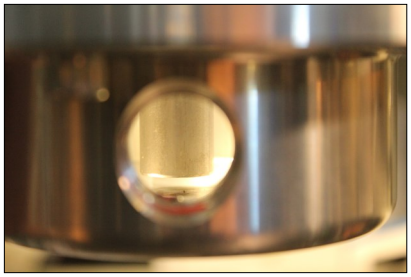


STEP 2: PREPARING SUMP

K. Install the 2 set screws into the bridge



L. Insert DT-1002 (draw tube) into the bridge. Position DT-1002 about 1/8" to 3/16" (approximately 2 quarters) from the surface of the sump. With the DT-1002 in proper position tighten down the 2 set screws.

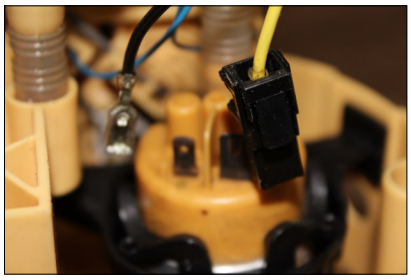
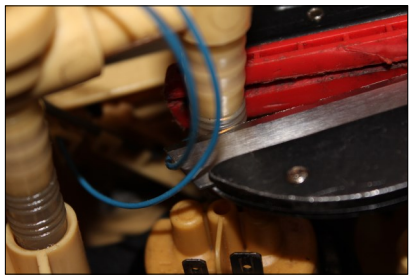
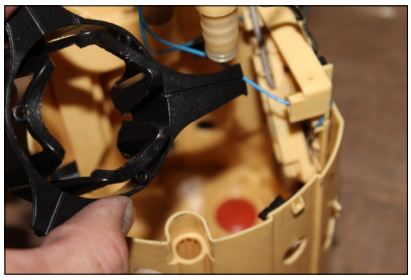


M. Remove SC-5500 (sump clamp) from the SP-5500 (sump) and then remove the SB-5500 (sump bridge). Leaving the SB-5500 and the DT-1002 assembled.

STEP 3: PREPARING FUEL SENDING UNIT

Some of the photo's are of a different application, refer to the photos that resemble your application.
This step is not necessary if sump is NOT going to be located below the fuel sending unit.

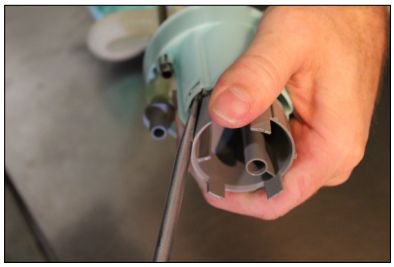
A. Remove non-essential features from the center of the fuel basket.

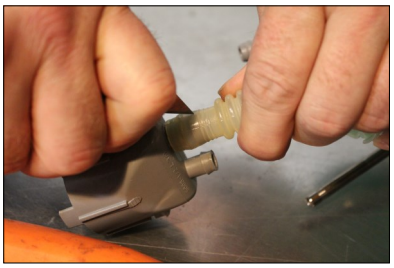
A1. If working with dual basket fuel module (some Duramax applications) follow these subsection steps. Using a flat tipped screw driver, carefully remove the outer basket.

A2. The factory return line nipple must be pulled or pried off the outer basket without breaking it. The nipple will be reinstalled.

A3. Using a flat tipped screw driver, remove the suction tube footing.



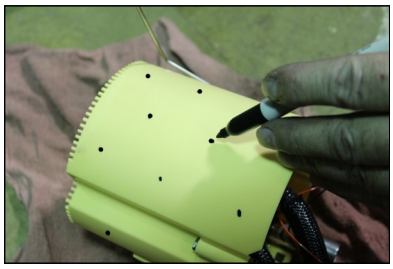
A4. Use a sharp blade to cut the suction tube collar and remove the plastic footing. Discard the footing.



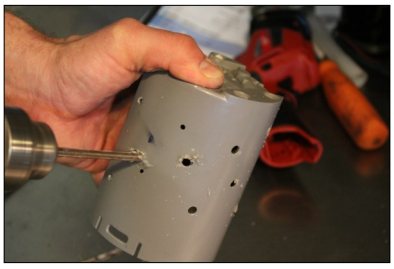
A5. Using tool of your choice, remove the marked area on the green inner cup. Do not cut off the locking tab! Measure twice and cut once. When cutting plastic use sharp tools and take your time!

STEP 3: PREPARING FUEL SENDING UNIT

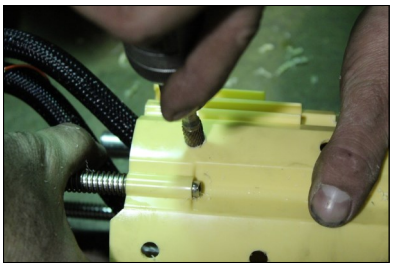
B. Using a Sharpie, mark staggered holes starting 1" from the bottom of the basket. Avoid marking holes where the factory return stacks and posts guides are located as well as where the draw tube assembly is installed. Check to make sure you have proper clearance inside the basket when you mark drill points. You may remove the draw tube only.



C. When drilling through plastic use a gentle touch and let the tool do the work. Do not press hard! Drill pilot holes with a 1/8" bit. Enlarge holes to 3/8" using a larger bit or high speed rotary grinder. Check for shavings and clean up holes.

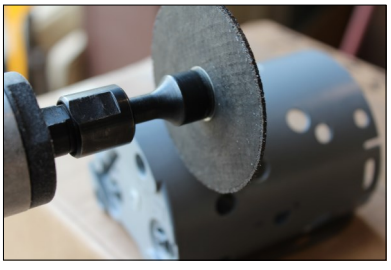


D. De-burr and clean holes as necessary.



D1. Working with a dual basket fuel module you will need to guide the factory return through the inner cup. Insert nipple into factory stack.

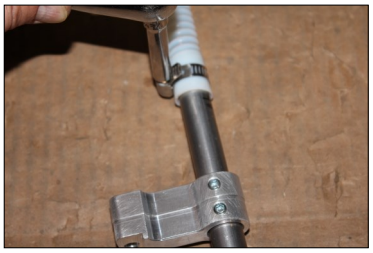
E. Remove the bottom of the fuel basket.



STEP 4: RE-INSTALLING FUEL SENDING UNIT & CONNECTING SUMP

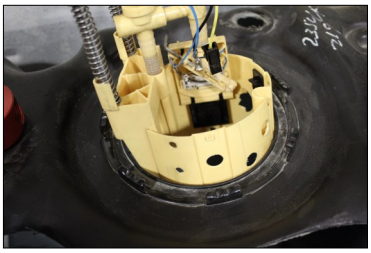
Some of the photo's are of a different application, refer to the photos that resemble your application.

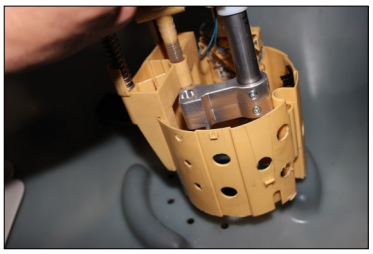
A. Attach the ST-1006P (opposite end/convoluted tube) to the DT-1002 & SB-5500 assembly using the hose clamp (HC-1001). Allow the tube to hang down for now.



B. Attach the ST-1006P (convoluted tube) to the BHF assembly using the hose clamp (HC-1001). Allow the tube to hang down for now.

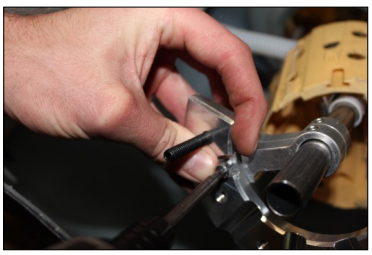
C. Carefully begin to install the fuel sending unit keeping in mind the original orientation. Do not bend the fuel sending arm. Reach in the tank and grab the bottom of the suction tube (previously prepared) and route it through the fuel basket.



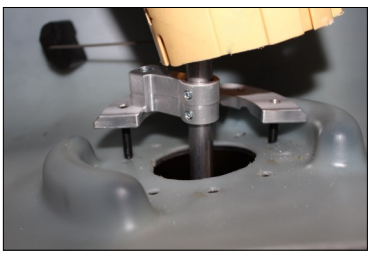


D. As seen in photo, screw in allen bolts into SC-5500's (sump clamp). These are used for alignment and will be removed later.

E. Through the 2 3/4" hole assemble the SC-5500 (suction clamp) and the SB-5500 using the 8 - 32 x 1/2" BHCS. Properly torque.



F. Push up on the sending unit, inside the fuel tank place the SC-5500's (sump clamp) into place with the arches facing the fuel tank surface. Note: the major portion of the location studs will be exiting the fuel tank.

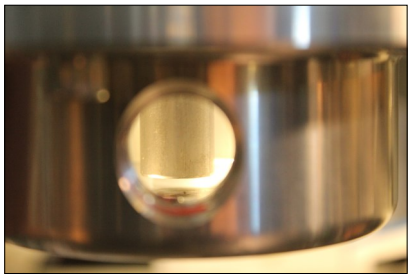


STEP 4: RE-INSTALLING FUEL SENDING UNIT & CONNECTING SUMP

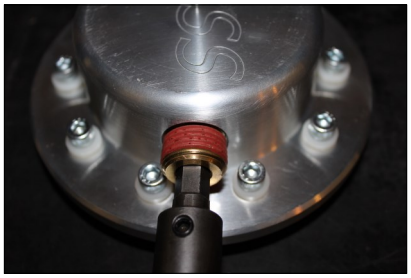
G. Place nylon washers onto the 1/4 - 20 x 1 1/2 SHCS's. Recommendation: apply a small amount of gasket sealant onto the threads to help prevent any leaks.

H. Install the inner and outer O-rings to the sump.

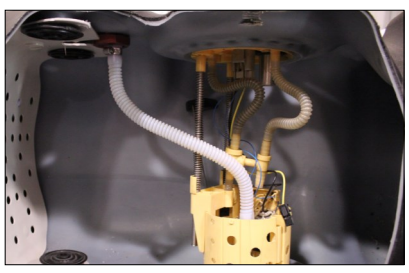
I. Using the 1/4 - 20 x 1 1/2 SHCS's, install sump over alignment studs, then remove the alignment studs and replace with the SHCS's. Note: Direct the fuel suction hole of the sump in the proper direction. Torque to 30 in lbs. Applying silicone to the SHCS's is also recommended.



J. Double check positioning of the DT-1002 (draw tube) to the floor surface. Make any necessary adjustments if needed.



K. Plug the suction hole using the 1/2" plug.

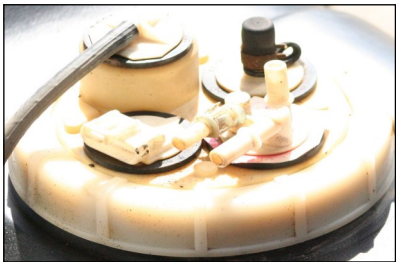


L. Make sure there are no restrictions in the ST-1006P

STEP 4: RE-INSTALLING FUEL SENDING UNIT & CONNECTING SUMP

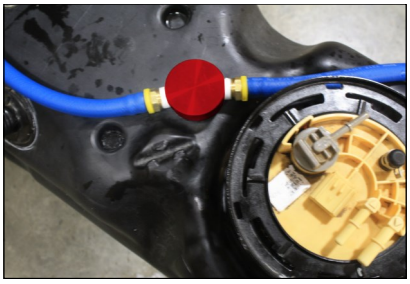
M. Compress the fuel sending unit into the tank. Align any marks. Be sure that the fuel level arm and the newly installed suction tube are not obstructed or pinched.

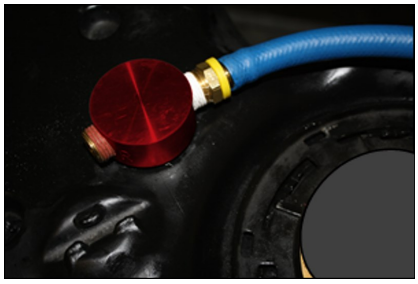
N. Reinstall the factory lock ring/nut



O. Using oil, push fuel line onto the push lock located at the "S" port of the BHF assembly. If returning fuel to the BHF assembly attach the FASS fuel return line to the "R" port of the BHF assembly.

NOTE: Hose clamps are not recommended for push lock fittings. They will hold up to 300psi! Use oil on fittings and inside fuel line when installing Push-Lok fittings





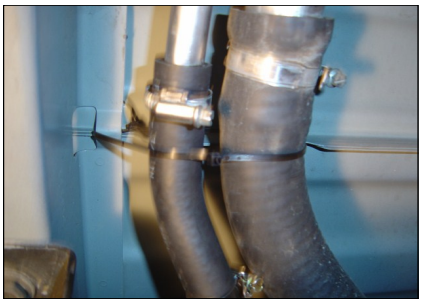
P. Reconnect the factory suction line or plug it to prevent debris from infiltrating the tank.

Q. Reconnect the factory electrical harness.

STEP 4: RE-INSTALLING FUEL SENDING UNIT & CONNECTING SUMP

R. Reconnect the filler neck and overflow tubes from the truck by tightening the clamps

Possible Variations
Clamps will be located at both ends
Clamps will be located at the tank.
Some applications have an integrated overflow/inner tube assembly. If so, then make sure the inner tube does not hang-up in the tank.



S. Reinstall fuel tank. Torque hanger bolts to factory specifications. If need be, cover the return line with spare tubing or similar to protect fuel line from rubbing on the trimmed fiberglass shell. Route FASS fuel line to prevent pinching.

T. Reconnect the vehicles battery. Prime the fuel system. according to owners manual.

Note: Secure all fuel lines with cable ties. Cable ties are an economical way to prevent the possibility of problems occurring!

SUMP TEMPLATE