Transfer Flow, Inc.
1444 Fortress Street
Chico, CA 95973

Phone: (530) 893-5209
Sales/Tech: 1-800-442-0056
Fax: (530) 893-0204
Website: www.transferflow.com

TRANSFER FLOW, INC.
Fuel Tank Systems
Your Legal Fuel Tank Source. ™

Aftermarket & OEM Fuel Tanks
Toolbox & Fuel Tank Combos
In-bed Fuel Tanks
Refueling Tanks
Retrofit Fillneck Kits
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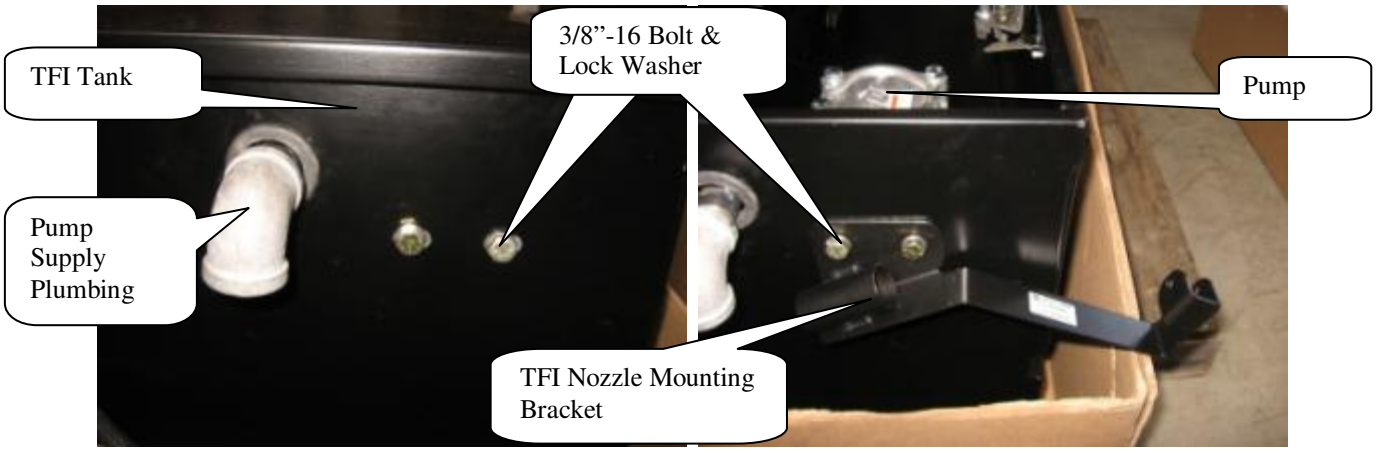
THANK YOU FOR PURCHASING A TRANSFER FLOW 40 GALLON TOOLBOX REFUELING SYSTEM. PLEASE READ THE FOLLOWING PROCEDURES CAREFULLY BEFORE STARTING THE INSTALLATION.

CAUTION: DO NOT HAVE ANY OPEN FLAME OR HEAT SOURCE CLOSE TO THE INSTALLATION AREA.

1. Remove the two 3/8”-16 bolts and lock washers that hold the pump to the toolbox and place the supplied TFI nozzle bracket on the outside of the toolbox. Secure the bracket using the two 3/8”-16 bolts and lock washers, insert the bolts through the bracket and toolbox into the pump and torque down. Use a 9/16” socket to secure the bracket to the toolbox. Refer to instruction sheet # 484 for proper torque specifications.



2. Confirm that the toolbox lid can rotate freely and that the dispensing nozzle can be removed and reinstalled onto the dispensing nozzle bracket. If using a paddle lock, confirm that the lock will secure the dispensing nozzle in place.

3. Place the toolbox tank in the bed of the pickup. Leave about ¾” spacing between the toolbox lid and the head gate of the pickup box. Confirm that both the lid and dispensing nozzle will properly function in the chosen location.

4. For GM 2001-15 long bed or gm 2011-15 short bed vehicles that are installing a 40 gallon steel toolbox tank with the feet on the front and back of the tank you will need kit 020-01-14222. There is a bracket in the kit that will be installed onto the rear feet, closest to the rear of the vehicle.

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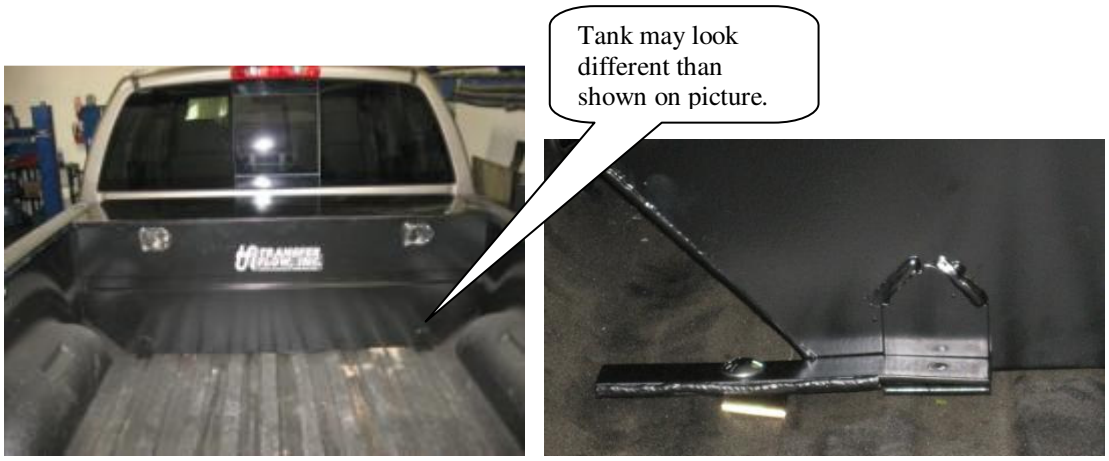

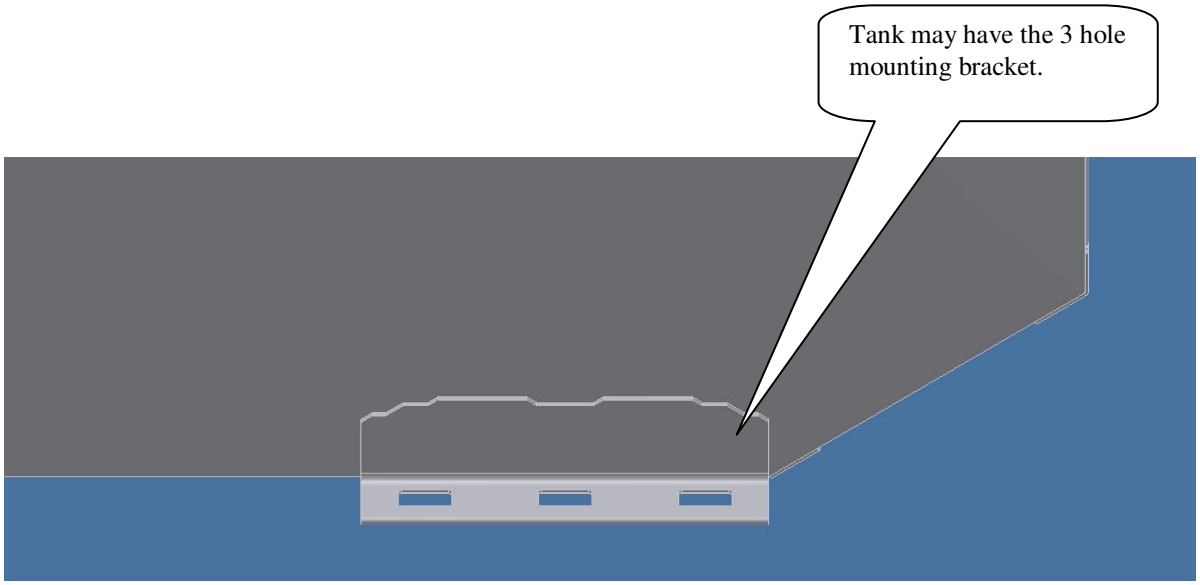

5. Mark the mounting holes of the toolbox tank with a Sharpie®. Try to use the furthest apart mounting holes on the tank. If you cannot reach the mounting tabs near the cab, attach the Sharpie® to a long stick with some electrical tape. Also mark where to locate (4) sticky back foam strips on the bottom of the toolbox tank. Two sticky back foam strips should be located at either end of the toolbox tank, and the other two should be located over risers in the pickup box floor.

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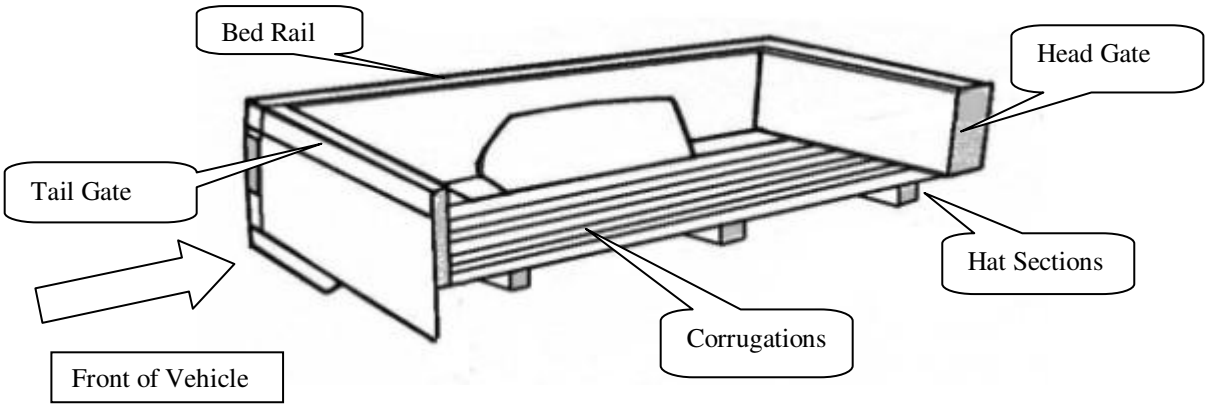
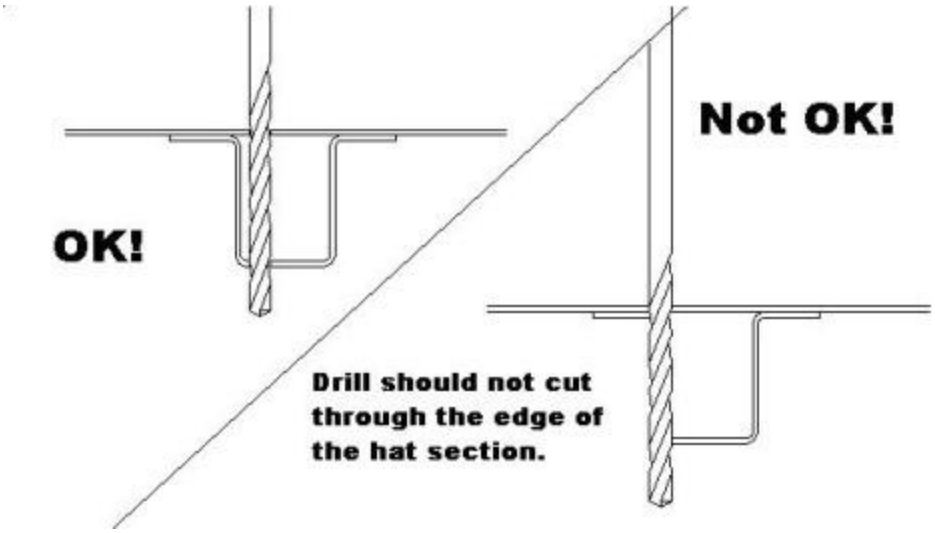
6. Remove the toolbox tank from the pickup box bed mounting area.

7. Measure the mounting hole locations using the head gate and bed corrugations as reference lines. Crawl under the truck.

8. Measure and mark the bed mounting holes on the bottom side of the bed. Use the head gate and bed corrugations for reference.



9. Look at the marks you have created and make sure that a 7/16" bolt with large shims will fit in the area you have marked. It is OK to drill through the hat section of the bed, but you don't want to be drilling through the tall edge of the hat section. Make sure that your drilled hole will pierce through the flat area of the hat section.



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10. Move any wires, hoses or obstructions that may be scarred by a drill bit (you will be drilling from the top down).

11. Double check your measurements and move the tank if you need to. If you move the tank you will need to remark the holes on the underside and double check your measurements once again.

12. Get ready to start drilling (you will be drilling from the top down.)

Section 3 Mount the tank

<u>CAUTION:</u> BEFORE ANY HOLES ARE DRILLED YOU NEED TO CHECK UNDER THE BED FOR ANY OBSTRUCTIONS. FOR EXAMPLE HAT SECTION, FILL HOSE, VENT HOSE OR ELECTRICAL WIRES.

13. Drill pilot holes with a long 1/8" drill bit. Did the pilot hole come through where you expected?

14. Drill a pilot hole for the wiring harness. This hole will be enlarged with a 1 ¼" hole-saw later. Place the hole in the side of the bed about 2" up from the bed floor. The hole location relative to the headgate will be different depending on the model year of the vehicle. Typically place the hole about 2" from the head gate. Make sure you are not drilling into anything valuable such as the outside of the bed, wiring, hoses or other brackets. Do not drill the hole in the head gate.

<u>CAUTION</u>: CARE SHOULD BE TAKEN WHEN DRILLING THE HOLES. ON LATE MODEL GM PICKUPS AND ON OTHER MODELS AS WELL, THE FUEL FILL HOSE MAY BE DIRECTLY BELOW THE CENTER PUNCH MARK.

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15. Use a 9/16" diameter drill and open (4) 1/8" diameter holes in the pickup box floor to 9/16" diameter. Change the bit to a 1 1/4" hole saw. Open the 1/8" diameter hole on the pickup box inner side panel to 1 ¼" diameter, than install the supplied rubber grommet.

16. Reposition the toolbox refueling tank over the drilled holes. Use the provided shims to avoid deforming the tank's angle brackets and the vehicle's floor. Confirm that the rollover valve vent hose and the electrical harness are not pinched or kinked.

    CAUTION: DUE TO THE WEIGHT OF THIS TANK WITH A FULL TANK OF FUEL, IT IS THE CUSTOMER'S RESPONSIBILITY TO MAKE SURE THAT THE BED FLOOR IS STRUCTURALLY CAPABLE OF HOLDING THIS TANK IN PLACE IF THE VEHICLE WERE IN A ROLLOVER SITUATION.

17. Insert the ½"-13 X 5" lg. OR ½"-13 X 2" lg. bolts through the tank feet and into the previously drilled holes of the OEM box floor. Position them such that the head of the bolt and one washer is above the angle bracket. From under the bed, install a spacer and ½"-13 flange nuts on each bolt. If there is space between the angles and the floor, use the provided shims to eliminate the gap.

18. Use a ¾" box open wrench or a socket to tighten the (4) ½"-13 flange nuts. Refer to Instruction Sheet #484 for proper torque specifications.

19. Route the vent hose through the TFI grommet on the OEM pickup box inner side panel. Route the open end of the rollover vent hose away from any heat or sharp objects. Confirm that there are no kinks in this hose. One place to route the hose is inside the box hat section reinforcement. Use a provided nylon tie to secure the end of the hose.

20. If you removed your fillneck as outlined in step #6. Go ahead and reattached it.

Wire harness installation:

21. **1999-2015 Ford Vehicles w/ Automatic Transmissions**: Locate the black rubber grommet in the driver's side footwell. This grommet will be located just to the left and behind the accelerator pedal with the transmission gear selector cable running through it. Make an incision out from the center of this grommet, so that the grommet is still one piece, but is now open on one side. This grommet will allow the TFI wiring harness to enter into and out of the passenger cab.

1999-2015 Ford Vehicles w/ Manual Transmissions: Either drill a 1¼" diameter hole into the firewall, and install a TFI 1¼" rubber grommet, or use an existing OEM rubber grommet to route the end of the TFI wiring harness into and out of the passenger cab. Prior to drilling the hole, make sure that the hole will not enter or interfere with any other components on the vehicle, such as the floor mat. After the hole has been drilled, insert the supplied 1¼" rubber grommet.

22. **Dodge Vehicles Only**: Either drill a 1¼" diameter hole into the firewall, and install a TFI 1¼" rubber grommet, or use an existing OEM rubber grommet to route the end of the TFI wiring harness into and out of the passenger cab. Prior to drilling the hole, make sure that the hole will not enter or interfere with any other components on the vehicle, such as the floor mat. After the hole has been drilled, insert the supplied 1¼" rubber grommet.

23. **GM Vehicles Only:** Either:

    - Use the OEM grommet on the firewall, underneath the Brake Master Cylinder.

    - Drill a 1¼" diameter hole into the firewall, and install a TFI 1¼" rubber grommet, or use an existing OEM rubber grommet to route the end of the TFI wiring harness into and out of the passenger cab. Prior to drilling the hole, make sure that the hole will not enter or interfere with any other components on the vehicle, such as the floor mat. After the hole has been drilled, insert the supplied 1¼" rubber grommet.

    - On 2007-2011 GM pickups, remove the OEM grommet on the firewall inside of the cab, located behind the relay box. Remove the cover from the relay box; gently pull the relay box away from its cradle. The grommet should be visible with the relay box moved out of the way.

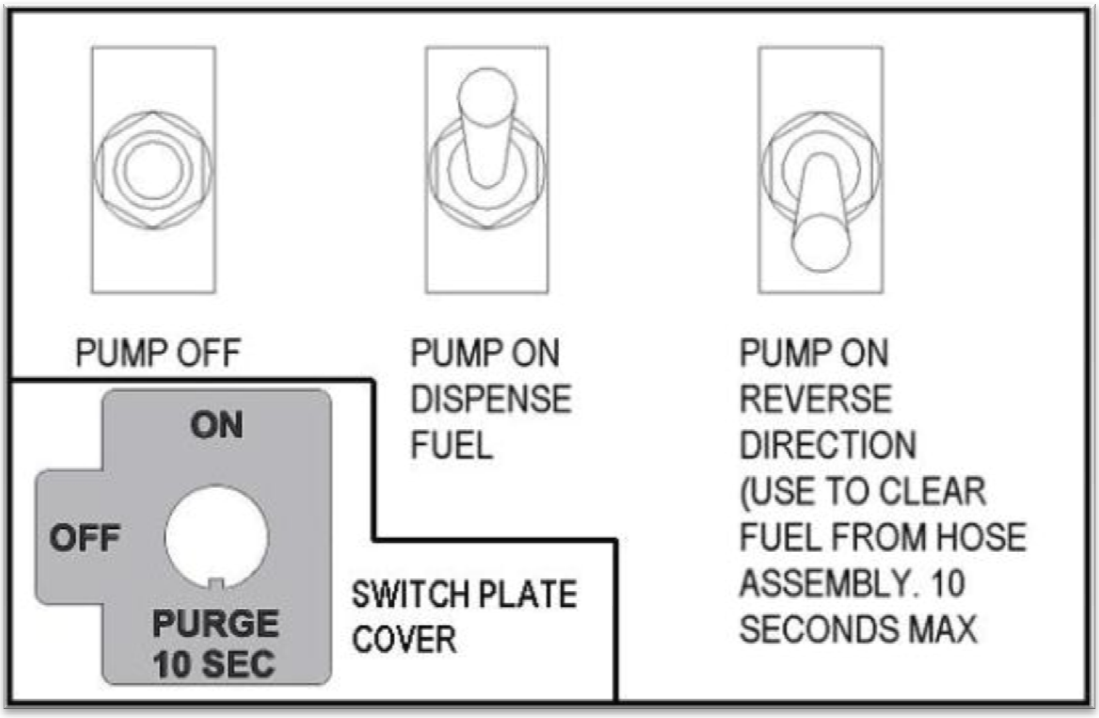
- Or, on 2007-2011 GM pickups, remove the sill plate and kick panel on the driver's side. Pull back the carpeting to expose a rubber OEM grommet in the driver's foot well.

24. Remove the TFI wiring harness from the installation kit. Locate the end of the harness, that has a switch. From inside the vehicle, insert both open ends of the wire harness through the access hole towards the ground. If drilling a hole and using the provided grommet, route the wires through the grommet and hole before inserting the grommet into position.

25. Find a suitable location for the switch and light. After confirming that there are no objects or electrical wires that could be damaged, drill two 1/2" diameter holes. Drill these holes, or a least the one for the light in a visible location.

26. Insert the switch into the hole so the up position is "MAINTAINED ON", the middle position is "OFF" and the down position is "MOMENTARY REVERSE". Holding the switch in the "MOMENTARY REVERSE" position for 10 seconds with the nozzle open will run the pump in reverse to drain the fuel from the refueling pump supply hose. Leave the switch in the "OFF" position during the installation process. Install the supplied switch label plate and the nut onto the switch and tighten down.

27. Insert the light through the hole and tighten the nut. Connect the male and female spades coming from the light and switch together. They can only go together one way. The light on the harness will turn on every time the switch is in the on position. The light is there so that the pump does not run continuously and burn up the motor.



CAUTION:

- **The rated duty cycle of this pump is 15 minutes ON and 30 minutes OFF. Allow the pump to cool for 30 minutes.**

- **An automatic bypass valve prevents pressure build up when the pump is on with the nozzle closed. To avoid motor damage, do not run the pump more than 5 minutes with the nozzle closed.**

- **Do not leave the system running without fluids. "Dry running" can damage the pump. If the system fails to deliver fuel after 15 to 20 seconds, turn the system off and refer to the troubleshooting section in the fuel pump owner's manual.**

28. Route the end of the wire harness with the two butt connectors towards the rear of the vehicle, through the grommet in the pickup box side panel and pull the harness into the bed of the truck. Avoid routing the harness close to any hot or sharp objects. Use some of the provided nylon ties to secure the harness to the vehicle. Do not secure the harness to any brake or fuel lines.

29. Remove the cover box from inside the toolbox and remove the (4) 1/4"-20 bolts holding the cover plate to the refueling pump to gain access to the pump wires. Route the TFI wire harness between the pump and the toolbox shell as pictured below.

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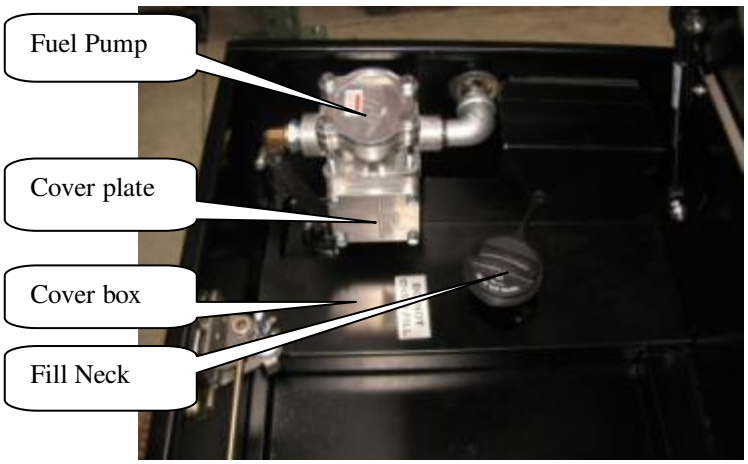

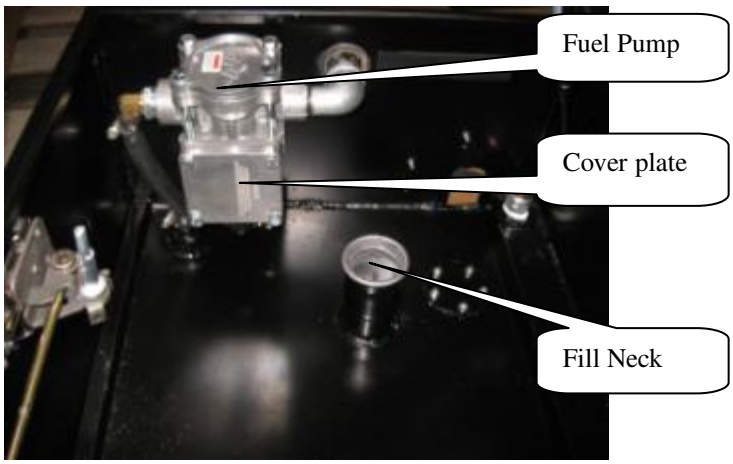

30. Remove the plastic nut on the back of the strain relief and push the convolute until it is inserted into the strain relief. Reinstall the strain relief nut, which will also secure the convolute in place. Make sure that the red and black wires from the TFI harness are through the pump enough to connect to the pump wires.

31. Place a piece of heat shrink tubing over the red and black wires on the wire harness. Crimp the red wire from the refueling pump to the red wire on the TFI wire harness. Repeat the operation for the black wires. Position the heat shrink tubing over each non-insulated butt connector. Use a heat gun to seal the heat shrink over each butt connector.

32. Reinstall the plate on the front of the refueling pump. Make sure not to pinch any of the wires.

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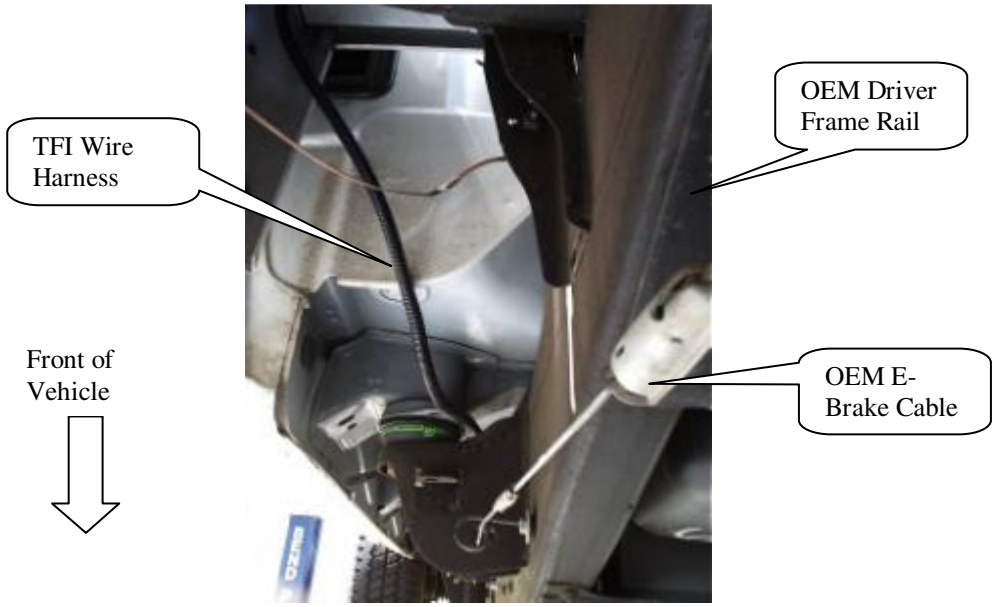
33. Route the end of the wire harness with the inline fuse towards the vehicle's battery. Avoid routing the harness close to any hot or sharp objects. Use the provided nylon ties to secure the harness as it is routed to the battery.



34. Some vehicles have top post batteries, while others have side post batteries. Based on your battery, secure either a 3/8" eyelet or a 5/16" eyelet to the TFI black wire.

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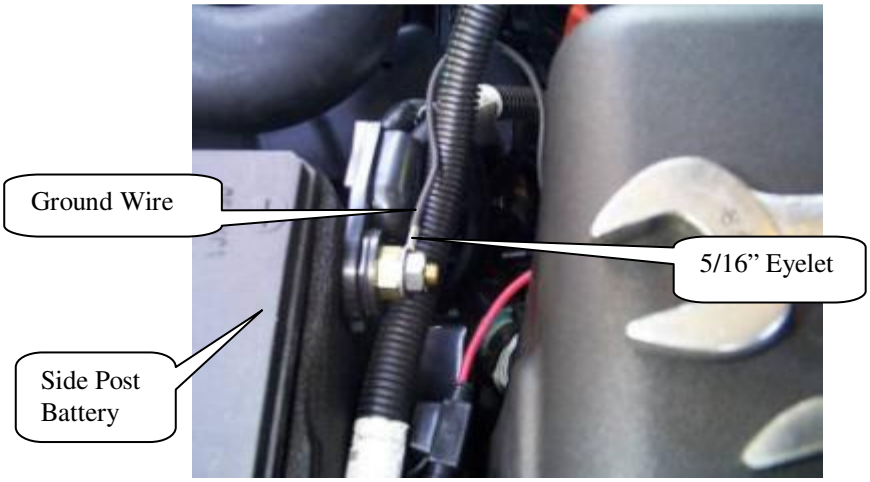
35. Secure the black ground wire to the negative side of the battery. If you have a side post battery, remove the existing OEM side port bolt, and install the provided brass side post extension. Secure the 5/16" eyelet to the end of this extension.



36. Repeat the procedure for securing the 5/16" or 3/8" eyelet to the red power wire. Secure the TFI red power wire to the positive side of the battery.

<u>CAUTION</u>: AVOID TOUCHING ANY GROUND WHEN TIGHTENING THIS FASTENER, AS IT CAN RESULT IN A DANGEROUS ELECTRICAL ARC. TOUCHING A GROUND CAN INJURE THE PERSON OR DAMAGE ELECTRICAL COMPONENTS ON THE VEHICLE.

37. Confirm that the pump operates by turning the pump switch to the "ON" position.

<u>CAUTION</u>: DO NOT RUN THE PUMP FOR MORE THAN 10 SECONDS WITHOUT FUEL IN THE TANK. PERMANENT DAMAGE TO THE PUMP MAY OCCUR.

38. Confirm that the pump transfers fuel. Fill the toolbox refueling tank with a minimum of 5 gallons of fuel. Turn the pump switch on. Aim the dispensing nozzle into a container that is capable of holding fuel. Depress the nozzle and confirm that fuel flows from the nozzle.

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39. Confirm that the refueling labels are located on the inside of the toolbox refueling lid.

40. Confirm there are no fuel leaks around any fittings.

41. The keys for the toolbox refueling tank are attached to the latch rod on the inside of the toolbox. Use a pair of diagonals to cut the nylon tie that holds the (2) keys.

42. There is an inline 25 amp mini fuse located in the wire harness near the vehicle's battery. An extra 25 amp mini fuse is supplied with this kit. The pump will not operate with a blown fuse.

43. Place the appropriate small label ("gas" or "diesel") near the gas cap, where it can be easily seen by the operator dispensing the fuel.

44. Place the flammable label on the outside of the toolbox refueling tank where it can be easily seen. It is a requirement of our special permit to install the flammable label on the outside of the toolbox refueling tank.

CAUTION: THE PUMP SWITCH SHOULD ALWAYS BE IN THE "OFF" POSITION WHEN NOT BEING USED. THIS WILL ELIMINATE THE POSSIBILITY OF RUNNING THE VEHICLE'S BATTERY DOWN. IT WILL ALSO REDUCE THE POSSIBILITY OF AN UNAUTHORIZED PERSON TAKING FUEL FROM THE REFUELING TANK.

CAUTION: THE TFI DISPENSING NOZZLE IS DESIGNED TO FILL GAS AND/OR DIESEL VEHICLES. THE OPERATOR DISPENSING THE FLUID FROM A TFI REFUELING TANK IS HEREBY WARNED THAT THEY CAN ACCIDENTALLY FILL A GAS VEHICLE WITH DIESEL FUEL OR A DIESEL VEHICLE WITH GAS.

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Tools Required:

Electrical crimpers	Heat gun
1 ¼" hole saw	11/16" box open-end wrench
Wire cutters	11/16" socket
Paint marker	½" drill
1/8" drill	5/8" socket
7mm socket	5/8" box open-end wrench
9/32" drill	3/8" drill
½" socket	½" box open end wrench

Trouble Shooting Guide:

IF THE PUMP DOES NOT RUN:

- Confirm that the pump switch is in "On" position.
- Confirm that the 25-amp inline fuse is not blown or missing.
- Confirm that 12 volts is measured at the fuel pump strain relief connection.
- Confirm that the red wire is positive volts and the black wire is ground.

IF THE PUMP RUNS BUT NO FUEL COMES OUT THE DISPENSING NOZZLE:

- Confirm that the dispensing nozzle trigger is compressed.
- Confirm that there is fuel in the refueling tank.
- Confirm that the drawtube is not hitting the bottom of the tank
- Confirm that the power wires are not crossed.