



TITAN pt. no.: 99 0000 0509

Important: Please read these instructions **carefully and completely** **before** starting the installation.

TITAN Fuel Tanks

INSTALLATION INSTRUCTIONS

In - Bed Fuel Tank



Shown Above, Left: 60 Gallon, Model 5410060 which includes pump and electronic transfer system (not shown). Right: 60 Gallon, Model 5110060 with gravity transfer system.

Required Tools:

- 1 ea. Power drill, electric or air powered
- 1 ea. 9/16" Drill Bit
- 1 ea. 3/4" Drill Bit
- 1 ea. 1/2" Drill Bit
- 1 ea. Medium Flat Blade Screw Driver
- 1 ea. 7/8" End Wrench
- 1 ea. 3/4" End Wrench
- 1 ea. Ratcheting socket driver
- 1 ea., 7/8" Socket
- 1 ea. 3/4" Socket
- 1 ea. Tape Measure
- 1 ea. Torque Wrench

Additional Tools for 5410060:

- 1 ea. Wire Stripper
- 1 ea. Wire Connection Crimper
- 1 ea. Small Propane Torch or Cigarette Lighter

Recommended Optional Tools:

- 1 ea. Center Punch
- 1 ea. Vehicle Hoist



50110060 Model Parts List with Gravity Transfer System:

1 ea.	99 0000 0169	Extra heavy-duty 60 gallon* cross-linked polyethylene (XLHDPE) in-bed fuel tank body
2 ea.	99 0000 0129	Front Toe Clamp
2 ea.	99 0000 0170	Forged Steel Eye Nut, 1/2"
2 ea.	99 0000 0171	1/2" Spring Lock Washer—plated
2 ea.	99 0000 0132	Adjustable Toe Clamp Assembly, Rear
2 ea.	99 0000 0133	Adjustable Toe Clamp Base
1 ea.	99 0000 0148	Fuel Level Gauge
1 ea.	99 0000 0144	Locking Fill Cap
1 ea.	99 0000 0145	Threaded Connector
1 ea.	99 0102 0000	Rollover vent, fill-stop valve
8 ea.	99 0000 0156	Nylon Locknut, 1/2" – 13 Zinc Plated
1 ea.	99 0000 0148	Mechanical Fuel Gauge
1 ea.	99 0000 0157	2" NPT Plug
1 ea.	99 0120 0000	Grounding Wire Assembly
6 ea.	99 0000 0162	3/8" Button Head Socket Cap Screw, plated
8 ea.	99 0000 0163	1/2" Flat Washer, plated
1 ea.	99 0000 0164	.375" – 18 NPT, Kynar plug
1 ea.	99 0000 0509	In-Bed Tank Installation Instructions
1 ea.	99 0000 0260	TITAN 60 Gallon, In-Bed Tank, Mounting Template

1 ea.	99 0000 0153	3/8" NPT by 5/16" Hose Barb Ball Valve
2 ea.	99 0000 0505	5/16" Hose, 4 feet
2 ea.	99 0000 0137	Rollover Valve
1 ea.	99 0000 0173	1 1/2" Double Tee, Fuel Line Connector (for use on 1 1/2" line)
1 ea.	99 0000 0251	2" Double Tee, Fuel Line Connector (for use on 1 1/2" line)
2 ea.	99 0000 0438	2" Hose Clamp
4 ea.	99 0000 0116	5/16" Hose Clamp
2 ea.	99 0000 0167	Push-in Grommet
1 ea.	99 0000 0285	5/16" Hose Tee



5410060 Model Parts List with TITAN™ Electronic Controller and Pump Transfer System:

1 ea.	99 0000 0169	Extra heavy-duty 60 gallon* cross-linked polyethylene (XLHDPE) in-bed fuel tank body
2 ea.	99 0000 0129	Front Toe Clamp
2 ea.	99 0000 0170	Forged Steel Eye Nut, 1/2"
2 ea.	99 0000 0171	1/2" Spring Lock Washer—plated
2 ea.	99 0000 0132	Adjustable Toe Clamp Assembly, Rear
2 ea.	99 0000 0133	Adjustable Toe Clamp Base
1 ea.	99 0000 0148	Fuel Level Gauge

1 ea.	99 0000 0144	Locking Fill Cap
1 ea.	99 0000 0145	Threaded Connector
1 ea.	99 0102 0000	Rollover vent, fill-stop valve
8 ea.	99 0000 0156	Nylon Locknut, 1/2" – 13 Zinc Plated
1 ea.	99 0000 0157	2" NPT Plug
1 ea.	99 0120 0000	Grounding Wire Assembly
6 ea.	99 0000 0162	3/8" Button Head Socket Cap Screw, plated
8 ea.	99 0000 0163	1/2" Flat Washer, plated
1 ea.	99 0000 0164	.375" – 18 NPT, Kynar plug
1 ea.	99 0000 0509	In-Bed Tank Installation Instructions
1 ea.	99 0000 0260	TITAN 60 Gallon, In-Bed Tank, Mounting Template
1 ea.	99 0000 0507	Draw Straw Assembly (installed in tank)
1 ea.	99 0000 0498	Electric Level Sensor
1 ea.	99 0130 0000	TITAN Electronic Controller and level monitor
1 ea.	99 0000 0401	1/2" NPT to 3/8" Elbow
1 ea.	99 0000 0488	Sending Unit Cover
1 ea.	99 0000 0506	2 ft. VHB Sticky Tape
1 ea.	99 0000 0370	In-line electric fuel pump
2 ea.	99 0000 0403	1/8" NPT TO 3/8" Hose barb adapter
1 ea.	99 0000 0405	In-Line Fuel Filter
2 ea.	99 0000 0420	Oval Head Drilling Screw, 8-18 Thread x 1" long
1 ea.	99 0000 0504	3/8" Fuel Hose, 4 feet
1 ea.	99 0000 0505	5/16" Fuel Hose, 4 feet
1 ea.	99 0000 0496	1 1/2" Double Tee Fill Hose Adapter (for 1 1/2" Hoses)
1 ea.	99 0000 0497	2" Double Tee Fill Hose Adapter (for 2" Hoses)
2 ea.	99 0000 0438	2" Hose Clamp
14 ea.	99 0000 0483	#4 Hose Clamp with 5/16" band width
2 ea.	99 0000 0167	Push-in Grommet
1 ea.	99 0000 0285	5/16" Hose Tee
1 ea.	99 0000 0104	5/16" Check Valve
1 ea.	99 0000 0283	2 inches, Adhesive Backed Velcro
1 ea.	99 0000 0200	4 Feet, 18 AWG Black Wire
1 ea.	99 0000 0201	20 Feet, 18 AWG Purple Wire
1 ea.	99 0000 0482	20 Feet, 18 AWG Blue Wire
3 ea.	99 0000 0204	18 AWG Crimp Insulated Ring Terminal, 3/8" stud
6 ea.	99 0000 0203	18 AWG Heat Shrink Butt Splice Terminal
1 ea.	99 0000 0489	22-18 Gauge Barrel Quick-Disconnect Terminal
1 ea.	99 0000 0487	ATM Fuse Tap
1 ea.	99 0000 0503	4 Feet, 1/4" Wire Loom



5310060 Model Parts List with Transfer Fuelling Pump and Mechanical Gauge:

1 ea.	99 0000 0169	Extra heavy-duty 60 gallon* cross-linked polyethylene (XLHDPE) in-bed fuel tank body
2 ea.	99 0000 0129	Front Toe Clamp
2 ea.	99 0000 0170	Forged Steel Eye Nut, ½"
2 ea.	99 0000 0171	½" Spring Lock Washer—plated
2 ea.	99 0000 0132	Adjustable Toe Clamp Assembly, Rear
2 ea.	99 0000 0133	Adjustable Toe Clamp Base
1 ea.	99 0000 0148	Fuel Level Gauge
1 ea.	99 0000 0144	Locking Fill Cap
1 ea.	99 0000 0145	Threaded Connector
1 ea.	99 0102 0000	Rollover vent, fill-stop valve
8 ea.	99 0000 0156	Nylon Locknut, ½" – 13 Zinc Plated
1 ea.	99 0000 0148	Mechanical Fuel Gauge
1 ea.	99 0000 0157	2" NPT Plug
1 ea.	99 0120 0000	Grounding Wire Assembly
6 ea.	99 0000 0162	3/8" Button Head Socket Cap Screw, plated
8 ea.	99 0000 0163	½" Flat Washer, plated
1 ea.	99 0000 0164	.375" – 18 NPT, Kynar plug
1 ea.	99 0000 0509	In-Bed Tank Installation Instructions
1 ea.	99 0000 0260	TITAN 60 Gallon, In-Bed Tank, Mounting Template
1 ea.	99 0106 0000	Transfer Pump with hose and nozzle.

Tank Body Installation

I. Drill Mounting Holes

Step	Description
1	Following the diagram below, or using the included mounting template (99 0000 0260), measure and mark hole centers on mounting surface (See Fig. 3). <i>Before drilling, check under the bottom of the bed to make sure there are no cross members on the bed that will interfere with installation.</i> If there is a conflict, move the “footprint” of the tank slightly forward or back to clear the obstruction.
2	Drill eight mounting holes using 9/16” drill bit (See Fig. 4). Also, if the tank is to gravity feed (Model 5110060) the vehicle’s existing tank, locate the place you want the 5/16” transfer hose to pass through the vehicle’s bed and drill a hole using a 3/4” drill bit. In some cases, two holes may be needed. Contact TITAN Technical Services, if needed, for details.

If installing Model 5410060 with TITAN Electronic Controller and pump transfer system, you will need to drill three holes. Two will be required for the fuel hoses (supply and return lines) and one for the wire loom to pass through (See Fig. 1).

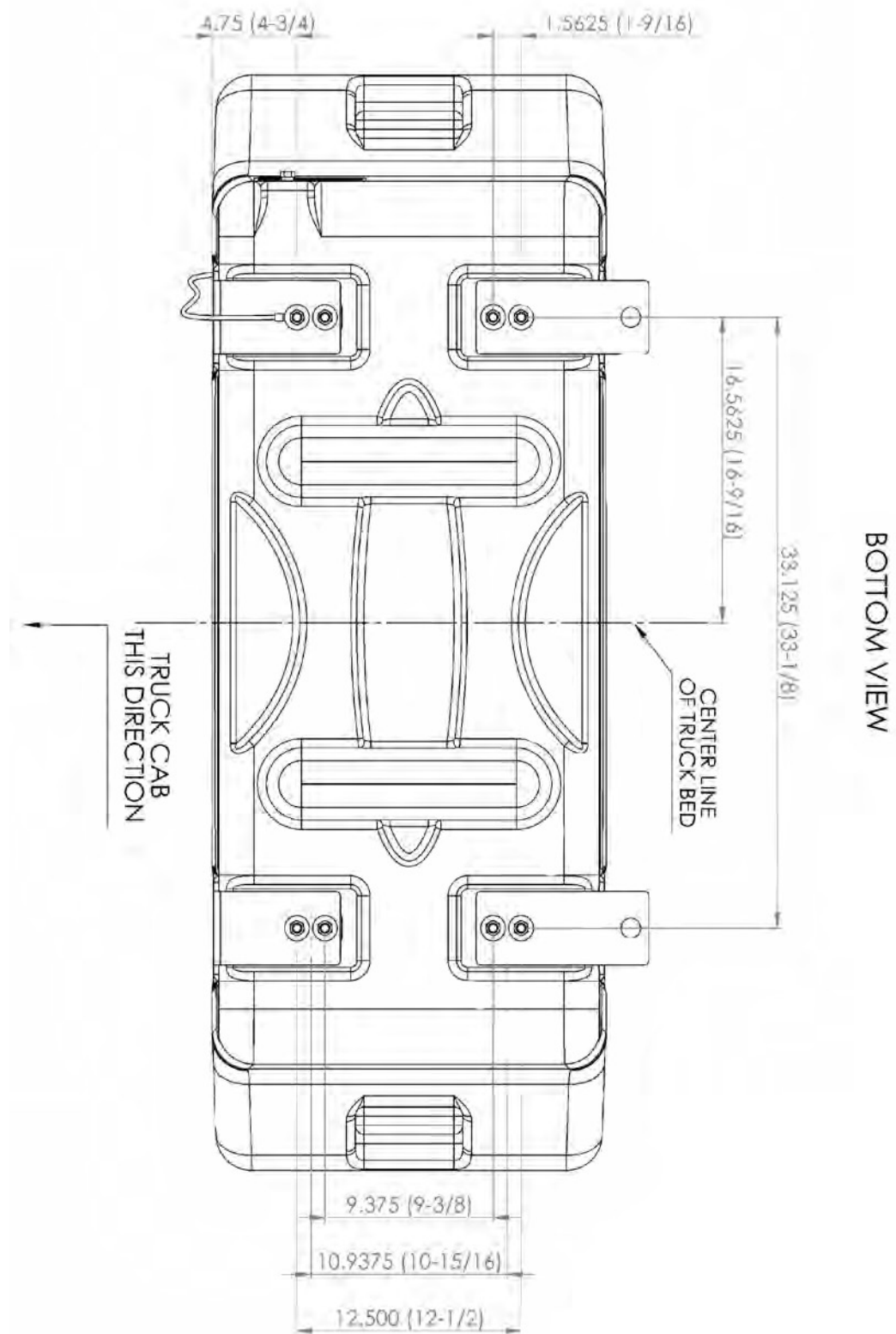
NOTE: When assembling any of this product’s threaded NPT connections, be sure to use a thread sealing tape or thread sealing compound. Be sure the tape or compound is compatible with motor fuels including biodiesel.



(Fig. 1) Holes for fuel lines and wire loom to pass, Model 5410060.



(Fig. 2) Parts for Model 5410060



(Fig. 3) Mounting bracket bolt hole pattern for 60 Gallon, Series 50 In-Bed Tank.



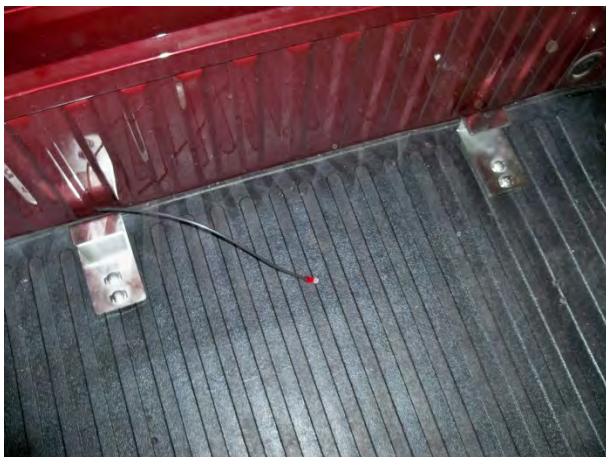
(Fig. 4) Drill eight mounting holes.



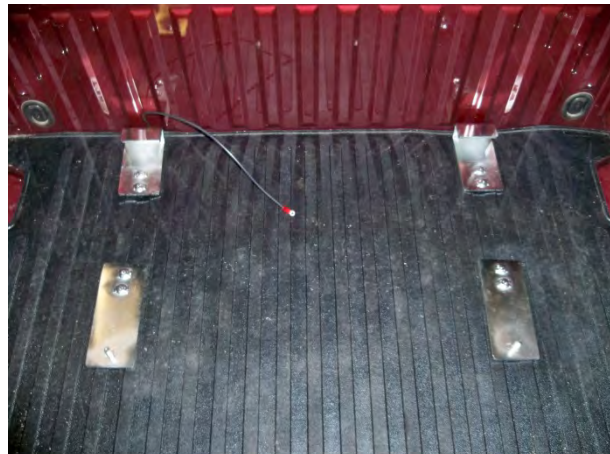
(Fig. 5) Install "99 0104 0000 Grounding Wire Assembly" on $\frac{1}{2}$ " stud of the "99 0000 0129 Front Toe Clamp" to be installed on the driver's side of the vehicle.

II. Install Mounting Brackets

- 3 Before placing the Mounting Brackets in the eight holes you have drilled, be sure to install the "99 0104 0000 Grounding Wire Assembly" on the $\frac{1}{2}$ " stud of "99 0000 0129 Front Toe Clamp" which will go on the driver's side (left hand) front corner of the bed (See Fig. 5).
- 4 Mount the Front Toe Clamps as shown in Figs. 6 & 7. Place them in the drilled holes while not tightening them down as yet. Do the same with the rear base.



(Fig. 6) View showing "Front Toe Clamps" installed complete with ground wire on driver's side clamp.



(Fig. 7) All four of the tank mounting brackets installed in their proper positions. Note the rear base of the "Adjustable Toe Clamp" is placed so the mounting stud is towards the rear of the vehicle.

III. Set Tank in Brackets

- 5 If the tank is to gravity feed (Model 5110060, diesel fuel only) into the vehicle's tank under the body, install the "99 0000 0165 3/8" NPT x 5/16" hose barb, Ball Valve" in the outlet at the bottom of the tank on the driver's side (See Fig. 8). Now might also be a good time to install the "99 0000 0166 5/16" id Hose" onto the barb of the ball valve. *For the Model 5410060* be sure the (99 0000 0164) .375 – 18 NPT, Kynar plug" is installed in the outlet.



(Fig. 8) Ball valve installed



(Fig. 9) One man can lift the TITAN In-Bed tank into the vehicle.

- 6 If the tank is to gravity feed the vehicle's tank (Model 5110060), install a rubber grommet (included) into the $\frac{3}{4}$ " hole drilled for this purpose in a previous step (See Fig. 10). If the product is a Model 5410060 tank with electronic controller and pump, install two grommets, one each into the two $\frac{3}{4}$ " holes drilled for the fuel hoses (See Fig. 1).
- 7 Lift the tank (See Fig. 9) into the vehicle and slide it into the Front Toe Clamps first. Then, assemble the top of the rear Adjustable Toe Clamp Assembly and tighten Forged Steel Eye Nut as shown in Fig. 11. Be sure to include a $\frac{1}{2}$ " Spring Lock Washer under the eye nut. Be sure the rear Toe Clamp is tight against the tank.

Important Note: If the In-Bed tank is used to gravity feed to a vehicle's tank be sure to:

- Never allow vehicle's tank to fill more than 7/8 full from In-Bed tank.
- Never leave vehicle unattended with in-bed tank gravity feed valve open.
- Use for diesel fuel ONLY.



(Fig. 10) Install rubber grommet into transfer hose hole(s). (Fig.11) Assemble rear adjustable toe clamp assembly.

- 8 Attach the Ground Wire coming from the Front Toe Clamp, to one of the screws on the top of the Fuel Gauge or level sensor as shown in Fig. 12 .



(Fig. 12) Attach ground wire to top of fuel gauge (shown above on the left), or the Electric Level Sensor shown above, right, depending on the model of tank being installed.



(Fig. 13) Install washers and nylon locknuts on the exposed bracket studs underneath the bed. Tighten the locknuts to 40 ft. lbs.



(Fig.14) Gravity transfer system parts for Model 5110060

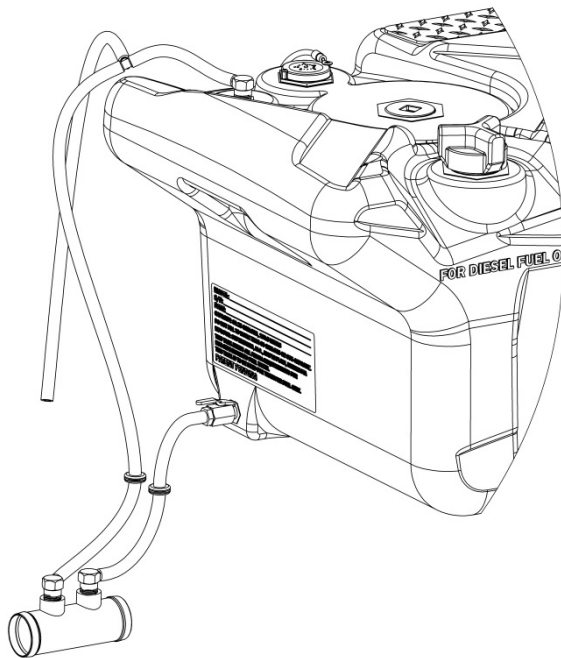
- 9 Install washers and nylon locknuts on the exposed bracket studs underneath the bed. Tighten the locknuts to 40 ft. lbs.—check with torque wrench (See Fig. 13)

IV. Installation of Transfer Tie-In to Vehicle’s Fuel Tank

A. Specific Instructions for Model 5110060 gravity transfer system.

For Model 5410060 Instructions employing pump transfer, proceed to “IV. B.” below and start with step 10.

- 10 See parts photo (Fig. 14) and diagram below (Fig. 15):



(Fig. 15) Plumbing Diagram for Model 5110060 gravity transfer system.

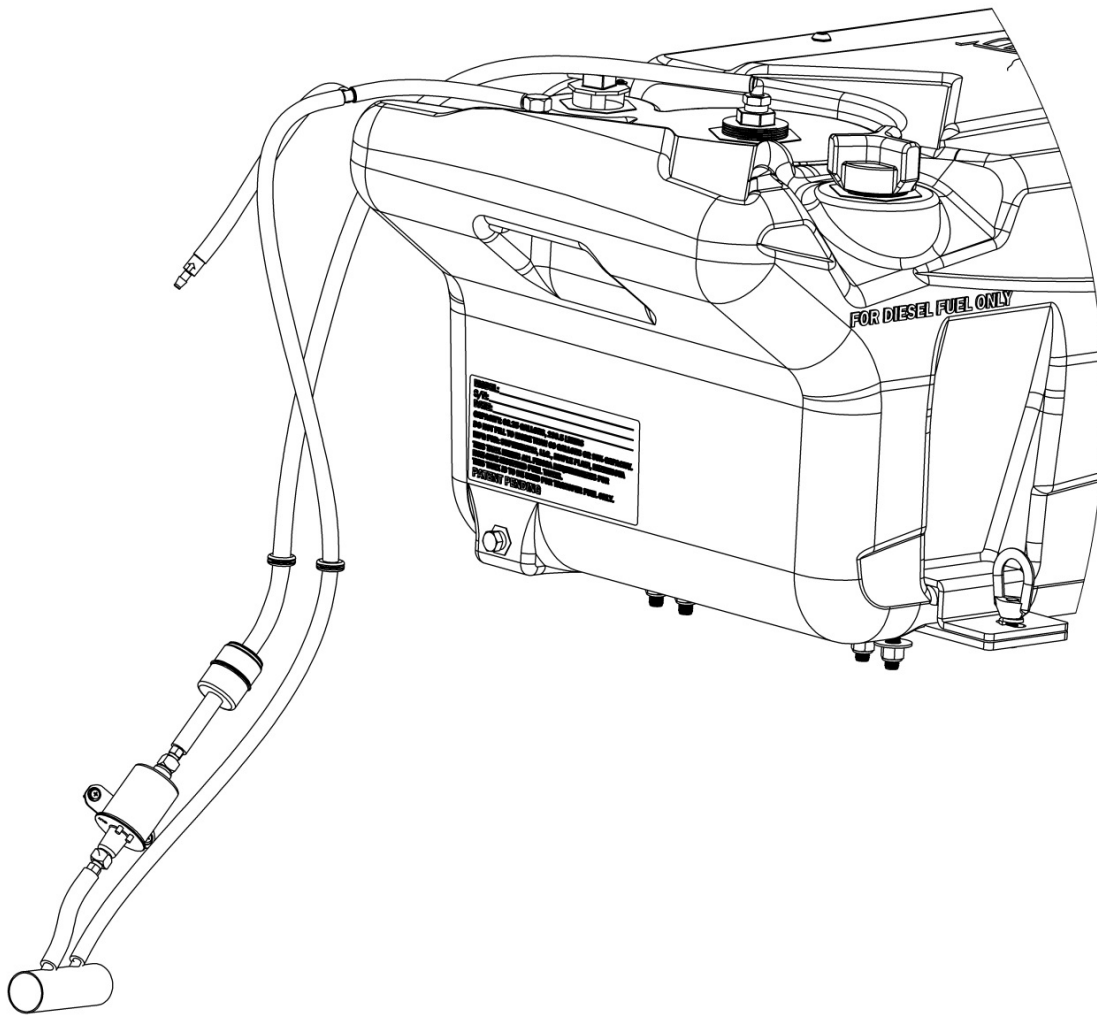
- 11 Install rollover valves into the appropriate Double Tee adapter, 1 ½” or 2” as required. Install the Double Tee into fill hose as shown in Fig. 15. Attach the in-bed tank lines as shown in Fig. 15. Disregard this section if you are installing a product with a controller and pump system. See those instructions in section “B” below. Be sure to use hose clamps on all connections.

Important Note: If the In-Bed tank is used to gravity feed to a vehicle’s tank be sure to:

- Never allow vehicle’s tank to fill more than 7/8 full from In-Bed tank.
- Never leave vehicle unattended with in-bed tank gravity feed valve open.
- Use for diesel fuel ONLY.

B. Specific Instructions for Model 5410060 with electronic controller and pump.

- 10 See parts photo (Fig. 2) and “plumbing” diagram below (Fig. 16):



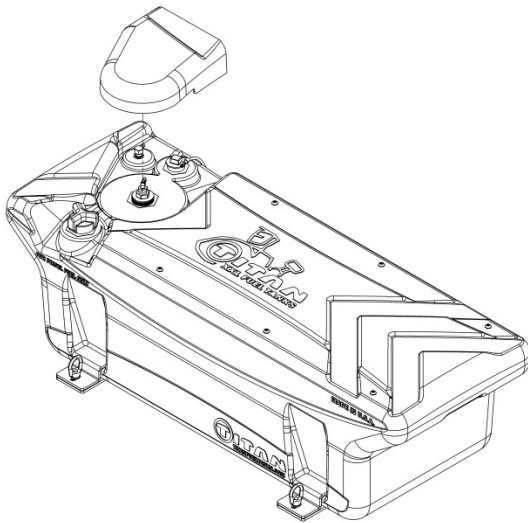
(Fig. 16) Plumbing Diagram for Model 5410060 with TITAN Electronic Controller and Pump system.



(Fig. 17) Transfer plumbing complete showing fuel filter in-line on suction side of pump. Notice fill hose adapter.



(Fig. 18) Shows 99 0000 0104 Check Valve Installed with directional arrow.



(Fig. 19) Diagram showing location of Sending Unit Cover.



(Fig. 20) Place supplied double-stick tape in at least six Strips around bottom of Sending Unit Cover

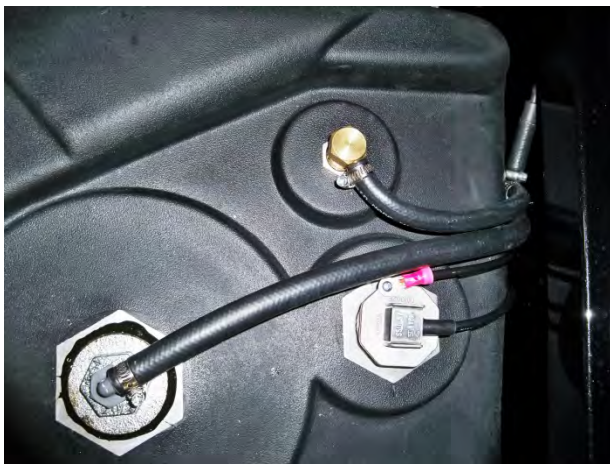


(Fig. 21) Place 20 lbs. of weight on Sending Unit Cover for at least 2 hours.



(Fig. 22) Using the supplied fuse tap, connect power input wire to output side of 10-15 Amp fuse (Max. 15 Amp).

- 11 Install Double Tee Adapter in fill hose using 1 ½" or 2" version as required. Attach the in-bed tank fill and return lines as shown in Fig. 16.
- 12 Complete plumbing as shown in Fig. 17. Be sure to use hose clamps provided on all connections.
- 13 After all hose and wiring connections are completed on top of tank (See Fig. 23), install the Sending Unit Cover (See Fig. 19) The cover will be attached using super-strong double stick tape (included). Procedure: **Clean:** Clean the area on the top of the tank and the sealing area around the bottom of the cover thoroughly with a 50:50 mixture of isopropyl alcohol and water. Be sure to let the cleaned area dry thoroughly. **Apply:** Double stick tape is included with the product. Cut the tape into six or more strips and apply to the bottom of the cover (See Fig. 20). Carefully position the cover over the sending unit area and press it into place. **Pressure:** Place 20 or so pounds of weight on the top of the cover and allow to set for at least 2 hours (See Fig. 21).



(Fig. 23) Completed sending unit wiring and plumbing.



(Fig. 24) TITAN™ Electronic Controller mounted on dash.

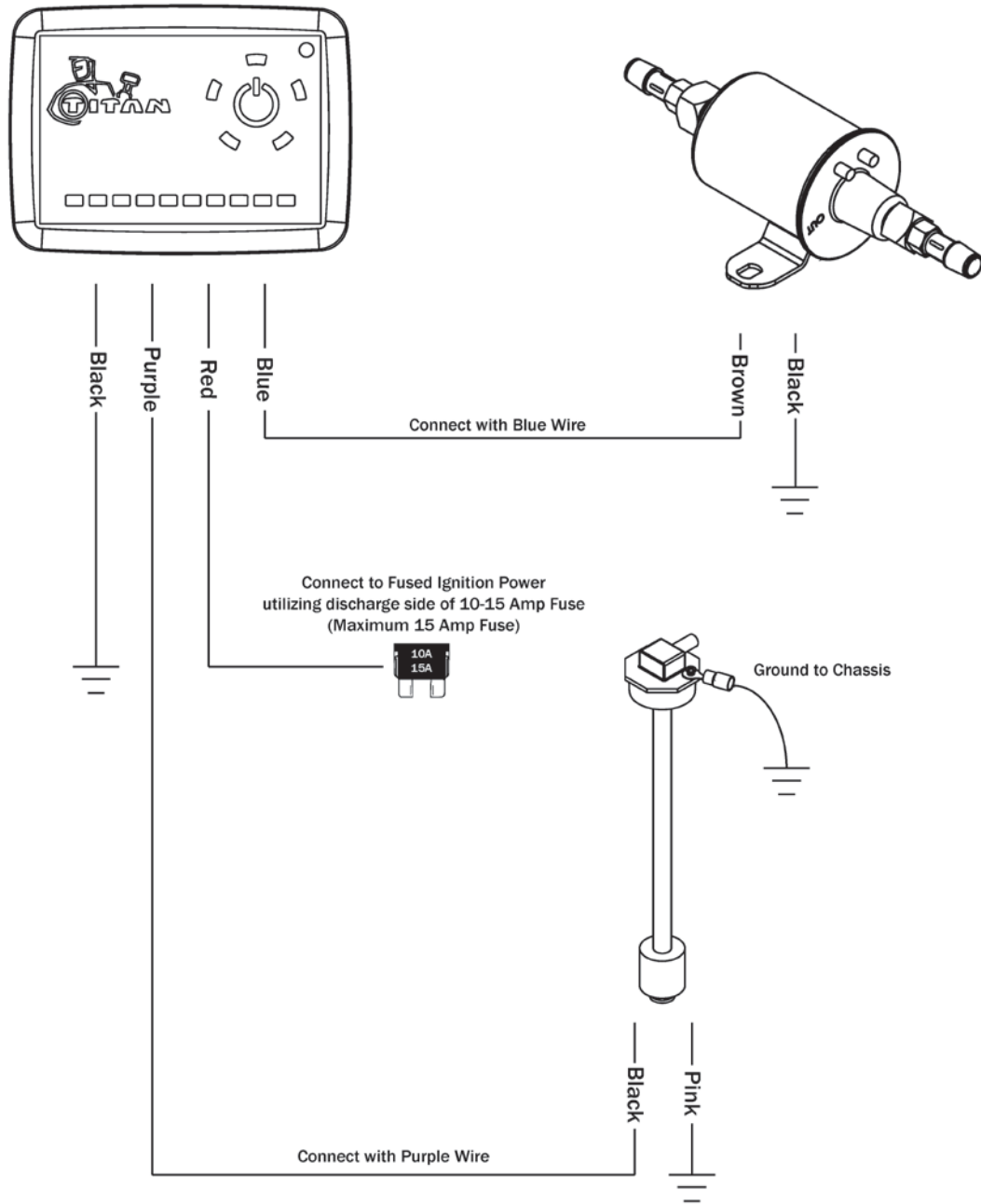
- 14 Plastic wire loom is included which is to cover the wire coming from the electric fuel level sensor, through the truck bed floor to the area near where the

- fuel pump is installed underneath.
- 15 Finish installing and wiring the components as per the Wiring Diagram below in Fig. 25. Use the provided crimp connectors and butt shrink connectors to accomplish the wiring. Route the proper wires forward to the cab and/or under the hood.
 - 16 Using the fuse tap provided (See Fig. 22), connect the power cable to the vehicle's power supply on the discharge side of a 10-15 Amp fuse in the vehicle's fuse block (Maximum 15 Amp). Pick a terminal which is only energized when the ignition switch is "on".
 - 17 Install the TITAN™ Controller in the vehicle's cab by drilling a hole at the chosen mounting point, threading the wire through, and using the Velcro tape to hold the controller firm (See Fig. 24). Be sure to fasten all the system's wiring neatly in place using cable ties in a workmanlike fashion.

V. Installation of Model 5310060 Transfer Tank with 12 Volt Pump and Nozzle

- * Install the tank body by following the instructions above contained in Steps 1-4 & 7-9. To install the 12 Volt transfer pump itself, follow the instructions provided by the pump manufacturer.

TITAN™ Electronic Controller Pump Wiring Diagram

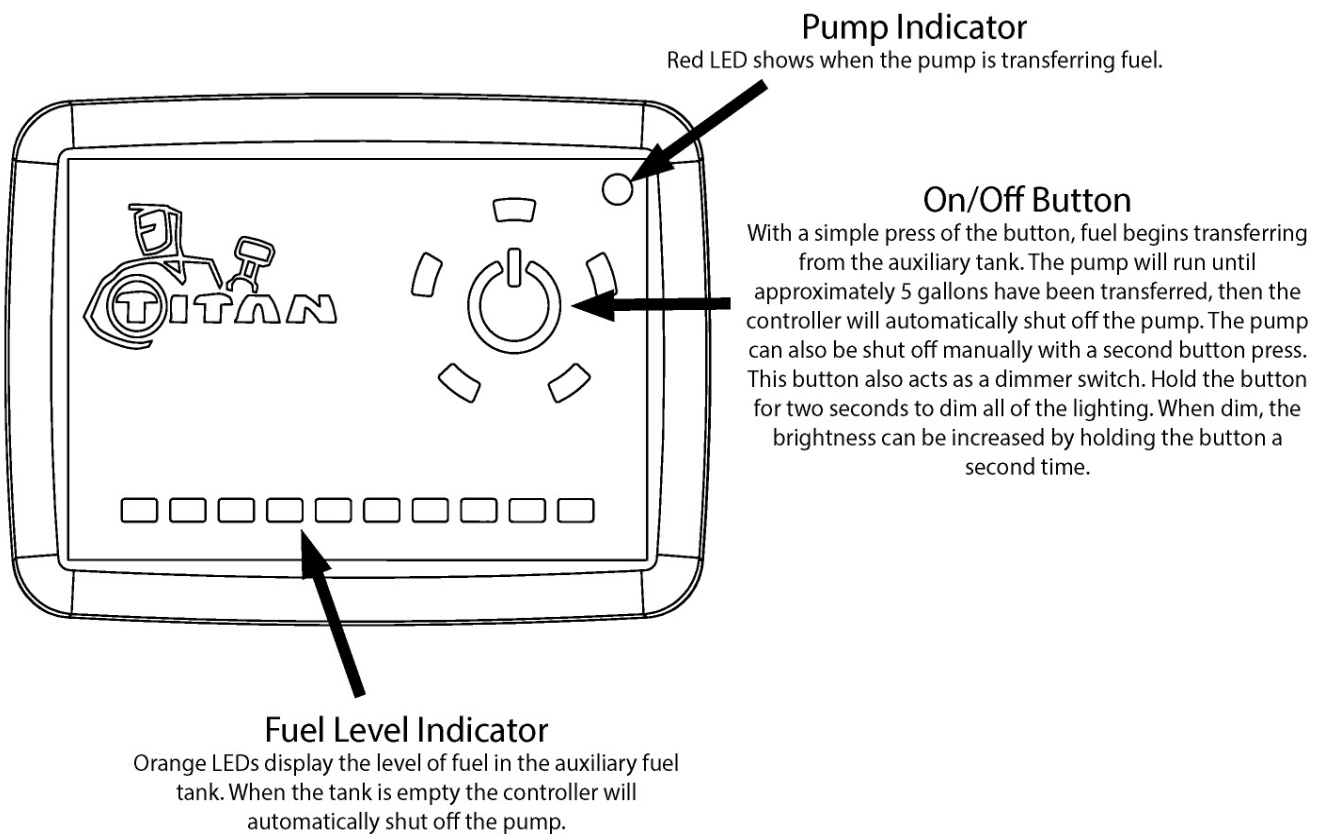


(Fig. 25) Wiring Diagram for TITAN Electronic Controller and Pump.

VI. Fill and Final Check

- 18 Make a complete careful check of all components to be sure that all bolts, clamps, caps, accessories and misc. are tight and secure.
- 19 **IMPORTANT: Fill tank completely with fuel and inspect all components carefully to be sure that there are no leaks or other problems. Check the operation of any valves, pumps or control systems.**

TITAN™ Electronic Controller



(Fig. 26) Operating instructions for TITAN™ Electronic Fuel Controller.