Titan Fuel Tanks 8020099 Installation Instructions

40 Gallon After-Axle Tank for Ford Chassis Cabs

Part number: 8020099

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Scan for fitment, price and install help

TITAN pt. no.: 02 0000 0141

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

TITAN Fuel Tanks

INSTALLATION GUIDE





Cross-Linked Polyethylene Replacement Tank for FORD Diesel-Fuelled Vehicles

8020099: *For **1999-2010** FORD models F-350, F-450 and F-550 Narrow Frame, Cab and Chassis vehicles which use PS-123 Sending Units.*

Replaces the following original FORD equipment part numbers: XC3Z9002AA, 6C3Z9002BA, 6C3Z9002A, 6C3Z9002E, 6C3Z9002F, 3C3Z9002AA, 5C3Z9002BB

8020099A: *For some **1999-2010** FORD models F-350, F-450 and F-550 Narrow Frame, Cab and Chassis vehicles which use PS-191 Sending Units (such as some E-series vans). Final user must be aware that this application may require the suction draw tube to be shortened by about ½", and mounting straps or hardware will require modification or even fabrication. User / installer proceeds with this installation at his own risk.*

Required Tools:

1 ea. Ratcheting socket driver
1 ea. SET of metric sockets for removal of vehicle straps and brackets etc.
1 ea. 12 inch long socket driver extension
1 ea. 5/8 inch socket

Recommended Optional Tools:

1 ea. Impact wrench

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1 ea. Small flat blade screw driver
1 ea. Medium flat blade screw driver
1 ea. Needle nose pliers
1 ea. Torque wrench handle for socket
1 ea. Mallet or small hammer
1 ea. A few ounces of liquid soap

8020099 After-axle, Multi-Model, Heavy Duty Cross-Linked Polyethylene Replacement Tank Parts List:

1 ea. 02 0000 0130 Extra heavy-duty, 40* gallon, cross-linked polyethylene (XLHDPE) fuel tank

Part Identification: Name “TITAN” appears on the bottom slanted surface of the tank body. The number “02 0000 0130” appears below the lettering.

Note: *Please check, before beginning to be sure the tank is properly identified as the one to fit your vehicle.*

The following parts (Sending Unit Mounting Assembly) should already be installed on the tank.

1 ea. Sending Unit Mounting Assembly, consisting of:

2 ea.	02 0000 0182	FORD, Multi-Model Sending Unit, Stainless Steel ½ Bottom Flange with 7/16” studs (mounted inside tank)
1 ea.	02 0000 0134	FORD, Multi-Model, Bottom Flange Flat Gasket (mounted inside tank)
8 ea.	99 0000 0122	7/16” Flat Push-On Retainers
1 ea.	02 0000 0135	FORD, Multi-Model, Viton “O” Ring Gasket
1 ea.	02 0000 0132	FORD, Multi-Model, Sending Unit Top Flange
1 ea.	02 0000 0142	FORD, Multi-Model Crash Flange
8 ea.	99 0000 0121	7/16” Nylon Locking Nuts

1 ea. 99 0102 0000 Rollover vent, fill-stop valve w 1.5” Pigtail & Cap.

1 ea. 99 0104 0000 Ground Cable

1 ea. 02 0125 0000 FORD, Plug **SET** for PS-123 Sending Unit,

7 ea. 02 0000 0137 FORD, Nitrile (large) Plugs for PS-123 SU

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6 ea. 02 0000 0138 FORD, Nitrile (small) Plugs for PS-123 SU

8020099A After-axle, Multi-Model, Heavy Duty Cross-Linked Polyethylene Replacement Tank Parts List:

1 ea. 02 0000 0130 Extra heavy-duty, 40* gallon, cross-linked polyethylene (XLHDPE) fuel tank

Part Identification: Name "TITAN" appears on the bottom slanted surface of the tank body. The number "02 0000 0130" appears below the lettering.

Note: *Please check, before beginning to be sure the tank is properly identified as the one to fit your vehicle.*

The following parts (Sending Unit Mounting Assembly) should already be installed on the tank.

1 ea. Sending Unit Mounting Assembly, consisting of:

2 ea.	02 0000 0182	FORD, Multi-Model Sending Unit, ½ Bottom Flange **SET** of 2 with 7/16" studs (mounted inside tank)
1 ea.	02 0000 0134	FORD, Multi-Model, Bottom Flange Flat Gasket (mounted inside tank)
8 ea.	99 0000 0122	7/16" Flat Push-On Retainers
1 ea.	02 0000 0135	FORD, Multi-Model, Viton "O" Ring Gasket
8 ea.	99 0000 0121	7/16" Nylon Locking Nuts

1 ea. 02 0126 0000 FORD, Multi-Model, PS-191 Sending Unit Adaption Kit.

Flanges and gasket to adapt PS-191Sending units, utilized in some FORD vehicles to the Multi-Model Utility diesel tank (8020099-191). This includes: 2 ea. 02 0000 0136 FORD, PS-191 Sending Unit Adaption Flanges. Also, 1 ea. 02 0000 0139 FORD, Viton "O" Ring Gasket.

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1 ea.	99 0102 0000	Rollover vent, fill-stop valve
1 ea.	99 0104 0000	Ground Cable

IMPORTANT NOTICE: *Before installation, be sure to thoroughly inspect inside of the tank for ANY foreign debris!*

I. Remove Original Equipment Tank

Step	Description
1	In a safe and approved manner, arrange the vehicle so that the stock tank is accessible and unobstructed.
2	Drain all the fuel from the original equipment (OEM) tank using a pump or siphon.
3	Remove the straps or brackets securing the tank and lower it just enough to access the sending unit lines and plugs.
4	Disconnect the sending unit.
5	Lower tank and remove the OEM tank from the vehicle.

II. Prepare Replacement Tank

Step	Description
6	Loosen the bolts holding the sending unit into the OEM tank and carefully remove it.
7	Thoroughly clean the mounting plate of the sending unit removing all dirt and fuel residue.

NOTE: For installation of the PS-191 Sending unit, see Supplement placed after Step #14 below. If yours is the PS-191 Sending Unit skip to the Supplement now.

8 The bolt holes in the PS-123 sending unit mounting plate (See Fig. 1) must have

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nitrile plugs installed to prevent leaking. There are six (6) holes which require the larger plugs (02 0000 0137) and four (4) holes with require the smaller plugs (02 0000 0138).

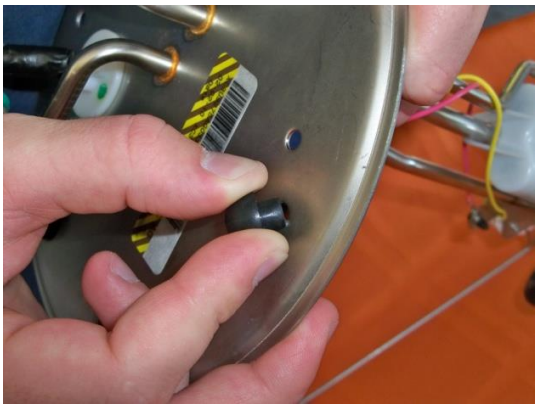
9 The easiest way to install the plugs is to place a small amount of liquid soap on the tip of each one, place it in the hole, gently work it back and forth, and *carefully* "tuck" it into place with a small blade screwdriver. Be *extremely* careful not to damage or cut the plugs as a leak will result (See Figs. 2-4).



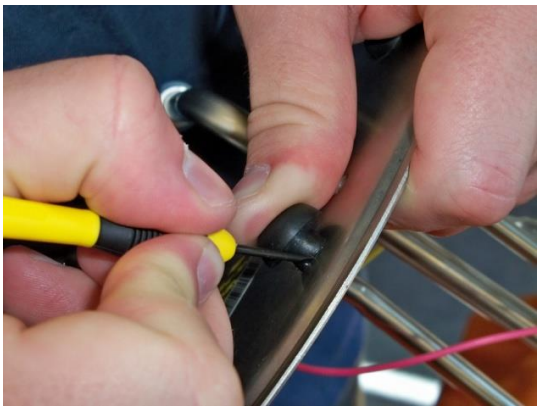
(Fig. 1) PS-123 Sending Unit mounting plate, showing bolt holes to be plugged.



(Fig. 2) Place small amount of liquid soap on the tip of the nitrile plugs.



(Fig. 3) Work plug into the hole.



(Fig. 4) Gently and carefully "tuck" edge of the plug into the hole.

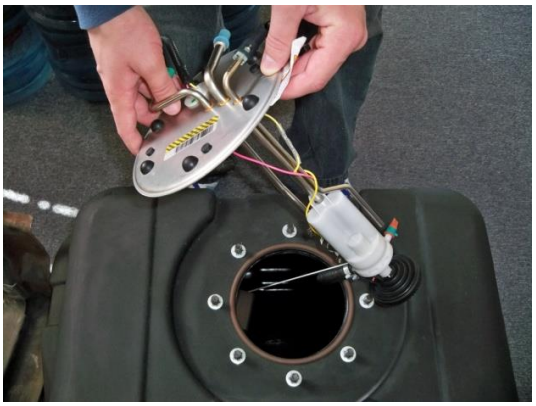
10 The new TITAN fuel tank comes with the sending unit mounting hardware assembled. Remove the 7/16"nylon nuts from the studs holding the top flanges. Remove the top flanges. You will see the "O" ring gasket in place under them.

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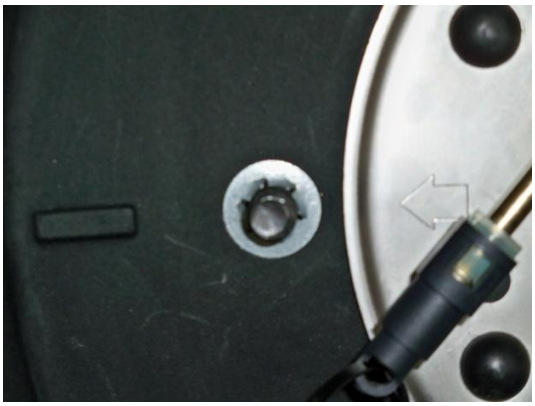
Leave the “O” ring gasket, studs, and retainers assembled as they are.

11 CHECK THE ½ FLANGES INSIDE THE TANK TO BE SURE THEY ARE SEATED FLAT AND NOT OVERLAPPING and have not shifted in shipment. Make sure the flat gasket is in place between the ½ flanges and the top inside surface of the tank.

12 Carefully place the sending unit into the new TITAN replacement tank. Make sure the “O” ring gasket is placed properly under the sending unit to seal correctly (See Fig. 5). Before installing the sending unit into the replacement tank, BE SURE THE INSIDE OF THE TANK IS FREE OF DIRT OR DEBRIS OF ANY KIND.



(Fig. 5) Place sending unit inside the new tank making sure the “O” ring gasket is in place.

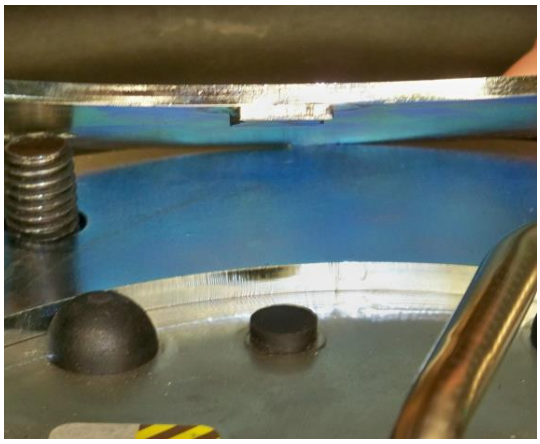


(Fig. 6) Line the arrow on the top of the PS-123 Sending Unit with the mark on the side of the sending unit mounting hole.

13 Line the arrow up on the top of the PS-123 Sending Unit with the mark on the top of the tank (See Fig. 6). Be sure sending unit is centered.

14 Place “Top Flange” on studs and atop centered sending unit. Place the “Crash Flange” (02 0000 0142) on top of the sending unit “Top Flange” with the small welded “tabs” facing downward as shown in Fig. 6a. Be sure to align the downward facing “tabs” with the position of the small rubber plugs in the PS-123 Sending Unit (See Fig. 6b). The purpose of the “Crash Flange” is to hold all the rubber plugs securely in place in the event of a catastrophic impact. Place the appropriate end of the Ground Cable on a stud which is close to a point on the chassis where it can be attached. Replace the 7/16” nylon locking nuts and tighten down the flanges. **Tighten to 25 pound feet (lb-ft) of torque using torque wrench.** Be sure to tighten in a “star” pattern, starting with the four studs adjacent to where the ½ flanges meet, so as to prevent the flanges from overlapping, and to ensure all nuts are equally tightened and the “O” ring gasket is properly seated. Carefully “snug” the nuts equally before tightening to specification (See Fig7). After initially tightening to 25 foot pounds (ft. lbs.), it is a good practice to check the torque again after 15 minutes or so.

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(Fig. 6a) “Crash Flange” tabs face downward.



(Fig. 6b) Align tabs with small rubber plugs.



(Fig. 7) Using a torque wrench, tighten the flange nuts to 25 ft. lbs. using a “star” pattern. “Crash Flange” is not shown in this picture.



(Fig. 8) PS-123 Sending unit complete with “Crash Flange” installed in new TITAN tank.

PS-191 Sending Unit Installation Supplement (8020099A)

Replaces Steps 8 through 14 above if Installation is of PS-191 Sending Unit, instead of PS-123.

*This Operation Requires a TITAN “**029910** (02 0126 0000) FORD, Multi-Model, PS-191 Sending Unit Adaption Kit”*

Step	Description
8	The new TITAN fuel tank comes with the sending unit mounting hardware assembled. Remove the 7/16” nylon nuts from the studs holding the top flange. Remove the top flange. You will see the “O” ring gasket in place under the flange. Leave the “O” ring gasket, studs, and retainers assembled as they are.
9	CHECK THE ½ FLANGES INSIDE THE TANK TO BE SURE THEY ARE SEATED FLAT AND NOT OVERLAPPING and have not shifted in shipment. Make sure the flat gasket is in place between the ½ flanges and the top inside

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surface of the tank.

10 Put the sending unit top flanges that ordinarily come on the TITAN Tank aside as you will not need them for this application. Place a “02 0000 0136 Flange” (From PS-191 Adaption Kit) on top of the “O” ring gasket which is in place on the tank (See Fig. 9).

11 Carefully center the 02 0000 0139 “O” ring from the adaption kit on top of the flange which was just installed as shown in Fig. 10.



(Fig.9) Place one adaption flange on top of the tank’s sealing “O” ring.



(Fig. 10) Center adaption “O” ring on top of adaption flange.

12 Carefully place the PS-191 Sending Unit into the tank centered on top of the “O” ring. Be sure to turn or “clock” the sending unit connections the same as they were in the original equipment (OEM) tank (See Fig. 11).

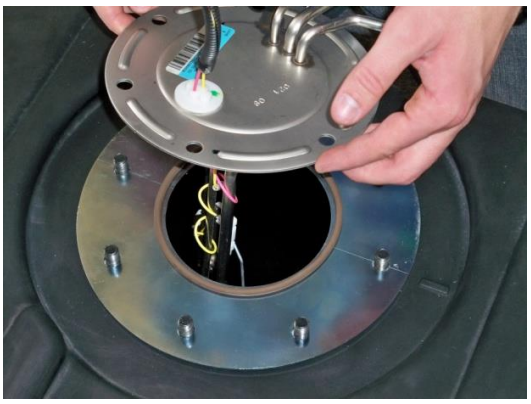
Note: If the sending unit is too long for the tank, follow these instructions:

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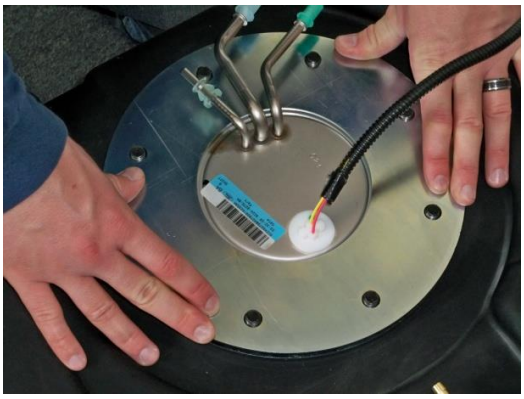
Procedure for shortening Ford sending unit: Place the sending unit upright on a flat surface with the suction funnel flat on the surface. With the sending unit held perfectly straight upright, take a measurement and note the distance from the bottom of the fuel level float to the top of the surface. Slide the suction funnel off the stainless steel suction tube and shorten the tube by cutting no more than ½" off the end using a saw, cutting tool, or grinder. After cutting, be sure to dress the end of the tube and make sure the inside of the tube is absolutely clean of any dirt or debris. Slide the suction funnel all the way back onto the tube. Place the sending unit on the flat surface again and carefully bend the float arm until the bottom of the fuel level float is at the same level from the surface as your first measurement.

Before installing the sending unit into the TITAN Tank, BE SURE THE INSIDE OF THE TANK IS FREE OF DIRT OR DEBRIS OF ANY KIND. Install the sending unit into the tank as per instructions.

13 Place another 02 0000 0136 Flange, centered, on top of the sending unit as shown in Fig. 12. Place the appropriate end of the Ground Cable on a stud which is close to a point on the chassis where it can be attached to ground.



(Fig. 11) Place sending unit on top of "O" ring.

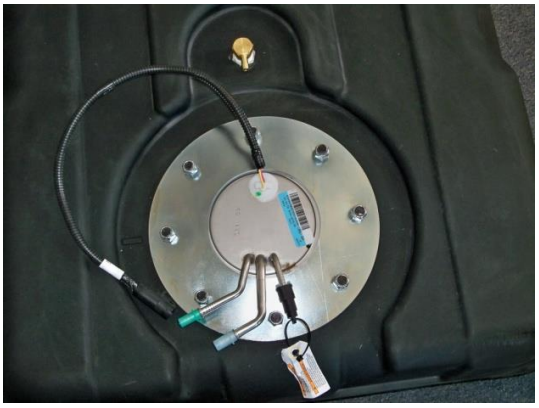


(Fig. 12) Place another adaption flange on top of sending unit.

14 Replace the 7/16" nylon locking nuts and tighten down the top flange. **Tighten to 25 pound feet (lb.-ft.) of torque using torque wrench.** Be sure to tighten in a "star" pattern, starting with the four studs adjacent to where the ½ flanges meet, so as to prevent the flanges from overlapping, and to ensure all nuts are equally tightened and the "O" ring gasket is properly seated. Carefully "snug" the nuts equally before tightening to specification. After initially tightening to 25

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pound feet (lb.-ft.), it is a good practice to check the torque again after 15 minutes or so. It is normal for the top adaption flange to *distort* when the nuts are tightened (See Fig. 13).



(Fig. 13) PS-191 Sending Unit Installed in TITAN tank.



(Fig. 14) Lift tank into vehicle.

III. Install Replacement Tank in Vehicle

Step Description

15 Attach any bracketing or straps, reversing the procedure used to remove the OEM tank from the vehicle, and lift it into place. Vehicles which use the PS-123 Sending Unit will reuse the standard factory mounting parts. Be sure to tighten all bolts and connections. Be sure to attach the other end of the Ground Cable to a grounded point of the chassis. **Vehicles which use the PS-191 Sending Unit may require modification of the factory mounting hardware and fixtures, or even fabrication of new mounting straps and hardware.**

16 Fill fuel tank <u>completely</u> with diesel fuel and check for leaks.





Installation Complete

* All capacities are approximate

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Be sure to return the completed warranty registration for your new Titan fuel tank; or you can register on-line at www.titanfueltanks.com

Write your tank's Serial Number here:_____

A tank must be registered within sixty (60) days of receipt for the warranty to be valid.

Warranty is void if product is improperly installed.

For questions or customer service call (800) 728-4982

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