

TITAN pt. no.: 02 0000 0143

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

TITAN Fuel Tanks

INSTALLATION INSTRUCTIONS Generation V



Extended Capacity Replacement Tanks for FORD Diesel Trucks

7020599 & 7020599S For **1999-2007 FORD** truck models F250 & F350 : (with pickup bed): Crew & Extended Cab, Long Bed (8 ft.)

7020508 & 7020508S For **2008-2010 FORD** truck models F250 & F350: (with pickup bed): Crew & Extended Cab, Long Bed (8 ft.)

Required Tools:

- 1 ea. Ratcheting socket driver
- 1 ea. 13 mm socket
- 1 ea. 12 inch long socket driver extension
- 1 ea. 13 mm end wrench
- 1 ea. 9/16 inch socket
- 1 ea. 9/16 end wrench
- 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. Razor blade or sharp bladed knife

Recommended Optional Tools:

- 1 ea. Hydraulic transmission jack
- 1 ea. Vehicle hoist
- 1 ea. Impact wrench

1 ea. Hook pick or small ice pick

7020599 & 7020508 Parts List:

1ea. Extra heavy-duty 60 gallon* cross-linked polyethylene (XLHDPE) fuel tank for Ford Motor Company diesel trucks:

Tank Body: Crew & Extended Cab, Long Bed 1999-2007
"Super Series" **Tank Body Identification:** "FORD C&XCLB
02 0000 0131"

Tank Body: Crew & Extended Cab, Long Bed 2008-2010
"Super Series" **Tank Body Identification:** "FORD C&XCLB,
02 0000 0131"



Note: *The tank body has the above identification on its top. Please check to be sure the tank is properly identified as the one to fit your vehicle.*

1 ea. Sending Unit Mounting Assembly (already installed on the tank body), consisting of:

- | | | |
|-------|--------------|--|
| 1 ea. | 98 0000 0103 | ½ flange SET of 2 with 5/16" studs (mounted inside tank) |
| 1 ea. | 98 0000 0106 | Flat flange gasket (mounted inside tank) |
| 8 ea. | 99 0000 0102 | 5/16" flat retainers |
| 1 ea. | 02 0000 0106 | "O" Ring sending unit gasket (primary "O" ring gasket) |
| 1 ea. | 02 0000 0105 | Top sending unit flange |
| 8 ea. | 99 0000 0101 | 5/16" nylon locking nuts |
| 1 ea. | 99 0102 0000 | Rollover Vent, Fill-Stop Valve with 99 0000 0125 5/16"x7.00" Fuel Hose Vent Line already installed on valve. |
| 1 ea. | 02 0000 0112 | Hose Barb Elbow installed in front insert of tank. |
| 1 ea. | 02 0000 0115 | ¾" x 50" Vent Line Hose, to be installed on hose barb of 02 0000 0112 above. This will be shortened to fit the individual application as part of the installation. |
| 4 ea. | 99 0000 0113 | Universal Strap Shims (Packaged in plastic bag). |

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- 1 ea. 02 0109 0000 Ford Long Fill Hose Extension KIT, needed in some cases.
- 2 ea. 99 0000 0103 Rubber Strap Bushing, Extruded (*NOT included* when TITAN Universal Shield is included as with 7020599S and 7020508S).

Specific to 7020599:

- 1 ea. 02 0123 0000 FORD Crew & Extended Cab, Long Bed Strap SET, 1999-2007. Front= Short, Rear=Long.

Specific to 7020508:

- 1 ea. 02 0124 0000 FORD Crew & Extended Cab, Long Bed Strap SET, 2008-2010. Front=Short, Rear=Long.

7020599S & 7020508S Parts List:

Same as above, except “2 ea. 99 0000 0103” is deleted AND the following is added:

- 1 ea. 99 0101 0000 (999999) TITAN Universal Shield



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	Place the vehicle on a hoist that leaves the entire underside of the frame unobstructed.
2	Drain all the fuel from the original equipment (OEM) tank using a pump or siphon.
3	Remove OEM tank plastic shield or shell (if applicable) from vehicle.
4	Support the OEM tank.
5	Disconnect the fill hose from the OEM tank’s king nipple.

- 6 Loosen and remove OEM tank straps by undoing the bolts on straps at inside of tank and the outside of the frame, and lower tank a few inches.
- 7 Disconnect vent line hose line coming from fill spout to tank. Disconnect at fill spout tubing end.
- 8 Disconnect fuel gauge electrical connection from sending unit.
- 9 Disconnect fuel and return lines from the sending.
- 10 Remove the OEM tank from the vehicle.

II. Prepare Vehicle and Replacement Tank

Step	Description
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|----|--|
| 11 | Loosen the OEM hold-down ring on the sending unit by turning it counter-clockwise (See Fig. 1). Before removing the sending unit, notice where the sending unit fuel line nipples and the electrical fitting are pointing or “clocked”, <i>they will need to be installed the same way, at the same angle in the replacement tank</i> . Remove the sending unit from the OEM tank. Do NOT reuse factory “O” ring seal. |
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(Fig. 1) Loosen the hold-down ring on the OEM tank by turning counter-clockwise. Note where the connections on your vehicle’s sending unit are “clocked” and install so they are located in the same position in the new tank.



(Fig. 2) Place the sending unit into the TITAN tank, install the top flange, and tighten the nylon lock nuts to 20 ft. lbs using a “star” pattern using a torque wrench.

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|----|---|
| 12 | The new TITAN fuel tank comes with the sending unit mounting hardware assembled. Remove the 5/16” nylon lock 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 |
| 13 | 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.
- 14 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. 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.**
 - 15 After placing the sending unit into the tank on top of the “O” ring gasket, rotate it (carefully so as not to displace the “O” ring) so the fuel fittings and electrical connections are positioned (or “clocked”) at the *same* angle as in the OEM tank.
 - 16 Place the top flange on the studs, on top of the sending unit, so as to hold it down securely.
 - 17 Use the 5/16” nylock nuts to tighten down the top flange. **Tighten to 20 foot pounds (ft. lbs) of torque using a 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 20 foot pounds (ft. lbs.), it is a good practice to check the torque again after 15 minutes or so (See Fig. 2).

III. Install Replacement Tank in Vehicle

<u>Step</u>	<u>Description</u>
18	The TITAN tank straps will reuse the original equipment mounting brackets and bolts. If the original equipment straps are equipped with threaded clips, you will need to transfer them to the new TITAN straps (See Fig. 3) Hang the outboard side of the straps first.
19	If the optional TITAN Shield was ordered with the tank, place it under the tank.



(Fig. 3) If vehicle has threaded clips, remove them from the OEM straps and place them on the TITAN straps.



(Fig. 4) This photo shows the proper configuration of the $\frac{3}{4}$ " vent line hose. When the tank is lifted into the vehicle trim it to proper length to attach to the fill spout vent. It must be configured to angle downward from the fill spout to the tank with no sags or kinks.

- 20 Place tank (and shield if included) on a transmission jack. Lift the tank partway into the vehicle and reattach the fuel and return lines, and the electrical connection to the sending unit. Finish lifting the tank into the vehicle and connect the fill and vent line hoses from the fill spout to the tank. The TITAN tank is equipped with a $\frac{3}{4}$ " vent line hose attached to the elbow which screws into the top of the tank. This hose runs from the tank to the vehicle's fill spout vent. Be sure to trim this $\frac{3}{4}$ " vent line hose that comes with the tank to the proper length for the vehicle. Make sure the vent line hose angles downward from the fill spout to the tank and that there are no "sags" (or kinks) in the line or it will not vent properly (See Fig. 4). Clamp tightly using OEM clamps on both ends.
- 21 If optional TITAN Shield is NOT to be installed, you will need to install the rubber bushings now on both straps. Place the bushings so they are centered in the bottom of the straps with the bushing's channel side toward the strap. Press the bushings securely into place (See Fig. 5).



(Fig. 5) If optional TITAN Shield is not to be installed, install rubber bushings (pn 99 0000 0103) on both straps with the channel side toward the strap.



(Fig. 6) **NOTE:** Be sure that vent breather hose on rollover-stop vent valve, on the rear of the tank, is routed *under* the adjacent frame cross member as shown above.

- 22 Attach the inboard sides of the straps and be sure to thread two zinc plated shims onto each strap bolt. Tighten the bolt and strap against the shims. If the strap does not hold the tank tightly enough, remove one shim at a time until it is tight. Tap straps with a mallet, if needed, to straighten them against the bottom of the tank.
- 23 Make sure ALL mounting hardware, clamps, bolts, etc. are properly installed and **TIGHT**. Double check it.
- 24 Lower vehicle, fill tank completely with diesel fuel and thoroughly check for leaks.



(Fig. 7) Installation complete!