

TITAN pt. no.: 03 0000 0141

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

TITAN Fuel Tanks™

INSTALLATION INSTRUCTIONS



Extended Capacity Replacement Tank for RAM EcoDiesel Trucks

7031214 For **2014+** RAM truck model 1500 EcoDiesel (with pickup bed only): Crew Cab, Short-Bed (6 ft. 4 in.)

No drilling or cutting is required for this installation.

Required Tools:

- 1 ea. Ratcheting socket driver
- 1 ea. 16 mm socket
- 1 ea. 12 inch long socket driver extension
- 1 ea. 7 mm socket
- 1 ea. 8 mm socket
- 1 ea. 9/16 inch socket
- 1 ea. 3/4 inch socket
- 1 ea. 3/4 inch end wrench
- 1 ea. Small 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
- 1 ea. Hook pick or small ice pick
- 1 ea. Diagonal Cutters or Dikes

Recommended Optional Tools:

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

7031214 Parts List:

1ea. Extra heavy-duty 39 gallon* military grade, cross-linked polymer body, (XLHDPE) fuel tank for RAM EcoDiesel trucks:

Tank Body: Crew Cab, 6 ft. 4 in. Bed, 2014 –

Tank Body Identification: “RAM 1500 CC 6’ 4” Box
DIESEL FUEL ONLY
03 0000 0138”

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

PARTS LIST

DESCRIPTION	TITAN PART NUMBER	QUANTITY
2014 RAM EcoDiesel Tank Body	03 0000 0138	1
Brass Roll Over, fill-stop Valve	99 0000 0137	3
1/2" NPT Male X 5/8" Hose Barb, 90° Elbow	99 0000 0785	1
Dodge Flat Gasket	98 0000 0401	1
Dodge Half Flange	98 0000 0400	2
Dodge Top Flange	02 0000 0183	1
3/8" Push Nut Retainer	02 0000 0162	8
O-Ring	02 0000 0106	1
3/8" Nylon Thin Locknut	02 0000 0163	8
2014 RAM EcoDiesel Strap Set	03 0121 0000	1
2014 Ram EcoDiesel Front Support Plate	03 0000 0139	1
1/2"-13 Threaded Rod	03 0000 0143	1
1/2" Oversized Flat Washer	99 0000 0786	2
1/2"-13 Serrated-Flange Nut	99 0000 0787	3
1/2"-13 Thin Nylon Insert Locknut	99 0000 0293	1
1/2"-13 Thin Hex Nut	99 0000 0788	1

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

NOTE: Take a moment and write the new TITAN™ Tank serial number in the back of this instruction booklet now.

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. <u>Some</u> vehicles <u>may</u> require the removal of the left rear fender liner and even the wheel to facilitate access to the tank fill and vent hoses.
4	Support the OEM tank.
5	Disconnect the fill hose from the vehicle's fill spout.
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 return line from the sending unit. Disconnect fuel line at the front of the tank.
10	Remove the OEM tank from the vehicle.

II. Prepare Vehicle and Replacement Tank

Step	Description
11	Disconnect fuel line from sending unit.
12	Loosen the OEM hold-down ring on the sending unit by turning it counter-clockwise (See Fig. 1). Remove the sending unit from the OEM tank. Do NOT reuse factory "O" ring seal.



(Fig.1) Loosen the hold-down ring on the OEM tank by turning counter-clockwise.



(Fig.2) Be sure the tab on the sending unit lines up with the "TAB LOCATION" marks on the body of the TITAN tank as shown above.



(Fig. 3) After placing the sending unit into the TITAN tank, install the top flange, and tighten the nylon lock nuts to 20 lb. ft. using a "start" pattern using a torque wrench.



(Fig. 4) Using a pair of dikes, cut off the clamp holding the factory vent line. Remove the line, and the fill hose and install them both on the new TITAN tank.

- 13 The new TITAN fuel tank comes with the sending unit mounting hardware assembled. Remove the 3/8" 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
- 14 CHECK THE 1/2 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 1/2 flanges and the top inside surface of the tank.
- 15 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.**
- 16 After placing the sending unit into the tank on top of the "O" ring gasket, rotate it

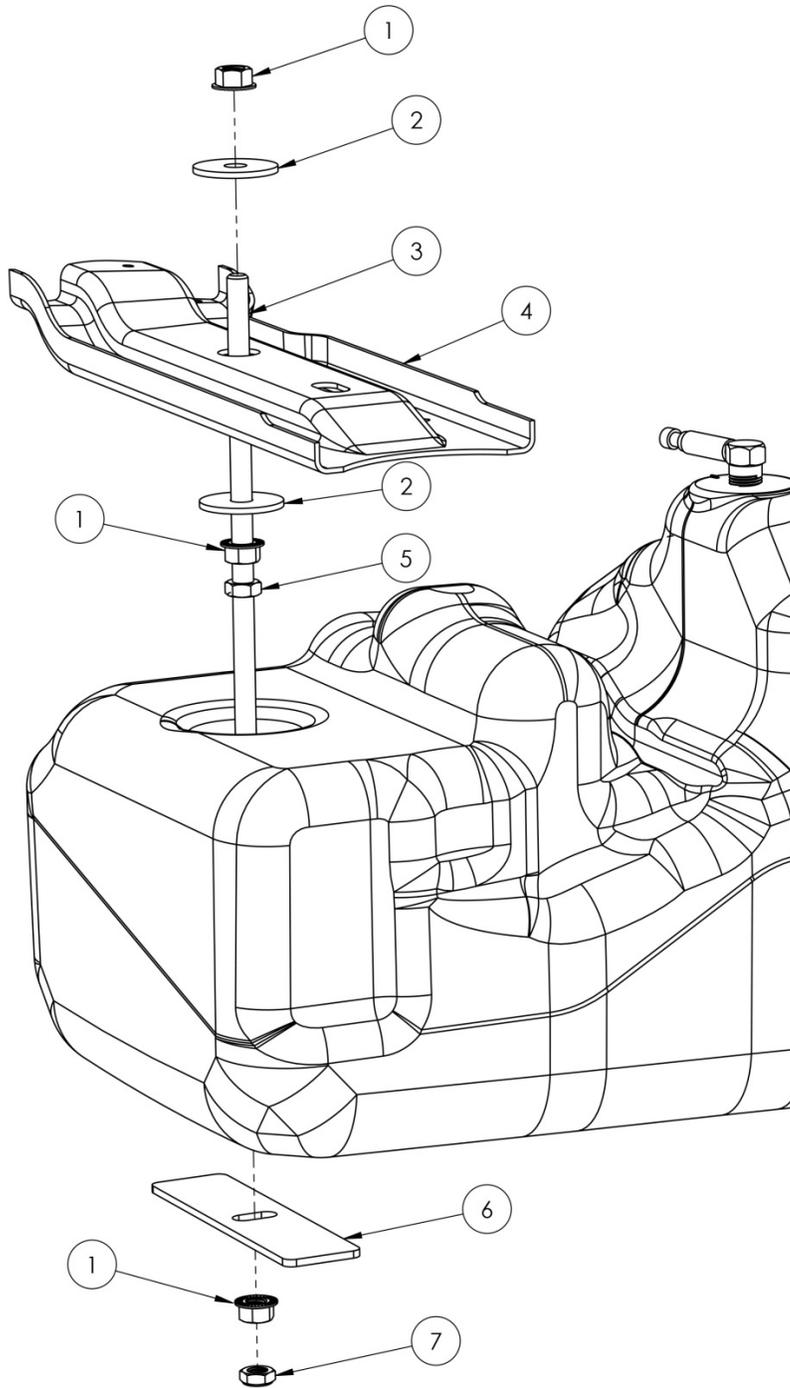
- (carefully so as not to displace the “O” ring) so the tab on the sending unit lines up with the “TAB LOCATION” marks on the tank body (See Fig. 2).
- 17 Place the top flange on the studs, on top of the sending unit, so as to hold it down securely.
 - 18 Use the 3/8” nylock nuts to tighten down the top flange. **Tighten to 20 pound feet (lb. ft.) 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 pound feet (lb. ft.), check the torque again after 15 minutes or so (See Fig. 3).
 - 19 Cut the clamp holding the factory vent hose on the OEM tank (See Fig. 4) and move the hose to the TITAN tank. Remove the clamp and the fill hose from the OEM tank and install it on the TITAN also. Use OEM or aftermarket clamps as needed. Attach the short fuel line to the sending unit and route it through the groove provided across the top of the front of the tank. The tank should appear as in Fig. 5.



(Fig. 5) Install the hoses from the OEM tank on the new TITAN as shown above.



(Fig. 6) Install the “Threaded Rod” from the “Front Support Assembly” in the cross member just behind the DEF tank.



(Fig. 7) **Front Support Assembly** (Assy no. 03 0127 0000):

1. ½" Serrated-Flange Locknut (03 0000 0143) **Torque:** Nuts above tank: 45 lb. ft., Bottom: 15 lb. ft.
2. ½" Flat Washer (99 0000 0786)
3. ½" Threaded Rod (03 0000 0143)
4. Vehicle Cross Member
5. ½" Thin Hex Nut (99 0000 0788), used as a jam nut **Torque:** 45 lb. ft.
6. Front Support Plate (03 0000 0139)
7. ½" Thin Nylon Insert Locknut, used as a jam nut (99 0000 0293) **Torque:** 45 lb. ft.

- 20 Install the threaded rod of the “Front Support Assembly” into the vehicle’s cross member that is just behind the DEF tank (See Fig. 6). The complete assembly and the required installation torque specs are shown in Fig. 7. All of the nuts are to be torqued to 45 lb. ft. **EXCEPT** the “ ½” Serrated-Flange Locknut” which is located under the “Front Support Plate.” It is only to be set at 15 lb. ft. Threaded rod should stick 1 ¼” above the top nut.

III. Install Replacement Tank in Vehicle

- | Step | Description |
|------|---|
| 21 | Place tank on a transmission jack. Lift the tank partway into the vehicle, threading the support rod through the front through-hole in the tank, and reattach the return line, 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. 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. Clamp hoses tightly using OEM or aftermarket clamps on both ends where applicable. Reattach the short fuel line at the front of the tank before it is secured in place. |
| 22 | Hang the outboard end of the straps on the vehicle. You may want to straighten the straps some to make them easier to fit around the tank. |
| 23 | Finish installation of the “Front Support Assembly” leaving it loose at the moment. |
| 24 | Attach the inboard ends of the straps. Tighten the bolts to factory specifications. Tap straps with a mallet, if needed, to form them against the bottom of the tank. |
| 25 | Tighten the “Front Support Assembly” to specification. Note: When tight, if installed properly, only about three to four threads should protrude past the bottom jam nut. |
| 26 | Make sure ALL mounting hardware, clamps, bolts, etc. are properly installed and TIGHT. Double check it. |
| 27 | IMPORTANT! Lower vehicle, <u>fill tank completely with diesel fuel and check for leaks.</u> |



(Fig. 8) Tighten the "Front Support Assembly" to specifications. (Fig. 9) "Front Support Assembly" properly installed.



Installation Complete!

Go to TITAN's website to view video installation instructions and tips.

* All capacities are approximate

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

You will find your tank's serial number located approximately ½ way up the driver's side located towards the rear of the tank; adjacent to the sending unit.

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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TITAN Fuel Tanks are PROUDLY MADE IN THE USA

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