

## **INSTALL INSTRUCTIONS FOR 10-1004**

### **Read Before You Install:**

Tanks shipped after December 1, 2020 do not include a new float. You may reuse the float from your factory tank.

According to the Ford TSB 17-0046. If your truck has a build date prior to 3-20-17. Replace the fuel Level Sender Resistor Card Assembly with Ford part # HC3Z-9A299-N.

### **PART#: 10-1004**

#### **Vehicle Application**

- YEAR: 2017-2021
- MAKE: Ford
- MODEL: F-250 and F-350 Crew Cab Short Bed,
- ENGINE: 6.7L Diesel

#### **Required Tools**

- Flathead Screwdriver or 5/16" Nut Driver
- Torx 30
- Mallet/Hammer
- 13mm Socket
- 19mm Deep Socket
- 10mm Socket
- Ratchet
- 12" Driver Extension

#### **Optional Tools**

- Vehicle Lift
- Transmission Jack
- Precision Pick

## **Before You Start**

- Please read the entire product guide before proceeding
- Ensure all parts are present.
- If you are missing any parts, please call or text us at (909)-675-1313
- Do not work on your vehicle while the underbody components are hot.
- Make sure the vehicle is in park or the parking brake is set if you plan on working on the ground. If working on a lift, make sure the vehicle is lifted safely and securely.

## **Before You Start**

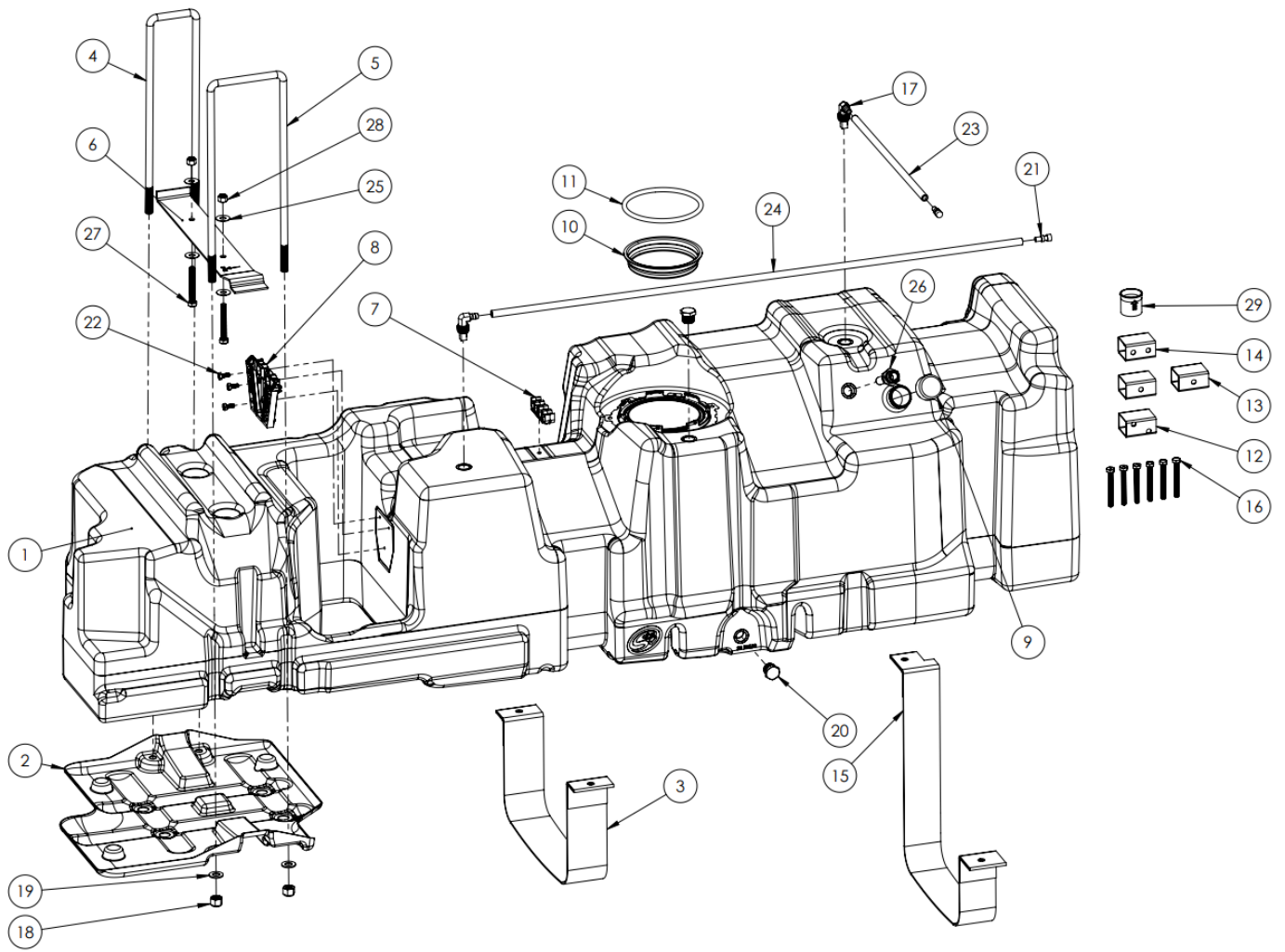
Drain your original fuel tank before beginning the S&B Installation process. S&B Tanks recommends removing only an empty or near empty tank for your safety. We recommend using a siphon or electronic transfer pump.

Disconnect and isolate both of the negative battery cables

**Before installing S&B Tank, conduct pressure test to ensure o'ring is properly seated.**

**In-bed Auxiliary Fuel Tanks will void the Lifetime Warranty.**

Nozzle at high flow fuel station may continue to "click off". Tank is designed to work at regular fuel stations.

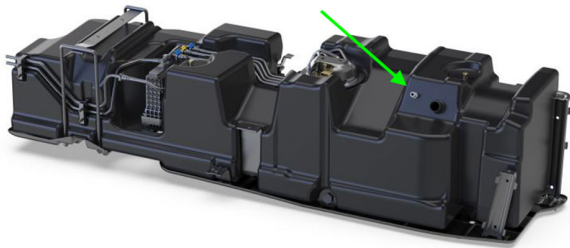


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	10-1004	HIGH CAPACITY REPLACEMENT TANK	1
2	TI1005-00	10-1004 FRONT SUPPORT/SHIELD	1
3	TI1006-00	MID STRAP 10-1004	1
4	TI1007-00	UBOLT PASSENGER SIDE FOR 10-1004	1
5	TI1008-00	UBOLT DRIVER SIDE	1
6	TI1009-00	CROSSMEMBER STRAP HOLDER	1
7	TI1010-00	FUEL LINE HOLDER (4 LINES)	1
8	TI1011-00	WATER SEPARATOR BRACKET (INJECTION MOLDED)	1
9	TI1092-00	TANK FILLER COVER	1
10	TI1093-00	TANK OPENING PLUG	1
11	TI1094-00	BUNA-N 50 DURO 8MM CS x 17.32" CUT LENGTH	1
12	TI1105-00	1-3/4" SKID PLATE SPACER FOR 10-1004, 2 HOLES DIAGONAL	1
13	TI1106-00	1-3/4" SKID PLATE SPACER FOR 10-1004, 1 HOLE	2
14	TI1107-00	1-3/4" SKID PLATE SPACER FOR 10-1004, 2 HOLES (CENTERED)	1
15	TI1109-00	REAR STRAP FOR 10-1004	1
16	TI1110-00	M8 X 1.25MM THREAD, 72MM SCREW	6
17	TI1122-00	ROLL OVER VENT FITTING, 1/2" NPT	2
18	TI1123-00	NYLON-INSERT LOCK NUT	4
19	TI1124-00	WASHER	4
20	TI1125-00	.5" PIPE PLUG	2
21	TI1141-00	ROLLOVER VENT CAP	2
22	TI1146-00	1/4-20 SCREW	3
23	TI1149-15	5/16" FUEL HOSE 15"	1
24	TI1149-40	5/16" FUEL HOSE 40"	1
25	AI1341-00	3/8" WASHER FLAT SS, 1" OD, .406" ID	4
26	TI1165-00	3/4" BARB TO 1/2" NPT, STRAIGHT	1
27	TI1166-00	18-8 STAINLESS STEEL HEX HEAD SCREW 3/8"-16 THREAD SIZE, 2-3/4" LONG, FULLY THREADED	2
28	TI1168-00	18-8 STAINLESS STEEL NYLON-INSERT LOCK NUT 3/8"-16 THREAD SIZE	2
29	TI1175-00	INLET CHECK VALVE	1

# INSTALL INSTRUCTIONS

## IMPORTANT:

Please confirm that the brass vent is opened behind the fitting. You can check by putting a pen or screwdriver through the fitting. Please call us if its not open.



## STEP 1

Remove the filler neck from the bed. Remove the diesel cap and pry the plate covering the bolts off. A precision pick can be used to help with prying the plate off. Using a 5/16" nut driver, remove the 3 bolts holding the filler neck to the bedside.

- 5/16" Nut Driver



## STEP 2

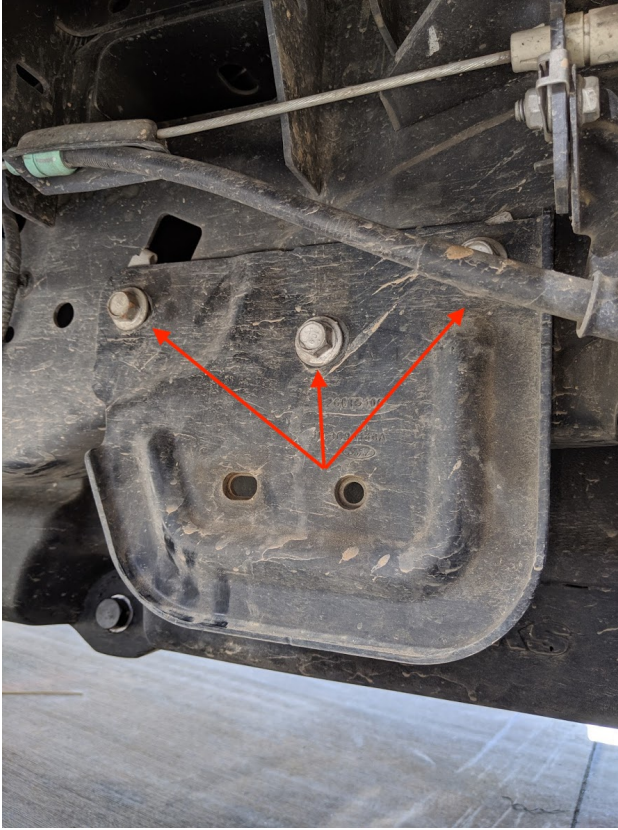
If using a 2 post lift, it is important to ensure the rear driver side lift pad doesn't protrude inboard of the frame rail. Your S&B Tank will extend further than the OEM tank and be flush with the inside of the frame rail.

- Installation can be completed without a lift. Make sure the vehicle is safely parked with the parking brake set. If your truck is lowered or has running boards you may have to use a jack to get the S&B Tank in position.



## STEP 2B

If you are installing the tank without a lift, you might need to remove these 3 bolts and panel. This will allow for more clearance when getting the S&B Tank into position to be installed.



## STEP 3

Remove the filler neck and vent hoses from the filler neck assembly.

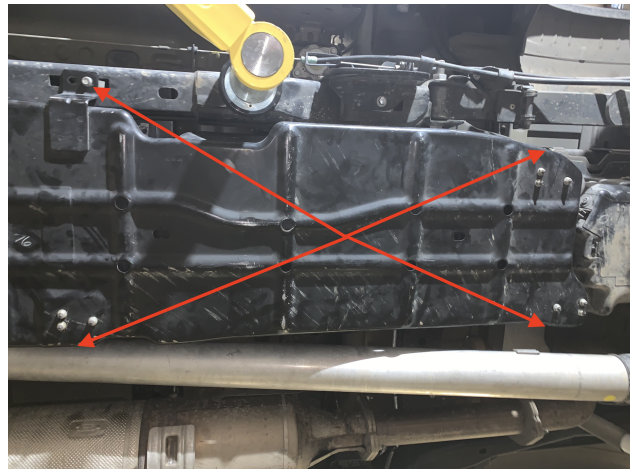
- Flathead Screwdriver or 5/16" Nut Driver



## STEP 4

Remove the OEM Skid Plate. There are 6 13mm bolts that hold the skid plate up.

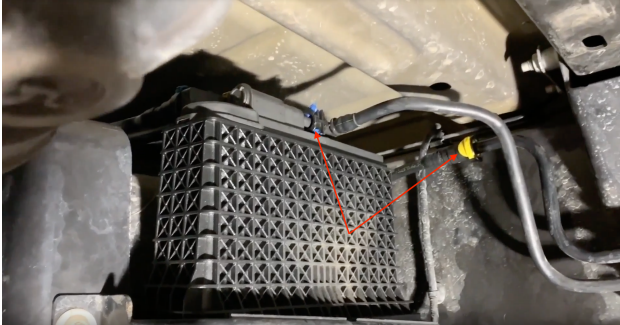
- 13mm Socket
- Ratchet



## STEP 5

Remove the two fuel lines positioned on top of the fuel water separator. For the blue connector, push both tabs towards the rear of the vehicle and remove the line. For the yellow connector, pull the locking tab out and depress the upper tab to remove the connector.

- Be careful with these connectors, they are known to break. Refer to our installation video if you need more detail on how to correctly remove these clips.



## STEP 6

Remove the water in fuel sensor located on the bottom of the water separator. Depress the tab and the sensor will release.



## STEP 7

Remove the bolt holding the water separator to its bracket.

- Torx 30 Driver



## STEP 8

Center the hydraulic jack underneath the fuel tank and raise until the jack contacts the tank. Caution: Support the tank properly as remaining fuel can slosh and cause the tank to shift.

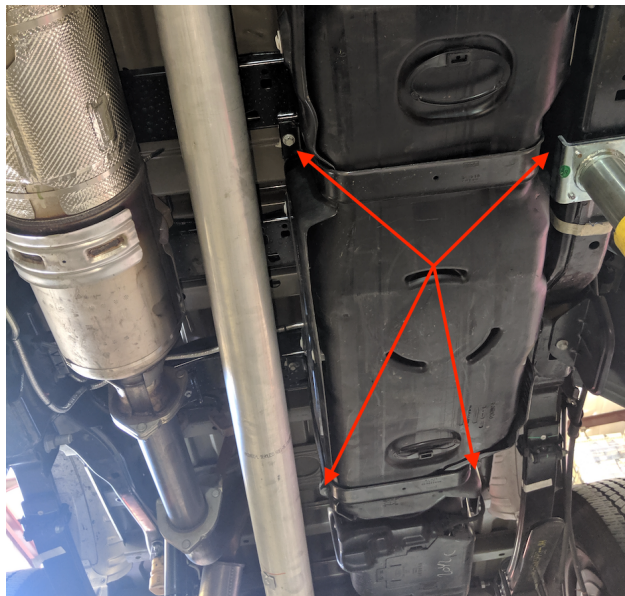
- Lift Install: Hydraulic Jack
- Floor Install: Floor jack with added support to properly hold tank



## STEP 9

Remove the 4 bolts holding the 2 tank straps in place. Do NOT use a drill/air ratchet or you risk spinning the cage nuts.

- 13mm Socket
- 12" Extension
- Ratchet



## STEP 10

Lower the tank 6". Then, reach between the top of the tank and the bottom of the frame rail to disconnect the electrical connection for the sending unit. Depress the tab and the connector will release.

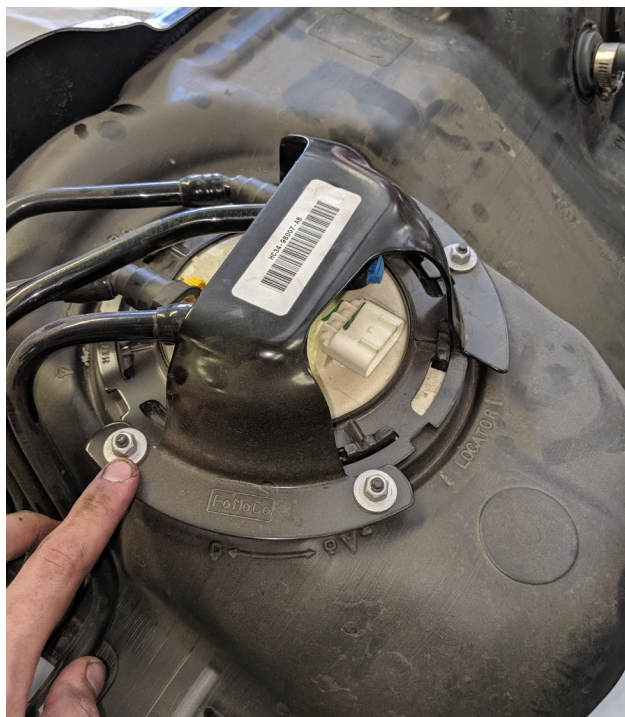
- Hydraulic Jack



## STEP 11

Remove the 3 bolts that hold the sending unit guard to the locking ring. It is important to remember the orientation of the sending unit guard.

- 10mm Socket
- Ratchet



## STEP 12

Remove the 4 fuel lines from the sending unit. They all remove the same way. Pull the locking tab at the base of each clip out, then depress the tab and the line will release.

- These clips are known to break. Please be extremely careful when removing them. If you need any more clarification on how to remove them please refer to our install video





### STEP 13

Remove the fuel lines from the hold down on the OEM tank. Simply pull upwards on the lines to pop them out.



### STEP 14

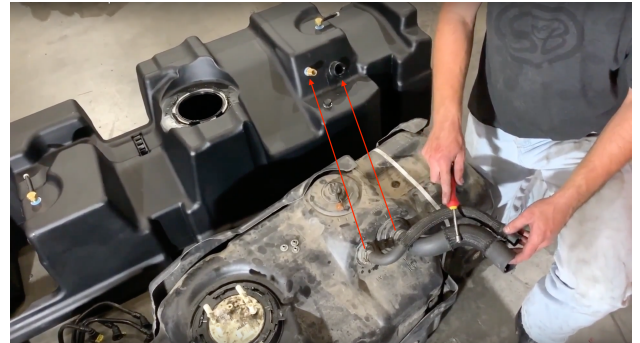
Remove the fuel water separator from its bracket. Simply pull upwards on the separator to remove it.



### STEP 15

Move the fill and vent lines over to your new S&B Tank. Make sure they are installed in the same orientation as they were on the OEM tank

- Flathead Screwdriver or 5/16" Nut Driver



## STEP 15B

Before installing the filler hose onto the S&B Tank. Place the white check valve into the bottom of the filler hose with the blue arrow pointing into the tank.



## STEP 15C

Zip tie the rear vent to the filler hose or main vent line. Make sure there are no sags in this line.



## STEP 16

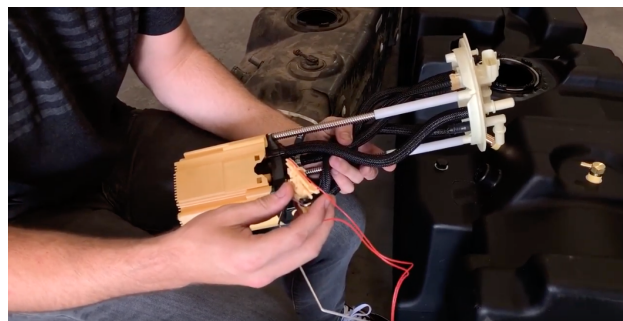
Remove the sending unit by hammering the locking ring counter clockwise.

- Mallet/Hammer
- Flathead Screwdriver



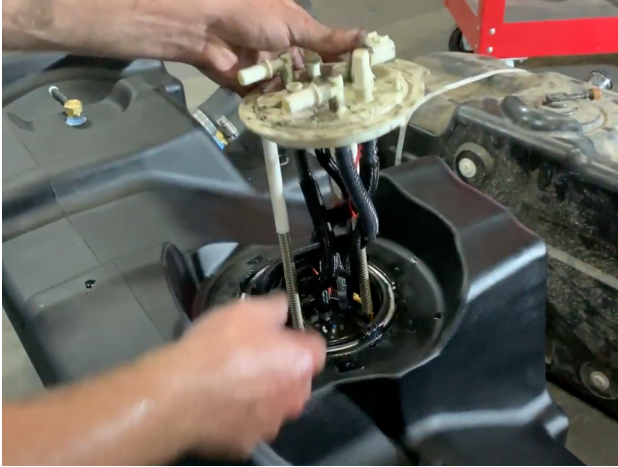
## STEP 17

According to the Ford TSB 17-0046. If your truck has a build date prior to 3-20-17. Replace the fuel Level Sender Resistor Card Assembly with Ford part # HC3Z-9A299-N. Watch the how to video here



## STEP 18

Place the black S&B o-ring in the o-ring groove and then carefully put the OEM sending unit (with OEM float attached) into the tank with the tab on the sending unit facing the arrow molded into the tank.



## STEP 19

Secure the sending unit into the tank. Make sure the locking ring is oriented as it was on the OEM Tank so the sending unit guard will install without interference. Hammer the locking ring clockwise and ensure the rib on the locking ring slides into the indentation of the receiving ring on your S&B Tank.

- Flathead Screwdriver
- Hammer/Mallet



## STEP 19B

Ensure the locking ring is fully rotated until the rib on the OEM locking ring is PAST the indentation on the S&B receiving ring. The locking ring should be very tight and not move after it's past the indentation. This insures sufficient o'ring compression.



## PRESSURE TEST

This step is important to ensure your o'ring is seated properly.

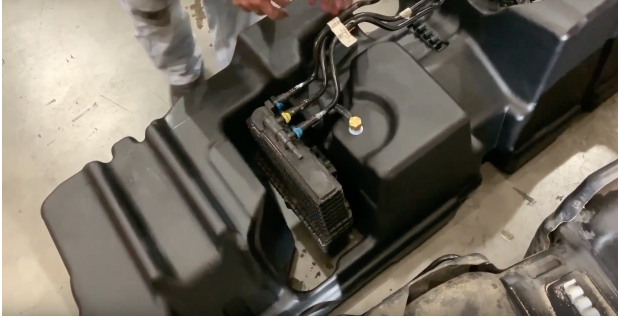
- Block off openings with electrical tape or with fingers
- Apply air pressure through the fill tube, spray soapy water around o'ring area and look/listen for leaks
- If there are leaks, call/text 909.675.1313

<https://youtu.be/FqOYrRuplKU>



## STEP 20

Install the fuel water separator onto the S&B Tank. To install simply push the separator onto the bracket that is installed on the S&B Tank. Don't worry about the Torx screw for now, it is easier to do that once the tank is in the truck.



## STEP 21

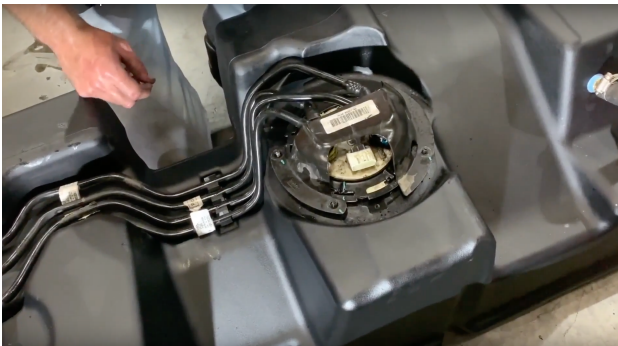
Reinstall the fuel lines into the fuel line holder on the S&B Tank. Once they're clipped in, reconnect the sending unit connections. Push the lines inwards and press the locking tab back in to ensure the fuel lines never release.



## STEP 22

Install the sending unit guard back onto the locking ring. If the guard doesn't fit over the fuel lines, your locking ring isn't oriented correctly. Do not over tighten these bolts.

- 10mm Socket
- Rathcet



## STEP 23

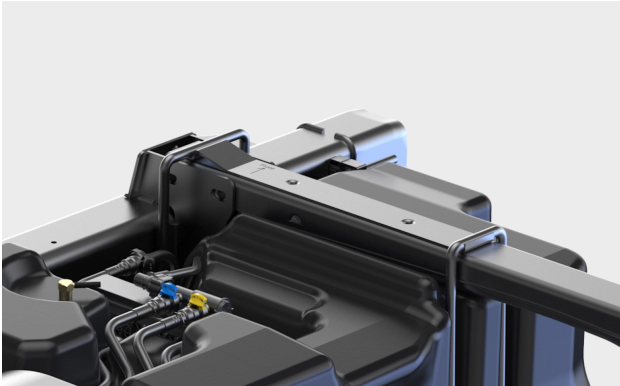
Remove the two fuel lines from the bracket on the frame. Slide the wider U Bolt up and over the crossmember. Position it between the fuel lines and the frame rail. Reinstall the fuel lines into the bracket.



## STEP 24

Slide the narrower U Bolt up and over the crossmember and position it against the driveshaft. Take your U Bolt positioning bracket and slide it on top of the cross member. Make sure the arrow is facing forwards. Align the holes on the bracket with the holes in the crossmember. Please proceed to step 24b and secure the bracket with the included nuts and bolts

- Tip: To keep the ubolt in place while installing the tank, place a piece of duct tape over the ubolt
  - Important: If the u-bolts(G & F) are not positioned on the crossmember bracket(F) correctly, the tank will not be secured properly and can lead to the tank shifting



## STEP 24B

Secure the bracket in place with the included hardware.



## STEP 25

You are now ready to raise your S&B Tank into place. It is important to guide the fill and vent lines over the frame rail while raising the tank into position. Also make sure to plug in the sending unit electrical connection while the tank is roughly 6" from being fully installed.



## STEP 25B

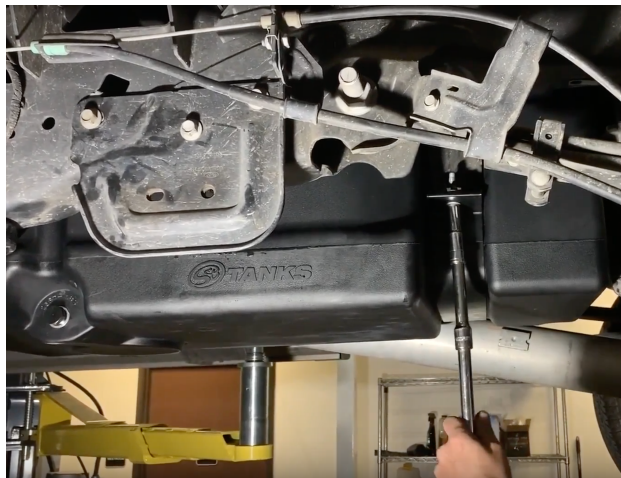
Route hose over crossmembers and zip tie to the filler neck



## STEP 26

With the tank fully raised, install the tank straps and bolts(30 lb.ft (40 Nm). All 4 strap bolts are 13mm. We like to install the longer of the 4 bolts in the middle strap driver side bolt position.

- 13mm Socket
- 12" Driver Extension
- Ratchet



## STEP 27

Connect all of the fuel water separator connections. To reconnect the yellow clip fuel line connector, slide it back onto the frame mounted fuel line and press the locking tab back into place. For the blue fuel line connector, slide it back onto the top of the water separator and slide the locking ring back to the locked position. At this point you can also connect the electrical connector at the bottom of the separator.



## STEP 28

Reinstall the Torx water separator screw. If the screw will not easily thread in, your water separator isn't fully seated on the bracket. Wiggle it gently while looking through the bolt hole to see when it fully seats.

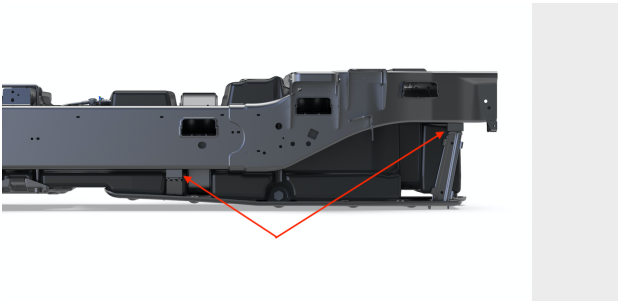
- Torx 30



## STEP 30

Install the OEM Skid Plate if your truck was equipped with one. Use the S&B provided 1" skid plate spacers and new hardware. Ensure the skid plate spacers are lined up with their corresponding position. The driver side front corner gets a spacer with 2 lined up holes, the passenger side rear spacer has 2 offset holes, and the other 2 positions only have 1 hole.

- 13mm Socket
- Ratchet



## STEP 29

Install the front S&B Skid Plate Support. Guide the U-bolts through the holes on the skid plate and use a washer and nylon lock nut on each U-bolt. Make sure to start these lock nuts by hand before tightening down. Use a hand ratchet to torque these in a diamond pattern to ensure the skid plate contacts the tank evenly. **THIS FRONT SUPPORT SKID PLATE MUST BE INSTALLED**

- 19mm Deep Socket
- Ratchet



## STEP 30B

The 1.75" spacers go in between the skid plate strap and crossmember or frame on the truck. Use the provided S&B bolts.



### STEP 31

Reinstall the filler neck and vent assembly. Slide the hoses over the assembly and tighten the hose clamps(44 lb.in)

- 5/16" Nut Driver or Flathead Screwdriver



### STEP 32

Reinstall the filler neck into the bed side. Position the neck through the opening and reinstall the 3 bolts. Place the trim piece back in place and screw on the diesel cap.

- 5/16" Nut Driver



### STEP 33

Make sure the u-bolts are positioned correctly on the crossmember bracket.



### FINAL CHECKLIST

This final checklist is very important.

#1 Make sure all bolts and nuts are safely fastened and torqued.

#2 Ensure there is proper driveshaft clearance.

#3 If you reinstalled the OEM skid plate, make sure the edges of the skid plate can't rub the tank. If they are, you'll need to bend the edges of the skid plate out and/or add washers to the skid plate spacer.

#4 Double check fuel line connections, the electrical connection as well as the vent and fill lines.

#5 Lastly, fill the tank full and check for any leaks.

If you have any questions, call or text us at 909.675.1313

