Titan Fuel Tanks 7020517 Installation Instructions

7020517

Part number: 7020517

trailfortress.com/titan-fuel-tanks-xxl-mid-ship-fuel-tank-7020517

Scan for fitment, price and install help

Titan PN: 02 0000 0356

INSTALLATION INSTRUCTIONS



7020517, 7020617 & 7020717: 54* Gallon (204* liters) Replacement Tank for 2017+ Ford Cab and Chassis trucks with Powerstroke diesel engines. This product specifically fits 60”, 84”, 108, 120” C.A. lengths and is compatible with the following wheelbases: 167.9”, 169.3”, 179.8”, 191.9”, 193.3”, 203.8”, 205.3” This tank is NOT compatible with a 145.3” wheelbase.

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

Required Tools:

1 ea. 3/8” ratcheting socket driver
1 ea. 10mm & 13 mm socket
1 ea. 12” socket driver extension
1 ea. 8 mm, 15 mm end wrenches
1 ea. Small flat blade screw driver
1 ea. Large flat blade screwdriver
1 ea. T-27 Torx bit
1 ea. Rubber Mallet
1 ea. Hook Pick

Recommended Optional Tools:

1 ea. Transmission jack
1 ea. Vehicle hoist
1 ea. Impact wrench
1 ea. TITAN Fuel Caddy™ to transfer fuel

IMPORTANT NOTICE: *Before installation, thoroughly inspect the tank interior for ANY foreign debris*

7020517, 7020617 & 7020717 Parts List:

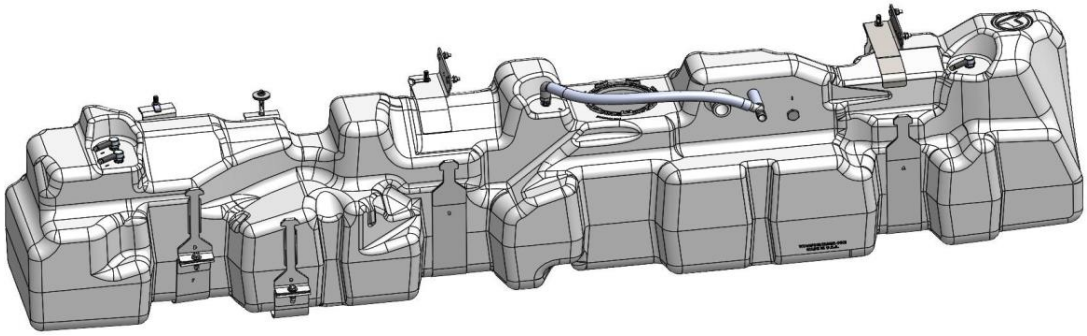
Description	Part Number	Quantity
2017 Ford Chassis XL Tank Body	02 0000 0425	1
135mm ID X 6mm CS O-Ring, 70 Dur, Bright Orange	02 0000 0197	1
Rollover Valve Assembly	99 0186 0000	1
Rollover Valve	98 0155 0000	2
5/16" ID RLA Fuel Hose, (1 ft. length)	02 0000 0465	2
Transmission Case Cap Vent for TITAN Rollover valves	99 0000 0519	2
1/2" NPT Hex Plug, Kynar	99 0000 0357	1
0.75" Barbed Tee Adapter, 1/2" NPT Leg	02 0000 0452	1
0.75" Barb to 1/2" NPT, Elbow Adapter, Kynar	02 0000 0112	2
Water Separator Mount	02 0000 0195	1
Water Separator Spacer Plate	02 0000 0435	1
1/4"-20 X 3/4" Flat Head Screw, Hex Drive, 18-8 SS	02 0000 0198	8
2017 Ford Chassis Strap Kit (B, C, or D)	Multiple	1
Titan Warranty Envelope	99 0000 0185	1
Instructions	02 0000 0356	1
Box 95x16x22 (LWH: 94 x 15 x 20)	99 0000 0870	1

2017 Ford Chassis Strap Kit B (for 7020517, 60 and 84 CA trucks) - PN 02 0153 0000

Description	Part Number	Quantity
2017 Ford Chassis Strap A1	02 0000 0436	1
2017 Ford Chassis Strap A2	02 0000 0437	1
2017 Ford Chassis Strap B	02 0000 0348	1
2017 Ford Chassis Strap C	02 0000 0349	1
2017 Ford Chassis Strap D	02 0000 0350	2
2017 Ford Chassis Strap E	02 0000 0351	1
2017 Ford Chassis Strap F	02 0000 0439	1
1/2" NPT to Quick Connect, Custom AL Fitting (only for dual tanks)	02 0000 0426	1
0.75" ID Fuel Hose, 21"	02 0000 0459	1
1/2"-1.25" Worm Drive Ring Clamp	99 0000 0106	2
3/8-16 x 1.5" Cap Screw, Gr 8, yellow zinc plated, Fully Threaded	02 0000 0456	4
3/8-16 x 3" Hex Bolt, Gr 5, zinc, Fully Threaded	02 0000 0455	1
3/8"-16 Washer, SAE	99 0000 0682	7
3/8" Oversized Flat Washer, 1.5" OD	99 0000 0588	2
U Nut, 3/8"-16 Panel Range:.050"-.200" Center 1.125"	02 0000 0430	2
U Nut, 3/8"-16 Panel Range:.050"-.200" Center 0.75"	02 0000 0428	1
3/8"-16 Locknut, Gr. 8	02 0000 0163	3
5/16" Washer, SAE	99 0000 0991	4
5/16"-18 Locknut, Nylon, Gr 8	99 0000 0455	4

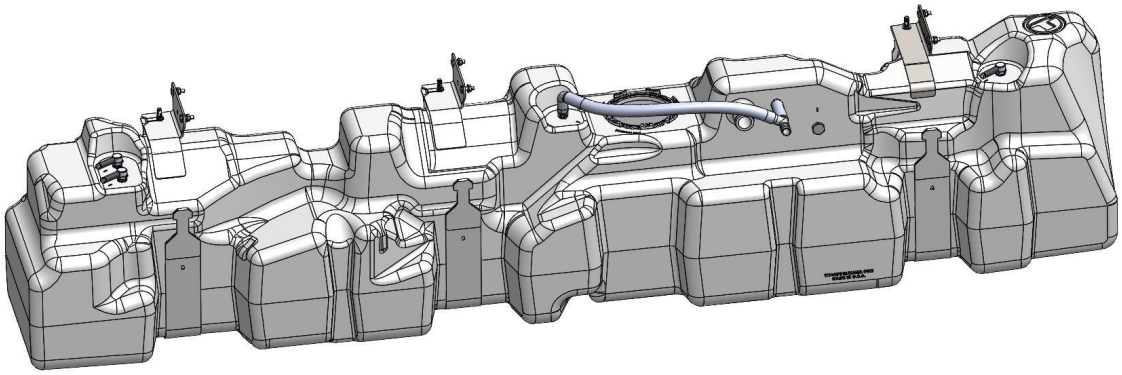
Note: The 7020517 tank is designed to fit multiple applications. For this reason, not all components may be used depending on application.

7020517



2017 Ford Chassis Strap Kit C (for 7020617, 108 CA trucks) - PN 02 0154 0000		
Description	**Part Number**	**Quantity**
2017 Ford Chassis Strap A1	02 0000 0436	1
2017 Ford Chassis Strap A2	02 0000 0437	1
2017 Ford Chassis Strap B	02 0000 0348	2
2017 Ford Chassis Strap C	02 0000 0349	2
3/8-16 x 1.5" Cap Screw, Gr 8, yellow zinc plated	02 0000 0456	3
3/8"-16 Washer, SAE	99 0000 0682	3
U Nut, 3/8"-16 Panel Range:.050"-.200" Center 1.125"	02 0000 0430	2
U Nut, 3/8"-16 Panel Range:.050"-.200" Center 0.75"	02 0000 0428	1
5/16" Washer, SAE	99 0000 0991	6
5/16"-18 Locknut, Nylon, Gr 8	99 0000 0455	6

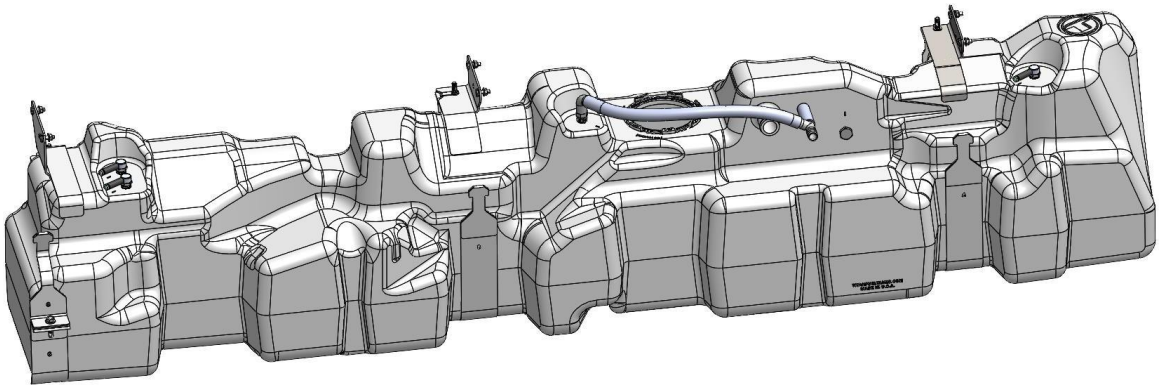
7020617



2017 Ford Chassis Strap Kit D (for 7020717, 120 CA trucks) - PN 0201550000		
Description	**Part Number**	**Quantity**
2017 Ford Chassis Strap A1	02 0000 0436	1
2017 Ford Chassis Strap A2	02 0000 0437	1
2017 Ford Chassis Strap B	02 0000 0348	1
2017 Ford Chassis Strap C	02 0000 0349	1
2017 Ford Chassis Strap G1	02 0000 0440	1
2017 Ford Chassis Strap G2	02 0000 0441	1
2017 Ford Chassis Strap G3	02 0000 0442	1
3/8-16 x 1.5" Cap Screw, Gr 8, yellow zinc plated	02 0000 0456	4

3/8"-16 Washer, SAE	99 0000 0682	5
U Nut, 3/8"-16 Panel Range:.050"-.200" Center 1.125"	02 0000 0430	1
U Nut, 3/8"-16 Panel Range:.050"-.200" Center 0.75"	02 0000 0428	2
3/8"-16 Locknut, Gr. 8	02 0000 0163	1
5/16" Washer, SAE	99 0000 0991	6
5/16"-18 Locknut, Nylon, Gr 8	99 0000 0455	6

7020717



Generation 6

Tank Body Identification:



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. Notice the serial number space. You will need the serial number to register for warranty coverage.

Alternative Configuration Notice:

The following instructions are for a direct replacement application (factory midship being replaced by Titan midship). If the truck does not have a factory midship tank, the DEF tank must be relocated first as stated below.

For those looking to remove their after-axle tank and only use the Titan Midship, extra components and steps will be needed. These can be found on page 21.

For those looking to run the Titan midship as an auxiliary tank, additional Titan kit (PN: 9900029) will be needed. A universal filler neck kit (PN: 9900025) is recommended. Instructions for the auxiliary system will come with the kit. However, these instructions will still be needed for installing the midship tank.

DEF Relocation Kit

If the truck didn't come stock with a midship tank, then the DEF tank is where the midship needs to go. The DEF tank must be relocated from inside the frame rail on the driver's side to outside the frame rail on the passenger side.

- Option 1: We highly recommend purchasing a 3rd party DEF relocation kit instead of purchasing the parts from Ford. This kit comes with all the necessary OE Ford parts included.
  - DirectDrive Plus
    137 Westbrook Dr.
    Honey Brook PA 19344
    Website: https://bushel.biz/directdrive/
    Email: info@directdriveplus.com
    Phone: 610-273-2071
  - DEF Relocate Kit, 2017-2021+ Ford, Includes 10' Harness (2-connector)
    - PN: DDP-5001
    - $419.00 + shipping (As of June 2022)

- Option 2: Ford parts list – use **SVE Bulletin Q-267R3** (https://fordbbas.com/bulletins)
  - Purchase all parts listed on the table at the bottom of page 1: "Outboard DEF Tank Mounting Hardware"

    NOTE: Many people struggle to get the Ford Electrical Harness Extension connected properly. If this option is used, we highly recommend a dealership or certified technician move the DEF tank.
  - The bulletin doesn't list the needed additional hardware. It will also require:
    - (3) M10-1.5 x 50mm Hex Bolts, corrosion resistant, grade 5 or higher
    - (3) M10-1.5 Flange Nuts, serrated or locking, grade 5 or higher
    - (1) M10-1.5 U-Nut, 1.5-5.5mm panel range, 28mm clearance length

NOTE: Neither of the previous options include an **extension for the DEF fill neck**. If you do not also purchase a fill neck extension for the DEF tank, the DEF tank will now be refilled from the passenger

I. Remove Original Equipment Tank

Step	Description
1	Before ANY INSTALLATION BEGINS INVENTORY ALL ITEMS IN KIT. Do not start Installation until you are 100% certain all Items are accounted for.
2	If a vehicle lift if being used, make sure that the lift you are using can hold the full weight of the truck. Many C&C trucks are upfitted with components that cause them to be too heavy for some commercial lifts. If you do not have a lift capable of lifting the truck, installation can be completed on the ground.
3	Drain all the fuel from the original equipment tank using a TITAN Fuel Caddy or siphon.

4 Remove original equipment tank side shield and bottom shield (if applicable) from vehicle.

5 Support the original equipment tank. (We recommend using a transmission jack or floor jack if installing on the ground)

6 Loosen original equipment tank straps by undoing inbound bolts first.

7 Disconnect the ¾" vent line hose and the larger fill hose from the tank.

8 There is a water separator attached to the front of the tank. It will have to be disconnected from fuel and electrical. First, disconnect the electrical connection on the bottom of the separator by depressing the clip on the plug and remove.



9 Next, disconnect the fuel line at the top of the separator by squeezing the two legs of the tab together and then pushing the entire tab towards the rear of the vehicle. Note: This coupling operates differently from all others involved in the install.



10 Disconnect the fuel line coupler located on the frame in front of the water separator.

11 Disconnect the fuel lines at the front of midship tank.
Note: If truck came stock with both midship and after-axle tanks, there are two additional quick connects. One in the fuel line near the sending unit and one on the tank near the vent line.

12 Disconnect fuel gauge electrical connection from the sending unit.

13 Remove OEM tank straps and remove OEM tank from vehicle.

II. Prepare Vehicle and Replacement Tank

Step Description

14 Disconnect all the fuel lines from the sending unit.

15 On the front of the OEM fuel tank, use a T-27 Torx bit and driver to loosen and remove the screw, located on the bottom of the water separator, which holds it to the mounting bracket. With the screw removed, using a rubber mallet, carefully tap the water separator up and out of its mounting bracket on the tank. Be very careful not to strike any of the fittings or sensor on the bottom of the water separator.

16 Loosen the OEM hold-down ring on the sending unit by turning it counterclockwise. Remove the sending unit from the OEM tank.



17 The new TITAN tank comes with an O-ring to seal for the sending unit. Make sure the new O-ring gasket is placed into the gland (groove) at the sending unit opening.

18 Place the sending unit into the TITAN tank. Be sure to turn the sending unit so that the tab lines up with the “tab location” marks on the tank.



19 Place the hold down ring from the OEM tank onto the sending unit and tighten it clockwise as far as it will go. **Note:** If your truck came stock with dual tanks, unscrew the hex cap near the vent line and install the aluminum ½" NPT to Ford quick connect adapter.

20 Note orientation then move the fill hose and vent hose from the OEM tank to the new tank, install in same orientation as factory and tighten securely.

21 Install 21" fuel hose that will connect the elbow on top of the tank to the side port of the barbed adapter that is pre-installed on the tank. The two ½" worm drive hose clamps (99 0000 0106) will be used to secure the hose to the fittings.

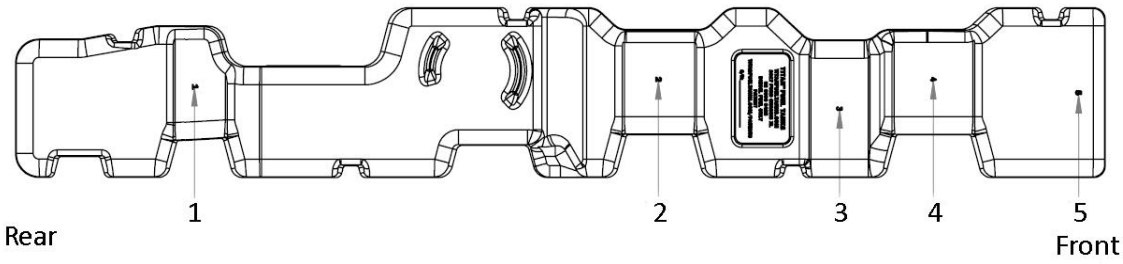
22 Install the water separator on the Titan tank by sliding it into the mounting bracket until it clicks and tightening down the hold-down screw on the bottom.

23 Install the fuel lines on the sending unit and water separator as they were on the OEM tank.

24 Remove the original tank strap brackets from the truck. They will not be reused.

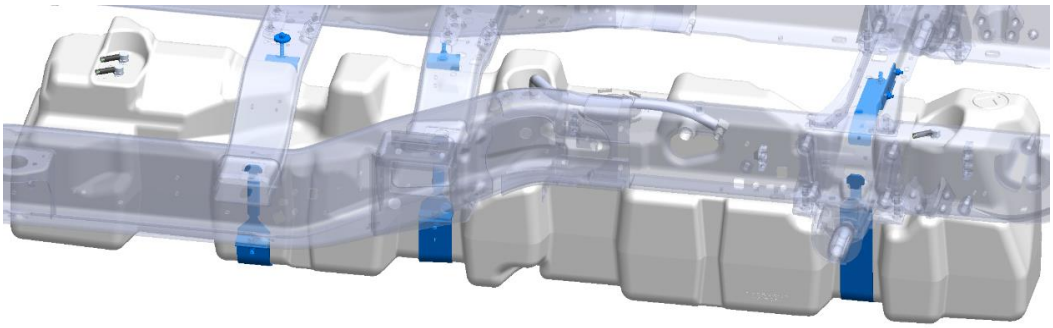
25 The straps needed for installation depend on the configuration of the truck. Please use the chart below to determine the straps are needed for your exact configuration. Strap placement (1-5) are marked on the tank body. This will allow you to make sure each strap is being placed in the correct location.

SKU	Tank Body	CA	WB	Cab	1	2	3	4	5
7020517	XL	60	167.9	SC	A1, A2	D, F	D, E	X	X
7020517	XL	84	169.3	Reg	A1, A2	B, C	X	D, F	X
7020517	XL	60	179.8	CC	A1, A2	D, F	D, E	X	X
7020517	XL	84	191.9	SC	A1, A2	B, C	X	D, F	X
7020517	XL	84	203.8	CC	A1, A2	B, C	X	D, F	X
7020617	XL	108	193.3	Reg	A1, A2	B, C	X	B, C	X
7020717	XL	120	205.3	Reg	A1, A2	B, C	X	X	G1, G2, G3

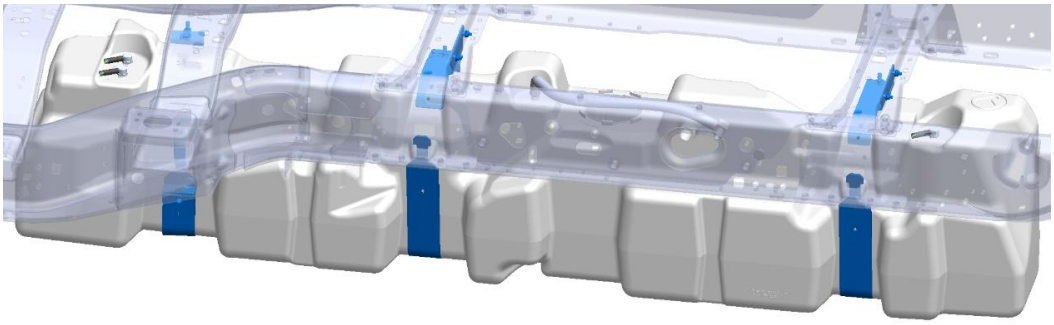


26 The top brackets and hangers must be installed before the tank body is lifted into the vehicle. These include A1, C, D, G1, and G2. Please view the images below as they depict placement and direction. As stated above, straps and supports will vary depending on application.

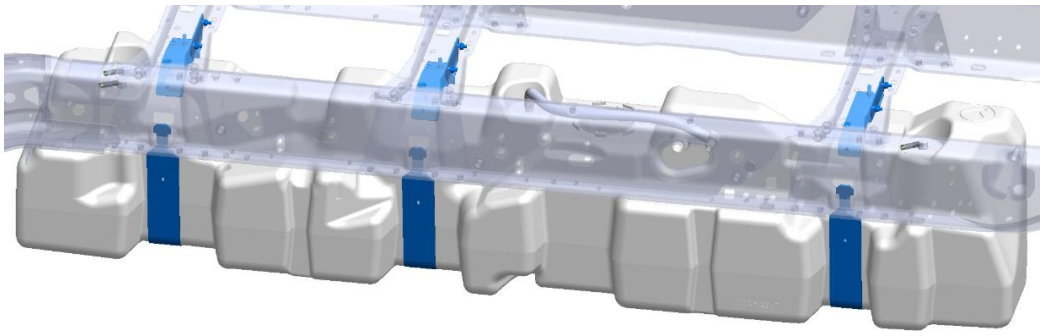
XL tank body in a 60 CA configuration. A1, D, (2 qty).



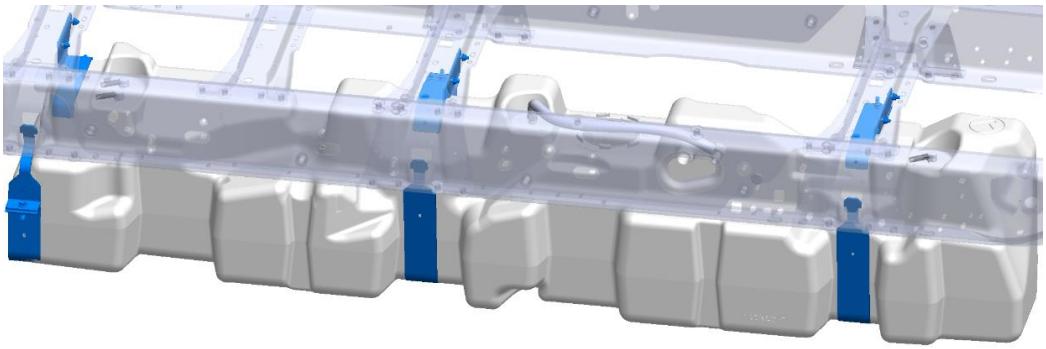
XL tank body in a 84 CA configuration. A1, C, D.



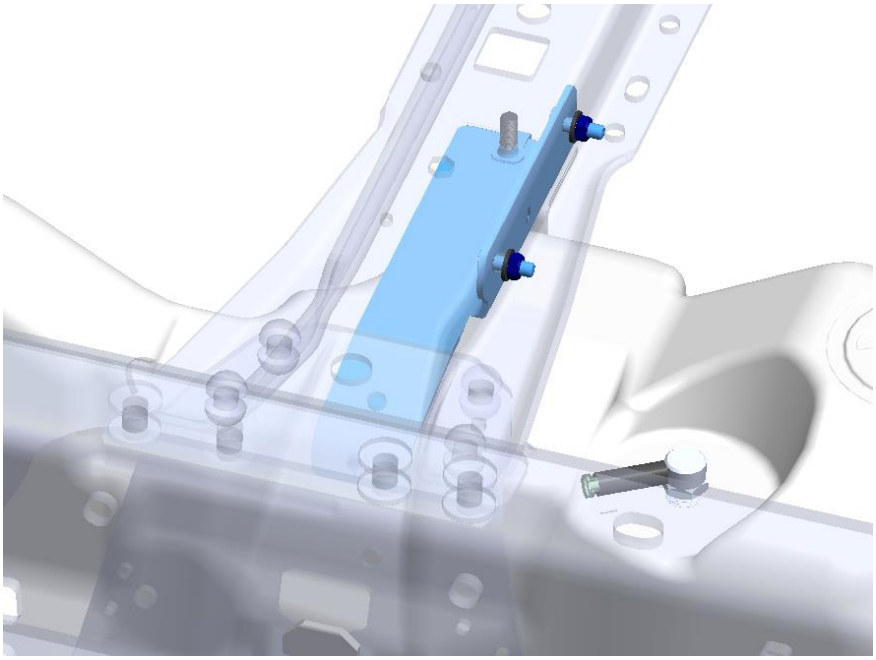
XL tank body in a 108 CA configuration. A1, C (2qty).

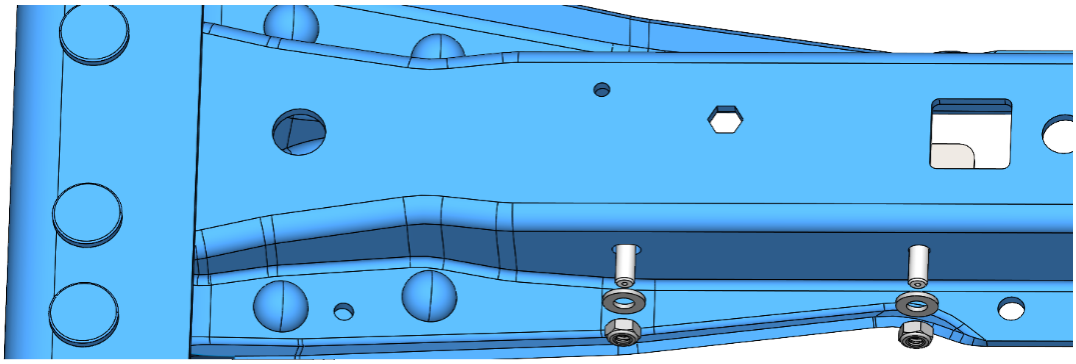


XL tank body in a 120 CA configuration. A1, C, G1, G2.

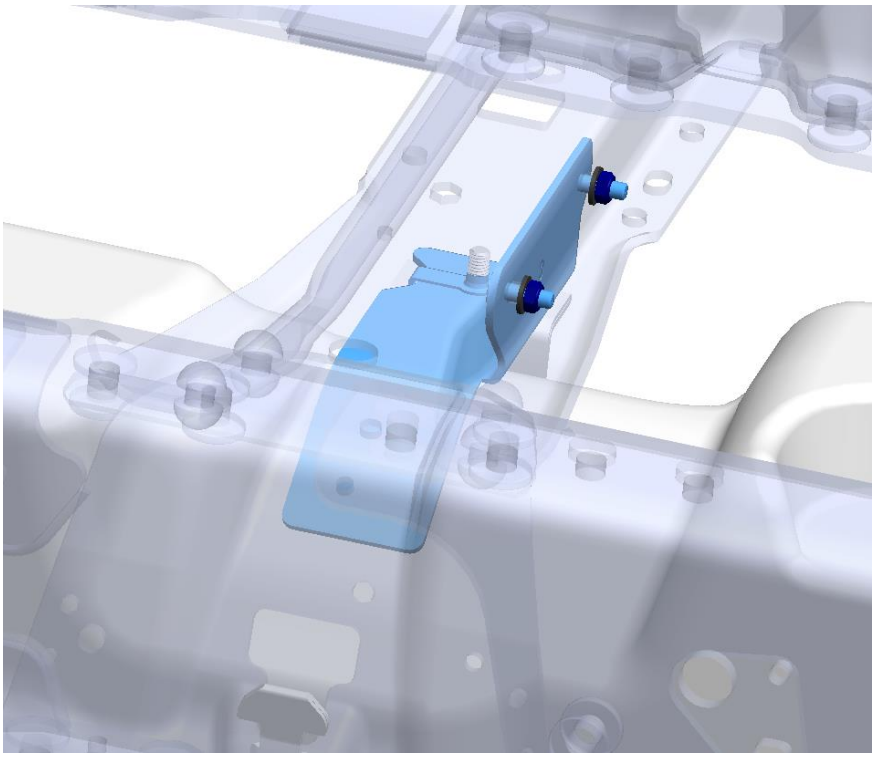


A1 Bracket - Used with Rear Strap on all configurations. 2qty 5/16" Washers and 2qty 5/16"-18 Locknuts will be used. (99 0000 0991 & 99 0000 0455)

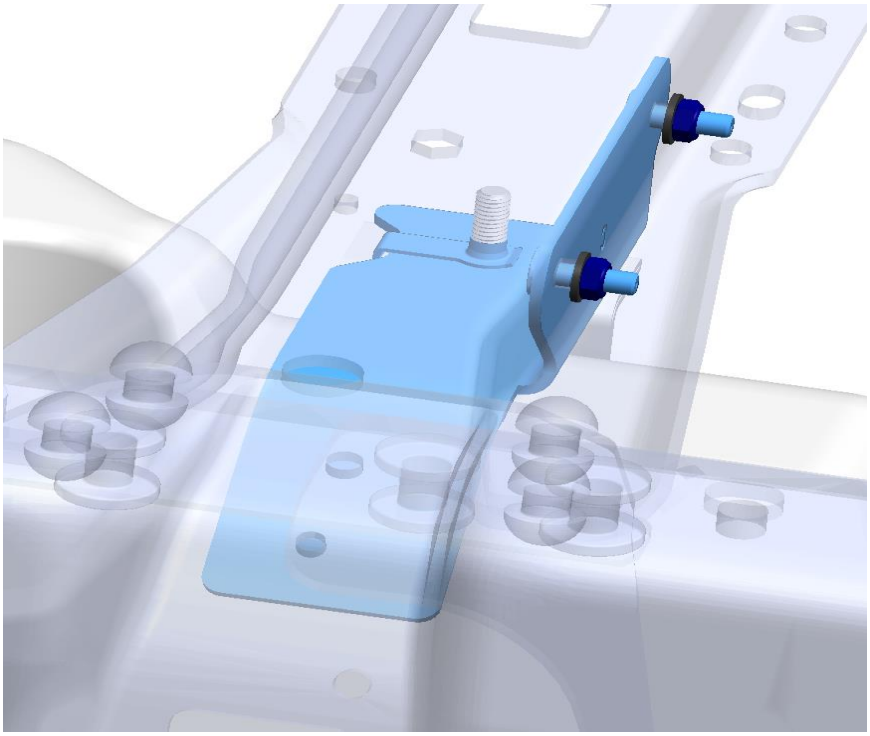




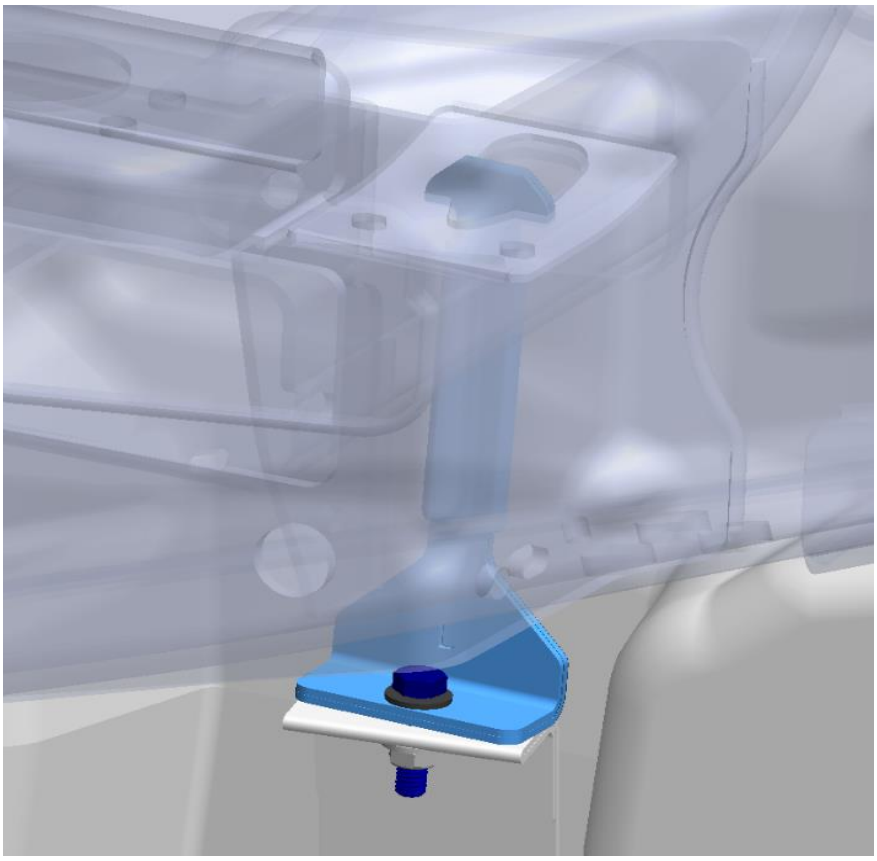
C Bracket - Used with 84, 108, 120 CA front strap. 2qty 5/16" Washers and 2qty 5/16"-18 Locknuts will be used. (99 0000 0991 & 99 0000 0455)



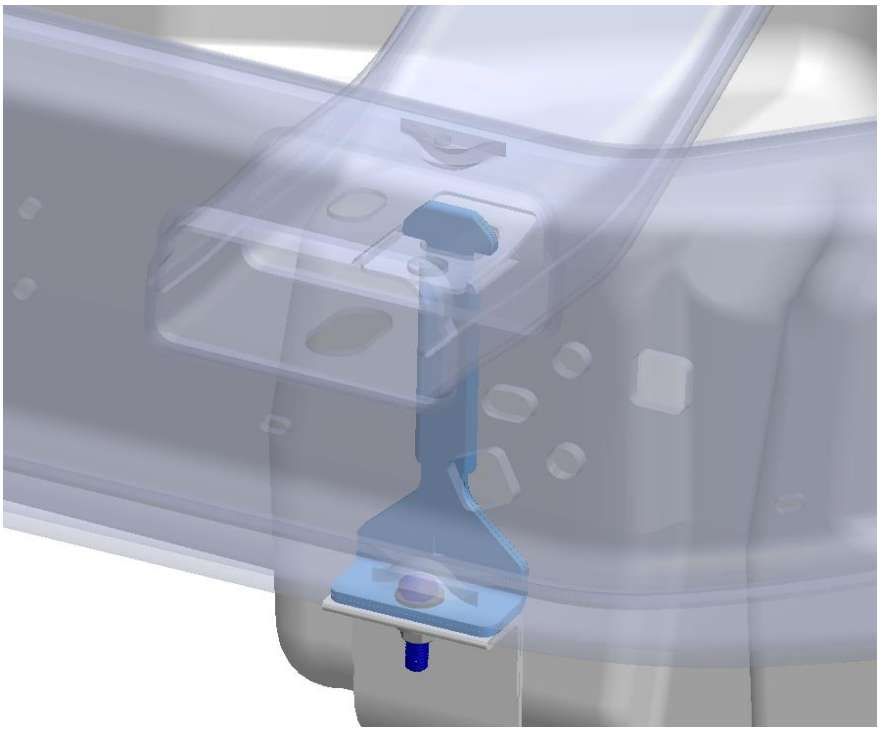
C Bracket - Used with 108 CA Front Support. 2qty 5/16" Washers and 2qty 5/16"-18 Locknuts will be used. (99 0000 0991 & 99 0000 0455)



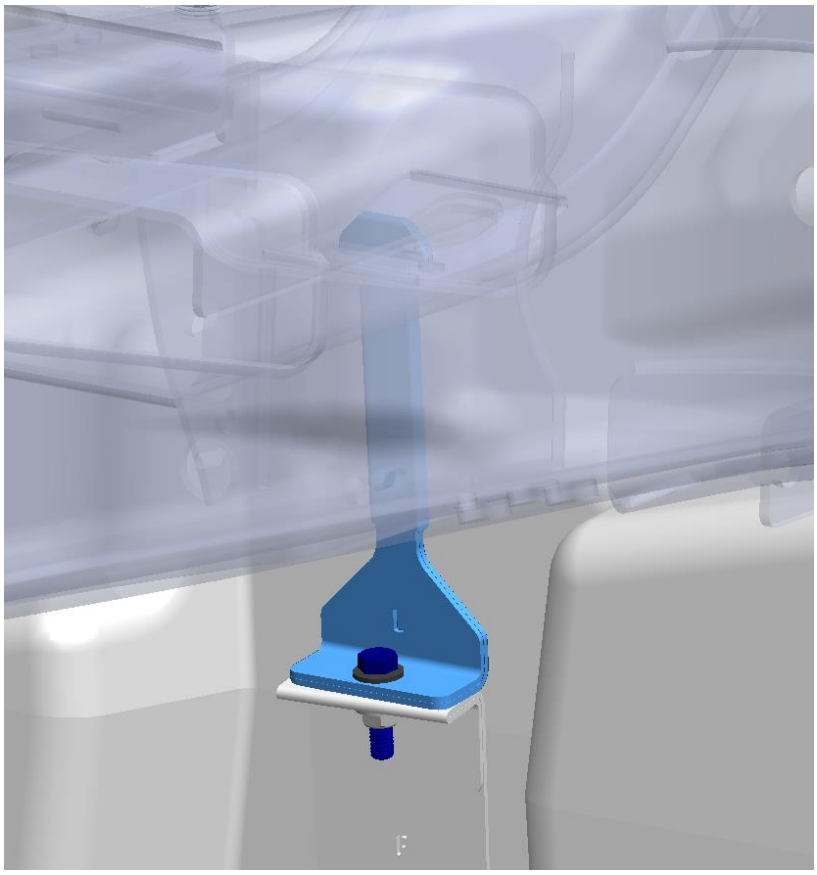
D Tab- Used with 60 CA Front Strap.



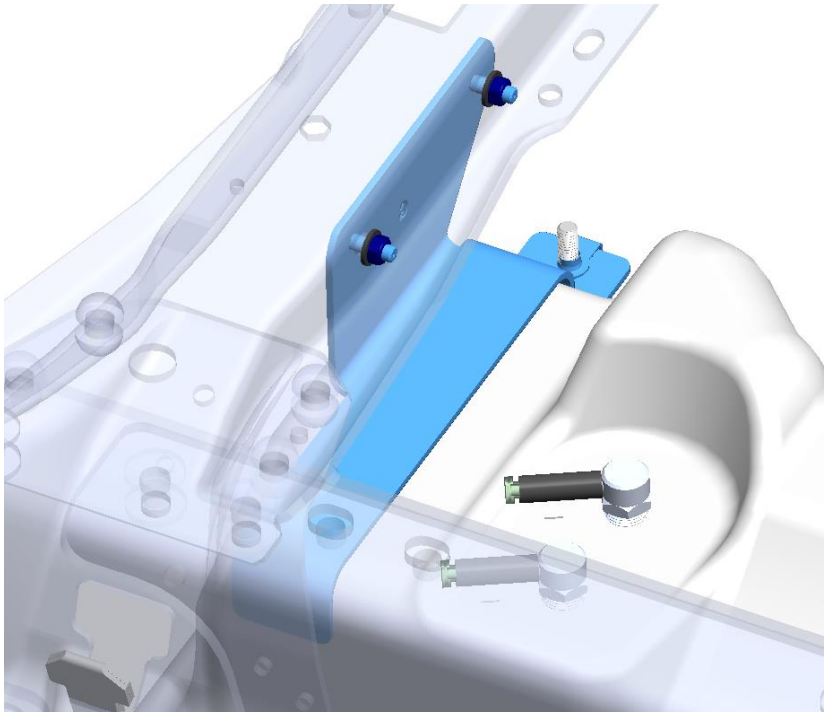
D Tab- Used with 60 CA Front Support.



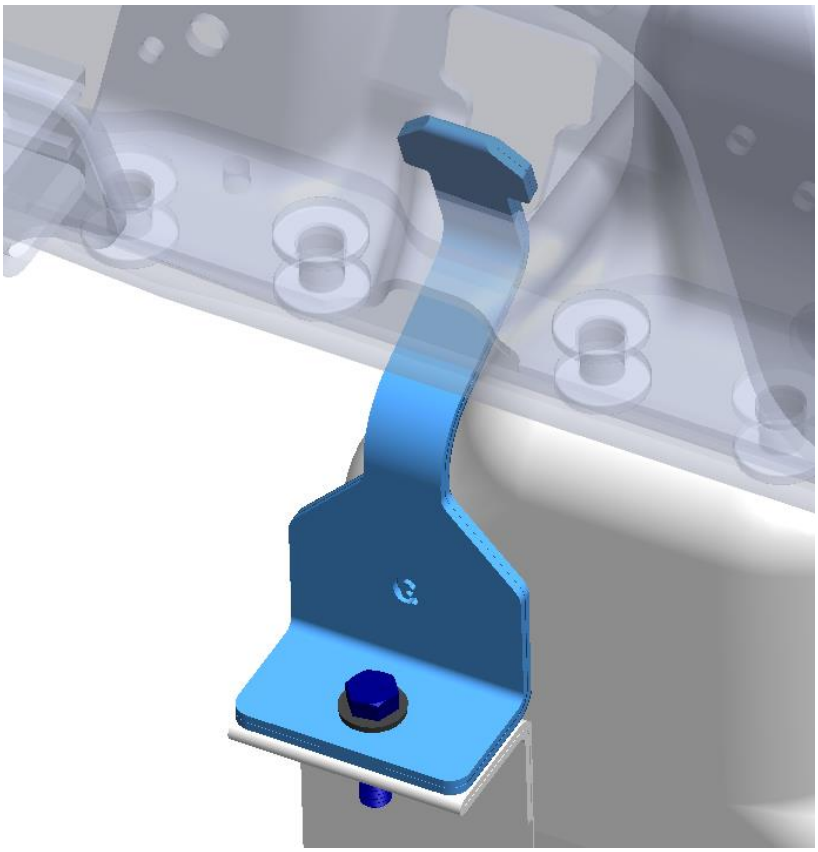
D Tab - Used with 84 CA Front Support.



G1 Bracket – Used with 120 CA Front Support. 2qty 5/16" Washers and 2qty 5/16"-18 Locknuts will be used. (99 0000 0991 & 99 0000 0455)

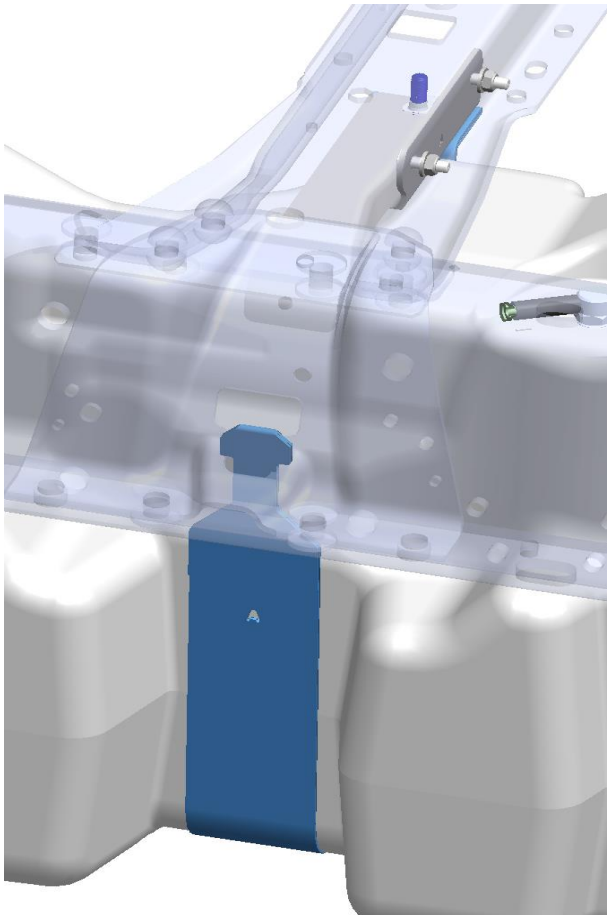


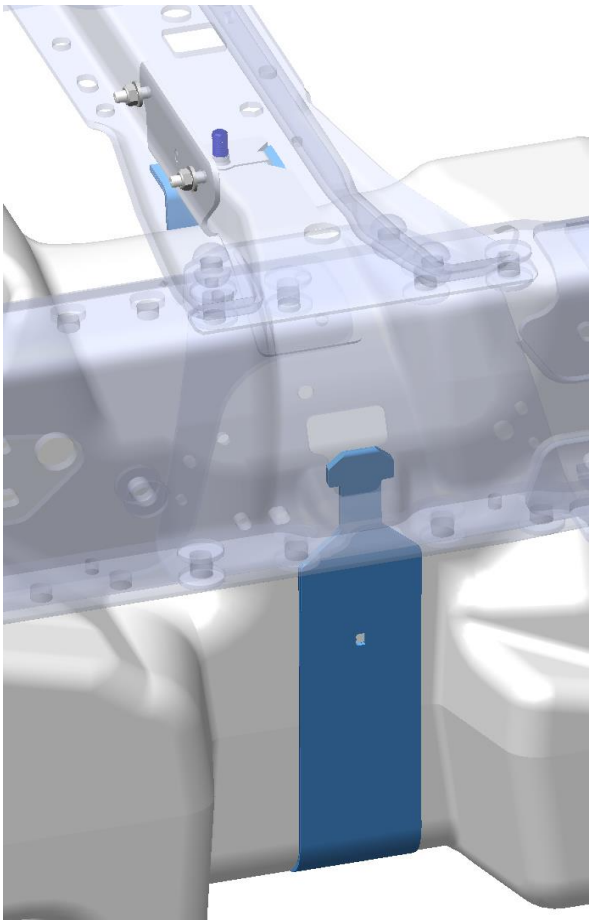
G2 Bracket – Used with 120 CA Front Support.



III. Install Replacement Tank in Vehicle

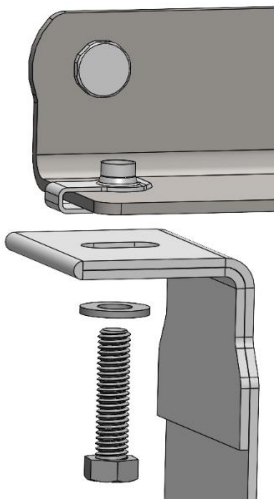
Step	Description
27	Support the TITAN tank and lift it nearly into place leaving enough space to be able to reach up and plug the fuel gauge electrical connection into the sending unit. **Note:** For trucks with dual tanks, reconnect the fuel lines and the additional port on the tank.
28	After re-attaching all connections, lift the tank all the way into place.
29	The two front roll-over valves have 12” of hose attached to the end of them. These will need to be routed upward and zip tied into a suitable location without having any low points or slumps in the line.
30	Install front and rear straps as well as the front support. Tighten bolts to manufacturer’s specifications.

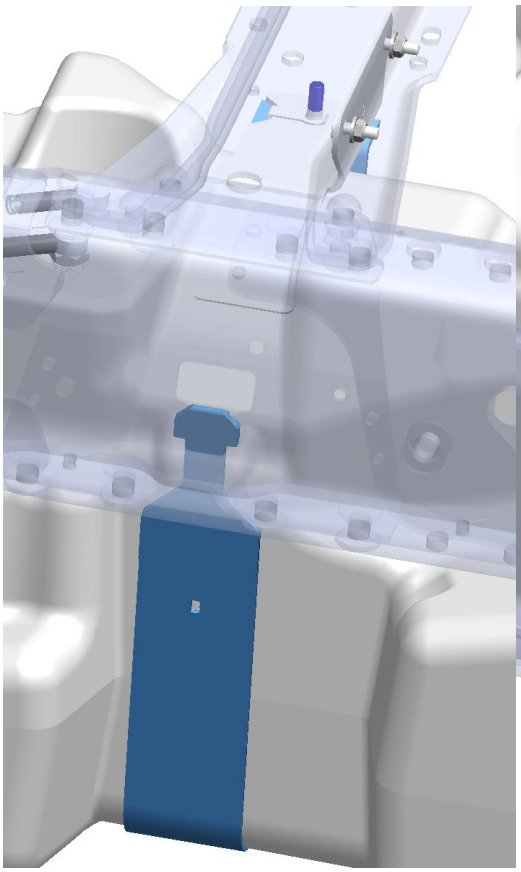


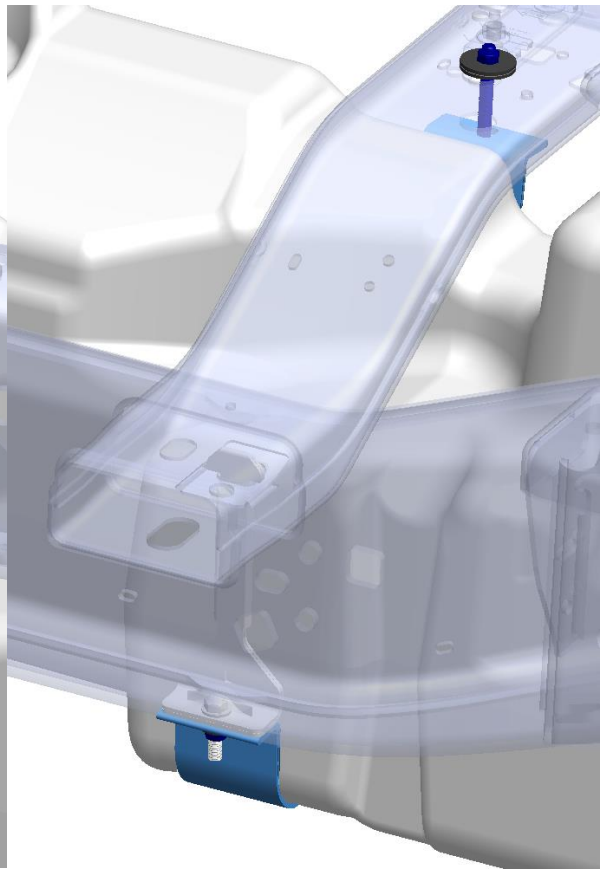


Fully installed A2 Rear Strap on all configurations. 1qty 3/8-16 x 1.5" Cap Screw, 1qty U Nut, 3/8"-16 0.75" center and 1qty 3/8"-16 Washer will be used. (02 0000 0456, 02 0000 0428 & 99 0000 0682)

Fully installed B Front Strap 84, 108 & 120 CA. 1qty 3/8-16 x 1.5" Cap Screw, 1qty U Nut, 3/8"-16 1.125" center and 1qty 3/8"-16 Washer will be used to connect to C bracket. (02 0000 0456, 02 0000 0430 & 99 0000 0682)



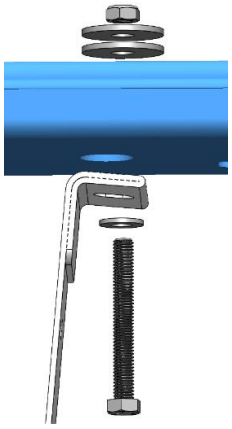


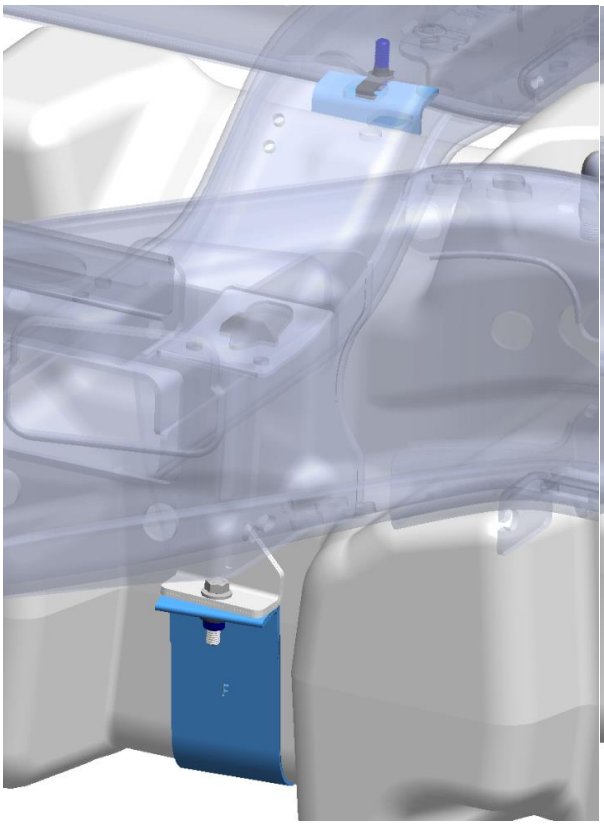


Fully installed B Front Support on 108 CA. 1qty 3/8-16 x 1.5" Cap Screw, 1qty U Nut, 3/8"-16 1.125" center and 1qty 3/8"-16 Washer will be used to connect to C bracket. (02 0000 0456, 02 0000 0430 & 99 0000 0682)

Fully installed E Front Support on 60 CA. 1qty 3/8-16 x 3" Hex Bolt, 2qty 3/8" Oversized Flat Washers, 1qty 3/8"-16 Washer, and 1qty 3/8"-16 Locknut will be used to connect to the vehicle frame. (02 0000 455, 99 0000 0588, 99 0000 0682 & 02 0000 0163)

1qty 3/8-16 x 1.5" Cap Screw, 2qty 3/8"-16 Washer, and 1qty 3/8"-16 Locknut will be used to connect to D tab. (02 0000 0456, 99 0000 0682, 02 0000 0163)





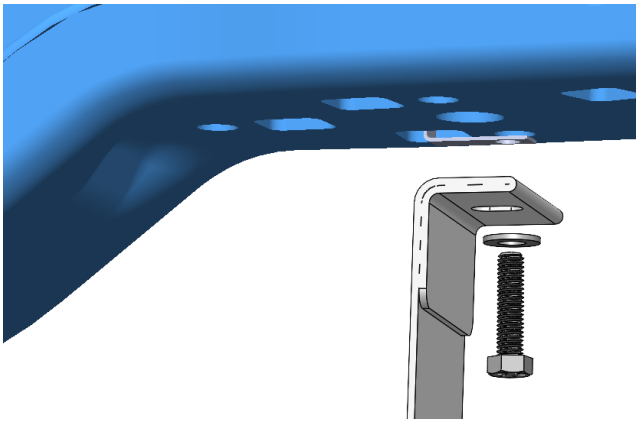
Fully installed F Strap on 60 CA. 1qty 3/8-16 x 1.5" Cap Screw, 1qty U Nut, 3/8"-16 1.125"" center and 1qty 3/8"-16 Washer will be used to connect to the frame. (02 0000 0456, 02 0000 0430 & 99 0000 0682)

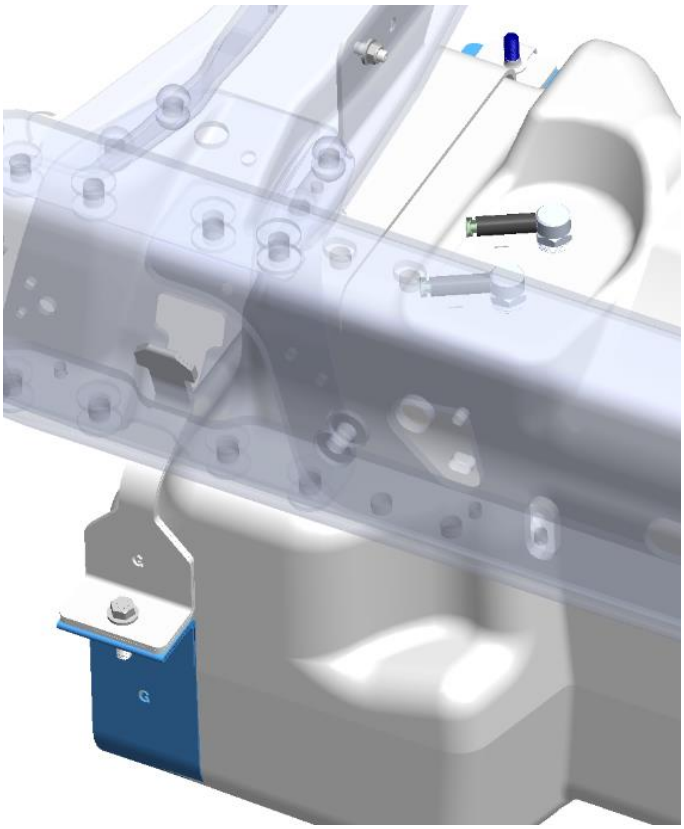
1qty 3/8-16 x 1.5" Cap Screw, 2qty 3/8"-16 Washer, and 1qty 3/8"-16 Locknut will be used to connect to D tab. (02 0000 0456, 99 0000 0682, 02 0000 0163)



Fully installed F Front Support on 84 CA. 1qty 3/8-16 x 1.5" Cap Screw, 1qty U Nut, 3/8"-16 1.125"" center and 1qty 3/8"-16 Washer will be used to connect to the frame. (02 0000 0456, 02 0000 0430 & 99 0000 0682)

1qty 3/8-16 x 1.5" Cap Screw, 2qty 3/8"-16 Washer, and 1qty 3/8"-16 Locknut will be used to connect to D tab. (02 0000 0456, 99 0000 0682, 02 0000 0163)



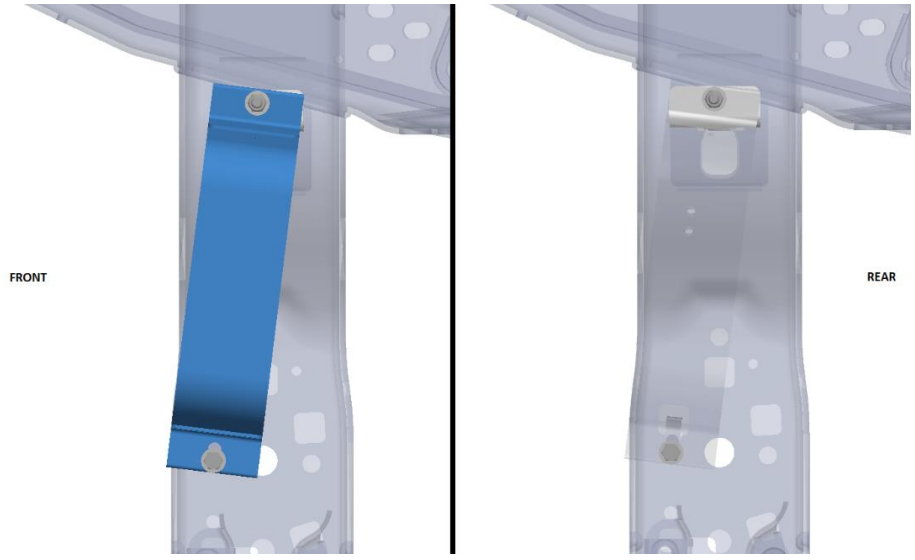


Fully installed G3 Bracket on 120 CA. 1qty 3/8-16 x 1.5" Cap Screw, 1qty U Nut, 3/8"-16 0.75" center and 1qty 3/8"-16 Washer will be used to connect to G1. (02 0000 0456, 02 0000 0428 & 99 0000 0682)

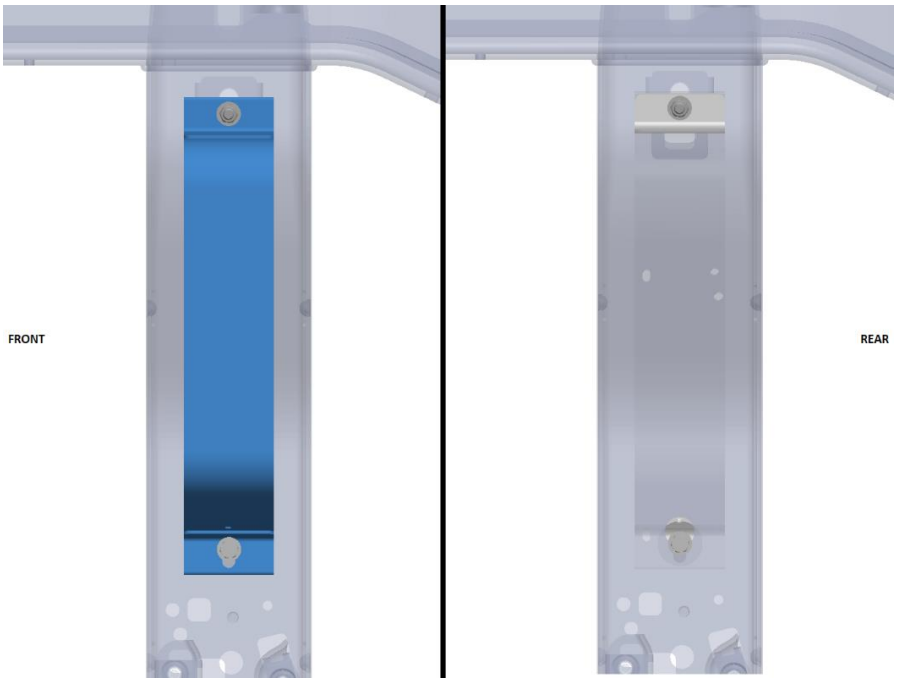
1qty 3/8-16 x 1.5" Cap Screw, 2qty 3/8"-16 Washer, and 1qty 3/8"-16 Locknut will be used to connect to G2. (02 0000 0456, 99 0000 0682, 02 0000 0163)

Front Strap & Front Support locations from bottom view. The second image in each set shows the strap as transparent so mounting locations can be more easily identified.

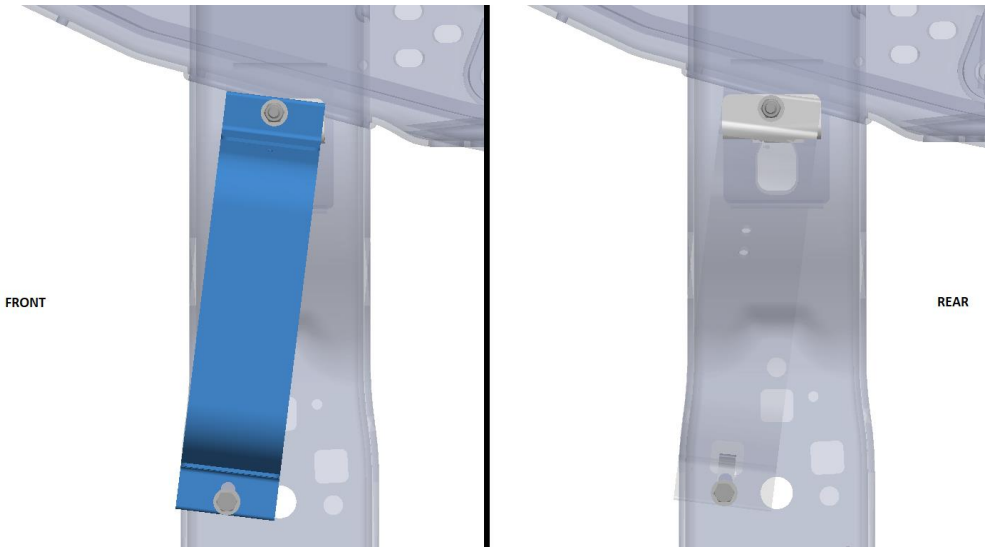
60 CA Front Strap Location.



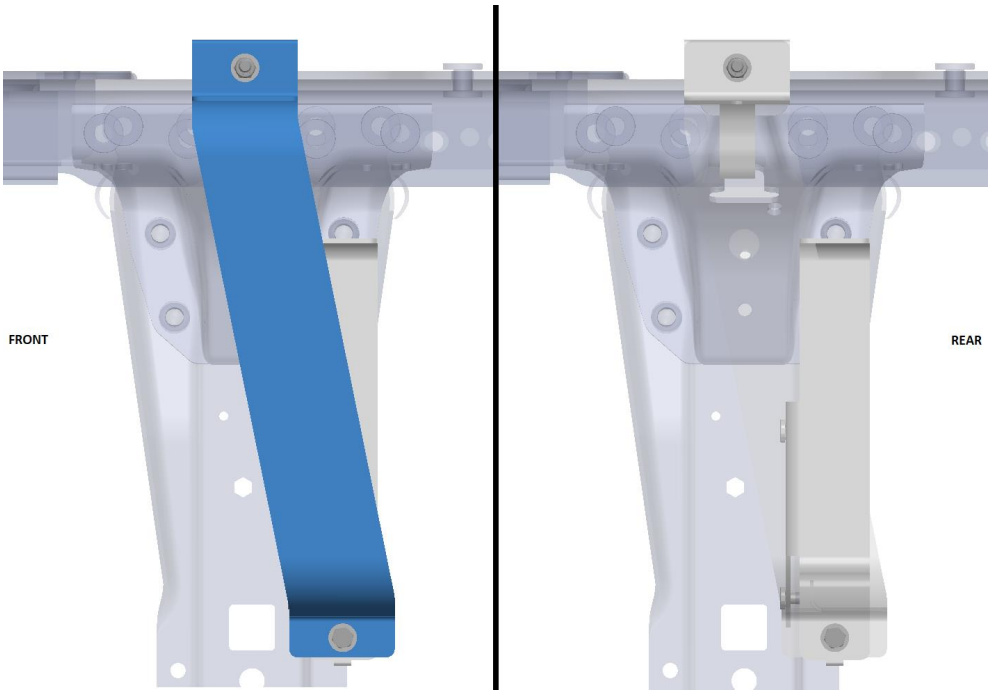
60 CA Front Support Location.



84 CA Front Support Location.



120 CA Front Support Location.



31 Reconnect the electrical connection on the bottom of the water separator.

32 Reconnect the fuel line connections on top of the water separator and on the frame.

33 Reconnect the fill hose and vent line to the vehicle's fill spout.

34 Move the fuel fill spout back into place and replace and tighten the bolts holding it.

35 Make sure ALL mounting hardware, clamps, bolts, etc. are properly installed and TIGHT.

36 **IMPORTANT!** Lower vehicle, fill tank to the first nozzle "click-off" with diesel fuel and check for leaks.

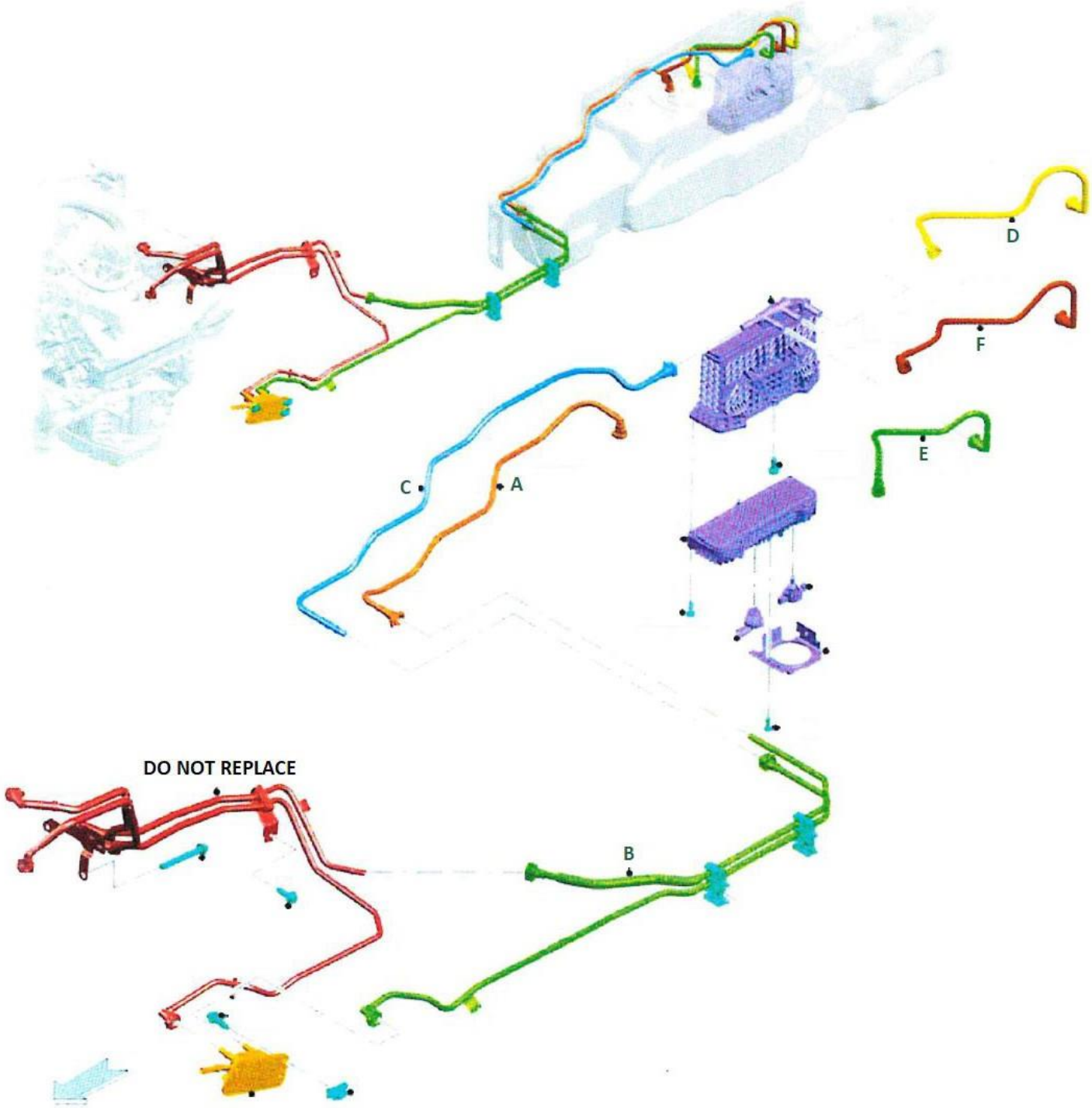
Aft-Axle only to Midship only conversion

For those who intend to remove the factory Aft-Axle tank and only use the Titan midship, the components below will be necessary.

- DEF relocation kit
  - We recommend using DirectDrive Plus
- Optional: DEF Fill Neck Extension
- Ford Midship only fuel lines (6 total, see diagram on next page)
  - Fill line from sender to end of midship tank (A)
  - Two connected hoses (fill and return) that run between the engine drop and the front end of the midship tank (B)
  - Return line from end of midship tank to fuel cooler (C)
  - Return line from fuel cooler to sending unit (D)
  - Filter line from sender to fuel cooler (E)
  - Filter return line from fuel cooler to sender (F)
- Ford Midship sending unit
  - Aft Axle sending unit is NOT compatible – too short
- Titan Sending Unit Electrical Harness Extension Kit (PN: 9900030)

OE Midship Only: Fuel Lines

(Lengths and part numbers vary by vehicle)



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

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 on the bottom of the tank.

Write your tank's Serial Number here:_____

A product must be registered within sixty (60) days of receipt for the warranty to be valid. Other conditions may apply. Consult TITAN's full warranty for details.

*All capacities are approximate.

Warranty is void if product is improperly installed.

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

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For patent information: http://titanfueltanks.com/patents

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