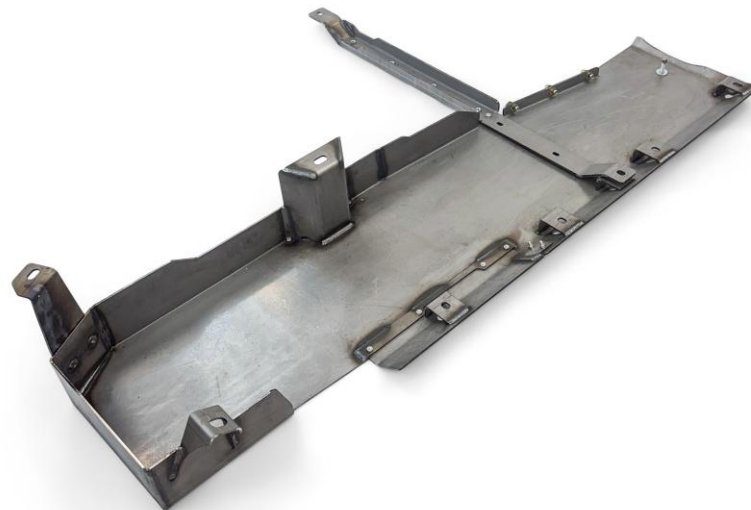


INSTALLATION MANUAL:

COR-4209500

Jeep Wrangler Gas Tank Skid Plate
Jeep JL 3.6L/2.0L V6/I4 2018



DISCLAIMER

WARNING:

Suspension systems and their components are designed to enhance your vehicle's off-road performance. This may cause your vehicle to handle differently, on and off-road. Always wear your seatbelt and take extra care when driving a modified vehicle. Failure to do so can result in loss of control which may result in a rollover causing serious injury, or even death to the driver and/or passengers of the vehicle. Regular maintenance and consistent inspections are required to keep your modified vehicle safe and functioning properly. These suspension systems and any components should be installed by certified technicians only. Attempts to install these products without proper knowledge can lead to poor performance, or possible failure, which may jeopardize the safety of the vehicle and its passengers. The installer is responsible for proper installation ensuring a safe and properly functioning vehicle. Take extra care when operating a modified vehicle and thoroughly inspect your vehicle before and after every off-road use.

Read the instruction set in its entirety before attempting the installation.

NOTE:

This product may require general welding, fabrication, and automotive mechanic skills. Welding should only be done by a competent welder. Clayton Off Road implies no guarantees or warranties and is not liable for improper installation. Some grinding and fitment may be required when installing this product. Every vehicle varies slightly, and some fabrication and/or modification may be required.

ATTENTION:

It is the customer's responsibility to thoroughly inspect all received parts to ensure they are assembled correctly and fully welded. Please carefully examine all weld seams and verify that bolt-through holes are properly aligned. Some Clayton Off Road products are permanent, non-removable, weld-on solutions. **If a defect or issue is found after installation, especially with permanent weld-on components, it may be difficult or impossible to correct.** Inspecting the part(s) received beforehand helps prevent unnecessary and avoidable complications.

All Clayton Off Road products are engineered and tested on U.S. spec, left-hand drive vehicles. Compatibility with right-hand drive vehicles is not guaranteed. Customer verification is highly recommended to ensure proper fitment prior to purchase.

ATTENTION: TORQUE SPECIFICATION

When working on any vehicle, it is good practice to torque suspension/weight-bearing components while the vehicle is resting under its load. This instruction set, as well as any other Clayton Off Road instruction set, assumes the installer will tighten any suspension-related components properly, to the recommended torque specification, when the vehicle is resting safely under its own weight.

ATTENTION!

Clayton Off Road offers two different gas tank skid plates for the JL 3.6L/2.0L, depending on the build date of the vehicle.

From our research, Jeep had redesigned the gas tank to provide additional clearance near the rear differential.

Vehicles with build dates before September 04, 2018, will use our gas tank skid plate COR-4209500

Vehicles with build dates after September 04, 2018, will use our gas tank skid plate COR-4209502

The following photos display the OEM gas tank skid before and after this rolling change. Use the photos to confirm which gas tank you have in order to determine which Clayton Off Road gas tank skid you will purchase.

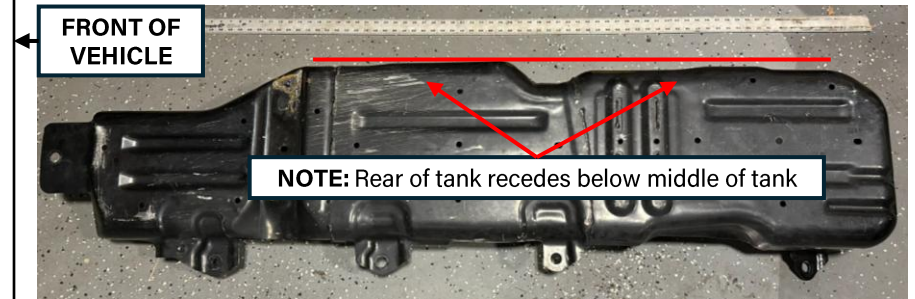
DO NOT RELY ON THE DATE/YEAR CATEGORIZATION. CROSS-REFERENCE WITH YOUR OWN VEHICLE TO CONFIRM!

PRE- SEPTEMBER 04 2018



**USE GAS TANK SKID PLATE
COR-4209500**

POST- SEPTEMBER 04 2018



**USE GAS TANK SKID PLATE
COR-4209502**

INCLUDED ITEMS

4209500 – Jeep Wrangler Gas Tank Skid Plate (3.6L V6, 2.0L I4 JL, 2018)			
QTY	Part Number	Description	Class/Grade
1	4209520	Gas Tank Skid Plate – Fat Tank (3.6L/2.0L 2018, JL)	N/A
1	4209510	Gas Tank Skid Plate Hardware (3.6L/2.0L/6.4L 2018-2024+, JL)	N/A
1	4209700	Skid Support Member (3.6L/2.0L/6.4L 2018+, JL/JT)	N/A

Product Notes and Features:

- 3/16” thick steel construction engineered using advanced CAD software and modern manufacturing techniques
- Shields the gas tank from high-rise obstructions during extreme off-road driving scenarios
- Rigid and gusseted support members to prevent buckling from abrupt impacts
- Replaces OEM fuel tank skid plate completely, minimizing weight/protection trade-off
- Countersunk hardware where it matters prevents unnecessary wear and tear
- Modular design allows for compatibility with short-arm and COR long-arm lift kits
- No exhaust modification required
- All hardware included, ships raw steel
- Minor drilling may be required depending on vehicle year and model

Note: Removal of the gas tank skid plate and tank is required for this installation.

It is recommended that this product be installed with less than ¼” tank of fuel, and at a shop with a 4-post lift. The gas tank skid plate is heavy and may require 2-3 people to lift into place.



INSTALLATION INSTRUCTIONS

TOOLS REQUIRED FOR INSTALLATION

- Basic hand tools
 - Hex key set,
 - Metric wrench/socket set,
 - Standard wrench/socket set,
 - Adjustable long travel jack stands
 - Vehicle lift
- Impact and driver drill, flathead screwdriver, 17/32" drill bit
3/16, 7/16"
7, 13, 18mm
9/16, 3/4"*

*****Take this product to a licensed professional if you are hesitant about the installation process!*****

1. Begin by safely parking the vehicle on a shop lift. It is recommended that this installation be performed on a 4-post lift; however, it can be done on a 2-post lift with additional care. Figure 1 below shows the vehicle set up and ready to be raised to a safe working height. **The new skid system is heavy, so recruit a friend or use adjustable long-travel jack stands to aid you in the installation.**



Figure 1: Jeep JL ready for installation

INSTALLATION INSTRUCTIONS

2. With the vehicle raised into the air, remove the transfer case guard that straps under the OEM gas tank skid plate. Use the diagram below to locate which bolts to remove. Put all hardware aside, as most of the bolts will be reused. **Note that if you have already installed our Front Long Arm Kit for JL/JT, the OEM engine skid will not be present.**

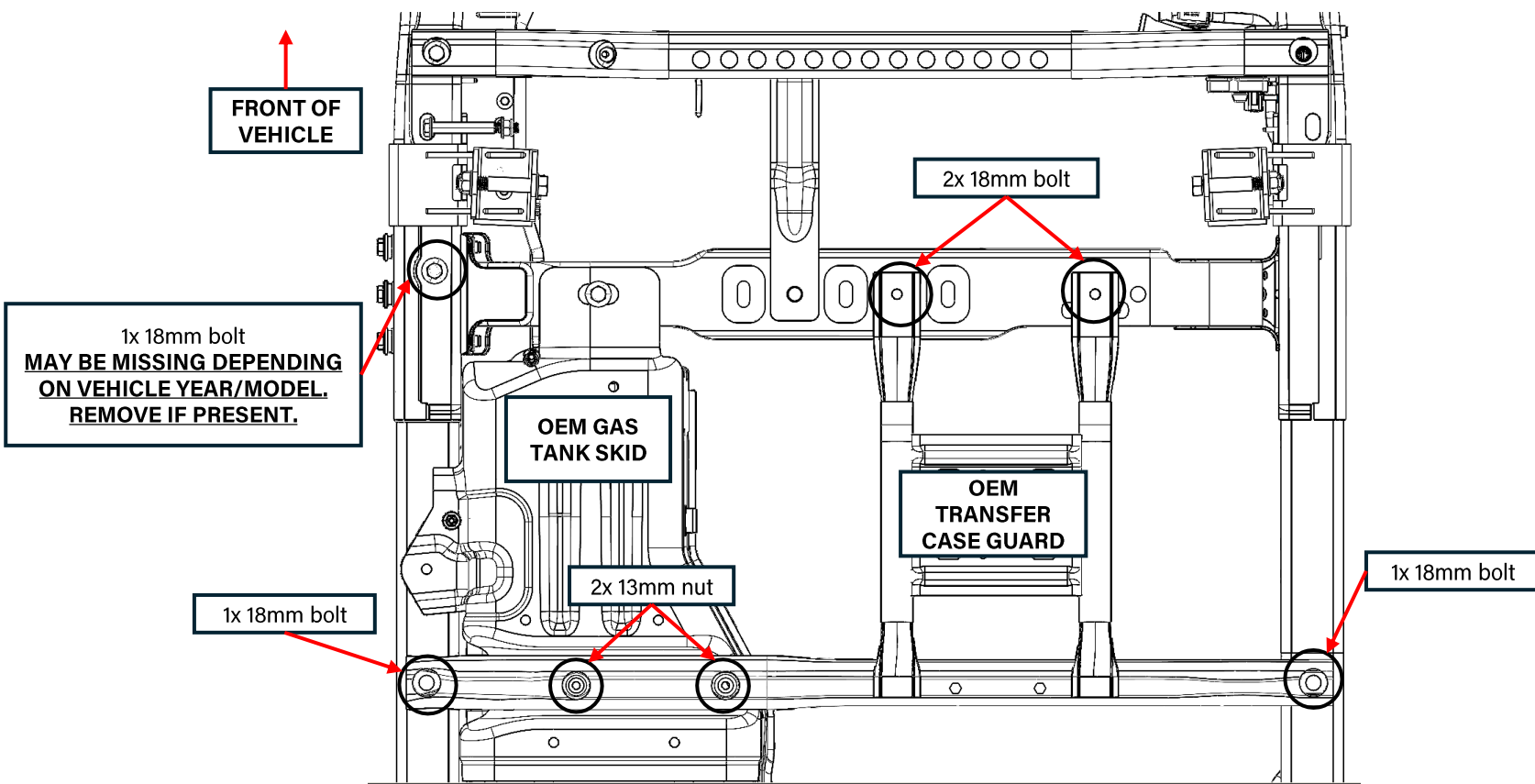


Figure 2: Underside view of OEM gas tank skid plate, transfer case guard, engine skid plate, and cross member with bolt locations to remove

INSTALLATION INSTRUCTIONS

3. Remove the plastic fuel line guard as seen in the figure below. Use a 10mm socket to remove the x2 nuts. Note that you will be able to reinstall this plastic shield once the installation is completed. **If you are installing this skid system on a vehicle that already has the COR long arm kit installed, this plastic shield will not be present.**

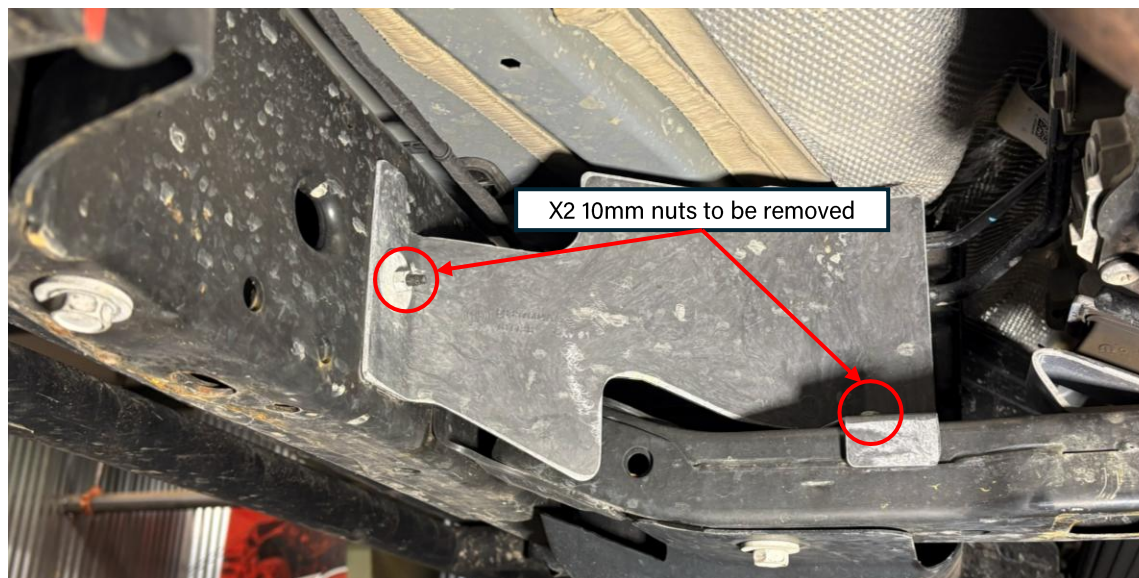


Figure 3: Plastic fuel line guard to be removed temporarily

INSTALLATION INSTRUCTIONS

4. It is now time to begin the gas tank removal process. **It is highly recommended that the gas tank be less than ¼" full before removing it from under the vehicle.** This will greatly ease the installation process.

Support the gas tank with the use of x2 tall, adjustable jack stands. This will greatly aid you the installation process, as the tank will need to slowly be dropped once the bolts are loosened in order to access all of the tank connections. Using adjustable stands (or something similar to allow adjustability) will slow down the removal process, which will allow you to take your time and carefully disconnect the tank connections.

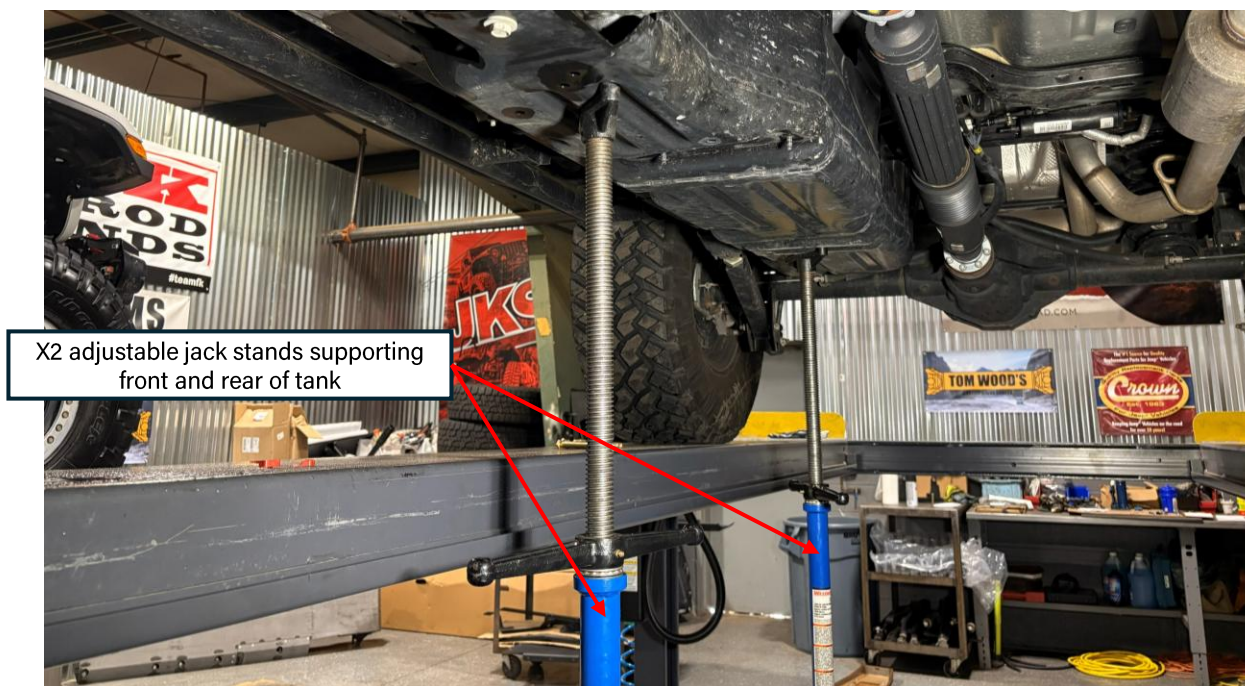
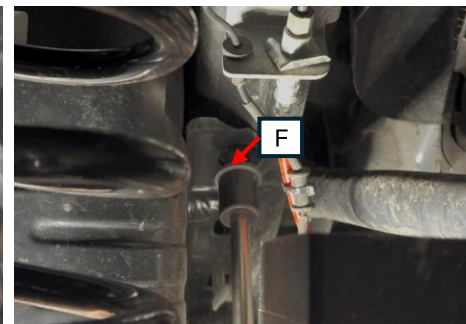
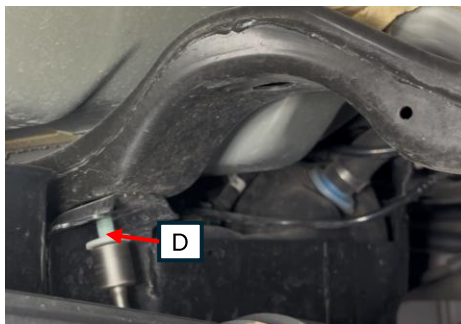
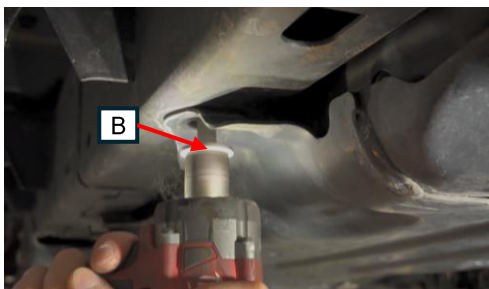
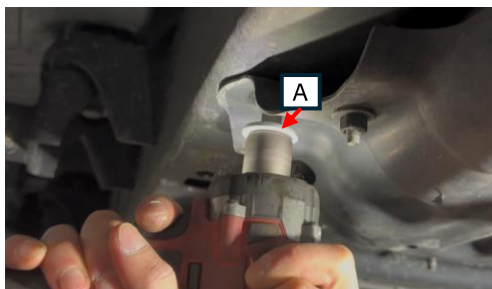


Figure 4: Gas tank supported with adjustable jack stands

INSTALLATION INSTRUCTIONS

5. With the tank supported, begin **loosening** the 7 bolts fastening the OEM tank skid to the vehicles undercarriage. Use an 18mm socket and go around loosening the bolts. **Do not fully remove the bolts yet. Leave a couple of threads engaged.**

Follow the photos below to remove the bolts holding the tank in place. You'll find 3 bolts on the frame rail (a, b, c), 2 on the side closest to the driveshaft (d, e), and 1 on the front cross member (f), and 1 on the back right of the tank (g). 7 bolts total.



INSTALLATION INSTRUCTIONS

6. **LONG ARM NOTE:** If you have Clayton Off Road rear long-arm brackets installed, removal of the rear, passenger-side control arm is required to access one of the 18mm bolts on the frame noted from the previous step. Remove the control arm bolts at the frame and the axle to remove the arm completely. **Leave the gas tank skid bolt with a couple of threads engaged, and do not remove it completely.**

Ignore this step if you are using a short arm suspension setup, as the bolt will be easily accessible.

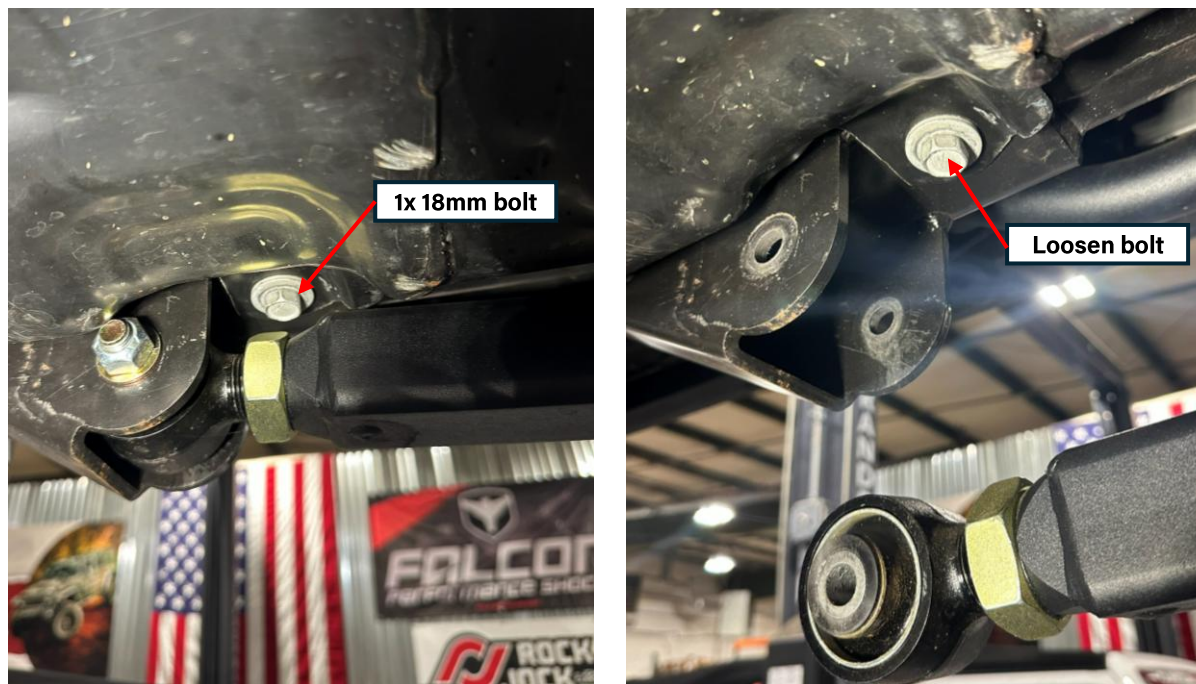


Figure 5: Rear lower long arm removed to access gas tank bolt at frame (passenger-side)

INSTALLATION INSTRUCTIONS

7. Slowly lower the jack stands to as much as the bolts will allow. Continue to support the tank and access the top of the tank to disconnect the lines shown below.

Remove the evap canister hose by removing the large green plastic clip on the top of the tank. Then push down on the back spring clip to release, and gently pull the hose off of the connection.

Next, gently push down on the electronic wiring harness located directly behind the evap canister hose. This may require the tank to be lowered further to gain additional clearance. **Be mindful of any retaining clips, remove them with a trim tool.**

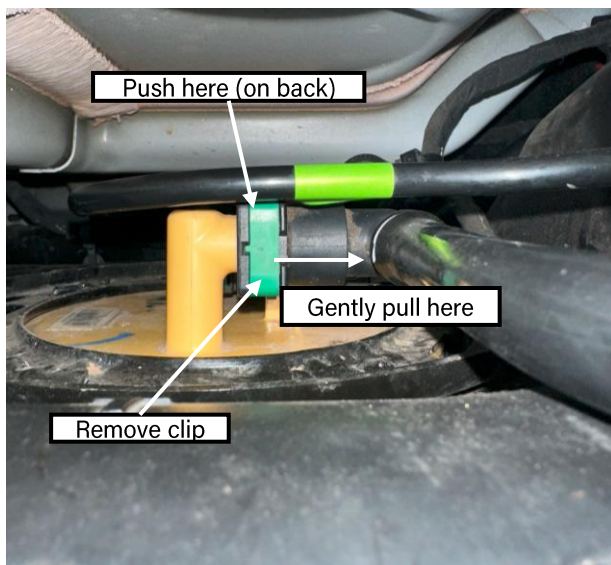


Figure 6: Evap canister hose

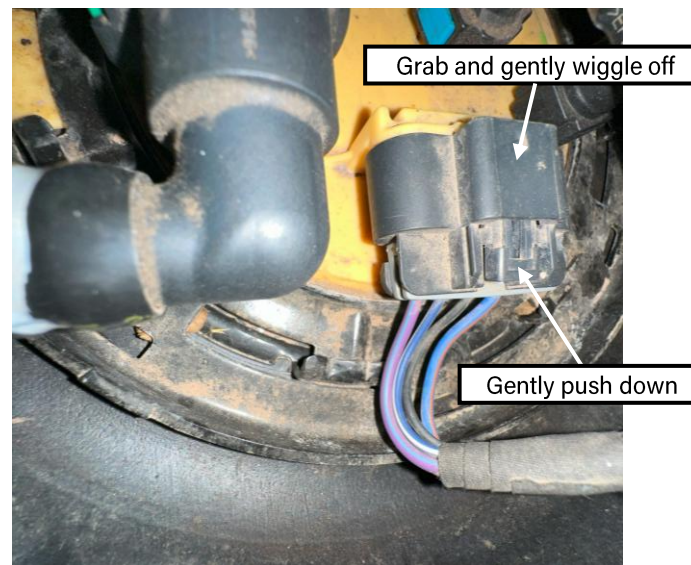


Figure 7: wiring harness

Note: RETAIN ALL PLASTIC FUEL CONNECTION CLIPS

INSTALLATION INSTRUCTIONS

8. Keep the tank supported and access the rear of the tank. Follow the steps below to make the necessary disconnections.
- Loosen the filler neck clamp and slip it off the tube using a 7mm socket (Figure 8)
 - Remove the filler breather by removing the blue, plastic retaining clip and gently pushing down on the spring on the back of the connection (Figure 9)
 - Remove the vapor system hose clip by removing the red, plastic retaining clip and gently pushing down on the spring on the back of the connection (Figure 10)

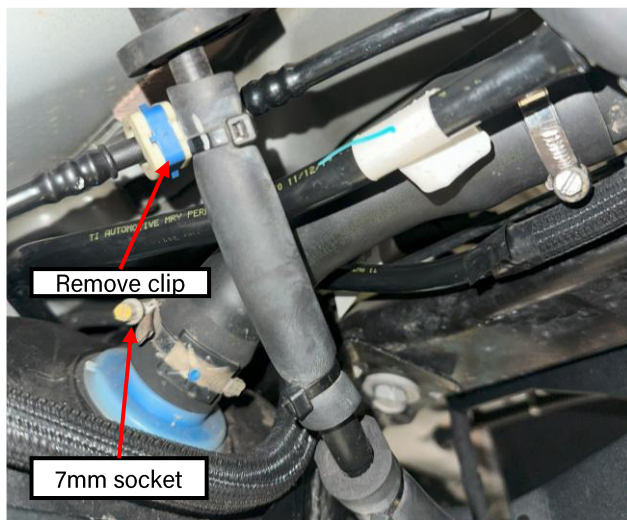


Figure 8: filler neck clamp

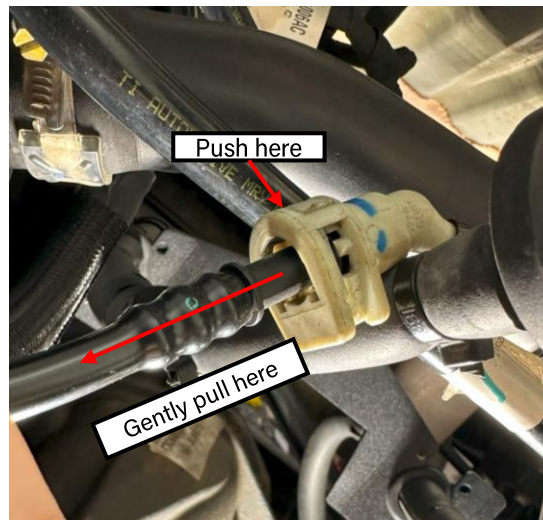


Figure 9: Filler breather connection

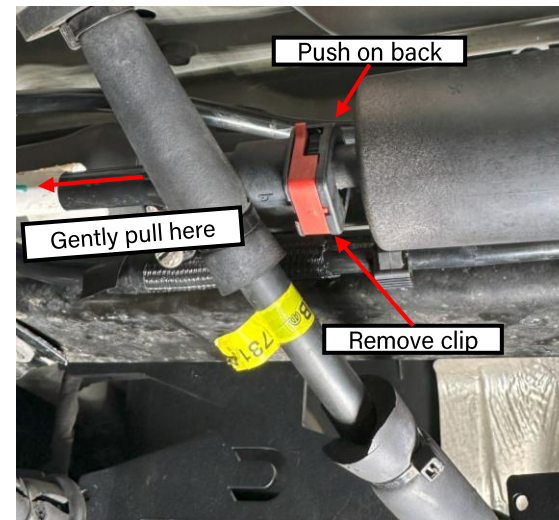


Figure 10: Vapor system hose clip

Note: RETAIN ALL PLASTIC FUEL CONNECTION CLIPS

INSTALLATION INSTRUCTIONS

9. Keep the tank supported and access the front of the tank. Follow the steps below to make the necessary disconnections.
- Remove the send fuel line by removing the red, plastic retaining clip and gently pushing down on the spring on the back of the connection. **THIS LINE IS PRESSURIZED. ENSURE THE VEHICLE IS COLD BEFORE DISCONNECTING, AND HAVE PLENTY OF RAGS AVAILABLE FOR FUEL CLEANUP**
 - Remove the return fuel line by removing the red, plastic retaining clip and gently pushing down on the spring on the back of the connection.

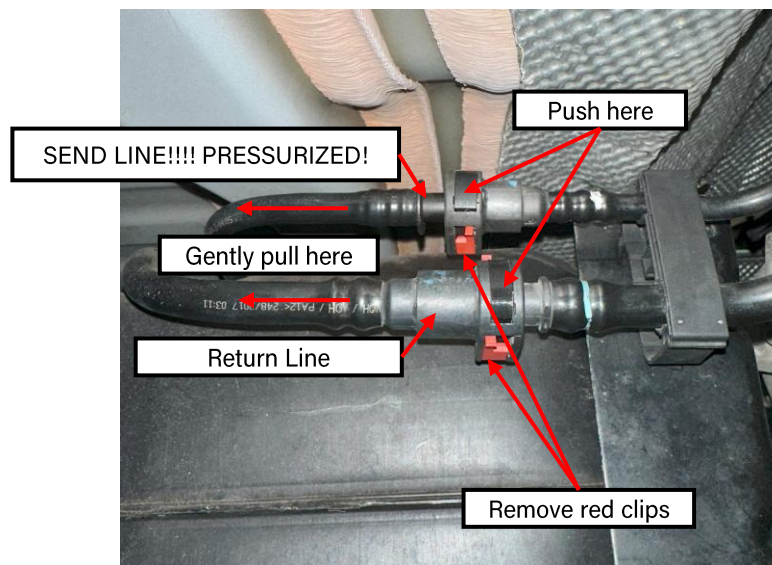


Figure 11: Send and return fuel lines

Note: RETAIN ALL PLASTIC FUEL CONNECTION CLIPS

INSTALLATION INSTRUCTIONS

10. Before fully dropping the tank, make sure that the tank is completely free of any remaining connections. Slowly drop the tank to gain visible clearance and ensure no hoses, plastic clips, or wires in the way. When the tank is fully dropped, Remove the OEM gas tank strap using a 13mm socket. **Remember, fuel is heavy and can easily tip the tank off your jack stands. Move slowly and carefully.**

When the tank is on the ground, note that there is a T-slot on the opposite side of the OEM skid. Lift the strap up, then push down to remove the strap completely.



Figure 12: OEM tank strap removal

INSTALLATION INSTRUCTIONS

11. Install the rear bracket bolt plate into the rear of the new tank skid. Line up the larger, 3/8"-16 bolts with the large open holes in the gas tank. Use the supplied 5/16"-18 countersunk bolt and hardware to tighten the rear bracket hanger into position. See the photos below. You will need a 3/16" hex key and a 1/2" socket/wrench to tighten the countersunk bolt.

Next, loosely tighten the provided 3/8"-16 locknuts, but **do not tighten yet**. Use a 7/16" hex key and a 9/16" socket/wrench, This is to allow some play in the bracket for when the new skid plate is brought into position for mounting.

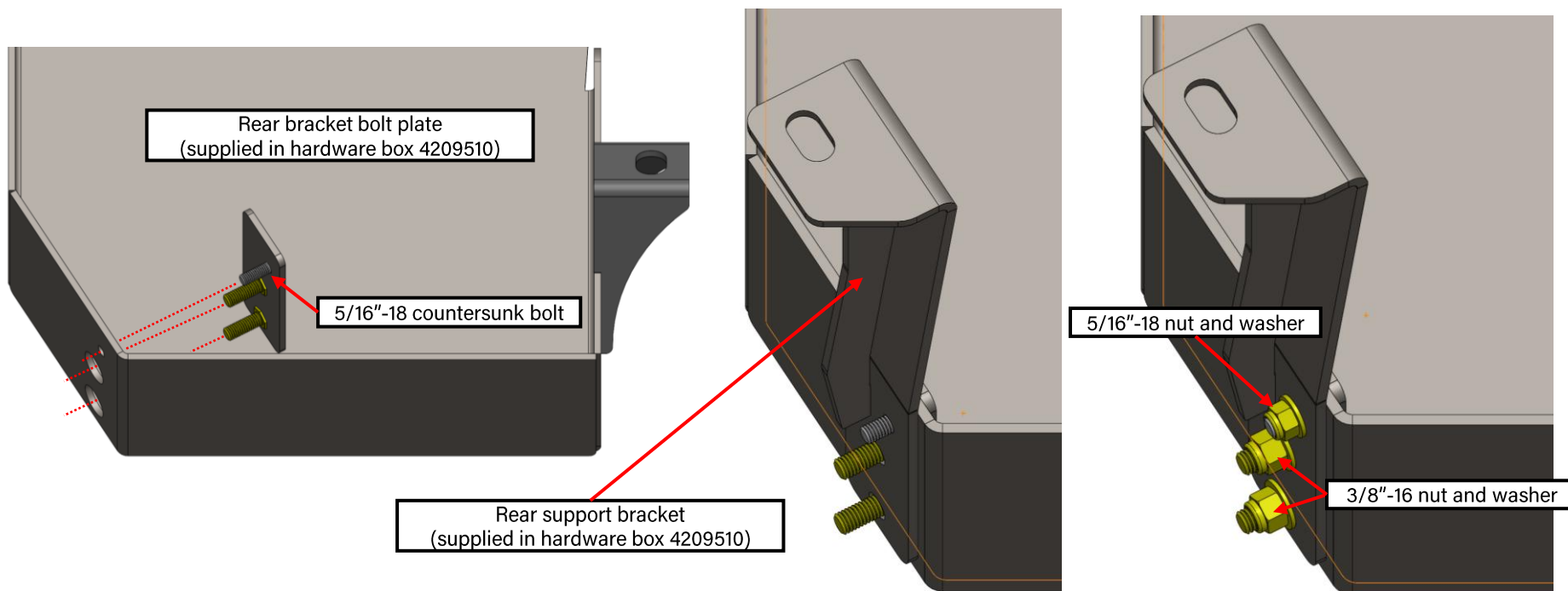


Figure 13: Loosely installing the rear support bracket

INSTALLATION INSTRUCTIONS

12. Prepare the new skid plate for the gas tank. Included in the hardware kit is a strip of sticky-sided foam tape. Apply the tape where the support member would make contact with the gas tank. Figure 14 shows where to apply this. Application of this tape is required to prevent the sharp, sheet-metal edges of the skid support member from rubbing into the plastic gas tank. This prevents damage long-term.

Place the skid support member with the flat, taped end in position across the new skid plate. Use one of the shorter 3/8-16" countersunk bolts (tighten with 7/16" hex key) to hold the support member in position. **With the help of another person**, place the gas tank into the new skid. The fit should be snug in the rear, with the support tower in the middle of the skid locking the skid in position.



Figure 14: Skid support member with gasket tape applied

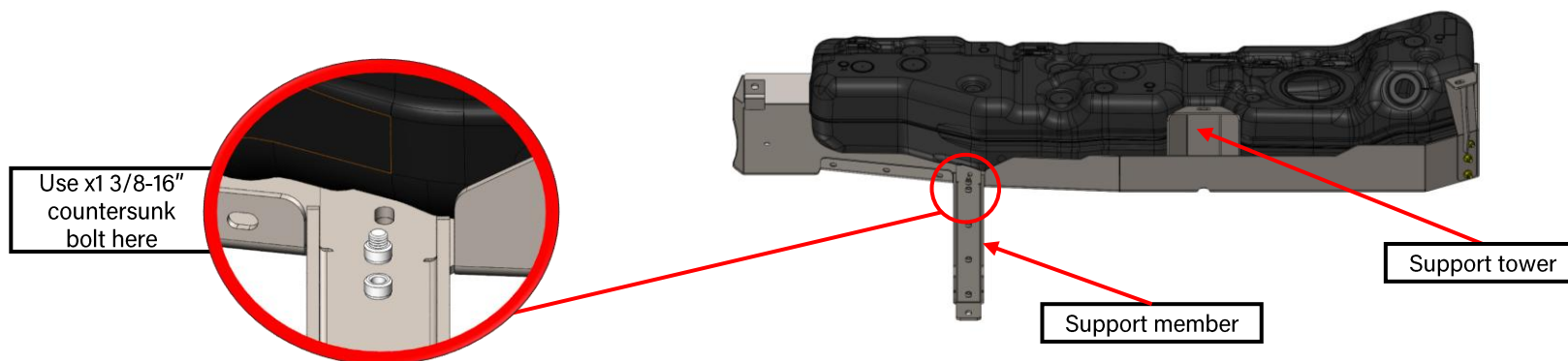


Figure 15: Gas tank installed into the skid plate with the support member underneath

INSTALLATION INSTRUCTIONS

13. **LONG ARM NOTE:** If you are installing the new gas tank skid plate on a vehicle with Clayton Off Road Rear Long Arm Brackets, note that you must remove the Gas Tank Extension for the new skid plate **before installing the new skid plate onto the vehicle.** See photos below. Use a 3/16" hex key to remove the x6, 5/16" countersunk bolts from the threaded inserts. Figure 16 shows the Gas Tank Extension installed with the OEM short-arm control arm mount. Figure 17 shows the extension removed, the OEM short-arm control arm mount removed from the frame, and the Clayton Rear Long Arm Bracket installed.

If you are installing this gas tank skid plate on a vehicle with short-arm suspension, please leave the extension installed.

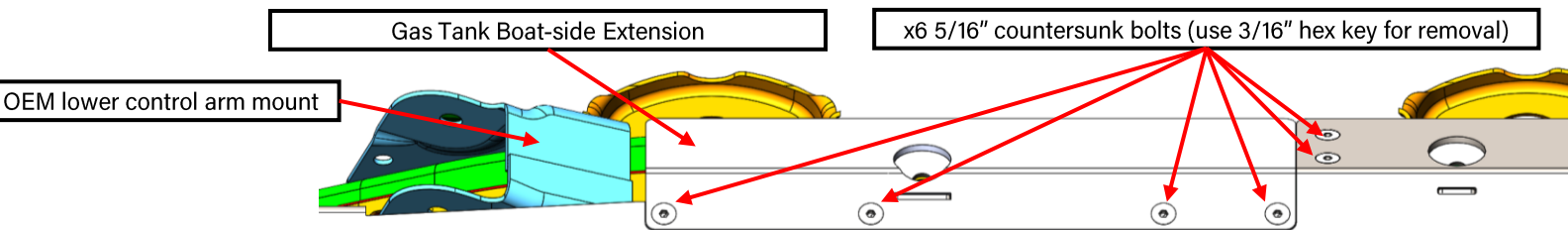


Figure 16: Boat-side Extension installed for a short-arm suspension setup using OEM lower control arm frame mounts

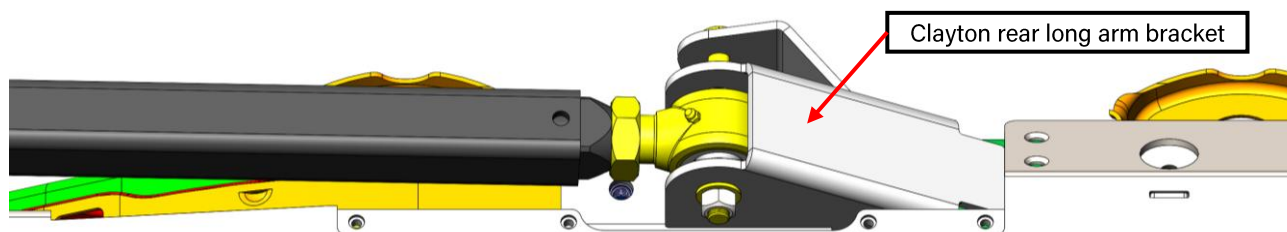


Figure 17: Boat-side Extension removed for a Clayton long-arm suspension setup using weld-on frame bracketry

INSTALLATION INSTRUCTIONS

14. Install the skid plate (with skid support member) onto the vehicle. **The use of 2 long-travel adjustable jack stands is highly recommended.** With the help of another person, lift the new skid plate and gas tank on top of the adjustable jack stands, and balance/center the tank. Keep one hand on the skid plate and slowly bring the tank up and into position by adjusting the jack stands.

Reinstalling the fuel lines first before bolting the tank into position is easiest. This requires the tank to remain stable for a brief period while the fuel lines are reconnected. One person should remain under the tank to stabilize it, while another person makes the necessary fuel line connections. Install the plastic clips at each fuel line at this time.

Bring the tank and new skid plate up into mounting position. Begin threading in the OEM frame bolts in the order shown in Figure 19 below. **Do not tighten the bolts. Start the threads 2-3 turns on each bolt so that you have plenty of wiggle room. Leave ALL bolts loose. If you cannot line up a bolt, remove the previous bolt completely and shift the skid plate to fit.**

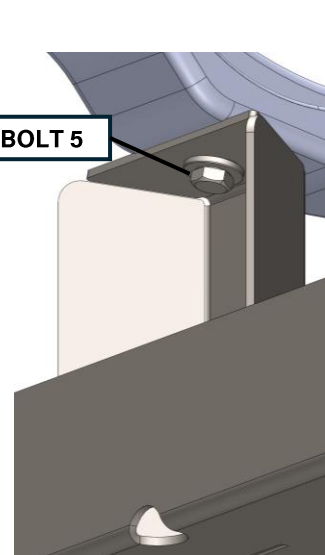


Figure 18: Bolt 5 location

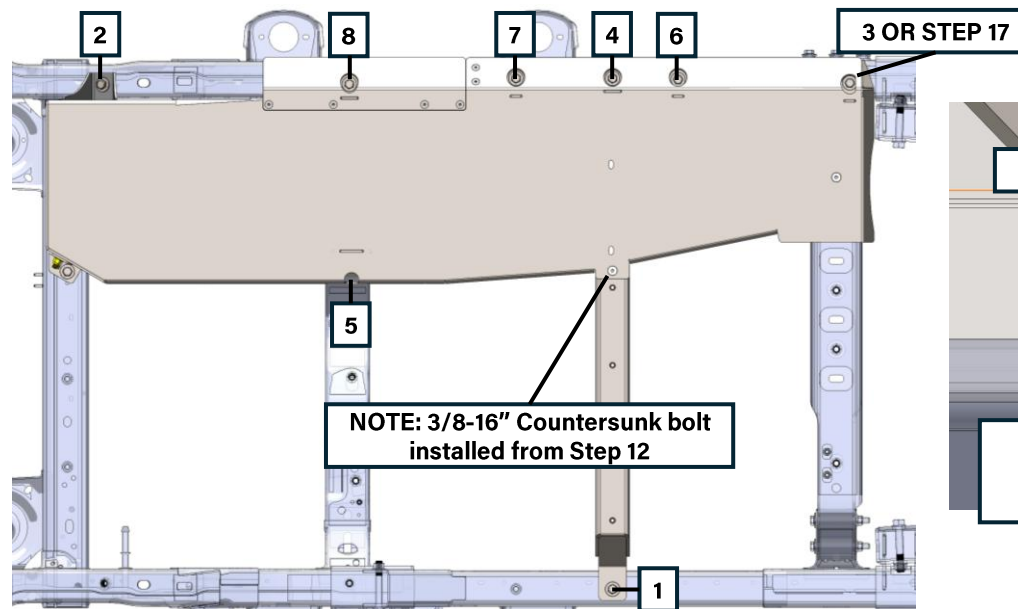


Figure 19: Recommended bolt installation order

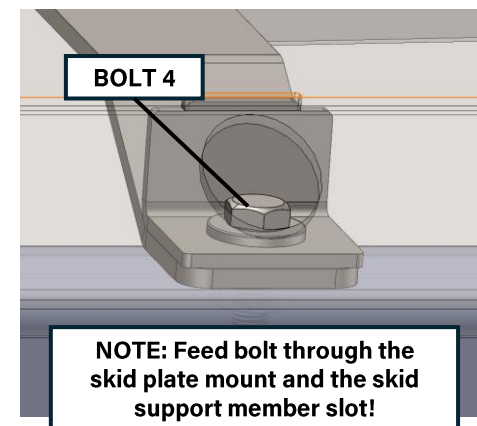


Figure 20: Bolt 4

INSTALLATION INSTRUCTIONS

15. Return to the front of the skid plate near the cross member. The remaining countersunk bolt hole is used to securely fasten the new skid plate to the OEM cross member. Follow the steps below.

Insert the longer 3/8"-16 countersunk bolt through the bottom of the skid plate at the countersunk hole. With your other hand, carefully drop the oversized 3/8" washer over the bolt shank. **Note, the bolt will not thread into the internal nut-sert in the cross member, but rather feed through it.** Thread on the provided 3/8"-16 nylon nut, and tighten with a 9/16" socket and 7/16" hex key.

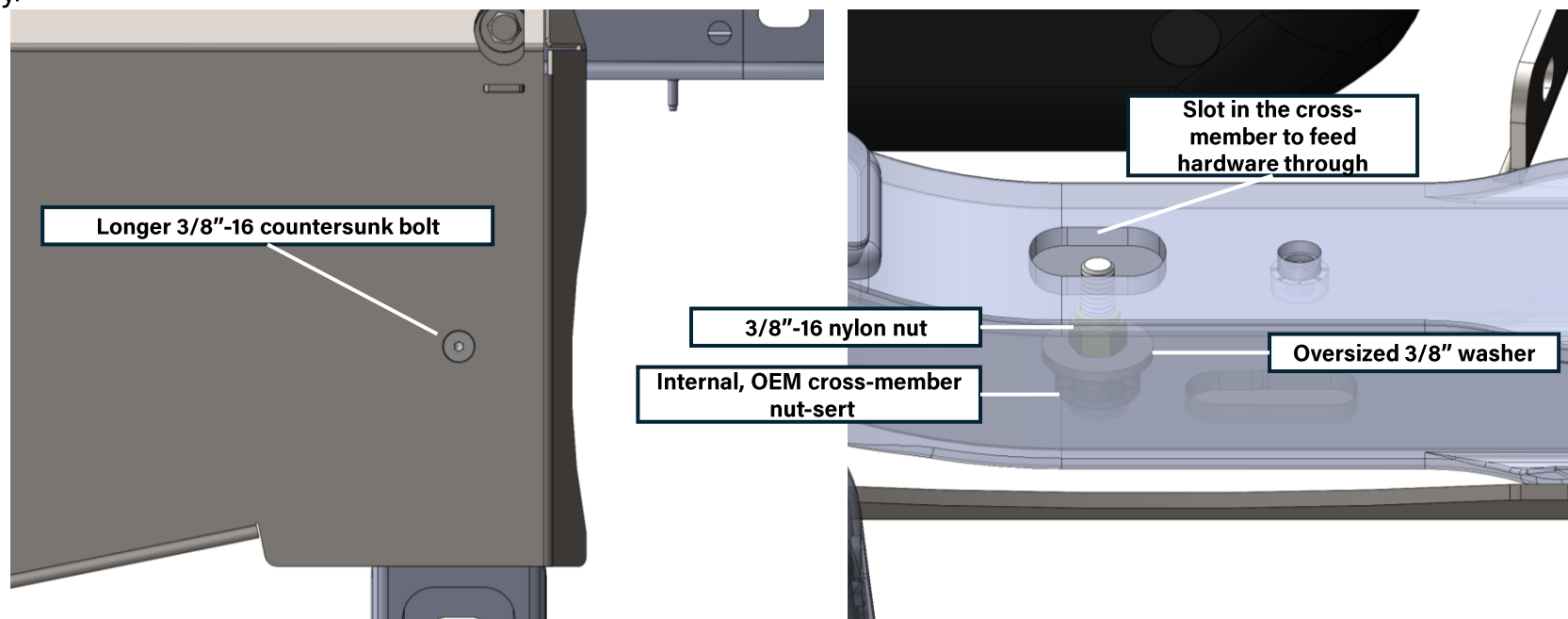


Figure 21: Front countersunk bolt and hardware installed

INSTALLATION INSTRUCTIONS

16. Tighten the rear gas tank support bracket into place using a $9/16''$ wrench. Then, thread the OEM frame bolt (previously removed from Step 5, Bolt E) until tight. The smaller, $5/16''$ -18 locknut should already be tight (recall Step 11).

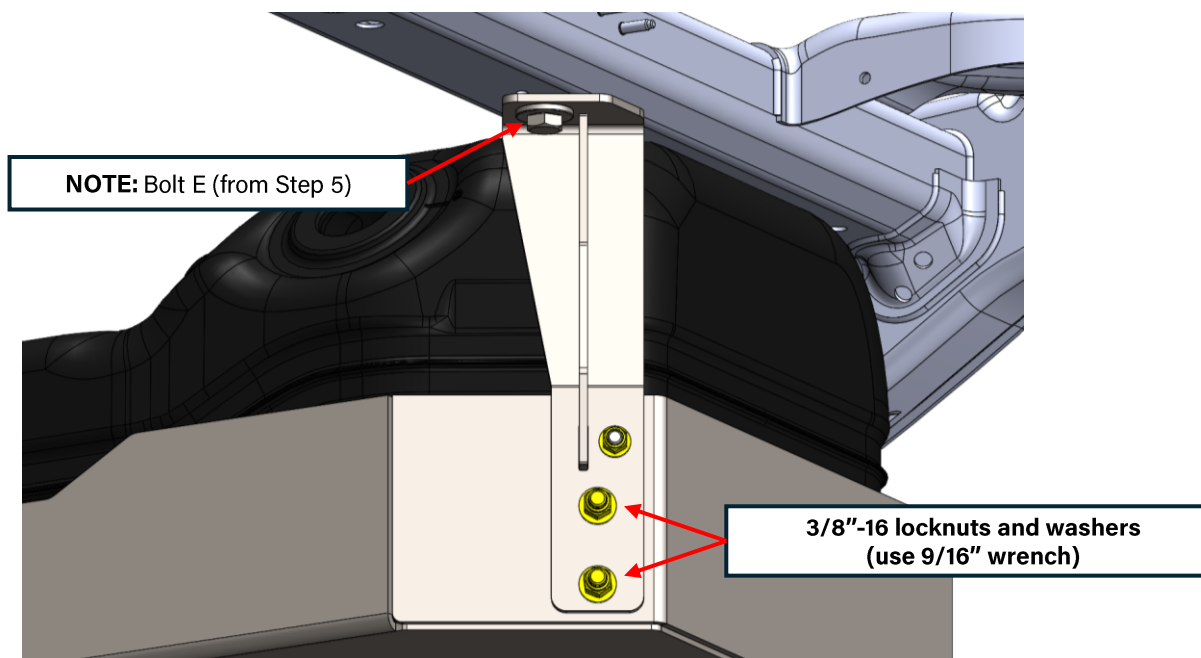


Figure 22: Rear gas tank support bracket installed

INSTALLATION INSTRUCTIONS

17. Note that, **depending on vehicle year and model, this threaded insert may be missing on your frame.** If this is the case, please use the flag nut-sert and a 1/2"-13 serrated bolt. Carefully feed the flag nut through the slot in the frame and feed the bolt through. See photos below for reference. Use a 3/4" socket to tighten the bolt.

If your vehicle has the OEM threaded insert at this location, use the OEM bolt removed from Step 2.

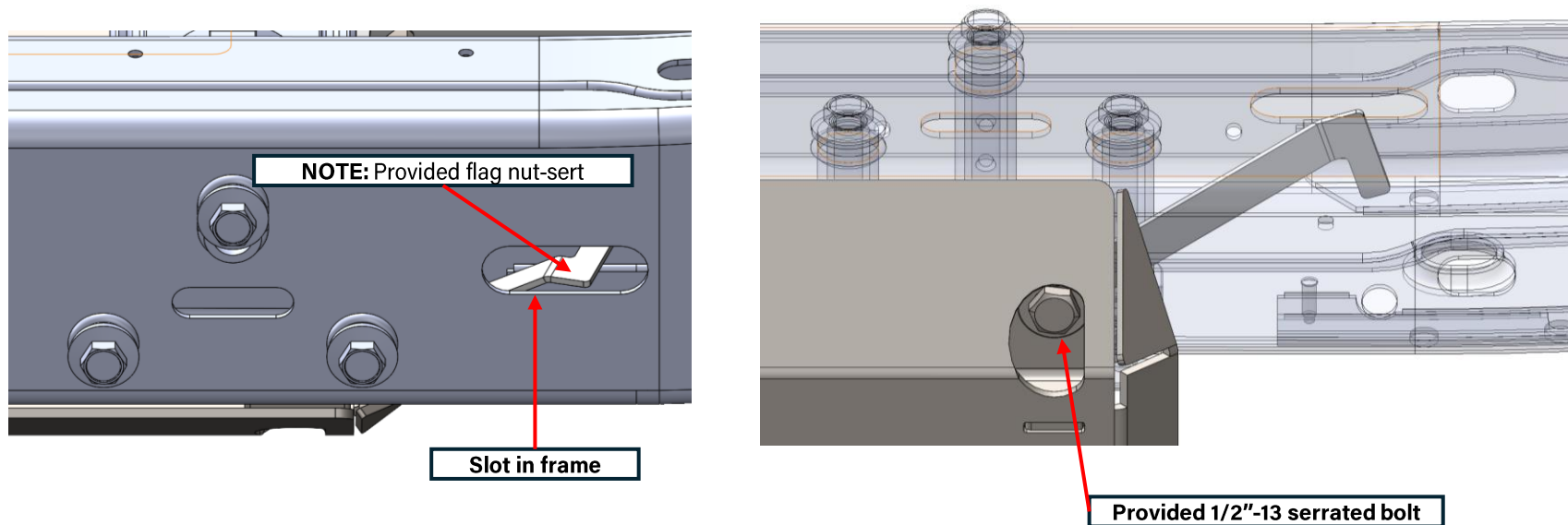


Figure 23: Front of tank threaded insert location

INSTALLATION INSTRUCTIONS

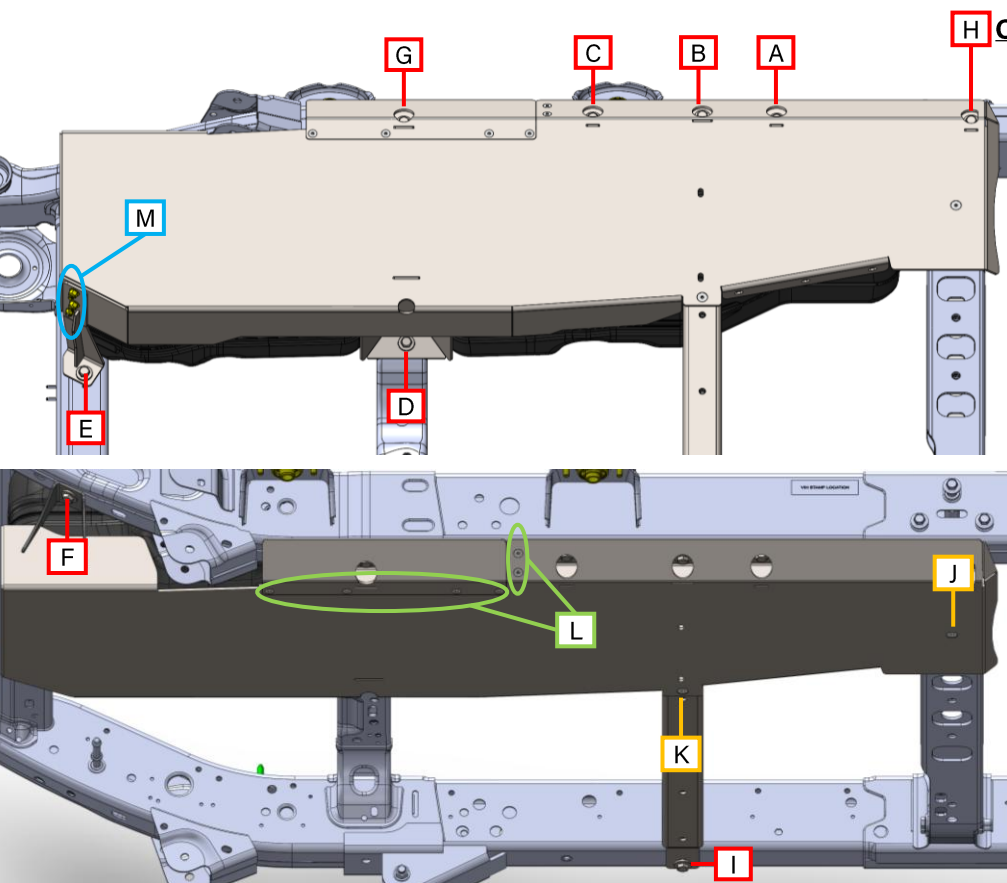
18. At this point, the new gas tank skid plate is fully installed, but all of the connections need to be torqued to specification. Please proceed to the following step for the torque values for each connection.



Figure 24: Gas tank skid plate fully installed

INSTALLATION INSTRUCTIONS

19. With all the hardware in place, you may now begin tightening. Starting at the gas tank skid plate, refer to Table 1 below to ensure that all the hardware used in the system is tightened to specification.



NOTE: Bolt H may be replaced with bolt R if the threaded insert in the frame is missing. See Step 17.

Table 1: Torquing procedure for gas tank skid plate hardware

BOLT ID	QTY.	DESCRIPTION	TORQUE (ft-lb)	TOOL SIZE
A-I	9	OEM frame bolts	48	18mm
J	1	3/8"-16 x 2" Countersunk bolt and nut	25	9/16" + 7/16" hex
K	1	3/8"-16 x 1" Countersunk bolt	25	7/16" hex
L	6	5/16"-18 x 0.625 Countersunk bolts	20	3/16" hex
M	2	3/8"-16 stud bolts and nuts	40	9/16"
R	1	1/2"-13 x 1.5" Serrated bolt	75	3/4"

Figure 25: bolt callouts on both sides of the gas tank skid plate

INSTALLATION INSTRUCTIONS

20. The new gas tank skid plate is installed. If you are also installing the Clayton Off-Road Transfer Case Skid Plate (4209300), please visit the product page and download the instructions document for detailed installation guidance.

If you are only installing the gas tank skid plate at this time, please follow the post-installation checklist below. Please reach out to us if you have any questions or concerns.

POST-INSTALLATION CHECKLIST:

- All 8 frame bolts are tightened down (factory, M12-1.5 hardware)
- The short, countersunk bolt at the skid support member is tightened
- The long, countersunk bolt at the OEM cross member is tightened with the provided 3/8"-16 nylon nut and hardware
- x2 front fuel lines are reconnected with plastic locks
- x2 top of tank fuel connections are reconnected with plastic locks
- x3 rear of tank fuel connections are reconnected with plastic locks
- Foam tape is applied to the skid support member to prevent rubbing

- Long Arm Suspension Only:** Rear lower control arm is reinstalled and torqued to proper bolt specifications

