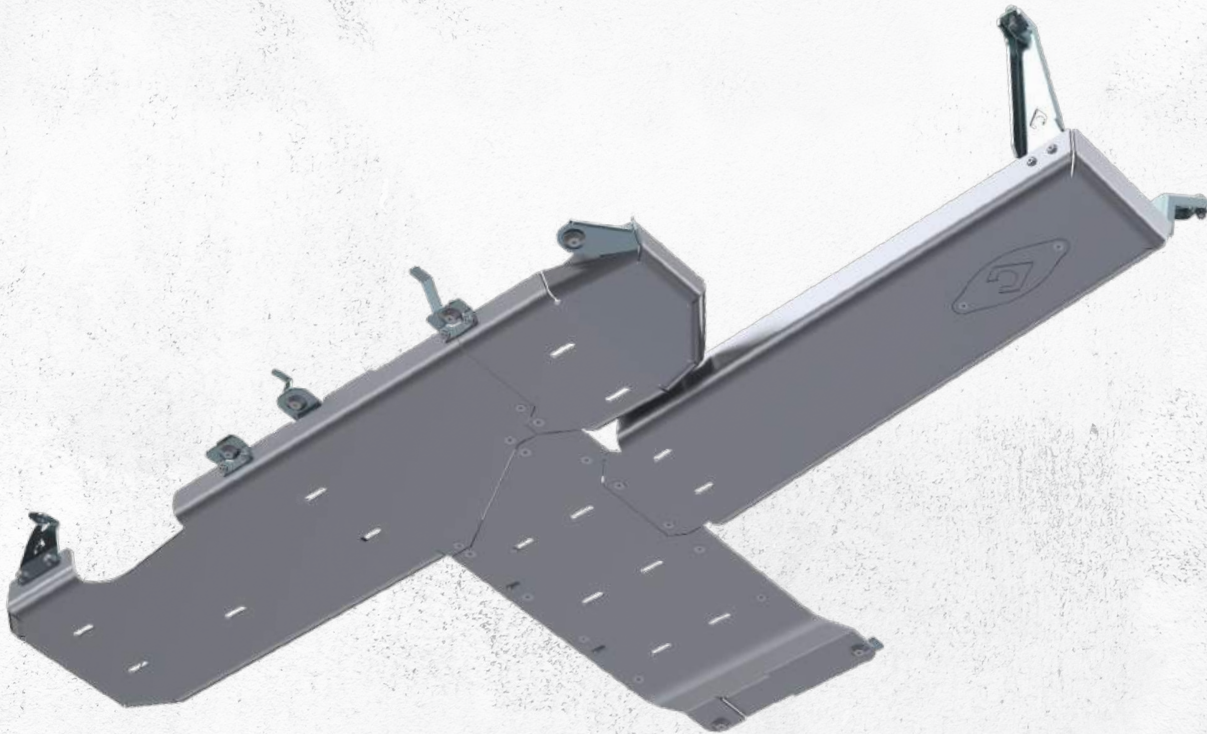




PART # JL4168

JL FULL BELLYPAN WITH OIL DOOR - 2.0L GAS ENGINE INSTALLATION INSTRUCTIONS



ESTIMATED INSTALLATION TIME

3-5 hours

REQUIRED SKILLS

- General Mechanics Skills
- Drilling

REQUIRED TOOLS & SUPPLIES

- 18mm socket
- 17mm socket
- 15mm socket
- 13mm socket
- 10mm socket
- Ratchet strap
- 9/16 inch wrench
- 9/16 inch socket
- Electrical tape
- 7/32 inch allen wrench
- Ratchet extension 2 inch
- Ratchet extension 6 inch
- Screw driver
- Flat pry bar
- magnet stick
- Safety glasses
- Jack/vehicle lift (optional)

NOTES:

- This kit replaces original SKU JL4108
- This product arrives in 4 separate boxes labeled BP1944.B, BP1867.B, BP1235.B, and BP1161.B
- Component appearance in instructions may vary from those received

WARNING MESSAGES

This product demands a basic understanding of mechanical procedures and should only be installed by individuals proficient with mechanic's tools. Any tasks involving welding or cutting parts should be performed by trained professionals. Artec Industries disclaims responsibility for mishaps arising from improper installation, or any damage or accidents resulting from cutting or welding tasks. Exercise caution and seek professional help as required

SAFETY

1. We've furnished a written installation guide, along with relevant details, to aid you in making safety-conscious decisions.
2. While these guidelines will highlight potential risks, it's crucial to exercise your personal judgment when performing any required steps.
3. Before initiating any tasks, it's essential to conduct a job safety analysis to identify specific hazards in your situation and take measures to eliminate or protect against them.
4. Before commencing the installation of this product, make sure you familiarize yourself with and fully understand all safety warnings and guidelines.

DISCLAIMERS

All Artec Industries products should be installed by a competent, certified individual following the intended installation instructions for each product. Incorrect installations not only nullify any warranties but could also lead to product damage or even damage to the vehicle it's installed on. Prior to installation, carefully read all provided instructions or manuals, and watch any associated videos. For any doubts or queries, reach out to Artec Industries before beginning the installation process.

Many products necessitate lifting and supporting the vehicle off the ground. It is the installer's responsibility to ensure this can be done safely and that the right equipment is at hand to carry out the installation. Artec Industries installation instructions presume the installer is competent to lift the vehicle safely and correctly.

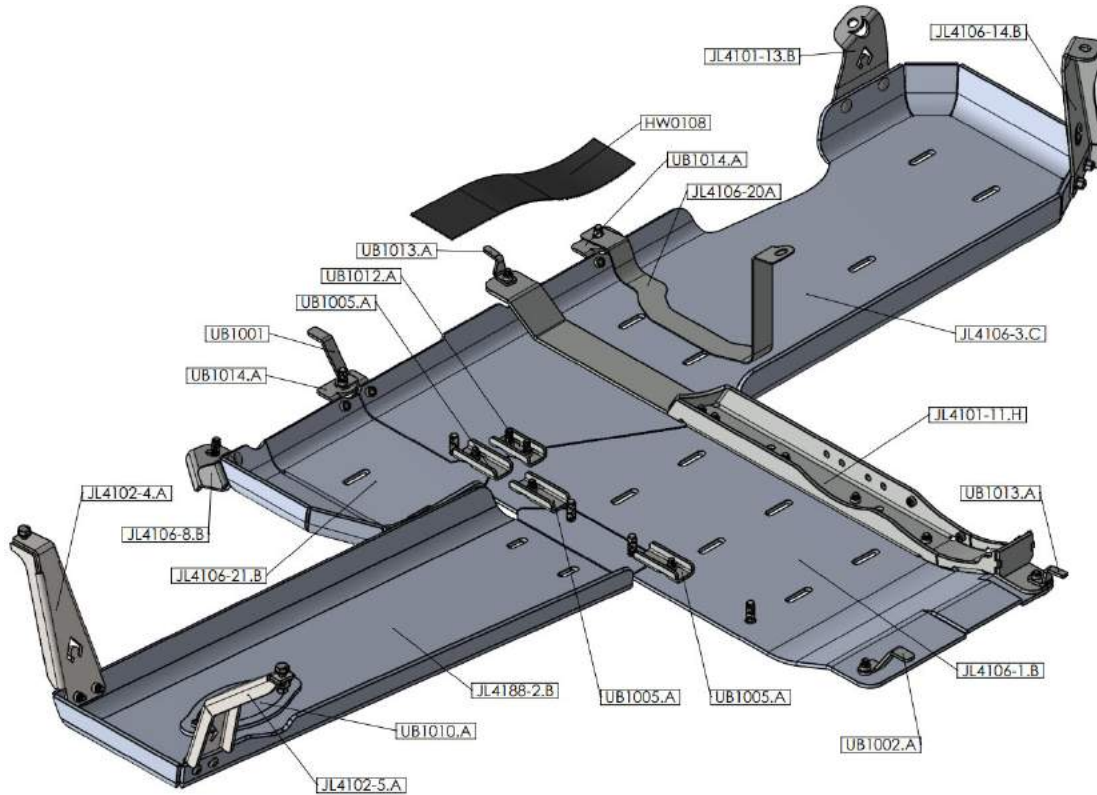
Modified vehicles won't perform identically to their stock counterparts. It's incumbent upon the vehicle owner to understand the alterations such modifications will bring to the vehicle's driving dynamics. These might encompass (but aren't limited to): changes in handling, braking, rollover angle, and potential incompatibilities with the factory-installed anti-lock braking systems, stability control systems, or traction control systems.

SPECIAL NOTES

- This product requires removal of the factory fuel tank skid which supports the plastic fuel tank. Prior to beginning installation, ensure that you have 1/4 tank of fuel or less in the vehicle.
- Unless otherwise noted, all hardware should be **LOOSELY** tightened by hand until the very end of installation when all components are attached.

JL4168 PARTS BILL OF MATERIALS

Please confirm you have all the listed parts below BEFORE beginning your installation. If any parts are damaged or missing, KEEP ALL ORIGINAL BOXES and PACKAGING and contact us.

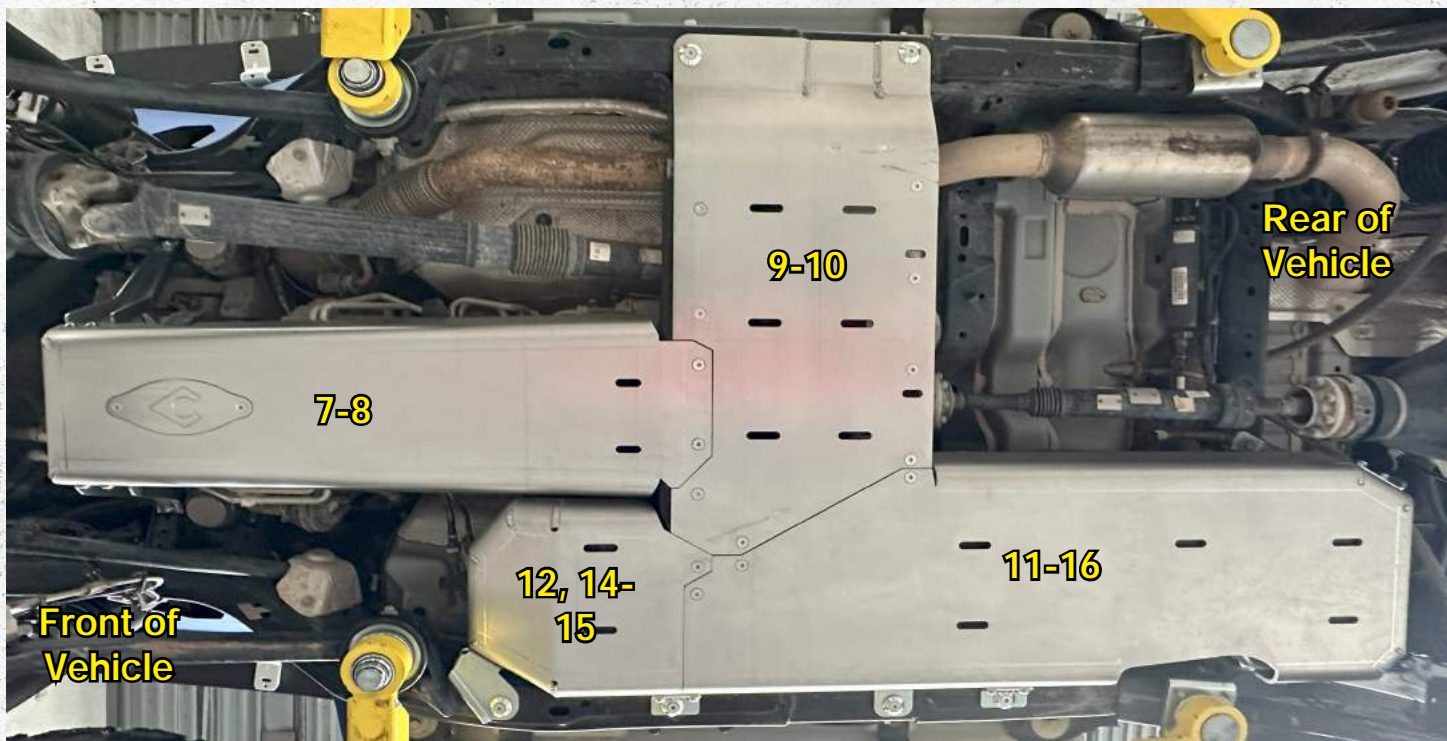
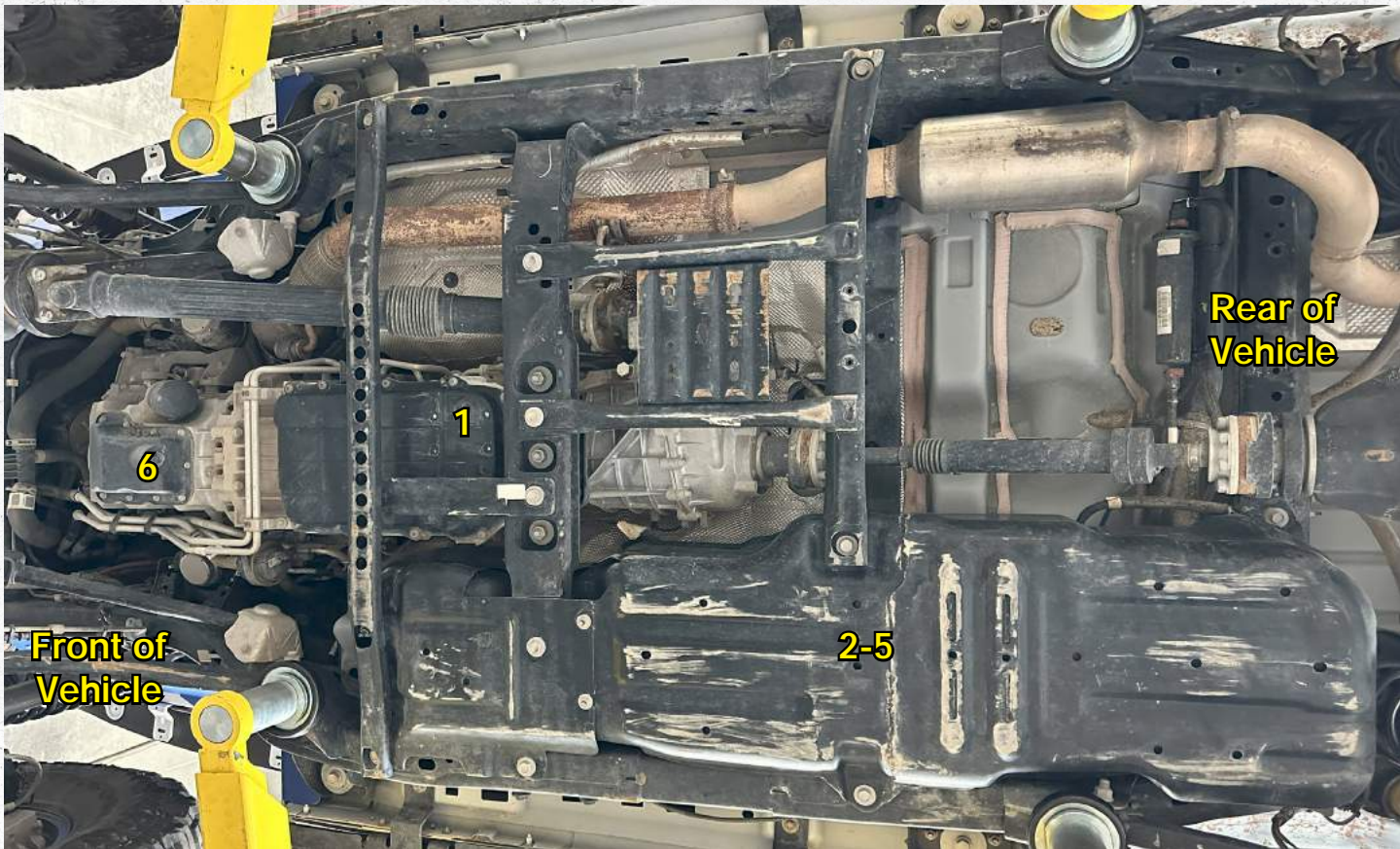


NOTE: The part numbers indicated above end in a "." and "letter" which indicate the revision number for the part. The etched part number on your physical parts do not need to match the above drawing revision exactly.

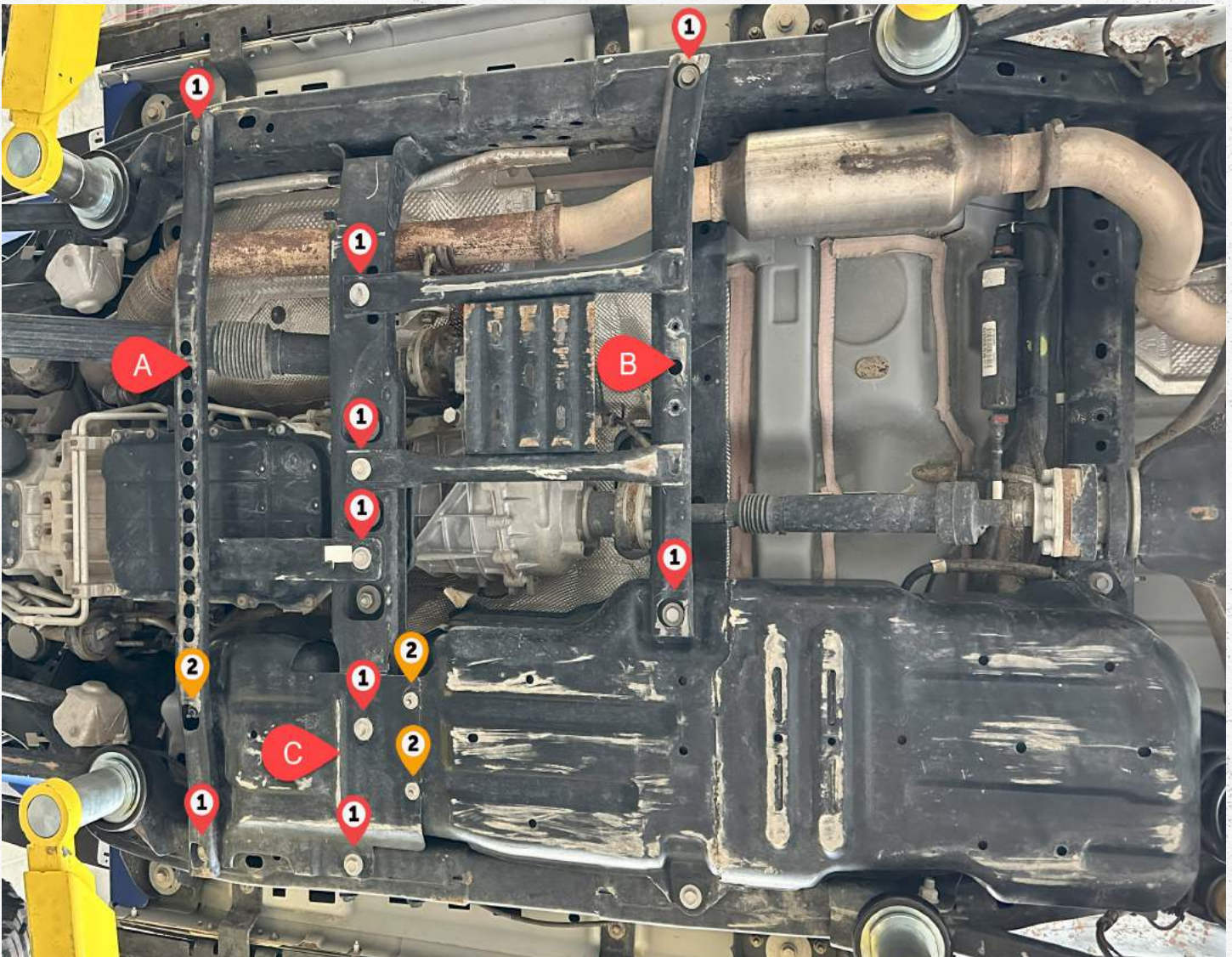
HK4108 HARDWARE BILL OF MATERIALS

PART NUMBER	DESCRIPTION	QTY.
HW0101	3/8 x 16 x 1 Button Head Cap Screw Alloy Steel Zinc Plated	4
HW0135	M10 x 1.5mm - Flange Lock Nut	2
HW0136	M10 - 1.5 x 40mm long Hex Head Bolt	2
HW0137	M10 washer	2
HW0019	3/8"-16 Nylock Insert Hex Nut Clear Zinc	6
HW0059	3/8" Flat Washer Type 1 Yellow Zinc	10
HW0105	3/8 x 1in carriage bolt	6
HW0141	CUSTOM M12 - 1.5 x 40mm long flat head	7
HW0147	.375" Countersunk Aluminum Washer	6
HW0185	3/8" x 1.5 Countersink Allen Head Bolt - Zinc	8
HW0035	3/8" 16 x .75" long button head screws ZINC plated	4
HW0061	3/8 x 1 flat head bolt	5

STEP LOCATION GUIDE



DISASSEMBLY INSTRUCTIONAL GUIDE

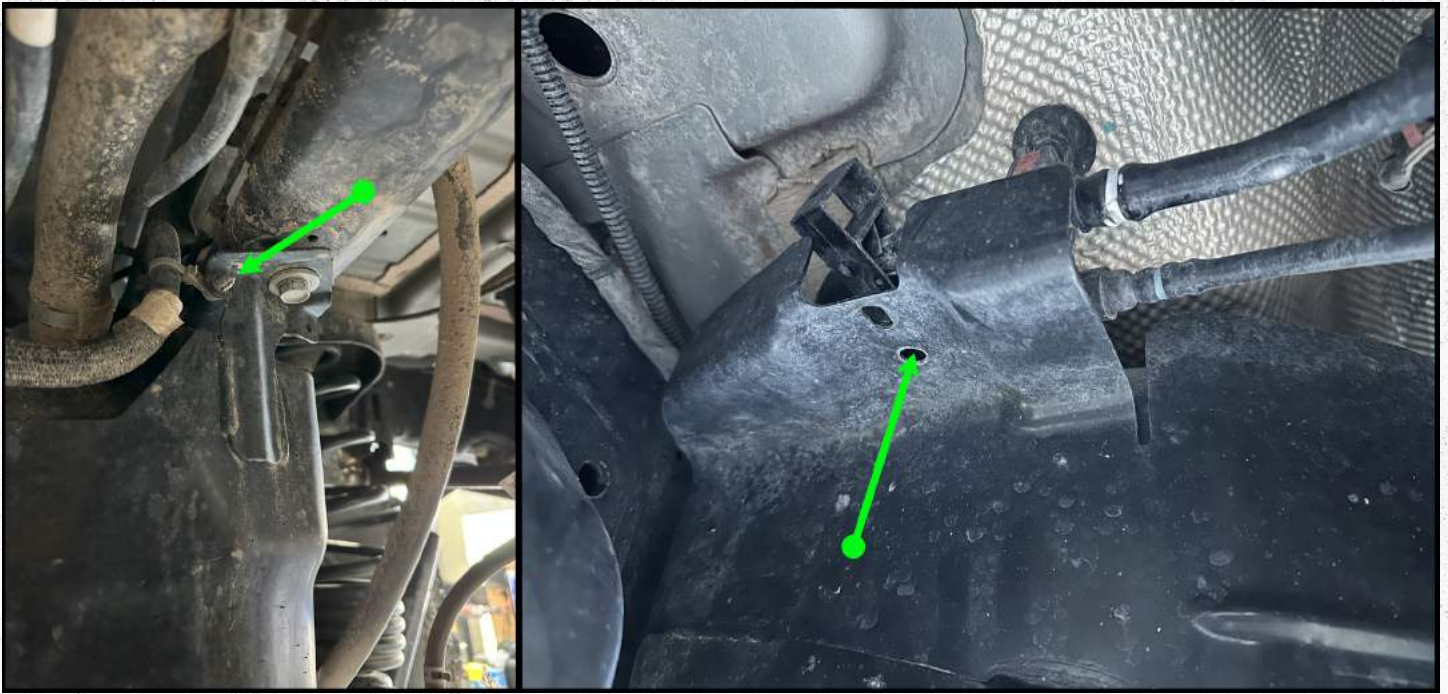


Step 1:

A: Remove the transmission skid by removing 3 - 12mm bolts ❶ using a 18mm socket AND 1 - 8mm bolts ❷ using 13mm socket.

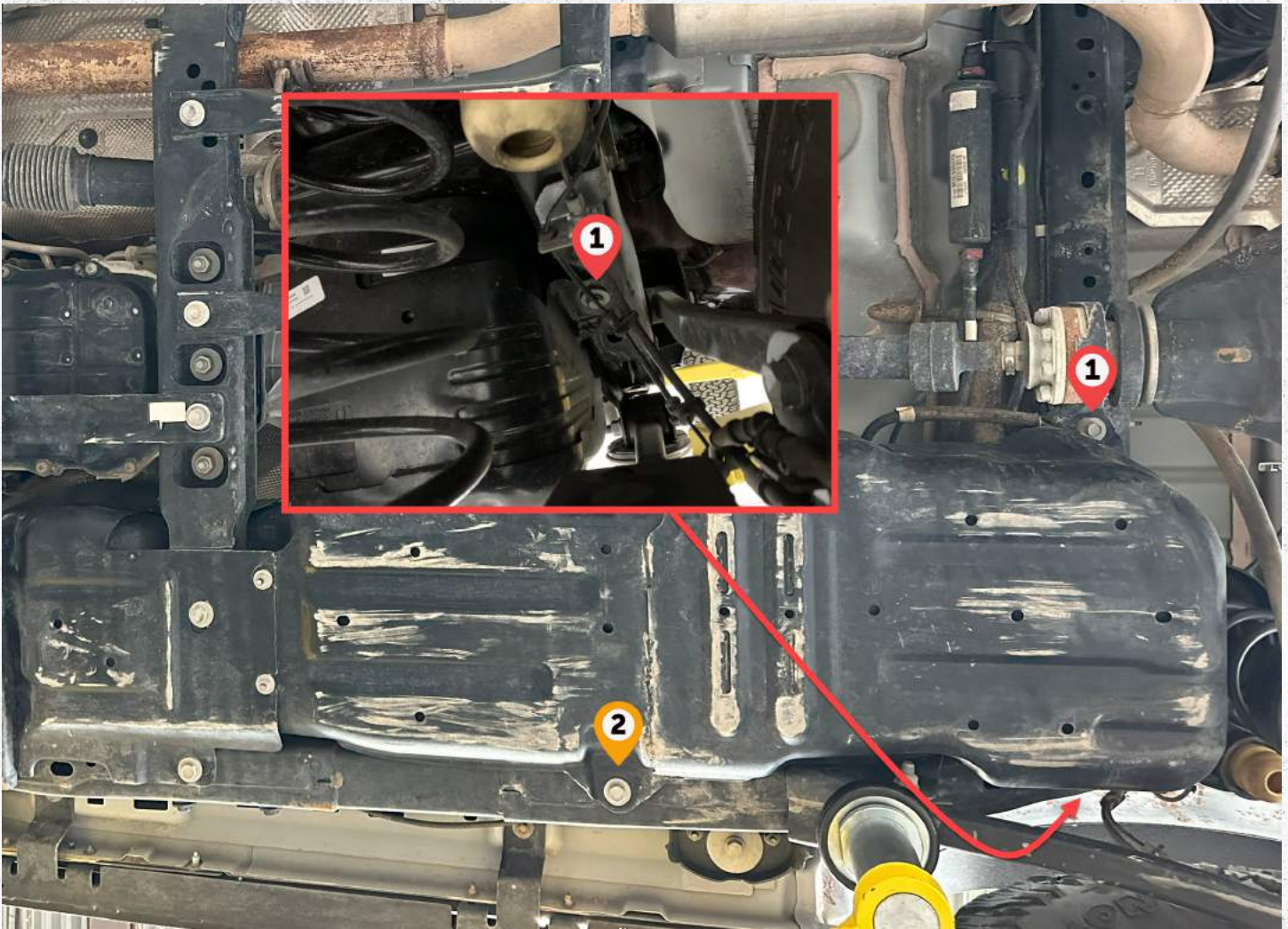
B: Remove transfer case skid by removing 4 - 12mm bolts ❶ using a 18mm socket.

C: Remove the fuel tank nose skid by 2 - 12mm bolts ❶ using a 18mm socket AND 2 - 8mm bolts ❷ using 13mm socket.



Step 3:

Disconnect the fuel line from the front and rear of the factory fuel tank skid by pushing the Christmas tree connector up through the bracket (GREEN) arrow

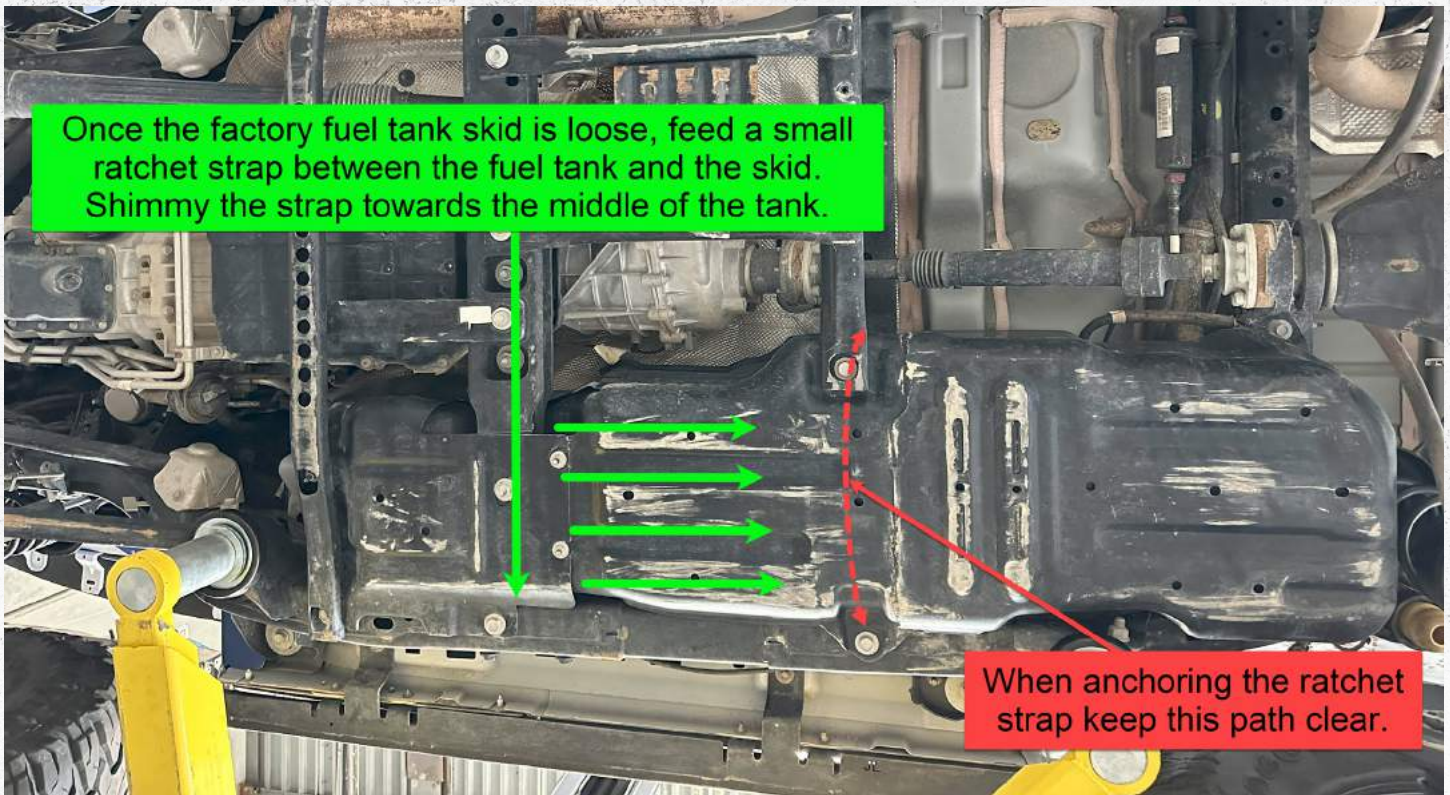


Step 2:

A: Remove fuel tank skid by loosening 2 - 12mm bolts ① using a 18mm socket.

B: Remove 1 - 12mm bolts ② using the same 18mm socket.

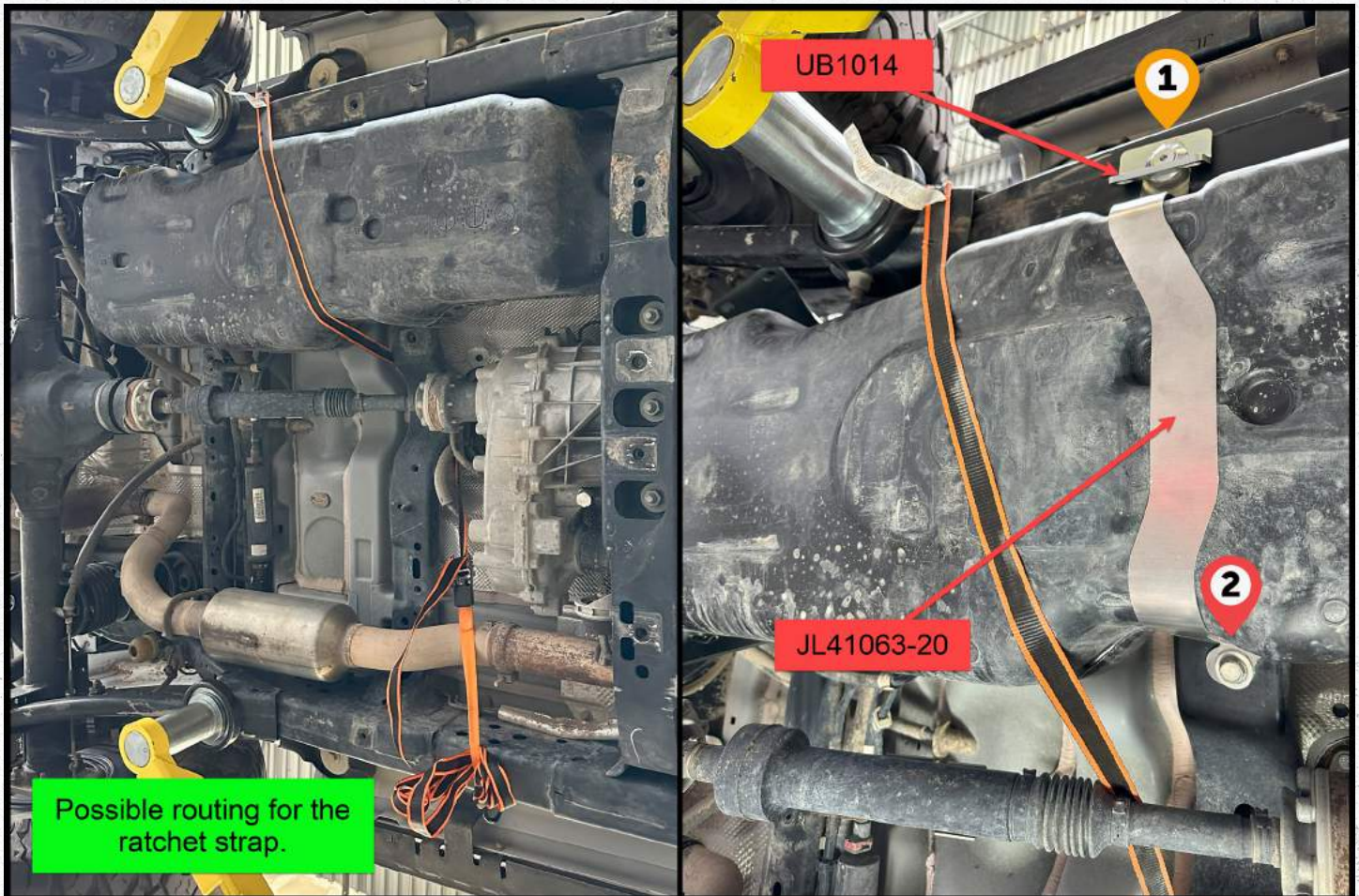
C: Detach the clips holding the fuel lines to fuel tank skid



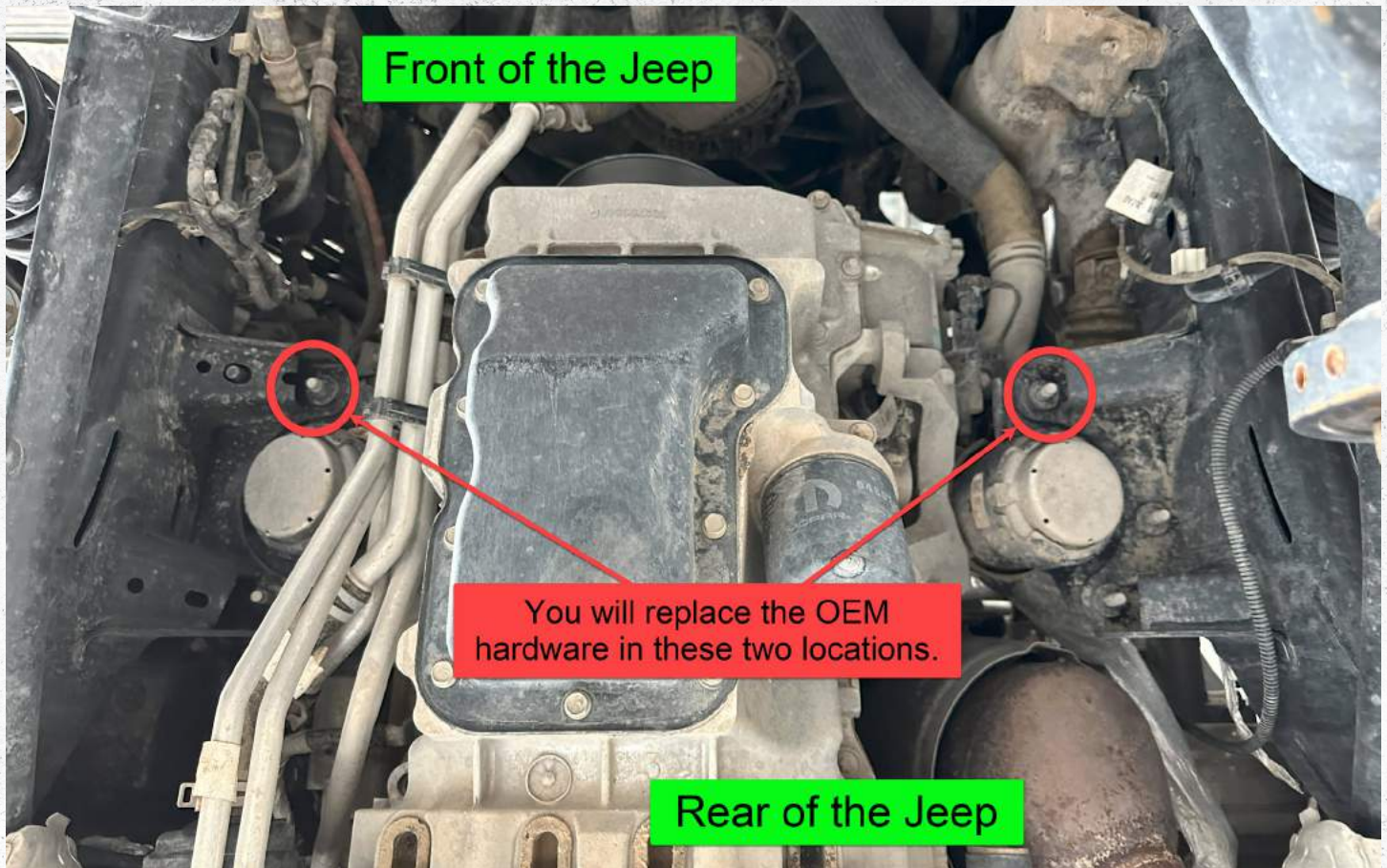
Step 4. Using a small ratchet strap you will suspend the tank so that you can remove the factory fuel tank skid. Make sure to anchor the ratchet strap to something substantial. After suspending the tank you can remove the fuel tank skid. This can take some time, and can be frustrating but it is necessary. Having less than 1/4 tank of fuel helps here.

SAFETY NOTE: When manipulating the skid and fuel tank, be careful not to damage or puncture the fuel tank. The fuel tank skid can be heavy and awkward to drop. Have a second person assist or use a jack to support the skid as you remove it. Ensure the ratchet strap is securely holding the fuel tank in place before attempting to remove the skid plate.

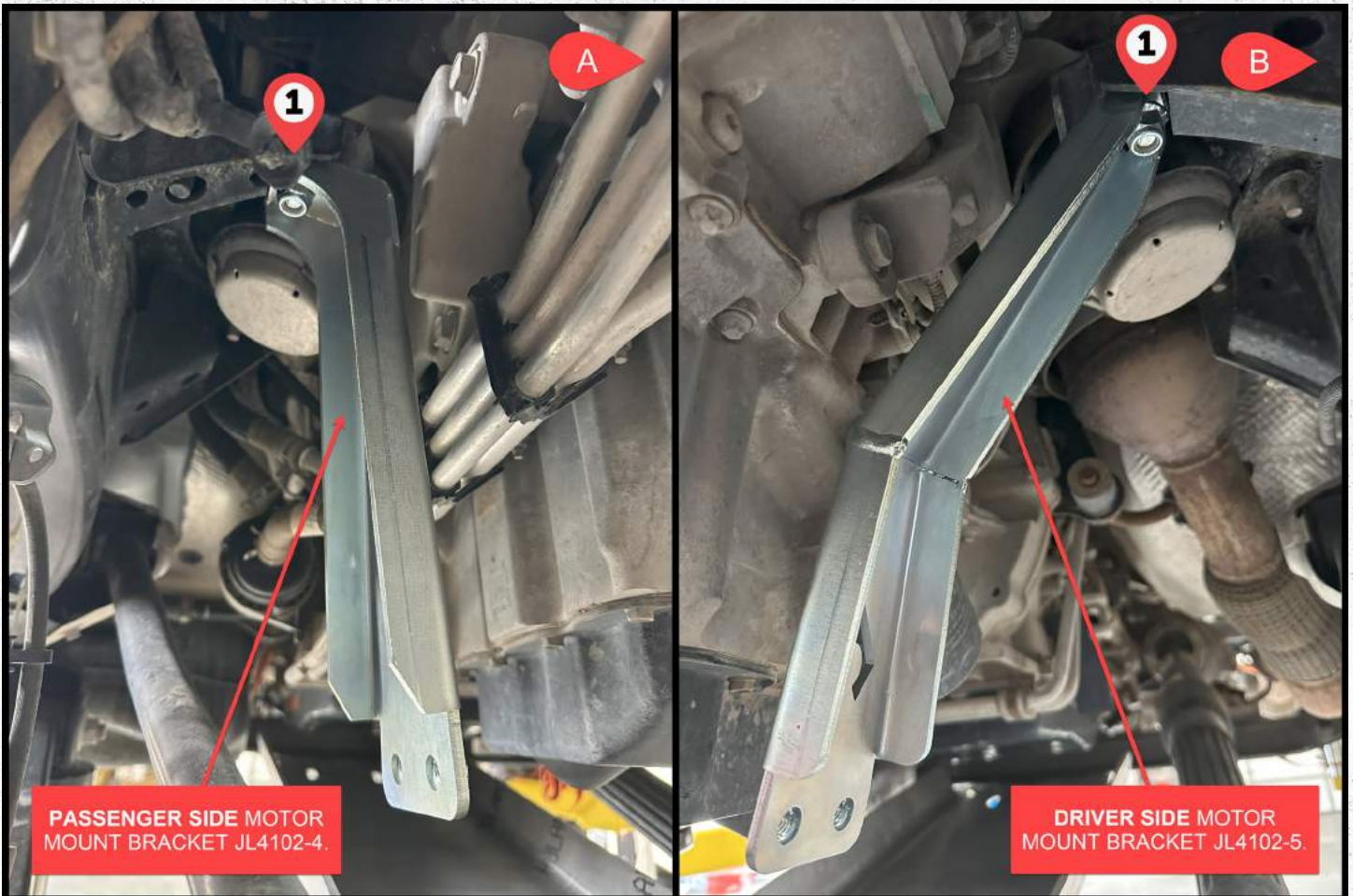
ASSEMBLY INSTRUCTIONAL GUIDE



Step 5: Once the factory fuel tank skid has been removed, install the fuel tank strap JL4106-20 using 1 - OEM 12mm bolt ② with a 18mm socket AND 1 - 12mm x 40mm counter sink bolt & counter sink washer ① through UB1014 bracket with the 7/32 allen wrench as shown above.



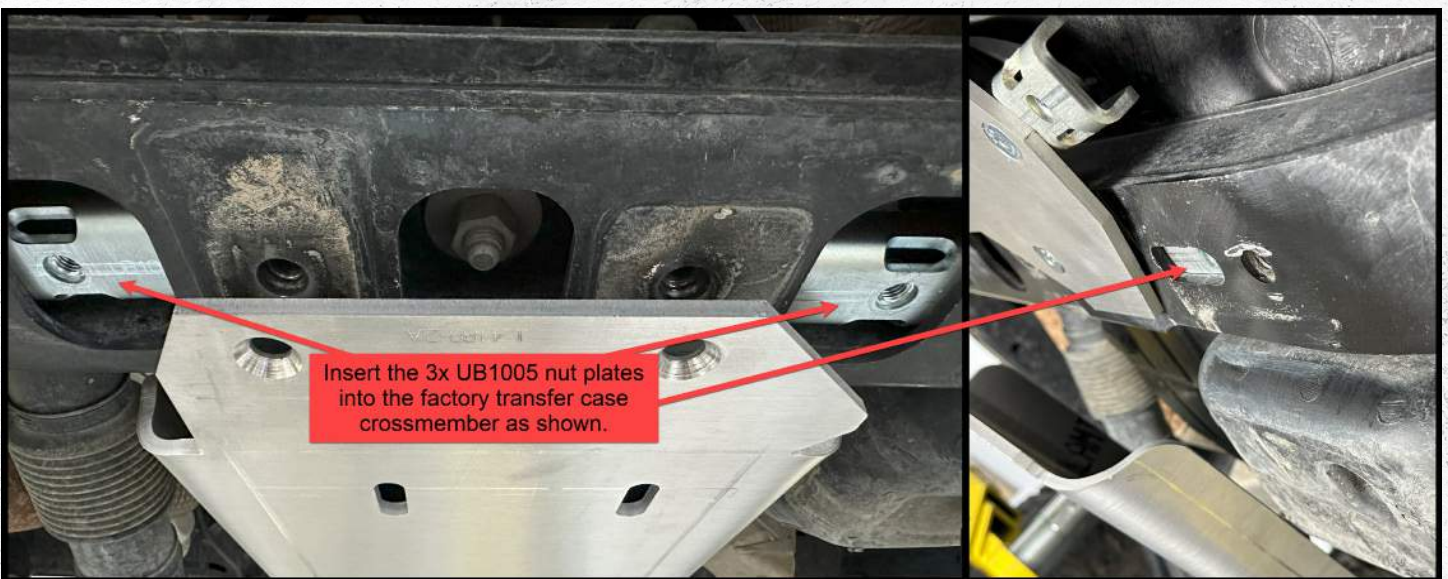
Step 16. Remove the factory 10mm bolts from these two locations (**RED**) and replace them with the supplied M10x40mm bolts with M10 zinc plated washers using a 17mm socket.
NOTE: We suggest applying loctite to this hardware **BEFORE** installing them into the motor mounts.



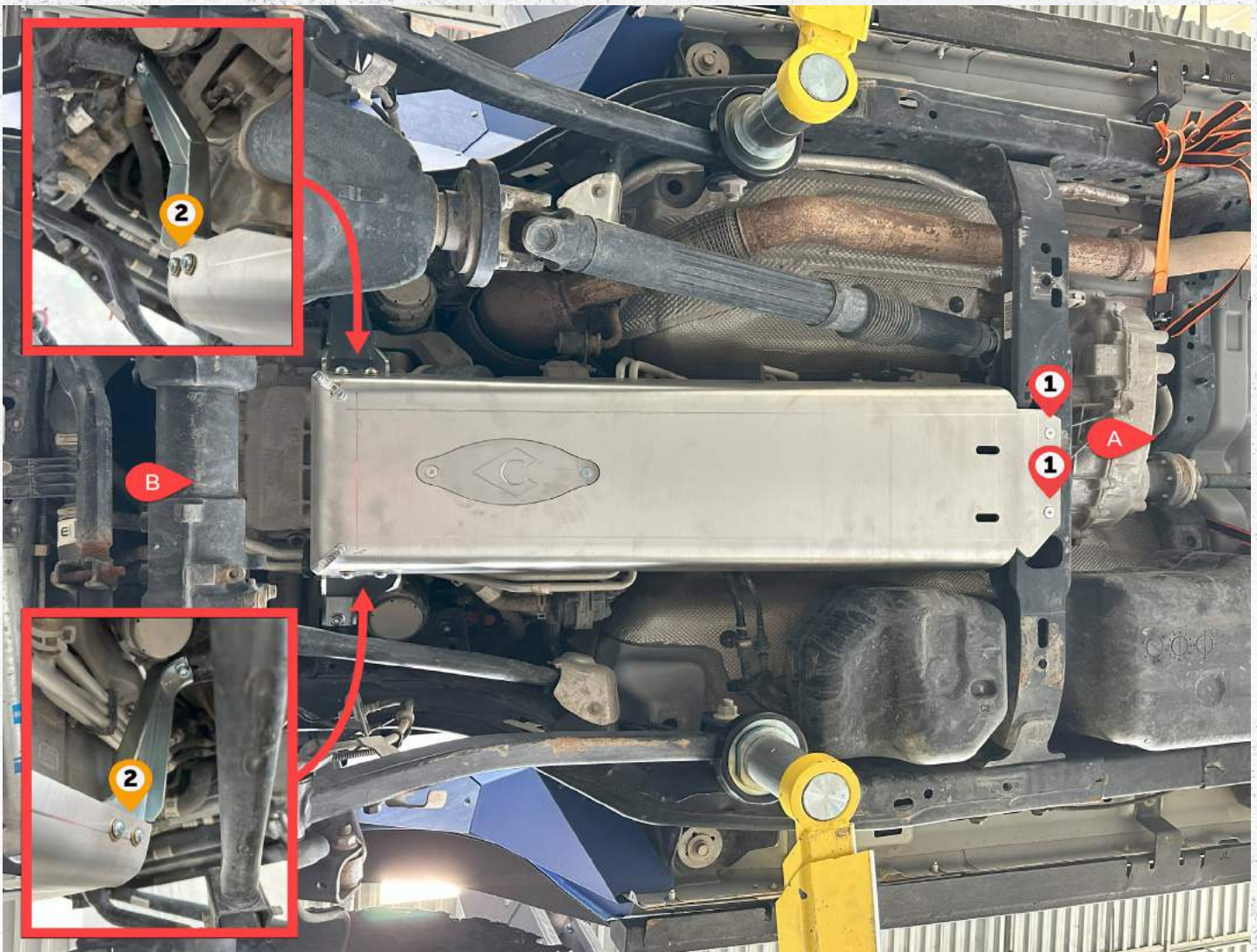
Step 17.

A: Loosely install the DRIVER SIDE motor mount bracket JL4102-4 using 1 - M10 flange nut ① with a 15mm socket.

B: Loosely install the PASSENGER SIDE motor mount bracket JL4102-5 using 1 - M10 flange nut ① with a 15mm socket.



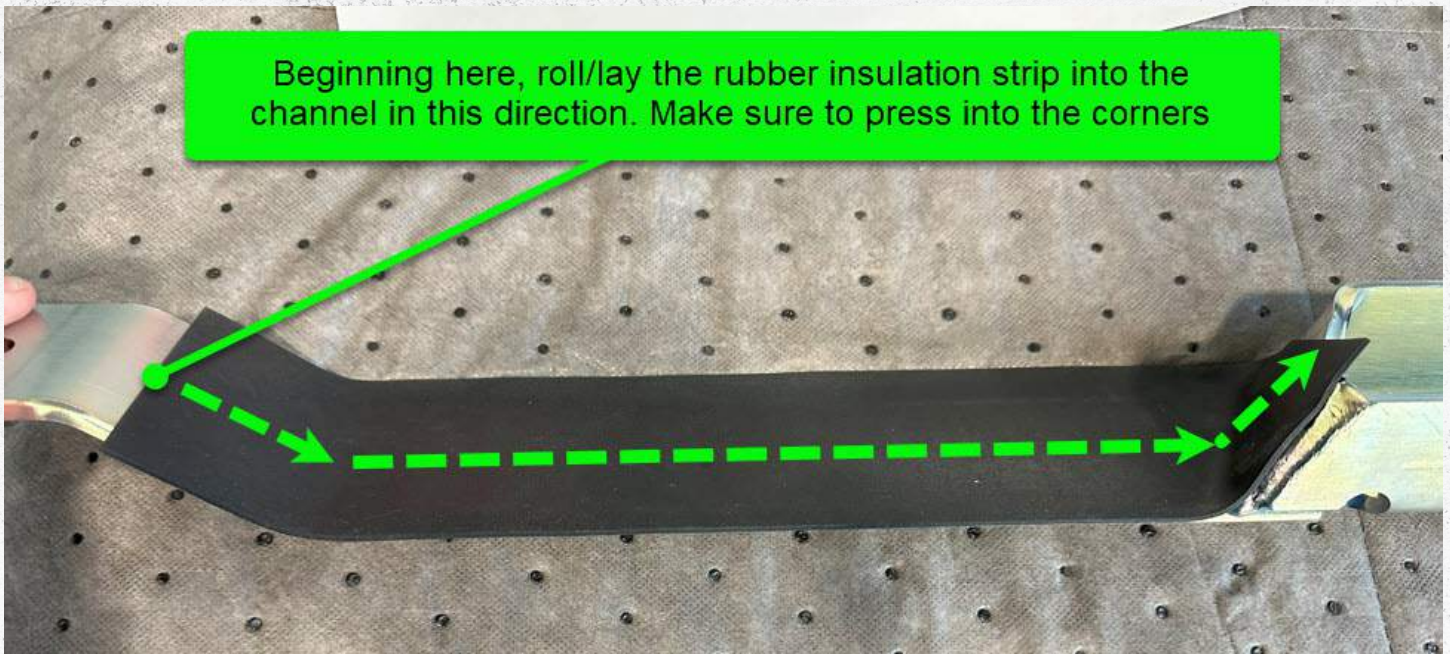
Step 8. Insert the 3 nut plates as shown above.



Step 9.

A: Loosely install the engine skid using 2 - M12 x 40mm custom flathead bolts **1** using the 7/32 allen wrench.

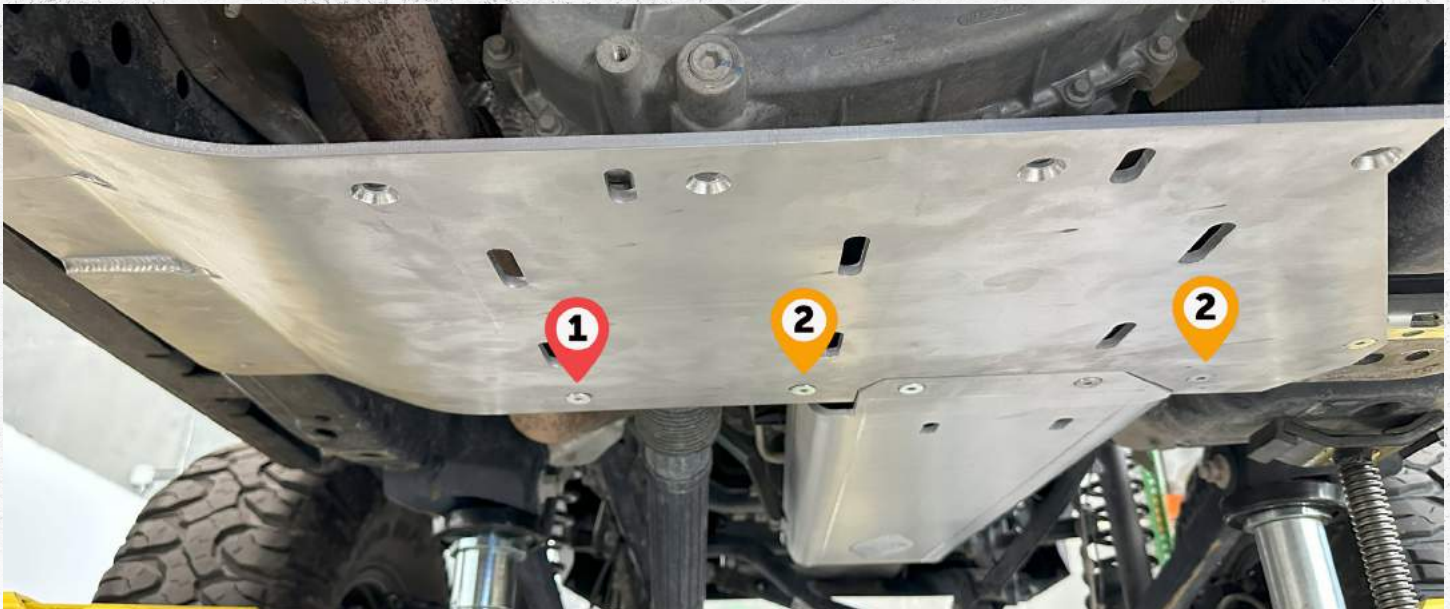
B: Loosely attach the engine skid to the motor mount brackets using using 4 - 3/8 x 1" button head bolts and 3/8 zinc plated washers **2** with the 7/32 allen wrench.



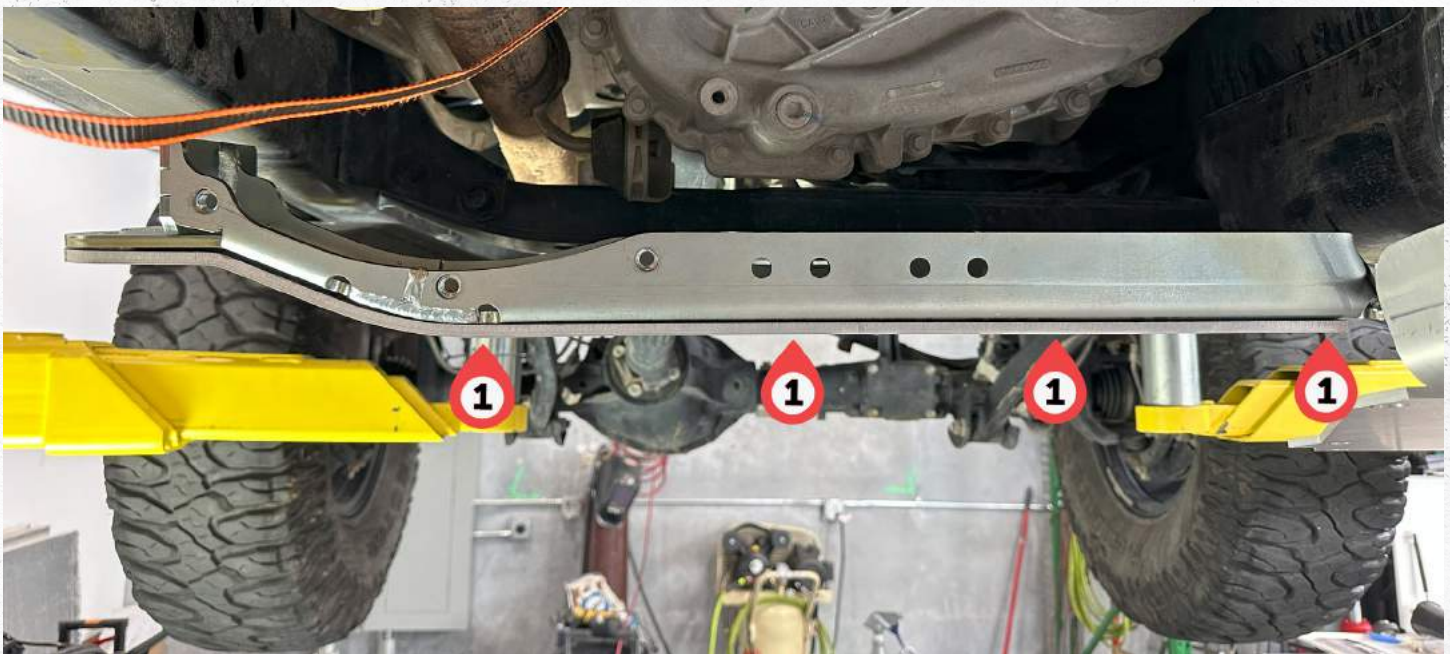
Step 6. Remove the adhesive backing strip from the rubber insulation and attach it as seen above. Make sure to lay it on squarely and press it into the corners.



Step 7. Loosely assemble the nut plate UB1012 to the transfer case skid with 1 - 3/8 x 1" flat head bolt ❶ using a 7/32 allen wrench.



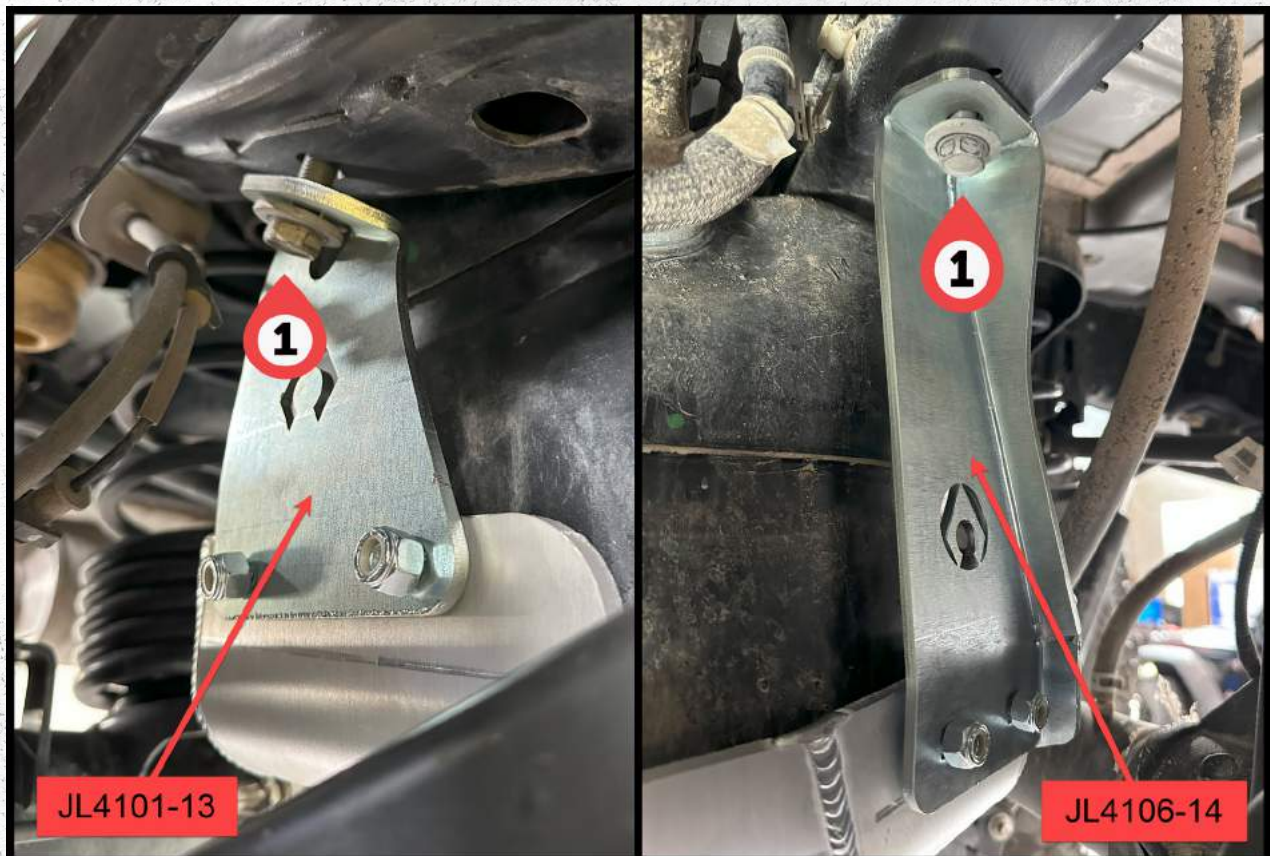
Step 15. Loosely assemble the transfer case using 2 - 3/8 x 1.5" flat head bolts ② and 1 - M12 x 40mm custom flat head bolt ① with the 7/32 allen wrench.



Step 14. Using the 7/32 Allen wrench assemble the supplied go ahead and tighten this crossmember to the transfer case skid with 3 - 3/8 x 1" flathead bolts ① Go ahead and tighten these bolts.



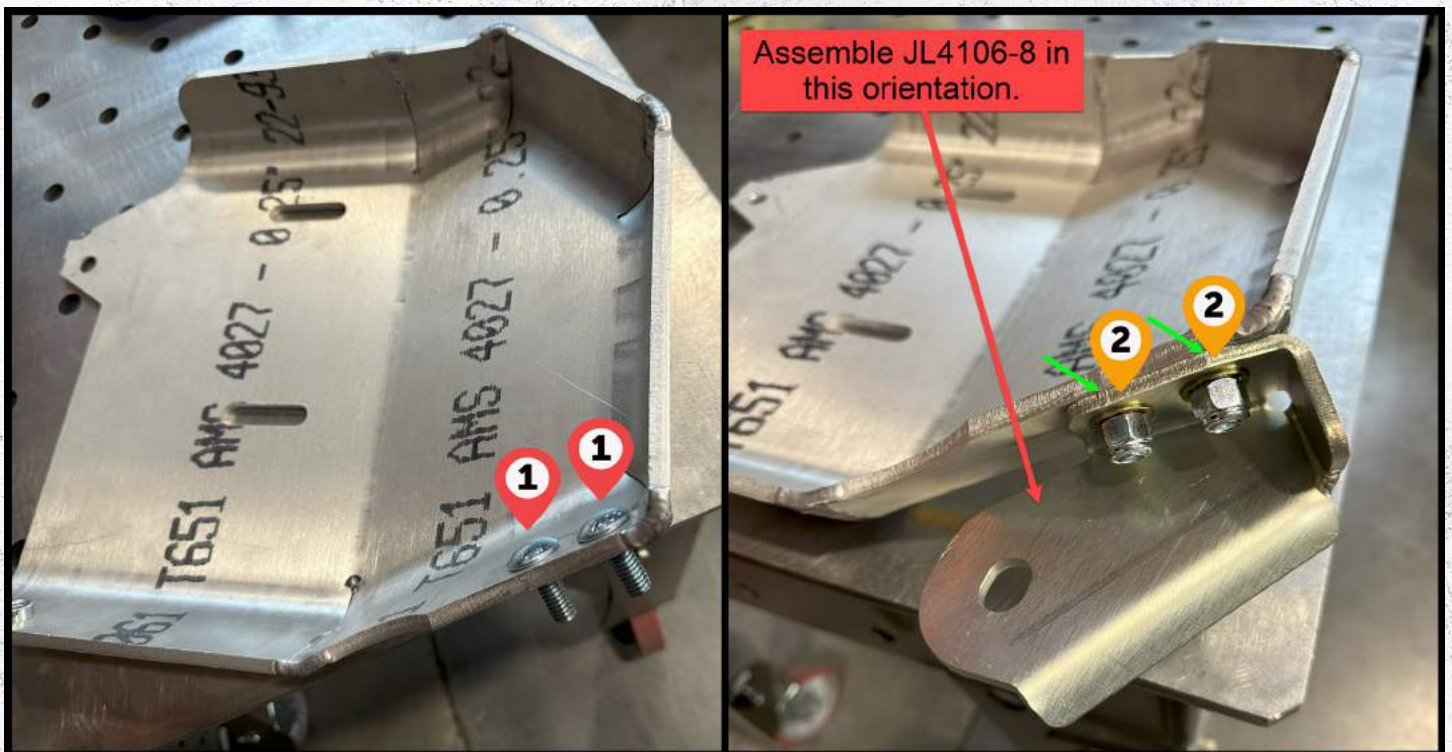
Step 13. Using tape secure 4 - 3/8" x 1" carriage bolts ① to the fuel tank skid prior to installing the fuel tank skid onto frame and support crossmember. Electrical tape works well.



Step 12. Loosely install fuel tank inner JL4106-14 and outer JL4101-13 support brackets using 2 - OEM 12mm bolts ② (removed from original skid) with a 18mm socket.

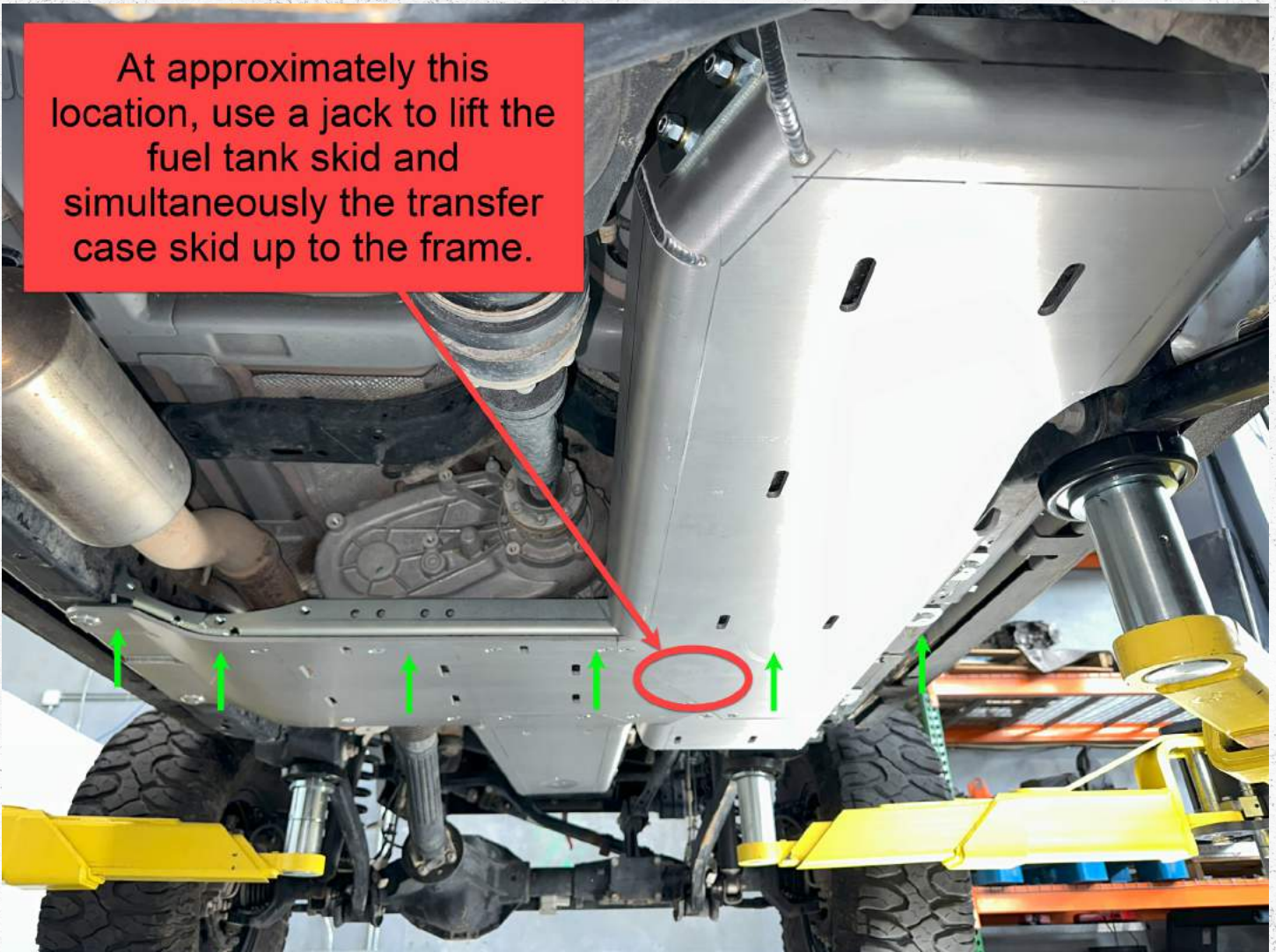


Step 14. Using a 9/16 inch wrench/socket loosely assemble the gas tank skid with 4 - 3/8 x 1" flat-head bolt ①.

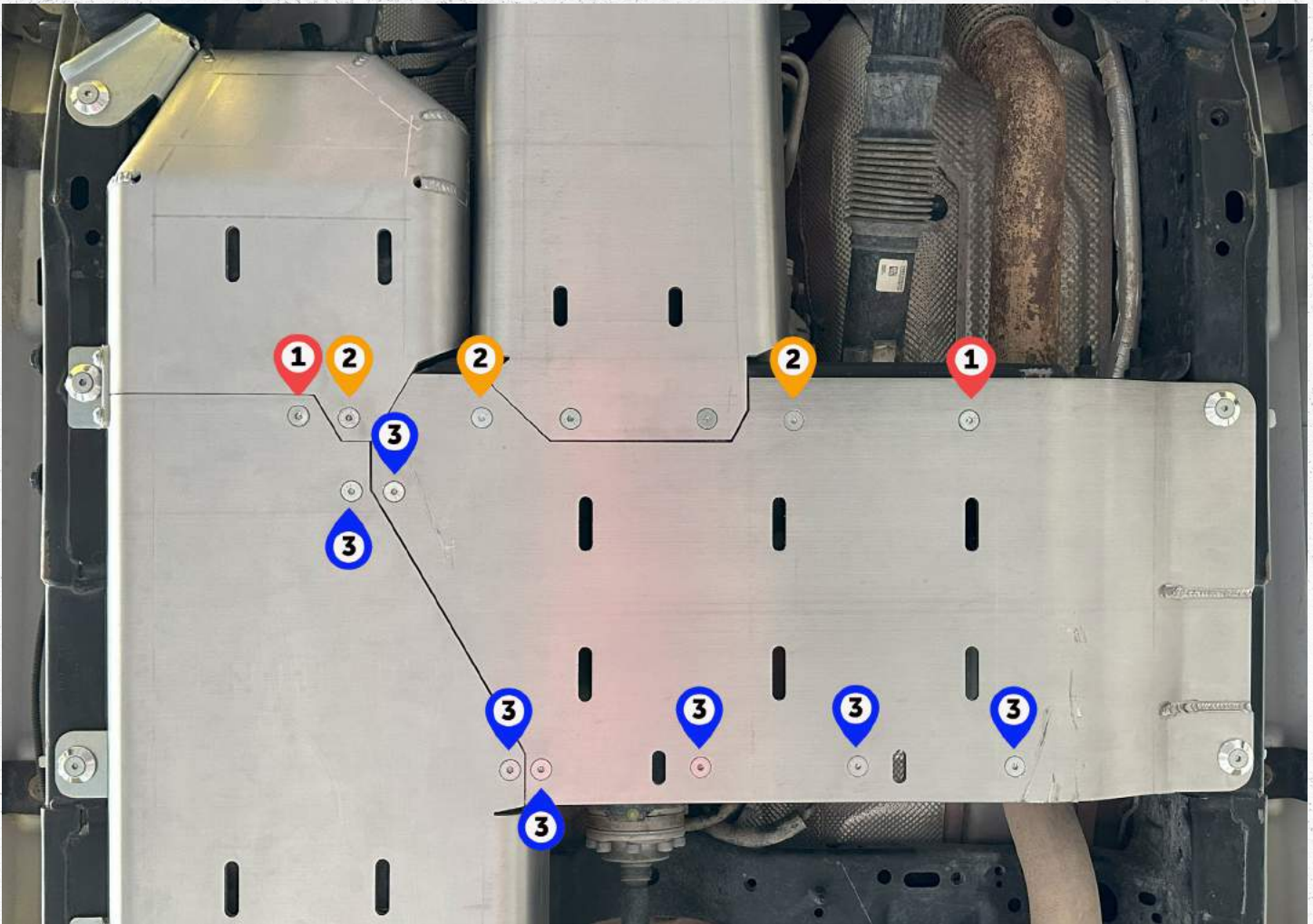


Step 15. Install 2 - 3/8 x 1" carriage bolts ① as shown above. Using a 9/16 inch wrench, assemble bracket JL4106-8 in the orientation above using 2 - 3/8 nyloc nuts with zinc flat washers ②. Make sure to align the edges, see the GREEN arrows, when assembling these parts. Tighten this hardware.

At approximately this location, use a jack to lift the fuel tank skid and simultaneously the transfer case skid up to the frame.



Step 15. With both the fuel tank skid and the transfer case skid hanging, with the supplier Artec cross-member assembled to the transfer case skid, place a jack/lift at the approximate location shown and lift the two skids into place. Pay close attention to how the parts interact and avoid any pinch points when lifting them. Be careful not to lift the skids too far, just until the crossmember makes even contact with the vehicle frame.

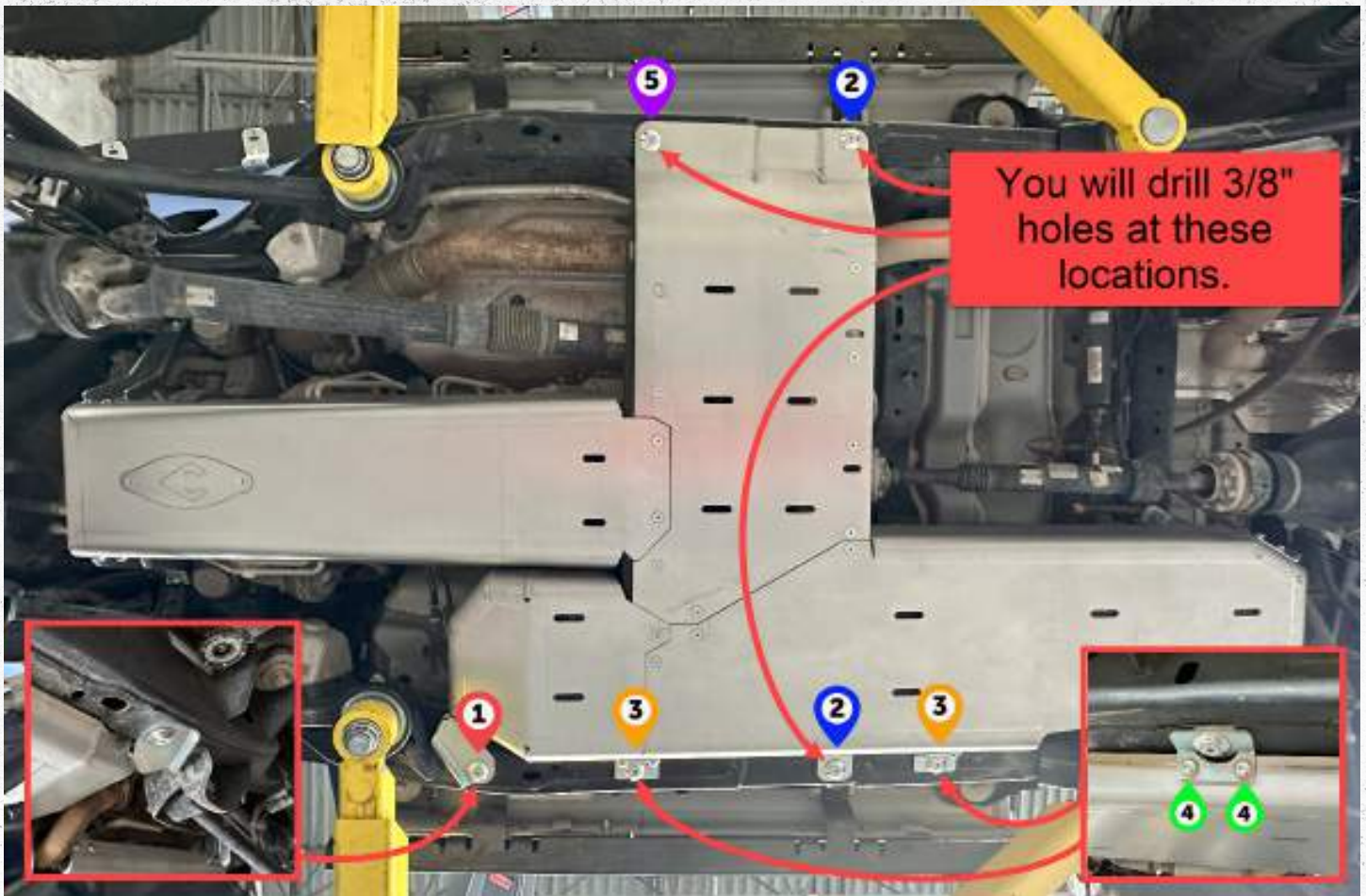


Step 15.

A: While being braced with the lift/jack/blocks, assemble the transfer case, fuel tank skid hardware as shown above using the 7/32 allen wrench. Verify hardware is as follows: 2 - 3/8 x 1.5" flathead bolts ②. 6 - 3/8 x 1" flat head bolts ③. 2 - M12 x 40 custom flat head bolt ①.

Go ahead and tighten this hardware paying attention to the spacing between each section of the bellypan. This is in preparation for drilling the 3 holes into the frame in

B: Loosely assemble the fuel tank skid nose section, JL4106-21, using 1 - 3/8 x 1.5" flat head bolts ② with the 7/32 allen wrench.



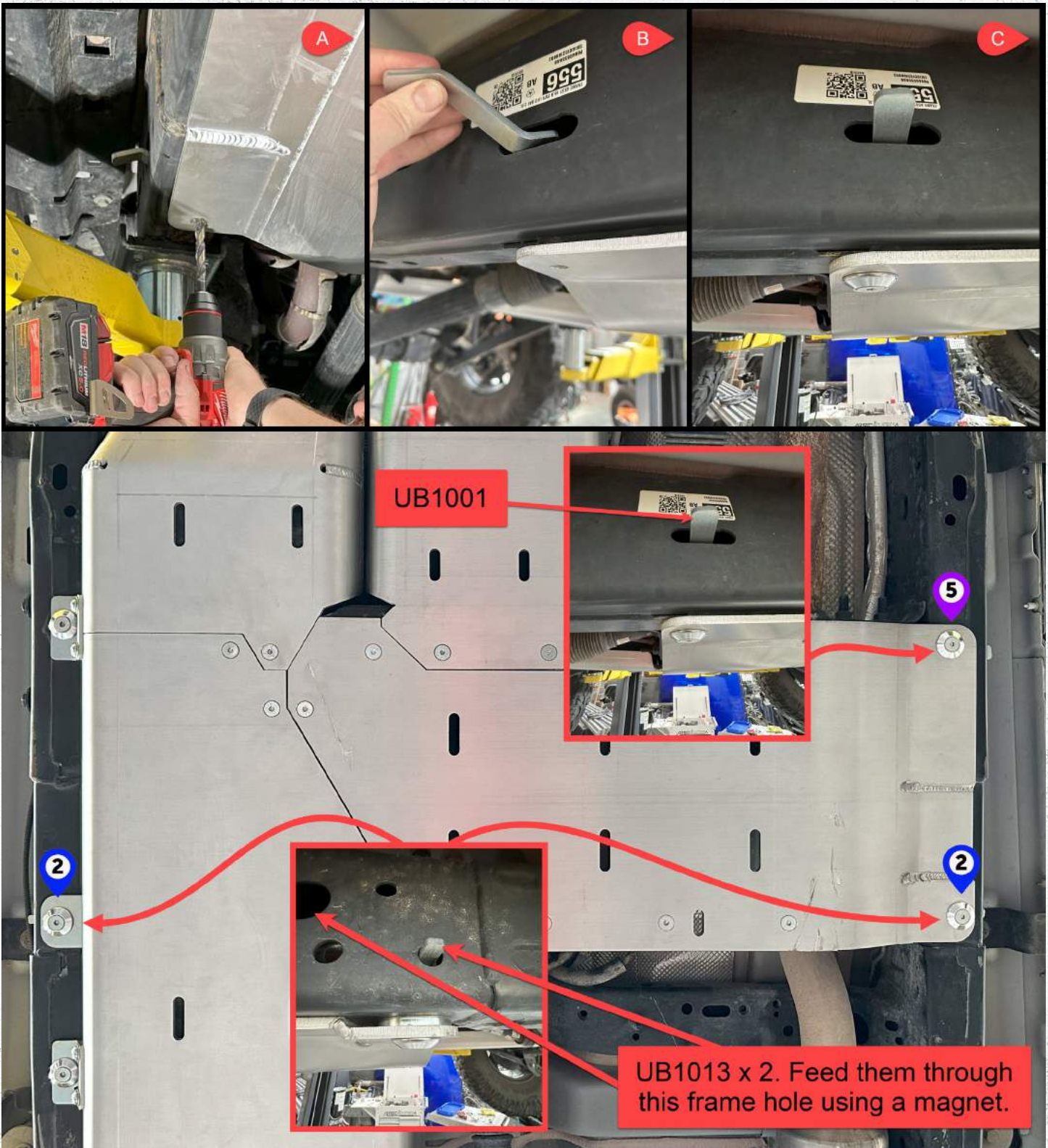
Step 18.

Loosely assemble both UB1014 brackets to the fuel tank skid using 4 - 3/8 x 3/4" button head bolts and zinc plated washers ④ with the 7/32 allen wrench.

Loosely assemble the JL4106-8 bracket to the frame using 1 - M12 x 40mm custom flathead bolt with the aluminum counter sink washer ① with the 7/32 allen wrench.

Loosely assemble the UB1014 brackets to the frame using 2 - M12 x 40mm custom flathead bolt with the aluminum counter sink washers ③ with the 7/32 allen wrench.

In the next step you will use the drill for locations ② and ⑤.



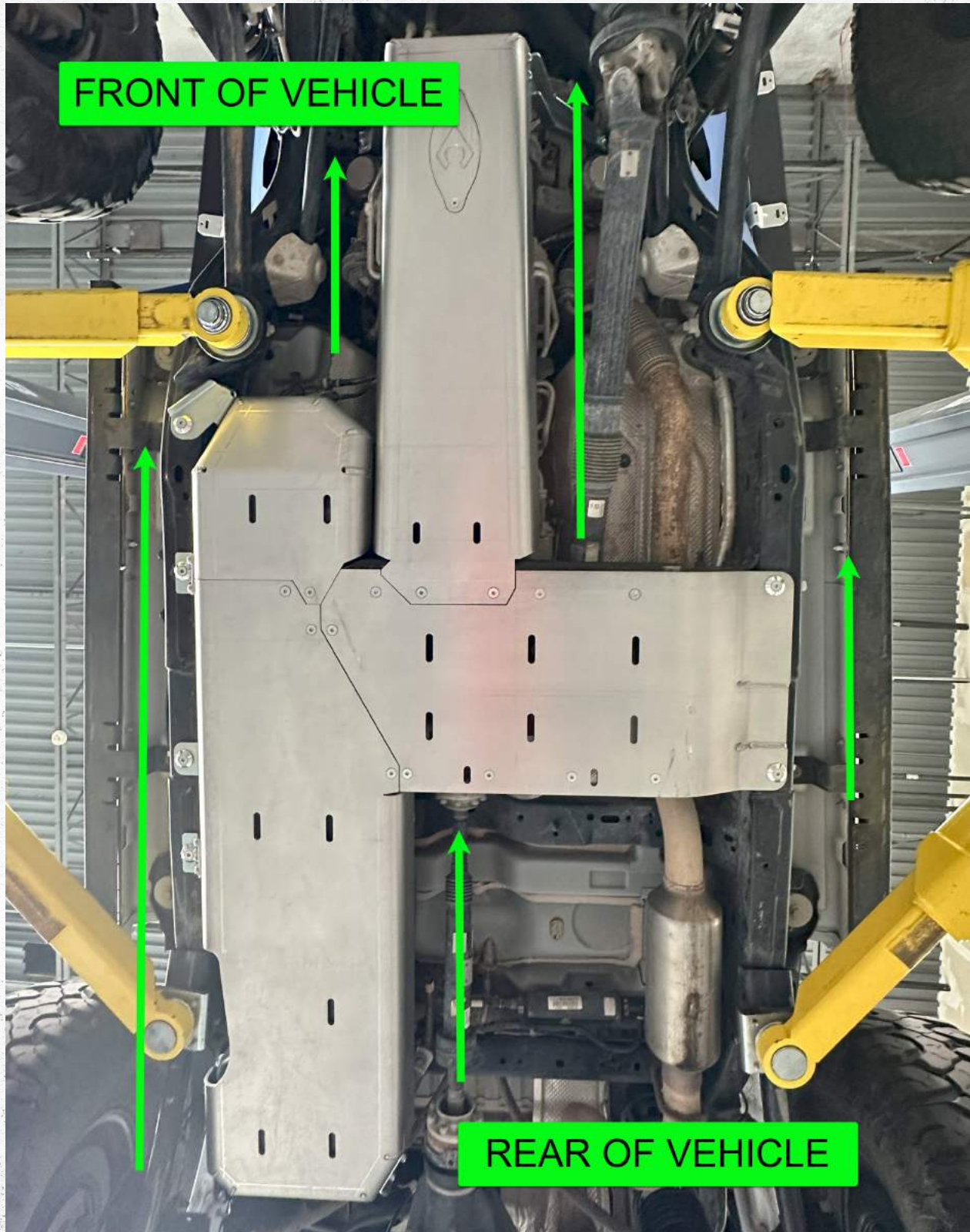
Step 14.

A: With the skid plates tightened and held tight to the frame, drill 3x 3/8" holes in the called out locations. Using a smaller bit to step drill will make it easier. **ALWAYS WEAR SAFETY GLASSES.**

B: Insert the nut plates in the locations shown above. UB1013 x2 at locations ② and UB1001 x1 at location ⑤.

C: Loosely install the 3 - 3/8 x 1.5" flathead bolts with the aluminum counter sink washers into each of the three locations.

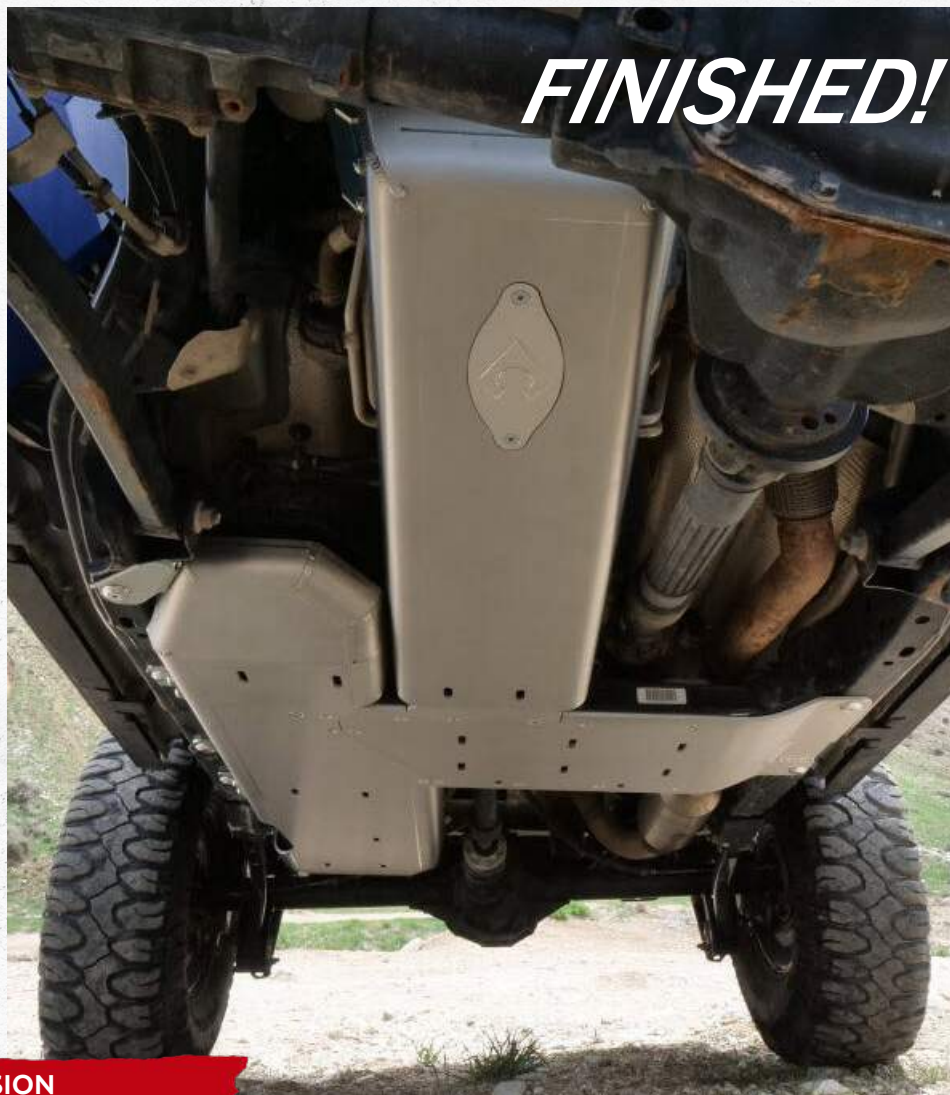
JT4155 INSTALLATION INSTRUCTIONS



Step 19. **FIRST**, loosen all previously installed hardware.

Once that all the hardware is loose, starting from the rear of the vehicle while working your way forward to the front, tighten/torque all skid and bracket hardware that was previously loosely installed on fuel tank skid, T-case skid, and engine oil skid.

CONCLUSION AND MAINTENANCE GUIDE



CONCLUSION

Congratulations on finishing the installation for your Artec Industries Alpha Series Aluminum Bellypan.

Before driving your vehicle, inspect all bolts again to ensure proper tightness.

If you used a vehicle lift, take proper care to ensure you lower your vehicle safely.

Now take your vehicle out and enjoy the outdoors in confidence.

MAINTENANCE / CARE

- After 500 miles, inspect all components and hardware to ensure they are properly fastened.
- If driving during the winter where salt is used on the roads, thoroughly and frequently wash underside of vehicle to prevent salt based corrosion.
- If removal of skid panels is required for vehicle maintenance, and bolts will not loosen, tap the bolt heads with a small sledge hammer using moderate force. This will allow the threads to loosen.
- Spray wax or similar products can be used to create a protective barrier on raw metals to protect against long term corrosion.