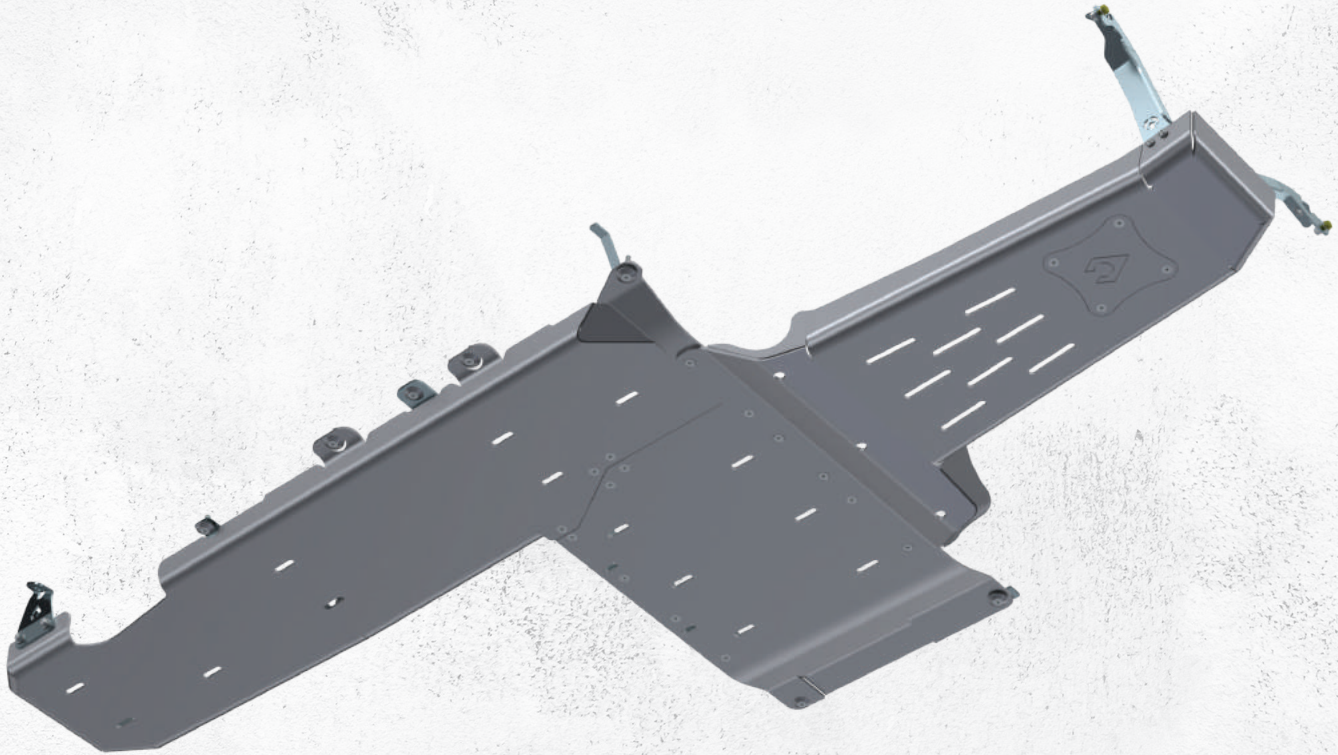




PART # JL4112

JLU 392 FULL BELLY PAN WITH OIL DOOR - ALUMINUM INSTALLATION INSTRUCTIONS



ESTIMATED INSTALLATION TIME

3-5 hours

REQUIRED SKILLS

- General Mechanics Skills
- Drilling

REQUIRED TOOLS & SUPPLIES

- 18mm socket
- 16mm wrench
- 15mm socket
- 15mm wrench
- 13mm socket
- 13mm wrench
- Ratchet strap
- 9/16 inch wrench x2
- 9/16 inch socket
- Electrical tape
- 7/32 inch allen wrench
- Ratchet extension 2 inch
- Ratchet extension 6 inch
- Flat pry bar
- Safety glasses
- Pliers/vice grips
- Screw driver flathead
- Jack/vehicle lift (optional)
- 9/16" ratchet wrench (optional)
- Drill
- Loctite

NOTES:

- This product arrives in 4 separate boxes labeled BP1917, BP1804, BP1536.D, and BP1482.D
- Component appearance in instructions may vary from those received
- Add-ons for this Kit include: JL4118 (Exhaust skid) and JL4113 (Muffler Skid)

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.

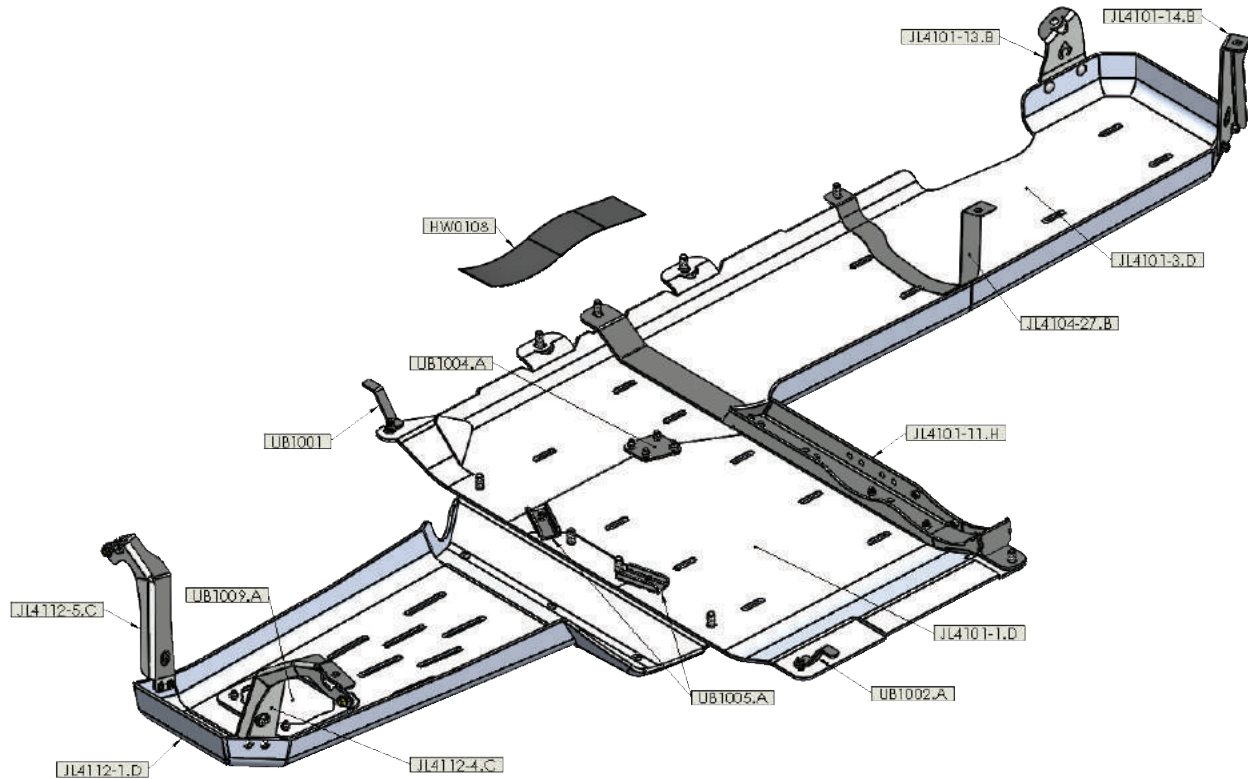
Modified vehicles won't perform identically to their stock counterparts. It's incumbent upon the vehicle owner to understand the alterations such modifications will bring to the vehicle's driving dynamics. These might encompass (but aren't limited to): changes in handling, braking, rollover angle, and 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** installed by hand until the very end of installation when all components are attached.

JL4112 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.

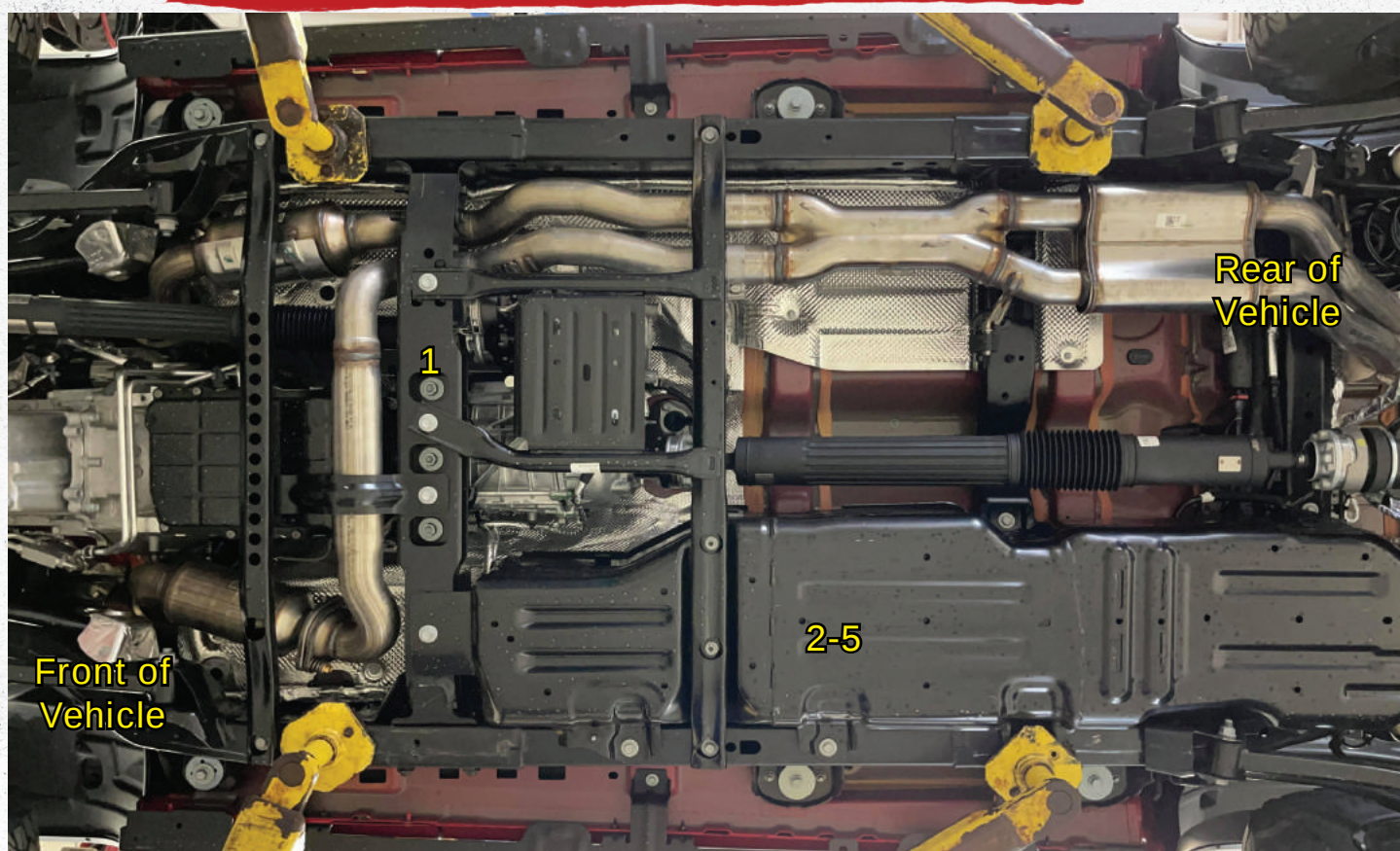


NOTE: The part numbers indicated above end in a "." and "letter" which indicate the revision number for the part. The etched part number on your physical parts do not need to match the above drawing revision exactly.

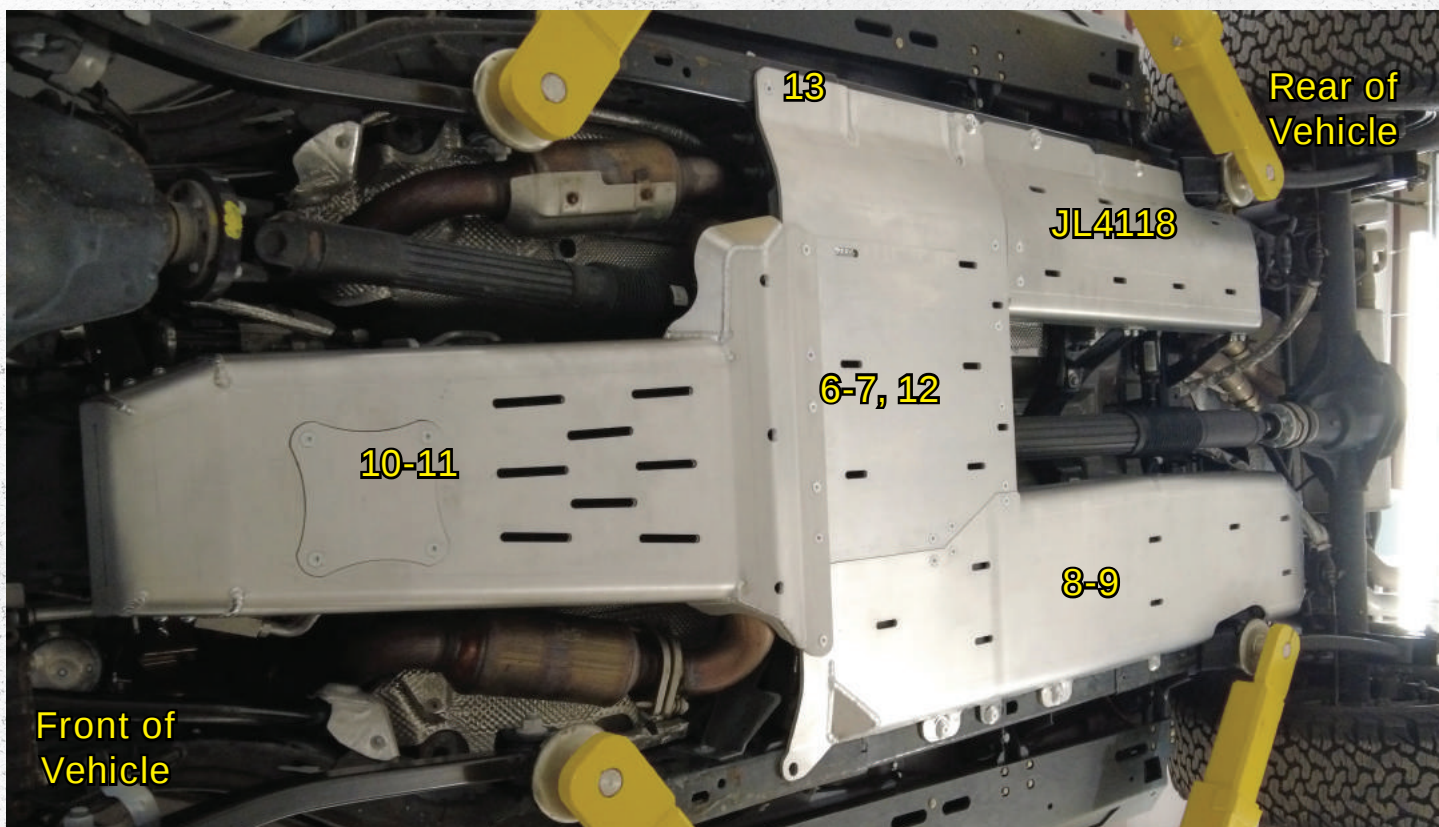
HK4112 HARDWARE BILL OF MATERIALS

PART NUMBER	DESCRIPTION	QTY.
HW0019	3/8"-16 Nylock Insert Hex Nut Clear Zinc	6
HW0035	3/8" 16 x .75" long button head screws ZINC plated	4
HW0058	3/8"-16 x 1.0" Long Grade 8 Hex Head Cap Screw Yellow Zinc	2
HW0059	3/8" Flat Washer Type 1 Yellow Zinc	8
HW0061	3/8 x 1 flat head bolt	9
HW0105	3/8 x 1in carriage bolt	4
HW0135	M10 x 1.5mm - Flange Lock Nut	1
HW0141	CUSTOM M12 - 1.5 x 40mm long flat head	10
HW0142	3/8-16 Whiz Flange Nut	4
HW0147	.375" Countersunk Aluminum Washer	7
HW0186	M10-1.5 Hex Low Profile Nylock Nut Zinc Class 8	1
HW0185	3/8" x 1.5 Countersink Allen Head Bolt - Zinc	4

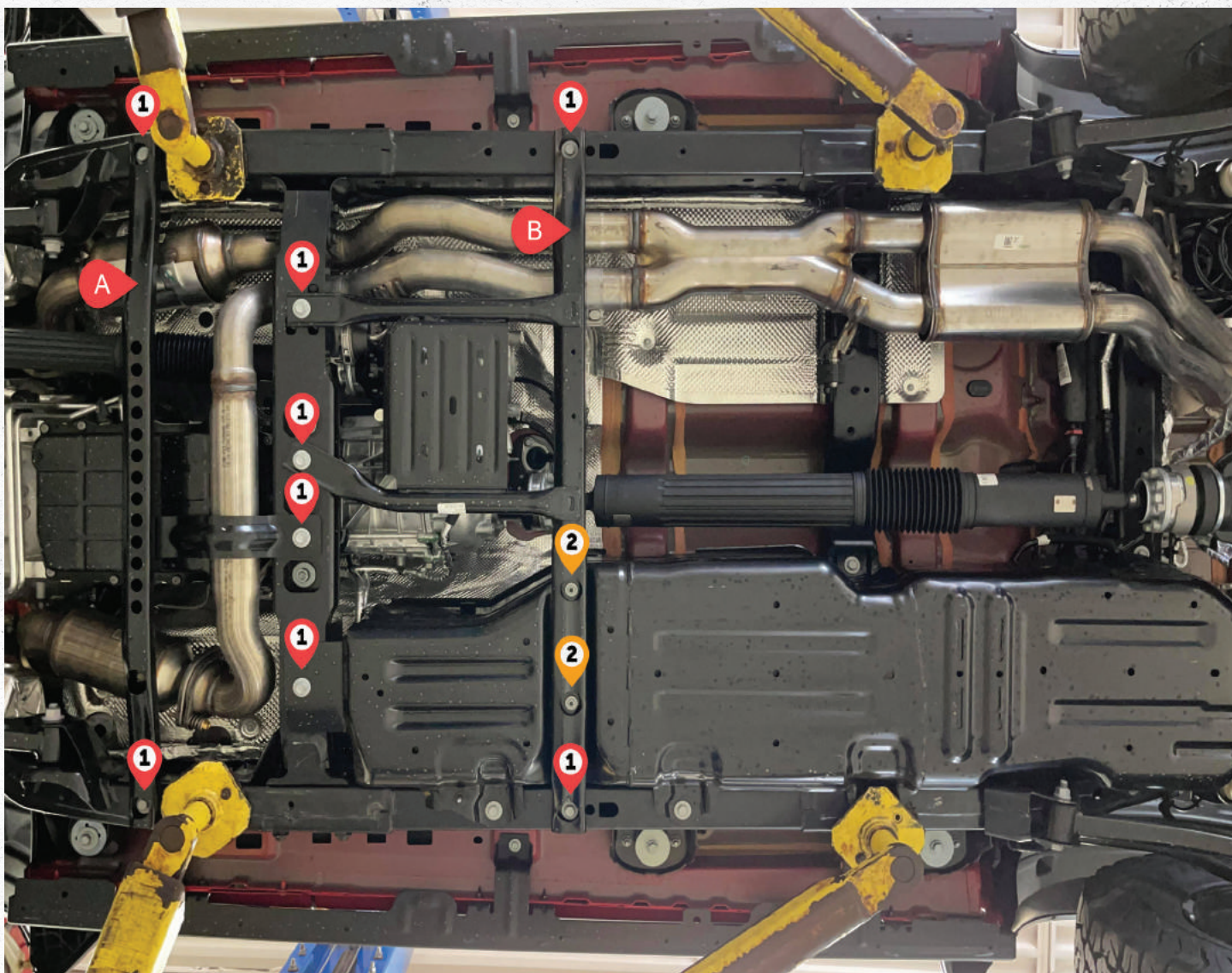
STEP LOCATION GUIDE



NOTE: Images may differ from your exact model. These are general instructions for JT, JL and JLU models. Some locations may differ slightly.



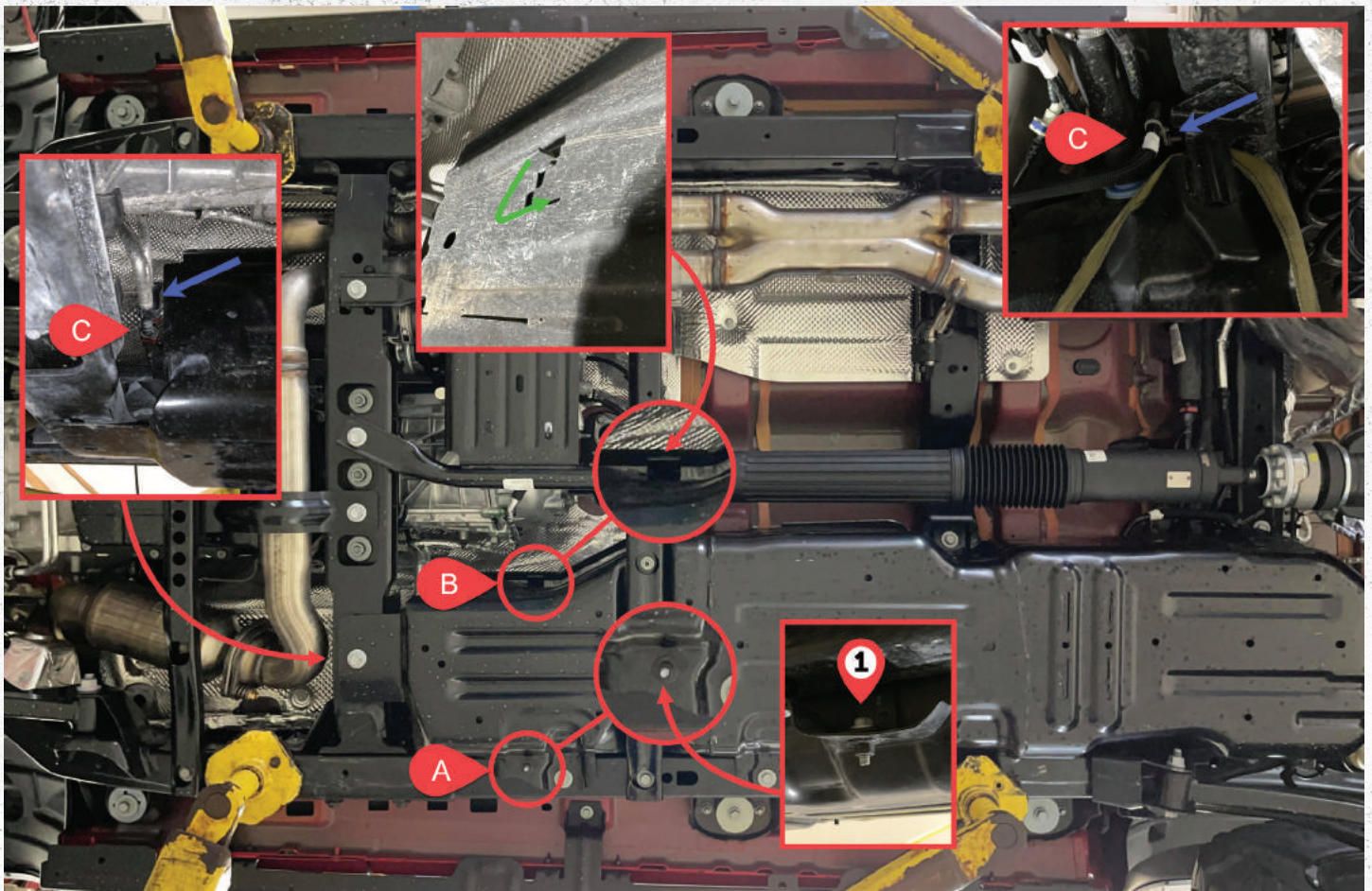
DISASSEMBLY INSTRUCTIONAL GUIDE



Step 1:

A: Remove the transmission skid by removing 3 - M12 bolts ❶ using a 18mm socket.

B: Remove transfer case & exhaust skid by removing 1 - M8 bolts ❷ using 13mm socket AND 4 - M12 bolts ❶ using a 18mm socket.

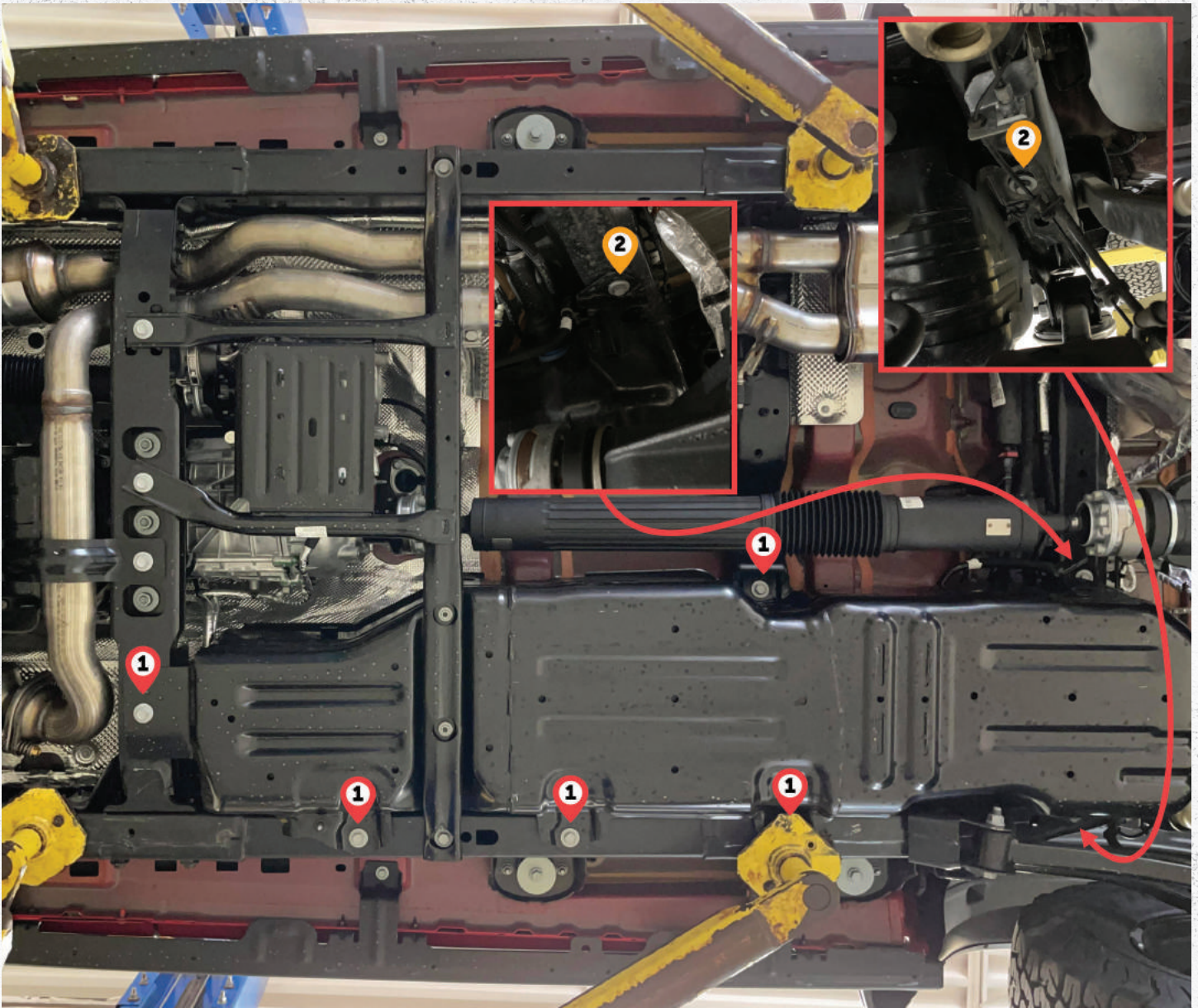


Step 2:

A: Remove 1 - M8 bolt ❶ using a 13mm wrench/socket.

B: Using pliers or vise grip pull this tab down and push through the slot to disengage it (**GREEN**) arrow

C: Disconnect the fuel line from the front of the factory fuel tank skip by pushing the Christmas tree connector up through the bracket (**BLUE**) arrow.



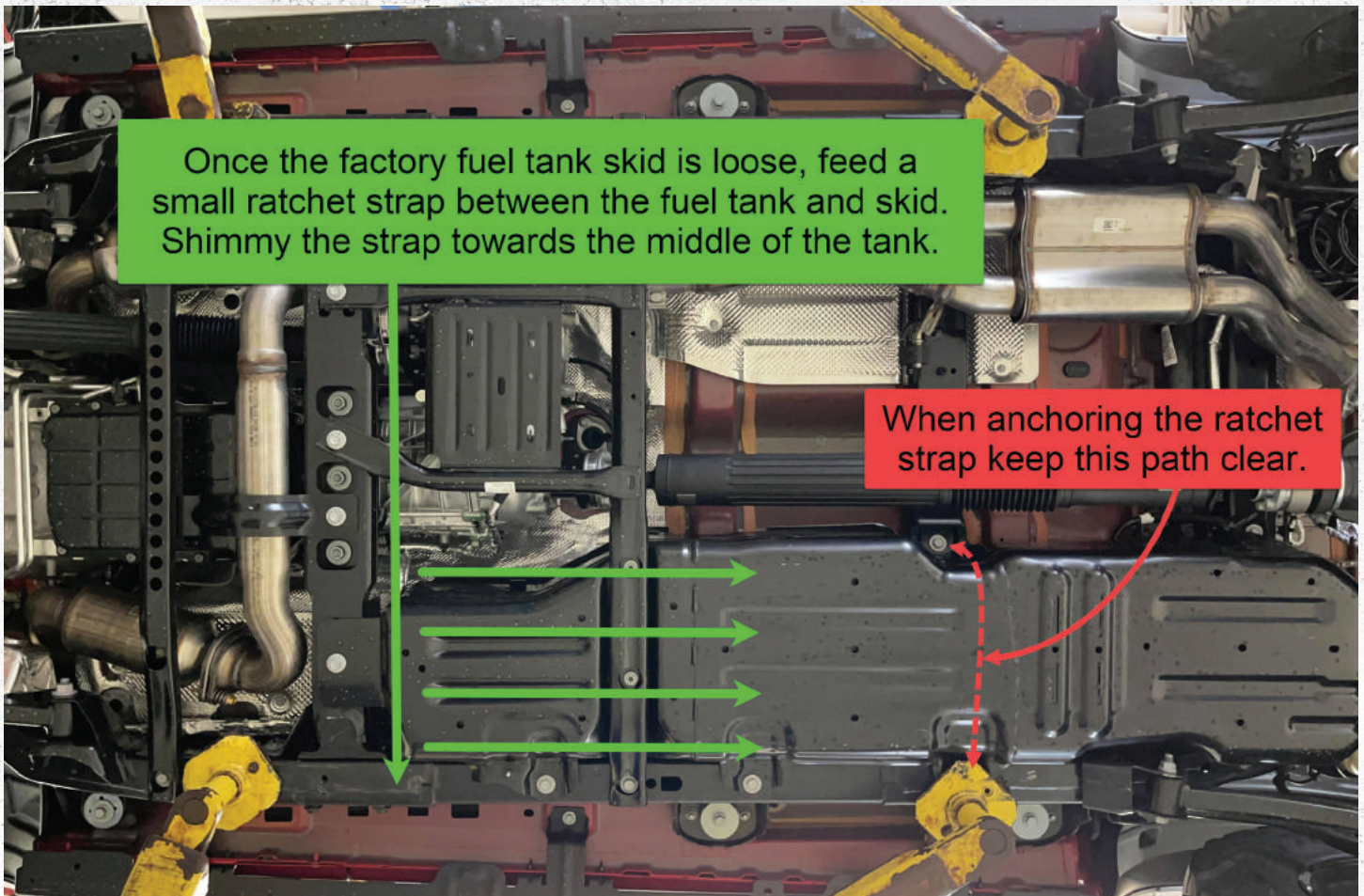
Step 3:

A: Remove fuel tank skid by removing 4 - M12 bolts **1** using a 18mm socket.

B: Loosen the 3 - M12 OEM bolts **2** using the 18mm socket.

C: Verify all clips holding the fuel lines to fuel tank skid have been detached.

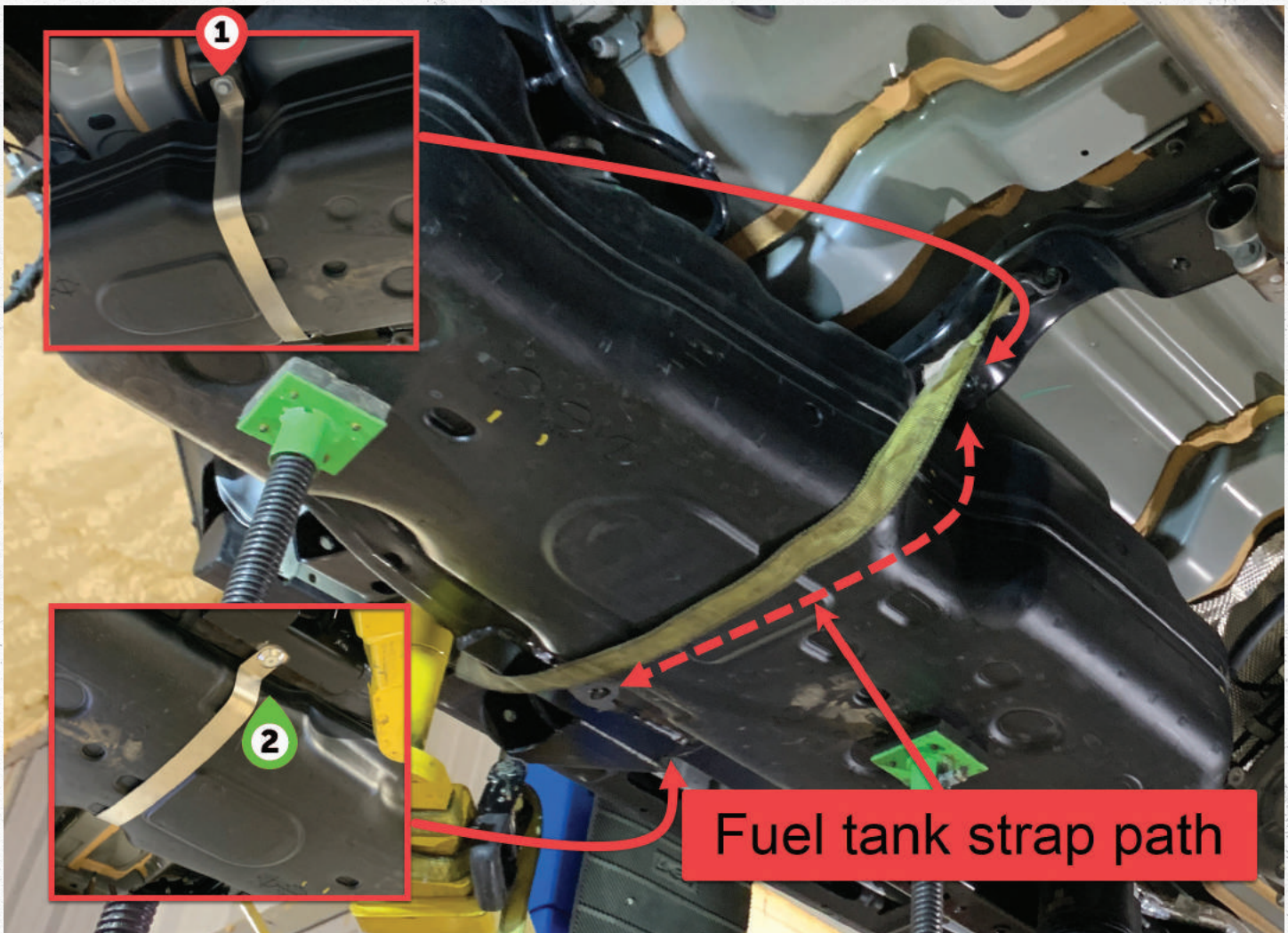
NOTE: No, that is not where you want to your lift point...



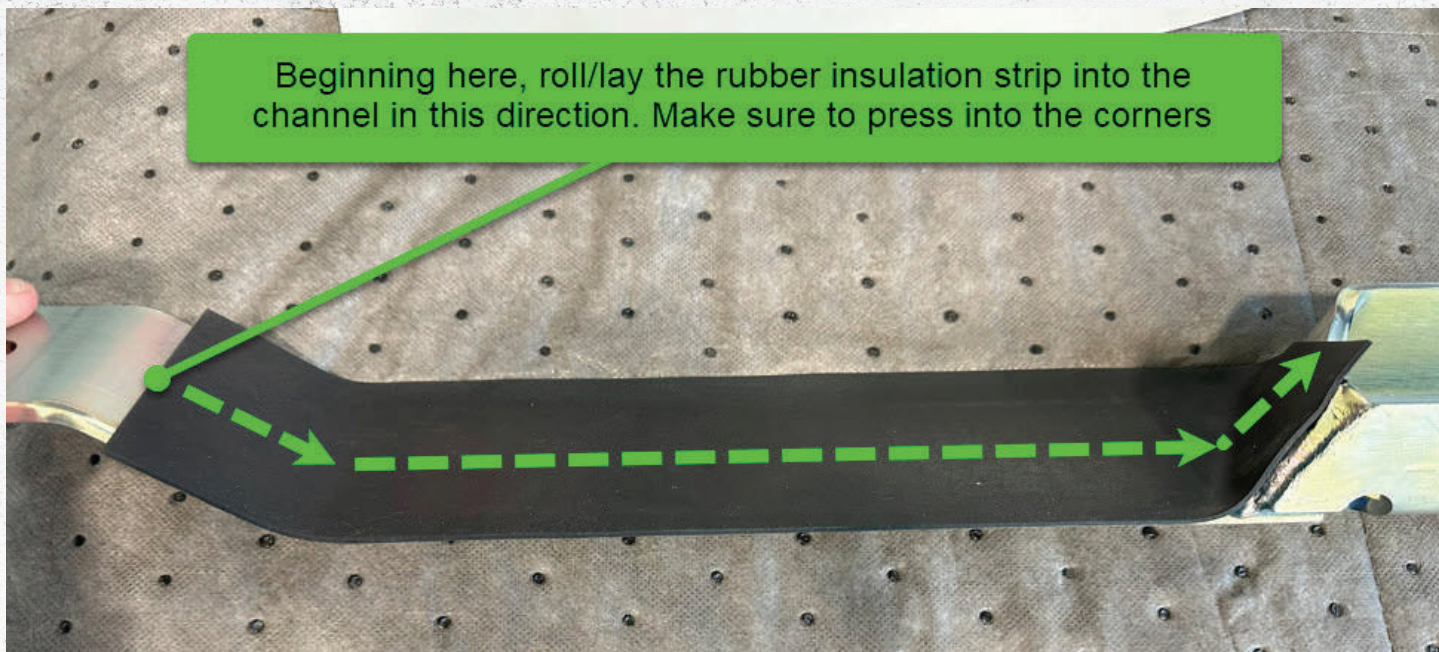
Step 4: Using a small ratchet strap you will suspend the tank so that you can remove the factory fuel tank skid. Make sure to anchor the ratchet strap to something substantial. After suspending the tank you can remove the fuel tank skid. This can take some time, and can be frustrating but it is necessary.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



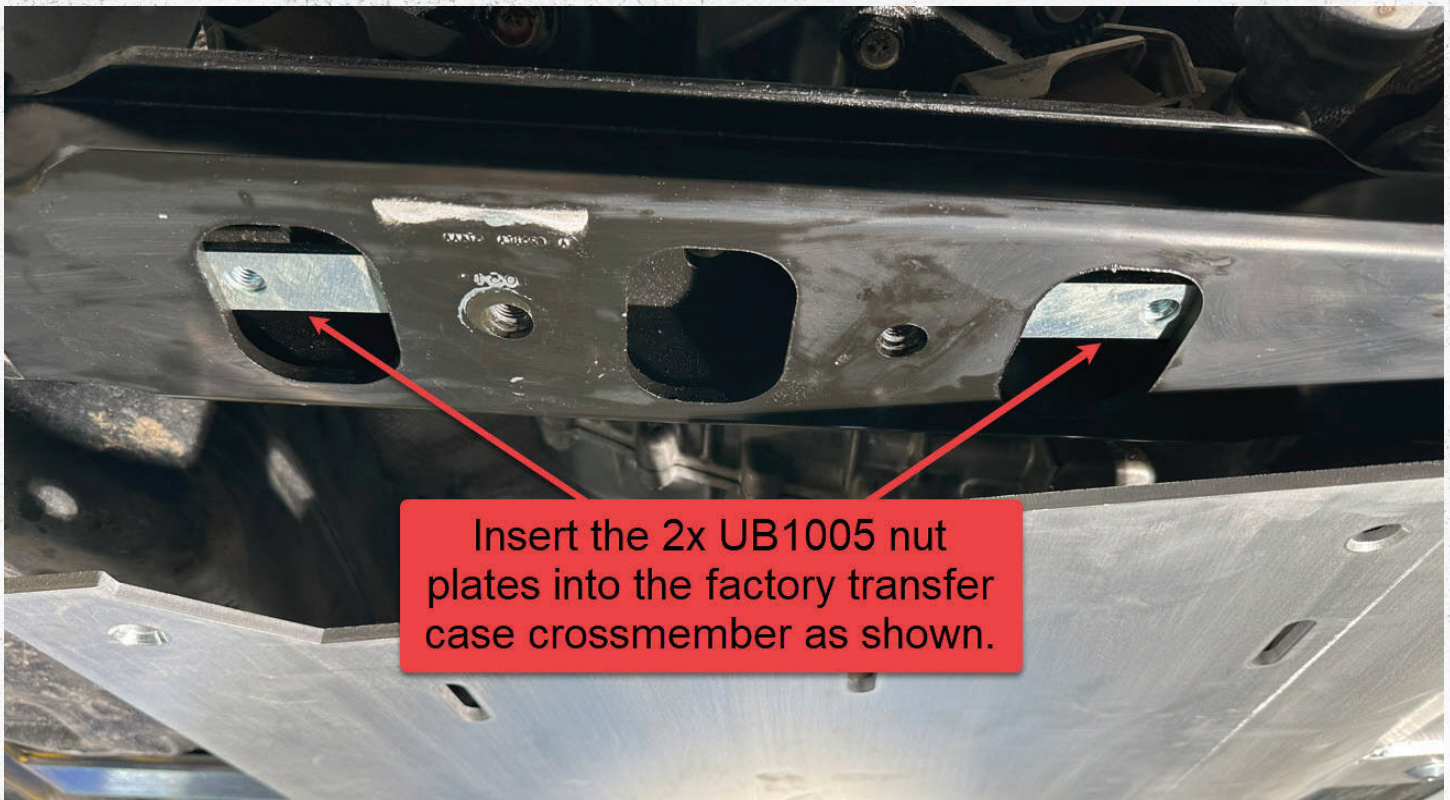
Step 5: Once the factory fuel tank skid has been removed, assemble the fuel tank strap JL4104-27 by installing 1 - OEM M12 bolt ❶ with a 18mm socket AND 1 - M12 x 40mm counter sink bolt & counter sink washer ❷ using the 7/32" allen wrench. The fuel tank strap hardware can be tightened at this stage. Once the fuel tank strap is mounted you can remove the ratchet strap.



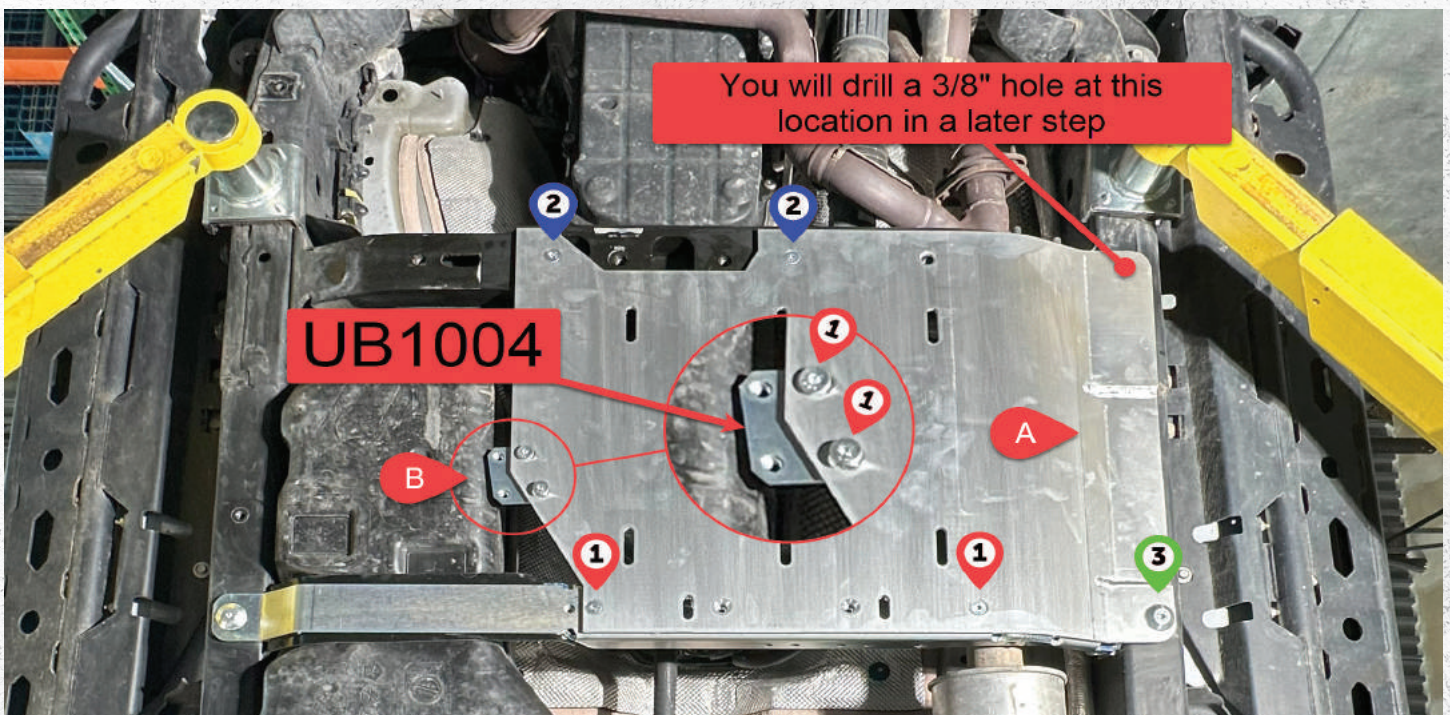
Step 6. Remove the adhesive backing strip from the rubber insulation and attach it as seen above. Make sure to lay it on squarely and press it into the corners.



Step 7. Loosely install the provided cross member using 1- M12 x 40mm flathead bolt with the tapered washer ① as shown below.



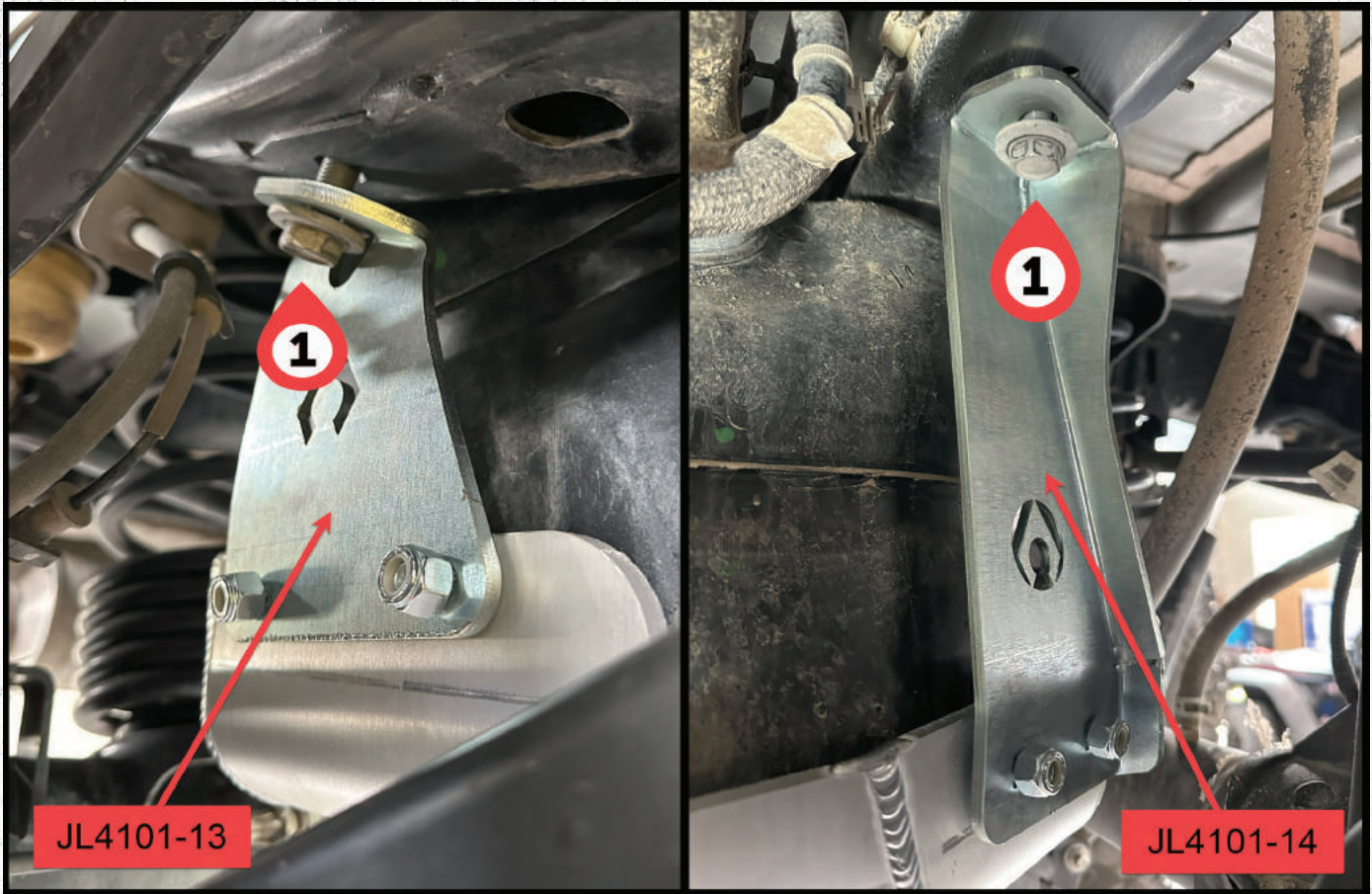
Step 8. Insert the 2 nut plates as shown above.



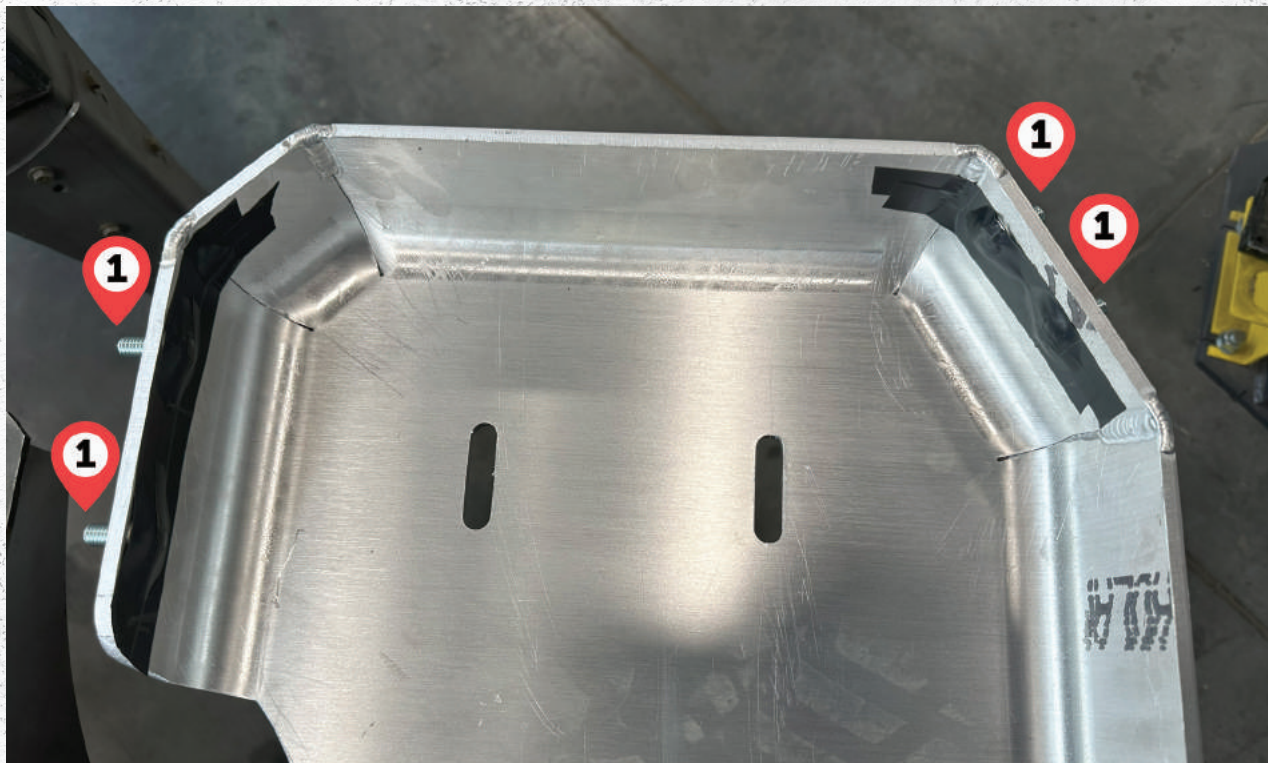
Step 9:

A: Loosely secure the T-case skid onto the support cross member and factory cross member using 2 - 3/8" x 1" flat head bolts ❶, 2 - 3/8" x 1.5" ❷ and 1 - M12 X 40mm bolts with the tapered washer ❸ using the 7/32" Allen wrench. In at later step you will drill a hole in the frame marked above.

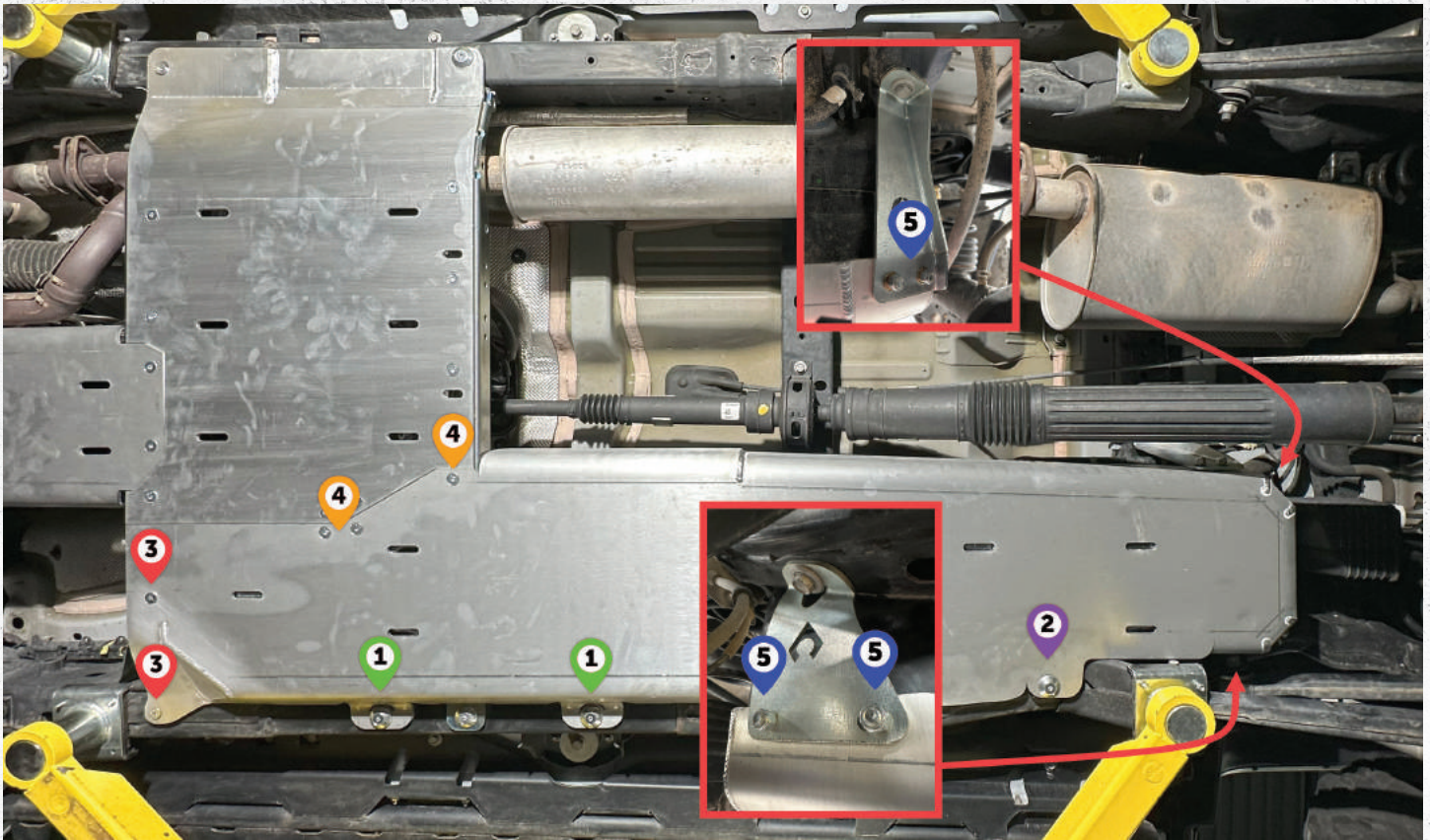
B: Assemble UB1004 as shown above using 2 - 3/8" x 1" flat head bolts ❶



Step 10: Loosely install fuel tank inner JL4101-14 and outer JL4101-13 support brackets using 2 – OEM 12mm bolts ❶ (removed from original skid) with a 18mm socket.

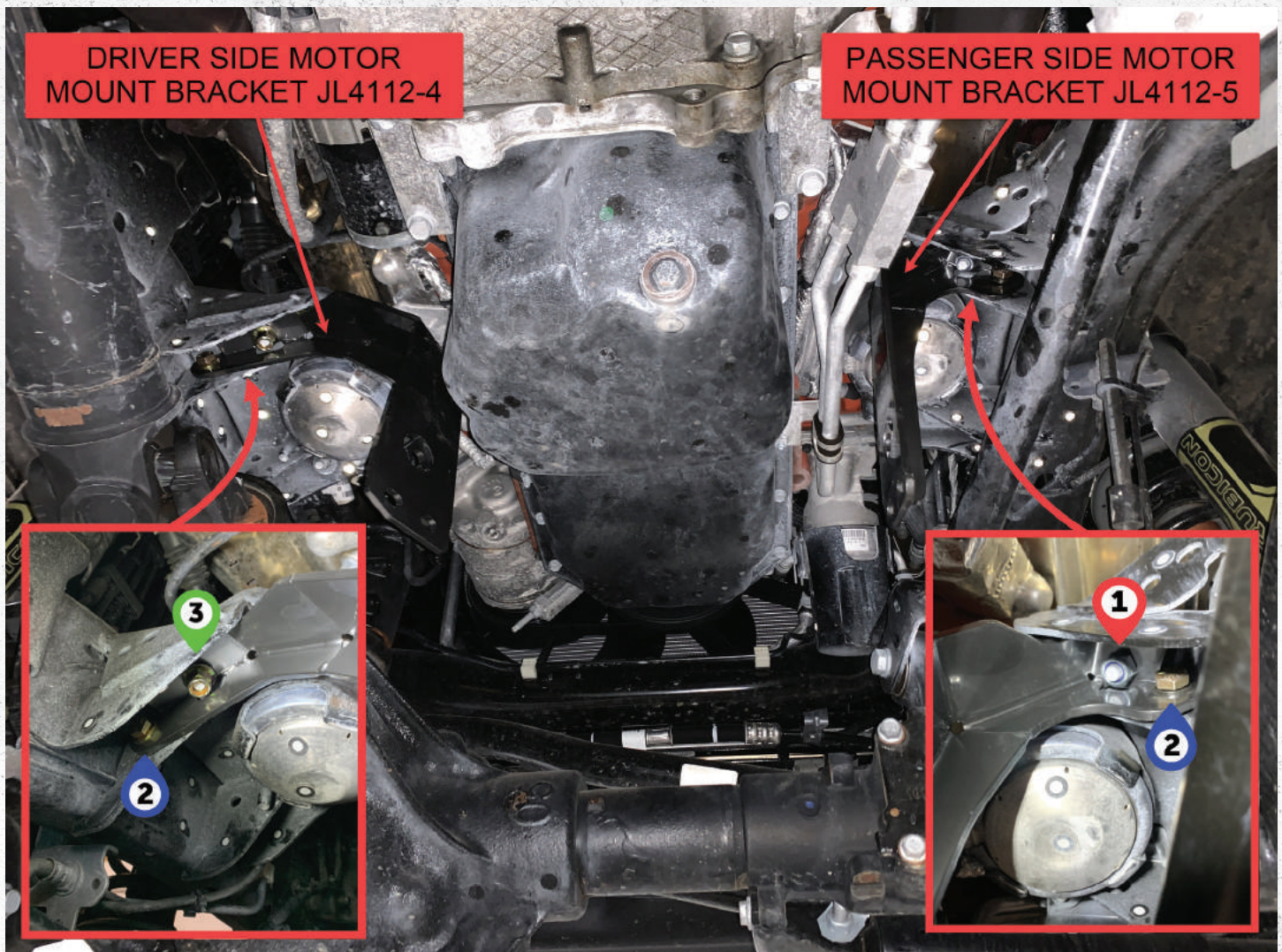


Step 11. Using tape secure 4 - 3/8" x 1" carriage bolts ❶ to the fuel tank skid prior to installing the fuel tank skid onto frame and support cross member. Electrical tape works well.



Step 12: Using the 7/32" Allen wrench loosely assemble the gas tank skid with ④ 3 - 3/8 x 1" flat-head bolt, ① 3 - M12 x 40mm flathead bolts with tapered washers AND ③ 2 - M12 x 40mm flathead bolt. Assemble the fuel tank skid to the fuel tank skid brackets using ⑤ 4 - 3/8 nylock nuts with 4 3/8 zinc plated washers using a 9/16 socket or wrench.

IMPORTANT NOTE: For JL and JLU Wrangler models please ignore location ②.



Step 13.

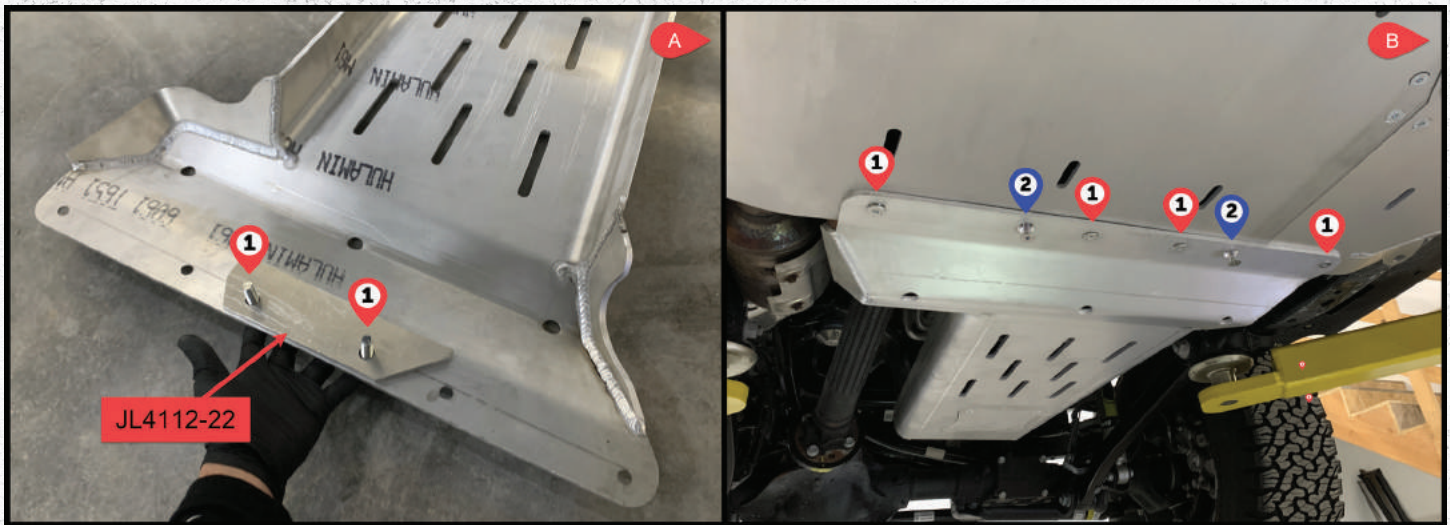
A: Loosely install the DRIVER SIDE motor mount bracket JL4112-4 as shown above using 1 - M10x1.5 nylock flange nut ③ with 15mm wrench and 1 - 3/8" x 1" bolt with washers and nylock nut ② using 2x 9/16 wrenches.

B: Loosely install the PASSENGER SIDE motor mount bracket JL4112-5 as shown above using 1 - M10x1.5 low profile nylock nut ① with 16mm wrench or crows foot and 1 - 3/8" x 1" bolt with washers and nylock nut ② using 2x 9/16" wrenches.

NOTE: Due to the design of the 392 motor mounts, access to the mounting hardware is difficult and this step can be frustrating. It will test your patience. And using a wrench is the only way given the tight area.

NOTE 2: For locations ① and ③ we suggest applying Loctite to the motor mount bolt threads before assembly.

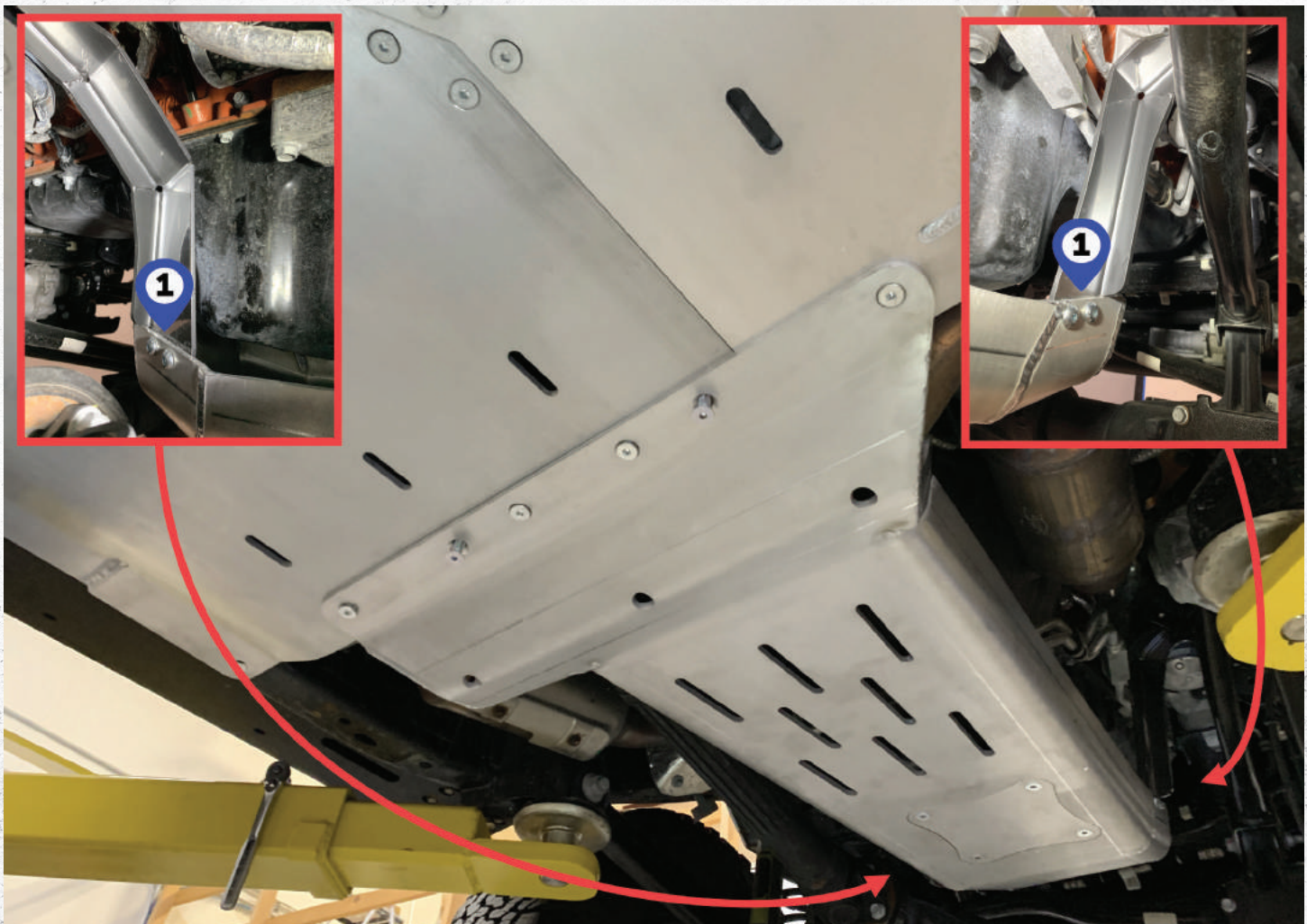
NOTE 3: Using 1x normal open end wrench and 1x ratchet wrench works best to install the 3/8" hardware.



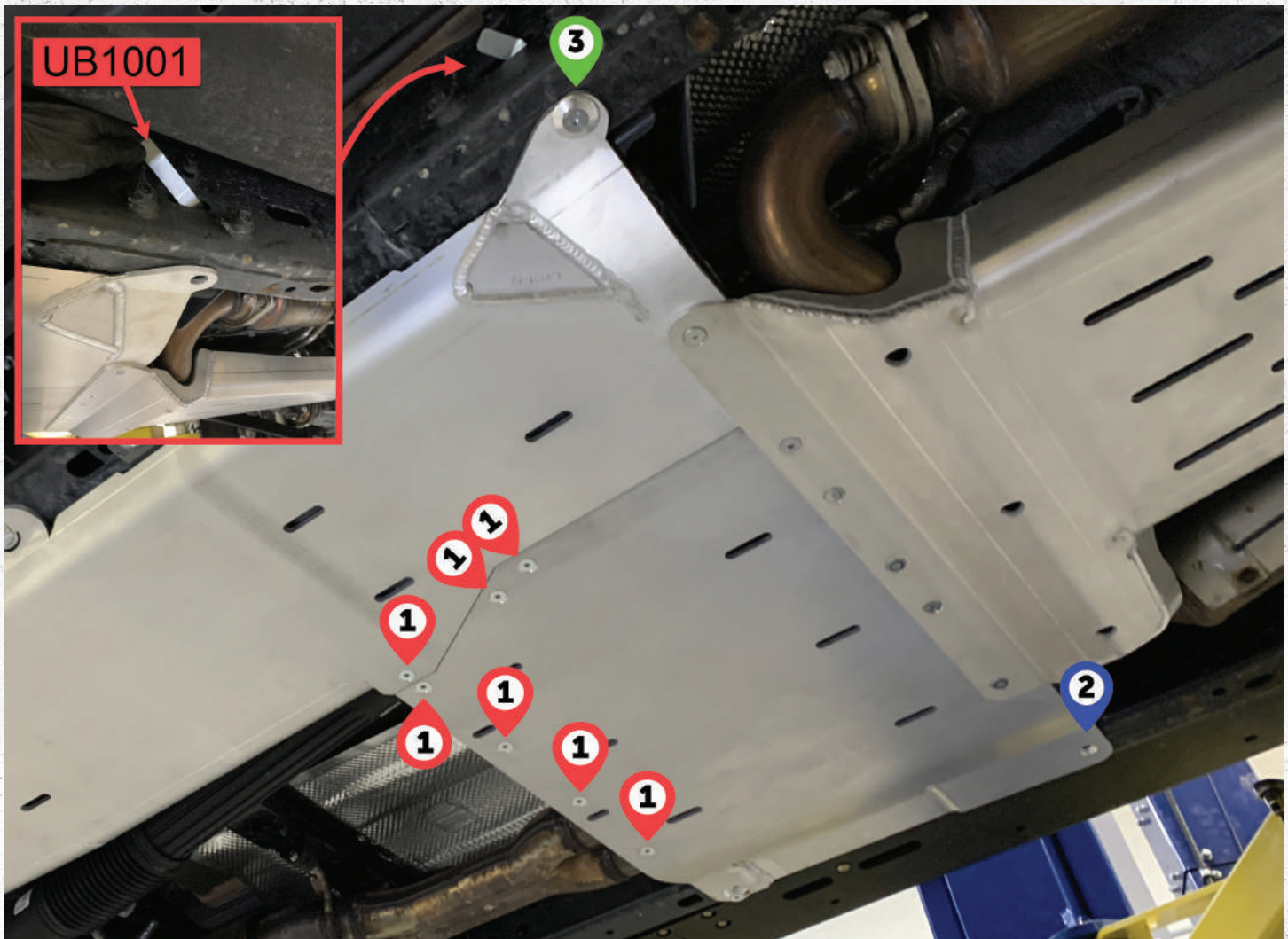
Step 14:

A: With 2 - M12 custom flathead bolt ❶ align the spacer JL4112-22 as shown above in preparation for installing the engine skid to the cross member.

B: Loosely assemble the engine skid to the cross member using 2 - 3/8" x 1.5" flat head bolts ❷ and 4 - M12 custom flathead bolt ❶ with the 7/32" Allen wrench.



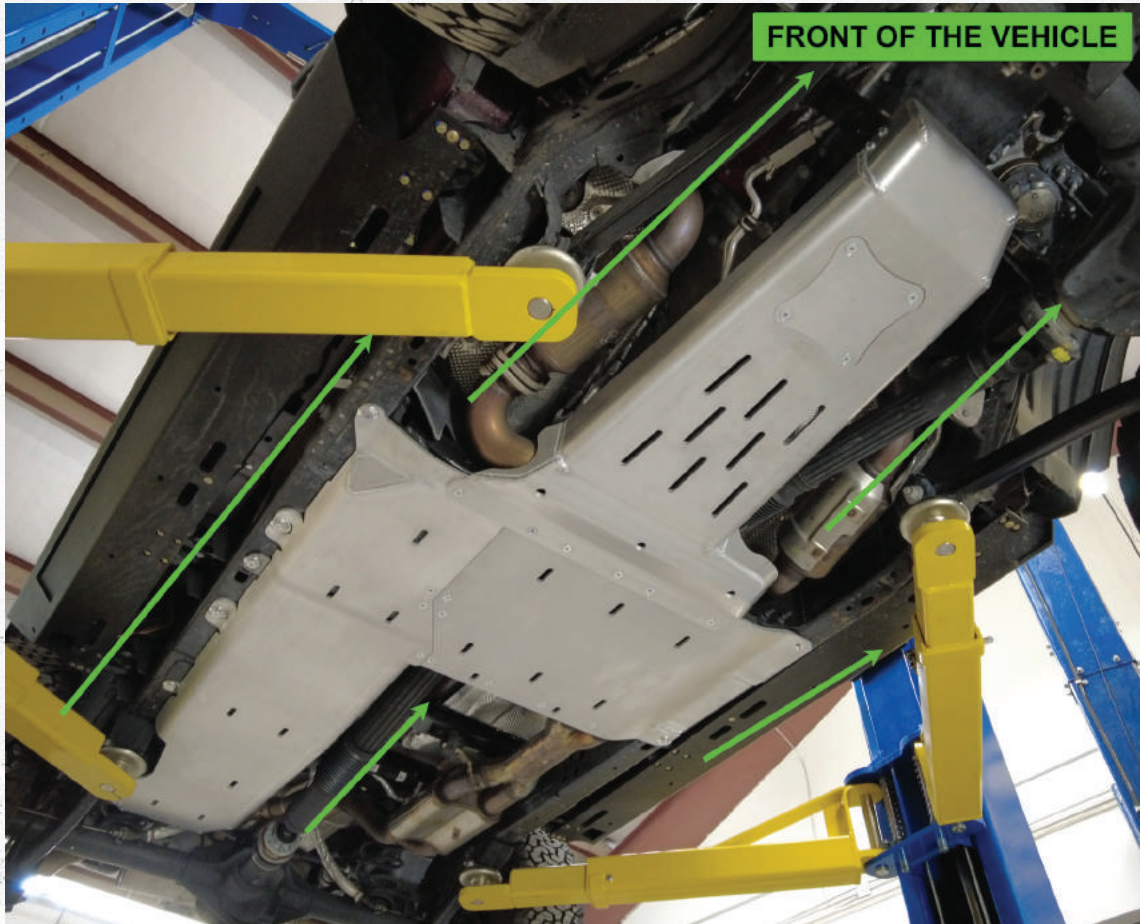
Step 15: Loosely assemble the engine skid to the motor mount brackets using 4 - 3/8" x 1" button head bolts with the serrated flange nuts ❶ using the 7/32" allen wrench and a 9/16" wrench.



Step 16:

- Loosely install the balance of the transfer case hardware as shown above. Verify hardware is as follows: 7 - 3/8 x 1" flat head bolts **1** using the 7/32" allen wrench.
- At location **3** insert the nut plate UB1001 and assemble with 1 - 3/8" x 1.5" flat head bolt and aluminum tapered washer.
- At location **2** you will drill a hole in a later step.

JT4155 INSTALLATION INSTRUCTIONS



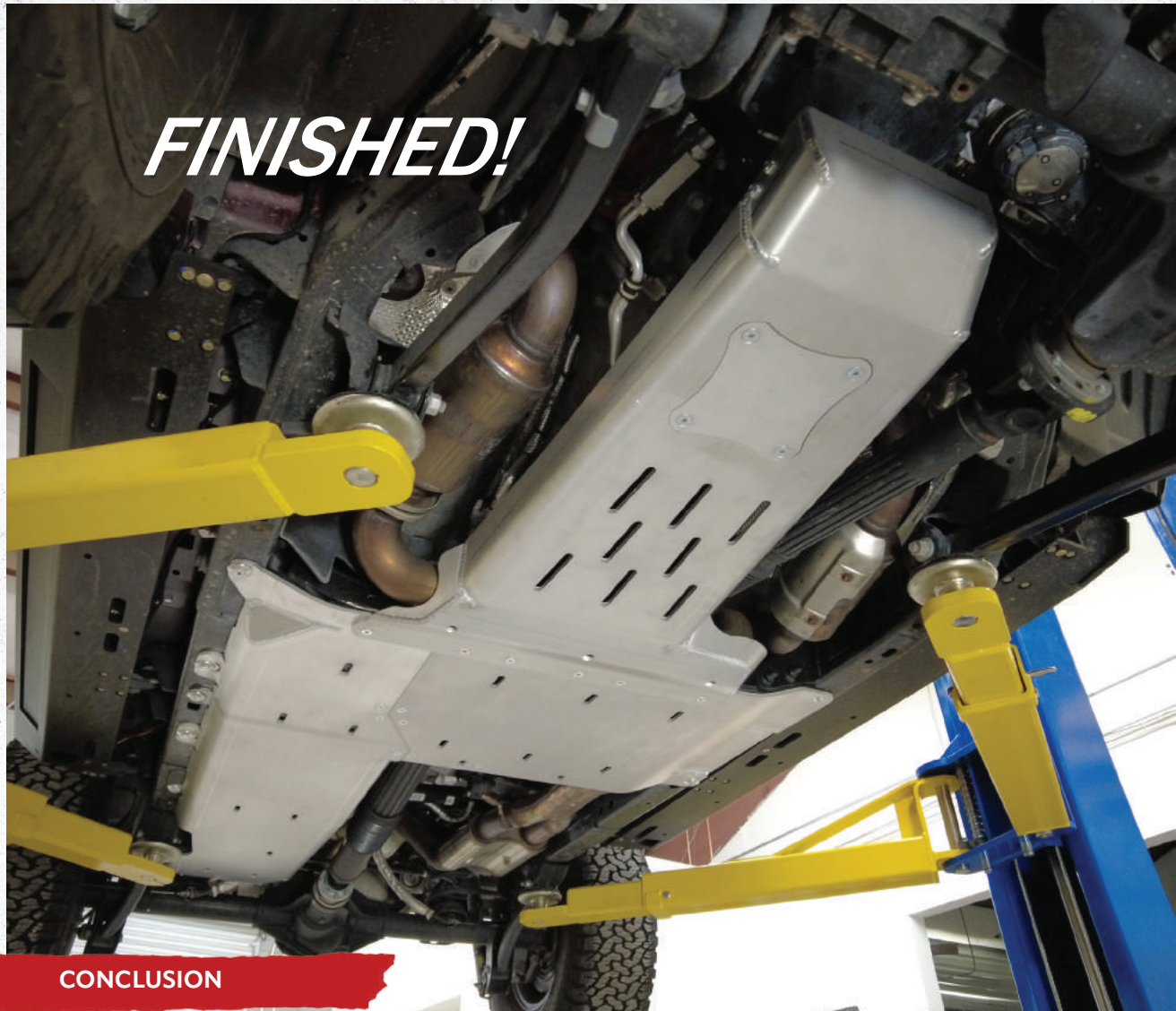
Step 17. Starting from the rear of the vehicle while working your way forward to the front, tighten/torque all skid and bracket hardware that was previously loosely installed on fuel tank skid, T-case skid, and engine oil skid.



Step 18: Once the skid plate hardware is tight, drill a 3/8" hole in the location shown.
NOTE: Using a smaller bit to first drill a pilot hole will help.

Step 19: Insert UB1002 3/8" DRIVER SIDE nut plate ② into the frame as shown and loosely install 1 - 3/8" x 1.5" flat head bolt ① with a 7/32" allen wrench.

CONCLUSION AND MAINTENANCE GUIDE



CONCLUSION

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

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 under-side 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.