



## JL4187

### 4XE ENGINE OIL SKID W/ OIL DOOR



#### ESTIMATED INSTALLATION TIME

**1.5 hours**

#### REQUIRED SKILLS

- General Mechanics Skills

#### REQUIRED TOOLS & SUPPLIES

- 7/32 Hex Bit
- 5/32 Hex Bit
- 5/16 Hex Bit
- 13MM Socket
- 15MM Socket
- 18MM Socket
- Ratchet
- 13MM wrench
- 17MM wrench
- 1/4 inch drill bit
- Drill
- Cutting tool

#### NOTES:

- 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.

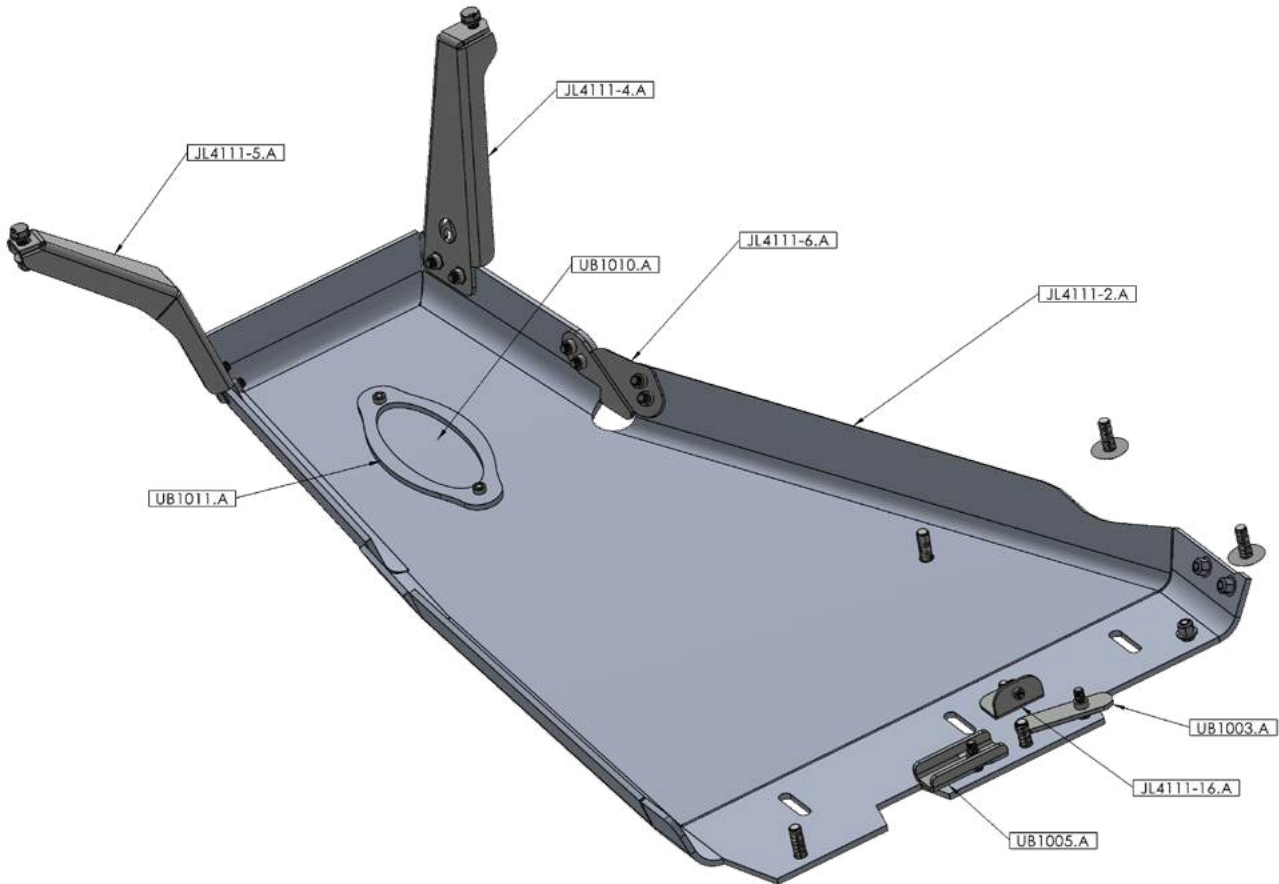
Modified vehicles won't perform identically to their stock counterparts. It's incumbent upon the vehicle owner to understand the alterations such modifications will bring to the vehicle's driving dynamics. These might encompass (but aren't limited to): changes in handling, braking, rollover angle, and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

## SPECIAL NOTES

- Unless otherwise noted, all hardware should be **LOOSELY** tightened by hand until the very end of installation when all components are attached.

## JL4187 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.

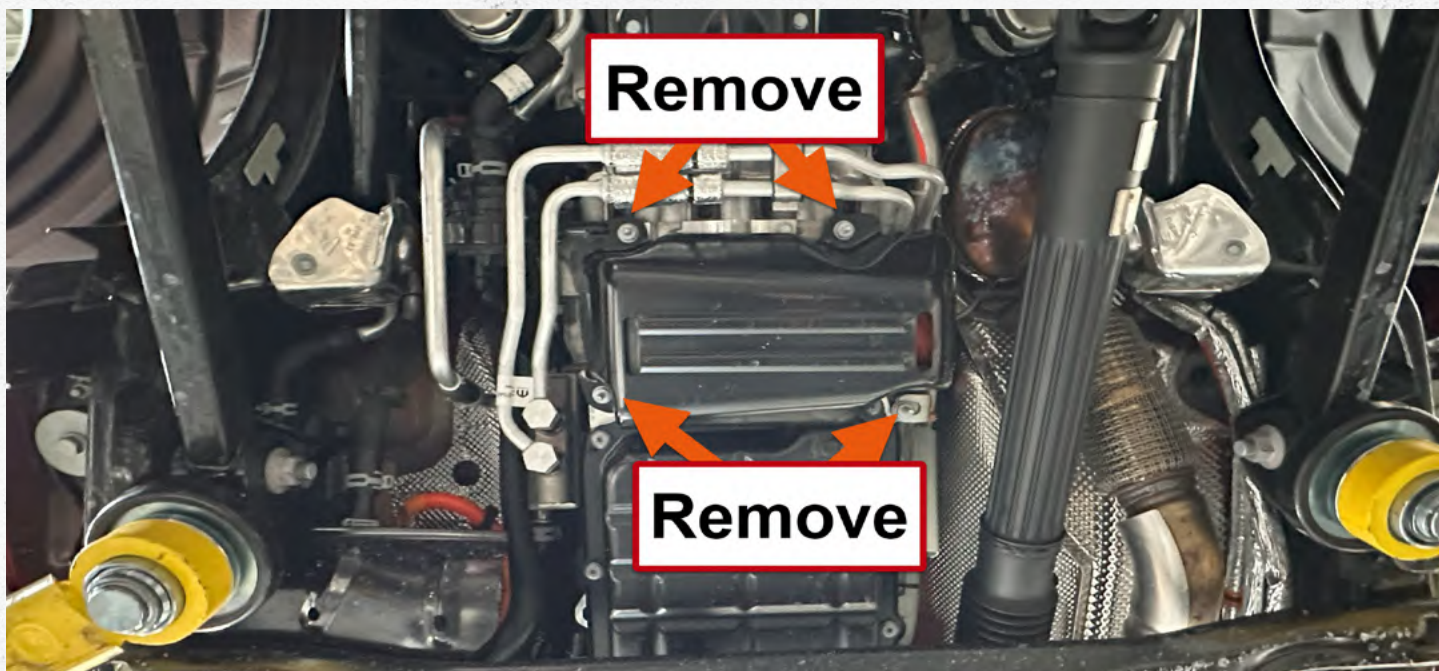


**NOTE:** The part numbers indicated above end in a “.” and “letter” which indicate the revision number for the part. The etched part number on your physical parts do not need to match the above drawing revision exactly.

## JL4187 BILL OF MATERIALS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	HW0147	.375" Countersunk Aluminum Washer	3
2	HW0185	3/8" x 1.5 Countersink Allen Head Bolt - Zinc	2
3	HW0135	M10 x 1.5mm - Flange Lock Nut	2
4	HW0136	M10 - 1.5 x 40mm long Hex Head Bolt	2
5	HW0137	M10 washer	2
6	HW0101	3/8 x 16 x 1 Button Head Cap Screw Alloy Steel Zinc Plated	10
7	HW0059	3/8" Flat Washer Type 1 Yellow Zinc	9
8	HW0061	3/8 x 1 flat head bolt	2
9	HW0141	CUSTOM M12 - 1.5 x 40mm long flat head	1
10	HW0062	1/4"-20 x 3/4 Button Head Socket Cap Screw Zinc Plated	1
11	HW0033	Zinc-Plated Steel USS Washer, Grade 5, for 1/4" Screw Size, 0.313" ID, 0.750" OD	1
12	HW0224	M12-1.5x40mm CUSTOM 10.9 Steel Counter Sink Allen Head Bolt - MAGNI 565 COATING	4
13	HW0019	3/8"-16 Nylock Insert Hex Nut Clear Zinc	3

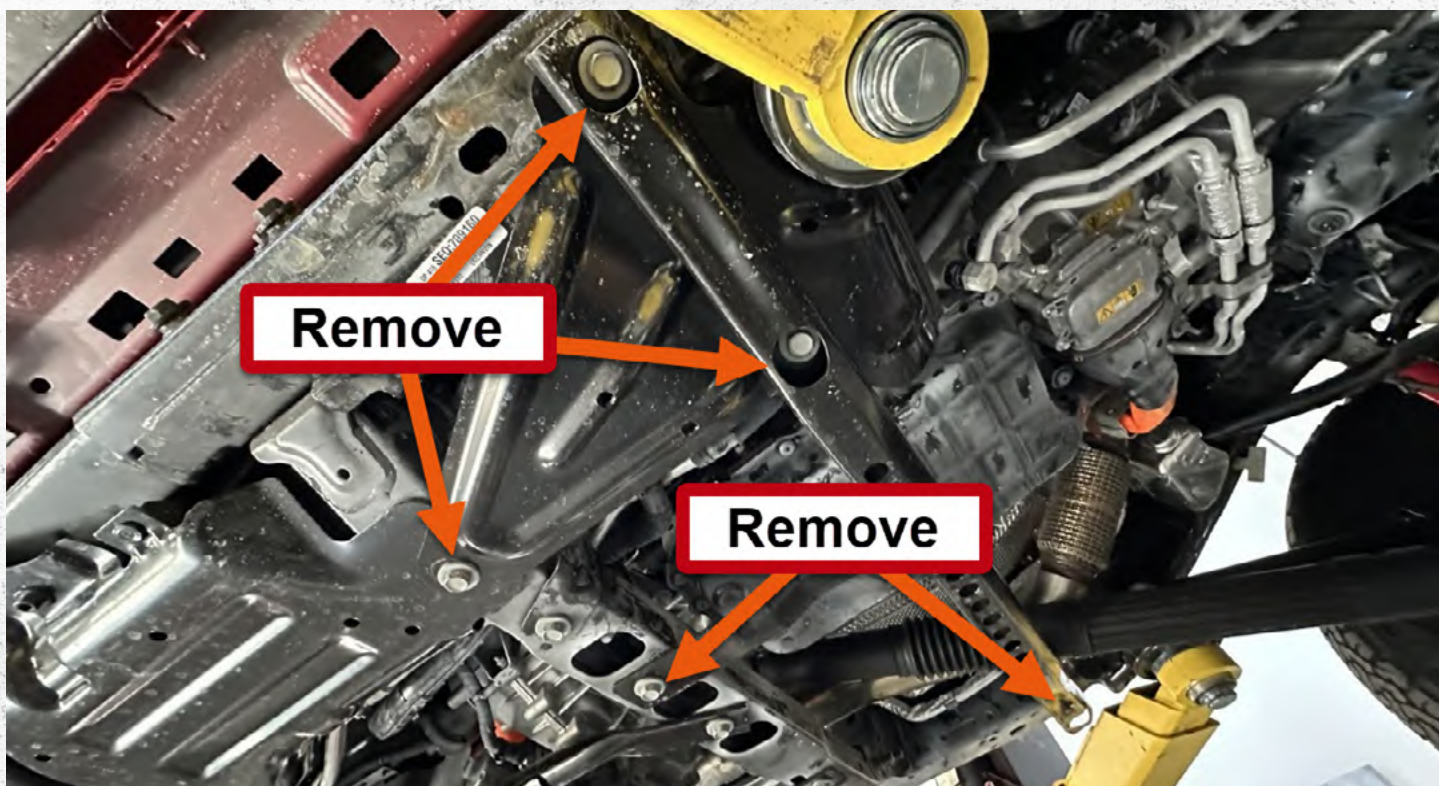
## DISASSEMBLY INSTRUCTIONAL GUIDE



### Step 1:

Remove the four factory bolts on the small engine skidplate using a 13mm socket.

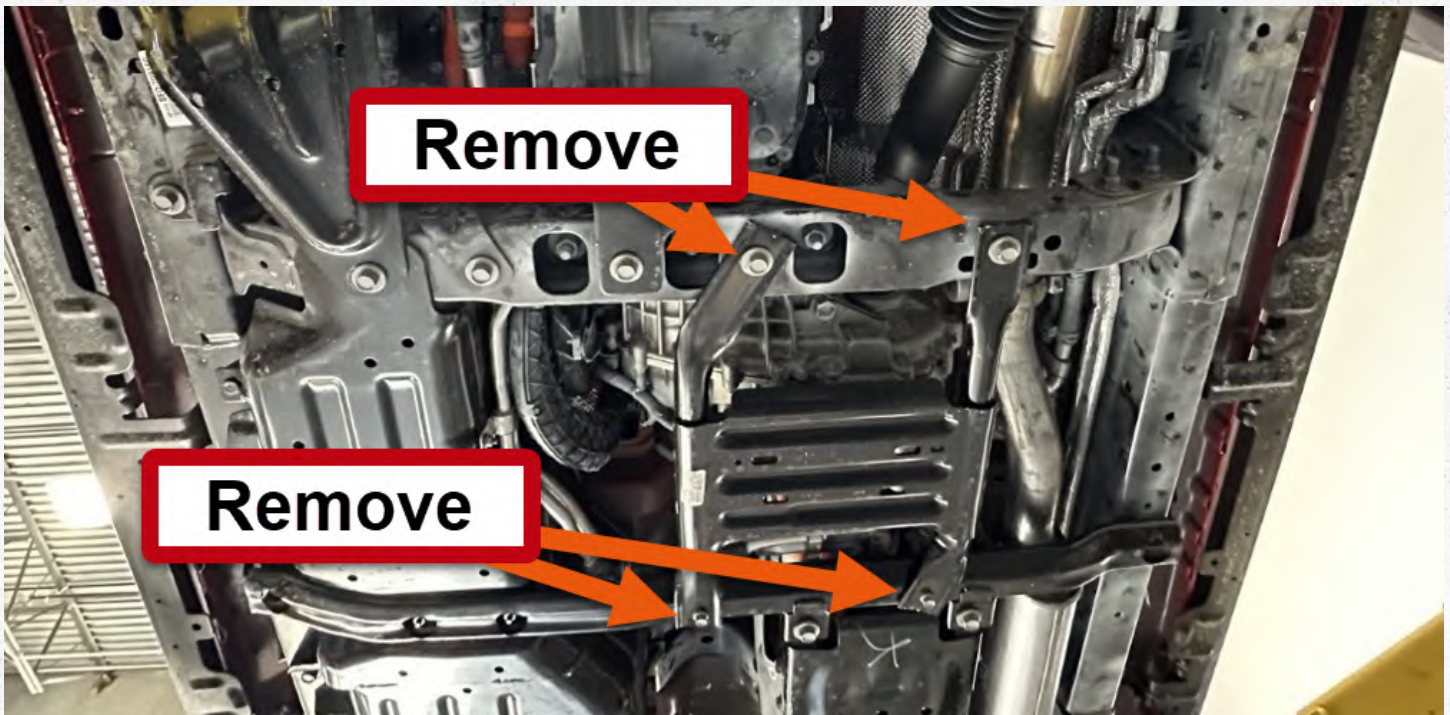
**Reinstall bolts after removal!**



### Step 2:

Remove the five factory bolts on the factory front brace using an 18mm socket.

## DISASSEMBLY INSTRUCTIONAL GUIDE



### Step 3:

Remove the factory t-case skid plate by uninstalling factory bolts using a 18mm and 13mm socket.

**Keep the removed bolts for re installing the factory t-case skid plate after the new engine skid plate is installed.**

## ASSEMBLY INSTRUCTIONAL GUIDE



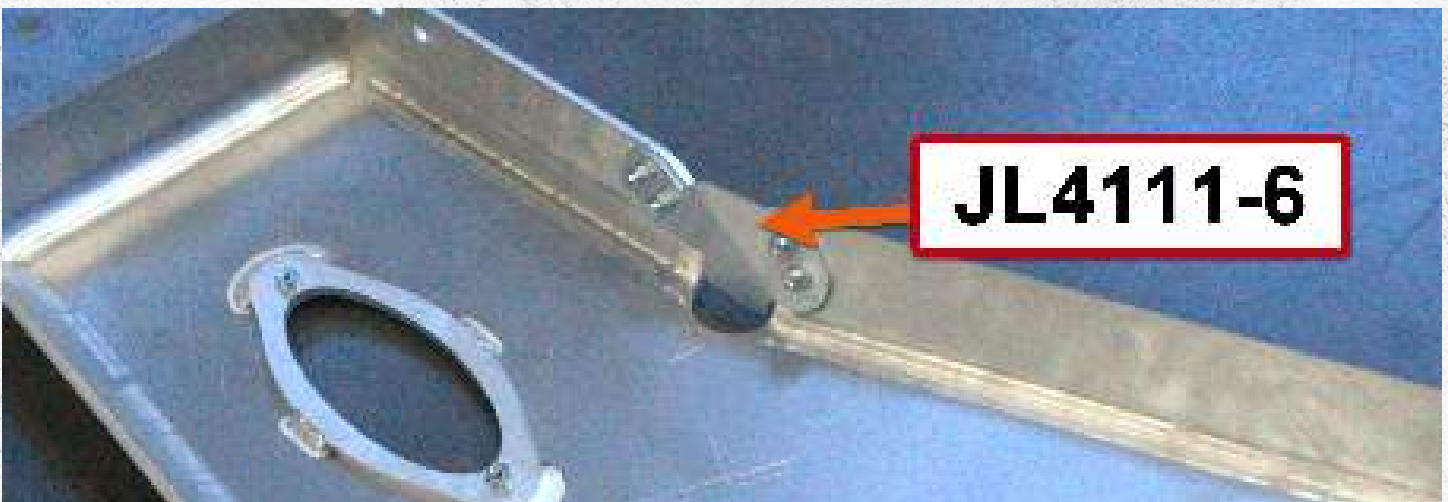
### Step 4:

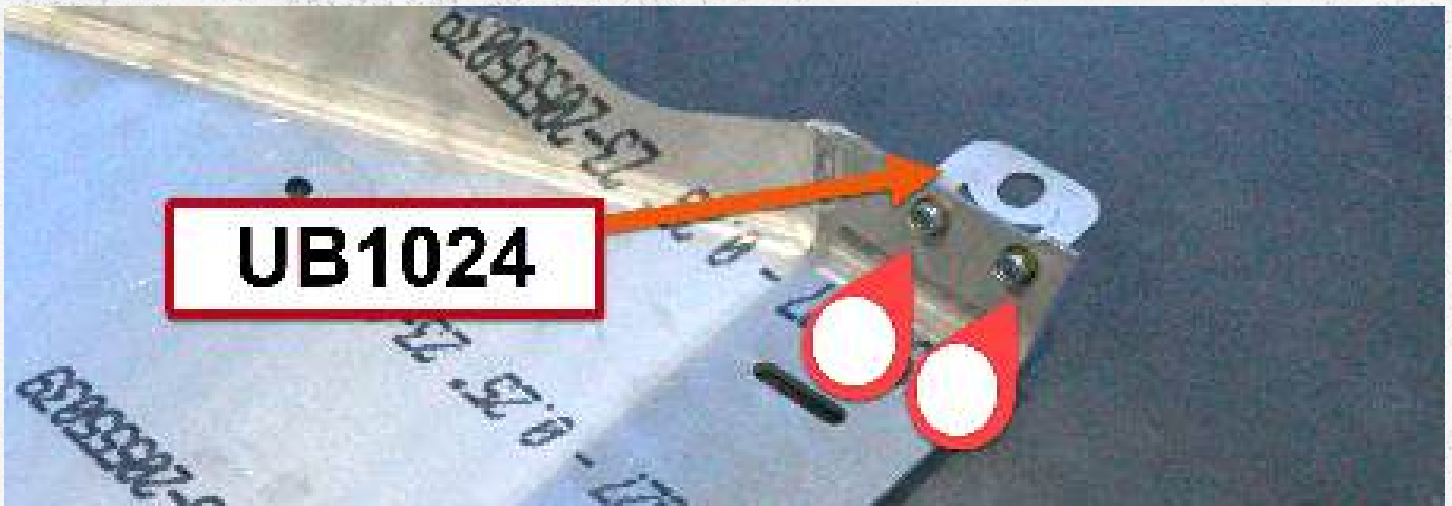
Gather your materials **JL4111-2**, **JL411-4**, **JL4111-5**, **JL4111-6**, **UB1024** and assorted hardware.

**Important!! Leave all hardware loose until the end of installation.**

### Step 5:

Install bracket **JL4111-6** into **JL4111-2** using 4 button head bolts with zinc plated washers.





**Step 6:**

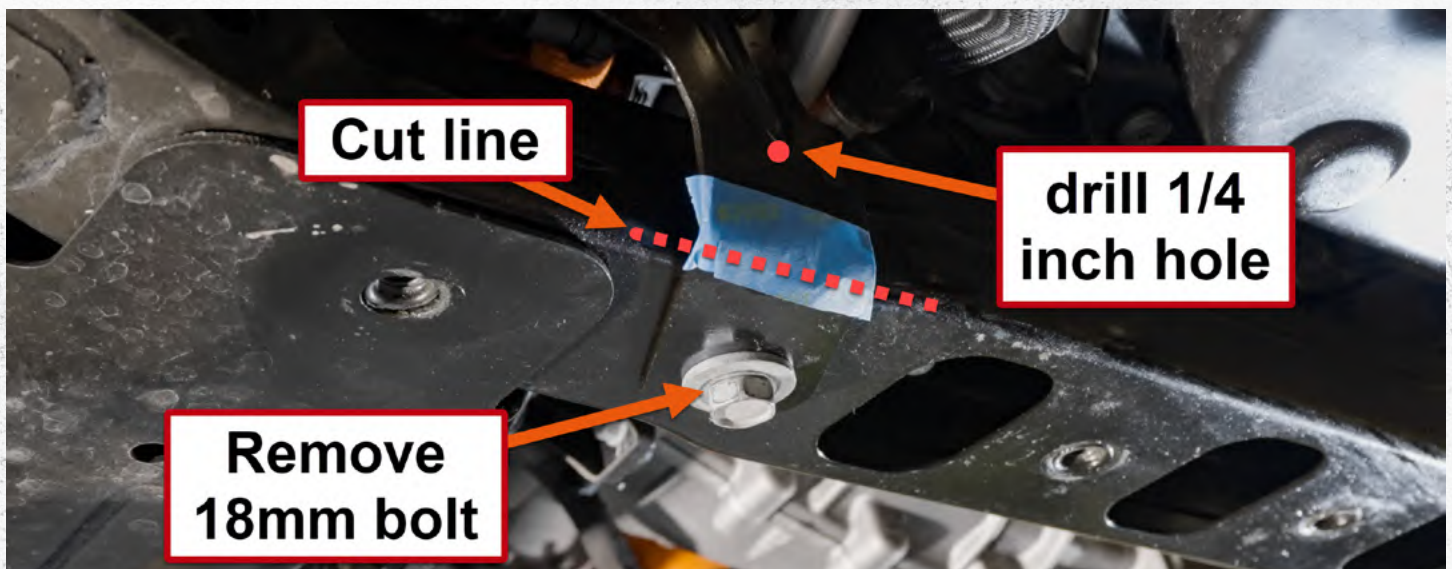
Loosely install the bracket **UB1024** using 2 button head allen bolts, two zinc washers and two nylon lock nuts.

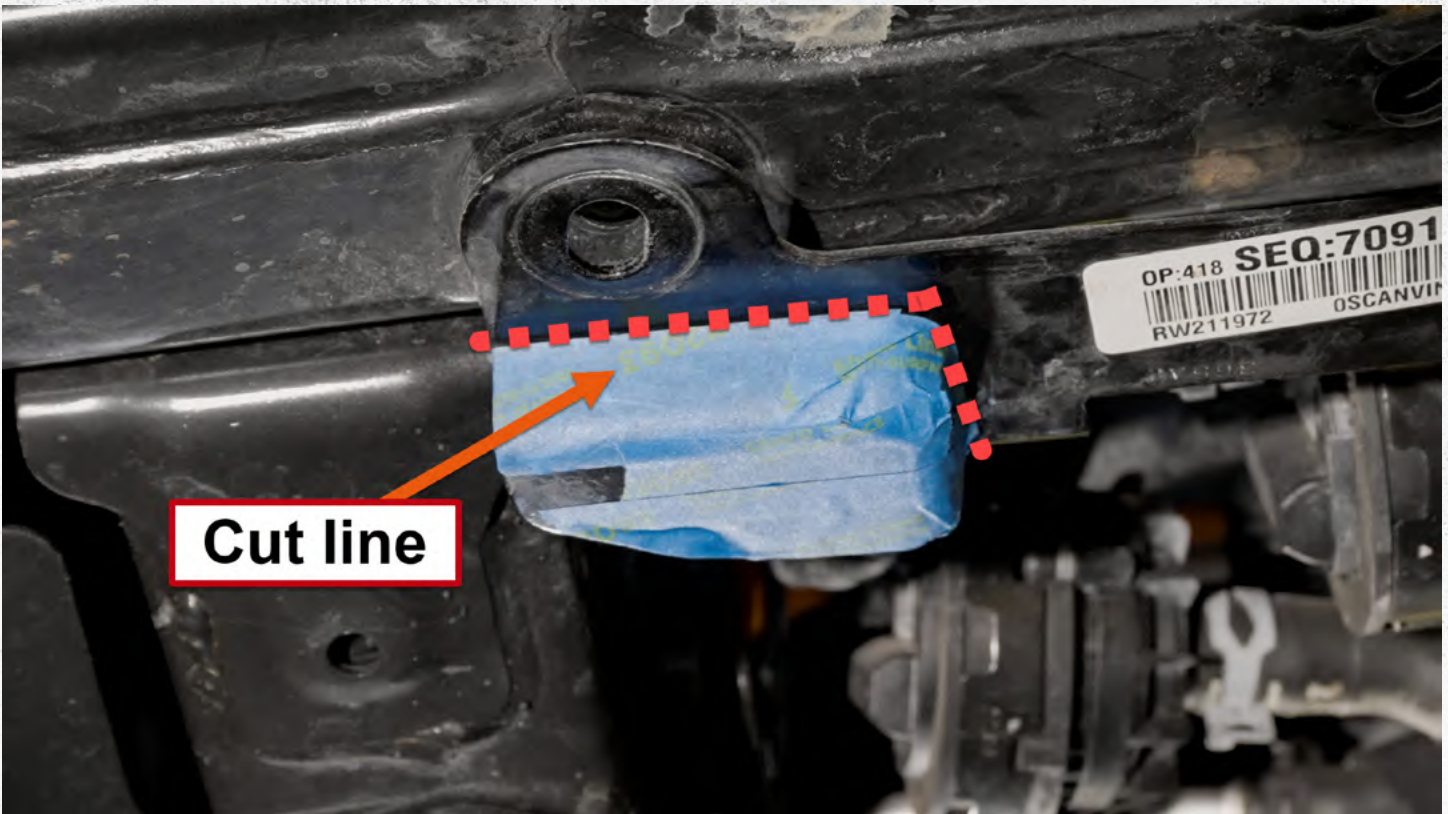


**Step 7:**

Cut the bracket mounted above parallel to the bottom of the cross member so that it sits flush with the cross member.. Drill a 1/4" hole in the center of the bracket, indicated by the marker. **See step 9.**

The 1/4" inch hole is located in the center of the bracket between the two indents in the bracket. The new bracket should be used to locate the hole, this bracket sits flush with the cross-member.





**Cut line**

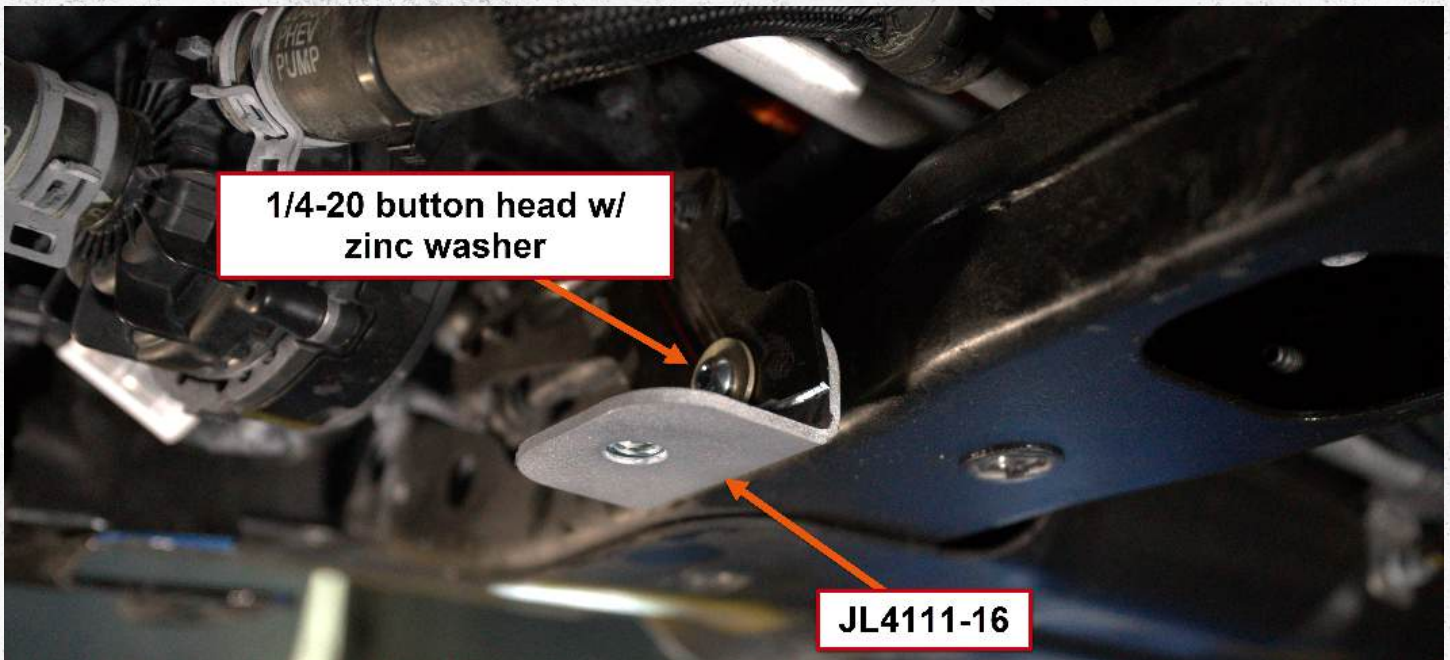
**Step 8:**

Cut the “bubble” off the bracket mounted to the frame along the bottom of the seem and cut flush.



**Additional view of step 8.**

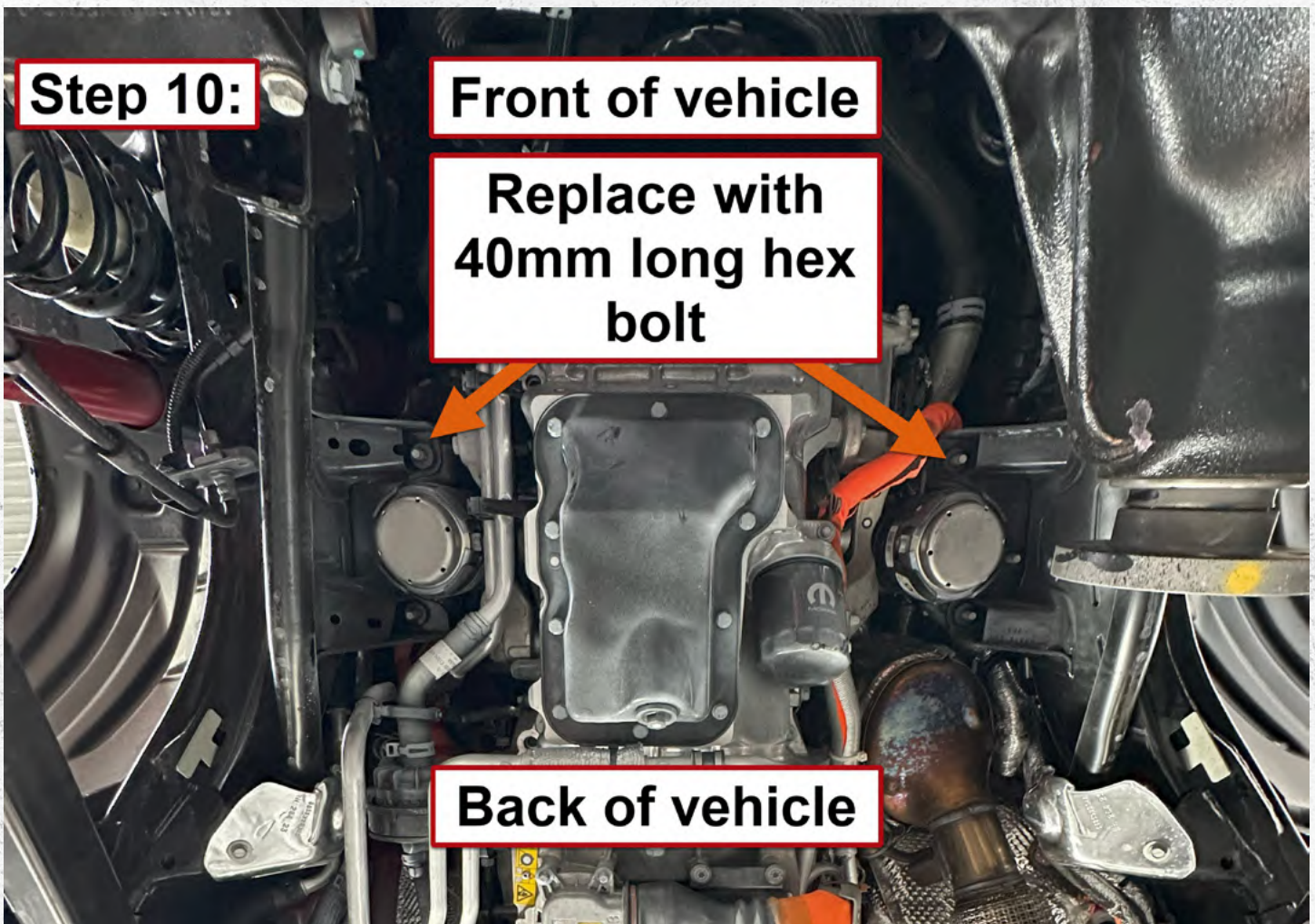
**The “Bubble” is located on the passenger side in front of the factory cross-member.**



**Step 9:**

Install bracket **JL4111-16** in between the cut bracket and the cross-member. Use the provided 1/4"-20 button head bolt and a zinc washer to secure it into place.

**Important! Tighten this bolt fully, it will not be accessible after the engine skid is installed.**





**Step 10:**

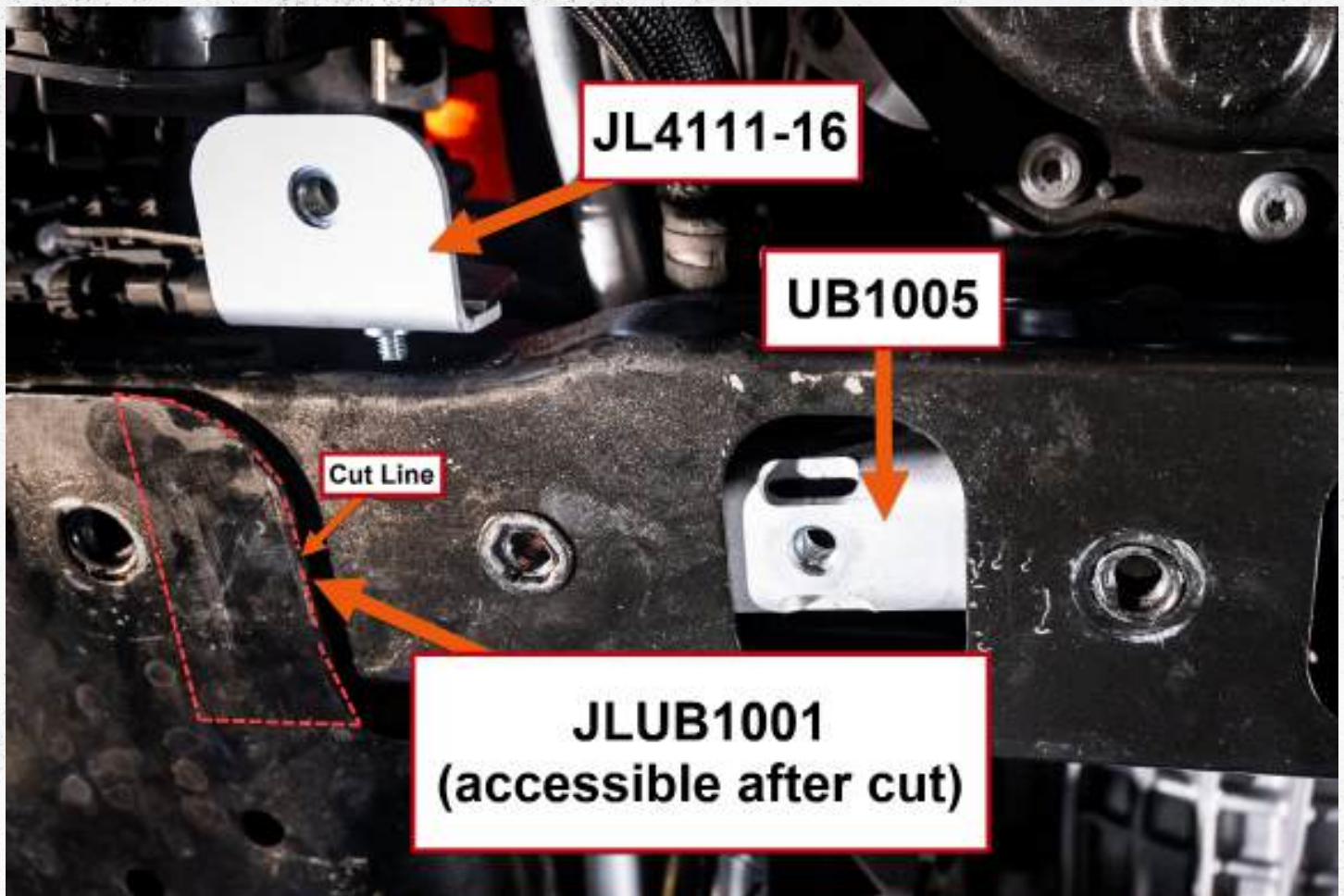
Install the new 40mm long hex bolt with zinc washer. This bolt replaces the factory bolt which can be removed using a 13mm wrench. **Replace the bolt closest to the front of the vehicle on the passenger and driver side of the vehicle.**

On both sides of the vehicle, tighten the new 40mm long hex bolt fully using a 17mm wrench.

**Detailed view above**



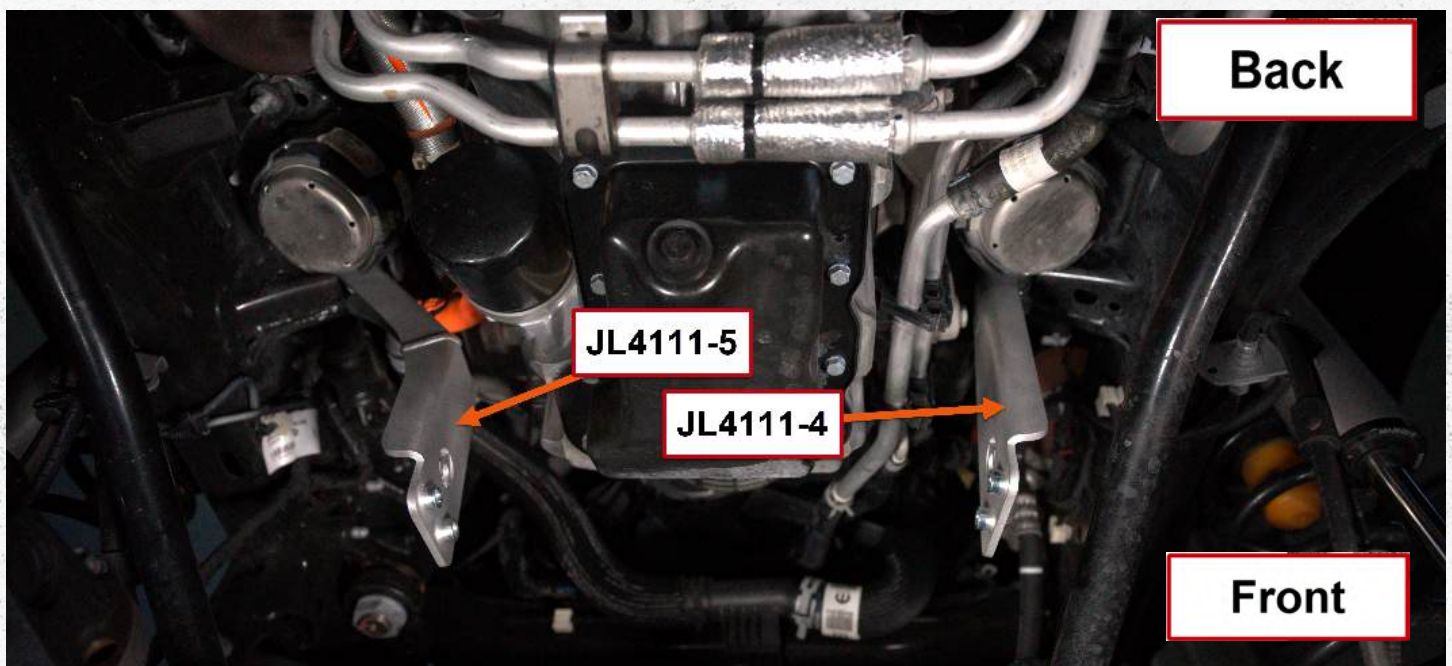
**Passenger  
front**

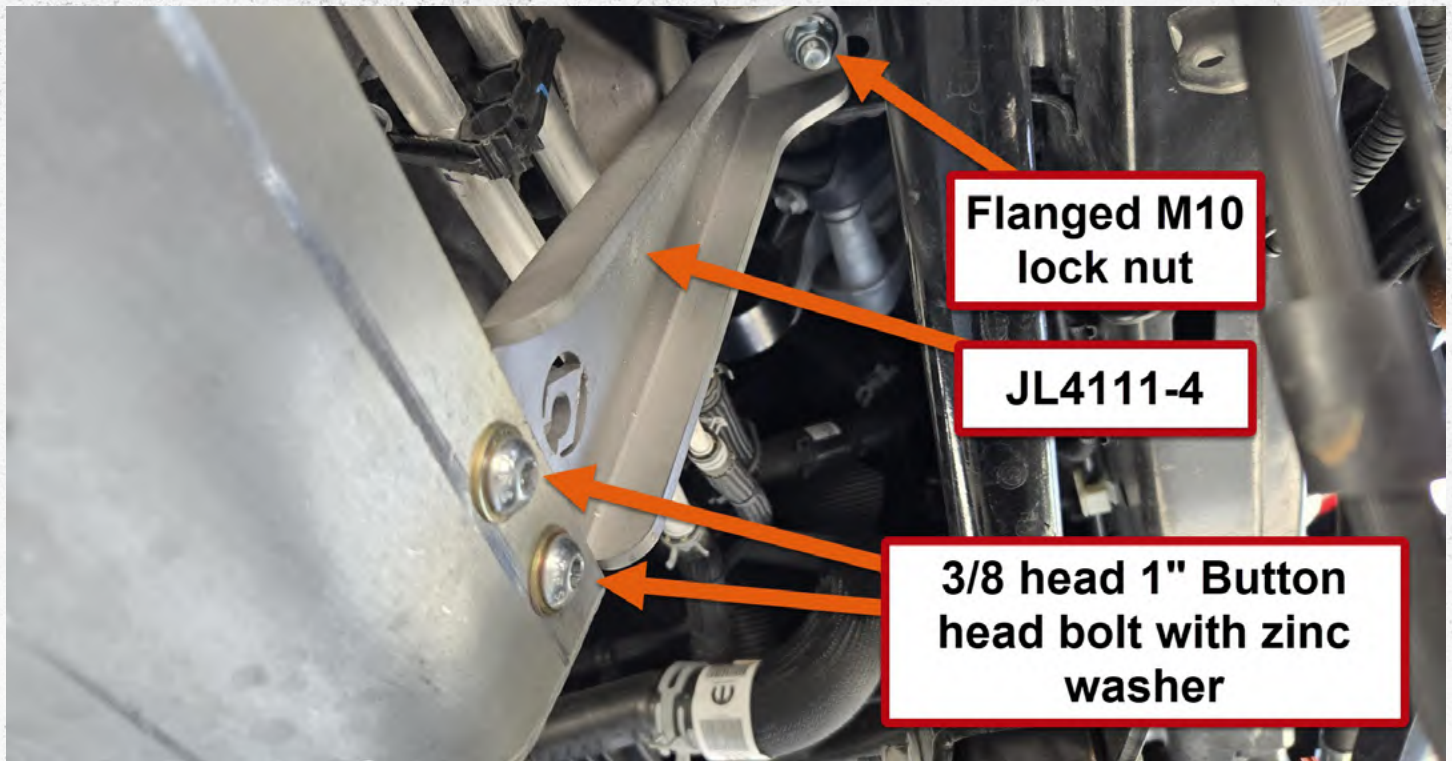


**Step 11:**

Cut the factory fuel skid as shown above. Insert the **UB1005** and **UB1001** nut plates into the cross member.

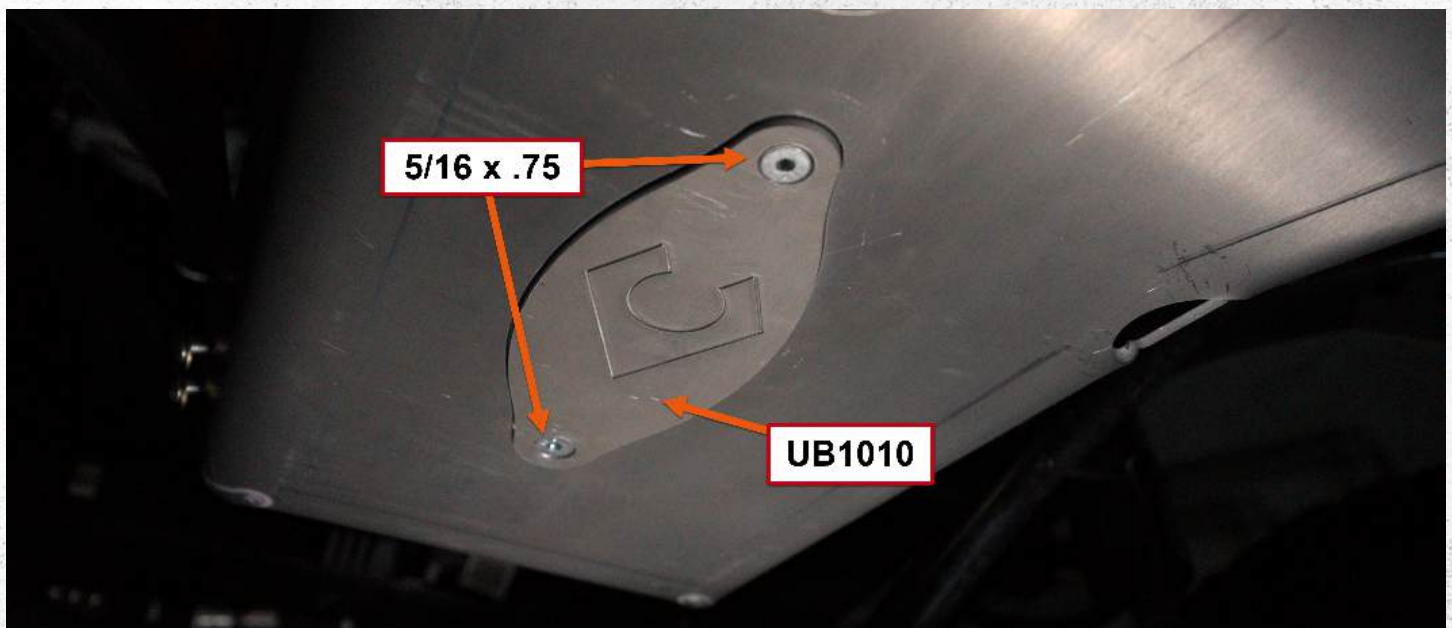
**Place the engine skid temporarily into place to mark the cut, this will result in a clean cut while still being able to bolt the factory fuel skid into place.**





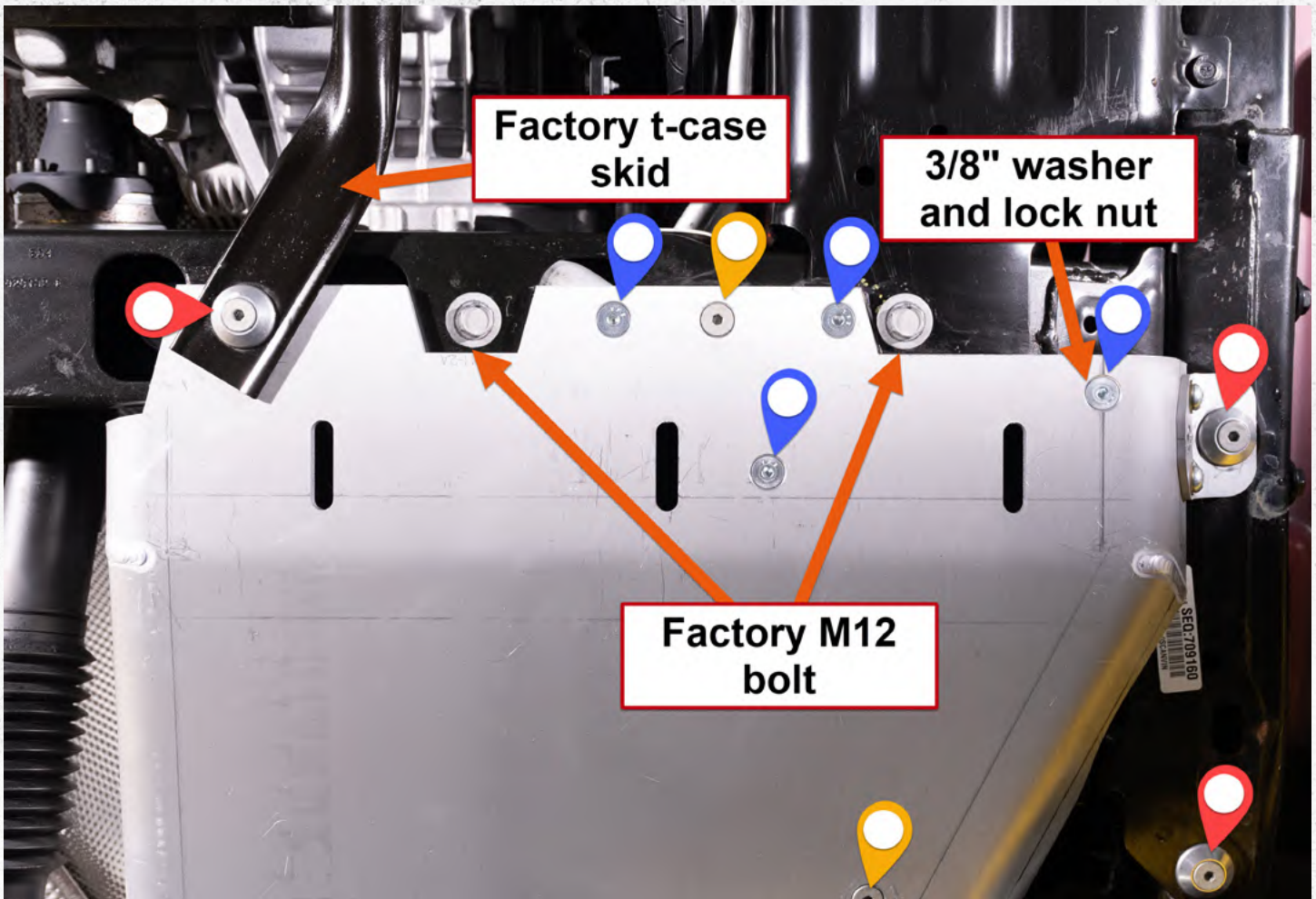
**Step 12:**

Install the skid plate onto the motor mount brackets using a m10 flag nut and twp 3/8" 1" button head bolts with zinc washers on both sides.



**Step 13:**

Install the oil door **UB1010** using two 5/16" x .75 inch countersunk bolts using a 5/16 hex bit.



**Step 14:**

Install the hardware as follows.

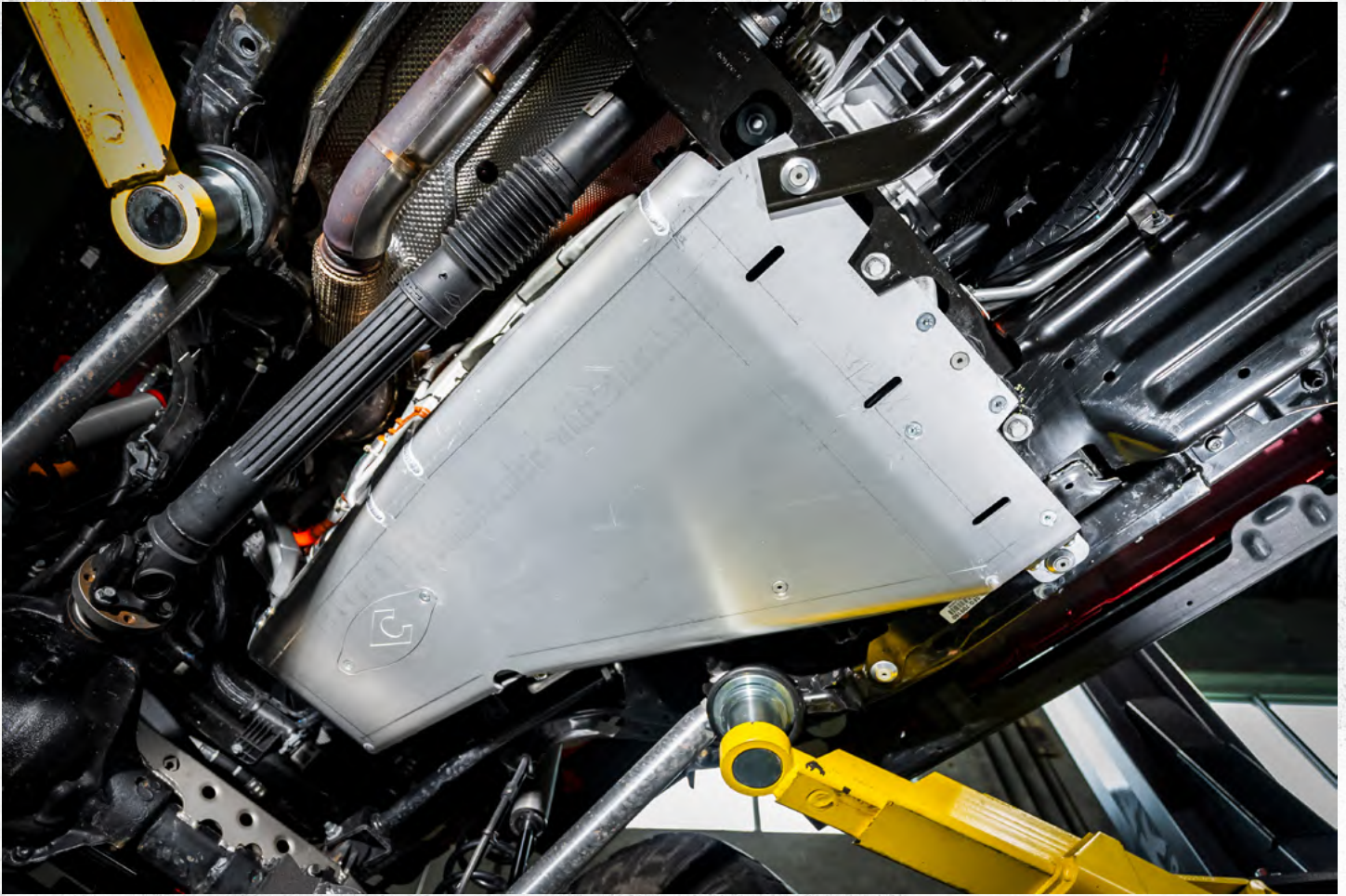
**RED** 40mm m12 countersunk bolt with aluminum washer

**BLUE** 3/8" x 1.5inch countersunk bolt

**Yellow** 40mm M12 countersunk bolt

**Tighten all hardware at this time moving from the rear of the vehicle to the front, If bolts do not line up to the intended hole, make sure all bolts are loose before trying again.**

**Verify ALL previously installed hardware is tight / torqued to specifications.**



## CONCLUSION

Congratulations on finishing the installation for your Artec Industries 4xE engine Skid. Before driving your vehicle, inspect all bolts to ensure they are properly tightened.

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.