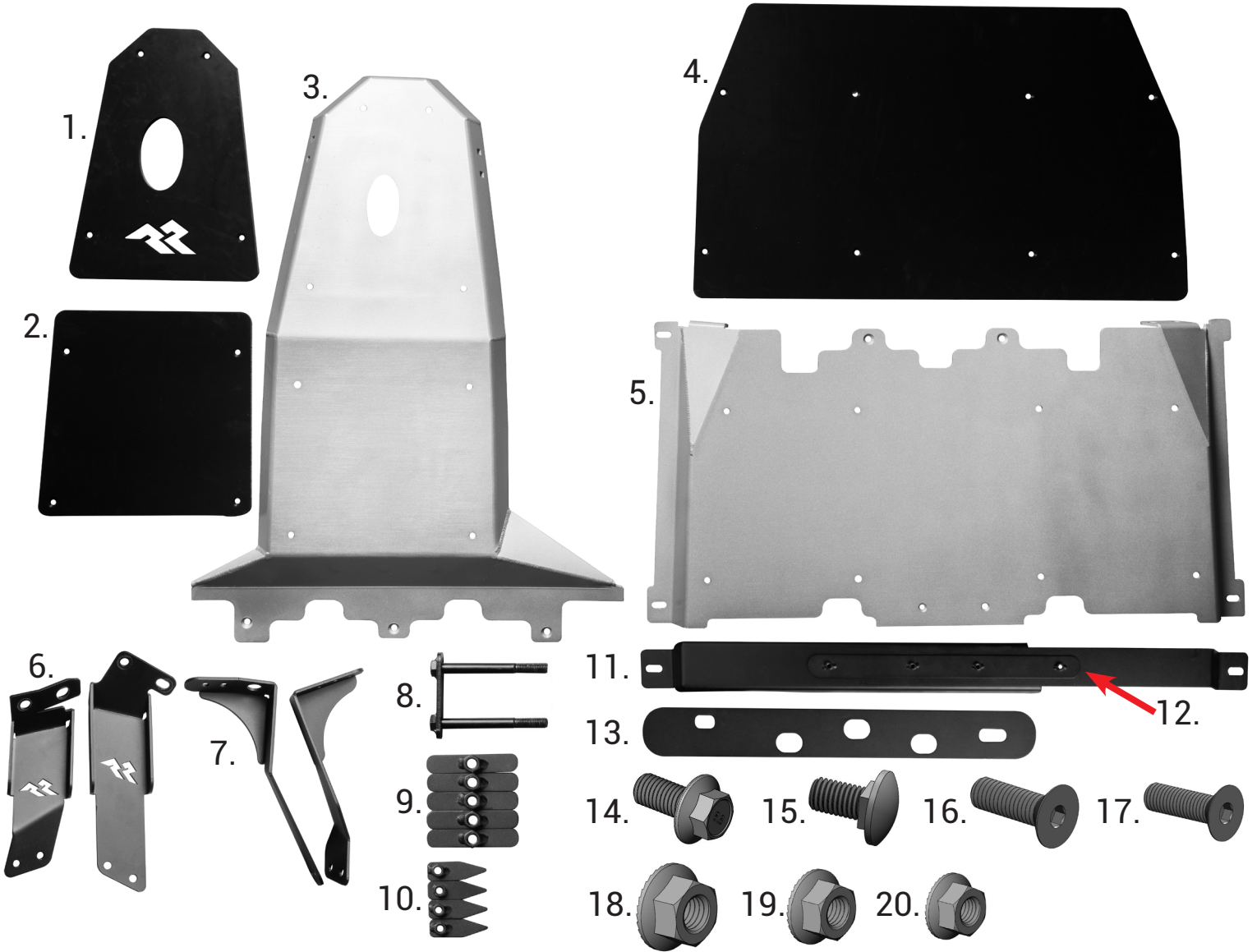


# Skid Plate, Engine / Transfer Case, Jeep JL 4-Door

18003.52

## Components and Hardware:



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1. Engine Skid UHMW Outer Panel, pyramid.....(1)	11. Cross Member for Transmission Skid .....(1)
2. Engine Skid UHMW Outer Panel, square.....(1)	12. M8 X 1.25mm Nut Plate, Cross Member .....(1)
3. Engine Skid Aluminum.....(1)	13. Spacer Plate OE Cross Member .....(1)
4. Transmission Skid UHMW Outer Panel .....(1)	14. M12 X 1.75 25mm, Flange Bolt .....(4)
5. Transmission Skid Aluminum .....(1)	15. M10 X 1.50 20mm, Carriage Bolt .....(4)
6. Engine Skid 1st Gen. Motor Mounts (Pass. & Dr.)...(2)	16. M12 X 1.75 40mm, Flat Head Bolt .....(5)
7. Engine Skid 2nd Gen. Motor Mounts (Pass. & Dr.)...(2)	17. M8 X 1.25 25mm, Flat Head Bolt.....(18)
8. OE Cross Member Bolt Plate .....(1)	18. M12 X 1.75, Flange Nut.....(6)
9. M12 X 1.75mm Nut Plate .....(5)	19. M10 X 1.50, Flange Nut.....(4)
10. M8 X 1.25mm Nut Plate.....(4)	20. M8 X 1.25, Flange Nut.....(14)

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# Skid Plate, Engine / Transfer Case, Jeep JL 4-dr

## STEP 1:

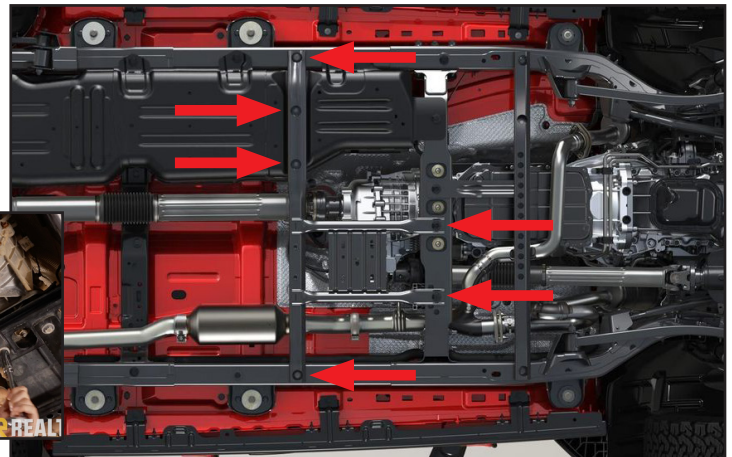
Install UHMW outer panels (1 & 2) to engine skid (3). The UHMW panels have a protective film applied.

Remove the film from both sides of the panels. Attach the UHMW panels to the engine skid using M8 flat head bolt (17) and flange nut (20).



## STEP 2:

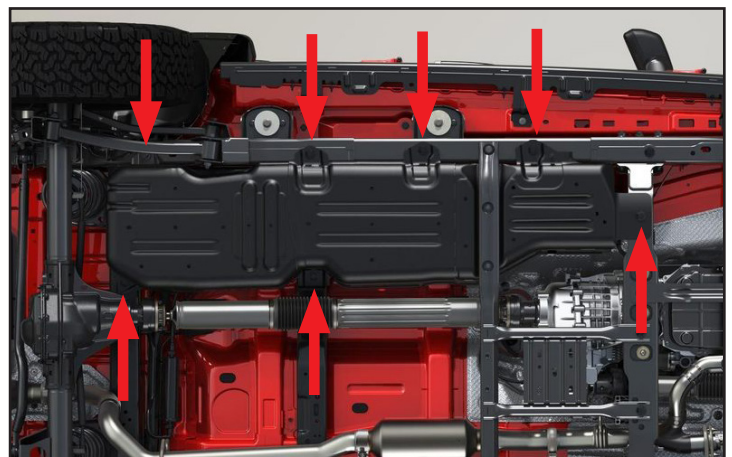
Remove the OE cross member below the transfer case. This cross member is also attached to the gas tank skid. Its attached with 4 bolts and 2 nuts.



## STEP 3:

Next the gas tank skid needs to be removed. This will require a few steps. First allow the fuel tank to be as empty as possible. Drive until the tank is bellow 1/8 of a tank or siphon fuel from the tank. The lighter you make the tank the easier it will be to manage.

Support the tank with a jack. Loosen (do not remove) all hardware. The tank is attached with 7 bolts.



## Skid Plate, Engine / Transfer Case, Jeep JL 4-dr

### STEP 4:

The gas tank has a strap that secures the tank to the OE skid. This strap must be released. Remove the bolt on the frame rail side, then bend the T-tab into the skid plate to release.



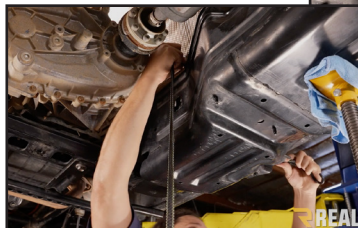
### STEP 5:

Examine the gas tank skid for clips and retainers that would hold any fuel lines or wire harnesses. Release all clips to free the gas tank to drop freely.



### STEP 6:

To support the tank use a ratchet strap feed it between the gas tank and the gas tank skid. Start at the front of the gas tank skid and remove the skid hardware as needed to feed the strap to the center of the tank. Once the strap is at the center hook to the frame rail on one side and the cross member in the center. Tighten strap to hang the tank.



## Skid Plate, Engine / Transfer Case, Jeep JL 4-dr

**STEP 7:**

With the tank still supported with and jack and ratchet strap, remove all hardware holding the gas tank skid.

Now lower the jack and free the OE gas tank skid from the Jeep and fully remove it.



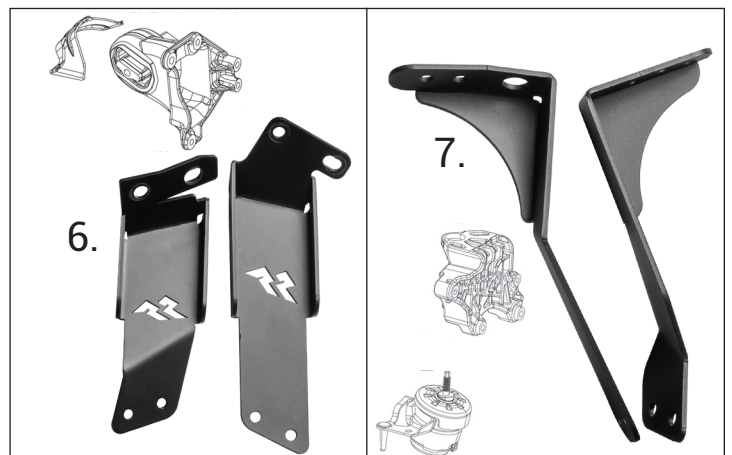
**STEP 8:**

Install the cross member for transmission skid (11). Use two OE bolts into the frame rails. DO NOT fully tighten at this time, these will be removed in another step.



**STEP 9:**

Determine the motor mount bracket to use for your vehicle. The first generation JL motor mount bracket (6) fits JL's between 2018-2020 3.6L. The second generation JL motor mount bracket (7) fits JL's 2021 to current 3.6L.



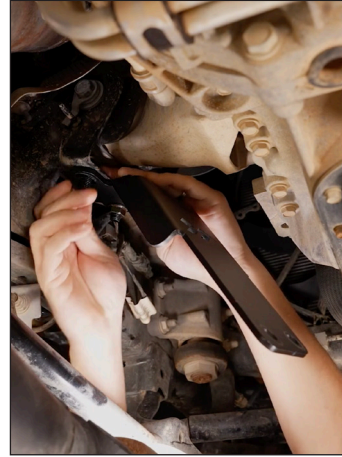
# Skid Plate, Engine / Transfer Case, Jeep JL 4-dr

**STEP 10:**

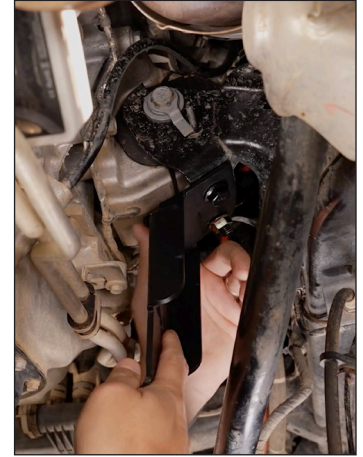
Notice the mounting surface at the top of the motor mount brackets (6 or 7), one side is flat and the other has a bend. Match this shape with the motor mount frame area.

Use two M12 flange bolts (14) and M12 flange nuts (18) to attach each mount. Hand tighten at this time.

**Note:** The first generation passenger side motor mount bracket requires the rear bolt to thread up into the nut because it's too tight to feed the bolt down between the motor mount. Photos shown here is of first generation, the second generation mounts in similar fashion.



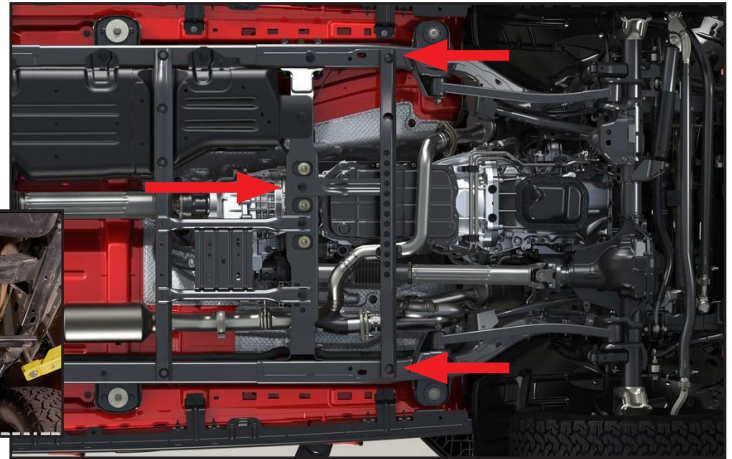
First generation Driver



First generation Passenger

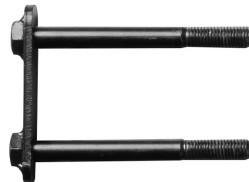
**STEP 11:**

Remove OE cross member under the transmission pan. It is attached with three bolts.



**STEP 12:**

The large OE cross member that has the transmission mount is secured on the drivers side with two long bolts. These bolts need to be replaced with the cross member bolt plate (8).



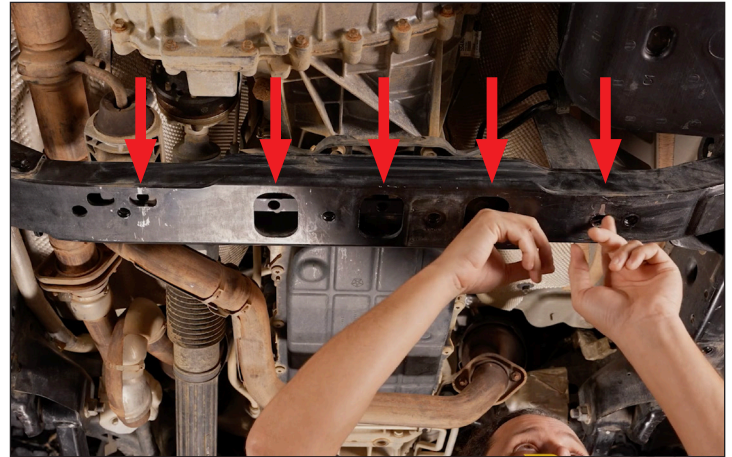
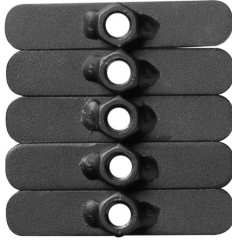
Use a jack to support the weight of the cross member and remove both bolts. Slide the bolt plate through these holes but DO NOT secure with nuts at this time. The nuts will be used when the skid plate is installed in a later step.



## Skid Plate, Engine / Transfer Case, Jeep JL 4-dr

**STEP 13:**

Insert the large M12 nut plates (9) into the OE cross member with transmission mount. The outer two holes are small and will require you to feed it through the large rounded square holes in the center. The center three span across the large rounded square holes.


**STEP 14:**

Bring the engine skid (3) into place. We highly suggest to either have a friend assist in holding it into place or use a jack. If using a jack make sure to not scratch your UHMW. That's to be damaged later on the trails...


**STEP 15:**

With your motor mount brackets (6 or 7) in the inside of your engine skid plate (3), use M10 carriage bolts through the outside of the skid plate into the mount and secure with M10 flange nuts. Attach all four carriage bolts, but DO NOT fully tighten at this time.

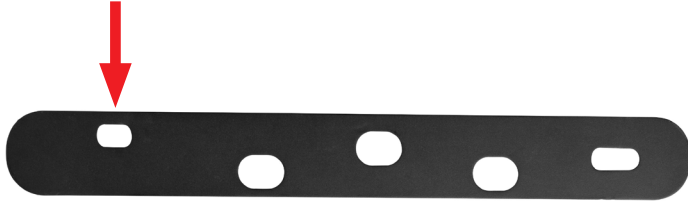


## Skid Plate, Engine / Transfer Case, Jeep JL 4-dr

### STEP 16:

Insert spacer plate (13) between the engine skid (3) and the OE cross member with transmission mount. Lift engine skid to snug spacer plate to cross member.

**Note:** Observe the direction of the spacer plate to assure the holes align. The hole marked with red arrow is the driver's side and the hole towards the rear of the vehicle.



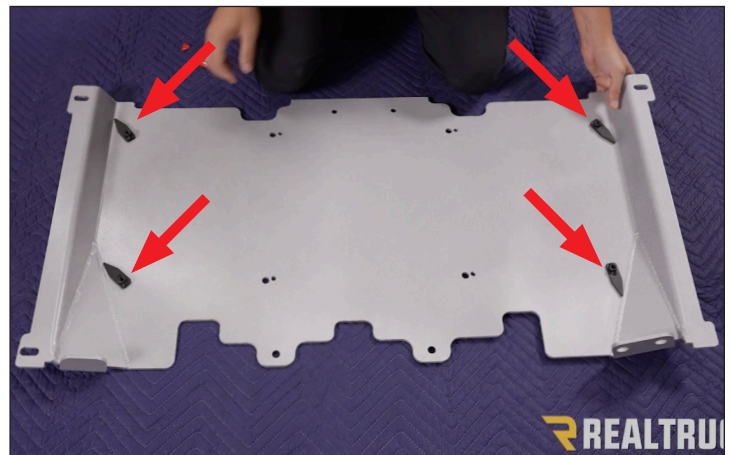
### STEP 17:

Thread the 3 M12 flat head bolt (16) into the M12 nut plates (9) from step 13. Take your time and slowly thread them, if you push it you run a chance of misaligned the bolt plates, simply be patient with this step. Leave hand tightened for now, DO NOT fully tighten.



### STEP 18:

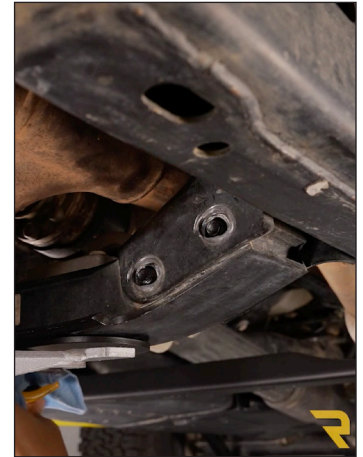
Use the four M8 nut plates (10) and secure them to the inside of the transmission skid plate (5) using tape. We used a doubled sided tape but painters tape or electrical tape will also work. The tape is necessary to hold the bolt plate in place while moving the skid plate in position. Align them over the outer four holes.



# Skid Plate, Engine / Transfer Case, Jeep JL 4-dr

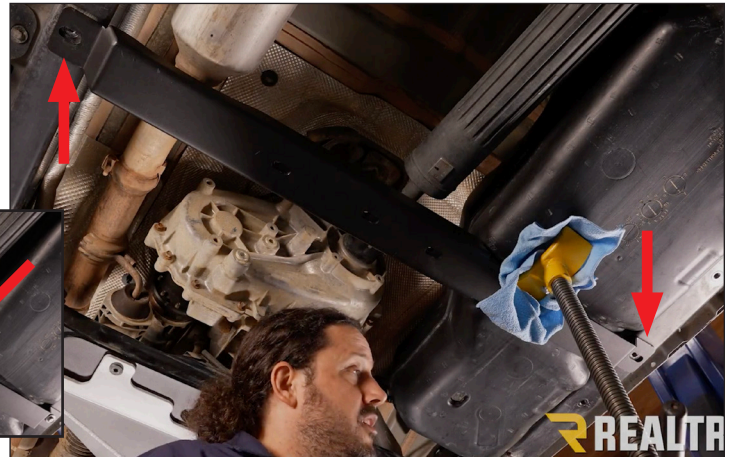
## STEP 19:

Adjust the cross member bolt plate (8) from step 12 to be flush with the front of the OE cross member. This may require lifting the cross member with a jack to relieve any pressure.



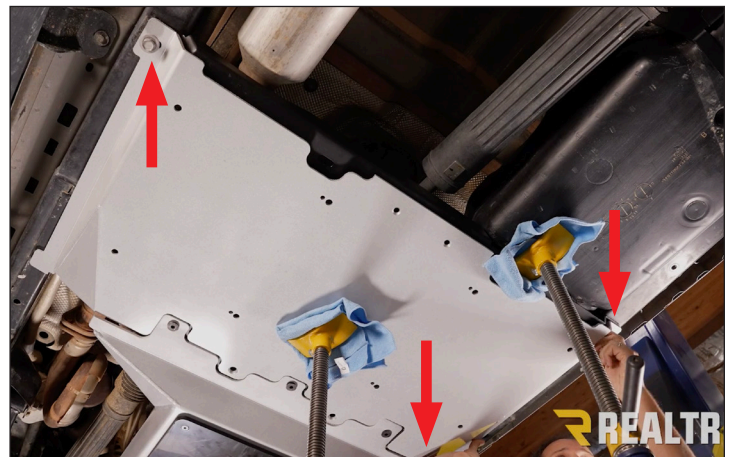
## STEP 20:

Place the long M8 nut plate (12) into the cross member for transmission skid (11). Align the nut plate with the holes of the cross member. Next, support the cross member with a jack and remove the two OE bolts into the frame rails from step 8.



## STEP 21:

Bring the transmission skid (5) into place. We highly suggest to either have a friend assist in holding it into place or use a jack. Thread the three OE bolts into the frame rails. Leave hand tightened for now, DO NOT fully tighten.





## Skid Plate, Engine / Transfer Case, Jeep JL 4-dr

### STEP 22:

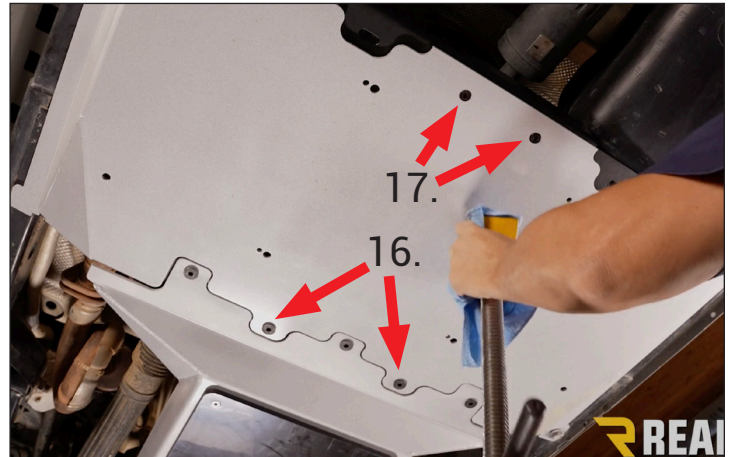
Press the cross member bolt plate (8) through the hole in the transmission skid (5). It may require lifting the skid with a jack to relieve any pressure. Thread the M12 flange nuts (18) to the bolt plate. Only hand tighten at this time.



### STEP 23:

Thread the two M12 flat head bolts (16) into the M12 nut plates (9) from step 13. Take your time and slowly thread them, if you push it you run a chance of misalignment the bolt plates, simply be patient with this step.

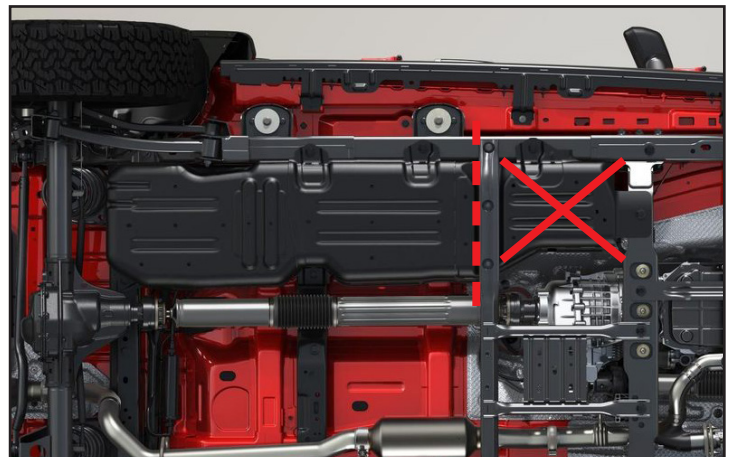
Thread the two M8 flat head bolts (17) into the nut plate (12) from step 20. Leave hand tightened for now, DO NOT fully tighten.



### STEP 24:

**NOTE:** If installing Rugged Ridge gas tank and exhaust skid plates refer to the instruction sheet included in that kit at this time.

Otherwise you will need to modify the OE gas tank skid. Trim the OE gas tank to meet up with the aluminum transmission skid.



## Skid Plate, Engine / Transfer Case, Jeep JL 4-dr

### STEP 25:

Reinstall the trimmed OE gas tank skid and remove the ratchet strap supporting the tank in the reverse manner applied in step 6.



### STEP 26:

Now fully tighten ALL hardware for the engine, transmission, exhaust, and gas tank skid.

Lift UHMW panel (4) for the transmission skid into place. Thread M8 flat head bolt (16) into the four outer nut plates (10) from step 18. The inside four holes of the UHMW will attach using M8 flat head bolt (16) into flange nuts (20).

