

FORD RANGER RAPTOR Next Gen

2022 MY ONWARDS

REAR BAR

IMPORTANT! – READ BEFORE INSTALLATION

- When installed in accordance with these instructions, the rear protection tow bar maintains the factory tow rating of your vehicle.
- This product must be installed exactly as per these instructions using only hardware supplied.
- Take a few moments to read instructions thoroughly before beginning work.
- In the event of damage to any bar component please contact OFFROAD ANIMAL to arrange repair/replacement of components.
- Do not use this product for any vehicle make or model other than that specified on these instructions.
- Do not remove labels from this product.
- This product and its fixings must not be modified in any way unless stated in these fitting instructions.
- The installation of this product is recommended for trained personnel.
- These instructions are correct at time of publication. OFFROAD ANIMAL cannot be held responsible for the impact of any changes subsequently made by the vehicle manufacturer. If you find something has changed please contact us to let us know!
- During installation it is the duty of the installer to check correct operation/clearances of all components.
- If Instructions are to be printed for reference in the workshop, it is recommended that they are printed in colour, for best legibility.

GENERAL CARE AND MAINTENANCE

Only wash the product with a PH neutral car wash to prevent paint damage and discolouration.

Plastic parts may be maintained with silicone spray.

Do not use acidic or alkaline based cleaning products.

It is important to perform regular checks (pre trip or on an annual basis) on the installed product. Checks include:

- Visual inspection for damage (eg. cracks, chips, dents etc.)
- Electrical wiring is not rubbing anything or worn out
- Bolts are torqued to correct specification (see torque guide below)

For touching up small stone chips, Offroad Animal recommends the following paint products:

- Dupli-Color Trim & Bumper Paint Black (TB101)
- VHT Hood, Bumper & Trim Paint Black (SP27)

BOLT TORQUE SETTINGS

Use the following bolt torques on all general fasteners, unless otherwise specified.

GENERAL FASTENERS	
Size	Torque Nm
M5	5 Nm
M6	9 Nm
M8	22 Nm
M10	44 Nm
M12	77 Nm

Use the following bolt torques on all structural front bar mount and tow point fasteners, and rear towbar fasteners, unless otherwise specified.

FRONT BAR MOUNTS AND TOW POINTS + REAR TOWBAR	
Size	Torque Nm
M10	57 Nm
M12	100 Nm
M14	164 Nm
M16	248 Nm

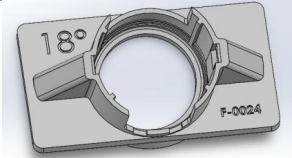
Always use a torque wrench to set correct torque settings. Ensure torque wrench is set to Nm unit of measurement. Otherwise perform conversion to lb-ft.

PARTS LISTING

IMPORTANT: Check all parts are present before beginning work! Contact OFFROAD ANIMAL if something is missing.

Main Parts – In the Box

Qty	Part Number	Description	Image
1	RB-FRR-NG-22-ASM1	RANGER RAPTOR NEXT GEN REAR BAR ASSY	
1	RB-FRR-NG-22-ASM2R	Ranger Raptor NG Rear - Wing Brace Assembly	
1	RB-FRR-NG-22-ASM2L	Raptor Rear Bar - Wing Brace	
1	B-1024R	Raptor Rear Bar - Chassis Bracket	
1	B-1024L	Raptor Rear Bar - Chassis Bracket	
2	P-0129	Raptor Rear Bar Nut Plate	
2	F-0016	Ford Ranger Next Gen Sensor Holder - 18 Deg Horizontal	
2	F-0023	Raptor Rear Bar sensor holder - Fat Isolation Ring 15Deg	

2	F-0024	Raptor Rear Bar sensor holder - Fat Isolation Ring 18Deg	
2	BR25B	LED NUMBER PLATE LIGHT	
1	TK-COM-PSEN- 6	Tape Kit – 6 Sensor Universal	No Image

Small Parts – Contained in Small Parts Kit Bag

Qty	Part Number	Description
6	M8 FLANGE NUT	Flange Nut, M8x1.25 G8.8 ZP
4	M8 X 16 BHCS BZP	SCREW, BUTTON HEAD CAP, M8X16X1.25 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
4	M8 HD FLAT WASHER - BZP	M8 FLAT WASHER - High Tensile 19x8x2mm, ISO4042 ZnNi BLACK PASSIVATED FINISH
4	M8 X 30 HEX	Bolt Hex, M8X30X1.25, GR8.8 ZP
2	M8 HD FLAT WASHER	M8 FLAT WASHER - High Tensile 19x8x1.9mm
1	NP-COM-M8- 200-ASM0	M8 Nut Plate 200mm
4	BP-COM- M12X30-190- ASM0	Bolt Plate M12X30, 190mm stem
10	M10 FW LHD	WASHER, FLAT M10X28.5X2.5
12	M10 FLANGE NUT	Flange Nut, M10x1.5 G8.8 ZP
2	M10 Flat Washer	M10 FW
2	M8 FLAT WASHER	M8 FW
4	M5 FLANGE NUT	Flange Nut, M5x0.8 G8.8 ZP
4	M5X15 PAN	SCREW, PAN HEAD PHILLIPS, M5X15X0.8 GR4.6 ZP
2	M12 FLANGE NUT	Flange Nut, M12x1.75 G8.8 ZP
2	M12 HD FLAT WASHER	M12 FLAT WASHER - Large High Tensile

TOOLS REQUIRED


The following tools will be required to install the product.

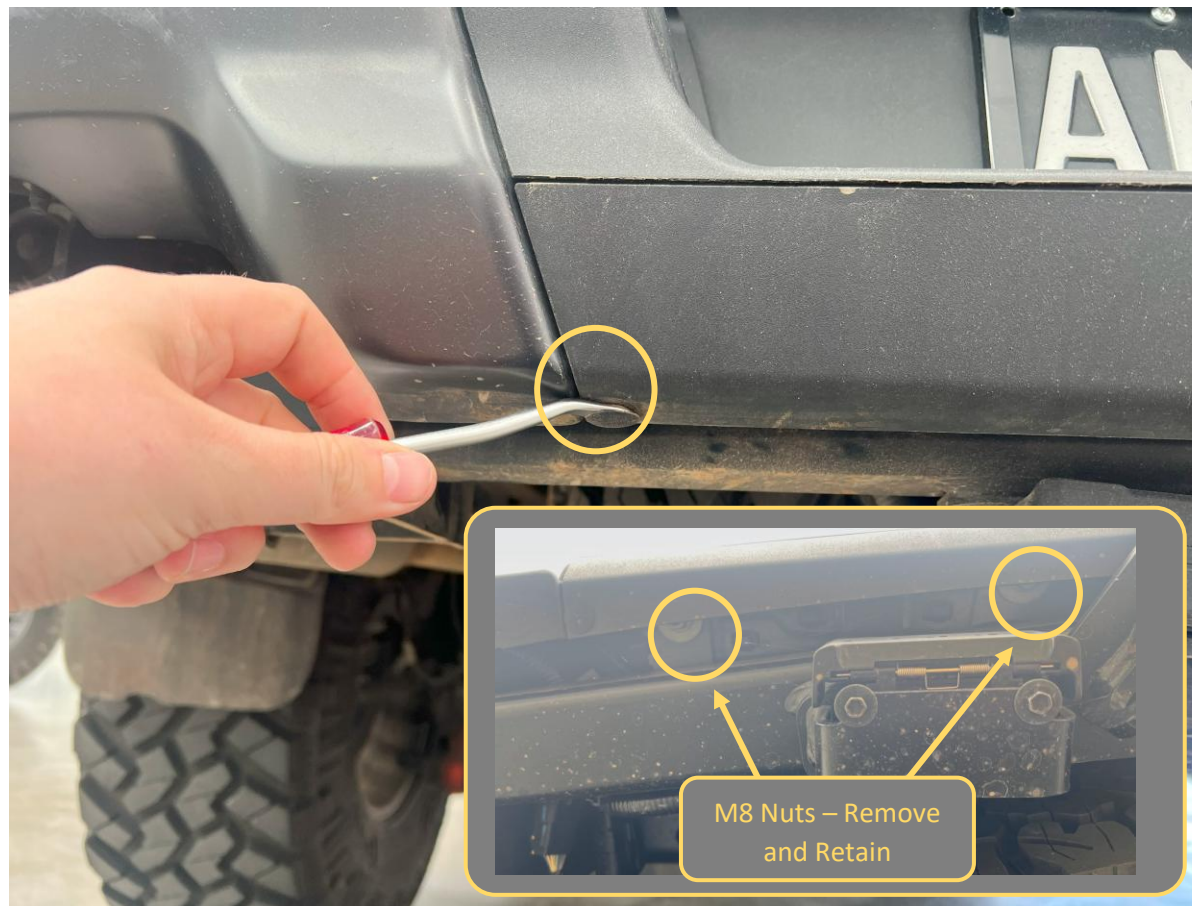
Hand Tools	Power Tools	Workshop Equipment
Metric Socket Set 8-19mm Metric Spanner Set 8-19mm Hex (Allen) Key Set 4-8mm Trim Tool Utility Knife Side Cutters Wire Strippers	Soldering Iron Heat Gun Or Crimping tools Electric / Air Impact Driver (Optional but speeds up fitting process)	Lift Trolley (Optional) Solder Heat Shrink Or Crimp Connectors

WORKSHOP SAFETY

It is the responsibility of the installer to always complete works in a safe manner. Make sure the following safety equipment is available and precautions are observed whilst fitting this product.

<p>Hearing Protection</p> 	<p>Always wear ear protection when using power tools.</p>
<p>Eye Protection</p> 	<p>Ensure eye protection is always worn when cutting or drilling.</p>
<p>Manual Handling</p> 	<p>Do not attempt to lift bar assemblies or rock sliders on your own.</p> <p>Always use two people to lift or use mechanical Lifting aid such as hydraulic lifting trolley.</p>
<p>Vehicle Support</p> 	<p>Always ensure vehicle is properly supported when working on it. Do not attempt to fit products whilst suspension work is being carried out. Do not work under a vehicle supported only by a jack.</p>

	
<div>1. Before beginning work, remove factory tow ball mount if fitted for easier access. 17mm spanner may be required to loosen anti rattle bolt on bottom of hitch.</div>	<div>TOOLS REQUIRED</div> <div>17mm spanner</div>
	<div>FASTENERS</div>



2. Remove the Clip the secures the trim strips to the bottom edge of the factory rear bar.
3. If desired you can remove the trim strips, otherwise flex the trim strip to access the recessed M8 Nuts.
4. Remove 4x M8 nuts securing the bottom edge of the rear bar. to the Chassis. Due to length of the studs use a deep socket for easy removal.


TOOLS REQUIRED

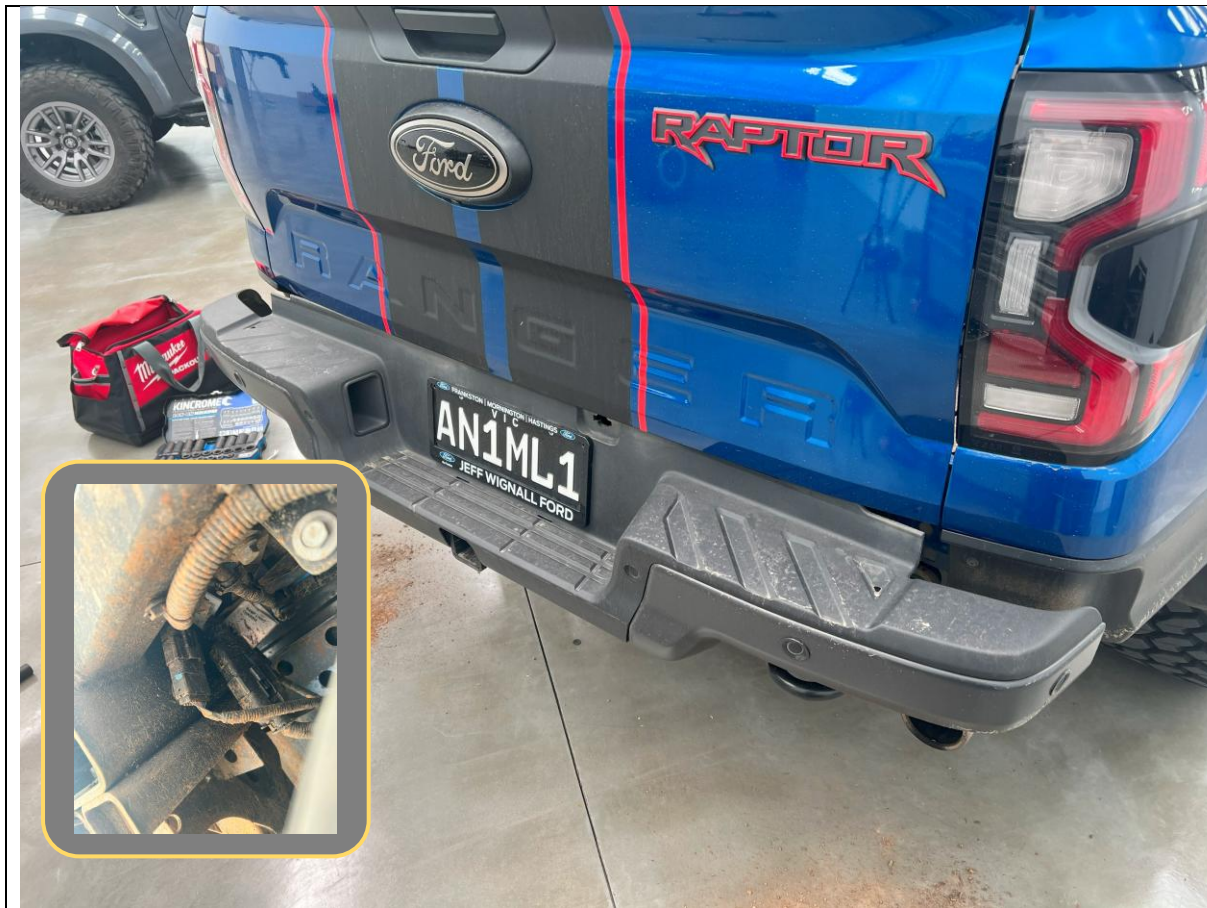
Trim Tool
or
Flat head screwdriver

13mm Deep Socket

FASTENERS


4x M8 Large Flange Nuts

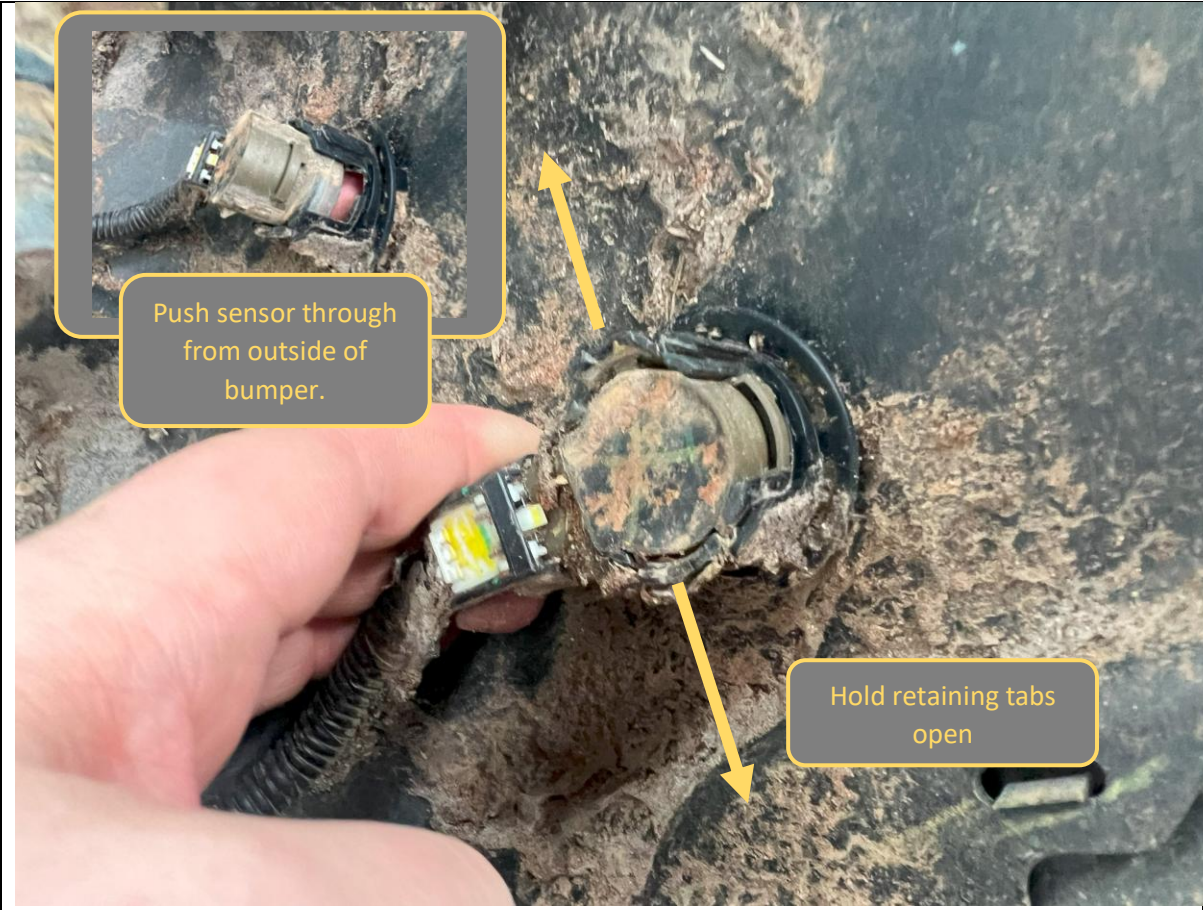
	
<p>5. Remove the remaining fasteners securing the factory rear bar. There is 1x M12 nut on the underside of tow bar, One M8 Nut directly above the tow point on tow bar and one M8 bolt inboard, behind the tow bar near the spare tyre on each side.</p> <p>6. Use 13mm socket on M8 and 18mm Socket on M12.</p> <p>7. Complete on both sides of the vehicle. Retain the Factory Fasteners for re-use.</p>	TOOLS REQUIRED 18mm Deep Socket 13mm Deep Socket
	FASTENERS 1xM8 Large Flange Nut 1x M12 Large Flange Nut 1x M8 Bolt Per Side




8. Carefully pull the bar rearward. Disconnect the sensor wiring harness, located on the LH chassis rail, then lift factory rear bar off car and set aside.
9. The bar is light enough to lift by one person, however, it may be easier with assistance.

TOOLS REQUIRED**FASTENERS**

<div><div>Unplug Numberplate Lights</div><div>Depress Tabs</div><div>Push Light Through Bumper</div></div>	
<div>10. Unplug number plate lamp connectors. Depress tab on connectors to release.</div> <div>11. Remove number plate lamp housing by releasing the clips securing and pushing through the bar, this will give access to the inboard parking sensors.</div> <div>12. Remove number plate from original rear bar.</div>	TOOLS REQUIRED
	FASTENERS

	
<div>13. Remove parking sensors from housings, by holding open the retaining tabs, whilst pushing the sensor through the housing from the outside of the bumper</div> <div>14. Repeat for all sensors in the bumper.</div>	TOOLS REQUIRED
	FASTENERS

		
<p>15. Unclip and remove wiring loom from original rear bar. Place aside in safe location for refitment to Offroad Animal Bar.</p>	TOOLS REQUIRED Trim Tool	
	FASTENERS	



16. Clean areas adjacent to parking sensor locations on inside of bar with isopropyl alcohol.	TOOLS REQUIRED Isopropyl Alcohol Rag
	FASTENERS

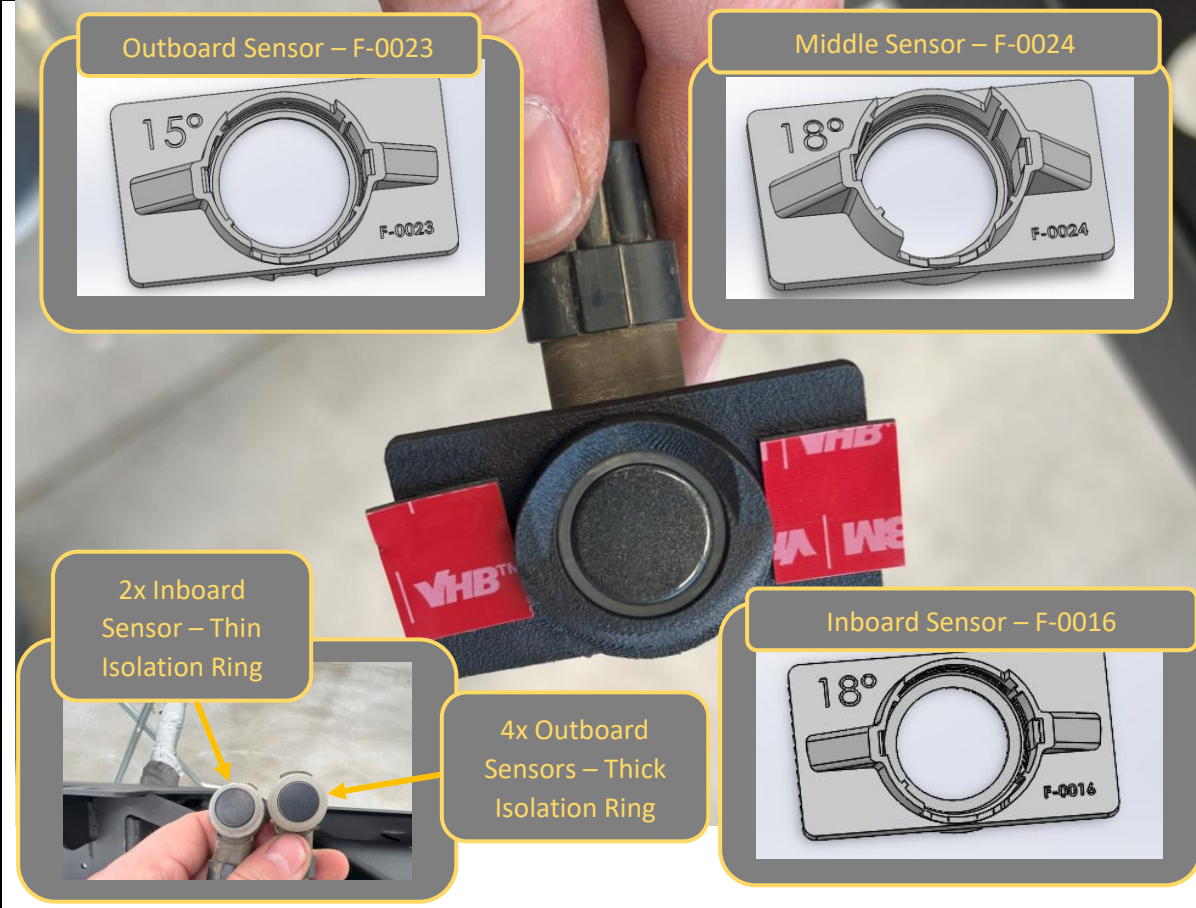


17. Activate the ampoule of adhesion promotor in the parking sensor tape kit by crushing tube in location indicated.
18. Apply adhesion promotor to sensor housing mounting faces, and bond areas of the bar adjacent to the sensor holes in the bar.

Important: allow at least 5 minutes for the primer to chemically bond to the surfaces before applying tape.

TOOLS REQUIRED

FASTENERS

	
<p>19. Determine correct sensor housings for each sensor location. Note that the 4x Outboard sensors and 2x Inboard sensors have different thickness isolation rings.</p> <p>20. Take care to ensure correct housing is fitted to correct locations.</p> <p>21. Apply 3M Tape pads to all sensor mounting tabs on the sensor housings.</p> <p>22. Re-fit parking sensors into new housings, ensure sensors are inserted square and there is no distortion to the rubber isolation ring.</p>	TOOLS REQUIRED
	FASTENERS Tape Pads



23. Route the loom through the new bar. Disconnect sensors as required to pass wiring through smaller openings.
24. Ensure main plug is adjacent to the LHS side arm.
25. With sensor plugs connected, remove tape backing and adhere sensors, in housings to the bar. Apply pressure for 20-30 seconds to ensure strong adhesion of tape.

TOOLS REQUIRED**FASTENERS**



26. Fit the number plate lamps to the rear bar, by first feeding the cable the bar, then securing with screws and nuts supplied in the lamp package.

27. Cut off lamp holders from the factory loom. Strip ends and solder to new LED number plate lamp cables. Use heat shrink or electrical tape to insulate solder connections.

28. Complete for both sides of vehicle.

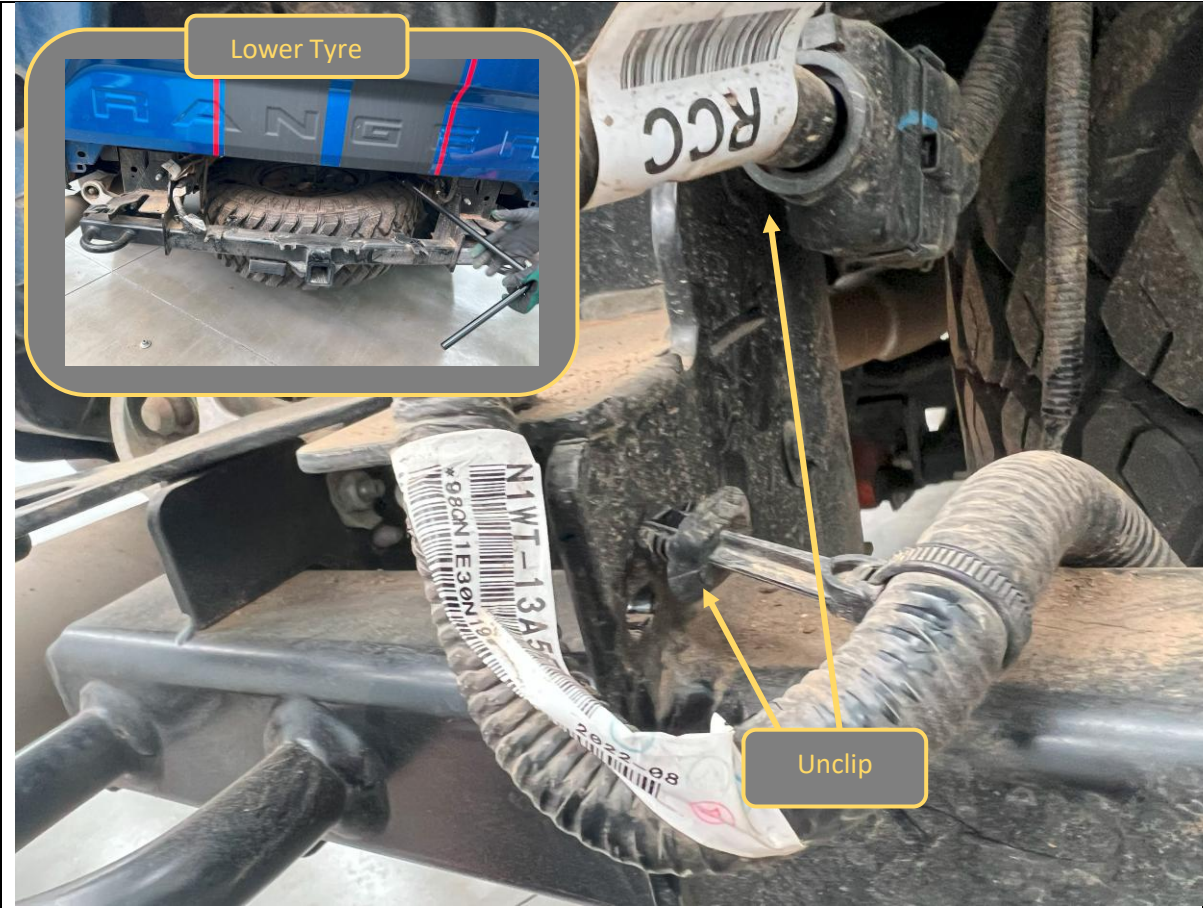
29. Refit Number Plate to Rear bar.

TOOLS REQUIRED

Soldering Iron
Solder
Heat Shrink / Gun
Electrical Tape
Side cutters
Wire strippers

FASTENERS

Screws supplied with Lights
M5 Screws for Number plate



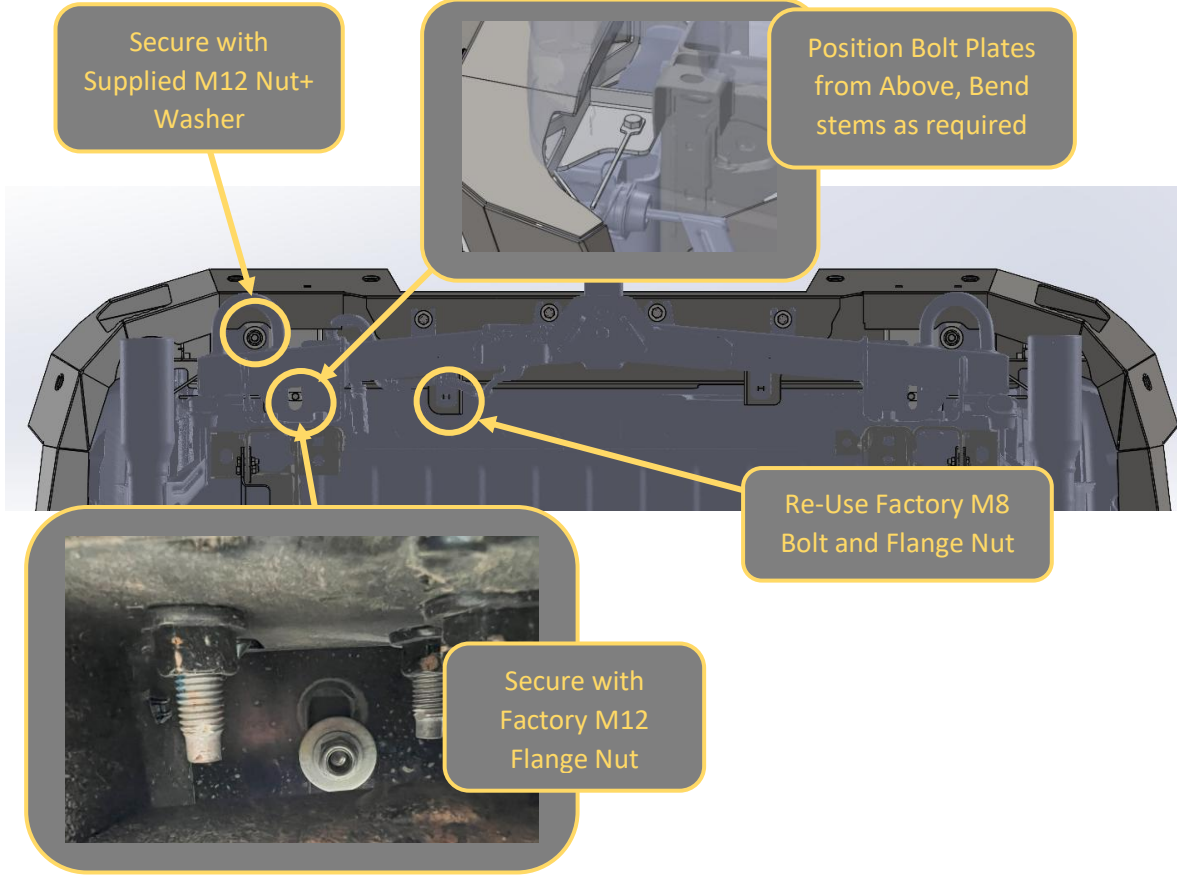
<p>30. Prior to fitment of the new rear bar, unclip the trailer wiring harness from the tow bar in the locations shown to create more access during fitment.</p> <p>31. It is necessary to drop the spare tyre to allow access for the inboard bolts. This is done most easily now whilst the bar is off. Use the factory tyre tools to lower the tyre by the winch.</p>	TOOLS REQUIRED
	FASTENERS



32. Lift the rear bar into position on the car. This can be done alone but will be easier with the assistance of another person. The bar should sit on top of the securing tabs on the tow bar.
33. Secure front of Offroad Animal Bar to factory tow bar using M10x30 Bolts, M10 Large washers and M10 nuts in original factory locations. Leave finger tight at this stage

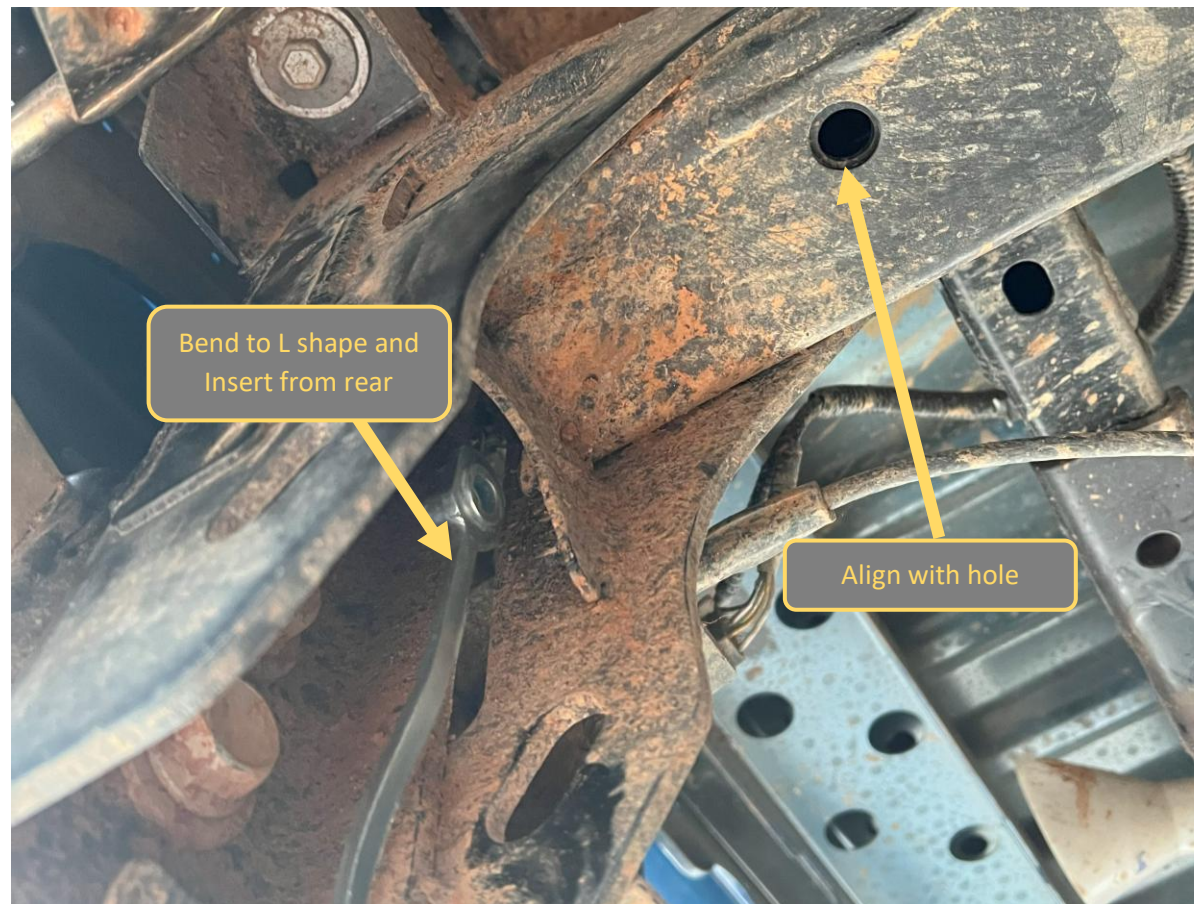
TOOLS REQUIRED**FASTENERS**

4x M10x30 bolts
4x M10 Large Washer
4x M10 Nut

 <p>Secure with Supplied M12 Nut+ Washer</p> <p>Position Bolt Plates from Above, Bend stems as required</p> <p>Re-Use Factory M8 Bolt and Flange Nut</p> <p>Secure with Factory M12 Flange Nut</p>	
<p>34. Position Bolt plates from above through the 2x main M12 mounting slot locations on the tow bar</p> <p>35. Secure M12 bolts plates using original M12 flange nut, and Supplied M12 Flange Nut and Washer from the underside of the tow bar.</p> <p>Leave all bolts finger tight at this stage.</p> <p>36. Secure rear inboard mounting points with re-used Factory M8 Flange nut and Bolt.</p> <p>37. Complete on both sides.</p>	<p>TOOLS REQUIRED</p>
	<p>FASTENERS</p> <p>2x M12x30 bolt Plate 1x M12 Factory Flange Nut 1x M12 Flange Nut 1xM12 Large Washer 1x Factory M8 Nut 1x Factory M8 Bolt</p> <p>Per side</p>



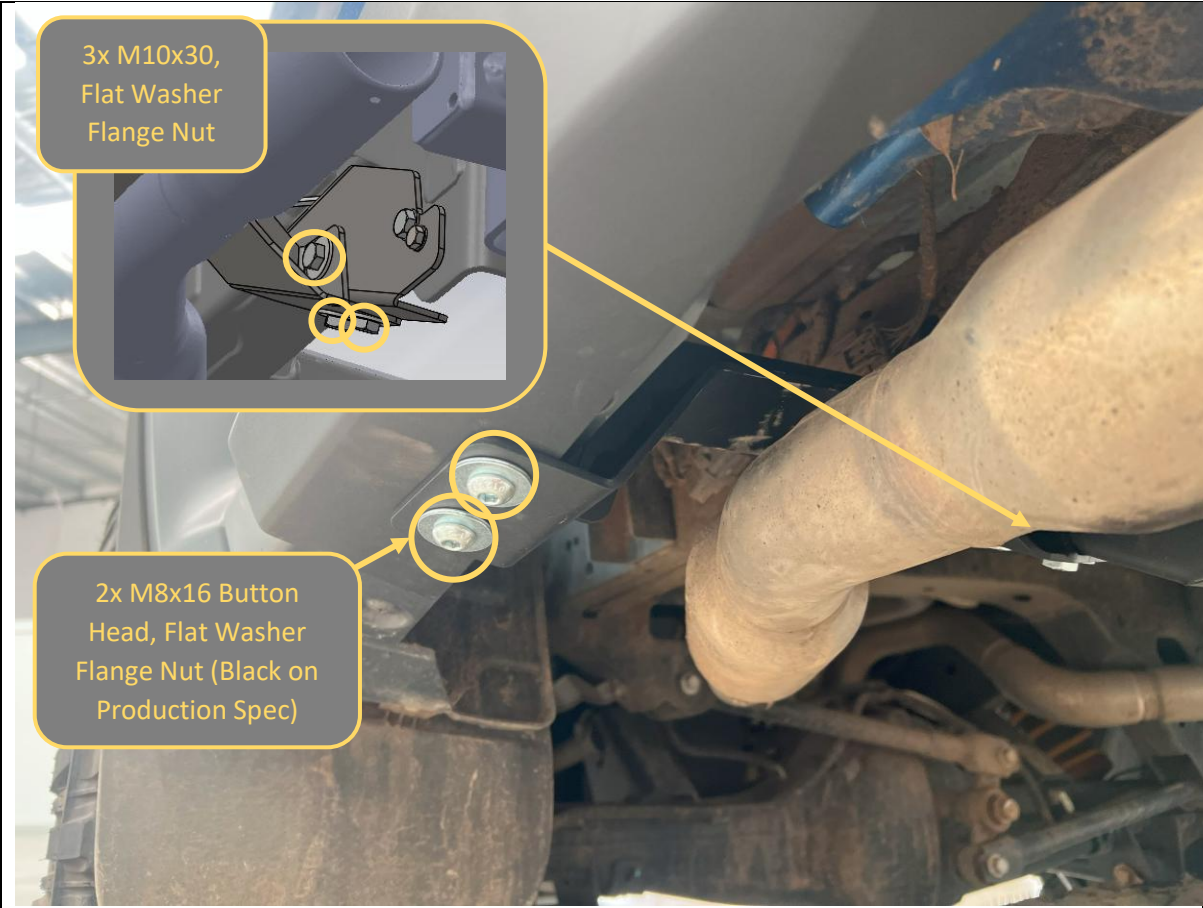
<p>38. On LHS of vehicle, use supplied M8x30 to fit the Chassis bracket to the underside of the chassis rail, to the M8 threaded insert in the chassis.</p> <p>39. Secure through large slot on tow bar using the backing plate, M10x30 bolt and M10 Flange Nuts & M8x30 bolt and M8 Flange Nuts.</p> <p>40. Leave bolts finger tight at this stage.</p>	TOOLS REQUIRED
	FASTENERS 1xM10x30 Hex Bolt 2x M8x30 Hex Bolt 2xM8 Flat Washer 1xM10 Flat Washer 1xM8 Flange Nut 1xM10 Flange Nut



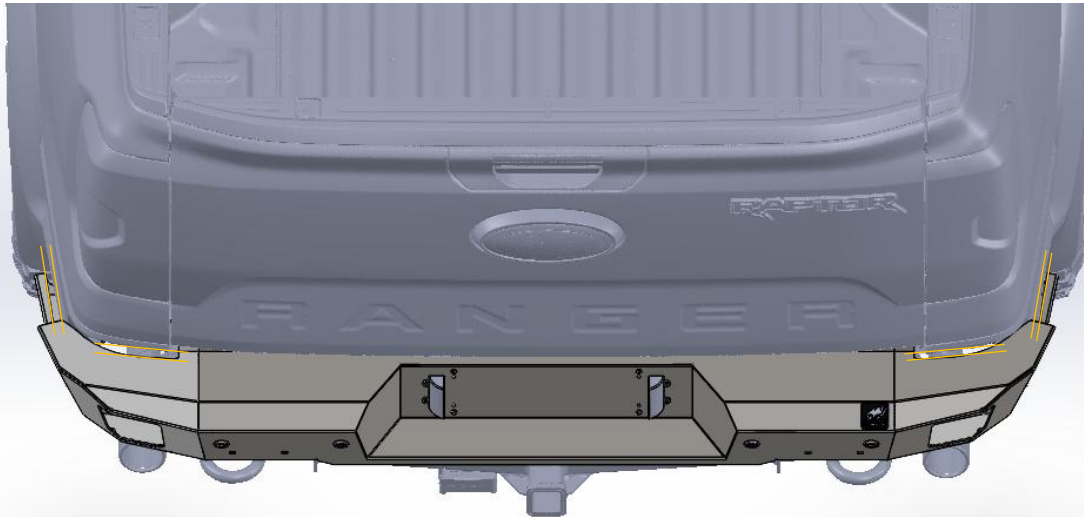
41. On RHS of vehicle there is no M8 threaded insert in the chassis rail. Position M8 Lollipop nut plate behind the hole in chassis rail as shown.
42. Repeat steps as per LHS of vehicle, using nut plate instead of factory threaded point in chassis.

TOOLS REQUIRED**FASTENERS**

M8 Lollipop Nut Plate
1xM10x30 Hex Bolt
2x M8x30 Hex Bolt
2xM8 Flat Washer
1xM10 Flat Washer
1xM8 Flange Nut
1xM10 Flange Nut



<p>43. Fit wing brace to chassis bracket using 3x M10x30 Bolts, Flat washer, and flange nuts. Wing brace position should sit over the exhaust system.</p>	<p>TOOLS REQUIRED</p>
<p>44. Secure wing brace to wing using M8X16 Button head bolts, flat washers, and Flange Nuts.</p> <p>Pre-production silver bolts shown in image, production bolts will have black finish.</p> <p>45. Repeat for other side of vehicle.</p>	<p>FASTENERS</p> <p>3x M10X25 Bolts 3xM10 Flat washer 3x M10 Flange Nuts 2x M8x16 Black BHCS 2xM8 Black Washer 2xM8 Flange Nut</p>

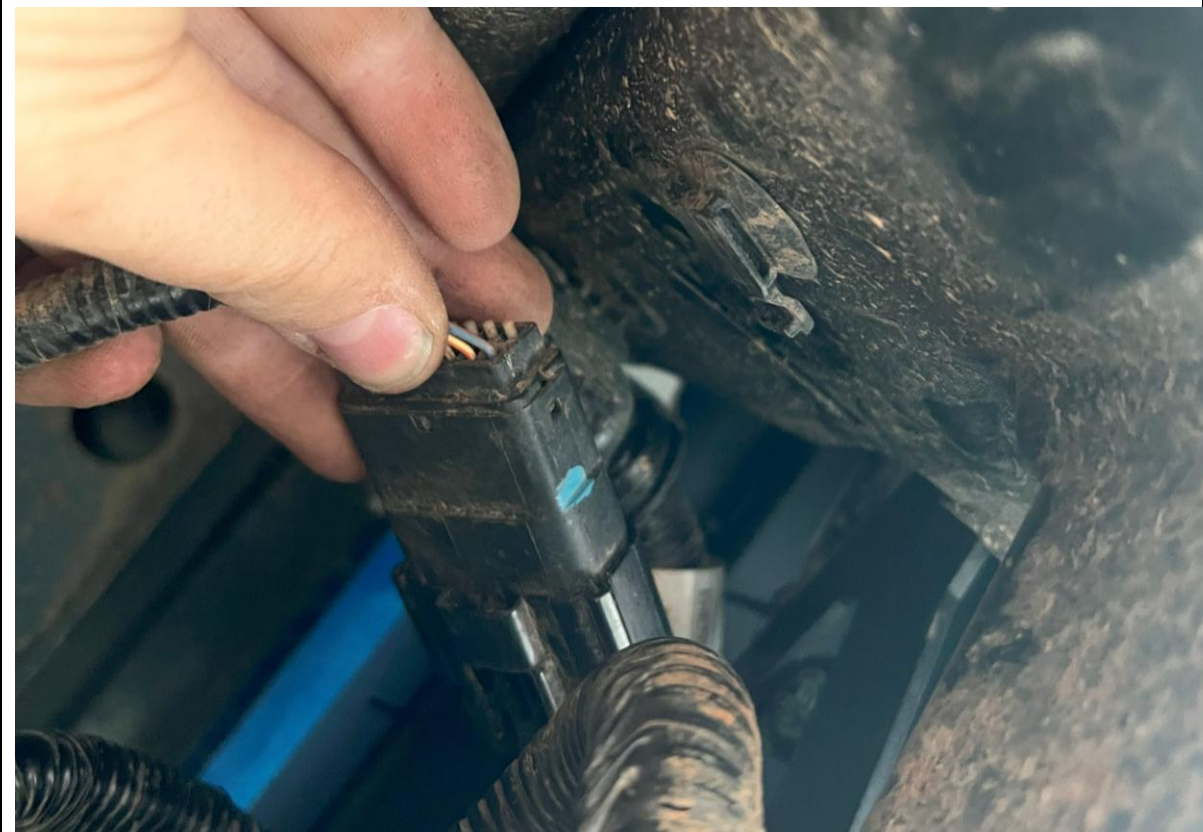


46. With everything fitted, inspect alignment of bar with tub. Adjust as necessary to achieve an even gap between bar and tub.
47. Tighten all fasteners, beginning with M12 Fasteners securing Offroad animal bar to tow bar. Tighten Bar->towbar fasteners first, then Chassis Brace -> Chassis bolts then finally Chassis Brace -> Bar bolts.

TOOLS REQUIRED

16mmSocket
18mm Socket
15&16mm Spanner
5mm Hex Key
13mm Socket

FASTENERS

	
<div>48. Return spare tyre to stowed position.</div> <div>49. Replace TBM and secure with factory Pull Pin and R Clip.</div> <div>50. Reconnect the parking sensor electrical harness</div> <div>With that you are done!</div>	TOOLS REQUIRED
	FASTENERS



Congratulations!
Head for the tracks and enjoy your newly protected Ford Ranger Raptor!