



TOYOTA LANDCRUISER PRADO 250

MY2025+

PREDATOR & TORO FRONT BAR

IMPORTANT! – READ BEFORE INSTALLATION

- When installed in accordance with these instructions, the front protection bar does not affect the operation of the vehicle's SRS airbags.
- 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

Use caution when cleaning with pressure washers, as they may compromise the product coating's integrity. Exercise care to avoid surface damage.

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

Do not use acidic or alkaline based cleaning products.

Plastic parts may be maintained with silicone spray.

It is important to perform regular checks (pre/during/post trip or on an annual basis) on the installed product. More frequent checks may be required in extreme use cases. 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.

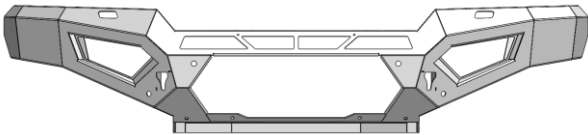
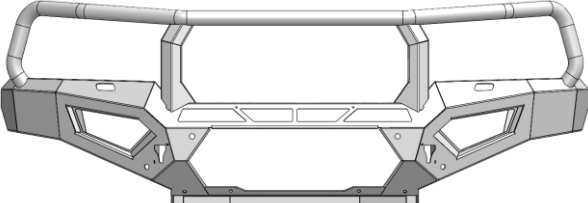
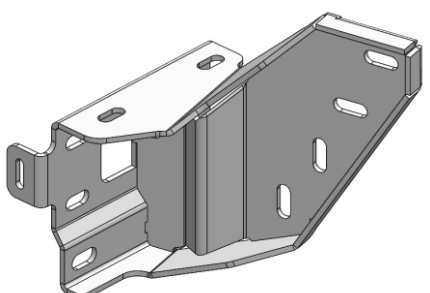
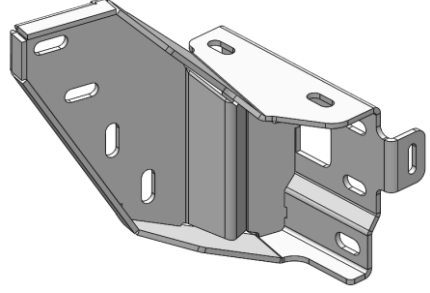
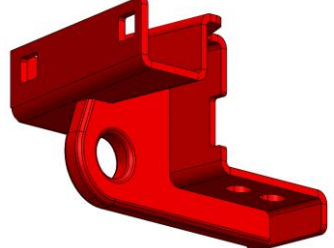
FRONT BAR MOUNTS AND TOW POINTS + REAR TOWBAR	
Size	Torque Nm
M10	57 Nm
M12	100 Nm
M14	164 Nm
M16	248 Nm

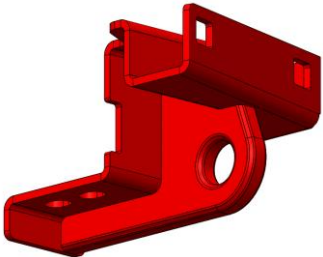
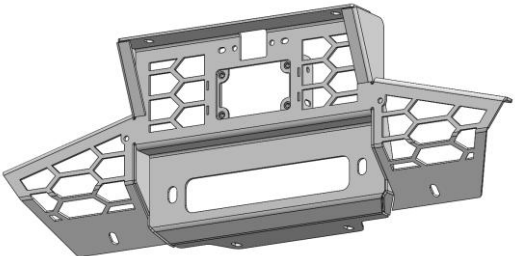
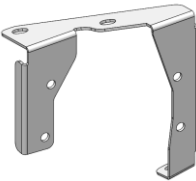
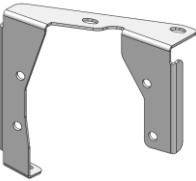
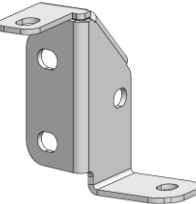
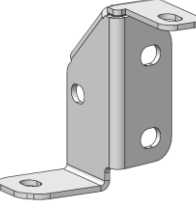
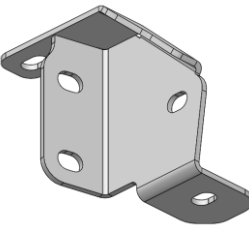
Always use a torque wrench to set correct torque settings. Ensure torque wrench is set to Nm unit of measurement. Otherwise perform conversion to lb-ft.

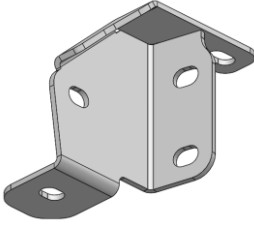
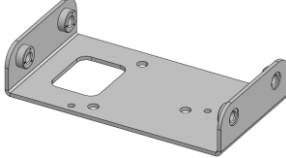
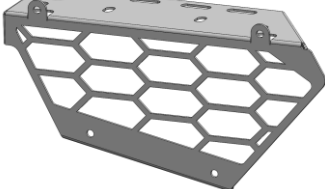
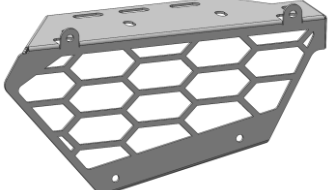
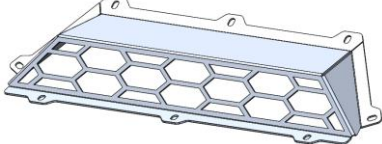
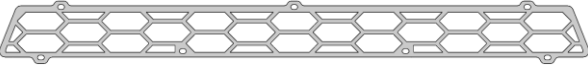
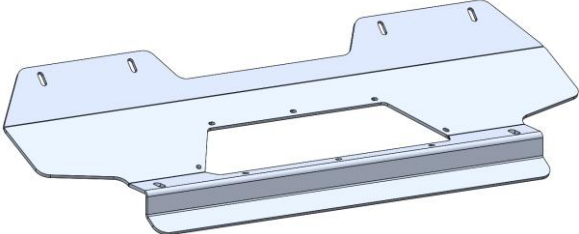
PARTS LISTING

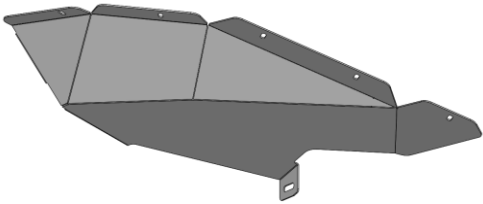
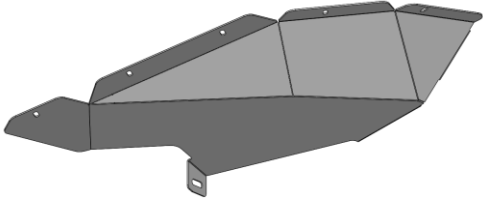
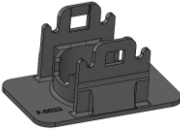
IMPORTANT: Check all parts are present before beginning work! Contact OFFROAD ANIMAL if something is missing.

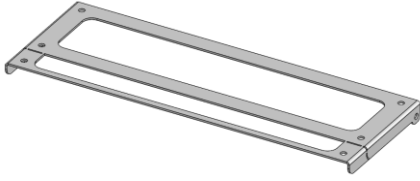
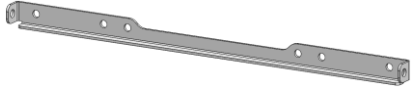
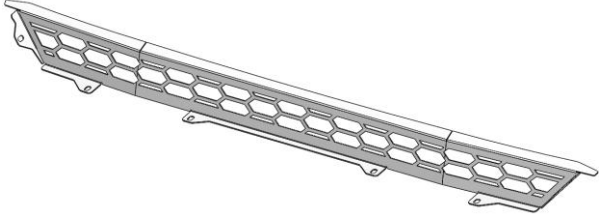
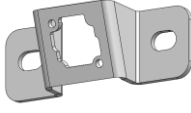
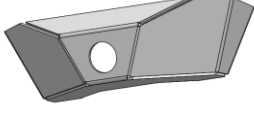
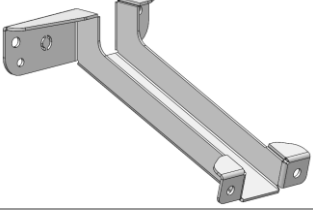
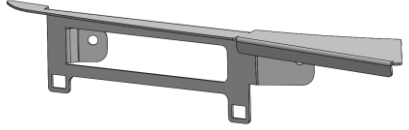
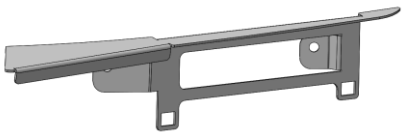
Main Parts – In the Box

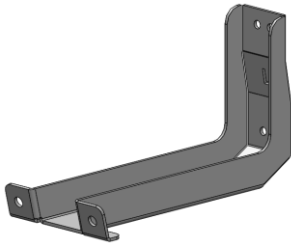
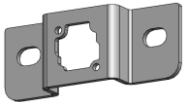
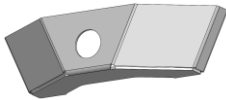
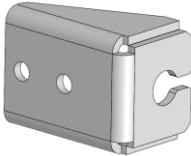
Qty	Part Number	Description	Image
1	FB-TPR-250-25-PR-ASM1	Prado 250 MY25+ Predator Bar Weldment	
OR			
1	FB-TPR-250-25-TOR-ASM1	Prado 250 MY25+ Toro Bar Weldment	
1	FB-TPR-250-25-PR-ASM2R	Prado 250 MY25+ Impact Assembly RH	
1	FB-TPR-250-25-PR-ASM2L	Prado 250 MY25+ Impact Assembly LH	
1	FB-TPR-250-25-PR-ASM3R	Prado 250 Tow Point Welded Assembly RH	

1	FB-TPR-250-25-PR-ASM3L	Prado 250 Tow Point Welded Assembly LH	
1	FB-TPR-250-25-PR-ASM4	Prado 250 MY25+ Mesh Fairlead Welded Assembly	
1	B-1431R	Prado 250 Fog Light Bracket RH	
1	B-1431L	Prado 250 Fog Light Bracket LH	
2	B-1433	Prado 250 Pan Brace	
1	B-1442R	Prado 250 Outer Chassis Support RH	
1	B-1442L	Prado 250 Outer Chassis Support LH	
1	B-1443R	Prado 250 Inner Chassis Support LH	

1	B-1443L	Prado 250 Inner Chassis Support RH	
1	B-1447	Prado 250 ACC Radar Mount	
1	B-1465R	Prado 250 Headlight Washer Retainer RH	
1	B-1465L	Prado 250 Headlight Washer Retainer LH	
1	M-0058R	Prado 250 Wing Light Mesh RH	
1	M-0058L	Prado 250 Wing Light Mesh LH	
1	M-0060	Prado 250 Bash Plate Cooling Mesh	
1	P-0488	BYD Shark 6 Lightbar Mesh Infill	
1	U-0095	Prado 250 Bash Plate	

1	U-0096R	Prado 250 Side Underpanel RH	
1	U-0096L	Prado 250 Side Underpanel LH	
1	OFA-LOGO	Offroad Animal Metal Logo	
1	FB-TPR-250-25-PR-ADRCP	ADR Compliance Plate Prado 250 Series	
4	F-0022	LC300 Sahara ZX + GR Sport Sensor Holder	
1	N-0017	Prado 250 ACC Radar Cover	
2	PWS-TOP-850	Pinch Weld PWS51T - Top Bulb Seal 850mm	N/A
1	TK-COM-PSEN-4	Tape Kit - 4 Sensor Universal	N/A
1	TK-FB-TPR-250-25	Tape Kit - Prado 250 MY25+, 3M5952 (4x 80x6mm, 4x 40x30mm, 6x 100x9mm), 2x 3M Primer 94	N/A
2	UC-14-3-90MM	U CHANNEL RUBBER 90MM LONG, AMBASSADOR PART NUMBER 7 R32-50/U277	N/A

NUMBER PLATE FLIP ASSEMBLY (NPF-COM-LGE-ASM0)			
1	B-1446	Number Plate Flip - Large	
1	B-1458	Number Plate Flip Base	
GX/GXL/ALTITUDE ONLY (FB-TPR-250-25-PR-ASM5)			
1	B-1432	Prado 250 Grille Infill - Offroad Spec	
1	B-1449	Prado 250 Camera Bracket - Offroad Spec	
1	B-1450	Prado 250 Camera Housing - Offroad Spec	
1	B-1452	Prado 250 Grille Support - Offroad Spec	
1	B-1468R	Prado 250 Headlight Infill Mount - Offroad Spec RH	
1	B-1468L	Prado 250 Headlight Infill Mount - Offroad Spec LH	
1	F-0034R	Prado 250 Headlight Infill - Offroad Spec RH	
1	F-0034L	Prado 250 Headlight Infill - Offroad Spec LH	

VX/KAKADU ONLY (FB-TPR-250-25-PR-ASM6)			
1	B-1469	Prado 250 Grille Support - Luxury Spec	
1	B-1470	Prado 250 Camera Bracket - Luxury Spec	
1	B-1471	Prado 250 Camera Housing - Luxury Spec	
1	CPHP125	Plastic Hole Insert, 16MM, Black, Tigerlink Hardware CPHP125	
TORO ONLY			
2	B-0649	Toro Antenna Bracket - 90 Degree Tall	

PREDATOR Fasteners – Contained in Small Parts Kit Bag

Qty	Part Number	Description
7	M6 X 12 CSK BZP	SCREW, COUNTERSUNK CAP, M6X12X1 Black ZP
52	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
52	M6 FLAT WASHER BLACK ZINC	M6 Flat Washer, 12x6.1x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
30	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
10	M6CN3MM	CAGE NUT M6x2.6-3.5
2	M8 X 20 HEX	Bolt Hex, M8X20x1.25, GR8.8 ZP
10	M8 X 16 BHCS BZP	SCREW, BUTTON HEAD CAP, M8X16X1.25 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
6	M8 X 30 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X30X1.25, ISO4042 ZnNi BLACK PASSIVATED FINISH
2	M8 HD FLAT WASHER	M8 FLAT WASHER - High Tensile 19x8x1.9mm
16	M8 FLAT WASHER- BLACK ZINC	M8 FLAT WASHER, 16.5x8.4x1.2, ISO4042 ZnNi BLACK PASSIVATED FINISH
10	M8 FLANGE NUT	Flange Nut, M8x1.25 G8.8 ZP
2	M10X25 BHCS	SCREW, BUTTON HEAD CAP, M10X25X1.5 GR12.9 ZP
2	M10 FLAT WASHER	M10 Flat Washer
2	M10 FLANGE NUT	Flange Nut, M10x1.5 G8.8 ZP
24	M12X30	Bolt Hex, M12X30x1.75, GR8.8 ZP
2	M12X40	Bolt Hex, M12X40X1.75, GR8.8 ZP
6	M12 FLAT WASHER	M12 Flat Washer
22	M12 FW LHD	M12 FW Large Heavy Duty
18	M12 FLANGE NUT	Flange Nut, M12x1.75 G8.8 ZP
2	M12 NYLOC NUT	M12 Nyloc nut
6	NP-COM-M12-30-ASM0	M12 NUT PLATE SHORT, 30MM STEM

TORO Fasteners – Contained in Small Parts Kit Bag

Qty	Part Number	Description
7	M6 X 12 CSK BZP	SCREW, COUNTERSUNK CAP, M6X12X1 Black ZP
52	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
52	M6 FLAT WASHER BLACK ZINC	M6 Flat Washer, 12x6.1x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
30	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
10	M6CN3MM	CAGE NUT M6x2.6-3.5
10	M8 X 16 BHCS BZP	SCREW, BUTTON HEAD CAP, M8X16X1.25 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
4	M8 X 20 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X20X1.25, ISO4042 ZnNi BLACK PASSIVATED FINISH
6	M8 X 30 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X30X1.25, ISO4042 ZnNi BLACK PASSIVATED FINISH
2	M8 X 20 HEX	Bolt Hex, M8X20x1.25, GR8.8 ZP
20	M8 FLAT WASHER- BLACK ZINC	M8 FLAT WASHER, 16.5x8.4x1.2, ISO4042 ZnNi BLACK PASSIVATED FINISH
2	M8 HD FLAT WASHER	M8 FLAT WASHER - High Tensile 19x8x1.9mm
10	M8 FLANGE NUT	Flange Nut, M8x1.25 G8.8 ZP
2	M10X25 BHCS	SCREW, BUTTON HEAD CAP, M10X25X1.5 GR12.9 ZP
2	M10 FLAT WASHER	M10 Flat Washer
2	M10 FLANGE NUT	Flange Nut, M10x1.5 G8.8 ZP
24	M12X30	Bolt Hex, M12X30x1.75, GR8.8 ZP
2	M12X40	Bolt Hex, M12X40X1.75, GR8.8 ZP
6	M12 FLAT WASHER	M12 Flat Washer
22	M12 FW LHD	M12 FW Large Heavy Duty
18	M12 FLANGE NUT	Flange Nut, M12x1.75 G8.8 ZP
2	M12 NYLOC NUT	M12 Nyloc nut
6	NP-COM-M12-30-ASM0	M12 NUT PLATE SHORT, 30MM STEM

NUMBER PLATE FLIP Fasteners – Contained in Number Plate Flip Kit

Qty	Part Number	Description
4	M6x12 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X12X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
4	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
10	M6 FLAT WASHER BLACK ZINC	M6 Flat Washer, 12x6.1x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
6	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
2	M6 NYLON WASHER	Nylon Flat Washer, M6x12x1mm
2	M6 NYLOC	NYLOC SELF LOCKING NUT, ST STL A2 ISO

GX/GXL/ALTITUDE ONLY Fasteners – Contained in ASM5 Kit

Qty	Part Number	Description
16	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
16	M6 FLAT WASHER BLACK ZINC	M6 Flat Washer, 12x6.1x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
6	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
4	M6CN2MM	CAGE NUT M6x1.6-2.5

VX/KAKADU ONLY Fasteners – Contained in ASM6 Kit

Qty	Part Number	Description
6	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
6	M6 FLAT WASHER BLACK ZINC	M6 Flat Washer, 12x6.1x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
4	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP

TOOLS REQUIRED

The following tools will be required to install the product.

Hand Tools	Power Tools	Workshop Equipment
Metric Socket Set 10-19mm	Electric/Air Impact Driver (Optional)	Panel Stand or Soft Blanket
Socket Extension Bar	Air Hacksaw or Jigsaw or Multi-tool	Lifting Trolley
Metric Spanner Set 10-19mm	Angle Grinder	Isopropyl Alcohol
Hex (Allen) Key Set 4-6mm	Heat Gun	Brake Cleaner
T6 Torx bit		Rag
Trim Removal Tool		Cable Ties
Plastic Auto Trim Tool Set		Marker Pen
Flat Blade Screwdriver Set		Ruler
Phillips Head Screwdriver Set		Measuring Tape
Utility Knife		Masking Tape
Side Cutters		Sikaflex Adhesive
Hose Line Clamp		Bucket
Deburring Tool		Black spray paint
		Sandpaper (optional)
		Spray Paint (colour matched to bull bar) (optional)
		Digital angle gauge

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.

Hearing Protection 	Always wear ear protection when using power tools.
Eye Protection 	Ensure eye protection is always worn when cutting or drilling.
Manual Handling 	Do not attempt to lift bar assemblies or rock sliders on your own. Always use two people to lift or use mechanical lifting aid such as hydraulic lifting trolley.
Vehicle Support 	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.



WARNING:
Do not attempt to turn on and move the vehicle while the front radar, camera and parking sensors are disconnected. Doing so may cause DTC error codes that can only be rectified by the dealer.

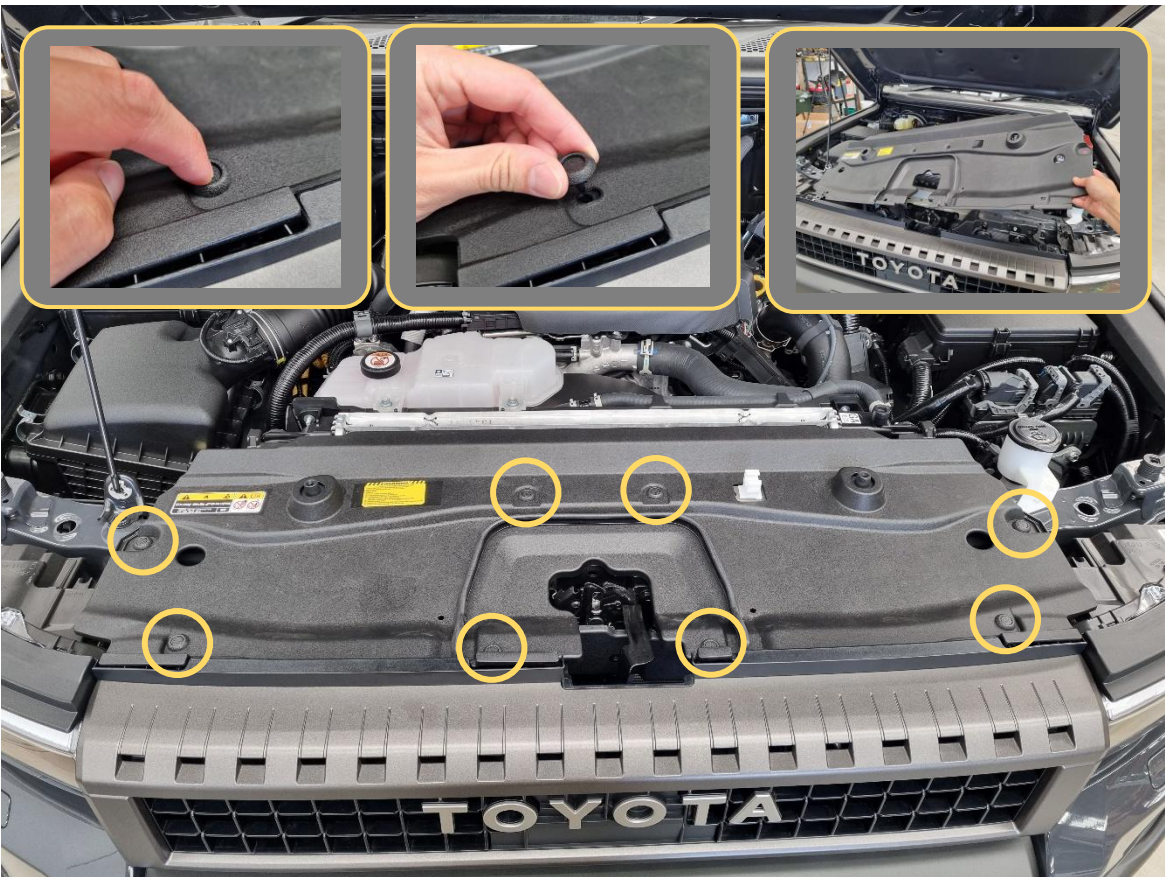
1. Remove 2x screws holding front number plate with a Phillips head screwdriver and set aside.

TOOLS REQUIRED

Phillips head screwdriver

FASTENERS

2x screws (discard)

	
2. Open the bonnet. 3. Remove 8x plastic push clips holding the radiator top cover. Set cover and clips aside for re-assembly. Press down on the middle of the clip to remove.	TOOLS REQUIRED
	FASTENERS 8x plastic push clips Retain for re-assembly

	
4. Remove 3x 10mm hex bolts on holding the underside of the lower outer bumper spoiler. 5. Remove 3x plastic push clips holding the rear of the lower outer bumper spoiler, in the wheel well. Use a flat blade screwdriver or trim tool to lever the centre section of the plastic clip outwards to remove. 6. Remove and discard the spoilers, for both sides.	TOOLS REQUIRED 10mm socket Socket extension bar Flat blade screwdriver or Trim tool
	FASTENERS 6x 10mm hex bolts 6x plastic push clips Discard

	
7. Remove 2x 10mm hex bolts and 1x plastic push clip in the centre holding the bottom bumper cover on the underside of the bumper.	TOOLS REQUIRED 10mm socket/spanner Flat blade screwdriver or Trim tool
	FASTENERS 1x 10mm hex bolt 2x plastic push clips Discard

 LH PASSENGER SIDE SHOWN	
8. The front flares and mudflap need to be removed. Start by removing 3x 10mm hex screws and 1x plastic push clip holding each front wheel mudflap.	TOOLS REQUIRED 10mm socket/spanner Flat blade screwdriver or Trim tool
	FASTENERS 6x 10mm hex screws 2x plastic push clips Retain for re-assembly

 LH PASSENGER SIDE SHOWN		
9. Remove 5x plastic push clips and 1x 10mm hex screw holding each front flare.	TOOLS REQUIRED 10mm socket/spanner Flat blade screwdriver or Trim tool	
	FASTENERS 2x 10mm hex screws 10x plastic push clips Retain for re-assembly	

	
10. Starting from each end, pull the flare outwards and release the 14x body clips holding it to the body. Set the flares aside in a safe place for later.	TOOLS REQUIRED
	FASTENERS

	
11. VX/Kakadu only. Vehicles with the 'luxury' spec grille will need the under headlight trim removed at this stage. Starting from the end indicated by the arrow, pull outwards by hand to unclip the trim. Do this on for both headlight trims. Do not discard, and set aside in a safe place for later.	TOOLS REQUIRED
	FASTENERS

		
12. Remove 3x 10mm hex bolts holding the top of the grille.	TOOLS REQUIRED 10mm socket/spanner	
	FASTENERS 3x 10mm hex bolts Retain for re-assembly	

		
13. Remove 6x 10mm hex bolts (3x per side) holding the bottom of the bumper.	TOOLS REQUIRED 10mm socket/spanner	
	FASTENERS 6x 10mm hex bolts	



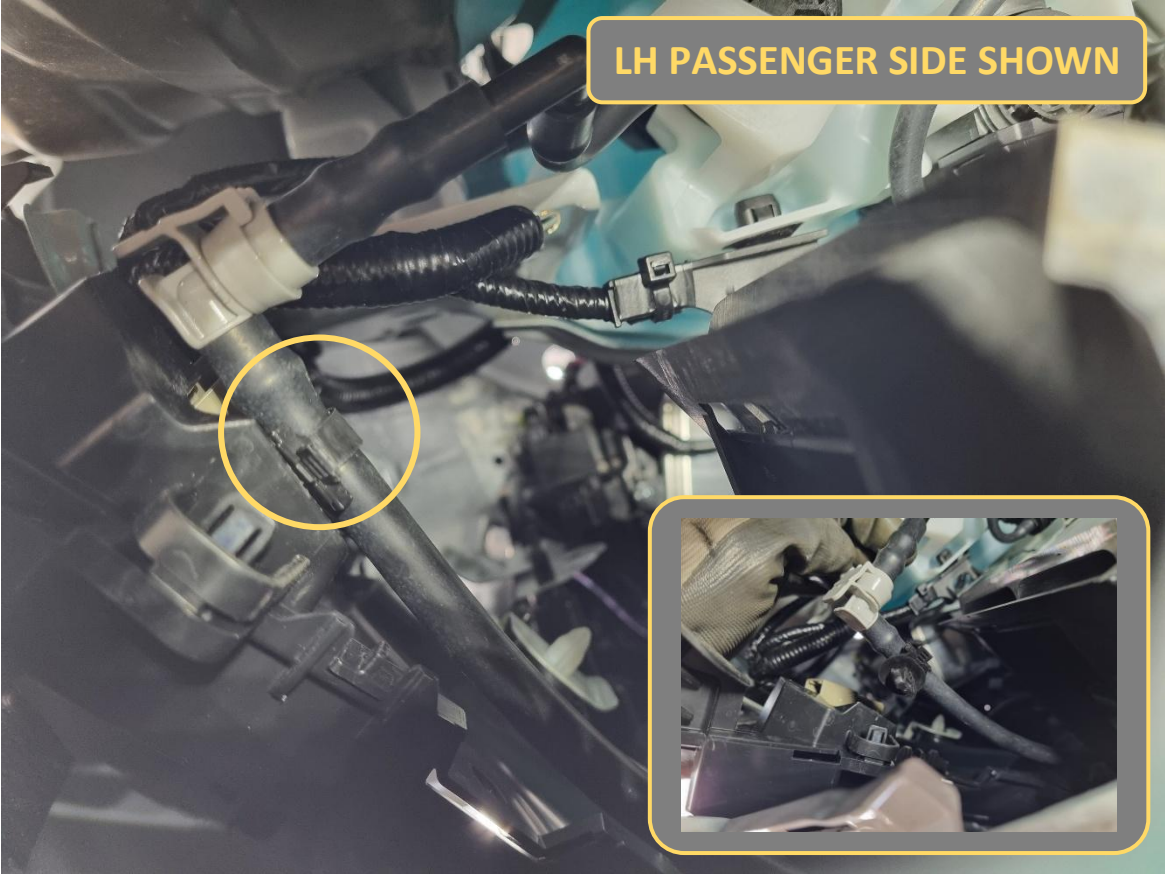
14. Remove 1x 10mm hex bolt and 1x plastic push clip on the outer end of the bumper. Do this on both sides.	TOOLS REQUIRED 10mm socket/spanner Flat blade screwdriver or Trim tool
	FASTENERS 2x 10mm hex bolts 2x plastic push clips

 LH PASSENGER SIDE SHOWN	
15. Remove 3x plastic push clips holding the front of the inner wheel guard. Do this on both sides.	TOOLS REQUIRED Flat blade screwdriver or Trim tool
	FASTENERS 6x plastic push clips

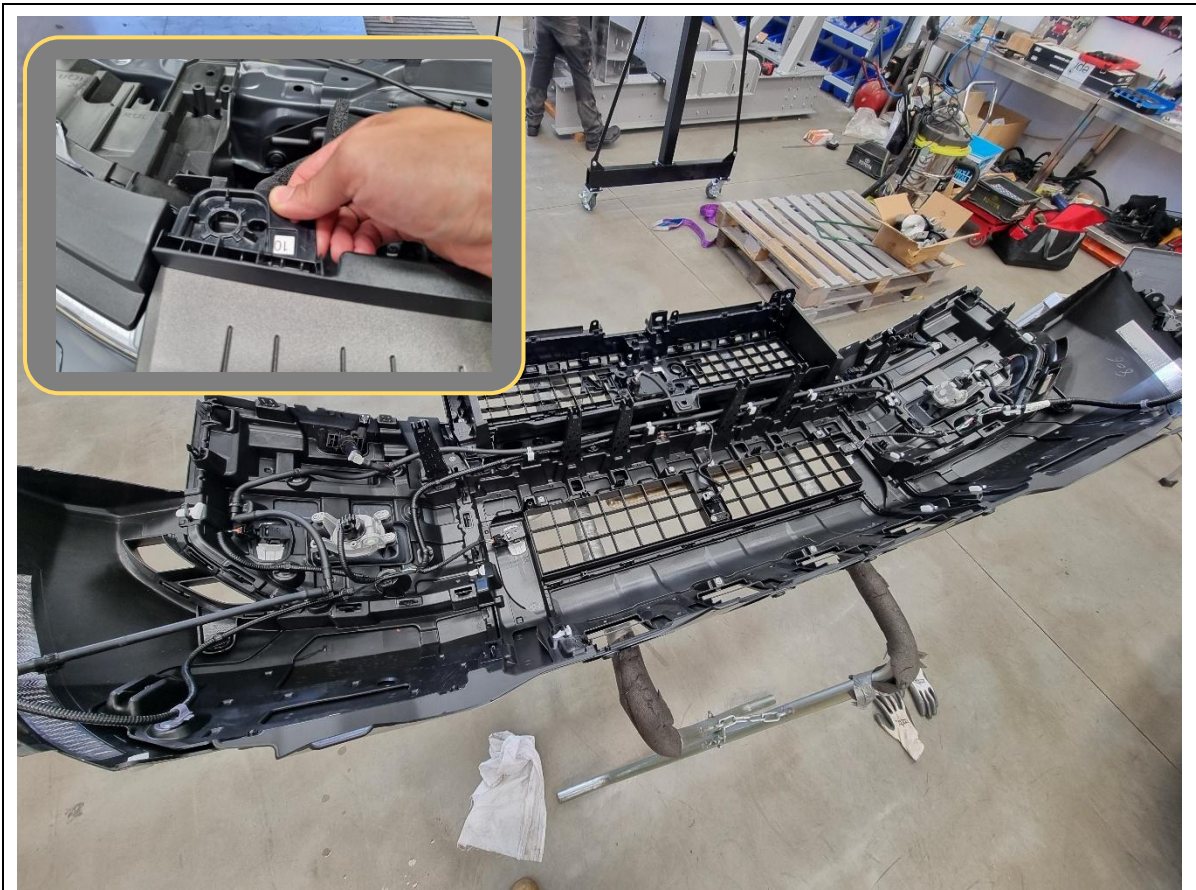
	
16. Grab onto each outer end of the bumper and pull outwards to unclip the outer section only. Do not unclip the rest of the bumper yet.	TOOLS REQUIRED
	FASTENERS

	
17. On the driver side, pull back on the inner wheel guard to gain access inside, then disconnect 1x bumper harness connector. The connector is a lever lock style, you may need to use a flat blade screwdriver to assist in unlatching the lever.	TOOLS REQUIRED Flat blade screwdriver (optional)
	FASTENERS

	
18. On the passenger side, do the same and disconnect 1x bumper harness connector. This connector has a single unlocking tab that can be pressed down with a thumb.	TOOLS REQUIRED Flat blade screwdriver (optional)
	FASTENERS

LH PASSENGER SIDE SHOWN 	
19. On the passenger side, there is a headlight washer hose that is clipped into the bumper in one location. Unclip the hose.	TOOLS REQUIRED Flat blade screwdriver or Trim tool
	FASTENERS

	
20. The headlight washer hose needs to be disconnected at the circled location. 21. Either clamp the washer hose either side of the connector with cable ties and/or hose line clamps, or place a bucket underneath to let washer fluid drain out (this needs to be re-filled at the end, see maintenance section of Toyota user manual). 22. Disconnect the washer hose.	TOOLS REQUIRED Cable ties or Hose line clamp or Bucket
	FASTENERS

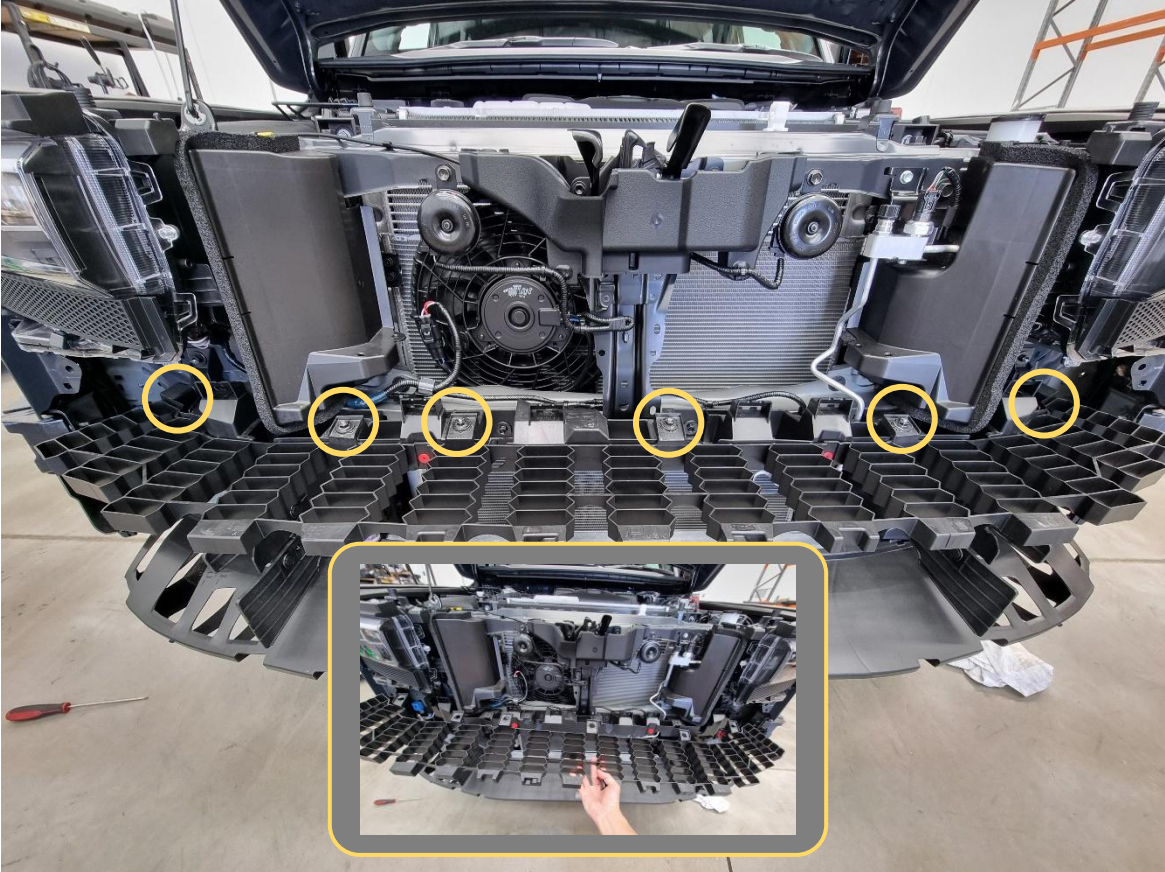


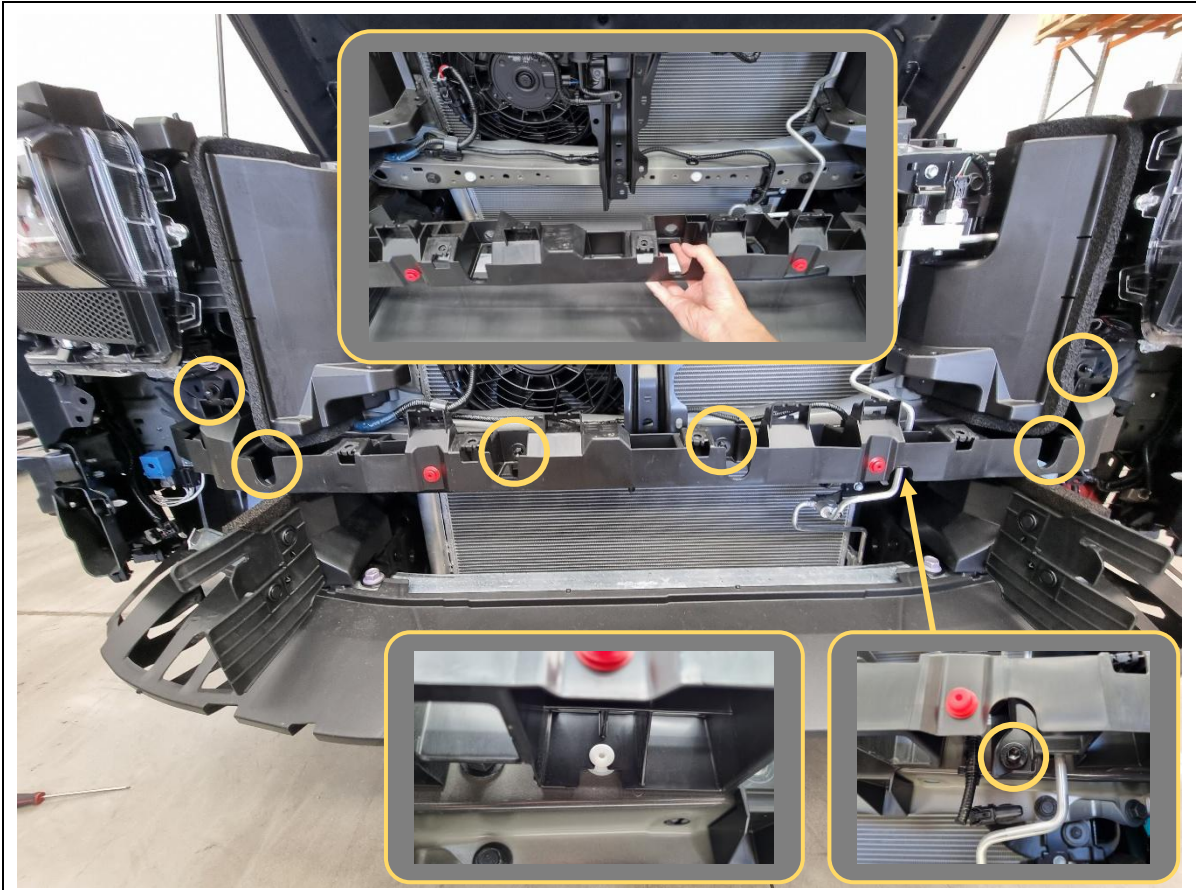
23. The bumper and grille are now ready to be removed. Lift the top of the grille tabs up and off the locating pins, then pull the bumper forwards to release any remaining bumper clips.
24. Set the bumper and grille aside on a panel stand or a soft blanket.

TOOLS REQUIRED

Panel stand
or
Soft blanket.

FASTENERS

		
25. Remove 6x 10mm hex bolts holding the front bumper energy absorber to the vehicle. 26. Pull the energy absorber upwards to unclip it from 2x red clips on the vehicle.	TOOLS REQUIRED 10mm socket/spanner Socket extension bar	
	FASTENERS 6x 10mm hex bolts	



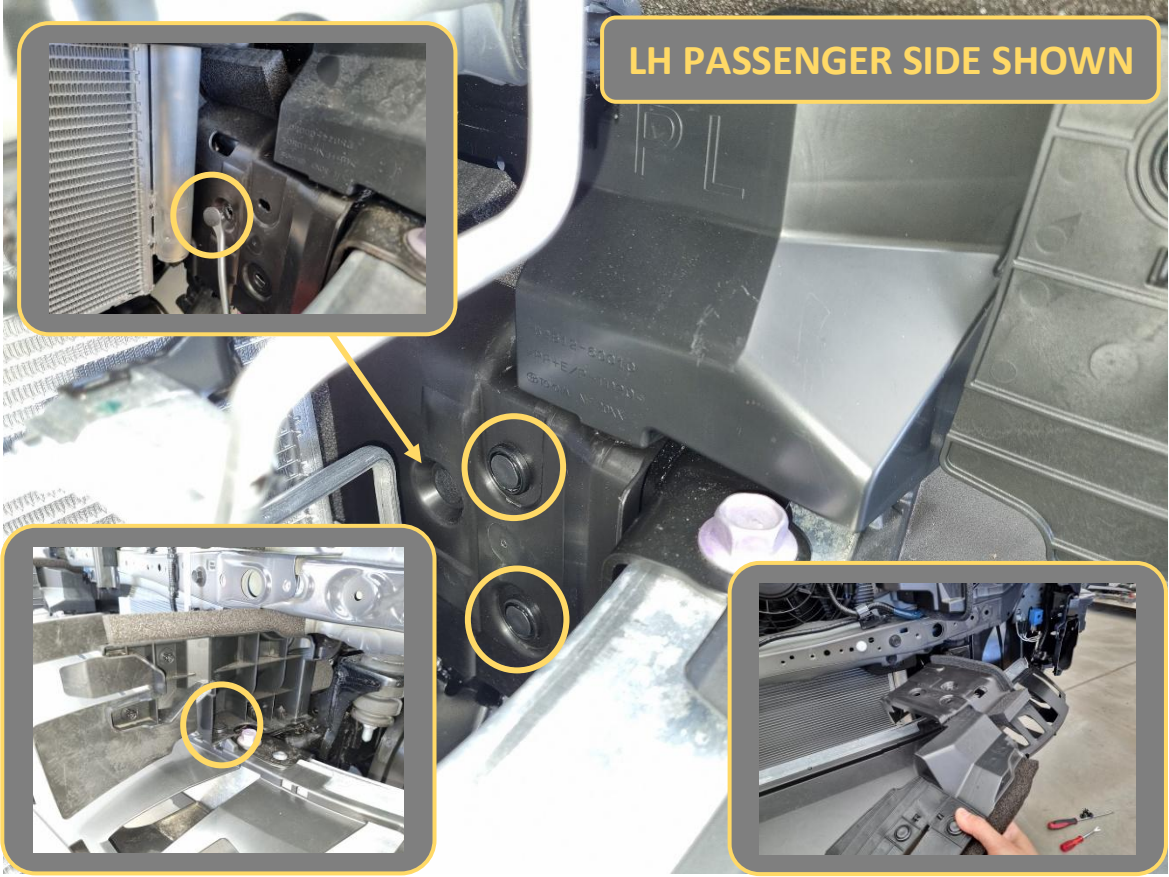
- 27. Remove 7x 10mm hex bolts holding the front bumper upper centre retainer to the vehicle.
- 28. Pull the centre retainer upwards to unclip it from the 2x white clips on the vehicle.

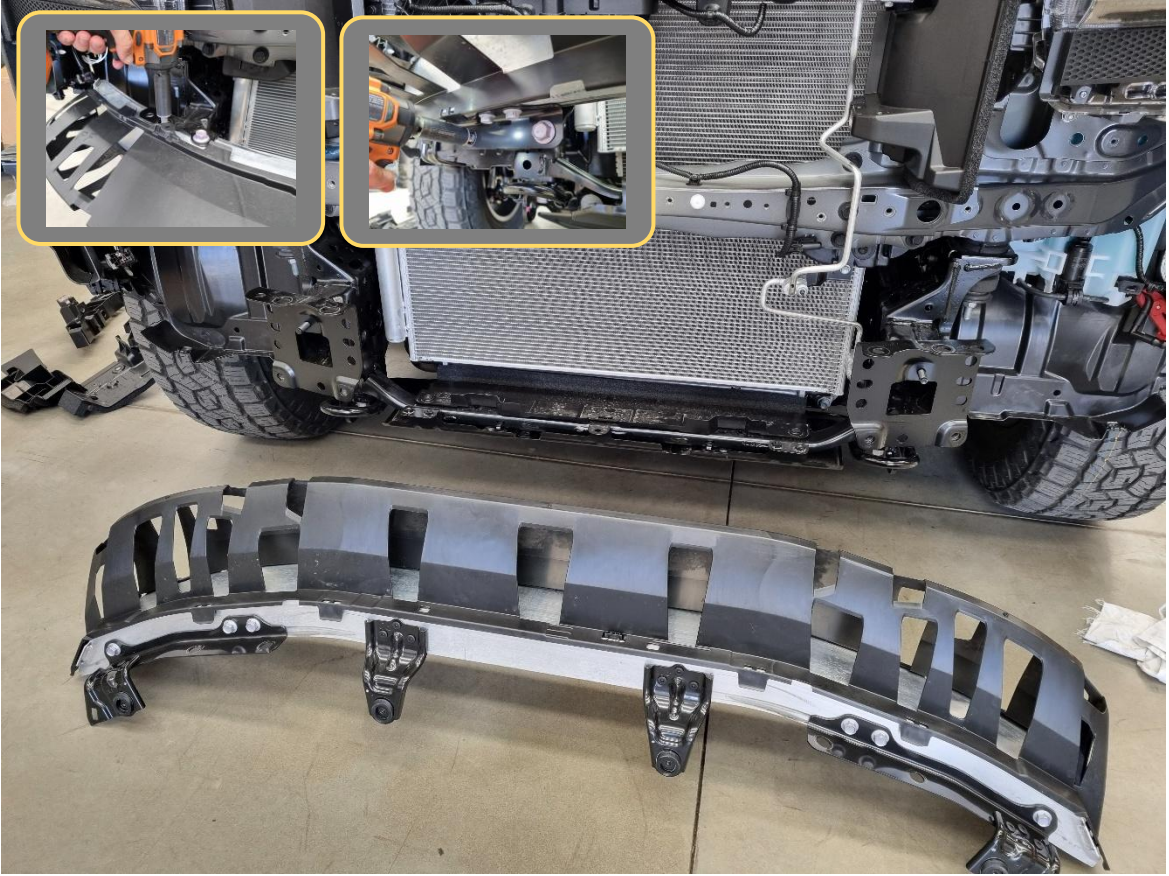
TOOLS REQUIRED

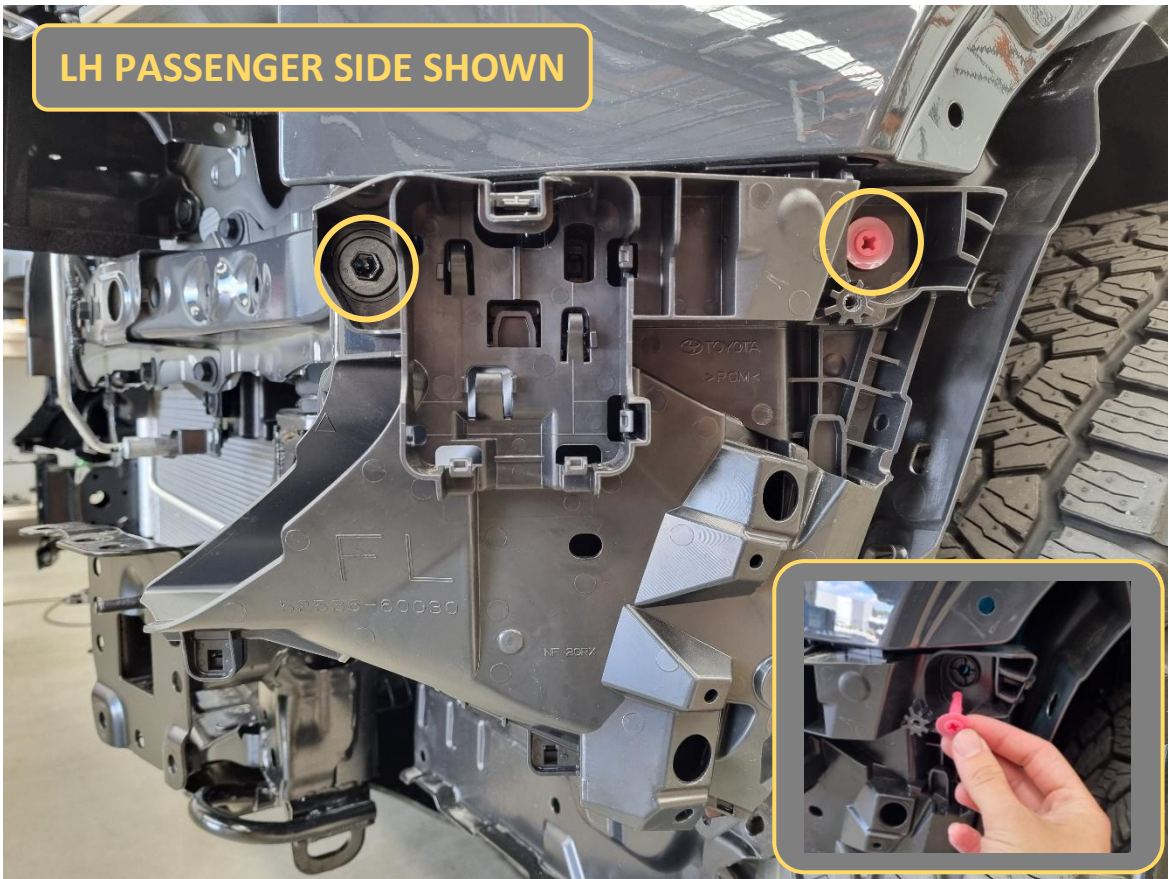
- 10mm socket/spanner
- Socket extension bar

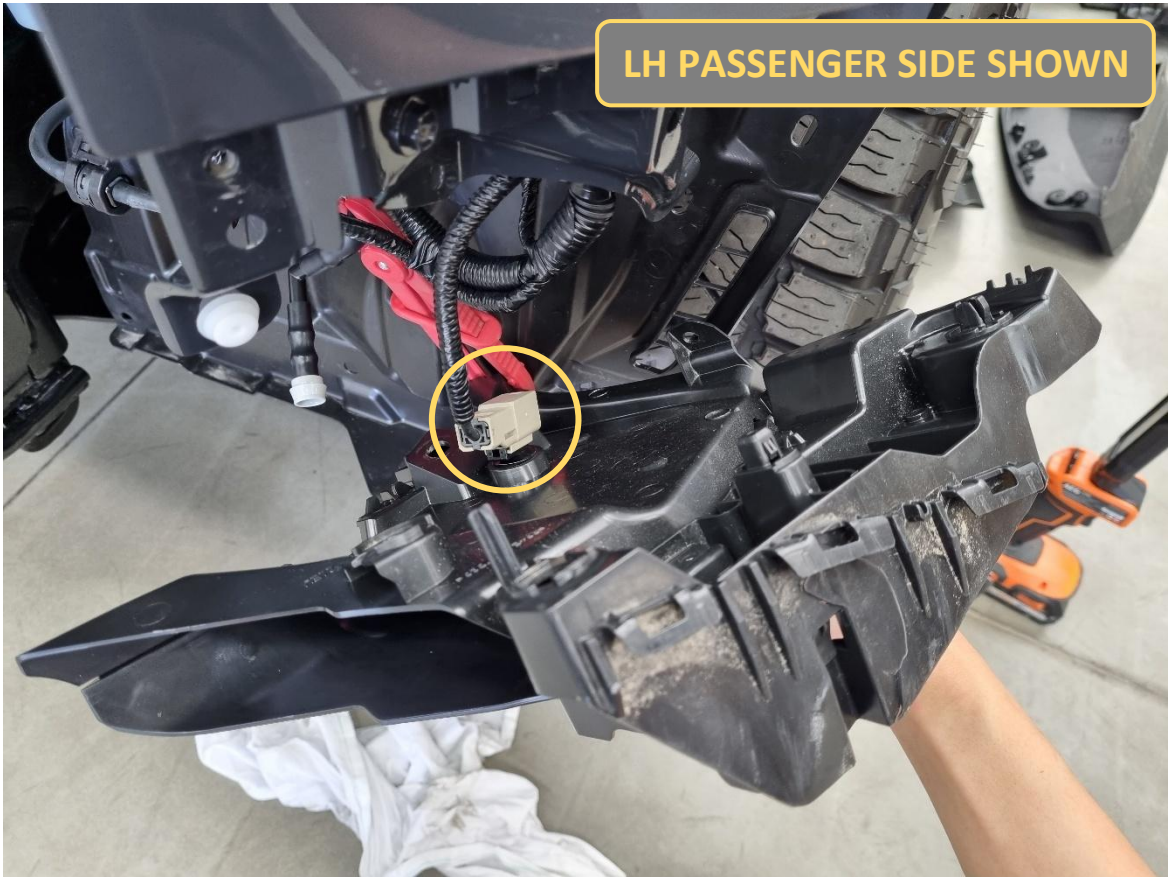
FASTENERS

- 7x 10mm hex bolts

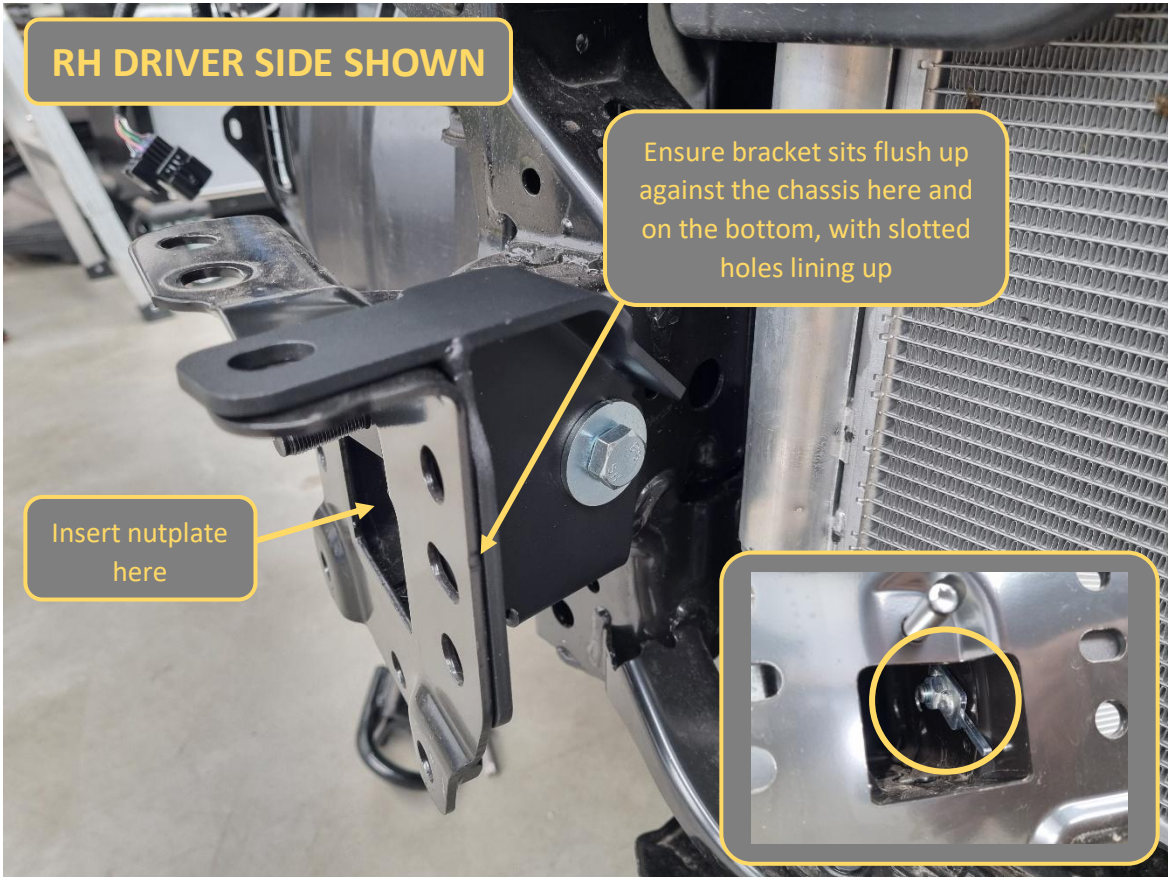
 LH PASSENGER SIDE SHOWN	
29. Remove 3x push clips and 1x Christmas tree clip holding the air guides to the inside of each chassis rail. 30. Fully remove and discard the 2x air guides.	
TOOLS REQUIRED Flat blade screwdriver or Trim tool	
FASTENERS 6x plastic push clips 2x Christmas tree clips	

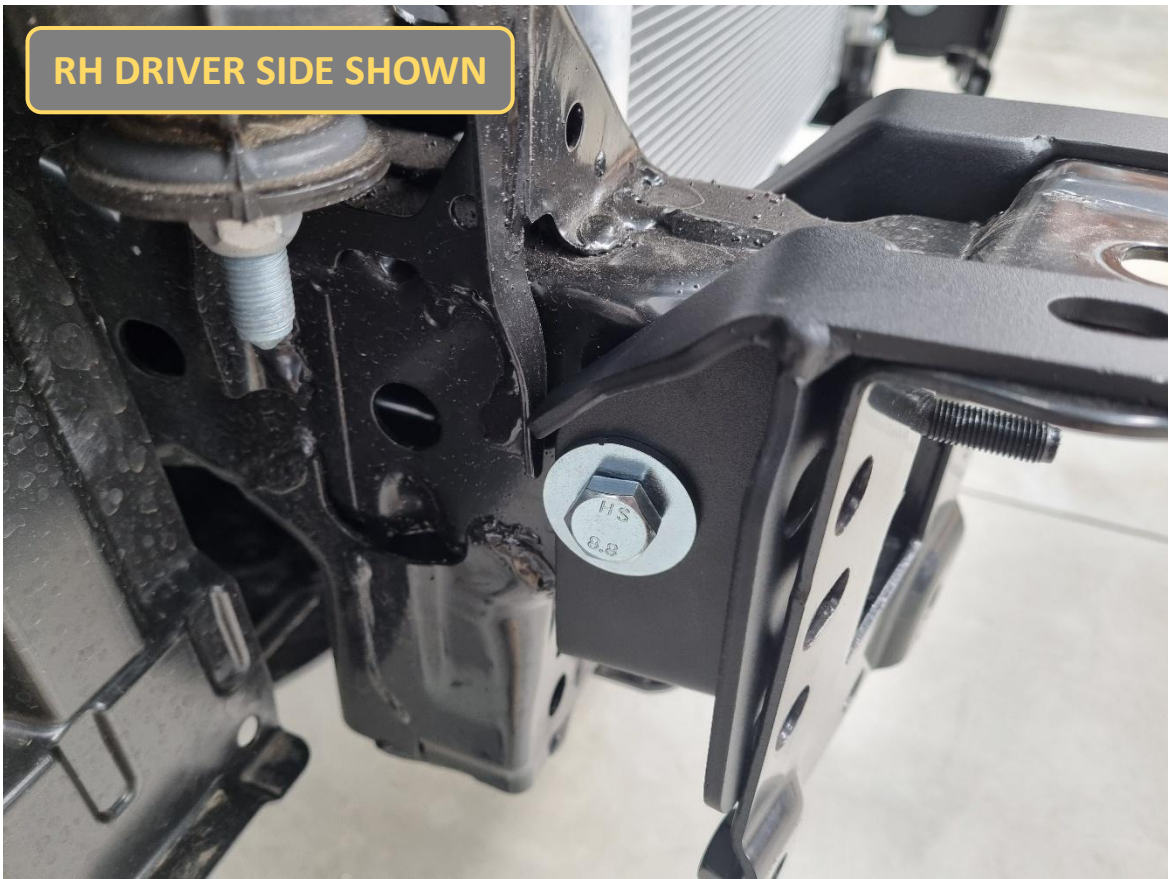
	
31. Remove 8x 17mm hex bolts (4x per side) holding the crash beam to the chassis. Retain 4x of the bolts for re-use.	TOOLS REQUIRED 17mm socket/spanner
	FASTENERS 8x 17mm hex bolts Retain for re-assembly

 LH PASSENGER SIDE SHOWN	
32. Remove 1x 10mm hex bolt holding the bumper side retainer. Do this on both sides of the vehicle. 33. Remove 1x red plastic clip by inserting a Phillips head screwdriver and rotating the clip anti-clockwise. Do this on both sides of the vehicle.	TOOLS REQUIRED 10mm socket Phillips head screwdriver Flat blade screwdriver or Trim tool
	FASTENERS 2x 10mm hex bolt 2x red plastic clip

	
34. First pull the bumper side retainer outwards at the rear to release the rearmost clip/s. 35. Then slide the bumper side retainer rearwards towards to the front wheel to release the front clip/s. 36. Unclip the bumper harness from the inside of the bumper side retainer. 37. Do this on both sides of the vehicle and discard the bumper side retainers	TOOLS REQUIRED Flat blade screwdriver or Trim tool
	FASTENERS

	
38. On the underside of the chassis, remove 2x 17mm hex bolts holding each tie-down point. Retain the bolts for re-fitment.	TOOLS REQUIRED 17mm socket
	FASTENERS 4x 17mm hex bolt Retain for re-assembly

	
39. Fit the B-1443 inner chassis support brackets to the inside face of each chassis rail. 40. Loosely secure with 1x M12x30 hex bolt, heavy duty washer and nutplate (to be inserted through the front opening of the chassis rail, see arrow and inset image). 41. Position the chassis support bracket so that the bottom flange is sitting flush up against the bottom of the chassis rail, and that the side flange is sitting flush up against the back face of the front of the chassis rail, with the slotted holes lining up. 42. Once aligned, tighten the M12x30 hex bolt.	TOOLS REQUIRED 18/19mm socket/spanner
	FASTENERS 2x M12x30 hex bolt 2x M12 heavy duty washer 2x M12 nutplate



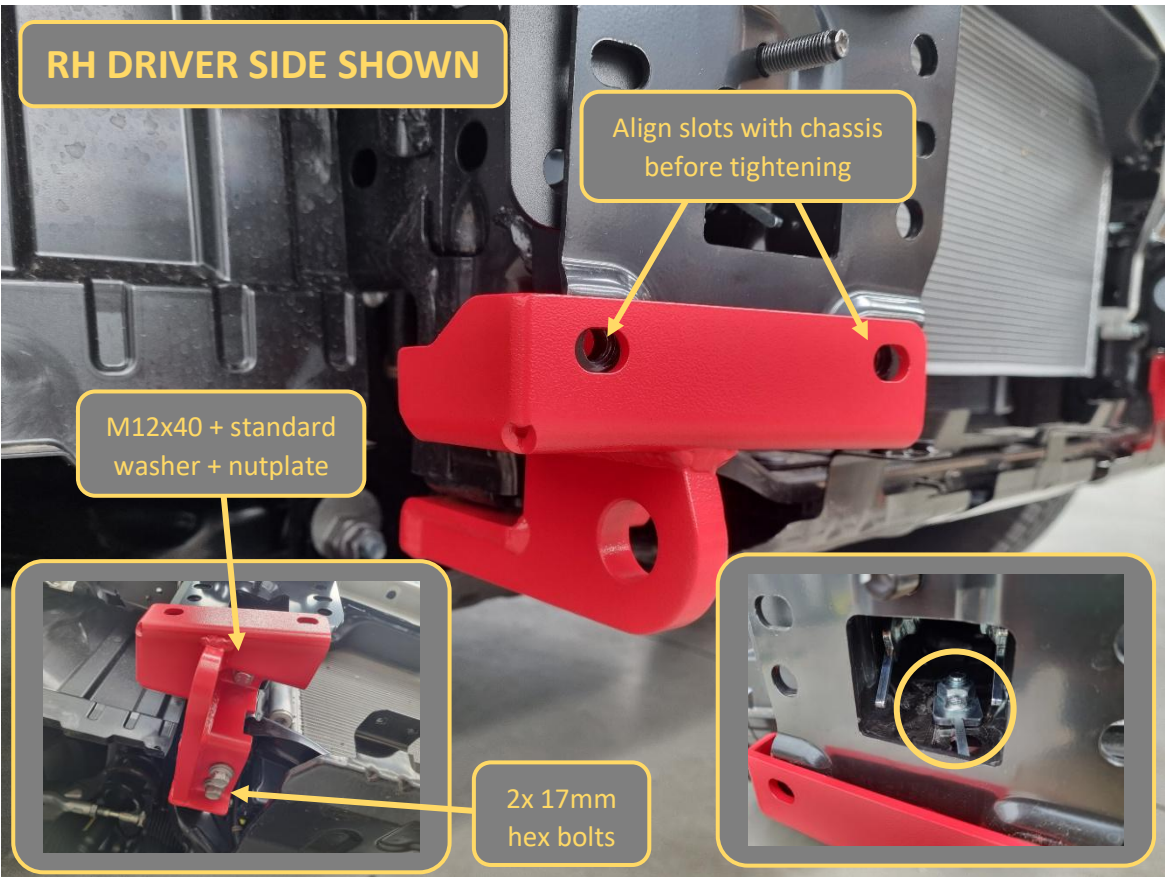
43. Fit the B-1142 outer chassis support brackets to the outside of each chassis rail, and secure/align in the same manner as the inner chassis support brackets.

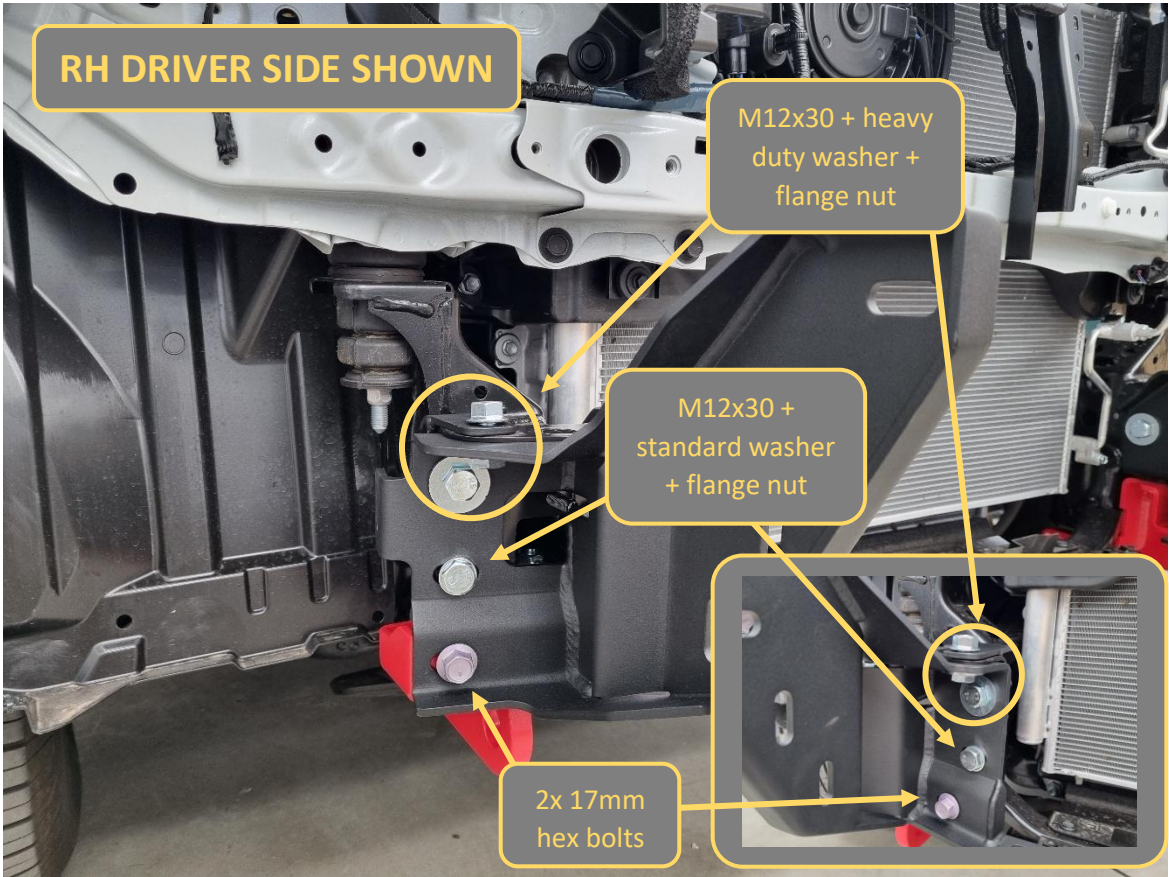
TOOLS REQUIRED

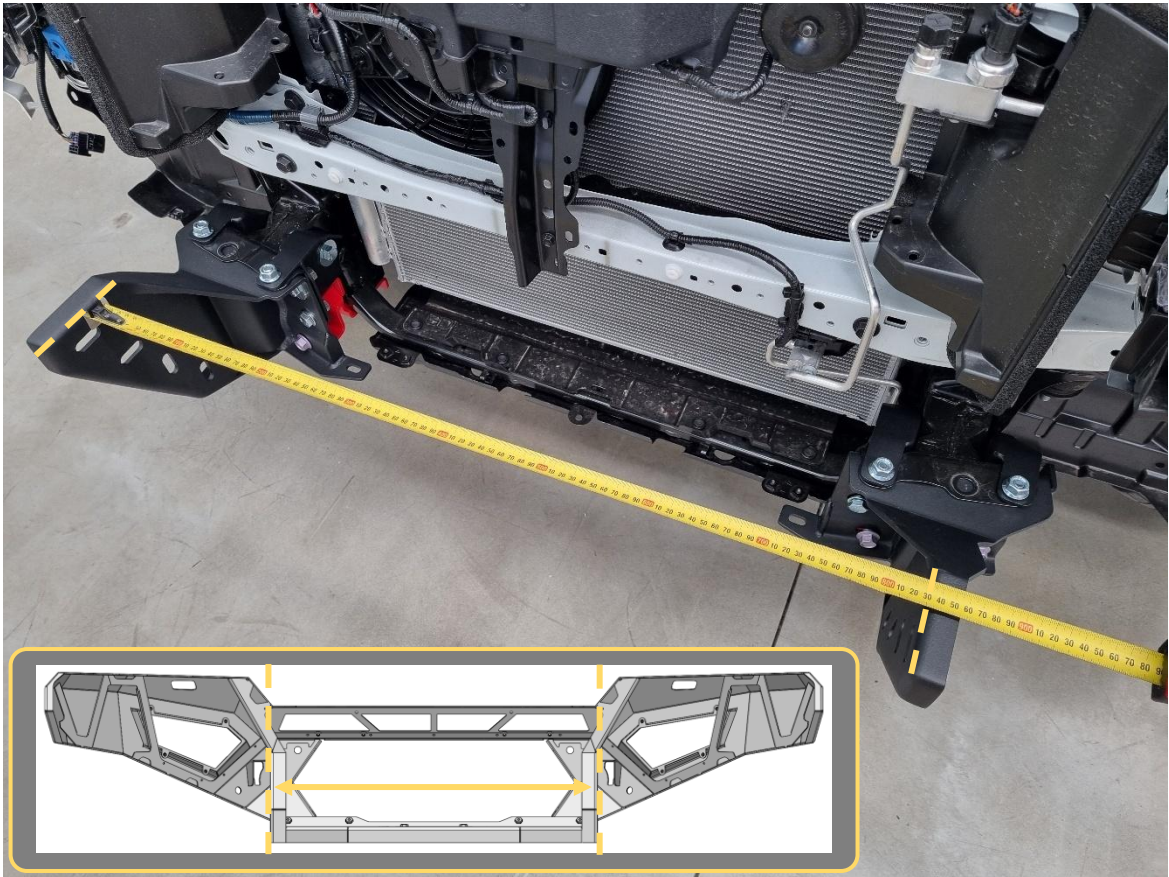
18/19mm socket/spanner

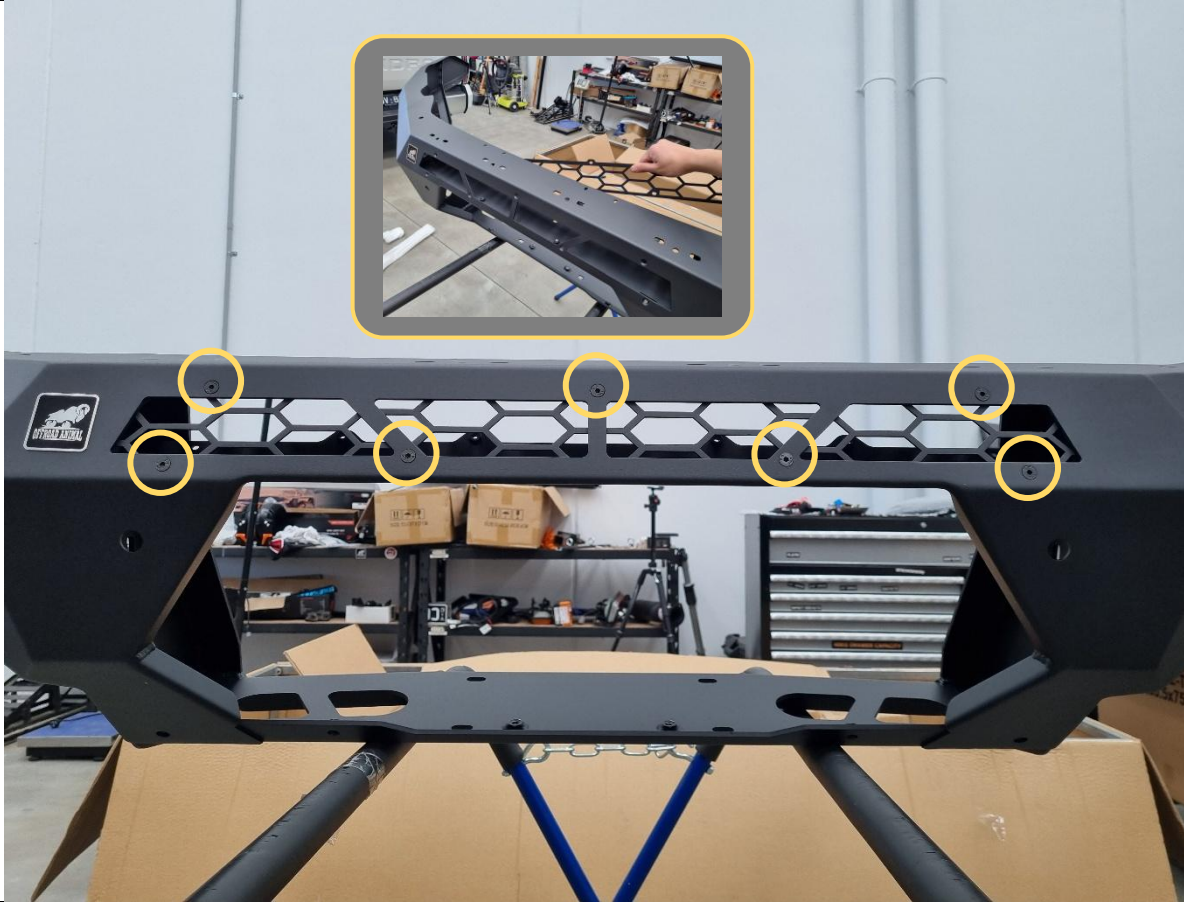
FASTENERS

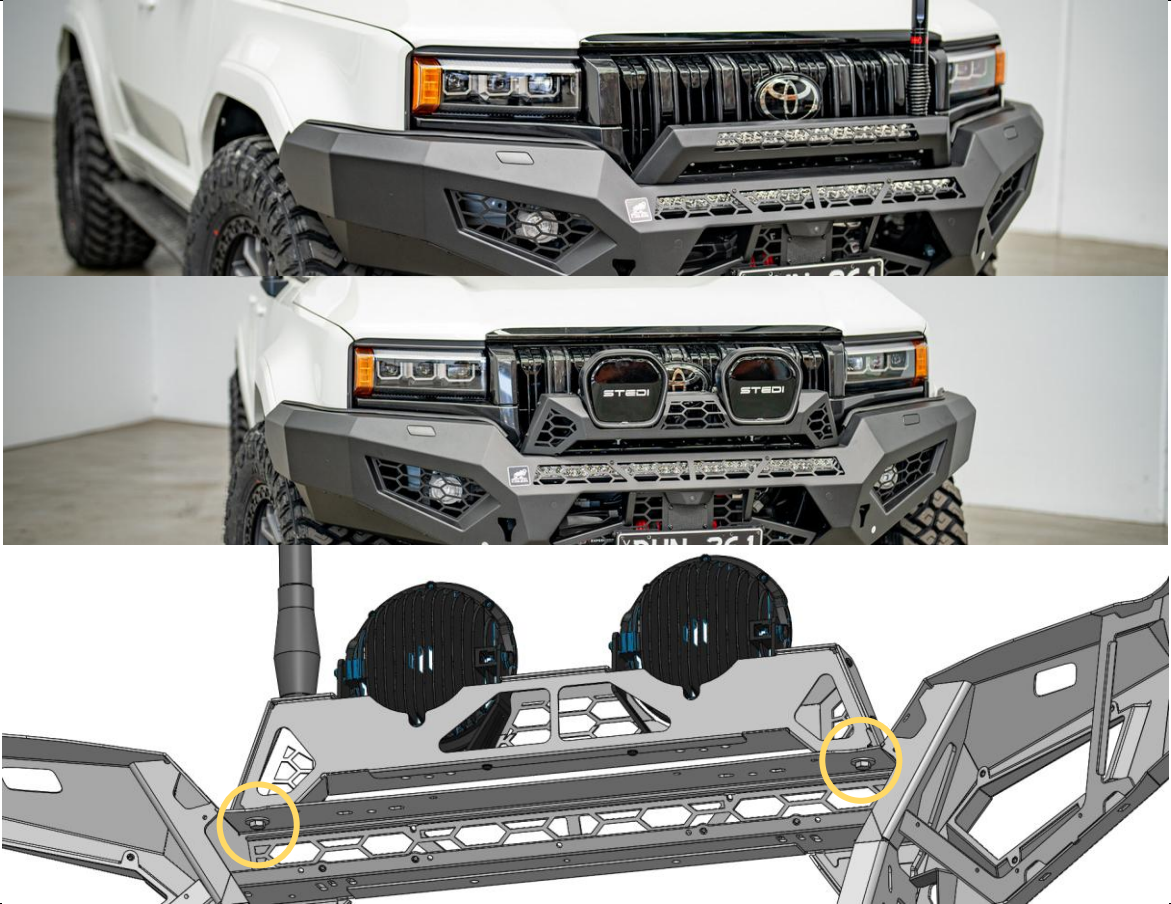
2x M12x30 hex bolt
2x M12 heavy duty washer
2x M12 nutplate

	
44. Fit the tow points to the underside of the chassis. 45. Loosely secure the rear of the tow point with the same 2x 17mm hex bolts as the factory tie-down points. 46. Loosely secure the underside tow point through the 2x chassis support brackets and into the chassis with 1x M12x40 hex bolt, standard washer and nutplate (inserted through front face of chassis rail). 47. Align the tow point so that the front slots are in line with the chassis rail holes, then fully tighten all tow points.	TOOLS REQUIRED 17mm socket/spanner 18/19mm socket/spanner
	FASTENERS 4x 17mm hex bolt (retained) 2x M12x40 hex bolt 2x M12 standard washer 2x M12 nutplate

	
48. Loosely fit the impact assemblies to the front of each chassis rail. 49. Loosely secure each impact assembly with: a. 2x 17mm hex bolts (retained from factory crash beam) b. 6x M12x30 hex bolts c. 4x M12 heavy duty washers (use on top 4x M12 bolts) d. 2x M12 standard washers (use on lower 2x M12 bolts) e. 6x M12 flange nuts	TOOLS REQUIRED
	FASTENERS 4x 17mm hex bolt (retained) 12x M12x30 hex bolt 8x M12 heavy duty washer 4x M12 standard washer 12x M12 flange nut

	
50. Measure the distance between the outside faces of the uprights on the bull bar using a tape measure. Write the distance below for reference if required: Bar upright width = _____ mm 51. Adjust the impact assemblies by sliding left/right on the slots, such that the distance between the inner mounting faces of the impact assemblies are 2-5mm more than the bull bar distance. Ensure the mount faces are vertically upright and symmetric left/right on the vehicle (measure to the corners of the headlights or similar to check). 52. Once adjusted, tighten all bolts securing the impact assemblies to the chassis/braces/tow points. 53. Re-check the distance and re-adjust if required.	TOOLS REQUIRED Tape measure 17mm socket/spanner 18/19mm socket/spanner FASTENERS

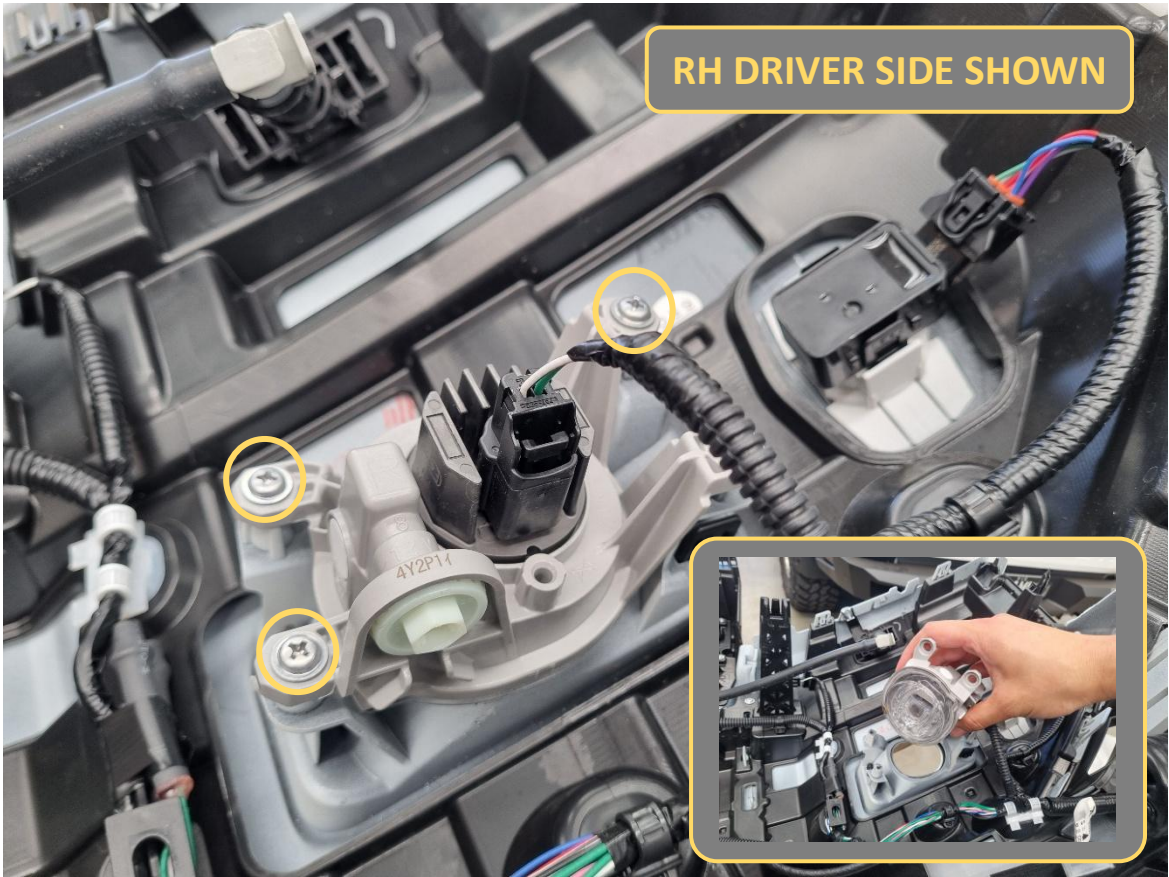
	
54. Fit the P-0488 light bar mesh infill to the inside of centre section the bull bar. Note: Fitment of this part is required on all bars. 55. Secure the infill to the front face of the bar with 7x M6x12 black countersunk bolts and flange nuts.	TOOLS REQUIRED 4mm hex/Allen key
	FASTENERS 7x M6x12 black countersunk bolt 7x M6 flange nut

	
56. If fitting driving lights, stealth hoop, round hoop or rally hoop to this bar, this is also the most convenient time to do so. It is still possible later, but it is more difficult. Note: Bolt head must be facing down for fitment of rally hoops.	TOOLS REQUIRED Supplied with accessories
	FASTENERS Supplied with accessories



57. If fitting an integrated light bar, do so now. This bar is designed to fit the Offroad Animal 32-inch light bar. If fitting this light bar, assemble the light bar with legs facing <u>outwards</u>, and line it up with the slots in the centre gusset. Secure with M6 fasteners supplied with the light. This bar can accommodate most other “30-32inch” size single row light bars. Stedi ST3K light bars require legs facing <u>outwards</u>.	TOOLS REQUIRED Supplied with accessories
	FASTENERS Supplied with accessories

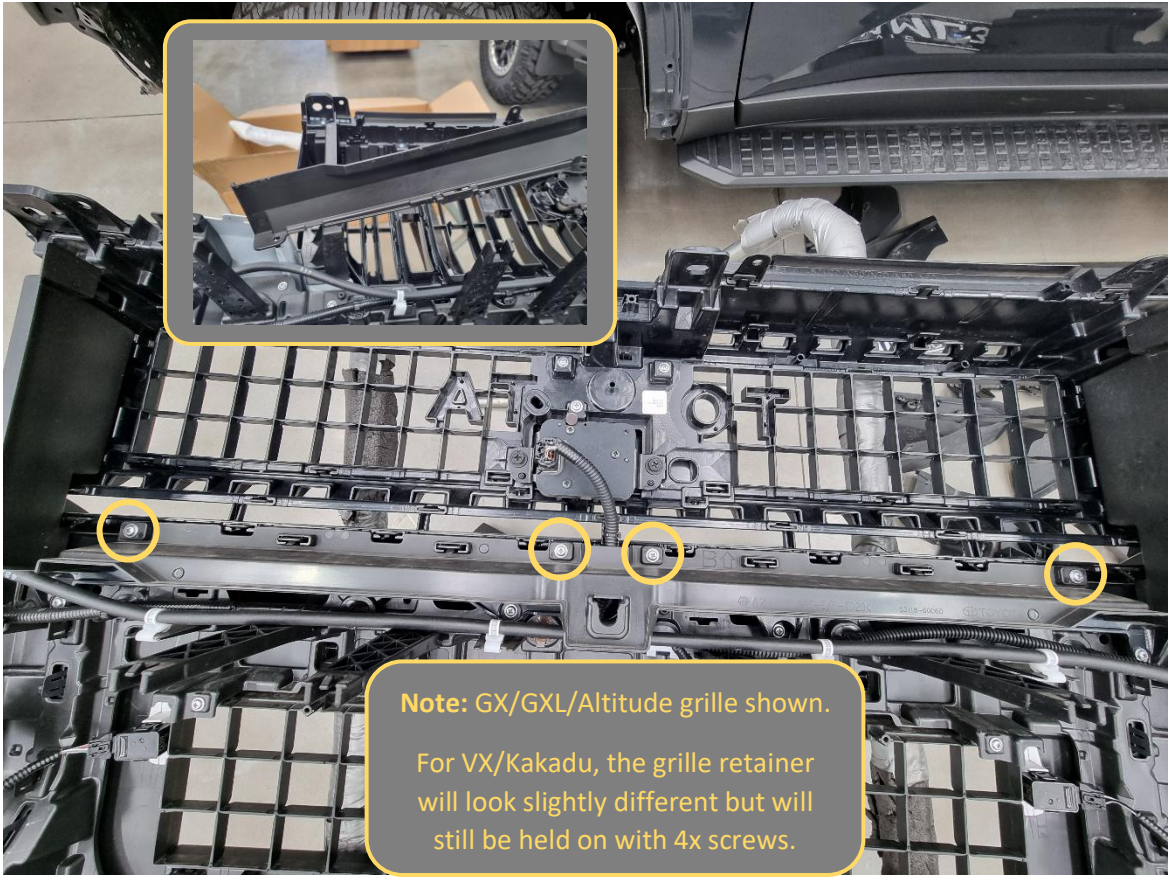
RH DRIVER SIDE SHOWN 	
58. Fit 10x M6 cage nuts into the rectangular slots in bottom of wing (5x per side). There should be two types of M6 cage nuts supplied. There are 10x cage nuts suited for thicker 3mm sheet metal, which are to be used here. The other 4x cage nuts are suited for thinner 2mm sheet metal and will be used later. Use a small flat blade screwdriver to push the edge of the cage to engage with the slot to aid fitting.	TOOLS REQUIRED Flat blade screwdriver
	FASTENERS 10x M6 cage nuts (to suit 3mm sheet metal)

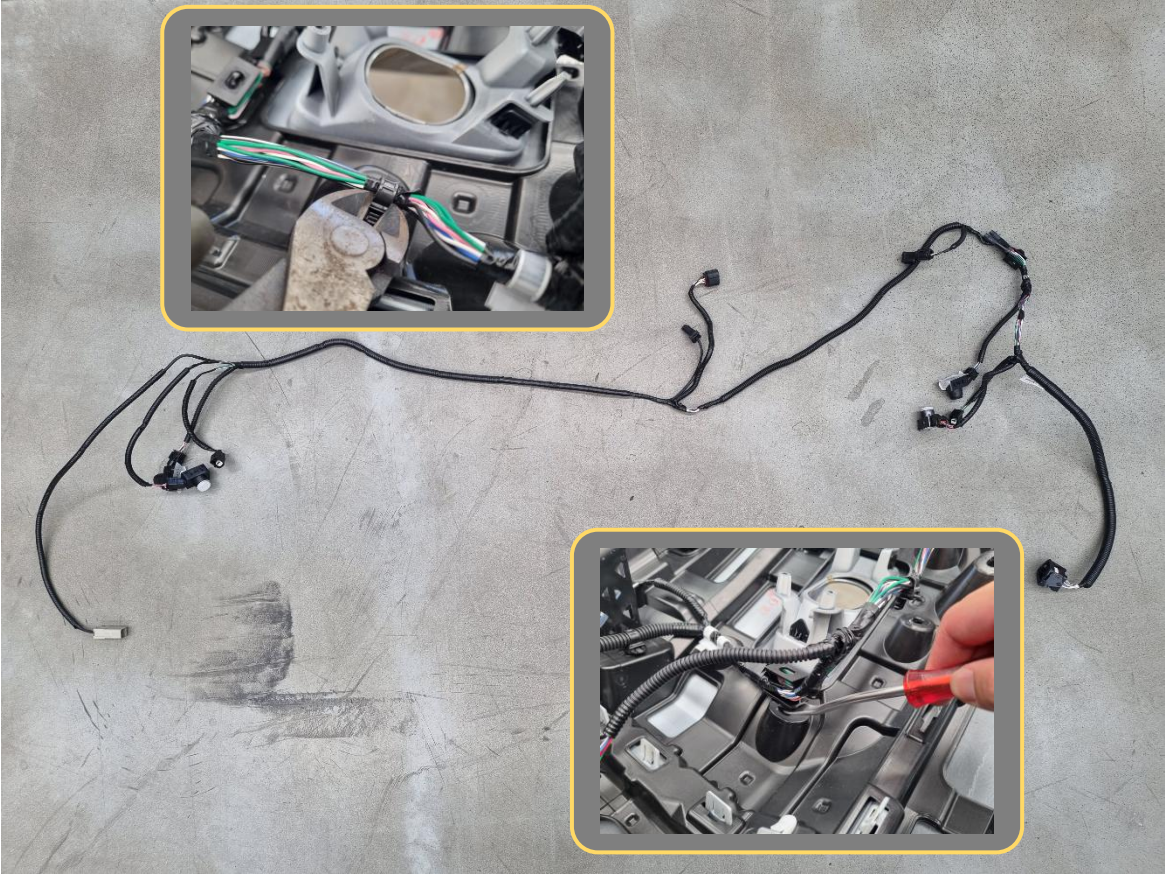
	
It is now time to strip the bumper. 59. Unplug the fog lights from the bumper harness. 60. Remove 3x Phillips head screws securing each fog light to the bumper and set aside.	TOOLS REQUIRED Phillips head screwdriver
	FASTENERS 6x Phillips head screws

	
61. Locate all 4x parking sensors and label their position and orientation (eg. outer left, inner left, inner right, outer right) with a marker pen and masking tape. 62. Unclip each parking sensor by spreading apart the plastic tabs on the housing.	TOOLS REQUIRED Marker pen Masking tape
	FASTENERS

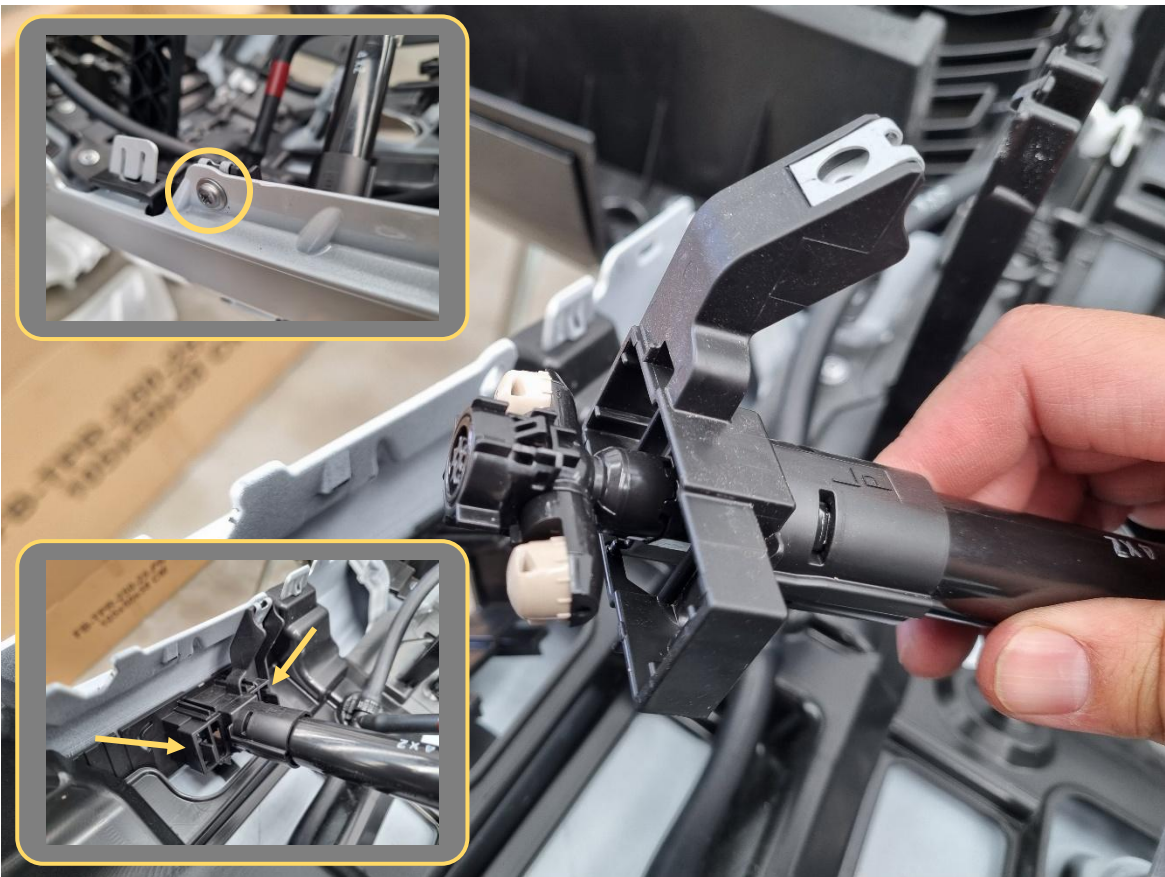
 Note: VX/Kakadu grille shown. For GX/GXL/Altitude, the radar will be in the same spot behind the TOYOTA badge. The camera will be located further down in the bumper, below the grille.	
63. Unplug the radar and camera behind the grille.	TOOLS REQUIRED
	FASTENERS

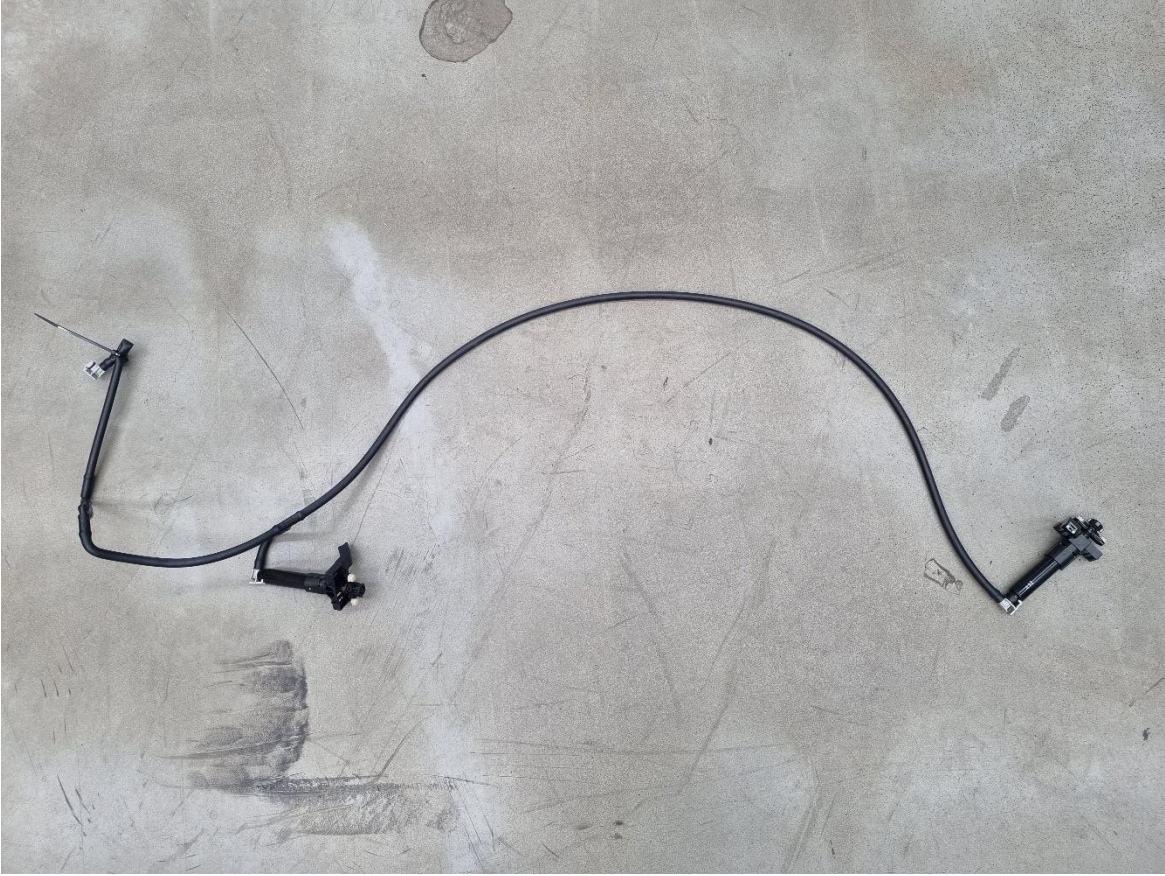
 RH DRIVER SIDE SHOWN		
64. On the driver side of the bumper, unclip the blanking plug highlighted. Use a flat blade screwdriver or trim tool to assist.		TOOLS REQUIRED Flat blade screwdriver or Trim tool
		FASTENERS

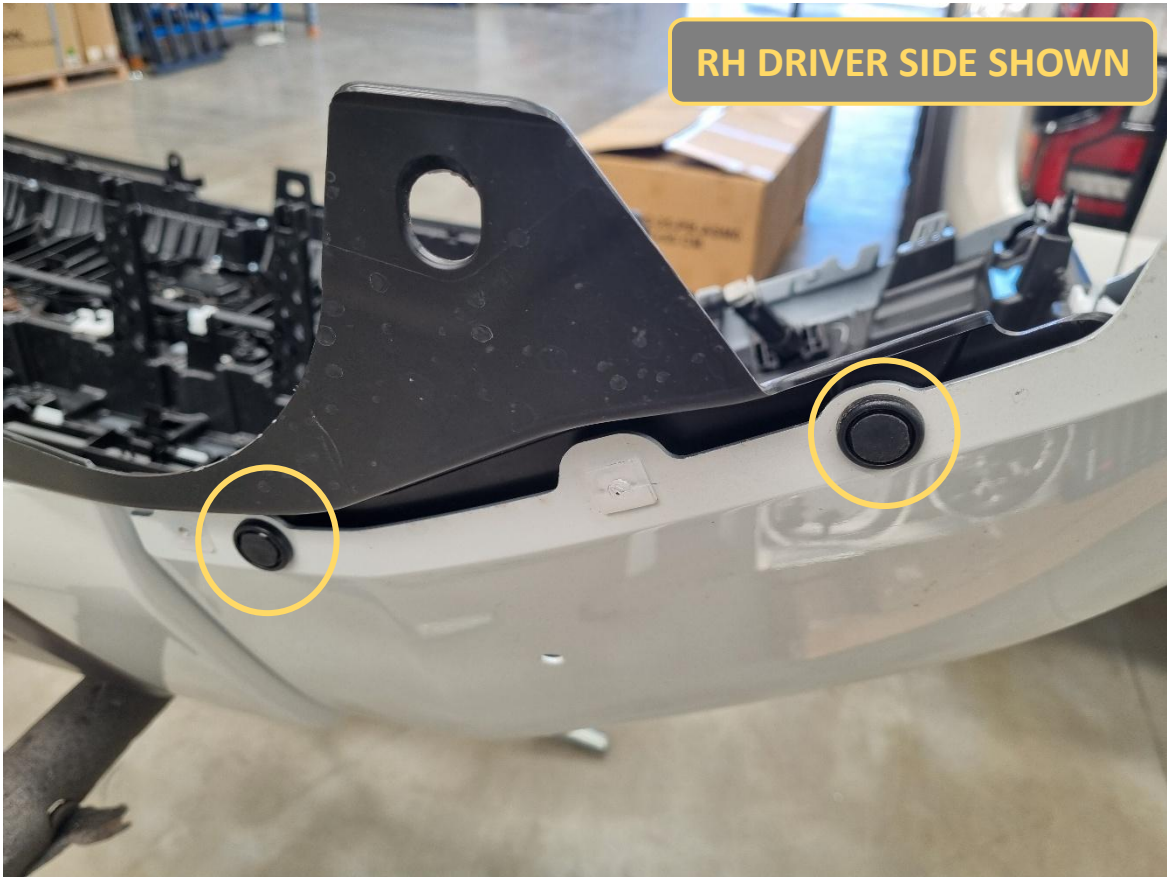
 Note: GX/GXL/Altitude grille shown. For VX/Kakadu, the grille retainer will look slightly different but will still be held on with 4x screws.		
65. Remove 4x Phillips head screws holding the lower grille retainer.	TOOLS REQUIRED Phillips head screwdriver	
	FASTENERS 4x Phillips head screws	

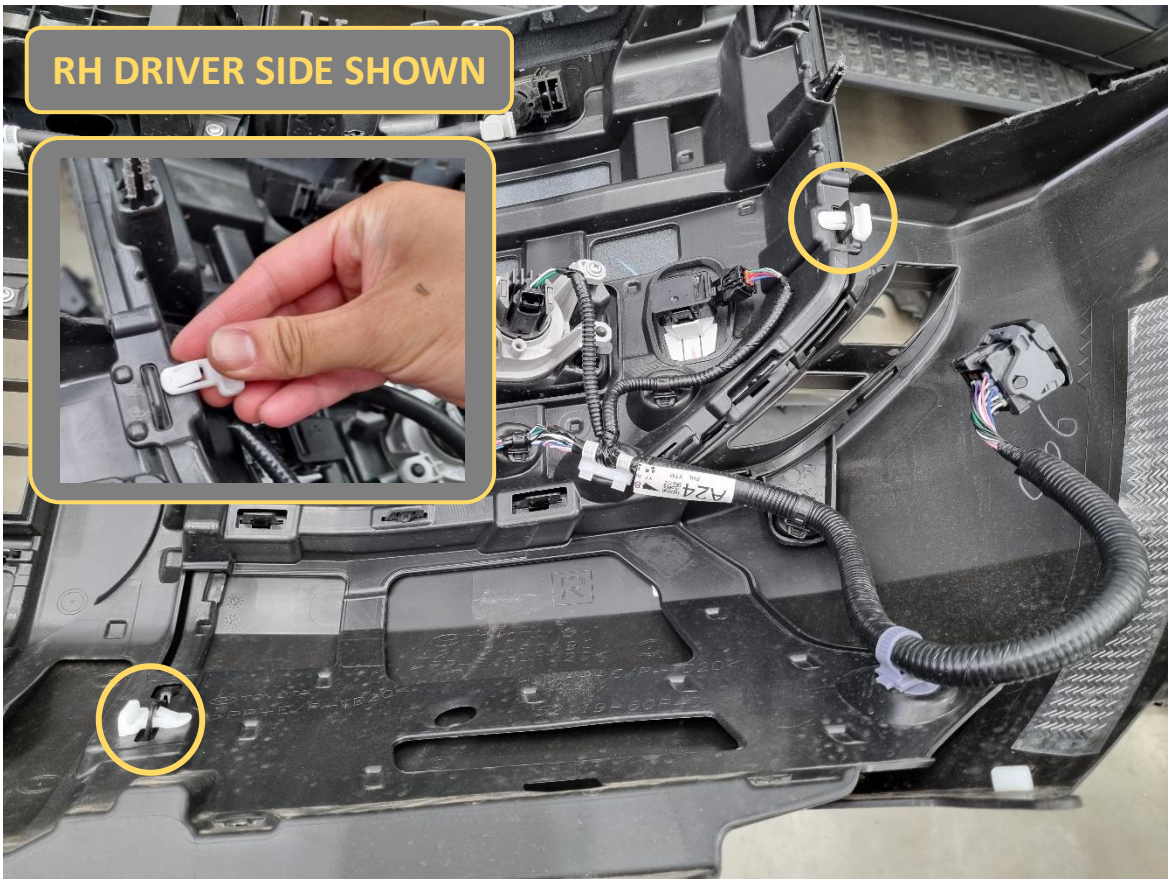
	
66. Fully strip the bumper wiring harness off the bumper by either unclipping the harness with a flat blade screwdriver or trim tool, or by carefully cutting off the cable tie clips with side cutters (take care not to cut the wires).	TOOLS REQUIRED Flat blade screwdriver or Trim tool or Side cutters
	FASTENERS

	
67. Using your hands, pull out the headlight washers on each of the bumper. 68. Unclip the headlight washer cover cap and set aside in a safe place. 69. It is highly recommended to match the colour of the headlight washer cover cap with the bull bar. Use sandpaper to scour the surface of the cover cap, then evenly apply at least 2 coats of spray paint and allow to dry.	TOOLS REQUIRED
	FASTENERS

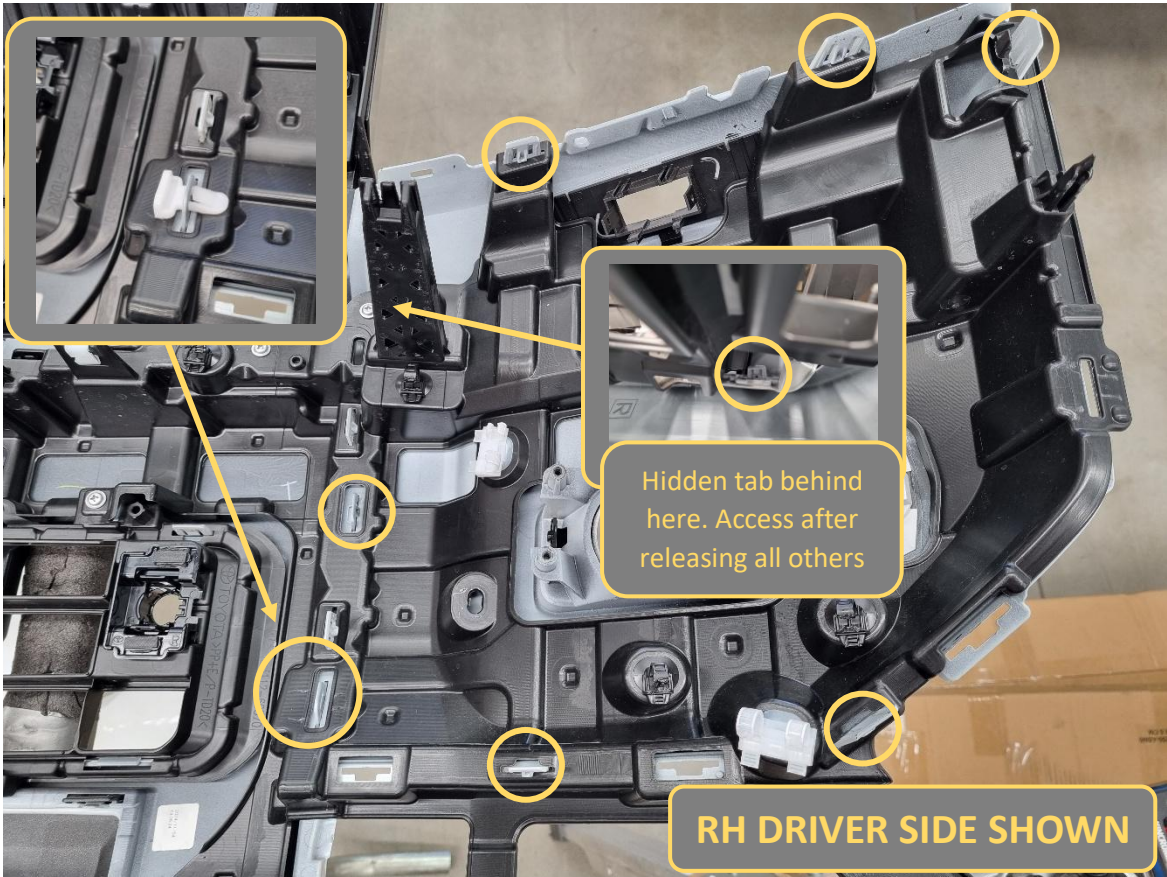
	
70. Remove 1x Phillips head screw holding each headlight washer unit to the top lip of the bumper (see top inset photo). 71. Then press down on the 2x tabs and release the headlight washer unit from the bumper (see bottom inset photo).	
TOOLS REQUIRED Phillips head screwdriver	
FASTENERS 2x Phillips head screws	

	
72. Either unclip or cut through the cable tie clips securing the washer hose system to the bumper and set aside.	TOOLS REQUIRED Flat blade screwdriver or Trim tool or Side cutters
	FASTENERS

		
73. Remove 2x plastic push clips on the bottom of the outer bumper extension. Do this for both sides.	TOOLS REQUIRED Flat blade screwdriver or Trim tool	
	FASTENERS 4x plastic push clips	

	
74. Remove 2x white plastic clips on the inside of the outer bumper extension. Do this for both sides. Press down on the clip and slide through the slotted tab to remove.	TOOLS REQUIRED
	FASTENERS

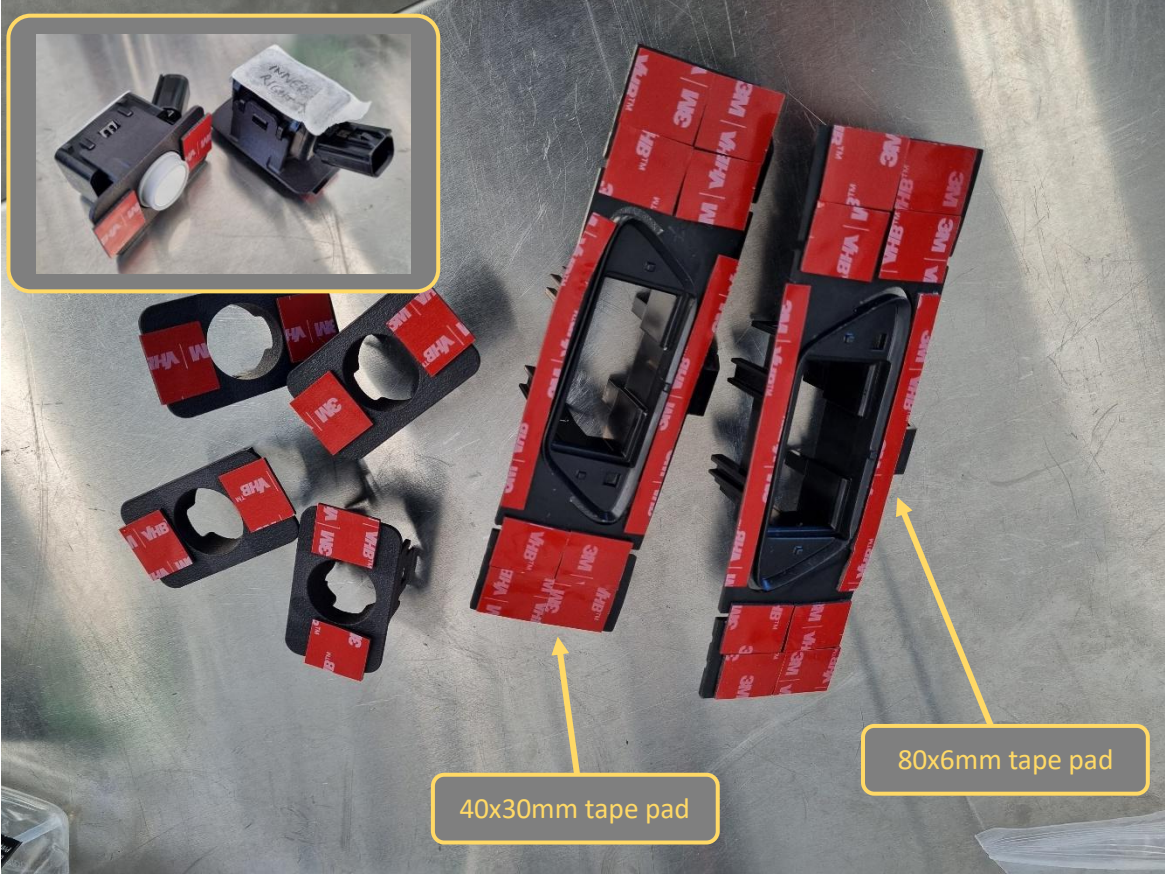
	
75. Release 3x tabs to remove the outer bumper extension. Do this for both sides.	TOOLS REQUIRED
	FASTENERS

		
76. Remove 1x white plastic clip on the inside of the bumper insert. 77. Release 7x tabs holding the bumper insert and remove. Note: 1x tab is hidden. Release the other 6x first and pry the bumper insert off the main bumper section to access the hidden tab. 78. Repeat for other side.	TOOLS REQUIRED Flat blade screwdriver (optional)	
	FASTENERS	

		
79. Use a combination of heat gun, plastic trim tool and utility knife to peel off the headlight washer holders from each bumper insert.	TOOLS REQUIRED Heat gun Plastic trim tool Utility knife	
	FASTENERS	

	
80. Use a heat gun to peel off most of the leftover foam tape on the headlight washer holders. 81. Then use a cleaning solvent (we found brake cleaner works best) to remove the remaining tape residue until the surface is clean.	TOOLS REQUIRED Heat gun Brake cleaner Rag
	FASTENERS

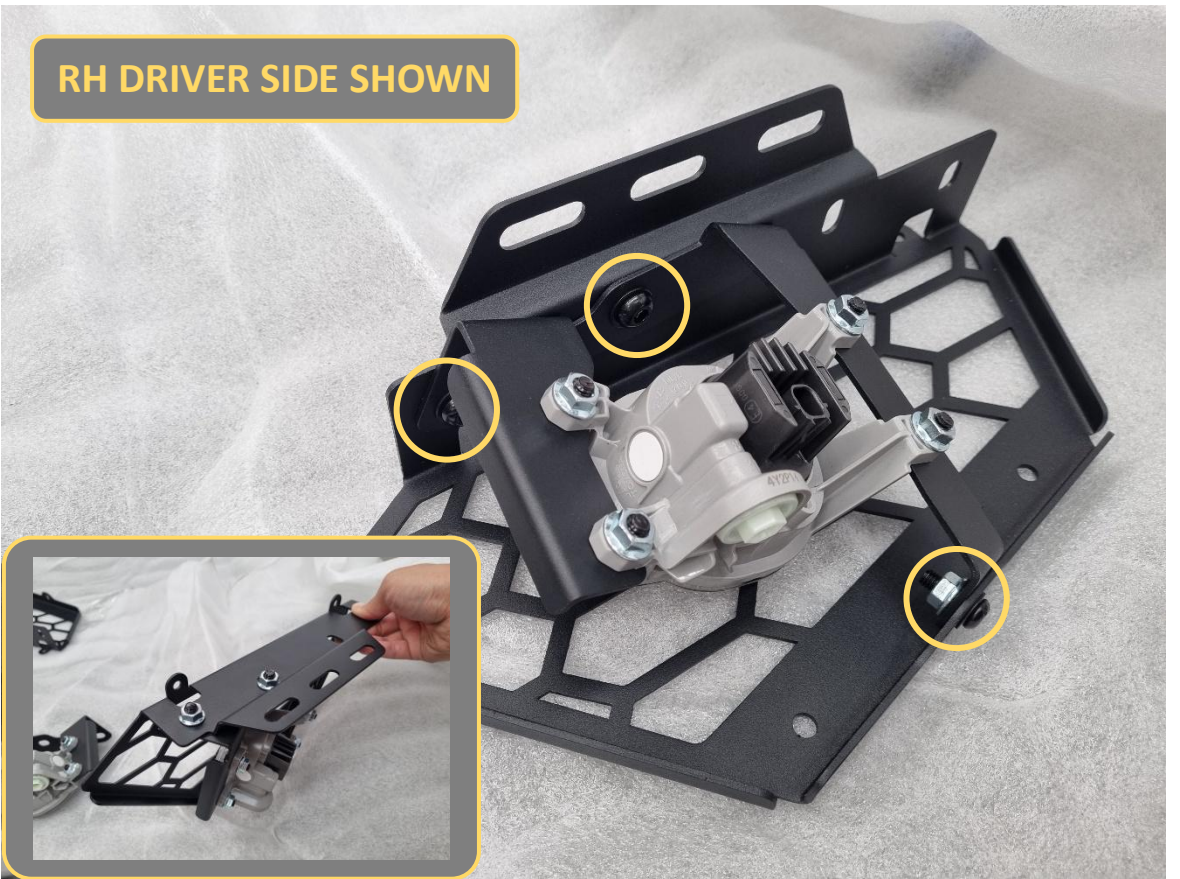
	
82. Clean the mounting surfaces of the supplied F-0022 parking sensor holders, the headlight washer holders and the corresponding mounting locations on the inside of the bull bar with isopropyl alcohol or similar and let it dry. 83. There are 3x 3M Primer 94 ampules supplied. Use 2x ampules and apply primer to all the cleaned surfaces, both on the bull bar and on the sensor/headlight washer holders.	TOOLS REQUIRED Isopropyl alcohol Rag
	FASTENERS 2x 3M Primer 94

	
Allow at least 5 minutes for the primer to chemically bond to the surfaces before applying tape. 84. Apply supplied 3M VHB tape from the universal parking sensor tape kit to the F-0022 parking sensor holders as shown. 85. Then temporarily unplug the parking sensors from the bumper harness and clip them into the sensor holders (see inset photo). 86. Apply supplied 3M VHB tape from the Prado 250 tape kit to the headlight washer holders as shown.	TOOLS REQUIRED
	FASTENERS

 LH PASSENGER SIDE SHOWN	
87. Remove the backing film off the tape on the parking sensor holders (use utility knife or 90 degree pick to assist), then fit to their corresponding positions inside the bull bar. Ensure the rubber isolating ring of the parking sensor fits through the hole in the bar and is not wedged in incorrectly. Ensure the sensor plug orientation matches the installation in the factory bumper.	TOOLS REQUIRED Utility knife
	FASTENERS

RH DRIVER SIDE SHOWN 	
88. Remove the backing film off the tape on the headlight washer holders (use utility knife to assist), then fit to their corresponding positions inside the bull bar. Ensure left/right orientation is correct. The headlight washer holder as a L/R marking for identification. 89. Add a pea-sized blob of automotive adhesive sealant (we recommended Sikaflex 227) over the sensor/headlight washer holders and inside face of bar to hold to ensure the tape holds position.	TOOLS REQUIRED Utility knife Sikaflex FASTENERS

	
90. The original fog lights can be re-fitted to the bar. Fit the fog lights to the supplied B-1431 fog light brackets and secure with 4x M6x16 black button head bolts, black washers and flange nuts, each.	TOOLS REQUIRED 4mm hex/Allen key
	FASTENERS 8x M6x16 black button head bolt 8x M6 black flat washer 8x M6 flange nut



- 91. Fit the fog light and bracket to the wing mesh.
- 92. Secure at the bottom with 1x M6x16 black button head bolt, black washer and flange nut.
- 93. Secure at the top with 2x M8x16 black button head bolts, black washers and flange nuts.
- 94. Repeat for the other side.

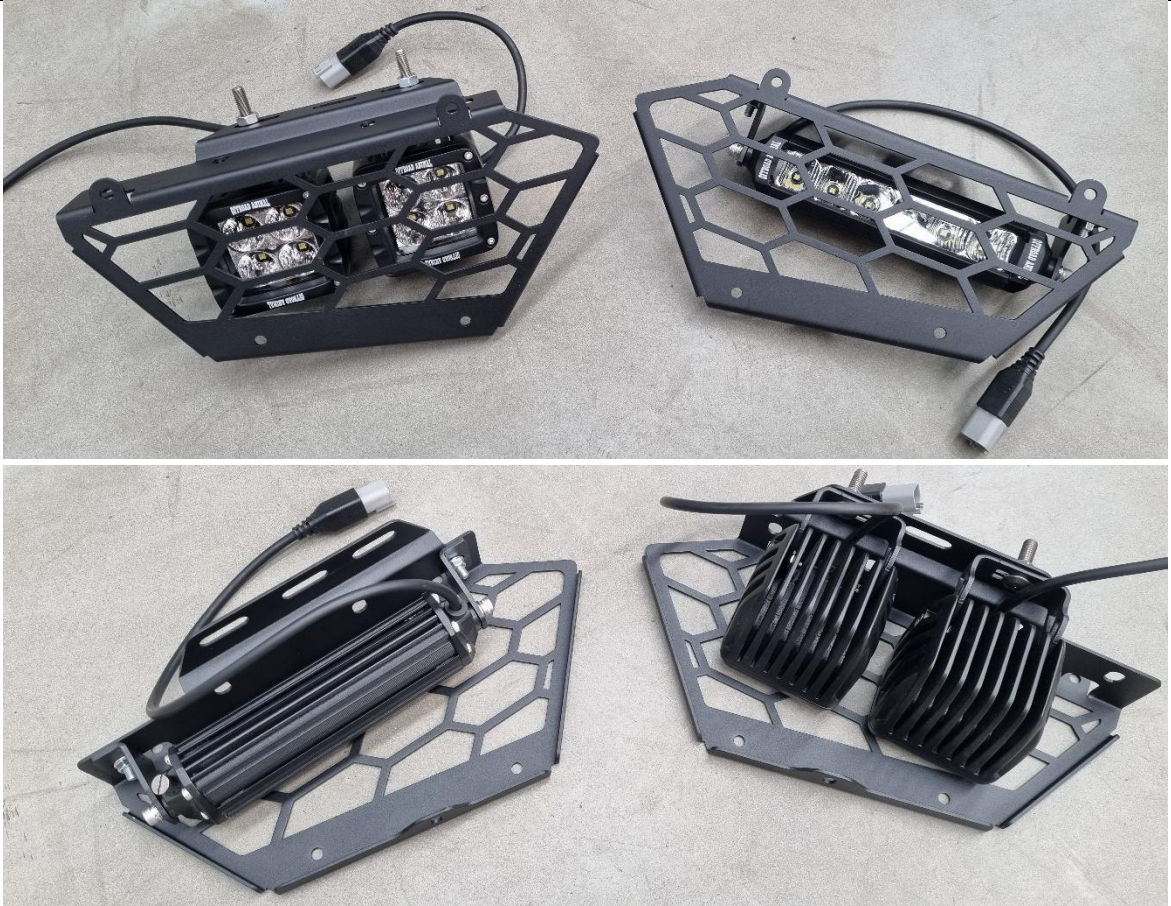
TOOLS REQUIRED

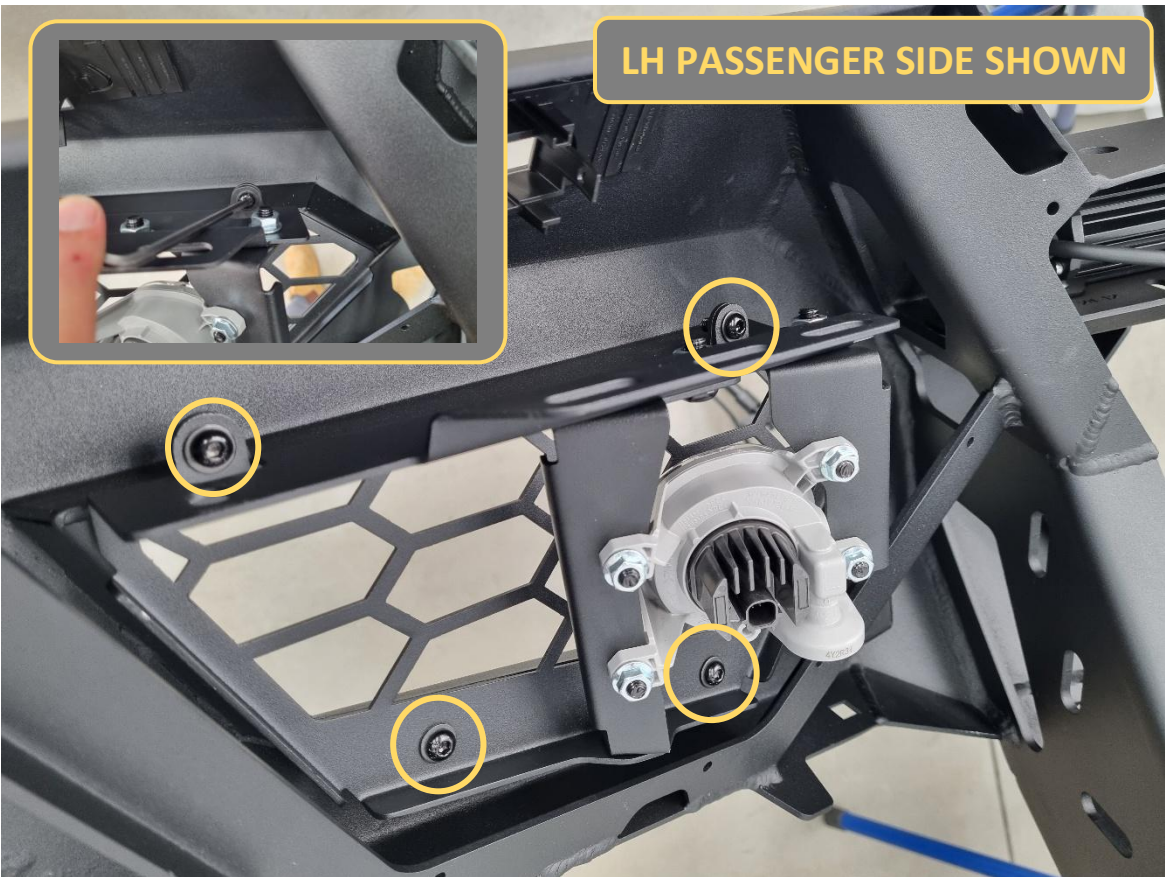
4mm hex/Allen key
5mm hex/Allen key

FASTENERS

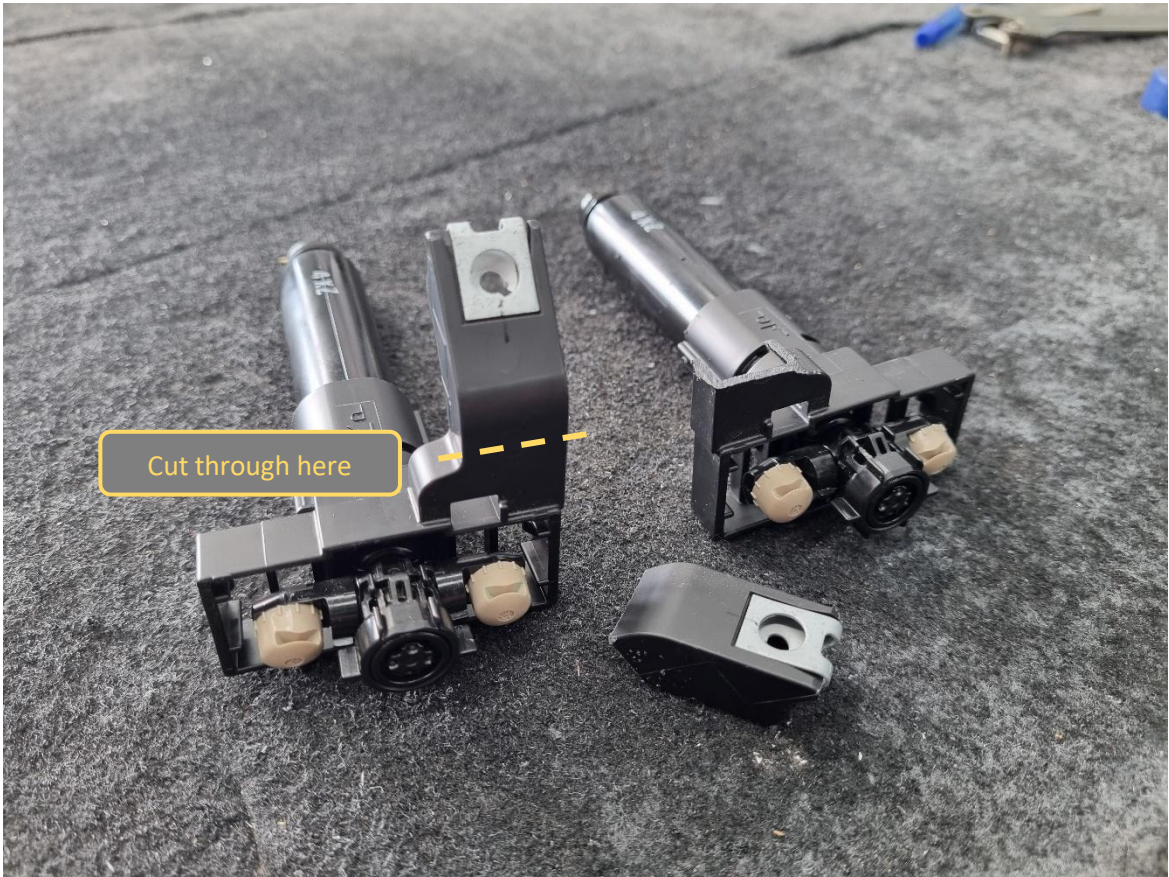
2x M6x16 black button head bolt
 2x M6 black flat washer
 2x M6 flange nut

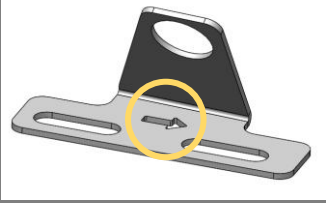
4x M8x16 black button head bolt
 4x M8 black flat washer
 4x M8 flange nut

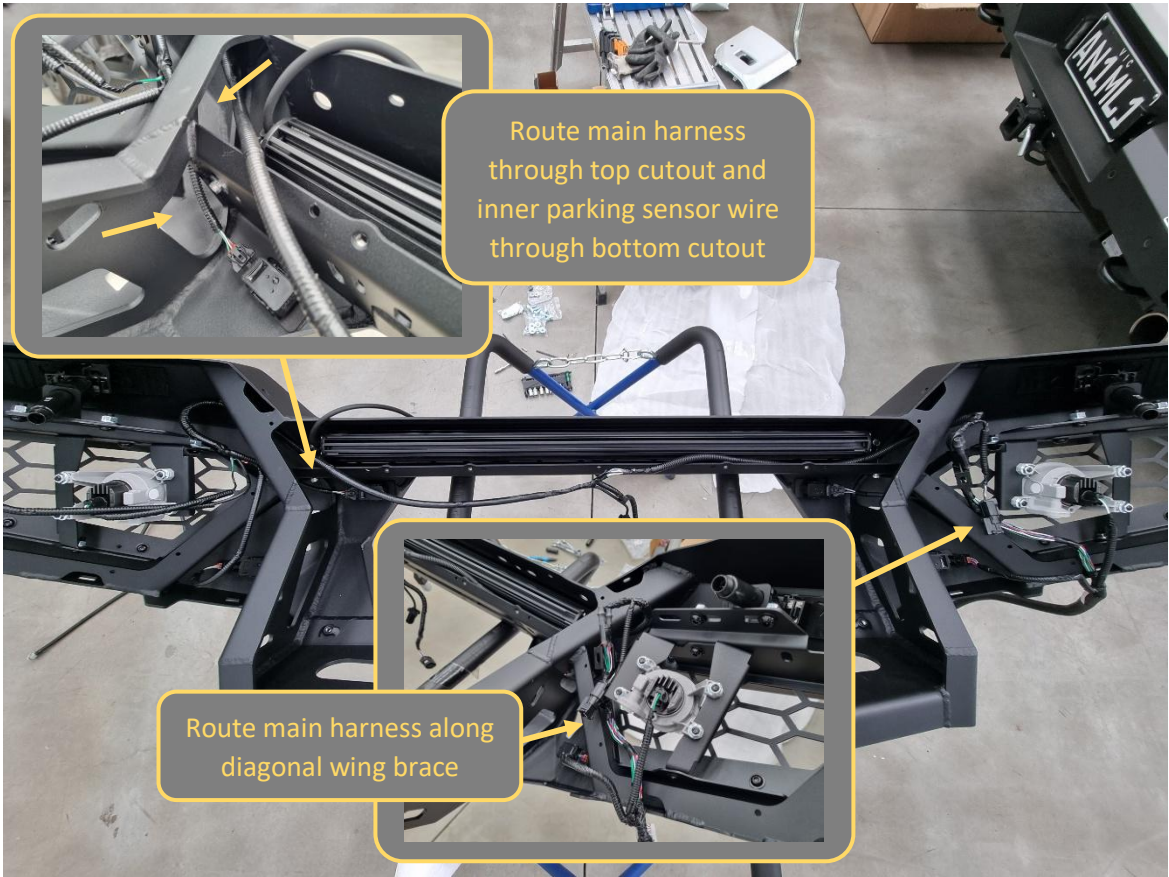
	
95. Instead of fog lights, there is also the option to fit an 8" light bar or up to two 2"x2" cube lights in each wing mesh, as shown. Or you can fit no lights at all.	TOOLS REQUIRED Supplied with accessories
	FASTENERS Supplied with accessories

	
96. Fit the wing meshes with lights to the inside of the bull bar wings. Secure each wing mesh with 4x M6x16 black button head bolts and black washers, into the embedded nuts in the bull bar.	TOOLS REQUIRED 4mm hex/Allen key
	FASTENERS 8x M6x16 black button head bolt 8x M6 black flat washer

	
97. Disconnect the headlight washer units from the washer hose. Do this with a bucket as there will be some fluid spilling out.	TOOLS REQUIRED Bucket
	FASTENERS

	
98. Using an air hacksaw or similar cutting tool, cut off the flange on each of the headlight washer units as shown. Ensure the washer unit is secured firmly (eg. with a table clamp) before cutting.	TOOLS REQUIRED Safety glasses Air Hacksaw or Oscillating Multi Tool or Angle Grinder or Jigsaw
	FASTENERS

LH Passenger Side RH Driver Side AUG 2026 UPDATE New bracket with arrow cutout (RH shown)  This angled edge matches with the wing mesh	
99. Slide the B-1465 headlight washer retainer brackets onto the main shaft of the headlight washer units. There is a left-hand and right-hand version of the retainer bracket. See image above of the angled edge used for identifying. AUG 2026 UPDATE The bracket has been updated. There is now going to be an arrow cutout in the bracket. This arrow points to the outside (LH or RH) of the vehicle.	TOOLS REQUIRED FASTENERS

	
103. Route the bumper wiring harness through the bar and connect the fog lights and parking sensors.	TOOLS REQUIRED
	FASTENERS

	
104. Connect the washer hose back to the headlight washer units. Leave the washer hose sitting on the outside of the bull bar, do not route through the cutouts inside.	TOOLS REQUIRED
	FASTENERS

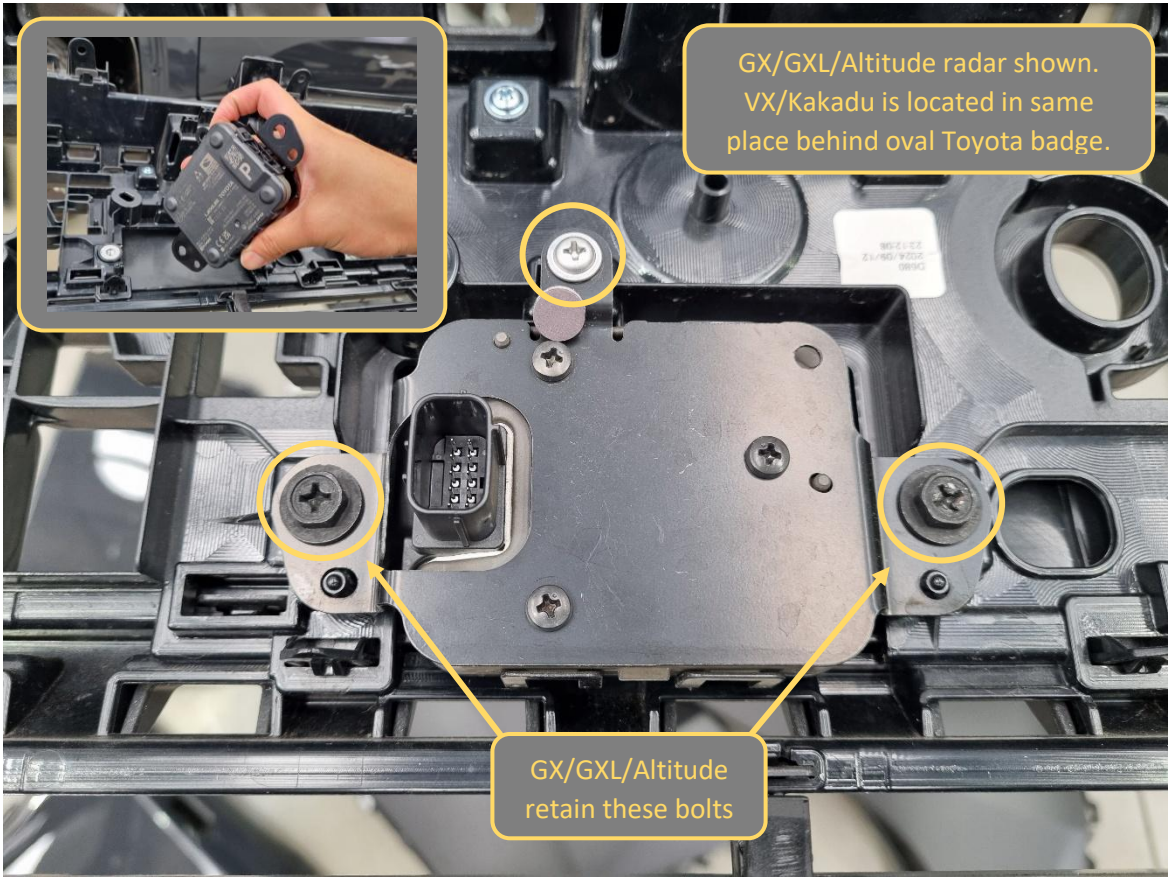
	
105. Secure the bumper wiring harness and washer hose to the provided holes in the bull bar using cable ties. Leave the camera and radar wires hanging loose out of the centre section (see inset photo). Take care not to clamp the washer hose too tight or else it will restrict/cut off fluid flow.	TOOLS REQUIRED Cable ties (not supplied) Side cutters
	FASTENERS

	
106. Fit the pair of pan braces to the back of the light bar mounting area in the bull bar. 107. Secure the bottom of each pan brace to the embedded nuts in the bull bar with 2x M6x16 black button head bolts and black washers. 108. If fitting to the VX/Kakadu spec with the 'luxury' grille, secure the top of each pan brace now with 2x M6x16 black button head bolts, black washers and flange nuts. For GX/GXL/Altitude, these bolts will be fitted after the next step.	TOOLS REQUIRED 4mm hex/Allen key
	FASTENERS 8x M6x16 black button head bolt 8x M6 black flat washer 4x M6 flange nut

		
109. GX/GXL/Altitude only. Fit the B-1432 grille infill to the bull bar. The little tabs sit on the inside of the bull bar and over the pan braces. 110. GX/GXL/Altitude only. Secure the infill with 6x M6x16 black button head bolts, black washers and flange nuts. 4x of the bolts go through the pan brace holes, and the remaining 2x at the far outer ends of the infill.	TOOLS REQUIRED 4mm hex/Allen key	
	FASTENERS 6x M6x16 black button head bolt 6x M6 black flat washer 6x M6 flange nut	

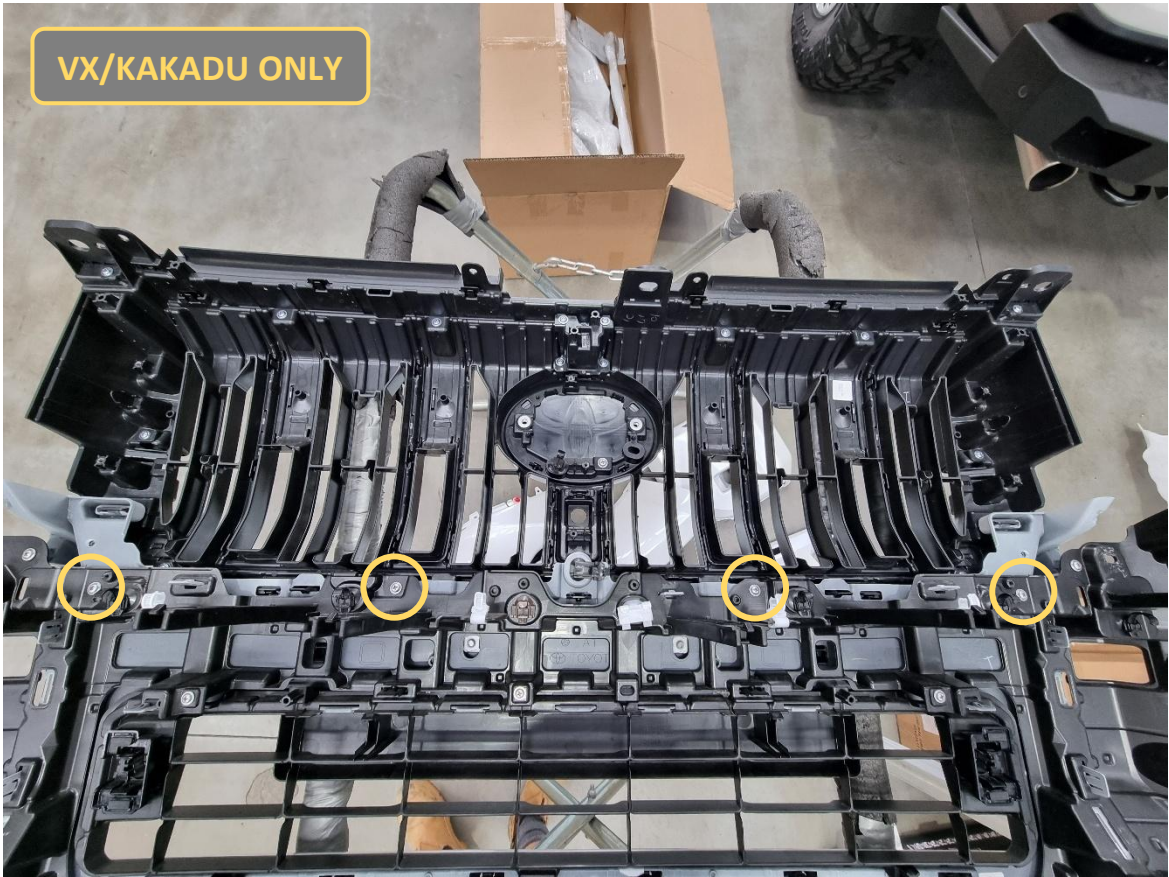
 RH DRIVER SIDE SHOWN		
111. Fit the supplied 2x lengths of pinch weld rubber to the top edge of the bull bar wings. Trim off any excess around the centre section.	TOOLS REQUIRED Side cutters	
	FASTENERS	

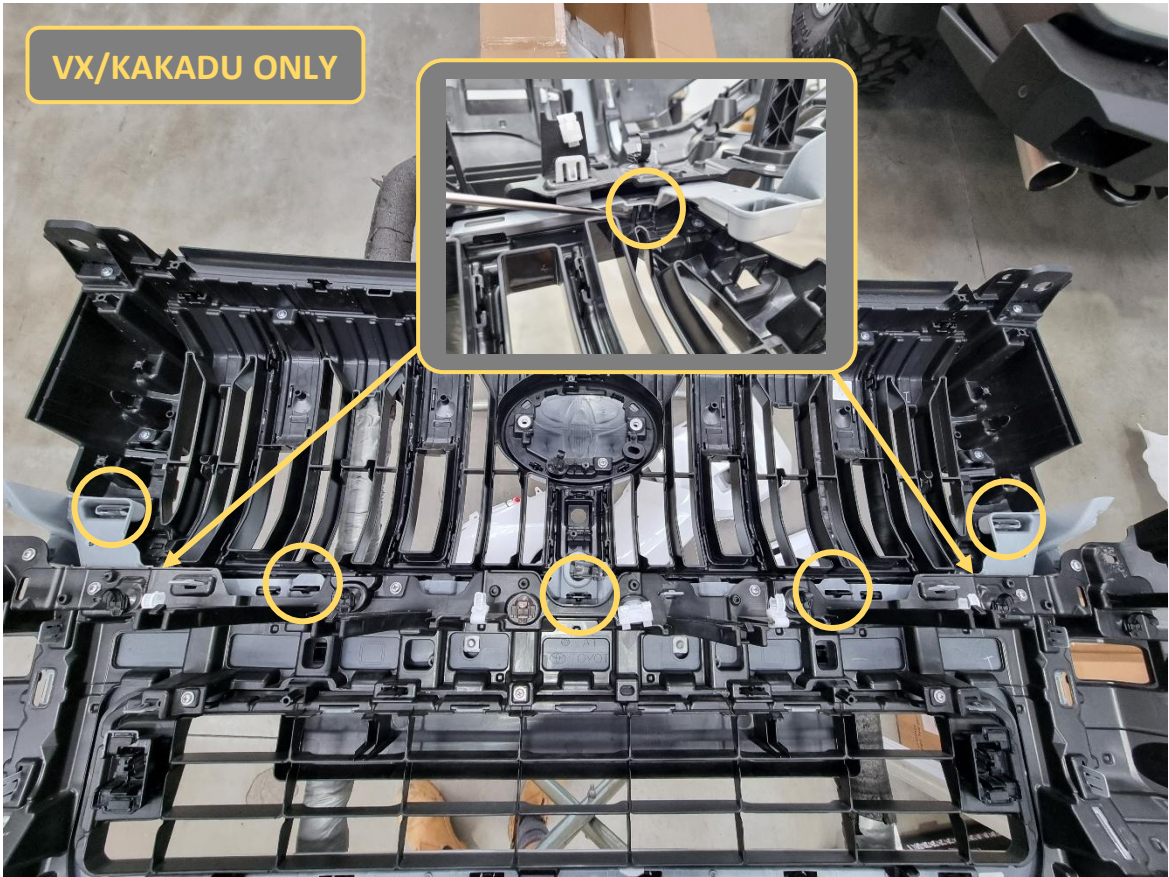
TORO BARS ONLY 	
112. Toro only. If required, fit the supplied antenna mounting brackets to the back of the bar, and secure with 2x M8x20 black button head bolts and black washers, each. 113. Toro only. Else fit the 2x M8x20 black button head bolts and black washers to the back of each bullbar upright, to protect nut threads in bar for future use.	TOOLS REQUIRED 5mm hex/Allen key
	FASTENERS 4x M8x20 black button head bolt 4x M8 black flat washer

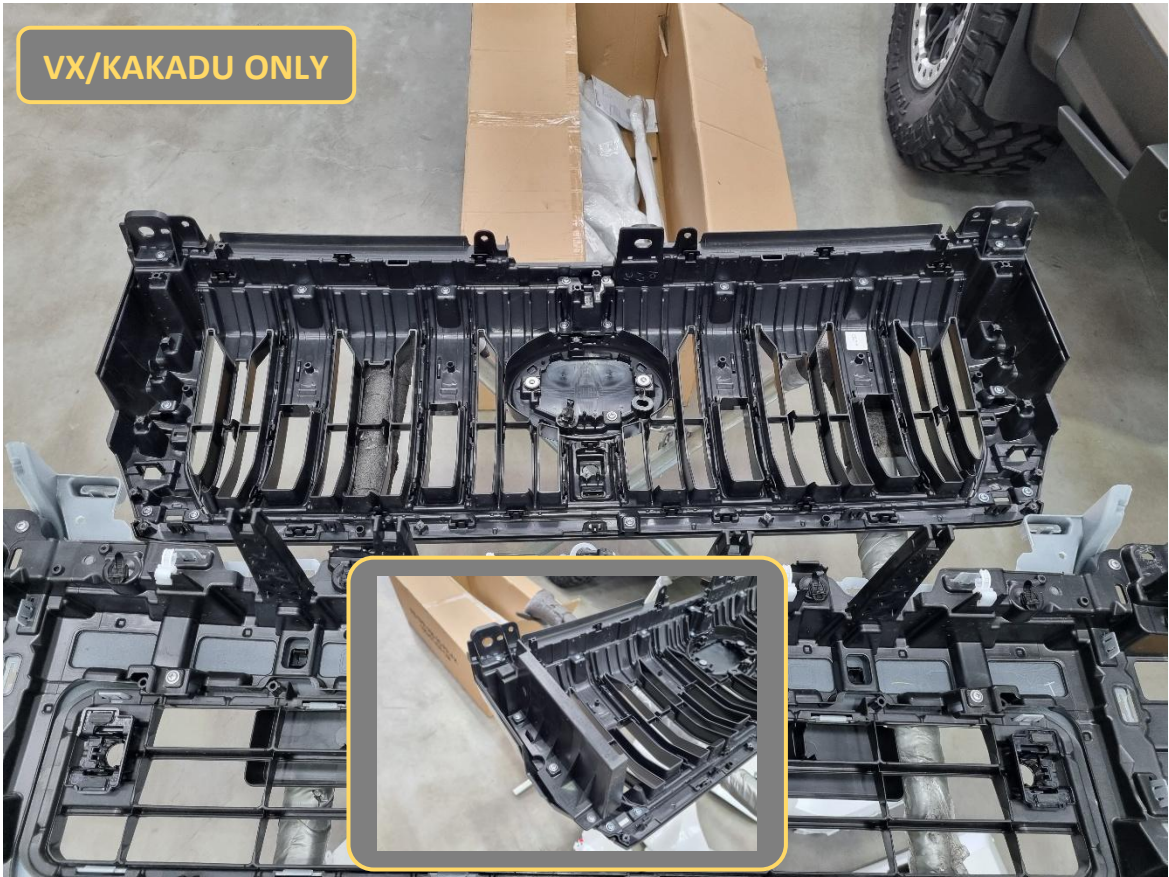
	
The radar and camera need to be removed before the grille goes back on the car. 114. Remove 2x 10mm hex bolts and 1x Phillips head screw holding the radar to grille. 115. Set the radar aside in a safe place. Take care not to drop or damage the radar. 116. GX/GXL/Altitude only. Retain the 2x 10mm hex bolts.	
TOOLS REQUIRED 10mm socket/spanner Phillips head screwdriver	
FASTENERS 2x 10mm hex bolts 1x Phillips head screw	

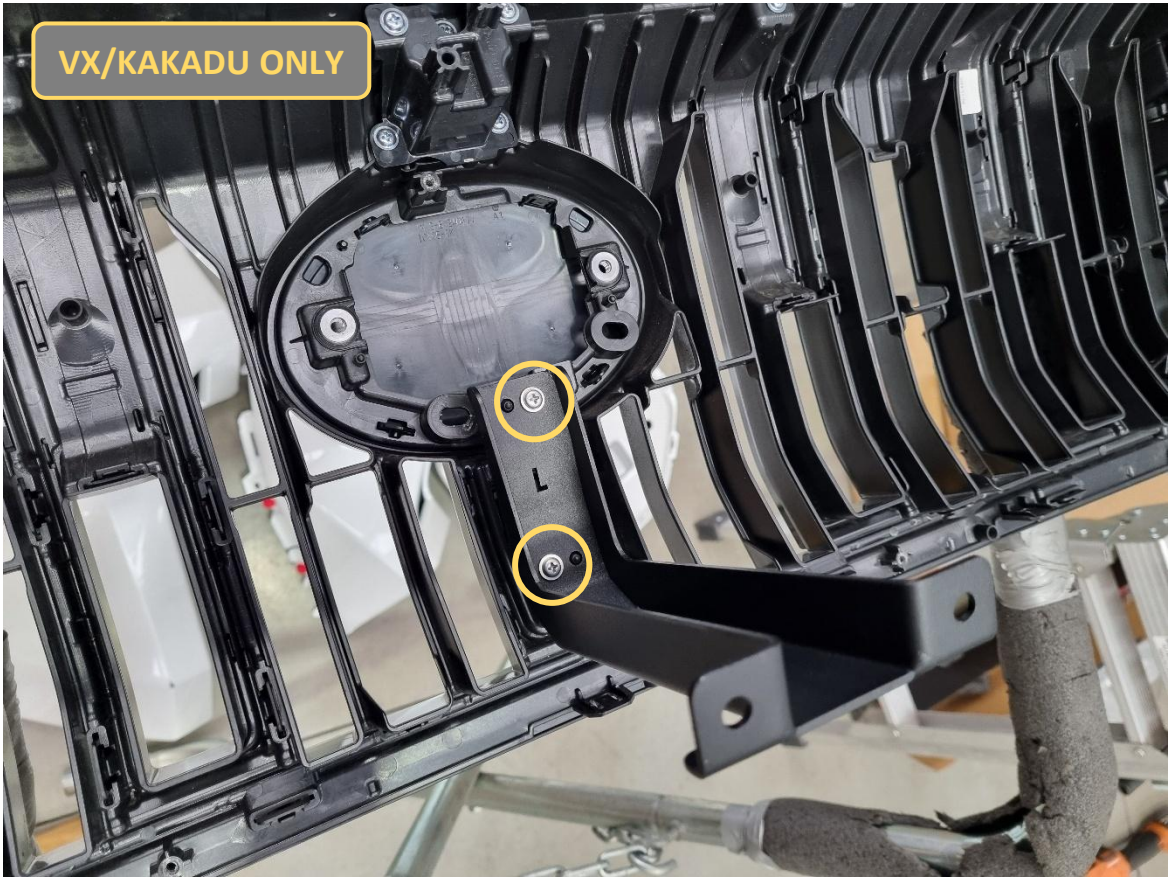
117. Remove 2x Phillips head screws holding the camera to the grille (VX/Kakadu) or bumper (GX/GXL/Altitude). 118. Set the camera aside in a safe place. Take care not to drop or damage the camera. 119. VX/Kakadu only. Retain the 2x Phillips head screws.	TOOLS REQUIRED Phillips head screwdriver
	FASTENERS 2x Phillips head screws

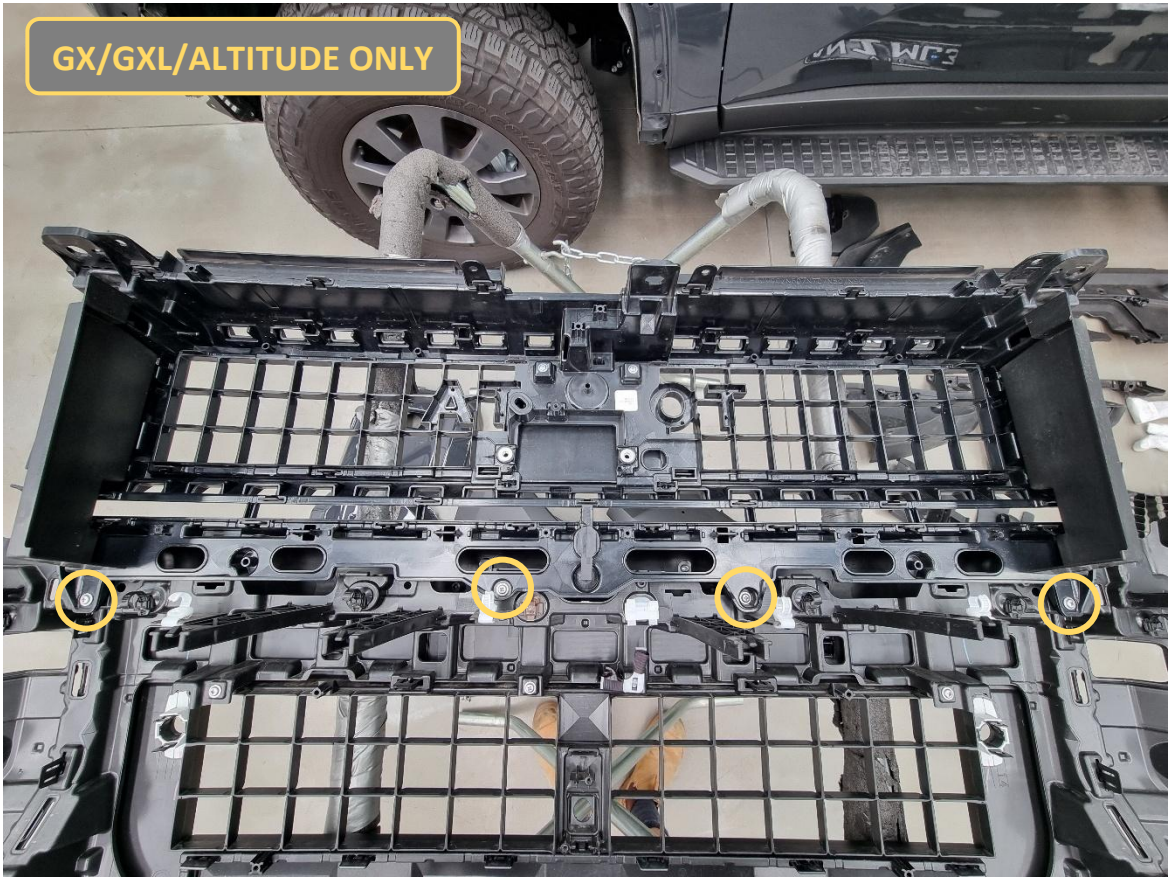
LH PASSENGER SIDE SHOWN VX/KAKADU ONLY 	
120. There are two different grille variants. For VX/Kakadu, refer to the steps below. GX/GXL/Altitude skip to Step 127. 121. VX/Kakadu only. Remove 3x Phillips head screws holding each plastic grille side retainer. Retain screws for re-assembly.	TOOLS REQUIRED Phillips head screwdriver
	FASTENERS 6x Phillips head screws Retain for re-assembly

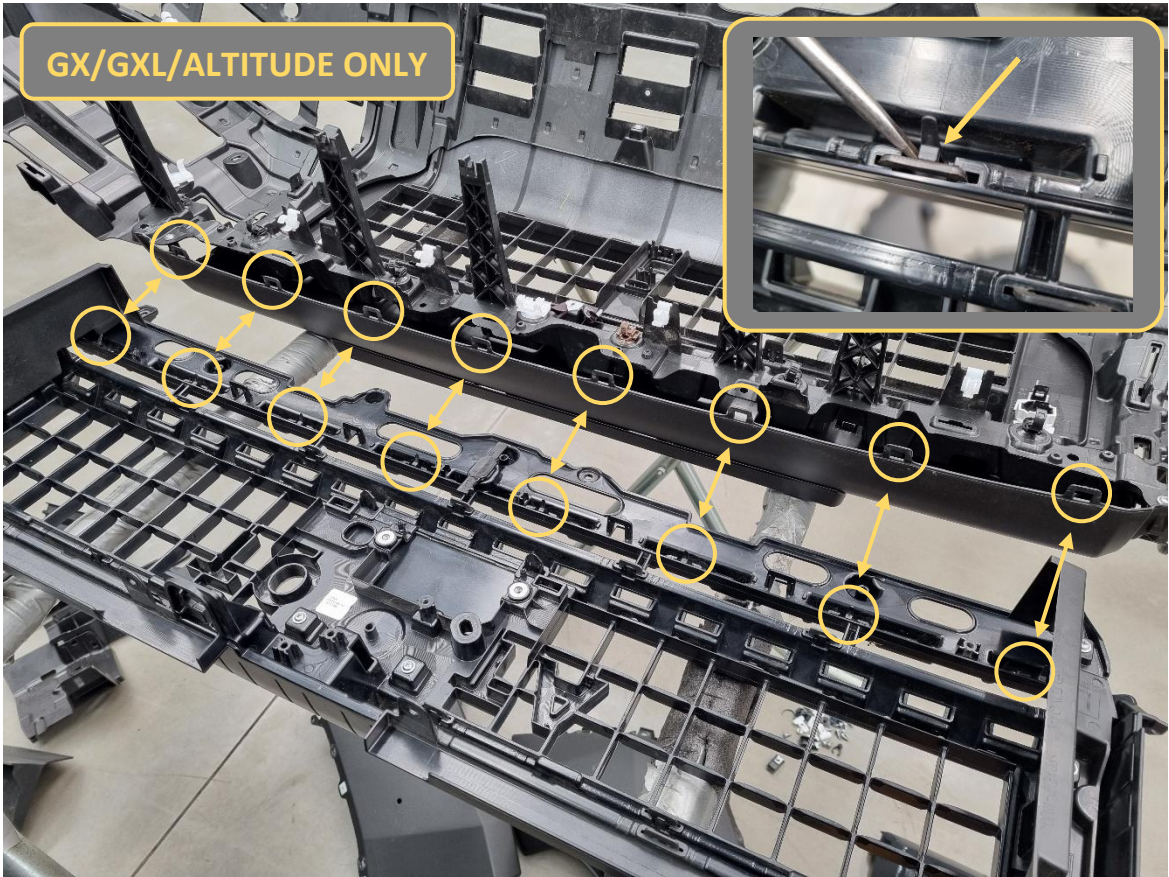
	
122. VX/Kakadu only. Remove 4x Phillips head screws holding the bottom of the grille to the bumper.	TOOLS REQUIRED Phillips head screwdriver
	FASTENERS 4x Phillips head screws

	
123. VX/Kakadu only. Using a flat blade screwdriver or trim tool, release 7x tabs/clips holding the grille to the bumper. There are 2x hidden tabs (see inset photo). These can be accessed after the main 5x are released and the grille is separated apart slightly.	TOOLS REQUIRED Flat blade screwdriver or Trim tool
	FASTENERS

	
124. VX/Kakadu only. Fully separate the grille from the bumper. The bumper may now be discarded. 125. VX/Kakadu only. Re-fit both grille side retainers back to the grille with Phillips head screws.	TOOLS REQUIRED Phillips head screwdriver
	FASTENERS 6x Phillips head screws

	
126. VX/Kakadu only. Fit the B-1469 grille support to the back of the grille, where the camera was mounted. Re-use the 2x Phillips head screws from the camera. The VX/Kakadu ‘luxury’ grille support can be identified with the ‘L’ cutout in the bracket.	TOOLS REQUIRED Phillips head screwdriver
	FASTENERS 2x Phillips head screws

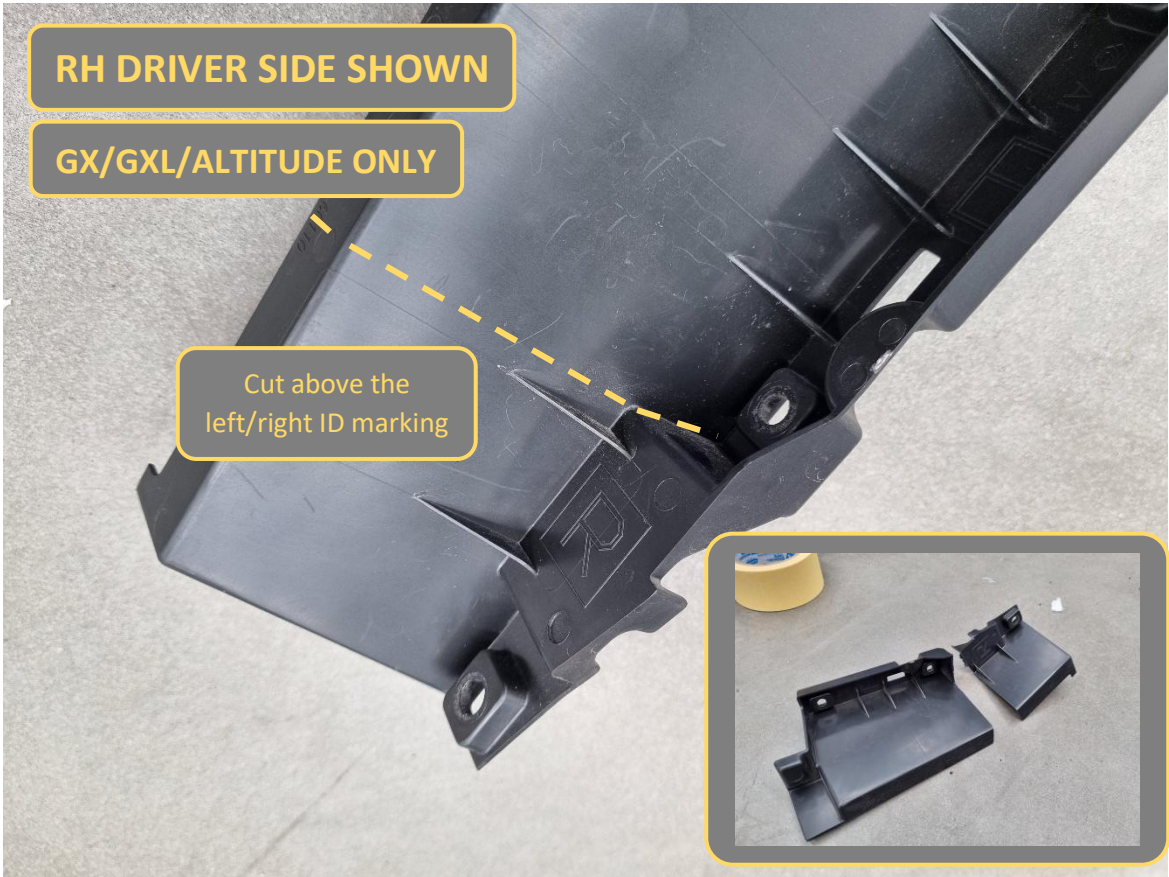
	
The following steps apply to GX/GXL/Altitude grille removal only. VX/Kakadu skip to Step 139. 127. GX/GXL/Altitude only. Remove 4x Phillips head screws holding the grille to the bumper.	TOOLS REQUIRED Phillips head screwdriver
	FASTENERS 4x Phillips head screws

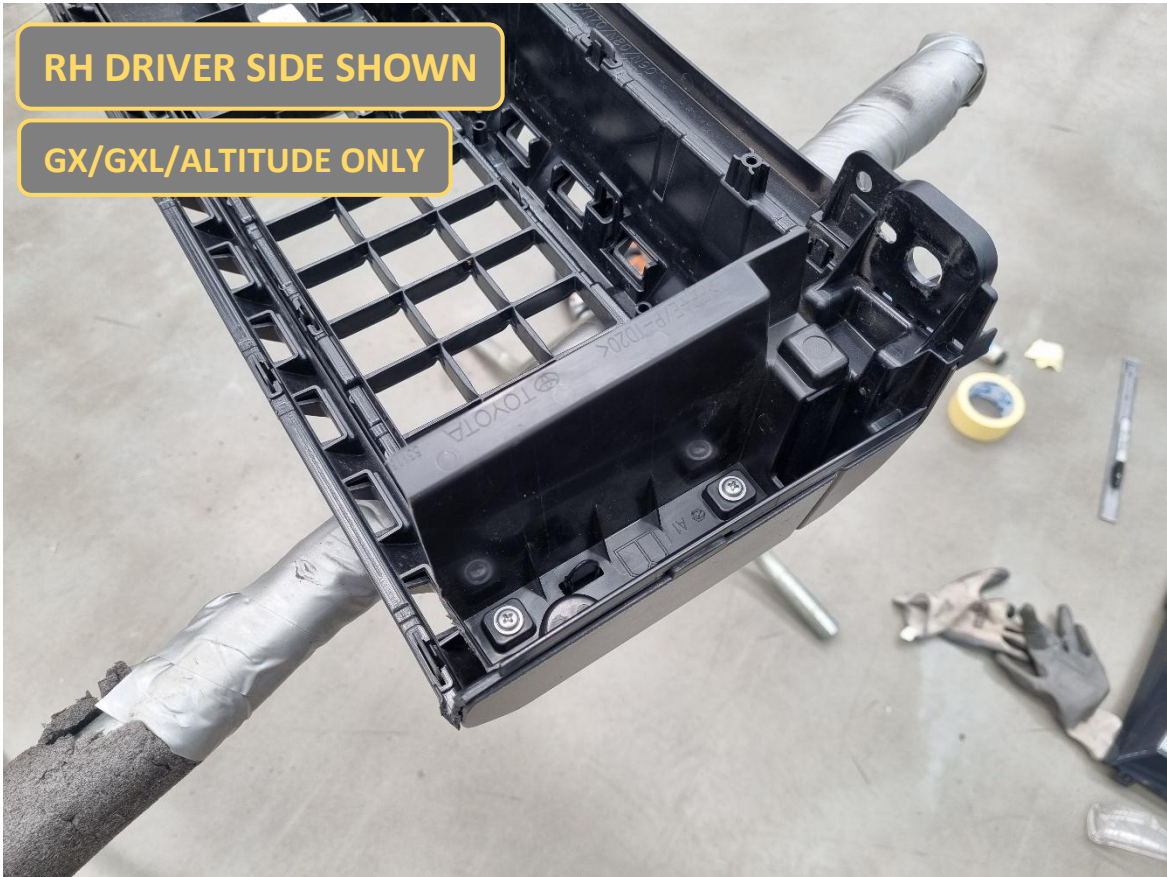
		
128. GX/GXL/Altitude only. Using a flat blade screwdriver or trim tool, release 8x tabs/clips holding the grille to the bumper. Fully separate the grille from the bumper. The bumper may now be discarded.		TOOLS REQUIRED Flat blade screwdriver or Trim tool
		FASTENERS

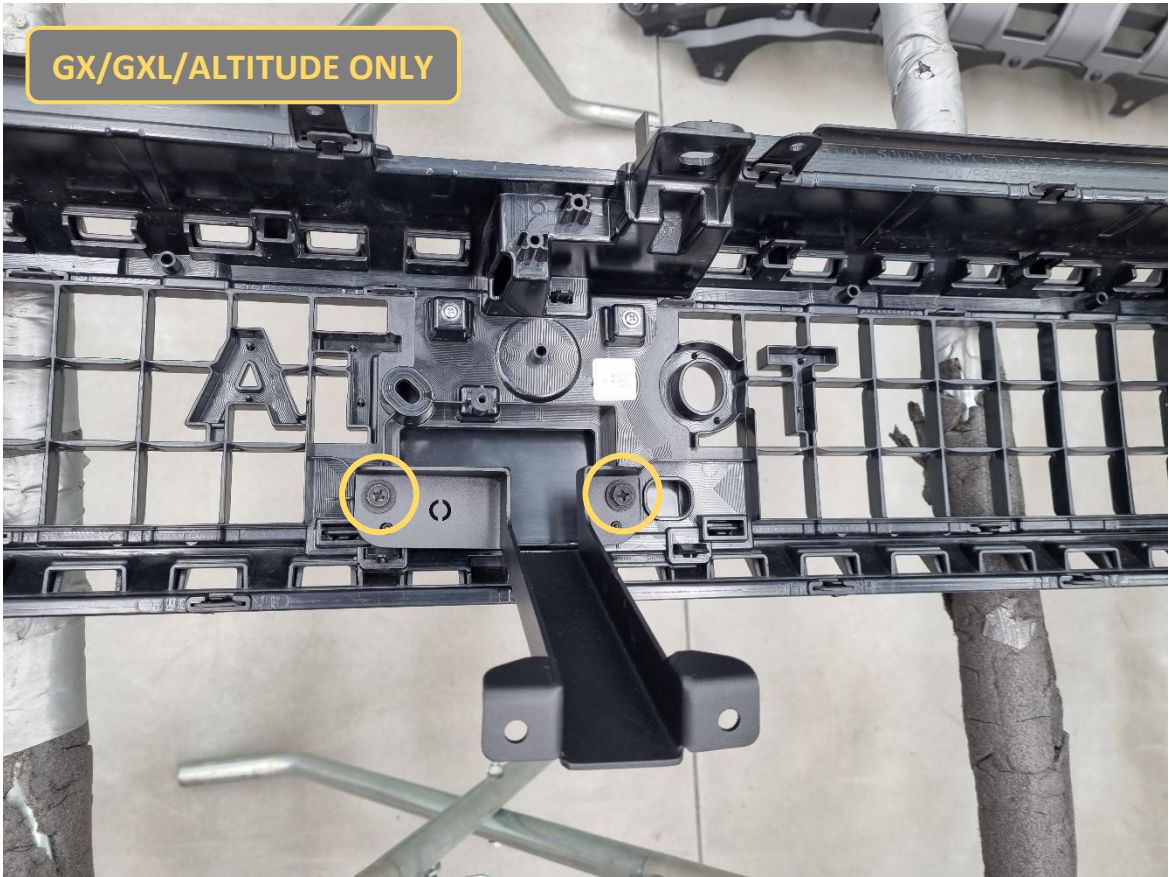
LH PASSENGER SIDE SHOWN GX/GXL/ALTITUDE ONLY 	
129. GX/GXL/Altitude. Remove 3x Phillips head screws holding each plastic grille side retainer. Retain screws for re-assembly.	TOOLS REQUIRED Phillips head screwdriver
	FASTENERS 6x Phillips head screws Retain for re-assembly

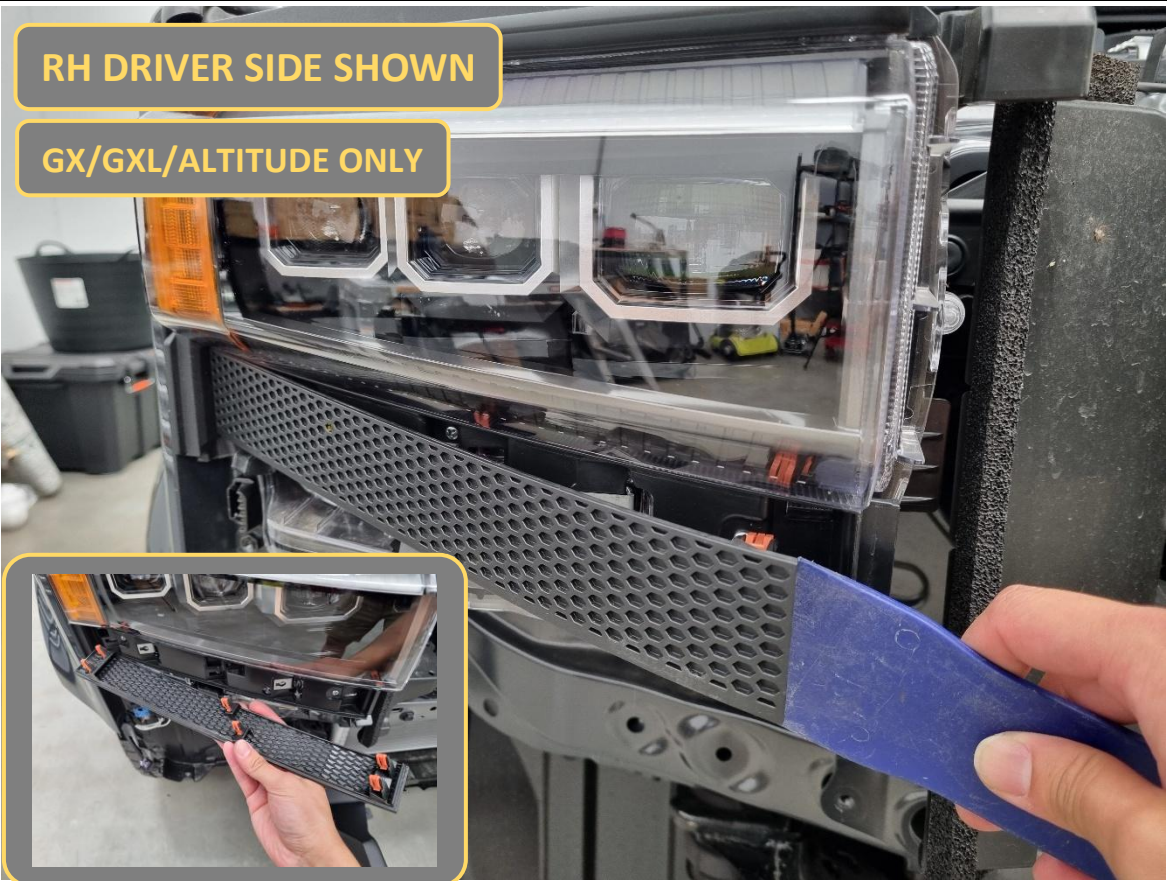
	
130. GX/GXL/Altitude only. The lower portion of the grille needs to be cut off. Mark out a cut line as shown. It will be flush with the bottom of the main grille section.	TOOLS REQUIRED Masking tape Marker pen
	FASTENERS

	
131. GX/GXL/Altitude only. Using an air hacksaw or similar cutting tool, cut the grille. 132. GX/GXL/Altitude only. Use a utility knife or similar tool to clean up the cut and remove any burrs.	TOOLS REQUIRED Safety glasses Air Hacksaw or Oscillating Multi Tool or Angle Grinder or Jigsaw Utility knife
	FASTENERS

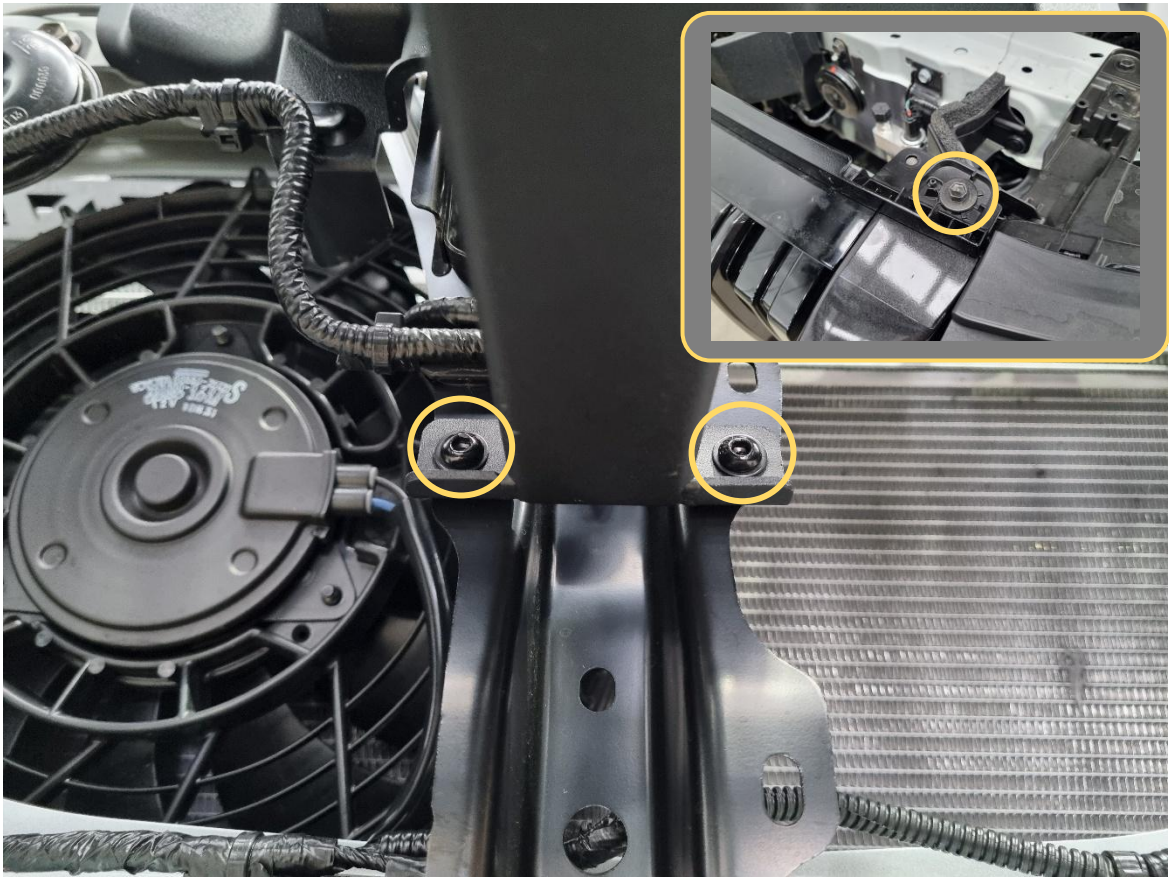
	
133. GX/GXL/Altitude only. The plastic grille side retainers also need to be cut to match the grille cut. 134. GX/GXL/Altitude only. Mark out a line as shown and cut using an air hacksaw or similar cutting tool. Discard the lower halves. 135. GX/GXL/Altitude only. Use a utility knife or similar tool to clean up the cut and remove any burrs.	TOOLS REQUIRED Safety glasses Air Hacksaw or Oscillating Multi Tool or Angle Grinder or Jigsaw Utility knife
	FASTENERS

	
136. GX/GXL/Altitude only. Re-fit the plastic grille side retainers to the grille using 2x Phillips head screws, each.	TOOLS REQUIRED Phillips head screwdriver
	FASTENERS 4x Phillips head screws

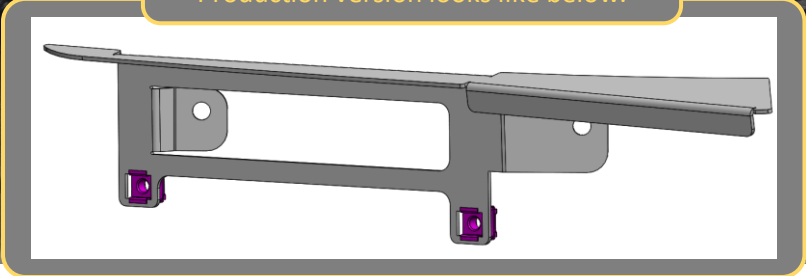
	
137. GX/GXL/Altitude only. Fit the B-1452 grille support to the back of the grille, where the radar was mounted. Re-use the 2x 10mm hex bolts from the radar. The GX/GXL/Altitude ‘offroad’ grille support can be identified with the ‘O’ cutout in the bracket.	TOOLS REQUIRED 10mm socket/spanner
	FASTENERS 2x 10mm hex bolt

RH DRIVER SIDE SHOWN GX/GXL/ALTITUDE ONLY 	
138. GX/GXL/Altitude only. Using a trim tool to assist, unclip the plastic under headlight trims, starting from the inner corner.	TOOLS REQUIRED Trim tool
	FASTENERS

	
139. Re-fit the grille back onto the vehicle. 140. VX/Kakadu only. Clip back in the under headlight trims removed earlier.	TOOLS REQUIRED
	FASTENERS

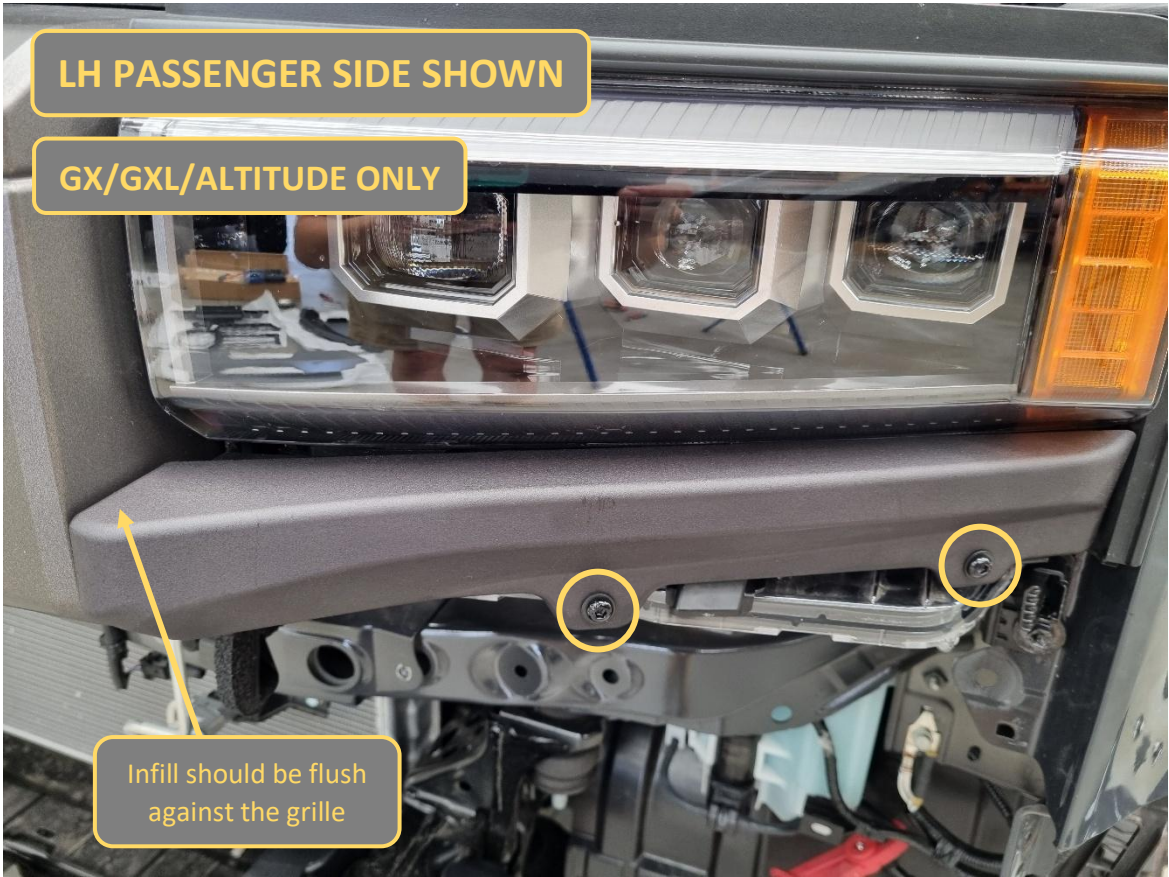
	
141. Re-secure the top of the grille using the original 3x 10mm hex bolts. 142. Secure the grille support to the body vertical cross member using 2x M6x16 black button head bolts, black washers and flange nuts.	TOOLS REQUIRED 10mm socket/spanner 4mm hex/Allen key
	FASTENERS 3x 10mm hex bolt (retained) 2x M6x16 black button head bolt 2x M6 black flat washer 2x M6 flange nut

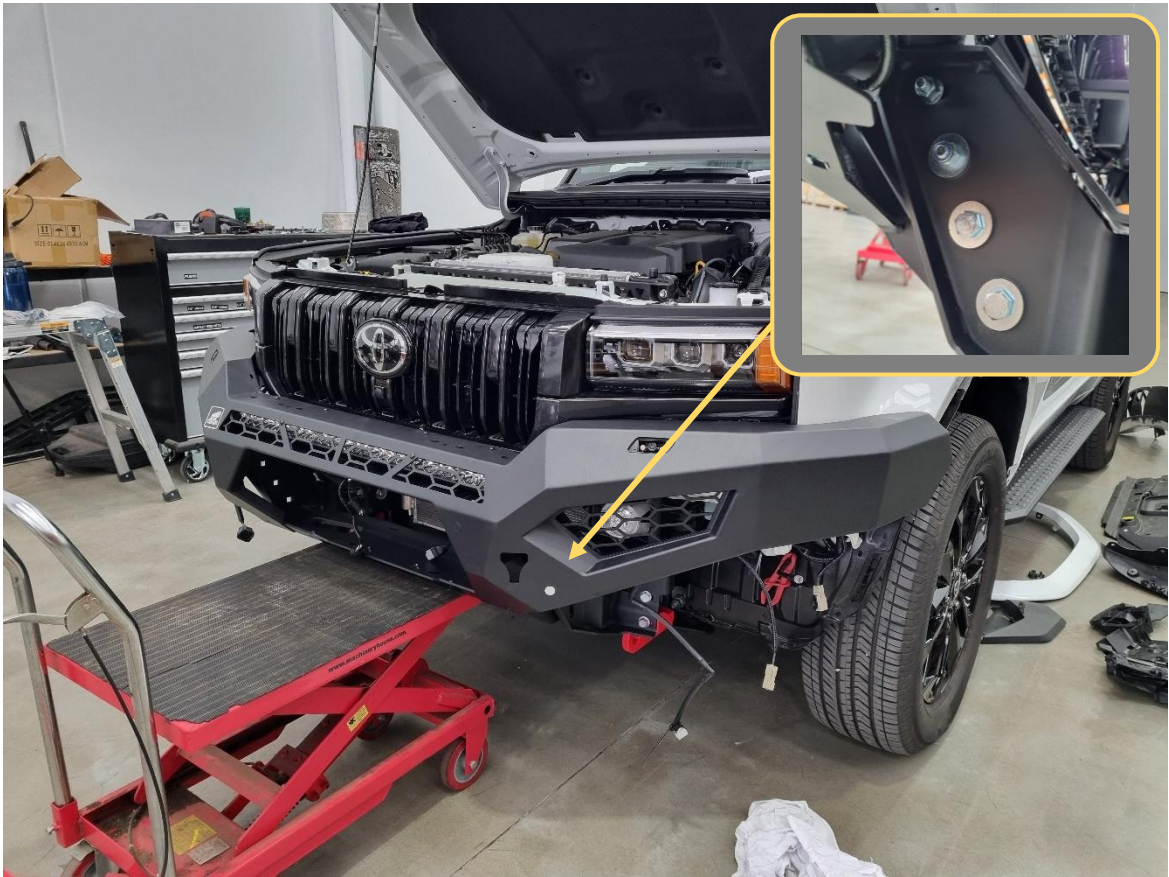
	
143. VX/Kakadu only. Using a deburring tool to remove the small notches in the camera opening on the grille. 144. VX/Kakadu only. Fit a supplied 16mm plastic blanking plug into the camera hole.	TOOLS REQUIRED Deburring tool
	FASTENERS 16mm plastic plug

RH DRIVER SIDE SHOWN GX/GXL/ALTITUDE ONLY Prototype bracket shown in main image. Production version looks like below. 	
145. GX/GXL/Altitude only. Fit 2x cage nuts into the rectangle slots in each of the B-1468 headlight infill mounts (see inset photo). Use the cage nuts suited for thinner 2mm sheet metal. 146. GX/GXL/Altitude only. Fit the B-1468 infill mounts under the headlights and secure each one with 2x M6x16 black button head bolts and black washers.	TOOLS REQUIRED Flat blade screwdriver 4mm hex/Allen key
	FASTENERS 4x M6 cage nut (to suit 2mm sheet metal) 4x M6x16 black button head bolt 4x M6 black flat washer

	
147. GX/GXL/Altitude only. Clean the mounting surfaces of the supplied F-0034 headlight infills and the corresponding mounting surfaces of the B-1468 infill mounts with isopropyl alcohol or similar and let it dry. 148. GX/GXL/Altitude only. Use the remaining 3M Primer 94 ampule and apply primer to all the cleaned surfaces, both on the infills and mounts.	TOOLS REQUIRED Isopropyl alcohol Rag
	FASTENERS 1x 3M Primer 94

	
Allow at least 5 minutes for the primer to chemically bond to the surfaces before applying tape. 149. GX/GXL/Altitude only. Apply supplied 3M VHB tape from the Prado 250 tape kit to the headlight infills as shown.	TOOLS REQUIRED
	FASTENERS

	
150. GX/GXL/Altitude only. Remove the backing film off the tape on the headlight infills (use utility knife to assist), then fit to their corresponding positions under the headlights, on the infill mounts. 151. GX/GXL/Altitude only. Secure each infill to the cage nuts in the infill mount with 2x M6x16 black button head bolts and black washers.	TOOLS REQUIRED Utility knife 4mm hex/Allen key
	FASTENERS 4x M6x16 black button head bolt 4x M6 black flat washer

	
152. The bull bar is now finally ready to go onto the vehicle. With assistance, either from another person or a lifting trolley, lift the bar onto the mounts on the vehicle. 153. Secure the bar to the mounts with 8x M12x30 bolts, heavy-duty washers and Nyloc + flange nuts. Leave finger tight at this stage. Note: Use a washer on both bolt and nut side for the Nyloc nut. 1x Nyloc required per side of the bar. 1x washer on the bolt side is all that is required with flange nuts.	TOOLS REQUIRED Lifting trolley
	FASTENERS 8x M12x30 hex bolt 10x M12 heavy duty washer 2x M12 Nyloc nut 6x M12 flange nut



154. With assistance, from another person, align the bar with the edges of the vehicle. Adjust such that the clearances are neat, and the bar is symmetric left/right on the vehicle.

Front view: The bar should sit horizontally level. On GX/GXL/Altitude, the top edge of the grille infill should sit in line with the bottom edge of the grille. On VX/Kakadu, the top face of the bar should sit in line with the bottom lip of the grille.

Side view: The end of the bar wing should be in line with the wheel arch liner. (Ensure liner is pressed back up against the body, since the clips have been removed)

Top view: There should be around 15mm clearance between the bar and the grille, headlight infills and quarter panel.

155. Once happy with alignment, tighten all 8x M12 bolts.

TOOLS REQUIRED

Lifting Trolley
18/19mm socket/spanner

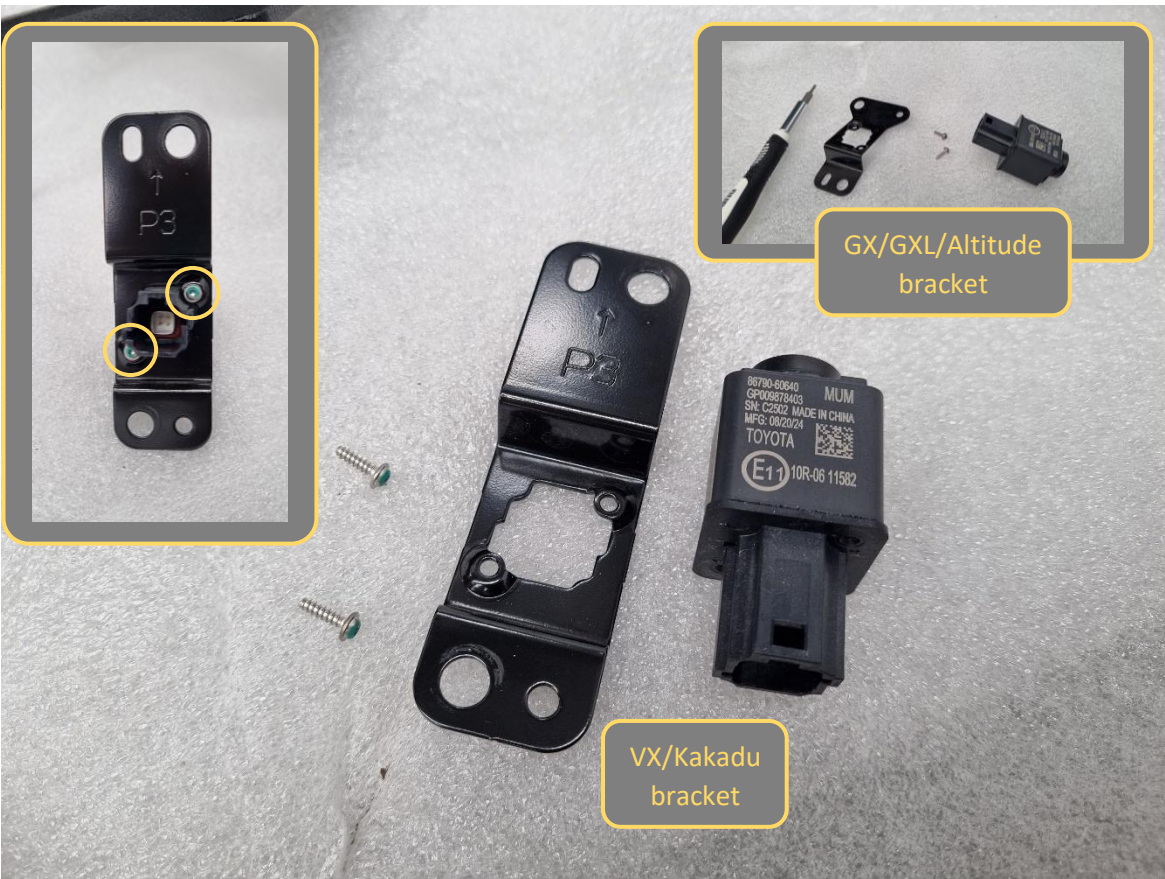
FASTENERS

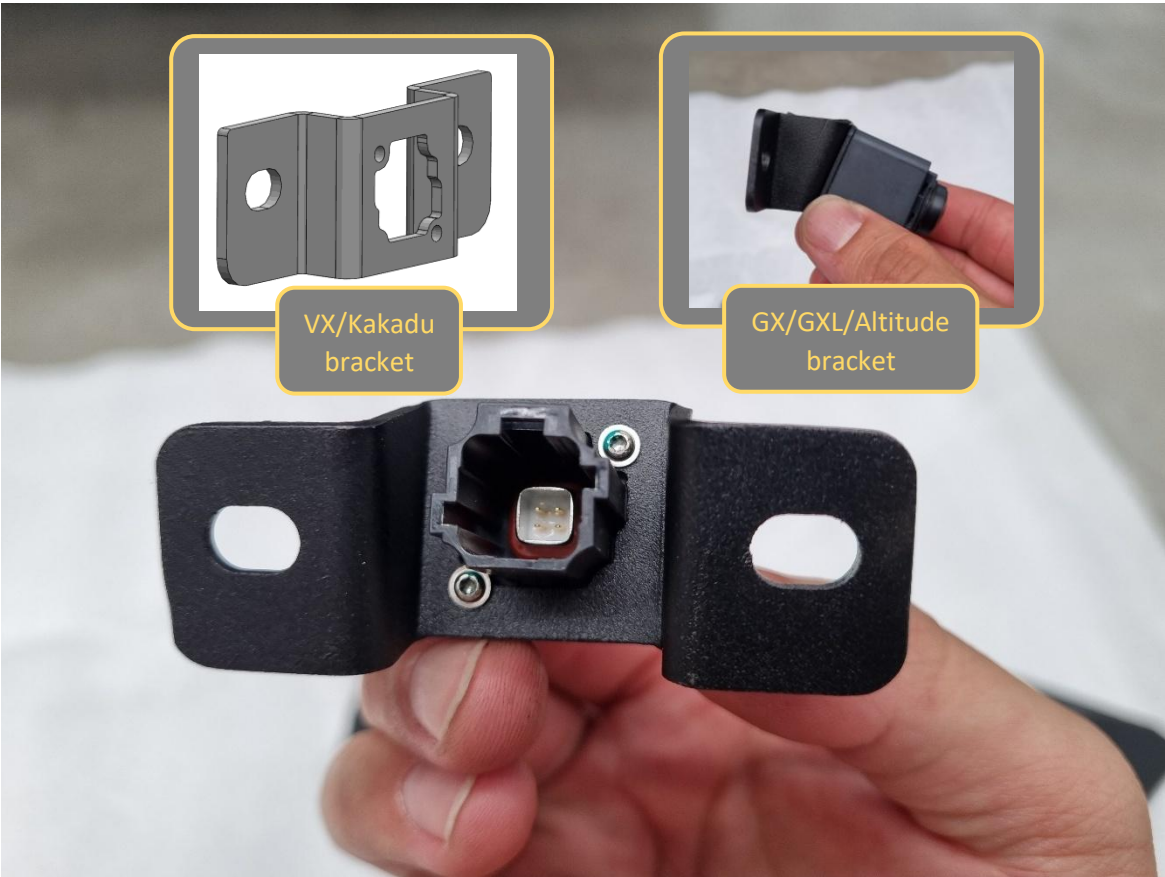
LH PASSENGER SIDE SHOWN 	
156. Re-connect the bumper wiring harnesses on both LH and RH sides, as well as the headlight washer hose. 157. On the LH passenger side, unclip the harness off the body as shown in the inset photo and reposition the harness further inboard. 158. Neatly cable tie all the harnesses on both sides so that they are tucked inboard and inside the bull bar. Ensure there is a little bit of slack in the harness to allow for movement over bumps.	TOOLS REQUIRED Flat blade screwdriver or Trim tool Cable ties (not supplied) Side cutters
	FASTENERS

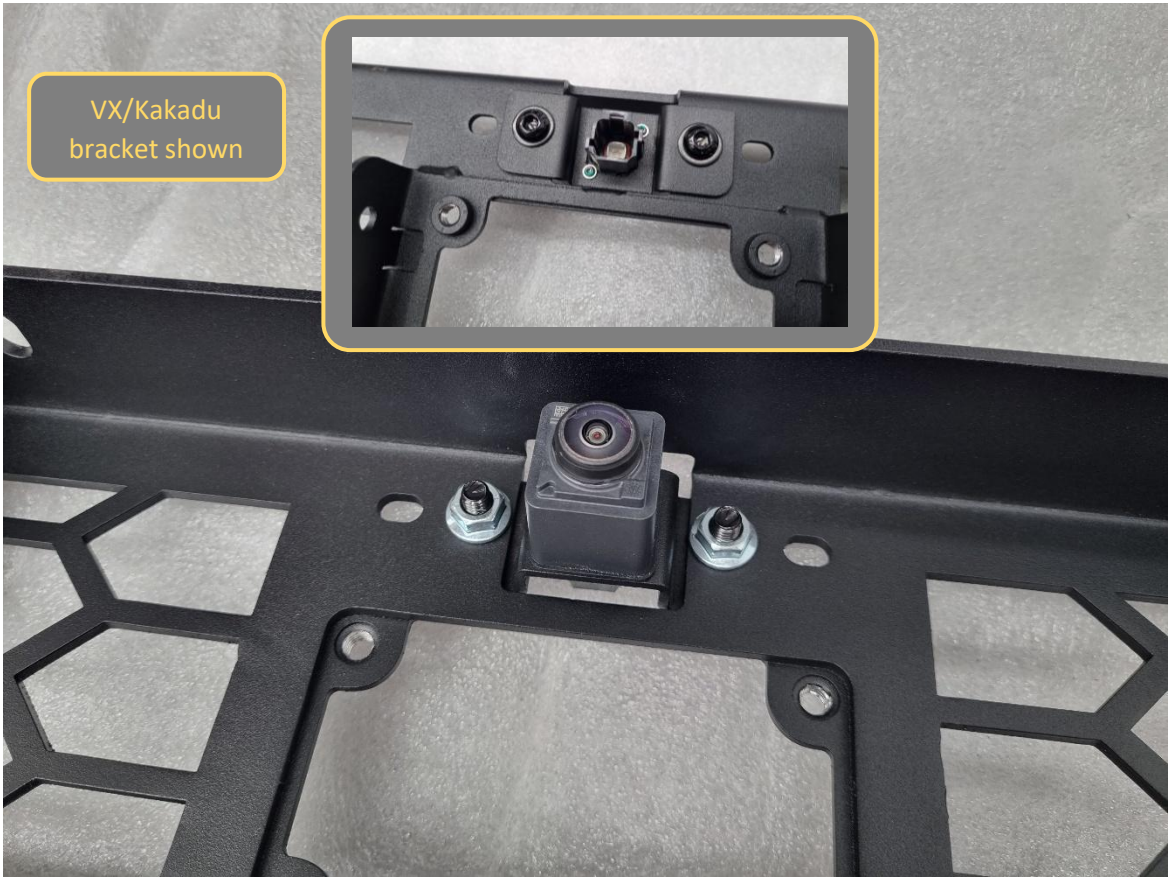


159. If fitting a winch, do so now. Ensure the camera and radar harnesses do not get squished. This bar is designed to fit most low mount winches, in foot down configuration. WARN ZEON 12 is the largest winch confirmed to fit. Ensure clutch handle will be accessible through opening in front mesh panel. Refer to winch instructions regarding changing clutch handle location.	TOOLS REQUIRED Refer to instructions supplied by winch
	FASTENERS Supplied with winch

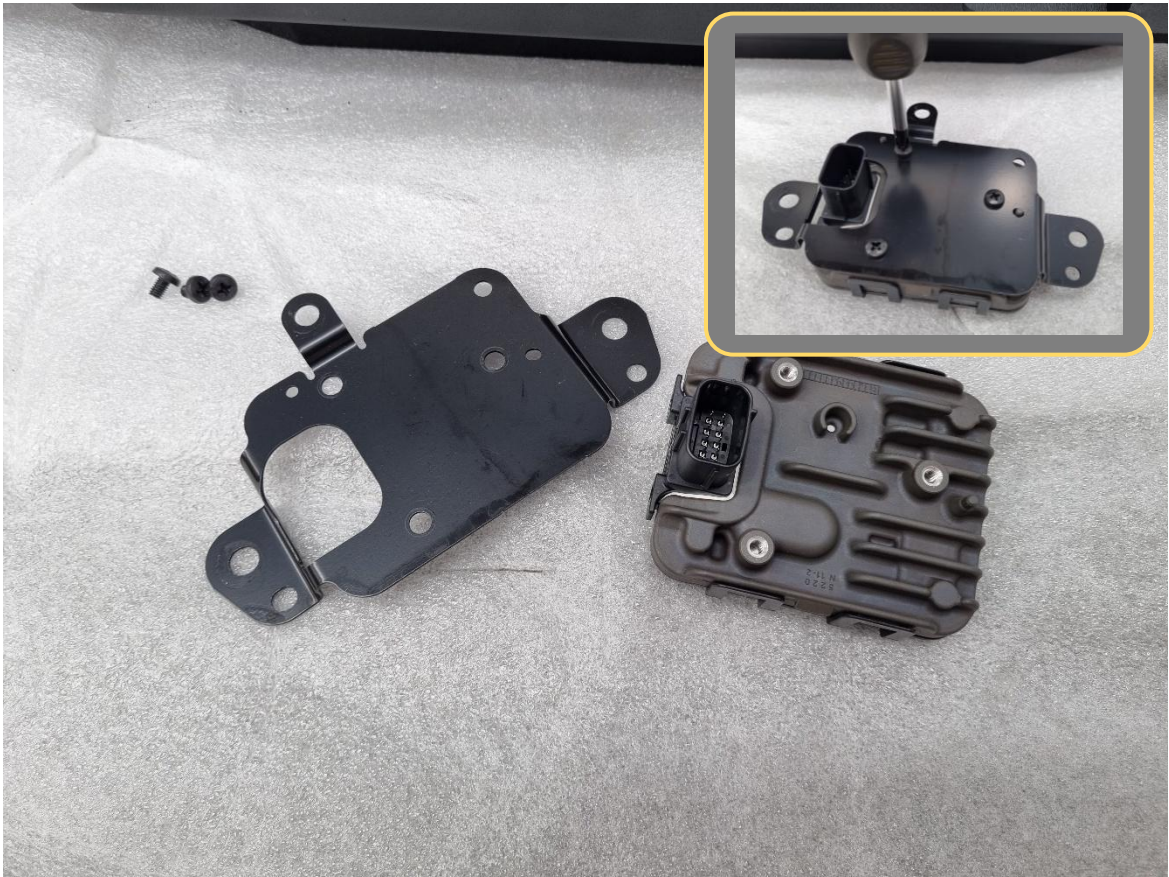
		
160. If fitting a winch, fit the hawse fairlead to the centre mesh now using M10 or 3/8" fasteners supplied with the winch. This bar is only compatible with hawse type fairleads.	TOOLS REQUIRED Refer to instructions supplied by winch	
	FASTENERS Supplied with winch	

	
161. Remove the 2x T6 Torx screws holding the camera to its mounting bracket. Retain the screws. 162. Take note of the camera orientation before doing so, the labels should be facing up.	TOOLS REQUIRED T6 Torx bit
	FASTENERS 2x T6 Torx screws Retain for re-assembly

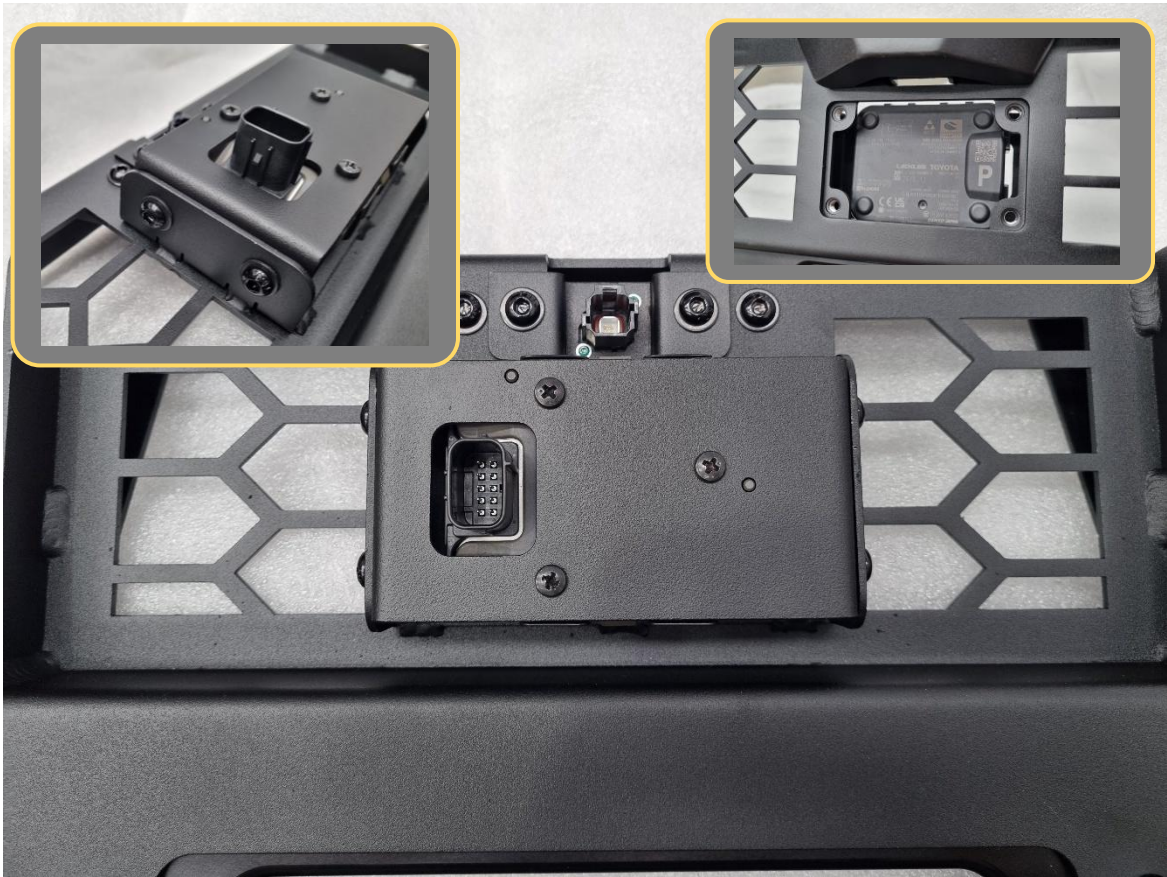
	
163. Fit the camera to the supplied camera bracket and secure with the same T6 Torx screws. The cutout in the bracket is keyed, so the camera can only be fitted in one way. There are two different brackets supplied depending on vehicle trim level. For VX/Kakadu, use the B-1470 bracket. The camera will face straight forwards to match the original car. For GX/GXL/Altitude, use the B-1449 bracket. The camera will be angling downwards to match the original car.	TOOLS REQUIRED T6 Torx bit
	FASTENERS 2x T6 Torx screws

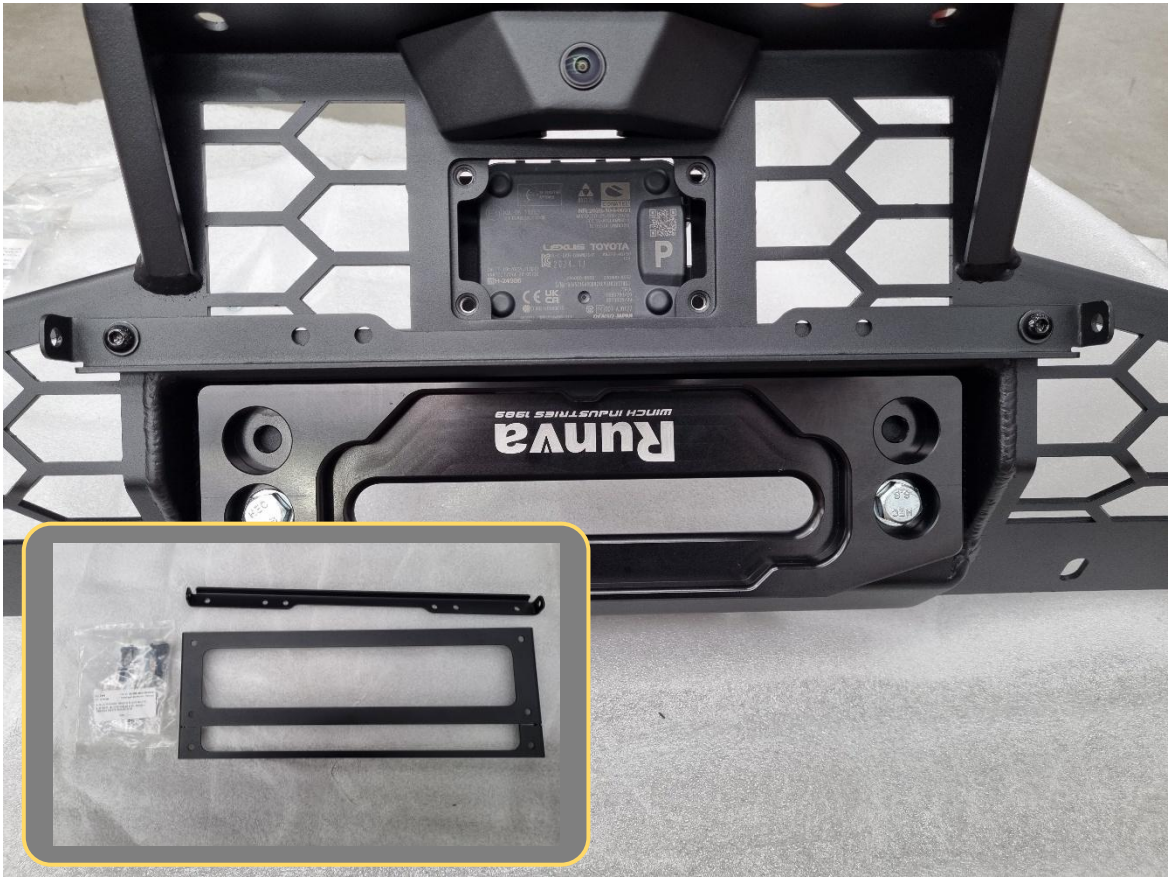
	
164. Fit the camera and bracket from the back of the centre mesh, and secure with 2x M6x16 black button head bolts, black washers and flange nuts.	TOOLS REQUIRED 4mm hex/Allen key
	FASTENERS 2x M6x16 black button head bolt 2x M6 black flat washer 2x M6 flange nut

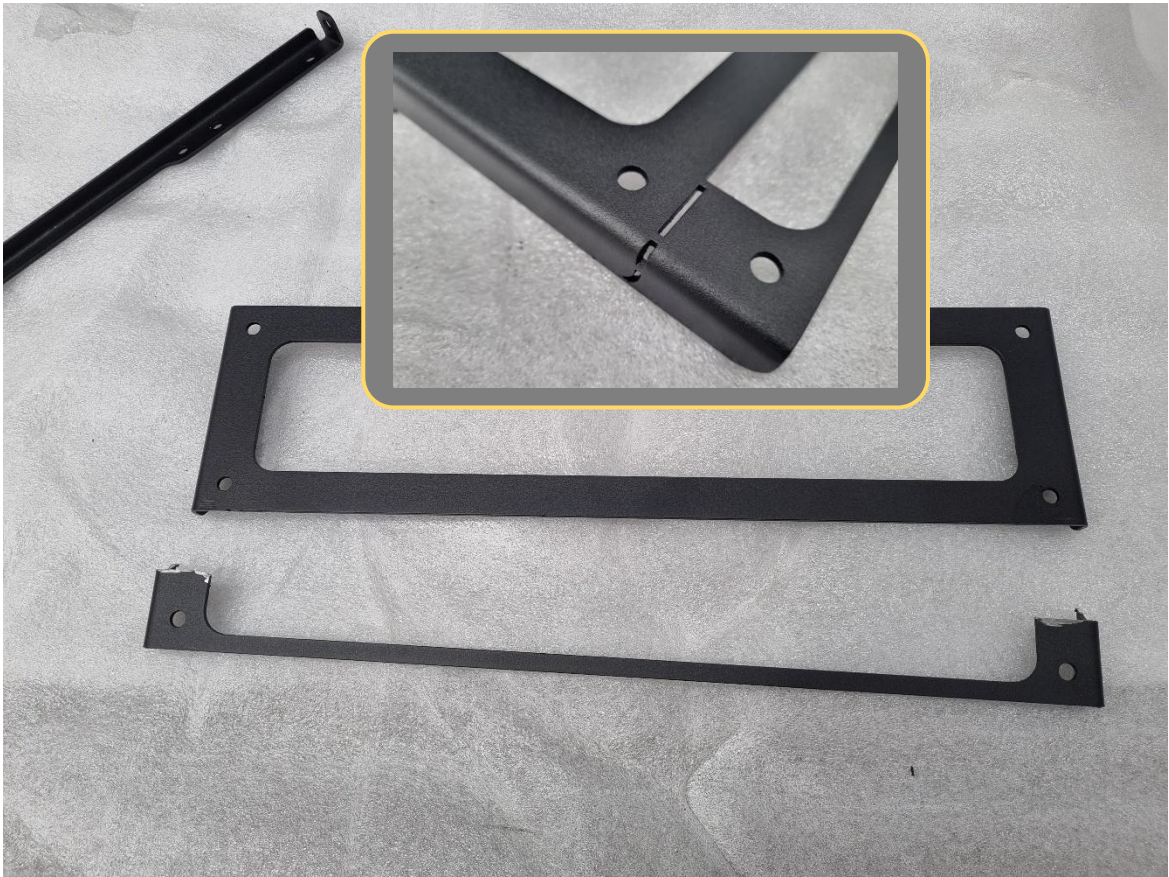
	
165. Fit the supplied camera housing to the outside of the centre mesh and camera, and secure from the back with 2x M6x16 black button head bolts and black washers. There are two different camera housings supplied. Use the B-1471 straight housing with VX/Kakadu vehicles and the B-1450 angled housing with GX/GXL/Altitude vehicles.	TOOLS REQUIRED 4mm hex/Allen key
	FASTENERS 2x M6x16 black button head bolt 2x M6 black flat washer

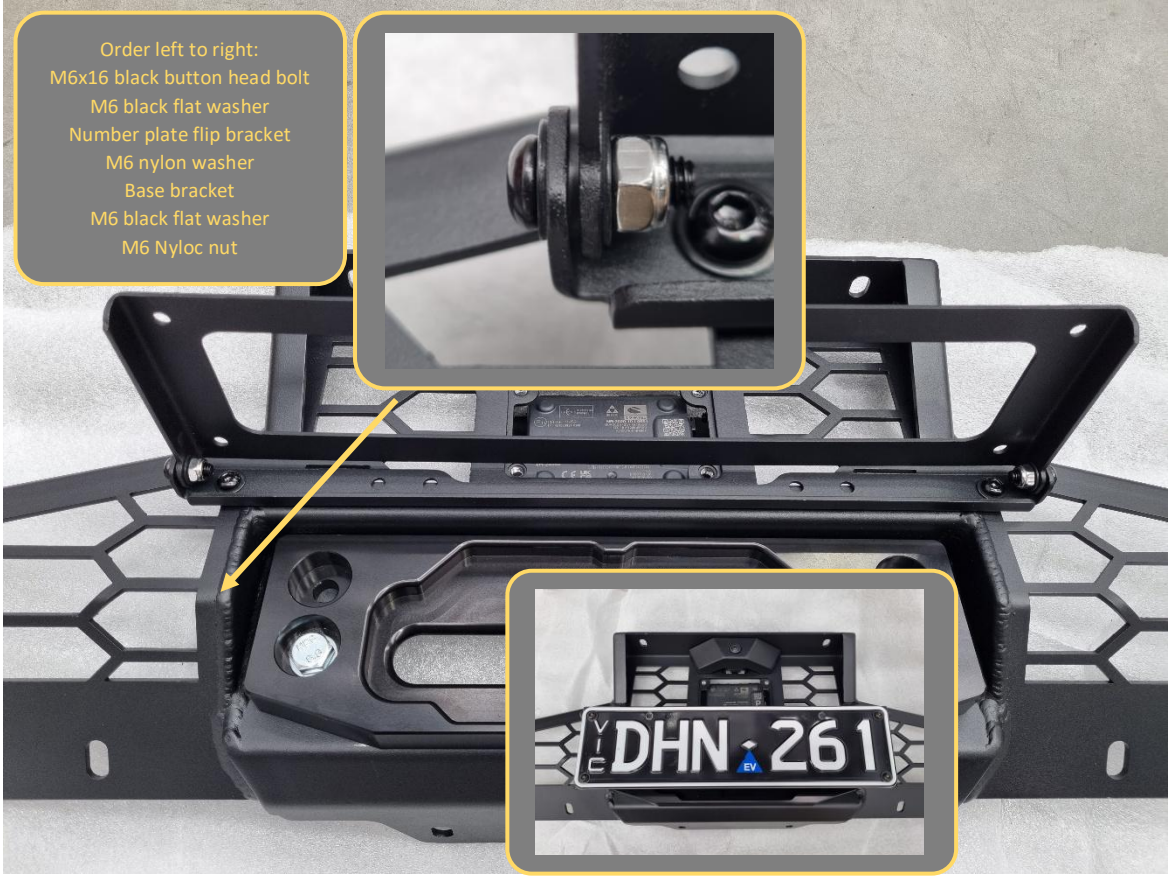
	
166. Separate the radar from its mounting bracket by removing 3x Phillips head screws. Retain the screws. Take care not to strip the heads of the screws as they may be done up very tight.	TOOLS REQUIRED Phillips head screwdriver
	FASTENERS 3x Phillips head screws Retain for re-assembly

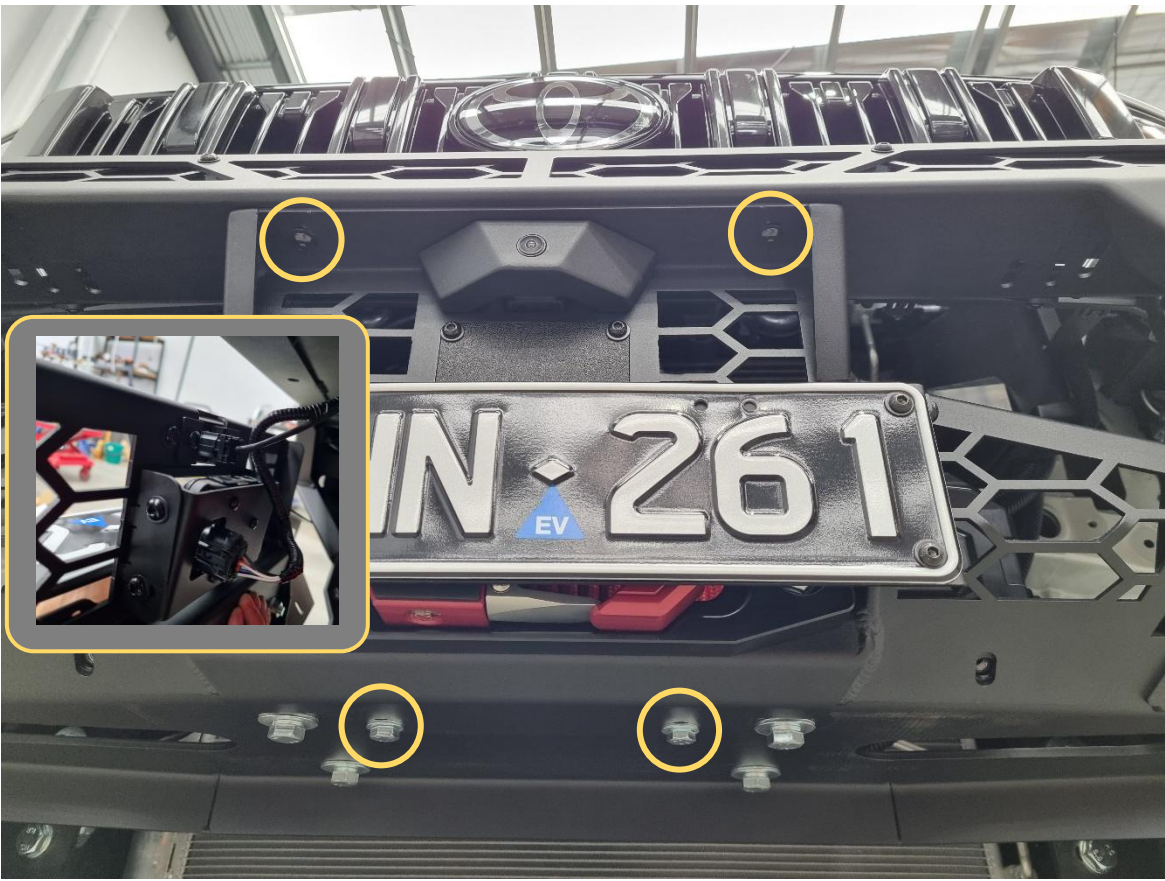
	
167. Re-fit the radar to the supplied B-1447 relocation bracket and secure using the retained screws.	TOOLS REQUIRED Phillips head screwdriver
	FASTENERS 3x Phillips head screws

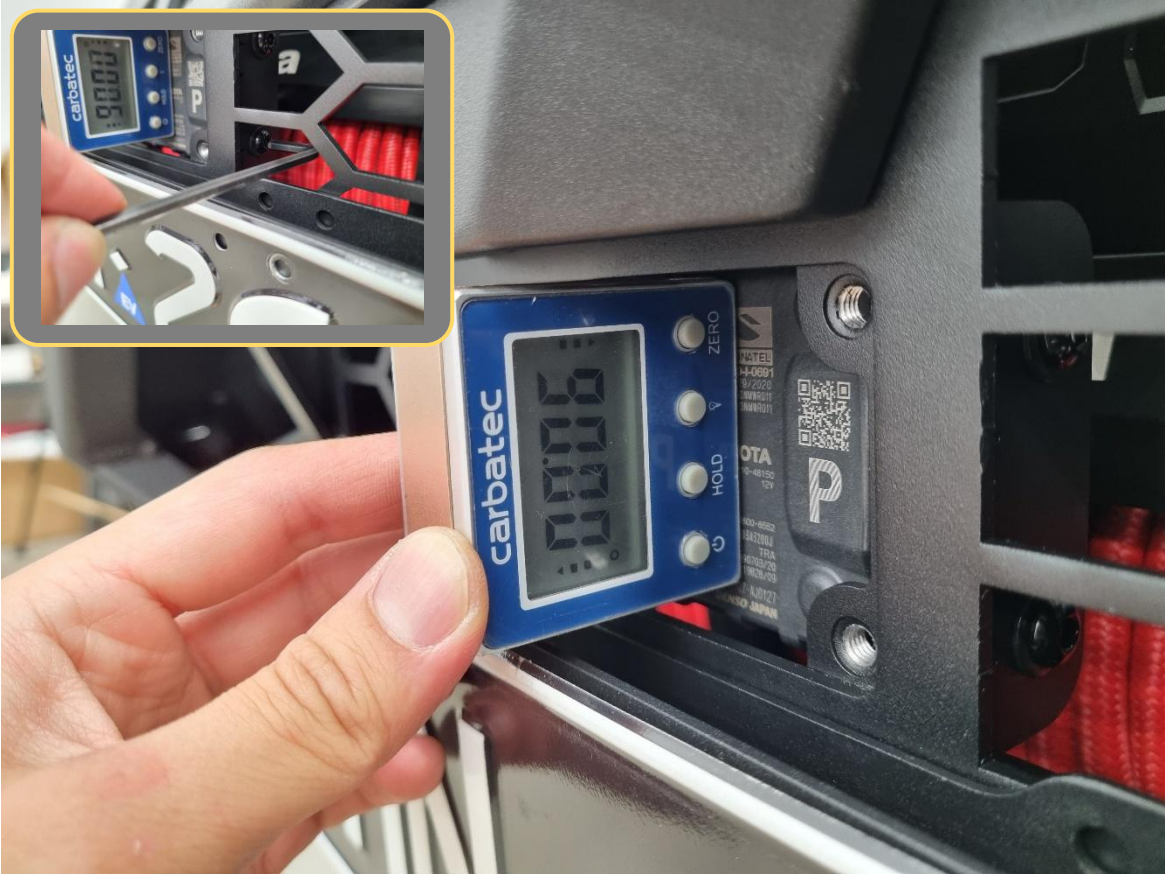
	
168. Fit the radar and relocation bracket to the back of the centre mesh, and loosely secure with 4x M6x16 black button head bolts and black washers. The angle of the radar can be adjusted once it is installed onto the vehicle.	TOOLS REQUIRED
	FASTENERS 4x M6x16 black button head bolt 4x M6 black flat washer

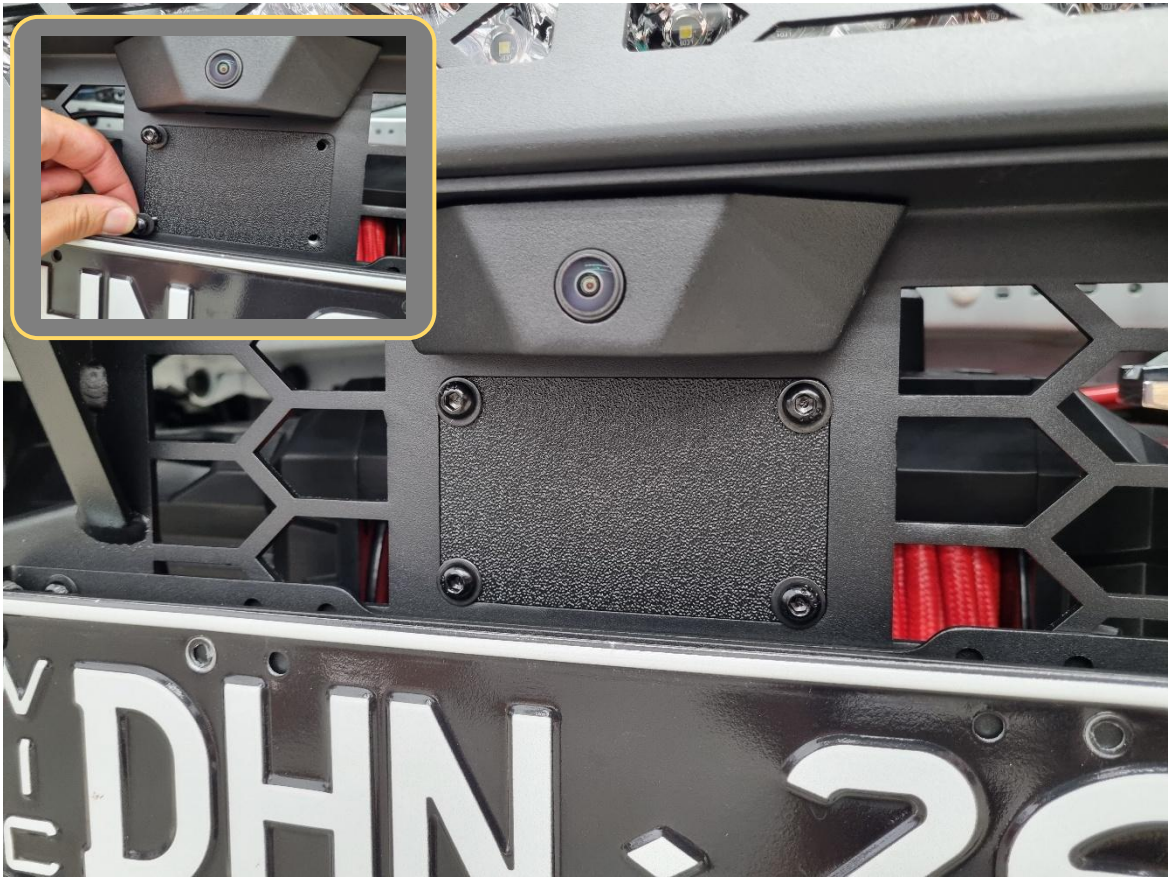
	
Locate the number plate flip brackets and fastener kit. 169. Fit the base bracket to the centre mesh and secure with 2x M6x16 black button head bolts, black washers and flange nuts.	TOOLS REQUIRED 4mm hex/Allen key
	FASTENERS 2x M6x16 black button head bolt 2x M6 black flat washer 2x M6 flange nut

	
The number plate flip bracket is designed to be compatible with both standard and slimline number plates. 170. If fitting to a slimline plate, use an angle grinder to cut the bottom section of the bracket off along the laser cut grooves. 171. Deburr the cut edges, then paint over to prevent rust.	TOOLS REQUIRED Angle grinder Deburring tool Black spray paint
	FASTENERS

	
172. Fit number plate flip bracket to base bracket as shown above. Tighten bolts so that flip bracket can be moved by hand with some friction resistance. 173. Attach number plate to flip bracket using 4x M6x12 black button head bolts, black washers and flange nuts.	TOOLS REQUIRED 4mm hex/Allen key 10mm spanner
	FASTENERS 4x M6x12 black button head bolt 2x M6x16 black button head bolt 8x M6 black flat washer 4x M6 flange nut 2x M6 nylon washer 2x M6 Nyloc nut

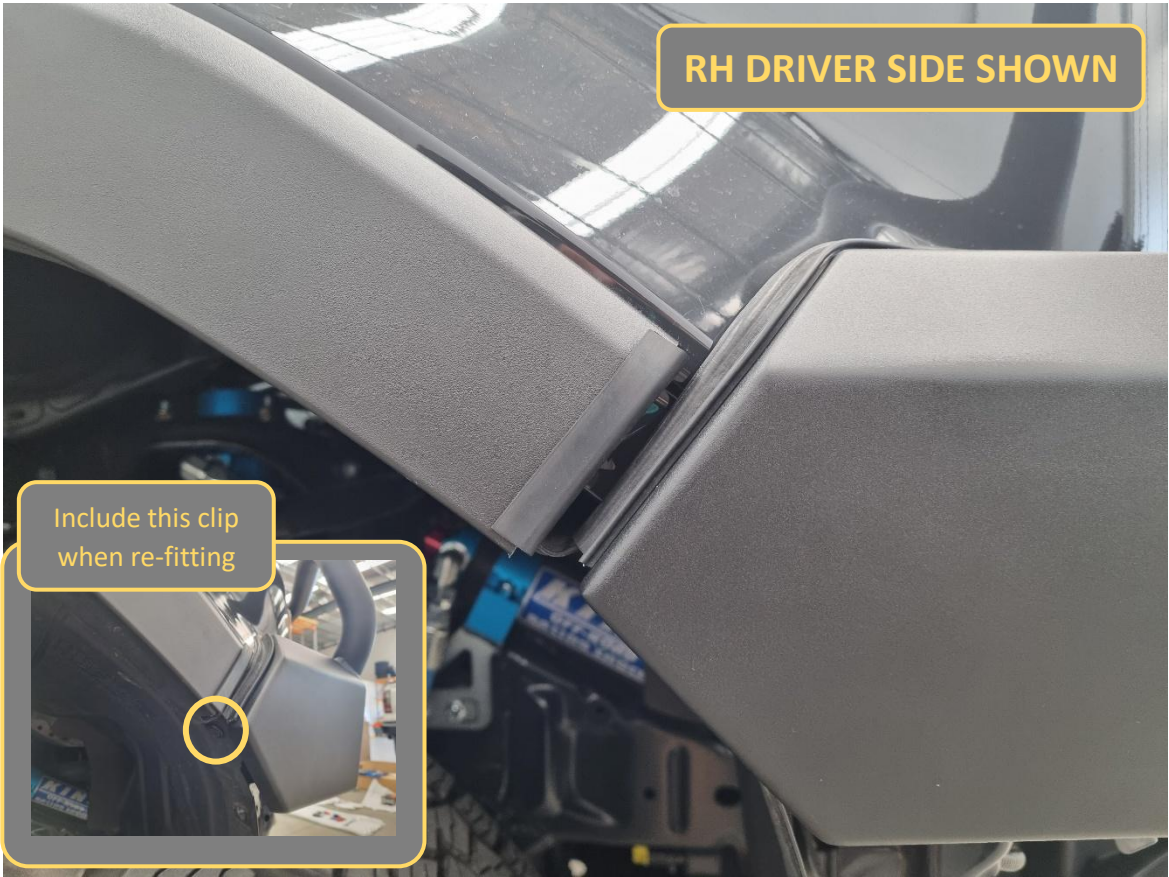
	
174. Present the centre mesh up to the centre opening of the bar. If a winch is fitted, feed the winch rope through the hawse fairlead and fit the winch hook. 175. Connect the radar and camera to the bumper harness. 176. Secure the centre mesh to the bar using 2x M8x16 black button head bolts + black washers (top), 2x M8x20 hex head bolts + heavy duty washers (bottom).	TOOLS REQUIRED 13mm socket/spanner 5mm hex/Allen key
	FASTENERS 2x M8x16 black button head 2x M8 black flat washer 2x M8x20 hex head 2x M8 heavy duty washer

	
177. Hold up a digital angle gauge or other measuring tool to the front face of the radar. 178. Adjust the radar so that the radar is sitting 90deg perpendicular to the ground. 179. Once aligned, tighten the 4x M6 button head bolts holding the radar (see inset photo).	TOOLS REQUIRED Digital angle gauge 4mm hex/Allen key
	FASTENERS

	
180. Fit the supplied plastic N-0017 radar cover panel and secure to the centre mesh with 4x M6x16 black button head bolts and black washers. 181. Once all the parking sensor, radar and camera cables are connected, turn the car on test the operation of the camera and parking sensors.	TOOLS REQUIRED 4mm hex/Allen key
	FASTENERS 4x M6x16 black button head bolt 4x M6 black flat washer

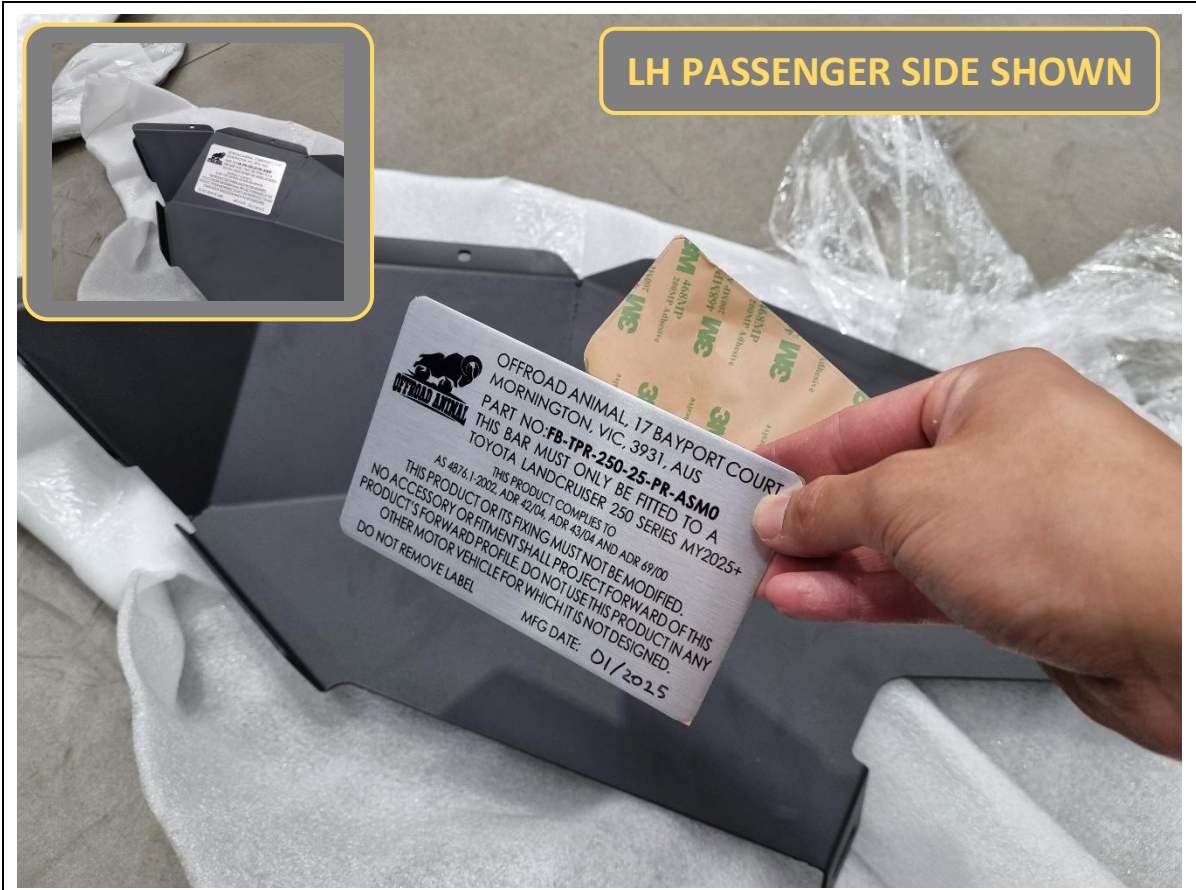
	
182. Pull out the headlight washer nozzles from the bar by hand, and adjust the angle of the 2x nozzles on each unit so that they are aiming at the headlight. The nozzles can be rotated left/right and up/down. 183. Check the correct aim and operation of washer nozzles by turning the vehicle on with main beam headlights on and activating the windscreen washer several times. 184. Once happy with aim, fit the original headlight washer covers back on.	TOOLS REQUIRED
	FASTENERS

LH PASSENGER SIDE SHOWN 	
185. The flares now need to be cut to match the bar. This will be done iteratively. To make it easier to fit/remove the flare, temporarily remove some of the clips on the inside of the flare. 186. Hold the flare up the vehicle, and mark out a conservative cut line matching the position of the end of the bar. 187. Make the first conservative cut of the flare with an air hacksaw or similar cutting tool. Check if the flare can be fitted to the vehicle and will not intersect with the bar. Make further cuts if necessary until it just clears the bar. You do not want a big gap just yet. 188. Temporarily clip the flare onto the vehicle, then mark out a precise cut line that is 20mm away and parallel to the edge of the bar, as shown in the main image above.	TOOLS REQUIRED Masking tape Marker pen Safety glasses Air Hacksaw or Oscillating Multi Tool or Angle Grinder or Jigsaw
	FASTENERS

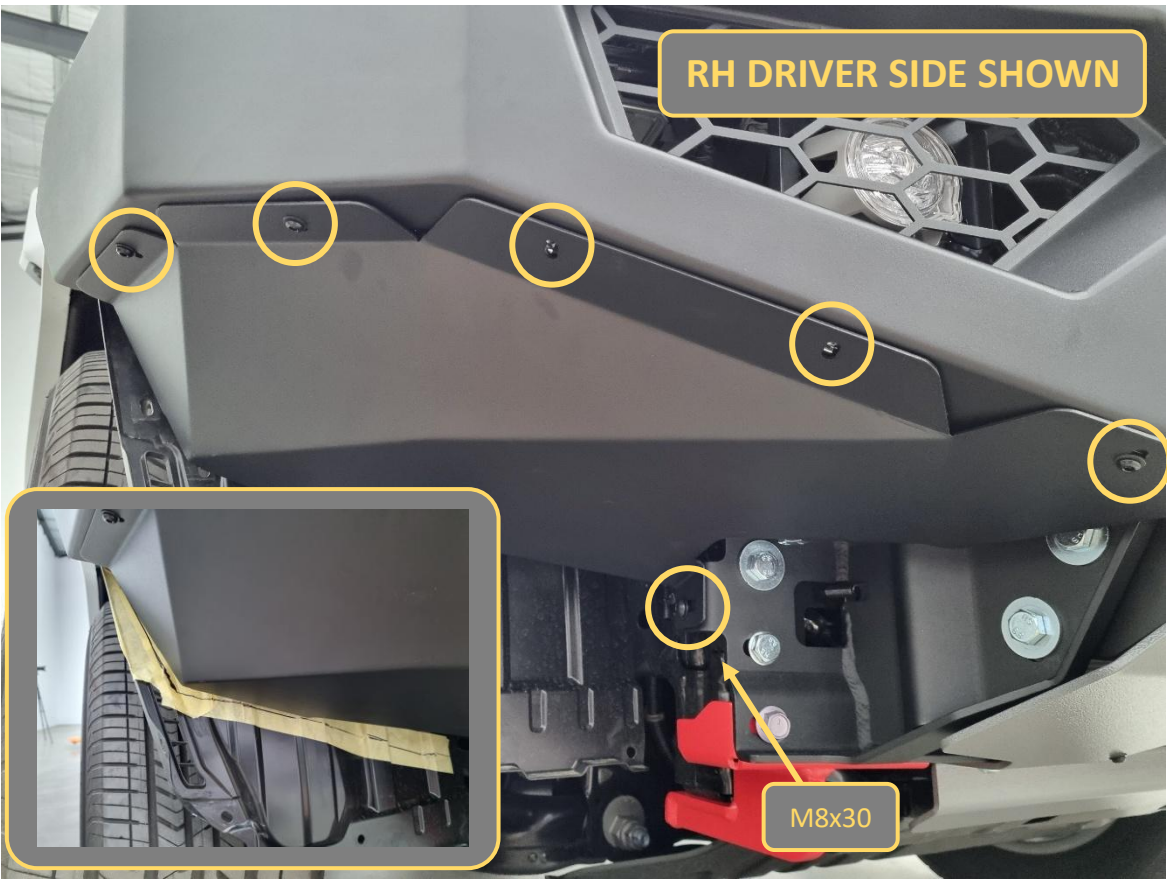
RH DRIVER SIDE SHOWN 	
189. Perform a final cut of the flare. Deburr and clean up the cut edge. 190. Re-fit any body clips that were removed. 191. If desired, trim and fit the supplied U-channel rubber to the cut edge. Use a small amount of Sikaflex or superglue to ensure it does not fall off. 192. Re-fit the cut flares and mudflaps to the vehicle using original fasteners. 193. Finish up wiring of winches/driving lights, then re-fit the radiator top cover and close the bonnet.	TOOLS REQUIRED Safety glasses Air Hacksaw or Oscillating Multi Tool or Angle Grinder or Jigsaw Utility knife or deburring tool Side cutters Sikaflex or superglue FASTENERS

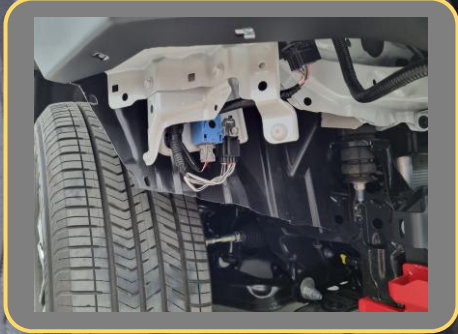
	
194. Fit the cooling mesh to the opening on the inside of the bash plate. 195. Secure using 8x M6x16 black button head bolts, black washers and flange nuts.	TOOLS REQUIRED 4mm hex/Allen key
	FASTENERS 8x M6x16 black button head bolt 8x M6 black flat washer 8x M6 flange nut

	
196. Fit the bash plate to the underside of the bar. 197. Secure to the bar at the front with 4x M8x30 black button head bolts and black washers. 198. Secure to the impact assemblies at the rear with 2x M10x25 button head bolts, standard washers and flange nuts. Reach in through the centre winch opening to fit the flange nut (see inset photo).	TOOLS REQUIRED 5mm hex/Allen key
	FASTENERS 4x M8x30 black button head bolt 4x M8 black flat washer 2x M10x25 button head bolt 2x M10 standard flat washer 2x M10 flange nut



199. Peel off the backing film and affix the ADR compliance plate to the inside of the LH side underpanel.	TOOLS REQUIRED
	FASTENERS

	
200. Fit the side underpanels to the underside of the bull bar wings. 201. Loosely secure each one with 5x M6x16 black button head bolts and black washers, plus 1x M8x30 black button head bolt, black washer and flange nut. 202. Apply masking tape to the wheel arch liner, then mark out a cut line that matches the profile of the side underpanel.	TOOLS REQUIRED Masking tape Marker pen
	FASTENERS 10x M6x16 black button head 10x M6 black flat washer 2x M8x30 black button head bolt 2x M8 black flat washer 2x M8 flange nut

  	
203. Remove the side underpanels, then cut the wheel arch liners along the marked lines using a utility knife or similar cutting tool. Whilst cutting, pull down on the section to be removed and apply tension, to allow for an easy cut. 204. Clean up the cut edge with a deburring tool or similar.	TOOLS REQUIRED Utility knife Deburring tool
	FASTENERS

	
205. Re-fit and fully tighten the side underpanels. Ensure the wheel arch liner is tucked inside the flanges on the back of the side underpanels. 206. The fitment is now complete. Double check all fasteners are done up.	TOOLS REQUIRED 4mm hex/Allen key 5mm hex/Allen key
	FASTENERS



Congratulations! You're done! Go do that big lap of Straya in your beast of a Prado 250!