MAZDA BT-50 TF

MY2025 FACELIFT

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.

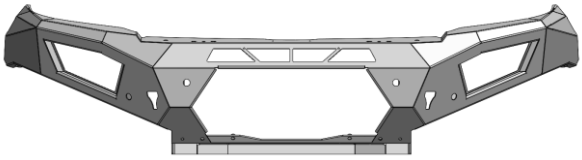
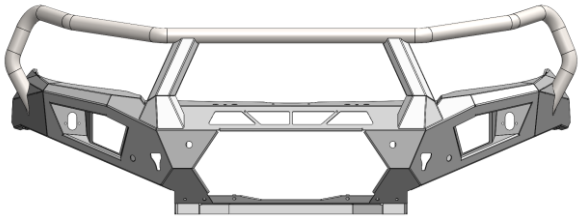
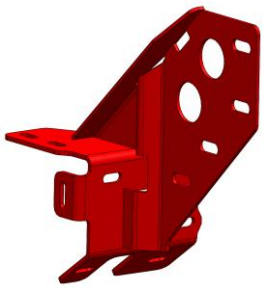
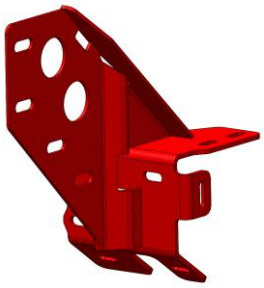
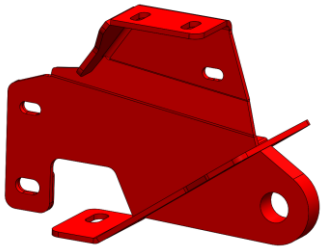
FRONT BAR MOUNTS AND TOW POINTS + REAR TOWBAR	
Size	**Torque Nm**
M10	57 Nm
M12	100 Nm
M14	164 Nm
M16	248 Nm

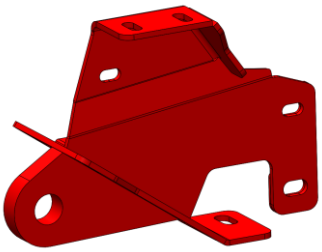
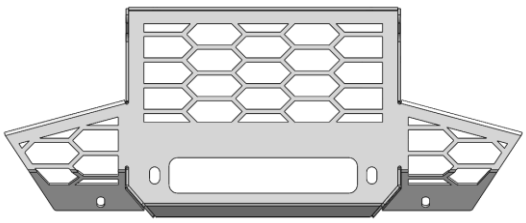
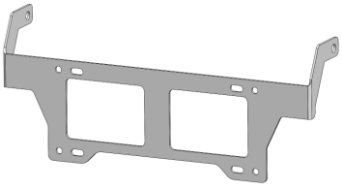
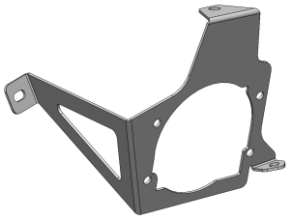
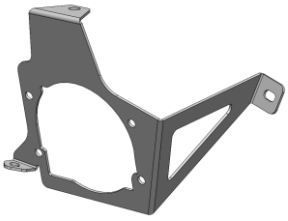
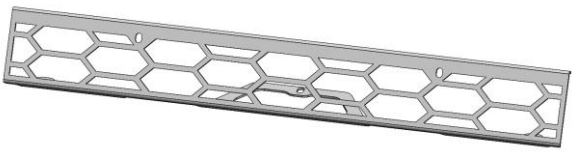
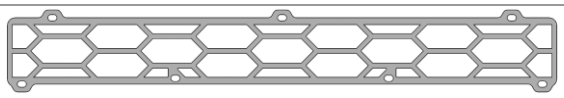
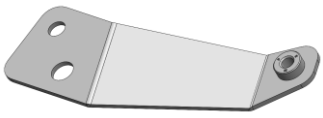
Always use a torque wrench to set correct torque settings. Ensure torque wrench is set to Nm unit of measurement. Otherwise perform conversion to lb-ft.

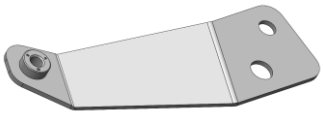
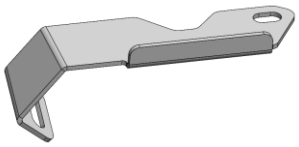
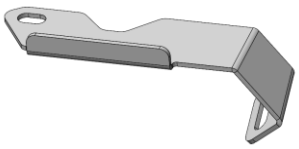
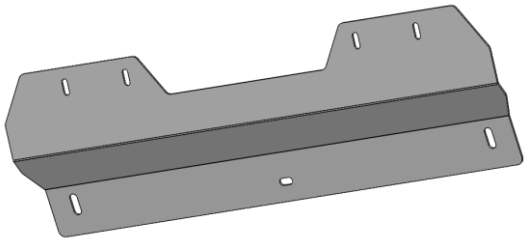
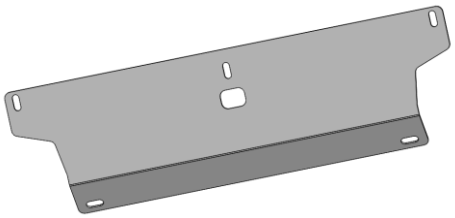
PARTS LISTING

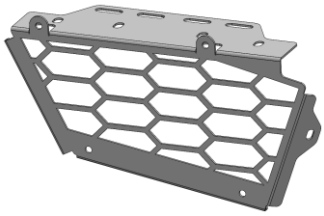
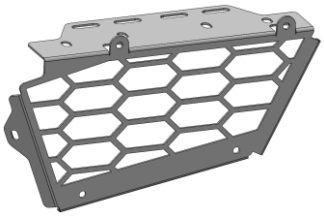
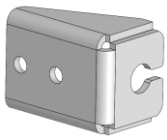
IMPORTANT: Check all parts are present before beginning work! Contact OFFROAD ANIMAL if something is missing.

Main Parts – In the Box

Qty	Part Number	Description	Image
1	FB-MBT-TF-25-PR-ASM1	BT-50 TF MY25 Facelift Predator Bar Welded Assembly	
		OR	
1	FB-MBT-TF-25-TOR-ASM1	BT-50 TF MY25 Facelift Toro Bar Welded Assembly	
1	FB-MBT-TF-25-PR-ASM2R	BT-50 TF MY25 Facelift Impact Assembly RH	
1	FB-MBT-TF-25-PR-ASM2L	BT-50 TF MY25 Facelift Impact Assembly LH	
1	FB-IDM-RG-21-PR-ASM3R	ISUZU DMAX 21+ TOW POINT ASSY RH	

1	FB-IDM-RG-21-PR-ASM3L	ISUZU DMAX 21+ TOW POINT ASSY LH	
1	FB-IDM-RG-24-PR-ASM2	D-MAX MY24 Facelift Mesh Fairlead Welded Assembly	
1	B-0822	WL Predator Number Plate Bracket	
1	B-1480R	Mazda BT-50 MY25 Facelift Fog Light Bracket RH	
1	B-1480L	Mazda BT-50 MY25 Facelift Fog Light Bracket LH	
1	B-1485	22" Lightbar Mesh Infill	
		OR	
1	P-0515	22" Lightbar Mesh Infill Plate	
1	B-1489R	Mazda BT-50 MY25 Facelift Headlight Bracket RH	

1	B-1489L	Mazda BT-50 MY25 Facelift Headlight Bracket LH	
1	B-1490R	Mazda BT-50 MY25 Facelift Headlight Infill Bracket RH	
1	B-1490L	Mazda BT-50 MY25 Facelift Headlight Infill Bracket LH	
1	B-1605	Mazda BT-50 MY25 Facelift Pan Brace	
1	U-0036	Isuzu DMAX 2021+ Predator Bash Plate	
1	U-0041	DMAX 21+ Supplementary Underpanel	
1	U-0099R	Mazda BT-50 MY25 Facelift Side Underpanel RH	
1	U-0099L	Mazda BT-50 MY25 Facelift Side Underpanel LH	
4	CPHP035	Plastic Hole Insert, 22MM, Black, Tigerlink Hardware CPHP035	
1	F-0035R	Mazda BT-50 MY25 Facelift Headlight Infill RH	

1	F-0035L	Mazda BT-50 MY25 Facelift Headlight Infill LH	
1	FB-MBT-TF-21-PR-ADRCP	ADR Compliance Plate BT-50 21+	
1	TK-FB-IDM-RG-24	Tape Kit - D-MAX 24+, 3M5952, 2x 30x6mm, 2x 50x6mm, 2x 75x15mm	N/A
PREDATOR ONLY			
1	M-0061R	Mazda BT-50 MY25 Facelift Predator Wing Light Mesh RH	
1	M-0061L	Mazda BT-50 MY25 Facelift Predator Wing Light Mesh LH	
TORO ONLY			
2	B-0649	Toro Antenna Bracket - 90 Degree Tall	
1	M-0062R	Mazda BT-50 MY25 Facelift Toro Wing Light Mesh RH	
1	M-0062L	Mazda BT-50 MY25 Facelift Toro Wing Light Mesh LH	
2	LED Autolamps 80AW	LED AUTOLAMPS 80AW LED INDICATOR PARKER COMBO LIGHT, SINGLE BLISTER PACK	

PREDATOR Fasteners – Contained in Small Parts Kit Bag

Qty	Part Number	Description
3	M6x12 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X12X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
7	M6 X 12 CSK BZP	SCREW, COUNTERSUNK CAP, M6X12X1 Black ZP
42	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
45	M6 FLAT WASHER BLACK ZINC	M6 Flat Washer, 12x6.1x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
27	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
12	M6CN3MM	CAGE NUT M6x2.6-3.5
4	M8 X 20 HEX	Bolt Hex, M8X20x1.25, GR8.8 ZP
2	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
4	M8 X 30 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X30X1.25, ISO4042 ZnNi BLACK PASSIVATED FINISH
6	M8 HD FLAT WASHER	M8 FLAT WASHER - High Tensile 19x8x1.9mm
10	M8 HD FLAT WASHER - BZP	M8 FLAT WASHER - High Tensile 19x8x2mm, ISO4042 ZnNi BLACK PASSIVATED FINISH
2	M8 NYW	Washer, M8, Nylon
4	M8 FLANGE NUT	Flange Nut, M8x1.25 G8.8 ZP
2	M8 NYLOC	NYLOC SELF LOCKING NUT, ST STL A2 ISO
13	M10 x 30	Bolt Hex, M10X30x[1.5], GR8.8 ZP
13	M10 FW LHD	WASHER, FLAT M10X28.5X2.5
9	M10 FLANGE NUT	Flange Nut, M10x1.5 G8.8 ZP
12	M12X30	Bolt Hex, M12X30x1.75, GR8.8 ZP
14	M12 FW LHD	M12 FW Large Heavy Duty
8	M12 FLANGE NUT	Flange Nut, M12x1.75 G8.8 ZP
2	M12 Nyloc nut	M12 NYLOC NUT
2	FB-IDM-RG-21-PR-ASM4	DMAX 21+ Tow Point Nut Plate
2	NP-COM-M10-190-ASM0	M10 LOLLYPOP NUT PLATE 190MM LONG

TORO Fasteners – Contained in Small Parts Kit Bag

Qty	Part Number	Description
3	M6x12 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X12X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
7	M6 X 12 CSK BZP	SCREW, COUNTERSUNK CAP, M6X12X1 Black ZP
40	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
43	M6 FLAT WASHER BLACK ZINC	M6 Flat Washer, 12x6.1x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
27	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
12	M6CN3MM	CAGE NUT M6x2.6-3.5
4	M8 X 20 HEX	Bolt Hex, M8X20x1.25, GR8.8 ZP
2	M8 X 16 BHCS BZP	SCREW, BUTTON HEAD CAP, M8X16X1.25 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
8	M8 X 20 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X20X1.25, ISO4042 ZnNi BLACK PASSIVATED FINISH
4	M8 X 30 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M8X30X1.25, ISO4042 ZnNi BLACK PASSIVATED FINISH
6	M8 HD FLAT WASHER	M8 FLAT WASHER - High Tensile 19x8x1.9mm
14	M8 HD FLAT WASHER - BZP	M8 FLAT WASHER - High Tensile 19x8x2mm, ISO4042 ZnNi BLACK PASSIVATED FINISH
2	M8 NYW	Washer, M8, Nylon
4	M8 FLANGE NUT	Flange Nut, M8x1.25 G8.8 ZP
2	M8 NYLOC	NYLOC SELF LOCKING NUT, ST STL A2 ISO
13	M10 x 30	Bolt Hex, M10X30x[1.5], GR8.8 ZP
13	M10 FW LHD	WASHER, FLAT M10X28.5X2.5
9	M10 FLANGE NUT	Flange Nut, M10x1.5 G8.8 ZP
12	M12X30	Bolt Hex, M12X30x1.75, GR8.8 ZP
14	M12 FW LHD	M12 FW Large Heavy Duty
8	M12 FLANGE NUT	Flange Nut, M12x1.75 G8.8 ZP
2	M12 Nyloc nut	M12 NYLOC NUT
2	FB-IDM-RG-21-PR-ASM4	DMAX 21+ Tow Point Nut Plate
2	NP-COM-M10-190-ASM0	M10 LOLLYPOP NUT PLATE 190MM LONG

TOOLS REQUIRED

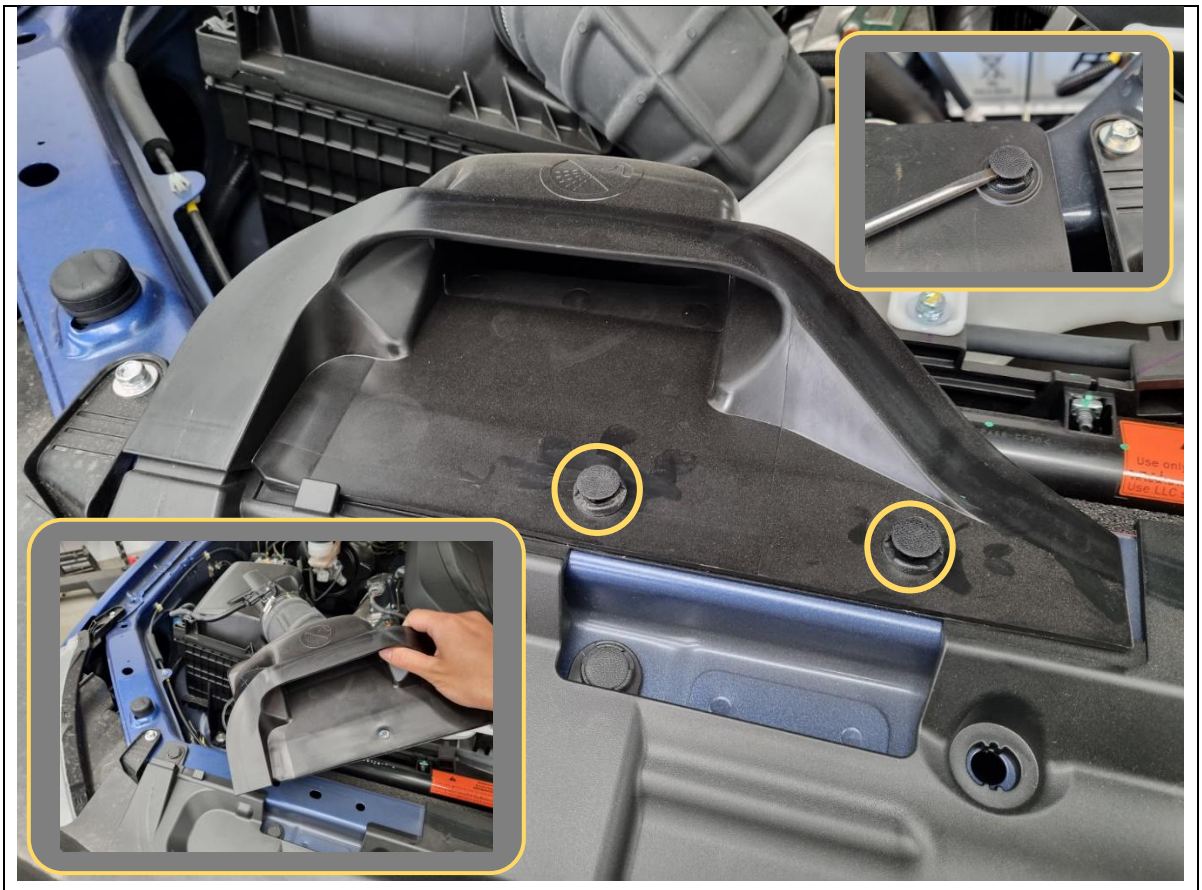
The following tools will be required to install the product.

Hand Tools	Power Tools	Workshop Equipment
Metric Socket Set 8-19mm	Electric/Air Impact Driver (Optional)	Panel stand or Soft Blanket
Socket Extension Bar	Soldering Iron	Lifting Trolley
Metric Spanner Set 8-19mm	Air hacksaw or Jigsaw or Multi-tool or Angle grinder	Isopropyl Alcohol
Hex (Allen) Key Set 4-6mm		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		Electrical tape
Pliers		Heat shrink
Wire Strippers		Sikaflex adhesive
		Black spray paint (optional)

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.



1. Remove the number plate from bumper and set aside.
2. Open the bonnet.
3. Remove 2x plastic push clips holding the factory air intake scoop. To remove each push clip, lever the centre section upwards using a flat blade screwdriver or trim tool, as shown. Retain these clips.
4. Remove the factory air intake scoop and set aside. Take car not to drop anything into the intake.

TOOLS REQUIRED

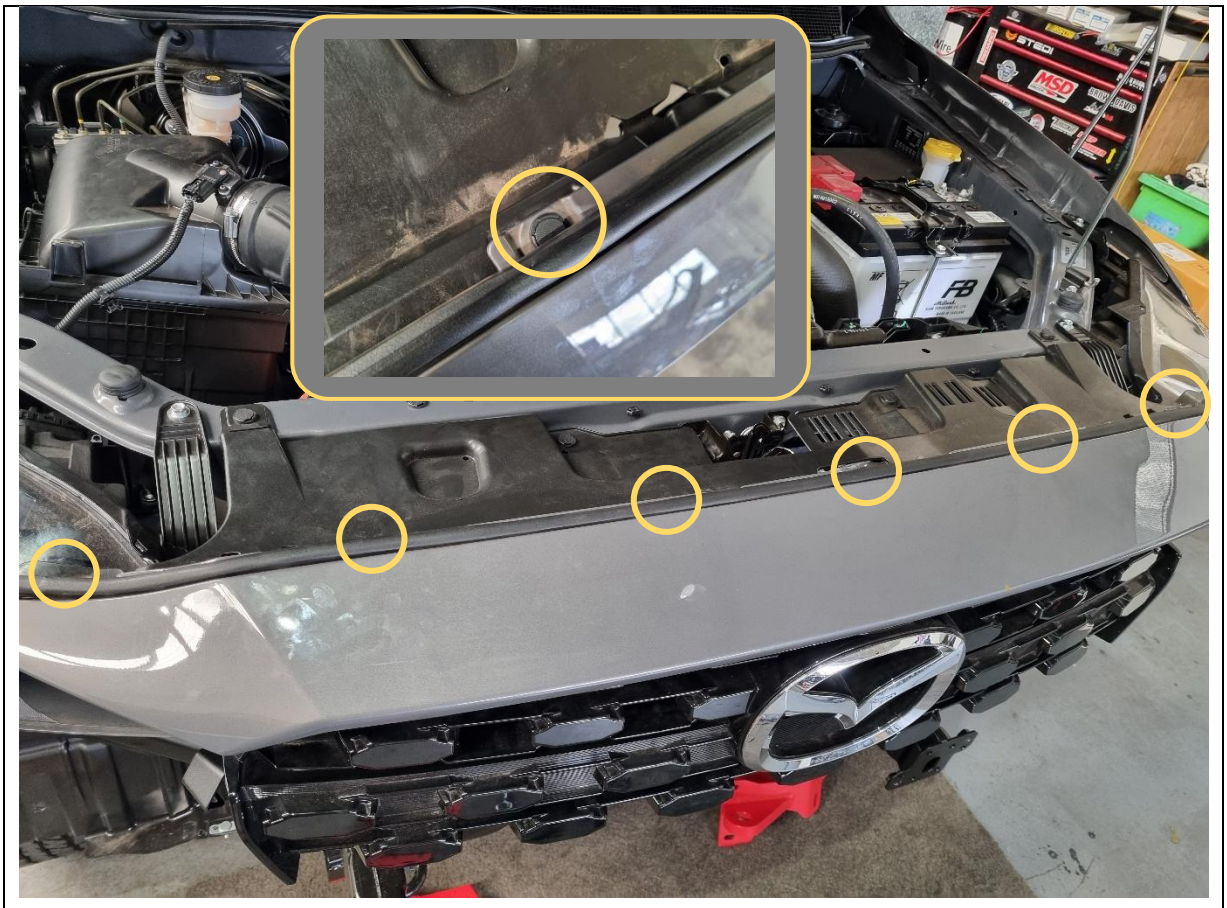
Phillips head screwdriver

Flat blade screwdriver
or
Trim tool

FASTENERS

2x plastic push clips

Retain for re-assembly



5. Remove 6x plastic push clips holding the upper grille lip. Move rubber seal aside to access.

TOOLS REQUIRED

Flat blade screwdriver
or
Trim tool

FASTENERS

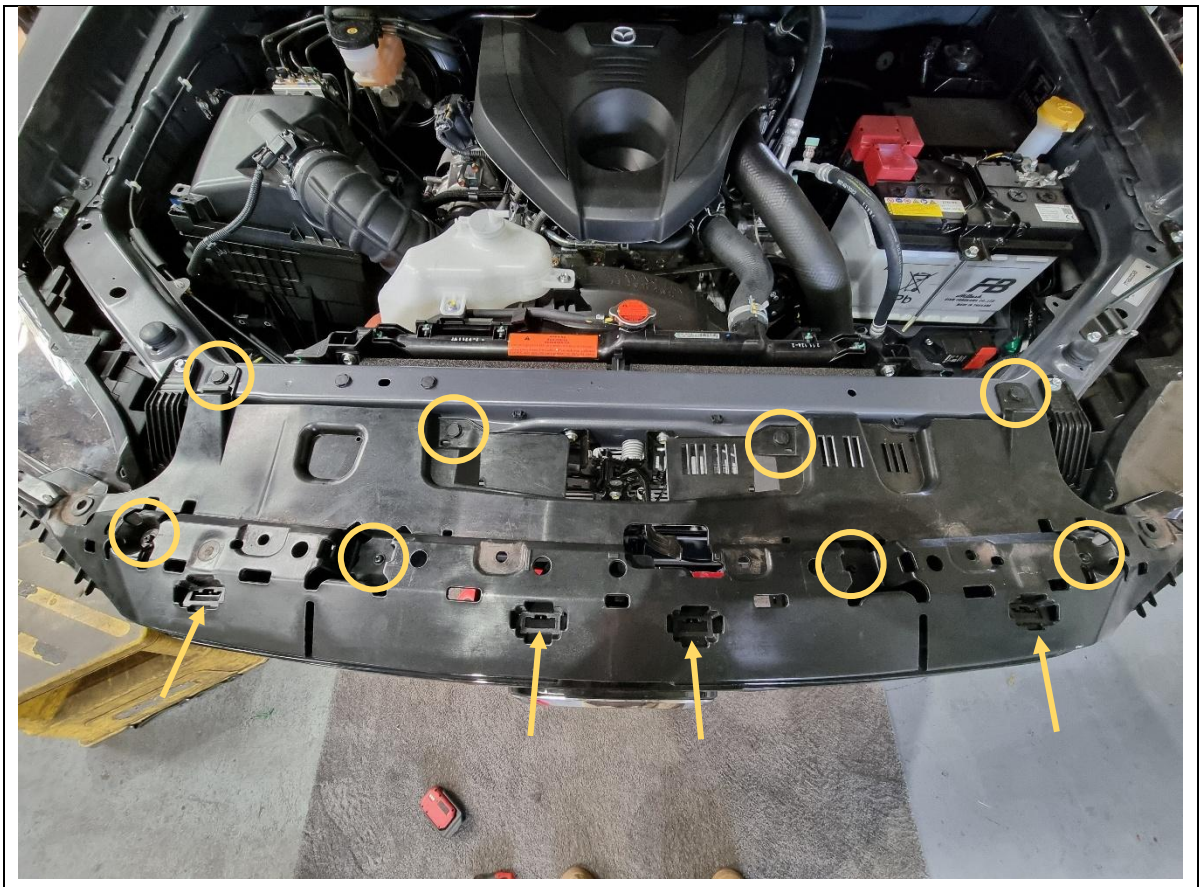
6x plastic push clips

Retain for re-assembly

6. Pull forwards and release 8x tabs holding grille lip to grille. Set grille lip aside.

TOOLS REQUIRED

FASTENERS



7. Remove 4x plastic push clips holding the rear of the radiator grille cover. Retain these clips.

8. Remove 4x Phillips head screws holding the front of the radiator grille cover. Retain these screws.

9. Use a flat blade screwdriver to release the 4x tabs (see arrows) holding the radiator grille cover down.

10. Pull upwards and remove the radiator grille cover. Set aside for later.

TOOLS REQUIRED

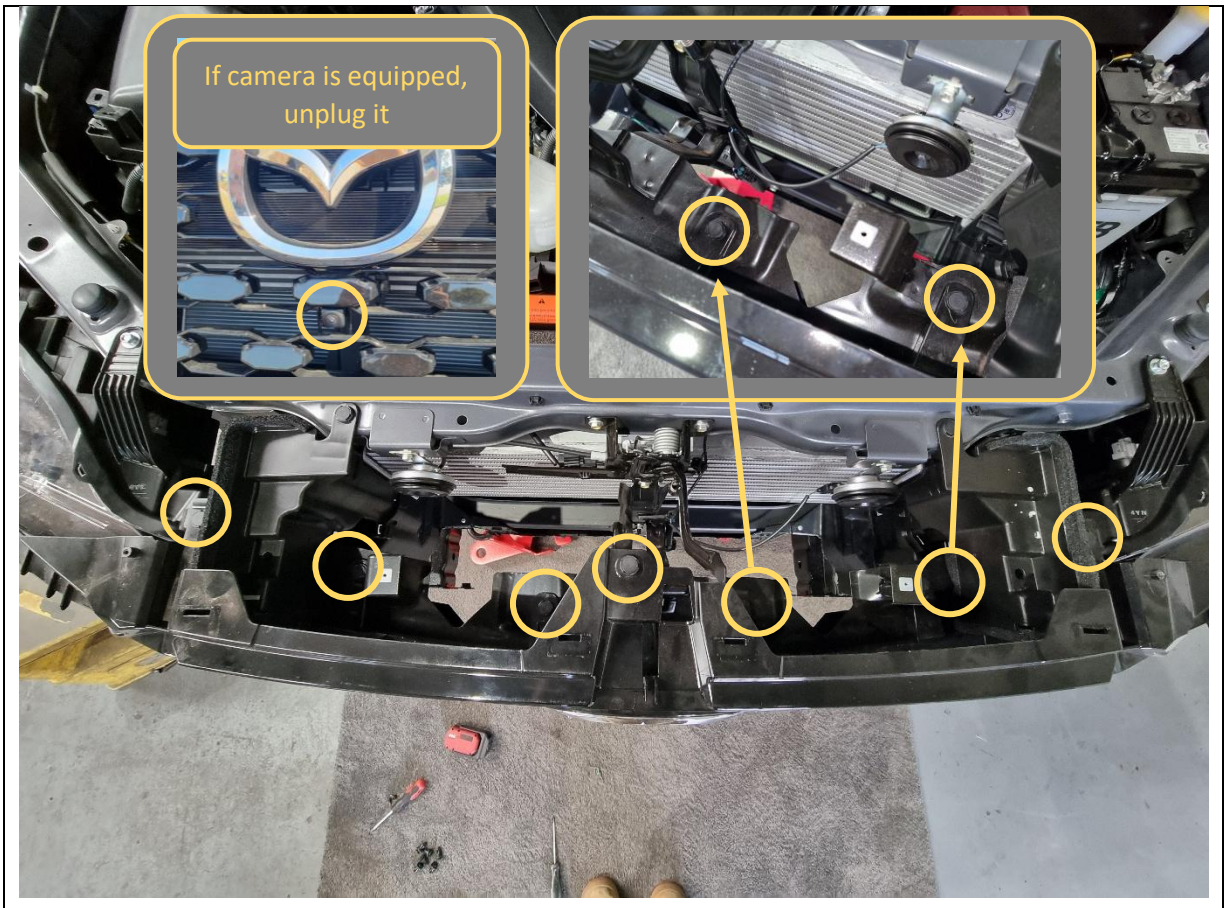
Flat blade screwdriver
or
Trim tool

Phillips head screwdriver

FASTENERS

4x plastic push clips
4x Phillips head screws

Retain for re-assembly



11. Remove 7x plastic push clips holding the grille. There are 3x clips on the top edge, and 4x clips on the cross member on the inside of the grille (see insert photo).

12. If a front 360 degree camera is equipped, reach behind the grille from above and unplug it.

TOOLS REQUIRED

Flat blade screwdriver
or
Trim tool

FASTENERS

7x plastic push clips

Retain for re-assembly

13. Remove 1x Phillips head screw above the Mazda badge in the grille.

TOOLS REQUIRED

Phillips head screwdriver

FASTENERS

1x Phillips head screw

Retain for re-assembly

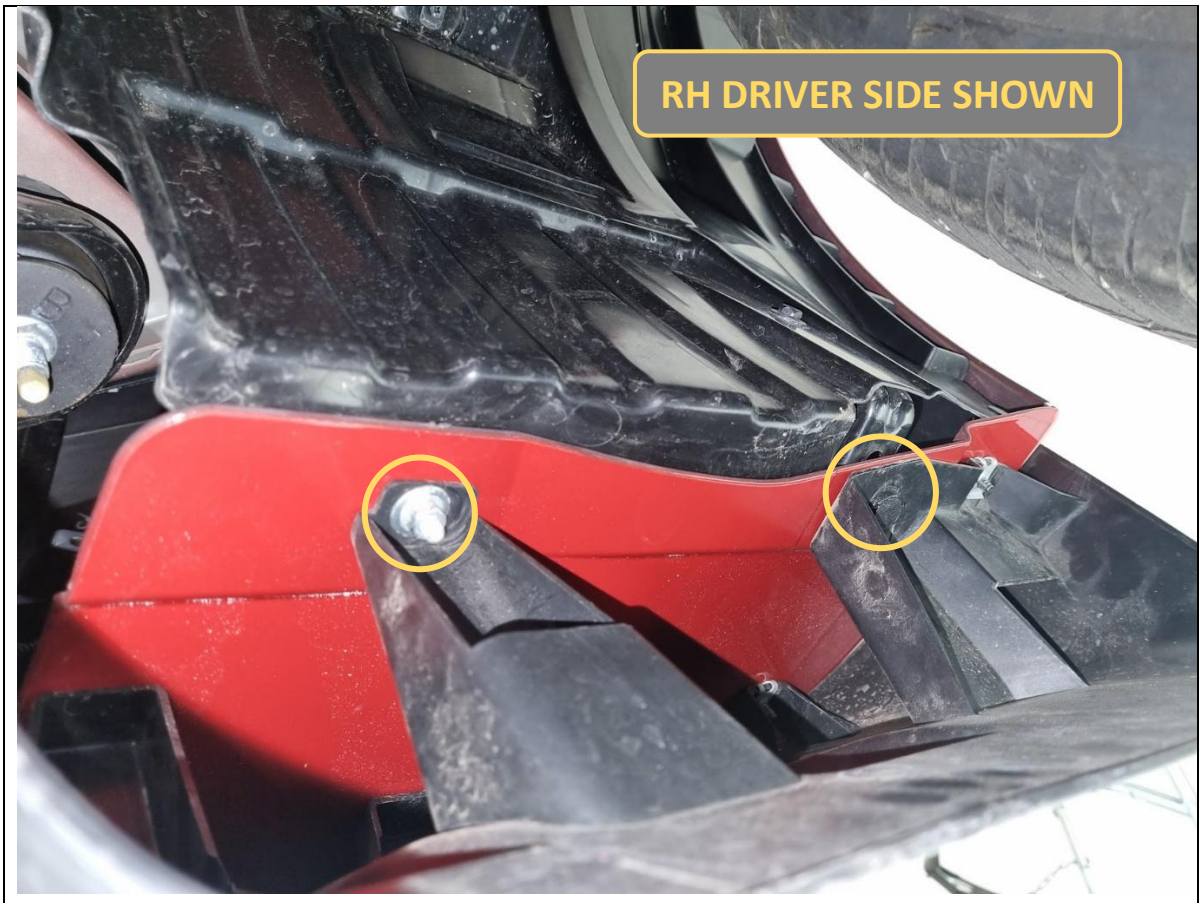
14. Remove 4x plastic push clips holding the wheel arch liner to the bumper, per side.

TOOLS REQUIRED

Flat blade screwdriver
or
Trim tool

FASTENERS

8x plastic push clips



15. From below, remove 1x 10mm hex nut and 1x plastic push clip holding the bottom of the bumper to the wheel arch liner and outer bumper support bracket. Do this on both sides.

TOOLS REQUIRED

Flat blade screwdriver
or
Trim tool

10mm socket/spanner

FASTENERS

2x 10mm hex nuts
2x plastic push clips

16. On the underside of the bumper, remove 2x plastic push clips holding the bumper to the inner bumper support brackets. These are located near where the factory tie down hooks are.

TOOLS REQUIRED

Flat blade screwdriver
or
Trim tool

FASTENERS

2x plastic push clips

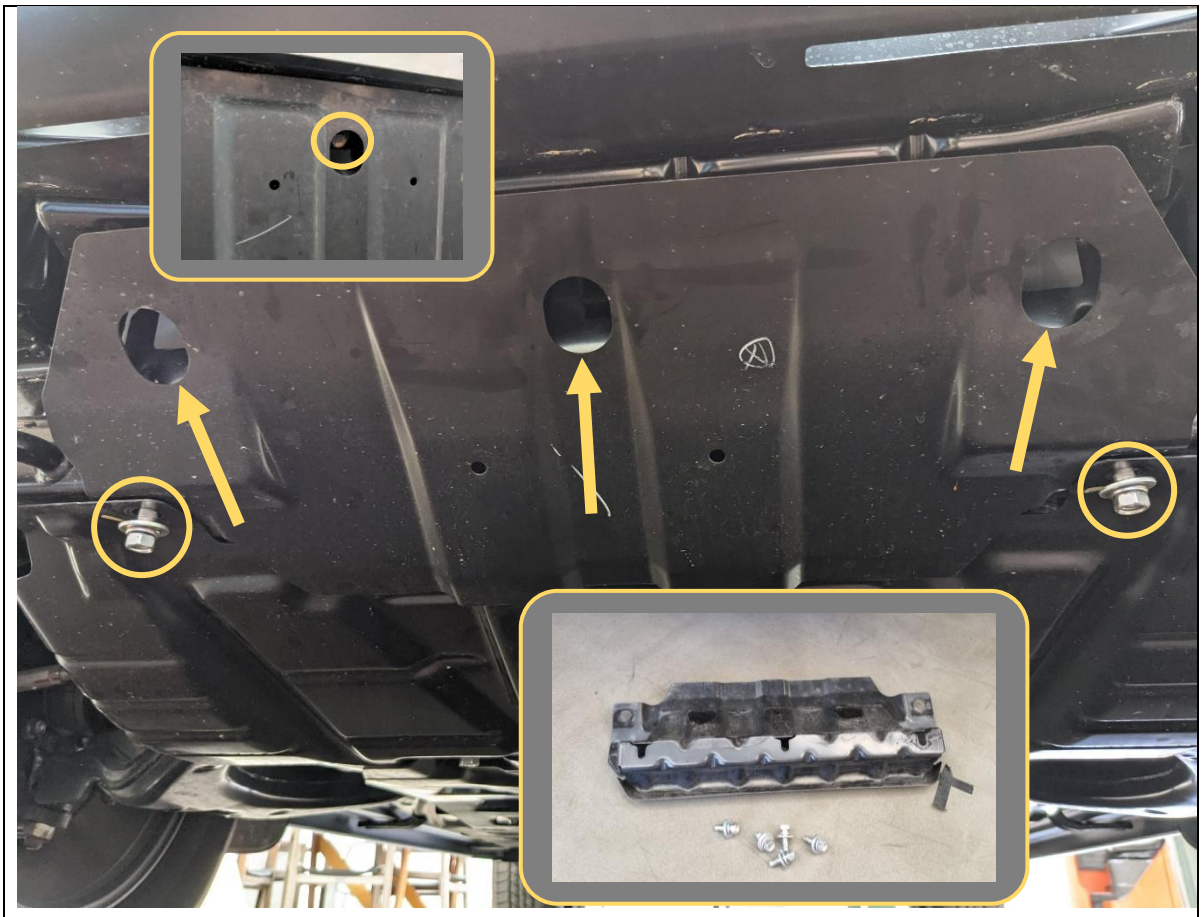
17. Release the bumper clips by pulling the bumper away and outwards from outer corners, starting from the outside and working in.

18. When bumper is loose, reach in and disconnect the bumper harness connectors (either 1x or 2x) located under the left-hand headlight.

19. Fully remove the bumper/grille from the car and set aside.

TOOLS REQUIRED

FASTENERS



20. Remove the front skid plate by removing the 5x 14mm hex bolts securing it to the chassis. Retain the bolts for use later.

    Note 3x bolts are recessed into the skid plate, as shown with arrows.

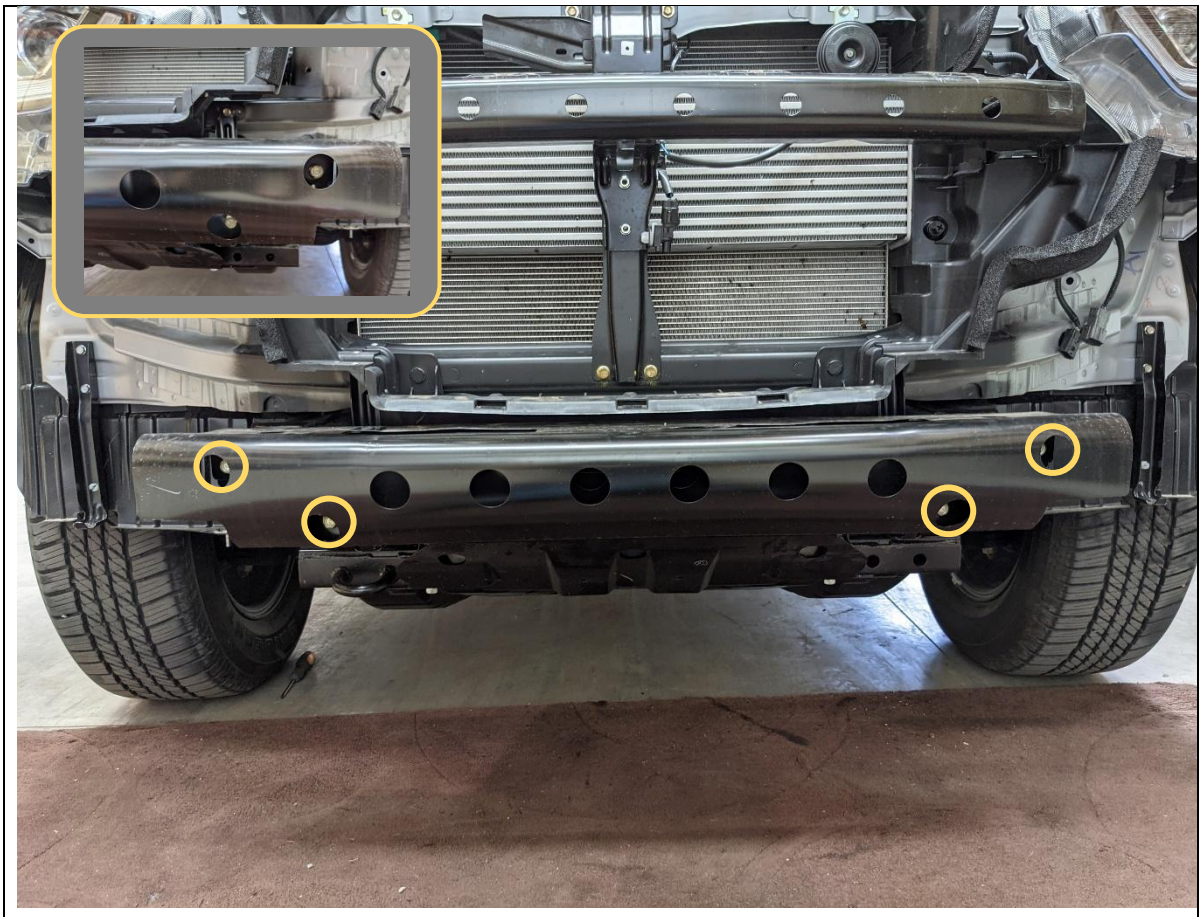
TOOLS REQUIRED

14mm socket
Socket extension bar

FASTENERS

5x factory 14mm hex bolts

Retain for re-fitment



21. Remove the 4x 14mm hex bolts securing the impact beam to the chassis.

22. Remove and discard the impact beam. Retain bolts for fitting of mounts.

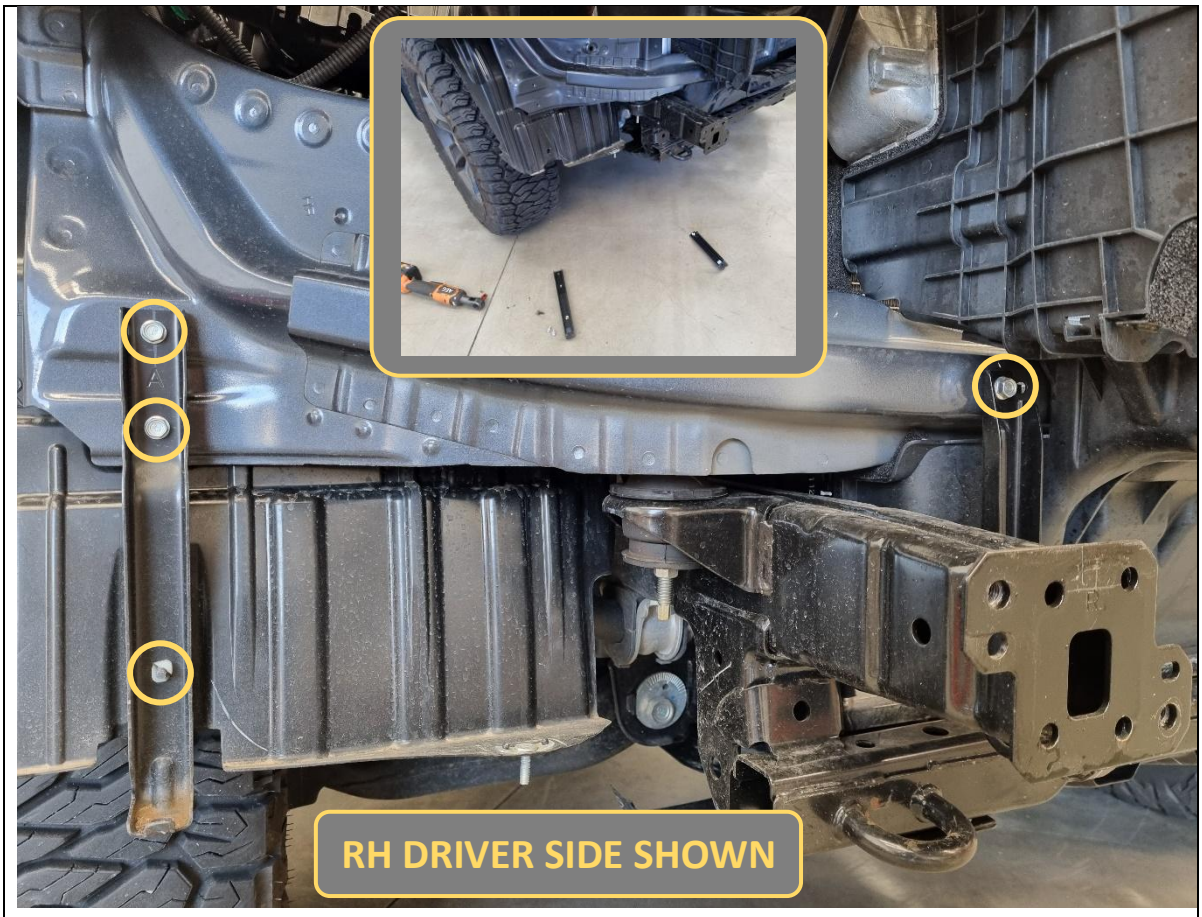
TOOLS REQUIRED

14mm socket

FASTENERS

4x factory 14mm hex bolts

Retain for re-fitment



23. Remove the 3x 10mm hex bolts securing each outer bumper support bracket.

24. Remove the 1x 10mm hex bolt securing each inner bumper support bracket.

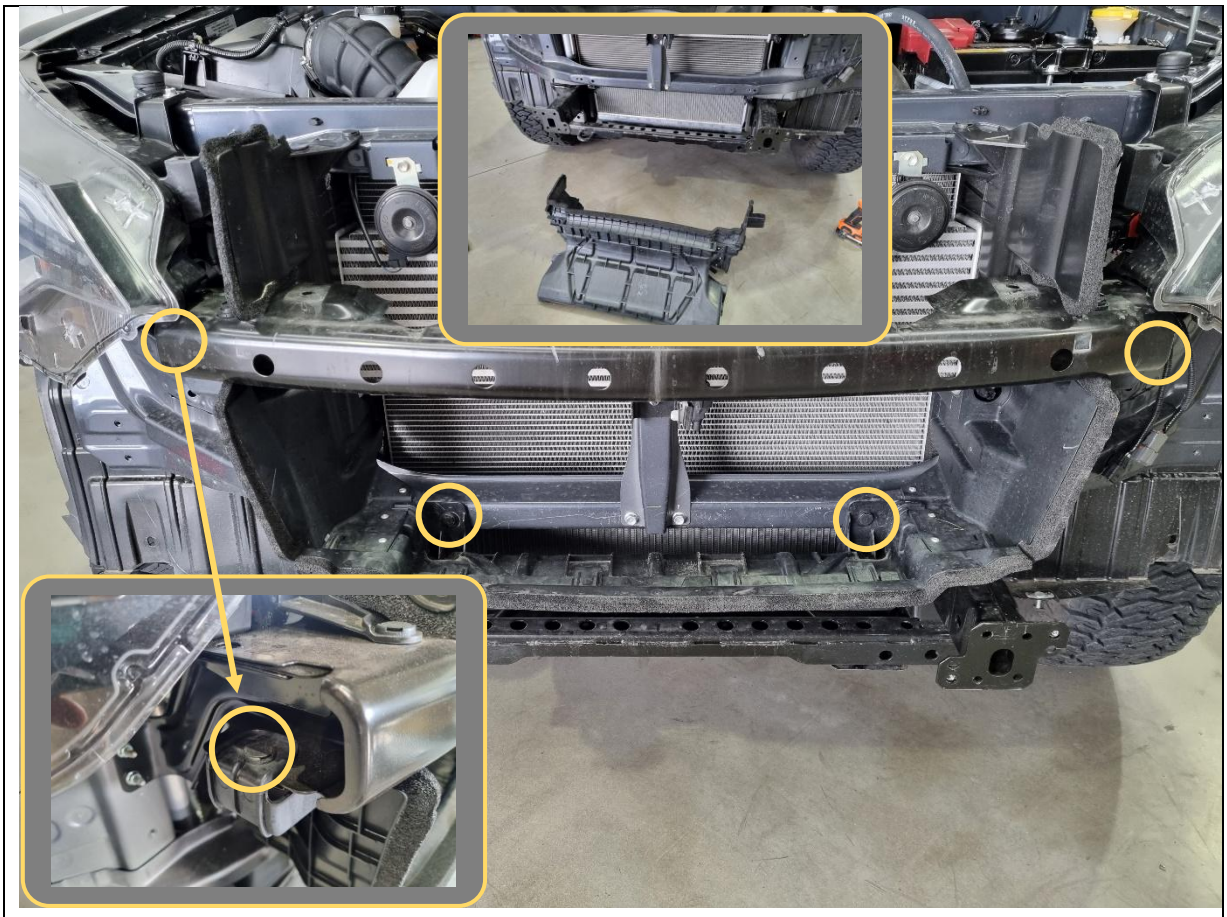
25. Remove and discard the bumper supports.

TOOLS REQUIRED

10mm socket/spanner

FASTENERS

8x 10mm factory hex bolts



26. Remove the 4x plastic push clips holding the lower plastic air guide.

TOOLS REQUIRED

Flat blade screwdriver
or
Trim tool

FASTENERS

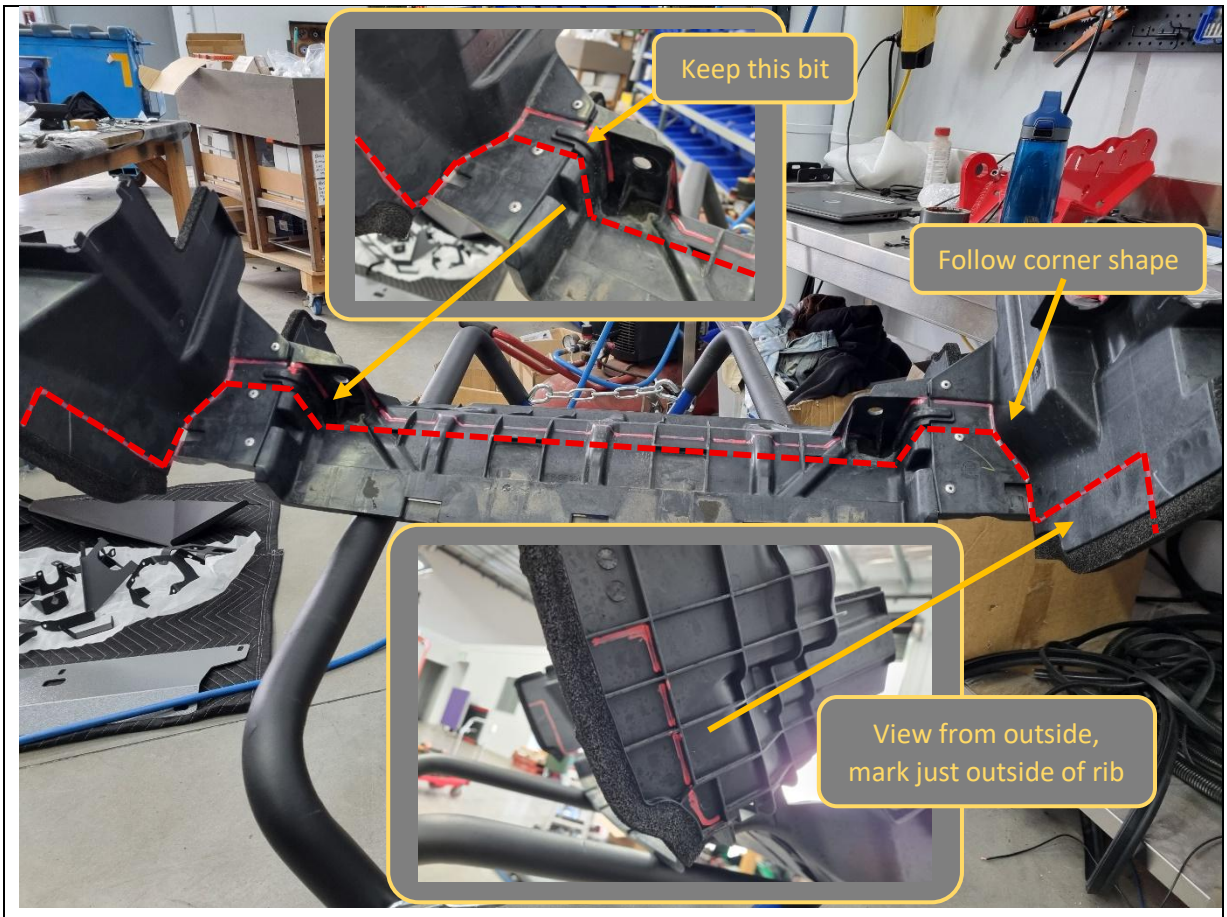
4x plastic push clips

Retain for re-assembly

27. Unclip the front plastic lip from the air guide and discard.

TOOLS REQUIRED

FASTENERS

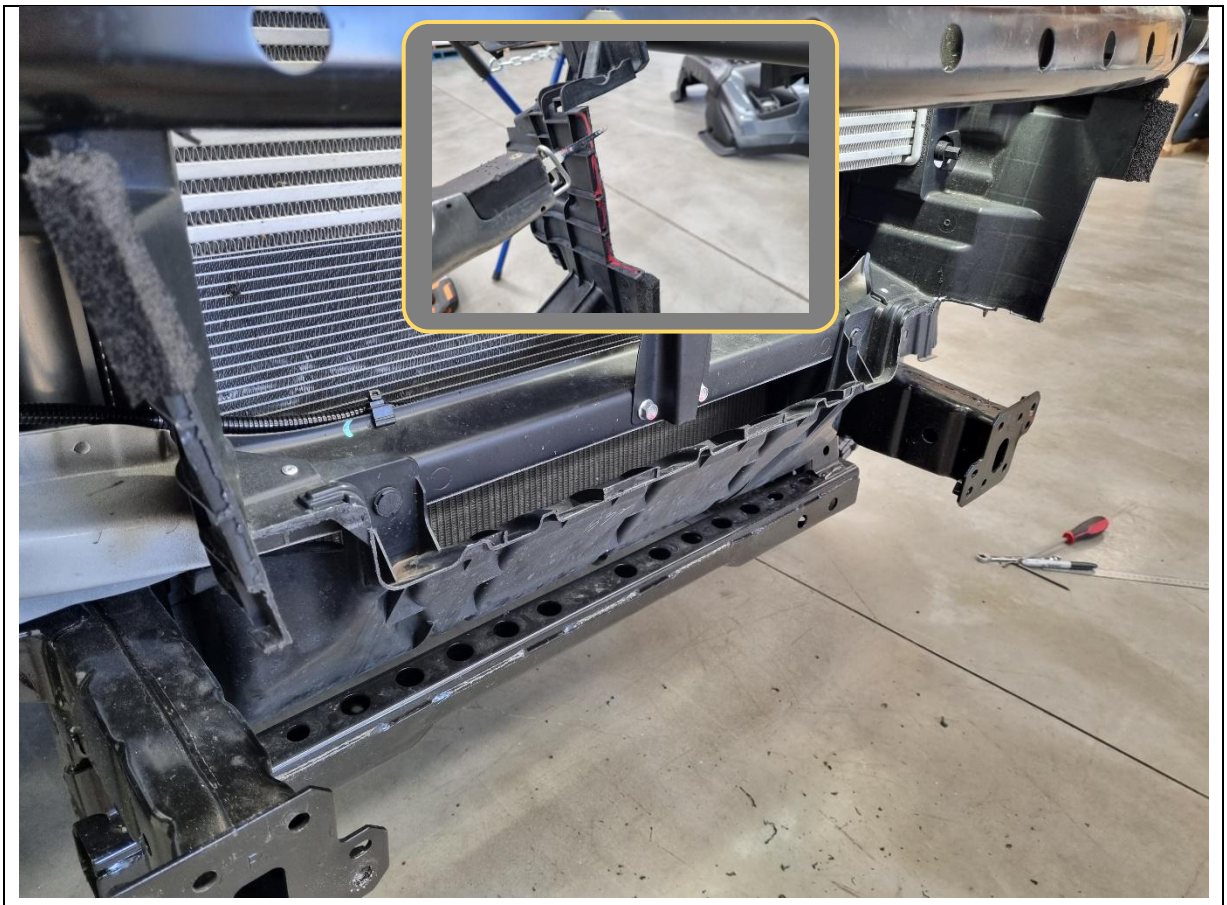


28. Use a marker pen and mark a cut line on the air guide, as shown.

TOOLS REQUIRED

Marker pen

FASTENERS



29. Trim the plastic air guide along the marking.

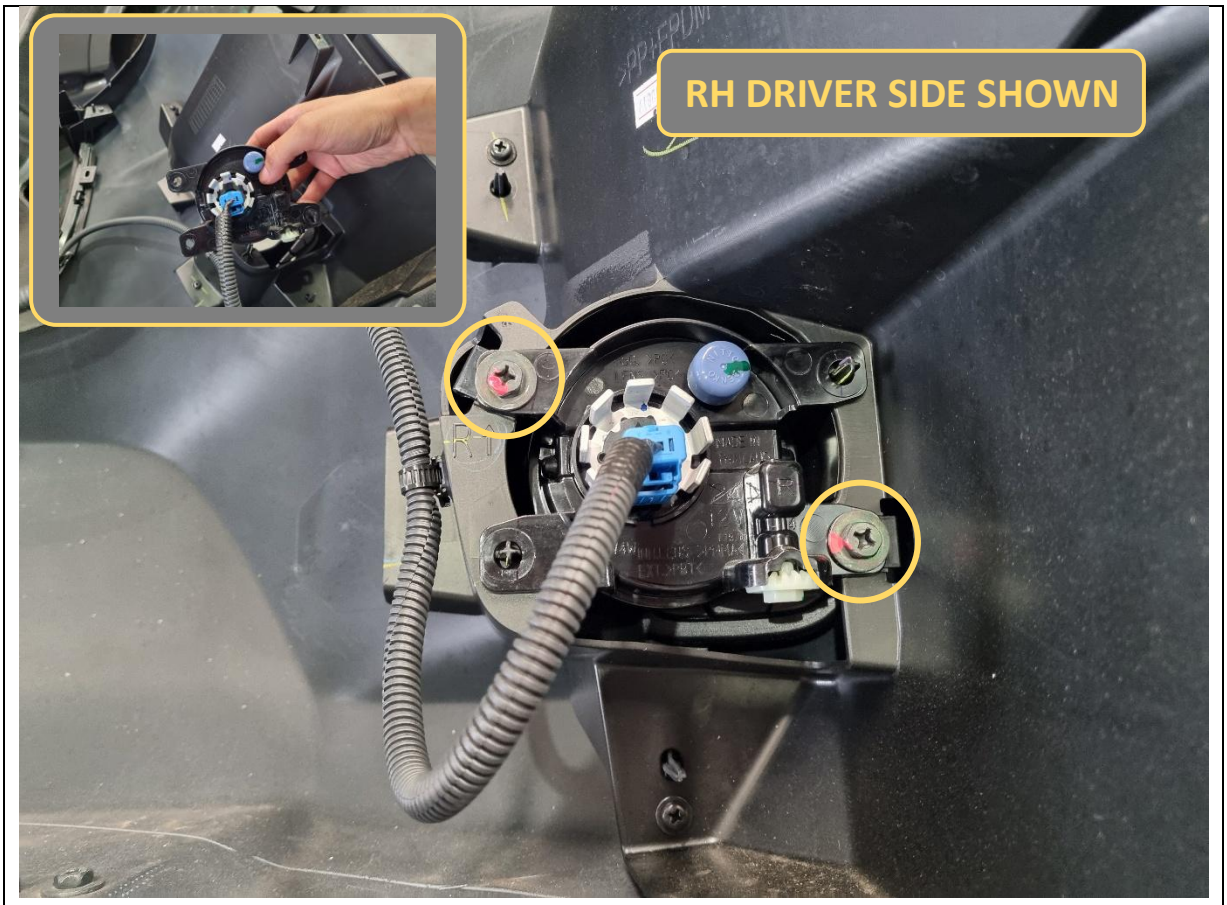
30. Discard the front section, then refit the trimmed air guide back onto the vehicle with the same 4x push clips.

TOOLS REQUIRED

Utility knife
or
air hacksaw

FASTENERS

4x plastic push clips



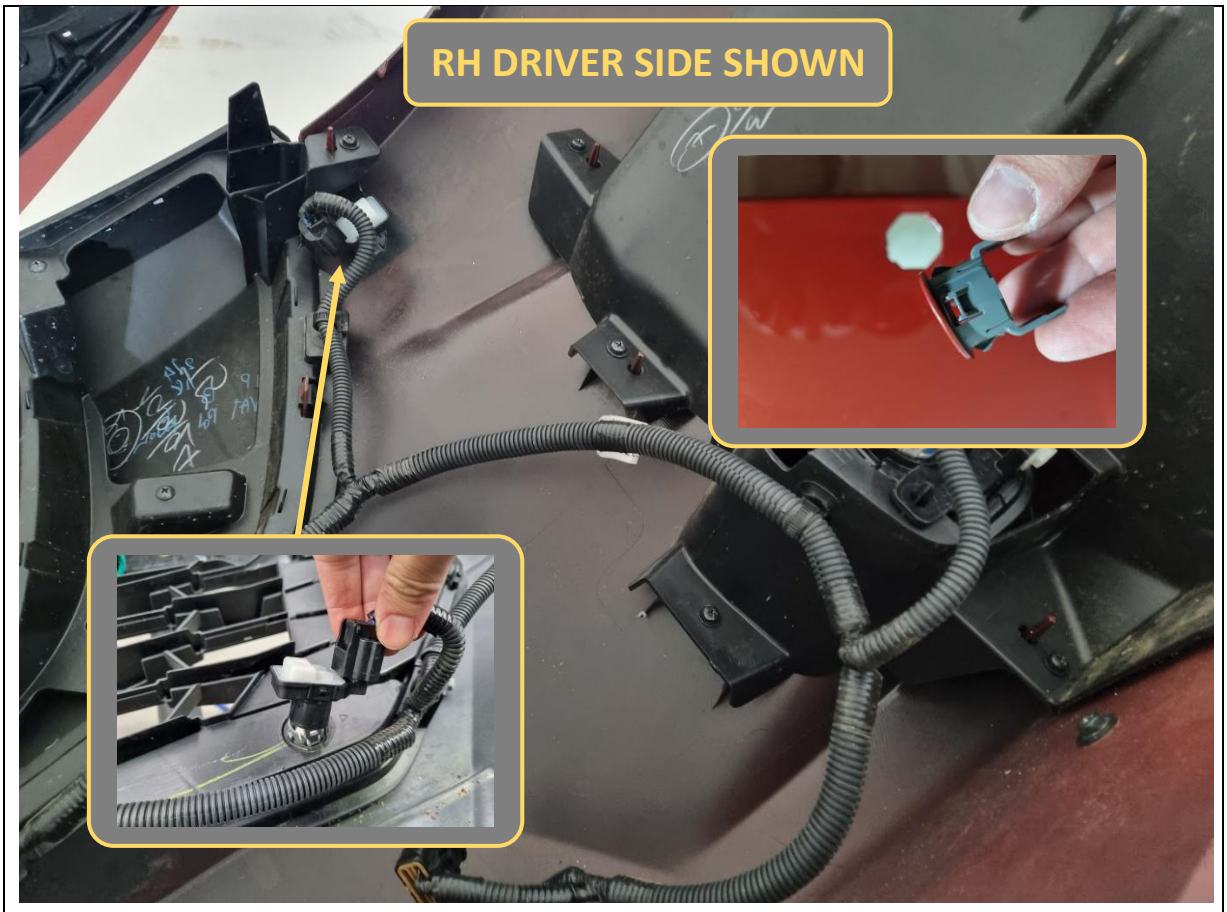
31. Time to strip the bumper. If equipped, remove 2x 10mm hex head screws securing each fog light on the back of the bumper.

TOOLS REQUIRED

10mm socket/spanner
or
Phillips head screwdriver

FASTENERS

4x 10mm hex head screws



32. If equipped, take note of the orientation of all 4x parking sensors. The plugs should all be pointing outwards to the side of the vehicle.

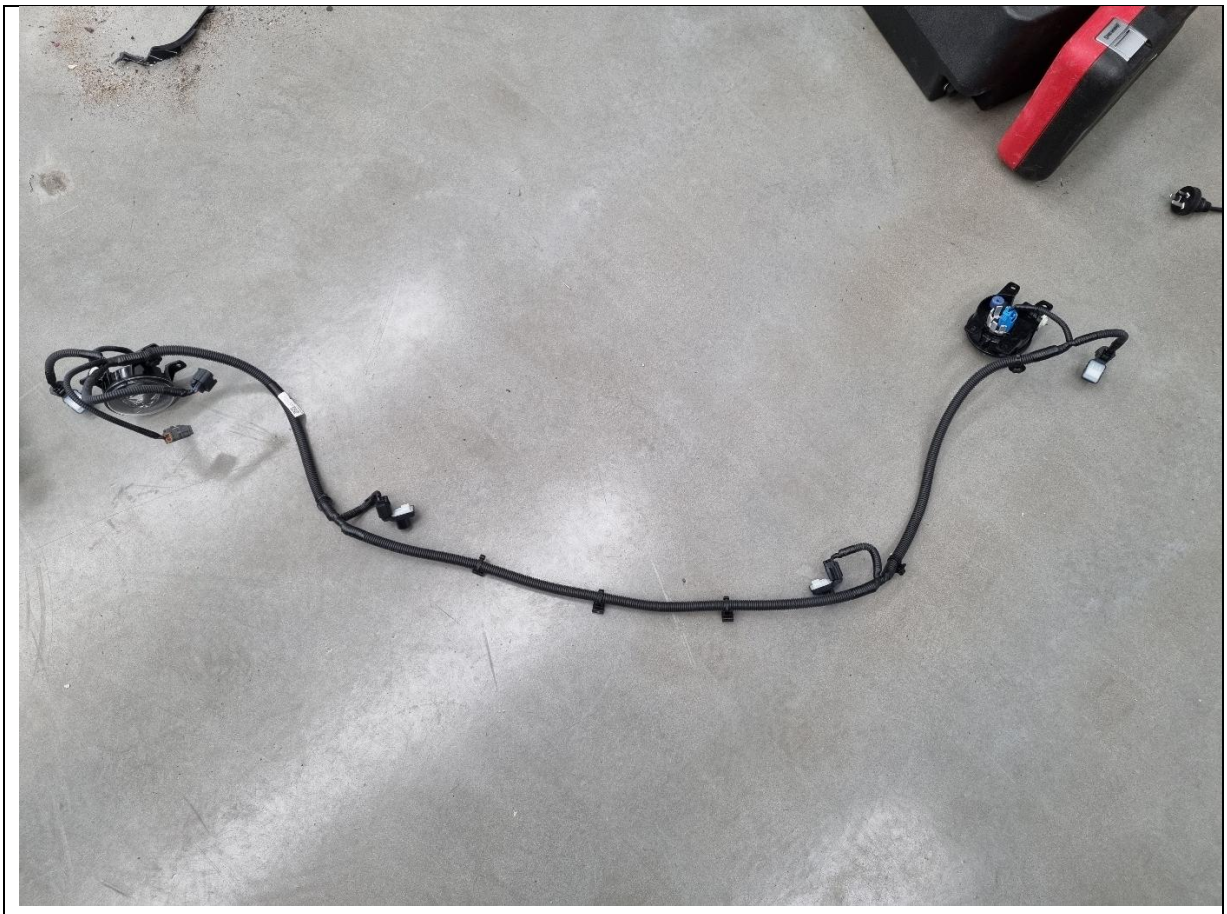
33. Spread open the tabs on the plastic sensor holder and unclip each parking sensor.

34. Press down on the tabs on the sensor holders and remove them from the bumper. Keep track of the sensor holder orientation.

35. Re-fit the sensor holders back onto the parking sensors in the same original orientation.

TOOLS REQUIRED

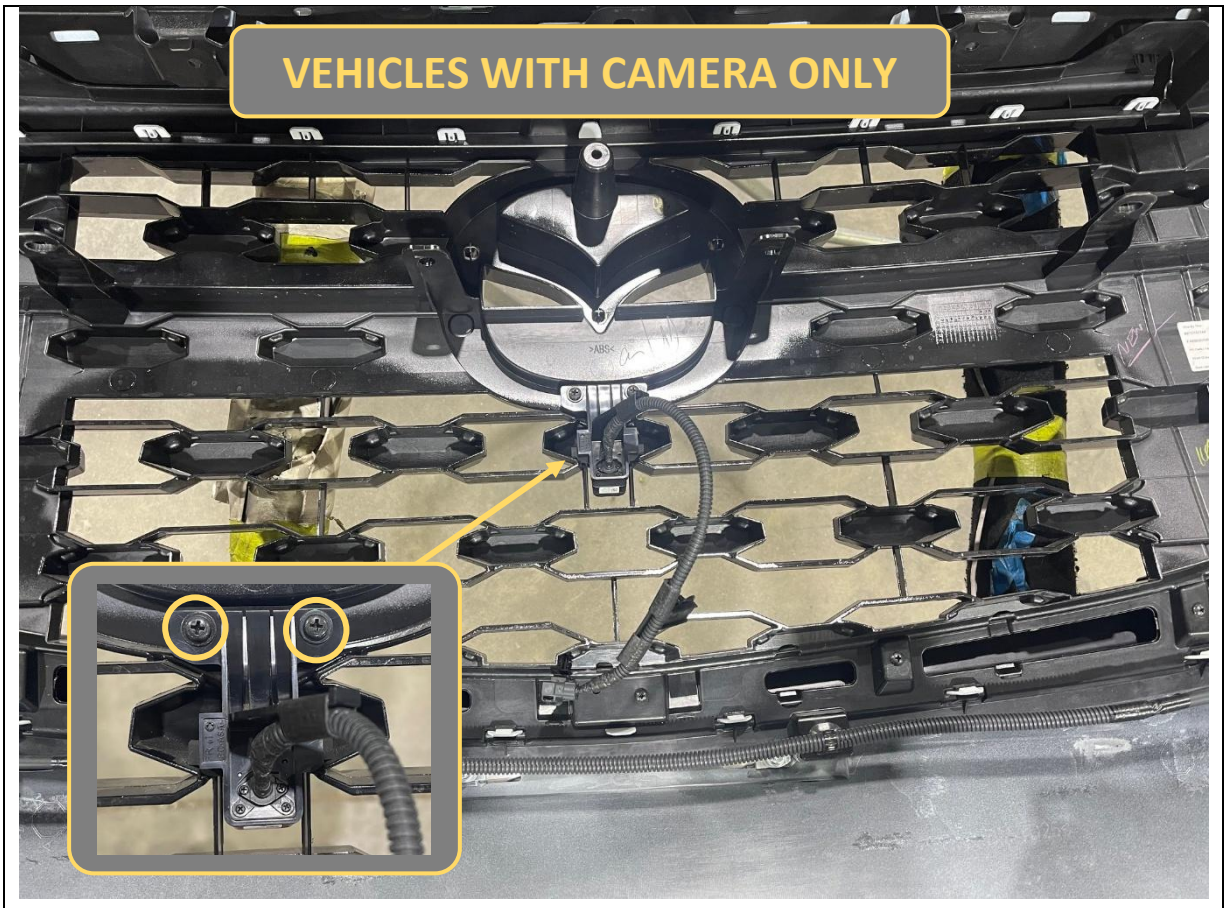
FASTENERS



36. Unclip and strip the entire harness from the bumper and set aside.

TOOLS REQUIRED

FASTENERS



37. If equipped, remove 2x Phillips head screws holding the front 360 degree camera assembly. Set the camera aside in a safe place.

    IMPORTANT:
    Check now if bar already has mounting holes for camera relocation.

    Go to the BT-50 MY25 Predator or Toro product page at https://offroadanimal.com.au/ and download the Camera Relocation Retro-Fit documents.

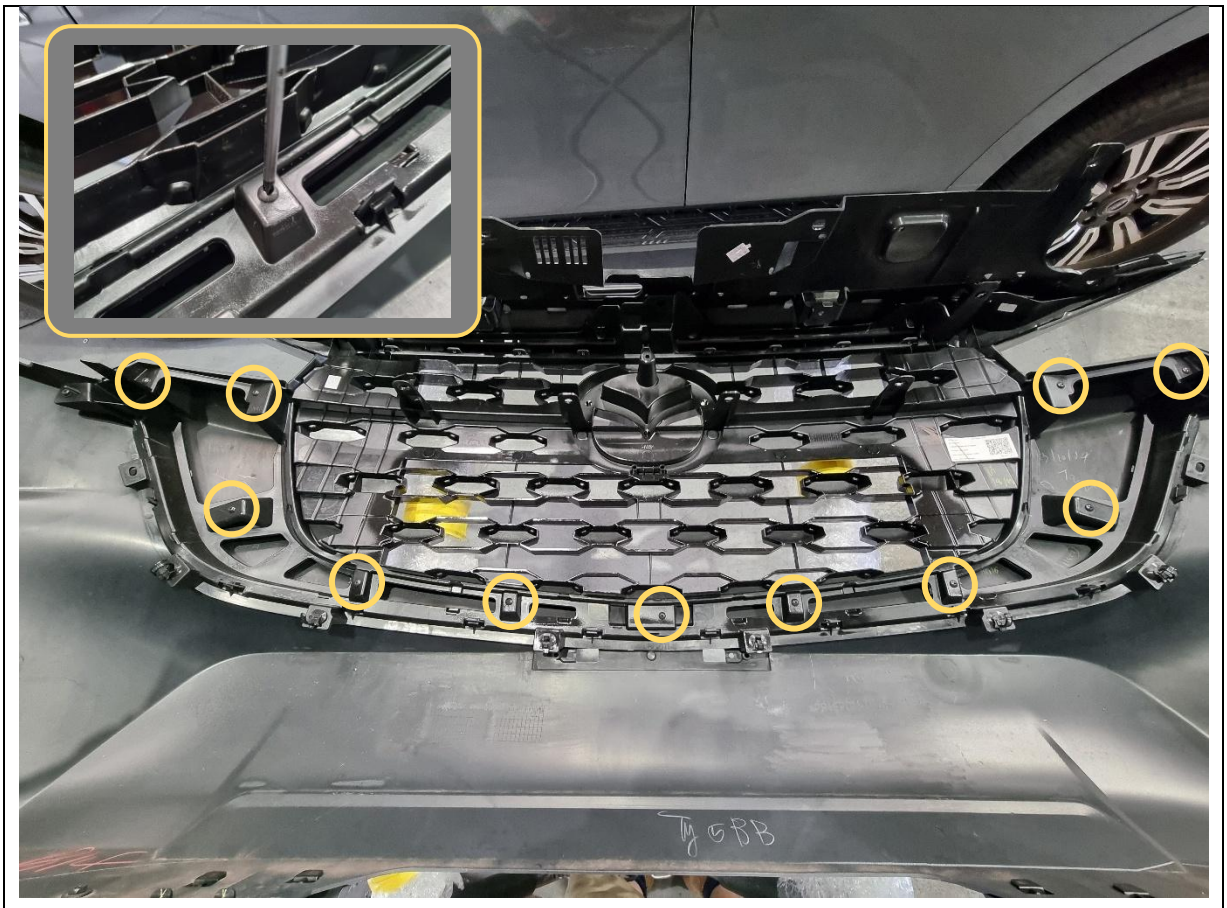
    If no mounting holes are present, they will need to be drilled by following the retro-fit instructions.

TOOLS REQUIRED

Phillips head screwdriver

FASTENERS

Discard



38. From the inside of the bumper, remove 11x Phillips head screws securing the black plastic grille inserts, as highlighted.

TOOLS REQUIRED

Phillips head screwdriver

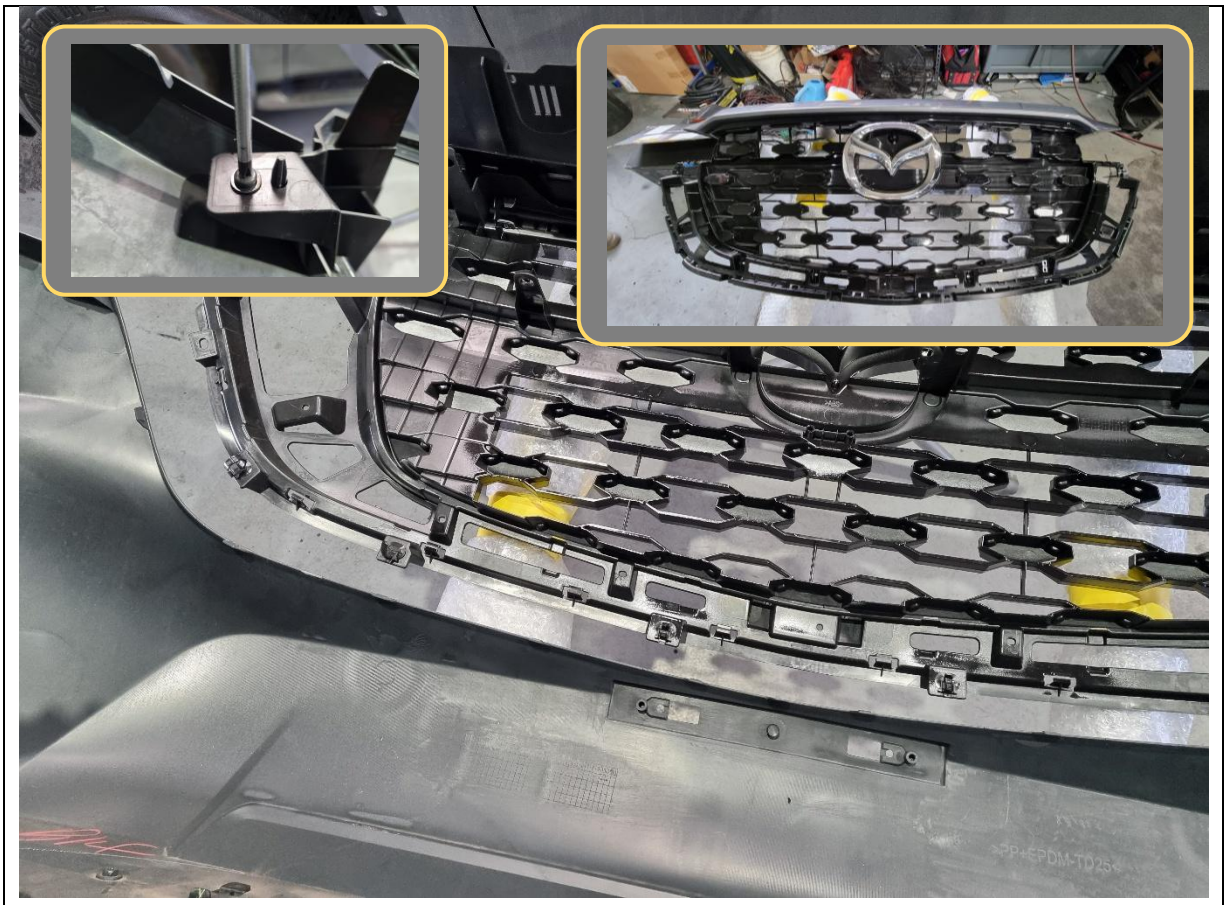
FASTENERS

11x Phillips head screws

39. From the outside, pull outwards and remove the black plastic grille inserts (left and right). These can be discarded.

TOOLS REQUIRED

FASTENERS



40. Remove 2x Phillips head screws (1x per side) holding the outer corners of the grille to the bumper.

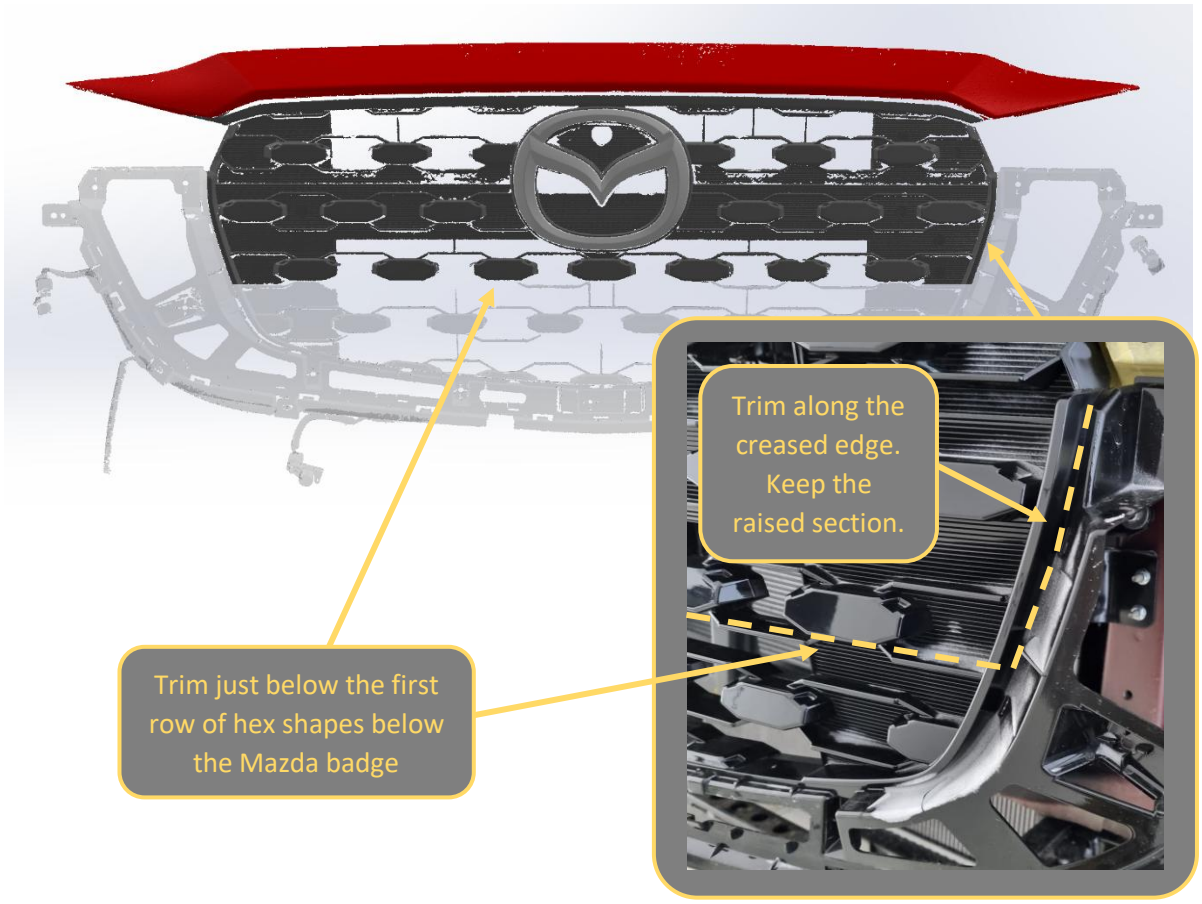
41. Separate the grille from the bumper by releasing 10x plastic tabs. Use a flat blade screwdriver to assist. The bumper can be discarded.

TOOLS REQUIRED

Phillips head screwdriver
Flat blade screwdriver

FASTENERS

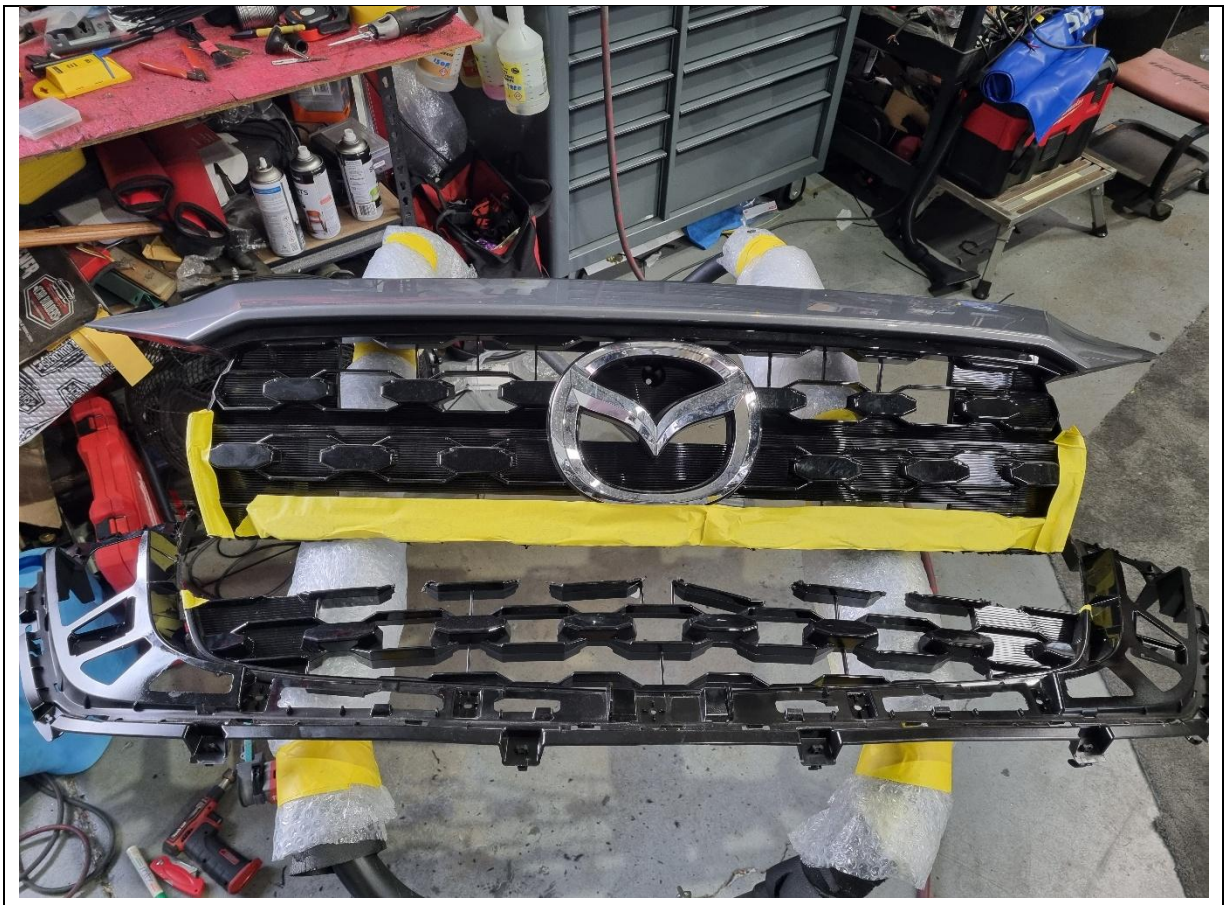
2x Phillips head screws



42. The grille will need to be cut as shown.

TOOLS REQUIRED

FASTENERS



43. Apply masking tape surround areas to be trimmed, to prevent scratches to the grille.

44. Trim the grille as detailed on the previous page.

45. Discard the lower section of the grille.

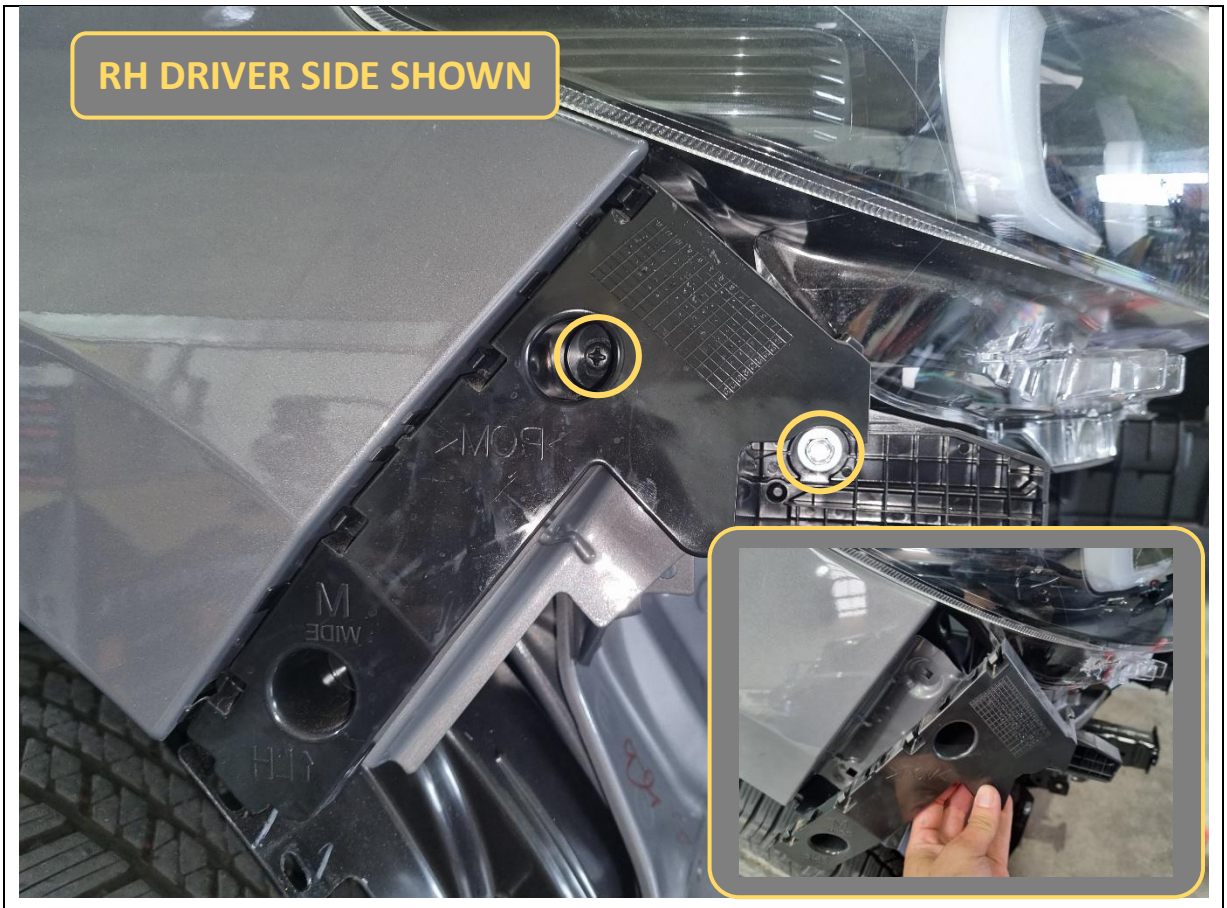
46. Clean up the trimmed edges with a deburring tool or utility knife.

TOOLS REQUIRED

Jigsaw
or
Air hacksaw

Deburring tool
or
Utility knife

FASTENERS



47. Remove 1x 10mm hex bolt and 1x Phillips head screw holding the bumper retaining clip to the vehicle. Retain the hex bolt.

48. Pull outwards to unclip the bumper clip.

49. Discard bumper clip and repeat for other side.

TOOLS REQUIRED

Phillips head screwdriver
10mm socket

FASTENERS

2x Phillips head screws
2x 10mm hex bolts (retain)

50. **Optional.** The metal guard underneath the headlight and quarter panel can be painted black. This is recommended on light-coloured vehicles, as the will be a gap between bull bar and headlight once fitted.

    Apply masking tape beforehand to prevent overspray.

51. Once the paint is dry, or if not painting, fit the supplied B-1489 headlight brackets where the bumper clip was.

52. Secure to the headlight with the same 10mm hex bolt removed previously, and secure to the guard with 1x M6x16 black button head bolt and black flat washer.

53. Repeat for other side.

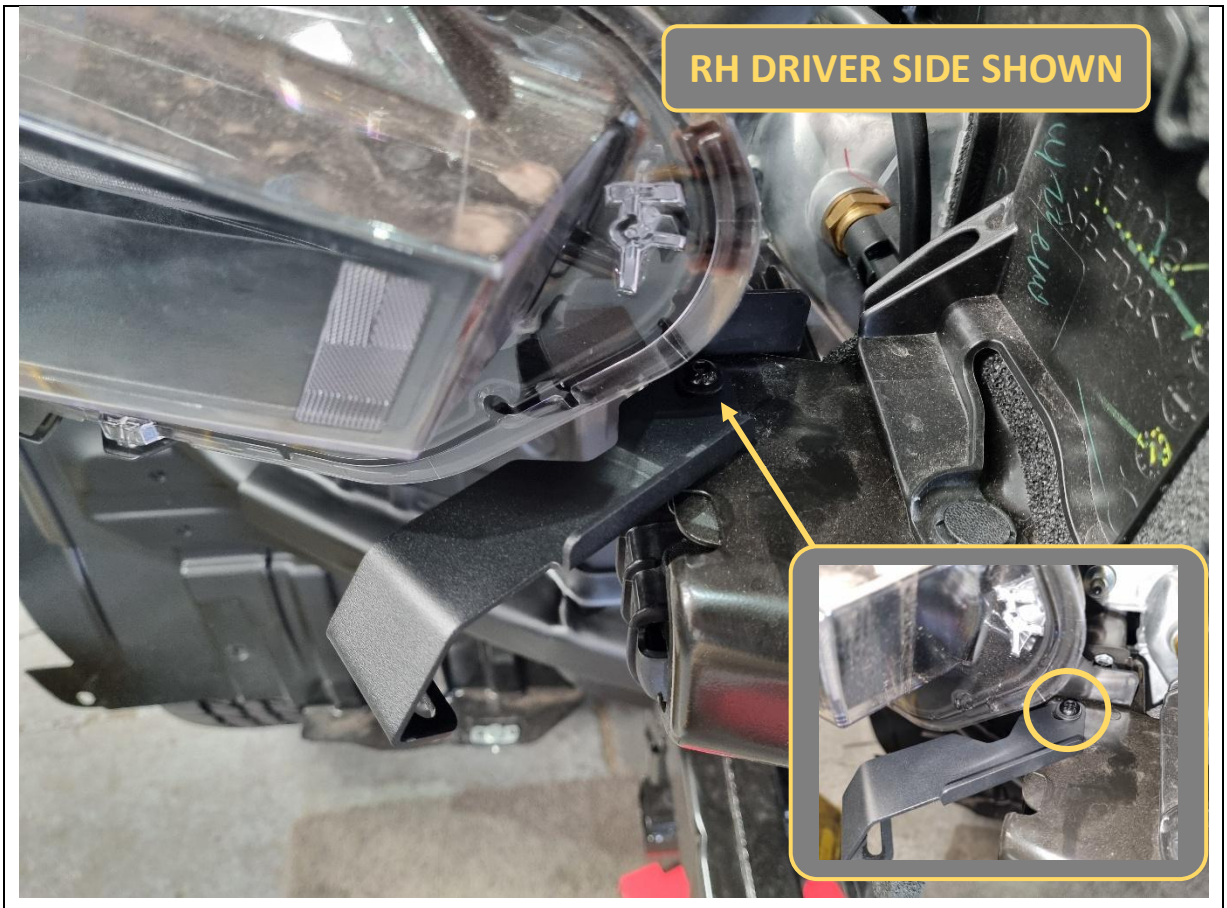
TOOLS REQUIRED

Masking tape (optional)
Black automotive paint (optional)

10mm socket/spanner
4mm hex/Allen key

FASTENERS

2x 10mm hex bolts (re-use)
2x M6x16 black button head bolt
2x M6 black flat washer



54. Fit the B-1490 headlight infill bracket onto the upper cross member, next to the inside of the headlight. Loosely secure with 1x M6x16 black button head bolt, black flat washer and flange nut.

55. Repeat for other side.

TOOLS REQUIRED

FASTENERS

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

56. Hold the supplied F-0035 plastic headlight infills up the underside of the headlight.

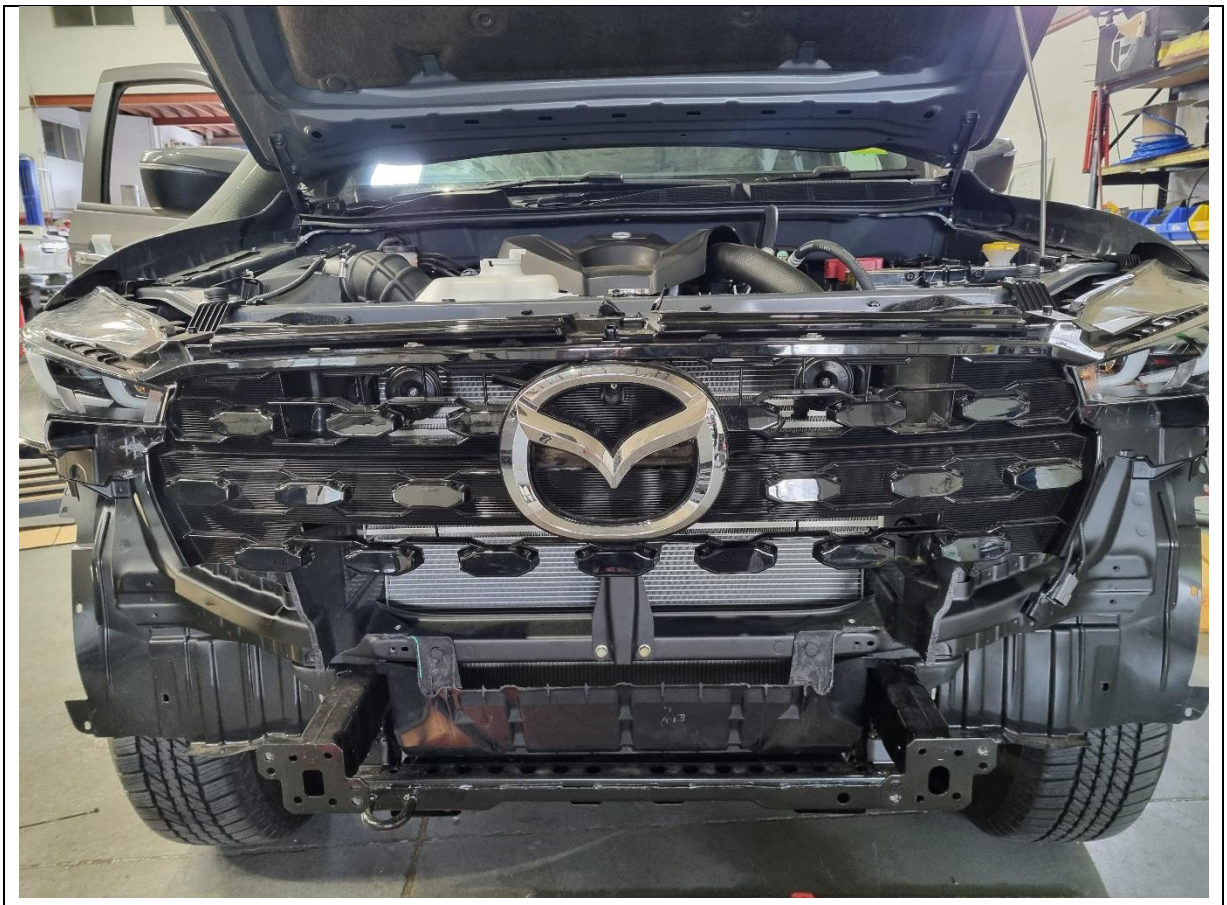
57. Adjust the B-1490 headlight infill bracket so that the lower mounting hole lines up and sits up against the inside of the plastic headlight infill.

58. Tighten the bolt to the upper cross member once the headlight infill bracket is aligned properly.

TOOLS REQUIRED

4mm hex/Allen key

FASTENERS



59. Re-fit the grille to the vehicle. Secure with the 7x plastic push clips and 1x Phillips head screw in Mazda badge removed previously.

TOOLS REQUIRED

Phillips head screwdriver

FASTENERS

7x plastic push clips (re-use)
1x Phillips head screw (re-use)

60. Clean the highlighted headlight surfaces with isopropyl alcohol and a rag.

61. Also clean the top flange surfaces of the supplied plastic headlight infills, as indicated by the arrows in the top left inset image.

Note:
If the tape kit comes supplied with a 3M Primer 94 ampoule, break the bulb on it activate primer dispensing. Apply primer to the cleaned surfaces.

Allow at least 5 minutes for the primer to chemically bond to the surfaces before applying tape (shown on next page).

TOOLS REQUIRED

Isopropyl alcohol
Workshop rag

Primer 94 (if supplied)

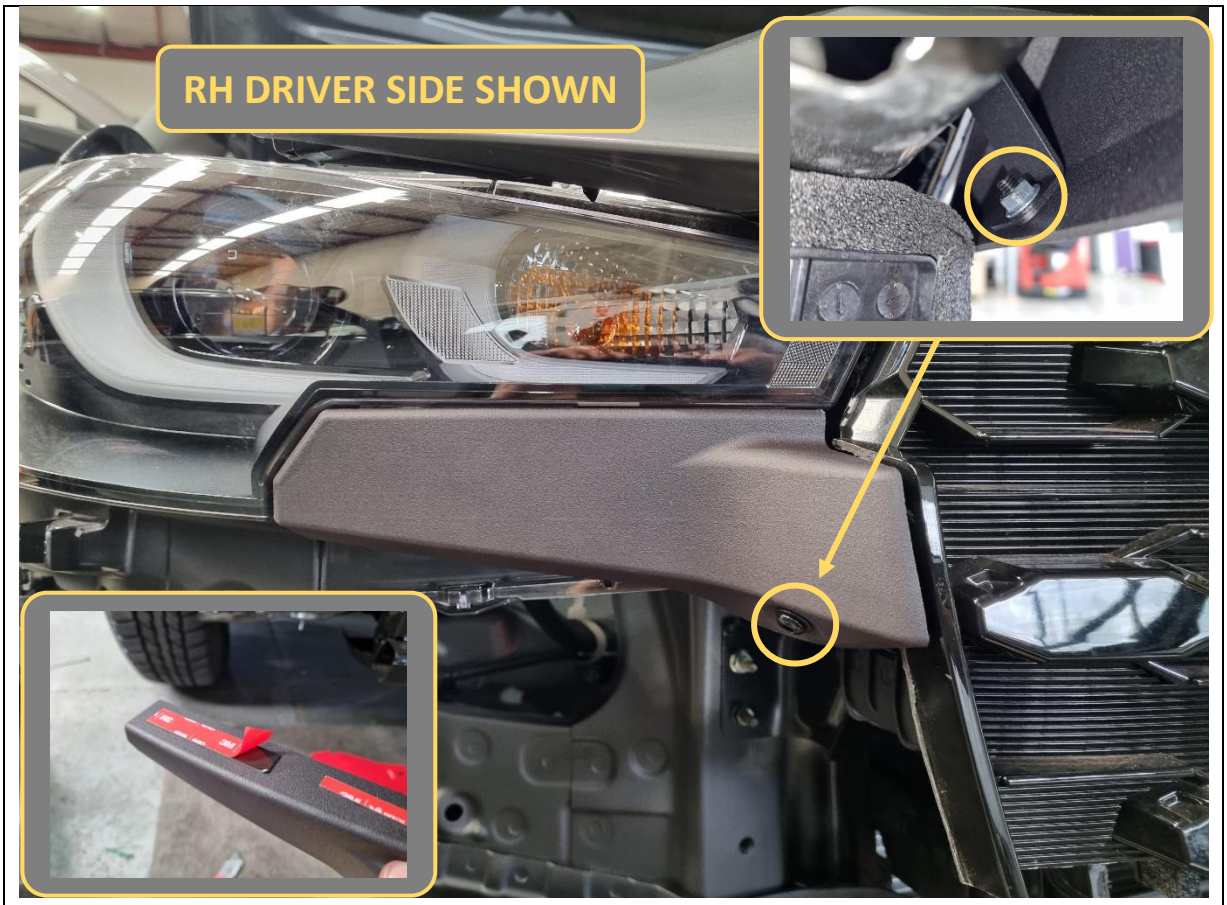
FASTENERS

62. Apply supplied 3M VHB tape strips to the 2x headlight infills as shown. Cut the 30x6mm strips of tape in half to form 15x6mm strips.

TOOLS REQUIRED

Scissors
or
Utility knife

FASTENERS



63. With a utility knife, peel off the red backing film for the tape strips, then adhere the headlight infill to the bottom inside corner of the headlight.

64. Hold the infill in place and press firmly up against the headlight for at least 20 seconds for the tape to properly adhere.

65. Secure the bottom of the infill to the B-1296 infill brace using 1x M6x16 black button head bolt, black washer and flange nut.

66. Repeat for other side.

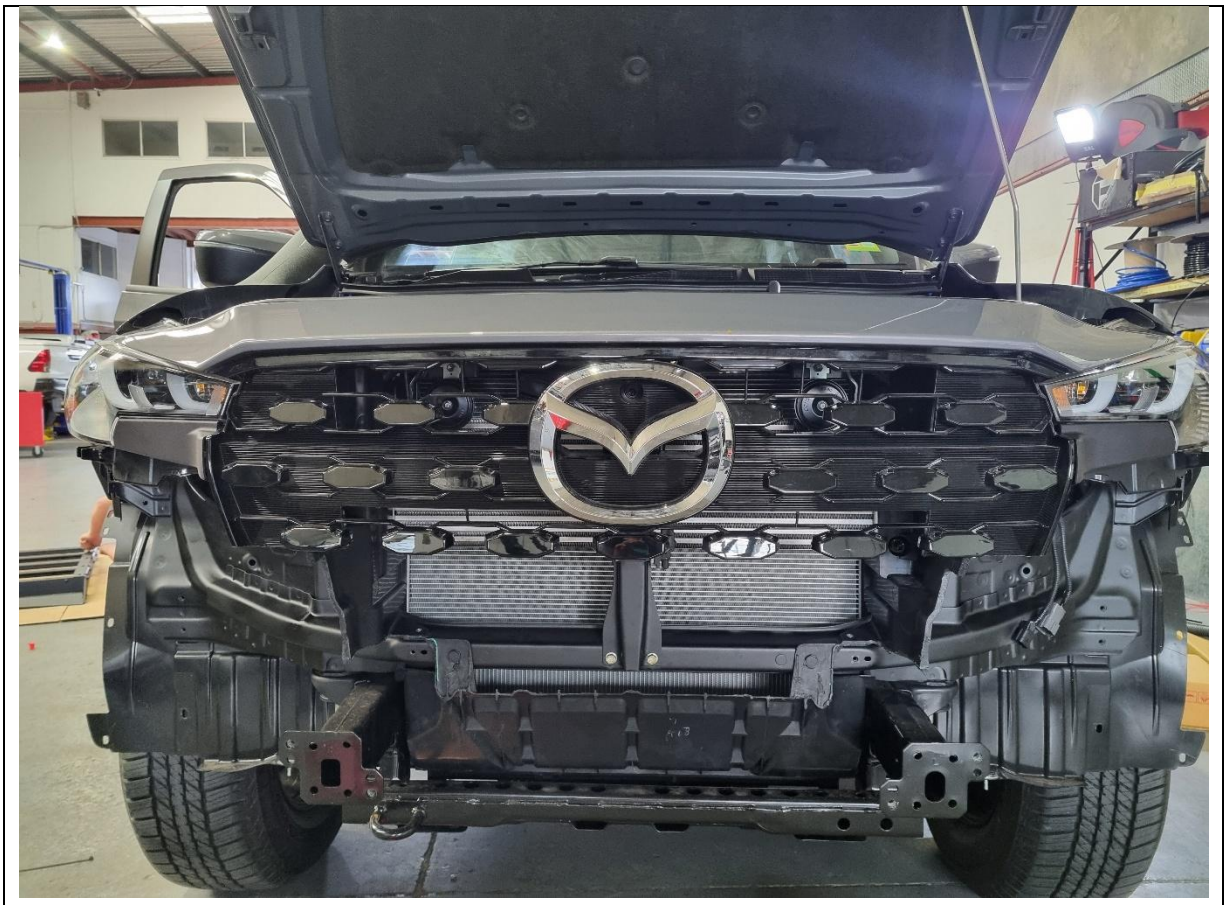
TOOLS REQUIRED

Utility knife

4mm hex/Allen key

FASTENERS

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



67. If wiring driving lights/light bars/winch, now is the best time to route wiring through behind the grille.

68. Re-fit the radiator grille cover, grille lip and factory air intake scoop in reverse order to disassembly.

TOOLS REQUIRED

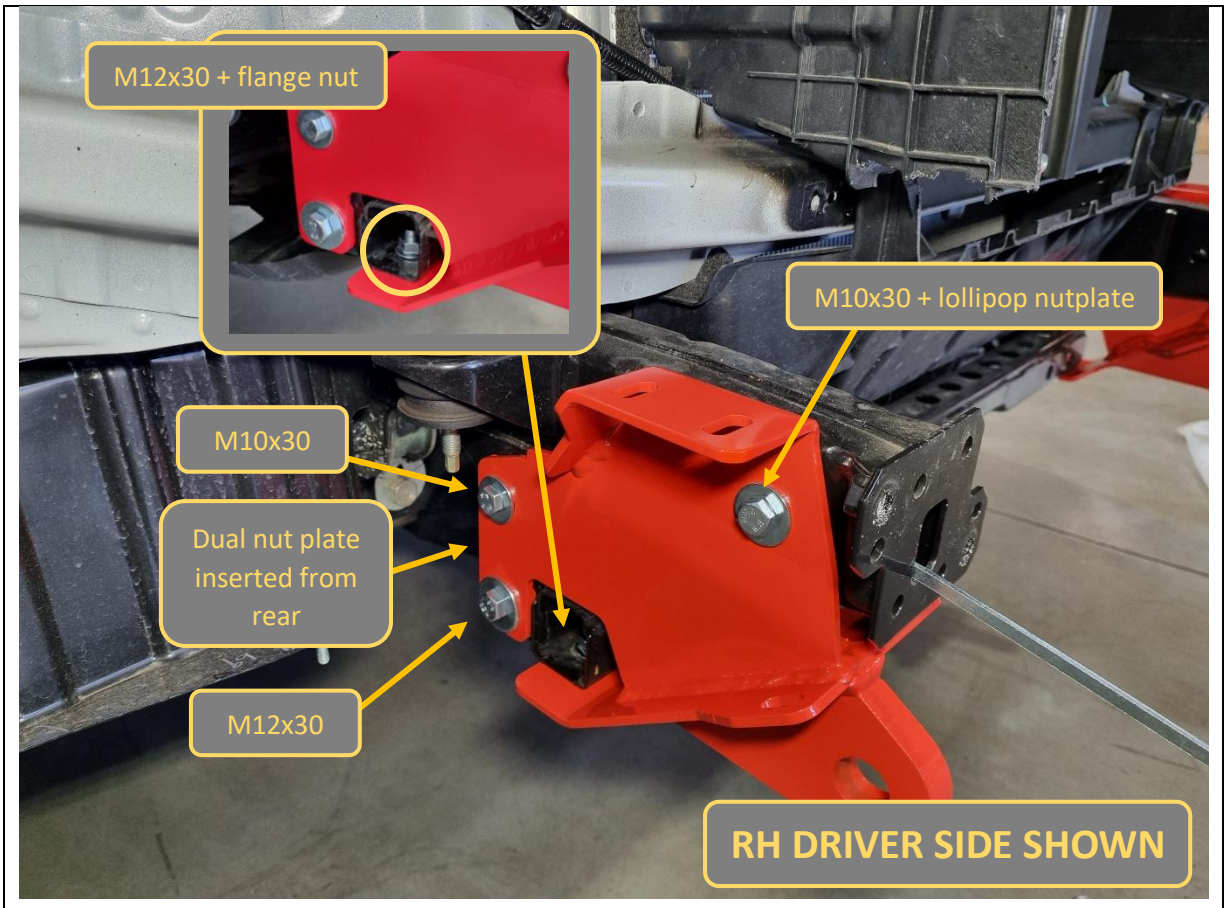
Phillips head screwdriver

FASTENERS

<u>Radiator grille cover:</u>
4x Phillips head screw
4x plastic push clips

<u>Grille lip:</u>
6x plastic push clips

<u>Factory air intake scoop:</u>
2x plastic push clips



69. Fit the tow point to the outside of the chassis rail.

70. Loosely secure the bottom of the tow point to the horizontal chassis cross member with 1x M12x30 hex bolt, heavy-duty washer and flange nut.

71. Insert 1x M10 lollipop nutplate through the front opening of the chassis rail, then loosely secure to the tow point with 1x M10x30 hex bolt and heavy-duty washer.

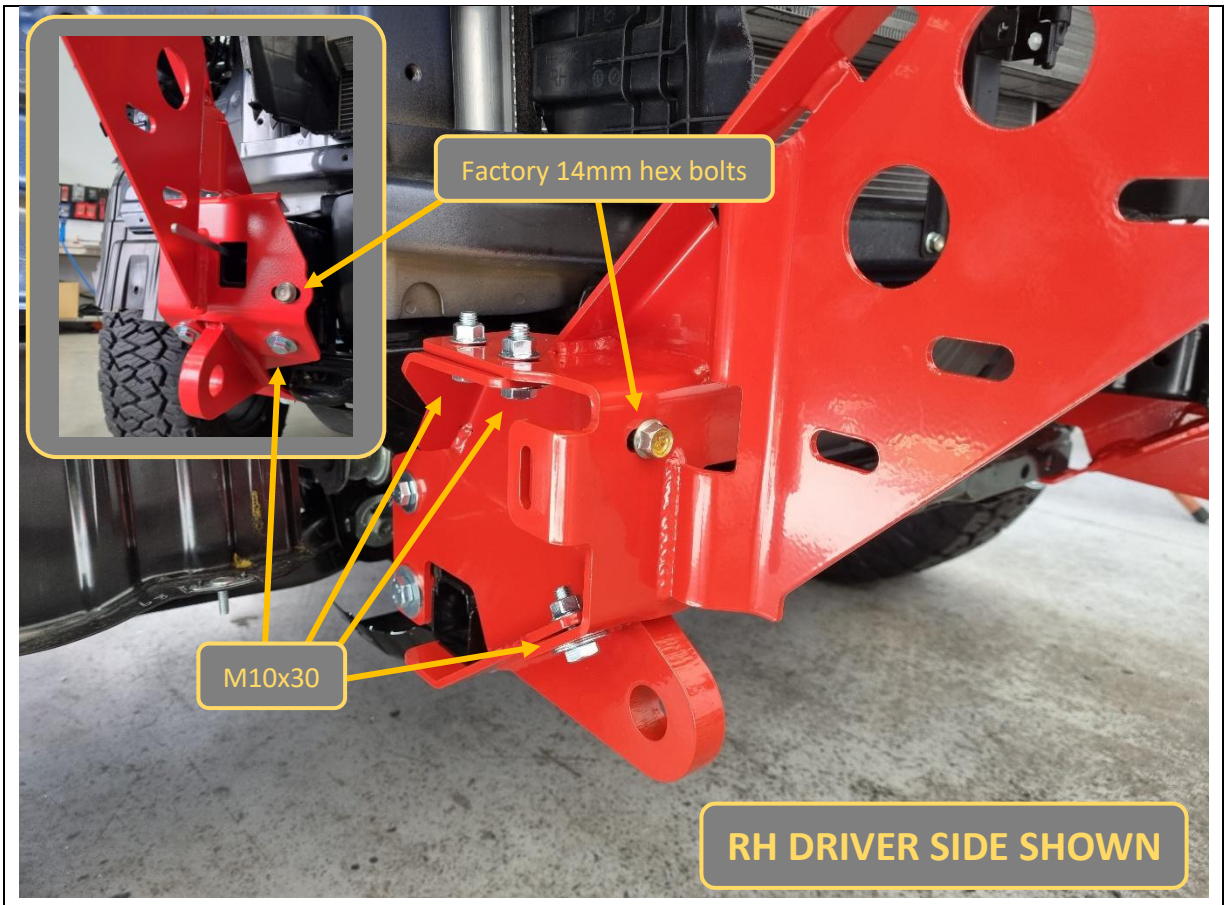
72. Insert the dual nutplate through the back of the chassis drop member and loosely secure to the tow point with 1x M12x30 hex bolt, 1x M10x30 hex bolt and heavy-duty washers.

73. Repeat for other tow point.

TOOLS REQUIRED

FASTENERS

4x M10x30 hex bolt
4x M10 heavy-duty washer
4x M12x30 hex bolt
4x M12 heavy-duty washer
2x M12 flange nut
2x M10 lollipop nutplate
2x dual nutplate



74. Fit the impact assembly to the chassis and loosely secure using 2x factory 14mm hex bolts retained from the crash beam.

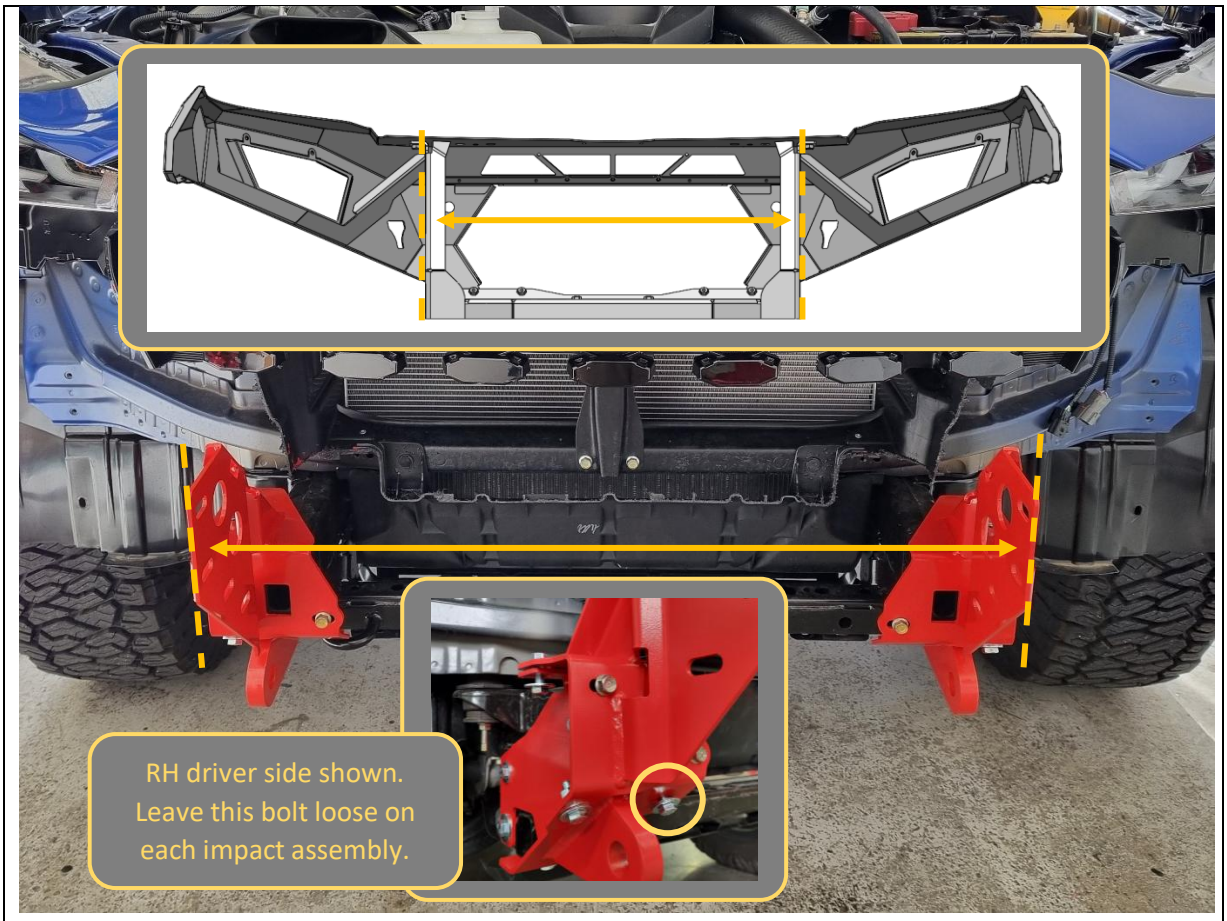
75. Secure to the impact assembly to the tow point using 4x M10x30 hex bolts, heavy-duty washers and flange nuts as shown.

76. Repeat for both sides of vehicle. Leave all bolts in the tow points and impact assemblies finger tight at this stage.

TOOLS REQUIRED

FASTENERS

4x factory 14mm hex bolt
8x M10x30 hex bolt
8x M10 heavy-duty washer
8x M10 flange nut



77. Measure the distance between the outside faces of uprights on bar using tape measure. Write distance below for reference if required.

    Bar Upright Width = _____mm

78. Adjust mounts by sliding left/right on the slots, such that distance between inner faces of mounts are 2-5mm more than bar. Ensure the mount faces are vertically upright and symmetric left/right on the chassis.

79. Tighten all bolts securing impact assemblies and tow points, except those highlighted (used later for attaching bash plates).

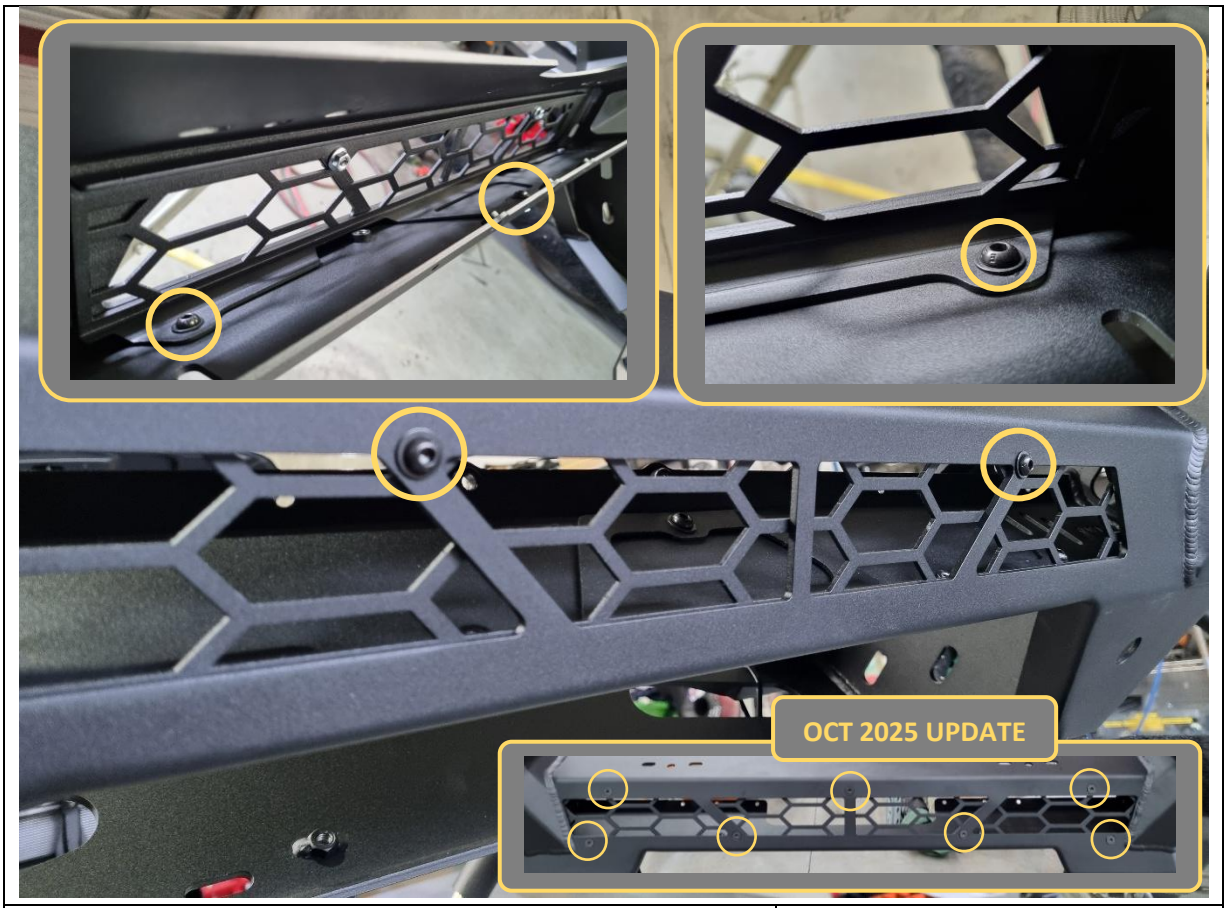
80. Re-check the distance and re-adjust as required.

TOOLS REQUIRED

Tape measure

14mm socket/spanner
16mm socket/spanner
19mm socket/spanner

FASTENERS



81. Fit the B-1485 mesh infill to the inside of the centre section of the bull bar. Note fitment is tight and infill will need to be pivoted to fit into bar.

82. Secure infill with 5x M6x12 black button head bolts, black flat washers and flange nuts. For the bottom 3x bolts, have the bolt head facing upwards for better visual appearance.

OCT 2025 UPDATE
B-1485 will be replaced by P-0515. Fit infill to inside of bar, and secure to the front face with 7x M6x12 black countersunk bolts and flange nuts.

TOOLS REQUIRED

4mm hex/Allen key

FASTENERS

5x M6x12 black button head bolt
5x M6 black flat washer
5x M6 flange nut

OCT 2025 UPDATE
7x M6x12 black countersunk bolt
7x M6 flange nut

83. If fitting an integrated light bar, do so now.

    This bar is designed to fit the Offroad Animal 22-inch light bar. If fitting this light bar, assemble the light bar with legs facing outwards, 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 “20-22inch” size single row light bars. Stedi ST3K light bars require legs facing inwards.

84. 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 is more difficult.

    Note: The front 360 degree camera can also be relocated into a stealth hoop or rally hoop instead of into the bull bar. Refer to steps 134-136 for how to use the camera relocation kit and bolt the camera to the underside of the hoop.

TOOLS REQUIRED

Supplied with accessories

FASTENERS

Supplied with accessories

85. Fit 12x M6 cage nuts into the rectangular slots in bottom of wing (6x per side).

    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

12x M6 cage nuts

86. **Toro only.** Locate the plug for the indicator on the back of each headlight and disconnect.

87. **Toro only.** Probe with a test light to confirm indicator signal and ground.

88. **Toro only.** Splice and solder automotive electrical wires into the harness for indicator signal and ground. Use heat shrink or electrical tape to insulate solder connections. Do this for both LH and RH indicators, then re-plug back into headlight.

89. **Toro only. Optional.** The supplied indicator units also have a parker light function built in. If desired, these may also be wired in. The plug on the back of the headlight is separate to the indicator, probe with a test light to confirm parker signal.

TOOLS REQUIRED

Cutting pliers
Wire strippers
Soldering iron
Solder
Automotive electrical wire
Heat shrink
Heat gun
Electrical tape

FASTENERS

90. **Toro only.** Fit indicator units to the bar, using fasteners supplied with the indicator.

TOOLS REQUIRED

Refer to instructions supplied with indicators

FASTENERS

Supplied with indicators

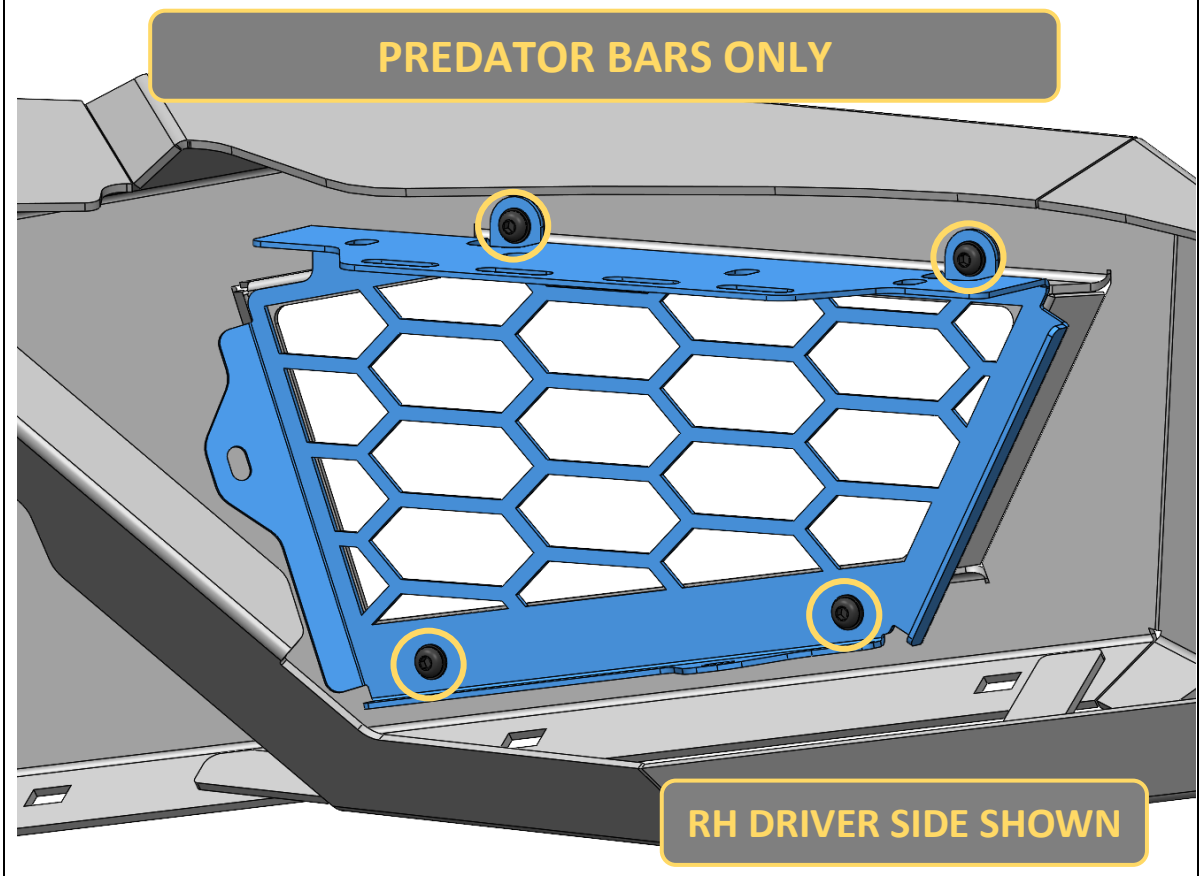
91. **Toro only.** Fit the M-0062 wing light meshes to the inside of each bull bar wing and secure with 3x M6x16 black button head bolts and black flat washers.

TOOLS REQUIRED

4mm hex/Allen key

FASTENERS

6x M6x16 black button head bolt
6x M6 black flat washer



92. **Predator only.** Fit the M-0061 wing light meshes to the inside of each bull bar wing and secure with 4x M6x16 black button head bolts and black flat washers.

TOOLS REQUIRED

4mm hex/Allen key

FASTENERS

8x M6x16 black button head bolt
8x M6 black flat washer

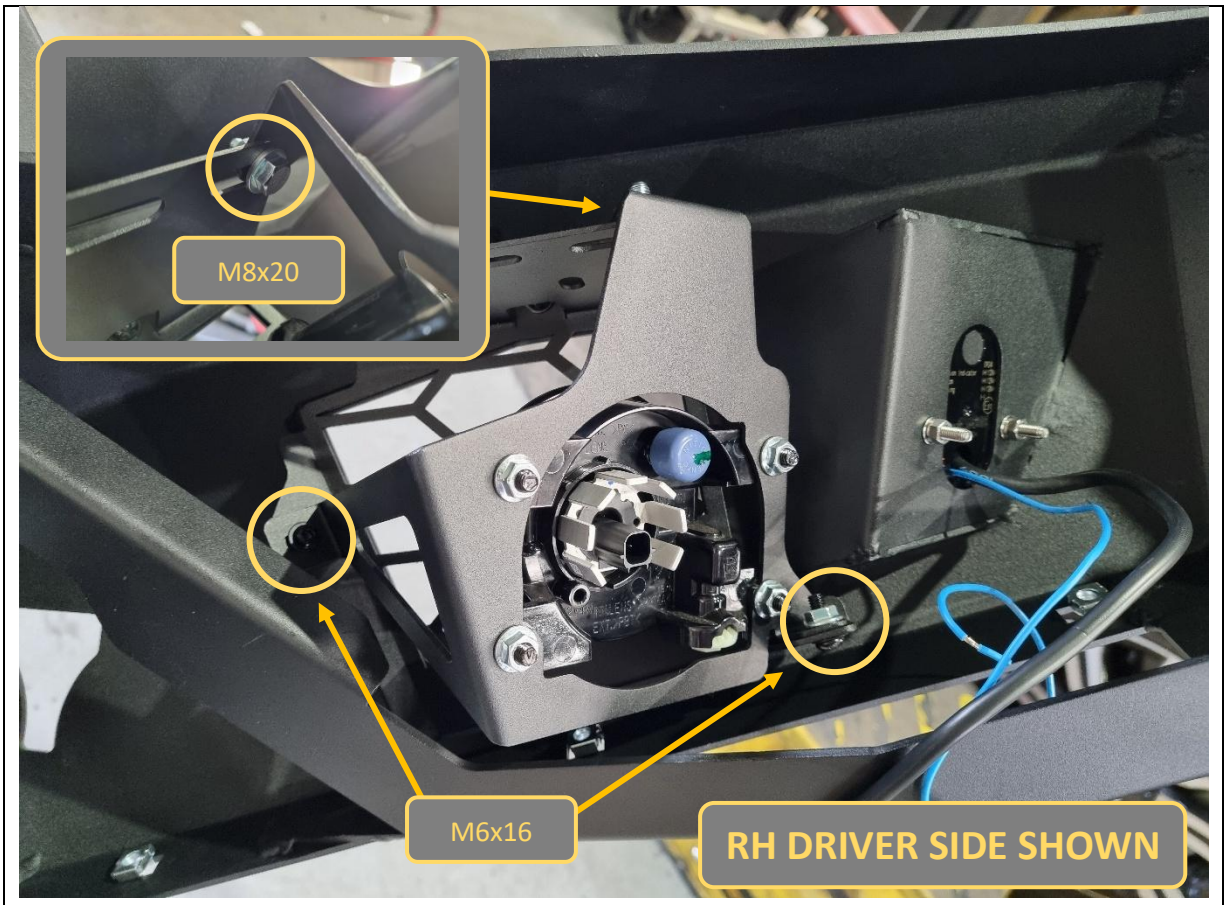
93. If equipped, unplug each fog light from the loom and then fit to the supplied mounting bracket and secure with 4x M6x16 black button head bolts, black washers and flange nuts.

TOOLS REQUIRED

4mm hex/Allen key

FASTENERS

8x M6x16 black button head bolt
8x M6 black flat washer
8x M6 flange nut



94. If equipped, fit the fog light and mounting bracket to the inside of the bullbar wing.

95. Secure the top with 1x M8x20 hex bolt, heavy duty washer and flange nut.

96. Secure the remaining 2x holes with 2x M6x16 black button head bolts, black flat washers and flange nuts.

97. Repeat for other side.

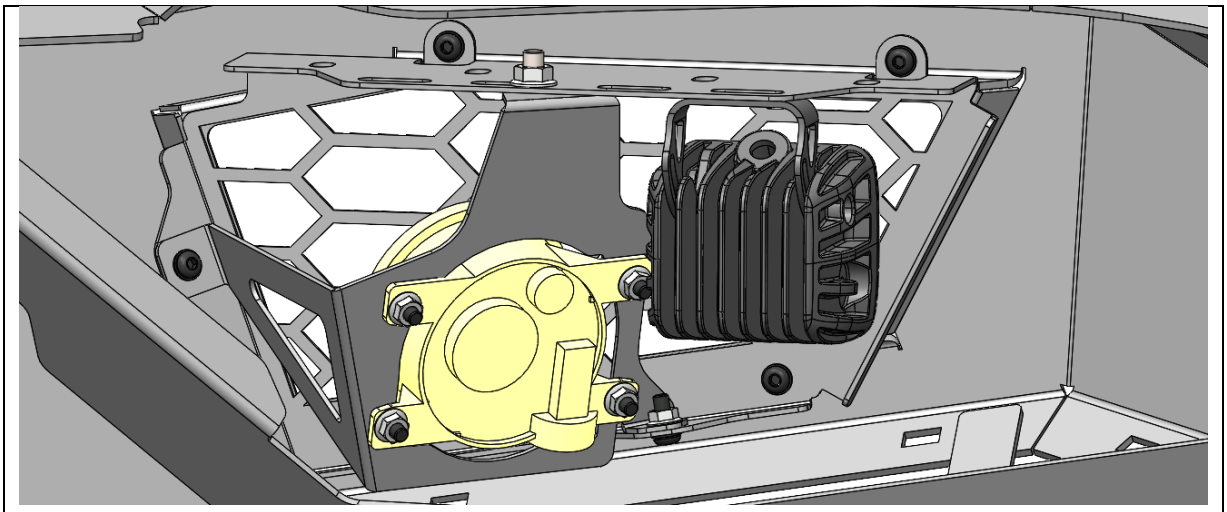
TOOLS REQUIRED

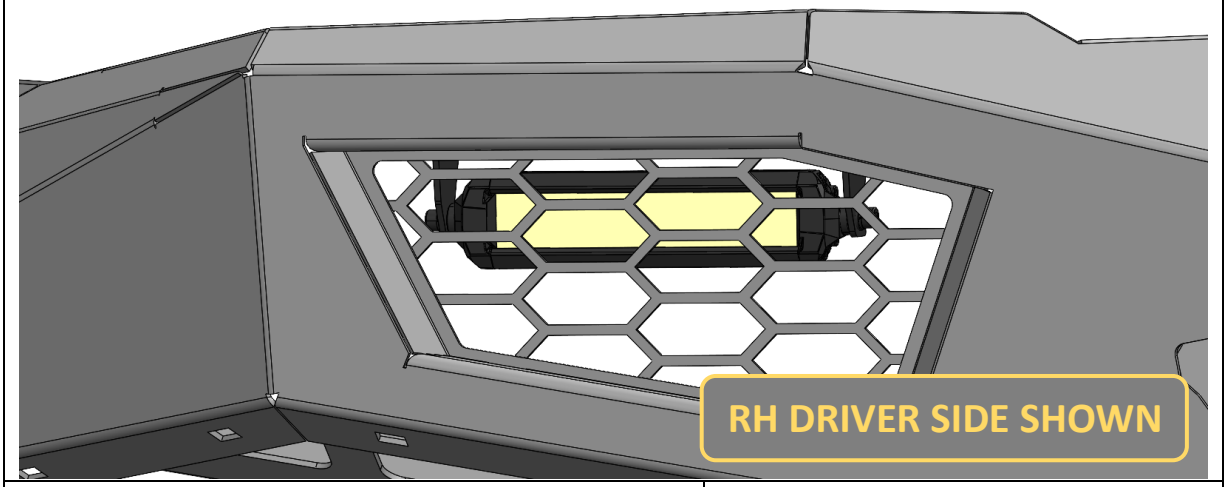
4mm hex/Allen key
13mm spanner

FASTENERS

4x M6x16 black button head bolt
4x M6 black flat washer
4x M6 flange nut

2x M8x20 hex bolt
2x M8 heavy-duty washer
2x M8 flange nut





98. Alternatively/additionally, 2”x2” cube lights or 8” light bars may be fitted in the wings.

99. There are several options:

<u>Predator bar:</u>

1. No lights
2. OE fog light only
3. 1x 8” light bar
4. 2x 2”x2” cube lights
5. 1x 2”x2” cube light
6. 1x 2”x2” cube light + OE fog light

<u>Toro bar:</u>

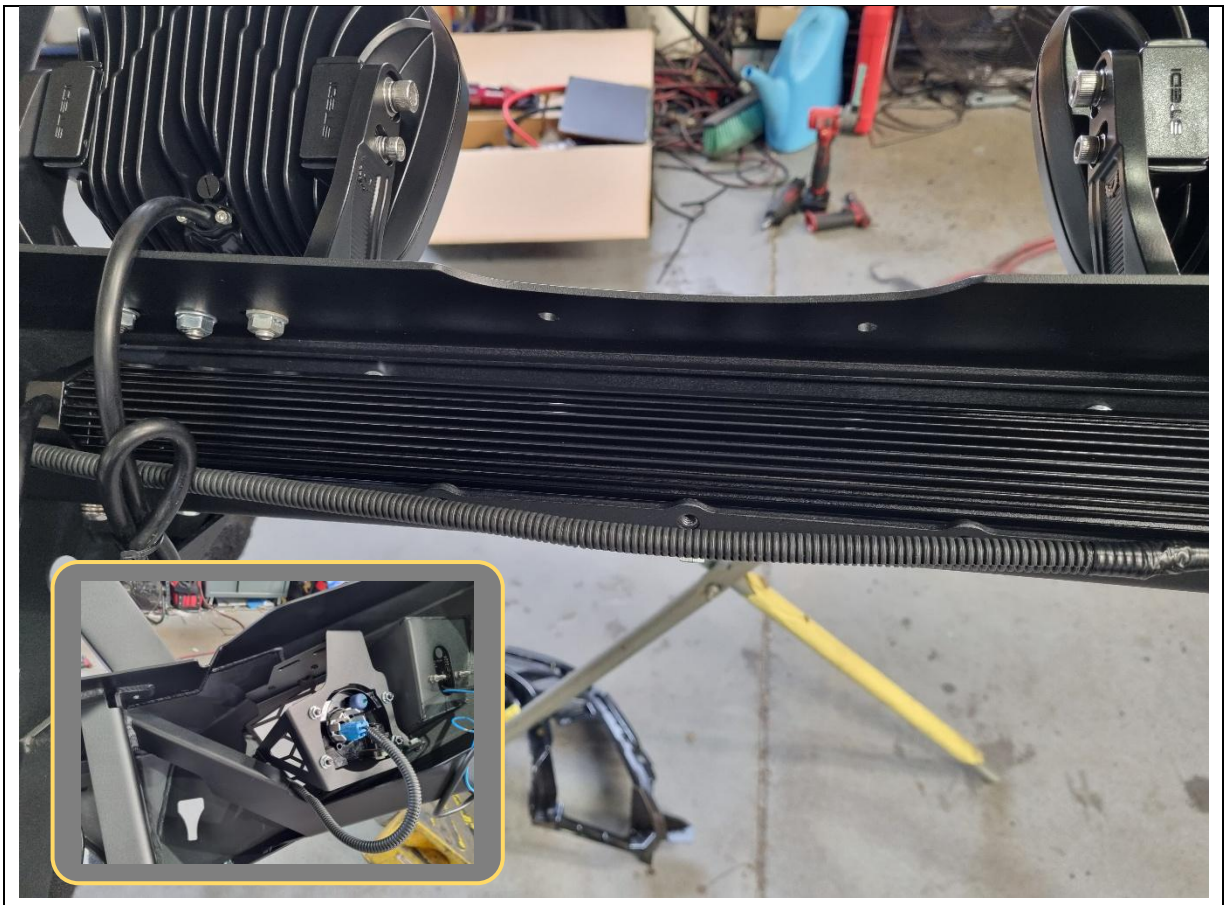
a. Indicator only
b. OE fog light + indicator
c. 1x 2”x2” cube light + indicator

TOOLS REQUIRED

Supplied with accessories

FASTENERS

Supplied with accessories



100. Route the bumper wiring harness through the inside of the bullbar.

     Use the provided cutouts to route parking sensors to the round holes in the bullbar.

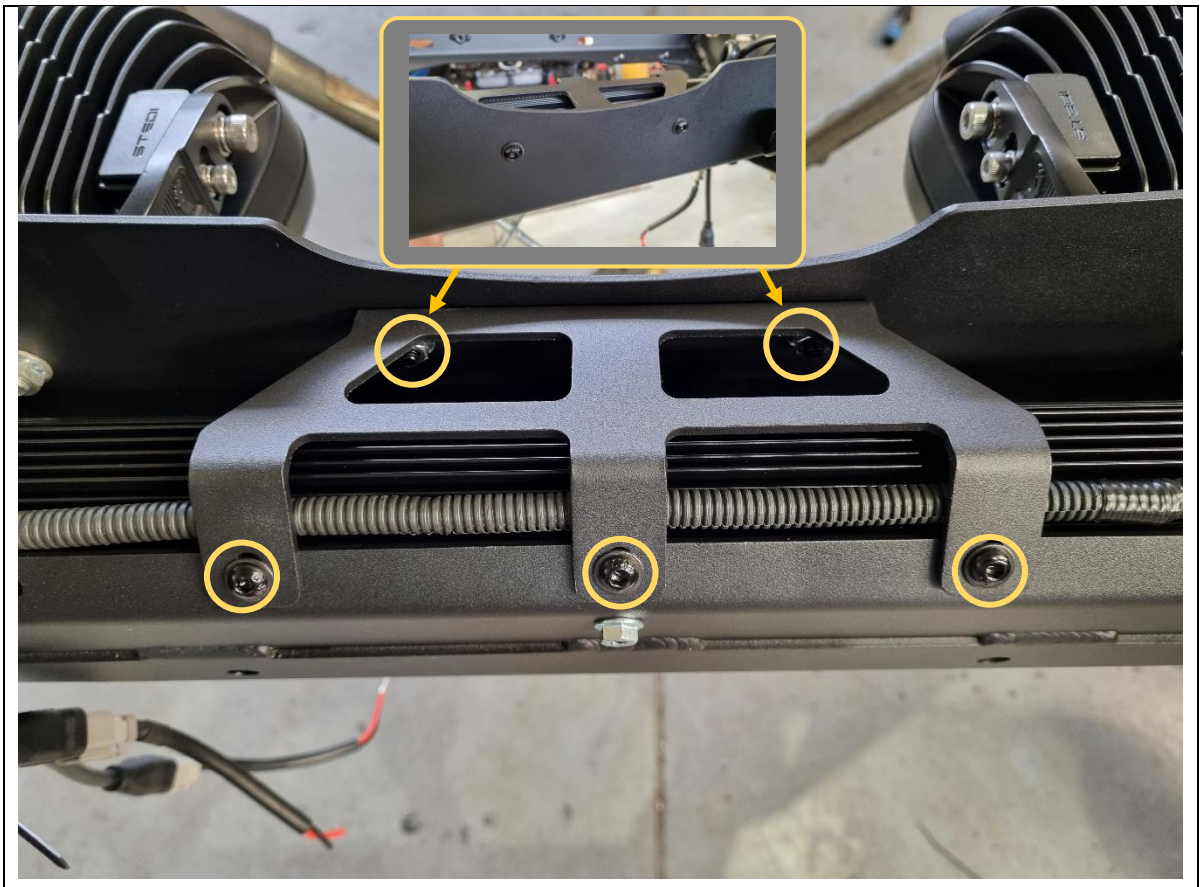
     If required, temporarily disconnect sensors to route through.

     Ensure the harness is orientated correctly, with plugs connecting to the vehicle on the LH side.

101. Re-connect the fog lights.

TOOLS REQUIRED

FASTENERS



102. Fit the pan brace to the back of the top centre section of the bullbar.

103. Secure the bottom of the pan brace to the back of the bar with 3x M6x12 black button head bolts and black washers.

104. Secure the top of the pan brace to the top face of the bar with 2x M6x16 black button head bolts, black washers and flange nuts.

TOOLS REQUIRED

4mm hex/Allen key

FASTENERS

3x M6x12 black button head bolt
2x M6x16 black button head bolt
5x M6 black flat washer
2x M6 flange nut

105. If equipped, the plastic parking sensor holders need to be modified to be able to clip them into the bullbar.

106. Disconnect the parking sensor with holder attached from the loom. Take care not to mix the location of each sensor on the harness.

107. Using a utility knife, trim 2mm off the front of the push in tabs (up to the join in the middle as shown).

108. Do for all 4 tabs around each sensor holder.

109. Also shave off the vertical keying feature on each sensor holder so that it is flush with the main cylindrical barrel of the sensor holder.

110. Re-fit parking sensors back to the harness in the bar in their correct positions.

TOOLS REQUIRED

Utility knife

FASTENERS

111. If parking sensors are not equipped, insert the supplied plastic round blanking plugs into all 4x parking sensor holes in the bullbar (see inset photos). It is recommended to use some Sikaflex silicone adhesive to ensure the plugs do not all out.

112. Otherwise, temporarily separate the sensor holder from each parking sensor, then clip into the 4x round holes in the bullbar, ensuring the orientation matches the original bumper.

113. Fit the parking sensors back into each sensor holder, with the plugs facing the correct direction.

114. If the sensor holder is loose and is rotating in the bar, apply a small blob of Sikaflex silicone adhesive to fix its position.

115. Once the bumper loom is all in position, use cable ties to secure and tidy it up inside the bull bar.

TOOLS REQUIRED

Sikaflex (optional)

Cable ties

FASTENERS

116. **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.

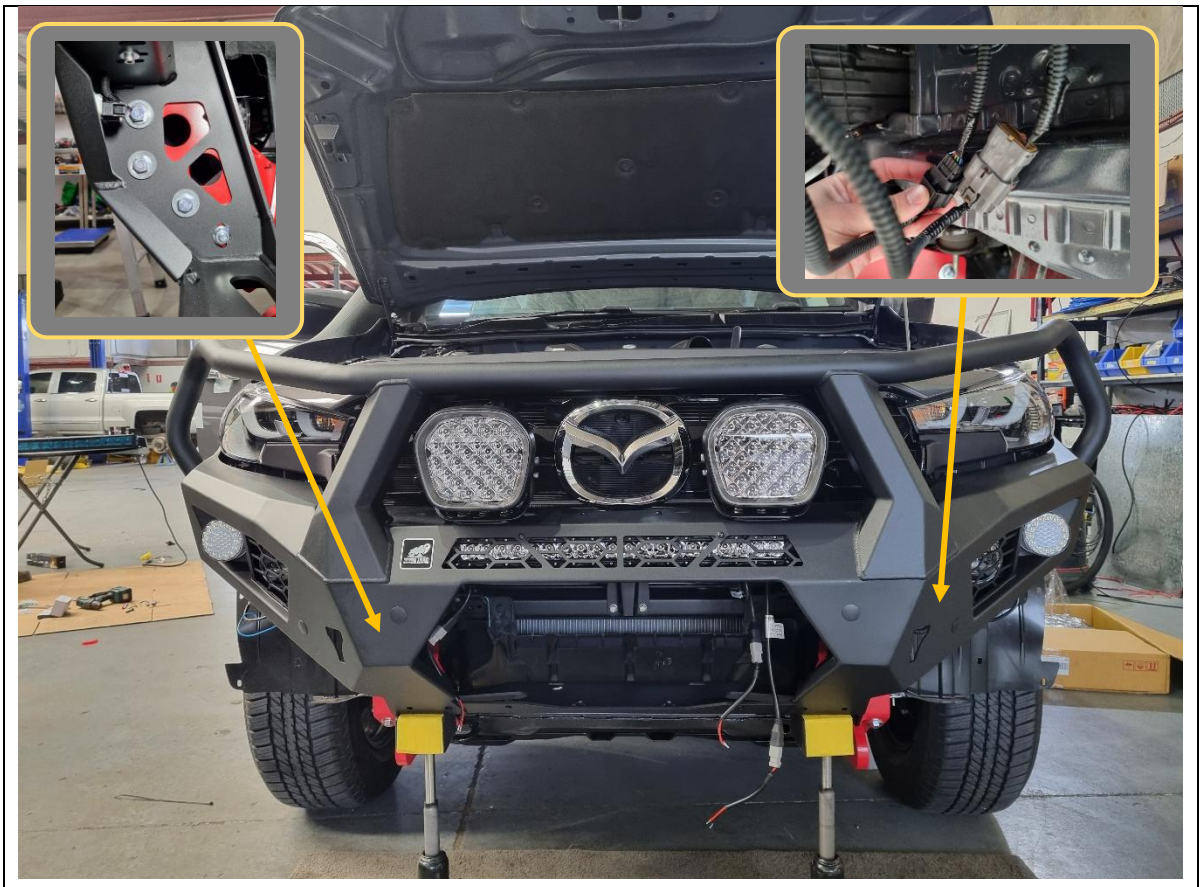
117. **Toro only.** Else fit the 2x M8x20 black button head bolts and black washers to the back of each bullbar upright, to protect nut threads in bar for future use.

TOOLS REQUIRED

5mm hex/Allen key

FASTENERS

4x M8x20 black button head bolt
4x M8 black flat washer



118. With assistance, either from another person or a lifting trolley, lift the bar onto the mounts on the vehicle.

119. 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.

120. Re-connect the 2x bumper harness connectors back to the vehicle.

121. **Toro only.** Connect the indicator repeater lamps to the vehicle headlight harness (solder/crimp together, ensure well insulated).

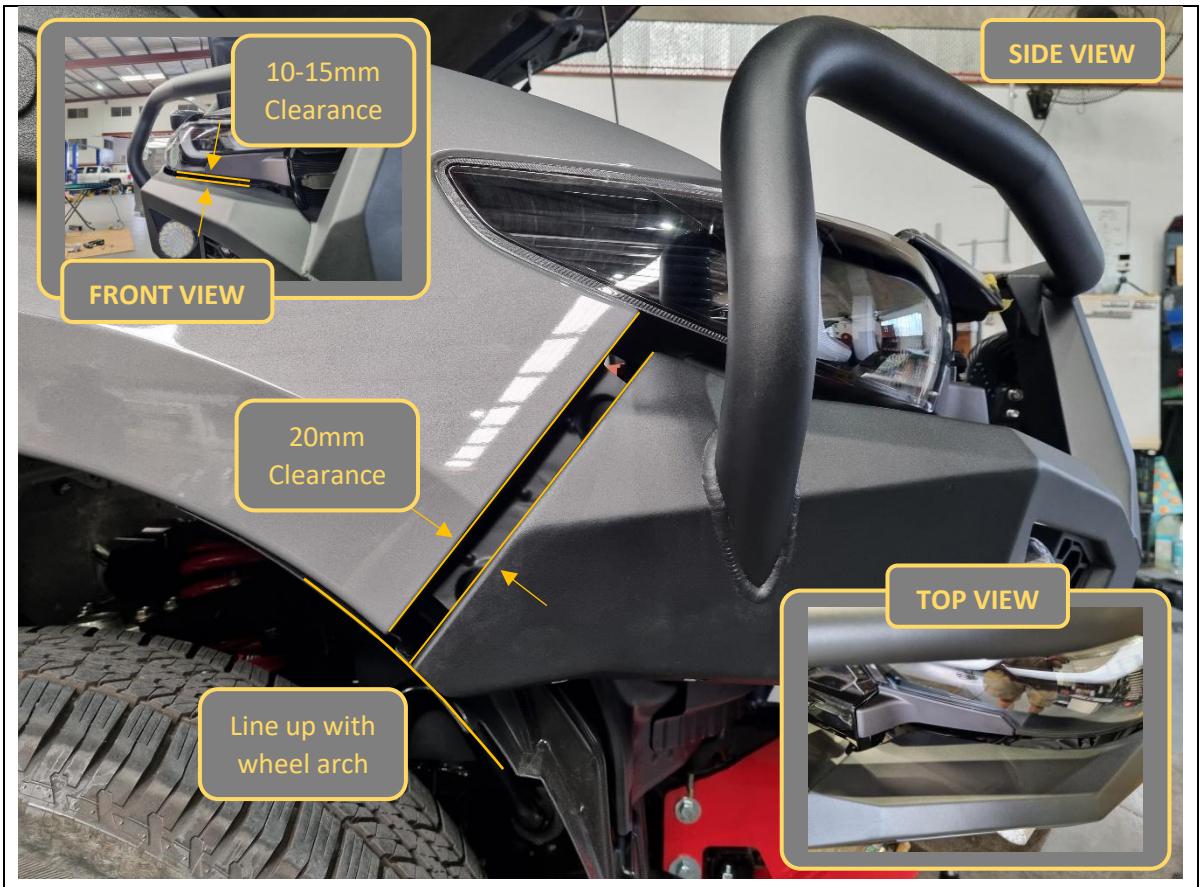
122. Check all wiring is connected, and that fog lights, indicators (Toro only) and parking sensors are all functional.

TOOLS REQUIRED

Lifting trolley

FASTENERS

8x M12x30 hex bolt
10x M12 heavy duty washer
2x M12 Nyloc nut
6x M12 flange nut



123. 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.

    Acceptable range of clearances are outlined below. **Ensure clearances are maintained all the way below the headlight.**

    Front view: the bar should sit horizontally level with the body, with the top of the pan sitting in line with the bottom of the Mazda badge. There should be 10-15mm vertical clearance between the top face of wing and headlight/headlight infill.

    Side view: the bar should have 20mm clearance and be parallel to the quarter panel. The end of the bar wing should be in line with the wheel arch liner.

    Top view: there should be 10-15mm clearance between the bar and grille.

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

TOOLS REQUIRED

Lifting Trolley

18/19mm socket/spanner

FASTENERS

125. If fitting a winch, do so now.

126. This bar is designed to fit most low mount winches, in foot down configuration. WARN ZEON 12 is the largest winch confirmed to fit.

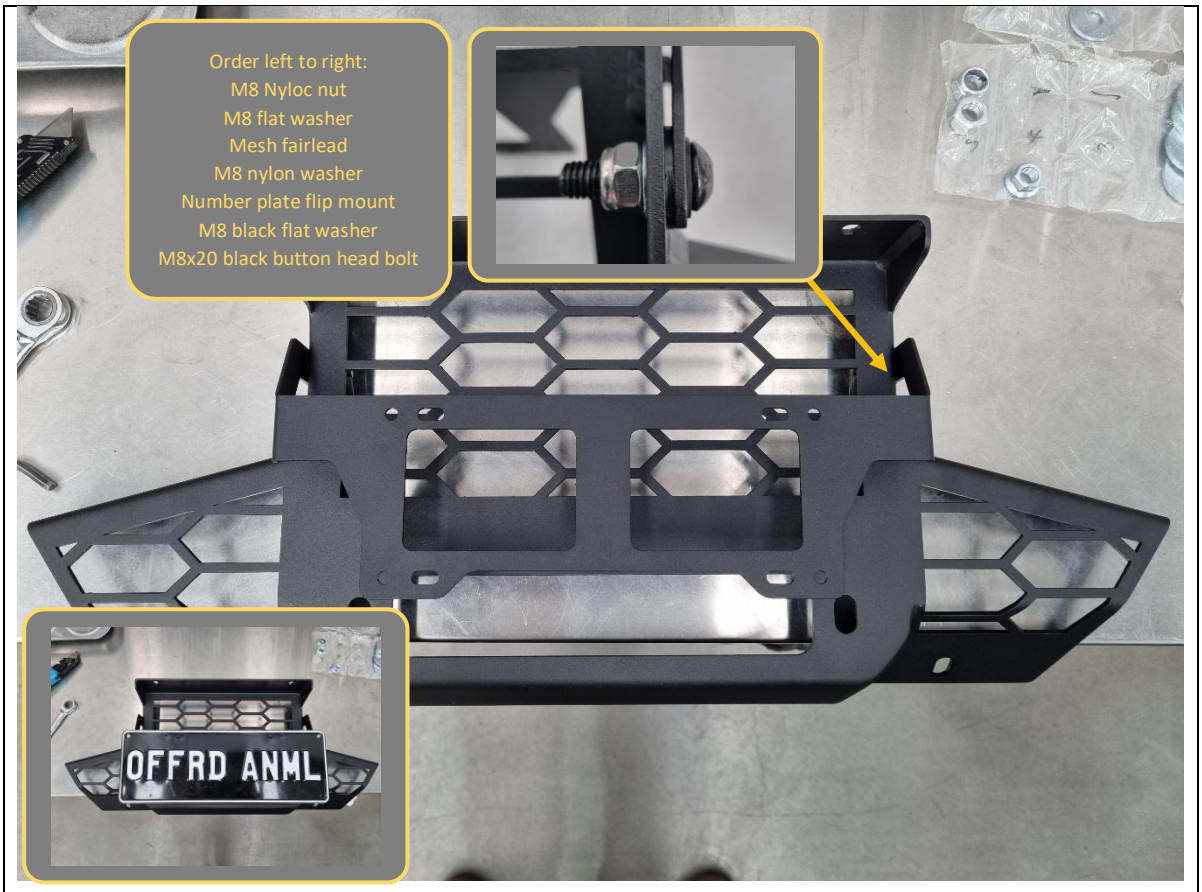
127. Ensure clutch handle will be accessible through opening in front mesh panel. Refer to winch instructions regarding changing clutch handle location.

TOOLS REQUIRED

Refer to instructions supplied by winch

FASTENERS

Supplied with winch



128. Fit number plate flip mount to mesh panel as shown above. Tighten bolts so that flip mount can be moved by hand with some friction resistance.

129. Attach number plate to mount using 2x M6x16 black button head bolts, black washers and flange nuts.

TOOLS REQUIRED

5mm hex/Allen key
13mm socket/spanner

4mm hex/Allen key

FASTENERS

2x M8x20 black button head
2x M8 black flat washer
2x M8 nylon washer
2x M8 flat washer
2x M8 flange nut

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

130. If required, fit the winch fairlead to the mesh fairlead mount 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

131. Fit the mesh fairlead mount to the centre of the bar, using 2x M8x16 black button head bolts + black washers (top), 2x M8x20 hex head bolts + heavy duty washers (bottom).

132. Tighten fasteners using 13mm socket/spanner and 5mm hex/Allen key.

133. Feed winch cable through the hawse fairlead if applicable, and then fit winch hook.

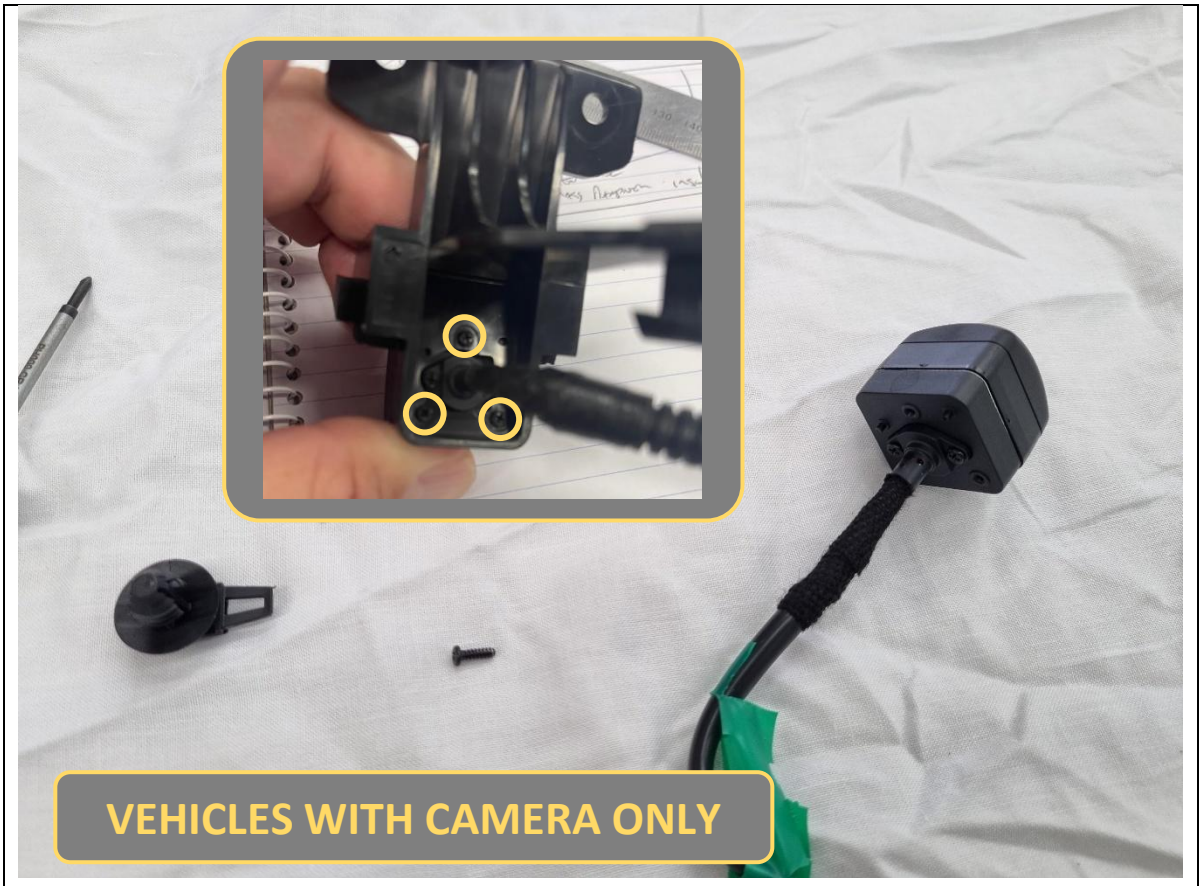
TOOLS REQUIRED

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



134. For vehicles equipped with the front 360 degree camera, remove 3x small Phillips head screws holding the camera to its mounting bracket. Retain these screws.

TOOLS REQUIRED

Small Phillips head screwdriver

FASTENERS

3x Phillips head screws

Retain

135. Fit the camera to the relocation bracket in the TB-ISU-CAM-BRKIT camera relocation kit using the original small Phillips head screws.

Note: If the plug on the end of the camera harness is too big to pass through the relocation bracket, you may need to temporarily remove the 2x screws holding the cable to the back of the camera.

TOOLS REQUIRED

Small Phillips head screwdriver

FASTENERS

3x Phillips head screws

136. Fit the camera and relocation bracket to the inside of the camera housing.

137. Next fit the camera assembly to the holes in the underside of the mesh fairlead and bull bar, and secure to the nutserts in the bar with 2x M6x20 black button head bolts and black washers.

Note: If bar retro-fit holes were drilled, use M6 flange nuts instead to secure bolts.

138. Feed the camera cable through one of the mesh openings, then plug the camera back into the main vehicle harness using the supplied RCAM1 extension harness.

139. Cable tie the harness so it won't rub/snag on anything (eg. winch), then turn the car on and check/confirm operation of camera.

TOOLS REQUIRED

4mm hex/Allen key

FASTENERS

2x M6x20 black button head bolt
2x M6 black flat washer

140. Temporarily remove the 2x M10x30 hex bolts from the impact assemblies in preparation for fitting the bash plate. Set them aside.

141. Fit the centre bash plate and secure the top to the bull bar using 4x M8x30 black button head bolts and black washers.

TOOLS REQUIRED

5mm hex/Allen key

FASTENERS

4x M8x30 black button head bolt
4x M8 black flat washer

142. Fit the supplementary lower bash plate and secure the rear through the factory underbody plate and into the chassis using the 2x factory 14mm hex bolts removed earlier.

143. Secure the front of the supplementary bash plate to the centre bash plate/impact assemblies/tow points with 3x M10x30 hex bolts, heavy duty washers and flange nuts.

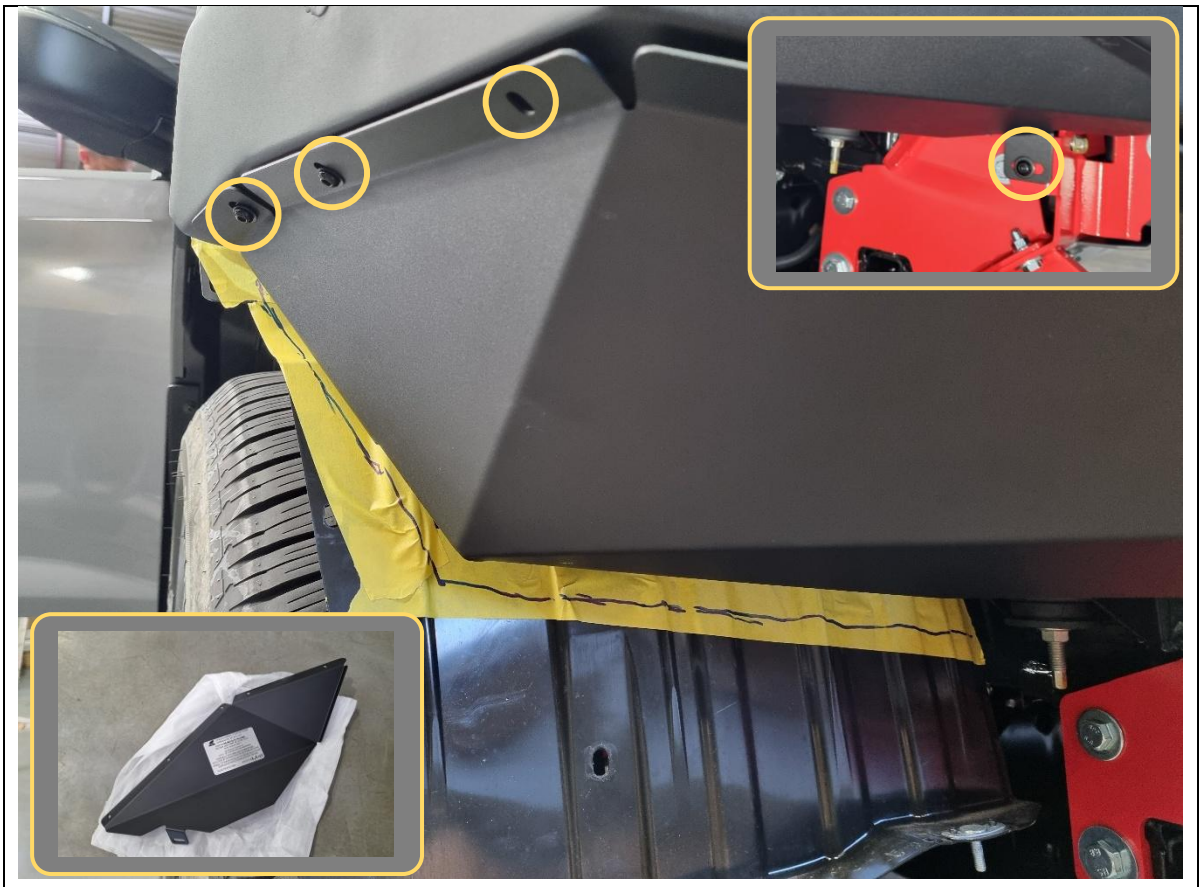
    Reach through the small access hole in the supplementary bash plate (see arrow) to reach middle flange nut.

TOOLS REQUIRED

14mm socket/spanner
16mm socket/spanner

FASTENERS

2x factory 14mm hex bolt
3x M10x30 hex bolt
3x M10 heavy duty washer
3x M10 flange nut



144. Affix the supplied ADR compliance plate on the inside of one of the side underpanels (see bottom left inset).

145. Fit the side underpanels to the underside of the bull bar wings, then loosely secure to the M6 cage nuts in the bull bar with 6x M6x16 black button head bolts and black washers, each.

146. Loosely secure the bottom inside corner of side underpanels to the impact assemblies using the 1x M8x20 black button head bolt, black washer and flange nuts, each.

147. Apply masking tape to the inner wheel arch liner and mark out cut lines matching the profile of the side underpanel.

TOOLS REQUIRED

Masking tape
Marker pen
Ruler

FASTENERS

12x M6x16 black button head bolt
12x M6 black flat washer
2x M8x20 black button head bolt
2x M8 black flat washer
2x M8 flange nut

148. Temporarily remove the side underpanels.

149. Using a sharp utility knife, cut back the plastic inner wheel arch liner as previously marked.

150. Re-fit the side underpanels and tuck the wheel arch liner in behind the flange.

151. Tighten all side underpanel bolts and repeat for other side.

TOOLS REQUIRED

Utility knife

4mm hex/Allen key

16mm socket

FASTENERS

152. **Optional.** Drill a hole through the inner wheel arch liner and use a cable tie to secure it to the body, as shown.

TOOLS REQUIRED

Electric drill
Cable tie

FASTENERS

153. Review fitment and double check all bolts are tightened correctly.

154. **Congratulations! You're done! Head for the tracks in your newly protected BT-50!**

TOOLS REQUIRED

FASTENERS