



CHEVROLET SILVERADO 1500 ZR2

4th Gen 2023+ Predator & Toro Front Bar

Fitting Instruction

IMPORTANT! – READ BEFORE INSTALLATION

- When installed in accordance with these instructions, the front protection bar does not affect the operation of the vehicles 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

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

Plastic parts may be maintained with silicone spray.

Do not use acidic or alkaline based cleaning products.

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

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

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

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

BOLT TORQUE SETTINGS

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

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

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

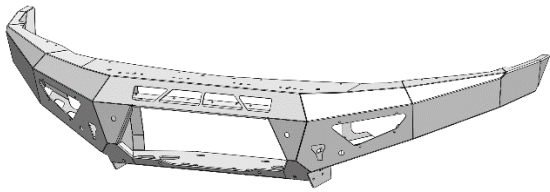
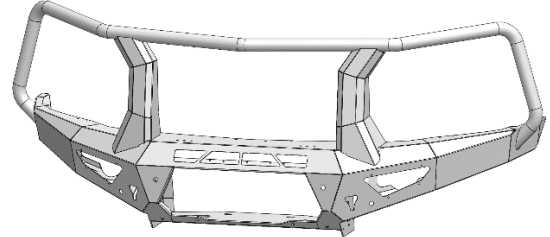
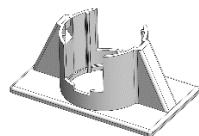
FRONT BAR MOUNTS AND TOW POINTS + REAR TOWBAR	
Size	Torque Nm
M10	57 Nm
M12	100 Nm
M14	164 Nm
M16	248 Nm

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

PARTS LISTING

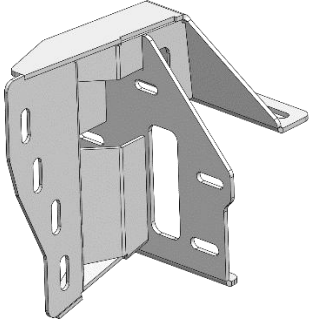
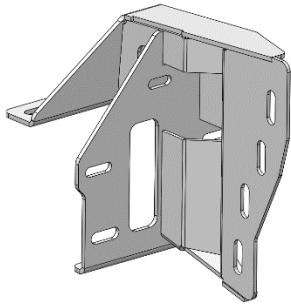
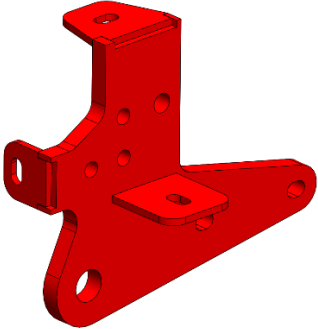
IMPORTANT: Check all parts are present before beginning work! Contact OFFROAD ANIMAL if something is missing.

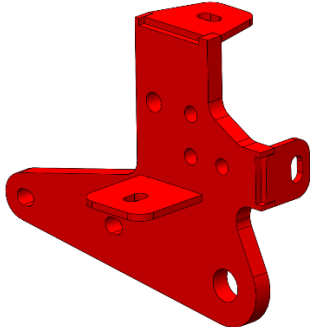
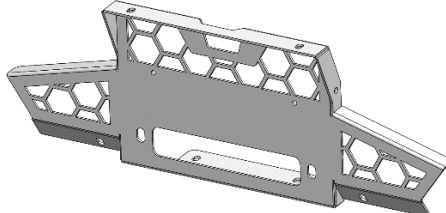
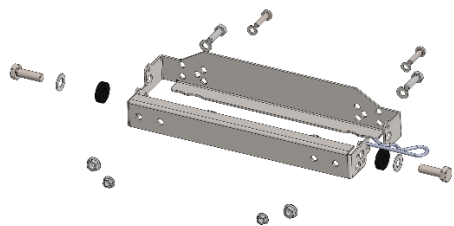
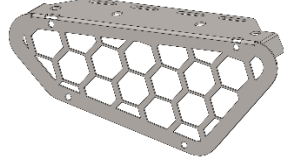
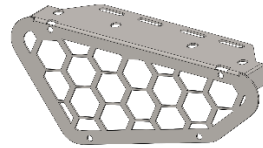
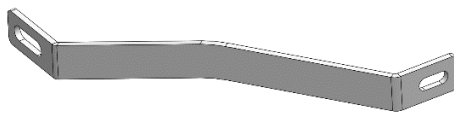
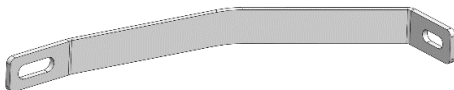
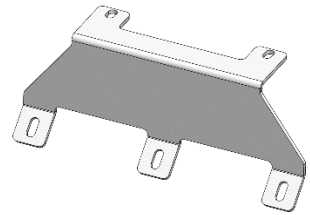
Parts – In the Main Box

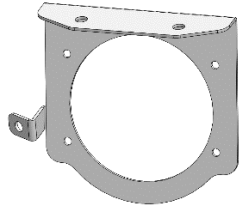
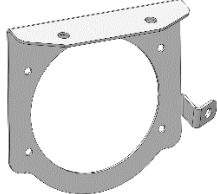
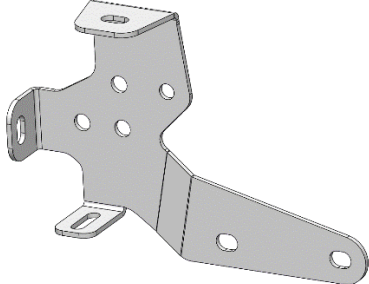
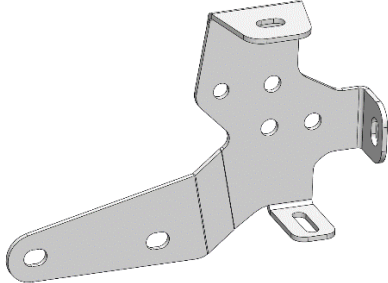
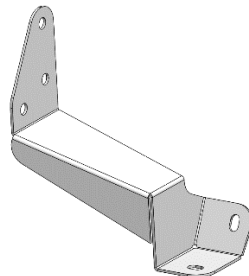
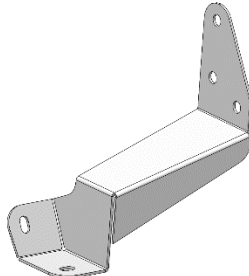
Qty	Part Number	Description	Image
1	FB-S15-T1-23-PR-ASM1	Silverado 1500 Predator Bar Welded Assembly	
OR			
1	FB-S15-T1-23-TOR-ASM1	Silverado 1500 Toro Bar Welded Assembly	
4	CPHP029	Plastic Hole Insert, 17.4MM, Black, Tigerlink Hardware CPHP029	
4	F-0030	Parking Sensor Holder - Universal, Flat	
1	FB-S15-T1-20-PR-ADRCP	ADR Compliance Plate Silverado 1500	
1	OFA-LOGO	Offroad Animal Metal Logo	
2	PWS-TOP-600	Pinch Weld PWS51T – Top Bulb Seal 600mm	

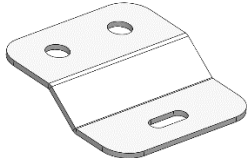
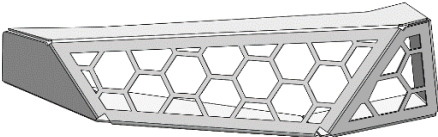
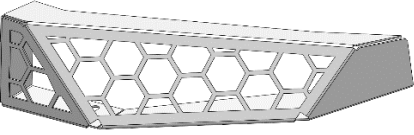
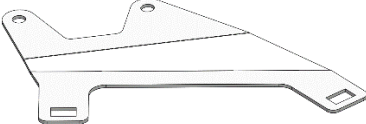
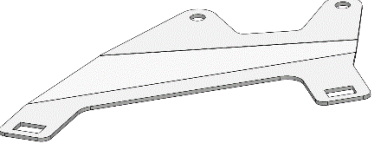
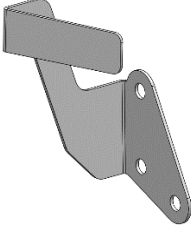
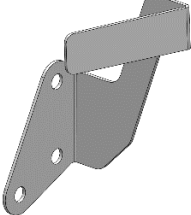
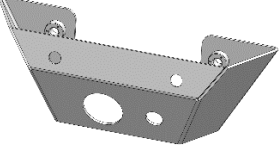
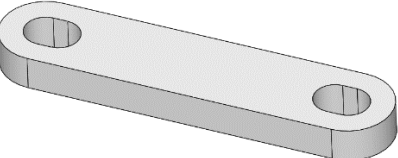
1	TK-COM-PSEN-4	Tape Kit – 4 Sensor Universal	
6	TK-FB-FRA-NG-22	Tape Kit – Next Gen Ranger Front Bar	

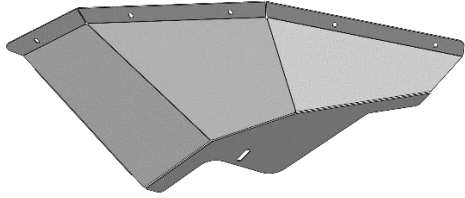
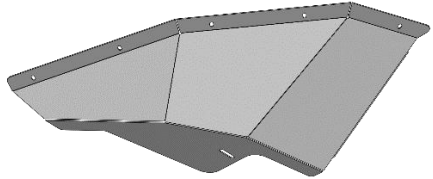
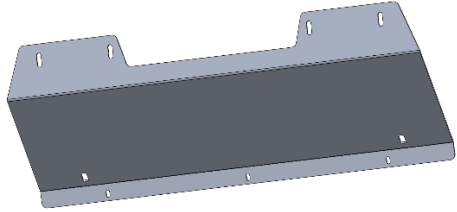
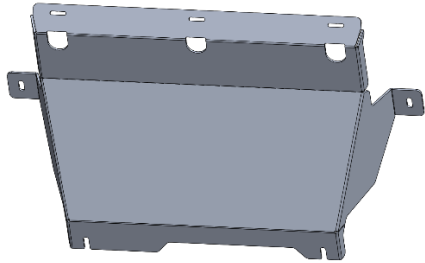
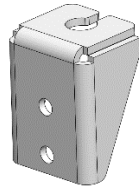
Parts – In the Fitting Kit Box

Qty	Part Number	Description	Image
1	FB-S15-T1-20-PR-ASM2R	Silverado 1500 Impact Assembly	
1	FB-S15-T1-20-PR-ASM2L	Silverado 1500 Impact Assembly	
1	FB-S15-T1-20-PR-ASM3R	Silverado 1500 Tow Point Assy	

1	FB-S15-T1-20-PR-ASM3L	Silverado 1500 Tow Point Assy	
1	FB-S15-T1-20-PR-ASM4	Silverado 1500 Mesh Fairlead Assy	
1	NPF-COM-SM-ASM0	Number Plate Flip ASM Small	
1	M-0002R	Light Cover Mesh	
1	M-0002L	Light Cover Mesh	
1	B-0857R	Silverado 1500 Winch Strap	
1	B-0857L	Silverado 1500 Winch Strap	
1	B-0858	Silverado 1500 Pan Brace	

1	B-0861R	Silverado 1500 Halo Fog Light Bracket	
1	B-0861L	Silverado 1500 Halo Fog Light Bracket	
1	B-0862R	Silverado 1500 Front Mount Chassis Brace	
1	B-0862L	Silverado 1500 Front Mount Chassis Brace	
1	B-0866R	Silverado 1500 Headlight Bracket	
1	B-0866L	Silverado 1500 Headlight Bracket	

2	B-0867	Silverado 1500 Side Underpanel Mount Bracket	
1	B-0940R	Facelift Headlight Infill	
1	B-0940L	Facelift Headlight Infill	
1	B-0941R	Facelift Headlight Infill Support Bracket	
1	B-0941L	Facelift Headlight Infill Support Bracket	
1	B-0942R	Bumper Winglet Support	
1	B-0942L	Bumper Winglet Support	
1	B-0943	Facelift Camera Housing	
6	P-0024	Ranger Tow Point Spacer	
2	P-0278	Silverado 1500 Tow Point Rear Spacer Plate	

1	U-0064R	Silverado 1500 Side Underpanel	
1	U-0064L	Silverado 1500 Side Underpanel	
1	U-0065	Silverado 1500 Bash Plate	
1	U-0066	Silverado 1500 Lower Base Plate	
TORO BAR ONLY			
2	B-0649	Toro Antenna Bracket – 90 Degree Tall	

PREDATOR Fasteners – Contained in Small Parts Kit Bag

Qty	Part Number	Description
8	M4x12 PAN	SCREW, PAN HEAD PHILLIPS, M4X12X0.7 GR4.6 ZP
8	M4 FLAT WASHER	Flat Washer M4, 8mmODx0.8mm T
8	M4 FLANGE NUT	Flange Nut, M4
4	M5X15 BHCS BZP	SCREW, BUTTON HEAD CAP, M5X15X0.8 GR12.9 ISO4042 ZnNi BLACK PASSIVATED FINISH
4	M5 Flat washer	M5 FW
4	M5 Flat washer BZP	M5 Flat Washer, 10x5.3x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
2	M5 FLANGE NUT	Flange Nut, M5x0.8 G8.8 ZP
4	M6 X 12 HEX	M6X12 HEX BOLT, ZP, 8.8
3	M6 X 20 HEX	M6X20 HEX BOLT, ZP, 8.8
27	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
7	M6 FLAT WASHER	M6 FW
27	M6 FLAT WASHER BLACK ZINC	M6 Flat Washer, 12x6.1x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
20	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
14	M6CN3MM	CAGE NUT M6x2.6-3.5
4	M8 X 12 HEX	Bolt Hex, M8X12x1.25, GR8.8 ZP
4	M8 X 20 HEX	Bolt Hex, M8X20x1.25, GR8.8 ZP
4	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 FLAT WASHER	M8 FW
2	M8 HD FLAT WASHER	M8 FLAT WASHER - High Tensile 19x8x1.9mm
8	M8 FLAT WASHER - BLACK ZINC	M8 FLAT WASHER, 16.5x8.4x1.2, ISO4042 ZnNi BLACK PASSIVATED FINISH
6	M8 FLANGE NUT	Flange Nut, M8x1.25 G8.8 ZP
4	M10 x 25	Bolt Hex, M10X25x[1.5], GR8.8 ZP
4	M10 FW LHD	WASHER, FLAT M10X28.5X2.5
4	M10 FLANGE NUT	Flange Nut, M10x1.5 G8.8 ZP
16	M12X30	Bolt Hex, M12X30x1.75, GR8.8 ZP
6	M12X120	Bolt Hex, M12X120x1.75, GR8.8 ZP
4	M12X130	Bolt Hex, M12X130x1.75, GR8.8 ZP
28	M12 FW LHD	M12 FW Large Heavy Duty
24	M12 FLANGE NUT	Flange Nut, M12x1.75 G8.8 ZP
2	M12 Nyloc nut	M12 NYLOC NUT
4	T-0060	Silverado 1500 Crush Tube 75mm
2	T-0061	Silverado 1500 Crush Tube 95mm
2	NP-COM-M8-200-ASM0	M8 Nut Plate 200mm
2	NP-COM-M10-190-SLIM	Nut Plate M10 Slim - Suit DMAX Predator
2	NP-COM-M12-300- ASM0	M12 NUT PLATE 300MM STEM

TORO Fasteners – Contained in Small Parts Kit Bag

Qty	Part Number	Description
8	M4x12 PAN	SCREW, PAN HEAD PHILLIPS, M4X12X0.7 GR4.6 ZP
8	M4 FLAT WASHER	Flat Washer M4, 8mmODx0.8mm T
8	M4 FLANGE NUT	Flange Nut, M4
4	M5X15 BHCS BZP	SCREW, BUTTON HEAD CAP, M5X15X0.8 GR12.9 ISO4042 ZnNi BLACK PASSIVATED FINISH
4	M5 Flat washer	M5 FW
4	M5 Flat washer BZP	M5 Flat Washer, 10x5.3x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
2	M5 FLANGE NUT	Flange Nut, M5x0.8 G8.8 ZP
4	M6 X 12 HEX	M6X12 HEX BOLT, ZP, 8.8
3	M6 X 20 HEX	M6X20 HEX BOLT, ZP, 8.8
27	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
7	M6 FLAT WASHER	M6 FW
27	M6 FLAT WASHER BLACK ZINC	M6 Flat Washer, 12x6.1x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
20	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
14	M6CN3MM	CAGE NUT M6x2.6-3.5
4	M8 X 12 HEX	Bolt Hex, M8X12x1.25, GR8.8 ZP
4	M8 X 20 HEX	Bolt Hex, M8X20x1.25, GR8.8 ZP
4	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
6	M8 FLAT WASHER	M8 FW
2	M8 HD FLAT WASHER	M8 FLAT WASHER - High Tensile 19x8x1.9mm
12	M8 FLAT WASHER - BLACK ZINC	M8 FLAT WASHER, 16.5x8.4x1.2, ISO4042 ZnNi BLACK PASSIVATED FINISH
6	M8 FLANGE NUT	Flange Nut, M8x1.25 G8.8 ZP
4	M10 x 25	Bolt Hex, M10X25x[1.5], GR8.8 ZP
4	M10 FW LHD	WASHER, FLAT M10X28.5X2.5
4	M10 FLANGE NUT	Flange Nut, M10x1.5 G8.8 ZP
16	M12X30	Bolt Hex, M12X30x1.75, GR8.8 ZP
6	M12X120	Bolt Hex, M12X120x1.75, GR8.8 ZP
4	M12X130	Bolt Hex, M12X130x1.75, GR8.8 ZP
28	M12 FW LHD	M12 FW Large Heavy Duty
24	M12 FLANGE NUT	Flange Nut, M12x1.75 G8.8 ZP
2	M12 Nyloc nut	M12 NYLOC NUT
4	T-0060	Silverado 1500 Crush Tube 75mm
2	T-0061	Silverado 1500 Crush Tube 95mm
2	NP-COM-M8-200-ASM0	M8 Nut Plate 200mm
2	NP-COM-M10-190-SLIM	Nut Plate M10 Slim - Suit DMAX Predator
2	NP-COM-M12-300- ASM0	M12 NUT PLATE 300MM STEM

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)	Isopropyl Alcohol
Socket Extension Bar	Air Hacksaw	Rag
Metric Spanner Set 10-19mm	or	Cable Ties
Hex (Allen) Key Set 4-6mm	Oscillating Multi Tool	Sandpaper
Torx Key Set	or	Automotive adhesive sealant (eg. Sikaflex)
Trim Removal Tool	Angle Grinder	
Plastic Auto Trim Tool Set	or	
Flat Blade Screwdriver Set	Jigsaw	
Phillips Head Screwdriver Set		
Utility Knife		
Side Cutters		
Pliers		

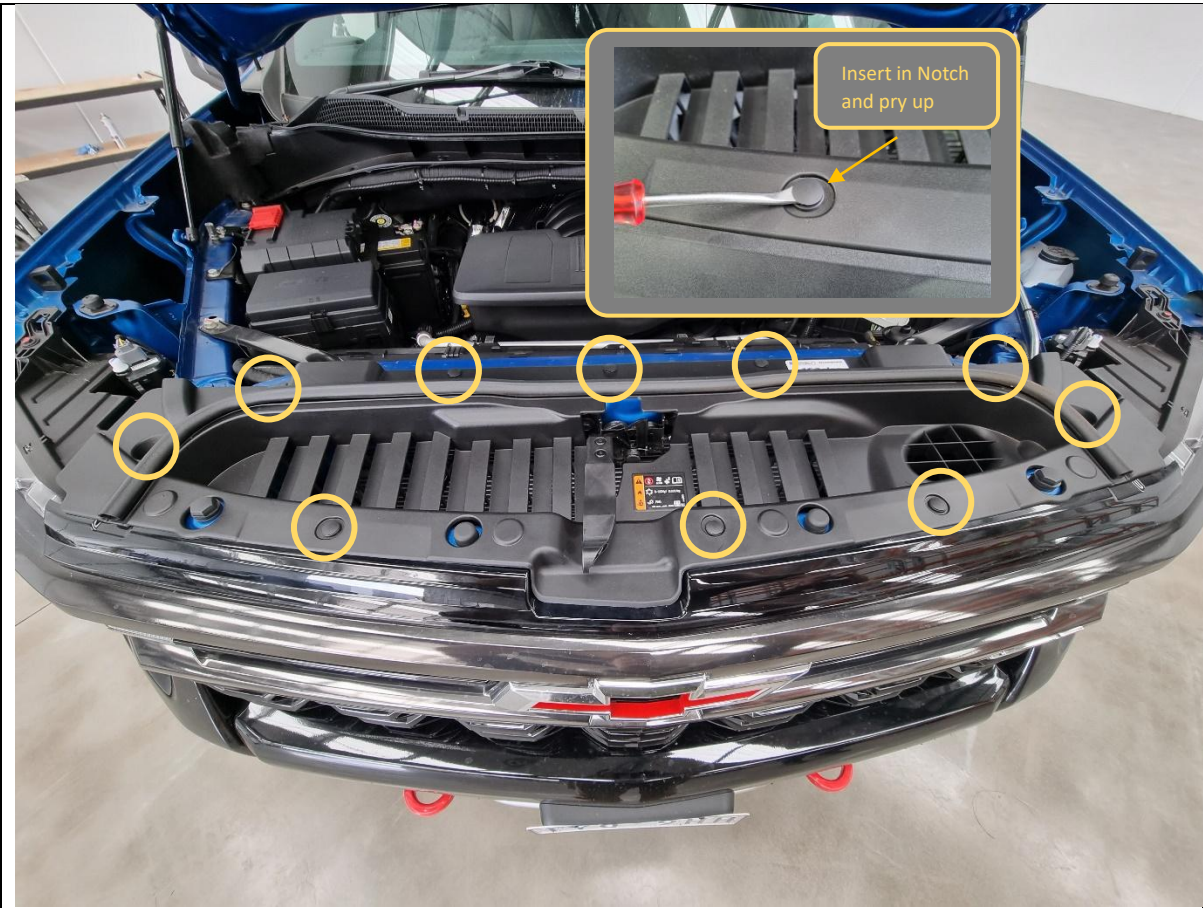
WORKSHOP SAFETY

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. Open the bonnet. 2. Remove the bonnet release handle by unscrewing the 2x T15 Torx screws.	TOOLS REQUIRED T15 Torx Driver
	FASTENERS 2x T15 Torx screw Retain for Reassembly



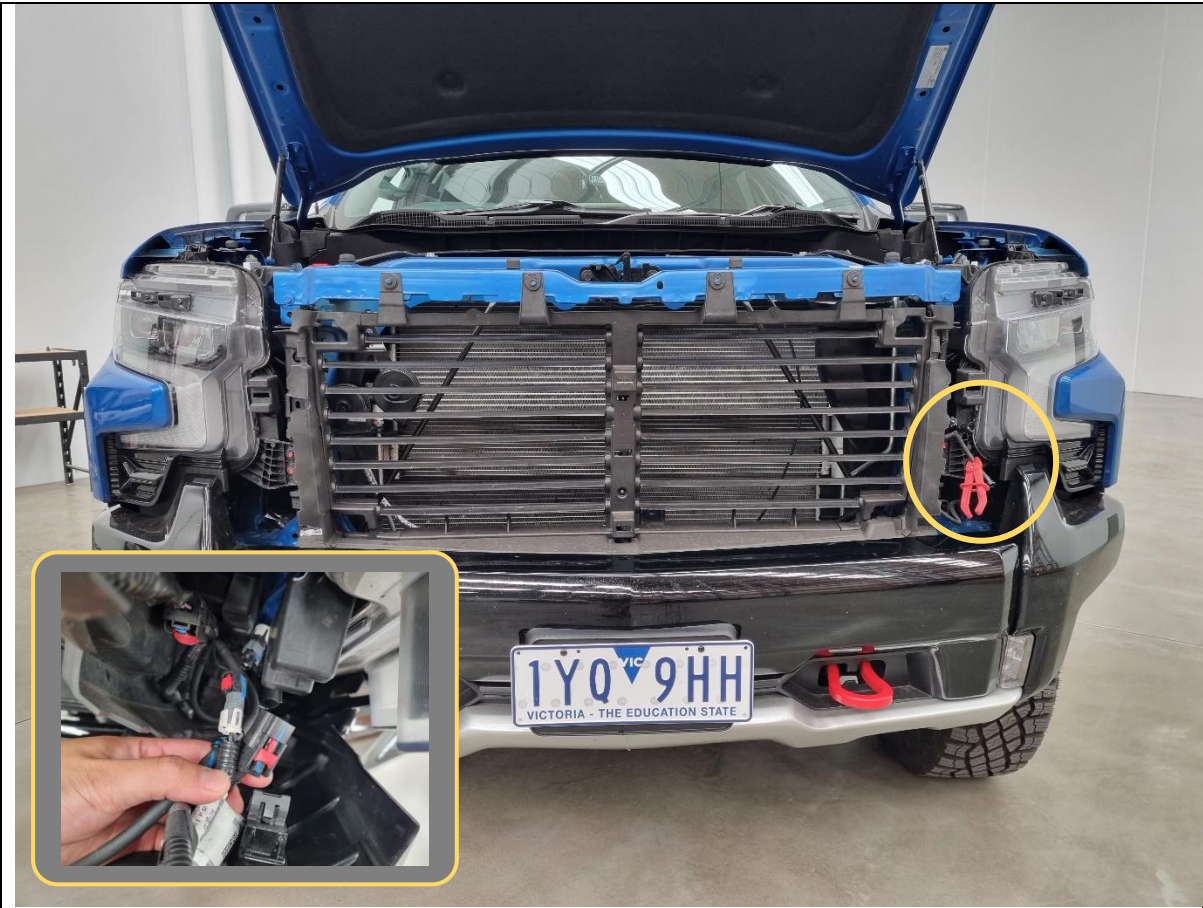
3. Remove 10x plastic push rivets securing the radiator grille cover, by levering centre section upwards using flat bladed screwdriver or trim tool, as shown.	TOOLS REQUIRED Flat Blade Screwdriver or Trim Tool
	FASTENERS 10x Plastic Push Rivet Retain for Reassembly



4. Remove 4x 10mm hex bolts on the top edge of the grille.	TOOLS REQUIRED 10mm socket
	FASTENERS 4x 10mm hex bolt Retain for Reassembly



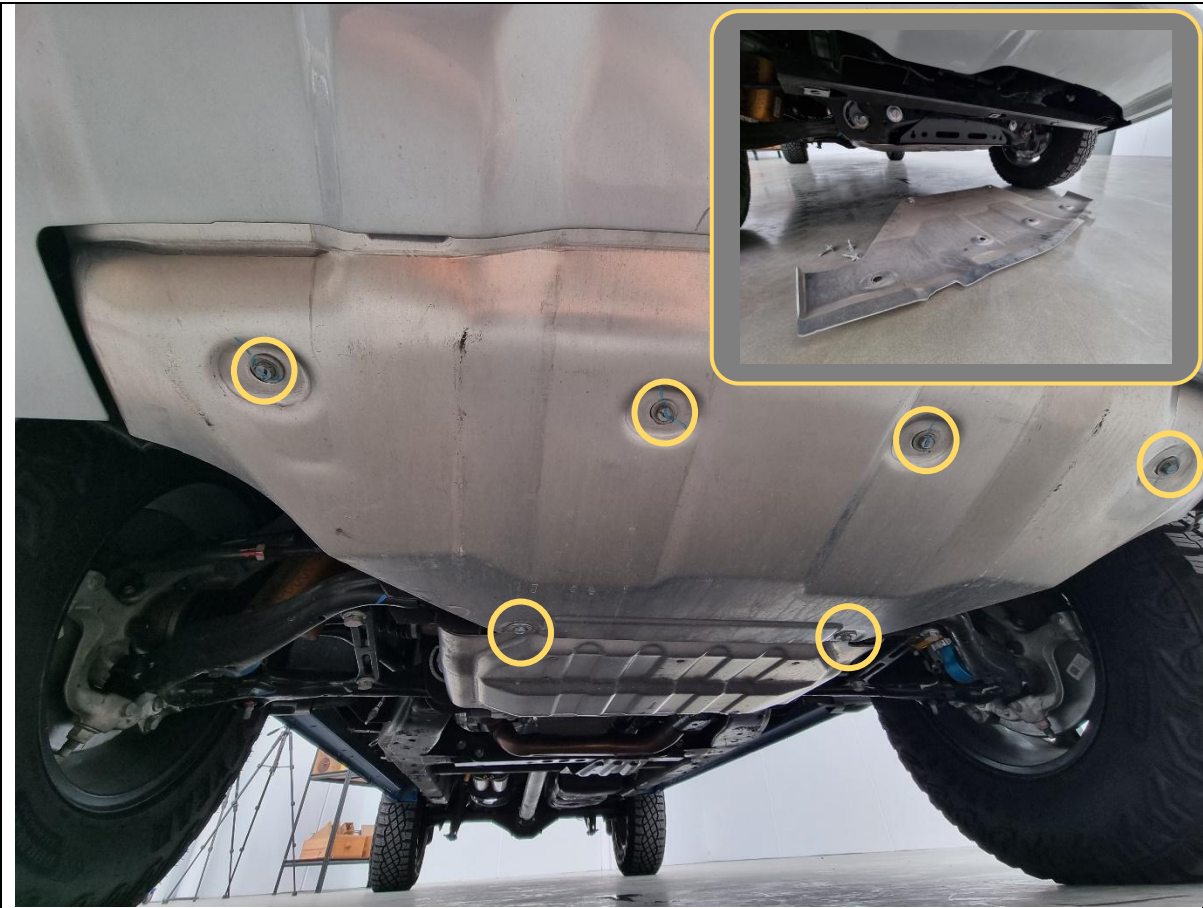
5. The grille is held in place with plastic clips throughout. Insert a plastic trim removal tool under the side at the headlight and gently release the first clip. 6. Continue working around the grille to release most of the clips, either with the plastic trim tool or by pulling the grille outwards.	TOOLS REQUIRED Plastic trim tool
	FASTENERS



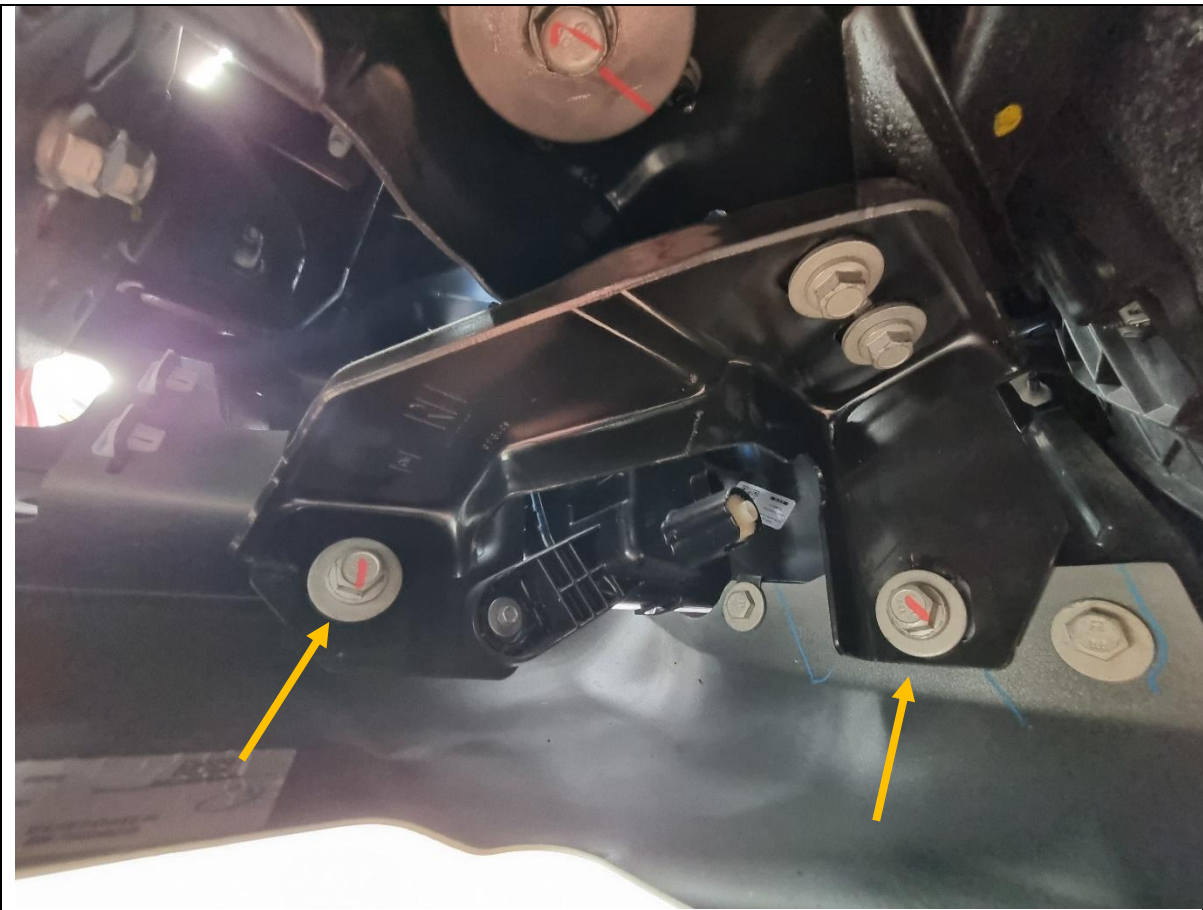
7. Pull the grille outwards to reveal the harness connections on the LH side near the headlight. 8. Disconnect the grille DRL cable, coaxial camera cable and washer hose for the camera. It is recommend to clamp the rubber washer hose to prevent fluid spillage. 9. Once all cables are disconnected, fully remove the grille and set aside.	TOOLS REQUIRED
	FASTENERS



10. Remove 5x T15 Torx screws securing the wheel arch liner to the bumper. 11. Repeat for the other side.	TOOLS REQUIRED T15 Torx Driver
	FASTENERS 10x T15 screw Retain for Reassembly



12. Remove 6x M8 bolts securing the bash plate to the vehicle, then remove and discard bash plate.	TOOLS REQUIRED 13mm socket/spaamer
	FASTENERS 6x M8 hex head bolts Retain for reassembly



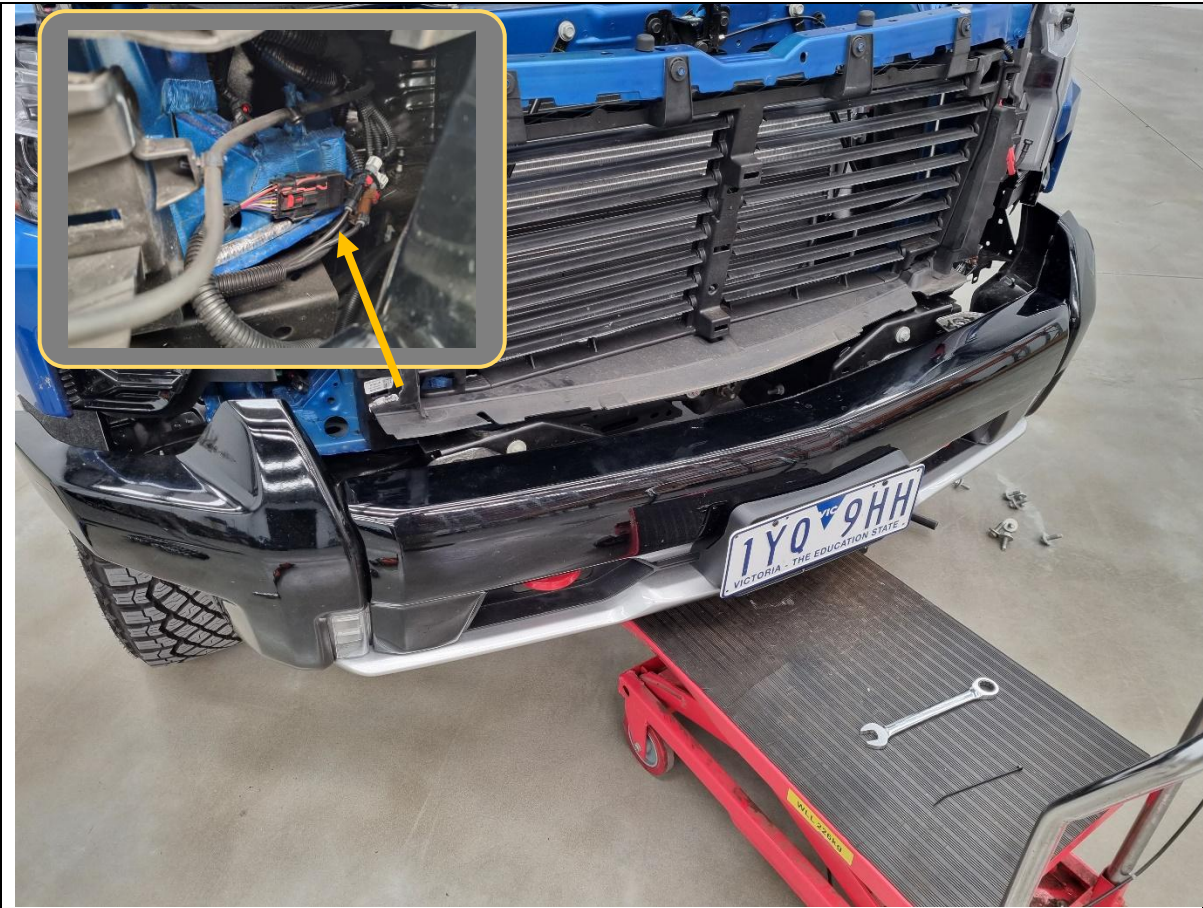
13. From underneath the vehicle, remove the 2x 15mm hex bolts (M10x35) for the outer bumper support bracket. Retain bolts for re-use later. 14. Repeat for the other side.	TOOLS REQUIRED 15mm socket
	FASTENERS 4x M10x35 hex bolt Retain for Reassembly



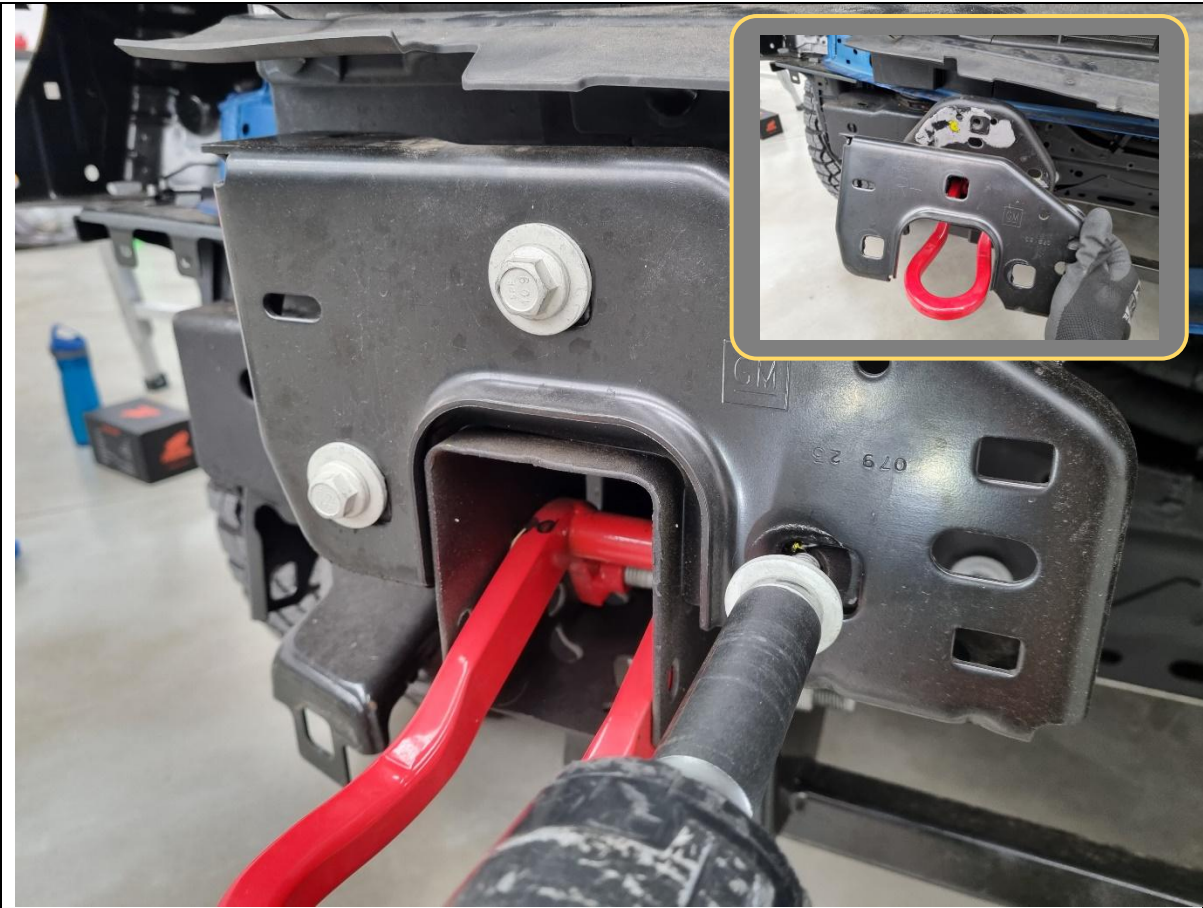
15. On the bumper support bracket next to the inside face of the chassis rail will be an 18mm hex bolt. Remove the 18mm hex bolt with a spanner. 16. Repeat for the other side.	TOOLS REQUIRED 18mm spanner
	FASTENERS 2x 18mm hex bolt



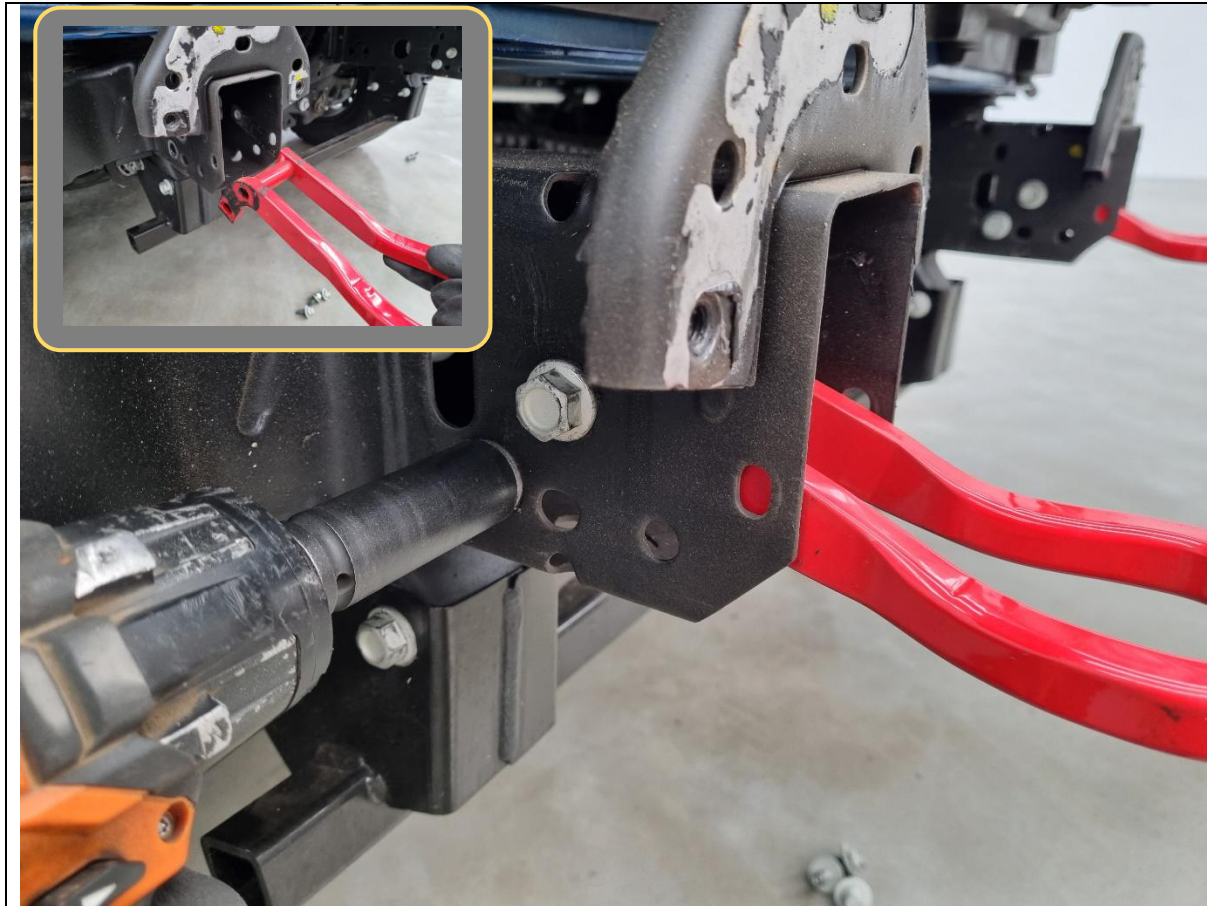
17. On the top lip of the bumper, there are 2x hex bolts hidden behind a rubber cover panel, above where the inner bolts were from the previous step. Remove the 18mm hex bolts securing the bumper to the chassis.	TOOLS REQUIRED 18mm socket/spanner
	FASTENERS 2x 18mm hex bolt



18. Support the bumper with a trolley or assistance from another person and pull outwards from the vehicle. Untuck the wheel arch liners from the bumper to do so. 19. Disconnect the bumper wiring harness on the passenger side underneath the headlight (RH for Aus, LH for US vehicles). 20. Fully remove the bumper and set aside.	TOOLS REQUIRED
	FASTENERS



21. Remove the 3x 15mm hex bolts (M10x35) securing the bumper bracket to the chassis. Retain bolts for re-use. 22. Repeat on other side.	TOOLS REQUIRED 15mm socket/spanner
	FASTENERS 6x M10x35 hex bolt Retain for Reassembly



23. Remove the 2x 18mm hex bolts (M12x40 and M12 long) securing the tow hook to the chassis. Retain bolts for re-use.

24. Repeat for the other tow hook.

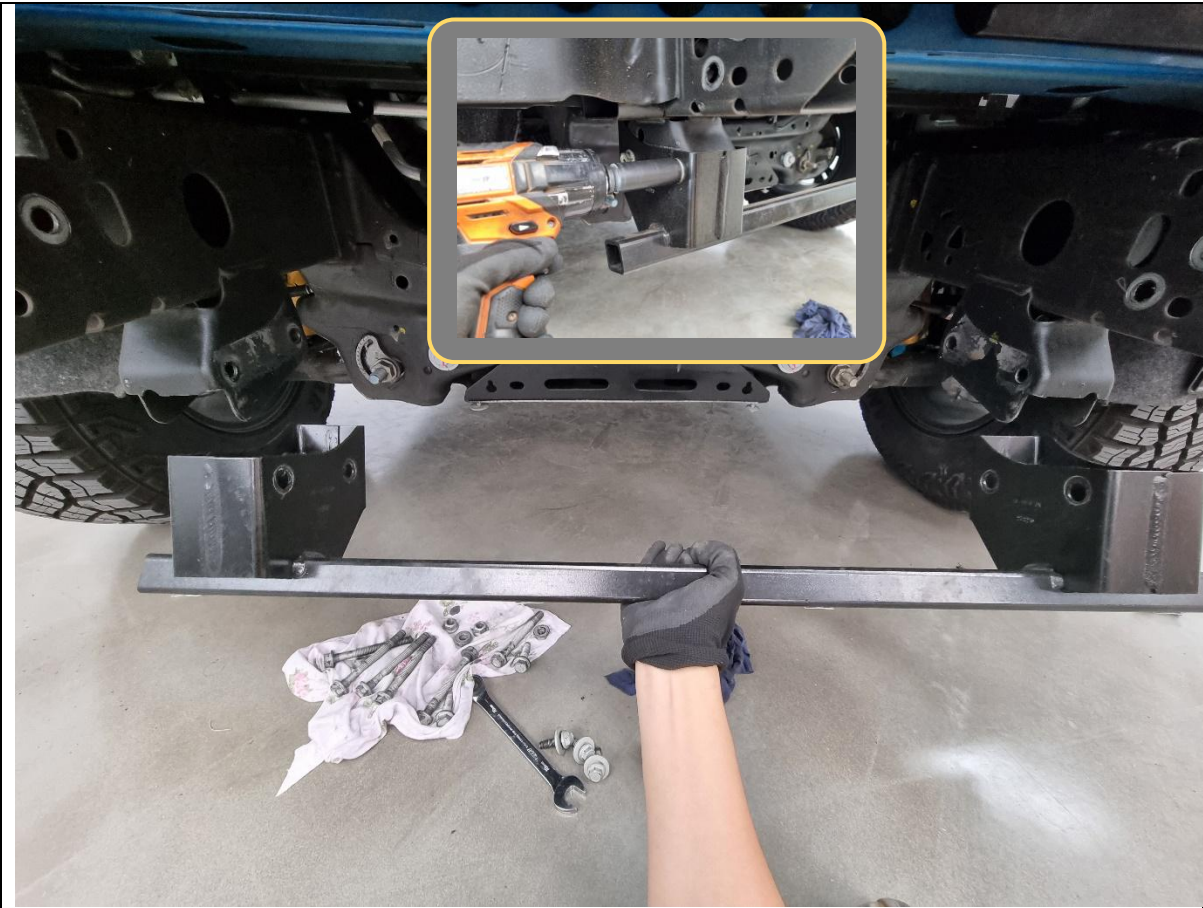
TOOLS REQUIRED

18mm socket/spanner

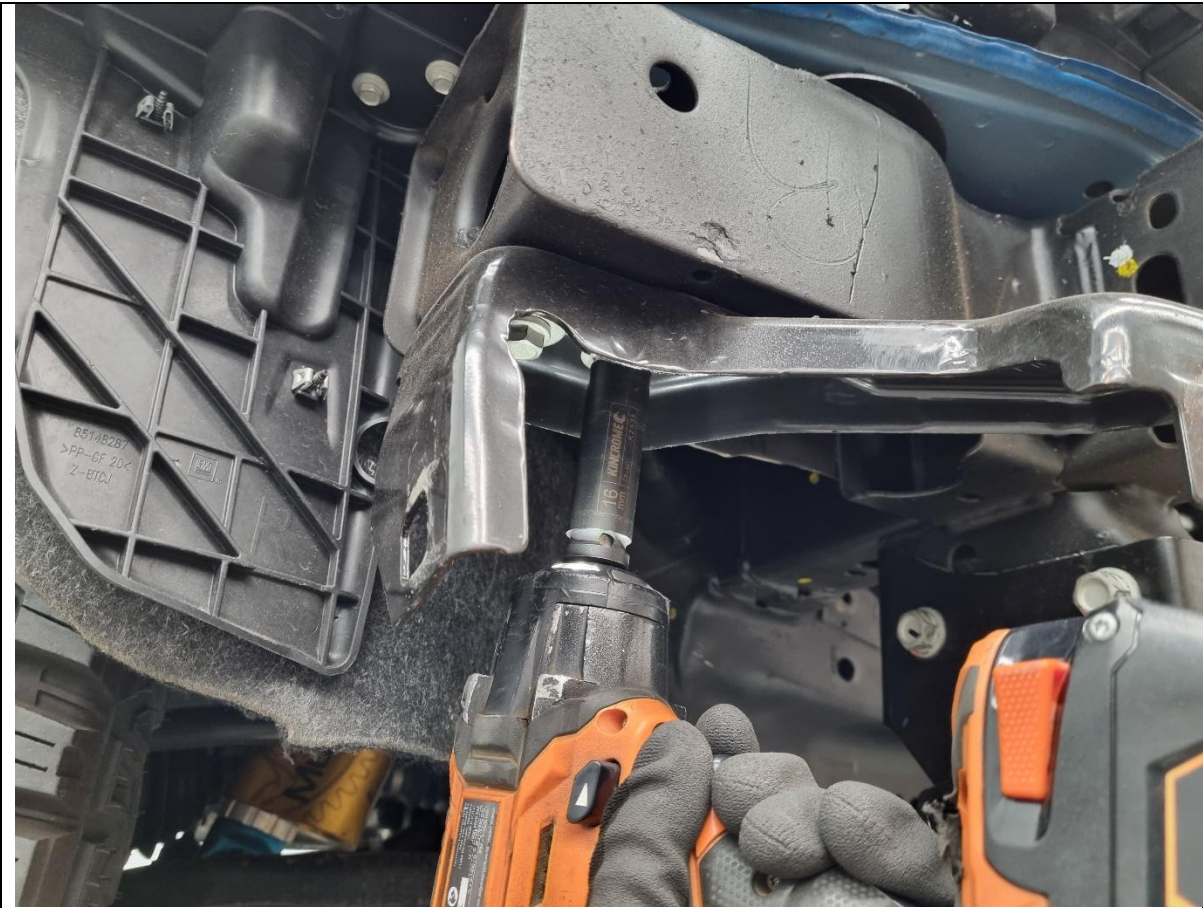
FASTENERS

2x M12x40 hex bolt
Retain for Reassembly

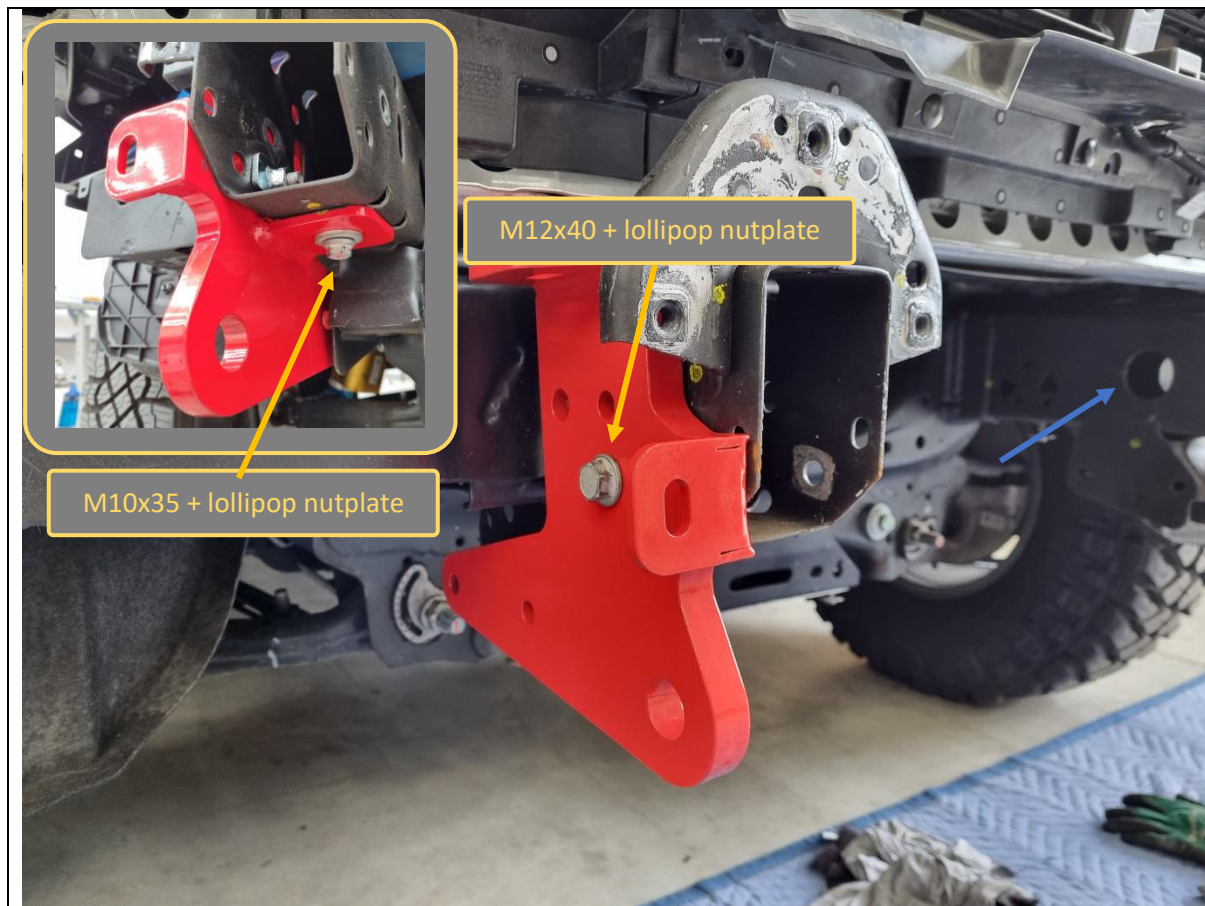
2x M12 hex bolt (long)



25. Remove the 4x 18mm hex bolts (2x per side) securing the bash plate reinforcement member to the chassis.	TOOLS REQUIRED 18mm socket/spanner
	FASTENERS 4x 18mm hex bolt



26. Remove the 2x 15mm hex bolts securing the bumper support bracket to the chassis. Retain bolts for re-use. 27. Repeat for both sides.	TOOLS REQUIRED 15mm socket/spanner
	FASTENERS 4x 15mm hex bolt Retain for Reassembly



28. Fit the RH tow point to the vehicle using the retained factory M12x40 hex bolt (from Step 23) + M12 nutplate on the side and factory M10x35 hex bolt (from Step 13) + M10 nutplate on the bottom.

The lollipop nutplates can be insert through the open hole on the inside of the chassis (see blue arrow for reference).

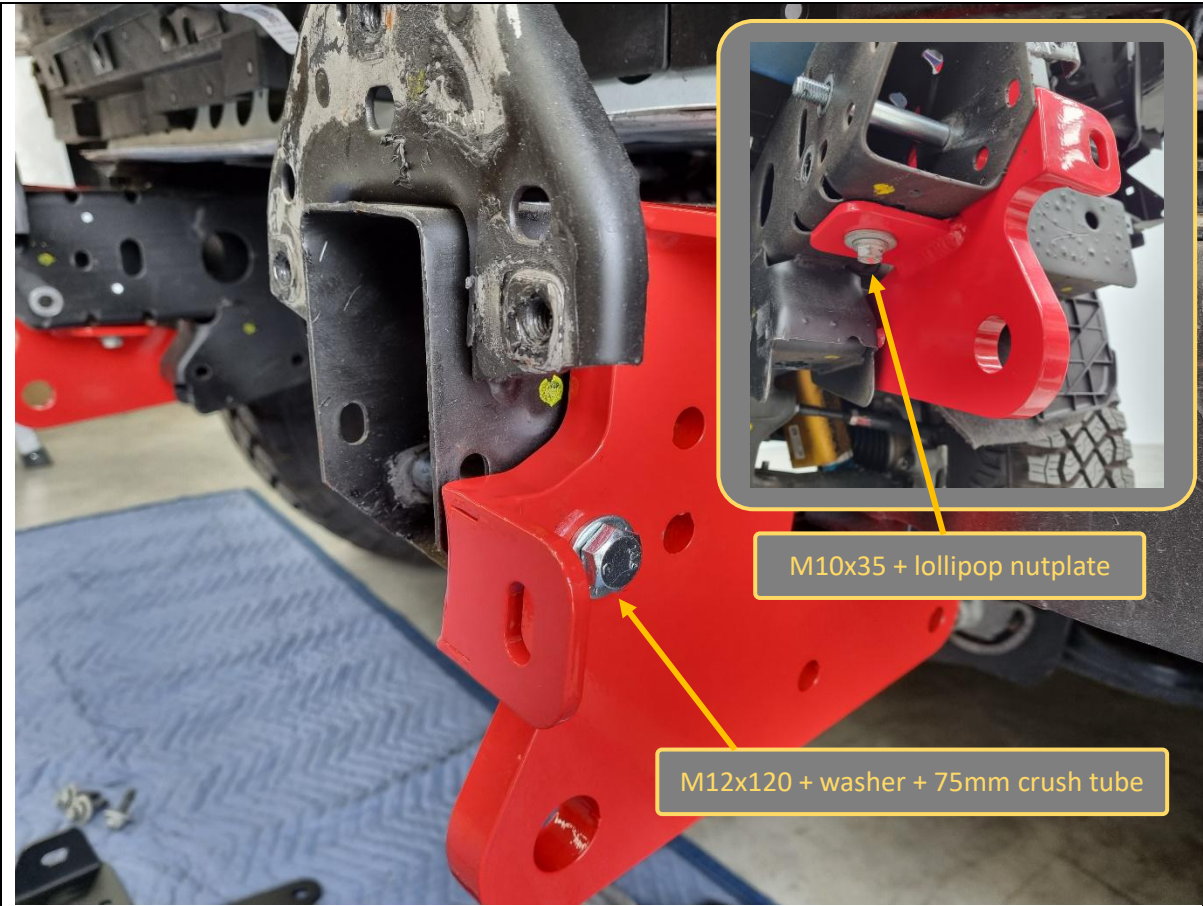
TOOLS REQUIRED

15mm socket
18mm socket

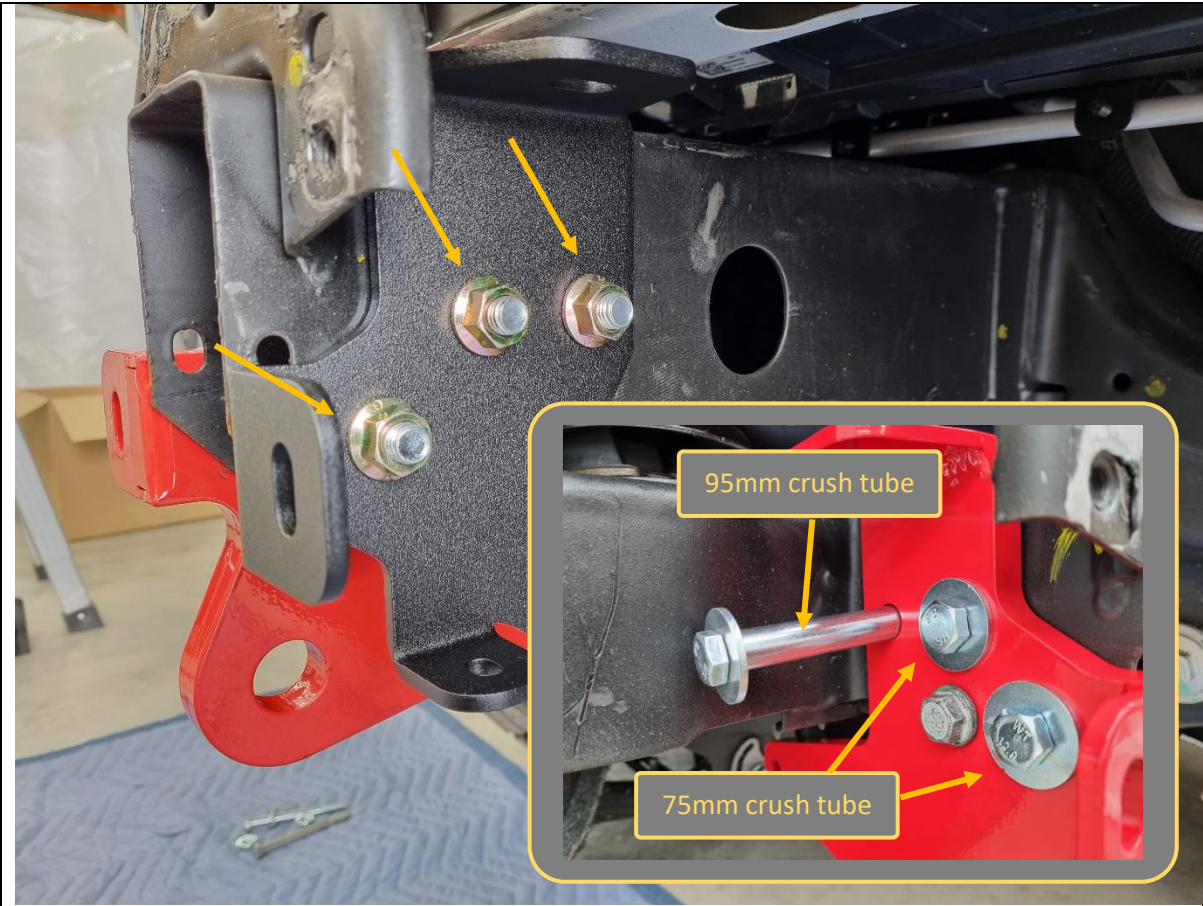
FASTENERS

1x factory M10x35 hex bolt
1x M10 lollipop nutplate

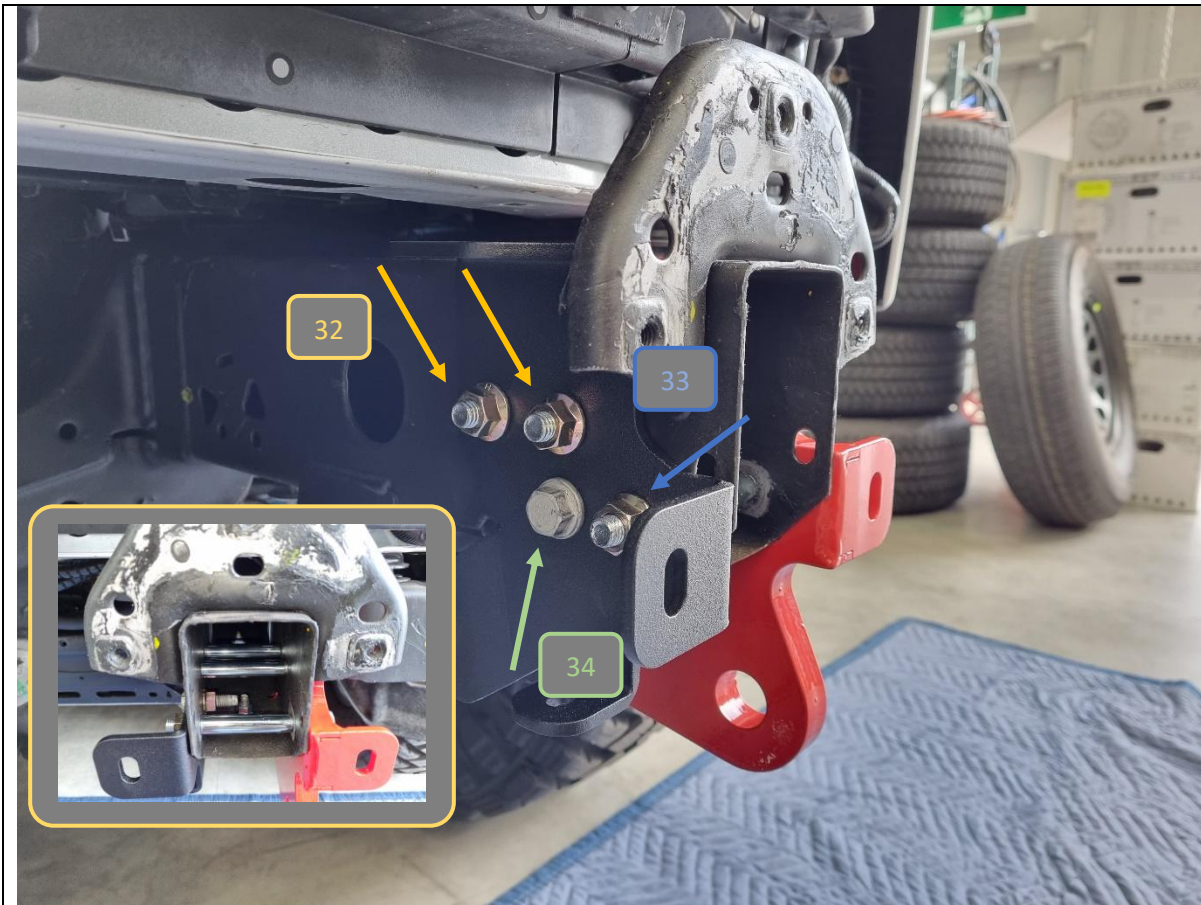
1x factory M12x40 hex bolt
1x M12 lollipop nutplate



29. Fit the LH tow point to the vehicle using the retained factory M10x35 hex bolt (from Step 13) + M10 nutplate on the bottom. 30. Also loosely fit the tow point in place using 1x M12x120, flat washer and 75mm crush tube through the side. Do not secure with nut yet.	TOOLS REQUIRED 15mm socket 18/19mm socket
	FASTENERS 1x factory M10x35 hex bolt 1x M10 lollipop nutplate 1x M12x120 hex bolt 1x M12 flat washer 1x 75mm crush tube



31. Fit the RH chassis mount brace bracket to the inside of the RH chassis rail and secure with 3x M12x120 hex bolt, 3x flat washer, 2x 75mm crush tube, 1x 95mm crush tube and 3x flange nut.	TOOLS REQUIRED 18/19mm socket
	FASTENERS 3x M12x120 hex bolt 3x M12 flat washer 2x 75mm crush tube 1x 95mm crush tube 3x M12 flange nuts



32. Fit the LH chassis mount brace bracket to the inside of the LH chassis rail and secure with 2x M12x120 hex bolt, 2x flat washer, 1x 75mm crush tube, 1x 95mm crush tube and 2x flange nut.

33. Secure the loose M12x120 from Step 30 with an M12 flange nut.

34. Fit the retained factory M12x40 hex bolt (from Step 24) + M12 nutplate on the side.

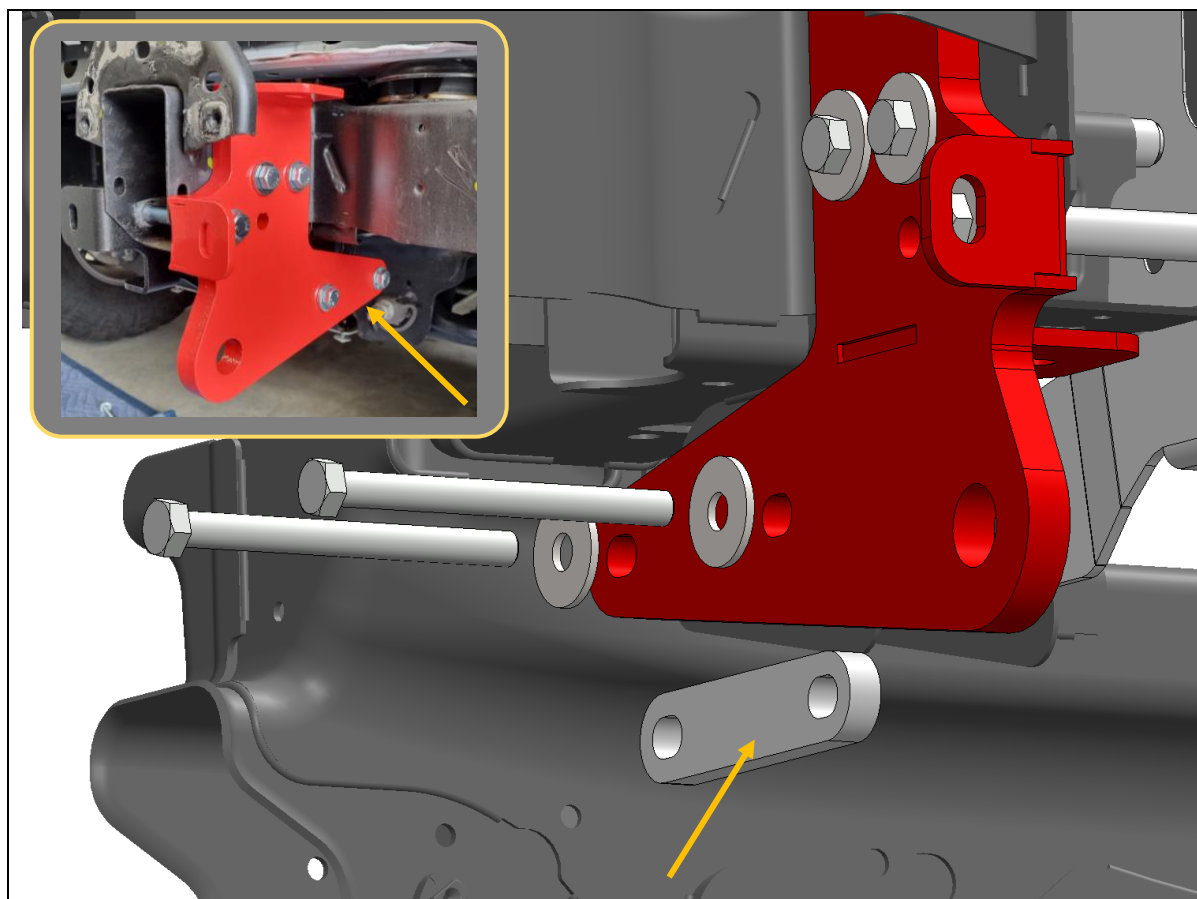
TOOLS REQUIRED

18/19mm socket

FASTENERS

2x M12x120 hex bolt
2x M12 flat washer
1x 75mm crush tube
1x 95mm crush tube
3x M12 flange nuts

1x factory M12x40 hex bolt
1x M12 lollipop nutplate



35. Insert the rear tow point spacer plate between the tow point and chassis at the rear, then loosely secure with 2x M12x130 hex bolts, flat washers and flange nuts.

Keep bolts finger tight at this stage.

36. Tighten all other fasteners in the tow point and chassis mount brace bracket, except for those 2x rear bolts.

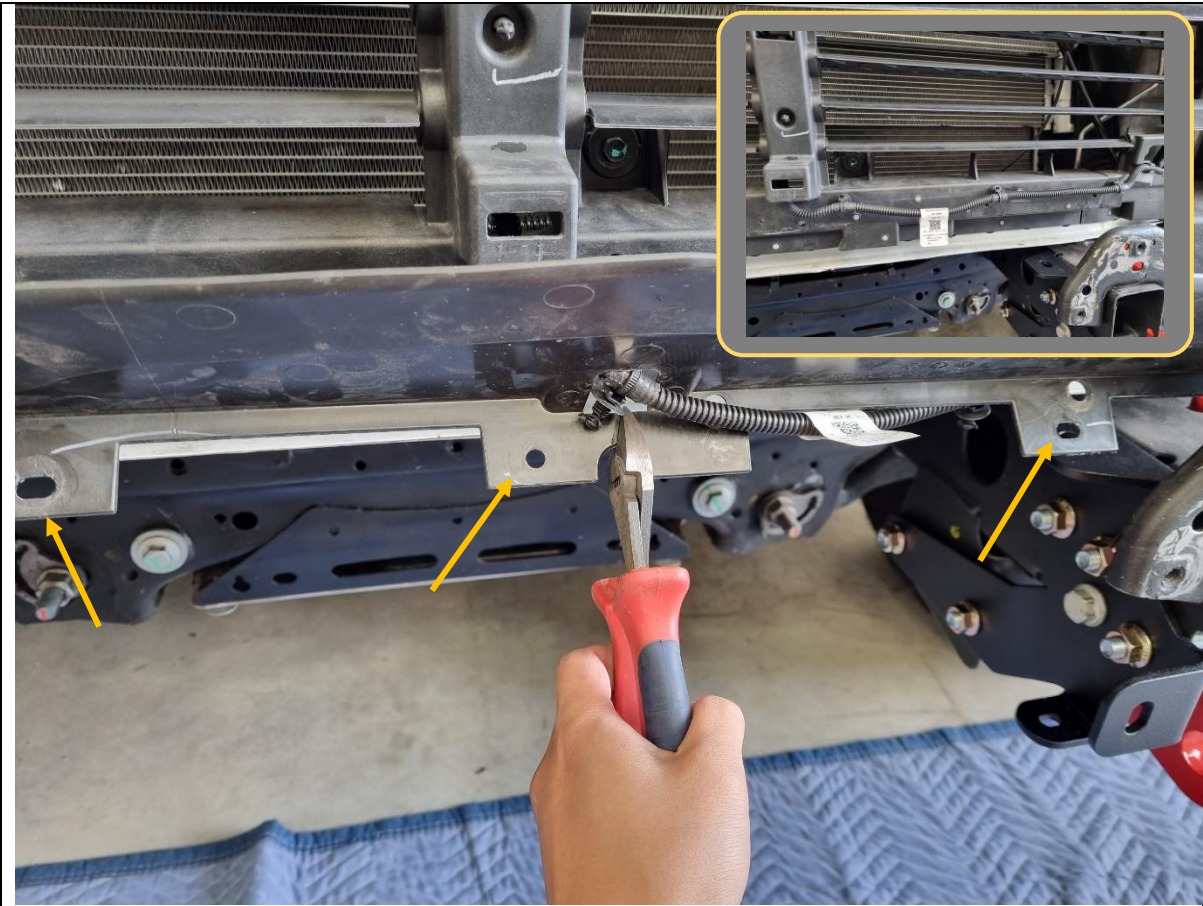
37. Repeat for the LHS tow point.

TOOLS REQUIRED

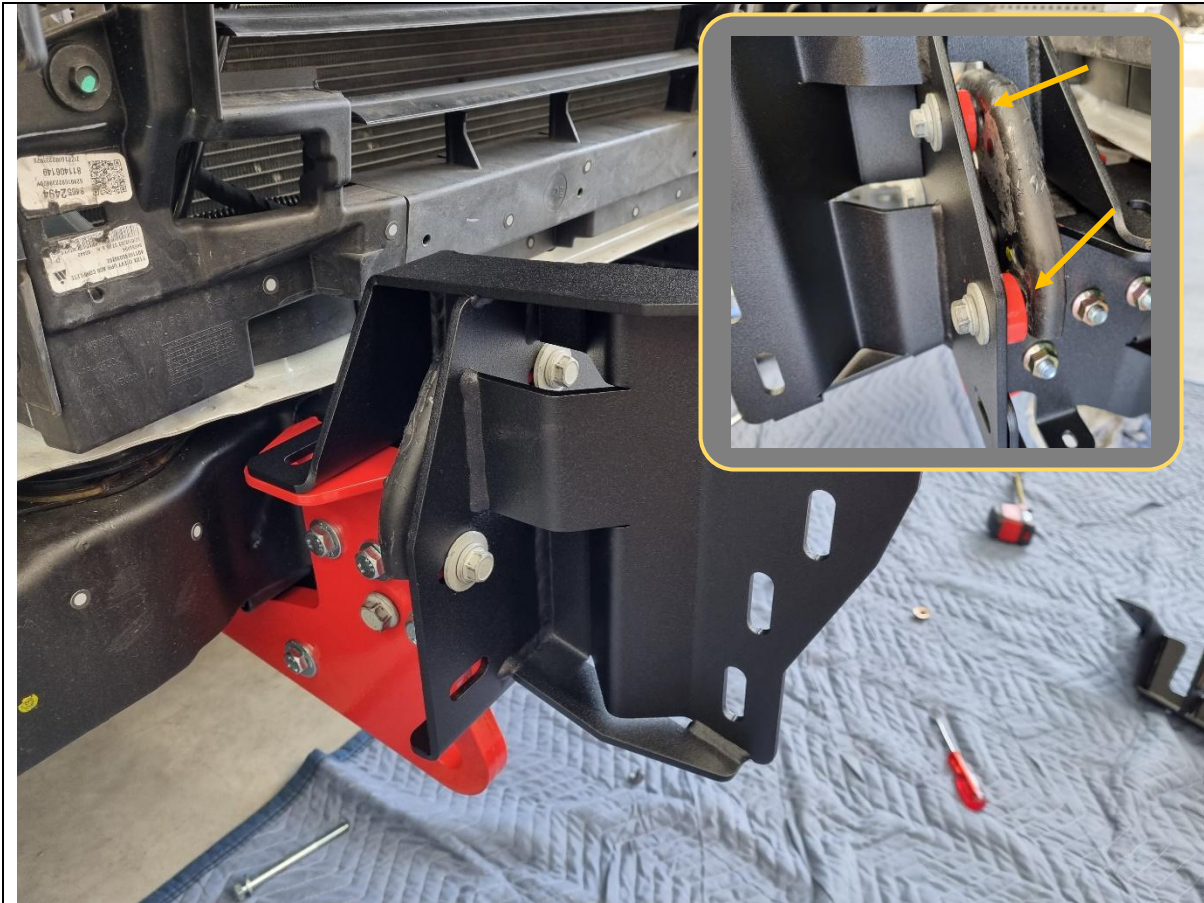
15mm socket
18/19mm socket

FASTENERS

2x M12x130 hex bolt
2x M12 flat washer
2x M12 flange nuts



38. Remove the plastic push rivets securing the lower plastic air dam. 39. Unclip the wiring loom from the air dam, and then reclip the loom to the radiator louvre plastic frame, without the air dam.	TOOLS REQUIRED Flat Blade Screwdriver or Trim Tool
	FASTENERS



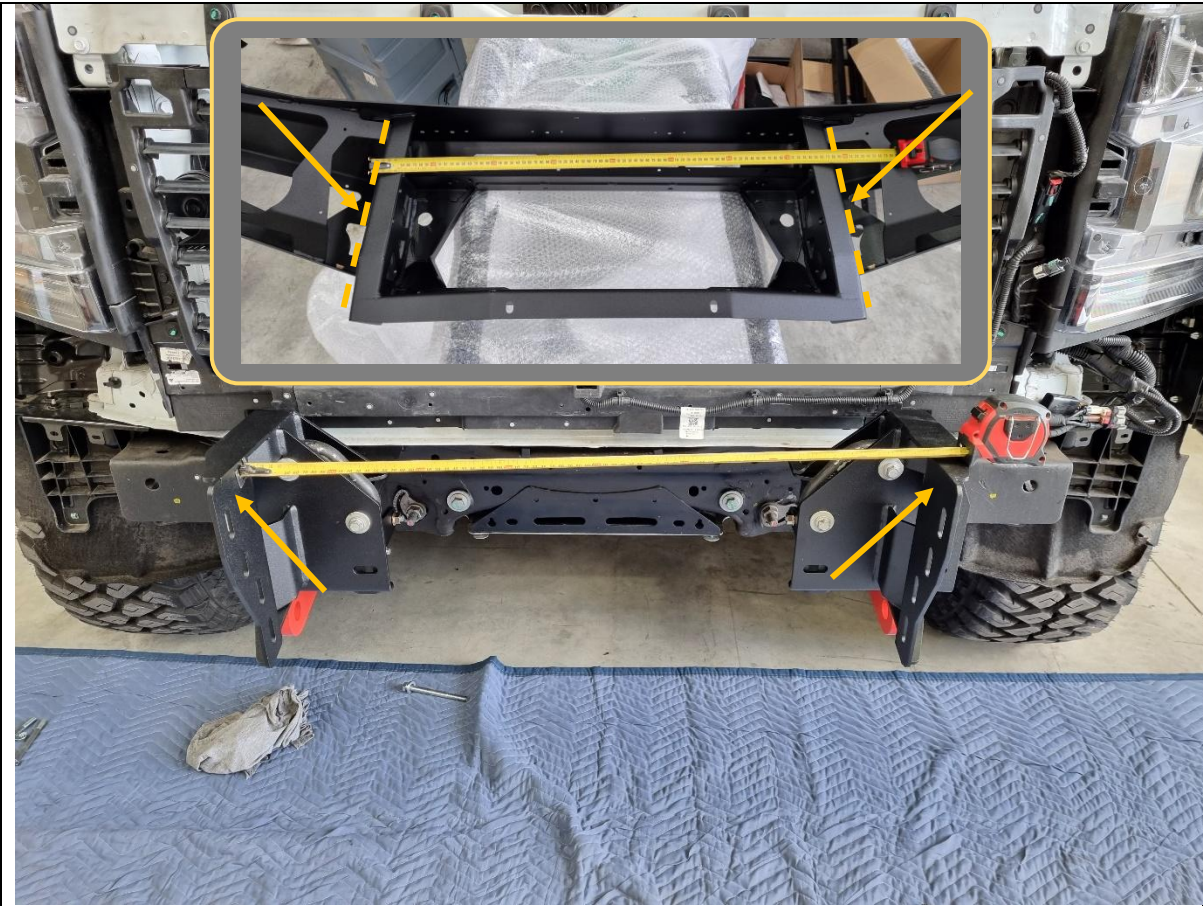
40. Slide the RH impact assembly from the side and onto the chassis.
41. Loosely secure to the chassis with 3x factory retained M10x35 hex bolts (from Step 21) and round tow point spacer blocks wedged inbetween (see inset).
42. Repeat for the LH impact assembly.

TOOLS REQUIRED

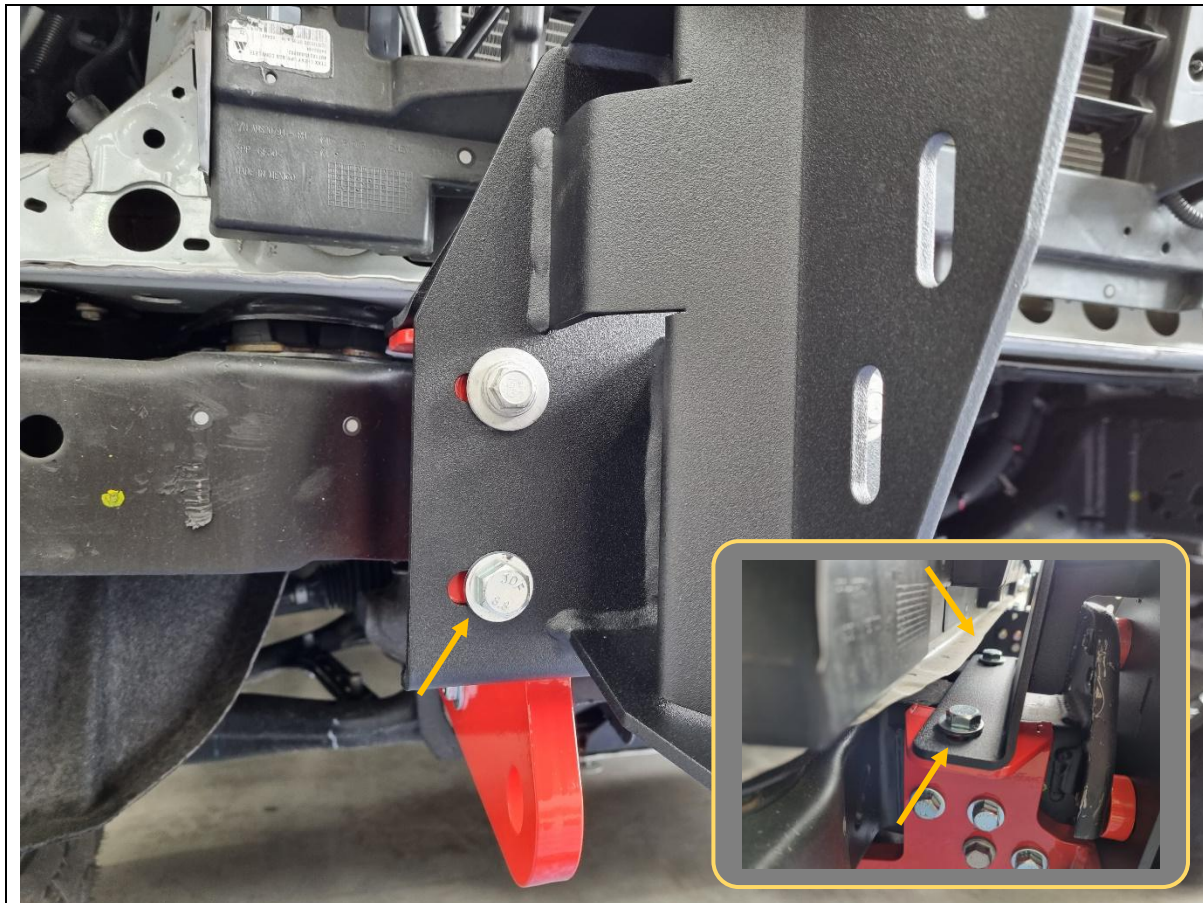
15mm socket

FASTENERS

6x factory M10x35 hex bolt



43. 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	TOOLS REQUIRED Tape measure 15mm socket
44. Adjust mounts by sliding left/right on the slots, such that distance between inner faces of mounts are approximately 2mm more than bar. Ensure the mount faces are vertically upright and symmetric left/right on the chassis. 45. Secure and tighten mounts.	FASTENERS



46. Fit remaining 4x M12x30 hex bolts, flat washers and flange nuts for the RH impact assembly.

The 2x bolts on the lower face can be tightened with a socket.

The 2x bolts on the top flange can be tightened with a spanner.

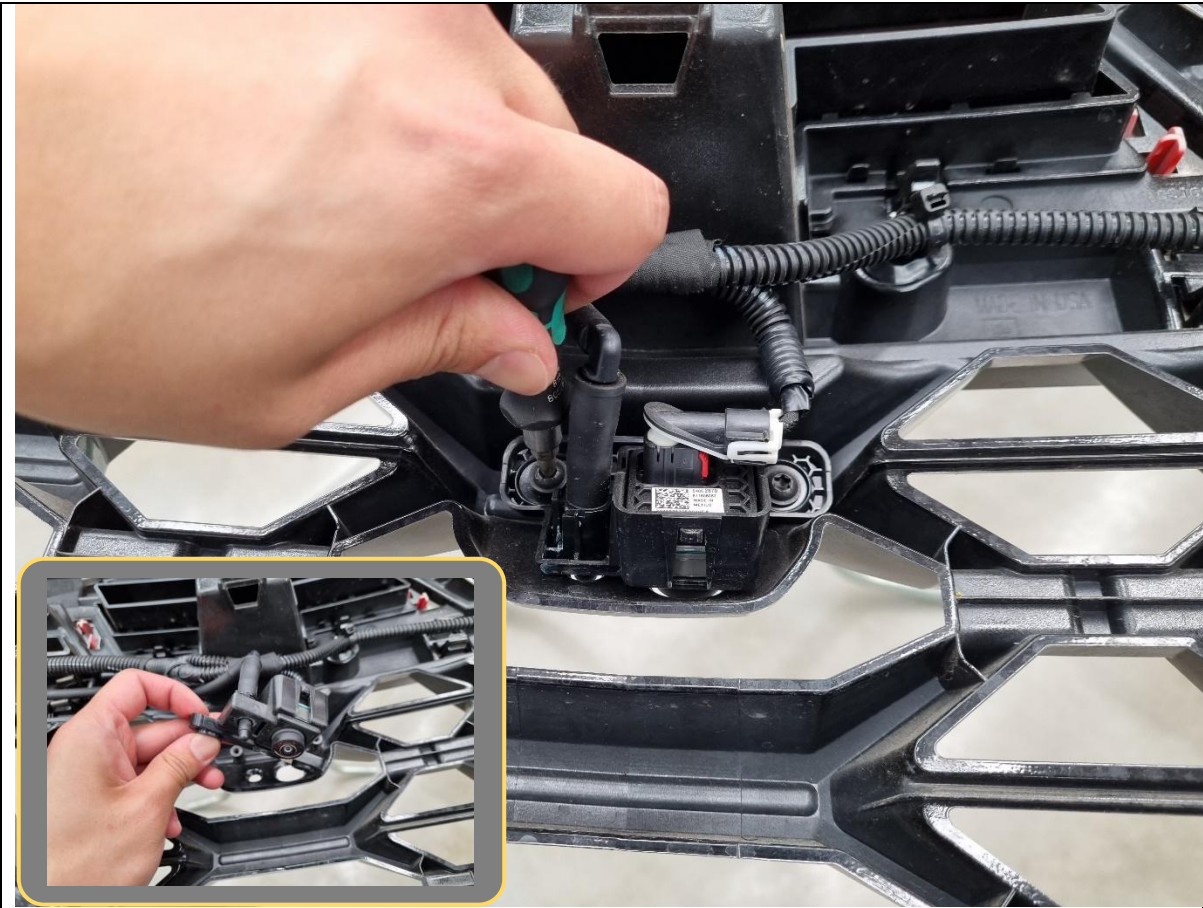
47. Repeat for the LH impact assembly.

TOOLS REQUIRED

18/19mm spanner
18/19mm socket

FASTENERS

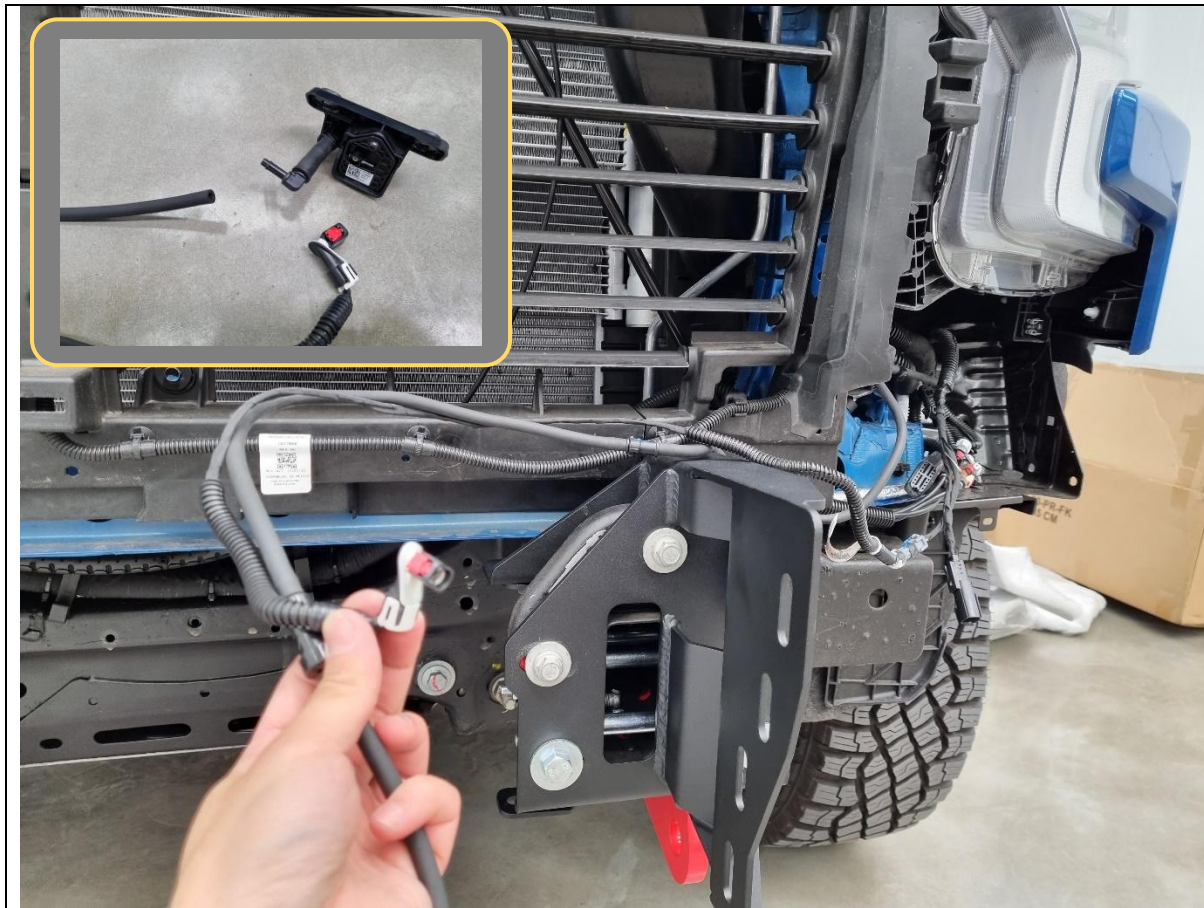
8x M12x30 hex bolt
8x M12 flat washer
8x M12 flange nut



48. The front camera can be optionally relocated from the grille into the bar for a clearer unobstructed view. This is especially recommended if running optional driving lights or top tubes. Unscrew the T20 Torx screws and separate the camera/washer and housing from the grille.	TOOLS REQUIRED T20 Torx Driver Trim Tool
	FASTENERS

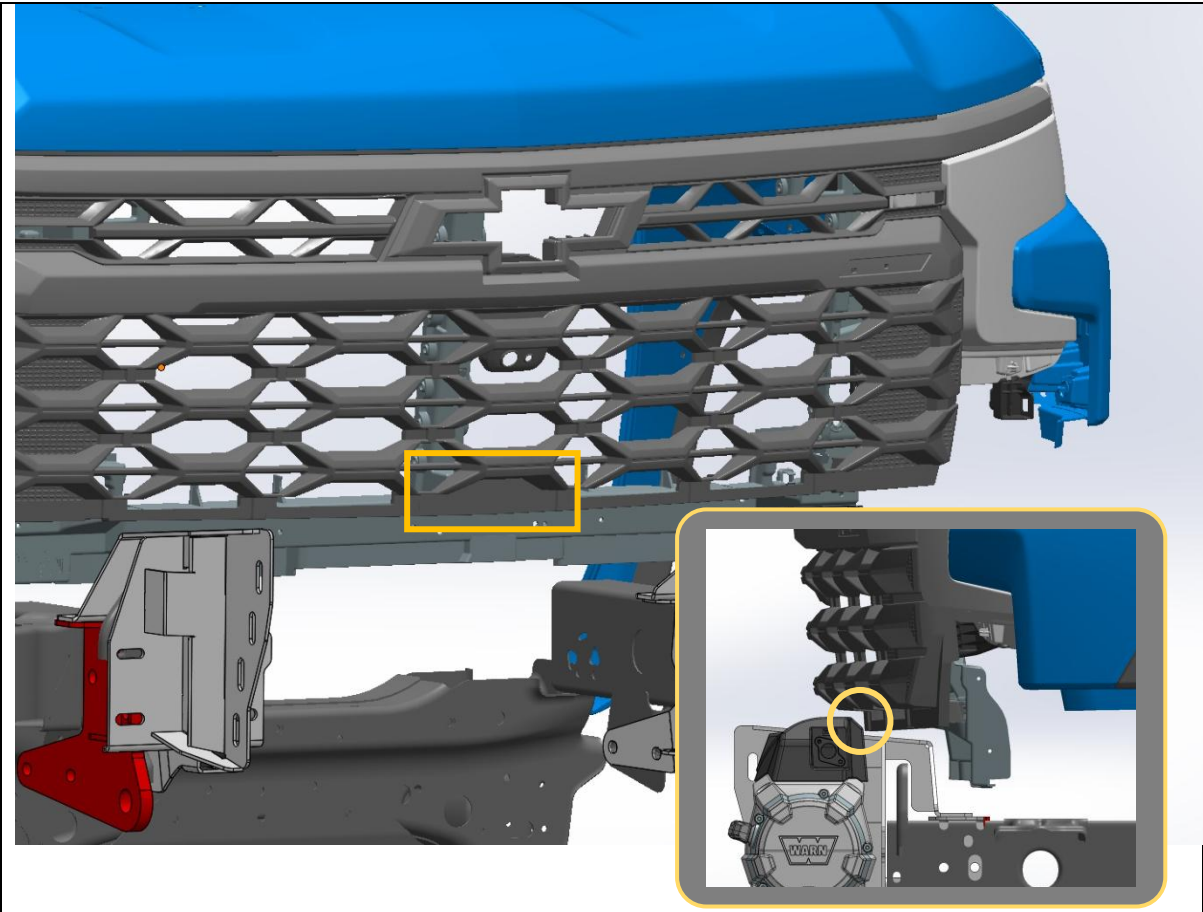


49. Unclip the rubber washer hose from the grille. 50. Pull apart the corrugated split tubing and separate the camera coaxial harness (circled, bottom left) from the grille DRL harness.	TOOLS REQUIRED
	FASTENERS



51. Disconnect the camera harness and washer hose on the camera body side and reconnect the other end back to the vehicle. Set aside the camera for later.
52. Route the harness over the top of the LH impact assembly towards the centreline of the vehicle.
53. Re-plug in the grille DRL harness, then re-fit the grille, cover and bonnet release handle to the vehicle in reverse order.

TOOLS REQUIRED**FASTENERS**

		
54. If fitting a WARN Zeon or a winch with a similar size, a small portion of the grille may need to cut to provide adequate clearance to the control box. It is best to do this before the bar is fully installed onto the vehicle.	TOOLS REQUIRED	
	FASTENERS	



55. Pull and release the clips securing the plastic trim below the headlight. Discard this piece.	TOOLS REQUIRED
	FASTENERS



56. Remove the bumper clip underneath the headlight by loosening 3x T15 Torx screws. Do not discard the fasteners.	TOOLS REQUIRED T15 Torx Driver
	FASTENERS 6x factory T15 Torx screw Retain for Reassembly



57. Clean the top face of the supplied facelift infill bracket with isopropyl alcohol or similar cleaning solvent and let it dry. 58. Apply the supplied 3M Primer 94 adhesion promotor from the tape kit onto the same top face of the infill. Important: allow at least 5 minutes for the primer to chemically bond to the surfaces before applying tape. 59. Apply 4x 100mm strips of supplied VHB tape in the arrangement shown.	TOOLS REQUIRED Isopropyl alcohol Rag
	FASTENERS VHB Tape pads Primer 94



60. Clean the underside face of the headlight with isopropyl alcohol or similar cleaning solvent and let it dry. 61. Fit 2x M6 cage nuts into the headlight infill support bracket. Use a flat head screwdriver to assist. 62. Fit the headlight infill support bracket to the underside of the headlight using 2x factory retained T15 Torx screws and 2x M5 flat washers. 63. Repeat for other side.	TOOLS REQUIRED Isopropyl alcohol Rag Flat head screwdriver T15 Torx driver
	FASTENERS 4x factory T15 Torx screw 4x M5 flat washer



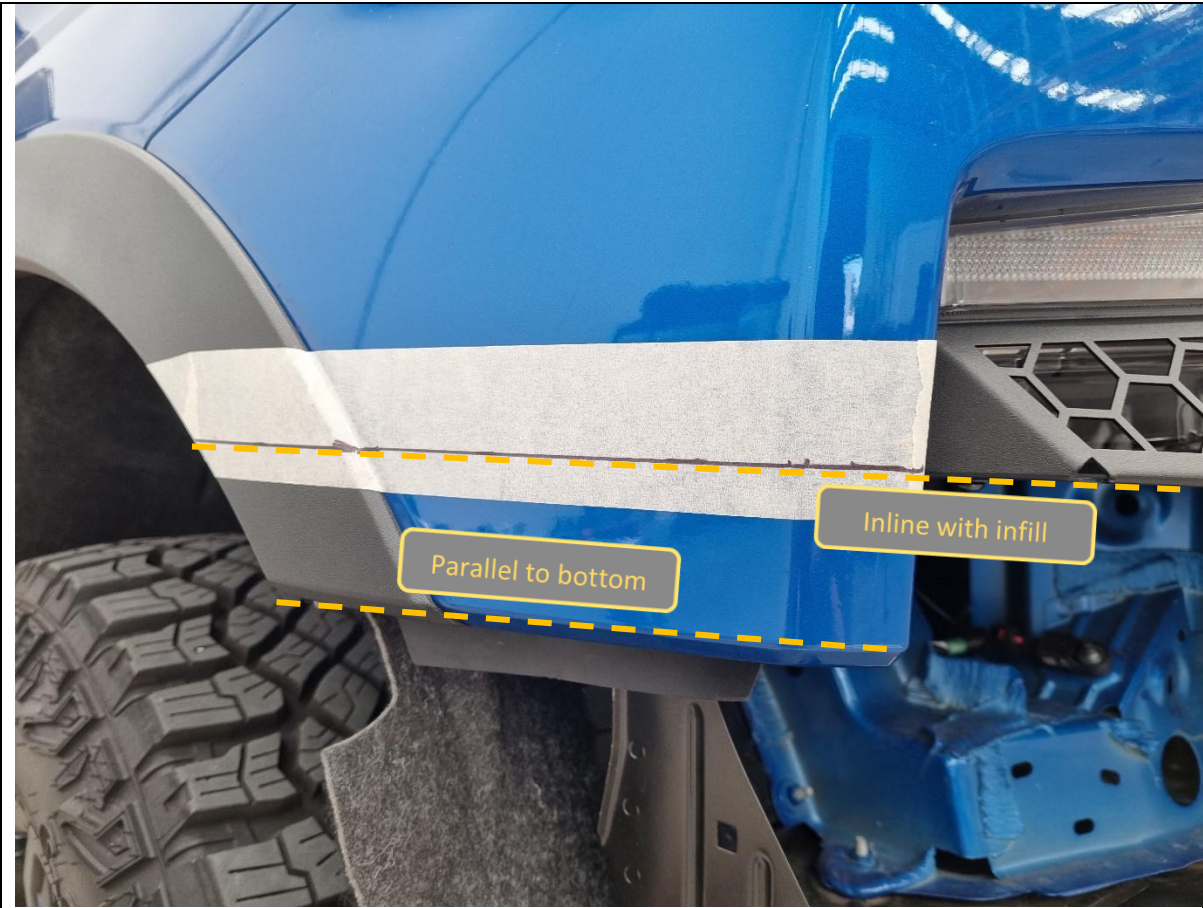
64. Remove backing film of VHB tape and present infill up against the bottom face of the headlight.
65. Align the infill so it is central and in line with the front face of the headlight.
66. Apply even pressure for 20-30 seconds to ensure best adhesion of the tape to the headlight.
67. Secure the infill to the support bracket with 2x M6x16 black button head bolts and 2x black flat washers.
68. Repeat for other side.

TOOLS REQUIRED

4mm hex/Allen key

FASTENERS

4x M6x16 black button head
4x M6 black washer
4x M6 cage nut



69. The bumper winglets need to be cut for fitment of the bar. Apply masking over the area shown to protect the plastic. 70. Next mark out a horizontal line parallel to the bottom of the winglet, and in line with the bottom edge of the headlight infill.	TOOLS REQUIRED Masking tape Marker pen
	FASTENERS



71. Using an air hacksaw or similar cutting device, perform a clean cut along the marked line in the bumper winglet. Take extra care not to cut/damage the headlight, infill or wheel arch liner. 72. Use a utility knife or similar to clean up the inside of the winglet, so that it is a flat surface. Anything that clips the winglet into the headlight needs to be cut off.	TOOLS REQUIRED Air hacksaw or similar Utility knife
	FASTENERS



73. Using a 10mm socket, remove all the bolts securing the wheel guard bracket to the vehicle and headlight. Retain these fasteners for re-use.	TOOLS REQUIRED 10mm socket
	FASTENERS 10mm hex bolts Retain for Reassembly



74. Clean the outer face of the bumper winglet support with isopropyl alcohol or similar cleaning solvent and let it dry.

75. Apply the supplied 3M Primer 94 adhesion promotor from the tape kit onto the same outer face.

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

76. Apply 2x 100mm strips of supplied VHB tape in the arrangement shown (bottom left).

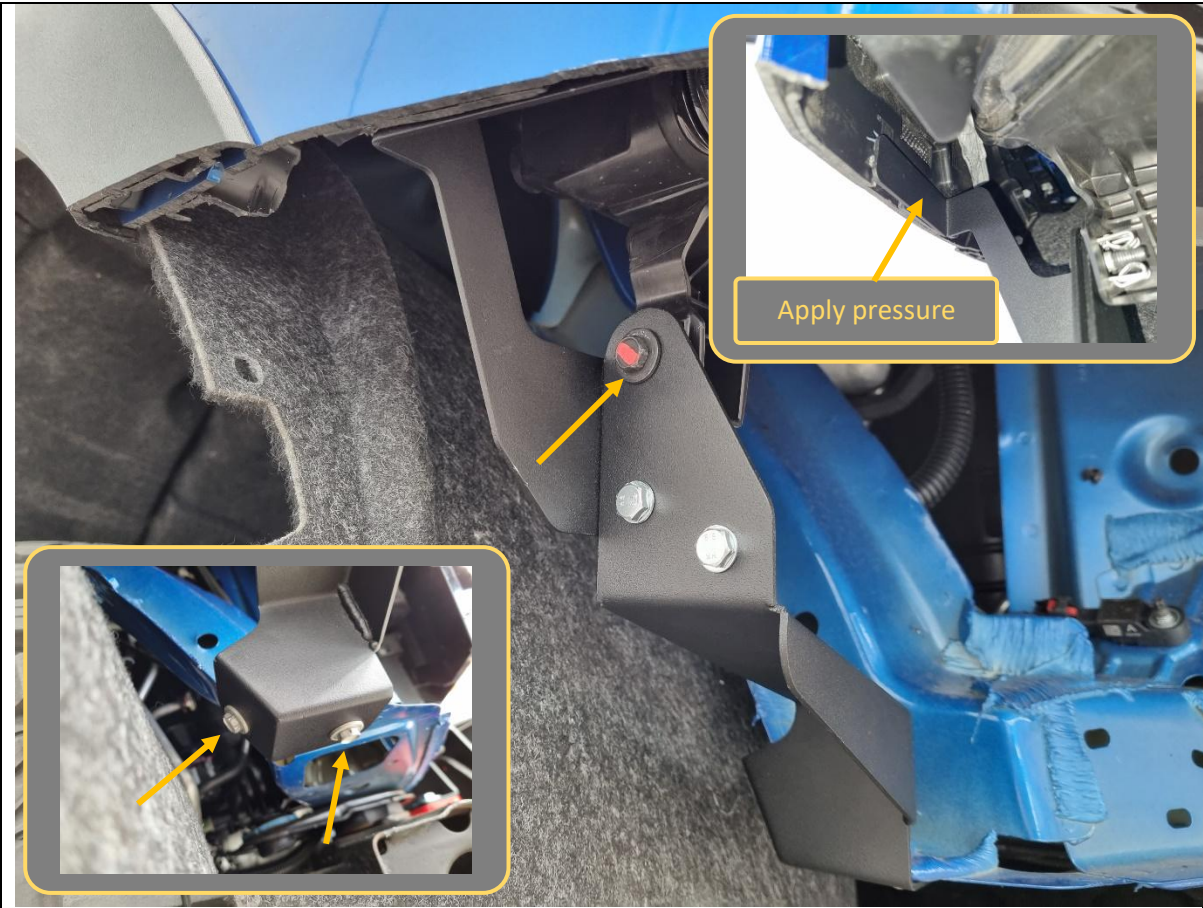
77. Fit the bumper winglet support to the supplied headlight bracket and loosely secure with 2x M6x12 hex bolts, flat washers and flange nuts.

78. Repeat for other side.

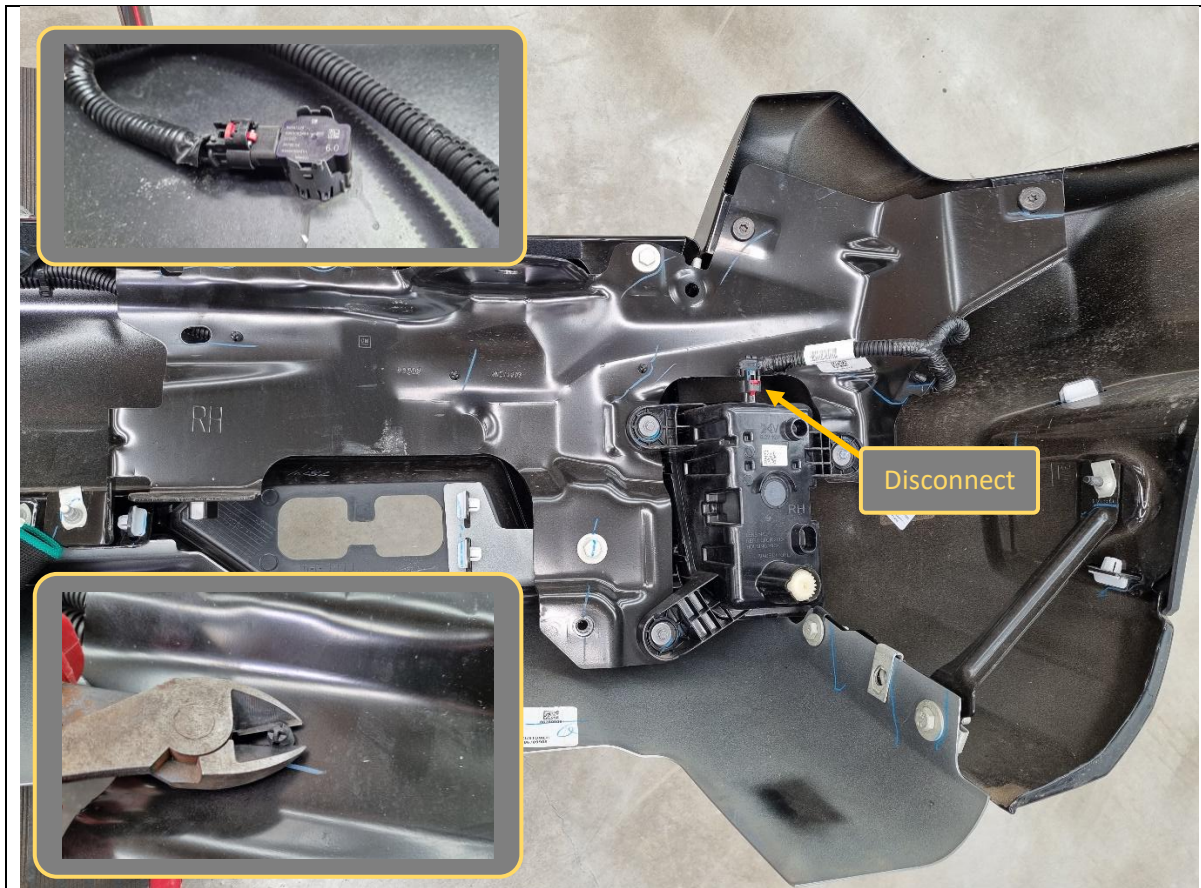
TOOLS REQUIRED

FASTENERS

4x M6x12 hex bolt
4x M6 flat washer
4x M6 flange nut



79. Remove backing film of VHB tape and present bumper winglet support and headlight bracket up to the vehicle. 80. Align the tape face to the inside of the cut bumper winglet, then secure the brackets to the headlight with 1x 10mm hex bolt (from Step 73) 81. Fit the bottom of the headlight bracket to the body with 2x 10mm hex bolts (also from Step 73). 82. Apply even pressure for 20-30 seconds on the bumper winglet to ensure proper adhesion to the support bracket. 83. Repeat for other side of vehicle.	TOOLS REQUIRED 10mm socket
	FASTENERS 6x factory 10mm hex bolts



84. Prepare the bumper for stripping parts.
85. Remove the number plate and set aside.
86. If fitting fog lights, disconnect the plug on the back of the fog light.
87. If equipped, unclip the 4x parking sensors from their plastic holders. The holders will not be re-used.
- Note down the orientation of the parking sensors before fully removing.
88. Pry off or cut off the clips holding the wiring harness in the bumper (see inset), then separate the harness from the bumper.

TOOLS REQUIRED

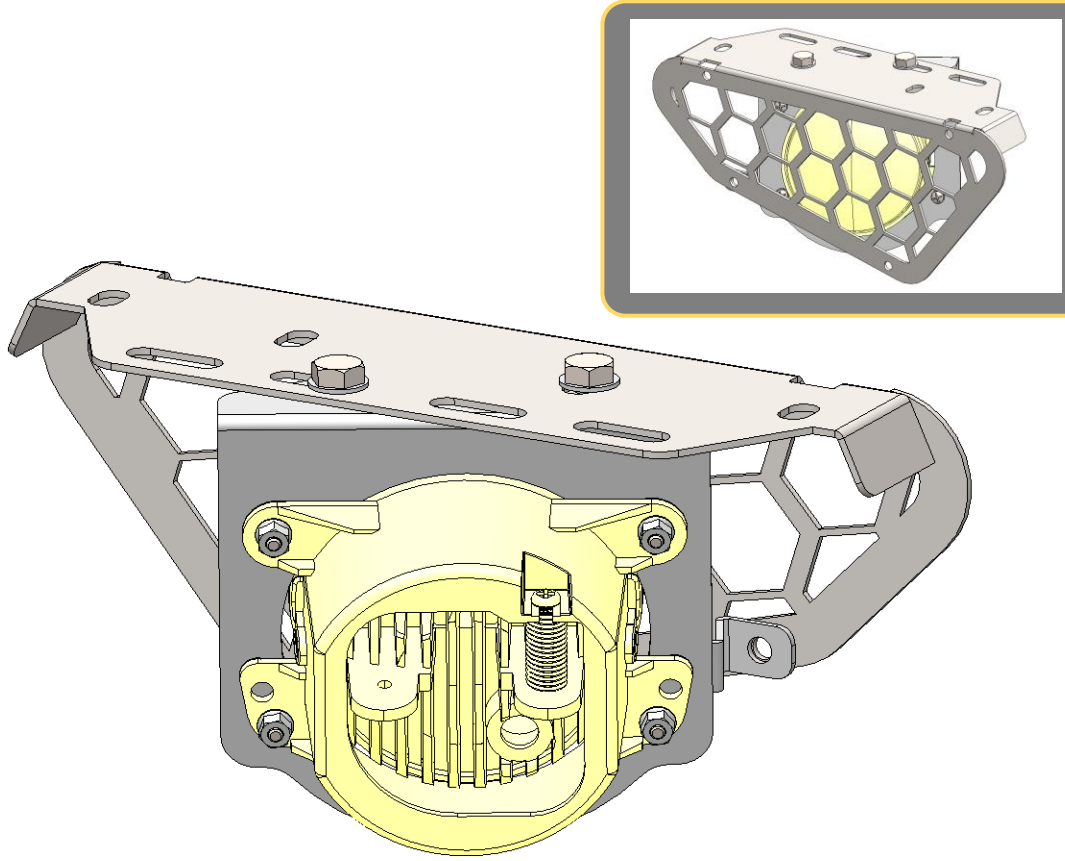
Side cutters

Trim tool

FASTENERS

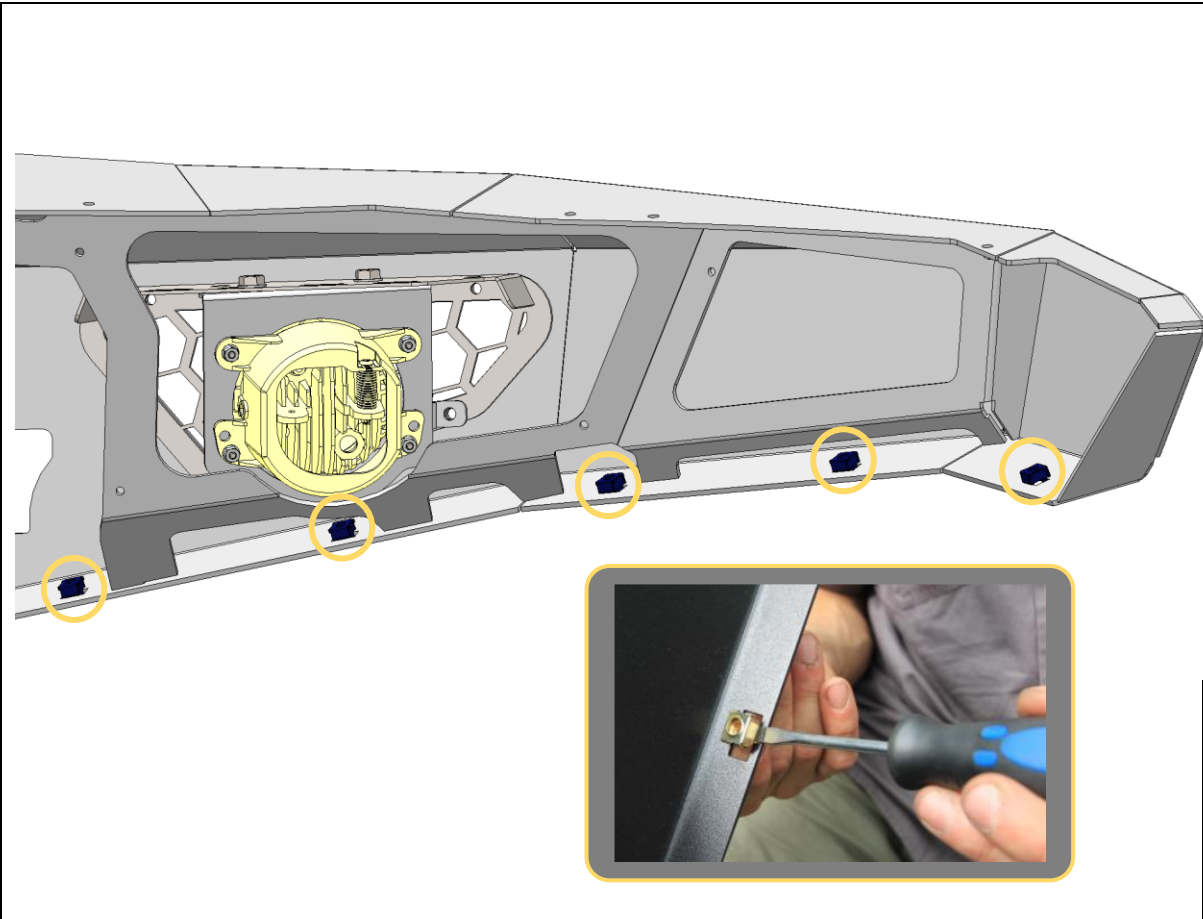


89. Prepare the bar for fitment. Start by routing wiring harness through the bar such that all plugs are in the correct location. Secure loom with cable ties to the bar. 90. If the option has been selected, fit the Offroad Animal Halo fog lights to the supplied fog light brackets using 4x M4x12 pan head screws, flat washers and flange nuts (each).	TOOLS REQUIRED Phillips head screwdriver Cable ties
	FASTENERS 8x M4x12 pan head 8x M4 flat washer 8x M4 flange nut

	
91. Fit the fog light and bracket to the mesh panel, using the supplied 2x M8x12 hex bolts, flat washers and flange nuts. Match the orientation as shown. 92. Repeat for other fog light.	TOOLS REQUIRED 13mm socket
	FASTENERS 4x M8x12 hex bolt 4x M8 flat washer 4x M8 flange nut

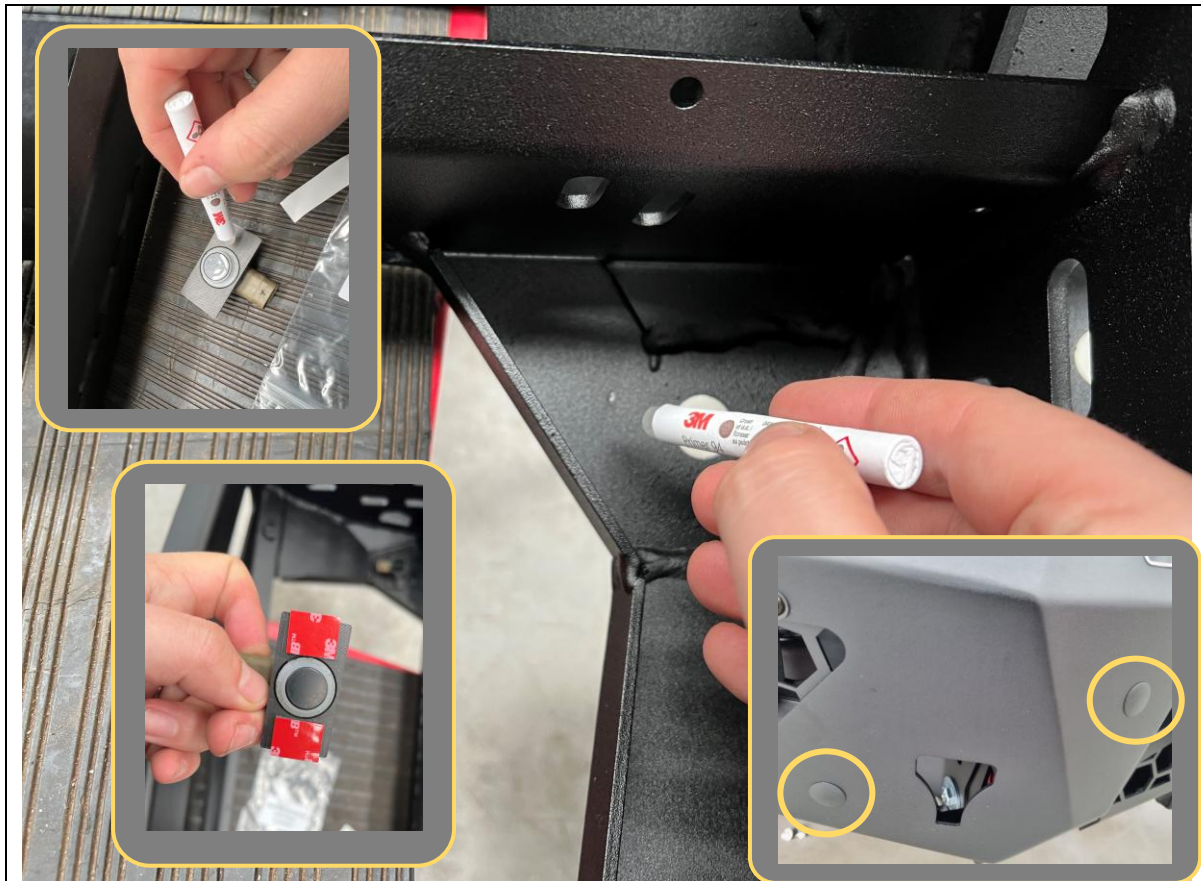


93. Fit the fog light + mesh panel to the bulbar using 4x M16x16 black button head bolts, black flat washers and flange nuts. 94. Secure and tighten using 4mm hex/Allen key and repeat for other side. 95. Re-wire the fog light and connect to the bumper loom.	TOOLS REQUIRED 4mm hex/Allen key
	FASTENERS 8x M6x16 black button head 8x M6 black washer 8x M6 flange nut

	
96. Fit 5x M6 cage nuts into the rectangular slots on the bottom of the bar wing. To aid fitting, use a small flat blade screwdriver to push the edge of the cage nut to engage with the slot. 97. Repeat for other side of the bar.	TOOLS REQUIRED Flat blade screwdriver
	FASTENERS 10x M6 cage nut



98. 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 light bars. 99. If fitting driving lights or top hoop to this bar, this is also the most convenient time to do so. It is still possible later but is more difficult. 100. Fit the pan brace to the back of the bar using 5x M6x16 black button head bolts, flat washers and flange nuts.	TOOLS REQUIRED 4mm hex/Allen key 10mm spanner Supplied with light bar
	FASTENERS 5x M6x16 black button head 5x M6 black flat washer 5x M6 flange nut Supplied with light bar



101. If not fitting parking sensors, insert the 4x supplied round plastic blanking plugs into the holes of the bar.
102. Otherwise, clean area surrounding the parking sensor holes in the bar with isopropyl alcohol or similar cleaning solvent and let it dry.
103. Lightly scuff the bonding surfaces of the 4x supplied plastic sensor housings with sandpaper. Then clean with isopropyl alcohol or similar.
104. Apply the 3M Primer 94 adhesion promotor from the tape kit to the parking sensor locations, on both the bar and the sensor housings.
Important: allow at least 5 minutes for the primer to chemically bond to the surfaces before applying tape.
105. Apply supplied VHB tape pads to all sensor housings as shown in the inset photo.
106. Dry fit sensors to bar to check loom position is correct.
107. Remove backing and adhere sensors in position in bar. Apply pressure for 20-30sec after positioning for best adhesion.
108. Add a pea-sized blob of automotive adhesive sealant over the sensor holder and inside face of bar to hold to ensure the tape holds position.
109. Connect all parking sensor loom connectors.

TOOLS REQUIRED

Isopropyl alcohol
Rag
Automotive adhesive
sealant (eg. Sikaflex)

FASTENERS

4x plastic blanking
plugs

or

VHB Tape pads
Primer 94



110. Fit the supplied pinch weld to both ends of the bar wing as shown.	TOOLS REQUIRED
	FASTENERS Bulb pinch weld



111. With assistance, either from another person, or a lifting trolley, lift the bar onto the mounts on the vehicle.
112. Reconnect the bumper wiring harness to the vehicle.
113. Secure with 8x M12x30 Bolts, heavy duty washers and M12 Nyloc + flange nuts. Leave finger tight at this stage.

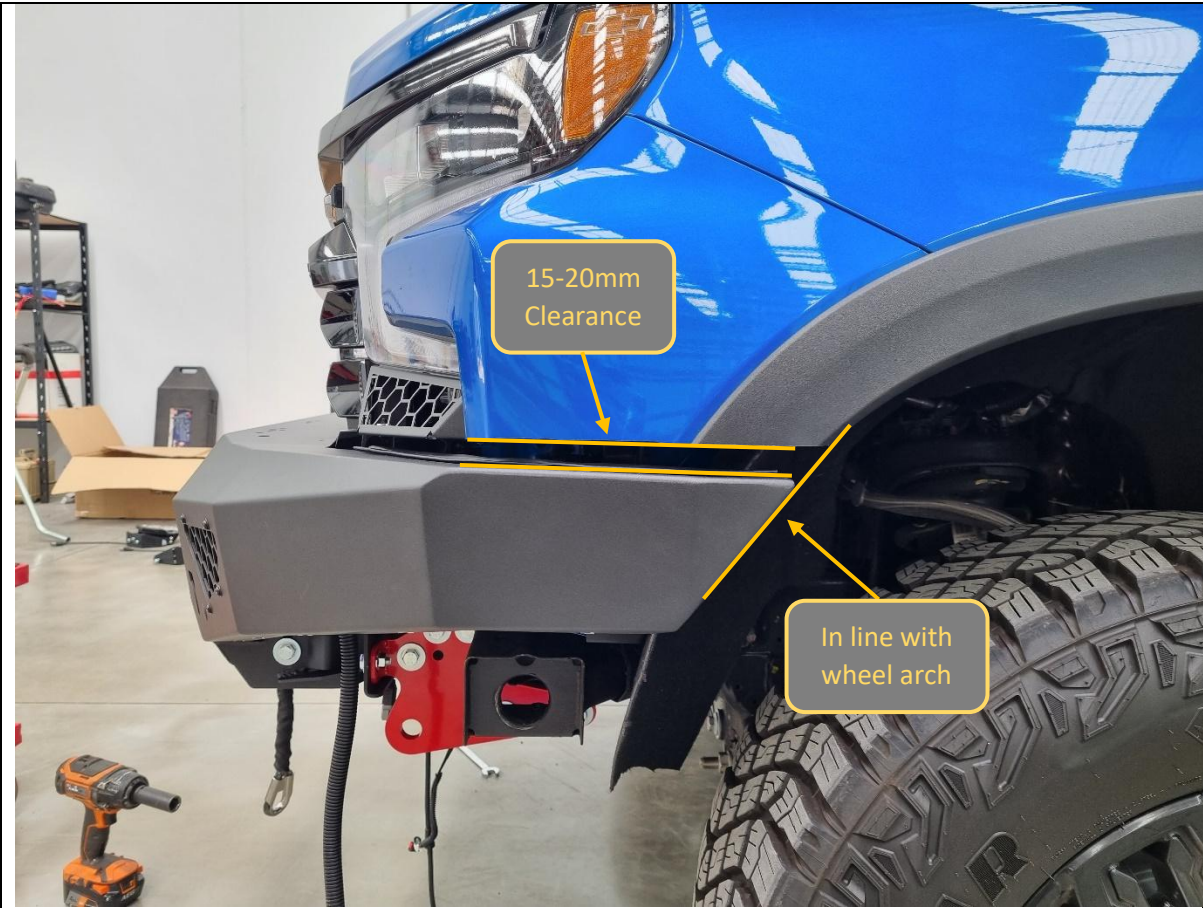
Note: Use a washer on both bolt and nut side for the Nyloc nut. 1x washer on the bolt side is all that is required with flange nuts.

TOOLS REQUIRED

Lifting trolley

FASTENERS

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



114. With assistance, from another person, align the bar with the edges of the vehicle. The bar should sit symmetric left/right on the vehicle. In front view, the top face of the bar should sit parallel with the ground, and have about 15-20mm vertical clearance to the bottom of the headlight infill. In side view, the end of the bar wing should be in line with the wheel arch liner. 115. Once happy with alignment, tighten all 8x M12 bolts.	TOOLS REQUIRED Lifting trolley 18/19mm socket
	FASTENERS



116. If fitting a winch, do so now.

This bar is designed to fit most low mount winches, in foot down configuration. WARN ZEON 12 is the largest winch confirmed to fit (with grille cut, see Step 54 for explanation)

117. The control box can be mounted on top of the winch, or to the side as shown. Winches usually come with a bracket to allow this. Refer to winch manufacturer.

In some rare cases, the winch control box may need to be relocated elsewhere using custom bracketry.

118. 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



119. Loosen the M12 flange nut on the rearmost chassis mount hole installed in Step 35. 120. Install the tension strap connecting the winch cradle to the rearmost chassis mount hole, using 1x M10x25 hex bolt, flat washer and flange nut. Re-secure the rear with the M12 flange nut. 121. Repeat on other side for other tension strap.	TOOLS REQUIRED 16mm socket 18/19mm socket
	FASTENERS 2x M10x25 hex bolt 2x M10 flat washer 2x M10 flange nut



122. 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. 123. Fit number plate flip mount to mesh panel using 2x M6x20 hex bolts, flat washers and flange nuts supplied in the number plate flip kit. 124. Attach number plate to mount using supplied pan head screws in the number plate flip kit.	TOOLS REQUIRED 10mm socket 13mm socket/spanner 4mm hex/Allen key Phillips head screwdriver
	FASTENERS 2x M6x20 hex bolt 2x M6 flat washer 2x M6 flange nut



125. If relocating the front camera, secure the entire camera and mounting bracket to the supplied facelift camera housing using 2x M5x15 black button bolts, black flat washers and flange nuts. 126. Attach the camera and housing to the mesh fairlead with 2x M5x15 black button head bolts and black flat washers.	TOOLS REQUIRED 3mm hex/Allen key
	FASTENERS 4x M5x15 black button head 4x M5 black flat washer 2x M5 flange nut



127. Hold the mesh fairlead up to the bar and connect the camera harness and washer hose to the back of the camera housing. 128. Feed winch cable through the hawse fairlead if applicable.	TOOLS REQUIRED
	FASTENERS



129. Fit the mesh fairlead mount to the centre of the bar, using 2x M8x16 black button head bolts (top), 2x M8x20 hex head bolts (bottom) and 4x flat washers.
130. Tighten fasteners using 13mm socket/spanner and 5mm hex/Allen key.

TOOLS REQUIRED

13mm socket/spanner
5mm hex/Allen key

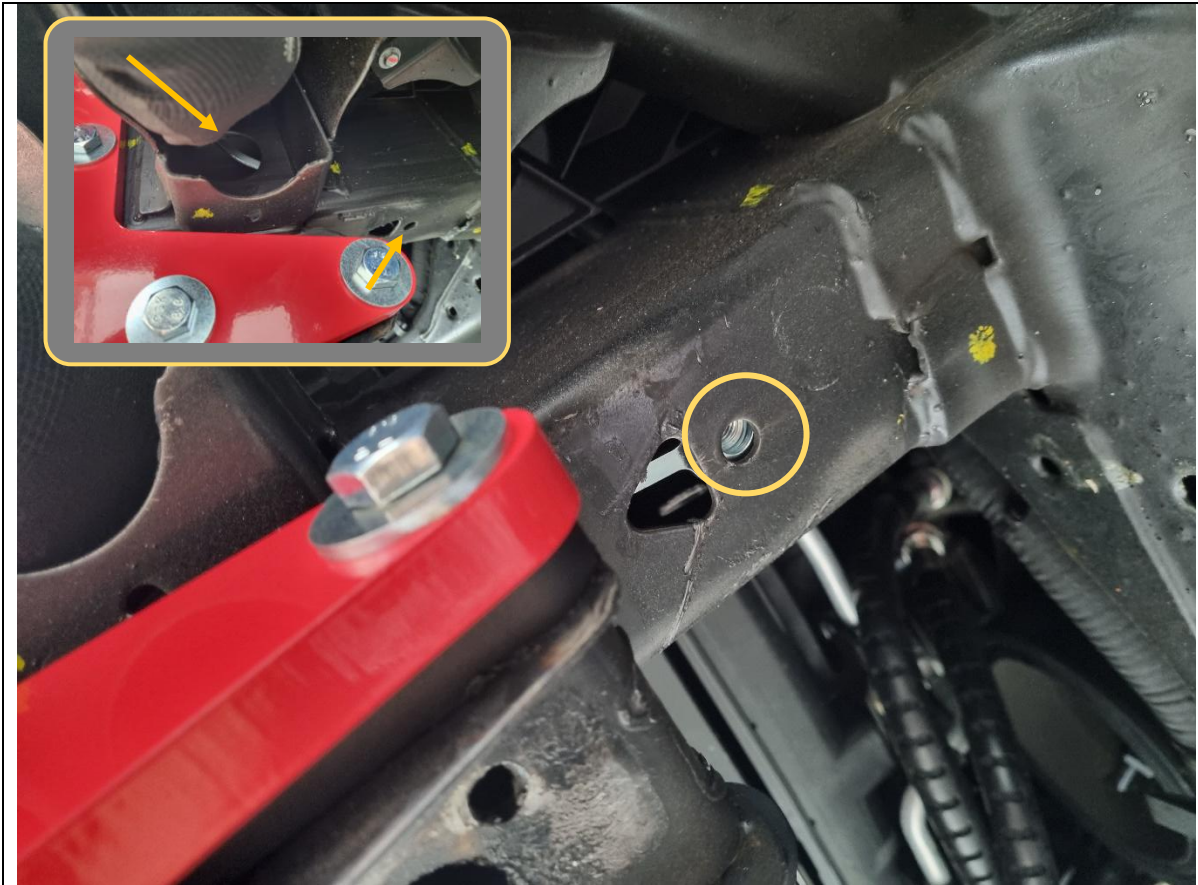
FASTENERS

2x M8x16 black button head
2x M8 black flat washer

2x M8x20 hex head
2x M8 flat washer



131. Fit the centre bash plate to the bar using 4x M8x20 black button bolts and flat washers. 132. Secure the back of the centre bash plate to the chassis mount bracket using 2x M10x25 hex bolts, flat washers and flange nuts (see inset).	TOOLS REQUIRED 5mm hex/Allen key 16mm socket/spanner
	FASTENERS 4x M8x20 black button head 4x M8 black flat washer 2x M10x25 hex bolt 2x M10 flat washer 2x M10 flange nut



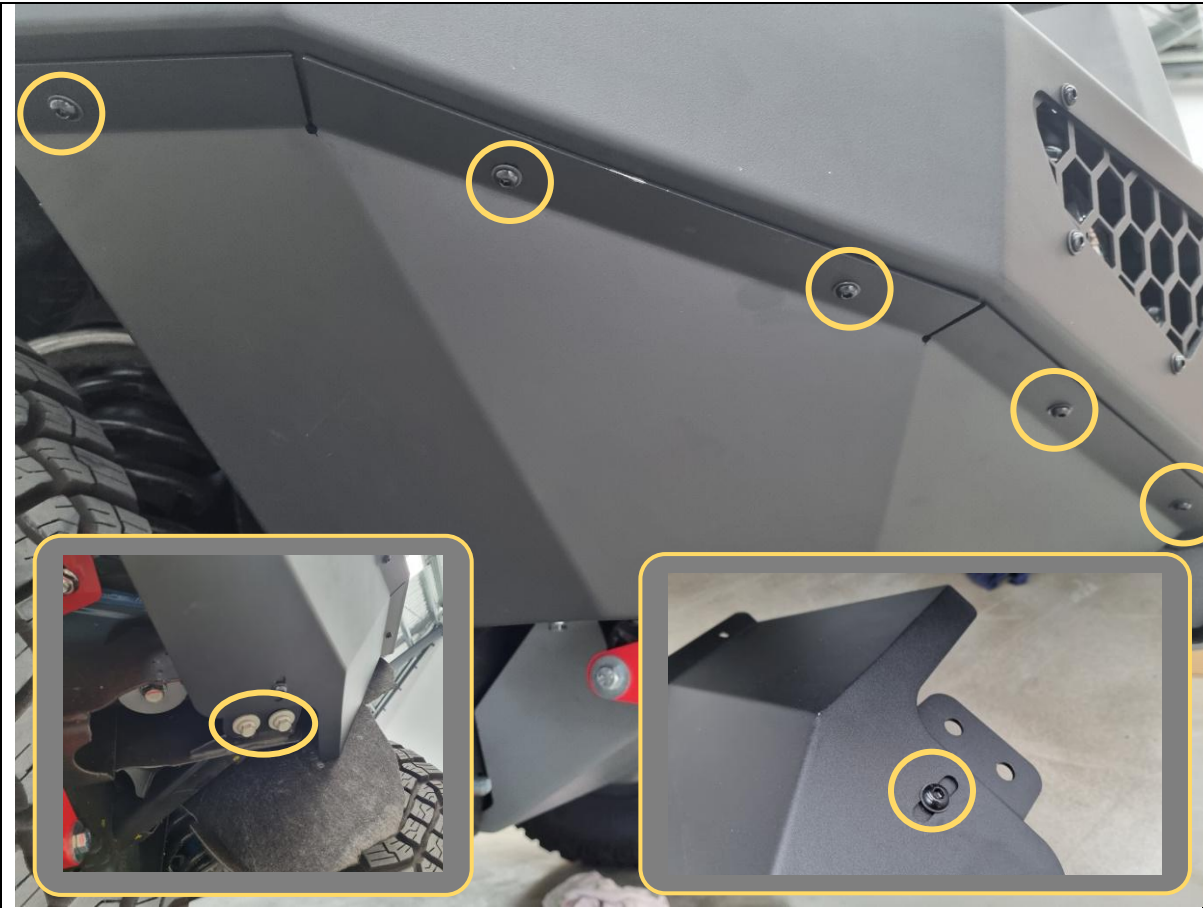
133. Insert 1x M8 lollipop nutplate through the opening in the chassis rail beneath the body mount bracket.
134. Align the nutplate with the hole on the underside of the chassis rail as shown.
135. Repeat for other side.

TOOLS REQUIRED**FASTENERS**

2x M8 lollipop nutplate



136. Fit the lower bash plate to the vehicle by re-using the 4x 13mm hex bolts from Step 12. Fit the rear 2x bolts through the factory under shield. Fit the front 2x bolts through the chassis rail into the previously installed nutplates. 137. Secure the front lip of the lower bash plate to the centre bash plate with 3x M6x20 hex bolts, flat washers and flange nuts. Insert flange nuts through the hole cutouts in the lower base plate.	TOOLS REQUIRED 10mm socket 13mm socket
	FASTENERS 4x factory 13mm hex bolt 3x M6x20 hex bolt 3x M6 flat washer 3x M6 flange nut



138. Loosely fit the side underpanel mount bracket to the side underpanel with 1x M8x16 black button head bolt, black flat washer and flange nut (see bottom right). Leave finger tight at this stage. 139. Loosely fit the side underpanel to the bar with 5x M6x16 black button head bolts and black flat washers. 140. Loosely fit the side underpanel mount bracket to the chassis with 2x factory 15mm hex bolts retained from Step 26 (see bottom left). 141. Repeat for other side underpanel.	TOOLS REQUIRED 4mm hex/Allen key 5mm hex/Allen key 15mm socket
	FASTENERS 4x factory 15mm hex bolt 10x M6x16 black button head 10x M6 black flat washer 2x M8x16 black button head 2x M8 black flat washer 2x M8 flange nut



142. Using the edge of the side underpanel as a guide, mark the wheel arch liner, approximately 10mm below the side underpanel.
143. Cut along the marked line with a utility knife.
144. Tuck the wheel arch liner behind the flange of the side underpanel.
145. Tighten all side underpanel bolts and repeat for other side.

TOOLS REQUIRED

Utility knife

4mm hex/Allen key
5mm hex/Allen key
15mm socket**FASTENERS**



146. Fit the Offroad Animal logo plate to the front of the vehicle as shown.
147. Fit the compliance plate in a visible location on the underside of the bar. We recommend placing it on the bottom of the centre bash plate.
148. **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.
149. **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.
150. Review fitment and double check all bolts are tightened correctly.

TOOLS REQUIRED

5mm hex/Allen key

FASTENERS4x M8x20 black button head
4x M8 flat washer



Congratulations! You're done!
Head for the tracks and enjoy your newly protected ZR2!