ISUZU D-MAX RG
MY2021 ONWARDS
REAR PROTECTION BAR

IMPORTANT! – READ BEFORE INSTALLATION

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

GENERAL CARE AND MAINTENANCE

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.

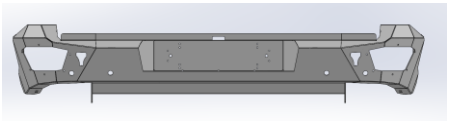
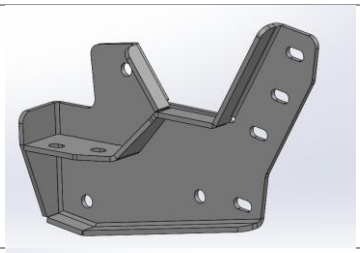
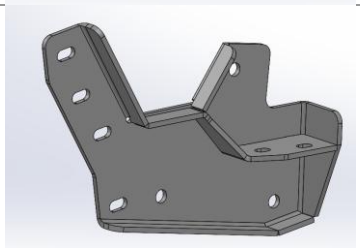
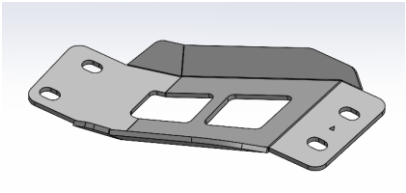
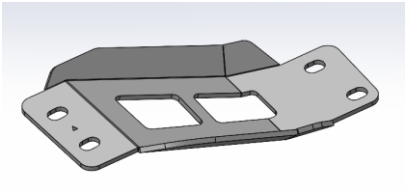
FRONT BAR MOUNTS AND TOW POINTS + REAR TOWBAR	
Size	**Torque Nm**
M10	57 Nm
M12	100 Nm
M14	164 Nm
M16	248 Nm

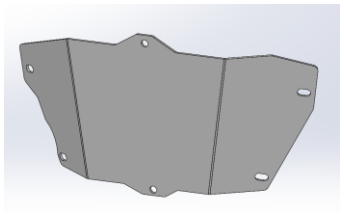
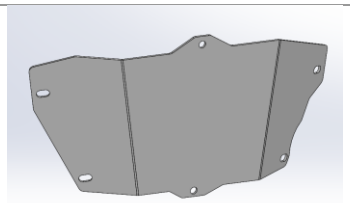
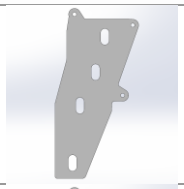
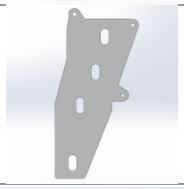
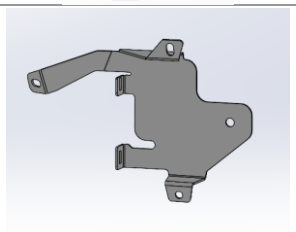
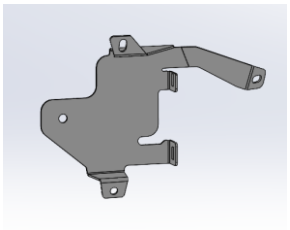
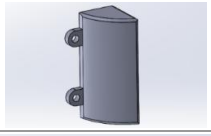
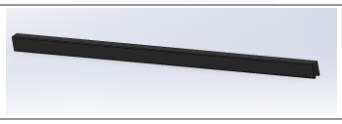
Always use a torque wrench to set correct torque settings. Ensure torque wrench is set to Nm unit of measurement. Otherwise perform conversion to lb-ft.

PARTS LISTING

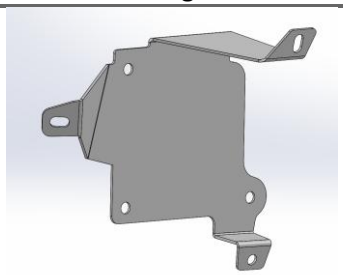
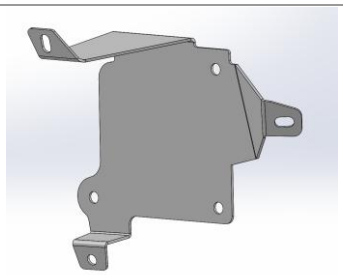
IMPORTANT: Check all parts are present before beginning work! Contact OFFROAD ANIMAL if something is missing.

Main Parts – In the Box

Qty	Part Number	Description	Image
1	RBP-IDM-RG-21-ASM1	ISUZU DMAX RG 21+ REAR PROTECTION BAR WELDMENT	
1	RBP-IDM-RG-21-ASM2L	DMAX Rear Protection Bar - Mount Assembly	
1	RBP-IDM-RG-21-ASM2R	DMAX Rear Protection Bar - Mount Assembly	
1	B-1861R	DMAX 21+ Rear Protection Bar - Wing Brace	
1	B-1861L	DMAX 21+ Rear Protection Bar - Wing Brace	

1	B-0544R	DMAX 21+ Rear Radar Cover Panel	
1	B-0544L	DMAX 21+ Rear Radar Cover Panel	
2	P-0560	DMAX 21+ Rear Protection Bar - Shim Plate 1mm	
4	P-0559	DMAX 21+ Rear Protection Bar - Shim Plate 2mm	
1	B-0576R	Isuzu DMAX 2021+ Rear Bar - Radar Bracket	
1	B-0576L	Isuzu DMAX 2021+ Rear Bar - Radar Bracket	
2	BR25B	LED NUMBER PLATE LIGHT	
2	PW-P-14x9-800	Pinch Weld - Plain Non Seal 800mm	

D-MAX MY23 Radar Upgrade Kit

Qty	Part Number	Description	Image
1	B-1066R	D-MAX MY23 Rear Radar Bracket	
1	B-1066L	D-MAX MY23 Rear Radar Bracket	
6	M6 X 16 HEX	M6X16 HEX BOLT, ZP, 8.8	-
6	M6 FLAT WASHER	M6 FW	-
6	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP	-

Small Parts – Contained in Small Parts Kit Bag

Qty	Part Number	Description
6	M5 FLANGE NUT	Flange Nut, M5x0.8 G8.8 ZP
6	M5X20 PAN	SCREW, PAN HEAD PHILLIPS, M5X20X0.8 GR4.6 ZP
16	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
16	M6 FLAT WASHER BLACK ZINC	M6 Flat Washer, 12x6.1x1, ISO4042 ZnNi BLACK PASSIVATED FINISH
16	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
4	M10X25 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M10X25X1.5 GR12.9, ISO4042 ZnNi BLACK PASSIVATED FINISH
4	M10 FW LHD BLACK ZINC	WASHER, FLAT M10X28.5X2.5, ISO4042 ZnNi BLACK PASSIVATED FINISH
12	M10 x 30	Bolt Hex, M10X30x[1.5], GR8.8 ZP
12	M10 FW LHD	WASHER, FLAT M10X28.5X2.5
16	M10 FLANGE NUT	Flange Nut, M10x1.5 G8.8 ZP

TOOLS REQUIRED

The following tools will be required to install the product.

Hand Tools	Power Tools	Workshop Equipment
Metric Socket Set 8-19mm Metric Spanner Set 8-19mm Hex (Allen) Key Set 4-8mm Trim Tool Utility Knife Side Cutters Wire Strippers Crimping Tool	Electric / Air Impact Driver (Optional but speeds up fitting process) Air Hacksaw or Reciprocating Saw	Lift Trolley Solder Heat Shrink Marker Electrical Crimp Connectors Automotive Adhesive (e.g Sikaflex 227)

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. This Product Requires the vehicle be fitted with Isuzu Genuine tow bar. Most model grades come with the towbar as standard.

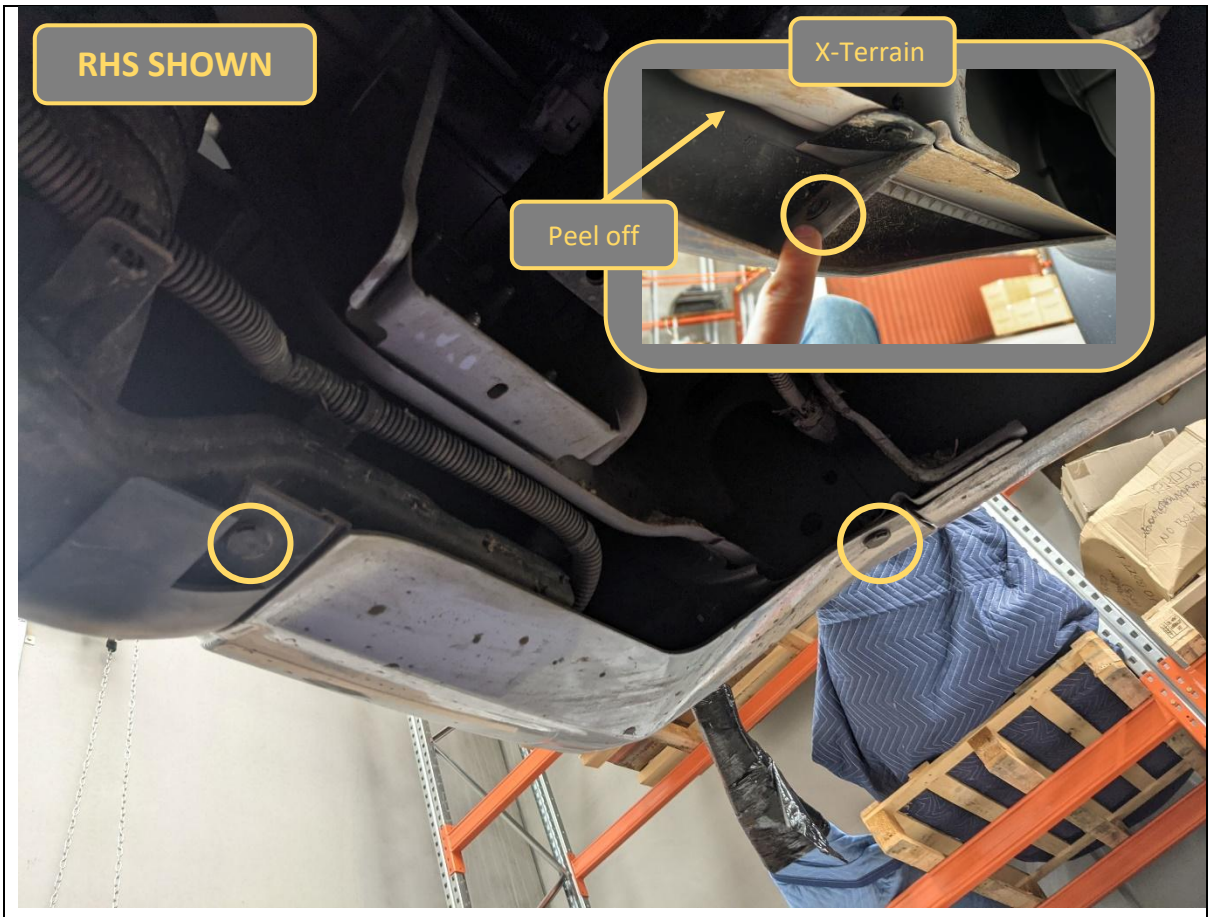
2. If required, fit Isuzu Genuine towbar, following Fitting instructions supplied with the tow bar.

TOOLS REQUIRED

Refer to the towbar instructions

FASTENERS

Refer to the towbar instructions



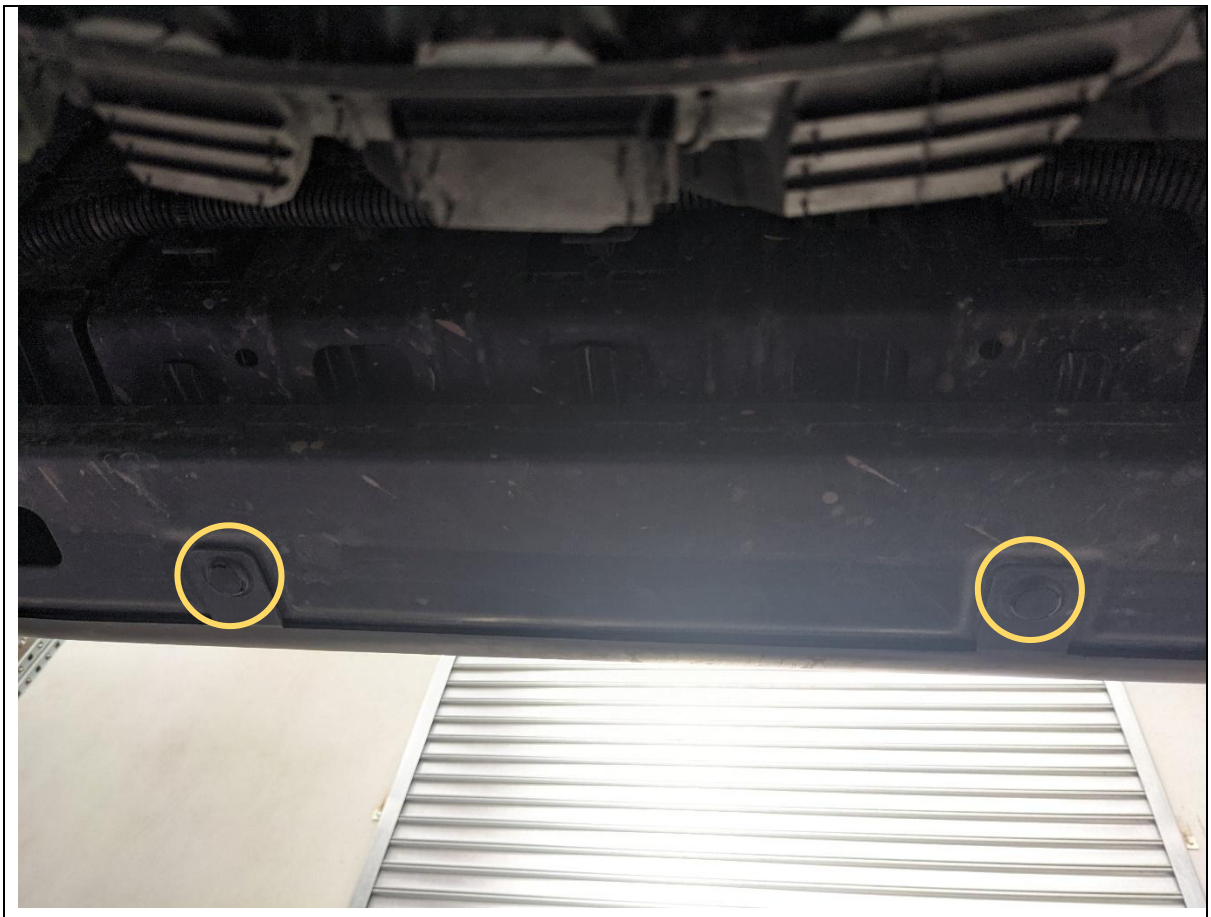
3. Remove the 2x Plastic clips from underside corner of rear bumper using trim tool. Complete for both sides.

4. X-Terrain models, remove fasteners securing the rear lower trim pieces, then remove trim pieces by peeling / cutting double side tape securing them to the bumper and tub.

TOOLS REQUIRED

Trim Tool

FASTENERS



5. Remove the 2x Plastic clips from underside center of rear bumper using trim tool.

TOOLS REQUIRED

Trim Tool

FASTENERS

6. Using a trim tool, pry away black plastic section of rear bumper to unseat it from the clips securing it to the colored outer sections.

7. Pull the black center section partly away from the vehicle as shown.

TOOLS REQUIRED

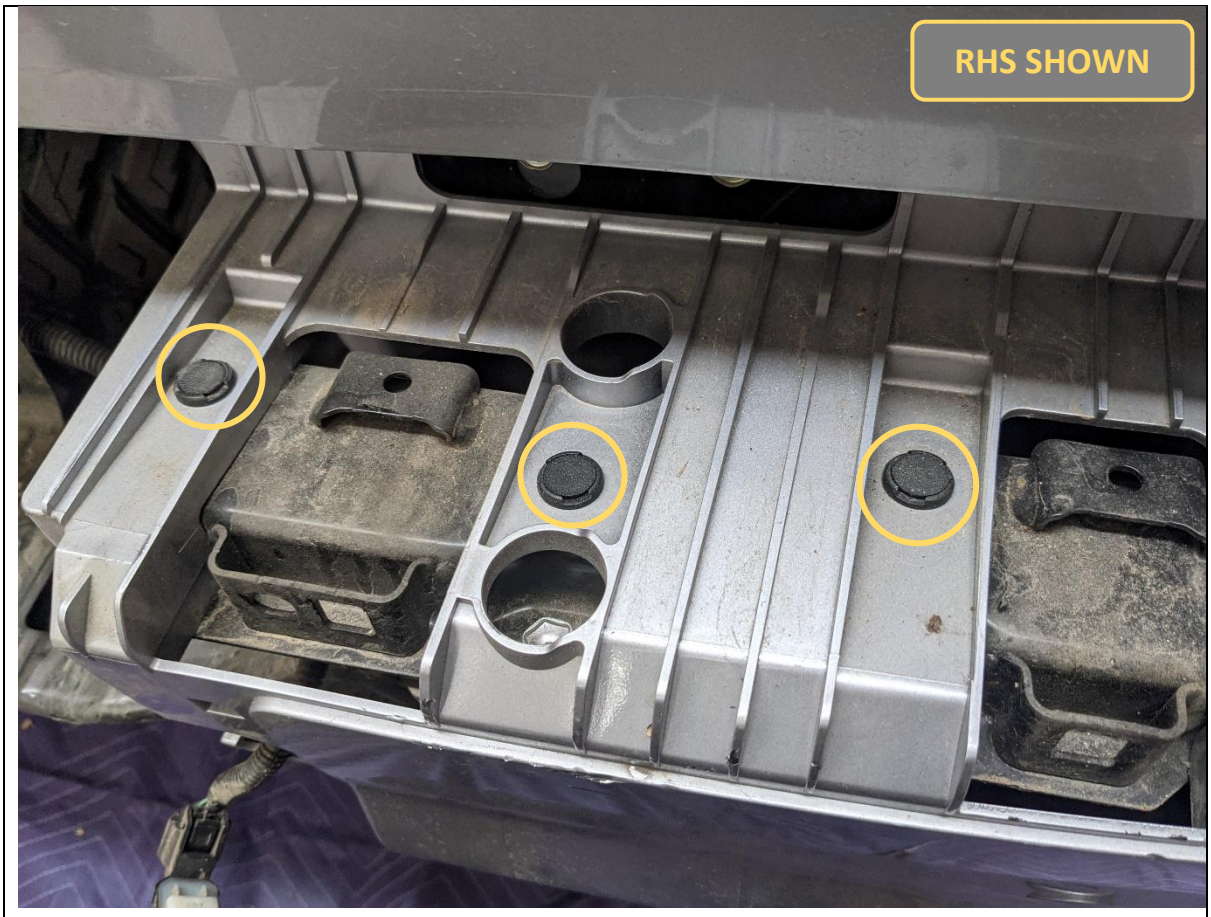
Trim Tool

FASTENERS

8. Remove the sensors from the housings in the center section loosened. Pry open the two retaining tabs holding the sensor in the housing then push the sensor through the bumper.

TOOLS REQUIRED

FASTENERS

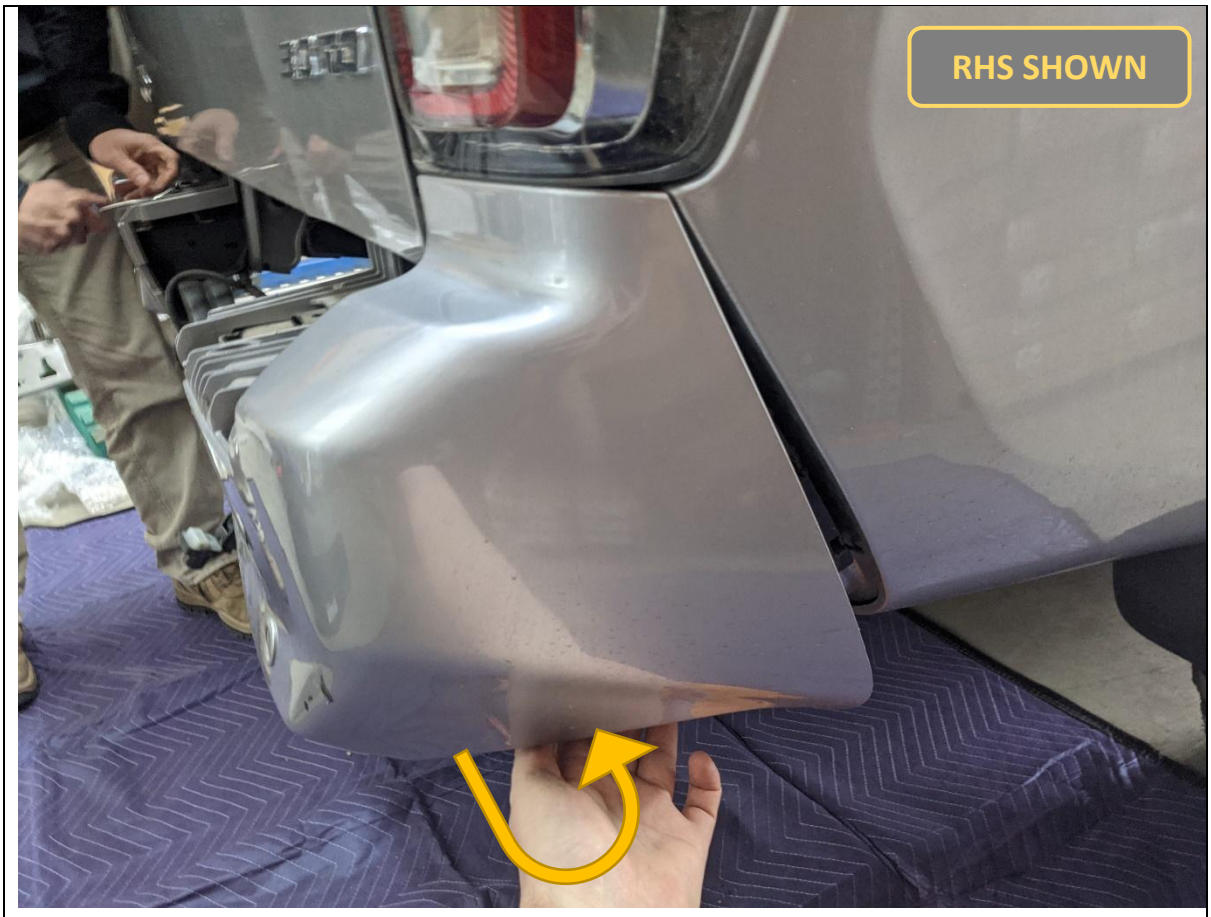


9. Remove the 3x Plastic clips securing the coloured outer bumper to the metal bumper support rail, using a trim tool

TOOLS REQUIRED

Trim Tool

FASTENERS



10. Pull off the outer bumper section, starting from the bottom corner as shown.

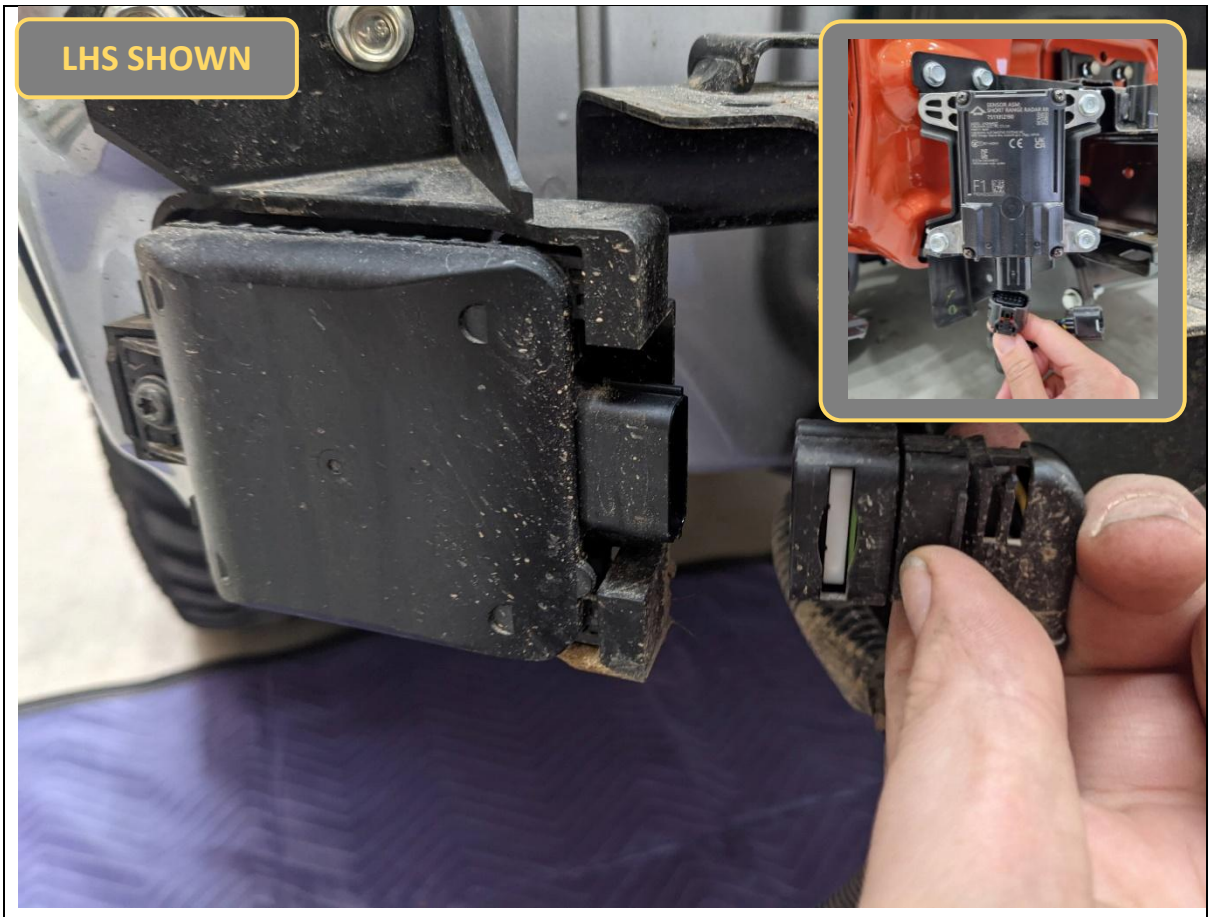
TOOLS REQUIRED

FASTENERS

11. Remove the sensors from the housings in the outer bumper section using same technique as before, Pry open the retaining tabs, then push sensor through.

TOOLS REQUIRED

FASTENERS



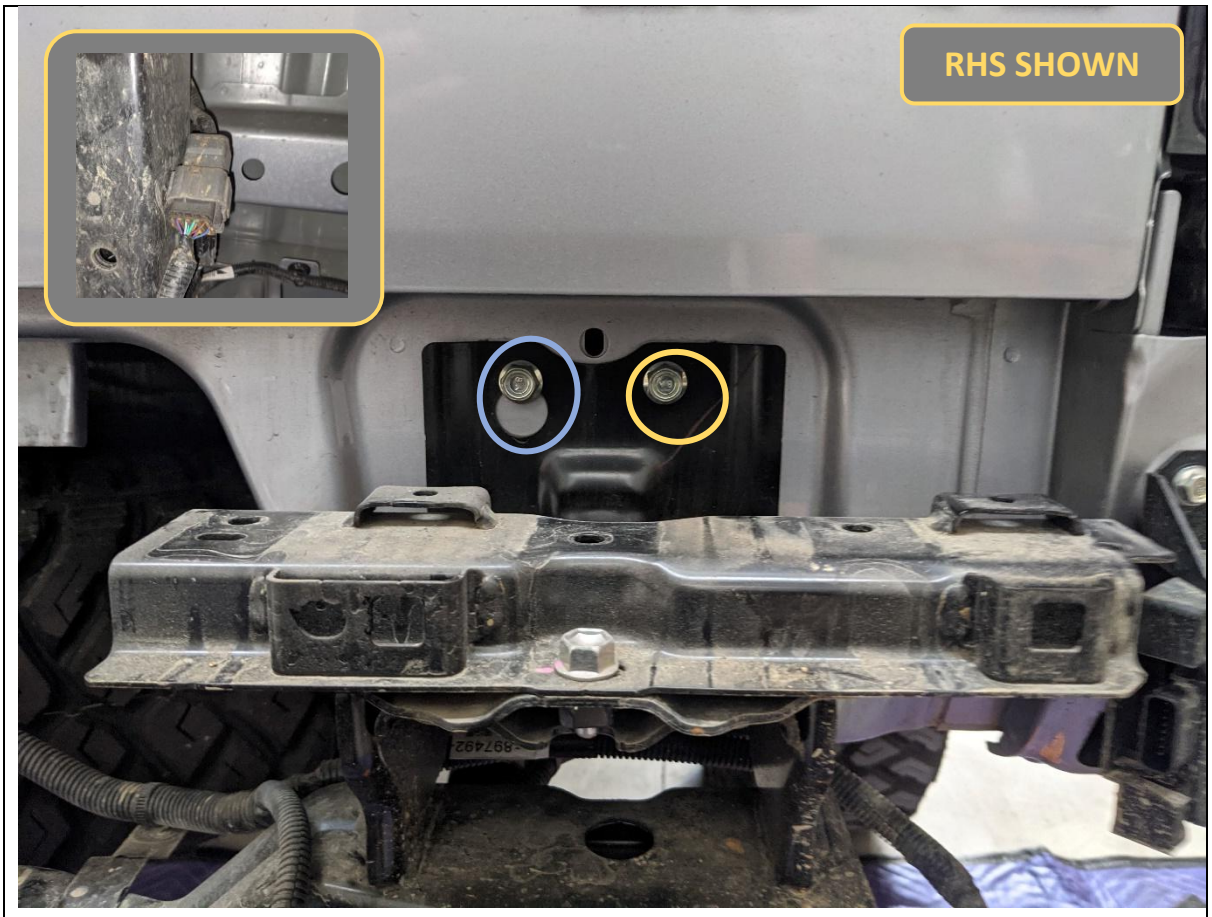
12. Disconnect the radar sensor wiring harness from the sensors at the connector.

    2023 UPDATE: On some trim levels, the radar unit has been changed. The plug will be pointing downwards instead of inwards (see inset).

13. Complete on both sides of vehicle.

TOOLS REQUIRED

FASTENERS



14. Disconnect the main rear bar wiring harness from the vehicle at the connector located under the tub.

15. Remove all the Hex head bolts that secure the metal bumper beam to the tub, except the bolts on with the keyhole slots (Blue Circle)

16. Loosen the 2x Bolts with the keyhole slots (Blue Circle).

TOOLS REQUIRED

Socket / Spanner

FASTENERS

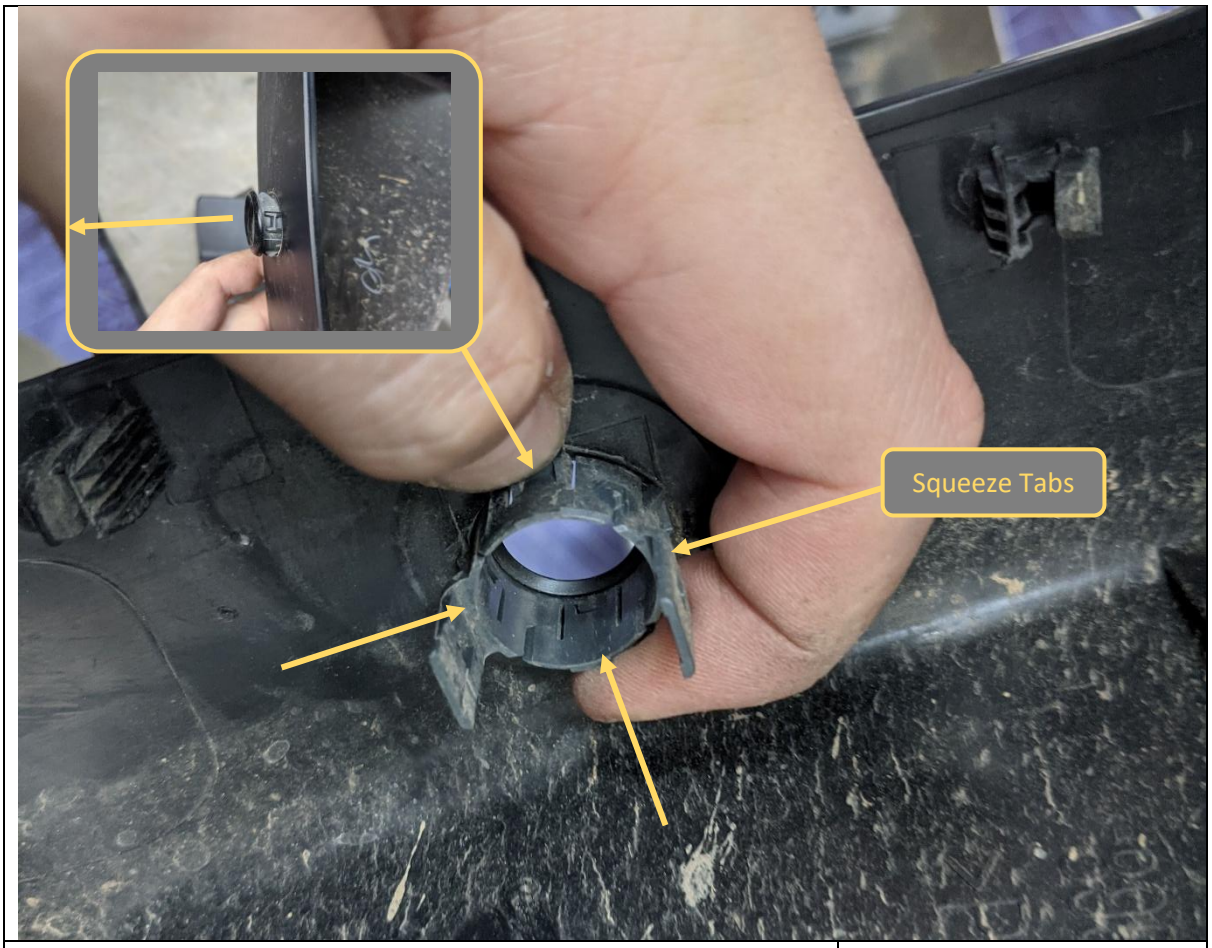
17. Lift and remove the metal bumper beam from the vehicle.

18. Remove the remaining hex bolts from the back of the tub.

TOOLS REQUIRED

Socket / Spanner

FASTENERS



19. Remove parking sensor housings, by squeezing the retaining tabs whilst pushing the housing forward through to the outside of the bumper.

    Take note of the housing orientation (there is a keying feature which can be used as reference)

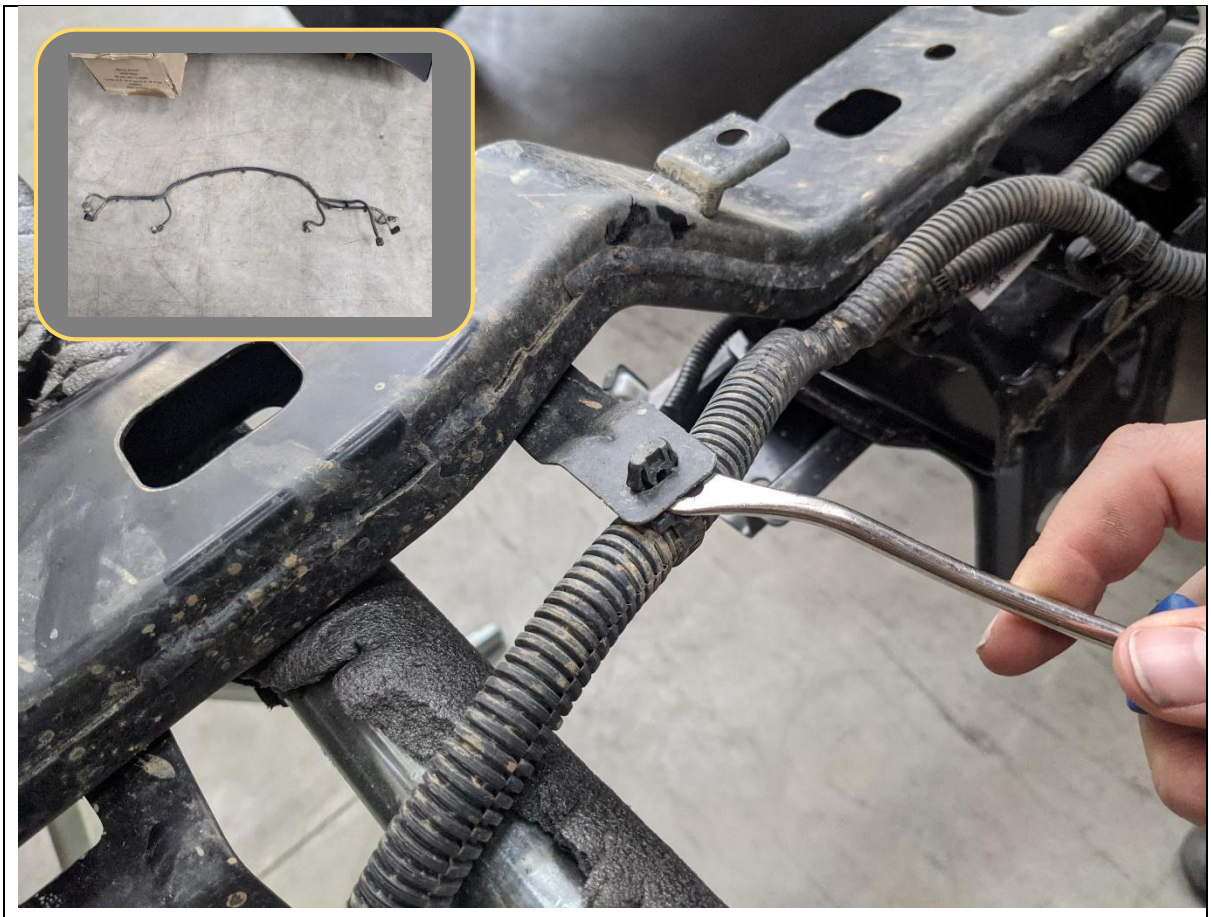
20. Repeat for all parking sensors in the bumper.

21. Remove Bulbs from Number plate lamps.

22. Remove number plate from original rear bar.

TOOLS REQUIRED

FASTENERS

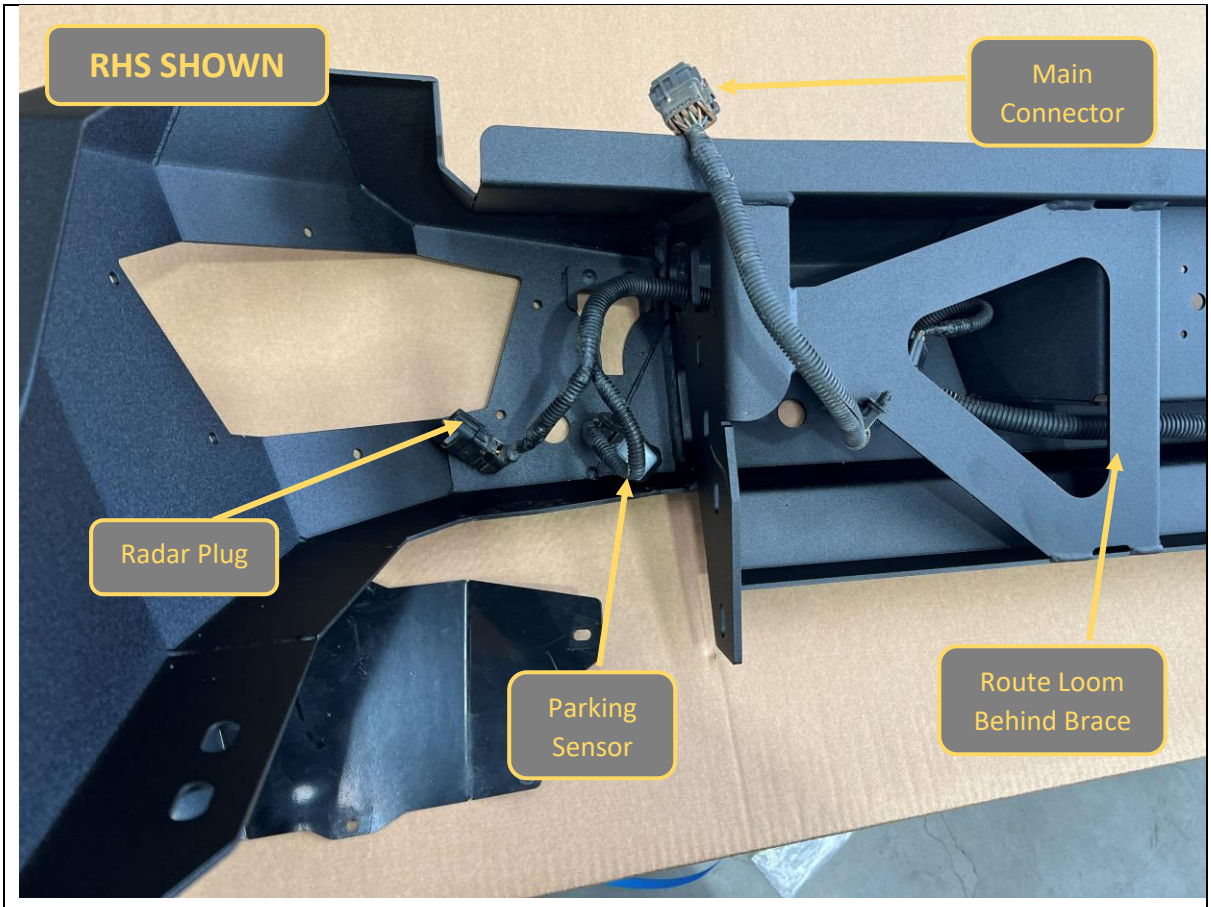


23. Remove the main rear bar loom from the metal bumper beam, by unclipping harness connections with the trim tool.

TOOLS REQUIRED

Trim Tool

FASTENERS



24. Fit the harness to the rear bar, routing the cables through the bar uprights so that the sensor wiring positions are in the correct location. Ensure the correct orientation of the harness connectors in maintained.

TOOLS REQUIRED

FASTENERS

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

26. Cut off lamp holders from the factory wiring.

    Note: this is located on the tub under the tailgate, not in the bumper loom

27. We suggest using crimp connectors to connect new LED number plate lamp cables. Crimp new connectors to both the number plate lights and vehicle loom.

28. Complete for both sides of vehicle.

TOOLS REQUIRED

Crimping tool
Automotive crimp connectors
Electrical Tape
Side cutters
Wire strippers

FASTENERS

Screws supplied with Lights

29. The plastic parking sensor holders need to be modified to be able to clip them into the rear bar.

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

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

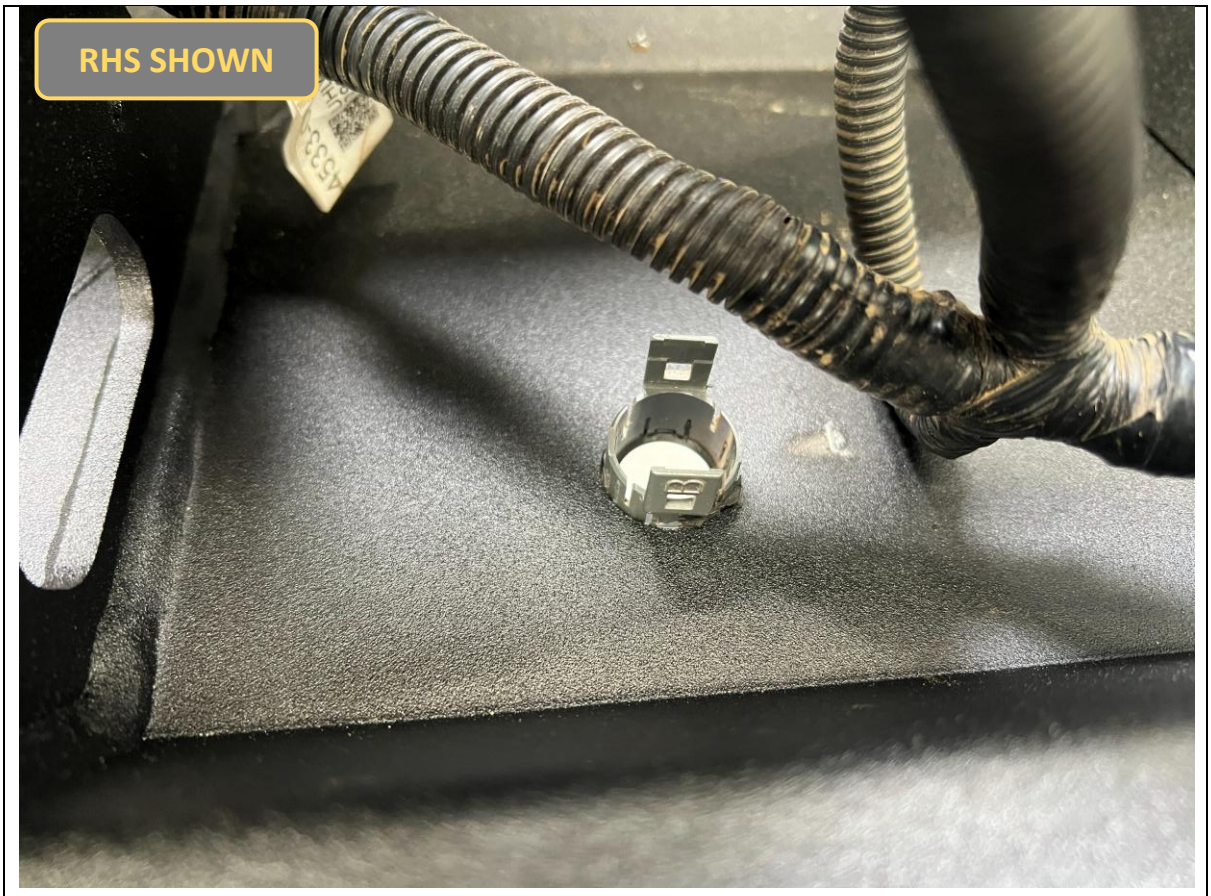
32. Do for all 4 tabs around each sensor holder.

33. 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.

TOOLS REQUIRED

Utility knife

FASTENERS

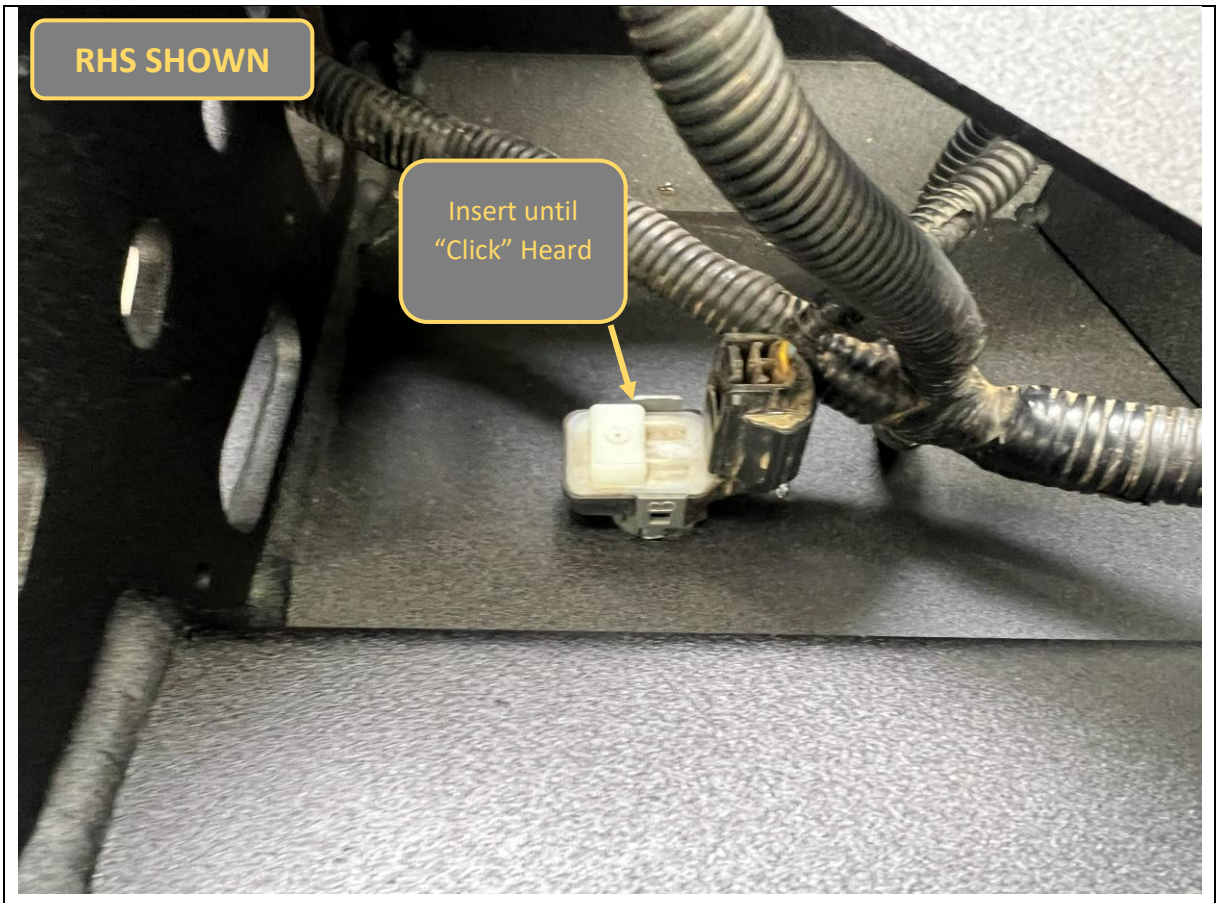


34. Install parking sensor housings by inserting from rear of bar and pushing until sensors housings sit flush with the bar.

35. Complete for all parking sensor locations on rear bar.

TOOLS REQUIRED

FASTENERS



36. Install sensors in housings by inserting into housing from rear of bar and pushing until audible “Click” is heard.

37. Plug in loom into sensors once seated.

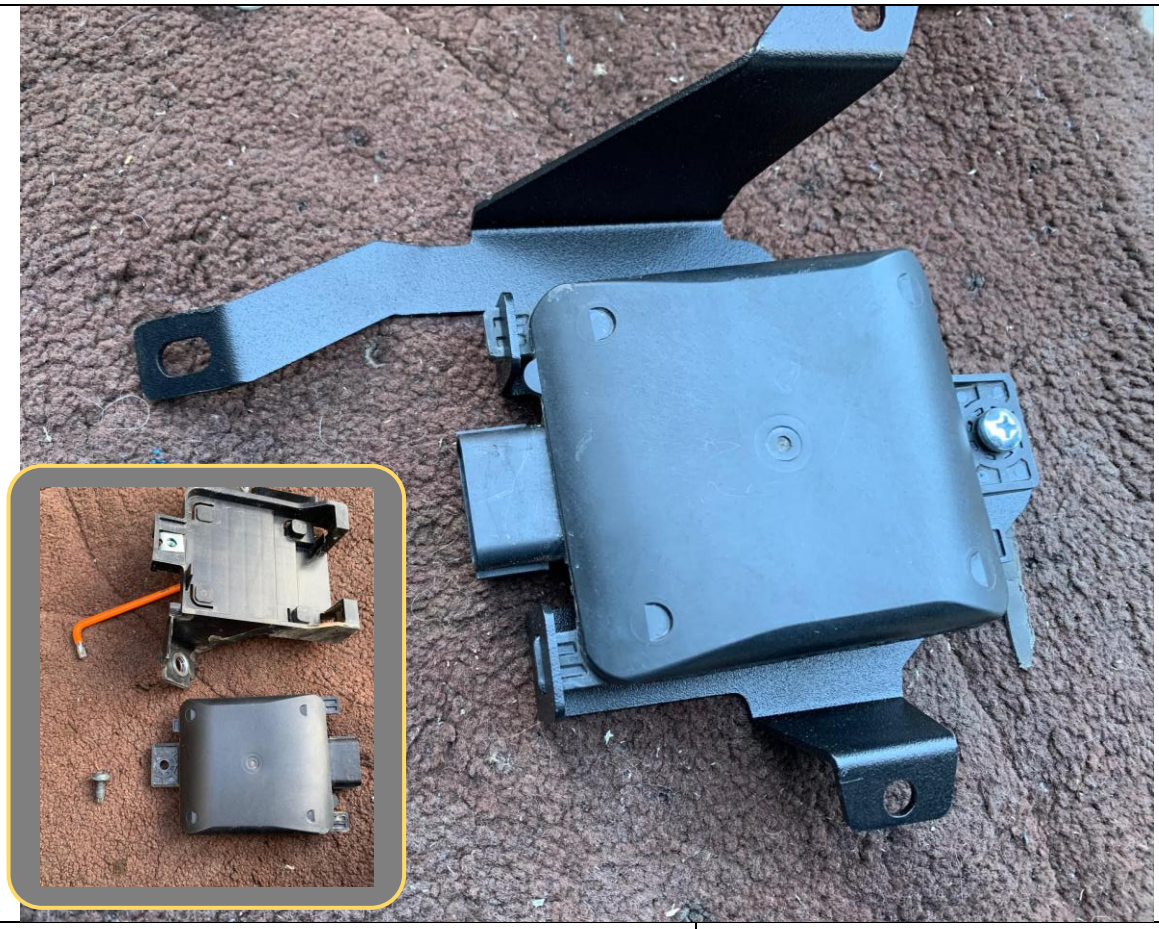
38. If the sensor holder is loose and is rotating in the bar, apply a small blob of adhesive (eg. Sikaflex 227) to fix its position.

39. Complete for both all sensors in bar.

TOOLS REQUIRED

Utility knife
Automotive Adhesive (e.g Sikaflex 227) If required.

FASTENERS



40. Remove rear radar sensors and their brackets from the tub, by removing Hex screws holding them in place.

    2023 UPDATE: On some Isuzu D-MAX trim levels, the radar unit has been changed. If it appears different to the photo above, skip to the next page.

41. Remove the rear radar sensor from the plastic bracket by removing the TORX screw holding it in place.

42. Complete for both sides of vehicle.

43. Re-fit the radar sensors to the supplied rear bar radar bracket using the supplied M5 Fastener (driver RH side shown).

TOOLS REQUIRED

Torx Key
Phillips Head screwdriver
10mm socket/spanner

FASTENERS

M5x15 Pan head
M5 Flange Nut

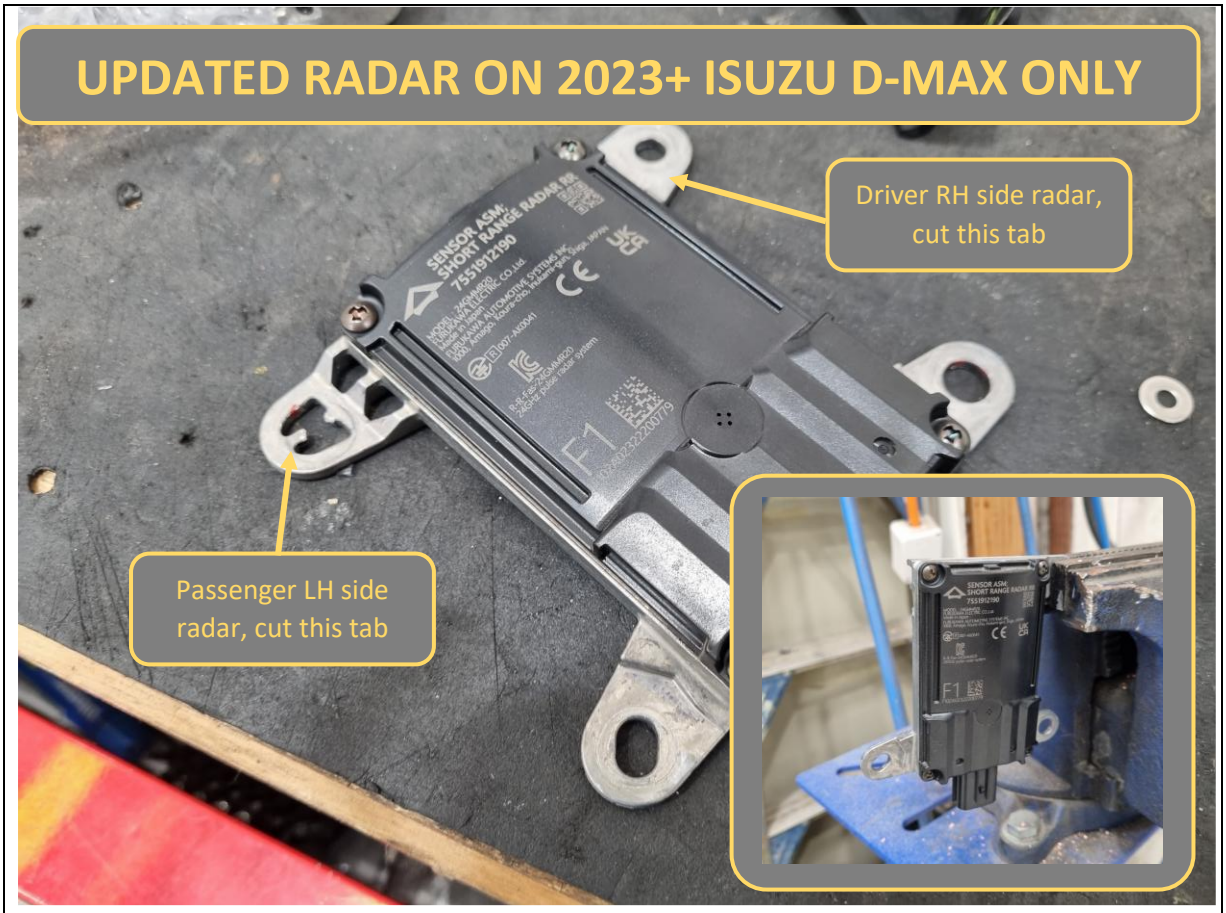
44. Remove the rear radar sensor from the plastic bracket by removing the 3x 10mm hex head bolts holding it in place.

45. Complete for both sides of vehicle.

TOOLS REQUIRED

10mm socket/spanner

FASTENERS



46. Cut off 1x metal tab on the radar sensor with an angle grinder.

    Different tabs need to be cut off for LH and RH radar sensors. See annotation above.

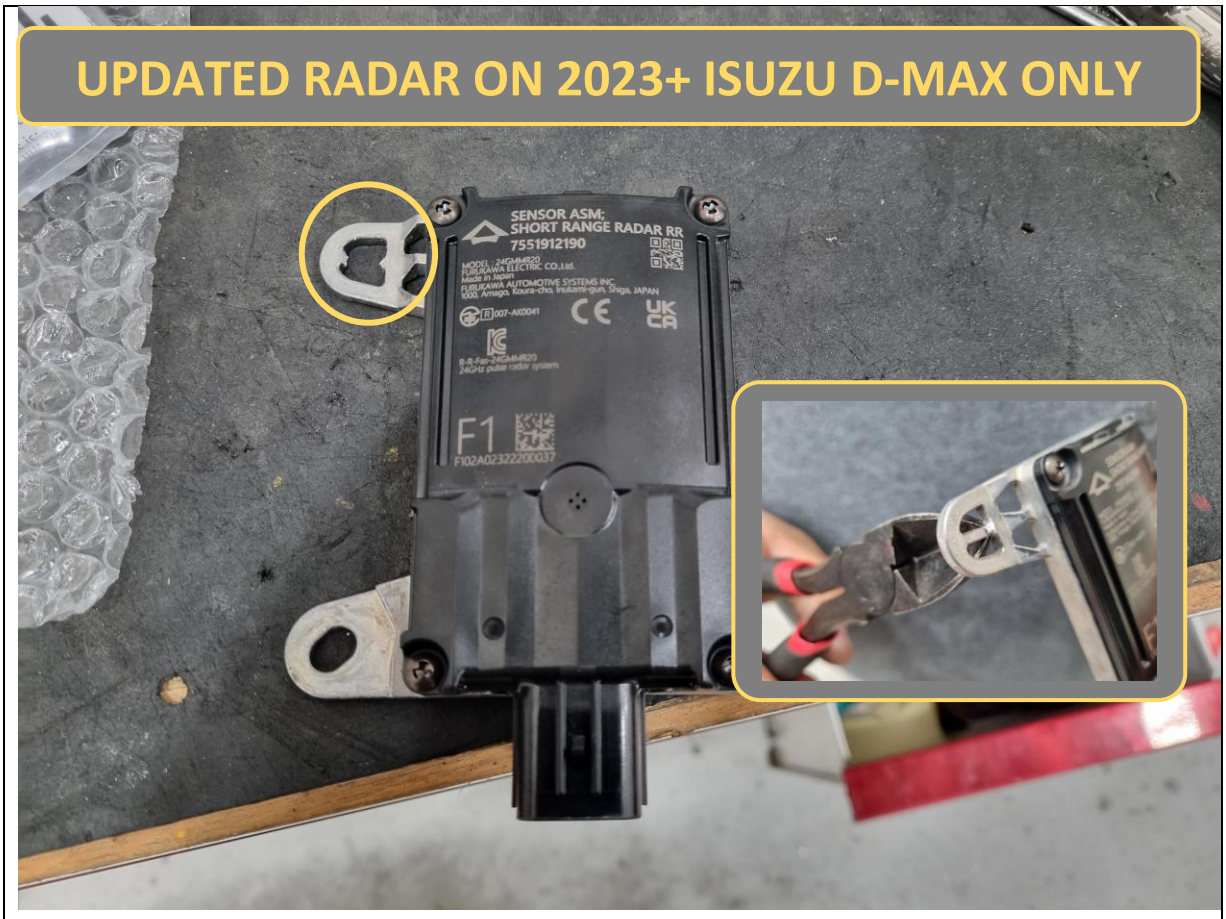
    It is advised to clamp the radar on one of the other tabs. **Take care not to damage any plastic parts of the radar sensor.**

47. Deburr/file after cutting.

TOOLS REQUIRED

Angle grinder
Deburr tool or metal file

FASTENERS

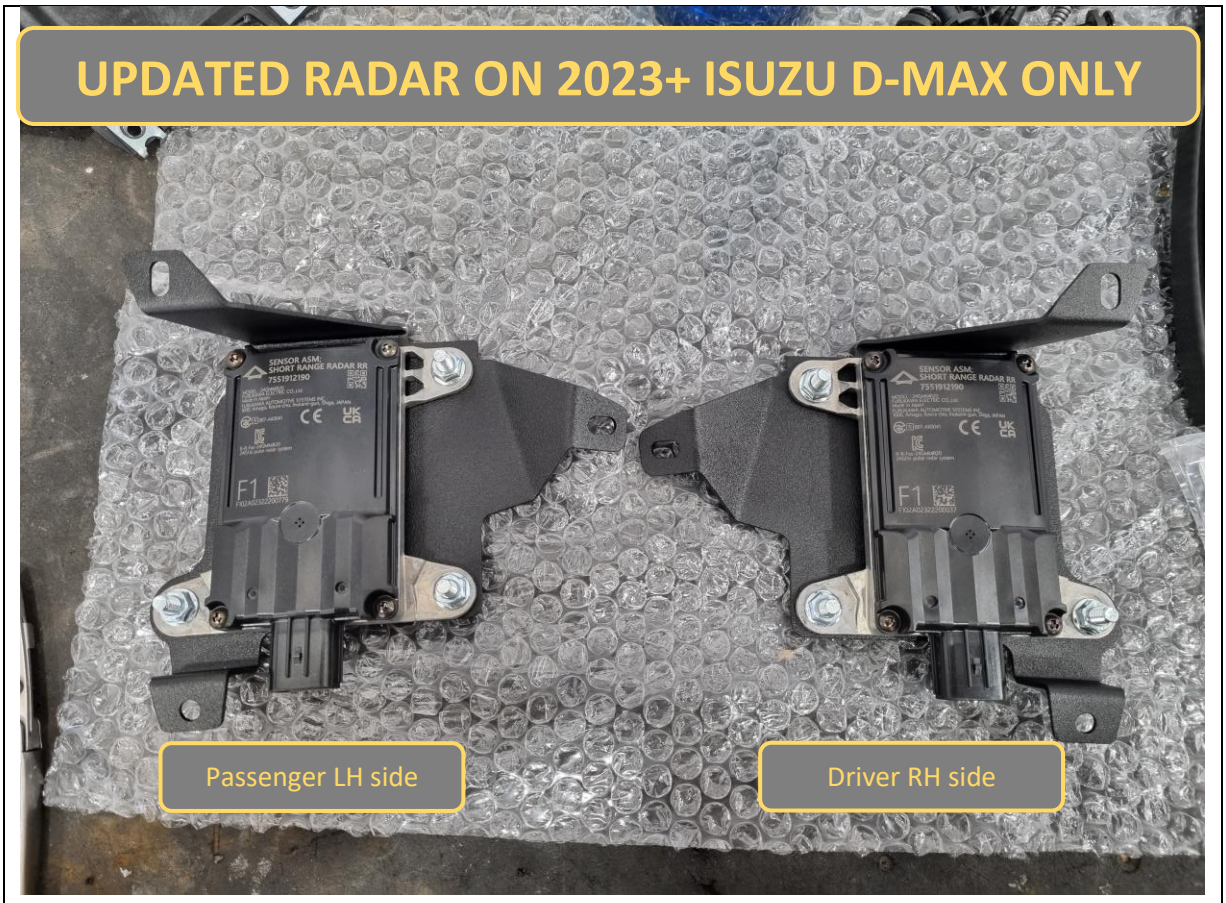


48. For the driver side RH radar sensor, also cut out the webbing in the top left tab. This can be done with a pair of side cutters.

TOOLS REQUIRED

Side cutters

FASTENERS



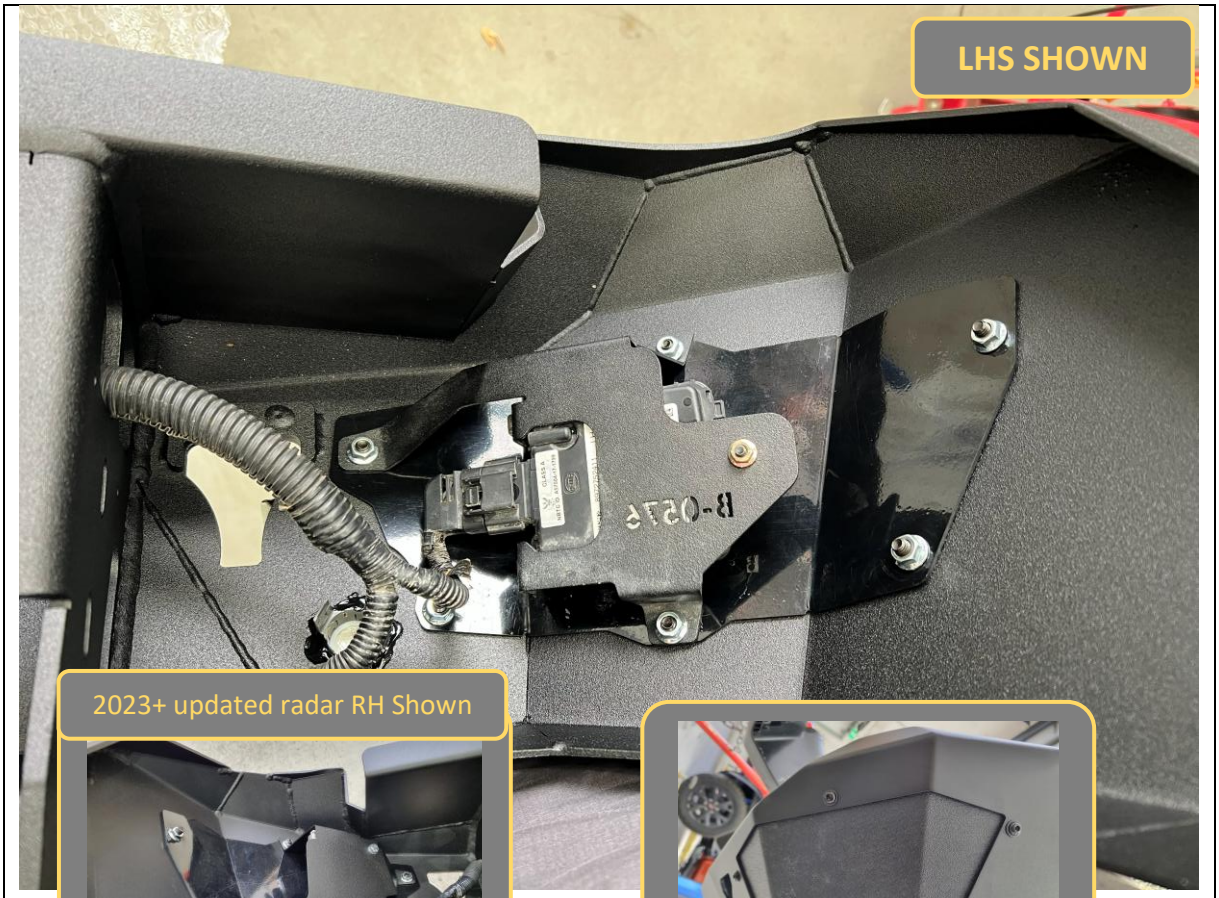
49. Re-fit the radar sensors to the supplementary radar brackets using M6x16 hex bolts, flat washers and flange nuts.

TOOLS REQUIRED

10mm socket/spanner

FASTENERS

6x M6x16 hex head bolt
6x M6 flat washer
6x M6 flange nut



50. Plug in radar harness connector to radar sensor.

51. Fit the radar sensor bracket, and plastic cover panel to the corner window of the bar and secure with M6x16 Button head, Flat washers, and Flange Nuts.

52. The radar bracket sits behind the plastic cover and shares the same fasteners.

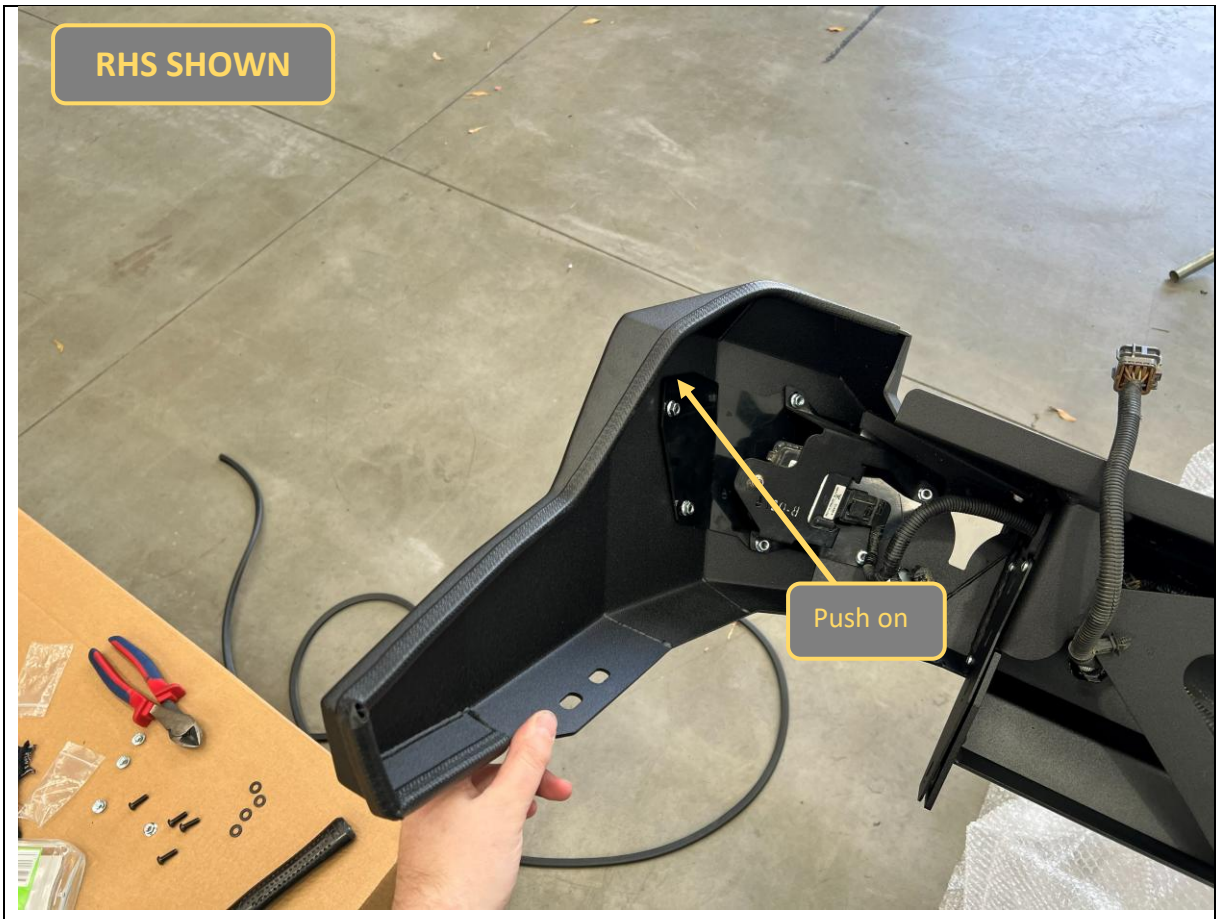
53. Complete for both sides of vehicle.

TOOLS REQUIRED

4mm Hex key

FASTENERS

6xM6x16 Black BHCS
6x M6 Black Washers
6x M6 Flange Nuts



54. Fit rubber pinch weld to edges of wing, in the location shown by pushing rubber over the edge.

55. Complete for both sides of vehicle.

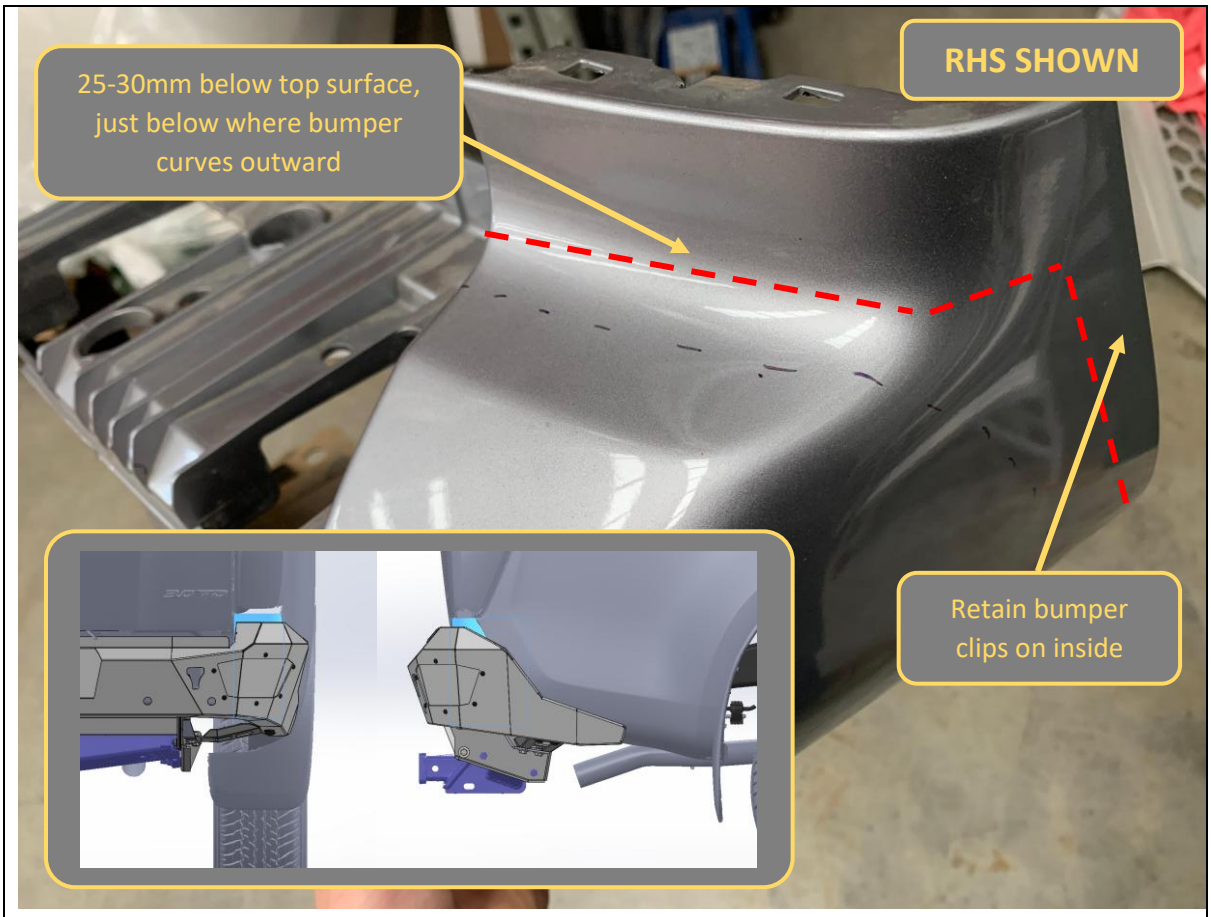
56. Re fit Number Plate to rear bar, using supplied M6 Button Head fasteners.

TOOLS REQUIRED

Phillips Screwdriver

FASTENERS

4x M6x16 Black Button head
4x M6 Black Washer
4x M6 flange nut



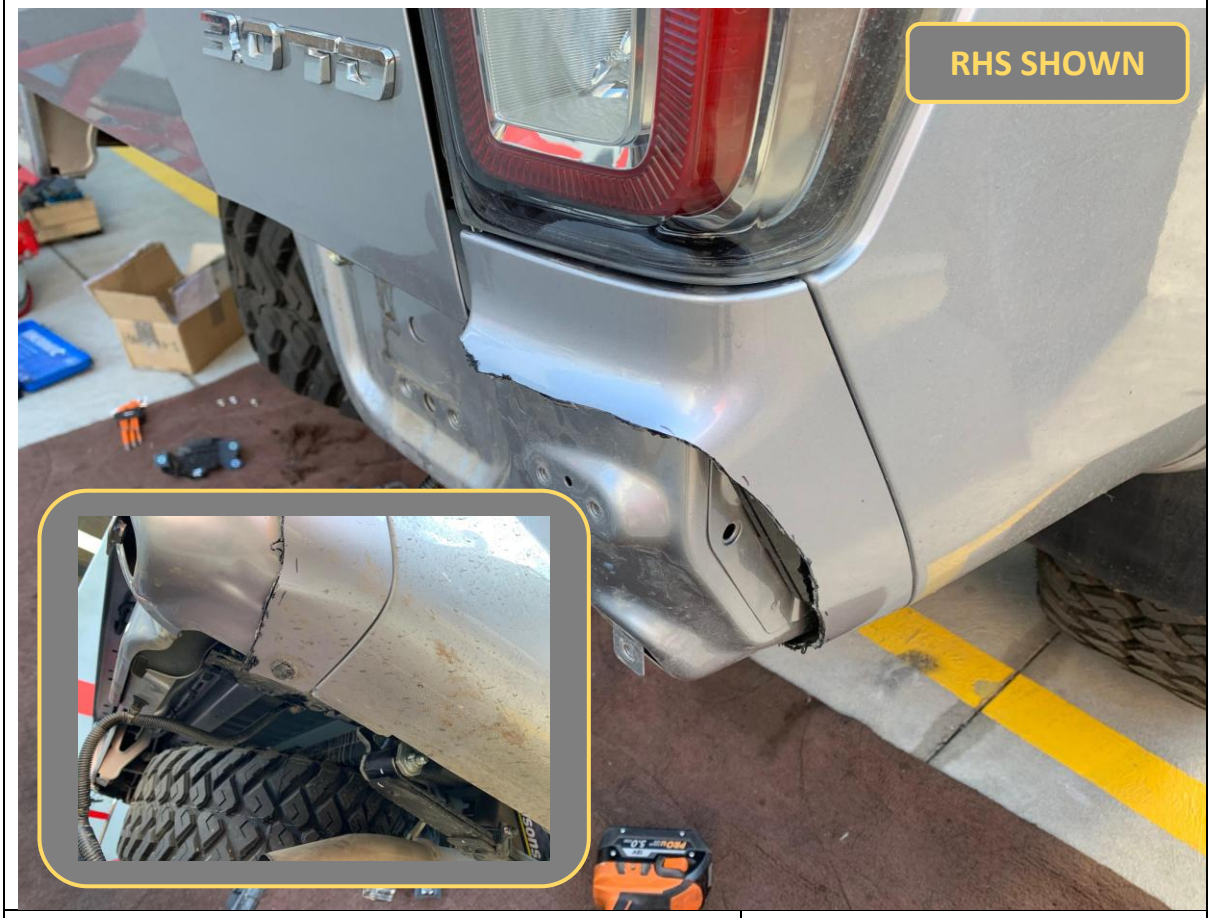
57. Mark location of bumper cut onto colored outer portion of bumper as shown in image.

58. The exact location of the cut is not critical provided it is below the location the bar will sit as shown in inset image.

TOOLS REQUIRED

Marker

FASTENERS



59. Trim along the line marked using air hacksaw or reciprocating saw.

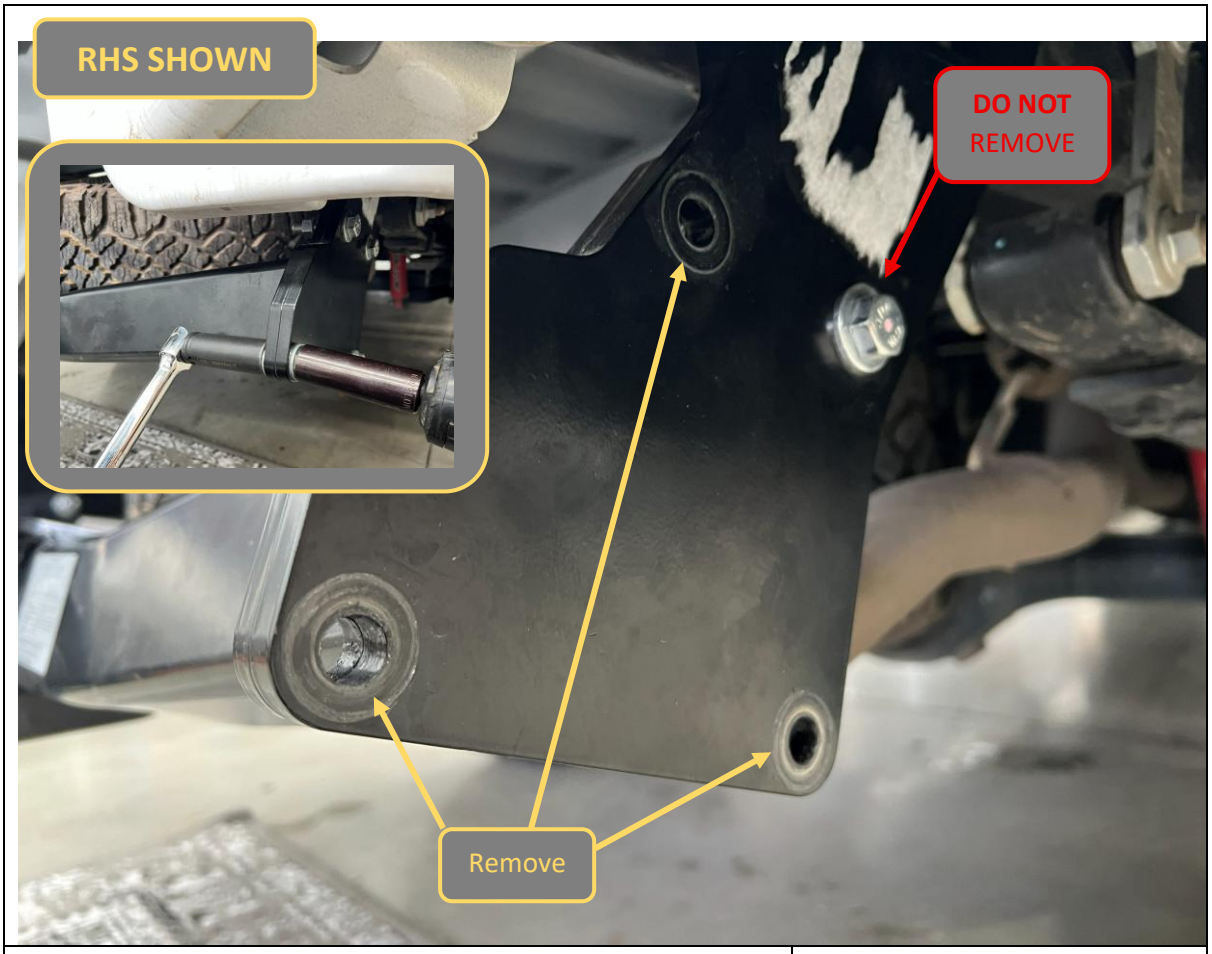
60. Re fit trimmed bumper portion using clips under light and plastic clip, on the bottom corner as removed earlier.

TOOLS REQUIRED

Air Hacksaw / Reciprocating Saw

FASTENERS

OE Clips (Re -Use)



61. Important – Complete the following steps 61 to 64 one side at a time, to avoid misaligning the tow bar.

62. Loosen and remove the 3x Bolts shown, from the towbar and towbar side plate. Use 18mm Socket and deep Socket.

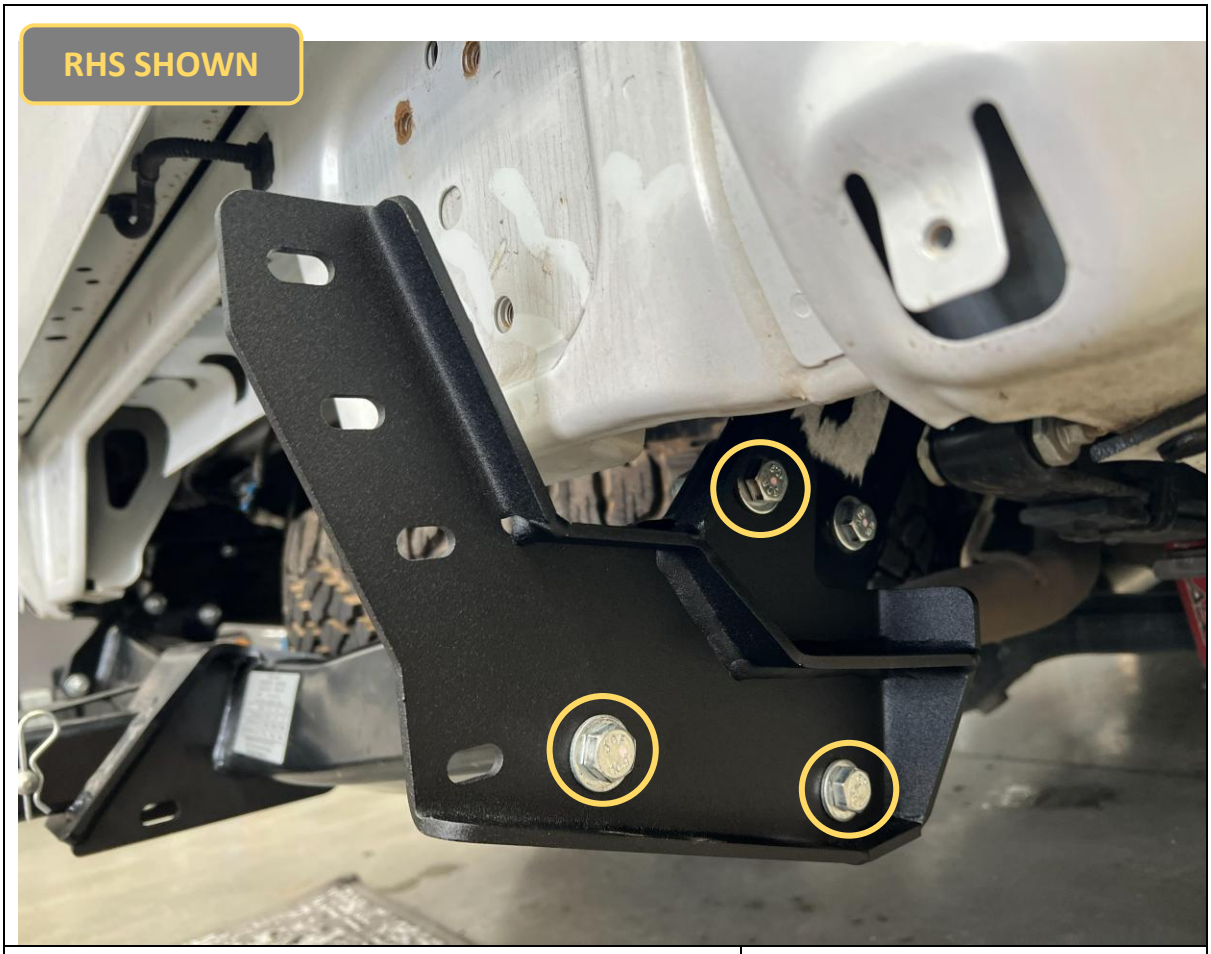
63. **DO NOT** remove the 4th Bolt.

TOOLS REQUIRED

18mm Socket
18mm Deep Socket

FASTENERS

3x OE M12 Fine Pitch Bolts, Washers and Flange Nuts (Retain)



64. Fit Rear bar mount to the towbar side plate, re-securing with the original bolts.

TOOLS REQUIRED

FASTENERS

3x OE M12 Fine Pitch Bolts, Washers and Flange Nuts

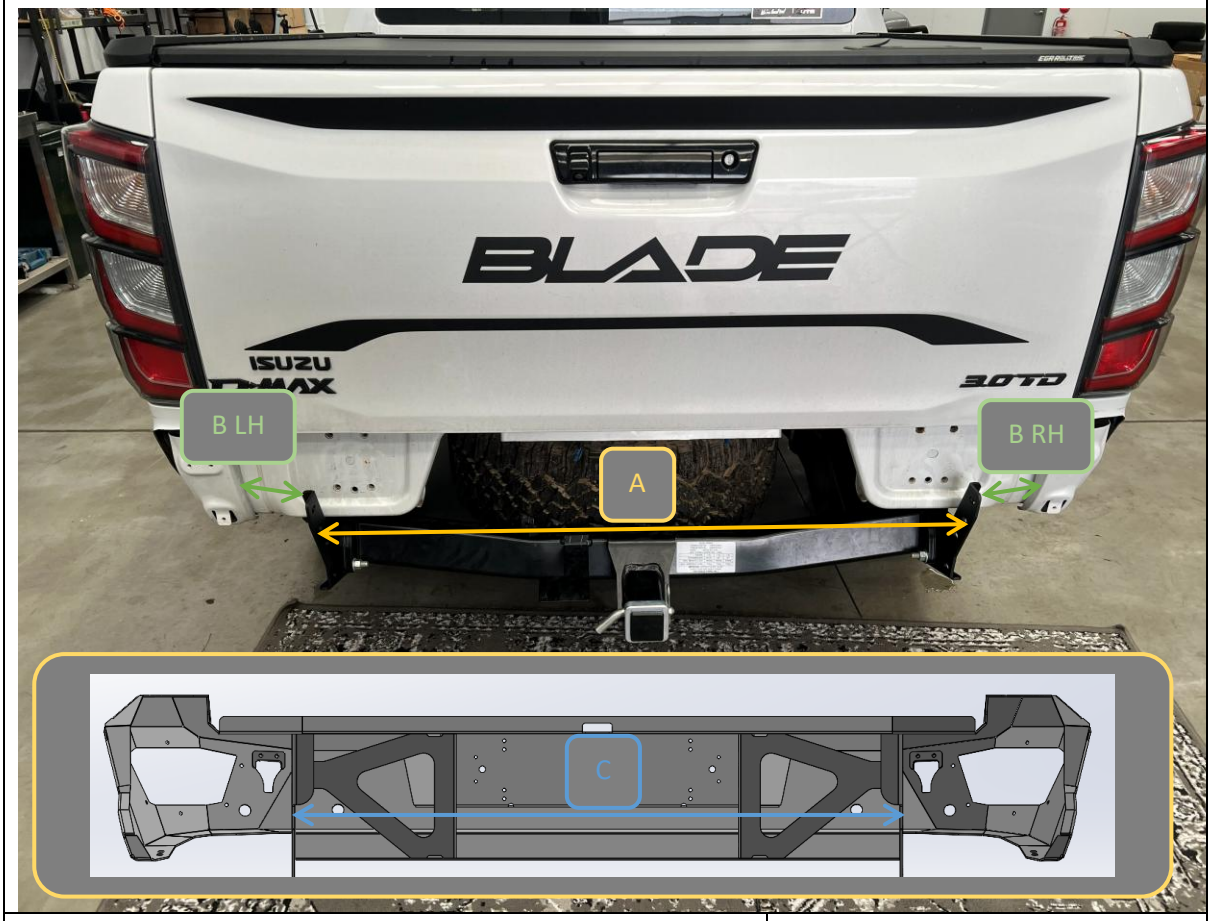
65. Torque bolts using torque wrench to **134Nm**

66. Once torqued, complete the mount fitment procedure for the other side of the vehicle.

TOOLS REQUIRED

18mm Socket
Torque Wrench

FASTENERS



67. Measure the distance between the inside edges mounts (Dimension A) and distances between the outside edges of mounts and vertical seam on the tub (Dimension B). The exact measurement locations don't matter so long as they are same side to side.

    Dimension A =
    Dimension B LH =
    Dimension B RH =

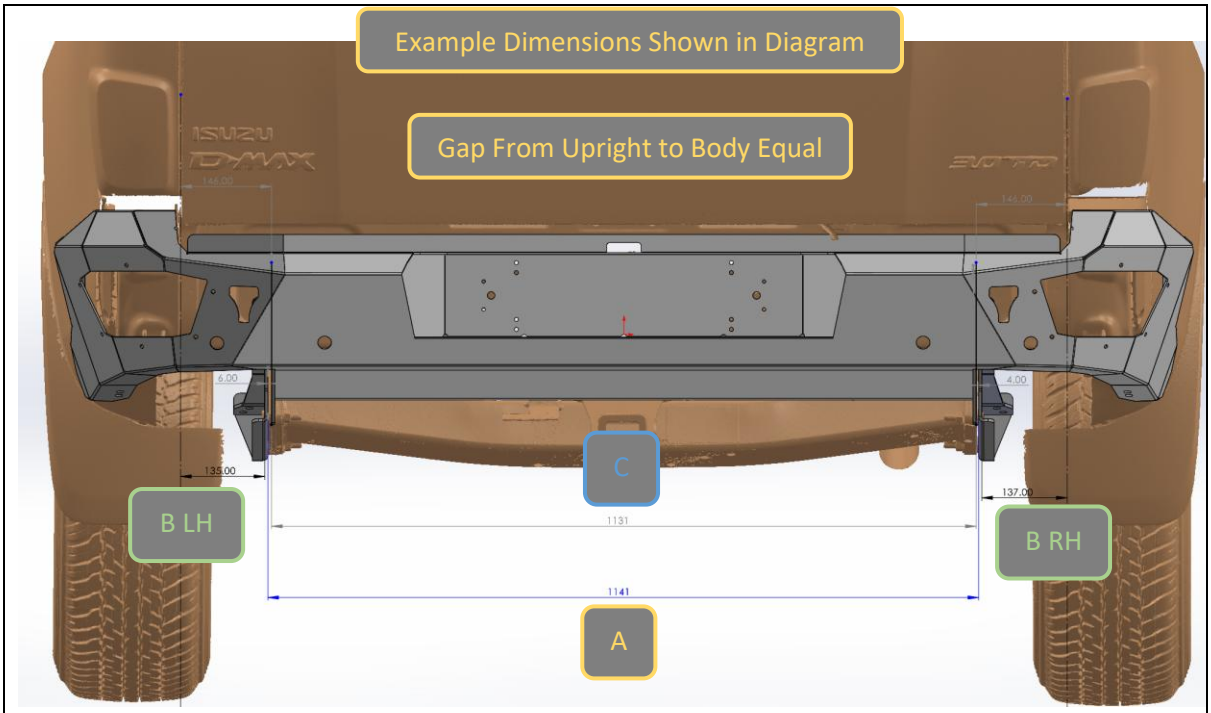
68. Measure the distance between the outside edges of the bar uprights (Dimension C)

    Dimension C =

TOOLS REQUIRED

Tape Measure

FASTENERS



69. Calculate the following values for Off-center, and Max Shim Stack Size.

    Max Shim = A - C
    Off-center = B LH – B RH
    +ve Off-Center indicates additional shims needed on RH side.

70. Select appropriate combination of shims for each side to take up 1-2mm less than the Max Shim size and center the bar to the tub.

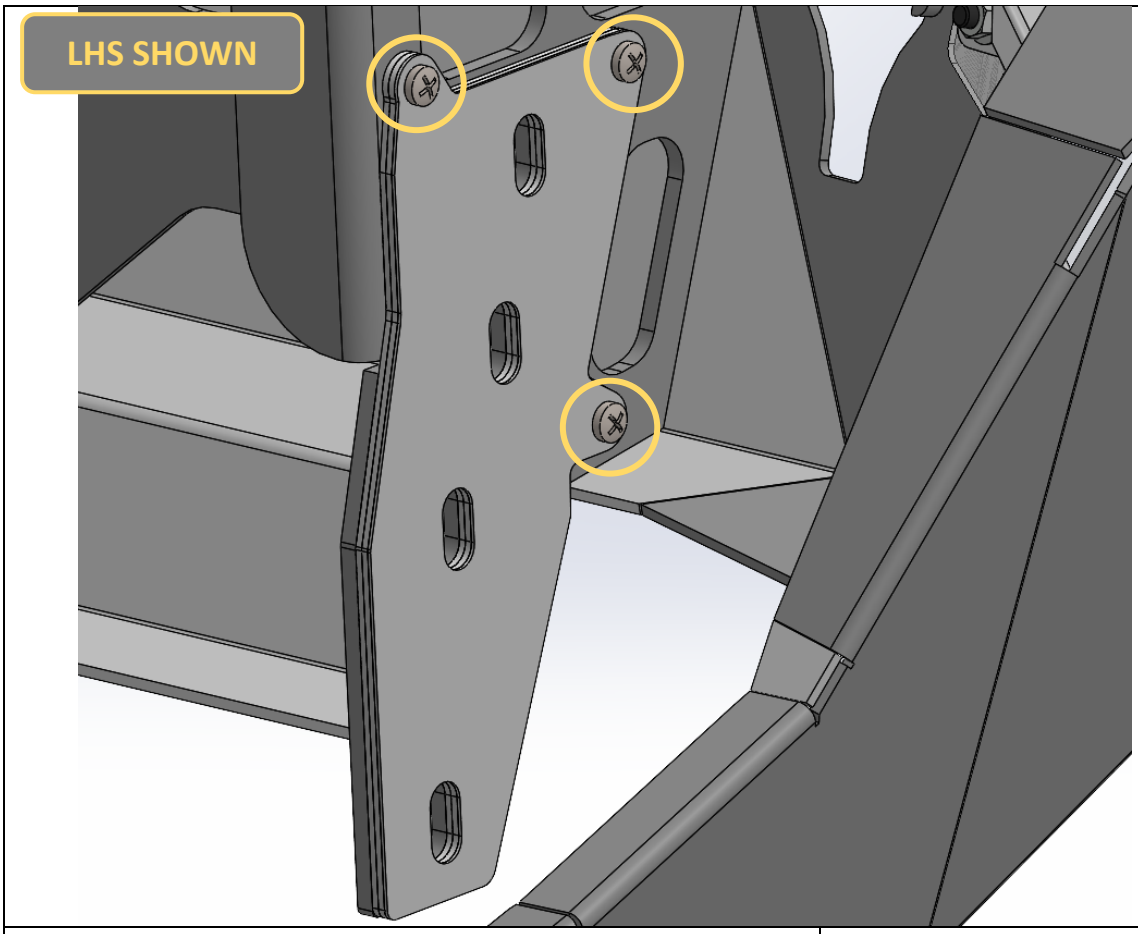
    In the example shown in diagram above:
    Max Shim = 1141-1131 = 10mm
    OC = 135-137 = -2mm (2mm more shim required on LH than RH side to center the bar on tub)

    Appropriate shims would therefore be
    LH = 5mm (2x2mm + 1x1mm)
    RH = 3mm (1x2mm +1x1mm)

    Shim Total Thickness = 5+3 = 8mm (2mm less than Max Shim of 10mm)
    LH shim is 2mm more than RH shim to center bar on tub.

TOOLS REQUIRED

FASTENERS



71. Secure shims to the outside of the Bar uprights using 3xM5 Pan head screws and M5 Flange Nuts Per side.

    Do not overtighten as this will make shims flare out and make it harder to fit to the vehicle.

TOOLS REQUIRED

Phillips head screwdriver

FASTENERS

6x M5 Pan Head Screw
6x M5 Flange Nut

72. With assistance, from a lift trolley or another person, lift the rear bar onto the car.

    Note: Platform type lift trolleys will not be able to completely position the bar due to the tow hitch. Two-person lift is recommended.

73. Secure bar to mounts using 4xM10x30 Hex Bolts, M10 Large Flat Washers and M10 Flange Nuts.

74. Snug bolts but do not yet tighten.

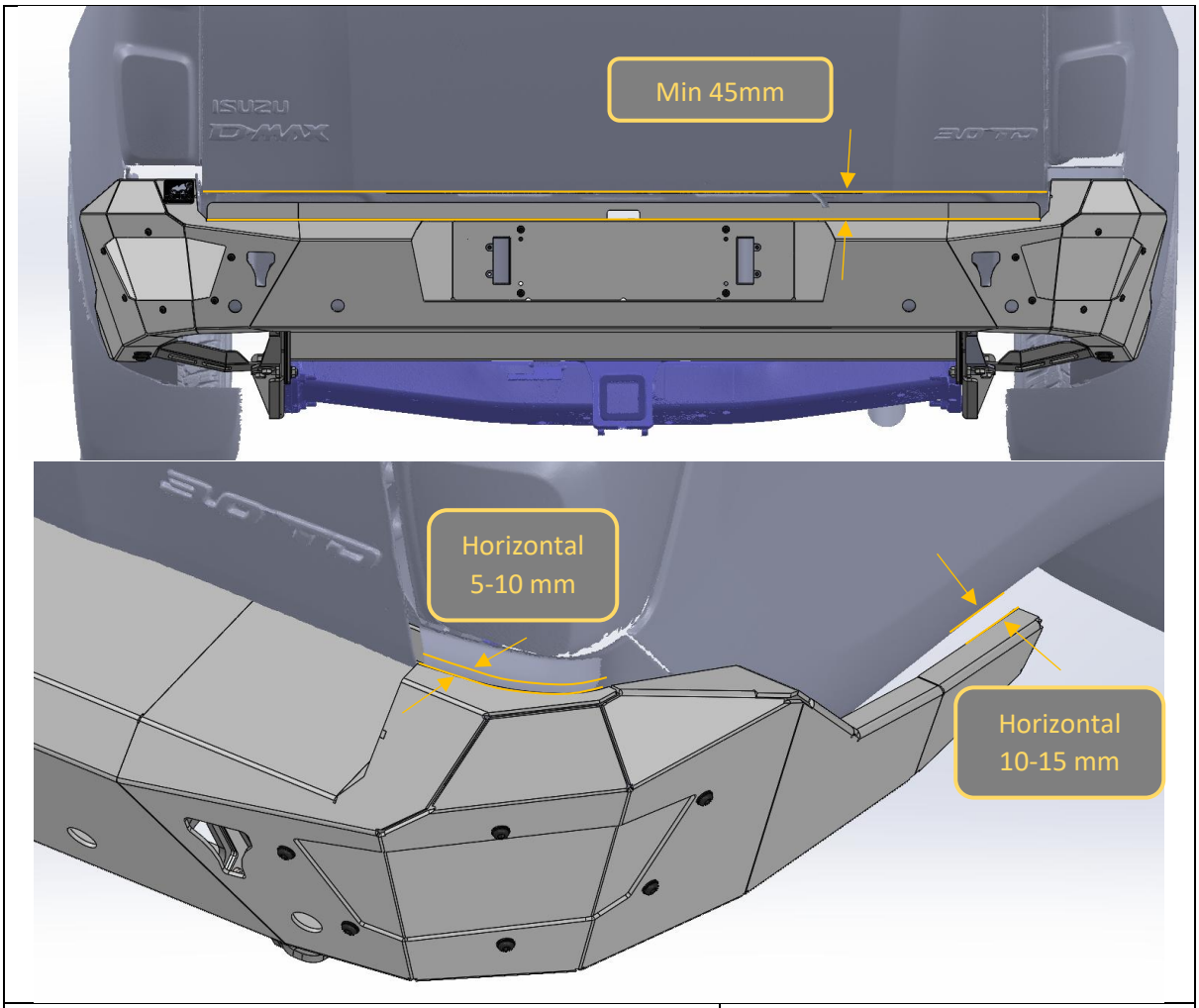
TOOLS REQUIRED

16 + 15mm Socket / Spanner

FASTENERS

4xM10x30 Hex Bolts
4x M10 Flange Nuts
4x M10 HD Flat Washer

Per side



75. Align bar such that following clearances are achieved.

    Rear View. Top Face of Bar is Level and minimum 45MM clearance to bottom of tailgate

    Top View. Horizontal Clearance of 5-10mm between bar and bumper under tail light and 10-15mm at end of wing. Gaps to be consistent and even side to side.

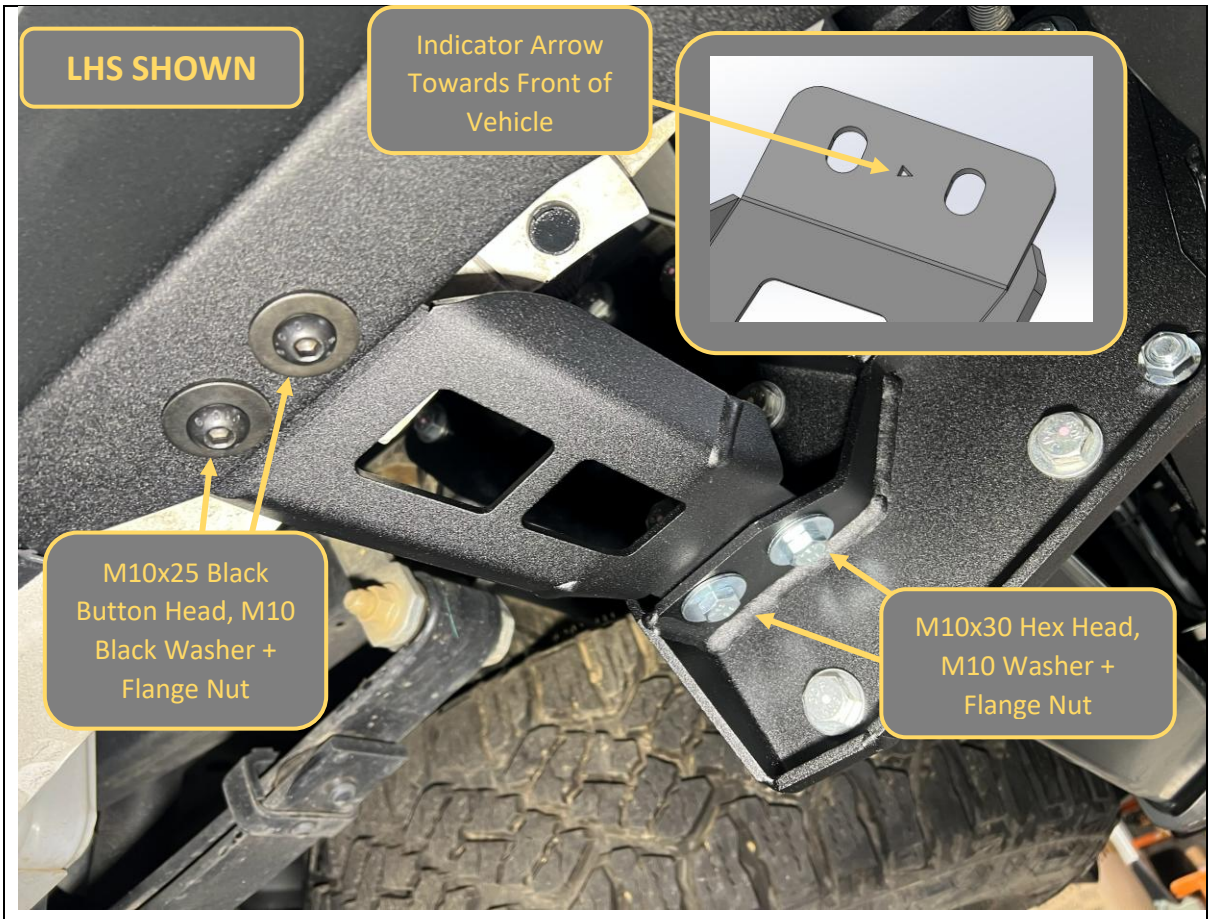
76. Tighten 8x M10 Bolts once aligned.

77. Carefully open tailgate and confirm that tailgate clears the bar through the full range of motion.

TOOLS REQUIRED

16/17mm + 15mm Socket / Spanner

FASTENERS



78. Use the indicator arrow on the wing braces to determine correct handed brackets. The brackets should have staggered slots facing inboard, and arrow pointing toward the front of the vehicle

79. Fit wing braces to the upright using 2x M10x30 Hex Bolts, flat washers, and M10 Flange nuts. The brace should sit ABOVE both the upright bracket and the wing, as shown in the image.

80. Secure to wing using 2x M10x25 Black Button head bolts, flat washers, and M10 Flange nuts.

81. Repeat for other side of vehicle.

TOOLS REQUIRED

16mm Socket / 15mm Spanner

6mm Hex wrench

FASTENERS

2x M10x30 Hex Bolts
2x M10x25 Black Button Head Bolts
4xM10 Flange Nut
2xM10 Flat Washer
2xM10 Black Flat Washer
Per side

82. Re connect the sensor and number plate lamp harness connectors.

83. Double check all bolts are tight, then you are done!

TOOLS REQUIRED

FASTENERS

Congratulations!
Head for the tracks and enjoy your newly protected DMAX!