



## MAZDA BT-50 TF

### MY2021 ONWARDS

### REAR BAR

#### **IMPORTANT! – READ BEFORE INSTALLATION**

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

## GENERAL CARE AND MAINTENANCE

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

Plastic parts may be maintained with silicone spray.

Do not use acidic or alkaline based cleaning products.

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

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

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

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

## BOLT TORQUE SETTINGS

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

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

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

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

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

## PARTS LISTING

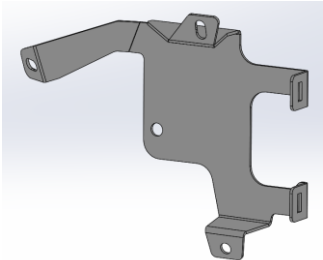
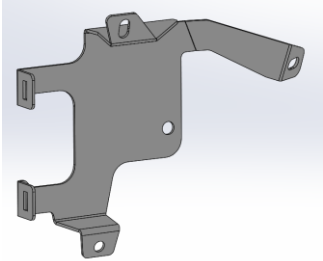
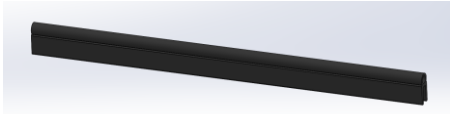
**IMPORTANT:** Check all parts are present before beginning work! Contact OFFROAD ANIMAL if something is missing.

### Main Parts – In the Box

Qty	Part Number	Description	Image
1	RB-IDM-RG-21-ASM1	ISUZU DMAX RG 21+REAR BAR WELDMENT	
1	B-0518R	Isuzu DMAX 2021+ Rear Bar - Wing Support Bracket	
1	B-0518L	Isuzu DMAX 2021+ Rear Bar - Wing Support Bracket	
1	B-0544R	DMAX 21+ Rear Radar Cover Panel	
1	B-0544L	DMAX 21+ Rear Radar Cover Panel	
1	B-0576R	Isuzu DMAX 2021+ Rear Bar - Radar Bracket	
1	B-0576L	Isuzu DMAX 2021+ Rear Bar - Radar Bracket	

<b>2</b>	BR25B	LED NUMBER PLATE LIGHT	
<b>2</b>	PW-P-14x9-800	Pinch Weld - Plain Non Seal 800mm	
<b>1</b>	RB-IDM-RG-21-ADRCP	DMAX 21+ REAR BAR ADR COMPLIANCE PLATE	<p>MANUFACTURED BY OFFROAD ANIMAL ISUZU DMAX RG SERIES MY2021 ON PART NO: RB-IDM-RG-21-ASM0 TONGUE PART NO: RB-TBM-01 RATED TOW CAPACITY 3500KG MAX TOWBALL DOWN LOAD 350KG FOR TOWING PURPOSES ONLY</p> <p>MFG DATE: </p>

### BT-50 Rear Bar Supplementary Kit

Qty	Part Number	Description	Image
<b>1</b>	B-0795R	Mazda BT50 2021+ Rear Bar – Radar Bracket	
<b>1</b>	B-0795L	Mazda BT50 2021+ Rear Bar – Radar Bracket	
<b>6</b>	PWS-TOP-380	Pinch Weld PWS51T - Top Bulb Seal 380mm	

**Small Parts – Contained in Small Parts Kit Bag**

Qty	Part Number	Description
<b>2</b>	RB-IDM-RG-21-ASM2	DMAX / BT50 21+ Rear Bar Nut Plate Assy
<b>10</b>	M12 FW LHD	M12 FW Large Heavy Duty
<b>6</b>	M12X30X1.25	Bolt Hex, M12X30x1.25, GR8.8 ZP
<b>4</b>	M12X30	Bolt Hex, M12X30x1.75, GR8.8 ZP
<b>8</b>	M10 Flat Washer	M10 FW
<b>4</b>	M10X20 BHCS	SCREW, BUTTON HEAD CAP, M10X20X1.5 GR12.9 ZP
<b>8</b>	M10 FLANGE NUT	Flange Nut, M10x1.5 G8.8 ZP
<b>4</b>	M10 x 30	Bolt Hex, M10X30x[1.5], GR8.8 ZP
<b>12</b>	M6 FLANGE NUT	Flange Nut, M6x1 G8.8 ZP
<b>12</b>	M6 FLAT WASHER BLACK ZINC	M6 FW BLACK ZP
<b>12</b>	M6x16 BHCS BLACK ZINC	SCREW, BUTTON HEAD CAP, M6X16X1 GR12.9 BLACK ZP
<b>1</b>	M10 NUT	Hex Nut, M10x1.5 G8.8 ZP
<b>1</b>	M10 x 25	Bolt Hex, M10X25x[1.5], GR8.8 ZP
<b>6</b>	M5 FLANGE NUT	Flange Nut, M5x0.8 G8.8 ZP
<b>6</b>	M5X15 PAN	SCREW, PAN HEAD PHILLIPS, M5X15X0.8 GR4.6 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	Soldering Iron Heat Gun  Electric / Air Impact Driver (Optional but speeds up fitting process)  Air Hacksaw or Reciprocating Saw	Lift Trolley Solder Heat Shrink Marker

## WORKSHOP SAFETY

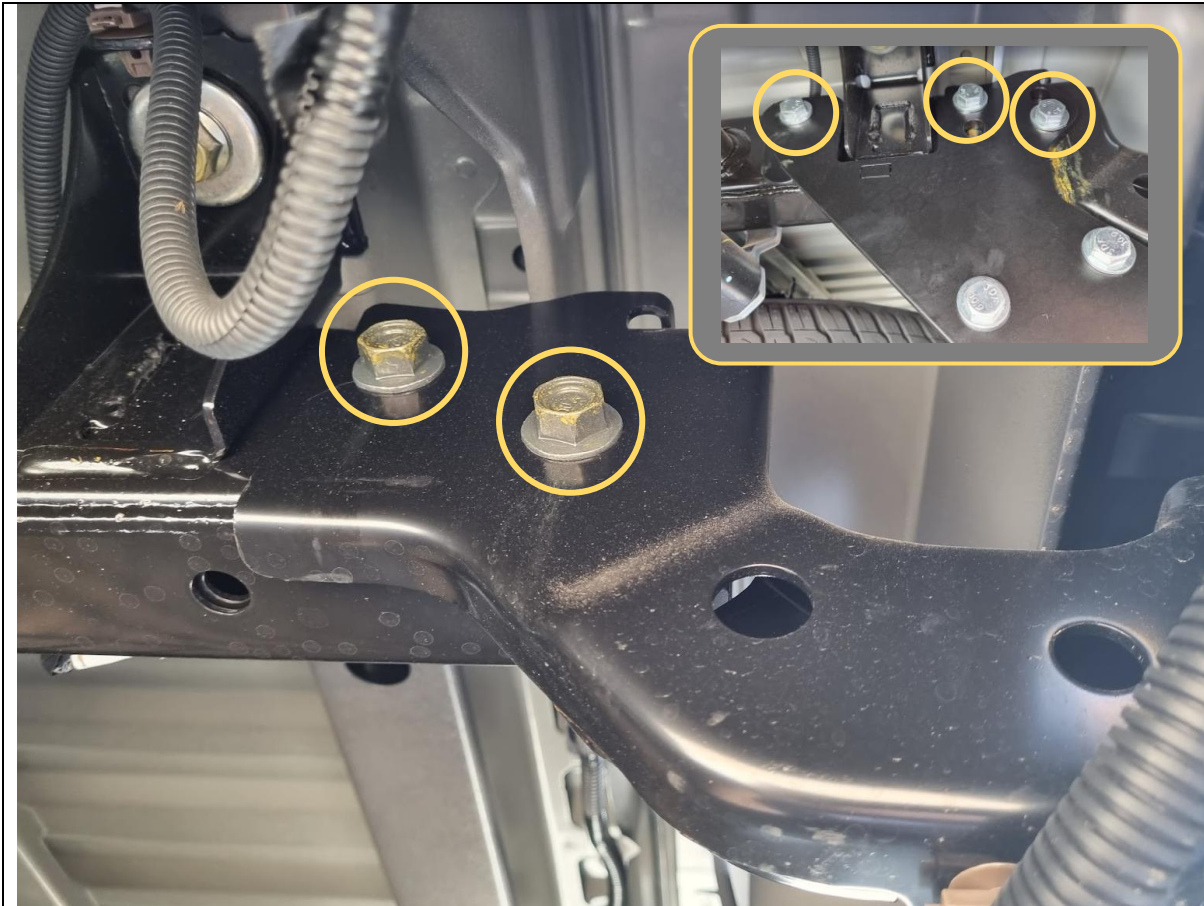
It is the responsibility of the installer to always complete works in a safe manner. Make sure the following safety equipment is available and precautions are observed whilst fitting this product.

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



1. Disconnect the bumper wiring harness on the driver side chassis rail.
2. If a factory towbar is already fitted, also disconnect the trailer wiring harness.

**TOOLS REQUIRED****FASTENERS**



3. Remove the 2x 17mm hex head bolts securing the factory rear bumper to the chassis (per side).
4. If a factory towbar is installed, remove 4x 18mm hex head bolts securing the towbar and rear bumper to the chassis (per side).

There are 3x bolts on the side, and 1x bolt on the bottom.

You may also need to loosen the side plate bolts connecting to the main towbar to get it off the car.

**TOOLS REQUIRED**

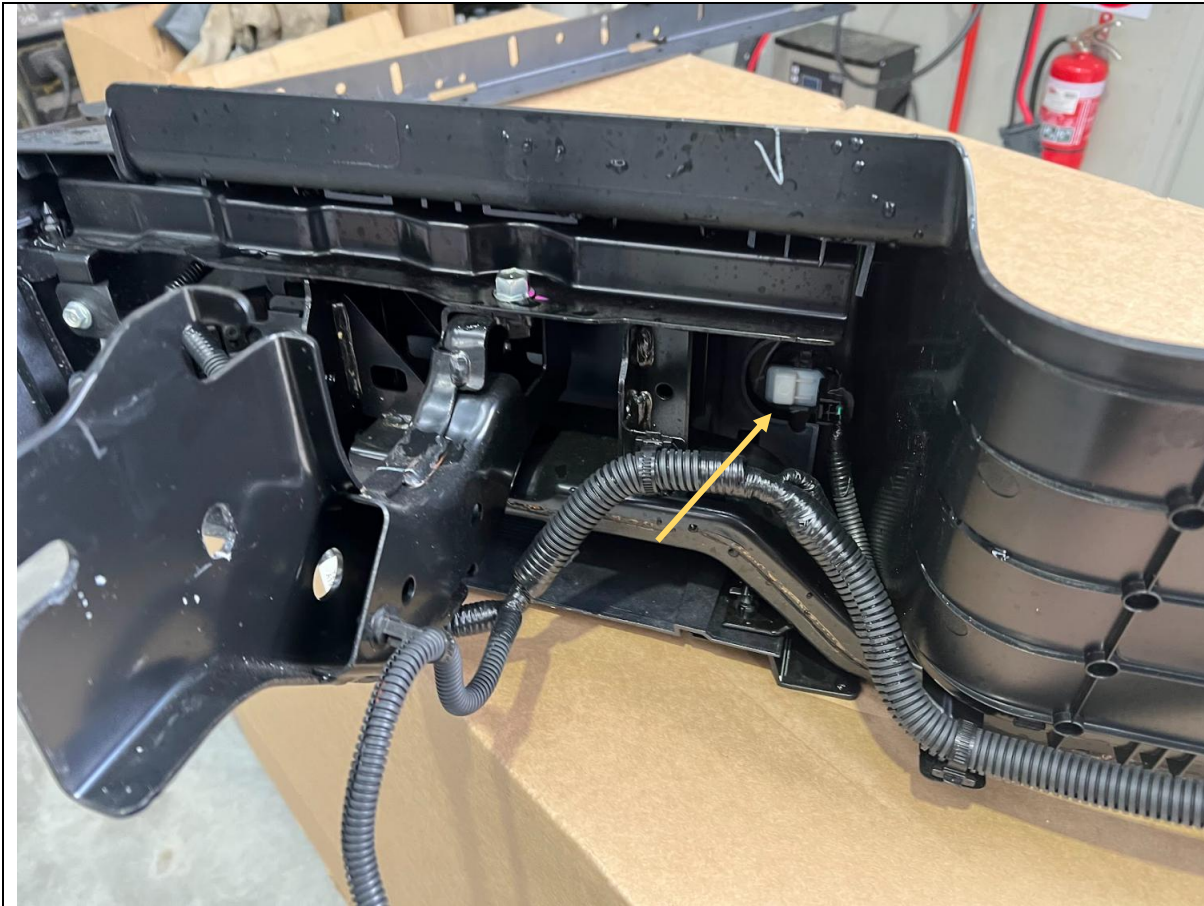
17mm socket/spanner  
or  
18mm socket/spanner

**FASTENERS**



5. Remove the rear bumper (and towbar).

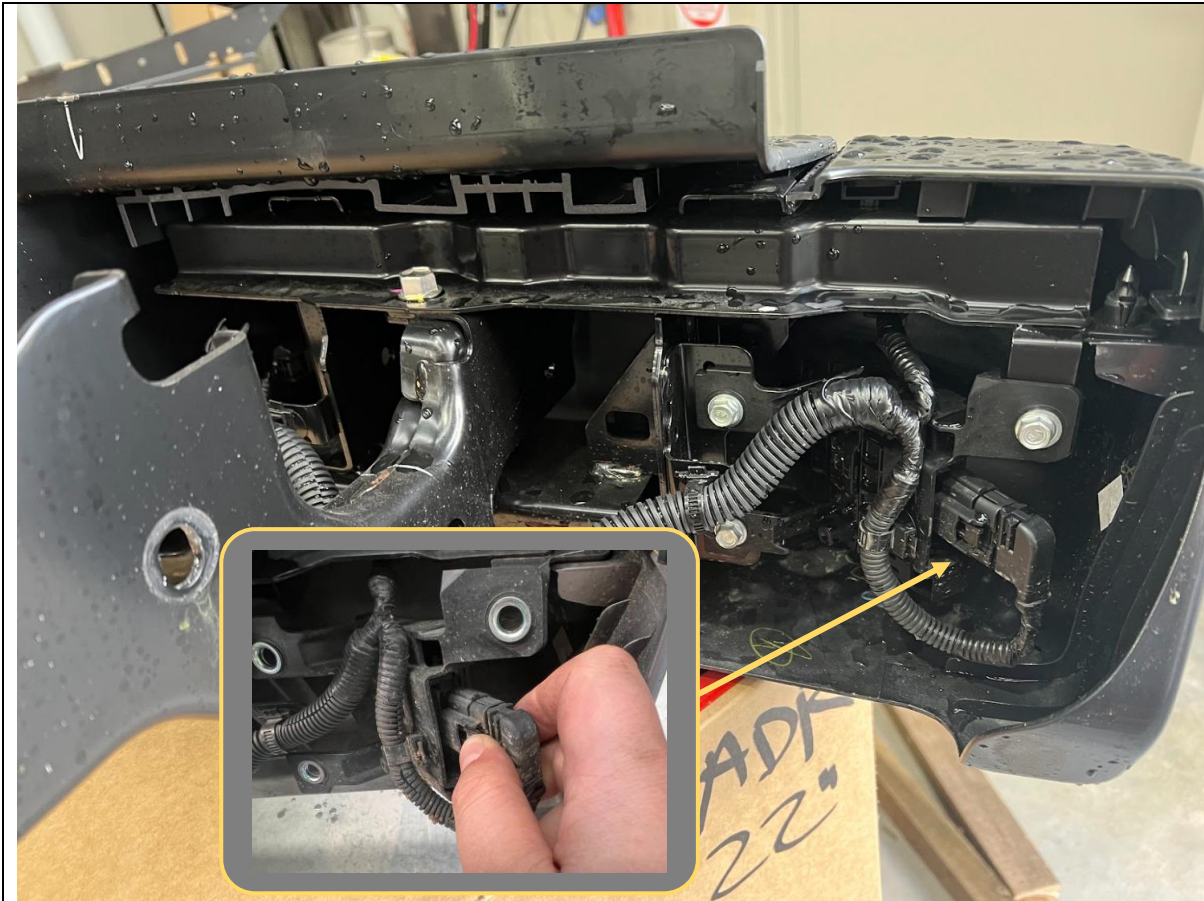
**TOOLS REQUIRED****FASTENERS**



6. Remove the parking sensors from their housings inside the bumper.

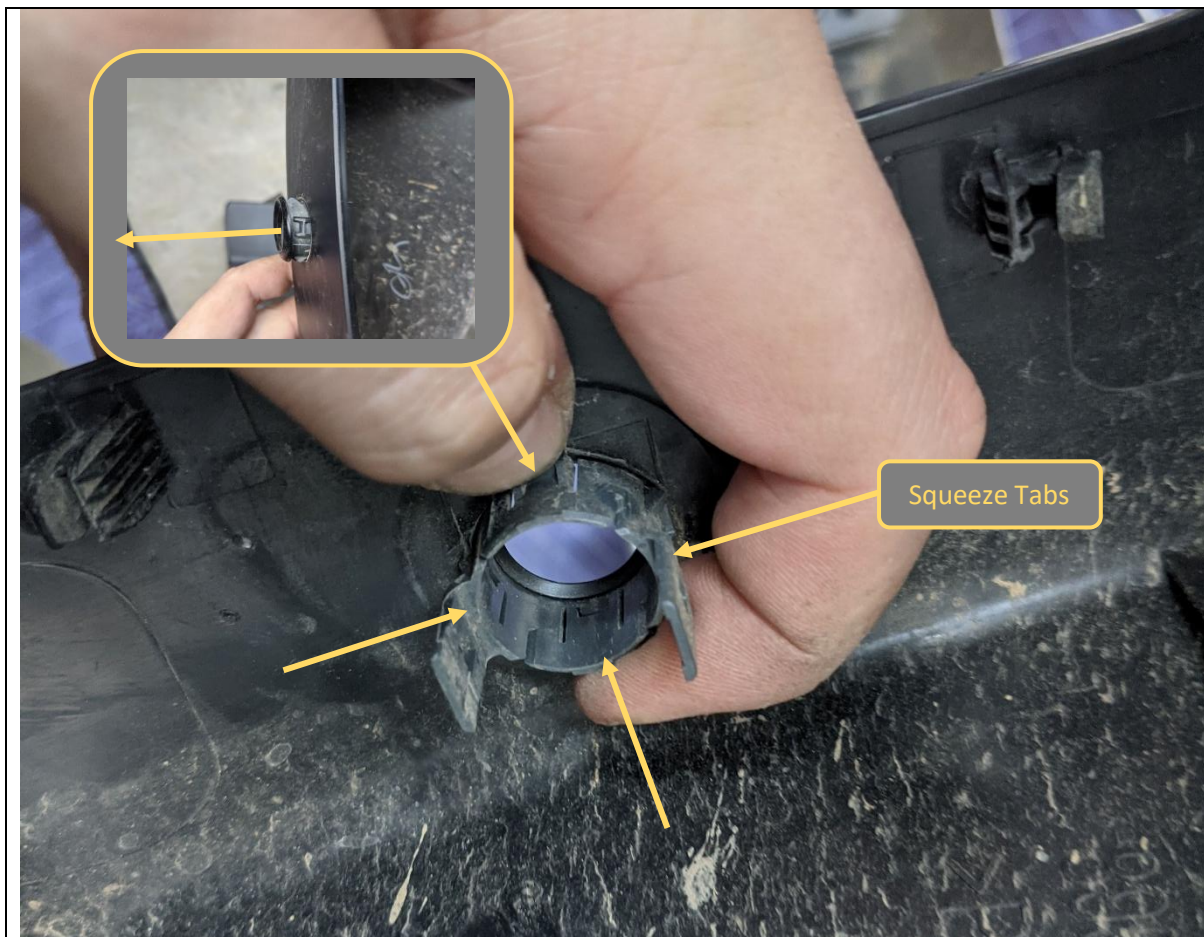
Pry open the two retaining tabs holding the sensor in the housing then push the sensor out the back of the bumper.

**TOOLS REQUIRED****FASTENERS**



7. Disconnect the rear radar sensors either side, inside the bumper.

**TOOLS REQUIRED****FASTENERS**



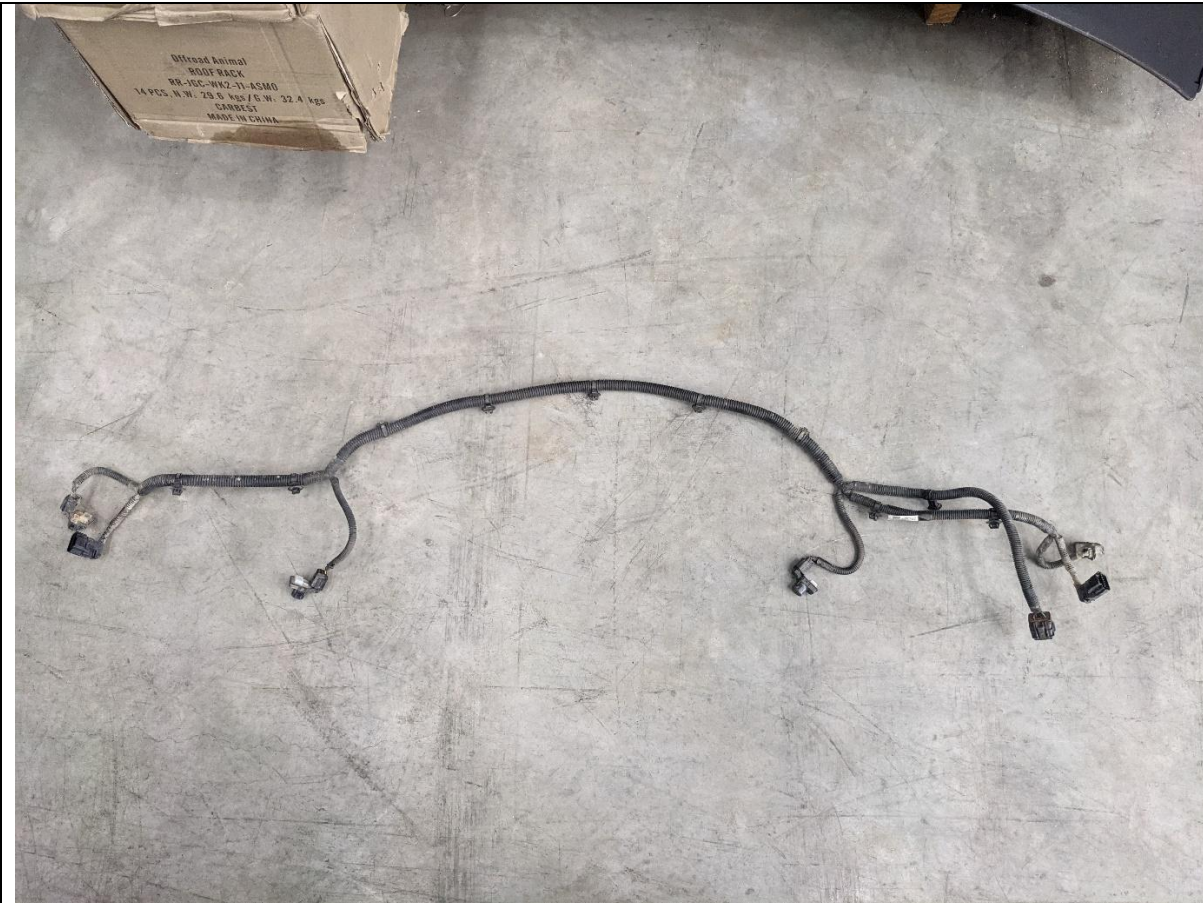
8. Remove parking sensor housings, by squeezing the retaining tabs whilst pushing the housing forward through to the outside of the bumper.

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

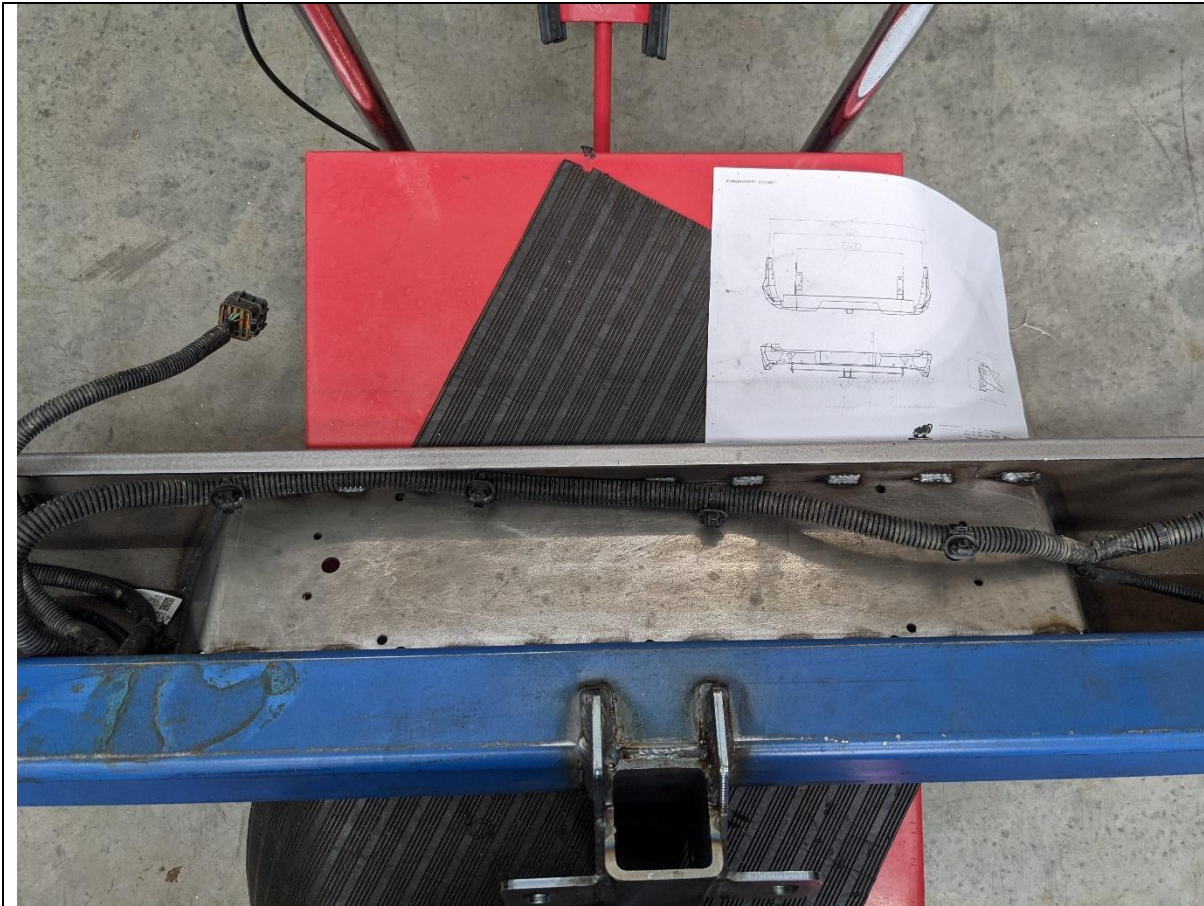
9. Repeat for all parking sensors in the bumper.
10. Remove Bulbs from Number plate lamps.
11. Remove number plate from original rear bar.

#### TOOLS REQUIRED

#### FASTENERS



<p>12. Remove the main rear bar wiring harness (with parking sensors attached) from the bumper, by unclipping harness connections with a trim tool.</p>	<p><b>TOOLS REQUIRED</b></p> <p>Trim Tool</p>
	<p><b>FASTENERS</b></p>



13. Fit the harness to the rear bar, routing the cables through the side arms so that the sensor wiring positions are in the correct locations. Ensure the correct orientation of the harness connectors is maintained.

**TOOLS REQUIRED****FASTENERS**



14. 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.

15. Cut off lamp holders from the factory wiring.

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

16. Solder to new LED number plate lamp cables. Use heat shrink or electrical tape to insulate solder connections.

17. Complete for both sides of vehicle.

#### TOOLS REQUIRED

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

#### FASTENERS

Screws supplied with Lights



<div>18. Install parking sensor housings by inserting from rear of bar and pushing until sensors housings sit flush with the bar.</div> <div>19. Complete for all parking sensor locations on rear bar.</div>	<b>TOOLS REQUIRED</b>
	<b>FASTENERS</b>



20. Install parking sensors in housings by inserting into housing from rear of bar and pushing until audible "Click" is heard.

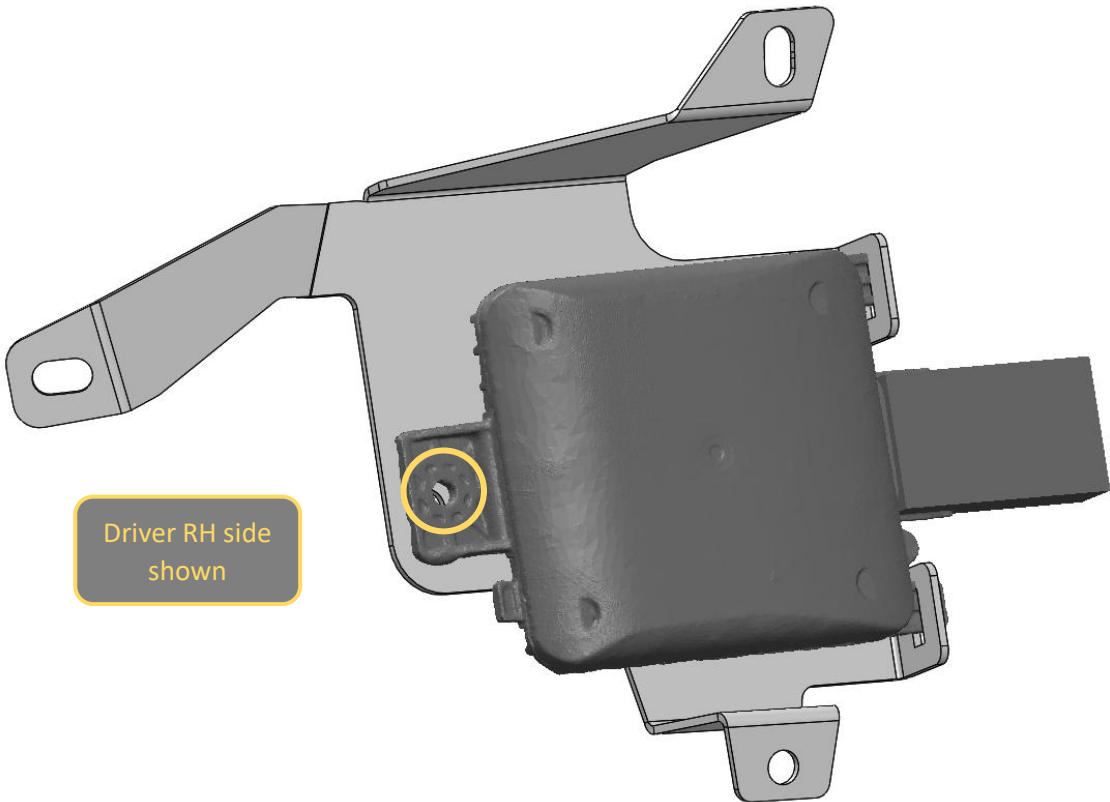
If the parking sensor will not go in all the way and click, the tabs on the sensor housing will need to be slightly shaved down with a sharp utility knife to create required clearance. Remove the housing from the bar to complete this if required.

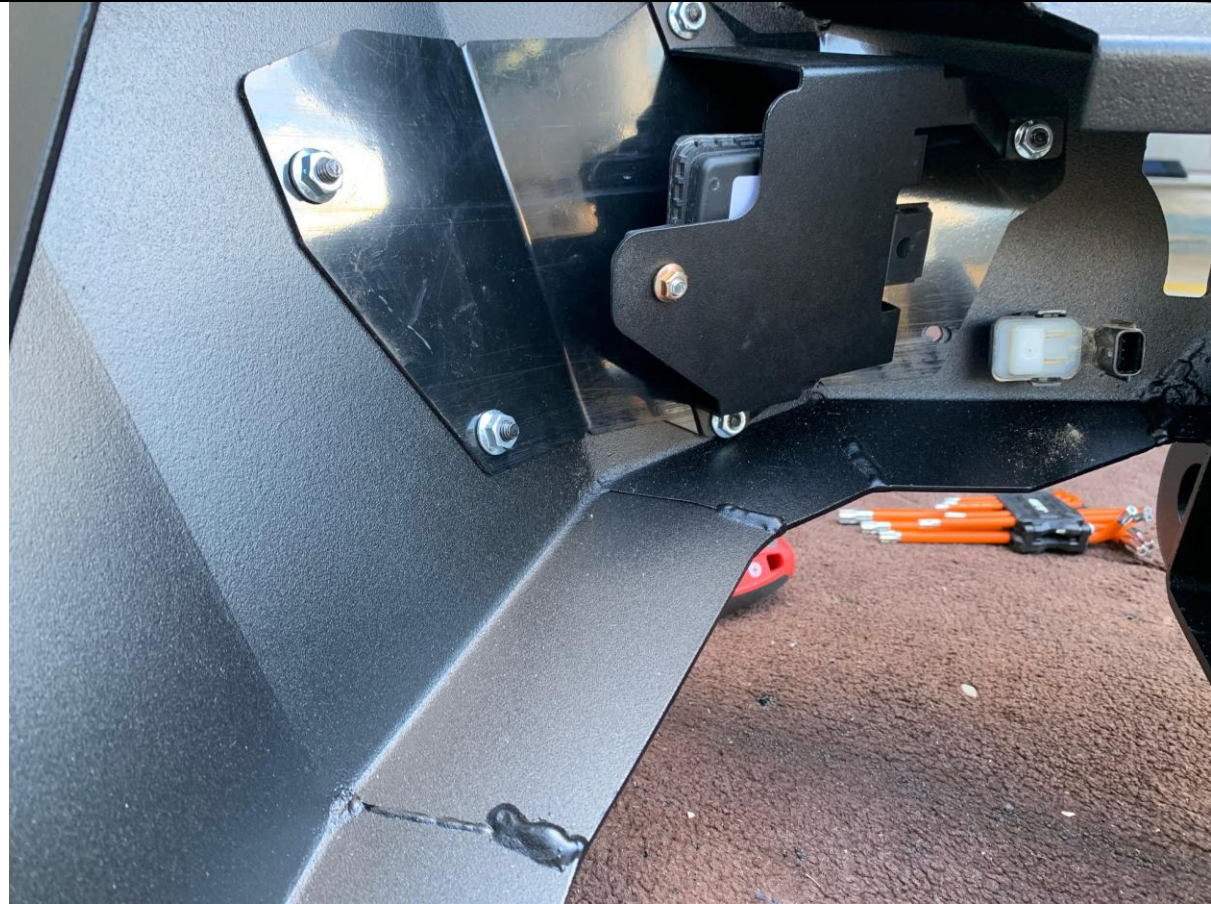
21. Plug in loom to parking sensors once seated.
22. Complete for both all parking sensors in bar.

**TOOLS REQUIRED**

Utility knife

**FASTENERS**

 <p>Driver RH side shown</p>	
<p>23. Remove rear radar sensors from the bumper.</p> <p><b>Note:</b> Take note of sensor orientation (ie. direction of plug connectors)</p> <p>24. Re fit the radar sensors to the supplied rear bar radar bracket using the supplied M5 Fastener, in the orientation shown above.</p>	<p><b>TOOLS REQUIRED</b></p> <p>Phillips Head screwdriver</p>
	<p><b>FASTENERS</b></p> <p>M5x15 Pan head M5 Flange Nut</p>



25. 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.
26. The radar bracket sits behind the plastic cover and shares the same fasteners.
27. Plug in radar harness connector to radar sensor.
28. Complete for both sides of vehicle.

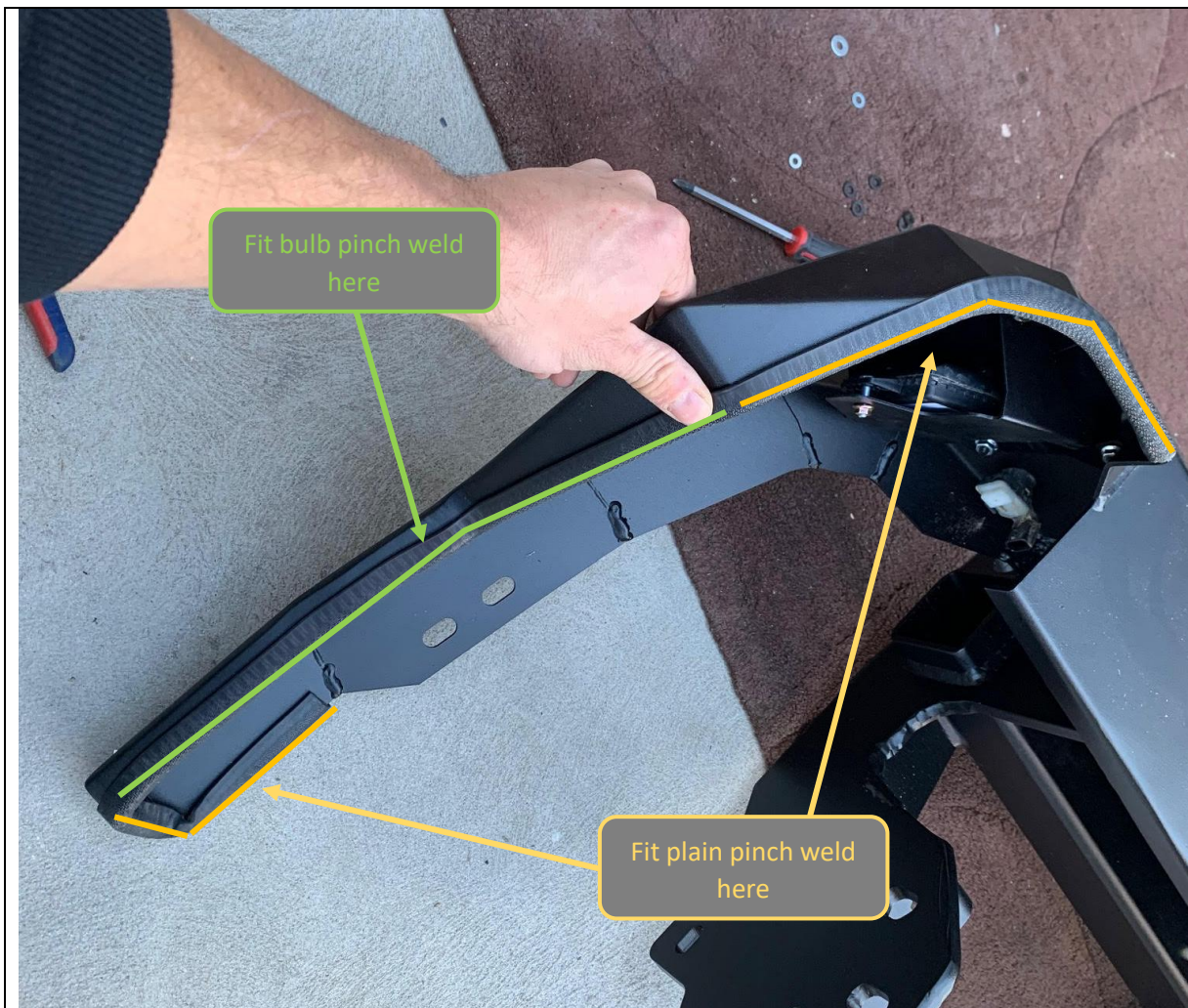
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**TOOLS REQUIRED**

4mm Hex key

**FASTENERS**

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



29. Fit bulb and plain rubber pinch weld to edges of wing, in the location shown by pushing rubber over the edge.

30. Complete for both sides of vehicle.

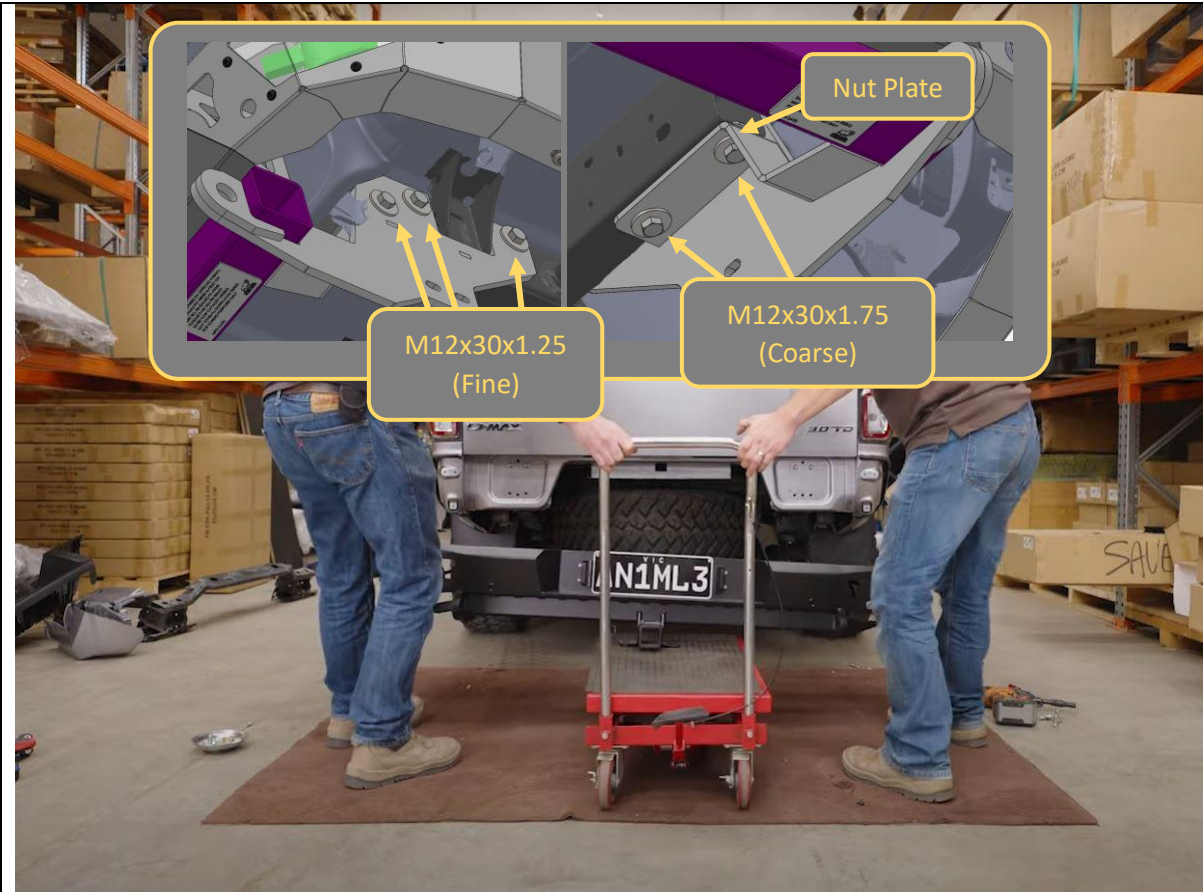
31. Re fit Number Plate to rear bar, using original hardware.

#### TOOLS REQUIRED

Phillips Screwdriver

#### FASTENERS

Original Number Plate Bolts



<div>32. With assistance, from a lift trolley or another person, lift the rear bar onto the car.</div> <div>33. Secure to side of chassis using 3xM12x30x1.25 Bolts, and M12 Large Flat Washers into captive chassis nuts</div> <div>34. Secure to Bottom of chassis nuts using 2xM12x30x1.75 Bolts into the supplied Nut Plate</div>	<div>TOOLS REQUIRED</div> <div>18mm Socket / Spanner</div>
	<div>FASTENERS</div> <div>2xM12x30x1.75 Bolts</div> <div>3xM12x30x1.25 Bolts</div> <div>M12 Nut Plate</div> <div>5x M12 Flat Washer</div> <div>Per side</div>



35. Fit tub protection brace to the upright using 2x M10x30 Hex Bolts, flat washers, and M10 Flange nuts.
36. Secure to wing using 2x M10x20 Button head bolts, flat washers, and M10 Flange nuts.
37. Repeat for other side of vehicle.


**TOOLS REQUIRED**

16mm Socket / 15mm Spanner  
6mm Hex wrench

**FASTENERS**

2x M10x30 Hex Bolts  
2x M10x20 Button Head Bolts  
4xM10 Flange Nut  
4xM10 Flat Washer

Per side

	
<p>38. Secure trailer plug to bracket on vehicle using M5 Screw and Flange Nut provided</p> <p>39. Secure the loom using cable ties as required.</p> <p>40. Re connect the sensor and number plate lamp harness connectors</p>	<p><b>TOOLS REQUIRED</b></p> <p>8mm socket / spanner Phillips head screwdriver Cable Ties</p>
	<p><b>FASTENERS</b></p> <p>2x M5 Phillips head screw 2xM5 Flange nut.</p>



41. Fit M10x25 Hex bolt and M10 Nut to anti rattle location on bottom of Hitch Box
42. Replace Trailer Ball Mount and secure with Pull Pin and R Clip.
43. Attach Offroad Animal Logo plate to chamfered face, using attached adhesive backing.
44. Fit towbar Compliance plate to underside of crossbar, using attached adhesive backing.
45. With that you are done!

**TOOLS REQUIRED****FASTENERS**

Pull Pin  
R-Clip  
M10x25 Bolt  
M10 Nut



**Congratulations!**  
**Head for the tracks and enjoy your newly protected BT-50!**