



# FITTING INSTRUCTIONS

Part Number: **3415020**  
Product **SUMMIT COMBAR/T TUNDRA 2014-17**  
Description:  
Suited to **TOYOTA TUNDRA 2014-17**  
vehicle/s:  
Optional Kits: **3500530 – ARB AUX FOG LIGHT LOOM (NON-FACTORY FOG LIGHT VEHICLES)**  
**3500590 – FOG LIGHT KIT (L&R) (NON-FACTORY FOG LIGHT VEHICLES)**  
**3500680 – FOG LAMP HOUSING CLEAR LENS KIT**  
**3500930 – SUMMIT BAR WINCH INSTALL KIT WITH USA NP BRKT**  
**3500860 – SUMMIT BAR WINCH INSTALL KIT WITHOUT NP BRKT**

## WARNING

### REGARDING VEHICLES EQUIPPED WITH SRS AIRBAG:

When installed in accordance with these instructions, the front protection bar does not affect operation of the SRS airbag.

### ALSO, NOTE THE FOLLOWING:

- ◆ This product must be installed exactly as per these instructions using only the hardware supplied.
- ◆ In the event of damage to any bull bar component, contact your nearest authorised ARB stockist. Repairs or modifications to the impact absorption system must not be attempted.
- ◆ Do not use this product for any vehicle make or model, other than those specified by ARB.
- ◆ Do not remove labels from this bull bar.
- ◆ This product or its fixing must not be modified in any way.
- ◆ The installation of this product may require the use of specialized tools and/or techniques
- ◆ It is recommended that this product is only installed by trained personnel
- ◆ These instructions are correct as at the publication date. ARB Corporation Ltd. cannot be held responsible for the impact of any changes subsequently made by the vehicle manufacturer
- ◆ During installation, it is the duty of the installer to check correct operation/clearances of all components
- ◆ Work safely at all times
- ◆ Unless otherwise instructed, tighten fasteners to specified torque

## **ARB 4x4 ACCESSORIES**

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# GENERAL CARE AND MAINTENANCE

By choosing an ARB Bar, you have bought a product that is one of the most sought after 4WD products in the world. Your bar is a properly engineered, reliable, quality accessory that represents excellent value. To keep your bar in original condition it is important to care and maintain it following these recommendations:

- Prior to exposure to the weather your bar should be treated to a Carnauba based polish on all exposed surfaces. It is recommended that this is performed on a six monthly basis or following exposure to salt, mud, sand or other contaminants.
- As part of any Pre Trip Preparation, or on an annual basis, it is recommended that a thorough visual inspection of the bar is carried out, making sure that all bolts and other components are torqued to the correct specification. Also check that all wiring sheaths, connectors, and fittings are free of damage. Replace any components as necessary. This service can be performed by your local authorized ARB Stockist.

## FITTING REQUIREMENTS

### REQUIRED TOOLS FOR FITMENT OF PRODUCT:

Metric socket and spanner sets 8-25mm range	External Circlip pliers
Screwdrivers, Philips and Flat blade	Power Jigsaw with blade for plastic cutting
Short Body Power Drill 13mm (1/2") capacity	Dia 7.0mm (5/16") and 10.5mm (25/64") drill bits
Torque Wrench (9-102Nm)	Marking pen
Brake line clamp	Soft Hammer
Metric hex&torx key set	Loctite© 262 or equiv.
Wide masking tape	Stanley knife and Multitool
Small Spirit Level	Tape Measure & 2 x 300mm rulers
Right-angled Drill	Paint black fast drying

### REQUIRED TOOLS FOR PARKING SENSOR FITMENT:

STEP DRILL/EQUIVALENT TOOL TO PRODUCE AN ACCURATE Ø23MM HOLE	RUST PREVENTATIVE PAINT
ELECTRIC DRILL	ROUND FILE
CENTRE PUNCH	DRILLING TEMPLATE
SILICONE TUBE AND CAULKING GUN	

### HAVE AVAILABLE THESE SAFETY ITEMS WHEN FITTING PRODUCT:

Protective eyewear 	Hearing protection 
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**NOTE: 'WARNING' notes in the fitting procedure relate to OHS situations, where to avoid a potentially hazardous situation it is suggested that protective safety gear be worn or a safe work procedure be employed. If these notes and warnings are not heeded, injury may result.**

### FASTENER TORQUE SETTINGS:

SIZE	Torque Nm	Torque lbft
M6	9Nm	7lbft
M8	22Nm	16lbft
M10	44Nm	32lbft
M12	77Nm	57lbft

## PARTS LISTING

APPLICATION.	PART NO.	QTY	DESCRIPTION
<b>Mount Brackets To Chassis</b>	3750178R	1	BRACKET TUNDRA MOUNT RHS
	3750178L	1	BRACKET TUNDRA MOUNT LHS
	6151428	2	NUT FLANGE M12 X 1.25 ZP
	6151429	2	STUD M12 x 265 x 1.75 Gd 8.8
	6151435	2	CLEVIS NUT
	5846400	2	PACKER M12 x 8mm
<b>Brace Assembly</b>	4681630	1	BRACE CROSS
	4581083	7	WASHER FLAT M10 X 20.6 X 2
	6151232	7	BOLT M10 X1.5 X 30 TZP480
	6151321	7	NUT FLANGE M10 x 1.5 ZP
<b>Bull Bar To Mount Bracket Assy</b>	6151542	4	SCREW SEMS M10 X 40 X 1.5 HX
	6151321	4	NUT FLANGE M10 x 1.5 ZP
	6151545	6	BOLT FLANGE HXHD M12 x 1.25 x 35
	6151480	6	NUT FLANGE M12 X 1.25 ZP
	6250054	6	SPACER TUNDRA HORIZ ADJ
	6151270	4	BOLT M6 x 1.0 x 40 Gd 8.8 BZ
	6151128	4	NUT FLANGE M6 x 1.0 ZP
<b>Stone Tray to Bull Bar</b>	6523200	1	PANEL CENTER STONE SHIELD
	6151300	4	NUT CAGED M6 2.6-3.5
	6151443	4	SCREW BTN HD M6 x 20 BZ
	4581082	4	WASHER FLAT, M6 x 19 x 1.6 BZ
<b>Fit Lights and Mouldings</b>	3500880	1	GRILLE SPLIT PAN KIT
	5100200	1	BUFF KIT 2PCE FRONT SECTION
	5100210	1	BUFFER TOP SECTION UPRIGHT
	6821287	1	LAMP LED INDICATOR
	3163082	1	KIT SURROUND ARB FOGLIGHT
	6821116	4	GROMMET NYLON SNAP IN TYPE
<b>Number Plate To Bull Bar</b>	6821189	2	GROMMET RND FC 1500 080 090
	6151384	2	SCREW ST PHDCOL PH 5.2 X 16
	6151443	3	SCREW BTN HD M6 x 20 BZ
	3750095	1	BRACKET US LICENSE PLATE FIXED
	4581082	3	WASHER FLAT, M6 x 19 x 1.6 BZ
	6151128	3	NUT FLANGE M6 x 1.0 ZP
<b>Wing Inner Panels</b>	6523199R	1	PANEL WING RIGHT
	6523199L	1	PANEL WING LEFT
	6151526	10	NUT CAGED M6 1.8-2.7x9.5 480BLK
	6151443	10	SCREW BTN HD M6 x 20 BZ
	4581082	10	WASHER FLAT, M6 x 19 x 1.6 BZ
	3750177	2	BRACKET WING PANEL
	6151021	4	BOLT M8X1.25PX20 HEX HD ZP GR
	4584336	4	WASHER FLAT M8x17x1.6 TZP480
6151132	4	NUT FLANGE M8 x 1.25 ZP	
<b>Fit Winch Cover Panel</b>	6523175	1	PRESS FORM WINCH COVER PANEL
	6151443	4	SCREW BTN HD M6 x 20 BZ
	4581082	4	WASHER FLAT, M6 x 19 x 1.6 BZ
	6151128	4	NUT FLANGE M6 x 1.0 ZP
<b>Miscellaneous</b>	6191030	1	Trim Pinch Weld 520mm
	3789712	1	TEMPLATE 14ON TUNDRA BUMPER
	180302	6	CABLE TIES
	3789822	1	SENSOR DRILLING TEMPLATE

## FITTING PROCEDURE



1. Remove tow hooks and bolts, set aside to be refitted.



2. Remove lower bumper retaining screws.



3. Remove all lower fender liner retaining screws to bumper.



4. Remove upper fender liner retaining screws.



5. Prise out lower fender liner plastic scrivet. Remove lower fender liner completely, they will not be reused.



6. Temporarily remove front grille by removing screws/scrivets across top of grille. Then gently unclip from retaining bracket along lower edge. **(retain scrivets for reuse later)**



7. Temporarily unbolt grille retaining bracket to access scrivets. This is done by unscrewing nuts from studs.



8. Remove all fasteners from top of lower bumper.



9. Remove screws from trim pieces underneath head lamps.



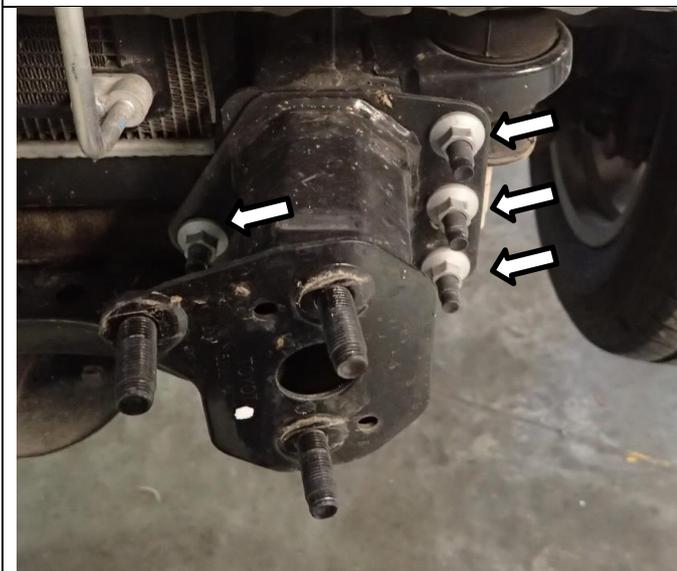
10. Gently remove trim pieces by unclipping from outer retainers.



11. Remove all remaining fasteners from lower bumper section.
12. Unplug Fog lights and parking sensors if fitted.
13. Remove lower bumper section



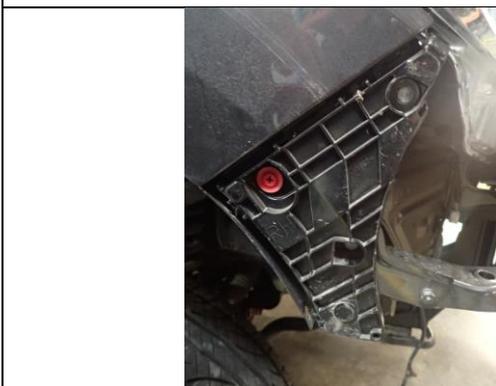
14. Undo fasteners holding Aluminium crash beam to chassis and remove.



15. Remove Crash beam mounts, retain nuts for reuse.



16. Remove rectangular chassis grommets (4) to reveal rectangular cut out in chassis.



17. Remove retaining bracket from each side.  
RETAIN FOR FITMENT LATER



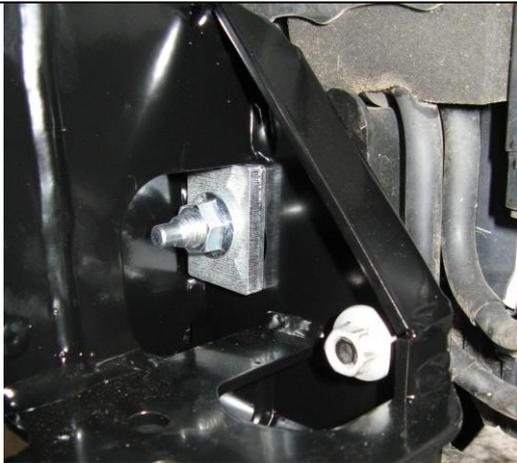
18. Insert clevis nut into rectangular hole in the inboard face of chassis, ensuring the threaded end is inserted first.

The nut when fitted correctly should fit square and locate into the chassis rail.



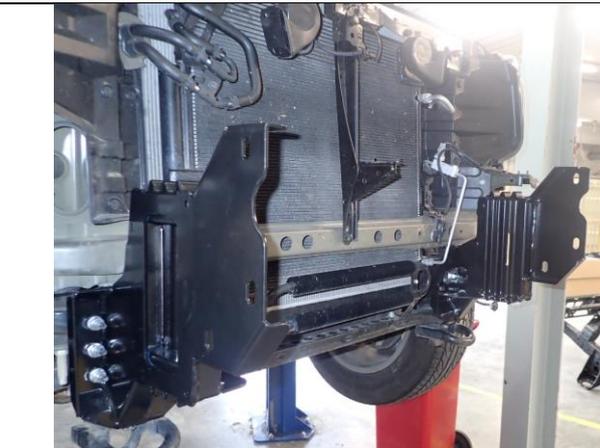
19. Install the chassis stud by fitting 2 nuts to the end of the stud and tightening until thread bottoms out.

20. Remove nuts and repeat for the LHS.



21. Loosely fit the mounting brackets to the chassis securing with the 8mm packers and flange nuts.

22. Secure using existing OE M10 flange nuts, **but do not do up tight**



23. Centralise the brackets to vehicle and then check the outside measurement across mount brackets, it needs to be 930mm or less. Torque the flange nuts, and tow hooks to chassis.



**M12 - 77 Nm.** (Chassis Stud)



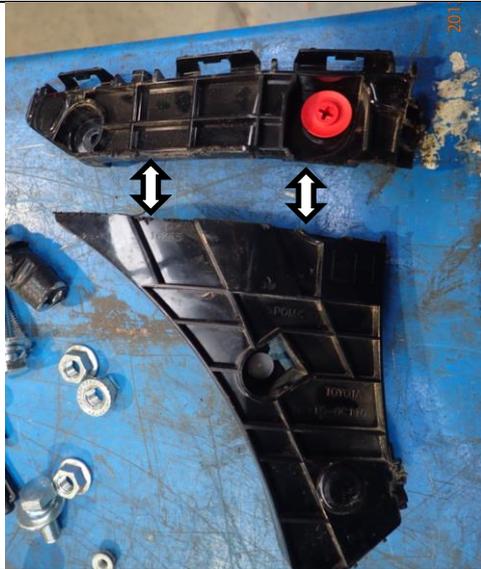
**M10 (FINE) - 67 Nm.** (Flange nuts)



**M12 - 102 Nm.** (Tow Hook)



24. Refit grille retaining bracket removed in step 7.



25. Using a hacksaw or similar, remove the lower section of the left and right retaining brackets as shown.



LHS INDICATOR PLUG SHOWN.

26. Using supplied scotch locks, connect the LED Indicator/clearance light looms as per table below:

Cable Colour
RED
GREEN
BLACK

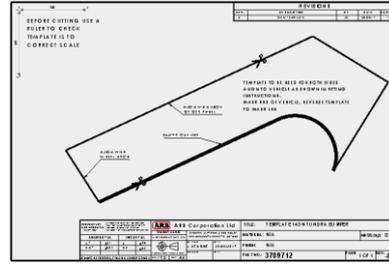
RHS OF VEHICLE	
Colour	Function
LIGHT PINK	CLEARANCE
PINK	INDICATOR
WHITE BLACK TRACER	GROUND
LHS OF VEHICLE	
Colour	Function
LIGHT PINK	CLEARANCE
RED	INDICATOR
WHITE BLACK TRACER	GROUND

\*HINT: USE GROUND ON INDICATOR PLUG

\*HINT: CLEARANCE SIGNAL FOUND IN CONECTOR UNDERNEATH LAMP ASSY



27. Using paper template cut the bumper trim panels which were removed at step 10.



28. Refit bumper retaining brackets

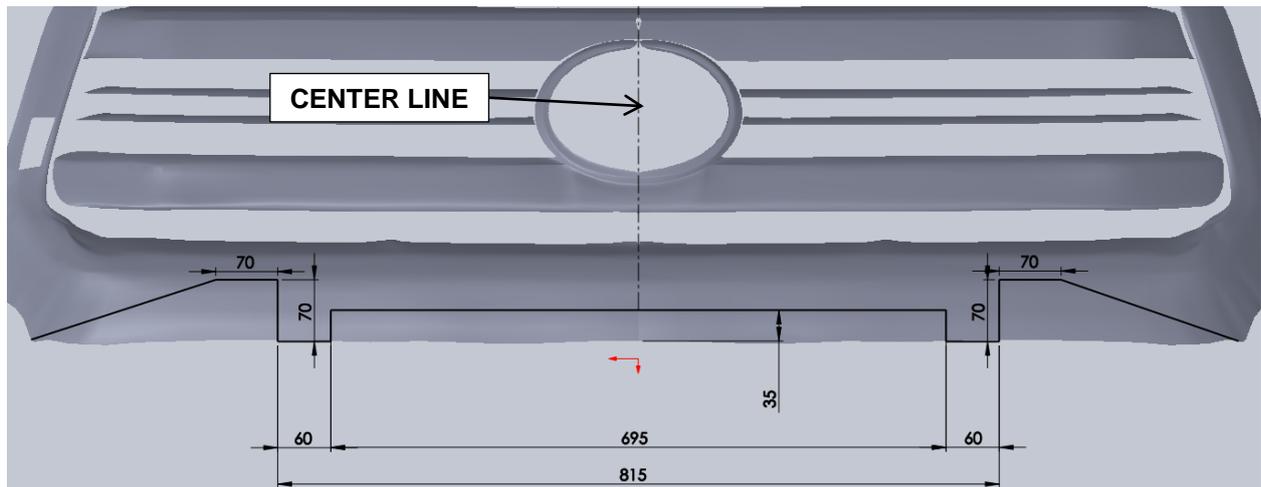
29. Refit trim panels onto retaining brackets and fasten on inboard side with original scrivenets.



30. Fit pinch weld to both sides along cut edge.

31. Cover the lower section of the grille with masking tape, then mark up the lower edge of the grille as shown below.

\*HINT: Mark vertical centre line first using Toyota badge as a reference. All dimensions are in mm.



32. Using an oscillating multitool or jigsaw remove the lower section of the grille as per lines marked in previous step.



Cut grille should appear as below:



**Warning:** Cutting operations can result in flying debris, safety glasses should be worn. Work safely; keep fingers clear of cutting blade.



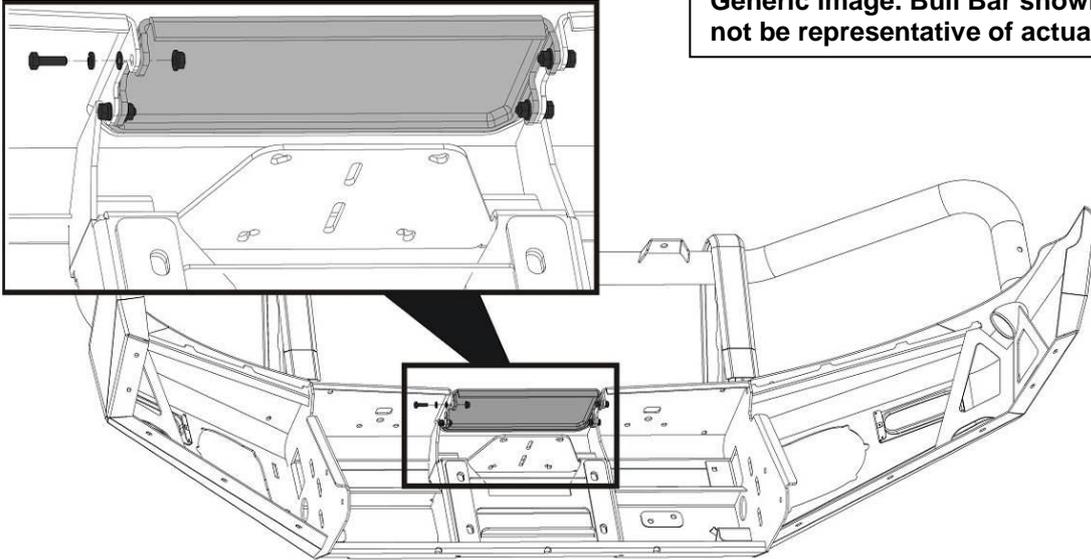
33. Refit grille to vehicle using scriveners and fasteners removed in previous steps.

**Note:** If fitting a winch proceed using fitting instructions 3789337 supplied with 3500720 winch install kit. Once the winch is fitted please continue to step 36. If no winch is being fitted continue from step 34.

34. Slide the winch cover panel from the bottom up until it is level with the top face of the bar.  
35. Fit the winch cover panel to the bar using 4 x M6 x 20 hex bolts, spring washers, flat washers and flange nuts.

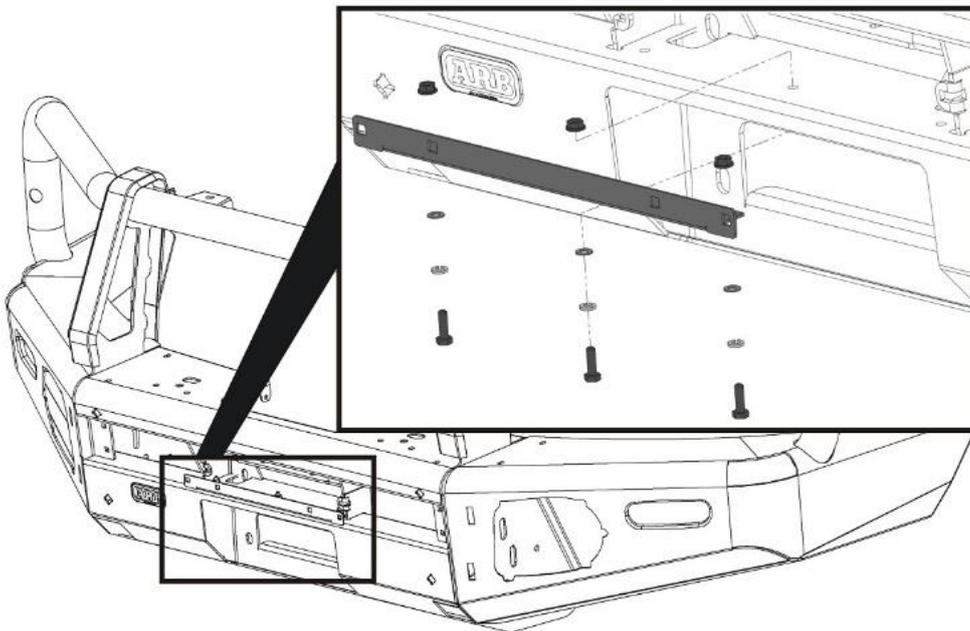
**Warning:** Be careful not to scratch the finish of the winch cover panel.

Generic image. Bull Bar shown may not be representative of actual product.



36. Fit the number plate bracket to the top face of the lower-centre pan on the bar using 3 x M6 x 20 hex bolts, spring washers, flat washers and flange nuts.

**Note: If you are fitting a winch, fit the folding number plate bracket supplied in winch install kit "3500720 WINCH INSTALL KIT" – See fitting instructions 3789337**



**Note: The following steps show the fitment of the plastic moulded parts. The mouldings are supplied in kits along with all fasteners required for fitment. It is important that the fasteners supplied with each kit are only used for the mouldings from the same kit.**

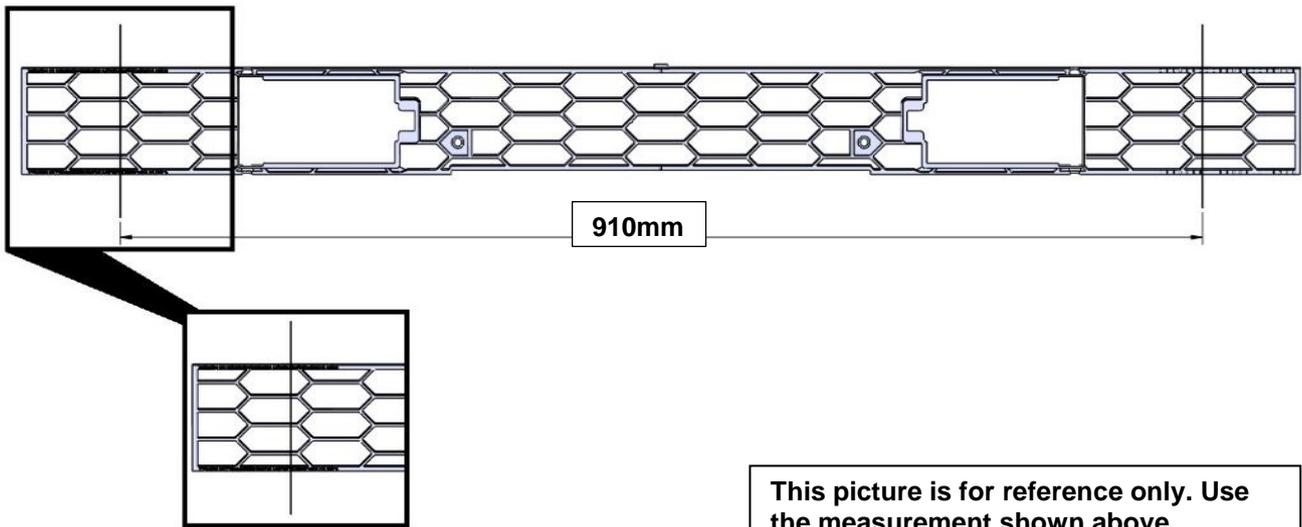
**The kits included in this bar kit are as follows:**

37. Layout the contents of each of the following kits ensuring the contents are kept separate from each other.

Kit No.	Description
5100200	BUFF KIT 2PCE FRONT SECTION
5100210	BUFF KIT 2PCE REAR UPRIGHT BAR
3500880	SPLIT PAN MESH KIT
3163082	FOG SURROUND KIT

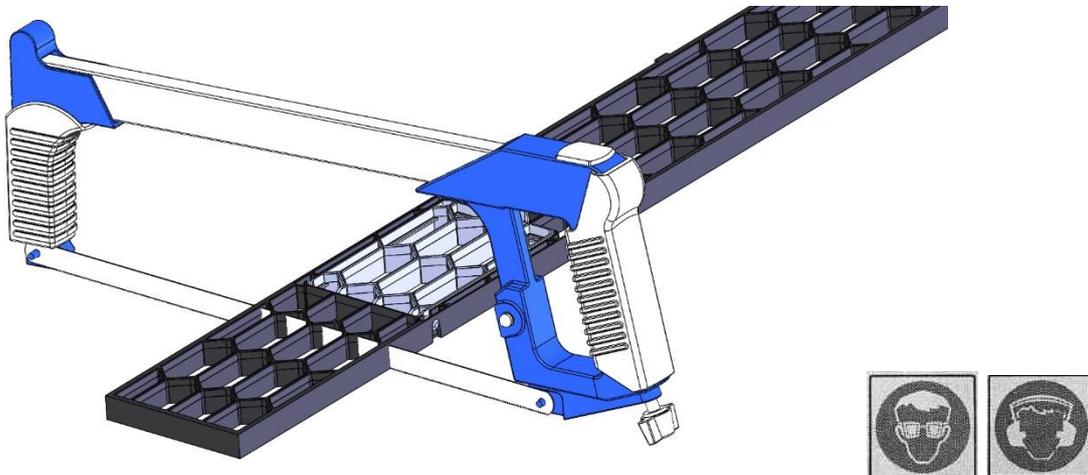
38. Mark the grille panel to be cut at the 910mm marks at each end on the back face.

**Note: When marked, double check the measurement with a measuring tool.**



39. Use a hacksaw or similar cutting tool to carefully cut the grille panel at the positions marked in the step above.

40. Discard the off cuts and clean up the cut edges using a file or sandpaper.

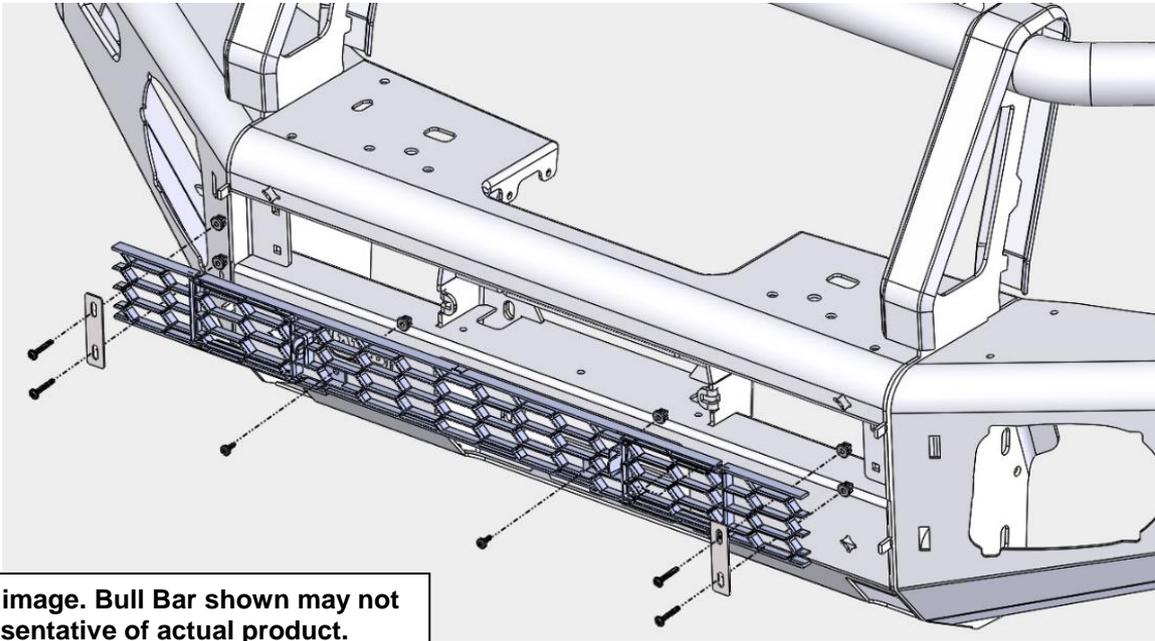


41. Insert the 6 x plastic grommets into the 6 square holes in the front face of the bar.

42. Insert the grille into the bar so that the hatches open outward (facing the front of the bar).

43. Attach the grille to the centre of the bar using the short screws into the grommets fitted above.

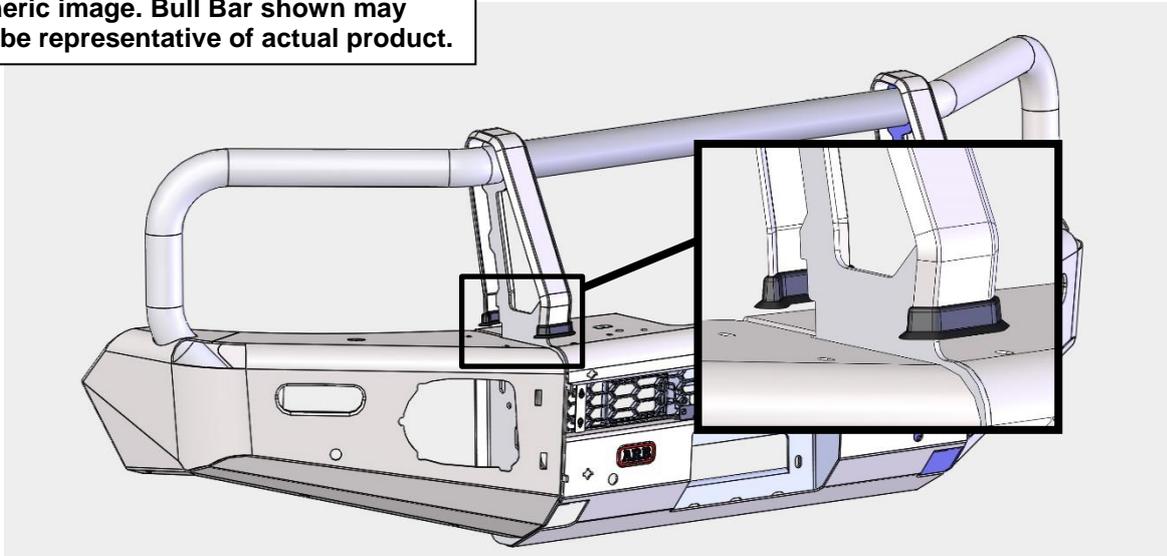
44. Attach the ends of the grille to the bar using the longer screws, through the clamp plates into the remaining grommets.



Generic image. Bull Bar shown may not be representative of actual product.

45. Fit the rubber intersection mouldings to the base of each upright cover strap.

Generic image. Bull Bar shown may not be representative of actual product.

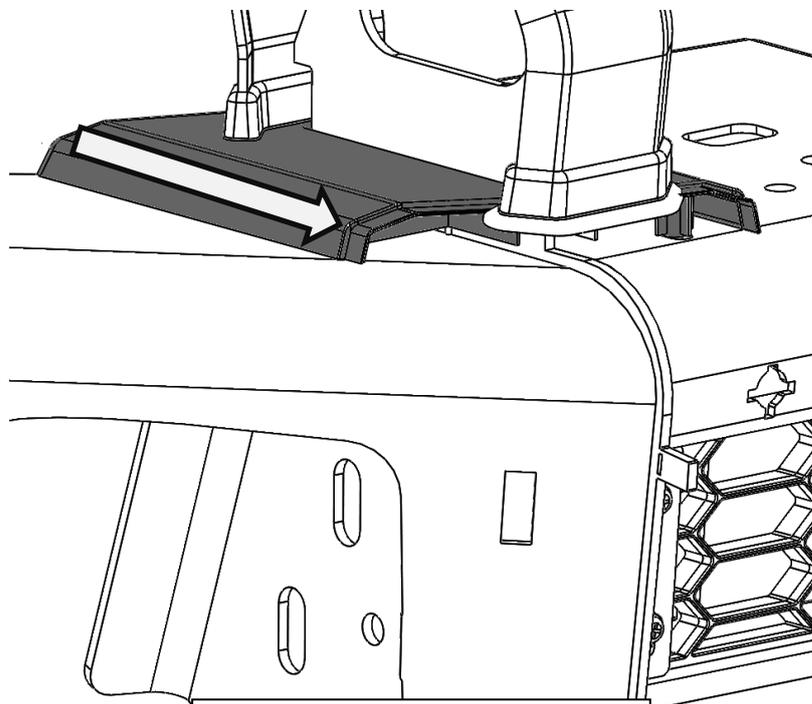


46. From the rear of the bar, slide the rear buffer sections under the rubber mouldings.

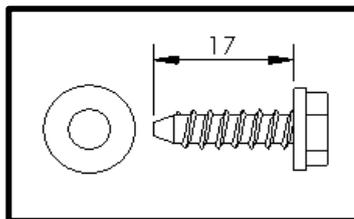
Fit 4 x screws and washers. Do not tighten screws. Leave enough play in buffers for adjustment later.

**Note:** Ensure that the skirts of the rubber intersection mouldings are not folded back on themselves and are sitting flat against the buffers.

Generic image. Bull Bar shown may not be representative of actual product.



Fit washers under screw heads

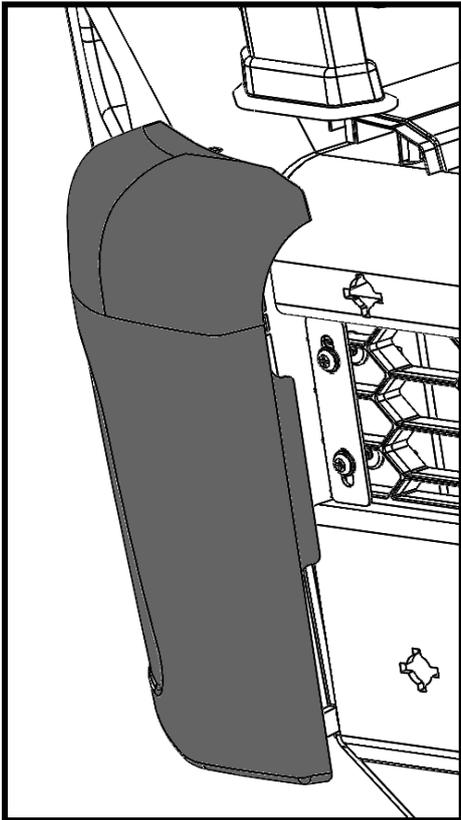


47. By aligning the front buffer with the tongue of the rear buffer, attach the front buffers to the front face of the bar. Ensure each buffer sits flat against the face of bar and is keyed into the top section of the rear buffer.

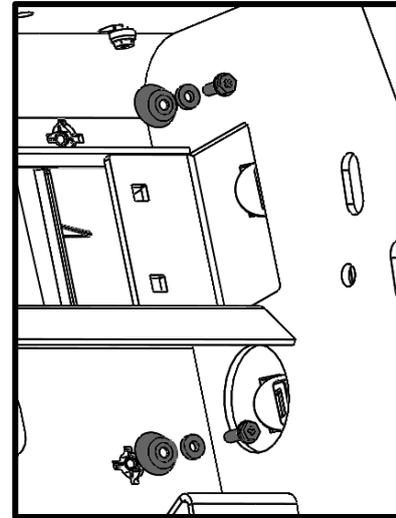
Secure wing side using retaining clips.

Secure inner side using the angled cup washers, flat washers and screws.

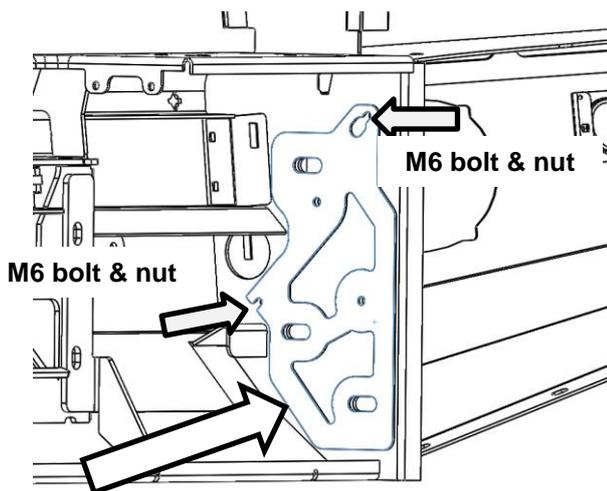
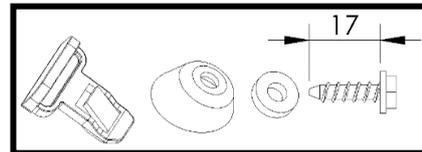
**The widest point of the cup washers goes to the top of the bar.**



Generic image.  
Bull Bar shown  
may not be  
representative of  
actual product.

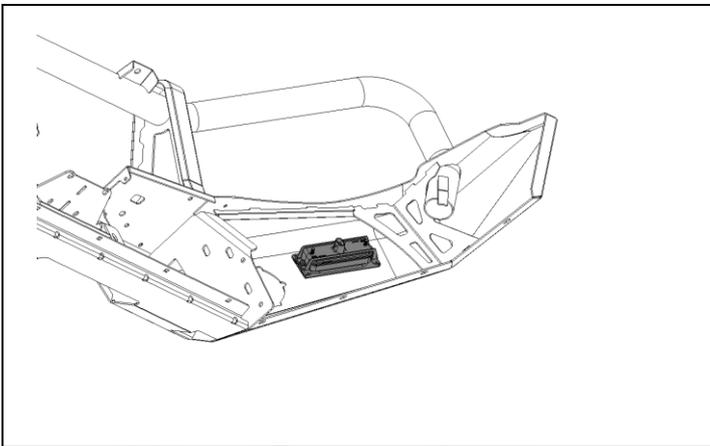


**Fit washers under screw heads.**

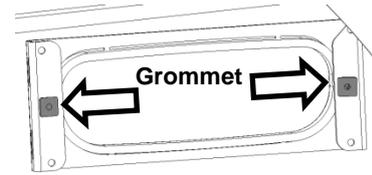


48. Fit an equal number of 2.5mm packers to the inside of the RH and LH bullbar uprights as required using M6 hardware.

The total clearance between the bull-bar mounting faces and the mounts should be roughly 1-2mm.



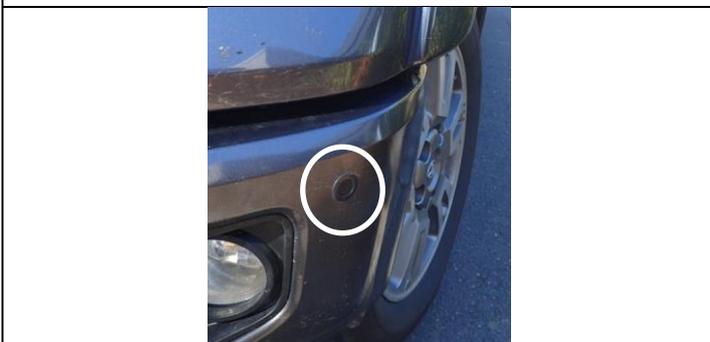
49. Fit the small plastic (square) grommets to the bar and attach the combination LED lamps to the bar using the screws provided with the lamp kit.



50. Fit the 4 longer leg M6 cage nuts to the lower pan of the bull bar as shown.

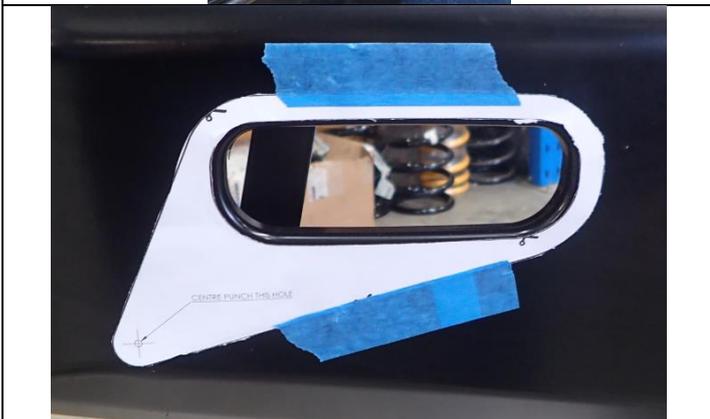


**Note: The following steps show the fitment of the parking sensors. If sensors are not fitted to vehicle continue to step 63.**



51. Clearly label which side of the vehicle the sensors are from.  
52. Carefully remove sensors from bumper making sure not to damage.

**Note: Identify & Record orientation of sensor/plug harness.**



53. Using a pair of scissors, cut out drilling template.  
54. Position template on right hand bullbar wing, aligning cut-out with indicator aperture as shown.

**NOTE: Be careful not to damage template as it will be reused for the other side.**



55. Using a centre punch and hammer, mark the drilling hole as shown.  
56. Reverse template and repeat for left hand side.



57. Using a step drill or similar, **carefully** drill the holes for the parking sensors to  $\text{Ø}23\pm 0.5\text{mm}$ .

**Caution: Make sure to move sensor loom out of the way before drilling.**

58. Use a file to deburr front and back edges of holes. Once deburred, file holes to ensure sharp edges are removed and a smooth inner finish is achieved.



**Warning: Drilling operations can result in flying metal debris, safety glasses should be worn.**



59. Use suitable rust preventative touch up paint to coat the exposed metal to prevent future rust.

60. Ensure sensor hole size still meets dimensional requirements once painted.



61. Using a small amount of adhesive silicone on the inside surface of the sensor (to prevent rotation). Clip the parking sensor into place from the front of the bullbar. Ensure the sensor connector is facing the correct direction as indicated in the picture.

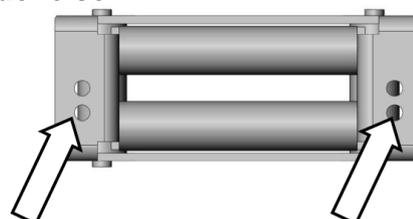
62. Reconnect parking sensor harness. Ensure the harness is loose to the connector and does not pull the sensor. Secure the harness so it does not rub on edges.

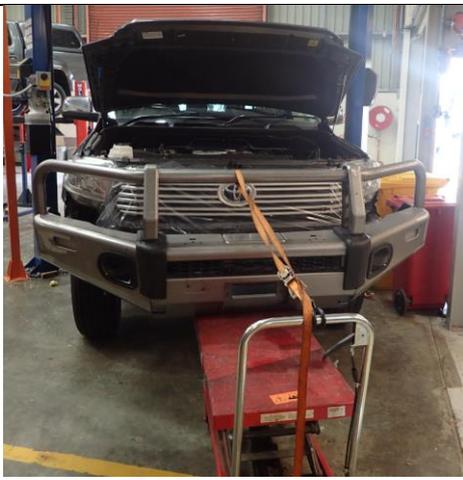
**Note: Ensure sensor mounting orientation in the bar is correct as observed from OE bumper.**



63. Ensure all other aftermarket accessories such as driving lights/winch/UHF aerial have been fitted to the bull bar.

**NOTE: Winch Roller Fairlead must be drilled to 25mm offset if not already done so.**



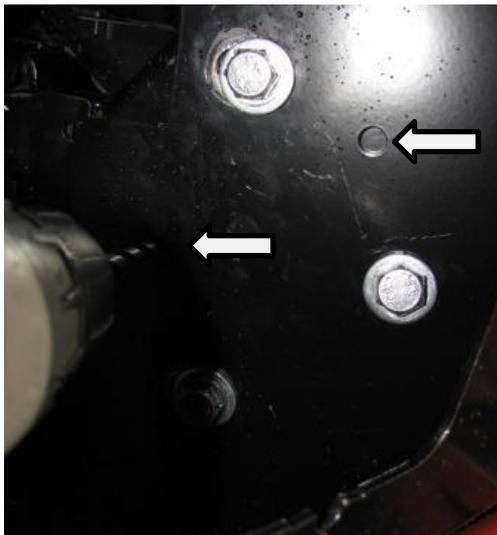


64. With the aid of a lift table or one or more assistants carefully and safely lift then position and loosely bolt the bull bar to the mounts using 6 x M12 bolts and M12 flange nuts.

**NOTE: DO NOT DO UP TIGHT**



65. Align rear edge of wings with bumper cut profile, so that there is a parallel 18-20mm gap



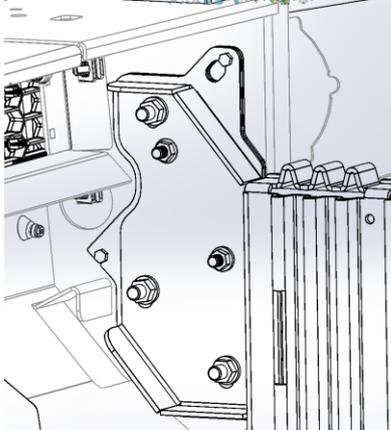
66. Once satisfied with the position of the bar on the vehicle drill the two  $\text{Ø}10\text{mm}$  pinning bolt holes per side with a 10.5mm drill bit through the Foglight apertures in the wings.



**Warning: Drilling operations can result in flying metal debris, safety glasses should be worn.**



67. Measure the clearance between the RH vehicle fender and the RH bull-bar wing. Repeat on the LH side to confirm the bar is sitting centrally on the vehicle.
68. If not, remove the bar from its mounts and shift the required number of 2.5mm packers installed on the bull-bar mounts from one side to the other. Next re-fit the bar on the mounts lining up the Ø10mm holes drilled in previous steps.



69. Once satisfied with the fitment of the bar to the vehicle, fit the M10 x 40 sems bolts to the RH & LH mounts (4 off - 2 per mount).

Torque fasteners to specification.



**M10 44 Nm**



**M12 77 Nm.**



70. Assemble and install combination light surrounds (p/n 3163082) as per instructions no. 3789190 supplied with surround kit. Note: Optional fog lamps can be installed at this point as per fitting instruction supplied with fog lamp kit no. 3500590

\*HINT: loosely fit top bracket to Foglight surround, then insert into Bull bar aperture, top outside corner first.

71. If installing fog lights use ARB wiring loom 3500530 for non-factory fitted vehicles. For factory fitted fog light vehicles use adapter kit 3500640.

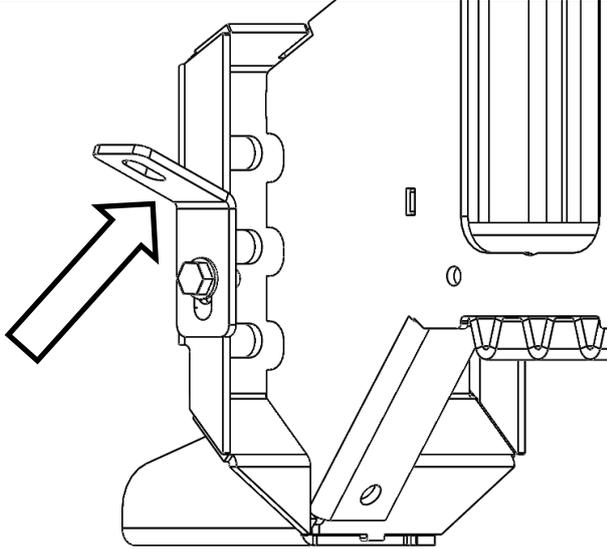


72. Connect electrical plugs for parking sensors, fog lights, driving lights and indicators.



73. Fit the cross brace to underside of lower pan and on top of gussets of mount brackets. Use M10 x 30mm bolts, washers and flange nuts.

 M10 - 44 Nm.



74. Fit both wing panel brackets to the higher holes in the outside of the mounting brackets using M8 bolt, washer and flange nut.

 M8 - 22 Nm.



75. Fit 5 x M6 cage nuts to each wing splash panel as shown on **inside** faces.

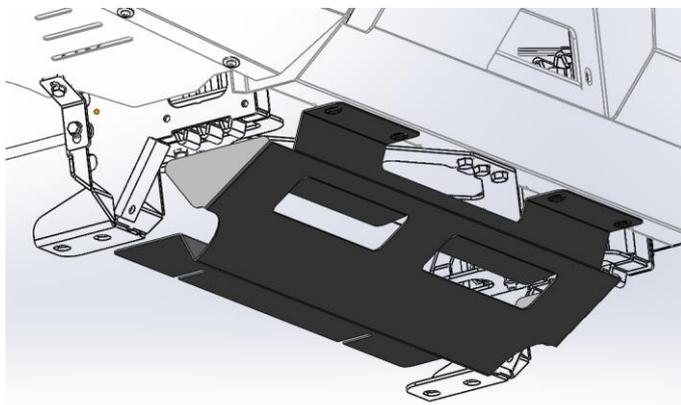
76. Fit panels up inside wings; secure using M6 x 20 black button head bolts and washer sets. Fix panel to bracket using M8 bolt, washer sets and flange nut.

 M6 - 9 Nm.

 M8 - 22 Nm.



77. In order to allow fitment of the centre stone panel, loosen the front two fasteners of the OEM sump guard several turns.



78. Slide the rear of the centre stone panel in between the chassis and the front of the OEM sump guard. Check that the existing fasteners (loosened in previous step) index into the open slots.
79. Using 4 x M6 bolts and washer sets at front, fix to cage nuts in the bull bar.

 M6 - 9 Nm.

 M8 - 22 Nm.

## FITTED PRODUCT

### NOTICE: ONCE SUMMIT BAR IS FITTED:

- ◆ Ensure all bolts are tensioned correctly.
- ◆ All wiring is clear of sharp edges or moving surfaces and secured properly.
- ◆ Piping is secured well away from sharp or moving components.
- ◆ Check operation of winch, if fitted.
- ◆ Check all wiring and connections to turn signal lamps, sensors, headlamp washers etc. are functioning correctly.
- ◆ Misalignment of parking sensor to hole in bull bar may cause malfunction, if fitted.
- ◆ Test operation of parking sensors after fitment, if fitted.

### NOTE:

If parking sensors are fitted, do not add any accessories to the Bull Bar on or around the sensors, this may affect the function of the sensors.

Sensors may not function well under the following conditions:

- ◆ After the vehicle, has been sitting out in hot or cold weather.
- ◆ When the system is affected by electrical equipment or devices generating an ultrasonic wave.
- ◆ When operating in bad weather

