



# FITTING INSTRUCTIONS

Part Number: **3438420**

Product Description: **SUMMIT COMBAR SUIT MY21 NP300**

Suited to vehicle/s: **NISSAN NAVARA NP300 MY21 MODELS ST, ST-X AND PRO-4X**

Optional Kits: **3500910** Fog Light Kit  
**3500680** Fog Lamp Housing Clear Lens Kit  
**3527060** Winch Installation Kit

## 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.

## REQUIRED TOOLS FOR FITMENT OF PRODUCT:

METRIC SOCKET SET	METRIC RING AND OPEN ENDED SPANNER SET
ELECTRIC DRILL 13 MM CAPACITY	STANDARD DRILL BIT SET
TORQUE WRENCHES 9-96Nm	PHILLIPS AND FLAT BLADE SCREW DRIVER SETS
FELT TIP MARKER PEN	HACKSAW BLADE
FINE FILE OR SAND PAPER	JIG SAW OR MULTI-TOOL WITH BLADE SUITABLE FOR PLASTIC
METRIC TAPE MEASURE	ROLLS OF 25 mm & 50 mm WIDE MASKING TAPE
TOUCH UP PAINT – BLACK FAST DRYING ENAMEL	SCISSORS
SMALL EXT CIR CLIP PLIERS	COLD CHISEL
BASIC TOOL KIT	SAW OR JIG SAW SUITABLE TO CUT PLASTIC
TORQUE WRENCH 9-77Nm	SPIRIT LEVEL

## 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	9 Nm	7 lbft
M8	22 Nm	16 lbft
M10	44 Nm	32 lbft
M12	77 Nm	57 lbft

PARTS LISTING			
APPLICATION.	PART NO.	QTY	DESCRIPTION
MOUNTS TO VEHICLE	3195274	2	PLATE NUT WELD ASSY M12 31X225   ZTS120
	3759501L	1	BRKT CHASSIS LHS D23 15ONI
	3759501R	1	BRKT CHASSIS RHS D23 15ONI
	4581007	1	WASHER FLAT 1/2x1 1/2x4mm   TZP SILVER T
	4581013	2	WASHER FLAT 14x21x3   LOCATING
	4581049	6	WASHER FLAT 1/2x1 1/8x3mm   ZP
	4584363	3	WASHER FLAT M12x26x4   HV300 TZP480
	4654045	1	MOUNT ASSY D23 STEEL 15ONI
	4654050	1	ASSEMBLY CAPTIVE NUTS D23 15ON
	4655107L	1	BRKT ASSY REAR CHASSIS MOUNT L   SUIT NP300 21 ON
	4655107R	1	BRKT ASSY REAR CHASSIS MOUNT R   SUIT NP300 21 ON
	6151255	2	SCREW HXHD M12x1.75x40   PC8.8 ZP
	6151321	10	NUT FLANGE M10x1.5   PC8.8 TZP480 SERRATED
	6151340	2	BOLT HXHD M12x1.75x50   PC8.8 ZP
	6151357	6	SCREW SEMS HXHD M10x1.5x30   PC8.8 TZP
	6151480	2	NUT FLANGE M12x1.25   PC8.8 TZP480 SERRATED
	6151542	4	SCREW SEMS HXHD M10x1.5x40   PC8.8 TZP
	6151545	2	BOLT HXHD FL M12x1.25x35   PC8.8 BTZP480
	6253337	2	SPACER M12 OD29 x ID12.5 x 12
BAR TO MOUNTS	4581007	6	WASHER FLAT 1/2x1 1/2x4mm   TZP SILVER T
	6151255	6	SCREW HXHD M12x1.75x40   PC8.8 ZP
	6151321	4	NUT FLANGE M10x1.5   PC8.8 TZP480 SERRATED
	6151357	4	SCREW SEMS HXHD M10x1.5x30   PC8.8 TZP
	6151428	6	NUT FLANGE M12x1.75   PC8.8 SERRATED
BUFFERS & MOULDINGS	3163082	1	KIT SURROUND ARB FOGLIGHT
	3500880	1	GRILLE SPLIT PAN KIT
	5100200	1	BUFF KIT 2PCE FRONT SECTION
	5100210	1	BUFF KIT 2PCE REAR UPRIGHT BAR
	6821287	1	LAMP LED INDICATOR CLEARANCE
	6821116	4	GROMMET NYLON SNAP IN TYPE
RADAR SENSOR TO BAR	3163221	1	COVER RADAR GRILLE CENTRE MNT
	3750625	1	BRKT RADAR HINGED SUITS Y62 S5
	3750626	1	BRKT RADAR FIXED SUITS Y62 S5
	4581082	4	WASHER FLAT M6x20   ZNB480
	4584329	5	WASHER FLAT M6x12.2x1.2   BTZP480
	4584347	4	WASHER FLAT M5   BTZP480
	5670069	2	SPRING COMP STAINLESS 25X6.0ID
	5848302	2	PACKER RB NYLON
	6151173	5	NUT FLANGE M6   ZNB480 SERRATED
	6151213	2	BOLT HXHD M6x1.0x20   PC8.8 ZNB480
	6151223	2	NUT HEX NYLOC M6x1.0   ZNB480
	6151354	2	NUT HEX NYLOC M5x0.8   TZP480
	6151459	5	SCREW BHD M6x16   BTZP480
	6151607	2	SCREW PHD M5x40   PH BZ

<b>UNDER PANELS</b>	3750977L	1	BRACKET WING UNDER PANEL LHS   SUIT NP300 21 ON
	3750977R	1	BRACKET WING UNDER PANEL RHS   SUIT NP300 21 ON
	4581082	14	WASHER FLAT M6x20   ZNB480
	4581303	2	WASHER FLAT M8x25.4x3   ZNB480
	4584393	4	WASHER FLAT M8x19x2   HV300 BTZP480
	6151234	2	BOLT HXHD M8x1.25x25   PC8.8 BTZP480
	6151301	4	NUT CAGED M8 3.3-4.7   1238-C
	6151443	14	SCREW BHD M6x20   BZP
	6151464	4	SCREW BHD M8x1.25x25   PC10.9 BTZP CAP
	6151526	14	NUT CAGED M6 1.8-2.7   BZP480
	6151548	2	NUT FLANGE M8x1.25   PC8.8 BTZP480 SERRATED
	6523501L	1	UNDER PANEL WING 3438420 LHS   SUIT NP300 21 ON
	6523501R	1	UNDER PANEL WING 3438420 RHS   SUIT NP300 21 ON
	6523502	1	UNDER PANEL SUMMIT 3438420   SUIT NP300 21 ON
<b>WINCH COVER PANEL</b>	4584329	4	WASHER FLAT M6x12.2x1.2   BTZP480
	6151173	4	NUT FLANGE M6   ZNB480 SERRATED
	6151213	4	BOLT HXHD M6x1.0x20   PC8.8 ZNB480
	6523321	1	PANL WINCH COVER MB SUIT PXIII
<b>BUMPER SUPPORTS</b>	3750954L	1	BRKT BUMPER SUPPORT 3438420 L   SUIT NP300 21 ON
	3750954R	1	BRKT BUMPER SUPPORT 3438420 R   SUIT NP300 21 ON
	6253417	2	SPACER BUMPER SUPPORT   SUIT NP300 21 ON
<b>CAMERA TO BAR</b>	4584329	2	WASHER FLAT M6x12.2x1.2   BTZP480
	4655103	1	BRKT CAMERA RELOCATION ASSY   SUIT NP300 21 ON
	6151213	2	BOLT HXHD M6x1.0x20   PC8.8 ZNB480
<b>NUMBER PLATE TO BAR</b>	4584329	2	WASHER FLAT M6x12.2x1.2   BTZP480
	6151173	2	NUT FLANGE M6   ZNB480 SERRATED
	6151443	2	SCREW BHD M6x20   BZP
<b>MISC</b>	180302	8	CABLE TIE 4.8 X 180 MM BLACK
	6191037	1	PINCH WELD 1000mm
<b>TEMPLATE</b>	37800144	1	TEMPLATE BUMPER CUT 3438420   SUIT NP300 21 ON

## FITTING PROCEDURE



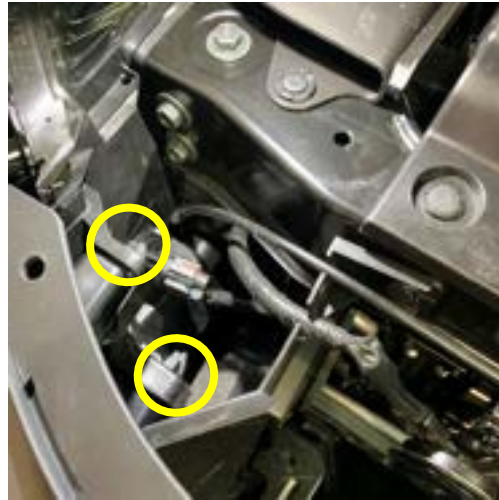
1. Open bonnet and remove the push clips on top holding the grille and remove plastic shields. **Note: retain push-clips and shields for re-assembly at later stages.**



**Note: retain scrivets**



2. Reach down behind the grille, and disconnect camera (if equipped) and radar plugs.
3. Dislodge the following clips that retain the grille.

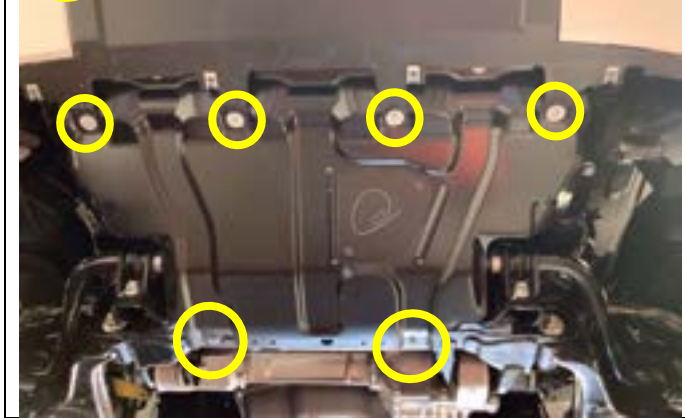


4. Reach down and remove the scrivets (3) connecting the bumper to the bumper support brackets





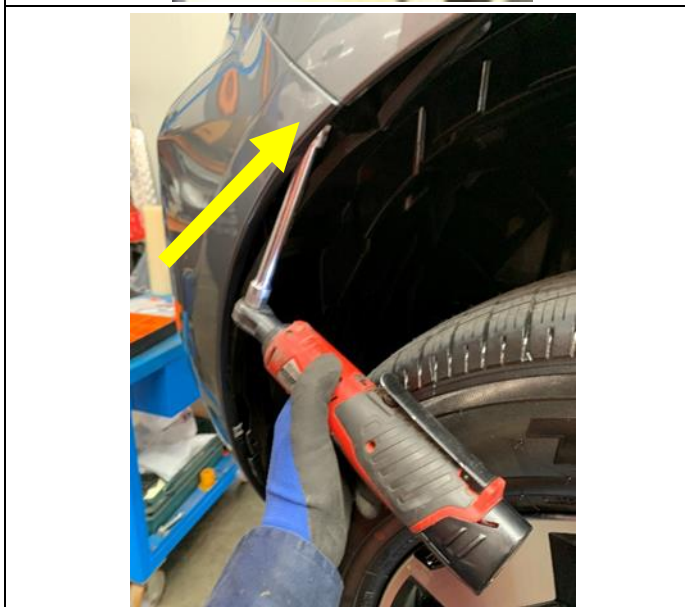
5. Remove the screws connecting the lower protector, and discard.



6. Remove front screws connecting the lower parts of the bumper lower bash plate. Loosen the rear bolts, but don't remove.



7. Remove and discard the screws attaching the lower section of the bumper to the wheel liners.



8. By prying open the wheel liner from the bumper, reach up and remove the screw connecting the front quarter panel to the bumper.



**Note: retain screws for reattachment later**



9. Reach up in behind the bumper to disconnect the fog light looms on each side of the bumper.



**Hint: Fog Light terminal plug is released by placing a screwdriver underneath pulling away the tab**



10. Dislodge the bumper from the clips that connect it to the vehicle. Start at the outer most point of the bumper, and make your way to the center of the grille. Once the center has been reached, repeat the same steps on the opposite side.



**PRO-4X MODEL ONLY:**

11. Prior to removing the bumper, disconnect the push-tabs that secure the flares to the bumper by reaching up through the wheel liners.





12. Once the bumper has been completely detached from the vehicle, place it in a safe area, on a soft surface to prevent it from being damaged

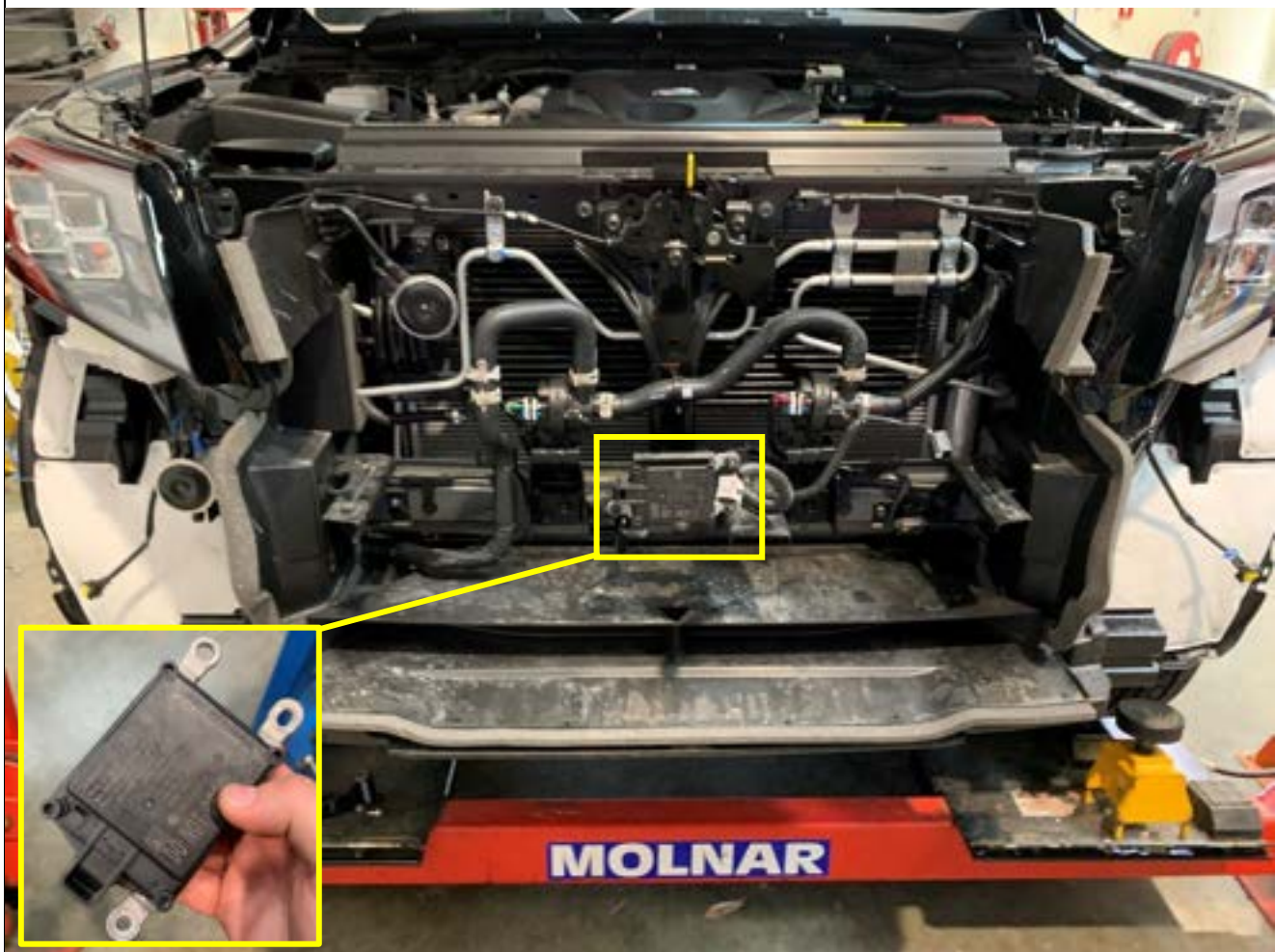


13. Un-screw the camera from the grille and set aside.

**Note: retain screws for re-assembly at a later stage**

14. Carefully remove the nuts (3) connecting the radar unit to the support bracket. Once removed, place in a safe location.

**WARNING: DROPPING OR DAMAGING THE RADAR UNIT COULD RESULT IN MALFUNCTION OF ADAS SAFETY SYSTEMS.**



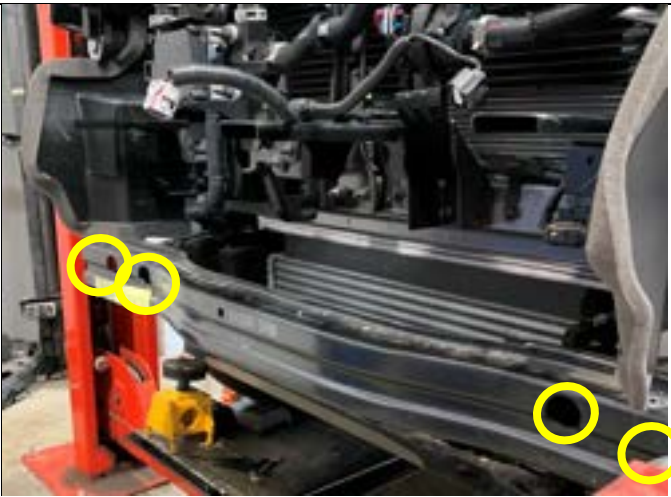




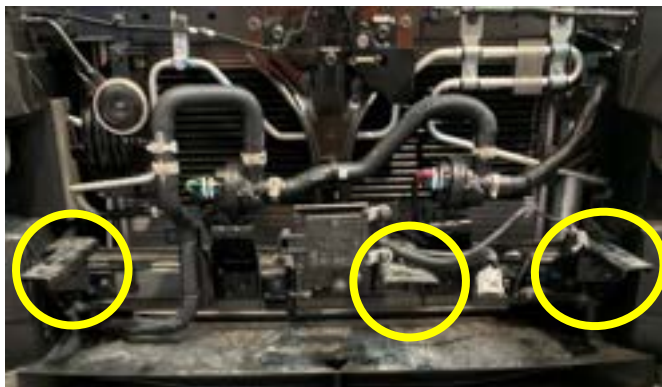
15. Remove Styrofoam impact absorber and discard.



16. Remove the push clips (4) connecting the front intake louvers, and remove from vehicle. Retain push clips for reinstallation at later stage. Discard the plastic intake louver.



17. Remove the factory flange bolts (4) connecting the crash beam. Retain bolts and discard the crash beam.



18. Remove and discard the front bumper support brackets (3), and retain the captive washer nuts (6) and push clips (2) for reinstallation at a later stage.





RHS SHOWN

19. From the engine bay, disconnect the 8pin and 2pin black connector from headlight cluster on each side.
20. Gently pull this section of the loom through to the front of the vehicle.



RHS

21. Connect the LED indicator harness to the relevant wires by the preferred method of stripping and soldering the wires. As an alternative, scotch locks are provided in the 6821287 indicator kit.

Power supply for the indicator can be taken from the Grey wire on the RHS and the Pink on the LHS .

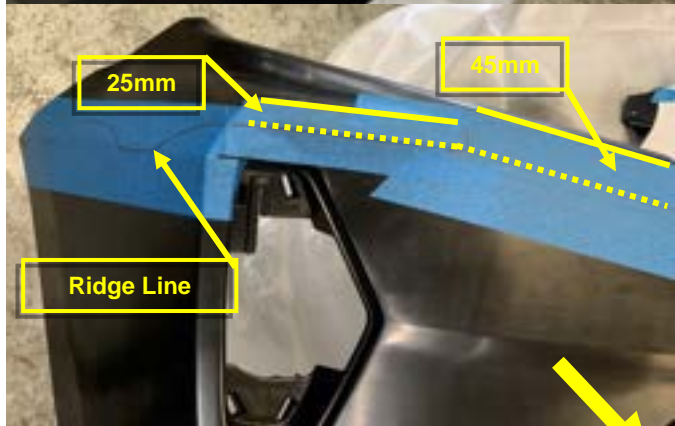
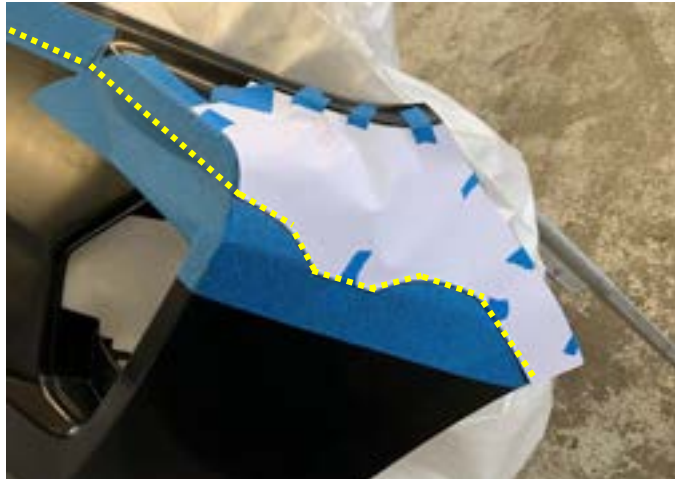
Earth supply can be taken from the black wire on this plug.

Power supply for the clearance lights can be taken from the Orange and Black wire on the RHS and the Red on the LHS. Ensure to check wires prior to splicing.



LHS

ARB LED INDICATOR/CLEARANCE LOOM	
Cable Colour	Function
RED	CLEARANCE (+)
GREEN	INDICATOR (+)
BLACK	EARTH (-)
VEHICLE LOOM RHS	
<b>Colour</b>	<b>Function</b>
ORANGE – BLACK (8PIN)	CLEARANCE (+)
GREY (2PIN)	INDICATOR (+)
BLACK (2PIN)	EARTH (-)
VEHICLE LOOM LHS	
<b>Colour</b>	<b>Function</b>
RED (8PIN)	CLEARANCE (+)
PINK (2PIN)	INDICATOR (+)
BLACK (2PIN)	EARTH (-)

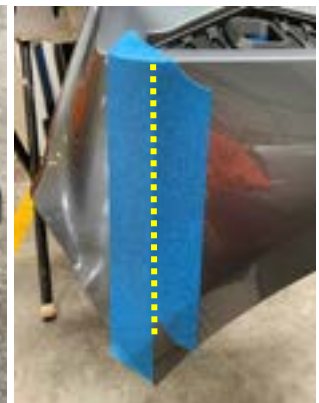


22. Cut out the template pn. 37800144



23. Using non-marking tape, cover the trim line area, and trace the template trim line (as seen in the image to the left).

**Note:** Find the ridge line on the bumper (as shown below), and place 2 pieces of tape (one above and below) on the bumper. The joint line will be used as a guide for locating the template (as seen in the image to the left).



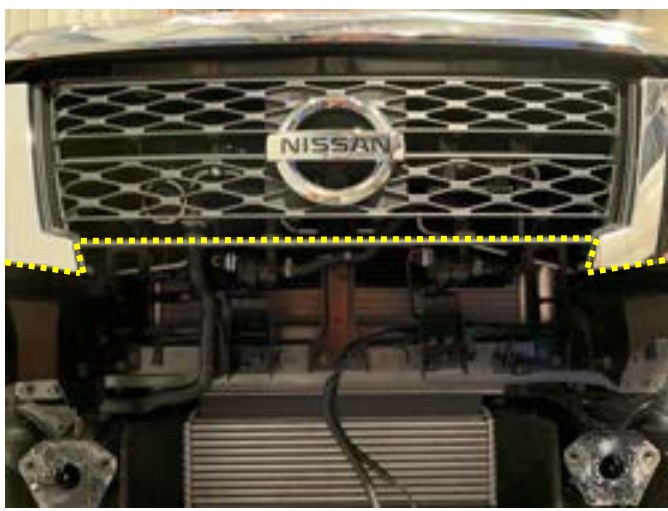
24. Using the highlighted edges as a guide (seen in the image to the left), find the start of the radius, and mark out a 25mm and 45mm offset line respectively.

25. Using an oscillating multi-tool or jigsaw, follow the cutting path outlined. Start at the outermost point of the bumper, and cut inwards, towards the center of the bumper. As you begin to approach the chrome grille, stop cutting, and carefully turn over the grille. Mark out the following cut, and resume cutting. Ensure to retain the clip and screw boss (as seen in the image to the left). Make your way to the center of the grille.

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

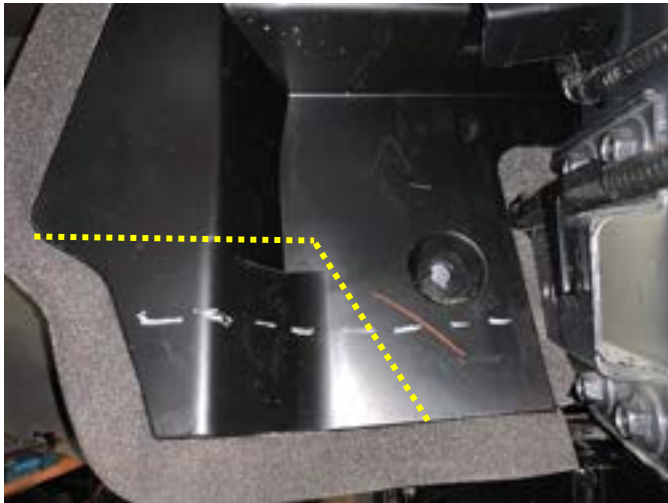


26. Repeat on the opposite side.



27. Ensure to debur rough edges along cutting line.

28. Reinstall plastic engine bay shielding



29. Trim the remaining air deflector in accordance with the image to the left.

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



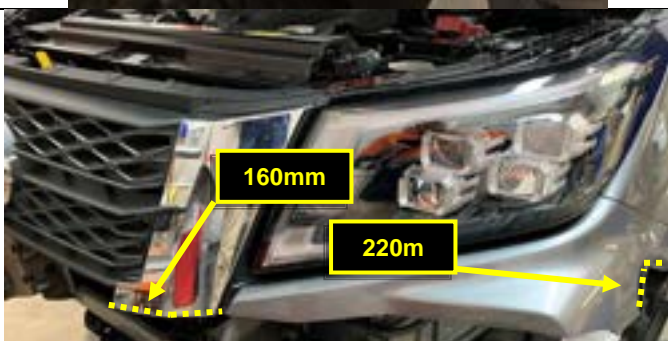
30. Repeat on the opposite side.



**PRO-4X MODEL ONLY:**

31. Temporarily install the trimmed bumper, mark a line corresponding to the bumper trim line. Remove the bumper, and trim the excess flares.

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



32. Reinstall grille and bumper on the vehicle.

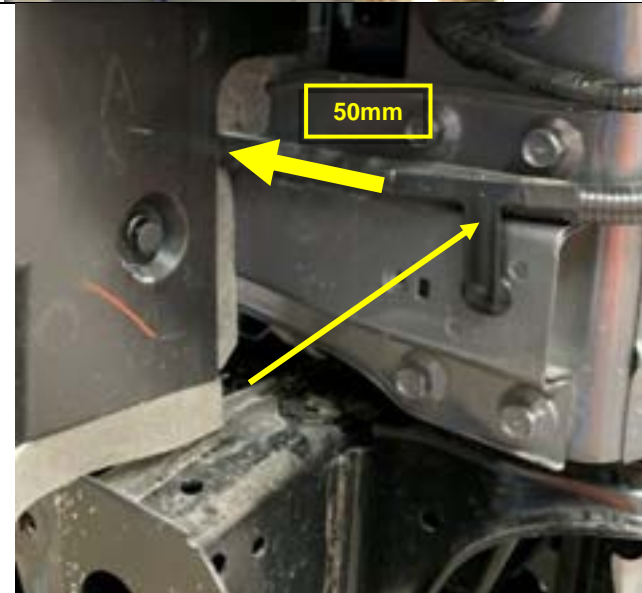
33. Cut the 1000mm pinch weld into the following lengths:

- 2x 100mm
- 2x 160mm
- 2x 220mm

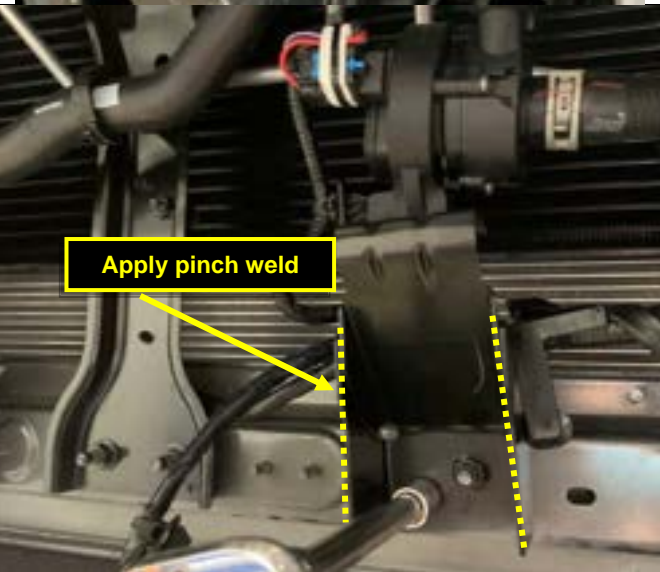
34. Apply pinch weld to bumper and grill cut-out.



35. Wedge the bumper spacer packer (pn 6253417) in between the grille tab and bumper. Once through, drill a  $\text{\O}6\text{mm}$  hole, and feed through a cable tie, and tighten.



36. Cut the tape connecting sensor loom locating plug, and move the conduit inboard by approximately 50mm, to give additional length to the central radar plug. Reapply tape.



37. Remove the captive washer nuts (2) retaining the water pump brackets. Reroute the loom in front of the bracket, and apply 100mm pinch weld (2) to the water pump bracket (as shown in the image to the left). Reinstall captive washer nuts.



**CRITICAL: DO NOT OVER TIGHTEN NUTS, AS OVER-TIGHTENING MAY RESULT IN BROKEN STUDS. PLEASE REFER TO TORQUE CHART ON PAGE 1 OF THESE INSTRUCTIONS.**



38. Fit the bumper support brackets to the weld studs located on the fore-most body cross-member, and fasten using the captive washer nuts (2 per bracket) removed in step 18.

**CRITICAL: DO NOT OVER TIGHTEN NUTS, AS OVERTIGHTENING MAY RESULT IN BROKEN STUDS. PLEASE REFER TO TORQUE CHART ON PAGE 1 OF THESE INSTRUCTIONS.**

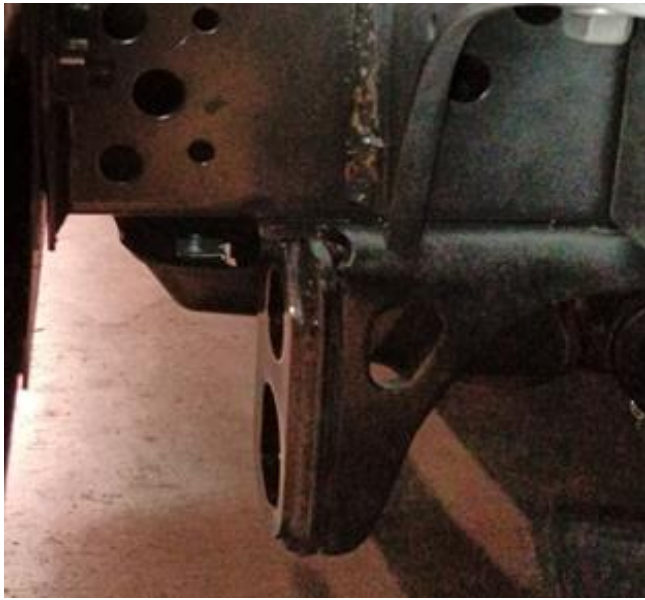


39. Align the bumper support brackets with the grille, and drill an  $\text{\O}8\text{mm}$  hole through the grille.
40. Install push clips (2 per bracket) removed in step 16 (as seen in the image below).



41. Repeat on the opposite side.



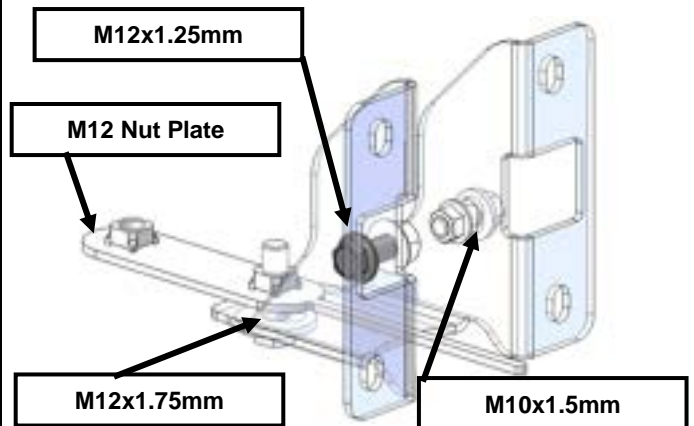


**LHS:**

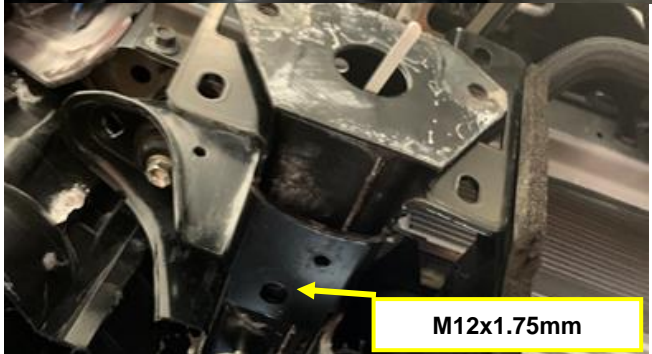
42. Remove the OE factory tow hook by removing the M12 flange bolts. Retain both tow hook and bolts for reinstallation at later stages.



43. Install rear chassis bracket.



44. Secure the chassis bracket using M12x1.25x35mm flange bolt (1) and M12x1.25 serrated flange nut (1) for the outside slot of the bracket, and the M10x1.5x30mm SEMS bolt (1), M10 serrated flange nut (1) for the inside slot (as seen in the image above). Leave loose at this stage.



**RHS:**

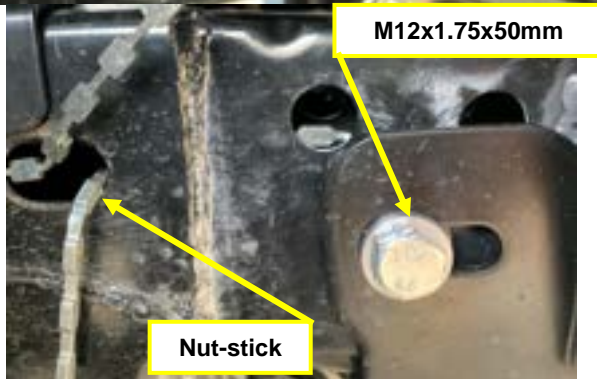
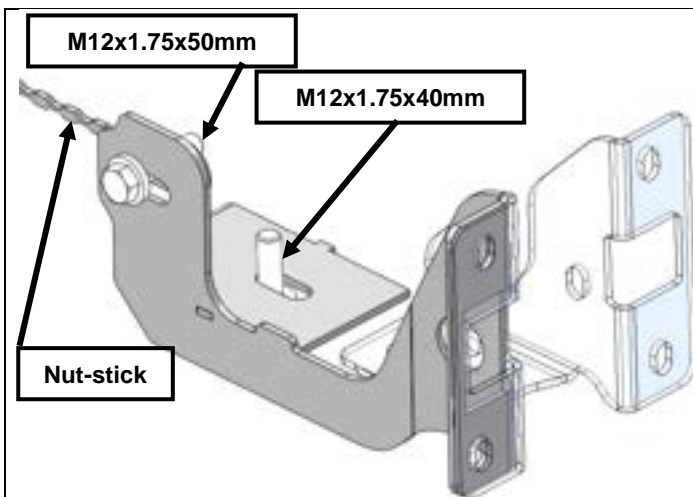
45. Place the M12 nut plate (1) inside the chassis, and insert a M12x1.75x40 (1) and M12x38x4 flat washer (1) into the lower chassis bracket slot (as shown in the image to the left)

**LHS:**

46. Repeat steps 43 and 44.  
47. Reinstall the OE factory tow hook that was removed it step 42, using only the front bolt. Leave loose at this stage.

**Note:** If installing recovery points (pn 2838010), refer to instructions 3789386 supplied with the recovery points before continuing on from this point.



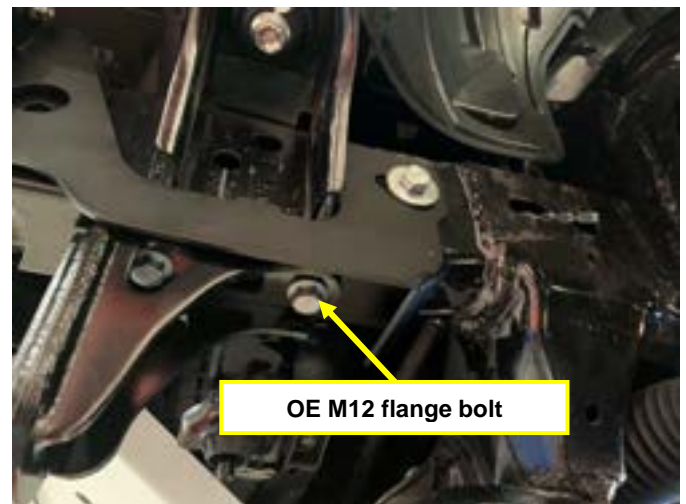


#### RHS:

48. Install the 2<sup>nd</sup> rear chassis support bracket using M12x1.75x40 (1) and M12x26x4 flat washer (1) into the lower chassis bracket slot, through the chassis, and into the M12 nut plate installed in step 45. Leave loose at this stage.
49. Located inside the wheel well, place the nut-stick (pn. 3195274) inside the chassis slot (as shown in the image to the left) and align it with the chassis hole. Place the M12x29x12mm spacer in-between the 2<sup>nd</sup> rear chassis support bracket and chassis, and align with the corresponding holes. Leave loose at this stage.
50. Insert a M12x1.75x50 (1) through a M12x26x4 flat washer (1), 2<sup>nd</sup> rear chassis support bracket, M12x29x12mm spacer, chassis hole and into the aligned nut plate (as seen in the image to the left).

#### LHS:

51. Install the 2<sup>nd</sup> rear chassis support bracket in-between the chassis and OE factory tow hook, and reinstall the rear OE M12 flange bolt (as seen in the image below).



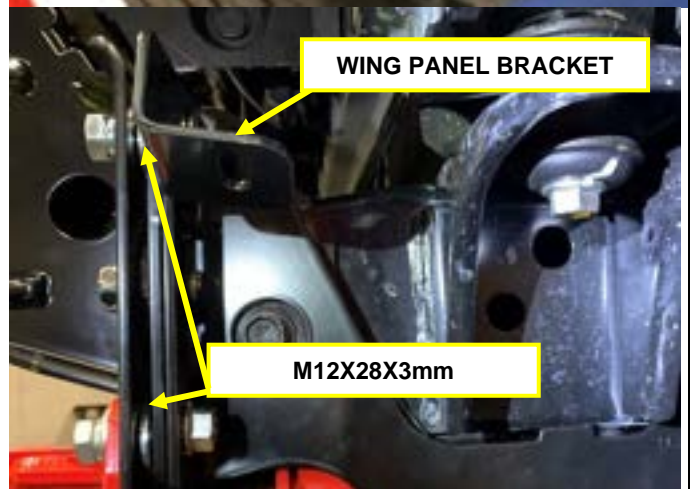
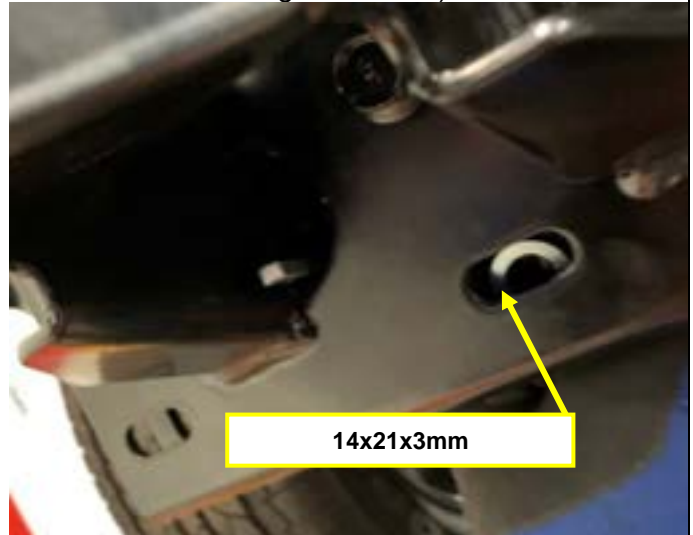
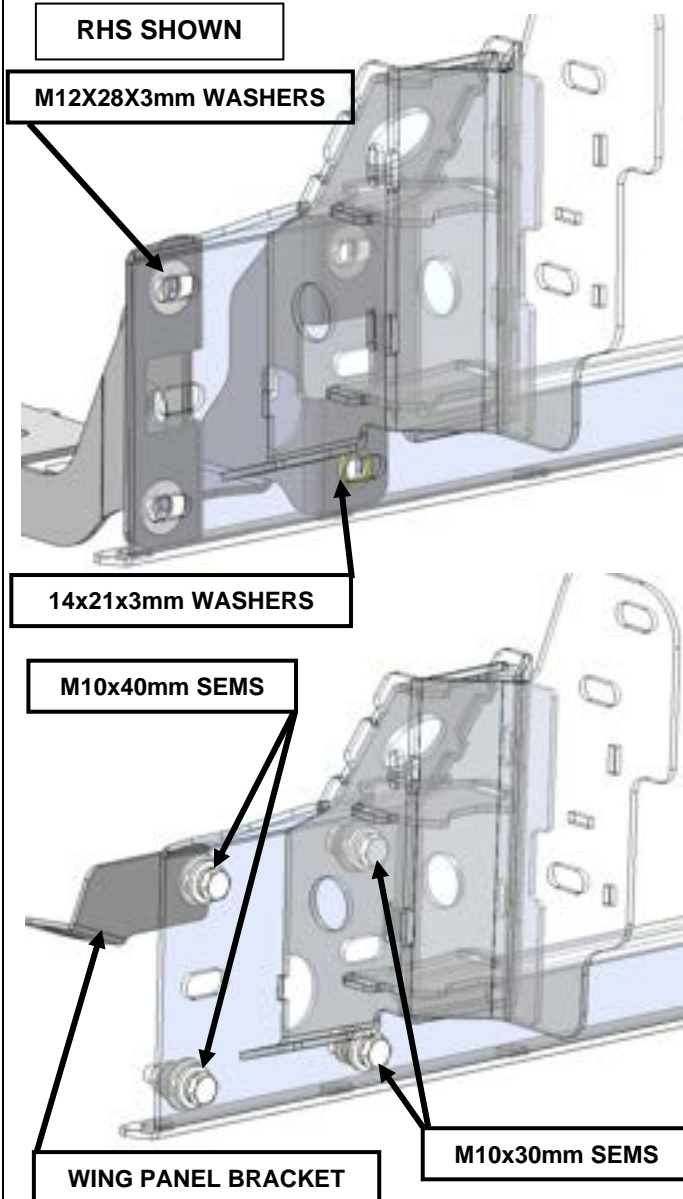
52. Repeat steps 49 and 50 on the LHS.

53. Using the factory flange bolts (4) removed in step 17, install bull bar chassis mounting assembly. Leave loose at this stage.

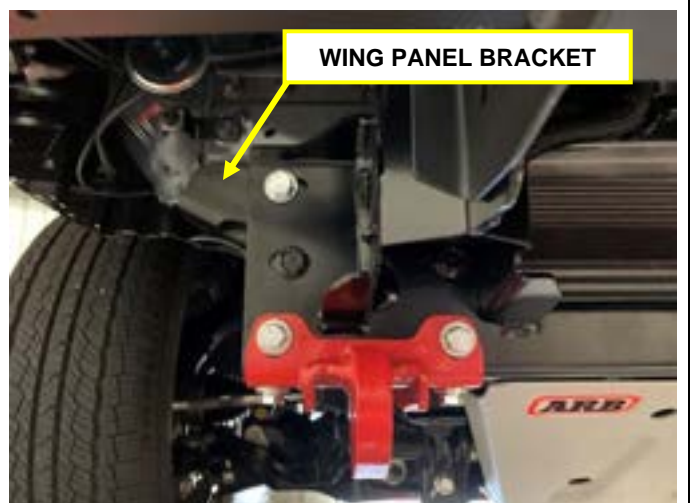


**CRITICAL: ENSURE THE FOLLOWING STEP IS CARRIED OUT CORRECTLY**

54. Individually place the M12X28X3mm (3) and 14x21x3mm (1) washers in-between the bull bar chassis mounting assembly and rear chassis support brackets with the corresponding slots. Once aligned, feed through the corresponding SEMS bolts (as seen in the image to the left).



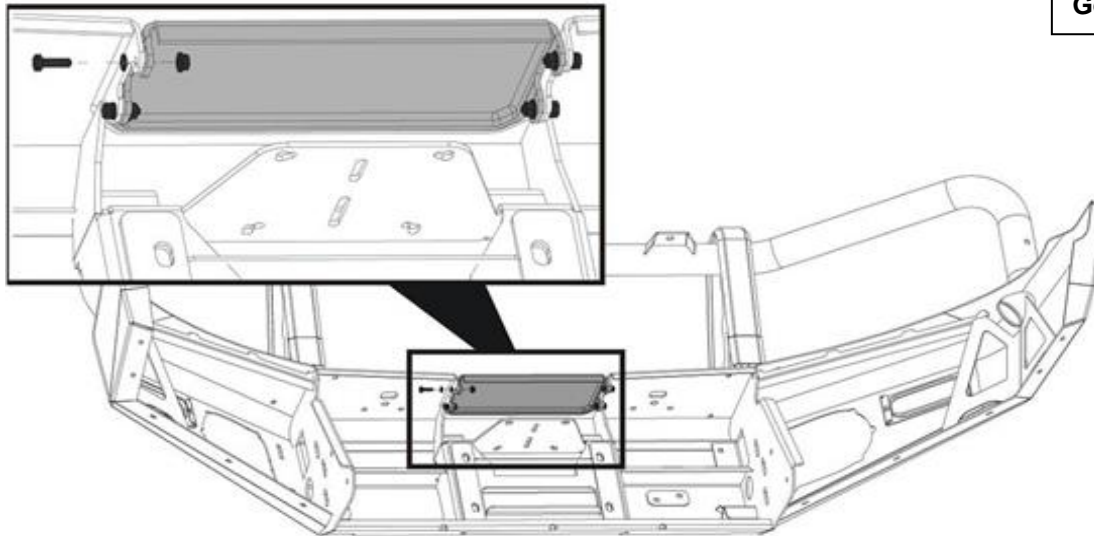
55. Install the wing panel bracket prior to fitting the M10 serrated flange nuts to the M10 SEMS bolts. Leave loose at this stage.



**Note: If fitting a winch proceed using fitting instructions 3789931 supplied with 3527060 winch install kit. Once the winch is fitted please continue to step 58. If no winch is being fitted, continue from step 56.**

56. Slide the winch cover panel from the bottom up until it is level with the top face of the bar.
57. Fit the winch cover panel to the bar using M6x20 hex bolts (4), M6x12x2 flat washers (4) and flange nuts (4).

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



**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.**

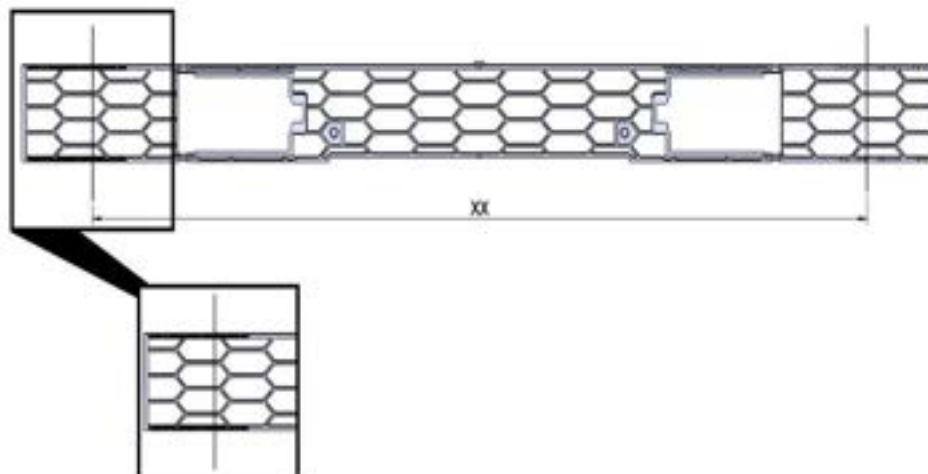
**The kits included in this bar kit are as follows:**

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

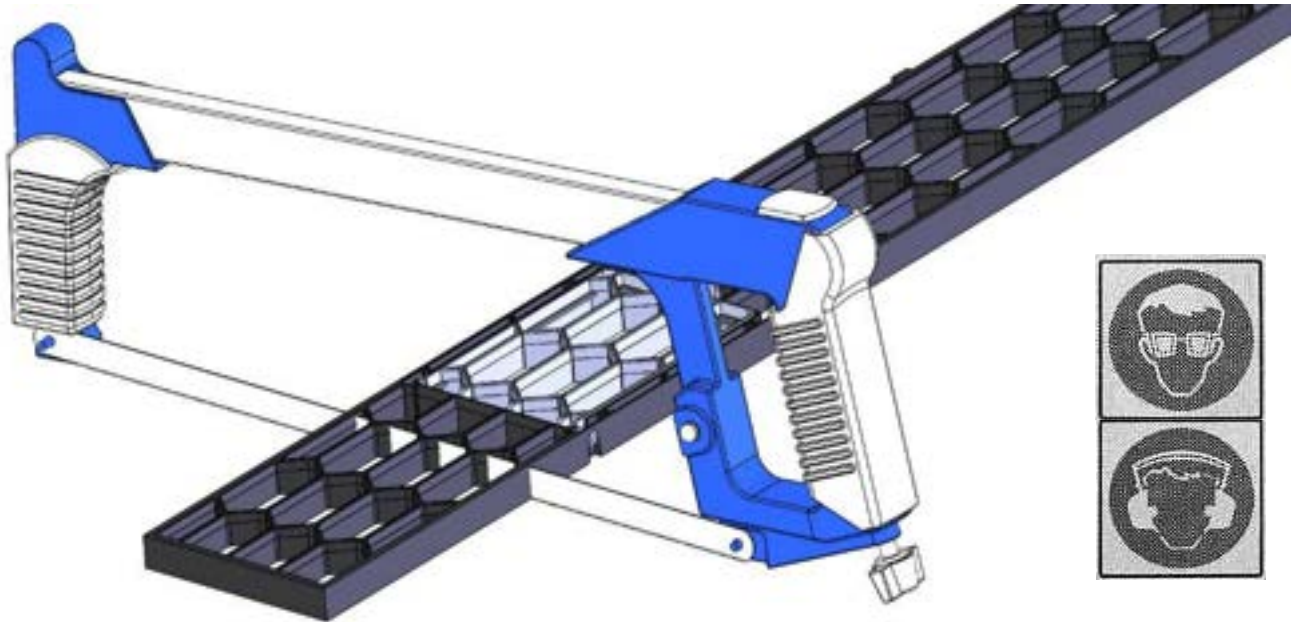
Kit No.	Description
5100200	BUFF KIT 2PCE FRONT SECTION
5100210	BUFF KIT 2PCE REAR UPRIGHT BAR
3500880	SPLIT PAN MESH KIT
3163082	FOG SURROUND KIT

59. Mark the grille panel to be cut at the 760mm marks at each end on the back face.

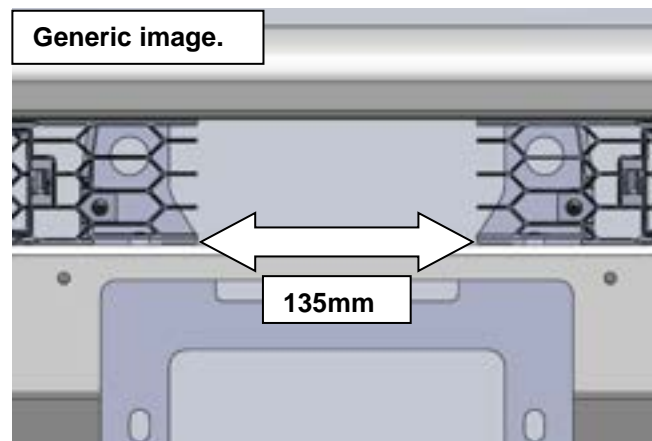
**Note: When marked, double check the measurement with a measuring tool.**



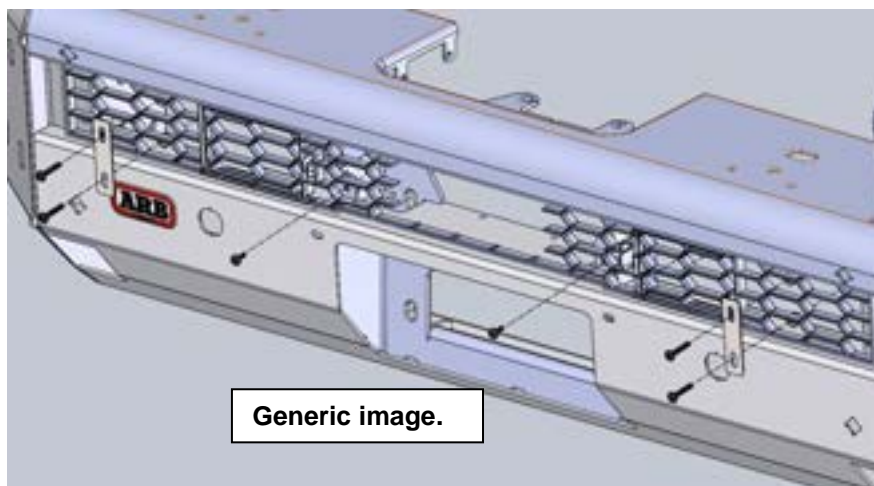
60. Use a hacksaw or similar cutting tool to carefully cut the grille panel at the positions marked in the step above.
61. Discard the off cuts and clean up the cut edges using a file or sandpaper.



62. Insert the 6 x plastic grommets into the 6 square holes in the front face of the bar.
63. Remove the middle 135mm of the grille with an oscillating multitool or hack saw.

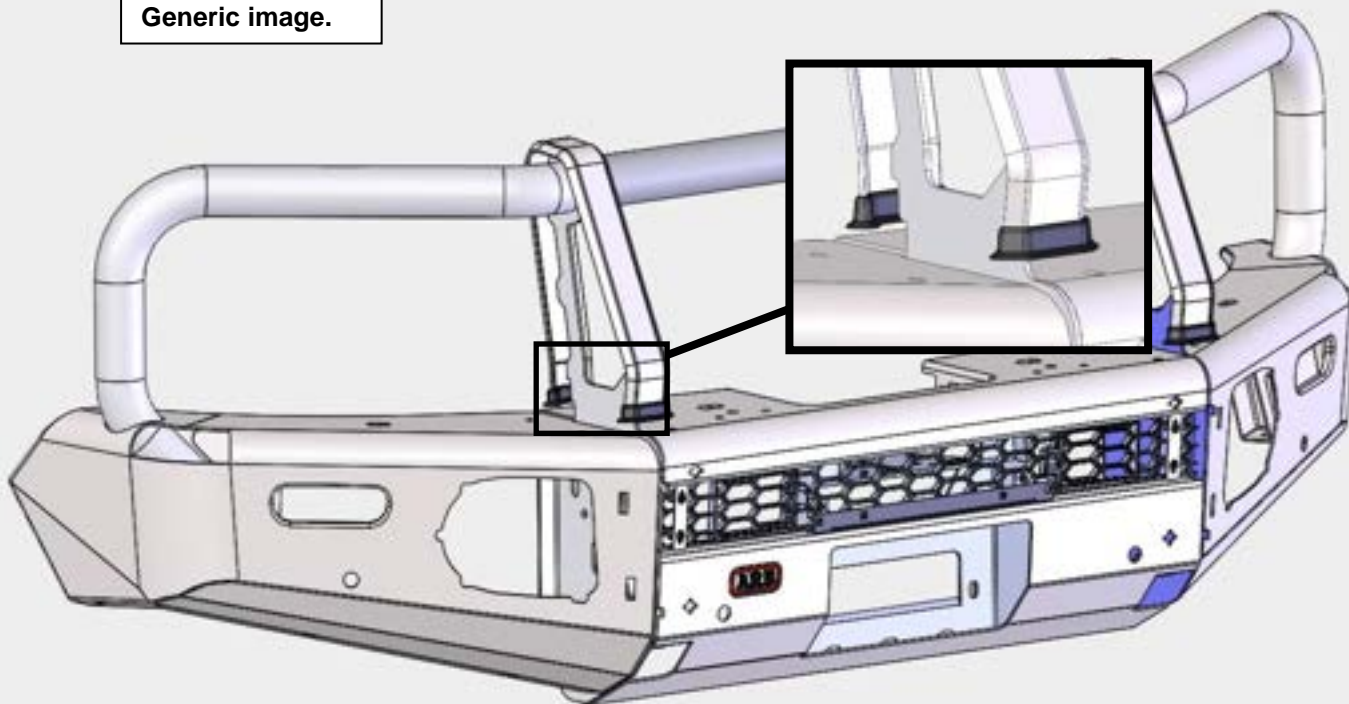


64. Insert the grille into the bar so that the hatches open outward (facing the front of the bar).
65. Attach the grille to the centre of the bar using the short screws into the grommets fitted above.
66. Attach the ends of the grille to the bar using the longer screws, through the clamp plates into the remaining grommets.



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

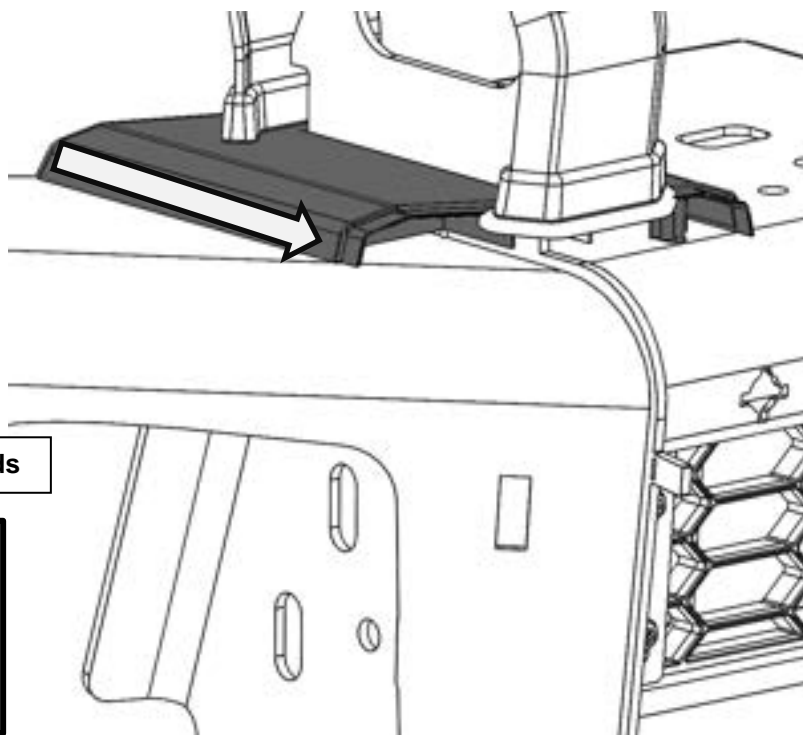
Generic image.



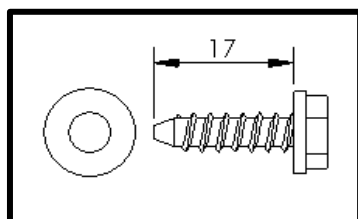
68. From the rear of the bar, slide the rear buffer sections under the rubber mouldings.

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.



Fit washers under screw heads



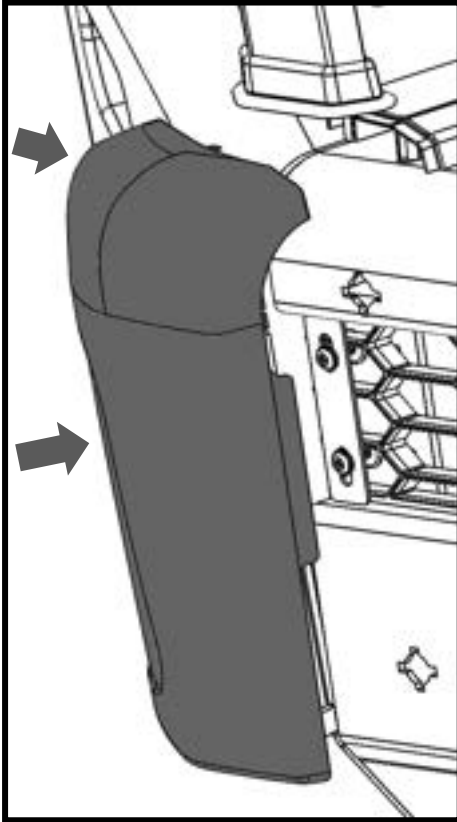
69. By aligning the front buffer with the tongue of the rear buffer, attach the front buffers to the front face of the bar. Ensure each buffer sits flat against the face of bar and is keyed into the top section of the

rear buffer.

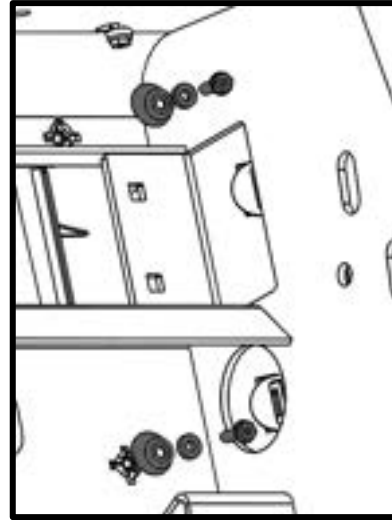
Secure wing side using retaining clips.

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

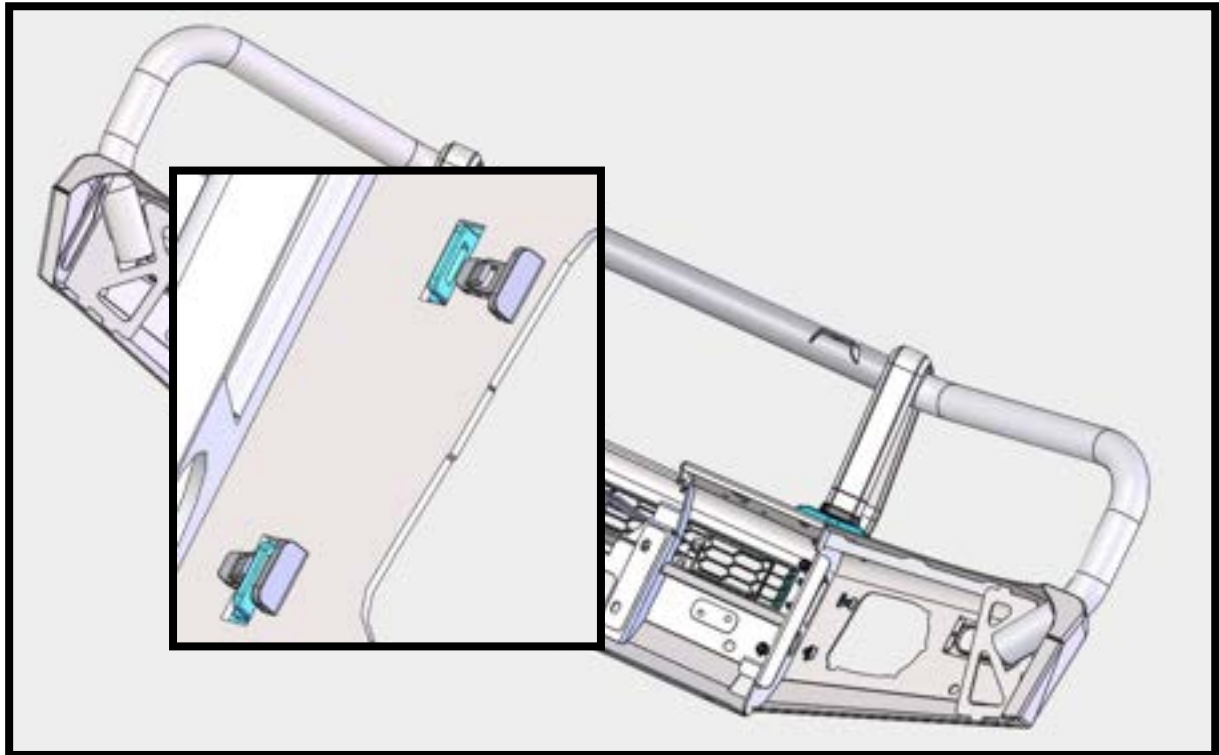
**The widest point of the cup washers goes to the top of the bar.**



Generic image.



Fit washers under screw heads.



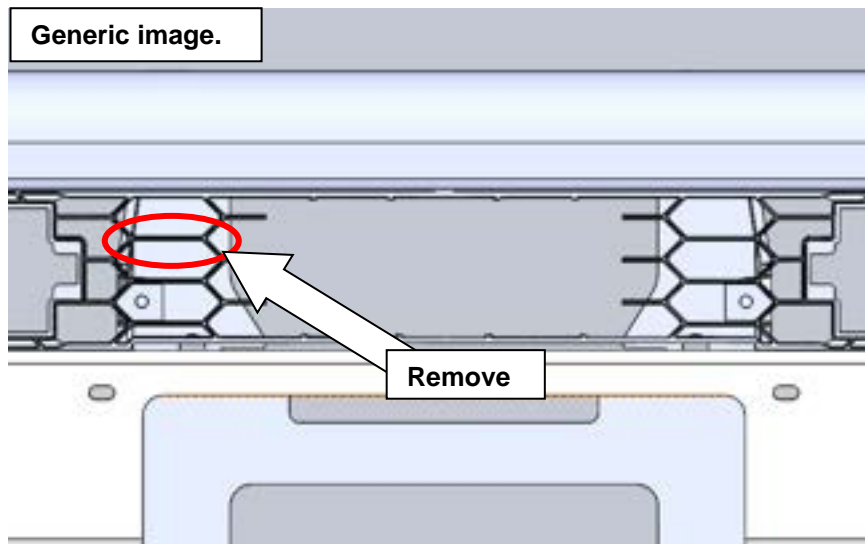


70. Using a Phillips head screw driver, disassemble the plug from the back of the front camera and remove from OEM bracket. (OEM bracket can be discarded, retain screws)


71. Reassemble plug and camera into ARB bracket supplied as shown using original screws.

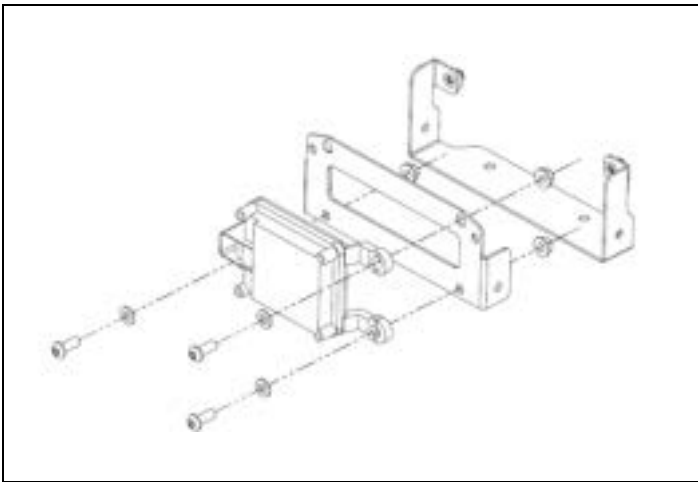


72. Using an oscillating Multitool or jigsaw, neatly remove the horizontal section of grille shown.



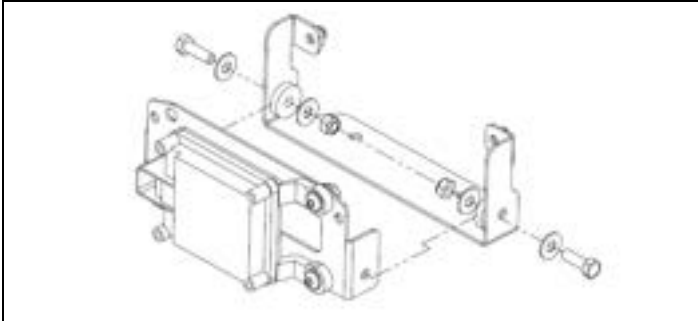
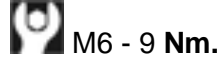
73. Using M6 hex head bolts and washers supplied assemble camera and bracket onto winch cradle as shown.

 M6 - 9 Nm.

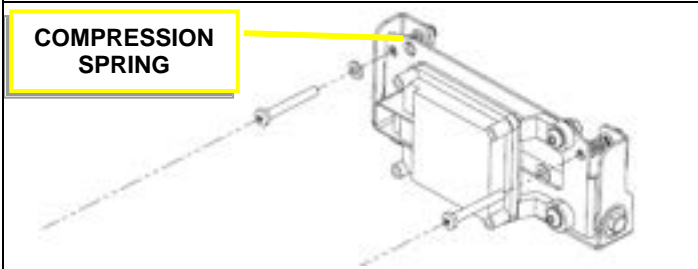


**WARNING: DO NOT DROP THE RADAR UNIT**

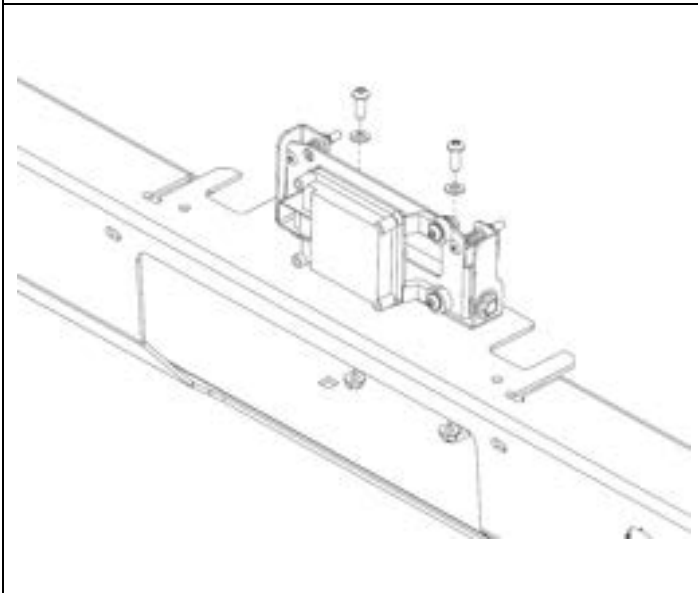
74. Reassemble radar into ARB bracket (p.n 3750625) supplied, using M6x16 button head screw (3), M6x12x1.2 black flat washer (3) and M6 serrated flange nut.



75. Assemble 3750625 to 3750626 using M6x1.0x20 hex head bolt (2), M6x16x1.2 black flat washer (4), M6x1.0 hex nyloc nut (2), nylon packer (2).



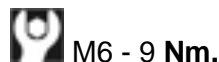
76. Place the compression springs in-line with the holes from the following brackets 3750625 and 3750626 (as shown in the diagram). Add the M5x40 Philips head screw (2), M5x10x1.1 black flat washer (4) and M5x1.0 hex nyloc nut (2), and thread into the weld nuts in bracket 3750626.



77. From the front of the bar, position the radar and bracket in the centre of the grille area and fix using M6x16 button head screw (2), M6x12x1.2 black flat washer (2) and M6 serrated flange nut (2).



**Note: Grille not shown for clarity.**



78. Fit the small square plastic grommets to the bar and attach the combination LED lamps to the bar using the screws provided with the lamp kit. Details provided in Fitting instruction 3789197.

**Caution: Correct orientation of indicator is achieved by ensuring the arrows on the lamp are pointing to the outside of the vehicle.**





79. 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.**

80. 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 M12x1.75x40 HXHD bolts (6) and M12x38x4 flat washer (6). Centralise the bar to the front of the vehicle. Once central, tighten up all the chassis mounting brackets.

**NOTE: Ensure not to scratch bar or bumper when the bar is approaching the vehicle. If necessary, tape up end of bull bar and/or vehicle bumper to prevent scratching.**



81. Connect the radar sensor, front vision camera to their respective terminals.

**Note: Check that all piping and wiring is clear of sharp edges and pinch points, and secure using cable ties provided.**



82. Position the bar so that it is level, central and there is a gap between the bar and the front quarter panel of 18-22mm.



83. Mark out a 25x15mm slot on the wheel lines, and trim away (as seen in the image to the left).





84. If the bull bar is still not centred on the vehicle, back off the mount bracket bolts to chassis, tap the mount brackets sideways with a soft hammer until the bar is central. Retention bolts to specified torque.



M12 X1.25 - 96 Nm.



M12 X1.75 - 77 Nm.



M10 - 44 Nm.



85. Once happy with the position of the bull bar and the clearance gap is 12-17 mm, tighten all the mount bolts to specified torque.



M12 - 77 Nm.



M10 - 44 Nm.



86. Using an electric drill and Ø10.0 mm drill bit, drill two pinning bolt holes through the bull bar upright each side using the holes in the mount bracket flanges as a guide. Touch up with rust inhibiting paint.

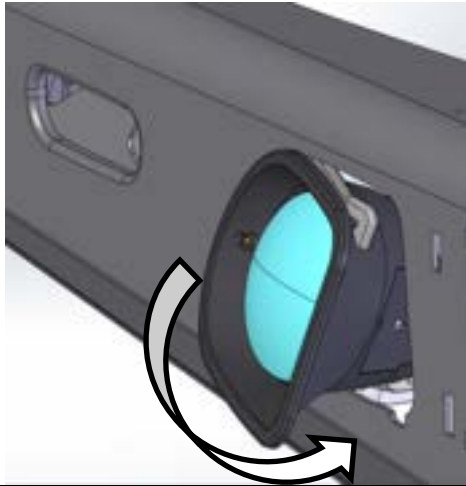
**Warning: Drilling operations can result in flying metal debris, safety glasses should be**



Fit the pinning bolts to the bull bar in the drilled positions using 4 x M10 SEMS bolt and washer sets and M10 flange nuts.

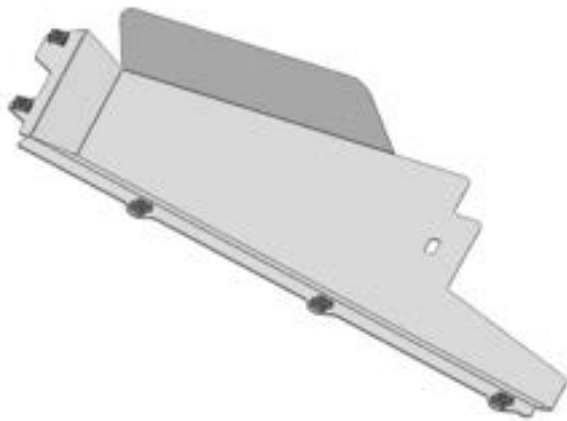


M10 - 44 Nm.

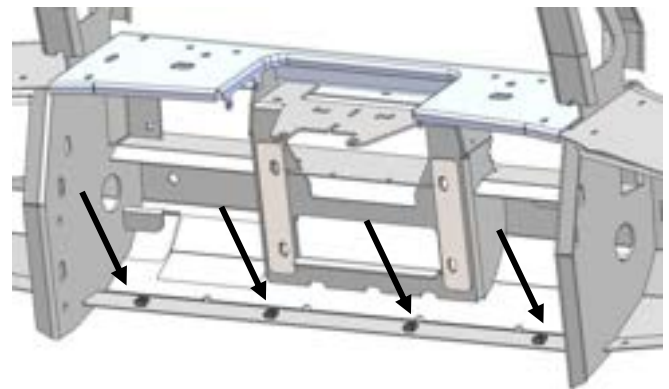


87. Assemble and install combination light surrounds (p/n 3163082) as per instruction no. 3789190 supplied with surround kit. Note: Optional fog lamps can be installed at this point as per fitting instruction supplied with fog lamp kit no. 3500910
88. Connect indicator looms to combination LED Indicator/Clearance light.

**HINT: loosely fit top bracket to foglight surround, then insert into bull bar aperture. Fasten lower bracket, tighten all screws.**



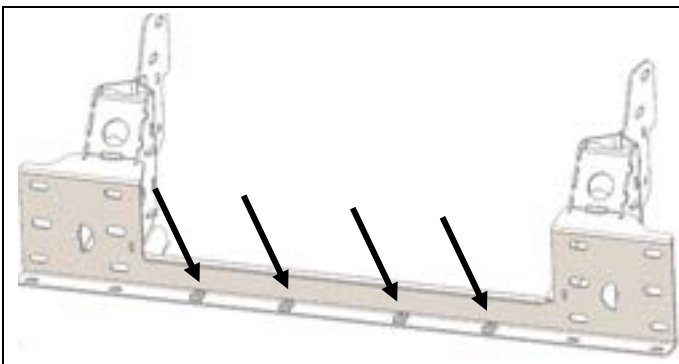
89. Fit M6 cage (5 per panel) nuts to the under panel as shown.
90. Fit M6 cage nuts (4) to the lower pan of the bull bar as shown.



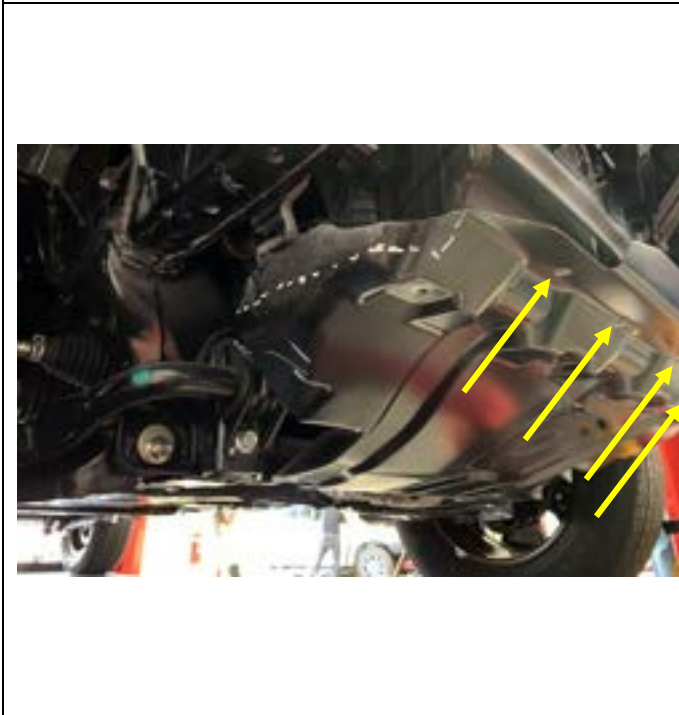
91. Align the stone shield with the 4 holes on the bull bar chassis mounting assembly, and mark out 2 central holes. Drill out 2 holes using an electric drill and Ø11.0 mm drill bit. Touch up with rust inhibiting paint.

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





92. Fit M8 cage nuts (4) to the chassis mount assembly.



93. Fit the OE factory stone shield to the bar by assembling M8 x 25mm BZ Button head screws (4) and washers (4) to the chassis mount assembly. Retighten the rear OE factory stone shield bolts (2).

**Note: OE factory stone guard sites between arb stone guard and arb chassis mount assembly**

94. Install stone guard using M6x20mm button head bolts (4) and washers (4) to fasten to the cage nuts fitted in previous step.



95. Temporarily place the under panels in place, and mark out a cutting line that follows the under panel profile (as seen in the image to the left).

96. Remove any remaining sound deadening insulation remaining on the wheel lines.

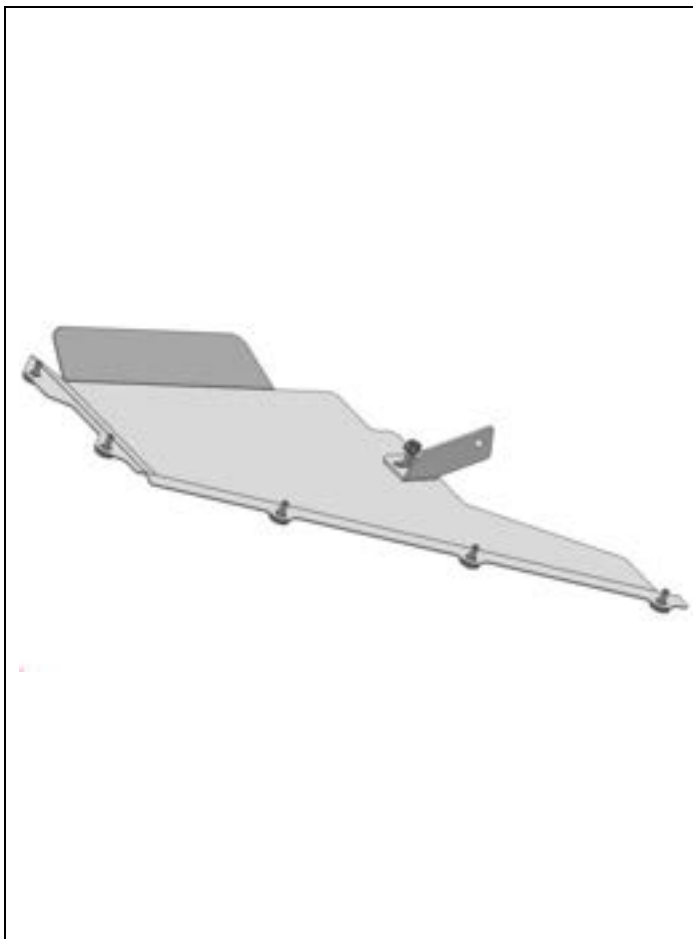


97. Using a saw suitable for cutting plastic, cut and remove the areas marked above. Discard offcuts.

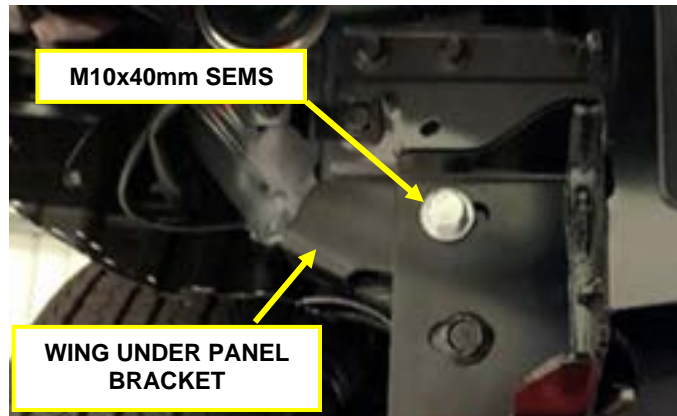
**Warning: Cutting operations can result in flying debris, safety glasses should be worn.**



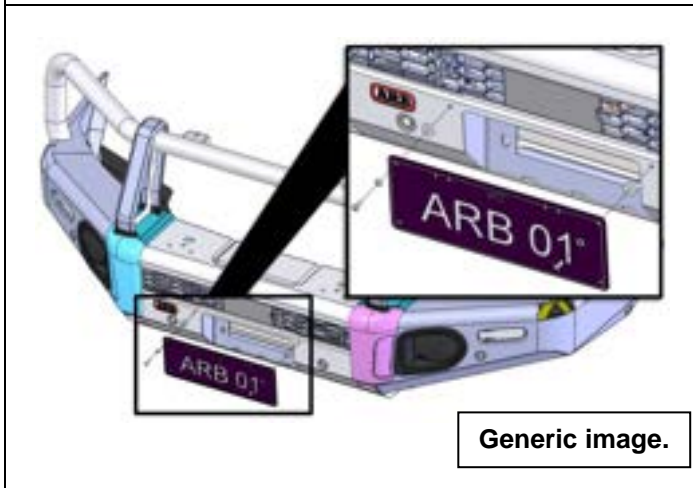
98. Tuck the inner guards inside the under wing panels.



99. Fit the under wing panels to the bar (as shown in the image to the left), and attach using M6 x 20 BZ Button head screws (5) and M6 BZ Flat washers (5).
100. If required, loosen the top outer chassis bracket bolt, and adjust wing under panel bracket to align slots of the panel and bracket. Once aligned, retighten according to correct torque settings.



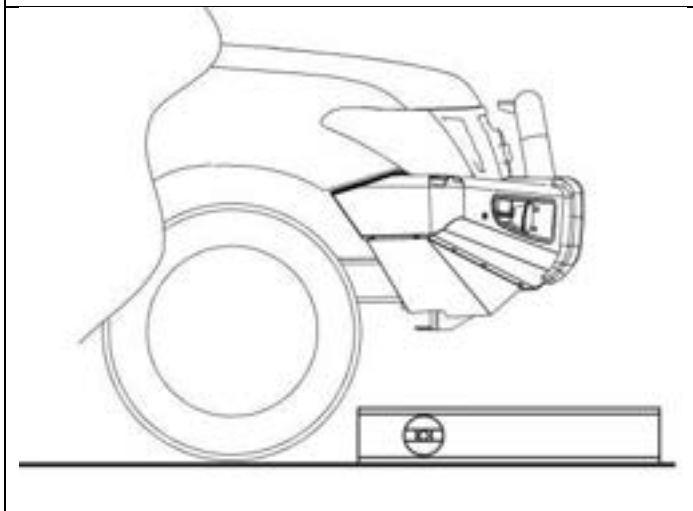
101. Attach wing under panel bracket to wing under panel using M8x25mm HXHD bolts (1), M8x25x3mm BZ flat washer (1) and M8 serrated flange nut.



102. Fit the number plate to the front face of the lower pan on the bar using 2 x button bead screws M6x16 BZ button head screws (2), M6x12 BZ washer flat (2), M6 flange nuts (2).

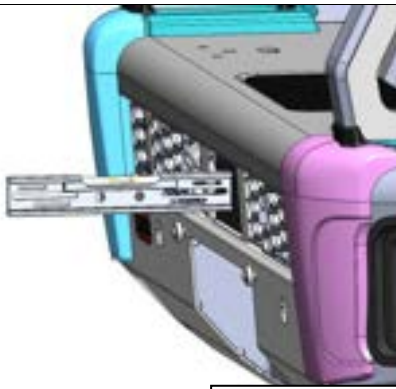
**Note: Non-winch applications.**

**Hint: A 10mm open ended spanner can be used to hold the flange nuts in place from the roller fairlead aperture.**



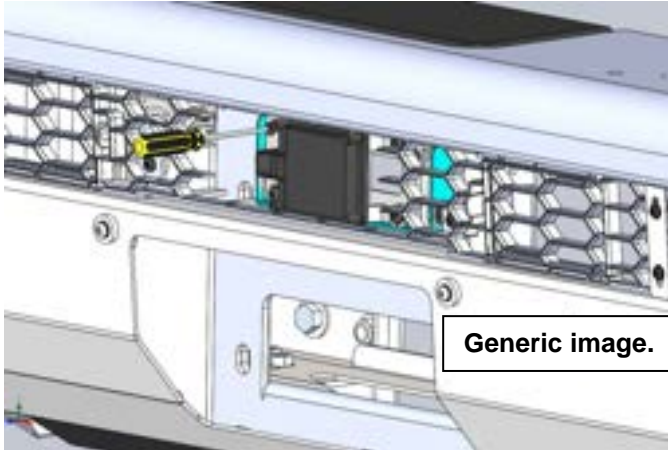
**When the bar is fitted and the radar sensor is relocated, it is critical that the sensor's angle be adjusted correctly to ensure correct operation. Below is a procedure for checking and adjusting the sensor. It is recommended that this check be done as part of regular maintenance of the vehicle. Please refer to the vehicle owner's manual for safe operation.**

103. Ensure the vehicle is sitting on level ground. This should be checked with a level.



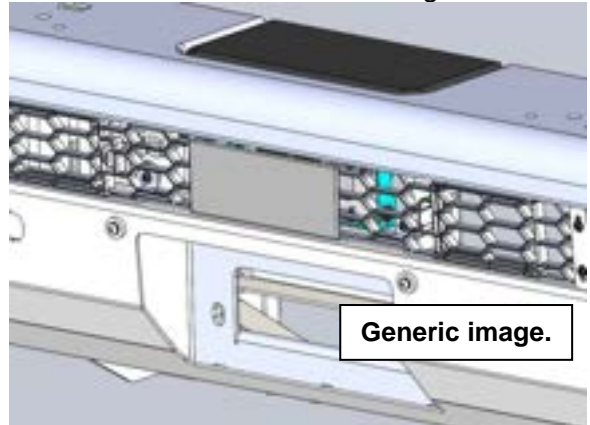
Generic image.

104. Place a level on the front face of the sensor. The front face should be 90 degrees to the level ground with a tolerance of +/- 1 degree. If it is not within this tolerance, proceed to the next step. If it is within tolerance, no further action is required.



Generic image.

105. Use a Philips Head screw driver to wind the adjustment screws, to adjust the sensor to achieve the correct angle. When set, re-check the angle. Once the sensor angle is correct, attach the sensor cover to front grill.



Generic image.

#### FINAL CHECKS:

- Check wiring connections to fitted lights.
- Check operation of all lights.
- Check operation of forward facing cameras.
- Check operation of winch if fitted.
- Check operation of radar

**IMPORTANT: Check that all piping and wiring is clear of sharp edges and pinch points. Adjust any piping to clear the bull bar or mounts by a minimum of 15mm.**

