FITTING INSTRUCTIONS

Part Number: **3421885**

Description: **LANDCRUISER 250 MKII BULL BAR**

Suited to vehicle/s: **TOYOTA LANDCRUISER 250 MY24 ON**

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:

BASIC TOOL KIT	ELECTRIC DRILL WITH COMPLETE METRIC DRILL SET
JIG SAW OR OSCILATING MULTITOOL WITH BLADE SUITABLE FOR PLASTIC	LOW TACK MASKING TAPE
FILE	UTILITY KNIFE
TAPE MEASURE	CLAMP
STEEL RULE	WHITE FELT MARKER
HACK SAW	TORQUE WRENCH
TOUCH UP PAINT ANTI CORROSION	RIGHT ANGLE ELECTRIC DRILL

HAVE AVAILABLE THESE SAFETY ITEMS WHEN FITTING PRODUCT:

Protective eyewear 	**Hearing protection** 

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 (PC8.8)	44Nm	32lbft
M10 (PC11.9)	54Nm	40lbft
M12 (PC8.8)	77Nm	57lbft
M12 (PC10.9)	92Nm	68lbft
M12 (PC11.9)	102Nm	75lbft

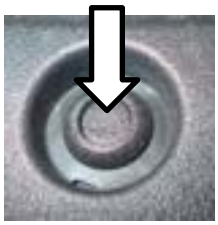
PARTS LISTING			
APPLICATION.	**PART NO.**	**QTY**	**DESCRIPTION**
FIT MOUNTS TO CHASSIS	37500337 L&R	1 PR	BRKT OUTER CHAS SUIT J250 RH/LH
	37500336 L&R	1 PR	BRKT INNER CHAS SUIT J250 RH/LH
	37500335 L&R	1 PR	BRKT CHAS UNDERPNL MNT J250 RH/LH
	4655646 L&R	1 PR	W/ASSY CHASSIS MNT J250 RH/LH
	4617103	2	CHASSIS CRUSH TUBE
	4584363	16	WASHER FLAT M12x26x4 | HV300 TZP480
	6152092	2	BOLT HXHD M12x1.75x100 | PC10.9 ZAS1000
	6151528	2	NUT HEX NYLOC M12x1.75 | PC10.9 ZP
	6151700	12	BOLT HXHD FL M12x1.25x35 | PC8.8 TZP480
	6151480	10	NUT FLANGE M12x1.25 | PC8.8 TZP480 SERRATED
	6151638	2	BOLT HXHD M10x1.5x40
	4584361	4	WASHER FLAT M10x25x4 | HV300 TZP480
	6151321	2	NUT FLANGE M10x1.5 | PC8.8 TZP480 SERRATED
FIT BAR TO MOUNTS	3197021	6	PLT CHASMNT ADJ SHIM SUIT J250
	4584363	12	WASHER FLAT M12x26x4 | HV300 TZP480
	6151969	4	NUT FLANGE M10x1.25 | PC10.9 ZAB1000
	6151815	4	BOLT HXHD FL M10x1.25x40 | PC11.9 ZAB1000
	6152023	6	NUT FLANGE M12x1.25 | PC10.9 ZAB1000
	6151817	6	BOLT HXHD FL M12x1.25x40 | PC11.9 ZAB1000
	6151173	4	NUT FLANGE M6 | ZNB480 SERRATED
	6152008	4	BOLT HXHD FL M6x1.0x25 | PC8.8 ZNB480
	4584361	4	WASHER FLAT M10x25x4 | HV300 TZP480
BUFFERS & MOULDINGS	3163316	1	RDR CVR LRG, SUIT SUMMIT
	3163294	1	KIT, CVR STRAP SUIT SUMMIT
	3163295	1	KIT, GRILLE OUTER SUIT SUMMIT
	4584329	4	WASHER FLAT M6x12.2x1.2 | BTZP480
	6151173	4	NUT FLANGE M6 | ZNB480 SERRATED
	6523688	1	GRILLE TRIM PANEL SUIT J250
	6151173	4	NUT FLANGE M6
	6152008	4	BOLT FLANGE HEAD M6X1.0X25
	4584329	4	WASHER FLAT M6X12.2X1.2
UNDER PANEL	6523686R	1	WING UDPNL UPPER J250 MKII RH
	6523686L	1	WING UDPNL UPPER J250 MKII LH
	6523687R	1	WING UDPNL LOWER J250 MKII RH
	6523687L	1	WING UDPNL LOWER J250 MKII LH
	6523675	1	PANEL STONE GUARD SUMMIT J250
	6151475	8	NUT U M6X1.0
	6152008	12	BOLT FLANGE HEAD M6X1.0X25
	6151459	10	SCREW BHD M6x16
	6151173	10	NUT FLANGE M6
	6151730	2	BOLT HXHD FL M8x1.25x20
	6151548	2	NUT FLANGE M8X1.25
	4584364	2	WASHER FLAT M8X26X4
	6151300	4	NUT M6 CAGED 2.6-3.5MM
	4584327	10	WASHER FLAT M6X16X1.2
	3500971	1	LAMP CLUSTER, ARB SUIT SUMMIT
	3501200	1	HARNESS CAN MODULE BULLBAR

FOG LIGHTS AND RADAR	3521110	1	HARNESS CANBUS ADAPTOR PRADO24
	CANDEC	1	ARB CAN CONNECT
	37500327	1	RADAR BRKT UPPER SUIT J250
	37500328	1	RADAR BRKT LOWER SUIT J250
	5670069	2	SPRING COMP STAINLESS 25X6.0ID
	4584421	2	WASHER FLAT M6X18X1.6 NYLON
	6151584	2	BOLT HXHD M6x1.0x40 | PC8.8 BTZP
	6151223	4	NUT HEX NYLOC M6x1.0 | ZNB480
	4584329	8	WASHER FLAT M6x12.2x1.2 | BTZP480
	6151459	4	SCREW BHD M6x16 | BTZP480
	6821451	2	HARNESS EXTENSION SUITS TOYOTA
	6151173	2	NUT FLANGE M6
	6152008	6	BOLT FLANGE HEAD M6X1.0X25
	6152094	2	SCREW PHD M6X1.0X30 NYN PATCH
	37500330	2	BRKT FOG CLUSTER MNT
	6151300	4	NUT M6 CAGED 2.6-3.5MM
CAMERA RELOCATION	37500329	1	BRKT CAMERA MOUNT SUIT J250
	6152091	1	SCREW PHD 4.8X1.59X26
	6821189	1	GROMMET RND FC
NUMBER PLATE FITMENT	3750122	1	BRKT LICENSE USA ONLY FLIP UP
	3752503	1	BRKT NPLATE WINCH US
	5848302	2	PACKER RBAR NYLON
	6151459	6	SCREW BHD M6x16
	6151223	8	NUT HEX NYLOC M6X1.0
	4584329	16	WASHER FLAT M6X12X1.2
	6151443	2	SCREW BHD M6x20
WINCH COVER PANEL	4584329	4	WASHER FLAT M6X12.2X1.2
	6152008	4	BOLT FLANGE HEAD M6X1.0X25
	6523321	1	PANL WINCH COVER MB SUIT PXIII
	6151223	4	NUT HEX NYLOC M6X1.0
MISCELLANEOUS	211258	1	CTN 1000X250X500MM
	3525010	1	SENSOR SURROUND KIT (X4)
	180302	8	CABLE TIE 4.8 X 180 MM
WINCH AND CONTROL BOX	6250010	4	SPACER ROD END 17 X 12.6 X 10
	4581307	1	WASHER FLAT M8X20X2
	4584310	2	WASHER FLAT M6X25X2.8
	6152008	6	BOLT FLANGE HEAD M6X1.0X25
	3195186	1	PLT MAGNUM CBOX MNT SUIT PXIII
	4581307	1	WASHER FLAT M8X20X2

Note: Read the instructions thoroughly before starting.

1. Open the bonnet and remove all scrivets retaining the plastic cover shown in the image to the left. Set aside scrivets removed for re-use later on.

   TIP: Depress centre to remove.



2. Remove upper grille retaining screws and Set aside for re-fitment later.

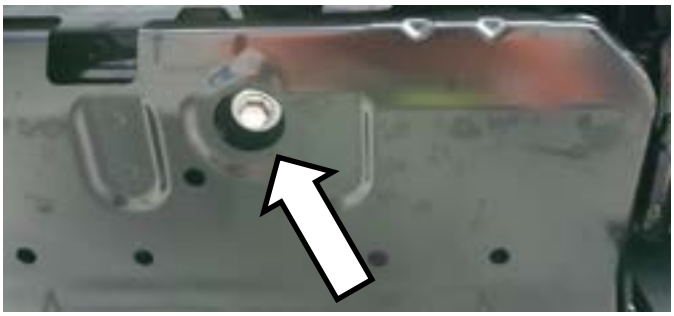
3. Remove all fasteners and scrivets retaining bumper & mudguard along inside edge of wheel arches – (Right hand side shown).

   Set aside for re-fitment later.

4. Remove fasteners on front side of mudguard, remove mudguard.

5. Remove lower bumper trim panel by removing two screws and one scrivet.

6. Ensure inner guards are unclipped from front bumper.

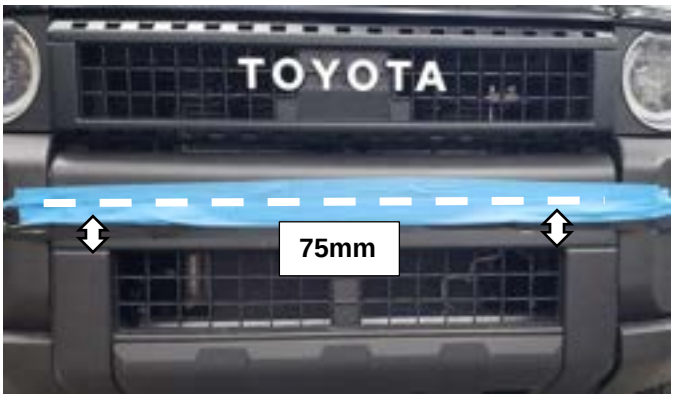


7. Discard both M8 Bolts at the front of the OEM underpanel.

8. Remove two M6 fasteners and one screw from each side, underneath the bumper.

9. Remove number plate from bumper.

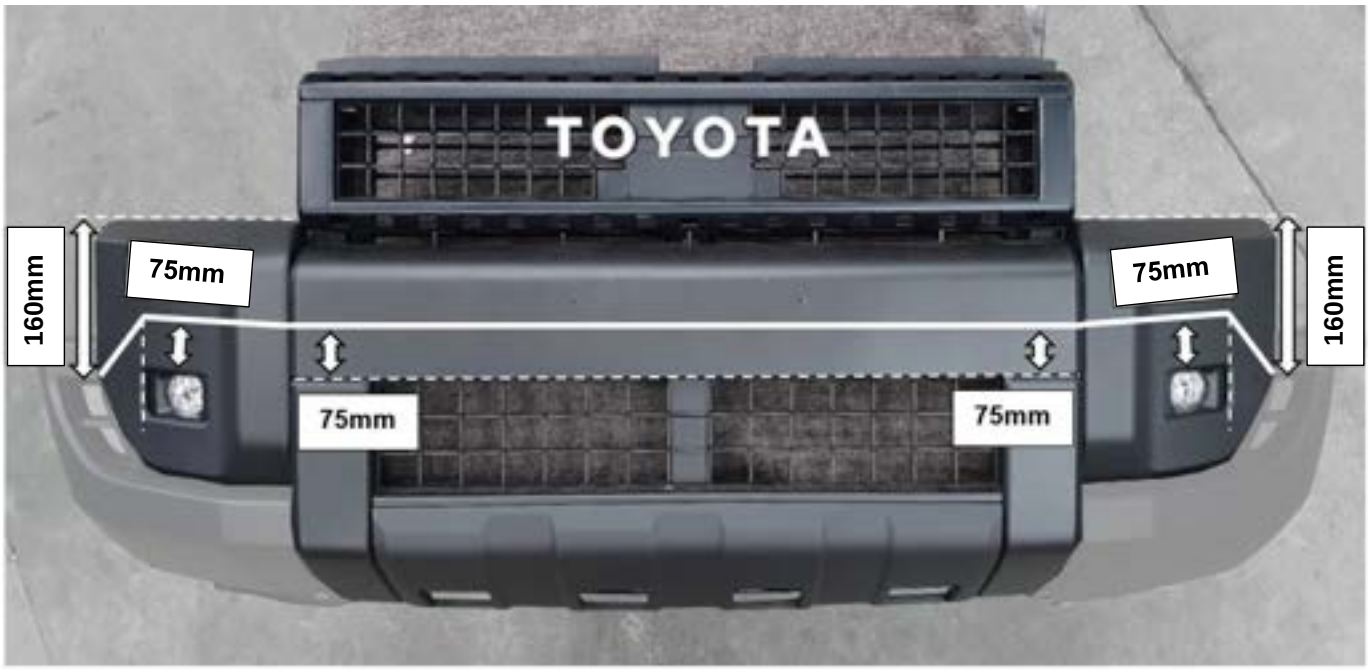
10. Carefully peel back flare to access and remove the screws retaining the outer bumper sections.

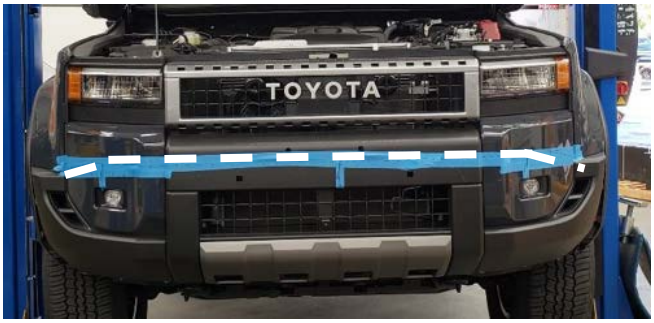


11. Apply a generous amount of masking tape 75mm up from the top edge of the lower grille as shown.

12. Using a straight edge, rule a straight horizontal line 75mm above the lower grille aperture.

13. Mark up the bumper on the vehicle with a cut line as appears below.





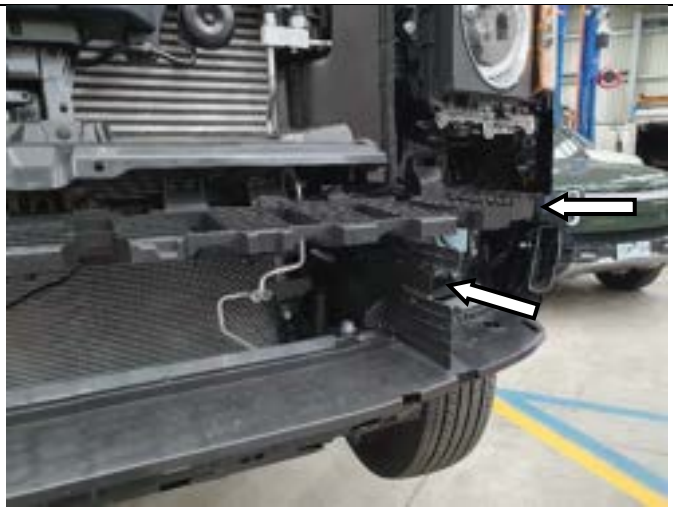
14. Apply a generous amount of masking tape in the area between the outer bumper cut markings and the central bumper cut marking.
15. Carefully cut bumper along marked lines using an oscillating multitool.

    Multiple layers need to be cut in the area below the head lights and radiator grille.

    Care must be taken to minimise the cutting depth to avoid the vehicle parking sensor and fog lamp harness.

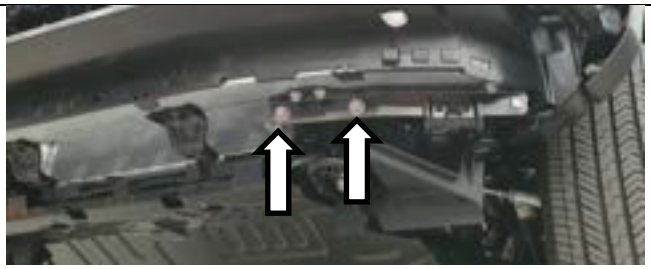
    Wheel arch flares will be required to be cutt inline with the fender body line as illustrated on the left.

16. By disconnecting the sensor and fog lamp harness from the vehicle, remove the lower bumper offcut from the vehicle.
17. Discard bumper but retain parking sensors, fog lamps and harness.



18. Remove plastic air deflectors.

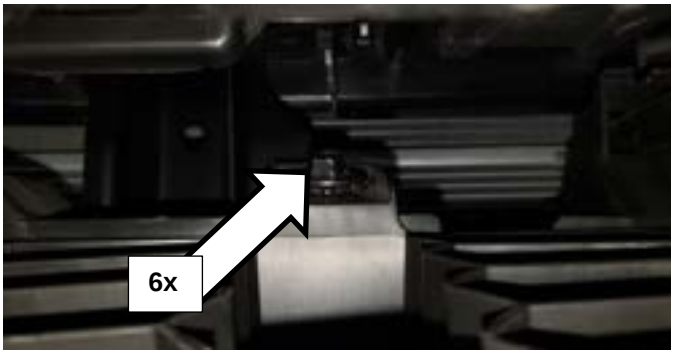
19. Remove the scrivet attaching the air deflector to the absorber, repeat for LHS.



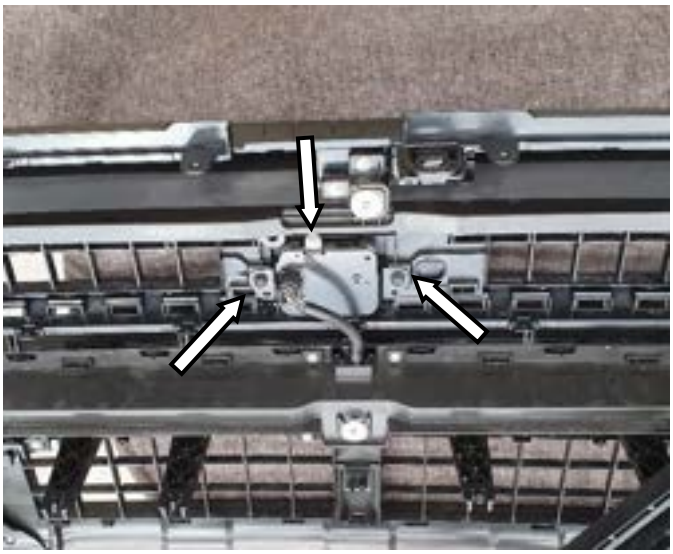
20. Remove four M12 bolts on both sides (eight total) fixing crash beam to chassis and remove crash beam.

    Discard crash beam.

21. Remove side air deflectors



22. Remove honeycomb bumper support by removing M6 hardware. Discard.

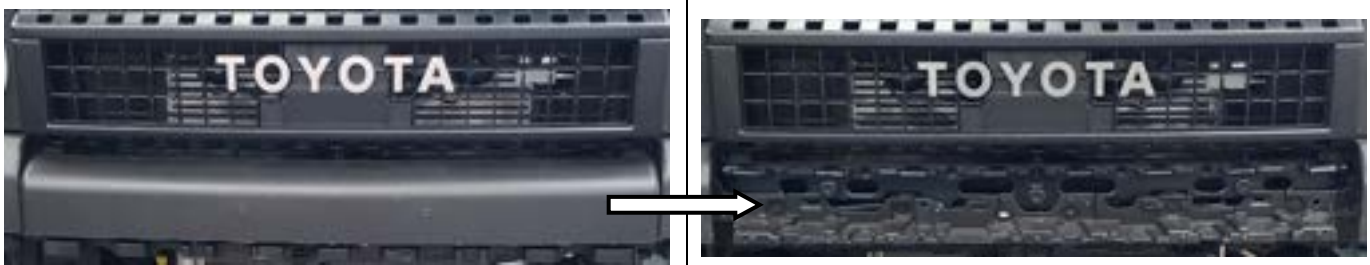


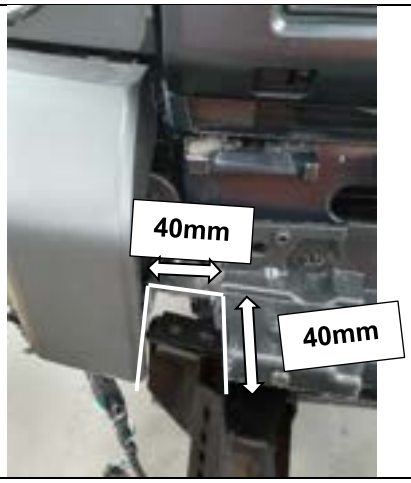
23. If equipped, remove the radar by removing the three bolts shown in the image on the left and store for reuse.

    Warning: Care must be taken not to drop radar module.

24. Unplug and unscrew camera from factory position in the lower grille.

25. Remove front bumper panel.



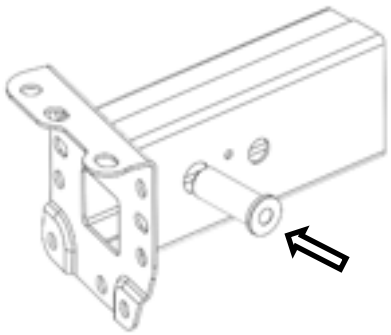


26. Cut extra out of front bumper for upright clearance as per diagram.

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

27. Re-install trimmed bumper and grille using OEM fasteners removed in previous steps.

28. Fit grille trim panel to bumper assembly.



29. Identify the chassis crush tubes supplied in the fitting kit.

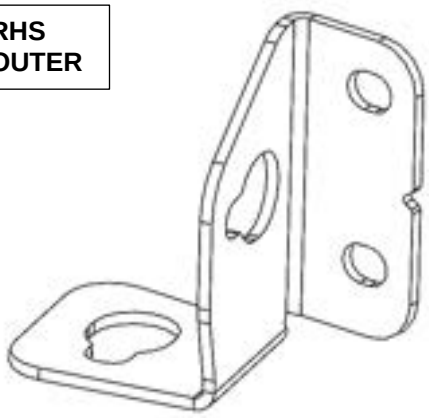
Fit the crush tubes to the chassis with the crush tube shoulder sitting on the inside of the chassis.

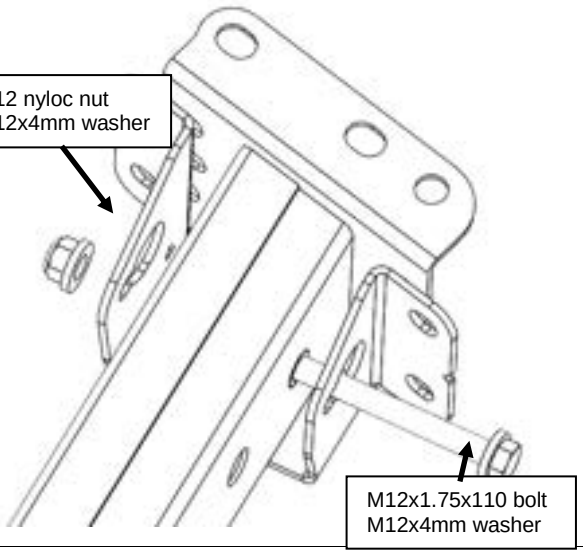
Machined crush tube

RHS INNER

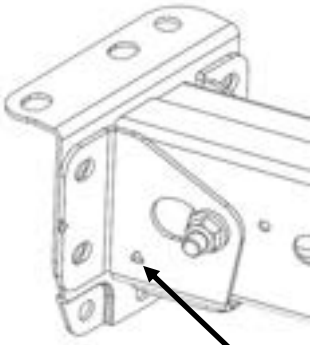
30. Identify the inner and outer chassis brackets.

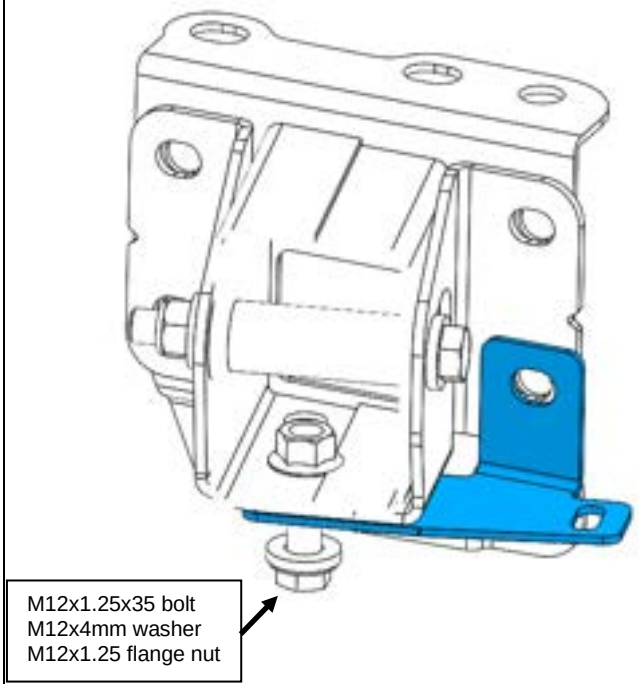
RHS OUTER





31. Fit inner & outer chassis brackets loosely using M12x1.75x110mm bolt, M12 washers & nyloc washers.



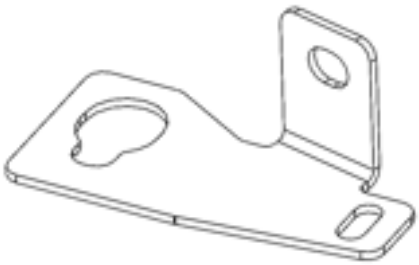


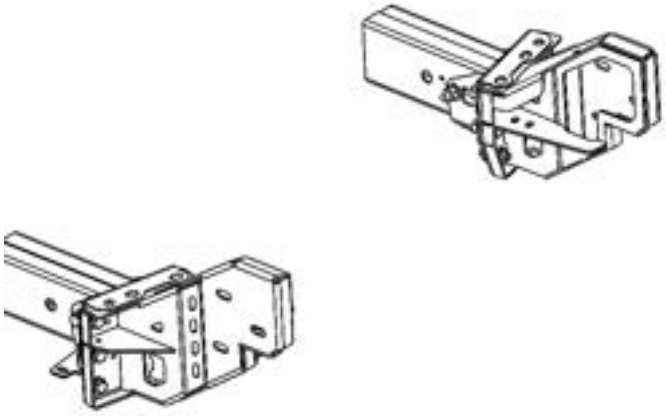
32. Identify underpanel mount bracket

Assemble using an M12x1.25x35 flange bolt, washer and flange nut. (Nut inside chassis).

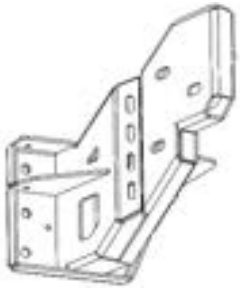
Torque to specification.

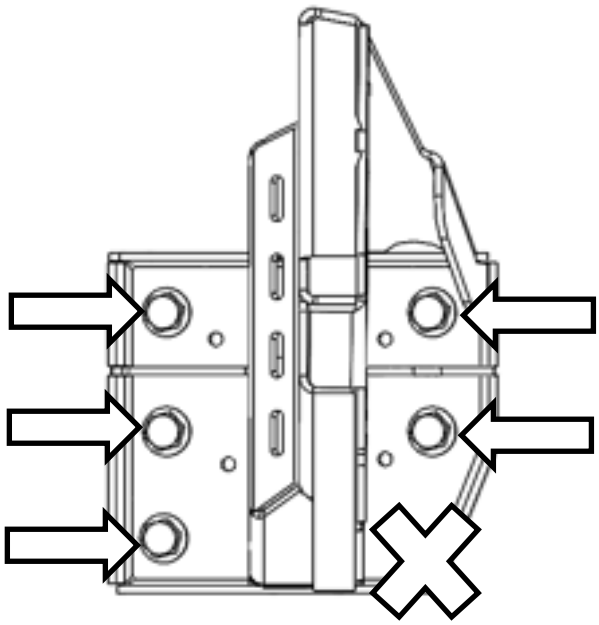
M12 (PC8.8) - **77 Nm.**





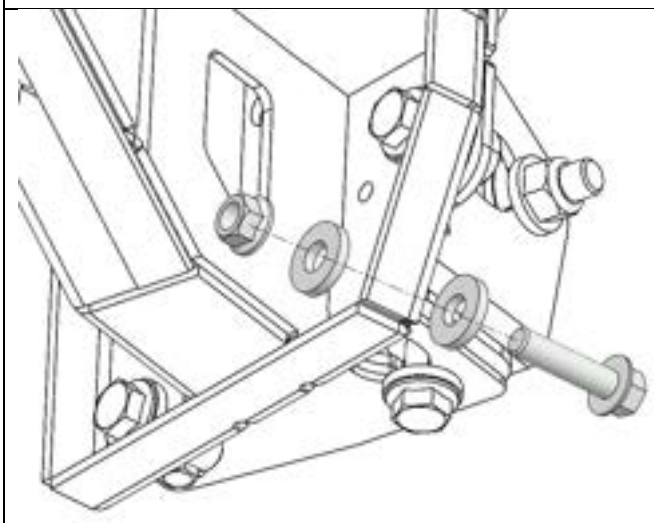
33. Identify the impact absorber bull bar mounts. Present each side to chassis ends.





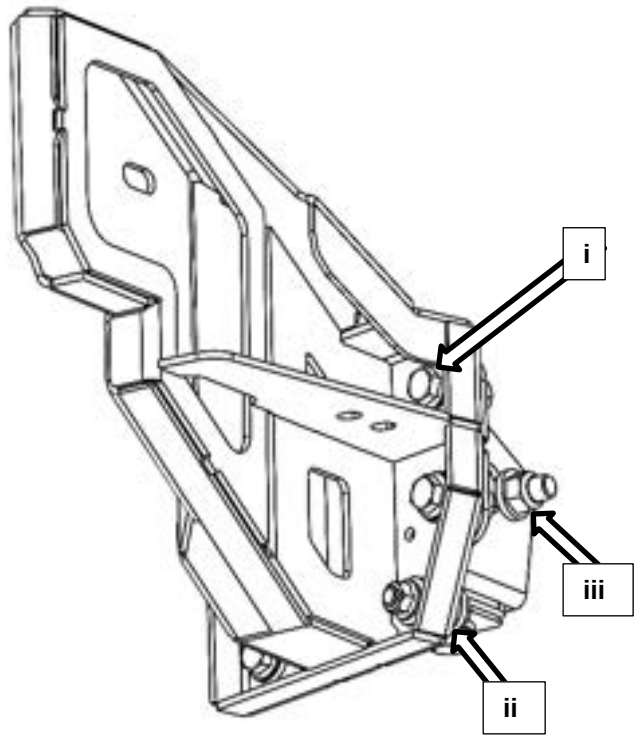
34. Fasten each mount to the chassis with five M12 x 1.25x35 flange bolts, five 4mm washers & five flange nuts.

    Note: Leave lower inner hole empty.



35. Assemble one M10x1.5x40 flange bolt, two M10x25 washers and one M10x1.5 flange nut through the lower inner mounting position.

    Repeat on opposing side.

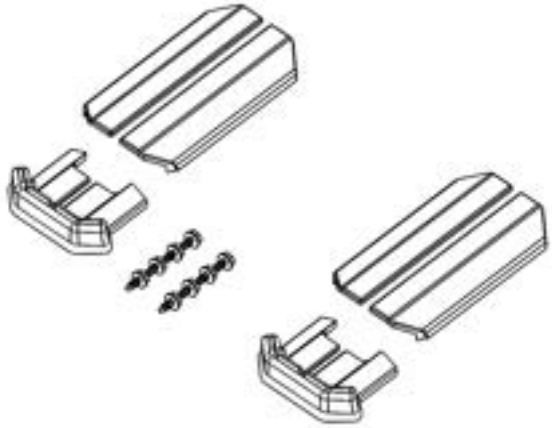


36. Tension mounting hardware to specification in the order illustrated.

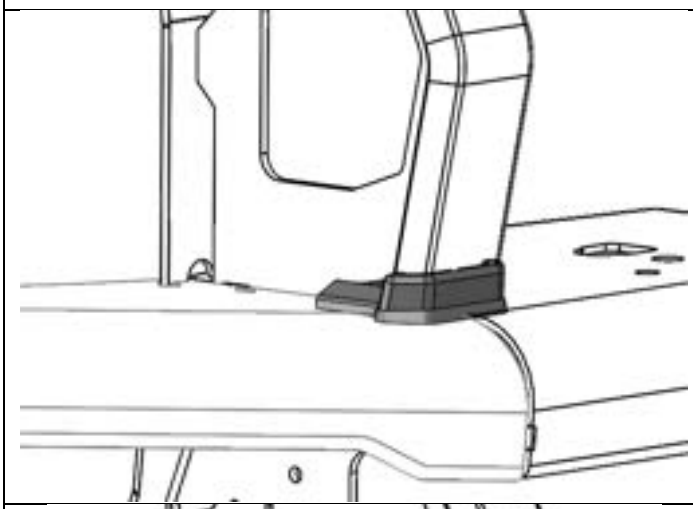
i. M12 (PC8.8) - **77 Nm.**
ii. M10 (PC8.8) - **44 Nm.**
iii. M12 (PC10.9) - **92 Nm.**

WINCH INSTALLATION

Note: If fitting a winch proceed from page 31 using fitting instructions provided. Once the winch is fitted, please continue to step 37. If no winch is being fitted, continue from here.

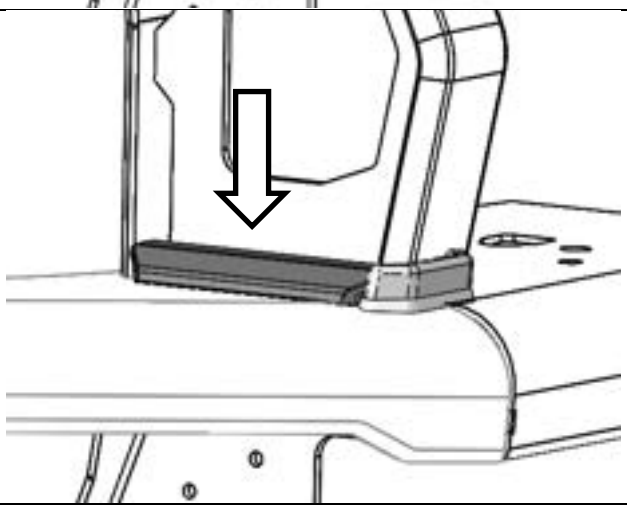


37. Identify the cover strap plastics kit, 3163294.

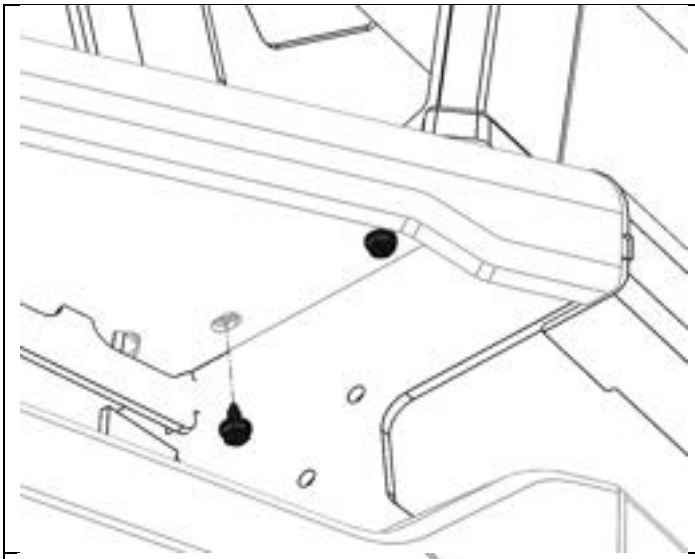


38. Fit the rubber intersection mouldings to the base of each upright cover strap.

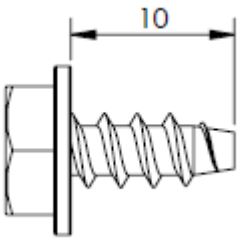
Ensure that the skirt of the rubber moulding is not folded back on itself and is sitting flat against the bull bar.

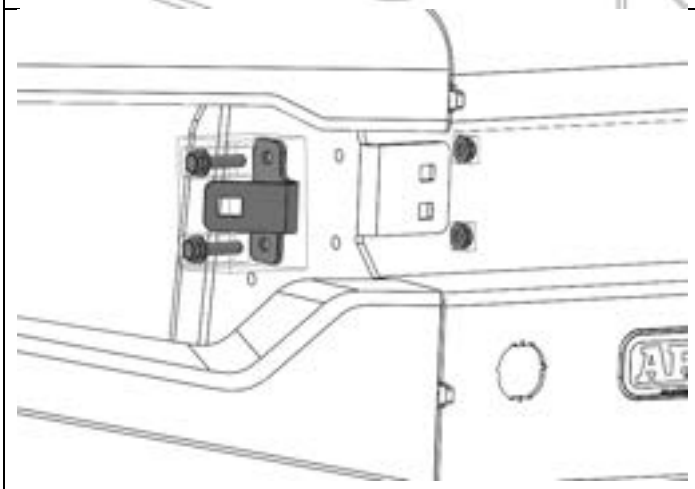


39. Place the plastic cover down onto the rubber moulding, repeat on both sides of the cover straps.



40. From underneath, fit two screws into each plastic cover. Tighten until the covers are secure and have firmly clamped the rubber moulding.

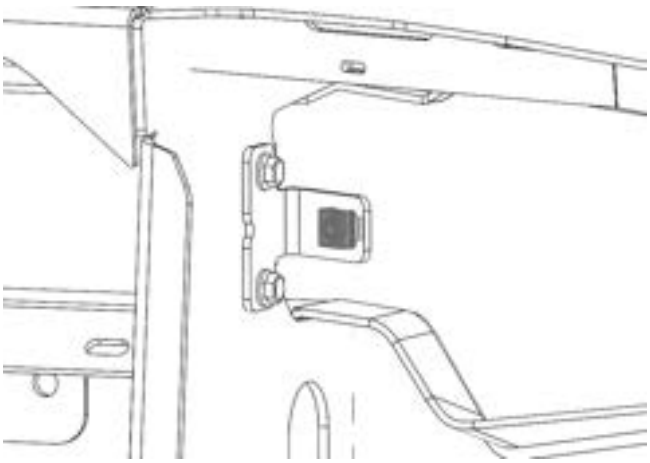




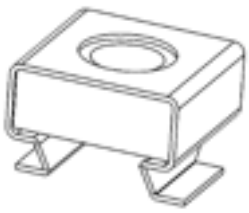
41. Identify fog cluster bracket and assemble both fog cluster mounting brackets onto the outside of the uprights with M6 flange bolts and flange nuts.

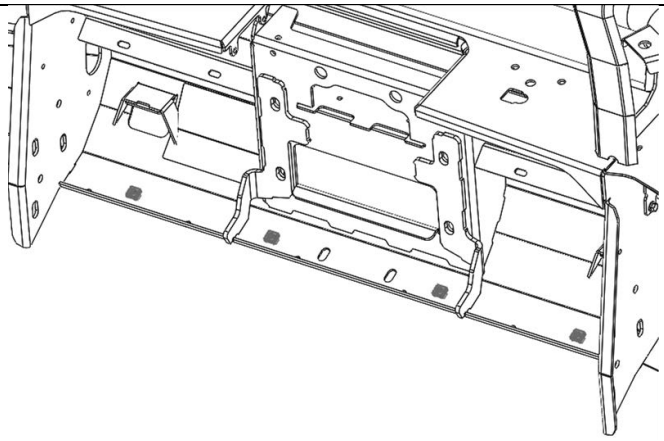
Torque to specification.

M6 - **9 Nm.**

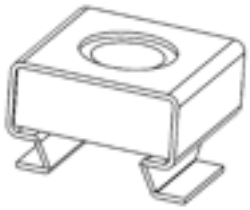


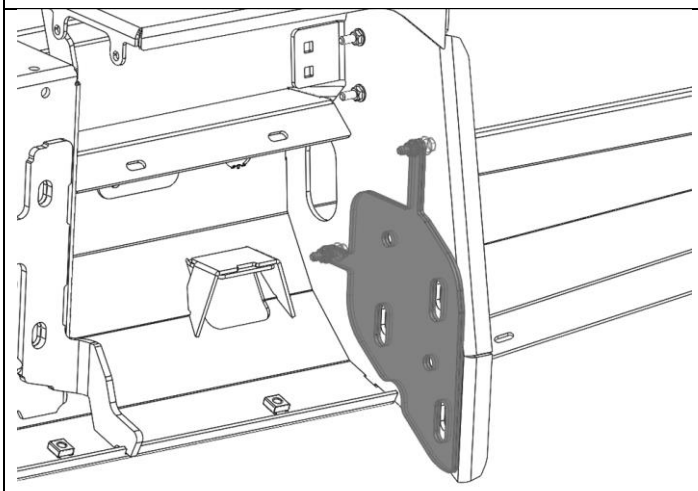
42. Identify silver M6 cage nut and assemble cage nuts into both fog cluster mounting brackets.





43. Assemble four M6 cage nuts into lower return of bull bar pan



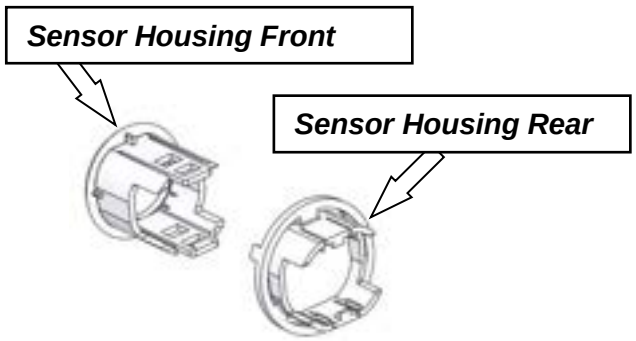


44. Use a tape measure to check the distance across the two internal mounting faces of the bull bar.

    Similarly measure the distance between the mounting faces on the chassis mounts.

    Select an appropriate number of 2.5mm shims to take up the difference in the two dimensions taken and pre assemble onto bull bar uprights using M6x25 bolts, washers and flange nuts.

    (1-2 shims per side should achieve a smooth sliding fit between bull bar and mounts).



45. Fit the four Sensor Housing Fronts to the bull bar. Placing the housing through the bar from the front of the vehicle.

    From the rear of the bar clip the Sensor Housing Rear to the Front Housing. Check that both clips are engaged properly. If clips don't engage apply pressure on the outer ring of the Rear Housing.

46. Clip the parking sensors into the housings. Check that both clips are engaged properly.

    Note: Tails for sensors should face the bull bar uprights.

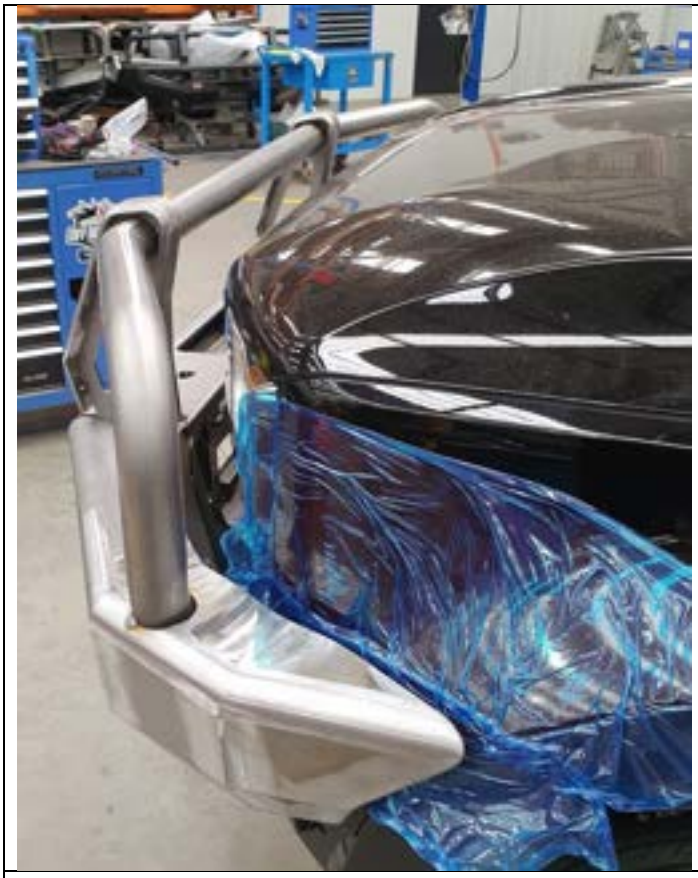
47. Route the OEM harness across the bull bar and connect to each parking sensor.

    Secure with cable ties.

Installation of wiring harness

48. Refer to 37800275 for CAN harness installation instructions – provided in kit.
49. Refer to 37800291 for PRADO250 specific CAN bus installation instructions – provided in kit.
50. Refer to ARB CAN Connect user guide provided with ARB CAN module for configuring module to vehicle.

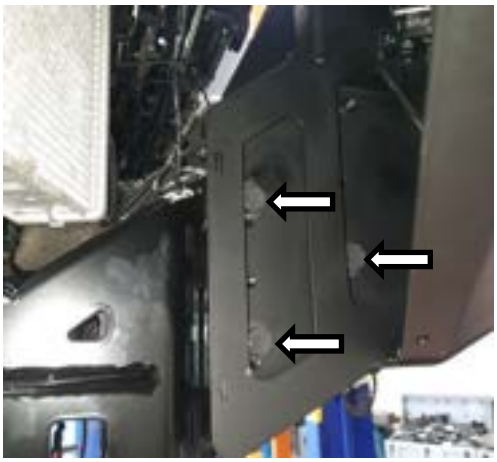
51. Route the bull bar harness towards the RHS side of the vehicle as shown in the image on the left and secure with cable ties to the inside of the bull bar.



Fitment of bull bar to vehicle

52. With the assistance of another person, place the bar on the vehicle mount brackets.

    WARNING: Due to the weight of the bar and winch if fitted, it is advised that you use some form of mechanical assistance when lifting the bar onto the vehicle such as an elevating trolley.



53. With the bull bar sitting in place, fit three black M12x1.25x40 (PC11.9) flange head bolts, M12 washers and M12 black flange nuts per side.

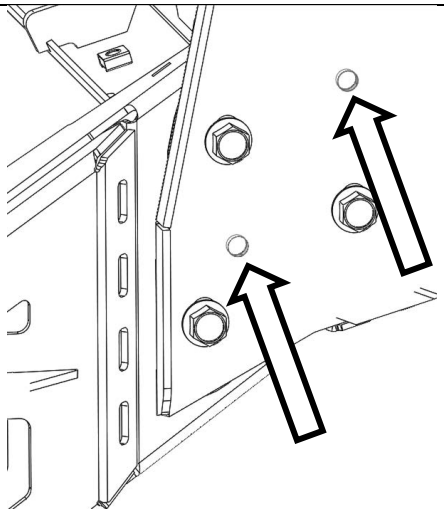
    Leave finger tight for now.

54. Adjust the bar so that there is an even gap of 15-20mm between the bull bar and the vehicle fascia.

55. If the gap between the inner wing profile and the quarter panels is not equal on both sides of the vehicle, adjust the number of shims accordingly.

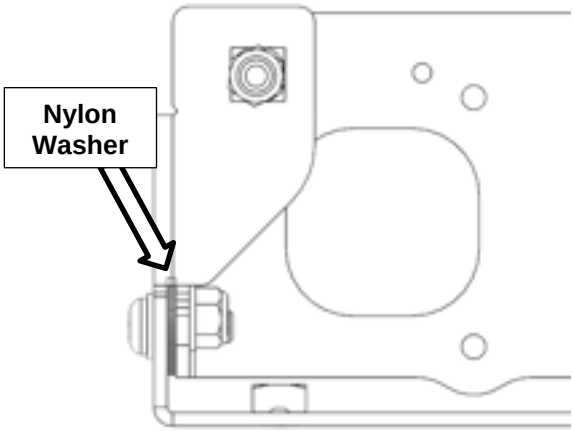
56. Torque all bolts to spec.

M12 (PC11.9) - 102 Nm

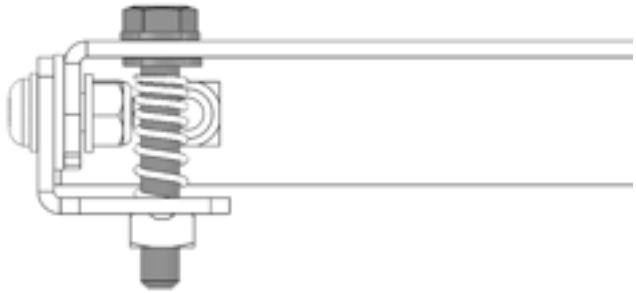


57. Drill the two Ø10mm pinning holes on each upright.
    Add anti-corrosion touch up paint to areas drilled.
    Install two M10 bolts, washers and flange nuts to the pinning holes on each side. Torque to specification.

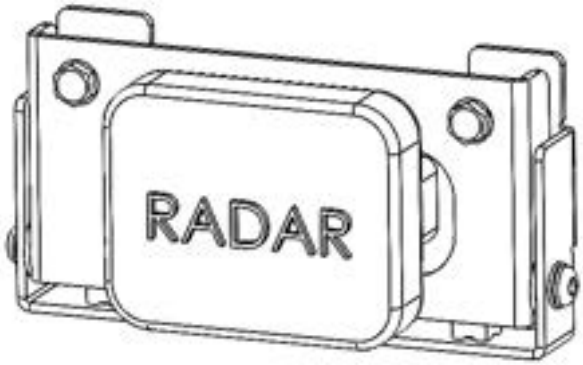
M10 (PC11.9) - 54 Nm



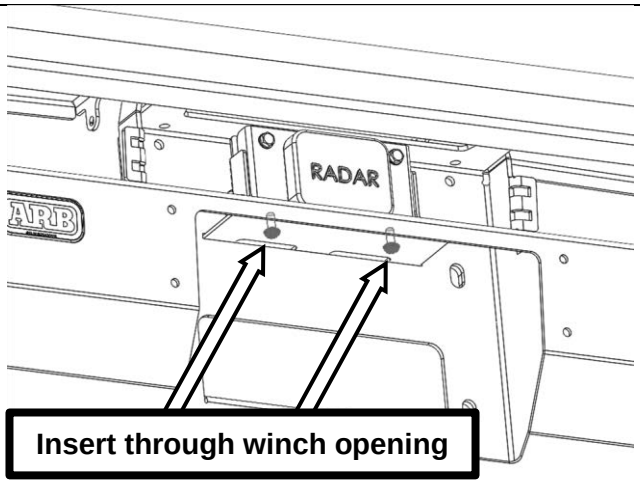
58. Assemble upper and lower half of radar bracket using two M6 button head screws, four M6 flat washers, two M6 nylon washers and two M6 nyloc nuts. Tighten to remove any play, while still allowing the bracket to pivot freely.



59. Assemble two M6x40 hex head bolts, two M6 flat washer and two springs provided. Position is not important at this stage.

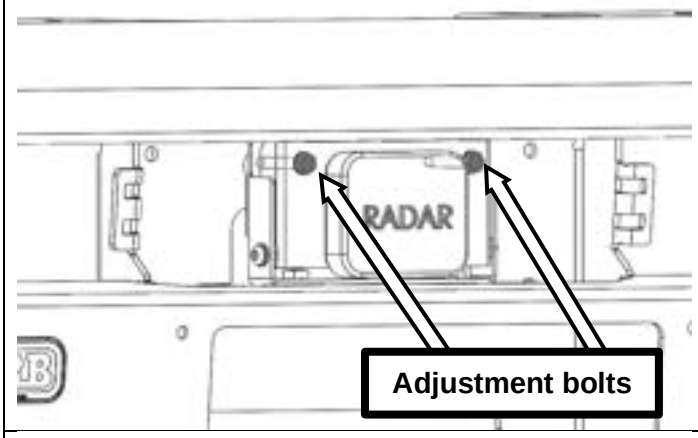


60. Fasten radar module to the bracket using 3 OEM phillips head screws.



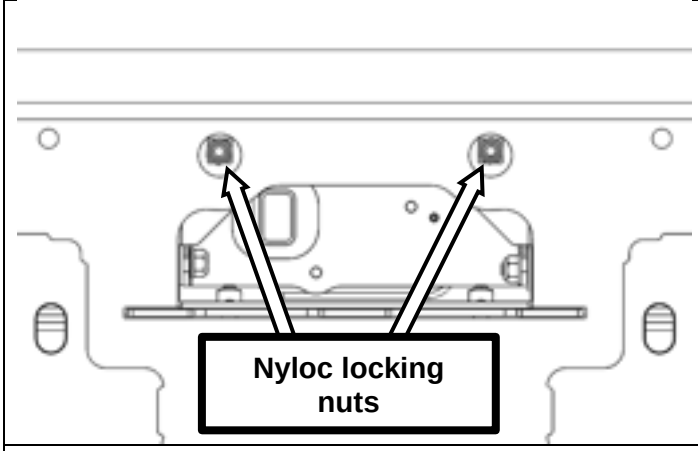
61. Fasten radar assembly to the bull bar using two M6 button head screws and two M6 flat washers. Torque to spec.

M6 - **9 Nm.**



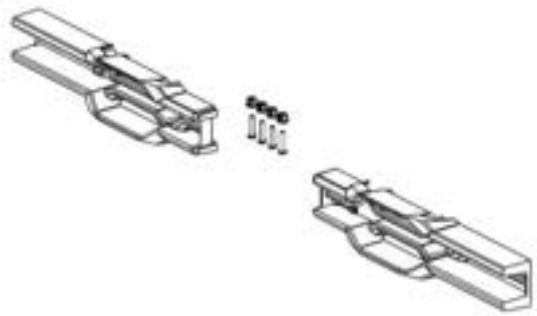
62. Place a digital level on the front face of the radar. The front face should be 90 degrees to level ground with a tolerance of ± 1 degree. Turn the two adjustment bolts evenly to alter the angle of the radar module to fall within this tolerance.

M6 - **9 Nm.**

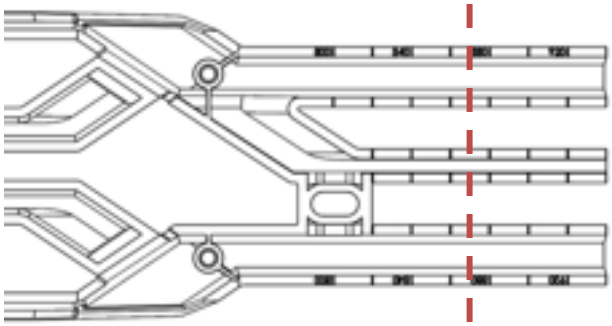


63. With radar positioned correctly, install two M6 nyloc nuts against the captive nuts (rear), to lock rotation of adjustment bolts. Ensure that the adjustment bolts do not rotate as the nyloc nuts are torqued to specification.

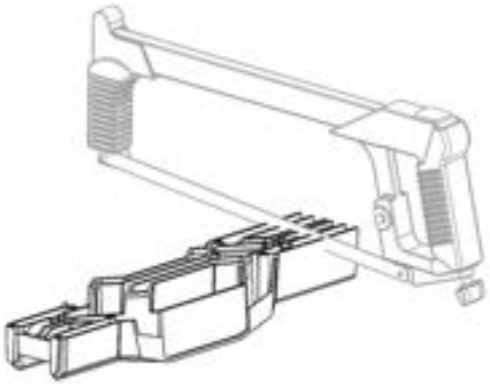
M6 - **9 Nm.**



64. Identify the outer grille section kit, 3163295.

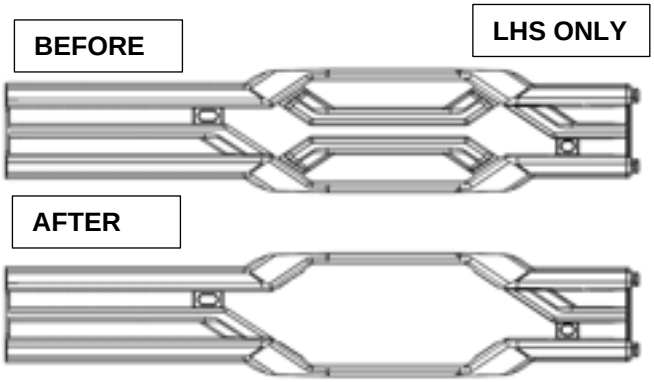


65. Mark both grille panels to be cut at 870mm based on markings on the back face.



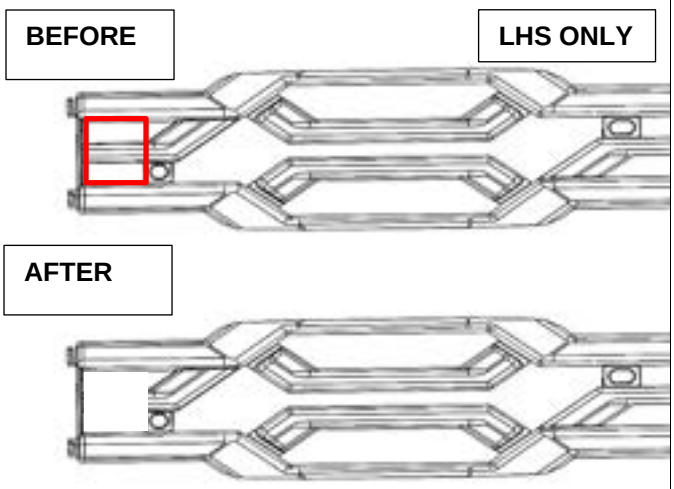
66. Use a hacksaw or similar cutting tool to carefully cut the grille panel at the positions marked in the step above.

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



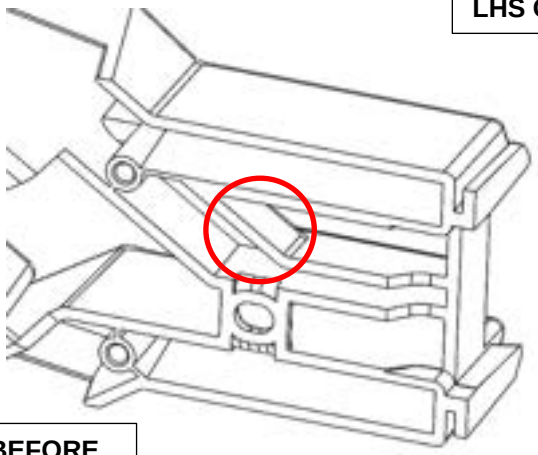
67. If fitting a winch, remove grille sections shown for access to clutch lever.

Cut from rear with an oscillating multi-tool.

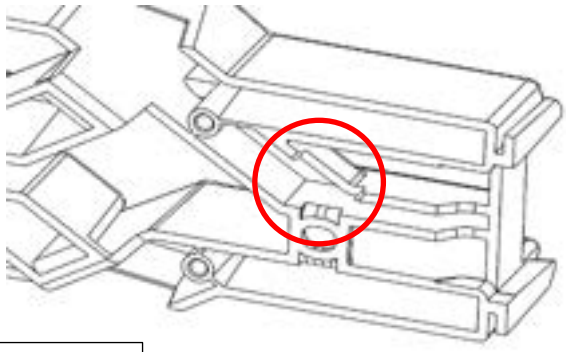


68. Remove sections of grille if equipped with front camera as shown for installation of camera relocation bracket.

LHS ONLY

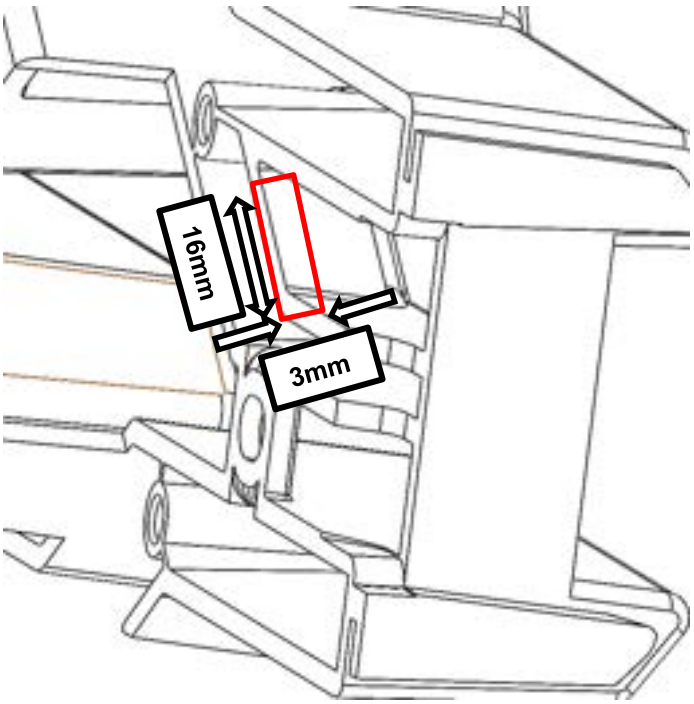


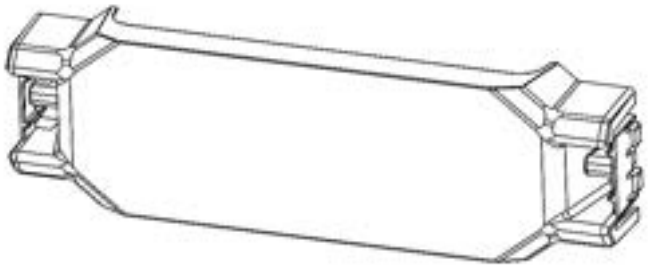
BEFORE



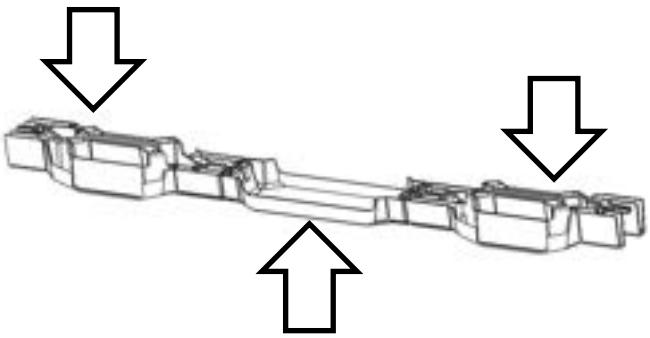
AFTER

69. Trimming is required to the rear section of the grille to allow clearance for vehicles fitted with camera bracket. See image to the left and below.

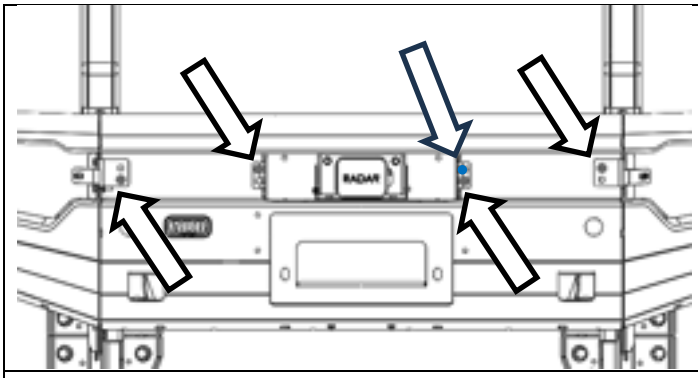




70. Identify the radar cover section kit, 3163316.



71. Assemble centre section with both outer sections included in kit 3163295. Make sure clips are fully engaged.

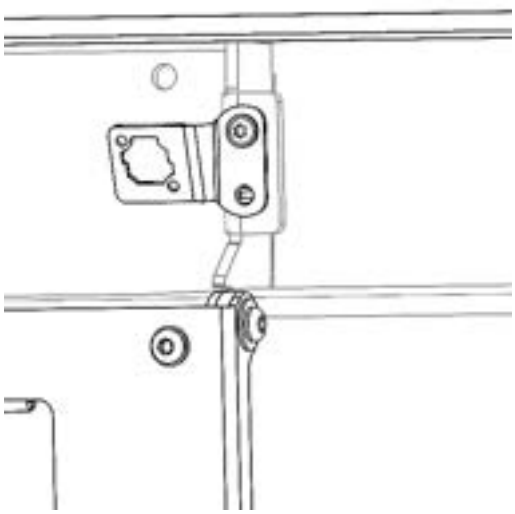


72. Press five round plastic grommets from grille kit into the square cut-outs seen from the front of the bull bar.

73. Locate the camera wiring harness and sperate from the factory loom by carefully untapping and cutting the outer wiring conduit.

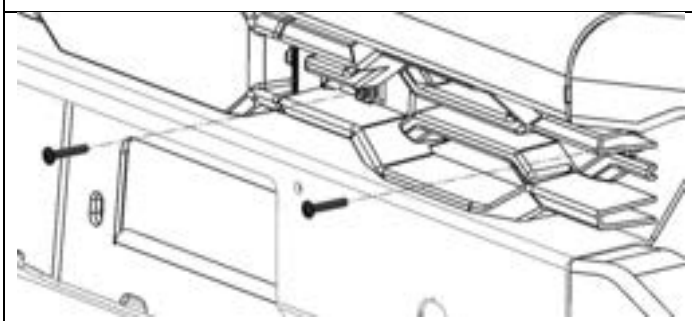
74. Run the camera harness to the left hand side of the bull bar next to the winch cradle as pictured.

75. Using the two OEM screws fasten the camera to the relocation bracket as shown on the left.

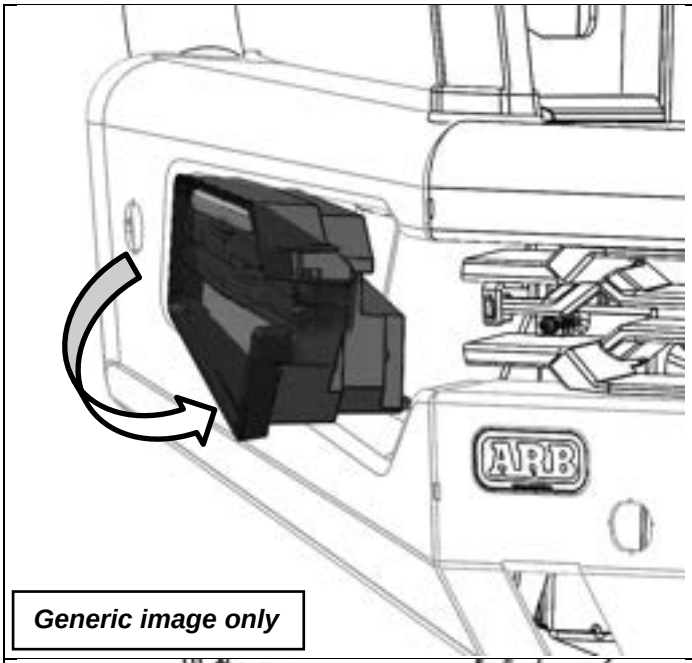


76. Fit camera bracket to the left hand side of the winch cradle by using the top Torx screw provided in the fit kit to secure the bracket in place as shown on the left.

77. The camera harness connector can be clipped into the camera at this step as well.

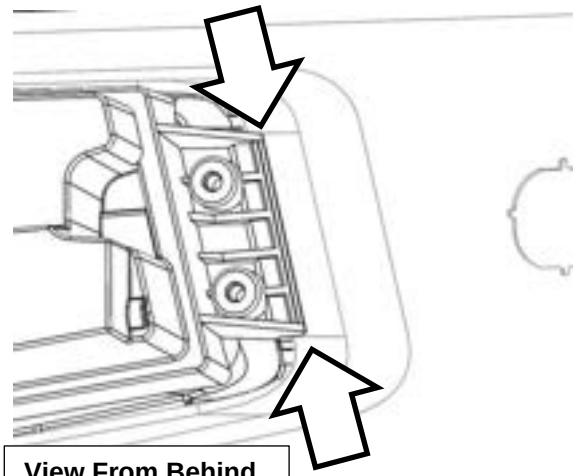


78. Attach grille assembly to bull bar using four torx head screws supplied in grille kit.

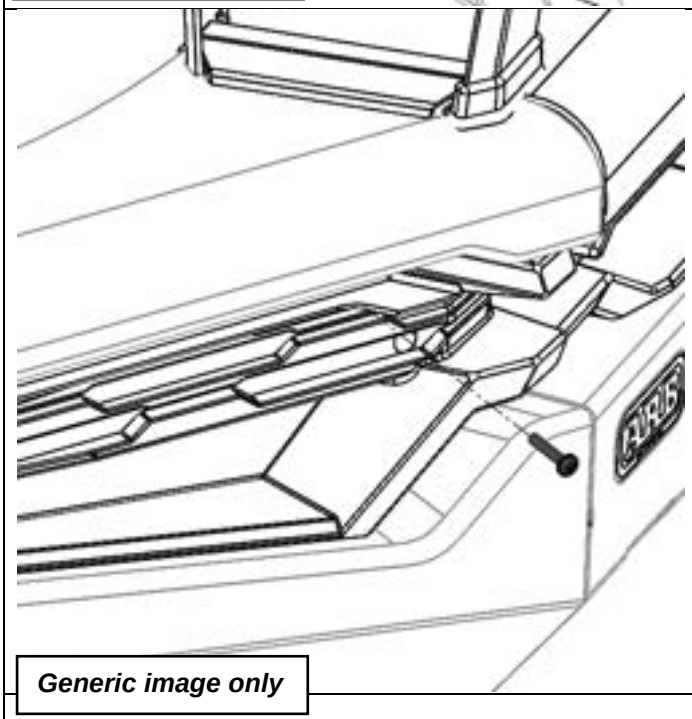


Generic image only

79. Index the outside groove of the lamp cluster over the edge of the aperture in the bull bar wing. Then rotate the lamp cluster into place.

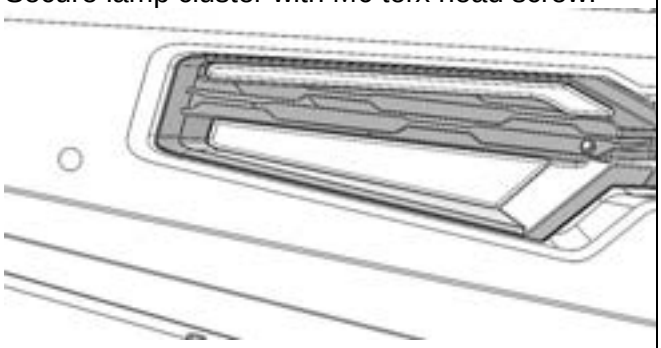


View From Behind



Generic image only

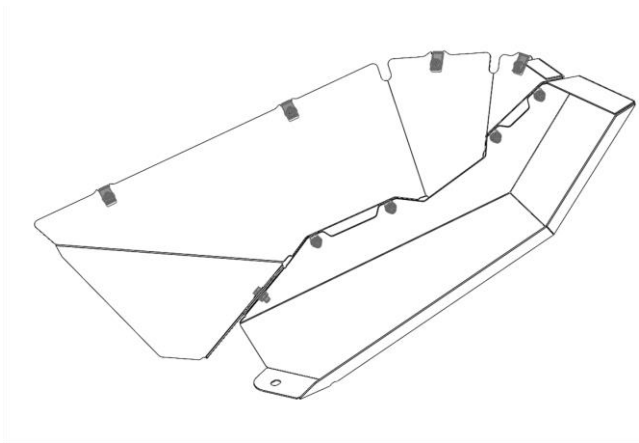
80. Secure lamp cluster with M6 torx head screw.



M6 - **9 Nm.**

Note: push lamp cluster hard against the aperture in the bull bar wing when fastening.

Connect lighting harness into the back of each fog cluster.



81. Fit four M6 U nuts to each wing under panel.

Note: U nut heads to be located on top side.

82. Assembly the two piece under panels together by using five M6x16 bolts with M6 flat washers and M6 flange nuts.

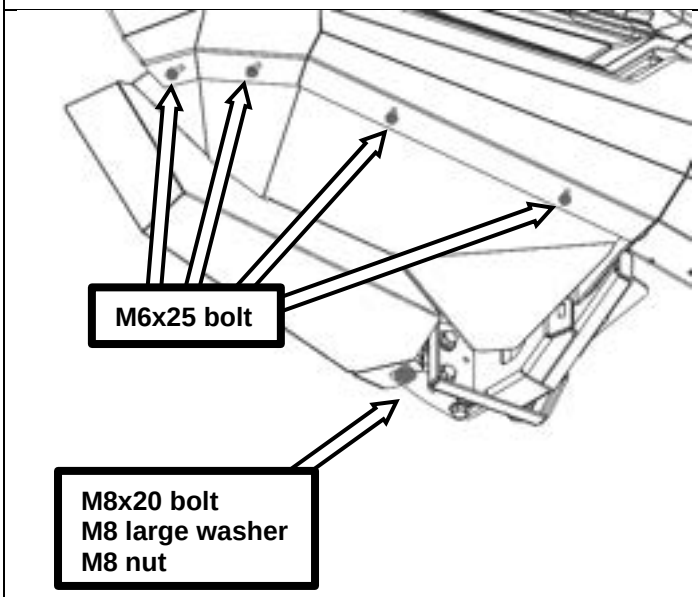
M6 - **9 Nm.**

83. Temporarily place the wing under panel in position, and mark lines onto the OEM inner guards (LH & RH) using lower edge of wing under panels as guide ensuring enough guard remains so that it may be neatly tucked/secured behind wing under panel lip.

Caution: Use care not to damage the windscreen washer bottle or hoses when trimming LH inner guard.

84. Carefully cut along marked lines using jig-saw or shears.

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

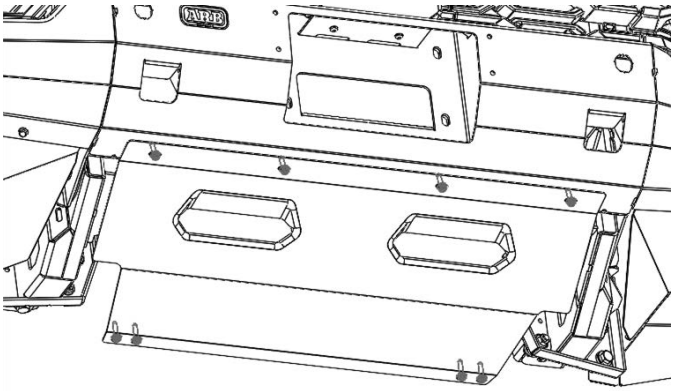


85. Fasten wing under panel assembly to bull bar using eight M6 flange bolts (four per side).

Fasten lower corner of wing under panel using two M8x1.25x20mm flange bolts, M8 large washer and M8 flange nuts.

M6 – 9Nm

M8 – 22Nm



86. Fit the centre stone shield using four M6x25 bolts into the cage nuts on the bull bar lower pan, & four M6x25 bolts into the OEM stone shield.

	87. Re-install upper radiator cover panel and fasten using OEM scrivets. 88. Reinstall all fasteners inside wheel arch liner.
	89. Use two M6x1.0x16mm button heads, M6 washers, and M6 nylon lock nuts to attach the number plate.

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 and clearance lights and that they are functioning correctly.**

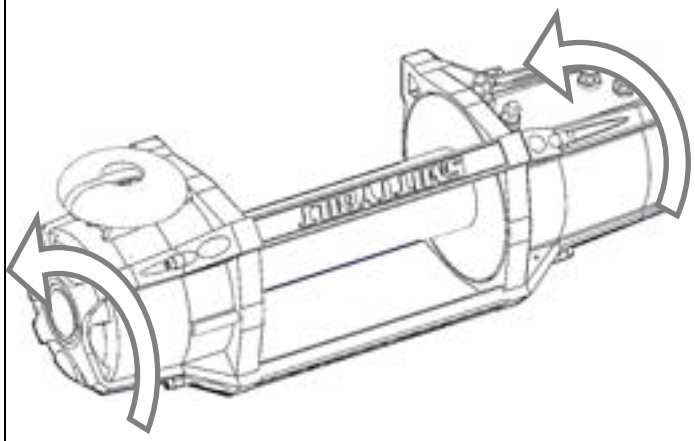
WINCH INSTALLTION

This ARB bar has been designed to carry a variety of Warn, Magnum, Smittybilt and Bushranger winches. Before the winch is fitted into the bar it will need to be configured for proper fit and operation.

Note: Before fitting the winch to the bar, ensure that you have read and understand the fitting instructions supplied with the winch. These instructions only cover the fitment of the winch and control box to the bar. They do not cover the wiring procedure. For this refer to the winch manufacturer's instructions.

You will need to modify your winch to allow fitment into the bar. See below for each of the winch brands:

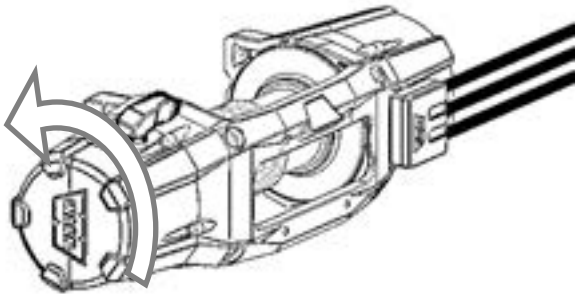
Note: The pictures below show the winches following modification.



Warn / Magnum / Smittybilt winches: Undo the screws in the gearbox end of the winch. Carefully slide the gearbox away from the winch only until it is able to rotate. Rotate the gear box anti-clockwise 72° and replace screws.

Smittybilt winches only. Motor will need to be rotated for adequate cable length. Remove 4 motor retaining bolts and cover. Remove 2 additional motor cap bolts. Rotate the motor until electrical connections are facing upwards. Reinstall retaining bolts and motor cover. (***SMITTYBILT "GEN 2"*** shown)

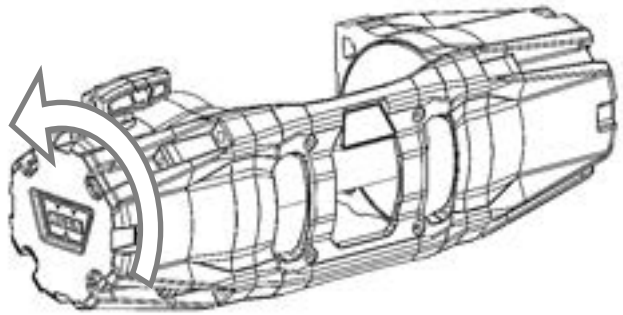
Ensure drain holes are correctly orientated. Refer to winch instructions for more details.



Warn Zeon winches*: Undo the screws in the gearbox end of the winch. Carefully slide the gearbox away from the winch only until it is able to rotate. Rotate the gear box anti-clockwise 72° and replace screws.
Remove the control box as per the Zeon control pack relocation kit installation guide.

Install the Warn Zeon relocation kit to the winch and control box.

***Not required for Zeon Platinum models.**

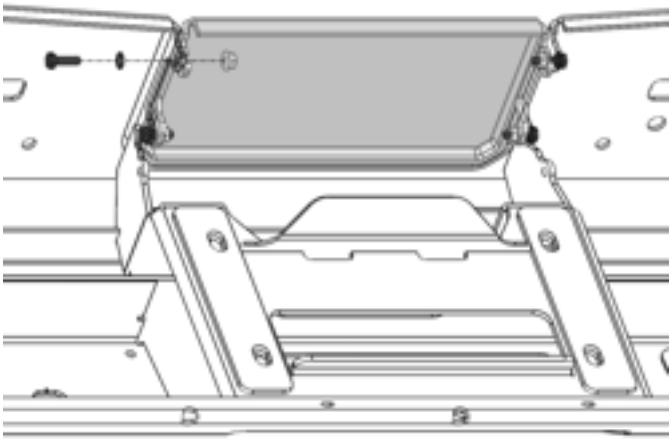


Warn VR Evo Winches: Undo the screws in the gearbox end of the winch. Carefully slide the gearbox away from the winch only until it is able to rotate. Rotate the gear box anti-clockwise 90° and replace screws.
Remove the control box as per the VR Evo control pack relocation kit guide.

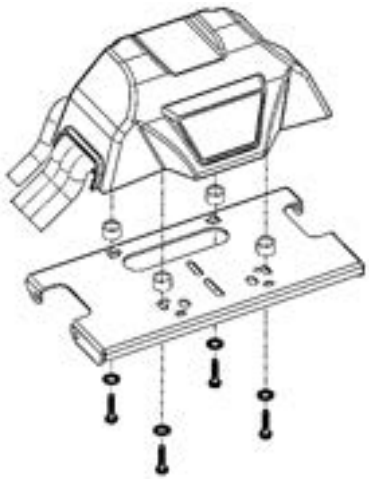
Install the Warn VR Evo wire extension kit to the winch and control box.

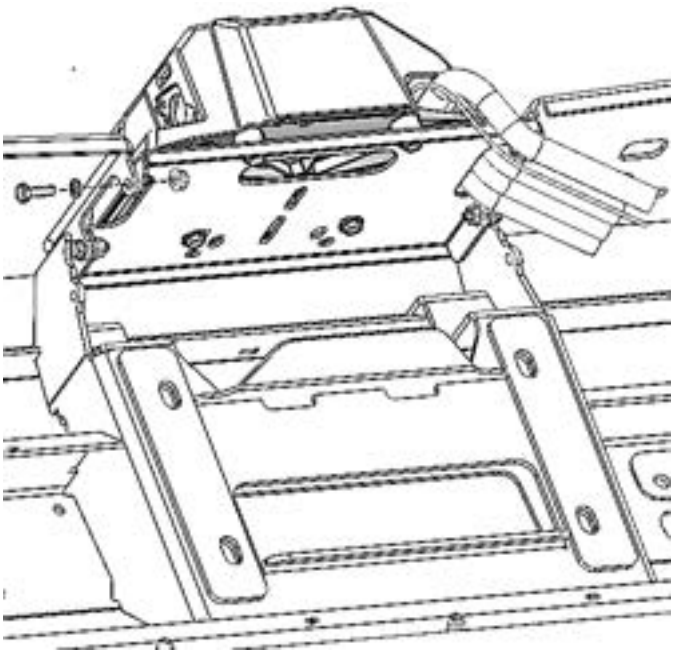
Bushranger winches: Undo the screws in the gearbox end of the winch to remove the brake cover. Remove the bolts retaining the gearbox housing.
Rotate the gearbox anti-clockwise until the clutch is as close as possible to directly upwards. Gearbox rotation increments may be 36 °, 40° or 90° depending on model. ("***REVO 10***" model shown)
Ensure fine seals are seated correctly then replate and tighten all fasteners.
Ensure drain holes are correctly orientated
Refer to winch instructions for more details.

FITTING PROCEDURE



1. Lay the bar face down on a soft surface so as not to damage the paint / powder coat.
2. If fitted, carefully remove the winch cover plate and discard. Keep fasteners for re-use.





Warn Zeon \ Platinum winches:

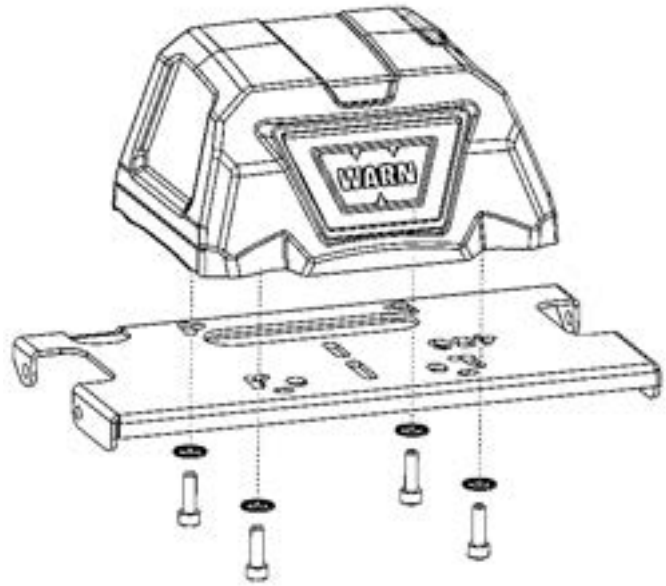
3. Mount the Control Box to the 3750486 Brkt Control Box Mount plate using 4x M6x25 hex bolts, washers and spacers provided. *Front view shown.*

M6 - 9 **Nm.**

4. Carefully position the Control Box assembly in the winch recess, sliding the front of the mount plate under the winch recess lip while passing the 3x RHS control box cables through the cut-out in the mount plate and between the mount tabs on the bar on the RHS. Pass the rear cables downwards between the bar and the trimmed Bumper. Align the 2x mount tabs on each side of the mount plate to the two mount tabs on the bar and then secure using the 4x M6 fastener sets removed in Step 2. Route and cable tie the control box cables clear of the winch spool. *Rear view shown.*

M6 - 9 **Nm.**

HINT: Apply some split cable protection conduit to the winch cables where they pass through the Bull Bar



M5 Cap Screws Supplied with winch.

Warn VR EVO winches:

5. Referring to instructions supplied in Warn kit W106928, separate control box from winch.

   Retain all 4 of the M5 cap screws.

6. Mount the Control Box to the 3750486 Brkt Control Box Mount plate using the original M5 cap screws retained from previous step and 4x M6x16 washers.

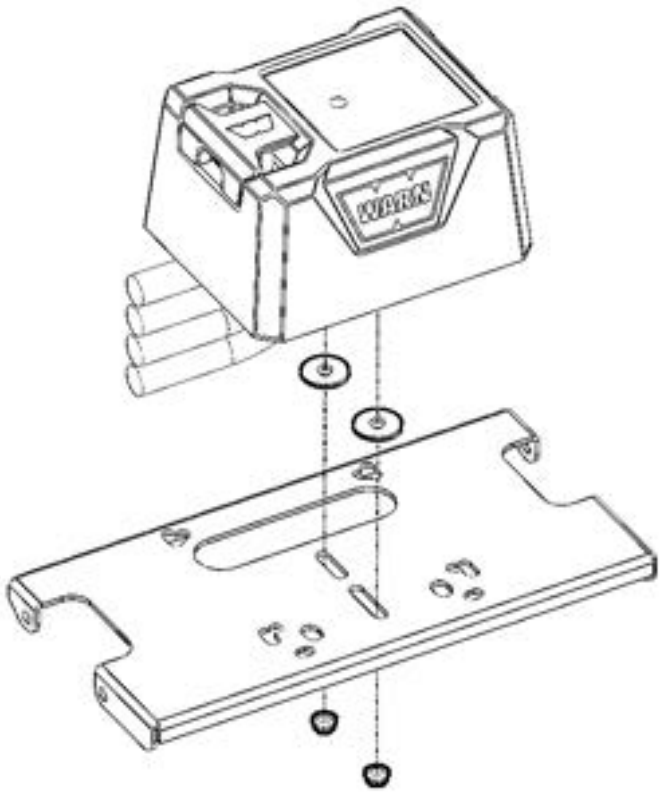
M5 – 5 **Nm.**

HINT: Apply some split cable protection conduit to the winch cables where they pass behind the Bull Bar

7. Carefully position the Control Box assembly in the winch recess, sliding the front of the mount plate under the winch recess lip.

   Pass the rear cables downwards between the bar and the trimmed Bumper. Align the 2x mount tabs on each side of the mount plate to the two mount tabs on the bar and then secure using the 4x M6 fastener sets removed in Step 1. Route and cable tie the control box cables clear of the winch spool. *Rear view shown.*

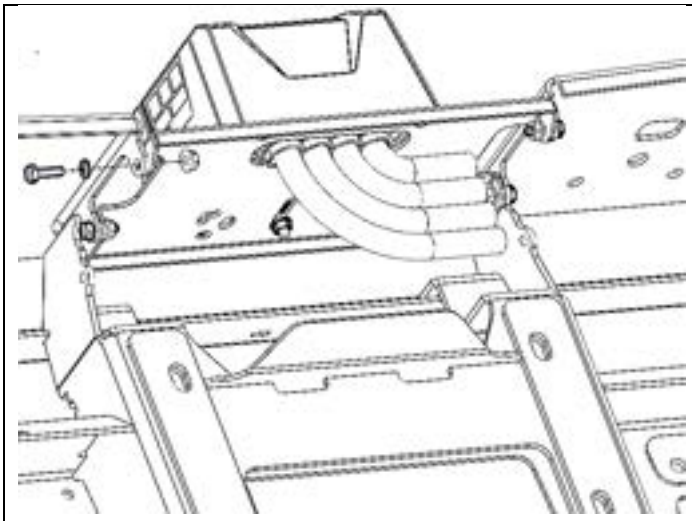
   M6 - 9 **Nm.**



Warn M8000, XD9 & 9.5XP control box winches.

8. Mount the Control Box to the 3750486 Brkt Control Box Mount plate using 2x M6 flange nuts and 2x M6x25x2.8 washers as spacers provided, passing the control box cables through the slot in the mount plate. *Front view shown.*

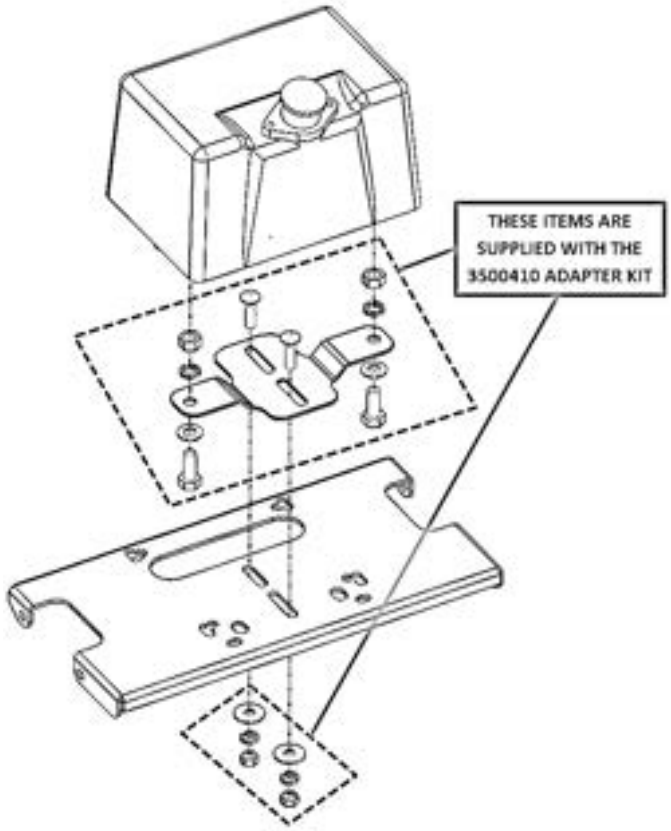
   M6 - 9 **Nm.**



9. Carefully position the Control Box assembly in the winch recess, sliding the front of the mount plate under the winch recess lip. Align the 2x mount tabs on each side of the mount plate to the two mount tabs on the bar and then secure using the 4x M6 fastener sets removed in Step 2. Route and cable tie the control box cables clear of the winch spool *Rear view shown.*

M6 - 9 **Nm.**

HINT: Apply some split cable protection conduit to the winch cables where they pass through the Bull Bar



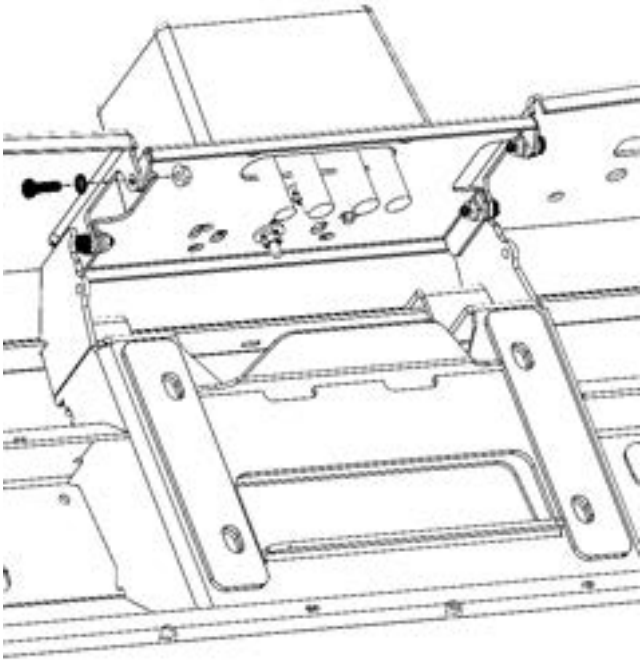
Warn XDC control box winches: Requires XDC adapter kit 3500410**.**

10. Mount the XDC Control Box to the adapter bracket included in the 3500410 kit using the M8 hardware provided in the kit. **Note:** the control box cover will need to be removed and rotated 180 degrees and re-assembled to the bracket. *Front view shown.*

M8 - 22 **Nm.**

11. Mount the control box to the 3750486 Brkt using the M6 fasteners supplied with the 3500410 kit, passing the control box cables through the slot in the mount plate. *Front view shown.*

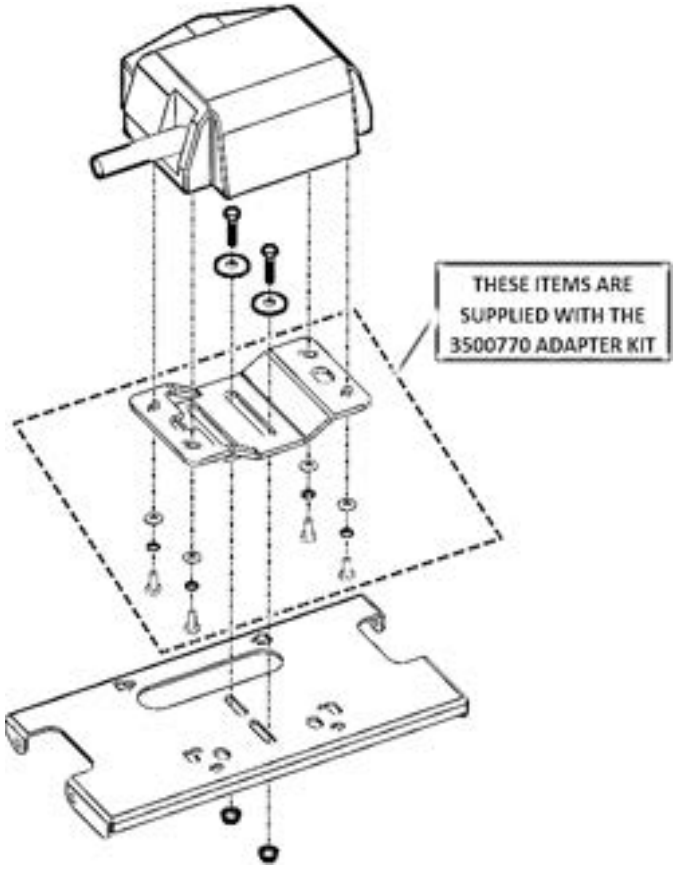
M6 - 9 **Nm.**



12. Carefully position the Control Box assembly in the winch recess, sliding the front of the mount plate under the winch recess lip. Align the 2x mount tabs on each side of the mount plate to the two mount tabs on the bar and then secure using the 4x M6 fastener sets removed in Step 2. Route and cable tie the control box cables clear of the winch spool. *Rear view shown.*

M6 - 9 **Nm.**

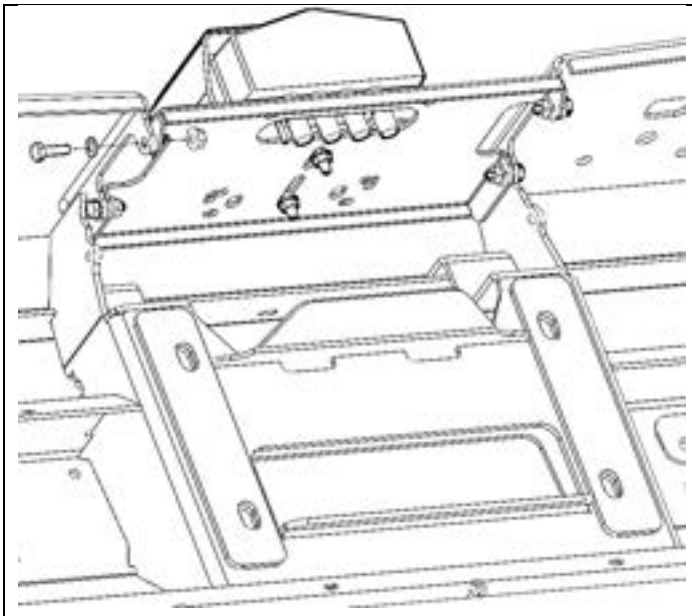
HINT: Apply some split cable protection conduit to the winch cables where they pass through the Bull Bar



Smittybuilt Gen 2 winches. Requires Smittybuilt adapter kit 3500770

13. Mount the Control Box to the adapter bracket included in the 3500770 kit using the M5 hardware provided in the kit.
14. Mount the control box to the 3750486 Brkt using 2x M6x25 bolts, flange nuts and M6x25x2.8 washers provided, passing the control box cables through the slot in the mount plate. *Front view shown.*

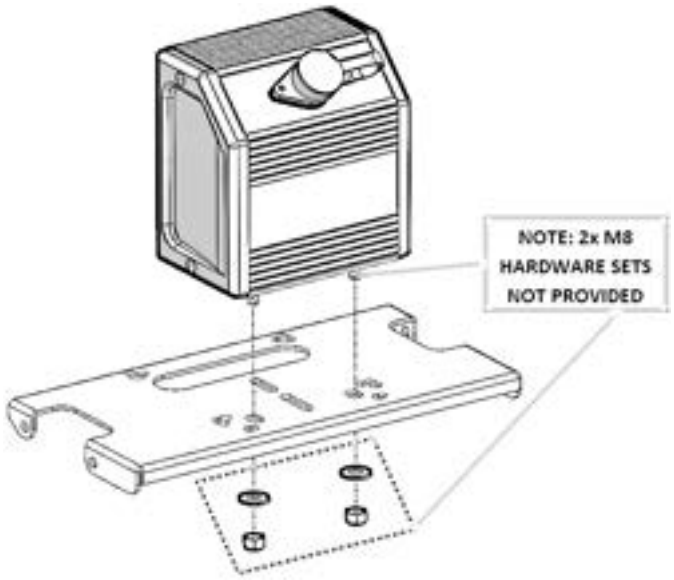
M6 - 9 **Nm.**



15. Carefully position the Control Box assembly in the winch recess, sliding the front of the mount plate under the winch recess lip. Align the 2x mount tabs on each side of the mount plate then secure to the mount tabs on the bar using the 4x M6 fastener sets removed in Step 2. Route and cable tie the control box cables clear of the winch spool. *Rear view shown.*

M6 - 9 **Nm.**

HINT: Apply some split cable protection conduit to the winch cables where they pass through the Bull Bar

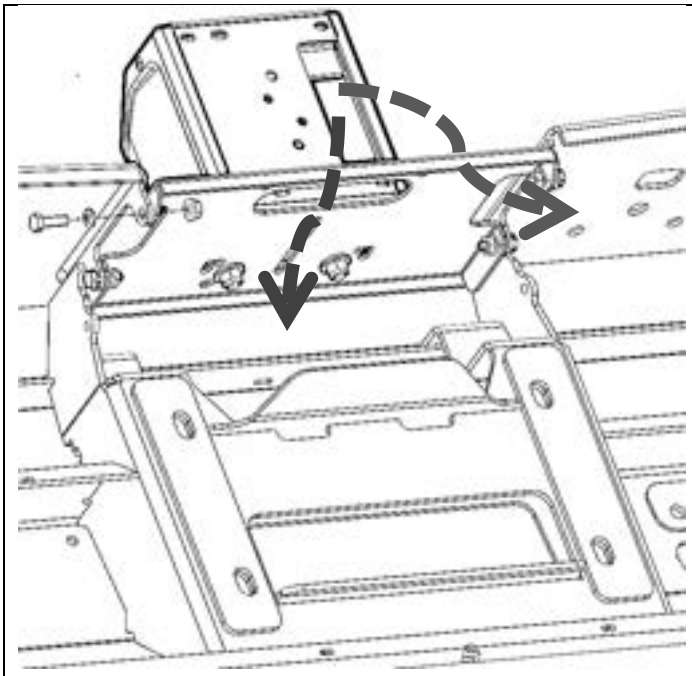


Bushranger winches:

16. First remove one plastic end from the control box. Slide in two Hex head M8x20 bolts. (not provided). *Front view shown.*
17. Replace plastic end of the control box and fasten to 3750486 Brkt using 2x M8 nut and washer set (not provided)

M8 - 22 **Nm.**

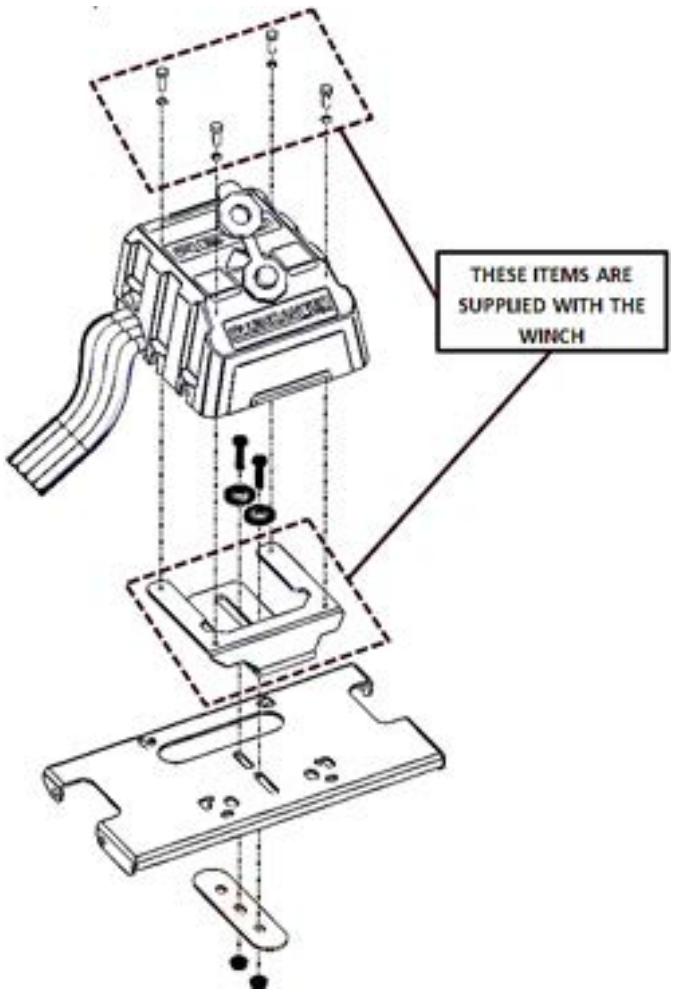
18. Carefully position the Control Box assembly in the winch recess, sliding the front of the mount plate under the winch recess lip while passing the control box cables through the cut-out in the mount plate. Either between the mount tabs on the RHS of the bar ***OR*** through



the slot at the back of the mount plate. Align the 2x mount tabs on each side of the mount plate to the two mount tabs on the bar and then secure using the 4x M6 fastener sets removed in Step 2. Route and cable tie the control box cables clear of the winch spool. *Rear view shown.*

M6 - 9 **Nm.**

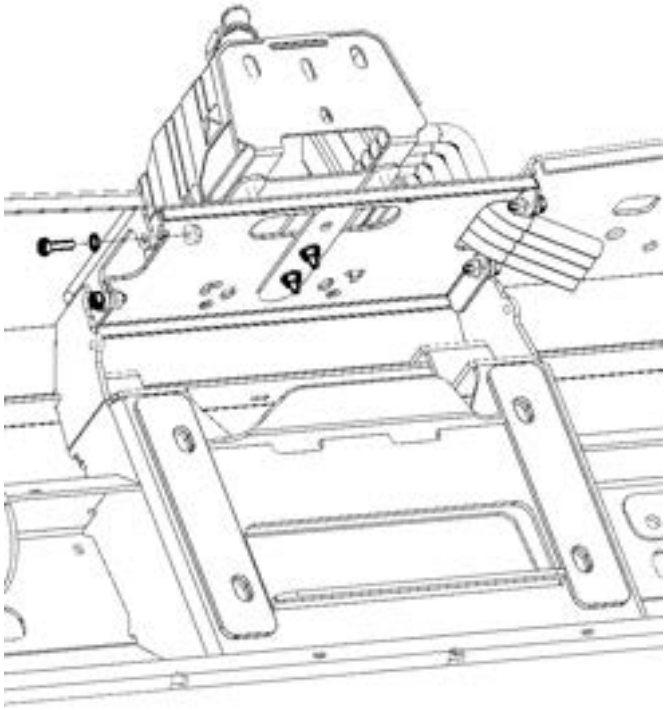
HINT: Apply some split cable protection conduit to the winch cables where they pass through the Bull Bar



Bushranger REVO winches:

19. Mount the Control Box to the REVO Mount plate using the 4X M5 fasteners supplied with the winch kit as shown. ***Note:*** Follow the winch instructions to re-route the control box cables through the RH side of the cover as shown.
20. Mount the control box to the 3750486 Brkt using 2x M6x25 bolts, 2x M6x25x2.8 washers, 1x 3195186 plate and 2x M6 flange nuts and provided. *Front view shown.*

M6 - 9 **Nm.**

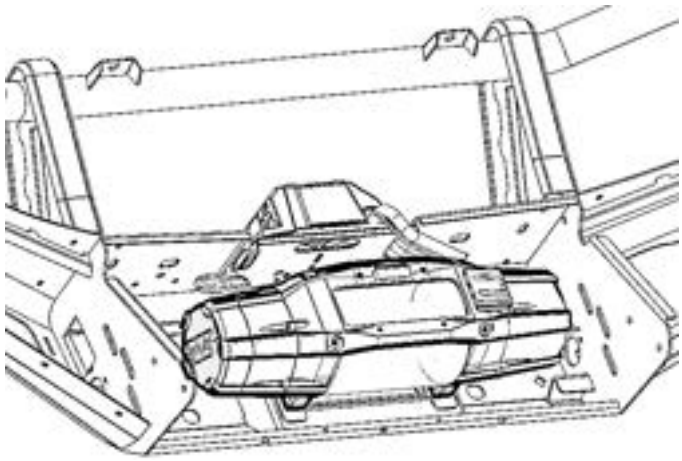


21. Carefully position the Control Box assembly in the winch recess, sliding the front of the mount plate under the winch recess lip while passing the control box cables through the cut-out in the mount plate and between the mount tabs on the RHS of the bar. Align the 2x mount tabs on each side of the mount plate to the two mount tabs on the bar and then secure using the 4x M6 fastener sets removed in Step 2. Route and cable tie the control box cables clear of the winch spool. *Rear view shown.*

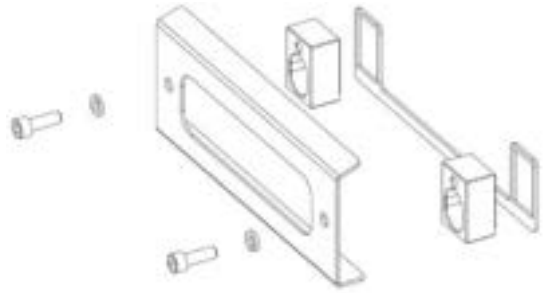
M6 - 9 **Nm.**

HINT: Apply some split cable protection conduit to the winch cables where they pass through the Bull Bar

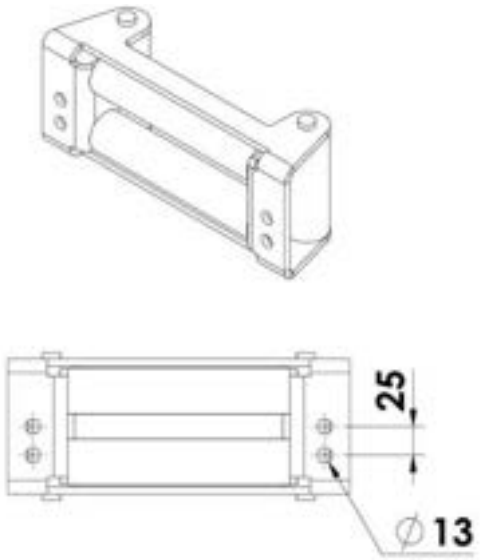
FITTING PROCEDURE



22. Locate the Bull Bar face down on a smooth non-marking surface.
23. Sit the winch in position on the bar's winch cradle.
24. Attach the winch to the bar through the top 2 holes using 2 of the bolts (and any washers) that are supplied with the winch.
25. Level the winch and tighten the bolts.

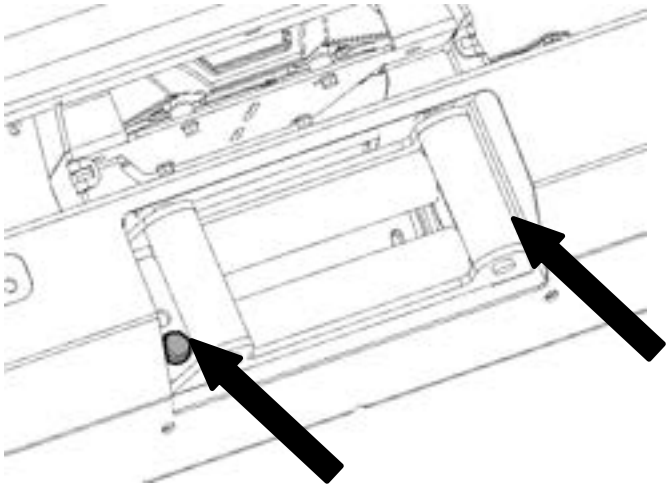


26. **For hawse fitment**, Spacer kit 3500600 is required, refer to instruction 3787087 supplied.



27. **For roller fairlead fitment**, if not already done, mark 2 hole positions 25mm below the centre holes as shown in the diagram.
28. Drill 2, Ø13mm holes. De-burr the holes and protect with a zinc rich primer to prevent rust.

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



29. Turn the bar over onto the back face.
30. Attach the roller fair lead (RFL) to the bar and winch using the longer hex bolts supplied in this kit and any washers supplied with the winch.

Note 1: To make it easier to get to the bolt holes in the RFL, remove the vertical roller pins and rollers.

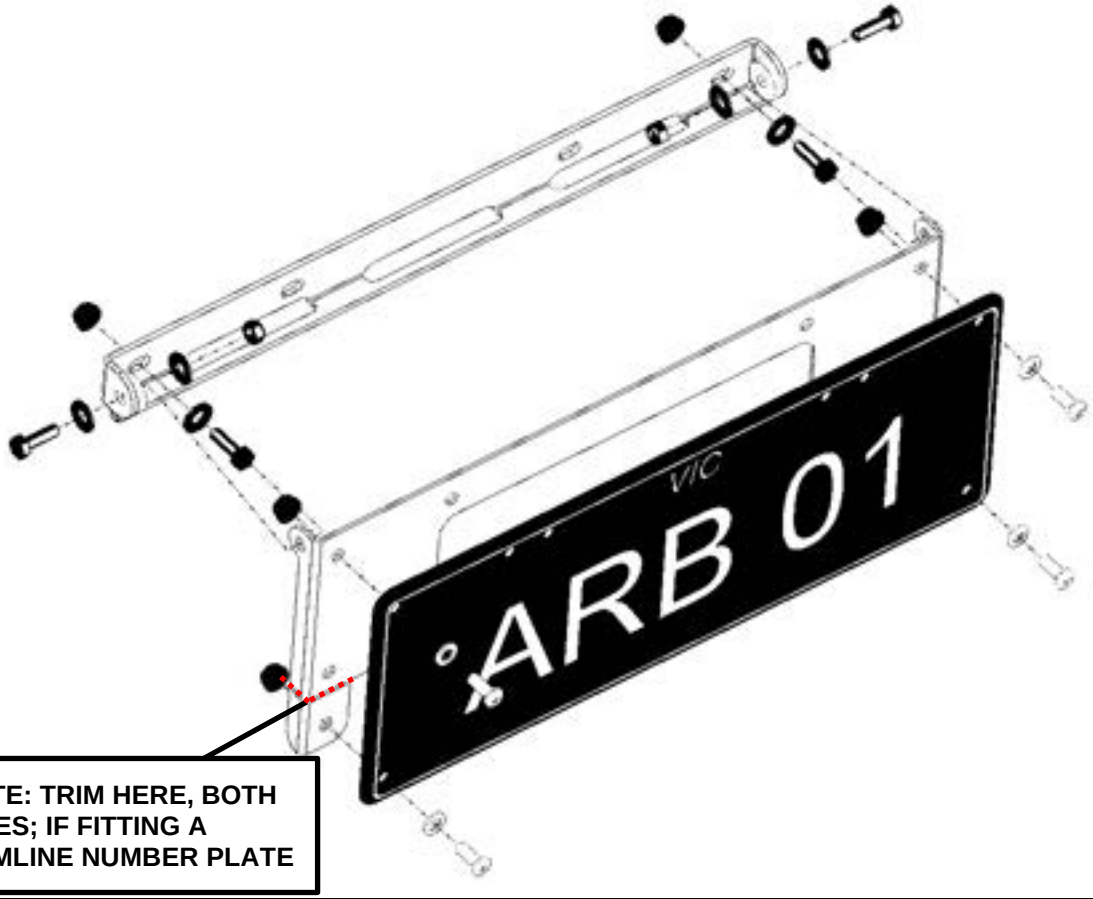
Note 2: Some winches will require 3/8" UNC bolts where others will require M10. Both have been supplied in this kit. Please check the threads before proceeding. This can be done by comparing the bolts from this kit with the ones supplied with the winch.

M10- 44 **Nm.** 3/8th - 44 **Nm.**

FOLDING NUMBER PLATE FITTING PROCEDURE

31. Assemble the smaller of the two number plate brackets to the front of the bar using 2x M6x20 hex bolts, washers and flange nuts provided.
32. Assemble the larger bracket to the smaller one using 2x M6x20 hex bolts, washers, packers and flange nuts provided.
33. If assembling a full size number plate, secure to the front bracket using 4x M6 stainless steel button head screws and washers as shown in the diagram below.

M6 – 9 **Nm**



NOTE: TRIM HERE, BOTH SIDES; IF FITTING A SLIMLINE NUMBER PLATE

34. If fitting a slim line / “Euro” style number plate, trim on both sides at the dotted lines shown in the image above. Remove all burs and sharp edges using a file, then apply black touch up paint to the cut areas and allow to dry.

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

35. Secure to the front bracket using 4x M6 stainless steel button head screws, washers and flange nuts provided.

 M6 – 9 **Nm**

36. Ensure all cables are attached as per the winch manufacturer’s instructions. Ensure cables are securely attached and cannot rub on any sharp edges.

37. Tidy the cables and secure using cable ties leaving the 2 long power cables free to be connected to the vehicles battery later.

Return to the bar fitment instructions.