



FITTING INSTRUCTIONS

Part Number: **3450420**
Product Description: **DELUXE [BULLBAR](#)**
Suited to vehicle/s: **JEEP GRAND CHEROKEE WK2 2014 ON (EXCLUDING SRT8)**

Winch install kit: **3540050**
Radar install kit: **3550110**

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

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	MASKING TAPE
MARKER PEN	HACKSAW BLADE / JIGSAW OR SIMILAR
TORQUE WRENCH	SOLDERING IRON AND SOLDER
ELECTRICAL TAPE OR EQUIV.	

HAVE AVAILABLE THESE SAFETY ITEMS WHEN FITTING PRODUCT:

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

FASTENER TORQUE SETTINGS:

SIZE	Torque Nm	Torque lbft
M6	9Nm	7lbft
M8	22Nm	16lbft
M10	44Nm	32lbft
M12 x1.75	77Nm	57lbft
M12 x 1.25	96Nm	71lbft

PARTS LISTING			
APPLICATION.	PART NO.	QTY	DESCRIPTION
PREPARE VEHICLE	3759170R	1	BRACKET ASSEM MOUNT WK2 GC RH
	3759170L	1	BRACKET ASSEM MOUNT WK2 GC LH
	3759182	1	COMPRESSOR BRACKET
	4581050	6	WASHER SPRING 1/2 x 3/16 x 3/16 ZP
	4581046	4	WASHER SPRING M8 x 3/32 x 3/32
	4581047	2	WASHER SPRING M8 x 3/32 x 3/33 BLK ZN
	6151480	4	NUT FLANGE M12 X 1.25 ZP
	6151132	2	NUT FLANGE M8 x 1.25 ZP
	4581011	6	WASHER FLAT, M12 x 27 x 4
	4581063	4	WASHER FLAT, M8 x 25 x 3 GOLD ZN
	4581085	2	WASHER FLAT, M8 x 19 x 1.2 BLK ZN
	6151096	6	BOLT HXHD M12 X 1.25 X 40 CL8.8 ZP
	6151022	4	BOLT M8 x 1.25 x 25 Gd 8.8 ZP
	6151234	2	BOLT M8 x 1.25 x 25 Gd 8.8 BP
	4681454	2	BRACE CHASSIS BASE WK2 GC
	6821152	2	LOOM
	6151357	4	BOLT SEMS M10 X 30 ZP Gd 8.8
PARKING SENSORS	EG50	4	GROMMET RUBBER
	3759181	4	BRACKET PARKING SENSOR MOUNT
	3759187	2	BRACKET PARKING SENSOR MOUNT
	665044	1	3M PRIMER STICK
	6781427	12	ADHEASIVE STRIP BUTYL 20 X 25
	3163091	6	PLUG BLANKING BLK
IMPACT ABSORBERS	3194531	1	PLATE IMPACT SLIDE WK2 JEEP GC
	6151207	4	BOLT HX HD M6 x 1.0 x 25 GR8.8 TZP480
	4581036	4	WASHER SPRING 1/4" x 3/32" x 3/32" ZP
	4581050	2	WASHER SPRING 1/2 x 3/16 x 3/16 ZP
	4581049	2	WASHER FLAT, 1/2 x 1 1/8 x 3 GOLD ZN
	6151046	4	WASHER FLAT, M6 ZP
	6151128	4	NUT FLANGE M6 x 1.0 ZP
	6151321	2	NUT FLANGE M10 x 1.5 ZP
	3194532	2	PLATE ASSEM IMP ABS JEEP WK2 GC
	3194531L	1	PLATE IMPACT SLIDE WK2 JEEP GC
	4584352	2	WASHER NYLON 12 X 25 X1.5
6151658	2	BOLT SHOULDER M12 X 16	
FIT BAR TO VEHICLE	4681460	2	BRACE PLATE JEEP WK2 GC RH
	5848394	8	PACKER WK2 JEEP GC
	4581050	6	WASHER SPRING 1/2 x 3/16 x 3/16 ZP
	6151480	6	NUT FLANGE M12 X 1.25 ZP
	6151096	6	BOLT HXHD M12 X 1.25 X 40 CL8.8 ZP
FOG/TURN/CLEARANCE LIGHTS	6821151R	1	INDICATOR RH
	6821151L	1	INDICATOR LH
	3163014	1	FOG LIGHT SURROUND KIT

PARTS LISTING			
APPLICATION	PART NO.	QTY	DESCRIPTION
BUFFERS	3162470R	1	BUFFER RH
	3162470L	1	BUFFER LH
	6151128	12	NUT FLANGE M6 x 1.0 ZP
UNDER PANELS	6522928	1	PANEL STONE SHIELD WK2 JEEP GC
	6522927R	1	PANEL UNDER WING WK2 GC RH
	6522928L	1	PANEL WING JEEP GC WK2 LH
	6151262	2	BOLT M8 x 1.25 x 20 Gd 8.8 BZ
	6151550	17	BOLT HXHD M6 x 1.0 x 25 GR8.8 BTZP480
	4581047	2	WASHER SPRING M8 x 3/32 x 3/33 BZ
	4581287	17	WASHER SPRING M6 x 2.5 x 1.6 BLK ZN
	4581085	2	WASHER FLAT, M8 x 19 x 1.2 BLK ZN
	4581082	17	WASHER FLAT, M6 x 19 x 1.6 BZ
	6151132	2	NUT FLANGE M8 x 1.25 ZP
	6151300	14	NUT CAGED M6 2.6-3.5
WINCH FITMENT	3759183	1	BRACKET WINCH SOCKET
	EG50	2	GROMMET RUBBER
	6151128	4	NUT FLANGE M6 x 1.0 ZP
	6151282	2	NUT FLANGE M5 x 0.8 ZP
	4581287	4	WASHER SPRING M6 x 2.5 x 1.6 BLK ZN
	6151550	4	BOLT HXHD M6 x 1.0 x 25 GR8.8 BTZ
	6151300	3	NUT CAGED M6 2.6-3.5
	4584295	4	WASHER FLAT M6 X 12 X 1.3 BLK ZN
	3540050	1	WINCH INSTALL KIT
INNER GUARD RETENTION	4581287	4	WASHER SPRING M6 x 2.5 x 1.6 BZ
	4581305	4	WASHER SPRING M6 x 2.5 x 1.6 S/S
	6151300	4	NUT CAGED M6 2.6-3.5
	4584295	4	WASHER FLAT M6 X 12 X 1.3 BLK ZN
	4581304	4	WASHER FLAT, M6 SS
	6151256	4	SCREW BTN HD M6 x 16 SS
	6151459	4	SCREW BTN HD M6 x 16 BZ
	3194584	2	PLATE INNER GUARD RET WK2
FIT RADAR TO VEHICLE	3550110	1	WK2 RADAR KIT SUIT 3450410-20
MISC	180302	10	CABLE TIE 4.8 X 180 MM BLACK
	2125449	1	LABEL TOW WARNING
LICENSE PLATE FIT	3500510	1	FOLDING NUMBER PLATE BRACKET
	6151128	2	NUT FLANGE M6 x 1.0 ZP
	3194532	1	PLATE ASSEM IMP ABS JEEP WK2 GC
	4581304	2	WASHER FLAT, M6 SS
	6151256	2	SCREW BTN HD M6 x 16 SS

FITTING PROCEDURE



1. Park the vehicle on a flat surface and open the hood.
2. Remove the 3 screws and 1 plug holding the stone shield to the cross beam and discard.
3. Remove the 2 screws holding the stone shield to the wheel arch inner guards and discard. Allow the stone shield to hang down.
4. Undo and discard the 5 quarter turn plastic clips holding the bumper to the vehicle.
5. Remove the under panel and set aside in a safe place.



6. Undo the clips on each side of the vehicle and remove the lower section of the bumper.
7. Remove the plastic rivets and screws securing the inner guards to the bumper bar.



8. Remove the foam bumper-packer and discard.
9. If fitted, carefully remove the parking sensors and loom from the bumper and set aside in a safe place.

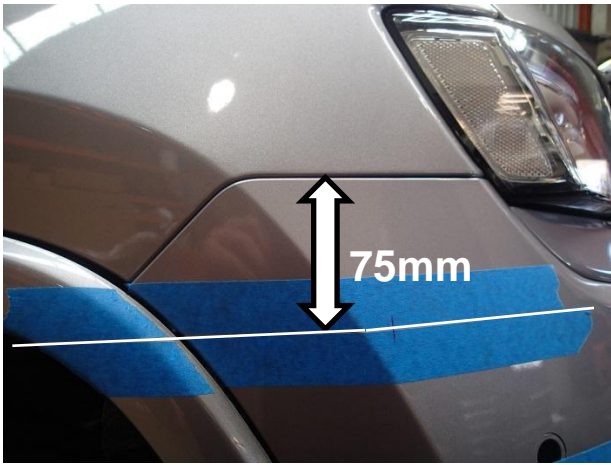
Note: Ensure each clear rubber grommet is retained for each sensor.



10. If fitted, disconnect the radar sensor cable from the vehicle.
11. Rotate the plastic clips on the rear of the radar sensor bracket until they release.
12. Remove and set aside the plastic clips and place the radar sensor in a safe place.
13. Un-plug the fog lamps if fitted.

WARNING: TAKE CARE WHEN HANDLING THE RADAR SENSOR!

FITTING PROCEDURE



- Using masking tape, mark a line 75mm down from the horizontal bumper joint line as shown. Run a second piece of tape parallel to the first piece leaving a 1-2mm gap as the cut line.

Note: Ensure the line is parallel to the joint line.

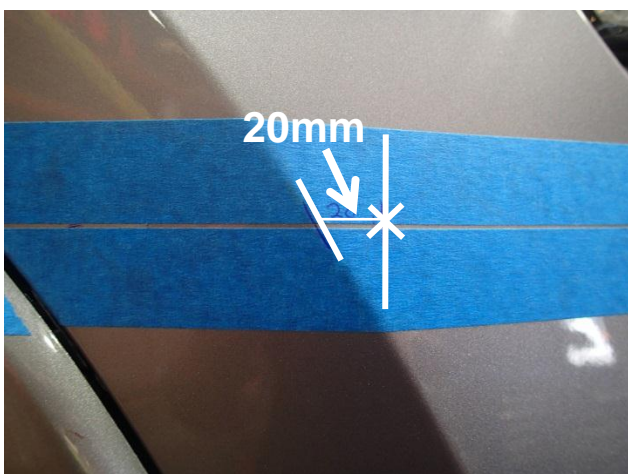
- Repeat on the other side of the vehicle



- Using masking tape, mark a line following the horizontal feature line (corner) on the bumper bar following level to the ground to the wheel arch edge as shown.



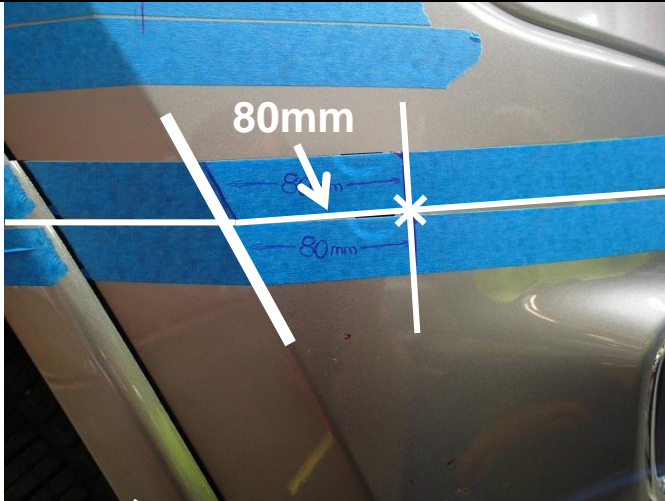
- Run a second piece of tape parallel to the first piece leaving a 1-2mm gap as the cut line.



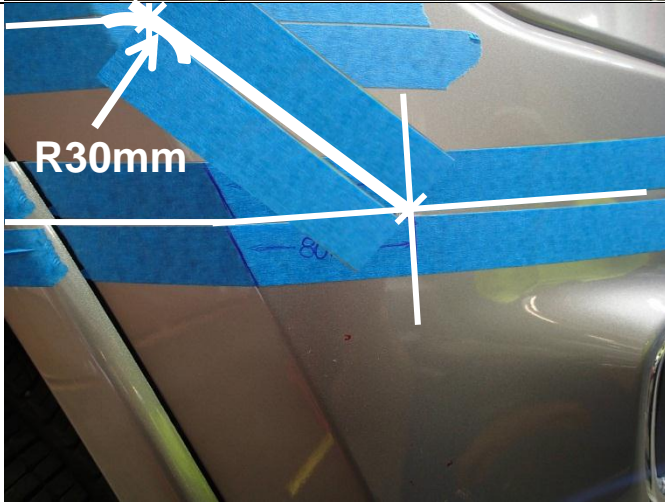
- On the top line (marked in step 14), measure and mark a point 20mm forward of the style line as shown.

- Repeat on the other side of the vehicle

FITTING PROCEDURE



20. On the lower line (marked in step 15), measure and mark a point 80mm forward of the style line as shown.
21. Repeat on the other side of the vehicle



22. Mark a line between the 2 points marked above as shown. In the top corner mark a radius of approximately 30mm.
23. Repeat on the other side of the vehicle



24. Using a jigsaw carefully cut along the lines marked above removing the lower section of the bumper.



25. Using sandpaper or a file, remove any sharp edges.

FITTING PROCEDURE



26. Attach pinch weld to each side of the vehicle as shown.

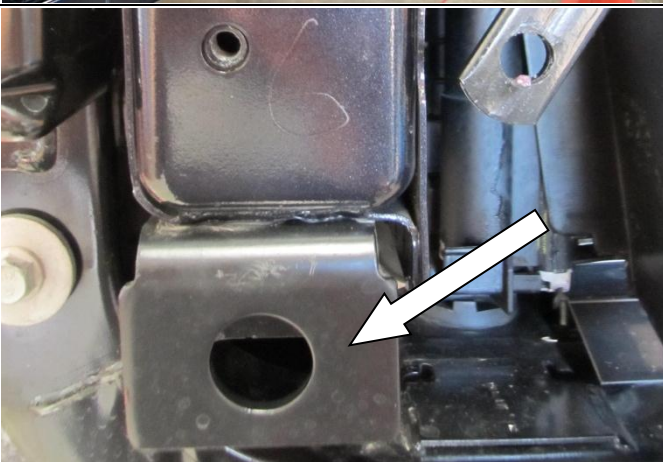


27. Remove the front crash beam and discard.

Note: If fitted, retain the 2 nuts holding the suspension air compressor to the crash beam.

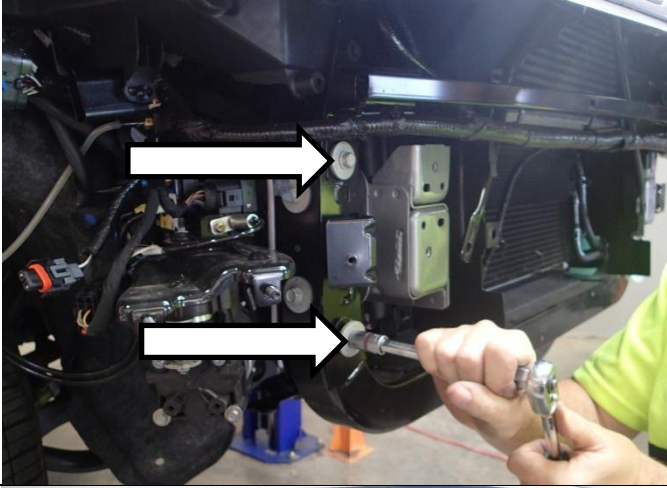


28. Remove and discard the centre plastic bracket.



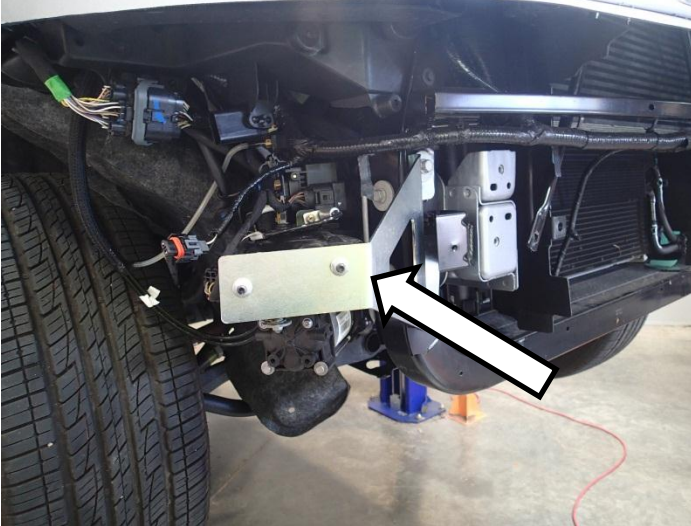
29. Remove any OEM tow points if fitted.

FITTING PROCEDURE




If the vehicle is fitted with QuadraLift suspension continue from here. If not proceed to step 33

30. Remove and retain the 2 bolts from the chassis as shown.



31. Attach the compressor bracket to the chassis and the compressor using the nuts removed earlier and the bolts removed in the step above.

 M8 NUTS - 22 Nm.

 M8 BOLTS - 32 Nm.



32. On each side of the vehicle, locate the wiring loom connectors.

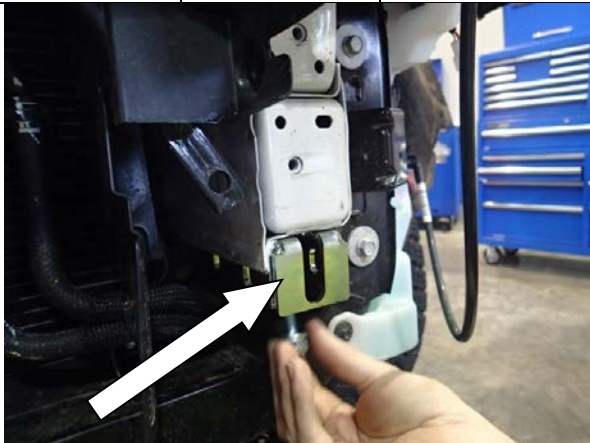


33. On each side of the vehicle identify the wire for the indicators and the clearance lamps using the chart below.

Warning: Wire colours may vary slightly and should be double checked with a multi-meter or test light. Failure to double check may result in damage to the vehicle.

34. Using a soldering iron and solder, connect the supplied indicator clearance looms to each side of the vehicle as per the table shown to the left.
35. Cover all joints with electrical tape or similar.

Description	Loom Wire Colour	Vehicle Cable Colour
RH TURN SIGNAL	GREEN	WHITE/BROWN
LH TURN SIGNAL	GREEN	WHITE/GREEN
RH CLEARANCE	RED	WHITE/RED
LH CLEARANCE	RED	WHITE/PURPLE
EARTH	BLACK	BLACK

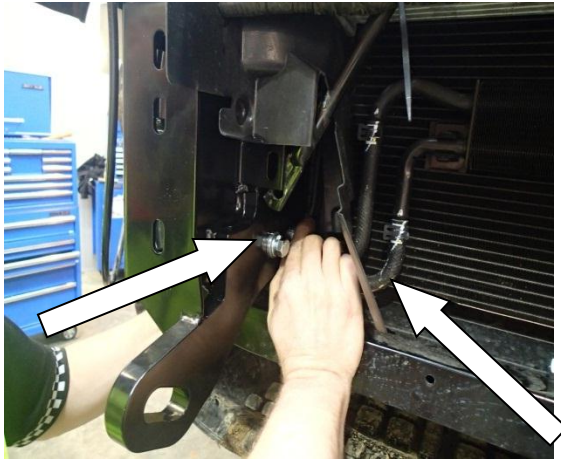


36. Attach the chassis mount braces to the bottom face of the chassis rails using 2 x M10 SEMS bolts in each side. Leave loose at this stage.
37. Repeat on the other side of the vehicle.



38. Attach the mount brackets to the chassis ends using 2 x M8 x 25 hex bolts, M8 spring washers and flat washers in each side. Leave loose at this stage.
39. Repeat on the other side of the vehicle.

FITTING PROCEDURE



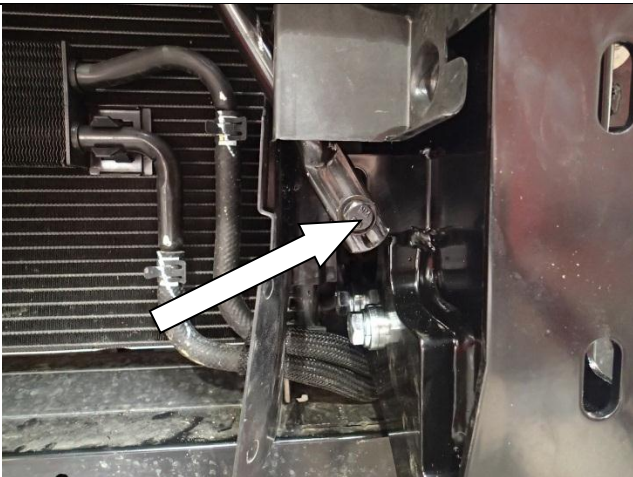
40. Attach the mount brackets to the mount braces using M12 x 65 hex bolts, spring washers, flat washers and flange nuts through the side holes and M12 x 40 hex bolts, spring washers, flat washers and flange nuts through the bottom front hole. Leave loose at this stage.
41. On each side, pull the braces as close to the mount bracket as possible and tighten the bolts into the chassis followed by the front bolt followed by the side bolts to the above specified torque.
42. Repeat on the other side of the vehicle.



M12 X1.25 - 96 Nm.



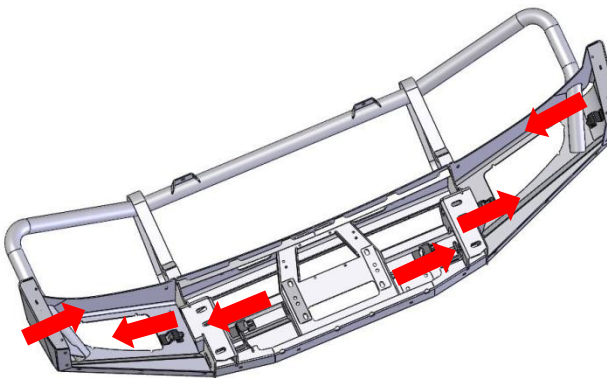
M10 - 44 Nm.



43. Attach the front cross braces to the mount brackets using M8 x 25 hex bolts, spring washers, flat washers and flange nuts and tighten to the specified torque.
44. Repeat on the other side of the vehicle.



M8 - 22 Nm.

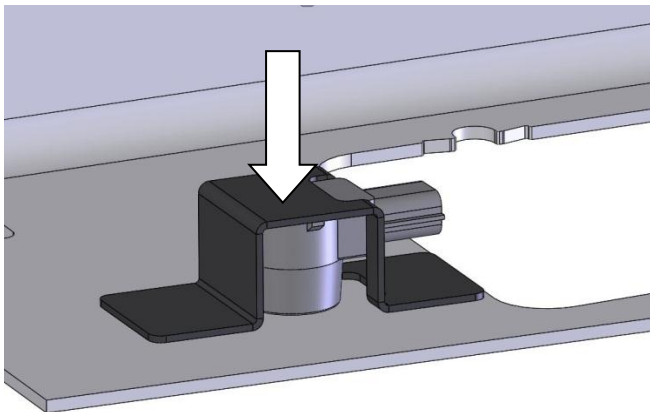
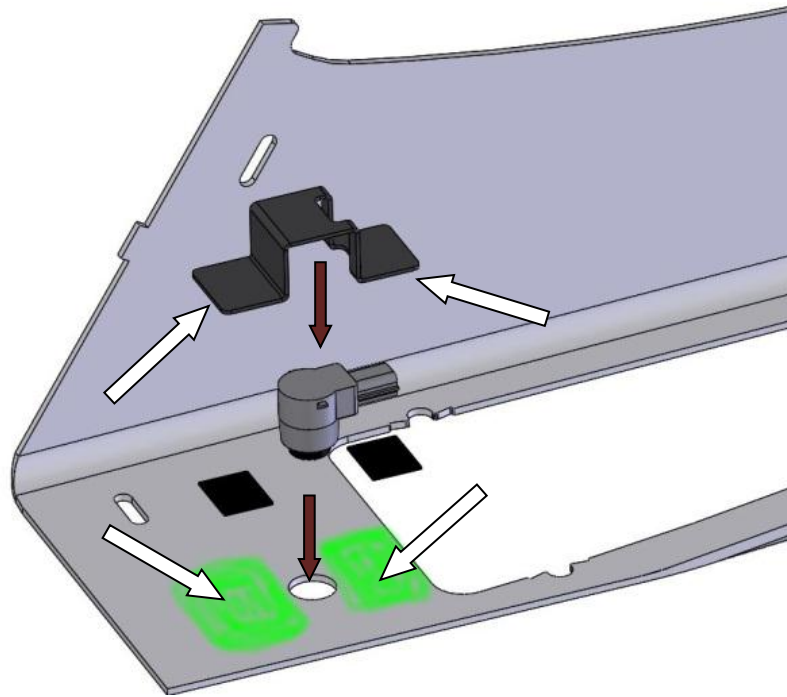


If fitting parking sensors continue from here. If not proceed to step 54.

45. Carefully remove the parking sensor loom from the bumper and set aside. Carefully remove the parking sensors from the loom ensuring you have all of the clear rubber grommets that fit between the sensors and the bumper holes.

Note: When fitting parking sensors to the bar it is important that they are installed in the correct orientation. The arrows to the left show the direction the plug end of the sensors should face.

FITTING PROCEDURE

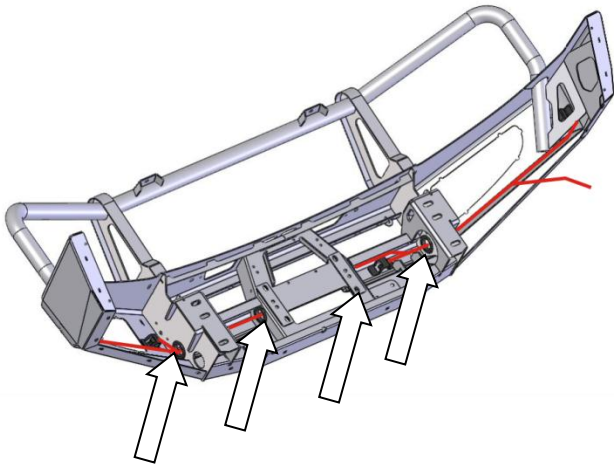


For each parking sensor:

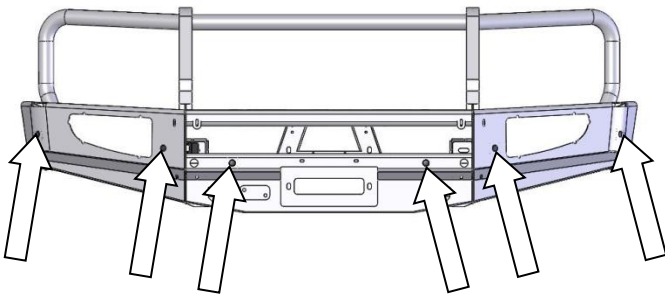
46. Ensure both the parking sensor bracket and mating area of the bull bar are thoroughly cleaned with soap and water and completely dried off.
47. Using the priming pen supplied, prime the mating faces of both the bracket and the bar.
48. Remove the backing tape from one side of the double sided tape pads and apply to each of the mating faces of the bracket.
49. Ensuring the clear rubber grommet remains in place, press the parking sensor into the hole in the bar facing the correct direction.
50. Remove the remaining backing tape from the tape pads and attach the bracket to the bar as shown in the picture to the left.
51. Apply pressure to the bracket for at least 60 seconds.

Note: There are 4 x brackets with flat mounting surfaces. These are for the 4 inner most sensors. The 2 x with bent mounting sensors are for the wing corners.

FITTING PROCEDURE

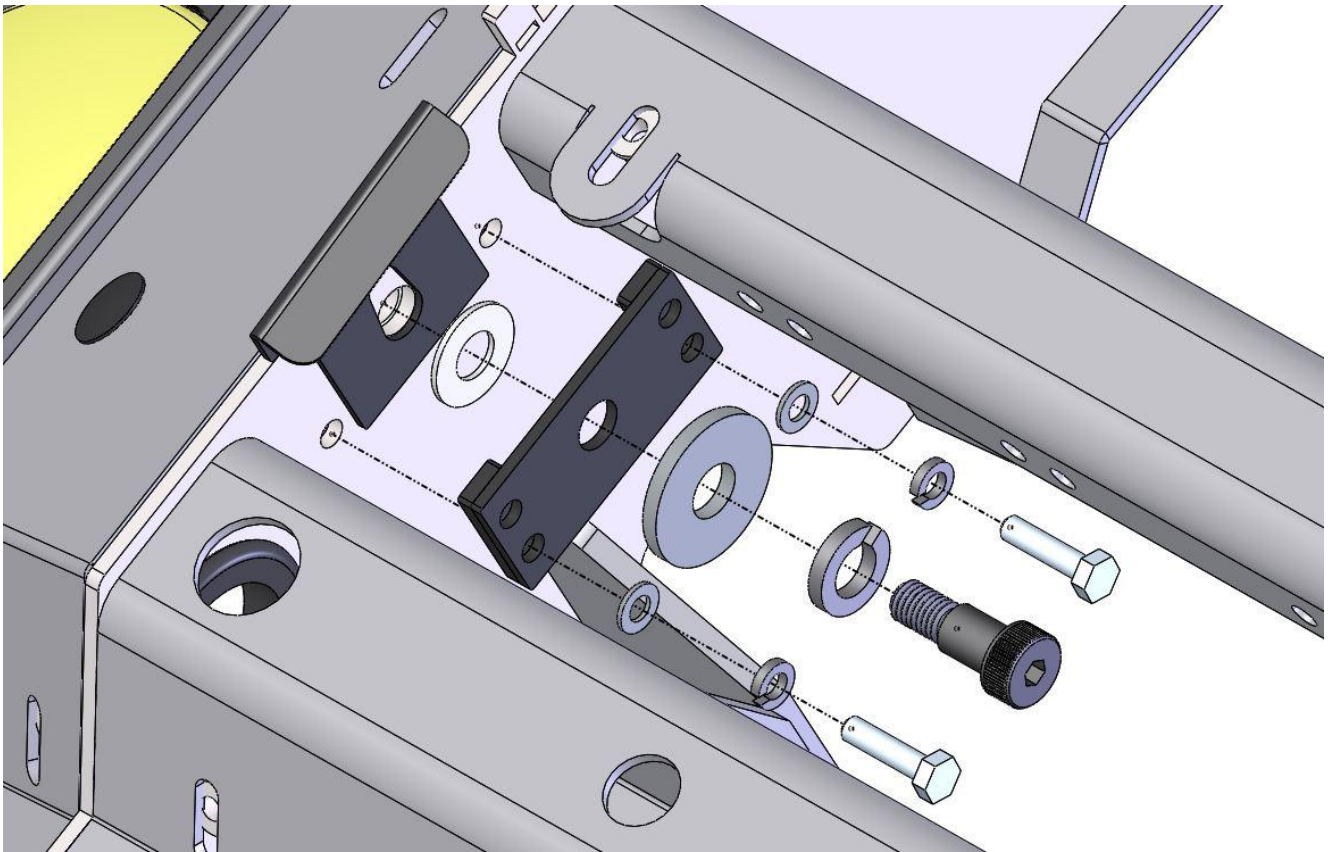


52. Fit 4 x rubber grommets to the holes on the inside of the bar.
53. Route the parking sensor loom starting at the left hand most sensor moving to the right hand side.

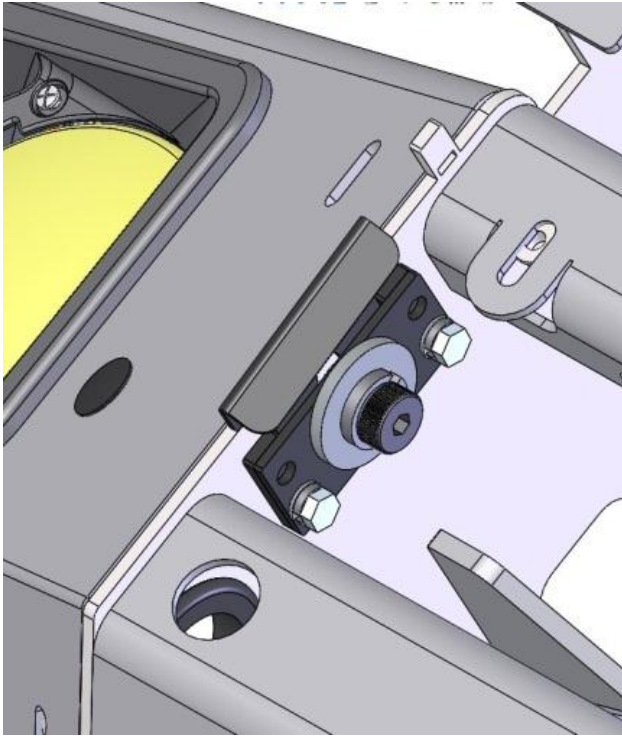


54. If not fitting parking sensors to the bar, fit the 6 plastic plugs to the bar into the parking sensor holes.


Impact absorber fitment (step 55)




FITTING PROCEDURE



55. Beginning with the right hand side of the vehicle, assemble the impact absorber as per the exploded view diagram shown on page 13 including 2 x M6 flange nuts and 1 x M10 flange nuts hidden in the view. Please see the component list at the start of these instructions for the list of fasteners required. The assembled item should resemble the picture to the left.
56. Once assembled, tighten all fasteners to the specified torque.

 M10 - 44 Nm.

 M6 - 9 Nm.

Warning: If the fasteners are not tightened to the correct torque setting the impact absorber may not perform correctly in the event of a collision.

57. Repeat on the other side of the vehicle.



58. Assemble and install combination light surrounds (p/n 3163015) as per instructions no. 3786421 supplied with surround kit. Note: Optional fog lamps can be installed at this point as per fitting instruction no. 3783315 supplied with fog lamp kit no. 6821201.

Caution: Cable tie all cables together and keep all cables clear of sharp edges and moving parts.

If the vehicle is fitted with adaptive cruise control continue from here using radar kit **3550110**. If not proceed to step 59:

WINCH FITMENT (if not fitting winch proceed to step 91)

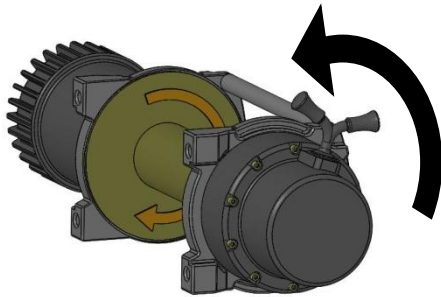
This bull bar has been designed to fit a range of Warn, Magnum, Bushranger and Smittybilt winches up to a capacity of 10000lbs capacity. It is important that a winch of a greater capacity is not fitted even if it physically fits into the bar. Failure to comply could result in damage to the bar and / or personal injury. Please read and take note of the owner's manuals supplied with your winch before proceeding. The following steps vary depending on which winch you are fitting.

In the case of Warn Zeon winches, a supplementary kit (Warn p/n 86695) is required. In the case of Smittybilt supplementary kit 3500580 is required.

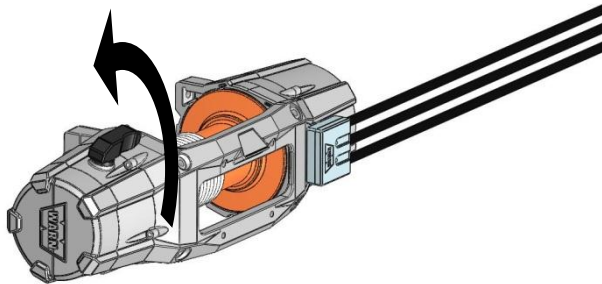
If fitting synthetic rope supplementary kit 3540060 is required.

For ALL winches ARB winch install kit 3540050 is required.

59. Winch Preparation



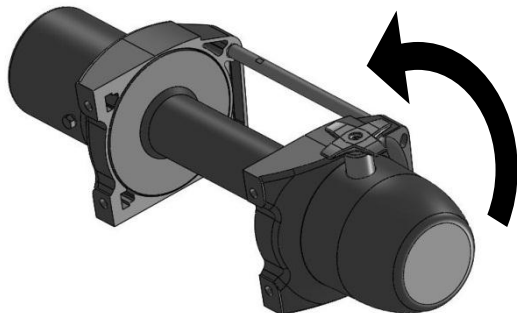
Warn / Magnum /Smittybilt winches: Undo the screws in the gearbox end of the winch. Carefully slide the gearbox away from the winch only until it is able to rotate. Rotate the gear box anti-clockwise 72° and replace screws.



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 relocation kit to the winch only. Remove the control pack and remote socket from the control box and set aside.

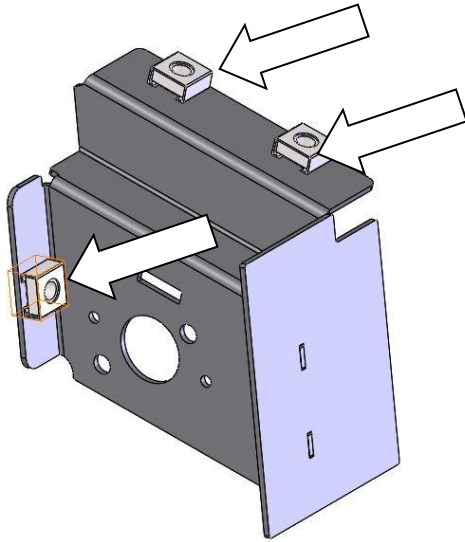


Bushranger winches: Undo the screws in the gearbox end of the winch. Carefully slide the gearbox away from the winch only until it is able to rotate. Rotate the gear box anti-clockwise 90° and replace screws.

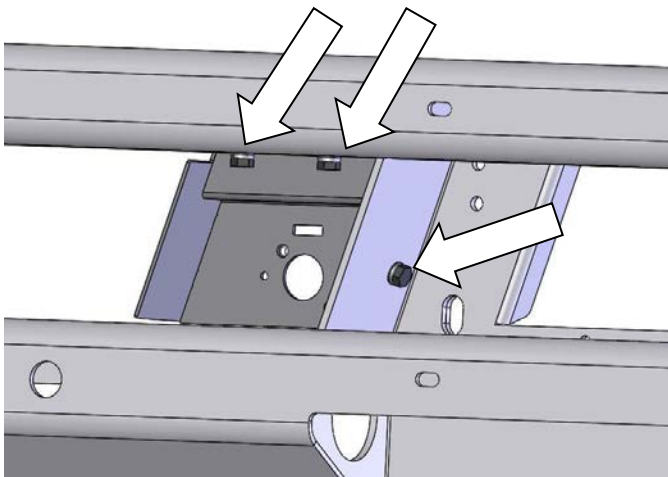
Remove the control pack and remote socket from the control box and set aside.

FITTING PROCEDURE

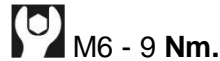
If fitting a Bushranger or Zeon winch continue from here. If not continue to install the winch as per fitting instructions 3787989 supplied with kit 3540050. The following pictures show the Zeon plug and plug cover. The same steps apply for fitment of Bushranger winches.



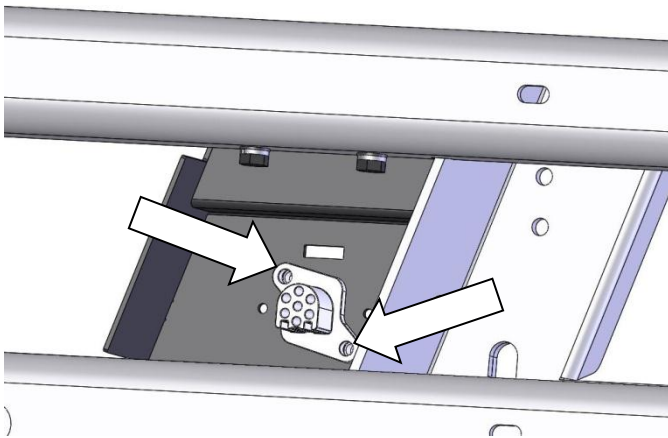
60. Fit M6 cage nuts to the plug mount bracket.



61. Attach the mount bracket to the bar using M6 hex bolts, M6 spring washers and M6 flat washers.



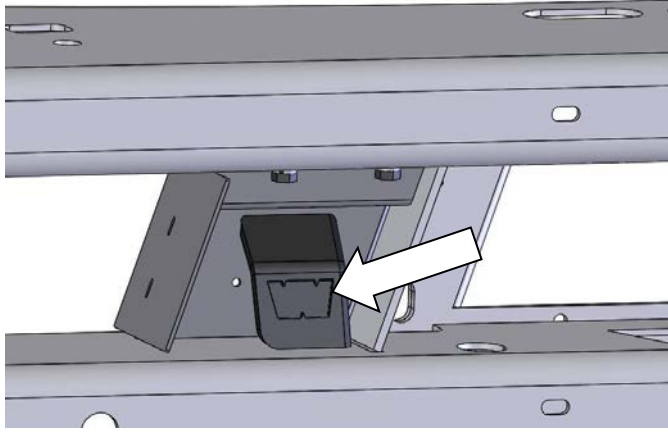
M6 - 9 Nm.



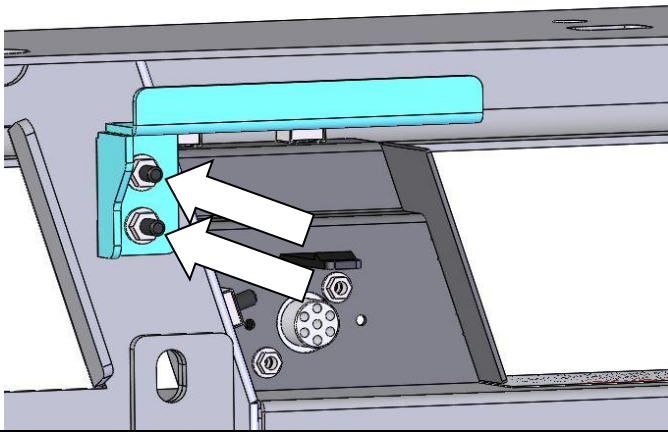
62. Attach the remote socket to the bracket using the screws removed from the factory control box. In the case of Zeon, use the M5 flange nuts supplied with the bar kit.

Note: 2 sets of holes have been cut to match the 2 different sockets.


FITTING PROCEDURE

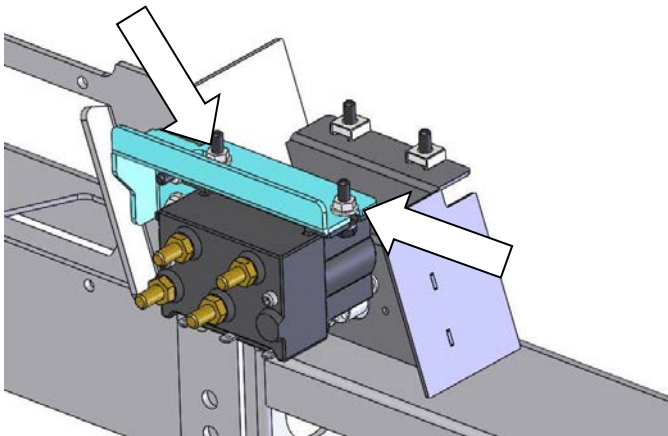


63. Attach the socket cover to the socket.



64. Attach the control pack mount bracket to the bar as shown using M6 hex bolts, M6 spring washers and M6 flat washers and M6 flange nuts.


 M6 - 9 Nm.



65. Attach the control pack to the bracket as shown using M6 hex bolts, M6 spring washers and M6 flat washers and M6 flange nuts.

66. Connect the wires from the socket to the control pack.

67. Fit the winch to the bar as per fitting instructions supplied with kits 3540050, 3500580 and 3540600 as required.

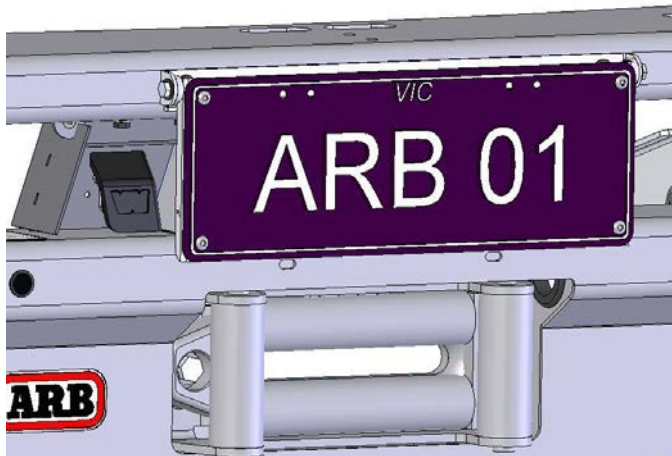
 M6 - 9 Nm.

FITTING PROCEDURE



68. If fitting a winch and a radar sensor attach the folding license plate bracket supplied in kit 3540050 to the lower pan using M6 SS button head screws, M6 SS flat washers and M6 flange nuts.

Or



69. If fitting a winch only attach the folding license plate bracket supplied in kit 3540050 to the upper pan using M6 SS button head screws, M6 SS flat washers and M6 flange nuts.

Or

70. If no winch is fitted attach the license plate directly to the upper pan using M6 SS button head screws, M6 SS flat washers and M6 flange nuts.



71. With the assistance of another person or a lifting device, lift the bar onto the car so that the mount faces of the bar align with the faces of the mount brackets.
72. Attach the bar to the mounts using M12 hex bolts, M12 spring washers and M12 flat washers, brace plates and M12 flange nuts. Leave loose at this stage

Note: Access to the bolts can be made through the gap between the pans and the holes cut in the lower pan.



73. Adjust the bar so that it is central to the vehicle and has an even gap of between 8-14mm between the rear edge of the bar and the vehicles bumper.

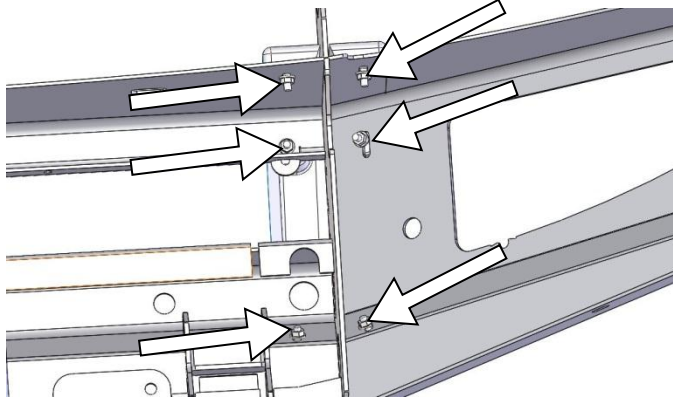
Note: Fore / Aft position and angular adjustment can be made by placing the required quantity of packer plates between the bar and the mount brackets.

When you are happy with the position of the bar, tighten the fasteners to the required torque setting.




M12 X 1.25 - 96 Nm.

FITTING PROCEDURE

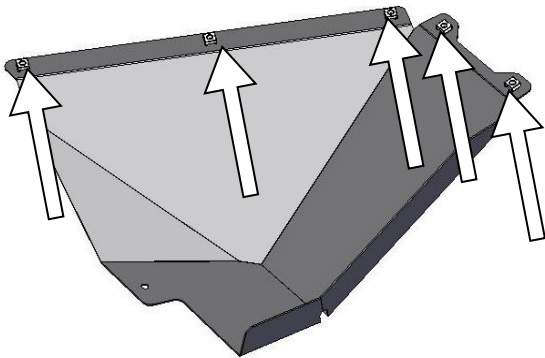


74. Attach the buffers to the bar using M6 flange nuts.

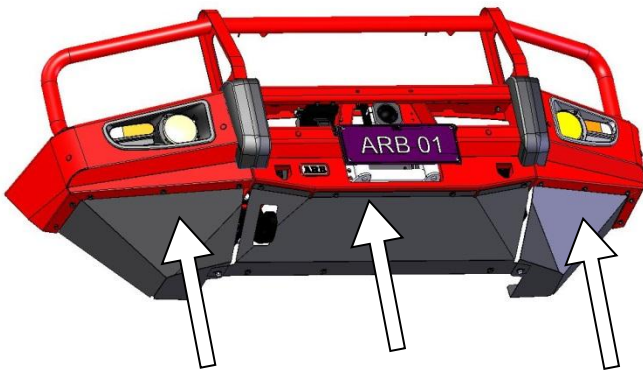
 M6 - 4 Nm.

Warning: Do not over tighten the nuts or you risk pulling the studs from the buffers.

75. Connect the indicator / clearance lights to the looms installed earlier as well as the parking sensors, radar, fog lights and winch if fitted.




76. Add M6 cage nuts into the top surface of the RH and LH under wing panels as shown.




77. Fit the centre panel to the bar and the vehicle (sandwiching the OEM under panel to the cross member) using M6 hex bolts, M6 spring washers and M6 flat washers.

78. Fit the under wing panels to the bar using M6 hex bolts, M6 spring washers and M6 flat washers.

79. Attach the under wing panels to the centre panel using M8 hex bolts, M8 spring washers, M8 flat washers and M8 flange nuts.

 M6 - 9 Nm.

 M8 - 22 Nm.



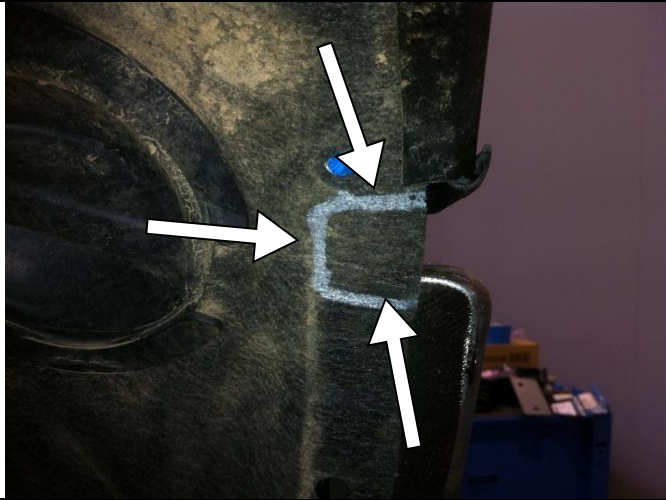
80. On each side of the vehicle, hold the inner guard against the wing and under wing panel.

81. Using a marker or paint pen, mark a line along the bottom edge of the under wing panel on the inner guard.

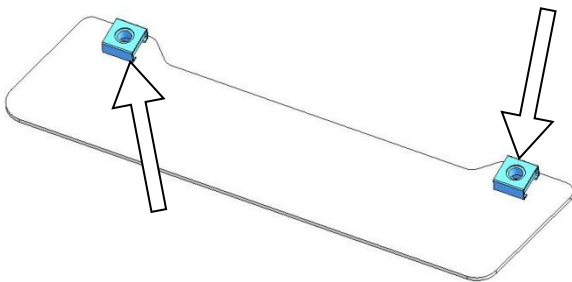
82. Using a saw or sharp knife, carefully cut along the marked line and remove the bottom section of the inner guard.

Warning: Take care when cutting the inner guards to cut away from yourself to prevent injury.

FITTING PROCEDURE

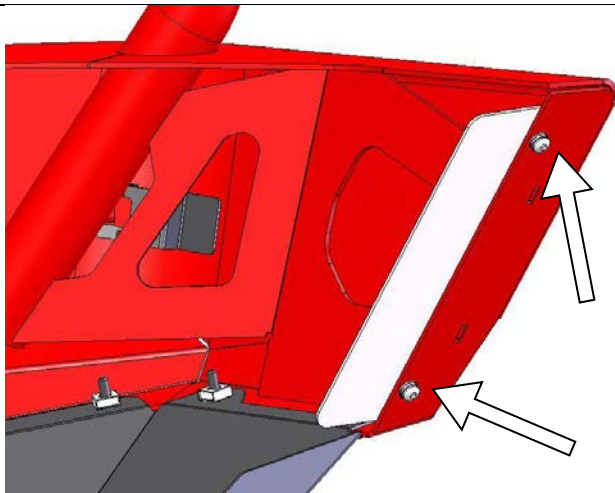


83. On the inner guard of each side of the vehicle, mark a line as shown just below the top edge of the bulbar, in board approximately 25mm and just above the bottom edge of the trimmed bumper bar.
84. Using a saw or sharp knife, carefully cut along the marked line and remove the square shaped piece.
85. Tuck the inner guard in behind the bull bar wing and under wing panel.




86. Place M6 cage nuts into each of the inner guard retention plates.

Note: RH side shown, LH side opposite.



87. Attach the inner guard retention plates to the bulbar as shown using M6 button head screws, M6 spring washers and M6 flat washers.

Note: Both stainless steel and black hardware have been supplied to fit the inner guard retention plates. For darker coloured bars, please use the black hardware and stainless steel for light coloured bars.

 M6 - 9 Nm.



88. Place the tow warning label onto the top surface of the lower pan as shown.

Warning: This label must be fitted and cannot be removed.

FITTING PROCEDURE

ONCE BAR IS FITTED:

- ◆ Ensure all bolts are tensioned correctly
- ◆ All wiring is clear of sharp edges or moving surfaces and secured properly
- ◆ Piping is secured well away from sharp or moving components
- ◆ Check operation of winch if fitted
- ◆ Check all wiring and connections to turn signal lamps, sensors, headlamp washers etc. are functioning correctly

FITTED PRODUCT

