



FITTING INSTRUCTIONS

Part Number: **3450480**

Product **DELUXE BULLBAR**

Description:

Suited to **JEEP GRAND CHEROKEE WK2 2017 ON**
vehicle/s: **(EXCLUDING SRT, TRACKHAWK, S-OVERLAND)**

Optional Kits: **Winch Install Kit: 3540050**
Radar Install Kit MY17: 3550110
Radar Install Kit MY18 ON: 3550130
ARB LED Fog Light Kit: 3500890
Wiring Loom for LED Fog Lights: 3500520

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 Carnuba 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	MULTI-TOOL / 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
	4581082	2	WASHER FLAT, M6 x 19 x 1.6 BZ
	6151480	6	NUT FLANGE M12 X 1.25 ZP
	4581011	6	WASHER FLAT, M12 x 27 x 4
	4581063	4	WASHER FLAT, M8 x 25 x 3 GOLD ZN
	6151094	2	BOLT HXHD M12 X 1.25 X 30 CL8.8 ZP
	6151096	4	BOLT HXHD M12 X 1.25 X 40 CL8.8 ZP
	6151022	4	BOLT M8 x 1.25 x 25 GD 8.8 ZP
	6151550	2	BOLT M6 x 1.25 x 25 GD 8.8 BP
	4681454	2	BRACE CHASSIS BASE WK2 GC
	6821152	2	TURN SIGNAL LOOM
	6151357	4	BOLT SEMS M10 X 30 ZP GD 8.8
	3789972	1	TEMPLATE TRIM/CUT 17ON JEEP GC
PARKING SENSORS	EG50	4	GROMMET RUBBER
	3500970	6	SENSOR HOUSING ASSEMBLY
IMPACT ABSORBERS	3194531R	1	PLATE IMPACT SLIDE WK2 JEEP GC
	6151207	4	BOLT HX HD M6 x 1.0 x 25 GR8.8 TZP480
	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
	4581011	6	WASHER FLAT M12 X 27 X 4
	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
	3163015	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
	6522927L	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
	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
WINCH FITMENT	6151300	14	NUT CAGED M6 2.6-3.5
	3759183	1	BRACKET WINCH SOCKET
	EG50	2	GROMMET RUBBER
	6151128	6	NUT FLANGE M6 x 1.0 ZP
	6151550	5	BOLT HXHD M6 x 1.0 x 25 GR8.8 BTZ
	6151300	3	NUT CAGED M6 2.6-3.5
INNER GUARD RETENTION	4584295	5	WASHER FLAT M6 X 12 X 1.3 BLK ZN
	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
MISC	3194584	2	PLATE INNER GUARD RET WK2
	180302	12	CABLE TIE 4.8 X 180 MM BLACK
	2125781	1	LABEL TOW WARNING
FIT LICENCE PLATE	6191020	2	PINCH WELD 400mm NARROW LONG
	6151128	2	NUT FLANGE M6 x 1.0 ZP
	4581304	2	WASHER FLAT, M6 SS
	6151256	2	SCREW BTN HD M6 x 16 SS

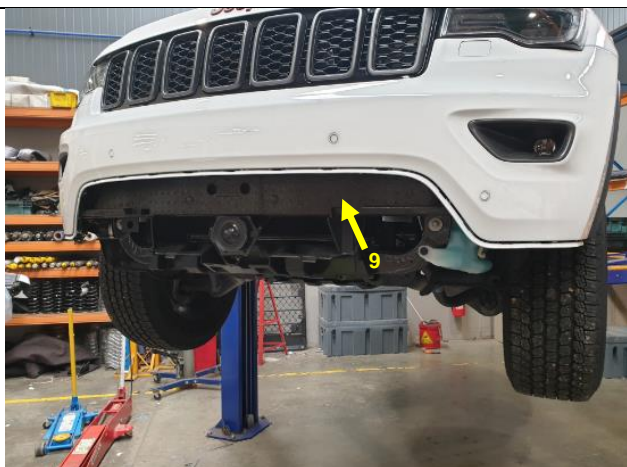
FITTING PROCEDURE



1. Remove the 3 bolts and 1 plug holding the stone shield to the cross beam and discard.
2. Remove the 2 bolts holding the stone shield to the wheel arch inner guards and discard. Allow the stone shield to hang down.
3. Remove the 2 bolts holding the steel bash plate to the cross member.
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 scrivets and screws securing the inner guards to the bumper bar.
8. Carefully unclip the plastic wheel arch trim



9. Remove the foam bumper-packer and discard.
10. Carefully remove the parking sensors and loom from the bumper and set aside in a safe place.
11. Label each parking sensor position. Leave sensors plugged into the loom
12. Unplug Fog lamps if fitted



Radar Removal:

13. Disconnect radar plug.
14. Unclip outer shield
15. Unclip the radar from the bracket
16. Remove bracket from vehicle and set aside all components

WARNING: TAKE CARE WHEN HANDLING THE RADAR SENSOR

FITTING PROCEDURE



17. Affix the template provided on the bumper as shown
18. Place masking tape on the bumper (under the template) along the trim line and mark the trim line with a permanent marker.
19. Continue the trim line along the plastic wheel arch trim



20. Repeat on the other side of the vehicle



21. Run masking tape above and below the bumper style line as shown leaving a 1-2mm gap. This gap will be used as the trim line

The trim line from the cutting template should line up with the style line:



22. The trim line should look like this and follows the bumper style line
23. Using an oscillating multi-tool, carefully cut along the trim line, ensuring the upper part of the bumper does not get scratched. Discard lower section of bumper



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



Trimmed Bumper



24. Use a smooth file or sandpaper to carefully remove all sharp edges and burrs from the trimmed bumper
25. Fit pinch weld to the end of the bumper cut on both sides. Cut a notch in the pinch weld where the wheel arch trim meets the bumper as shown



26. Remove the front crash beam and discard.
27. *If fitted, retain the 2 nuts holding the suspension air compressor to the crash beam.*

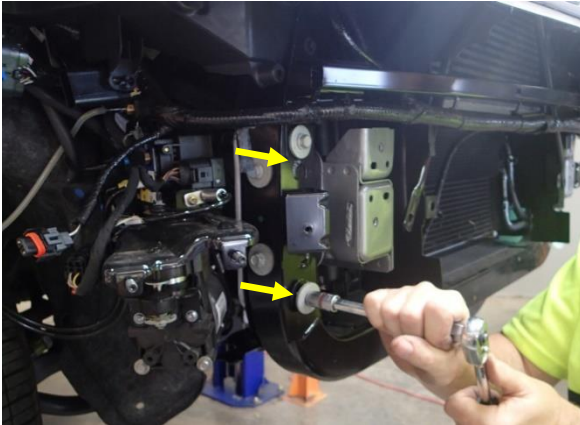
Note: Leave the support braces connected to the vehicle. (Bumper and grille removed for clarity)



28. Remove and discard the centre plastic bracket.



29. Remove any OEM tow points if fitted.



If the vehicle is fitted with QuadraLift suspension continue from here. If not proceed to step 32

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.

FITTING PROCEDURE



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.

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

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.



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.

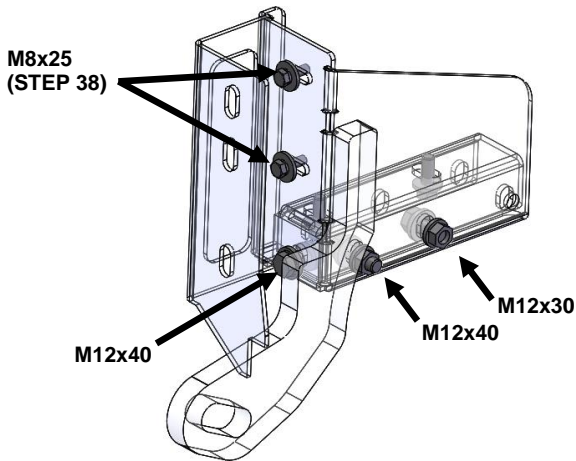


38. Attach the mount brackets to the chassis ends using 2 x M8 x 25 hex bolts and flat washers on each side. Leave loose at this stage. *See diagram on next page*


- The drivers side has the tow hook


39. Repeat on the other side of the vehicle.

FITTING PROCEDURE



40. Attach the mount brackets to the mount braces using M12 x 40 hex bolts, flat washers and flange nuts through the side holes and M12 x 40 hex bolts, flat washers and flange nuts through the bottom front hole. Leave loose at this stage.
41. On each side, pull the braces as far from the radiator as possible using a g-clamp and tighten the bolts into the chassis followed by the front bolt, followed by the side bolts to the below specified torque.
42. Repeat on the other side of the vehicle.


 M12 X1.25 - 96 Nm.

 M10 - 44 Nm.

Note: The M12x30 bolts must be used in the position shown in the diagram as the M12x40 bolts will hit the radiator



43. Attach the front cross braces to the mount brackets using M6 x 25 hex bolts, flat washers and flange nuts and tighten to the specified torque.
44. Repeat on the other side of the vehicle.
45. Use a cable tie to secure the plastic air deflector to the brace on each side.

 M6 - 9 Nm.

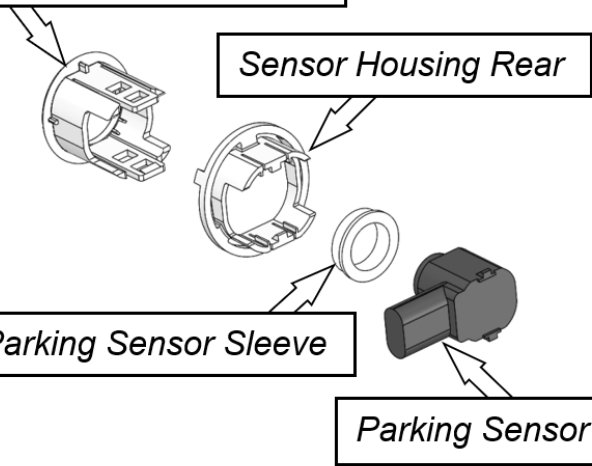


Sensor Housing Front

Sensor Housing Rear

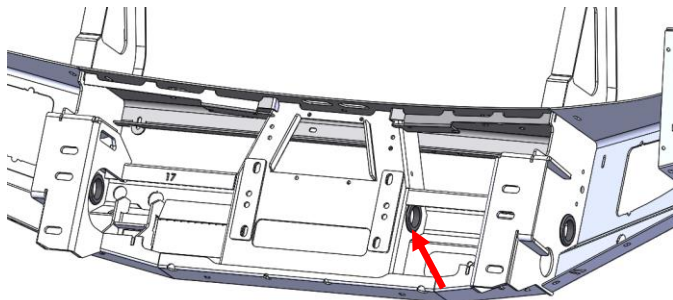
Parking Sensor Sleeve

Parking Sensor

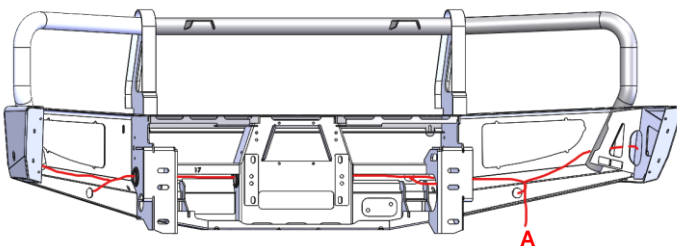


Parking Sensor Installation (All models)

46. Install the 6x parking sensor housings into the bar. Set aside the silicone sleeves that come with the ARB fitting kit. *Do not use the OE silicone sleeves that were originally on the sensors*



47. Fit 4x 50mm rubber gromets as shown. These are required for the parking sensor wiring harness



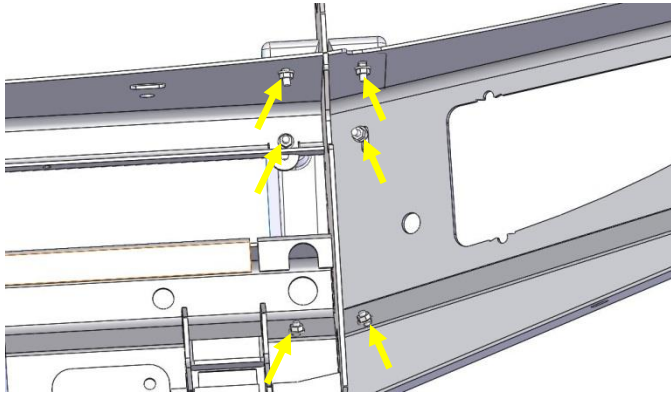
48. Starting at point A, rout the wiring harness (with parking sensors still connected) through the bar as shown. Be careful not to scratch the front faces of the parking sensors. The harness plug must be at point A when finished.



49. Fit the ARB supplied silicone sleeves on the parking sensors and clip the sensors into the housings. *Ensure that the silicone sleeves don't get caught on the housing.*

(Sensor positions should look as shown)





50. Assemble and install combination light surrounds (p/n 3163015) as per instructions no. 3786421 supplied with surround kit.

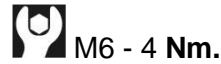
Note: Optional fog lamps can be installed at this point as per fitting instruction no. 3783315 supplied with fog lamp kit no. 3500890.

51. Fit the Indicator assemblies as shown.

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



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



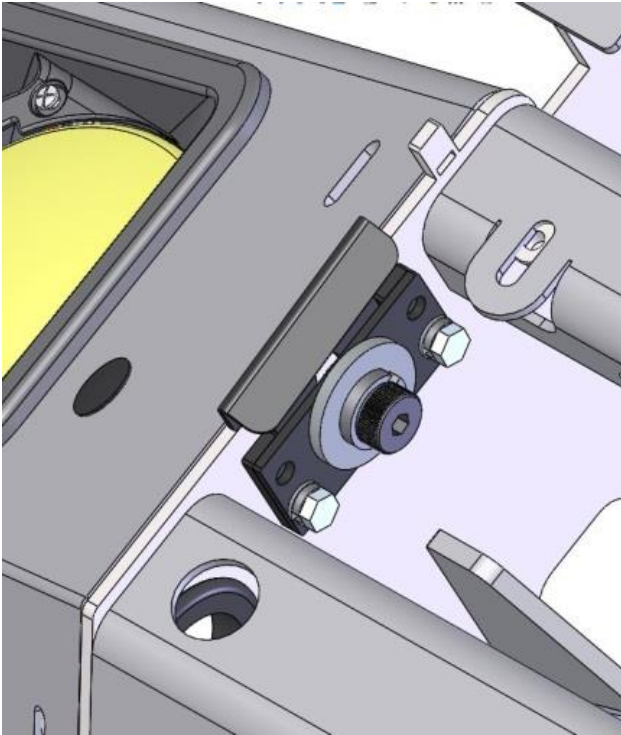
Warning: Do not over tighten the nuts or you risk pulling the studs from the buffers.



53. Install the adaptive cruise control radar using the instructions provided with the following install kits:


- MY17: 3550110
- MY18 ON: 3550130


FITTING PROCEDURE



54. Beginning with the right-hand side of the vehicle, assemble the impact absorber as per the exploded view diagram shown below 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.

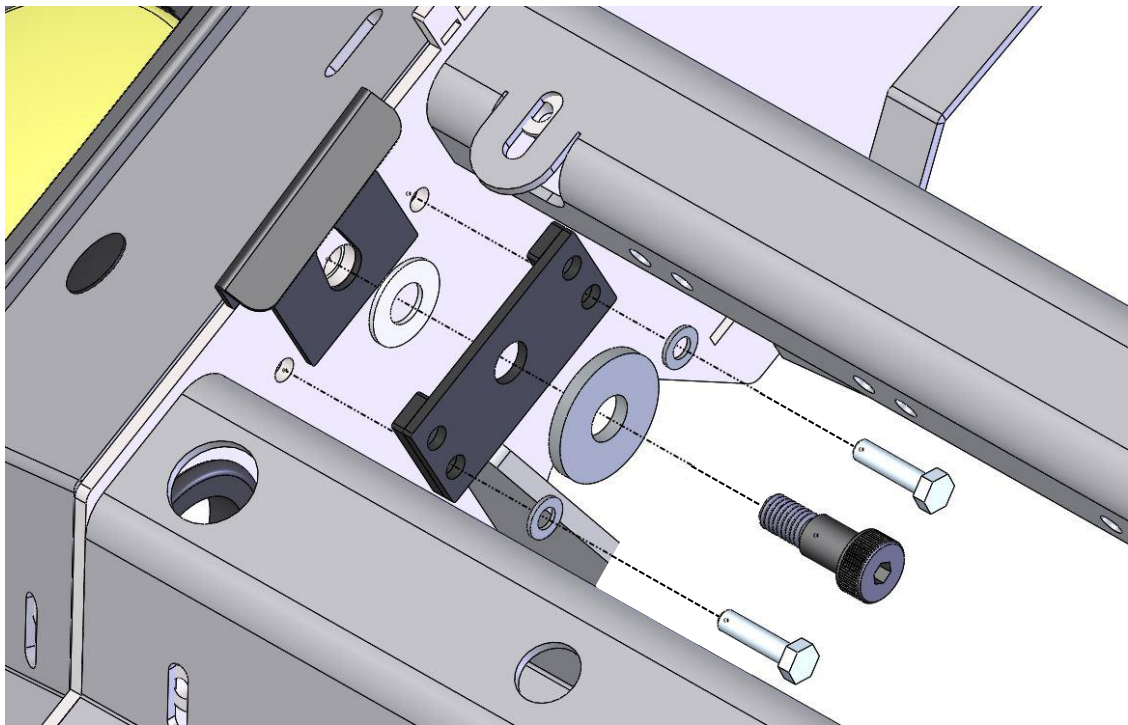
55. Once assembled, tighten all fasteners to the specified torque.

 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.

56. Repeat on the other side of the vehicle.



WINCH FITMENT (if not fitting a winch proceed to step 66)

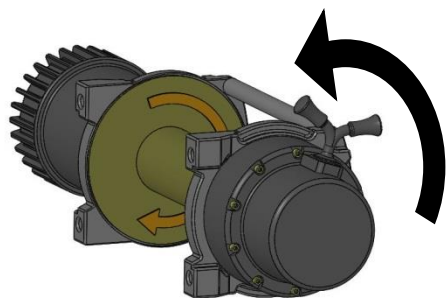
This bull bar has been designed to fit a range of Warn, Magnum, Bushranger and Smittybilt winches up to a capacity of 10000lbs capacity. It is important that a winch of a greater capacity is not fitted even if it physically fits into the bar. Failure to comply could result in damage to the bar and / 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.

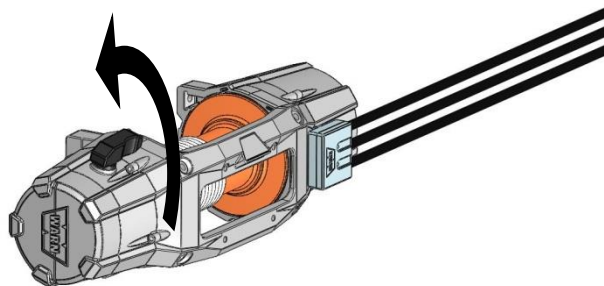
If fitting synthetic rope supplementary kit 3540060 is required.

For ALL winches ARB winch install kit 3540050 is required.

57. Winch Preparation



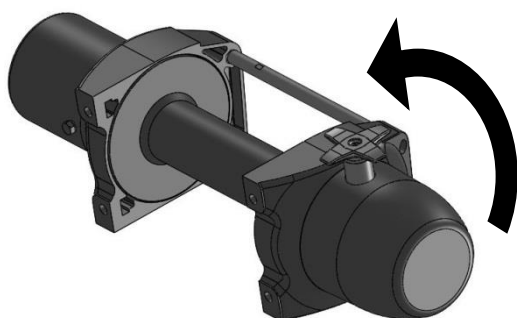
Warn / Magnum / Smittybilt winches: Undo the screws in the gearbox end of the winch. Carefully slide the gearbox away from the winch only until it is able to rotate. Rotate the gear box anti-clockwise 72° and replace screws.



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.

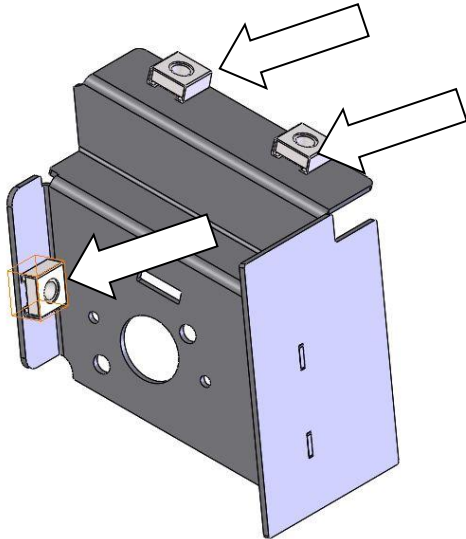


Bushranger winches: Undo the screws in the gearbox end of the winch. Carefully slide the gearbox away from the winch only until it is able to rotate. Rotate the gear box anti-clockwise 90° and replace screws.

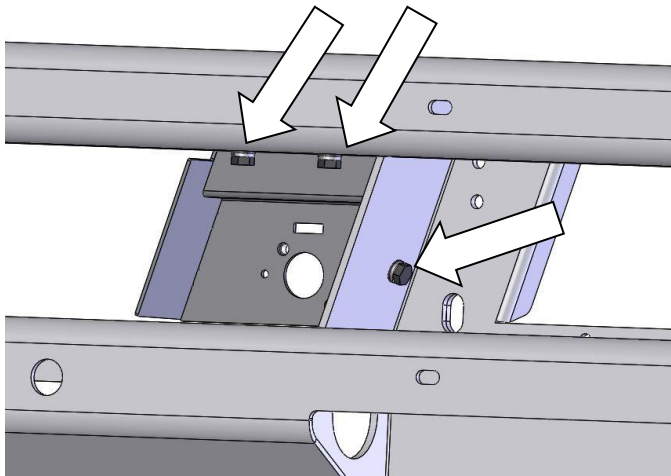
Remove the control pack and remote socket from the control box and set aside.

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.

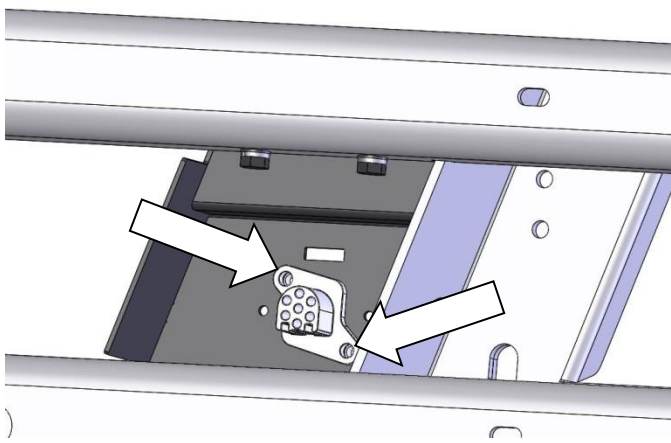


58. Fit M6 cage nuts to the plug mount bracket.



59. Attach the mount bracket to the bar using M6 hex bolts and M6 flat washers.

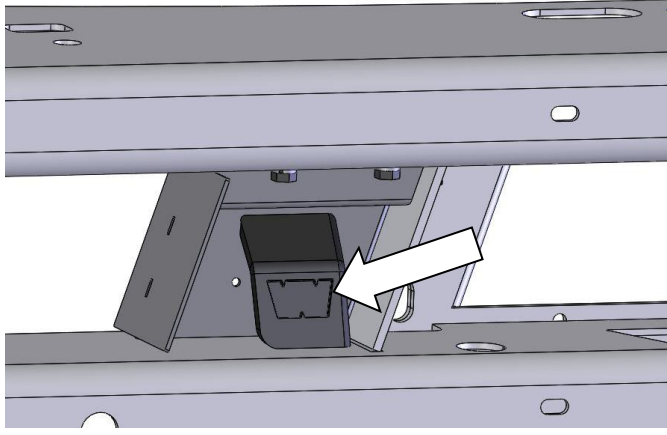
 M6 - 9 Nm.



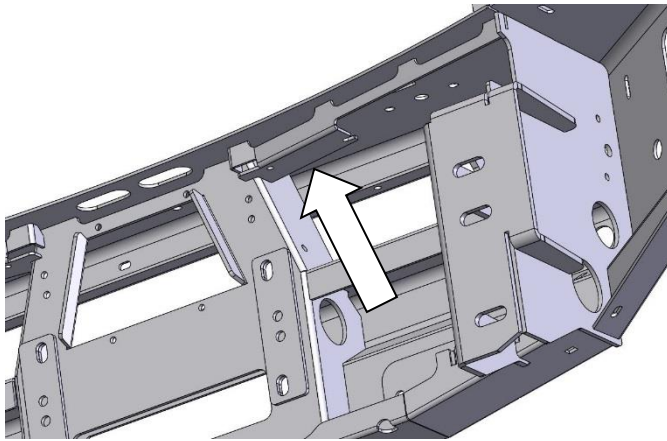
60. Attach the remote socket to the bracket using the screws removed from the factory control box. In the case of Zeon, use the M5 flange nuts supplied with the bar kit.

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


FITTING PROCEDURE

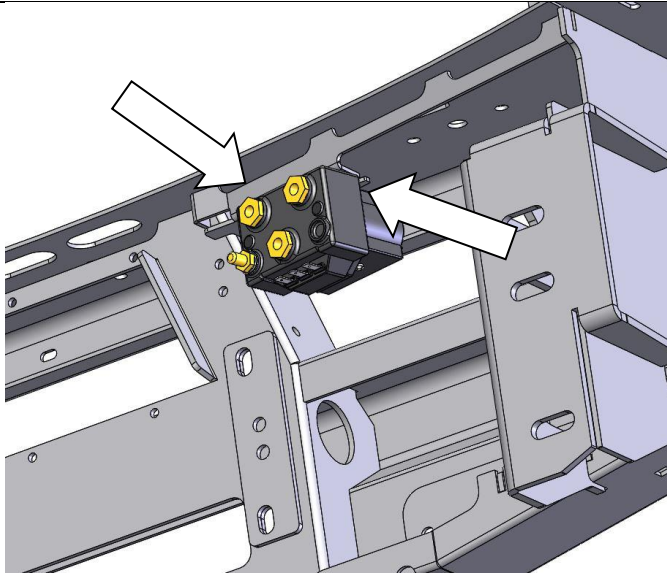


61. Attach the socket cover to the socket.



62. The control pack mounts to the bar here as shown using M6 hex bolts, M6 flat washers and M6 flange nuts.


 M6 - 9 Nm.



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

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

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

 M6 - 9 Nm.



66. If fitting a winch, 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

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



67. 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.

68. Attach the bar to the mounts using 3x M12x40 hex bolts, M12 flat washers, brace plates and M12 flange nuts on each side. 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.

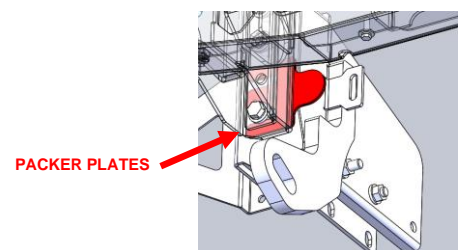


69. Adjust the bar so that it is central to the vehicle and has an even gap of between 8-15mm between the rear edge of the bar and the vehicles bumper.

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.

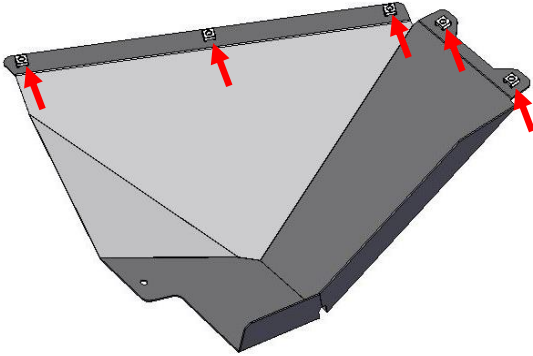
When you are happy with the position of the bar, tighten the fasteners to the required torque setting.

 M12 X 1.25 - 96 Nm.

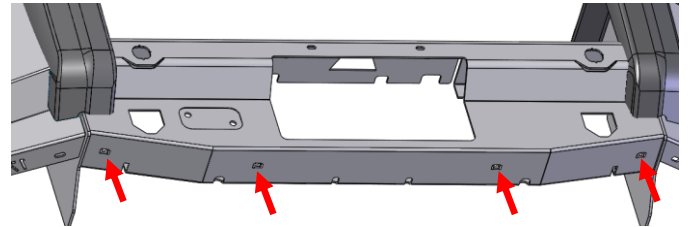




70. Reconnect the adaptive cruise control radar loom, parking sensor loom, turn signal lamps, and fog lights (if fitted).
71. Using cable ties provided secure all wiring neatly away from any sharp edges.




72. Fit 5x M6 cage nuts into the top surface of the RH and LH under wing panels as shown.
73. Fit 4x M6 cage nuts into the lower section of the bar




74. Refit the OEM under panel as shown, leaving it loose at this stage



75. Fit the centre panel to the bar and the vehicle (sandwiching the OEM under panel to the cross member) using M6 hex bolts and M6 flat washers.
76. Fit the under-wing panels to the bar using M6 hex bolts and M6 flat washers.
77. Attach the under-wing panels to the centre panel using M8 hex bolts, M8 flat washers and M8 flange nuts.

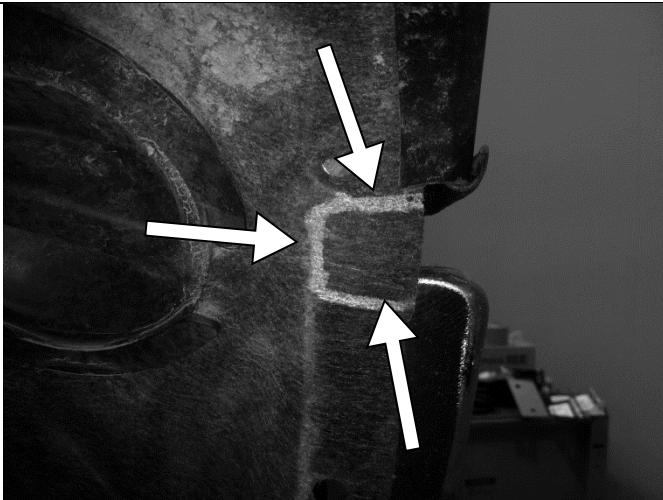
 M6 - 9 Nm.

 M8 - 22 Nm.

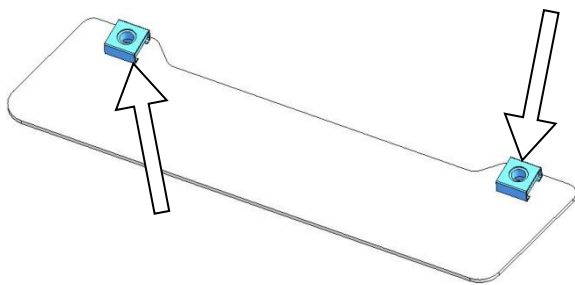


78. On each side of the vehicle, hold the inner guard against the wing and under wing panel.
79. Using a marker or paint pen, mark a line along the edge of the under-wing panel on the inner guard.
80. Using a saw or sharp knife, carefully cut along the marked line and remove the bottom section of the inner guard.

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



81. 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.
82. Using a saw or sharp knife, carefully cut along the marked line and remove the square shaped piece.
83. Tuck the inner guard in behind the bull bar wing and under wing panel.



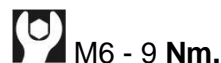
84. Place M6 cage nuts into each of the inner guard retention plates.

Note: RH side shown, LH side opposite.



85. Attach the inner guard retention plates to the bullbar as shown using M6 button head screws and M6 flat washers.

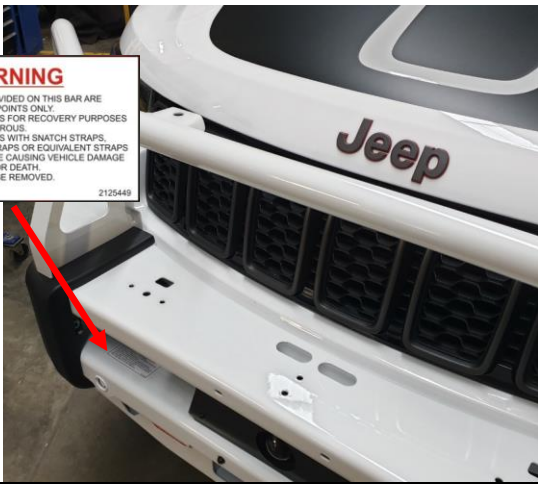
Note: Both stainless steel and black hardware have been supplied to fit the inner guard retention plates. Either may be used depending on vehicle colour



WARNING

*THE TOWING EYES PROVIDED ON THIS BAR ARE INTENDED AS TOWING POINTS ONLY.
*THE USE OF THESE EYES FOR RECOVERY PURPOSES IS POTENTIALLY DANGEROUS.
*THE USE OF THESE EYES WITH SNATCH STRAPS, ELASTIC RECOVERY STRAPS OR EQUIVALENT STRAPS COULD LEAD TO FAILURE CAUSING VEHICLE DAMAGE AND POSSIBLE INJURY OR DEATH.
*THIS LABEL MUST NOT BE REMOVED.

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

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

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.
- Misalignment of parking sensor to housing in bull bar may cause malfunction.
- Test operation of parking sensors after fitment.

Note:

Do not add any accessories to the Bull Bar on or around the sensors, this may affect the function of the sensors.

Sensors may not function well under the following conditions;

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

FITTED PRODUCT – 2019 Trailhawk Model Shown

