

Part Number:	3948020
Product Description:	SAHARA BAR
Suited to vehicle/s:	ISUZU DMAX
Optional	5148020 Sahara Top Tube Kit
Fitting Kit:	3540050 Winch Install Kit
	3500640 ARB AUX Fog Light Adaptor
	3500530 ARB AUX Fog Light Loom (non-factory fog lamp vehicles)
	3500680 Fog Lamp Housing Clear Lens Kit
	3500590 Fog Light Kit (LH&RH Lights)

# 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**

42-44 Garden St Kilsyth, Victoria AUSTRALIA 3137 Australian enquiries North & South American enquiries Other international enquiries

Corporate Head Office Tel: +61 (3) 9761 6622 Fax: +61 (3) 9761 6807

> sales@arb.com.au sales@arbusa.com exports@arb.com.au

## www.arb.com.au

Last Rev Date: 18/08/2014

Page 1 of 24

Fitting instructions# 3789275

# **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 Canuba 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.

## Important electrical system information

If the vehicle is fitted with factory fog lights check that the fog lamps are rated at or above 55 watts. If rated below 55 watts to prevent overloading the fog lights must be activated through relays. Relay looms are not provided within this kit to wire these lights. Use 3500530 harness for this scenario.

## FITTING REQUIREMENTS

## **REQUIRED TOOLS FOR FITMENT OF PRODUCT:**

BASIC TOOL KIT	ELECTRIC DRILL & Ø4, Ø10, Ø10.5 & Ø13mm BITS
JIG SAW WITH BLADE SUITABLE FOR PLASTIC	RIGHT ANGLE DRILL or 90° FITTING TO CONVERT A STANDARD DRILL
FILE OR SAND PAPER	LOW TACK MASKING TAPE
TAPE MEAURE	UTILITY KNIFE
STEEL RULER	CLAMP
HACK SAW	WHITE FELT MARKER

### 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	0	TORQUE SETTINGS:
----------	---	------------------

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

Last Rev Date: 18/08/2014

Page 2 of 24

Fitting instructions# 3789275

NOTE:

- REQUIRES BUFFERS 5100030 (NO SAHARA TOP TUBE) OR 5100020 (WITH SAHARA TOP TUBE)
- REFER KIT SURROUND ARB FOGLIGHT (p/n: 3163082) FOR PARTS AND FITTING INSTRUCTIONS.
- ♦ ARB INTENSITY LIGHTS, UP TO 900 SERIES ROUND OR 800 RECTANGULAR DRIVING OR FOG LAMPS SUIT THIS PRODUCT.

PARTS LISTING			
APPLICATION.	PART NO.	QTY	DESCRIPTION
PREPARE VEHICLE	3788096	1	TEMPLATE INNER RAIL
	3788097	1	TEMPLATE OUTER RAIL
	3789124	1	TEMPLATE BUMPER CUT
	6191014	2	PINCH WELD 330mm LONG
	·		
MOUNT TO VEHICLE	3759054R	1	BRACKET ASSY RH MOUNT COLORADO
	3759054L	1	BRACKET ASSY LH MOUNT COLORADO
	3194385	2	PLATE TAPPED COLORADO
	4581083	8	WASHER FLAT, M10 x 21 x 2 ZP
	4581048	4	WASHER SPRING M10 x 1/8 x 1/8
	6151555	4	BOLT M10 x 1.5 x 30 SEMS BLACK
	6151381	4	BOLT M10 x 1.5 x 80 Gd 8.8 ZP
	4721558	4	TUBE CRUSH HILUX B/BAR
	3194384	2	PLATE RECT WASHER COLORADO
	6151026	4	NUT M10 x 1.5
	5848393	6	PACKER UPRIGHT COLORADO
	6151207	4	BOLT M6 x 1.0 x 25 Gd 8.8 ZP
	6151128	4	NUT FLANGE M6 x 1.0 ZP
	4581082	4	WASHER FLAT M6 BZ
		1	
BUFFERS TO BAR	6151128	12	NUT FLANGED M6
FOG LIGHTS TO BAR	3163082	1	KIT SURROUND ARB FOGLIGHT
BAR TO VEHICLE	4581011	8	WASHER FLAT, M12 x 27 x 4
	6151340	4	BOLT M12 x 1.75 x 50 Gd 8.8 ZP
	4581050	4	WASHER SPRING 1/2 x 3/16 x 3/16 ZP
	6151189	4	NUT M12 x 1.75 ZP
	4581083	4	WASHER FLAT, M10 x 21 x 2 ZP
	6151456	4	BOLT M10 x 1.5 x 45 Gd 8.8 ZP
	6151321	4	NUT FLANGE M10 x 1.5 ZP

PARTS LISTING			
APPLICATION.	PART NO.	QTY	DESCRIPTION
MOUNT BRACE &	3759055	1	BRACKET BAR BRACE
LOWER STONE GUARD	4581291	4	WASHER FLAT, M10 BLK ZN
	6151320	4	BOLT M10 x 1.5 x 25 Gd 8.8 BZ
	6151321	4	NUT FLANGE M10 x 1.5 ZP
	6522900	1	PANEL LOWER PAN DMAX 12 ON
	6151315	3	NUT CAGED M6 0.7-1.6
	4581082	3	WASHER FLAT, M6 x 19 x 1.6 BZ
	4581287	3	WASHER SPRING M6 x 2.5 x 1.6 BLK ZN
	6151213	3	BOLT M6 x 1.0 x 20 Gd 8.8 ZP
	6151302	5	NUT CAGED M10 1.8-3.2
	6151555	5	BOLT M10 x 1.5 x 30 SEMS BLACK
WING STONE GUARDS	6522901R	1	PANEL RH WING DMAX
	6522901L	1	PANEL LH WING DMAX
	3759106	2	BRACKET PANEL WING DMAX
	4581082	12	WASHER FLAT, M6 x 19 x 1.6 BZ
	4581287	8	WASHER SPRING M6 x 2.5 x 1.6 BLK ZN
	6151213	12	BOLT M6 x 1.0 x 20 Gd 8.8 ZP
	6151128	4	NUT FLANGE M6 x 1.0 BZ
	6151315	8	NUT CAGED M6 0.7-1.6
WINCH COVER PANEL	6522883	1	PANEL WINCH COVER
(Non-winch bars)	6151256	2	SCREW BTN HD M6 x 16 SS
	4581304	2	WASHER FLAT, M6 SS
	6151128	2	NUT FLANGE M6 x 1.0 ZP
	6191006	1	EXTRUSION COVER 1.5m
NUMBER PLATE TO BAR	6821189	2	PLASTIC PLUGS
(NO WINCH FITTED)	6151384	2	SELF TAPPING SCREWS
	0151564	2	SELF TAFFING SCREWS
WINCH TO BAR	3540050	1	OPTIONAL WINCH INSTALL KIT
	EG50	2	RUBBER GROMMET
	LG50	2	
SAHARA TOP TUBE TO BAR	6151321	2	BOLT M12 x 1.75 x 50 Grade 8.8 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 3mm ZP

FITTING PROCEDURE		
	1.	Read these instructions thoroughly before starting.
	2.	Remove 2 bumper retaining screws at the wheel liner (1 per side).
	3.	Remove the bumper retaining screws and scrivets from underneath the bumper.
	4.	Remove and retain the top three scrivets holding the bumper grill.
	5.	Remove and retain the front screw holding the bumper grill in place.
Last Rev Date: 18/08/2014 Page	5 of 2	P4 Fitting instructions# 3789275

FITTING PROCEDURE		
	6.	Use a flat head screw driver to unclip the vehicle grill from the bumper. Remove and retain the vehicle grill.
	7.	Once the grill has been removed, remove and retain the 4 scrivets on top of the bar.
	8.	In the wheel arch, remove and retain the upper rear bumper scrivets (1 per side).
	9.	Remove and retain the number plate from the bumper. If the vehicle has fog lights fitted disconnect the right and left hand fog light looms.

Page 6 of 24

Fitting instructions# 3789275

FITTING PROCEDURE		
	11. Carefully remove the bumper from the vehicle by pulling it away from the retaining clips located near the fenders and head lights.	
35mm	<ul><li>12. Cover the vehicle bumper bar with protective low tack tape in the regions where it is to be trimmed.</li><li>Mark up the first cut line, all the way around the bumper, 35mm above the upper external bumper corner as shown on the adjacent image.</li></ul>	
<image/>	<ul> <li>13. Cut the A3 paper template along identified cutting line (Part Number 3789124).</li> <li>Fasten the template to the RH rear corner of the bumper with tape. Ensure the template is accurately positioned and flush with the upper rear edge of the bumper.</li> <li>Use a black marker and mark up the second bumper cut line.</li> <li>Use the same template and mark up the bumper cut lines on the LH rear corner of the bumper.</li> </ul>	
	<ul> <li>14. With the aid of an assistant, holding the bumper, trim and remove the lower portion of the bumper with an electric jigsaw.</li> </ul>	

Page 7 of 24

#### Fitting instructions# 3789275

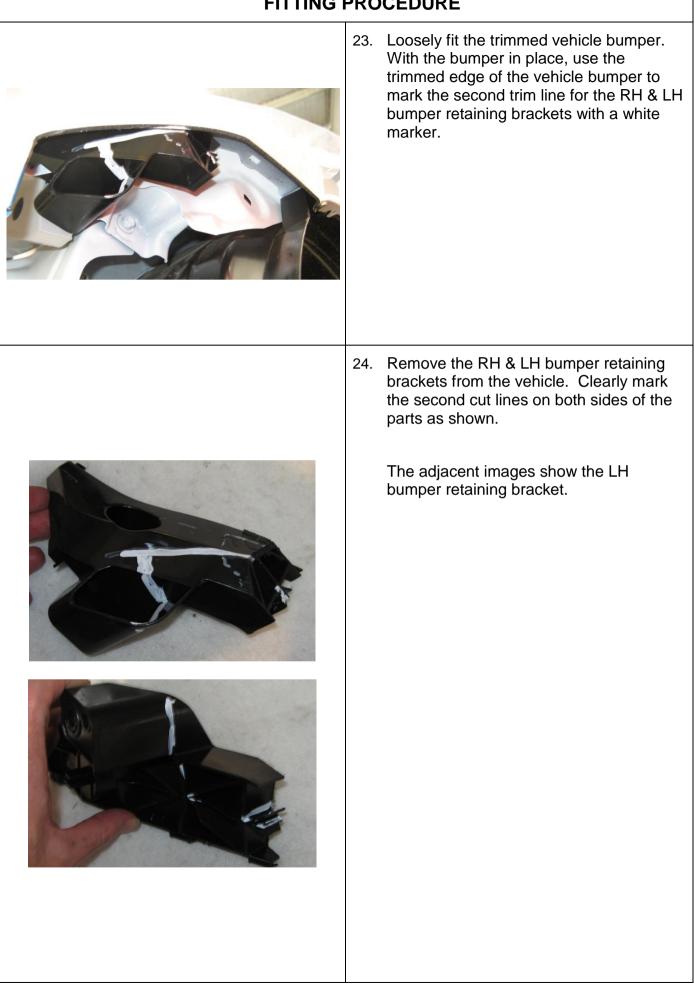
FITTING PF	ROC	EDURE
	15.	<ul> <li>Unbolt the RH &amp; LH wheel liner retaining brackets.</li> <li>Remove the lower bumper reinforcement beam using a 15mm socket.</li> <li>4 hex bolts fastening the beam to the vehicle chassis rails</li> <li>3 hex bolts fastening the stone guard to the lower bumper reinforcement beam</li> </ul>
	17.	Unbolt the RH & LH bumper retaining brackets.
	18.	Mark up and trim the RH & LH air deflectors using a sharp utility knife. - located above the chassis rails - the dimensions shown on the adjacent image include: 40 & 60mm

Page 8 of 24

FITTING PROCEDURE		
	19. Carefully remove the RH and LH black plastic bumper retaining brackets. Keep the fastening screws as they will be re- used.	
	20. Use a white felt tipped pen to mark up the RH plastic bumper retaining bracket: the shaded region is to be cut off.	
	<ul> <li>21. Use a hack saw to cut and remove the shaded portion of the bumper retaining bracket as shown in the adjacent image.</li> <li>Repeat these two steps for the LH bumper retaining bracket.</li> </ul>	
	<ul> <li>22. Loosely refit the LH and RH bumper retaining brackets. It is not necessary to screw them in place yet.</li> <li>NOTE:</li> <li>The adjacent image displays the LH bumper retaining bracket clipped into the LH vehicle fender.</li> </ul>	

Page 9 of 24

Fitting instructions# 3789275



#### Last Rev Date: 18/08/2014

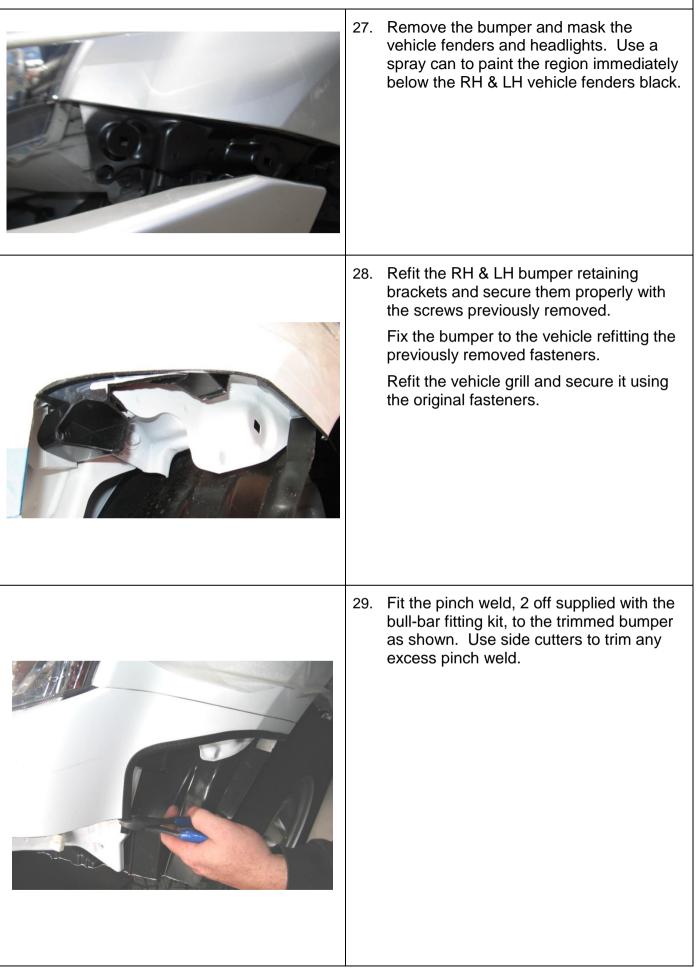
Page 10 of 24



#### Last Rev Date: 18/08/2014

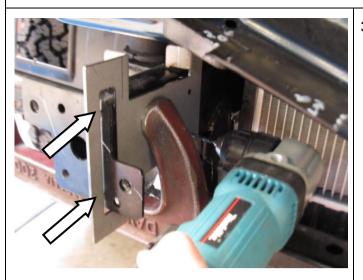
Page 11 of 24

#### Fitting instructions# 3789275



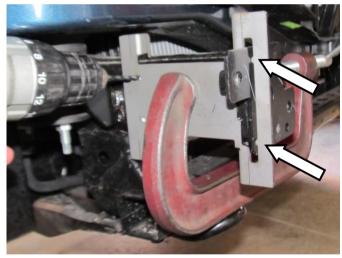
Last Rev Date: 18/08/2014

Page 12 of 24





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





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

 Clamp the inner chassis drilling template, identifiable with an "I" cut through the centre of this part, to the inside face of the RH chassis rail.

ENSURE THE LOCATING DATUMS CONTACT THE FRONT CHASSIS FLANGE. ENSURE THE TEMPLATE IS SITTING CENTRALLY ON THE CHASSIS RAIL, IN THE VERTICAL DIRECTION, BY CHECKING THE CLEARANCE BETWEEN THE UPPER AND LOWER LOCATING TABS AND THE CHASSIS RAIL.

Once the template is positioned accurately on the chassis rail use a right angle drill to drill two Ø4mm pilot holes through the inner wall of the chassis rail.

DO NOT DRILL STRAIGHT THROUGH THE OUTER WALL OF THE CHASSIS RAIL NOW.

NOTE: If you do not have a right angle drill a right angle drill attachment can be bought from a hardware store.

31. Clamp the outer chassis drilling template, identifiable with an "O" cut through the centre of this part, to the outside face of the RH chassis rail.

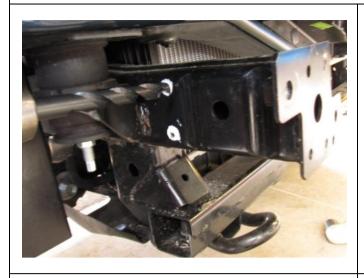
ENSURE THE LOCATING DATUMS CONTACT THE FRONT CHASSIS FLANGE. ENSURE THE TEMPLATE IS SITTING CENTRALLY ON THE CHASSIS RAIL, IN THE VERTICAL DIRECTION, BY CHECKING THE CLEARANCE BETWEEN THE UPPER AND LOWER LOCATING TABS AND THE CHASSIS RAIL.

Once the template is positioned accurately on the chassis rail drill the two Ø4mm pilot holes through the outer wall of the chassis rail.

#### Last Rev Date: 18/08/2014

Page 13 of 24

#### Fitting instructions# 3789275



32. Drill two Ø13mm holes through the outer wall of the chassis rail only.

DO NOT DRILL STRAIGHT THROUGH THE INNER WALL OF THE CHASSIS RAIL NOW.



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

 Replace the Ø13mm drill bit with a Ø10.5mm drill bit and pass the drill through the Ø13mm holes.

> USE A SECOND PERSON TO WATCH AND ENSURE THE DRILL IS LOCATED CORRECTLY ON THE Ø4mm PILOT HOLES, ON THE INNER WALL OF THE CHASSIS RAIL, DRILLED AT STEP 30.

## IT IS CRITICAL THAT THESE HOLES ARE ACCURATELY LOCATED.

Drill two Ø10.5mm holes through the inner wall of the chassis rail.



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

# Note: Paint all drilled holes with rust inhibiting paint.

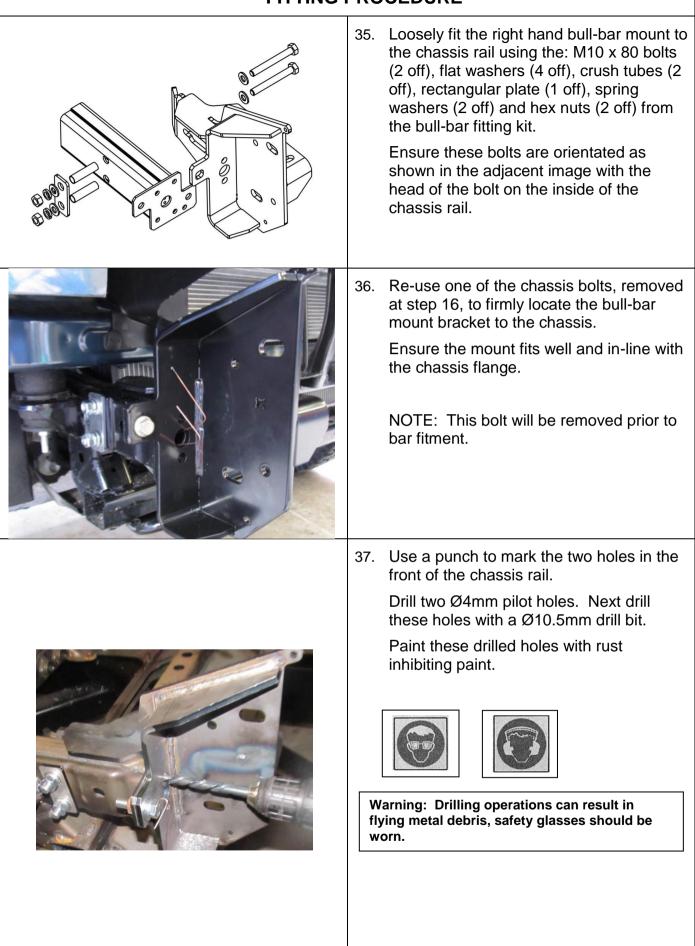
34. Insert the nut plate, from the bull-bar fitting kit, through the front flange of the chassis rail with the wire attached.

ENSURE THE WIRE REMAINS ATTACHED TO THE NUT PLATE AND PROTRUDES FROM THE CHASSIS RAIL.



Page 14 of 24

#### Fitting instructions# 3789275

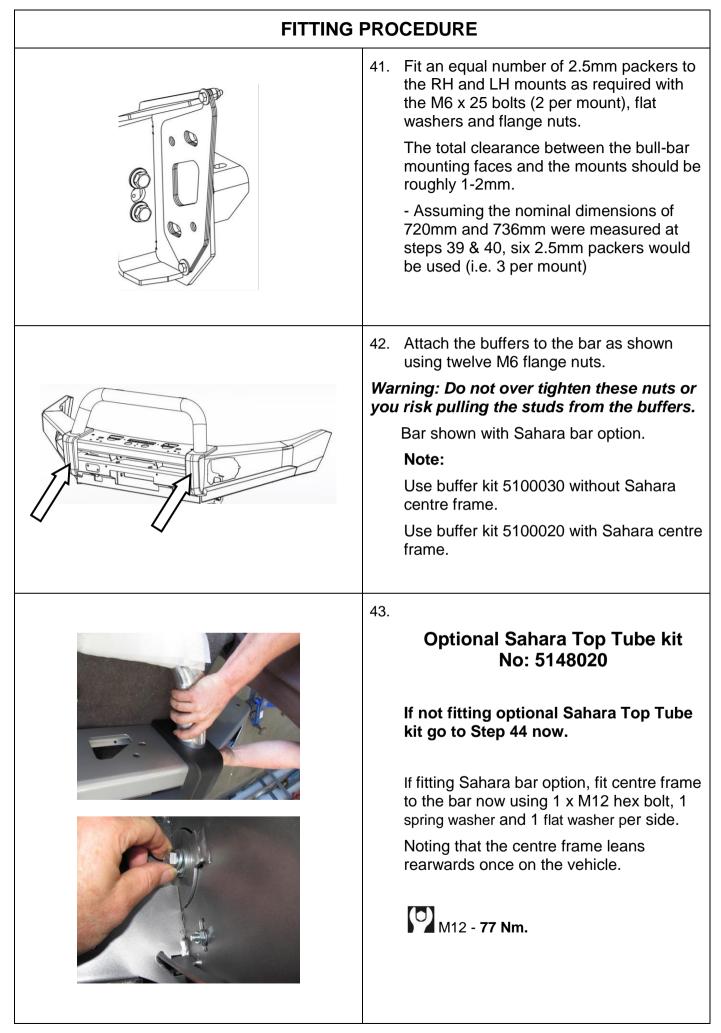


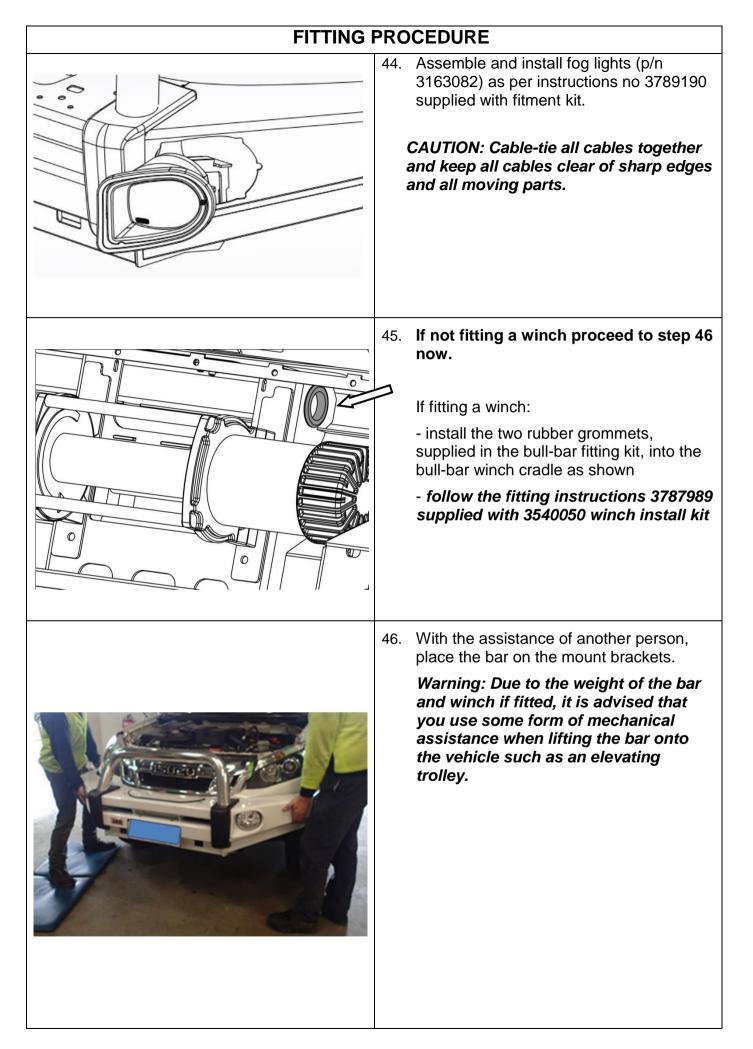
Last Rev Date: 18/08/2014

Page 15 of 24

FITTING	PROCEDURE
	<ul> <li>38. Fasten the two M10 x 30 SEMS bolts to the nut plate inserted in the chassis at step 34. Use the wire, shown in the adjacent image, to correctly position the nut plate.</li> <li>Tighten the two M10 x 30 hex bolts.</li> <li>M10 - 44 Nm.</li> <li>Tighten the two M10 x 80 hex bolts (fit at step 35).</li> <li>M10 - 44 Nm.</li> <li>Remove the chassis bolt fit at step 36.</li> <li>Note: DO NOT REMOVE THE WIRE USED TO POSITION THE NUT PLATE AS IT MAY BE REQUIRED IN THE FUTURE IF THESE MOUNTS ARE REMOVED.</li> <li>Repeat steps 30 to 38 for the left hand chassis mount.</li> </ul>
	<ul> <li>39. Use a tape to measure the distance between the two outer faces of the bullbar mounts.</li> <li>The nominal design dimension is 720mm. This may differ, however, due to vehicle chassis variation.</li> </ul>
	<ul> <li>40. Measure the distance between the bullbar mounting faces.</li> <li>The nominal design dimension is 736mm.</li> </ul>

Page 16 of 24





Page 18 of 24

FITTING PROCEDURE	
	47. Use the M12 x 50 hex bolts (2 per mount), flat washers (4 per mount), spring washers (2 per mount) and hex nuts (2 per mount) to secure the bar.
	<ul> <li>48. Position the bar so that the rear of the wing is parallel with the vehicle fender and lines up with the wheel arch. The nominal distance between the vehicle fender and the bull-bar is 48mm.</li> <li>Once happy with the position of the bar tighten the M12 mounting bolts.</li> <li>M12 - 77 Nm.</li> </ul>
48	
	<ul> <li>49. Once satisfied with the position of the bar on the vehicle drill the four Ø10mm pinning bolt holes (2 per mount).</li> <li>Image: Distribution of the bar of the provided states and the</li></ul>

Page 19 of 24

## Fitting instructions# 3789275

	<ol> <li>Measure the distance from the RH vehicle fender to the outer face of the RH bull-bar wing. Repeat on the LH side to confirm the bar is sitting centrally on the vehicle.</li> <li>If not, remove the bar from its mounts and shift the required number of 2.5mm packers installed on the bull-bar mounts, fitted at step 41, from one mount to the other. Next re-fit the bar on the mounts lining up the Ø10mm holes drilled at step 49.</li> </ol>
	<ul> <li>52. Once satisfied with the fitment of the bar to the vehicle, fit the M10 x 45 hex bolts to the RH &amp; LH mounts (4 off - 2 per mount), flat washers (4 off) and flange nuts (4 off). Tighten the four M10 x 45 hex bolts.</li> <li>M10 - 44 Nm. Tighten the four M12 x 50 hex bolts.</li> <li>M12 - 77 Nm.</li> </ul>
	<ul> <li>53. If fitting fog lights, fit the RH and LH Fog light looms to the bull-bar.</li> <li>54. If fitting driving lights it is advisable to fit them now.</li> </ul>

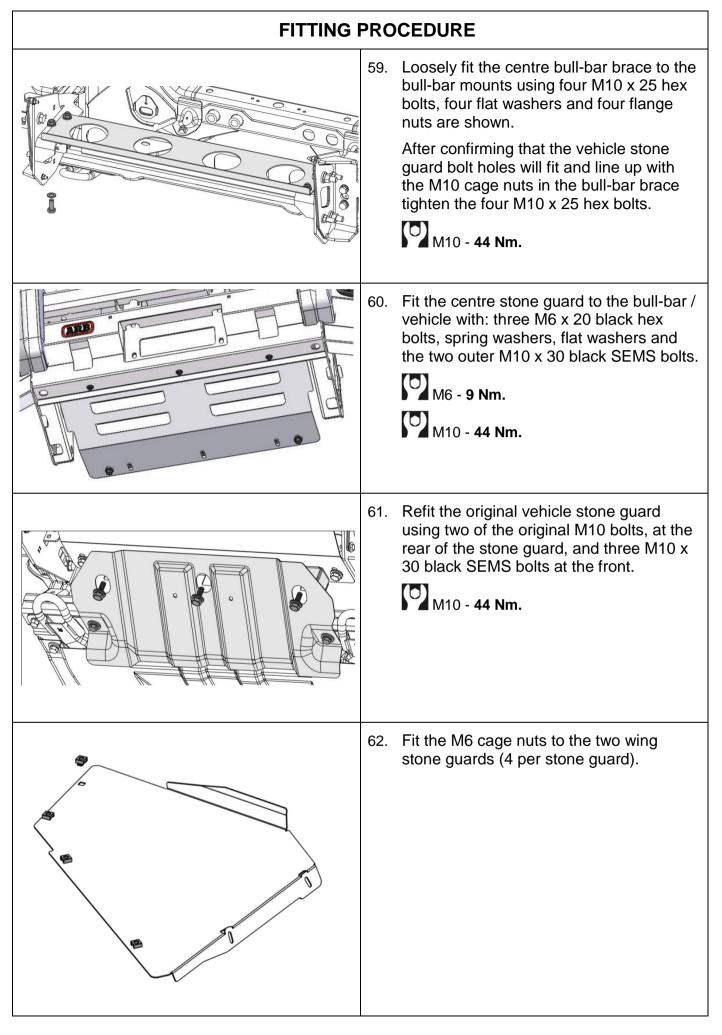
Last Rev Date: 18/08/2014

Page 20 of 24

FITTING PROCEDURE		
ARBODI	55. IF NOT FITTING A WINCH Insert the two plastic plugs into the square holes in the front of the bar. Next, screw the number plate to these grommets.	
	<ul> <li>56. IF NOT FITTING A WINCH Wrap the rubber extrusion around winch cover</li> <li>Place the winch cover on top of the bar and align the panel bolts holes with mating holes located on the top middle face of the bull-bar.</li> <li>Bolt winch cover to the bull-bar using the two M6 button head stainless steel screws, stainless steel flat washers and M6 flange nuts.</li> <li>M6 - 9 Nm.</li> </ul>	
	57. Fit three M6 cage nuts to the centre stone guard as shown.	
	<ul> <li>58. Fit five M10 cage nuts to the centre bull- bar brace.</li> <li>Ensure the cage nuts are inserted with their legs as shown, so they can slide along the rectangular slots.</li> </ul>	

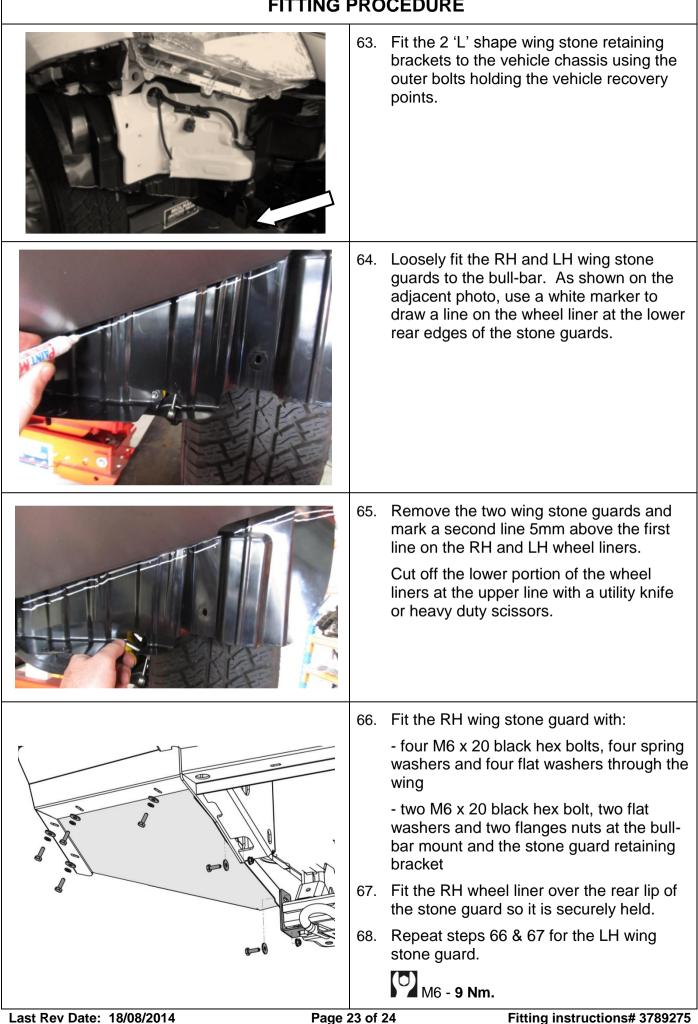
Page 21 of 24

## Fitting instructions# 3789275



Page 22 of 24

Fitting instructions# 3789275



FINAL CHECKS:

- Check wiring connections to fitted lights and winch (if fitted).
- Check operation of winch and all lights (if fitted).
- IMPORTANT: Check that all piping and wiring is clear of sharp edges and pinch points. Adjust any piping to clear the bull bar or mounts by a minimum of 15mm.

