FITTING INSTRUCTIONS

Part Number: **3415110/120 F/Kit 6172316**

Product Description: **ARB DELUXE WINCH BULL BAR**

Suited to vehicle/s: **TOYOTA LANDCRUISER 200 SERIES 2007 ON,**
Note: 3415110 NO HLC, 3415120 WITH HLC (SAHARA)

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 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.

FITTING REQUIREMENTS

REQUIRED TOOLS FOR FITMENT OF PRODUCT:

Metric socket and spanner sets 8-25mm range	**External Circlip pliers**
Screwdrivers, Philips and Flat blade	**Power Jigsaw with blade for plastic cutting**
Short Body Power Drill 13mm (1/2") capacity	**Dia 7.0mm (5/16") and 10.5mm (25/64") drill bits**
Tin snips	**Marking pen**
Half round file	**Soft Hammer**
Metric hex key set	**Loctite© 262 or equiv.**
Wide masking tape	**Stanley knife**
Small Spirit Level	**Tape Measure & 2 x 300mm rulers**
If fitting parking sensors: Dia 22.0 (7/8") hole saw	**Paint black fast drying**

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	44Nm	32lbft
M12	77Nm	57lbft

OPTIONAL LIGHT SETS TO SUIT THIS PRODUCT:

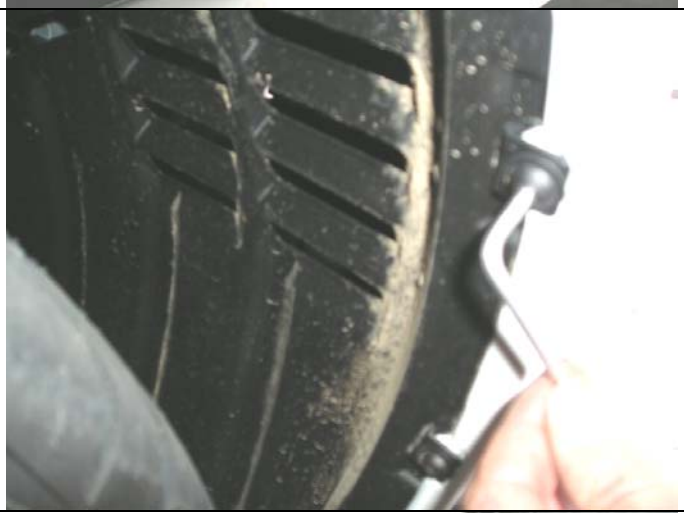
- FOG LAMP SET P# 6821201 ADD GXL ONLY P#MD02 LOOM KIT, P#180209 SWITCH AND P#180215 SWITCH CAP FOR FOGS
- UP TO IPF 900 SERIES FOG OR DRIVING LIGHT SETS
- IPF 840 FYS FOG LIGHTS CAN BE FITTED TO LOWER PAN AREA

PARTS LISTING			
APPLICATION.	**PART NO.**	**QTY**	**DESCRIPTION**
Mount Brackets To Chassis	3757602R	1	Bracket Mount RHS
	3757602L	1	Bracket Mount LHS
	4581007	2	Washer Flat M12 large
	4581050	2	Washer Spring M12
	6151395	2	Bolt M12 x 240mm
	6151396	2	Nut Clevis
	5846400	2	Plate M12 Bolt x 8mm
Brace Assembly	4681274	1	Brace
	6151357	7	SEMS Bolt M10 x 1.5 x 30mm
	6151321	7	Nut Flanged M10 x 1.5
Bull Bar To Mount Bracket Assy	6151357	2	SEMS Bolt M10 x 1.5 x 30mm
	6151321	2	Nut Flanged M10 x 1.5
	6151255	6	Bolt M12 x 1.75 x 40mm
	6151189	6	Nut M12 x 1.75
	4581049	12	Washer Flat M12
	4581050	6	Washer Spring M12
Stone Tray to Bull Bar	6522683	1	Stone Tray
	6151300	4	Nut Cage M6
	6151213	4	Bolt M6 x 20mm
	4581082	6	Washer Flat M6 x 16 x 3
	4581287	6	Washer Spring M6
	6151270	2	Bolt M6 x 40
	4721518	2	Spacer Tube 18mm
Winch To Bull Bar	3756499	1	Bracket Control Box Univ.
	6151234	2	Bolt M8 x 25
	4581045	2	Washer Flat M8 BZ
	4581047	2	Washer Spring M8 BZ
	6151132	2	Nut M8 Flanged
	180302	8	Cable Tie
	EG50	2	Grommet Dia 50mm
	6151074	2	Bolt 3/8 x 1 3/4
Number Plate To Bull Bar	6821189	2	Grommet round
	6151384	2	Screw self tapping pan head
	6781408	1	Tape double sided
Wing Inner Panels	6522685R	1	Panel Inner Wing RH
	6522685L	1	Panel Inner Wing LH
	6151300	10	Nut Caged M6
	6151213	10	Bolt M6 x 20 Blk
	4581082	10	Washer Flat M6 Blk
	4581287	10	Washer Spring M6 Blk
	6151234	2	Bolt M8
	4581045	2	Washer Flat M8
	4581047	2	Washer Spring M8
	6151132	2	Nut M8 Flanged
Buffers	3163018R	1	Buffer
	3163018L	1	Buffer
	6151128	12	Nut M6 Flanged
Lights	3163015	1PR	Light Surround Set
	6821151R	1	Indicator
	6821151L	1	Indicator
	6821152	2	Loom
	180701	6	Scotch Locks
	180302	6	Cable Ties
Miscellaneous	6191019	2	Trim Pinch Weld
	3786342	1	Template Bumper Cutting
	EG50	2	Grommet Dia 50mm
	5868356	3	Packer

REMOVAL OF BUMPER

1. Remove number plate

2. Remove number plate mount bracket



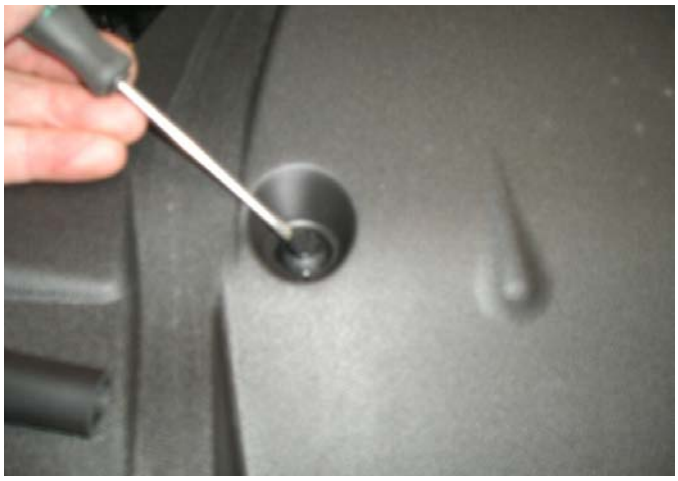
3. Remove inner guard bumper retaining screws three per side using M4 hex key

4. Remove lower trim panel sets each side which attach to bumper and engine protective plate area then set aside, they will not be reused.

REMOVAL OF BUMPER

5. When removing lower trim panels, a plastic nut located on each side will need to be prized open with a small flat blade screwdriver to assist removal.

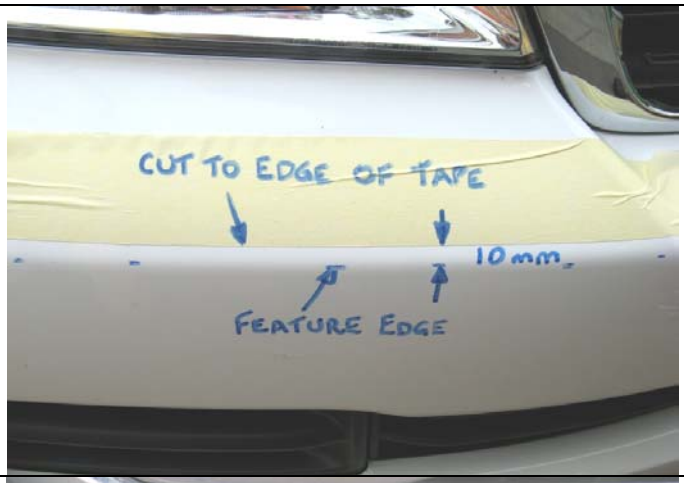
6. Remove lower bumper retaining screws.



7. Remove plastic engine bay cover above grille area and set aside. Prise open plastic plugs with small flat blade screwdriver or similar as shown.

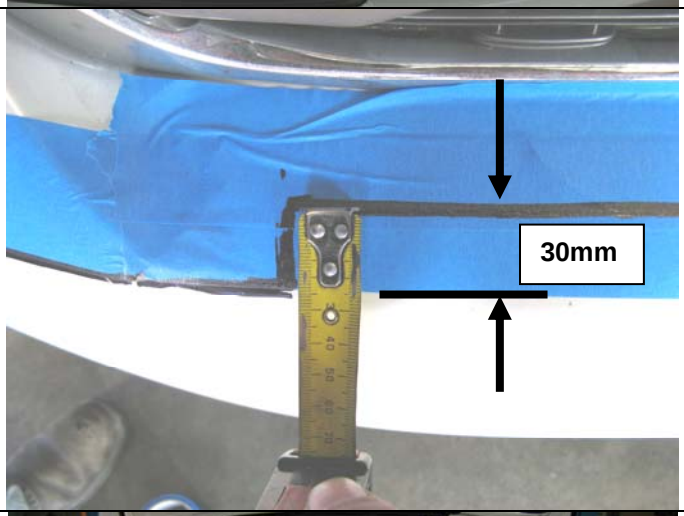
8. Remove 3 X retaining screws from top of grille

MASKING BUMPER FOR TRIMMING

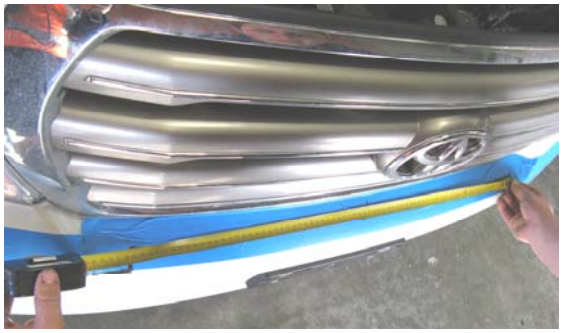


9. Apply wide masking tape edge, carefully aligning 10mm above bumper feature line as shown. Keep the same line level through the centre section of the bumper as shown

Hint: Using a marking pen, run a line or dashed lines along the feature line on the bumper to assist in measuring the 10mm offset for the tape application.



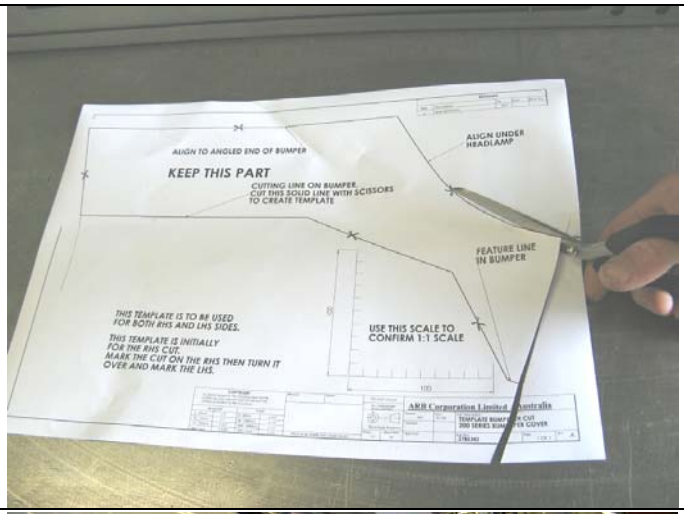
10. Mark out centre cut area of bumper as shown, 740mm wide x 30mm back from feature edge.



11. View of masking tape across bumper for reference.

12. Apply approx.200mm of masking tape with edge exactly 90mm from angled bumper end as shown.

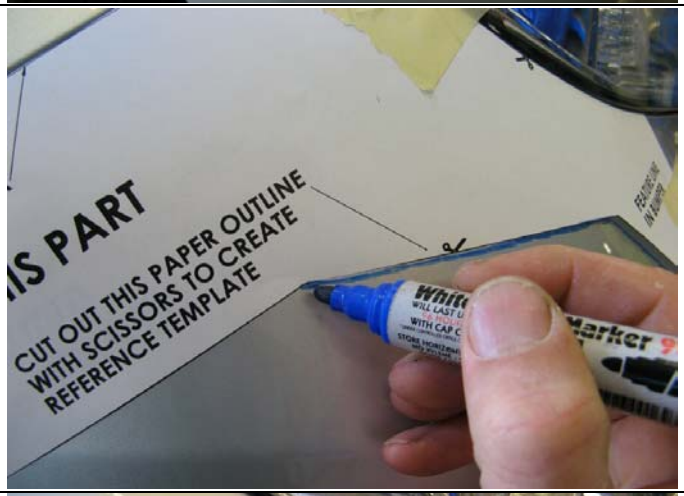
MASKING BUMPER FOR TRIMMING



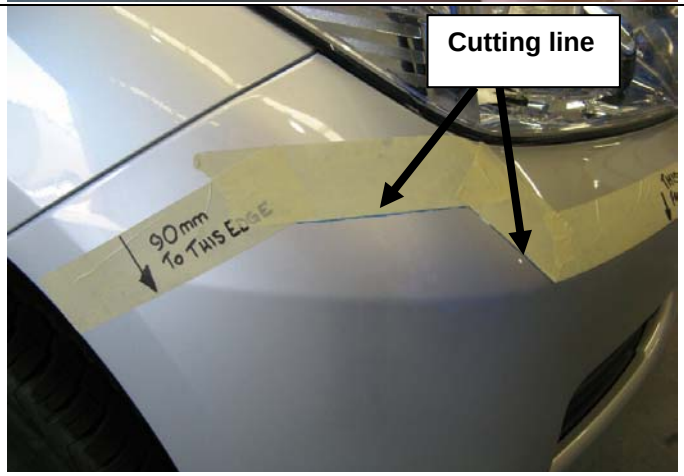
13. Cut A3 paper template along identified cutting line.

NOTE: There is a scale on the sheet to confirm that the template is 1:1 scale, this is critical.

14. Apply template to outer corner of RHS bumper as shown aligning accurately to features such as the lower line of headlamp and end of bumper. Tape in position



15. Transfer cutting line to bumper



16. Apply masking tape aligning edge to marked cut line as shown

17. Reverse template and apply to LHS of bumper and follow same steps as RHS.

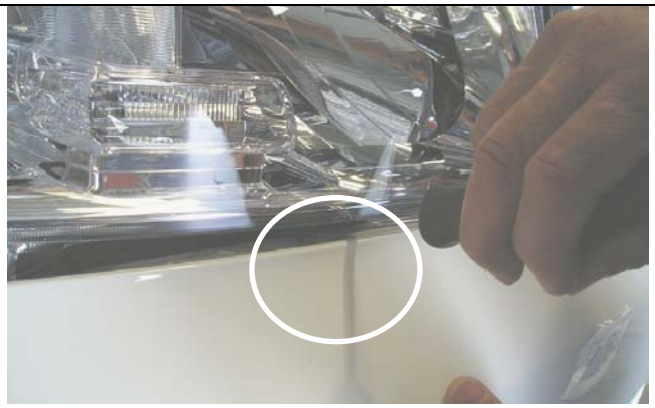
18. The bumper is now marked out for cutting.

REMOVAL OF BUMPER

19. Release top of grille. It is retained by 2 x push in spring clips, located at the outer top sections below the bolt position.

Hint: You can use a small flat blade screwdriver to aid in pushing in spring. Fit spring clips back to grille plugs for easy replacement.

20. Pull outer returns of bumper outwards and out of retaining clips.



21. Push bumper down immediately below headlamp to gain access with a small flat blade screwdriver and release holding tab.

NOTE: Take care not to damage painted edge of bumper

22. Remove plastic plugs securing upper bumper tabs to cross member.

23. You can now remove the bumper and place on soft non abrasive rug or similar, it is best to do this with the help of another person.

24. If headlight washer system is fitted disconnect the main line from the vehicle to the bumper circuit and clamp/crimp it to prevent washer fluid from leaking out

25. If factory fog lights are fitted, disconnect the fog light harness from the vehicle by opening the white flip over clip on the connector and releasing the loom plug.

REMOVAL OF BUMPER Cont.

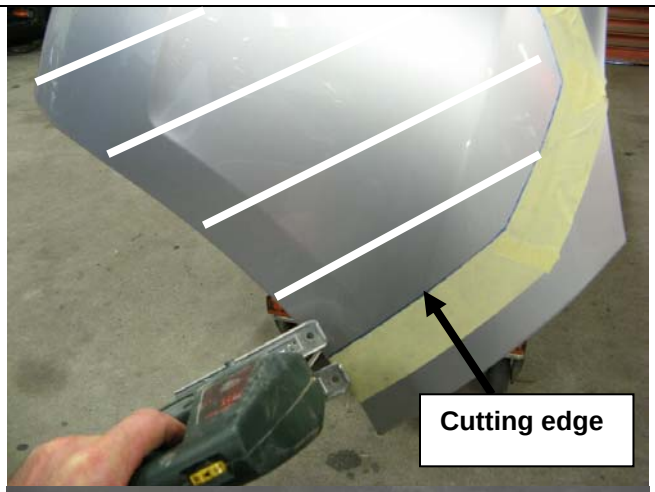
26. ***If fitting 12000lb winch, undo bolt securing the brace attached to the centre of grille cross member. See step 61 for picture of bracket.***

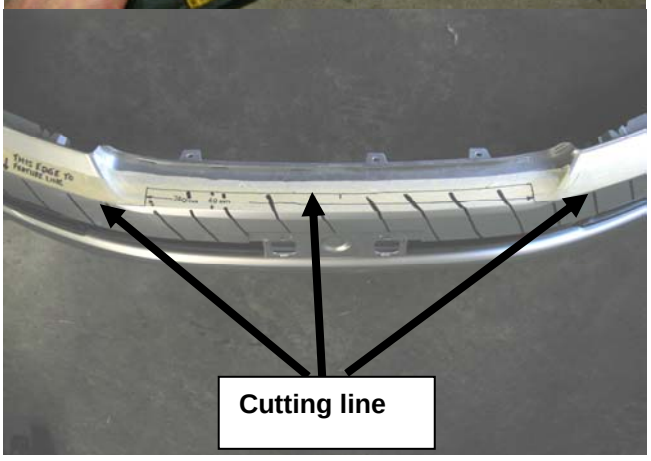
27. Remove grille from bumper cover by releasing plastic tabs as shown

28. Remove fog light brackets and set aside, these will not be reused

29. Remove headlight washer circuit if fitted and retain for reuse.

30. Remove fog light loom, if fitted, for reuse. Note, the connections will need to be removed to fit through the bull bar holes.





31. Place bumper face up on a bench or similar so there is sufficient access for the cutting operation

32. Using a jigsaw, carefully cut along the edge of the masking tape.

33. Remove burrs from the cut edge of the bumper, then set aside on the soft non abrasive surface.

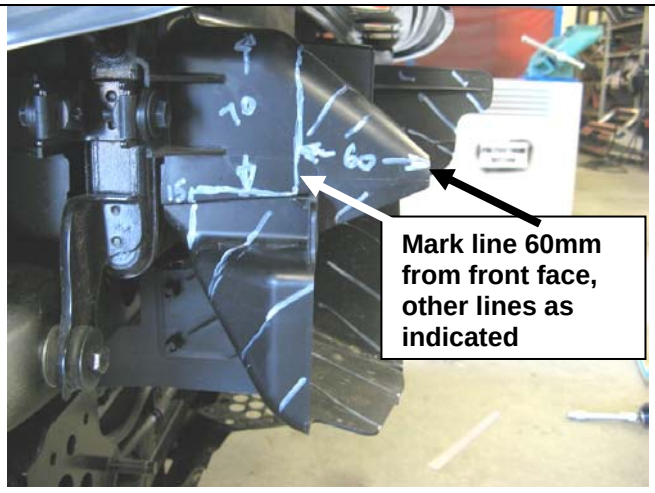
Warning: Cutting operations can result in flying debris, safety glasses should be worn. Work safely; keep fingers clear of cutting blade.

PREPARATION FOR MOUNT BRACKETS

34. Remove foam absorber bar and set aside, this will not be reused

35. Remove crash bar then beam mount brackets and set aside, retain only M10 flange nuts for reuse.

36. Remove tow hooks and set aside, these will be reused.



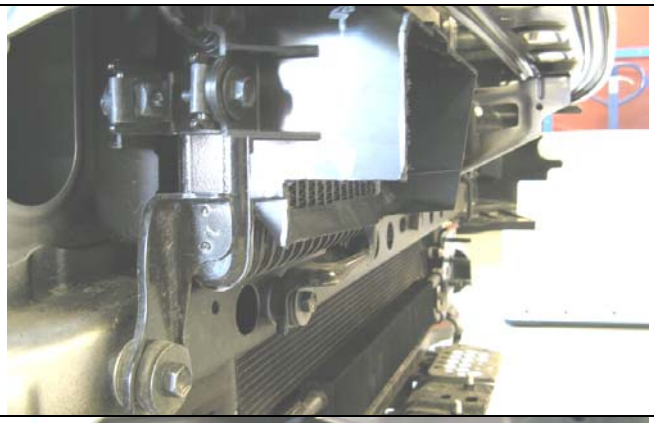
37. Mark the lower section of the air scoop for the power steering radiator as shown. This is for trimming to clear the mount brackets.

Note: The 60 mm line from front as indicated goes right over the top of the scoop and down the other side, then steps back in the same at 70mm from top, then back to 15mm and down as shown this side.

38. Remove scoop and cut using jigsaw or similar and remove burrs.

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

PREPARATION FOR MOUNT BRACKETS



39. Refit to vehicle, it should now look like this.

40. Mark out and trim the air deflector on the LHS of the vehicle using a pair of tin snips or similar.

Hint: You can do this on the vehicle as shown below.

41. Fit the cut bumper and secure.

42. Fit the grille

43. Fit pinch weld to each end of the bumper as shown

44. Secure the wing return in the wheel arch area with one of the original dome head screws each side.

45. Fit 2 x large rubber grommets to holes in uprights inside the upper area of the bull bar.

46. If fitting fog lamps, factory loom can be reused and routed through the grommets in uprights and along inside the lower lip of the top pan.

47. If headlight cleaner circuit is to be refitted, run hosing along the underside of the grille cross member, cable tie in position as shown Ensure that the tee is centralised and then cable tie in position

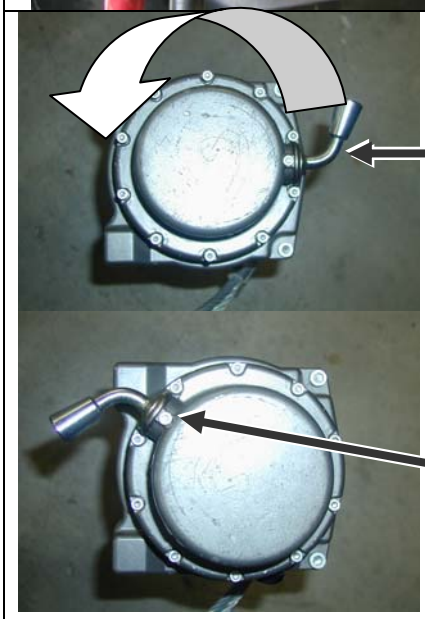
PREPARATION OF BULL BAR

FITTING WINCH

48. Fit large grommets to holes in top pan

49. Fit control box bracket to control box studs as shown. *Picture also shows routing of leads through grommets in pan.*

50. Using M8 fasteners fit control box mounting bracket to pan



51. Prepare winch for fitting by undoing the cap screws on the gearbox end.

52. Then rotate the end cap and gearbox in a counter clockwise direction 144° (four hole pitches) while looking down at the gearbox, as shown (for 12000lb winches rotate clockwise 72°)

53. Tighten the cap screws ensuring the gearbox handle operates freely.

54. For 8-9500lb only rotate the motor end 90° clockwise (elec. terminals will be up, see step 59)

NOTE: 12000lb motor is in correct position as supplied

NOTE: Be careful not to lift the gearbox more than a few millimetres. Before doing up cap screws, ensure that the flange faces engage properly and gaskets are not damaged.

PREPARATION OF BULL BAR

55. Position the winch with the mount face facing upward on an adjustable table or similar and with the assistance of another person lower the bulbar over the winch. The winch handle should be in the LHS of the bull bar for all winches except 12000lb winch is on the opposite side. The cable must spool off the bottom of the winch.

NOTE: The 12000lb winch will need to be at the bottom of the adjustment slots.

Also follow the installation instructions in the Warn winch handbook accompanying the winch.

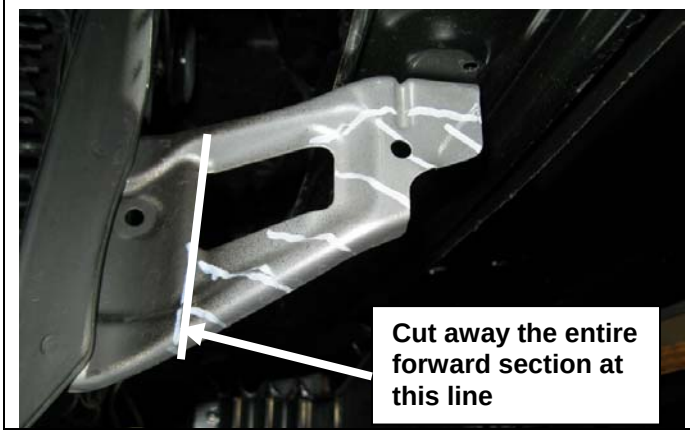
56. Fit the roller fair lead, pull only the end of the cable through and adjust the position of winch then bolt up securely. Use the 1 ½" long bolts in the top and 1 ¾"in the lower set through the RFL.

Hint: To increase access to mount bolts in front of roller fairlead, remove circlips from bottom of each vertical roller shaft, push shaft up so roller can be dislodged sideways. Do up bolts in fairlead and winch, then refit circlip.

57. With the aid of another person, turn the bull bar over so that the back of the bar is accessible.

58. Connect up the wires to the winch. Note that the 12000lb winch requires supplementary wire kit 3512050. Connect the longer wires to control box connections, marking them for correct connection to motor terminals.

NOTE: Refer to the Warn winch handbook for wiring instructions to winch and vehicle.



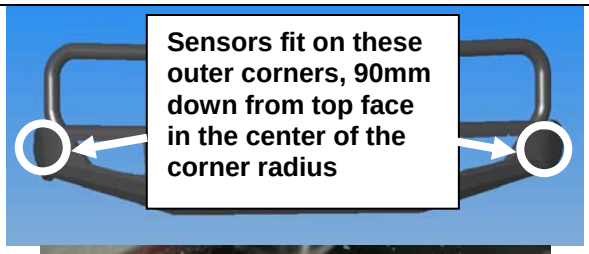
If fitting 12000LB winch only

59. Either relieve the forward section of the vehicle bracing sheet metal member as shown to clear winch tie rod, or bend it back clear of where the winch will be positioned.

PREPARATION OF BULL BAR

60. Fit 4 x M6 cage nuts to bottom inside face of lower pan in square holes as shown.

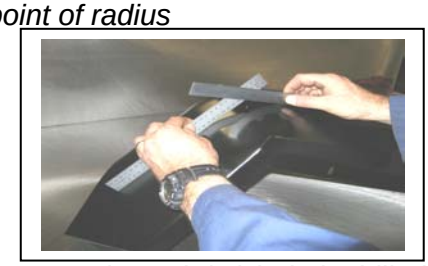
Hint: A small flat blade screwdriver may help to press nut cage flanges into hole.



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

61. If parking sensors are to be fitted, mark out the hole positions, located in the middle of the large corner radius of the wings and 90mm down from the top face. *(Similar position to original bumper)*

Hint: Use two rules across flat faces to find mid point of radius



62. Once Dia 22 (7/8") hole is drilled and ***fully deburred,*** check that the hole size is actually Dia 22.0 – 22.8mm, better if on larger side. *Trial fit sleeve and sensor.*

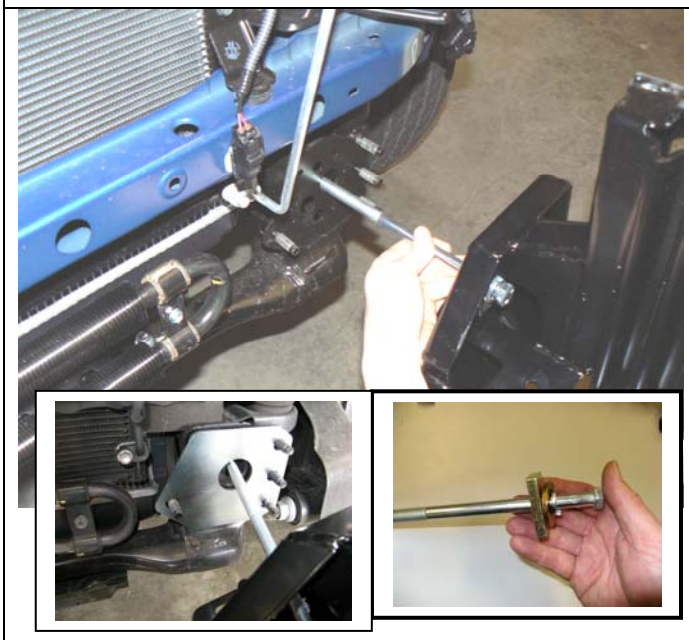
63. Once checked use some fast drying primer paint to seal bare edges.

64. Carefully slide top section of buffer past edge of cover strap as shown

65. Adjust buffers so they sit neatly on the bull bar profile then secure using M6 flange nuts over studs.

NOTE: Do not over tighten nuts as damage to buffer may result.

FITTING MOUNT BRACKETS



Hint: Check that the M12 long bolts screw freely into the clevis nut threads before assembly.

Packers are supplied to compensate for body to chassis variation if required

66. Insert clevis bolt with spring, large flat washers and rectangular 8mm plate washer through hole in mount bracket rear flange as shown. ***Then loose fit mount brackets to chassis.***

67. Secure using existing OE M10 flange nuts, ***but do not do up tight.***

68. Replace tow hooks using existing bolts ***but do not do up tight.***

69. Insert clevis nut into rectangular hole in outboard face of chassis, with the notch in nut facing toward front of vehicle and located at the outboard edge of chassis.

NOTE: If KDSS is fitted to vehicle the LHS nut will have to be loaded to the chassis hole from the inboard face (engine bay side).

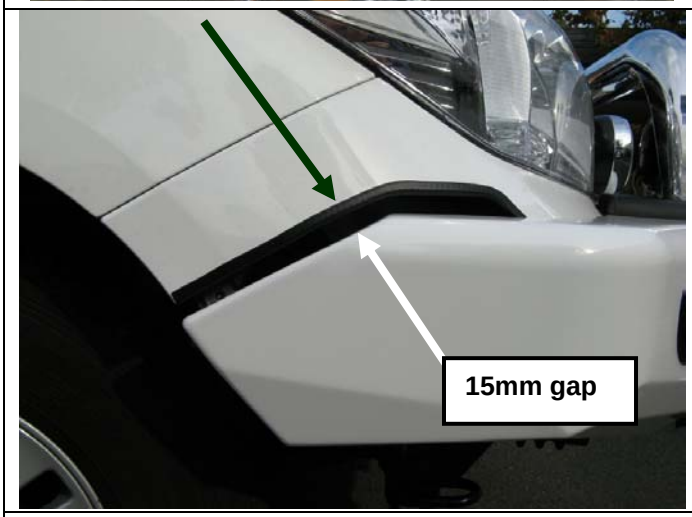
70. The nut when positioned has a slot which should snugly fit and locate the nut on the ***outboard*** edge of the rectangular chassis hole. The nut should protrude approximately 7mm. Screw the clevis bolt into the clevis nut, ***do not tighten yet.***

71. Tap the outer flange of the mount brackets until they are hard up against the tow hook mount area. Nip up the lowest outboard nut on each bracket. Brackets should be about 935mm apart

FITTING BULL BAR TO VEHICLE

72. With the aid of a lift table or one or more assistants carefully and safely lift, position and bolt the bull bar to the mounts using 6 x M12 bolts, large flat washers and spring washers. Centralise the bar to the front of the vehicle and adjust height.

73. Fit the cross brace to underside of lower pan and on top of gussets in mount brackets. Use M10 x 30mm SEMS bolt and washer sets, flange nuts ***but do not do up tight.***



74. Adjust the bar height leaving approximately 15mm gap between top of wing angled face and the pinch weld on bumper.

75. Tighten bar mount M12 bolts

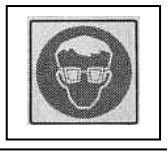
76. Tighten M10 flange nuts to chassis studs to 56Nm.

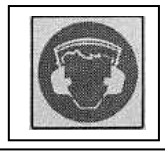
77. Then tighten up the long M12 tension bolts, ensuring that the clevis nut location slot is positioned correctly over the hole edge in the chassis, protrusion as shown is approximately 7mm.

78. Tighten brace bolts.

79. Remove each tow hook bolt in turn, apply loctite © to threads and tighten up.

80. With access through light aperture in wing, using the M10 pilot holes in mount brackets (located up 175mm from bottom face of bar), drill pinning hole through uprights on bull bar. Fit M10 screw, washer set and flange nut and do up tight.





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

FITTING BULL BAR TO VEHICLE

81. If headlight cleaner system to be fitted, reconnect circuit at main joint to vehicle and also hoses to tails of spray heads

82. Remove and discard screws and speed nuts on supplied indicators.

83. Using the 25mm long pan head screws in the fitting kit, fit indicators to light surrounds, note that the indicators are handed and drain holes must be on the lowest edge.

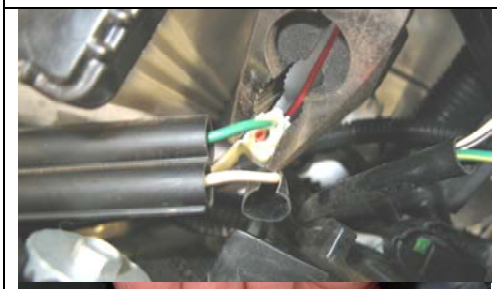
84. If fitting fog lamps, refer to instructions supplied with kit.

85. Fit insert assemblies into the wings as shown

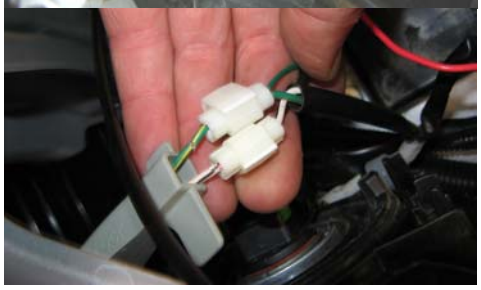
86. Fit the 4 x clamps to secure light assembly in position.

HINT: You can loose fit the top two screw and clamp sets before loading the assembly into the wing to make fit up easier.

FITTING BULL BAR TO VEHICLE



Running lamp wiring



Indicator lamp wiring

87. Wire up indicators and parking lamps.
88. Connect red wire from supplied loom to green wire from running (parker) lamp. Connect black wire from supplied loom to green/yellow indicator wire. Connect green loom wire to white/black indicator wire.
89. Use supplied scotch locks for the electrical connections then secure wiring with cable ties when complete.

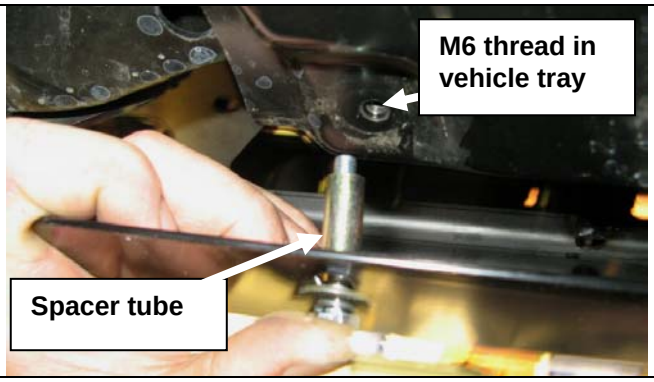
HINT: Temporarily undo the battery clamps and move batteries sideways to gain better access.

90. Wire up P# 6821201 ARB fog lamps if fitted. Connect factory loom if fitted.

NOTE: For GXL use ARB Loom MD02 plus switch, for VX and Sahara no extra loom or switching is required. Supplied tails can be joined to OE loom which is run through bull bar.

Check that sensor fits flush

91. If parking sensors to be fitted, insert sleeves first noting that they must be in the same orientation as in the original bumper (tab to top RHS down on LHS).
92. Fit sensors checking that they are not too tight, otherwise correct operation may be affected (if tight check hole size and rectify as necessary)
93. Connect to main loom and cable tie wiring securely



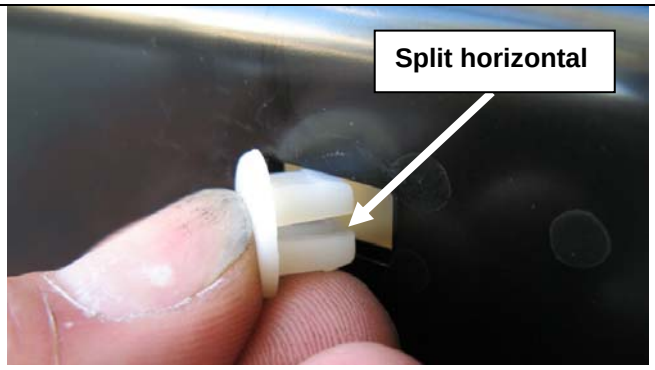
M6 thread in vehicle tray

Spacer tube

94. Fit stone tray using 4 x M6 bolts and washer sets at front under bull bar and 2 x M6 x 40 bolts, washers and 18mm long tube spacers at two locations into existing sump guard front section as shown.

95. Fit off winch hook.

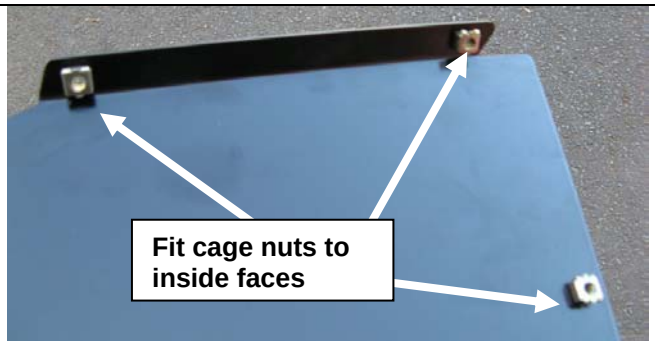
FITTING BULL BAR TO VEHICLE



96. If fitting winch apply double sided tape strip to top back of number plate. If not fitting winch use top holes in number plate and no adhesive is required.

97. Fit grommets to slots, with split horizontal as shown

98. Fit number plate using supplied pan head screws into grommets.

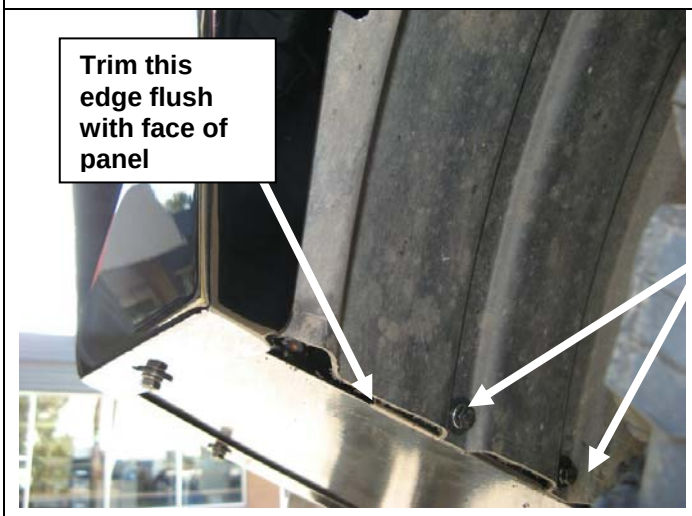


99. Fit 5 x M6 cage nuts to each wing splash panel as shown on ***inside*** faces.

Note: LHS shown with 3 of 5 cage nuts inserted.

100. Fit panels up inside wings, secure using M6 x 20 black bolts and washer sets.

101. Fix folded up slotted flange on panel to top hole in side of main mount bracket using M8 bolt set.



102. Tuck fender liner into wing return. Trim if necessary

103. Mark out and drill 2 x Dia 7.0 mm holes in each fender liner for securing to the splash panel flange.

Hint: Scribe a line on the liner parallel to the splash panel, measure and mark the position of the required holes up from the marked line.

104. Use M6 x 20 black bolts and washer sets to secure the fender liner to the panels.

105. Trim the fender liner end flush with the splash panel face as shown.

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

NOTE:

- ***Check wiring connections to fitted lights and winch.***
- ***Check operation of winch and all lights.***
- ***Check operation of headlight washers if fitted***
- ***Check operation of parking sensors 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.***

FINAL PRODUCT ON VEHICLE