



FITTING INSTRUCTIONS

Part Number: **3421520 F/Kits 6173065**
Product **Deluxe Combination Winch Bull Bars**
Description:
Suited to **TOYOTA 4 RUNNER 2010 ON**
vehicle/s:

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 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 SET	METRIC RING AND OPEN ENDED SPANNER SET
ELECTRIC DRILL 13MM CAPACITY	3, 7, 8.5, 10, 13 & 19mm DRILL BITS (19mm holesaw)
SHARP KNIFE	PHILLIPS AND FLAT BLAD SCREW DRIVER SETS
FELT TIP NON PERMANENT MARKER PEN	HACKSAW BLADE
FINE FILE OR SAND PAPER	ELECTRIC JIG SAW
METRIC TAPE MEASURE	ROLLS OF 25 mm & 50 mm WIDE MASKING TAPE
TOUCH UP PAINT – BLACK FAST DRYING ENAMEL	SCISSORS
	COLD CHIZEL

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

NOTE:

- ◆ OPTIONAL FOG LAMPS TO SUIT THIS PRODUCT ARE P#6821201. IF LOOM AND SWITCH REQUIRED USE P#MD02 LOOM KIT, P#180209 SWITCH AND P#180215 SWITCH CAP FOR FOGS
- ◆ UP TO 900 SERIES ROUND OR 800 RECTANGULAR DRIVING OR FOG LAMPS SUIT THIS PRODUCT

PARTS LISTING

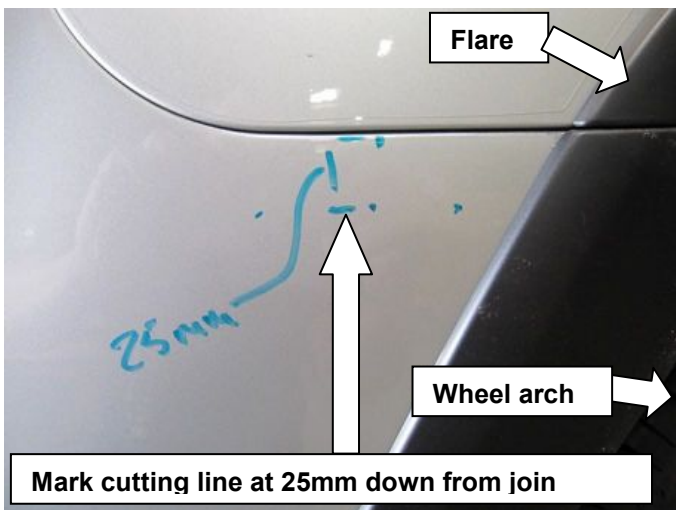
APPLICATION.	PART NO.	QTY	DESCRIPTION
MOUNT BRACKET (IMPACT ABSORBER) TO CHASSIS	3758067R&L	1 PR	BRACKET ASSY IMP ABS RH & LH
	3757995R&L	1 PR	BRACE
	6151040	8	BOLT M10X1.25P(FINE)X30
	4581040	8	WASHER FLAT M10 X 25 X 3THICK
	4581048	8	WASHER SPRING M10
	6151306	2	NUT CAGE M12 X 1.75P
	3194155	2	PLATE EXTENSION CAGE NUT
	6151094	2	BOLT M12 X 1.25P(FINE) X 30
	4581049	12	WASHER FLAT M12 X 25 X 3THICK
	4581050	8	WASHER SPRING M12
	6151360	8	BOLT M12 X 1.75 X 35 (COARSE PITCH)
	6151428	7	NUT FLANGED M12
	6151511	1	BOLT M12 X 1.75 X 100
	5811044	1	SLEEVE ID 13 @ 50MM
5811009	1	SLEEVE ID 13 @ 20MM	
BULL BAR TO MOUNT BRACKETS	6151360	6	BOLT M12 X 1.75 X 35 (COARSE PITCH)
	4581007	6	WASHER FLAT M12 X 37 X 4
	4581050	6	WASHER SPRING M12
	6151428	6	NUT FLANGED M12
	6151357	4	BOLT SEMS M10 x 30 LONG
	6151321	4	NUT FLANGE M10
BUFFERS TO BULL BAR	3162470R&L	1 PR	BUFFER SLOTTED RH & LH
	6151128	12	NUT FLANGED M6
LICENCE PLATE TO BULL BAR	6151384	2	SCREW PAN HD
	6821189	2	GROMMET RND HD
LIGHT INSERT AND INDICATORS	3163015	1	COMBINATION LIGHT SURROUND KIT
	6821151R&L	1 PR	INDICATOR/CLEARANCE LAMP RH/ LH
	6821152	2	LOOM INDICATORS
	180701	6	SCOTCH LOKS
WINCH TO BULL BAR	3756499	1	CONTROL BOX MOUNT
	EG50	2	RUBBER GROMMET
	6151074	2	BOLT 3/8" x 1 3/4" HEX HEAD
	6151073	2	BOLT 3/8" x 1 1/2" HEX HEAD
	4581040	4	WASHER FLAT M10
	4581048	4	WASHER SPRING M10
	6151234	2	BOLT M8 x 25mm
	6151132	2	NUT FLANGE M8
	4581307	2	WASHER FLAT M8
180302	6	CABLE TIES	
BRACE STRAPS	4681358	2	STRAP BRACE LOWER
	6151357	6	BOLT SEMS M10 x 30 LONG
	6151321	6	NUT FLANGE M10
STONE TRAY TO BULL BAR	6522802	1	STONE TRAY
	6151300	4	CAGE NUT M6
	6151213	6	BOLT M6 x 20 BZ
	4581082	6	WASHER FLAT M6 x 20 BZ
	4581287	6	WASHER SPRING M6 BZ
WING UNDER PANELS TO BULL BAR	6522801R&L	1 PR	PANEL WING UNDER SIDE
	6151300	14	CAGE NUT M6
	6151213	14	BOLT M6 x 20 BZ
	4581082	14	WASHER FLAT M6 x 20 BZ
	4581287	14	WASHER SPRING M6 BZ
	6151234	2	BOLT M8 x 25 LONG BZ
	4581303	2	WASHER FLAT PANEL M8X 25X3mm BZ
	4581047	2	WASHER SPRING M8 BZ
6151132	2	NUT FLANGE M8	

MISCELLANEOUS	180302	16	CABLE TIES
	6191020	2	PINCH WELD NARROW 400mm LONG
	3787837	1	TEMPLATE BUMPER CUT
	6151234	2	BOLT M8 x 25 LONG BZ
	4581307	2	WASHER FLAT PANEL M8 BZ
	4581047	2	WASHER SPRING M8 BZ
	6151132	2	NUT FLANGE M8
	6821231	1	CONDUIT ID10 @ 500mm

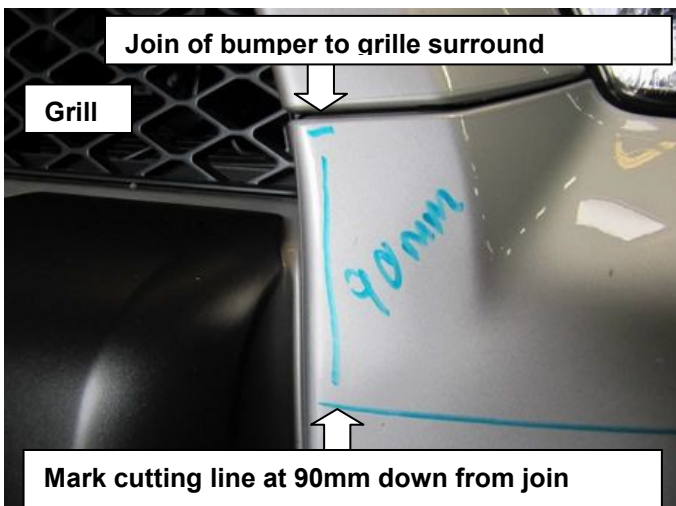
PREPARATION TO VEHICLE



1. Remove number plate

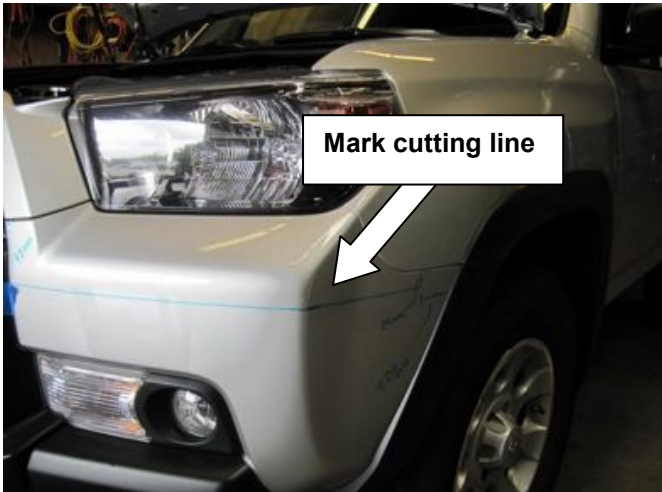


2. Using a non permanent marker, measure and mark a point 25mm (1") down from the bumper and fender join both sides of vehicle

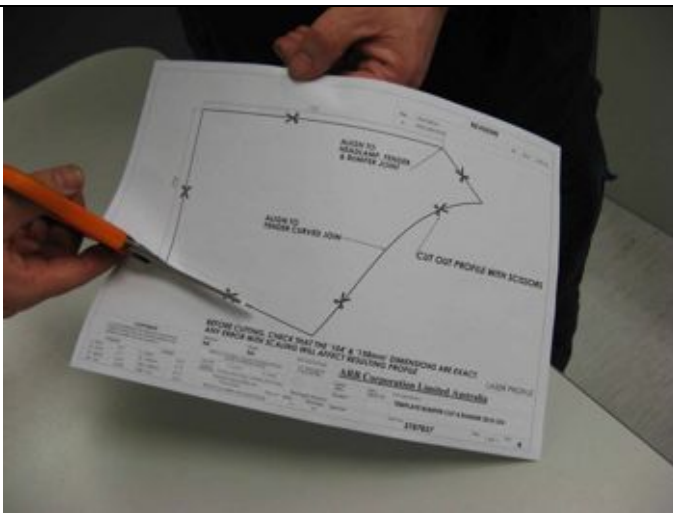


3. Mark a position for the cutting line at 90mm (3 1/2") down from bumper to grille surround join inboard of headlamp as shown, repeat on other side of vehicle

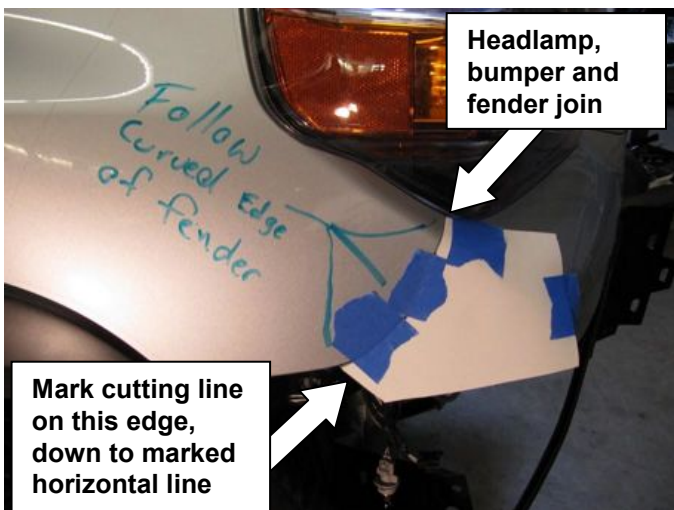
PREPARATION TO VEHICLE



4. Mark a straight, horizontal line joining the marked cutting points on each end of the bumper



5. Using scissors accurately cut out the bumper cutting template along designated bumper cutting line as shown.



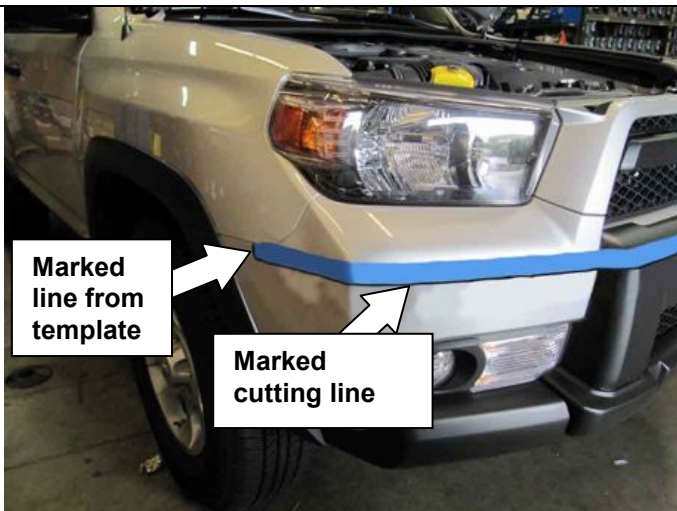
6. Carefully and accurately fit the template to the RHS of the bumper using the identified reference points aligning with the join of bumper, guard and the head lamp outer lower corner and tape in position. **Make sure the template sits as flat as possible on the bumper as any misalignment could affect the final cut profile accuracy on the vehicle.**

7. Repeat for other side of vehicle

PREPARATION TO VEHICLE



8. Temporarily apply some masking tape joining the cutting line positions from each of the bumper outer sections. Apply the tape so the top edge is on the cutting line

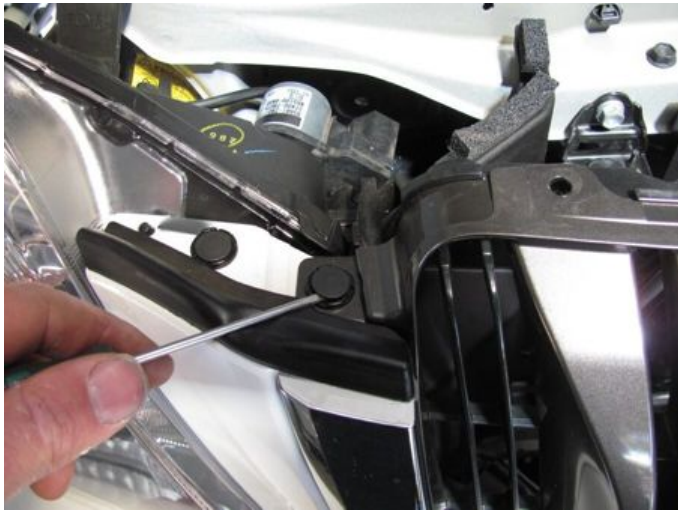


9. Apply 50mm masking tape along the top side of the cutting line right across the bumper as shown.
NOTE: The bottom edge is on the cutting line



10. Once bumper cutting has been marked out, the bumper can be removed
11. Remove the plastic rivets securing the courtesy panel above the grille

PREPARATION TO VEHICLE



12. Remove the plastic scrivets securing the top of the grille
13. Release the clip positions along the lower edge of the grille to the bumper then remove grille



14. Remove the plastic rivets securing the top of the bumper



15. Remove the screws securing the bumper to wheel arch area and across the lower section across the front so that there are no more fasteners securing the bumper
16. Remove the lower joining panel from the bumper to the sump guard
17. Work the inner guard liners away from the bumper and reaching in behind, undo the connections to the following if fitted:- fog lamps, parking sensors (connection is on LHS of vehicle), headlamp washers (use a cable tie to crimp off the hose to prevent washer bottle leaking).

PREPARATION TO VEHICLE

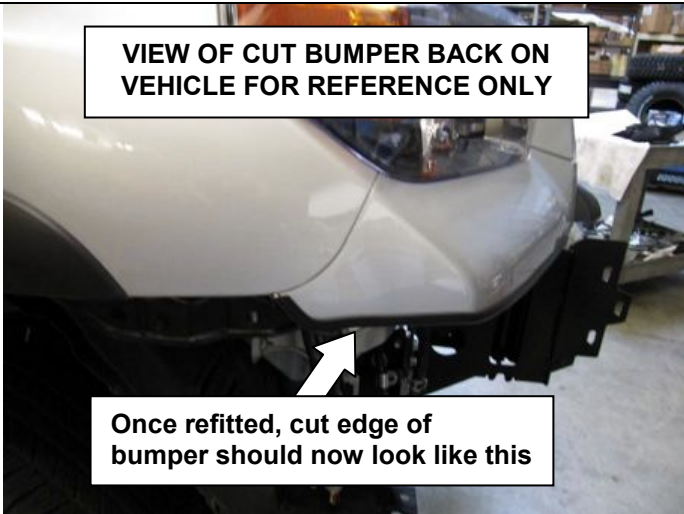


18. Carefully, and ideally with the aid of a friend, unclip each outer of the bumper at the guard as shown and remove bumper.

19. Place bumper face up on cutting table.



VIEW OF CUT BUMPER BACK ON VEHICLE FOR REFERENCE ONLY



20. With the bumper face up and on a suitable bench or the like, carefully cut the bumper along the cutting line with a jig saw or similar tool. **Take care not to damage surface above cutting line.**

21. When finished cutting, deburr cut edge with file, then remove protective tape.



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



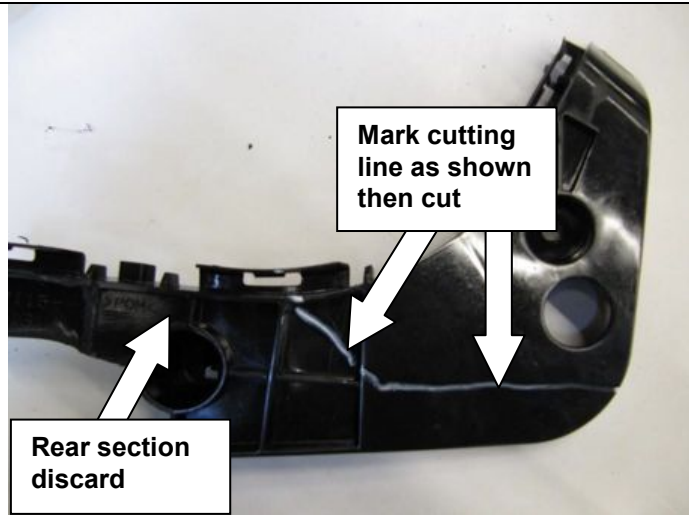
22. Remove the plastic bumper retaining clips from each side of the vehicle

23. Mask up the fenders and headlamps as shown

24. Spray paint black the area immediately below the fender edge which will be partially visible when the bull bar is fitted

25. Remove masking tape and allow paint to dry

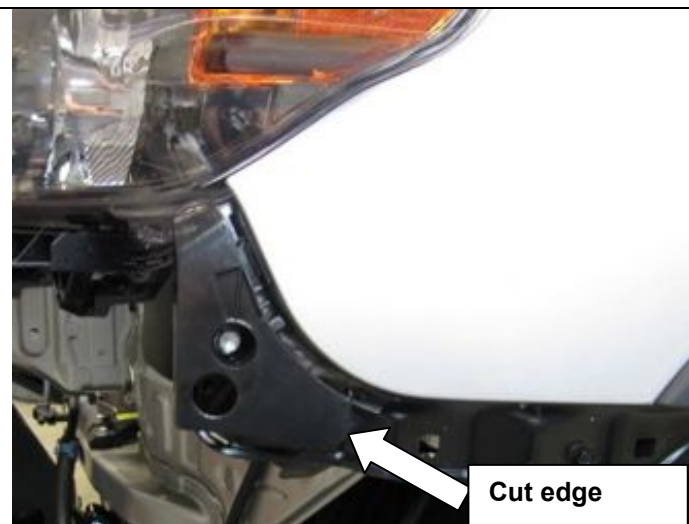
PREPARATION TO VEHICLE



26. Mark cutting line on each bumper retaining clip as shown (RHS shown)
27. Cut along marked line with jigsaw or similar cutting device. Clean up and deburr forward section then discard rear section



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



28. Once cut, replace forward section only of clip to vehicle as shown



29. Remove reinforcing beam foam pad, then remove the beam, *refer next step.*

PREPARATION TO VEHICLE



30. Remove reinforcing beam at mounts to chassis by undoing the M10 fine thread bolts. Set beam aside, it will not be reused



31. Remove clamp from power steering pipes, by undoing the M10 bolt into the side of the chassis and the bolt holding the clamp plate. Set aside as this bracket *will* be reused

32. *Repeat for other side of vehicle*

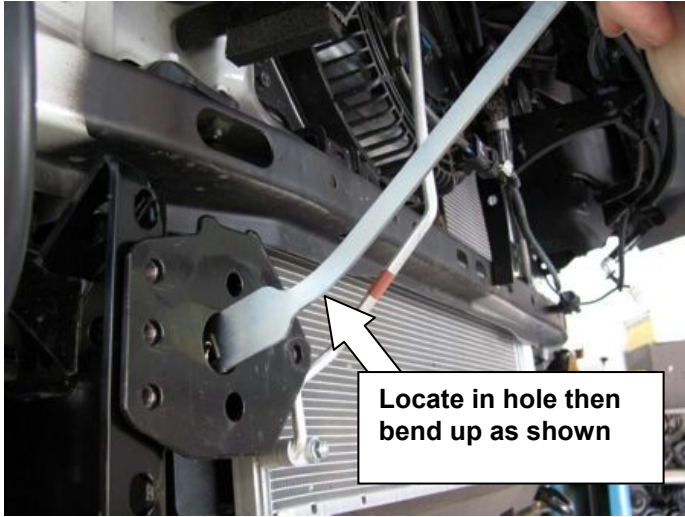


33. Using a power drill with Dia13mm bit, drill out captive nut in hole immediately behind chassis flange as shown, for both RH and LH chassis ends

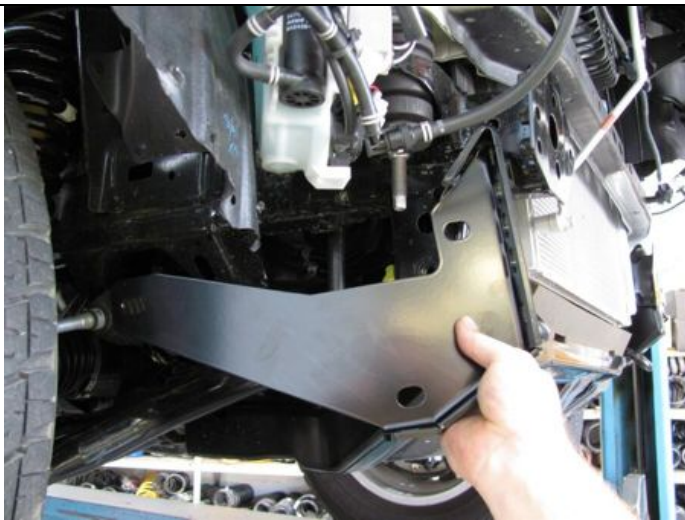


Warning: Cutting operations can result in flying debris, safety glasses should be worn.

PREPARATION TO VEHICLE



34. **Starting with RHS of vehicle**, insert M12 cage nuts to nut plate extensions
35. Bend up the nut plate on the RHS only as shown, this is to clear cross tube in chassis.
36. Insert nut plates in chassis holes with approximately 40mm still protruding



37. Fit handed specific side brace as shown, locating over the captive nuts at the rear of the chassis.



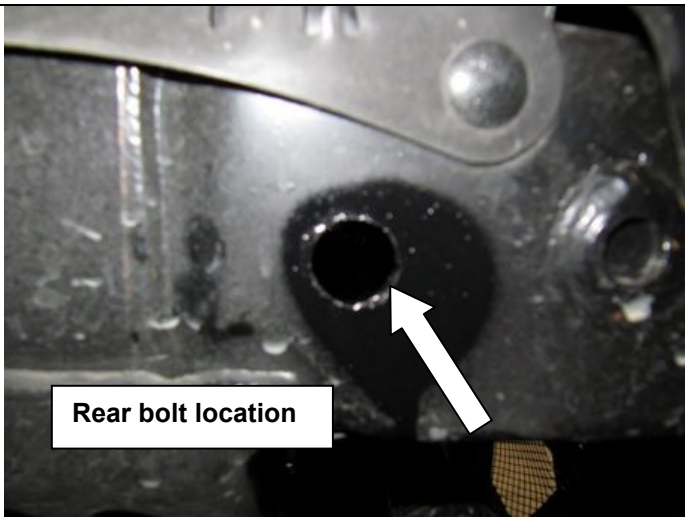
38. When the RHS side brace are fitted in position as shown, insert **fine thread M12 x1.25P x 30 bolt** and washer sets into lowest hole position to chassis. There is an existing captive nut in chassis, **but do not do up tight.**



PREPARATION TO VEHICLE



39. Insert M12 flange nut through hole in chassis flange, you can retain with ring spanner, then insert M12 x 35 coarse pitch bolt and washer set, **but do not do up tight**
40. Insert M12 x 35 coarse pitch bolt and washer set into rearmost hole into cage nut on extension plate, **but do not do up tight**



NON KDSS EQUIPPED VEHICLES

41. Proceed to fit LHS brace as per RHS instructions in previous steps

KDSS EQUIPPED VEHICLES

42. If the vehicle has KDSS, using a power drill with Dia19mm (3/4") bit or holesaw, drill out rear brace mounting hole in chassis face **outboard side only as shown**



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

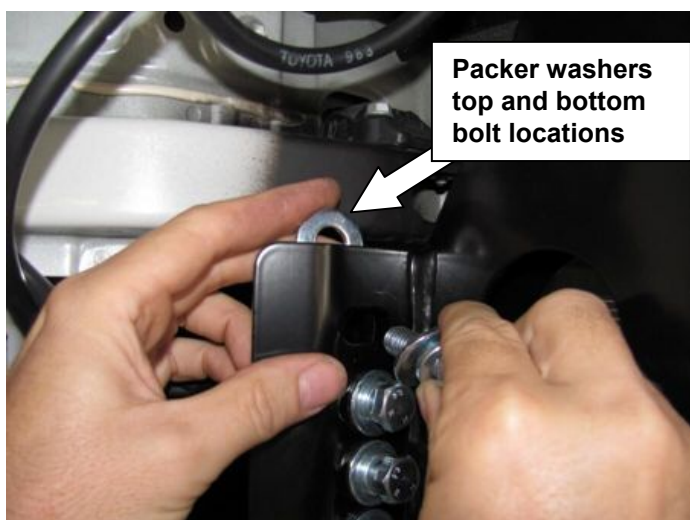


43. Fit the LHS brace into position as per the RHS instructions with the following exception.....
44. ***The cage nut on extension plate is not fed through the front end of the chassis and used for the rear bolt position, instead fit the supplied M12 x 100 bolt and flat washer to the rearmost hole in the brace, then fit the two sleeves over the bolt.*** Fit the brace while fitting the bolt and sleeve combination into the opened up hole, fit the M12 flange nut to the bolt on the inside of the chassis but **do not do up tight**.
45. ***Fit the other bolts as per RHS, snugged up but do not do up tight***

PREPARATION TO VEHICLE



46. Fit impact absorbers to chassis ends using ***fine thread M10 x 1.25P x 30 bolt*** and washer sets supplied, note that the brackets are handed, slide them towards the centre of the vehicle on the adjustment slots ***do not do up tight***

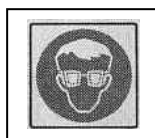


47. Fit M12 bolt, washer and flange nut sets to top and bottom positions as shown. Insert M12 flat packing washer between the rear face of the impact absorber flange and the front face of the side brace as shown, ***but do not do up tight. If necessary grind a small flat on the side of the washer to clear lower bolt.***
48. Once all bolts are in place nip up the bolts in the side brace.
49. Then tighten to full torque the bolts of impact absorbers to chassis flange, ***starting with the two inner first*** then moving outboard to vertical rows of 5 bolts on outer flange position. ***Now, tension up side brace bolts to full torque***

NOTE: When fitted, if bull bar requires sideways adjustment to align with vehicle, the bolts of the mount to chassis will need to be loosened, adjustment made then re-tensioned. This is best done before angular brace straps are fitted and pinned.

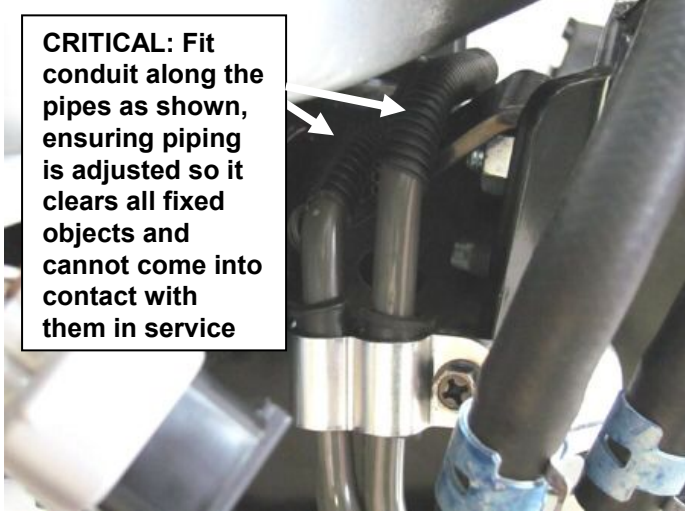


50. Modify the clamp plates for the power steering pipes by cutting off the flange as shown then drilling a Dia 8.5 hole 8mm from the bend as shown



PREPARATION TO VEHICLE

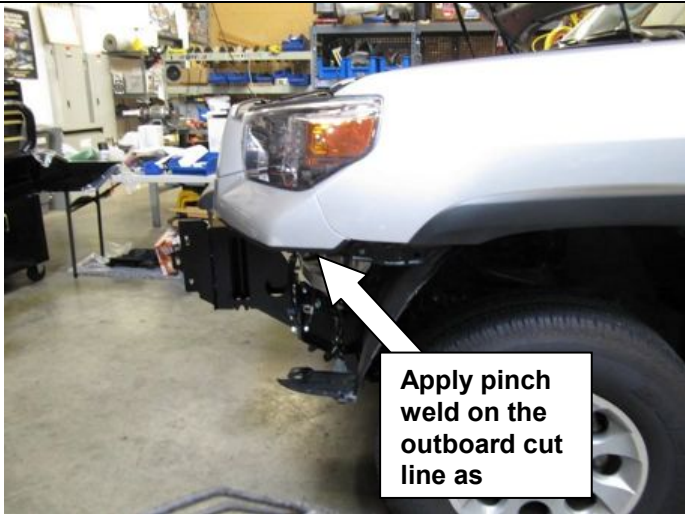
CRITICAL: Fit conduit along the pipes as shown, ensuring piping is adjusted so it clears all fixed objects and cannot come into contact with them in service



51. Fit the clamps back into position, and bolt to the vertical flange on the bull bar mount bracket using a 6mm bolt washer and nut set. If there is no hole in flange, drill a Dia 8.5 hole 70mm down and 8mm in from the edge of the flange

52. **CRITICAL:** Adjust the piping so it clears all fixed objects and ***then apply the conduit over the pipe where it runs above the mount bracket as shown***

53. Fit bumper back onto vehicle and apply pinch weld to edges as shown



BULL BAR PREPARATION

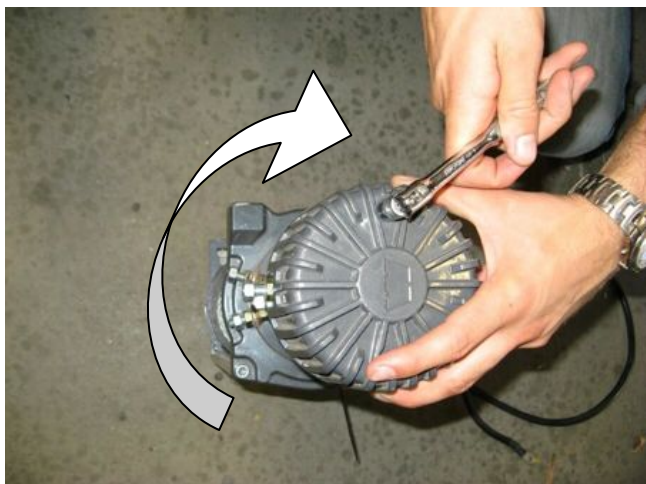


54. Fit the buffers to either side of the bull bar using 6 x M6 flange nuts. Do not over tighten.

55. Fit M6 cage nuts for stone tray fixing to lower pan to the four holes in underside of pan.

NOTE: The nut bodies are inside the bull bar, MUST BE COMPLETED BEFORE WINCH RFL IS FITTED.

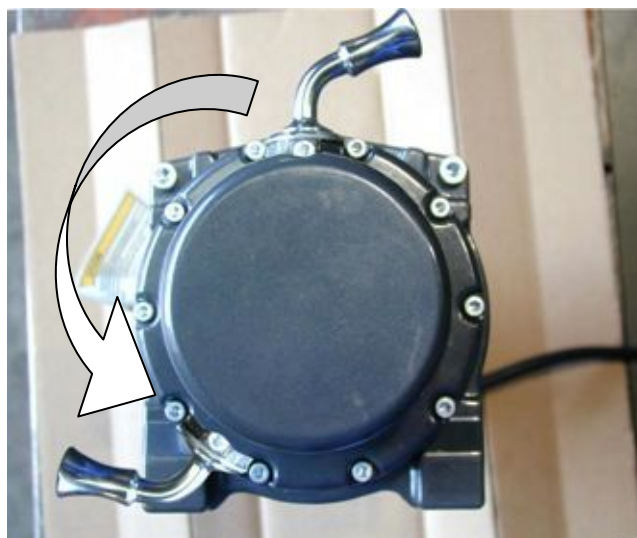
WINCH FITMENT ONLY



IF FITTING A WINCH

56. Rotate the winch motor 90 degrees as shown

NOTE: Follow the winch manufacturers instructions regards motor rotation and drainage requirements



57. Remove the cap head screws retaining the gearbox to the winch drum. Carefully lift the gearbox a small amount (5 mm) and rotate 144 degrees counter clockwise (four hole spacings) and re-fit the cap screws . This places the winch handle in the correct orientation.

58. Lay the winch on a suitable flat surface and place the bull bar on top so that the wire rope will feed through from the bottom.

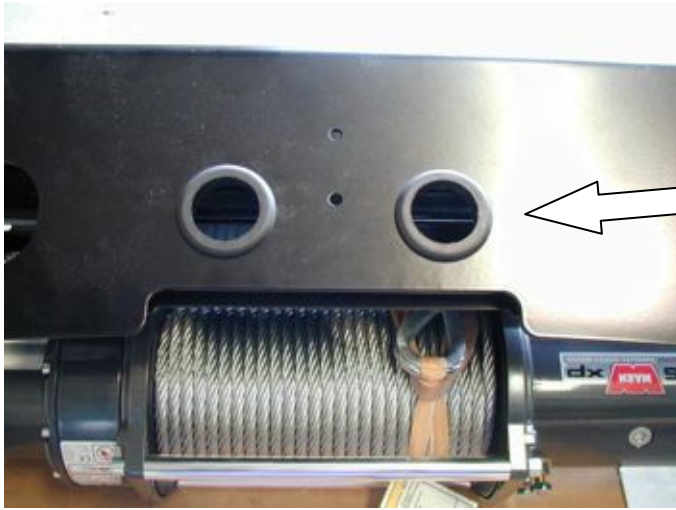
59. Using the two 3/8" x 1 1/2" long bolts, M10 flat and spring washers, attach the bull bar to the winch through the top two bolt holes



60. Remove the cir clips from the bottom of the vertical rollers of the fairlead and push the pin upwards. Push the vertical rollers inwards on the lower edges as shown and using two 3/8" x 1 3/4" bolts M10 flat and spring washers, attach the lower section of the roller fairlead to the bull bar and winch.

61. Replace the cir clips on the vertical rollers on both sides.

WINCH FITMENT ONLY



62. Insert the two rubber grommets into the top face of bull bar.



63. Attach the control box to the control box bracket as shown.

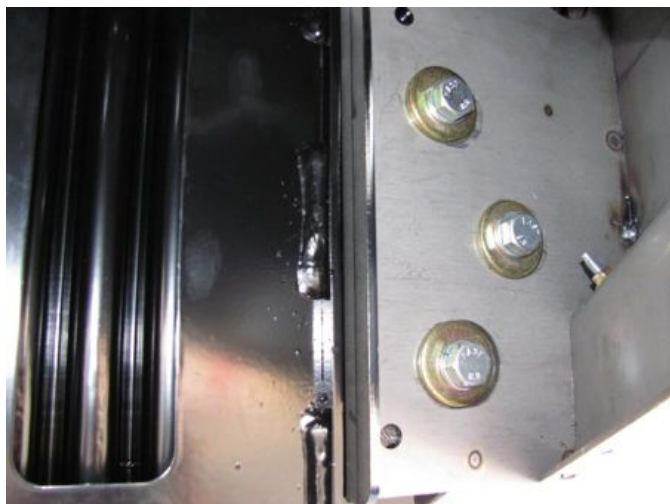
64. Fit the control box to the bull bar with two M8 x 25mm bolts, M8 flat washers and M8 flange nuts.



65. Run the cables through the rubber grommets and connect to the winch as per the wiring diagram supplied with the winch.

66. Using cable ties fix the cables securely and ensure they are well away from any moving, sharp or hot surfaces.

BULL BAR FITMENT TO VEHICLE



67. With assistance guide the bull bar into position on the vehicle. The uprights on the bull bar sit outside the impact absorber blades.
68. Bolt the bull bar into position using the M12 bolts, spring washer, large body washer and flange nuts 3 places per side of bull bar as shown. Tighten the bolts firmly – but allow enough movement for the bull bar to be adjusted
69. If winch fitted route cables up into the engine bay and secure.



70. Ensure the bull bar is sitting on the vehicle level and the gap between the bumper bar cut and the bull bar wing is even.

**16-20 mm (5/8 -3/4") GAP
REQUIRED**

71. If the bull bar is not centred on the vehicle, back off the mount bracket bolts to chassis, tap the mount brackets sideways with a soft hammer until the bar is central. Retention bolts to specified torque
72. Once happy with the position of the bull bar and the clearance gap is 16-20mm, **tighten all the mount bolts to specified torque**



73. Using an electric drill and a Dia10.0 mm drill bit, drill two pinning bolt holes through the bull bar upright each side using the holes in the mount bracket flanges as a guide. One hole is located in the lower lug of the mount face and one up above the welded nuts. Use access through the light surround opening for the top hole.
74. Fit the pinning bolts to the bull bar in the drilled positions using 4 x M10 SEMS bolt and washer sets and M10 flange nuts and **do up to specified torque.**



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

BULL BAR FITMENT TO VEHICLE



WINCH FITMENT ONLY

75. Fit the two bracing straps from the top face of the gusset on the mounting bracket to the bottom of the flange on the rear of the winch bracket in bull bar

NOTE: *The M10 bolts must have the nuts on the lower side*



76. Using a Dia10mm drill bit, drill and pin the straps at the adjustment end using the pilot hole as a guide, as shown (note strap fits above the gusset as shown).

77. Fit and torque the M10 pinning bolts and flange nut sets to specifications.



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

BULL BAR FITMENT TO VEHICLE



78. 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.

79. Check that the lights clear the bumper cut line, if not trim the bumper edge to clear by at least 15mm

80. Wire both the positive sides of the indicator and running lamps together to the vehicles indicator lamp wiring, black to earth (- neg).

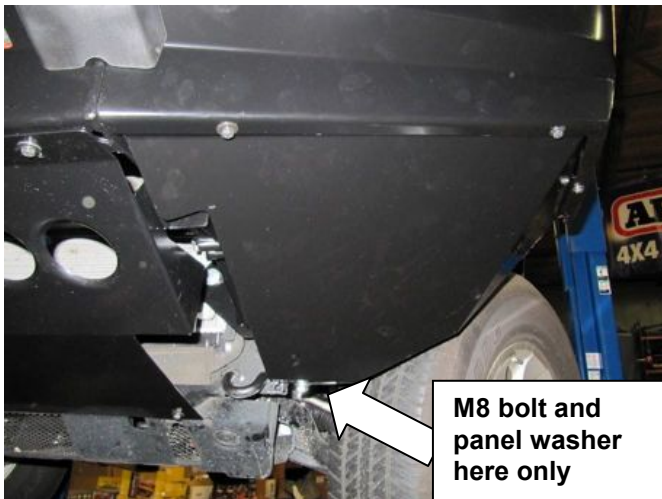
Caution: Cable tie all cables together and keep all cables clear of sharp edges and moving parts.

Wiring:

Green wire is Turn signal + (pos)

Red is running lamp + (pos)

Black is - (neg)



81. **Check that all connections have been made, fog lights, indicators**

82. The wing under panels can now be fitted.

83. Fit M6 cage nuts to the inside of the wings lower flanges, 3 places per wing, also to the lower inside of the pan.

84. Fit the wing panels as shown and secure with M6 bolt and washer sets and M8 bolt and washer set to position on side brace to chassis



85. The stone shield can now be fitted using 6 x M6 bolt and washer sets

86. Rear fixing position is to sump guard 2 x M6 captive nuts

BULL BAR FITMENT TO VEHICLE



87. The licence plate can now be attached to the bull bar. Insert the two plastic square plugs supplied into the two square holes in the face of the bull bar (note slot allows for adjustable number plate hole pitch, ensure grommet flanges fit over the narrow width of the slot to engage correctly).



88. If winch fitted, position the licence plate as shown fastening top picture using lower holes. If winch not fitted use the top row of holes, licence plate is positioned lower and covers RFL opening in front of bull bar, lower picture.

89. Using the two dome head screws supplied screw into position firmly.



90. If required, trim the outer edge of the fender liner as shown so that it will clip in behind the wing with the maximum grab

BULL BAR FITMENT TO VEHICLE



91. Push the outer edge of the liner forward past the wing return edge so that it snaps in place
92. Drill Dia 7 holes in fender liner co-incident with the holes in the return flange and captive nuts in the wing under panels
93. Fasten with M6 bolt and washer sets



94. Carefully trim off the bottom of the guard liner flush with the wing under panel

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

