ARB FITTING INSTRUCTIONS

Part Number: **3414470 F/ Kit 6173258, Winch F/Kit 3514010**

Product Desc: HILUX ARB COMMERCIAL BULL BAR 2005 ONWARDS INCLUDING 2011 UPDATE.

Suited to vehicle/s: 4 x 4 Flared and Non Flared (SRS AIR BAG MODELS)

Not suitable for 2WD (4 x 2) models

NOTE: Optional winch kit 3514010

Optional wing underpanel kit 3514070

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:

3.5, 5, 10mm drill bits and power drill	**Scissors or sharp knife**
300mm Rule	**Tape measure**
Basic metric tool kit, spanners and sockets	**Stepped ring spanner to suit 3/8" bolt**
25 and 50mm masking tape	**Air hacksaw or jigsaw**
Screwdrivers Philips and blade type	**Fine point permanent marking pen**
Fine flat file or sand paper and sanding block	**Side cutters**

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:

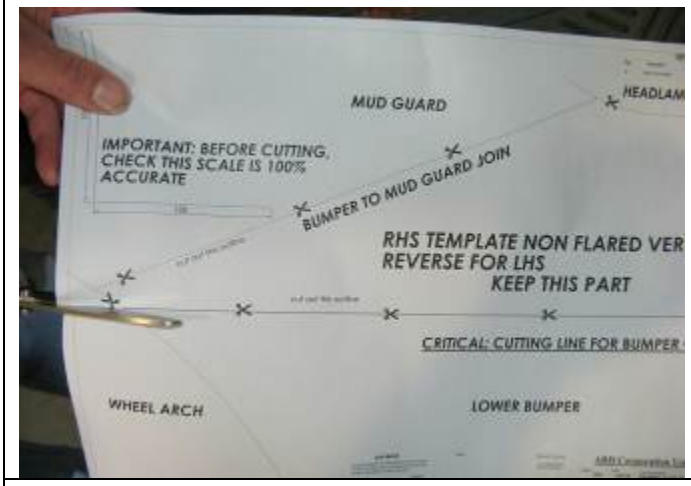
SIZE	Torque Nm	Torque lbft
M6	9Nm	7lbft
M8	22Nm	16lbft
M10	44Nm	32lbft
M12	77Nm	57lbft

Winches that are recommended for this product; WARN 8000lb XD, 9000lb XD, 9.5XP, 9000XDC

PARTS LISTING			
APPLICATION.	**PART NO.**	**QTY**	**DESCRIPTION**
****CONTROL BOX FITMENT (SUPPLIMENTARY KIT)**	3756499	1	CONTROL BOX BRACKET
	6151234	2	BOLT M8 x 25 LONG (BLACK)
	4581045	2	WASHER FLAT M8 (BLACK)
	6151132	2	NUT FLANGE M8
	EG50	2	GROMMET RUBBER
	180302	8	CABLE TIES
****WINCH MOUNT (SUPPLIMENTARY KIT)**	4581040	4	WASHER FLAT 3/8"
	6151074	2	BOLT UNC 3/8" x 1 ¾"
	BLB850	3	CABLE BLACK 850mm
BOLT BULL BAR TO MOUNTS	6151428	6	NUT FLANGE M12
	6151355	6	BOLT M12
	4581049	6	WASHER FLAT M12
	4581064	6	WASHER SPRING M12
BULL BAR PINNING	6151357	2	BOLT (SEMS) M10
	6151321	2	NUT FLANGE M10
IMP. ABS. TO CHASSIS	3757766R	1	MOUNT BRACKET ASSY R.H.S
	3757766L	1	MOUNT BRACKET ASSY L.H.S
	3194068R	1	MOUNT BRACE R.H.S
	3194068L	1	MOUNT BRACE L.H.S
	4581288	4	WASHER FLAT M10 (OVERSIZED)
	6151357	2	BOLT (SEMS) M10
	6151133	4	NUT M10 X1.25P FINE THREAD
	6151026	4	NUT M10 X1.5P
	4581008	2	WASHER OFFSET 40 X 13
	6151232	2	BOLT M10 x 30 x 1.5mm
	4581040	4	WASHER FLAT M10 X 25mm
	4581048	6	WASHER SPRING M10
	6151095	2	BOLT M12 X 1.25 X 30 FINE THREAD
	4581064	2	WASHER SPRING M12
	4581007	2	WASHER FLAT LG M12 X 4mm THK
STONE TRAY	6522719	1	STONE TRAY
	6151234	6	BOLT M8
	6151303	6	NUT CAGE M8
	4581045	6	WASHER FLAT M8
	4581047	6	WASHER SPRING M8
INDICATORS TO BULL BAR	6821151R	1	INDICATOR KIT, RHS
	6821151L	1	INDICATOR KIT, LHS
	6821116	4	NYLON PLUG
	6151308	4	SCREW, SELF TAPPING
	6821152	2	WIRING LOOM
	6821198	1	INDICATOR RELAY LOOM
	1080302	6	CABLE TIES
NUMBER PLATE	6151017	2	BOLT M6
	6151300	2	NUT CAGE M6
	4581072	2	WASHER FLAT M6
	4581036	2	WASHER SPRING M6
MISCELLANEOUS	6191026	1	PINCH WELD @ 2700MM
	3787817	1	CUTTING TEMPLATE NON FLARED 05-11
	3787818	1	CUTTING TEMPLATE FLARED 05-11
	3787979	1	CUTTING TEMPLATE FLARED 11on
	3787980	1	CUTTING TEMPLATE NON FLARED 11on
	6151338	2	SCREW PAN HD PLASTITE

****NOTE: GREY FILLED ITEMS LISTED ARE AVAILABLE ONLY IN SUPPLIMENTARY WINCH FITTING KIT 3514010, THEY DO NOT COME IN STANDARD KIT.**
NOTE IF FITTING AN XDC WINCH, SUPPLIMENTARY KIT 3500140 CONTROL BOX BRACKET IS REQUIRED

VEHICLE PREPARATION 2005 -2011 VEHICLES (FOR 2011 ON VEHCILES GO TO STEP 19)



BUMPER CUT

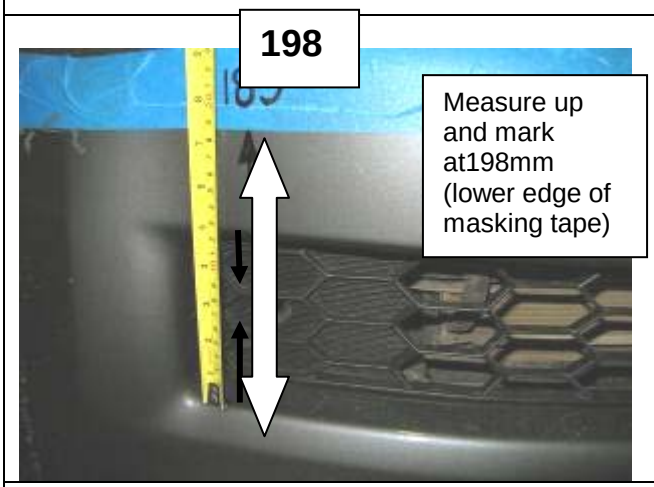
1. Cut out the relative supplied bumper cutting template to suit the bumper type – flared or non flared.

2. Flared bumpers have a flaret attached, leave this on the bumper on for marking and cutting

3. Carefully and accurately apply the cutting template to the outer corner of the bumper on the RHS as shown, lining up the ***bumper to fender join***, ***wheel arch and headlamp lower edge***. Use masking tape to secure in position.

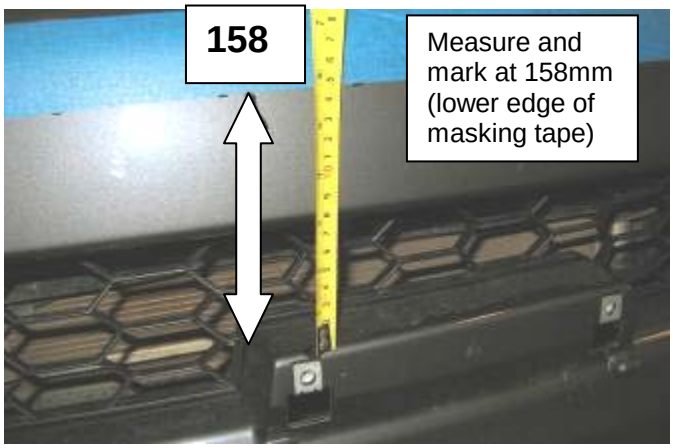
4. Accurately mark cutting line using a marking pen

5. Repeat by reversing template for LHS



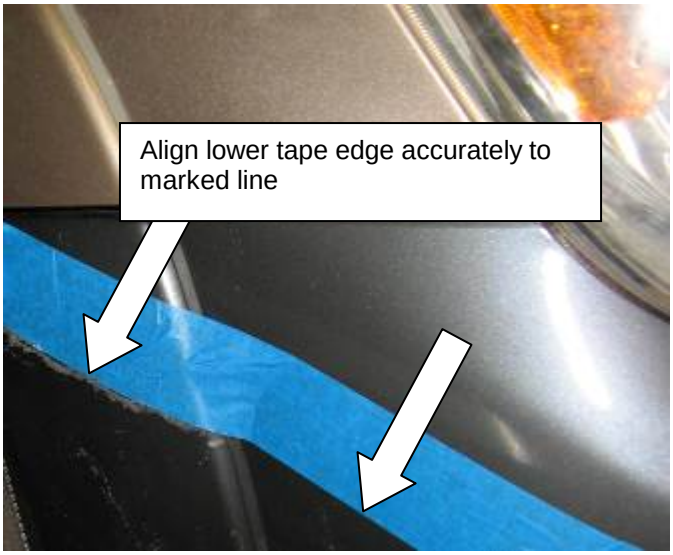
6. Accurately mark cutting line reference points at either end of the outer openings of the air intake as shown on the flat section (don't measure on the corner radius)

Note: Masking tape shown for reference



7. Accurately measure and mark at the center of the bumper facia up at two points on either end of the number plate boss top face as shown.

Note: Masking tape shown for reference



8. As accurately as possible, using 50mm masking tape, place the bottom edge of the tape along the marks for the cutting edge right across the bumper and flarets.

NOTE: This is intended to be a straight horizontal cut across the bumper. A laser level is the optimum way to ensure the cut is level. If you can get access to one use it once you have ensured the car is level. If the cutting line appears to be crooked or uneven, reapply the tape so it is straight.

NOTE: If fog lamps are fitted, disconnect them. Check that there is nothing behind the bumper such as wiring in the cutting path before proceeding

9. Using the ***lower masked line*** as a guide accurately cut the bumper facia with an air hacksaw or jig saw or similar (always use eye and ear protection). ***NOTE: You may need to use a hand saw to cut through the bumper behind flaret on the flared bumper version as shown. Ensure the saw is horizontal.***

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

VEHICLE PREPARATION 2005 -2011 VEHICLES

10. Deburr the cut edge with a fine flat file or sandpaper and block

11. Remove the lower bumper braces and discard.

12. Remove the chassis cross-brace and discard.

13. Remove the lower bumper from the vehicle.

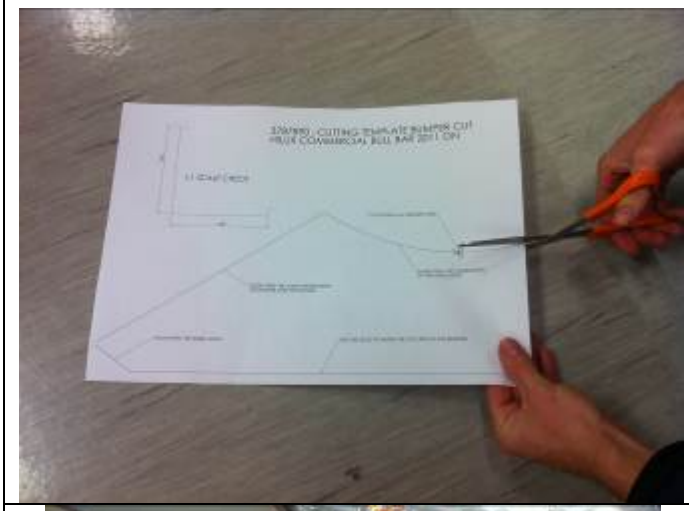
14. Blow off all the plastic swarf then apply supplied pinch weld to the cut edge, from wheel arch to wheel arch

15. ***If a flared vehicle***, then cut some short pieces of pinch weld to fit over the flaret edge as shown

16. ***If a flared vehicle,*** drill a Dia 3.5mm hole about 15mm from the outer edge ***almost vertical***, through the rear wheel arch area of the flaret and then into the mud guard flare as shown

17. Drill a Dia 5.0mm clearance hole in the ***rear piece of the flaret only***

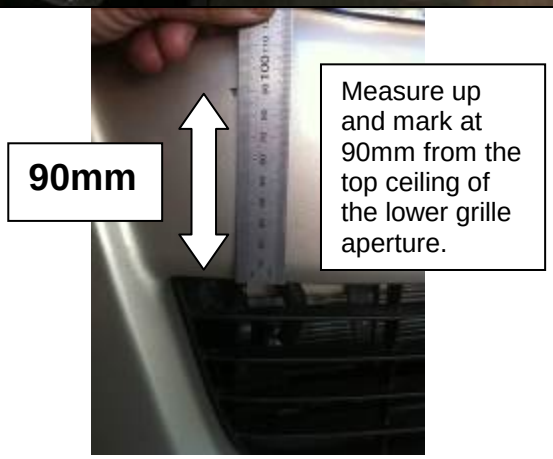
18. Fit a plastite screw to secure the rear of the flaret as shown



BUMPER CUT

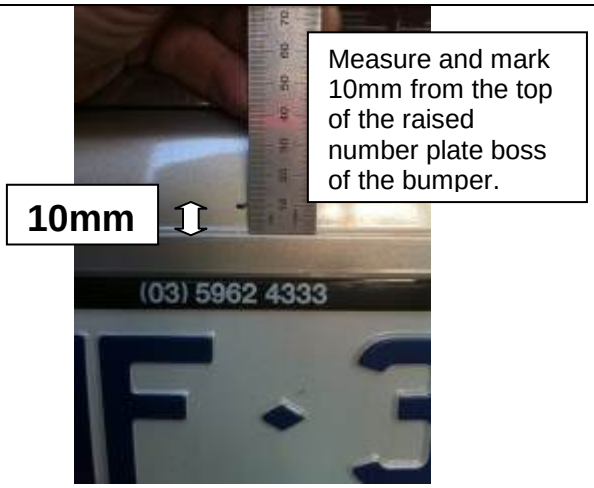
19. Cut out the relative supplied bumper cutting template to suit the bumper type – flared or non-flared.
20. Flared bumpers have a flaret attached, leave this on the bumper on for marking and cutting

21. Carefully and accurately apply the cutting template to the outer corner of the bumper on the RHS as shown, lining up the **bumper to fender join; wheel arch and headlamp lower edge.** Use masking tape to secure in position.
22. Accurately mark cutting line using a marking pen
23. Repeat by reversing template for LHS



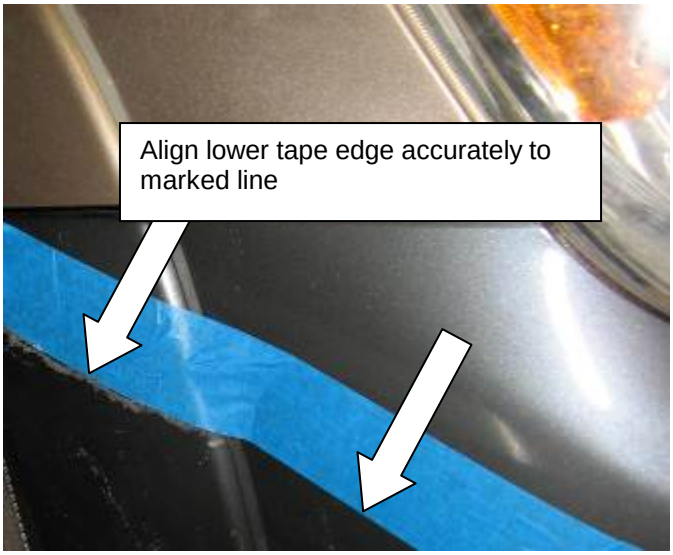
24. Accurately mark cutting line reference points at either end of the outer openings of the air intake as shown on the flat section (don't measure on the corner radius)

Note: Masking tape shown for reference



25. Accurately measure and mark at two points on either end of the number plate boss top face as shown.

Note: Masking tape shown for reference



26. As accurately as possible, using 50mm masking tape, place the bottom edge of the tape along the marks for the cutting edge right across the bumper and flarets.

NOTE: This is intended to be a straight horizontal cut across the bumper. A laser level is the optimum way to ensure the cut is level. If you can get access to one use it once you have ensured the car is level. If the cutting line appears to be crooked or uneven, reapply the tape so it is straight.

NOTE: If fog lamps are fitted, disconnect them. Check that there is nothing behind the bumper such as wiring in the cutting path before proceeding

27. Using the lower masked line as a guide accurately cut the bumper facia with an air hacksaw or jig saw or similar (always use eye and ear protection).

    NOTE: You may need to use a hand saw to cut through the bumper behind flaret on the flared bumper version as shown. Ensure the saw is horizontal.

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

VEHICLE PREPARATION 2011 ON VEHICLES

28. Deburr the cut edge with a fine flat file or sandpaper and block

29. Remove the lower bumper braces and discard.

30. Remove the chassis cross-brace and discard.

31. Remove the lower bumper from the vehicle.

32. Blow off all the plastic swarf then apply supplied pinch weld to the cut edge, from wheel arch to wheel arch

33. **If a flared vehicle**, then cut some short pieces of pinch weld to fit over the flaret edge as shown

34. **If a flared vehicle,** drill a Dia 3.5mm hole about 15mm from the outer edge **almost vertical**, through the rear wheel arch area of the flaret and then into the mud guard flare as shown

35. Drill a Dia 5.0mm clearance hole in the **rear piece of the flaret only**

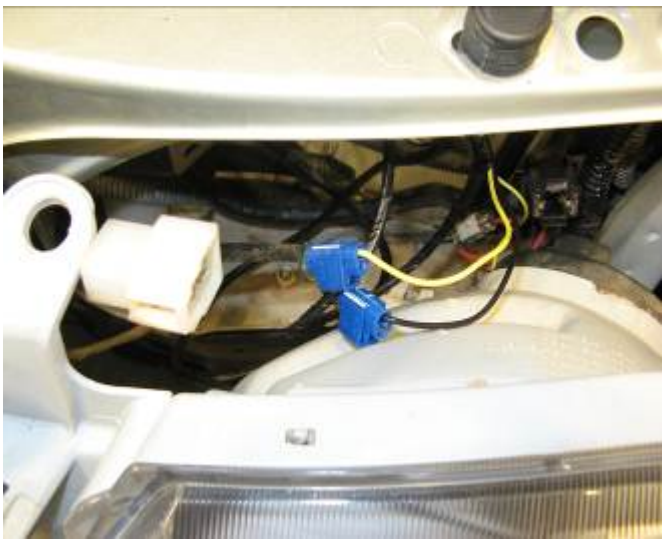
36. Fit a plastite screw to secure the rear of the flaret as shown

WIRING OF LIGHTS

37. Carefully read the wiring diagram supplied at the end of these instructions.

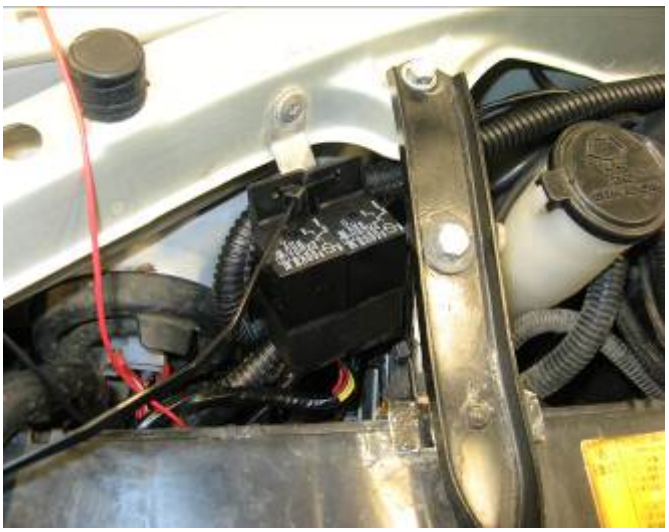
38. Take the relay loom (6821198) from the kit and position in the engine bay so that all wires will reach the appropriate connections.

39. Starting with the passenger side, use scotch locks to connect the red wire from the indicator loom (6821152) to the green wire from the vehicles front park lamp.
40. Connect the Yellow / Black wire from the relay loom to the Green / Black wire from the vehicles left indicator.



41. Connect the Yellow and Black wires from the relay loom to the Green and Black wires from the indicator loom.
42. Let the indicator loom hang freely for connecting to the bull bar indicators later on.
43. Do the same for the driver's side, using the wiring diagram supplied as a reference to the correct wire colours.

VEHICLE PREPARATION

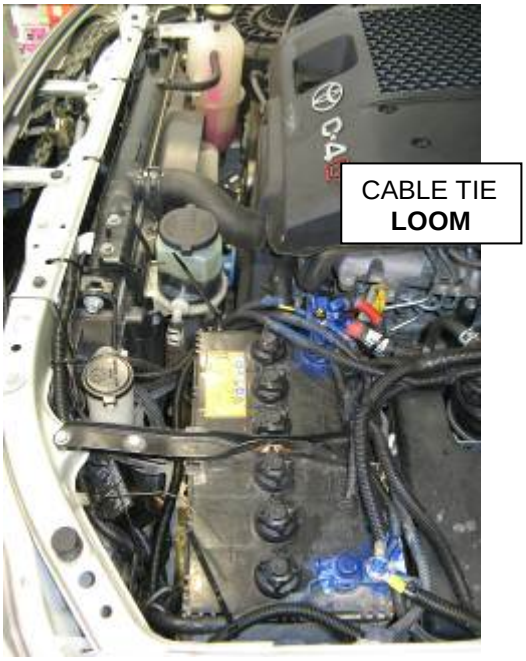


44. Find a suitable place and mount the relay.

NOTE: Always mount the relay upright to help prevent water ingress.

45. Run the main black wire to a suitable earth.

46. Connect the main power wire (red) to the positive terminal of the battery. (Main battery if a dual battery system is installed)



47. Using the cable ties supplied, secure the loom keeping clear of any hot, sharp or moving surfaces.

BULL BAR PREPARATION

48. Working within the bull bar, insert 2 x M6 caged nuts to inside front face of top pan.

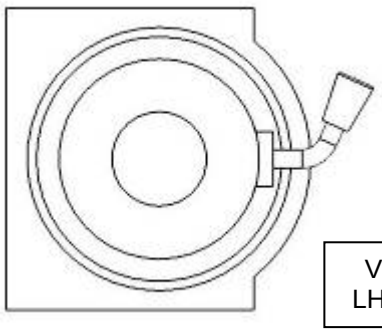
NOTE: Caged portion faces the rear of the bar.

49. Fit 4 x M8 cage nuts across inside of lower pan as shown

50. Remove the fastening screws and nuts supplied with the turn signal/clearance lamps and replace these with the four screws provided in the kit. Push the square plastic plugs into the holes on the turn signal bracket. Fasten the turn signal lamps to the bull bar as shown.

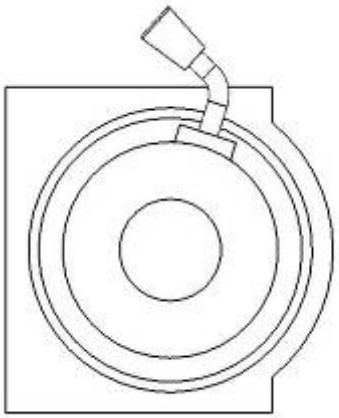
NOTE: - The drain holes in the lamp are at the bottom. (As shown)

IMPORTANT: -
The turn signal (amber section) is to face to the inside of the bull bar.



ORIGINAL

VIEWED FROM LHS OF VEHICLE



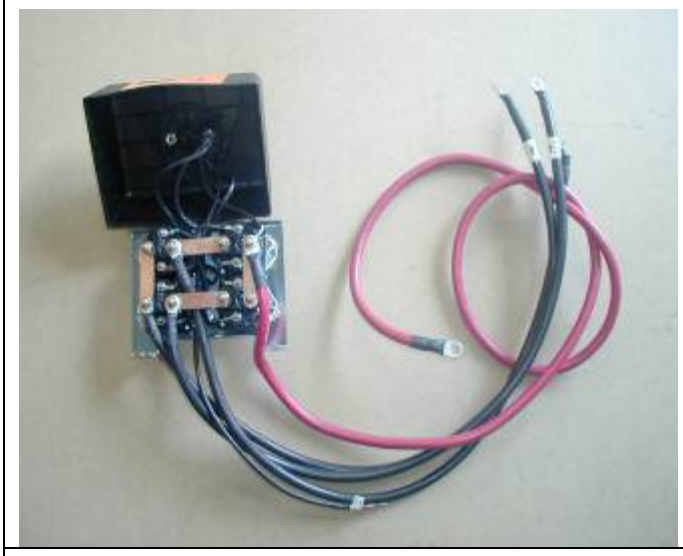
ROTATED

IF FITTING A WINCH

51. To fit an 8/9000lb or 9.5XP winch, rotate gearbox 72° counter clockwise.
52. Stand winch upright and undo the capped head screws and by lifting the gearbox only a couple of millimetres, rotate the gearbox. Once in position, refit all screws and tighten firmly.

WARNING: Do not lift gearbox more than a couple of millimetres.

BULL BAR PREPARATION



53. Remove the cover from the control box.

54. Replace the three main power cables that go from winch to control box. Make sure that you identify the colour codes on the new cables before closing control box cover.

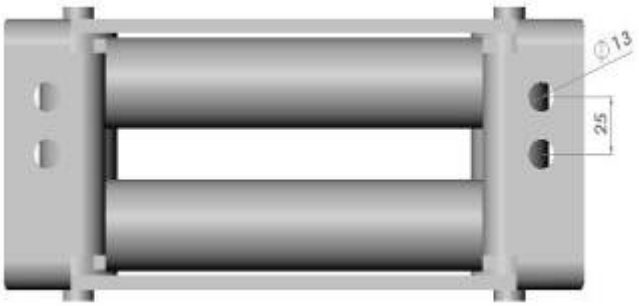
55. This must be done for whatever winch is to be fitted to the bull bar.

56. Bolt the control box bracket to the control box then thread the cables through the aperture cut into the top of the pan.
57. Mount the control box bracket onto the top pan, using M8 bolts, flat washers and flanged nuts. Use the cable ties to ensure the winch cables are secure, clear of moving parts and sharp edges and tie them together.

58. Place winch on a stand with mounting holes facing upwards and lower bull bar onto winch. Align all four holes, using the original 3/8” bolts that came with the winch in the top two holes and the longer 1 ¾” x 3/8” bolts, supplied in the kit, in the lower two holes plus 3/8” spring and flat washers with each bolt.

59. When all bolts are fitted and finger tight, tighten top holes only, using a stepped ring spanner and remove lower bolts.

BULL BAR PREPARATION



60. Drill two new 13mm holes in the roller fairlead provided in the kit, as shown on the adjacent picture.

61. Fit roller fairlead into cutout and refit bolts and tighten firmly.

Note. For ease of tightening lower bolts use a stepped ring spanner.

62. Connect the winch control box cables to the winch. Refer to Warn installation instruction manual when wiring up winch.

63. Ensure that all cables are installed well clear of all sharp or moving parts, by using cables ties from bolt kit.

64. Cable tie main cables that go to battery in between underside of bar and brace. Refer to photo to see where to cable tie to bull bar.

FITTING BULLBAR

65. Loosely bolt the impact absorbers to the chassis using the factory studs with the large M10 flat washers, spring washers and **M10 x 1.25 fine pitch nuts.**

66. Loosely bolt the chassis tension bracket to the impact absorber at the lower position using an M10 bolt, offset washer at front, std flat washer, spring washer and std pitch nut at rear. Fasten upper position with M10 SEMS bolt, flat washer and nut at rear.

67. Bolt the bracket to the chassis using **M12 x 1.25 x 30 fine pitch** bolt with the large M12 x 4 thick flat washer and spring washer.

68. Repeat on other side.

69. Set the distance between the inner mount faces at 785mm

70. Position the bar on the vehicle and fasten it to the impact absorber brackets using the M12 bolts, washers, spring washers and flange nuts provided.

71. Adjust the bull bar position up/down and in/out to achieve uniform gaps between the bar and the fenders on each side of the vehicle. The optimal clearance between the bull-bar and the cut edge of bumper fenders is 15 -20mm.

Tighten the impact absorber and bull bar bolts to specified torque.

FITTING BULL BAR

72. Once satisfied with the position of the bull-bar, using a 10mm drill, drill through the 10mm holes in the impact absorber
73. Drill 1 hole per side, and secure using the M10 x 30 SEMS bolts and flange nut.

74. Fit the centre stone guard as shown using M8 black bolts, black M8 flat washers, black M8 spring washers & cage nuts.

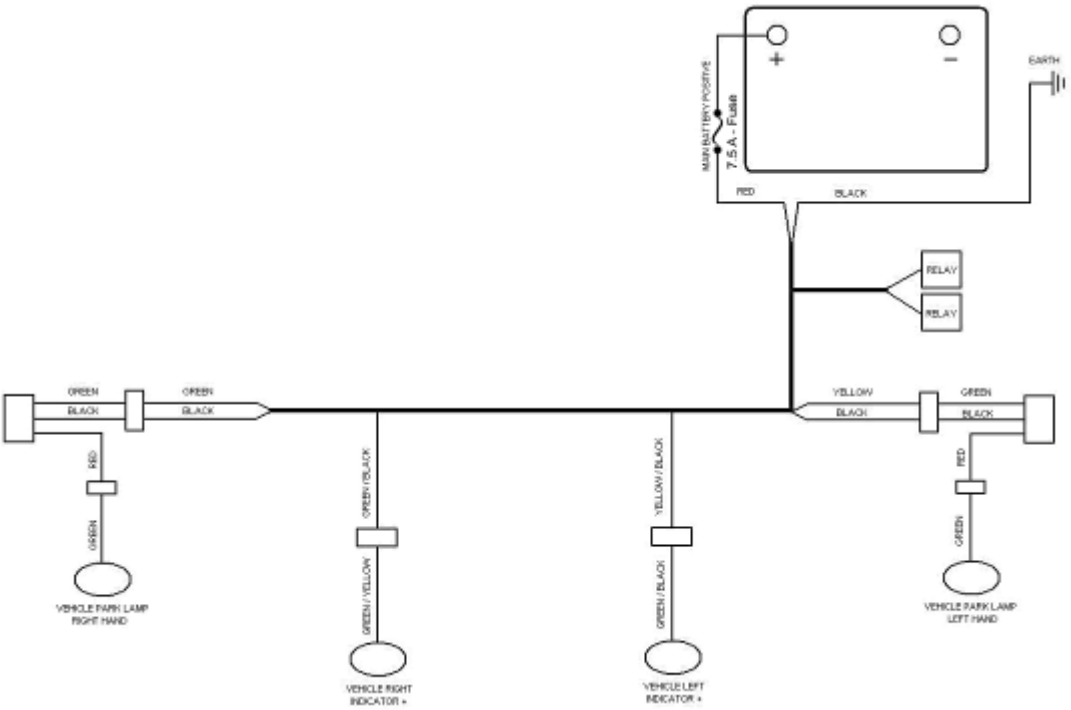
75. Cable tie the plastic wheel liner on the LH and RH side of the vehicle to the hole provided in the wing.

76. **If fitting wing under panels proceed now. Separate fitting instructions are included with supplementary kit 3514050.**

77. Carefully cut the lower part of the plastic wheel liner that hangs below the wing stone guard with a pair of scissors or sharp knife.

FITTING BULL BAR

78. Fit number plate to bar using 2 X M6 x 20 bolts, spring washers and standard flat washers. (Winch version shown)



Wiring Schematic
Hilux 05 ON for fitment of ARB commercial bull bar

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 etc. are functioning correctly**

FITTED PRODUCT