



FITTING INSTRUCTIONS

Part Number: 3440230/50 F/KIT: 6172487 BOLT PACK 6172488

Product Description: COMBINATION BULL BAR FLARED

Suited to vehicle/s: MAZDA BT 50 DEC 2006 ON

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:

- ◆ ***For approach angle improvement, it is preferable that sheet metal is trimmed from vehicle at step 30, as this step is not reversible, please advise customer (owner of vehicle) prior to commencing bull bar fitment.***
- ◆ 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.
- Please contact local Authorised ARB Stockist if you would like to have this service carried out on your behalf.

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.

TOOLS REQUIRED TO FIT THIS PRODUCT:

TAPE MEASURE	SOLDERING IRON AND SOLDER
ELECTRIC DRILL	Dia 7.0 and 10.5mm DRILL BITS
METRIC/ IMP. SOCKET & SPANNER SETS	JIG SAW OR KEY HOLE SAW
BLACK SPRAY PAINT	WHITE AND BLACK MARKER PENS
INSULATION TAPE OR HEAT SHRINK	CIRCLIP PLIERS (OUTER)

FASTENER TORQUE SETTINGS:

SIZE	Torque Nm	Torque lbft
M6	9Nm	4lbft
M8	22Nm	16lbft
M10	44Nm	32lbft
M12	77Nm	57lbft

LARGEST LIGHTS WHICH CAN BE FITTED TO THIS PRODUCT:

- IPF 900 SERIES FOG OR DRIVING LIGHT SETS

USE	PART No	QTY	DESCRIPTION
IMPACT ABSORBER AND BRACES	3756996L	1	BRKT IMPACT ABSORBER LHS
	3756996R	1	BRKT IMPACT ABSORBER RHS
	4681233L	1	BRACE ASSEMBLY LHS
	4681233R	1	BRACE ASSEMBLY RHS
	4681234	2	BRACE TENSION STRAP
	6151304	10	NUT M10 CAGED
	6151098	4	BOLT M12 X 40
	4581049	4	WASHER FLAT M12
4581050	4	WASHER SPRING M12	
BULL BAR TO IMPACT ABSORBERS	6151357	12	BOLT M10 x 30mm SEMS ASSY
	6151321	2	NUT M10 FLANGE
CONTROL BOX BRACKET	6151021	2	BOLT M8 x 20mm
	4581044	2	WASHER FLAT M8
	3751564	1	CONTROL BOX BRACKET
	6151132	2	NUT FLANGE M8
NUMBER PLATE BRACKET	6151180	4	BOLT M6 x 20mm (BRACKET TO BAR)
	6151046	4	WASHER FLAT M6 x 13mm
	6151128	4	NUT FLANGE M6
	3751313	1	NUMBER PLATE BRACKET
	6151384	2	SCREW PAN HD (NON WINCH BAR)
	6821189	2	GROMMET RND FL 1500 080 090
FOG LIGHT PARTS	3163015	1	LIGHT INSERT KIT
	6821151L	1	OS LIGHT INDICATOR LHS
	6821151R	1	OS LIGHT INDICATOR RHS
	6821152	2	TURN SIGNAL / CLEARANCE LIGHT LOOM
	6821184	1	ELECTRIC CABLE RED
	180701	8	SCOTCH LOCK
BUFFERS	3162470 L/R	2	BUFFERS 260 X 230 UPRIGHT B/BAR
	6151128	12	NUT FLANGE M6
AIR DEFLECTOR	6522672	1	AIR DEFLECTOR
	6151213	6	BOLT M6 X 20MM BLACK
	4581082	6	WASHER FLAT M6 BLACK
	4581287	6	WASHER SPRING M6 BLACK
	6151300	10	NUT CAGED M6
WING PANELS	6522689L	1	WING PANEL LHS
	6522689R	1	WING PANEL RHS
	6151300	6	NUT CAGED M6
	6151228	4	BOLT M6 X 30MM BLACK
	6151213	6	BOLT M6 X 20MM BLACK
	4581287	10	WASHER SPRING M6 BLACK
	4581082	10	WASHER FLAT M6 BLACK
MISCELLANEOUS	180701	6	SCOTCH LOK
	BLB 600	1	BATTERY LEAD 600MM BLACK
	180302	4	CABLE TIES
WINCH FITMENT	180302	8	CABLE TIES
	6151073	2	BOLT 3/8" X 1 1/2"
	6151074	2	BOLT 3/8" X 1 3/4"
	4581040	4	WASHER FLAT M10
	4581048	4	WASHER SPRING M10
	EG50	2	GROMMET RUBBER

REMOVAL OF BUMPER



1. Remove screws and plastic scrivets holding lower bumper in place and set aside
2. Remove tie downs and tow hook from under vehicle (these will not be reused)



3. Undo fog light connections



4. Remove vertical screws in wheel arch area holding wings of bumper onto fenders and set aside



5. Remove number plate from bumper and set aside

REMOVAL OF BUMPER



6. Remove screws holding grille in place



7. Prise out bumper stops and scrivets then set aside

8. Remove scrivets located approximately 30mm rearward of bump stop shown from behind top grille cover



9. Remove scrivets holding top of grille in place and set aside



10. Pull outer wings of bumper as shown, when both sides are released carefully remove bumper and place on soft surface to prevent damage.

REMOVAL OF BUMPER



11. Remove flare extensions from bumper



12. Remove fog lamps if fitted

CUTTING OF BUMPER



13. Set bumper on flat hard surface and measure to the top of the number plate boss (APPROX 315mm).

HINT: Place weights on the tabs on the bottom of the bumper to stop it tipping while you measure and mark cutting line.



14. Mark a horizontal cutting line at the measured height of the top of the number plate boss. The line must be straight and level all around the front face of the bumper

CUTTING OF BUMPER

CAUTION: Cutting operations can cause flying debris, safety glasses should be worn.



5. Using masking tape, tape up either side of the cutting line to clearly show line, protect painted surface and reduce burring.

16. Use a jigsaw or similar device and carefully cut along the line while bumper is supported on a narrow table or in similar manner.



17. Once cut is completed use a file to deburr the cut edges.

18. Fit cut bumper back to vehicle as shown.

NOTE: The cut line is horizontal when bumper is fitted onto vehicle



19. Push back bumper ends into clips as shown and refit securing screws removed at stage 4



20. Refit scrivets and screws removed at stages 6 - 9.

REMOVAL OF CRASH BAR



21. Using a long extension bar setup, undo vertical bolts holding crash bar from inside the engine bay, one is located next to battery the other on LHS as shown



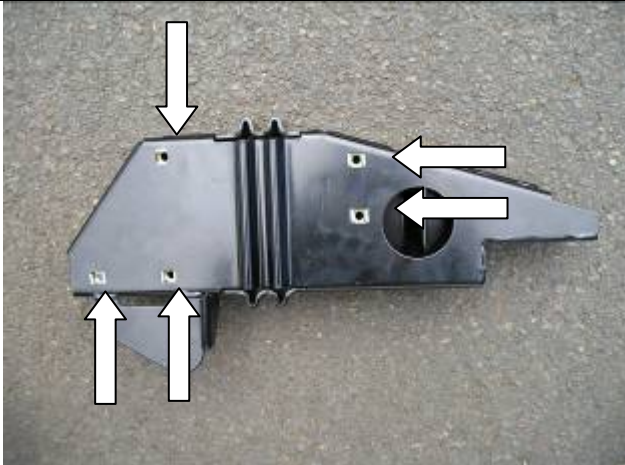
22. Undo horizontal bolts and remove crash bar from vehicle and set aside. Retain the 4 x bolts for reuse.

FIT IMPACT ABSORBERS



23. Fit M10 cage nuts to impact absorbers as shown, use a screwdriver to assist pushing in flange.

NOTE: All nut bodies to be inside the brackets



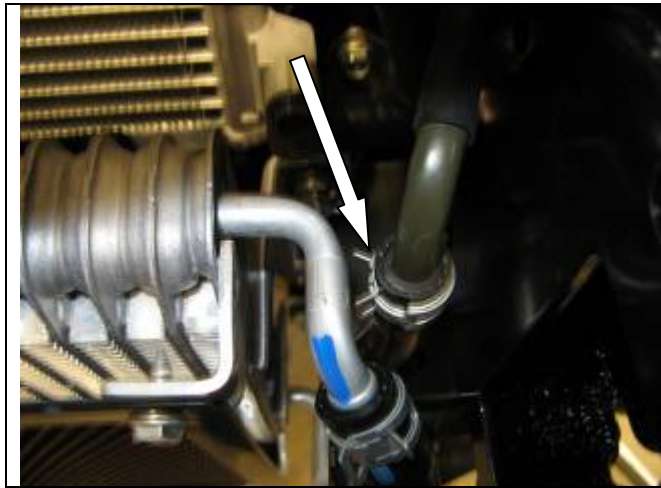
24. Locations of nuts (RHS shown)



25. Fit impact absorbers as shown using existing horizontal and vertical bolts from crash bar as in steps 21 &22. LHS shown (note the RHS and LHS orientation)



26. RHS also shown for clarity

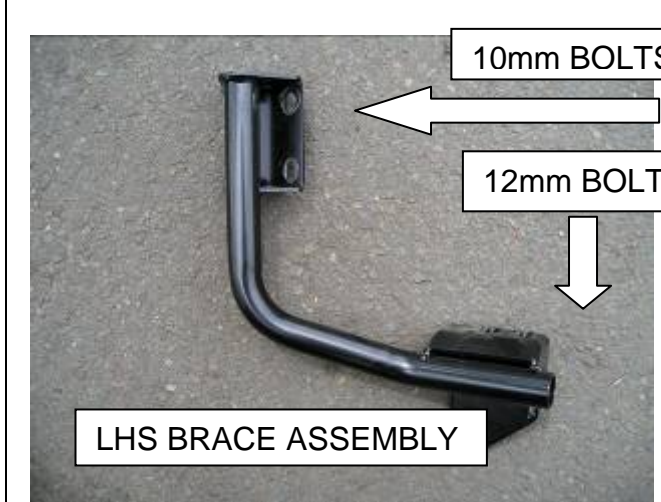


27. If vehicle is fitted with automatic transmission the cooler lines must be moved slightly. When doing so make sure factory metal clamp does not touch solid lines. Refer photo.

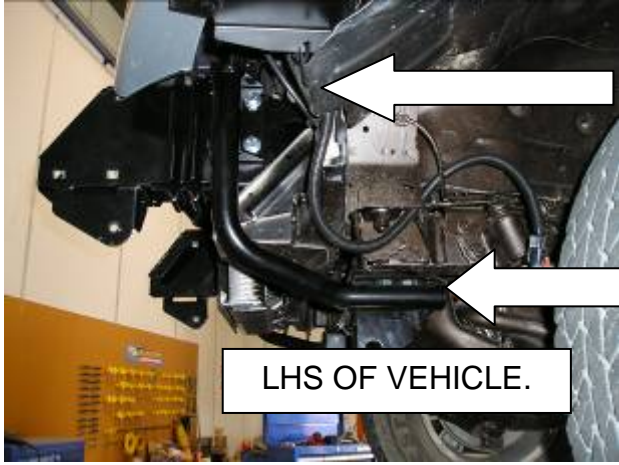


28. Secure transmission line to inside of chassis bracket using a cable tie supplied in kit. Photo is looking from top down.

FIT IMPACT ABSORBERS



29. After fitting impact absorbers to vehicle, the brace assembly is next to be fitted.



30. Fit lower mounting bracket to tow hook bolt holes using 12mm hardware. Fit upper mounting bracket to impact absorber using 10mm hardware.

NOTE: Fit all bolts loosely first, then tighten all bolts.



31. With impact absorbers fitted and tightened up check that the inside measurement across the faces is 815mm

NOTE: Modified bumper not fitted for clarity reasons.

VEHICLE PREPARATION



32. The next step is to cut lower panel in photo. The cut out section measures 160mm x 160mm.

NOTE: This is to give ground clearance and aesthetics to the vehicle with mounted bull bar. Not required if fitting wing panels.
NOTE: (Completion of this step is decided by the owner of the vehicle, see note on Page 1)



33. Use tin snips to remove this section of metal.



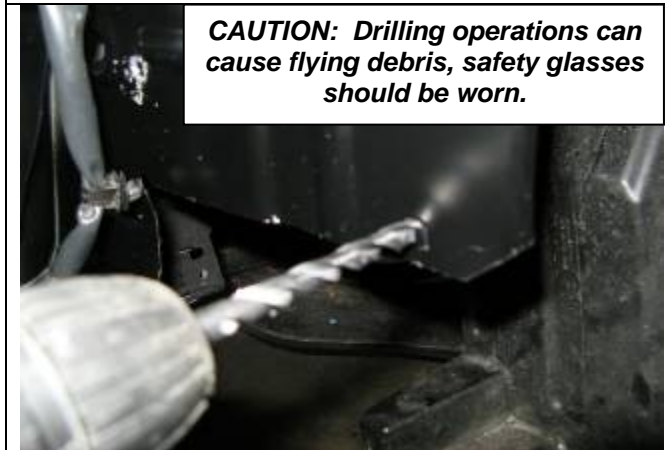
PHOTO IS OF RHS OF VEHICLE

34. After cutting out sheet metal section, dress up cut edges with a file



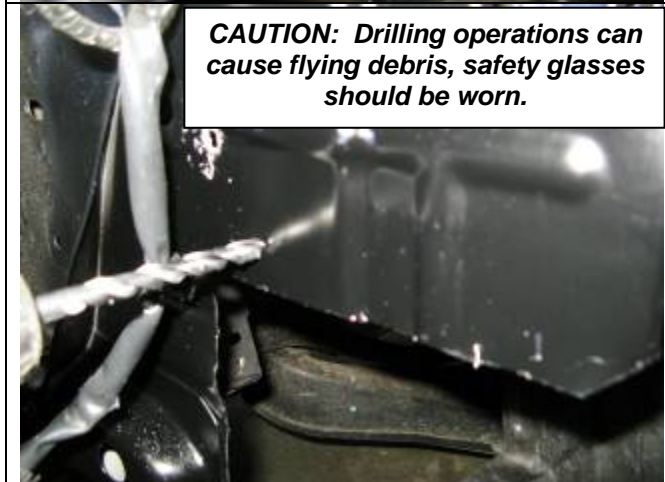
35. Trim inner guard liner as shown both sides, cut in line with corner arrowed.

VEHICLE PREPARATION



CAUTION: Drilling operations can cause flying debris, safety glasses should be worn.

36. Using Dia 7.0 drill, drill hole in sheet metal as shown, approximately 15mm from lower edge and across from outside edge 35mm.



CAUTION: Drilling operations can cause flying debris, safety glasses should be worn.

37. Using Dia 7.0 drill, drill second hole in sheet metal, approximately 125mm inboard of the first one as shown



CAUTION: Drilling operations can cause flying debris, safety glasses should be worn.



38. Drill corresponding holes in the guard liner to those drilled in the sheet metal so it can be cable tied up as in step 38.



PHOTO IS OF LHS OF VEHICLE



39. Use a black spray pack to paint cut edges to protect metal from rust. If required, mask up to prevent overspray on critical areas.

BULL BAR PREPARATION

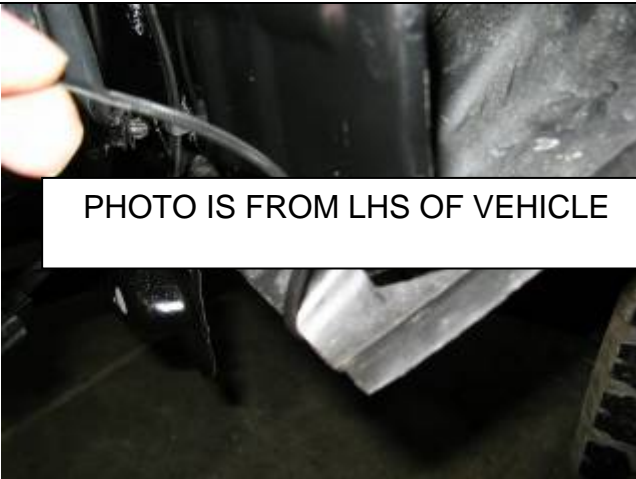


PHOTO IS FROM LHS OF VEHICLE

40. Cable tie inner plastic guards up as shown.



LHS OF VEHICLE

41. Before fitting bar, it is advisable to modify vehicle wiring looms for indicators /clearance lights and fog lights if fitted to vehicle.

42. To modify vehicle indicator/ clearance loom, remove insulation tape from loom and using scotch locks connect indicator /clearance loom from bar bolt kit to vehicle loom.



Summary of Wire Connections

FUNCTION	TURN SIGNAL HARNESS
	VEHICLE PARK LAMP
	RIGHT
	LEFT
PARK LAMP	RED
	RED
	RED
	VEHICLE INDICATOR
	RIGHT
	LEFT
EARTH	BLACK
	BLACK
	BLACK
INDICATOR	GREEN
	GREEN
	GREEN

43. After completing connections, cover all wiring with insulation tape



44. If vehicle comes fitted with fog lights, you must cut loom and extend loom

45. Using the red wire in bolt kit, cut into four equal lengths. It is recommended that you solder and tape the red wire in between the cut fog light loom. When joining wires match black to black and blue/white to blue/white.

BULL BAR PREPARATION



46. Fit light insert into rear of bar using 4 screws, rubber washers and retainer clips. (Do not over tighten)



ARROWS INDICATES POSITION OF SCREW



47. Install the turn signal into the rear of light insert using 2 self tapping screws 6 x 25mm (pan head) supplied with the light insert fitting kit.

48. NOTE :- The indicators should be installed with the drain holes at the bottom and are marked LH & RH . (Clearance lights outboard)



49. If optional fog lights are going to be fitted to bar , follow fitting instructions from fog light kit part no. 6821201 and wiring harness part.no.MD02

BULL BAR PREPARATION



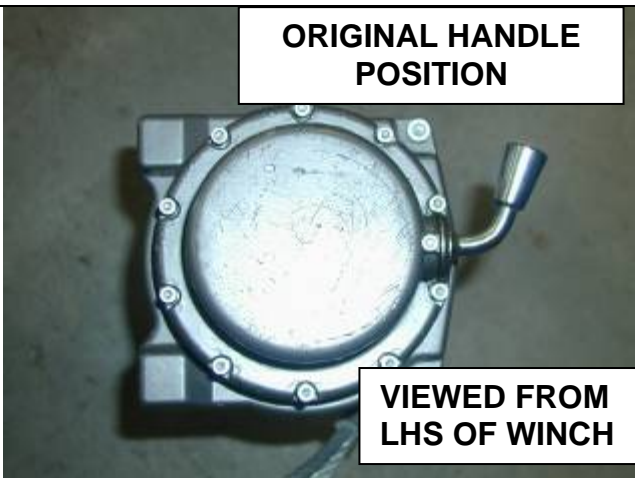
If you are not going to fit a winch to the bar, go to step 60. Non winch application number plate fitment is at step 82

50. If fitting a winch to bull bar, fit control box bracket to bar using 8mm hardware.

51. Next fit number plate bracket to bar using silver colored 6mm hardware as shown.

BULL BAR PREPARATION – FITTING A WINCH

ORIGINAL HANDLE POSITION



VIEWED FROM
LHS OF WINCH

52. To fit an 8/9/9500lb winch, you will need to rotate gearbox 144° (4 x hole spaces) **counter clockwise**.

ROTATED HANDLE POSITION



53. Stand winch upright and undo the cap screws and by lifting the gearbox only a couple of millimeters, rotate the gearbox. Once in position, refit all screws and tighten firmly.

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



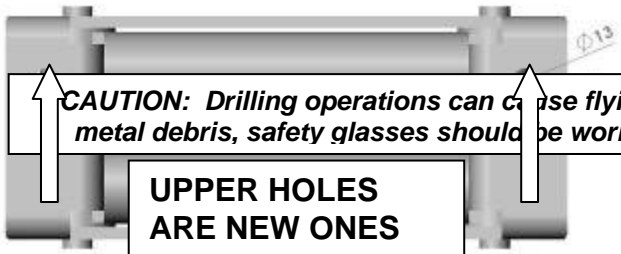
54. An ideal method to fit a winch into bar is to pack winch up on a bench to enable you to lower bar down on winch

55. Fit the four 3/8" square nuts into winch lugs before lowering bull bar onto winch.



56. Lower bar down over winch, line up top holes first and secure these only using 3/8" hardware (1 1/2" x 3/8" bolts) with flat and spring washers (finger tighten only)

BULL BAR PREPARATION – FITTING A WINCH



57. If necessary, mark out and drill two new 13mm holes in the roller fairlead, 25mm apart from the original holes, as shown on the adjacent picture.



58. Place roller fairlead over lower holes and again secure using 3/8" hardware (1 3/4" x 3/8" bolts) flat and spring washers.

HINT: Using circlip pliers, remove lower circlips and push shaft upwards to be able to move rollers sideways and enable sufficient access to bolt head .

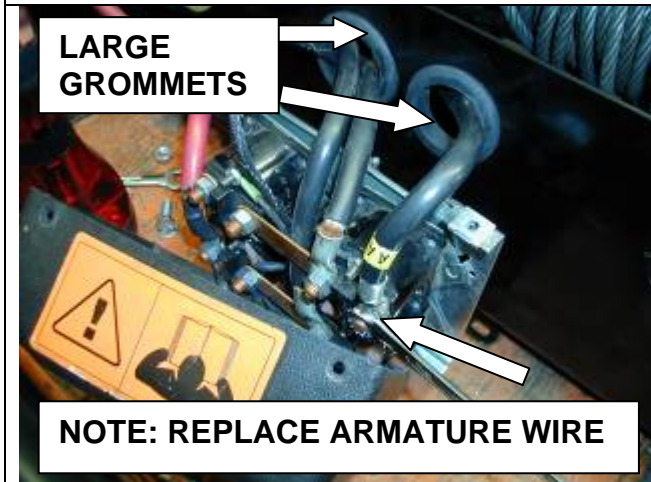


59. Tighten all bolts using socket and extension.



60. If circlips were removed, refit rollers and circlips after tightening bolts.

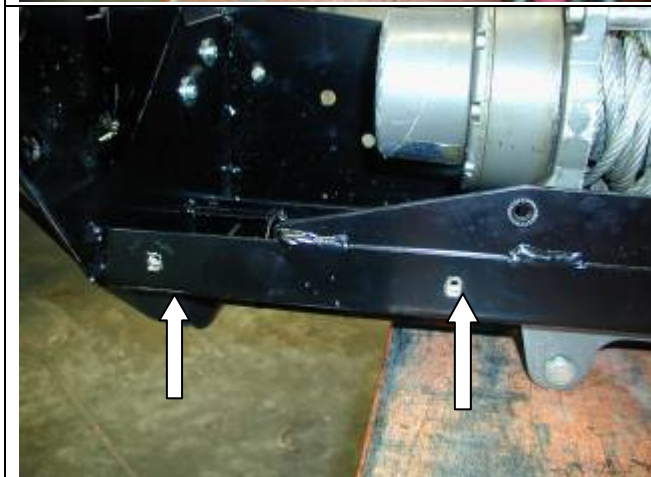
BULL BAR PREPARATION – FITTING A WINCH



- 61. Fit black rubber grommets into round holes in top of bar.
- 62. Fit winch control box to control box bracket on bar and remove plastic cover. The black ARMATURE ('A') lead must be removed from control box terminal and replaced with a longer lead supplied in fitting kit.
- 63. When new lead fitted, refit plastic cover back to control box.



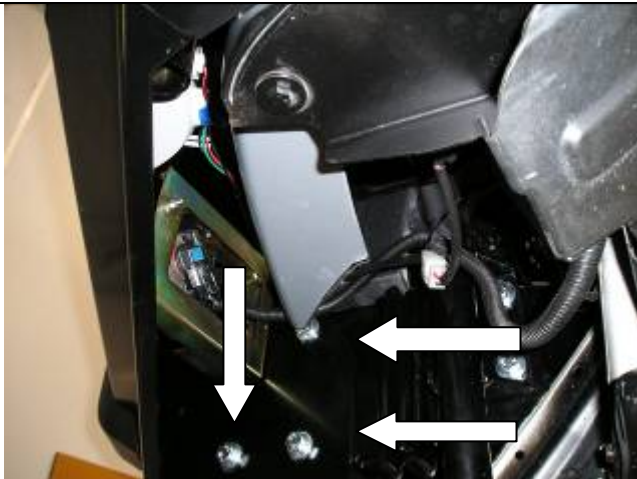
- 64. Pass cables through rubber grommets and connect as per Warn installation instructions. Fit plastic boots over terminals. Cable tie cables to bar as per photo to clear all moving parts.
- 65. Fit ground wire under tie rod.



- 66. Fit M6 caged nuts into lower section of bar. (4 in total) These are to fit air deflector to bar at a later time.

NOTE: LHS only shown

FITTING BULL BAR



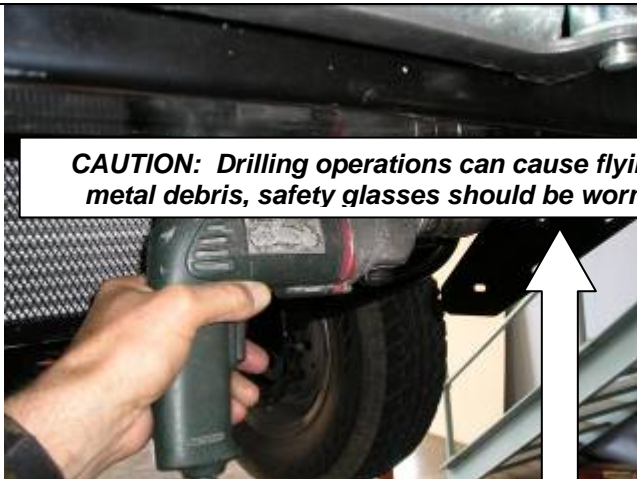
67. With the help of a friend, lift bar in between impact mounting bracket and align slots on bar to caged nuts on impact absorbers Secure using M10 SEMS bolts(finger tighten only)

NOTE: View from under LHS showing upright and 3 x bolts



68. Check whether bar is centered to vehicle, if not central, take note of amount to move bar to centralize it. Remove bar. Loosen off mount bolts one bracket at a time and using soft hammer, tap across in direction of adjustment. Check that each bracket in turn has moved the correct distance, then tighten mounts and refit bull bar.

69. Adjust bar to vehicle so there is an even 15mm gap to flare on vehicle. When bar is in correct position, tighten all six bolts firmly.



CAUTION: Drilling operations can cause flying metal debris, safety glasses should be worn.

70. Using 10mm holes in pinning brackets as a template, drill through bar as per photo using a 10mm drill bit.

71. Secure using a M10 SEMS bolt (Shown below), and an M10 flange nut.



72. When bar is secured to mounting bracket, connect winch cables to battery and cable tie cables together clear of all moving parts, sharp edges and hot parts.

FITTING BULL BAR



73. Fit diagonal braces from impact absorbers to lower brace on bar, securing using 8mm hardware.

NOTE: Diagonal braces must be fitted to winch and non winch bars.



74. Fit M6 caged nuts to air deflector and fit in between lower section of bar and secure using M6 hardware.

NOTE: These bolts fit to caged nuts which were fitted in paragraph 72.

(NOTE: All M6 hardware is black in colour)



75. Fit M6 caged nuts to top surface of wing panels. Place the wing panels on top of the bottom lip of bulbar wing and secure using 6 x M6 x 20mm black bolts, spring washers and flat washers. Leave finger tight.



76. Secure wing panel to centre air deflector using 4 x M6 x 30mm black bolts, spring washers and flat washers. When everything is in place tighten all bolts.



77. Fit number plate to number plate bracket using M6 hardware.

78. Finally when everything is fitted, connect all lighting loom plugs to lights.



79. If the bar is a non winch bar setup, the number plate is fitted to front of bull bar directly as per photo using press in 2 x large round head plastic grommets and black Philips drive pan head screws. This position will cover the roller fairlead cutout in pan.

FINAL PRODUCT FITTED TO VEHICLE

