



# FITTING INSTRUCTIONS

Part Number: **3420210**  
Fitting Kit No: **6173022 (suits all year models)**  
***Available Lower Panel Supplementary kits:***  
**3520010 06-09 FJ Cruiser**  
**3520020 2010 ON FJ Cruiser**  
**3520030 Field fix kit is required for Australian delivery vehicles in addition to the main bar kit.**  
Product Description: **ARB WINCH BULL BAR**  
Vehicle/s: **TOYOTA FJ CRUISER 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:

- ◆ 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

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## **ARB 4x4 ACCESSORIES**

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## FITTING REQUIREMENTS

### REQUIRED TOOLS FOR FITMENT OF PRODUCT:

Basic Tool Kit	External Circlip pliers
17mm Tube Spanner	Power Drill 13mm capacity
7mm, 10mm and 13mm drill bits	Cold chisel

### 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:

- ◆ ARB 6821201 Fog Light Kit Suit 3163015
- ◆ Up to IPF 900 SERIES FOG OR DRIVING LIGHT SETS

## Fitting Kit 6172343 PARTS LISTING

APPLICATION.	PART NO.	QTY	DESCRIPTION
<b>Mount Assembly To Chassis</b>	3756848	1	Bracket Mount Assembly
	3756851R	1	Bracket Mount Brace RHS
	3756851L	1	Bracket Mount Brace LHS
	3193741	2	Captive Nut Plate
	6151306	2	Nut Cage M12 x 1.75
	6151255	8	Bolt M12 x 1.75 x 40mm
	6151189	6	Nut M12 x 1.75
	6151094	2	Bolt M12 x 1.25 x 30mm
	4581049	18	Washer Flat M12
	4581050	10	Washer Spring M12
	5846401	4	Spacer 8mm
<b>Bull Bar To Impact Absorber</b>	6151357	10	SEMS Bolt M10 x 1.5 x 30mm
	4581040	10	Washer Flat M10 x 2mm
	6151026	10	Nut M10 x 1.5
<b>Indicators To Bull Bar</b>	3163015	1	Combination Light Surround Kit
	6821152	2	Turn signal / clearance light loom
	6821151L	1	Turn Signal / Clearance Light
	6821151R	1	Turn Signal / Clearance Light
<b>Winch To Bull Bar</b>	EG50	1	Rubber Grommet
	3756499	1	Bracket Control Box
	6151021	2	Bolt M8 x 20mm
	4581044	2	Washer Flat M8
	6151132	2	Nut Flange M8
	BLB560	2	Cable Black 560mm
	4581040	4	Washer Flat 3/8" x 1"
6151074	2	Bolt 1 3/4" x 3/8" UNC	
<b>Number Plate To Bull Bar</b>	6821189	2	Grommet Nylon Nut
	6151384	2	Screw Pan Hd Phil 5x16mm
	6781408	1	Tape Double sided
<b>Miscellaneous</b>	6821132	2	Rubber Grommet 3/8" ID
	180302	8	Cable Ties
	3162152	2	Plastic Plug 16mm DIA
	3756857	1	Bracket Bracing Lower Grille
<b>Supplementary Kit: 3520010 06-09 Models: Stone Tray</b>	6542088	1	Stone Tray 06-09
	6151300	4	Nut Cage 6mm
	6151213	4	Bolt M6 x 20mm BZ
	4584310	4	Washer Flat M6 BZ
	4581287	4	Washer Spring M6 BZ
<b>Supplementary Kit: 3520020 2010 ON Models: Stone Tray and Wing Under Panels</b>	6542111	1	Stone Tray 2010 ON
	6522795 R&L	1 pr	Wing under panels
	6151300	14	Nut Cage 6mm
	6151213	16	Bolt M6 x 20mm BZ
	4584310	6	Washer Flat M6 THK BZ
	4581082	10	Washer Flat M6 BZ
	4581287	16	Washer Spring M6 BZ
	6151132	2	Nut Flange 8mm
	6151234	2	Bolt M8 x 25mm BZ
	4581307	4	Washer Flat Panel M8 BZ
	4581047	2	Washer Spring M8 BZ
	3787825	1	Template drilling mount holes

## FITTING PROCEDURE



1. Remove protective plate if fitted



2. Remove front fasteners only from stone tray. Retain fasteners for reuse.



3. Remove lower bumper fixing screws and screws in wheel arch area

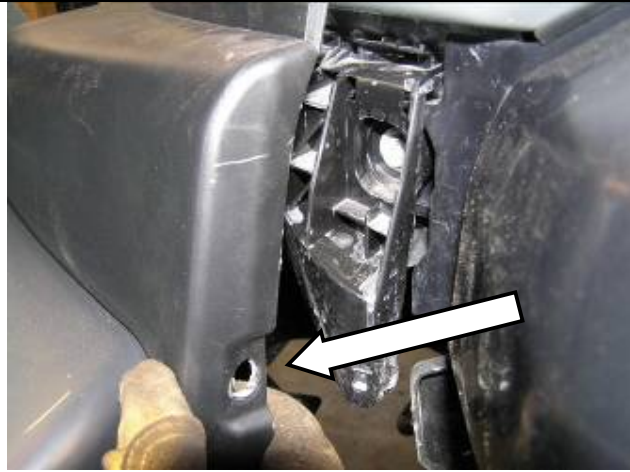


4. Remove grille. Screws are located in tabs at top of grille. Once these are removed carefully release clips some are located along the inside lower section.

## FITTING PROCEDURE



5. Remove plastic rivets along top of bumper



6. Remove screw then remove front bumper cover from vehicle.

*NOTE: Prise the rear lip of the bumper off the retaining spigot where screw was located (as shown with arrow) then pull bar wing outward.*



7. Remove front bumper reinforcing bar.

*NOTE: Retain the 8 x flange nuts removed for fitment of the bull bar chassis mount.*



8. Using the 13mm drill bit and power drill, drill out the M8 captive nut located at the outboard side of the chassis as shown, on both sides of the vehicle.

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





## FITTING PROCEDURE

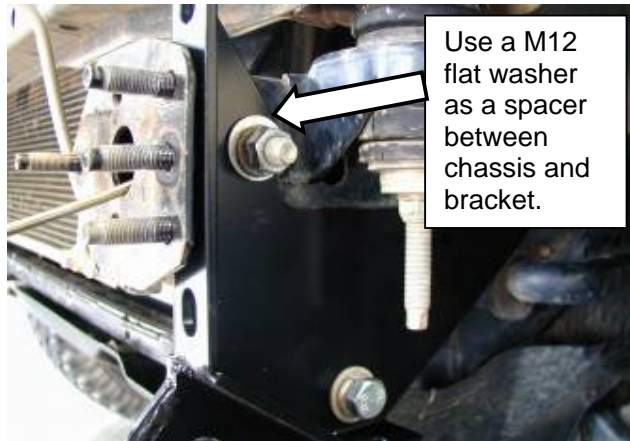


9. Check that the nut body is completely removed, if it is not cleared, using a cold chisel and hammer chisel the remainder off.

**Warning: Hammering and chiselling operations can result in flying metal debris, safety glasses should be worn.**



10. Fit an M12 cage nut to each of the captive nut plates 3193741.

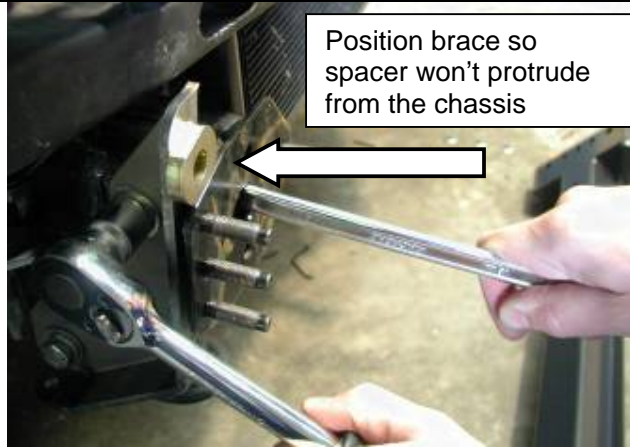


11. Fit the chassis mount braces to the vehicle using the M12 x 30mm fine pitched bolt, M12 spring and flat washers supplied in the lower hole. Use an M12 flat washer as a spacer between the brace and the chassis at the upper hole and fix with an M12 x 40mm bolt M12 spring and flat washers and M12 x 1.75 nut. **Do not tighten the bolts.**



12. Insert the captive nut assembly through the front of the chassis and line it up with the hole at the end of the mount brace. Fix in place with the M12 x 1.75 x 40mm bolt, M12 flat and spring washers. Break off the end of the captive nut plate. Do not tighten yet.

## FITTING PROCEDURE



13. Hold the 8mm spacer against the chassis mount brace forward facing surface and position the brace so that the spacers sit just below the surface of the chassis front face. Tighten the bolts.
14. If fitting the bar to an Australian delivered vehicle, please refer now to fitting instructions **#3787967** to relocate the power steering lines. If not proceed to the next step.



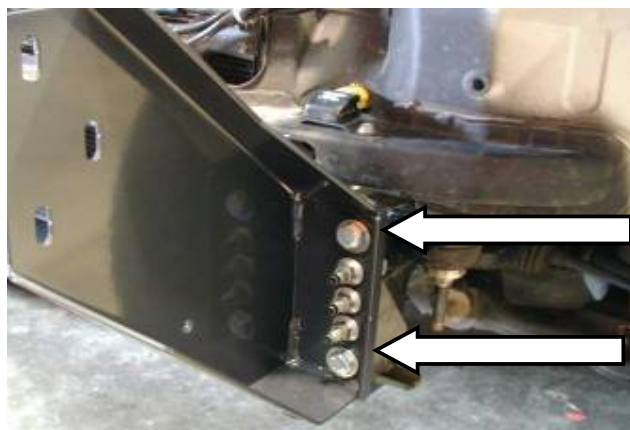
15. Fit the chassis mount bracket to the chassis using the original flange nuts removed with the bumper reinforcing bar. Centre the chassis mount bracket and tighten.

**CAUTION: When fitting the Chassis mounting bracket carefully bend the air-conditioning pipe out of the way.**



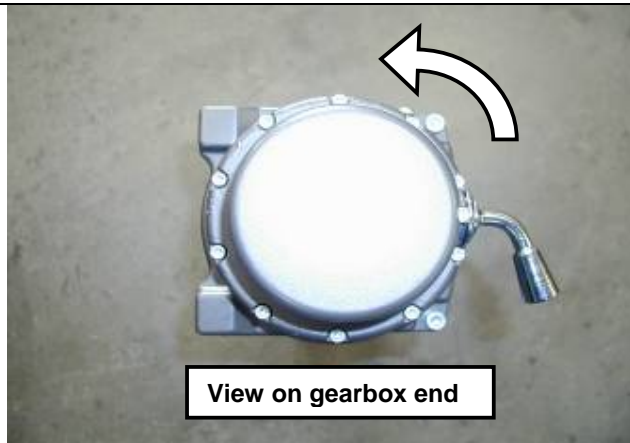
16. If required, carefully bend A/C piping clear of mount bracket assembly as shown, with a minimum clearance of 20mm (3/4").

**CAUTION: Piping must not rub on sharp edges, secure with cable tie and protective sheath if required.**



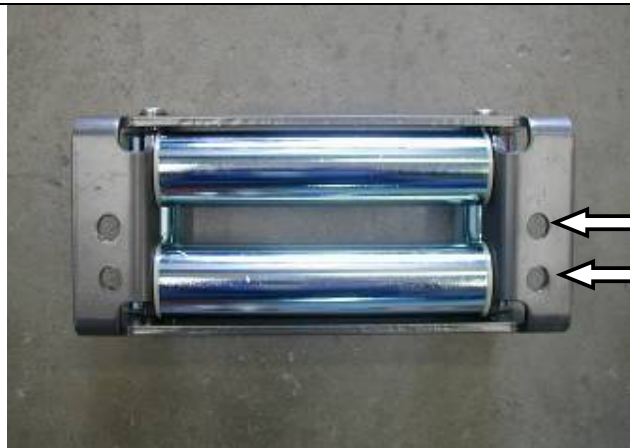
17. Fix the chassis mount bracket to the chassis mount brace using M12 x 40mm bolts, M12 spring and flat washers, the 8mm spacers and M12 x 1.75 nuts. Tighten bolts

## FITTING PROCEDURE



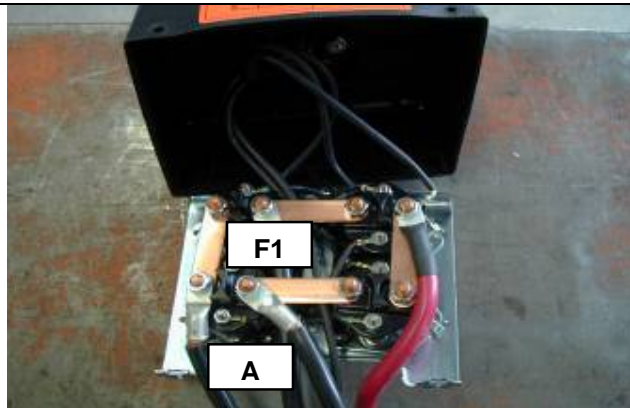
**NOTE: If fitting winch continue through step 17, if not skip to step 29**

18. For ease of access the winch gearbox handle needs to be rotated. To do this undo all the cap screws, carefully lift the gearbox clear of the winch body so as not to damage the gasket. **(Do not lift the gearbox more than a couple of millimetres)** Rotate the gearbox anti-clockwise two hole spaces (72°). Re-fit the cap screws.



19. Using a 12mm (1/2") drill bit, drill two new holes in the roller fairlead 25mm below the original holes.

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



20. Remove the three screws from the control box and remove the cover.
21. Replace the two cables marked "A" and "F1" and replace them with the two cables (BLB560) supplied with the fitting kit. Label the cables the same as the original to assist in the wiring of the winch.



22. Place the winch on a table with the feet facing up and using an assistant; carefully lift the bull bar on top of the winch.
23. Attach the winch to the bull bar using two 1 1/2" x 3/8" bolts from the winch fitting kit, 3/8" spring washer and 3/8" flat washers in the top holes.
24. Fit the 4 x M6 cage nuts from inside of the lower flange on the pan, where the stone tray will bolt up.

**NOTE: Access to this area for cage nut fitment will be restricted once the RFL is fitted so it is important to insert these now.**



## FITTING PROCEDURE



25. Position the roller fairlead, and remove the circlips from the lower of the vertical rollers and push the pins up to give access to the lower bolts.

26. Fix the roller fairlead to the bar using the 1 3/4" x 3/8" bolts, spring and flat washers



27. Fit the control box bracket to the bull bar using two M8 x 20mm bolts, M8 flat washers and M8 flange nuts.



28. Fit the control box to the control box bracket and connect the power cables to the winch as per the winch instructions.

29. Connect the ground wire to the tension bar of the winch.

**CAUTION: Cable-tie all cables together and keep all cables clear of sharp edges and all moving parts.**



30. Insert square grommets into holes in front of bar for licence plate fixing. Place the double-sided tape along the top edge of the number plate. Using supplied black Hi-lo screws, attach the licence plate to the bull bar.

**NOTE: If winch is not fitted, licence plate can be located lower on bar front to cover RFL opening.**

## FITTING PROCEDURE



31. Remove original grille brace member. Retain screws.

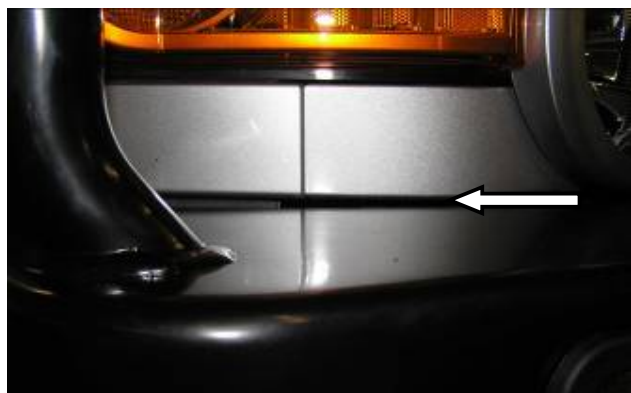


32. Fit supplied replacement brace and secure with original fasteners



33. With the help of an assistant position the bull bar on the chassis bracket and fix with six M10 x 30mm bolts, M10 spring and flat washers.

**CAUTION: Nip up bolts, but do not tighten them yet.**



34. Position the bull bar so that there is an even gap of approximately 5mm from the top face of the bar to the underside of the body edge. Then tighten all the bolts.

## FITTING PROCEDURE



35. With the bull bar in position drill Dia10mm pinning holes, one through pilot hole in mount bracket and one through hole in upright for both sides of mounts.

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



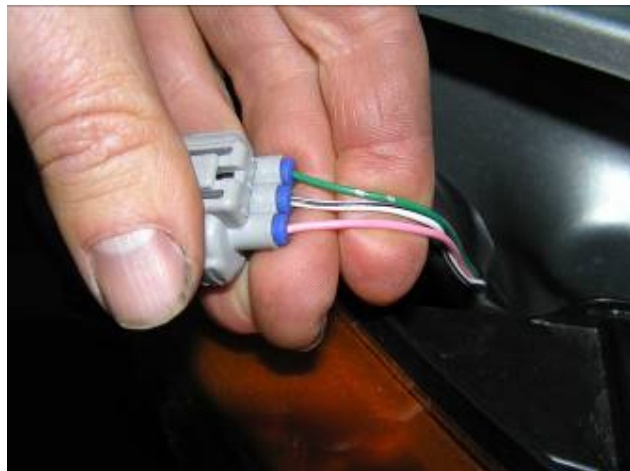
36. Fix in place using two M10 x 30mm SEMS bolts, M10 Flat washers and M10 x 1.5 nuts per side.



37. Assemble and install combination light surrounds (P# 3163015) as per instructions # 3786421 supplied with surround kit. Note: Optional fog lamps can be installed at this point as per fitting instruction #. 3783315 supplied with fog lamp kit # 6821201.

38. Wire the combination lamp to the vehicles indicator and clearance lamps.

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



39. Wire up lights using loom extensions supplied in fitting kit.

**Wiring loom detail for flasher and clearance lamps supplied standard with bullbar;**

Red	Clearance lamp
Green	Flasher lamp
Black	Ground

**Wiring loom detail on FJ Cruiser;**

**LHS**

Blue	Flasher
Green	Run
Wh/Blk	Ground

**RHS**

Pink	Flasher
Green	Run
Wh/Blk	Ground

*NOTE: Other wiring detail supplied with accessories.*

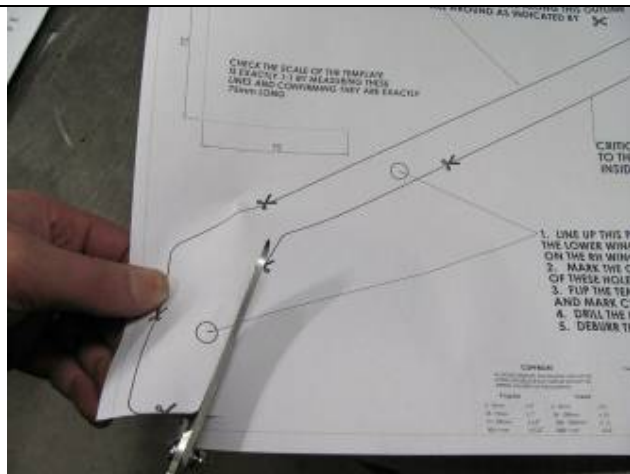


## FITTING PROCEDURE



### FROM SUPPLEMENTARY KITS – 3520010 & 20 STONE TRAY

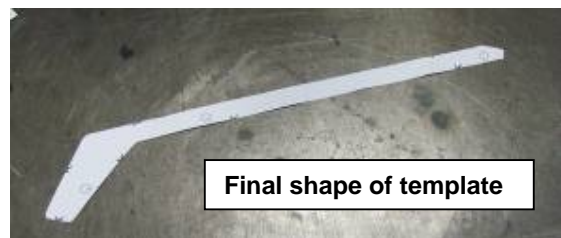
40. Fit the bull bar stone tray by sliding the tray under the front of the vehicles original stone tray
41. Fit the front of the stone tray to the bull bar with four M6 x 20mm bolts, M6 large panel washers and M6 spring washers.



### ONLY FROM SUPPLEMENTARY KIT - 3520020 WING UNDER PANELS

**Check first, then if there are no holes in lower flange of wing for fixing panels- follow the next 6 steps**

42. Cut out the hole position paper template



43. Locate on the RH wing lower flange and align to the inner flange edge then tape in position
44. Centre punch the hole positions onto the wing lower flange
45. Remove template, apply to LH wing and centre punch holes



46. Drill the holes to Dia 9mm (11/32")
47. Deburr then touch up the bared steel with rust preventing paint

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





## FITTING PROCEDURE



### FROM SUPPLEMENTARY KIT 3520020

48. Fit the cage nuts to the inside faces of the wing under panels as shown



49. Fit the wing under panels as shown using M6 bolts and washer sets to bolt to wing underside

***If there is a corresponding hole in the chassis brace lower flange to fix inside flange of the wing under panels....***

50. Use M8 x 25mm bolts, washer sets and flange nut to bolt to chassis brace lower flange



***If there is no corresponding hole in chassis brace lower flange to fix inside flange of the wing under panels....***

51. On the RH side, lift the inner locating flange up to the chassis reinforcing bracket lower flange, position centrally then mark and drill a Dia 7mm (11/32") hole through the existing reinforcing bracket flange. Repeat for LH side
52. Touch up holes with rust preventing paint
53. Use M8 x 25mm bolts, washer sets and flange nut to bolt to chassis brace lower flange

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



***If wing panels are fitted...***

54. Drill 2 x Dia 7mm (5/16") holes in each fender liner lining up with the cage nuts in the rear flanges of the wing under panels so the liners can be fastened to the rear flange
55. Fix in place using 2 x M6 x 20 Bolts and washer sets per side

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



## FITTING PROCEDURE



56. Trim fender liner to coincide with the underside of the wing under panel lower face as shown



*If no wing panels are fitted...*

57. Trim fender liner horizontally with sharp knife approximately 30mm (1 ¼") below hole as shown.



58. Trim corner as shown.



59. Drill 7mm securing holes in the liner and the plastic bracket arm as shown.

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



## FITTING PROCEDURE



60. Feed a cable tie through holes and secure.
61. The painted color coded area of vehicle visible in the region around the trimmed fender liner may be spray painted black to hide this area.

**NOTES:** When finished make sure all bolts are tightened and that all wiring is clear of hot, sharp and moving parts.

Also supplied in the kit are two 3/8" rubber grommets and two 16mm plugs. The rubber grommets are for the two holes in the top pan if lights are being fitted. The two plastic plugs are for the holes in the top surface of the wings if no CB aerials are going to be connected.

**CAUTION:** If winch fitted, check that the air conditioner piping is clear of the winch by at least 20mm (3/4"). Fit a sheath around tubing and secure with cable tie to prevent chaffing which may lead to piping damage.

## FITTED PRODUCT ON VEHICLE

