ARB BASE RACK
FITTING INSTRUCTION

Part Number:	**1780400 & 1780410**
Product Description:	**Roof Rack Wiring Kit - Wired & Provisional**

<u>WARNING</u>

- ♦ Care must be taken to ensure the vehicle is not damaged. In particular be aware of curtain airbags, air vents and sunroof cavities
- ♦ Vehicle roof linings are easily damaged by creasing, as well as easily marked by dirt and grease. Caution should be used during lowering/removal steps
- ♦ If the roof rack is intended to be removed regularly, it is recommended to add an optional connector housed inside the roof (connector not provided)
- ♦ This product must be installed exactly as per these instructions using only the hardware supplied
- ♦ These instructions are correct as at the publication date
- ♦ During installation, it is the duty of the installer to check correct operation/clearances of all components
- ♦ Work safely at all times

ARB 4x4 ACCESSORIES
Corporate Head Office
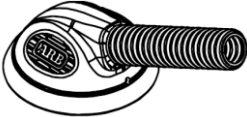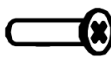
www.arb.com.au

REQUIRED TOOLS FOR FITMENT OF PRODUCT:

Phillips head screwdriver	**Trim removal tools**
Metal tray	**Deburring tool**
Touch up paint	**Ruler**
Scissors	**7mm(9/32") drill + drill stop**
25mm sheet metal hole saw **(ARB recommends Sutton Tools H1190250)**	**Centre punch**

PARTS LISTING

APPLICATION.		SPARE PART KIT #	QTY	DESCRIPTION
		6980350	1	BOOT MAIN MOULDING
			1	GROMMET BASE RACK EXIT
			1	GROMMET DIRECT EXIT
		6980380	1	GROMMET MAIN BODY
with 1780400			1	GROMMET WITH WIRES
with 1780410		6980310	1	GROMMET INSERTABLE TYPE 1
			1	GROMMET INSERTABLE TYPE 2
		6980310	1	NUT MOULDED M27x1.5
with 1780400 OR with 1780410		6980310	1	O-RING BS018
		6980310	1	SLIP RING
		6980370	2	SEAL GROMMET MAIN
		6980360	1	GROMMET BOOT TO BASE RACK
			1	PLATE NUT GROM BACKING M5
		6980340	2	SCREW CSK M5x20
			2	NUT U M5 0.5-3.0mm
			2	ORING BS 901 4.7X1.42MM
		6980330	6	CLIP CABLE TIE EDGE

FITTING PROCEDURE
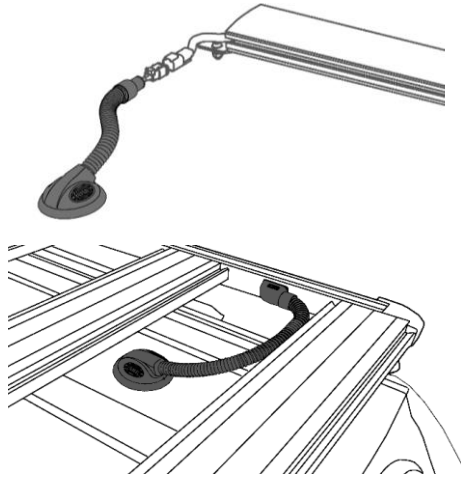
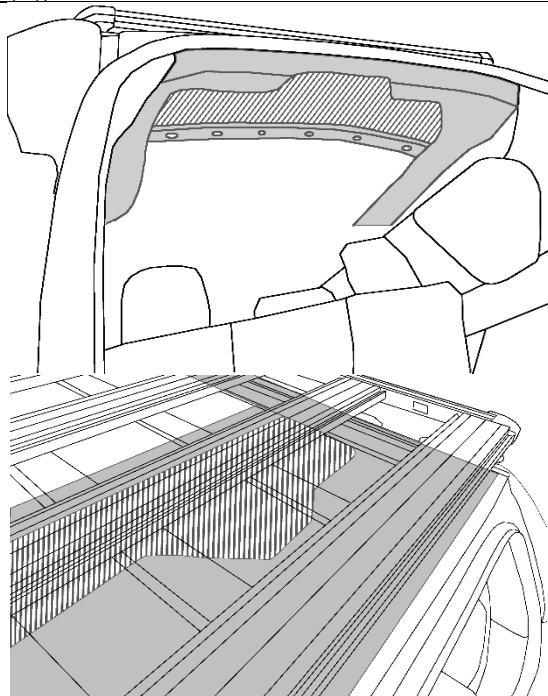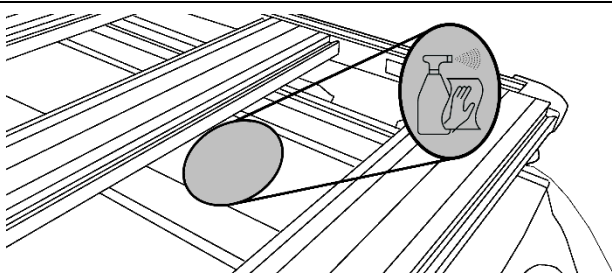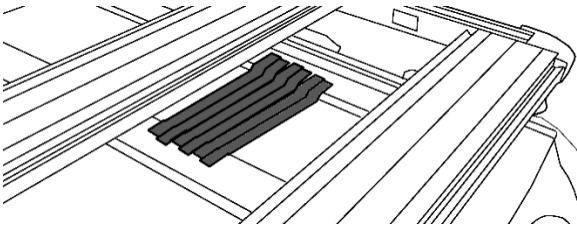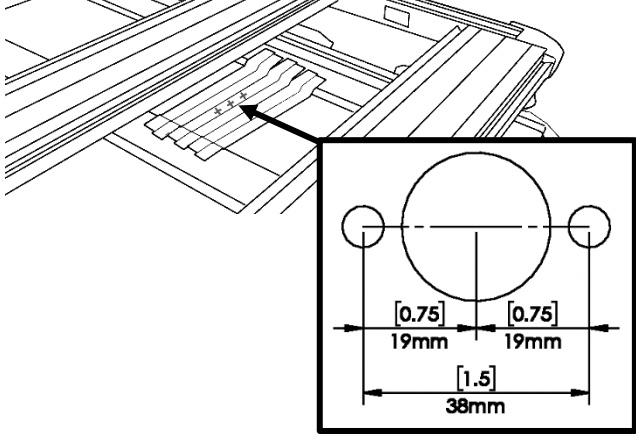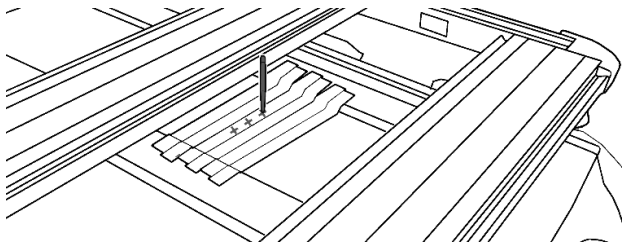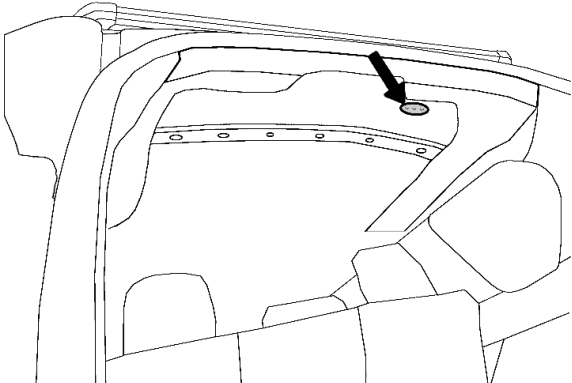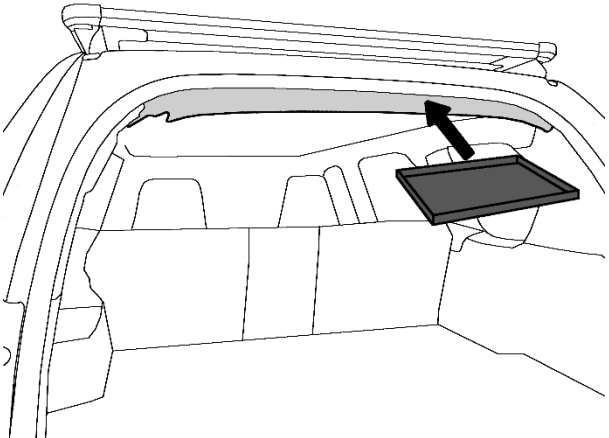|	
	1. Refer to BASE Rack fitting kit instructions where, suitable drilling locations may be provided. 2. Plan the location **Option 1** - Direct to device or through rack Wiring may run inside a rack, or go straight to a device (e.g. a light) **Option 2** - Vehicle exit point (front or back, left or right) It is recommended to exit from the rear where possible • Read all instructions before starting work
	3. Lower the roof lining near the exit point **! Caution - roof linings are easily damaged by creasing as well as easily marked by dirt and grease!**
	4. Locate a clear area of the roof skin for exit 5. Confirm the area clears the roof rack **! Caution – particular care must be taken to avoid curtain airbags, cross members and air vents!**
	6. Clean the roof near the exit point
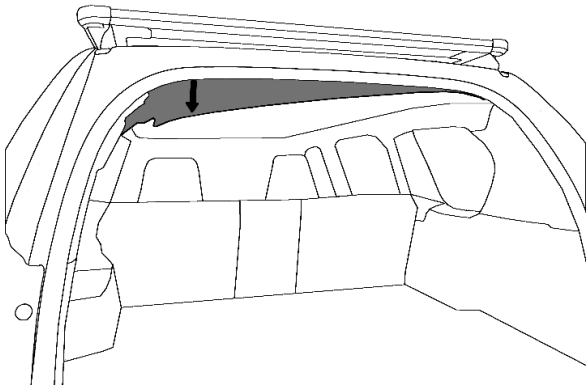
	7. Lay masking tape over the exit area to protect paint
	8. Mark out the hole locations as per the diagram
	9. Peen the hole positions, to assist drilling and check location
	10. Look inside the roof, check the peen marks are in the correct location
	11. Slide a tray between the head lining and roof skin. Ensure the tray will catch drilling swarf and protect against drilling through roof lining *Hint: attaching a rod to the tray will make it easier to install and remove*
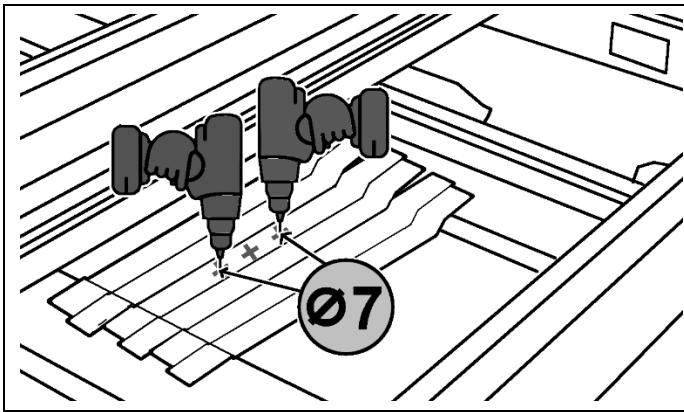
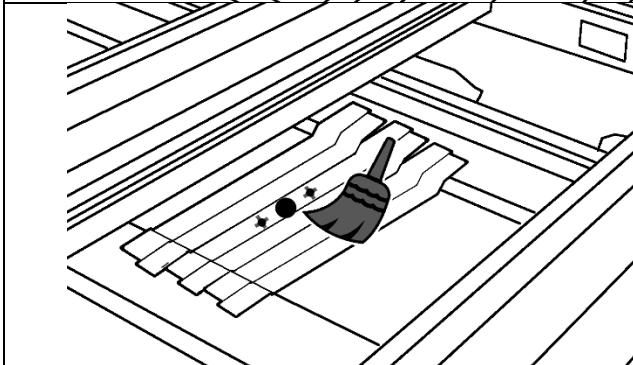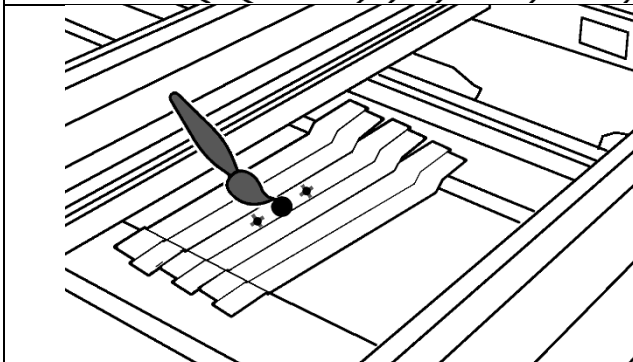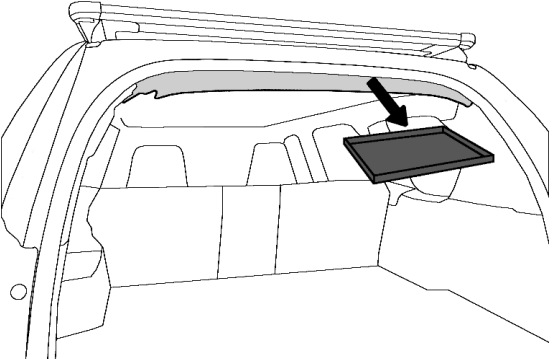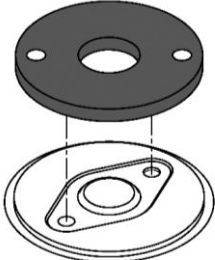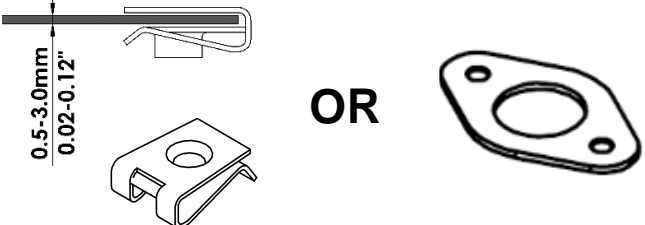|	
	12. Drill the outer 2 holes to 7mm (9/32") **! Caution – drill bits may grab on sheet metal, always use a drill stop !**
	13. Drill the centre hole to 25mm (1") *Hint: for best results use a sharp good quality sheet metal hole saw. ARB recommends Sutton Tools H1190250* **! Caution – drill bits may grab on sheet metal, always use a drill stop !**
	14. Deburr all holes
	15. Clean away swarf and debris
	16. Remove tape 17. Paint holes to protect from corrosion
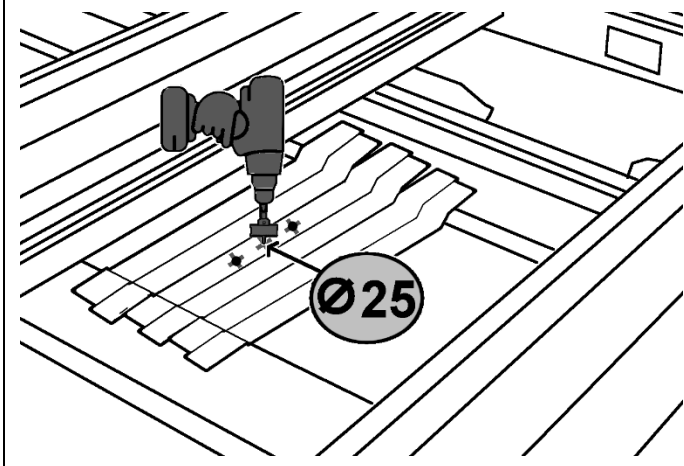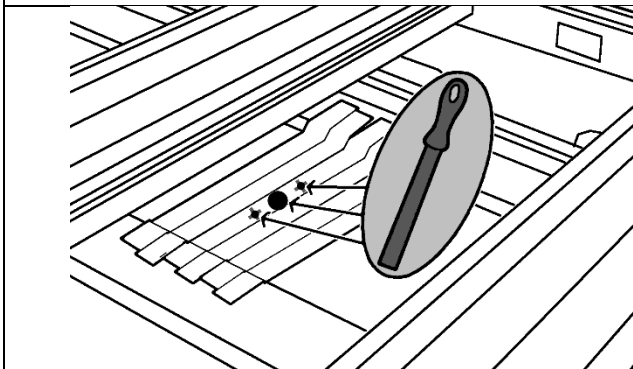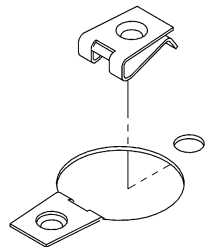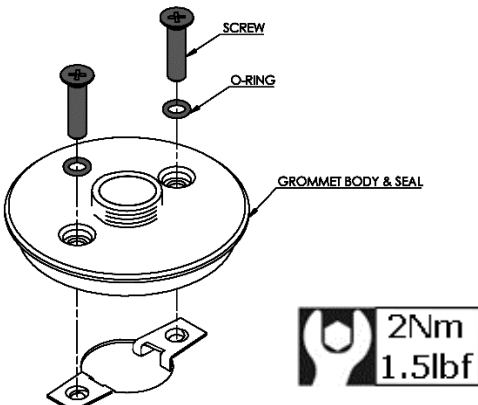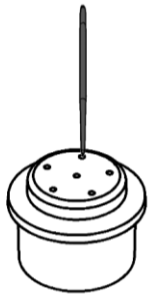
	18. Remove the tray
	19. Install the mastic seal to the grommet base
0.5-3.0mm **0.02-0.12"** **OR**	20. For roof thickness up to 3mm(1/8") use the supplied U-nuts 21. For thick roofs (such as canopies), use the supplied backing plate (note this must be fitted from the inside of the roof)
	22. If using U-nuts, install over Ø7 (9/32") holes as shown
 SCREW O-RING GROMMET BODY & SEAL 2Nm 1.5lbf	23. Fasten the grommet to the roof with the supplied O-rings and M5 screws. Tighten to specified torque
For Non-Wired Kit Only 	24. Use a sharp tool to pierce a hole in the grommet for each wire to be installed. Use the location points on the top surface to guide

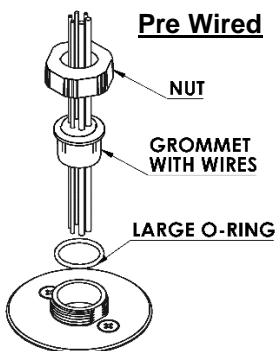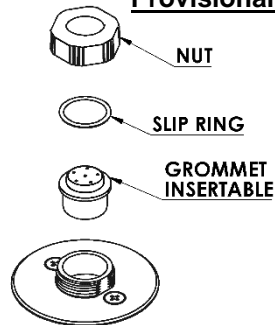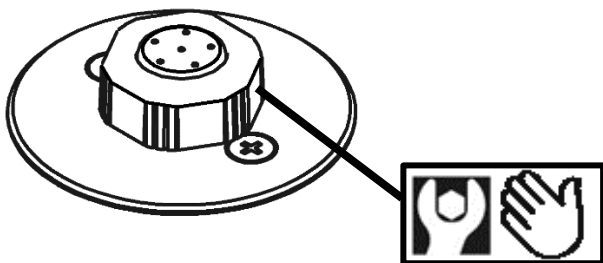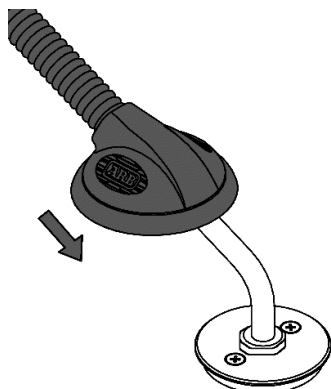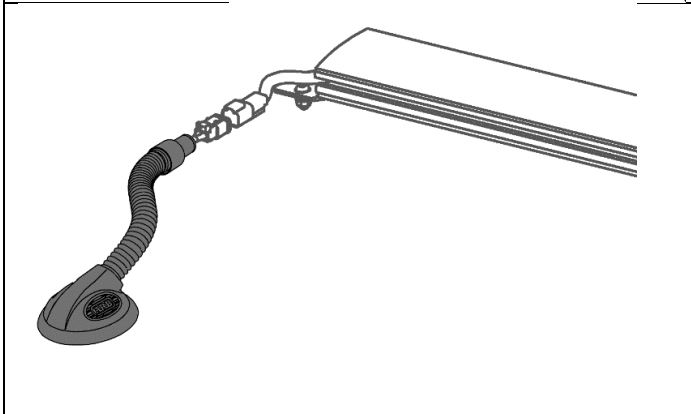|	
For Non-Wired Kit Only **Type 1 – 6 Cavity** **Type 2 – 4 Cavity** ⌀ 2.2 - 3.2mm ⌀ 0.087 - 0.125" ⌀ 2.2 - 3.2mm ⌀ 3.9 - 5.8mm ⌀ 0.087 - 0.125" ⌀ 0.154 - 0.228"	25. Insert one wire through each hole in the grommet. Wire should be in the size range shown to ensure sealing 26. Type 1 and Type 2 grommets suit different wires gauges – refer to diagram for correct wire diameters *Hint: soapy water will aid installation* **! Caution: excessive force and dragging may damage the seal!**
Optional Step	27. Add inline connector(s) to fit inside roof (connector not supplied) Adding a connector(s) will aid removal and reinstallation of rack **! Caution: ensure the connector(s) will not cause rattles in roof and can pass through the 20mm (0.79") drilled hole!**
Pre Wired **Provisional** NUT NUT GROMMET SLIP RING WITH WIRES **OR** GROMMET LARGE O-RING INSERTABLE	28. Install the wiring gromet, nut and parts as per the diagram • For pre-wired version, fit the supplied o-ring, then grommet with wires, then the nut • For provisional/insertable version install the insertable grommet, then the supplied plastic slip ring, then the nut
	29. Tighten nut by hand 30. The nut will come to a hard stop on the thread
	31. Install the boot over the wires and clip the boot over the grommet *Hint: soapy water will aid installation*
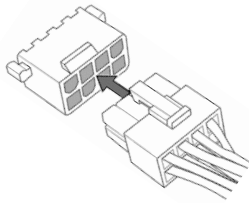
For Direct to Device fitment go to Step 32

For installation into BASE Rack go to Step 35

For Direct To Device
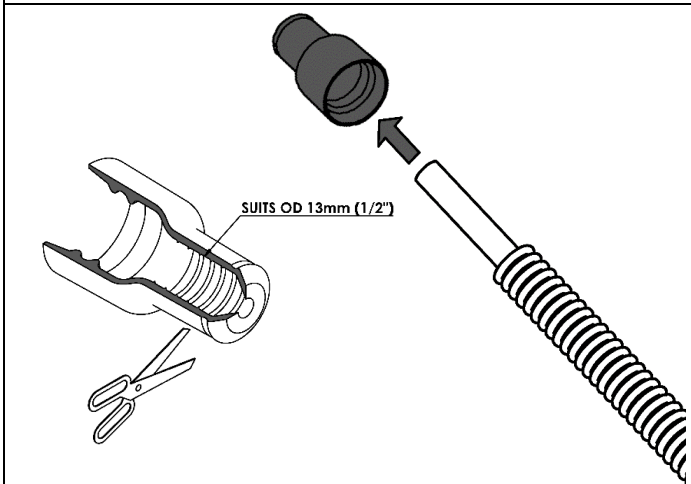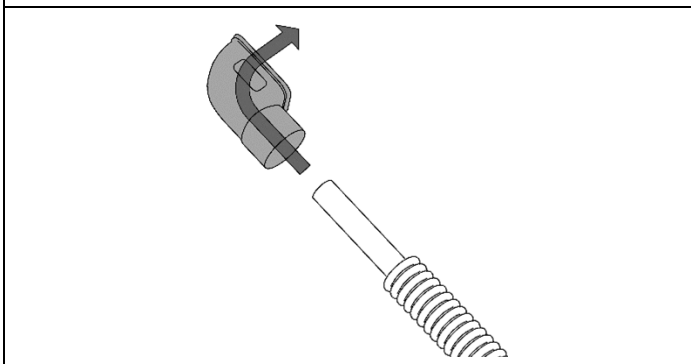
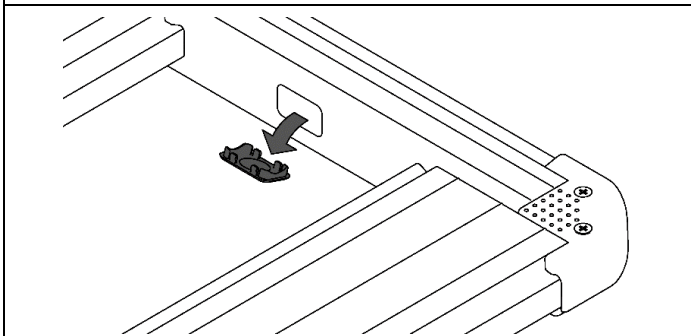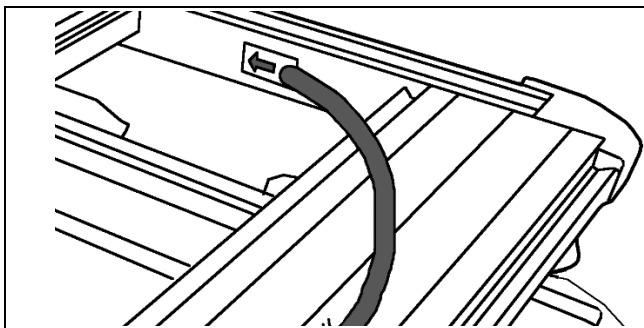|	
SUITS OD 13mm (1/2")	32. Install the direct end boot over the cable and boot tail 33. If the wires do not fit through the hole, the grommet can be cut to accept 13mm (1/2") Outer Diameter convoluted tubing
	34. Connect to device

For BASE Rack

	35. Install the BASE Rack Boot over the cable and boot tail
	36. Remove the plastic cover from the rack, closest to the roof exit

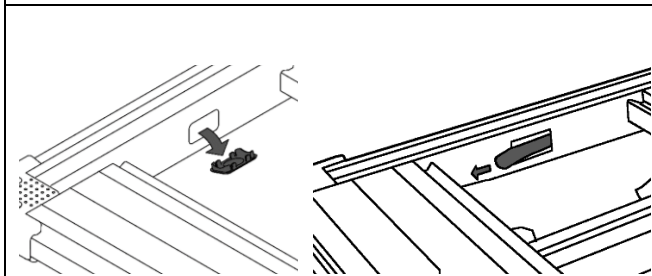|	
	37. Pass the wires though the hole in the rack
	38. Clip the BASE Rack Boot into the square hole
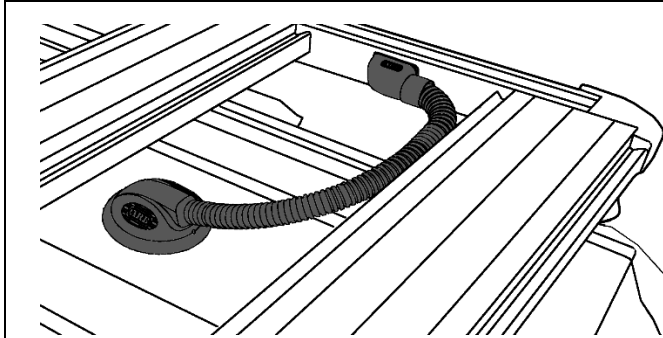
EXITING THE BASE RACK
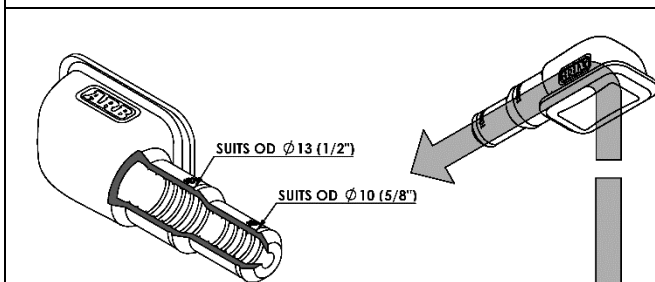## Please note there are multiple options for exiting the rack

Using the square exit boot

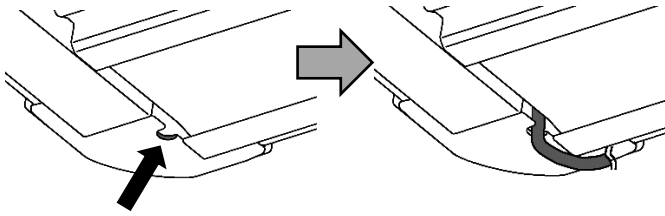|	
	39. Remove the plastic cover from the rack 40. Pull wires through the hole
  SUITS OD ⌀13 (1/2") SUITS OD ⌀10 (5/8")	41. Pull the wires through the exit boot 42. If the wires do not fit through the hole, the grommet can be cut to accept 10mm (3/8) or 13mm (1/2") Outer Diameter convoluted tubing 43. Clip the boot into the hole

Notching the end cap

	44. Create a small notch in the lower roof rack end cap 45. Guide the wires from the end of the extrusion and out through the notch in the cap

| **Using optional 6980320 16mm 90° Boot Sold Separately** |
|---|
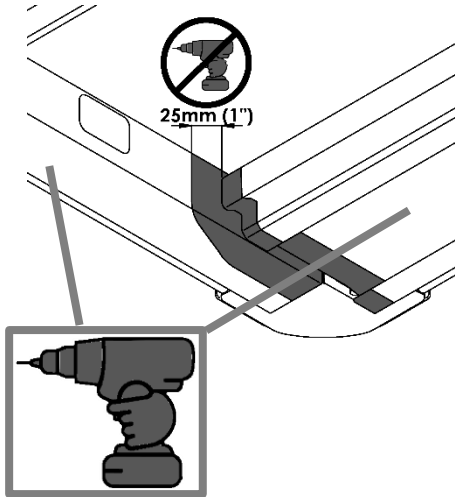
	46. Use the boot to exit the BASE Rack, through a 16mm (5/8") hole 47. Note additional boots can be purchased separately 48. The hole can be drilled in the BASE Rack alloy, minimum 25mm (1") away from welds areas **! Caution: never drill in welded areas, it may lead to failure !**

25mm (1")

SUITS OD 13mm (1/2")
SUITS OD 10mm (3/8")
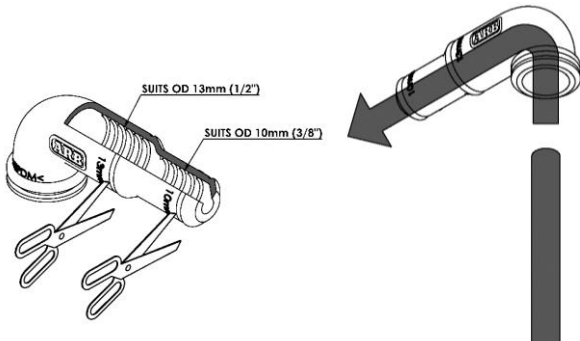
	49. Feed the wires through the 90° Grommet 50. If the wires do not fit through the hole, the grommet can be cut to accept 10mm (3/8) or 13mm (1/2") Outer Diameter convoluted tubing
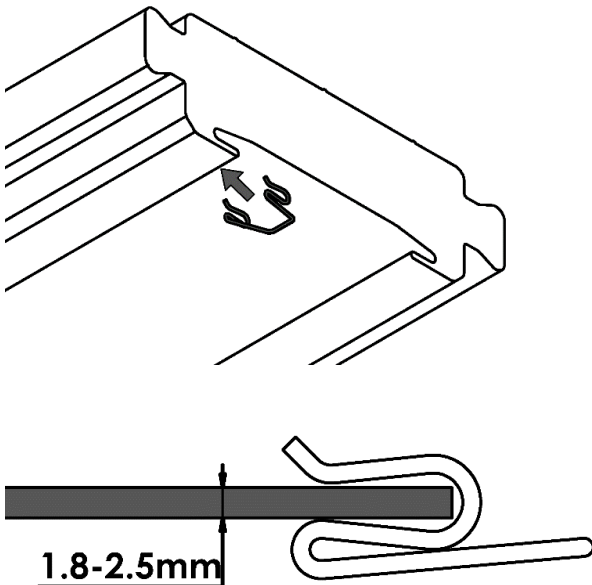
	51. Use the cable ties and edge clips to neatly route wiring

1.8-2.5mm