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FLEXIGLASS FITTING MANUAL - SECTION 1.2B

HOLDEN COMMODORE VU-VZ FIT - ISSB2

Note: Familiarise yourself with the instructions before you start to ensure you are clear on all aspects of the fit

SAFETY EQUIPMENT
● Hearing protection as required
● Eye protection as required

TOOLS REQUIRED
● Standard canopy fitting tools
● Drill, rivet gun, socket, spanners, etc.
● Silicone, IPA wipes, knife, pencil, etc.
● Side cutters.
● Terminal pliers (Wurth)
● Electricians "snake"
● Insulated pliers
● Screwdrivers (various)
● 10mm drill bit
● Toledo cable strippers
● Wurth Cable strippers

MATERIALS & PARTS REQUIRED

Part No.	Description	Qty.
PLT300	Plate VU Commodore Door Seal	2
BKT310	Bracket Fixing VU	4
RIVET200	Rivet 6-6 Steel	4
NUT8N	Nut Nyloc M8	4
WSH220	Washer 5/16 X 3/4 Flat	4
SCRHHZP850	Screw Set Hex Head ZP 8x50mm	4
TAPE200	Tape Foam 4205 Truck	6M
TAPE180	Tape 4203 Front Tube 25X3 25M	1.7M
TAPE100	Tape Foam 2016 Cmdr 7.5M Roll	300mm
BLK100	Block Mounting Plastic	4
SEAL100	Seal Btm Door Bulb Flap 200ft	1
TUB140	Flexible split conduit.	200mm
	Adhesive insulation tape	As req'
WIRE500	Flexiglass wiring harness kit.	1

The VU Holden canopy has been modelled to the vehicle body contours considerably closer than previous models. This combined with the design of the fixing brackets will allow some work to be carried out prior to the arrival of the vehicle and should achieve a faster turn around.
Note: If the vehicle has, or is to have a liner fitted, then tapping into the wiring for the brake lamp must be carried out before fitting the canopy.

If you are unsure as to the wiring of the canopy to the vehicle then consult an auto electrician.

FITTING INSTRUCTIONS

1 Remove the plastic liner by unfastening the four screws around the tailgate opening. Grasp the centre of the floor at the opening and lift lift up. With a person on each side push the liner sides downwards and under the coaming lips and tie down loops while keeping the floor bowed upwards. When the sides are clear the whole unit can be lifted at the rear and pulled rearwards.

2 Unfasten the 8 Philips head screws securing the passenger side tail lamp access panel and remove.

3 On the inside curve of the coaming corner moulding measure a point 60mm down and 20mm rearward of the joint line.

4 Using a 5/16” (8mm) dia drill bit, drill a hole through both skins of the corner angle the drill as shown in **ILL 1**.

5 Fit a rubber grommet in the hole (inside hole can’t be fitted with one).

6 Pass the end of a 500mm length of figure eight flex through the grommet and hole, pull down into access area. Quick connect the live wire to the blue with red trace and the earth to the brown with a white trace.

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7 Ensure the wire is not pulled tight then close up the access panel.

8 Trim wires to length and attach bullet connectors in the usual way.

9 To wire the interior lamp, start the two core cable from the battery position run it along the side of the engine bay to the fire wall.

10 Run the cable down the fire wall and out from under the engine bay.

11 Run the cable along the hydraulic pipes inside the sub frame on the driver's side of the vehicle as far as the spare wheel bay, tie at regular intervals.

12 Pass cable between cross member above spare wheel and floor. Attach to central bearer before running out to the large (50mm Dia) bung in the rear cross member.

13 With the interior access panel removed on the driver's side a "snake" can be passed through the bung hole and up through the access panel aperture.

14 Make a small hole through the bung, pass the cable through it and pull the cable up to the tray interior using the "snake".

15 Re fit the bung.

16 Pass the cable up through the rear corner in a similar manner to the brake lamp.

17 Connect cable at battery and test cable using a spare lamp. If circuitis ok attach bullet connectors and close access panel remove fuse until canopy is fully wired.

18 Re fit liner to vehicle in reverse of Item 1. Ensure that all tie down loops are exposed before screwing the rear end in place.

19 From the cabin roof remove the two plastic gutter covers. Lift the lip of the windscreen rubber and pull upwards. A tongue projects rearward under the rear cab fairing so pull forwards after the fourth clip has released.

20 Measure forward from the fairing edge 60mm and fill the gutter with silicone at this position, make the dam about 15-20mm wide.

21 Re-attach the gutter covers.

22 Apply a bead of silicone to the cracks either side of the cover extending approx 15mm either side of the 60mm mark make sure the sealant is forced right down into the cracks so as to form an unbroken block with the sealant under the cover. Tool each bead flush to the roof contour using a wet fingertip.

23 Attach 5mm truck tape **TAPE200** to either the coaming top or the base rail underside. On the coaming the inside edge of the tape should be about 6-8mm from the corner of the coaming. On the base rail, keep the tape 30 mm from the outside of the outer rail.

24 Water proof the tail gate opening top corners using foam tape **TAPE100**, VU weather seals **SEAL445** and silicone to form a barrier as shown in **ILL 2** & **3**.

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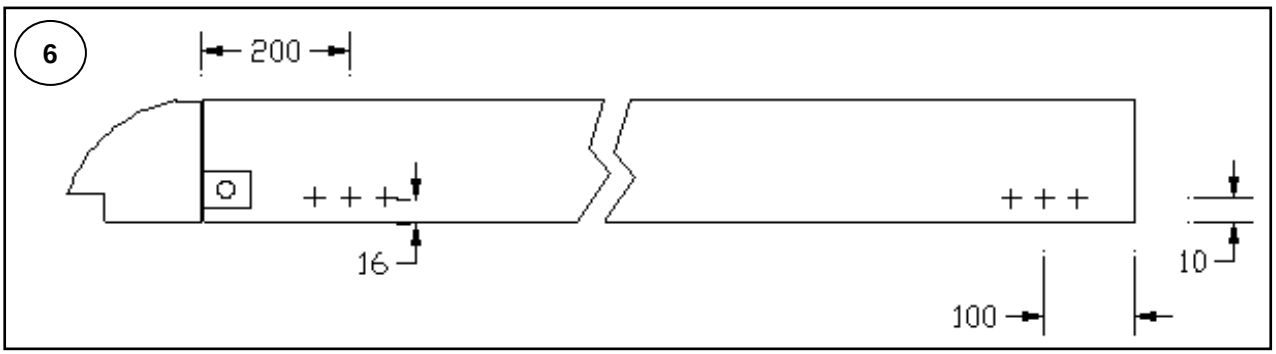
25 Base rails should be predrilled, as the hole positions, in conjunction with the fixing brackets, control the width of the canopy. The mount block positions remain the same either with or without flexiracks. Measurements are given to the centre point of each mount block, drill either one 5/16" dia hole or two 7mm holes. Drill mount blocks at the same time. See **image 6**.

26 Lay canopy in position on vehicle. Adjust the canopy position to obtain the best tailgate / door seal fit by moving canopy either forward or backwards.

27 Mark around outside of canopy seal over the cab roof using a whiteboard marker.
Then remove canopy.



28 Starting approximately 50mm outside the gutter covers apply a strip of **TAPE140** all weather tape along the inside of the marked line, end approximately 50mm outside the opposite gutter cover. Wipe off whiteboard mark with a little IPA.
Note: To improve the finish, silicone to the front of the tape can be carefully removed from the gutter areas.

29 Replace the canopy onto the vehicle and align joints as in step #26. Place the mounting blocks over the 110.

30 Place a **BKT310** fixing bracket beneath rear of the base rail. The short leg of the channel hooks in behind the top lip of the coaming recess it will probably be necessary to pull the base rail inwards to get the bolt or bolts to drop through the bracket holes. See **Photo 4**.

31 Place the **BKT310** fixing bracket beneath the base rail at the front, the BKT310 sits into the vehicle recess. The inner rail must sit into the **BKT310** as in Diagram One for maximum seal across the front drop bolts or boltsthrough pre-drilled holes, then partially tighten.

32 Drill & Rivet to the coaming with **RIVET200** rivets through hole below the bolt in each bracket.

33 Fully tighten each fixing point while ensuring that the rear door gaps are correct and the base rail is fully seated on the **BKT310** bracket as shown.

34 If flexiracks are fitted adjust foot bolts.

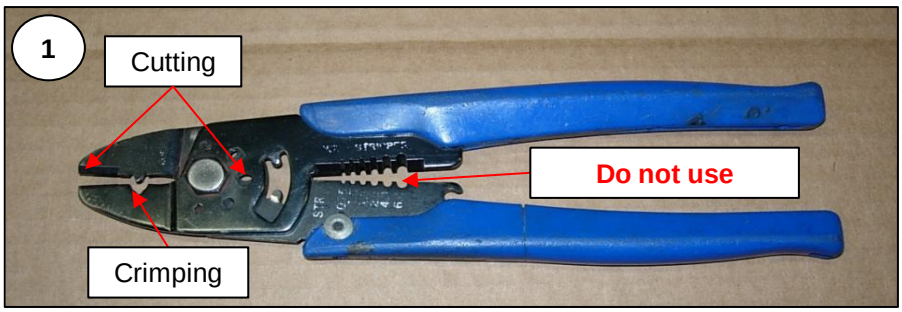
- Note: Be very careful with the front unit as over adjustment will lift the canopy front off the roof.

35 Connect interior and brake lamps to the prepared connectors on the vehicle and check operation.

36 Trim bottom door seal, apply all weather tape and adjust door lock tension.

ELECTRICAL WIRE STRIPPING SAFETY PROCEDURE

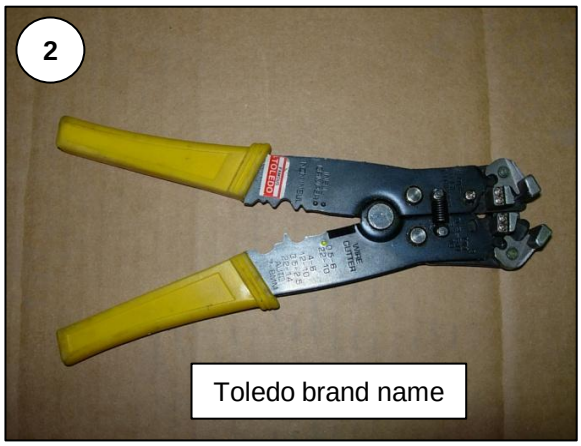
It is Flexiglass policy that the use of combination electrical cutting/crimping and stripping pliers be restricted to cutting and crimping use only.



It is a documented fact that the use of these pliers can cause personal injury due to the fact that they are reliant upon holding the cable in one hand while pulling with the pliers with the opposite hand. Any attachments to the gripped end can be pulled into and through the palm of the gripping hand causing injury.

The single hand action strippers are to be used at all times for stripping cable ends ready for joining or connecting.

Two types of cable strippers are recommended, one operates with the pliers at 90° to the cable **(2)** the other operates in-line with the cable **(3)**.



The tool in **ILL 2** is a generaly stronger and harder wearing item but the other is very useful for getting to cables in restricted space, it is therefore recommended that both types be available.

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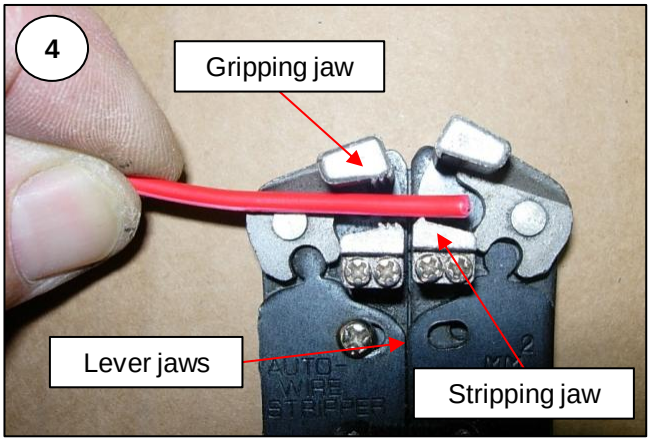
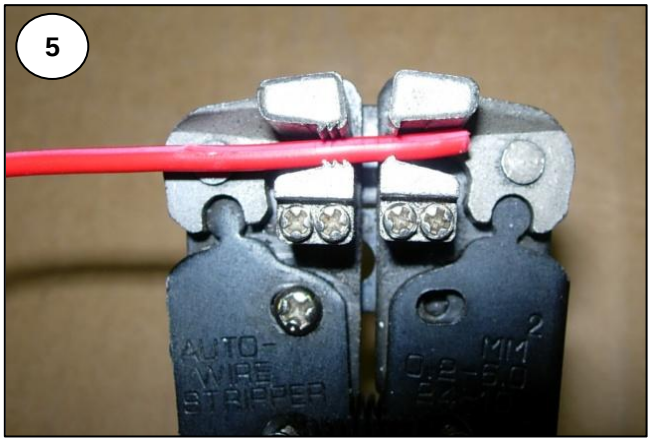
OPERATING INSTRUCTIONS

1 Squeeze handles sufficiently to bring the lever jaws together. Lay cable between stripping jaws as shown in **ILL 4.**

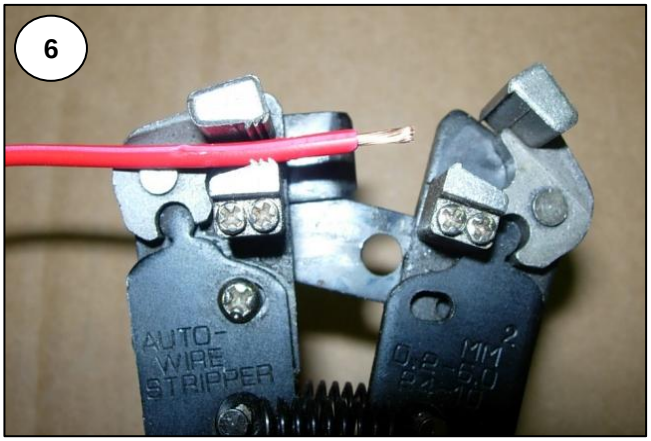
Note:
There should be no necessity to strip more than 10mm of sheathing from the cable end for any of the connectors used by Flexiglass. If for any reason a longer stripped end is required, do it in repeated 10mm bites, the pieces can then be slid off the end using the fingers.



2 Continue squeezing the handles together to engage the gripping and stripping jaws.



3 Increase the pressure slightly as you continue to squeeze. The stripping jaws will then move indipendantly of the pliers cutting and stripping the end of the wire until with a sharp click both sets of jaws will automaticaly disengage.



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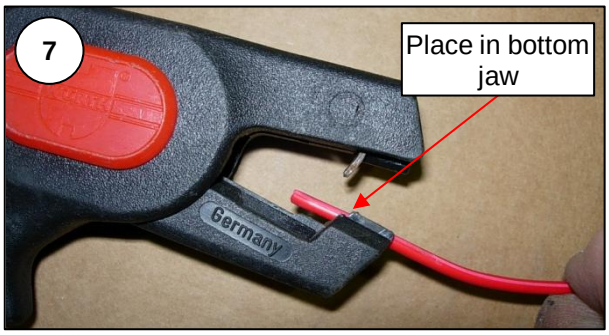
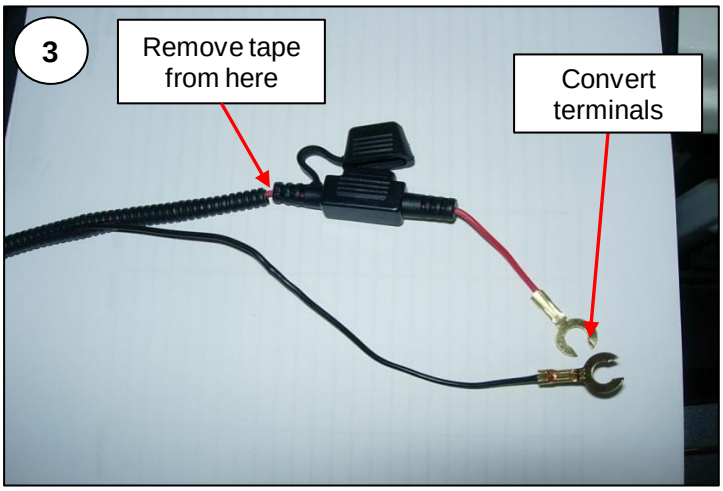


4 The Wurth pliers are simpler in operation.
After placing the cable in the "V" of the bottom jaw, **ILL 7,** squeeze the handles together.
The squeezing action brings the jaws together and forces the bottom jaw forward both cutting and pulling the sheath from the cable.
See ILL 8 & 9.

WIRE500 FITTING INSTRUCTION

Engine bay veiw



1 Pass an electricians snake down through the engine bay, keep it as close to the chassis as possible and avoid moving parts such as steering extensions and linkages. See **ILL 2**.

2 Remove fuse from its holder and keep safe.

3 Remove electrical tape from the junction of fuse holder and convoluted conduit to allow more of the earth line to become available.

4 Convert the terminals into spade terminals by the use of a pair of side cutters. See **Photo 3**.

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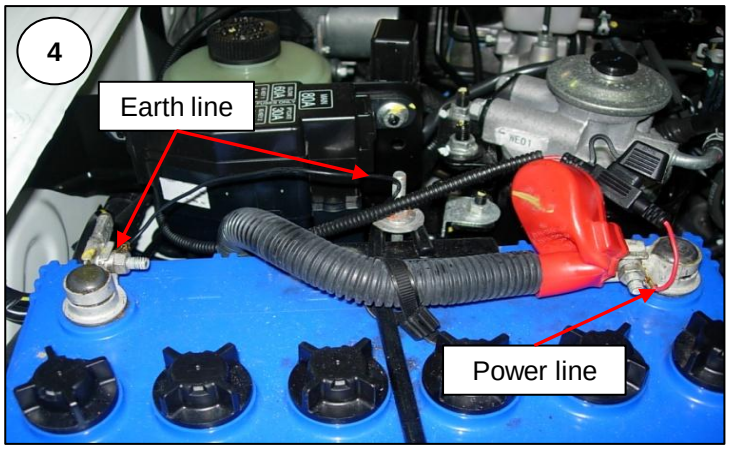
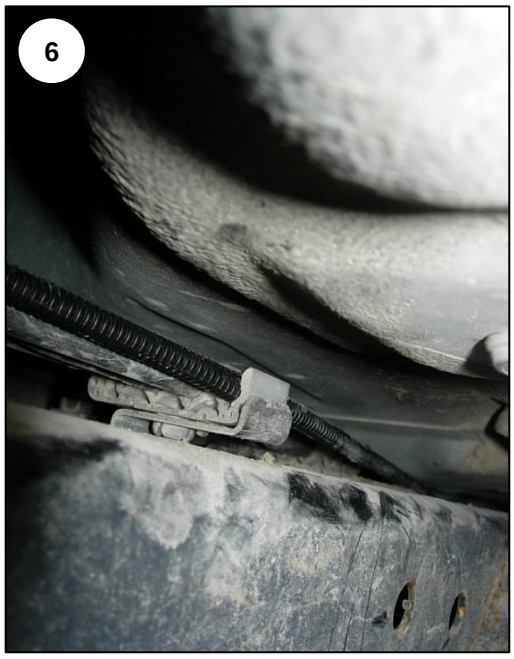
5 Slacken the battery terminals sufficiently to allow the spade terminals to be slid under the clamp nuts then re-tighten.
See **ILL 4**.

6 Re-wrap the conduit/fuse holder with electrical tape and extend back down the conduit to secure the earth line.

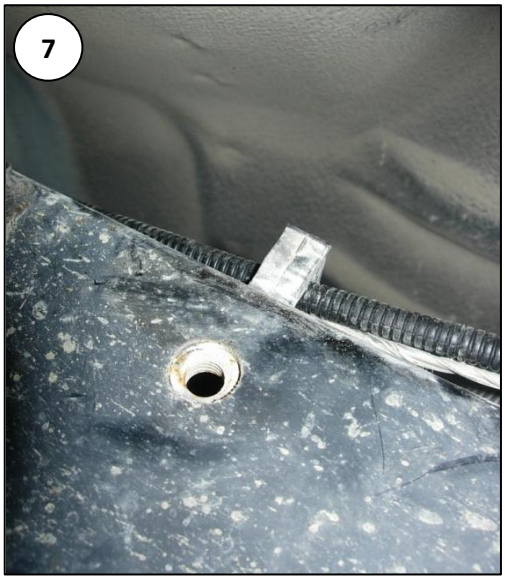
7 Tie the conduit to a couple of fixtures close to the battery to prevent it over tensioning the terminals whilst being run along the chassis.





8 Use any available service brackets, on the chassis, to run the cable to the rear of the vehicle, **See ILL 5,6 & 7.** If there are none available then use cable ties provided.

Note:
Do not tie cable to brake lines and avoid exhaust system. Do not pass cable through wheel wells where it can be struck by debris thrown from the tyres.



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9 The harness is easily passed up through the body and into the tail lamp recess. See **ILL 8.**

10 Scotch lock the white line to the brake lamp wire and the accompanying black wire to the earth lead of the lamp.

11 In the top corner of the well body rear corner, adjacent to the position of the canopy wiring when fitted, drill a 10mm (3/8") diameter hole.

12 Fit the rubber grommet from the harness kit into this hole.

13 One at a time, carefully thread the three wire ends with the terminals pre-attached through the hole in the grommet. See **ILL 9**.

14 Carefully loop up the harness and tie it to the lamp wiring with either electrical tape or cable ties, ensure that it is short enough not to form a loop coming out of the vehicle underbody when the tail lamp cluster is re-fitted.

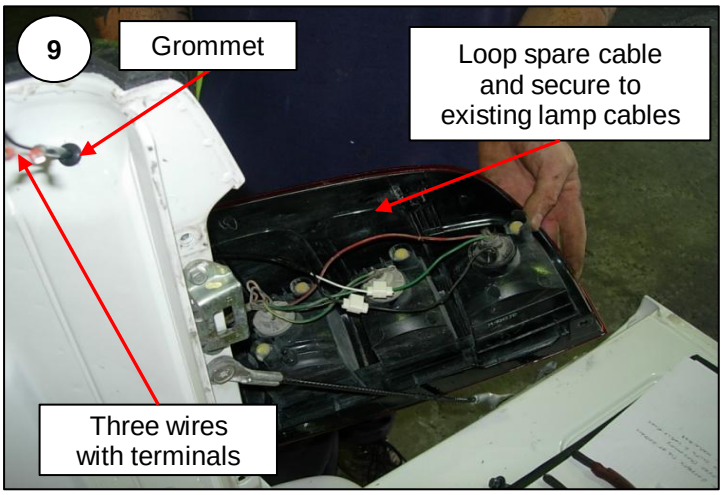
15 Proceed with the fitment of the canopy to the tub.

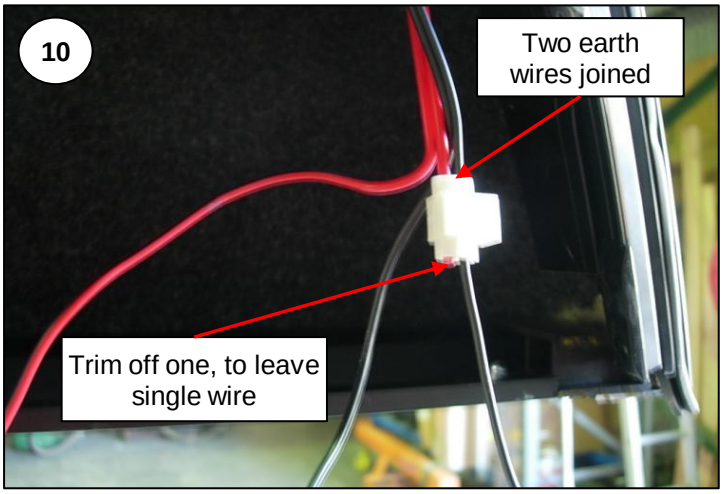
Note: The following stage can be carried out prior to fitting the canopy to the vehicle if desired.

16 Take the two figure eight wires from their location behind the door frame and split them into four separate wires for about 100mm above the canopy base rail.

17 Take the two earth leads (red/black,interior light and black, brake light) and join them as shown in **ILL 10** then trim one of them to give a single earth wire.

18 Slide a weather seal onto each wire with the small diameter section towards the end of the wire.





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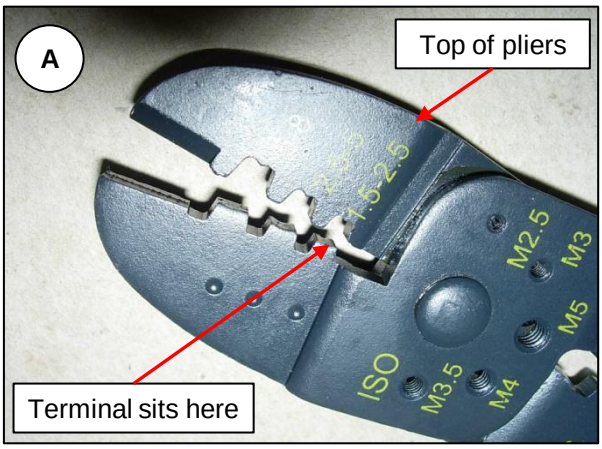
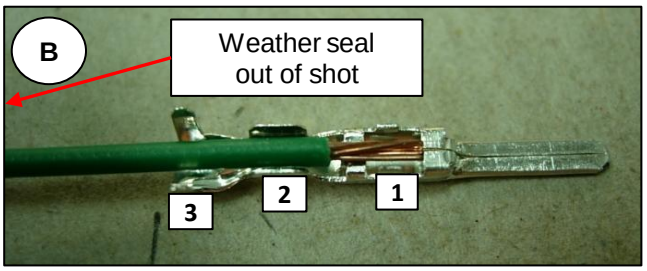
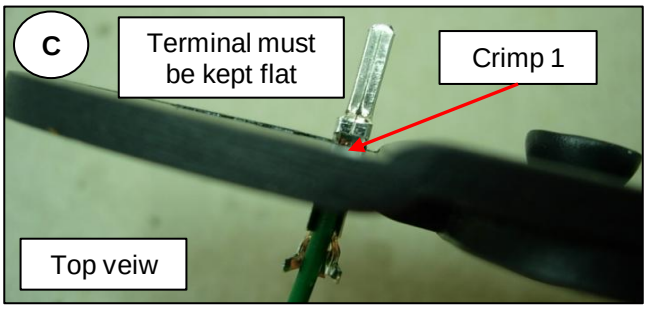
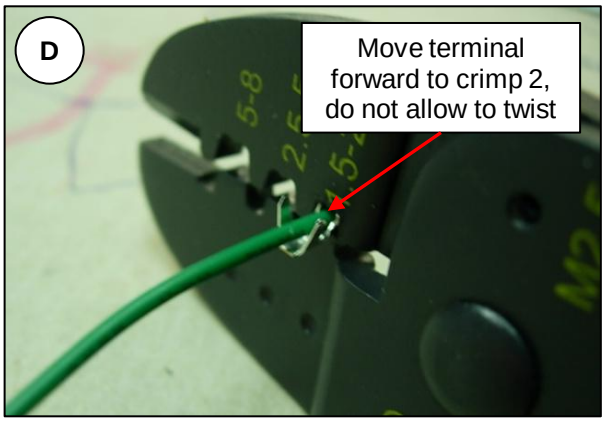
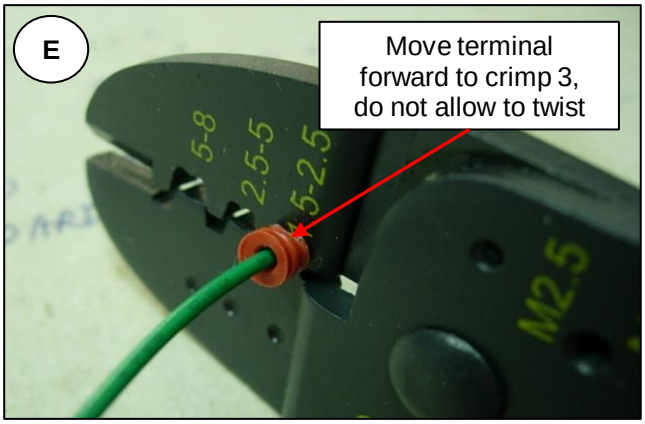
FITTING OF DEUTZCH STYLE TERMINALS



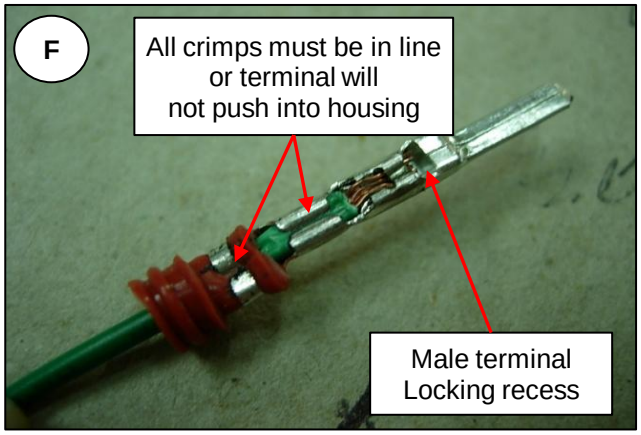








19 Attach a male terminal to the end of each wire with the correct crimping tool. Ensure the seal is firmly crimped in place so that it can't be pushed back up the wire when inserting the terminals into the connectors. Do not damage the terminal locking recess or the terminal will not remain in the housing when the two parts of the snap connector are pushed together.



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20 Insert the earth leads into the two parts of the connectors. Use the sockets at the end of the locator and slot and opposite the snap catch. See **Photo 11**.

Note: Careful attention must be paid to the orientation of the locking recess of the terminals. On the female terminal (shown) the recess is on the opposite side to the crimiping lugs, on the male it is on the same side.
Therefore use the snap catch as a reference and fit females with the crimp away from the catch and on the other connector insert the male terminals with the crimp facing it.

21 Insert the wires in the tub with the female connectors into the remaining two holes in the connector body.

22 Fit the two parts of the connector body together and insert the remaining two male terminals into the holes opposite the corresponding wires, ie black to white and red to red. See **Photo 12.**

23 Cut a small piece of convoluted conduit to cover the exposed wires from the grommet and tuck the canopy wires back into the door frame channel as shown.

37 Finish and inspect as normal.