

# Cable Jointing Manual

## Jointing Procedures

### Module 13

# Stripping Polymeric (XLPE) Single Core Cables (Bonded and Strippable Screens)

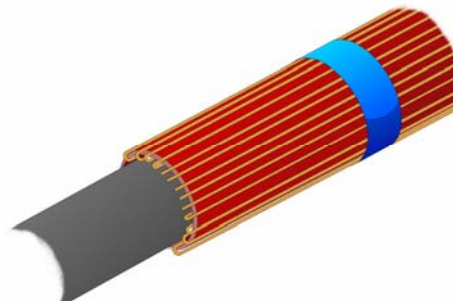
Version:	1.0	Date of Issue:	June 2008
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		Review Date:	June 2013

## Revision Log

Version: 1.0	Prepared by: Terry Dutton	Date: June 2008
Changes made	New Combined Module. Replaces Central Networks East COP15 MODULE 13. Replaces Cable Jointing Procedures in Central Networks West Underground Cable Jointing Manual:- CJP416; CJP450.	



**2** Pull the screen wires off the semi-conducting screen and carefully fold them back onto the sheath (the jointing instruction may require red mastic here). Lay the wires down parallel and straight not crossed. Fasten the wires down to the sheath with a wire or PVC tape binder.

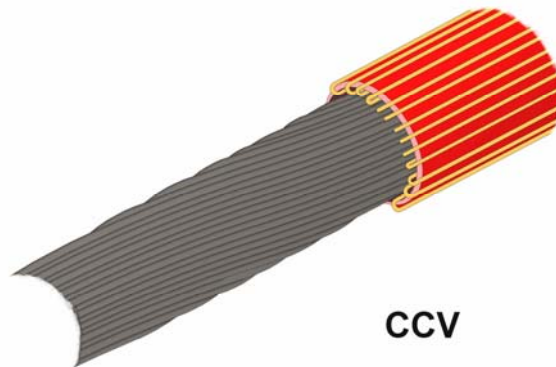
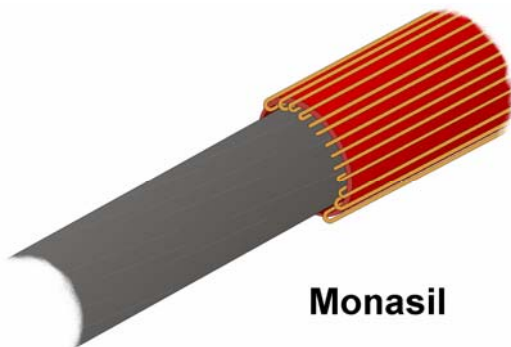


**3** Measure and mark the semi-conducting screen at the point where the screen is to be terminated. Use a Chinagraph pencil to mark the screen.

**4** Cable manufacturers currently supply two types of semi-conducting screen, both may be *strippable* or *bonded*. The types are:

- **Monasil** – identified by its smooth appearance.
- **CCV** (Continuous Catenary Vulcanising) – identified by its heavily ribbed appearance and characteristic odour.

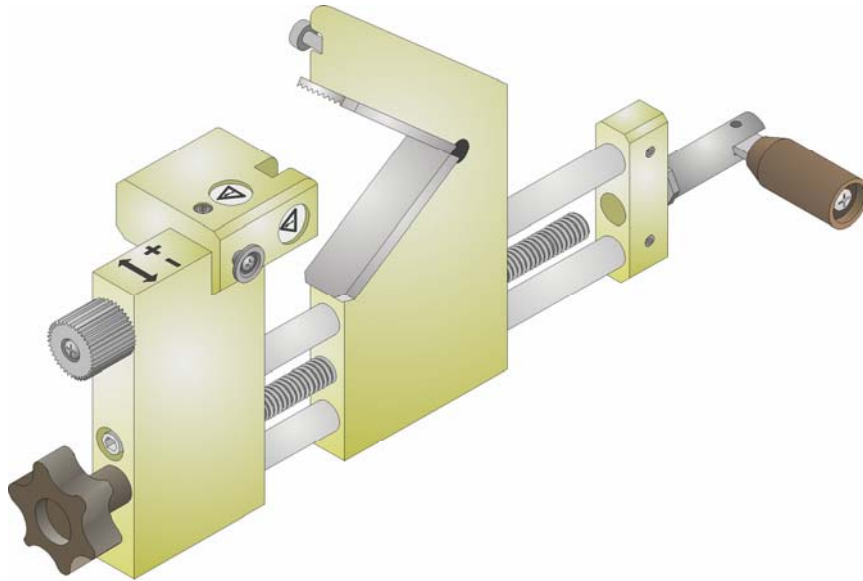
Some difficulty may be experienced in cutting the CCV screen due to its rubbery consistency. If this is the case, then it is permitted to gently warm the screen, which should smooth out the ribs. **Only the area to be removed should be warmed.**



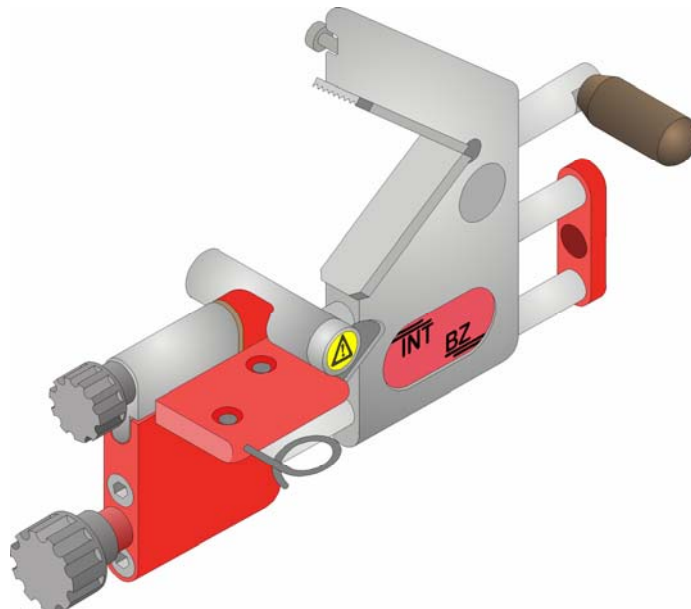
**PART B – REMOVING SEMI-CONDUCTING SCREENS**

Two special tools are approved for this purpose and both may also be used for the removal of strippable screens, as an alternative to the procedure in Part B described previously. The first tool illustrated with a **yellow** anodised Aluminium body is the tool supplied by Central Networks in the East and described in detail in this Module. The second tool illustrated with a **red** anodised Aluminium body is used in the West of Central Networks and by some contractors.

***Stripping tool used by Central Networks in the East***

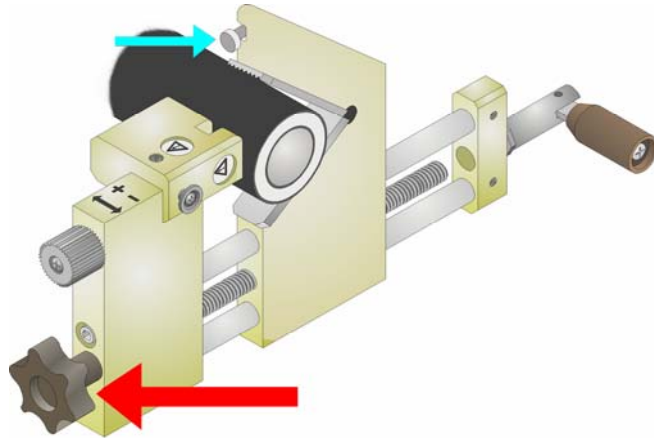


***Stripping tool used by Central Network in the West and by some contractors***

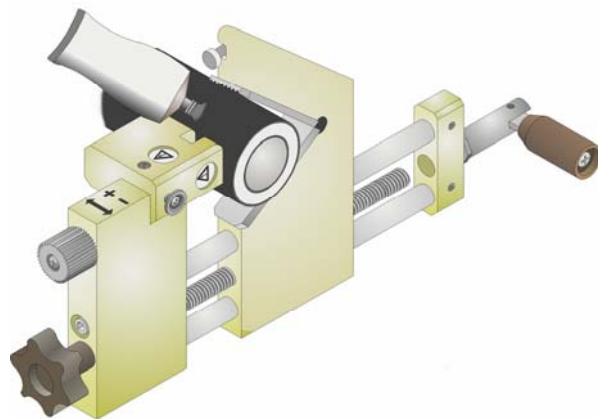


**USING THE STRIPPING TOOL (yellow tool illustrated, red tool is the same in operation)**

**1** Ensure that the cable is as **straight** as possible. Close up the tool jaws using the large, black plastic knob marked by a red arrow, to provide a firm grip that will still allow the tool to rotate. At this stage, the button marked by a blue arrow should be in the **FRONT** position, as shown.

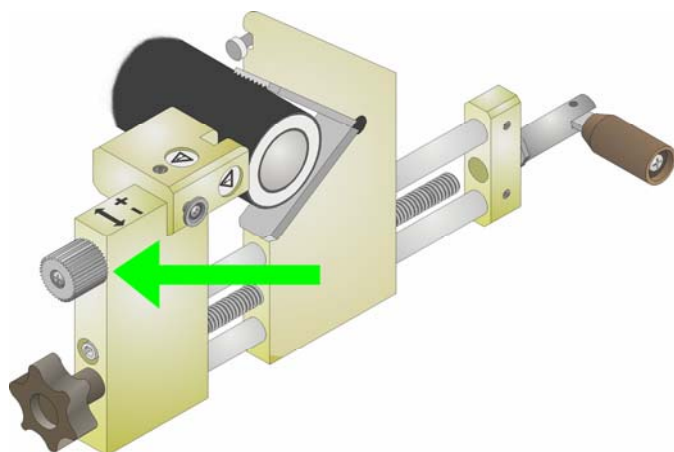


**2** Lubricate the surface of the semi-conducting screen with Silicone grease. This will allow easier rotation of the tool and a better finish.



**3** Position the cutter at the front edge of the screen and set the depth of cut using the small metal knob marked by a green arrow, as shown. The adjustment is anticlockwise to increase the depth of cut, clockwise to decrease. Each click is 0.1mm.

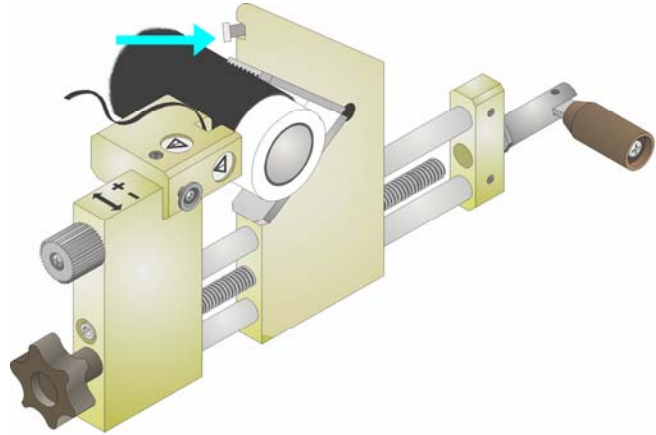
If necessary, practice on a scrap piece of cable to obtain the correct depth setting.



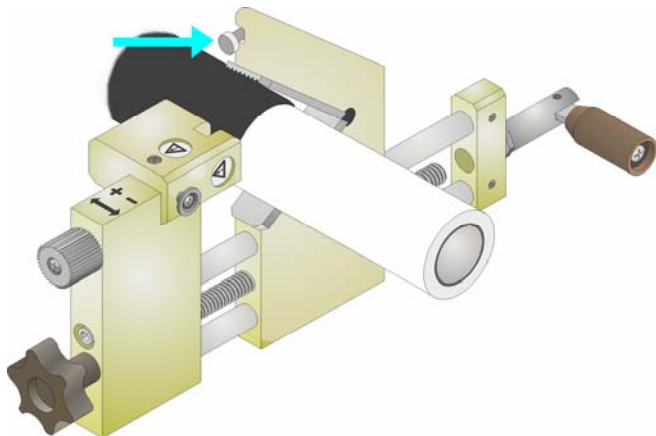
**4** With the correct depth set, move the button marked by a blue arrow from the FRONT towards the SIDE position – the exact position of this button will depend upon the core diameter (**larger sizes need a smaller button movement towards the side**).

Now rotate the whole tool using the rear handle – as the tool is rotated it will move progressively down the cable, peeling the screen. **Do not apply excess pressure.**

The selected depth setting should produce a clean, smooth cut free of black sheath residue.



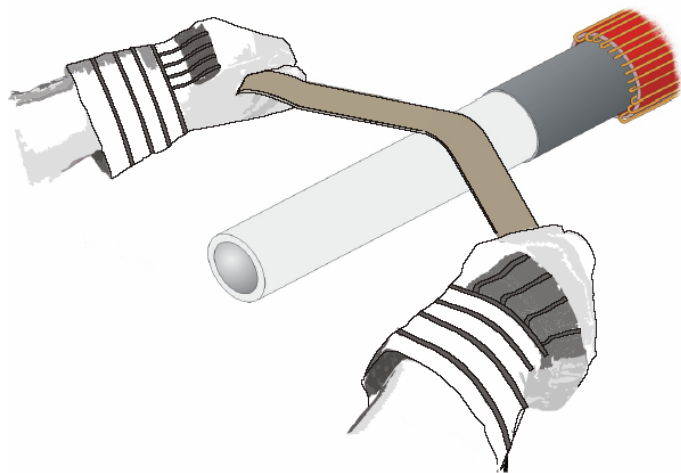
**5** When the required screen termination position is reached, rotate the button marked by the blue arrow to the FRONT position, to stop the tool moving down the cable. Continue to rotate the tool until a clean cut screen edge is produced. Open the jaws and remove the tool on completion.



**6** After the tool is removed, examine the surface of the insulation to ensure all black particles are removed. If necessary, abrade with fine grade (P320 grade) Aluminium Oxide paper (CC 5819810).

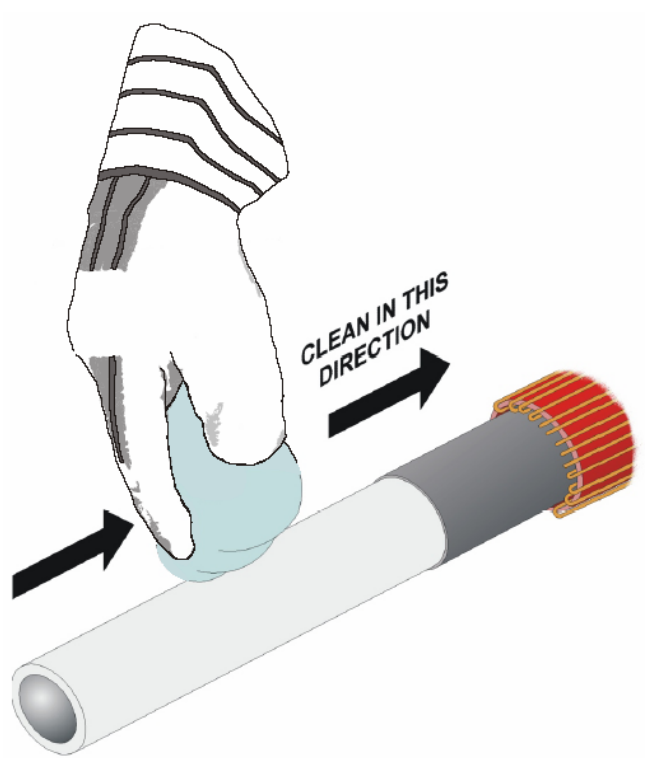
Also, if any fine cuts or light surface damage are present, abrade them away with the fine grade Aluminium Oxide paper.

**Emery paper MUST NOT be used for this task as it contains metal particles.**



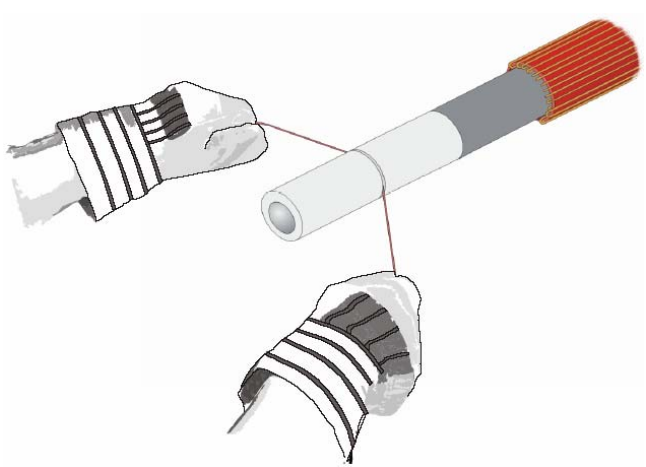
**7** Clean the surface of the insulation with a fresh paper wiper (CC 5149380) on completion.

Always move the cleaning wiper from the cable end toward the semi-conducting screen, so that any fine particles remain on the edge of the screen, not on the insulation.



**8** Remove the XLPE insulation by making a small cut in the insulation with a sharp knife at the insulation off position and then using pink string (CC 5321000) again 'saw' through the insulation down to the conductor.

The insulation can then be removed either by twisting it off the conductor or by cutting along its length with a sharp knife. An approved insulation removal tool may be used at this point.



**9** This illustration shows removal of screen and insulation completed.

