

## Company Directive

### STANDARD TECHNIQUE: CA3Y

#### Relating to Tools Required for 33kV Cable Jointing

##### Policy Summary

This Standard Technique document details the tooling and certain test equipment required for 33kV Jointing and in addition details the respective E5 item numbers.

The jointer is responsible for the safe custody and care of tools and appliances issued to him.

This ST has not been written as a training document. It is not intended to be exhaustive in content and you must refer to your supervisor if you require training or instruction.

You shall work safely and skilfully, utilising the training/instruction you have already received, relating to the contents of this document and its cross-references.

You must make sure that you understand your job instructions and that you have the necessary tools and equipment for the job.

**Author:** Peter White

**Implementation Date:** March 2017

**Approved by**



**Policy Manager**

**Date:**

14 March 2017

***All references to Western Power Distribution or WPD must be read as National Grid Electricity Distribution or NGED***

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## **IMPLEMENTATION PLAN**

### **Introduction**

This new Standard Technique document contains a list of all the basic tooling, dedicated 33kV Tooling and certain test equipment and their E 5 item numbers required for 33kV Jointing.

### **Main Changes**

This is a new document.

### **Impact of Changes**

All existing 33kV Jointers who attend the 33kV cold applied conversion course shall be issued with the dedicated 33kV tooling. All subsequent Jointers upgrading to 33kV jointing who attend the complete 33kV course, then their respective TM's shall provide the tooling listed under dedicated 33kV tooling.

### **Implementation Actions**

Team managers to disseminate the information to their respective 33kV Jointers.

### **Implementation Timetable**

This Standard Technique can be implemented with immediate effect.

Document Revision & Review Table		
Date	Comments	Author
March 2017	This is a new document.	Peter White

# ST: CA3Y TOOLS REQUIRED FOR 33kV CABLE JOINTING

## 1.0 GENERAL

This updated Standard Technique document contains a list of all the basic tooling, dedicated 33kV Tooling and certain test equipment and their E 5 item numbers required for 33kV Jointing.

## 2.0 SPECIALIST TOOLS, INSULATED TOOLS AND GAS EQUIPMENT

Specialist tools, insulated tools and gas equipment need to be tightly controlled and **shall only be sourced from stock or from our Approved supplier**. When ordering directly from our Approved supplier the WPD E 5 code number must be used to ensure that the items are supplied with the correct blades or accessories.

Where **specialist** tools are required, but they are not listed below please contact the Company Cable Engineer in Avonbank.

## 3.0 GENERAL TOOLS

General tools are considered as a lower risk and as such must be ordered from our Approved supplier. This allows the individuals to source items based on personal preference and quality. General tools will not be stocked in our stores.

**Non stock items must only be supplied by the current contract holder** Approved for the type of tool required.

## 4.0 LINKS TO APPROVED SUPPLIERS

### 4.1 Hand Tools

<\\avodcs01\data\Purchase\Buyer Folders\David Barker\Purchasing Catalogue 2011\RT Test Pages\Good into Stores\Hand Tools\handtools.htm>

### 4.2 Gas Equipment

[\\avodcs01\data\Purchase\Buyer Folders\David Barker\Purchasing Catalogue 2011\RT Test Pages\Good into Stores\Gas \(LPG\) Equipment\GasLPGEquipment.htm](\\avodcs01\data\Purchase\Buyer Folders\David Barker\Purchasing Catalogue 2011\RT Test Pages\Good into Stores\Gas (LPG) Equipment\GasLPGEquipment.htm)

### 4.3 Insulated Tools

<\\avodcs01\data\Purchase\Buyer Folders\David Barker\Purchasing Catalogue 2011\RT Test Pages\Good into Stores\Insulated Tools\insulatedtools.htm>

## **5.0 CARE**

The jointer is responsible for the safe custody and care of tools and appliances issued to him.

The jointer should place his tool tray within easy reach of his work area or have a clean board adjacent to his work area on which to place his tools. The jointer should not place his tools on the ground, as dirt and or moisture may be introduced into the joint, which could lead to the joints ultimate failure.

It should be remembered that if insulated tools used in normal jointing work the Nylon insulation can be damaged by heat etc., thus making the insulation ineffective and therefore appropriate care should be taken.

The following tools are required by a jointer to carry out basic jointing unless stated otherwise (i.e. bracketed) a minimum of one tool is required.

## **6.0 INSPECTION AND CALIBRATION**

All insulated tools must be visually inspected for damage and defects before use on live equipment. The use of insulated tools shall not in any way remove the obligation to adhere to the Distribution Safety Rules or the safe working practices laid down in the various jointing manuals.

Insulated tools shall be formally inspected on an annual basis and a record of this inspection will be stored locally on the “PPE and Vehicle” check-sheet. This visual inspection should check for signs of damage, defects or wear that may affect the performance of the insulation or tool.

Gas equipment shall be formally inspected on an annual basis in accordance with HS15C/2. Records of this inspection shall be stored locally on the “LPG Hand Torches, Hoses and Regulators” check-sheet.

Torque tools shall be calibrated on an annual basis, thus ensuring the torque devices are fit for purpose. Checks and adjustments can be carried out locally (using a calibrated test device) or by using Boddingtons Electrical Limited, who offer a recalibration service (E5 No. 39701 for the torque driver (E 5 No 36841) and 61000 for the 60N ½ inch drive torque wrench E 5 No 41836) whereby a replacement torque device is sent to the Jointer and they send their current torque device to Boddingtons Electrical Limited, Prospect House, Queenborough Lane, Great Notley, Braintree, Essex. Telephone number 01376-567490. A record of this calibration/check shall also be stored locally.

## BASIC TOOLING LIST

Description	E 5 No.
Abrading Card	TA
Allen Key - Tee Bar 3mm	32394
- Tee Bar 3/16 AF	32373
- Tee Bar 5mm	41812
- Tee Bar 6mm	41929
- Right Angle 3mm	39106
Calliper - Outside	32067
Consac Sheath Cutting Tool (2)	34743
- 95 Wheel	34741
- 185 Wheel	34742
- Spare pads	41293
Consac Al. sheath lifting tool	39208
Clip application tool	36809
Core - Guard	36193
Core Wedge - Maxi JTM/3 (2)	31332
- Mini JTM/1 (2)	31331
- Hepwedge JTM/2	31330
Core Twisting Tools - 3c 70mm <sup>2</sup> B - 120mm <sup>2</sup> B (B = Bare Conductor)	39114
- 3c 70mm <sup>2</sup> I - 120mm <sup>2</sup> I (I = Over Insulation)	39115
- 3c 95mm <sup>2</sup> B - 185mm <sup>2</sup> B	39119
- 3c 95mm <sup>2</sup> I - 185mm <sup>2</sup> I	39116
- 3c 300mm <sup>2</sup> B - 4c 300mm <sup>2</sup> B	39120
- 3c 300mm <sup>2</sup> I - 4c 300mm <sup>2</sup> I	39121
- 4c 95mm <sup>2</sup> B - 4c 185mm <sup>2</sup> B	39117
- 4c 95mm <sup>2</sup> I - 4c 185mm <sup>2</sup> I	39118
Croppers - Large	32387
- Replacement Blades (Grip Snip)	32388
- Small	32317
Croppers – Ratchet (With Insulated Head)	60309
Cutting Snips - Side	32318
Diameter Tape	42524
Extension Bar ½ Drive - 125mm	32390
Earth Continuity Strap - 3 Way TCCM	38986
- 3 Way TCC/K	40277
File Bas - Bastard Cut	Non Stock
- Second Cut	Non Stock
- Half Round	Non Stock
- Round	Non Stock
Flint Gun	51780
Gas Torch - Raychem	40044
- General Purpose Nozzle	36121
- Large Soft Flame Nozzle	51783
Gas Hose - High Pressure 4.8mm	51773
- Connector Quick Release (Male End)	51775
- Connector Quick Release (Female End)	51775

## BASIC TOOLING LIST (Continued)

Description	E 5 No.
- Crimp 'O' Clips	51773
- 'O' Clip Pincers	36120
Gas Regulator	36124
Gas Single Burner	36125
Gas Spanner	36123
Gas Outlet Valve - 2 Way	36118
Hammer - Ballpeen 430g (1lb)	Non Stock
Hacksaw - Large	32391
- Junior	32392
- Depth gauge	32538
Hacksaw blade – junior 18 tpi	42348
Holding Tool - MSIP	38985
- UBR 95mm	36837
- UBR 185/300mm	36838
- UST .95/185/300	32373
- TA 1 & 2 connector	41799
- BCNE	41278
- SSIP	41811
Insulated 3m tape measure	42446
'Izumi' Shearbolt Power Tool	Non Stock
Kevlar string	36499
Knife – Insulated (Hook)	32393
- Ceramic Core Knife	60242
- Un-insulated Hook	32261
- Large Curved (Hook)	32264
- Hack Insulated	32262
- Leather	32263
Lead Sheath Belling Tool	39107
Lead Scraper	Non Stock
Metal Snips	Non Stock
Mirror	32402
Oil Bath	36976
Pliers - Combination	32319
- Chain Nose	32323
- Gas	32325
- Water Pump	32327
Rasp - Half Round	Non Stock
Ratchet Spanner - ½ Drive	32389
Resin Mould for Spiking Gun	41976
Rubber matting	42454
Resin paddle for removing resin from buckets	42592
Rule - 1m Plastic	Non Stock
Screwdrivers - 6.5mm Blade	32329
- 8m Blade	32334
- Pozidrive 2mm	32340

## BASIC TOOLING LIST (Continued)

Description	E 5 No.
- Pozidrive 3mm	32341
- Hybrid Flat blade / Pozidrive blade size 1	41489
- Hybrid Flat blade / Pozidrive blade size 2	41488
Sockets ½ Drive - 13mm	39133
- 14mm	32379
- 15mm	39134
- 16mm	39135
- 17mm	32380
- 18mm	39136
- 19mm	32381
¼ Drive - 7mm	36842
- 8mm	36843
- 5/16	Non Stock
- 4mm Hexagon	Non Stock
- 6mm Hexagon	Non Stock
Shearing Tool	36502
Spanner - 10mm Ring	32554
- insulated for Solidal gland nut	41797
- insulated for Solidal glands	41798
Spirit Level	Non Stock
Spiking Gun Cleaning Kit	42722
Thermometer – Damp Testing	36977
Torque Driver	36841
Torque driver recalibration service	39701
Unistrip Tool - Single Phase Cable	34342
- Three Phase Cable	34922
- Replacement Blade	34341
Wax pellets for oil bath	39009
Wedge – hybrid neutral	41732
Wire Brush (Stainless Steel Bristle)	Non Stock

## Dedicated 11kV Tooling

Adaptor 1/4" female to 1/2" drive male	60218
Allen Key 4mm (socket)	TBA
Allen Key 6mm (socket)	41832
Calliper - Foam Build-Up Tape (Lovink)	61143
Calliper - Outer Sleeve Build-Up Tape (Lovink)	61143
Earth Continuity Strap - TCC (WPD)	40403
Insulation Stripping tool - Alroc 8YROBRMCD1 LH1	40401
- Spare Blade	40402
Jerry Can Stand (Straight & Branch)	41017



## DEDICATED 11kV TOOLING (Continued)

Description	E5 No.
Scissors – 200mm (8")	32579
Pliers - PG 2	40396
- PG2/3 Spare Blade (Circumferential)	40397
- PG2/3 Spare Blade (Longitudinal)	40398
- PG2/3 Spare Blade (Claw Blade)	40399
Ratchet Strap Minimum Length 2m	TBA
11kV Stress Cone Applicator Tool - 70mm <sup>2</sup> Conductor	41116
- 95/185/240/300mm <sup>2</sup> Conductor	41198
- 630mm <sup>2</sup> Conductor	41197
Coopers LBITOOL	Non stock
Coopers LPW 1525/TL 120X	Non Stock

## Common 11 & 33kV Tooling

Allen key 6mm 124mm long – ½" drive	42498
Bonded semi-con removal Tool 16-60mm Pfisterer CWB18-60	TBA
Calliper - Foam Build-Up Tape (Lovink)	61143
Chamfer tool (Boddingtons Electrical Ltd.)	TBA
File - Abra	40726
Knife – depth guarded 0.4mm	40400
Knife – depth guarded 0.6mm	61114
Pliers – PG 3	41199
Sockets ½" drive – 22mm	41828
- 24mm	42514
Torque driver recalibration service	61000
60Nm Wrench - torque adjustable ½" drive	41829

## Dedicated 33kV Tooling

Allen Key 3mm	32394
Insulation Stripping tool - Pfisterer MF2/60	TBA
Pliers - PRG 4	TBA
- PRG 4 Spare Blade (Circumferential)	TBA
- PRG 4 Spare Blade (Longitudinal)	TBA
33kV Stress cone applicator kit – Lovink 006435	61660
4m Earth Continuity Strap - TCC (WPD) (Boddingtons)	TBA
M125 Transition joint trefoil spacer	TBA
M85 Dimension ruler for Lovink straight joint.	TBA
M95 Dimension ruler for Lovink straight joint	TBA

## **APPENDIX A**

### **SUPERSEDED DOCUMENTATION**

This is a new document.

## **APPENDIX B**

### **ASSOCIATED DOCUMENTATION**

ST: CA3A, ST: CA3C/2, ST: CA3L/2, ST: CA3M/2, ST: CA3N/2, ST: CA3O, ST: CA3S, ST: CA3V, ST: CA7D.

## **APPENDIX C**

### **IMPACT ON COMPANY POLICY**

All existing 33kV Jointers who attend the 33kV cold applied conversion course shall be issued with the dedicated 33kV tooling. All subsequent Jointers upgrading to 33kV jointing who attend the complete 33kV course, then their respective TM's shall provide the tooling listed under dedicated 33kV tooling.

## **APPENDIX D**

### **IMPLEMENTATION OF POLICY**

For WPD staff Team Managers shall ensure that all relevant 33kV Jointing staff are aware of the changes to 33kV Jointing Manual of which this Standard Technique forms a major part. It can be implemented into all area of WPD with immediate effect. Managers shall ensure that all staff involved in the design, installation, maintenance and operation of the 33kV system are familiar with, and follow, the requirements of this document.

Independent Connection Providers (ICPs) shall follow the requirements of ST: CA3Y or they can continue to use their existing tools for a period of up to 3 months from the issue of this document. After this date, all jointing works shall comply with ST: CA3Y.

Where any difficulty is encountered in the application of this Standard Technique the author shall be notified who will determine whether a variation is appropriate.

## **APPENDIX E**

### **KEY WORDS**

33kV standard hand tools.