

# CSTE – Operating Instructions

## Operating instructions for the cable spiker kit CSTE

### CABLE SPIKER KIT

The Bowthorpe EMP cable spiker is only intended for use by competent personnel fully trained in the use of high voltage electrical test and safety equipment. These instructions are not meant as a replacement for the necessary correct training or site Health and Safety code.

The Bowthorpe EMP cable spiker is intended to prove that a selected cable, previously disconnected, is in fact dead before site work commences. The unit which has been in world wide use for over 25 years is silent in operation and of a robust and rigid construction.

The kit comprises a hand operated hydraulic pump connected by a fully insulated hose to a hydraulic ram which carries the diamond shaped chisel cable spike. The ram is mounted on a shaped tubular steel body which is located and held around a cable, up to 102mm dia., by the 2 threaded steel rods connected to the lower tubular steel base with its cable locating tray.

An independent earth cable 6m x 50mm<sup>2</sup> with suitable connecting lugs is also supplied.

All component parts are supplied in a stout wooden carrying case.

### OPERATING INSTRUCTIONS

- 1 Locate cable to be spiked and ensure its positive disconnection from electrical system.
- 2 Remove spiker assembly from the wooden carrying case and separate the body, with its hydraulic ram, from base by loosening the 2 knurled/wing nuts on the 2 tensioning rods and swinging them sideways (Fig 1).
- 3 Locate the cable in the "V" shaped tray on the base with the 2 tensioning rods either side.
- 4 Check that the spike is correctly located in the body and that the ram is fully retracted. The ram is fully retracted when the point of the spike is level with or above the point of the "V" shaped locating cut-out (Fig 2). The spike is retained by a sprung loaded ball in a groove in the carrier and a pin in the carrier locates in a groove in the spike to ensure correct orientation.
- 5 Locate the body over the cable and between the 2 tensioning rods. Swing the rods in and locate them in the bottom brackets and the slots in the top plate of the tubular body. Tighten nuts evenly until the assembly is rigid.
- 6 Remove hand pump with its hose from the case and connect the free end with its quick connect coupling to the ram on the spiker body. Hand tighten only.
- 7 Connect earth cable to the copper bracket on the back of the spiker body using fixings provided (Fig 3).

**WARNING:** This spiker must not be used without an earth cable connected and properly earthed as failure to do so could have serious consequences for the operator in the event of a live cable being pierced.



Fig 1



Fig 2



Fig 3

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- 8 Terminate the other end of the earth cable to a suitable earth. It is not necessary to extend the earth cable fully if a convenient earth point is adjacent to the tool however it must be terminated at a position at least 6m from the operator's position.
- 9 Extend the hydraulic hose with the pump away from the connected spiker. To comply with site safety precautions the full length of the hose should be used to allow the greatest distance between the cable being spiked and the operator who should be wearing eye and other relevant protective equipment.
- 10 Turn the pump oil filler cap to "VENT". Hand tighten the winged screw on the pump and operate the handle which will extend the ram and start the spike moving downwards into the cable. The travel of the spike can be monitored by the pointer, attached to the ram carrier, moving down the diagonally bisected gauge plate attached to the Spiker body (Fig 4). When the ram is fully extended pressure will build up in the system and a relief valve will operate in the pump.
- 11 When the spike has completed its travel release the winged screw on the pump allowing the ram to retract but leaving the spike in the cable.
- 12 Disconnect the hydraulic hose from the spiker ram cylinder wiping away any oil that may be present.
- 13 Disconnect the earth lead from both the spiker body bracket and the earthing point.
- 14 Unscrew the 2 knurled/winged nuts on the tension rods and swing the rods outwards to free and remove the Spiker body leaving the spike embedded in the cable. NOTE; Leave the spike firmly embedded in the cable as permanent evidence of spiking until the site work commences and the cable is fully opened by the jointer. The spike can eventually be removed by tapping it from side to side until it can be withdrawn.
- 15 Remove the base from around the cable.
- 16 Ensure all the components of the spiker are clean and free from damage before repacking in the carrying case.



Fig 4



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