

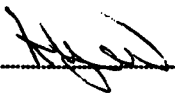
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Issue	2
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Business Process Document

Identification of bonds on all electrified lines except the southern areas of Network Rail

Endorsement & Authorisation

Endorsed by:



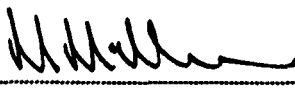
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1 Purpose

All staff patrolling the track are required to report the location and identity of bond cables which they regard as being damaged or defective. Reports of damaged and defective bonding must be reported to the E.C.O. by patrolling staff.

The E.C.O. must in turn transmit any reports of damaged or defective bonds to the nominated report point of the department responsible for the bond.

2 Scope

This document assists staff to identify the different types of bond cables and indicate their location and the E.C.O. to identify the responsible department for specific bonds so that he may report to the correct point.

3 Definitions

E.C.O. Electrical Control Operator.

O.H.L. Overhead Line.

4 Location of bonds

The location of a bond in the route is best reported in terms of its relationship to nearby structures or equipment such as:

Structure or equipment -	Station, junction, bridge, O.H.L. structure, milepost etc.
Relation to Structure -	"South of", "London side of", "Power Station side of", etc

The position of the bond in the route is best described in terms of Track and rail:

Track	-	"Up", "Down", "Fast", "Relief", etc
Rail	-	"Cess", "6-foot", etc..

5 Identification of types of bond

Staff reporting defective cables shall identify them to the E.C.O.. This identification shall consist of determining the "TYPE" of cable and any "SPECIAL FEATURES".

5.1 Types of cable

(See Appendix A figs. 1 & 2)

5.1.1 Bare galvanised wire bonds

Characteristics -

No Sheathing, provided to ensure electrical continuity between two rails at a fishplate joint.
Diameter of 4 mm. - 3/16".
Usual length 0.75 or 1.5 m. - 2'6" or 5'.
Style: "No. 8" single strand or 7 strand steel wire terminated at rails by 7 mm. pin drive or pin braze.

5.1.2 "Signal" connection cable

(See Appendix A. fig.3)

Characteristics -

Black sheathing, they either connect lineside track circuit equipment to the running rails or form part of the track circuit bonding by connecting together non-adjacent sections of rail.
Outside diameter of 12 mm. - 1/2".
(Cable size 50/0.25 sq. mm.)
Lengths from 2 m. to 200 m. - 6' to 600'.
Terminated at rails on "L-Plate", 22 mm. pin drive lug, "Goal Post", taper pin or pin braze.

5.1.3 "Signal" tuning unit cable

Characteristics -

Black sheathing.
Outside diameter of 12 mm. - 1/2".
(Cable size 19/1.53 sq. mm.)
Lengths from 1.5 m. to 3 m. - 5' to 9'.
Terminated at rails on "L-Plate" or 22 mm. pin drive lug; at the other end in small vertical white or grey boxes by lineside.

5.1.4 "Traction" bonding cable

(See Appendix A fig. 4)

Characteristics -

Black sheathing.
Outside diameter of 25 mm. - 1".
(Cable size 19/3.25, 19/4.22 or, 37/2.25 mm.)