

# Letter of Instruction: NR/BS/LI/152

Issue date: 09 November 2009

Compliance date: 10 November 2009

Expiry date: 09 November 2010

Contact details: Glenn Wiles 085 78850

**Standard affected: RT/BS/LI/024 (Issue 2),**

## **ELECTRICAL TRIPPING – MIDLAND MAIN LINE HEADSPAN AREA**

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### **1 Reason for issue**

There has been a history of Cap+Pin porcelain insulator failures in termination assemblies on MSE due to manufacturing defects.

On 19/06/05 a failure occurred at Westoning, in a headspan arrangement with catastrophic consequences.

RT/BS/LI/024 was implemented to specify actions to be taken to protect the line following a tripping where a Cap+Pin insulator failure could be associated.

This instruction amends original process to minimise area affected by use of fault location data from the 25kV circuit breaker protection relays.

This instruction supersedes RT/BS/LI/024 (Issue 2) dated 27/06/05.

### **2 Scope**

This instruction is applicable to the section of line between Graeme Park and Bedford where the principal means of OLE support is via Headspan arrangement.

It is an enhancement to GE/RT8000 – Module AC and does not change any requirements for compliance with legislation, other standards or Health and Safety.

### 3 Changes

**Action to be followed if a tripping has occurred and the ECO has no other information as to the cause; then assume that a “Headspan” Cap+Pin insulator failure has occurred.**

*The person responsible: **Electrical Control Operator***

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|    | Do <u>NOT</u> attempt to reclose VCB's until the following actions have been taken:-                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 1) | Arrange with West Hampsted PSB to stop trains on the line that has tripped.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2) | Check the distance to fault readings from the P438 protection relays for the VCBs at each end of the affected electrical section. If the distance to fault readings from each relay add up to the total length of the section (with a tolerance of +/- 10%) you may advise West Hampsted PSB who will arrange for an inspection of the affected area only. If the distance to fault readings do not add up or if there is any other reason to suspect the accuracy of the information from the P438 relays, you must advise West Hampsted PSB that the complete electrical section must be inspected. |
| 3) | When West Hampsted PSB advises you that the line has been inspected and there is no apparent damage to the OLE and the headspans appear intact, you may re-close the VCBs.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 4) | If the VCBs remain closed, advise West Hampsted PSB that normal working can be resumed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

*The person responsible: **Signaller***

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| 1) | Stop the passage of trains on the line affected                                                                                                                                                                                                                                                                                                                                                |
| 2) | Trains on the <b>unaffected lines</b> can continue to run as normal.                                                                                                                                                                                                                                                                                                                           |
| 3) | When required and at an appropriate time, the affected line must be inspected by a train on one of the adjacent lines at 20mph. The driver is to be asked to look for any damage to the OLE at Headspan structures paying particular attention to the integrity of the lower spanwire. It is not necessary to stop trains on the unaffected lines whilst this takes place.                     |
| 4) | If the ECO advises you that the distance to fault readings from the relevant protection relays may be used, it will not be necessary for the complete electrical section to be inspected. You must calculate the shortened length of section to be inspected by adding 2 signal sections either side of the suspected fault location and advise the driver of the examining train accordingly. |
| 5) | If the subsequent report from the driver indicates that there is no apparent damage to the OLE, you must advise the ECO at York who will re-close the VCB's.                                                                                                                                                                                                                                   |
| 6) | If the VCBs remain closed, the ECO will advise you that normal working can be resumed on the affected line.                                                                                                                                                                                                                                                                                    |