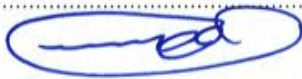


Level 2

Investigation of Signalling Equipment

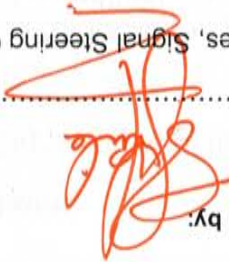
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Issue record

Issue	Date	Comments
01	April 1996	First issue
02	August 2008	Updated to reflect the business after the Engineering/Maintenance 2A Re-organisation
3	September 2011	Maintenance of document, no change to requirements (CCMS document number 61361641)

Compliance

This Network Rail standard is mandatory and shall be complied with by Network Rail and its contractors if applicable from 03/09/2011.

When this standard is implemented, it is permissible for all projects that have formally completed GRIP Stage 3 (Option Selection) to continue to comply with the issue of any relevant Network Rail standards current when GRIP Stage 3 was completed and not to comply with requirements contained herein, unless stipulated otherwise in the scope of this standard.

Reference documentation

[NR/L3/SIG/11231](#) Signalling Maintenance Testing Handbook

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1 Purpose

This standard defines the requirements for authorising the technical investigation of signalling equipment on Network Rail infrastructure or property, undertaking the investigation, and distributing Investigation Reports.

2 Scope

The requirements laid down in this standard are the minimum that shall be applied in undertaking investigations on Network Rail signalling systems. The requirements apply to Network Rail operational signalling equipment either in service or installed on Network Rail property pending commissioning.

3 Abbreviations and Definitions

3.1 Abbreviations

RAM [S&T]	Route Asset Manager [Signals & Telecoms]
STME	Signal & Telecoms Maintenance Engineer
TIC	Technical Investigation Centre
PH [S&T]	Professional Head [Signals & Telecoms]
IMDM	Infrastructure Maintenance Delivery Manager

3.2 Definitions

Technical Investigation	A careful examination of railway signalling equipment used to control or protect the safe movement of trains by means of mechanical, electrical, or electronic engineering techniques. The investigation for the purposes of this procedure shall be to investigate the functioning of the equipment and determine its contribution or potential contribution to the wrong side failure or incident.
Operational Equipment	Equipment which is "in service" to control or protect the safe movement of trains.
Wrong Side Failure	A failure resulting in the protection normally provided by the signalling system being reduced.
Sealed Equipment	An item of signalling equipment which fulfils at least one of the following criteria: • Its internal mechanism and parts are inaccessible without breaking a manufacturer's/service agent's seal - (e.g. relay) • It is a standard replacement unit whose internal parts or mechanism is not designed to be user maintainable (e.g. clamplock microswitch) • It is a standard replacement unit with no internal parts or components • It is a standard replacement unit whose internal parts or components are inaccessible without irreparable destruction of its functionality (e.g. cable).

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4 Processes Requiring Approved Technical Investigation Centre Involvement

4.1 Authorisation for Investigation Categories

4.1.1 Wrong Side Failure (Infrastructure)

A request to undertake an investigation on Sealed Operational Equipment which:

- is positively identified as having caused a wrong side failure, or
- is suspected of causing or contributing to a wrong side failure after the failure has been exhaustively investigated by the application of Signalling Failure Investigation ([NR/L3/SIG/11231](#)) or approved equivalent

and for the equipment to be transported to an approved investigator's premises shall be initiated by the Signal & Telecom Maintenance Engineer (STME).

Approved Technical Investigation Centres are listed in Appendix A.

A request may be verbal in the first instance but shall in all cases be confirmed in writing, (using the form in Appendix B). Confirmation in such circumstances shall be deemed to be the authorisation for the investigation to be undertaken.

- A request to undertake an investigation on equipment which is additional to the above, and which the STME considers in their professional judgement needs to be investigated by an approved Technical Investigation Centre (TIC) shall be initiated by the STME.

The STME shall in such circumstances seek the authority of the Route Asset Manager [S&T] (RAM [S&T]) before removing the equipment from site and for its transportation to an approved investigators premises for the investigation to be undertaken. The STME shall prepare an investigation remit which shall be approved by the RAM [S&T].

- A request for an approved investigator to undertake an investigation on equipment which remains on site shall be initiated by the STME or the PMSE (S&T).

If initiated by the STME it shall be authorised by the RAM [S&T].

4.1.2 Major Incident

A request to undertake an on-site independent technical investigation shall be initiated and authorised by the RAM [S&T], who shall prepare the investigation remit.

4.1.3 Performance

A request to undertake an investigation on operational equipment which repeatedly fails such that its being in service causes significant disruption shall be initiated by the STME.

The STME shall, in such circumstances, consult the RAM [S&T] before removing the equipment from site and for its transportation to an approved investigators premises for the investigation to be undertaken. The STME shall prepare the investigation remit which shall be approved by the RAM [S&T].