

Arrangements Concerning The Non Operation of **Track Circuits During The **Leaf Fall** Contamination Period**

Synopsis

This Standard mandates the means of identifying the need for, introduction and subsequent removal of, restrictions to normal operations in the event of significant problems being encountered during the **Autumn leaf** fall period.

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Revisions have not been marked by a vertical black line in this issue because the document has been revised throughout.

Superseded documents

The following Railway Group documents are superseded, either in whole or in part as indicated:

Superseded documents	Sections superseded	Date when sections are superseded
GO/RT3208 issue two	All	04 August 2007

GO/RT3208 issue three ceases to be in force and is withdrawn as of 04 August 2007.

Supply

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GO/RT3208
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Part 1 Purpose and Introduction

1.1 Purpose

1.1.1 This document mandates requirements for identifying the need for, introduction and subsequent removal of, restrictions to normal operations in the event of problems being encountered with the operation of **track circuits** during the **leaf** fall contamination period.

1.2 Introduction

1.2.1 Background

The principle of maintaining a safe distance between trains travelling in the same direction on the same line is normally achieved by the provision of lineside signals; effectively dividing the line into several sections.

On many lines **track circuits** are used to detect the absence of a train in any of the sections and in doing so influences the signalling system's interlocking and signalling. However, if for any reason a **track circuit** fails to operate, commonly referred to as wrong-side failure, then the integrity of the system is destroyed and the protection normally provided by the interlocking is lost.

A wrong-side failure of this nature exposes the system users to the following hazards:

- a) collisions between trains
- b) derailments
- c) trains colliding with obstructions at level crossings
- d) persons being struck by trains.

Experience over a number of years has shown that the likelihood of a wrong-side failure occurring at certain locations increases during the **leaf** fall contamination period (1 October until 13 December [inclusive] each year).

A high proportion of wrong-side failures during the **leaf** fall contamination period can be attributed to a build up of compacted leaves on the rail surface, creating a poor electrical contact between wheel and rail.

There is sufficient evidence, therefore, to make it possible to identify high-risk locations and introduce special measures to reduce the likelihood of wrong-side failures and mitigate their effects. This is the purpose of this Railway Group Standard.

1.2.2 Related requirements in other documents

The following Railway Group Standards contain requirements that are relevant to the scope of this document:

GE/RT8000 Rule Book

1.2.3 Supporting documents

There are no Railway Group documents supporting this Railway Group Standard.

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Part 2 Requirements relating to the preparation for the leaf fall period

2.1 Responsibilities common to the infrastructure manager and railway undertakings

- 2.1.1 The infrastructure manager and railway undertaking shall jointly develop special working arrangements:
- a) using Appendix A of this document, appropriate to local circumstances at any location affected by leaf fall contamination
 - b) that make provision for inspection of the infrastructure and trains where required.
- 2.1.2 The infrastructure manager and railway undertaking shall incorporate the arrangements referred to in section 2.1.1 of this document within their contingency plans.
- 2.1.3 The infrastructure manager and railway undertakings shall jointly determine a common method of transmission, format and content for the information to be disseminated concerning the non-operation of track circuits by a train.

2.2 Responsibilities of the infrastructure manager

- 2.2.1 The infrastructure manager shall have arrangements in place for monitoring, recording and communicating incidents concerning the non-operation of track circuits by a train.
- 2.2.2 The infrastructure manager shall publish the arrangements referred to in section 2.2.1 of this document and make them available to railway undertakings by the 30 September each year.
- 2.2.3 The infrastructure manager shall inform railway undertakings of its central point of contact for receiving and giving information about the non-operation of track circuits by trains.
- 2.2.4 The infrastructure manager shall introduce special working arrangements at any location where there is reason to believe that a track circuit can no longer be relied upon to operate normally unless additional controls have been implemented into the signalling system that will control the risk.
- 2.2.5 The infrastructure manager shall define the geographical areas for the purpose of implementing special working arrangements.
- 2.2.6 The infrastructure manager shall, when more than two incidents involving the non-operation of track circuits by a train occur in any period of seven days and the cause is believed to be leaf fall contamination:
- a) implement special working arrangements at all high risk locations within that geographical area
 - b) inform the railway undertakings concerned of the implementation of the special working arrangements
 - c) arrange for a special site examination to be carried out to establish the existence of contamination which could result in a further incident occurring, involving the non-operation of track circuits by a train
 - d) consider the need to apply further restrictions.
- 2.2.7 The infrastructure manager shall only restore normal working, at any location where special working arrangements have been implemented:

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- a) when the contamination that caused the incident involving the non-operation of **track circuits** by a train has been found and treated, or
- b) when no contamination is present, provided specific site examinations at high risk sites are arranged daily to monitor the condition of the rail surfaces,

and the infrastructure manager is satisfied that the **track circuits** involved are operating normally.

2.3 Responsibilities of railway undertakings

- 2.3.1 Each railway undertaking shall inform the infrastructure manager of its central point(s) of contact for receiving information concerning the non-operation of **track circuits** by a train.

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Part 3 Application of this document

3.1 Application - infrastructure manager

3.1.1 Scope

- 3.1.1.1 The requirements of this document apply each year between 1 October and 13 December inclusive, but maybe extended by the infrastructure manager.
- 3.1.1.2 The requirements of this document apply to the reporting and monitoring arrangements in respect of failure of trains to operate **track circuits** correctly and the special working arrangements which will apply.
- 3.1.1.3 The requirements of this document only apply where **track circuits** are used to detect the presence of trains.

3.1.2 Exclusions from scope

- 3.1.2.1 The following exclusions from the scope, as specified in clause 3.1.1 of this document apply:
 - a) to the first train over a portion of line that has not been used for a considerable period. In this case the instructions in GE/RT8000 Module T1B - working of trains during failure, maintenance and renewal of signalling equipment will apply
 - b) before resuming normal working following a possession of the line for engineering work. In this case the instructions in GE/RT8000 Module T3 – Possession of the line for engineering work will apply
 - c) where the cause of an incident involving the non-operation of **track circuits** is not because of contamination and has been rectified.

3.1.3 General compliance date for the infrastructure manager

- 3.1.3.1 This Railway Group Standard comes into force and is to be complied with from 04 August 2007.
- 3.1.3.2 After the compliance dates or the date by which compliance is achieved if earlier, infrastructure managers are to maintain compliance with the requirements set out in this Railway Group Standard. Where it is considered not reasonably practicable to comply with the requirements, authorisation not to comply should be sought in accordance with the Railway Group Standards Code.

3.1.4 Exceptions to general compliance date

- 3.1.4.1 There are no exceptions to the general compliance date specified in clause 3.1.3 for infrastructure managers.

3.2 Application - railway undertakings

3.2.1 Scope

- 3.2.1.1 The requirements of this document apply each year between 1 October and 13 December inclusive, but maybe extended by the infrastructure manager.
- 3.2.1.2 The requirements of this document apply to the reporting and monitoring arrangements in respect of failure of trains to operate **track circuits** correctly and the special arrangements which will apply.
- 3.2.1.3 The requirements of this document only apply where **track circuits** are used to detect the presence of trains.

3.2.2 Exclusions from scope

There are no exclusions from the scope specified in clause 3.2.3 for railway undertakings.

3.2.3 General compliance date for railway undertakings

3.2.3.1 This Railway Group Standard comes into force and is to be complied with from 04 August 2007.

3.2.3.2 After the compliance dates or the date by which compliance is achieved if earlier, railway undertakings are to maintain compliance with the requirements set out in this Railway Group Standard. Where it is considered not reasonably practicable to comply with the requirements, authorisation not to comply should be sought in accordance with the Railway Group Standards Code.

3.2.4 Exceptions to general compliance date

There are no exceptions to the general compliance date specified in clause 3.2.3 for railway undertakings.

3.3 Health and safety responsibilities

Users of documents published by RSSB are reminded of the need to consider their own responsibilities to ensure health and safety at work and their own duties under health and safety legislation. RSSB does not warrant that compliance with all or any documents published by RSSB is sufficient in itself to ensure safe systems of work or operation or to satisfy such responsibilities or duties.

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Appendix A - Special working arrangements

The content of this appendix is mandatory

A.1 Development of special working arrangements

A.1.1 Special working arrangement

A.1.1.1 The infrastructure manager and railway undertaking shall apply the following when working together to develop special working arrangements:

- a) Where practicable, signalling equipment shall be operated to avoid the need for signals to be passed at danger.
- b) The affected section shall be capable of being protected by a signal under the direct control of the signaller.
- c) The signaller shall be able to establish that a train has passed clear of the affected section before allowing a subsequent train to proceed beyond the controlling signal.
- d) Where points are normally locked by **track circuits** but the **track circuits** are not functioning correctly, the points shall not be operated until the train is well clear. The individual point control devices shall be used on a route setting system.
- e) Reminder appliances shall be used as appropriate on the switches/levers for points and signals.
- f) Where automatic level crossings are operated solely by **track circuits** in the affected area, drivers shall be instructed to stop and not proceed over the crossing until it is safe to do so.
- g) Level crossings with auto-raise facilities shall be operated on manual raise.
- h) Where barrow crossings or other warning apparatus are operated solely by **track circuits**, appropriate instructions shall be issued to ensure the safety of users or the equipment shall be disconnected.
- i) Train Operated Warning Systems (TOWS) shall be taken out of use.
- j) Disc braked Diesel Multiple Units (DMUs) shall not be permitted to run over the sections of line where Automatic Half Barrier level crossings are operated solely by **track circuits**.
- k) The special working arrangements shall be applied to all trains except where:
 - i) the incidents have been associated with specific traction unit types or class of train; and
 - ii) reliable advice is given to the signaller regarding train formation, in which case the special working arrangements shall be applied only to the specific unit types or class of train concerned.
- l) Units fitted with the auxiliary tread brakes shall not be subject to special working arrangements except where they apply to all traction or all trains in a particular class.
- m) Disc-braked DMUs when coupled with other unit types in a mixed formation need not be subject to Special Working Arrangements, (except where they apply to all traction or all trains in a particular class) providing the disc-braked DMUs do not form more than two vehicles at the extreme end.

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- n) Hybrid formations, as defined in this document, need not be subject to the special working arrangements.

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Definitions

Defined term

Disc braked DMUs	Any class of diesel multiple unit fitted with disc brakes and not fitted with auxiliary tread brakes.
Further restrictions	Arrangements in addition to, or instead of, the Special Working Arrangements imposed to allow continued railway operation. These arrangements include: <ul style="list-style-type: none"> a) disc braked DMUs being coupled to other vehicles that can be relied upon to operate track circuits; b) creation of Hybrid formations; c) diversions; d) withdrawal of, or limitations upon, the use of specific fleets or vehicles on specified routes.
High risk locations	These are either: <ul style="list-style-type: none"> a) locations specified and listed by the infrastructure manager; or b) sites considered by the infrastructure manager to be 'high risk' on the basis of incidents occurring during the leaf fall contamination period.
Hybrid formation	Units made up of vehicles of different classes and which include at least one vehicle not equipped with disc brakes.
Incident	Where a track circuit or series of consecutive track circuits fails to operate for one train. This includes both intermittent and continuous failures.
Leaf fall contamination period	The period between 1 October and 13 December inclusive.
Special working arrangements	Procedures to be adopted when the cause of an incident is due to ' leaf fall contamination' or 'not known but likely to be leaf fall contamination' as contained in section 2.3 of this document.
TOWS	Train Operated Warning System, as defined in GE/RT8000, Module TS1, section 9.5.
Track circuit (s)	A method of detecting a train on a line. An electrical device, using the rails as an electrical circuit , detects the absence of a train. Where these requirements refer to the term track circuits , this excludes the use of axle counters.
Train	As defined in the Railways Act, 1993.
Treatment	The method by which rail surfaces are cleaned in order to restore the signalling system to its normal operating mode.

References

The Catalogue of Railway Group Standards and the Railway Group Standards CD-ROM give the current issue number and status of documents published by RSSB. This information is also available from www.rgsonline.co.uk.

Documents referenced in the text

RGSC 01	The Railway Group Standards Code
Railway Group Standards	
GE/RT8000	Rule Book