

Railway Group Standard
GO/RT3440
Issue Two
Date October 2009

Steam Locomotive Operation

Synopsis

This document mandates risk control measures to manage the operation of steam locomotives on Network Rail managed infrastructure.

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Railway Group Standard**GO/RT3440****Issue Two****Date** October 2009**Steam Locomotive Operation****Issue record**

Issue	Date	Comments
One	March 2007	Original document – rapid response
Two	03 October 2009	Replaces issue 1- minor change to sections 2.2.2.1 and 2.3.3.1 (requirement to notify where vulnerable parts of the overhead line equipment are located).

Superseded documents

The following Railway Group documents are superseded, either in whole or in part as indicated:

Superseded documents	Sections superseded	Date when sections are superseded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/RT3440 Operation of Steam Locomotives – Rapid Response, issue 1	All	05 December 2009

Supply

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Part 1 Purpose and introduction**1.1 Purpose**

- 1.1.1 This document mandates risk control measures to manage the operation of steam locomotives on Network Rail managed infrastructure.

1.2 Introduction**1.2.1 Background**

- 1.2.1.1 The operation of steam traction on Network Rail managed infrastructure continues to attract public interest, which can lead to crowd control problems at stations or at the lineside, with associated risk of trespass. This is a factor that needs to be considered in planning the itineraries and stopping points of steam-hauled trains.
- 1.2.1.2 Timing and operation of steam movements must account for maximum speeds permissible according to driving wheel diameter, to control excessive track forces.
- 1.2.1.3 This standard also mandates steam locomotive crewing levels to mitigate against the absence of safety features such as drivers' safety or vigilance devices, and to overcome difficulties in sighting signals and lineside warning boards when operating right-hand drive locomotives or running tender first.
- 1.2.1.4 A clause has been included to ensure that, when stopping a steam locomotive or steam-hauled train, the effect of smoke and steam emissions on heat-sensitive overhead line equipment is avoided.

1.2.2 Principle

- 1.2.2.1 The requirements of this document are based on the principle that certain aspects of steam locomotive operation, by virtue of their rarity or special interest, physical characteristics of track forces and emissions of smoke and steam, together with the nature and position of driving controls, impose particular requirements over and above those mandated in other operational Railway Group standards.

1.2.3 Supporting documents

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

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Part 2 Requirements for steam locomotive operation

2.1 Requirements of infrastructure managers and railway undertakings

2.1.1 Planning

2.1.1.1 Infrastructure managers and railway undertakings planning steam locomotive movements shall consider potential public interest and safety implications (such as trespass) that could arise.

2.2 Requirements of the infrastructure manager

2.2.1 Planning

2.2.1.1 The infrastructure manager shall time steam locomotive movements to take account of restrictions on maximum permissible speed according to driving wheel diameters, as shown in Table A:

Nominal driving wheel diameter		Maximum speed
	Less than 1524 mm (5 feet)	35 mph
1524 mm (5 feet) or greater	Less than 1727 mm (5 feet 8 inches)	50 mph
1727 mm (5 feet 8 inches) or greater	Less than 1880 mm (6 feet 2 inches)	60 mph
1880 mm (6 feet 2 inches) or greater		75 mph

Table A

2.2.2 Operation under overhead line equipment

2.2.2.1 The infrastructure manager shall make available to railway undertakings information regarding the location of overhead line equipment that could be affected by emissions from the chimney or safety valve.

2.3 Requirements of railway undertakings

2.3.1 Crewing of movements

2.3.1.1 Railway undertakings shall crew all steam locomotive movements when under their own power with no less than two persons, one of whom must be a driver competent in driving steam locomotives and the other a competent fireman.

2.3.1.2 Railway undertakings shall assess the proposed route to identify signals and lineside warning boards that may be difficult to see from a steam locomotive, particularly when:

- a) the steam locomotive has driving controls only on the right hand side of the cab
- b) running tender-first.

2.3.1.3 Railway undertakings shall, when signals or lineside warning boards are identified as being difficult to see, provide the driver with assistance in sighting them, either by the fireman or an additional person provided on the footplate.

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2.3.2 Maximum permissible speeds

- 2.3.2.1 Railway undertakings shall restrict the maximum speed of steam locomotive movements to comply with the limits related to driving wheel diameter shown in Table A.
- 2.3.2.2 Railway undertakings shall, where a train is hauled by, or includes within its formation, more than one steam locomotive(s) with driving wheel diameters of different sizes, restrict maximum operating speed to that applicable to the locomotive with smaller driving wheels.

2.3.3 Operation under overhead line equipment

- 2.3.3.1 Railway undertakings shall, whenever possible (considering the possibility of unplanned events), prevent steam locomotives being brought to a stand at locations where emissions from the chimney or safety valve could affect overhead line equipment (as identified with reference to 2.2.2.1).

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Part 3 Application of this document

3.1 Application - infrastructure managers

3.1.1 Scope

3.1.1.1 The requirements of this document apply to all steam locomotives on Network Rail managed infrastructure.

3.1.2 Exclusions from scope

3.1.2.1 There are no exclusions from the scope specified in clause 3.1.1 for infrastructure managers.

3.1.3 General compliance date for infrastructure managers

3.1.3.1 This Railway Group Standard comes into force and is to be complied with from 05 December 2009, except as specified in section 3.1.4.

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 to railway undertakings operating steam locomotives on Network Rail managed infrastructure.

3.2.2 Exclusions from scope

3.2.2.1 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 05 December 2009, except as specified in section 3.2.4.

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

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

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3.3 Health and safety responsibilities

- 3.3.1 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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Definitions

Fireman

A person competent in the management of the locomotive fire and boiler, and associated controls such as the blower, injectors and ashpan dampers.

Steam locomotive movement

This includes light locomotive movements and any train hauled by a steam locomotive.

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

None

Other relevant documents

GM/TT0088	Permissible Track Forces for Railway Vehicles
RGSC 01	The Railway Group Standards Code