

Railtrack Approved Code of Practice: Safe Testing of Rail Vehicles on Railtrack Controlled Infrastructure

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Synopsis

This Railtrack Approved Code of Practice details items that should be considered when identifying risks and control measures associated with the testing of vehicles on Railtrack Controlled Infrastructure.

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Railtrack Approved Code of Practice

GM/RC2559

Issue One

Date October 2000

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Part A

Issue Record

This document will be updated when necessary by distribution of a complete replacement.

Revisions in the reissued document will be marked by a vertical black line in the right hand margin adjacent to the revision.

Issue	Date	Comments
One	October 2000	Original Document

Technical Content

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Responsibilities

Railway Group Standards are mandatory on all members of the Railway Group * and apply to all relevant activities that fall into the scope of each individual's Railway Safety Case. If any of those activities are performed by a contractor, the contractor's obligation in respect of Railway Group Standards is determined by the terms of the contract between the respective parties. Where a contractor is a duty holder of a Railway Safety Case then Railway Group Standards apply directly to the activities described in the Safety Case.

Railtrack Approved Codes of Practice are non mandatory documents detailing suitable and sufficient means of meeting the mandatory requirements of a Railway Group Standard.

* The Railway Group comprises Railtrack and the duty holders of the Railway Safety Cases accepted by Railtrack.

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Supply

Controlled and uncontrolled copies of this document may be obtained from the Industry Safety Liaison Dept, Safety and Standards Directorate, Railtrack PLC, Railtrack House DP01, Euston Square, London, NW1 2EE.

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Part B

1 Purpose

The purpose of this document is to give recommendations for the control of risks, from on-track **testing**, when **vehicles** are accepted for temporary operation on Railtrack Controlled Infrastructure.

2 Scope

The overall scope of Railway Group Standards is as specified in Appendix A of [GA/RT6001](#).

This document contains recommendations which are applicable to the duty holders of the following categories of Railway Safety Case:

- Infrastructure Controller
- Train Operator

Specifically the contents of this document apply to all vehicle on-track tests on Railtrack Controlled Infrastructure.

This document addresses the particular risks associated with a requirement to operate in a situation where the intrinsic safety of the vehicle and/or its acceptable interaction with the infrastructure is not fully proven. It does not deal with the generality of the processes which are required in order to ensure compliance with the requirements of [GO/RT3270](#).

3 Principles

Section 8 from [GO/RT3270](#) - Staged Acceptance

Where it is not feasible or desirable for the full Route Acceptance process to be completed immediately for the intended service operation which is envisaged (for example because either the **vehicles** or the infrastructure or both are not in their final state, or because the adequacy of the proposed arrangements needs to be demonstrated through on-track **testing** or a period of service evaluation) the Train Operator or third party and Railtrack shall agree on a staged programme of acceptance. In a situation where that agreed programme involves on-track running, Railtrack and the Train Operator shall ensure that the processes defined in Section 6 have been carried out. In particular they shall ensure that any risks associated with the unproven nature of the **vehicles** or the infrastructure or of their mutual interaction have been addressed by the introduction of appropriate temporary control measures. This shall include consideration of any endorsements on the Certificate of Engineering Acceptance, which may itself be provisional, awaiting the results of track tests or satisfactory service experience.

Where the mandatory requirements, as required by [GM/RT2000](#):

- require verification by **testing**; or
 - where other requirements for route acceptance have been identified;
- and

- on-track **testing** of the vehicle is required,

then the train operator (or third party) should identify and assess the risks from the **testing** of the rail vehicle and where appropriate present the findings and proposed additional control measures in the Route Acceptance Safety Case.

The Infrastructure Controller should assess the Route Acceptance Safety Case and ensure that the proposed additional / alternative controls form an adequate method of ensuring safety and safe interworking in such a situation.

The requirements detailed in sections 4 and 5 of this document should be taken into account when preparing and assessing the Route Acceptance Safety Case.

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4 Identification of Risks

The process of identifying the risks should take into account:

- any unproven mandatory requirements;
- any unproven or missing vehicle components;
- any unproven or abnormal interactions between the vehicle and the infrastructure;
- any limitations identified at engineering acceptance;
- any exceedence of the normal operating envelope for the route.

5 Additional Control Measures

Additional controls that reduce risks to the level achieved by the existing controls should be identified and applied.

In most cases systems or components will be designed to be intrinsically safe or to reduce risks with minimal human intervention. Where these systems or components are unproven the additional controls are likely to be in the form of additional procedures to confirm specific requirements have been met. The requirements of the remainder of this section should be addressed.

5.1 Formulation of a Test Plan

A test plan should be developed to address all the risks identified in section 4, which includes as a minimum:

- purpose of test;
- management procedure;
- limits of operation, including transit speed to test site;
- speed of operation;
- interfaces with other traffic;
- facilities including calibrated instrumentation;
- monitoring required;
- test methods;
- staff competence;
- loading limits and configurations to be tested;
- environmental issues;
- criteria for acceptably safe running;
- designated stand down areas off the running line;
- programme of events;
- transit moves;
- emergency plans to cover credible failures.

5.2 Maintenance Requirements

Consideration should be given both to normal maintenance and to any special maintenance requirements which may be required during the test period such as:

- special pre-use tests / checks;
- special examinations of unproven components during the test;
- increased frequency of tests / checks;

5.3 Technical Control of the Tests

A technical officer should be appointed to monitor the tests and adherence to the requirements of the test plan. Consideration should be given to the :

- competence of the technical officer;
- on-line monitoring;
- communication between the technical officer, the test team and the trainborne operational staff.

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References

- [GA/RT6001](#) Railway Group Standards Change Procedures
- [GO/RT3270](#) Route Acceptance of Rail [Vehicles](#)
- [GM/RT2000](#) Engineering Acceptance of Rail [Vehicles](#)

The Catalogue of Railway Group Standards and the Railway Group Standards CD-ROM give the current issue number and status of documents published by the Safety & Standards Directorate.