

Group Standard

GM/TT0173

Issue: 1

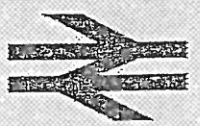
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Braking System Maintenance

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British Railways Board

Braking System Maintenance

Part A Synopsis

Defines the maintenance requirements and tests of the braking systems of Traction and Rolling Stock to enable safety of operation and interworking to be maintained.

Approval and Authorisation

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GM/TT0173

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Issue/ Revision Record

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

Amended or additional parts of revised pages will be marked by a vertical black line in an adjacent margin.

Issue	Rev	Date	Comments
1	A	Sep 93	Original Document

Responsibilities and distribution

This standard applies to BR businesses, private owners and other organisations that operate vehicles on BR lines. Businesses shall ensure that the provisions of the standard are communicated to all persons and organisations with responsibilities for the performance and operational requirements of the braking systems of railway vehicles that run on BR lines.

Implementation

The provisions of this standard are mandatory. The implementation process shall begin immediately on receipt of this document.

Supply

Controlled copies of this standard must be obtained from the TDCC Manager, Central Services, Dovedale House, RTC, Derby. Uncontrolled copies may be obtained from the same source of supply.

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Part B

1 Purpose

To define the maintenance requirements and brake tests of the braking systems of Traction and Rolling Stock, to enable safe operation and interworking to be maintained.

2 Scope

The requirements of this standard are mandatory and apply to all Traction and Rolling Stock, whilst operating on BR lines.

3 Key Definitions

Maintenance – A planned scheme of vehicle examination to check conformance with the specification for the particular component or system being checked.

For a list of other definitions see Appendix 'A'.

4 Maintenance Requirements

4.1 Every vehicle shall be subject to a scheme of maintenance that is auditable and ensures that the components of vehicle braking systems are given maintenance attention, at a periodicity appropriate for both the functional characteristics of the components and utilisation of the vehicle.

4.2 The maintenance attention and periodicity shall be designed to ensure that the brake systems shall function correctly and safely, during the intervals between maintenance, to achieve the specified performance.

5 Functional Brake Tests

- 5.1 At periodicities appropriate for both the functional characteristics of the systems and utilisation of the vehicle, the brake systems shall be subject to functional brake tests to prove that they are functioning correctly.
- 5.2 The functional brake test shall be designed to prove that the systems respond to all the graduated brake application demands, up to and including a Full Service and Emergency Brake Application.
- 5.3 Appropriate functional brake tests shall also be undertaken whenever components of the brake system are replaced and reconnected on the vehicle, following component repair, renewal or disconnection.
- 5.4 Appropriate and auditable records of the brake tests, shall be made and retained.
- 5.5 If a fault in a vehicle brake system or component is revealed by either the maintenance or tests, appropriate action shall be taken that will ensure the safety of the railway, in so far as the braking system of that vehicle is concerned.
- 5.6 Where the vehicle has a driving position(s), the functional brake test shall involve the use of each drivers brake controller and where there is no driving position there shall be an arrangement to enable brake demand signals to be relayed to the vehicle via the brake system couplings used for that purpose.
- 5.7 If it is necessary to provide energy for the brake system from an external source, the energy shall either be supplied to the vehicle via the brake system couplings, normally used to transmit the energy between vehicles, or alternatively, where the vehicle has equipment for generating the energy, it may be supplied direct to the vehicle, adjacent to that equipment.

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Appendix A – Other Definitions

Brake Application – see GM/TT0168 for this definition.

Brake Controller – See GM/TT0168 for this definition.

Brake Force – See GM/TT0168 for this definition.

Brake System – See GM/TT0168 for this definition.

Brake System Couplings – See GM/TT0168 for this definition.

Emergency Brake Application – See GM/TT0168 for this definition.

Full Service Brake Application – See GM/TT0168 for this definition.

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Appendix B – References

GM/TT0168 – Braking System and Performance Policy for T&RS, Including On-track Plant.

Qualification of Suppliers of Safety Critical Engineering Products and Services

Submitted by



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Synopsis

Safety critical engineering products and services ultimately for use on Railtrack controlled infrastructure shall be procured from qualified suppliers who shall demonstrate their competence to supply products and services that will sustain the safety of the railway.

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Qualification of Suppliers of Safety Critical Engineering Products and Services

Railway Group Standard

GM/RT2450

Issue One

Date December 1995

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Qualification of Suppliers of Safety Critical Engineering Products and Services

Part A

Issue record This Railway Group Standard supersedes GM/TT0182. Material changes from GM/TT0182 are black-lined in the adjacent margins.

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

Number	Issue	Date	Comments
GM/TT0182	I A	Jan. 94	Original document : Qualification of Rail Vehicle Suppliers.
GM/RT2450	One	Dec. 95	Supersedes GM/TT0182. Scope expanded to all safety critical engineering products and services.

Responsibilities and distribution

Controlled copies of this standard shall be distributed to and complied with by all personnel who are responsible for placing contracts for the supply of safety critical engineering products or services intended ultimately for use on Railtrack controlled infrastructure.

Implementation

The provisions of this Railway Group Standard are mandatory. Processes for qualification of suppliers shall be in place by 6 April 1996.

Health and Safety Responsibilities

In authorising this Standard, Railtrack PLC makes no warranties, express or implied, that compliance with all or any Railway Group Standards is sufficient on its own to ensure safe systems of work or operation. Each user is reminded of its own responsibilities to ensure health and safety at work and its individual duties under health and safety legislation.

Supply

Controlled and uncontrolled copies of this standard must be obtained from the Catalogue Secretary, Railtrack Safety & Standards Directorate, Floor 2, Fitzroy House, 355 Euston Road, London NW1 3AG.

Qualification of Suppliers of Safety Critical Engineering Products and Services

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Part B

1 Purpose This standard mandates that suppliers of safety critical engineering products and services ultimately for use on Railtrack controlled infrastructure shall be qualified in order to minimise the importation of safety risks.

2 Scope The contents of this standard apply to procurers and suppliers of all safety critical engineering products and services procured ultimately for use on Railtrack controlled infrastructure.

N.B.: Qualifications of a supplier does not in itself qualify or approve any products or services (see GK/RT0104).

3 Definitions

Safety critical product/service
Any engineering product or service which is capable of importing risk to Railtrack controlled infrastructure. (Examples are procurement of track, structures, rail vehicles, components, systems, telecommunications, signalling, repairs, modifications, maintenance services, engineering activities, hire of labour, consultancy activities and technical advice; this list is not exhaustive.

Procurer or its agent

Person or organisation responsible for selecting and qualifying suppliers of safety critical products or services on behalf of an employing body.

Qualification

In the context of this standard, the term "qualification" may form one part of a Qualification System established in accordance with the Utilities Directive 93/38 EEC.

Railtrack controlled infrastructure

Those buildings, structures and lines of railway managed or controlled by Railtrack PLC.

Risk

The combination of the probable frequency of exposure to a hazard and the likely consequence (severity) of the exposure.

Safety

The avoidance of death, injury or poor health to railway customers, employees and contractors, and to the general public, caused by accidents, incidents or hazards; also avoidance of damage to property and the environment.

Qualification of Suppliers of Safety Critical Engineering Products and Services

Scope of qualification

The defined range of products or services that a supplier is qualified to supply.

4 Requirements

4.1 All safety critical products and services shall be procured from qualified suppliers.

4.2 The procurer or its agent shall be competent to qualify its suppliers. This competence shall include professionalism in the relevant product or service fields, and competence in safety management.

4.3 There shall be a process for qualifying suppliers that establishes at least the following:

- that the supplier understands the risks to the railway that are associated with the product or service;
- that the supplier is competent to produce a safe product or service;
- that the supplier's quality and safety management system is adequate and follows the principles of national and international standards;
- that the supplier is competent to evaluate and select sub-contractors;
- the scope of the supplier's qualification;
- that there is a process to monitor that suppliers continue to meet the criteria for qualification;
- that records are kept, including a list of qualified suppliers and their scope of qualification.

4.4 The employer shall have processes in place to identify products or services that have the potential to import unacceptable risk to Railtrack controlled infrastructure.

5 Responsibilities of a procurer or its agent

5.1 The procurer or its agent shall ensure that the qualification of its suppliers meets the requirements of this document (see section 4).

5.2 The procurer or its agent shall have auditable, documented processes that demonstrate continual compliance with this Railway Group Standard.

5.3 The procurer or its agent shall make available to any potential supplier the requirements for qualification to supply safety critical products or services.

5.4 The procurer or its agent may accept as evidence to support supplier qualification documents previously used by the supplier to gain qualification by another, equivalent procurer, subject to any confidentiality conditions.

5.5 The procurer or its agent shall maintain records of:

- the list of qualified suppliers;
- the criteria for supplier qualification;
- any amendments to each supplier's qualification.

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5.6 Record retention and maintenance shall be in accordance with current legislation, or with established railway industry practice as mandated in internal standards, whichever mandates the more stringent requirement for a given type of record or document.

5.7 The procurer or its agent shall have a process in place for surveillance of the integrity of a supplier's existing qualification, particularly when new contracts are to be let. Failure of a supplier to meet the conditions of its qualification may result in that qualification being withdrawn.

5.8 The procurer or its agent shall review the qualification of a supplier when:

- the procurer or its agent changes the criteria of qualification;
- there are material changes to the product or service;
- there is a change to the scope of the supplier's qualification;
- surveillance (see paragraph 5.7 indicates the need for review).

6 Responsibilities of a supplier

6.1 The supplier shall conform to all the undertakings made during the qualification process.

6.2 The supplier shall advise the procurer of any material changes to the elements forming the qualification.

References

GK/RT0104 Policy for Approval of Signalling Equipment