

Railway Group Standard

GM/RT2473

Issue Two

Date June 2013

Power Operated External Doors on Passenger Carrying Rail Vehicles

Synopsis

This document mandates the minimum design and maintenance requirements to enable passengers to safely gain access to, and egress from, passenger trains via external bodyside doors.

This document contains requirements that are amended under the Railway Group Standards Code (Issue Three) as a small scale change. Reference to the amended requirements is made in the 'Issue Record'. All other parts of the document are unchanged from the previous issue.

This document contains one or more pages which contain colour

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Power Operated External Doors on Passenger Carrying Rail Vehicles

Contents

Section	Description	Page
Part A		
A1	Issue record	2
A2	Implementation of this document	2
A3	Scope of Railway Group Standards	2
A4	Deleted	2
A5	Health and safety responsibilities	2
A6	Technical content	3
A7	Supply	3
Part B		
B1	Purpose	4
B2	Application of this document	4
B3	Definitions	4
B4	Principles	5
B5	Design of doors and doorways	5
B6	Operating forces for power operated doors	6
B7	Door control systems	7
B8	Provision of door controls	9
B9	Locking doors out of use	10
B10	Controls for emergency access	10
B11	Controls for emergency egress	11
B12	Selective door operation (SDO)	11
Appendix 1	Guidance for measuring the closing forces of power operated doors	13
Appendix 2	Data format structure	15
Appendix 3	Automatic Selective Door Operation (ASDO) systems	17
References		19

Railway Group Standard

GM/RT2473

Issue Two

Date June 2013

Page 2 of 19

Power Operated External Doors on Passenger Carrying Rail Vehicles

Part A

A1 Issue record

Issue	Date	Comments
One	February 2003	Original Document Supersedes GO/OTS300
Two	June 2013	Replaces issue one. Small scale change amendment – revision of clauses B2.2, B6.3 b) to mandate an obstacle extraction test piece and B12.2.1 to mandate, where RFID is fitted, the data format structure and communications protocol, and inclusion of two new Appendices, Appendix 2 and Appendix 3.

Amended or additional parts of revised pages from Part B onwards have been marked by a vertical black line in the adjacent margin.

A2 Implementation of this document

The publication date of this document is 01 June 2013.

This document comes into force on 07 September 2013.

The dates by which compliance with the requirements of this document is to be achieved are set out in Part B2. Where those dates are later than the date on which this document comes into force, this is to give Railway Group members additional time to plan and commence implementation so as to achieve full compliance by the dates set out in Part B2.

This document supersedes the following Railway Group Standards, either in whole or in part as indicated:

Railway Group Standard	Issue No.	Title	RGS sections superseded by this document	Date(s) as of which sections are superseded
GM/RT2473	One	Power Operated External Doors on Passenger-Carrying Rail Vehicles	All sections	07 September 2013

A3 Scope of Railway Group Standards

The overall scope of Railway Group Standards is set out in the Railway Group Standards Code.

A4 Deleted

No longer relevant.

A5 Health and safety responsibilities

In issuing this document, Railway Safety makes no warranties, express or implied, that compliance with all or any documents published by Railway Safety 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.

Power Operated External Doors on Passenger Carrying Rail Vehicles

A6 Technical content

The technical content of this document was approved by:

Rolling Stock Standards Committee on 18 January 2013.

This document was authorised by RSSB on 25 April 2013.

A7 Supply

The authoritative version of this document is available at www.rgsonline.co.uk.
Uncontrolled copies of this document can be obtained from Communications,
RSSB, Block 2 Angel Square, 1 Torrens Street, London EC1V 1NY, telephone
020 3142 5400 or e-mail enquiries@rssb.co.uk. Other Standards and
associated documents can also be viewed at www.rgsonline.co.uk.

Railway Group Standard

GM/RT2473

Issue Two

Date June 2013

Page 4 of 19

Power Operated External Doors on Passenger Carrying Rail Vehicles

Part B

B1 Purpose

This document mandates the minimum design and maintenance requirements to enable passengers to safely gain access to, and egress from, passenger trains via external bodyside doors.

B2 Application of this document

B2.1 To whom the requirements apply

This document contains requirements that are applicable to railway undertakings.

B2.2 Compliance requirements

B2.2.1

The vehicle design requirements set out in this document are to be complied with from 07 September 2013.

B2.2.2

Action to bring existing power operated external doors into compliance with the requirements of this document is not required.

B2.2.3

Where a vehicle is subject to alteration and the nature of the alteration provides a reasonable opportunity to bring the vehicle into conformity, then the requirements of this document applicable to the alteration apply.

B2.2.4

After the compliance date, or after the date by which compliance is achieved (if earlier), Railway Group members shall not deviate from the requirements set out in this document.

B2.3 Exclusions from the application of this document

The contents of this document do not apply to on-track machines, road-rail vehicles, rail-mounted maintenance machines or other vehicles not specifically designed for the carriage of passengers.

B3 Definitions

Access device

An access device is a device to permit entry from outside a passenger carrying rail vehicle to the inside.

Door

An external bodyside door available for passenger use, including its components irrespective of the number of door leaves used.

Effective force

The average value of the closing force related to the pulse duration.

Egress device

An egress device is a device to permit evacuation from inside the train to the outside.

Locked

When a door is positively held in the closed position such that it cannot be opened without operation of train crew operated controls or devices, and/or emergency access/egress devices.

Locked out of use

When a door is manually locked by a mechanism other than the normal operational door controls and unavailable for passenger use following a defect or for operational requirements.

Power Operated External Doors on Passenger Carrying Rail Vehicles

Passenger carrying rail vehicle

Rail vehicle designed and used to convey fare-paying persons.

Peak force

The maximum value of the closing force.

Ready to start

A communication signal used to advise the driver that it is permissible to start the train.

Traincrew

Persons certificated as competent to carry out the requirements of the Rule Book for drivers and guards.

Unlocked

The release of positive door locking, thus allowing the door to be opened. For the purposes of this document, the door is considered to be open when unlocked.

B4 Principles

This document supports HMRI Railway Safety Principles & Guidance, Principle 26 – Access and Egress:

‘Trains should have a safe means of access, egress and retention of people and goods carried’.

With effect from 1 January 2004 legislation mandates that it is permissible to fit only power operated external doors for passenger use on trains. Such doors are required to provide high levels of safety of operation with particular attention being paid to preventing trapping people in doors, preventing doors from opening when the train is moving, and preventing doors from being opened where no platform exists or when it is not safe to do so. As human factor/ergonomic issues are embodied in most of the requirements of a door system, it is essential that particular attention is paid to the needs of the train crew responsible for controlling the doors and the needs of the users of individual doors during both normal and emergency situations.

B5 Design of doors and doorways

B5.1 Safe access for passengers

Passenger access and egress facilities shall be provided that are adequate and safe. The number and dimensions of doors provided in each vehicle shall be sufficient to provide for safe boarding and alighting within the target times specified for the vehicle in question under normal operating conditions.

B5.1.1 Doorway minimum width

Each doorway shall have an unrestricted passage width of 800 mm minimum.

B5.1.2 Doorway minimum height

Except where the infrastructure gauge limits the vehicle body profile, each doorway shall have an unrestricted passage height of 1900 mm minimum. Where any reduced passage height exists, this shall be minimised before reinstating a minimum doorway height of 1900 mm.

B5.1.3 Traincrew access and egress

The requirements for traincrew, and other authorised staff, such that they have adequate and safe access and egress facilities to passenger carrying rail vehicles are set out in GM/RT2162.

B5.2 Doors

A locked door, or a door locked out of use, shall not open when subject to forces exerted by a passenger falling or leaning against the door, or by pressure pulses