

Lead standards committee:	Rolling Stock	Date:	08 June 2023
Subject:	Five-year review of RIS-2747-RST Issue 1 Rail Industry Standard for the Functioning and Control of Exterior Doors on Passenger Vehicles		
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1. Purpose of the paper

This paper sets out the outcome of the ten-year (second five-year) review of RIS-2747-RST – ‘Rail Industry Standard for the Functioning and Control of Exterior Doors on Passenger Vehicles’ issue one. Standards committee(s) approval and support is sought for the recommendation and way forward.

2. Background

- 2.1 RIS-2747-RST was created in 2017 to incorporate the content of, and supersede, GMRT2473 issue 2 Power Operated External Doors on Passenger Carrying Rail Vehicles and GEGN8577 issue 3 Guidance on the Application of Selective Door Operating Systems.
- 2.2 RIS-2747-RST is a standard detailing functional requirements for passenger access doors.
- 2.3 The standard substantially references BS EN 14752:2015 as well as other ENs and Railway Group Standards. Reference is also made to the Loc and Pas TSI
- 2.4 RIS-2747-RST sets out GB specific requirements for passenger access doors that are not covered in the other referenced documents.

3. Impacts on the standard(s) following publication/entering into force

- 3.1 Consideration has been given to the following during the review:
 - a Business case for change – RIS-2747-RST was created to incorporate content that no longer met the criteria for National Technical Rules (NTRs) and to capture GB custom and practice. This was achieved.
 - b Deviations – As it is a Railway Industry Standard, deviations from RIS-2747-RST do not require approval from the standards committees, and therefore no applications have been received. Standards committees have not been consulted on any potential alternatives to the requirements in the standard.
 - c Current projects or proposals being processed – There are no current or proposed projects directly related to the content of this standard.
 - d Amendments and clarifications – An amendment was published in October 2018 against clause 6.5.1 of the standard to be incorporated at the next revision. This amendment was in relation to the installation of SDO beacons and applied to 6.5.1 f) to indicate that only beacons used for Packet 44 and TASS applications, and not RFID beacons, should not be installed on steel sleepers.

- e Enquiries – Twelve (12) enquiries have been received either regarding the content of RIS-2747-RST or queries that are relevant to, or could have an impact on the content of the standard.

The enquiries included questions in relation to passenger evacuation in the event that the doors on a vehicle with only one set of doors per side are locked-out-of-use; anti-drag functionality; generic definitions and descriptions for doors; the appearance of the emergency access handle; the material pull-through test on doors; the loss of door interlock and subsequent restoration of interlock before the train is brought to a standstill by the emergency brake; the mounting of SDO beacons on steel sleepers; the use of SDO on multiple units without inter-vehicle gangways; adoption of a manual SDO system; other SDO related queries.

- f Research projects – Eight (8) RSSB research projects have been identified that have been carried out since the publication date of RIS-2747-RST that may have a direct, or in-direct, influence on its content. Three of the research projects are currently live. These projects are as follows:

- i T1102 Understanding how door closure arrangements affect passenger behaviours at the platform train interface
- ii T1177 Assisted braking and door opening concept
- iii T1202 Guidance for introducing and managing Selective Door Operation (SDO)
- iv T1240 Understanding barriers to implementing recommendations for trap and drag prevention
- v T1248 Practical enhanced door obstacle detection systems
- vi T1257 PERFORM - Defining safe and efficient guard-controlled door operation methods of working (project completed 01 March 2023)
- vii T1262 PERFORM - Defining Safe and Efficient Driver Controlled Door Operation (on hold)
- viii T1317 Evaluating novel door systems (currently underway)

- g Regulations – There have been no changes in regulations directly relevant to the content of RIS-2747-RST since it was issued, with the exception of the transition from TSI to NTSN.

- h National technical specification notices (NTSNs) and European standards –

As a Rail Industry Standard, RIS-2747-RST contains no national technical rules, however, RIS-2747-RST issue one references the following documents listed below. Changes or updates to these documents are noted as follows:

- Loc and Pas TSI; reference should now be to the Loc and Pas NTSN
- PRM TSI; reference should now be to the PRM NTSN
- BS EN 12663-1:2010 has been superseded by BS EN 12663-1:2010+A1:2014
- BS EN 13272:2012 has been superseded by BS EN 13272-1:2019

- BS EN 14752:2015 has been superseded by BS EN 14752:2019+A1:2021
- BS EN 61373:2010 remains valid
- BS ISO 3864-4:2011 remains valid
- GIRT7033 undated reference, remains valid
- GMRT2045 undated reference, remains valid
- GMRT2100 issue 5 has been superseded by GMRT2100 issue 6.1
- GMRT2111 undated reference, remains valid
- GMRT2113 undated reference, remains valid
- GMRT2130 issue 4 has been superseded by GMRT2130 issue 5.1
- GMRT2472 undated reference, remains valid
- RIS-0784-CCS undated reference, remains valid
- RIS-2795-RST undated reference, remains valid
- RIS-3437-TOM undated reference, remains valid
- GEGN8578 undated reference, remains valid
- GOGN3637 undated reference, withdrawn, superseded by RIS-3437-TOM issue 2.
- BS 1376:1974 remains valid

In addition to these, a EuroSpec specification for door systems is soon to be published that may contain relevant information.

- i Changes in technology – There have been changes in technology that may affect some of the content of the standard, such as door status indicator lighting around the doorway, and light curtains and other forms of obstacle detection.
- j Are there any barriers to adoption? – There are no identified barriers to adoption.
- k Any other observations – It is proposed to include the content of GOOTS303 Issue 1 Secondary door locking – operational requirements, in an appendix of the RIS.

4. Discussion

4.1 Review outcome

- 4.1.1 The standard serves as a common description of doors systems suitable for the GB railway.
- 4.1.2 The standard was created in RMDB and follows the current requirement, rationale and guidance structure and nomenclature.

- 4.1.3 The content of RIS-2747-RST is still largely valid and appropriate to the railway today, although some revision of its content is required. Part of this is to improve style and language, reflect the current state of the art for existing systems, and to consider new technologies where appropriate. The content of the standard also needs to be reviewed to reflect, where appropriate, the findings of industry research, and to address enquiries that have been received. There is one amendment that needs to be incorporated into the text.
- 4.1.4 RIS-2747_RST references a number of external standards, and several of these references are now out of date as newer versions of the documents have been published. Similarly, the standard references the Loc and Pas and PRM TSI (Technical Specification for Interoperability), both of which are currently under revision, where it should now reference the Loc and Pas and PRM NTSN (National Technical Specification Notice).
- 4.1.5 GOOTS303 Issue 1 was published in 1993. A 15 year review proposed withdrawal of the standard but a condition was agreed that the content should be re-issued as a RIS. As the content is currently of limited application it is proposed to include it as an appendix to RIS-2747-RST, rather than a separate standard.

4.2 Industry consultation

- 4.2.1 Industry consultation has not yet taken place.

5. Recommendations

- 5.1 The standard committee is asked to:
 - a DISCUSS the outcome of the (second) five-year review and the proposed recommendation:
 - i. Consult with industry on the recommendations of this review and the content of RIS-2747-RST.
 - ii. Initiate a change project for the revision of RIS-2747-RST.
 - b APPROVE/SUPPORT as appropriate:
 - Rolling Stock standards committee to approve the recommendation.

RSSB completion: [\[do not delete\]](#)

Standards committee	Meeting date	Decision	Minute numbers		Next review date approved by the lead standards committee
			Pre-consultation review	Post-consultation review	
Rolling Stock		Approve			