

National technical rules for vehicles

Related control command and signalling requirements

Control, Command and Signalling TSI (Commission Regulation (EU) 2016/919 of 27 May 2016)

Amended by Commission Implementing Regulation (EU) 2019/776 to align with the Fourth Railway Package Technical Pillar

RGS	Title	Issue No.	Issue date	In force date	Application conditions	A) For technical compatibility with legacy subsystems: <i>National requirements in addition to the TSI requirements</i>	B) Addressing TSI open points: <i>National requirements where there are no TSI requirements</i>	C) Addressing TSI specific cases: <i>National requirements which are alternatives to the TSI requirements</i>	Changes relating to December 2019 notification
BR1654	Radio Electronic Token Block System	2	Dec-86	Dec-86	Part 2	Parts 3 to 13 relevant for Class B CCS system	None	None	None
GERT8018	Mechanical Trainstop System Interface	2	Sep-12	Dec-12	Part 5	3.2.1 3.2.2	None	None	None
GERT8075	AWS and TPWS Interface Requirements	3	Mar-18	Mar-18	Part 4	Part 3 relevant for Class B CCS system [Note: Part 2 is a notified infrastructure rule]	None	None	None
GERT8402	ERTMS/ETCS DMI National Requirements	2	Jun-16	Sep-16	Part 4	None	None	Part 2 for display of train speed information in miles per hour Part 3 for use of alphanumeric keyboard to enter train running number addressing CCS TSI specific case 7.6.2.2 for 4.2.12 (ETCS Driver-Machine Interface: addressing display of train speed in miles per hour and alphanumeric keyboard)	None
GKRT0055	Block System Interface Requirements	1	Sep-13	Dec-13	Part 3	2.4.2.1 [Note: other relevant requirements in Part 2 are notified infrastructure rules]	None	None	None

Notes:

1) If a requirement is not notified for A), B) or C) then it does not meet the characteristics of an NTR.

2) Changes since the last notification are highlighted in yellow. No standards have been withdrawn since the last notification update.

National technical rules for vehicles

Related rolling stock and plant requirements

Locomotive and Passenger Rolling Stock TSI (Commission Regulation (EU) No 1302/2014 of 18 November 2014)

Rolling Stock (Freight Wagon) TSI (Commission Regulation (EU) 321/2013 of 13 March 2013)

Amended by Commission Implementing Regulation (EU) 2019/776 to align with the Fourth Railway Package Technical Pillar

Noise TSI (Commission Regulation (EU) 1304/2014)

Amended by Commission Implementing Regulation (EU) 2019/774

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GERT8006	Assessment of Compatibility of Rail Vehicle Weights and Underline Bridges	2	Sep-10	Dec-10	Part 5	Part 3 and Appendix A	None for LOC&PAS and WAG TSIs [Note: Part 2 and Appendix A for INF TSI open point: 4.2.1 and Appendix E/F (TSI categories of line)].	None for LOC&PAS and WAG TSIs Note: Part 2 and Appendix A for INF TSI specific case: 4.2.7.4 and Appendix F (resistance of existing bridges and earthworks to traffic loads).	None
GERT8014	Axlebox Condition Monitoring - Hot Axlebox Detection	2	Jun-11	Sep-11	Part 4	None	2.3 for on-board detection addressing WAG TSI open point: 4.2.3.4 (axle bearing condition monitoring).	None	None
GERT8073	Requirements for the Application of Standard Vehicle Gauges	3	Dec-15	Mar-16	Part 5	None	None	Part 3 and Appendices A to N addressing LOC&PAS TSI specific case 7.3.2.2 for 4.2.3.1 (gauging). [Note: All requirements and Appendices A to N are notified infrastructure rules to address INF TSI specific cases: 7.7.17.1 for 4.2.1 (categories of line: gauge) 7.7.17.2 for 4.2.3.1 (structure gauge) 7.7.17.3 for 4.2.3.2 (distance between track centres) 7.7.17.7 for 4.2.9.3 (platform offset) 7.7.17.9 for 6.2.4.1 (assessment of structure gauge) 7.7.17.10 for 6.2.4.2 (assessment of distance for track centres) 7.7.17.11 for 6.2.4.11 (assessment of platform offset)]	None

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GMRT2045	Braking Principles for Rail Vehicles	4	Mar-16	Jun-16	Part 4	<p>Part 2 (except where indicated, all requirements in Part 2 (including 2.3.3.10 which is relevant for service braking as well as emergency braking) are NTRs and apply to all rolling stock</p> <p>2.2.2.1 2.2.3.1 2.3.2.4 2.12.6 only apply to modifications where the vehicles are deemed not to be new, renewed and upgraded as defined in RIR 2011.</p> <p>The LOC&PAS TSI is silent on the provision of the holding brake command (set out in 2.2.4.1).</p> <p>Appendix A, Figures 1 - 4 and Appendices B - E support specific requirements</p> <p>Appendices F - K are provided for guidance</p>	None	<p>2.2.1.1 addressing LOC&PAS TSI specific case 7.3.2.19. for 4.2.9.1.6 (Driver's desk - Ergonomics: covers GB direction of movement of the power/brake controller).</p> <p>2.3.3.10 addressing LOC&PAS TSI 7.3.2.7 for 4.2.4.5.2 (Emergency braking (performance): note permits GB not to comply with point (9) of clause 4.2.4.5.2).</p>	None
GMRT2100	Requirements for Rail Vehicle Structures	5	Jun-12	Sep-12	Part 10	<p>7.3 8.1.6 8.3</p>	<p>3.3.3 5.3 5.4 5.5 Part 6 addressing the LOC&PAS TSI open point 7.5.2.1 for interior passive safety</p>	<p>7.2 addressing LOC&PAS TSI specific case 7.3.2.8 for 4.2.6.2 (Aerodynamic effects).</p> <p>8.1.2.c) addressing LOC&PAS TSI specific case 7.3.2.1 for 4.2.2.2.5 (Staff access for coupling and end couplings).</p>	<p>Requirements 3.3.3, 5.3, 5.4 and 5.5 were already notified for technical compatibility but similar to Part 6 they are requirements dealing with interior passive safety, so these requirements are also notified to address the open point in the LOC&PAS TSI 7.5.2.1 .</p> <p>The open point was identified as a 'hidden' open point, this was unnecessary and has been deleted.</p>

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GMRT2111	Rolling Stock Subsystem and Interfaces to AC Energy Subsystem	2	Dec-19	Dec-19	Part 5	Part 2 Part 3 Part 4	None	<p>2.4.2 addressing LOC&PAS TSI specific case 7.3.2.24 for 4.2.11.6 (Special requirements for stabling of trains (shore supply)).</p> <p>3.2 3.5 addressing LOC&PAS TSI specific case 7.3.2.11 for 4.2.8.2.2 (Operation within range of voltages and frequencies).</p> <p>4.2 addressing LOC&PAS TSI specific case 7.3.2.14 for 4.2.8.2.9.2 (Pantograph).</p> <p>4.5 addressing LOC&PAS TSI specific case 7.3.2.13 for 4.2.8.2.9.1.1 (Height of the interaction with contact wires).</p>	<p>Issue two revises requirements that deal with pantograph/overhead contact line mechanical interaction to align with the LOC&PAS TSI.</p> <p>In addition notification of requirement 4.2 has been corrected to notify it against specific case 7.3.2.14, as it was incorrectly notified against LOC&PAS TSI specific case 7.3.2.24.</p>
GMRT2113	Rolling Stock Subsystem and Interfaces to DC Conductor Rail Energy Subsystem	1	Sep-15	Jun-17	Part 5	Part 2 Part 3 Part 4	None	<p>3.1 3.6 addressing LOC&PAS TSI specific case 7.3.2.10 (for 4.2.8.2 power supply).</p> <p>3.3 3.6 addressing LOC&PAS TSI specific case 7.3.2.11 (for 4.2.8.2.2 operation within range of voltages and frequencies).</p>	<p>The notification has been changed as a result of an evaluation conducted by the European Union Agency for Rail (ERA) which found that requirement 3.6 is addressing LOC&PAS TSI specific cases 7.3.2.11 as well as 7.3.2.10.</p> <p>The requirement deals with the train regenerating electricity during braking and specifies control limits for the voltage that are slightly different to the limits and controls for the network supplied voltage.</p>
GMRT2130	Vehicle Fire, Safety and Evacuation	4	Dec-13	Mar-14	Part 8	<p>3.1 5.1 5.2</p> <p>Note: RSSB have published a recommended approach for identifying valid fire testing requirements for vehicles, which advises the use of EN16989:2018 (Railway applications - Fire protection on railway vehicles. Fire behaviour test for a complete seat is published on RSSB's website (hyperlink provided below).</p> <p>https://www.rssb.co.uk/-/media/Project/RSSB/Platform/Documents/Public/Public-content/Using-Standards/2019-10-08-Recommended-Approach-to-fire-testing-requirements-for-Vehicles.pdf?la=en&hash=75C99493CC3FF0E6C2742DE45027768D</p>	None	None	<p>Requirement 2.2 which related to BS6853:1999 (Code of practice for fire precautions in the design and construction of passenger carrying trains) is no longer applicable and has been de-notified. The requirement related to the transitional period which was permitted by the LOC&PAS TSI to use alternative material requirements, the transitional period expired in January 2018.</p>

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GMRT2131	Audibility and Visibility of Trains	1	Dec-15	Mar-16	Part 4	<p>3.1.2 (specifies the method set out in EN 15153-1:2013, clause 5.3.4, table 3).</p> <p>3.2.1 3.3 3.4 3.5 3.8 3.10</p>	None	2.2 addressing LOC&PAS TSI specific case 7.3.2.9 for 4.2.7.2.2 (warning horn sound pressure levels).	None
GMRT2132	On-board Energy Metering for Billing Purposes	1	Sep-10	Dec-10	Part 4	None	<p>2.5 for data transfer on-board to ground</p> <p>2.6 for communication service - on-board to ground</p> <p>addressing LOC&PAS TSI open point 4.2.8.2.8 and Appendix D - part 5 (on-board energy measurement system).</p> <p>Commission Implementing Regulation (EU) 2018/868 of 13 June 2018 closed the open point on energy metering. By 1 January 2022, Member States shall ensure that an on-ground energy data collecting system capable of exchanging compiled energy billing data in accordance with point 4.2.17 of this TSI is implemented. Hence these NTRs remain open until that time.</p>	None	None
GMRT2141	Permissible Track Forces and Resistance to Derailment and Roll-Over of Railway Vehicles	4.1	Dec-19	Dec-19	Part 4	<p>2.1 2.2 2.4 3.3 3.5 3.6 and Appendix D</p> <p>[Note Appendix D is only applicable if choosing to conduct a simulation assessment to demonstrate vehicle susceptibility to cyclic top. The guidance in Appendix C may also be considered as an alternative option].</p>	None	2.3 and Appendix H 3.4 and Appendix A addressing LOC&PAS TSI specific case 7.3.2.5 for 4.2.3.4.2 and WAG TSI specific case 7.3.2.4 for 4.2.3.5.2 (running dynamic behaviour)	References relating to the LOC&PAS and WAG TSIs have been updated to reflect the amended TSIs published in June 2019, and Appendix F has been amended.

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GMRT2142	Resistance of Railway Vehicles to Roll-Over in Gales	4.1	Jun-19	Jun-19	Part 3	2.1 2.2	None	None	None
GMRT2160	Environment Inside Railway Vehicles (Audibility of detonators)	4	Dec-10	Mar-11	Part 3	2.1	None	None	None
GMRT2161	Requirements for Driving Cabs of Railway Vehicles	1	Aug-95	Oct-95	Parts A and B	None	None	6.1.1 addressing LOC&PAS TSI specific case 7.3.2.18 for 4.2.9.1.3 (front visibility).	None
GMRT2173	Requirements for the Size of Vehicles and Position of Equipment	2	Jun-18	Sept-18	Part 5	3.2 and Appendix A for technical compatibility with legacy platforms that have a track radii greater than 160m and less than 300m. [Note: 3.2 and Appendix A are also notified to address the PRM TSI specific case].	None	2.2 2.3 have been notified for the purposes of the specific case in the LOC&PAS TSI 7.3.2.27 and the WAG TSI specific case 7.3.2.7 (rules to manage changes in both rolling stock and rolling stock type). 3.3 3.4 and Appendix E 3.5 and Appendix B 3.6 and Appendix C addressing LOC&PAS TSI specific case 7.3.2.2 (for 4.2.3.1 (gauging) 3.2 and Appendix A addressing the PRM TSI specific case 7.3.2.6 (table 25) for 4.2.2.11 (step position for vehicle access and egress) - the TSI gives a choice of using the NTR or the TSI requirement. The PRM TSI applies for track radii from straight track down to 300m. [Note: 3.2 and Appendix A are also notified for technical compatibility].	None
GMRT2185	Train Safety Systems	2	Dec-01	Feb-02	Parts A and B	B5.1 B5.2 B5.3	None	None	None

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GMRT2400	Engineering Design of On-track Machines in Running Mode	6	Sep-18	Dec-18	Part 5	<p>Part 2 general requirement for BS EN 14033-1:2017 to be applied in GB</p> <p>Part 3 specifies where 14033-1:2017 is amended (additional requirements, variations or guidance).</p> <p>GMRT2400 must be used in conjunction with the EN 14033-1:2017</p> <p>Clause 7.1.1.3 of the LOC&PAS TSI permits NTRs for OTMs, as an alternative solution.</p>	None	None	None
GMRT2461	Sanding Equipment	3	Dec-18	Mar-19	Part 3	<p>2.4 for alternative solution to CCS TSI, Annex A, Index 77 clause 3.1.4.1 as permitted by the Application Guide to the LOC&PAS TSI.</p>	<p>2.1 2.2 and Appendix D 2.3 and Appendix E addressing CCS TSI open point 3.1.4.2 for the type of sand (Index 77) (ERA/ERTMS/033281) INTERFACES BETWEEN CONTROL-COMMAND AND SIGNALLING TRACKSIDE AND OTHER SUBSYSTEMS.</p>	None	None

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GMRT2466	Railway Wheelsets	4.1	Dec-19	Dec-19	Part 4	None	None	<p>2.1.1 2.1.2 3.1.1 3.2.3 addressing WAG TSI specific case 7.3.2.5 for 4.2.3.6.2 (characteristics of wheelsets) and the LOC&PAS TSI specific case 7.3.2.6 for 4.2.3.5.2.2 (mechanical and geometric characteristics of wheelset and wheel) for wheelsets in scope of TSIs but restricted to national use.</p> <p>3.2.1 3.2.2 3.2.3 3.3.1 addressing WAG TSI specific case 7.3.2.5 for 4.2.3.6.2 (characteristics of wheelsets) and the LOC&PAS TSI specific case 7.3.2.6 for 4.2.3.5.2.1 (mechanical and geometric characteristics of wheelset and wheel) for wheelsets in scope of TSIs but restricted to national use.</p> <p>2.1.3 supported by guidance (relating to cast wheels) addressing WAG TSI 6.1.2.3 b) and LOC&PAS TSI 6.1.3.1 (3) for other types of wheels.</p> <p>[Note 3.4.1 addressing INF TSI 7.7.17.4 for 4.2.5.3 (Maximum unguided length of fixed obtuse crossings)].</p>	<p>Table 3 and Table 39 that deal with flange height and thickness tread profiles have been amended to address potential misinterpretation of 'as new, maximum' column heading.</p> <p>In addition, the requirements already notified have been clarified to indicate which specific TSI parameter they are addressing, either 4.2.3.5.2.2 or 4.2.3.5.2.1.</p>
GMRT2472	Requirements for Data Recorders on Trains	2	Jun-14	Dec-15	Part 4	Part 2 Part 3	None	None	None
GMRT2477	Compatibility Requirements for Track Circuit Assisters (TCAs) on Rail Vehicles	3	Jun-18	Sep-18	Part 4	Part 2 Part 3	None	None	None
GMRT2491	Design Requirements for a Driver's Reminder Appliance (DRA)	2	Oct-09	Dec-09	Parts 1 and 2	3.1 4.1 4.2 4.3 4.4 4.5	None	None	None
GOOTS303	Secondary Door Locking - Operational Requirements	1	Jan-93	Jan-93	Part B2	Parts 3 to 7	None	None	None

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2) Changes since the last notification are highlighted in yellow.

3) Withdrawn standard:

GMRTT0088 Permissible Track Forces, issue one - withdrawn in June 2019, superseded by GMRTT2141 Permissible Track Forces and Resistance to Derailment and Roll-Over of Railway Vehicles, issue four that came into force in September 2019.