



GMRT2173 issue 4

Size of Vehicles and Position of Equipment

Briefing note

Background

To ensure compatibility between rail vehicles and infrastructure, there needs to be a common way of defining the vehicle swept envelope, taking into account movement, and the corresponding dimensions of the infrastructure.

What is it about?

GMRT2173 sets out National Technical Rules, as mandated in the National Technical Specification Notices (NTSNs), related to the size of vehicles and position of equipment for mainline rolling stock on the GB network.

GMRT2173 sets out requirements for the development of a vehicle swept envelope including information related to the lower, and upper sectors.

This document contains requirements related to equipment required to interface with infrastructure including the footstep position, pantograph sway, and compatibility with train detection systems.

GMRT2173 also contains requirements for recording vehicle data for a gauging portfolio. The appendices include the method for calculating pantograph sway and guidance on RSSB Research Project T1196 - Development of a Suite of Pantograph Gauges.

What has changed?

Requirements for the compatibility of tripcocks and collector shoe gear with infrastructure have been moved to GERT8073.

Guidance on the vehicle's maximum overhang length exceeding 3.226 m up to 4.2 m has been added to the standard.

Guidance on T1196 and the calculator for creating infrastructure gauges for pantographs has been added as a new appendix in GMRT2173.

Rationale has been added to the requirements to explain the 'why' as well as the 'what'.

What are the benefits?

The total benefit for the change is estimated at approximately £1.5M over 5 years and this document is a key part of the process. The introduction of a calculator for infrastructure gauges for pantographs can be used as a tool to facilitate the process for pantograph gauging.

Who is it for?

This document is applicable to Infrastructure Managers, Railway Undertakings and projects working on rolling stock and infrastructure.