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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 32358-2025

Replacing GB/T 32358-2015

**Railway applications - Test methods for rolling stock on test
rigs**

轨道交通 机车车辆台架试验方法

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document supersedes GB/T 32358-2015 "Test Methods for Rail Transit Locomotives and Rolling Stock", and is consistent with GB/T 32358-2015. Aside from structural adjustments and editorial changes, the main technical changes are as follows:

- a) Terms and definitions have been changed (see Chapter 3, Chapter 3 of the.2015 edition);
- b) The altitude requirements have been changed (see Chapter 4, Chapter 4 in the.2015 edition);
- c) Additional pre-test inspection items for the test samples have been added (see Chapter 5);
- d) The requirements for rolling vibration test benches or rolling test benches have been changed (see 6.1.1,.2015 version of 6.1.1);
- e) Technical requirements for the bogie slewing resistance test bench have been added (see 6.1.2);
- f) The technical requirements for other auxiliary equipment have been changed (see 6.1.3, 6.1.2 in the.2015 version);
- g) The power supply system requirements for the traction test power supply of electric locomotives and electric multiple units have been changed, as well as the precision requirements for the main testing instruments on the test bench. Degree requirements (see 6.2, 6.3, and 6.3 in the.2015 edition);
- h) The general requirements and recommended test items for testing have been changed (see 8.1,.2015 version of 8.1);
- i) Modified the running gear operation test, temperature rise test, low-speed air brake test, and traction characteristic (traction force/speed characteristic curve) test. Tests include. anti-slip/electric braking coasting performance test, voltage variation test, motion stability test, operational response test, and vehicle suspension system test. System vibration characteristic test, vehicle body modal test, internal combustion locomotive traction thermal

performance test, internal combustion locomotive oil-water cooling system performance test and Thermal balance tests (see 8.2.1, 8.4, 8.6, 8.9, 8.10, 8.12, 8.16, 8.17, 8.19, 8.20, 8.22, 8.23, 2015 edition) 8.2.2, 8.4, 8.6, 8.10, 8.11, 8.13, 8.17, 8.18, 8.20~8.23);

j) The full-torque speed scan test and the diesel locomotive no-load fuel consumption measurement test have been removed (see sections

1 Scope

GB/T 32358-2025 is the Chinese national standard covering testing a locomotive or a car on a rig instead of on a line - the roller rig that spins the wheels, the bogie and body structural tests, the traction and braking exercised without leaving the works, and what such a test can and cannot prove. It replaces GB/T 32358-2015. It was issued on 31 December 2025 and has been in force since 1 July 2026, replacing GB/T 32358-2015. The document is under the responsibility of the National Railway Administration. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the environmental conditions, test specimens, instruments and equipment, and approval documents for locomotive and rolling stock bench testing, and describes the corresponding tests. method. This document applies to rail transit locomotives and rolling stock, including rail transit locomotives, EMU trains, passenger cars, freight cars, urban rail vehicles, and engineering vehicles.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 5599-2019 Specification for Evaluation and Testing of Dynamic Performance of Locomotives and Rolling Stock

GB/T 25117-2020 Test Methods for Combined Traction Systems of Rail Transit Locomotives and Rolling Stock

GB/T 44991-2025 Test methods for rail transit locomotives and rolling stock before they are put into service after manufacture TB/T 1407.1 Train traction calculation - Part

1.Locomotive-traction trains TB/T 1492-2017 Single-vehicle test of railway vehicle brakes
TB/T 3098-2004 Detailed Rules for Certification Tests of Diesel Engines for Railway Power Units
TB/T 3540.1-2018 Test methods for traction thermal performance of diesel

locomotives - Part

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Rolling vibration test rig Using track wheels to simulate steel rails, and with the help of a vibration system, traction power supply, and other support systems, the traction, braking, and dynamic testing of locomotives and rolling stock are performed on a test bench.

Complete sets of equipment for mechanical testing.

3.2 rolling test bench Using track wheels to simulate steel rails, and with the aid of traction power supply and other support systems, traction, braking, and rolling tests of locomotives and rolling stock were conducted. Complete sets of equipment.

3.3 Vibration test bench A complete set of equipment for bench vibration testing of locomotives and rolling stock using a vibration excitation system.

3.4 Utilizing the support and rotation functions of the test platform, the bogie can be rotated while supporting the entire vehicle, enabling testing of rotational torque and rotational angle. The test bench.

3.5 The rolling vibration test bench or rolling test bench is used to simulate the operation test conducted on the factory test line and the main line.