

ICS 83.160.99

CCS G 41



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

GB/T 44550-2024

**Test method for endurance performance of pneumatic tyres for
industrial vehicles**

工业车辆充气轮胎耐久性试验方法

Issued on: September 29, 2024

Implemented on: April 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020 "Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

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This document was proposed by China Petroleum and Chemical Industry Federation.

This document shall be under the jurisdiction of National Technical Committee on Tyres and rims of Standardization Administration of China (SAC/TC 19).

The drafting organizations of this document: Guizhou Tyre Co., Ltd., Zhongce Rubber Group Co., Ltd., Xiamen Chengshin Rubber Industry Co., Ltd., Zhongce Rubber (Tianjin) Co., Ltd., Shantou Haoda Tyre Testing Equipment Co., Ltd., Shandong Linglong Tyre Co., Ltd., Beijing Rubber Industry Research and Design Institute Co., Ltd., Xuzhou Xulun Rubber Co., Ltd., Triangle Tyre Co., Ltd., Sailun Group Co., Ltd., Fengshen Tyre Co., Ltd., Hebei Wanda Tyre Co., Ltd., Hai'an Rubber Group Co., Ltd., Michelin (China) Investment Co., Ltd., Bridgestone (China) Investment Co., Ltd., Dalian Goodyear Tyre Co., Ltd., Heilongjiang Red River Valley Automotive Testing Co., Ltd., Jining Qilu Testing Technology Co., Ltd., Guangdong Guangdong-Hong Kong-Macao Greater Bay Area Huangpu Materials Research Institute, Tianjin Jiurong Industrial Technology Co., Ltd., Qingdao Houze JinYE Technology Co., Ltd.

Main drafters of this document: Lin Xiaoyong, Li Gongwu, Chen Jianming, Huang Binwen,

Chen Xun, Zhang Lijie, Mou Shouyong, Zheng Rui, Sui Anquan, Wu Junrong, Shi Chao, Pei Quanhua, Yu Zhenjiang, Huang Zhenhua, Zhou Ling, Zhu Cheng, Yin Qingye, Zhao Xinhong, Gao Ming, Xun Yan, Gu Zheng, Tang Shunfeng, Xu Lihong, Li Shuhuan, Li Miaomiao, Yang Zhong.

Test method for endurance performance of pneumatic tyres for industrial vehicles

1 Scope

This document describes the test method for endurance performance of pneumatic tyres for industrial vehicles, including test equipment and accuracy requirements, test conditions, test steps, judgment rules and test report.

This document applies to new pneumatic tyres for industrial vehicles.

2 Normative references

GB/T 521

GB/T 2982

GB/T 6326

3 Terms and definitions

For the purposes of this document, the terms and definitions defined in GB/T 6326 as well as the followings apply.

3.1 Test speed

The linear speed of the drum surface along the circumferential direction when the steel testing machine drum rotates.

4.1 Endurance testing machine

4.1.1 The diameter of the testing machine drum is 1700 mm $\pm$ 17 mm or 3000 mm $\pm$ 30 mm.

4.1.2 The test drum surface of the testing machine shall be a smooth steel surface. Its width shall not be less than the total cross-sectional width of the test tyre.

4.1.3 The loading capacity of the test loading device shall be able to meet the requirements of the test method, and its accuracy shall be $\pm$ 1.5% of the full scale.

4.1.4 The speed capability of the testing machine drum and the testing equipment shall meet the requirements of the test method. The speed accuracy shall be km/h.

4.1.5 The radial runout of the testing machine drum shall not be greater than 0.25 mm.

4.1.6 The ambient temperature measuring device shall be set within the range of 150 mm to 1000 mm from the test tyre.

4.2 Inflation pressure gauge

The accuracy of the inflation pressure gauge is ± 10 kPa.

5 Test conditions

5.1 The appearance quality of the test tyres shall comply with the requirements of HG/T 2177.

5.2 For tyres with a rim nominal diameter code less than 24, a 1700 mm drum tester shall be used. For tyres with a rim nominal diameter code of 24 or above, a 3000 mm drum tester shall be used.

5.3 The test rim shall comply with the provisions of GB/T 2982 or relevant industry technical documents on measuring rims. Install the test tyre on the test rim and inflate it to the pressure specified in GB/T 2982 or relevant industry technical documents.

5.4 The ambient temperature during the test shall be $38^{\circ}\text{C} \pm 3^{\circ}\text{C}$. The tyre-rim assembly

shall be kept at the ambient temperature for at least 24 h.

5.5 The time from the test drum starting with uniform acceleration to the initial test speed shall be within 5 min.

5.6 The endurance test speed and test load of each series of tyres shall comply with the test speed and percentage of the maximum rated load of the tyre specified in Table 1.

The maximum rated load of ordinary section, low section bias and radial tyres shall be in accordance with the load capacity of the driving wheel of the counterbalanced forklift at a speed of 25 km/h in GB/T 2982 or relevant industry technical documents. If there is no corresponding data, the corresponding load capacity of other industrial vehicles at a speed of 25 km/h shall be used. The maximum rated load of metric series bias and