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

GB 9744-2024

Replacing GB 9744-2015

Truck tyres

载重汽车轮胎

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Requirements
- 4.5 Safety performance
- 4.5.1 Tyre strength performance
- 4.8 Tread wear signs and markings
- 5 Test method
- 6 Judgment rules
- 7 Markings
- 8 Implementation of the standard
- 8.1 Other clauses in this document, except

Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 "Directives for standardization - Part

1.Rules for the structure and drafting of standardizing documents". This document replaces GB 9744-2015 "Truck tyres". Compared with GB 9744-2015, in addition to structural adjustments and editorial changes, the main technical changes are as follows: - CHANGE the relevant provisions of the main parameters of tyres (see 4.1;

4.1 of the 2015 edition); - DELETE the corresponding relationship between speed, air pressure and load (see

4.3 of the 2015 edition); - ADD the minimum damage energy values of some tyres (see Table 1 and Table 2; Table 1 and Table 2 of the 2015 edition); - ADD the tyre rolling resistance requirements (see 4.6); - ADD the tyre relative grip performance requirements on wet roads (see 4.7); - DELETE other appearance quality requirements for tyres and fenders (see

4.8.2 of the 2015 edition); - ADD tyre rolling resistance performance test methods and test results rounding requirements (see 5.3); - ADD the requirements for the test methods and test results of tyre relative grip performance on wet roads (see 5.4); - ADD the judgment principles (see Chapter 6); - DELETE the manufacturer's name or place of origin, exit-factory inspection mark (see

6.1 of the 2015 edition); - ADD the requirements for special-purpose tyres, tyres with electronic tags, traction tyres to have corresponding signs (see 7.8, 7.10, 7.11); - ADD the implementation requirements of the standard (see Chapter 8). Please note that some of the contents of this document may involve patents. The issuing agency of this document does not assume the responsibility for identifying patents. This document was proposed by AND shall be under the jurisdiction of the Ministry of Industry and Information Technology of the People's Republic of China. This standard replaces the standard previously issued as follows: - It was first published in 1988 as GB 9744-1988 "Radial tyres of truck". When it was first revised in 1997, the content of GB 516-1989 "Truck diagonal tyres" was incorporated (the previous versions of the documents replaced by GB 516-1989 are: GB 516-1965, GB 516-1974, GB 516-1982), meanwhile the standard name was changed to "Truck tyres"; - The second revision was in 2007; the third revision was in 2015; - This is the fourth revision. Truck tyres

1 Scope

GB 9744-2024 is the Chinese national standard on truck tyres, in the field of rubber and plastic industries. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 29 April 2024 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 May 2025. Classification: ICS 83.160.10, CCS G41. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the requirements, judgment principles, markings and implementation requirements for truck tyres; describes the relevant test methods. This document applies to new truck pneumatic tyres.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, for dated references, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies to this document.

GB/T 521 Test methods for measuring peripheral dimensions of tyres

GB/T 2977 Size designation, dimensions, inflation pressure and load capacity for truck tyres

GB/T 4501 Laboratory test methods for truck and bus tyres capabilities

GB/T 6326 Tyre - Vocabulary

GB/T 8170 Rules of rounding off for numerical values and expression and judgement of limiting values

GB/T 29040 Test methods of rolling resistance for motor vehicle tyres - Single point test and correlation of measurement results

GB/T 29042 Thresholds and grading of rolling resistance for motor vehicle tyres

GB/T 35163 Method for measuring relative wet grip performance of truck and bus tyres

GB/T 39971 Thresholds and grading of relative wet grip index for motor vehicle tyres

3 Terms and definitions

The terms and definitions, which are defined in GB/T 6326 and GB/T 39971, apply to this document.

4 Requirements

4.1 Main parameters of tyres Tyre specifications, load index, ply, measuring rim, load capacity, inflation pressure, minimum twin-tyre spacing, permitted rims shall comply with the provisions of GB/T 2977 or relevant industry technical documents.

Note. Complying with relevant industry technical documents refers to any parameter of a truck tyre that is different from GB/T 2977 and is not within the scope of GB/T 2977.

4.2 New tyre outer rim dimensions The total width and outer diameter of the tyre section shall comply with the provisions of Appendix A.

4.3 Correspondence between tyre speed symbol and maximum driving speed The correspondence between tyre speed symbol and maximum driving speed shall comply with the provisions of Appendix B.

4.4 Correspondence between tyre load index and load capacity The correspondence between tyre load index and load capacity shall comply with the provisions of Appendix C.

4.5.1 Tyre strength performance

4.5.2 Durability test After the durability test, the tyre pressure shall not be lower than the specified initial pressure; after the test, the tyre appearance inspection (tread, sidewall, cord layer, airtight layer, belt layer, bead) shall not have delamination, cord layer cracks, cord peeling, cord breakage, chunking [except for the derivative tread chunking (PTBC) caused by the light truck snow tyre durability test], joint splitting, cracking, abnormal deformation of the tyre body.

Note. PTBC is a phenomenon that occurs during the drum test of tyres. Rubber pieces fall

off the tyre tread or tears occur, but the tyre skeleton materials (such as carcass cord layer, belt layer, etc.) are not exposed. It will not occur in actual road operation. It usually occurs during the test of tyres with soft tread formulas or complex tread patterns (such as many small grooves).

4.6 Tyre rolling resistance It is applicable to radial tyres; but it does not include tyres with rim nominal diameter code ≤ 10 and rim nominal diameter code ≥ 25 , nor does it include special ST metric tyres for road trailers, high-passage radial tyres for light trucks, truck tyres with speed capacity below 100 km/h, special-purpose tyres. The rolling resistance coefficient of the tyre shall not exceed the maximum limit specified in Table 3.

4.7 Tyre relative grip performance on wet road It is applicable to radial tyres; it does not include tyres with rim nominal diameter code ≤ 10 and rim nominal diameter code ≥ 25 , nor does it include special ST metric tyres for road trailers, light truck high pass-ability radial tyres, truck tyres with speed capacity below 100 km/h, special purpose tyres. The tyre's wet road relative grip index shall not be less than the minimum limit specified in Table 4.

4.8 Tread wear signs and markings

4.9 Appearance quality The appearance of the tyre shall not have appearance defects that seriously affect the service life, such as delamination between components, sponginess, broken wire rings, serious pull-up of wire rings, multiple cord breakage, ridges in the tyre cords, rubber edge cords on the crown. If a cushion belt is used, the cushion belt shall not be incomplete or cracked.

4.10 Inner tube and cushion belt If an inner tube and cushion belt are used, the inner tube and cushion belt shall meet the requirements for matching with the outer tyre.

5 Test method

5.1 The total width and outer diameter of the new tyre after inflation and the height of the tread wear sign shall be measured in accordance with GB/T 521.

5.2 The tyre strength, durability, high-speed performance of mini and light truck tyres shall be tested in accordance with GB/T 4501.

5.3 The rolling resistance coefficient of the tyre shall be measured according to the method specified in GB/T 29040; the result shall be rounded off according to the provisions of GB/T 8170, with one decimal place retained.

6 Judgment rules

6.1 Outer edge dimensions, tread wear sign height, wear sign marking, appearance quality According to the provisions of GB/T 521, the total width, measure the outer diameter and tread wear sign height of the test tyre; visually check the wear sign, wear sign marking,