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

GB 518-2020

Replacing GB 518-2007

Motorcycle tyres

摩托车轮胎

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Foreword

This document is drafted in accordance with GB/T 1.1-2020 "Directives for standardization - Part

1.Rules for the structure and drafting of standardizing documents". This document replaces GB 518-2007 "Motorcycles tyres". Compared with GB 518-2007, the main technical changes are as follows: - ADD the term and definition of motorcycle radial tyre (see Clause 3); - ADD "load index (code indicates the corresponding level added to the series or level description)" (see 4.1); - In the strength performance requirements, modify "The minimum damage energy of tyres shall not be lower than the requirements of Table 1" to "The strength test damage energy of each test point shall not be lower than the requirements of Table 1" (see 4.5.1;

4.2.1 of the 2007 edition); - Modify the applicable maximum driving speed of the tyre that shall be subjected to the high-speed performance test to the speed symbol J level and above (see 4.5.3;

4.2.3 of the 2007 edition); - ADD the requirement that the tread wear marks shall fall in the groove that is not more than 1/2 the tread width by the center of the tyre crown (see 4.6.1); - Modify the "place name" in marking to "place of origin" [see 6.1b); 6.1b) of the 2007 edition]; - Modify the "level or load index" in marking to "load index (code indicates the corresponding level added to the series or level description)" [see 6.1c); 6.1c) of the 2007 edition]; - Delete the marking requirement of "Metric series and code-designated series tyres shall be marked with speed symbols" (see

6.2 of the 2007 edition); modify it to all motorcycle tyres shall be marked with speed symbols [see 6.1d)]; - Modify the "framework material" in marking to "Name and number of layers of the framework material for the crown and sidewall of radial tyres; name of the framework material for bias tyres" [see 6.1e); 6.1d) of the 2007 edition]; - ADD the marking requirements for the position of the tread wear mark [see 6.1f)]; - ADD some characteristic distinguishing marks when the tread type is C- type and D-type (see 6.7,

6.8 and 6.9); - ADD the mark for moped tyres (see 6.10); - ADD requirements for peripheral dimensions of new tyres (see Appendix A); - ADD a table of correspondence between tyre speed symbol and maximum driving speed (see Appendix B); - ADD a table of correspondence between tyre load index and load capacity (see Appendix C). This document was proposed by and shall be under the jurisdiction of Ministry of Industry and Information Technology of the PRC. The previous releases of this document and the documents it replaces are as follows: - GB 518-1965, GB 518-1974, GB 518-1991, GB 518-1997, GB 518-2007. Motorcycle tyres

1 Scope

GB 518-2020 is the Chinese national standard on motorcycle 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 24 December 2020 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 January 2022. 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, test methods and marking for motorcycle tyres. This document applies to new pneumatic motorcycle tyres.

2 Normative references

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

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

GB/T 2983 Series of motorcycle tyres

GB/T 6326 Tyre terms and definitions

GB/T 7036.2 Inner tube of pneumatic tyres - Part

3 Terms and definitions

The terms and definitions defined in GB/T 6326 and the following one apply to this document.

3.1 Motorcycle radial tyre The pneumatic motorcycle tyre in which the carcass ply cords are arranged at an angle of 65° ~ 90° with the center line of the tread and the carcass is tightened with a belt.

4 Requirements

4.1 Tyre size, load index (code indicates the corresponding level added to the series or level description), load capacity, measuring rim, allowable rim and inflation pressure It shall comply with GB/T 2983 or relevant industry technical documents.

4.2 Peripheral dimensions of new tyres It shall comply with the provisions of Appendix A.

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

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

4.5 Safety performance

4.5.1 Strength performance Tyres shall be tested for strength performance. The strength test damage energy of each test point shall not be lower than the requirements of Table 1.

4.5.2 Durability Tyres shall be tested for durability. After the durability test, the tyre shall not have defects such as delamination, chunking, crack, joint cracking, cord splitting or breaking. The test tyre pressure shall not be lower than the initial pressure.

4.5.3 High-speed performance Tyres with speed symbol J and above shall be subjected to high-speed performance test. After the high-speed performance test, the tyre shall not have defects such as delamination, chunking, crack, joint cracking, cord splitting or break. The test tyre pressure shall not be lower than the initial pressure.

4.6 Tread wear mark

4.6.1 Each tyre shall, at equal distances along the circumferential direction, be provided with no less than 3 clearly-observable tread wear marks. And make the tread wear marks fall in the groove that is not more than $1/2$ the tread width by the center of the tyre crown. The height of the tread wear mark shall not be less than

0.8 mm.

4.7 Appearance quality

4.7.1 The tyre shall not have appearance defects that seriously affect the service life; such as delamination between components, spongy, drawing-up and breaking of the traveler, multiple cord breaks, folds of the cord in the tyre, and rubber edge cords on the tyre crown, etc. The shape of the cushion belt shall not be broken; or the belt body shall be cracked.

4.7.2 Other appearance quality of tyres and cushion belts shall comply with the regulations of HG/T 2177.

4.8 Inner tube If an inner tube is used, the inner tube shall meet the requirements of GB/T 7036.2.

5 Test methods

5.1 Refer to GB/T 2983 or relevant industry technical documents for test parameters such as tyre size, load index, load capacity, measuring rim, allowable rim and inflation pressure involved in the test methods.

5.2 The outer diameter, section width, and tread wear mark height of a new tyre after inflation are measured in accordance with GB/T 521.

5.3 The strength performance, durability and high-speed performance of tyres are tested in accordance with GB/T 13203.

5.4 The appearance quality of tyres shall be inspected according to HG/T 2177.

5.5 When necessary, the inner tube can be inspected according to GB/T 7036.2.

6 Marking

6.1 Each tyre shall have the following marks.

- c) Name of manufacturer or place of origin;
- d) Load index (code indicates the corresponding level added to the series or level description), load capacity, and inflation pressure;
- e) Speed symbol;
- f) Name and number of layers of the framework material for the crown and sidewall of radial tyres; name of the framework material for bias tyres;
- g) Marking of the position of tread wear mark (such as "" and/or "T.W.I.");
- h) Production number;

6.2 Metric series tyres with nominal rim diameter code 13 and above shall be marked with "M/C".