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GB/T 13203-2014

Replacing GB/T 13203-2007

Test methods for verifying capabilities of motorcycle tires

摩托车轮胎性能试验方法

(ISO 10231:2003, Motorcycle tires – Test methods for verifying tire capabilities, MOD)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 13203-2007 “Test methods for verifying capabilities of motorcycle tires”. As compared with GB/T 13203-2007, the main technical changes are as follows:

- ADD the centrifugal swelling test method [SEE Chapter 1, 4.4, 5.1 c), 5.5, 6.4, 7.4 and Appendix C, Appendix D];

- MODIFY the scope of application of the high-speed performance test method, changing the maximum speed capability from the original less than 130 km/h to less than 100 km/h motorcycle tire which is not applicable (SEE Chapter 1; Chapter 1 of 2007 version);

- ADD the test drum “radial run ≤ 0.25 mm” (SEE 4.1.2);

- MODIFY the tolerance of the end diameter of the indenter for strength testing machines, from ± 0.6 mm to ± 0.2 mm (SEE 4.2.1; 4.2.1 of 2007 version);

- ADD the general rules on the test methods (SEE 5.1);

- DELETE the provisions that the tire damage energy is taken as the arithmetic mean of the damage energy which is measured at each test point (SEE 5.1.2.8 of the 2007 version), and MODIFY the corresponding judgement rules and test report contents [SEE 6.1, 7.1 e); 6.1, 7.1 e) of the 2007 version];

- ADD the relevant additional provisions on the use of devices that can automatically calculate the damage energy (SEE 5.2.2.8);

- ADD the test conditions for J and L grade in high speed test (SEE 5.4);

- As for the strength test report contents, ADD the indicated requirements for the use of automatic calculation device [SEE 7.1 g)];

- As for the endurance test report content, MODIFY the description requirements for the recorded invariable parameters and variable parameter during the test [SEE 7.2 e); 7.2e) of the 2007 version);

- As for the high-speed test report contents, MODIFY the description requirements for the recorded invariable parameters and variable parameter during the test [SEE 7.3 e); 7.3e) of the 2007 version).

This standard, through the re-drafting method, modifies and adopts ISO 10231:2003 “Test methods for verifying capabilities of motorcycle tires”.

Test methods for verifying capabilities of motorcycle tires

1 Scope

This standard specifies the terms and definitions, test equipment and accuracy, test methods, judgment rules and test reports for the motorcycle tire performance test. This standard includes the motorcycle tire strength test method, endurance test method, high speed performance test method, and centrifugal swelling test method.

This standard applies to new motorcycle pneumatic tires.

The high-speed performance test method in this standard is not applicable to motorcycle pneumatic tires having a maximum speed capability of less than 100 km/h.

The centrifugal swelling test method in this standard is only applicable to motorcycle pneumatic tires having a speed symbol of P (maximum speed capability of 150 km/h) and above.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this Standard.

GB 518 Motorcycle tires

GB/T 2983 Series of motorcycle tires

GB/T 6326 Tire terms and definitions (GB/T 6326-2005, ISO 4223-1:2002, NEQ)

3 Terms and definitions

The terms and definitions as defined in GB/T 6326 AND the following terms and definitions are applicable to this document.

3.1

Test drum speed

It refers to the outer surface of the steel test drum.

3.2

Tire speed

It refers to the peripheral speed of the tread surface.

3.3

Maximum load rating

It refers to the maximum load the tire is rated to carry at the maximum speed.

Note: The maximum speed refers to the speed corresponding to the speed symbol on the tire or the maximum tire speed capability as specified by the tire manufacturer.

4 Test equipment and accuracy

4.1 High-speed endurance testing machine

4.1.1 Testing machine drum diameter is 1700 mm ± 17 mm.

4.1.2 The surface of the testing machine drum shall be smooth steel surface, having a radial runout ≤ 0.25 mm, AND the width shall be greater than the total width of the pneumatic section of the test tire.

4.1.3 The loading capacity of the test loading device shall comply with the requirements of the test, AND its accuracy is ±1.5% of the full scale.

4.1.4 The speed capacity of the testing machine drum shall comply with the requirements of the test, AND its accuracy is ±3% of the full scale.

4.2 Strength testing machine

4.2.1 The testing machine shall be equipped with a steel cylindrical indenter of sufficient length, AND the end of the indenter shall be in hemispherical shape having a diameter of 8.0 mm ± 0.2 mm.

4.2.2 The loading capacity of the testing machine loading device shall not be more than 2000 kg.

4.2.3 Indenter displacement and pressure display accuracy is ±1% of full scale. The control accuracy of the indenter displacement speed shall be ±3% of full scale.

4.3 Inflatable pressure gauge

The maximum measuring range of the inflatable pressure gauge shall be not less than 400 kPa, AND the accuracy is ± 10 kPa.

4.4 Centrifugal swelling test device

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