



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

GB/T 5334-2021

**Passenger car - Wheels - Performance requirements and test
methods for cornering and radial fatigue**

Issued on: October 11, 2021

Implemented on: May 1, 2022

Issued by: SAMR; SAC

Table of Contents

Foreword...	3
1 Scope...	6
2 Normative References...	6
3 Terms and Definitions...	6
4 Test Wheels...	7
5 Performance Requirements...	7
5.1 Requirements of dynamic bending fatigue test performance...	7
5.2 Requirements of dynamic radial fatigue test performance...	7
6 Test Methods...	8
6.1 Dynamic bending fatigue test...	8
6.2 Dynamic radial fatigue test...	10

Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 Directives for Standardization - Part 1. Rules for the Structure and Drafting of Standardizing Documents.

This Document replaced GB/T 5334-2005 Performance Requirements and Test Methods of Passenger Car Wheels. Compared with GB/T 5334-2005, the major technical changes of this Standard are as follows besides the structural adjustments and editorial modifications.

- a) Change the scope of application, "This Document applies to passenger car wheels specified in GB/T 3730.1" (see Clause 1 of this Edition; Clause 1 of 2005 Edition);
- b) Add normative reference GB/T 3730.1 (see Clause 2 of this Edition);
- c) Add terms and definitions (see Clause 3 of this Edition);
- d) Add the requirements for test wheels (see Clause 4 of this Edition);
- e) Change the performance requirement index; and add the number of test samples and the performance requirement index of the spare wheel (see Clause 5 of this

Edition; Clause 3 of 2005 Edition);

f) Change the test method; delete the test items, test samples, preparation work, etc.; and they are re-divided into four parts. test equipment, load determination, test procedures and failure criteria; (see Clause 6 of this Edition; Clause 4 of

2005 Edition);

g) Change the requirements for the test equipment; and add the requirements for the mounting surface of the test wheel connectors (see 6.1.1 and 6.2.1 of this Edition; 4.3.1 and 4.4.1 of 2005 Edition);

h) Change part of the test procedure; and add the tightening torque requirements for wheel installation (see 6.1.3 and 6.2.3 of this Edition; 4.3.2 and 4.4.2 of 2005 Edition);

i) Change the schematic diagram of the bending fatigue test (see Figure 1 of this Edition; Figures 1 and 2 of 2005 Edition);

j) Add a schematic diagram of the radial fatigue test (see Figure 2 of this Edition).

This Document revised and adopted ISO 3006.2015 Road Vehicles - Passenger Car Wheel for Road Use - Test Methods.

Compared with ISO 3006.2015, this Document has many adjustments in structure.

See Appendix A for a list of comparisons of structural number changes between the two documents.

Compared with ISO 3006.2015, there are technical differences in this document. The terms of these differences have been marked by a vertical single line (?) on the outer margin of the document. The technical differences and their reasons are as follows.

a) Regarding normative references, this document has made adjustments with technical differences. The adjustments are collectively reflected in Clause 2

"Normative References". The specific adjustments are as follows.

--- Replace ISO 3911 with GB/T 2933 equivalent to the international standard (see Clause 2 of this Edition),

--- Replace ISO 3833 with GB/T 3730.1 modified to adopt international standards

(see Clause 2 of this Edition);

b) Change terms and definitions; change the definition of "crack"; add the definition of "wheel-tire assembly"; and delete other terms and definitions (see Clause 3 of this Edition);

c) Change the informative Appendix A of ISO 3006:2015 into Clause 5 performance indicators (see Clause 5 of this Edition);

d) Change the schematic diagram of the test equipment (see Figures 1 and 2 of this Edition);

e) Add the technical requirements for the mounting surface of the test connector (see 6.1.1 and 6.2.1 of this Edition);

f) Add the technical requirements for wheel load offset (see 6.1.4 of this Edition);

g) Change the tire pressure requirements for the radial fatigue test (see 6.2.2.2 of this Edition).

This Document also made the following editorial modifications.

--- Change the standard name into Passenger Car - Wheels - Performance Requirements and Test Methods for Cornering and Radial Fatigue.

Please note some contents of this Document may involve patents. The issuing agency of this Document shall not assume the responsibility to identify these patents.

This Document was proposed by Ministry of Industry and Information Technology of the RPC.

This Document shall be under the jurisdiction of National Technical Committee of Auto Standardizations (SAC/TC 114).

Drafting organizations of this Document. Citic Dicastal Co., Ltd.; Dongfeng Automotive Wheel Suizhou Co., Ltd.; Changchun FAWAY Automobile Components Co., Ltd., Wheel Branch; CATARC Automotive Testing Centre (Tianjin) Co, Ltd.; Baoding Lizhong Wheel Manufacturing Co., Ltd.; Zhejiang Wanfeng Auto Wheel Co., Ltd.; Dare Wheel Manufacturing Co., Ltd.; Zhejiang Jinfei Kaida Wheel Co., Ltd.; Zhejiang STARCO Huanmei Auto-Parts Co., Ltd.; Shanghai Baosteel Wheels Co., Ltd.; Qingdao Product

Quality Testing Research Institute; SAIC Motor Co., Ltd.; Jiangsu Poran Holding Co., Ltd.; and Dongfeng Nissan Passenger Vehicle Company.

Chief drafting staffs of this Document. Xu Zuo, Li Shide, Wang Xianfu, Zhang Shijiang, Wang Yang, Ma Jianhua, Liu Chunhai, Hua Yingchun, Mao Qiuxian, He Guoyuan, Zhu Hongbin, Xiong Hongbing, Cai Jianzhong, Li Chao, Ding Jiaxiang, Wan Jinhua, and Li Jiankun.

The historical editions replaced by this Document are as follows.

--- GB/T 5334-1985 was first-time published in 1985; first-time revised in 1995; and second-time revised in 2005.

--- It is the third-time revision hereby.

Passenger Car - Wheels - Performance Requirements
and Test Methods for Cornering and Radial Fatigue

1 Scope

This Document specifies the test wheels, performance requirements and test methods for the dynamic bending fatigue test and dynamic radial fatigue test of passenger car wheels.

2 Normative References

The provisions in following documents become the provisions of this Document through reference in 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) is applicable to this Document.

GB/T 2933 Wheels and Rims for Pneumatic Tyres - Vocabulary, Designation and Marking (GB/T 2933-2009, ISO 3911.2004, IDT)

GB/T 3730.1 Motor Vehicles and Trailers - Types - Terms and Definitions (GB/T 3730.1-2001, ISO 3833.1999, MOD)

3 Terms and Definitions

For the purposes of this Document, the terms and definitions given in GB/T 2933 and