# QC

AUTOMOTIVE INDUSTRY STANDARD

OF THE PEOPLE'S REPUBLIC OF CHINA

ICS 43.040.50

CCS T 22

# QC/T 242-2024

Replacing QC/T 242-2014

# Static Unbalance Requirements and Test Methods of Vehicle Wheels

# 汽车车轮静不平衡量要求及检测方法

**Issued on: July 19, 2024** **Implemented on: January 1, 2025**

**Issued by: Ministry of Industry and Information Technology of the People's Republic of China.**

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# Foreword

This document was drafted in accordance with the rules provided in GB/T 1.1-2020 *Directives for Standardization - Part 1: Rules for the Structure and Drafting of Standardizing Documents*.

This document serves as a replacement for QC/T 242-2014 *Static Unbalance Requirements and Test Methods of Vehicle Wheels*. In comparison with QC/T 242-2014, apart from structural adjustments and editorial modifications, the main technical changes are as follows:

a) The terms and definitions are modified (see Chapter 3; Chapter 3 of Version 2014);

b) The requirements for valve configuration for the test of light alloy wheels are modified (see Chapter 4; Chapter 4 of Version 2014);

c) The requirements for the test equipment are added (see Chapter 5);

d) The requirements for the amount of static unbalance of light alloy wheels on commercial vehicles are modified (see Chapter 6; Chapter 5 of Version 2014);

e) The test methods are modified (see Chapter 7; Chapter 6 of Version 2014).

Please be noted that certain content of this document may involve patents. The institution issuing this document does not undertake the responsibility of identifying these patents.

This document was proposed by and shall be under the jurisdiction of National Technical Committee 114 on Auto of Standardization Administration of China (SAC/TC 114).

The drafting organizations of this document: Baoding Lizhong Wheel Manufacturing Co., Ltd.; Dongfeng Motor Chassis Systems Co., Ltd.; Beijing Shuangyuan Tianheng Testing Co., Ltd.; Xingmin Lichi Co., Ltd.; CITIC Dicastal Co., Ltd.; Zhejiang Jingu Co., Ltd.; Changchun FAWAY Automobile Components Co., Ltd. Wheel Branch Company; Zhejiang Wanfeng Auto Wheels Co., Ltd.; Dare Wheel Manufacturing Co., Ltd.; Jiangsu POMLEAD Co., Ltd.; Zhengxing Wheel Group Co., Ltd.; Jiangsu KAITE Automobile Parts Co., Ltd.

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The issuing of the previous versions:

---Firstly issued in 1997 as QC/T 242-1997, firstly revised in 2004 and secondly revised in 2014;

---This is the third revision.

# Static Unbalance Requirements and Test Methods of Vehicle Wheels

## 1 Scope

This document specifies the requirements and test methods for the static unbalance of vehicle wheels.

This document is applicable to the determination of static unbalance of vehicle wheels.

## 2 Normative References

The content of the following documents constitutes indispensable clauses of this document through normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 2933 Wheels and Rims for Pneumatic Tyres - Vocabulary, Designation and Marking

GB/T 6444 Mechanical Vibration - Balancing - Vocabulary

GB/T 9239.21 Mechanical Vibration - Rotor Balancing - Part 21: Description and Evaluation of Balancing Machines

## 3 Terms and Definitions

The terms and definitions defined in GB/T 2933 and GB/T 6444, and the following are applicable to this document.

### 3.1 mass eccentricity

The distance from the center of mass of the wheel to the centerline of the wheel.

### 3.2 amount of static unbalance

*U*

The product of the wheel mass multiplied by the mass eccentricity (3.1).

**NOTE 1:** the unit is (g • cm).

**NOTE 2:** as shown in Figure 1, expressed in Formula (1):

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