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

GB/T 12428-2023

Replacing GB/T 12428-2005

Laden mass calculating method for bus

客车装载质量计算方法

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Foreword

This document was drafted in accordance with the provisions of GB/T1.1-2020 Directives for standardization - Part

1. Rules for the structure and drafting of standardizing documents. This document replaces GB/T 12428-2005 Laden mass calculating method for buses. Compared with GB/T 12428-2005, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) The term "passengers" is deleted (see 3.2 of the 2005 edition);
- b) The terms "crew" and "volume of luggage compartment" are added (see 3.4 and 3.5; see 3.5 of the 2005 edition);
- c) The definitions of the terms "surface area available for passenger compartment" and "surface area available for standing passenger" are changed (see 3.4 and 3.5; see 3.5 of the 2005 edition);
- d) The calculation method of the available surface area is added (see Chapter 4);
- e) The average passenger mass is changed (see Table 1; see Table 1 of the 2005 edition);
- f) The method for calculating the number of passengers and crew is changed (see Chapter 6; see Chapter 7 of the 2005 edition);

g) The method for calculating the loaded luggage mass of a bus is changed (see Chapter 7; see Chapter 8 of the 2005 edition);

h) The calculation method for the maximum design pay mass of a bus is changed (see Chapter 8; see Chapter 9 of the 2005 edition). Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents. This document is proposed by the Ministry of Industry and Information Technology of the People's Republic of China. This document is under the jurisdiction of the National Technical Committee of Auto Standardization (SAC/TC114). Drafting organizations of this document. China Highway Vehicle & Machinery Co., Ltd., Chang'an University, Yutong Bus Co., Ltd., Xiamen Golden Dragon Bus Co., Ltd., CRRC Times Electric Vehicle Co., Ltd., Zhongtong Bus Holding Co., Ltd., BYD Auto Industry Co., Ltd., Higer Bus Co., Ltd., China Automotive Engineering Research Institute Co., Ltd., China Merchants Testing Vehicle Technology Research Institute Co., Ltd. Main drafters of this document. Yu Yali, Shen Fulin, Song Jiangquan, Guo Jingang, Kang Tuanjie, Chen Yan, Liang Bo, Liu Houlin, Shi Hong, Cai Pengfei, Li Wei, Chu Guanyao, Li Zhaokai. This document was first published in 1990, and revised for the first time in 2005; this is the second revision. Laden mass calculating method for bus

1 Scope

GB/T 12428-2023 is the Chinese national standard on laden mass calculating method for bus, in the field of road vehicles engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 27 November 2023 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 June 2024. Classification: ICS 43.080.20, CCS T42. 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 main parameter requirements for the laden mass of a bus, as well as the calculation methods for the maximum design number of passengers and crew, the loaded luggage mass of a bus, and the maximum design pay mass of a bus. This document is applicable to the calculation of laden mass of M2 and M3 buses, and is used as a reference to the calculation of other types of vehicles.

2 Normative references

The provisions in the following documents become the essential provisions of this standard through normative reference in this standard. For the dated referenced documents, only the

versions with the indicated dates are applicable to this document; for the undated referenced documents, only the latest version (including all the amendments) is applicable to this document.

GB/T 3730.1 Terms and definitions of motor vehicles, trailers and combination vehicle - Part

3 Terms and definitions

The terms and definitions defined in GB/T3730.1, GB/T3730.2 and GB/T15089, and the following apply to this document.

3.1 passenger and crew A general term for the passengers and crew on a bus.

3.2 crew Staff on a bus. NOTE. It includes the driver, the conductor, etc.

3.3 passenger compartment A space on a bus dedicated to passengers.

3.7 bulky luggage Other luggage carried by passengers and placed in the luggage compartment except for hand luggage.

3.8 volume of luggage compartment The available volume for bulky luggage when the bus is in operation.

4 Calculation methods for available areas

4.1 Calculation of surface area available for passenger compartment The surface area available for passenger compartment shall be calculated by subtracting the following areas from the total horizontal projected area inside the bus (no double calculations).

4.2 Calculation of surface area available for standing passengers The surface area available for standing passengers shall be calculated by subtracting the following areas from the surface area available for passenger compartment (no double calculation).

5.1 Per capita mass of (passenger and crew)

5.1.1 The per capita mass of (passengers and crew) includes the average mass per passenger and the per capita mass of the crew. The values shall comply with the provisions of Table 1.

5.2 Surface area available per standing passenger The surface area available per standing passenger (S_{sp}) shall comply with the provisions of Table 2.

6 Maximum design number of passengers and crew

The maximum design number of passengers and crew of a bus is calculated according to formula (1) and formula (2), and the minimum value is taken as the result. where.

7 Loaded luggage mass of a bus

The loaded luggage mass of a bus is calculated according to formula (3) ~ formula (5), and the minimum value is taken as the result.

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