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

GB 1589-2016

**Limits of dimensions, axle load and masses for motor
vehicles, trailers and combination vehicles**

汽车、挂车及汽车列车外廓尺寸、轴荷及质量限值

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Foreword

All the technical contents of this standard are mandatory. This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB 1589-2004 "Limits of dimensions, axle load and masses for road vehicles". As compared with GB 1589-2004, except for editorial changes, the main technical changes are as follows: - CHANGE the standard name into "Limits of dimensions, axle load and masses for motor vehicles, trailers and combination vehicles"; - MODIFY the scope of Chapter 1; - ADD the reference to GB/T 17350 in Chapter 2; - In Chapter 3, ADD the definitions of vehicle length, vehicle width, vehicle height, tri-wheel vehicle, low-speed goods vehicle, fence goods vehicle/trailer, drop slide vehicle/trailer, platform goods vehicle/trailer, dump goods vehicle/trailer, low deck semi-trailer, long nose towing vehicle, long nose articulated vehicle, center axle trailer, center axle trailer of car carrier, center axle trailer train of car carrier, passenger/car trailer combination, goods road train, special motor vehicle, oilfield special vehicle, semi-trailer wheelbase, front fitting radius of semi-trailer, air suspension; - MODIFY the limits of vehicle dimensions (4.1.1), which is divided into two limits. the maximum limit of the dimensions of a fence type, drop slide type, platform type, dump goods vehicle/trailer (Table 1), AND the maximum limit of the dimensions of other motor vehicles, trailer and vehicle combination (Table 2); - MODIFY the requirements for unilateral extension of the indirect field of view (SEE 4.1.2.1); - MODIFY the distance between the rear axle of the vehicle and the front axle of the towing trailer, which shall be not less than 3000mm (SEE 4.1.2.3); - ADD the requirements for semitrailer towing vehicle and semi-trailers (SEE

4.1.3); - CHANGE the assembled axle (SEE 4.2.2) into the axle group (SEE Table 3); - MODIFY the axle load limits of cars and trailers; COMBINE the single axle and the assembled axle (SEE 2004 version) into one table (SEE table 3); - MODIFY the maximum allowable axle load limit for single tire on each side (SEE Table 3). - MODIFY the drive axle load limit of the double-axle goods truck (SEE Table 2 in 2004 version) into 11500 kg (SEE Table 3); - MODIFY the axle load limit when the wheelbase of the double-axle trailer is ≥ 1800 mm, which is 18000 kg (SEE Table 3); - DELETE the maximum total design mass and minimum limits (SEE

4.3.2 of 2004 version); - MODIFY the maximum allowable total mass limit at each axle at each side (double tires) of the double-axle truck and drawbar trailer, which is 18000 kg (SEE Table 4); - ADD the maximum allowable total mass limit of center axle trailer (SEE Table 4); - MODIFY the maximum allowable total mass limit of the four-axle train to 36000 kg (SEE Table 4). - ADD the double-axle trailer with single tire on each side of the axle, the installation nominal cross-section width of the tire is not less than 425 mm, AND the maximum allowable total mass limit is 18000 kg (SEE footnote d in Table 4); - MODIFY the requirements for the round and outward swaying values of the vehicular and vehicular train routes (SEE

4.4.1 and 4.4.2); - ADD that semi-trailer pin wheelbase which is less than or equal to the calculated length L will not be subjected to the tests in Appendix B (SEE 4.4.3); - ADD the rear suspension requirements (SEE 4.5); - ADD the requirement that the height of the cargo fence shall include the cover height (SEE 4.6.3); - ADD the requirements for low platform special semi-trailers, concrete pump trucks, fire trucks, wreckers, truck cranes, oilfield special vehicles (SEE 4.7); - ADD Appendix A dimension measurement provisions; - MODIFY the measurement method of the round and outward swaying value of the vehicle channel (SEE Appendix B). This standard was jointly proposed by the Ministry of Industry and Information Technology, the Ministry of Transport, AND the Ministry of Public Security of the People's Republic of China. This standard shall be under the jurisdiction of the National Automotive Standardization Technical Committee (SAC/TC 114). The responsible drafting organizations of this standard. China Automotive Technology Research Center, Ministry of Transport Highway Science Research Institute, Ministry of Public Security Traffic Management Science Research Institute. The participating drafting organizations of this standard. China First Automobile Group Corporation, Dongfeng Motor Corporation, Shanghai Automotive Group Co., Ltd., China Heavy Vehicle Group Co., Ltd., Beiqi Foton Motor Co., Ltd., Anhui Jianghuai Automobile Co., Ltd., Zhengzhou Yutong Bus Co., Ltd., CIMC Vehicle (Group) Co., Ltd., AND Tianjin Raul Industry Co., Ltd. This Standard replaces the standard previously issued as follows: - GB 1589-1979, GB 1589-1989, GB 1589-2004 Limits of dimensions, axle load and masses for motor vehicles, trailers and combination vehicles

1 Scope

GB 1589-2016 is the Chinese national standard on limits of dimensions, axle load and masses for motor vehicles, trailers and combination vehicles, in the field of road vehicles engineering. 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 26 July 2016 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 26 July 2016. Classification: ICS 43.020, CCS T04. 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 standard specifies the limits of dimensions, axle load and masses for motor vehicles, trailers and combination vehicles. This standard applies to the motor vehicles, trailers and combination vehicles used on roads. This standard does not apply to the following vehicles.

- Special vehicles equipped for military, armed police and public security;
- Double articulated passenger cars operating on limited roads.

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/T 3730.1 Motor vehicles and trailers - Types - Terms and definitions

GB/T 3730.2 Road vehicles - Masses - Vocabulary and codes

GB/T 3730.3 Motor vehicles and towed vehicles - Dimensions of vehicles - Terms and definitions

GB/T 17350 Terms marks and designation for special purpose vehicles and special trailers

3 Terms and definitions

The terms and definitions as defined in GB/T 3730.1, GB/T 3730.2, GB/T 3730.3, GB/T 17350 and the following apply to this document.

3.1 Vehicle length It refers to the distance between the two planes which pass the front and rear outermost end points of the vehicle AND perpendicular to the Y plane and X plane, as measured in accordance with Appendix A.

3.2 Vehicle width It refers to the distance between the two planes respectively passing the

outermost point of the fixed projection on both sides of the vehicle AND parallel with the Y plane, as measured in accordance with Appendix A.

3.3 Vehicle height It refers to the distance from the highest point of the vehicle to the X plane as measured in accordance with Appendix A.

3.4 Tri-wheel vehicle It refers to the goods vehicle with the maximum design speed less than or equal to 50 km/h AND with three wheels.

3.5 Low-speed goods vehicle It refers to the goods vehicle with the maximum design speed less than 70 km/h AND with four wheels.

3.6 Fence goods vehicle/trailer It refers to the goods vehicle/trailer the cargo loading structure of which is in the form of cage or fence AND independent of the cab; the top of the cargo loading part shall be fitted with a ceiling rod which is fixed to the side fence AND cannot removed or adjusted.

3.7 Drop slide vehicle/trailer It refers to the goods vehicle/trailer the cargo loading structure of which is drop slide, including the drop slide vehicle/trailer equipped with vehicle mounted lifting gear, BUT excluding the goods vehicle/trailer equipped with automatic dumping devices.

4.1.1 Dimension limits

4.1.1.1 The dimensions of the drop slide type, fence type, platform type, dump type vehicles and trailers shall not exceed the maximum limit values as specified in Table 1.

4.1.1.2 The dimensions of other motor vehicles, trailers and combination vehicles shall not exceed the maximum limit values as specified in Table 2.

4.1.2 Other requirements for dimensions

4.1.2.1 The unilateral extension of the vehicle's view field device shall not exceed the vehicle width of 250 mm.

4.1.2.2 The top window and ventilator, etc. of the vehicle shall, when opened, not exceed the vehicle height by 300 mm.

4.1.2.3 The distance between the rear axle of the vehicle and the front axle of the drawbar trailer shall not be less than 3000 mm.

4.1.3 Requirements for semi-trailer towing vehicles and semi-trailers

4.1.3.1 The front fitting radius of semi-trailer shall not be more than 2040 mm.

4.1.3.2 The horizontal distance from the central axis of the semi-trailer drawbar pin to the rear end of the semi-trailer length shall not exceed 12000 mm (except for the semi-trailers carrying 45 ft containers).