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

**中华人民共和国国家标准**

GB 14166-2013

Replace GB 14166-2003

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**Safety-belts, restraint systems, child restraint  
systems and ISOFIX child restraint systems for  
occupants of power-driven vehicles**

**机动车乘员用安全带、约束系统、儿童约束  
系统和 ISOFIX 儿童约束系统**

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## Foreword

**Chapter 4, 5, 6 to 7 of this Standard is mandatory and the rest are recommended.**

This Standard is drafted according to the rules specified in GB/T 1.1-2009.

This Standard replaced GB14166-2003 *Safety-belts and Restraint Systems for Occupants of Power-driven Vehicles*.

The main differences between the Standard and GB14166-2003:

a) Modified the name of the Standard

Modified the name of the Standard to be: Safety-belts, restraint systems, child restraint systems and ISOFIX child restraint systems for occupants of power-driven vehicles (the former name was: Safety belt and restraint system for adult occupants of power-driven vehicles).

b) Modified the scope of application of the Standard;

- For the M, N types vehicles; there are belts and restraint system solely used as independent equipments for the adult occupants on forward-facing or rearward-facing seats.
- The M, N type's vehicles are equipped with belts and restraint system solely used as independent equipments for the adult occupants on forward-facing or rearward-facing seats.
- The M<sub>1</sub> type and N<sub>1</sub> type vehicles are equipped with the child restraint system and ISOFIX child restraint system.
- The M<sub>1</sub> type vehicles are equipped with seatbelt reminder.

c) Retracting force

The measurement requirements of retracting force with tension-reduce device are added. When measure the retracting force under the operation condition of the tension-reduce device, the retracting force can be reduced to 0.5 N; and if the retractor assembly is equipped with tension-reduce device, before and after the durability test, the retracting force of strap should be measured when the tension-reduce device works and doesn't work (4.2.5.3.4 of this Edition).

d) Dynamic performance

The Standard was proposed by National Development and Reform Commission of the People's Republic of China

The Standard is under the jurisdiction of National Technical Committee of Auto Standardization (SAC/TC 114).

This Standard is drafted by: Dongfeng Motor Corporation, National Automobile Quality Supervision and Test Center (Xiangyang), China Automotive Technology and Research Center, Zhengzhou Nissan Motor Co., Ltd, China Quality Certification Center.

The main drafters of this Standard are: Li Sanhong, Yu Boying, Yang Bin, Wang Changjiang, Zhang Shangjiao, Wang Sheng, Li Weijing, Li Qianghong, Wang Dongcheng, Qu Yanping.

This standard replaced GB 14166—2003.

All previous publishing situation of GB14166—2003 are as follows:

—GB14166—1993

# **Safety-belts, restraint systems, child restraint systems and ISOFIX child restraint systems for occupants of power-driven vehicles**

## **1 Scope**

This standard stimulates the definitions of the car safety belts, restraint systems, the child restraint system and ISOFIX child restraint system, together with the technical requirements and test methods.

This Standard applies to:

- a) For the M, N types vehicles; there are safety belts and restraint system solely used as independent equipments for the adult occupants on forward-facing or rearward-facing seats.
- b) The M, N type's vehicles are equipped with belts and restraint system solely used as independent equipments for the adult occupants on forward-facing or rearward-facing seats;
- c) The M<sub>1</sub> type and N<sub>1</sub> type vehicles are equipped with the child restraint system and ISOFIX child restraint system.
- d) The M<sub>1</sub> type vehicles are equipped with seatbelt reminder.

## **2 Normative references**

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (Including all corrections) or revisions made thereafter shall be applicable to this Standard.

GB 4094-1999 Motor vehicles--symbols for controls, indicators and tell-tales

GB/T 8427-2008 Textiles - Tests for color fastness - Color fastness to artificial light: Xenon arc fading lamp test

GB 11551-2003 The protection of the occupants in the event of a frontal collision for passenger car

GB 11552-2009 The interior fittings of passenger car

GB 13057-2003 The strength of the seats and their anchorages of passenger vehicles

GB 14167-2013 Safety-belt anchorages, ISOFIX anchorages systems and ISOFIX top tether anchorages for vehicles

GB/T 15089-2001 Classification of power-driven vehicles and trailers

GB 27887-2011 Restraining devices for child occupants of power-driven vehicles

ISO 6487: 2002 Road vehicles -- Measurement techniques in impact tests -- Instrumentation

ISO 17373: 2005 Road vehicles -- Sled test procedure for evaluating occupant head and neck interactions with seat/head restraint designs in low-speed rear-end impact

ASTM D573 Standard Test Method for Rubber—Deterioration in an Air Oven

ASTM D735 Specification for Elastomer Compounds for Automotive Applications

ASTM D736 Method of Test for Low-Temperature Brittleness of Rubber and Rubber-Like Materials

### **3 Terms and definitions**

For the purpose of this Standard, the following terms and definitions shall apply.

#### **3.1**

##### **Safety belt, belt**

There are straps, buckles, regulating parts and attachments which fix them inside the power-driven vehicle, used for reducing the total damage degree during the sharp deceleration and collision of vehicles by restricting the movement of the wearer's body, including energy absorption or the restraint of the retraction straps.

##### **3.1.1**

##### **Lap belt**

The two-point seats belt cross in front of the wearer's pelvis.

##### **3.1.2**

##### **Diagonal belt**

The safety belts obliquely cross from the hip to the front chest to the other side of the shoulder.

##### **3.1.3**

##### **Three-point belt**

The seatbelts consists of a lap belt and a diagonal belt.

#### **3.1.4**

##### **S-type belt**

Belt devices apart from the three-point belt or lap belt

#### **3.1.5**

##### **Harness belt**

The S-type seatbelt assembly consists of a lap belt and multiple diagonal belts. The harness belts may provide an additional crotch belt assembly.

#### **3.2**

##### **Belt type**

Safety belts without differences in the following main aspects:

- Rigid member (buckle, attachments, retractor etc.);
- The materials, weaving ways, sizes and colors, etc. of the strap;
- Geometrical shape of the safety belt assembly.

#### **3.3**

##### **Strap**

The flexible components used for restraining occupants' bodies and transmitting the received force to safety belt anchorage.

#### **3.4**

##### **Buckle**

A kind of device that can restrain the wearers by safety belts and can untie fast, the buckle can be equipped with adjusting device, except harness belts.

#### **3.5**

##### **Belt adjusting device**

The device which can make the safety belt adjusted in accordance with the seat position and the requirements of the wearer, with the adjusting device can be equipped with a buckle, or retractor, or a part of the other parts of the safety belt.

#### **3.6**

##### **Pre-loading device**

The additional or integrated device for reducing the safety belts slacks volume when



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