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

GB 11551-2014/XG1-2026

Replacing GB 11551-2003

**The protection of the occupants in the event of a frontal
collision for motor vehicle (including National Amendment No.
1 of 2026)**

汽车正面碰撞的乘员保护

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Foreword

The whole of the technical content of this standard is mandatory.

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB 11551-2003 "The protection of the occupants in the event of a frontal collision for passenger car". Compared with GB 11551-2003, the main differences are as follows:

- the title of the standard was changed to "The protection of the occupants in the event of a frontal collision for motor vehicle";
- the scope of application was revised, being extended from category M1 vehicles to category M1 vehicles, category N1 vehicles with a maximum design total mass not greater than 2 500 kg, and multipurpose goods vehicles (see Clause 1);
- the definition of "multipurpose goods vehicle" was added (see 3.10);
- the airbag information marking, and the warning about the use of a rear-facing child restraint system on a seating position protected by an airbag, were added (see 4.1.4 and 4.1.5);
- part of the technical requirements was added and revised (see 4.2);
- changes and extensions of the vehicle type were added (see Clause 6);
- the sled test procedure was

added (see Annex E).

This standard was proposed by the Ministry of Industry and Information Technology of the People's Republic of China and is under the jurisdiction of the National Technical Committee of Auto Standardization (SAC/TC 114).

Organizations responsible for drafting: China Automotive Technology and Research Center; Hafei Motor Co., Ltd.; Beiqi Foton Motor Co., Ltd.

The previous editions of the standard replaced by this standard are: GB/T 11551-1989 and GB 11551-2003.

1 Scope

This standard specifies the terms and definitions, the requirements and the test methods for the protection of the occupants of the front outboard seating positions in the event of a frontal collision of a vehicle.

This standard applies to category M1 vehicles, to category N1 vehicles with a maximum design total mass not greater than 2 500 kg, and to multipurpose goods vehicles.

2 Normative references

The following documents are indispensable to the application of this document. For dated references, only the edition bearing the date applies; for undated references, the latest edition (including all amendments) applies.

GB/T 3730.1 Motor vehicles and trailers - Types - Terms and definitions · GB 14166 Safety-belts, restraint systems, child restraint systems and ISOFIX child restraint systems for occupants of power-driven vehicles · GB 14167 Safety belt anchorages, ISOFIX anchorages systems and ISOFIX top tether anchorages for vehicles · GB/T 15089 Classification of power-driven vehicles and trailers · GB/T 20913-2007 The protection of the occupants in the event of a frontal offset collision for passenger car · ISO 2575:2021 Road vehicles - Symbols for controls, indicators and tell-tales (added by National Amendment No. 1)

3 Terms and definitions

The terms and definitions given in GB/T 20913-2007 and the following apply to this document.

3.1 Protective system - the interior fittings and devices intended to restrain the occupants.

3.2 Type of protective system - protective devices that do not differ in the following essential respects: manufacturing process technology; dimensions; materials.

3.3 Angle of impact - the angle between the straight line perpendicular to the front face of

the barrier and the longitudinal line of travel of the vehicle.

3.4 Barrier face - that part of the barrier surface to which the plywood is fitted.

3.5 Vehicle type - vehicles that do not differ in the following essential respects: the length and width of the vehicle where they adversely affect the results of the impact test; the structure, dimensions, shape and materials of the part of the vehicle forward of the transverse plane through the "R" point of the driver's seat where they adversely affect the results of the impact test; the external shape and the internal dimensions of the passenger compartment and the type of protective system, where they adversely affect the results of the impact test; the location of the engine (front, rear or centre) and its orientation (transverse or longitudinal); the unladen kerb mass where it adversely affects the results of the impact test; the optional equipment or fittings supplied by the manufacturer where they adversely affect the results of the impact test.

3.6 Passenger compartment - the space accommodating the occupants, bounded by the roof, the floor, the side walls, the doors, the glazing and the front bulkhead, the rear bulkhead or the plane supporting the rear seat backs.

3.7 R point - the reference point specified by the manufacturer for each seating position and related to the structure of the vehicle.

3.8 H point - the reference point of each seating position determined in accordance with the procedure described in Annex A.

3.9 Unladen kerb mass - the mass of the vehicle in running order, without driver, passengers and goods, but with the fuel tank filled to 90 % of its total capacity and with the on-board tools and the spare wheel, where these are supplied by the vehicle manufacturer as standard equipment.

3.10 Multipurpose goods vehicle - a goods vehicle whose design and construction are principally intended for the carriage of goods, having a long-nose body and cab structure (more than half of the engine length lying forward of the foremost point of the windscreen, or the centre of the steering wheel lying within the forward quarter of the total vehicle length), having an open cargo box, carrying not more than 5 occupants including the driver, and with a maximum design total mass not greater than 3 500 kg.

4 Requirements

4.1.1 The H point of each seating position shall be determined in accordance with the procedure specified in Annex A.

4.1.2 Where the protective system of a front seating position includes a safety belt, that belt shall comply with the requirements of GB 14166.

4.1.3 For a seating position at which a dummy is placed and which is equipped with a

protective system including a safety belt, the belt anchorages shall comply with the requirements of GB 14167.

4.1.4 A seating position fitted with an airbag shall carry airbag information: on a vehicle fitted with a driver frontal airbag, the marking "AIRBAG" or equivalent information shall be placed within the circumference of the steering wheel and shall be durable and easily visible; on a vehicle fitted with a passenger airbag, the marking "AIRBAG" or equivalent information shall be placed durably and be easily visible, and the warning label shall carry the information given in 4.1.5.

4.1.5 A vehicle fitted with one or more frontal protection airbags shall carry information warning of the extreme hazard arising from the use of a rear-facing child restraint system on a seating position protected by a frontal airbag. The information shall at least comprise the layout and content of the warning label shown in Figure 1, with an overall size of at least 120 mm x 60 mm or an equivalent area; another form of label is permitted provided its wording matches the warning content of Figure 1. The warning label shall carry the warning content in Chinese. For a front passenger seating position protected by a frontal airbag, the warning label shall be durably kept on each face of the passenger-side sun visor so that at least one label is visible at all times whether the visor is open or closed; alternatively one label shall be affixed to the visible surface of the visor and another to the roof lining behind it. For other seating positions protected by a frontal airbag, the label shall be affixed directly in front of the seating position concerned and shall be clearly visible at all times to a user about to install a rear-facing child restraint system there. This requirement does not apply to a seating position on which the frontal airbag protection is automatically deactivated when a rear-facing child restraint system is installed. The vehicle user manual shall carry the following information in Chinese: "Do not use a rear-facing child restraint system on a seating position protected by an activated frontal airbag!", together with a warning illustration.

4.2.1 Where a vehicle is tested in accordance with GB/T 20913-2007 and complies with 4.2 of GB/T 20913-2007, the vehicle is deemed to comply with the requirements of 4.2 of this standard. For category N1 vehicles and multipurpose goods vehicles, the provisions of items b), c) and e) of 4.2.2 do not apply.

4.2.2 For the dummies placed at the front outboard seating positions, the performance criteria determined in accordance with Annex B shall meet the following requirements: a) the head performance criterion (HPC) shall be not greater than 1 000, and the cumulative time during which the resultant head acceleration exceeds 80 g shall not exceed 3 ms, head rebound excluded; b) the neck injury criterion (NIC) shall not exceed the limit curves of Figure 2 and Figure 3; c) the neck bending moment about the Y axis in extension shall be not greater than 57 N·m; d) the thorax compression criterion (ThCC) shall be not greater than 75 mm; e) the viscous criterion of the thorax (V·C) shall be not greater than 1.0 m/s; f) the femur force criterion (FFC) shall not be above the performance criterion curve shown in