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

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**Safety requirements for occupant injury caused by cargo
movement of passenger cars
(English Translation)**

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1 Scope

This document specifies the safety requirements and test methods for occupant injury caused by cargo movement of passenger cars.

This document is applicable to passenger cars with a loading space limited by seats.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the 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 3730.1 Terms and Definitions of Motor Vehicles, Trailers and Combination Vehicle - Part

1: Types

GB 15083 Strength Requirement and Test Method of Automobile Seats, Their Anchorages and

Any Head Restraints

GB/T 29120 Procedure for H-point and R-point Determination (GB/T 29120-2012, ISO 6549:1999, ISO 20176:2006, MOD)

3 Terms and Definitions

What is defined in GB/T 3730.1, and the following terms and definitions are applicable to this document.

3.1

single seat

A ride for one adult occupant and with a complete covering and a backrest that is not connected to the vehicle structure.

3.2

bench seat

A ride for more than one adult occupant and with a complete covering.

[source: GB 15083-2019, 3.3]

NOTE: such as: horizontal rings, vertical rings, cables, hooks, eyelets, lugs, edge hooks, threaded connections and guide rails, etc.

3.10

lashing device

A device connected to a lashing point to secure the load (luggage and cargo) in the vehicle.

NOTE: such devices generally consist of nets, tensioning devices (such as: webbing and belts), tensioning elements (such as: wrenches and ratchets) and connectors (such as: hooks and eyelets) and are defined by the vehicle manufacturer.

3.11

partitioning system

In addition to the backrest, other components or devices (such as: partitions, bulkheads, grilles and nets) used to protect occupants from injury due to movement of luggage.

NOTE 1: in particular, it refers to partitioning system composed of mesh or metal mesh, located above the backrest in the upright or folded position.

NOTE 2: if a partitioning system is installed on the head restraint as standard configuration of the vehicle, then, the head restraint (excluding the seat equipped with the head restraint) is considered to be part of the partitioning system.

NOTE 3: it is up to the vehicle manufacturer to define whether the head restraint or other integrated vehicle components (for example, foldable backrest) assume the function of the partitioning system.

[source: GB 15083-2019, 3.15, modified]

3.12

longitudinal plane

A plane parallel to the longitudinal center plane of the vehicle.

[source: GB 15083-2019, 3.11]

3.13

transverse plane

A vertical plane orthogonal to the longitudinal center plane of the vehicle.

[source: GB 15083-2019, 3.10]

3.14

test block

A standard module to simulate cargo.

3.15

luggage compartment

The area in a vehicle behind the second row of seats or the non-foldable / non-removable last row of seats (the row farther back) that is used for transporting cargo.

3.16

loading space

The area in a vehicle that consists of the luggage compartment and an area that can be adapted to transport passengers and / or cargo, as defined by the vehicle manufacturer.

3.17

cargo

A load that can be transported within the loading space.

NOTE: such as: luggage and items.

3.18

backrest

A part of a seat designed to support the occupant's back, shoulders and head.

4.1 General Requirements

4.1.1

The backrest of passenger cars whose loading space is limited by backrests shall be tested in accordance with 5.3 and satisfy the requirements of 4.2.

4.1.2

If the passenger cars (except multi-purpose passenger cars) with a loading space limited by backrests are equipped with a partitioning system, they shall be tested in accordance with 5.3 and satisfy the requirements of 4.3; multi-purpose passenger cars with a loading space limited by backrests shall at least be equipped with a partitioning system, and the

partitioning system shall be tested in accordance with 5.3 and satisfy the requirements of 4.3. If the multi-purpose passenger cars cannot arrange test blocks in accordance with 5.2.3, then, it is unnecessary to satisfy the above-mentioned requirements.

4.1.3

If the passenger cars (except multi-purpose passenger cars) with a loading space limited by backrests are equipped with a lashing point, they shall be tested in accordance with 5.4 and satisfy the requirements of 4.4; multi-purpose passenger cars with a loading space limited by backrests shall at least be equipped with a lashing point, and the lashing point shall be tested in accordance with 5.4 and satisfy the requirements of 4.4.

4.2 Backrests

4.2.1

The backrests shall satisfy the requirements of 4.2.2 and 4.2.3. Seat systems that satisfy the requirements of GB 15083 are also deemed to comply with the requirements of this article.

4.2.2

The backrests assuming the function of loading space partitioning shall be designed to have sufficient strength, so as to improve the protective capability against injuries to the occupants caused by forward movement of cargo when the vehicle sharply decelerates.

4.2.3

During the test in 5.3, the test block shall be maintained behind the backrest, the locking system of the backrest shall be maintained in the original position; the backrest, seat, anchorage, adjustment system and displacement system are allowed to generate permanent deformation that has no risk of injury to the occupants. After the test, there shall be no sharp corners or edges that may increase the risk or degree of injury to the occupants.

4.3 Partitioning System

4.3.1

Occupants seated in the rearmost row of seats with limited loading space shall be protected by the partitioning system, so as to reduce injuries from moving luggage above the backrests.

4.3.2

During the test in 5.3, the test block shall be maintained behind the partitioning system and / or integrated vehicle components. The partitioning system and / or integrated vehicle components shall maintain in the original position and shall not become detached from their anchor points.