INTERNATIONAL STANDARD

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Road vehicles — Anchorages in vehicles and attachments to anchorages for child restraint systems —

Part 1:
Seat bight anchorages and attachments

Véhicules routiers — Ancrages dans les véhicules et attaches aux ancrages pour systèmes de retenue pour enfants —

Partie 1: Ancrages près de la jonction dossier-coussin d'assise et attaches

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 13216 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 13216-1 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 12, *Restraint systems*.

ISO 13216 consists of the following parts, under the general title *Road vehicles — Anchorages in vehicles and attachments to anchorages for child restraint systems*:

— *Part 1: Seat bight anchorages and attachments*

— *Part 2: Top tether anchorages and attachments*

— *Part 3: Classification of child restraint dimensions and vehicle space*

Annexes A and B form a normative part of this part of ISO 13216.

Introduction

This part of ISO 13216 describes a universal system for anchoring child restraint systems to vehicles.

The purpose of this system is to improve the overall safety performance of child restraints, particularly by improving the convenience of installation and reducing the risk of misuse.

Road vehicles — Anchorages in vehicles and attachments to anchorages for child restraint systems —

Part 1:
Seat bight anchorages and attachments

1 Scope

This part of ISO 13216 specifies the dimensions, general requirements and static strength requirements of rigid anchorages for anchoring child restraint systems (CRS) in vehicles. It is applicable to fittings for the installation of CRSs for children with a mass of up to 22 kg, by means of two rigid anchorages positioned in the seat bight area, in passenger carrying vehicles.

NOTE 1 This mass limit applies to CRSs where the inertia forces of the child and CRS are transferred via the anchorage system for the CRS. The anchorages may be used for systems for larger children, such as seats where the main forces are transferred through the adult seat belt, provided that the forces applied to the anchorages and the resulting excursions (see 4.2) do not exceed the limits in this part of ISO 13216.

To assure compatibility with the anchorages, this part of ISO 13216 also specifies important features of CRSs equipped with rigid attachments, such as critical dimensions of the attachments and general requirements for handling. Supplementary devices, such as tether straps and reaction bars, which may be necessary for specific vehicle configurations or to fulfil performance criteria included in national and international standards and regulations, are not specified in this part of ISO 13216.

An interim anchorage system that employs semi-rigid anchorages in the vehicle is described in annex A. Requirements for optional non-rigid attachments on the CRS are given in annex B.

NOTE 2 Performance and strength requirements for the homologation of CRSs using attachments according to this part of ISO 13216 are presumed to be specified in other standards and regulations.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 13216. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 13216 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 4130*, Road vehicles — Three-dimensional reference system and fiducial marks — Definitions.*

ISO 6487, *Road vehicles — Measurement techniques in impact tests — Instrumentation.*

ISO 6549, *Road vehicles — Procedure for H- and R-point determination.*

ISO 13215-2[1], *Road vehicles — Reduction of misuse risk of child restraint systems — Part 2: Requirements and test procedures for correct installation (panel method).*

3 Terms and definitions

For the purposes of this part of ISO 13216, the following terms and definitions apply.

3.1
anchorage
one of two (2) prescribed 6 mm diameter round horizontal bars, in accordance with this part of ISO 13216, provided at a vehicle seating position and extending from vehicle or seat structure to accept and restrain a **child restraint system** (3.3) with prescribed **attachments** (3.2)

NOTE Anchorages may be rigid, or semi-rigid according to annex A.

3.2
attachment
one of two (2) prescribed connections, in accordance with this part of ISO 13216, extending from the **child restraint system** (3.3) structure, and compatible with an **anchorage** (3.1)

NOTE Attachments may be rigid, or non-rigid according to annex B.

3.3
child restraint system
CRS
free-standing device intended to provide child vehicle occupants with an approved restraint

NOTE CRSs comprise various categories such as car beds, infant restraints, toddler seats (forward and rearward facing), booster cushions, and booster seats. Combination products may cover two or more of these product categories.

3.4
child restraint fixture
CRF
fixture which simulates the maximum external dimensions of the child restraint, and which is used to determine the space required by the **child restraint system** (3.3) and the location and access to the **anchorages** (3.1), but not the space required for ingress to the vehicle

See Figures 1 and 2.

NOTE Forward and upward limitations are not specified in this part of ISO 13216.

3.5
CRS connector
attachment (3.2) with certain specified dimensions designed to be rigidly supported

See Figure 8.

NOTE When designed according to annex B, a CRS connector may be flexibly supported.

3.6
ISOFIX
system for the connection of **child restraint systems** (3.3) to vehicles which has two rigid **anchorages** (3.1) in a vehicle seating position located near the seat bight, corresponding rigid **attachments** (3.2) on the child restraint system, and a means to limit the pitch rotation of the CRS

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[1] To be published.