INTERNATIONAL STANDARD

ISO 13216-2

First edition
2004-12-01

Corrected version
2005-03-15

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

Part 2: Top tether anchorages and attachments

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

Partie 2: Ancrages pour fixation supérieure et attaches

Reference number
ISO 13216-2:2004(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

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 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13216-2 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 12, *Passive safety crash protection 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*, is under preparation.

This corrected and reprinted version of ISO 13216-2:2004 incorporates the following correction:

— The descriptive text for Figure 9 on page 14 has been replaced.

Introduction

This part of ISO 13216 specifies top tether anchorages and attachments: a means of limiting the pitch rotation of child restraint systems (CRS) when used in conjunction with the specifications of ISO 13216-1 and which can also be used in conjunction with seat belt systems for CRS installation.

The main body of this document presents a wide installation zone for top tether anchorages intended for CRS with *rigid* ISOFIX seat bight attachments — the "ISOFIX zone" — developed and evaluated in dynamic tests with CRS in combination with rigid ISOFIX seat bight attachments[1)].

Annex A specifies top tether anchorage installation zones, referred to as "conventional zones", which are compatible with current US and Canadian regulations (those required under current Australian regulations are narrower). These conventional zones are applicable to all child restraint systems intended for use with top tether attachments and can be combined with any type of lower attachments: ISOFIX, LATCH or conventional seat belt attachments.

The ISOFIX zones were developed in order to allow more design possibilities for locating the top tether anchorage within the vehicle structure. They are based on the conventional zones, but test results have shown that CRS with rigid ISOFIX attachments can accept wider top tether angles than those in the conventional zones, in both the vertical and horizontal planes, without a reduction in performance.

1) The application of ISOFIX zones to child restraint systems in combination with other types of attachments (LATCH or conventional seat belt attachments) had not been evaluated at time of publication.

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

Part 2:
Top tether anchorages and attachments

IMPORTANT — Measures should be taken to assure that top tether anchorages positioned in the extended part of the ISOFIX zones (i.e. the portions outside the conventional zones) are used only in combination with ISOFIX child restraint systems having *rigid* seat bight attachments. Use of ISOFIX zones for positioning top tether anchorages could result in a positioning that is incompatible with regulations in some countries.

1 Scope

This part of ISO 13216 establishes the positioning zones, dimensions and general and static-strength requirements for top tether anchorages used together with seat bight anchorages according to ISO 13216-1 or with other systems for anchoring child restraint systems (CRS) in road vehicles. It is applicable to child restraint systems intended for children with a mass of up to 22 kg.

NOTE Further specifications for top tether anchorages, straps and connectors could exist in other standards and regulations.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO 13216-1, *Road vehicles — Anchorages in vehicles and attachments to anchorages for child restraint systems — Part 1: Seat bight anchorages and attachments*

SAE J1100:1993, *Motor vehicle dimensions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 13216-1 and the following apply.

3.1
top tether anchorage
feature located on the vehicle in a defined zone, designed to accept a CRS tether strap connector and transfer its restraint forces to the vehicle structure

EXAMPLE Bar, bracket, ring, webbing loop (recessed or unrecessed).