

First edition
2006-07-01

Corrected version
2006-11-01

**Road vehicles — Reduction of misuse
risk of child restraint systems —**

**Part 1:
Forms for field studies**

*Véhicules routiers — Réduction du risque de mauvaise utilisation des
systèmes de retenue pour enfants —*
Partie 1: Formulaires pour les études in situ

[ISO 13215-1:2006](https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664-c3b84ba0c05a/iso-13215-1-2006)

[https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664-
c3b84ba0c05a/iso-13215-1-2006](https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664-c3b84ba0c05a/iso-13215-1-2006)



Reference number
ISO 13215-1:2006(E)

© ISO 2006

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 13215-1:2006](#)

<https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664-c3b84ba0c05a/iso-13215-1-2006>

© ISO 2006

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

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.....	iv
Introduction	v
1 Scope	1
2 Terms and definitions.....	1
3 Instructions	1
3.1 General.....	1
3.2 Recommendations regarding accomplishment of the field study	2
4 Instructions for completion of the forms	2
5 Assessment of results.....	2
6 Assessment cases.....	3
7 Related electronic documents.....	3
Annex A (informative) Sample collection and report forms.....	4
Bibliography	12

ITeH STANDARD PREVIEW
(standards.iteh.ai)

[ISO 13215-1:2006](https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664-c3b84ba0c05a/iso-13215-1-2006)

<https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664-c3b84ba0c05a/iso-13215-1-2006>

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 13215-1 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 12, *Passive safety crash protection systems*.

ISO 13215 consists of the following parts, under the general title *Road vehicles — Reduction of misuse risk of child restraint systems*:

- *Part 1: Forms for field studies*
- *Part 2: Requirements and test procedures for correct installation (panel method)*
- *Part 3: Prediction and assessment of misuse by Misuse Mode and Effect Analysis (MMEA)*

This corrected version of ISO 13215-1:2006 incorporates the following correction:

- the URL in Clause 7 has been updated.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 13215-1:2006](https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664-c3b84ba0c05a/iso-13215-1-2006)

<https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664-c3b84ba0c05a/iso-13215-1-2006>

Introduction

Whether or not adequate protection is provided to a child occupant in a vehicle crash depends not only on the inherent capability of the child restraint system to provide protection, but also on its proper installation and subsequent correct use. Today it is known that certain misuse configurations and interface problems can have serious consequences for child occupants in vehicle crashes.

A clear understanding of the kind and frequency of incorrect use has important implications for the design of child restraint systems and instructions for use, the vehicle in which they are used, education and loan programs, and legislation.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[ISO 13215-1:2006](https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664-c3b84ba0c05a/iso-13215-1-2006)

<https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664-c3b84ba0c05a/iso-13215-1-2006>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 13215-1:2006

<https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664-c3b84ba0c05a/iso-13215-1-2006>

Road vehicles — Reduction of misuse risk of child restraint systems —

Part 1: Forms for field studies

1 Scope

This part of ISO 13215 specifies a basic methodology, including sample forms, for collection of data concerning misuse of child restraint systems in field studies. The purpose of using standardized forms is to provide a tool for quantification of misuse related to common misuse parameters, and to facilitate the exchange of data between different parties, thus making the results easily available for analysis. By using the sample forms provided, some main misuse configurations for several different groups of child restraint systems can be determined.

NOTE For further evaluation of the misuse risk of a specific child restraint system, ISO 13215-2 and ISO 13215-3 can be used.

2 Terms and definitions

ISO 13215-1:2006

<https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664->

For the purposes of this document, the following terms and definitions apply.

2.1

child restraint system

CRS

any free-standing device intended to provide child vehicle occupants with an approved restraint

NOTE CRS comprise various categories, such as car beds, infant restraints, toddler seats, booster cushions and booster seats. Combination products may cover two or more of these product categories.

2.2

misuse of child restraint systems

any deviation from intended application and use which might reduce the protective performance of the child restraint system

3 Instructions

3.1 General

Annex A consists of two forms for general information, and five forms covering various application examples for common CRS types. The different forms have the same general layout. Typical child mass ranges are given for reference.

NOTE The forms presented are examples for common CRS types. While the forms may not fully cover the needs for a typical CRS, they can serve as a support for development of more specific layouts. In general, the main intention is to provide all variables needed to perform a CRS field study on misuse, and to facilitate the assessment and comparison of incorrect use of child restraint systems for different markets.

3.2 Recommendations regarding accomplishment of the field study

3.2.1 The observations should be performed by experienced persons, with the ability to distinguish between correct and incorrect installations of the respective CRS types and models.

3.2.2 The observations should be carried out at suitable selected areas, such as parking areas, shopping centres, roadside restaurants, zoos.

3.2.3 The observations should preferably be performed both in urban areas (short driving distances) and rural areas (longer driving distances).

NOTE In addition to the above, it is presumed that the observations are performed in a safe and ethical manner according to instructions and guidelines of the performing organization.

4 Instructions for completion of the forms

The forms (see Annex A) shall be filled out as follows:

- Seating position in vehicle: Enter the two-digit seating code for the actual child restraint system in accordance with the figure.
- Installation parameters (forms C to G):
 - If correct use applies: Enter a check mark (e.g. "X", or "0") in the first square (marked as bold);
 - If a misuse mode applies: Enter a check mark (not "0") in the corresponding misuse mode square. In case the misuse mode can be quantified by the observer, an error score between 2 and 10 (see below) can be entered directly in the appropriate square.

Each separate misuse mode should be judged with an individual error score (a weighted value between 2 and 10). The value of each error score should be based on the probability and potential severity of injury caused by incorrect use of that particular aspect. Minor errors are scored "2"; the more serious the error, the higher the score (up to and including "10"). For correct use, the "error" score is always "0".

The judgement of error scores can either be made by the time of checking the restraint installations, or afterwards.

5 Assessment of results

The total score of a CRS in a field study is obtained by adding the error scores of the different aspects. Total scores far in excess of "10" are possible.

The scale used to translate this total score into a final assessment can be divided in four categories:

- 0 points: Correct use;
- 2 to 4 points: Acceptable slight misuse;
- 5 to 9 points: Serious misuse;
- ≥ 10 points: Very serious misuse.

6 Assessment cases

6.1 All aspects are correct, the total score is “0”. Assessment: Correct use.

6.2 Only one or two aspects of minor severity (value “2”) is incorrect, the total score is “2” or “4”. Assessment: Acceptable slight misuse.

6.3 Three or more minor errors are detected, the total score is more than “4” but less than “10”. Assessment: Serious misuse.

6.4 One or more very serious errors are found, the total score is “10” or more. Assessment: Very serious misuse.

7 Related electronic documents

To enhance the value and applicability of this part of ISO 13215, the forms found in Annex A are provided in a revisable (MS Excel) format.

These forms are posted on the ISO Standards maintenance web site, and can be found at the following URL: <http://standards.iso.org/iso/13215/-1>.

iTeh STANDARD PREVIEW (standards.iteh.ai)

ISO 13215-1:2006

<https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664-c3b84ba0c05a/iso-13215-1-2006>

Annex A
(informative)

Sample collection and report forms

The forms below are presented on the following pages.

General information forms:

Form A: General information

Form B: General information — Questions for all occupants

Specific child restraint evaluation forms:

Form C: Carry-cots/car-beds (up to 10 kg)

Form D: Infant restraints (up to 13 kg)

Form E: Rearward or forward facing infant/child seats (up to 25 kg)

Form F: Child safety seats with harnesses or harness/shield combinations (9 kg to 25 kg)

Form G: Booster cushions/seats, backless shield boosters (15 kg to 36 kg)

ISO 13215-1:2006
<https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-4f3a-a664-c3b84ba0c05a/iso-13215-1-2006>

FORM A

General Information

ID: _____

Observer: _____

<u>General interview data:</u>		<u>Vehicle and occupant data:</u>	
Date:	_____	Model:	_____
Day:	Su M Tu W Th F Sa	Type:	_____
Road conditions:	Dry Wet Snow Ice	Model year:	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Start time:	_____ am/pm	Number of doors (2 or 4):	<input type="checkbox"/>
End time:	_____ am/pm	Number of occupants:	<input type="checkbox"/> <input type="checkbox"/>
iTeh STANDARD PREVIEW			
(standards.iteh.ai)			
<u>General area data:</u>	(Shopping centre, roadside restaurant, zoo, etc.)		
Area type:	_____		
Location:	_____ ISO 13215-1:2006		
Place:	_____ https://standards.iteh.ai/catalog/standards/sist/49d725bb-80a5-43a-a664-c3b84ba0c05a/iso-13215-1-2006		
Country:	_____		
<u>If possible, describe details of the travel (shopping, weekend trip, holiday):</u>			

<u>General remarks:</u>			

Begin a new general observation sheet for each study.			
If a vehicle has more than one CRS, use the applicable evaluation form (C to G) for each CRS.			