INTERNATIONAL STANDARD

ISO 13218

First edition
1998-08-01

Road vehicles — Child restraint systems — Report form for accidents involving child passengers

Véhicules routiers — Systèmes de retenue pour enfants — Formulaire de rapport pour accidents avec des enfants dans les véhicules

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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.

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.

International Standard ISO 13218 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 12, *Restraint systems*.

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Annex A forms an integral part of this International Standard. Annex B is for information only.

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Road vehicles — Child restraint systems — Report form for accidents involving child passengers

1 Scope

This International Standard specifies a report form for the collection of data in accidents with children under the age of 13 in motor vehicles. The aim of this standardized form is to provide a simple format for reporting road accidents where children are involved.

Severe accidents where children have been sitting in a child restraint system are rare. Therefore, the format has been designed in a way that it should be possible to use in all countries, although the design of child restraint systems varies, in order to simplify the exchange of data.

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The coding used in this form is based on ISO 6813, ISO 12353-1, AIS manual from AAM (Association for the advancement of automotive medicine) and SAE J 224 (CDC-coding).

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2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 6813:1998, *Road vehicles — Collision classification — Terminology.*

SAE J 224:1980, *Collision deformation classification.*

AIS 90, *The Abbreviated Injury Scale (Association for the Advancement of Automotive Medicine).*

3 Definitions and abbreviations

For the purposes of this International Standard, the definitions given in ISO 6813 and the following definition apply.

3.1
child restraint system (CRS)
any free standing device intended to provide child vehicle occupants with an approved restraint

NOTE — Child restraint systems 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.

For the purposes of this International Standard the following abbreviations apply.

AIS: Abbreviated Injury Scale
CDC: Collision Deformation Classification
EES: Energy Equivalent Speed
ISS: Injury Severity Score
MAIS: Maximum AIS, the highest single AIS code in a patient with multiple injuries

4 Report form

The report form given in annex A shall be used.

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Annex A
(normative)

Report form

A.1 General

Items 1 to 8 of the form contain information related to the accident/collision circumstances and the case vehicle involved. Should there be more than one case vehicle with child occupants in the collision, it is recommended that additional copies of this part of the form be used.

Items 9 to 12 of the form contain information related to the case vehicle occupants, and specifically the child restraint system (CRS). In case there are more than one child restraint system to be reported, it is recommended that additional copies of this part of the form be used, one for each child restraint system.

A.2 Special remarks and recommendations for using the form

The following remarks and recommendations relate to specific items of the form.

4. Direction of impact

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The direction of principal force should be given in relation to the event that probably caused the main risk for injury. This entry is also related to the first two digits of the CDC code in item 8.2. Further information is given in ISO 6813 and SAE J 224.

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5. Type of impact

More than one alternative (e.g. relevant events in multiple impact collisions) may be used to describe the type of impact.

6. Collision sketch

If possible, point and direction of principal force should be sketched according to recommendations given in ISO 6813.

7. Vehicle crash severity

If possible, the change of velocity or other adequate measures of vehicle crash severity should be used, but the travel speed estimated by, for example, the driver could also be of help. If the change of velocity, mean acceleration, etc., was reconstructed, the method should be mentioned.

8. Vehicle damage/interior observations

Vehicle damage can optionally be shown by shading damaged portions of the vehicle in the drawing.

Moving luggage in the luggage compartment deforming the seat back should be mentioned only when it affects the child/CRS.

9. Case vehicle occupants

The occupant position coding system given in the figure is a matrix system currently in use in several countries. It may be expanded for larger vehicles. Alternatively, other coding systems are acknowledged and may be used with the addition of a reference.

Non-injured occupants, and occupants not affecting the injury outcome of the child, do not have to be recorded in this section.

NOTE — Age should preferably be given in years, also for children (using decimals as appropriate). Occupant mass should be recorded in kilograms. Occupant length should be recorded in centimetres.

10. Child restraint / belt / misuse

The type of child restraint system (CRS) should be stated by a textual description, and optionally by placing a photograph or a drawing of the restraint in the assigned square.

NOTE — "10.8.1 Wrong position" also includes positioning of the CRS in a vehicle position equipped with an airbag.

11. Injuries

Information on the injury outcome of vehicle occupants other than the child is optional, but may add valuable information about the vehicle crash severity, and the protection degree of the CRS used.

12. Comments and observations

Comments and observations noted here should have a reference to the related item no. in the form, if applicable.

A.3 Report form

The standardized report form is given on the following pages.

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ISO 13218:1998 Accident involving child passenger

1. GENERAL

1.1 Identification no.	1.2 Date	1.3 Country	1.4 Case no.
1.5 Source of reported data	1.6 Contact name, phone/fax no.		

2. CASE VEHICLE

2.1 Vehicle make/model	2.2 Model code (VIN)	2.3 Model year	2.4 Mass at impact	2.5 No. of occupants

3. TYPE OF ACCIDENT / OTHER VEHICLE

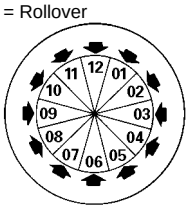
3.1 Single vehicle accident ☐	3.2 Collision with other vehicle ☐	3.2.1 Vehicle make/model	
3.2.2 Model code (VIN)	3.2.3 Model year	3.2.4 Mass at impact	3.2.5 No. of occupants

4. DIRECTION OF IMPACT (CASE VEHICLE)

4.1 Direction of principal force

_____

00 = Rollover



5. TYPE OF IMPACT

CASE VEHICLE (MARK ALL THAT APPLY)

5.1 ☐ Frontal impact, % overlap___ 5.2 ☐ Side impact 5.3 ☐ Sideswipe

5.4 ☐ Rear impact 5.5 ☐ Skid 5.6 ☐ Run off road 5.7 ☐ Rollover

5.8 ☐ Submersion 5.9 ☐ Fire 5.10 ☐ Animal

5.11 ☐ Object contacted _____

5.12 ☐ Other (specify) _____

OTHER VEHICLE (MARK ALL THAT APPLY)

5.13 ☐ Frontal impact, % overlap ___

5.14 ☐ Side impact 5.15 ☐ Sideswipe

5.16 ☐ Rear impact

5.17 ☐ Other (specify)

6. COLLISION SKETCH

7. VEHICLE CRASH SEVERITY

7.1 Estimated change in velocity (km/h) _____

by _____

7.2 Calculated change in velocity (km/h) _____

method _____

7.3 Calculated EES (km/h) _____

7.4 Mean acceleration (g) _____

7.5 Speed limit (km/h) _____

7.6 Other crash severity assessment

PICTURE OF DAMAGED VEHICLE

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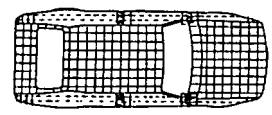
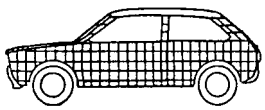
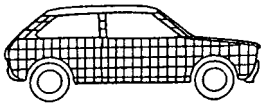
8. VEHICLE DAMAGE / INTERIOR OBSERVATIONS







8.1 Damage to vehicle (describe) _____

8.2 CDC CODE ☐☐☐☐☐☐☐

8.3 Intrusion into passenger compartment ☐ yes ☐ no ☐ unknown _____

_____

8.4 Failure of CRS attachment(s) ☐ yes ☐ no ☐ unknown _____

_____

8.5 Problem opening doors ☐ yes ☐ no ☐ unknown _____

8.6 Front passenger airbag installed ☐ yes ☐ no ☐ unknown _____

8.7 Front passenger airbag deployed ☐ yes ☐ no ☐ unknown _____

8.8 CRS/airbag interaction ☐ yes ☐ no ☐ unknown _____

8.9 Moving luggage (affecting child/CRS) ☐ yes ☐ no ☐ unknown _____

8.10 Other interaction with child/CRS ☐ yes ☐ no ☐ unknown _____

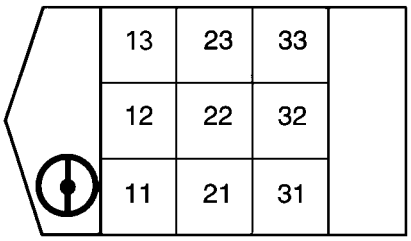
9. CASE VEHICLE OCCUPANTS

9.1.1 Position __ 9.1.2 ☐ Male 9.1.3 ☐ Female	9.2.1 Position ___ 9.2.2 ☐ Male 9.2.3 ☐ Female	9.3.1 Position ___ 9.3.2 ☐ Male 9.3.3 ☐ Female
9.1.4 Age _____ 9.1.5 Mass ___ 9.1.6 Height ___	9.2.4 Age _____ 9.2.5 Mass ___ 9.2.6 Height ____	9.3.4 Age _____ 9.3.5 Mass ___ 9.3.6 Height ___
9.1.7 MAIS _____ 9.1.8 ☐ Fatal 9.1.9 ☐ Ejected	9.2.7 MAIS _____ 9.2.8 ☐ Fatal 9.2.9 ☐ Ejected	9.3.7 MAIS _____ 9.3.8 ☐ Fatal 9.3.9 ☐ Ejected
9.1.10 Restraint ☐ used ☐ not used ☐ unknown	9.2.10 Restraint ☐ used ☐ not used ☐ unknown	9.3.10 Restraint ☐ used ☐ not used ☐ unknown

9.4.1 Position ___ 9.4.2 ☐ Male 9.4.3 ☐ Female	9.5.1 Position ___ 9.5.2 ☐ Male 9.5.3 ☐ Female	9.6.1 Position ___ 9.6.2 ☐ Male 9.6.3 ☐ Female
9.4.4 Age _____ 9.4.5 Mass ___ 9.4.6 Height __	9.5.4 Age _____ 9.5.5 Mass ___ 9.5.6 Height ___	9.6.4 Age _____ 9.6.5 Mass ___ 9.6.6 Height ____
9.4.7 MAIS _____ 9.4.8 ☐ Fatal 9.4.9 ☐ Ejected	9.5.7 MAIS _____ 9.5.8 ☐ Fatal 9.5.9 ☐ Ejected	9.6.7 MAIS _____ 9.6.8 ☐ Fatal 9.6.9 ☐ Ejected
9.4.10 Restraint ☐ used ☐ not used ☐ unknown	9.5.10 Restraint ☐ used ☐ not used ☐ unknown	9.6.10 Restraint ☐ used ☐ not used ☐ unknown

Occupant position codes:

If right-hand drive, mirror image



PICTURE OR DRAWING OF CHILD RESTRAINT

10. CHILD RESTRAINT / BELT / MISUSE

10.1 Position code _____ 10.2 ☐ Adult seat belt only 10.2.1 ☐ Lap belt only

10.2.2 ☐ Lap and diagonal 10.2.3 ☐ On lap of adult, belt routing _____

10.3 ☐ Child restraint, ECE group (if applicable) _____

10.3.1 ☐ Booster cushion 10.3.2 ☐ Forward facing 10.3.2.1 ☐ Harness

10.3.2.2 ☐ Impact shield 10.3.3 ☐ Rear facing 10.3.4 ☐ Infant restraint

10.3.5 ☐ Other type 10.4 CRS attachment type _____

10.5 CRS type/model _____

10.6 Type approval/year _____ 10.7 Restraint age _____

10.8 CRS misuse	☐ yes	☐ no	☐ unknown
10.8.1 Wrong position (including seating position with an airbag)	☐ yes	☐ no	☐ unknown
10.8.2 Child incompatible with CRS	☐ yes	☐ no	☐ unknown
10.8.3 CRS incorrectly mounted/adjusted	☐ yes	☐ no	☐ unknown
10.8.4 Incorrect belt routing	☐ yes	☐ no	☐ unknown
10.8.5 Excessive belt slack	☐ yes	☐ no	☐ unknown

10.8.6 Other misuse: _____

10.9 CRS failure/damage	☐ yes	☐ no	☐ unknown

10.9.1 Failure/damage description:

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11. INJURIES

Position (in car)	Injury (type and location)	Injury mechanism and contact	AIS 90 code	ISS

12. COMMENTS AND OBSERVATIONS (related to item no. if applicable)

_____

_____

_____

_____

Annex B
(informative)

Bibliography

ISO 12353-1:—[1)], *Road vehicles — Traffic accident analysis — Terminology.*

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1) To be published.