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**Road vehicles — Sled test method to  
enable the evaluation of side impact  
protection of child restraint systems  
— Essential parameters**

*Véhicules routiers — Méthode d'essai sur chariot pour permettre  
l'évaluation de la protection en choc latéral des dispositifs de retenue  
pour enfants — Paramètres essentiels*



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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 22 *Road vehicles*, Subcommittee SC 36, *Safety and impact testing*.

This document cancels and replaces ISO/PAS 13396:2009, which has been technically revised.

The main changes compared to ISO/PAS 13396 are as follows:

- accident statistics data have been further reviewed;
- input parameter data related to intrusion have been reviewed and supplemented with new data;
- based on the new and supplementary data presented, a judgement is made whether the ISO/PAS 13396 parameter recommendations are still valid.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

In 2008, the United Nations (UN) GRSP Informal Working Group on Child Restraint Systems (CRS) sent a request to ISO asking ISO's CRS working group to support their work on defining a side impact test procedure for CRS type approval based on state-of-the-art research and experience. It was specifically requested to define the **essential parameters** of a simplified test method, to ensure that a CRS has a sufficient capacity to contain the child and to absorb energy in the case of side impact exposure.

In response, a Publicly Available Specification was developed, published as ISO/PAS 13396:2009<sup>1)</sup>. This comprised a series of essential parameters that a side impact test procedure should seek to replicate. Much of the technical content was derived from a previous Technical Report, ISO/TR 14646:2007, with updated information where available.

In conjunction with a systematic review of ISO/PAS 13396:2009, it was decided to verify its applicability in relation to more recent accident data and the vehicle technology development.

This document reflects the review of ISO/PAS 13396:2009 considering the relevant accident data updates available and the in-depth vehicle data.

Since this document is a check of the applicability of the ISO/PAS 13396 data (on which the CRS side impact method in UN Regulation No. 129 is based), the ISO/PAS 13396 parameter recommendations are included together with the supplementary information, to judge whether an update of the parameter recommendations should be made.

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1) Cancelled and replaced by this document (ISO/TS 13396:2021).

