INTERNATIONAL STANDARD

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Third edition
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Road vehicles — Design and performance specifications for the WorldSID 50th percentile male side impact dummy —

Part 4: User's manual

Véhicules routiers — Conception et spécifications de performance pour le mannequin mondial (WorldSID), 50e percentile homme, de choc latéral —

Partie 4: Manuel de l'utilisateur

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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).

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).

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.

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

This third edition cancels and replaces the second edition (ISO 15830-4:2013), which has been technically revised.

The main changes are as follows:

— parts lists and disassembly and assembly procedures have been updated to the current production version of WorldSID;

— full arm parts list and the disassembly, assembly, and adjustment procedures have been removed;

— informative annex on general practices has been removed;

— informative annex on temperature sensitivity has been replaced by reference to ISO/TR 27957;

— informative annex on seating procedure has been replaced by reference to ISO 17949;

— all electrical components have been replaced by their respective mass or structural replacements;

— informative annex on cable routing has been removed;

— normative annex on electrical grounding scheme has been removed;

— informative annex on a permissible internal data acquisition system has been removed.

A list of all parts in the ISO 15830 series can be found on the ISO website.

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.

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Introduction

This third edition of the ISO 15830 series has been prepared on the basis of the existing design, specifications, and performance of the WorldSID 50th percentile adult male side impact dummy. The purpose of the ISO 15830 series is to document the design and specifications of this side impact dummy in a form suitable and intended for worldwide use.

In 1997, the WorldSID 50th percentile adult male dummy development was initiated, with the aim of defining a global-consensus side impact dummy with more human-like anthropometry, improved biofidelity and increased injury monitoring capabilities, suitable, for example, for regulatory use. Participating in the development were research institutes, dummy and instrumentation manufacturers, governments and vehicle manufacturers from around the world.

The original WorldSID drawings were available in electronic format. The updates are not available.

In order to apply the ISO 15830 series properly, it is important that all four parts be used together.

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Road vehicles — Design and performance specifications for the WorldSID 50th percentile male side impact dummy —

Part 4: User's manual

1 Scope

This document specifies requirements for assembling and disassembling of the WorldSID 50th percentile side impact dummy, a standardized anthropomorphic dummy for near-side-impact tests of road vehicles.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 15830-1, *Road vehicles — Design and performance specifications for the WorldSID 50th percentile male side-impact dummy — Part 1: Vocabulary and rationale*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 15830-1 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

4 Requirements

4.1 Disassembly and assembly

The WorldSID shall be disassembled and assembled according to the procedures in Annex A.

Unless noted otherwise, all fasteners shall be installed using the torques in Annex B (Table B.1). Refer to Annex C (Table C.1) for fastener abbreviations, descriptions, and ISO references.

4.2 Support equipment

The usual laboratory equipment and, in particular, the specialized support equipment in Annex D (Table D.1) shall be used.

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