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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 47804.1-2026

**Road vehicles - Design and performance specifications for the
WorldSID 50th percentile male side impact dummy - Part 1:
Terminology and symbols**

道路车辆 WorldSID第50百分位男性侧面碰撞假人的设计和性能规范 第1部分：
术语和符号

(English Translation)

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This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is GB/T 47804 "Design and Performance Specifications for Road Vehicles WorldSID 50th Percentile Male Side Impact Dummy" Part 1 of GB/T 47804 has been published, including the following parts.

---Part 1: Terminology and Symbols;

---Part 2: Mechanical Subsystem;

---Part 3: Mechanical Requirements for Electronic Subsystems;

---Part 4: User Manual this document is modified to adopt ISO 15830-1:2022 "Road vehicles - Design of 50th percentile male side-impact crash test dummies".

Performance Specification Part 1: Terminology and Basic Principles.

The technical differences between this document and ISO 15830-1:2022, and the reasons

therefor, are as follows.

---Changes were made to "Dedicated Upper Arm" (see 3.4, 3.5 in ISO 15830-1:2022) and "Rib Compression Sensor" (see 3.13).

The terminology in ISO 15830-1:2022, 3.16, "Calibration Seats" (see 3.17, ISO 15830-1:2022, 3.34) and Definitions should be developed to meet my country's technological requirements.

---The term "dummy mid-sagittal plane" (see 3.18) and its definition have been added to meet my country's technical requirements;

---The terms "1 to 2g setting joint", "aluminum honeycomb", "angular velocity sensor", "seventh cervical vertebra", "range", "round head screw", and "connection" have been removed.

"Linear", "Front", "Full Arm", "First Lumbar Vertebra", "Fifth Lumbar Vertebra", "First Sacral Vertebra", "Side Impact Dummy", "First Thoracic Vertebra", "Fourth Thoracic Vertebra" "Vertebra," "Twelfth Thoracic Vertebra," "Universal," "W50-," and their definitions (see Chapter 3 of ISO 15830-1:2022) are required to adapt to the needs of my country.

Technical requirements;

---Chapter 5 of ISO 15830-1:2022 has been deleted. This chapter describes the background and development process of dummy research and development, and is not applicable to my country.

Standard content.

The following editorial changes have been made to this document.

---To align with existing standards, the standard name has been changed to "Road Vehicles WorldSID 50th Percent Male Side Impact Dummy".

Design and performance specifications, Part 1: Terms and symbols;

---Added notes to the terminology;

---Added Appendix A (Informative) "Dummy Coordinate System";

---Added index;

---Appendices A (informative) to D (informative) in ISO 15830-1:2022 have been deleted;

---The references in ISO 15830-1:2022 have been removed.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This document is under the jurisdiction of the National Automotive Standardization Technical Committee (SAC/TC114).

Introduction

The WorldSID 50th percentile male side-impact dummy is an important testing tool for evaluating the side-impact protection performance of automobiles.

Requirements, calibration methods, and mechanical requirements of electronic subsystems are of great significance for evaluating dummy performance and for further advancing automotive safety testing.

The development of crash test dummies, and the formulation of GB/T 47804 "Design and Performance Specifications for Road Vehicle WorldSID 50th Percent Male Side Impact Dummy" the standard GB/T 47804 is proposed to consist of four parts.

---Part 1: Terminology and Symbols. The purpose is to standardize the terminology and symbols used for the 50th percentile male side-impact dummy in WorldSID.

Numbers, subscripts, and abbreviations.

Calculation, calibration method, and dummy structural dimension measurement method.

---Part 3: Mechanical Requirements for Electronic Subsystems. The aim is to standardize the 50th percentile male side-impact crash test dummy according to WorldSID.

Sensor requirements.

---Part 4: User Manual. The purpose is to standardize the assembly and disassembly requirements for the 50th percentile male side-impact crash dummy according to WorldSID standards.

Requirements for human joint adjustment and positioning.

50th percentile male among road vehicle WorldSID Design and performance specifications of side-impact dummy Part 1: Terms and Symbols

1 Scope

This document defines the terms, symbols, subscripts, and abbreviations for the 50th percentile male side-impact dummy in WorldSID.

This document applies to the design and application of the 50th percentile male side-impact dummy in WorldSID.

2 Normative references this document has no normative references.

3 Terms and Definitions 3.1 shoulder rib the first rib from top to bottom among the six ribs of the 50th percentile male side-impact dummy in WorldSID.

Note: The shoulder ribs consist of three parts. the outer shoulder ribs, the inner shoulder ribs, and the reinforcing shoulder ribs.

The second, third, and fourth ribs from top to bottom in the six ribs of the 50th percentile male side-impact dummy in WorldSID.

Note: Rib 1 is the second rib from the top in the dummy's six ribs, and rib 2 is the third rib from the top in the dummy's six ribs.

The third rib is the fourth rib from top to bottom among the six ribs of the dummy. Each rib consists of two parts. the outer rib and the inner rib.

Abdominal ribs

The two lowest two ribs among the six ribs of the 50th percentile male side-impact dummy in WorldSID.

Note: Abdominal rib 1 is the fifth rib from top to bottom in the dummy's six ribs; abdominal rib 2 is the sixth rib from top to bottom in the dummy's six ribs.

The ribs consist of two parts. the lateral ribs and the medial ribs.

Special upper arm

Note: The dedicated upper arm is different from the optional upper arm components for the arm.

upper leg

The lower limb portion between the knee and hip joint.

lower leg

The lower limb portion between the knee and ankle.