AS 13459:2021

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Earth-moving machinery — Trainer seat — Deflection limiting volume, space envelope and performance requirements (ISO 13459:2012, MOD)

AS 13459:2021

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Engineers Australia
Institute of Instrumentation, Control & Automation Australia
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Preface

This Standard was prepared by the Standards Australia Committee ME-063, Earthmoving Equipment.

The objective of this document is to specify the trainer-seat deflection limiting volume (DLV), space envelope and performance requirements, and dimensions, for use in laboratory evaluations of protective structures on earth-moving machinery as defined in ISO 6165.

The effects of vibration are not considered a significant risk for short-term or temporary seats and are therefore outside the scope of this International Standard.

This document is an adoption with national modifications, and has been reproduced from, ISO 13459:2012, *Earth-moving machinery — Trainer seat — Deflection limiting volume, space envelope and performance requirements*. The modifications are additional requirements and are set out in Appendix ZZ, which has been added at the end of the source text.

Appendix ZZ lists the variations to ISO 13459:2012 for the application of this document in Australia.

As this document has been reproduced from an International Standard, the following applies:

(a) In the source text “this International Standard” should read “this document”.

(b) A full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms “normative” and “informative” are used in Standards to define the application of the appendices or annexes to which they apply. A “normative” appendix or annex is an integral part of a Standard, whereas an “informative” appendix or annex is only for information and guidance.

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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.

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 13459 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery*, Subcommittee SC 2, *Safety, ergonomics and general requirements*.

This second edition cancels and replaces the first edition (ISO 13459:1997), which has been technically revised.

Australian Standard®

Earth-moving machinery — Trainer seat — Deflection limiting volume, space envelope and performance requirements (ISO 13459:2012, MOD)

1 Scope

This International Standard specifies the trainer-seat deflection limiting volume (DLV), space envelope and performance requirements, and dimensions, for use in laboratory evaluations of protective structures on earth-moving machinery as defined in ISO 6165.

The effects of vibration are not considered a significant risk for short-term or temporary seats and are therefore outside the scope of this International Standard.

2 Normative references

The following referenced documents are indispensable for the application 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 2867, *Earth-moving machinery — Access systems*

ISO 3411, *Earth-moving machinery — Physical dimensions of operators and minimum operator space envelope*

ISO 3449, *Earth-moving machinery — Falling-object protective structures — Laboratory tests and performance requirements*

ISO 3471, *Earth-moving machinery — Roll-over protective structures — Laboratory tests and performance requirements*

ISO 5006, *Earth-moving machinery — Operator's field of view — Test method and performance criteria*

ISO 5353, *Earth-moving machinery, and tractors and machinery for agriculture and forestry — Seat index point*

ISO 6165, *Earth-moving machinery — Basic types — Identification and terms and definitions*

ISO 6683, *Earth-moving machinery — Seat belts and seat belt anchorages — Performance requirements and tests*

ISO 9248, *Earth-moving machinery — Units for dimensions, performance and capacities, and their measurement accuracies*

ISO 10262, *Earth-moving machinery — Hydraulic excavators — Laboratory tests and performance requirements for operator protective guards*

ISO 12117-2, *Earth-moving machinery — Laboratory tests and performance requirements for protective structures of excavators — Part 2: Roll-over protective structures (ROPS) for excavators of over 6t*

ISO 20474-1, *Earth-moving machinery — Safety — Part 1: General requirements*

3 Terms and definitions

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

3.1
locating axis
LA
horizontal axis for positioning the *DLV* (3.2) with respect to the seat index point (SIP)