



Powered industrial trucks

Part 1: General requirements

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AS 2359.1:2019

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The following are represented on Committee ME-026:

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- Australian Institute for Health and Safety
- Construction and Mining Equipment Industry Group
- Hire and Rental Industry Association of Australia
- National Road Transport Association
- SafeWork NSW
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- WorkSafe Victoria

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Preface

This Standard was prepared by the Standards Australia Committee ME-026, Industrial Trucks, to supersede AS 2359.1—2015, *Powered industrial trucks, Part 1: General requirements*.

The objective of this Standard is to set out additional requirements not found in AS 2359.6 for the design, manufacture, marking and testing of self-propelled industrial trucks (hereafter referred to as “trucks”) and their attachments, as defined in ISO 5053-1.

The major changes in this edition are as follows:

- (a) Addition of a definition for lateral stability control.
- (b) The increase of height from 800 mm to 1500 mm for ride-on battery electric trucks with an elevated mast in [Clause 8.2.3](#) when fitted with lateral stability control.
- (c) Updates references for recent ISO adoptions.
- (d) Deletion of Clause 11.7 (now covered by AS 5144.3).
- (e) Deletion of Appendix A (now covered by AS ISO 22915.1:2018) and Appendix E (now covered by AS 5144.3).

For the AS 2359 series of Standards, wherever practicable, the relevant International Standards have been adopted. However, Parts 1, 2 and 12 continue to be locally developed, in the absence of suitable International Standards.

This Standard is Part 1 of the AS 2359 series, *Powered industrial trucks*, which currently comprises the following parts, including those proposed for revision, listed below.

AS 2359.1, *Powered industrial trucks, Part 1: General requirements* (this Standard)

AS 2359.2, *Powered industrial trucks, Part 2: Operations*

AS 2359.5, *Powered industrial trucks, Part 5: Symbols for operator controls and other displays*

AS 2359.6, *Powered industrial trucks, Part 6: Self-propelled industrial trucks, other than driverless trucks, variable-reach trucks and burden-carrier trucks (ISO 3691-1:2011, MOD)*

AS 2359.9, *Powered industrial trucks, Part 9: Overhead guards—Specification and testing (ISO 6055:2004, MOD)*

AS 2359.10, *Powered industrial trucks, Part 10: Fork-lift trucks—Hook-on type fork arms—Vocabulary*

AS 2359.12, *Powered industrial trucks, Part 12: Hazardous areas*

AS 2359.14, *Powered industrial trucks, Part 14: Fork arms—Technical characteristics and testing*

AS 2359.15, *Powered industrial trucks, Part 15: Fork-arm extensions and telescopic fork arms—Technical characteristics and strength requirements*

AS 2359.16, *Powered industrial trucks, Part 16: Safety signs and hazard pictorials—General principles*

ISO is in the process of developing a number of new International Standards in relation to industrial trucks, e.g. on stability, safety, etc. It is intended that the ISO Standards will be adopted as Australian Standards under a new series number. The designation of existing Australian adoptions currently in the AS 2359 series will be changed by amendment. It is anticipated that the number of AS 2359 Standards will be reduced to only those parts that are written specifically for Australian conditions. The ISO 3691 series has been adopted in Australia as the AS 5144 series.

The following Australian Standards relate to industrial trucks:

AS 5143:2015, *Fork-lift trucks—Hook-on type fork arms and fork arm carriages—Mounting dimensions*

AS 5144.2, *Industrial trucks—Safety requirements and verification, Part 2: Self-propelled variable-reach trucks (ISO 3691-2:2016, MOD)*

AS 5144.3, *Industrial trucks — Safety requirements and verification, Part 3: Additional requirements for trucks with elevating operator position and trucks specifically designed to travel with elevated loads (ISO 3691-3:2016, MOD)*

AS 5144.5:2015, *Industrial trucks—Safety requirements and verification, Part 5: Pedestrian-propelled trucks*

This Standard does not cover industrial towing tractors with a drawbar pull greater than 50 kN.

EN Standards are referenced for visibility, noise level and electromagnetic compatibility (EMC) requirements for industrial trucks as these are not currently covered by any ISO Standard. Lighting requirements are not included, but lighting may be required to suit requirements of statutory authorities or to allow operation in areas of low light intensity.

This Standard needs to be read in conjunction with AS 2359.6.

AS 2359.6 is a modified adoption of ISO 3691-1:2011. When ISO 3691-1:2011 was being developed it became clear that not all requirements relating to each country could be included in the ISO 3691 series of Standards. Therefore, the revision of AS 2359.1 provides general requirements but any provisions that duplicate those in Part 6 have been removed from this Standard.

NOTE The regional requirements from ISO/TS 3691-8:2012 for Australia have been included in this Standard to assist in their conformance.

The terms “normative” and “informative” have been used in this Standard to define the application of the appendix to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

Statements expressed in mandatory terms in notes to tables are deemed to be requirements of this Standard.

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Section 1 Scope and general

1.1 Scope

This Standard sets out additional requirements not found in AS 2359.6 for the design, manufacture, marking and testing of self-propelled industrial trucks (hereafter referred to as “trucks”) and their attachments, as defined in ISO 5053-1. Therefore, this Standard and AS 2359.6 need to be read in conjunction.

NOTE 1 Guidance on the principles of stability is given in [Appendix A](#).

NOTE 2 The operation of powered industrial trucks is covered by AS 2359.2.

1.2 Application

The duties of designers, manufacturers, importers, suppliers, users and owners of plant, including trucks, are set out in legislative requirements. This Standard offers a way in which designers, manufacturers, importers, suppliers, users and owners of trucks can meet these duties. However, conformance with this Standard may not ensure conformance to such legislation and legislation takes precedence where any contradiction occurs.

Designers, manufacturers, importers, suppliers, users and owners of multipurpose equipment (e.g. telehandlers) are advised to consult the legislative requirements and determine their specific obligations. This Standard may be applied to multipurpose equipment designed to be used as a powered industrial truck in order to control the specific risks unique to its operation in this mode; however, it is recognized that duties under the law may be discharged in other ways, including conformance with other relevant Standards.

NOTE 1 Telehandlers, also known as “rough terrain variable-reach trucks”, are covered by AS 10896.1.

NOTE 2 Because of the range of designs of multipurpose equipment currently on the market it is not possible to provide more precise advice on the application of this Standard to such equipment that will be valid in all instances.

NOTE 3 It is not intended that multipurpose equipment be required to simultaneously conform with all of the requirements of a range of standards.

1.3 Innovation

It is not intended that this Standard impose unnecessary restrictions on design, manufacture, marking and testing of trucks, or on the development and use of new, improved or unusual methods and materials.

1.4 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.

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS 1657, *Fixed platforms, walkways, stairways and ladders—Design, construction and installation*

AS 2359.5, *Powered industrial trucks, Part 5: Symbols for operator controls and other displays*