AS 2657.1:2025

Australian STANDARD®

STANDARDS Australia

Garden equipment — Safety requirements for combustion-engine-powered lawnmowers

Part 1: Terminology and common tests (ISO 5395-1:2013, MOD)



AS 2657.1:2025

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Preface

This Standard was prepared by the Standards Australia Committee CS-033, Power Lawn Mowers and Edge Trimmers. This document supersedes AS 2657:1985, *Powered rotary lawnmowers*, which has been withdrawn.

The objective of this document is to specify terminology and common test methods used for verification of safety requirements for combustion-engine-powered, walk-behind type rotary lawnmowers and cylinder lawnmowers, including pedestrian-controlled (with or without sulky) (hereafter named "lawnmower"), and equipped with:

(a) metallic cutting means and/or;

(b) non-metallic cutting means with one or more cutting elements pivotally mounted on a generally circular drive unit, where these cutting elements rely on centrifugal force to achieve cutting, and have a kinetic energy for each single cutting element of 10 J or more.

This document does not apply to:

(i) robotic and remote-controlled lawnmowers, flail mowers, grassland mowers, sickle bar mowers, towed/semi-mounted grass cutting machines, and scrub-clearing machines;

(ii) cutting-means assembly when used in combination with an agricultural tractor; and

(iii) electrically powered and battery-powered lawnmowers.

NOTE 1 AS/NZS 60335.1, together with AS/NZS 62841.4.3, give particular requirements for pedestrian-controlled walk-behind electrically powered lawnmowers.

NOTE 2 AS/NZS 62841.4.3 gives requirements for Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery – Safety (Particular requirements for pedestrian-controlled walk-behind lawnmowers).

This document is not applicable to lawnmowers which are manufactured before the date of publication of this document.

A list of all parts in the AS 2657 series can be found in the Standards Australia online catalogue.

This document is an adoption with national modifications, and has been reproduced from ISO 5395-1:2013, *Garden equipment — Safety requirements for combustion-engine-powered lawnmowers — Part 1: Terminology and common tests* and its *Amendment No. 1 (2017)*, which has been added at the end of the source text. The modifications are alternate requirements and are set out in Appendix ZZ, which has been added at the end of the source text.

Appendix ZZ lists the modifications to ISO 5395-1:2013, for the application of this document in Australia.

As this document has been reproduced from an international document, the following apply:

(A) In the source text, "this part of ISO 5395" 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 5395-1 was prepared by the European Committee for Standarization (CEN) Technical Committee CEN/TC 144, *Tractors and machinery for agriculture and forestry* in collaboration with ISO Technical Committee TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 13, *Powered lawn and garden equipment*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition of ISO 5395-1, together with ISO 5395-2 and ISO 5395-3, cancels and replaces ISO 5395:1990, which has been technically revised. These three parts also incorporate the Amendment ISO 5395:1990/Amd.1:1992.

ISO 5395 consists of the following parts, under the general title *Garden equipment — Safety requirements for combustion-engine-powered lawnmowers*

— *Part 1: Terminology and common tests*

— *Part 2: Pedestrian-controlled lawnmowers*

— *Part 3: Ride-on lawnmowers with seated operator*

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Introduction

This document is a type-C standard as stated in ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations or hazardous events are covered are indicated in the scope of this document.

When requirements of this type-C standard are different from those which are stated in type-A or type-B standards, the requirements of this type-C standard take precedence over the requirements of the other standards for machines that have been designed and built according to the requirements of this type-C standard.

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NOTES

Australian Standard®

Garden equipment — Safety requirements for combustion-engine-powered lawnmowers

Part 1: Terminology and common tests (ISO 5395-1:2013, MOD)

1 Scope

This part of ISO 5395 specifies terminology and common test methods used for verification of safety requirements for combustion engine powered rotary lawnmowers and cylinder lawnmowers including pedestrian-controlled (with or without sulky) and ride-on types (hereafter named “lawnmower”), and equipped with:

— metallic cutting means and/or;

— non-metallic cutting means with one or more cutting elements pivotally mounted on a generally circular drive unit, where these cutting elements rely on centrifugal force to achieve cutting, and have a kinetic energy for each single cutting element of 10 J or more.

This document does not apply to:

— robotic and remote-controlled lawnmowers, flail mowers, grassland mowers, sickle bar mowers, towed/semi-mounted grass cutting machines, and scrub-clearing machines;

— cutting-means assembly when used in combination with an agricultural tractor;

— electrically powered and battery-powered lawnmowers.

NOTE IEC 60335-1[1] together with IEC 60335-2-77[2] give requirements for pedestrian-controlled walk-behind electrically powered lawnmowers.

This document is not applicable to lawnmowers which are manufactured before the date of publication of this document.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1032:2003+A1:2008, *Mechanical vibration — Testing of mobile machinery in order to determine the vibration emission value*

IEC 61672-1:2002, *Electroacoustics — Sound level meters — Part 1: Specifications*

ISO 354:2003, *Acoustics — Measurement of sound absorption in a reverberation room*

ISO 683-9:1988, *Heat-treatable steels, alloy steels and free-cutting steels — Part 9: Wrought free-cutting steels*

ISO 3744:2010, *Acoustics — Determination of sound power levels and sound energy levels of noise sources using sound pressure — Engineering methods for an essentially free field over a reflecting plane*

ISO 4871, *Acoustics — Declaration and verification of noise emission values of machinery and equipment*

ISO 5008:2002, *Agricultural wheeled tractors and field machinery — Measurement of whole-body vibration of the operator*

ISO 5008:2002/Cor 1:2005, *Agricultural wheeled tractors and field machinery — Measurement of whole-body vibration of the operator — Technical Corrigendum 1*

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