

INTERNATIONAL STANDARD

ISO
3600

Fifth edition
2022-11

Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Operator's manuals — Content and format

*Tracteurs, matériels agricoles et forestiers, matériel à moteur
pour jardins et pelouses — Manuels d'utilisation — Contenu et
présentation*

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Reference number
ISO 3600:2022(E)

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Published in Switzerland

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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).

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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 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 14, *Operator controls, operator symbols and other displays, operator manuals*.

This fifth edition cancels and replaces the fourth edition (ISO 3600:2015), which has been technically revised.

The main changes are as follows:

- added content for digital presentation of operator's manuals;
- revised [3.2](#) from *normal operation and service* to *normal operation*;
- added the following terms:
 - [3.4](#) display;
 - [3.5](#) maintenance;
 - [3.6](#) service;
 - [3.7](#) operator's manual;
 - [3.8](#) repair;
 - [3.9](#) replacement part;
- revised [4.1.2.1](#) to printed format;
- added [4.1.2.2](#) for electronic format;
- added [Clause 5](#) to address the reference to [Annex A](#).

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

In the preparation of this document, consideration has been given to the fact that manuals are expected to be available for operators. Operators need to have a manual, giving guidance for the correct use and maintenance of the machine and its equipment and attachments. It is expected that such a manual be clear and simple to understand, that it contains warnings for foreseeable hazards as well as definitions of terms, and that the units, symbols and pictorials used conform with the relevant International Standards.

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Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Operator's manuals — Content and format

1 Scope

This document specifies the content and gives guidance on the format of operator's manuals for tractors, machinery for agriculture and forestry, and powered lawn and garden equipment. It is intended to assist manufacturers of the machinery in the drafting and presentation of these manuals.

Manuals intended for use by a service technician are not within the scope of this document.

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 11684, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Safety labels and hazard pictorials — General principles*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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/>

3.1

operator

person using the machine for the purpose intended by the manufacturer

3.2

normal operation

use of the machine by an *operator* (3.1) for the purpose intended by the manufacturer

3.3

service technician

person specifically trained to *service* (3.6), maintain, diagnose problems and *repair* (3.8) the machine

3.4

display

electronic device capable of visually communicating information

3.5

maintenance

activities necessary to avoid machine failure, and retain a machine in operable condition

Note 1 to entry: This would exclude *repairs* (3.8) to machine components that are not intended to be replaced on a regular schedule

3.6

service

activities necessary to repair machine components

Note 1 to entry: This would exclude those components that are intended to be replaced on a regular schedule.

3.7

operator's manual

document that provides information needed by the *operator* (3.1) to safely operate and maintain specified machines

3.8

repair

activities necessary to restore a machine to operable condition after a failure has occurred

3.9

replacement part

single part, multiple parts or subassembly used to replace a worn or failed part or subassembly

4 Content of operator's manuals

4.1 Basic information

4.1.1 General

The information specified in 4.1.2 through 4.1.9 shall be included as appropriate and applicable to the machine. It is recommended that the information be presented in the order shown in 4.1.2 through 4.1.9, but deviations may be made to suit particular machines or situations.

4.1.2 Identification of printed or electronic manual

4.1.2.1 The following information shall be shown on the front cover of the printed manual or upon opening the electronic manual:

- name or type of publication; and
- model number, model name or type designation of machine.

4.1.2.2 The following information shall be provided:

- the manufacturer or distributor of machine, including contact information;
- part number, publication number or printing number by which the manual can be obtained;
- printing date, publication date, revision level or a publication code that can be used to identify the publication date or revision level of the manual or section.

4.1.3 Contents

4.1.3.1 Table of contents shall list the main sections of the manual. For printed manuals, the page number of the first page of each section shall be listed. For electronic manuals, hyperlinks may be used for each heading.

4.1.3.2 The contents list of each main section shall be included in the table of contents or at the beginning of the section to which the contents list applies, or both.

4.1.4 Identification of machine

The following information shall be included:

- model designations of the machines to which the manual applies;
- serial numbers, serial number range or beginning serial numbers of the range to which the manual applies, as appropriate;
- description, either by words or pictorially, or both, of the location of serial numbers of the machine and of serialized components; and
- ability to record or identify serial numbers pertaining to the particular machine to which the manual applies.

4.1.5 Introduction

The following information shall be included:

- statement of the importance of the information given in the manual and the necessity for all operators to read the manual and to understand the information contained in the manual;
- information regarding the functions for which the machine is designed (intended use);
- any information needed to aid the correct interpretation of the information given in the manual;
- information regarding sources of assistance in understanding the information given in the manual and other concerns regarding operation of the machine.

4.1.6 Machine configurations

If a manual is intended to represent a machine that has multiple configurations, then the various configurations shall be clearly identifiable on the machine and in the manual. Organizational strategies can include:

- separate sections for each configuration with common features repeated; or
- a common section and separate sections for configuration-specific content.

4.1.7 Safety information

4.1.7.1 Safety alert symbol

4.1.7.1.1 The meaning of the safety alert symbol, used in the manual and on the machine to highlight information about potentially safety concerns, shall be included in the manual.

4.1.7.1.2 The safety alert symbol shall be either the solid background version, or the outline version, as shown in ISO 11684.

4.1.7.2 Signal words

The meaning of signal words DANGER, WARNING and CAUTION, used in conjunction with safety messages in the manual and on safety labels on the machine, shall be explained. The meaning of other signal words not associated with safety messages, such as NOTE and IMPORTANT, shall also be explained, if used in the manual.

4.1.7.3 Safety message

4.1.7.3.1 Information shall be given regarding hazards and precautions to be taken to avoid or minimize the effect of hazards associated with the following aspects of machine use, as applicable:

- preparation for use;
- normal operation and service;
- clearing blockages and cleaning;
- transport;
- maintenance and adjustment;
- storage.

4.1.7.3.2 Basic safety instructions shall be included in the safety section. Specific warning messages related to particular hazards shall appear in the pertinent sections of the manual and shall precede the functional instructions to which they apply.

4.1.7.4 Safety signs

4.1.7.4.1 Information shall be provided regarding all safety labels that are affixed to the machine. This information shall include the following:

- reproduction of the safety signs, in legible size;
- location of the safety labels on the machine;
- explanation of the meaning of the safety signs, in particular if the safety sign does not contain a written message.

4.1.7.4.2 In addition, the following information should be provided:

- instruction to keep the safety labels clean and visible;
- instruction to replace safety labels if they are missing or illegible;
- instruction regarding affixing safety labels to replacement parts, as applicable;
- information on how to obtain replacement safety labels.

4.1.8 Operation

4.1.8.1 Controls and displays

Illustrations and descriptions shall be provided for all controls and displays, including:

- location relative to the operator's position;
- purpose, function and mode of operation; and
- explanation of any symbols used.

4.1.8.2 Operating instructions

Information shall be provided for proper operation of the machine or equipment, including the following, as applicable:

- pre-start instructions;
- instructions for starting, stopping and shutdown, including emergency procedures, if applicable;
- operation of all functions, including any adjustments made during normal operation;
- instructions for clearing blockages and cleaning.

4.1.8.3 Troubleshooting

Information shall be provided for fault diagnosis and remedy of problems in normal operation, as applicable to an operator. If machine fault codes are displayed, an explanation of the codes should be included.

4.1.9 Routine maintenance and adjustments

4.1.9.1 Maintenance schedules

Information shall be provided concerning periodic maintenance tasks and the recommended frequency, preferable in tabular or graphical format with further details in text, if necessary.

4.1.9.2 Maintenance procedures

Instructions shall be provided for each task, including identification of any tools, test equipment, replacement parts, or other services required. Any tasks requiring specialized knowledge or tools shall be identified, and the recommendation given that this be performed by a qualified service technician.

4.1.9.3 Maintenance materials

Specifications, including quantities or capacities, shall be provided for normal maintenance materials, for example, fuel, lubricants, coolants, diesel exhaust fluid.

4.1.9.4 Adjustments

Information shall be required concerning adjustments required to adapt the machine to different tasks or operating conditions.

4.1.9.5 Storage

Instructions shall be provided, including precautions to be taken and any tools or special equipment required, to prepare the machine for storage and to prepare the machine for use after storage.

4.1.9.6 Specifications

Technical data and information shall be provided to assist the operator in optimizing operational performance and reliability.

4.2 Auxiliary information

4.2.1 General

The information specified in 4.2.2 through 4.2.5, as appropriate to the machine, shall be included in the manual, if not otherwise available in separate publications. The manual shall specify the separate publication, if applicable.

4.2.2 Reception, assembly and initial set-up and transportation

4.2.2.1 Reception

Instructions for unpacking the machine shall be provided with attention drawn to any specific points that need special care or treatment.

Lifting points shall be identified, and instructions on the safe use of devices such as slings, spreaders, shall be provided.

4.2.2.2 Assembly and initial set-up

Instructions regarding operations necessary to assemble the machine and to bring it to full working condition shall be specified, as appropriate. Performance specifications, inspection and testing requirements shall be specified, as appropriate.

4.2.2.3 Transportation

Instructions shall be provided for preparing the machinery for transportation, whether being driven, towed or carried on suitable means. Transportation precautions and information about the tools required should be included. A list of requirements should be provided and procedures for preparing the product for use after transportation should be given.

4.2.3 Warranty

Information should be given regarding terms of warranty, any limitations of coverage, and actions that can invalidate the warranty.

NOTE National or local requirements can apply, which can be more stringent.

4.2.4 Accessories and attachments

Information on accessories and attachments available for the machine from the manufacturer or approved by the manufacturer for use with the machine shall be provided.

4.2.5 Parts list

Information to assist the correct identification of replacement parts shall be provided.

4.2.6 End of machine life information

4.2.6.1 The manual should contain information relating to handling, recycling or disposal of the machine after it is no longer needed.

4.2.6.2 If the machine contains any hazardous substance, or if any hazardous substance is supplied together with the machine, the necessary information on its constituents and the correct disposal procedure should be given with due regard to safety and legal requirements.

5 Format of operator's manuals

Guidance on format of operator's manuals is given in [Annex A](#).

Consider the display of information on electronic devices.

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Annex A (informative)

Format of operator's manuals

A.1 General considerations for printed manuals

A.1.1 Paper size

The preferred paper size is A4 (210 mm × 297 mm), as specified in ISO 216, or for manuals printed in or for North America "letter size" (216 mm × 279 mm/8,5 inch × 11 inch). Other paper sizes, such as A5 can be used as appropriate.

A.1.2 Covers

The covers should be the same size as the pages and preferably be made of stiff, durable material resistant to oil, lubricants and water.

A.1.3 Inks

Inks used should be durable, water resistant and smudge resistant.

A.2 Presentation of the text

A.2.1 General

The manual should be written in a style and language that can be readily understood by the operator.

Manuals should be available in the appropriate language for each country where the machine is sold.

A.2.2 Style of text

Text should be brief and simple. Sentences should be short and direct. Instructions should be positive and given in the imperative.

A.3 Typographical design

A.3.1 Font

The font used should be clear and readable.

A.3.2 Type size

The type size of the main text should be 10 points or greater. Smaller type sizes can be appropriate for manuals on A5 or smaller paper.

It is recommended that the main text size in electronic documents be 13 pixels or greater.

A.3.3 Columns

Information on A4 or larger format paper should be presented in two columns. Information on A5 format paper should be presented in a single column.