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

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National foreword

This British Standard is the UK implementation of ISO 3600:2015.

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**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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Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

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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 on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 23, *Tractors and Machinery for Agriculture and Forestry*, Subcommittee SC 14, *Operator controls, operator symbols and other displays, operator manuals*.

This fourth edition cancels and replaces the third edition (ISO 3600:1996), which has been technically revised.

Introduction

In the preparation of this International Standard, consideration has been given to the fact that manuals are expected to be available for both operators and service technicians. Operators need to have a manual, giving guidance for the correct use and routine basic service and preventive 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 comply with the relevant International Standards.

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

1 Scope

This International Standard 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 International Standard.

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.

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

3 Terms and definitions

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

3.1

operator

person using the machine for the purpose intended by the manufacturer and complying with the information for operation, including safety practices, as specified by the manufacturer in the operator's manual and by signs on the machine

3.2

normal operation and service

use of the machine for the purpose intended by the manufacturer by an operator

3.3

service technician

person specifically trained to service, maintain, diagnose problems, and repair the machine

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 manual

4.1.2.1 The following information shall be shown on the front cover:

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

4.1.2.2 The following information shall be provided:

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

4.1.3 Contents

4.1.3.1 Table of contents shall list, as a minimum, the main sections of the manual with the page number of the first page of each section.

4.1.3.2 Contents list of each main section, if applicable, 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 number 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;
- spaces to record serial numbers pertaining to the particular machine the manual accompanies.

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 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 Safety information

4.1.6.1 Safety alert symbol

Attention shall be drawn to the use of the safety alert symbol, in the manual and on the machine, to highlight information about potential safety concerns. The meaning of the safety alert symbol shall be included in the manual.

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

4.1.6.2 Signal words

The meaning of signal words (DANGER, WARNING, CAUTION, etc.), if used in conjunction with safety messages in the manual and on safety signs 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.

4.1.6.3 Safety messages

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.

Safety messages that are specific to particular hazards shall appear in the pertinent sections of the manual and shall precede the functional instructions to which they apply. These messages may also be included in the safety section.

4.1.6.4 Safety signs

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

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

In addition, the following information should be provided:

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

4.1.7 Operation

4.1.7.1 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.

4.1.7.2 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.

4.1.7.3 Troubleshooting

Information shall be provided for fault diagnosis and remedy of problems in normal operation, as applicable to an operator.

4.1.8 Routine maintenance and adjustments

4.1.8.1 Maintenance schedules

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

4.1.8.2 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.

4.1.8.3 Maintenance materials

Specifications, including quantities or capacities, shall be provided for normal maintenance materials, such as:

- fuel;
- lubricants;
- coolant.

4.1.8.4 Adjustments

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

4.1.8.5 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 Specifications

Appropriate technical data shall be provided to assist the operator in achieving a high standard of 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 operator's manual, if not otherwise available in separate publications.

4.2.2 Reception, assembly and initial set-up, and transportation

4.2.2.1 Reception

Unpacking instructions with attention drawn to any specific points that need special care or treatment. Lifting points, use of slings or spreaders, etc. shall be specified.

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 and inspection and testing requirements shall be specified, as appropriate.

4.2.2.3 Transportation

Instructions for preparing the machinery for transportation, whether being driven or towed or carried on suitable means. 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 regarding terms of warranty and the period of coverage, including any limitations of coverage and actions that can invalidate the warranty.

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.

4.2.5 Parts list

Information to assist in the correct identification of replacement parts.

Annex A **(informative)**

Format of operator's manuals

A.1 General considerations

A.1.1 Paper size

The preferred paper size is A4 (210 mm x 297 mm), as specified in ISO 216, or, for manuals printed in or for North America, "letter size" (216 mm x 279 mm/8,5 inch x 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 Typographic 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.

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.

A.3.4 Headings

Headings should be used consistently throughout the manual to provide a systematic method of presentation. Headings should be in larger type size than the text and in a bolder typeface or an alternative colour. The number of levels should be kept to a minimum; normally three levels are sufficient.

A.4 Text conventions

A.4.1 General

Consistent forms of language, spelling, numbering, symbols, etc. should be used throughout the manual.

A.4.2 Terminology

Terminology should be consistent throughout the manual. Technical terms that require specialized knowledge should be avoided except where no other terms convey the intended meaning.

A.4.3 Symbols

Graphical symbols for operator controls and displays should conform to ISO 3767-1, ISO 3767-2, ISO 3767-3, ISO 3767-4, or ISO 3767-5.

A.4.4 Case

Normal sentence case should be used for text. Bold lower case letters, rather than upper case letters, should be used to emphasize keywords or phrases. Upper case should be used only for references to machine elements which have words in upper case on them (for example STOP control).

A.4.5 Measurements and quantities

All measurements and quantities should be expressed in the International System of Units (SI units in accordance with ISO 80000-1). For countries where non-SI units are customary, the SI units should be given first, followed by the equivalent in customary units, in parentheses.

A.4.6 Numbers

All numbers should be written in Arabic numerals. Sentences should be ordered to avoid starting with a number. If this is not practical, the number should be expressed in words.

A.4.7 Dates

Dates should be shown using the numerical year-month day style (e.g. 2014-06-02) or the day-month-year style (e.g. 2 June 2014).

A.5 Illustrations

A.5.1 General

Illustrations with supporting text are, in general, a user-friendly way of presenting technical information. Illustrations should be as simple as practicable with no superfluous information.

Words should only be used on illustrations to identify specific elements if their usage does not impair the clarity. Otherwise, use numbers, letters or symbols on the illustration, with an explanation for each number, letter, or symbol used in the text of the manual. This requirement does not apply to illustrations of actual machine displays.

A.5.2 Use of colour

Colour should be used only if it is necessary to clarify complicated diagrams or to illustrate actual machine displays. Techniques such as shading, cross-hatching, and screening should be used in preference to colour. If colours are used, primary colours are preferable, while avoiding the use of red and green in combination. Colours considered acceptable for colour blindness should be used where possible.

A.5.3 Charts

Information which is required frequently, or which is easier to explain in flow form should be included as charts. These should be accompanied by a glossary of abbreviations, symbols, and any unfamiliar terms.

A.5.4 Tables

Tables should be presented with the minimum number of lines required for clarity. A title and number should be provided for each table.

A.6 Alphabetical index

An alphabetical index with page numbers, conforming to the relevant provisions of ISO 999, should be included at the back of the manual, in particular if the manual consists of more than 30 pages.

Bibliography

- [1] ISO 216, *Writing paper and certain classes of printed matter — Trimmed sizes — A and B series, and indication of machine direction*
- [2] ISO 999, *Information and documentation — Guidelines for the content, organization and presentation of indexes*
- [3] ISO 3767-1, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 1: Common symbols*
- [4] ISO 3767-2, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 2: Symbols for agricultural tractors and machinery*
- [5] ISO 3767-3, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 3: Symbols for powered lawn and garden equipment*
- [6] ISO 3767-4, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 4: Symbols for forestry machinery*
- [7] ISO 3767-5, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 5: Symbols for manual portable forestry machinery*
- [8] ISO 80000-1, *Quantities and units — Part 1: General*

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BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

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