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

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

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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.

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.

International Standard ISO 3600 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*.

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This third edition cancels and replaces the second edition (ISO 3600:1981), which has been technically revised.

Annex A of this International Standard is for information only.

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

1 Scope

This International Standard gives guidance for the content and presentation of operator's manuals for tractors, machinery for agriculture and forestry, and powered lawn and garden equipment. It is intended to assist manufacturers of tractors, machinery for agriculture and forestry, and powered lawn and garden equipment in the production of operator's manual.

ISO 3767-3:1995, *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.*

ISO 3767-4:1993, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 4: Symbols for forestry machinery.*

ISO 3767-5:1992, *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.*

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 999:1975, *Documentation — Index of a publication.*

ISO 3767-1:1991, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays — Part 1: Common symbols.*

ISO 3767-2:1991, *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.*

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ISO 11684:1995, *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Safety signs and hazard pictorials — General principles.*

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 left-hand side: Side which is on the left when an observer is facing in the normal forward direction of travel of the machine.

3.2 right-hand side: Side which is on the right when an observer is facing in the normal forward direction of travel of the machine.

4 Content of operator's manuals

4.1 Identification of manual

4.1.1 Any document drafted in accordance with this International Standard shall be identifiable as the relevant manual for a specific machine.

NOTE 1 This requirement can be achieved by including such information as the identity of the manufacturer, machine model, and publication name on the front cover of the manual.

4.1.2 Each operator's manual shall have its own part number and date of issue.

4.1.3 Each publication should identify the following:

- manufacturer or distributor of the machine;
- the model designation of the machine;
- the name or type of publication;
- the part number or publication number by which the manual may be ordered;
- the printing or publication date;
- the language in which the manual is written.

4.2 Categories of information

4.2.1 The categories of information given in this International Standard cover the whole range of information that the user of a machine is likely to need. Manuals shall be organized to present the appropriate information in a logical sequence that allows easy access by the user of the manual.

4.2.2 Operator's manuals should give safety precautions, controls, and operating instructions in the front portion. The extent of information provided will depend on the type of machine and the operator's needs.

4.2.3 Where the work involved is complex, procedures that are performed only once (for example, initial set-up or installation) may be detailed in a separate publication.

4.3 Machine identification

4.3.1 Model designation and number

This information enables the operator to identify

readily the machine to which the operator's manual belongs.

4.3.2 Serial numbers

Information that enables the operator to locate and identify the whereabouts of serial numbers and/or codes of the major components of the machine, and any additional information necessary for initial communication with a dealer, shall be provided within the manual.

A section shall be provided in the manual to record this information, and it shall be completed at the time of delivery or installation. Figure 1 shows an example of the identification section of the operator's manual provided by a tractor manufacturer.

4.4 Introduction

4.4.1 The introduction shall stress the importance of the information given in the manual. Figure 2 shows an example of how this may be done.

4.4.2 The introduction shall explain why the manual has been provided with the machine. It shall also provide the reader with any information that will help him to interpret the manual correctly.

4.4.3 Each publication should contain a statement advising the reader where to get assistance if items covered in the publication are not understood.

4.4.4 Attention shall be drawn to the use of the safety alert symbol to highlight information about potential safety concerns. Figure 3 shows an example of how this may be done.

The safety alert symbol may be either the solid background version, ISO 11684:1995, figure 5, or the outline version, ISO 11684:1995, figure 7.

4.5 "Intended use"

This category shall inform the operator of the functions for which the machine is designed and, where appropriate, draw attention to ways in which the machine should not be used. If the machine is designed for use in association with other machinery, the information shall state the type of machinery that is suitable for such use. Figure 4 gives an example of a manufacturer's definition of "intended use".


<p>Model designation</p> <p>Model number</p> <ul style="list-style-type: none"> Note the model and serial numbers of your tractor. Always quote these numbers in any communication with your dealer <p>Serial numbers¹⁾</p> <ul style="list-style-type: none"> Machine serial number Engine serial number Transmission serial number Cab serial number <p>Supplier</p> <p>Date of delivery and installation</p> <p>Information about manufacturer and/or importer</p> <ul style="list-style-type: none"> Name Address Phone number <p>Owner or operator</p>
<p>1) It is extremely important to quote the complete serial number group, including all letters, or both the machine and its relevant components on all warranty claims and correspondence pertaining to this machine. This point cannot be overemphasized.</p>

Figure 1 — Example of the identification section of the operator’s manual provided by a tractor manufacturer

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This operator’s manual should be regarded as part of the machine. Suppliers of both new and second-hand machines are advised to retain documentary evidence that this manual was provided with the machine.

Figure 2 — Example introductory statement stressing the importance of the operator’s manual



Safety alert symbol

This safety alert symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of injury, carefully read the message that follows, and inform other operators.

Figure 3 — Example explanation of the safety alert symbol

This machine is designed solely for use in customary agricultural or similar operations. Use in any other way is considered as contrary to the intended use. Compliance with and strict adherence to the conditions of operation, service, and repair as specified by the manufacturer, also constitute essential elements of the intended use.

This machine should be operated, serviced, and repaired only by persons who are familiar with its particular characteristics and who are acquainted with the relevant safety procedures.

Accident prevention regulations, all other generally recognized regulations on safety and occupational medicine, and all road traffic regulations must be observed at all times.

Any arbitrary modifications carried out to this machine may relieve the manufacturer of liability for any resulting damage or injury.

Figure 4 — Example of a manufacturer’s definition of “intended use”

4.6 Contents

A contents list shall be provided to identify the main categories of information in the manual and where they can be found. The contents list shall be presented clearly and simply; it shall begin on a right-hand page. Page numbers for the beginning of each main category shall be clearly shown. Figure 5 shows an example of a contents list.

4.7 Safety notes and warnings

4.7.1 General

This category shall draw the operator’s attention to potential hazards associated with the following:

- use;
- movement;
- transport;

- cleaning;
- clearing blockages;
- maintenance of the machine;
- associated machinery with which it is designed to work (where appropriate).

It is important also to state the precautions to be taken to minimize or avoid any hazards.

An example of the hazards and precautions identified by a tractor manufacturer is given in figure 6. An example of the hazards and precautions identified by a sprayer manufacturer is given in figure 7. These examples are not intended to be exhaustive lists, but only as indications of the type of information that may be included.

Safety information should also be included in other sections of operator’s manuals whenever an operating procedure may result in personal injury or damage to machinery if not observed carefully.

Example	Explanation
[Outer front cover] <ul style="list-style-type: none"> • Model number and model designation • Part number and issue date of the operator’s manual 	Identification of the machine For ordering additional or replacement copies of the operator’s manual
[Inner front cover] <ul style="list-style-type: none"> • Introduction • Purpose of the machine 	What the manual is for What the machine is for
[Next page] Contents Safety notes and warnings Operating information Accessories and attachments Maintenance instructions Storage Handling, reception, transportation, assembly, and installation Specifications Dismantling and disposal Alphabetical index Parts lists	What the manual consists of What hazards exist and what safety precautions should be taken How to use the machine How to add and use accessories and attachments How to keep the machine working properly and safely How to look after the machine when it is not in use How to prepare the machine for use; for complex machines, this should be a separate publication What the machine is and what its physical and performance specifications are How to take the machine apart and dispose of it safely; applies only to simple machines Where information can be found In most cases, this should be a separate publication

Figure 5 — Example of contents with explanation of each category

Driving on slopes
 Roll-over or overturning
 Driving on public roads
 Stability
 Power take-off
 Falls
 Runovers
 Hitching, towing, and recovery
 Lifting

Figure 6 — Example of the information headings that a manufacturer could include on the hazards and precautions associated with tractor operation

Chemicals
 Personal protective equipment
 Overhead lines
 Clearing blockages
 Minimizing spray drift
 Power take-off
 Hitching
 Tractor ballast

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Figure 7 — Example of the information headings that a manufacturer could include on the hazards and precautions associated with sprayer operation

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4.7.2 Safety signs

Safety signs that appear on the equipment shall be reproduced in legible size in the operator's manual, either in the appropriate section of the text relative to the point of use, or in the safety section, or in a separate safety sign section. Text that explains the meaning of a safety sign should be included in the operator's manual if the safety sign itself does not contain a written message. A safety sign may appear in more than one section of the manual.

Other relevant information about safety signs includes:

- information on the location of each safety sign on the machine or equipment;
- instructions on the need to keep safety signs clear and visible on the equipment;
- instructions to replace safety signs if they are missing or illegible;
- instructions that new equipment components installed during repair shall include the current safety signs specified by the manufacturer and shall be affixed to the replacement component;

- instructions on how to obtain replacement safety signs.

NOTE 2 Refer to ISO 11684 for information on safety signs.

4.7.3 Hazards

It is essential that any known hazards relating to the use of the machine, and any restrictions for its use by classes of persons (such as children) are clearly stated. Figure 8 shows an example of hazard information provided by a chain-saw manufacturer.

NOTE 3 Refer to ISO 11684 for information on hazard pictorials.

4.8 Operating information

4.8.1 This category shall provide the operator with logical instructions for the effective operation of the machinery. Operating information should include:

- general specifications and description of the machinery or equipment;

- identification of controls and displays by means of:
 - illustrations that identify controls and displays relative to the operator's position;
 - detailed illustrations and explanation of controls and displays if their purpose, function, and mode of operation are not readily apparent;
 - illustrations and explanations of all symbols used on the machinery or equipment;
- instructions for proper operation of the machinery or equipment;
- troubleshooting information.

4.8.2 Where appropriate, the information should be subdivided. Figure 9 shows an example of subheadings for operating information provided by the manufacturer.

4.9 Accessories and attachments


This category shall inform the operator of any choice of authorized accessories and attachments and how they affect the safety, operation, and maintenance of the machine.

4.10 Maintenance instructions

4.10.1 General

This category shall provide information to the operator in light of the resources likely to be available to him. The extent, level, and location of maintenance is dependent on the owner's maintenance policy. Maintenance instructions should be divided into logical groups appropriate to the machinery; for example,

- checks, inspections and tests;
- other routine maintenance tasks;
- fault diagnosis and correction.



CAUTION A chain-saw is a demanding tool. It shall only be used by fully trained operatives or by trainee operatives under the close supervision of a fully trained person.

Anyone using a chain-saw should be fully aware of the hazards involved and how to avoid these hazards.

Always wear appropriate personal protection equipment when using a chain-saw.

- Safety helmet
- Ear protection
- Eye protection
- Leg protection
- Suitable gloves and boots

A first aid kit should be readily available to the operator.

Figure 8 — Example of hazard information provided by a chain-saw manufacturer

- Instruments and controls
- Starting and stopping safely
- Running in
- Advice on efficient operation and checks prior to and during operation
- Safety
- Mounting and dismantling of equipment and attachments
- Malfunctions and troubleshooting
- Movement of machinery between sites (driving on the road)

Figure 9 — Example of subheadings for operating information provided by the manufacturer

The manual should be confined to maintenance tasks within the capability of the operator. Such tasks may include:

- cleaning;
- clearing blockages;
- replenishment;
- lubrication;
- external visual examination;
- simple tests;
- correction of minor deterioration.

The designer of the machinery should consider the maintenance work necessary to keep it running "as designed" and make a decision as to which information is to be included in the operator's manual and which information is more suited to a workshop or technical manual.

NOTE 4 There may be circumstances in which manufacturers wish to give advice on maintenance carried out by technicians limited by the available service parts, tools and skills, including on-the-spot rectification or replacement.

4.10.2 Maintenance schedules

Where maintenance tasks are required to be carried out at specific intervals (such as time, distance, running hours, completed operations) they should be summarized in tabular form with further details, if necessary, in the text. Where maintenance times vary according to individual conditions of operation (for example, checking and replenishing coolant) this should be stated.

4.10.3 Specialized tasks

Where maintenance tasks require specialist knowledge or resources, this shall be stated. If any work carried out by an unauthorized person would affect the warranty on the machinery, it is important that this be stated.

4.10.4 Details of maintenance work

The instructions for each task should include details of dismantling and reassembly procedures and identification of replacement parts, materials, tools, test equipment, and services required. It is important that warnings of possible hazards and information about safety precautions are given. For example, if a ballasted rear wheel is to be removed from a tractor, there is a potential stability hazard both during removal and subsequent temporary storage; the manual

should identify this potential hazard and give instructions for safe removal of the wheel and its temporary storage.

4.11 Storage

This category shall provide the operator with instructions and information, including precautions to be taken and any tools or special equipment required, to prepare the machinery for storage. A list of storage requirements should be provided, including information about supplies and services needed, periodic inspections, tests, limitations on storage life, etc. Procedures for preparing the machinery for use after storage should also be given.

4.12 Handling, reception, transportation, assembly, and installation

4.12.1 General

This category shall contain technical information and instructions for

- handling;
- reception;
- transportation;
- assembly;
- installation;

initial set-up of the machinery (unless this will be carried out by the dealer).

It should also describe machine disassembly for transport and subsequent reinstallation in another location or different environment.

Information on handling, reception, transportation, assembly, and installation may be either contained in a separate publication or included in the operator's manual. A separate publication is usually appropriate for more complex machines.

4.12.2 Reception

Unpacking instructions should be given and attention drawn to any specific points that need care or special treatment, unless this will be carried out by the dealer. Lifting points, slings, spreaders, etc. should be specified.

4.12.3 Transportation

Instructions for preparing the machinery for transportation, including 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.