INTERNATIONAL STANDARD

ISO 3767-2

Third edition
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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

Tracteurs, matériels agricoles et forestiers, matériel à moteur pour jardins et pelouses — Symboles pour les commandes de l'opérateur et autres indications —

Partie 2: Symboles pour tracteurs et machines agricoles

Reference number
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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 3767-2 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 third edition cancels and replaces the second edition (ISO 3767-2:1991), which has been technically revised. It also incorporates the Amendments ISO 3767-2:1991/Amd.1:1995, ISO 3767-2:1991/Amd.2:1998 and ISO 3767-2:1991/Amd.3:2000.

ISO 3767 consists of the following parts, under the general title *Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays*:

— *Part 1: Common symbols*

— *Part 2: Symbols for agricultural tractors and machinery*

— *Part 3: Symbols for powered lawn and garden equipment*

— *Part 4: Symbols for forestry machinery*

— *Part 5: Symbols for manual portable forestry machinery*

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

1 Scope

This part of ISO 3767 establishes symbols for use on operator controls and other displays on tractors and machinery for agriculture as defined in ISO 3339-0.

The symbols given in this part of ISO 3767 are for controls and displays specific to agricultural tractors and machinery such as combine harvesters, cotton harvesters, and forage harvesters.

NOTE Other symbols relating to specific forms of machinery and equipment are given in other parts of ISO 3767.

2 Normative references

The following referenced documents are indispensable for the application 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 3339-0, *Tractors and machinery for agriculture and forestry — Classification and terminology — Part 0: Classification system and classification*

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*

ISO 80416-2, *Basic principles for graphical symbols for use on equipment — Part 2: Form and use of arrows*

3 Terms and definitions

For the purposes of this part of ISO 3767, the terms and definitions given in ISO 3767-1 apply.

4 General

4.1 Symbols shall be as shown in succeeding clauses of this part of ISO 3767. However, selected symbols and selected combined symbols, which are shown in outline form in this part of ISO 3767, may be shaded in actual use for clarity of reproduction and improved visual perception by the operator, except as otherwise noted for individual symbols.

4.2 Limitations inherent in some reproduction and display technologies can require increased line thickness or other minor modifications of symbols. Such modifications are acceptable provided the symbol remains unchanged in its basic graphical elements, and easily discernible by the operator.

4.3 Additionally, to improve the appearance and perceptibility of a graphical symbol or to coordinate with the design of the equipment to which it is applied, it may be necessary to change the line thickness or to round off the corners of a symbol. The graphic designer is normally free to make such changes, provided that the essential perceptual characteristics of the symbol are maintained. See IEC 80416-3.

4.4 For actual use, all symbols shall be reproduced large enough to be easily discernible by the operator. See IEC 80416-1 for guidelines on the proper sizing of symbols. Symbols shall be used in the orientations shown in this part of ISO 3767 unless otherwise noted for individual symbols.

4.5 Most symbols are constructed using a building-block approach in which various symbols and symbol elements are combined in a logical manner to produce a new symbol.

4.6 If a symbol shows a machine or parts of a machine from a side view, a machine moving from right to left in the symbol area shall be assumed. If a symbol shows a machine or parts of a machine from an overhead view, a machine moving from bottom to top in the symbol area shall be assumed.

4.7 Symbols on controls and displays shall have good contrast to their background. A light symbol on a dark background is preferred for most controls. Displays may use either a light symbol on a dark background or a dark symbol on a light background, depending upon which alternative provides the best visual perception. When a symbol image is reversed (for example, from black to white and vice versa) it shall be done for the entire symbol.

4.8 Symbols shall be located on or adjacent to the control or display that is being identified. Where more than one symbol is required for a control, the symbols shall be located in relation to the control such that movement of the control toward the symbol shall effect the function depicted by that symbol.

4.9 Arrows used in symbols shall conform to the requirements of ISO 80416-2. IEC 80416-1 should be consulted for general principles on the creation of symbols.

4.10 ISO/IEC registration numbers are shown for symbols in all parts of this International Standard. Registration numbers below 5000 refer to ISO 7000. Registration numbers above 5000 refer to IEC 60417.

4.11 Letters and numerals may be used as symbols, but are not registered by ISO/TC 145/SC 3 or published in ISO 7000. In certain clauses, letters and numerals have the meaning indicated when used in association with gear transmission controls and displays on agricultural tractors and machinery. The fonts shown in this International Standard are not intended to be restrictive: other fonts may be substituted, but care shall be taken that legibility is maintained.

4.12 Symbols shown in this part of ISO 3767 are presented at 32 % of original size. The corner marks denote the corners of the 75 mm square of the basic pattern. The corner marks are not part of the symbol but are provided to ensure consistent presentation of all symbol graphics within the outer limits of a 24 mm square grid (32 % of original ISO graphics grid size).

5 Colour

5.1 When used to indicate operating status or condition, the following colours have meaning as follows:

— red: failure or serious malfunction; requires immediate attention;

— yellow or amber: outside normal operating limits;

— green: normal operating condition.

5.2 In addition, certain colours are used for specific functions:

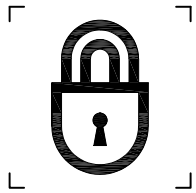
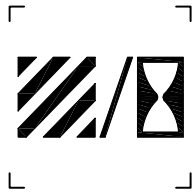
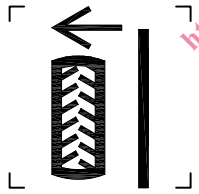
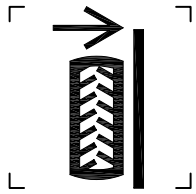
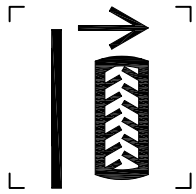
— blue: headlight main/high beam display;

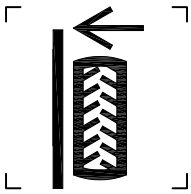
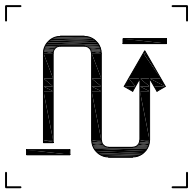
— red: hazard warning display;

— green: turn signal display.

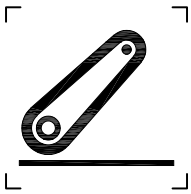
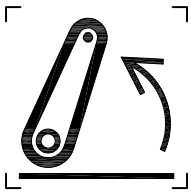
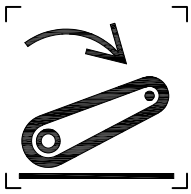
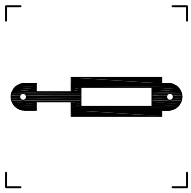
5.3 If colour is used on symbols for heating and/or cooling systems, the colour red shall be used to indicate hot, and the colour blue shall be used to indicate cold.

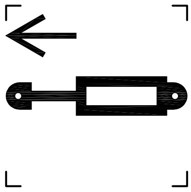
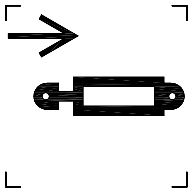
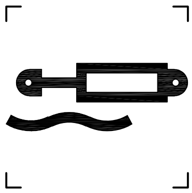
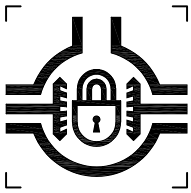
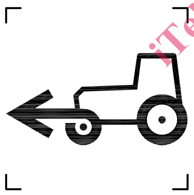
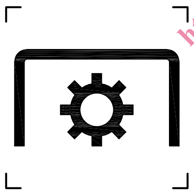
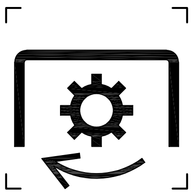
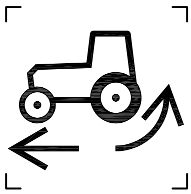
6 General symbols

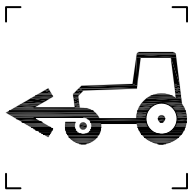
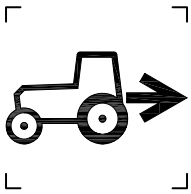
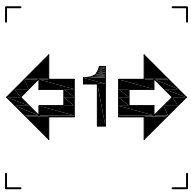
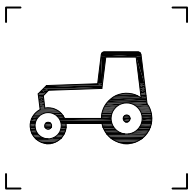
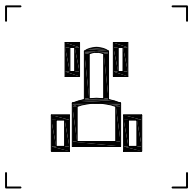
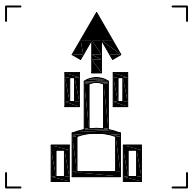
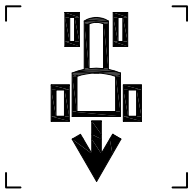
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
6.1		**Lock**	ISO 7000-1656
6.2		**Area worked**	ISO 7000-1657
6.3		**Area worked per hour**	ISO 7000-1658
6.4		**Service indicator; read technical manual**	ISO 7000-1659
6.5		**Wheel adjustment, left wheel, move outward**	ISO 7000-2129
6.6		**Wheel adjustment, left wheel, move inward**	ISO 7000-2130
6.7		**Wheel adjustment, right wheel, move outward**	ISO 7000-2131

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
6.8		**Wheel adjustment, right wheel, move inward**	ISO 7000-2132
6.9		**Work distance travelled** This symbol represents the distance travelled by a machine during field operations. In conjunction with header or implement width, this information may be used to calculate the area worked or the area worked per hour.	ISO 7000-2177

7 Agricultural tractor symbols

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.1		**Rockshaft**	ISO 7000-1566
7.2		**Rockshaft, up (raise)**	ISO 7000-1567
7.3		**Rockshaft, down (lower)**	ISO 7000-1568
7.4		**Rockshaft, float**	ISO 7000-1660
7.5		**Remote cylinder**	ISO 7000-1569

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.6		**Remote cylinder, extend**	ISO 7000-1570
7.7		**Remote cylinder, retract**	ISO 7000-1571
7.8		**Remote cylinder, float**	ISO 7000-1661
7.9		**Differential lock** May be used with On (IEC 60417-5007) and Off (IEC 60417-5008), or On/Off (IEC 60417-5010), or Engage (ISO 7000-0022) and Disengage (ISO 7000-0023) symbols.	ISO 7000-1662
7.10		**Tractor, front wheel drive** May be used with On (IEC 60417-5007) and Off (IEC 60417-5008), or On/Off (IEC 60417-5010), or Engage (ISO 7000-0022) and Disengage (ISO 7000-0023) symbols.	ISO 7000-1663
7.11		**PTO (Power take-off)** May be used with On (IEC 60417-5007) and Off (IEC 60417-5008), or On/Off (IEC 60417-5010), or Engage (ISO 7000-0022) and Disengage (ISO 7000-0023) symbols.	ISO 7000-1572
7.12		**PTO (Power take-off), rotational speed** May be used with On (IEC 60417-5007) and Off (IEC 60417-5008), or On/Off (IEC 60417-5010), or Engage (ISO 7000-0022) and Disengage (ISO 7000-0023) symbols.	ISO 7000-1664
7.13		**Tractor, wheel slip**	ISO 7000-1665

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.14		Tractor, direction of movement, forward (side view of machine)	ISO 7000-1666
7.15		Tractor, direction of movement, rearward (side view of machine)	ISO 7000-1667
7.16		Turn signal, tractor and first trailer	ISO 7000-1419
7.17		Turn signal, tractor and second trailer	ISO 7000-1420
7.18		Tractor (side view of machine)	ISO 7000-2133
7.19		Tractor (overhead view of machine)	ISO 7000-2134
7.20		Tractor, direction of movement, forward (overhead view of machine)	ISO 7000-2135
7.21		Tractor, direction of movement, rearward (overhead view of machine)	ISO 7000-2136