INTERNATIONAL STANDARD

ISO 3287

Second edition
1999-12-01

Powered industrial trucks — Symbols for operator controls and other displays

Chariots de manutention automoteurs — Symboles pour les organes de commandes de l'opérateur et autres dispositifs indicateurs

Reference number
ISO 3287:1999(E)

Contents

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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 3.

International Standard ISO 3287 was prepared by Technical Committee ISO/TC 110, *Industrial trucks*, Subcommittee SC 2, *Safety of powered industrial trucks*.

This second edition cancels and replaces the first edition (ISO 3287:1978), which has been technically revised.

Annexes A and B of this International Standard are for information only.

Powered industrial trucks — Symbols for operator controls and other displays

1 Scope

This International Standard establishes symbols for use on operator controls and other displays on powered industrial trucks.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 3461-1:1988, *General principles for the creation of graphical symbols — Part 1: Graphical symbols for use on equipment.*

ISO 4196, *Graphical symbols — Use of arrows.*

3 Term and definition

For the purposes of this International Standard, the following term and definition apply.

3.1
symbol
visually perceptible figure used to transmit information independently of language

NOTE It may be produced by drawing, printing or other means.

4 General

4.1 Symbols shall be as shown in succeeding clauses of this International Standard. However, symbols which are shown in outline form may, in actual use, be filled for enhanced 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 may 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 the symbol is applied, it may be necessary to change the line thickness or round 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 ISO 3461-1:1988, subclause 10.2.

4.4 For actual use, all symbols shall be reproduced large enough to be easily discernible by the operator. See ISO 3461-1 for guidelines on the proper sizing of symbols. Symbols shall be used in the orientation shown in this International Standard 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 new symbols.

4.6 If a symbol shows a machine or parts of a machine from a side view, a machine moving from right to left across the symbol grid 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 across the symbol grid 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-on-white to white-on-black 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 4196. ISO 3461-1 shall be consulted for the general principles of creating symbols.

4.10 ISO/IEC registration numbers are shown for symbols in this International Standard. Registration numbers below 5000 refer to ISO 7000. Registration numbers above 5000 refer to IEC 417.

4.11 Letters and numerals may be used as symbols, but are not registered by ISO/TC 145 or published in ISO 7000. The fonts shown in this International Standard are not intended to be restrictive: other fonts may be substituted, but care shall be taken to ensure that legibility is maintained.

4.12 Symbols in this International Standard are presented within the outer limits of a 24 mm square grid (32 % of original size on the ISO graphics grid). Grid marks "└" delimit the corners of the 75 mm square graphics grid from ISO 3461-1. Corner marks are not part of the symbol, but are provided to ensure consistent presentation of all symbol graphics.

5 Colour

5.1 When used on illuminated displays, the following colours have the meanings indicated:

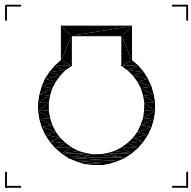
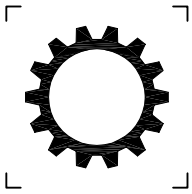
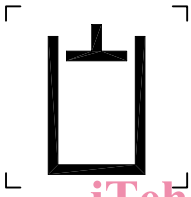
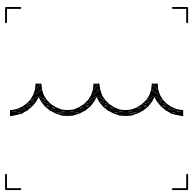
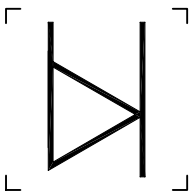
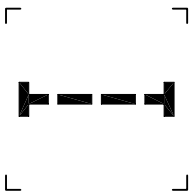
- **red:** failure, serious malfunction, or dangerous operating condition that requires immediate attention;
- **yellow** or **amber:** outside normal operating limits or approaching a dangerous operating condition;
- **green:** normal operating conditions.

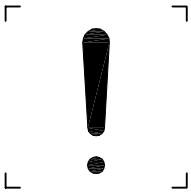
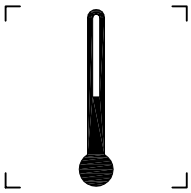
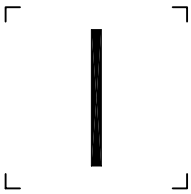
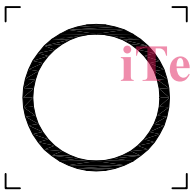
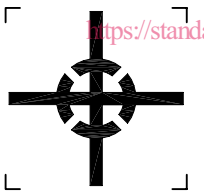
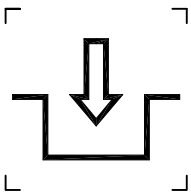
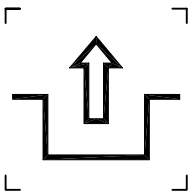
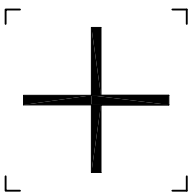
5.2 In addition, certain colours are used for specific functions:

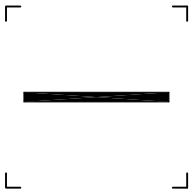
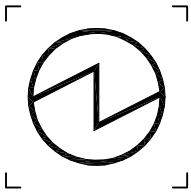
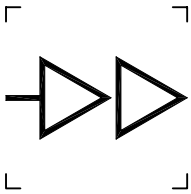
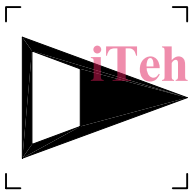
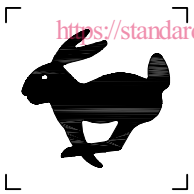
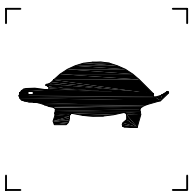
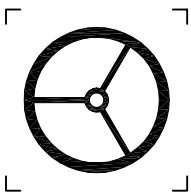
- **blue:** headlight main/high beam display;
- **red:** hazard warning display;
- **green:** turn signal display.

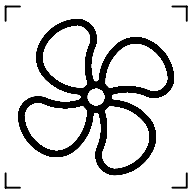
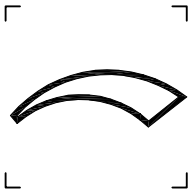
5.3 If colour is used on symbols for heating and/or cooling systems, the colour **red** shall be used to indicate hot and the colour **blue** shall be used to indicate cold.

6 Basic symbols

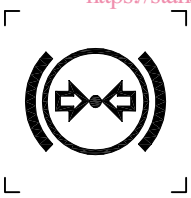
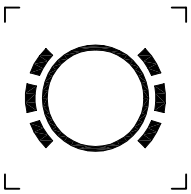
Reference number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
6.1		Engine (RIC engine)	1156
6.2		Transmission	1166
6.3		Hydraulic system	1409
6.4		Brake system	1399
6.5		Oil	1056
6.6		Water	0536
6.7		Level indicator	Application of 0159
6.8		Filter	1369

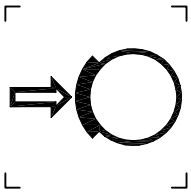
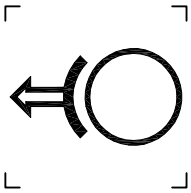
Reference number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
6.9		Failure/malfunction	1603
6.10		Temperature	0034
6.11		On	5007
6.12		Off	5008
6.13		Centre of gravity	0627
6.14		Engage	0022
6.15		Disengage	0023
6.16		Increase/positive polarity	5005

Reference number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
6.17		Decrease/negative polarity	5006
6.18		Electric energy	0232
6.19		Fast run	5108
6.20		Slow run	5124
6.21		Fast	Application Example
6.22		Slow	Application Example
6.23		Lock	1656
6.24		Steering	0326

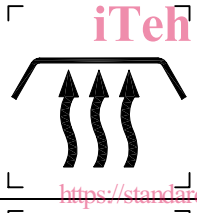
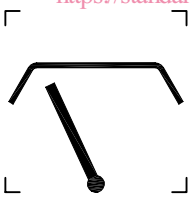
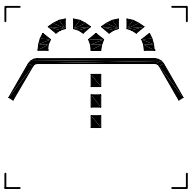
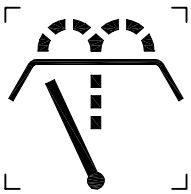
Reference number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
6.25		Ventilating/air circulating fan	0089
6.26		Progressively variable — Rotation	1364

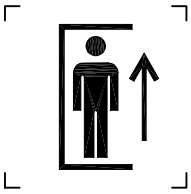
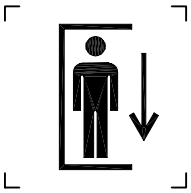
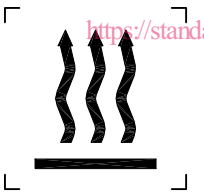
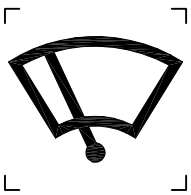
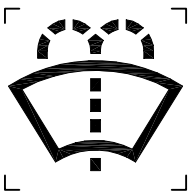
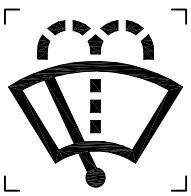
7 Brake system symbols

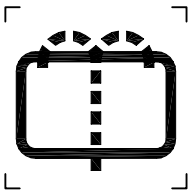
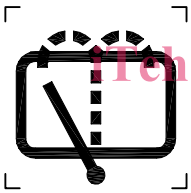
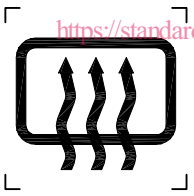
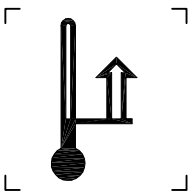
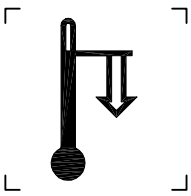
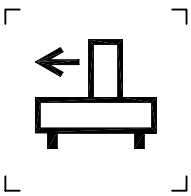
Reference number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.1		Brake fluid	1400
7.2		Brake system — Pressure	1402
7.3		Brake system — Failure/malfunction	0239
7.4		Parking brake	0238
7.5		Worn brake linings	1408

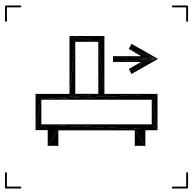
Reference number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.6		Brake — On	0020
7.7		Brake — Off	0021

8 Cab symbols

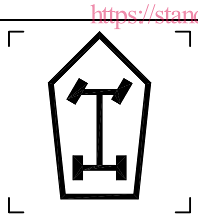
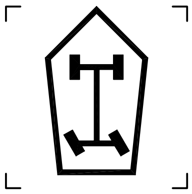
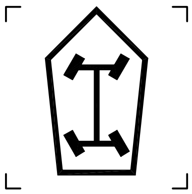
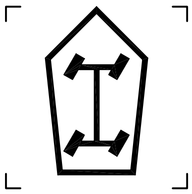
Reference number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
8.1		Cab roof — Demister/defroster	2385
8.2		Cab roof — Wiper	2387
8.3		Cab roof — Washer	2386
8.4		Cab roof — Washer and wiper	2388
8.5		Cooling/air conditioning	0027

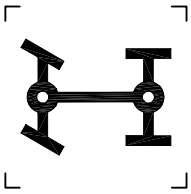
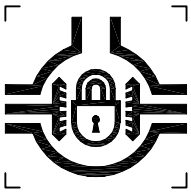
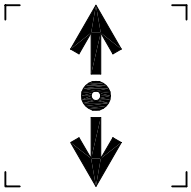
Reference number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
8.6		Elevating operator position — Raise	2340
8.7		Elevating operator position — Lower	2339
8.8		Seatbelt — Lap and shoulder belt	0249
8.9		Seatbelt — Lap belt only	1702
8.10		Interior heating	0637
8.11		Windscreen/windshield wiper	0086
8.12		Windscreen/windshield washer	0088
8.13		Windscreen/windshield washer and wiper	0087

Reference number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
8.14		Windscreen/windshield demister/defroster	0635
8.15		Rear window wiper	0097
8.16		Rear window washer	0099
8.17		Rear window washer and wiper	0098
8.18		Rear window demister/defroster	0636
8.19		Temperature — Increasing	0035
8.20		Temperature — Decreasing	0036
8.21		Sideloader cab — Traverse left	2382

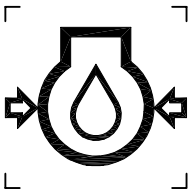
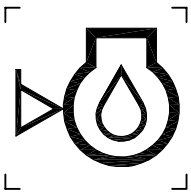
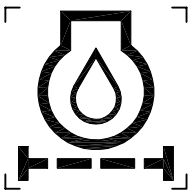
Reference number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
8.22		Sideloader cab — Traverse right	2383
8.23		Seat adjustment — Longitudinal	1428
8.24		Seat height adjustment	1430

9 Driving controls symbols

Reference number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
9.1		2-wheel steering — Front (Powered industrial trucks)	2391
9.2		2-wheel steering — Rear (Powered industrial trucks)	2392
9.3		All-(4)-wheel steering (Powered industrial trucks)	2393
9.4		Crab steering (Powered industrial trucks)	2394

Reference number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
9.5		Axle connect — All wheel drive [Add symbols for "on" and "off" or "engage" and "disengage" as needed.]	1203
9.6		Differential lock [Add symbols for "on" and "off" as needed.]	1662
9.7		Operating direction — Forward/reverse	1436
9.8		Operating direction — Multiple direction	1703

10 Engine symbols

Reference number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
10.1		Engine lubricating oil — Pressure	1374
10.2		Engine lubricating oil — Level	1373
10.3		Engine lubricating oil — Filter	1376