

INTERNATIONAL STANDARD

ISO
3767-1

Second edition
1991-12-01

Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays —

Part 1: Common symbols

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

Partie 1: Symboles communs



Reference number
ISO 3767-1:1991(E)

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 3767-1 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 second edition cancels and replaces the first edition (ISO 3767-1:1982), incorporating Addendum 1 of 1985, of which it constitutes a technical revision.

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*

Annex A of this part of ISO 3767 is for information only.

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International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Tractors, machinery for agriculture and forestry, powered lawn and garden equipment — Symbols for operator controls and other displays —

Part 1: Common symbols

1 Scope

This part of ISO 3767 establishes the common symbols for use on operator controls and other displays on tractors and machinery for agriculture and forestry, and powered lawn and garden equipment as defined in ISO 3339-0 and ISO 5395.

The symbols given apply to controls and displays common to tractors and machinery for agriculture and forestry, and powered lawn and garden equipment, as well as to other types of self-propelled work machines designed to operate off public roads, such as earth-moving machines, powered industrial trucks and mobile cranes.

NOTE 1 The foreword lists other parts of this International Standard, where symbols for specific forms of machinery and equipment may be found.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 3767. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 3767 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 3461-1:1988, *General principles for the creation of graphical symbols — Part 1: Graphical symbols for use on equipment*.

ISO 4196:1984, *Graphical symbols — Use of arrows*.

ISO 7000:1989, *Graphical symbols for use on equipment — Index and synopsis*.

IEC 417:1973, *Graphical symbols for use on equipment — Index, survey and compilation of the single sheets*, and its supplements (IEC 417A:1974, IEC 417B:1975, IEC 417C:1977, IEC 417D:1978, IEC 417E:1980, IEC 417F:1982, IEC 417G:1985, IEC 417H:1987, IEC 417J:1990).

3 Definition

For the purposes of all parts of this International Standard, the following definition applies.

3.1 symbol: Visually perceptible figure used to transmit information independently of language. It may be produced by drawing, printing or other means.

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 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 it is applied, it may be necessary to change the line thickness or to round off the corners of the symbol. The graphical 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 for 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. For example, symbol 8.4 for engine lubricating oil filter is a composite of symbol 6.1 for engine, symbol 6.5 for oil, and symbol 6.13 for filter.

4.6 If a symbol shows a machine or parts of a machine in 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 in an overhead (top) 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, 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 controls towards 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. In clauses 9.8 to 9.17, letters and numerals have the meaning indicated when used in association with transmission gear controls and displays on tractors and machinery for agriculture and forestry. 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 in this part of ISO 3767 are presented 32 % of original size. The grid marks "L" denote the corners of the 75 mm square of the graphic grid presented. The grid marks are not part of the symbol but are provided to ensure consistent presentation of all symbol graphics.

4.13 Microfiches of the symbols are available from the ISO/TC 145 Secretariat.

5 Colour

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

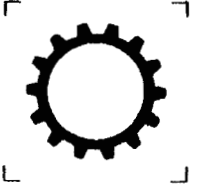
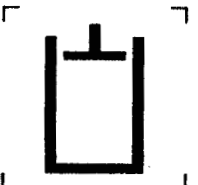
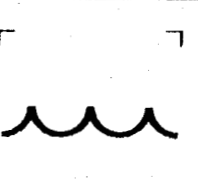
- red: failure or serious malfunction; requires immediate attention;
- yellow or amber: outside normal operating limits;
- green: normal operating condition.

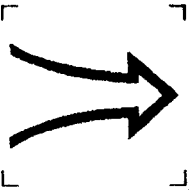
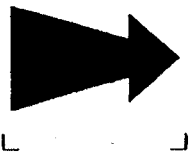
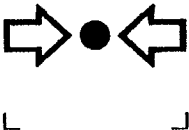
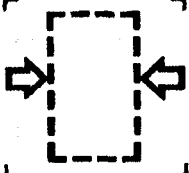
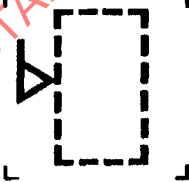
5.2 In addition, certain colours are used for specific functions:

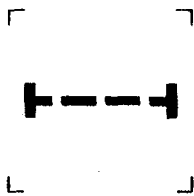
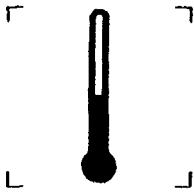
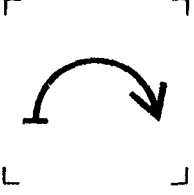
- blue: headlight main-/high-beam display;
- red: hazard warning display;
- green: turn signal display.

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

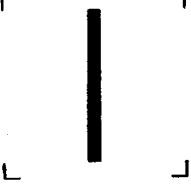
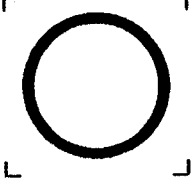
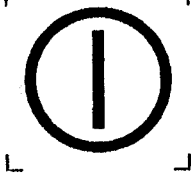
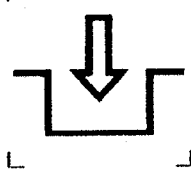
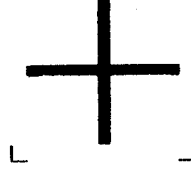
6 Basic symbol shapes

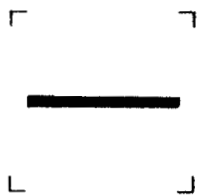
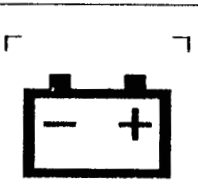
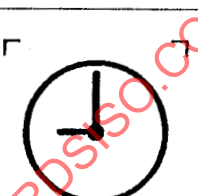
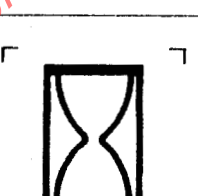
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
6.1		Engine	1156
6.2		Transmission	1166
6.3		Hydraulic system	1409
6.4		Brake system	1399
6.5		Oil	1056
6.6		Coolant (water)	0536

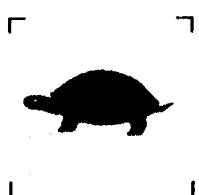
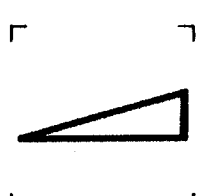
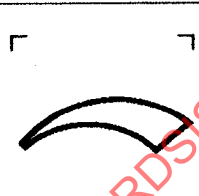
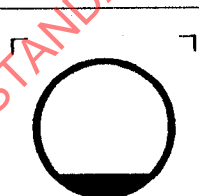
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
6.7		Intake air [To be used as symbol element only in combination with other symbols (e.g., engine). Shall be outline in all applications.]	1604
6.8		Exhaust gas [To be used as symbol element only in combination with other symbols (e.g., engine). Shall be shaded in all applications.]	1605
6.9		Pressure (To be used where the medium under pressure is not specified.)	1701
6.10		Pressure (For the creation of a combined symbol where the medium under pressure is specified, replace the dashed rectangle with a symbol for the medium.)	Application examples are not registered
6.11		Level indicator	Application of 0159
6.12		Liquid level (For the creation of a combined symbol where the fluid being measured is specified, replace the dashed rectangle by a symbol for the fluid.)	Application examples are not registered

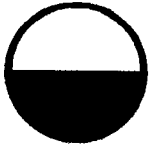
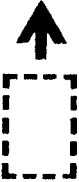
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
6.13		Filter	1369
6.14		Temperature	0034
6.15		Failure/malfunction (To be used as symbol element only in combination with other symbols.)	1603
6.16		Start switch mechanism	1365

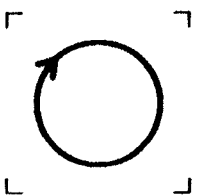
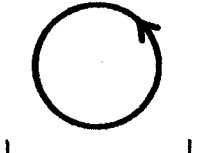
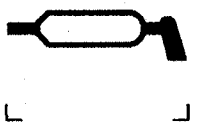
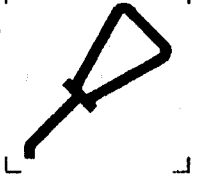
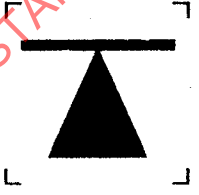
7 General symbols

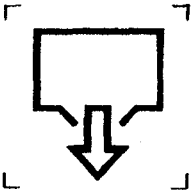
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.1		On/start	5007
7.2		Off/stop	5008
7.3		On and off	5010
7.4		Engage (Symbol may be rotated 90° for a clearer visual representation.)	0022
7.5		Disengage (Symbol may be rotated 90° for a clearer visual representation.)	0023
7.6		Plus/increase/positive polarity	5005

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.7		Minus/decrease/negative polarity	5006
7.8		Horn	0244
7.9		Lighter	0620
7.10		Battery charging condition	0247
7.11		Clock/time switch/timer	5184
7.12		Hourmeter/elapsed operating hours	1366

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.13		Seatbelt — Lap belt only	1702
7.14		Fast	Application examples are not registered
7.15		Slow	Application examples are not registered
7.16		Continuously variable — Linear	5004
7.17		Continuously variable — Rotational	1364
7.18		Volume empty	1563

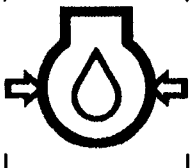
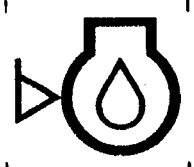
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.19		Volume half-full	1564
7.20		Volume full	1565
7.21		Machine travel direction — Forward (Replace dashed rectangle with appropriate symbol. May be rotated 90° counter-clockwise for side view of forward travel direction.)	Application examples are not registered
7.22		Machine travel direction — Reverse (Replace dashed rectangle with appropriate symbol. May be rotated 90° counter-clockwise for side view of reverse travel direction.)	Application examples are not registered
7.23		Control lever operating direction — Dual direction (Place appropriate symbols at extremes of directional arrows.)	1436
7.24		Control lever operating direction — Multiple direction (Place appropriate symbols at extremes of directional arrows.)	1703

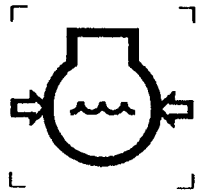
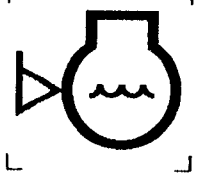
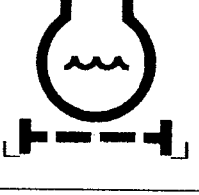
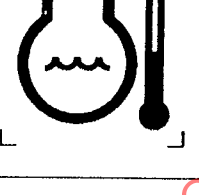
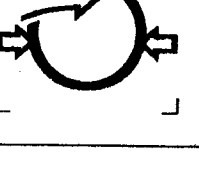
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.25		Clockwise rotation	0258
7.26		Counter-clockwise rotation	0937
7.27		Grease lubrication point	0787
7.28		Oil lubrication point	0391
7.29		Lift point	1368
7.30		Jack or support point	0542

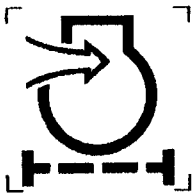
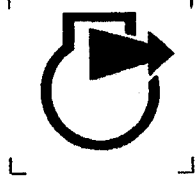
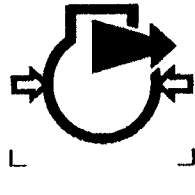
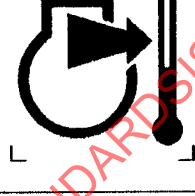
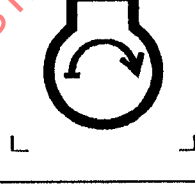
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
7.31		Draining/emptying	0029

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8 Engine symbols

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
8.1		Engine lubricating oil (If engine lubricating oil level alone is to be displayed, this symbol may be used to indicate level.)	1372
8.2		Engine lubricating oil pressure	1374
8.3		Engine lubricating oil level	1373
8.4		Engine lubricating oil filter	1376
8.5		Engine lubricating oil temperature	1375
8.6		Engine coolant (If engine coolant level alone is to be displayed, this symbol may be used to indicate level.)	1377

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
8.7		Engine coolant pressure	1379
8.8		Engine coolant level	1378
8.9		Engine coolant filter	1562
8.10		Engine coolant temperature	1380
8.11		Engine intake/combustion air	1381
8.12		Engine intake/combustion air pressure	1382

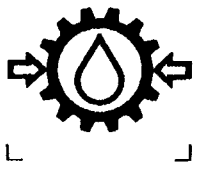
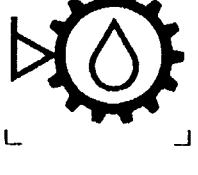
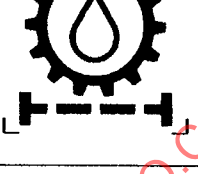
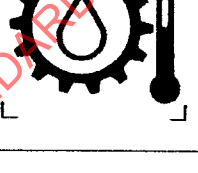
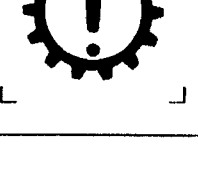
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
8.13		Engine intake air filter	1170
8.14		Engine intake air temperature	1383
8.15		Engine exhaust gas	1384
8.16		Engine exhaust gas pressure	1385
8.17		Engine exhaust gas temperature	1386
8.18		Engine start	1387

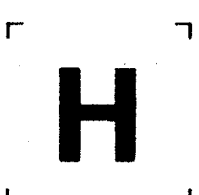
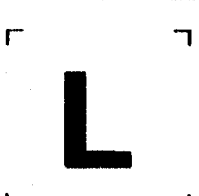
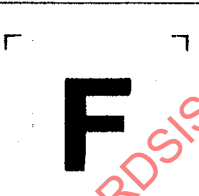
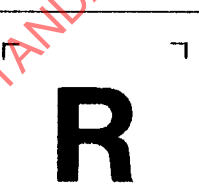
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
8.19		Engine stop	1388
8.20		Engine failure/malfunction	1371
8.21		Engine rotational speed/frequency	1389
8.22		Choke	0243
8.23		Primer (start aid)	1370
8.24		Electrical preheat (low temperature start aid)	1704

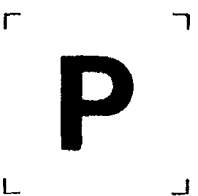
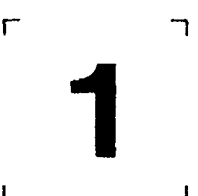
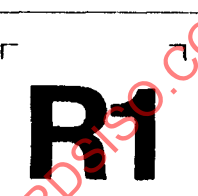
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
8.25		Gas injection (low temperature start aid)	1547

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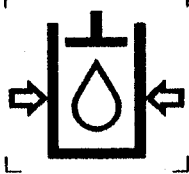
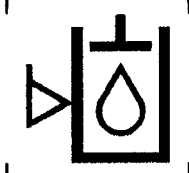
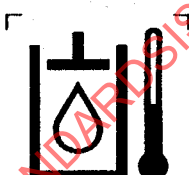
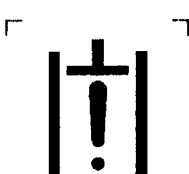
9 Transmission symbols

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
9.1		Transmission oil (If transmission oil level alone is to be displayed, this symbol may be used to indicate level.)	1397
9.2		Transmission oil pressure	1167
9.3		Transmission oil level	1398
9.4		Transmission oil filter	1169
9.5		Transmission oil temperature	1168
9.6		Transmission failure/malfunction	1396

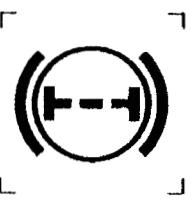
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
9.7		Clutch	1308
9.8		Neutral	Letters used as symbols are not registered
9.9		High	Letters used as symbols are not registered
9.10		Low	Letters used as symbols are not registered
9.11		Forward	Letters used as symbols are not registered
9.12		Reverse	Letters used as symbols are not registered

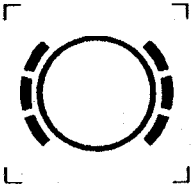
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
9.13		Park	Letters used as symbols are not registered
9.14		First gear	Numbers used as symbols are not registered
9.15		Second gear	Numbers used as symbols are not registered
9.16		Third gear (Other numbers may be used until the maximum number of forward gears is reached.)	Numbers used as symbols are not registered
9.17		Reverse first gear (Other numbers may be used until the maximum number of reverse gears is reached.)	Letters and numbers used as symbols are not registered

10 Hydraulic symbols

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
10.1		Hydraulic oil (If hydraulic oil level alone is to be displayed, this symbol may be used to indicate level.)	1411
10.2		Hydraulic oil pressure	1413
10.3		Hydraulic oil level	1412
10.4		Hydraulic oil filter	1415
10.5		Hydraulic oil temperature	1414
10.6		Hydraulic system failure/malfunction	1410

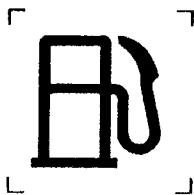
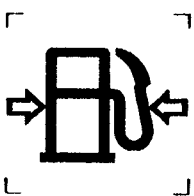
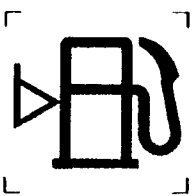
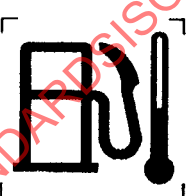
11 Brake symbols

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
11.1		Brake oil fluid (If brake oil/fluid level is to be displayed, this symbol may be used to indicate level.)	1400
11.2		Brake system pressure	1402
11.3		Brake system filter	1404
11.4		Brake system temperature	1403
11.5		Brake system failure/malfunction	0239
11.6		Parking brake	0238

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
11.7		Worn brake linings	1408

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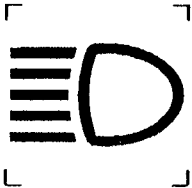
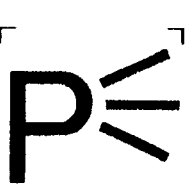
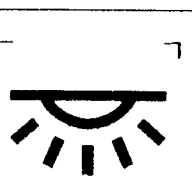
12 Fuel symbols

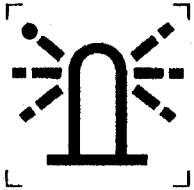
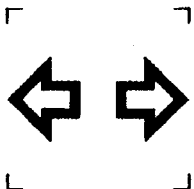
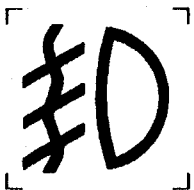
Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
12.1		Fuel (If fuel level alone is to be displayed this symbol may be used to indicate level. The type of fuel may be indicated inside the symbol.)	0245
12.2		Fuel pressure	1392
12.3		Fuel level	1551
12.4		Fuel filter	1393
12.5		Fuel temperature	1394
12.6		Fuel system failure/malfunction	1391

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
12.7		Fuel shut-off (Not to be used as engine stop symbol.)	1395
12.8		Diesel (compression-ignition) fuel	1541

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13 Light symbols

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
13.1		Headlights — Main-/high-beam	0082
13.2		Headlights — Dipped-/low-beam	0083
13.3		Work light	Application of 1142
13.4		Parking lights	0240
13.5		Hazard warning lights	0085
13.6		Interior/dome light	1421

Symbol number	Symbol form/shape	Symbol description/application	ISO/IEC registration number
13.7		Beacon	1141
13.8		Clearance/position lights	0456
13.9		Turn signals	0084
13.10		Front fog-lights (If one control is used for both front and rear fog-lights, the symbol designated front fog-lights shall be used.)	0633
13.11		Rear fog-lights (If one control is used for both front and rear fog-lights, the symbol designated front fog-lights shall be used.)	0634