



Fire Apparatus Manufacturers' Association
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FAMA TC008

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Graphical Symbols for Automotive Fire Apparatus

RATIONALE

This document gives the fire and rescue community an option for labeling common controls with a graphical representation of their function. This can be either in place of, or in addition to, the traditional text description. Some symbols have been adopted from already established sources, and many of the symbols are identical or similar to those being developed for use in Europe.

FOREWORD

This document presents graphical symbols for use on operator controls and other displays on fire and rescue apparatus.

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1 SCOPE

This document presents graphical symbols for use on operator controls and other displays on fire and rescue apparatus. These symbols are appropriate for vehicles designed to meet NFPA 1901 *Standard for Automotive Fire Apparatus*, NFPA 1906 *Standard for Wildland Apparatus*, and NFPA 414 *Standard for Airport Rescue and Fire Fighting Vehicles*.

2 REFERENCES

2.1 Applicable Publications

The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply.

2.1.1 SAE Publication

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

SAE J1362 Graphical Symbols for Operator Controls and Displays on Off-Road Self-Propelled Work Machines

2.1.2 ISO Publications

Available from ANSI, 25 West 43rd Street, New York, NY 10036-8002, Tel: 212-642-4900, www.ansi.org.

ISO 7000 Graphical symbols for use on equipment—Index and synopsis

ISO 7296-2 Cranes—Graphical symbols—Part 2: Symbols for mobile cranes

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

ISO 80416-4 Basic principles for graphical symbols for use on equipment—Part 4: Guidelines for the adaptation of graphical symbols for use on screens and displays (icons)

ISO 8999 Reciprocating internal combustion engines -- Graphical symbols

2.1.3 Other Publications

CEN 15989 Fire Fighting Vehicles and Equipment – Symbols for Operator Controls and Other Displays

IEC 60417 Graphical symbols for use on equipment

IEC 80416-1 Basic principles for graphical symbols for use on equipment—Part 1: Creation of symbol originals

IEC 80416-3 Basic principles for graphical symbols for use on equipment—Part 3: Guidelines for the application of graphical symbols

NFPA 1901 Standard for Automotive Fire Apparatus

NFPA 1906 Standard for Wildland Fire Apparatus

NFPA 414 Standard for Airport Rescue and Fire Fighting Vehicles.

3 DEFINITIONS

For the purpose of this document the following definition from ISO 80416-1 applies:

3.1 Symbol

A visually perceptible figure used to transmit information independent of language. It may be produced by drawing, printing, or other means.

4 GENERAL

- 4.1 New symbol ideas should be forwarded to FAMA. The FAMA Graphical Symbols group will consider new symbols at each FAMA technical committee meeting and add new symbols as appropriate.
- 4.2 Use symbols as shown in this document. However, symbols which are shown in outline form may be filled in actual use for enhanced clarity of reproduction and improved visual perception by the operator, unless otherwise noted for individual symbols. Refer to IEC 80416-3.
- 4.3 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 is unchanged in its basic graphical elements and remains easily discernible by the operator.
- 4.4 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 free to make such changes, provided that the essential perceptual characteristics of the symbol are maintained.
- 4.5 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 grouped together in a display or on a set of controls should be scaled to the same degree relative to the corner marks of the original symbol as shown in this document in order to maintain the correct visual relationship among the symbols. Symbols shall be used in the orientation shown in unless otherwise noted for individual symbols.
- 4.6 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.
- 4.7 Symbols are generally intended to replace a word or words with a graphical representation that has the same meaning for all operators, regardless of their native language. However, the use of a graphical symbol to identify a control or display does not preclude the use of words in conjunction with that control or display.
- 4.8 Symbols on controls and displays shall have good contrast to their background. 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.
- 4.9 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.
- 4.10 Reference numbers and the standards they come from are provided for each symbol not unique to this document. This list is not exhaustive. Certain symbols may be found in more than one standard, or in standards not referenced here.
- 4.11 Symbols are shown within the outer limits of a 24 mm square grid (32 percent of original ISO graphics grid size). Corner marks delimit the corners of the 75 mm square graphics grid from IEC 80416-1. Corner marks are not part of the symbol itself.

5 COLOR

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

- 5.1.1 The color **red** shall denote a failure, serious malfunction, or dangerous operating condition that requires immediate attention.
- 5.1.2 The color **yellow** or **amber** denotes a condition outside normal operating limits or approaching a dangerous operating condition.
- 5.1.3 The color **green** or denotes a normal operating condition.
- 5.2 Color coding should not be used to provide any unique information since 7 percent of the male population is color blind. Use colors to assist if desired but the operator should not need to rely on the colors for essential information.

6 ADAPTATION OF SYMBOLS AS DIGITAL DISPLAY ICONS

- 6.1 Symbols may be adapted for use as digital display icons on reconfigurable or other electronic displays. Such adaptations should follow the principles of ISO 80416-4. Special care should be taken to ensure that digital display icons preserve the visual impression of the symbol from which the icon is adapted.

7 APPLICATION RULES

7.1 Numbering Discharges

- 7.1.1 Number all driver side discharges beginning at the exact center of the apparatus front bumper using odd numbers going CCW around the driver side and ending before the center of the rear bumper
- 7.1.2 Number all passenger side discharges beginning just past the center of the apparatus front bumper using even numbers going CW around the passenger side and ending at the exact center of the rear bumper

7.2 Numbering Intakes

- 7.2.1 Number all driver side intakes beginning at the exact center of the apparatus front bumper using odd numbers going CCW around the driver side and ending before the center of the rear bumper
- 7.2.2 Number all passenger side intakes beginning just past the center of the apparatus front bumper using even numbers going CW around the passenger side and ending at the exact center of the rear bumper

7.3 Numbering Scene Light Switches

- 7.3.1 For instances when there are multiple lights of the same description, number driver side lights beginning at the front of the apparatus using odd numbers. Use even numbers on the passenger side.

7.4 Numbering Electrical Outlets

- 7.4.1 Number each electrical outlet circuit. Number each circuit at the circuit breaker or fuse panel. This can be accomplished by directly labeling the fuse or breaker, or by providing a diagram.
- 7.4.2 Use the Electrical Outlet symbol to label each outlet or cord reel with the number of its corresponding circuit, the circuit voltage, and the circuit amperage. Each circuit may have more than one outlet, so there may be several outlets with identical labels.

7.5 Symbols with Multiple uses

- 7.5.1 One of the main goals of this document is to keep the symbols simple and to minimize the number symbols. Keeping with this philosophy, many symbols can be employed to indicate multiple functions. Example: When the water discharge symbol is located on or next to the control it will be apparent that the label is identifying the water discharge control function. When the same symbol is placed next to the discharge outlet it is apparent that the label is identifying the discharge outlet. When the same symbol is located below the pressure gauge it is apparent that the symbol is describing the function of the gauge. For this reason separate symbols for control, outlet, and pressure are not needed.

7.6 Monitors

If there are multiple monitors on the same apparatus they should be numbered. Number monitors consecutively beginning at the front of the apparatus and moving to the back, then up the aerial device.

7.7 Aerial Symbols

Where there are multiple devices on the same apparatus, and one of them is associated with the aerial, it is permissible to use the aerial symbol in place of the numbering system.

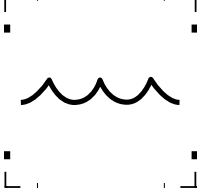
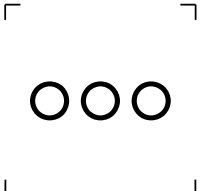
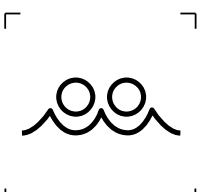
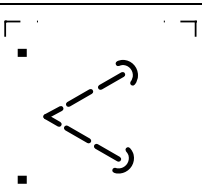
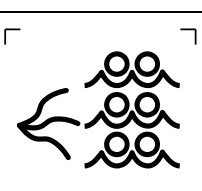
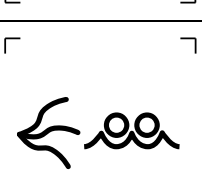
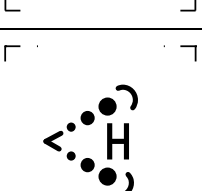
7.8 Aerial Monitor Numbering

Number the monitors on an aerial by starting at the center tip of the ladder or in the center of the basket facing along the device. Number monitors to the left with even numbers and to the right as odd numbers and then increasing the number going down the device toward the base.

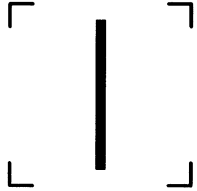
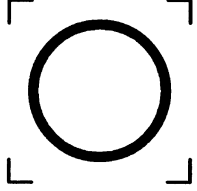
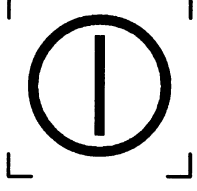
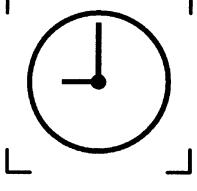

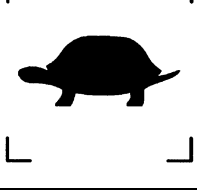
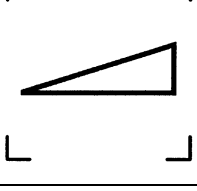
7.9 Manual Override Function

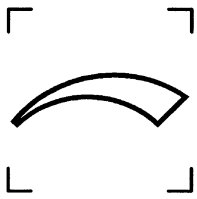
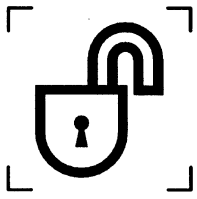


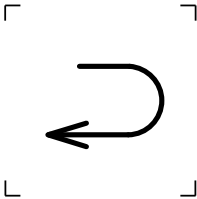
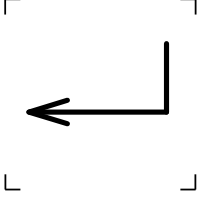
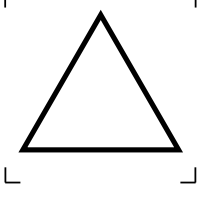
Label manual override valves on aerial device functions with the switch interlock override symbol above each of the specific control function symbols.

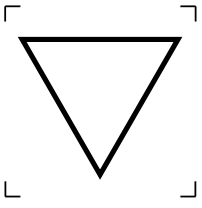

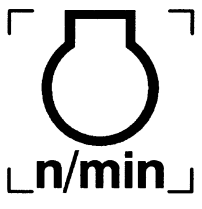
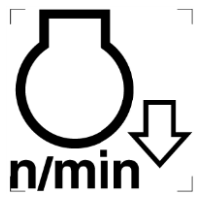
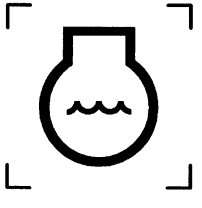
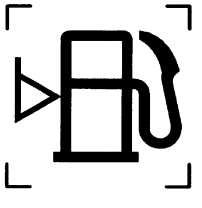

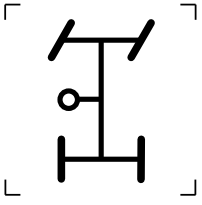
8 BASE SYMBOLS

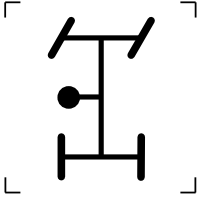
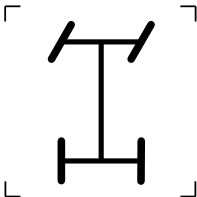
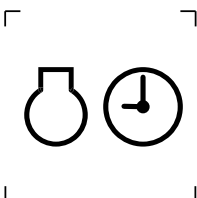
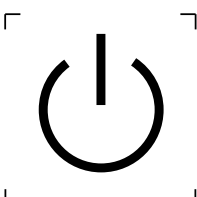

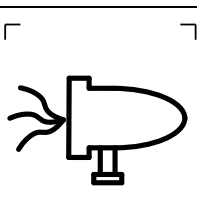
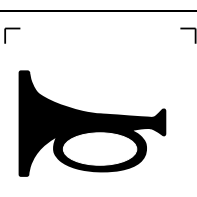
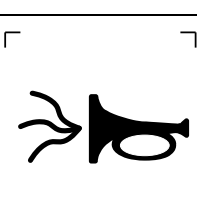
Symbol Number	Graphical Symbol	Symbol Description / Application	Reference Number	Reference Standard
8.01		Water	0536	ISO 7000
8.02		Foam Concentrate	3.3.2	CEN 15989:2010
8.03		Foam Solution	3.3.3	CEN 15989:2010
8.04		Powder	3.3.4	CEN 15989:2010
8.05		Compressed Air Foam (CAF) Wet	None	—
8.06		Compressed Air Foam (CAF) Dry	None	—
8.07		Halotron	None	—


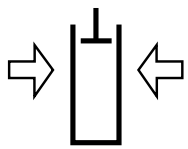


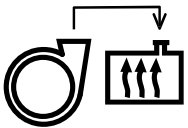
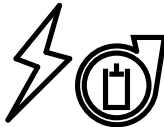
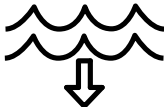

9 GENERAL SYMBOLS


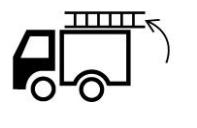

Symbol Number	Graphical Symbol	Symbol Description / Application	Reference Number	Reference Standard
9.01		On / Start Use independently or in conjunction with other symbols. Do not use as a graphical element in developing combined symbols per Clause 4.5	5007	IEC 60417
9.02		Off / Stop Use independently or in conjunction with other symbols. Do not use as a graphical element in developing combined symbols per Clause 4.5	5008	IEC 60417
9.03		On and Off Use independently or in conjunction with other symbols. Do not use as a graphical element in developing combined symbols per Clause 4.5	5010	IEC 60417
9.04		Clock / Time Switch / Timer	5184	IEC 60417
9.05		Fast This symbol is published without a registration number in the ISO standards indicated.	9.15	SAE J1362
9.06		Slow This symbol is published without a registration number in the ISO standards indicated.	9.26	SAE J1362
9.07		Continuously Variable — Linear	5004	IEC 60417

9.08		Continuously Variable — Rotational	1364	ISO 7000
9.09		Unlock - or - Switch Interlock Use to label a switch or control that must be held in the engaged position to allow another switch or control to function (“dead-man” feature)	9.36	SAE J1362
9.10		Bell - or - Alarm Use as an “urgent alert” indicator to call attention to another (already existing) symbol.	2301	ISO 7000
9.11		Manual Operation / Manual Start Use as a symbol element in a combined symbol or in conjunction with a function symbol to indicate manual operating mode.	0096	ISO 7000
9.12	AUTO	Automatic Operation / Automatic Start Use as a symbol element in a combined symbol or in conjunction with a function symbol to indicate automatic operating mode.	9.49	SAE J1362
9.13		Back	None	—
9.14		Select	None	—
9.15		Up	None	—

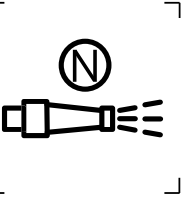
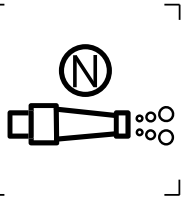
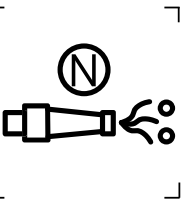
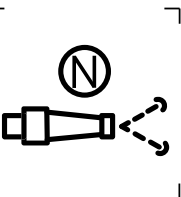
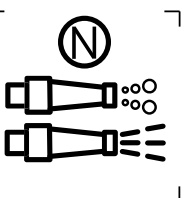
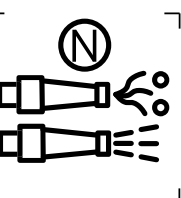
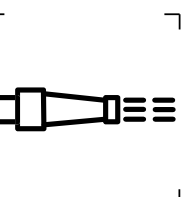
9.16		Down	None	—
9.17		Warning	None	—
9.18		Engine — Rotational Speed	1389	ISO 7000
9.19		Engine — Rotational Speed — Instantaneous Decrease	2308	ISO 7000
9.20		Engine Coolant	1377	ISO 7000
9.21		Fuel — Level	1551	ISO 7000
9.22		Emergency Stop To be shown with white border, red background, and white letters.	10.31	SAE J1362
9.23		Power Take-Off (PTO)	3.1.30	CEN 15989:2010

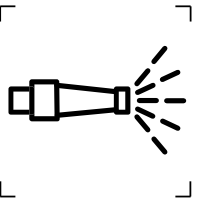
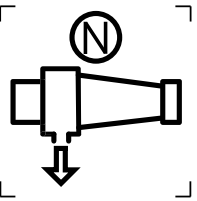
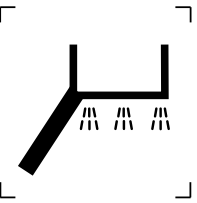

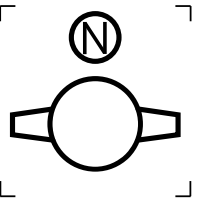
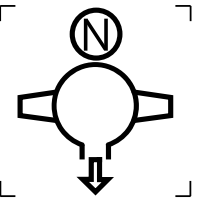
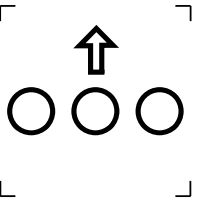
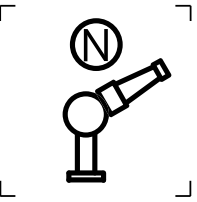
9.24		Power Take-Off Engage	3.1.31	CEN 15989:2010
9.25		Road Mode Mid-ship pump disengaged and vehicle is ready to drive.	None	—
9.26		Engine Operating Hours	None	—
9.27		Standby	None	—
9.28		Breathing Air (SCBA) Indicate max pressure for breathing air outlets. Symbol without the pressure designations can be used to indicate SCBA storage locations, brackets, etc...	None	—
9.29		Siren, Mechanical	None	—
9.30		Horn	0244	ISO 7000
9.31		Air Horn	None	—

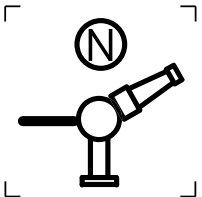
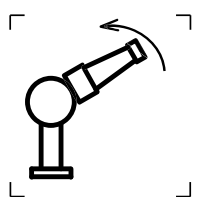
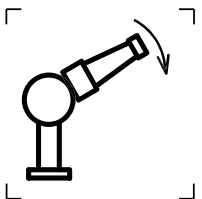
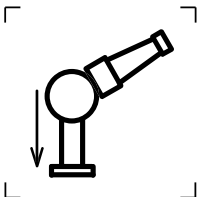
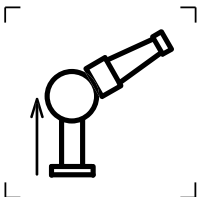
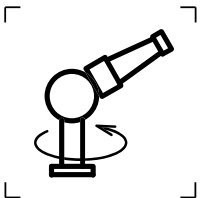
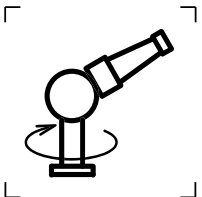

9.32		<p>Foam Pressure Foam pressure can also be indicated by placing the basic foam symbol on or underneath the foam pressure gauge.</p>	None	—
9.33		<p>Hydraulic Pressure Hydraulic pressure can also be indicated by placing the basic hydraulic symbol on or underneath the hydraulic pressure gauge.</p>	None	—
9.34		<p>Hydraulic Pump</p>	None	—
9.35		<p>Air Compressor</p>	None	—
9.36		<p>Radiator Re-Fill Use this symbol for the method of refilling the radiator with water from the fire suppression pump in the event that the cooling system springs a leak.</p>	None	—
9.37		<p>Emergency Power Unit Use this symbol for the electric-over-hydraulic pump used to provide emergency hydraulic power in the event of a main apparatus engine or hydraulic pump failure.</p>	None	—
9.38		<p>Water Flush Use this symbol for control valves or fittings that allow a system to be flushed with water.</p>	None	—
9.39		<p>Air Purge or Drain Use this symbol for control valves or fittings that allow a system to be purged with air, or a valve that allows a compressed air device or system to be drained.</p>	None	—

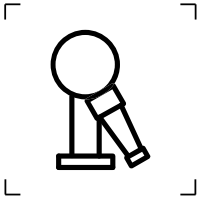
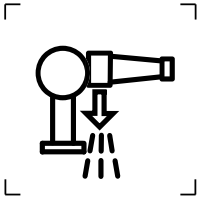
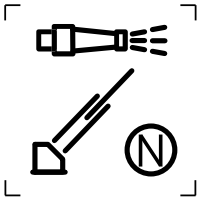
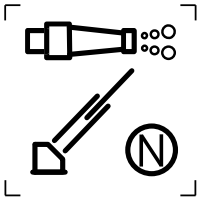
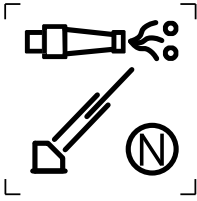
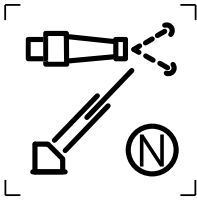
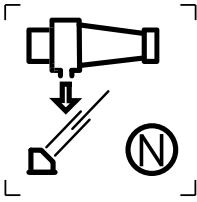
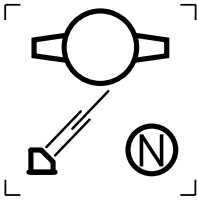
9.40		Ladder Rack Down Use this symbol for control of any powered ladder rack or gantry.	None	—
9.41		Ladder Rack Up Use this symbol for control of any powered ladder rack or gantry.	None	—
9.42		Compartment Door Alert Use this symbol to indicate that a compartment door is not secured.	None	—


10 DISCHARGES AND INTAKES

Symbol Number	Graphical Symbol	Symbol Description / Application	Reference Number	Reference Standard
10.01		Water Discharge Replace "N" with a number designation so that the corresponding control, gauge, and function or device all match.	None	—
10.02		Foam Discharge Replace "N" with a number designation so that the corresponding control, gauge, and function or device all match.	None	—
10.03		CAFS Discharge Replace "N" with a number designation so that the corresponding control, gauge, and function or device all match.	None	—
10.04		Powder Discharge Replace "N" with a number designation so that the corresponding control, gauge, and function or device all match.	None	—
10.05		Foam or Water Discharge Replace "N" with a number designation so that the corresponding control, gauge, and function or device all match.	None	—
10.06		CAFS or Water Discharge Replace "N" with a number designation so that the corresponding control, gauge, and function or device all match.	None	—
10.07		Stream	None	—

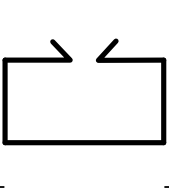
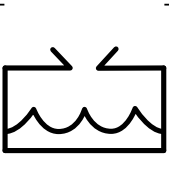
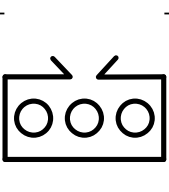
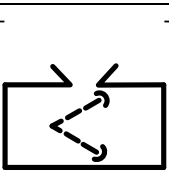
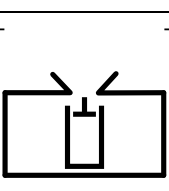
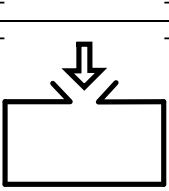
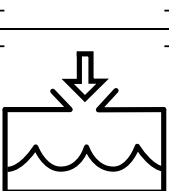
<p>10.08</p>		<p>Fog</p>	<p>None</p>	<p>—</p>
<p>10.09</p>		<p>Discharge Drain or Bleeder Replace "N" with a number designation so that the corresponding control, gauge, and function or device all match.</p>	<p>None</p>	<p>—</p>
<p>10.10</p>		<p>Aerial Platform Water Curtain</p>	<p>None</p>	<p>—</p>
<p>10.11</p>		<p>Pavement Cooler Discharge</p>	<p>None</p>	<p>—</p>
<p>10.12</p>		<p>Intake Replace "N" with a number designation so that the corresponding control, gauge, and function or device all match.</p>	<p>None</p>	<p>—</p>
<p>10.13</p>		<p>Intake Drain or Bleeder Replace "N" with a number designation so that the corresponding control, gauge, and function or device all match.</p>	<p>None</p>	<p>—</p>
<p>10.14</p>		<p>Foam Intake</p>	<p>None</p>	<p>—</p>
<p>10.15</p>		<p>Remote Monitor Replace "N" with a number designation so that the corresponding control, gauge, and function or device all match.</p>	<p>None</p>	<p>—</p>

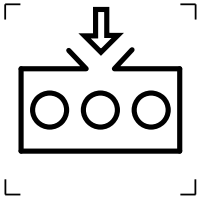
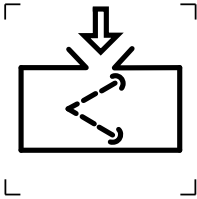
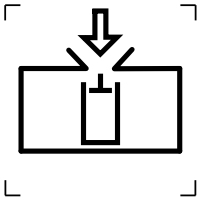
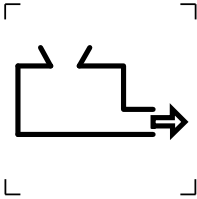
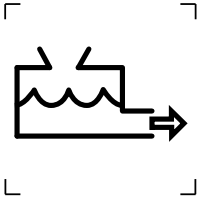
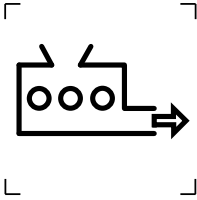
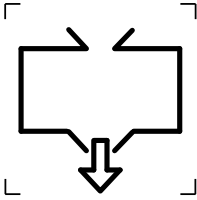
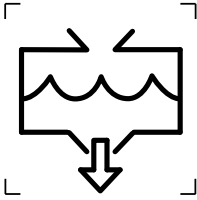
<p>10.16</p>		<p>Manual Monitor Replace "N" with a number designation so that the corresponding control, gauge, and function or device all match.</p>	<p>None</p>	<p>—</p>
<p>10.17</p>		<p>Monitor Elevate</p>	<p>None</p>	<p>—</p>
<p>10.18</p>		<p>Monitor Depress</p>	<p>None</p>	<p>—</p>
<p>10.19</p>		<p>Monitor Lower</p>	<p>None</p>	<p>—</p>
<p>10.20</p>		<p>Monitor Raise</p>	<p>None</p>	<p>—</p>
<p>10.21</p>		<p>Monitor Rotate CCW</p>	<p>None</p>	<p>—</p>
<p>10.22</p>		<p>Monitor Rotate CW</p>	<p>None</p>	<p>—</p>
<p>10.23</p>		<p>Monitor Oscillate</p>	<p>None</p>	<p>—</p>

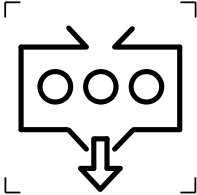
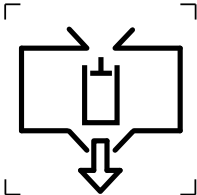
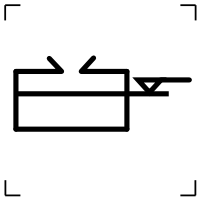
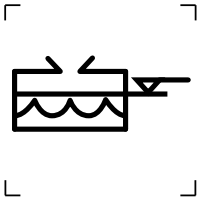
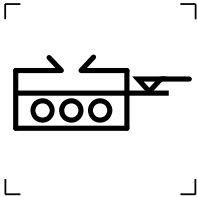
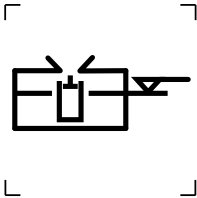
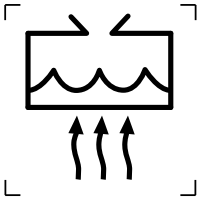
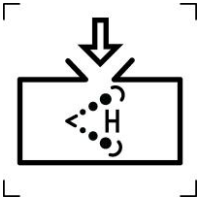
<p>10.24</p>		<p>Monitor Stow</p>	<p>None</p>	<p>—</p>
<p>10.25</p>		<p>Monitor Drain or Bleed</p>	<p>None</p>	<p>—</p>
<p>10.26</p>		<p>Aerial Water Discharge</p>	<p>None</p>	<p>—</p>
<p>10.27</p>		<p>Aerial Foam Discharge</p>	<p>None</p>	<p>—</p>
<p>10.28</p>		<p>Aerial CAF Discharge</p>	<p>None</p>	<p>—</p>
<p>10.29</p>		<p>Aerial Powder Discharge</p>	<p>None</p>	<p>—</p>
<p>10.30</p>		<p>Aerial Discharge Drain</p>	<p>None</p>	<p>—</p>
<p>10.31</p>		<p>Aerial Intake</p>	<p>None</p>	<p>—</p>

10.32		Shower Discharge	None	—
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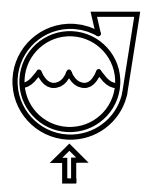

11 TANKS

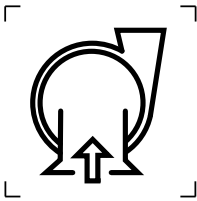
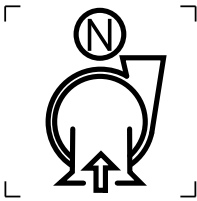
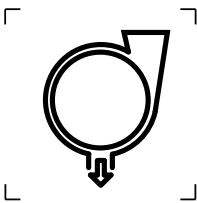
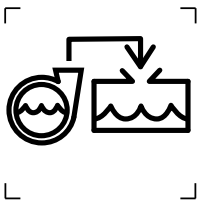
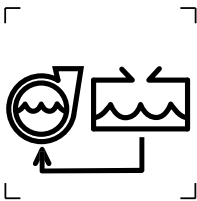
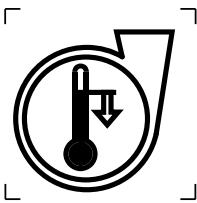

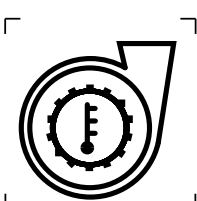
Symbol Number	Graphical Symbol	Symbol Description / Application	Reference Number	Reference Standard
11.01		Tank	None	—
11.02		Water Tank	3.5.1	CEN 15989:2010
11.03		Foam Tank	3.5.2	CEN 15989:2010
11.04		Powder Tank	None	—
11.05		Hydraulic Tank	None	—
11.06		Tank Fill	3.5.3 0028	CEN 15989:2010 ISO 7000
11.07		Water Tank Fill Use this symbol for both top and direct tank fill locations.	None	—

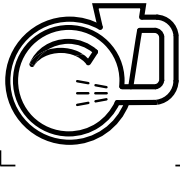
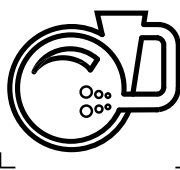
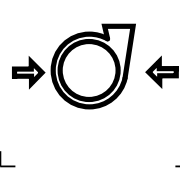
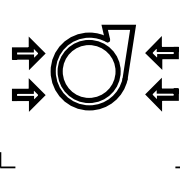
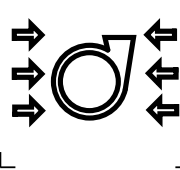
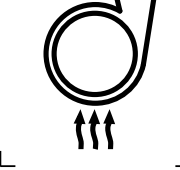
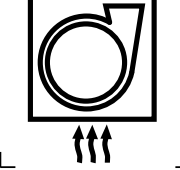
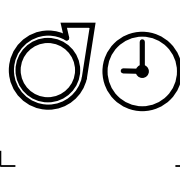
<p>11.08</p>		<p>Foam Tank Fill</p>	<p>None</p>	<p>—</p>
<p>11.09</p>		<p>Powder Tank Fill</p>	<p>None</p>	<p>—</p>
<p>11.10</p>		<p>Hydraulic Tank Fill</p>	<p>None</p>	<p>—</p>
<p>11.11</p>		<p>Tank Outlet</p>	<p>3.5.7</p>	<p>CEN 15989:2010</p>
<p>11.12</p>		<p>Water Tank Outlet</p>	<p>None</p>	<p>—</p>
<p>11.13</p>		<p>Foam Tank Outlet</p>	<p>None</p>	<p>—</p>
<p>11.14</p>		<p>Tank Drain</p>	<p>3.5.6 0029</p>	<p>CEN 15989:2010 ISO 7000</p>
<p>11.15</p>		<p>Water Tank Drain</p>	<p>None</p>	<p>—</p>

11.16		Foam Tank Drain	None	—
11.17		Hydraulic Tank Drain	None	—
11.18		Tank Level	3.5.9	CEN 15989:2010
11.19		Water Tank Level	None	—
11.20		Foam Tank Level	None	—
11.21		Hydraulic Tank Level	None	—
11.22		Water Tank Heater	None	—
11.23		Halotron Tank Fill	None	—

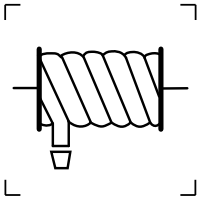
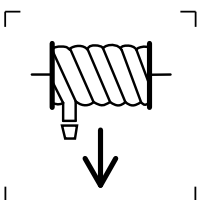
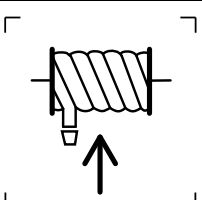
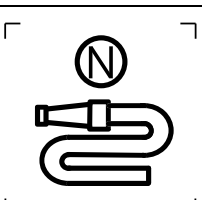
12 FIRE SUPPRESSION PUMP FUNCTIONS AND FEATURES

Symbol Number	Graphical Symbol	Symbol Description / Application	Reference Number	Reference Standard
12.01		Pump	3.4.1	CEN 15989:2010
12.02		Pump Engage	None	—
12.03		Pump Engage Manually	None	—
12.04		Water Pump Engage	None	—
12.05		Foam Pump Engage	None	—
12.06		Pump Intake Use this symbol to label the master pump intake pressure gauge and to label the pump intake valve if there is only one intake valve on the apparatus.	None	—
12.07		Pump Discharge Use this symbol to label the master pump discharge pressure gauge and to label the pump discharge valve if there is only one discharge valve on the apparatus.	None	—

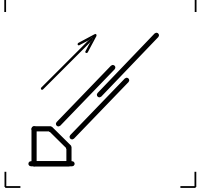
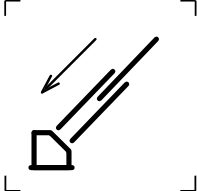
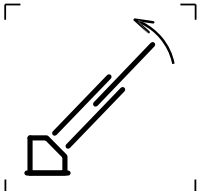
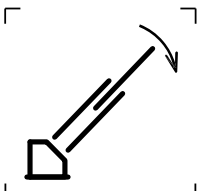
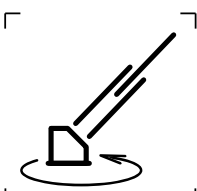
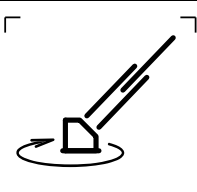
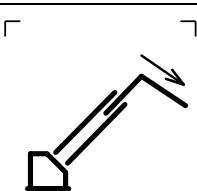
12.08		<p>Pump Priming Use this symbol when there is only one pump priming device on the apparatus.</p>	3.4.2	CEN 15989:2010
12.09		<p>Pump Priming Use this symbol when there are more than one priming pumps on the apparatus. Replace "N" with a number to match the pump with its control</p>	None	—
12.10		<p>Pump Drain</p>	3.4.5	CEN 15989:2010
12.11		<p>Pump-to-Tank Valve</p>	None	—
12.12		<p>Tank-to-Pump Valve</p>	None	—
12.13		<p>Pump Cooling Recirculation Valve</p>	None	—
12.14		<p>Pump Water Temperature Use this symbol illuminated in red, or in conjunction with a red lamp, to indicate that the pump water temperature is at a critical level. Use without color to label a pump water temperature gauge.</p>	None	—
12.15		<p>Pump Transmission Temperature Use this symbol illuminated in red, or in conjunction with a red lamp, to indicate that the pump transmission temperature is at a critical level. Use without color to label a pump transmission temperature gauge.</p>	None	—

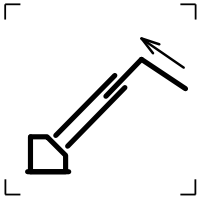
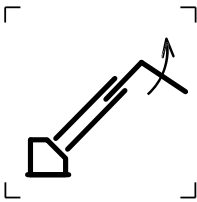
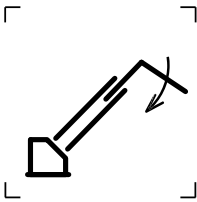
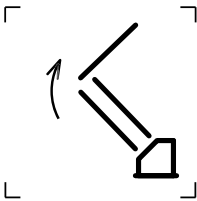
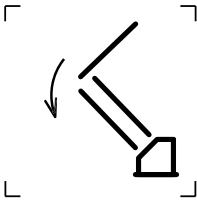
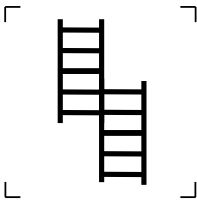
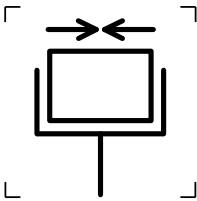
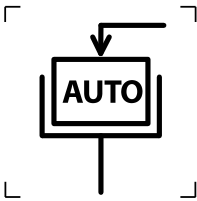
12.16		Water Pump Discharge Relief	None	—
12.17		Foam Pump Discharge Relief	None	—
12.18		Pump, Low Pressure Use this symbol to label the low pressure control position on a pump which has multiple pressure settings. This would be the single-stage setting of a two-stage pump.	None	—
12.19		Pump, High Pressure Use this symbol to label the high pressure control position on a pump which has multiple pressure settings. This would be the two-stage setting of a two-stage pump.	None	—
12.20		Pump, Ultra High Pressure Use this symbol to label the highest pressure control position on a pump which has more than two pressure settings.	None	—
12.21		Pump Heater	None	—
12.22		Pump Compartment Heater	None	—
12.23		Pump Hours Use this symbol to label the meter that keeps track of the running time for the fire suppression pump.	None	—

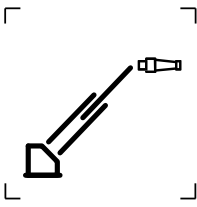
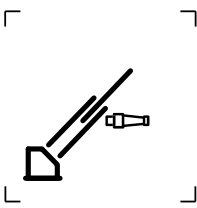
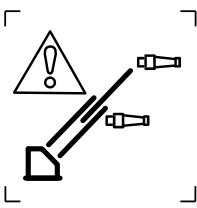
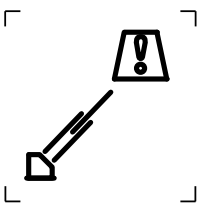

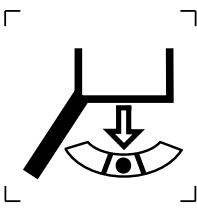
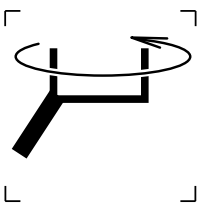
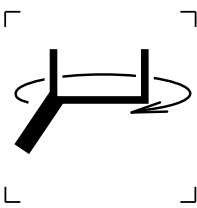
13 HOSE

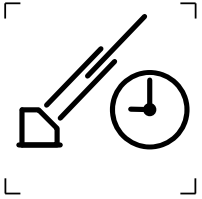
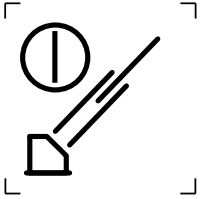
Symbol Number	Graphical Symbol	Symbol Description / Application	Reference Number	Reference Standard
13.01		Hose Reel	3.8.13	CEN 15989:2010
13.02		Hose Reel Wind Out	3.8.15	CEN 15989:2010
13.03		Hose Reel Wind In	3.8.14	CEN 15989:2010
13.04		Pre-Connect Hose Replace "N" with a number designation so that the corresponding control, gauge, and function or device all match.	None	—

14 AERIAL DEVICE

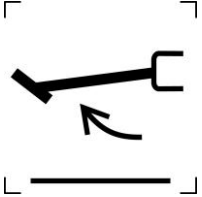
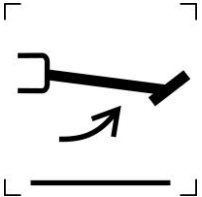
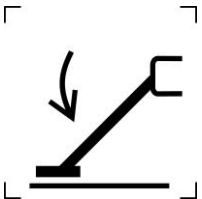
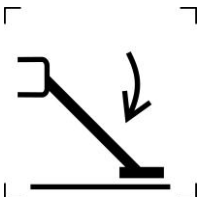
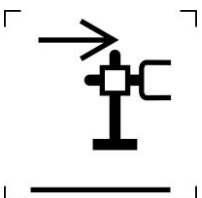
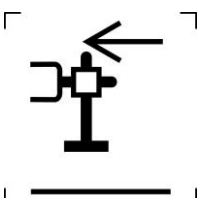
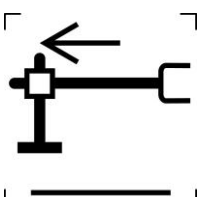
Symbol Number	Graphical Symbol	Symbol Description / Application	Reference Number	Reference Standard
14.01		Aerial Extend	None	—
14.02		Aerial Retract	None	—
14.03		Aerial Elevate	None	—
14.04		Aerial Depress	None	—
14.05		Aerial Rotate CCW	None	—
14.06		Aerial Rotate CW	None	—
14.07		Aerial Articulate Extend	None	—

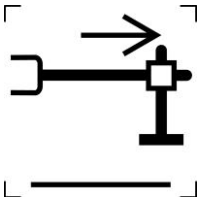
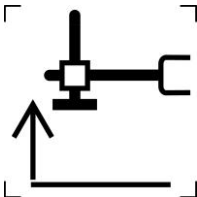
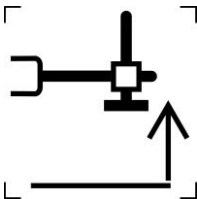
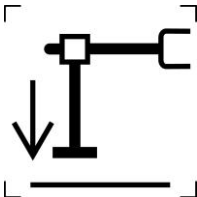
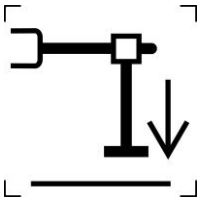

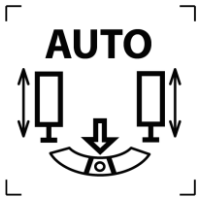
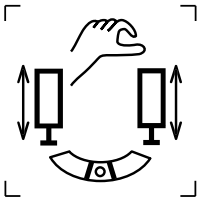
<p>14.08</p>		<p>Aerial Articulate Retract</p>	<p>None</p>	<p>—</p>
<p>14.09</p>		<p>Aerial Articulate Elevate</p>	<p>None</p>	<p>—</p>
<p>14.10</p>		<p>Aerial Articulate Depress</p>	<p>None</p>	<p>—</p>
<p>14.11</p>		<p>Aerial Boom Raise</p>	<p>None</p>	<p>—</p>
<p>14.12</p>		<p>Aerial Boom Lower</p>	<p>None</p>	<p>—</p>
<p>14.13</p>		<p>Ladder Rungs Aligned</p>	<p>None</p>	<p>—</p>
<p>14.14</p>		<p>Aligned With Cradle</p>	<p>None</p>	<p>—</p>
<p>14.15</p>		<p>Automatic Aerial Stowing</p>	<p>None</p>	<p>—</p>

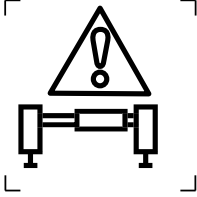

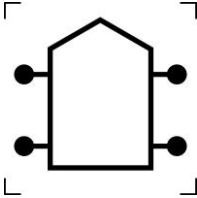
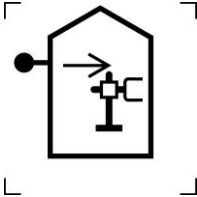
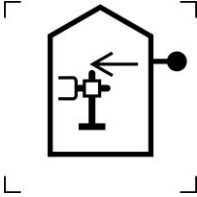
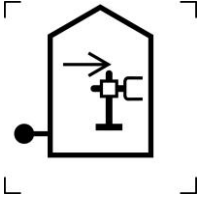
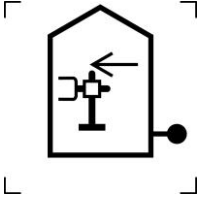
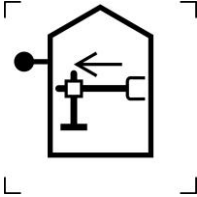
<p>14.16</p>		<p>Aerial Monitor Water Tower Mode</p>	<p>None</p>	<p>—</p>
<p>14.17</p>		<p>Aerial Monitor Rescue Mode</p>	<p>None</p>	<p>—</p>
<p>14.18</p>		<p>Movable Monitor Not Secure</p>	<p>None</p>	<p>—</p>
<p>14.19</p>		<p>Aerial Overload</p>	<p>None</p>	<p>—</p>
<p>14.20</p>		<p>Aerial Platform Overload</p>	<p>None</p>	<p>—</p>
<p>14.21</p>		<p>Aerial Platform Leveling</p>	<p>None</p>	<p>—</p>
<p>14.22</p>		<p>Aerial Platform Rotate CCW</p>	<p>None</p>	<p>—</p>
<p>14.23</p>		<p>Aerial Platform Rotate CW</p>	<p>None</p>	<p>—</p>

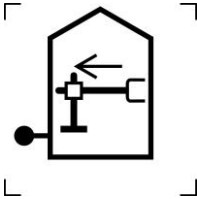
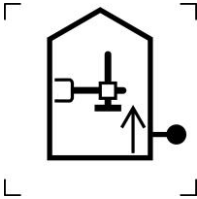
14.24		Aerial Hours	None	—
14.25		Aerial Power	None	—

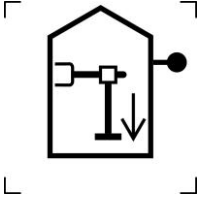
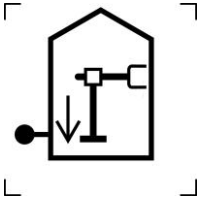
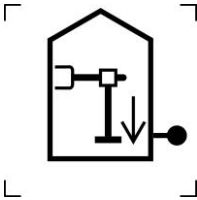
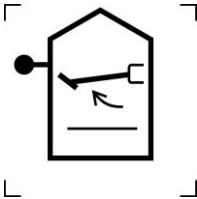
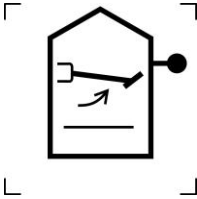
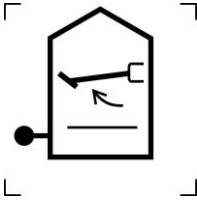
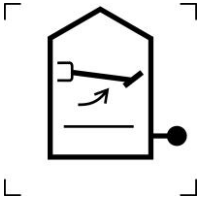
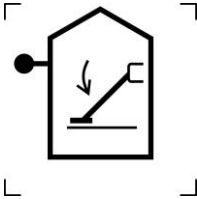
15 STABILIZERS

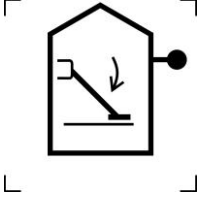
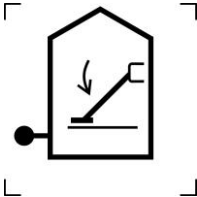
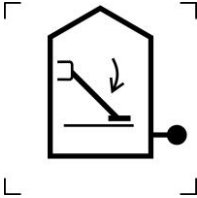
Symbol Number	Graphical Symbol	Symbol Description / Application	Reference Number	Reference Standard
15.01L		Left Stabilizer Up	23-02	SAE J1362
15.01R		Right Stabilizer Up	23-04	SAE J1362
15.02L		Left Stabilizer Down	23-01	SAE J1362
15.02R		Right Stabilizer Down	23-03	SAE J1362
15.03L		Left Beam In	24-03	SAE J1362
15.03R		Right Beam In	24-05	SAE J1362
15.04L		Left Beam Out	24-02	SAE J1362

15.04R		Right Beam Out	24-04	SAE J1362
15.05L		Left Jack Up	24-07	SAE J1362
15.05R		Right Jack Up	24-09	SAE J1362
15.06L		Left Jack Down	24-06	SAE J1362
15.06R		Right Jack Down	24-08	SAE J1362
15.07		Stabilizer Off-Level Warning	None	—
15.08		Stabilizers Automatic Leveling	None	—
15.09		Stabilizers Manual Leveling	None	—

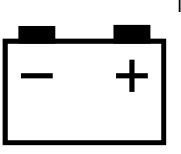




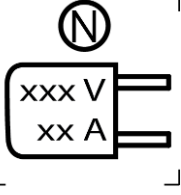
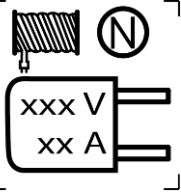
<p>15.10</p>		<p>Stabilizers Short-Jacked Warning</p>	<p>None</p>	<p>—</p>
<p>15.11</p>		<p>Stabilizers Set</p>	<p>2967 3.1.13</p>	<p>ISO 7000 CEN 15989</p>
<p>15.12</p>		<p>Stabilizer Locations</p>	<p>1222 3.1.12</p>	<p>ISO 7000 CEN 15989</p>
<p>15.13FL</p>		<p>Front Left Beam In</p>	<p>-</p>	<p>-</p>
<p>15.13FR</p>		<p>Front Right Beam In</p>	<p>-</p>	<p>-</p>
<p>15.13RL</p>		<p>Rear Left Beam In</p>	<p>-</p>	<p>-</p>
<p>15.13RR</p>		<p>Rear Right Beam In</p>	<p>-</p>	<p>-</p>
<p>15.14FL</p>		<p>Front Left Beam Out</p>	<p>-</p>	<p>-</p>

15.14FR		Front Right Beam Out	-	-
15.14RL		Rear Left Beam Out	-	-
15.14RR		Rear Right Beam Out	-	-
15.15FL		Front Left Jack Up	-	-
15.15FR		Front Right Jack Up	-	-
15.15RL		Rear Left Jack Up	-	-
15.15RR		Rear Right Jack Up	-	-
15.16FL		Front Left Jack Down	-	-

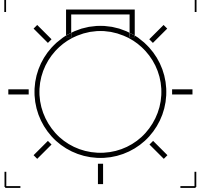


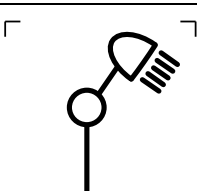
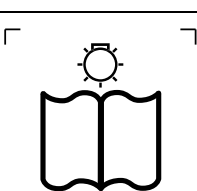
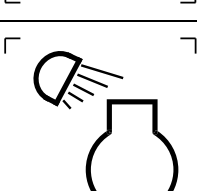
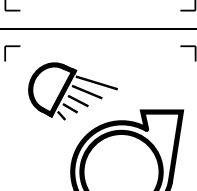
15.16FR		Front Right Jack Down	-	-
15.16RL		Rear Left Jack Down	-	-
15.16RR		Rear Right Jack Down	-	-
15.17FL		Front Left Stabilizer Up	-	-
15.17FR		Front Right Stabilizer Up	-	-
15.17RL		Rear Left Stabilizer Up	-	-
15.17RR		Rear Right Stabilizer Up	-	-
15.18FL		Front Left Stabilizer Down	-	-






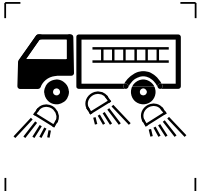
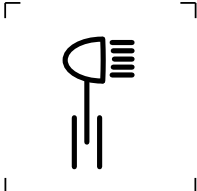
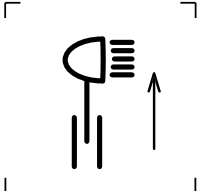
<p>15.18FR</p>		<p>Front Right Stabilizer Down</p>	<p>-</p>	<p>-</p>
<p>15.18RL</p>		<p>Rear Left Stabilizer Down</p>	<p>-</p>	<p>-</p>
<p>15.18RR</p>		<p>Rear Right Stabilizer Down</p>	<p>-</p>	<p>-</p>

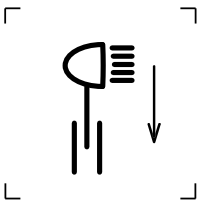
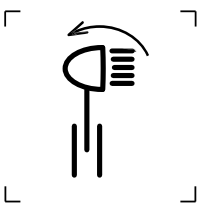
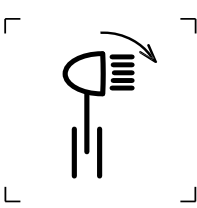


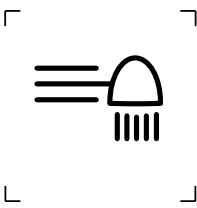
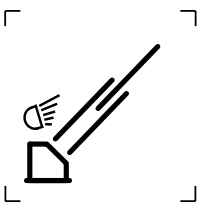
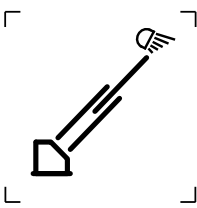
16 ELECTRICAL

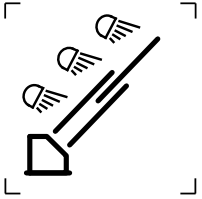
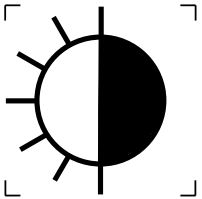
Symbol Number	Graphical Symbol	Symbol Description / Application	Reference Number	Reference Standard
16.01		Battery	0247	ISO 7000
16.02		Ammeter	3.2.5	CEN 15989:2010
16.03		Generator	1153	ISO 7000
16.04		Generator Pre-Heater	None	—
16.05		Voltmeter	3.2.4	CEN 15989:2010
16.06		Electrical Outlet Replace "N" with the number of the circuit that it is powered from. Replace the xxx with the voltage and xx with the amperage of the circuit.	None	—
16.07		Electrical Cord Reel Outlet Replace "N" with the number of the circuit that it is powered from. Replace the xxx with the voltage and xx with the amperage of the circuit.	None	—

17 LIGHTING

Symbol Number	Graphical Symbol	Symbol Description / Application	Reference Number	Reference Standard
17.01		Panel Light Use this symbol for the pump panel light control, instrument panel light control, or similar lighting that illuminates controls or gauges.	5012	IEC 60417
17.02		Dome Light	0085	ISO 7000
17.03		Flood Light	1204	ISO 7000
17.04		Adjustable Work Light	1142	ISO 7000
17.05		Reading Light	3.2.10	CEN 15989:2010
17.06		Engine Compartment Light	None	—
17.07		Pump Compartment Light	None	—

<p>17.08</p>		<p>Hose Bed Light</p>	<p>None</p>	<p>—</p>
<p>17.09</p>		<p>Front Scene Light</p>	<p>None</p>	<p>—</p>
<p>17.10</p>		<p>Rear Scene Light</p>	<p>None</p>	<p>—</p>
<p>17.11</p>		<p>Left Side Scene Light</p>	<p>None</p>	<p>—</p>
<p>17.12</p>		<p>Right Side Scene Light</p>	<p>None</p>	<p>—</p>
<p>17.13</p>		<p>Perimeter Ground Lights</p>	<p>None</p>	<p>—</p>
<p>17.14</p>		<p>Elevating Light</p>	<p>None</p>	<p>—</p>
<p>17.15</p>		<p>Elevating Light Raise</p>	<p>None</p>	<p>—</p>

17.16		Elevating Light Lower	None	—
17.17		Elevating Light Elevate	None	—
17.18		Elevating Light Depress	None	—
17.19		Elevating Light Rotate CCW	None	—
17.20		Elevating Light Rotate CW	None	—
17.21		Elevating Light Stow Use this symbol regardless of how the light and mast physically fold up.	None	—
17.22		Aerial Base Lights	None	—
17.23		Aerial Tip Lights	None	—

17.24		Aerial Track Lights	None	—
17.25		Day-Night Switch	3.2.9	CEN 15989:2010

18 Revisions

Date	Graphical Symbol(s)	Description of Change
10/01/2014	15.11	Replaced "Stabilizers Set" pictorial with image used by ISO 7000 and CEN 15989
10/01/2014	15.01 – 15.06	Replaced stabilizer pictorials with images from ISO 7000 and SAE J1362
10/01/2014	15.12 – 15.18	Added pictorials that depict the function as well as the location of the stabilizer controls using a combination of symbols from ISO 7000 and SAE J1362.