
Cranes — Crane operating manual —

**Part 2:
Mobile cranes**

Appareils de levage à charge suspendue — Manuel à l'usage des opérateurs —

Partie 2: Grues mobiles

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 96, *Cranes*, Subcommittee SC 6, *Mobile Cranes*

This second edition cancels and replaces the first edition (ISO 9928-2:2007), of which it constitutes a minor revision. Notably, *driving* has been replaced by *operating* in the title of the standard.

ISO 9928 consists of the following parts, under the general title *Cranes — Crane operating manual*:

- *Part 1: General*
- *Part 2: Mobile cranes*

Cranes — Crane operating manual —

Part 2: Mobile cranes

1 Scope

This part of ISO 9928 specifies the contents of a manual for the operators of mobile cranes as defined in ISO 4306-2.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4306-1:2007, *Cranes — Vocabulary — Part 1: General*

ISO 4306-2, *Cranes — Vocabulary — Part 2: Mobile cranes*

ISO 9928-1:2014, *Cranes — Crane operating manual — Part 1: General*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4306-1 and the following apply.

3.1

crane operator

person who uses (operates) the crane controls

[SOURCE: ISO 4306-1:2007, 7.1]

Note 1 to entry: For mobile cranes, the term *driver* is generally used to refer to that person who operates only those controls which move the crane from place to place.

4 Presentation of the manual

ISO 9928-1:2014, Clause 4, shall apply, with the exception of 4.2 e).

5 Contents

5.1 Technical data

This section of the manual shall include technical data for the crane operator which are necessary for operating, maintaining, inspecting and servicing the crane. The following are examples of this technical data:

- a) general dimensions;
- b) schematic diagrams;
- c) lubrication and fluids;

- d) machine and component weights;
- e) wire rope specifications;
- f) performance specifications;
- g) rated capacities (may be supplied in a separate book).

5.2 General safety instructions

This section of the manual shall include general safety rules applicable to both crane and job site practices.

It shall address aspects including

- a) electrical hazards (working in the vicinity of overhead power lines, etc.),
- b) load handling,
- c) setting up crane,
- d) access, egress,
- e) warning and crane-related hand signals, and
- f) environmental conditions such as wind or temperature limitations.

5.3 Controls, control or work stations

5.3.1 Crane travelling on road

This section of the manual shall illustrate all controls, pedals, gauges, warning lights, symbols, etc. of operation and explain their function. All gauges, indicators and lights shall have an explanation of their function.

5.3.2 Positioning loads

This section of the manual shall illustrate all controls, levers, pedals, switches, gauges, warning lights, symbols, etc. All controls shall have an explanation of their operation. All gauges, indicators and lights shall have an explanation and/or instruction by means of graphical symbols.

5.4 Crane information

This section of the manual shall include information on the following:

- a) boom and attachments: instructions for their installation, assembly and disassembly and limitations of use;
- b) hoist line reeving: instructions on how to select and reeve the correct parts of line for lift;
- c) instructions on the assembly, disassembly and storage of the crane;
- d) inspections: instructions on the inspection responsibilities of the crane operator, including information on wire rope discard criteria, correct fluid levels, etc.;
- e) maintenance instructions and the responsibilities of the crane operator;
- f) load charts and their use;
- g) special operations.

5.5 Operation

This section of the manual shall contain explanations on how to carry out the following:

- a) pre-start inspection, which the operator is expected to carry out prior to starting the machine;
- b) start up: information relative to starting the engine, cold weather starting, jump-starting, etc.;
- c) travelling: information on moving the crane on the road or job site, provide information on the use of the transmission and brakes, inclines, the position of the upper structure, boom elevation, etc.;
- d) set-up: information on setting up the crane, on outriggers, ground conditions, operational aids, safety devices, etc.;
- e) load positioning: information on positioning loads at the job site, which shall include the lifting of loads on outriggers and/or tyres, and the applicable positioning of the upper structure, among others;
- f) loading/unloading: instructions on the correct procedures for loading, unloading and transporting the crane on other vehicles.

5.6 Leaving the crane out of service

This section of the manual shall contain the following:

- a) instruction on the correct parking of the crane;
- b) information on the allowable wind speed.

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Bibliography

- [1] ISO 80000-1, *Quantities and units — Part 1: General*

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