

Manitowoc

SERVICE/MAINTENANCE MANUAL

This manual has been prepared for and is considered part of -

10000-1/11000-1/10000E-1

Model Number

1000/1100Ref

Serial Number


This Manual is Divided into the following Sections:

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SECTION 2	TEST PROCEDURES
SECTION 3	GENERAL
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SECTION 5	HYDRAULIC SYSTEM
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SECTION 12	TROUBLESHOOTING


NOTICE

The serial number of the crane is the only method Manitowoc has of providing you with correct parts and service information.

Always furnish serial number of crane and its attachments when ordering parts or discussing service problems with your Manitowoc distributor or the factory.



WARNING



To prevent death or serious injury:

- Avoid unsafe operation and maintenance.
Crane and attachments must be operated and maintained by trained and experienced personnel. Manitowoc is not responsible for qualifying these personnel.
- Do not operate or work on crane or attachments without first reading and understanding instructions contained in Operator Information Manual and Service Manual supplied with crane and applicable attachments.
- Store Operator Information Manual and Service Manual in operator's cab.
If Operator Information Manual or Service Manual is missing from cab, contact your Manitowoc distributor for a new one.

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SAFETY

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SAFETY

Reference Only

Reference Only

SAFETY INFORMATION

Most accidents, which occur during operation, are due to neglect of precautionary measures and safety rules. Sufficient care should be taken to avoid these accidents.

Erroneous operation, lubrication or maintenance services are very dangerous and may cause injury or death of personnel.

Thus, precautionary measures, or notes, written in this manual should be read and understood by personnel before starting each task.

Operation, inspection, and maintenance should be carefully carried out, and safety must be given the first priority. Messages of safety are indicated with caution marks. The safety information contained in this manual is intended only general safety information.

Messages of safety appear in this manual and on the machine. All messages of safety are identified by the words "DANGER", "WARNING" and "CAUTION". These words mean the following:



Indicates an imminently hazardous situation which, if not avoided, will result in loss of life or serious injuries.



Indicates a potentially hazardous situation which, if not avoided, could result in loss of life or serious injuries.



Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injuries. It may also be used to alert against possible damage to the machine and its components.

Note

Supplementary explanation.

It is very difficult for us to forecast every danger that may occur during operation. However, safety can be ensured by operating this machine according to methods recommended by Manitowoc. While operating machine, be sure to perform work with great care, so as to not damage the machine, or let accidents occur.

Please continue studying this manual until proper operation is completely understood.

EXPLANATION OF WARNING LABELS IN THE MACHINE

Since the warning labels are installed in the machine and indicated with the three stages in the same way as the warning description, confirm the positions and contents of all warning labels first.

Put them to the practical use to secure safety when operating, checking and performing maintenance.

HANDLING OF WARNING LABELS IN THE MACHINE

1. When the warning label is damaged or stained, order it to the designated service shop.
2. Do not remove the warning labels.
3. When the surface of the warning label is soiled and difficult to be seen, wipe it cleanly.

Reference Only

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