

OPERATOR'S MANUAL

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

RT535E

Crane Model Number

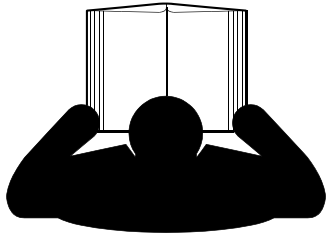
This Manual is divided into the following sections:

SECTION 1	INTRODUCTION
SECTION 2	SAFETY INFORMATION
SECTION 3	OPERATING CONTROLS AND PROCEDURES
SECTION 4	SET-UP AND INSTALLATION
SECTION 5	LUBRICATION
SECTION 6	MAINTENANCE CHECKLIST

NOTICE

The crane serial number is the only method your distributor or the factory has of providing you with correct parts and service information.

The crane serial number is identified on the builder's decal attached to the operator's cab. **Always furnish crane serial number** when ordering parts or communicating service problems with your distributor or the factory.



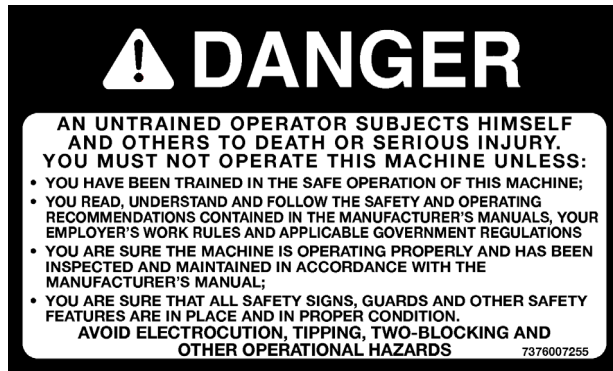
! WARNING

To prevent death or serious injury:

- Avoid unsafe operation and maintenance.
- This crane must be operated and maintained by trained and experienced personnel. Manitowoc is not responsible for qualifying these personnel.
- Do not operate or work on this crane without first reading and understanding Operator's Manual and Rating Plate supplied with crane.
- Store Operator's Manual in holder provided on crane.
- Attach laminated Capacity Charts supplied with crane to chain in operator's cab.
- If Operator's Manual or Capacity Charts are missing from cab, contact your distributor for new ones.

6. When a **level indicator** is inoperative or malfunctioning, other means shall be used to level the crane.

OPERATOR'S QUALIFICATIONS



An untrained operator subjects himself and others to death or serious injury.

YOU MUST NOT OPERATE THIS MACHINE UNLESS:

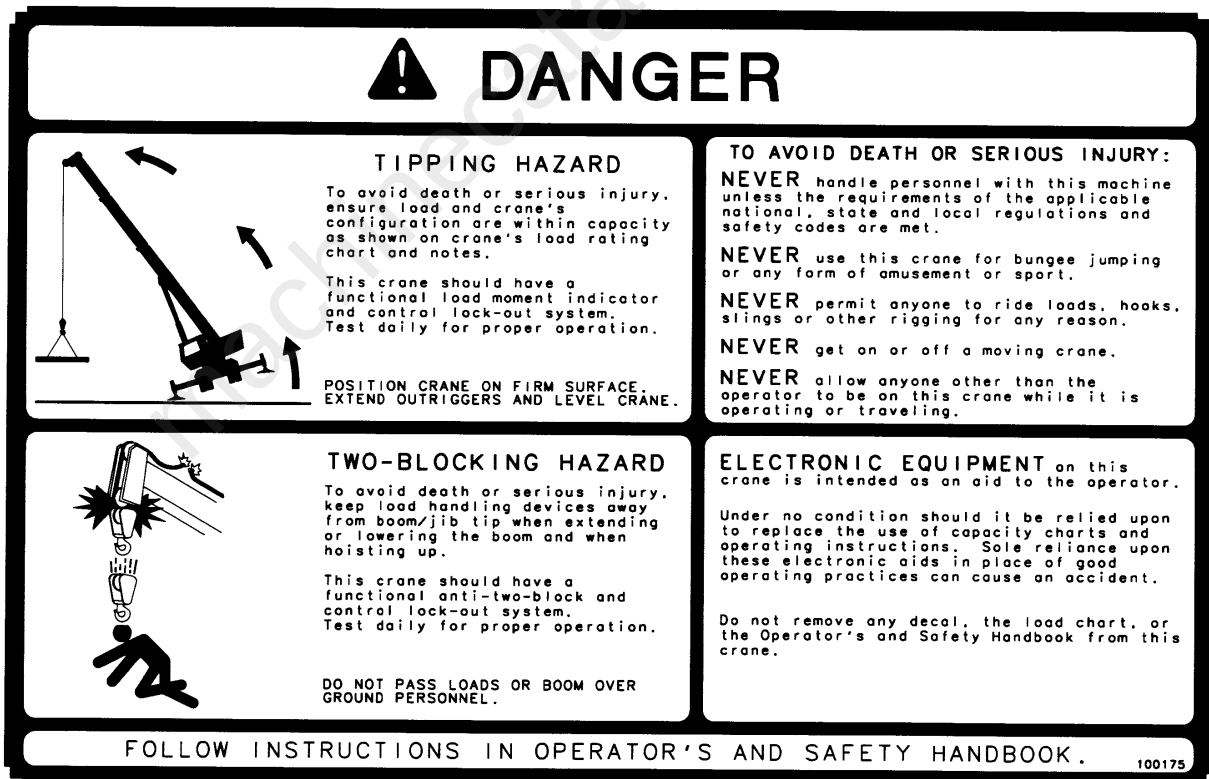
- You have been trained in the safe operation of this machine.

- You read, understand, and follow the safety and operating recommendations contained in the manufacturer's manuals, your employer's work rules, and applicable government regulations.
- You are sure the machine is operating properly and has been inspected and maintained in accordance with the manufacturer's manuals.
- You are sure that all safety signs, guards, and other safety features are in place and in proper condition.

Do not attempt to operate the crane unless you are trained and thoroughly familiar with all operational functions. Controls and design may vary from crane to crane, therefore, it is important that you have specific training on the particular crane you will be operating.

Training is **ESSENTIAL** for proper crane operation. Never jeopardize your own well-being or that of others by attempting to operate a crane on which you have not been trained.

You must be mentally and physically fit to operate a crane. Never attempt to operate a crane while under the influence of medication, narcotics, or alcohol. Any type of drug could impair physical, visual and mental reactions, and capabilities.



Hi/Med/Low Fan Switch

The Hi/Med/Low fan switch (24) is located at the bottom left side of the front console. It is a three-position switch that controls the speed which in turn regulates the volume of heated air output of the heater fan.

NOTE: The heater switch must be positioned to on (press top of switch) before fan will become operational.

- High speed - press top of switch
- Medium speed - switch centered
- Low Speed - press bottom of switch

Heater On/Off Switch

The heater on/off switch (25) is located on the bottom left side of the front console. Press the top of the switch to turn heater on. Press the bottom of the switch to turn the heater off.

Fan Defroster Switch

The fan defroster switch (26) is located at the bottom left side of the front console. It is a three position switch that controls operation of the defroster fan (47), located on top of the front console. When the switch is in the high (press top of switch) or low (switch centered) position, the amber indicator on the switch is illuminated.

Cross-Axle Differential Lock Switch (Optional)

The cross-axle differential lock switch (27) is located on the left bottom side of the front console and is used to lock the right and left wheels in a tandem set. The cross-axle differential lock increases traction on slippery roads. It is a two position momentary on switch. Press and hold top of switch for the lock position release switch for the unlock position.

CAUTION

Do not operate cross-axle differential lock while crane wheels are spinning or at speeds over approximately 16 km/h (10 mph). Release the throttle when locking or unlocking.

Drive Axle Selector Switch

The drive axle selector switch (28) is located on the lower left side of the front console. The two-position switch selects 2WD HI (high range) or 4WD LO (low range). The switch controls a solenoid valve (energized for 2WD HI) that operates the speed range and axle disconnect cylinders on the transmission. When the switch is in the 4WD LO position, the indicator on the switch is illuminated amber, and the four-wheel engaged indicator (5) will illuminate amber.

Right Rear Outrigger/Stabilizer Switch

The right rear outrigger switch (29) is located on the left side of the console. It is a three-position switch used to extend or retract the right rear stabilizer and extension cylinders. It must be used in conjunction with the outrigger extend/retract switch (33).

To extend the right rear outrigger beam, push the top of the outrigger extend/retract switch (33) and the top of the right rear outrigger switch.

To retract the right rear outrigger beam, push the bottom of the outrigger extend/retract switch (33) and the top of the right rear outrigger switch.

To extend the right rear stabilizer, push the top of the outrigger extend/retract switch (33) and the bottom of the right rear outrigger switch.

To retract the right rear stabilizer, push the bottom of the outrigger extend/retract switch (33) and the bottom of the right rear outrigger switch.

Left Rear Outrigger/Stabilizer Switch

The left rear outrigger switch (30) is located on the left side of the console. It is a three-position switch used to extend or retract the left rear stabilizer and extension cylinders. It must be used in conjunction with the outrigger extend/retract switch (33).

To extend the left rear outrigger beam, push the top of the outrigger extend/retract switch (33) and the top of the left rear outrigger switch.

To retract the left rear outrigger beam, push the bottom of the outrigger extend/retract switch (33) and the top of the left rear outrigger switch.

To extend the left rear stabilizer, push the top of the outrigger extend/retract switch (33) and the bottom of the left rear outrigger switch.

To retract the left rear stabilizer, push the bottom of the outrigger extend/retract switch (33) and the bottom of the left rear outrigger switch.

Emergency Stop Switch

The emergency stop switch (31) is located on the right side of the front console. Push in on the switch to remove power and stop the engine.

Ignition Switch

The ignition switch (32) is located on the right side of the front console. The switch is key operated with four positions: accessory (left position), off (vertical position), run (position between vertical and right), and start (right position).

With the ignition switch in the off position, all electrical power is off except for the headlights, marker lights, gauge lights,

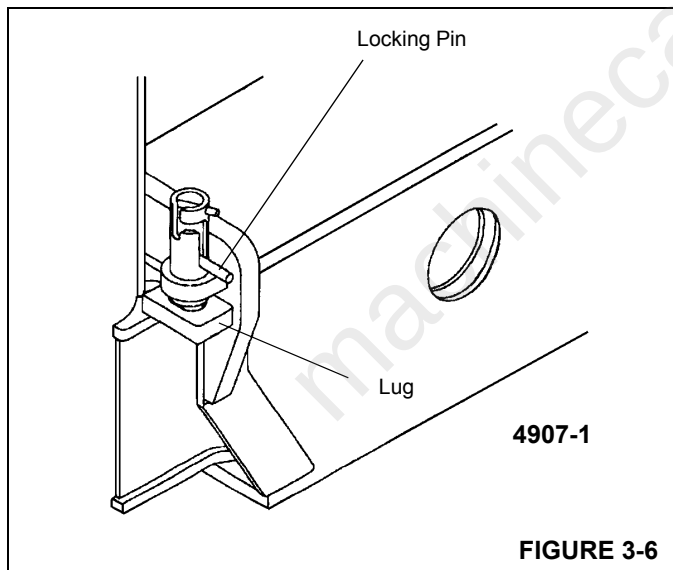


DANGER

Operator must select proper load chart and LMI program for the outrigger position selected.

8. Repeat step 3 until all wheels are clear of the ground and the crane is level as indicated by the sight level bubble located on the right side of the cab. If it is suspected that the bubble level indicator is out of adjustment, verify and adjust the bubble level as follows:
 - a. Locate the crane on a firm level surface.
 - b. Extend and set the outriggers. Level the crane, as indicated by the bubble level indicator, with the outriggers.
 - c. Place a miracle pointer, carpenter level, or similar type device on a machined surface such as the turntable bearing or bearing mounting surfaces.
 - d. Level the crane with the outriggers as indicated on the device used in step (c).
 - e. Adjust the bubble level indicator with the mounting screws to show level.

Engaging the Mid Extend Lock Pin



NOTE: It may be necessary to jog the outrigger extension/retraction switch slightly to ensure proper pin engagement.

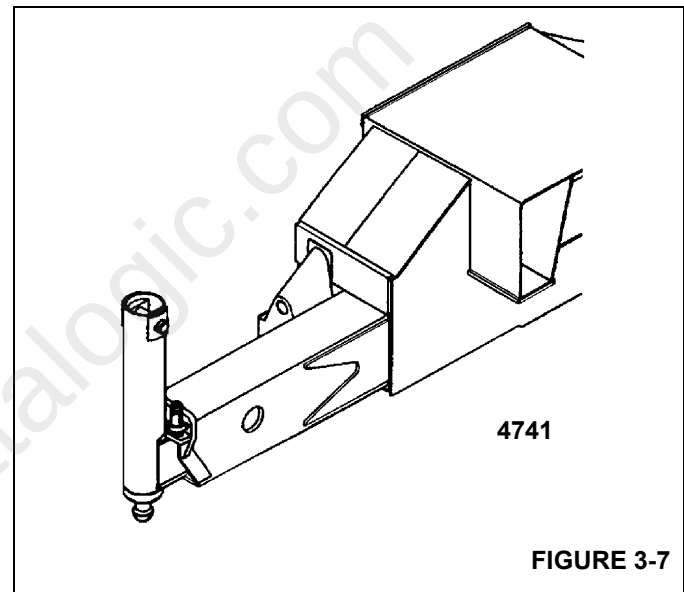
1. With the outriggers fully retracted, turn the locking pin (Figure 3-6) 90° from its stowed position and allow the

pin to slip into the lug on the jack beam. If the pin will not slip into the lug, slowly extend or retract the outrigger beam, allowing the locking pin to drop into the lug.

2. Slowly extend or retract the outrigger beam, allowing the locking pin to drop into the hole in the top of the outrigger beam, engaging the outrigger beam at the desired length.

Stowing The Outriggers

1. Press the bottom of the left or right rear outrigger selector switch and press the bottom of the extend/retract switch. Retract until the rear stabilizers have retracted several inches (Figure 3-7).



2. Press the bottom of the left or right front outrigger selector switch and press the bottom of the extend/retract switch. Retract until the front stabilizers have retracted several inches.



DANGER

Keep feet and hands clear of floats when unlocking the floats from the stabilizers.

3. Repeat steps 1 and 2 until the crane is resting on all wheels and the stabilizer floats are several inches off the ground.
4. Release the locking levers and allow the floats to drop to the ground.

37. Fuel Filter

- Drain water trap every 10 hours or daily
- Change filter every 500 hours or 6 months

38. Air Cleaner Filter

Replace air cleaner filter element when indicator shows red (25" H₂O).

WIRE ROPE LUBRICATION

Wire rope is lubricated during manufacturing so that the strands, and individual wires in strands, may move as the

rope moves and bends. A wire rope cannot be lubricated sufficiently during manufacture to last its entire life. Therefore, new lubricant must be added periodically throughout the life of a rope to replace factory lubricant which is used or lost.

NOTE: Wire rope may be purchased by contacting the Manitowoc CraneCARE Parts Department.

For more detailed information concerning the lubrication and inspection of wire rope, refer to WIRE ROPE in Section 1-INTRODUCTION in the Service Manual.

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Full Version Available

Grove RT535E Rough Terrain Crane Operator Manual

Grove RT535E rough terrain crane operator manual, covering controls, safe operation, setup, load charts and daily checks. Instant PDF download.

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