

MANITOWOC ENGINEERING CO.

Division of the Manitowoc Company, Inc. Manitowoc, Wisconsin 54220



MAXIMUM ALLOWABLE WIND CONDITIONS

M-250 SERIES 2

**FOR COMBINATIONS REQUIRING OUTSIDE ASSIST
BOOM NO. 44 WITH HEAVY LIFT TOP
AND LUFFING JIB NO. 133 OR NO. 133A**

**CAUTION: OUTSIDE
ASSIST REQUIRED**

SUPPLEMENTS WIND CONDITIONS ON CAPACITY CHARTS

A. WIND LIMITS DURING RAISING OR LOWERING

1. MACHINE MUST BE ASSEMBLED AS SHOWN ON APPROPRIATE RIGGING DRAWING.
2. MACHINE MUST BE ON A FIRM, LEVEL, AND UNIFORMLY SUPPORTING SURFACE.
3. RAISING OR LOWERING MUST BE DONE OVER FRONT OF BLOCKED CRAWLERS.
4. WIND LIMITS DURING ERECTION
 - a. BOOM AND LUFFING JIB LENGTHS OF 320' (97.5m) TO 450' (137.2m).
 - 1.) WINDS FROM ANY DIRECTION SHOULD NOT EXCEED 25 MPH (11 m/s).

B. WIND LIMITS DURING NORMAL LIFTING OPERATION

1. ALL BOOM AND LUFFING JIB LENGTHS
 - a. BOOM AND LUFFING JIB MAY REMAIN IN OPERATING POSITION UNDER THE FOLLOWING CONDITIONS.
 - 1.) MACHINE MUST BE ON A FIRM, LEVEL, AND UNIFORMLY SUPPORTING SURFACE.
 - 2.) MACHINE MAY BE OPERATED IN WINDS PER NOTES ON APPROPRIATE CAPACITY CHART PROVIDED AN ALLOWANCE FOR EFFECT OF WIND ON LIFTED LOAD BE CONSIDERED. WIND WILL HAVE A CONSIDERABLE EFFECT ON A LOAD WITH A LARGE 'SAIL AREA' AND MUST BE COMPENSATED FOR ACCORDINGLY BY REDUCING LOAD RATINGS, REDUCING OPERATING SPEEDS, OR A COMBINATION OF BOTH.
 - 3.) AT ALL TIMES DURING A LIFT OPERATION, THE LOAD MUST REMAIN CONTROLLABLE THROUGHOUT ENTIRE LIFT RANGE SUCH THAT IT CAN BE LOCATED IN ITS FINAL POSITION.
 - 4.) AS A GUIDE, ALLOWABLE SIDE LOAD ON LIFTED LOAD SHALL NOT EXCEED 1 PERCENT OF CAPACITY OF CRANE CORRESPONDING TO LOAD-RADIUS CONFIGURATION.

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C. WIND LIMITS DURING NON-OPERATION

1. WINDS UP TO 40 MPH (18 m/s) FOR BOOM AND LUFFING JIB LENGTHS OF 320' (97.5m) TO 450' (137.2 m).
 - a. WEATHER VANING (CHECK FOR SITE INTERFERENCE TO FREE SWING BOOM AND LUFFING JIB).
 - 1.) BOOM AND LUFFING JIB CAN REMAIN ERECTED AND IN OPERATING POSITION.
 - 2.) SET BOOM AT 83 DEGREE BOOM ANGLE AND LUFFING JIB AT 45 DEGREES ABOVE HORIZONTAL. LOAD BLOCK MUST BE TIED OFF TO MACHINE ROTATING BED.
 - 3.) SWING LOCK AND SWING BRAKE MUST BE DISENGAGED (SEE OPERATOR'S MANUAL).
 - b. TIE DOWN (WHERE SITE INTERFERENCE PRECLUDES WEATHER VANING).
 - 1.) BOOM AND LUFFING JIB CAN REMAIN ERECTED IN NON-OPERATING POSITION. BOOM SHOULD BE POSITIONED AT 83 DEGREES WITH BOOM AND LUFFING JIB INLINE OVER FRONT OF BLOCKED CRAWLERS. LOWER LUFFING JIB UNTIL BOOM TO LUFFING JIB ANGLE REACHES 60 DEGREES. DO NOT UNDER ANY CONDITION ALLOW BOOM TO LUFFING JIB ANGLE TO BECOME LESS THAN 60 DEGREES.
 - 2.) SWING LOCK AND SWING BRAKE MUST BE ENGAGED (SEE OPERATOR'S MANUAL).
 - 3.) TWO (2) LINES SHOULD BE TIED OFF; ONE FROM EACH SIDE OF BOOM POINT AT OR NEAR THE BOOM POINT SHAFT. LOWER CHORD MEMBERS IN THIS AREA ARE ALSO ACCEPTABLE PROVIDED CARE IS TAKEN NOT TO DAMAGE CHORDS WITH TIE LINES. TIE LINES SHOULD RUN TO SUITABLE ANCHOR POINTS AT GROUND LEVEL AT AN ANGLE OF 60 DEGREES FROM HORIZONTAL. CENTER AXIS OF BOOM POINT SHAFT AND THE TWO ANCHOR POINTS SHOULD FORM A VERTICAL PLANE.
 - 4.) TIE OFF LINES MUST BE CAPABLE OF HOLDING A 30,000 LB. (13 610 kg) LOAD.
2. WINDS ANTICIPATED ABOVE THOSE LISTED IN SECTION C.1.
 - a. BOOM AND LUFFING JIB TO BE LOWERED TO GROUND AND SECURED.