MANITOWOC ENGINEERING CO.

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



LUFFING JIB RAISING PROCEDURE

M-2501

LUFFING JIB NO. 133 OR NO. 133A ON BOOM NO. 44A WITH HEAVY LIFT TOP

RECOMMENDED BOOM AND LUFFING JIB RAISING AND LOWERING PROCEDURE.

M-250T MUST BE EQUIPPED WITH 123,200 LB. (55 880 kg) COUNTERWEIGHT OR 177,600 LB. (80 560 kg) COUNTERWEIGHT FOR RAISING AND LOWERING VARIOUS BOOM AND LUFFING JIB COMBINATIONS. REFER TO LUFFING JIB RIGGING ASSEMBLY NO. 174043 OR NO. 174310 FOR BOOM AND LUFFING JIB MAKE-UP OF INSERTS, PENDANTS, AND MISCELLANEOUS PARTS, ETC.

TWO METHODS MAY BE USED TO RAISE AND LOWER BOOM AND LUFFING JIB COMBINATIONS, DEPENDING ON LENGTH.

A. STANDARD (IN-LINE) METHOD

THE FOLLOWING COMBINATIONS MAY BE RAISED AND LOWERED USING THIS METHOD. SLOWLY RAISE BOOM UNTIL JIB STOP STRUT IS JUST CLEAR OF GROUND. UNPIN JIB STOP INNER STRUT FROM RETRACTED POSITION AND ATTACH JIB STOP PENDANTS. SLOWLY RAISE BOOM UNTIL JIB STOP STRUT IS FULLY EXTENDED AND PINS ENGAGED (APPROXIMATELY 168 DEGREE BOOM TO LUFFING JIB ANGLE). TIGHTEN LUFFING JIB SUSPENSION WITH LUFFING JIB HOIST. BOOM AND LUFFING JIB CAN THEN BE RAISED SIMULTANEOUSLY USING ONLY THE BOOM HOIST. REVERSE THIS PROCEDURE WHEN LOWERING BOOM AND LUFFING JIB.

M-250T WITH 123,200 LB. (55 880 kg) COUNTERWEIGHT OR 177,600 LB. (80 560 kg) COUNTERWEIGHT

> MAXIMUM BOOM AND LUFFING JIB LENGTHS LIFTED UNASSISTED OVER REAR ON SPREAD OUTRIGGERS USING STANDARD (IN-LINE) METHOD

BOOM LENGTH		NO. 133 OR NO. 133A		
FEET	METERS	FEET	METERS	
80	24.4	70 - 200	21.3 - 61.0	
90	27.4	70 - 200	21.3 - 61.0	
100	30.5	70 - 200	21.3 - 61.0	
110	33.5	70 - 190	21.3 - 57.9	
120	36.6	70 - 170	21.3 - 51.8	
130	39.6	70 - 150	21.3 - 45.7	
140	42.7	70 - 130	21.3 - 39.6	
150	45.7	70 - 110	21.3 - 33.5	
160	48.8	70 - 90	21.3 - 27.4	
170 51.8		70	21.3	

LOAD BLOCKS, HOOK AND WEIGHT BALL ON GROUND UNTIL BOOM AND LUFFING JIB ARE ERECTED.

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LUFFING JIB RAISING PROCEDURE.

M-250T

LUFFING JIB NO. 133 OR NO. 133A ON BOOM NO. 44A WITH HEAVY LIFT TOP

B. JACK-KNIFE METHOD

LONGER BOOM-LUFFING JIB COMBINATIONS MUST BE RAISED AND LOWERED USING THIS METHOD. SLOWLY RAISE BOOM UNTIL JIB STOP STRUT IS JUST CLEAR OF GROUND. UNPIN JIB STOP INNER STRUT FROM RETRACTED POSITION AND ATTACH JIB STOP PENDANTS. SLOWLY RAISE BOOM UNTIL JIB STOP STRUT IS FULLY EXTENDED AND PINS ENGAGED (APPROXIMATELY 168 DEGREE BOOM TO LUFFING JIB ANGLE). BOOM IS THEN RAISED WHILE JIB POINT ROLLER IS ALLOWED TO ROLL ON GROUND. TENSION SHOULD BE APPLIED TO LUFFING JIB HOIST TO KEEP JIB STRUT OFF LUFFING JIB DURING BOOM RAISING. BOOM UP UNTIL BOOM TO LUFFING JIB ANGLE REACHES VALUE SPECIFIED IN TABLE OR VERTICAL, WHICHEVER OCCURS FIRST. TIGHTEN LUFFING JIB SUSPENSION WITH LUFFING JIB HOIST. BOOM AND LUFFING JIB ARE THEN RAISED TOGETHER USING BOOM HOIST UNTIL BOOM REACHES DESIRED BOOM OPERATING ANGLE. LUFFING JIB RADIUS MUST BE WITHIN CAPACITY CHART BEFORE SWINGING OVER SIDE OF MACHINE.

POSITION BOOM AT 80 DEGREES OR GREATER WITH BOOM AND LUFFING JIB INLINE OVER REAR ON SPREAD OUTRIGGERS PRIOR TO LOWERING LUFFING JIB. LOWER LUFFING JIB UNTIL BOOM TO LUFFING JIB ANGLE REACHES VALUE SPECIFIED IN TABLE. LOWER BOOM UNTIL LUFFING JIB POINT ROLLERS CONTACT GROUND. IF LUFFING JIB IS HANGING VERTICAL. RAISE LUFFING JIB A FEW DEGREES FORWARD OF VERTICAL. CONTINUE TO LOWER BOOM WHILE LUFFING JIB ROLLS ALONG GROUND. KEEP ENOUGH TENSION ON LUFFING JIB HOIST TO KEEP JIB STRUT OFF LUFFING JIB. STOP LOWERING BOOM WHEN JIB STOP PENDANTS START TO GO INTO TENSION (APPROXIMATELY 168 DEGREE BOOM TO LUFFING JIB ANGLE). DISENGAGE JIB STOP STRUT PINS AND LOWER BOOM TO RETRACT JIB STOP INNER STRUT. PIN STRUT IN RETRACTED POSITION AND UNPIN JIB STOP PENDANTS. ROTATE JIB STOP STRUTS FORWARD AND LOWER BOOM AND LUFFING JIB TO GROUND.

CAUTION: DO NOT UNDER ANY CONDITION ALLOW BOOM TO LUFFING JIB ANGLE TO BECOME LESS THAN 60 DEGREES.

THE FOLLOWING BOOM AND LUFFING JIB COMBINATIONS REQUIRE JACK KNIFING TO A SPECIFIED BOOM TO LUFFING JIB ANGLE FOR RAISING AND LOWERING. BOOM LENGTHS SHOWN WITH ASTERISK (*) REQUIRE ONLY THE MIDDLE 3 SHEAVES TO BE USED ON THE LOWER BOOM POINT. ALL OTHER SHEAVES MUST BE REMOVED FROM THE LOWER BOOM POINT.

MAXI OVER	MUM BOOM REAR ON			LIFTED UNASSISTED UACK-KNIFE METHOD
воом	LENGTH	NO. 133 0	NG JIB R NO. 133A	BOOM TO LUFFING JIB ANGLE
FEET 110	METERS 33.5	FEET 200	METERS 61.0	DEGREES 90
120	36.6	180 - 200	54.9 - 61.0	90
130	39.6 42.7	160 - 200	48.8 - 61.0	90
150	45.7	120 - 200	36.6 - 61.0	90
160	48.8	100 - 200	30.5 - 61.0	90
170	51.8	80 - 200 70 - 150	24.4 - 61.0	90 60
×190	57.9	70 - 110	21.3 - 33.5	60

MAXI OVER				LIFTED UNASSISTED UACK-KNIFE METHOD
BOOM	LENGTH METERS		NG JIB R NO. 133A METERS	BOOM TO LUFFING JIB ANGLE DEGREES
110 120 130 140 150	33.5 36.6 39.6 42.7 45.7 48.8	200 180 - 200 160 - 200 140 - 200 120 - 200 100 - 200	61.0 54.9 - 61.0 48.8 - 61.0 42.7 - 61.0 36.6 - 61.0 30.5 - 61.0	90 90 90 90 90 90
170 180 *190 *200	51.8 54.9 57.9 61.0	80 - 200 70 - 200 70 - 170 70 - 100	24.4 - 61.0 21.3 - 61.0 21.3 - 51.8 21.3 - 30.5	90 90 90 90