Manitowoc Cranes, Inc.
Manitowoc, Wisconsin 54220 U.S.A.

Luffing Jib Raising Procedure

Luffing Jib No. 133 or No. 133A On Boom No. 44 with Heavy Lift Top

M-250
M-250 SERIES 2, 3

Recommended boom and luffing jib raising and lowering procedure

M-250 must be equipped with 167,000 Lb. (75 750 kg) counterweight, M-250 SERIES 2 must be equipped with 207,000 Lb. (93 890 kg) crane counterweight and 60,000 Lb. (27 220 kg) carbody counterweight and M-250 SERIES 3 must be equipped with 248,700 Lb. (112 840 kg) crane counterweight and 120,000 Lb. (54 446 kg) carbody counterweight for raising and lowering various boom and luffing jib combinations. Refer to luffing jib rigging assembly **No. 172894**, **No. 174308**, or **No. 192086** for boom and luffing jib make-up of inserts, straps, 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.

Maximum Boom And Luffing Jib Lengths Lifted Unassisted Using Standard (In-Line) Method

Boom Length		**M-250 Over Front of Blocked Crawlers**		**M-250 SERIES 2 Over Front of Blocked Crawlers**		**M-250 SERIES 3 Over Front of Crawlers**	
		Luffing Jib No. 133 or No. 133A		Luffing Jib No. 133 or No. 133A		Luffing Jib No. 133 or No. 133A	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
80	24.4	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
90	27.4	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
100	30.5	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
110	33.5	70 - 190	21.3 - 57.9	70 - 190	21.3 - 57.9	70 - 190	21.3 - 57.9
120	36.6	70 - 180	21.3 - 54.9	70 - 180	21.3 - 54.9	70 - 180	21.3 - 54.9
130	39.6	70 - 160	21.3 - 48.8	70 - 160	21.3 - 48.8	70 - 160	21.3 - 48.8
140	42.7	70 - 140	21.3 - 42.7	70 - 150	21.3 - 45.7	70 - 150	21.3 - 45.7
150	45.7	70 - 120	21.3 - 36.6	70 - 130	21.3 - 39.6	70 - 130	21.3 - 39.6
160	48.8	70 - 100	21.3 - 30.5	70 - 110	21.3 - 33.5	70 - 110	21.3 - 33.5
170	51.8	70 - 80	21.3 - 24.4	70 - 90	21.3 - 27.4	70 - 90	21.3 - 27.4
180	54.9	---	---	70	21.3	70	21.3

Load blocks, hook and weight ball on ground until boom and luffing jib are erected.

Luffing Jib Raising Procedure

Luffing Jib No. 133 or No. 133A On Boom No. 44 with Heavy Lift Top

M-250

M-250 SERIES 2, 3

B. Jack-Knife Method

Longer boom and 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 front of blocked crawlers 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.

All of 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 lower boom point.

Boom length shown with double asterisk (**) requires only the middle 3 sheaves to be used on lower boom point and machine equipped with optional upperworks jacking cylinders.

Maximum Boom And Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method

M-250
Over Front of Blocked Crawlers

Boom Length		Luffing Jib No. 133 or No. 133A		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees
110	33.5	200	61.0	90
120	36.6	190 - 200	57.9 - 61.0	90
130	39.6	170 - 200	51.8 - 61.0	90
140	42.7	150 - 200	45.7 - 61.0	90
150	45.7	130 - 200	39.6 - 61.0	90
160	48.8	110 - 200	33.5 - 61.0	90
170	51.8	90 - 200	27.4 - 61.0	60
180	54.9	80 - 200	24.4 - 61.0	60
*190	57.9	70 - 200	21.3 - 61.0	60
*200	61.0	70 - 140	21.3 - 42.7	60
**200	61.0	150	45.7	60

Load blocks, hook and weight ball on ground until boom and luffing jib are erected.

Luffing Jib Raising Procedure

Luffing Jib No. 133 or No. 133A On Boom No. 44 with Heavy Lift Top

M-250
M-250 SERIES 2, 3

All of 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 lower boom point.

Maximum Boom And Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method

M-250 SERIES 2
Over Front of Blocked Crawlers

Boom Length		Luffing Jib No. 133 or No. 133A		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees
110	33.5	200	61.0	90
120	36.6	190 - 200	57.9 - 61.0	90
130	39.6	170 - 200	51.8 - 61.0	90
140	42.7	160 - 200	48.8 - 61.0	90
150	45.7	140 - 200	42.7 - 61.0	90
160	48.8	120 - 200	36.6- 61.0	90
170	51.8	100 - 200	30.5 - 61.0	90
180	54.9	80 - 200	24.4 - 61.0	90
190	57.9	70 - 200	21.3 - 61.0	90
*200	61.0	70 - 170	21.3 - 51.8	90

Load blocks, hook and weight ball on ground until boom and luffing jib are erected.

Maximum Boom And Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method

M-250 SERIES 3
Over Front of Crawlers

Boom Length		Luffing Jib No. 133 or No. 133A		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees
110	33.5	200	61.0	90
120	36.6	190 - 200	57.9 - 61.0	90
130	39.6	170 - 200	51.8 - 61.0	90
140	42.7	160 - 200	48.8 - 61.0	90
150	45.7	140 - 200	42.7 - 61.0	90
160	48.8	120 - 200	36.6 - 61.0	90
170	51.8	100 - 200	30.5 - 61.0	90
180	54.9	80 - 200	24.4 - 61.0	90
190	57.9	70 - 200	21.3 - 61.0	90
*200	61.0	70 - 170	21.3 - 51.8	90

Load blocks, hook and weight ball on ground until boom and luffing jib are erected.