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

Luffing Jib Raising Procedure

Luffing Jib No. 222 On Boom No. 260

222 SERIES B
222EX SERIES B

Recommended boom and luffing jib raising and lowering procedure

222 SERIES B and 222EX SERIES B must be equipped with 63,300 Lb. (28 710 kg) crane counterweight and 14,000 Lb. (6 350 kg) crawler frame counterweight for raising and lowering various boom and luffing jib combinations. Refer to luffing jib rigging assembly **No. 194529** 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. Layout In-Line Method

Boom and luffing jib are assembled in layout, end to end, position. Boom and luffing jib must be inline over end of blocked crawlers prior to raising boom and luffing jib. Slowly raise boom until jib stop strut is just clear of ground. Attach jib stop pendants and unpin jib stop inner strut from retracted position. 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.

The following boom and luffing jib combinations may be raised and lowered using layout in-line method.

Maximum Boom And Luffing Jib Lengths Lifted Unassisted Over End Of Blocked Crawlers Using Layout In-Line Method

Boom Length		Luffing Jib No. 222	
Feet	Meters	Feet	Meters
55	16.8	50 - 120	15.2 - 36.6
65	19.8	50 - 110	15.2 - 33.5
75	22.9	50 - 100	15.2 - 30.5
85	25.9	50 - 80	15.2 - 24.4
95	29.0	50 - 70	15.2 - 21.3
105	32.0	50 - 60	15.2 - 18.3

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

Luffing Jib Raising Procedure

Luffing Jib No. 222 On Boom No. 260

222 SERIES B
222EX SERIES B

B. Layout Jack-Knife Method

Longer boom and luffing jib combinations must be raised and lowered using this method.

Boom and luffing jib are assembled in layout, end to end, position. Boom and luffing jib must be inline over end of blocked crawlers prior to raising boom and luffing jib. Slowly raise boom until jib stop strut is just clear of ground. Attach jib stop pendants and unpin jib stop inner strut from retracted position. 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 wheel 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 with boom and luffing jib inline over end 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 wheel contacts 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.

The following boom and luffing jib combinations require jack knifing to a specified boom to luffing jib angle for raising and lowering. Boom length shown with asterisk (*) requires intermediate fall load line and limit control weight and chains to be removed. Only one load hoist lead line is allowed up boom.

Maximum Boom And Luffing Jib Lengths Lifted Unassisted Over Front Of Blocked Crawlers Using Layout Jack-Knife Method

Boom Length		Luffing Jib No. 222		Boom To Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees
55	16.8	130 - 150	39.6 - 45.7	90
65	19.8	120 - 150	36.6 - 45.7	90
75	22.9	110 - 150	33.5 - 45.7	90
85	25.9	90 - 150	27.4 - 45.7	90
95	29.0	80 - 150	24.4 - 45.7	90
105	32.0	70 - 150	21.3 - 45.7	90
115	35.1	50 - 150	15.2 - 45.7	60
125	38.1	50 - 140	15.2 - 42.7	60
135	41.1	50 - 100	15.2 - 30.5	60
145	44.2	50	15.2	60
*145	*44.2	60	18.3	60

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