Luffing Jib Raising Procedure 15000 SERIES 3, 4

Luffing Jib No. 149A On Boom No. 57

Recommended boom and luffing jib raising and lowering procedure

15000 SERIES 3 equipped with 99 740 kg crane counterweight and 36 290 kg carbody counterweight and 15000 SERIES 4 equipped with 107 680 kg crane counterweight and 52 160 kg carbody counterweight for raising and lowering boom and luffing jib combinations. Refer to luffing jib rigging assembly **No. A08947** for proper make-up of inserts, straps, pendants and miscellaneous parts, etc. and to luffing jib operator's manual.

Two methods may be used to raise and lower boom and luffing jib combinations.

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 angle between boom to luffing jib is approximately 172 degrees. Jib stop pins should engage automatically when inner strut is fully retracted. Visually observe that these pins are fully engaged before raising boom and jib. 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.

Boom and luffing jib combinations in table below may be raised and lowered using layout in-line method.

LAYOUT IN-LINE METHOD - 15000 SERIES 3, 4

Maximum Boom and Luffing Jib Lengths Lifted Unassisted Over End Of Blocked Crawlers

Boom Length		Luffing Jib No. 149A			
		Without Intermediate Fall		**With Intermediate Fall**	
Feet	Meters	Feet	Meters	Feet	Meters
80.4	24.5	70 - 190	21.3 - 57.9	70 - 180	21.3 - 54.9
90.2	27.5	70 - 180	21.3 - 54.9	70 - 170	21.3 - 51.8
100.1	30.5	70 - 170	21.3 - 51.8	70 - 160	21.3 - 48.8
109.9	33.5	70 - 160	21.3 - 48.8	70 - 150	21.3 - 45.7
119.8	36.5	70 - 150	21.3 - 45.7	70 - 130	21.3 - 39.6
129.6	39.5	70 - 130	21.3 - 39.6	70 - 120	21.3 - 36.6
139.4	42.5	70 - 120	21.3 - 36.6	70 - 110	21.3 - 33.5
149.3	45.5	70 - 100	21.3 - 30.5	70 - 90	21.3 - 27.4
159.1	48.5	70 - 80	21.3 - 24.4	70	21.3
169.0	51.5	70	21.3		

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

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B. Layout Jack-Knife Method

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

Caution: Anytime luffing jib point rollers are in contact with ground during raising or lowering procedure, disengage swing lock and release swing brake.

Raising:

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. Luff up jib strut until straps on insert next to butt are clear of strap brackets (jib strut at approximately 60 degrees). Slowly raise boom until angle between boom to luffing jib is approximately 172 degrees. Jib stop pins should engage automatically when inner strut is fully retracted. Visually observe that these pins are fully engaged before raising boom and jib. Boom is then raised while luffing jib point rollers roll on ground. Tension should be applied to luffing jib hoist to keep luffing jib strut off luffing jib during boom raising. Boom up until boom to luffing jib angle reaches value specified in tables 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 85 degrees. Luffing jib radius must be within capacity chart before swinging over side of machine. Boom may then be adjusted to desired operating angle.

Lowering:

Position boom at 85 degrees with boom and luffing jib inline over end of blocked crawlers prior to lowering luffing jib. Set load blocks, hook and weight ball on ground before lowering boom and luffing jib to ground. Lower luffing jib until boom to luffing jib angle reaches value specified in tables. Lower boom until luffing jib point rollers contact ground. If luffing jib is hanging at or near vertical, raise luffing jib a few degrees forward of vertical to allow luffing jib to roll out. ***Caution***: Be careful not to damage upper jib point after contacting ground by booming down and rollers not wanting to roll out. Continue to lower boom while luffing jib rollers roll on ground. Keep enough tension on luffing jib hoist to keep luffing jib strut off luffing jib. Stop lowering boom when boom to luffing jib angle is approximately 168 degrees. Disengage luffing jib stop strut pins and lower boom onto blocking.

Boom and luffing jib combinations in following tables require layout jack knifing to a specified boom to luffing jib angle for raising and lowering.

Refer to column A for Maximum Number of Lower Boom Point Sheaves allowed. Boom lengths shown with an asterick (*) require lower boom point to be removed.

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LAYOUT JACK-KNIFE METHOD - 15000 SERIES 3

Maximum Boom and Luffing Jib Lengths Lifted Unassisted Over End Of Blocked Crawlers

Boom Length		Luffing Jib No. 149A			**A** Maximum Number of Lower Boom Point Sheaves	Boom Length		Luffing Jib No. 149A			**A** Maximum Number of Lower Boom Point Sheaves
		Without Intermediate Fall		Boom To Luffing Jib Angle				**With Intermediate Fall**		Boom To Luffing Jib Angle	
Feet	Meters	Feet	Meters	Degrees		Feet	Meters	Feet	Meters	Degrees	
80.4	24.5	200 - 240	61.0 - 73.2	90	8	80.4	24.5	190 - 240	57.9 - 73.2	90	8
90.2	27.5	190 - 240	57.9 - 73.2	90	8	90.2	27.5	180 - 240	54.9 - 73.2	90	8
100.1	30.5	180 - 240	54.9 - 73.2	90	8	100.1	30.5	170 - 240	51.8 - 73.2	90	8
109.9	33.5	170 - 240	51.8 - 73.2	90	8	109.9	33.5	160 - 240	48.8 - 73.2	90	8
119.8	36.5	160 - 240	48.8 - 73.2	90	8	119.8	36.5	140 - 240	42.7 - 73.2	90	8
129.6	39.5	140 - 240	42.7 - 73.2	90	8	129.6	39.5	130 - 240	39.6 - 73.2	60	8
139.4	42.5	130 - 240	39.6 - 73.2	60	8	139.4	42.5	120 - 240	36.6 - 73.2	60	8
149.3	45.5	110 - 240	33.5 - 73.2	60	8	149.3	45.5	100 - 240	30.5 - 73.2	60	8
159.1	48.5	90 - 240	27.4 - 73.2	60	8	159.1	48.5	80 - 240	24.4 - 73.2	60	8
169.0	51.5	80 - 240	24.4 - 73.2	60	8	169.0	51.5	70 - 240	21.3 - 73.2	60	8
*178.8	54.5	70 - 240	21.3 - 73.2	60	0	*178.8	54.5	70 - 230	21.3 - 70.1	60	0
*188.7	57.5	70 - 190	21.3 - 57.9	60	0	*188.7	57.5	70 - 170	21.3 - 51.8	60	0

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

LAYOUT JACK-KNIFE METHOD - 15000 SERIES 4

Maximum Boom and Luffing Jib Lengths Lifted Unassisted Over End Of Blocked Crawlers

Boom Length		Luffing Jib No. 149A			**A** Maximum Number of Lower Boom Point Sheaves	Boom Length		Luffing Jib No. 149A			**A** Maximum Number of Lower Boom Point Sheaves
		Without Intermediate Fall		Boom To Luffing Jib Angle				**With Intermediate Fall**		Boom To Luffing Jib Angle	
Feet	Meters	Feet	Meters	Degrees		Feet	Meters	Feet	Meters	Degrees	
80.4	24.5	200 - 240	61.0 - 73.2	90	8	80.4	24.5	190 - 240	57.9 - 73.2	90	8
90.2	27.5	190 - 240	57.9 - 73.2	90	8	90.2	27.5	180 - 240	54.9 - 73.2	90	8
100.1	30.5	180 - 240	54.9 - 73.2	90	8	100.1	30.5	170 - 240	51.8 - 73.2	90	8
109.9	33.5	170 - 240	51.8 - 73.2	90	8	109.9	33.5	160 - 240	48.8 - 73.2	90	8
119.8	36.5	160 - 240	48.8 - 73.2	90	8	119.8	36.5	140 - 240	42.7 - 73.2	90	8
129.6	39.5	140 - 240	42.7 - 73.2	90	8	129.6	39.5	130 - 240	39.6 - 73.2	90	8
139.4	42.5	130 - 240	39.6 - 73.2	90	8	139.4	42.5	120 - 240	36.6 - 73.2	90	8
149.3	45.5	110 - 240	33.5 - 73.2	90	8	149.3	45.5	100 - 240	30.5 - 73.2	60	8
159.1	48.5	90 - 240	27.4 - 73.2	60	8	159.1	48.5	80 - 240	24.4 - 73.2	60	8
169.0	51.5	80 - 240	24.4 - 73.2	60	8	169.0	51.5	70 - 240	21.3 - 73.2	60	8
*178.8	54.5	70 - 240	21.3 - 73.2	60	0	*178.8	54.5	70 - 230	21.3 - 70.1	60	0
*188.7	57.5	70 - 190	21.3 - 57.9	60	0	*188.7	57.5	70 - 170	21.3 - 51.8	60	0
*198.5	60.5	70 - 130	21.3 - 39.6	60	0	*198.5	60.5	70 - 110	21.3 - 33.5	60	0

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