

# Luffing Jib Raising Procedure

# 888 SERIES 1, 2

Luffing Jib No. 135 On Boom No. 22EL

## Recommended boom and luffing jib raising and lowering procedure

888 SERIES 1 must be equipped with 144,100 Lb. (65 360 kg) crane counterweight and 888 SERIES 2 must be equipped with 179,100 Lb. (81 240 kg) crane counterweight and 44,000 Lb. (19 960 kg) carbody counterweight for raising and lowering various boom and luffing jib combinations. Refer to luffing jib rigging assembly **No. 177063** or **No. 177354** (without intermediate fall) or **No. A07691** (with intermediate fall) for boom and luffing jib make-up of inserts, pendants and miscellaneous parts, etc.

Three methods may be used to raise and lower boom and luffing jib combinations, depending on length.

### A. Fold Under Jack-Knife Method

#### Raising:

Boom and luffing jib are assembled in fold under position. Boom and luffing jib must be inline over front of blocked crawlers prior to raising boom and luffing jib. Slowly raise boom, luffing jib point wheels will roll along ground. When luffing jib hinge pin is 30 Ft. (9.1m) off ground, connect luffing jib pendants. Move luffing jib top wire rope guide to working position. Tighten luffing jib suspension with luffing jib hoist. Slowly raise boom until luffing jib is vertical and luffing jib point wheels are clear of ground. 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 range. Luffing jib radius must be within capacity chart before swinging over side of machine.

#### Lowering:

Position boom at 75 degrees with boom and luffing jib inline over front of blocked crawlers prior to lowering luffing jib. Slowly lower luffing jib to vertical. Lower boom until luffing jib point wheels are just clear of ground. Slowly boom down and assist luffing jib point wheels in fold under direction. Boom down until luffing jib hinge pin is 30 Ft. (9.1m) off ground. Disconnect luffing jib pendants. Move luffing jib top wire rope guide to stowed position. Raise luffing jib strut with luffing jib hoist until luffing jib strut is in line with luffing jib. Lower boom and luffing jib to ground.

Boom and luffing jib combinations in table below may be raised and lowered using fold under jack-knife method. Boom length shown with pound sign (#) requires only the middle two sheaves in lower boom point. All other sheaves must be removed from lower boom point. Boom lengths shown with asterisk (\*) require lower boom point to be removed.

888 SERIES 1				888 SERIES 2 Without Intermediate Fall				888 SERIES 2 With Intermediate Fall			
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Over Front Of Blocked Crawlers Using Fold Under Jack-Knife Method				Maximum Boom and Luffing Jib Lengths Lifted Unassisted Over Front Of Blocked Crawlers Using Fold Under Jack-Knife Method				Maximum Boom and Luffing Jib Lengths Lifted Unassisted Over Front Of Blocked Crawlers Using Fold Under Jack-Knife Method			
Boom Length		Luffing Jib No. 135		Boom Length		Luffing Jib No. 135		Boom Length		Luffing Jib No. 135	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
90	27.4	70	21.3	90	27.4	70	21.3	130	39.6	110	33.5
100	30.5	70 - 80	21.3 - 24.4	100	30.5	70 - 80	21.3 - 24.4	140	42.7	110 - 120	33.5 - 36.6
110	33.5	70 - 90	21.3 - 27.4	110	33.5	70 - 90	21.3 - 27.4	150	45.7	110 - 130	33.5 - 39.6
120	36.6	70 - 100	21.3 - 30.5	120	36.6	70 - 100	21.3 - 30.5	160	48.8	110 - 140	33.5 - 42.7
130	39.6	70 - 110	21.3 - 33.5	130	39.6	70 - 110	21.3 - 33.5	170	51.8	110 - 150	33.5 - 45.7
140	42.7	70 - 120	21.3 - 36.6	140	42.7	70 - 120	21.3 - 36.6	180	54.9	110 - 160	33.5 - 48.8
150	45.7	70 - 130	21.3 - 39.6	150	45.7	70 - 130	21.3 - 39.6	*190	57.9	110 - 170	33.5 - 51.8
160	48.8	70 - 140	21.3 - 42.7	160	48.8	70 - 140	21.3 - 42.7	*200	61.0	110 - 150	30.5 - 45.7
*170	51.8	80 - 150	24.4 - 45.7	170	51.8	70 - 150	21.3 - 45.7	Load blocks, hook and weight ball on ground until boom and luffing jib are erected.			
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.				180	54.9	70 - 160	21.3 - 48.8				
				#190	57.9	70 - 170	21.3 - 51.8				
				*200	61.0	100 - 170	30.5 - 51.8				
				Load blocks, hook and weight ball on ground until boom and luffing jib are erected.							

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## B. Layout In-Line Method

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

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

888 SERIES 1			
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Over Front Of Blocked Crawlers Using Layout In-Line Method			
Boom Length		Luffing Jib No. 135	
Feet	Meters	Feet	Meters
70	21.3	70 - 170	21.3 - 51.8
80	24.4	70 - 170	21.3 - 51.8
90	27.4	70 - 170	21.3 - 51.8
100	30.5	70 - 170	21.3 - 51.8
110	33.5	70 - 170	21.3 - 51.8
120	36.6	70 - 140	21.3 - 42.7
130	39.6	70 - 120	21.3 - 36.6
140	42.7	70 - 90	21.3 - 27.4
150	45.7	70	21.3
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.			

888 SERIES 2					
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Over Front Of Blocked Crawlers Using Layout In-Line Method					
Boom Length		Luffing Jib No. 135 Without Intermediate Fall		Luffing Jib No. 135 With Intermediate Fall	
Feet	Meters	Feet	Meters	Feet	Meters
70	21.3	70 - 170	21.3 - 51.8	110 - 170	33.5 - 51.8
80	24.4	70 - 170	21.3 - 51.8	110 - 170	33.5 - 51.8
90	27.4	70 - 170	21.3 - 51.8	110 - 170	33.5 - 51.8
100	30.5	70 - 170	21.3 - 51.8	110 - 170	33.5 - 51.8
110	33.5	70 - 170	21.3 - 51.8	110 - 170	33.5 - 51.8
120	36.6	70 - 170	21.3 - 51.8	110 - 160	33.5 - 48.8
130	39.6	70 - 160	21.3 - 48.8	110 - 150	33.5 - 45.7
140	42.7	70 - 150	21.3 - 45.7	110 - 130	33.5 - 39.6
150	45.7	70 - 120	21.3 - 36.6	110	33.5
160	48.8	70 - 100	21.3 - 30.5		
170	51.8	70 - 80	21.3 - 24.4		
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.					

# Luffing Jib Raising Procedure

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### C. Layout Jack-Knife Method

**Longer boom and luffing jib combinations must be raised and lowered using this method.** In some cases, fold under jack-knife method may be used where boom and luffing jib combinations exceed layout in-line method for raising and lowering.

#### Raising:

Boom and luffing jib are assembled in layout, end to end, position. Boom and luffing jib must be inline over front of blocked crawlers prior to raising boom and luffing jib. Slowly raise boom until luffing jib stop strut is just clear of ground. Attach luffing jib stop pendants and unpin luffing jib stop inner strut from retracted position. Slowly raise boom until luffing jib stop strut is fully extended and pins engaged (approximately 168 degree boom to luffing jib angle). Boom is then raised while luffing jib point wheels are allowed to 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 table below 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.

#### Lowering:

Position boom at 75 degrees 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 below. Lower boom until luffing jib point wheels 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 luffing jib strut off luffing jib. Stop lowering boom when luffing jib stop pendants start to go into tension (approximately 168 degree boom to luffing jib angle). Disengage luffing jib stop strut pins and lower boom to retract luffing jib stop inner strut. Pin strut in retracted position and unpin luffing jib stop pendants. Rotate luffing jib stop struts forward and lower boom and luffing jib to ground.

Boom and luffing jib combinations in table below and tables on page 4 require layout jack knifing to a specified boom to luffing jib angle for raising and lowering. Boom length shown with pound sign (#) requires only the middle two sheaves in lower boom point. All other sheaves must be removed from lower boom point. Boom lengths shown with asterisk (\*) require lower boom point to be removed.

888 SERIES 1				
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Over Front Of Blocked Crawlers Using Layout Jack-Knife Method				
Boom Length		Luffing Jib No. 135		Boom To Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees
120	36.6	150 - 170	45.7 - 51.8	90
130	39.6	130 - 170	39.6 - 51.8	90
140	42.7	100 - 170	30.5 - 51.8	90
150	45.7	80 - 170	24.4 - 51.8	90
160	48.8	70 - 170	21.3 - 51.8	60
*170	51.8	80 - 150	24.4 - 45.7	60
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.				

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Boom length shown with pound sign (#) requires only the middle two sheaves in lower boom point. All other sheaves must be removed from lower boom point. Boom lengths shown with asterisk (\*) require lower boom point to be removed.

888 SERIES 2 Without Intermediate Fall				
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Over Front Of Blocked Crawlers Using Layout Jack-Knife Method				
Boom Length		Luffing Jib No. 135		Boom To Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees
130	39.6	170	51.8	90
140	42.7	160 - 170	48.8 - 51.8	90
150	45.7	130 - 170	39.6 - 51.8	90
160	48.8	110 - 170	33.5 - 51.8	90
170	51.8	90 - 170	27.4 - 51.8	90
180	54.9	70 - 170	21.3 - 51.8	90
#190	57.9	70 - 170	21.3 - 51.8	60
*200	61.0	100 - 170	30.5 - 51.8	60
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.				

888 SERIES 2 With Intermediate Fall				
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Over Front Of Blocked Crawlers Using Layout Jack-Knife Method				
Boom Length		Luffing Jib No. 135		Boom To Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees
120	33.6	170	51.8	90
130	39.6	160 - 170	48.8 - 51.8	90
140	42.7	140 - 170	42.7 - 51.8	90
150	45.7	120 - 170	36.6 - 51.8	90
160	48.8	110 - 170	33.5 - 51.8	90
170	51.8	110 - 170	33.5 - 51.8	90
180	54.9	110 - 170	33.5 - 51.8	60
*190	57.9	110 - 170	33.5 - 51.8	60
*200	61.0	110 - 150	33.5 - 45.7	60
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.				