Luffing Jib Raising Procedure

Luffing Jib No. 44 On Boom No. 79
Wheeled Counterweight

MAX-ER 2000 On 2250

Recommended boom and luffing jib raising and lowering procedure.

Machine must be equipped with 169,200 Lb. (76 750 kg) crane counterweight, 60,000 Lb. (27 220 kg) carbody counterweight, and 240,000 Lb. (108 860 kg) or 462,000 Lb. (209 560 kg) wheeled counterweight. Refer to luffing jib rigging assembly **No. 194324** for boom and luffing jib make-up of inserts, straps, struts and strut raising procedure 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

Haul in luffing hoist line (luff up) until adjustable jib straps are raised to clear strap stowage brackets on luffing jib (approx. 50 to 68 degree jib strut to horizontal angle). Do not exceed 70 degree jib strut to horizontal angle. Check jib strut position by viewing angle indicator. Slowly raise boom to tighten luffing jib suspension while jib point rollers are allowed to roll on ground. After luffing jib suspension is tight, boom and luffing jib can then be raised simultaneously using only the boom hoist. Raise boom to 60 degrees or greater. If boom to luffing jib angle is more than 160 degrees, lower luffing jib to obtain this angle to allow jib stop to engage (see caution). Boom and luffing jib can then be set to desired operating angle and radius. Luffing jib radius must be within capacity chart before swinging over side of machine. Reverse this procedure when lowering boom and luffing jib.

CAUTION: Failure to lower luffing jib to 160 degree boom to luffing jib angle will not allow luffing jib stop to engage. Structural damage may result.

The following combinations may be raised and lowered using this method.

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS							
Maximum Boom And Luffing Jib Lengths Lifted Unassisted Using Standard (In-Line) Method Over Front of Blocked Crawlers							
Boom Length		**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 30 Ft.** (9.1m) **Position**		**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 40 Ft.** (12.2m) **Position**		**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 50 Ft.** (15.2m) **Position**	
		Luffing Jib No. 44		Luffing Jib No. 44		Luffing Jib No. 44	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
140	42.7	70 - 140	21.3 - 42.7	70 - 180	21.3 - 54.9	70 - 210	21.3 - 64.0
160	48.8	70 - 100	21.3 - 30.5	70 - 140	21.3 - 42.7	70 - 170	21.3 - 51.8
180	54.9			70 - 100	21.3 - 30.5	70 - 130	21.3 - 39.6
200	61.0					70 - 90	21.3 - 27.4
Boom Length		**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 30 Ft.** (9.1m) **Position**		**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 40 Ft.** (12.2m) **Position**		**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 50 Ft.** (15.2m) **Position**	
		Luffing Jib No. 44		Luffing Jib No. 44		Luffing Jib No. 44	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
140	42.7	70 - 240	21.3 - 73.2	70 - 240	21.3 - 73.2	70 - 240	21.3 - 73.2
160	48.8	70 - 210	21.3 - 64.0	70 - 240	21.3 - 73.2	70 - 240	21.3 - 73.2
180	54.9	70 - 170	21.3 - 51.8	70 - 220	21.3 - 67.1	70 - 220	21.3 - 67.1
200	61.0	70 - 130	21.3 - 39.6	70 - 180	21.3 - 54.9	70 - 190	21.3 - 57.9
220	67.1	70 - 90	21.3 - 27.4	70 - 150	21.3 - 45.7	70 - 170	21.3 - 51.8
240	73.2			70 - 100	21.3 - 30.5	70 - 130	21.3 - 42.7
260	79.2			70	21.3	70 - 100	21.3 - 33.5
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.							

Luffing Jib Raising Procedure

Luffing Jib No. 44 On Boom No. 79
Wheeled Counterweight

MAX-ER 2000 On 2250

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS							
Maximum Boom And Luffing Jib Lengths Lifted Unassisted Using Standard (In-Line) Method Over Rear of Blocked Crawlers							
Boom Length		**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 30 Ft.** (9.1m) **Position**		**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 40 Ft.** (12.2m) **Position**		**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 50 Ft.** (15.2m) **Position**	
		Luffing Jib No. 44		Luffing Jib No. 44		Luffing Jib No. 44	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
140	42.7	70 - 140	21.3 - 42.7	70 - 170	21.3 - 51.8	70 - 210	21.3 - 64.0
160	48.8	70 - 90	21.3 - 27.4	70 - 130	21.3 - 39.6	70 - 170	21.3 - 51.8
180	54.9			70 - 90	21.3 - 27.4	70 - 130	21.3 - 39.6
200	61.0					70 - 80	21.3 - 24.4
Boom Length		**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 30 Ft.** (9.1m) **Position**		**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 40 Ft.** (12.2m) **Position**		**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 50 Ft.** (15.2m) **Position**	
		Luffing Jib No. 44		Luffing Jib No. 44		Luffing Jib No. 44	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
140	42.7	70 - 240	21.3 - 73.2	70 - 240	21.3 - 73.2	70 - 240	21.3 - 73.2
160	48.8	70 - 210	21.3 - 64.0	70 - 240	21.3 - 73.2	70 - 240	21.3 - 73.2
180	54.9	70 - 170	21.3 - 51.8	70 - 220	21.3 - 67.1	70 - 230	21.3 - 70.1
200	61.0	70 - 130	21.3 - 39.6	70 - 180	21.3 - 54.9	70 - 190	21.3 - 57.9
220	67.1	70 - 90	21.3 - 27.4	70 - 150	21.3 - 45.7	70 - 170	21.3 - 51.8
240	73.2			70 - 100	21.3 - 30.5	70 - 130	21.3 - 39.6
260	79.2			70	21.3	70 - 100	21.3 - 30.5
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.							

Luffing Jib Raising Procedure

Luffing Jib No. 44 On Boom No. 79
Wheeled Counterweight

MAX-ER 2000 On 2250

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS							
Maximum Boom And Luffing Jib Lengths Lifted Unassisted Using Standard (In-Line) Method Over Side of Crawlers							
Boom Length		**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 30 Ft.** (9.1m) **Position**		**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 40 Ft.** (12.2m) **Position**		**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 50 Ft.** (15.2m) **Position**	
		Luffing Jib No. 44		Luffing Jib No. 44		Luffing Jib No. 44	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
140	42.7	70 - 110	21.3 - 33.5	70 - 150	21.3 - 45.7	70 - 180	21.3 - 54.9
160	48.8	70	21.3	70 - 100	21.3 - 30.5	70 - 140	21.3 - 42.7
180	54.9			70	21.3	70 - 100	21.3 - 30.5
Boom Length		**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 30 Ft.** (9.1m) **Position**		**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 40 Ft.** (12.2m) **Position**		**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 50 Ft.** (15.2m) **Position**	
		Luffing Jib No. 44		Luffing Jib No. 44		Luffing Jib No. 44	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
140	42.7	70 - 230	21.3 - 70.1	70 - 240	21.3 - 73.2	70 - 240	21.3 - 73.2
160	48.8	70 - 190	21.3 - 57.9	70 - 240	21.3 - 73.2	70 - 240	21.3 - 73.2
180	54.9	70 - 150	21.3 - 45.7	70 - 210	21.3 - 64.0	70 - 220	21.3 - 67.1
200	61.0	70 - 110	21.3 - 33.5	70 - 170	21.3 - 51.8	70 - 190	21.3 - 57.9
220	67.1	70	21.3	70 - 130	21.3 - 39.6	70 - 170	21.3 - 51.8
240	73.2			70 - 90	21.3 - 27.4	70 - 130	21.3 - 39.6
260	79.2					70 - 100	21.3 - 30.5
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.							

Luffing Jib Raising Procedure

Luffing Jib No. 44 On Boom No. 79
Wheeled Counterweight

MAX-ER 2000 On 2250

B. Jack-Knife Method

Longer boom and luffing jib combinations must be raised and lowered using jack-knife method.

Haul in luffing hoist line (luff up) until adjustable jib straps are raised to clear strap stowage brackets on luffing jib (approx. 50 to 68 degree jib strut to horizontal angle). Do not exceed 70 degree jib strut to horizontal angle. Check jib strut position by viewing angle indicator. Slowly raise boom while jib point rollers are allowed to roll on ground. Tension should be applied to luffing jib hoist to keep adjustable jib straps off luffing jib during boom raising. Boom up until boom to luffing jib angle reaches value specified in table or jib is 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 70 degrees or greater 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 is just above 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 adjustable jib straps off luffing jib and lower boom to ground.

CAUTION: Do not under any condition allow boom to luffing jib angle to become less than 70 degrees.

The following boom and luffing jib combinations require jack knifing to a specified boom to luffing jib angle for raising and lowering.

Luffing Jib Raising Procedure

Luffing Jib No. 44 On Boom No. 79
Wheeled Counterweight

MAX-ER 2000 On 2250

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS

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

Boom Length		**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 30 Ft.** (9.1m) **Position**			**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 40 Ft.** (12.2m) **Position**			**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 50 Ft.** (15.2m) **Position**		
		Luffing Jib No. 44		Boom to Luffing Jib Angle	Luffing Jib No. 44		Boom to Luffing Jib Angle	Luffing Jib No. 44		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	Feet	Meters	Degrees
140	42.7	150 - 240	45.7 - 73.2	90	190 - 240	57.9 - 73.2	90	220 - 240	67.1 - 73.2	90
160	48.8	110 - 240	33.5 - 73.2	90	150 - 240	45.7 - 73.2	90	180 - 240	54.9 - 73.2	90
180	54.9	70 - 240	21.3 - 73.2	70	110 - 240	33.5 - 73.2	90	140 - 240	42.7 - 73.2	90
200	61.0	70 - 220(c)	21.3 - 67.1	70	70 - 240	21.3 - 73.2	70	100 - 240	30.5 - 73.2	90
220	67.1							70 - 240	21.3 - 73.2	70

Boom Length		**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 30 Ft.** (9.1m) **Position**			**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 40 Ft.** (12.2m) **Position**			**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 50 Ft.** (15.2m) **Position**		
		Luffing Jib No. 44		Boom to Luffing Jib Angle	Luffing Jib No. 44		Boom to Luffing Jib Angle	Luffing Jib No. 44		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	Feet	Meters	Degrees
160	48.8	220 - 240	67.1 - 73.2	90	—	—	—	—	—	—
180	54.9	180 - 240	54.9 - 73.2	90	230 - 240	70.1 - 73.2	90	230 - 240	70.1 - 73.2	90
200	61.0	140 - 240	42.7 - 73.2	90	190 - 240	57.9 - 73.2	90	200 - 240	61.0 - 73.2	90
220	67.1	100 - 240	30.5 - 73.2	90	160 - 240	48.8 - 73.2	90	180 - 240	54.9 - 73.2	90
240	73.2	70 - 190	21.3 - 57.9	70	110 - 240	33.5 - 73.2	90	140 - 240	42.7 - 73.2	90
(a) 240	73.2	200 - 240	61.0 - 73.2	70	—	—	—	—	—	—
260	79.2				80 - 240	24.4 - 73.2	90	110 - 240	33.5 - 73.2	90
280	85.3				70 - 130	21.3 - 39.6	70	70 - 240	21.3 - 73.2	90
(b) 280	85.3				140 - 210	42.7 - 64.0	70	—	—	—
300	91.4							70 - 150	21.3 - 45.7	70
(a) 300	91.4							160 - 210	48.8 - 64.0	70
(b) 300	91.4							220 - 240	67.1 - 73.2	70

Load blocks, hook and weight ball on ground until boom and luffing jib are erected.
(a) Requires boom point to be removed.
(b) Requires boom point, rigging winch and wire rope guides in luffing jib butt to be removed.
(c) When equipped with boom and/or jib catwalks, 220 Ft. luffing jib on 200 Ft. boom cannot be raised with 240,000 Lb. wheeled counterweight at 30 Ft. position.

Luffing Jib Raising Procedure

Luffing Jib No. 44 On Boom No. 79
Wheeled Counterweight

MAX-ER 2000 On 2250

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS

Maximum Boom And Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method Over Rear of Blocked Crawlers

Boom Length		**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 30 Ft.** (9.1m) **Position**			**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 40 Ft.** (12.2m) **Position**			**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 50 Ft.** (15.2m) **Position**		
		Luffing Jib No. 44		Boom to Luffing Jib Angle	Luffing Jib No. 44		Boom to Luffing Jib Angle	Luffing Jib No. 44		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	Feet	Meters	Degrees
140	42.7	150 - 240	45.7 - 73.2	90	180 - 240	54.9 - 73.2	90	220 - 240	67.1 - 73.2	90
160	48.8	100 - 240	30.5 - 73.2	90	140 - 240	42.7 - 73.2	90	180 - 240	54.9 - 73.2	90
180	54.9	70 - 240	21.3 - 73.2	70	100 - 240	30.5 - 73.2	90	140 - 240	42.7 - 73.2	90
200	61.0	70 - 190	21.3 - 57.9	70	70 - 240	21.3 - 73.2	70	90 - 240	27.4 - 73.2	90
220	67.1							70 - 240	21.3 - 73.2	70

Boom Length		**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 30 Ft.** (9.1m) **Position**			**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 40 Ft.** (12.2m) **Position**			**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 50 Ft.** (15.2m) **Position**		
		Luffing Jib No. 44		Boom to Luffing Jib Angle	Luffing Jib No. 44		Boom to Luffing Jib Angle	Luffing Jib No. 44		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	Feet	Meters	Degrees
160	48.8	220 - 240	67.1 - 73.2	90	—	—	—	—	—	—
180	54.9	180 - 240	54.9 - 73.2	90	230 - 240	70.1 - 73.2	90	240	73.2	90
200	61.0	140 - 240	42.7 - 73.2	90	190 - 240	57.9 - 73.2	90	200 - 240	61.0 - 73.2	90
220	67.1	100 - 240	30.5 - 73.2	90	160 - 240	48.8 - 73.2	90	180 - 240	54.9 - 73.2	90
240	73.2	70 - 190	21.3 - 57.9	70	110 - 240	33.5 - 73.2	90	140 - 240	42.7 - 73.2	90
(a) 240	73.2	200 - 240	61.0 - 73.2	70	—	—	—	—	—	—
260	79.2				80 - 240	24.4 - 73.2	90	110 - 240	33.5 - 73.2	90
280	85.3				70 - 130	21.3 - 39.6	70	70 - 240	21.3 - 73.2	90
(b) 280	85.3				140 - 210	42.7 - 64.0	70	—	—	—
300	91.4							70 - 150	21.3 - 45.7	70
(a) 300	91.4							160 - 210	48.8 - 64.0	70
(b) 300	91.4							220 - 240	67.1 - 73.2	70

Load blocks, hook and weight ball on ground until boom and luffing jib are erected.
(a) Requires boom point to be removed.
(b) Requires boom point, rigging winch and wire rope guides in luffing jib butt to be removed.

Luffing Jib Raising Procedure

Luffing Jib No. 44 On Boom No. 79
Wheeled Counterweight

MAX-ER 2000 On 2250

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS

Maximum Boom And Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method Over Side of Crawlers

Boom Length		**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 30 Ft.** (9.1m) **Position**			**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 40 Ft.** (12.2m) **Position**			**240,000 Lb.** (108 860 kg) **Wheeled Counterweight at 50 Ft.** (15.2m) **Position**		
		Luffing Jib No. 44		Boom to Luffing Jib Angle	Luffing Jib No. 44		Boom to Luffing Jib Angle	Luffing Jib No. 44		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	Feet	Meters	Degrees
140	42.7	120 - 240	36.6 - 73.2	90	160 - 240	48.8 - 73.2	90	190 - 240	57.9 - 73.2	90
160	48.8	80 - 240	24.4 - 73.2	70	110 - 240	33.5 - 73.2	90	150 - 240	45.7 - 73.2	90
180	54.9	70 - 240	21.3 - 73.2	70	80 - 240	24.4 - 73.2	70	110 - 240	33.5 - 73.2	90
200	61.0							70 - 240	21.3 - 73.2	70

Boom Length		**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 30 Ft.** (9.1m) **Position**			**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 40 Ft.** (12.2m) **Position**			**462,000 Lb.** (209 560 kg) **Wheeled Counterweight at 50 Ft.** (15.2m) **Position**		
		Luffing Jib No. 44		Boom to Luffing Jib Angle	Luffing Jib No. 44		Boom to Luffing Jib Angle	Luffing Jib No. 44		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	Feet	Meters	Degrees
140	42.7	240	73.2	90	—	—	—	—	—	—
160	48.8	200 - 240	61.0 - 73.2	90	—	—	—	—	—	—
180	54.9	190 - 240	57.9 - 73.2	90	220 - 240	67.1 - 73.2	90	230 - 240	70.1 - 73.2	90
200	61.0	120 - 240	36.6 - 73.2	90	180 - 240	54.9 - 73.2	90	200 - 240	61.0 - 73.2	90
220	67.1	80 - 240	24.4 - 73.2	70	140 - 240	42.7 - 73.2	90	180 - 240	54.9 - 73.2	90
240	73.2	70 - 190	21.3 - 57.9	70	100 - 240	30.5 - 73.2	90	140 - 240	42.7 - 73.2	90
(a) 240	73.2	200 - 240	61.0 - 73.2	70	—	—	—	—	—	—
260	79.2				70 - 240	21.3 - 73.2	70	110 - 240	33.5 - 73.2	90
280	85.3							70 - 240	21.3 - 73.2	70

Load blocks, hook and weight ball on ground until boom and luffing jib are erected.
(a) Requires boom point to be removed.