Luffing Jib Raising Procedure

Luffing Jib No. 133 or No. 133A On Boom No. 79-44
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. 195517** 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

Boom and luffing jib are assembled in layout, end to end, position. 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.

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

WITH OR WITHOUT BOOM 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. 133/133A		Luffing Jib No. 133/133A		Luffing Jib No. 133/133A	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
200	61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
220	67.1	70 - 170	21.3 - 51.8	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
240	73.2	70 - 120	21.3 - 36.6	70 - 170	21.3 - 51.8	70 - 200	21.3 - 61.0
260	79.2	70 - 80	21.3 - 24.4	70 - 130	21.3 - 39.6	70 - 180	21.3 - 54.9
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. 133/133A		Luffing Jib No. 133/133A		Luffing Jib No. 133/133A	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
200	61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
220	67.1	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
240	73.2	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
260	79.2	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
Load block, 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. 79-44
Wheeled Counterweight

MAX-ER 2000 On 2250

WITH OR WITHOUT BOOM 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. 133/133A		Luffing Jib No. 133/133A		Luffing Jib No. 133/133A	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
200	61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
220	67.1	70 - 160	21.3 - 48.8	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
240	73.2	70 - 110	21.3 - 33.5	70 - 160	21.3 - 48.8	70 - 200	21.3 - 61.0
260	79.2	70	21.3	70 - 120	21.3 - 36.6	70 - 170	21.3 - 51.8
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. 133/133A		Luffing Jib No. 133/133A		Luffing Jib No. 133/133A	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
200	61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
220	67.1	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
240	73.2	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
260	79.2	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
Load block, 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. 79-44
Wheeled Counterweight

MAX-ER 2000 On 2250

WITH OR WITHOUT BOOM 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. 133/133A		Luffing Jib No. 133/133A		Luffing Jib No. 133/133A	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
200	61.0	70 - 170	21.3 - 51.8	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
220	67.1	70 - 130	21.3 - 39.6	70 - 170	21.3 - 51.8	70 - 200	21.3 - 61.0
240	73.2	70	21.3	70 - 120	21.3 - 36.6	70 - 170	21.3 - 51.8
260	79.2			70 - 90	21.3 - 27.4	70 - 130	21.3 - 39.6
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. 133/133A		Luffing Jib No. 133/133A		Luffing Jib No. 133/133A	
Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
200	61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
220	67.1	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
240	73.2	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
260	79.2	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0	70 - 200	21.3 - 61.0
Load block, 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. 79-44
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.

Raising:

Boom and luffing jib are assembled in layout, end to end, position. 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 rollers 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 following 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 desired boom operating angle. Luffing jib radius must be within capacity chart before swinging over side of machine.

Lowering:

Position boom at 80 degrees prior to lowering luffing jib. Lower luffing jib until boom to luffing jib angle reaches value specified in following tables. 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 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.

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. 133 or No. 133A On Boom No. 79-44
Wheeled Counterweight

MAX-ER 2000 On 2250

WITH OR WITHOUT BOOM 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. 133/133A		Boom to Luffing Jib Angle	Luffing Jib No. 133/133A		Boom to Luffing Jib Angle	Luffing Jib No. 133/133A		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	Feet	Meters	Degrees
220	67.1	180 - 200	54.9 - 61.0	90	—	—	—	—	—	—
240	73.2	130 - 200	39.6 - 61.0	90	180 - 200	54.9 - 61.0	90	—	—	—
260	79.2	90 - 200	27.4 - 61.0	90	140 - 200	42.7 - 61.0	90	190 - 200	57.9 - 61.0	90
280	85.3	70 - 200	21.3 - 61.0	70	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90
300	91.4				70 - 200	21.3 - 61.0	70	70 - 200	21.3 - 61.0	90

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. 133/133A		Boom to Luffing Jib Angle	Luffing Jib No. 133/133A		Boom to Luffing Jib Angle	Luffing Jib No. 133/133A		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	Feet	Meters	Degrees
280	85.3	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90
300	91.4	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90

Load block, 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. 79-44
Wheeled Counterweight

MAX-ER 2000 On 2250

WITH OR WITHOUT BOOM 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. 133/133A		Boom to Luffing Jib Angle	Luffing Jib No. 133/133A		Boom to Luffing Jib Angle	Luffing Jib No. 133/133A		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	Feet	Meters	Degrees
220	67.1	170 - 200	51.8 - 61.0	90	—	—	—	—	—	—
240	73.2	120 - 200	36.6 - 61.0	90	170 - 200	51.8 - 61.0	90	—	—	—
260	79.2	80 - 200	24.4 - 61.0	90	130 - 200	39.6 - 61.0	90	180 - 200	54.9 - 61.0	90
280	85.3	70 - 200	21.3 - 61.0	70	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90
300	91.4				70 - 200	21.3 - 61.0	70	70 - 200	21.3 - 61.0	90

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. 133/133A		Boom to Luffing Jib Angle	Luffing Jib No. 133/133A		Boom to Luffing Jib Angle	Luffing Jib No. 133/133A		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	Feet	Meters	Degrees
280	85.3	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90
300	91.4	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90

Load block, 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. 79-44
Wheeled Counterweight

MAX-ER 2000 On 2250

WITH OR WITHOUT BOOM 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. 133/133A		Boom to Luffing Jib Angle	Luffing Jib No. 133/133A		Boom to Luffing Jib Angle	Luffing Jib No. 133/133A		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	Feet	Meters	Degrees
200	61.0	180 - 200	54.9 - 61.0	90	—	—	—	—	—	—
220	67.1	140 - 200	42.7 - 61.0	90	180 - 200	54.9 - 61.0	90	—	—	—
240	73.2	80 - 200	24.4 - 61.0	90	130 - 200	39.6 - 61.0	90	180 - 200	54.9 - 61.0	90
260	79.2	70 - 200	21.3 - 61.0	70	100 - 200	30.5 - 61.0	90	140 - 200	42.7 - 61.0	90
280	85.3				70 - 120	21.3 - 36.6	90	70 - 200	21.3 - 61.0	90
280	85.3				130 - 200	39.6 - 61.0	70	—	—	—
300	91.4							70 - 170	21.3 - 51.8	90
300	91.4							180 - 200	54.9- 61.0	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. 133/133A		Boom to Luffing Jib Angle	Luffing Jib No. 133/133A		Boom to Luffing Jib Angle	Luffing Jib No. 133/133A		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	Feet	Meters	Degrees
280	85.3	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90
300	91.4	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90	70 - 200	21.3 - 61.0	90

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