

# Luffing Jib Raising Procedure

## 16000 MAX-ER

Luffing Jib No. 59 on Boom No. 58 HL  
with 98.4 ft (30,0 m) Mast No. 59A  
Hanging Counterweight

### Recommended Boom and Luffing Jib Raising and Lowering Procedure

Machine must be equipped with 332,000 lb (150 590 kg) crane counterweight, 120,000 lb (54 430 kg) carbody counterweight and 0 lb (0 kg), 137,850 lb (62 530 kg) or 313,850 lb (142 360 kg) hanging counterweight. Refer to luffing jib rigging assembly **No. A13416** for boom and luffing jib make-up of inserts, straps, struts, strut raising procedure, jib stop setup and operation, and miscellaneous parts, etc. Refer to Operator's Manual for setup and installation.

Boom and luffing jib combinations must be raised and lowered using jack-knife 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:

Position jib stop to clear jib butt. Luff up jib strut until straps on inserts are clear of strap supports. Slowly raise boom while jib point rollers are allowed to roll on ground. Tension should be applied to luffing jib hoist to keep jib straps above strap supports. Boom up until boom to luffing jib angle reaches 145 degrees. Lower jib stops to operating position.

Continue to boom up until boom to luffing jib reaches value specified in table. 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 when raising over end of blocked crawlers.

#### Lowering:

Position boom at 85 degrees 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 rollers contact ground. Continue to lower boom while luffing jib rollers roll along ground until boom to luffing jib angle reaches 145 degrees. Position jib stop to clear jib butt. Keep enough tension on luffing jib hoist to keep jib straps above strap supports. Continue to lower boom while luffing jib rollers roll along ground.

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

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS							
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method							
Boom Length		Over End of Blocked Crawlers			Over Side of Crawlers		
		0 lb (0 kg) Hanging Counterweight					
		Luffing Jib No. 59		Boom to Luffing Jib Angle	Luffing Jib No. 59		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees
137.8	42,0	78.7 - 137.8 157.5 - 275.6 —	24,0 - 42,0 48,0 - 84,0 —	145 90 —	78.7 - 98.4 118.1 - 236.2 255.9 - 275.6	24,0 - 30,0 36,0 - 72,0 78,0 - 84,0	145 90 70
157.5	48,0	78.7 - 98.4 118.1 - 236.2 255.9 - 275.6	24,0 - 30,0 36,0 - 72,0 78,0 - 84,0	145 90 70	— 78.7 - 177.2 196.9 - 275.6	— 24,0 - 54,0 60,0 - 84,0	— 90 70
177.2	54,0	78.7 - 196.9 216.5 - 275.6	24,0 - 60,0 66,0 - 84,0	90 70	— 78.7 - 275.6	— 24,0 - 84,0	— 70
196.9	60,0	78.7 - 275.6	24,0 - 84,0	70	—	—	—
216.5	66,0	78.7 - 157.5	24,0 - 48,0	70	—	—	—
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.							



# Luffing Jib Raising Procedure

Luffing Jib No. 59 on Boom No. 58 HL  
with 98.4 ft (30,0 m) Mast No. 59A  
Hanging Counterweight

## 16000 MAX-ER

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS							
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method							
Boom Length		Over End of Blocked Crawlers			Over Side of Crawlers		
		137,850 lb (62 530 kg) Hanging Counterweight at 36.1 ft (11,0 m) Position					
		Luffing Jib No. 59		Boom to Luffing Jib Angle	Luffing Jib No. 59		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees
137.8	42,0	78.7 - 236.2 255.9 - 275.6	24,0 - 72,0 78,0 - 84,0	145 90	78.7 - 196.9 216.5 - 275.6	24,0 - 60,0 66,0 - 84,0	145 90
157.5	48,0	78.7 - 196.9 216.5 - 275.6	24,0 - 60,0 66,0 - 84,0	145 90	78.7 - 157.5 177.2 - 275.6	24,0 - 48,0 54,0 - 84,0	145 90
177.2	54,0	78.7 - 157.5 177.2 - 275.6	24,0 - 48,0 54,0 - 84,0	145 90	78.7 - 118.1 137.8 - 275.6	24,0 - 36,0 42,0 - 84,0	145 90
196.9	60,0	78.7 - 118.1 137.8 - 275.6 —	24,0 - 36,0 42,0 - 84,0 —	145 90 —	78.7 98.4 - 216.5 236.2 - 275.6	24,0 30,0 - 66,0 72,0 - 84,0	145 90 70
216.5	66,0	78.7 98.4 - 216.5 236.2 - 275.6	24,0 30,0 - 66,0 72,0 - 84,0	145 90 70	— 78.7 - 137.8 157.5 - 275.6	— 24,0 - 42,0 48,0 - 84,0	— 90 70
236.2	72,0	78.7 - 98.4 118.1 - 275.6	24,0 - 30,0 36,0 - 84,0	90 70	— —	— —	— —
255.9	78,0	78.7 - 216.5	24,0 - 66,0	70	—	—	—
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.							



# Luffing Jib Raising Procedure

**16000 MAX-ER**

Luffing Jib No. 59 on Boom No. 58 HL  
with 98.4 ft (30,0 m) Mast No. 59A  
Hanging Counterweight

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS								
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method								
Boom Length		Over End of Blocked Crawlers			Over Side of Crawlers			
		313,850 lb (142 360 kg) Hanging Counterweight at 36.1 ft (11,0 m) Position						
		Luffing Jib No. 59		Boom to Luffing Jib Angle	Luffing Jib No. 59		Boom to Luffing Jib Angle	
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	
137.8	42,0	78.7 - 275.6	24,0 - 84,0	145	78.7 - 275.6	24,0 - 84,0	145	
157.5	48,0	78.7 - 275.6 —	24,0 - 84,0 —	145 —	78.7 - 255.9 275.6	24,0 - 78,0 84,0	145 90	
177.2	54,0	78.7 - 255.9 275.6	24,0 - 78,0 84,0	145 90	78.7 - 236.2 255.9 - 275.6	24,0 - 72,0 78,0 - 84,0	145 90	
196.9	60,0	78.7 - 236.2 255.9 - 275.6	24,0 - 72,0 78,0 - 84,0	145 90	78.7 - 196.9 216.5 - 275.6	24,0 - 60,0 66,0 - 84,0	145 90	
216.5	66,0	78.7 - 196.9 216.5 - 275.6	24,0 - 60,0 66,0 - 84,0	145 90	78.7 - 157.5 177.2 - 275.6	24,0 - 48,0 54,0 - 84,0	145 90	
236.2	72,0	78.7 - 157.5 177.2 - 275.6	24,0 - 48,0 54,0 - 84,0	145 90	78,7 - 118.1 137.8 - 275.6	24,0 - 36,0 42,0 - 84,0	145 90	
255.9	78,0	78.7 - 118.1 137.8 - 275.6 —	24,0 - 36,0 42,0 - 84,0 —	145 90 —	78.7 98.4 - 216.5 236.2 - 275.6	24,0 30,0 - 66,0 72,0 - 84,0	145 90 70	
275.6	84,0	78.7 98.4 - 196.9 216.5 - 275.6	24,0 30,0 - 60,0 66,0 - 84,0	145 90 70	— 78.7 98.4 - 275.6	— 24,0 30,0 - 84,0	— 90 70	
295.3	90,0	78.7 98.4 - 275.6	24,0 30,0 - 84,0	90 70	— —	— —	— —	
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.								



# Luffing Jib Raising Procedure

Luffing Jib No. 59 on Boom No. 58 HL  
with 98.4 ft (30,0 m) Mast No. 59A  
Hanging Counterweight

## 16000 MAX-ER

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS							
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method							
Boom Length		Over End of Blocked Crawlers			Over Side of Crawlers		
		137,850 lb (62 530 kg) Hanging Counterweight at 42.7 ft (13,0 m) Position					
		Luffing Jib No. 59		Boom to Luffing Jib Angle	Luffing Jib No. 59		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees
137.8	42,0	78.7 - 236.2	24,0 - 72,0	145	78.7 - 216.5	24,0 - 66,0	145
		255.9 - 275.6	78,0 - 84,0	90	236.2 - 275.6	72,0 - 84,0	90
157.5	48,0	78.7 - 216.5	24,0 - 66,0	145	78.7 - 177.2	24,0 - 54,0	145
		236.2 - 275.6	72,0 - 84,0	90	196.9 - 275.6	60,0 - 84,0	90
177.2	54,0	78.7 - 177.2	24,0 - 54,0	145	78.7 - 137.8	24,0 - 42,0	145
		196.9 - 275.6	60,0 - 84,0	90	157.5 - 275.6	48,0 - 84,0	90
196.9	60,0	78.7 - 137.8	24,0 - 42,0	145	78.7 - 98.4	24,0 - 30,0	145
		157.5 - 275.6	48,0 - 84,0	90	118.1 - 255.9	36,0 - 78,0	90
		—	—	—	275.6	84,0	70
216.5	66,0	78.7 - 98.4	24,0 - 30,0	145	—	—	—
		118.1 - 255.9	36,0 - 78,0	90	78.7 - 177.2	24,0 - 54,0	90
		275.6	84,0	70	196.9 - 275.6	60,0 - 84,0	70
236.2	72,0	78.7 - 157.5	24,0 - 48,0	90	—	—	—
		177.2 - 275.6	54,0 - 84,0	70	78.7 - 275.6	24,0 - 84,0	70
255.9	78,0	78.7 - 255.9	24,0 - 78,0	70	—	—	—
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.							



# Luffing Jib Raising Procedure

## 16000 MAX-ER

Luffing Jib No. 59 on Boom No. 58 HL  
with 98.4 ft (30,0 m) Mast No. 59A  
Hanging Counterweight

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS								
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method								
Boom Length		Over End of Blocked Crawlers			Over Side of Crawlers			
		313,850 lb (142 360 kg) Hanging Counterweight at 42.7 ft (13,0 m) Position						
		Luffing Jib No. 59		Boom to Luffing Jib Angle	Luffing Jib No. 59		Boom to Luffing Jib Angle	
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	
137.8	42,0	78.7 - 275.6	24,0 - 84,0	145	78.7 - 275.6	24,0 - 84,0	145	
157.5	48,0	78.7 - 275.6	24,0 - 84,0	145	78.7 - 275.6	24,0 - 84,0	145	
177.2	54,0	78.7 - 275.6	24,0 - 84,0	145	78.7 - 255.9	24,0 - 78,0	145	
		—	—	—	275.6	84,0	90	
196.9	60,0	78.7 - 255.9	24,0 - 78,0	145	78.7 - 216.5	24,0 - 66,0	145	
		275.6	84,0	90	236.2 - 275.6	72,0 - 84,0	90	
216.5	66,0	78.7 - 216.5	24,0 - 66,0	145	78.7 - 177.2	24,0 - 54,0	145	
		236.2 - 275.6	72,0 - 84,0	90	196.9 - 275.6	60,0 - 84,0	90	
236.2	72,0	78.7 - 177.2	24,0 - 54,0	145	78.7 - 157.5	24,0 - 48,0	145	
		196.9 - 275.6	60,0 - 84,0	90	177.2 - 275.6	54,0 - 84,0	90	
255.9	78,0	78,7 - 157.5	24,0 - 48,0	145	78.7 - 118.1	24,0 - 36,0	145	
		177.2 - 275.6	54,0 - 84,0	90	137.8 - 255.9	42,0 - 78,0	90	
		—	—	—	275.6	84,0	70	
275.6	84,0	78.7 - 118.1	24,0 - 36,0	145	—	—	—	
		137.8 - 255.9	42,0 - 78,0	90	78.7 - 177.2	24,0 - 54,0	90	
		275.6	84,0	70	196.9 - 275.6	60,0 - 84,0	70	
295.3	90,0	78.7	24,0	145	—	—	—	
		98.4 - 157.5	30,0 - 48,0	90	—	—	—	
		177.2 - 275.6	54,0 - 84,0	70	78.7 - 275.6	24,0 - 84,0	70	
315.0	96,0	78.7 - 236.2	24,0 - 72,0	70	—	—	—	
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.								



# Luffing Jib Raising Procedure

Luffing Jib No. 59 on Boom No. 58 HL  
with 98.4 ft (30,0 m) Mast No. 59A  
Hanging Counterweight

## 16000 MAX-ER

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS								
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method								
Boom Length		Over End of Blocked Crawlers			Over Side of Crawlers			
		137,850 lb (62 530 kg) Hanging Counterweight at 49.2 ft (15,0 m) Position						
		Luffing Jib No. 59		Boom to Luffing Jib Angle	Luffing Jib No. 59		Boom to Luffing Jib Angle	
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees	
137.8	42,0	78.7 - 255.9 275.6	24,0 - 78,0 84,0	145 90	78.7 - 216.5 236.2 - 275.6	24,0 - 66,0 72,0 - 84,0	145 90	
157.5	48,0	78.7 - 216.5 236.2 - 275.6	24,0 - 66,0 72,0 - 84,0	145 90	78.7 - 196.9 216,5 - 275.6	24,0 - 60,0 66,0 - 84,0	145 90	
177.2	54,0	78.7 - 196.9 216.5 - 275.6	24,0 - 60,0 66,0 - 84,0	145 90	78.7 - 157.5 177.2 - 275.6	24,0 - 48,0 54,0 - 84,0	145 90	
196.9	60,0	78.7 - 157.5 177.2 - 275.6	24,0 - 48,0 54,0 - 84,0	145 90	78.7 - 118.1 137.8 - 275.6	24,0 - 36,0 42,0 - 84,0	145 90	
216.5	66,0	78.7 - 118.1 137.8 - 275.6 —	24,0 - 36,0 42,0 - 84,0 —	145 90 —	78.7 98.4 - 196.9 216.5 - 275.6	24,0 30,0 - 60,0 66,0 - 84,0	145 90 70	
236.2	72,0	78.7 98.4 - 177.2 196.9 - 275.6	24,0 30,0 - 54,0 60,0 - 84,0	145 90 70	— 78.7 98.4 - 275.6	— 24,0 30,0 - 84,0	— 90 70	
255.9	78,0	78.7 - 275.6	24,0 - 84,0	70	—	—	—	
275.6	84,0	78.7 - 177.2	24,0 - 54,0	70	—	—	—	
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.								

# Luffing Jib Raising Procedure

## 16000 MAX-ER

Luffing Jib No. 59 on Boom No. 58 HL  
with 98.4 ft (30,0 m) Mast No. 59A  
Hanging Counterweight

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS							
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method							
Boom Length		Over End of Blocked Crawlers			Over Side of Crawlers		
		313,850 lb (142 360 kg) Hanging Counterweight at 49.2 ft (15,0 m) Position					
		Luffing Jib No. 59		Boom to Luffing Jib Angle	Luffing Jib No. 59		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees
137.8	42,0	78.7 - 275.6	24,0 - 84,0	145	78.7 - 275.6	24,0 - 84,0	145
157.5	48,0	78.7 - 275.6	24,0 - 84,0	145	78.7 - 275.6	24,0 - 84,0	145
177.2	54,0	78.7 - 275.6	24,0 - 84,0	145	78.7 - 275.6	24,0 - 84,0	145
196.9	60,0	78.7 - 275.6	24,0 - 84,0	145	78.7 - 236.2	24,0 - 72,0	145
		—	—	—	255.9 - 275.6	78,0 - 84,0	90
216.5	66,0	78.7 - 236.2	24,0 - 72,0	145	78.7 - 216.5	24,0 - 66,0	145
		255.9 - 275.6	78,0 - 84,0	90	236.2 - 275.6	72,0 - 84,0	90
236.2	72,0	78.7 - 216.5	24,0 - 66,0	145	78.7 - 177.2	24,0 - 54,0	145
		236.2 - 275.6	72,0 - 84,0	90	196.9 - 275.6	60,0 - 84,0	90
255.9	78,0	78.7 - 177.2	24,0 - 54,0	145	78.7 - 137.8	24,0 - 42,0	145
		196.9 - 275.6	60,0 - 84,0	90	157.5 - 275.6	48,0 - 84,0	90
275.6	84,0	78.7 - 137.8	24,0 - 42,0	145	78.7 - 98.4	24,0 - 30,0	145
		157.5 - 275.6	48,0 - 84,0	90	118.1 - 236.2	36,0 - 72,0	90
		—	—	—	255.9 - 275.6	78,0 - 84,0	70
295.3	90,0	78.7 - 98.4	24,0 - 30,0	145	—	—	—
		118.1 - 236.2	36,0 - 72,0	90	78.7 - 137.8	24,0 - 42,0	90
		255.9 - 275.6	78,0 - 84,0	70	157.5 - 275.6	48,0 - 84,0	70
315.0	96,0	78.7 - 137.8	24,0 - 42,0	90	—	—	—
		157.5 - 275.6	48,0 - 84,0	70	—	—	—
Load blocks, hook and weight ball on ground until boom and luffing jib are erected.							