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

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														
	Over End of Blocked Crawlers Over Side of Crawlers													
			0 lb (0 kg) Hangir	ng Counterweig	ght								
Bo Len	om igth	Luffing Jit	o No. 59	Boom to Luffing Jib Angle	Luffing Jil	Boom Luffing Luffing Jib No. 59 Angl								
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		 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		 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 bl	ocks, hoc	ok and weight ba	all on ground u	intil boom an	d luffing jib are	Load blocks, hook and weight ball on ground until boom and luffing jib are erected.								

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WITH OR WITHOUT BOOM AND/OR JIB CATWALKS									
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method									
		Over End	of Blocked C	rawlers	Over	Side of Craw	ers		
		137,850 lb	(62 530 kg) Ha	anging Cour	nterweight at 3	6.1 ft (11,0 m)	Position		
	om ngth	Luffing Jil	b No. 59	Boom to Luffing Jib Angle			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			
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.									



WITH OR WITHOUT BOOM AND/OR JIB CATWALKS									
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method									
		Over End	of Blocked C	rawlers	Over	Side of Crawl	ers		
		313,850 lb (142 360 kg) H	anging Cou	nterweight at 3	6.1 ft (11,0 m)	Position		
Bo Len	om igth	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	24,0 - 78,0	145	78.7 - 236.2	24,0 - 72,0	145		
		275.6	84,0	90	255.9 - 275.6	78,0 - 84,0	90		
196.9	60,0	78.7 - 236.2	24,0 - 72,0	145	78.7 - 196.9	24,0 - 60,0	145		
		255.9 - 275.6	78,0 - 84,0	90	216.5 - 275.6	66,0 - 84,0	90		
216.5	66,0	78.7 - 196.9	24,0 - 60,0	145	78.7 - 157.5	24,0 - 48,0	145		
		216.5 - 275.6	66,0 - 84,0	90	177.2 - 275.6	54,0 - 84,0	90		
236.2	72,0	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 - 275.6	42,0 - 84,0	90		
255.9	78,0	78.7 - 118.1	24,0 - 36,0	145	78.7	24,0	145		
		137.8 - 275.6	42,0 - 84,0	90	98.4 - 216.5	30,0 - 66,0	90		
					236.2 - 275.6	72,0 - 84,0	70		
275.6	84,0	78.7	24,0	145		—	—		
		98.4 - 196.9	30,0 - 60,0	90	78.7	24,0	90		
		216.5 - 275.6	66,0 - 84,0	70	98.4 - 275.6	30,0 - 84,0	70		
295.3	90,0	78.7	24,0	90	—	—	—		
		98.4 - 275.6	30,0 - 84,0	70			—		
Load bl	ocks, hoc	ok and weight ba	all on ground u	intil boom an	d luffing jib are e	erected.			



WITH OR WITHOUT BOOM AND/OR JIB CATWALKS											
Ма	Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method										
	Over End of Blocked Crawlers Over Side of Crawlers										
		137,850 lb	(62 530 kg) Ha	anging Coun	terweight at 42	2.7 ft (13,0 m)	Position				
Bo Len	om igth	Luffing Jil	o 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 bl	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

WITH OR WITHOUT BOOM AND/OR JIB CATWALKS										
Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method										
		Over End	of Blocked C	rawlers	Over Side of Crawlers					
		313,850 lb (142 360 kg) H	anging Cou	nterweight at 4	2.7 ft (13,0 m)	Position			
Bo Len	om Igth	Luffing Jil	o 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			
				\rightarrow	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 bl	ocks, hoc	ok and weight ba	all on ground u	Intil boom an	d luffing jib are	erected.				



WITH OR WITHOUT BOOM AND/OR JIB CATWALKS										
Ма	Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method									
	Over End of Blocked Crawlers Over Side of Crawlers									
		137,850 lb	(62 530 kg) Ha	anging Coun	terweight at 49	9.2 ft (15,0 m)	Position			
	om igth	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			
255.9 275.6	78,0 84,0	78.7 - 275.6 78.7 - 177.2	24,0 - 84,0 24,0 - 54,0	70						
	Load blocks, hook and weight ball on ground until boom and luffing jib are erected.									



$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	WITH OR WITHOUT BOOM AND/OR JIB CATWALKS									
313,850 lb (142 360 kg) Harging Courterweight at 49.2 ft (15,0 m) Position Born Luffing Jib Boom to Luffing Jib Angle Luffing Jib No. 59 Boom to 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 - 216.5 24,0 - 84,0 90 216.5 66,0 78.7 - 236.2 24,0 - 72,0 145 78.7 - 216.5 24,0 - 66,0 145 236.2 72,0 78.7 - 216.5 24,0 - 64,0 90 196.9 - 275.6 60,0 - 84,0 90 255.9 78,0 78.7 - 137.8 24,0 - 42,0 145<	Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method									
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			Over End	of Blocked C	rawlers	Over	Side of Crawl	ers		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			313,850 lb (142 360 kg) H	anging Cou	nterweight at 4	9.2 ft (15,0 m)	Position		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		-	Luffing Jib No. 59		Luffing Jib	Luffing Jib No. 59		Luffing Jib		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Feet	Meters	Feet	Meters	Degrees	Feet	Meters	Degrees		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	137.8	42,0	78.7 - 275.6	24,0 - 84,0	145	78.7 - 275.6	24,0 - 84,0	145		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	157.5	48,0			145		24,0 - 84,0	145		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	177.2	54,0		24,0 - 84,0	145	78.7 - 275.6	24,0 - 84,0	145		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	196.9	60,0	78.7 - 275.6	24,0 - 84,0	145	78.7 - 236.2	24,0 - 72,0	145		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			_	—		255.9 - 275.6	78,0 - 84,0	90		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	216.5	66,0	78.7 - 236.2		145	78.7 - 216.5	24,0 - 66,0	145		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			255.9 - 275.6		90	236.2 - 275.6	72,0 - 84,0	90		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	236.2	72,0	78.7 - 216.5		145	78.7 - 177.2	24,0 - 54,0	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 90 295.3 90,0 78.7 - 98.4 24,0 - 30,0 145 - - 295.3 90,0 78.7 - 98.4 24,0 - 30,0 145 - - - 295.3 90,0 78.7 - 98.4 24,0 - 30,0 145 - - - 295.3 90,0 78.7 - 98.4 24,0 - 30,0 145 - - - 295.3 90,0 78.7 - 98.4 24,0 - 30,0 145 - - - 295.3 90,0 78.7 - 98.4 24,0 - 30,0 145 - - - - 295.9 - 275.6 78,0 - 84,0 70 157.5 - 275.6 48,0 - 84,0 70 315.0 96,0 78.7 - 137.8			236.2 - 275.6	72,0 - 84,0	90	196.9 - 275.6	60,0 - 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 90 295.3 90,0 78.7 - 98.4 24,0 - 30,0 145 295.3 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 90 295.3 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	255.9	78,0	78.7 - 177.2	24,0 - 54,0	145	78.7 - 137.8	24,0 - 42,0	145		
157.5 - 275.6 48,0 - 84,0 90 118.1 - 236.2 36,0 - 72,0 90 295.3 90,0 78.7 - 98.4 24,0 - 30,0 145 — — — 118.1 - 236.2 36,0 - 72,0 90 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 — — — —			196.9 - 275.6	60,0 - 84,0	90	157.5 - 275.6	48,0 - 84,0	90		
295.3 90,0 78.7 - 98.4 24,0 - 30,0 145 — — — — — — — — — — — — … <th< td=""><td>275.6</td><td>84,0</td><td>78.7 - 137.8</td><td>24,0 - 42,0</td><td>145</td><td>78.7 - 98.4</td><td>24,0 - 30,0</td><td>145</td></th<>	275.6	84,0	78.7 - 137.8	24,0 - 42,0	145	78.7 - 98.4	24,0 - 30,0	145		
295.3 90,0 78.7 - 98.4 24,0 - 30,0 145 — 24,0 - 42,0 90 255.9 - 275.6 78,0 - 84,0 70 157.5 - 275.6 48,0 - 84,0 70 — — — — — … <th< td=""><td></td><td></td><td>157.5 - 275.6</td><td>48,0 - 84,0</td><td>90</td><td>118.1 - 236.2</td><td>36,0 - 72,0</td><td>90</td></th<>			157.5 - 275.6	48,0 - 84,0	90	118.1 - 236.2	36,0 - 72,0	90		
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 — — — —						255.9 - 275.6	78,0 - 84,0	70		
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 — — — — —	295.3	90,0			145	—		—		
315.0 96,0 78.7 - 137.8 24,0 - 42,0 90 — = # # <th< td=""><td></td><td></td><td></td><td></td><td>90</td><td>78.7 - 137.8</td><td>24,0 - 42,0</td><td>90</td></th<>					90	78.7 - 137.8	24,0 - 42,0	90		
157.5 - 275.6 48,0 - 84,0 70 — — —			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	—	_	—		
Load blocks, book and weight hall on ground until boom and luffing ith are prosted			157.5 - 275.6	48,0 - 84,0	70	—		—		
Load blocks, hook and weight bair on ground until boom and running jub are elected.	Load bl	ocks, hoo	ok and weight ba	all on ground u	intil boom an	d luffing jib are e	erected.			