Luffing Jib Raising Procedure 14000 SERIES 2

Fixed Jib No. 138 on Luffing Jib No. 135 on Boom No. 76

Recommended boom, luffing jib and fixed jib raising and lowering procedure:

14000 SERIES 2 must be equipped with 168,000 lb (76 200 kg) crane counterweight and 53,000 lb (24 040 kg) carbody counterweight. Refer to fixed jib rigging assembly **No. 179361** for makeup of inserts, pendants, strut, jib stop setup and operation, and miscellaneous parts, etc. Refer to luffing jib rigging assembly **No. A18387** for boom and luffing jib make-up of inserts, pendants, struts, strut raising and lowering procedure, jib stop setup and operation and miscellaneous parts, etc. Refer to Operator's Manual for setup and installation.

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

A. Layout Jack-Knife Method With Fixed Jib Attached:

Caution: Anytime luffing jib or fixed jib point rollers are in contact with ground during raising or lowering procedure, disengage swing lock and release swing brake.

Raising:

Boom, luffing jib and fixed jib are assembled in layout, end-to-end, position. Raise fixed jib strut and attach pendants and backstays. Attach fixed jib stop to fixed jib butt and temporarily tie off to fixed jib strut. 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 and fixed 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 the tables. Tighten luffing jib suspension with luffing jib hoist. Boom and luffing jib are then raised together using boom hoist while fixed jib point wheel rolls on ground. Continue raising until fixed jib suspension tightens. Attach fixed jib stop to luffing jib top. Boom, luffing jib and fixed jib are then raised together using boom hoist until boom reaches desired boom operating angle. Fixed 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 the tables. Lower boom until fixed jib point wheels contact ground. Remove fixed jib stop from luffing jib top and temporarily tie off to fixed jib strut. Lower boom as fixed jib point wheels roll on ground. Lower boom until luffing jib point wheels contact ground. Continue to lower boom while luffing jib and fixed jib point wheels roll 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.

B. Layout Jack-Knife Method With Fixed Jib Attached Before Luffing Jib Lift-Off:

Raising:

Boom and luffing jib are assembled in layout, end-to-end, position. Attach fixed jib backstay pendants to luffing jib insert and place on ground. 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 the tables. Tighten luffing jib suspension with luffing jib hoist. Attach fully assembled fixed jib to luffing jib. Attach fixed jib backstays to fixed jib strut. Attach fixed jib stop to fixed jib butt and temporarily tie off to fixed jib strut. Boom and luffing jib are then raised together using boom hoist while fixed jib point wheel rolls on ground. Continue raising until fixed jib suspension tightens. Attach fixed jib stop to luffing jib top. Boom, luffing jib and fixed jib are then raised together using boom hoist until boom reaches desired boom operating angle. Fixed 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 the tables. Lower boom until fixed jib point wheels contact ground. Remove fixed jib stop from luffing jib top and temporarily tie off to fixed jib strut. Lower boom as fixed jib point wheels roll on ground. Lower boom until luffing jib point wheels contact ground. Remove fixed jib from luffing jib. Continue to lower boom while luffing jib point wheels roll 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.

Luffing Jib Raising Procedure

14000 SERIES 2

Fixed Jib No. 138 on Luffing Jib No. 135 on Boom No. 76

Boom and luffing jib combinations in following tables require layout jack-knifing to a specified boom-to-luffing jib angle for raising and lowering.

WITH OR WITHOUT BOOM CATWALKS

14000 SERIES 2

Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method

Boom Length		Over End of Blocked Crawlers				
		Luffing Jib No. 135		Fixed Jib No. 138		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Feet	Meters	Degrees
65.6	20,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	90
85.3	26,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	90
105.0	32,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	90
124.7	38,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	90
144.4	44,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	90
164.0	50,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	90
173.9	53,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	60
183.7	56,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	60
(a)(b) 193.6	59,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	60

Load blocks, hook and weight ball on ground until boom, luffing jib and fixed jib are erected.
(a) Requires lower boom point to be removed.
(b) When equipped with boom catwalks, lowerworks jacking cylinders must be attached.

WITH OR WITHOUT BOOM CATWALKS

14000 SERIES 2

Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method

Boom Length		Over Side of Crawlers				
		Luffing Jib No. 135		Fixed Jib No. 138		Boom to Luffing Jib Angle
Feet	Meters	Feet	Meters	Feet	Meters	Degrees
65.6	20,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	90
85.3	26,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	90
105.0	32,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	90
124.7	38,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	90
144.4	44,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	90
164.0	50,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3	60

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

Luffing Jib Raising Procedure 14000 SERIES 2

Fixed Jib No. 138 on Luffing Jib No.135 on Boom No. 76

C. Fold Under Jack-Knife Method:

Raising:

Boom and luffing jib are assembled in fold under position. 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 and fixed jib backstays. Place fixed jib backstays on ground clear of luffing jib point wheels. 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. Slowly raise luffing jib to 10 degrees ahead of vertical with luffing jib hoist leaving wheels on ground. Attach assembled fixed jib to luffing jib top. Attach fixed jib backstay pendants to fixed jib strut. Attach fixed jib stop to fixed jib butt and temporarily tie off to fixed jib strut. Boom and luffing jib are raised together using boom hoist while fixed jib point wheels roll on ground. Continue raising until fixed jib suspension tightens. Attach fixed jib stop to luffing jib top. Boom, luffing jib and fixed jib are then raised together using boom hoist until boom reaches desired boom operating range. Fixed jib radius must be within capacity chart before swinging over side of machine, when raising over end of blocked crawlers.

Lowering:

Position boom at 75 degrees prior to lowering luffing jib and fixed jib. Slowly lower luffing jib until luffing jib angle reaches 10 degrees ahead of vertical. Maintain 10 degrees ahead of vertical angle with luffing jib while lowering boom until fixed jib point wheels contact ground. Remove fixed jib stop from luffing jib top and temporarily tie off to fixed jib strut. Lower boom as fixed jib point wheels roll on ground. Maintain 10 degrees ahead of vertical angle with luffing jib while lowering boom until luffing jib point wheels contact ground. Remove fixed jib from luffing jib. Raise boom slightly and lower luffing jib to vertical. Slowly boom down and assist luffing jib point wheels in fold under direction. Continue to lower boom while luffing jib rolls along ground. Boom down until luffing jib hinge pin is 30 Ft. (9.1m) off ground. Disconnect luffing jib pendants and fixed jib backstays (if still attached). 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 following table may be raised using fold under jack-knife method.

WITH OR WITHOUT BOOM CATWALKS

14000 SERIES 2

Maximum Boom and Luffing Jib Lengths Lifted Unassisted Using Jack-Knife Method

Boom Length		Over End of Blocked Crawlers			
		Luffing Jib No. 135		Fixed Jib No. 138	
Feet	Meters	Feet	Meters	Feet	Meters
164.0	50,0	140.0	42,7	30.0 - 60.0	9,1 - 18,3
173.9	53,0	140.0 - 150.0	42,7 - 45,7	30.0 - 60.0	9,1 - 18,3
183.7	56,0	140.0 - 160.0	42,7 - 48,8	30.0 - 60.0	9,1 - 18,3
(a)(b) 193.6	59,0	140.0 - 170.0	42,7 - 51,8	30.0 - 60.0	9,1 - 18,3

Load blocks, hook and weight ball on ground until boom, luffing jib and fixed jib are erected.
(a) Requires lower boom point to be removed.
(b) When equipped with boom catwalks, lowerworks jacking cylinders must be attached.

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