**Manitowoc Cranes, Inc.**
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# Luffing Jib Raising Procedure 555 SERIES 2

**Luffing Jib No. 155 On Boom No. 84**

Recommended boom and luffing jib raising and lowering procedure

555 SERIES 2 must be equipped with 98,500 Lb. (44 680 kg) crane counterweight and 44,000 Lb. (19 960 kg) carbody counterweight for raising and lowering various boom and luffing jib combinations. Refer to luffing jib rigging assembly **No. A05469** for boom and luffing jib make-up of inserts, straps, pendants, and miscellaneous parts, etc.

Two methods may be used to raise and lower boom and luffing jib combinations, depending on length.

A. Layout In-Line Method

Boom and luffing jib are assembled in layout, end to end, position. Boom and luffing jib must be inline over end of blocked crawlers prior to raising boom and luffing jib. Slowly raise boom until jib stop strut is just clear of ground. Attach jib stop pendants and unpin jib stop inner strut from retracted position. Slowly raise boom until 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 boom and luffing jib combinations may be raised and lowered using layout in-line method.

**WITHOUT INTERMEDIATE FALL**

**Maximum Boom And Luffing Jib Lengths Lifted Unassisted Over End Of Blocked Crawlers Using Layout In-Line Method**

| Boom Length | | Luffing Jib No. 155 | |
|---|---|---|---|
| Feet | Meters | Feet | Meters |
| 60 | 18.3 | 60 - 160 | 18.3 - 48.8 |
| 70 | 21.3 | 60 - 160 | 18.3 - 48.8 |
| 80 | 24.4 | 60 - 160 | 18.3 - 48.8 |
| 90 | 27.4 | 60 - 160 | 18.3 - 48.8 |
| 100 | 30.5 | 60 - 150 | 18.3 - 45.7 |
| 110 | 33.5 | 60 - 140 | 18.3 - 42.7 |
| 120 | 36.6 | 60 - 130 | 18.3 - 39.6 |
| 130 | 39.6 | 60 - 110 | 18.3 - 33.5 |
| 140 | 42.7 | 60 - 90 | 18.3 - 27.4 |
| 150 | 45.7 | 60 - 70 | 18.3 - 21.3 |

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

**WITH INTERMEDIATE FALL**

**Maximum Boom And Luffing Jib Lengths Lifted Unassisted Over End Of Blocked Crawlers Using Layout In-Line Method**

| Boom Length | | Luffing Jib No. 155 | |
|---|---|---|---|
| Feet | Meters | Feet | Meters |
| 60 | 18.3 | 110 - 160 | 33.5 - 48.8 |
| 70 | 21.3 | 110 - 160 | 33.5 - 48.8 |
| 80 | 24.4 | 110 - 160 | 33.5 - 48.8 |
| 90 | 27.4 | 110 - 140 | 33.5 - 42.7 |
| 100 | 30.5 | 110 - 130 | 33.5 - 39.6 |
| 110 | 33.5 | 110 - 120 | 33.5 - 36.6 |
| 120 | 36.6 | 110 | 33.5 |

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

# Luffing Jib Raising Procedure 555 SERIES 2

**Luffing Jib No. 155 On Boom No. 84**

B. Layout Jack-Knife Method

Longer boom and luffing jib combinations must be raised and lowered using this method.

Boom and luffing jib are assembled in layout, end to end, position. Boom and luffing jib must be inline over end of blocked crawlers prior to raising boom and luffing jib. Slowly raise boom until jib stop strut is just clear of ground. Attach jib stop pendants and unpin jib stop inner strut from retracted position. Slowly raise boom until jib stop strut isfully extended and pins engaged (approximately 168 degree boom to luffing jib angle). Boom is then raised while jib point wheels are allowed to roll on ground. Tension should be applied to luffing jib hoist to keep jib strut off luffing jib during boom raising. Boom up until boom to luffing jib angle reaches value specified in table 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.

Position boom at 75 degrees with boom and luffing jib inline over end of blocked crawlers 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 wheels 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 jib strut off luffing jib. Stop lowering boom when jib stop pendants start to go into tension (approximately 168 degree boom to luffing jib angle). Disengage jib stop strut pins and lower boom to retract jib stop inner strut. Pin strut in retracted position and unpin jib stop pendants. Rotate jib stop struts forward and lower boom and luffing jib to ground.

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

**WITHOUT INTERMEDIATE FALL**

**Maximum Boom And Luffing Jib Lengths Lifted Unassisted Over End Of Blocked Crawlers Using Layout Jack-Knife Method**

| Boom Length | | Luffing Jib No. 155 | | Boom To Luffing Jib Angle |
|---|---|---|---|---|
| Feet | Meters | Feet | Meters | Degrees |
| 100 | 30.5 | 160 | 48.8 | 90 |
| 110 | 33.5 | 150 - 160 | 45.7 - 48.8 | 90 |
| 120 | 36.6 | 140 - 160 | 42.7 - 48.8 | 90 |
| 130 | 39.6 | 120 - 160 | 36.6 - 48.8 | 90 |
| 140 | 42.7 | 100 - 160 | 30.5 - 48.8 | 90 |
| 150 | 45.7 | 80 - 160 | 24.4 - 48.8 | 60 |
| 160 | 48.8 | 60 - 160 | 18.3 - 48.8 | 60 |
| 170 | 51.8 | 60 - 160 | 18.3 - 48.8 | 60 |

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

**WITH INTERMEDIATE FALL**

**Maximum Boom And Luffing Jib Lengths Lifted Unassisted Over End Of Blocked Crawlers Using Layout Jack-Knife Method**

| Boom Length | | Luffing Jib No. 155 | | Boom To Luffing Jib Angle |
|---|---|---|---|---|
| Feet | Meters | Feet | Meters | Degrees |
| 90 | 27.4 | 150 - 160 | 45.7 - 48.8 | 90 |
| 100 | 30.5 | 140 - 160 | 42.7 - 48.8 | 90 |
| 110 | 33.5 | 130 - 160 | 39.6 - 48.8 | 90 |
| 120 | 36.6 | 120 - 160 | 36.6 - 48.8 | 90 |
| 130 | 39.6 | 110 - 160 | 33.5 - 48.8 | 90 |
| 140 | 42.7 | 110 - 160 | 33.5 - 48.8 | 90 |
| 150 | 45.7 | 110 - 160 | 33.5 - 48.8 | 60 |
| 160 | 48.8 | 110 - 160 | 33.5 - 48.8 | 60 |
| 170 | 51.8 | 110 - 150 | 33.5 - 45.7 | 60 |

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