

SYMMETRICAL ABOUT CENTERLINE

STANDARD CRANE EQUALIZER (2)

VIEW D-D SCALE: .75=1FT

VIEW "E-E" SCALE: .50=1FT

SCALE: .75=1FT

VIEW B-B SCALE: 1.5=1FT (BOTH SIDES)

SECTION C-C SCALE: 1.5=1FT

REFERENCE PARTS LIST (SEE MAST TOP ASSEMBLY 194104)

R1	LINK	194556
R2	STRAP	194551
R3	LINK	194550
R4	STRAP	194548
R5	STRAP	194549
R6	STRAP	194699
R7	BOOM EQUALIZER ASSEMBLY	194343
R8	LINK EQUALIZER	194437
R9	BOOM EQUALIZER WEIGHT BOX	194342
R10	JAW & HOOK	674137
R11	PIN	194433
R12	COLLAR	194138
R13	PIN	194212
R14	PIN	194682
R15	COLLAR	194683
R16	PIN	194684

REFERENCE PARTS LIST (SEE MAST BUTT ASSEMBLY 194102)

R17	STRAP	194545
R18	LINK	194550
R19	SPREADER BAR	194691
R20	STRAP	194546
R21	LINK	194058
R22	PIN	194433
R23	COLLAR	194138
R24	PIN	194212
R25	PIN	194137
R26	PIN	179863
R27	COLLAR	179862
R28	PIN	179959
R29	LINK	179984
R30	MAST STOP ASSEMBLY	194418

OPTIONAL CAT WALK ASSEMBLY REFERENCE BOOM SECTION ASSY FOR TIMBER REQUIREMENTS

BOOM SECTION	OPTIONAL CAT WALK ASSY
179912	81016945
179914	81016947
194102	81016963
194104	81016964

- MAST BUTT 40 FT ID TAG #194056 OR 81019311.
- MAST TOP 40 FT ID TAG #194103 OR 81019312.

BILL OF MATERIAL

QTY	ITEM NO	DESCRIPTION	UNIT	MATERIAL	QTY	ASSEMBLY USED ON
1930-3400 MAST ASSEMBLY						
1	1	MAST BUTT ASSEMBLY			194102	4.5
2	1	10 FT #44 INSERT			179912	4
3	1	40 FT #44 INSERT			179914	4
4	1	#44 MAST TOP ASSEMBLY			194104	4.6
5	2	HITCH PIN BRACKET			194471	
6	2	CYLINDER SUPPORT			194440	
7	2	CYLINDER - AIR			385437	1
8	4	STRAP REST ASSEMBLY			194709	
9	3	TIMBERS			178905	
10	2	PIN			194385	1
11	2	TRUNNION			171491	
12	2	SPRING ATTACHMENT BRACKET			175498	
13	4	SPRING TENSION			852521	
14	2	PIN			194818	
15	2	SHAFT			194472	
16	2	KEEPER PLATE			169810	
17						

OPTIONAL PARTS

F	18	CAT WALK ASSY 40FT #44 MAST BUTT	81016963	4
G	19	CAT WALK ASSY 10FT #44 INSERT	81016945	4
H	20	CAT WALK ASSY 40FT #44 INSERT	81016947	4
J	21	CAT WALK ASSY 40FT #44 MAST TOP	81016964	4
22				

- USE LOCTITE #242 (M.C.C. CODE NO. 622293) TO LOCTITE PIN (ITEM 10) TO ROD END OF AIR CYLINDER (ITEM 7).
 - MAXER MAST HOIST REEVING IS SAME AS BOOM HOIST REEVING ON STANDARD LIFT CRANE. REFERENCE 179809.
 - CHECK SLACK IN MAST STRAPS AND SHIM MAST STOP AS REQUIRED. TO REMOVE EXCESS SLACK.
- WARNING:
- MAST HOIST ROPE MUST NOT BE IN TENSION DURING MACHINE OPERATION -ALLOW ADEQUATE SLACK.
 - NOTE: CYLINDERS IN MAST STOP MUST BE FULLY EXTENDED.

194041

REVISIONS

05-11-00	ETS	ADDED
08-25-11	JMG	DELETED
08-28-00	ETS	ADDED
03-23-12	RTS	ADDED

ENG. NO. 194363

SHT. 1 OF 3

DATE 11-17-99

PATTERN NO.

Manitowoc Cranes, Inc. MAST RIGGING ASSEMBLY

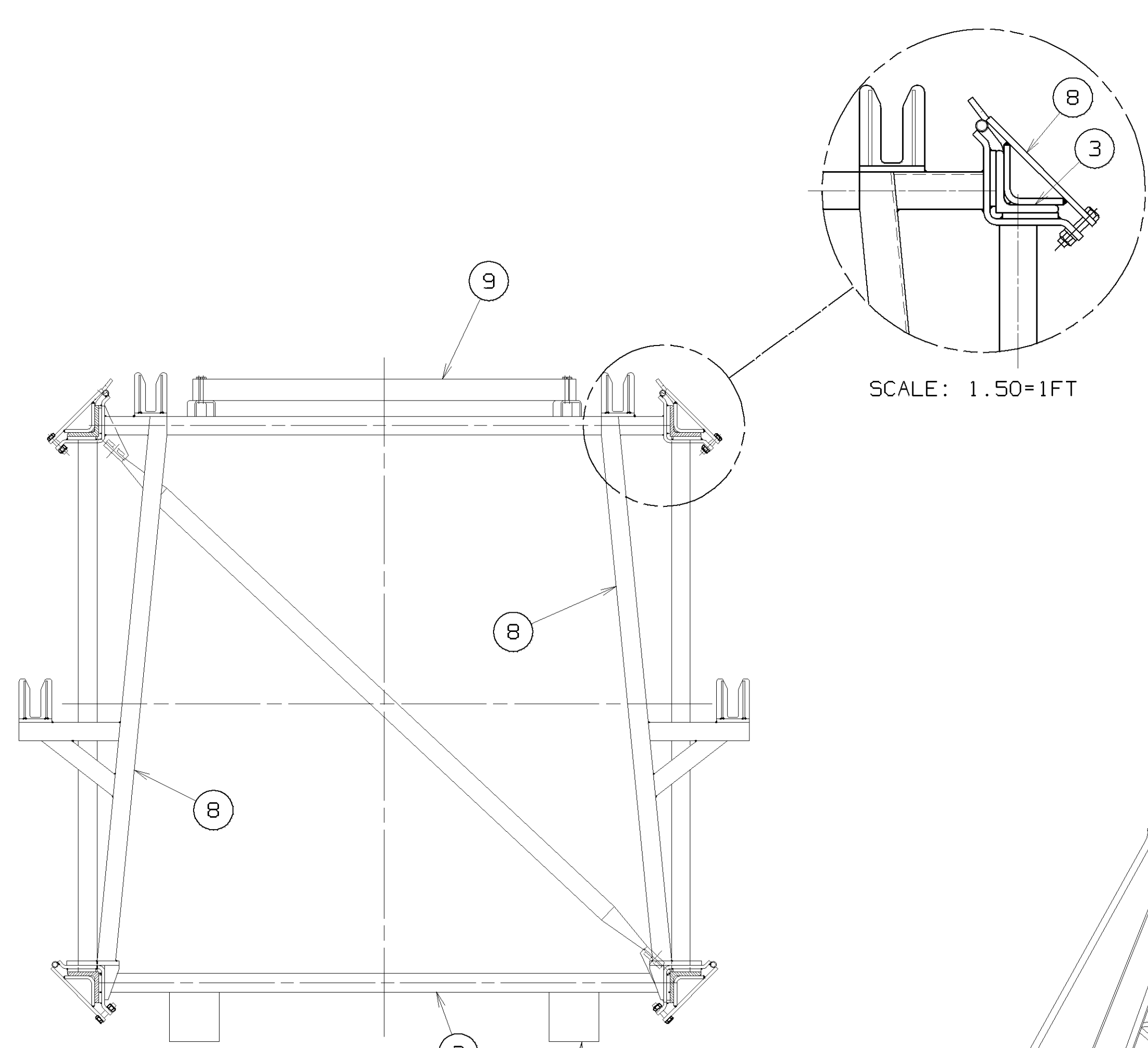
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SHT. 1 OF 3

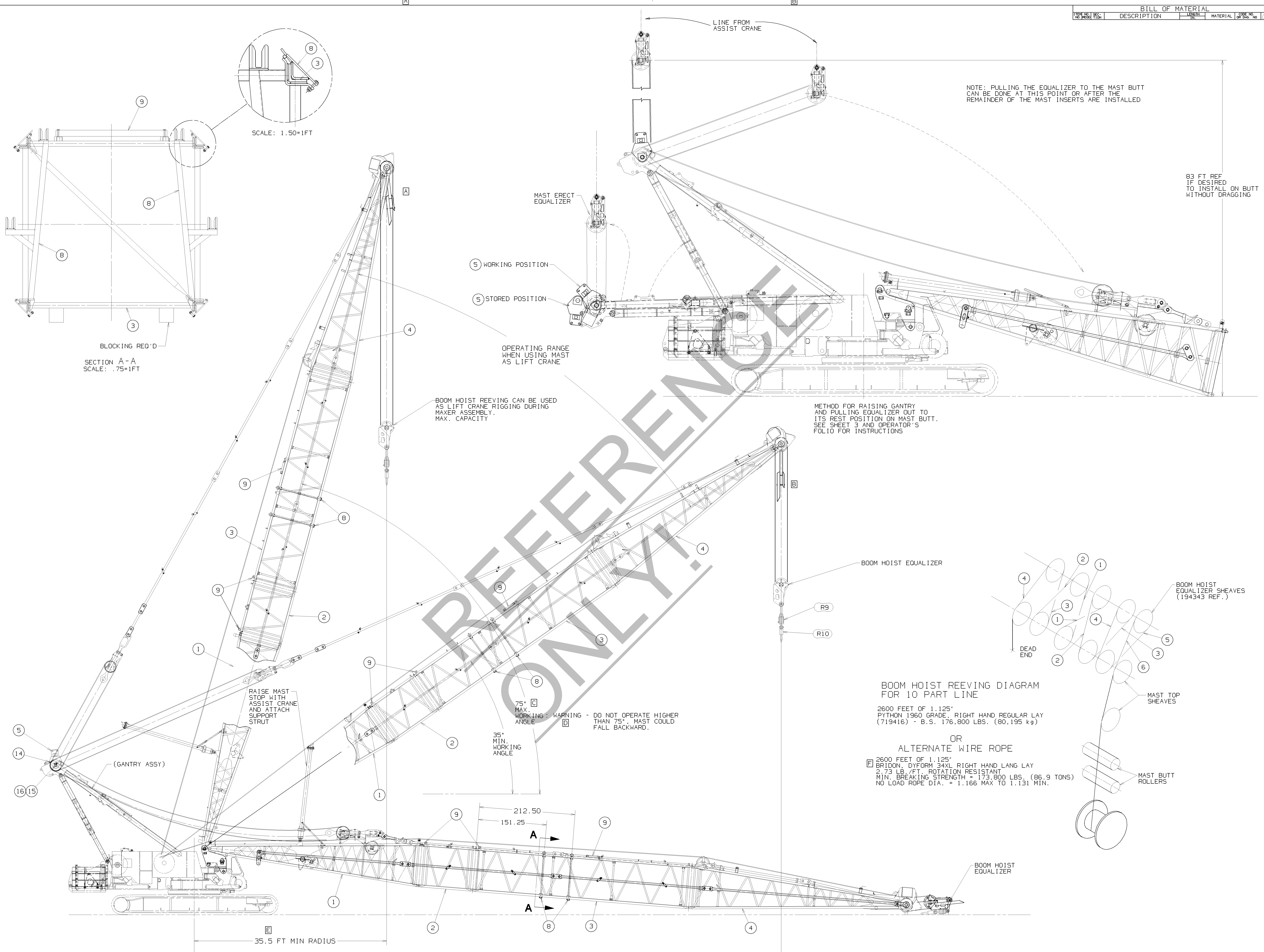
<p>THIS PRINT REMAINS THE PROPERTY OF MANITOWOC CRANES, INC. ALL INFORMATION CONTAINED THEREIN IS CONFIDENTIAL. IT IS LOANED, SUBJECT TO RETURN UPON DEMAND, AND ON EXPRESS CONDITION THAT IT IS NOT TO BE COPIED OR USED DIRECTLY OR INDIRECTLY IN ANY MANNER DETRIMENTAL TO OUR INTERESTS.</p>	<p>TOLERANCE UNLESS OTHERWISE SPECIFIED</p> <table border="1"> <tr><th>DECIMAL PLACES</th><th>FABRICATION</th><th>MACHINING</th></tr> <tr><td>(1) PLACE 0.0</td><td>±.12</td><td>±.18</td></tr> <tr><td>(2) PLACE 0.00</td><td>±.06</td><td>±.12</td></tr> <tr><td>(3) PLACE 0.000</td><td>±.005</td><td>±.015</td></tr> <tr><td>ANGLES</td><td>±1.30</td><td>±0.90</td></tr> </table>	DECIMAL PLACES	FABRICATION	MACHINING	(1) PLACE 0.0	±.12	±.18	(2) PLACE 0.00	±.06	±.12	(3) PLACE 0.000	±.005	±.015	ANGLES	±1.30	±0.90	<p>SCALE 1:88=1FT</p> <p>DR. UES</p> <p>CK. KLH</p> <p>APP. KLH</p>	<p>Manitowoc Cranes, Inc.</p> <p>Manitowoc, Wisconsin</p> <p>MODEL 2250 MAXER 2000</p>	<p>MAST RIGGING ASSEMBLY</p>
DECIMAL PLACES	FABRICATION	MACHINING																	
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ANGLES	±1.30	±0.90																	

BILL OF MATERIAL			
ITEM NO.	QTY	DESCRIPTION	ASSEMBLY NO.
194041			

REVISIONS
05-11-00 ETS
A) UPDATED
EQUALIZER FORK
GEOMETRY
06-28-00 ETS
D) WAS 80"
D) ADDED
WARNING NOTE
E) WAS 24.5 FT
06-05-02 MK
E) WAS 34LR
1960 GRADE
B.S. 154900
LBS.
(70,261 kg)



SECTION A-A
SCALE: .75=1FT



NOTE: PULLING THE EQUALIZER TO THE MAST BUTT CAN BE DONE AT THIS POINT OR AFTER THE REMAINDER OF THE MAST INSERTS ARE INSTALLED

83 FT REF IF DESIRED TO INSTALL ON BUTT WITHOUT DRAGGING

BOOM HOIST REEVING CAN BE USED AS LIFT CRANE RIGGING DURING MAXER ASSEMBLY. MAX. CAPACITY.

METHOD FOR RAISING GANTRY AND PULLING EQUALIZER OUT TO ITS REST POSITION ON MAST BUTT. SEE SHEET 3 AND OPERATOR'S FOLIO FOR INSTRUCTIONS

75° MAX. WORKING ANGLE - WARNING - DO NOT OPERATE HIGHER THAN 75°. MAST COULD FALL BACKWARD.

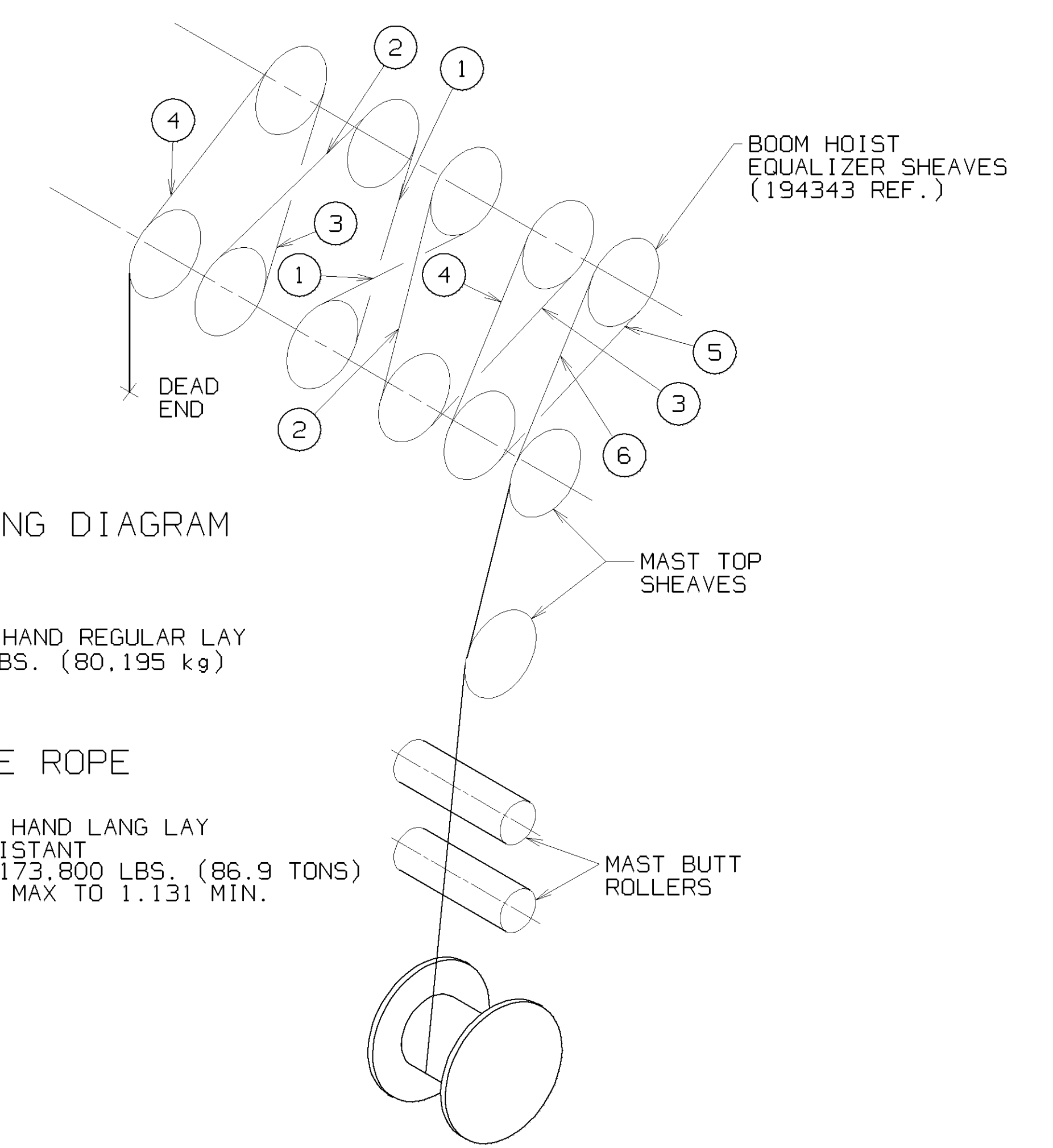
35° MIN. WORKING ANGLE

BOOM HOIST REEVING DIAGRAM FOR 10 PART LINE

2600 FEET OF 1.125" PYTHON 1960 GRADE, RIGHT HAND REGULAR LAY (719416) - B.S. 176,800 LBS. (80,195 kg)

OR ALTERNATE WIRE ROPE

2600 FEET OF 1.125" BRIDON, DYFORM 34XL RIGHT HAND LANG LAY 2.73 LB./FT. ROTATION RESISTANT MIN. BREAKING STRENGTH = 173,800 LBS. (86.9 TONS) NO LOAD ROPE DIA. = 1.166 MAX TO 1.131 MIN.



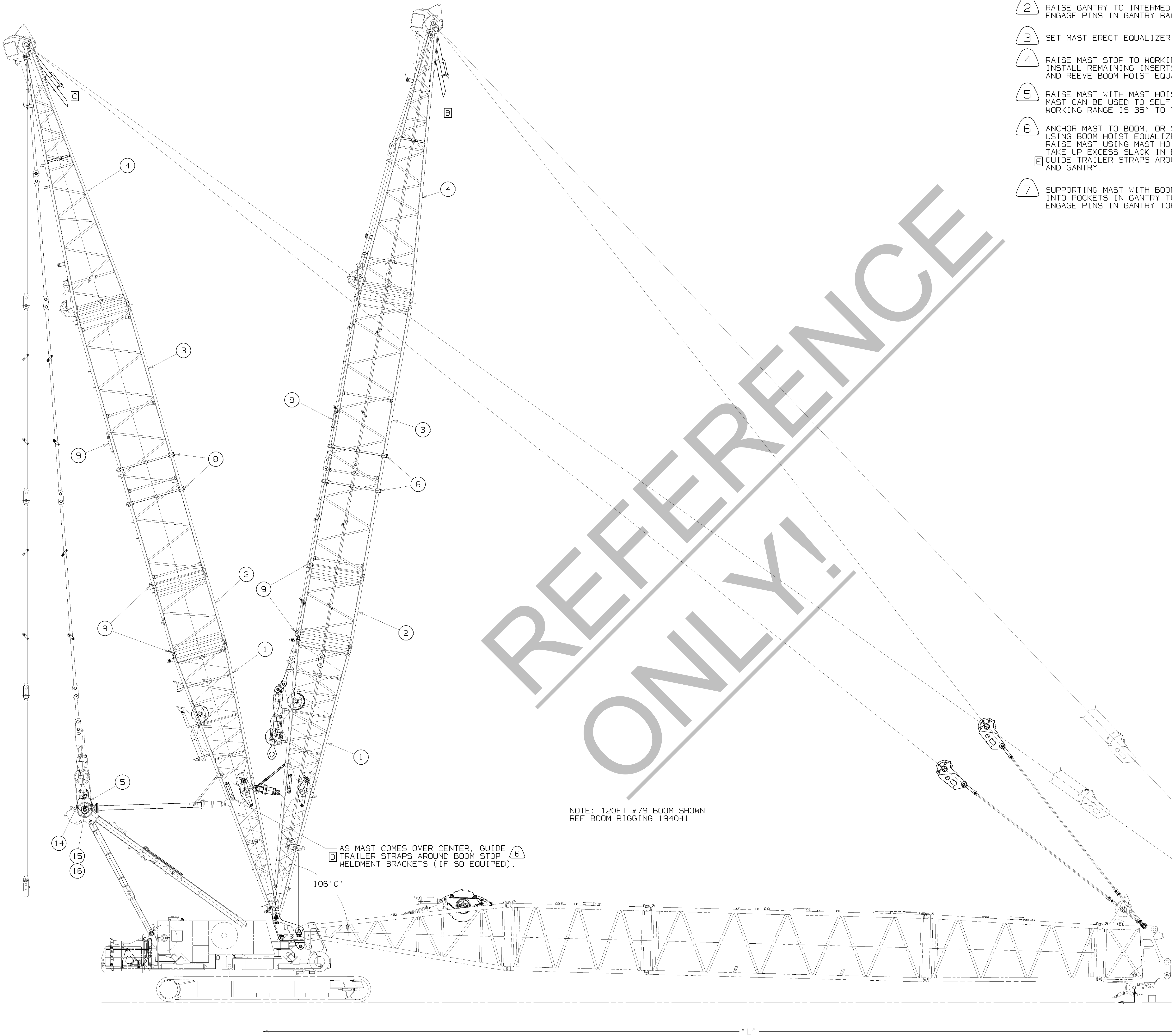
TOLERANCE UNLESS OTHERWISE SPECIFIED		MATERIAL		DATE	
DECIMAL PLACES	FABRICATION	DESCRIPTION	DATE	BY	CHK
(1) PLACE 0.0	± 0.00	MANITOWOC	11-17-99	UES	KLH
(2) PLACE 0.00	± 0.00	MANITOWOC		UES	KLH
(3) PLACE 0.000	± 0.005	MANITOWOC		UES	KLH
ANGLES	± 11.25	MANITOWOC		UES	KLH

MANITOWOC Cranes, Inc.	Manitowoc, Wisconsin
MODEL 2250 MAXER 2000	MAST RIGGING ASSEMBLY
194363	

DO NOT SCALE THIS DRAWING

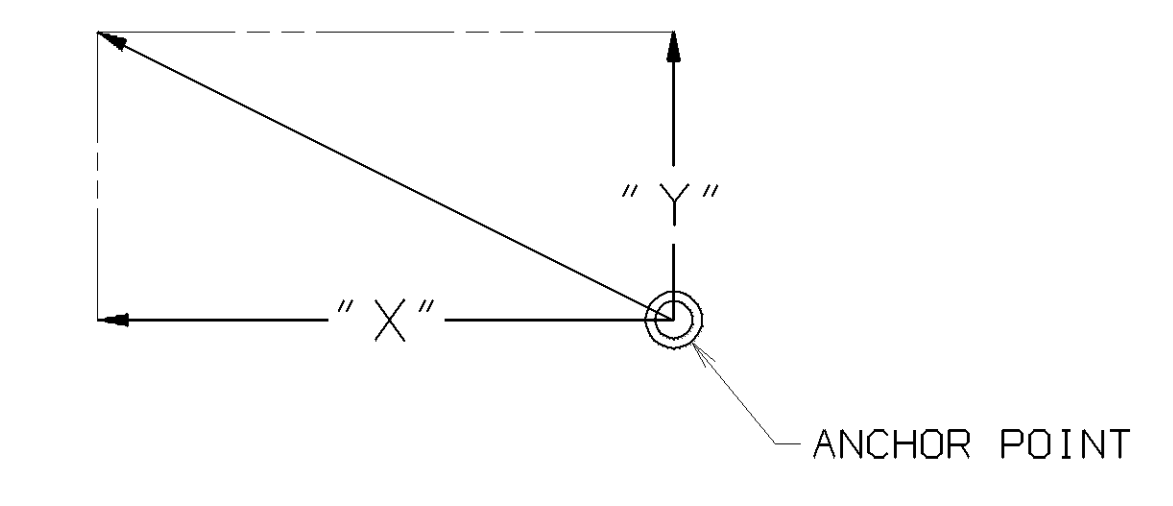
MAST RAISING PROCEDURE
-REFER TO ASSEMBLY GUIDE-

- A** IMPORTANT NOTE: 2250 COUNTER WEIGHT REQUIREMENTS
ROTATING BED MUST HAVE S1 WEIGHT (169,200 LBS)
CARBODY MUST HAVE S2 WEIGHT (60,000 LBS)
- 1 INSTALL MAST BUTT INTO CRANE
 - 2 RAISE GANTRY TO INTERMEDIATE POSITION USING EQUALIZER W/ ASSIST CRANE.
ENGAGE PINS IN GANTRY BACKHITCH AND CONFIRM ENGAGEMENT.
 - 3 SET MAST ERECT EQUALIZER ON MAST BUTT.
 - 4 RAISE MAST STOP TO WORKING POSITION.
INSTALL REMAINING INSERTS, ASSEMBLE STRAPS, DOWN THE MAST,
AND REEVE BOOM HOIST EQUALIZER.
 - 5 RAISE MAST WITH MAST HOIST (DRUM #4).
MAST CAN BE USED TO SELF ERECT REMAINDER OF CRANE.
WORKING RANGE IS 35° TO 75° MAX. CAPACITY IS 99000 LBS
 - 6 ANCHOR MAST TO BOOM, OR SUFFICIENT ANCHOR TIE OFF AS SHOWN IN TABLE.
USING BOOM HOIST EQUALIZER.
RAISE MAST USING MAST HOIST (DRUM #4). AS MAST APPROACHES VERTICAL,
TAKE UP EXCESS SLACK IN BOOM HOIST (DRUM #2) AND EASE MAST OVER CENTER.
E GUIDE TRAILER STRAPS AROUND BOOM STOP WELDMENT BRACKETS (IF APPLICABLE)
AND GANTRY.
 - 7 SUPPORTING MAST WITH BOOM HOIST, GUIDE SPREADER BAR (ITEM R19)
INTO POCKETS IN GANTRY TOP USING MAST HOIST (DRUM #4).
ENGAGE PINS IN GANTRY TOP (ITEM 10) AND CONFIRM COMPLETE ENGAGEMENT.



HOLD BACK FORCES

"L"	"X"	"Y"
120 FT	13,450	10,940
150 FT	13,450	9,230
200 FT	13,450	7,320
250 FT	13,450	6,070



REFERENCE ONLY!

NOTE: 120FT #79 BOOM SHOWN
REF BOOM RIGGING 194041

AS MAST COMES OVER CENTER, GUIDE
TRAILER STRAPS AROUND BOOM STOP
WELDMENT BRACKETS (IF SO EQUIPPED).

OPTIONAL GROUND
ANCHOR METHOD

3 FT (REF)