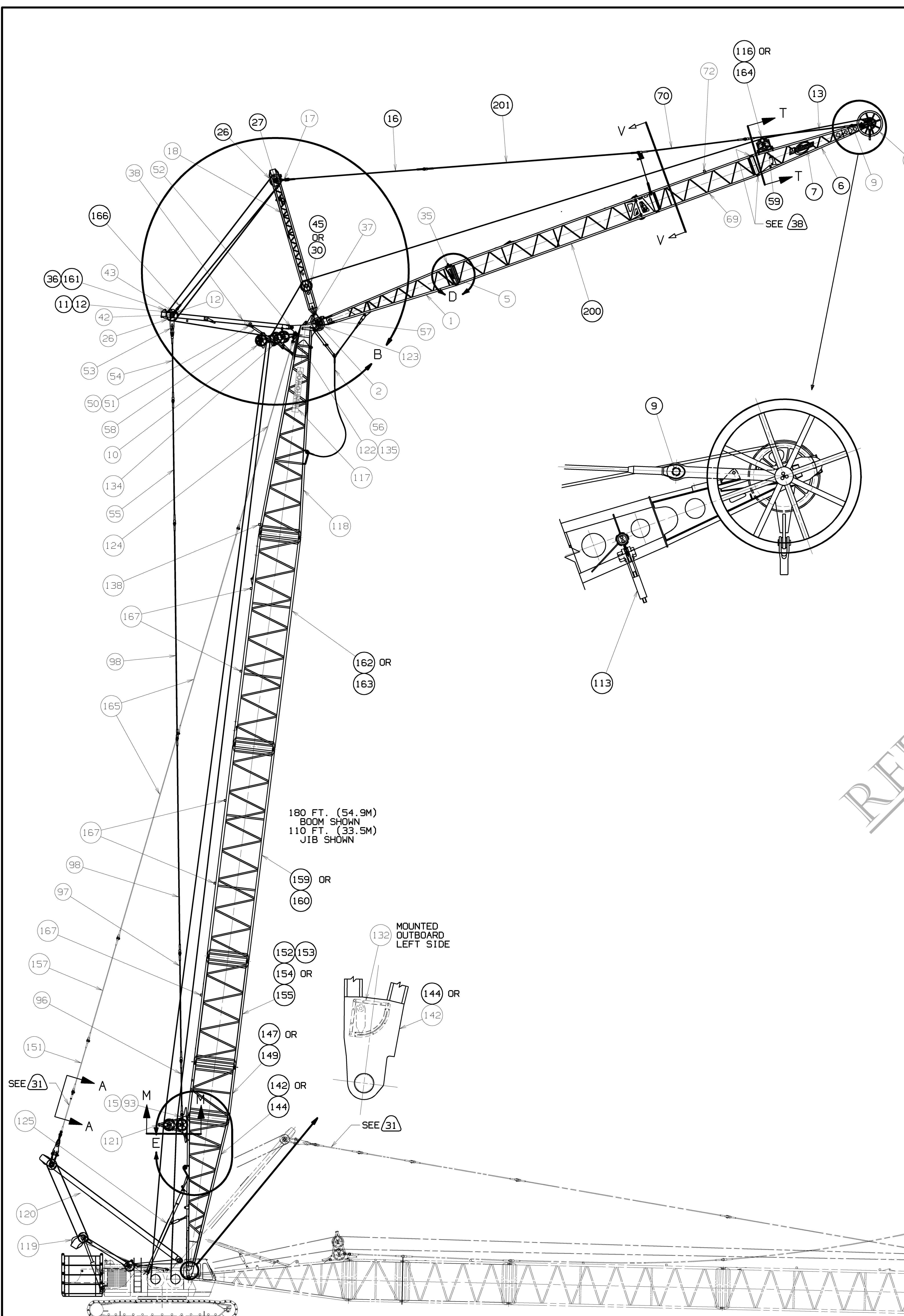




#22EL BOOM/#135 JIB ASSEMBLY

BILL OF MATERIAL				
ITEM NO.	QTY.	DESCRIPTION	MATERIAL	QTY.
OPTIONAL BOOM PARTS LIST-REF. (BOOM RIGGING ASSEMBLY #22EL BOOM WITH STOWABLE PENDANTS)				
SEE TABLE OF COMPONENTS FOR VARIOUS BOOM LENGTHS				
117		BOOM SIGN		22656
118		BOOM TOP 40 FT. #22L		196142
119		GANTRY ASSEMBLY		176396
120		MAST ASSEMBLY		176397
121		WIRE ROPE GUIDE ASSEMBLY		176985
122		PENDANT LINK		177209
123		LOWER BOOM POINT SHAFT ASSEMBLY		177042
124		PENDANT BASIC 36 FT.-6.00 (11.1 M)		277425
125		BOOM STOP ASSEMBLY		176601
126		CLAMP		345678
127		TIMBER		176831
128				
129				
130		SCREW CAP HEX .50-13UNC X 5.50 LG.		612583
131		WASHER FLAT .50		709460
132		BOOM ANGLE INDICATOR ASSEMBLY		168779
133				
134		WIRE ROPE GUIDE ASSEMBLY		177191
135		PIN		177242
136				
137				
138		TIMBER (TOP)		177236
139				
140				
141				
142		BOOM BUTT #22E		176967
143		BOOM BUTT #22E (AUX. DRUM)		177290
144		MOD. TO BOOM BUTT #22E (176967)		421262
145		MOD. TO BOOM BUTT #22E (177290)		421256
146				
147		INSERT 10 FT. (3.05M) #22		33407-3
148		INSERT 10 FT. (3.05M) #22E (AUX. DRUM)		177291
149		INSERT 10 FT. (3.05M) #22E		178758
150				
151		PENDANT 10 FT. (3.05M)		276861
152		INSERT 20 FT. (6.10M) #22(W/O JIB BKSTY)		33426-3
153		INSERT 20 FT. (6.10M) #22E(W/O JIB BKSTY)		178757
154		INSERT 20 FT. (6.10M) #22(W/JIB BACKSTAY)		623580
155		INSERT 20 FT. (6.10M) #22E(W/JIB BACKSTAY)		178794
156				
157		PENDANT 20 FT.-1.5 (6.13M)		277426
158				
159		INSERT 40 FT. (12.19M) #22(W/O JIB BKSTY)		50609-2
160		INSERT 40 FT. (12.19M) #22E(W/O JIB BKSTY)		178756
161		INSERT 40 FT. (12.19M) #22(W/JIB BKSTY)		623526
162		INSERT 40 FT. (12.19M) #22E(W/JIB BKSTY)		178793
163				
164		PENDANT 40 FT.-3.0 (12.27M)		277427
165				
166		TIMBER		192013
167		TIMBER		192014
168				
169		DRUM SHAFT ASSEMBLY - AUXILIARY		177255
170		WIRE ROPE GUIDE ASSEMBLY		177349
171		BOOM ASSEMBLY LADDER STORAGE		177969
172		BOOM BUTT SUPPORT ASSEMBLY		177055

BILL OF MATERIAL				
ITEM NO.	QTY.	DESCRIPTION	MATERIAL	QTY.
BASIC JIB 110 FT. (33.5M) CONT.				
INSERT 40 FT. (12.19M) WITH JIB BACKSTAY LUGS				
81		1 INSERT 40 FT. (12.19M)		48208-3
82		2 PENDANT 40 FT.-3.00 (12.27M)		277384
83				
84		2 TIMBER		192022
85		4 BOOM JOINT PIN		70366
86				
INSERT 40 FT. (12.19) ASSEMBLY WITH INTERMEDIATE FALL				
200		1 INSERT 40 FT. (12.19M) ASSEMBLY		A07059
201		2 PENDANT 40 FT.-3.00 (12.27M)		277384
202				
203				
204				
205				
INTERMEDIATE SUSPENSION FOR INTERMEDIATE FALL				
206		2 PIN		179959
207		6 PIN		196297
208		1 LINK ASSEMBLY		A07324
209		2 PIN		A07330
210		2 PIN		A07332
211		2 COLLAR		A07451
212		2 PENDANT 78.0 IN (1.98M)		A07776
213		4 PENDANT 21.0 IN (.53M)		A07777
214		2 LINK		A07778
215		1 BEAM		A07779
216				
217				
218				
219				
220				
LINKS & PINS - JIB BACKSTAY BOOM LENGTHS 100-130 FT. (30.5-39.6M)				
87		2 PENDANT LINK 24.00 (610mm)		177553
88		2 PIN		170690
89				
PENDANTS & LINKS - JIB BACKSTAY BOOM LENGTHS 70-90 FT. (21.3-27.4M)				
90		2 PENDANT LINK 39.00 (991mm)		177569
91		2 PENDANT 10 FT.-1.00 (3.07M)		277382
92				
LINKS - JIB BACKSTAY BOOM LENGTHS 100-200 FT. (30.5-61.0M)				
93		2 PENDANT LINK 11.00 (279mm)		177570
94				
PENDANT 10 FT.-1.00 (3.07M) JIB BACKSTAY FOR USE WITH 10 FT. BOOM INSERT				
96		2 PENDANT 10 FT.-1.00 (3.07M)		277382
PENDANT 20 FT.-1.50 (6.13M) JIB BACKSTAY FOR USE WITH 20 FT. BOOM INSERT				
97		2 PENDANT 20 FT.-1.50 (6.13M)		277383
PENDANT 40 FT.-3.00 (12.27M) JIB BACKSTAY FOR USE WITH 40 FT. BOOM INSERT				
98		2 PENDANT 40 FT.-3.00 (12.27M)		277384
99				
1.00 WIRE ROPE FOR LAGGING 502382 ON REAR HOIST DRUM - SEE (37)				
100		1 1.00 X 850 FT. WIRE ROPE-CONSTRUCTEX		719394
1.00 WIRE ROPE FOR LAGGING 502382 ON REAR HOIST DRUM - SEE (37)				
101		1 1.00 X 850 FT. WIRE ROPE - PYTHON		719395
26mm WIRE ROPE FOR LAGGING 502372 ON REAR HOIST DRUM - SEE (37)				
102		1 26mm X 850 FT. WIRE ROPE - PYTHON		719396
OPTIONAL JIB PARTS LIST				
SHEAVE, SHAFT & CLAMPS FOR USE WITH OPT. AUX. DRUM				
103		1 SHEAVE ASSEMBLY		176799
104		1 SHAFT		177455
105		2 PIN - HITCH .88 X 7.00 LG.		563699
106		5 CLAMP		174844
107		1 ROPE GUARD CLAMP		177223
108		1 SHEAVE WIRE ROPE ASSY		81007542
109		6 SCREW CAP .625-11UNC X 6.50 LG.		612691
110		6 WASHER LOCK .625		710307
111		12 NUT ST. HEX .625-11UNC		546058
OPTIONAL JIB PARTS ASSEMBLY LIST				
112		1 WIRE ROPE WINCH ASSEMBLY		179383
113		1 UNIV. WIRE ROPE ANCHOR JOINT ASSEM.		92046
114		1 WIRE ROPE GUIDE ASSEMBLY		177364
115		1 WIRE ROPE SUPPORT ASSEMBLY		179027
116		1 W.R. GUIDE SINGLE SHEAVE BRACKET ASM		179380
164		1 W.R. GUIDE DOUBLE SHEAVE BRACKET ASM		179381

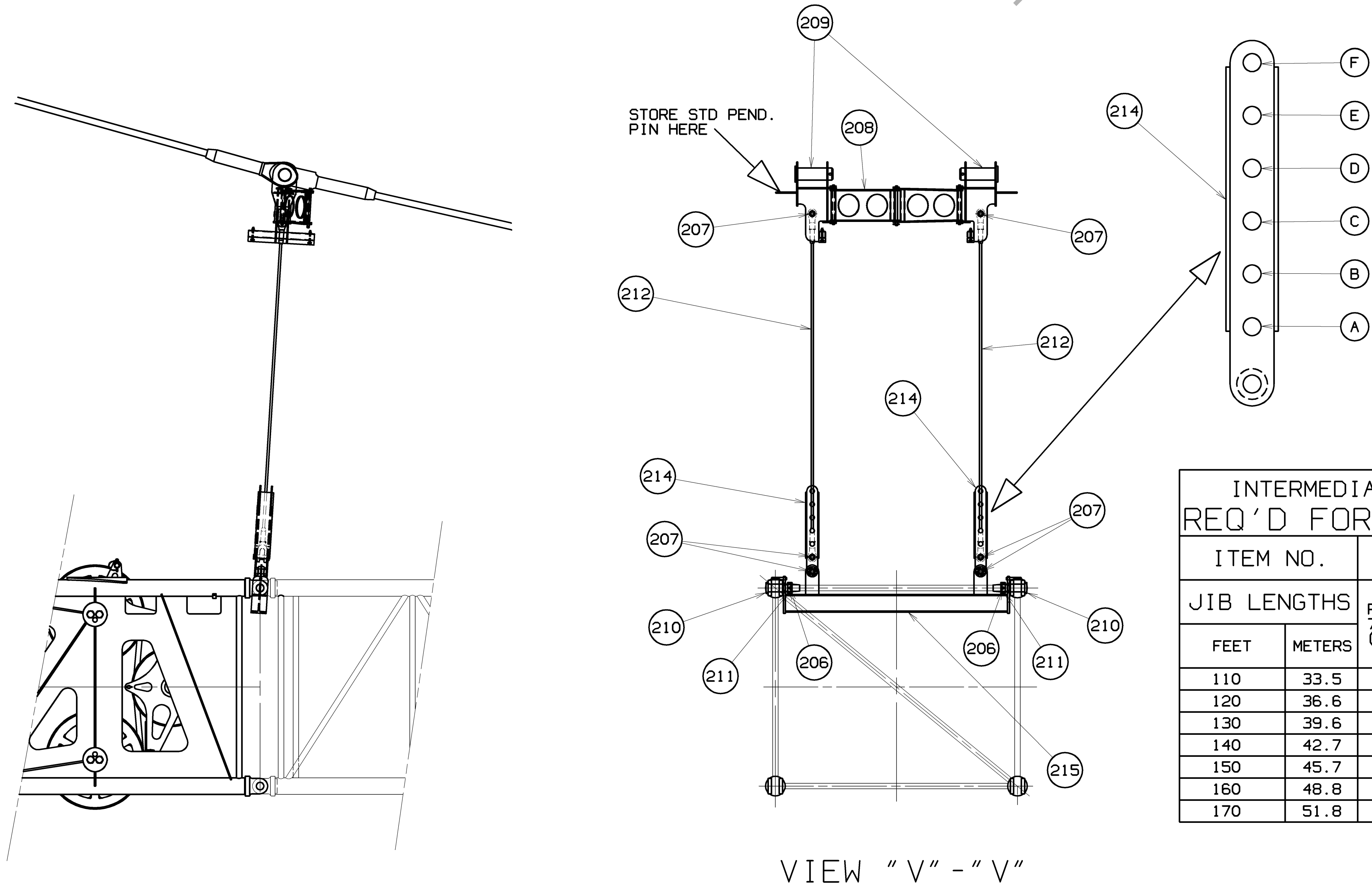
BILL OF MATERIAL				
ITEM NO.	QTY.	DESCRIPTION	MATERIAL	QTY.
BASIC JIB 110 FT. (33.5M)				
SEE TABLE OF COMPONENTS FOR VARIOUS JIB LENGTHS				
1		127 FT. BUTT		177053
2		2 PIN		177479
3		6 PIN KEEPER		169810
4		2 BAR - .50 X 1.00 X 6.00 LG.		221009
5		1 ADAPTER ASSEMBLY		177493
6		1 23 FT. TOP		177560
7		2 BOOM SIGN		A02743
8		1 JIB POINT ROLLER ASSEMBLY-2 SHEAVE		177448
9		2 PENDANT PIN		137919
10		1 WIRE ROPE GUIDE ASSEMBLY		177612
11		2 STRUT		177634
12		4 PIN		172937
13		2 PENDANT 20 FT.-1.50 (6.13M)		277383
14				
15		2 PIN		170690
16		2 PENDANT 25 FT.-11.00 (7.90M)		277437
17		1 LINK SUB-ASSEMBLY		177481
18		1 JIB STRUT		177443
19		4 BEARING LOCKNUT		225105
20		2 BEARING LOCKWASHER		225111
21		4 SPACER		170677
22		10 SLEEVE		177107
23		10 WASHER		177108
24		1 LINK		177639
25		1 PENDANT 11 FT.-3.00 (3.43M)		277241
26		8 SHEAVE ASSEMBLY		177693
27		1 SHAFT		177457
28		1 SHAFT		177456
29		2 PIN - HITCH .88 X 7.00 LG.		563699
30		1 SHEAVE ASSEMBLY		176799
31		4 CLAMP		174844
32		4 SCREW CAP .625-11UNC X 6.50 LG.		612691
33		6 WASHER LOCK .625		710307
34		12 NUT ST. HEX .625-11UNC		546058
35		2 PIN		14902-3
36		1 ROLLER		602170
37		2 PIN		176155
38		1 MAIN STRUT		177439
39		1 SPACER		177472
40		2 SPACER		177554
41		1 SPACER		177471
42		1 SHAFT		177458
43		1 LINK SUB-ASSEMBLY		179958
44		1 PIN		75368
45		1 SHEAVE WIRE ROPE ASSY		81007542
46				
47				
48		1 ROLLER		177640
49		1 PIN COTTER STEEL .375 X 3.00 LG.		562150
50		1 PIN		13368
51		3 ROLLER		602162
52		2 PIN		143491
53		1 LINK SUB-ASSEMBLY		177565
54		2 PENDANT 12 FT.-3.00 (3.73M)		277439
55		2 PENDANT 23 FT. (7.01M)		277440
56		1 JIB STOP ASSEMBLY		177561
57		1 JIB STOP & ANGLE IND. ASSEM. (AUTO)		177573
58		2 STRUT STOP TUBE ASSEMBLY		177590
59		1 WIRE ROPE GUIDE FRAME ASSEMBLY		179379
60		1 24.00 DIA. SHEAVE ASSEMBLY		177636
61		2 CLAMP		177633
62		2 SCREW CAP HEX .625-11UNC X 6.00 LG.		612691
161		1 SHAFT		178149
166		1 WEDGE/SOCKET ASSEMBLY 1.00 WIRE ROPE		646246
173		10 SHIM		A00038
INSERT 10 FT. (3.05M)				
63		1 INSERT 10 FT. (3.05M)		180136
64		2 PENDANT 10 FT.-1.00 (3.07M)		277382
66		1 TIMBER		192022
67		4 BOOM JOINT PIN		70366
68				
INSERT 20 FT. (6.10M)				
69		1 INSERT 20 FT. (6.10M)		180137
70		2 PENDANT 20 FT.-1.50 (6.13M)		277383
71				
72		1 TIMBER		192022
73		4 BOOM JOINT PIN		70366
74				
INSERT 40 FT. (12.19M) WITHOUT JIB BACKSTAY LUGS				
75		1 INSERT 40 FT. (12.19M)		48208-2
76		2 PENDANT 40 FT.-3.00 (12.27M)		277384
77				
78		2 TIMBER		192022
79		4 BOOM JOINT PIN		70366
80				

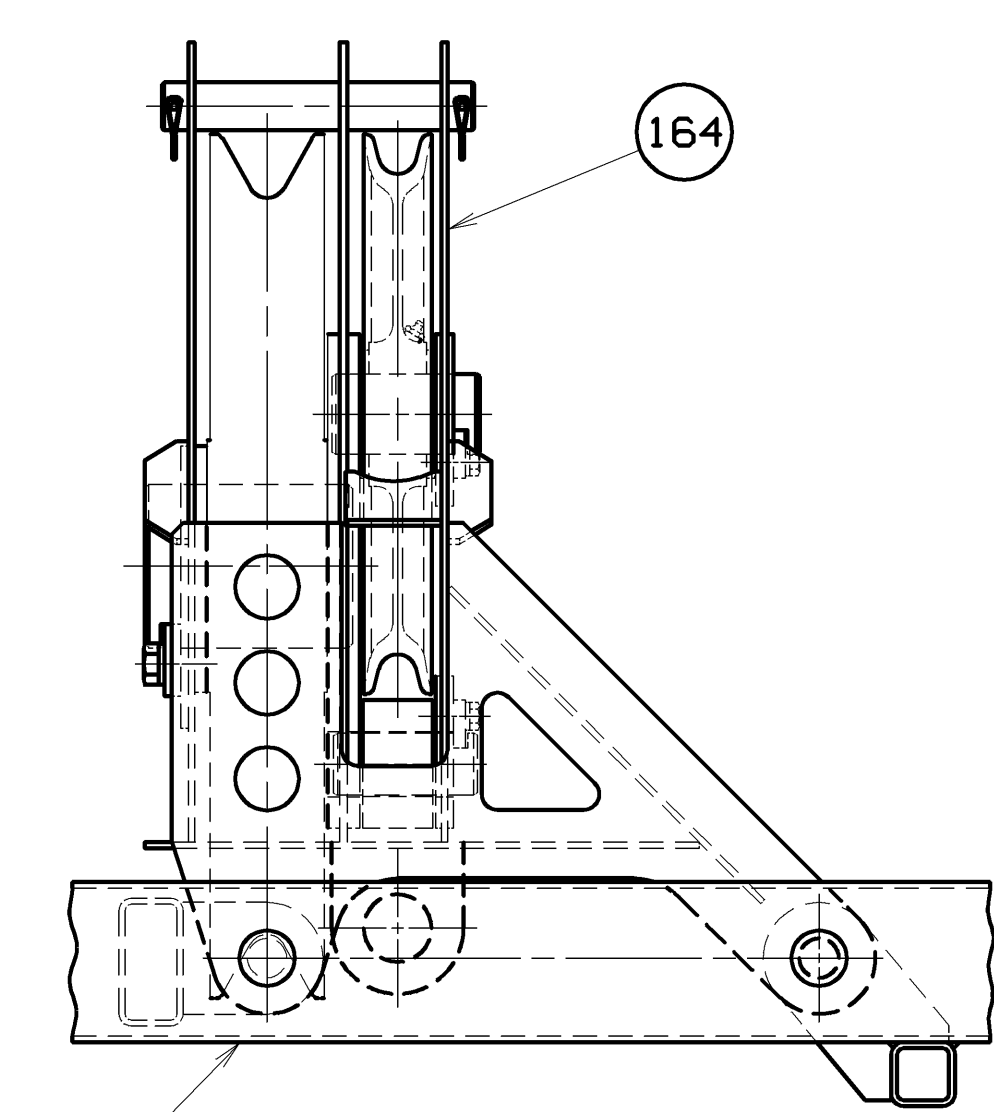
PRIVATE LABELING
REQUIREMENT TO
CONFORM TO
SPECIFICATION
6829103794 FOR
COMPONENTS LISTED
IN 6829103794-05
DATE
02-18-03
PATTERN NO.
A07691

SCALE	Manitowoc Cranes, Inc.	JIB LUFFING ASSEMBLY
DR. TSC	Manitowoc, Wisconsin	#22EL BOOM/#135 JIB
CR. TSC	MODEL 888	W/INTERMEDIATE FALL
APP. TSC		

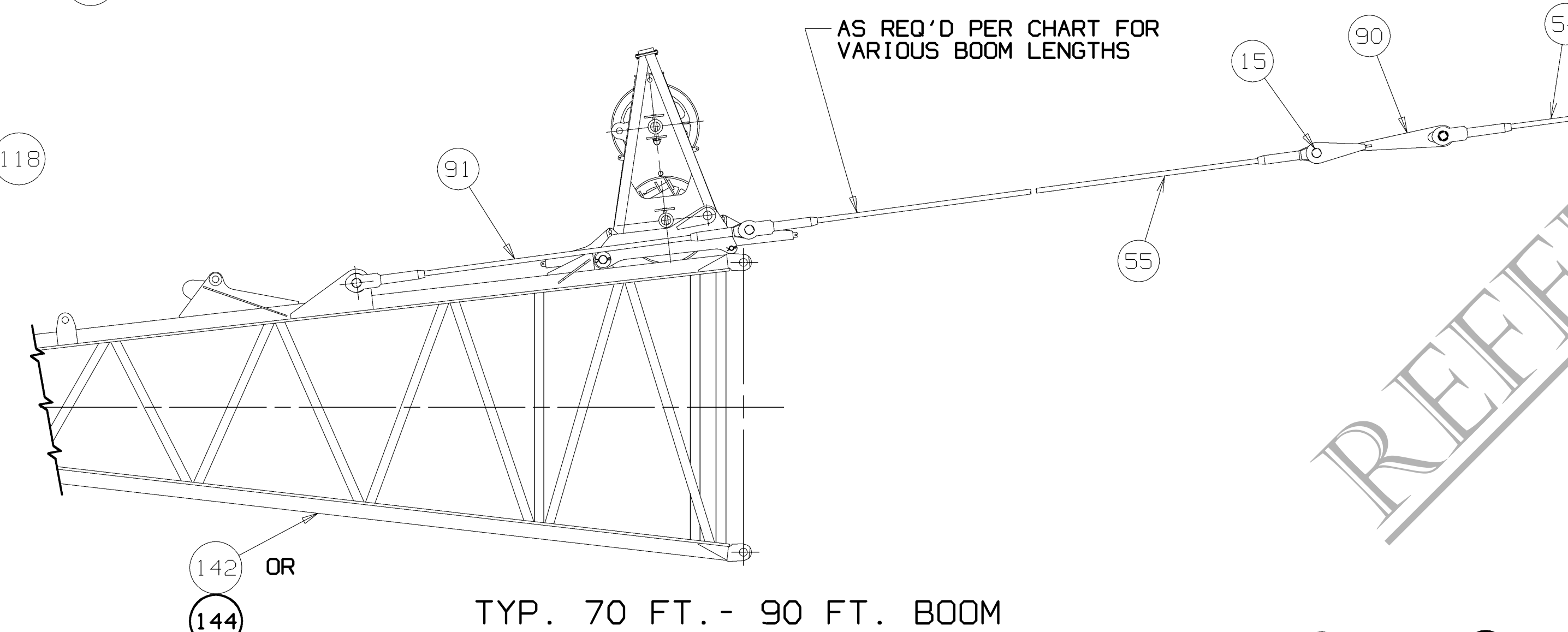
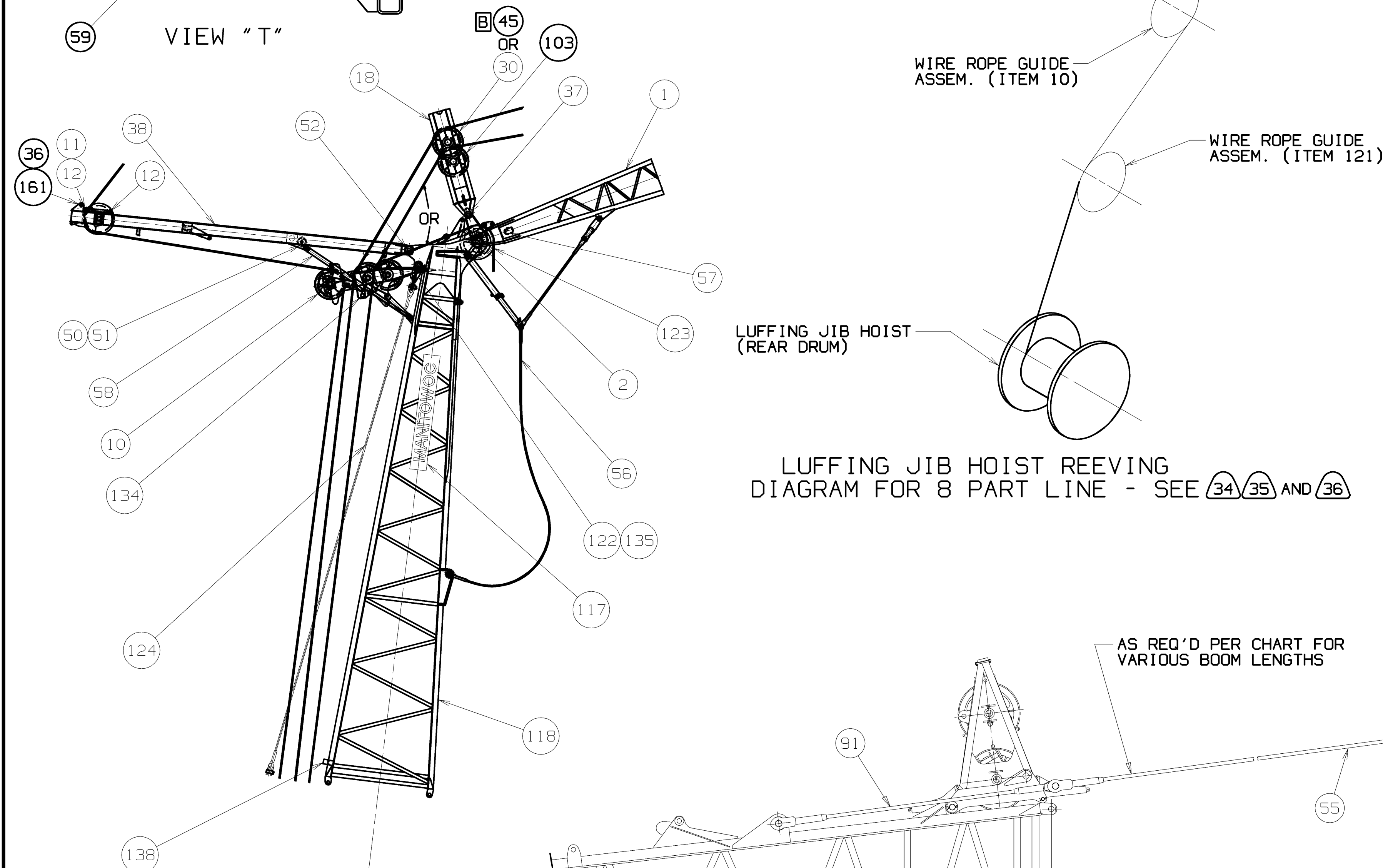
INSERTS, PENDANTS, TIMBERS, & PINS REQ'D. FOR VARIOUS JIB LENGTHS										
ITEM NO.	63	69	75 OR 81	200	64 DWG. 78145	70 DWG. 78145	76 OR 82 DWG. 78145	66,72 78 OR 84	67,73 79 OR 85	
JIB LENGTHS	10 FT 3.05 M INSERT	20 FT 6.10 M INSERT	40 FT 12.19 M INSERT	40 FT 12.19 M INSERT ASSY SEE (27)	10 FT-1.0 3.07 M PENDANT	20 FT-1.5 6.13 M PENDANT	40 FT-3.0 12.27 M PENDANT	WIRE ROPE TIMBER	BOOM JOINT PIN	
FEET	METERS									
110	33.5	0	1	0	1	0	2	2	3	8
120	36.6	1	1	0	1	2	2	2	4	12
130	39.6	OR 0 0	2 0	0 0	1 1	0 0	4 0	2 0	4 4	12 8
140	42.7	OR 1 1	2 0	0 1	1 1	2 2	4 0	2 4	5 5	16 12
150	45.7	0	1	1	1	0	2	4	5	12
160	48.8	1	1	1	1	2	2	4	6	16
170	51.8	OR 0 0	2 0	1 2	1 1	0 0	4 0	4 6	6 6	16 12

INSERTS, PENDANTS, AND TIMBER GUIDES REQUIRED FOR VARIOUS BOOM LENGTHS								JIB BACKSTAY PENDANTS, LINKS & PINS REQUIRED FOR VARIOUS BOOM LENGTHS						
ITEM NO.	147, 148, OR 149	152, 153, 154 OR 155	159, 160, 162 OR 163	151 DWG. 76280	157 DWG. 76280	165 DWG. 76280	167 OR 168	91 & 96	97	98	90	93	87	15 & 88
BOOM LENGTH	10 FT 3.05 M INSERT SEE (17)	20 FT 6.10 M INSERT SEE (18)	40 FT 12.19 M INSERT SEE (3)	10 FT 3.05 M PENDANT	20 FT-1.5 6.13 M PENDANT	40 FT-3.0 12.27 M PENDANT	WIRE ROPE TIMBER	10 FT-1.0 3.07 M PENDANT SEE (39)	20 FT-1.5 6.13 M PENDANT SEE (39)	40 FT-3.0 12.27 M PENDANT SEE (39)	PENDANT LINK 39.00 (991mm)	PENDANT LINK 11.00 (279mm)	PENDANT LINK 24.00 (610mm)	PIN
FEET	METERS													
70	21.3	0	0	0	0	0	0	2	0	0	2	0	0	2
80	24.4	1	0	0	4	0	0	OR 4 0	0	0	2	0	0	2
90	27.4	OR 2 0	0 1	0 0	8 0	0 4	0 1	OR 6 2	0 2	0 0	2 2	0 0	0 0	2 2
100	30.5	1	1	0	4	4	1	2	2	0	0	2	2	4
110	33.5	OR 2 0	1 0	0 1	8 0	4 0	1 2	OR 4 0	2 0	0 0	0 0	2 2	2 2	4 4
120	36.6	OR 1 1	2 0	0 1	4 4	8 0	2 2	OR 2 2	4 0	0 2	0 0	2 2	2 2	4 4
130	39.6	OR 2 0	0 1	1 1	8 0	0 4	2 3	OR 4 0	0 6	2 0	0 0	2 2	2 2	4 4
140	42.7	1	1	1	4	4	3	2	2	2	0	2	0	2
150	45.7	OR 2 0	1 2	1 2	8 0	4 0	3 4	OR 0 0	0 4	4 2	0 0	2 2	0 0	2 2
160	48.8	OR 1 1	2 0	1 2	4 4	8 0	4 4	OR 2 2	4 0	2 4	0 0	2 2	0 0	2 2
170	51.8	OR 2 0	0 1	2 2	8 0	0 4	8 5	OR 4 0	0 2	4 4	0 0	2 2	0 0	2 2
180	54.9	1	1	2	4	4	8	2	2	4	0	2	0	2
190	57.9	OR 2 0	1 2	2 3	8 0	4 0	8 12	OR 4 0	2 4	4 4	0 0	2 2	0 0	2 2
200	61.0	OR 1 1	2 0	2 3	4 4	8 0	8 12	OR 2 2	4 0	4 6	0 0	2 2	0 0	2 2

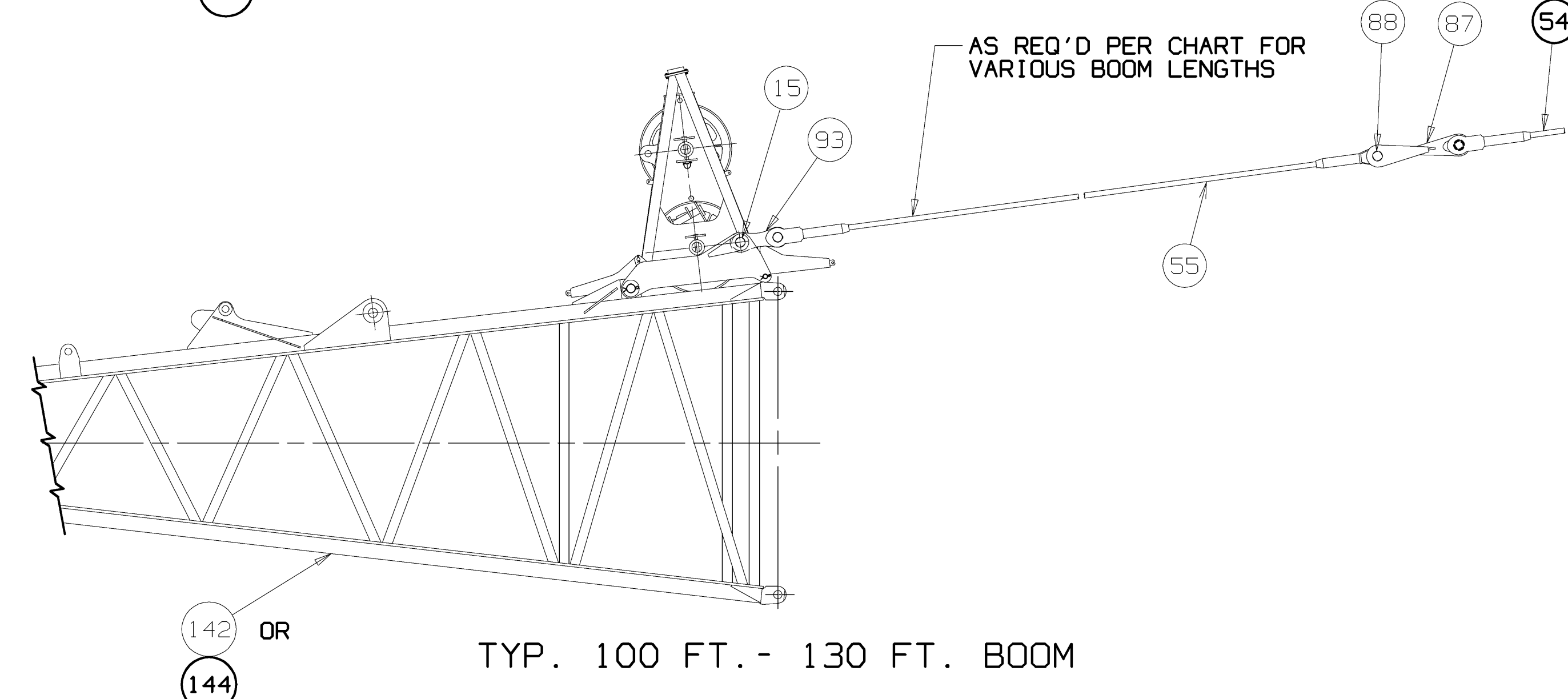




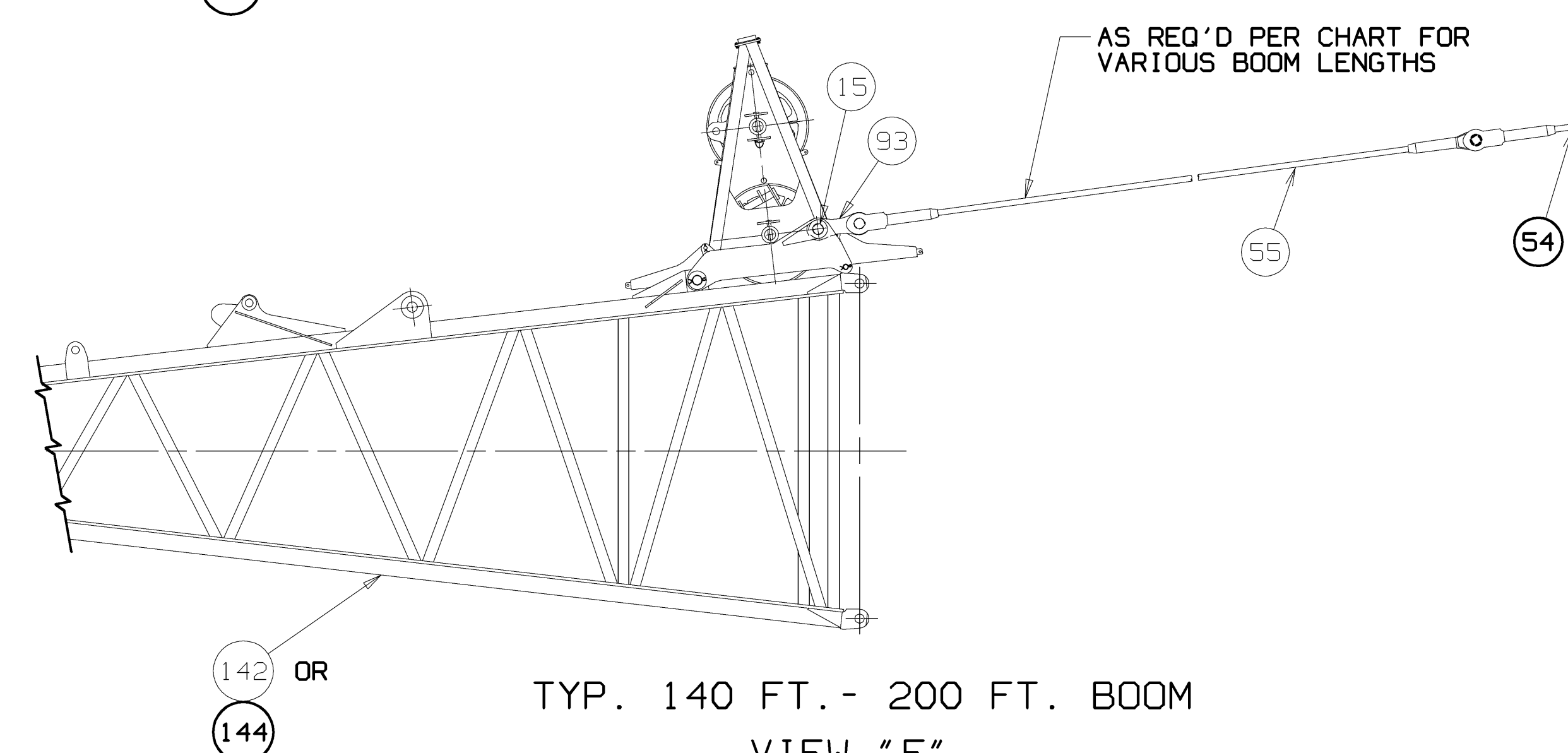
VIEW "T"



TYP. 70 FT. - 90 FT. BOOM



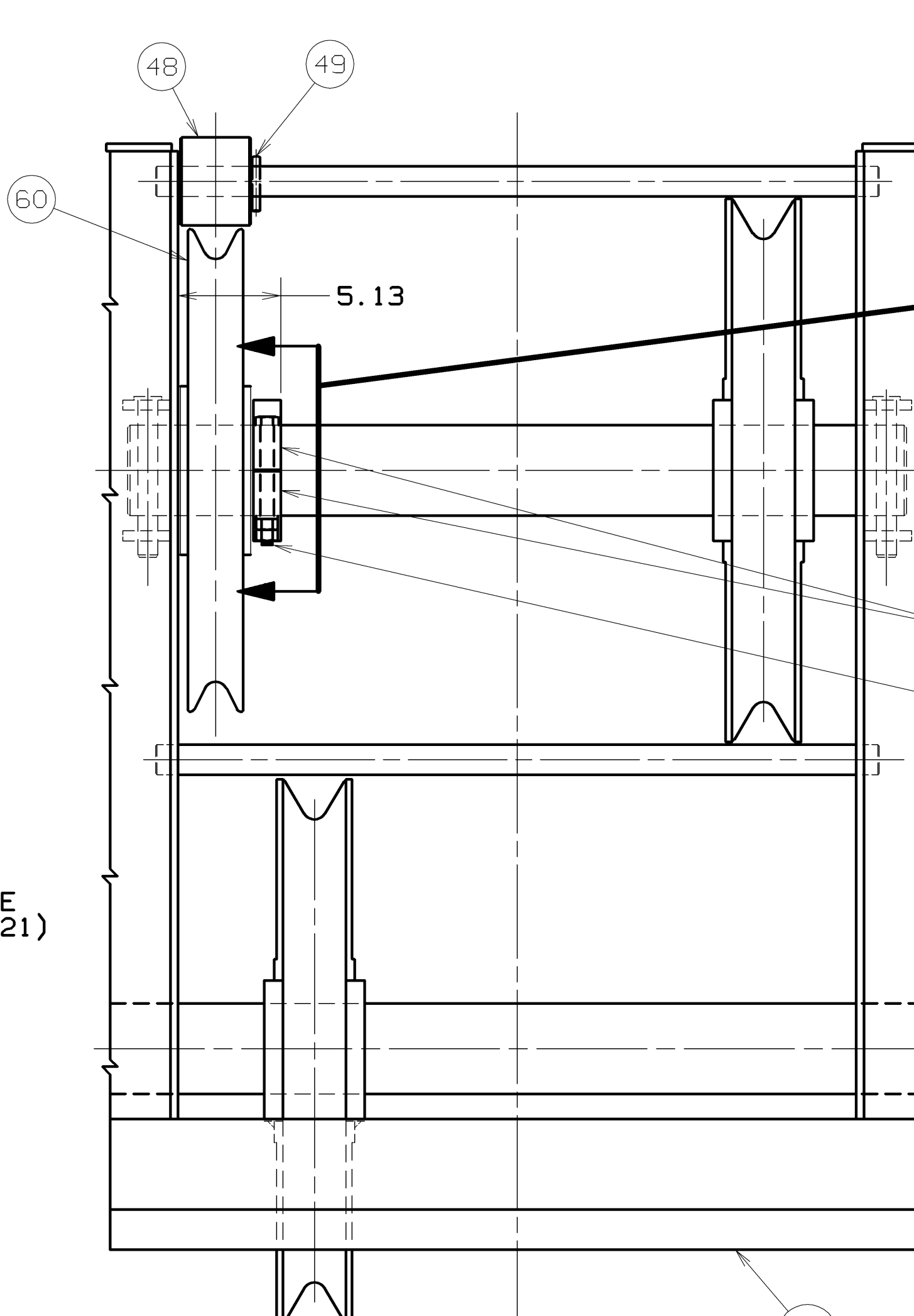
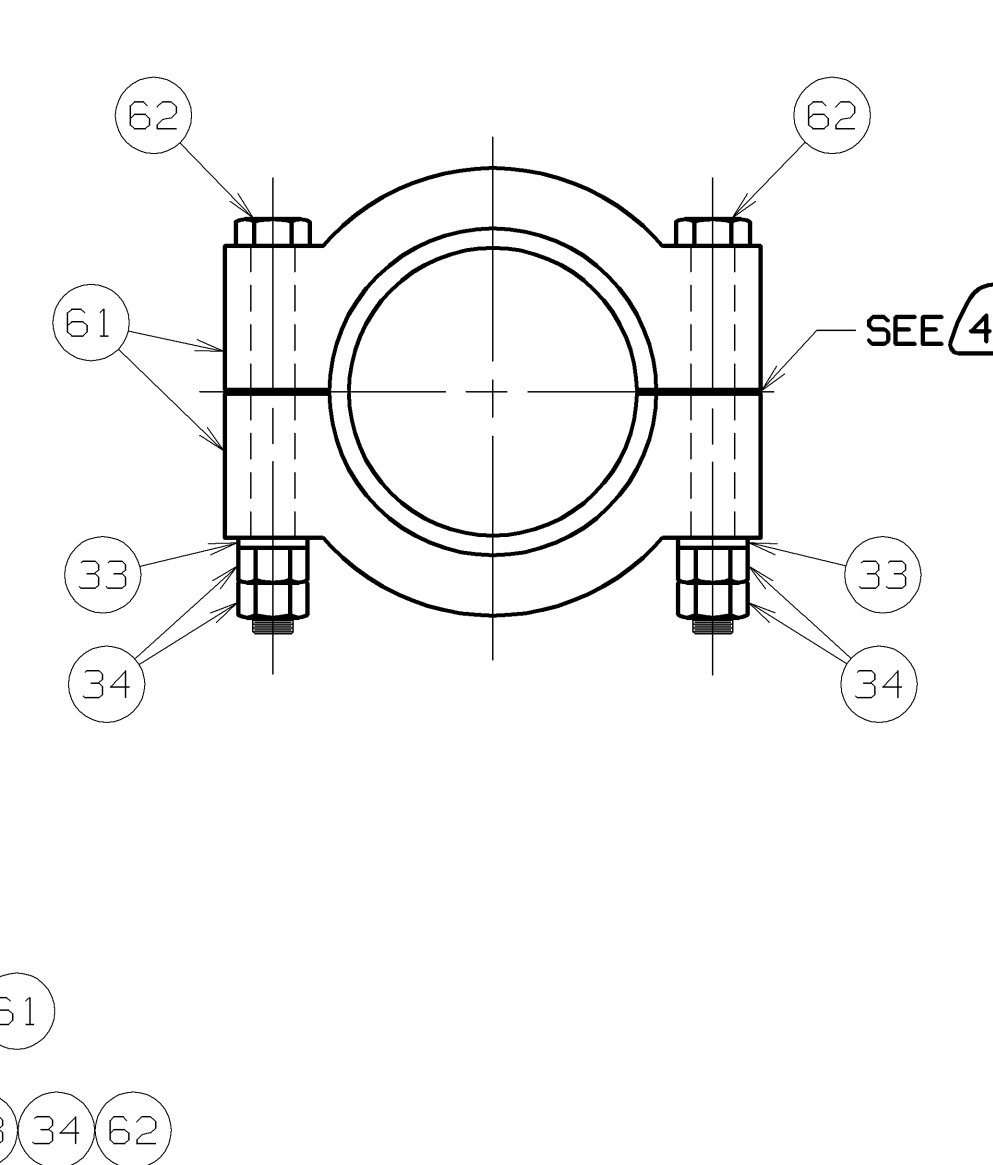
TYP. 100 FT. - 130 FT. BOOM



TYP. 140 FT. - 200 FT. BOOM

VIEW "E"
BASIC JIB BACKSTAY PENDANT ARRANGEMENTS#22EL BOOM/#135 JIB ASSEMBLY
WITH AUX. DRUM SHAFT ASSEMBLY

DO NOT SCALE THIS DRAWING

VIEW "M" - "M"
SCALE: 2=1 FT.

- 40 REQUIRED FOR FOLD UNDER LUFFING JIB - MUST BE REMOVED FOR RAISING MAXIMUM BOOM/JIB COMBINATIONS. REFER TO LUFFING JIB RAISING PROCEDURE (7826A).
- 41 TIGHTEN EACH SIDE EQUALLY TO PROVIDE AN EQUAL GAP. TORQUE (ITEMS 32, 62, AND 109) TO 120 FT.-LBS. AND ADD SECOND (ITEM 34 OR 111) AS A LOCKNUT. SEE VIEW M-M AND SECTION H-H.
- 42 ATTACHES TO BACKSTAY LUG ON BOOM BUTT.
- 43 MATERIAL- A-514
- 44 WHEN (ITEM 149) INSERT 10 FT. (3.05M) #22E IS USED, (2) TIMBERS (ITEM 168) ARE REQUIRED FOR STOWAGE DURING SHIPPING BUT MUST BE REMOVED FOR CRANE OPERATION. REINSTALL (1) TIMBER ON TOP OF INSERT CHORDS FOR CRANE OPERATION.
- 45 WHEN (ITEM 153 OR 155) INSERT 20 FT. (6.10M) #22E IS USED, (2) TIMBERS (ITEM 168) ARE REQUIRED FOR STOWAGE DURING SHIPPING BUT MUST BE REMOVED FOR CRANE OPERATION. REINSTALL (1) TIMBER ON TOP OF INSERT CHORDS FOR CRANE OPERATION.
- 46 WHEN (ITEM 160 OR 163) INSERT 40 FT. (12.19M) #22E IS USED, (3) TIMBERS (ITEM 168) ARE REQUIRED FOR STOWAGE DURING SHIPPING BUT MUST BE REMOVED FOR CRANE OPERATION. REINSTALL (2) TIMBERS ON TOP OF INSERT CHORDS FOR CRANE OPERATION.
- 47 SEE 44, 45, OR 46
- 48 EQUIPPED WITH REMOVABLE DIAGONAL LACINGS.
- 49 INSERT (33407) 10 FT. (3.05M) CAN BE EQUIPPED WITH REMOVABLE DIAGONAL LACINGS PER MODIFICATION (421257).
- 50 INSERT (33426) 20 FT. (6.10M) CAN BE EQUIPPED WITH REMOVABLE DIAGONAL LACINGS PER MODIFICATION (421258).
- 51 INSERT (50609) 40 FT. (12.19M) CAN BE EQUIPPED WITH REMOVABLE DIAGONAL LACINGS PER MODIFICATION (421259).
- 52 FOR USE WITH FOLD UNDER LUFFING JIB WHEN BLOCK IS ATTACHED TO LOWER BOOM POINT (ITEM 123).
- 53 (421256) AND (421262) ARE #22E BOOM BUTT MODIFICATIONS FOR USE AS #22EL JIB BUTTS.
- 54 SEE 3, 19, OR 51
- 55 BOLT TORQUE: (WITH LOCTITE #271)
APPLY LOCTITE #271 (MCC CODE NO. 622292) TO THREADS OF CAPSCREWS WITH (ITEM 59) - SEE VIEW "S" AND TORQUE TO 180 FT.-LBS.
- 56 WIRE ROPE WINCH ASSEMBLY (ITEM 112) IS REQUIRED FOR FOLD-UNDER LUFFING JIB AND CAN ONLY BE USED WITH WIRE ROPE GUIDE SINGLE SHEAVE BRACKET ASSEMBLY (ITEM 116).
- 57 WIRE ROPE GUIDE SINGLE SHEAVE BRACKET ASSEMBLY (ITEM 116) IS OPTIONAL FOR LAYOUT OR FOLD-UNDER LUFFING JIB.
- 58 WIRE ROPE GUIDE DOUBLE SHEAVE BRACKET ASSEMBLY (ITEM 164) IS OPTIONAL FOR LAYOUT LUFFING JIB BUT IS REQUIRED FOR USE WITH THE #138 JIB.
- 59 ADD SHIMS (ITEM 173) AS REQUIRED (IN AREA SHOWN) TO LIMIT LATERAL MOVEMENT OF JIB BUTT. USE AN EQUAL AMOUNT OF SHIMS ON BOTH SIDES TO CENTER JIB BUTT WITH BOOM TOP.
- 60 ON DRAWING (A02331).
- 61 USE COTTER PIN 562172.
- 62 REPLACES BOOM JOINT PIN 70366 WHEN INTERMEDIATE SUSPENSION IS USED.
- 63 ON DRAWING (A06395).
- 64 ON DRAWING (A02427).

- 1 EXISTING 10 FT. (3.05M) BOOM INSERT (33407-2) CAN ALSO BE USED.
- 2 (33426-3) IS WITHOUT JIB BACKSTAY LUGS. (623580) IS WITH JIB BACKSTAY LUGS. EXISTING 20 FT. (6.10M) BOOM INSERT (623564) WITHOUT JIB BACKSTAY LUGS CAN ALSO BE USED.
- 3 (50609-2) IS WITHOUT JIB BACKSTAY LUGS. (623526) IS WITH JIB BACKSTAY LUGS. THE FOLLOWING EXISTING 40 FT. (12.19M) BOOM INSERTS CAN ALSO BE USED: (623532), (623533), (623534), (623535), (623536) AND (623537) ARE WITHOUT BACKSTAY LUGS. (623527), (623530) AND (623579) ARE WITH BACKSTAY LUGS.
- 4 IF #23 BOOM TOP (191029) IS TO BE USED AS THE #135 LUFFING JIB TOP, MODIFY PER (421224).
- 5 IF #22E BOOM BUTT (ITEM 142) IS NOT EQUIPPED WITH JIB BACKSTAY LUGS, MODIFY PER (421226).
- 6 IF #22L BOOM TOP (ITEM 118) IS NOT EQUIPPED WITH JIB STOP LUGS, MODIFY PER (421225).
- 7 (7) - 30.00 DIA. SHEAVES
- 8 ON DRAWING (A03150).
- 9 ON DRAWING (147109).
- 10 ON DRAWING (A03603).
- 11 ON DRAWING (76280).
- 12 ON DRAWING (140773).
- 13 TIGHTEN BEARING LOCKNUT (ITEM 19) SUFFICIENTLY TO CLAMP BEARING INNER RACE.
- 14 MAXIMUM NO. OF 10 FT. (3.05M) BOOM INSERTS = (2)
- 15 MAXIMUM NO. OF 20 FT. (6.10M) BOOM INSERTS = (2)
- 16 COMBINATIONS OF 10 FT. (3.05M) AND 20 FT. (6.10M) BOOM INSERTS CANNOT EXCEED (2) - 10 FT. (3.05M) PLUS (1) - 20 FT. (6.10M) OR (1) - 10 FT. (3.05M) PLUS (2) - 20 FT. (6.10M).
- 17 SEE 1, 14, 16 AND 49
- 18 SEE 2, 15, 16 AND 50
- 19 STARTING WITH THE BOOM BUTT, INSERTS AND PENDANTS MUST BE ASSEMBLED IN ORDER OF ASCENDING LENGTH. THE SHORTER INSERTS AND PENDANTS MUST BE CLOSEST TO THE BOOM BUTT.
- 20 REQUIRED FOR BASIC BACKSTAY PENDANT. ATTACHES TO LINK SUB-ASSEMBLY (ITEM 53).
- 21 REQUIRED FOR BASIC JIB PENDANT. ATTACHES TO THE JIB TOP (ITEM 6) LINK.
- 22 (ITEMS 67, 73, 79 & 85) ARE THE SAME PART NO. (70366). (ITEMS 66, 72, 78 & 84) ARE THE SAME PART NO. (192022). (ITEMS 15 & 88) ARE THE SAME PART NO. (170690). (ITEMS 64, 91 & 96) ARE THE SAME PART NO. (277382). (ITEMS 13, 70 & 97) ARE THE SAME PART NO. (277383). (ITEMS 76, 82, 98 & 201) ARE THE SAME PART NO. (277384).
- 23 SEE 8, 21, 22 AND 49
- 24 SEE 8, 22, 27 AND 39
- 25 WHEN AUXILIARY DRUM SHAFT ASSEMBLY (ITEM 169) IS USED, #22E BOOM BUTT (ITEM 143 OR 145), WIRE ROPE GUIDE ASSEMBLY (ITEM 170) AND 10 FT. (3.05M) #22E INSERT (ITEM 149) ARE REQUIRED. THE 10 FT. INSERT MUST BE ADJACENT TO THE BOOM BUTT AT ALL TIMES. MINIMUM BOOM LENGTH USING THESE COMPONENTS IS 80 FT. (24.38M).
- 26 IF BOOM BUTT (ITEM 142) IS TO BE USED WITH AUXILIARY DRUM SHAFT ASSEMBLY (ITEM 169), MODIFY PER (421218).
- 27 INSERT 40 FT ASSY (ITEM 200) MUST BE ATTACHED TO JIB BUTT. STARTING WITH ITEM 200, INSERTS AND PENDANTS MUST BE ASSEMBLED IN ORDER OF ASCENDING LENGTH. THE SHORTER INSERTS AND PENDANTS MUST BE CLOSEST TO ITEM 200.
- 28 ATTACHES TO JIB STRUT LINK SUB-ASSEMBLY (ITEM 17).
- 29 INSTALL WITH HEAD OF PENDANT PIN (ITEM 9) TO THE INSIDE.
- 30 SEE VIEW "E" FOR VARIOUS JIB BACKSTAY PENDANT (ITEM 55) AND PENDANT LINK (ITEMS 87, 90 AND 93) ARRANGEMENTS.
- 31 PENDANTS SHOWN - SEE VIEW A-A ARE CALLED FOR ON MAST ASSEMBLY (ITEM 120).
- 32 REFER TO SPECIFIC CAPACITY CHART FOR APPROPRIATE BOOM AND JIB COMBINATIONS.
- 33 REFER TO LUFFING JIB RAISING PROCEDURE (7826A) FOR RAISING AND LOWERING BOOM AND JIB.
- 34 WIRE ROPE - 1.00 INCH X 850 FT. CONSTRUCTEX. BREAKING STRENGTH OF 125,000 LBS. FOR USE WITH LAGGING (502382) ON REAR HOIST DRUM.
- 35 WIRE ROPE - 1.00 INCH X 850 FT. PYTHON 8F7KV RIGHT HAND REGULAR LAY. BREAKING STRENGTH OF 120,600 LBS. FOR USE WITH LAGGING (502382) ON REAR HOIST DRUM.
- 36 WIRE ROPE - 26MM X 850 FT. PYTHON 8F7KV RIGHT HAND REGULAR LAY. BREAKING STRENGTH OF 126,400 LBS. FOR USE WITH LAGGING (502372) ON REAR HOIST DRUM.
- 37 REAR DRUM MUST BE EQUIPPED WITH A LAGGING WHEN USED AS THE LUFFING HOIST. THE RECOMMENDED LAGGING FOR SPECIFIC WIRE ROPE DIA. MUST BE USED.
- 38 USE (4) PINS (70366) FROM INSERT ADJACENT TO ADAPTER ASSEMBLY (ITEM 5) FOR JIB TOP CONNECTION.
- 39 10 FT. (3.05M) PENDANT (276823), 20FT. (6.10M) PENDANT (276825) AND 40 FT. (12.19M) PENDANT (276892) MAY BE USED IN PLACE OF 10 FT.-1.00 (3.07M) PENDANT (277382), 20 FT.-1.50 (6.13M) PENDANT (277383) AND 40 FT.-3.00 (12.27M) PENDANT (277384) FOR JIB/JIB BACKSTAY. 277383 (ITEM 13) MUST BE USED AT JIB TOP (ITEM 6). DO NOT MIX PENDANTS OF DIFFERENT LENGTHS. PENDANTS MUST BE INSTALLED IN MATCHED SETS (PENDANTS ON ONE SIDE OF BOOM MUST MATCH LENGTH OF PENDANTS ON OTHER SIDE OF BOOM). FAILING TO OBSERVE THIS PRECAUTION WILL CAUSE MAST TO TWIST EXCESSIVELY WHEN BOOM IS RAISED. STRUCTURAL DAMAGE TO MAST OR BOOM WILL OCCUR.

BILL OF MATERIAL					ASSEMBLIES USED ON
QTY	NO.	DESC	UNIT	QTY	

REVISIONS
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AT WAS
SHT 4 OF 6
B UPDATED
VIEW

ENG. NO.
A07691
SHT 4 OF 7

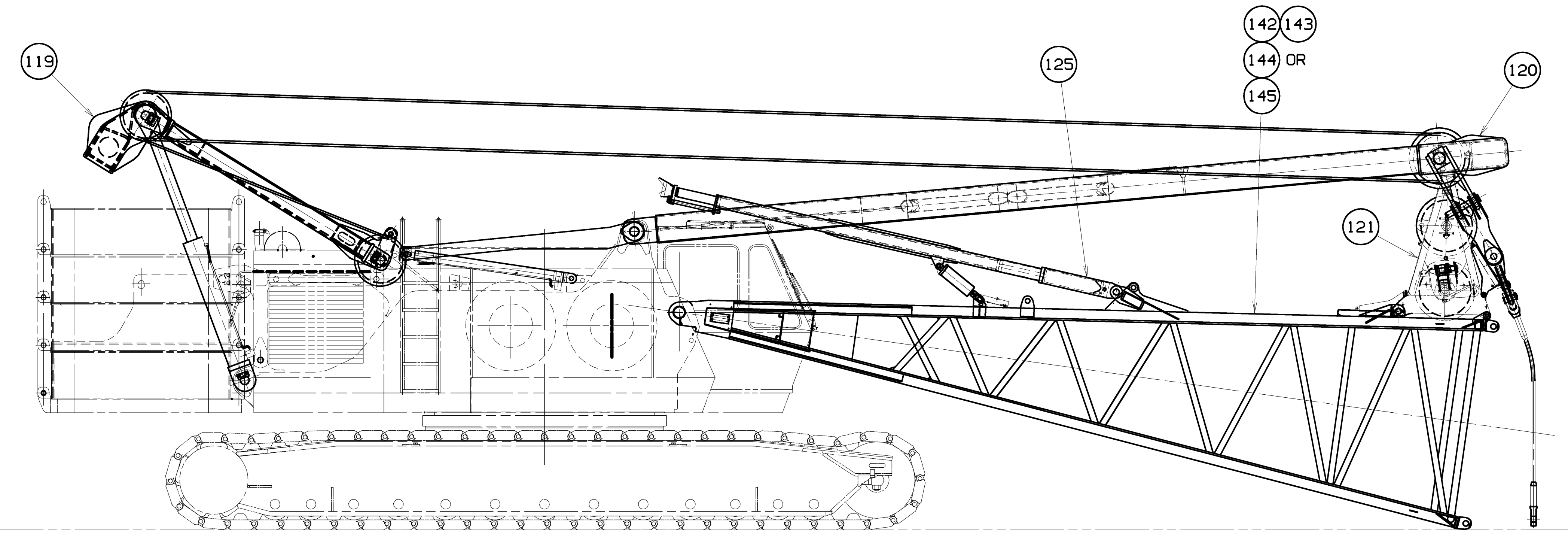
PRIVATE LABELING
REQUIREMENT TO
CONFORM TO
ENGINEERING
SPECIFICATION
8629103794 FOR
COMPONENTS LISTED
IN 035200-05-026

DATE
02-18-03
PATTERN NO.

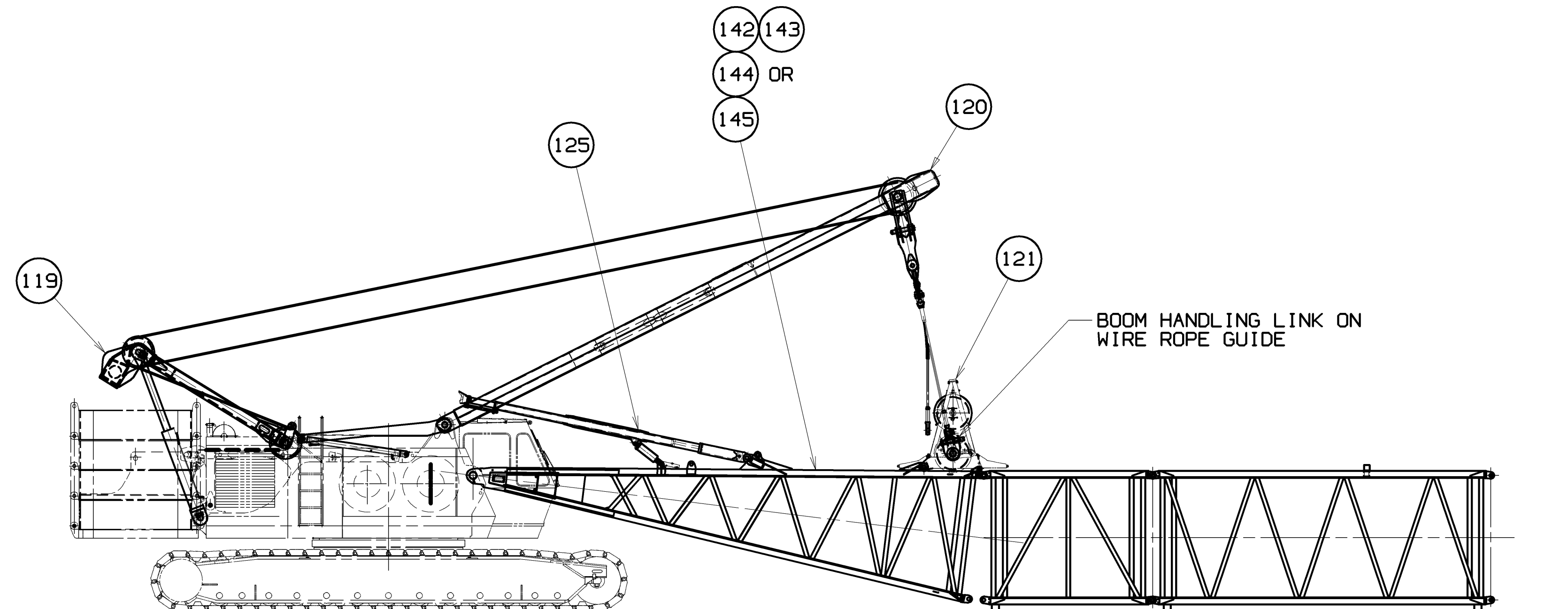
TOLERANCE UNLESS OTHERWISE SPECIFIED				SCALE		Manitowoc Cranes, Inc.		JIB LUFFING ASSEMBLY	
DECIMAL PLACES	FABRICATION	MACHINING	WELDING	DR	TSC	Manitowoc, Wisconsin	#22EL BOOM/#135 JIB	W/INTERMEDIATE FALL	
(1) PLACE 0.00	± .12	± .10	± .015	OK	TSC	MODEL 888			
(2) PLACE 0.00	± .06	± .12	± .015	OK	TSC				
(3) PLACE 0.000	± .005	± .005	± .005	APP	TSC				
ANGLES	± 1°	± 30'	± 30'						

DATE
02-18-03
PATTERN NO.

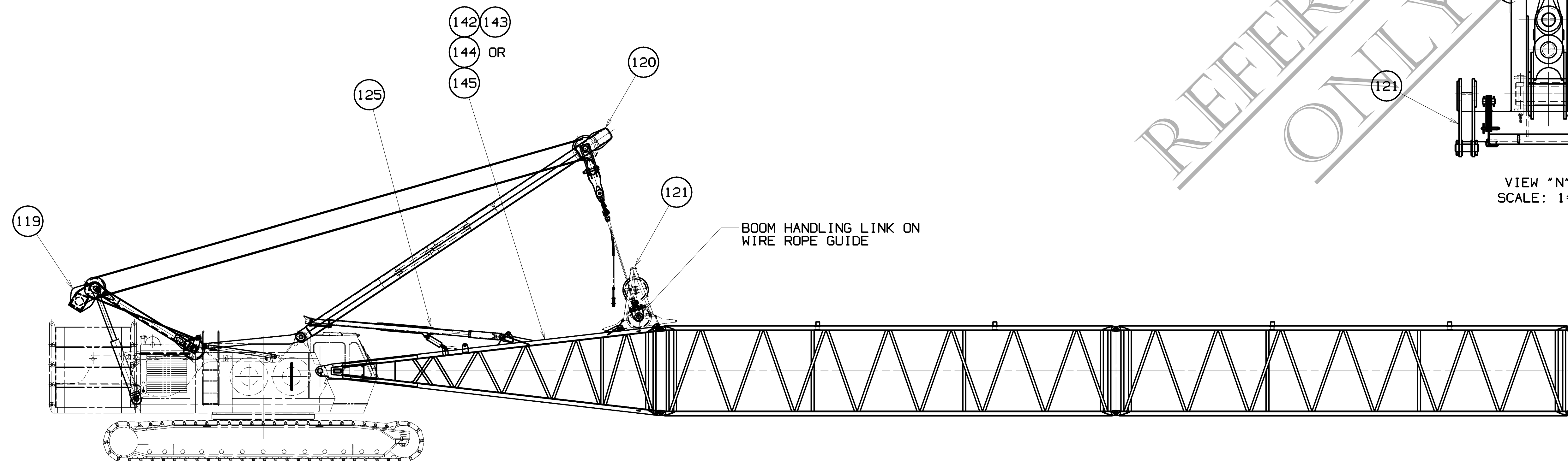
SHT. 4 OF 7



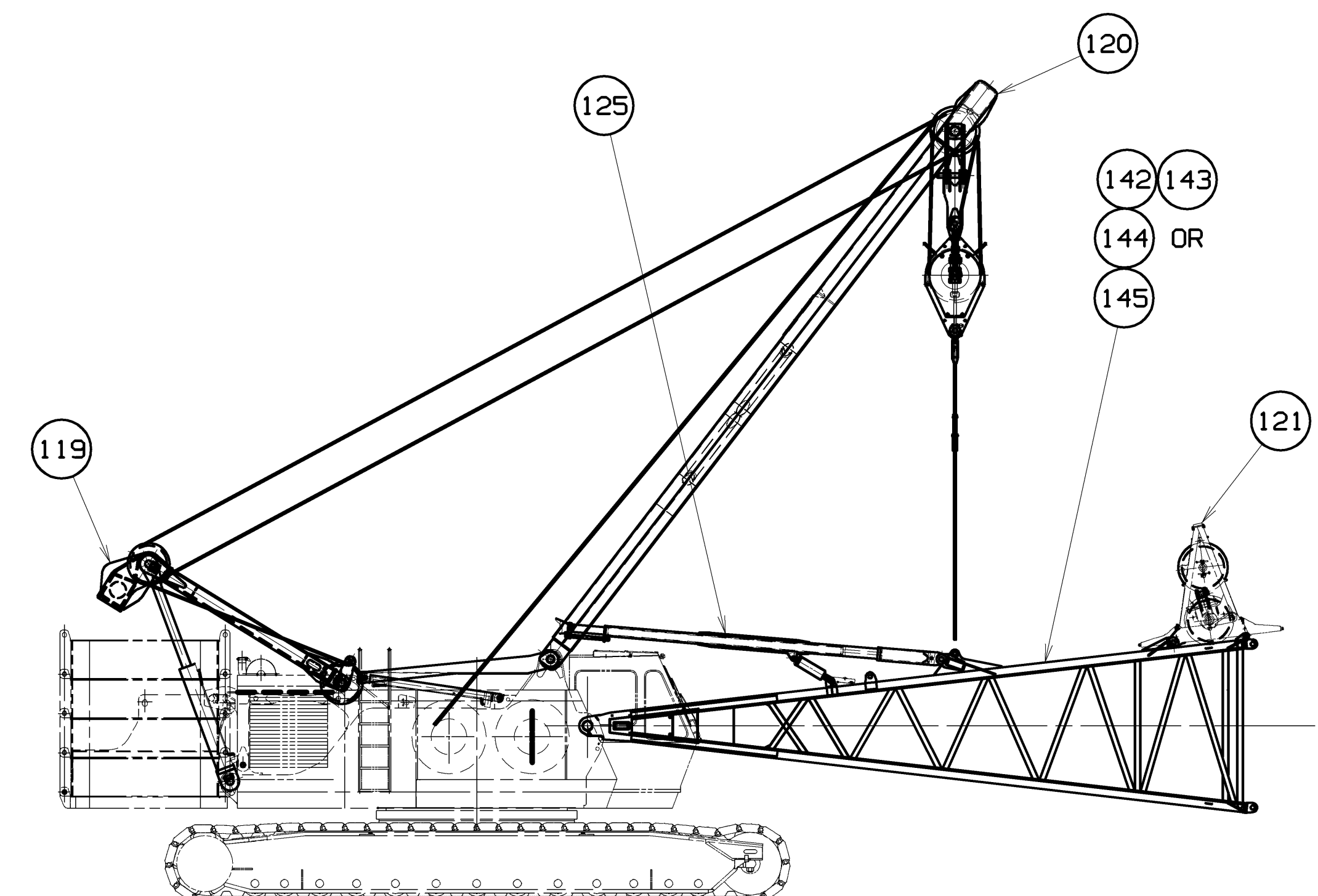
MAST RESTING ON BOOM BUTT WIRE ROPE GUIDE



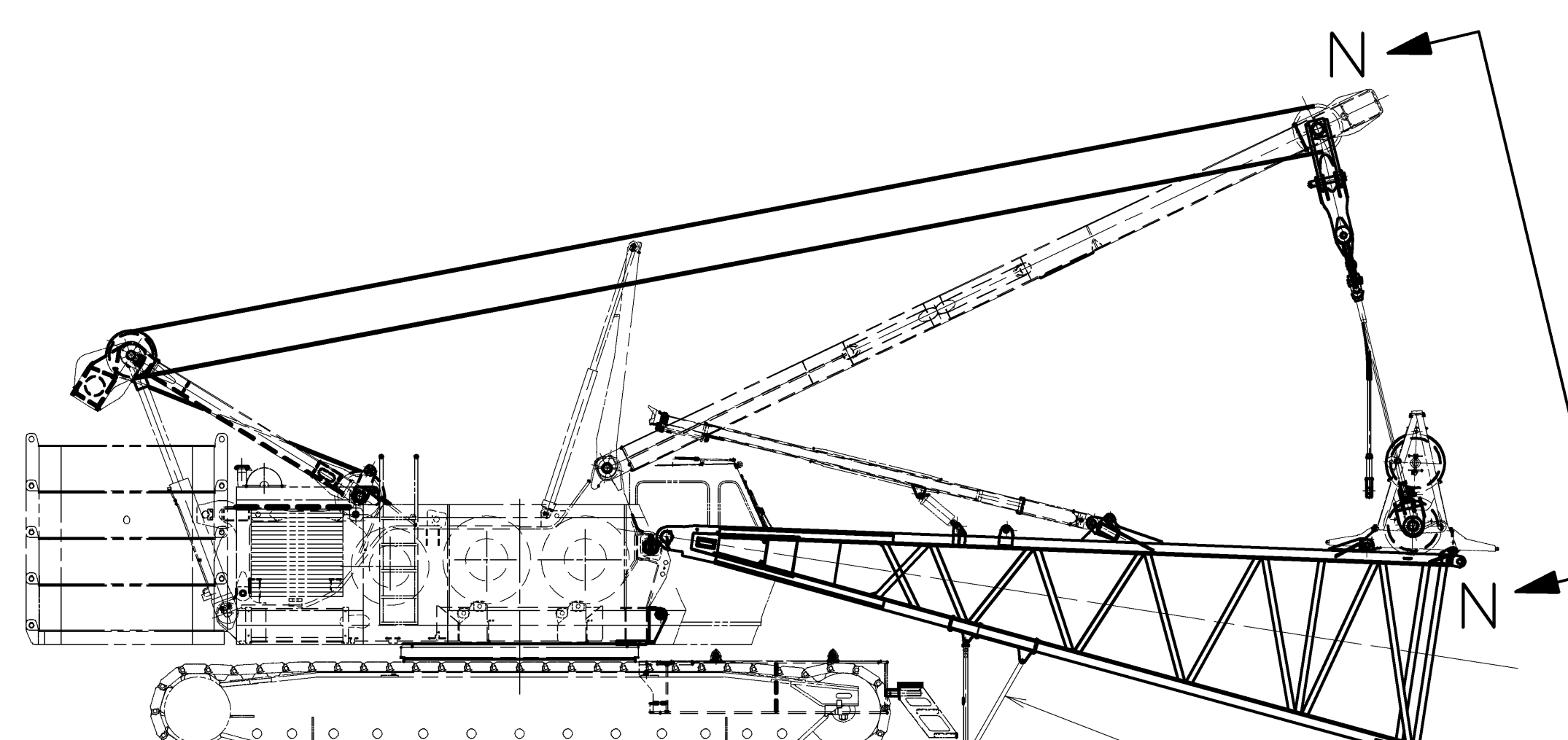
BOOM ASSEMBLY WITH MAST



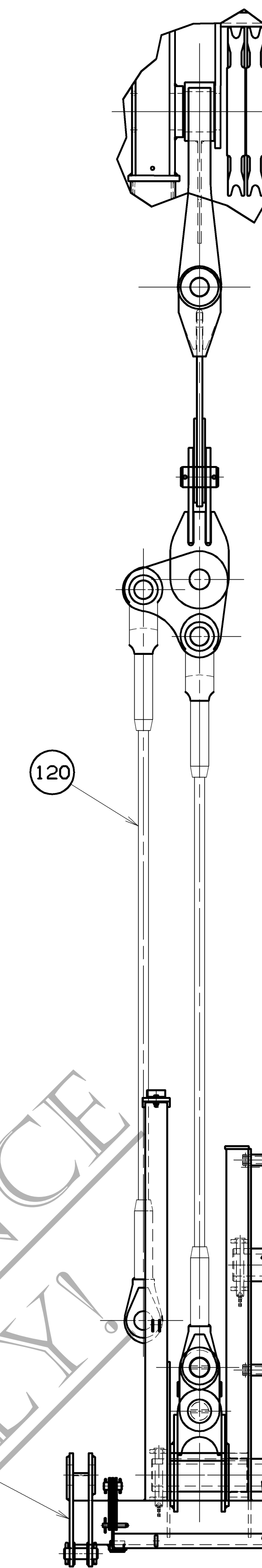
BOOM HANDLING WITH MAST



ATTACHING BOOM BUTT TO ROTATING BED
USING AUXILIARY BLOCK IN MAST.



ATTACHING BOOM BUTT TO ROTATING BED
USING OPTIONAL BUTT ATTACHING ASSEMBLY.



VIEW "N"-"N"
SCALE: 1=1FT.

BOOM ASSEMBLY PROCEDURE

(MAST CAN BE USED TO ASSEMBLE ALL RIGGING COMPONENTS.)

1. ASSEMBLE BOOM COMPLETE, WITHOUT BUTT.
2. ATTACH ROPE GUIDES, PENDANTS, LINKS AND PINS AS REQ'D.
3. USING THE MAST WITH AUXILIARY BLOCK OR THE OPTIONAL BOOM BUTT SUPPORT, INSTALL THE BOOM BUTT WITH ROPE GUIDE AND BOOM STOPS TO ROTATING BED. (BOOM STOPS MUST BE IN SHIPPING (LOWER) POSITION.)
4. BOOM DOWN AND ATTACH INSIDE MAST PENDANT TO BOOM HANDLING LINK ON ROPE GUIDE (ITEM 121) - SEE VIEW "N"-"N"
5. BOOM UP TO CLEAR GROUND WITH BUTT.
6. POSITION MACHINE TO ALIGN UPPER PIN CONNECTOR HOLES ON BOOM BUTT WITH UPPER PIN CONNECTOR HOLES ON FIRST BOOM INSERT AND INSERT PINS.
7. SLOWLY BOOM UP TO ALIGN LOWER PIN CONNECTOR HOLES ON BOOM BUTT WITH LOWER PIN CONNECTOR HOLES IN FIRST BOOM INSERT AND INSERT PINS.

WARNING:

DO NOT BOOM UP PAST LOWER CONNECTOR HOLES. IF BOOMING UP CONTINUES AFTER CONNECTORS BOTTOM OUT OR AFTER PINS ARE INSERTED, DAMAGE TO ROPE GUIDE AND BOOM BUTT WILL OCCUR.

8. BOOM DOWN TO DISCONNECT MAST PENDANT FROM ROPE GUIDE LINKS.
9. ATTACH MAST PENDANT TO BOOM PENDANTS.
10. BOOM UP TO REMOVE SOME SLACK FROM PENDANTS.
11. CONNECT AIR SUPPLY TO BOOM STOPS AND RAISE BOOM STOPS INTO POSITION. ROTATE CYLINDER BRACKET INTO POSITION AND PIN.
12. BOOM UP TO DESIRED BOOM ANGLE.

TO DISASSEMBLE BOOM

1. BOOM DOWN AND SUPPORT BOOM ON BLOCKING.
2. DISCONNECT BOOM STOP AIR LINES ETC.
3. DISCONNECT MAST PENDANT FROM BOOM PENDANTS
4. CONNECT INSIDE MAST PENDANTS TO HANDLING LINK ON ROPE GUIDE (ITEM 121) - SEE VIEW "N"-"N"
5. BOOM UP TO REMOVE SLACK FROM MAST PENDANT.

WARNING:

DO NOT BOOM UP TO PUT TENSION INTO MAST PENDANT. (REMOVE SLACK ONLY) TENSION IN MAST PENDANT WILL DAMAGE ROPE GUIDE AND BOOM BUTT.

6. REMOVE LOWER AND THEN UPPER BOOM BUTT CONNECTOR TO BOOM INSERT CONNECTOR PINS.

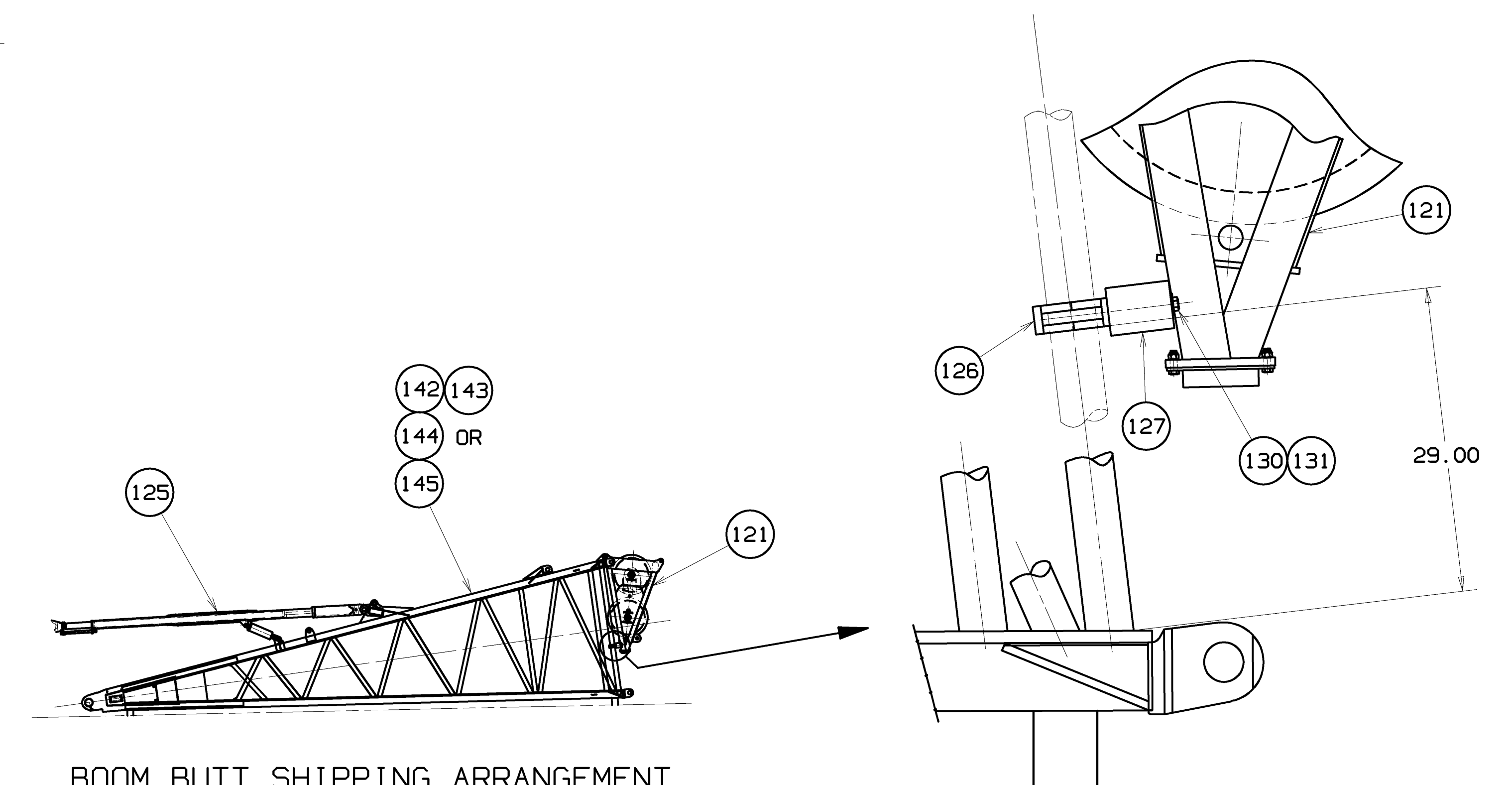
WARNING:

BOOM MUST BE PROPERLY BLOCKED TO PREVENT SHIFTING DURING PIN REMOVAL.

7. SLOWLY BOOM UP TO SUPPORT BOOM BUTT WITH MAST PENDANT AND BACK AWAY FROM BOOM.
8. REMOVE BOOM BUTT FROM ROTATING BED WITH MAST.
9. DISASSEMBLE BOOM WITH MAST.

BOOM HANDLING WITH MAST WITH MAST PENDANTS PINNED TO ROPE GUIDE LINKS: MAXIMUM BOOM THAT CAN BE CANTILEVERED IS AS FOLLOWS:

LENGTH	10 FT. (3.05 M) INSERT	20 FT. (6.10 M) INSERT	40 FT. (12.2 M) INSERT
40 FT. (12.2 M)	2	1	0
50 FT. (15.2 M)	1	2	0
60 FT. (18.3 M)	2	0	1
60 FT. (18.3 M)	0	1	1
80 FT. (24.4 M)	0	0	2



BOOM BUTT SHIPPING ARRANGEMENT

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PRIVATE LABELING
REQUIREMENT TO
CONFORM TO
ENGINEERING
SPECIFICATION
8829103794 FOR
COMPONENTS LISTED
IN 8829103794

DATE
02-18-03
PATTERN NO.

DATE
02-18-03
PATTERN NO.

FOLD-UNDER LUFFING JIB RAISING CONDITIONS

(SEE LUFFING JIB RAISING PROCEDURE 7826-A)

NOTE: THE FOLLOWING IS REQUIRED FOR FOLD-UNDER OPERATION.

- A) WIRE ROPE GUIDE ASSEMBLY (ITEM 114) MUST BE INSTALLED.
B) ADAPTER ASSEMBLY (ITEM 5) MUST BE EQUIPPED WITH PIN PULLER COMPONENTS CALLED FOR ON (ITEM 5 REF.).
C) WIRE ROPE WINCH ASSEMBLY (ITEM 112) AND WIRE ROPE GUIDE SINGLE SHEAVE BRACKET ASSEMBLY (ITEM 116) MUST BE INSTALLED.

NOTE: WHEN JIB BUTT IS FOLDED UNDER BOOM TOP (JIB PENDANTS NOT ATTACHED) USE CAUTION DURING ASSEMBLY AND RAISING OR LOWERING OF JIB THAT JIB STRUT DOES NOT CRASH INTO WIRE ROPE GUIDE ON FRONT OF BOOM TOP OR DAMAGE WILL OCCUR (SEE VIEW "P").

BOOM UP UNTIL THERE IS ENOUGH CLEARANCE TO CONNECT INTERMEDIATE SUSPENSION PENDANTS AND LINK TO BEAM (ITEM 215). CONTINUE TO BOOM UP UNTIL THERE IS ENOUGH CLEARANCE FOR WIRE ROPE GUIDE MOUNTED TO THE JIB TOP TO BE LOWERED WITH THE POSITIONING WINCH AND PINNED IN ITS WORKING POSITION. CONTINUE TO BOOM UP UNTIL JIB STRUT CAN HANG APPROXIMATELY VERTICAL. CONNECT JIB PENDANTS AND LINKS TO JIB POINT AND JIB STRUT TOP (EXCESS PENDANT SLACK SHOULD BE AT THE JIB STRUT END). LUFF UP TO REMOVE EXCESS JIB PENDANT SLACK ONLY (NEVER PUT JIB PENDANTS INTO TENSION). CONTINUE TO BOOM UP AND PERIODICALLY LUFF UP TO REMOVE EXCESS JIB PENDANT SLACK.

CAUTION: FAILURE TO MAINTAIN A MINIMUM ANGLE OF 74° BETWEEN JIB BUTT AND JIB STRUT WHILE RAISING MAY CAUSE JIB STRUT TO SNAP OVER CENTER AND CRASH THE JIB BUTT CAUSING DAMAGE.

NOTE: MAXIMUM BOOM ANGLE ALLOWED WITH JIB HANGING VERTICAL IS 75°.

INSTALL BLOCK/HOOK AND WEIGHT BALL. CONTINUE TO BOOM UP TO DESIRED ANGLE AND LUFF UP TO DESIRED WORKING RADIUS (SEE LUFFING JIB RAISING PROCEDURE 7826-A FOR BOOM TO JIB ANGLE REQUIREMENTS).

NOTE: REVERSE SEQUENCE TO LOWER AND FOLD LUFFING JIB. BOOM TO JIB CLEARANCE WILL DETERMINE TO WHAT DEGREE BOOM AND JIB CAN BE LOWERED. CLEARANCE POINTS WILL VARY DEPENDING ON BOOM/JIB COMBINATION, GROUND CONDITIONS AND BLOCKING USED. CLEARANCE POINTS AT JIB STOP STRUT TO JIB BUTT AND BOOM TOP, JIB INSERT TO BOOM LACING, JIB POINT WHEEL TO BOOM LACING AND JIB TOP WIRE ROPE GUIDE ASSEMBLY TO GROUND SHOULD BE MONITORED AS BOOM/JIB IS LOWERED. A MEANS TO START JIB UNDER BOOM WHEN FOLDING MAY BE REQUIRED.

USE CAUTION WHEN RAISING JIB STRUT SO THAT CONTACT WITH WIRE ROPE GUIDE DOES NOT OCCUR OR DAMAGE WILL RESULT

VIEW "P"

VIEW "S"

#22EL BOOM/#135 JIB ASSEMBLY

DO NOT SCALE THIS DRAWING

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DECIMAL PLACES	FABRICATION	MACHINING
(1) PLACE 0.0	± 0.12	± 0.18
(2) PLACE 0.00	± 0.06	± 0.12
(3) PLACE 0.000	± 0.03	± 0.06
ANGLES	± 1°	± 0°30'

SCALE
DR TSC
CK TSC
APP TSC

Manitowoc Cranes, Inc.
Manitowoc, Wisconsin
MODEL 888

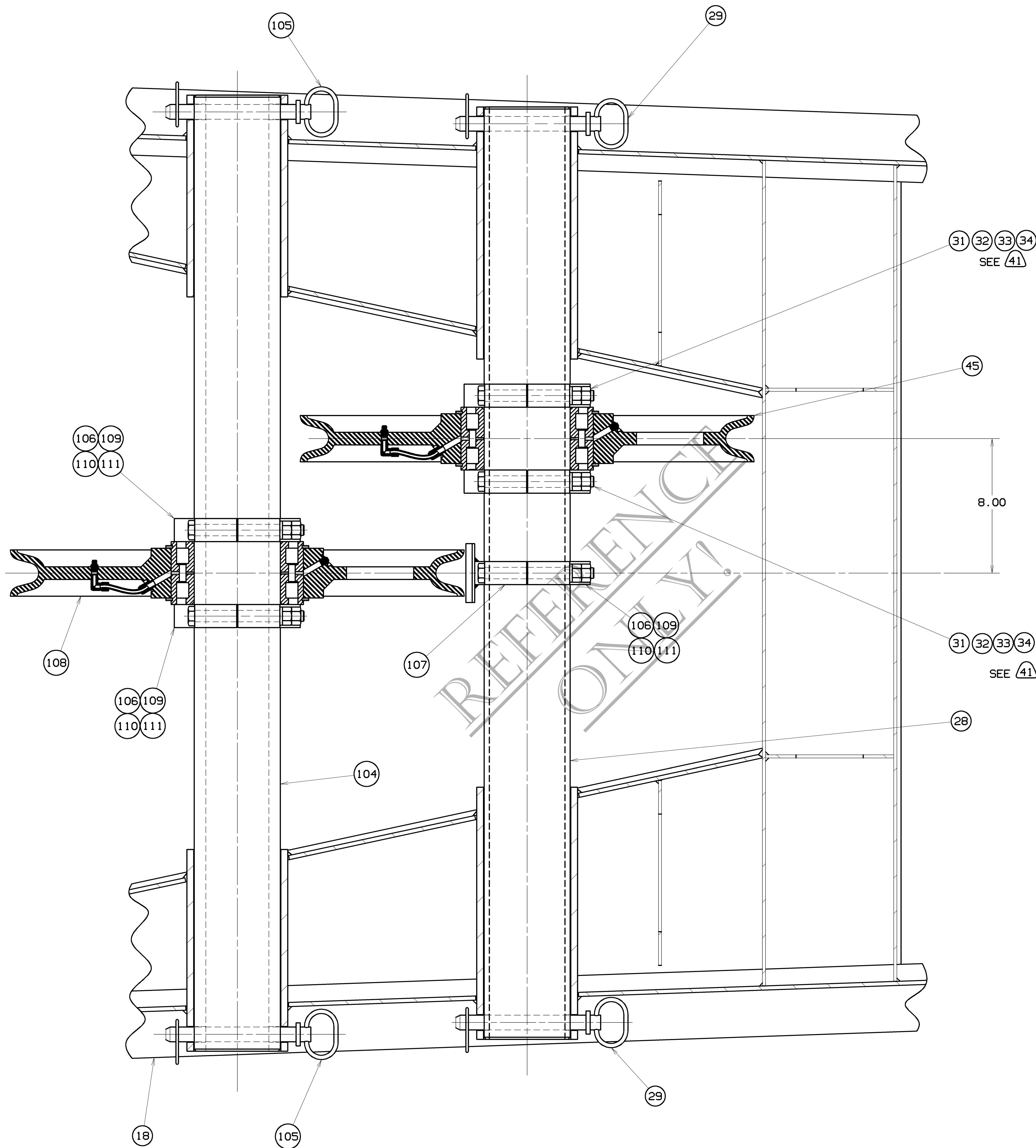
JIB LUFFING ASSEMBLY
#22EL BOOM/#135 JIB
W/INTERMEDIATE FALL

PRIVATE LABELING
REQUIREMENT TO
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ENGINEERING
SPECIFICATION
8829103794 FOR
COMPONENTS LISTED
IN 68200-05-025
DATE
02-18-03
PATTERN NO.
A07691

SHT. 6 OF 7

BILL OF MATERIAL					ASSEMBLIES USED ON	
ITEM NO.	REV.	DESCRIPTION	QUANTITY	MATERIAL	DATE	BY

REVISIONS



SECTION "H" - "H"
SHOWN ITEMS 45 & 108, FOR ORIENTATION OF GREASING ONLY
SCALE: 2=1FT

DWG. NO.
A07691
SHT. 7 OF 7

PRIVATE LABELING
REQUIREMENT TO
CONFORM TO
ENGINEERING
SPECIFICATION
8829103794 FOR
COMPONENTS LISTED
IN 8829103794-05-055

DATE
03-16-09
PATTERN NO.

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DECIMAL PLACES				FABRICATION				MACHINING				DR. MER				Manitowoc, Wisconsin			
(1) PLACE	0.0	±.12	±.18	±.05	(2) PLACE	0.00	±.06	±.12	±.015	(3) PLACE	0.000	±.005	±.005	±.005	±.005	DR. MER	MODEL 888	#22EL BOOM/#135 JIB	W/INTERMEDIATE FALL
ANGLES				±1°30'				±0°30'				APP. PMP							