

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
169	DRUM SHAFT ASSEMBLY - AUXILIARY	177255	25
170	WIRE ROPE GUIDE ASSEMBLY	177349	25
171	BOOM ASSEMBLY LADDER STORAGE	177969	
172	BOOM BUTT SUPPORT ASSEMBLY	177055	

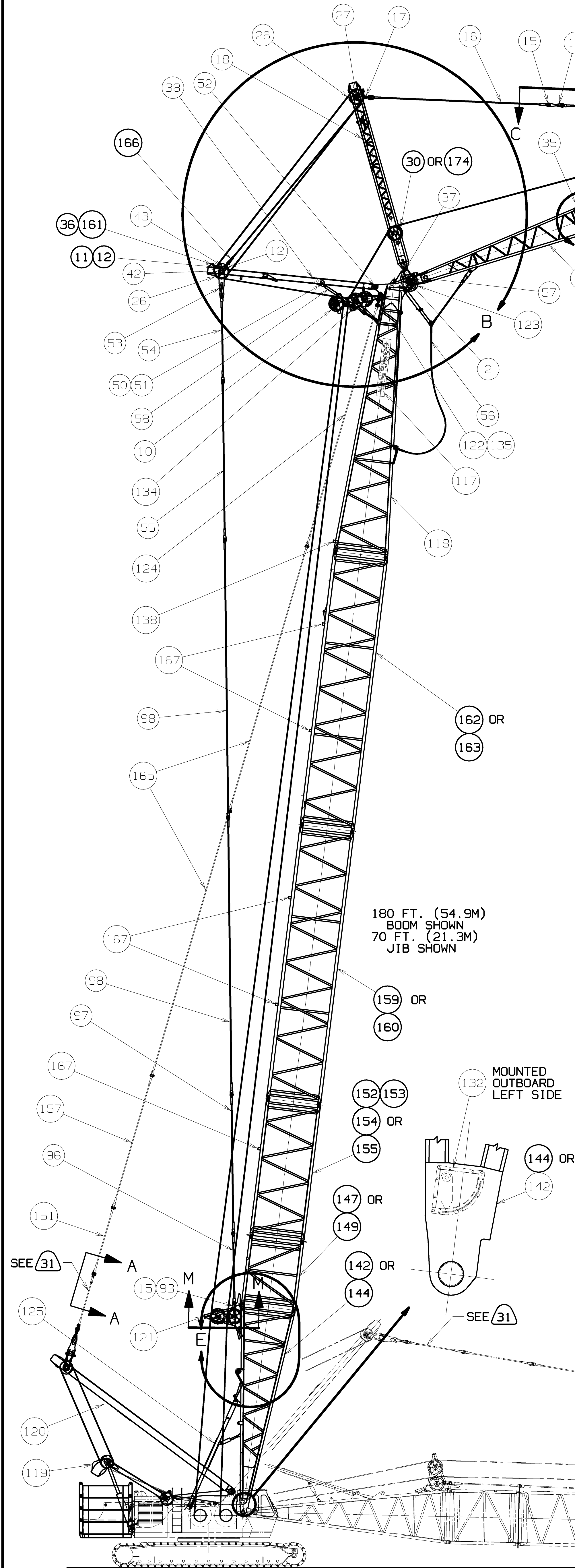
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
157	PENDANT 20 FT. -1.5 (6.13M)	277426	11
158			
159	INSERT 40 FT. (12.19M) #22(W/O JIB BKSTY)	50609	254
160	INSERT 40 FT. (12.19M) #22E(W/O JIB BKSTY)	178756	48
162	INSERT 40 FT. (12.19M) #22(W/JIB BKSTY)	623526	54
163	INSERT 40 FT. (12.19M) #22E(W/JIB BKSTY)	178793	48
165	PENDANT 40 FT. -3.0 (12.27M)	277427	11
167	TIMBER	192013	
168	TIMBER	192014	47

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
142	BOOM BUTT #22E	176967	25
143	BOOM BUTT #22E (AUX. DRUM)	177290	25
144	MOD. TO BOOM BUTT #22E (176967)	421262	53
145	MOD. TO BOOM BUTT #22E (177290)	421262	53
146			
147	INSERT 10 FT. (3.05M) #22	33407	31
148	INSERT 10 FT. (3.05M) #22E (AUX. DRUM)	177291	25
149	INSERT 10 FT. (3.05M) #22E	178758	48
150			
151	PENDANT 10 FT. (3.05M)	276861	11
152	INSERT 20 FT. (6.10M) #22(W/O JIB BKSTY)	33426	31
153	INSERT 20 FT. (6.10M) #22E(W/O JIB BKSTY)	178757	48
154	INSERT 20 FT. (6.10M) #22(W/JIB BACKSTAY)	623580	19
155	INSERT 20 FT. (6.10M) #22E(W/JIB BACKSTAY)	178794	48
156			

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
117	BOOM SIGN	22656	
118	BOOM TOP 40 FT. #22L	196142	6
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	7
124	PENDANT BASIC 36 FT. -6.00 (11.1 M)	277425	12
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			

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
88	2PIN	170690	22
89			

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
1610-0000	BASIC JIB 70 FT. (21.3M)		



#22EL BOOM/#135 JIB ASSEMBLY

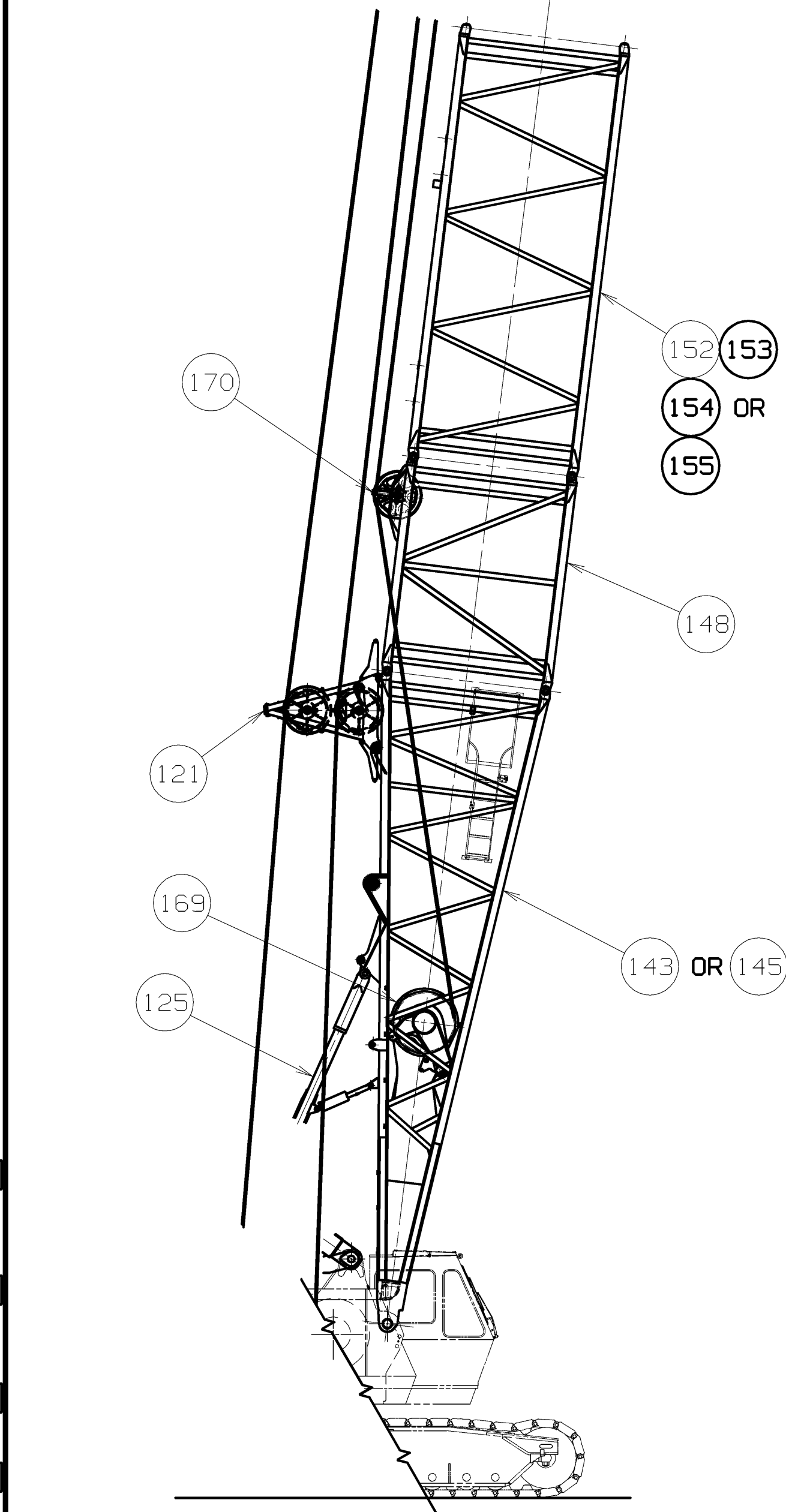
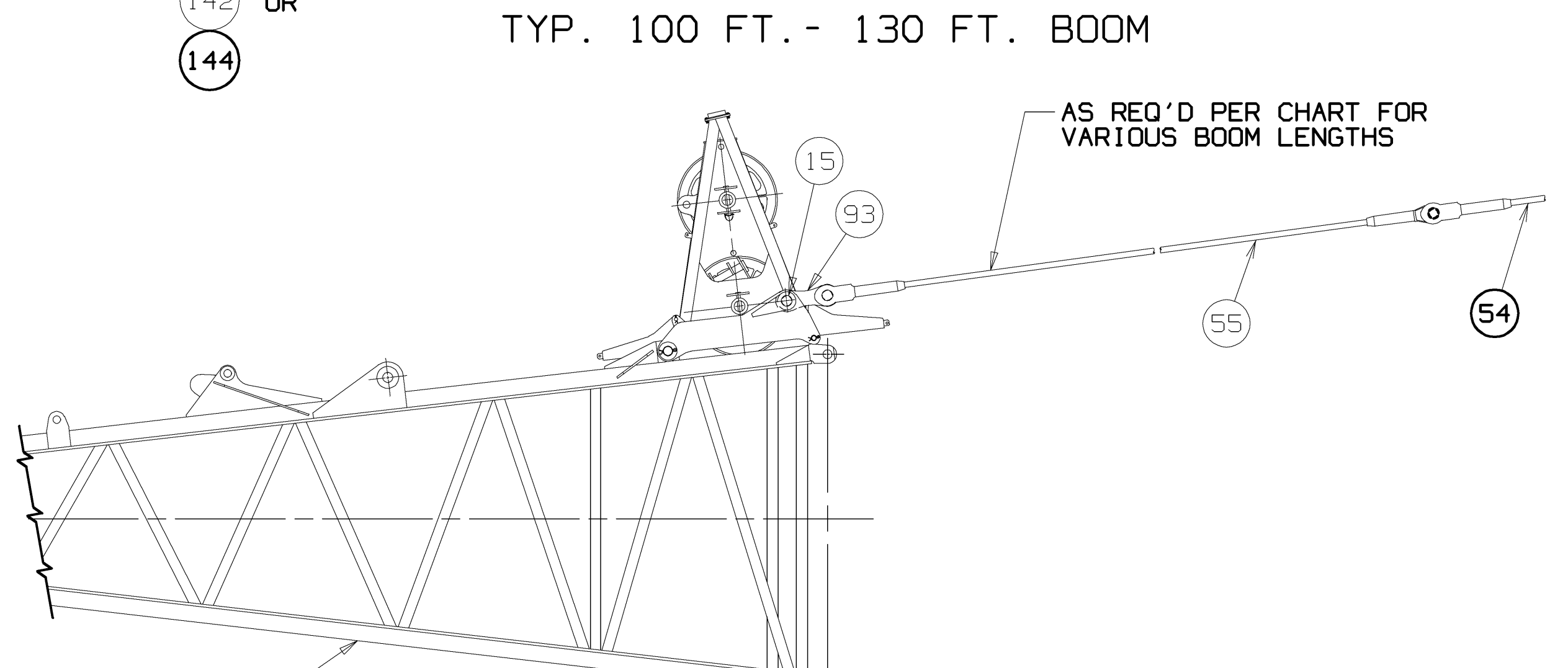
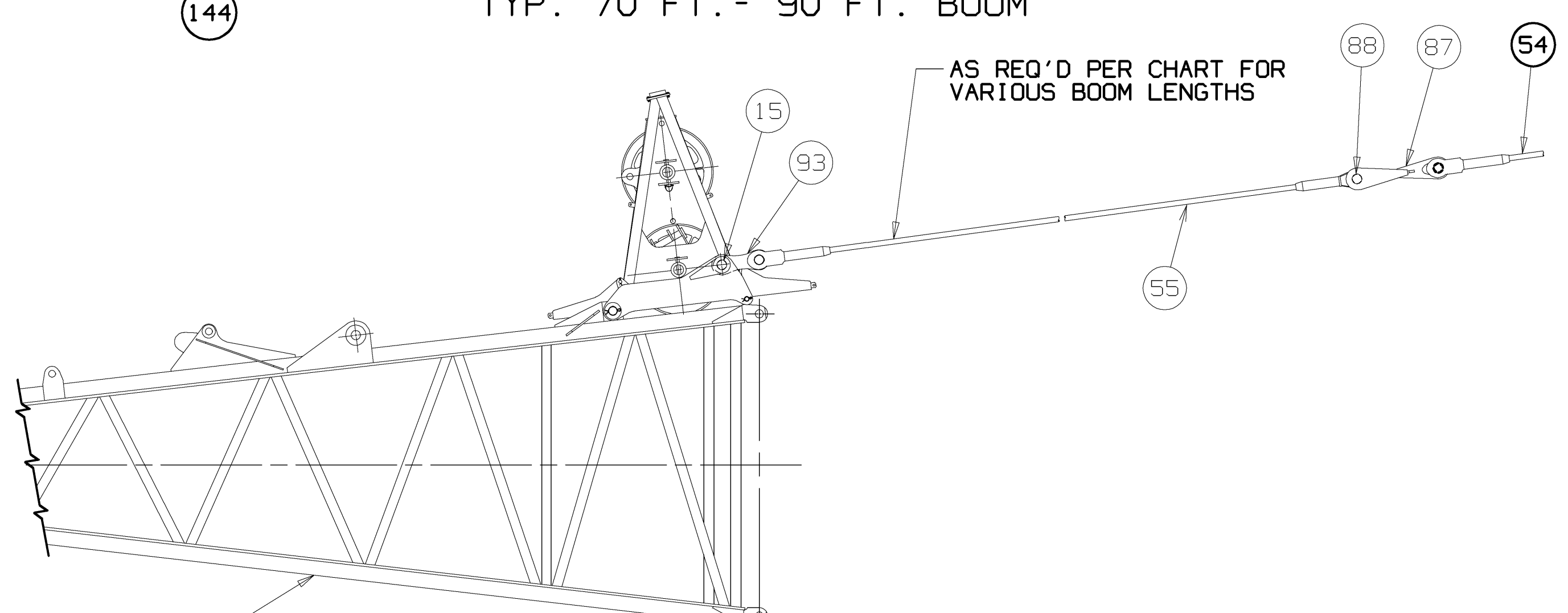
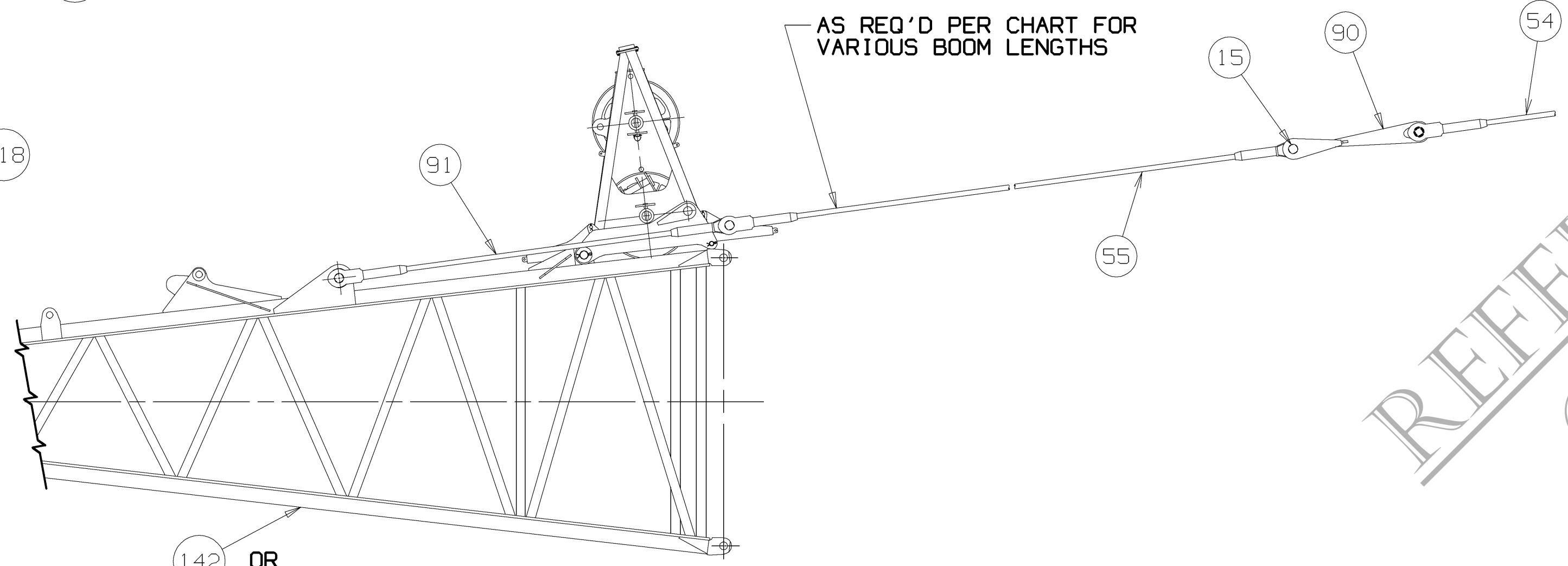
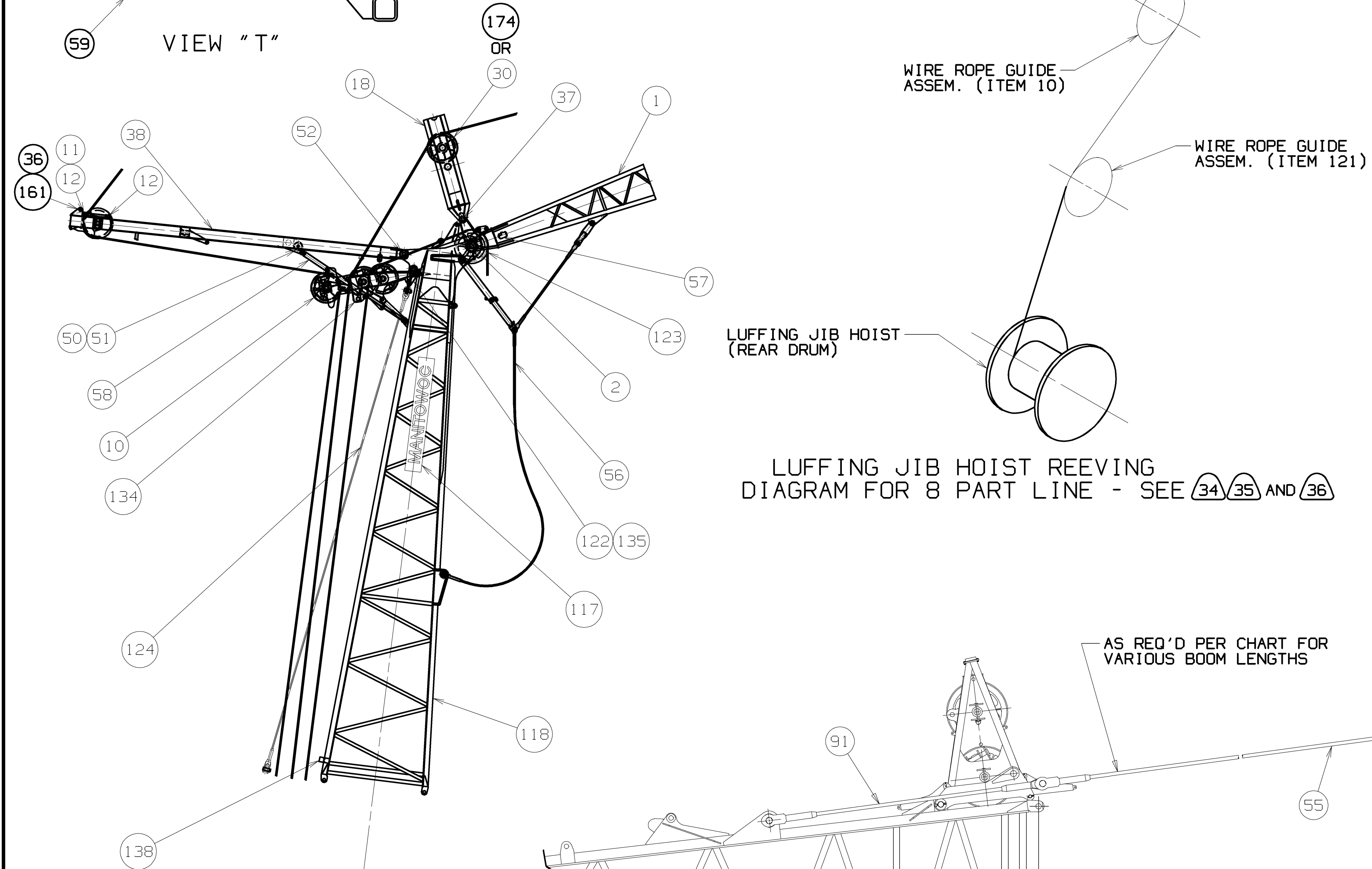
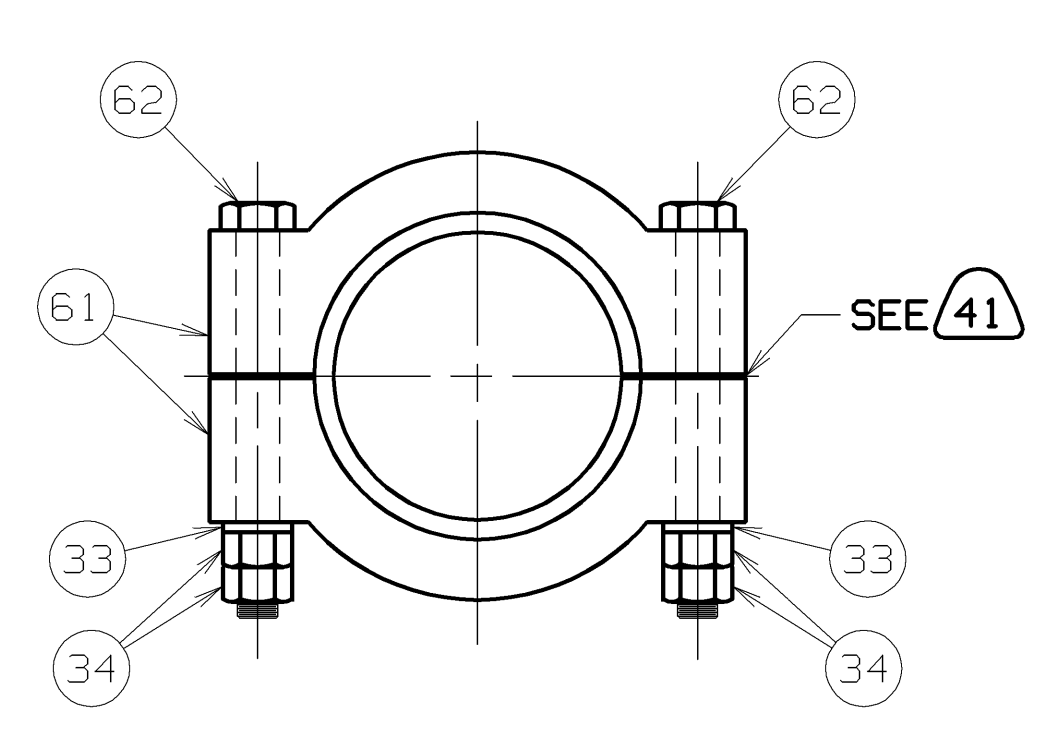
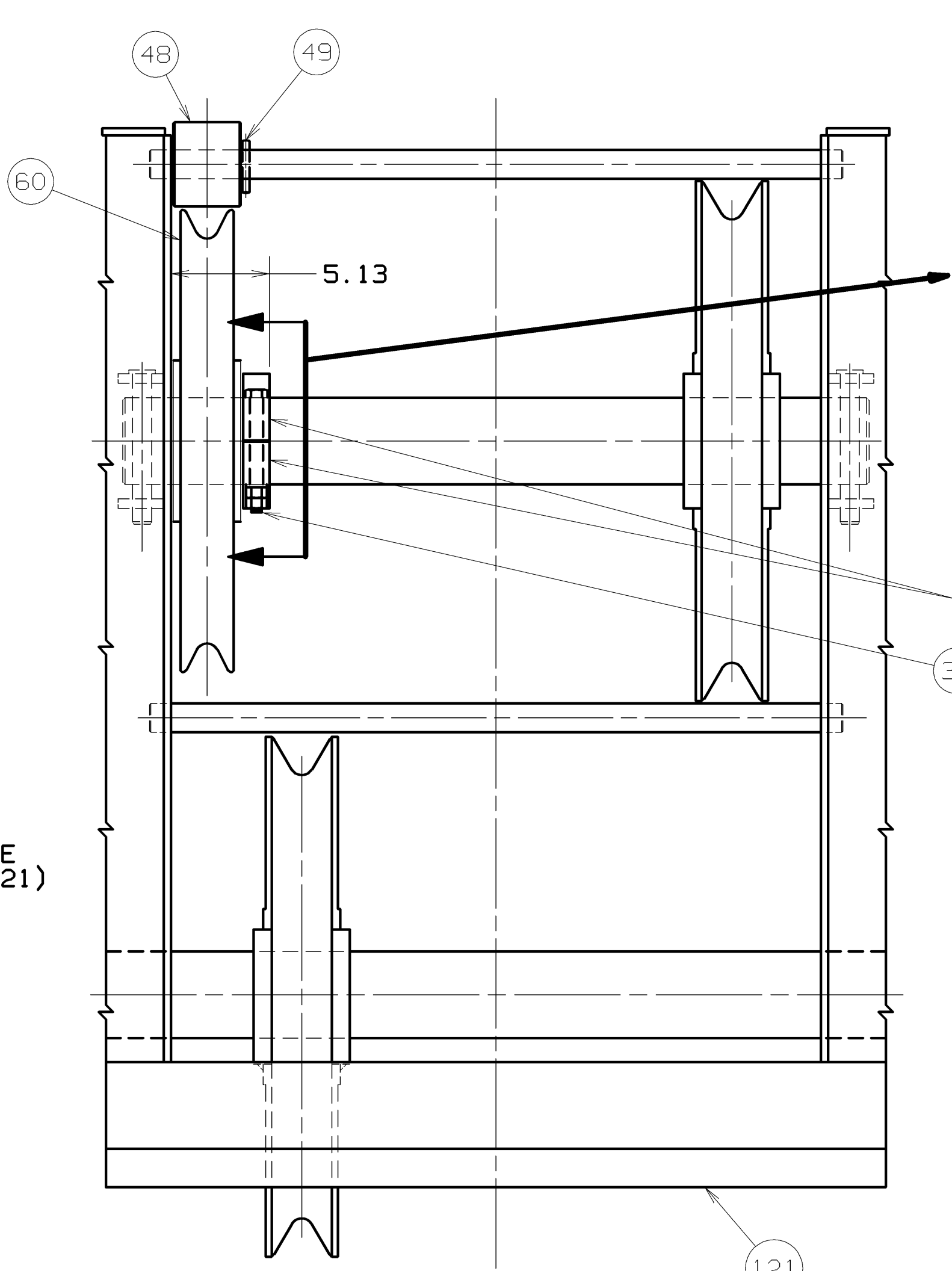
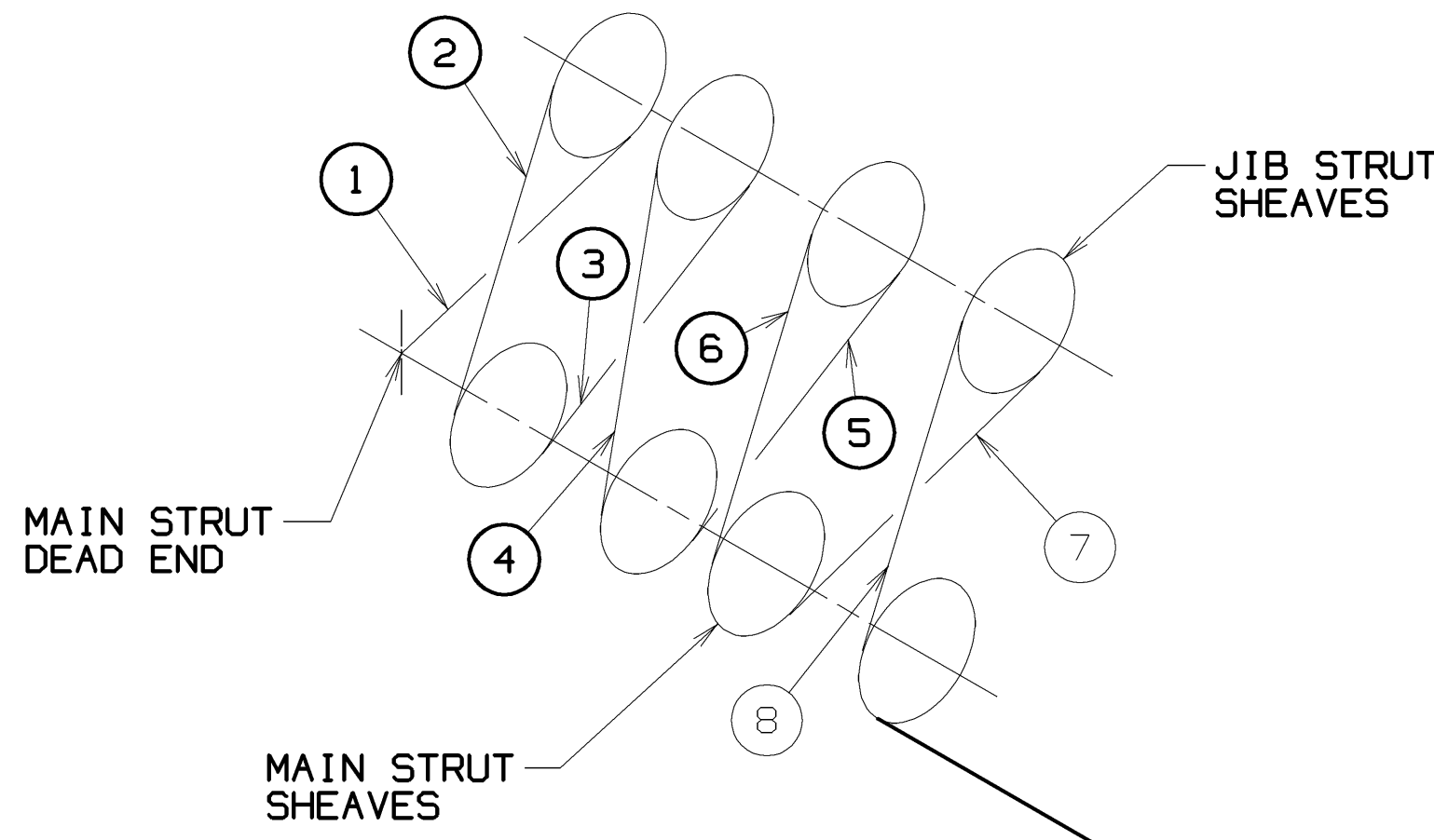
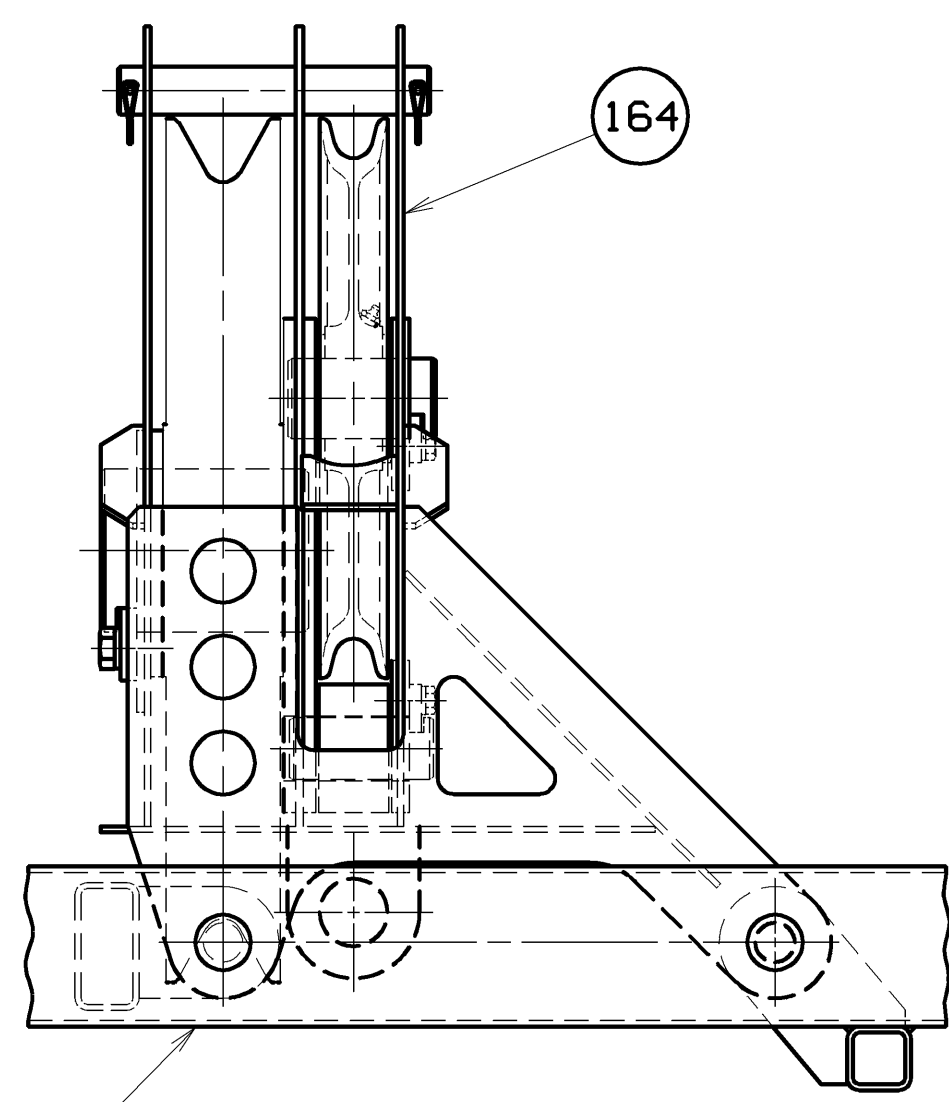
INSERTS, PENDANTS, ROLLER GUIDES, LINKS & PINS REQ'D. FOR VARIOUS JIB LENGTHS											
ITEM NO.		63	69	75 OR 81	64 DWG. 78145	70 DWG. 78145	76 OR 82 DWG. 78145	66,72 DWG. 78 OR 84	67,73 DWG. 79 OR 85	14	15
JIB LENGTHS		10 FT 3.05 M INSERT	20 FT 6.10 M INSERT	40 FT 12.19 M INSERT	10 FT-1.0 3.07 M PENDANT	20 FT-1.5 6.13 M PENDANT	40 FT-3.0 12.27 M PENDANT	WIRE ROPE TIMBER	BOOM JOINT PIN	PENDANT LINK 24.00 (610mm)	PIN
FEET	METERS										
70	21.3	0	1	0	0	2	0	1	4	2	2
80	24.4	1	1	0	2	2	0	2	8	2	2
90	27.4	OR 0	2	0	0	4	0	2	8	2	2
100	30.5	OR 1	2	0	2	4	0	3	12	2	2
110	33.5	0	1	1	0	2	2	3	8	0	0
120	36.6	1	1	1	2	2	2	4	12	0	0
130	39.6	OR 0	2	1	0	4	2	4	12	0	0
140	42.7	OR 1	2	1	2	4	2	5	16	0	0
150	45.7	0	1	2	0	2	4	5	12	0	0
160	48.8	1	1	2	2	2	4	6	16	0	0
170	51.8	OR 0	2	2	0	4	4	6	16	0	0

INSERTS, PENDANTS, AND ROLLER GUIDES REQUIRED FOR VARIOUS BOOM LENGTHS										JIB BACKSTAY PENDANTS, LINKS & PINS REQUIRED FOR VARIOUS BOOM LENGTHS					
ITEM NO.		147, 148, OR 149	152, 153, OR 154	159, 160, 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 36.00 (991mm)	PENDANT LINK 11.00 (279mm)	PENDANT LINK 24.00 (610mm)	PIN
FEET	METERS														
70	21.3	0	0	0	0	0	0	0	2	0	0	2	0	0	2
80	24.4	1	0	0	4	0	0	0	OR 4	0	0	2	0	0	2
90	27.4	OR 2	0	0	8	0	0	0	OR 5	0	0	2	0	0	2
100	30.5	1	1	0	4	4	0	1	2	2	0	0	2	2	4
110	33.5	OR 2	1	0	8	4	0	1	OR 4	2	0	0	2	2	4
120	36.6	OR 1	2	0	4	8	0	2	OR 2	4	0	0	2	2	4
130	39.6	OR 2	0	1	8	0	4	2	OR 4	2	2	0	2	2	4
140	42.7	1	1	1	4	4	4	3	OR 0	6	0	0	2	2	4
150	45.7	OR 2	1	1	8	4	4	3	OR 0	4	4	0	2	0	2
160	48.8	OR 1	2	1	4	8	4	4	OR 2	4	2	0	2	0	2
170	51.8	OR 2	0	2	8	0	8	4	OR 4	0	4	0	2	0	2
180	54.9	1	1	2	4	4	8	5	2	2	4	0	2	0	2
190	57.9	OR 2	1	2	8	4	8	5	OR 4	2	4	0	2	0	2
200	61.0	OR 1	2	2	4	0	12	6	OR 0	4	4	0	2	0	2

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
81	INSERT 40 FT. (12.19M)	48208	319
82	PENDANT 40 FT. -3.00 (12.27M)	277384	24
83			
84	2TIMBER	192022	22
85	4BOOM JOINT PIN	70366	22
86			
87	PENDANT LINK 24.00 (610mm)	177553	36

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
1610-0010	INSERT 10 FT. (3.05M)	A00038	
63	1INSERT 10 FT. (3.05M)	180136	19
64	2PENDANT 10 FT. -1.00 (3.07M)	277382	24
66	1TIMBER	192022	22
67	4BOOM JOINT PIN	70366	22
68			
1610-0020	INSERT 20 FT. (6.10M)		
69	1INSERT 20 FT. (6.10M)	180137	19
70	2PENDANT 20 FT. -1.50 (6.13M)	277383	24
71			
72	1TIMBER	192022	22
73	4BOOM JOINT PIN	70366	22
74			
1610-0030	INSERT 40 FT. (12.19M) WITHOUT JIB BACKSTAY LUGS		
75	1INSERT 40 FT. (12.19M)	48208	219
76	2PENDANT 40 FT. -3.00 (12.27M)	277384	24
77			
78	2TIMBER	192022	22
79	4BOOM JOINT PIN	70366	22
80			
1610-0040	INSERT 40 FT. (12.19M) WITH JIB BACKSTAY LUGS		
81	1INSERT 40 FT. (12.19M)	48208	319
82	2PENDANT 40 FT. -3.00 (12.27M)	277384	24
83			
84	2TIMBER	192022	22
85	4BOOM JOINT PIN	70366	22
86			
1610-0050	LINKS & PINS - JIB BACKSTAY BOOM LENGTHS 100-130 FT. (30.5-39.6M)		
87	2PENDANT LINK 24.00 (610mm)	177553	36

SUPERSEDES 177063 SHT.1 OF 09-06-96



- 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 STORAGE DURING SHIPPING BUT MUST BE REMOVED FOR CRANE OPERATION.
- 45 WHEN (ITEM 153 OR 155) INSERT 20 FT. (6.10M) #22E IS USED, (2) TIMBERS (ITEM 168) ARE REQUIRED FOR STORAGE 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 STORAGE 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.

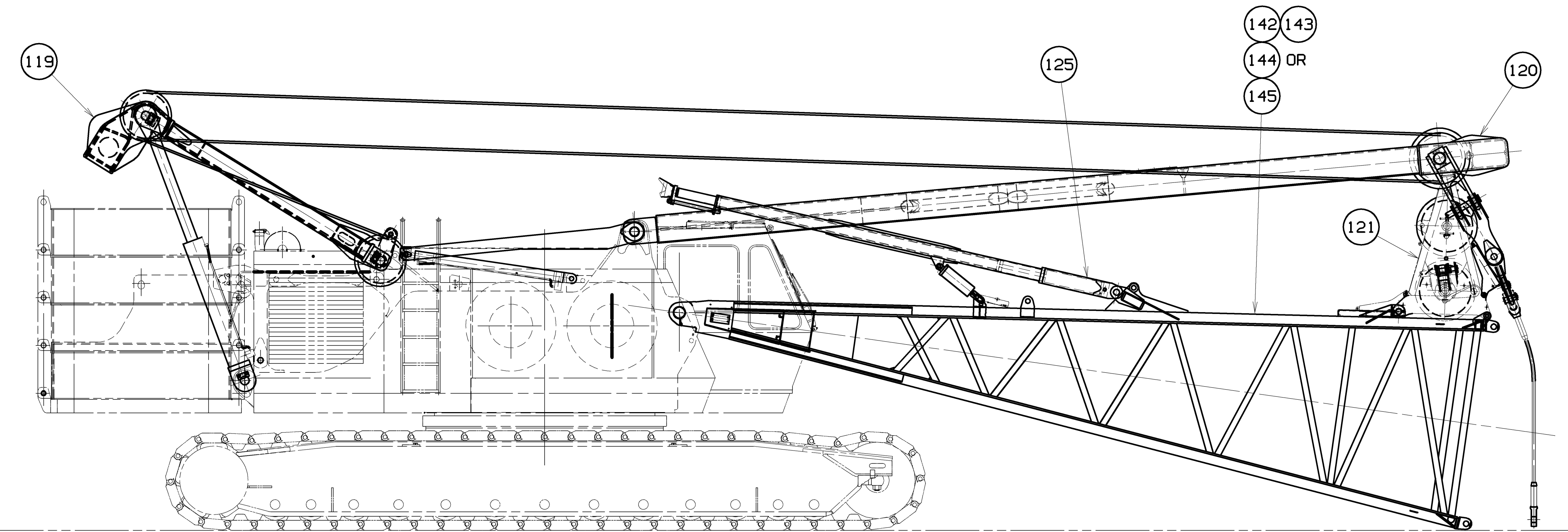
- 1 EXISTING 10 FT. (3.05M) BOOM INSERT (33407-2) CAN ALSO BE USED.
- 2 (33426-3) IS WITHOUT JIB BACKSTAY LUGS. (623580) IS WITH JIB BACKSTAY LUGS. EXISTING 20 FT. (6.10M) BOOM INSERT (623564) WITHOUT JIB BACKSTAY LUGS CAN ALSO BE USED.
- 3 (50609-2) IS WITHOUT JIB BACKSTAY LUGS. (623526) IS WITH JIB 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 (78145).
- 9 ON DRAWING (147109).
- 10 ON DRAWING (79335).
- 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 OR JIB BUTT, INSERTS AND PENDANTS MUST BE ASSEMBLED IN ORDER OF ASCENDING LENGTH. THE SHORTER INSERTS AND PENDANTS MUST BE CLOSEST TO THE BOOM OR JIB 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 14 & 87) ARE THE SAME PART NO. (177553). (ITEMS 64, 91 & 96) ARE THE SAME PART NO. (277382). (ITEMS 13, 70 & 97) ARE THE SAME PART NO. (277383). (ITEMS 76, 82 & 98) ARE THE SAME PART NO. (277384).
- 23 SEE 8, 21 AND 22
- 24 SEE 8, 19 AND 22
- 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 148) 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 ATTACHES TO BASIC PENDANT (ITEM 16) 25 FT.-11 (7.90M).
- 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 87KV 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 87KV 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. (3.07M) PENDANT (277382), 20 FT. (6.13M) PENDANT (277383) AND 40 FT. (12.27M) PENDANT (277384) FOR JIB/JIB BACKSTAY.
- 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.

N #22EL BOOM/#135 JIB ASSEMBLY WITH AUX. DRUM SHAFT ASSEMBLY

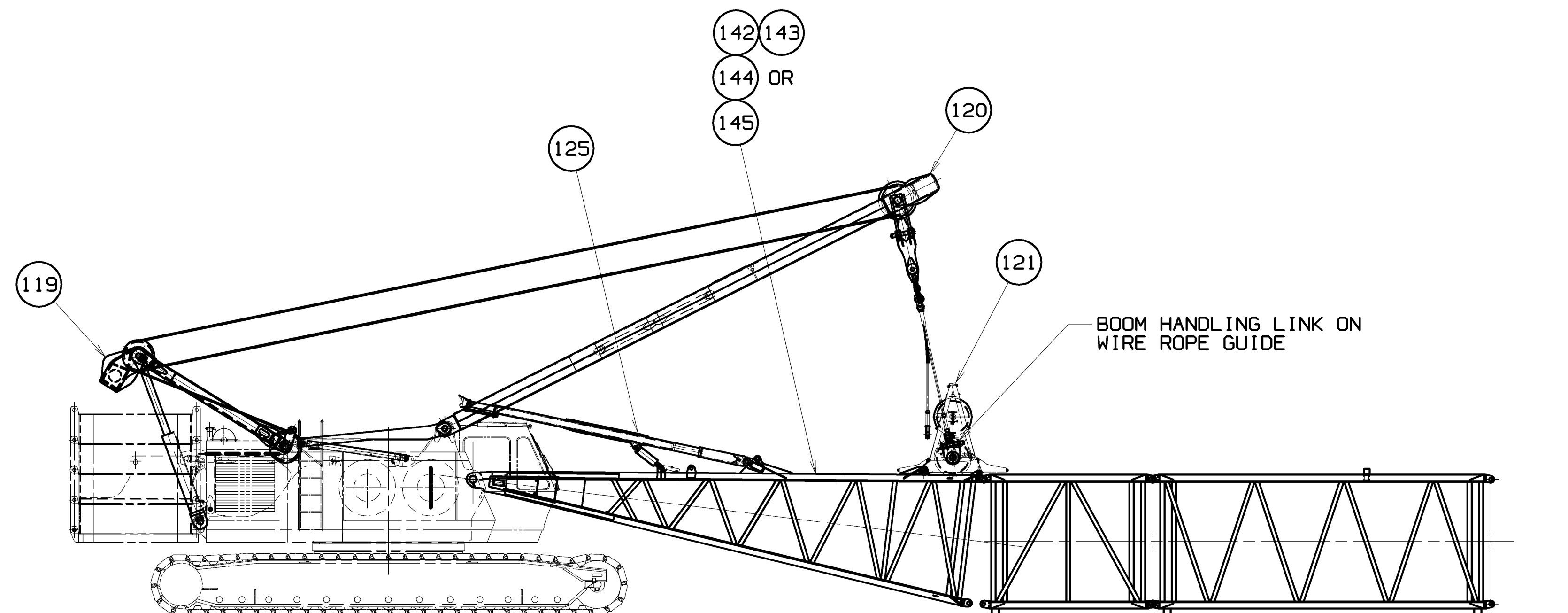
VIEW "E" BASIC JIB BACKSTAY PENDANT ARRANGEMENTS

SUPERSEDES 177063 SHT.3 OF 09-06-96

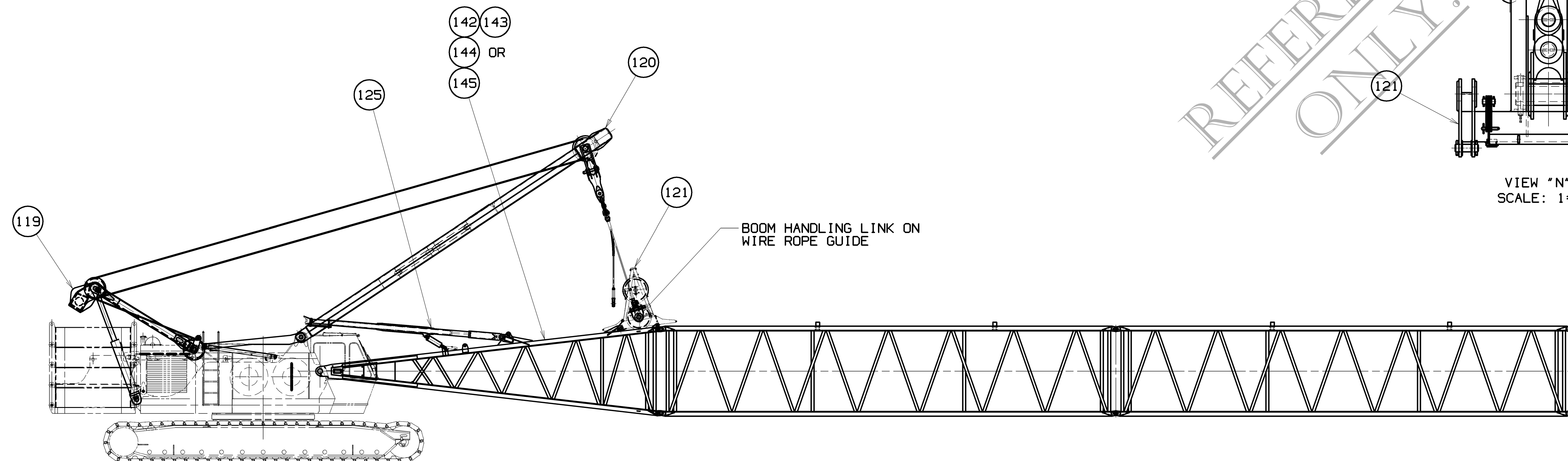
BILL OF MATERIAL				ASSEMBLIES USED ON	
QTY	UNIT	DESCRIPTION	LOGS	MATERIAL	QTY
1	EA	EXISTING 10 FT. (3.05M) BOOM INSERT (33407-2) CAN ALSO BE USED.			
2	EA	(33426-3) IS WITHOUT JIB BACKSTAY LUGS. (623580) IS WITH JIB BACKSTAY LUGS. EXISTING 20 FT. (6.10M) BOOM INSERT (623564) WITHOUT JIB BACKSTAY LUGS CAN ALSO BE USED.			
3	EA	(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	EA	IF #23 BOOM TOP (191029) IS TO BE USED AS THE #135 LUFFING JIB TOP, MODIFY PER (421224).			
5	EA	IF #22E BOOM BUTT (ITEM 142) IS NOT EQUIPPED WITH JIB BACKSTAY LUGS, MODIFY PER (421226).			
6	EA	IF #22L BOOM TOP (ITEM 118) IS NOT EQUIPPED WITH JIB STOP LUGS, MODIFY PER (421225).			
7	EA	(7) - 30.00 DIA. SHEAVES			
8	EA	ON DRAWING (78145).			
9	EA	ON DRAWING (147109).			
10	EA	ON DRAWING (79335).			
11	EA	ON DRAWING (76280).			
12	EA	ON DRAWING (140773).			
13	EA	TIGHTEN BEARING LOCKNUT (ITEM 19) SUFFICIENTLY TO CLAMP BEARING INNER RACE.			
14	EA	MAXIMUM NO. OF 10 FT. (3.05M) BOOM INSERTS = (2)			
15	EA	MAXIMUM NO. OF 20 FT. (6.10M) BOOM INSERTS = (2)			
16	EA	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	EA	SEE 1, 14, 16 AND 49			
18	EA	SEE 2, 15, 16 AND 50			
19	EA	STARTING WITH THE BOOM OR JIB BUTT, INSERTS AND PENDANTS MUST BE ASSEMBLED IN ORDER OF ASCENDING LENGTH. THE SHORTER INSERTS AND PENDANTS MUST BE CLOSEST TO THE BOOM OR JIB BUTT.			
20	EA	REQUIRED FOR BASIC BACKSTAY PENDANT. ATTACHES TO LINK SUB-ASSEMBLY (ITEM 53).			
21	EA	REQUIRED FOR BASIC JIB PENDANT. ATTACHES TO THE JIB TOP (ITEM 6) LINK.			
22	EA	(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 14 & 87) ARE THE SAME PART NO. (177553). (ITEMS 64, 91 & 96) ARE THE SAME PART NO. (277382). (ITEMS 13, 70 & 97) ARE THE SAME PART NO. (277383). (ITEMS 76, 82 & 98) ARE THE SAME PART NO. (277384).			
23	EA	SEE 8, 21 AND 22			
24	EA	SEE 8, 19 AND 22			
25	EA	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 148) 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	EA	IF BOOM BUTT (ITEM 142) IS TO BE USED WITH AUXILIARY DRUM SHAFT ASSEMBLY (ITEM 169), MODIFY PER (421218).			
27	EA	ATTACHES TO BASIC PENDANT (ITEM 16) 25 FT.-11 (7.90M).			
28	EA	ATTACHES TO JIB STRUT LINK SUB-ASSEMBLY (ITEM 17).			
29	EA	INSTALL WITH HEAD OF PENDANT PIN (ITEM 9) TO THE INSIDE.			
30	EA	SEE VIEW 'E' FOR VARIOUS JIB BACKSTAY PENDANT (ITEM 55) AND PENDANT LINK (ITEMS 87, 90 AND 93) ARRANGEMENTS.			
31	EA	PENDANTS SHOWN - SEE VIEW A-A ARE CALLED FOR ON MAST ASSEMBLY (ITEM 120).			
32	EA	REFER TO SPECIFIC CAPACITY CHART FOR APPROPRIATE BOOM AND JIB COMBINATIONS.			
33	EA	REFER TO LUFFING JIB RAISING PROCEDURE (7826A) FOR RAISING AND LOWERING BOOM AND JIB.			
34	EA	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	EA	WIRE ROPE - 1.00 INCH X 850 FT. PYTHON 87KV RIGHT HAND REGULAR LAY. BREAKING STRENGTH OF 120,600 LBS. FOR USE WITH LAGGING (502382) ON REAR HOIST DRUM.			
36	EA	WIRE ROPE - 26MM X 850 FT. PYTHON 87KV RIGHT HAND REGULAR LAY. BREAKING STRENGTH OF 126,400 LBS. FOR USE WITH LAGGING (502372) ON REAR HOIST DRUM.			
37	EA	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	EA	USE (4) PINS (70366) FROM INSERT ADJACENT TO ADAPTER ASSEMBLY (ITEM 5) FOR JIB TOP CONNECTION.			
39	EA	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. (3.07M) PENDANT (277382), 20 FT. (6.13M) PENDANT (277383) AND 40 FT. (12.27M) PENDANT (277384) FOR JIB/JIB BACKSTAY.			
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.					



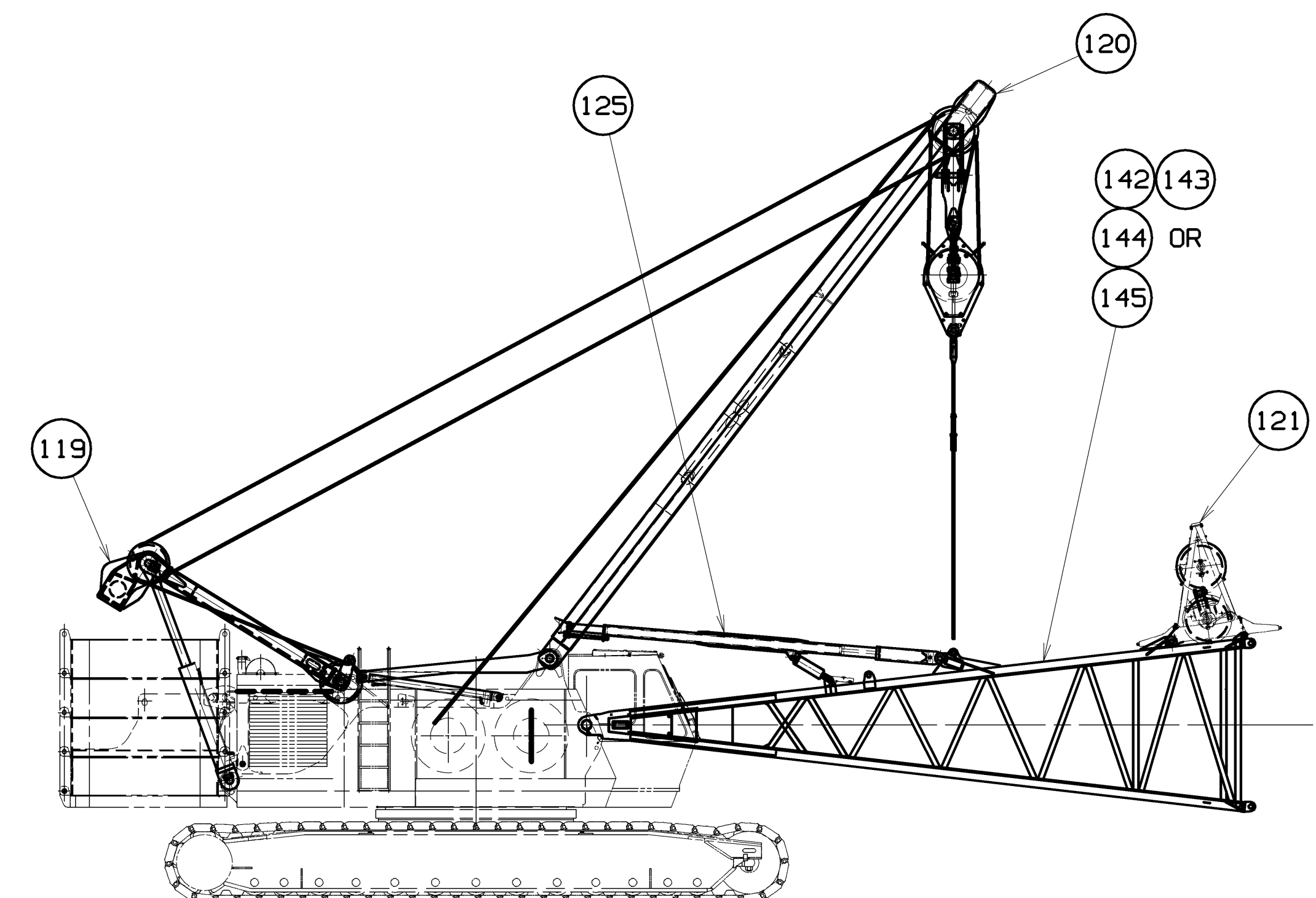
MAST RESTING ON BOOM BUTT WIRE ROPE GUIDE



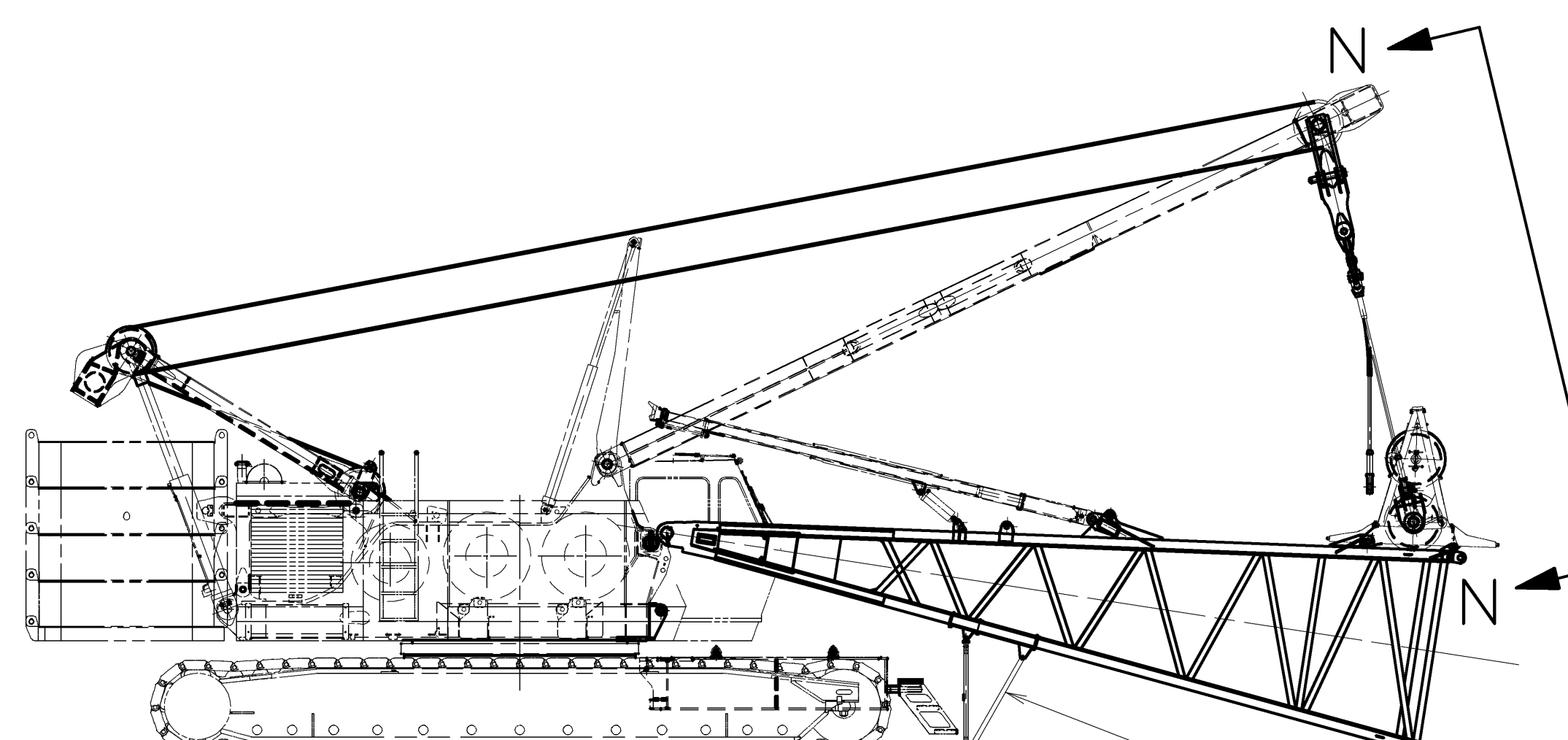
BOOM ASSEMBLY WITH MAST



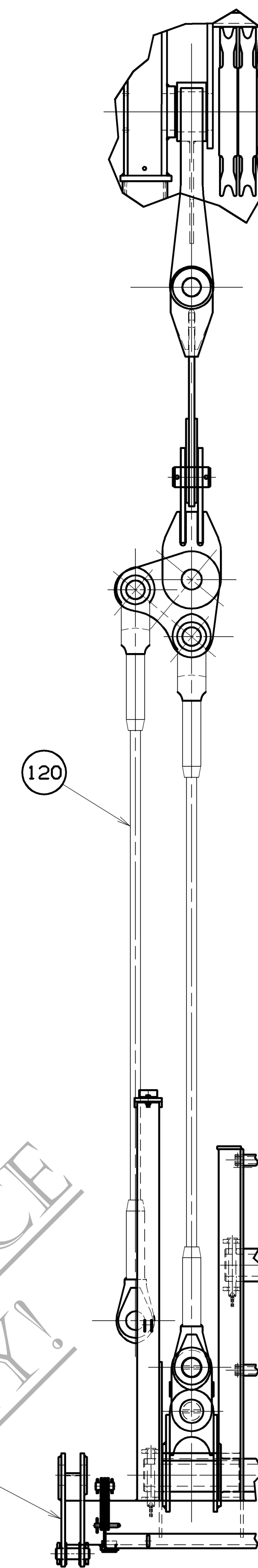
BOOM HANDLING WITH MAST



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.

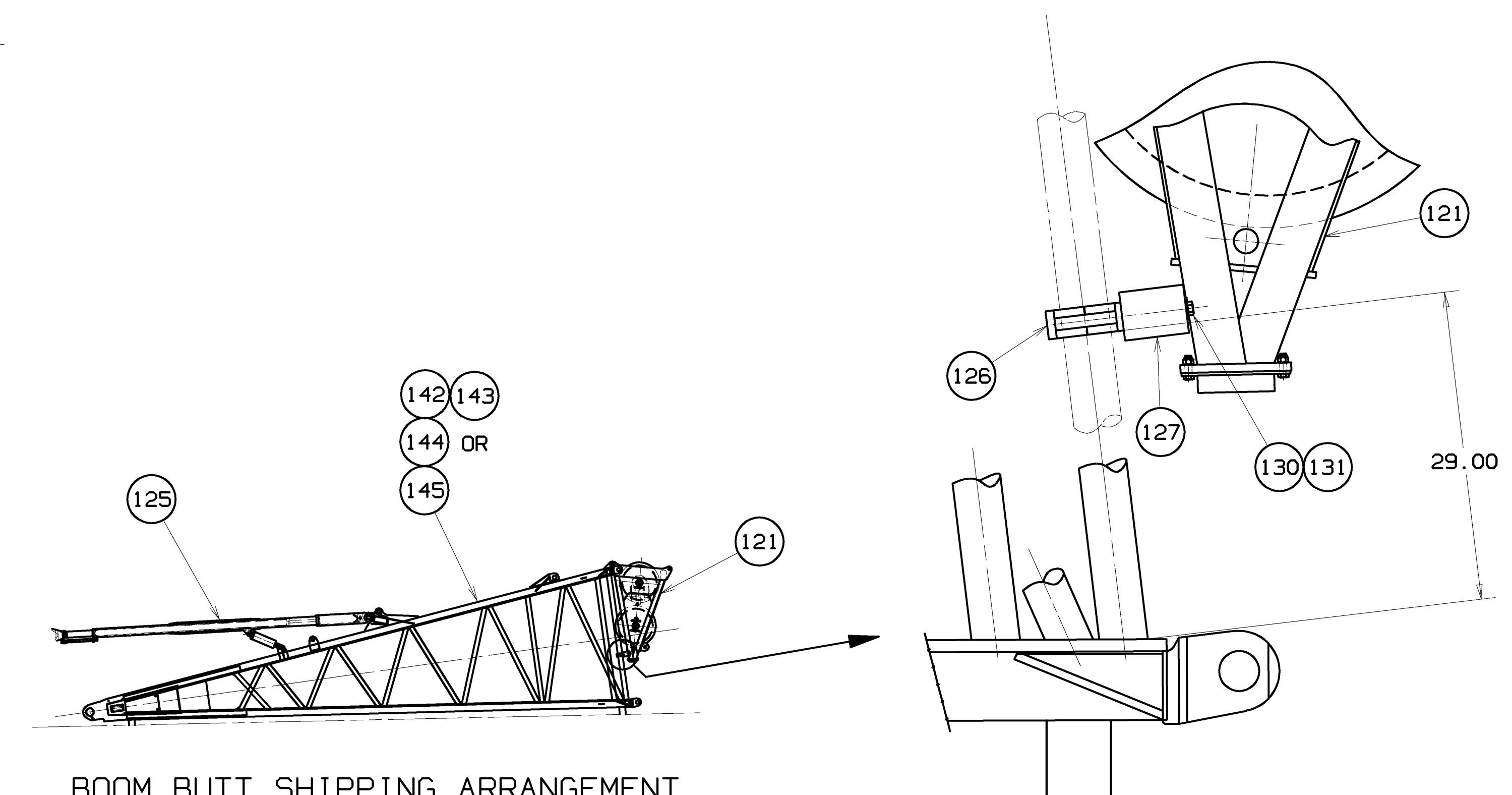
WARNING:

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.
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

SUPERSEDES 177063 SHT.4 OF 03-15-96

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		DECIMAL PLACES		FABRICATION		MACHINING		PATTERN NO.			
		(1) PLACE 0.0		$\pm .12$		$\pm .18$		DR. ACK		TSC	
		(2) PLACE 0.00		$\pm .06$		$\pm .12$		CK. TSC		TSC	
		(3) PLACE 0.000		$\pm .03$		$\pm .06$		APP. TSC		TSC	
								MODEL 888		#22EL BOOM/#135 JIB	
								WITH STOWABLE PENDANTS		177,063	

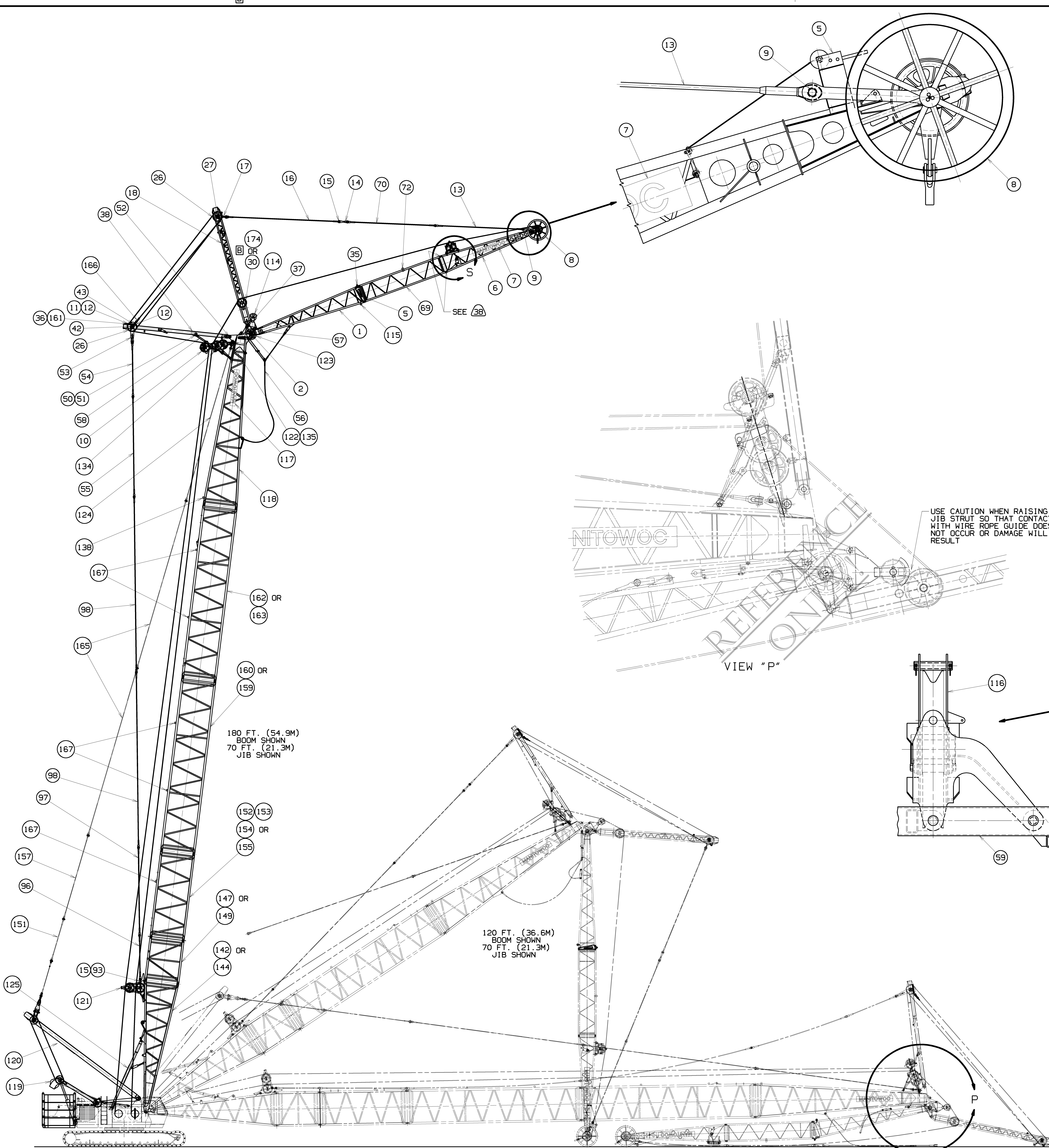
PRIVATE LABELING REQUIREMENT TO CONFORM TO ENGINEERING SPECIFICATION 6829103794 FOR COMPONENTS LISTED IN 6829103-056

DATE: 03-25-97

PATTERN NO.:

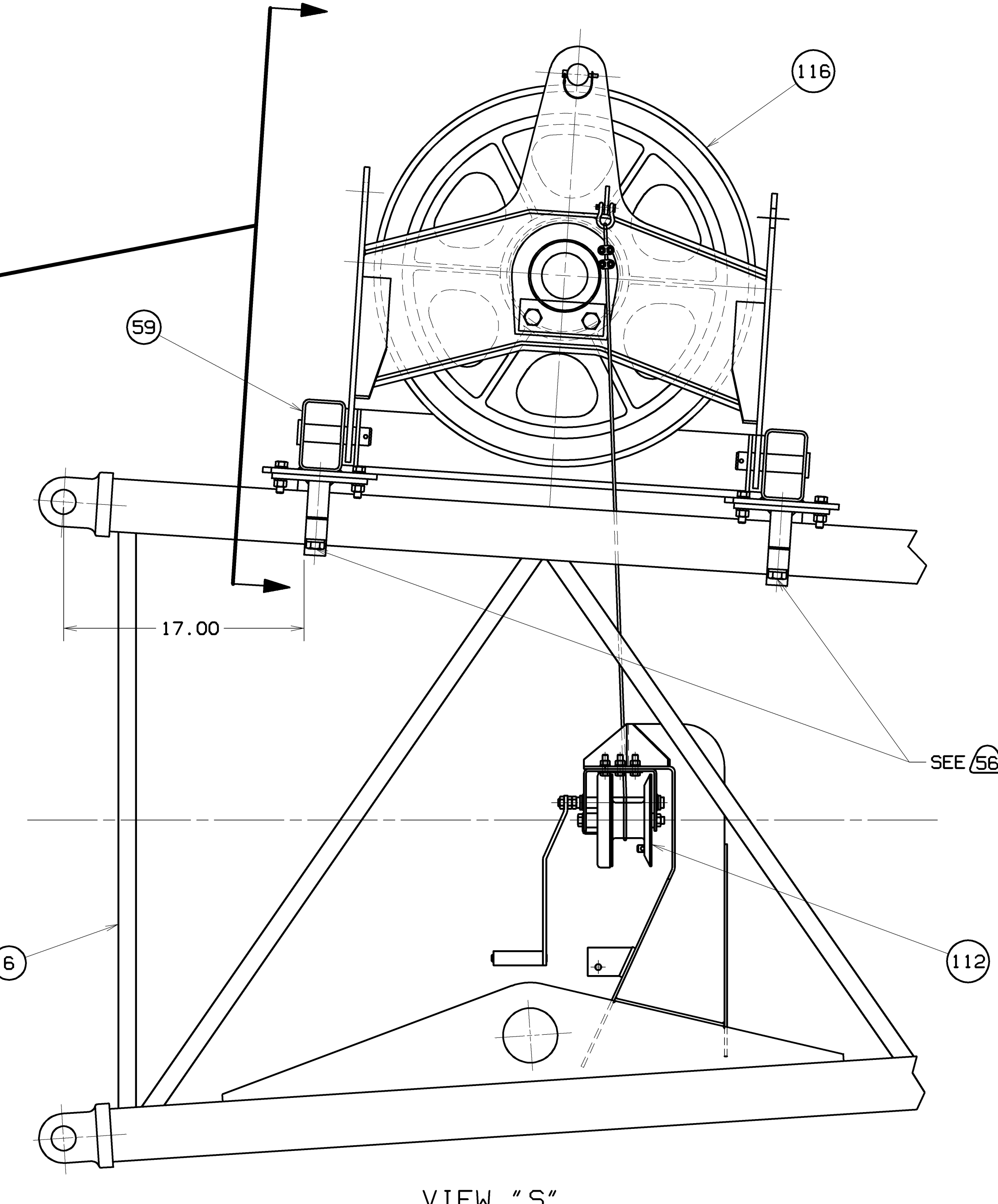
177063

SHT. 4 OF 6



BILL OF MATERIAL

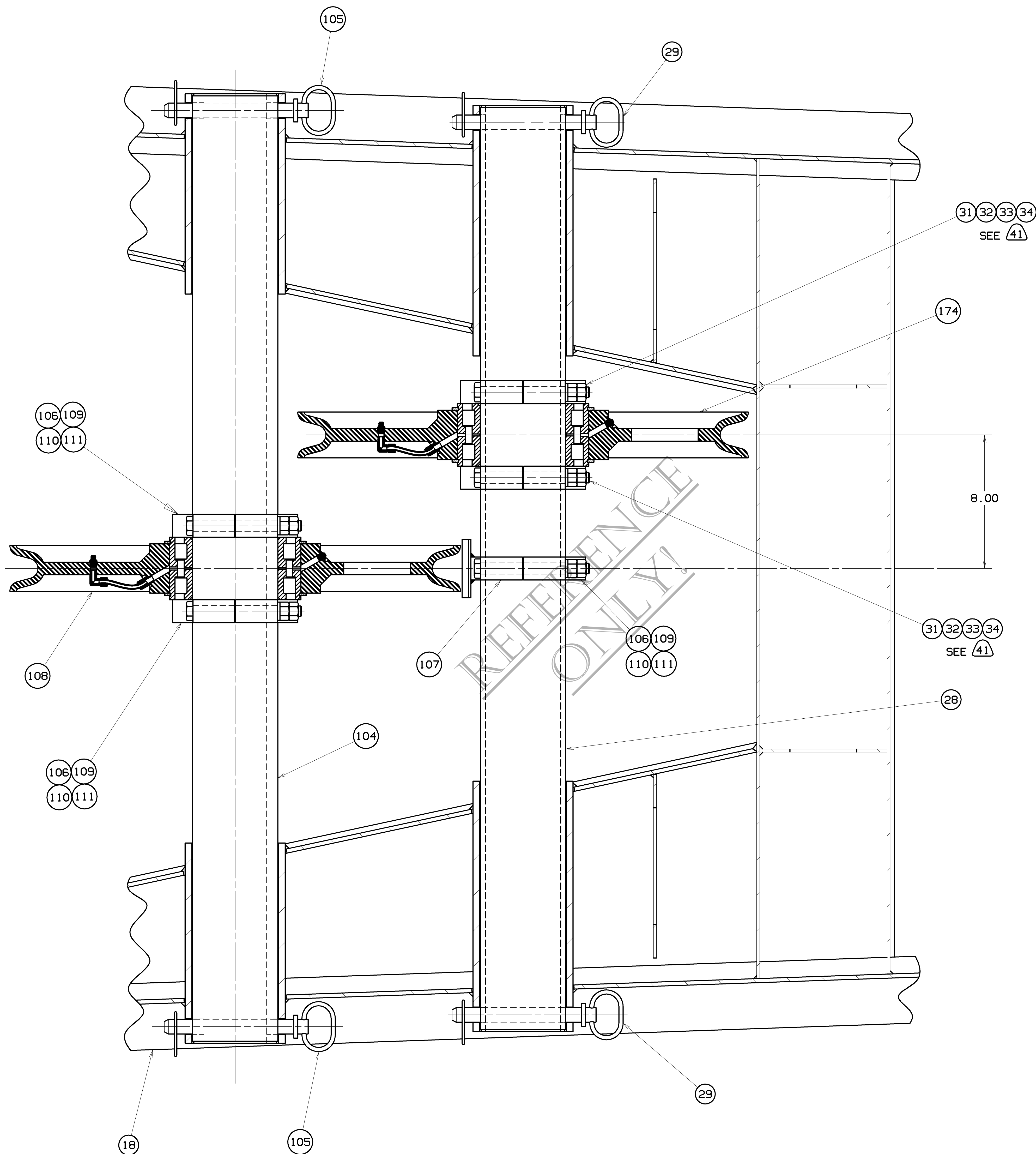
ITEM NO.	QTY	DESCRIPTION	LOGS	MATERIAL	QTY	QTY
FOLD-UNDER LUFFING JIB RAISING CONDITIONS						
(SEE LUFFING JIB RAISING PROCEDURE 7826-A)						
NOTE: THE FOLLOWING IS REQUIRED FOR FOLD-UNDER OPERATION.						
A) WIRE ROPE GUIDE ASSEMBLY (ITEM 114) MUST BE INSTALLED.						
B) ADAPTER ASSEMBLY (ITEM 5) 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 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.						



#22EL BOOM/#135 JIB ASSEMBLY

TOLERANCE UNLESS OTHERWISE SPECIFIED		FABRICATION		MACHINING	
DECIMAL PLACES	±	10 FEET	±	10 FEET	±
(1) PLACE 0.0	±	0.12	±	0.12	±
(2) PLACE 0.00	±	0.06	±	0.06	±
(3) PLACE 0.000	±	0.03	±	0.03	±
ANGLES	±	1°	±	1°	±
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		APP. TSC		MODEL 888	
				LUFFING JIB RIGGING	
				ASSEM. - FOLD UNDER JIB	
				#22EL BOOM/#135 JIB	
				WITH STOWABLE PENDANTS	

DO NOT SCALE THIS DRAWING



SECTION "H" - "H"
SHOWN ITEMS 108 & 174. FOR ORIENTATION OF GREASING ONLY
SCALE: 4=1FT