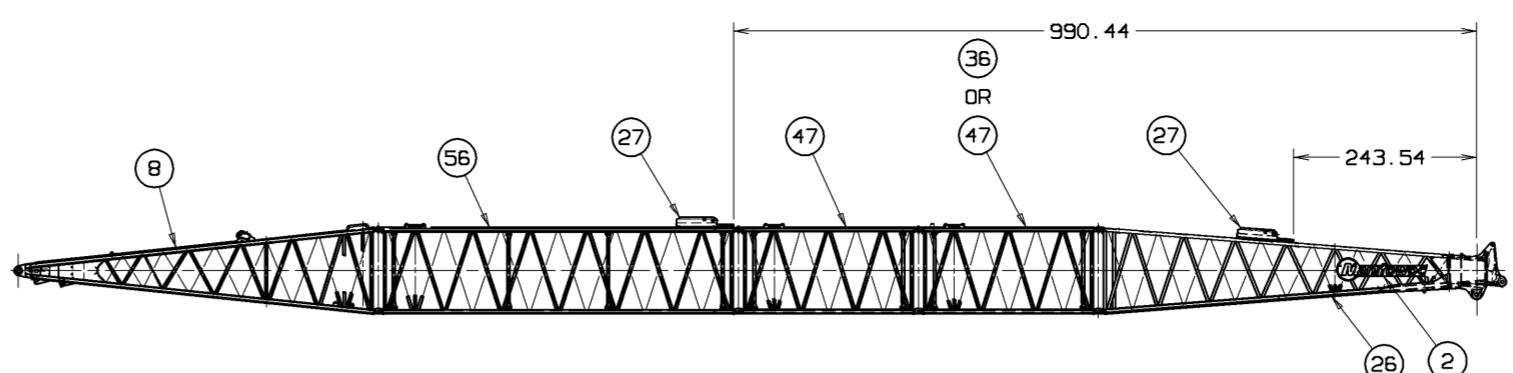


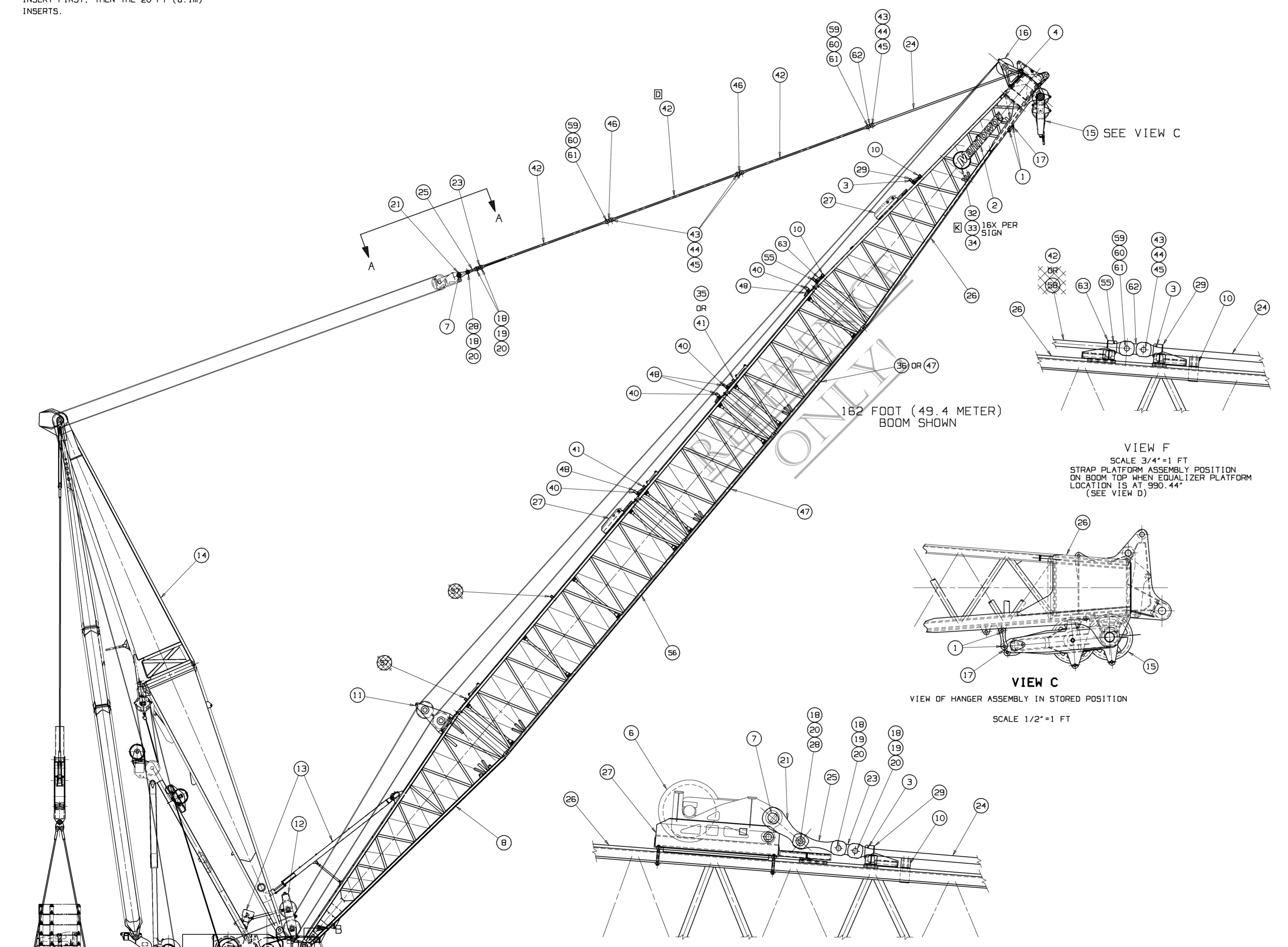
ADDITIONAL PARTS REQUIRED FOR VARIOUS BOOM LENGTHS

ITEM NO.	36.47	56	21	23.46.62	25	24	42.56	18.43.59	19.44.60	28	20.45.61	10.41.52	27.29.48.63		
BOOM LENGTH	#49A 20 FT 6.10 M INSERT	#49A 40 FT 12.19 M INSERT	BOOM SUPPORT LINK	BOOM SUPPORT LINK	BOOM SUPPORT STRAP BASIC	BOOM SUPPORT STRAP BASIC	BOOM SUPPORT STRAP 20FT	COLLAR	PIN	PIN	PIN	TIMBERS	EQUALIZER PLATFORM LOCATION SEE VIEW D		
FEET													SEE (5)		
METERS															
7	82 BASIC	25.0	0	0	4	4	2	2	0	6	4	2	6	2	243.54
7	102	31.1	1	0	4	4	2	2	0	6	4	2	6	3	243.54
8	122	37.2	0	1	4	8	2	2	2	10	8	2	10	4	990.44
8	142	43.3	1	1	4	12	2	2	4	14	12	2	14	5	990.44
8	162	49.4	2	1	4	16	2	2	6	18	16	2	18	6	990.44

INSERT NOTES:
 1. THE LONGER #49A INSERTS MUST BE LOCATED CLOSEST TO THE BOOM BUTT. 40 FT (12.2m) INSERT FIRST, THEN THE 20 FT (6.1m) INSERTS.

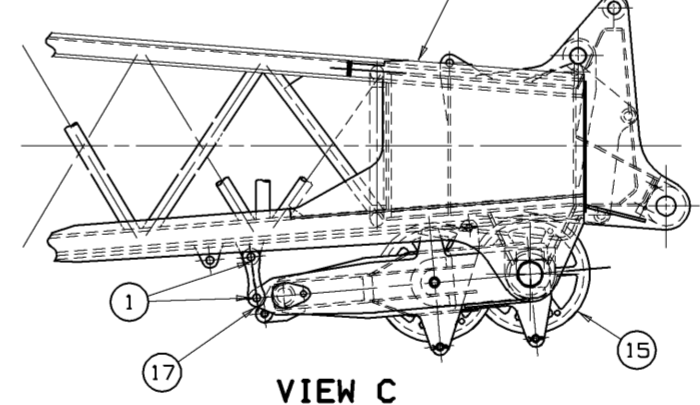


EQUALIZER PLATFORM ITEM 27 LOCATIONS REF. REQ'D. FOR VARIOUS BOOM LENGTHS TABLE



162 FOOT (49.4 METER) BOOM SHOWN

VIEW F
 SCALE 3/4"=1 FT
 STRAP PLATFORM ASSEMBLY POSITION ON BOOM TOP WHEN EQUALIZER PLATFORM LOCATION IS AT 990.44" (SEE VIEW D)



VIEW C
 VIEW OF HANGER ASSEMBLY IN STORED POSITION
 SCALE 1/2"=1 FT

VIEW E
 SCALE 3/4"=1 FT
 PLATFORM POSITION ON BOOM TOP WHEN EQUALIZER PLATFORM LOCATION IS AT 293.54" (SEE VIEW D)

ITEM NO.	QTY	DESCRIPTION	MATERIAL	QTY	ASSEMBLIES USED IN
BILL OF MATERIAL					
1911-0000 BASIC BOOM 82 FT. (25.0 M) ALSO SEE REQ'D. FOR VARIOUS BOOM LENGTHS TABLE					
1	4	HOOK BLOCK PIN		2394	
2	2	SIGN BOOM MANITOWOC	B1008829		
3	4	PIN	78292		
4	2	PIN	160720		
5	1	BOOM ANGLE INDICATOR ASSEMBLY	168779	3	
6	1	EQUALIZER ASSEMBLY	179896		
7	2	PIN	172132		
8	1	40FT BOOM BUTT #49A BOOM	174551		
9	4	STEEL WASHERS	174904		
10	2	TIMBER	174915	4	
11	1	WIRE ROPE GUIDE ASSEMBLY	174944		
12	1	WIRE ROPE GUIDE ASSEMBLY	174946	2	
13	1	BOOM STOP ASSEMBLY FOR #49A BOOM	174955		
14	1	MAST ASSEMBLY	192231		
15	1	LOWER BOOM POINT HANGER FRAME ASS'Y	176213	1	
16	1	WIRE ROPE GUIDE ASSEMBLY UPPER	176214		
17	2	LINK	176330		
18	6	COLLAR	179862		
19	4	PIN	179863		
20	6	PIN	179959		
21	4	BOOM SUPPORT LINK	179984		
22					
23	4	BOOM SUPPORT LINK	192250		
24	2	BOOM SUPPORT STRAP BASIC	192703		
25	2	BOOM SUPPORT STRAP BASIC	192704		
26	1	42 FT. #49A BOOM TOP	192707		
27	1	EQUALIZER PLATFORM ASSEMBLY	192709	5	
28	2	PIN	192712		
29	1	STRAP PLATFORM ASSEMBLY	192721		
30					
31					
32	32	SCR MB X 30. 4.8 ZINC PLT	7121171301		
33	32	NUT HEX MB-1.25 10 PLN	7861170004		
34	32	WASHER LOCK MB	7951170210		
1911-0010 INSERT 20FT (6.10M) #49A BOOM FOR 102 FT BOOM LENGTH					
35	1	TIMBER	174915	4	
36	1	20 FT INSERT (6.10M) #49A BOOM	192706		
37					
38					
39					
1911-0020 INSERT 20FT (6.10M) #49A BOOM FOR 142FT AND 162FT BOOM LENGTHS					
40	4	PIN	78292		
41	1	TIMBERS	174915	4	
42	2	BOOM SUPPORT STRAP 20 FT	179838		
43	4	COLLAR	179862		
44	4	PIN	179863		
45	4	PIN	179959		
46	4	BOOM SUPPORT LINK	192250		
47	1	20 FT INSERT FOR #49A BOOM	192706		
48	2	STRAP PLATFORM ASSEMBLY	192721		
49					
50					
51					
52					
53					
54					
1911-0030 INSERT 40FT (12.19M) #49A BOOM					
55	4	PIN	78292		
56	1	INSERT 40 FT (12.19) #49A BOOM	174422		
57	2	TIMBER	174915	4	
58	2	BOOM SUPPORT STRAP 40 FT	179839		
59	4	COLLAR	179862		
60	4	PIN	179863		
61	4	PIN	179959		
62	4	BOOM SUPPORT LINK	192250		
63	2	STRAP PLATFORM ASSEMBLY	192721		
64					
65					

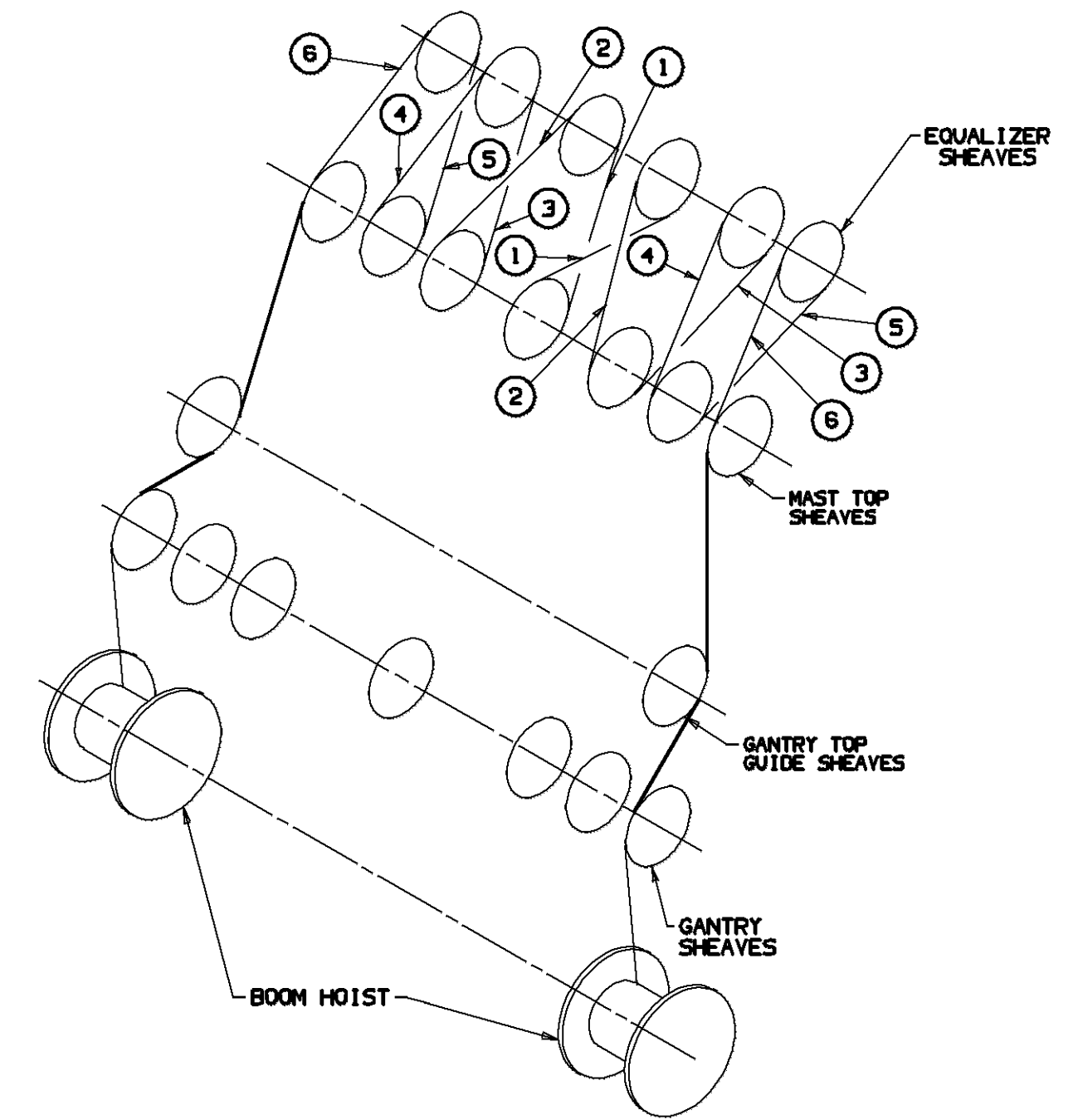
- 1 1.125 (29 mm) WIRE ROPE
- 2 BOOM STOP SUPPORT BEAM 174960 (REF.) AND MAST ITEM 14 MUST BE IN PLACE BEFORE INSTALLING WIRE ROPE GUIDE ASSEMBLY ITEM 12. WIRE ROPE GUIDE ASSEMBLY ITEM 12 MUST BE REMOVED PRIOR TO LOWERING MAST.
- 3 NOT SHOWN
- 4 ATTACH TIMBERS SO THEY ARE FREE TO SLIDE UNDER THERMAL EXPANSION/CONTRACTION OF PLASTIC.
- 5 EQUALIZER PLATFORM ASSEMBLY ITEM 27 IS DESIGNED SOLELY TO FACILITATE STRAP INSTALLATION AND REMOVAL. DO NOT APPLY TENSION TO BOOM HOIST LINE WHEN EQUALIZER IS PINNED TO PLATFORM.
- 6 PLATFORM ITEM 27 MUST BE REMOVED TO ASSEMBLE OR DIS-ASSEMBLE THE BOOM.
- 7 SEE VIEW E
- 8 SEE VIEW F

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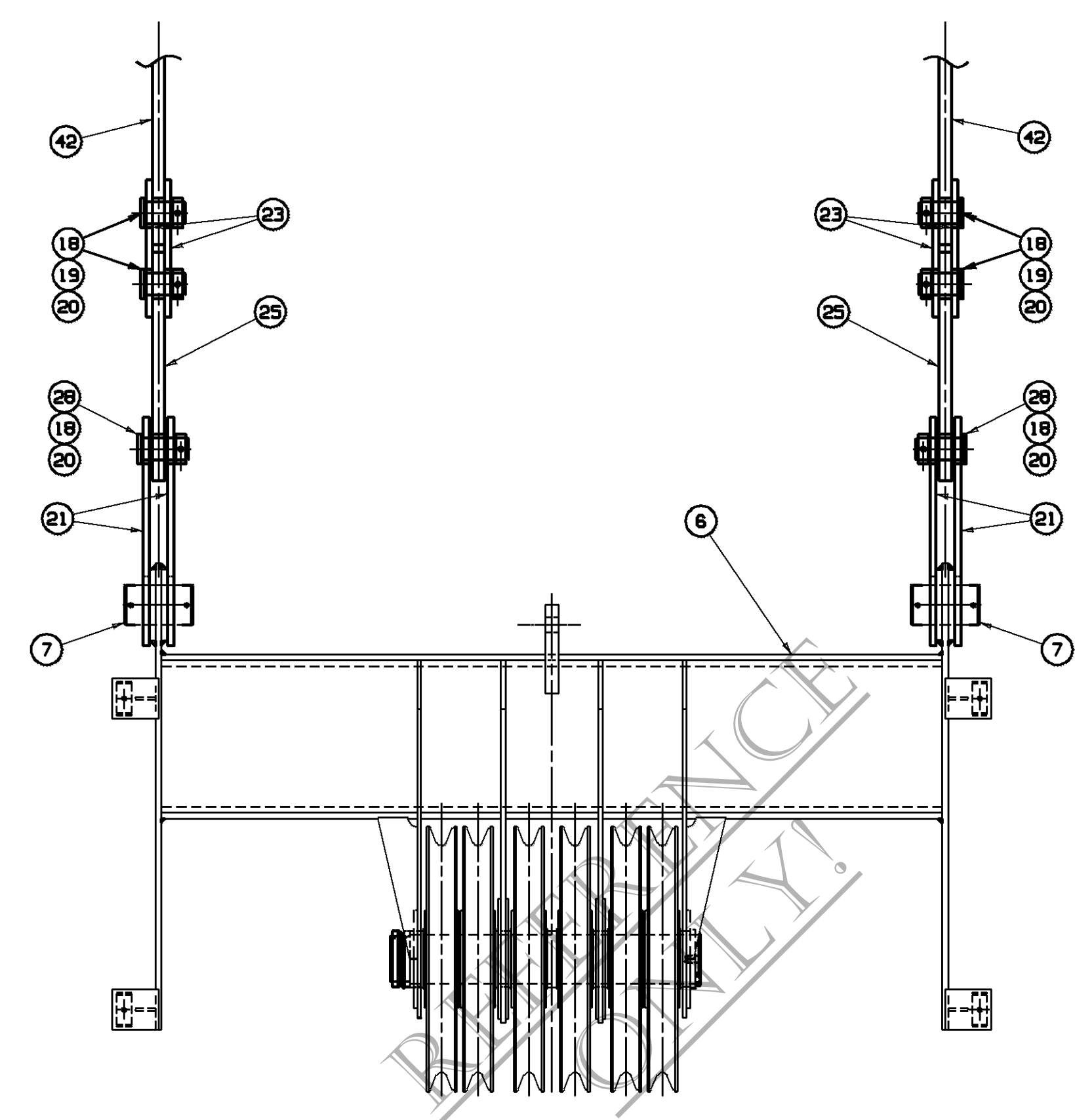
DECIMAL PLACES	FABRICATION	MACHINING
(1) PLACE 0.0	± 0.12	± 0.18
(2) PLACE 0.00	± 0.08	± 0.12
(3) PLACE 0.000	± 0.015	± 0.025
ANGLES	± 1.0'	± 0.50'

MANITOWOC CRANES, INC. BOOM RIGGING ASSEMBLY
 MODEL 2250 MAX-ER 400 WITH STRAPS
 (USA)

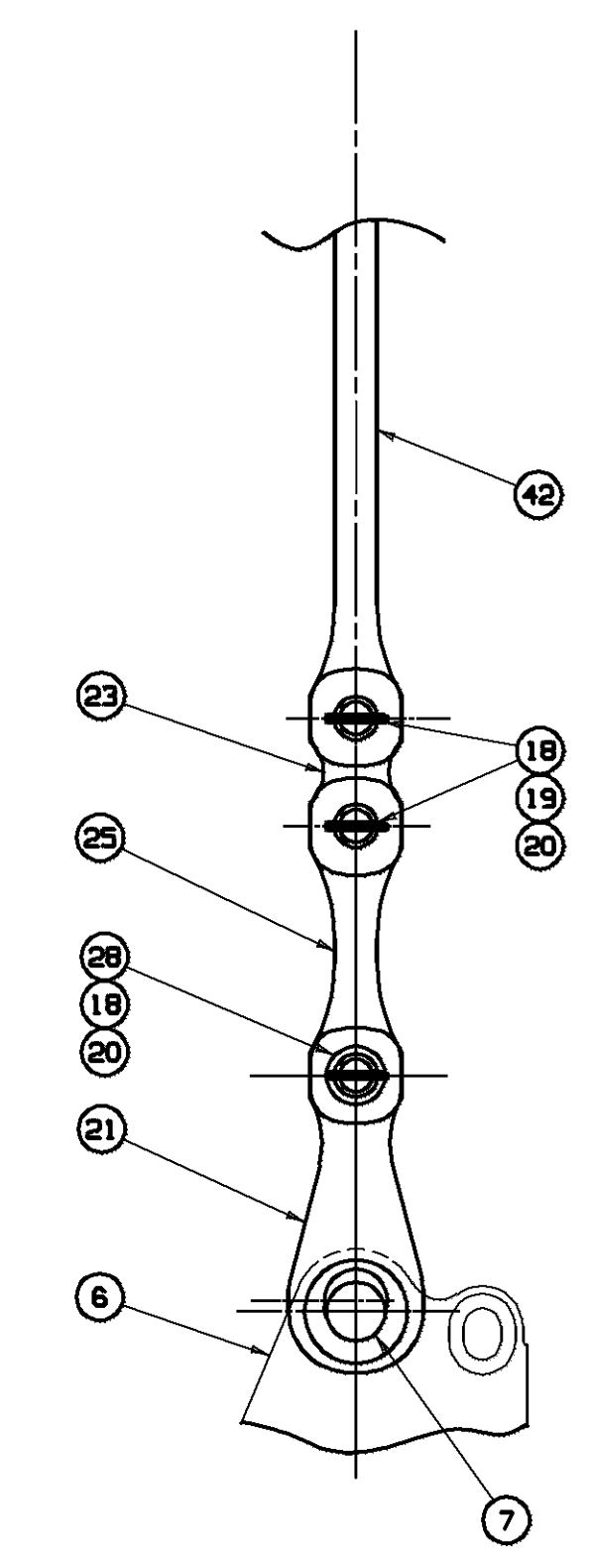
DATE 11-04-98
 PATTERNS
 192708



BOOM HOIST REEVING DIAGRAM FOR 12 PART LINE
 2150 FEET (655.3 M) OF 1.00" (26mm)-6 X 26 HARRINGTON SEALE, EXTRA IMPROVED PLOW STEEL, ALTERNATE LAY, IHRC (719095) - B.S. 103,400 LBS. (46 900 kg)
 OR
ALTERNATE WIRE ROPE
 2150 FEET (655.3 M) OF 1.00" (26mm)-6 X 26 HARRINGTON SEALE, EXTRA IMPROVED PLOW STEEL, REGULAR LAY, IHRC (719276) - B.S. 103,400 LBS. (46 900 kg)
 OR
ALTERNATE WIRE ROPE
 2150 FEET (655.3 M) OF 1.00" (26mm) DYFORM-6 (719359) - B.S. 113,800 LBS. (51 620 kg)



VIEW A-A



SECTION B-B

192708
 SHT 2 OF 2

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 SHT 2 OF 2