

ADDITIONAL PARTS REQUIRED FOR VARIOUS BOOM LENGTHS

ITEM NO.	31	35	32 OR 36	45	55	41	51	39 OR 49	40 OR 50	47 OR 57	43 OR 53	44 OR 54	46 OR 56	16	59
BOOM LENGTH	#49A 20 FT 6.10 M INSERT	#49A 40 FT 12.19 M INSERT	WIRE ROPE TIMBER	#44 20 FT 6.10 M INSERT	#44 40 FT 12.19 M INSERT	19 FT 4.75 (5.91M) STRAP	39 FT 4.75 (12.00M) STRAP	PIN	TIMBER	BOOM SUPPORT LINK	COLLAR	PIN	PIN	BOOM SUPPORT STRAP	BOOM SUPPORT STRAP
140 BASIC	OR 2	0	2	0	0	0	0	0	0	0	0	0	0	2	0
160	1	1	3	0	0	0	0	0	0	0	0	0	0	0	2
180	OR 2	1	4	0	0	0	0	0	0	0	0	0	0	0	2
200	OR 2	1	4	1	0	2	0	4	1	4	4	4	4	0	2
220	OR 2	1	4	2	0	4	0	8	2	8	8	8	8	0	2
240	OR 2	1	4	1	1	2	2	8	3	8	8	8	8	0	2
260	OR 2	1	4	2	1	4	2	12	4	12	12	12	12	0	2
280	OR 2	1	4	1	2	2	4	12	5	12	12	12	12	0	2
300	OR 2	1	4	2	2	4	4	16	6	16	16	16	16	0	2

BOOM HANDLING INSTRUCTIONS

TRAVEL SPEED NOT TO EXCEED 1/2 MPH (.80 km/h)
BOOM ANGLE AT 10° OR LESS.

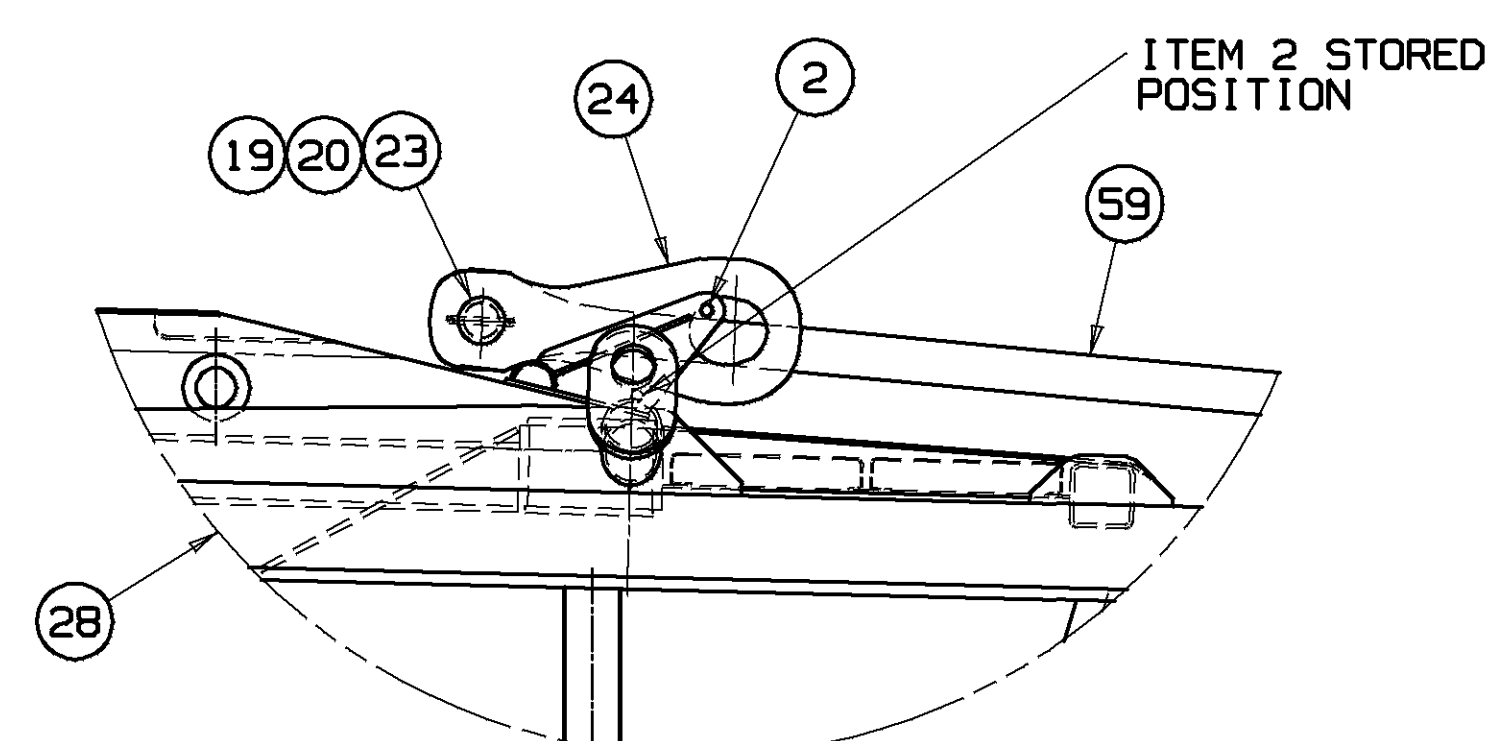
MAST POSITION	MAX. LENGTH OF BOOM HANDLED		BOOM MAKE UP	BOOM CONDITIONS OR LIMITATIONS
	FEET	METERS		
UP	230	70.1	BUTT & INSERTS	EQUALIZER PINNED TO RAILS. CAN CANTILEVER 80 FT. (24.4 M) OF INSERTS.

INSERT NOTES:

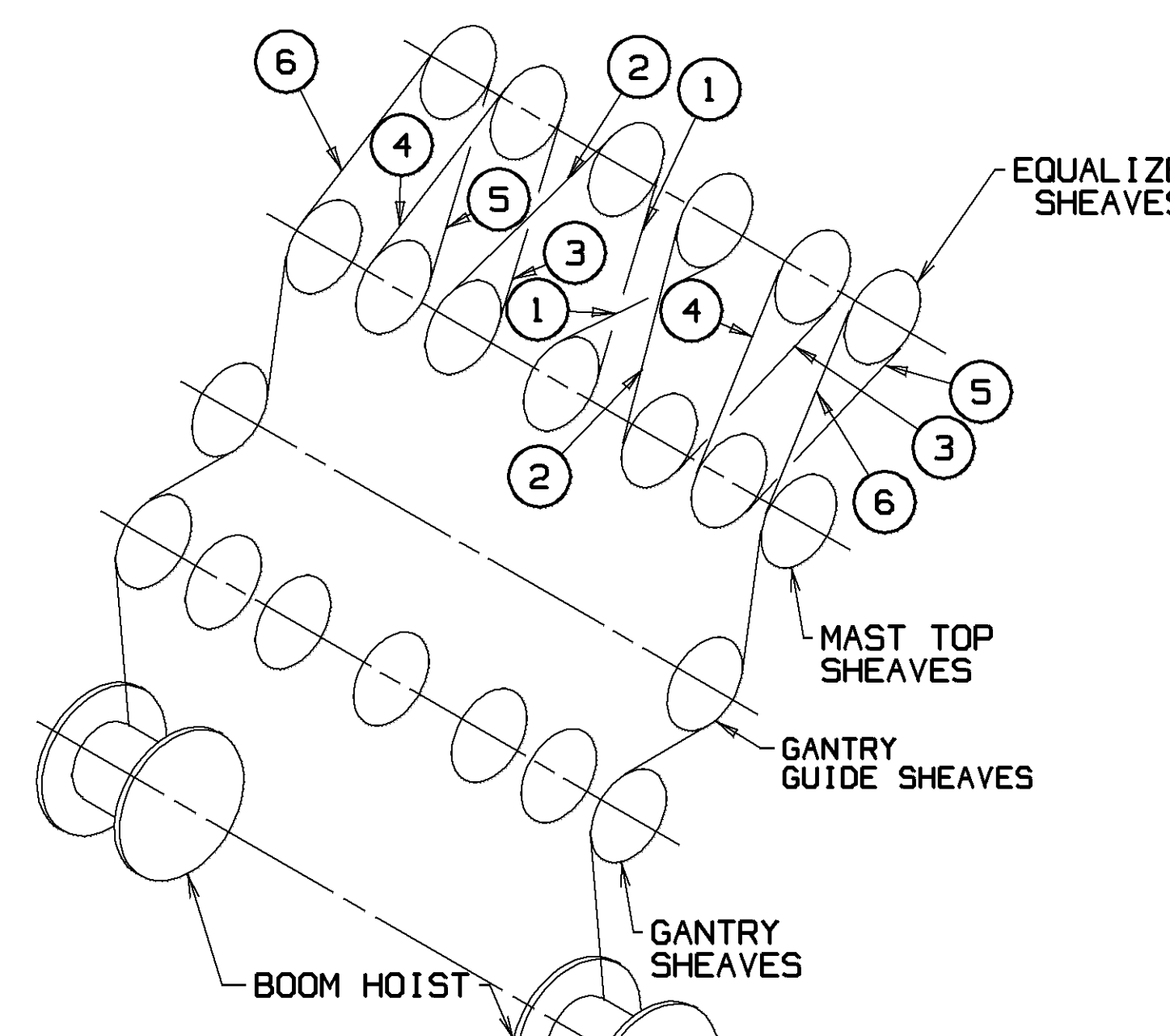
- THE SHORTER #44 INSERTS MUST BE CLOSEST TO THE TRANSITION INSERT. (20 FT (6.10 M) INSERT FIRST, THEN THE 40 FT (12.19 M) INSERTS.)
- THE MAXIMUM NUMBER OF 20 FT. (6.10 M) #49A INSERTS (ITEM 31), IS 2 AND MUST BE LOCATED NEXT TO BUTT (ITEM 8).

GENERAL NOTES:

- MINIMUM BOOM LENGTH REQUIRED FOR #132 JIB = 220 FT. (67.1 M)
- WHEN #132 JIB IS USED, RUN LOAD LINE FROM WIRE ROPE GUIDE ASSEMBLY (ITEM 11), OVER JIB STRUT SHEAVE, TO JIB POINT.

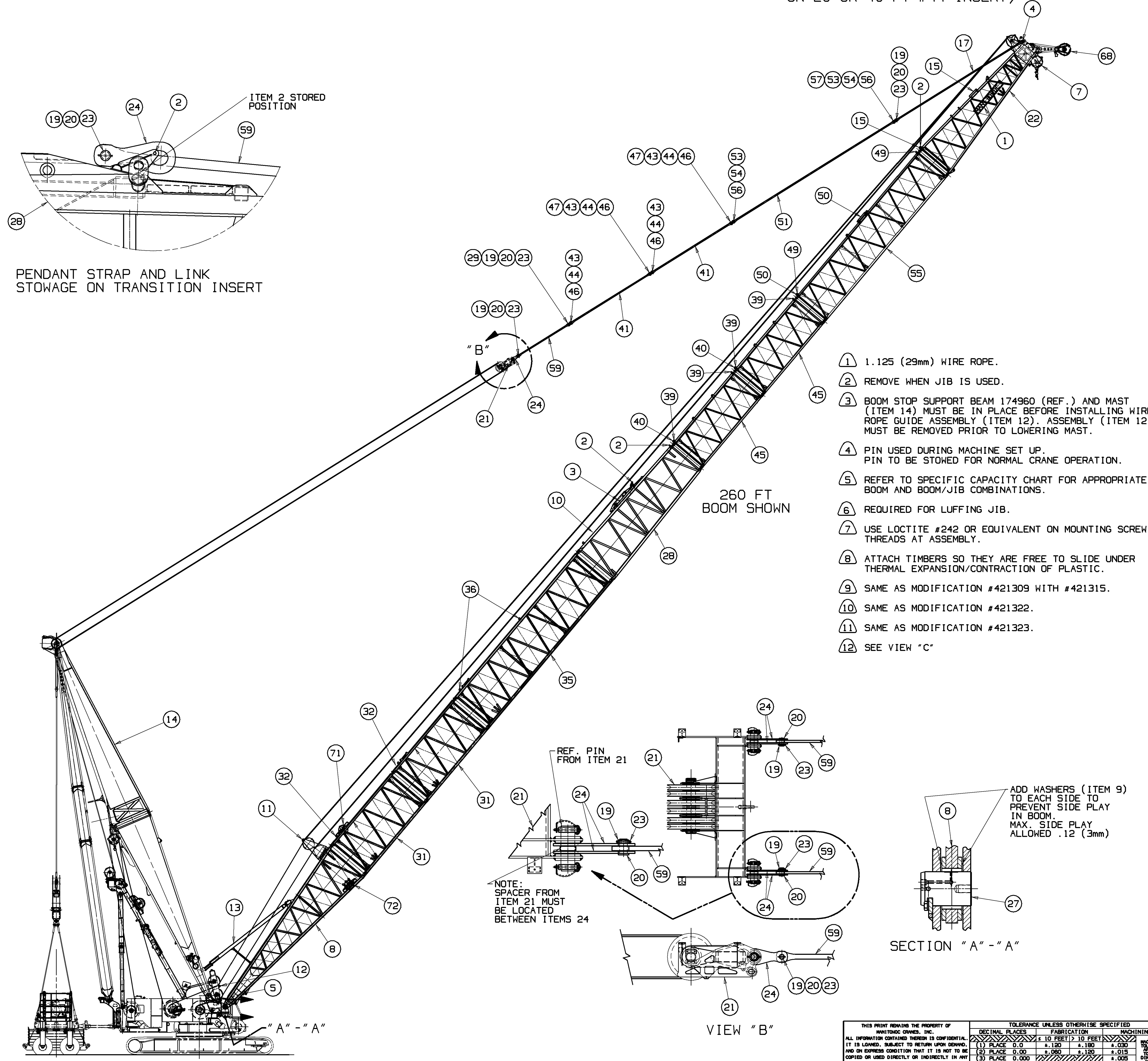


PENDANT STRAP AND LINK STOWAGE ON TRANSITION INSERT

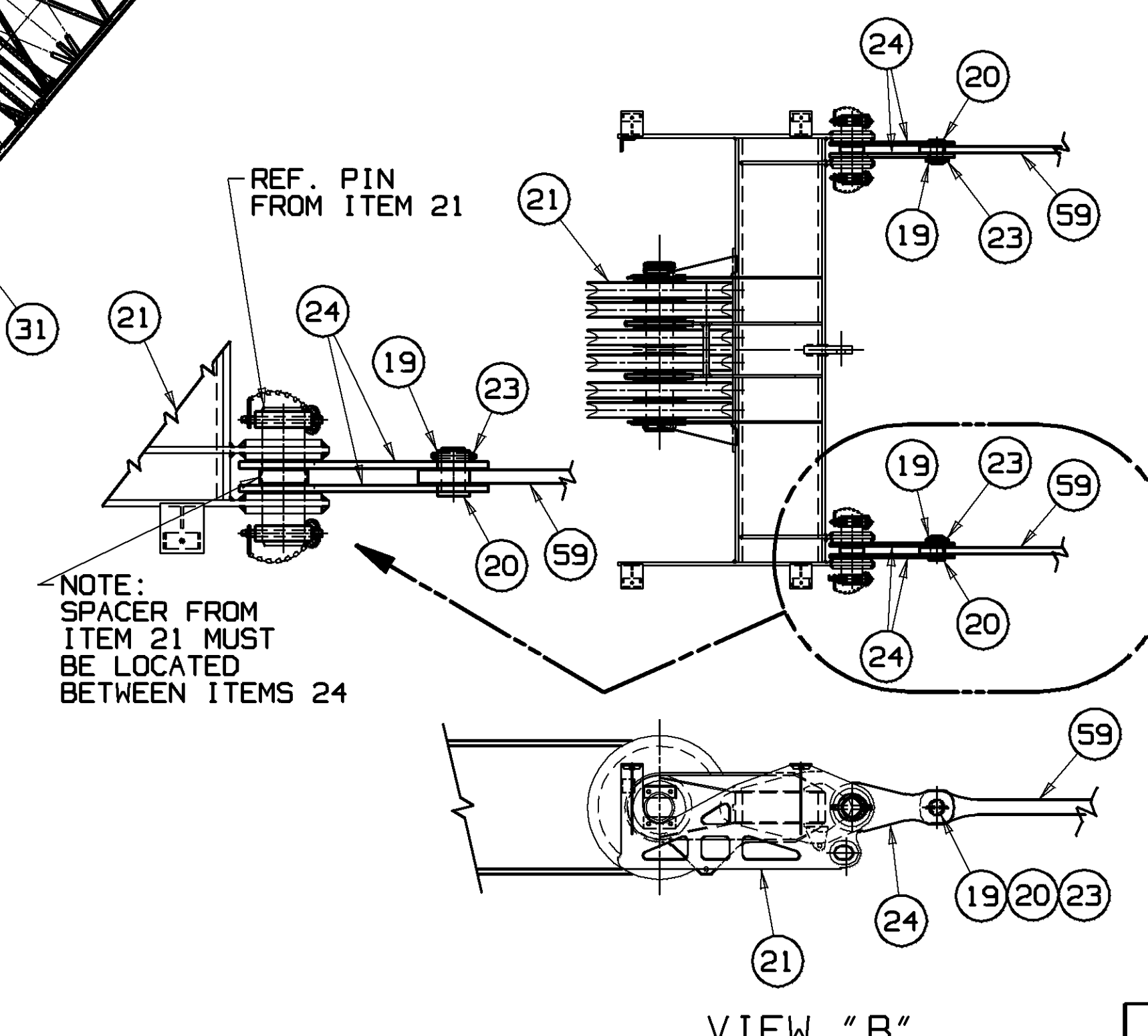


BOOM HOIST REEVEING DIAGRAM FOR 12 PART LINE

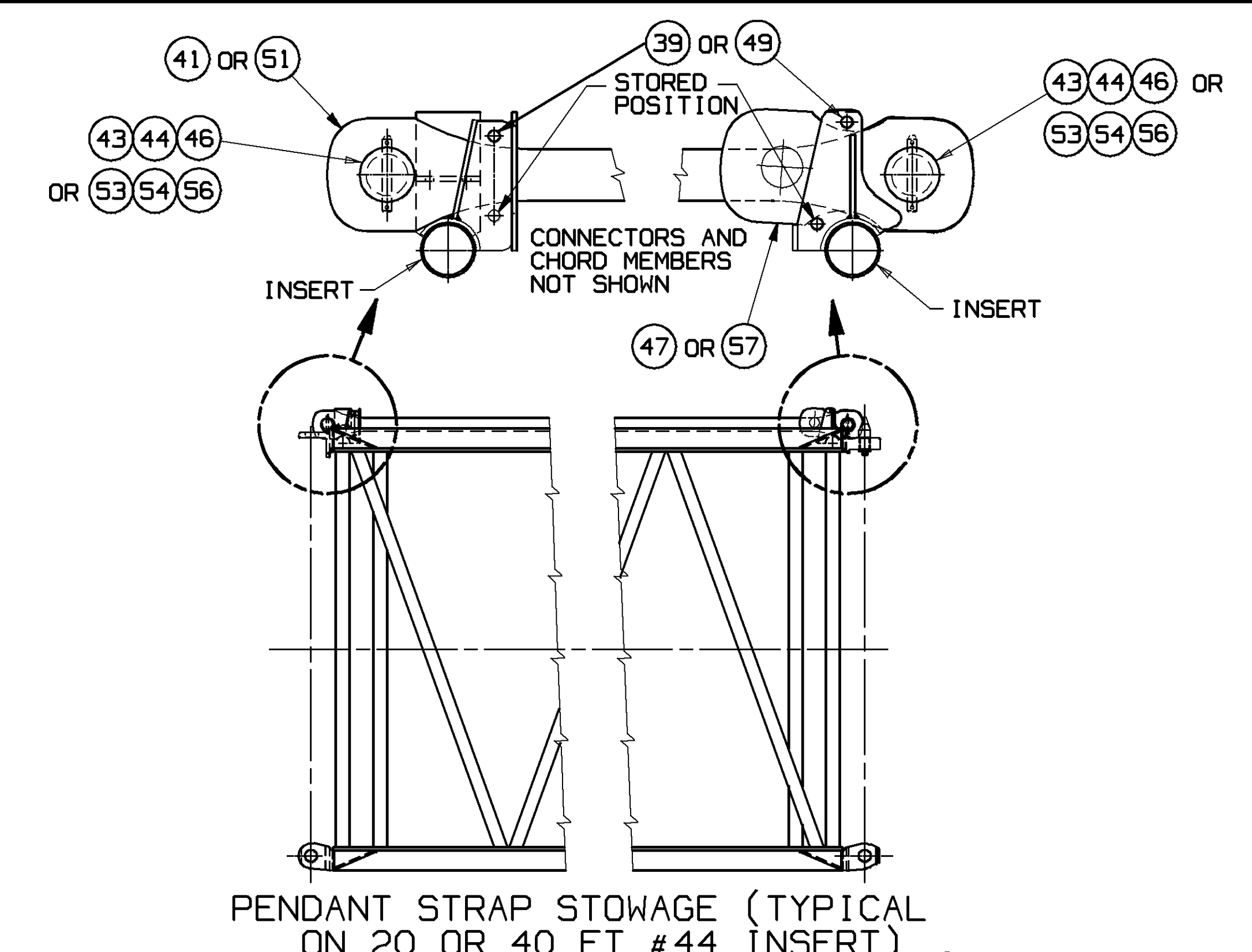
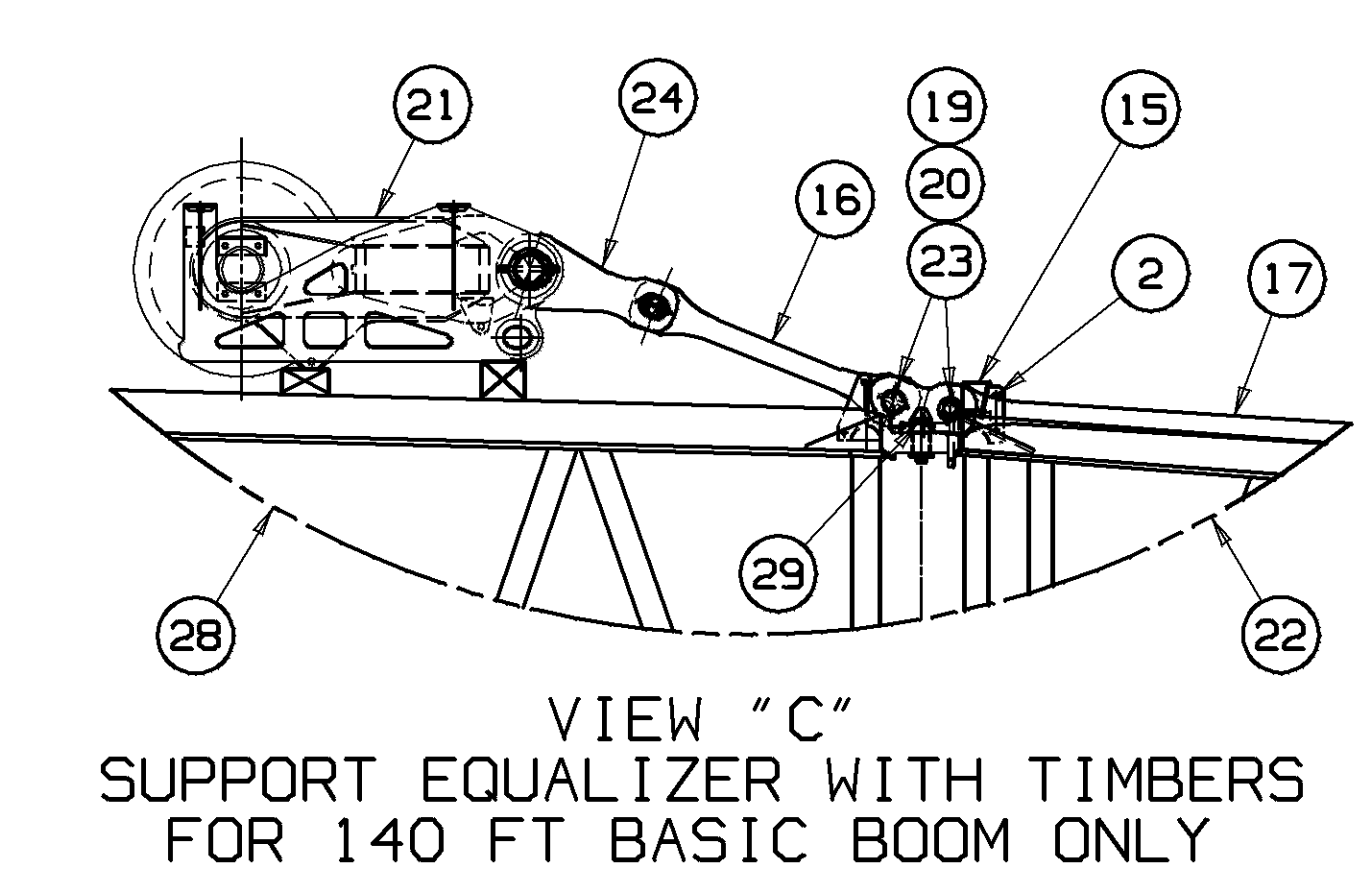
- 2150 FEET (655.3 M) OF 1.00" (26mm)-6 X 26 WARRINGTON SEALE, EXTRA IMPROVED PLOW STEEL, ALTERNATE LAY, 1WRC (719095) - B.S. 103,400 LBS. (46 900 kg)
- OR ALTERNATE WIRE ROPE
- 2150 FEET (655.3 M) OF 1.00" (26mm)-6 X 26 WARRINGTON SEALE, EXTRA IMPROVED PLOW STEEL, REGULAR LAY, 1WRC (719276) - B.S. 103,400 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)
- OR ALTERNATE WIRE ROPE
- USE WHEN A SAFETY FACTOR OF 6.0 OR LESS IS REQUIRED.
- 2150 FEET (655.3 M) OF 1.00" (25mm) CASAR SUPERLAST, (719372) B.S. 137,200 LBS. (62 230 kg) (UK-EUROPEAN)
- OR ALTERNATE WIRE ROPE
- 2150 FEET (655.3 M) OF 1.10" (28mm) DYFORM-6 #RRL 719390) - B.S. 147,289 LBS. (66 809 kg) (JAPANESE)



- 1.125 (29mm) WIRE ROPE.
- REMOVE WHEN JIB IS USED.
- BOOM STOP SUPPORT BEAM 174960 (REF.) AND MAST (ITEM 14) MUST BE IN PLACE BEFORE INSTALLING WIRE ROPE GUIDE ASSEMBLY (ITEM 12). ASSEMBLY (ITEM 12) MUST BE REMOVED PRIOR TO LOWERING MAST.
- PIN USED DURING MACHINE SET UP. PIN TO BE STOWED FOR NORMAL CRANE OPERATION.
- REFER TO SPECIFIC CAPACITY CHART FOR APPROPRIATE BOOM AND BOOM/JIB COMBINATIONS.
- REQUIRED FOR LUFFING JIB.
- USE LOCTITE #242 OR EQUIVALENT ON MOUNTING SCREW THREADS AT ASSEMBLY.
- ATTACH TIMBERS SO THEY ARE FREE TO SLIDE UNDER THERMAL EXPANSION/CONTRACTION OF PLASTIC.
- SAME AS MODIFICATION #421309 WITH #421315.
- SAME AS MODIFICATION #421322.
- SAME AS MODIFICATION #421323.
- SEE VIEW "C"



ADD WASHERS (ITEM 9) TO EACH SIDE TO PREVENT SIDE PLAY IN BOOM. MAX. SIDE PLAY ALLOWED .12 (3mm)



ITEM NO.	DESCRIPTION	QUANTITY	REVISIONS
BILL OF MATERIAL			
1910-0000 BASIC BOOM 140 FT (42.7M)			
1	2	BOOM SIGN	22656
2	6	PIN	78292
3	2	PIN	139128
4	2	PIN	160720
5	1	BOOM ANGLE INDICATOR ASSEMBLY	168779
6			
7	1	BOOM POINT SHAFT ASSEMBLY (LOWER)	172960
8	1	#49A BOOM BUTT (40 FT.)-(12.19 M)	174551
9	8	WASHERS	174904
10	1	TIMBER	174915
11	1	WIRE ROPE GUIDE ASSEMBLY	174944
12	1	WIRE ROPE GUIDE ASSEMBLY	174946
13	1	BOOM STOP ASSEMBLY	174955
14	1	MAST ASSEMBLY	192231
15	2	TIMBER	178905
16	2	BOOM SUPPORT STRAP (BASIC)	179841
17	2	BOOM SUPPORT STRAP (BASIC)	179840
18			
19	6	COLLAR	179862
20	6	PIN	179863
21	1	EQUALIZER ASSEMBLY	179896
22	1	BOOM TOP (30 FT.)-(9.14 M)	179915
23	6	PIN	179959
24	6	BOOM SUPPORT LINK	179984
25			
26			
27			
28	1	TRANSITION INSERT 30 FT (9.14M)	192228
29	4	BOOM SUPPORT LINK	192250
30			
1910-0010 INSERT 20 FT (6.10M) #49A BOOM			
31	1	INSERT 20 FT (6.10M) #49A BOOM	174425
32	1	TIMBER	174915
33			
34			
1910-0020 INSERT 40 FT (12.19M) #49A BOOM			
35	1	INSERT 40 FT (12.19M) #49A BOOM	174422
36	2	TIMBER	174915
37			
38			
1910-0030 INSERT 20 FT (6.10M) #44 BOOM			
39	4	PIN	78292
40	1	TIMBER	178905
41	2	BOOM SUPPORT STRAP (20 FT)	179838
42			
43	4	COLLAR	179862
44	4	PIN	179863
45	1	INSERT 20 FT (6.10M) #44 BOOM	179913
46	4	PIN	179959
47	4	BOOM SUPPORT LINK	192250
48			
1910-0040 INSERT 40 FT (12.19M) #44 BOOM			
49	4	PIN	78292
50	2	TIMBER	178905
51	2	BOOM SUPPORT STRAP (40 FT)	179839
52			
53	4	COLLAR	179862
54	4	PIN	179863
55	1	INSERT 40 FT (12.19M) #44 BOOM	179914
56	4	PIN	179959
57	4	BOOM SUPPORT LINK	192250
58			
1910-0050 BOOM SUPPORT STRAP			
59	2	BOOM SUPPORT STRAP	192109
60			
61			
62			
63			
64			
65			
66			
67			
OPTIONAL PARTS			
68	1	BOOM POINT ASSEMBLY (UPPER)	170419
69			
70			
71	1	WIRE ROPE GUIDE ASSEMBLY	176259
72	1	WIRE ROPE GUIDE ASSEMBLY	176260
<p>MANITOWOC CRANES, INC. BOOM RIGGING ASSEMBLY #49A - #44 BOOM WITH STRAPS & 80 FT MAST</p>			

DATE: 1-13-99
DRAWING NO.: 192633