

SHT 1 OF 2

ADDITIONAL PARTS REQUIRED FOR VARIOUS BOOM LENGTHS

ITEM NO.	47	57	67	77	43	53	63 OR 73	41,51,61 OR 71	42,52,62 OR 72	44,54,64 OR 74	45,55,65 OR 75	46,56,66 OR 76	48,58,68 OR 78
BOOM LENGTH	10 FT 3.05 M INSERT	20 FT 6.10 M INSERT	40 FT 12.19 M INSERT	40 FT 12.19 M LIGHT INSERT	9 FT 4.75 (2.86M) STRAP	19 FT 4.75 (5.91M) STRAP	39 FT 4.75 (12.00M) STRAP	PIN	TIMBER	BOOM SUPPORT LINK	COLLAR	PIN	PIN
190 (BASIC)	OR 0	2	1	0	0	4	2	12	4	12	12	12	12
200	OR 1	2	1	0	2	4	2	16	5	16	16	16	16
210	OR 1	0	2	0	2	4	4	12	5	12	12	12	12
220	OR 1	1	2	0	2	2	4	16	6	16	16	16	16
230	OR 0	2	2	0	0	4	4	16	6	16	16	16	16
240	OR 1	2	2	0	0	4	4	12	6	12	12	12	12
250	OR 1	0	3	0	2	6	16	7	16	16	16	16	16
260	OR 1	1	3	0	2	6	20	8	20	20	20	20	20
270	OR 0	2	3	0	0	4	6	20	8	20	20	20	20
280	OR 1	2	3	0	2	4	6	16	8	16	16	16	16
290	OR 1	0	4	0	2	0	8	20	9	20	20	20	20
300	OR 1	1	3	1	2	2	8	24	10	24	24	24	24
310	OR 0	2	3	1	0	4	8	24	10	24	24	24	24
320	OR 1	2	4	1	2	4	8	28	11	28	28	28	28
330	OR 0	1	4	1	0	10	10	24	11	24	24	24	24

INSERT NOTES:

- THE SHORTER INSERTS MUST BE CLOSEST TO THE BUTT. (10 FT (3.05 M) INSERT FIRST, THEN THE 20 FT (6.10 M) INSERTS.)
- SEE CRANE ASSEMBLY AND RIGGING GUIDE IN THE OPERATORS MANUAL FOR INSTRUCTIONS ON JIB STOWAGE.
- INSERT (ITEM 77) (40 FT) (12.19 M) LIGHT INSERT MUST BE LOCATED IMMEDIATELY BELOW THE BOOM TOP.

GENERAL NOTES:

- WHEN #132 JIB IS USED, RUN LOAD LINE FROM WIRE ROPE GUIDE ASSEMBLY (ITEM 22) OVER JIB STRUT SHEAVE, TO JIB POINT.

BOOM HANDLING INSTRUCTIONS				
TRAVEL SPEED NOT TO EXCEED 1/2 MPH (.80 km/h) BOOM ANGLE AT 10° OR LESS.				
GANTRY POSITION	MAX. LENGTH OF BOOM HANDLED	BOOM MAKE UP	BOOM CONDITIONS OR LIMITATIONS	
	FEET	METERS		
DOWN	40	12.19	BUTT ONLY	EQUALIZER PINNED TO RAILS
UP	120	36.6	BUTT & INSERTS	EQUALIZER PINNED TO RAILS. CAN CANTILEVER 80 FT. (24.4 M) OF INSERTS.

- 19 SAME AS MODIFICATION #421321.
- 20 SAME AS MODIFICATION #421322.
- 21 SAME AS MODIFICATION #421323.
- 22 SAME AS MODIFICATION #421324.

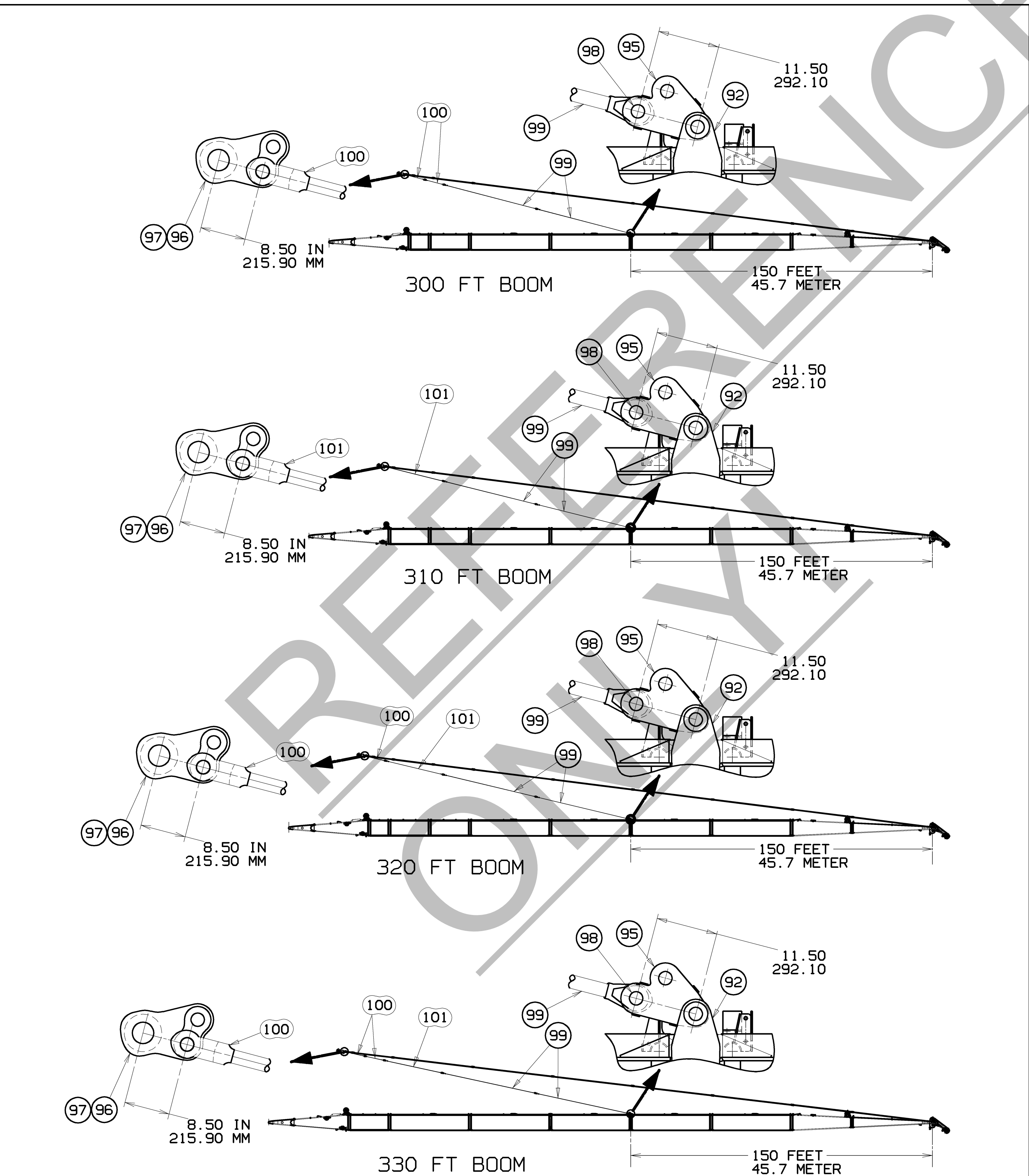
171284 CAN BE REPLACED BY 81016955.

OPTIONAL CAT WALK ASSEMBLY
QTY 1 CAT WALK ASSY PER BOOM SECTION

BOOM SECTION	OPTIONAL CAT WALK ASSY
192062, 192063	81016955
192064, 192065	81016957
179912	81016945
179913	81016946
179914, 179917	81016947

192063 CAN BE REPLACED BY 81019264.

TIMBERS 81019336 AND 192468 CAN ONLY BE USED FOR 81019264. TIMBERS CANNOT BE USED WITH CATWALK ASSY 81016955.



ITEMS AND LOCATIONS REQUIRED FOR INTERMEDIATE SUSPENSION

ITEM NO.		92		95		96 AND 97		99	100	101
BOOM LENGTH		LOCATION FROM BOOM TOP		PINNING DIMENSION		PINNING DIMENSION		47 FT 6.00 (14.48M) PENDANT	9 FT 9.00 (2.97M) PENDANT	29 FT 5.00 (8.97M) PENDANT
FEET	METERS	FEET	METERS	INCH	MILLIMETER	INCH	MILLIMETER			
300	91.4	150	47.7	11.50	292	8.50	216	4	4	0
310	94.5	150	47.7	11.50	292	8.50	216	4	0	2
320	97.5	150	47.7	11.50	292	8.50	216	4	2	2
330	100.6	150	47.7	11.50	292	8.50	216	4	4	2

2580-0070 FOR MACHINES W/SELF-ERECT

812	PIN	139128	8
823	KEEPER	164479	
831	LINK	171522	
841	WIRE ROPE GUIDE ASSY CRAW. HANDLING	171621	
852	PIN	172111	
861	PIN	172112	
874	BUSHING	A04261	7

2580-0072 SELF-ERECT BOOM BUTT HANDLING CYLINDER-SEITZ

881	CYLINDER	385413	6
-----	----------	--------	---

2580-0074 SELF-ERECT BOOM BUTT HANDLING CYLINDER-HYCO

891	CYLINDER	385630	6
-----	----------	--------	---

2580-0080 FOR INTERMEDIATE SUSPENSION

902	PIN	75465	5
912	PIN	170844	5
922	LINK	171761	5.11
932	PIN	171870	5
94			
952	LINK	192059	
961	LINK (RIGHT HAND)	192060	
971	LINK (LEFT HAND)	192061	
982	PIN	564081	
994	PENDANT - 47FT 6.00 (14.48M)	277467	14
1004	PENDANT - 9FT 9.00 (2.97M)	277466	14

2580-0090 PENDANT FOR INTERMEDIATE SUSPENSION

1012	PENDANT - 29 FT 5.00 (8.97M)	277468	14
102			
103			
104			
105			
106			
107			
108			
109			
110			

OPTIONAL PARTS

1111	BOOM POINT ASSEMBLY (UPPER)	170419	13
1121	BOOM LADDER STORAGE ASSEMBLY	192795	
1131	WIRE ROPE GUIDE ASSEMBLY	172559	4
1141	RIGGING WINCH ASSEMBLY	172577	
115	CAT WALK ASSY 40FT #44 LONG REACH TOP	81016955	24
116	CAT WALK ASSY 30FT #44 INSERT TAPERED	81016957	24
117	CAT WALK ASSY 10FT #44 INSERT	81016945	24
118	CAT WALK ASSY 20FT #44 INSERT	81016946	24
119	CAT WALK ASSY 40FT #44 INSERT	81016947	24
1201	TIMBER	81019336	26
1211	TIMBER	192468	26

- 1.125 (29mm) WIRE ROPE.
- ON DWG. 139117, GANTRY TIE DOWN PENDANT.
- OPTIONAL 40 FT. (12.19 M) BUTT (ITEM 40) REPLACES THE COMBINATION OF BUTT SECTIONS (ITEM 37 & 38). ONE PIECE BUTT CANNOT BE USED WITH SELF-ERECT.
- REQUIRED FOR LUFFING JIB. SELF-ERECT (CRAWLER HANDLING) AND RIGGING WINCH.
- IF MACHINE IS EQUIPPED WITH #132 JIB ASSEMBLY, LINKS (ITEM 92) AND PINS (ITEM 90,91 AND 93) FROM JIB ASSEMBLY MAY BE USED.
- BOOM BUTT HANDLING:
USED WITH 2-PIECE BOOM BUTT ONLY. MAX. COMBINATION THAT CAN BE HANDLED WITH CYLINDER (ITEM 88 OR 89) IS: BUTT SECTIONS (ITEM 37 & 38) : ROPE GUIDES (ITEM 22,84 AND 123); RIGGING WINCH (ITEM 124); EQUALIZER (ITEM 16); BOOM STOPS (ITEM 6) AND 2 PARTS OF 1.125 (29mm) WIRE ROPE. (FOR EQUALIZER HANDLING.) CYLINDER MUST BE FULLY RETRACTED FOR CRANE OPERATION.
- INSTALL 2 BUSHINGS (ITEM 87) (1 EACH SIDE) IN LOWER PIN EYE AND 2 (1 EACH SIDE) IN UPPER PIN EYE OF CYLINDER (ITEM 88). BUSHINGS TO BE FLUSH WITH OUTSIDE FACE OF PIN EYE.
- PIN IN PLACE ONLY DURING EQUALIZER RELOCATION FROM GANTRY STORAGE TO BOOM BUTT EQUALIZER RAIL. PIN TO BE STOWED FOR NORMAL CRANE OPERATION.
- REMOVE WHEN JIB IS USED.
- USE LOCKTITE #242 OR EQUIVALENT ON MOUNTING SCREW THREADS AT ASSEMBLY.
- BOSS ON LINK (ITEM 92) MUST ALWAYS BE TO THE OUTSIDE OF THE BOOM. SEE VIEW "B".
- (12 FT.)-(3.66 M)
- (28 FT.)-(8.53 M)
- ON DRAWING 76280.
- SAME AS MODIFICATION 421318 WITH 421317
- SAME AS MODIFICATION 421319 WITH 421317
- SERIES 1 MACHINE REQUIRES TWO 40 FT LIGHT INSERTS. SERIES 2 & 3 REQUIRE ONE 40 FT LIGHT INSERT.
- ATTACH TIMBERS SO THEY ARE FREE TO SLIDE UNDER THERMAL EXPANSION/CONTRACTION OF PLASTIC.

ITEM NO.	QTY	DESCRIPTION	LOGS	MATERIAL	QTY	NO.	ASSEMBLIES USED ON
2580-0000	BASIC BOOM 190 FT.(21.3M)						
1	2	SIGN BOOM MANITOWOC		81008829			
2	10	PIN		78292			
3	3	WASHERS		137502			
4	32	SCR MB X 30. 4.8 ZINC PLT		7121171301			
5	1	BOOM ANGLE INDICATOR ASSEMBLY		168779			
6	1	BOOM STOP ASSEMBLY		170474			
7	1	BOOM POINT SHAFT ASSEMBLY (LOWER)		170422			
8	1	UPPER ROPE GUIDE ASSEMBLY		171669			
9	2	TIMBER		178905	18		
10	1	GANTRY ASSEMBLY		179777			
11	2	BOOM SUPPORT STRAP (40 FT)		179839			
12	2	BOOM SUPPORT STRAP (BASIC)		179841			
13	4	BOOM SUPPORT LINK		192250			
14	12	COLLAR		179862			
15	12	PIN		179863			
16	1	EQUALIZER ASSEMBLY		179896			
17	2	COLLAR		179919			
18	32	NUT HEX MB-1.25 10 PLN		7861170004			
19	12	PIN		179959			
20	4	BOOM SUPPORT LINK		179983			
21	4	BOOM SUPPORT LINK		179984			
22	1	WIRE ROPE GUIDE ASSEMBLY		192000			
23	4	BOOM SUPPORT LINK		192070			
24	2	BOOM SUPPORT STRAP (30 FT)		192071			
25	2	PIN		192077			
26	2	PIN		192078			
27	2	STRAP BRACKET		192074			
28	2	STRAP BRACKET		192075			
29	2	STRAP BRACKET		192082			
30	2	STRAP SUPPORT		192493			
31	32	WASHER LOCK MB		7951170210			
32	2	PENDANT		277465	2		

2580-0010	BOOM TOP FACT CONNECTOR		
331	LONG REACH BOOM TOP (40 FT.)-(12.19m)	192062	14
341	TRANSITION INSERT (30 FT.)-(9.14m)	192064	24

2580-0010 BOOM TOP PIN CONNECTOR

351	LONG REACH BOOM TOP (40 FT.)-(12.19m)	192063	14
361	TRANSITION INSERT (30 FT.)-(9.14m)	192065	24

2580-0010 BOOM BUTT 2-PIECE

371	40 FT. (12.19 M) BUTT LOWER SECTION	171283	12
381	40 FT. (12.19 M) BUTT UPPER SECTION	171284	12
392	TIMBER 41.00 LG X 3.50 W	81017791	18
404	HHCS 5/8-11UNC X 5.00 GR 5	612685	
414	HEX LOCK NUT 5/8-11UNC Gr5.2	7660201601	
428	F WASHER SHIM 5/8 ST F436	709747	

2580-0020 BOOM BUTT 1-PIECE

401	40 FT. (12.19 M) BOOM BUTT	171230	3
-----	----------------------------	--------	---

2580-0030 INSERT 10 FT (3.05M)

414	PIN	78292	
421	TIMBER	178905	18
432	BOOM SUPPORT STRAP (10 FT)	179837	
444	BOOM SUPPORT LINK	192250	
454	COLLAR	179862	
464	PIN	179863	
471	INSERT 10 FT (3.05M)	179912	12
484	PIN	179959	
49			
50			

2580-0040 INSERT 20 FT (6.10M)

514	PIN	78292	
521	TIMBER	178905	18
532	BOOM SUPPORT STRAP (20 FT)	179838	
544	BOOM SUPPORT LINK	192250	
554	COLLAR	179862	
564	PIN	179863	
571	INSERT 20 FT (6.10M)	179913	12
584	PIN	179959	
59			
60			

2580-0050 INSERT 40 FT (12.19M)

614	PIN	78292	
622	TIMBER	178905	18
632	BOOM SUPPORT STRAP (40 FT)	179839	
644	BOOM SUPPORT LINK	192250	
654	COLLAR	179862	
664	PIN	179863	
671	INSERT 40 FT (12.19M)	179914	12
684	PIN	179959	
69			
70			

2580-0060 INSERT 40 FT LIGHT (12.19M)

714	PIN	78292	
722	TIMBER	178905	18
732	BOOM SUPPORT STRAP (40 FT)	179839	
744	BOOM SUPPORT LINK	192250	
754	COLLAR	179862	
764	PIN	179863	
771	INSERT 40 FT LIGHT (12.19M)	179917	12
784	PIN	179959	
79			
80			

SUPERSEDES 192054 SHT 2 OF 2 OF 2-11-98

THIS PRINT REMAINS THE PROPERTY OF MANITOWOC CRANES, INC. 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 WITHOUT THE WRITTEN PERMISSION OF MANITOWOC CRANES, INC.				TOLERANCE UNLESS OTHERWISE SPECIFIED: DECIMAL PLACES (1) PLACE 0.0 ± .12 ± .18 ± .05 (2) PLACE 0.00 ± .06 ± .12 ± .015 (3) PLACE 0.000 ± .002 ± .005 ± .002				MANITOWOC CRANES, INC. CRP CRP MODEL-M-250, 2250 #44 BOOM LONG REACH - WITH STRAPS -				DATE 2-25-98 PATTERN NO. 192054
---	--	--	--	---	--	--	--	--	--	--	--	--