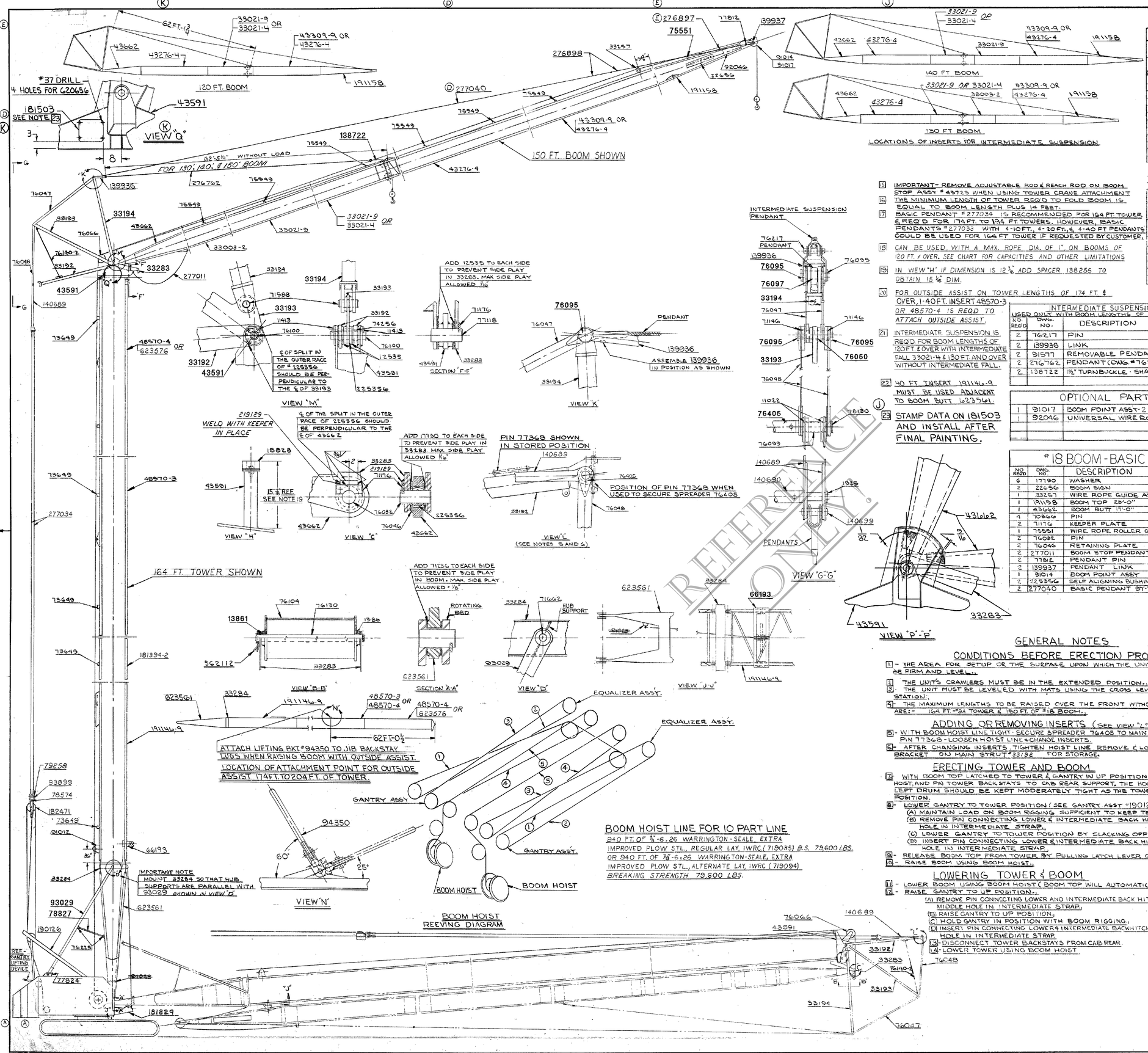

LOCATIONS OF INSERTS FOR INTERMEDIATE SUSPENSION

#9A TOWER - REQ'D FOR VARIOUS TOWER LENGTHS									
DWG. NO.	181394-2	181429-2	48570-3 48570-2	623576 48570-4	276897 DWG 77535	276898 DWG 77535	276935 DWG 77535	75549	
TOWER LENGTH (SEE NOTE 18)	10 FT. HEAVY DUTY INSERT	20 FT. HEAVY DUTY INSERT	40-FT INSERT	40-FT. INSERT	PENDANT 10. FT	PENDANT 20-FT.	PENDANT 40-FT	WIRE ROPE ROLLER GUIDE ASSY	
114'	0	0	0	1	0	4	0	3	
124'	1	0	0	1	4	4	0	4	
134'	0	1	0	1	0	0	4	4	
144'	1	0	0	1	4	0	4	5	
154'	0	0	1	1	0	4	4	5	
164'	1	0	1	1	0	0	0	6	
FOLLOWING TOWER LENGTHS AN OUTSIDE ASSIST IS REQ'D TO RAISE TOWER (SEE NOTES 4 & 20)									
174'	0	1	1	1	4	0	0	6	
184'	1	1	1	1	0	4	0	7	
194'	0	0	2	1	4	4	0	7	

48570-2 PLAIN INSERT
48570-3 WITH JIB BACKSTAY ANCHORS
48570-4 WITH JIB BACKSTAY ANCHORS & RUBBER BUMPER

623576 WITH RUBBER BUMPER

#18 BOOM - REQ'D FOR VARIOUS BOOM LENGTHS								
DWG. NO.	33003-2	33021-4 33021-9	43276-4 43309-9		276897 DWG 77535	276898 DWG 77535	75549	70866
BOOM LENGTH	10 FT INSERT	20 FT INSERT	30 FT INSERT		PENDANT 10 FT	PENDANT 20 FT.	WIRE ROPE ROLLER GUIDE ASSY	BOOM JOINT PIN
100-FT.	0	0	2		0	0	3	8
110-FT	1	0	2		2	0	4	12
120 FT.	0	1	2		0	2	4	12
130 FT.	1	1	2		2	2	5	16
140-FT.	0	2	2		0	4	5	16
150-FT.	1	2	2		2	4	6	20

33021-9 — WITH SHEAR STOP LUGS. 33021-4 — WITH INTERMEDIATE FALL — SEE NOTE 18
43276-9 — WITH SHEAR STOP LUGS. 43309-9 WITH JIB BACKSTAY LUGS.

15 IMPORTANT - REMOVE ADJUSTABLE ROD & REACH ROD ON BOOM STOP ASSY # 49733 WHEN USING TOWER CRANE ATTACHMENT

16 THE MINIMUM LENGTH OF TOWER REQ'D TO FOLD BOOM IS EQUAL TO BOOM LENGTH PLUS 14 FEET.

17 BASIC PENDANT # 277034 IS RECOMMENDED FOR 164 FT. TOWER & REQ'D FOR 174 FT. TO 194 FT. TOWERS. HOWEVER, BASIC PENDANTS # 277033 WITH 4-10 FT., 4-20 FT., & 4-40 FT PENDANTS COULD BE USED FOR 164 FT. TOWER IF REQUESTED BY CUSTOMER.

18 CAN BE USED, WITH A MAX. ROPE DIA. OF 1", ON BOOMS OF 120 FT. & OVER. SEE CHART FOR CAPACITIES AND OTHER LIMITATIONS

19 IN VIEW "H" IF DIMENSION IS 12 7/16" ADD SPACER 138256 TO OBTAIN 15 1/16" DIM.

20 FOR OUTSIDE ASSIST ON TOWER LENGTHS OF 174 FT & OVER, 1-40 FT. INSERT 48570-3 OR 48570-4 IS REQ'D TO ATTACH OUTSIDE ASSIST.

21 INTERMEDIATE SUSPENSION IS REQ'D FOR BOOM LENGTHS OF 120 FT. & OVER WITH INTERMEDIATE FALL 33021-4 & 130 FT. AND OVER WITHOUT INTERMEDIATE FALL.

22 40 FT INSERT 191146-9 MUST BE USED ADJACENT TO BOOM BUTT 623561.

23 STAMP DATA ON 181503 AND INSTALL AFTER FINAL PAINTING.

INTERMEDIATE SUSPENSION PARTS USED ONLY WITH BOOM LENGTHS OF 130, 140 & 150 FT			
NO. REQ'D	DWG. NO.	DESCRIPTION	REMARKS
2	76217	PIN	
2	139936	LINK	
2	91577	REMOVABLE PENDANT ATTACH LUG	
2	276762	PENDANT (DWG. # 76232)	58'-8" LG.
2	138722	1½" TURNBUCKLE - SHACKLE ENDS	

OPTIONAL PARTS		
1	91017	BOOM POINT ASSY - 2 SHEAVES
1	92046	UNIVERSAL WIRE ROPE ANCHOR JOINT

#18 BOOM - BASIC PARTS			
NO. REQ'D	DWG. NO.	DESCRIPTION	REMARKS
6	17780	WASHER	
2	22656	BOOM SIGN	
1	33257	WIRE ROPE GUIDE ASSY	
1	191158	BOOM TOP 23'-0"	
1	43662	BOOM BUTT 17'-0"	FOR FITTING SEE VIEW "P-P"
4	70866	PIN	BOOM JOINT
2	71176	KEEPER PLATE	
1	75551	WIRE ROPE ROLLER GUIDE	
2	76032	PIN	
2	76046	RETAINING PLATE	
2	277011	BOOM STOP PENDANT	DWG. 79152
2	77824	PENDANT PIN	
2	139937	PENDANT LINK	
1	91014	BOOM POINT ASSY	ONE SHEAVE
2	225356	SELF ALIGNING BUSHING	
2	277040	BASIC PENDANT 87'-7" LG.	DWG # 77695

#9A TOWER - BASIC PARTS			
NO. REQ'D	DWG. NO.	DESCRIPTION	REMARKS
2	1925	END PLATE	
(G) 1	181503	BUILDERS PLATE	SEE NOTE 23
4	11022	BUSHING	
4	11413	KEEPER PLATE	
26	12535	WASHER	
2	138861	BUSHING	
2	18828	RUBBER BUMPER	
1	33192	MAIN STRUT	
1	33193	INTERMEDIATE STRUT	
1	33194	BOOM STRUT	
1	33288	BOOM CARRIER	
1	33284	SPECIAL INSERT	
(F)(B) 1	66193	BOOM TO TOWER LATCH ASSY	
2	138256	SPACER (SEE NOTE 19)	USE ONLY W/ 43581 PRIOR TO REV OF 8-24-71
1	182471	EQUALIZER ASS'Y	
1	181829	HOLD BACK ASSY	
1	93029	BOOM BACK STAY	
2	93899	PENDANT LINK	
1	43591	TOWER CAP	
1	190126	GANTRY ASSY	
4	140699	PIN	
4	71146	BUSHING	
2	71176	KEEPER PLATE	
8	71236	WASHER	
2	71588	PIN	
2	71662	PIN	
4	74256	BUSHING	
8	74336	PIN	BOOM JOINT
2	76047	UPPER STRAP	
2	76048	LOWER STRAP	
2	76050	PIN	
1	76066	WIRE ROPE GUIDE ASSY	
8	76095	END PLATE	
2	76097	PIN	
2	76099	SPACER	
2	76100	PIN	
1	76104	WIRE ROPE GUIDE ASSY	
1	76130	PIN	
2	76140-2	STRUT LINK PENDANT	11 FT 11 LG
4	76225	PIN	
1	76405	SPREADER	
2	77118	PIN	
2	77368	PIN	
2	77824	PIN	
2	78180	END PLATE	
2	78574	PIN	
1	140690	SPREADER	
4	140688	LINK	
2	78827	STRUT	TOWER BACKSTAY
1	91012	WIRE ROPE GUIDE ASSY.	
(C) ~~1~~	~~91025~~	~~HAND LEVER ASSY FOR #9A TOWER LATCH CONTROL~~	
2	225356	BALL BUSHING	
4	277033	BASIC PEND. 34'-0" 154 FT. TOWER & UNDER (DWG # 77523)	
4	277034	BASIC PEND. 104'-0" 164 FT. TOWER & OVER (DWG # 77523)	
1	623561	BOOM BUTT 30'-0" (DWG # 50874)	
1	191146-9	40" INSERT W/ EQUALIZER RAIL	SEE NOTE 22
2	79258	PIN	
1	94350	LIFTING BRACKET	FOR 174 FT TOWER & OVER
1	562112	COTTER PIN - 1/4 x 4	
2	219129	1/2 x 1 x 4 LG, F.B. - 1020	
(H) 4	620656	1/4 x 3/16 LG. TYPE "U" DRIVE SCR.	
ASSEMBLIES NOT SHOWN			
1	48256	TWIST INDICATOR ASSEMBLY	
1	190171	AUTOMATIC BOOM STOP ASSEMBLY	
1	181727	BOOM ANGLE INDICATOR ASSY	

GENERAL NOTES

CONDITIONS BEFORE ERECTION PROCEDURE

1 - THE AREA FOR SETUP OR THE SURFACE UPON WHICH THE UNIT WILL TRAVEL MUST BE FIRM AND LEVEL.

2 THE UNIT'S CRAWLERS MUST BE IN THE EXTENDED POSITION.

3 THE UNIT MUST BE LEVELED WITH MATS USING THE CROSS LEVEL AT THE OPERATOR'S STATION.

4 - THE MAXIMUM LENGTHS TO BE RAISED OVER THE FRONT WITHOUT AN OUTSIDE ASSIST ARE:- 164 FT. - #9A TOWER & 150 FT. OF #18 BOOM.

ADDING OR REMOVING INSERTS (SEE VIEW "L")

5 - WITH BOOM HOIST LINE TIGHT - SECURE SPREADER 76405 TO MAIN STRUT 33192 WITH PIN 77368 - LOOSEN HOIST LINE & CHANGE INSERTS.

6 - AFTER CHANGING INSERTS, TIGHTEN HOIST LINE REMOVE & LOCK PIN # 77368 IN BRACKET ON MAIN STRUT # 33192 FOR STORAGE.

ERECTING TOWER AND BOOM

7 - WITH BOOM TOP LATCHED TO TOWER & GANTRY IN UP POSITION, RAISE TOWER WITH BOOM HOIST AND PIN TOWER BACKSTAYS TO CAB REAR SUPPORT, THE HOLD BACK LINE FROM THE LEFT DRUM SHOULD BE KEPT MODERATELY TIGHT AS THE TOWER APPROACHES A VERTICAL POSITION.

8 - LOWER GANTRY TO TOWER POSITION (SEE GANTRY ASSY # 190126).
(A) MAINTAIN LOAD ON BOOM RIGGING SUFFICIENT TO KEEP TENSION IN BACK HITCH.
(B) REMOVE PIN CONNECTING LOWER & INTERMEDIATE BACK HITCH STRAPS FROM LOWER HOLE IN INTERMEDIATE STRAP.
(C) LOWER GANTRY TO TOWER POSITION BY SLACKING OFF BOOM HOIST LINE.
(D) INSERT PIN CONNECTING LOWER & INTERMEDIATE BACK HITCH STRAPS TO MIDDLE HOLE IN INTERMEDIATE STRAP.

9 - RELEASE BOOM TOP FROM TOWER BY PULLING LATCH LEVER ON TOWER BUTT DOWNWARD.

10 - RAISE BOOM USING BOOM HOIST.

LOWERING TOWER & BOOM

11 - LOWER BOOM USING BOOM HOIST (BOOM TOP WILL AUTOMATICALLY LATCH TO TOWER).

12 - RAISE GANTRY TO UP POSITION.
(A) REMOVE PIN CONNECTING LOWER AND INTERMEDIATE BACK HITCH STRAP FROM MIDDLE HOLE IN INTERMEDIATE STRAP.
(B) RAISE GANTRY TO UP POSITION.
(C) HOLD GANTRY IN POSITION WITH BOOM RIGGING.
(D) INSERT PIN CONNECTING LOWER & INTERMEDIATE BACK HITCH STRAPS TO LOWER HOLE IN INTERMEDIATE STRAP.

13 - DISCONNECT TOWER BACKSTAYS FROM CAB REAR.

14 - LOWER TOWER USING BOOM HOIST.

BOOM HOIST LINE FOR 10 PART LINE

940 FT. OF 3/8-6.26 WARRINGTON-SEALE, EXTRA IMPROVED PLOW STL., REGULAR LAY, IWRC (719035) B.S. 79600 LBS. OR 940 FT. OF 3/8-6.26 WARRINGTON-SEALE, EXTRA IMPROVED PLOW STL., ALTERNATE LAY, IWRC (719094) BREAKING STRENGTH 79,600 LBS.

ASSEMBLIES USED ON

10-17-80 RAD REV PRIOR TO MFG
4-17-81 JN (A) REV. CTWT. (B) WAS 33287 (C) DELETED
12-15-81 RAD (D) WAS 276897 (E) WAS 277040 (F) WAS 66145
5-21-82 MJW (G)(H)(J)(K) ADDED

SCALE 1/8" 1/4" 3/8" 1/2"	UNLESS NOTED FRACT. DIM. HOLE DIA. HOLE CENTERS FINISH	MANITOWOC ENGINEERING CO. MANITOWOC, WISCONSIN	TOWER CRANE RIGGING ASSEMBLY - #9A TOWER W/ #18 BOOM -
DR. BSS CK. MM APP.		MODEL 3900W	FOR USE W/ #124 JIB

DWG. NO. 660916 | REVISED DATE | DATE 8-8-80 | PATTERN NO. | CODE NO. | DWG. NO. 660916

DO NOT SCALE THIS DRAWING

REFERENCE ONLY!