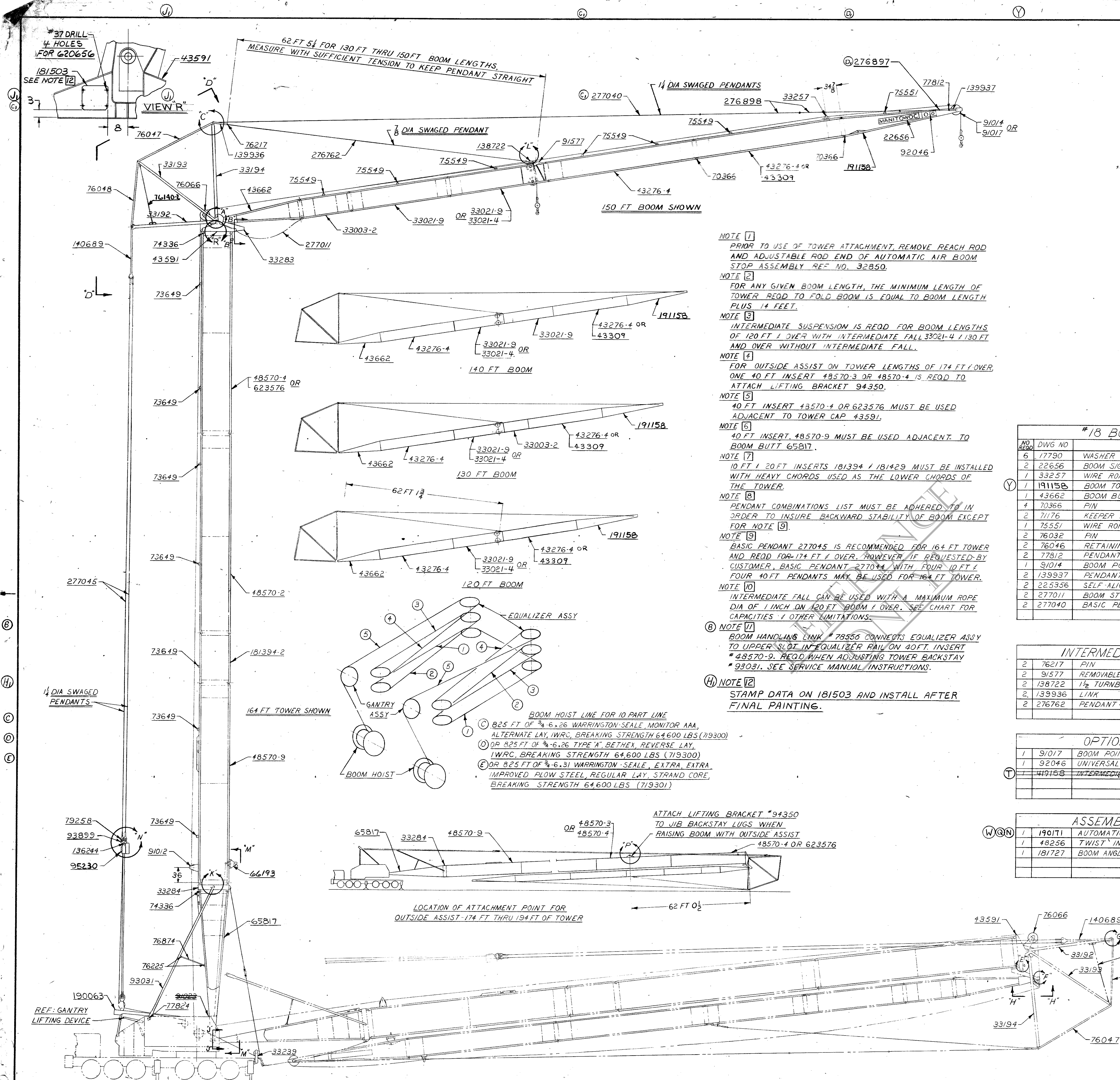




#9A TOWER-RECOMMENDED FOR VARIOUS TOWER LENGTHS									
DWG NO.	181394-2	181429-2	18570-2	623576-1	18570-3	18570-4	18570-9	276897	276898
TOWER LENGTH	10 FT	20 FT	40 FT	40 FT	40 FT	40 FT	10 FT	20 FT	40 FT
WIRE ROPE ROLLER GUIDE ASSY	114 FT	124 FT	134 FT	144 FT	154 FT	164 FT	174 FT	184 FT	194 FT
114 FT	0	0	0	1	1	1	0	0	0
124 FT	1	0	0	1	1	1	4	0	0
134 FT	0	1	0	1	1	1	0	4	0
144 FT	1	1	0	1	1	1	4	4	0
154 FT	0	0	1	1	1	1	0	0	4
164 FT	1	0	1	1	1	1	0	0	0
174 FT	0	1	1	1	1	1	4	0	0
184 FT	1	1	1	1	1	1	0	4	0
194 FT	0	0	2	1	1	1	4	4	0

18570-2 PLAIN INSERT
18570-3 WITH JIB BACKSTAY LUGS
18570-4 WITH JIB BACKSTAY LUGS AND RUBBER BUMPER
18570-9 WITH EQUALIZER RAILS
623576 WITH RUBBER BUMPER

#18 BOOM-RECOMMENDED FOR VARIOUS BOOM LENGTHS									
DWG NO.	33003-2	33021-9	33021-4	33021-4	33021-4	33021-4	33021-4	33021-4	33021-4
BOOM LENGTH	10 FT	20 FT	30 FT	40 FT	50 FT	60 FT	70 FT	80 FT	90 FT
100 FT	0	0	2	2	2	2	2	2	2
110 FT	1	0	2	2	2	2	2	2	2
120 FT	0	1	2	2	2	2	2	2	2
130 FT	1	1	2	2	2	2	2	2	2
140 FT	0	2	2	2	2	2	2	2	2
150 FT	1	2	2	2	2	2	2	2	2

33021-9 WITH SHEAR STOP LUGS
33021-4 WITH INTERMEDIATE FALL-SEE NOTES 5 & 10
33021-4 WITH JIB BACKSTAY LUGS

#18 BOOM-BASIC PARTS		
DWG NO.	DESCRIPTION	REMARKS
1 17790	WASHER	
2 22656	BOOM SIGN	
1 33257	WIRE ROPE GUIDE ASSEMBLY	
1 19115B	BOOM TOP-23 FT	
1 43662	BOOM BUTT-17 FT	FOR FITTING SEE VIEW Q-Q
4 70366	PIN	BOOM JOINT
2 71176	KEEPER PLATE	
1 75551	WIRE ROPE ROLLER GUIDE	
2 76032	PIN	
2 76046	RETAINING PLATE	
2 77812	PENDANT PIN	
1 91014	BOOM POINT ASSEMBLY-1/2 ROPE	ONE SHEAVE-27 DIA
2 139937	PENDANT LINK	
2 225356	SELF-ALIGNING BUSHING	
2 277011	BOOM STOP PENDANT-17 FT 10 1/2 LG	DWG 79152
2 277040	BASIC PENDANT-97 FT 7	DWG 77695

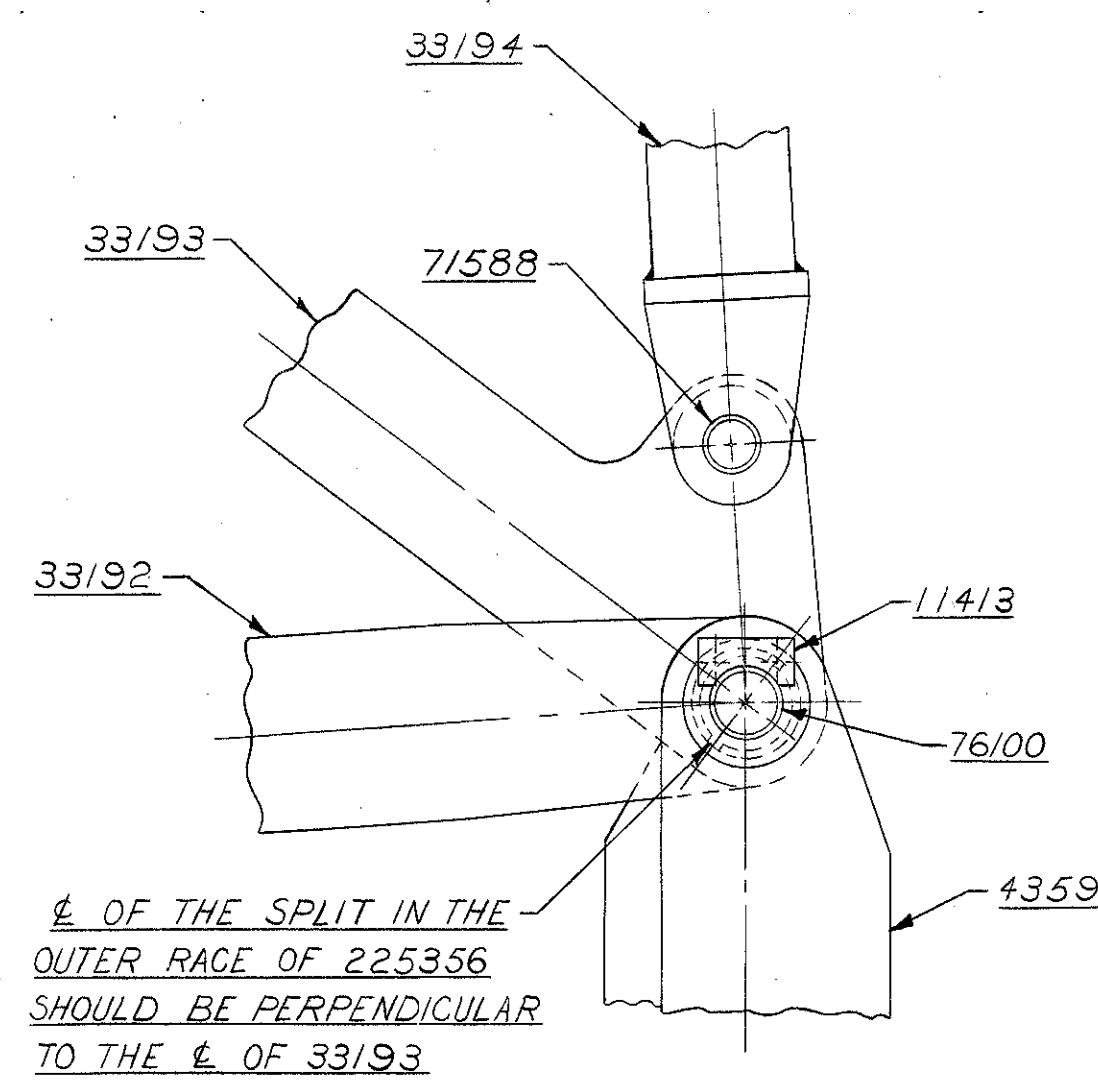
INTERMEDIATE SUSPENSION PARTS		
2 76217	PIN	
2 91577	REMOVABLE PENDANT ATTACHMENT LUG	
2 138722	1/2 TURNBUCKLE-SHACKLE ENDS	
2 139936	LINK	
2 276762	PENDANT-58 FT 8 LG	DWG 76232

OPTIONAL PARTS		
1 91017	BOOM POINT ASSEMBLY-1/2 ROPE	2 SHEAVES-27 DIA
1 92046	UNIVERSAL WIRE ROPE ANCHOR JOINT	
1 49168	INTERMEDIATE FALL FOR 18 BOOM	SEE NOTES 3 & 10

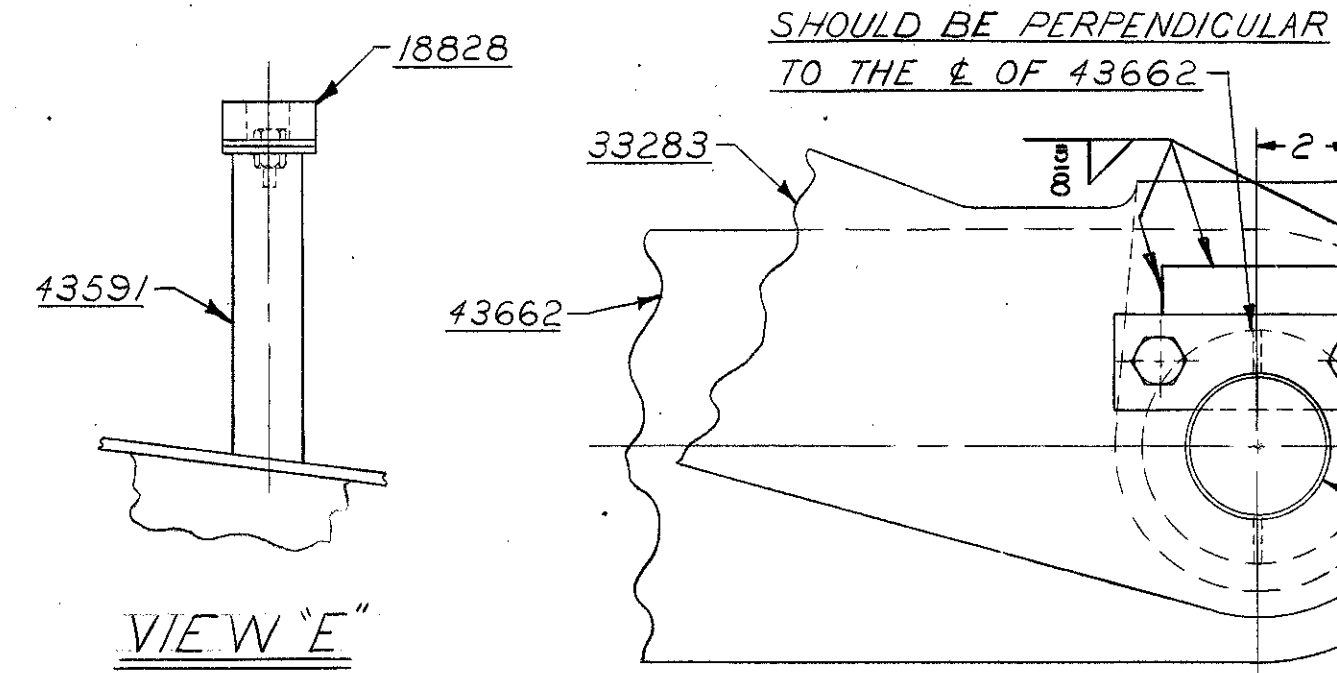
ASSEMBLIES NOT SHOWN		
1 190171	AUTOMATIC BOOM STOP	ELECTRIC CONTROL
1 18256	TWIST INDICATOR ASSEMBLY	
1 181727	BOOM ANGLE INDICATOR ASSEMBLY	

#9A TOWER-BASIC PARTS		
DWG NO.	DESCRIPTION	REMARKS
2 1925	END PLATE	
1 33257	WIRE ROPE GUIDE ASSEMBLY	
4 11022	BUSHING	
4 11413	KEEPER PLATE	
20 12535	WASHER	
2 13861	BUSHING	
2 18828	RUBBER BUMPER	
1 33192	MAIN STRUT	
1 33193	INTERMEDIATE STRUT	
1 33194	BOOM STRUT	
1 33239	TOWER HOLD-BACK ASSEMBLY	
1 33283	BOOM CARRIER	
1 33284	SPECIAL INSERT	
1 46193	BOOM TO TOWER LATCH ASSEMBLY	
1 43591	TOWER CAP	
1 190063	GANTRY ASSEMBLY	
4 71146	BUSHING	
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 ASSEMBLY	
8 76095	END PLATE	
2 76097	PIN	
2 76099	SPACER	
2 76100	PIN	
1 76104	WIRE ROPE ROLLER GUIDE	
1 78130	PIN	
2 76140-2	STRUT LINK PENDANT	11 FT 11 LG
4 76225	PIN	
1 76405	SPREADER	
2 76874	STRUT-TOWER BACKSTAY	
2 77118	PIN	
2 77368	PIN	
2 77824	PIN	
2 78130	END PLATE	
2 79258	PIN	
1 91012	WIRE ROPE GUIDE ASSEMBLY	
1 93031	ADJUSTABLE BACKSTAY	
2 93899	PENDANT LINK	
1 95230	EQUALIZER ASSEMBLY	
1 94350	LIFTING BRACKET FOR 174 FT OF TOWER & OVER	
4 140689	LINK	
1 140690	SPREADER	
4 140699	PIN	
4 277044	BASIC PENDANT FOR 154 FT TOWER UNDER-62 FT 6-DWG 77523	
4 277045	BASIC PENDANT FOR 164 FT TOWER OVER-112 FT 6-DWG 77523	
1 65817	BOOM BUTT-30 FT	
2 71176	KEEPER PLATE	
2 136244	PIN	
2 225356	SELF-ALIGNING BUSHING	
6 17790	WASHER	
2 78556	BOOM HANDLING LINK-NOT SHOWN	SEE NOTE 17
1 562112	COTTER PIN-1/4 x 4	
2 219129	1/2 x 1 x 4 LG FB-1020	
1 181503	BUILDERS PLATE	SEE NOTE 12
4 160656	4 x 5/16 LG TYPE 'U' DRIVE SCREW	

THIS RIGGING CANNOT BE USED WITH #124 JIB-SEE ASSY #66015 IF #124 JIB IS TO BE USED.



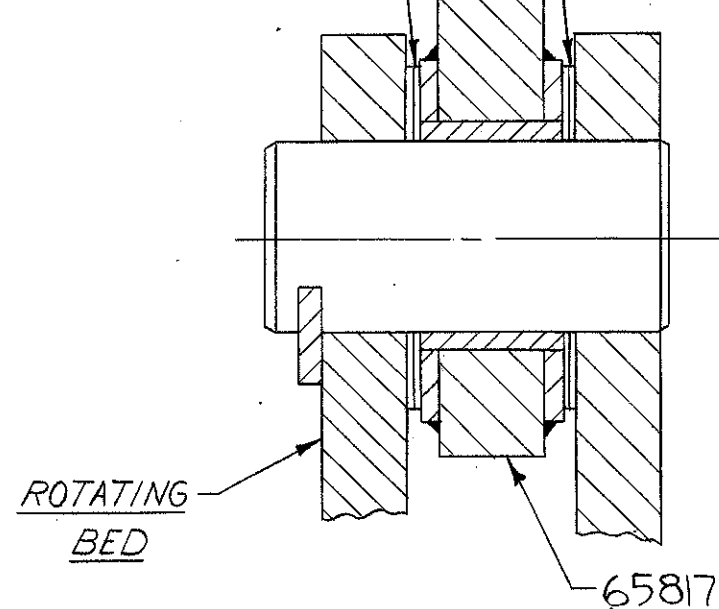
VIEW "A"



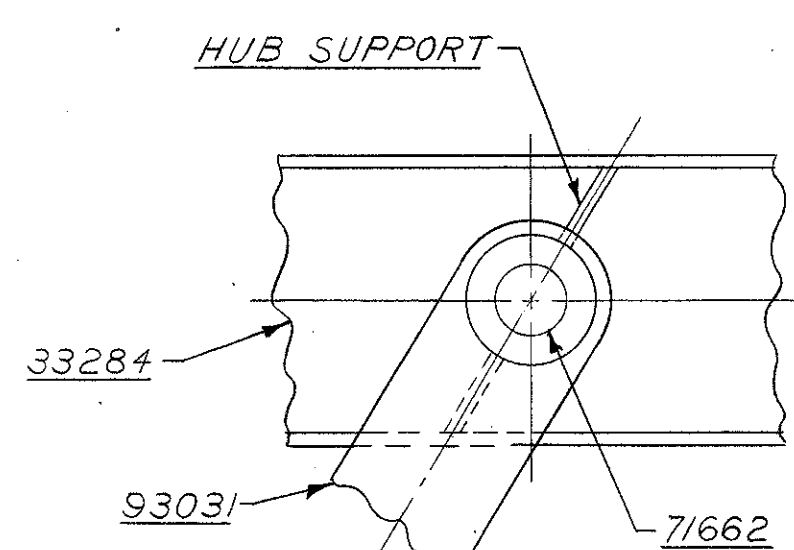
VIEW "E"

VIEW "F"

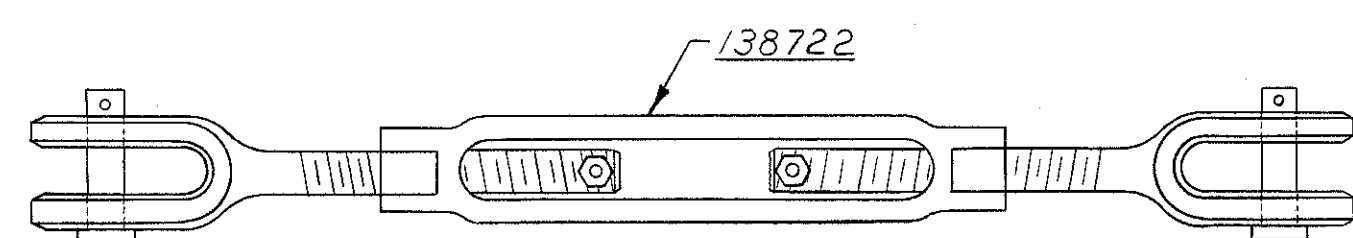
ADD WASHERS 71236 ON EACH SIDE TO PREVENT SIDE PLAY IN BOOM. - MAX SIDE PLAY ALLOWED $\frac{1}{8}$



SECTION "J-J"

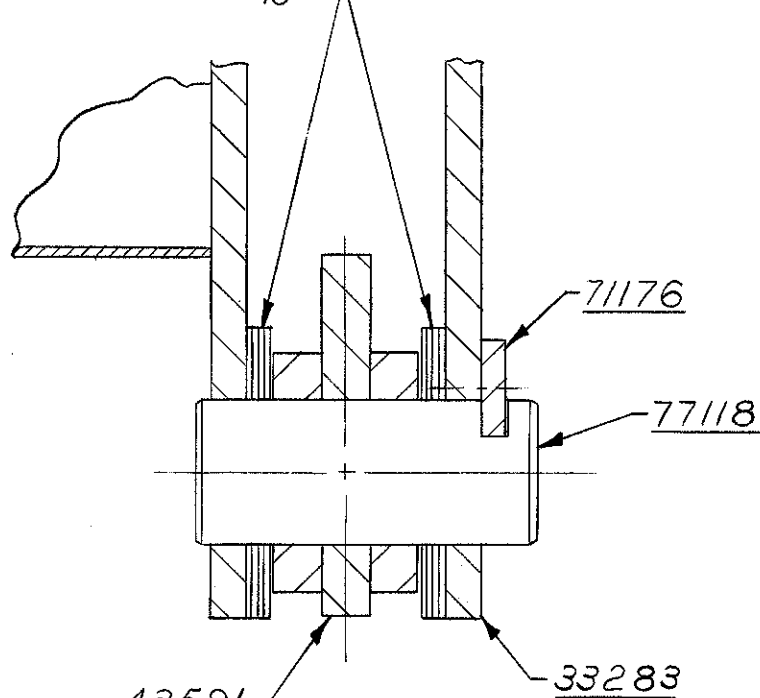


VIEW "K"

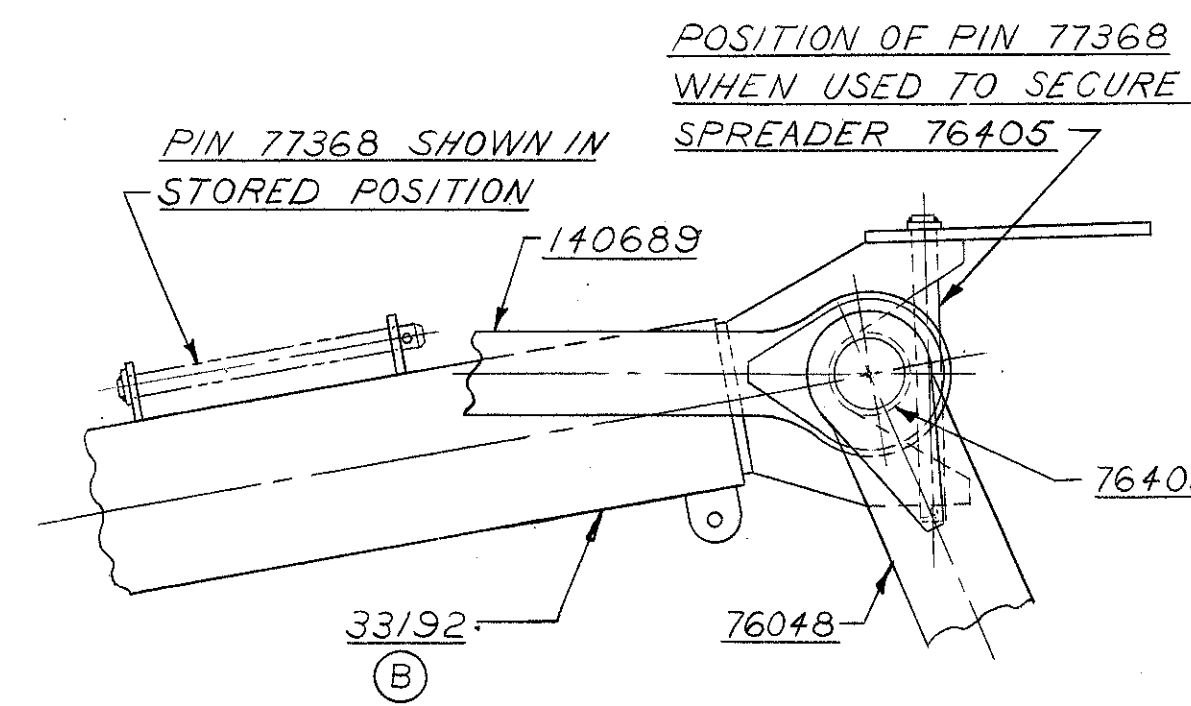


VIEW "L"

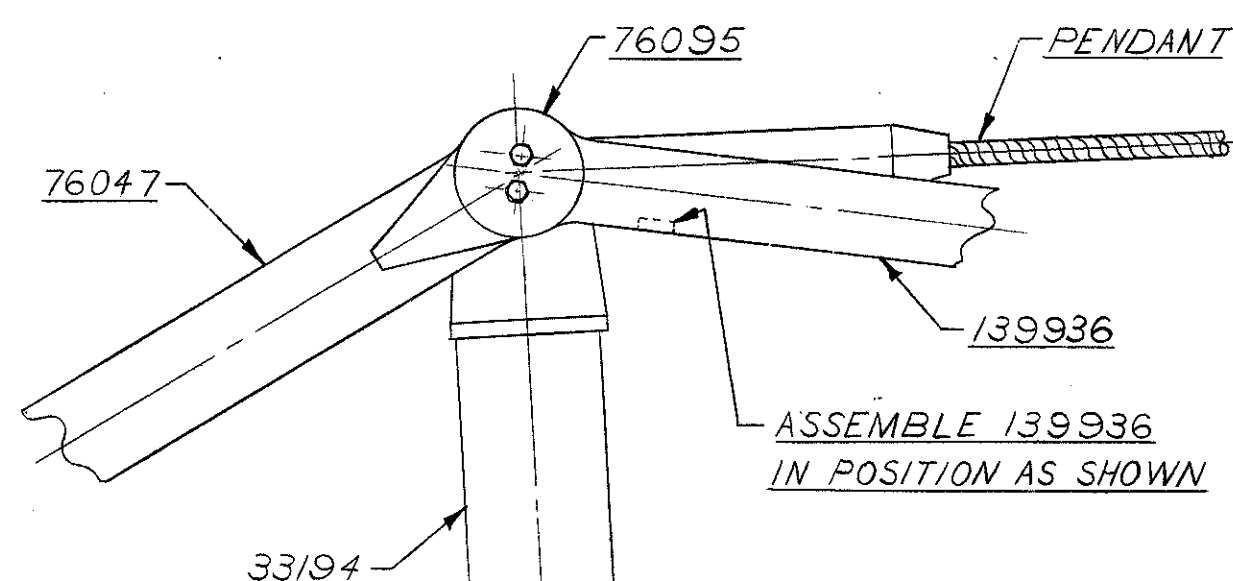
ADD WASHERS 12535 ON EACH SIDE TO PREVENT SIDE PLAY OF 33283 - MAX SIDE PLAY ALLOWED $\frac{1}{8}$



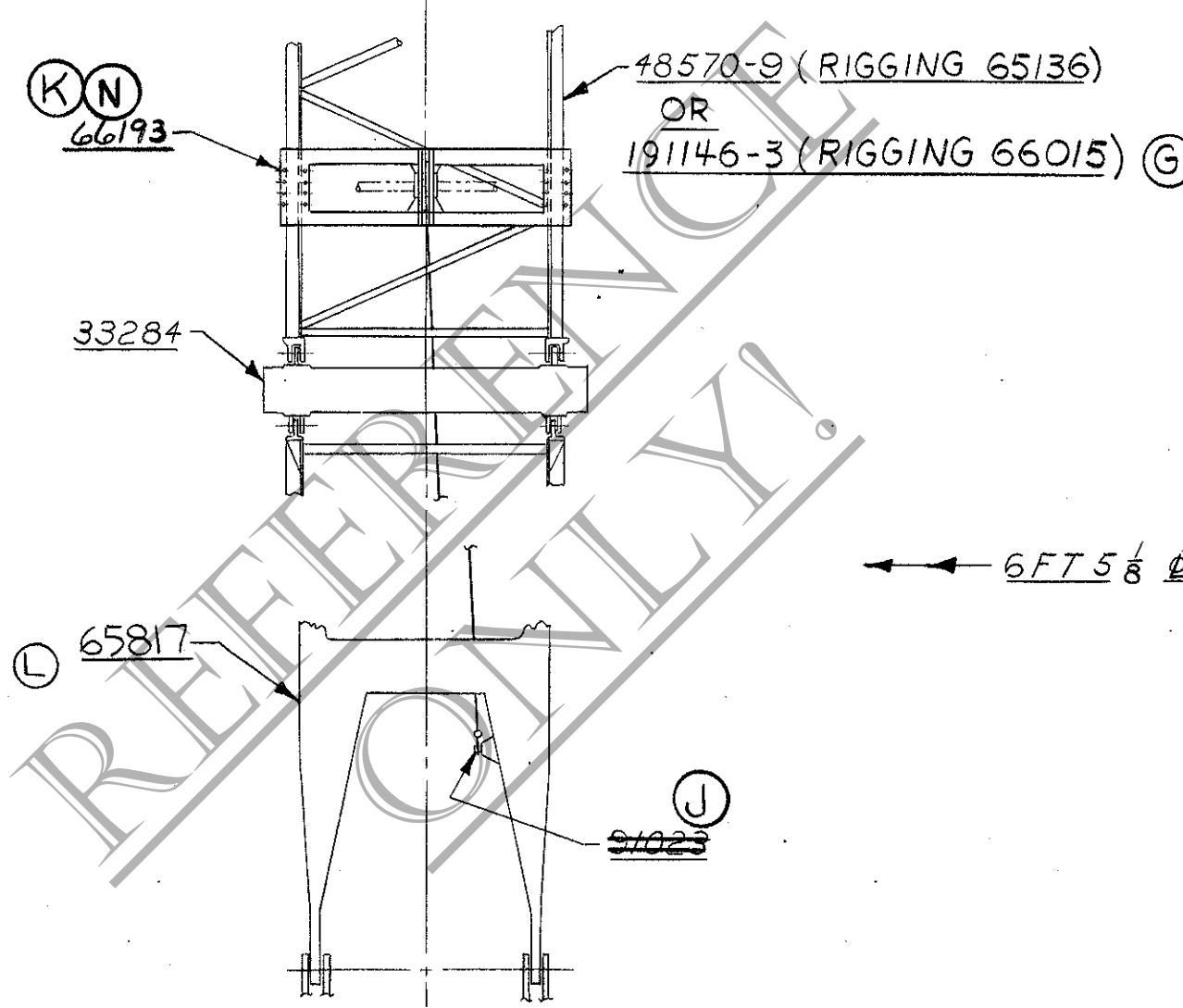
SECTION "B-B"



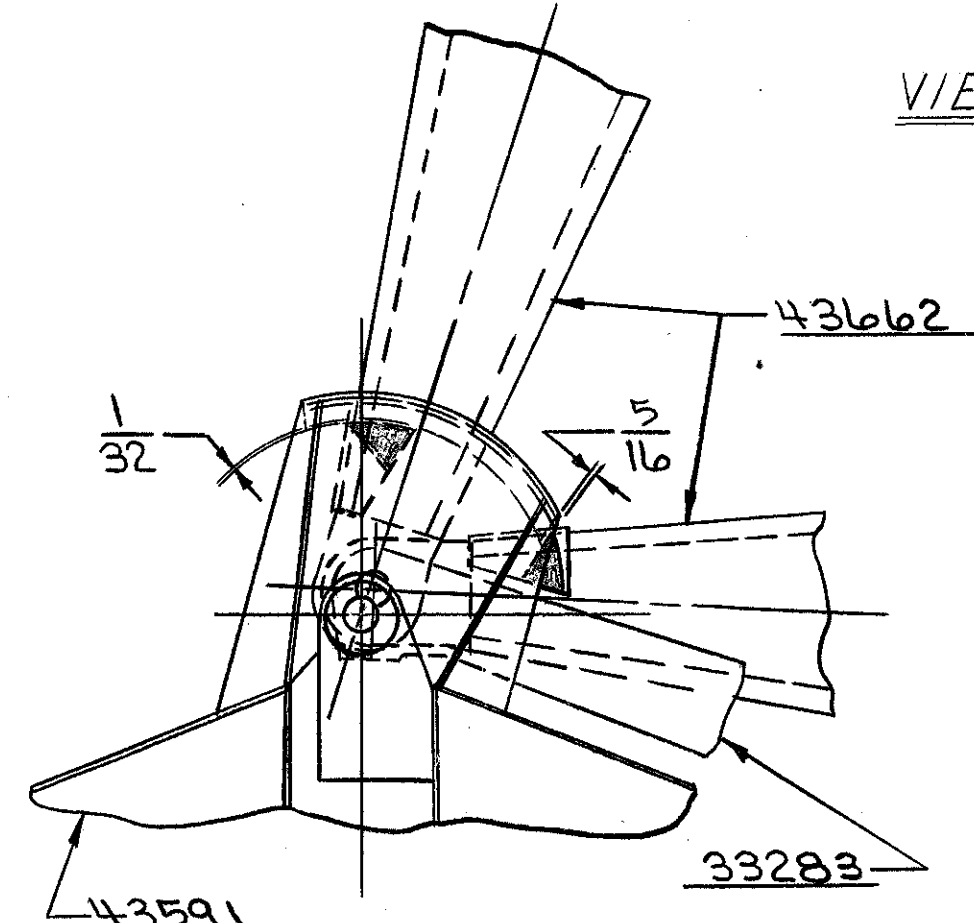
VIEW "G"



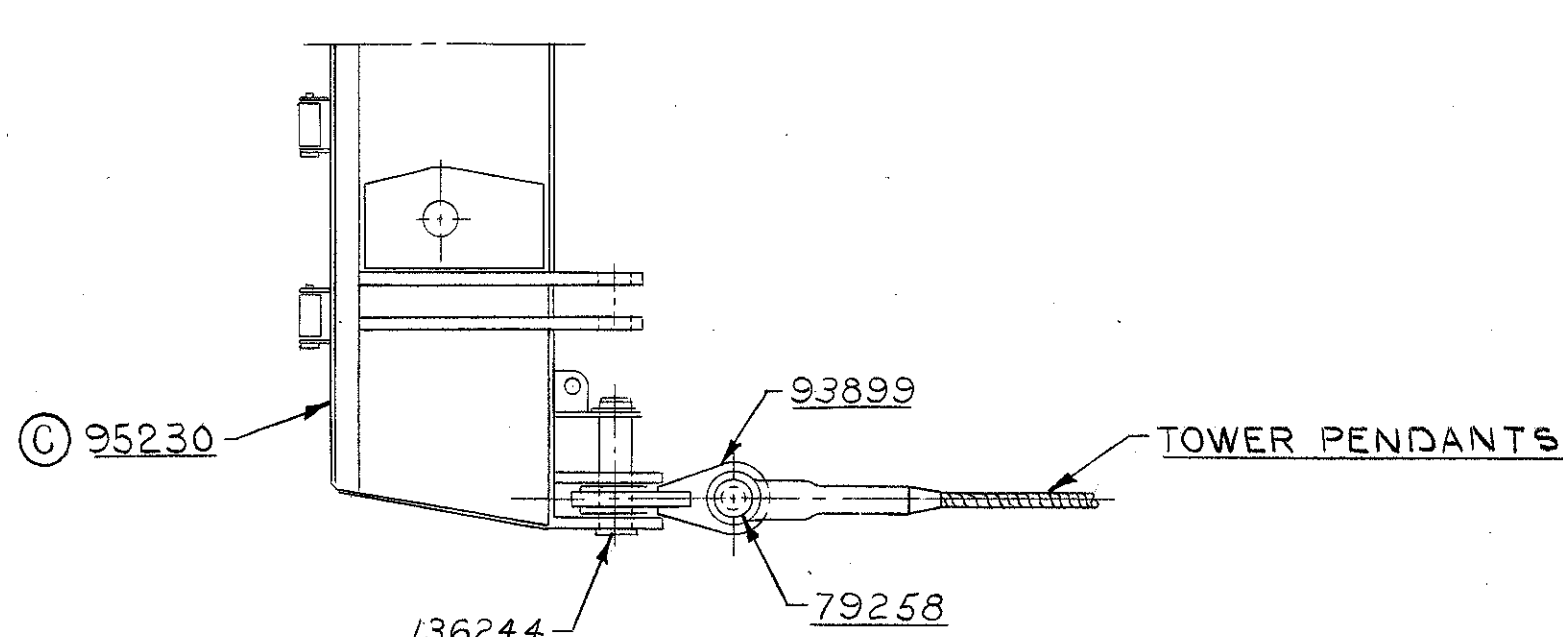
VIEW "C"



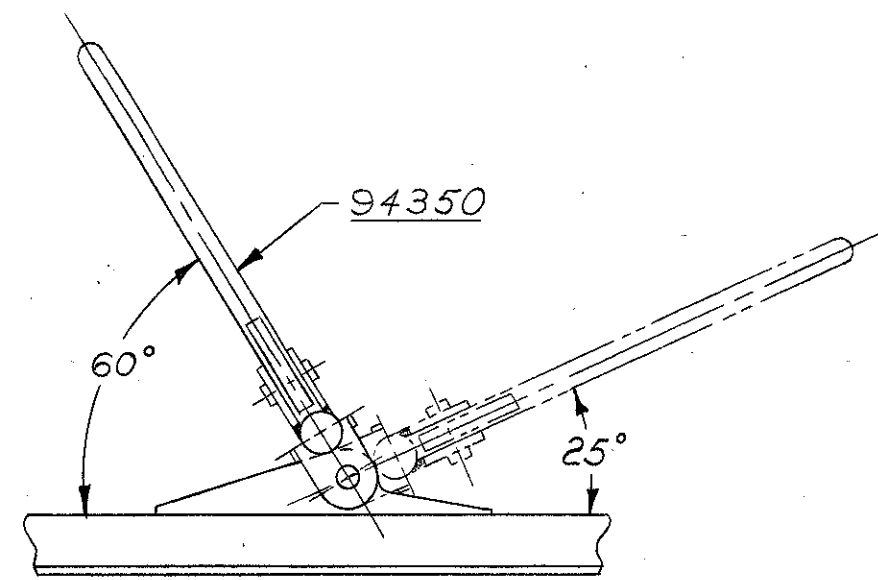
VIEW "M-M"



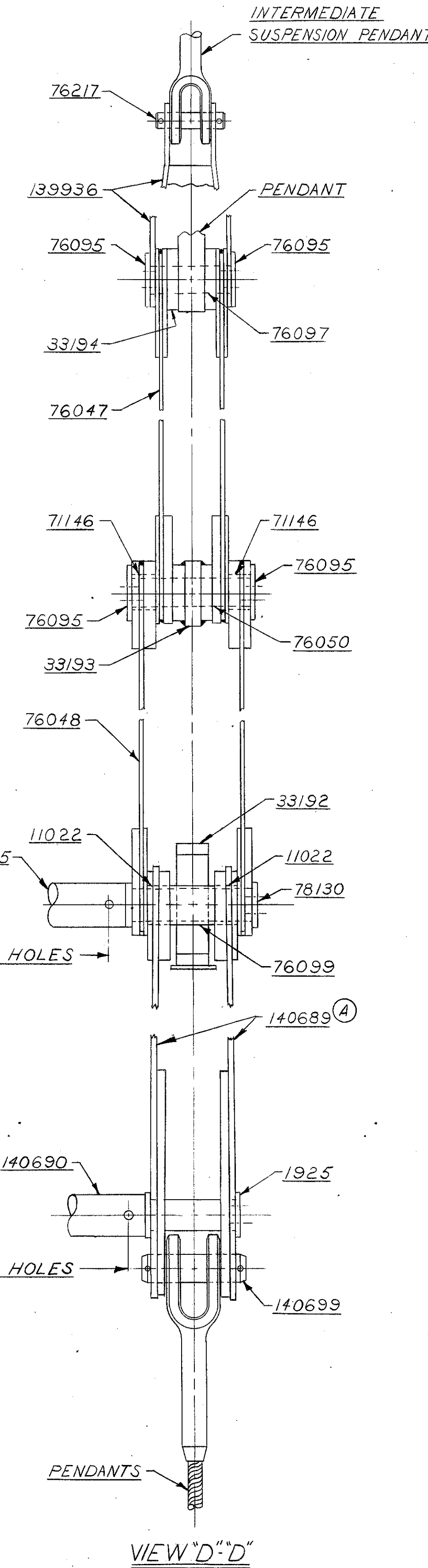
VIEW "Q-Q"



VIEW "N"



VIEW "P"



VIEW "D-D"

GENERAL ERECTION NOTES

1. THE AREA FOR SET-UP OR THE SURFACE UPON WHICH THE UNIT WILL TRAVEL, MUST BE FIRM AND LEVEL.
2. TRUCK CARRIER AND CRANE MUST BE EQUIPPED WITH 61,200 * CRANE COUNTERWEIGHT AND FRONT BUMPER COUNTERWEIGHT TO RAISE OR LOWER TOWER, OR TRAVEL WITH TOWER.
3. THE UNIT MUST BE SUPPORTED AND LEVELED ON ITS JACKS WITH THE OUTRIGGER BEAMS FULLY EXTENDED. THE CROSS LEVEL AT OPERATORS STATION IS TO BE USED FOR LEVELING.
4. THE MAXIMUM LENGTHS TO BE RAISED ON OUTRIGGERS WITHOUT AN OUTSIDE ASSIST ARE:
A. 164 FT * 9A TOWER AND 150 FT * 18 BOOM OVER THE REAR.
B. 134 FT * 9A TOWER AND 120 FT * 18 BOOM OVER THE SIDE.
5. WITH BOOM HOIST LINE TIGHT, SECURE SPREADER 76405 TO MAIN STRUT 33192 WITH PIN 77368. LOOSEN HOIST LINE AND CHANGE INSERTS.
6. AFTER CHANGING INSERTS, TIGHTEN HOIST LINE. REMOVE AND LOCK PIN 77368 IN BRACKETS ON MAIN STRUT 33192 FOR STORAGE.
7. WITH BOOM TOP LATCHED TO TOWER, AND GANTRY IN UP POSITION, RAISE TOWER WITH BOOM HOIST AND PIN TOWER BACKSTAYS TO CAB REAR WITH PIN 77824. THE HOLD BACK LINE FROM THE LEFT DRUM SHOULD BE KEPT MODERATELY TIGHT AS TOWER APPROACHES VERTICAL POSITION.
8. WITH TOWER LOCKED IN VERTICAL POSITION, MOVE TOWER HOLD-BACK ASSEMBLY 33239 FROM CRANE CARRIER FRAME TO LUG ON ROTATING BED.
9. LOWER GANTRY TO DOWN POSITION (SEE GANTRY INSTRUCTIONS).
10. RELEASE BOOM TOP FROM TOWER BY PULLING LATCH LEVER ON TOWER BUTT DOWNWARD.
11. RAISE BOOM USING THE BOOM HOIST.
12. LOWER BOOM USING THE BOOM HOIST (BOOM TOP WILL AUTOMATICALLY LATCH TO TOWER).
13. RAISE GANTRY TO UP POSITION (SEE GANTRY INSTRUCTIONS).
14. MOVE TOWER HOLD-BACK ASSEMBLY 33239 FROM LUG ON ROTATING BED TO CRANE CARRIER FRAME.
15. DISCONNECT TOWER BACKSTAYS FROM CAB REAR AND LOWER TOWER AND-BOOM USING THE BOOM HOIST.

BILL OF MATERIAL						REVISIONS
ITEM NO.	REV.	DESCRIPTION	LENGTH	MATERIAL	CODE NO.	
			FT. IN.		OR DWG. NO.	

REVISIONS
3-29-73 CRP
4-6-73 R.A.D.
10-31-74 DWD
11-15-76 CRP
12-17-80 CRP
10-17-80 SPS
3-27-81 DVB
4-21-81 JN
12-17-81 LPW
10-17-81 LPW

DATE 12-29-72

SHEET 2 OF 2

MANITOWOC ENGINEERING CO.	TOWER CRANE RIGGING ASSY
MANITOWOC, WISCONSIN	"9A" TOWER W/ "18" BOOM -
MODEL 39007	DOUBLE 1/4 DIA SWAGED
	TOWER PENDANTS

DATE	PATTERN NO.	CODE NO.	REV. NO.
12-29-72			65136