







**GENERAL**

ALL #72A BOOM SECTIONS ARE SHIPPED IN HALVES TO COMPLY WITH HEIGHT AND WIDTH SHIPPING RESTRICTIONS. THE 50 FT AND 25 FT SECTION HALVES ARE SHIPPED BOLTED TOGETHER. THE BOOM BUTT AND TRANSITION SECTION HALVES ARE SHIPPED SEPARATELY. EACH BOOM SECTION WAS CONSTRUCTED AS TWO MATCHED HALVES. STAMPED INTO THE CASTING AT THE FOUR LOWER CONNECTING LUGS OF EACH BOOM SECTION ARE THE BOOM NUMBER, THE PART NUMBER, AND A MANUFACTURING CODE. WHEN ASSEMBLING ANY BOOM SECTION, INCLUDING THE BOOM BUTT AND THE TRANSITION SECTION, MAKE SURE THESE NUMBERS MATCH. SEE DELTA (1) FOR WEIGHT AND SHIPPING DIMENSIONS.

**CAUTION**

HANDLE BOOM WITH CARE TO AVOID DAMAGING LACINGS AND CHORDS. USE NYLON SLINGS TO HANDLE BOOM SECTIONS. DO NOT USE HOOKS, CHAINS OR WIRE ROPE SLINGS. LIFT AGAINST CHORDS ONLY. NEVER AGAINST LACINGS. DO NOT ATTACH LIFTING SLINGS TO LACINGS OR AT A POINT WHERE TWO LACINGS COME TOGETHER, EXCEPT FOR 3 POINT HANDLING OF HALF SECTION. SEE DELTA (4).

**DISASSEMBLING SECTION HALVES FROM SHIPPING POSITION**  
(SECTION HALVES MUST BE IN DELTA (2) POSITION)

1. SECTION HALF MUST BE BLOCKED AS SHOWN IN VIEW "D".
2. ADJUST SO SECTION HALF IS LEVEL BEFORE SEPERATING. USE HOOKUP AS SHOWN IN DELTA (4).
3. REMOVE BOLTS AND KEEPERS FROM SHIPPING BRACKETS TO ALLOW SEPERATION OF TWO HALVES OF BOOM SECTION. (SEE VIEW "B" DELTA (1)).
4. DISENGAGE CONNECTING PIN FROM HOLE IN SHIPPING BRACKETS BY LIFTING UPPER HALF SLIGHTLY. ADJUST CHAIN HOIST TO LEVEL SECTION SO PINS DO NOT BIND UP. LIFT SECTION OFF PINS AND THEN SWING AWAY. (SEE DELTA (3)).

**ASSEMBLING BOOM SECTIONS**

(THE FOLLOWING PROCEDURES APPLY TO ALL BOOM SECTIONS INCLUDING THE BUTT AND THE TRANSITION INSERT)

1. SECTION HALF MUST BE BLOCKED AS SHOWN IN VIEW "D".
2. CHECK THAT ALL MATING SURFACES ON DOVETAIL LACING CONNECTORS ARE CLEAN AND DRY. CLEAN AS NECESSARY. (REF. SECTION "A" - "A".
- NOTE: SURFACES ON DOVETAIL LACING CONNECTORS ARE PLATED, DO NOT COAT THESE SURFACES WITH "NEVER-SEEZ".
3. USE HOOKUP AS SHOWN IN DELTA (4). PLACE EACH HALF OF BOOM IN APPROXIMATE POSITION FOR ASSEMBLY WITH SECTION HALVES LEVEL, SIDE TO SIDE AND FRONT TO BACK. BLOCK AS NECESSARY TO ASSURE HALVES REMAIN LEVEL. ALL LACING CONNECTORS OF SECTION HALVES MUST BE IN INITIAL POSITION AT THE SAME TIME (AS SHOWN IN VIEW "C") BEFORE LOWERING.
4. LOWER SECTION HALVES. THEN HAND-TIGHTEN BOLT TO HOLD LACING CONNECTORS TOGETHER. SEE DELTA (5).
5. TORQUE ALL LOWER CONNECTING BOLTS TO 600 FT-LBS. (813 N m) THEN TORQUE ALL UPPER BOLTS TO 600 FT-LBS. (813 N m)
- CAUTION: TORQUING LOWER BOLTS BEFORE UPPER BOLTS IS REQUIRED TO PREVENT COMPRESSION OF THE ADJUSTING LACING. ADJUSTABLE LACING WAS TORQUED TO CORRECT TENSION AT FACTORY AND SHOULD NOT NEED TO BE RETORQUED WHEN BOOM IS ASSEMBLED.
6. INSTALL KEEPER PLATE TO HOLD BOLT IN PLACE. TORQUE BOLT HEAD AS NEEDED SO HEAD FITS KEEPERS NOTCHED OR FLAT SIDE. SEE DELTA (5).

**RESETTING ADJUSTABLE LACING TENSION**

(NOTE: ADJUSTABLE LACING IS TORQUED SO LACING IS ALWAYS IN TENSION.)

IF BOOM LACING CONNECTORS LOOSEN OVER TIME DUE TO WEAR OR OTHER CAUSES, CHECK THE TORQUE OF THE TURNBUCKLE NUT ON THE ADJUSTABLE LACING.

1. REMOVE PIN HOLDING SLEEVE IN PLACE AND SLIDE SLEEVE UP AND OUT OF THE WAY. (SEE DELTA (6)).
2. CLEAN AND LUBE THREADS FOR ADJUSTABLE LACING AS NEEDED.
3. USING OPEN END TORQUE WRENCH, TORQUE NUT ON TURNBUCKLE TO 250 FT-LBS TENSION. (365 N m)
4. SLIDE SLEEVE BACK INTO PLACE AND INSERT PIN.

**DISASSEMBLY BOOM SECTIONS FOR SHIPPING**

(THE FOLLOWING PROCEDURES APPLY TO ALL BOOM SECTIONS INCLUDING THE BUTT AND THE TRANSITION INSERT)

1. SECTION HALF MUST BE BLOCKED AS SHOWN IN VIEW "D".
2. USE HOOKUP AS SHOWN IN DELTA (4). ADJUST SECTION HALF IN APPROXIMATE POSITION FOR DISASSEMBLY WITH SECTION HALVES LEVEL, SIDE TO SIDE AND FRONT TO BACK.
3. REMOVE BOLTS AND KEEPER PLATES FROM LACING CONNECTORS. SEE DELTA (5).
4. PLACE TWO CONNECTING BOLTS INTO JACKING HOLES PROVIDED TO UNLOCK DOVETAIL CONNECTIONS. SEE DELTA (5). FOR BUTT SECTION THE LARGE DOVETAIL MUST BE SEPERATED FIRST. AFTER ALL OTHER DOVETAIL JOINTS HAVE BEEN SEPERATED, FULLY ENGAGE CONNECTING BOLTS IN LARGE DOVETAIL JOINT TO PREVENT BINDING. (SEE VIEW "E" - "E" DELTA (4)).
- LIFT UPPER HALF SLIGHTLY AND ADJUST CHAIN HOIST TO LEVEL SECTION SO JOINTS DO NOT BIND. (SEE VIEW "C")
- LIFT SECTION TO DISENGAGE, THEN REMOVE HALF OR MOVE TO SHIPPING POSITION.

**ASSEMBLING SECTION HALVES FOR SHIPPING**

(APPLIES TO 25 AND 50 FT INSERTS)

1. SECTION HALF MUST BE BLOCKED AS SHOWN IN VIEW "D".
2. ADJUST SO SECTION HALF IS LEVEL WITH EACH OTHER. USE HOOKUP AS SHOWN IN DELTA (4).
3. SWING SECTION HALVES TOGETHER AS SHOWN IN DELTA (3). LOWER SECTION HALF INTO SHIPPING CONNECTOR PINS AND SECURE WITH BOLTS AND KEEPERS. SEE VIEW "B" DELTA (1).
4. TURN COMPLETED INSERT 90° INTO SHIPPING POSITION. SEE DELTA (1).

- (7) REF. 1.25-7UNC-2A X 3.50 LG. CAPSCREW - MANITOWOC CODE NO. 612928

TOLERANCE UNLESS OTHERWISE SPECIFIED				SCALE		Manitowoc Cranes, Inc.		BOOM RIGGING ASSEMBLY	
DECIMAL PLACES	FRACTIONS	INCHES	MILLIMETERS	AS SHOWN	AS SHOWN	MANITOWOC	WISCONSIN	#72A BOOM - #75 MAST	HANDLING AND ASSEMBLY
(1) PLACE 0.00	1/16	1.50	1.50	1/16	1.50	DP: KO	MANITOWOC	MANITOWOC	MANITOWOC
(2) PLACE 0.00	1/8	1.00	1.00	1/8	1.00	OK: KO	MANITOWOC	MANITOWOC	MANITOWOC
(3) PLACE 0.000	1/32	0.75	0.75	1/32	0.75	APP: RJW	MANITOWOC	MANITOWOC	MANITOWOC

- 11300 m TON
- 21.00 WIRE ROPE FOR USE WITH OPTIONAL LAGGING #502369 (REF. DRUM SHAFT ASSEMBLY) NEITHER 25 mm NOR 26 mm METRIC ROPE WILL SPOOL CORRECTLY FOR THIS LAGGING AND SHOULD NOT BE CONSIDERED AS ALTERNATE ROPES.
- 3900 U.S. TON
- 4BOLT TORQUE: (WITH LOCTITE #271) APPLY TO THDS. LOCTITE #271 (MEC CODE NO. 622292) CAPSCREWS W/END PLATE 174236 TORQUE TO 115 FT. LBS.
- 5NEVER-SEEZ: APPLY NEVER-SEEZ OR EQUIVALENT TO THE FOLLOWING: ALL SLEEVE I.D.
- 6SEE OPTIONAL 90T UPPER POINT BILL OF MATERIAL
- 7FOR 278 THRU 403 FT BOOM, 50FT #72 INSERT (173408) MUST BE LOCATED ABOVE 72A INSERTS.

OPTIONAL - 900T			
1	LOWER BM POINT HANGER FRAME ASSY	174346	3

OPTIONAL - 90T UPPER POINT WITH 1.125 WIRE ROPE			
1	BOOM POINT ASSEMBLY-UPPER	175731	
2	SPACER	175753	
1	WIRE ROPE GUIDE ASSEMBLY	175882	
1	WIRE ROPE GUIDE ASSEMBLY	175889	
1	SHEAVE 42.00 DIA, 1.12 ROPE - STEEL	631092	

BILL OF MATERIAL						ASSEMBLIES USED ON
ITEM NO.	NO.	SEC.	DESCRIPTION	LENGTH IN.	MATERIAL	
1	1		1.00 X 1.00	5.00	CF 1018	174346-9
4			PIN			136697
2			PIN			160306
4			WASHER			162803
1			BOOM ANGLE INDICATOR ASSEMBLY			168779
1			#75 MAST ASSEMBLY			173397
1			BOOM STOP ASSEMBLY FOR #72 BOOM			173550
1			WIRE ROPE GUIDE ASSEMBLY #72 BOOM			173795
1			END PLATE			174236
1			EQUALIZER ASSEMBLY			174257
1			SLEEVE			174345
1			SPACER			174354
1			SPACER			174356
1			EQUALIZER SUPPORT ASSEMBLY			174811
1			LOWER BM POINT HANGER FRAME ASSY			175078
2			LINK			175221
1			ROPE GUARD			175754
2			SHEAVE 42.00 DIA, 1.62 ROPE - STEEL			631086

DWG. NO.	173436	175608	175610	173408	179982	175699	175700	175702	175709	175701	175713	175714	175715	175703	175730	173675	173677	175797	175796	175795	175794	175245	175242
BOOM LENGTH	50 FT 15.24 M BUTT	50 FT 15.24 M #72A INSERT	25 FT 7.62 M #72A INSERT	50 FT 7.62 M #72 INSERT	50 FT 15.24 M TRANSITION INSERT	3 FT .91 M TOP	80.83' 2.05 M BASIC STRAP	25 FT 7.62 M STRAP	50 FT 7.62 M STRAP	15.00" .38 M LINK	PIN	COLLAR	PIN	15.00" .38 M LINK	PIN	COLLAR	PIN	STRAP BRACKET ASSEMBLY	STRAP BRACKET ASSEMBLY	STRAP BRACKET AND TIMBER GUARD ASSEMBLY	STRAP BRACKET ASSEMBLY	TIMBER GUARD ASSEMBLY	TIMBER GUARD ASSEMBLY
153 FT-46.63 M	1	1	0	0	1	1	2	2	0	4	6	6	6	4	2	2	2	1	1	1	0	1	3
178 FT-54.25 M	1	1	1	0	1	1	2	4	0	8	10	10	10	4	2	2	2	1	1	2	0	1	3
203 FT-61.87 M	1	2	0	0	1	1	2	4	0	8	10	10	10	4	2	2	2	1	1	1	0	1	5
228 FT-69.49 M	1	2	1	0	1	1	2	6	0	12	14	14	14	4	2	2	2	1	1	2	1	1	5
253 FT-77.11 M	1	2	2	0	1	1	2	8	0	16	18	18	18	4	2	2	2	1	1	3	2	1	5
278 FT-84.73 M	1	2	1	1	1	1	2	6	2	16	18	18	18	4	2	2	2	1	1	3	2	1	6
303 FT-92.35 M	1	2	2	1	1	1	2	8	2	20	22	22	22	4	2	2	2	1	1	4	3	1	6
328 FT-99.97 M	1	2	1	2	1	1	2	6	4	20	22	22	22	4	2	2	2	1	1	4	3	1	7
353 FT-107.59 M	1	2	2	2	1	1	2	8	4	24	26	26	26	4	2	2	2	1	1	5	4	1	7
378 FT-115.21 M	1	2	1	3	1	1	2	6	6	24	26	26	26	4	2	2	2	1	1	5	4	1	8
403 FT-122.83 M	1	2	2	3	1	1	2	8	6	28	30	30	30	4	2	2	2	1	1	6	5	1	8

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DECIMAL PLACES

FABRICATION

MACHINING

TOLERANCE UNLESS OTHERWISE SPECIFIED

SCALE

CRP

CRP

RJW

175955

DATE

175955

Mantowoc Cranes, Inc.

Mantowoc, Wisconsin

BOOM RIGGING ASSEMBLY

MODEL M-1200R

#72A BOOM

#75 MAST

DATE

2-5-96

PATTERN NO.

175955

SHT 3 OF 3