



TRADITIONAL CRANE PARTS MANUAL

This manual has been prepared for and is considered part of

4600

Model

460061

Serial Number

GROUP A = Rotating Structure (Includes rotating bed, operator's cab, cases, fuel tanks, transfer pump, counterweights, guards, platforms, catwalks, machinery enclosure, horn)

GROUP B = Upperworks Machinery (Includes front, rear, and auxiliary drums, boom hoist, swing and drive shafts, hand levers, foot pedals, control linkage, rotation indicators, upperworks hydraulic components, hydraulic piping, hydraulic oil reservoir, lubrication pump and piping, blowers)

GROUP C = Air Components & Electrical (Includes control console, air piping, electric wiring, auxiliary light plant and lighting, TV monitoring, compressor and air tank)

GROUP D = Power Components - Upperworks (Includes engine or motor, radiator, auxiliary power plant, take off converters and piping, controls, VICON power lowering, torque limiter, hydraulic pumps and piping, fuel piping, battery box)

GROUP E = Lower Structure & Control (Includes carbody, crawlers, travel shafts and control, steering travel locks, hydraulic travel, travel power outriggers, carrier, pedestal, lowerworks hydraulic piping, RINGER components, barge mounting and machinery, spud drums)

GROUP F = Attachments (Includes booms, jibs, masts, tower, wire rope guides, equalizer, gantry, fairlead, timber guards, boom angle indicator, block-up limit, tag line, hook block, weight ball, upper and lower boom point, wind speed indicator, crowd and retract dipper sticks, dippers,)

O-NUMBER SECTION = (Includes lacing drawings and purchased component parts drawings referenced in sections A through F)

This manual is arranged in sections as listed above. Sections A through F are arranged by group numerical order with an index after each section tab. An alphabetical index for groups A Through F combined is located after the O-number Section. The O-number section is arranged in numerical order by O-number. Following this cover page are the Basic Specifications, Warranty Information, Tool List (if applicable) Outline Dimensions, Weights, and Dealer Listing.

MANITOWOC CRANES, INC.

2401 South 30th Street • PO Box 70

Manitowoc, WI 54221-0070

Phone: 920-684-6621 • Fax: 920-683-6278

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

B. Ordering Lacings without Lacing Drawings

The parts order must contain the following information to ensure that Manitowoc provides you with the correct lacings:

1. Crane serial number (can be found on builders plate in operator's cab.)
2. Boom or jib identification number.
3. Quantity, lacing location, and lacing number.
4. Boom or jib component name (butt, insert, or top) and part number.

NOTE To obtain the lacing location and number, view the boom or the jib from the butt end looking forward. Identify the side on which the damaged lacing is located: left side, top side, right side, or bottom side. Count each lacing up to and including the damaged lacing, starting with **first lacing nearest butt end** of the component as shown in Figure 3.

Do not count a diagonal lacing as the first lacing. Identify diagonal lacing separately; lower end diagonal lacing or upper end diagonal lacing.

ASSISTANCE

If you are in doubt as to which lacings to order, **DO NOT GUESS**. Contact your nearest Manitowoc distributor for assistance; doing so may prevent the wrong parts from being shipped.

EXAMPLE: Assume you have a number 22 boom and the lacings with circled numbers in Figure 3 are damaged. Your parts order should be similar to the following example:

Crane Serial Number: **00000** (from builders plate).

Boom Identification Number: **#22 Boom**

Required:

- 1 each Top Side Lacing (1) for 30 ft Butt 48153-9
- 1 each Right Side Lacing (5) for 30 ft Butt 48153-9
- 1 each Bottom Side Lacing (3) for 20 ft Insert 33426-3
- 1 each Bottom Side Lacing (6) for 20 ft Insert 33426-3
- 1 each Top Side Lacing (2) for 40 ft Top 50453-2

Quantity	Lacing Location	Lacing Identification Number	Component Name and Part Number
----------	-----------------	------------------------------	--------------------------------

WELDING INSTRUCTIONS

Refer to folio 1316 for welding instructions.

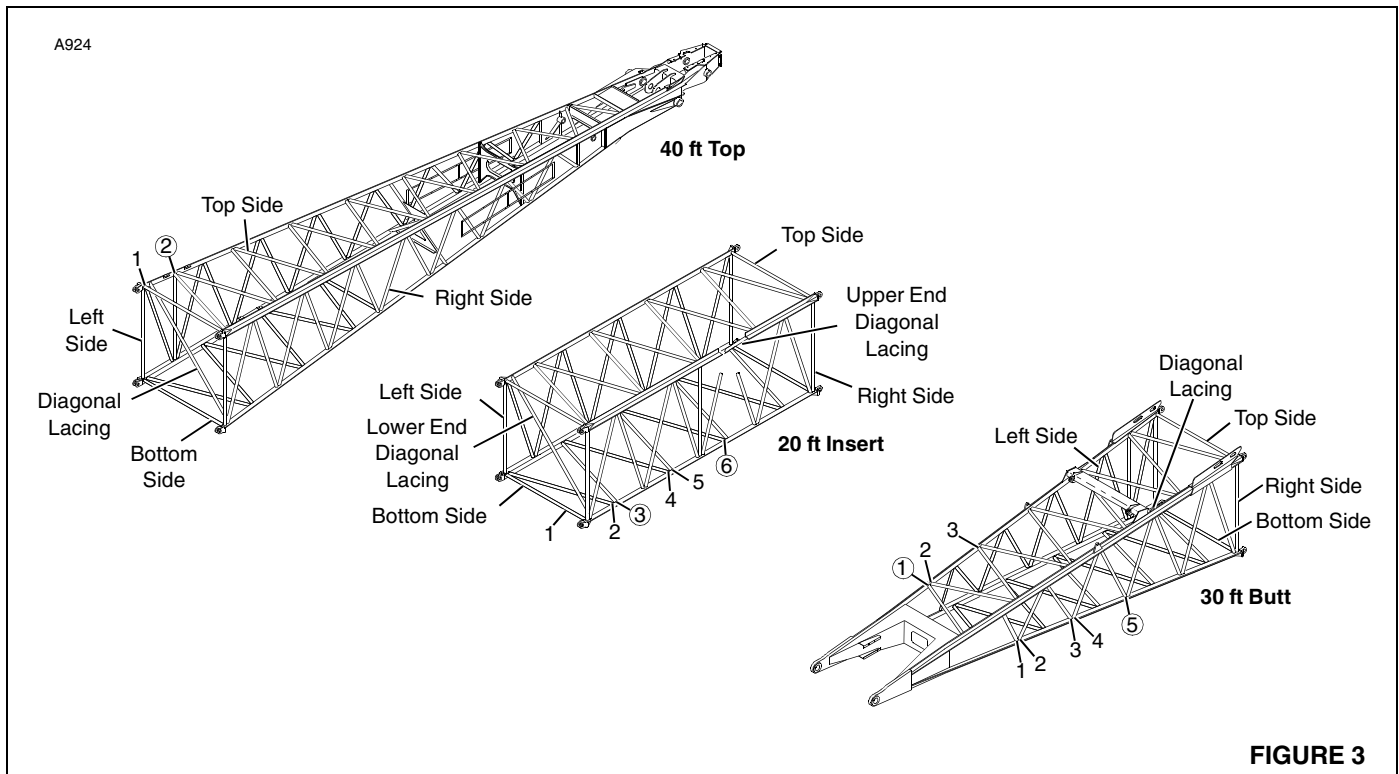
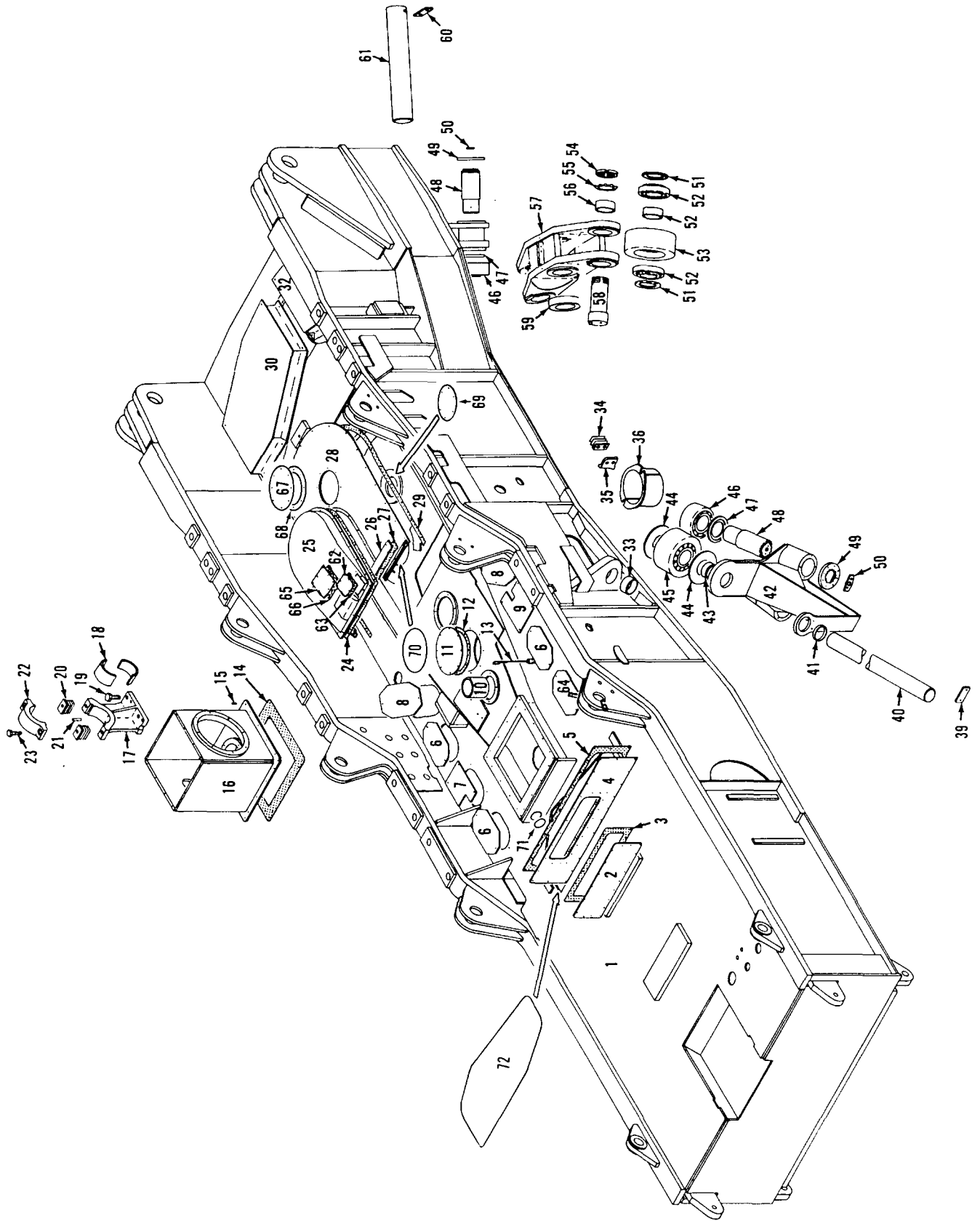


FIGURE 3

GROUP A - Rotating Structure

MAER



65086F1

MATERIAL LIST ON BACK

ROTATING BED

65151-1 Cont.	REV. I	MODEL 4600-S4
---------------	--------	---------------

MACHINERY CAB

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
<u>FOR MACHINES W/66 TOOTH FRONT DRUM GEAR</u>				
113	94721	1	CLOSING SHEET w/stove bolts, hex nuts and lockwashers	
114	139376	1	CLOSING SHEET w/mach. screws, hex nuts and lockwashers	
115	141549	1	CLOSING SHEET w/stove bolts, hex nuts and lockwashers	
116	94723	1	CLOSING SHEET w/stove bolts, hex nuts and lockwashers	
117	94722	1	CLOSING SHEET w/stove bolts, hex nuts and lockwashers	
118	94718	1	CLOSING SHEET w/bolts, hex nuts and lockwashers	
119	139370	1	CLOSING SHEET w/mach. screws, hex nuts and lockwashers	
120	141547	1	CLOSING SHEET	
121	94720	1	CLOSING SHEET w/stove bolts, hex nuts and lockwashers	
121	95999	1	CLOSING SHEET w/stove bolts, hex nuts and lockwashers (w/Front Drum Panel)	
122	94719	1	CLOSING SHEET w/stove bolts, hex nuts and lockwashers	
<p><u>NOTE 1:</u> Prior to design change of February 20, 1975 the following were used:</p>				
24	181999	2	LADDER (w/angle sides)	
25	334101	4	CHAIN (14 links each)	
	508931	8	LINK	
26	563912	4	PIN, Quick Release	
30	141299	4	BRACKET, Ladder (Weld to Roof)	
<p>Ladder 182523 cannot replace ladder 181999 w/out altering catwalk and cab roof.</p>				
<p><u>NOTE 2:</u> Machines w/out gantry lifting device, add the following:</p>				
124	146994	2	COVER	
125	146996	2	COVER	
<p><u>NOTE 3:</u> Design change of 11/25/81 replaces ladder 182523 w/16" steps and hand rails (Ref. 24) with 160101 w/16" steps and hand rails spread to 25" at the top.</p>				
<p><u>NOTE 4:</u> For machines w/99 TOOTH FRONT DRUM GEAR and 63" DRUM FLANGE closing sheet 95909 replaces closing sheet Ref. 107, 95910 replaces 100, 95911 replaces 106, 95912 replaces 99, 95913 replaces 105, 95914 replaces 98, 95915 replaces 104, 95916 replaces 97, and use . . .</p>				
	138505	13	CLIP, Angle (1" x 1" x 1" Lg. w/.31" hole) w/screw and washer	
	138508	13	PAD, Mounting (1" x 1" x 1/4" thick w/1/4" - 20 hole)	
<p>three each on Ref. 95, two each on Ref. 96, four each on two front Ref. 103, and four each on two Ref. 94 (not on rear 94).</p>				
				REV. I
				65151-1

PLEASE GIVE MACHINE S/N W/ORDER

CPT

Run as a Front

65151 I1 Cont. 3

65763-1 Cont.	REV. E	MODEL 4600 S4 - 6000W
---------------	-----------	--------------------------

OPERATOR'S CAB

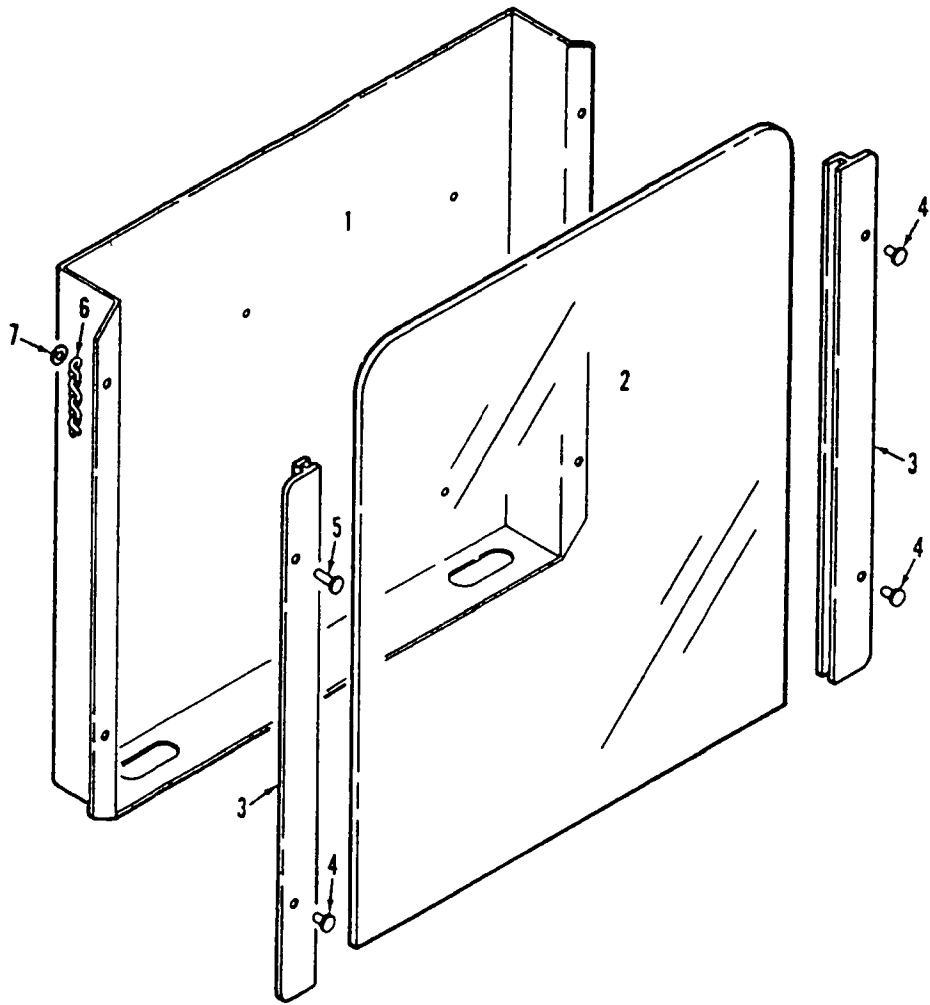
REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
	95652	1	MAT ASSEMBLY, Floor	
46	95702	1	MAT, Floor	
47	139954	2	BINDING, Mat	
48	95702	1	BINDING, Mat	
49	350326	2	BUTTON, Closure Plug (See Note 2)	
50	71450	2	PAD, Mounting	
51	147377	1	COVER w/mach. screws	
52	147378	1	COVER w/mach. screws	
	137669	1	SHADE, Roof Window (Not Shown)	
	492120	As Req'd	Insulation, Fiberglass (Not Shown)	
<p>NOTE 1: Ladder 182611 (16" step) has been replaced w/160106 (24" step) to comply w/current codes. When replacing Ladder, one (1) additional mounting pad 71450 (Ref. 50) will be required for installation of wider Ladder.</p>				
<p>NOTE 2: Machines before 11-25-81 design change use 350321 Closure Plug Button.</p>				

Run as Front

65763 E1 Cont'd

REV. E	65763 - 1
-----------	-----------

PLEASE GIVE MACHINE S/N W/ORDER



93994A1

MATERIAL LIST ON BACK

CHART HOLDER

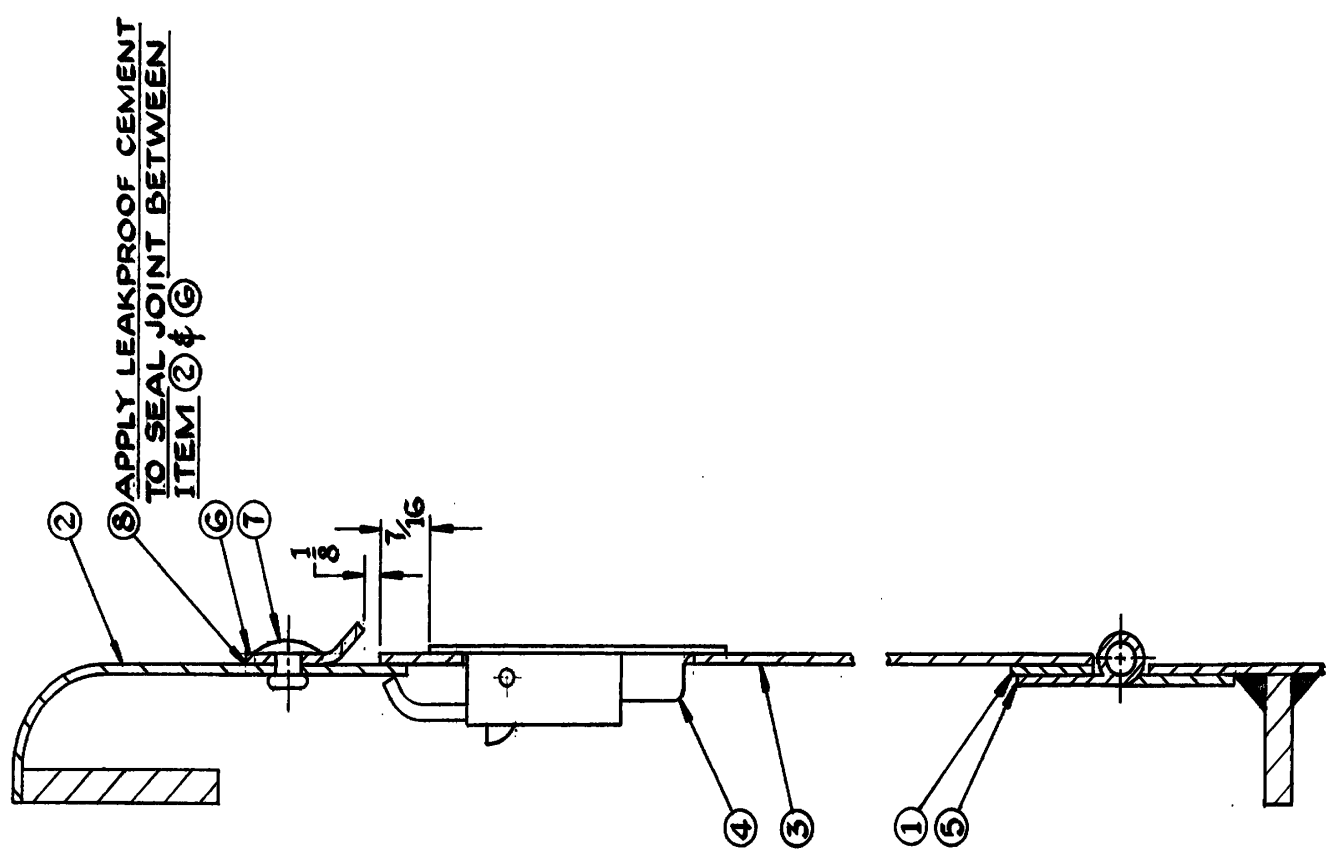
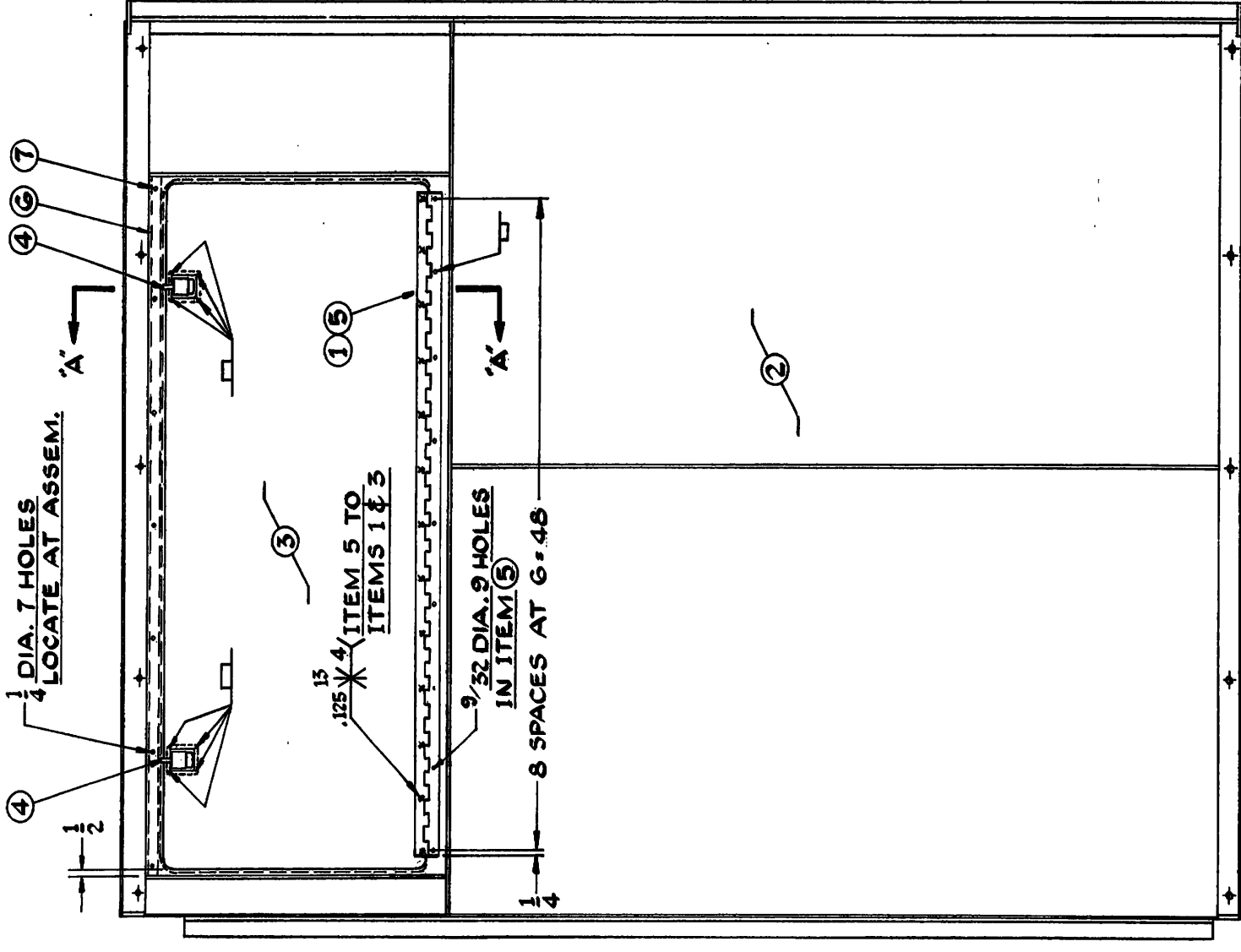
ASSEMBLIES USED ON
65151

NO. REQ. PER UNIT	DESCRIPTION	LENGTH FT. IN.	MATERIAL	CODE NO. OR DWG. NO.	REMARKS
1	14 GA. X 3/4"	4 0 1/2	1020		
2	CLOSING SHEET			181912	
3	DOOR			141433	
4	PADDLE HANDLE LOCK			510190	
5	CONTINUOUS HINGE 48 LG.			482271	
6	DOOR GUARD			141434	
7	1/2 X 1/2 WAGON BOX RIVET			598391	
8	LEAKPROOF CEMENT			333072	

REVISIONS

DWG. NO.
181977

DATE
5-21-75
PATTERN NO.
CODE NO.
181977-4
DWG. NO.
181977



APPLY LEAKPROOF CEMENT TO SEAL JOINT BETWEEN ITEM 2 & 6

MANITOWOC ENGINEERING CO.
MANTOWOC, WISCONSIN
MODEL 4600 SERIES 4
CLOSING SHEET
SUB-ASSEMBLY

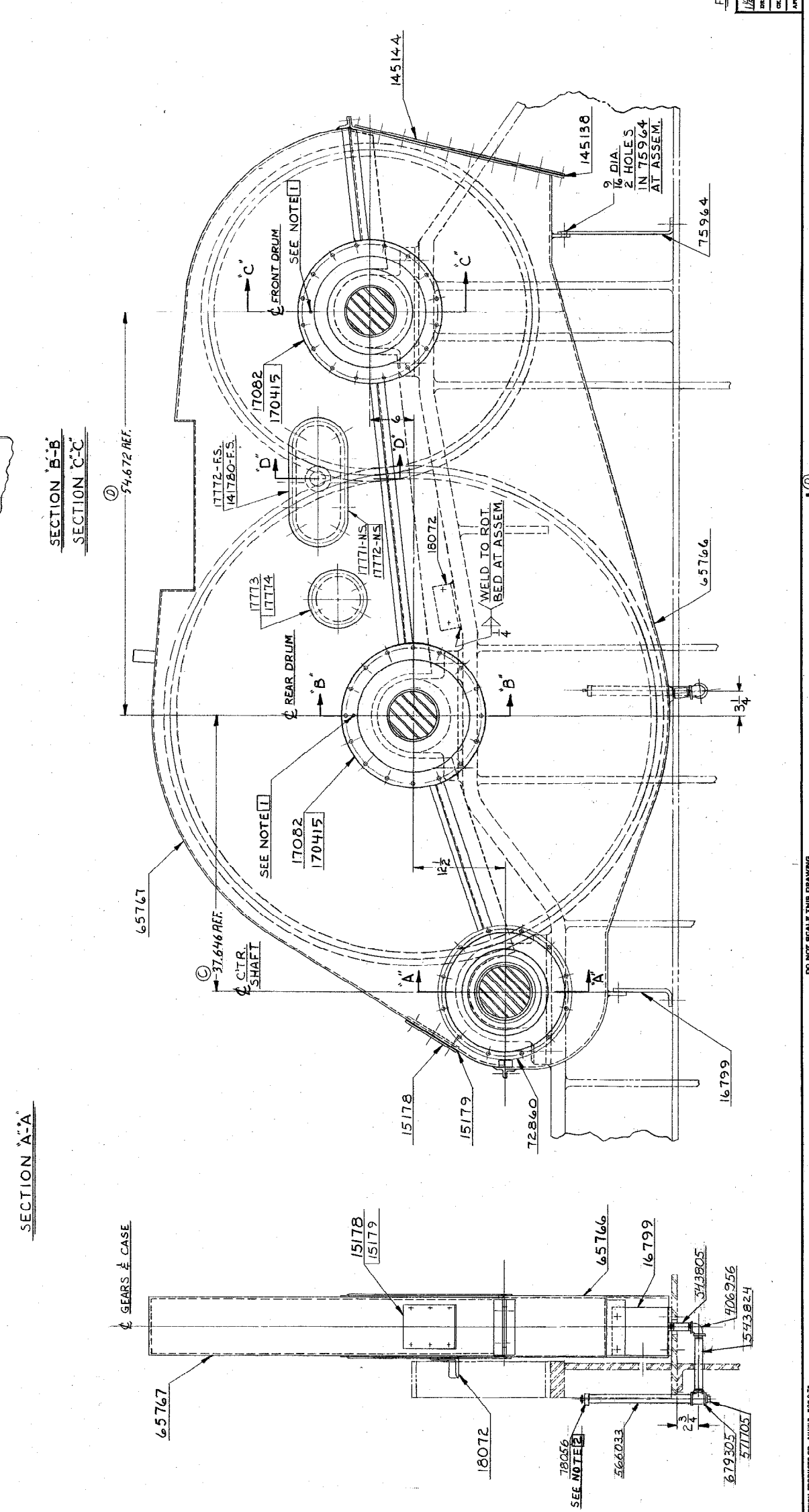
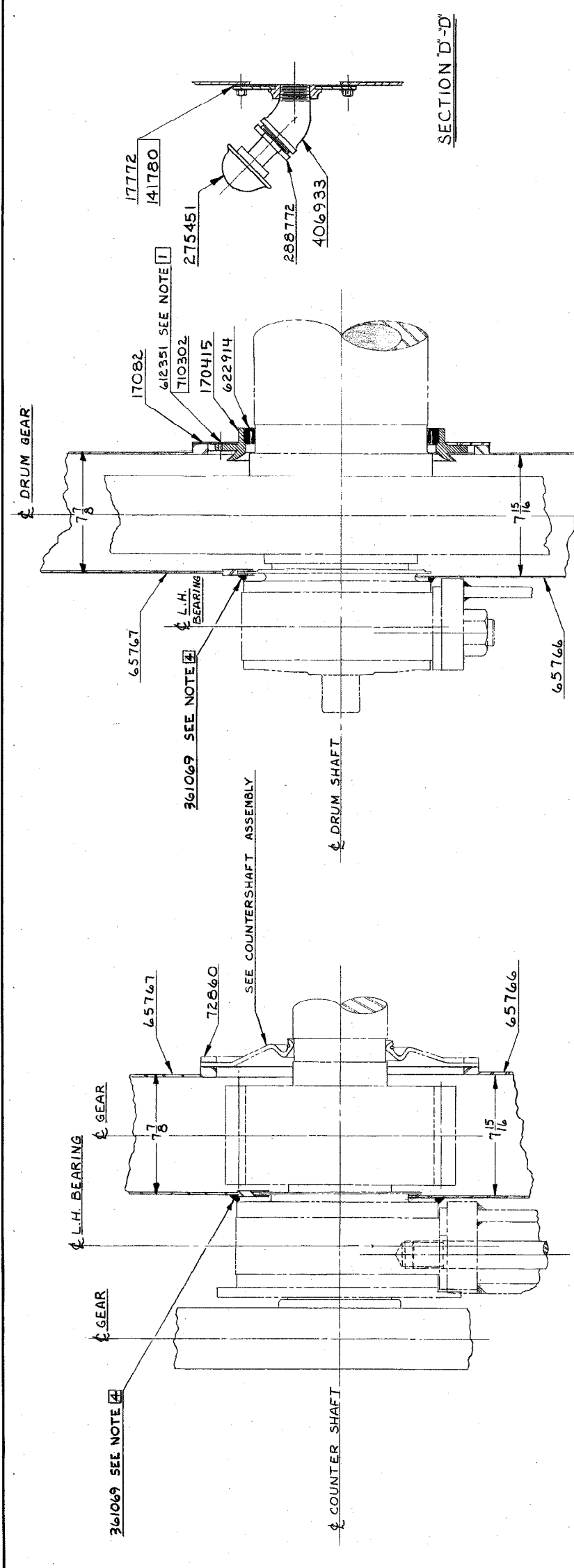
ITEM NO.	QTY.	DESCRIPTION	UNIT	REMARKS
1	1	OIL GAUGE		
1	1	COVER PLATE		
1	1	GASKET		
1	1	REAR SUPPORT		
2	2	RETAINER RING		
1	1	COVER PLATE		
2	2	GASKET		
2	2	COVER PLATE		
2	2	GASKET		
2	2	SUPPORT ANGLE		
2	2	OIL SEAL RETAINER		
1	1	DRUM GEAR CASE LOWER		
1	1	DRUM GEAR CASE UPPER		
1	1	RETAINER RING		
1	1	FRONT SUPPORT		
1	1	COVER PLATE		
1	1	COVER		
1	1	GASKET		
1	1	BREATHER		
1	1	2 X1 NUT BUSHING		
1	1	2 X45° STREET ELBOW		
1	1	SEALANT COMPOUND		
2	2	1/4-20 UNC-2A 1/2 LG. CAPSCR.		
2	2	OIL SEAL		
2	2	LOCKWASHER		
1	1	1 X 90° ELBOW		
1	1	1 X 3 NIPPLE		
1	1	1 X 8 NIPPLE		
1	1	1 X 1/2 PIPE T.O.E.		
1	1	1 PIPE PLUG		
1	1	1 TEE		

BILL OF MATERIAL

REVISIONS

3-14-79 GLP
 (A) NOTE ADDED
 (B) NOTE ADDED
 (C) WAS 37.58
 (D) WAS 54.116
 (E) CORRECTED
 (F) 11-20-84 F
 (G) WAS 3523
 (H) ADDED
 (I) 12-13-84 RRE
 (J) DWG. NO. WAS 75086
 (K) 3-7-85 D.M.
 (L) WAS 585814
 (M) 6-25-90 KWB
 (N) WAS 22382
 (O) WAS 622324
 (P) 8-16-90 PGD
 (Q) NOTE
 (R) CORRECTED

DATE 190685



NOTE 1
 1-20 UNC-2B THD-1 HOLE IN EACH OF THE
 2-170415 & 3/8 DIA. HOLE IN EACH OF THE
 2-17082 AT ASSEMBLY

NOTE 2
 PROCEDURE FOR MARKING THE GEAR CASE
 DIPSTICK HIGH AND LOW LEVELS:
 1. FILL GEAR CASE WITH 6 GALLONS .8
 AUXILIARY DRUM. OF REQUIRED LUBRICANT.
 2. CIRCULATE OIL THROUGHOUT THE GEAR
 CASE. SHUT MACHINE DOWN AND LEAVE
 GEAR CASE DRAIN DOWN. MARK
 DIPSTICK FOR HIGH LEVEL. AT 3/4 INCH
 DOWN MARK LOW LEVEL.

NOTE 3
 DELETE COVER 145144 ON MACHINES
 WITH FRONT AUXILIARY DRUM.

NOTE 4
 APPLY SILICONE RUBBER SEALANT #361069
 AROUND GEAR CASE AND INNER BEARING
 COVER AT ASSEMBLY AFTER UPPER AND
 LOWER CASE HALVES ARE ASSEMBLED
 AS SHOWN.

FORMERLY 31226

MANITOWOC ENGINEERING CO.
 MANITOWOC, WISCONSIN

MODEL 4600, 4600-S4

DRUM GEAR CASE ASSEMBLY
 FOR 46 T DRUM GEAR

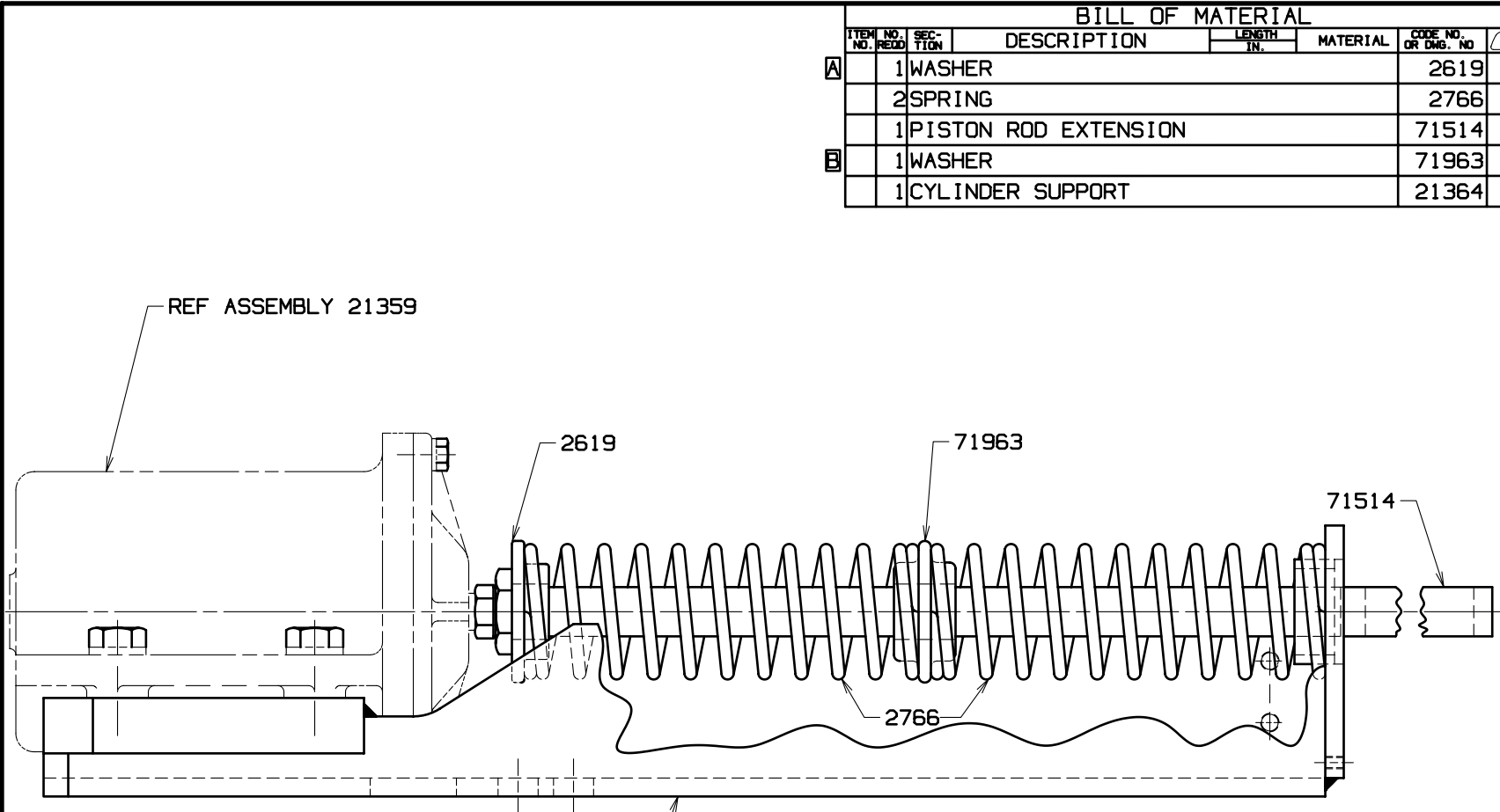
DATE 2-10-78
 DRAWING NO. 190685

PARTS MANUAL ALPHABETICAL INDEX
Group B - Upperworks Machinery

DESCRIPTION	PUBLICATION	REV	START DATE	END DATE	GROUP
Boom Hoist Chain Case	182767	C1	02/02/76	01/14/81	B0212
Boom Hoist Chain Case	190184	D1	12/09/77	01/04/79	B0212
Boom Hoist Chain Case	95823	A1	02/11/76		B0212
Boom Hoist Control, Independent	190815	D1	06/28/78	06/03/87	B0204
Boom Hoist Control, Independent	93560	K1	12/27/70	08/07/85	B0204
Boom Hoist Hydraulic Motor	182591	D1	08/20/75	01/14/85	B0205
Boom Hoist Hydraulic Motor	94879	-	08/14/73		B0205
Boom Hoist Hydraulic Piping	49740	F1	01/03/73	06/15/79	B0209
Boom Hoist Hydraulic Piping	49773	F1	04/04/73	12/19/83	B0209
Boom Hoist Hydraulic Piping	65507	J1	05/16/78	10/10/80	B0209
Boom Hoist Hydraulic Pump Drive	183358	-	10/17/77		B0206
Boom Hoist Pawl	182481	B1	03/26/75	01/06/84	B0211
Boom Hoist Rotation Indicator	145998	N/A	01/03/79	01/03/79	B0213
Boom Hoist, Independent	182345	A1	07/25/74	06/07/83	B0202
Boom Hoist, Independent	419973	-	01/06/81		B0202
Boom Hoist, Independent	65087	Q1	07/24/72	03/24/92	B0202
Countershaft, Drum Drive	33892	E1	12/07/67	02/27/85	B0501
Drum Brake - Front	21359	-	02/07/47	11/06/81	B0603
Drum Brake - Front	22635	C1	11/04/52	05/08/69	B0603
Drum Brake - Front	23984	-	09/15/59	12/16/82	B0603
Drum Brake - Front	31497	-	03/09/56		B0603
Drum Brake - Front	49783	F1	05/11/73	05/18/83	B0603
Drum Brake - Front	49784	E1	05/14/73	05/18/83	B0603
Drum Brake Booster/Parking Brake	42768	E1	02/22/71	05/18/83	B0604
Drum Brake Booster/Parking Brake	93251	-	01/29/70	03/04/82	B0604
Drum Clutch Control/Band	182343	A	07/25/74	05/12/95	B0602
Drum Rotation Indicator - Front and Rear	182768	D1	02/05/76	01/08/79	B0607
Drum Rotation Indicator - Front and Rear	182769	D1	03/10/76	01/08/79	B0607
Drum Rotation Indicator - Front and Rear	95822	B1	02/11/76	02/14/86	B0607
Drum Shaft - Front	50922	C2	10/24/70	06/11/84	B0601
Drum Shaft - Front	50922	O1	03/03/71	06/11/84	B0601
Foot Pedals	182297	F1	05/21/74	02/08/82	B1202
Front Auxiliary Drum and/or Power Lowering Control	24323	-	06/29/60	06/12/74	B0902
Independent Swing Auxiliary Brake	184004	B1	05/01/79	09/30/81	B0404
Independent Swing Control	182813	C1	04/26/76	09/12/80	B0403
Lubrication Pump & Piping (Sump)	65152	E1	01/14/81	08/26/81	B1401
Main Drive Shaft	49645	D1	07/28/72	04/08/76	B1301
Main Drive Shaft	94866	-	08/09/73		B1301
Rear or Rear Auxiliary Drum	22635	C1	11/04/52	06/06/88	B0801
Rear or Rear Auxiliary Drum	50927	C2	03/03/71	06/04/84	B0801
Rear or Rear Auxiliary Drum	50927	P1	03/03/71	06/04/84	B0801
Rear or Rear Auxiliary Drum Brake	49308	G1	02/22/71	05/04/92	B0803
Rear or Rear Auxiliary Drum Brake	49736	B1	01/02/73	10/02/74	B0803
Rear or Rear Auxiliary Drum Control/Band	182345	-	07/25/74	05/12/95	B0802
Rear or Rear Auxiliary Drum Parking Brake	33749	G1	02/22/71	06/02/80	B0804
Slide Pinion Shaft (Intermediate Travel or Swing Shaft)	181754	A1	07/17/72	05/16/75	B1601
Swing Lock Control	182394	E1	08/29/74	06/29/82	B1701
Swing Lock Control	420020	B1	01/05/78	12/15/81	B1701
Swing Shaft	91301	E1	03/07/66	04/09/86	B1901
Swing Shaft - Intermediate	21629	C1	03/22/48	12/12/72	B1902
Travel Drive	65095	-	09/11/72	11/29/79	B2001
Travel Drive Control/Brake	184084	C1	09/06/79	09/24/84	B2003
Travel Drive Piping	49770	G1	06/29/76	12/10/79	B2004
Travel Drive Piping	65176	I1	04/24/73	08/22/79	B2004
Travel Drive Transmission	182880	B1	06/30/76	04/24/84	B2002
Travel Drive Transmission	49630	A2	07/18/72	08/20/82	B2002
Travel Drive Transmission	49630	H1	03/16/72	11/29/79	B2002
Travel Drive Transmission	65094	G1	09/08/72	07/28/82	B2002
Travel Drive Transmission	94772	C	06/20/73	04/16/84	B2002

C

C



BILL OF MATERIAL						
ITEM NO.	NO. REQ'D	SECTION	DESCRIPTION	LENGTH IN.	MATERIAL	CODE NO. OR DWG. NO.
A	1		WASHER			2619
	2		SPRING			2766
	1		PISTON ROD EXTENSION			71514
B	1		WASHER			71963
	1		CYLINDER SUPPORT			21364

ASSEMBLIES USED ON
41802
41803
41861
49308
49661
49784

REVISIONS

7-21-60 PD
 WAS 3 REQ'D
 B ADDED
 12-16-82 WNM
 REDRAW CADAM
 CK FJZ
 APP RJS

DATE	9-15-59
PATTERN NO.	
DWG. NO.	23984

SCALE	1/8" = 1 FT
DR.	MFB
CK.	DCM
APP	
DWG. NO.	23984

Manitowoc Cranes, Inc.
 Manitowoc, Wisconsin
 MODEL 4500, 4600

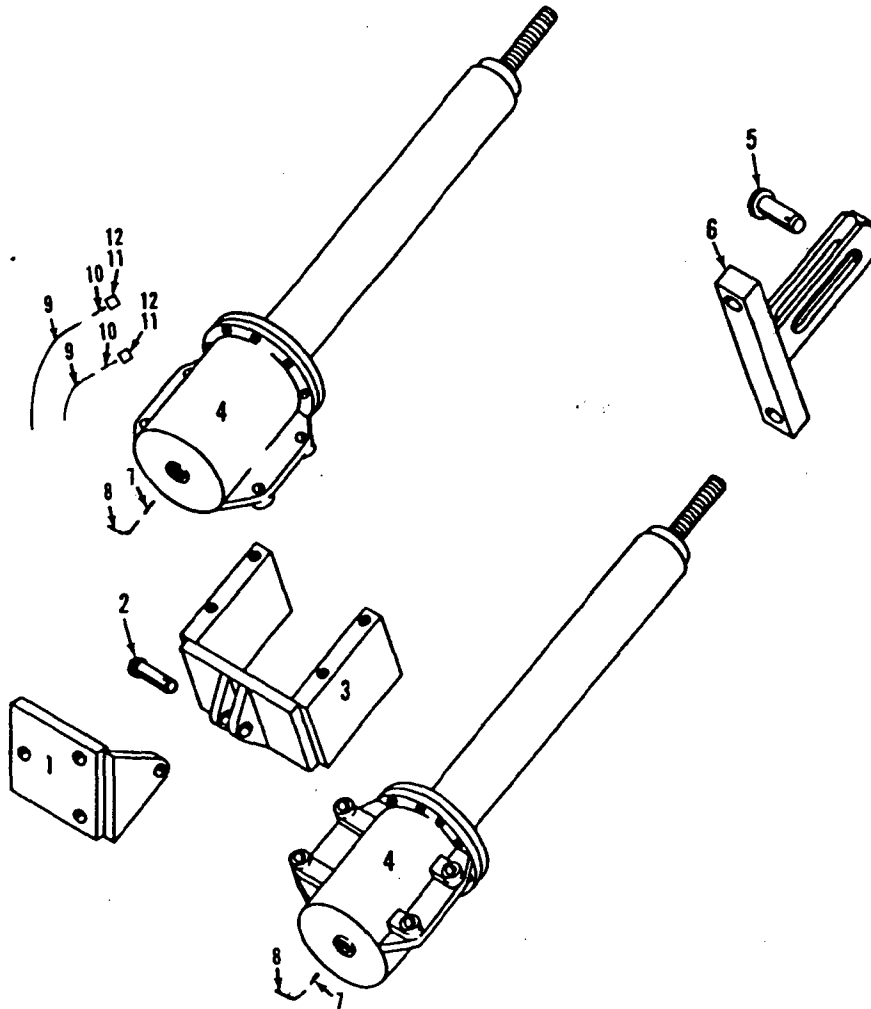
AIR CYLINDER
 SUPPORT ASSEMBLY

DO NOT SCALE THIS DRAWING

C

C

MASTER



42768B1

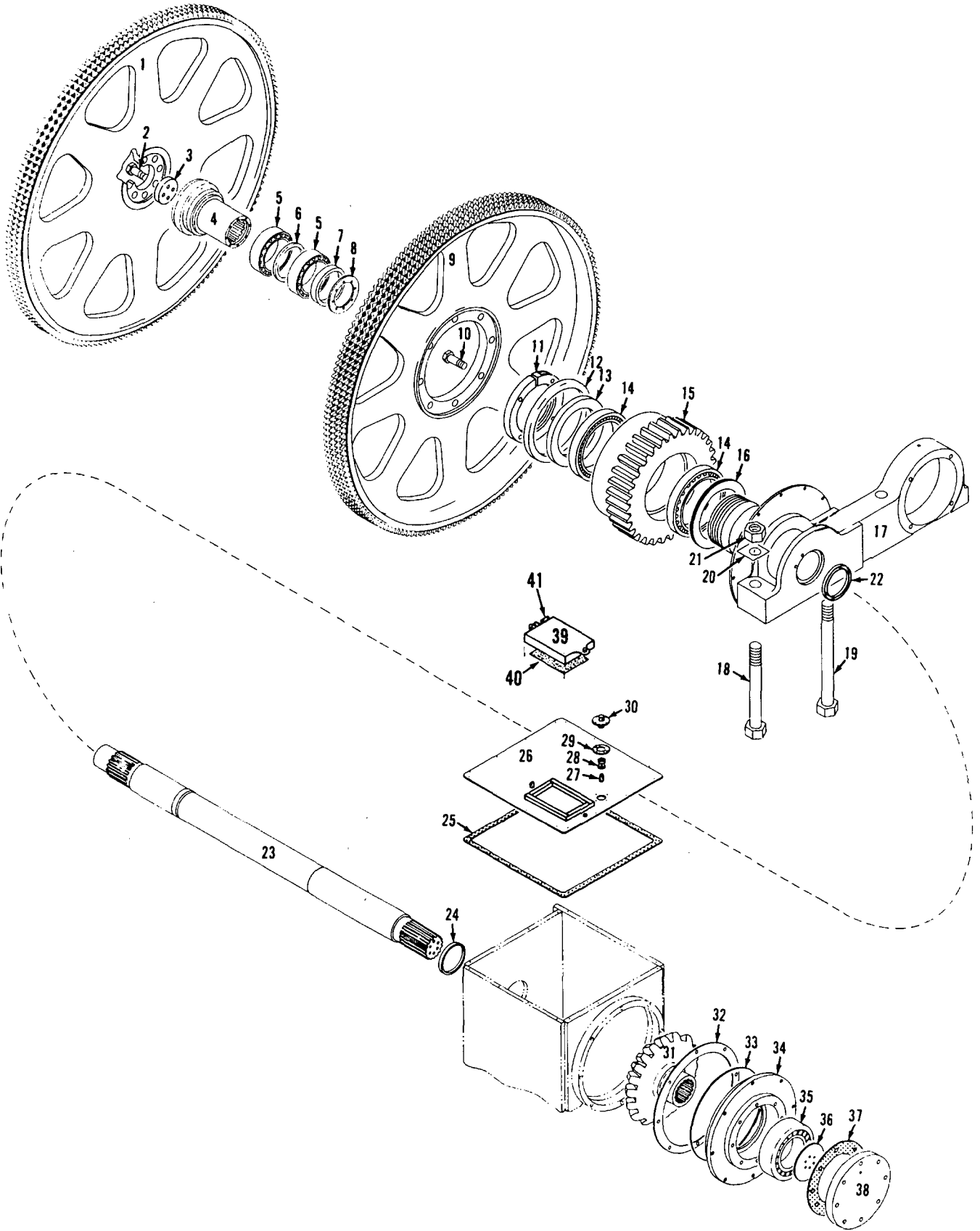
MATERIAL LIST ON BACK

FRONT DRUM PARKING BRAKE CONTROL

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin



49645C1

MATERIAL LIST ON BACK

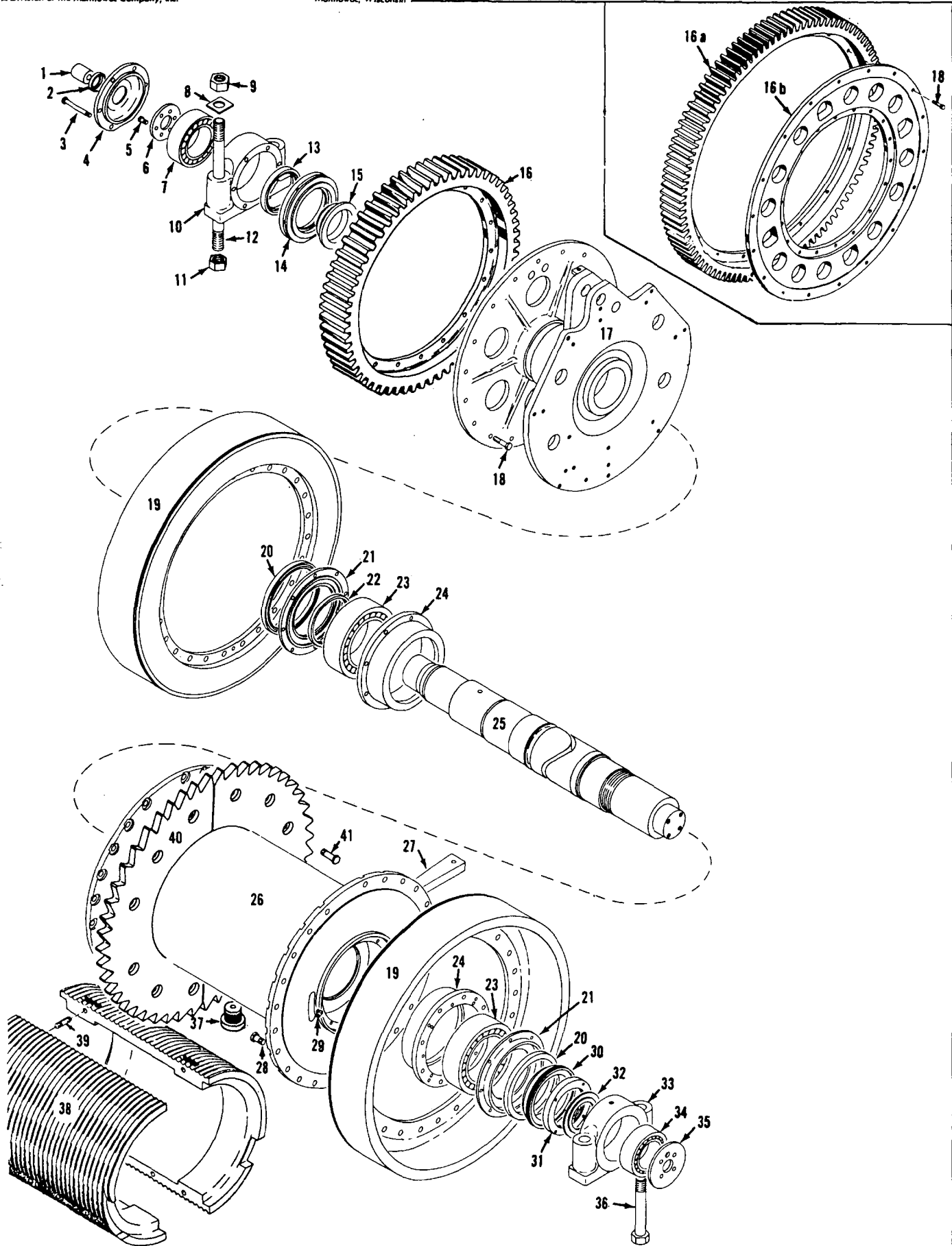
MAIN DRIVE SHAFT

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin

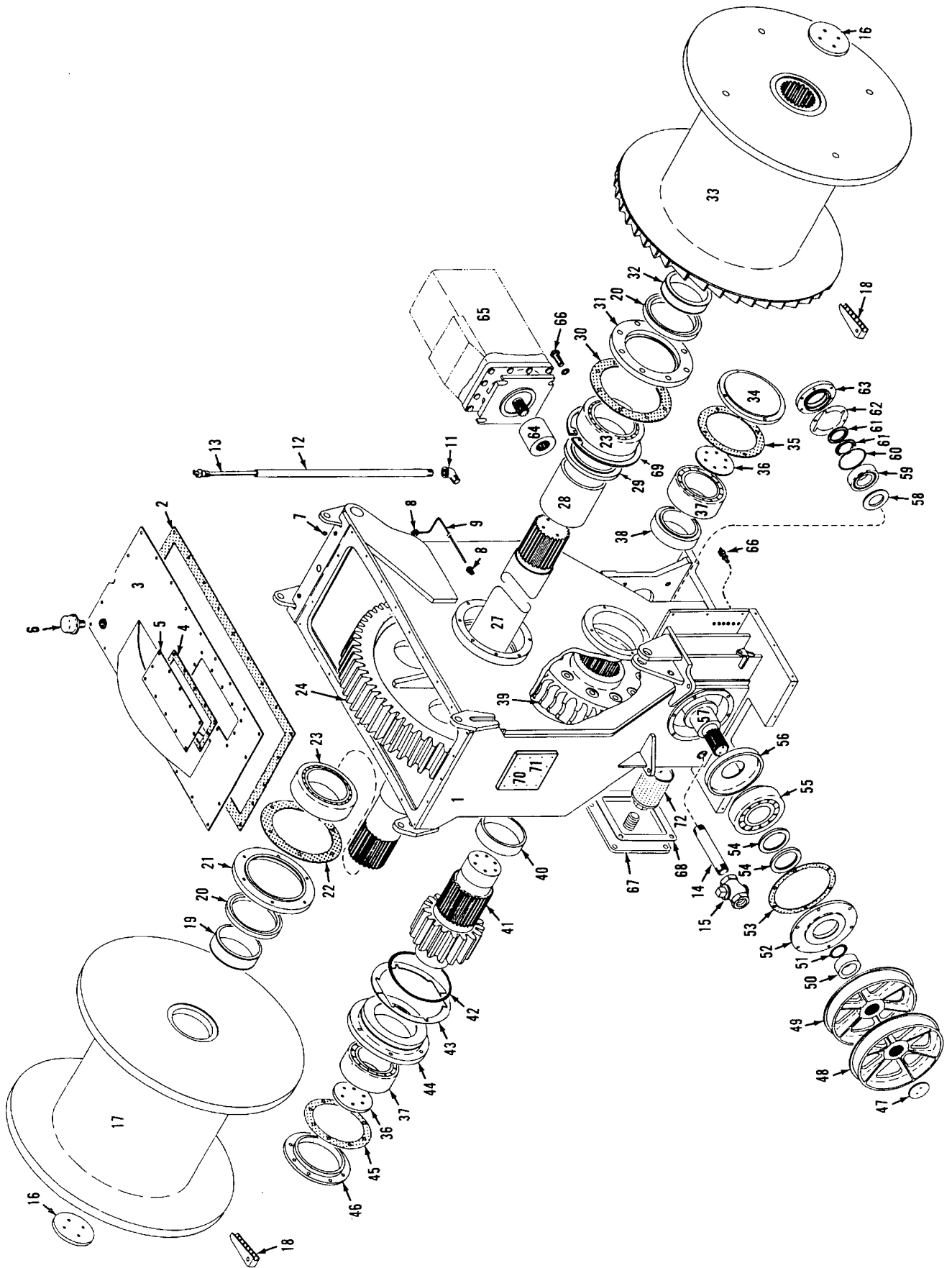
ASTER



50922D1

MATERIAL LIST ON BACK

FRONT DRUM SHAFT



6508711

MATERIAL LIST ON BACK

INDEPENDENT BOOM HOIST

65152-1 Cont.	REV E	MODEL 4600 S4
---------------	----------	------------------

LUBRICATION PIPING

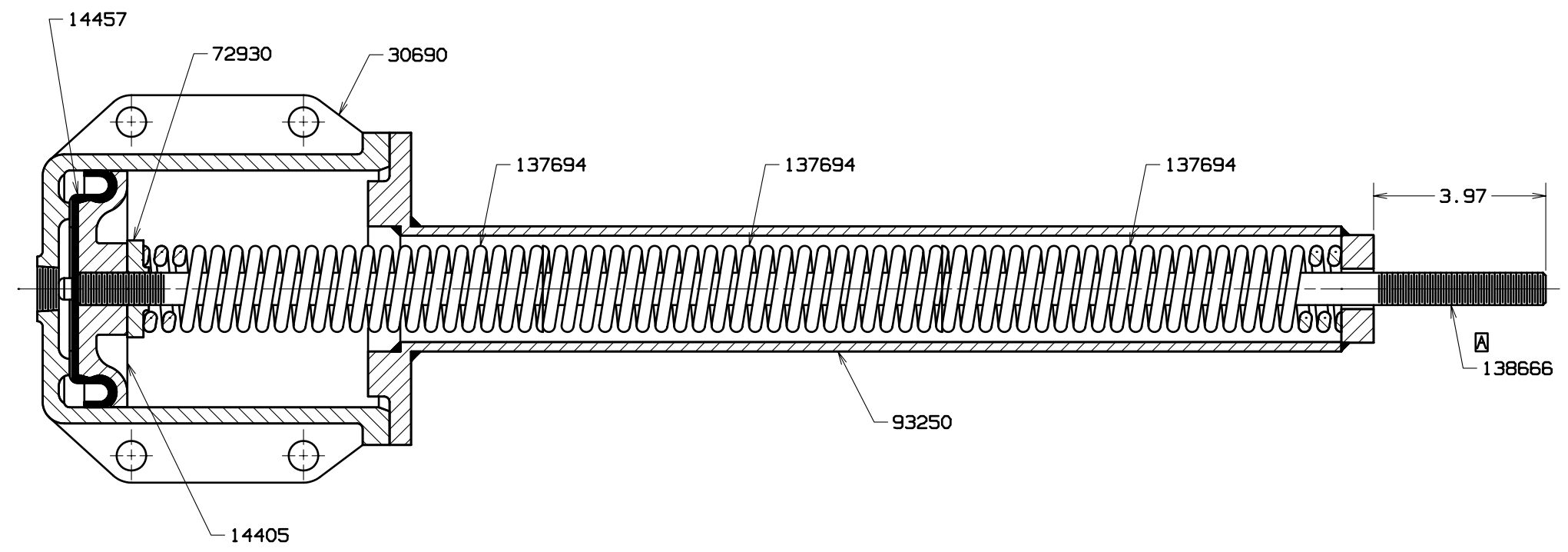
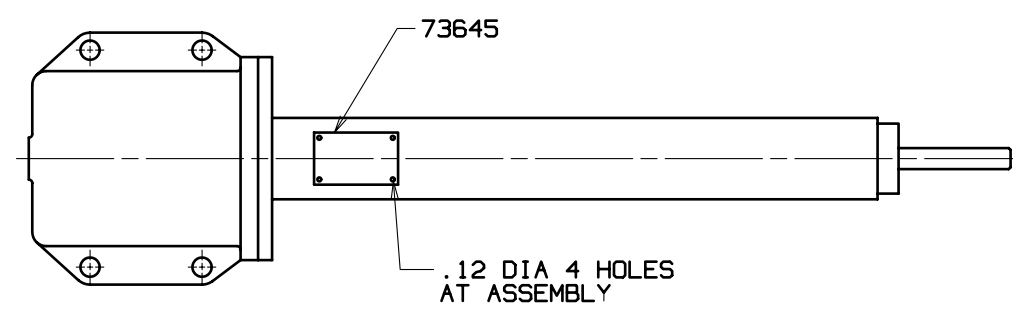
REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.				
52	543408	1	NIPPLE, Close (1-1/2")					
53	94595	1	GUARD					
54	138508	4	PAD, Mounting					
55	543220	1	NIPPLE (1-1/2" x 24-3/4")					
<p><u>NOTE 1:</u> Machine W/out travel drive, delete 1 of Ref. Nos. 23, 31 and 43. Plug opening in travel case and tee Ref. #38 W/plug #571703.</p> <p><u>NOTE 2:</u> Per design change of Aug. 26, 1981, delete Ref. Nos. 28 and 30 and one of Ref. No. 27.</p>								
<p>0-340</p> <table border="1" data-bbox="1182 1942 1542 2016"> <tr> <td data-bbox="1182 1942 1304 1974">REV.</td> <td data-bbox="1304 1942 1542 1974">65152 - 1</td> </tr> <tr> <td data-bbox="1182 1974 1304 2016">E</td> <td data-bbox="1304 1974 1542 2016"></td> </tr> </table>					REV.	65152 - 1	E	
REV.	65152 - 1							
E								

PLEASE GIVE MACHINE S/N W/ORDER

MASTER

runas a front

65152 E.1 Cont.



BILL OF MATERIAL						ASSEMBLIES USED ON	
ITEM NO.	NO. REQD.	SEC. TION	DESCRIPTION	LENGTH IN.	MATERIAL	CODE NO. OR DWG. NO.	
1			PISTON			14405	33749
1			PACKING CUP			14457	42768
1			AIR CYLINDER			30690	42769
1			NUT			72930	43433
1			NAME PLATE			73645	48860
1			SPRING RETAINER			93250	
3			SPRING			137694	
1			PISTON ROD			138666	

REVISIONS

3-10-70 HDG
 A WAS 72929

3-19-70 HDG
 B NO.
 CORRECTED

3-4-82 RVP
 REDRAW CADAM
 CK FJZ
 APP RJS

DWG. NO.
 93251

FIRST ON S/N 46170

SCALE	6" = 1"	DR. HDG	Manitowoc Cranes, Inc.	Manitowoc, Wisconsin	AIR CYLINDER ASSEMBLY
CK. GMP	MODEL 4600	APP			5.50 BORE X 5.50 STROKE

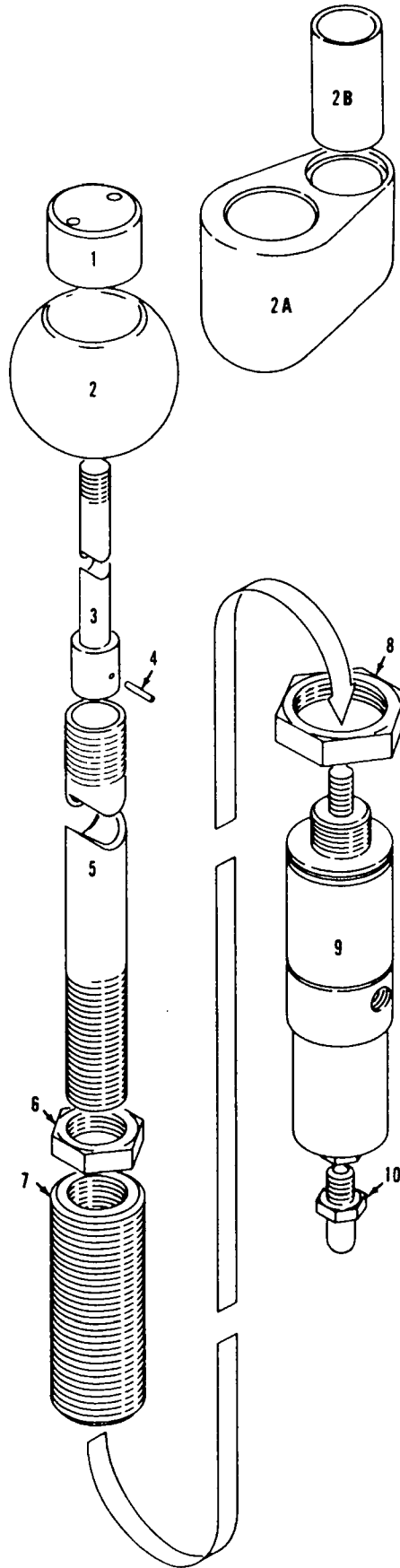
DATE
 1-29-70

PATTERN NO.

DWG. NO.
 93251

DO NOT SCALE THIS DRAWING

MASTER



95822A1

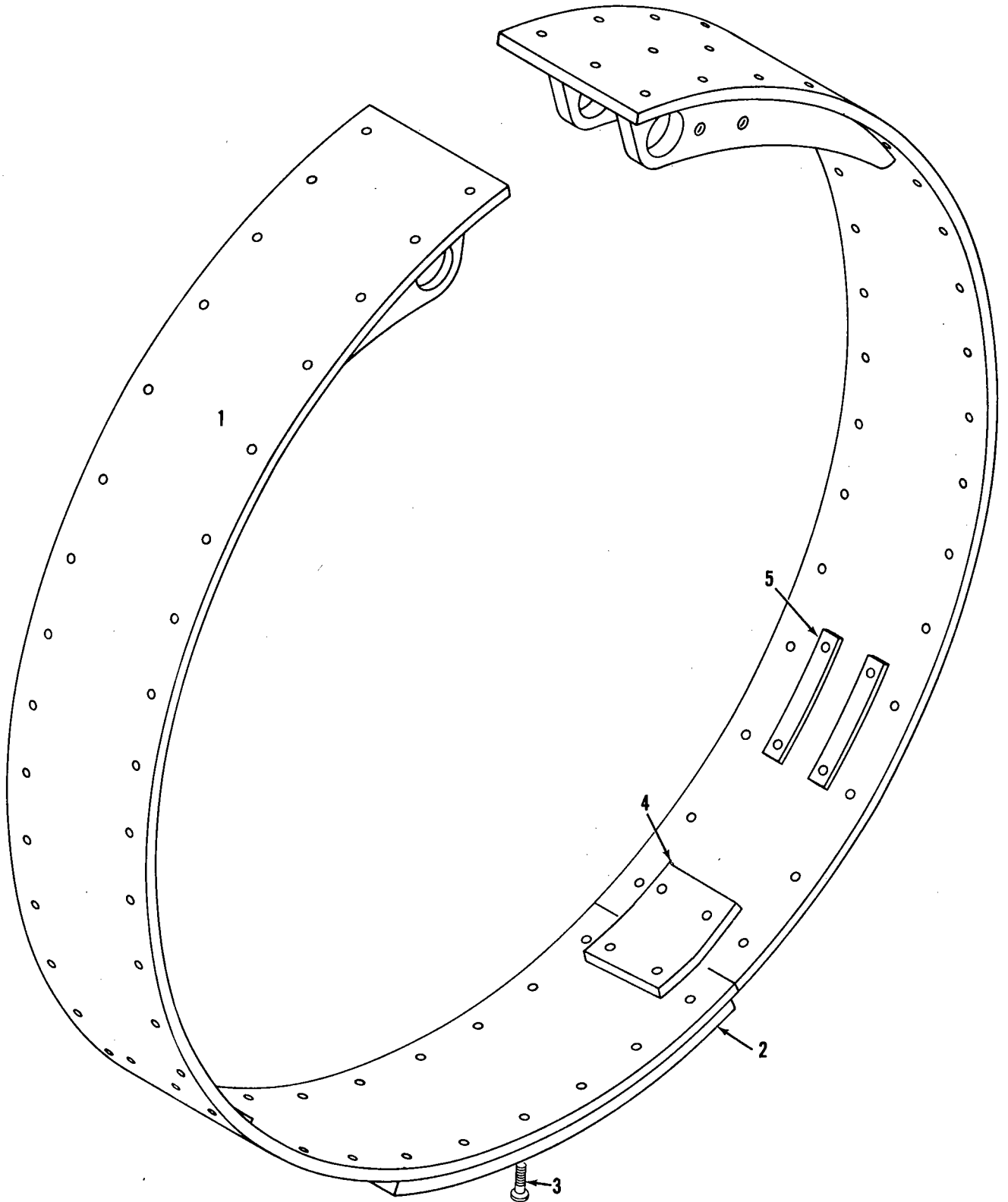
MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin

MASTER

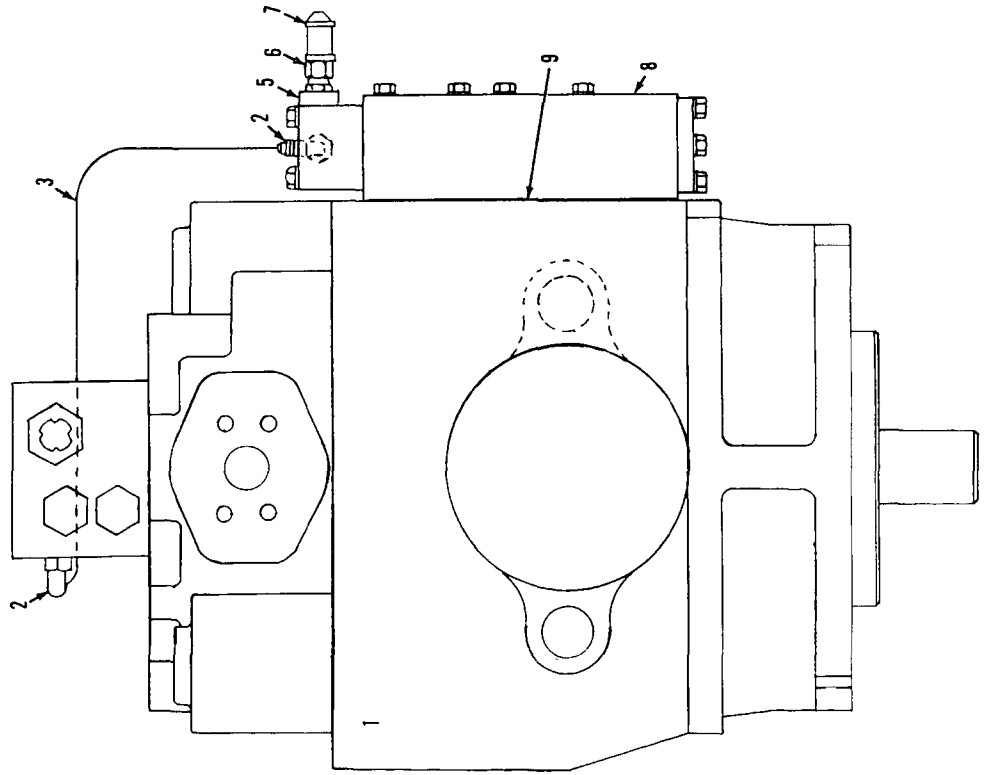
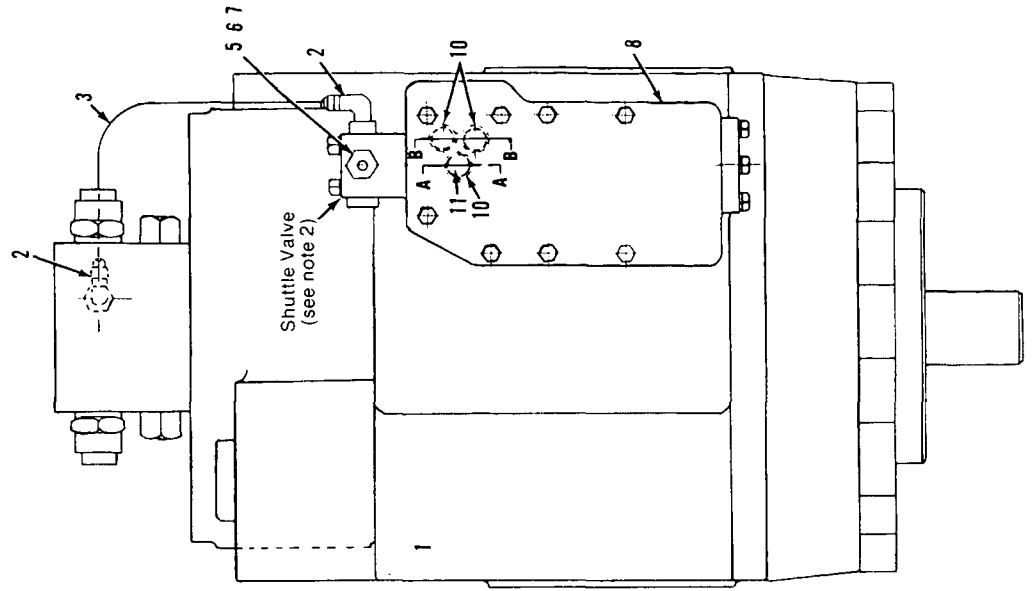
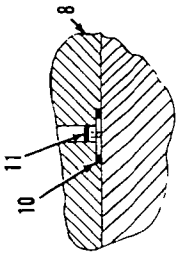
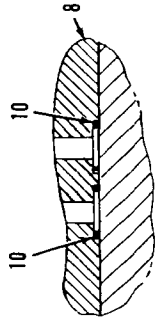
81355 A1

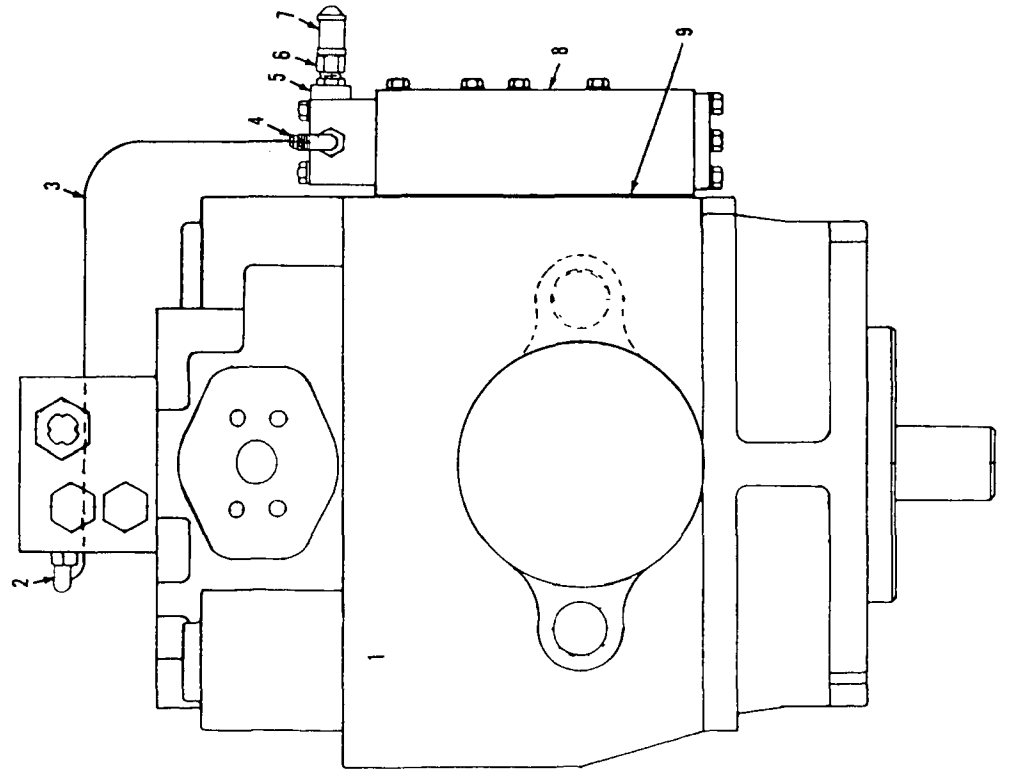
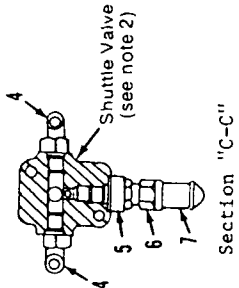
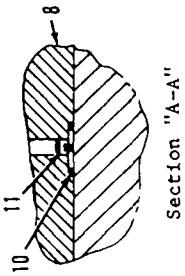
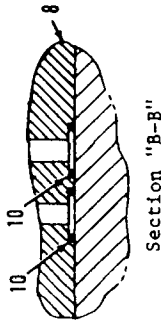
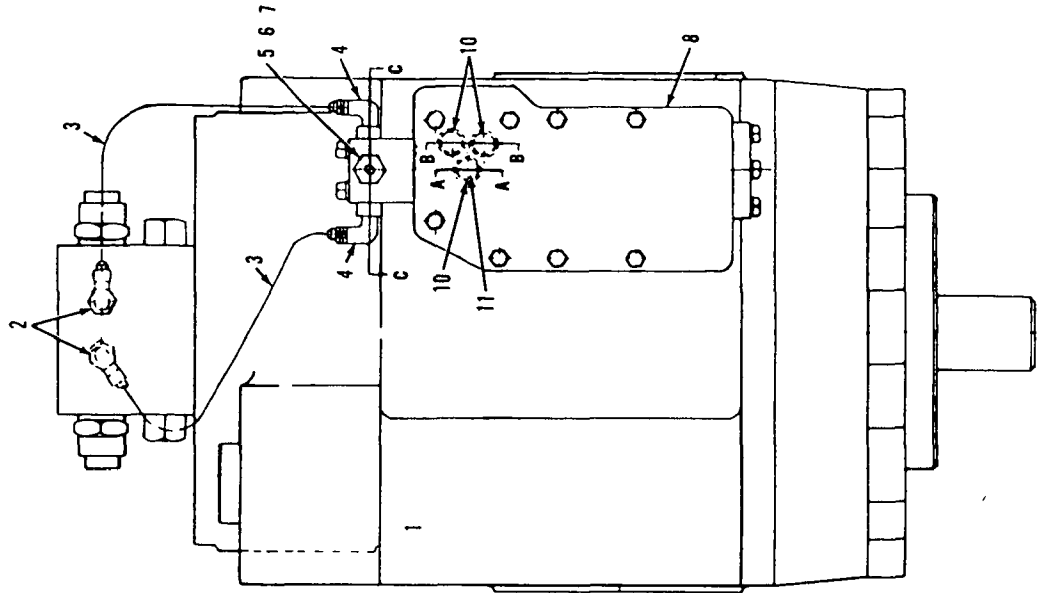


MATERIAL LIST ON BACK

CLUTCH BAND

181355A1

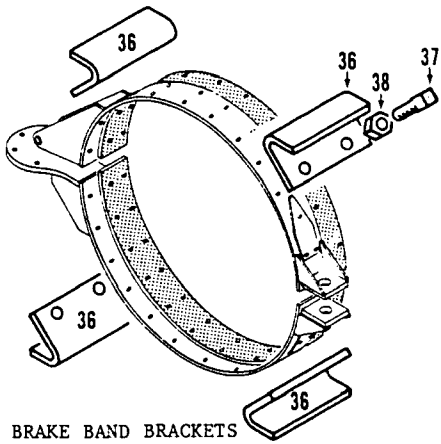




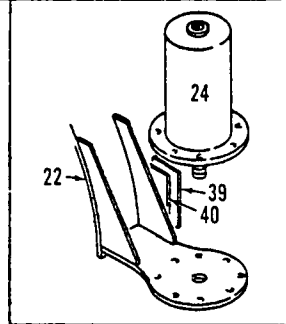
MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

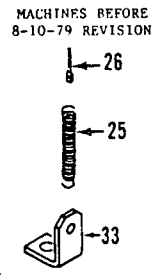
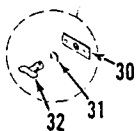
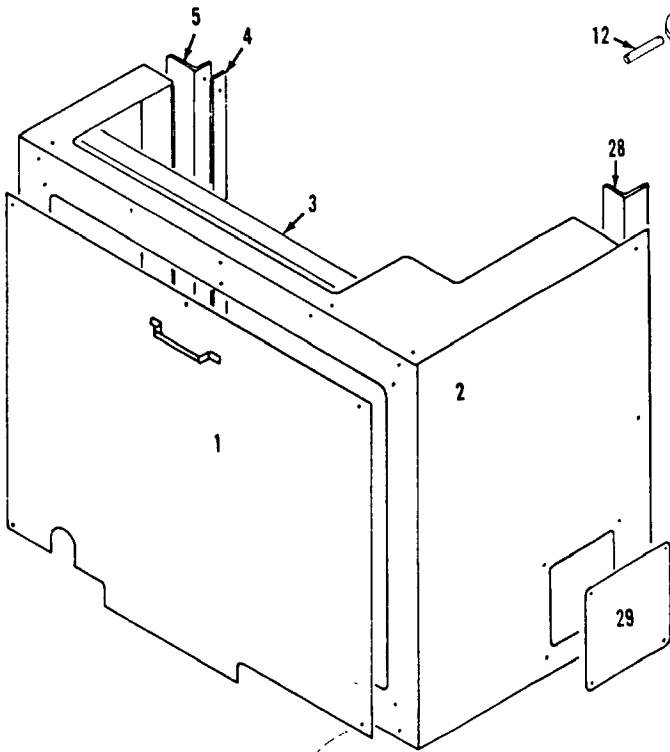
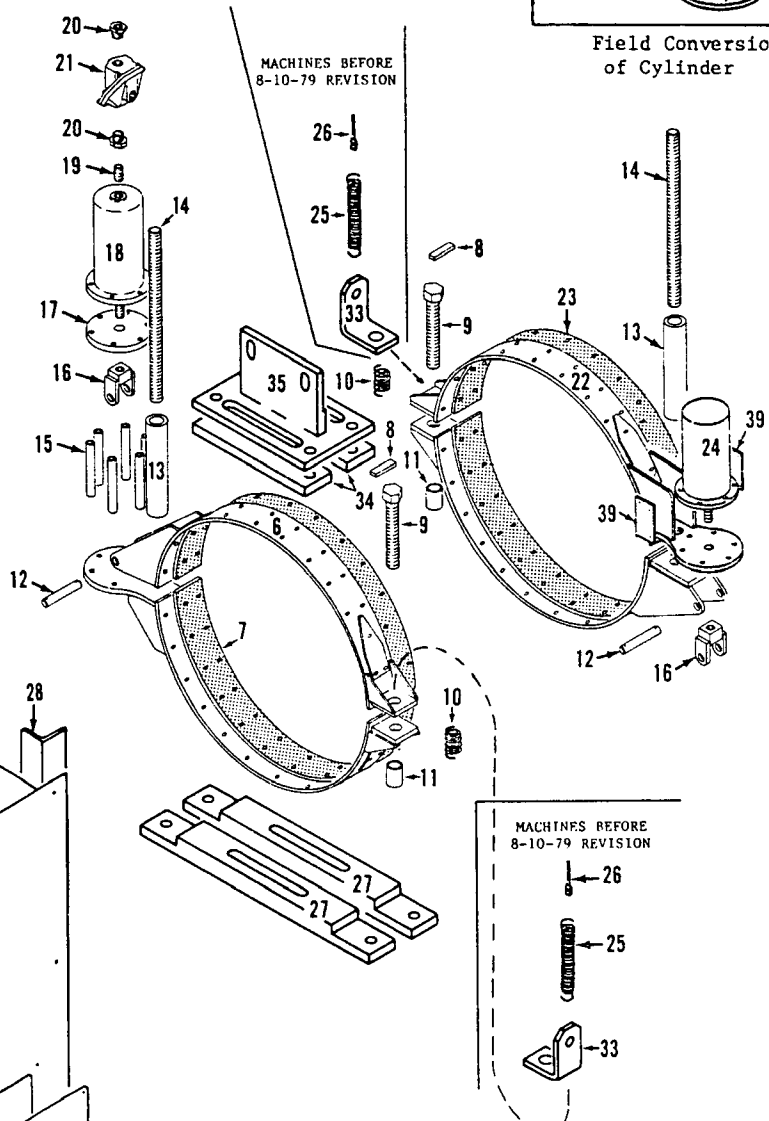
Manitowoc, Wisconsin



BRAKE BAND BRACKETS
AFTER 8-10-79 REVISION



Field Conversion
of Cylinder



ASTER

190815C1

MATERIAL LIST ON BACK

HYD. BOOM HOIST BRAKE

PARTS MANUAL ALPHABETICAL INDEX
Group C - Air Components & Electrical

DESCRIPTION	PUBLICATION	REV	START DATE	END DATE	GROUP
Air Joint	65912	E1	02/22/79	03/07/84	C0501
Air Piping	141626	-	06/20/73	08/20/93	C0301
Air Piping to Elevated Operator's Station	141781	-	08/23/73	07/12/83	C0302
Air Piping to Elevated Operator's Station	49974	G1	09/30/76	06/13/80	C0302
Air Piping to Elevated Operator's Station	96197	E1	10/21/76	05/16/91	C0302
Cab Lighting	141781	-	04/22/74		C1301
Cab Lighting	65252	-	01/04/74	07/15/81	C1301
Compressor & Piping	181831	-	09/29/72	12/15/80	C0101
Compressor & Piping	96516	-	12/15/80	01/11/84	C0101
Control Console	183210	F1	09/27/77	04/25/91	C0201
Control Console	65517	D1	08/13/76	03/16/92	C0201
Control Console	65518	C2	02/03/77	01/03/86	C0201
Control Console	65518	M1	08/13/76	04/25/91	C0201
Electrical Controls	145282	-	02/21/78		C0303
Electrical Controls	181934	-	01/31/73	10/25/78	C0303
Electrical Controls	184000	-	07/17/91	03/19/96	C0303
Electrical Controls	65190	-	02/21/78	03/19/79	C0303
Electrical Controls	65460	-	02/27/76	05/01/86	C0303
Instrument Panel/Switch	190215	E1	11/14/77	10/13/81	C0202
Instrument Panel/Switch	190217	D1	03/25/77	10/13/81	C0202
Light Plant - Alternator - Generator	190651	-	02/27/78	10/30/81	C1101

65518-1 Cont.	REV. M	MODEL 4600-S4, 4600-S5
---------------	-----------	---------------------------

LEFT CONTROL CONSOLE

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
47	673356	1	SWITCH. Pressure	
48	709155	2	WASHER; Copper	
49	96779	1	BLOCK, Mounting	
50	709150	1	WASHER (1/2")	
51	500837	1	KNOB	
52	143252	1	HANDLE	
53	709897	1	WASHER, Spring	
54	252869	1	BOLT, Shoulder (1/2")	
55	702582	1	VALVE, Pressure control	
56	614062	1	CAPSCREW (3/8" - 24 UNF x 1-1/2")	
57	137594	4	SHIM	
58	252868	1	BOLT, Shoulder (3/8")	
59	77711	1	PIN	
60	709151	4	WASHER	
61	225607	4	BEARING	
62	96081	1	LEVER w/jam nut and gr. fitting	
63	143955	1	ROD, Reach w/jam nuts	
64	142729	2	EXTENSION, Handle	
65	714491	1	VALVE, Travel Control	
66	143251	2	HANDLE	
67	714440	2	KNOB, Handle	
68	96082	1	LEVER, w/jam nut and gr. fitting	
69	143956	1	ROD, Reach w/hex nuts	
70	715570	1	VALVE, Ind. swing control	
71	142728	1	SPACER	
72	143237	1	PIN	
73	94667	1	NAMEPLATE w/backing plate	
74	715570	1	VALVE, Boom hoist aux. brake control	
75	12488	1	SPRING	
76	141583	1	HANDLE	
77	500812	1	KNOB	
78	97729	1	BRACKET w/truss head screws, hex nuts and lockwashers	
79	543173	1	NIPPLE, Close (3/8)	
			NOTE 1: If any controls not installed in panel Ref. #4, plug holes w/plug buttons #350317 (small) and #350320 (large).	
			NOTE 2: Prior to design change of Dec. 30, 1976 - (delete Ref. No. 30)	
31	138648	1	MANIFOLD (Cylindrical)	
	140532	2	CLAMP, Manifold	
			NOTE 3: This control is for the Backhitch Pin Lock. See Sht. 2 for drwg. date of Apr. 10, 1984 or later. If Field conversion has been made on prior machines see parts sht. #96402-1.	
			NOTE 4: <u>MACH. W/TRAVEL BRAKE, DELETE REF. #5 AND ADD:</u>	
42	146867	1	LEVER	
43	225397	1	BEARING	
44	709440	1	WASHER (3/8")	

REV. M	65518-1 Cont.
-----------	---------------

PLEASE GIVE MACHINE S/N W/ORDER

CPT

Run as Front

65518-1 Cont.

DWG. NO. 141781	HORN ASSEMBLY AIR MODEL 4600 - SERIES 4	SCALE NONE DR. L.P.W. CK. C.W.H. APP.	MANITOWOC ENGINEERING CO. MANITOWOC, WISCONSIN	DATE 8-23-73 REVISIONS 4-22-74 L.P.W. (A) ADDED 7-12-82 J.C.S. (B) (C) DELETED
TO OPERATORS CAB HORN VALVE		MOUNT HORN ON LEFT SIDE OF MACH. CAB		
AIR MANIFOLD		TO AIR HORN MACHINERY CAB		
OPERATORS CAB RIGHT CONSOLE		FRONT VIEW		
REQD.		CODE NO.		
(1)	1	HORN	485312	(A) 702539
(2)	1	1/4" - 20 UNC. X 1/4" LG. CAPSCREW	612357	(B) 3/16" DIA. MACH. CAB LEFT SIDE M-ASSEMBLY
(3)	1	1/4" - 20 UNC. HEX NUT	546052	(C) 3/16" DIA. MACH. CAB LEFT SIDE M-ASSEMBLY
(4)	1	1/4" LOCKWASHER	710302	(2) (3) (4)
(5)	AS REQD.	3/8" O.D. PLASTIC TUBING	486056	
(6)	1	3/8" X 1/4" FEMALE ELBOW	429626	
(7)	1	1/4" X 1/8" BUSHING NUT	288790	
(8)	1	VALVE	702539	

NOTICE
 THIS PRINT REMAINS THE PROPERTY OF
 MANITOWOC ENGINEERING CO.
 ALL INFORMATION CONTAINED THEREON IS CONFIDENTIAL
 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 WAY WHATSOEVER
 DETRIMENTAL TO OUR INTERESTS

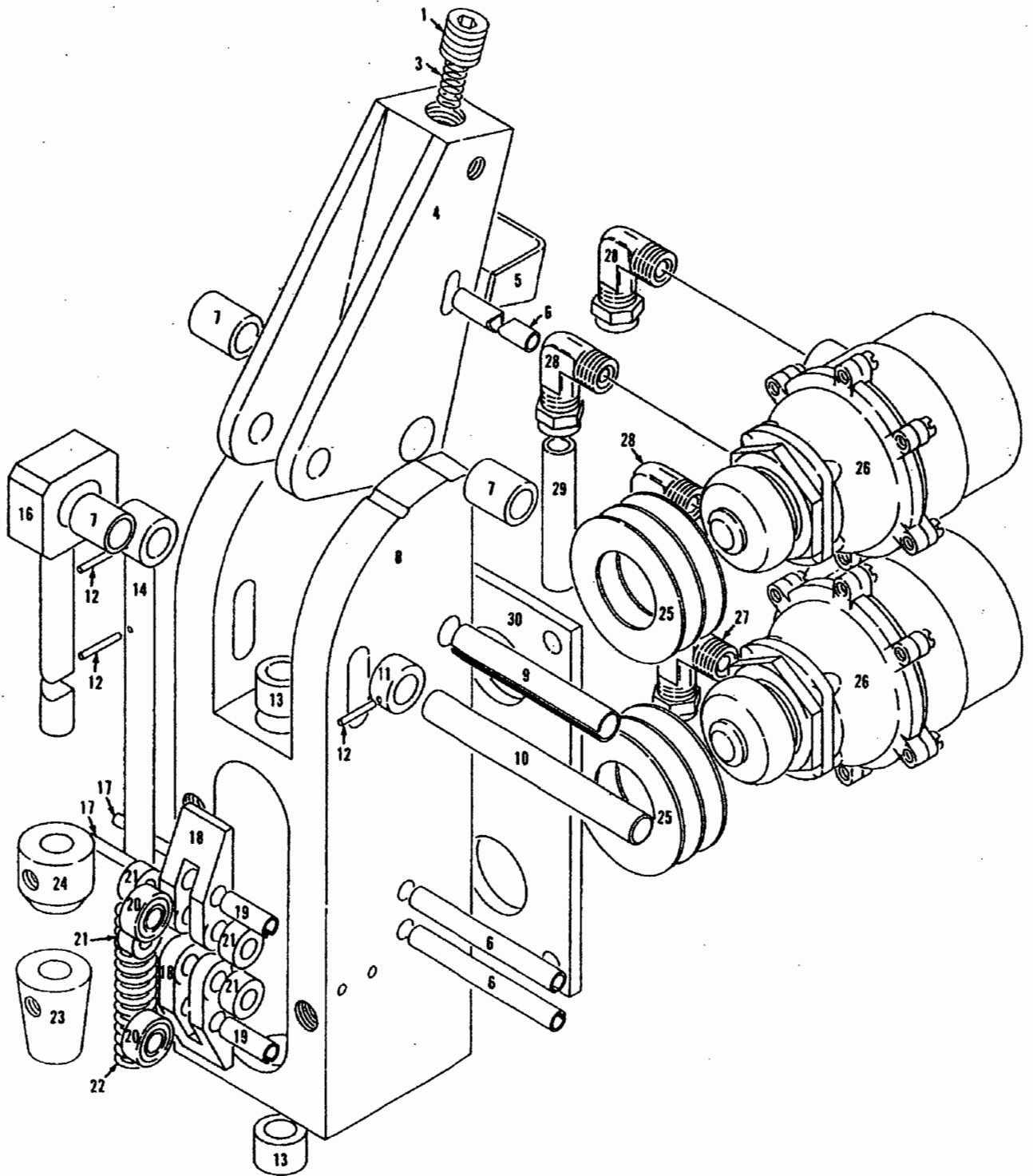
DO NOT SCALE THIS DRAWING

DWG. NO.
141781

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin



183210C1

MATERIAL LIST ON BACK

CONTROL VALVE

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

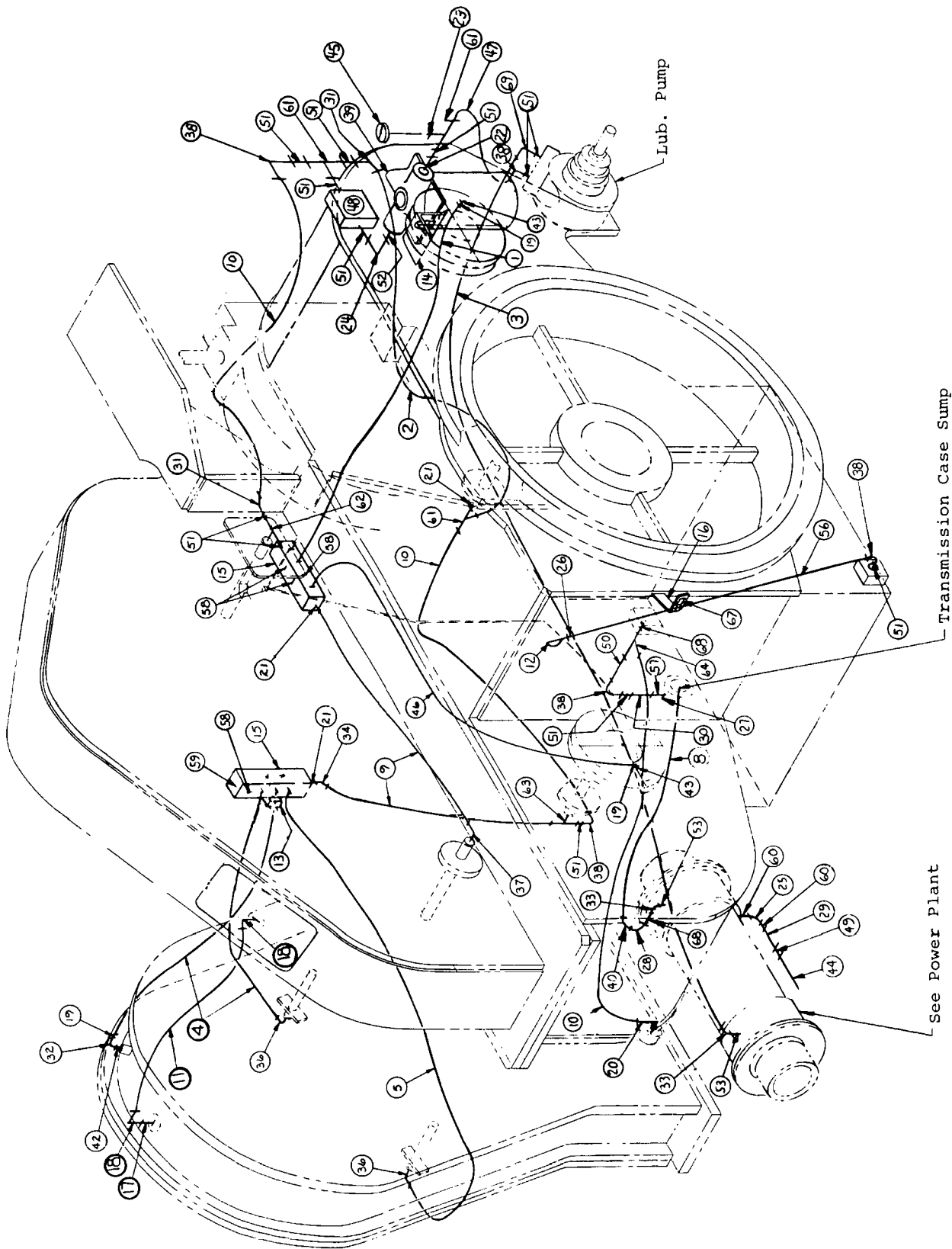
- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

GROUP D - Power Components



49756 K1

MATERIAL LIST ON BACK

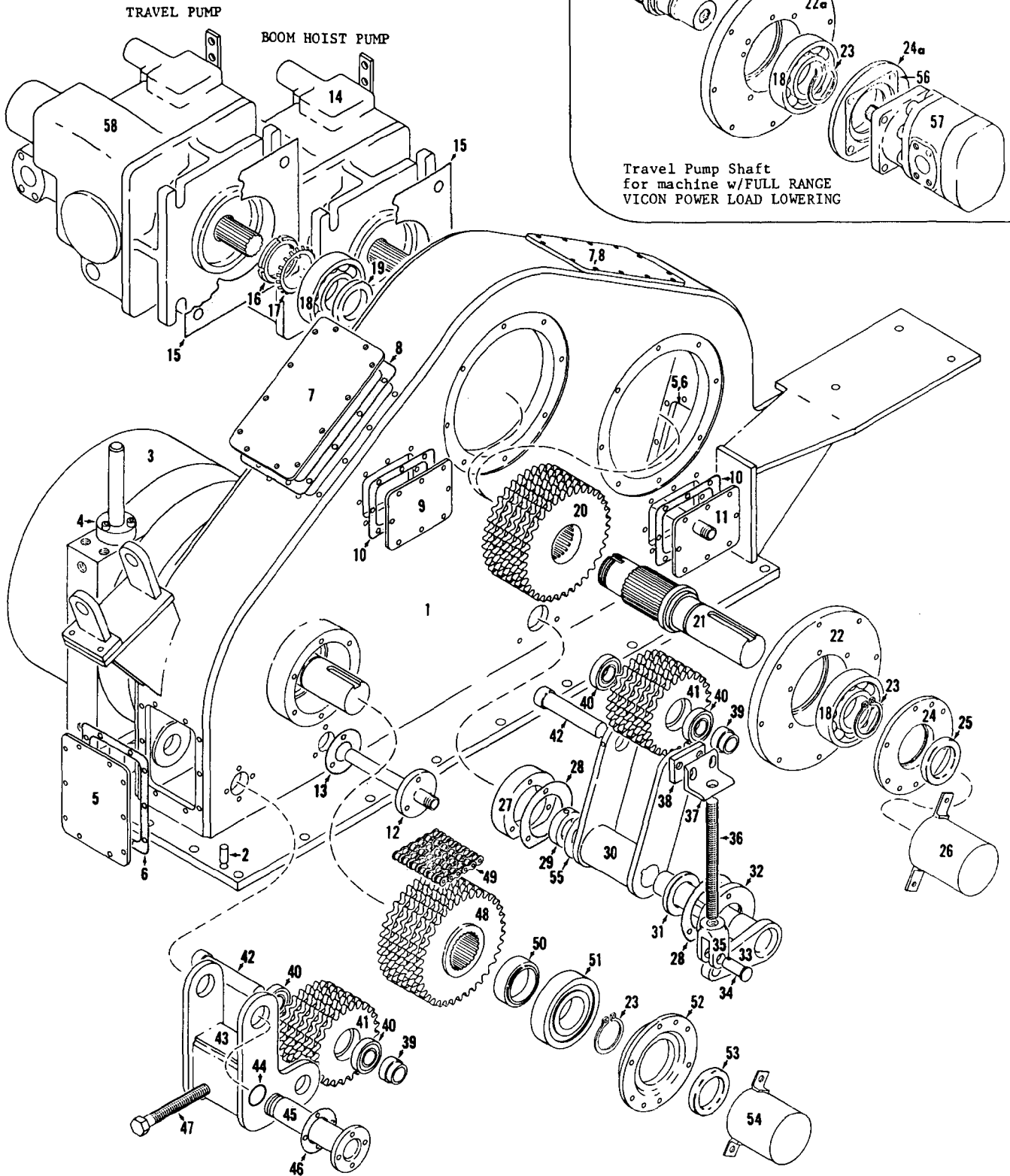
TRANSMISSION LUB. PIPING

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin

MASTER



Travel Pump Shaft
for machine w/FULL RANGE
VICON POWER LOAD LOWERING

65106D2

MATERIAL LIST ON BACK

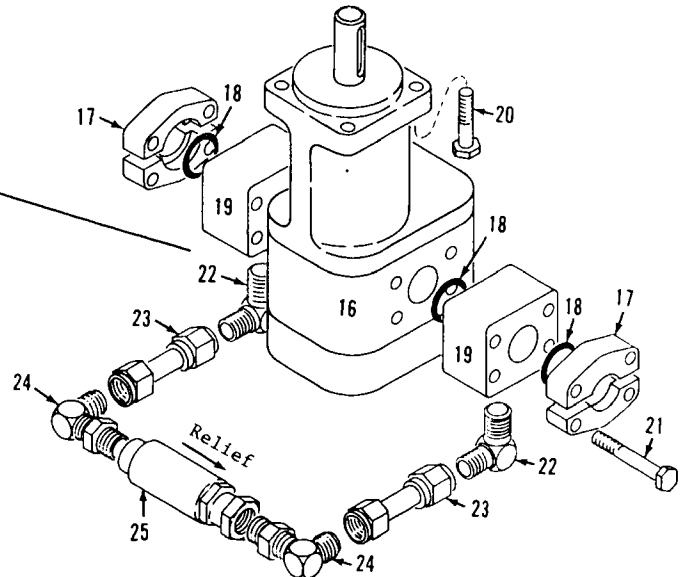
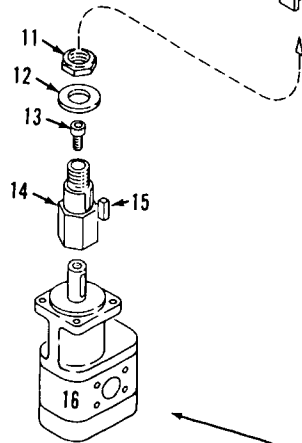
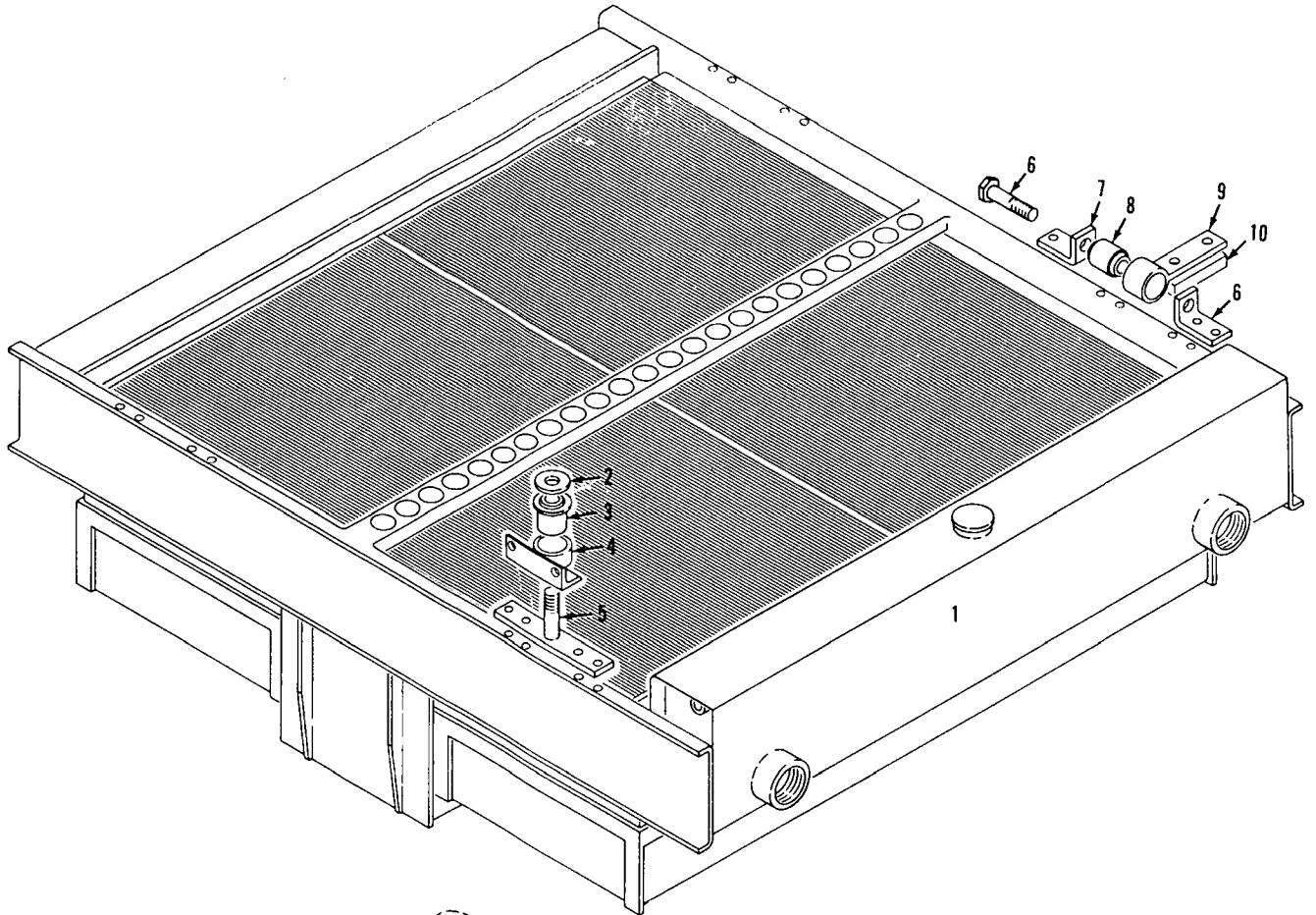
UPPER TRANSMISSION CASE

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin

MASTER



65115D1

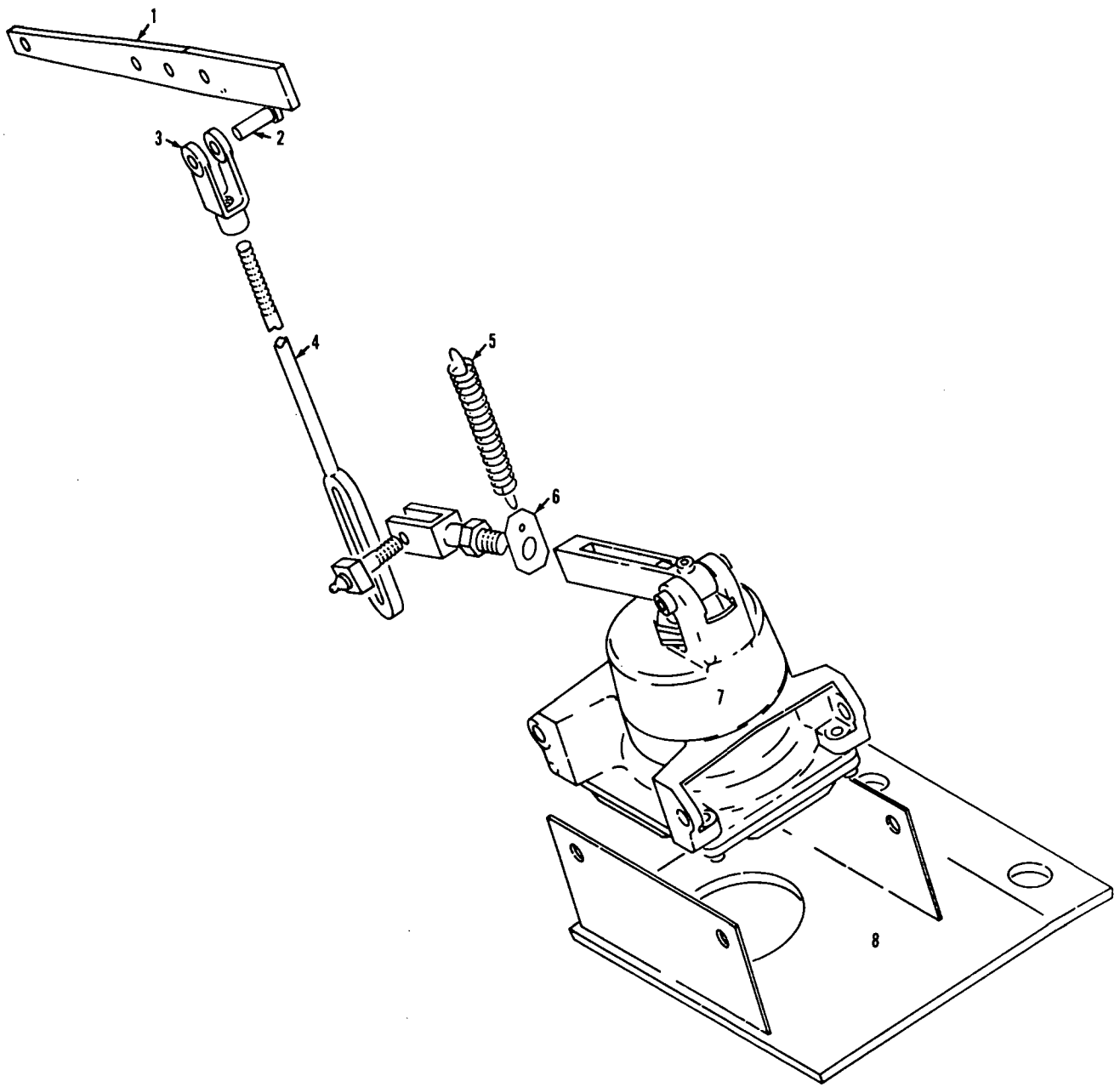
MATERIAL LIST ON BACK

RADIATOR and MOTOR

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin

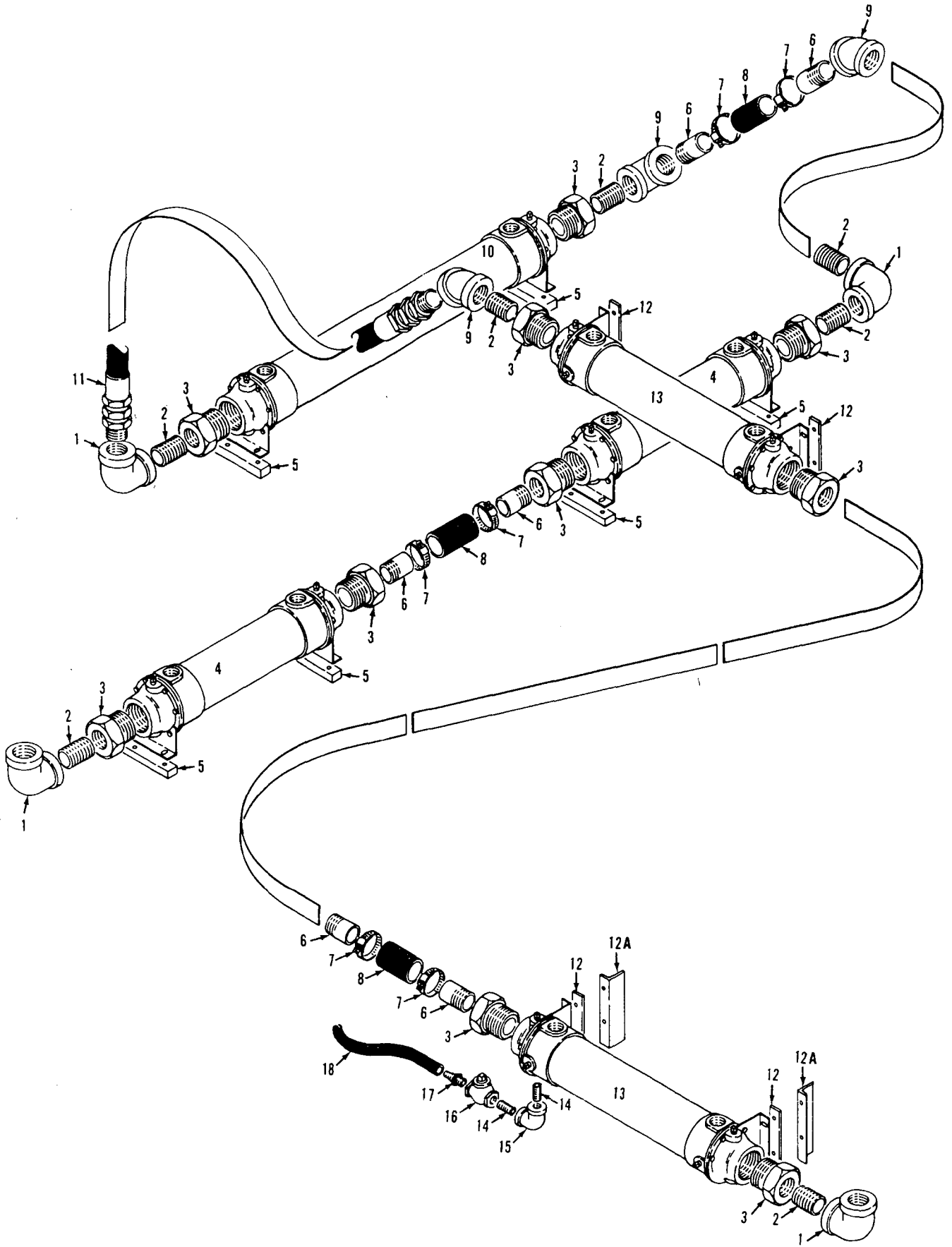


MASTER

95236A1

MATERIAL LIST ON BACK

ENGINE CONTROL

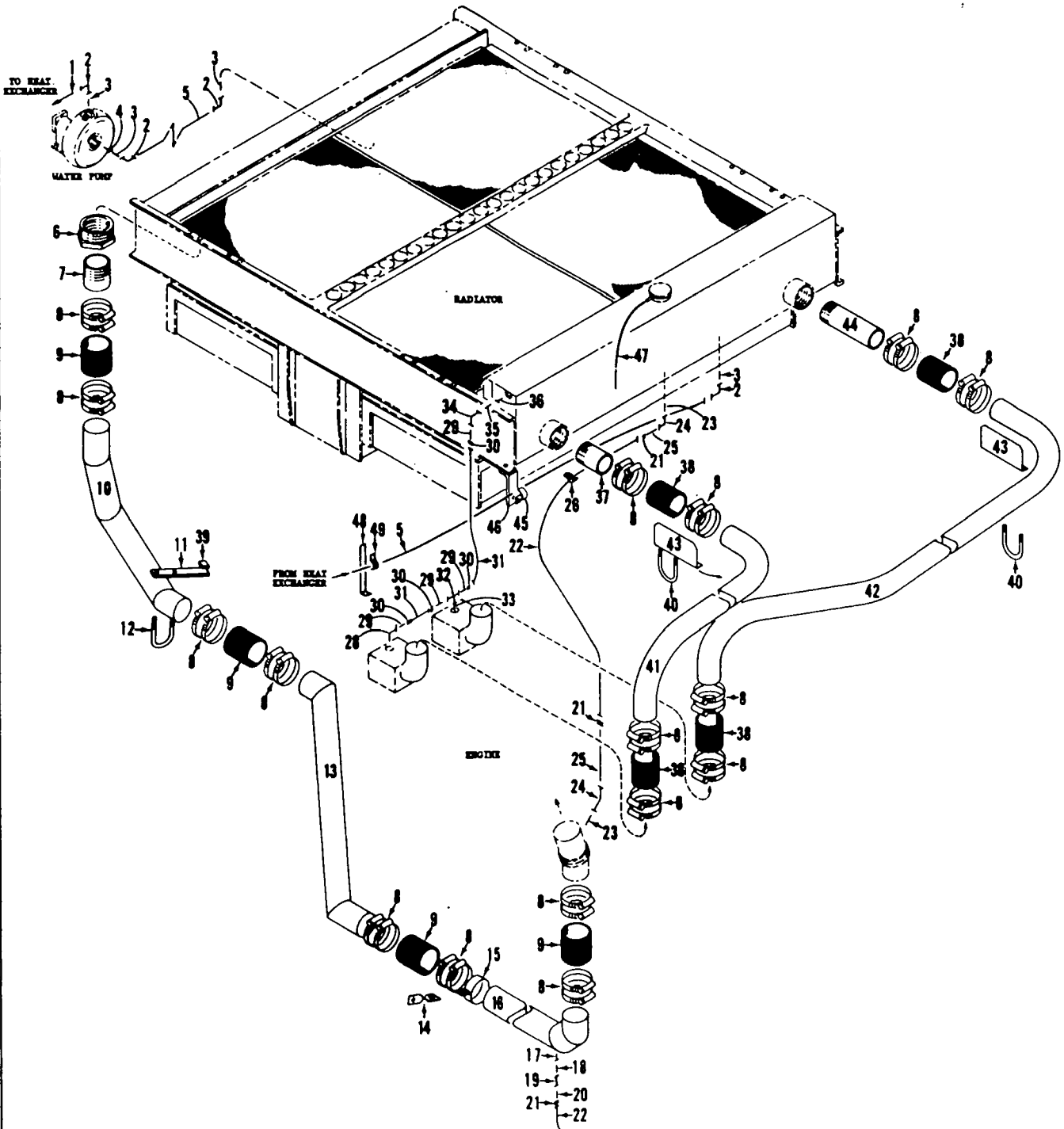


182025A1

MATERIAL LIST ON BACK

HEAT EXCHANGER COOLING

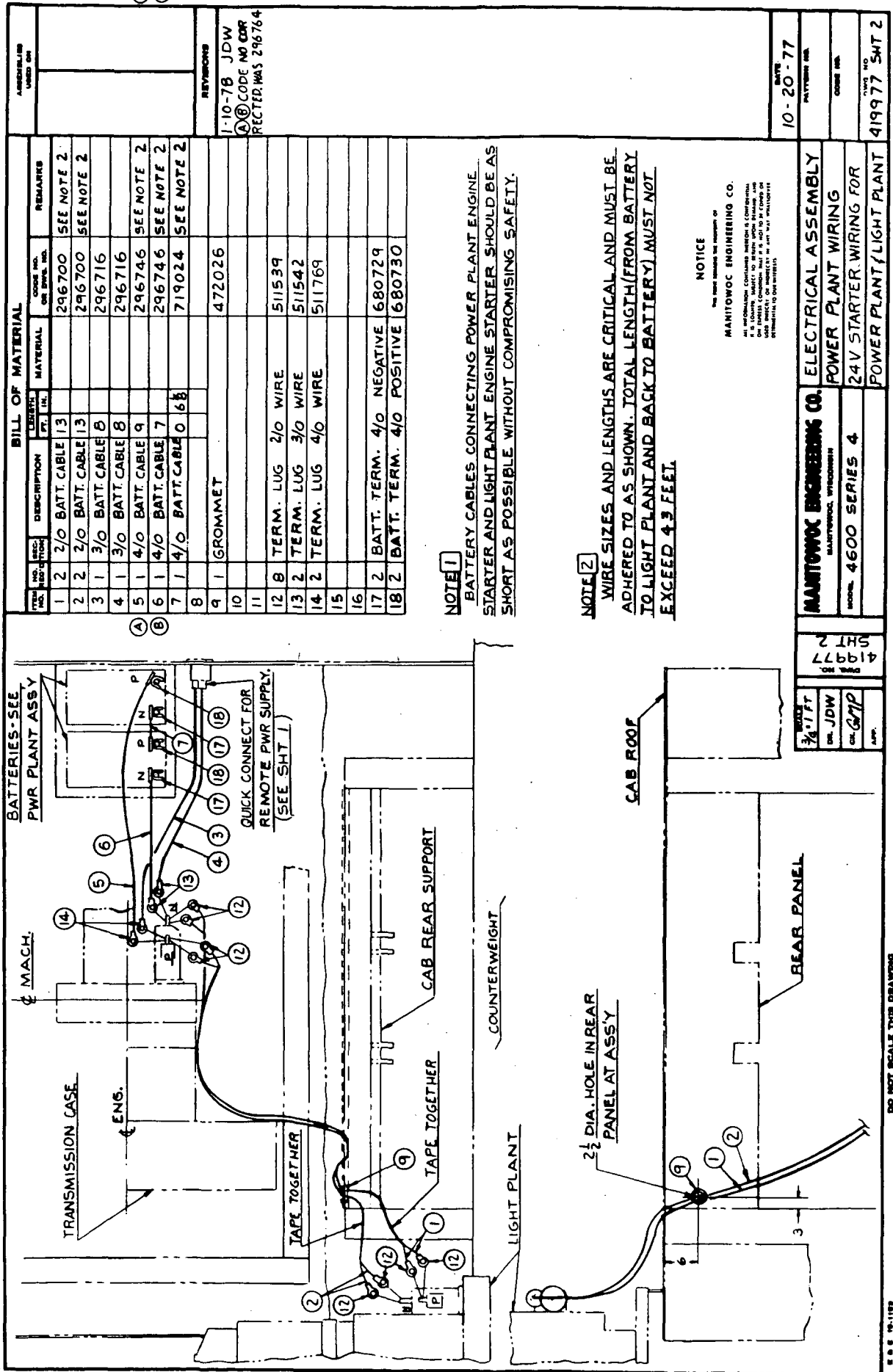
MASTER



183102C1

419972 1-10-78

-DI.6-



BILL OF MATERIAL

QTY	DESCRIPTION	UNIT	MATERIAL	CODE NO.	REMARKS
1	2/O BATT. CABLE	13		296700	SEE NOTE 2
2	2/O BATT. CABLE	13		296700	SEE NOTE 2
3	3/O BATT. CABLE	8		296716	
4	3/O BATT. CABLE	8		296716	
5	4/O BATT. CABLE	9		296746	SEE NOTE 2
6	4/O BATT. CABLE	7		296746	SEE NOTE 2
7	4/O BATT. CABLE	68		719024	SEE NOTE 2
8					
9	GROMMET			472026	
10					
11					
12	TERM. LUG	2/O WIRE		511539	
13	TERM. LUG	3/O WIRE		511542	
14	TERM. LUG	4/O WIRE		511769	
15					
16					
17	BATT. TERM.	4/O NEGATIVE		680729	
18	BATT. TERM.	4/O POSITIVE		680730	

NOTE 1
 BATTERY CABLES CONNECTING POWER PLANT ENGINE STARTER AND LIGHT PLANT ENGINE STARTER SHOULD BE AS SHORT AS POSSIBLE WITHOUT COMPROMISING SAFETY.

NOTE 2
 WIRE SIZES AND LENGTHS ARE CRITICAL AND MUST BE ADHERED TO AS SHOWN. TOTAL LENGTH (FROM BATTERY TO LIGHT PLANT AND BACK TO BATTERY) MUST NOT EXCEED 43 FEET.

NOTICE
 THE BEST MATERIALS FOR REPAIRS OF
 MANITOWOC ENGINEERING CO.
 REPAIRS SHOULD BE MADE BY THE COMPANY OR BY A LICENSED CONTRACTOR WHOSE WORK IS SUBJECT TO INSPECTION BY THE COMPANY.
 THE COMPANY IS NOT RESPONSIBLE FOR THE QUALITY OF REPAIRS MADE BY OTHERS.

DATE	10-20-77
PREPARED BY	
CHECKED BY	
DRAWING NO.	419977 SMT 2

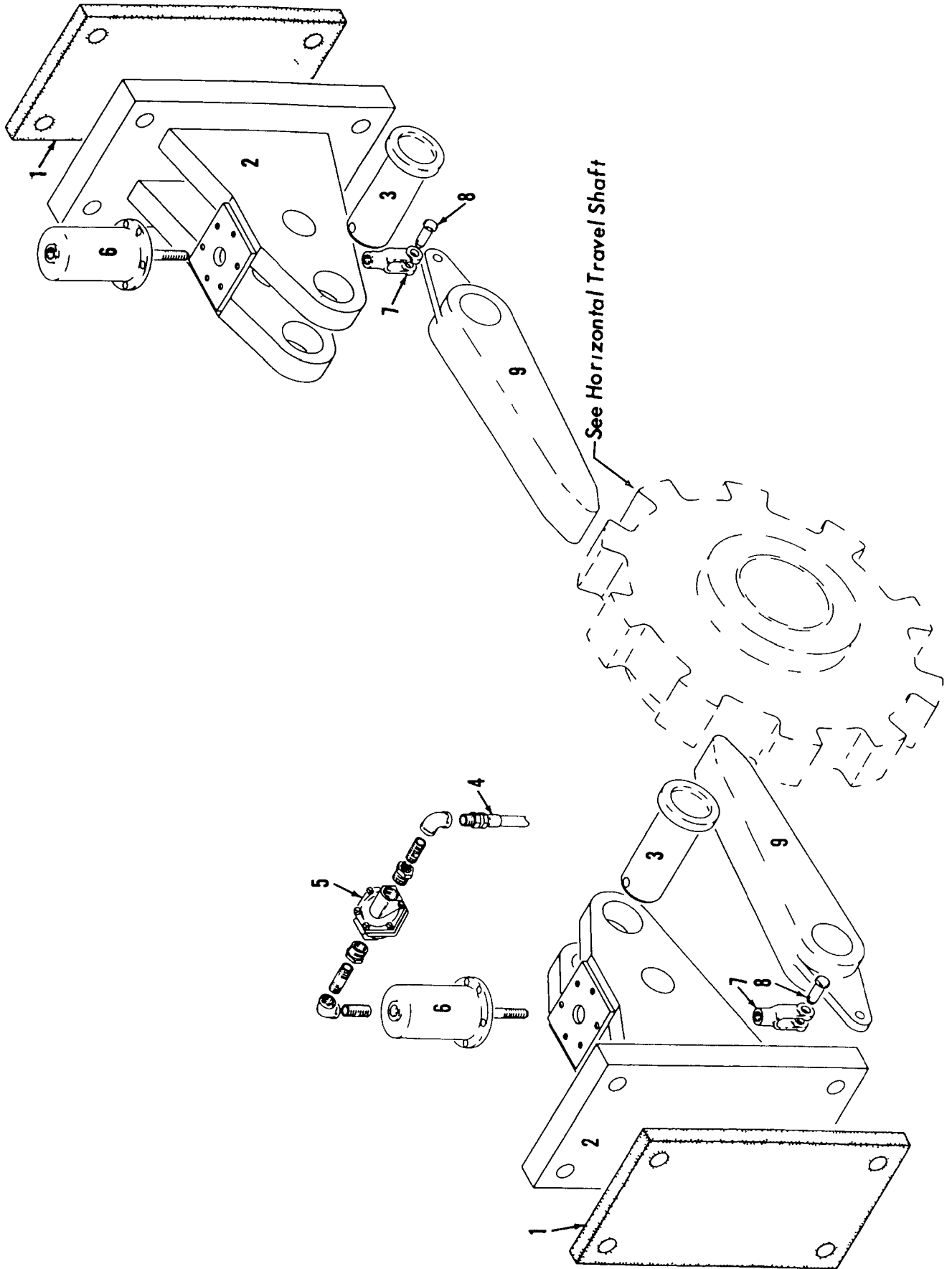
MANITOWOC ENGINEERING CO.	ELECTRICAL ASSEMBLY
MILWAUKEE, WISCONSIN	POWER PLANT WIRING
MODEL 4600 SERIES 4	24V STARTER WIRING FOR
	POWER PLANT/LIGHT PLANT

DO NOT SCALE THIS DRAWING

MANITOWOC ENGINEERING CO

A Division of The Manitowoc Company, Inc

Manitowoc, Wisconsin



MASTER

33048A1

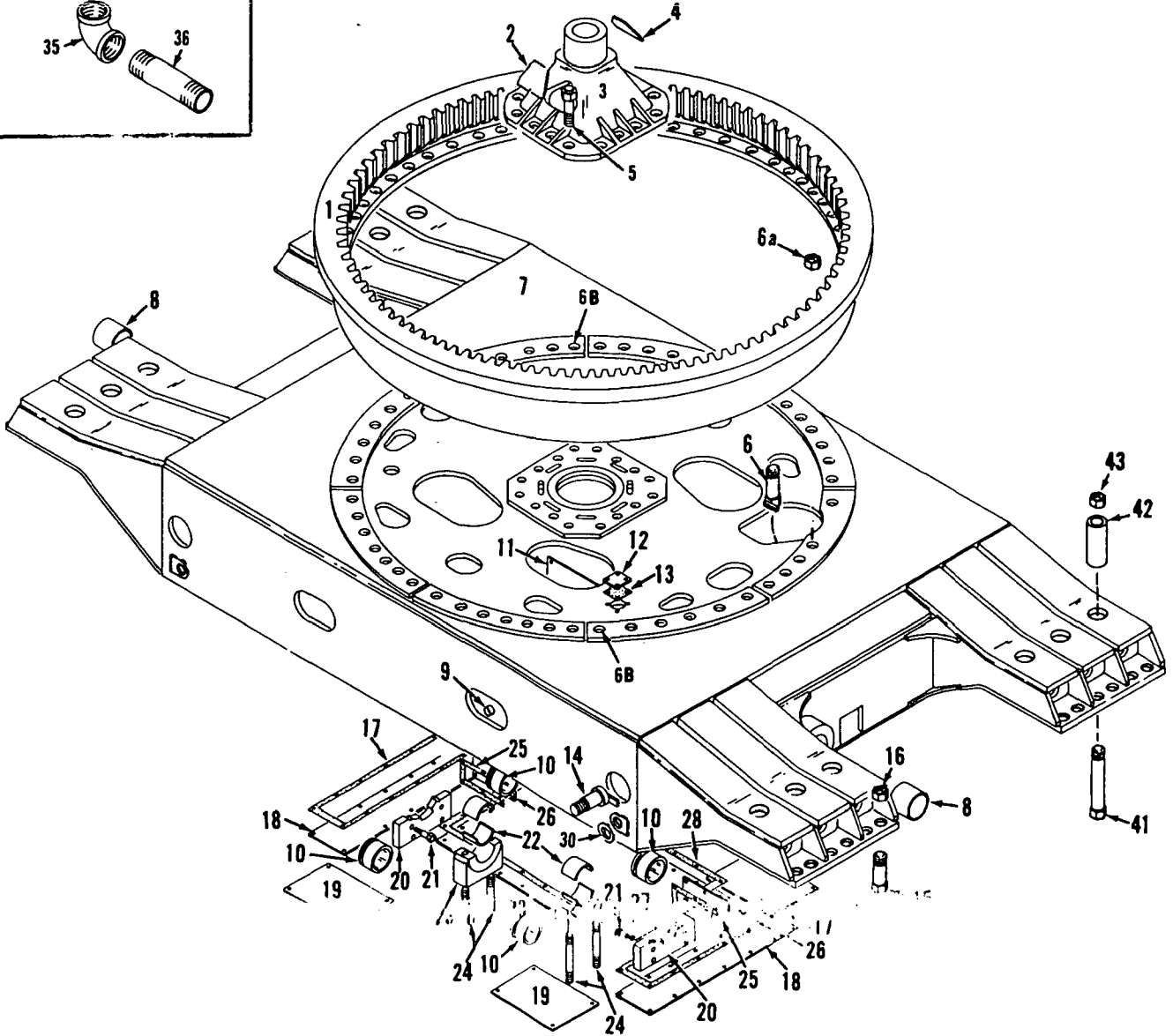
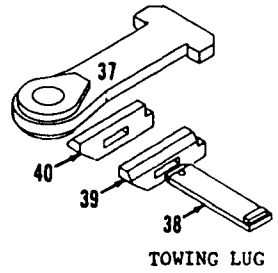
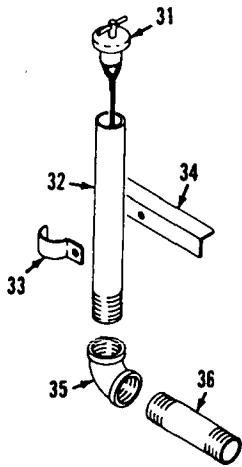
MATERIAL LIST ON BACK

TRAVEL LOCK

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin

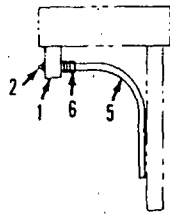


MASTER

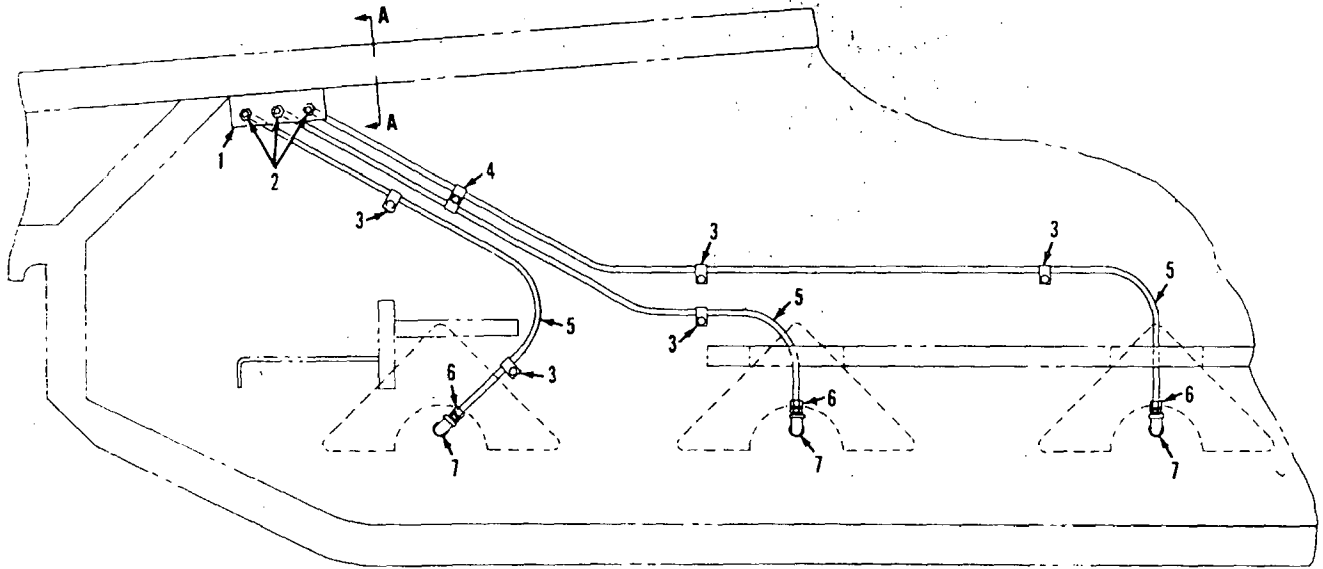
65071G1

MATERIAL LIST ON BACK

CARBODY



Section "A-A"

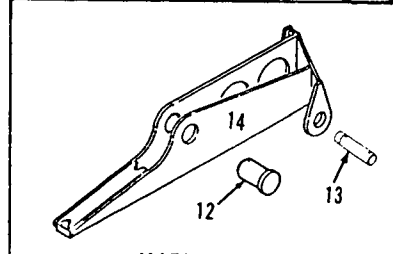
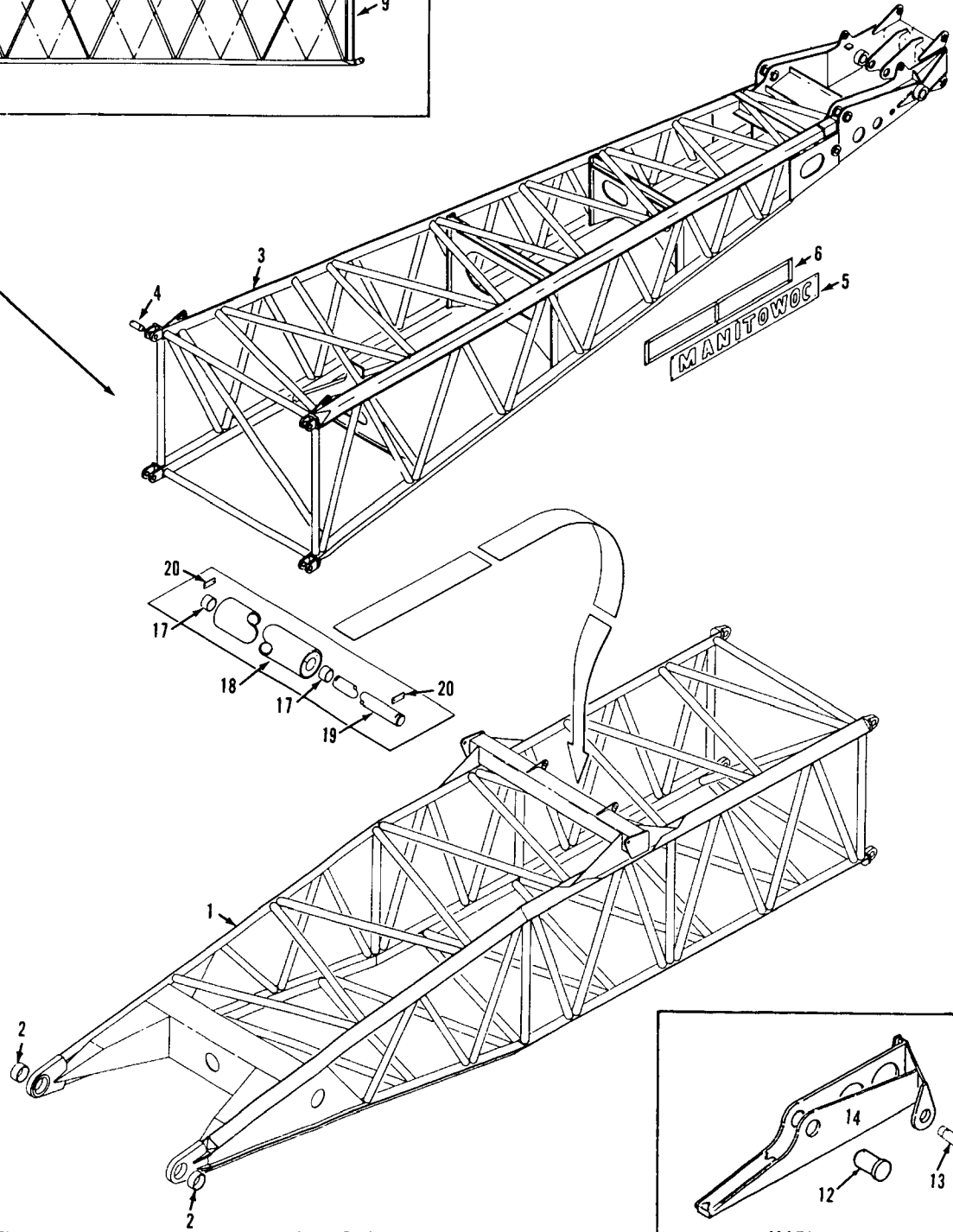
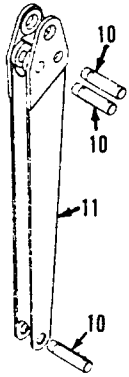
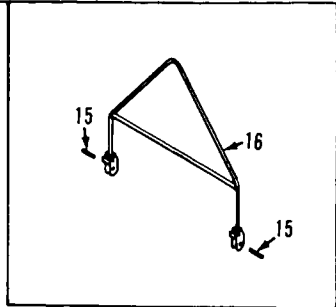
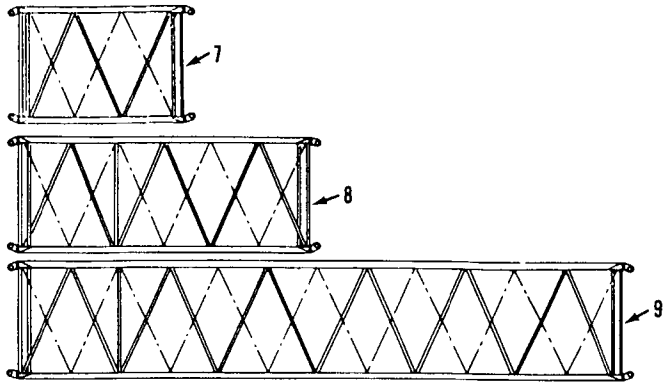


GROUP F - Attachments

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin



MASTER

65234C4

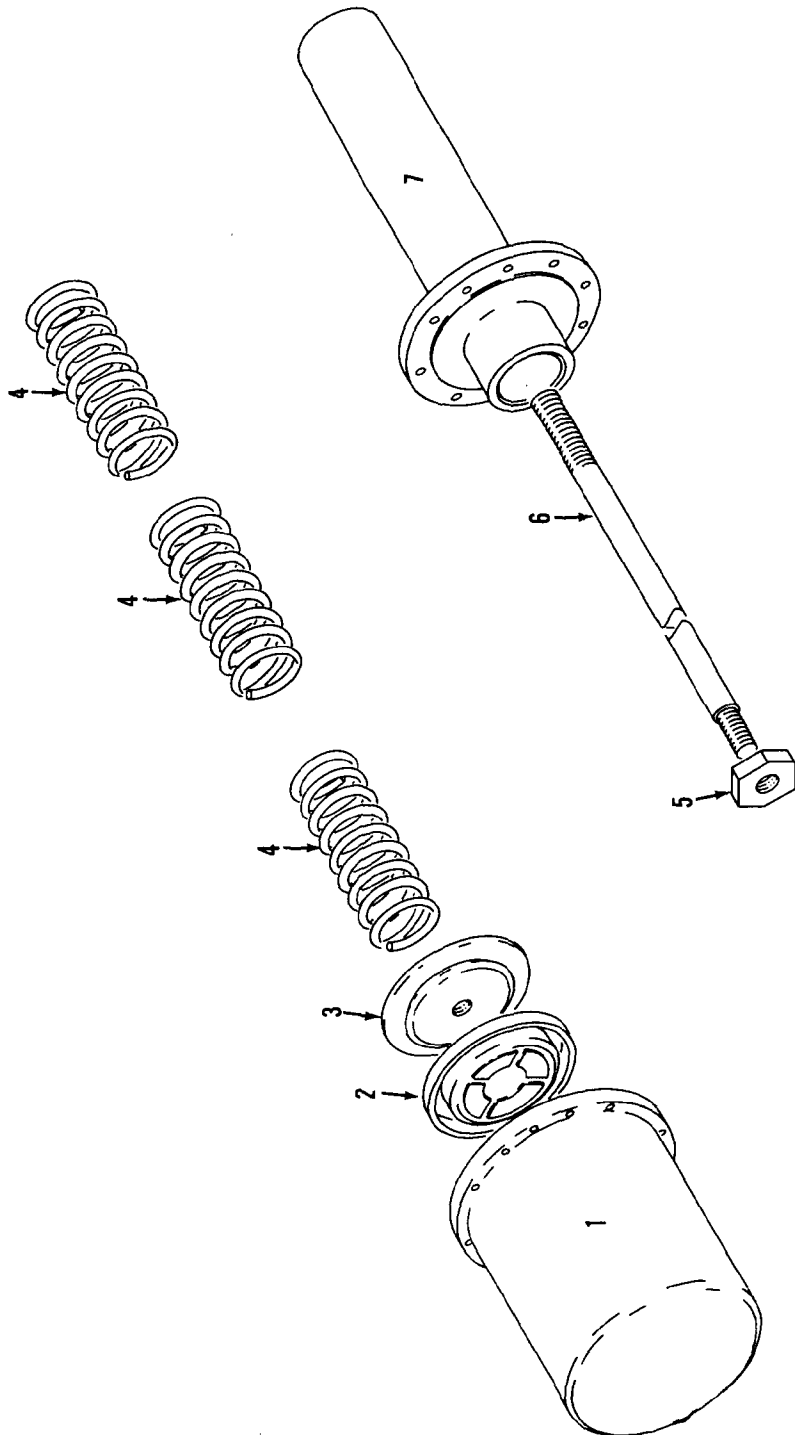
MATERIAL LIST ON BACK

BOOM NO. 27B

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

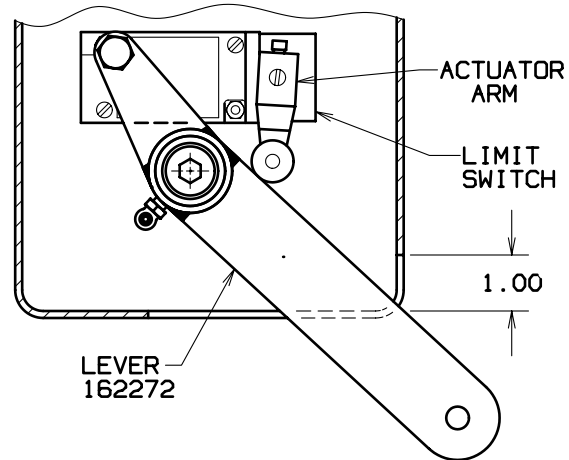
Manitowoc, Wisconsin



93251A1

MATERIAL LIST ON BACK

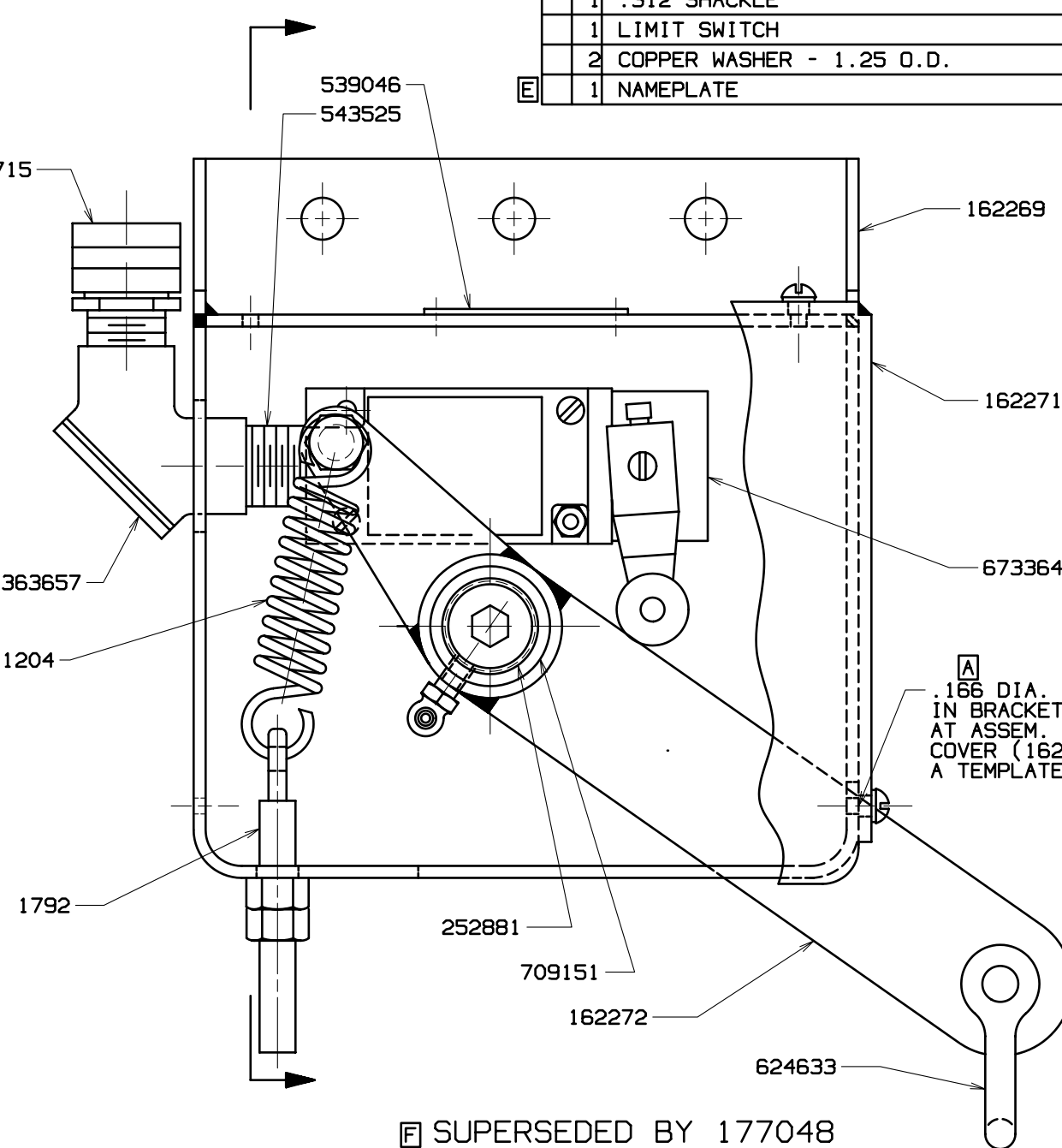
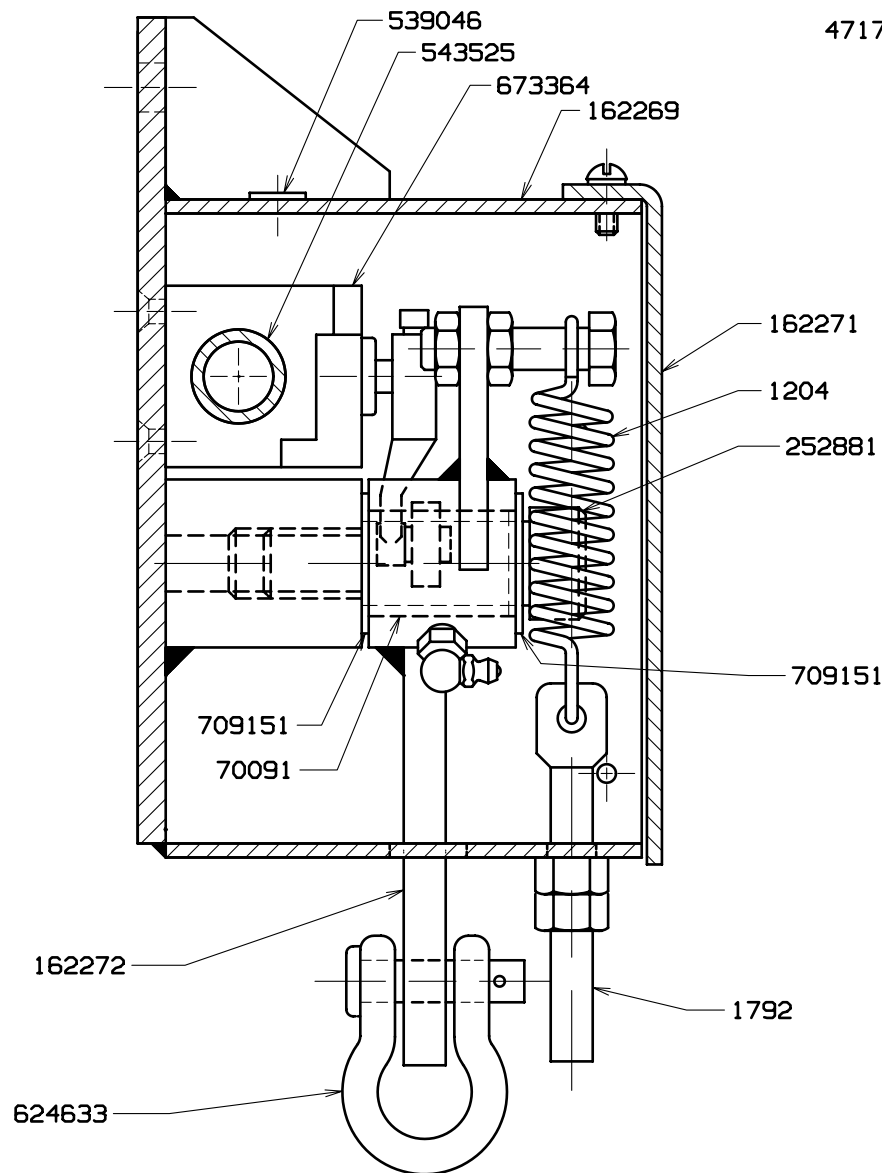
AIR CYLINDER



ADJUSTMENT OF LIMIT SWITCH:

- 1) HOLD LEVER 162272 1.00 INCH FROM THE SPRING RETURN POSITION.
- 2) LOOSEN SETSCREW ON LIMIT SWITCH ACTUATOR ARM.
- 3) HOLD ACTUATOR ARM ROLLER AGAINST LEVER 162272. WITH SCREWDRIVER ROTATE SHAFT OF LIMIT SWITCH IN A COUNTER-CLOCKWISE DIRECTION UNTIL SWITCH JUST ACTUATES; TIGHTEN SETSCREW.

VIEW SHOWING ACTUATOR TRIP POINT



BILL OF MATERIAL					ASSEMBLIES USED ON
ITEM NO.	SEC. TION	DESCRIPTION	LENGTH IN.	MATERIAL	
1		SPRING			1204
1		EYE BOLT			1792
1		BUSHING			70091
1		BRACKET			162269
1		COVER			162271
1		LEVER			162272
1		.750 DIA. X 1.50 LG. SHOULDER BOLT			252881
1		CONDUIT ELBOW			363657
1		CORD GRIPPER			471715
1		.50 X 2.00 LG. NIPPLE			543525
1		.312 SHACKLE			624633
1		LIMIT SWITCH			673364
2		COPPER WASHER - 1.25 O.D.			709151
1		NAMEPLATE			539046

REVISIONS
4-23-91 CPC
A) ADDED
1-27-94 KLW
B) WAS 542979
4-5-94 TJC
C) D) ADJUSTMENT
PROCEDURE AND
VIEW ADDED
E) ADDED
11-11-98 CJW
F) ADDED

DWG. NO.
163614

SUPERSEDED BY 177048

SCALE 12=1'	Manitowoc Crane, Inc.	BLOCK-UP LIMIT	DATE 6-17-88
DR. TJC	Manitowoc, Wisconsin	SWITCH ASSEMBLY	PATTERN NO.
CK. CWH	MODEL ALL		
APP. CWH			DWG. NO. 163614

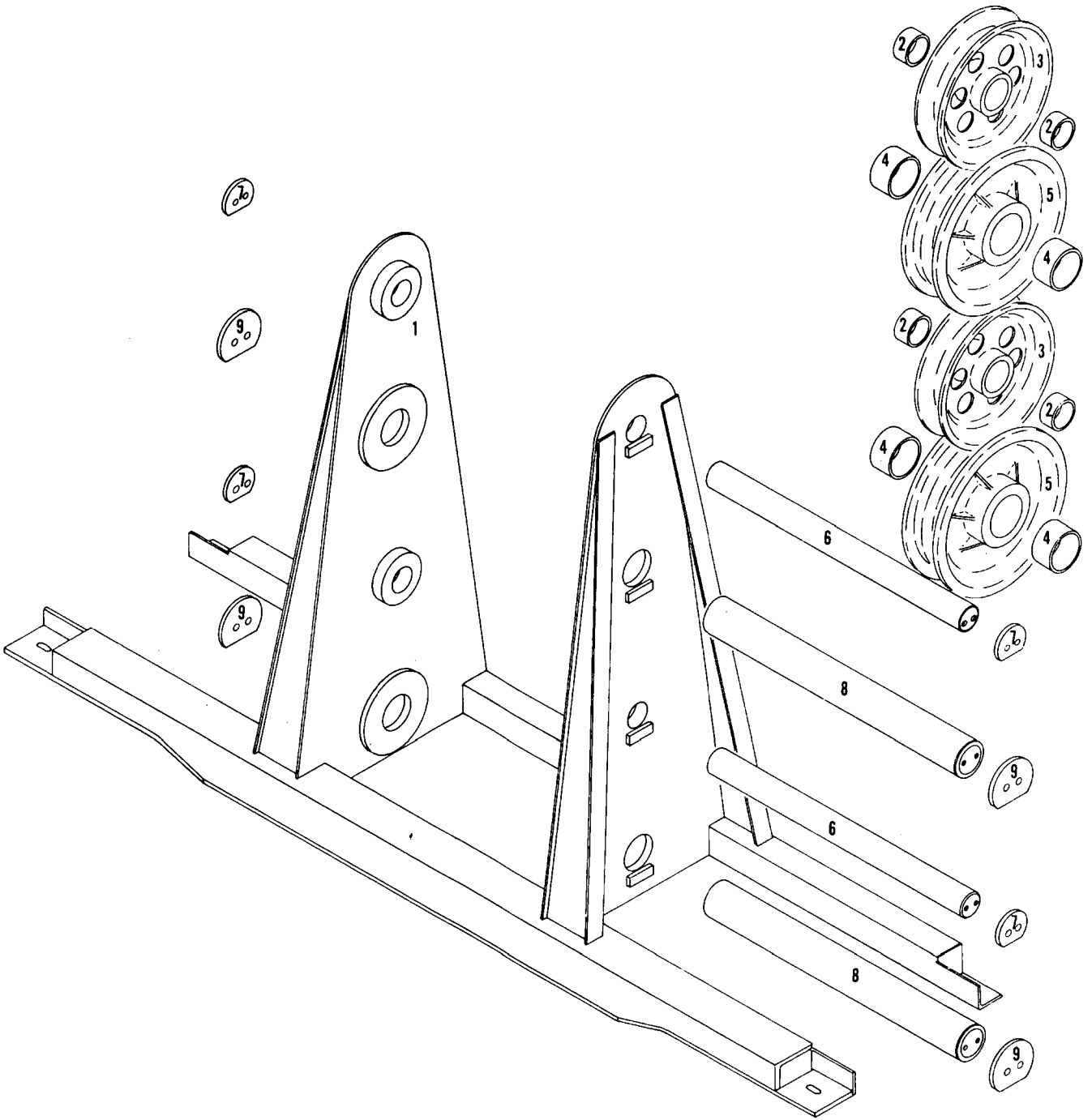
DO NOT SCALE THIS DRAWING

MASTER

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin



181858A1

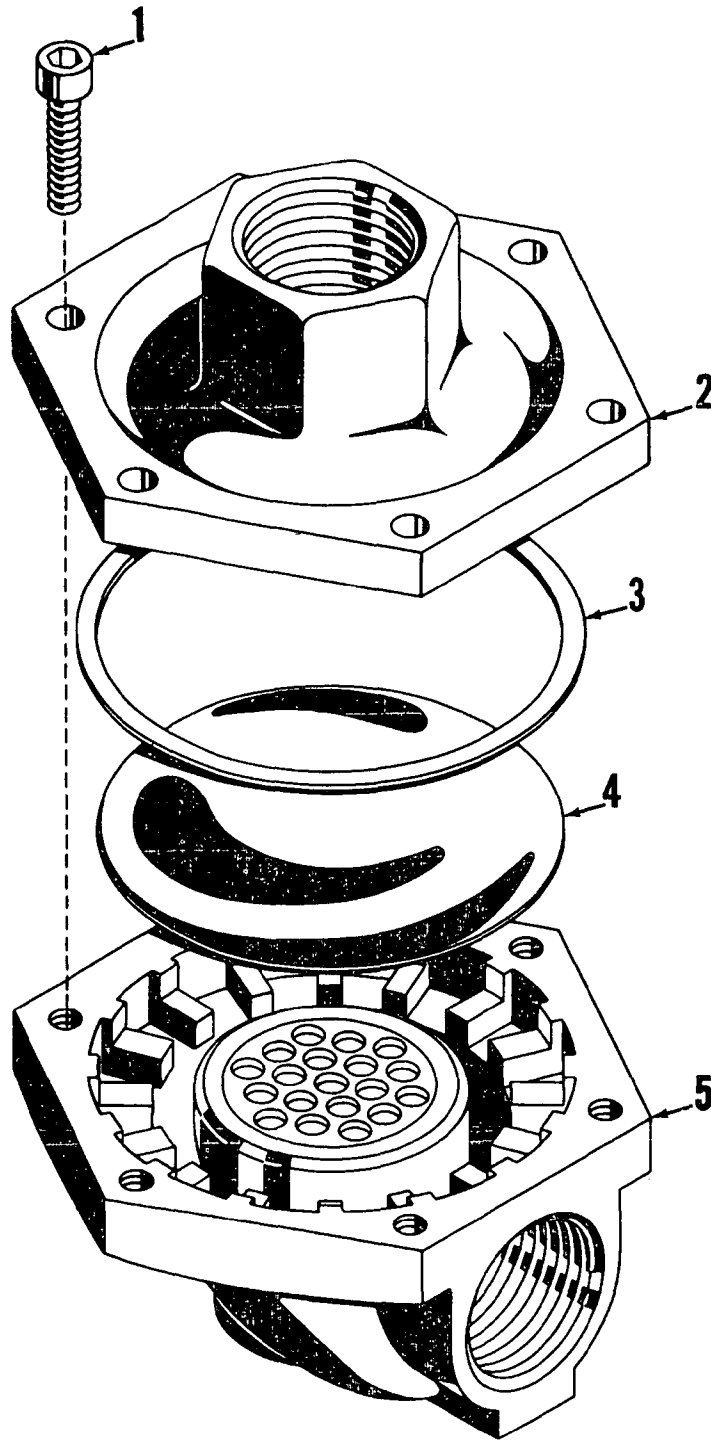
MATERIAL LIST ON BACK

WIRE ROPE GUIDE

101000 M1

MASTER

MASTER



MANITOWOC ENGINEERING CO.

Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin 54220



TUBING (soft copper)

Code No.	Tube O.D.
696205	3/16
696210	1/4
696214	5/16
696216	3/8
696218	1/2
696219	5/8
696220	3/4



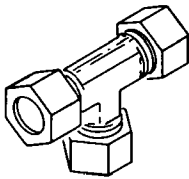
NUT

Code No.	Tube O.D.
424603	3/8
424604	1/2
424605	3/4
424633	5/16
424634	1/4
424635	3/16



FERRULE

Code No.	Tube O.D.
424600	1/4
424601	3/4
424602	3/8
424616	5/16
424617	1/2
424618	1/8
424619	3/16



UNION TEE

Code No.	Tube O.D.
429315	1/4
429316	3/8
429317	5/16



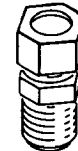
UNION

Code No.	Tube O.D.
429349	3/8
429361	1/4
429362	1/2
429397	5/16



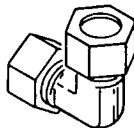
FEMALE CONNECTOR

Code No.	Tube O.D.	Pipe Thread
429312	3/16	1/8
429407	1/4	1/8
429830	1/4	1/4



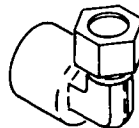
MALE CONNECTOR

Code No.	Tube O.D.	Pipe Thread
429324	3/4	3/4
429328	3/8	1/2
429351	5/16	1/8
429358	1/2	3/4
429359	1/2	3/8
429363	1/4	1/8
429364	1/4	1/4
429365	3/16	1/8
429366	3/8	1/8
429367	3/8	1/4
429368	3/8	3/8



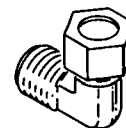
UNION ELBOW

Code No.	Tube O.D.
429372	3/8
429378	1/2
429381	1/4



FEMALE ELBOW

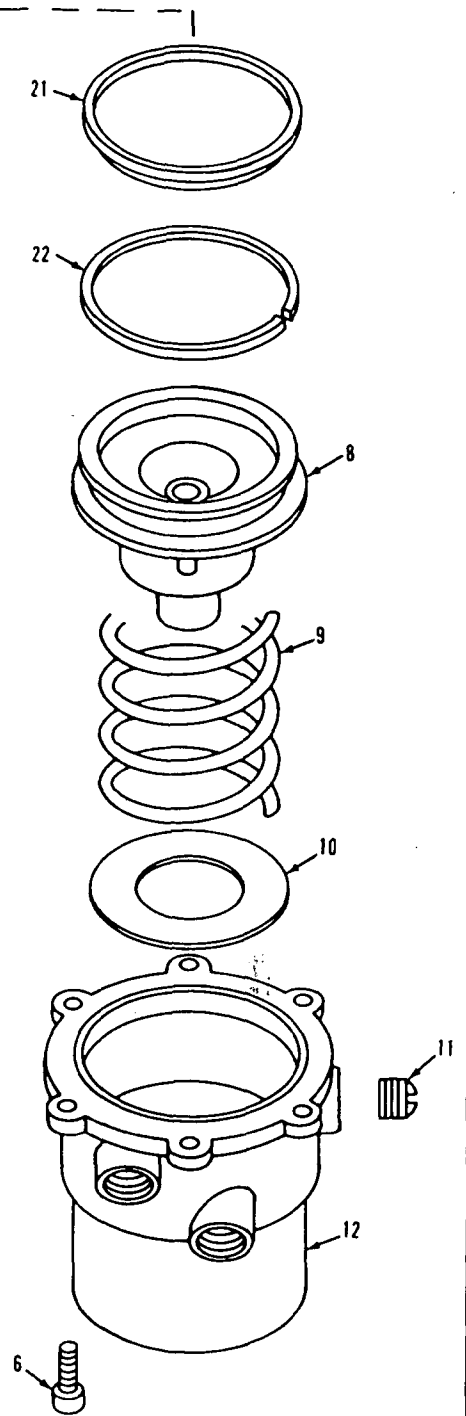
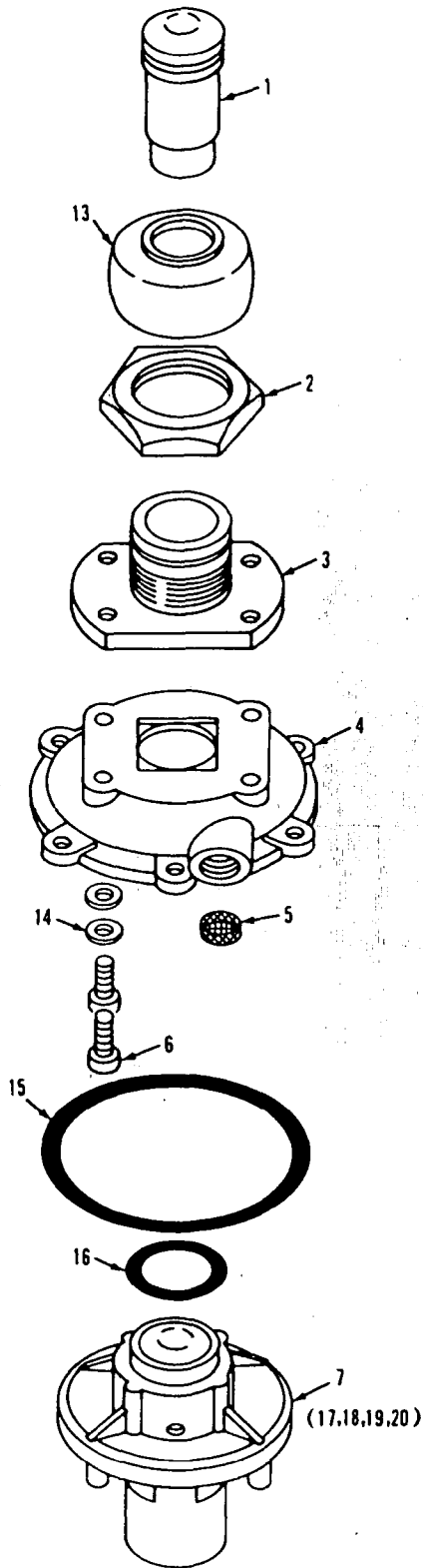
Code No.	Tube O.D.	Pipe Thread
429066	1/4	1/8
429825	1/4	1/4

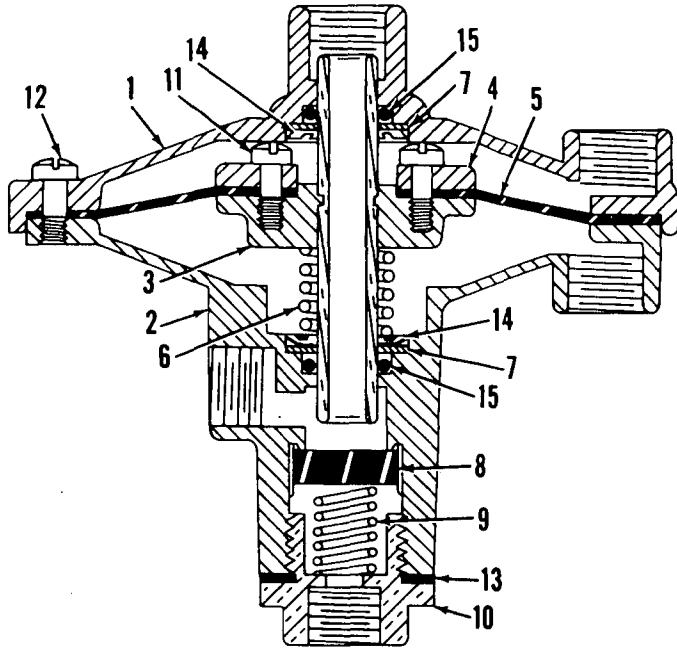


MALE ELBOW

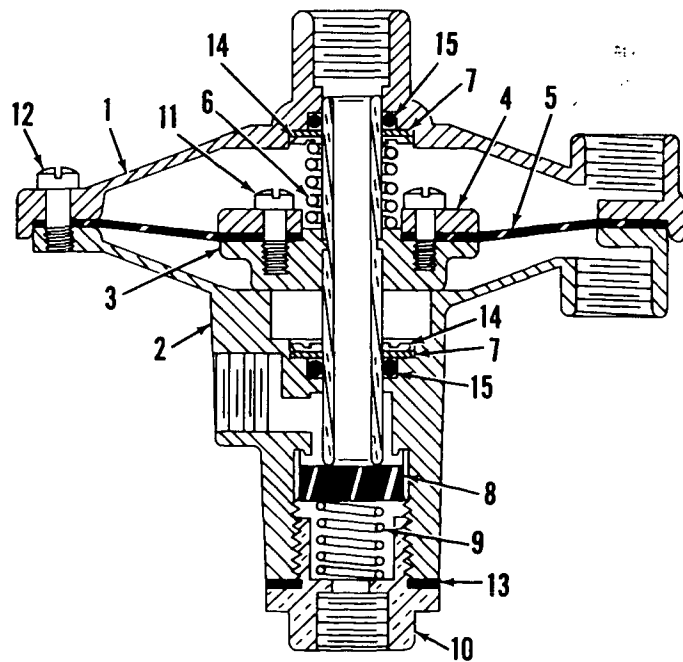
Code No.	Tube O.D.	Pipe Thread
429371	1/2	1/2
429373	3/8	1/8
429374	1/4	1/4
429375	3/8	1/4
429376	1/2	3/8
429380	1/4	1/8
429384	3/8	1/2
429385	5/16	1/8
429386	3/16	1/8
429401	1/2	3/4
429422	3/8	3/8
429453	3/4	3/4

MASTER





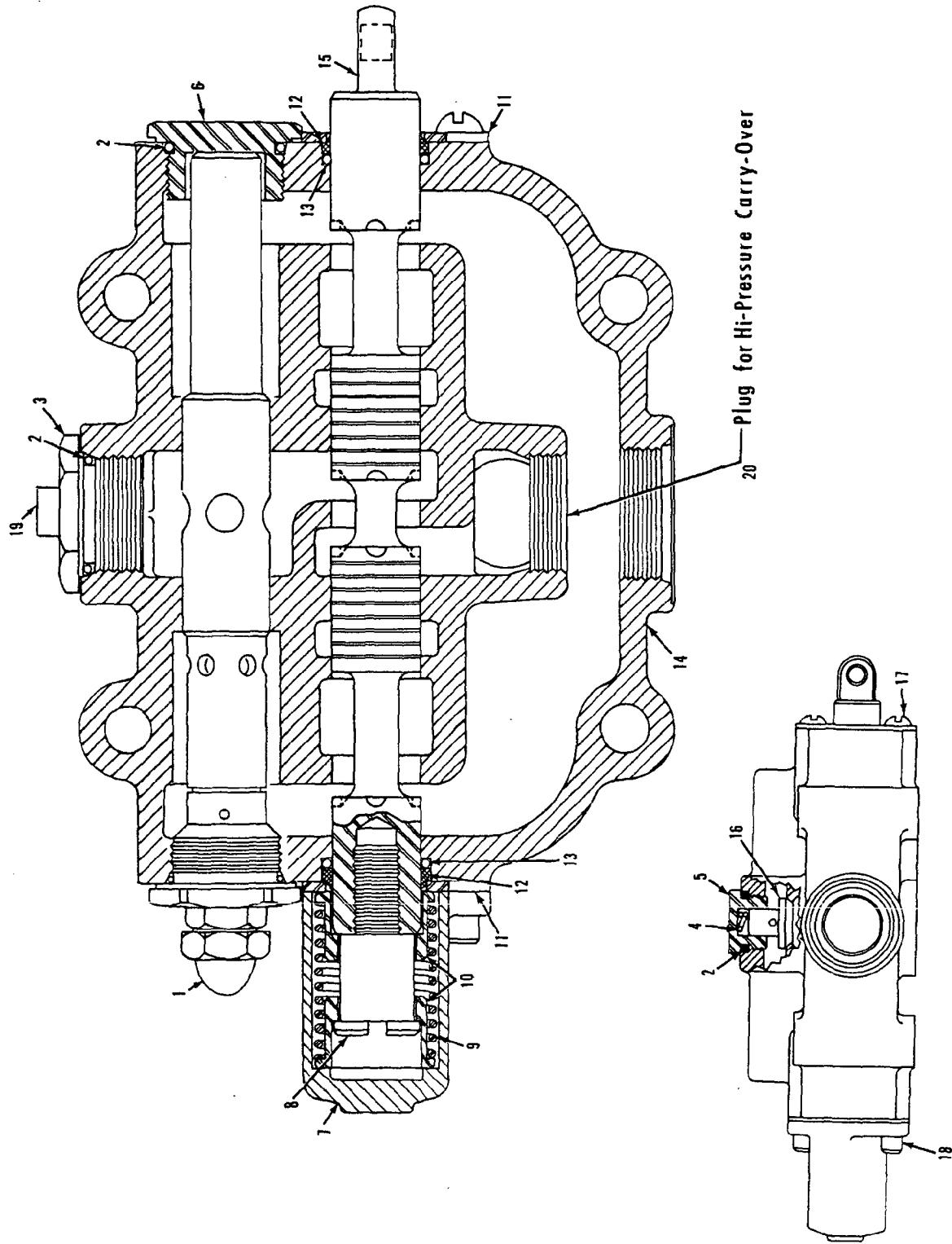
Normally Closed



Normally Open

MASTER

MASTER

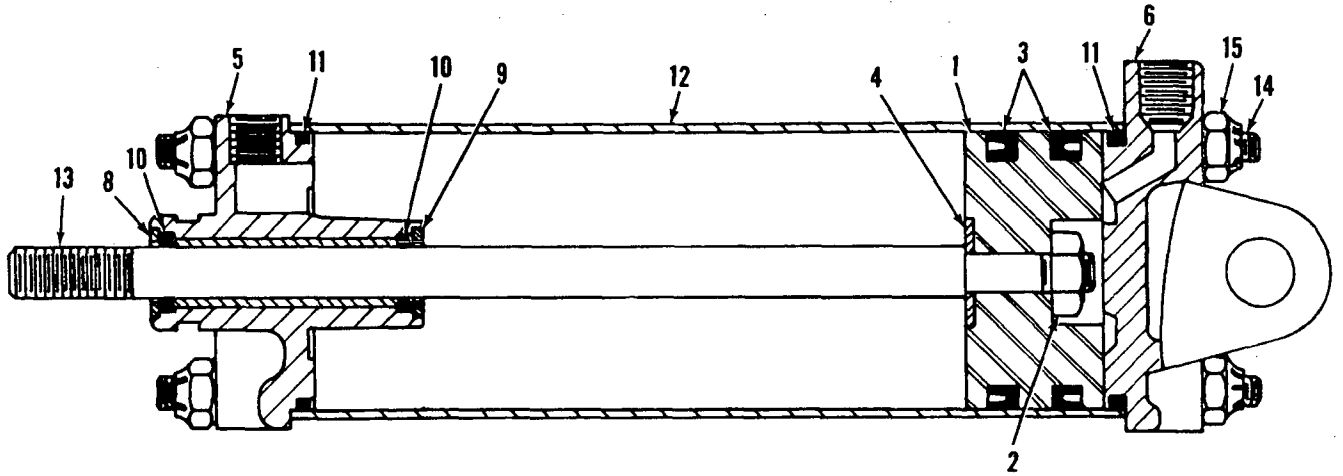


MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin

MASTER



0-414

MATERIAL LIST ON BACK

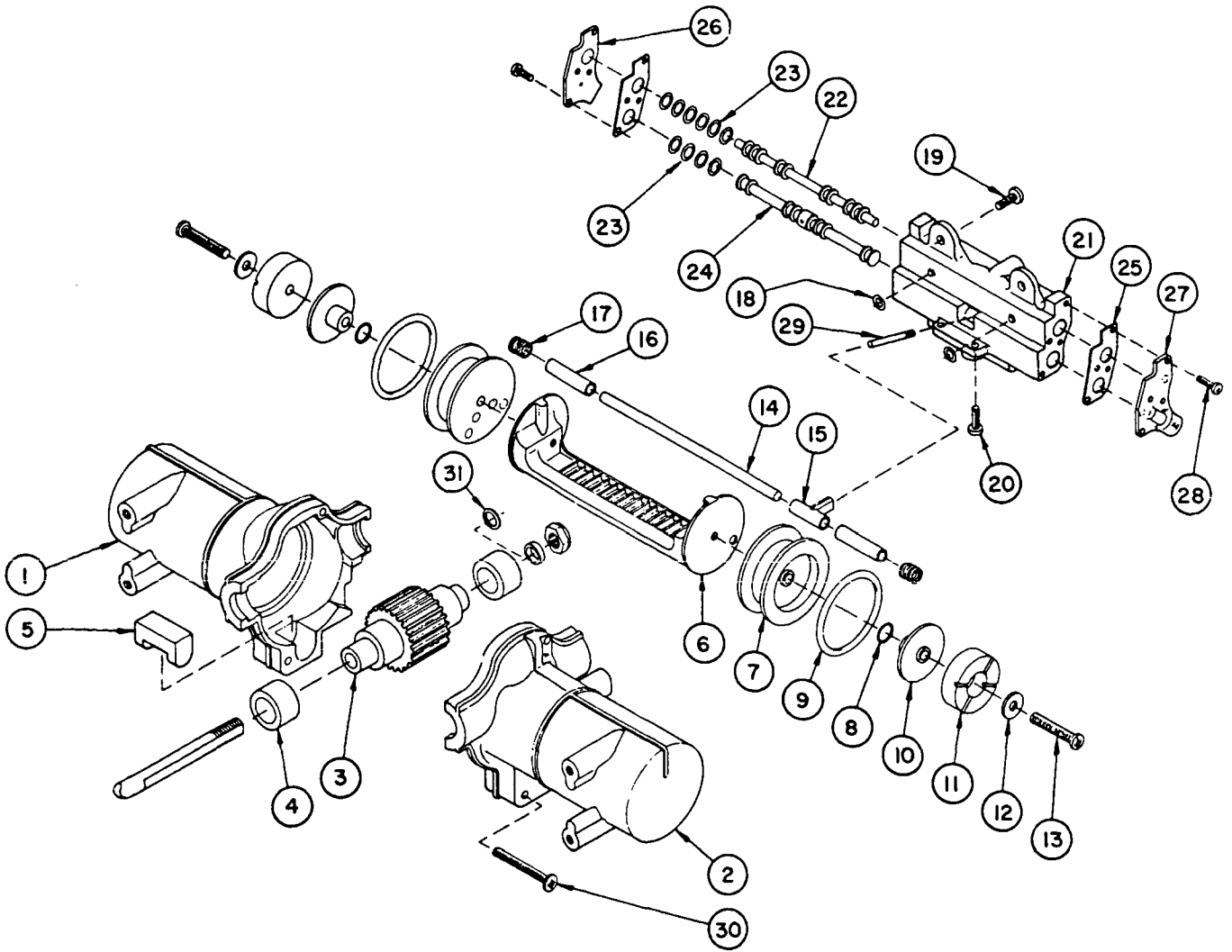
AIR CYLINDER

0-414

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin



MODEL: M-550-1-Deg.

MATERIAL LIST ON BACK

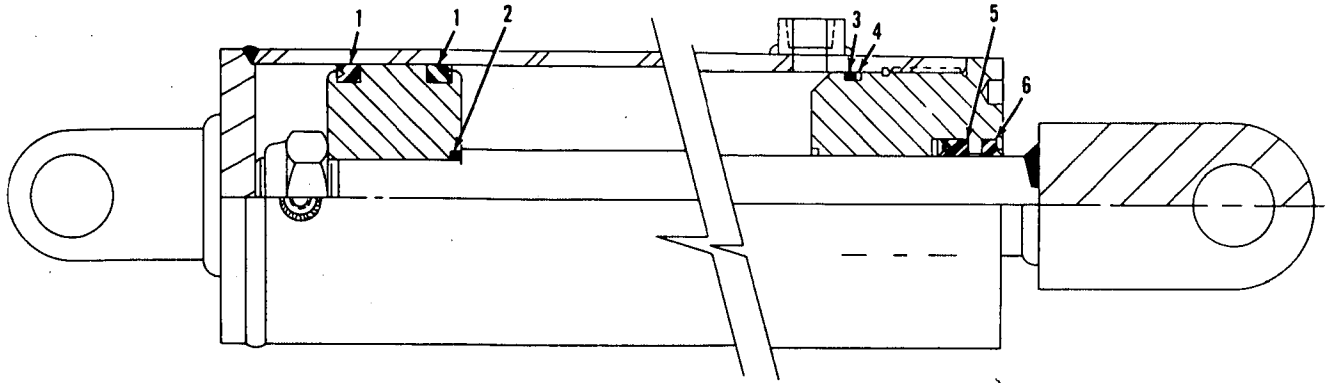
WINDSHIELD WIPER MOTOR

MANITOWOC ENGINEERING CO.

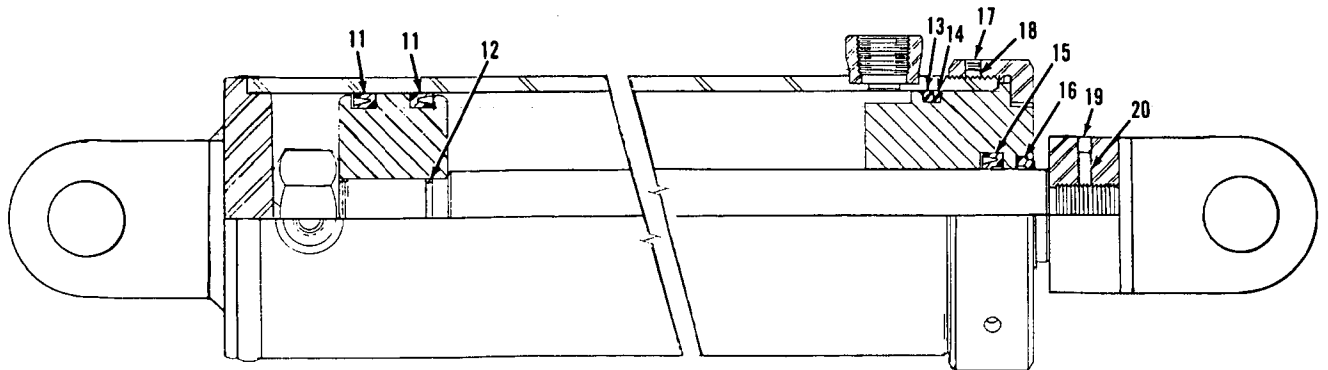
A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin

MASTER



Manitolwoc #385245



Manitolwoc #385274

0-459A1

MATERIAL LIST ON BACK

Hyd. Cylinder

MANITOWOC ENGINEERING CO.

A Division of the Manitowoc Company, Inc.

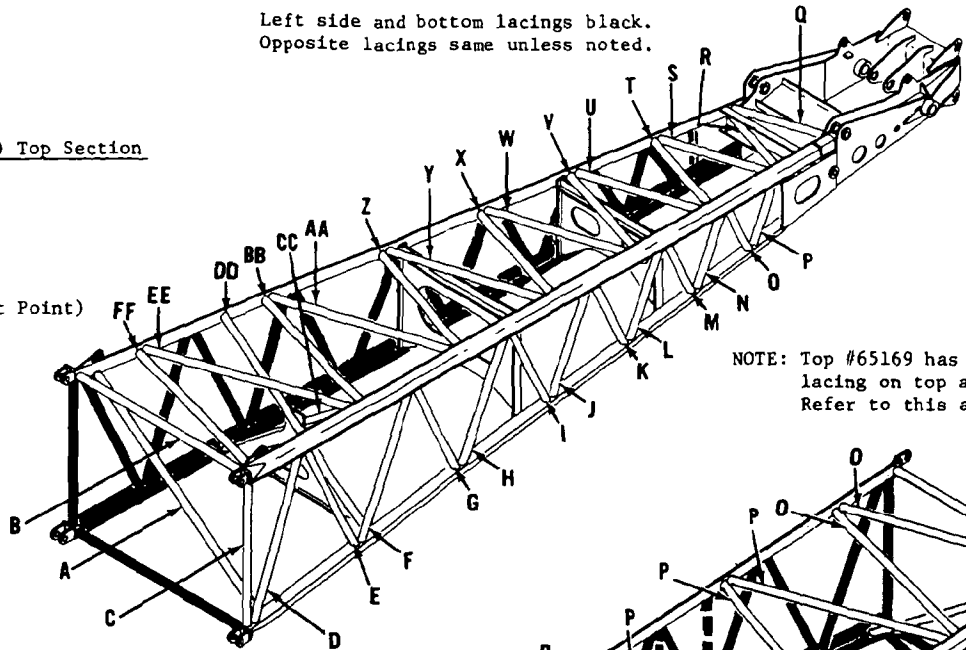
Manitowoc, Wisconsin

Booms #27,28,29

Left side and bottom lacings black.
Opposite lacings same unless noted.

39'6" (12.040) Top Section

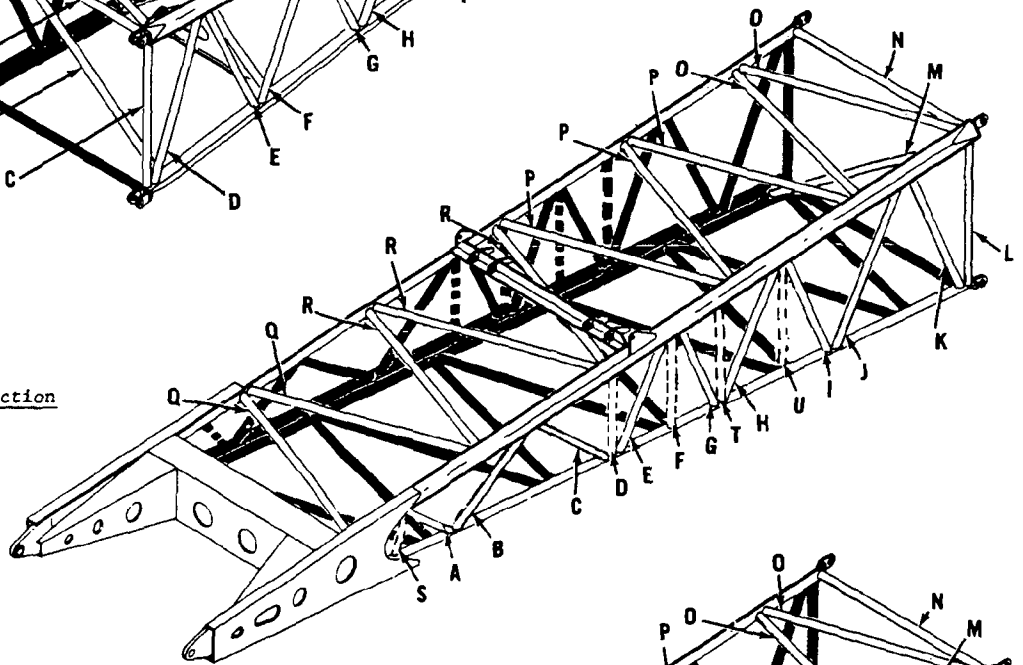
- 50953
- 50958
- 65088
- 65169
- 65332
- 65466
- 190257 (Offset Point)



NOTE: Top #65169 has one additional lacing on top above lacing "q". Refer to this as lacing "gg".

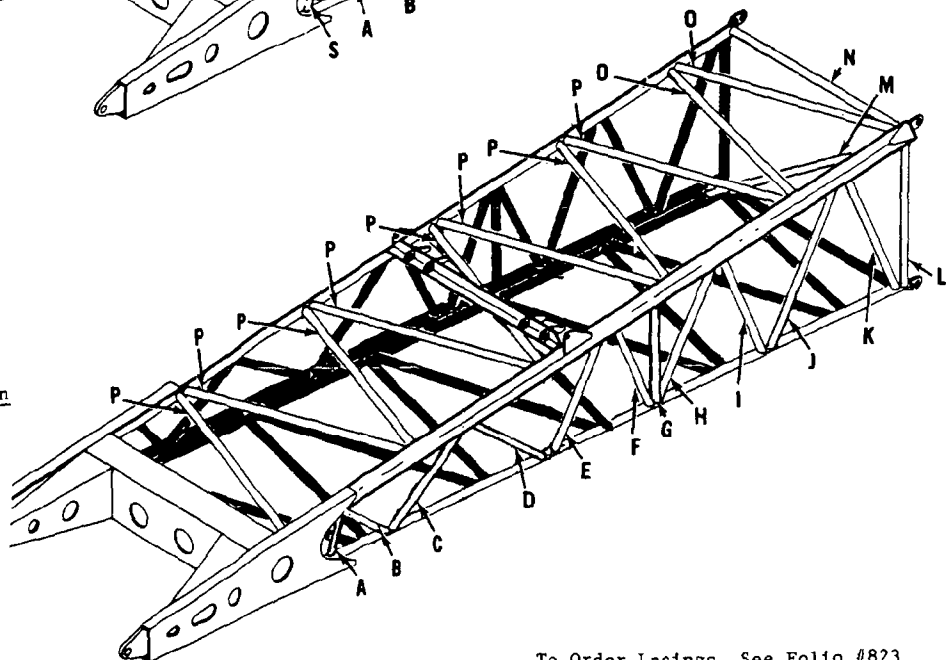
40'6" (12.244) Butt Section

- 50952
- 419466



40'6" (12.244m) Butt Section

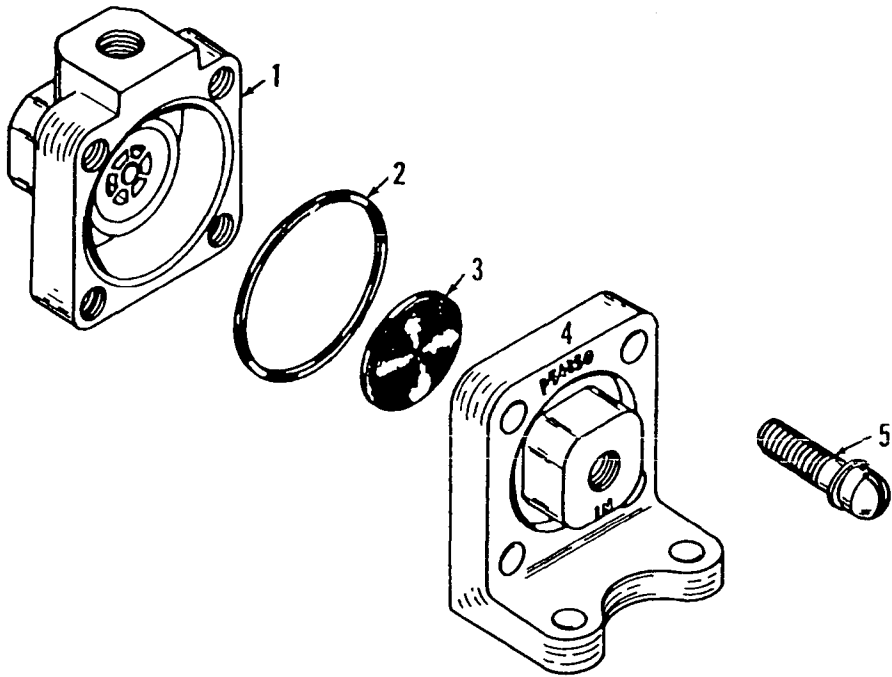
- 65089



All lacings may not be on any specified section.

To Order Lacings, See Folio #823

0-511.1



1-63B1

0-63B1

MATERIAL LIST ON BACK

SHUTTLE VALVE ASSEMBLY

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL