

Manitowoc

TRADITIONAL CRANE PARTS MANUAL

This manual has been prepared for and is considered part of

4000W

Model

40630

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.

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Chord Straightness

Refer to Figure 6.

If visual inspection indicates that a chord may not be straight, proceed as follows:

1. Remove the suspect lattice section from the attachment.
2. Place wood blocks or steel plates having the same thickness against both ends of the section (X₁ and X₂).
3. Stretch a line (string or wire) over the outside of the wood blocks or steel plates.
4. Stretch the line as tight as possible and tie it off at both ends.
5. Measure the distance from the chord (on either side of lacing intersection) to the line as shown in Figure 6.
6. Measurements must be taken in two planes at each chord (dimensions A and B). To eliminate the effect of sag in the line, take all measurements in the horizontal plane.
7. Take the first set of measurements, then roll the insert over 90 degrees, and take the second set of measurements.
8. Tubular and angular chords must not deviate from straight more than plus or minus 3/16 in (4.8 mm) at any lacing intersection (dimension A). Deviation between any two adjacent lacings must not exceed plus or minus 3/16 in (4.8 mm).
9. On angular chords, *waviness at toe of chord* (dimension B) must not deviate from straight more than plus or minus 1/4 in (6.4 mm) at any point. Furthermore, waviness between any two adjacent lacings must not exceed plus or minus 1/4 in (6.4 mm).

Gradual and sweeping bends in chords can be straightened by cold bending them back into alignment. Take care not to kink or further damage the chords.

ORDERING LACINGS

This topic is divided into two sections:

- a. Ordering boom or jib lacings from LACING DRAWINGS contained in the Attachment Section of the Parts Manual furnished with the crane.
- b. Ordering boom or jib lacings when LACING DRAWINGS ARE NOT AVAILABLE.

Assistance

If you are in doubt as to which lacings to order, DO NOT GUESS. Contact your Manitowoc distributor for assistance.

Boom or Jib Identification

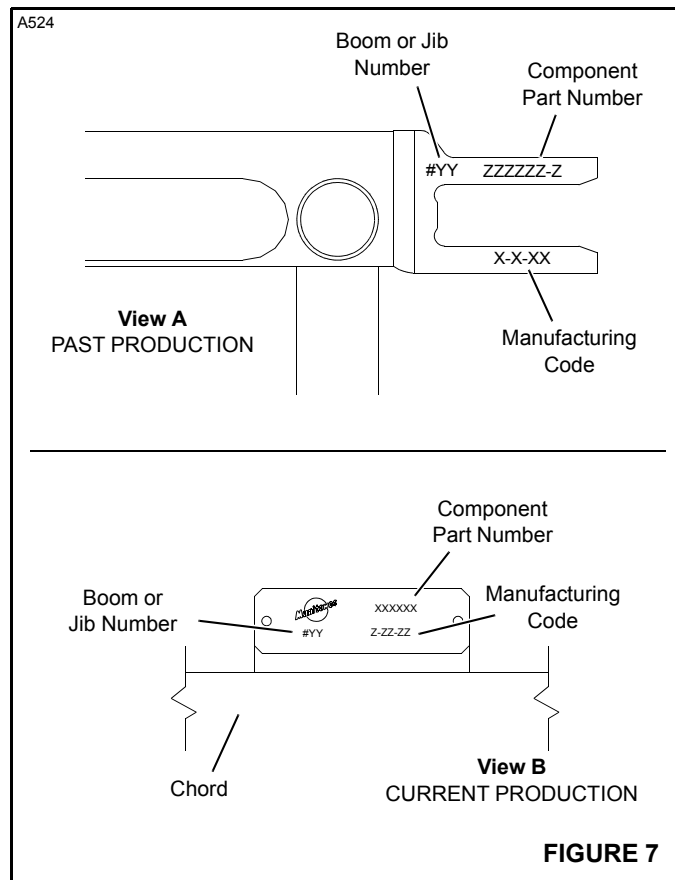
All parts orders for lacings must contain the boom or jib identification number and the component part number:

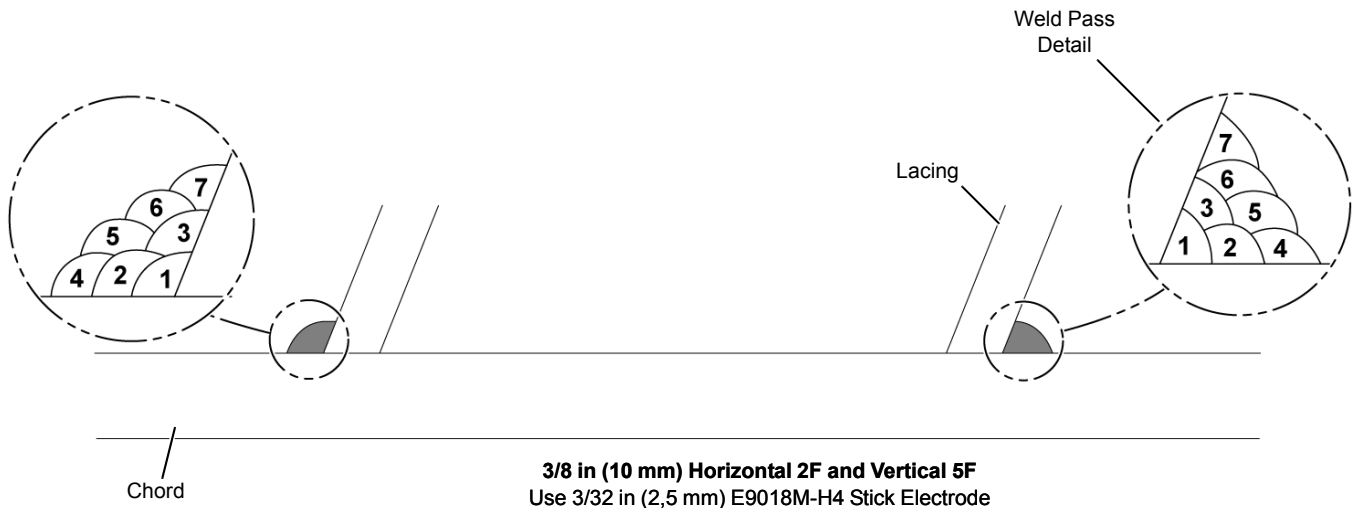
- **Past Production (View A):**

Boom or jib number, component part number, and manufacturing code stamped into two connectors (diagonally opposite) on both ends of each insert and on end of top and butt.

- **Current Production (View B):**

Boom or jib number, component part number, and manufacturing code stamped into a plate mounted on all four chords of each lattice section.





3/8 in (10 mm) Horizontal 2F and Vertical 5F
 Use 3/32 in (2,5 mm) E9018M-H4 Stick Electrode
 OR
 1/8 in (3,2 mm) E9018M-H4 Stick Electrode



3/8 in (10 mm) Overhead 4F
 Use 3/32 in (2,5 mm) E9018M-H4 Stick Electrode
 OR
 1/8 in (3,2 mm) E9018M-H4 Stick Electrode

FIGURE 16 continued



WEIGHTS
4000W

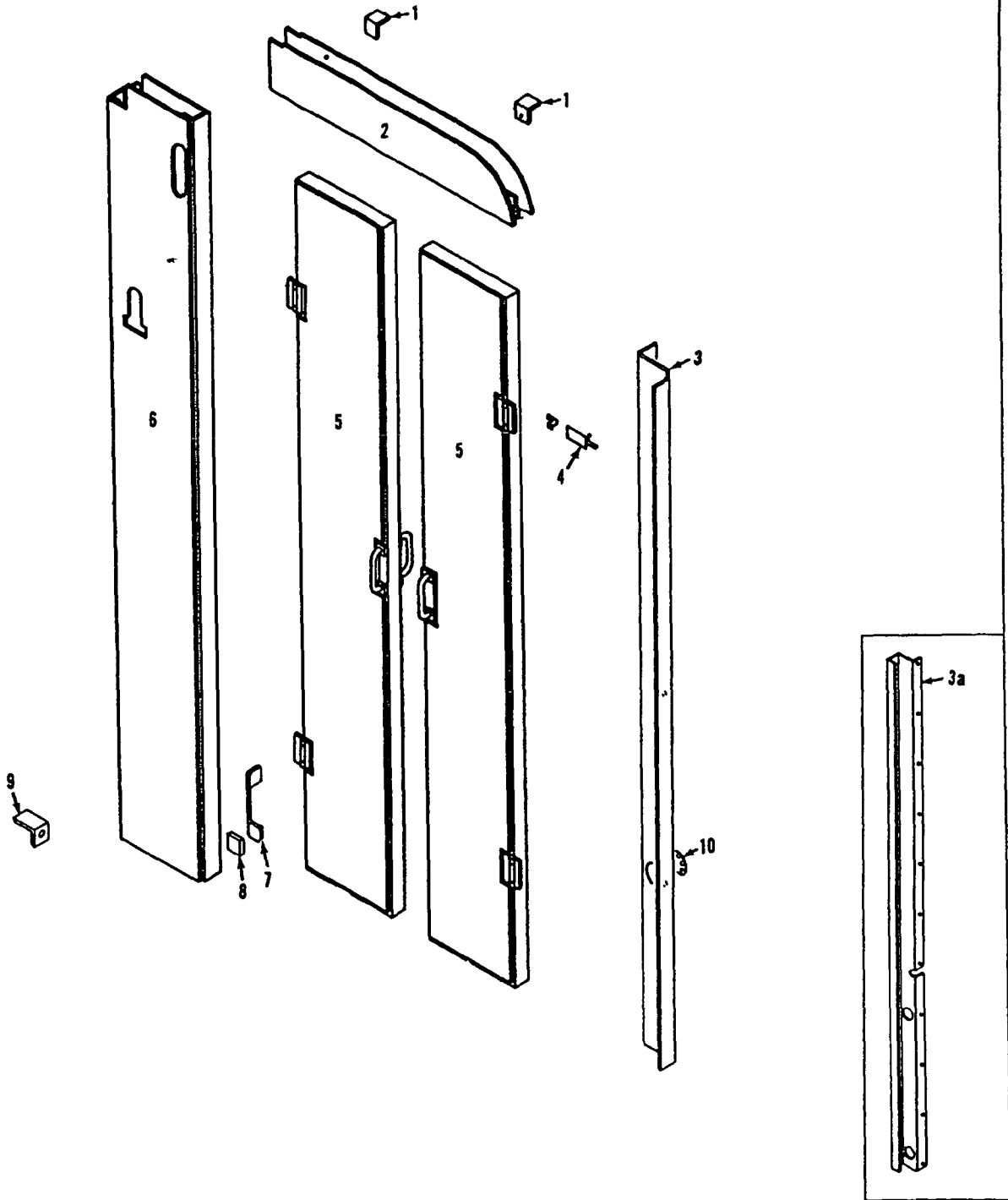
DESCRIPTION	APPROXIMATE WEIGHT (POUNDS)
Liftcrane — with 70 feet of Number 22 boom, 104,400 pound crane counterweight, universal gantry with link type backhitch, split front drum with 21" diameter lagging on left drum, independent swing, independent boom hoist with boom hoist wire rope, Cummins NT-855-C310 engine with VICON® controlled converters, 24' crawlers with 48" treads, telescopic air cushioned boom stops, single sheave upper boom point, lower and upper wire rope guides, 15 ton swivel hook and weight ball, and 155 ton load block	312,135 *
Upperworks — with split front drum with 21" diameter lagging on left drum, independent swing, independent boom hoist, Cummins NT-855-C310 engine with VICON controlled converters; LESS crane counterweights, gantry and backhitch, boom, equalizer, boom hoist wire rope, telescopic air cushioned boom stops, wire rope guides, swivel hook and weight ball, and load block	64,930 *
Upperworks — as above with gantry and backhitch, equalizer, boom hoist wire rope, and carbody; LESS crawlers	113,975 *
*Weights do not include hoist line, whip line, fuel. For optional engines ADD the following weights:	
Caterpillar D-343T	800
Caterpillar D-343TA	1,130
Caterpillar 3406DIT	190
Caterpillar 3406DITA	285
Detroit Diesel 12V-71N	1,050
Cummins NTA-855-C360	145
Carbody — with roller path, ring gear, and king pin; LESS crawlers	40,605
Crawlers — 24 feet with 48 inch treads	34,440
Counterweight	
Inner	40,100
Middle	35,800
Outer	28,500
No. 22 Open Throat Boom Top	
Boom Top — 40' (with lower boom point assembly)	8,350
Basic Pendant — 40' 9-3/4" (4)	240 each
Upper Boom Point (single sheave)	1,180
(double sheave)	1,260
Jib Adapter	545
Offset Link (2)	55 each
No. 22 Light Tapered Boom Top	
Tapered Boom Top — 50' (with boom point assembly)	5,980
Tapered Insert — 30'	3,610
Basic Pendant — 40' 9-3/4" (4)	240 each
No. 22 Hammerhead Boom Top	
Boom Top — 10' (with boom point and wire rope guide assembly)	5,440
Tapered Insert — 30'	3,610
Upper Boom Point	275
Basic Pendant — 37'11" (4)	215 each

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Manitowoc, Wisconsin

MASTER



32696D1

MATERIAL LIST ON BACK

Insulated Door

33760-1 Cont.	REV. S	MODEL 4000T-4000W
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CAB
(SLOPING ROOF)

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
28	138440	1	SHEET, Right Front Lower Closing W/stovebolts, hex nut and lockwasher (Use W/Catwalk only)	
31	73227	1	GLASS, Window	
30	605301	1	CHANNEL, Rubber (11'0" - 3.353 m)	
32	97029	1	SASH, Front Window W/hinges (See Note 1)	
33	18972	1	GLASS, Window	
30	605301	1	CHANNEL, Rubber (6'3" - 1.905 m)	
	42313-6	1	PANEL, Right Side (Complete) W/mach. screw, capscrew, stovebolts, hex nuts and lockwasher	
34	632652	1	PANEL, Front	
37	632653	1	PANEL, Upper	
43	587072	1	RAIL, Door	
44	207247	1	STOP, Door	
45	632651	1	PANEL, Center	
46	31590	1	CABINET, Tool	
47	632656	1	GUIDE, Door	
48	42313-2	1	PANEL, Rear	
35	17864	2	RAIL, Hand W/hex nuts	
36	17834	1	GLASS, Window	
30	605301	1	CHANNEL, Rubber (7'4" - 2.236 m)	
38	16031	1	AWNING, Door W/stovebolts, hex nuts and lockwashers	
39	17836	1	GLASS, Window	
30	605301	1	CHANNEL, Rubber (9'5" - 2.870 m)	
40	31631	1	DOOR, Right (See Sheet #2)	
41	70876	1	BAR, Filler (not used W/catwalk)	
	93557	1	CLOSING SHEET ASSEMBLY, Right Rear W/capscrews, elastic stop nuts and chain	
42	140175	1	DOOR	
68	482058	3	HINGE, Concealed	
49	94012	1	SHEET, Closing	
67	510183	1	LOCK	
51	32807	1	EXTENSION, Cab W/mach. screws and lockwashers	
50	32823	1	SHUTTER, Radiator W/pins, cotter pins, capscrews, hex nuts and lockwashers	
52	77158	1	PANEL, Right Rear W/mach. screw, hex nut and lockwasher	
53	91878	1	CLOSING SHEET, Bottom Right Front W/capscrew, hex nut and lockwasher (W/out catwalk)	
53	71299	1	CLOSING SHEET, Bottom Right Front W/capscrews, hex nuts and lockwashers (W/catwalk)	
54	91877	1	CLOSING SHEET, Bottom Right Rear W/capscrew, hex nut and lockwasher	
55	91879	1	CLOSING SHEET, Vertical W/capscrew, hex nut and lockwasher	
	180160-6	1	PANEL, Inner Right W/mach. screws, capscrews, stovebolts, hex nut and lockwasher	
57	632693	1	SHEET, Lower	
58	632692	1	SHEET, Front	
59	180160-2	1	SHEET, Front	
56		1	DOOR W/hinge	
60	633214	1	FRAME, Window	
62	633213	1	SHEET, Upper	

REV. S	33760-1 Cont.
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Run as Front

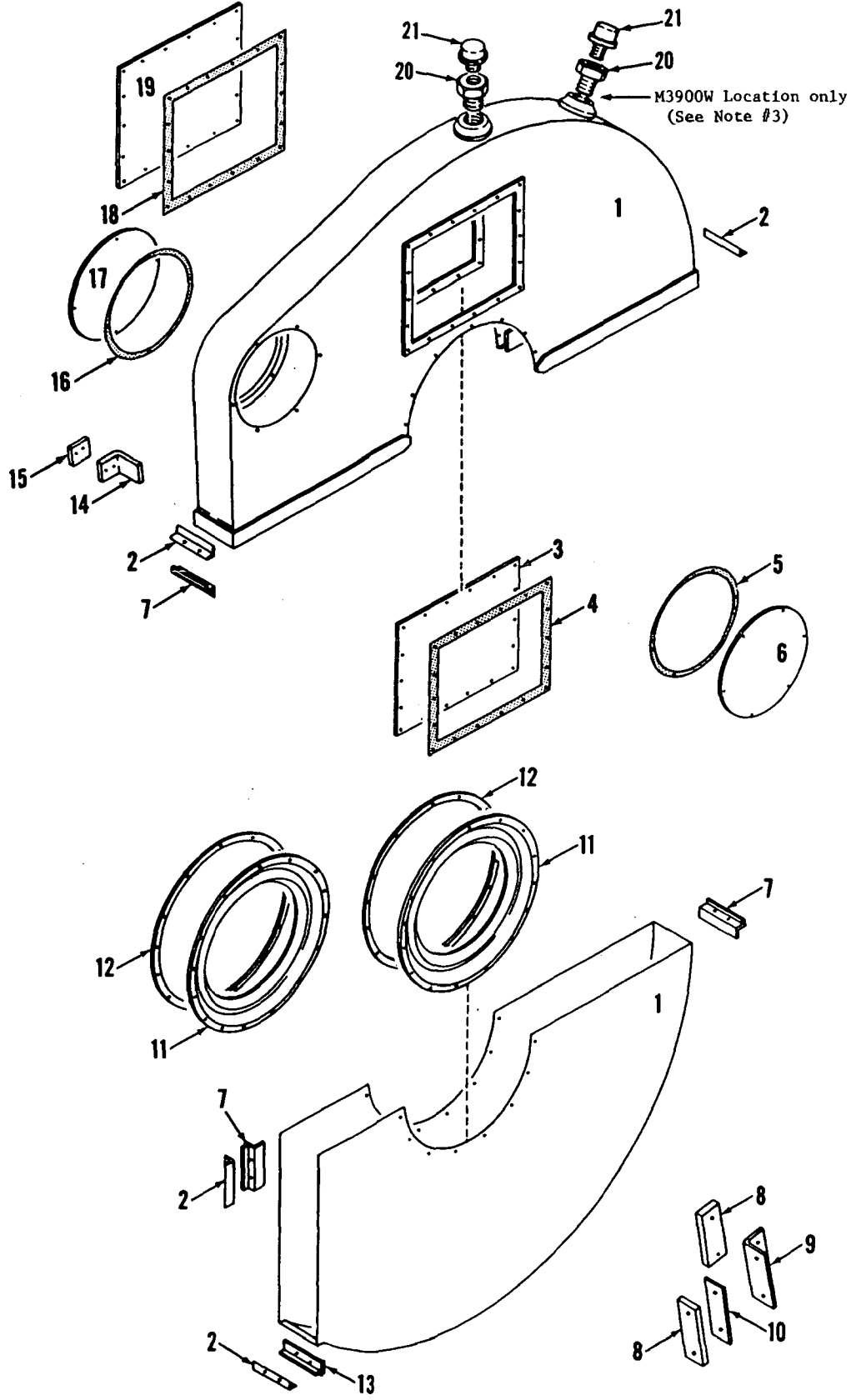
W/OER

33760 S1 Cont'd. -1

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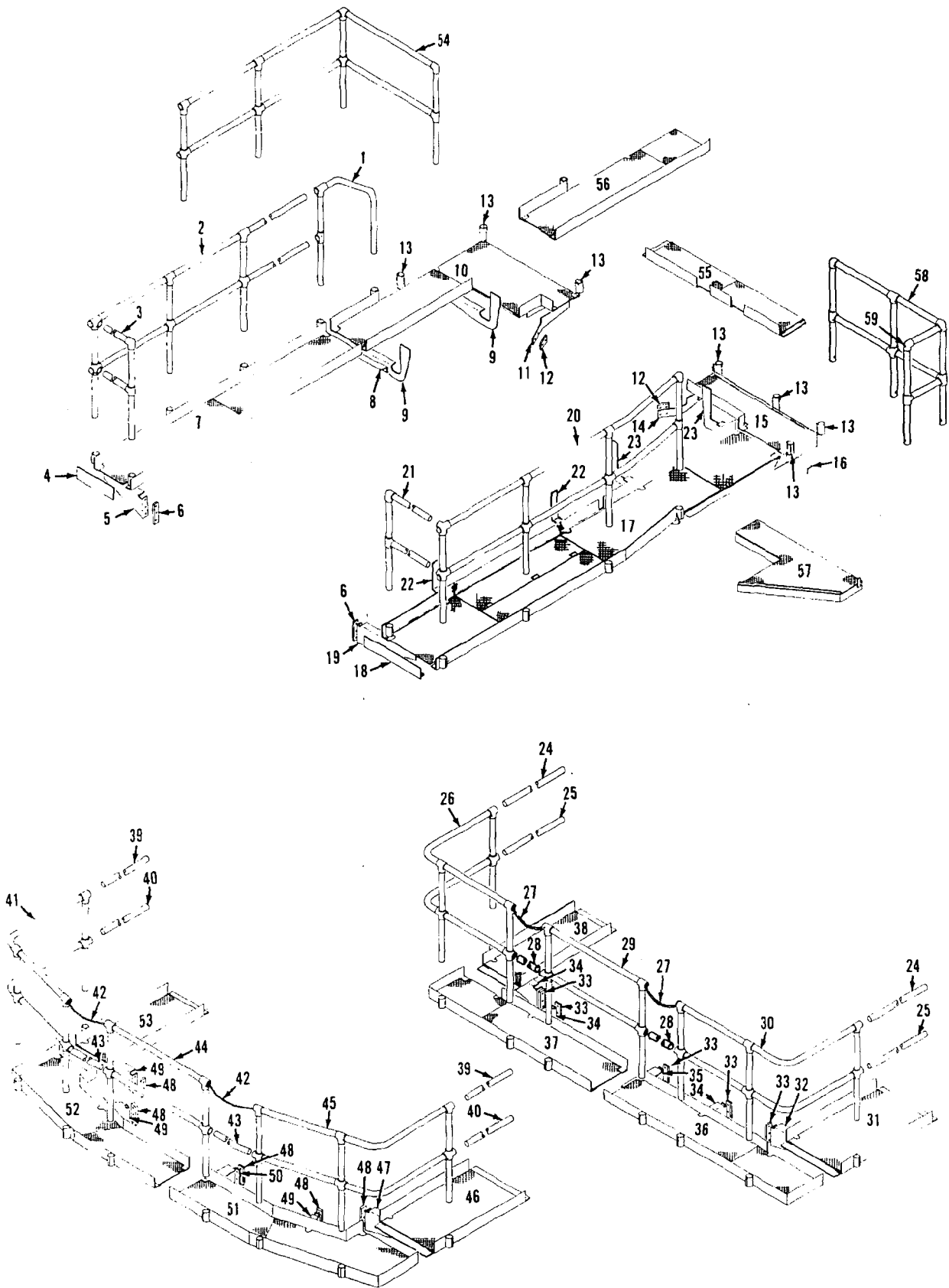
MATERIAL LIST ON BACK

GEAR CASE

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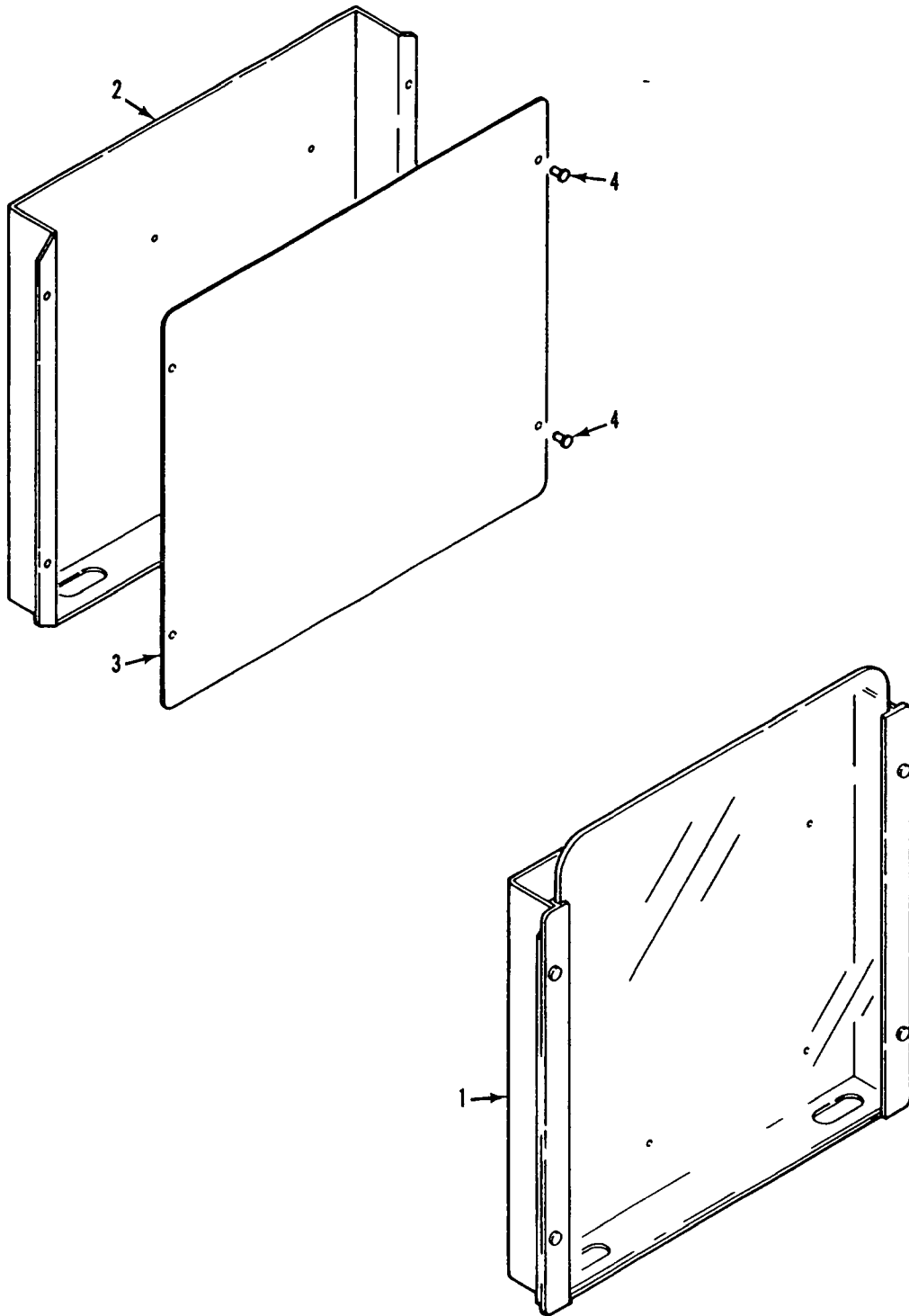
Manitowoc, Wisconsin



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MATERIAL LIST ON BACK

CATWALK



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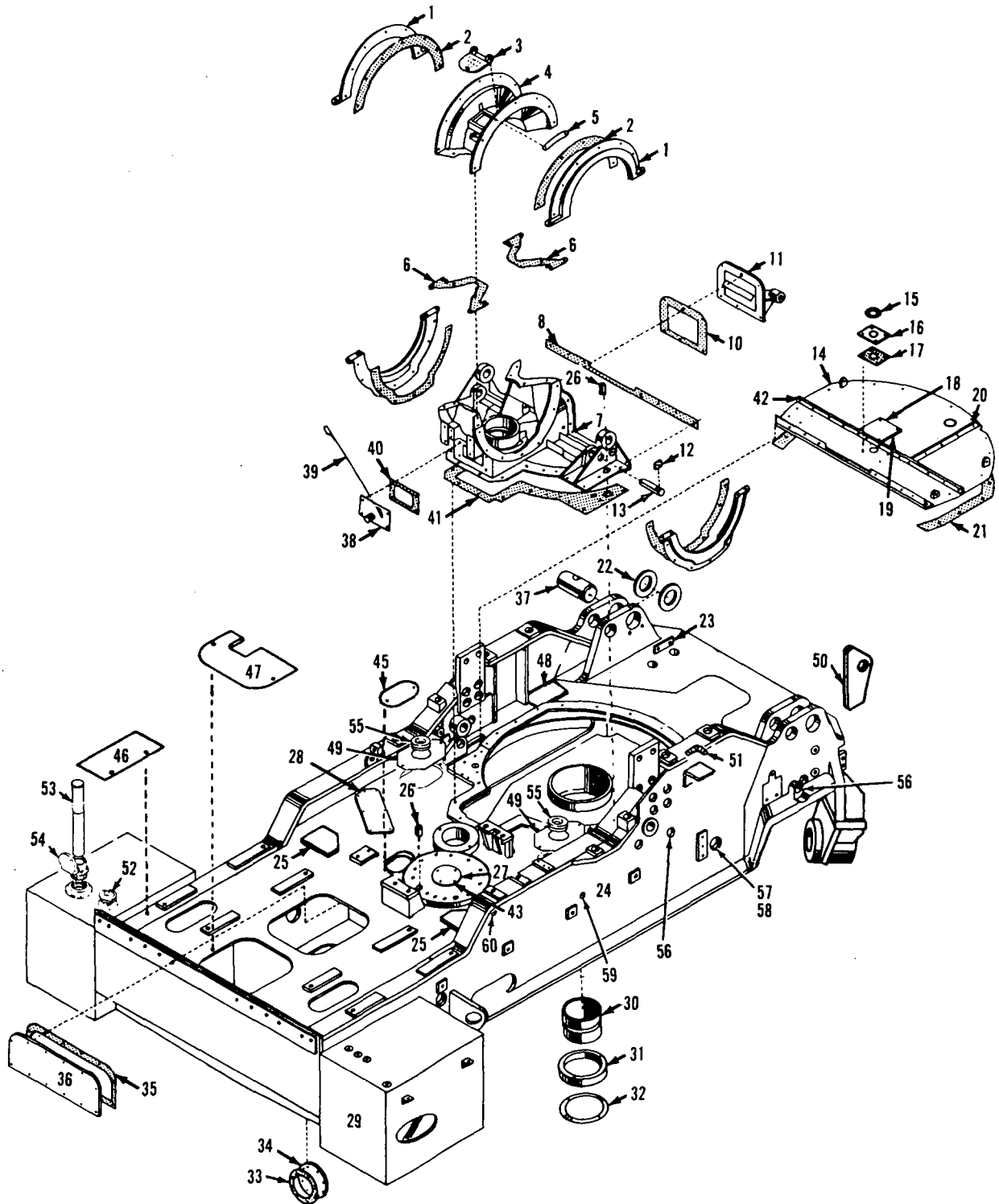
MATERIAL LIST ON BACK

CAPACITY CHART & SERVICE MANUAL HOLDERS

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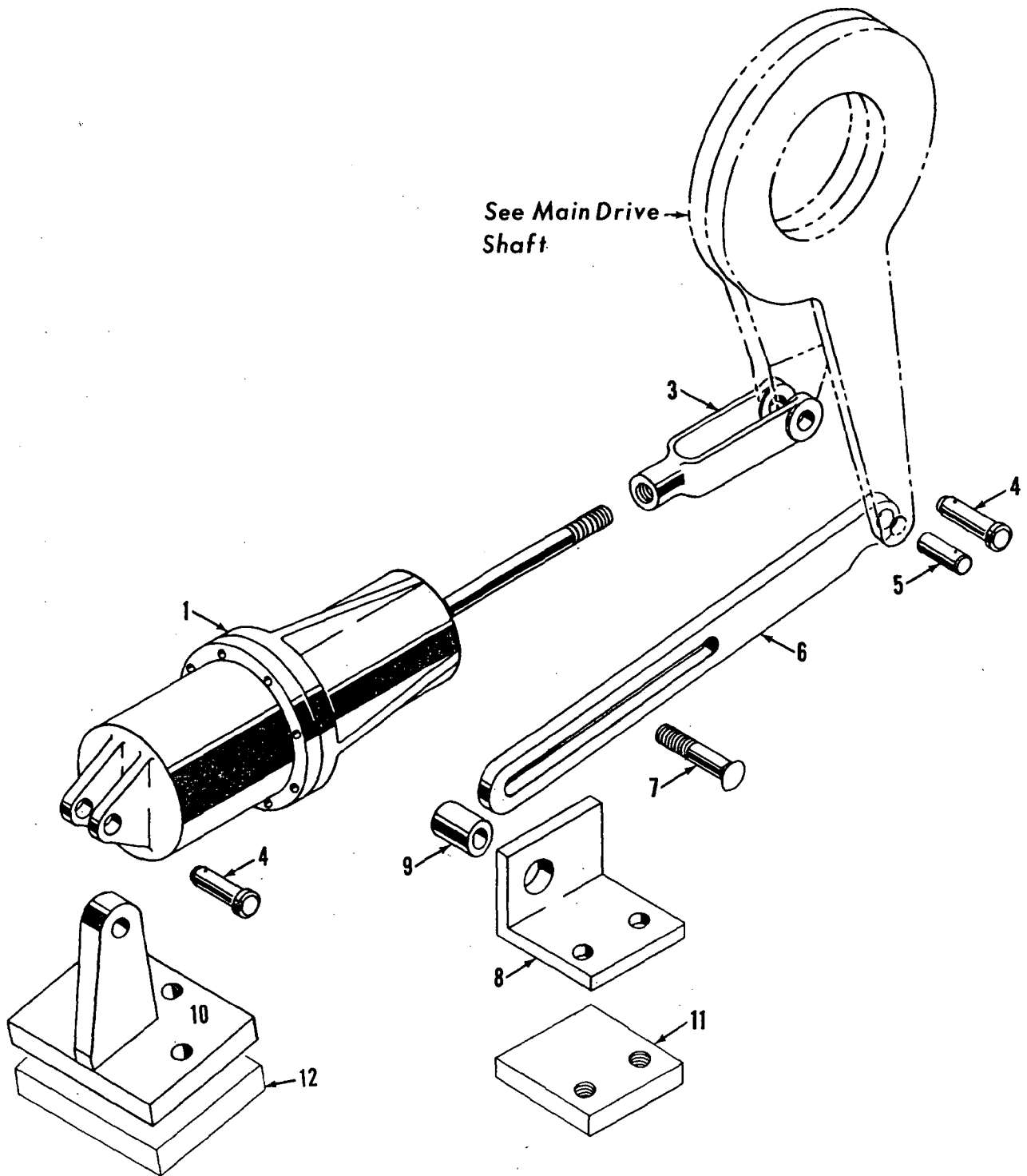
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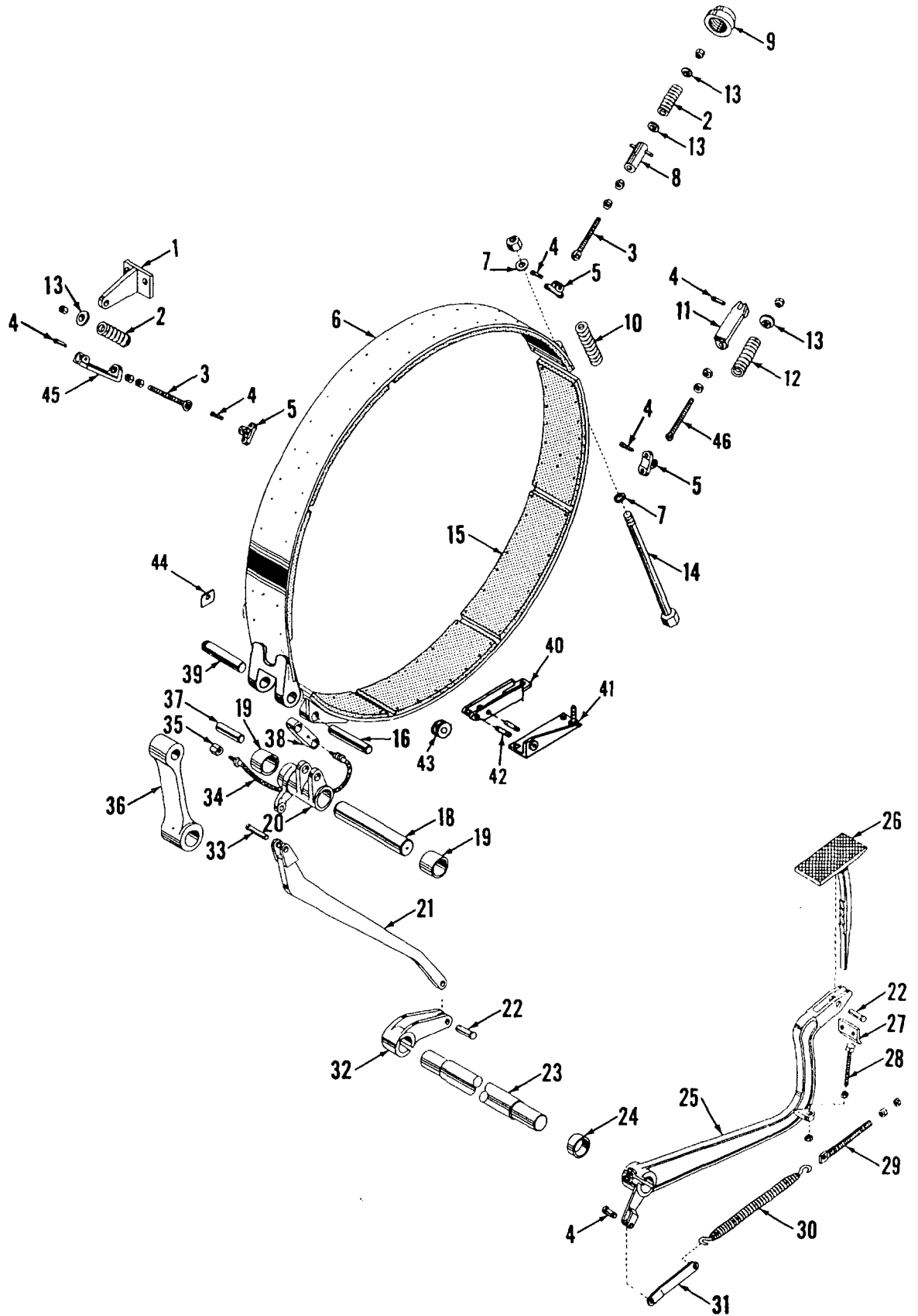
ROTATING BED

PARTS MANUAL ALPHABETICAL INDEX
Group B - Upperworks Machinery

DESCRIPTION	PUBLICATION	REV	START DATE	END DATE	GROUP
Boom Hoist Auxiliary Brake	181526	B1	09/20/71	09/28/76	B0210
Boom Hoist Control, Independent	181533	C1	09/28/71	04/09/85	B0204
Boom Hoist Control, Independent	42392	L1	04/19/72	02/05/80	B0204
Boom Hoist Drive Shaft, Independent	42197	D1	09/19/58	06/09/80	B0207
Boom Hoist Drive Shaft, Independent	42197	I2	10/24/60	11/14/89	B0207
Boom Hoist, Independent	95401	C1	01/24/75	05/13/80	B0202
Boom Hoist, Independent	65195	L1	07/02/73	02/16/90	B0202
Drum Brake - Front	42183	H1	10/16/67	04/01/77	B0603
Drum Brake - Front	42183	J	03/31/59	05/19/09	B0603
Drum Brake - Front	42184	H1	10/16/67	04/01/77	B0603
Drum Brake - Front	42184	J	03/31/59	05/19/09	B0603
Drum Rotation Indicator - Front and Rear	182303	C1	02/23/76	09/10/86	B0607
Drum Rotation Indicator - Front and Rear	95131	-	04/17/74	06/10/92	B0607
Drum Rotation Indicator - Front and Rear	95131	E1	04/17/74	06/10/92	B0607
Drum Shaft - Front	22596	A	09/03/52	10/08/81	B0601
Drum Shaft - Front	42385	G2	04/10/59	12/23/92	B0601
Drum Shaft - Front	42385	J1	05/27/64	03/08/78	B0601
Front Auxiliary Drum and/or Power Lowering Control	181195	K1	04/16/70	05/07/93	B0902
Hand Levers	181449	D1	02/21/77		B1201
Hand Levers	183110	A1	02/21/77	01/17/80	B1201
Independent Swing Control	42372	C1	05/13/63	09/21/72	B0403
Independent Swing Guards & Lubrication Piping	181861	C1	11/03/72	04/02/85	B0405
Independent Swing Outboard Bearing	23806	A1	06/18/58	05/23/83	B0406
Independent Swing Shaft, Horizontal	48085	E2	05/05/67	04/29/85	B0401
Independent Swing Shaft, Horizontal	48085	H1	05/05/67	11/14/89	B0401
Independent Swing Shaft, Vertical	23439	D1	07/11/56	04/12/85	B0402
Lubrication Pump & Piping (Sump)	33242	D1	04/05/65	05/20/77	B1401
Lubrication Pump & Piping (Sump)	50841	C1	03/29/71	05/20/77	B1401
Main Drive Shaft	43132	C3	08/09/63	07/13/78	B1301
Main Drive Shaft	43132	F1	08/19/63	09/17/76	B1301
Main Drive Shaft	43132	F2	09/19/63	05/06/74	B1301
Main Drive Shaft Control	32340	D1	08/15/60	03/02/84	B1302
Main Drive Shaft Control	42565	C1	06/28/60	02/18/75	B1302
Slide Pinion Control	48187	C1	10/17/67	11/04/74	B1602
Slide Pinion Shaft (Intermediate Travel or Swing Shaft)	90467	C1	04/22/64	04/18/72	B1601
Swing Brake Control	42394	F1	05/11/59	02/21/79	B1802
Swing Lock Control	48963	E1	04/23/70	04/08/93	B1701
Swing Shaft	23688	C1	05/12/58	06/19/81	B1901



MASTER



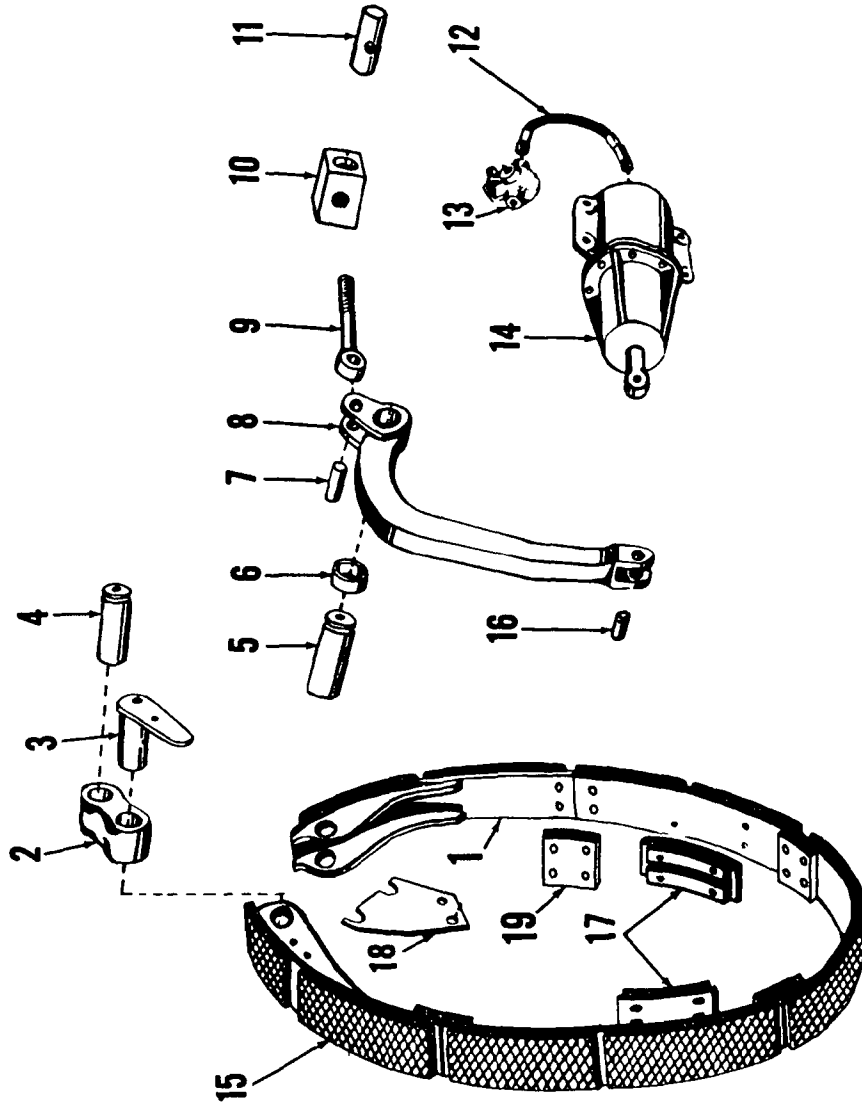
LEFT DRUM BRAKE

MATERIAL LIST ON BACK

42184C1

4101 C1

Use 4238 E2 Back MASTER



4170282

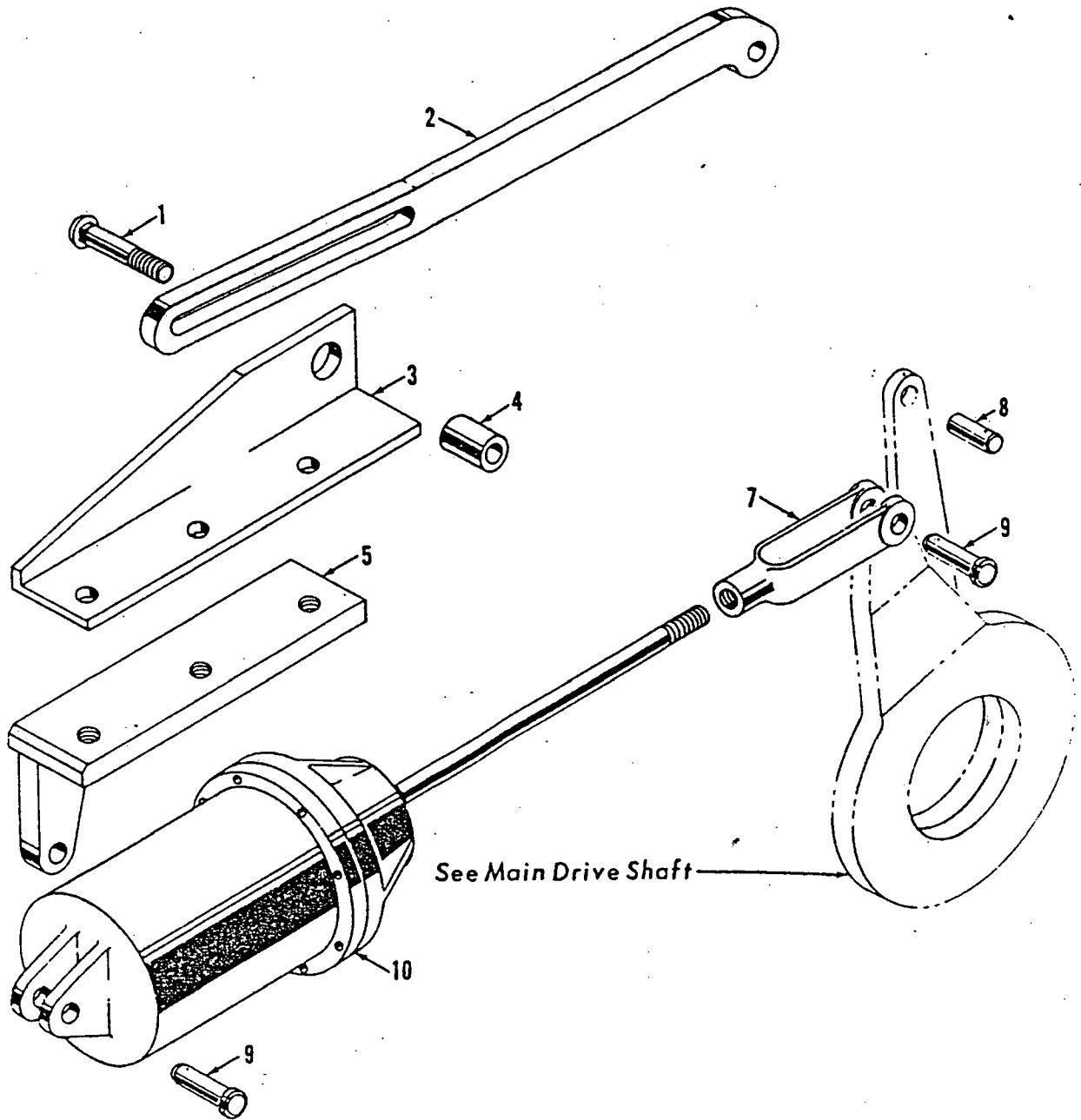
MATERIAL LIST ON BACK

CLUTCH BAND ASSEMBLY

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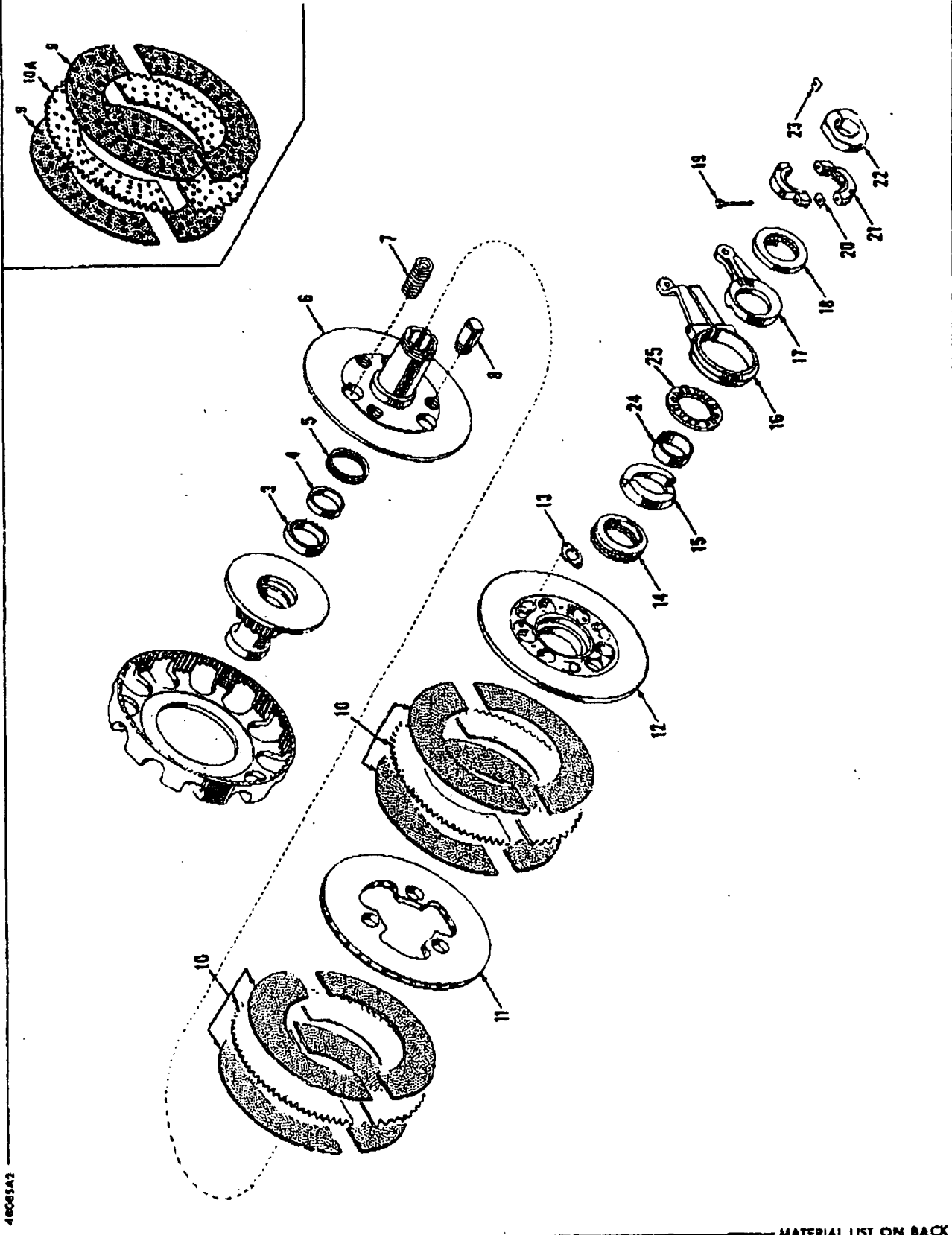
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40085A3

MATERIAL LIST ON BACK

IND. SWING CLUTCH

50841-1 Cont.	REV. C	MODEL 3000W-3600-3900-4000W
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GEAR LUBE PIPING
(VICON)

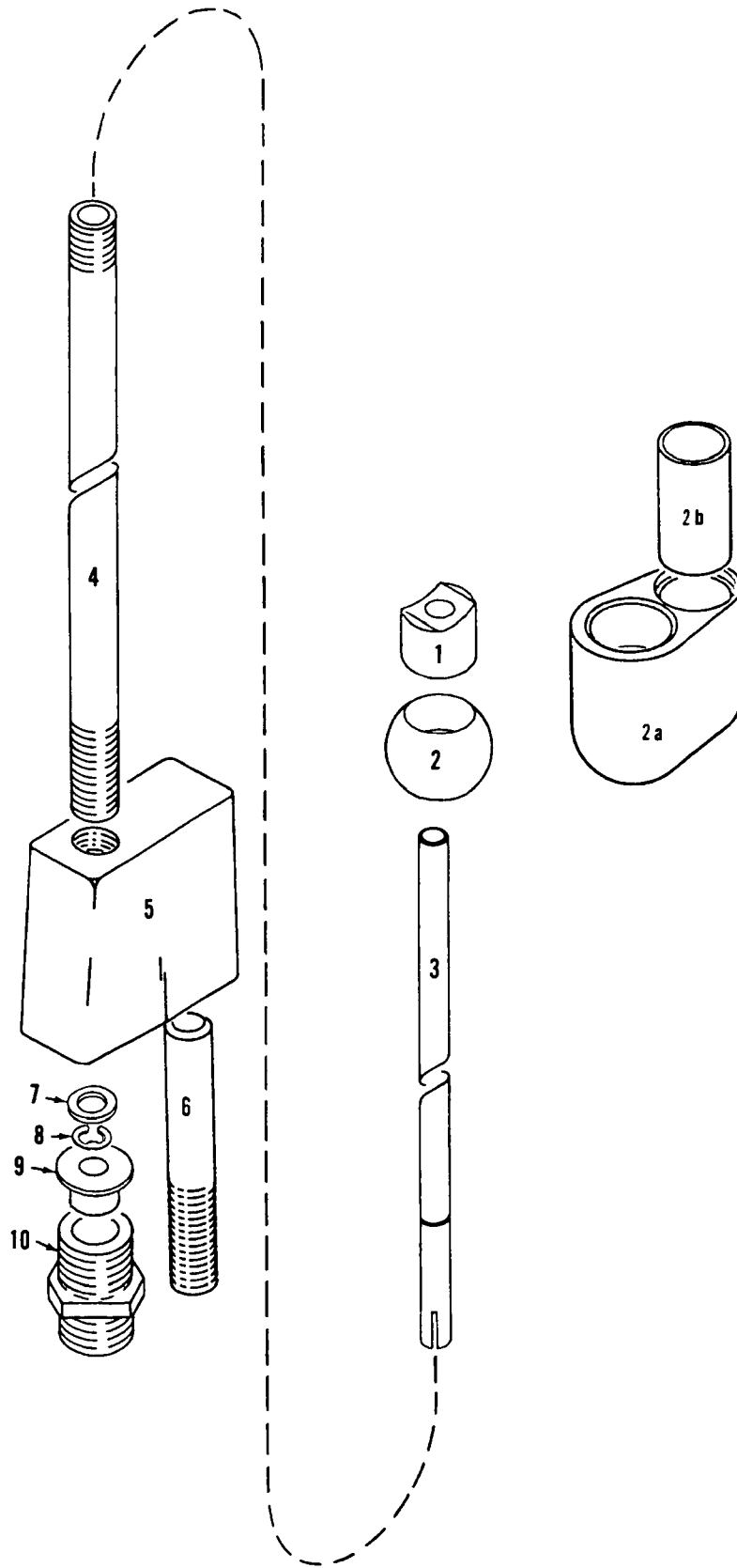
BOOM HOIST

Run as a Front

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
49	70188	1	HOSE, Flex (1/2" I.D. 9'4" long or 2.845 m)	
50	71911	2	ADAPTER	
51	345338	2	CLAMP, Hose (1-3/4")	
52	486067	1	HOSE, 90° Curved (1-3/4" I.D.)	
53	377209	1	COUPLING (1 1/2")	
54	543423	1	NIPPLE (1 1/2" x 4 1/2")	
55	543425	1	NIPPLE (1 1/2" x 13-1/8")	
56	543424	1	NIPPLE (1 1/2" x 7") (M3000W)	
56	543543	1	NIPPLE (1 1/2" x 4") (M3600-3900-4000W)	
<u>MACH. W/STANDARD BOOM HOIST, USE THE FOLLOWING:</u>				
57	543496	1	NIPPLE (1/2" x 3")	
59	695565	1	TUBE, Prefab	
58		1	ELBOW, 90° (Formrite #7-10)	
		1	CONNECTOR, Male (Formrite #2-10)	
60	695566	1	TUBE, Prefab	
63		1	CONNECTOR, Male (Upper) (Formrite #2-24)	
		1	CONNECTOR, Male (Lower) (Formrite #24-37-2)	
<u>PREFORMED TUBES FOR IND. BOOM HOIST</u>				
57	543496	1	NIPPLE (1/2" x 3")	
61	695581	1	TUBE, Supply	
62	695580	1	TUBE, Return	

50841 C1 Cont'd.

REV. C	50841 - 1
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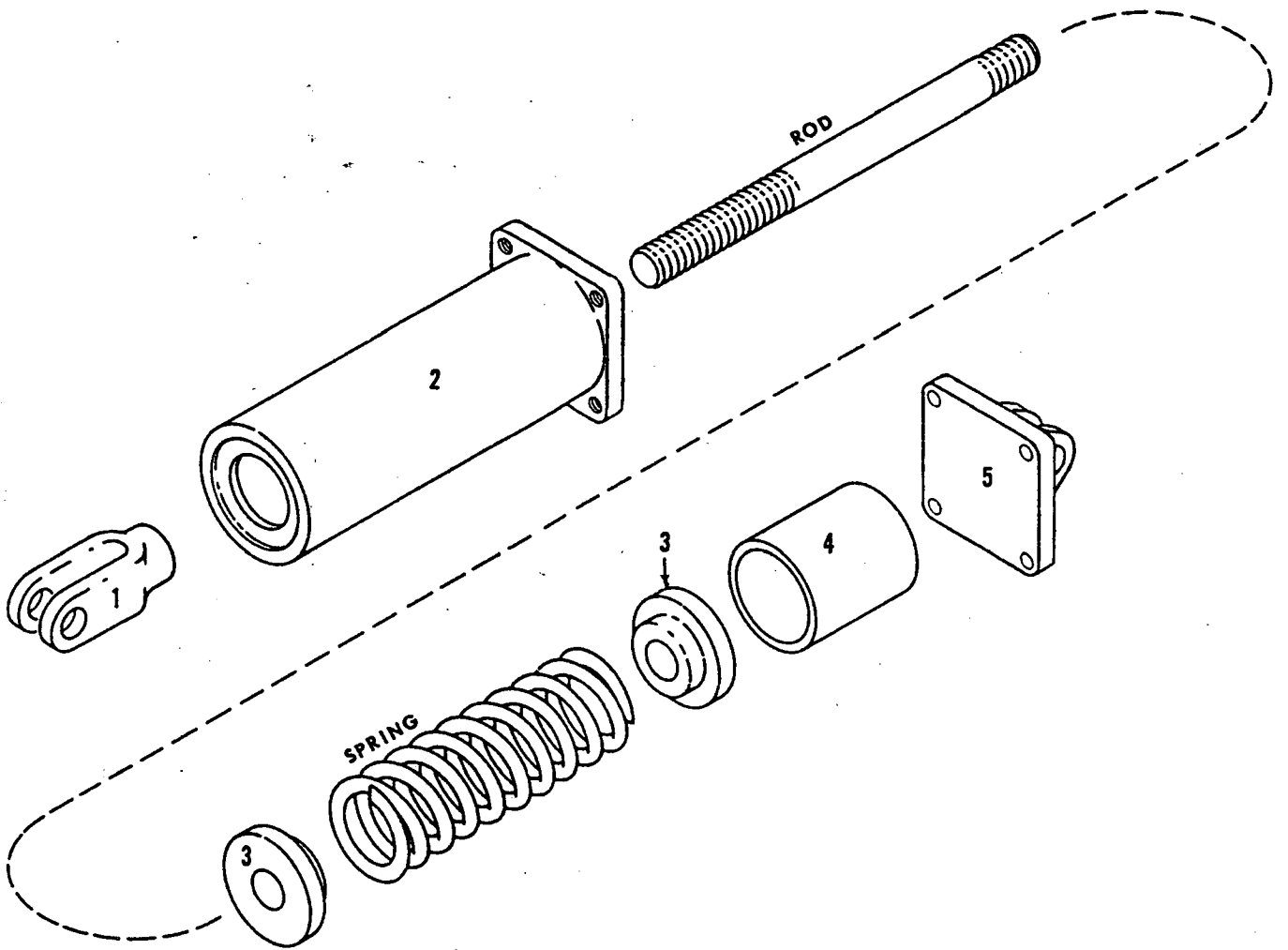


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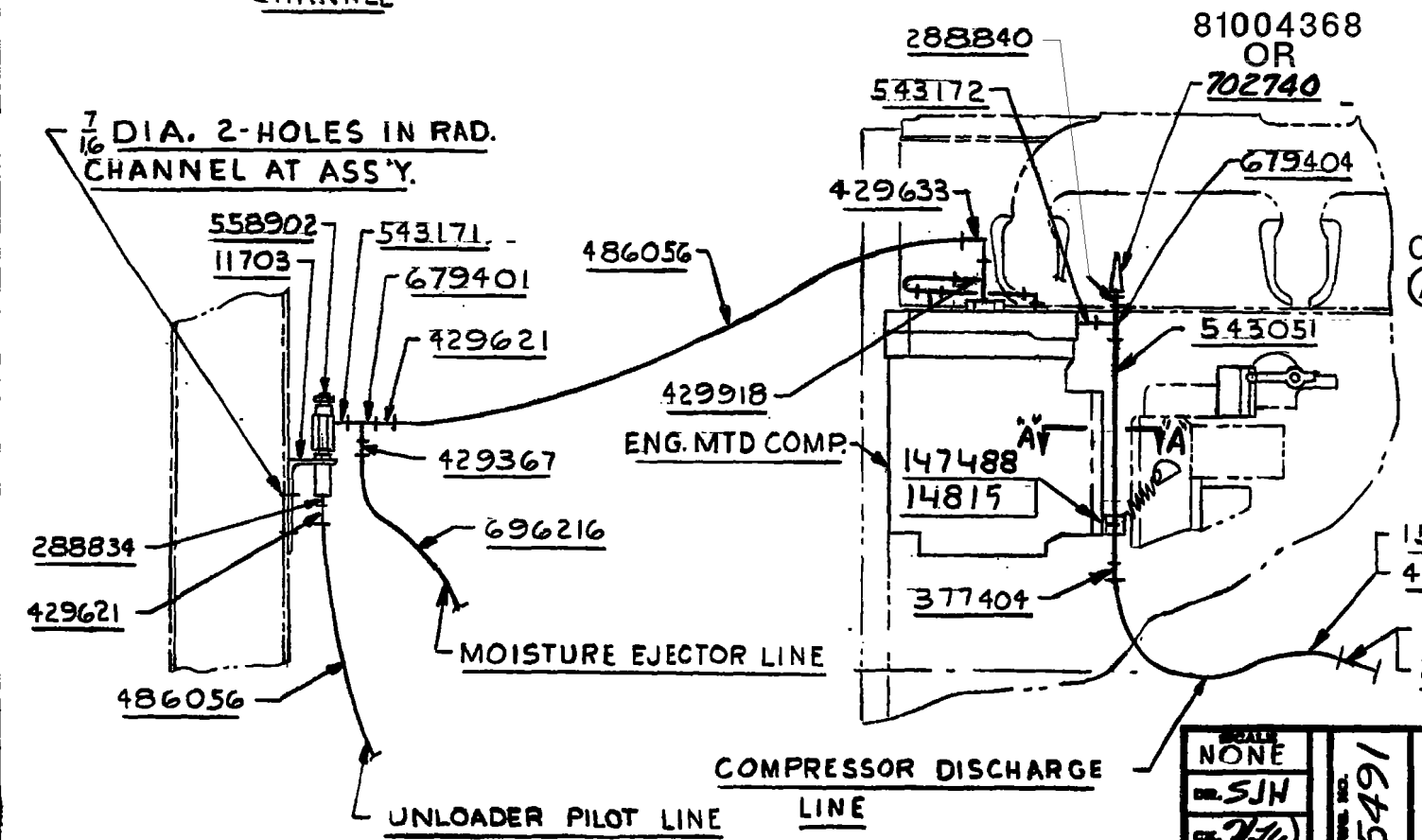
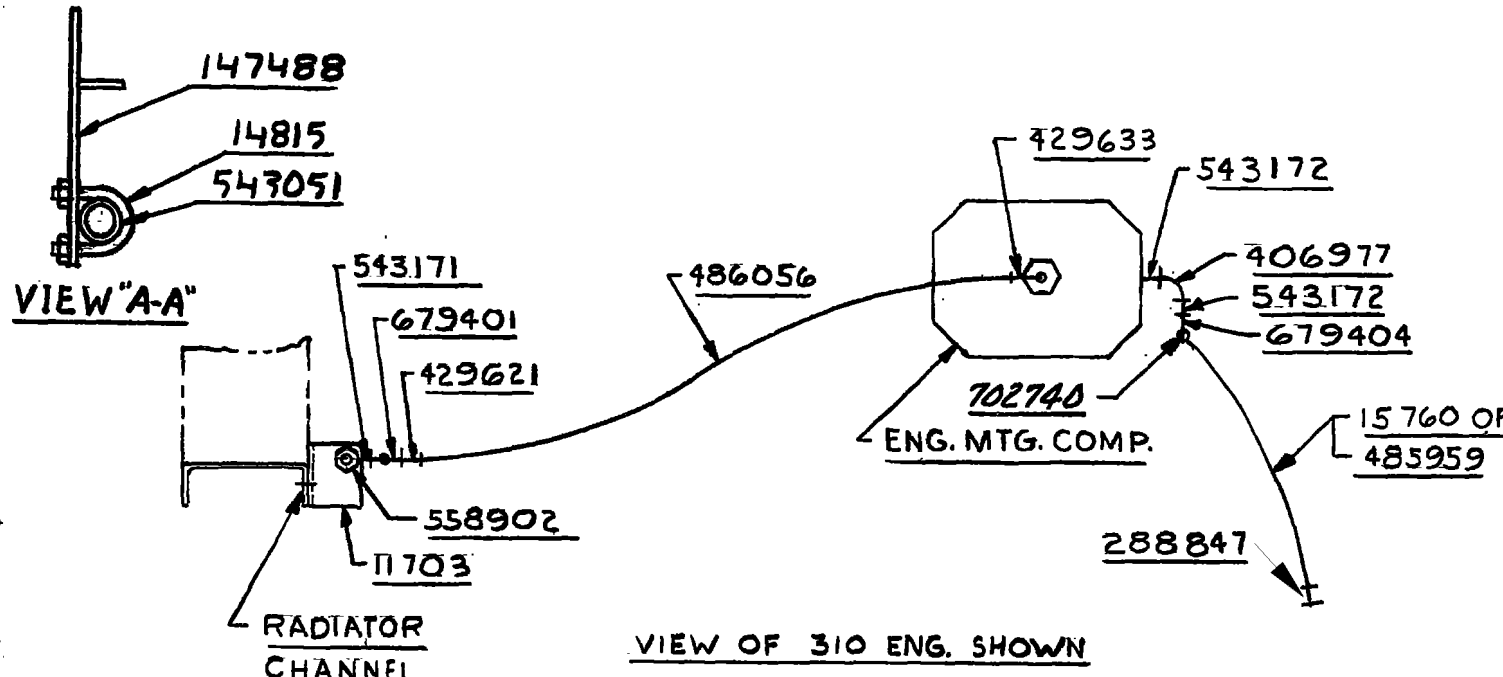
MATERIAL LIST ON BACK

CENTERING DEVICE

PARTS MANUAL ALPHABETICAL INDEX
Group C - Air Components & Electrical

DESCRIPTION	PUBLICATION	REV	START DATE	END DATE	GROUP
Air Piping	78327	A1	02/15/67	11/12/76	C0301
Compressor & Piping	50949	E2	01/29/71	10/23/80	C0101
Compressor & Piping	95491	-	01/23/81	07/16/08	C0101
Control Console	48462	Q1	08/20/71	07/07/81	C0201

NOTE 3
 REMOVE ANGLE BRACKET SUPPLIED W/ENG.
 REASS'Y W/147488 SUPPORT.



BILL OF MATERIAL							ASSEMBLIES USED ON
ITEM NO.	NO. RES'D	SECTION	DESCRIPTION	LENGTH FT. IN.	MATERIAL	CODE NO. OR DWG. NO.	REMARKS
1			BRACKET			11703	
1			3/4 X 8 FT. LG. HOSE			15760	4000W & 390 HOIST
1			SUPPORT			147488	SEE NOTE 3
1			1/2 X 1/4 NUT BUSHING			288834	
1			3/4 X 1/2 NUT BUSHING			288840	
1			1 1/4 X 3/4 NUT BUSHING			288847	
1			3/4 PIPE COUPLING			377404	
1			3/4 X 90° ELBOW			406977	
1			3/8 X 1/4 TUBE CONNECTOR			429367	
2			3/8 X 1/4 MALE CONNECTOR			429621	
1			3/8 X 3/8 MALE ELBOW			429633	
1			3/4 X 70 LG. HOSE			485959	3900, 3900W, 4100W
AS REQ'D			3/8 O.D. PLASTIC HOSE			486056	
1			3/4 X 8 1/4 LG. NIPPLE			543051	
1			1/4 X 7/8 LG. NIPPLE			543171	
2			3/4 X 1 3/8 LG. NIPPLE			543172	
1			TEE			429918	I.E. 53 F
1			UNLOADER PILOT			558902	
1			CLAMP (U-BOLT)			14815	
1			1/4 TEE			679401	
1			3/4 TEE			679404	
AS REQ'D			3/8 COPPER TUBE			696216	
1			3/4 X 1 NUT BUSH.			288757	390 ONLY
1			1/2 SAFETY VALVE			702740	165 PSI.
1			VALVE RELIEF 165 PSI. 500 NPT			81004368	165 PSI.

49591
 49946
 49592
 49874
 90724
 191150

REVISIONS
 07-16-08 TMO
 (A) ADDED

NOTE 1
 COMP. DISCHARGE PRESSURE 125 PSIG - 137 PSIG.

NOTE 2
 FOR PIPING TO THE TANK SEE AIR TANK AND PIPING ASS'Y.

SUPERSEDES 95491 OF 6-15-75

SCALE NONE	DWG. NO. 95491	MANITOWOC ENGINEERING CO.	POWER PLANT SUB-ASSY	DATE 1-23-81
DR. SJH		MANITOWOC, WISCONSIN	COMPRESSOR - ENG. MTD.	PATTERN NO.
CL. J.W.		MODEL 3900-3900W	30 CFM ON CUMMINS	CODE NO.
APP.		4000W-4100W-390	NT-855 OR NTA-855 ENGINE	DWG. NO. 95491

MODEL

3000W-3600-3900-3900W-3950W-3950D-4000W-4100W

TRANSMISSION CASE
(VICON MACHINE)

ITEM	PART #	QTY.	DESCRIPTION OF PART			
26	352022	1	<p><u>Note 3</u> For machines with electric drive, delete Ref. #26-27 above and add:</p> <p>SPIDER, Drive</p>			
27	352021	1	RING, Drive			
	352715	26	BLOCK, Rubber (not shown)			
			<p><u>Note 4</u> Clean splines of shafts and sprockets thoroughly with Loctite Safety Solvent (MEC 622296). Apply Loctite Retaining Compound #620 (MEC 622285) to engine shaft and converter input shafts. Allow to cure 24 hours.</p>			
			<p align="center">PLEASE GIVE MACHINE SERIAL NUMBER WITH ORDER</p> <table border="1" data-bbox="1218 1974 1570 2041"> <tr> <td data-bbox="1218 1974 1380 2041">ASSEMBLY 42749</td> <td data-bbox="1380 1974 1485 2041">PAGE 3 of 3</td> <td data-bbox="1485 1974 1570 2041">REV. P-1</td> </tr> </table>	ASSEMBLY 42749	PAGE 3 of 3	REV. P-1
ASSEMBLY 42749	PAGE 3 of 3	REV. P-1				

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- 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.

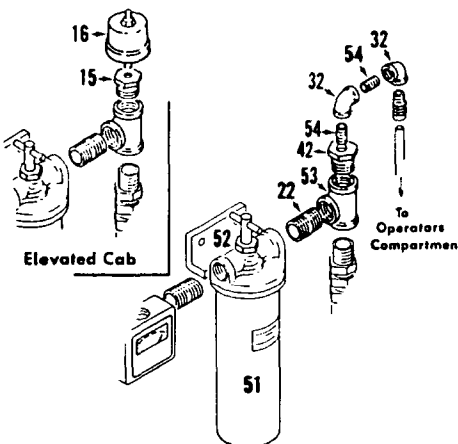
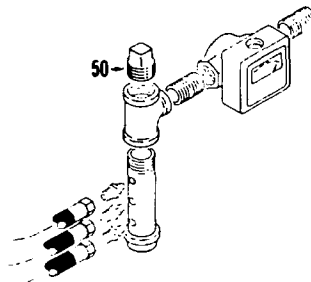
CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

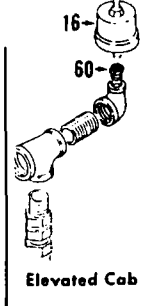
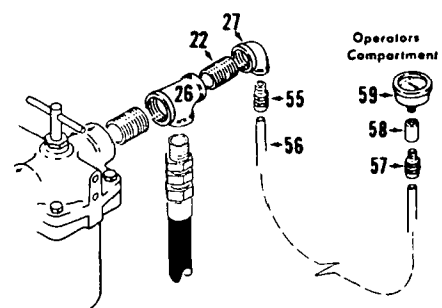
Manitowoc, Wisconsin

Machines w/out Forced Oil Lubrication to Converters

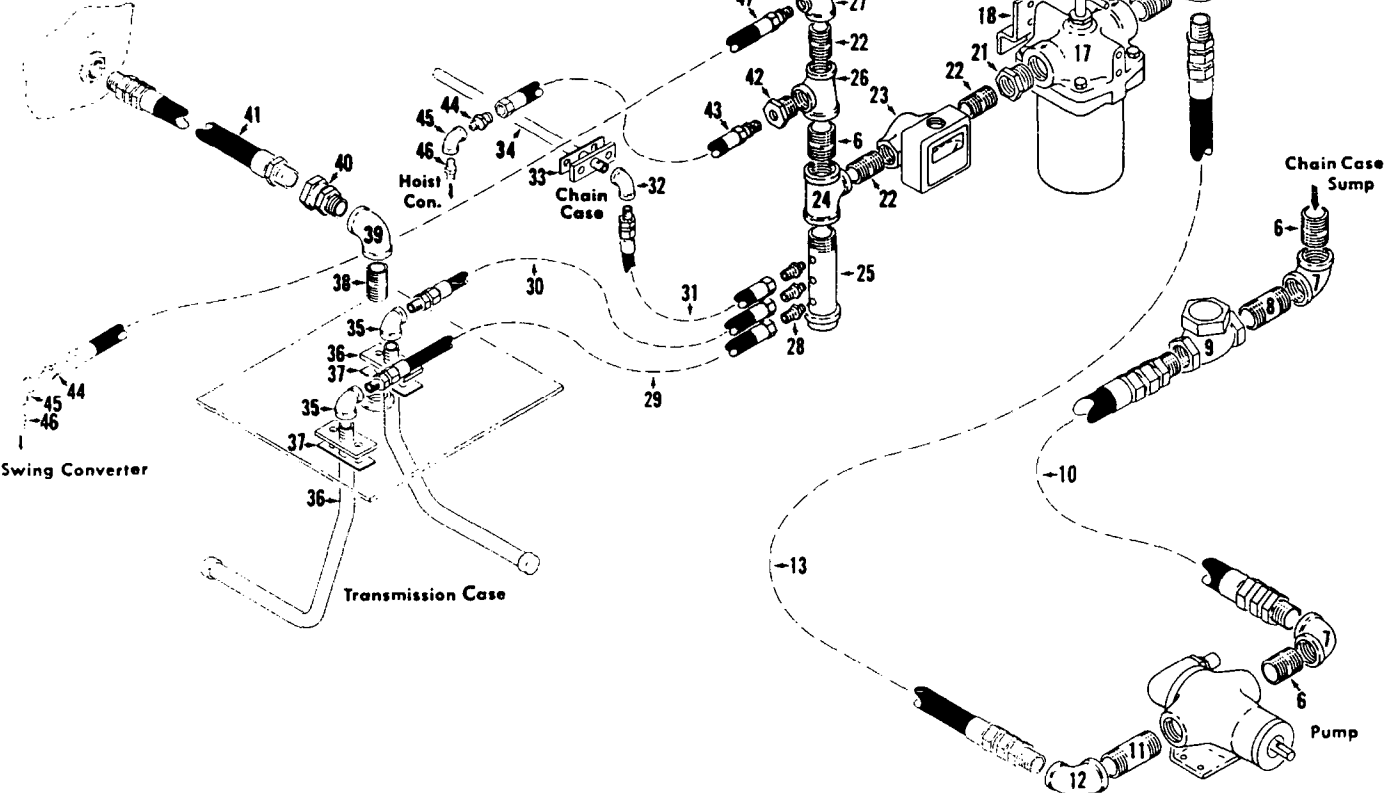


3/4" Port Filter with Direct Reading Gauge

1" Port Filter with Direct Reading Gauge



Chain Case



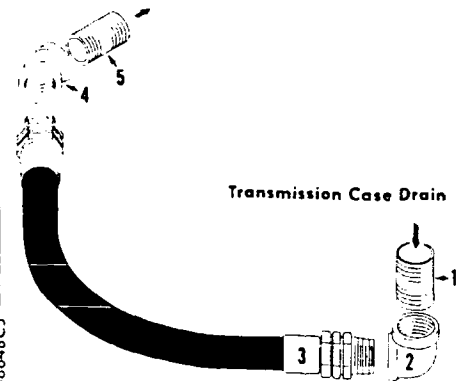
Swing Converter

Transmission Case

Chain Case Sump

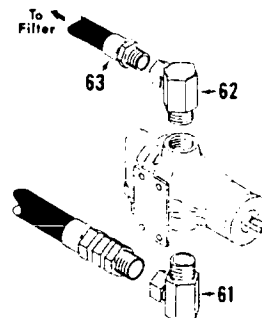
Pump

Chain Case

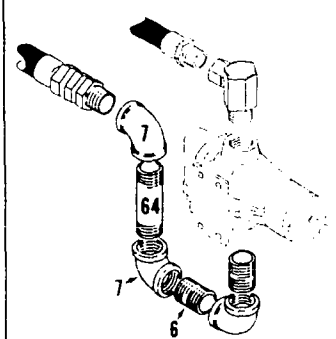


Transmission Case Drain

Machines with Vertically Mounted Oil Pump



Machines with Vertically Mounted Oil Pump w/Oil Trap

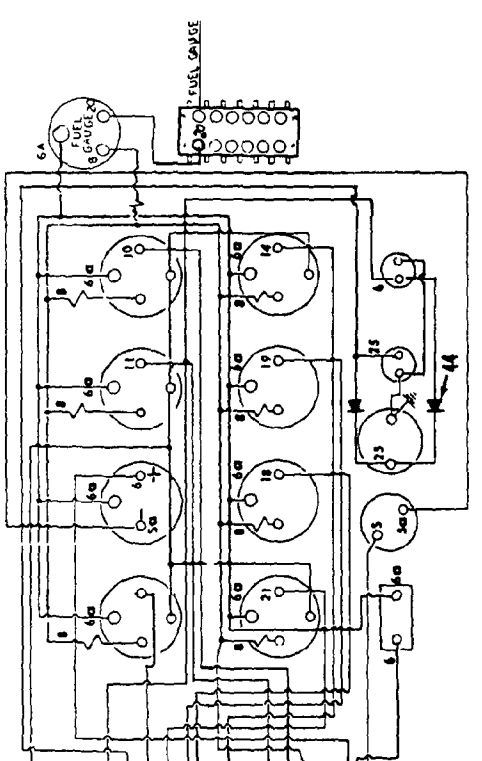
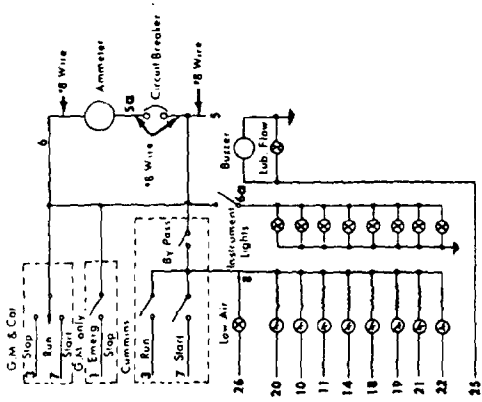


48648C5

MATERIAL LIST ON BACK

LUBRICATION PIPING

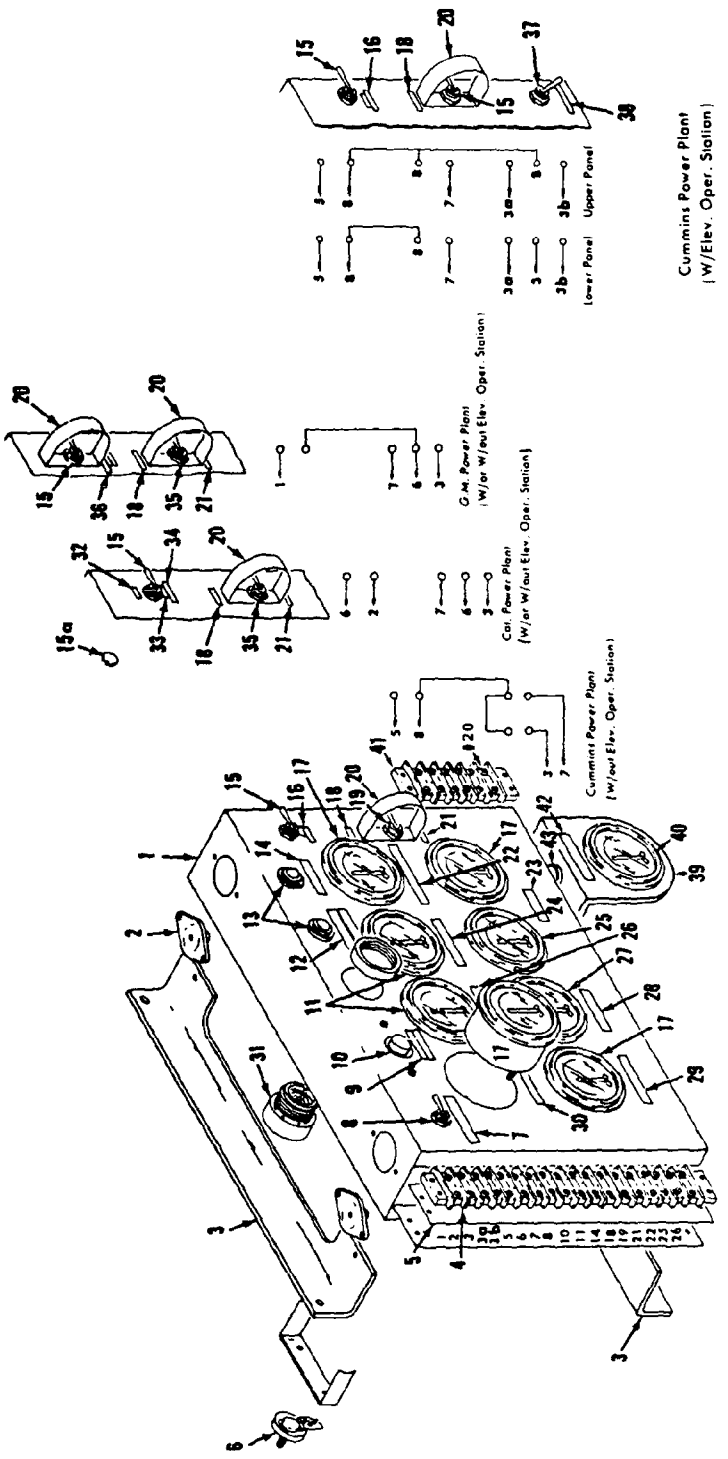
49301D1



- 0260 Low Air Alarm
- 0270 Sander Alarm System
- 0280 Gear Lub. Oil Pressure
- 0290 Chain Lub. Oil Pressure
- 0300 Rear Converter Oil Pressure
- 0310 Front Converter Oil Pressure
- 0320 Converter Oil Pressure
- 0330 Engine Water Temperature
- 0340 Engine Oil Pressure
- 0350 Load Side - Pressure Switch
- 0360 Starter Solenoid Mag. Switch
- 0370 Battery
- 0380 Alternator Output & Pressure Switch
- 0390 Fuel Solenoid - Cummins/Elev. Oper. Station
- 0400 Fuel Solenoid - Cummins W/Elev. Oper. Station
- 0410 Fuel Solenoid
- 0420 Glo-Plug - Cummins Plant
- 0430 Emergency Shutdown - G.M. Power Plant

Schematic
(Unless noted all wires be #14.)

WIRING DIAGRAM - NEGATIVE GROUND FOR POSITIVE GROUND REVERSE AMMETER TERMINALS - REAR VIEW



MATERIAL LIST ON BACK

INSTRUMENT PANEL

Cummins Power Plant
(W/Elev. Oper. Station)

Cummins Power Plant
(W/Elev. Oper. Station)

G.M. Power Plant
(W/ or W/ out Elev. Oper. Station)

G.M. Power Plant
(W/ or W/ out Elev. Oper. Station)

Upper Panel

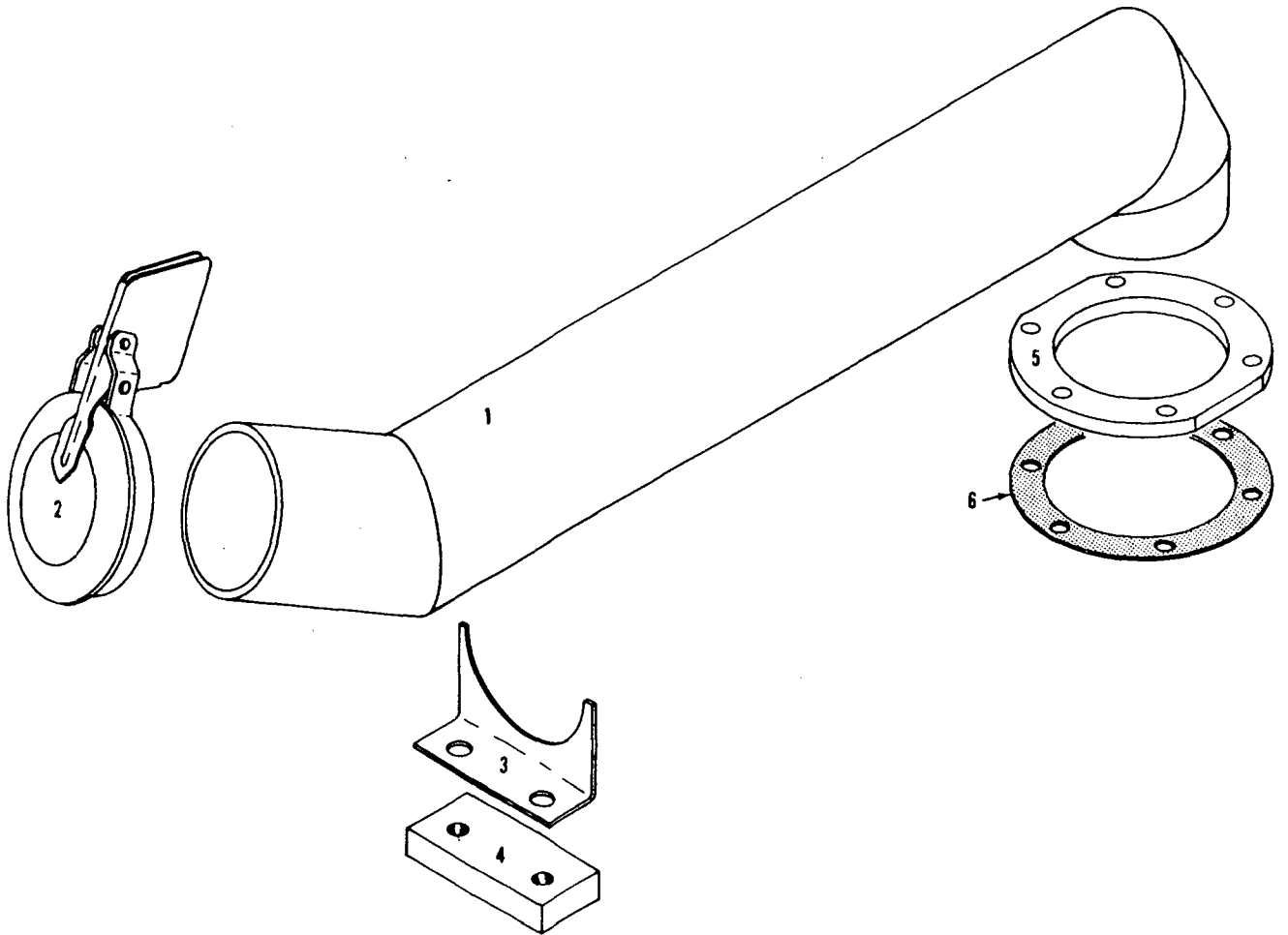
Lower Panel

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin

MASTER



44681 HI

94681A1

MATERIAL LIST ON BACK

BILL OF MATERIAL		PART NO.		REV.	
1	246008	STRANDED			
2	246009	STRANDED			
3	311800				
1	143914				
1	143927				
1	143928				
1	182787				
1	182812				
1	345308				

1	246008	STRANDED			
2	246009	STRANDED			
3	311800				
1	143914				
1	143927				
1	143928				
1	182787				
1	182812				
1	345308				

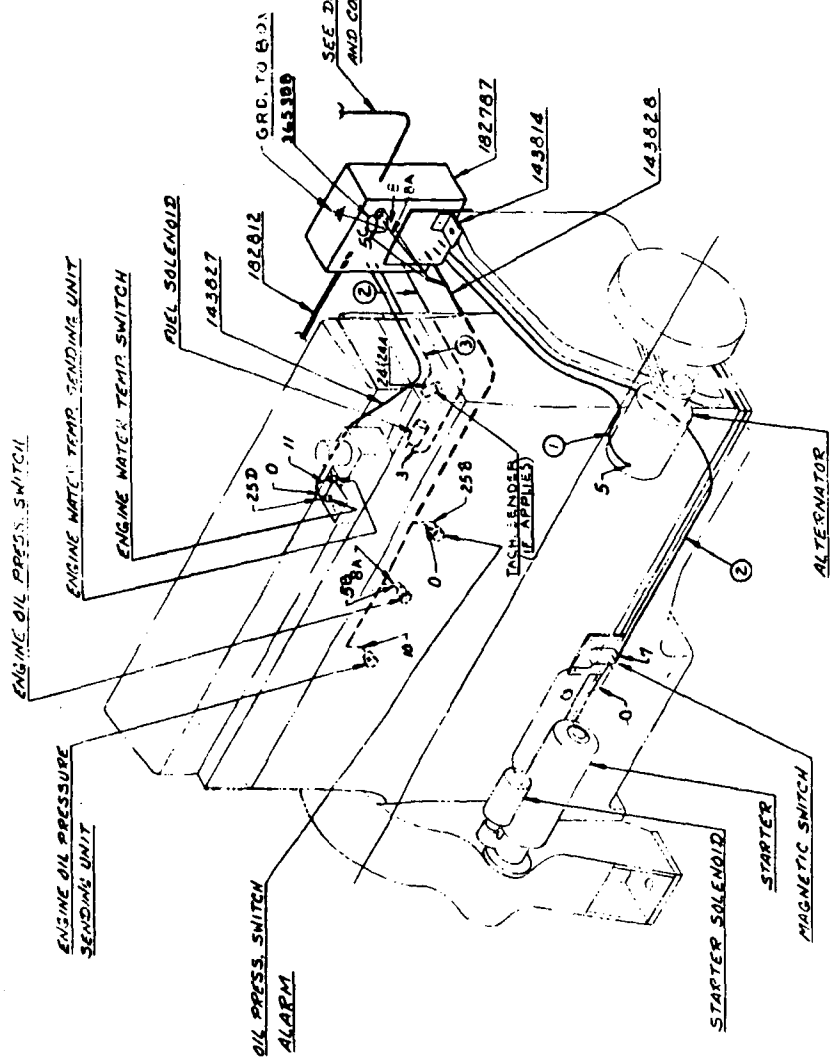
9-2-76 B.L.K. CONNECTIONS ADDED TO 345308
 10-12-79 REC
 3 ADDED

NOTE: 1
 SEE CHART NO. 5605 FOR M.E.G. NUMBER SYSTEM.
 NOTE: 2
 SEE CHART NO. 5604 FOR ELEC. SCHEMATIC.

NOTICE
 THE ITEM SHOWN IS PROPERTY OF
 MARITOWOC ENGINEERING CO.
 ALL INFORMATION CONTAINED HEREIN IS CONFIDENTIAL AND IS TO BE KEPT AS SUCH UNLESS THE WORK IS OF INTEREST TO THE U.S. GOVERNMENT IN WHICH CASE IT IS TO BE RELEASED TO THE GOVERNMENT.

FIRST ON S.O. 4196
 SUPERSEDED BY 183230 FOR 4100W ONLY
 REDESIGNED AS 183113

NOTE	MARITOWOC ENGINEERING CO.	ELECTRICAL ASSY
1	3900, 3907, 3908 W	POWER PLANT WIRING
2	4000 N	FOR CUMMINS ENGINE 24 V.D.C. SYSTEM



32233-1 Cont.	REV. B	MODEL 3900-4000
---------------	--------	-----------------

LUBRICATING PIPING
(CARBODY)

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
7			<u>SPRING THRUST WASHER-RIGHT</u>	
	696216	1	TUBE, Copper (3/8" O.D.) (Specify Length)	
	429020	1	EXTENSION (1/8")	
	429373	1	ELBOW (3/8" x 1/8")	
	429367	2	CONNECTOR (3/8" x 1/4")	
	429010	1	GR. FITTING (1/4")	
	543564	1	NIPPLE (1/4" x 3")	
	377202	2	COUPLING (1/4")	
8			<u>SPRING THRUST WASHER-LEFT</u>	
	696216	1	TUBE, Copper (3/8" O.D.) (Specify Length)	
	429020	1	EXTENSION (1/8")	
	429373	1	ELBOW (3/8" x 1/8")	
	429367	2	CONNECTOR (3/8" x 1/4")	
	429010	1	GR. FITTING (1/4")	
	543564	1	NIPPLE (1/4" x 3")	
	377202	2	COUPLING (1/4")	
9			<u>TRAVEL SHAFT OUTER-LEFT</u>	
	696216	1	TUBE, Copper (3/8" O.D.) (Specify Length)	
	429020	1	EXTENSION (1/8")	
	429373	1	ELBOW (3/8" x 1/8")	
	429367	2	CONNECTOR (3/8" x 1/4")	
	429010	1	FITTING, Grease (1/4")	
	543564	1	NIPPLE (1/4" x 3")	
	377202	2	COUPLING (1/4")	
10			<u>TRAVEL SHAFT OUTER-RIGHT</u>	
	696216	1	TUBE, Copper (3/8" O.D.) (Specify Length)	
	429020	1	EXTENSION (1/8")	
	429373	1	ELBOW (3/8" x 1/8")	
	429367	2	CONNECTOR (3/8" x 1/4")	
	429010	1	FITTING, Grease (1/4")	
	543564	1	NIPPLE (1/4" x 3")	
	377202	2	COUPLING (1/4")	
11			<u>TRAVEL SHAFT (OUTER BEARING) (ONE EACH SIDE)</u>	
	429032	2	BUSHING, Reducing (1/4" x 1/8")	
	429000	2	GR. FITTING (1/8")	
12			<u>TRAVEL SHAFT (PILOT BEARING) (ONE EACH SIDE)</u>	
	429032	2	BUSHING, Reducing (1/4" x 1/8")	
	429000	2	GR. FITTING (1/8")	
13	23935	1	SUPPORT W/capscrews, hex nuts and lockwashers	

0-147

REV. B	32233 - 1
--------	-----------

PLEASE GIVE MACHINE S/N W/ORDER

RUN AS FRONT

32233 B1 Cont.

42396-2 Cont	REV C	MODEL 3000W-3400-3600-3900-3900W-4000W
--------------	----------	---

STEERING CONTROL
(CARBODY)

REF NO	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO
11	647552	1	SPACER	
12	548632	1	NUT, Hex	
14	22924	1	YOKE, Plunger	
<u>FOR AIR TRAVEL LOCKS PRIOR TO DESIGN CHANGE OF SEPT 21, 1966</u>				
22	18843	1	GASKET	
23	18840	1	HEAD, Plunger Shaft W/capscrews and flatwasher (see note 1)	
24	552686	2	PACKING, Vee Block	
25	18838	1	BASE W/mach screw, jam nut and lockwasher	
26	18839	1	COVER	
27	543442	1	NIPPLE	
28	18841	1	GUIDE W/capscrews, hex nuts and lockwashers	
NOTE 1 Per design change of Oct 16, 1961, capscrew and washer deleted Part #18840 grooved for snap ring #596663				
NOTE 2 For machine W/Manual Travel Lock Control, delete Ref Nos 7, 27, and 28, and plug air passage with 1/4" pipe plug				

REV C	42396 - 2
----------	-----------

PLEASE GIVE MACHINE S/N W/ORDER

MASTER

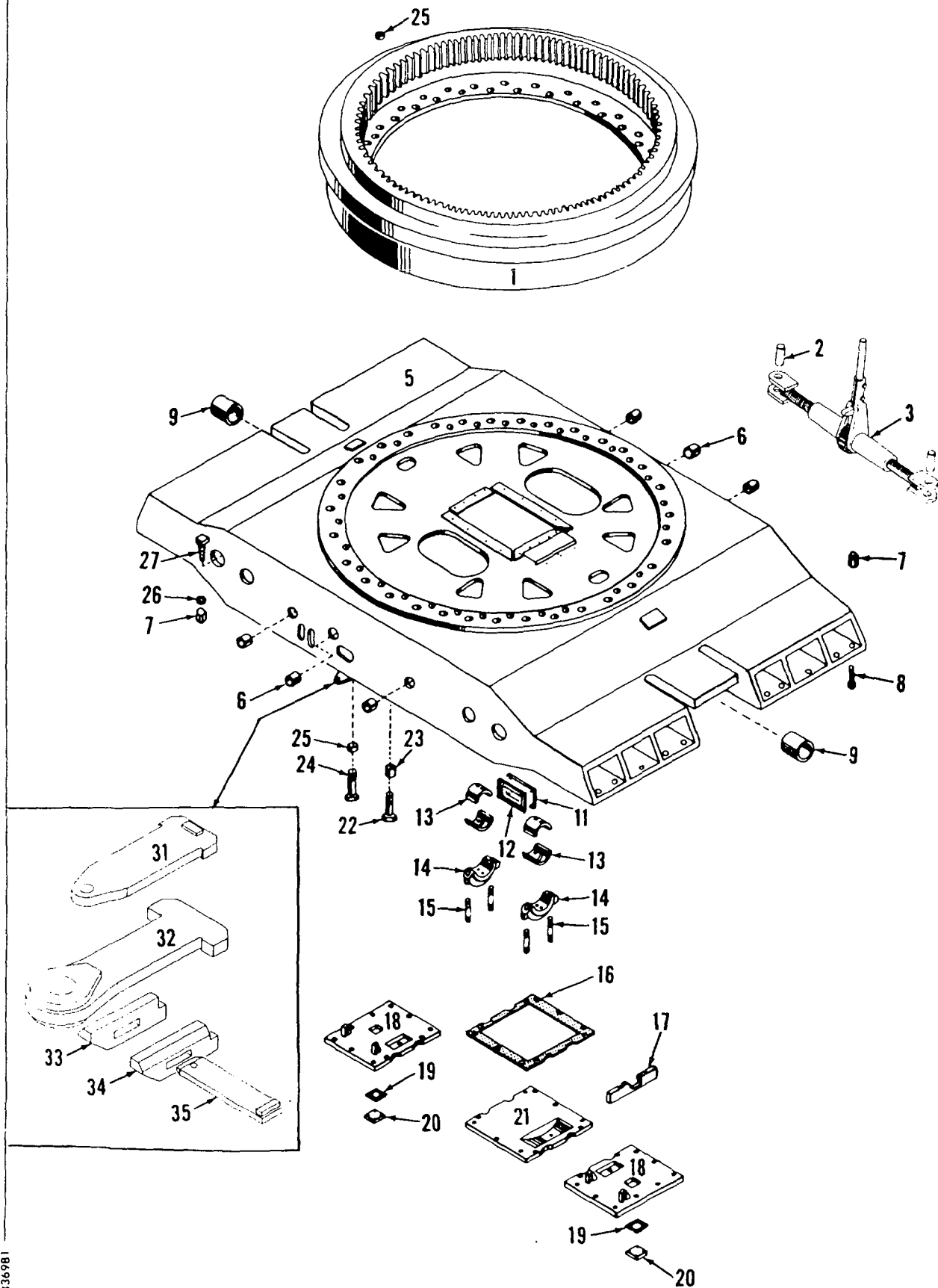
RU FRONT

42396 Cont

MANITOWOC ENGINEERING CO.

A Division of the Manitowoc Company, Inc.

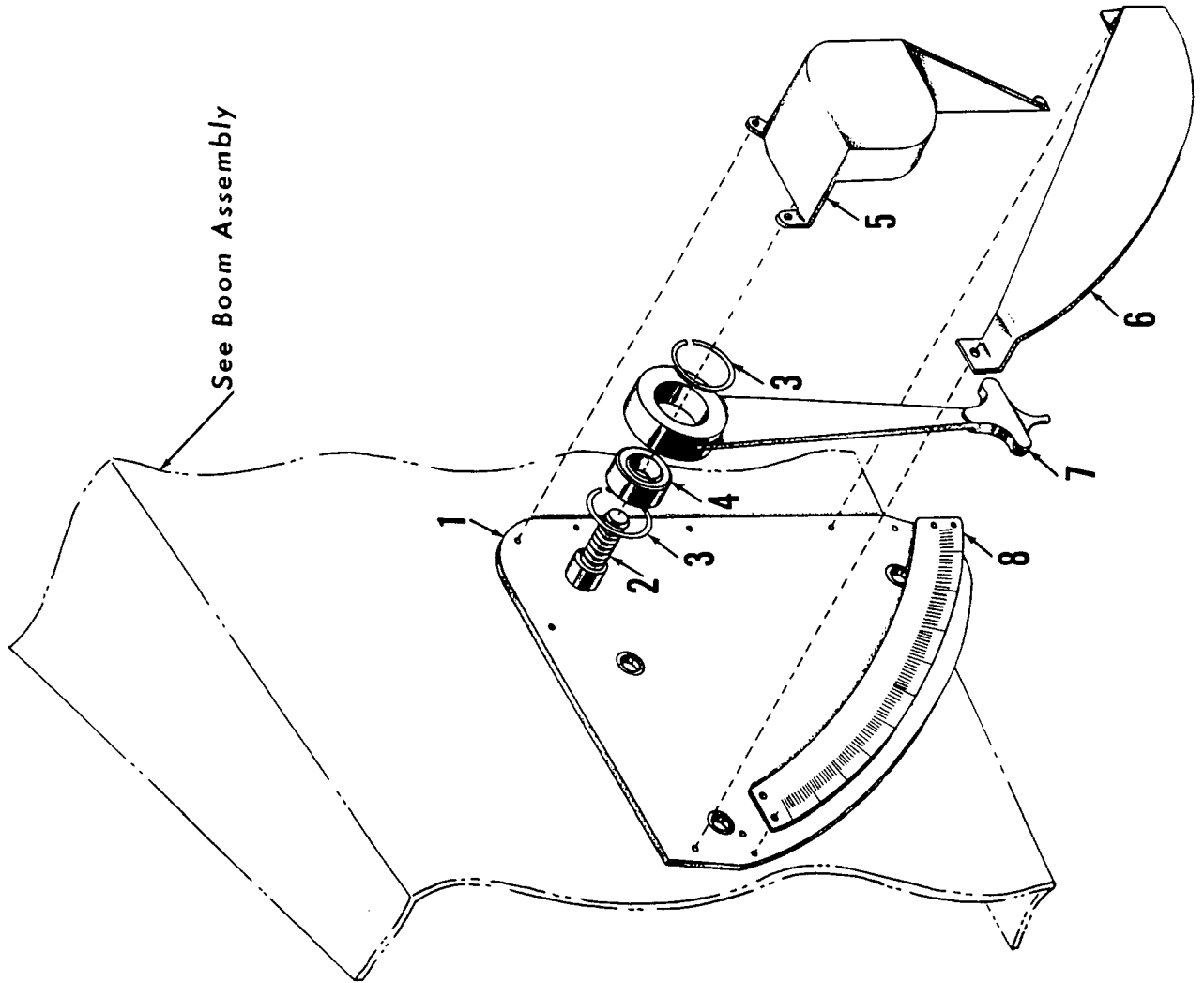
Manitowoc, Wisconsin



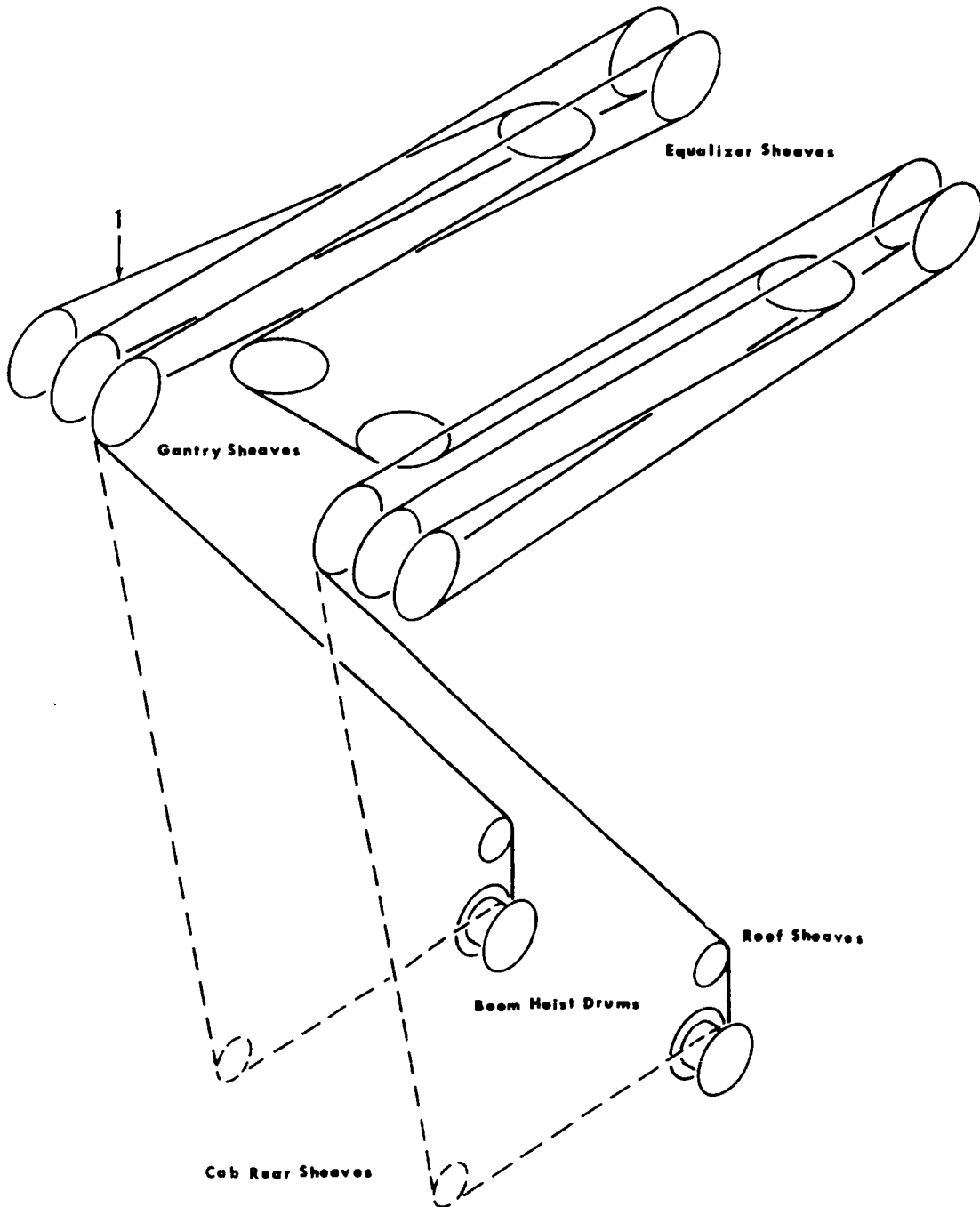
4336981

MATERIAL LIST ON BACK

CARBODY

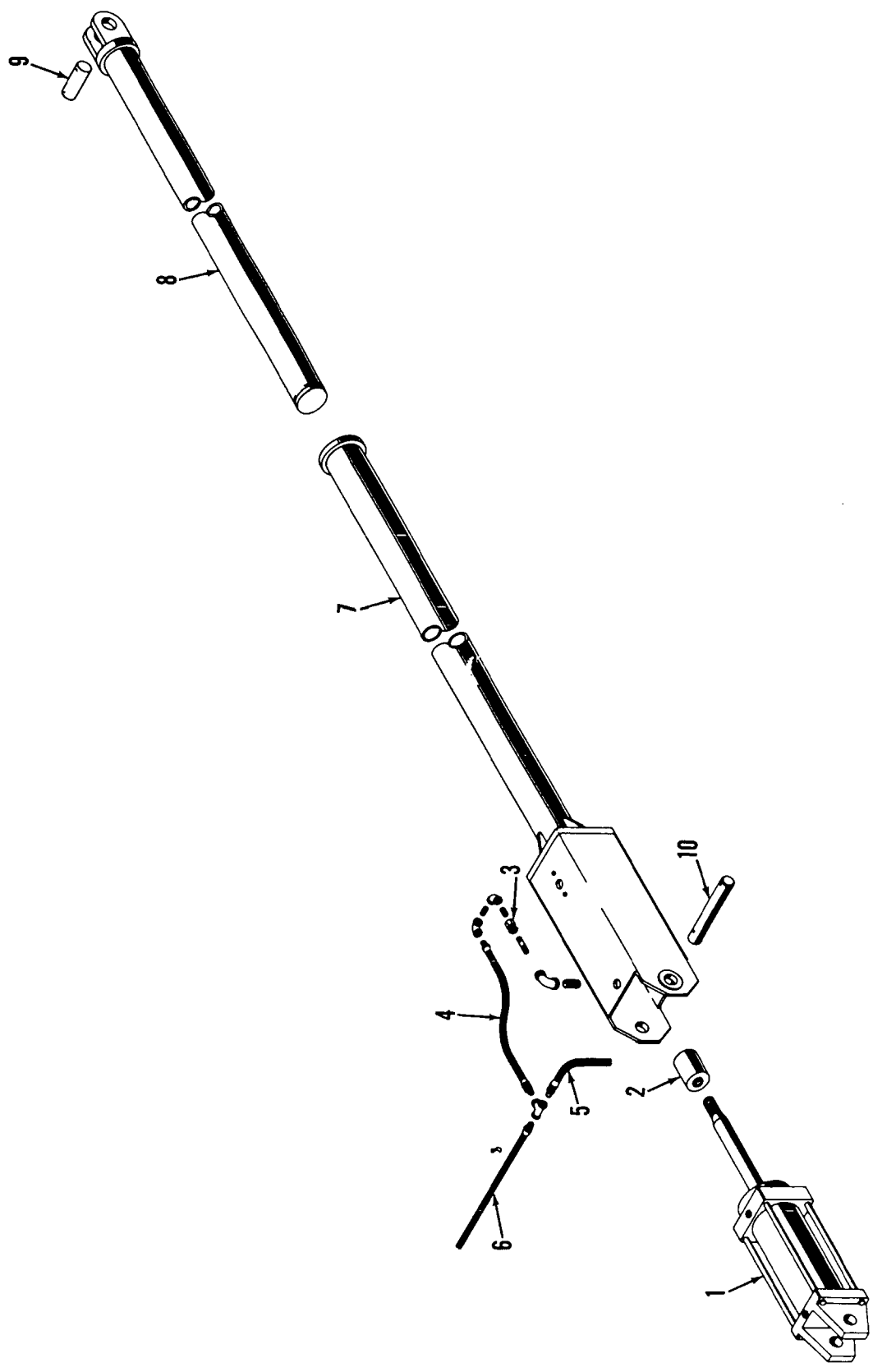


See Boom Assembly



MASTER

49321A1



49321A1

MATERIAL LIST ON BACK

TELESCOPIC AIR CUSHIONED BOOM STOP

A/B

A NOTE:

SET SCREWS TO BE REMOVED FROM BOTH BEARINGS.

B 1

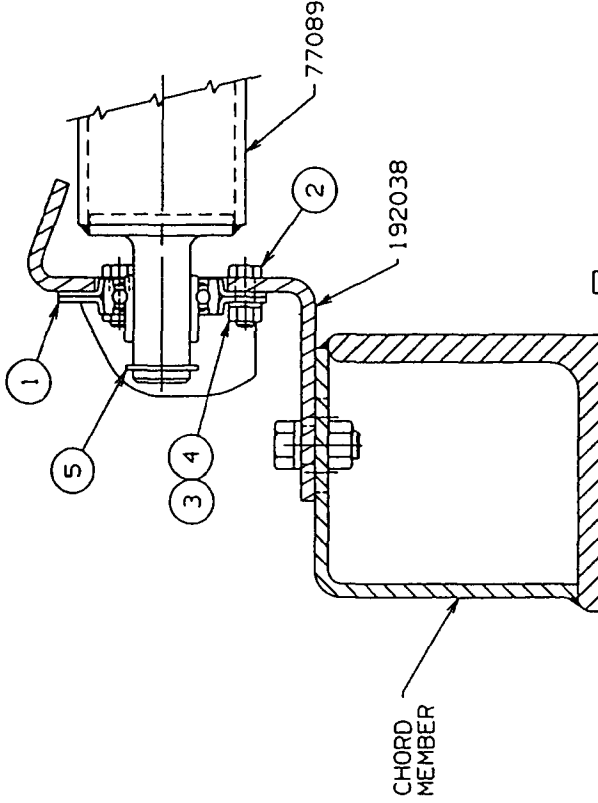
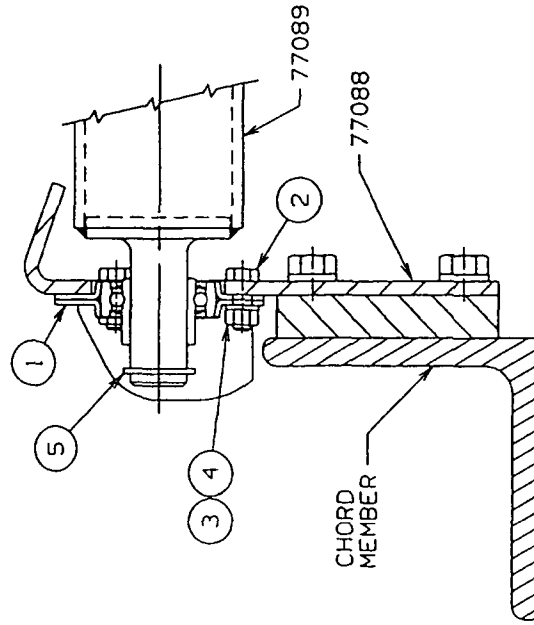
BEARING BRACKET 192038
REO'D FOR USE ON INSERTS
33426, 50609, 623525, 623526,
623527, 623528, 623529, 623530,
623531, 623532, 623533, 623534,
623535, 623536, 623537, 623538,
623545, 623564, 623579, 623580,
& 623586 WITH TIMBER BRACKETS

BILL OF MATERIAL

ITEM NO.	SEC. NO.	DESCRIPTION	LENGTH IN.	MATERIAL	CORE NO. OR Dwg. No.	ASSEMBLIES USED ON
1	2	BEARING. #F116 "NICE"			224218	43698
2	6	SCR. HEX. HD. CAP .312-18UNC-2A X .88 LG.			612404	49368 49377 49727
3	6	NUT, HEX .312-18UNC-2B			546053	65173
4	6	WASHER, LOCK .312			710303	65156 49379
5	2	RING, RET. TRUARC			596823	65388
	1	ROLLER			77089	65415
	2	BEARING BRACKET			77088	
	2	BEARING BRACKET			192038	

OR

REVISIONS
10-3-66 CEF
A NOTE
REVISED
PC. S. ADDED
1-29-68 LJE
REVERSED
POSITION
OF HEX SCR
7-19-82 CRP
REDRAW CADAM
CK:LS
APP: PWR
1-21-98 DM
B/C ADDED
D VIEW ADDED



SCALE
5 = 1 FT
DR: RLT
DC: EGT
APP

77090

Manitowoc Cranes, Inc.
Manitowoc, Wisconsin
MOOD. 4000, 4000W

WIRE ROPE ROLLER
GUIDE ASSEMBLY
#22 BOOM

DATE
9-15-65

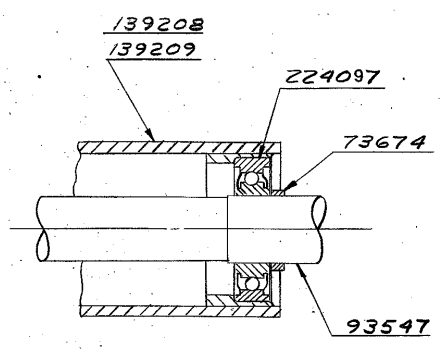
PATTERN NO.

DWG. NO.
77090

DO NOT SCALE THIS DRAWING

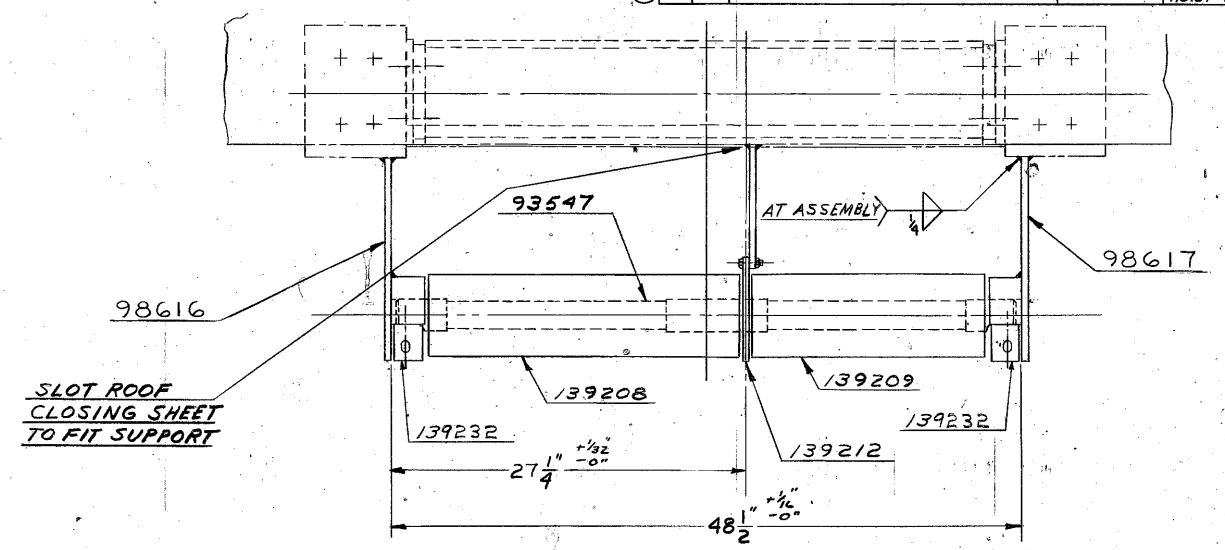
C	1	ROLLER SUPPORT L.H.	98617
---	---	---------------------	-------

BILL OF MATERIAL							ASSEMBLIES USED ON
ITEM NO.	NO. REQ'D	SECTION	SIZE	LENGTH FT. IN.	MATERIAL	CODE NO. OR DWG. NO.	REMARKS
1			GUARD			17856	USE WITH BOOM HOIST 49364
1			SUPPORT			72193	USE WITH BOOM HOIST 49364
4			SPACER			73674	USE WITH BOOM HOIST 49364
1			ROLLER SUPPORT R.H.			98616	
1			ROLLER SHAFT			93547	
2			KEEPER PLATE			139232	
1			ROLLER R.H.			139208	
1			ROLLER L.H.			139209	
1			ROLLER SUPPORT			139212	
4			BALL BEARING			224097	
1			ROPE GUARD			93797	USE WITH BOOM HOIST 50497

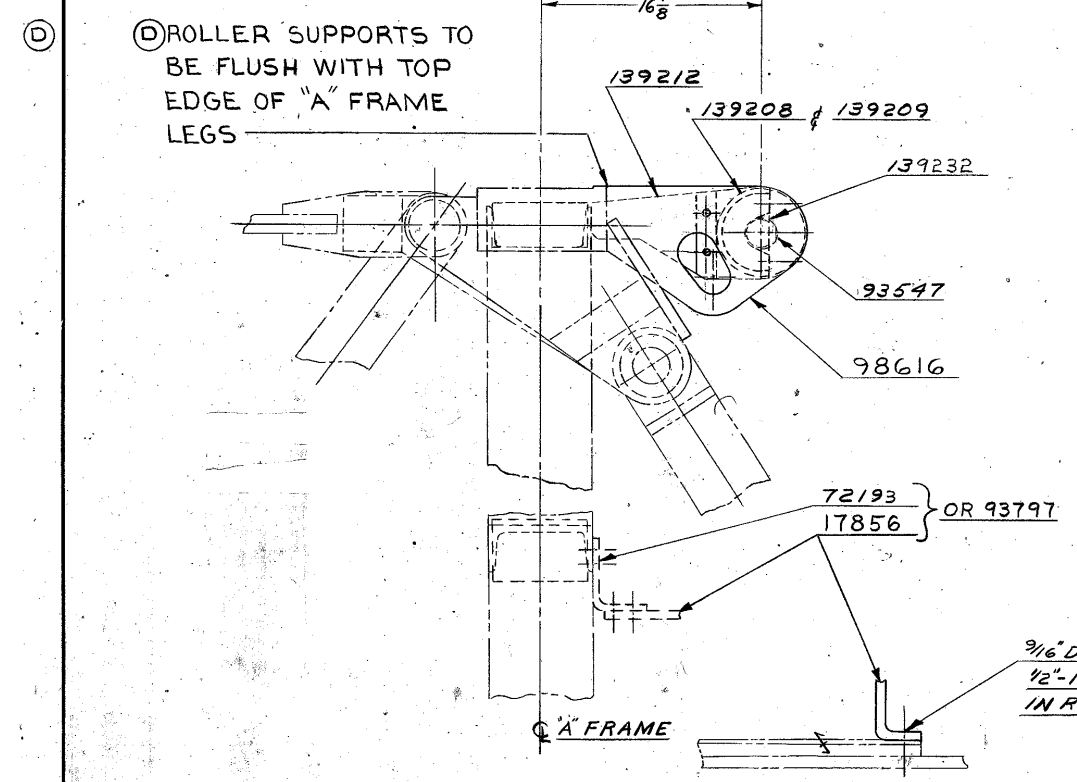


TYPICAL SECTION OF ROLLER END

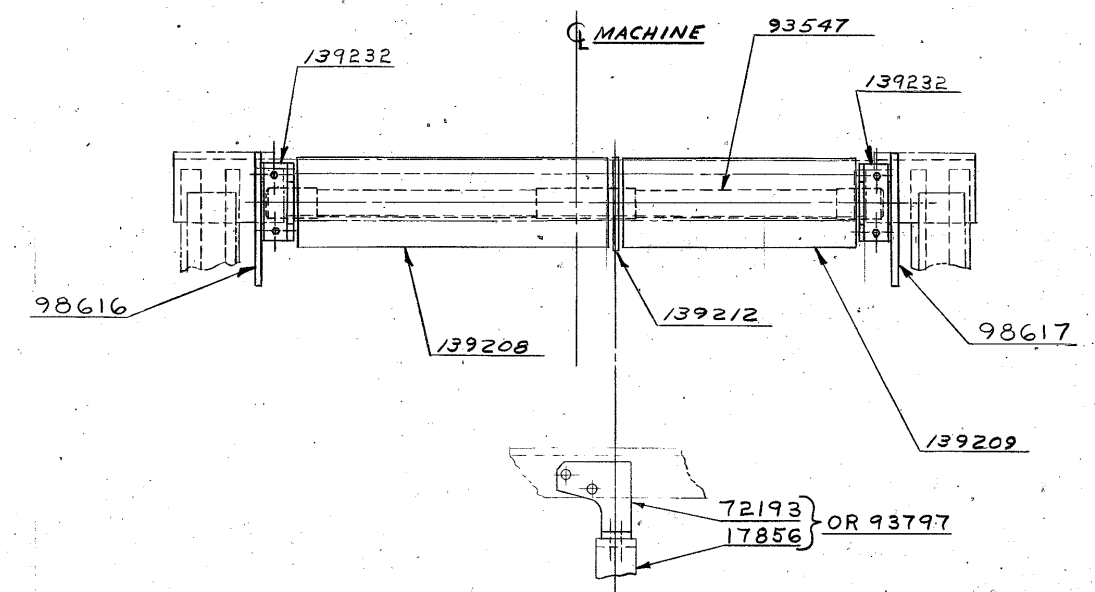
NOTE:
FOR SINGLE DRUM SEE ASSEMBLY 181293
FOR EQUAL DRUMS SEE ASSEMBLY 181295



SLOT ROOF CLOSING SHEET TO FIT SUPPORT



ROLLER SUPPORTS TO BE FLUSH WITH TOP EDGE OF "A" FRAME LEGS



3/16" DIA. - 1 HOLE IN COVER
1/2"-13 NC. TAP 3/4" DEEP
IN ROT. BED AT ASSEMBLY

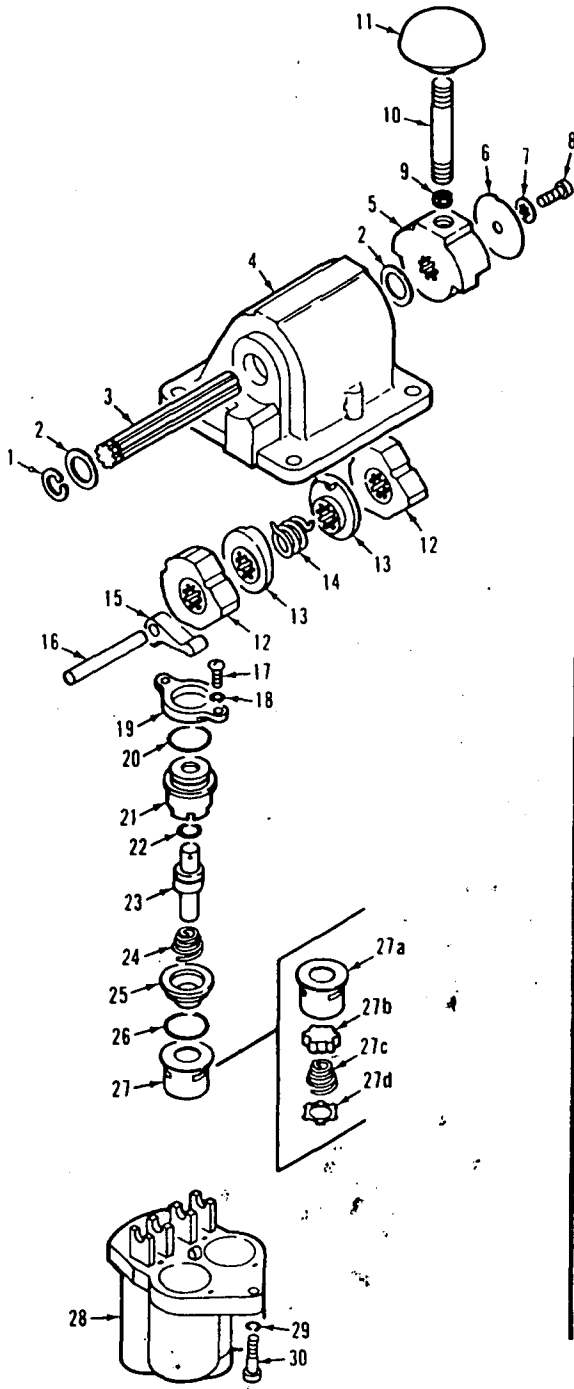
FORMERLY WAS #180932

SCALE 1/2, 3/4, 1" = 1'-0"	UNLESS NOTED FRAC. DIM. HOLE DIA. HOLE CENTERS FINISH	MANITOWOC ENGINEERING CO. MANITOWOC, WISCONSIN	WIRE ROPE GUIDE ROLLER ASSEMBLY FOR WIDE & NARROW DRUMS MODEL 4000W	PATTERN NO.
DR. M. J. W.	CK. L. S.	MATERIAL		CODE NO.
APP. R. R.				DWG. NO. 181294

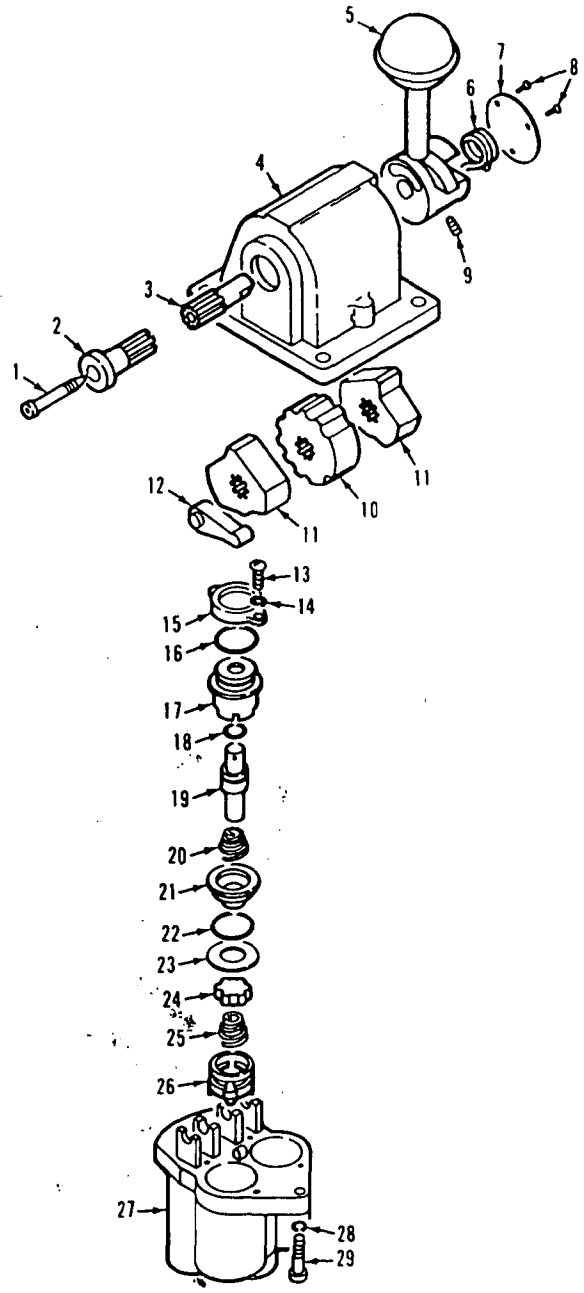
6-29-72 LS
A ADDED
5-15-81 JHS
B WAS
93546-2
C WAS
93546-3
9-3-81 JHS
D ADDED
7-28-06 CRN
E WAS
22478

DWG. NO.
181294

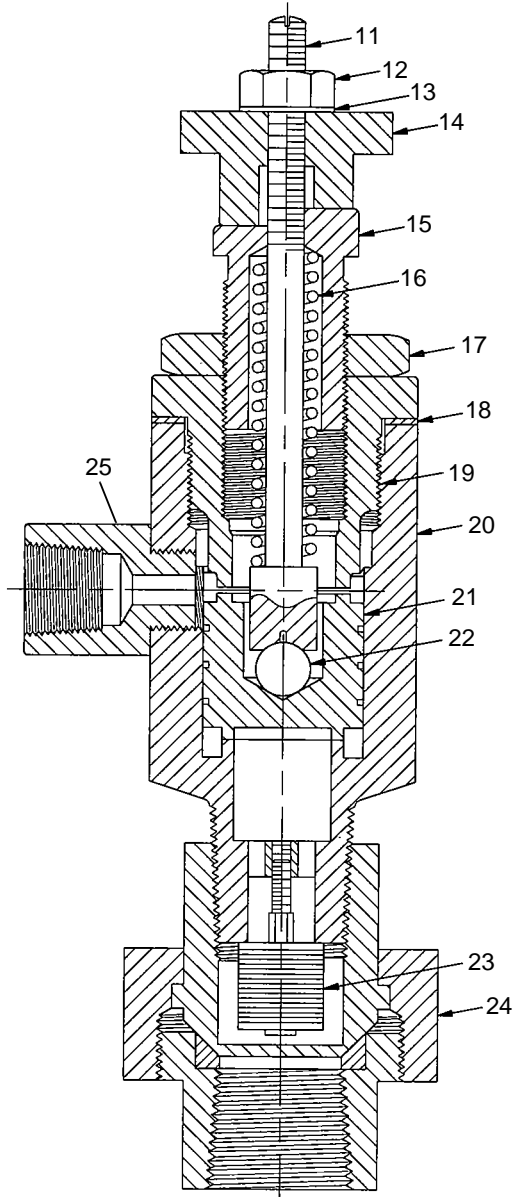
REVISED DATE
DATE
10-2-70



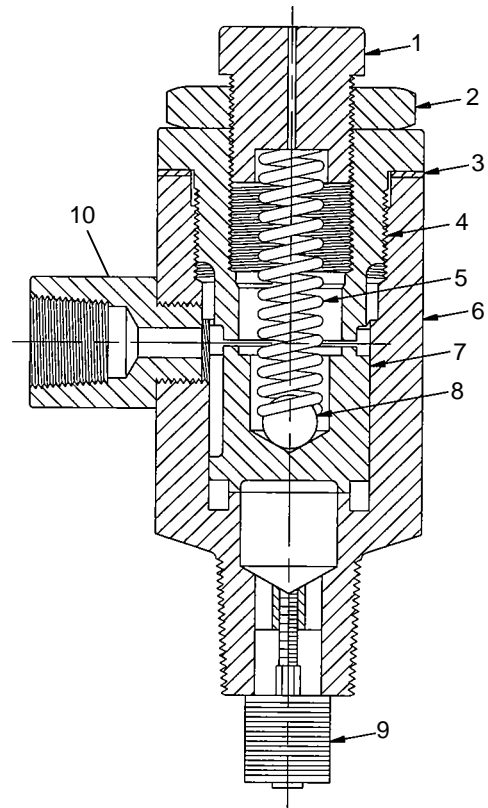
P59339



P54425-0310



Valve
5589030



Valve
5589020

ASSEMBLY	REVISION
O-72	B

VALVE, UNLOADER PILOT

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



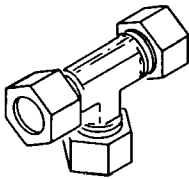
NUT

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



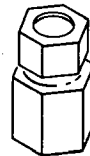
UNION TEE

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



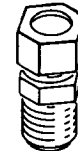
UNION

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



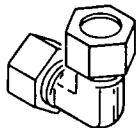
FEMALE CONNECTOR

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



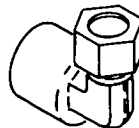
MALE CONNECTOR

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



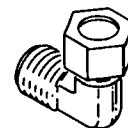
UNION ELBOW

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



FEMALE ELBOW

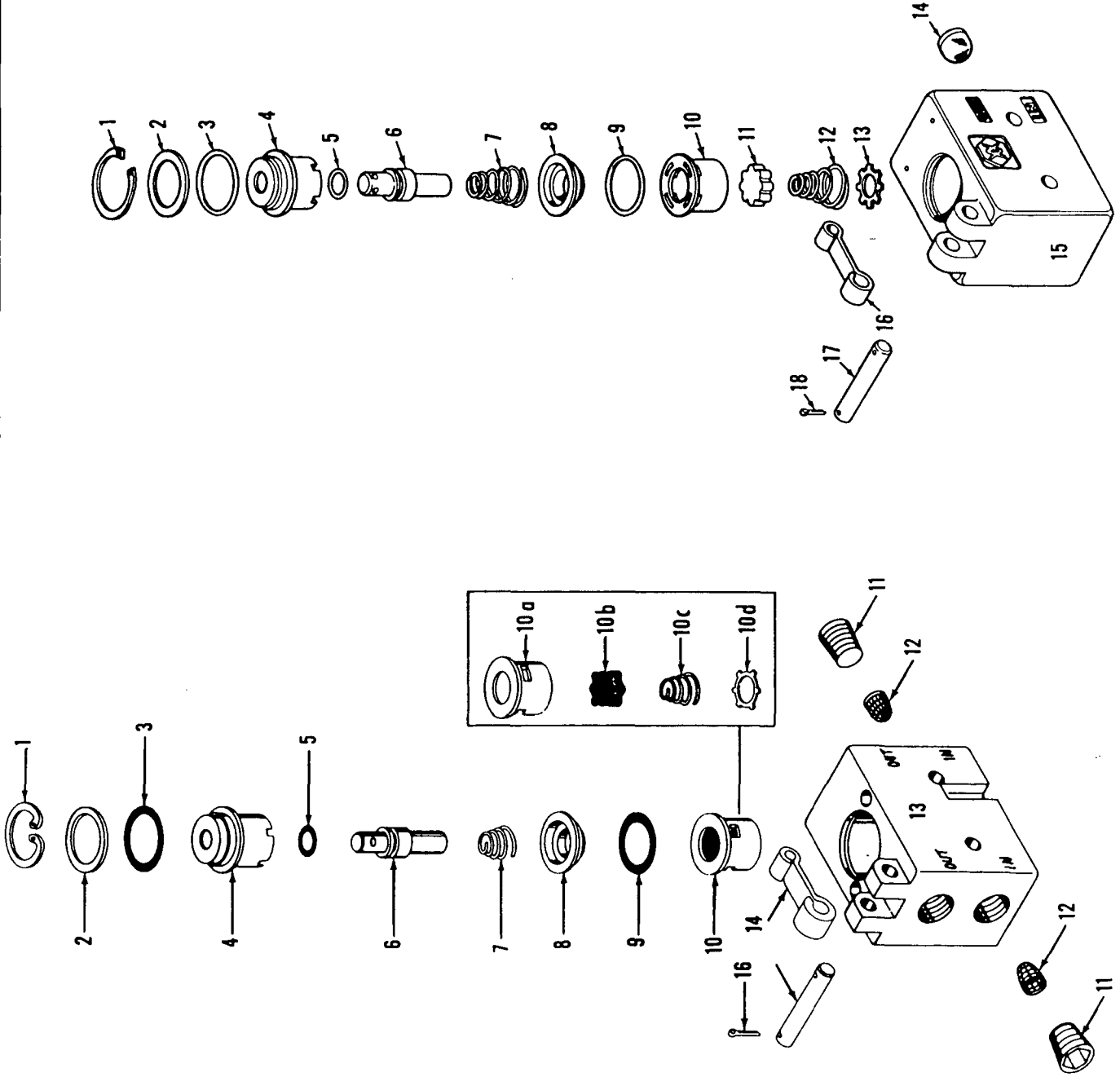
Code No.	Tube O.D.	Pipe Thread
429066	1/4	1/8
429825	1/4	1/4



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

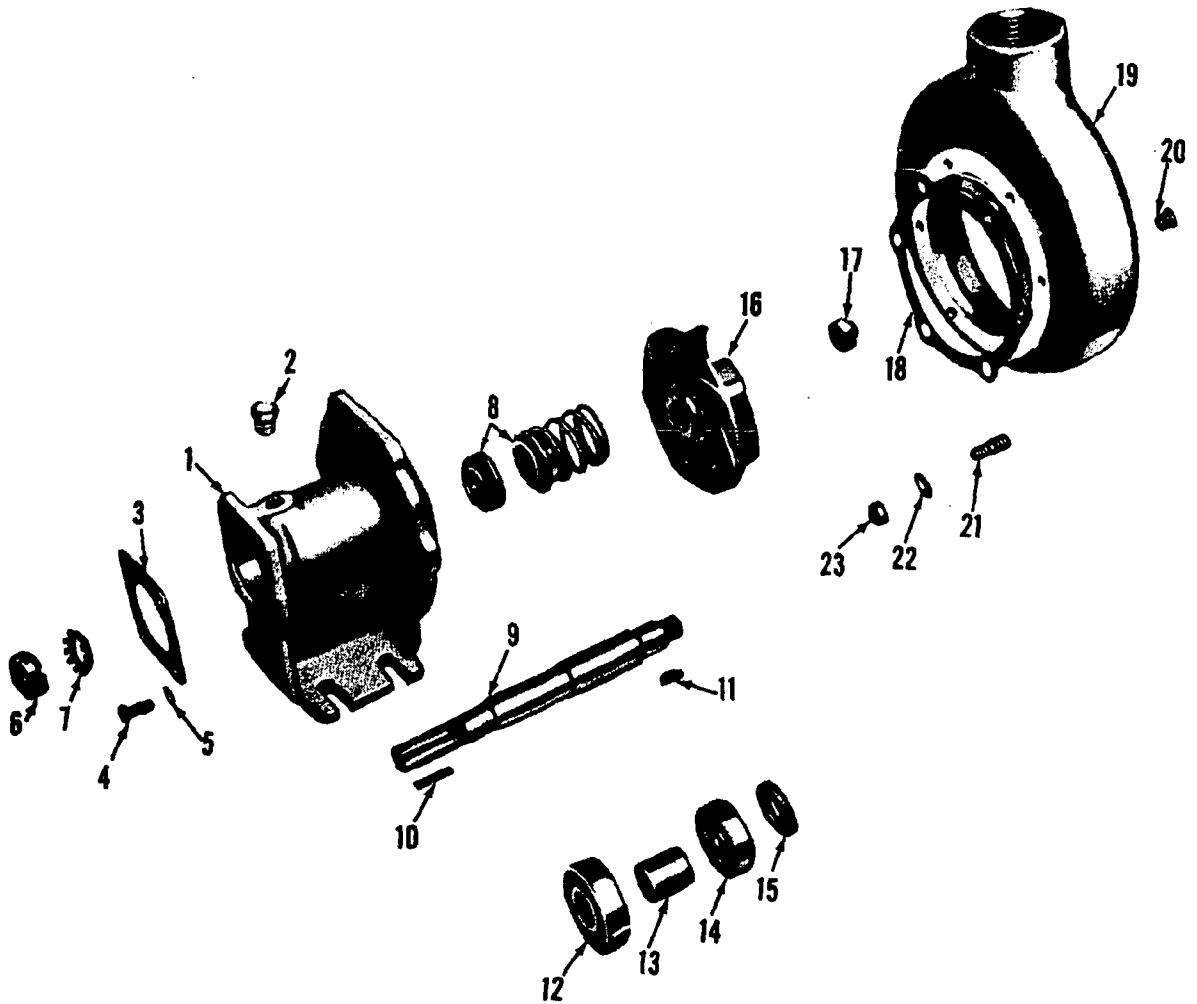


MANITOWOC ENGINEERING CO.

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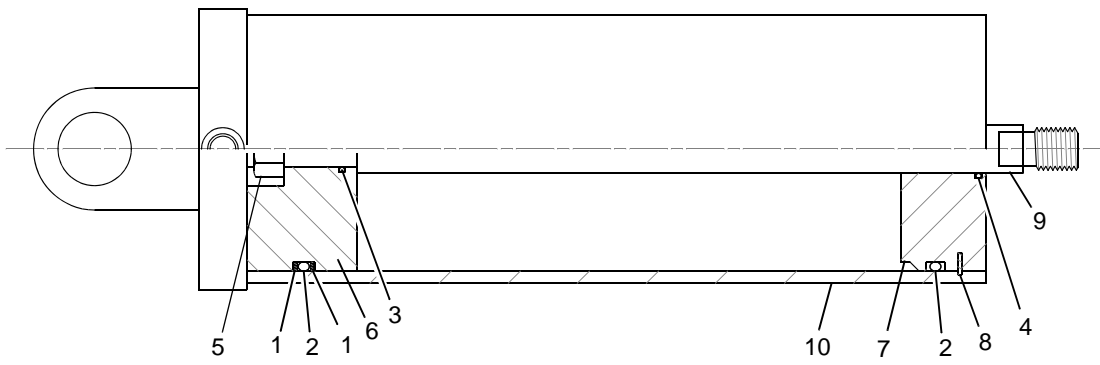
Manitowoc, Wisconsin

MASTER



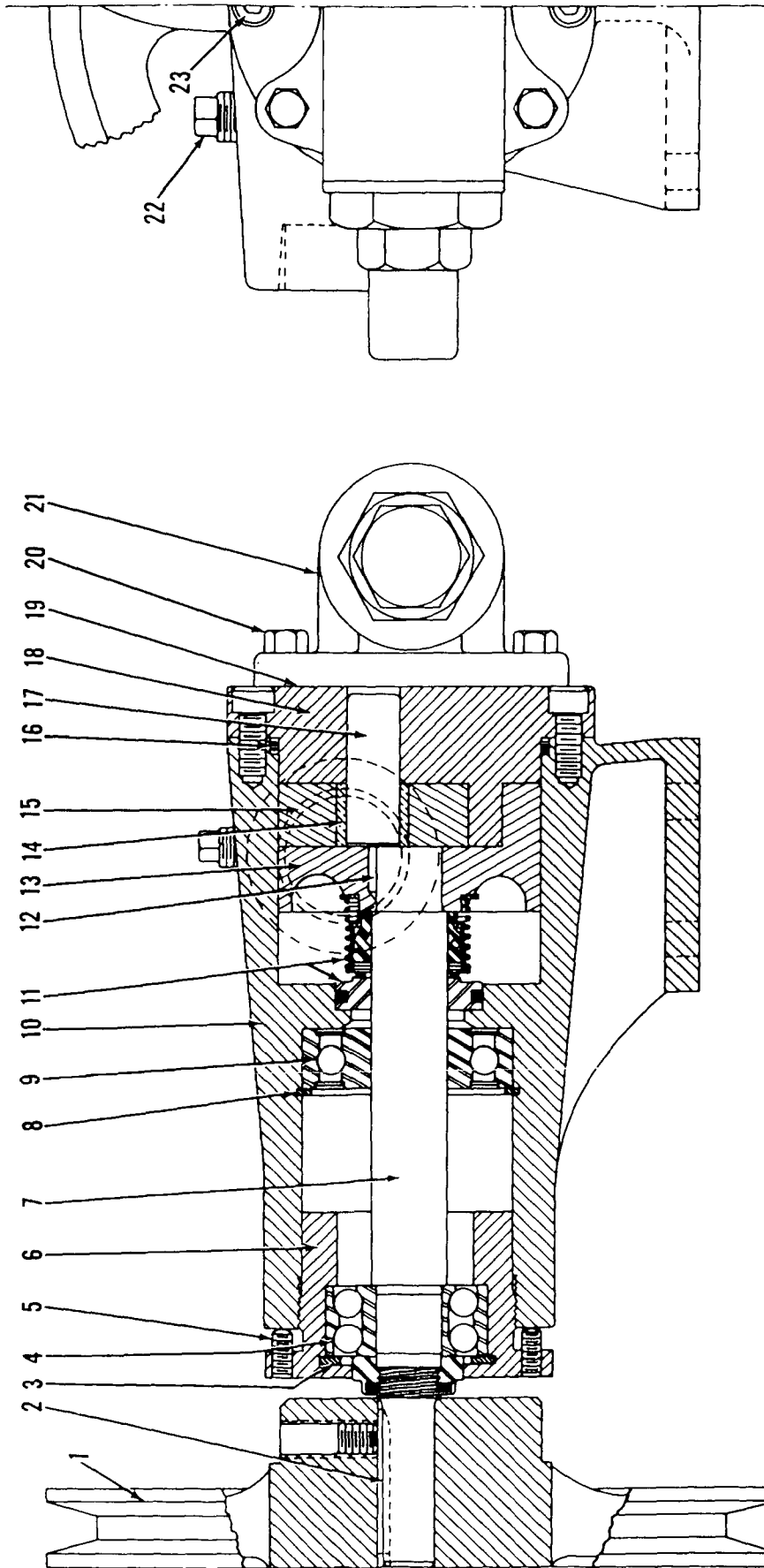
43051A6

MATERIAL LIST ON BACK



ASSEMBLY	REVISION
O-307	F

MASTER



4305187

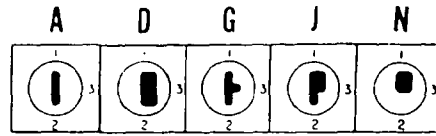
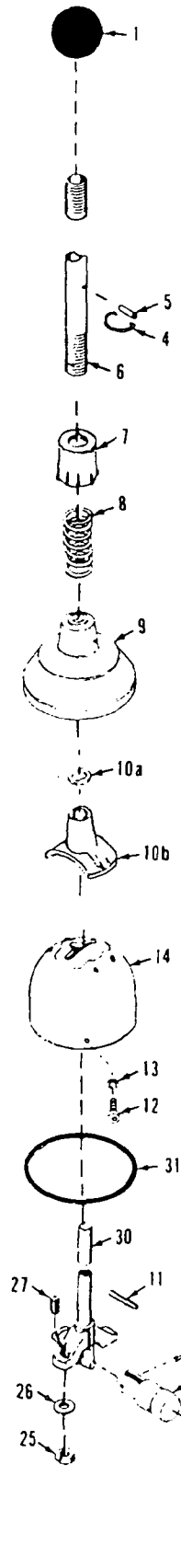
MATERIAL LIST ON BACK

OIL PUMP

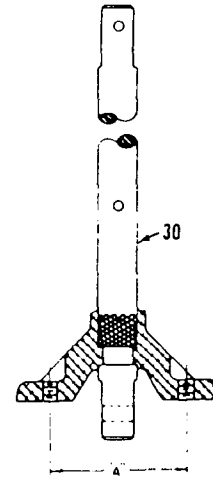
MANITOWOC ENGINEERING CO.

A Division of the Manitowoc Company, Inc.

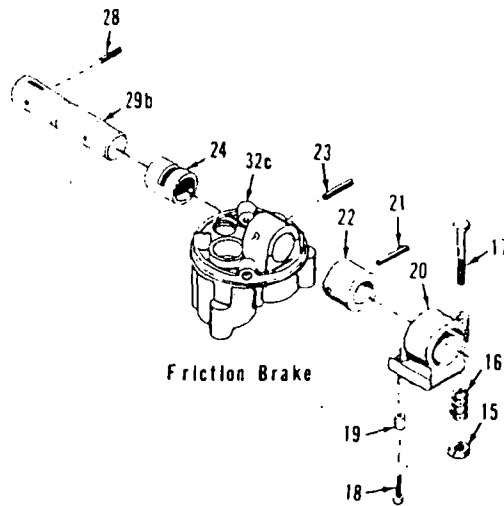
Manitowoc, Wisconsin



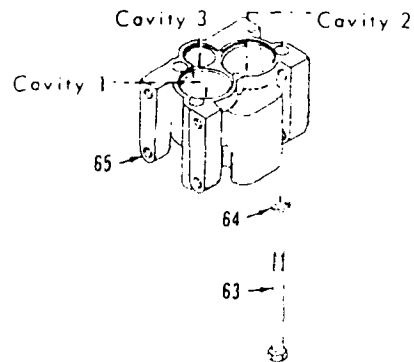
Handle Guide Inserts for Ref. No. 14



Yoke Spacing
Ref. No. 30



Friction Brake



0-441-2B

MATERIAL LIST ON BACK

FLEXAIR VALVE OPERATING MECHANISM

MODEL
ALL

CYLINDER, PUMP
Crawler Adjusting Jack
583136, 385177 or 385653 (see Note 1)

ITEM	PART #	QTY.	DESCRIPTION OF PART
4	NSS	1	BUSHING
11	NSS	1	GASKET
12	90022895	1	NUT
6	NSS	1	RING, Retaining
7	NSS	1	U-CUP
8	NSS	1	WASHER
9	90022897	1	BEARING, Rod
10	90022898	1	PLUNGER
11	NSS	1	GASKET
3	90022894	1	SCREW
5	90022896	1	SPRING
12	90022895	1	NUT
12	90022895	1	NUT
11	NSS	1	GASKET
13	90022899	1	RING, Stop
14	NSS	1	RING, Wiper
15	90022900	1	PROTECTOR, Thread
16	90022901	1	SADDLE
17	90022862	1	COUPLER, Half (female) High Flow
18	90022902	1	CAP, Dust
	90022861	1	COUPLER, Half (male) High Flow (not included - listed as reference only)
	90022903	1	KIT, Seal
2	NSS	1	PIN, Roll
6	NSS	1	RING, Retaining
7	NSS	1	U-CUP
8	NSS	1	WASHER
11	NSS	1	GASKET
14	NSS	1	RING, Wiper
JACK CYLINDER (385653) (see Page 3)			
1	NSS	1	HOUSING
2	9372220360	2	PISTON
3	9372220361	1	NUT, Retaining
5	9372220362	1	RING, Retaining
6	9372220363	1	RING, Bearing
8	9372220364	1	SCREW
9	9364220155	1	COUPLING, Half (female) High Flow
	9364220154	1	COUPLING, Half (male) High Flow (not included - listed as reference only)
10	9372220366	1	LOAD CAP ASSEMBLY
11	9372220367	1	SPRING
12	9372220368	1	NUT, Cap
13	9372220369		GASKET
14	9372220370	1	SCREW
15	9372220371	1	BUSHING
16	9372220372	2	PLUG
17	9372220373	1	PROTECTOR, Thread

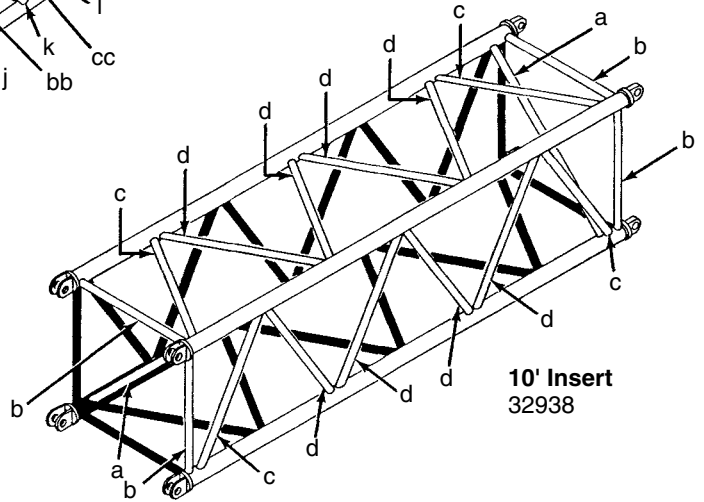
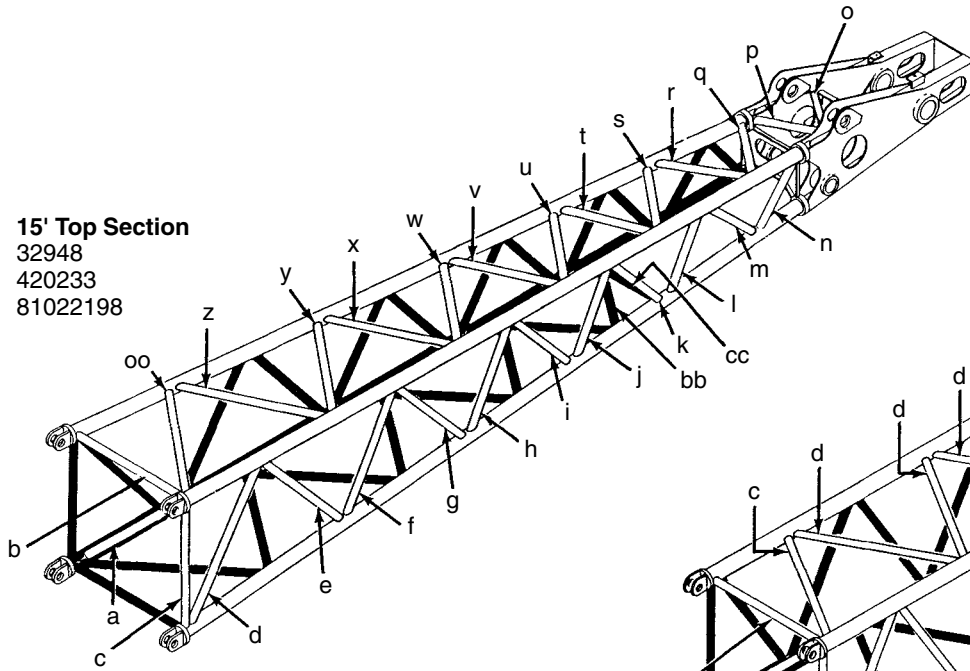
PLEASE GIVE MACHINE SERIAL NUMBER WITH ORDER

ASSEMBLY O-471	REVISION E
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#123 - 123A Jib

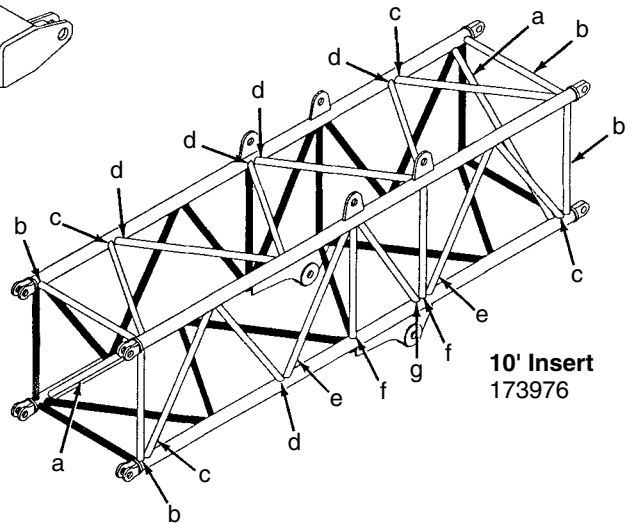
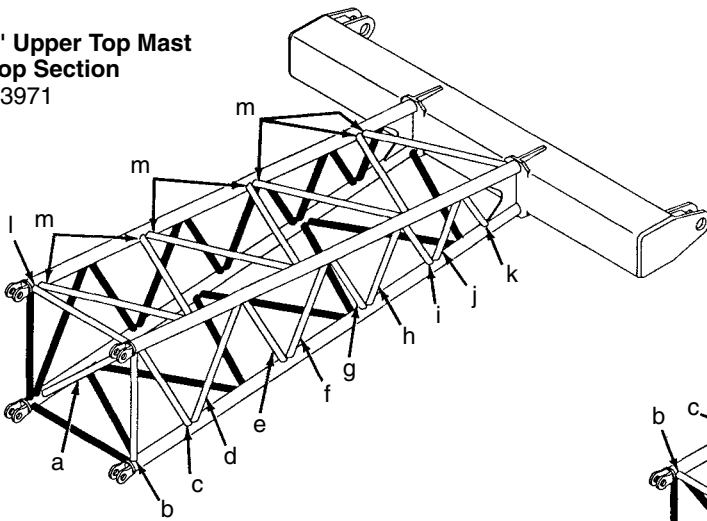
Opposite lacings (black) same unless noted.

15' Top Section
32948
420233
81022198



10' Insert
32938

10' Upper Top Mast Stop Section
173971



10' Insert
173976

ASSEMBLY	REVISION
O-512	C

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