



TRADITIONAL CRANE PARTS MANUAL

This manual has been prepared for and is considered part of

3900W

Model

395047

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

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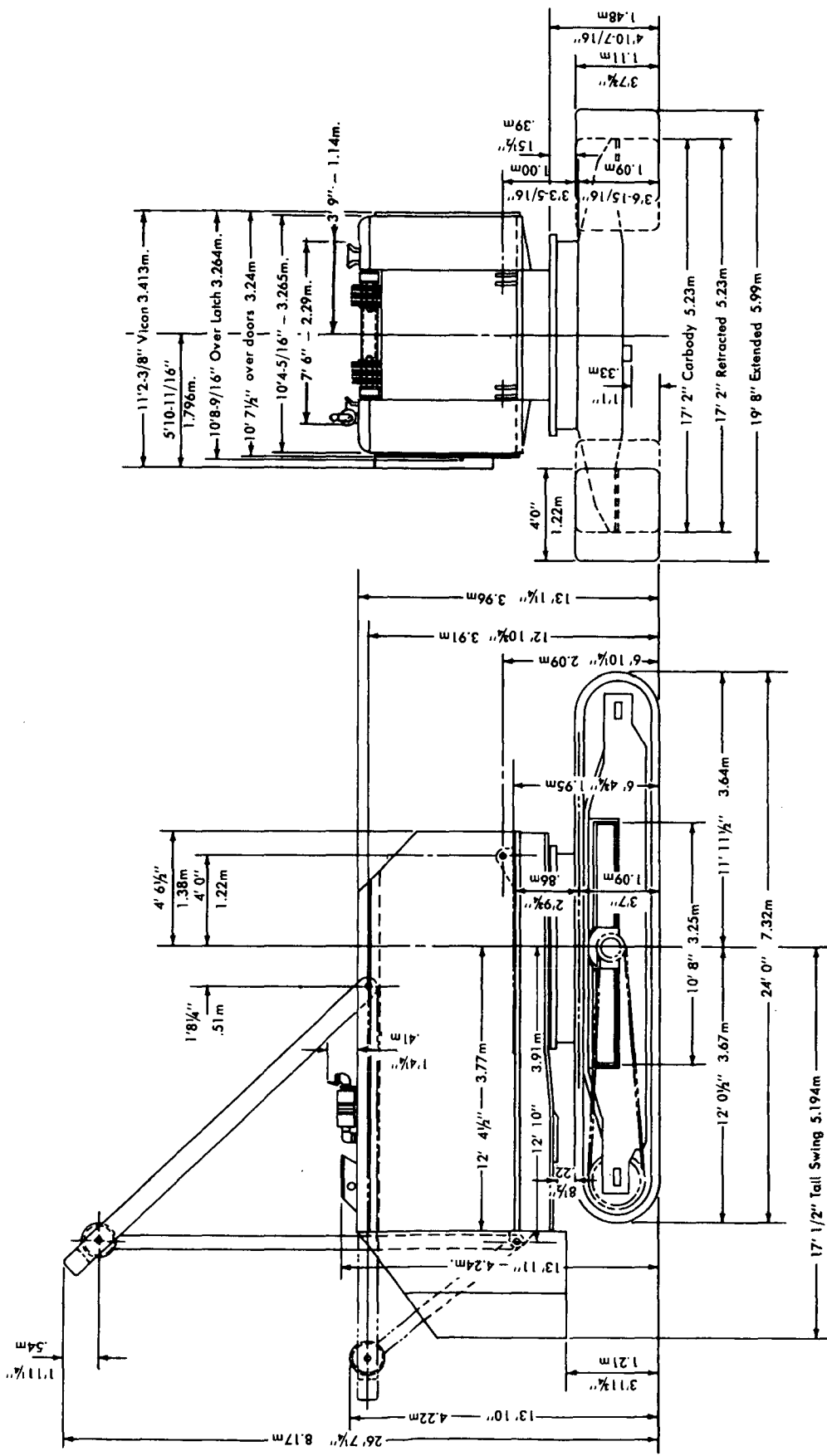
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Manitowoc, Wisconsin

MASTER



2-3-72
12-29-71
12-7-70
9-21-70
9-9-69
7-1-68
8-3-66

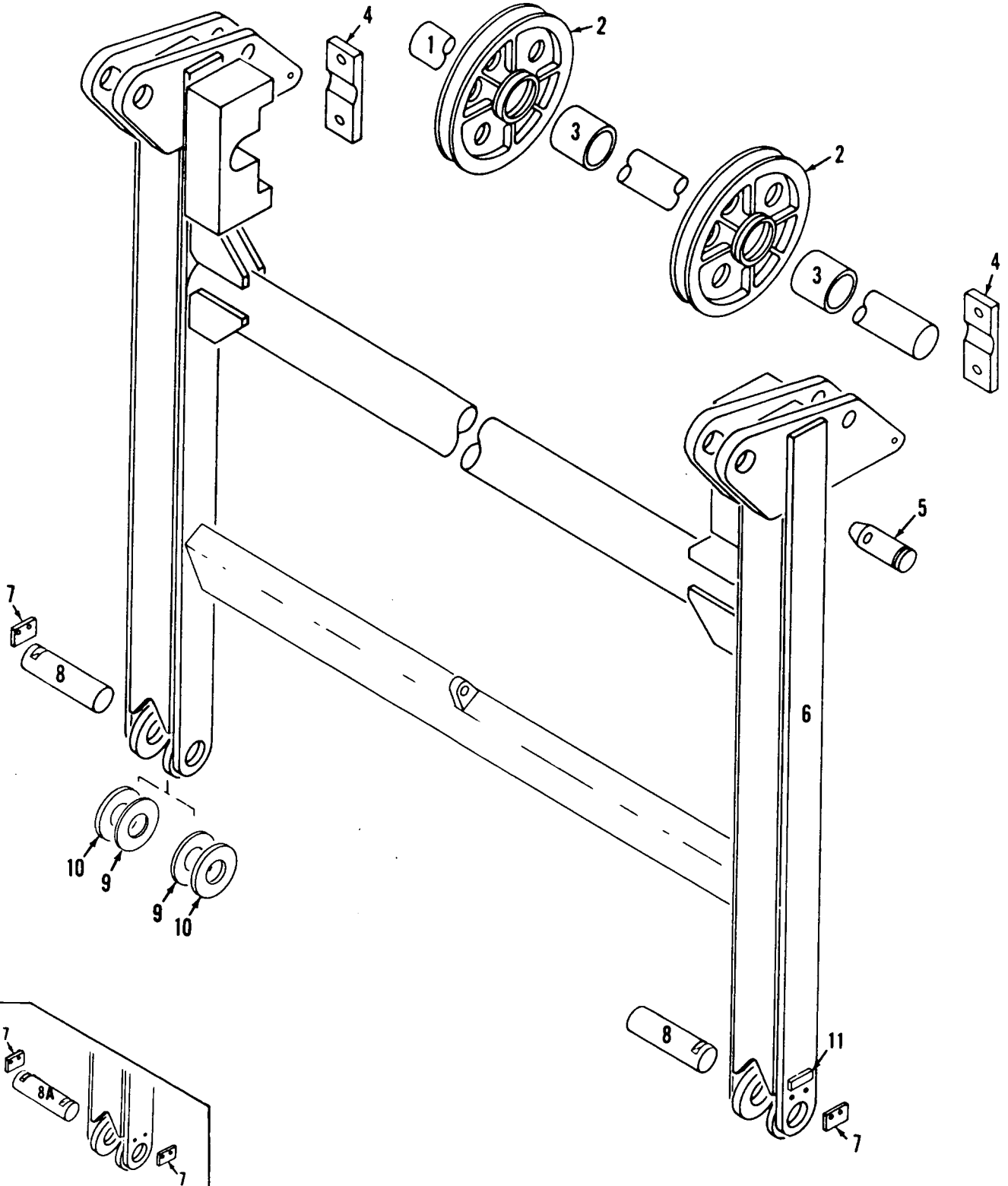
DRWG. DATE 11-24-65

90509

M3900W

OUTLINE DIMENSIONS

90506



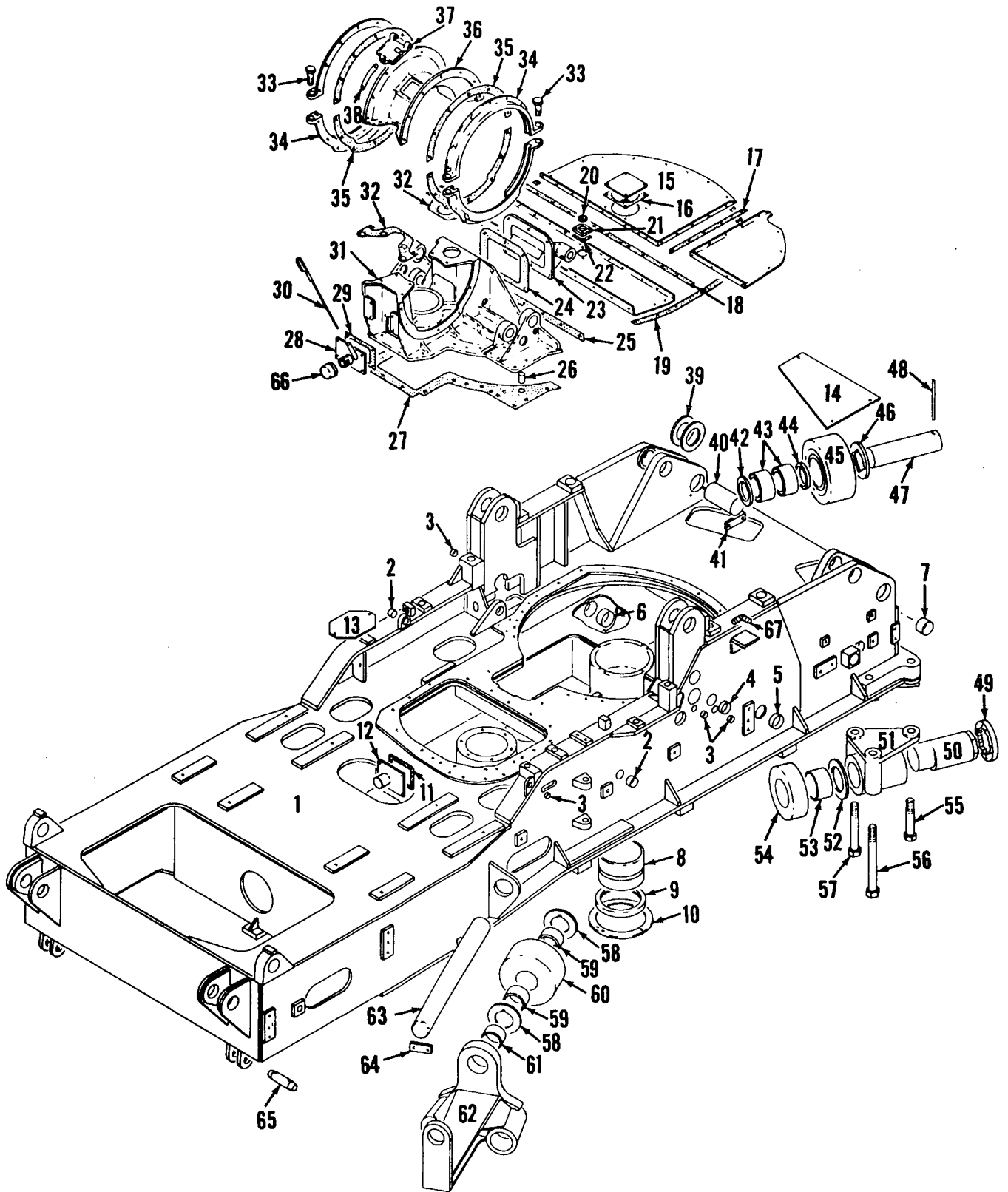
MAHYER

3352781

MATERIAL LIST ON BACK

Cab Rear Support

MANITOWOC



43705-1 Cont	REV. H	MODEL VICON 3900W
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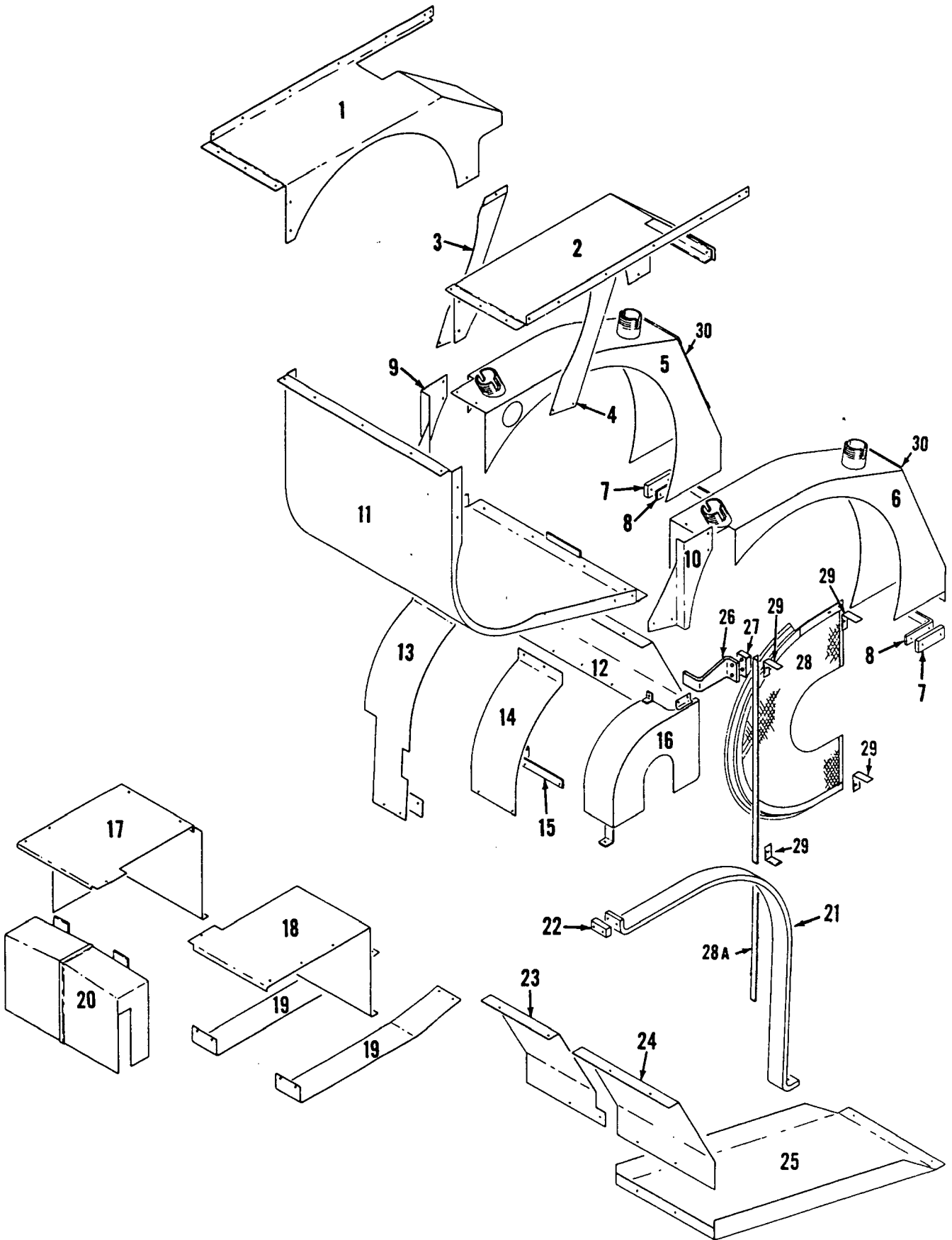
PLATFORM

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
			<p>Note 1: Ref. Nos. 22, 23, 30, 31, 32, 33 not used W/catwalk. Ref. Nos. 22, 30 not used W/Front Step, Front Service Walk or Elev. Operator's Station.</p> <p>Note 2: Support #190363 used W/left pedal for Front Drum Brake, and right pedal for Rear Aux. Drum Brake. Support #31999 used W/left pedal for Rear Aux. Drum Brake and right pedal for Front Drum Brake.</p>	

MASTER

REV. H	43705 - 1
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MASTER



43870E1

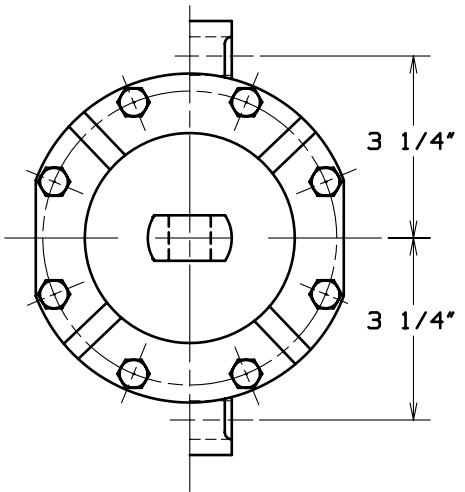
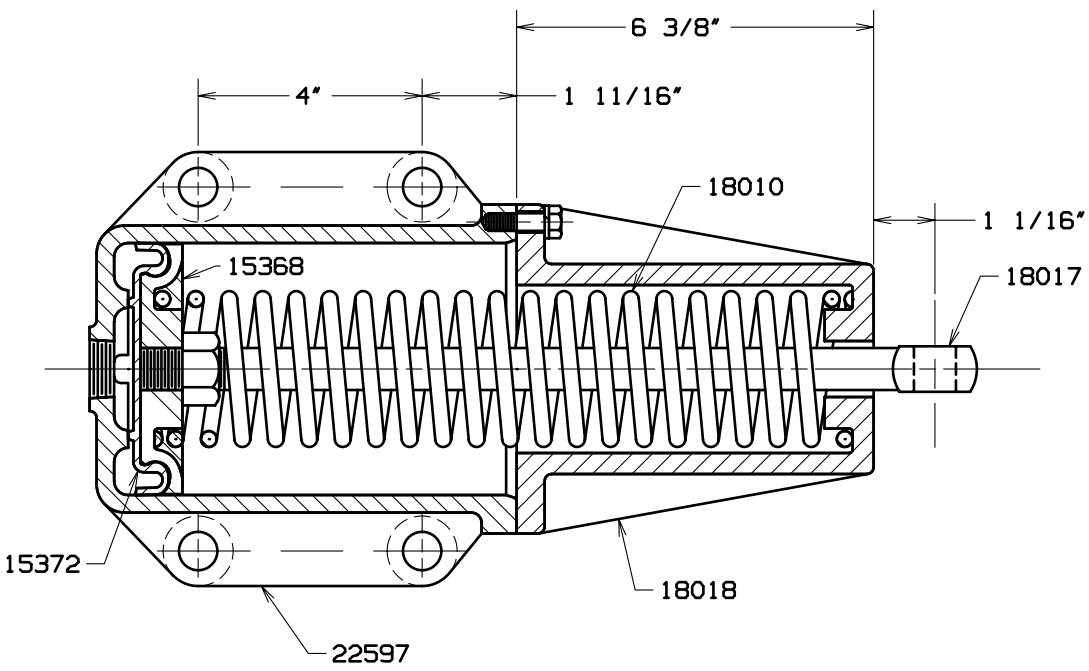
BILL OF MATERIAL							
ITEM NO.	NO. RECD	SECTION	DESCRIPTION	LENGTH		MATERIAL	CODE NO. OR DMS. NO.
				FT.	IN.		
	1		PISTON				15368
	1		PACKING CUP				15372
A	1		SPRING				18010
C	1		PISTON ROD				18017
E	1		COVER				18018
	1		AIR CYLINDER				22597

ASSEMBLIES USED ON	
41461	49401
41566	49872
41702	65643
42348	
42607	
43990	
43975	
48437	
48463	
50865	

REVISIONS

10-22-52
 A WAS 2624
 E WAS 17938
 C WAS 17939

10-8-81 RVP
 REDRAW CADAM
 CK NJK
 APP TLP



SCALE = 1"
 DR. DOS
 CK. JK
 APP

DMS. NO. 22596

Manitowoc Cranes, Inc.
 Manitowoc, Wisconsin

MODEL 3900

4 1/2" X 6" AIR
 CYLINDER ASSEMBLY
 WITH SNAP ON
 PACKING CUP

DATE
 9-3-52

PATTERN NO.

DMS. NO.
 22596

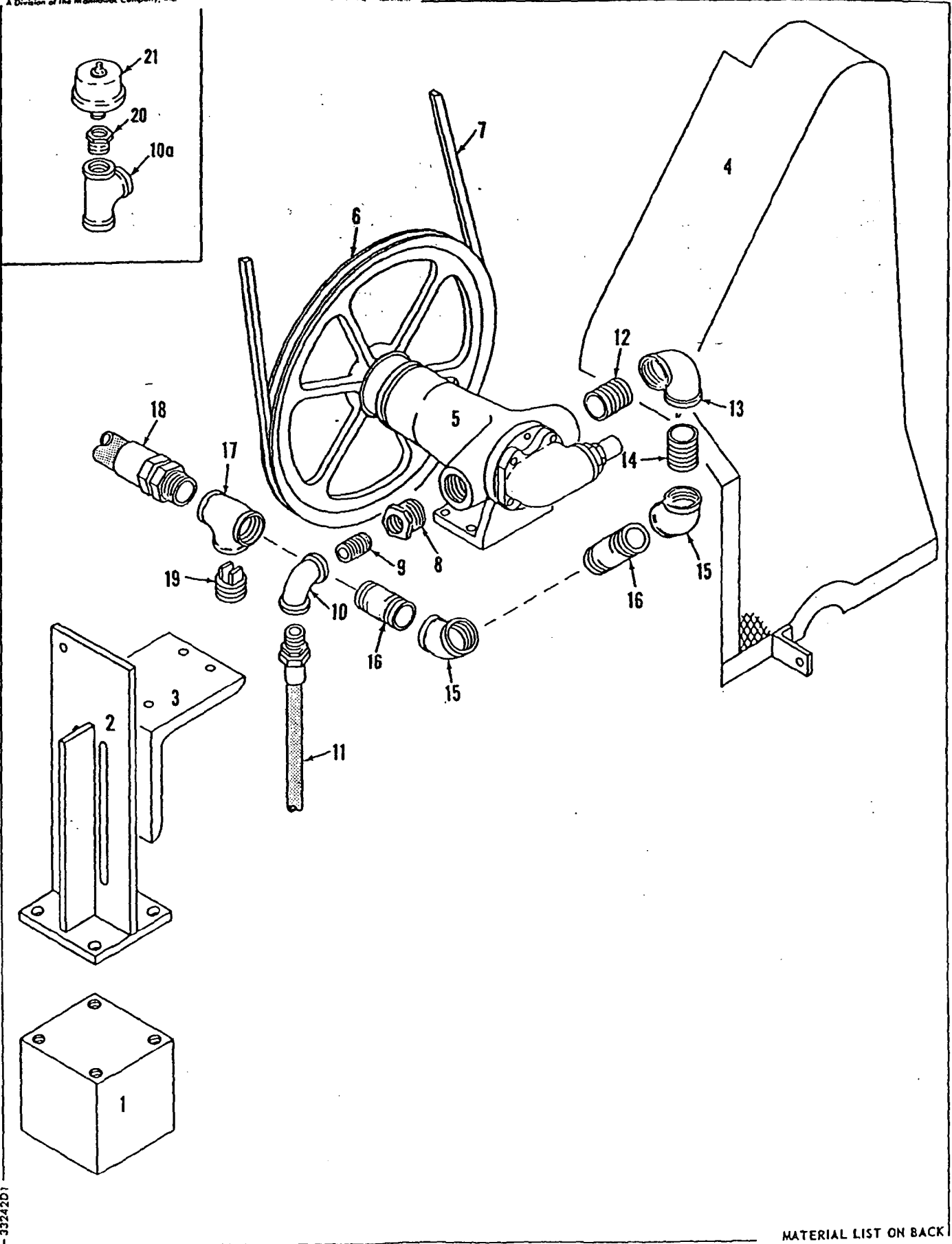
DO NOT SCALE THIS DRAWING

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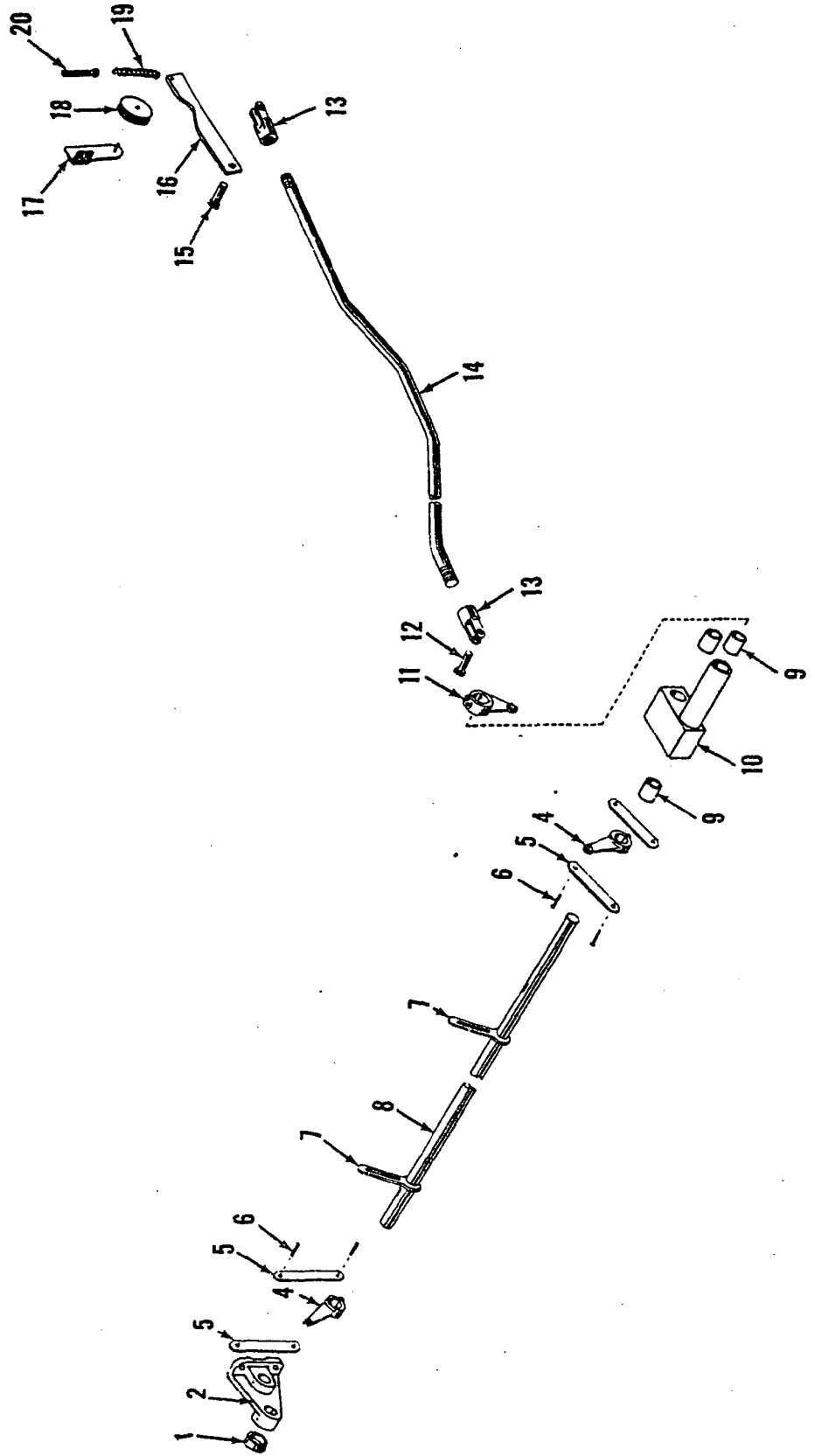
MASTER



3324201

MATERIAL LIST ON BACK

OIL PUMP

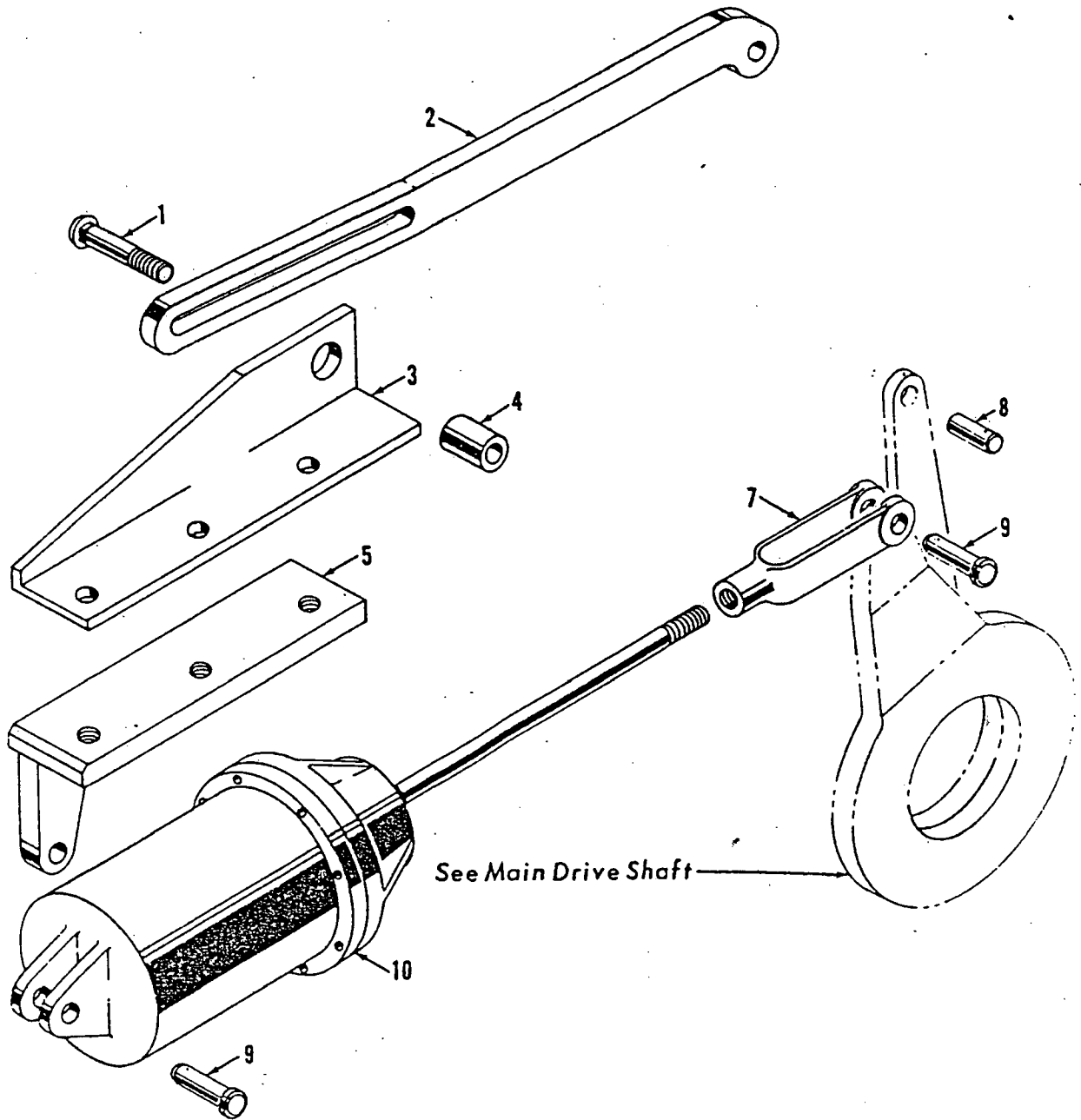


MASTER

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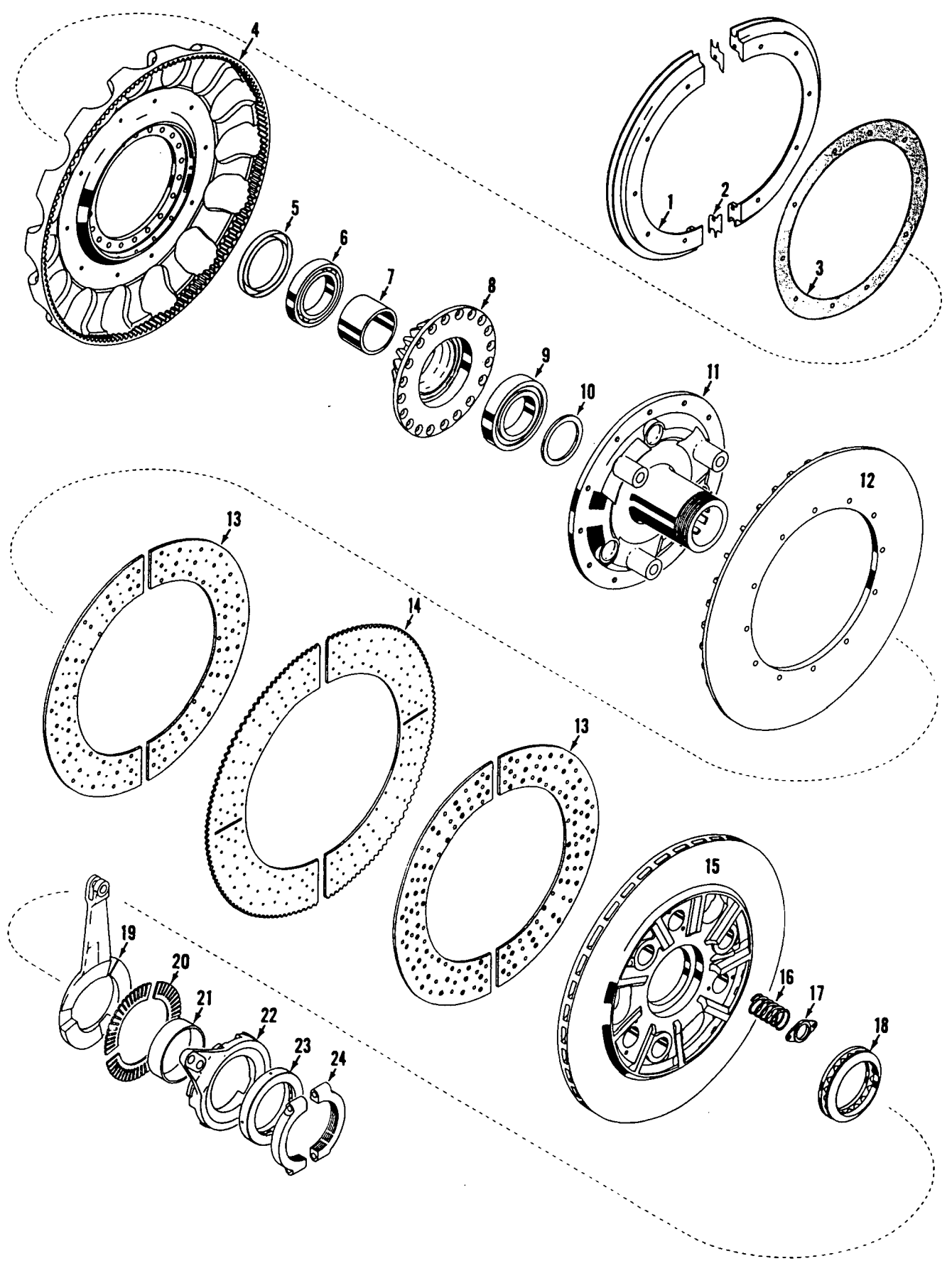
Manitowoc, Wisconsin



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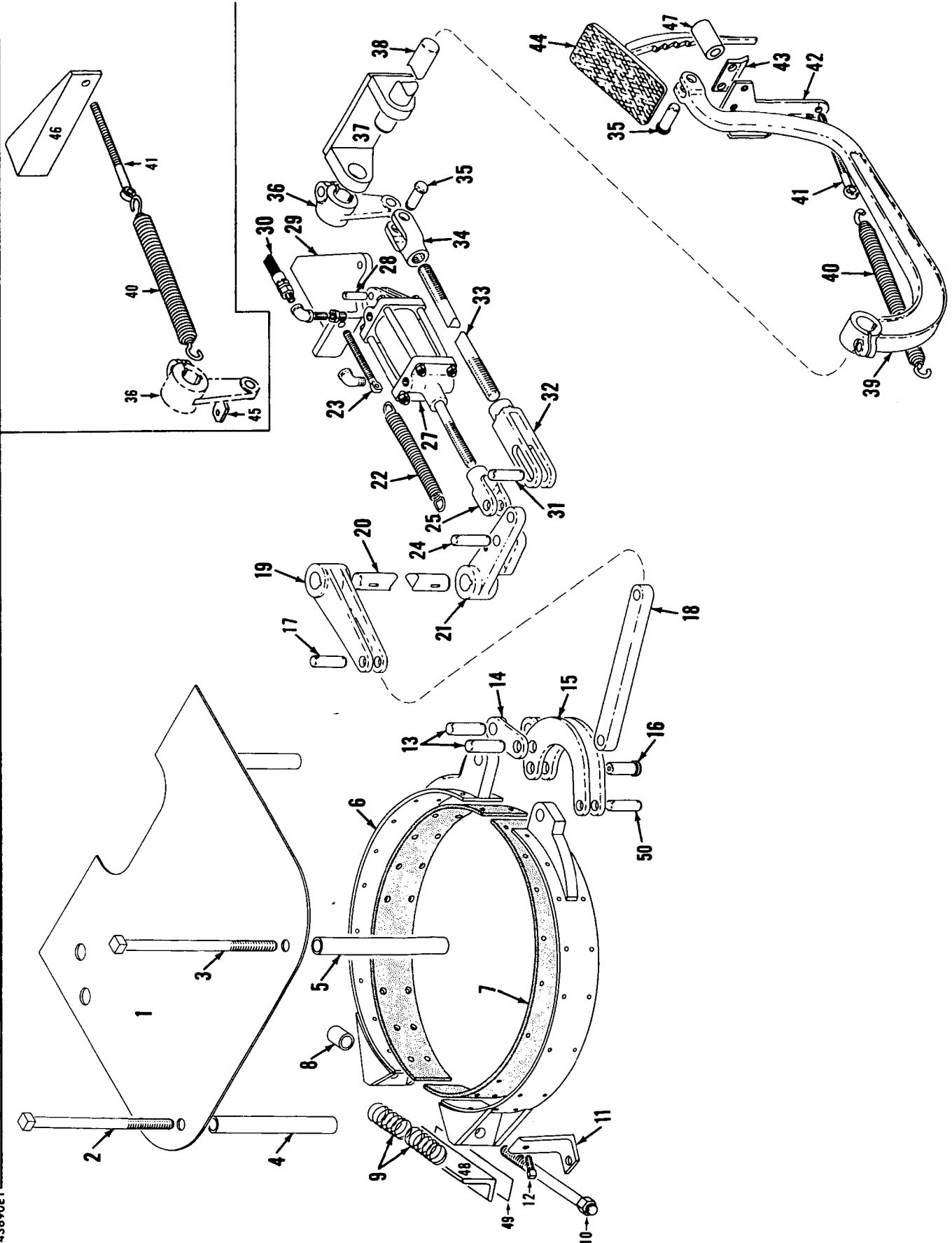


43132A2

MATERIAL LIST ON BACK

MAIN DRIVE CLUTCH

MASTER



43690E1

MATERIAL LIST ON BACK

SWING BRAKE CONTROL

43713-1 Cont.	REV. E	MODEL 3900 W
---------------	--------	--------------

RIGHT DRUM BRAKE
(MANUAL)

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.		
49	140199	2	PIN w/cotter pins and flatwashers			
50	145659	1	ROLLER, Guide			
<p><u>NOTE 1:</u> Mach. w/remote greasing, delete Ref. Nos. 30, 31.</p> <p><u>NOTE 2:</u> Use washers #144434 and #144435 to center band on brake flange.</p>						
				<table border="1"> <tr> <td>REV. E</td> <td>43713 - 1</td> </tr> </table>	REV. E	43713 - 1
REV. E	43713 - 1					

PLEASE GIVE MACHINE S/N W/ORDER

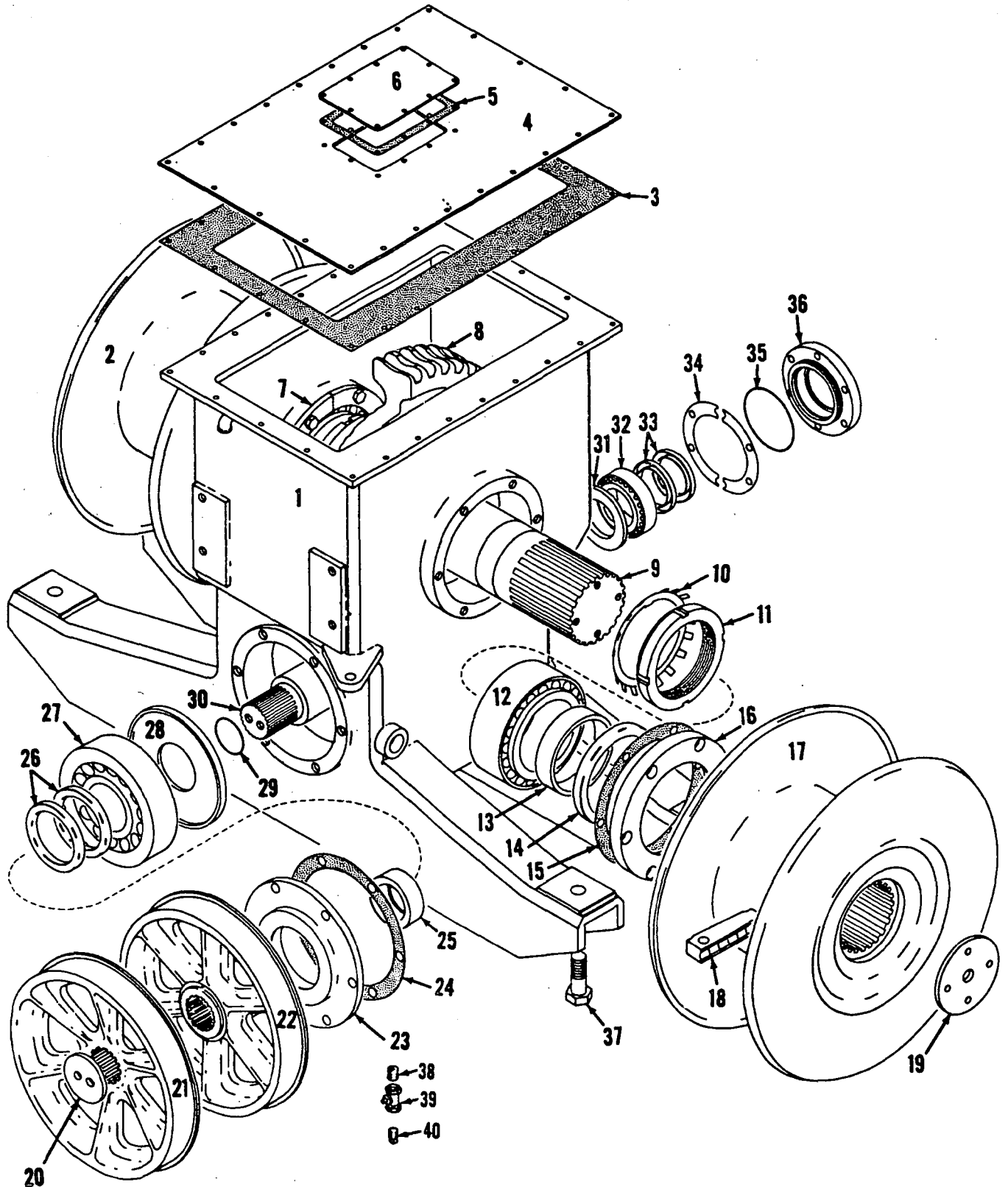
Run as Front
MASTER

43713 E1 Cont.

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4824981

MATERIAL LIST ON BACK

BOOM HOIST

50464-1 Cont.	REV. G	MODEL 3900W
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REAR AUX. DRUM CONTROL

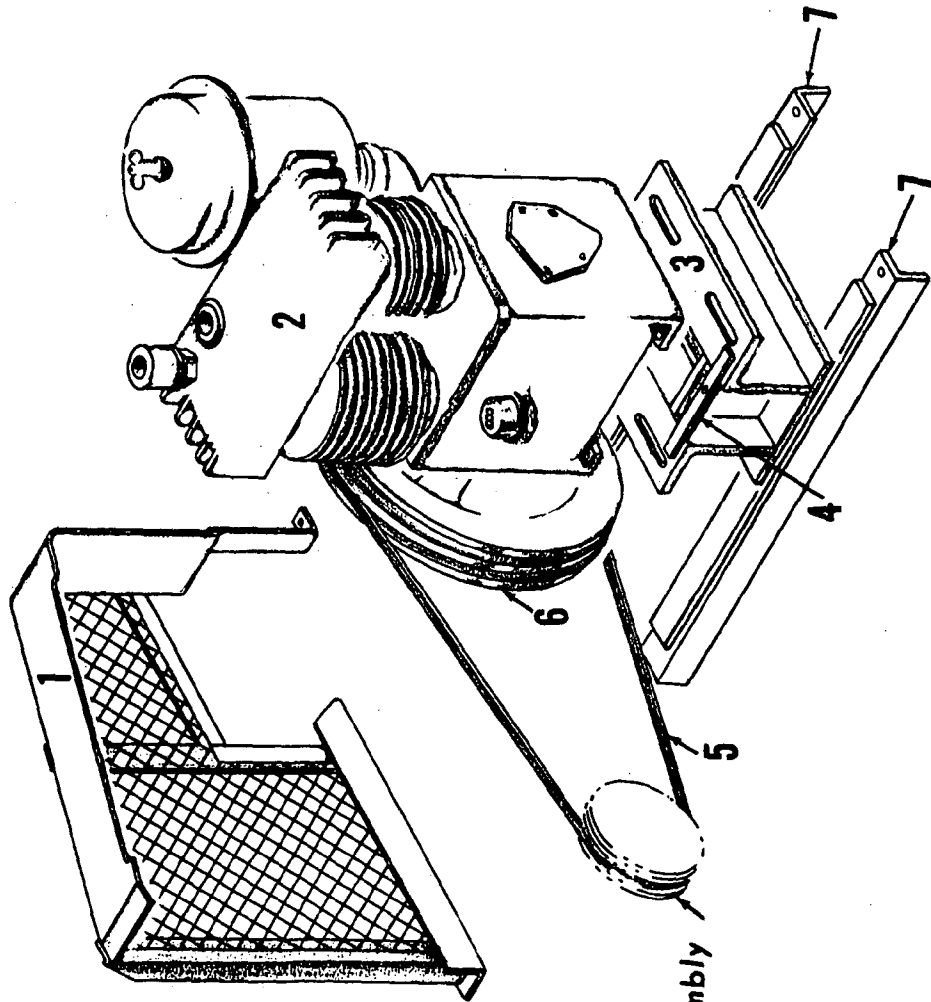
REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
46	140197	2	PIN W/cotter pin	
48	79563	1	ROD, Reach W/hex nuts (47½" long - offset) (See note 1)	
48	77370	1	ROD, Reach W/hex nuts (49-3/8" long - straight)	
49	79562	1	SHAFT, W/woodruff keys	
50	72695	1	LEVER W/capscrew, hex nut and lockwasher	
51	72691	1	LEVER, Hand W/capscrew, hex nut and lockwasher	
52	358131	2	COLLAR, Set	
53	72693	2	SUPPORT, Shaft	
54	72692	1	STOP, Lever W/capscrew, hex nut and lockwasher	
55	73690	1	END, Rod (See note 3)	
56	1657	1	SPRING (See note 3)	
<p>NOTE 1: Rod #79563 replaces rod #77370 per design change of 1-10-68.</p> <p>NOTE 2: Bushings added to lever #77285 per design change of 4-1-68.</p> <p>NOTE 3: Ref. #56 added and Ref. #55 changed from #10227 per design change of Jan. 9, 1975.</p>				
			#0-71, 0-313, 181543	
				REV. G 50464 - 1

PLEASE GIVE MACHINE S/N W/ORDER

Run as front

50464 G1 Cont.

MASTER



See Power Plant Assembly

MATERIAL LIST ON BACK

COMPRESSOR ASSEMBLY

41994 A1

41994A1

42953-1 Cont.	REV. E	MODEL VICON 3000-4000 Incl.
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VALVE BOARD
(4 VALVE BOARD - 5 VALVE SPECIAL)

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
34	73779	As Reqd	SPACER (½" thickness)	
35	73279	2	CLAMP, Manifold	
36	73780	As Reqd	SPACER (1" thickness)	
37	73335	1	BRACKET, Valve W/capscrews, hex nuts and lockwashers	
38	17854	1	MANIFOLD, Air	
39	32592	1	SUPPORT W/capscrews, hex nuts and lockwashers	
40	73336	2	SUPPORT W/capscrews, hex nuts and lockwashers	
41	70188	1	HOSE, Flex (9'4" long - 2.845 m)	
42	3603	1	HOSE, Flex (3'6" long - 1.066m)	
43	73366	1	BRACKET W/capscrews, hex nuts and lockwashers (W/filter and injector)	
44	73368	1	CLAMP W/capscrews, hex nuts and lockwashers	
45	511111	1	INJECTOR, Alcohol (Optional) (Norgren)	
46	427066	1	FILTER, Air (Watts)	
47	15054	1	HOSE, Flex (3'4" long - 1.016m)	
48	79017	1	BRACKET W/capscrews, hex nuts and lockwashers (W/filter only)	
49	667227	2	STRAP, Pipe	
			<u>MACH. W/RELAY STYLE BOOM HOIST CONTROL</u>	
51	79084	2	BRACKET, Valve W/capscrews, hex nuts and lockwashers	
52	703909	2	VALVE, Relay	
			<u>MACH. #39798 AND #39803 ADD:</u> (Mounted Between Ref. Nos. 17 and 20)	
53	136334	1	BRACKET, Valve W/capscrews and lockwashers	
54	136335	1	SPACER	
55	714474	1	VALVE, Aux. Third Drum Control	
			<u>INSTALLATION PRIOR TO DESIGN CHANGE 6-12-67</u>	
50	427069	1	FILTER AND LUBRICATOR (Watts)	
			<u>HOSE LIST FOR PRIOR INSTALLATION</u>	
	15610		HOSE, Flex (5'6" long - 1.676m)	
	15914		HOSE, Flex (4'9" long - 1.448m)	
	15099		HOSE, Flex (2'0" long - .610m)	
	3412		HOSE, Flex (10½" long - .267m)	
	17848		HOSE, Flex (12½" long - .318m)	
			Sheets #0-69, 0-96, 0-117B, 0-147, 0-441, 0-294 and 0-176 or 0-289 W/0-290 (33895, 180093)	
				REV. E 42953 - 1

PLEASE GIVE MACHINE S/N W/ORDER

MASTER

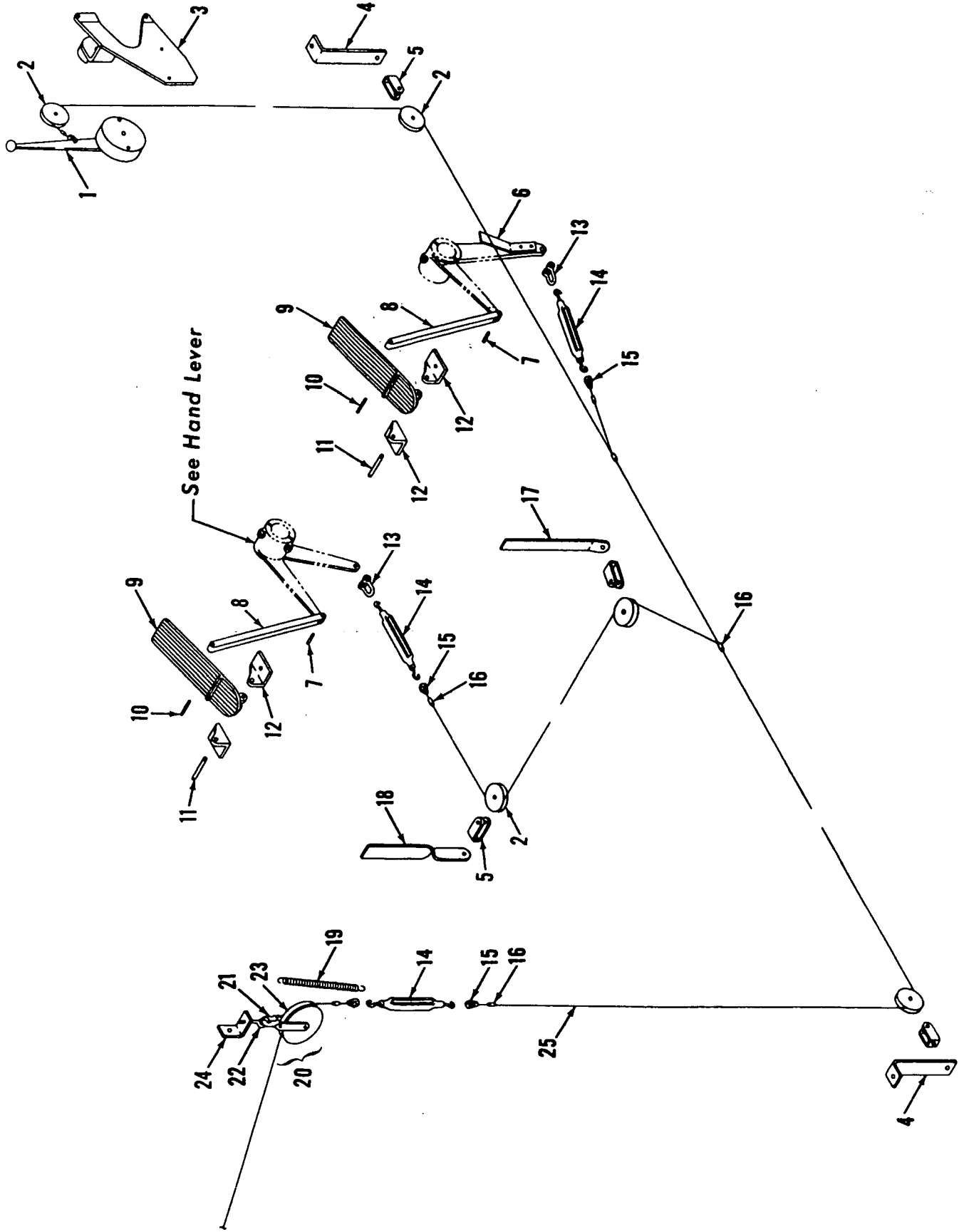
run as front

42953 E1 cont'd.

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MASTER

324 A1

MATERIAL LIST ON BACK

ENGINE CONTROL

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MODEL

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

TRANSMISSION CASE (VICON MACHINE)

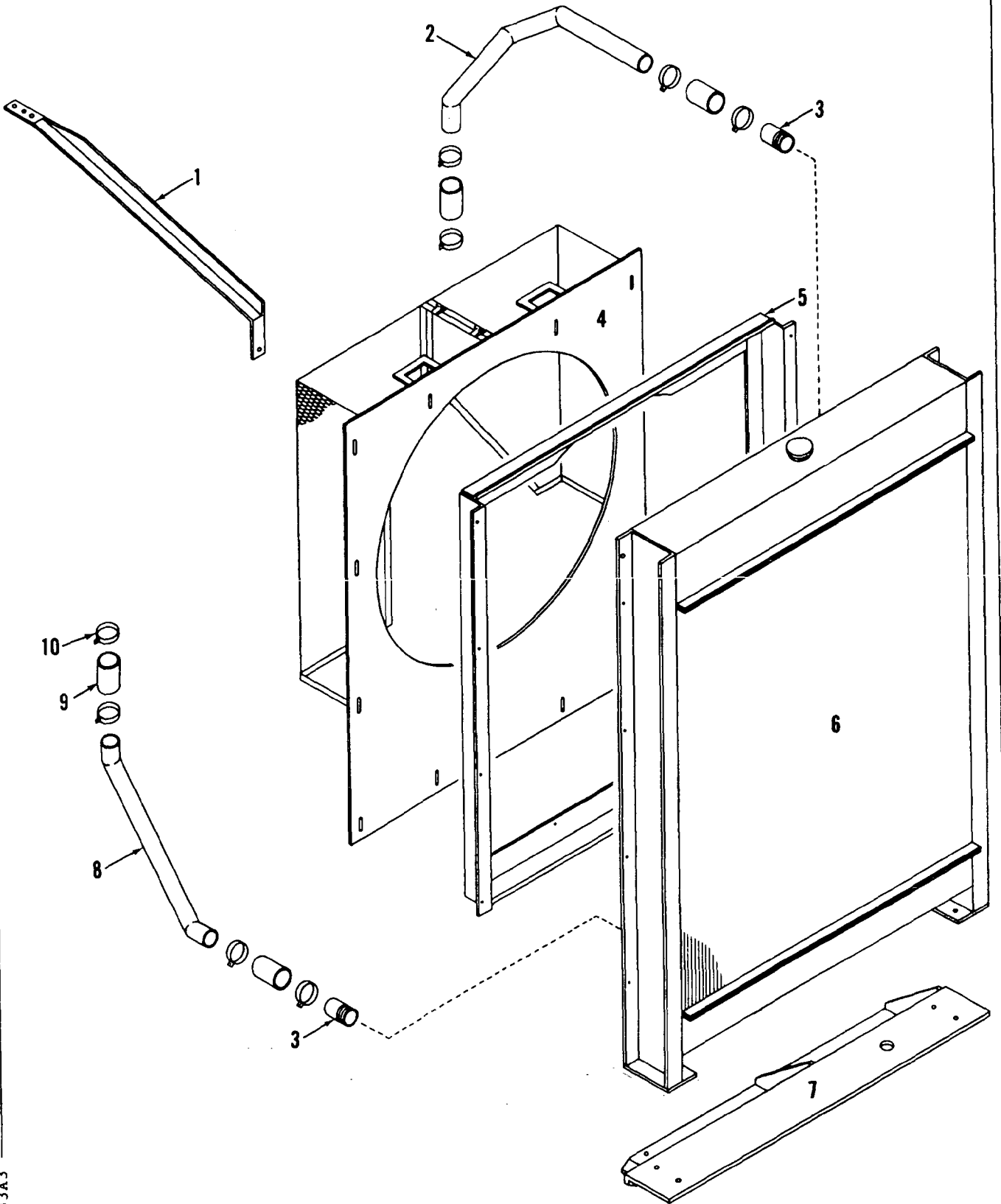
ITEM	PART #	QTY.	DESCRIPTION OF PART
			<p><u>Note 3</u> For machines with electric drive, delete Ref. #26-27 above and add:</p>
26	352022	1	SPIDER, Drive
27	352021	1	RING, Drive
	352715	26	BLOCK, Rubber (not shown)
			<p><u>Note 4</u> Clean splines of shafts and sprockets thoroughly with Loctite Safety Solvent (MEC 622296). Apply Loctite Retaining Compound #620 (MEC 622285) to engine shaft and converter input shafts. Allow to cure 24 hours.</p>
			<p style="text-align: center;">PLEASE GIVE MACHINE SERIAL NUMBER WITH ORDER</p>

ASSEMBLY	PAGE	REV.
42749	3 of 3	P-1

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43233A3

MATERIAL LIST ON BACK

RADIATOR

43894-5 Cont.	REV. A	MODEL 3900W-4000W
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LUBRICATION PIPING

MASTER

Run as Front

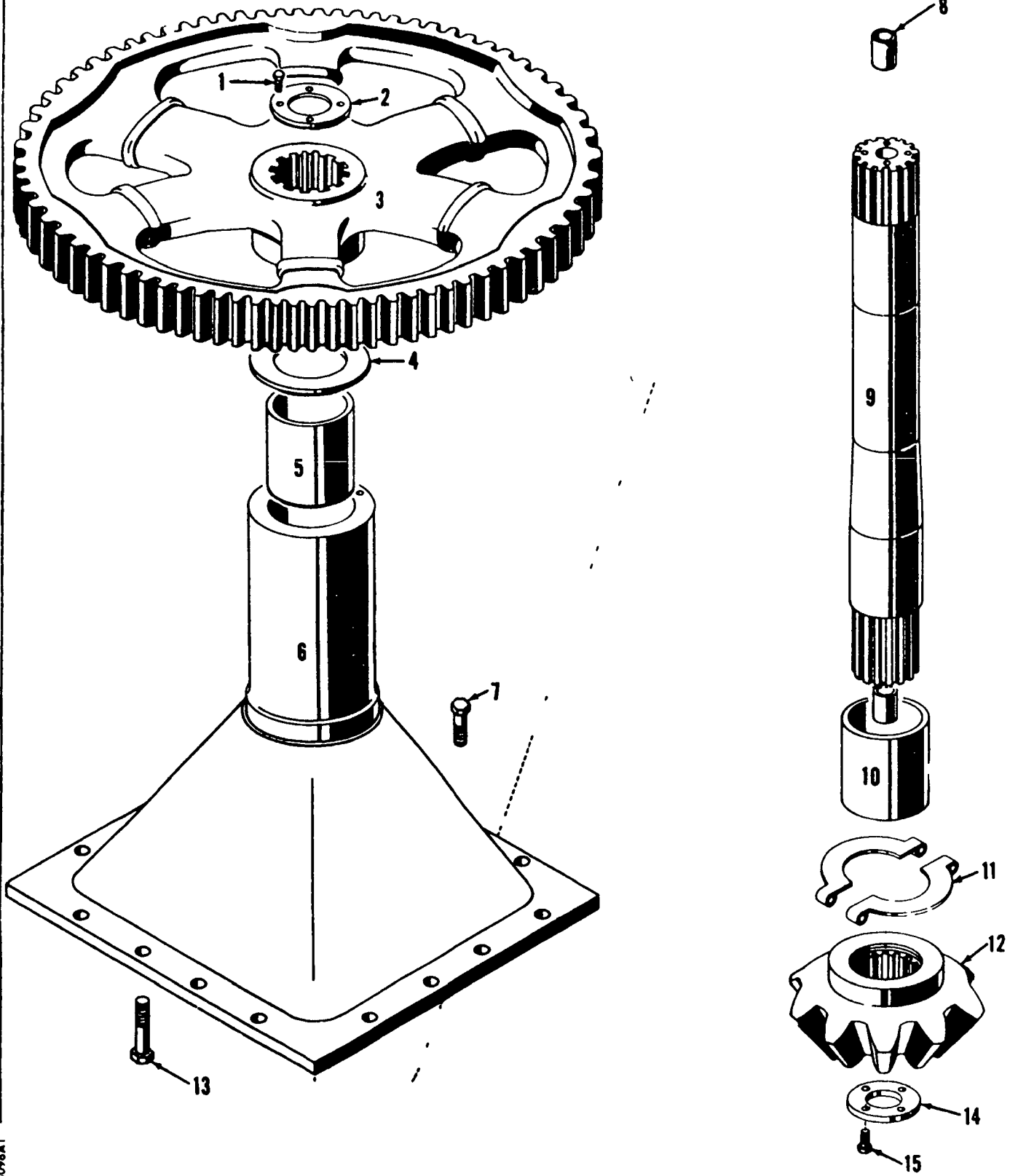
43894 A5 Cont'd.

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
50	429555	1	MACHINES W/OUT OIL TRAP UNDER PUMP	
51	571705	1	UNION, 90° Swivel Adapter (1" Male NPT 1" Female NPSM) MACHINES W/OUT FORCED OIL LUBRICATION TO CONVERTERS PLUG (1")	
52	427090	1	FILTERS WITH 3/4" NPT PORTS	
53	73396	1	FILTER, Oil (3/4" NPT Ports)	
54	543740	1	BRACKET W/mach. screws, hex nuts and lockwashers	
55	679304	1	NIPPLE (3/4" x 1 1/2")	
56	288751	1	TEE (3/4")	
57	543402	2	BUSHING (3/4" x 1/4")	
58	406952	2	NIPPLE, Close (1/2") ELBOW (1/2")	
NOTE: For machines W/out alarm system, omit Ref. #27 and one Ref. #15.				
			#0-147	
				REV. A 43894 - 5

PARTS MANUAL ALPHABETICAL INDEX
Group E - Lower Structure & Control

DESCRIPTION	PUBLICATION	REV	START DATE	END DATE	GROUP
Carbody	43593	H1	07/09/65	01/24/84	E0101
Carbody Lubrication Piping	32233	B1	08/07/59	08/03/83	E0102
Crawlers	43654	K1	07/02/65	01/15/86	E0201
Horizontal Travel Shaft	33294	A1	06/30/65	02/23/66	E0401
King Pin & Vertical Travel Shaft	33098	E1	08/21/64	10/21/81	E0301
Steering Control	20729	A1	05/14/41		E0501
Steering Control	42396	C2	05/11/59	07/07/81	E0501
Steering Control	42396	E1	06/15/60	01/24/84	E0501
Travel Lock Control	31743	H1	07/12/56	04/24/69	E0601

MASTER



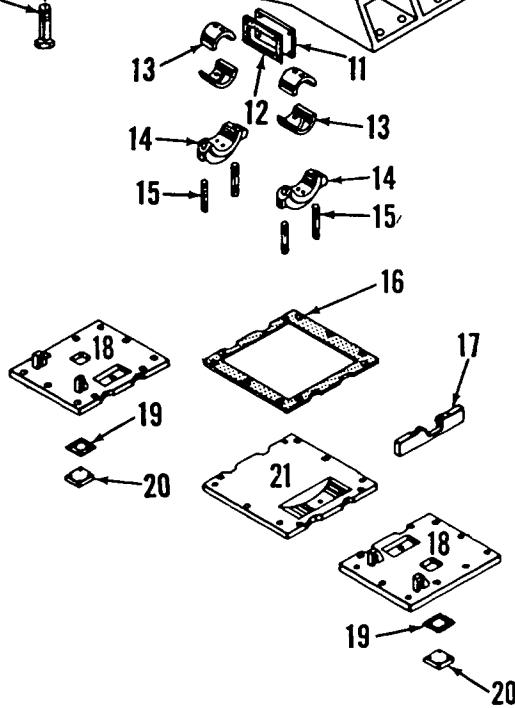
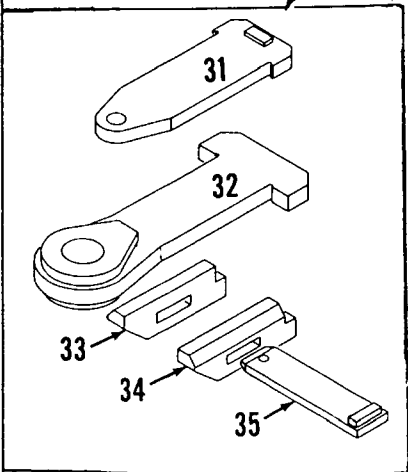
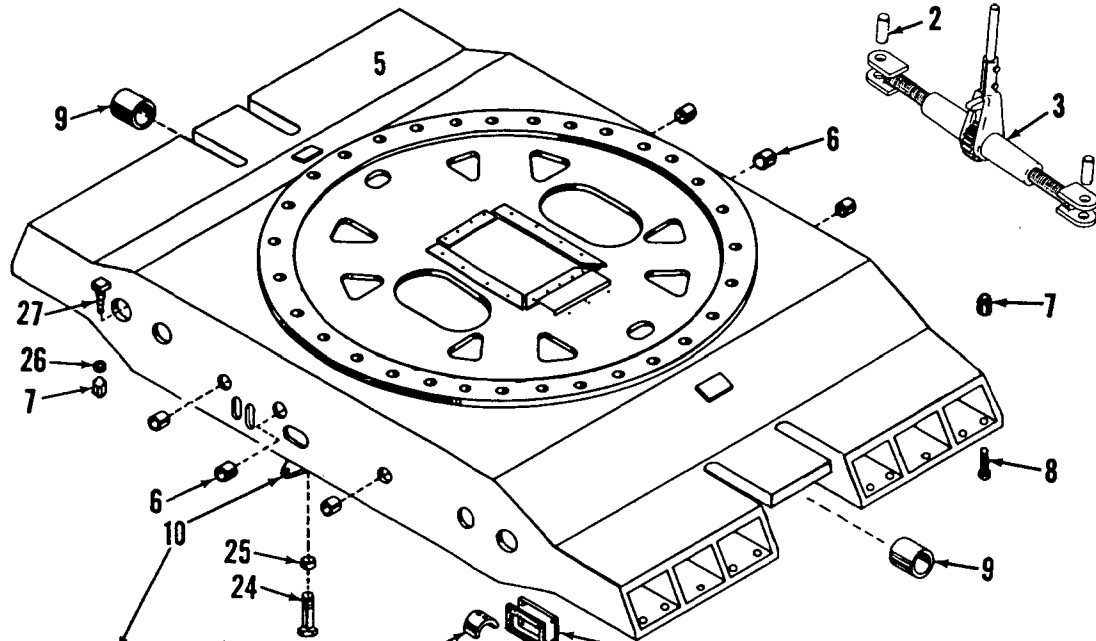
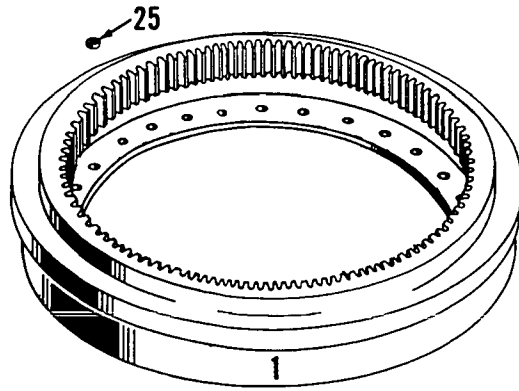
33098A1

33098 A1

MATERIAL LIST ON BACK

KING PIN & VERTICAL TRAVEL SHAFT

MASTER



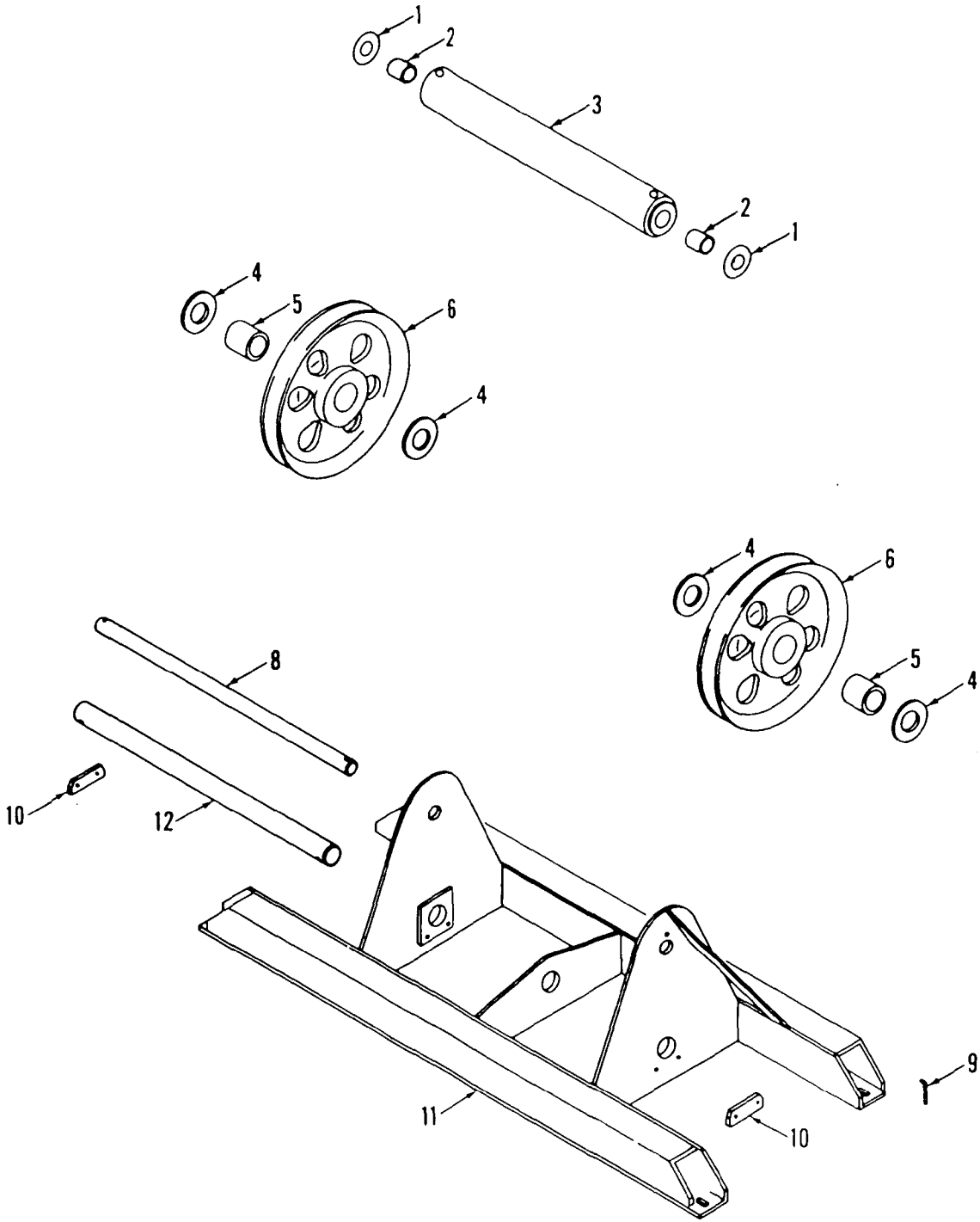
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43593 A1

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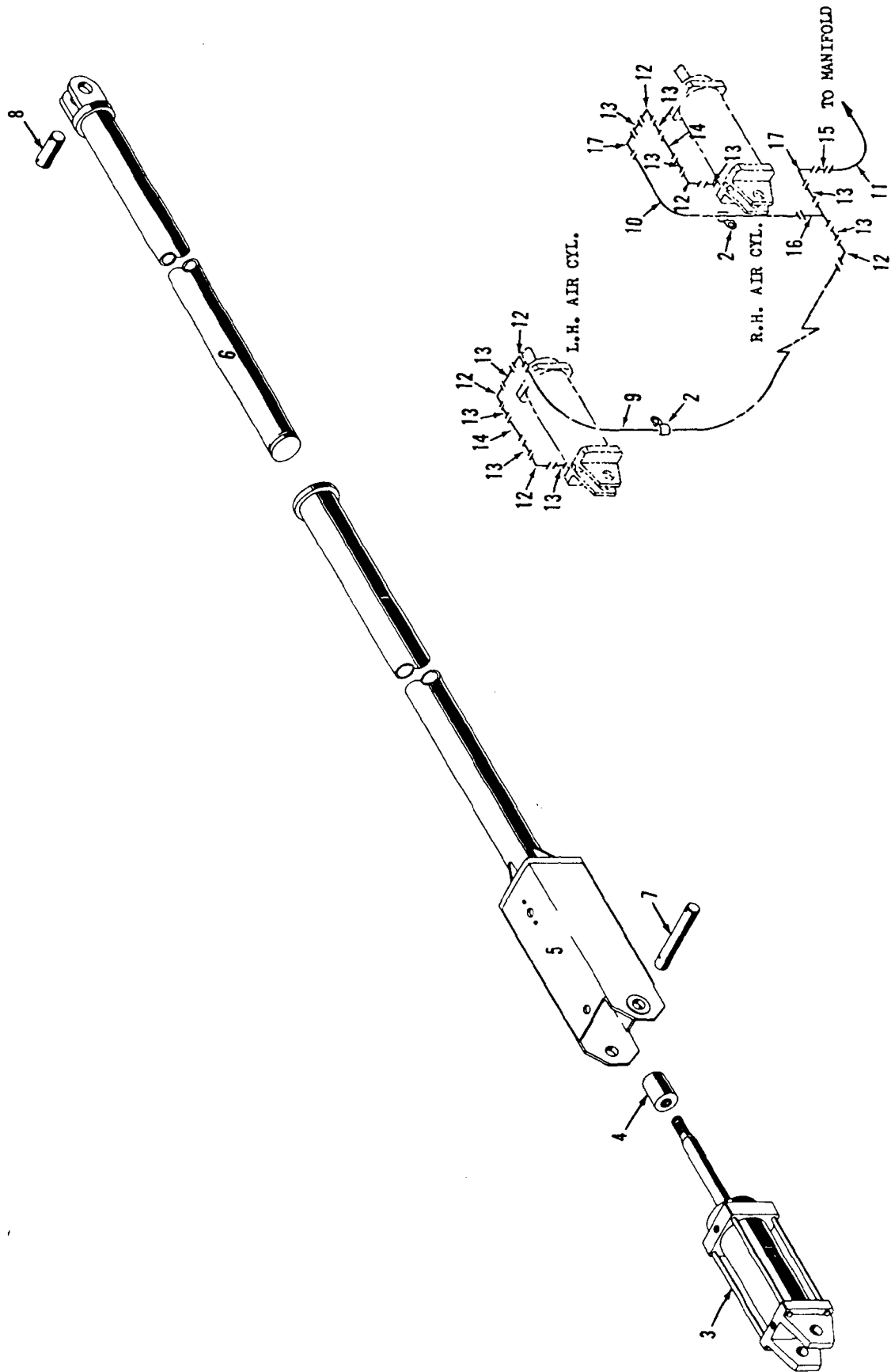
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32889C1

MATERIAL LIST ON BACK

CABLE GUIDE



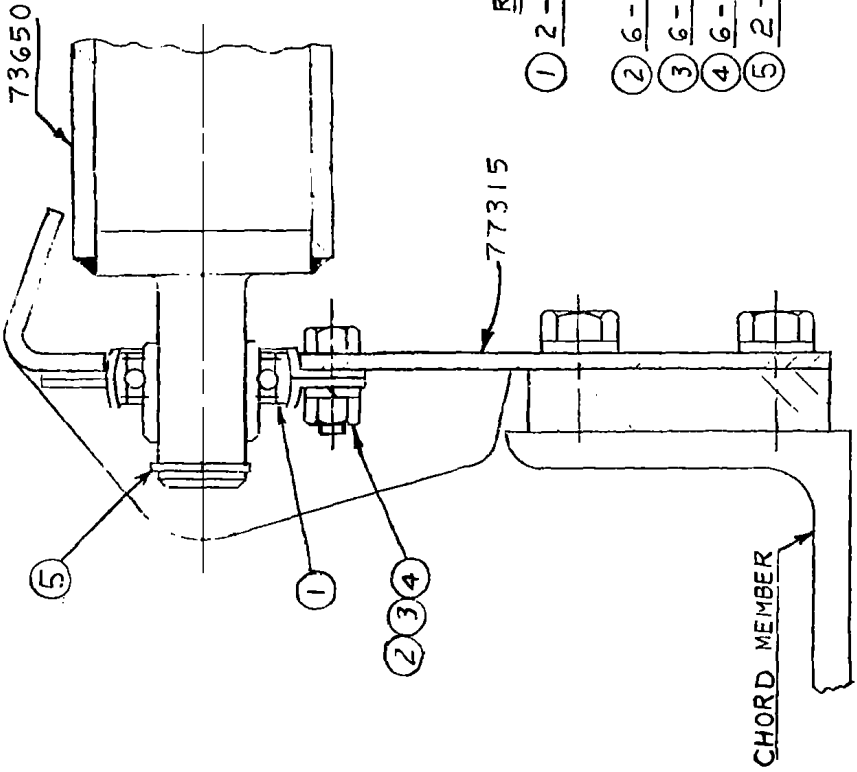
4371401

MATERIAL LIST ON BACK

BOOM STOP

DWG. NO. 73649	WIRE ROPE ROLLER GUIDE	SCALE 6"=1'-0"	UNLESS NOTED FRACT. DIM.	DATE 6-30-67
CODE NO.	ASSEMBLY	DR. R/J/L	HOLE DIA.	REVISED DATE 9-13-79 JN
PATTERN NO.	# 8 & # 9 BOOMS	CK.	HOLE CENTERS	REVISIONS (A) REVERSED POSITION OF HEX SCREW
	MODEL 3900	APP.	FINISH	
			MATERIAL	

MANITOWOC ENGINEERING CO.
MANITOWOC, WISCONSIN



NOTE:
SET SCREWS TO BE
REMOVED FROM
BOTH BEARINGS

REQ'D	CODE NO.
① 2 - # F 116 NICE FLANGE MOUNTED BEARING	<u>224218</u>
② 6 - 5/16" - 18 N.C. - 7/8" HEX SCREW	<u>612404</u>
③ 6 - 5/16" - 18 N.C. HEX NUT	<u>546053</u>
④ 6 - 5/16" LOCKWASHER	<u>710303</u>
⑤ 2 - TRUARC RETAINE RING	<u>596823</u>

NO REQ'D	DWG NO.	TITLE
<u>1</u>	<u>73650</u>	<u>ROLLER</u>
<u>2</u>	<u>77315</u>	<u>BRG. BRACKET</u>

- 190401
- 65550
- 65541
- 190281
- 47447
- 49761
- 49759
- 65136
- 43991
- 48074
- 42425
- 43258

SUPERSEDES 73649 OF 3-5-65

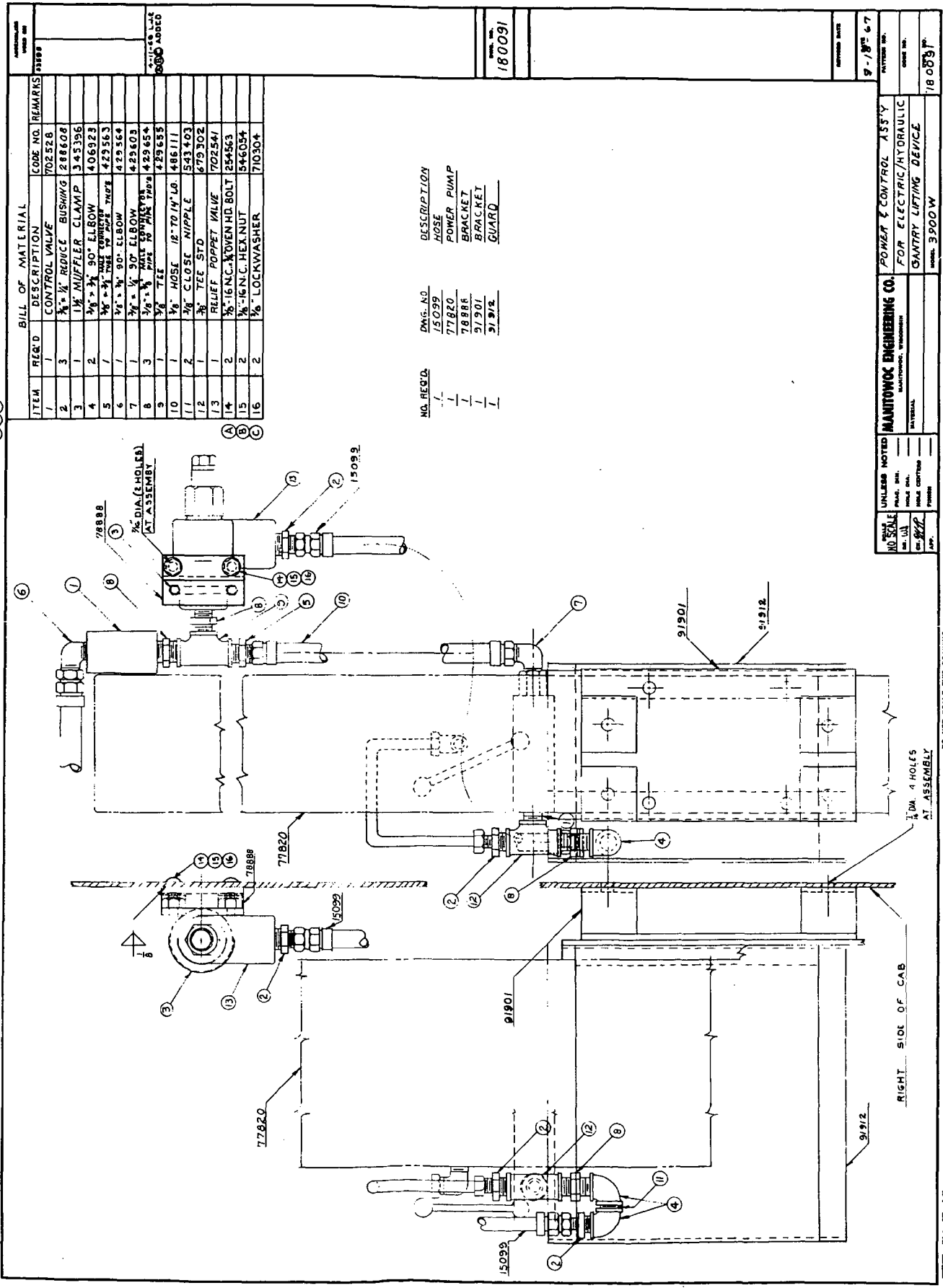
ASSEMBLIES
USED ON

DWG. NO.
73649

150041
4-11-67

F10.2

(A)(B)(C)



ITEM	REQ'D	DESCRIPTION	CODE NO.	REMARKS
1	1	CONTROL VALVE	702528	
2	3	3/4" x 1/2" REDUCE BUSHING	288608	
3	1	1 1/2" MIFFLER CLAMP	345396	
4	2	3/4" x 3/4" 90° ELBOW	406923	
5	1	3/4" x 3/4" 90° ELBOW WITH	423563	
6	1	3/4" x 1/2" 90° ELBOW	423564	
7	1	3/4" x 1/2" 90° ELBOW	423603	
8	3	3/8" x 1/2" PIPE	423654	
9	1	3/8" TEE	423655	
10	1	1/2" HOSE 12.70 IN. LB.	486111	
11	2	3/4" CLOSE NIPPLE	543403	
12	1	3/8" TEE STD	679302	
13	1	RELIEF POPPET VALVE	702541	
14	2	3/8" 16 IN. XOVEN HD BOLT	254563	
15	2	3/8" 16 IN. C. HEX NUT	546034	
16	2	1/2" LOCKWASHER	710304	

NO. REQ'D. 1
1
1
1
1

DWG. NO. 15099
71820
78888
91901
91912

DESCRIPTION
HOSE
POWER PUMP
BRACKET
BRACKET
GUARD

UNLESS NOTED OTHERWISE, DIMENSIONS ARE IN INCHES.

SCALE: 1/4" = 1"

DATE: 4-11-67

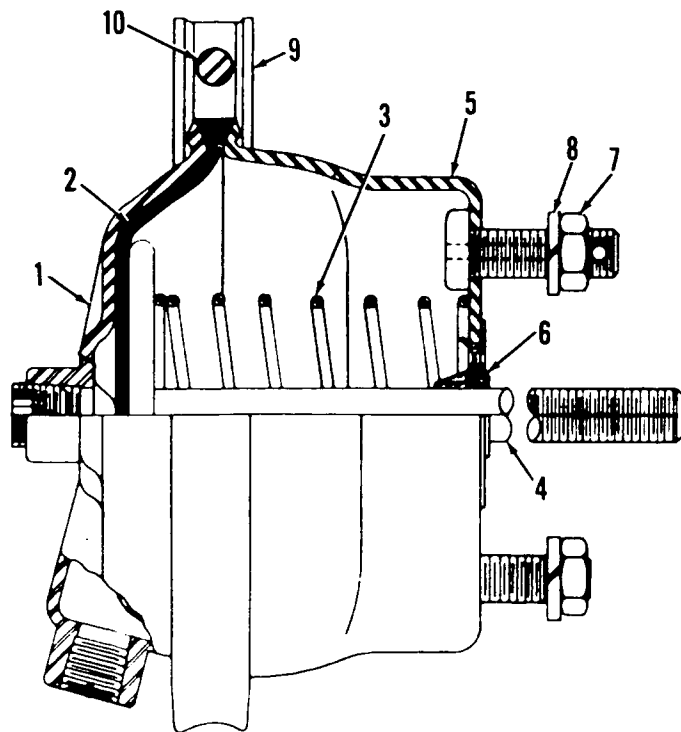
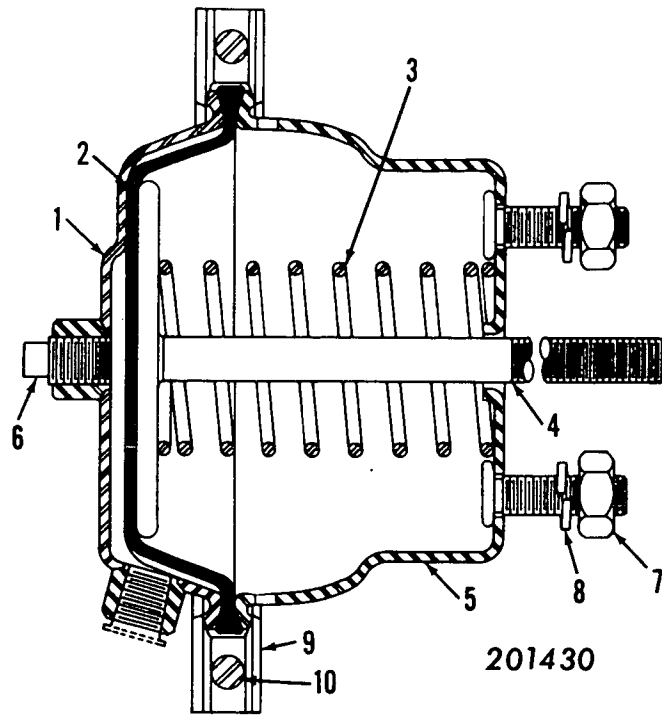
MANITOWOC ENGINEERING CO. POWER & CONTROL ASS'Y
FOR ELECTRIC HYDRAULIC
GANTRY LIFTING DEVICE

180091

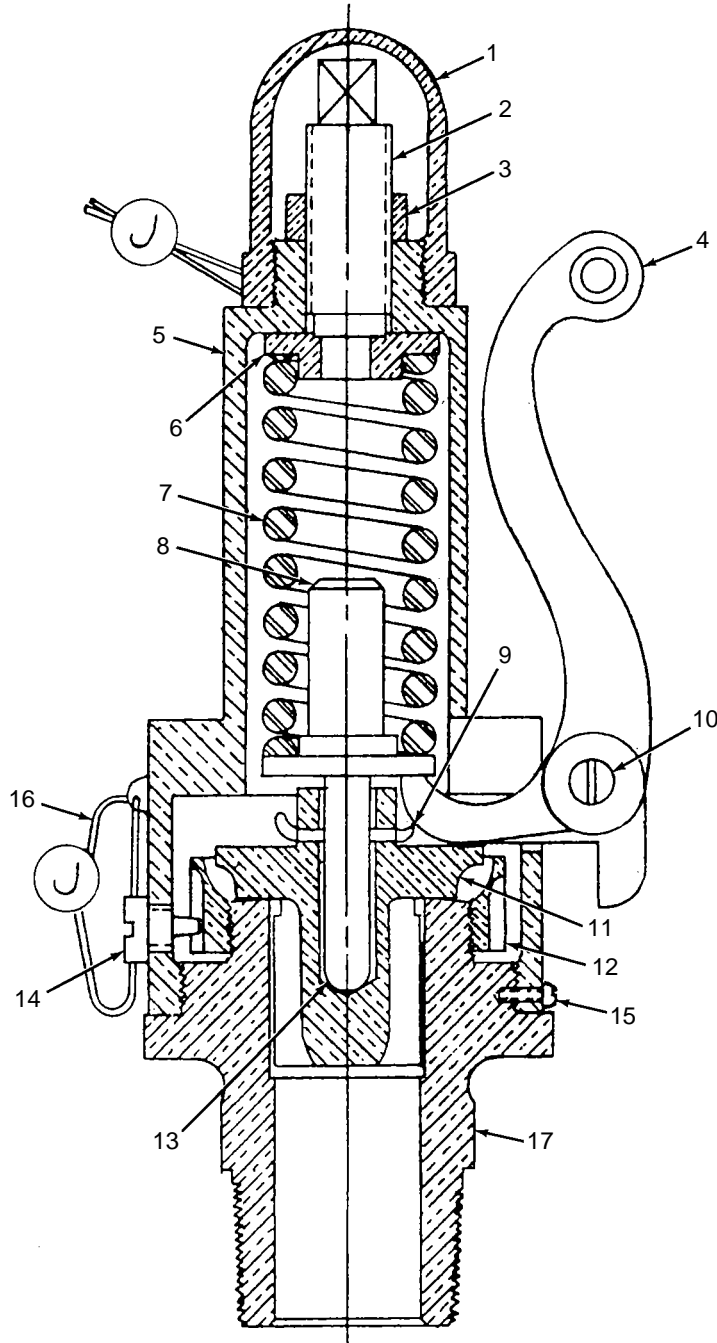
RIGHT SIDE OF CAB

1/4" DIA. 4 HOLES AT ASSEMBLY

DO NOT SCALE THE DRAWING



MASTER



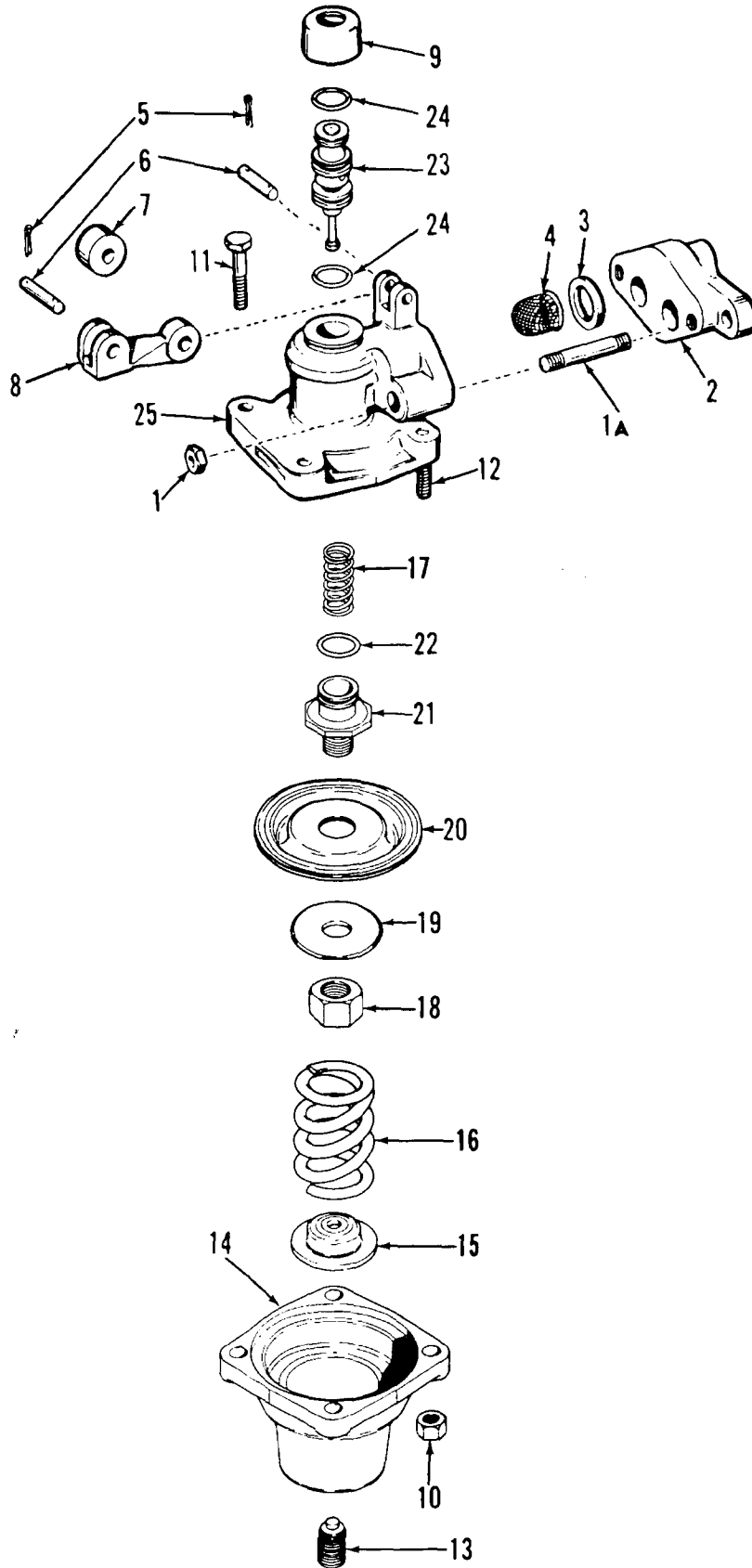
ASSEMBLY	REVISION
O-156	D

SAFETY VALVE

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Manitowoc, Wisconsin



O243

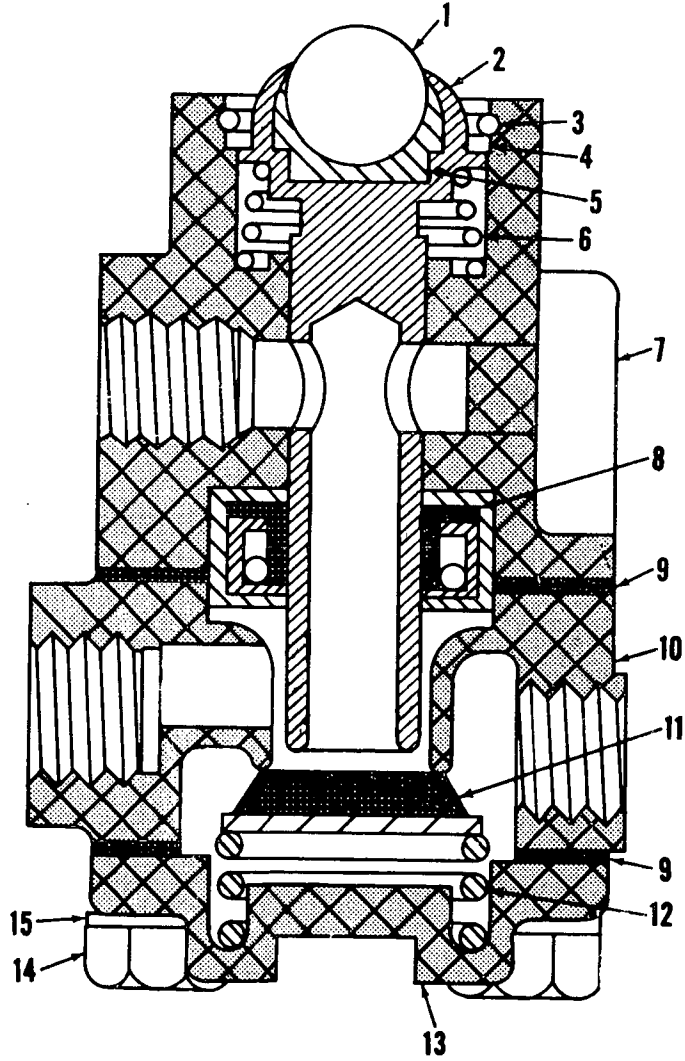
MATERIAL LIST ON BACK

VALVE ASSEMBLY

MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

Manitowoc, Wisconsin

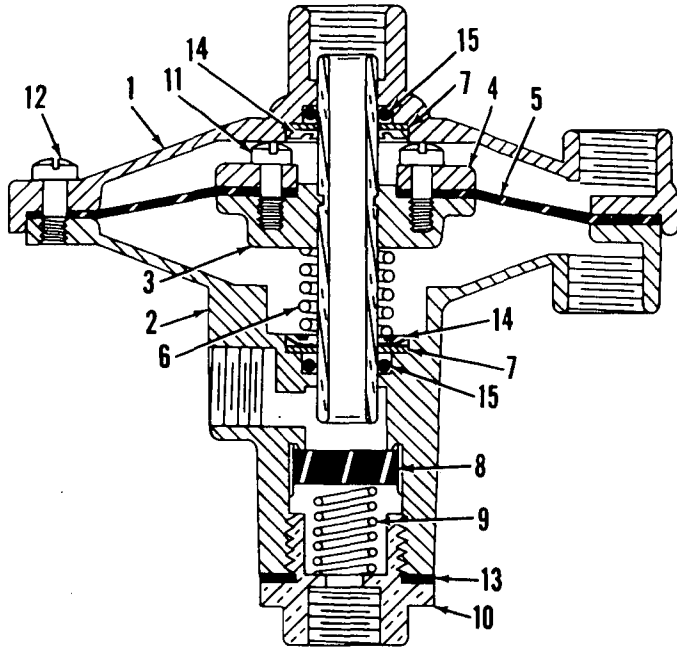


MANITOWOC

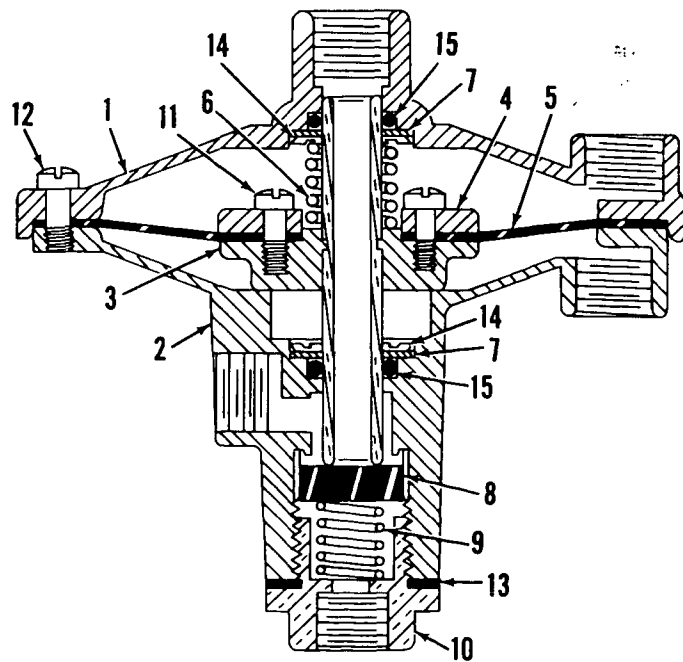
0 250 A 1

O-250A1

MATERIAL LIST ON BACK



Normally Closed

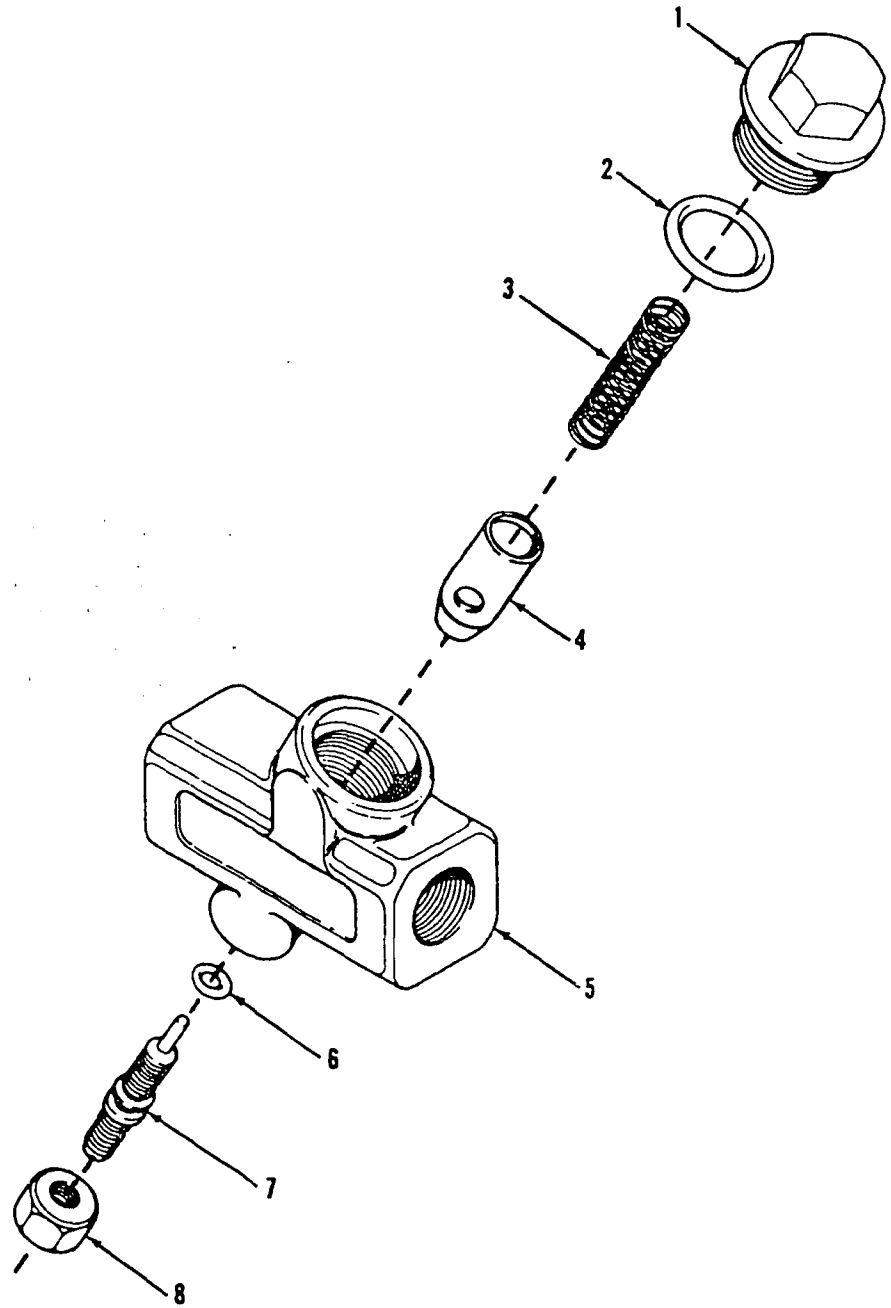


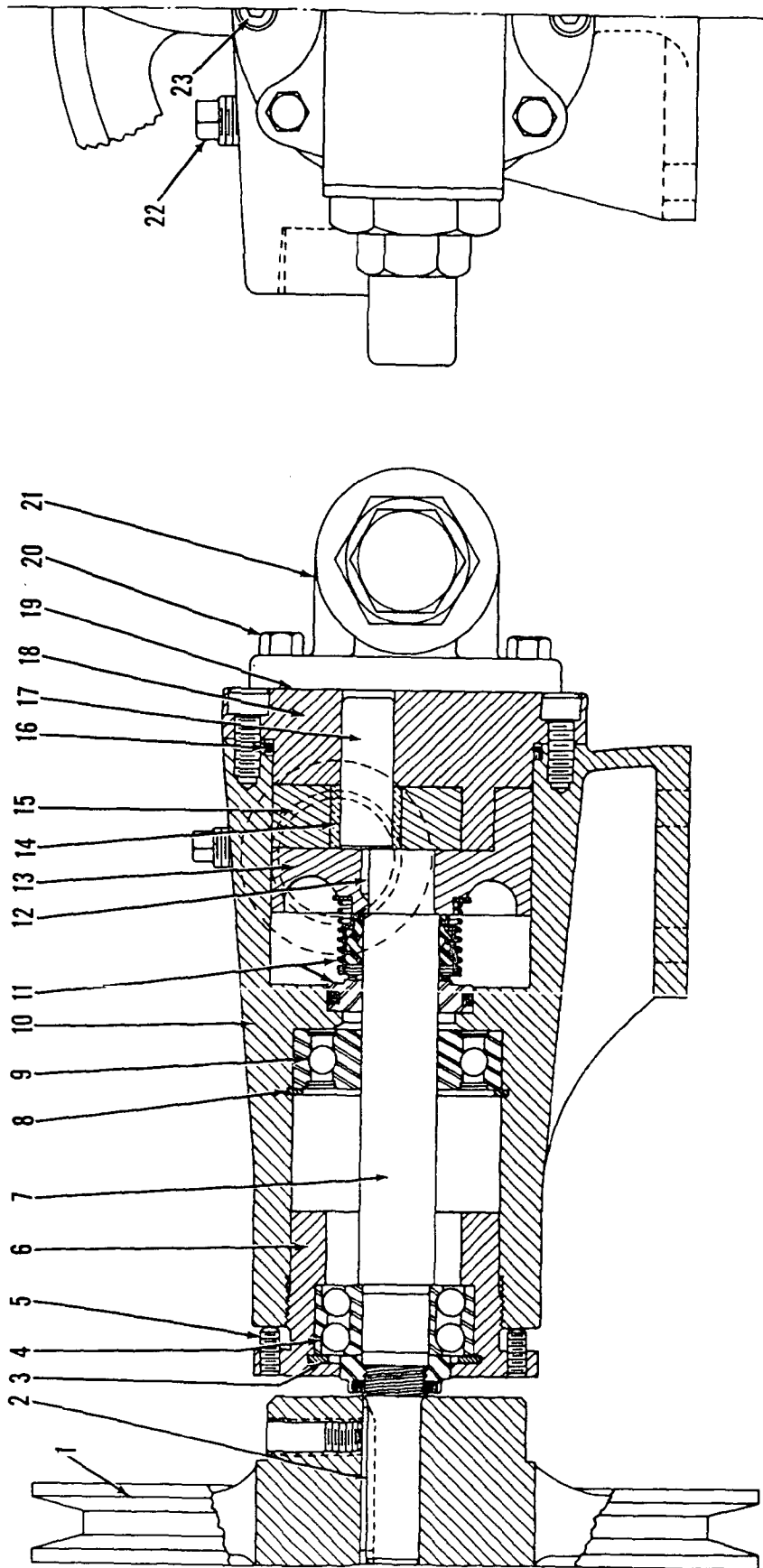
Normally Open

MASTER

RELAY VALVES

WASIEK





43051B7

MATERIAL LIST ON BACK

OIL PUMP

0-407 B7

MANITOWOC ENGINEERING CO.

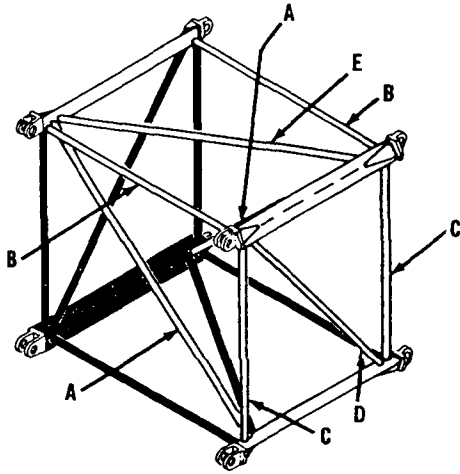
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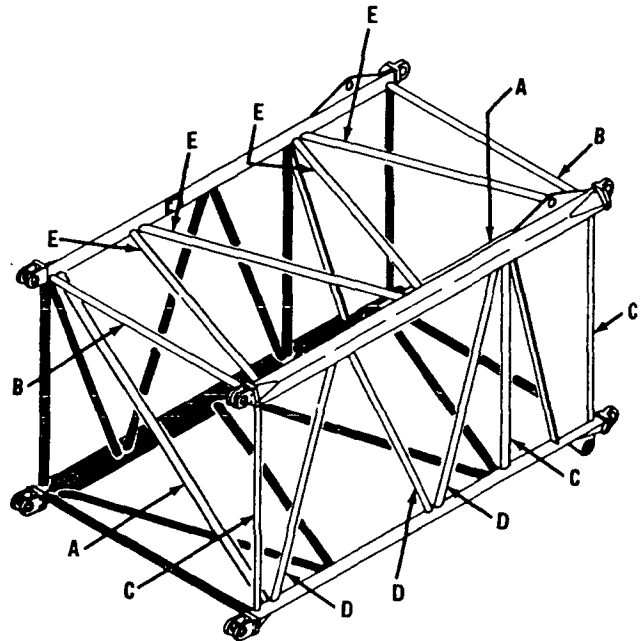
Boom #9, 9A, 24

Opposite lacings (black) same unless noted.

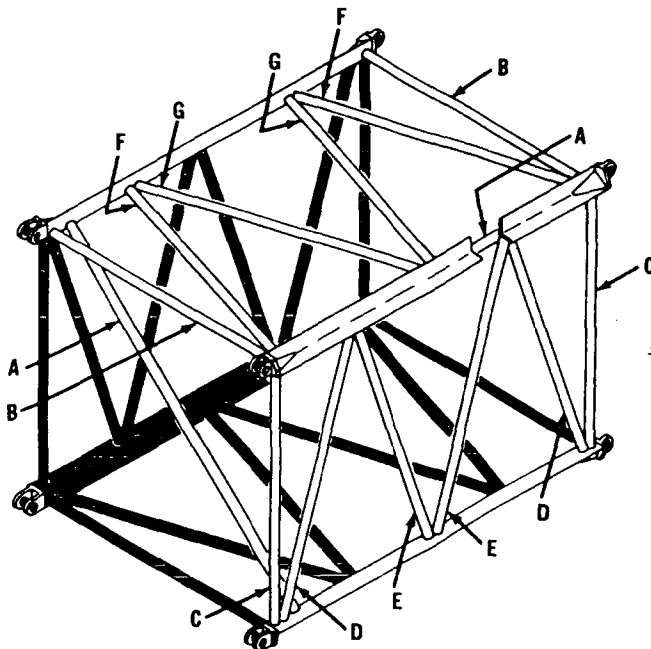
MASTER



5' (1.524m) Insert
#48930
49135
49384

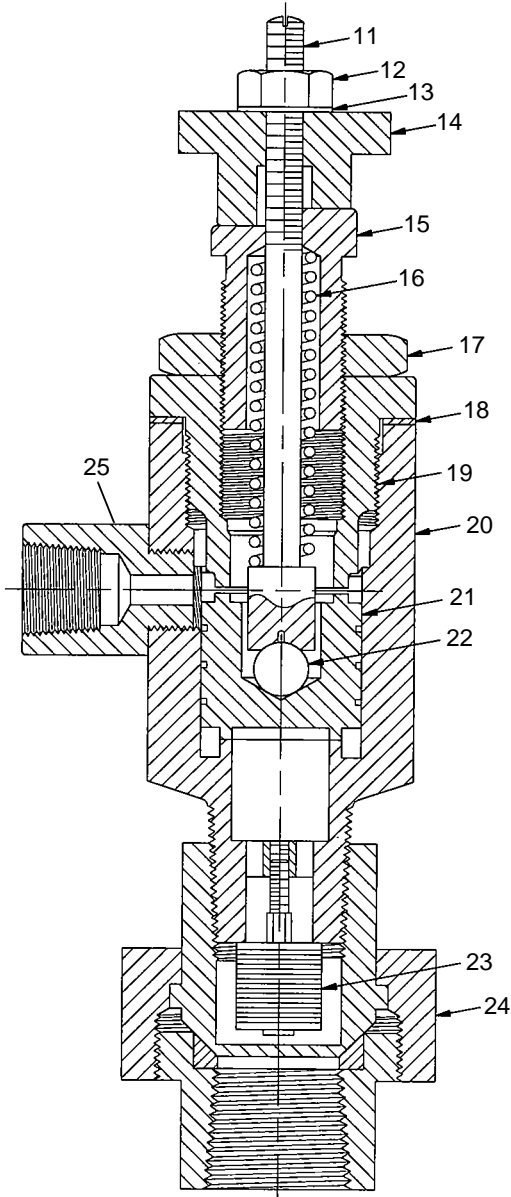


10' (3.048m) Insert
#180789

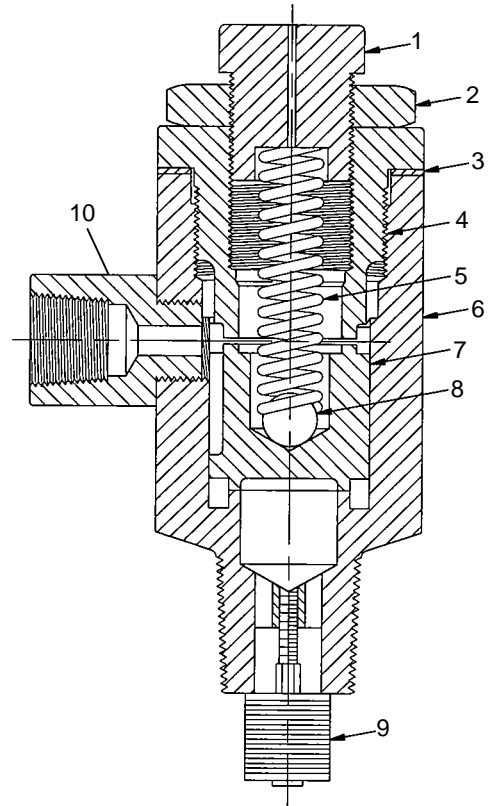


10' (3.048m) Insert
#32803
420665

To order lacings see Folio #823



Valve
5589030



Valve
5589020

ASSEMBLY	REVISION
O-72	B

VALVE, UNLOADER PILOT

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