



# TRADITIONAL CRANE PARTS MANUAL

This manual has been prepared for and is considered part of

**4100W**

Model

**41559**

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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-- Fax: 509-534-7104
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-- Sales Fax: 908-218-1959  
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-- Fax: 813-261-0358
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-- Phone: 972-556-0910  
-- Fax: 972-556-0479
- (8) **NORTH CENTRAL CRANE & EXCAVATOR SALES CORP.**  
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-- Phone: 815-469-0700  
-- Fax: 815-469-0708
- (9) **SHAWMUT EQUIPMENT CO., INC.**  
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-- Phone: 860-643-4161  
-- Fax: 860-649-9825
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Minneapolis, MN  
-- Phone: 952-884-2301  
-- Fax: 952-884-2293



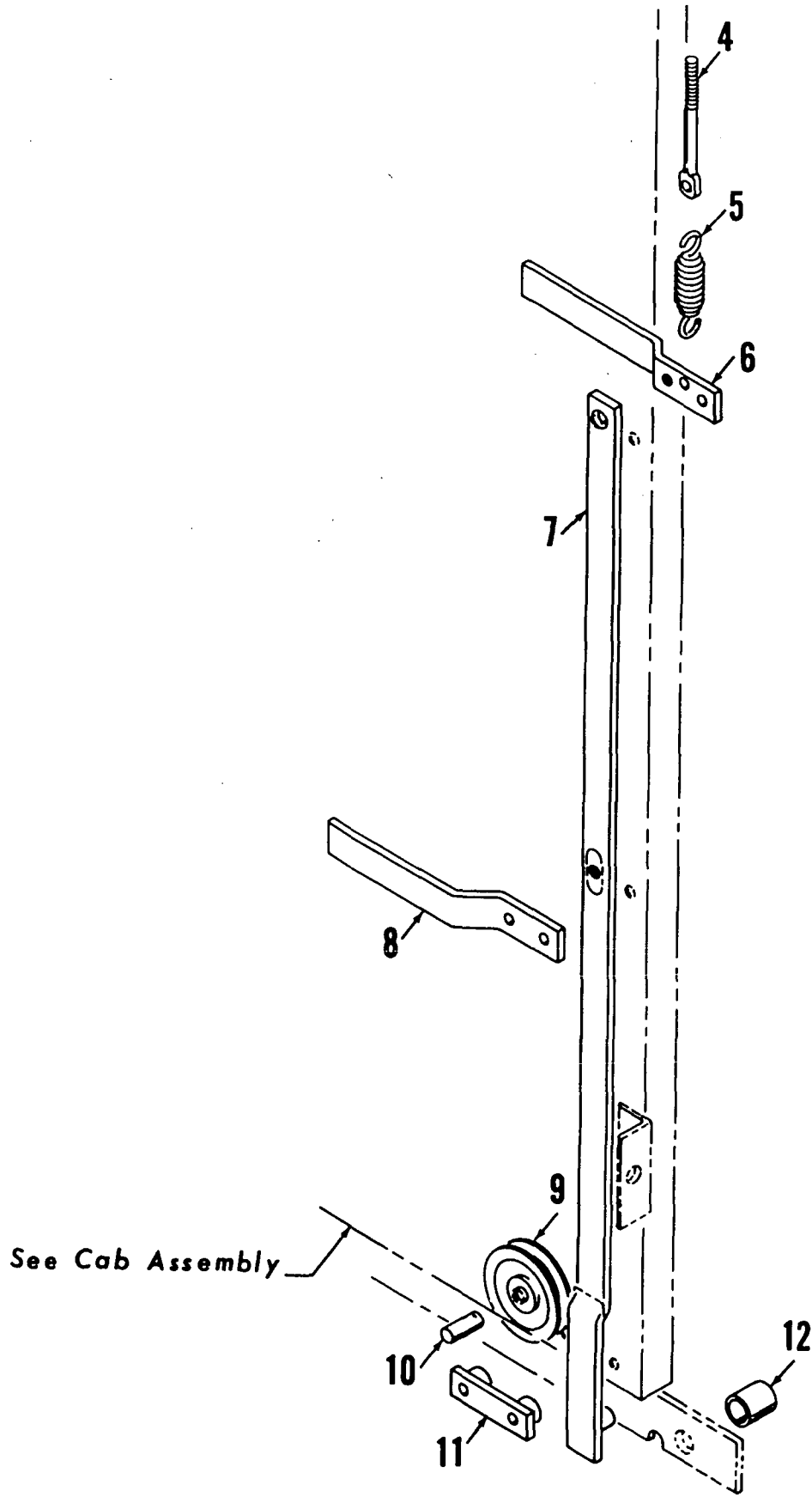
**WEIGHTS**  
4100W SERIES-1 and 2

DESCRIPTION	APPROXIMATE WEIGHT (POUNDS)
<b>Liftcrane</b> — with 70' No. 22C boom, crane counterweight, universal gantry with telescopic backhitch, 26'6" crawlers with 48" treads, full width tandem drums, independent swing, independent boom hoist, Cummins NTA-855-C360 engine, 27-5/8" diameter lagging for rear drum, boom hoist rope, equalizer, telescopic air cushioned boom stop, 200 ton hook block, 15 ton hook and weight ball, single sheave upper boom point, and upper wire rope guide .....	S-1 — 366,575 * S-2 — 450,575 *
<b>Upperworks</b> — with Cummins NTA-855-C360 engine, independent swing, independent boom hoist, and 27-5/8" diameter lagging for rear drum; <b>LESS</b> boom, gantry and backhitch, equalizer, hook block, weight ball, counterweight, telescopic air cushioned boom stop and catwalk.....	80,620 *
<b>Upperworks</b> — as above with gantry and backhitch, equalizer, boom hoist rope, and carbody; <b>LESS</b> crawlers .....	141,365 *
*Weights do not include hoist line, whip line or fuel. For Caterpillar D-343TA add 1,170 lbs.; for Caterpillar 3406 PCTA add 100 lbs.; for GM 12V-71N add 600 lbs.	
<b>Carbody</b> — with roller path, ring gear, and king pin; <b>LESS</b> crawlers .....	49,700
<b>Crawlers</b> — 26'6" with 48" treads .....	38,405 each
<b>Counterweight</b>	
Inner (Self-Removing) .....	41,900
Middle (Self-Removing) .....	41,500
Outer (Self-Removing) .....	39,000
Upper Side (2) (Series-2 only) .....	12,000 each
Carbody (2) (Series-2 only) .....	30,000 each
<b>No. 22C Open Throat Boom Top</b>	
Boom Top — 40' (with lower boom point assembly) .....	8,770
Basic Pendant — 40' 9-3/4" (4) .....	250 each
Upper Boom Point (single sheave) .....	1,260
(double sheave) .....	1,510
Jib Adapter .....	540
Offset Link (2) .....	60 each
<b>No. 22A Light Tapered Boom Top</b>	
Tapered Boom Top — 50' (with lower boom point assembly) .....	5,980
Tapered Boom Insert — 30' .....	3,610
Basic Pendant — 40' 9-3/4" (4) .....	250 each
Upper Boom Point .....	720
Wire Rope Anchor Joint .....	140
<b>No. 22A Hammerhead Boom Top</b>	
Boom Top — 10' (with boom point and wire rope guide assembly) .....	5,510
Tapered Boom Insert — 30' .....	3,610
Basic Pendant — 37'11" (4) .....	215 each
Upper Boom Point .....	275

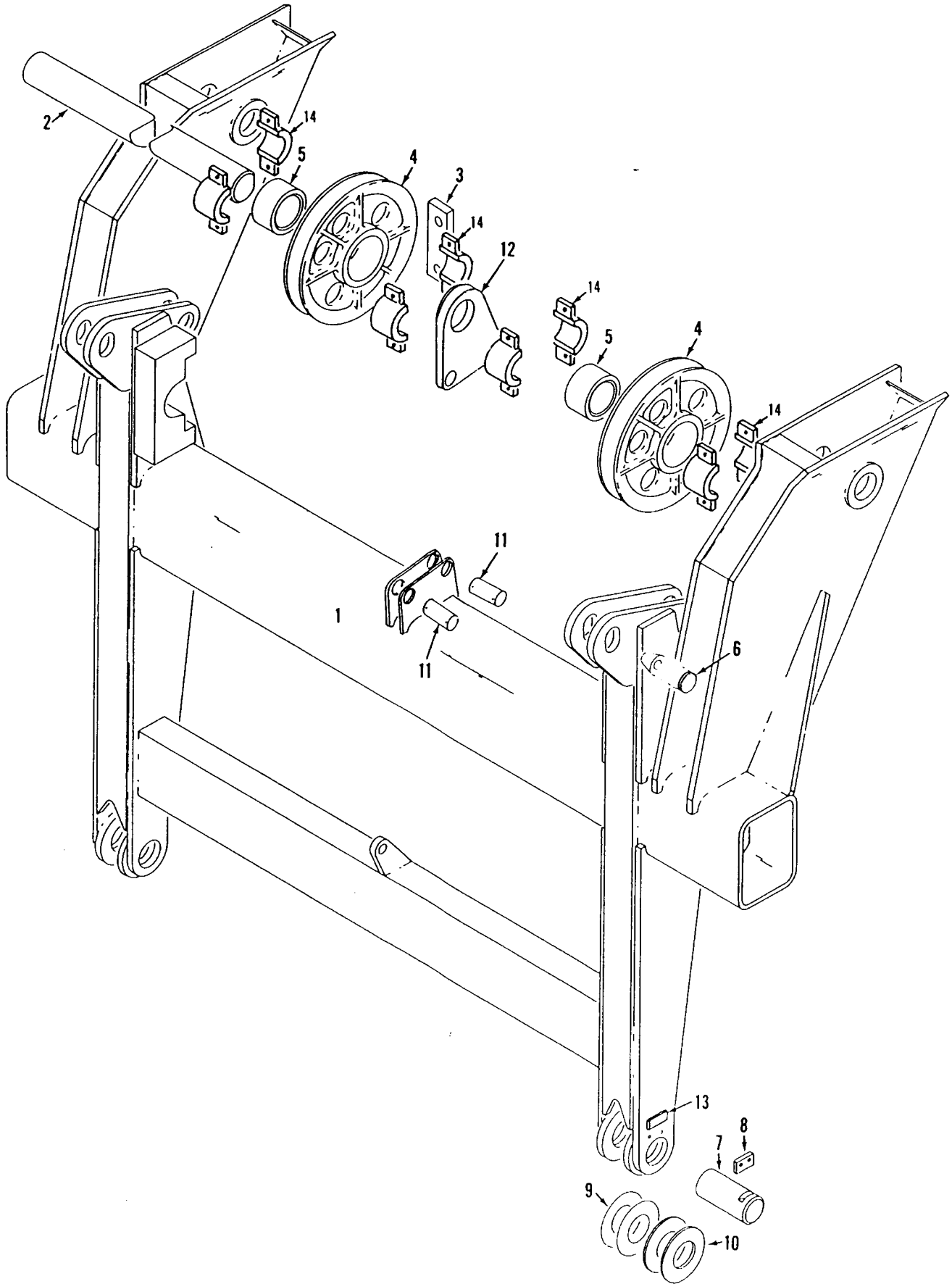
MASTER

65413-62 Back

32383-A-2



See Cab Assembly



18085601

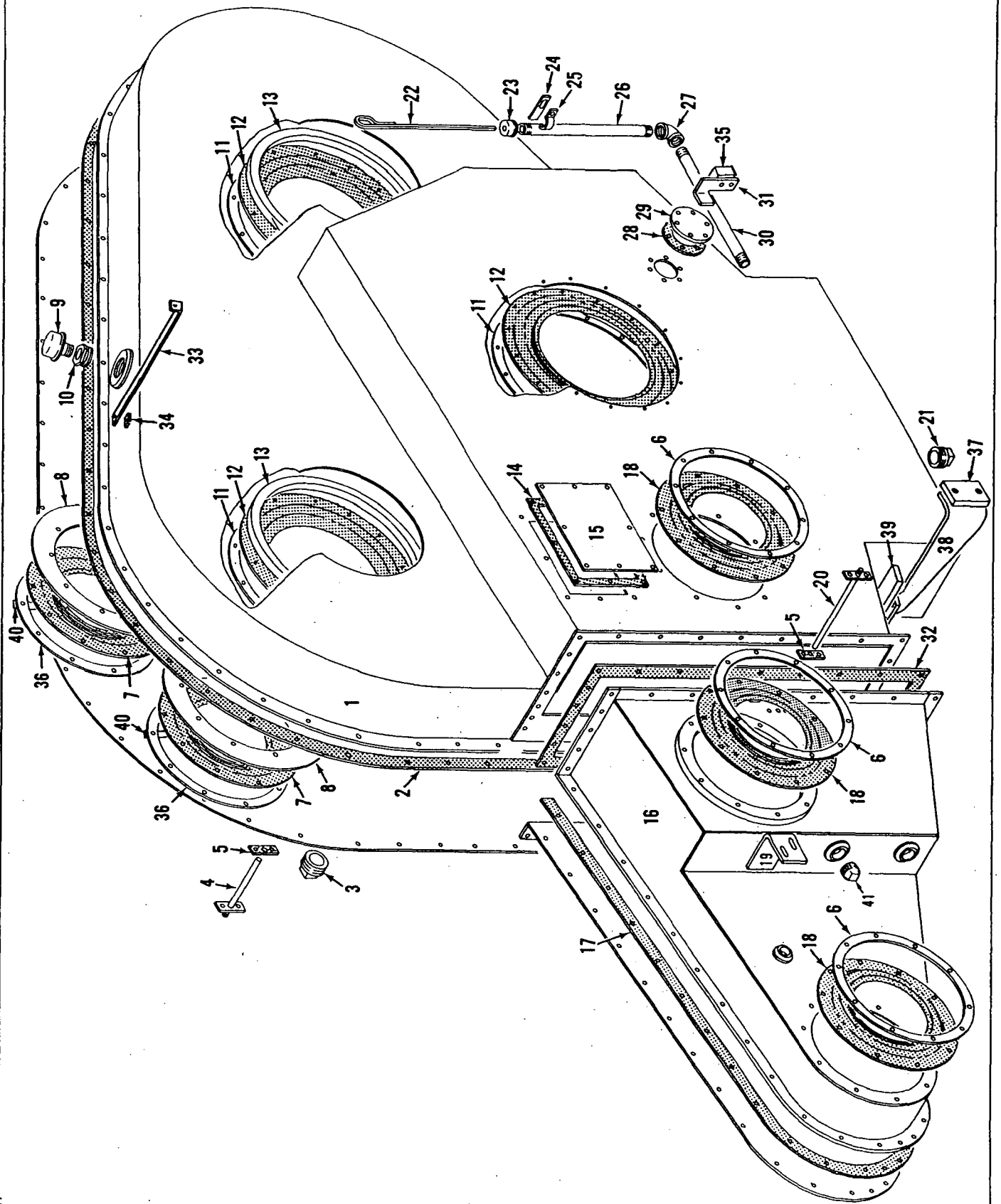
MATERIAL LIST ON BACK

CAB REAR SUPPORT

# MANITOWOC ENGINEERING CO.

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Manitowoc, Wisconsin

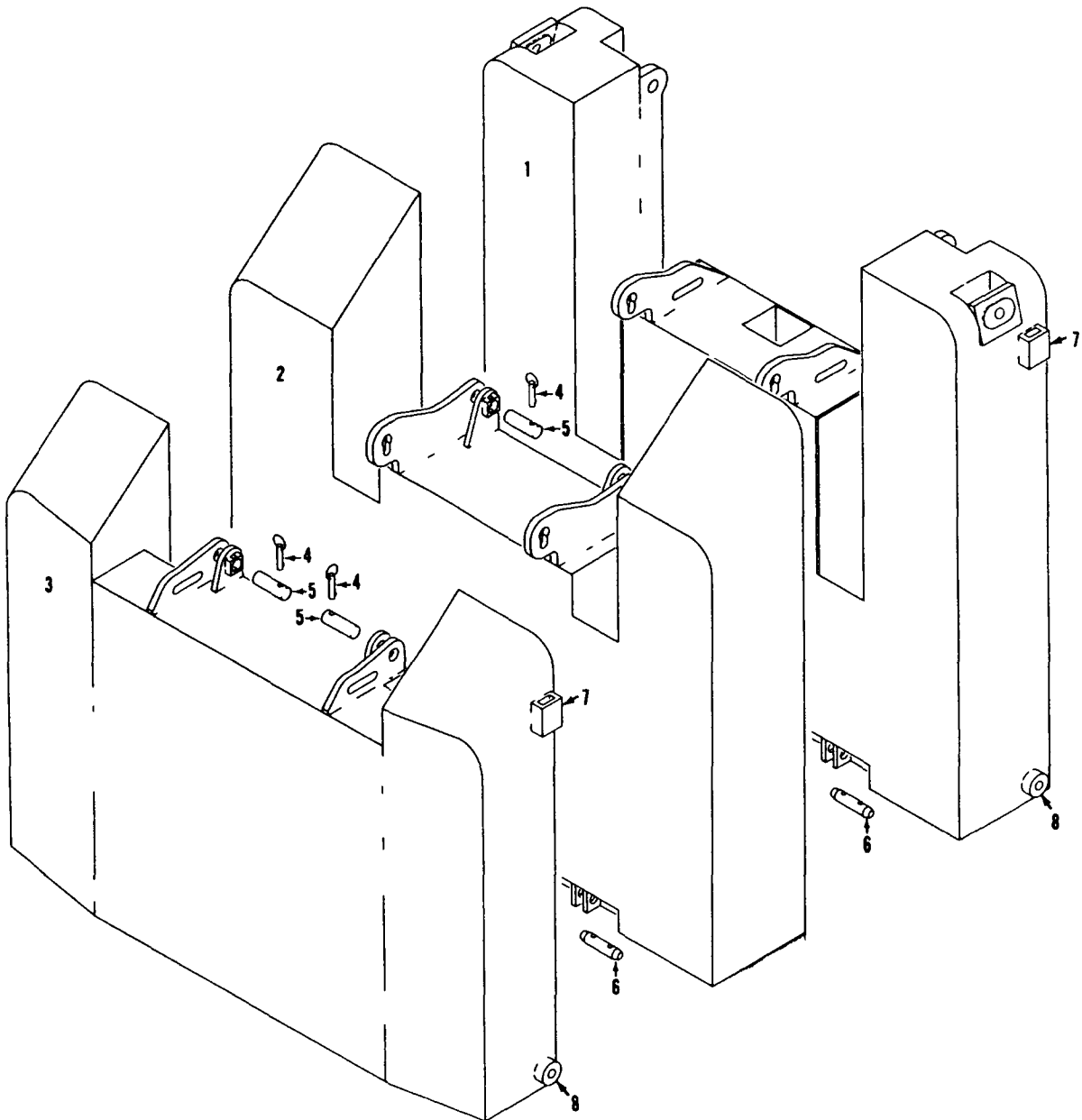


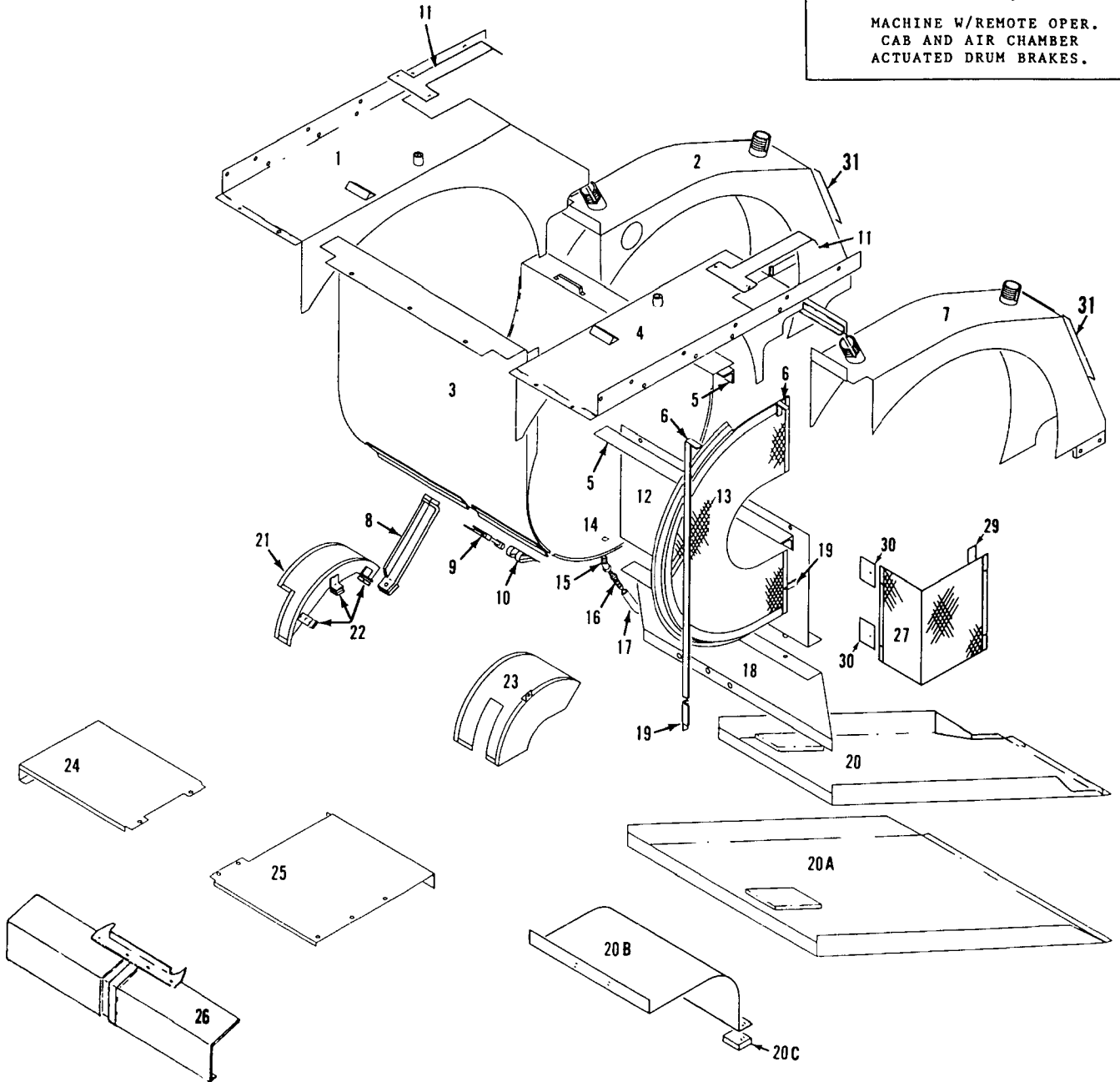
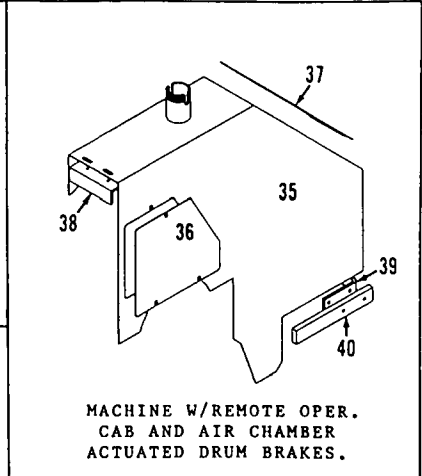
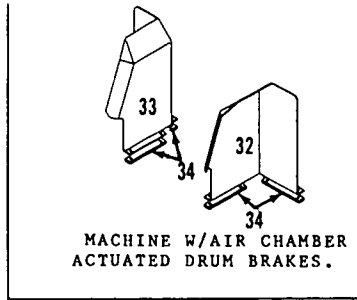
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MATERIAL LIST ON BACK

CHAIN CASE

MASICK



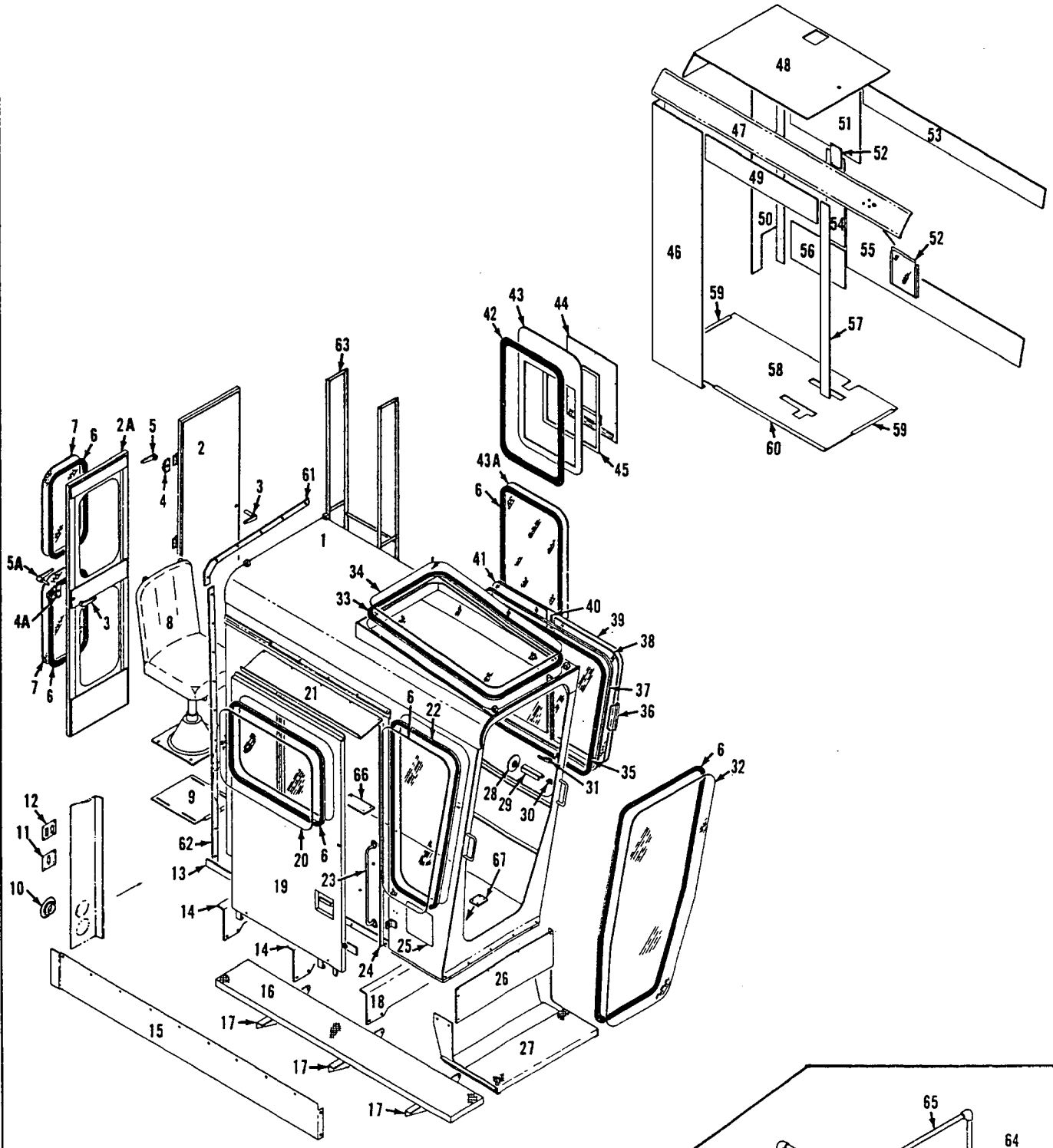


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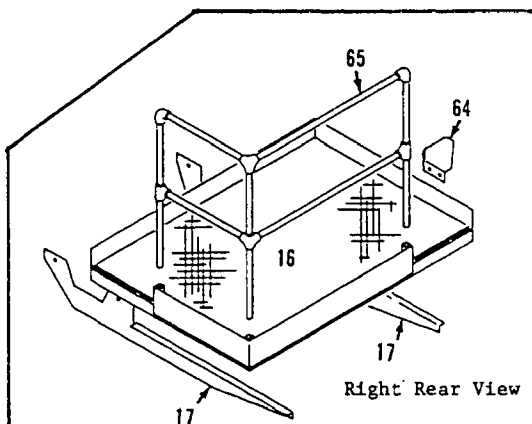
MATERIAL LIST ON BACK

GUARDS

MASTER



Right Front View



Right Rear View

Operator's Cab

MATERIAL LIST ON BACK

6538601

65371-1 Cont.	REV. D	MODEL 4100 S1, S2
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UPPERWORKS LUB. PIPING

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
	144507	1	NAMEPLATE (w/Ref. 28 only)	
	147575	1	NAMEPLATE (w/Ref. 6 only)	
36	70656	4	SUPPORT, Grease Line	
37	140911	1	BRACKET	
38	137925	1	BRACKET	
39	140631	1	BRACKET	
40	183568	1	NAMEPLATE	
41	147576	1	BRACKET, Nameplate (w/Ref. #31 only)	
42	145819	1	NAMEPLATE (w/Ref. #31 only)	

MASTER

0-147

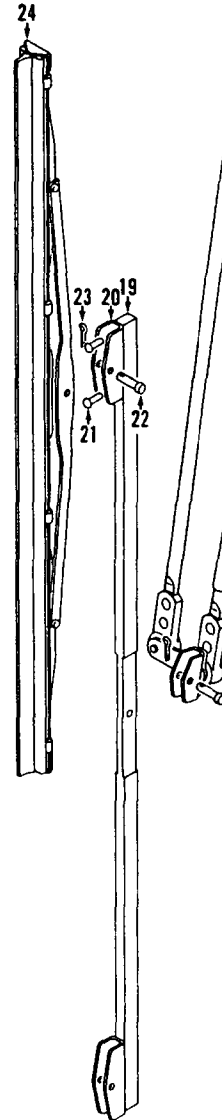
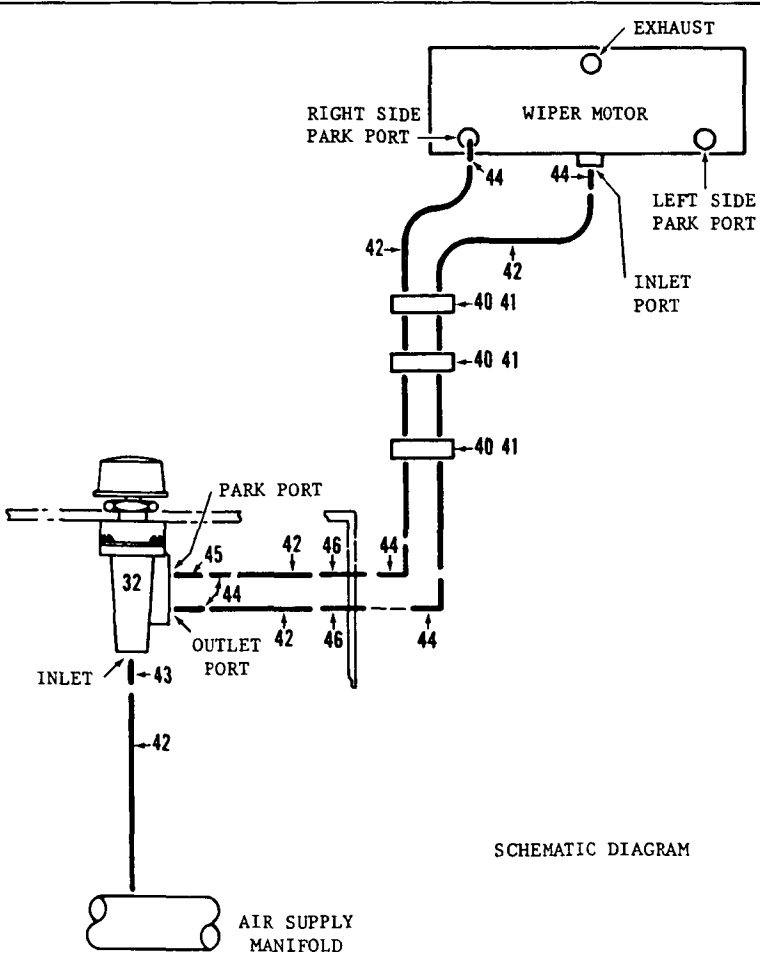
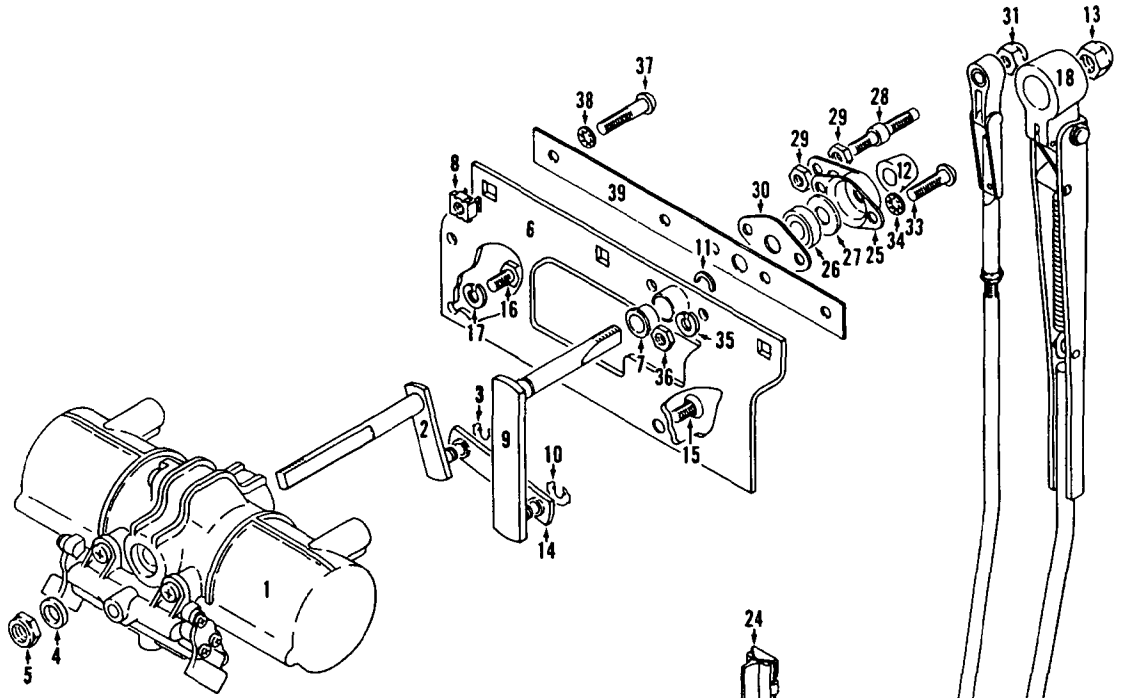
PLEASE GIVE MACHINE S/N W/ORDER

REV. D	65371 - 1
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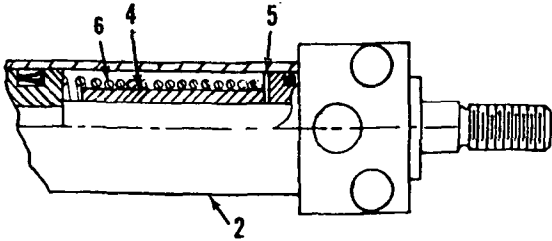
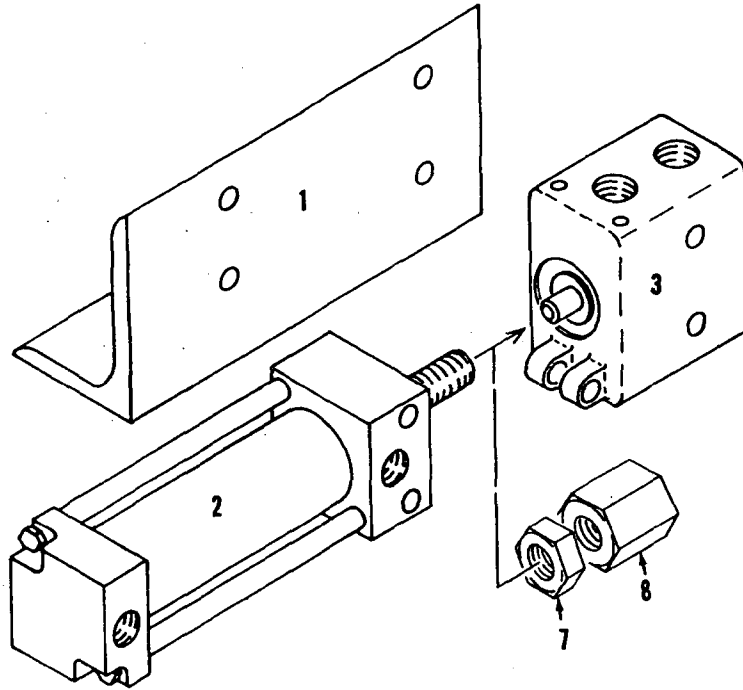


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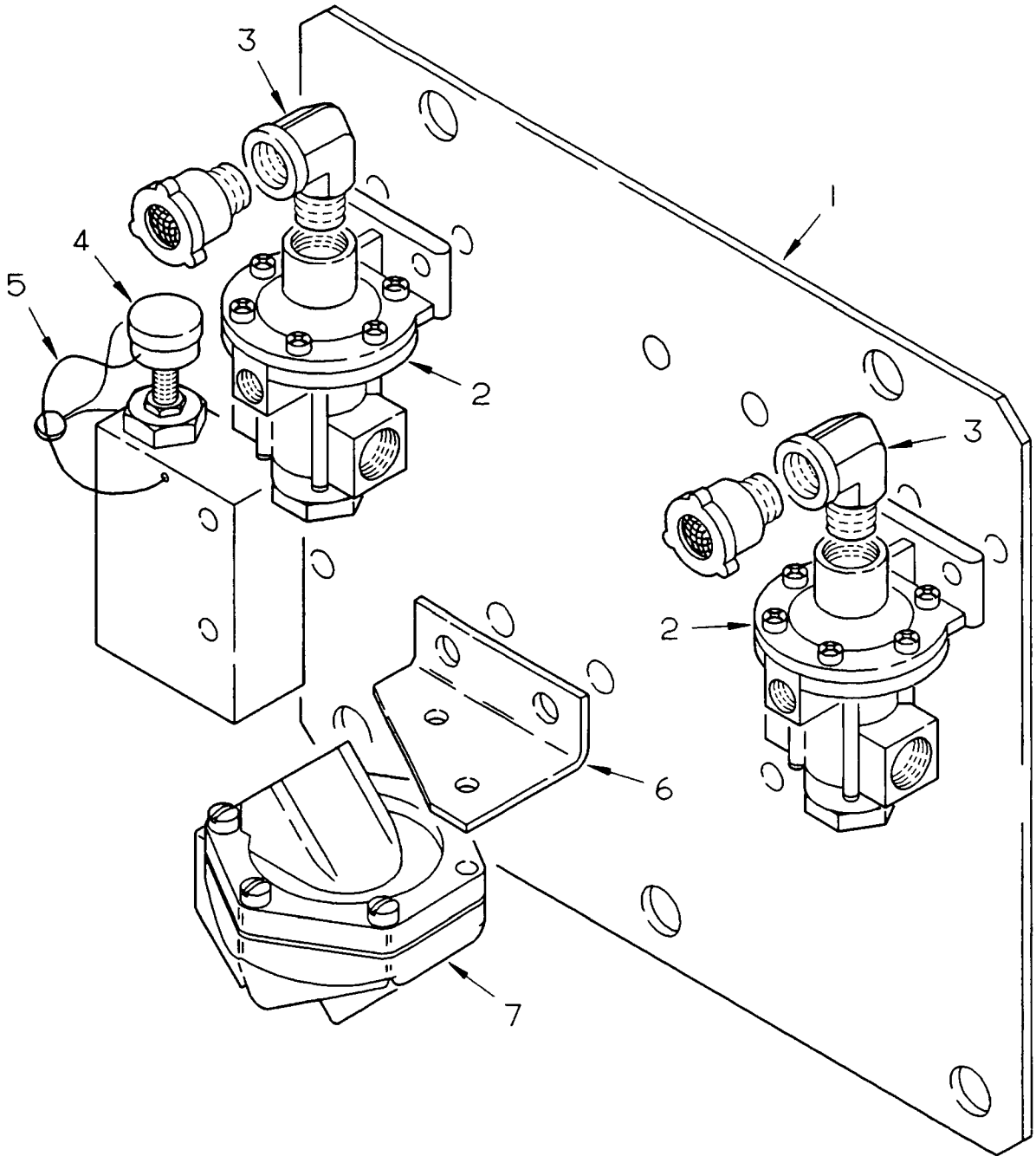
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WINDSHIELD WIPER

MASTER



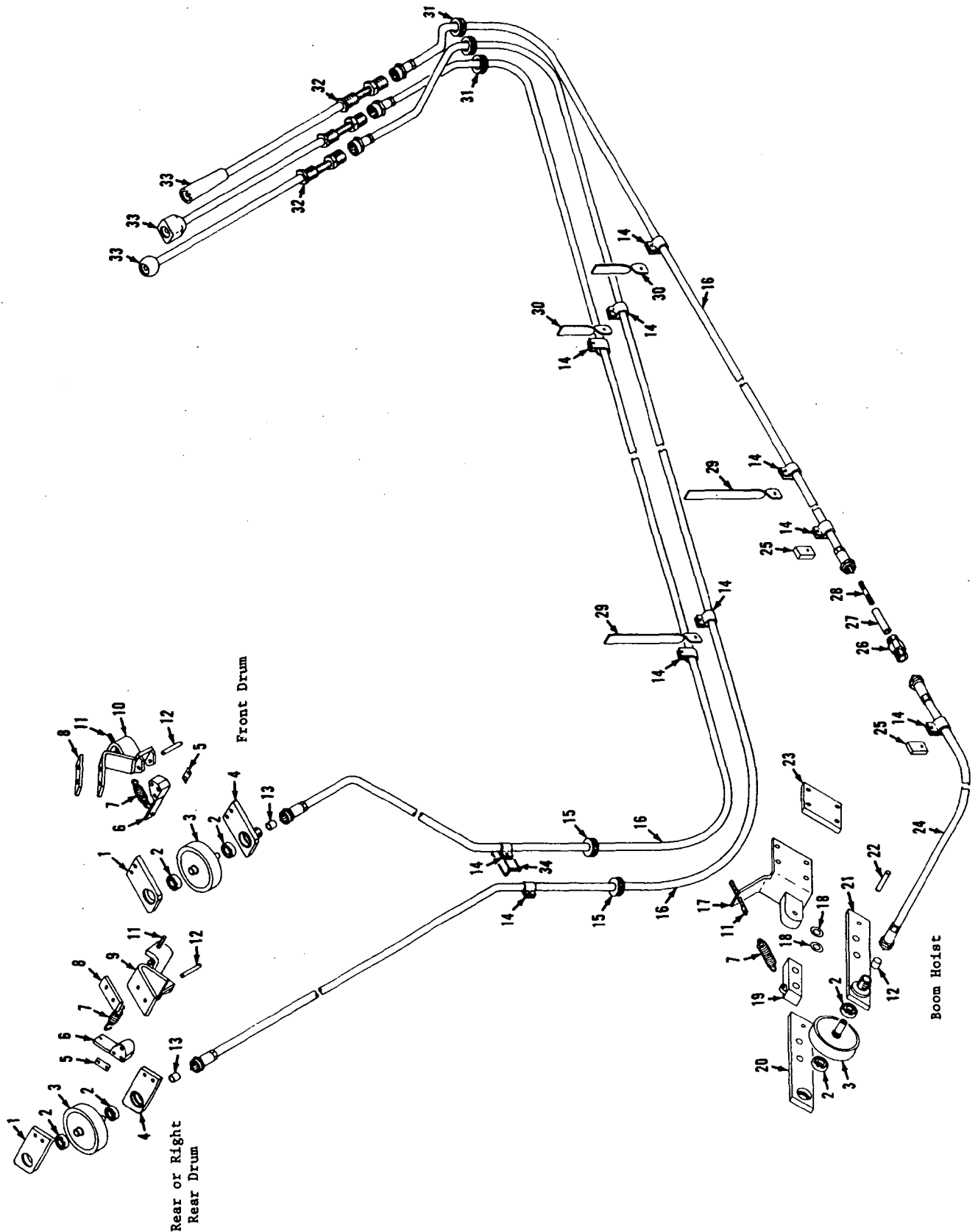




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PAWL INTERLOCK

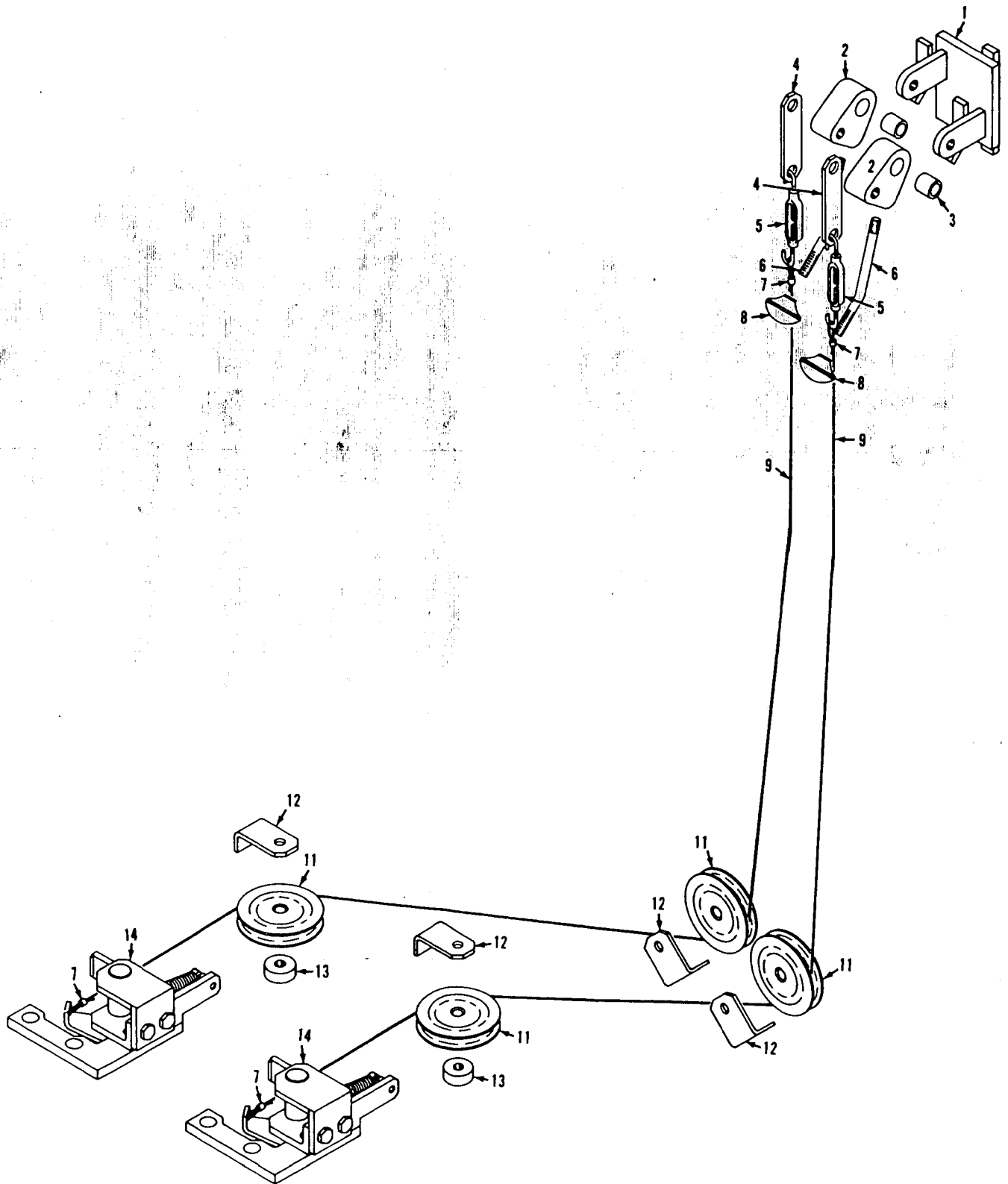


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Drum Rotation Indicators

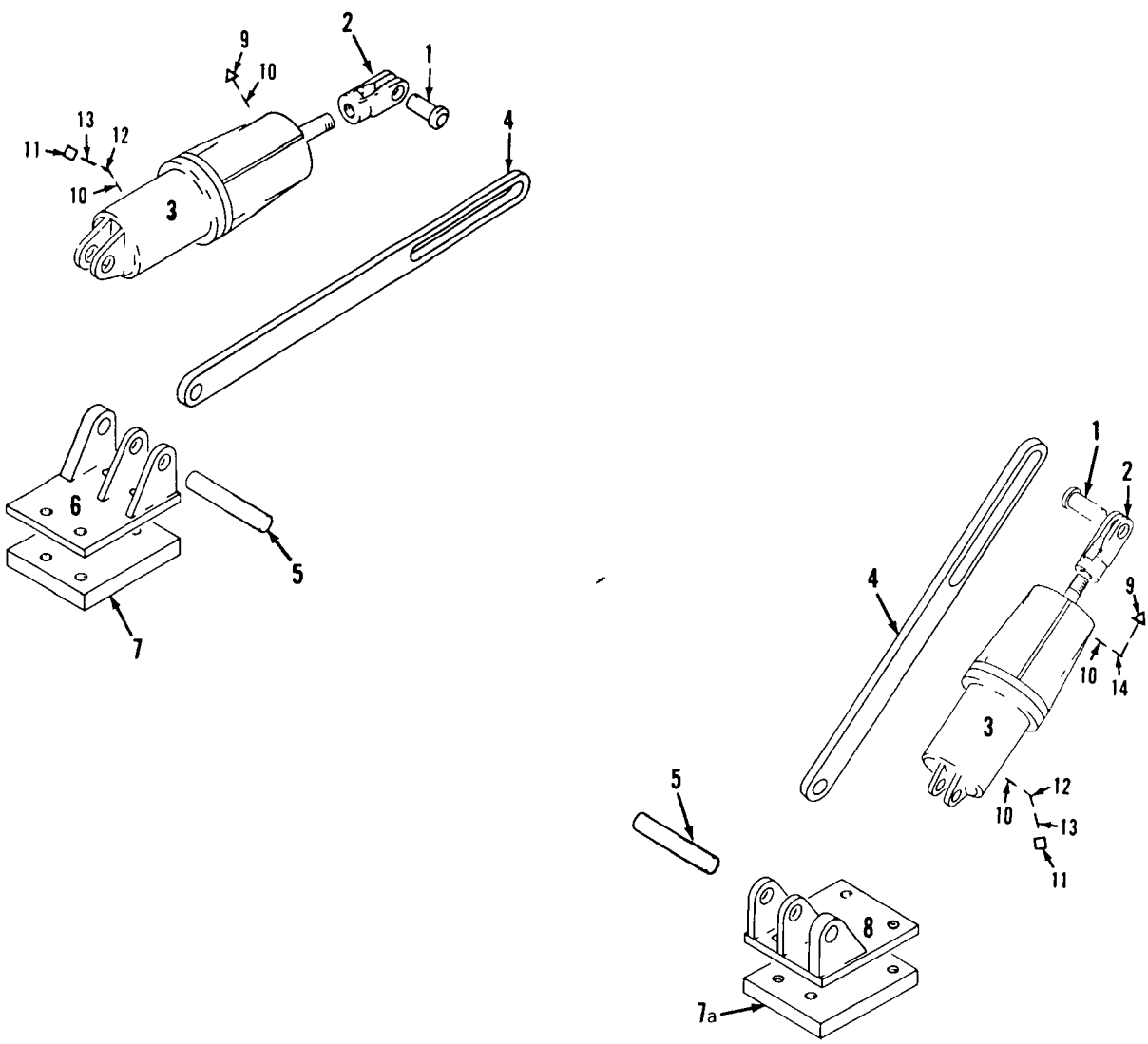
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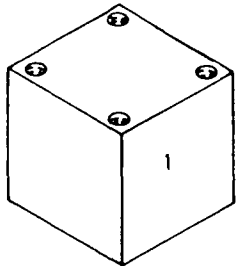
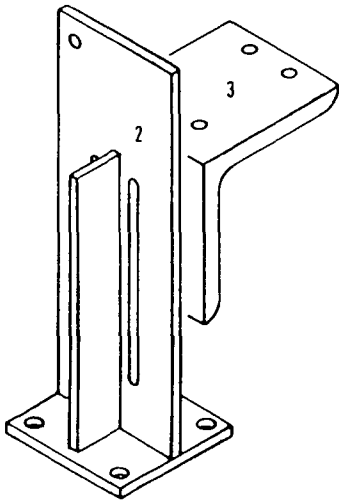
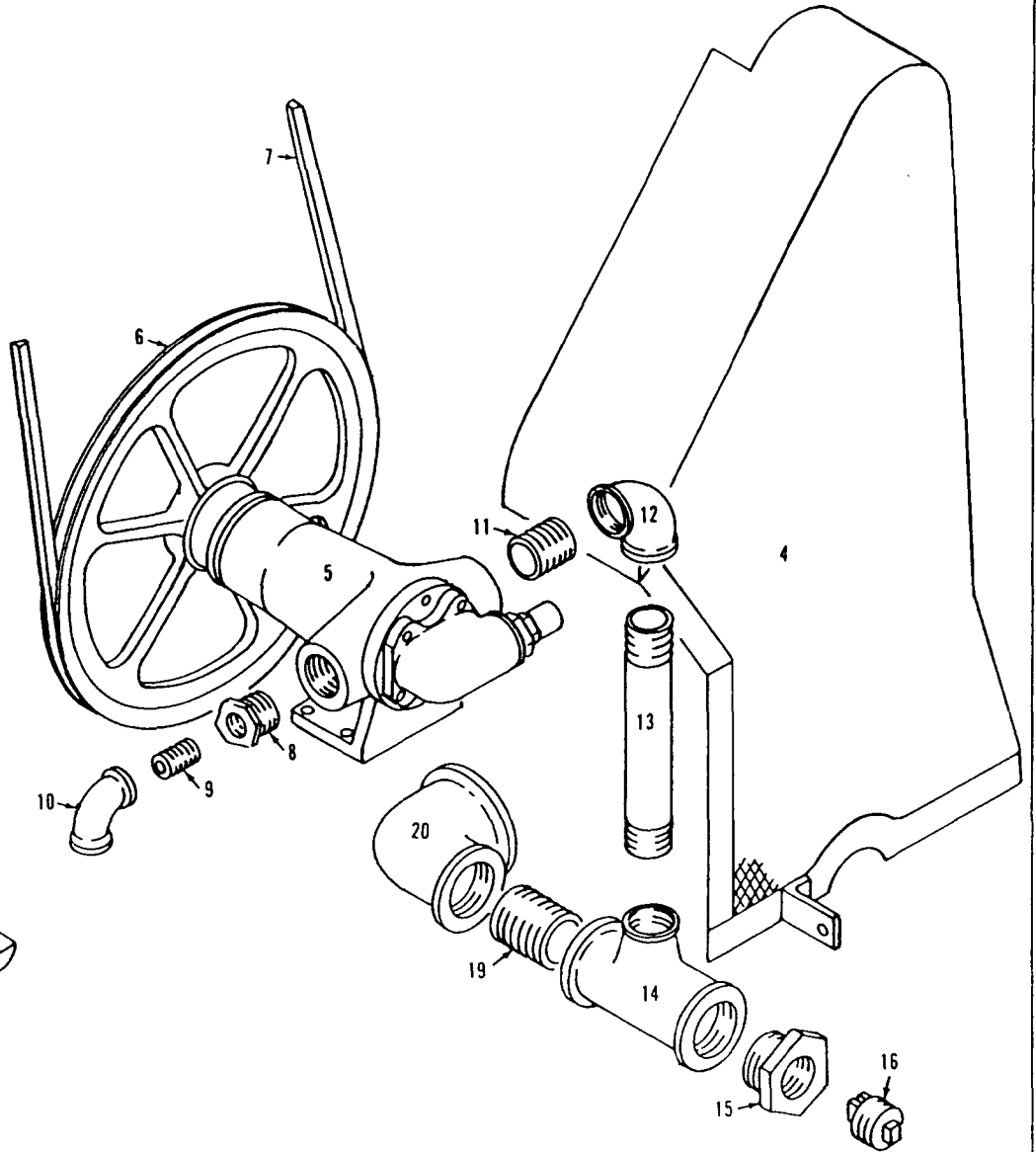
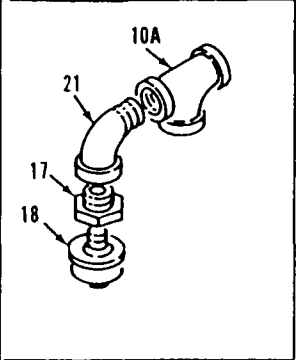
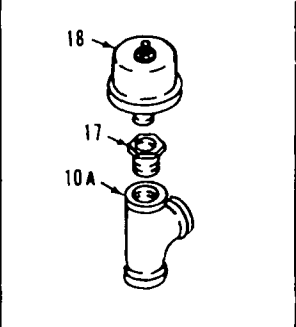
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Brake Pedal Locks



Stick



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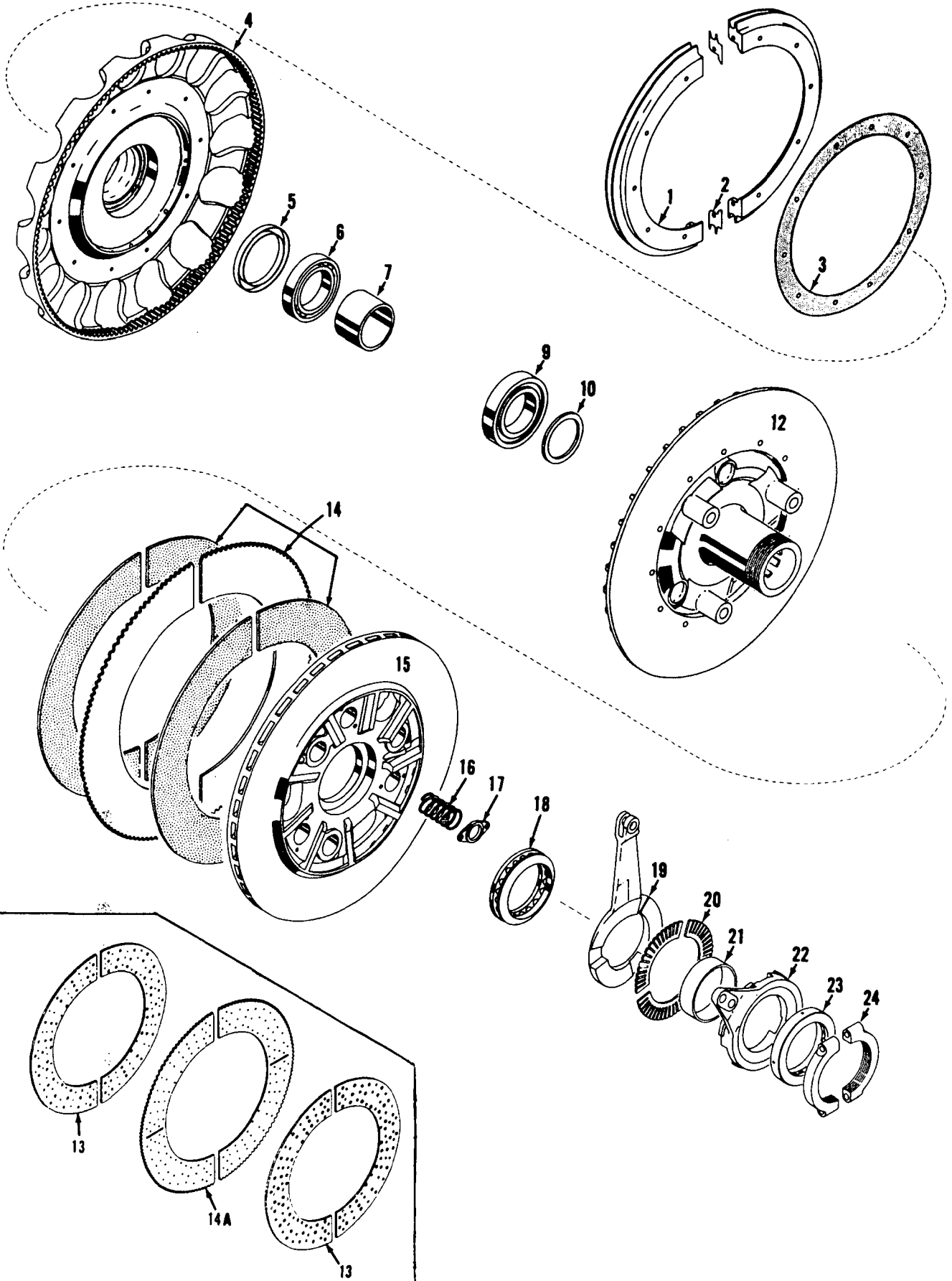
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OIL PUMP

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Manitowoc, Wisconsin



4202382

MATERIAL LIST ON BACK

MAIN DRIVE CLUTCH

48334-1 Cont.	REV. G	MODEL 3950W, 4100W
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REAR DRUM SHAFT  
(AIR CONTROL - ROLLER BEARING - SINGLE DRUM)

MASTER

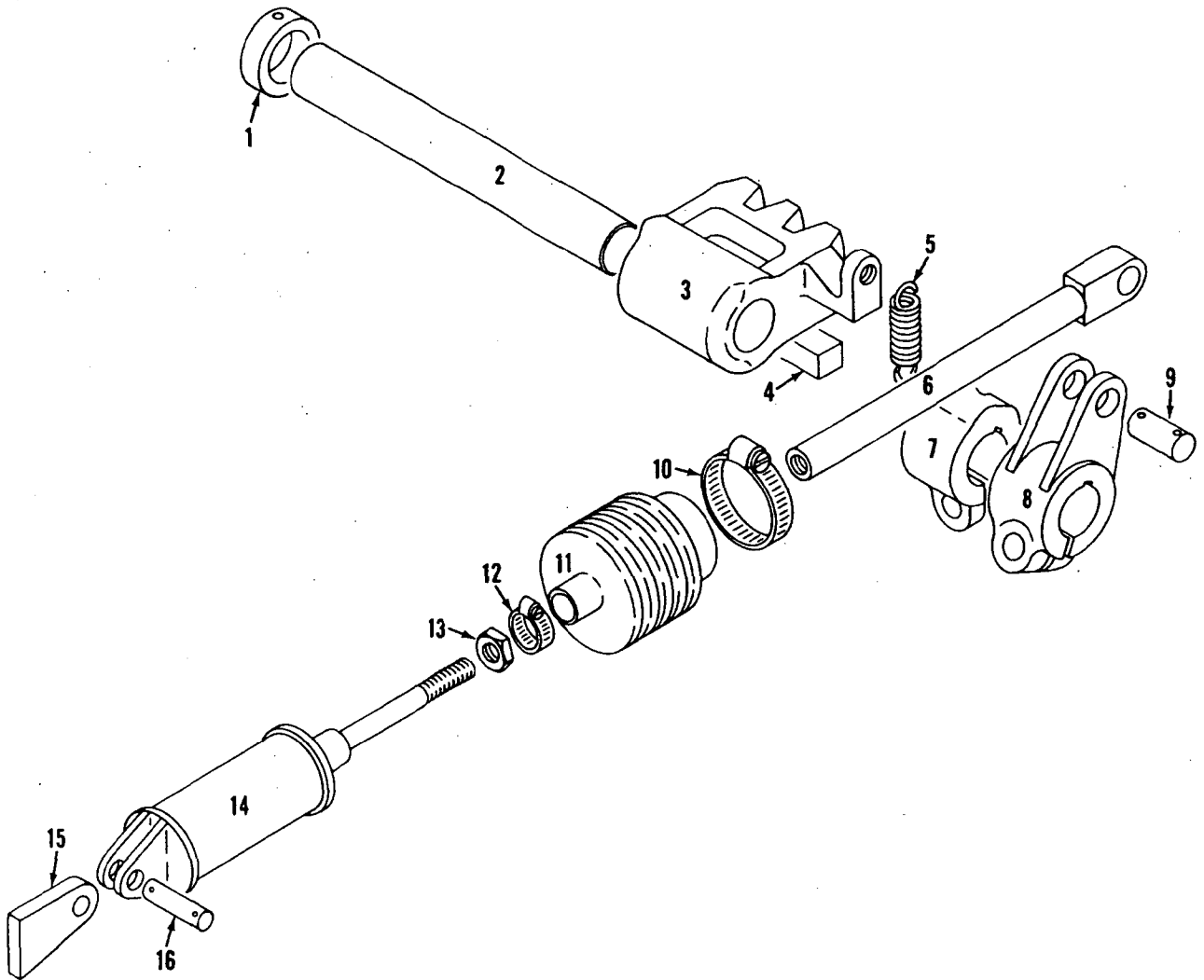
Run as a Front

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
43	139494	2	PLUG, Drum W/capscrew (Use W/out Lagging)	
44	13779	4	LOCK, Bolt (Tack weld to side frame)	
45	335214	1	CHAIN, Drive (2 strand, 2½" P., 94 pitches - standard)	
45	335248	1	CHAIN, Drive (2 strand, 2½" P., 84 pitches - optional for hi-speed rear drum)	
			<u>LAGGING LIST (NOT SHOWN)</u>	
	48816		LAGGING (27" Dia. - grooved 1-1/8")	
	48817		LAGGING (24" Dia. - grooved 1-1/4")	
	48935		LAGGING (27-5/8" Dia. - plain)	
	48839		LAGGING (27" dia. - grooved 1-1/4")	
	181753		LAGGING (24" dia. - plain)	
			#0-157	

48334 G1 Cont'd.

REV. G	48334 - 1
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MASTER



180760C1

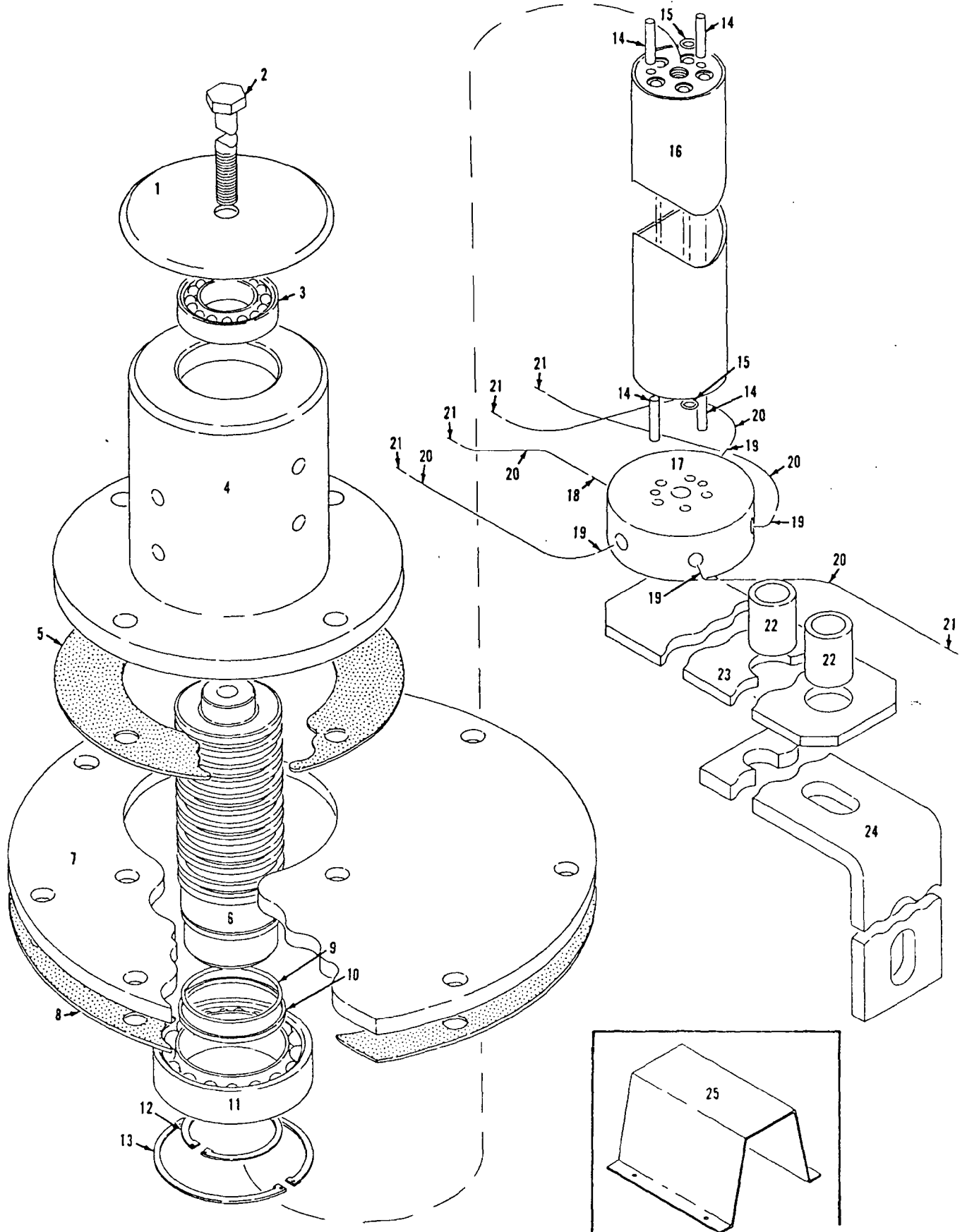
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SWING LOCK CONTROL

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6544581

MATERIAL LIST ON BACK

312 1/2

9549

# MASTER

-C.I.-

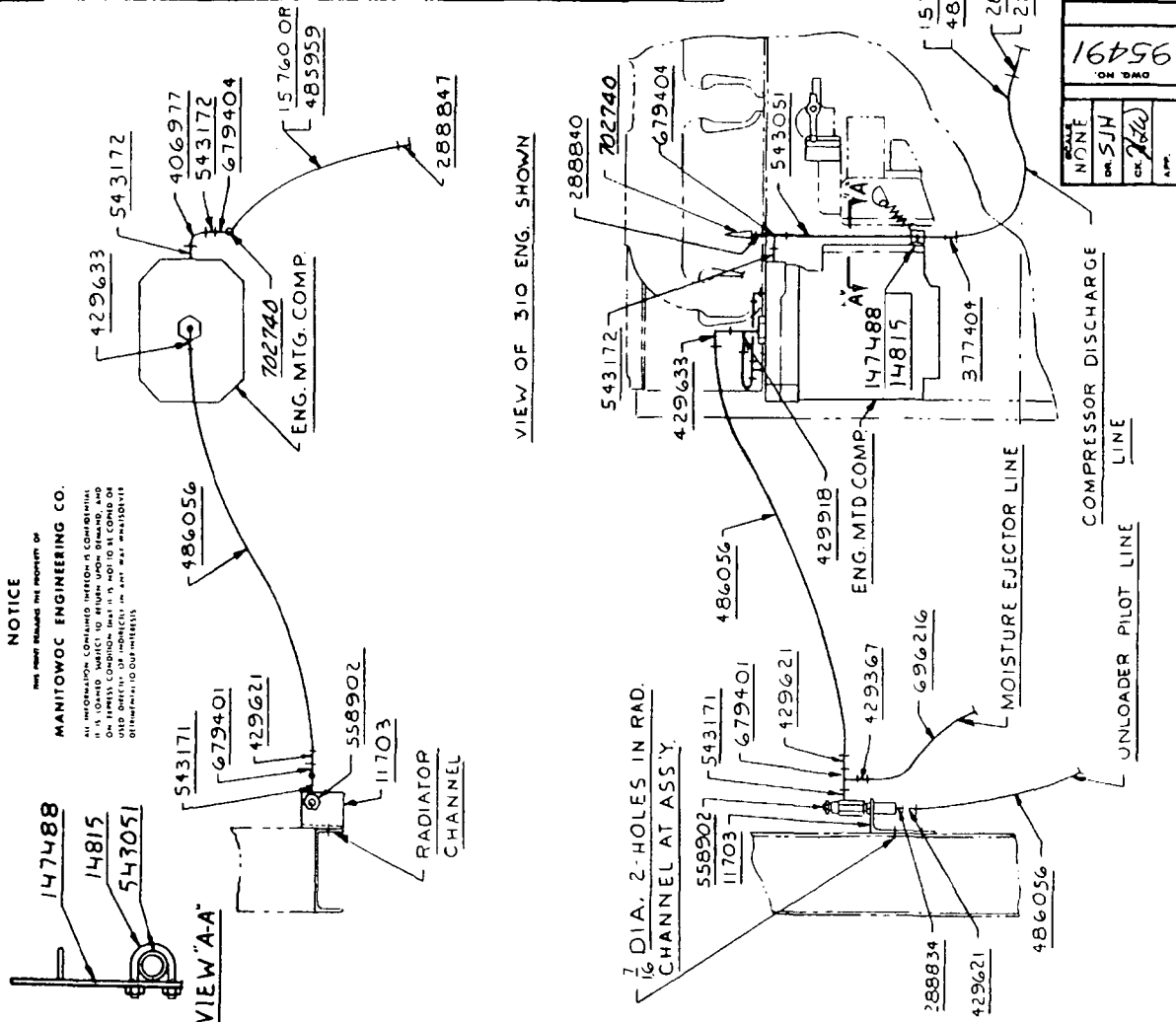
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**BILL OF MATERIAL**

ITEM NO.	QTY.	DESCRIPTION	LENGTH FT.	INCH.	MATERIAL	ORDER NO. OR DWG. NO.	REMARKS
1		BRACKET				11703	
1		3/4 X 8 FT. LG. HOSE				15760	4000 W. 4100 W. 3900 W.
1		SUPPORT				147488	SEE NOTE 3
1		1 X 1/2 NUT BUSHING				288834	
1		1 X 1/2 NUT BUSHING				288840	
1		1 X 1/2 NUT BUSHING				288847	
1		1/2 PIPE COUPLING				377404	
1		1 X 90° ELBOW				406977	
1		1/2 X 1/2 TUBE CONNECTOR				429367	
2		1/2 X 1/2 MALE CONNECTOR				429621	
1		1/2 X 1/2 MALE ELBOW				429633	
1		1/2 X 70 LG. HOSE				485959	3900 W. 4100 W.
1		1/2 O.D. PLASTIC HOSE				486056	
1		1 X 8 LG. NIPPLE				543051	
1		1 X 7 LG. NIPPLE				543171	
2		1 X 1/2 LG. NIPPLE				543172	
1		TEE				429918	1 E 53 F
1		UNLOADER PILOT				558902	
1		CLAMP (U-BOLT)				14815	
1		TEE				679401	
1		TEE				679404	
AS REQD.		COPPER TUBE				696216	
1		3/4 X 1 NUT BUSH				288757	390 ONLY
1		1/2 SAFETY VALVE				702740	165 PSIG.

**REVISIONS**

NO.	DATE	DESCRIPTION
1	191150	RO724
2	49874	
3	49592	
4	49446	
5	49591	



DATE: NONE  
 DR: SJH  
 CK: [Signature]  
 APP: [Signature]

95491  
 ON 940

**MANITOWOC ENGINEERING CO.**  
 MANITOWOC, WISCONSIN

MODEL: 3900 - 3900 W  
 4000 W - 4100 W - 390

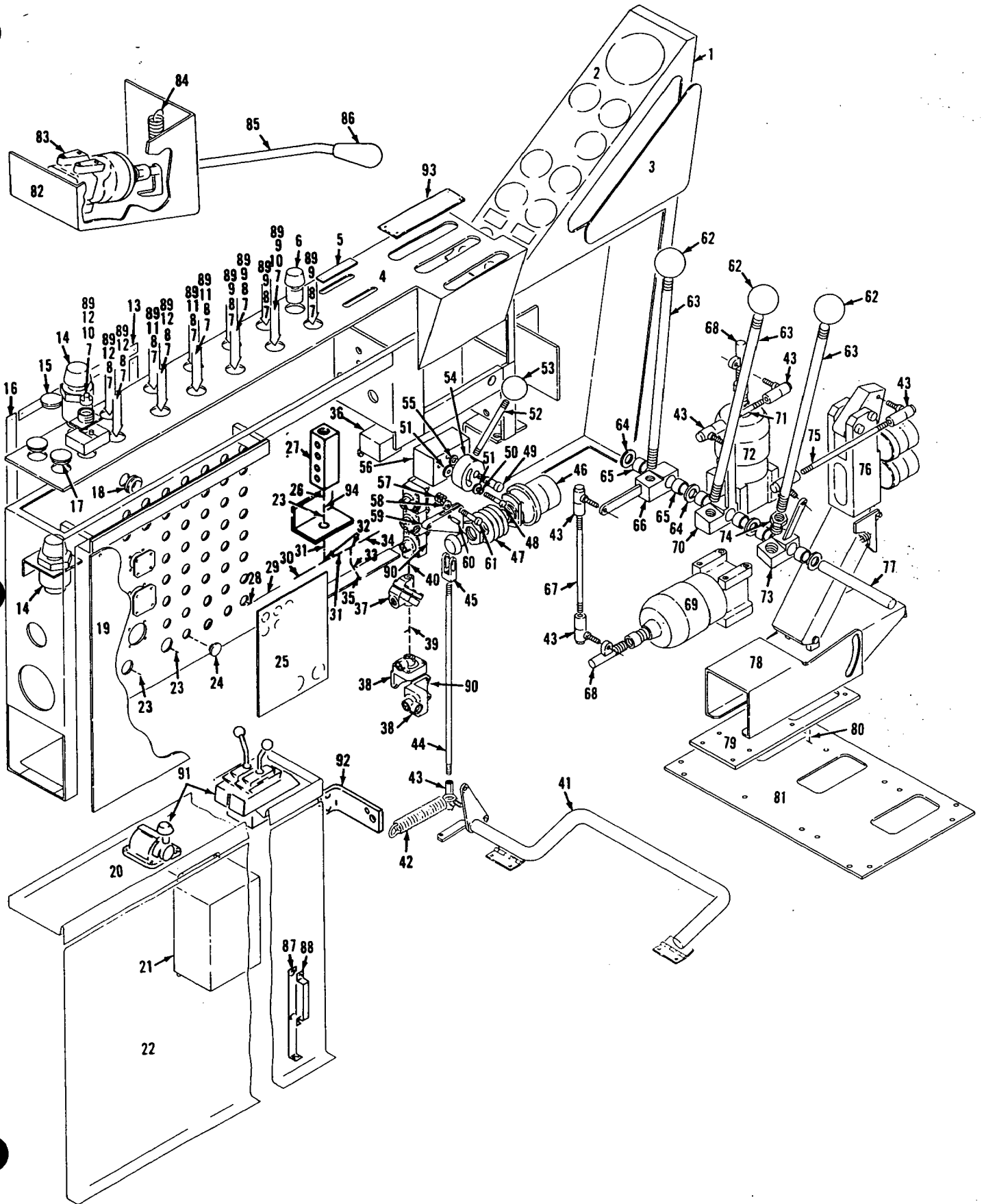
POWER PLANT SUB-ASSY  
 COMPRESSOR - ENG. MTD  
 30 CFM ON CUMMINS  
 NT-855 OR NTA-855 ENGINE

1-27-81  
 PATTERN NO.  
 CODE NO.  
 DWG. NO. 95491

O-72, 0-147, 0-156

DO NOT SCALE THIS DRAWING

K & E 18-1188 500-1274



65516 G1

MATERIAL LIST ON BACK

LEFT CONTROL CONSOLE

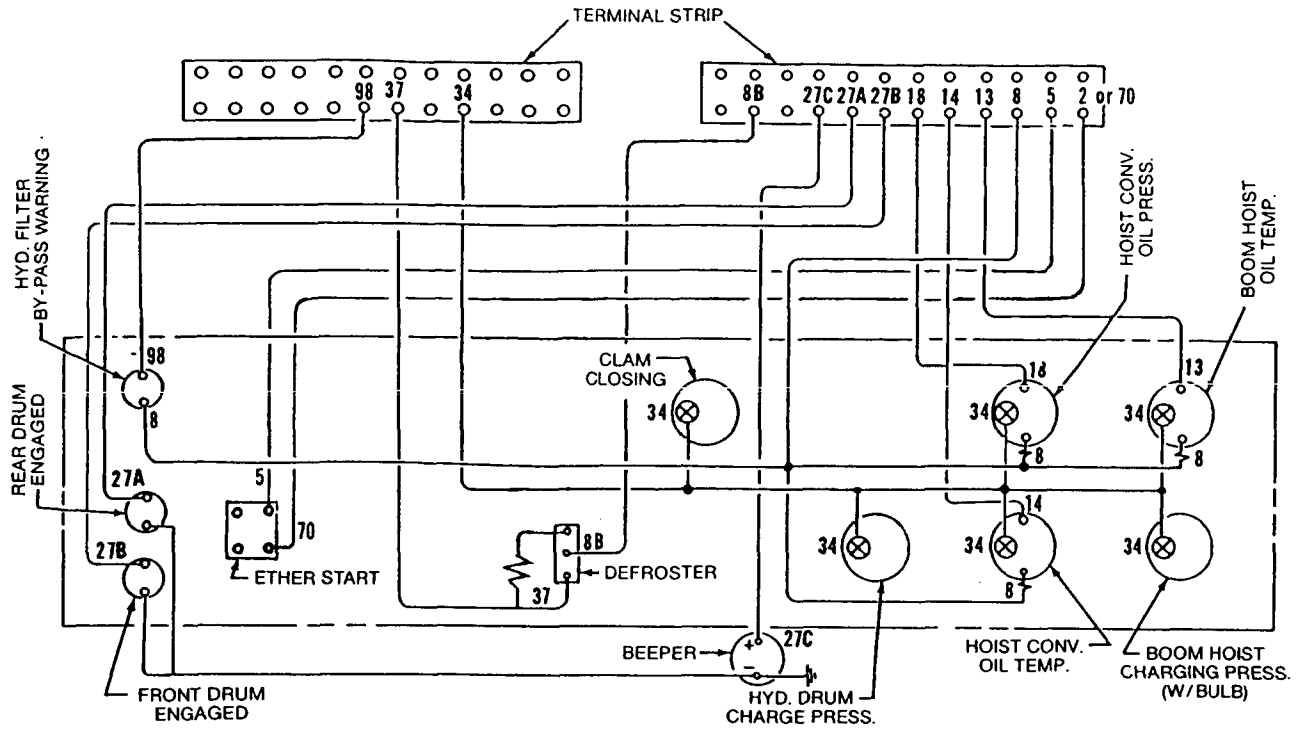
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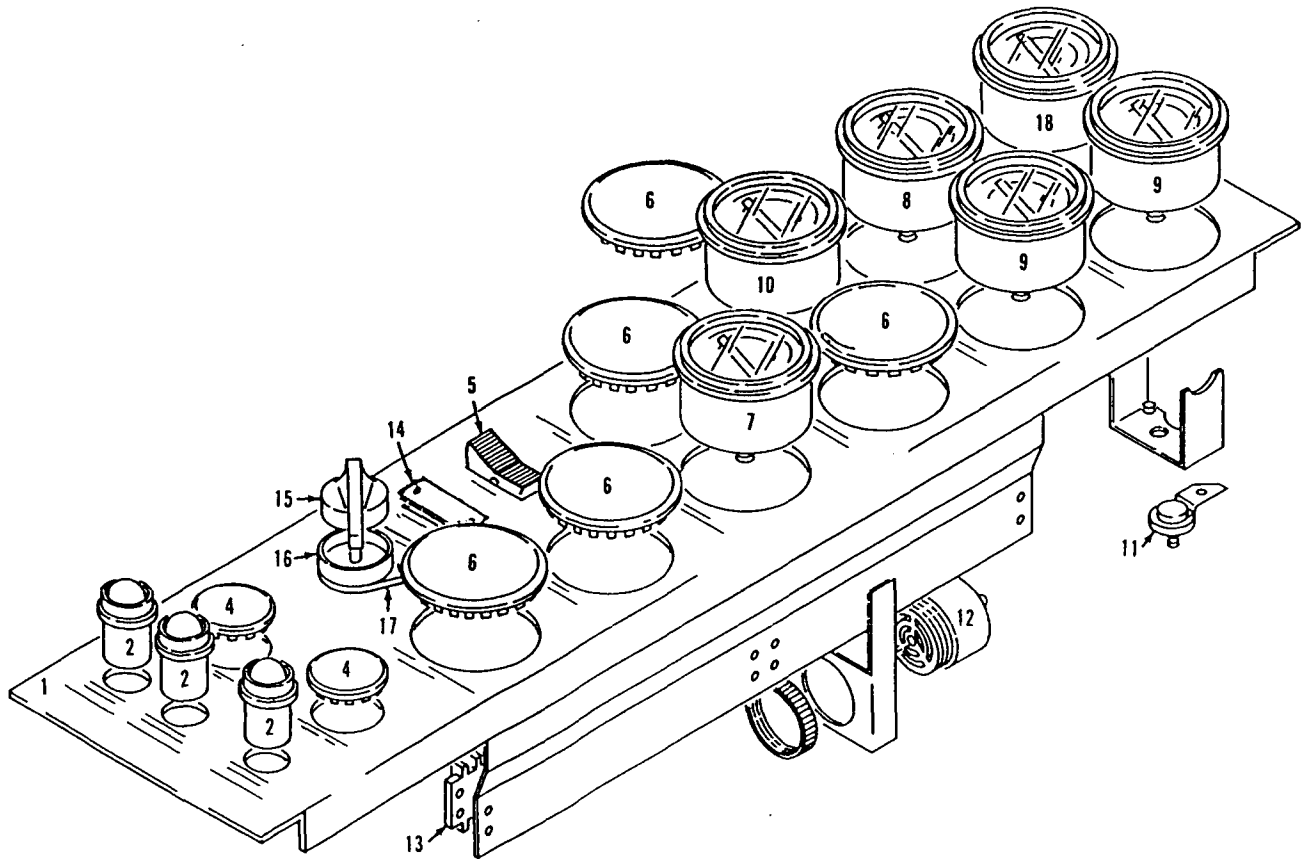


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WIRING DIAGRAM  
(REAR VIEW)



INSTRUMENT PANEL

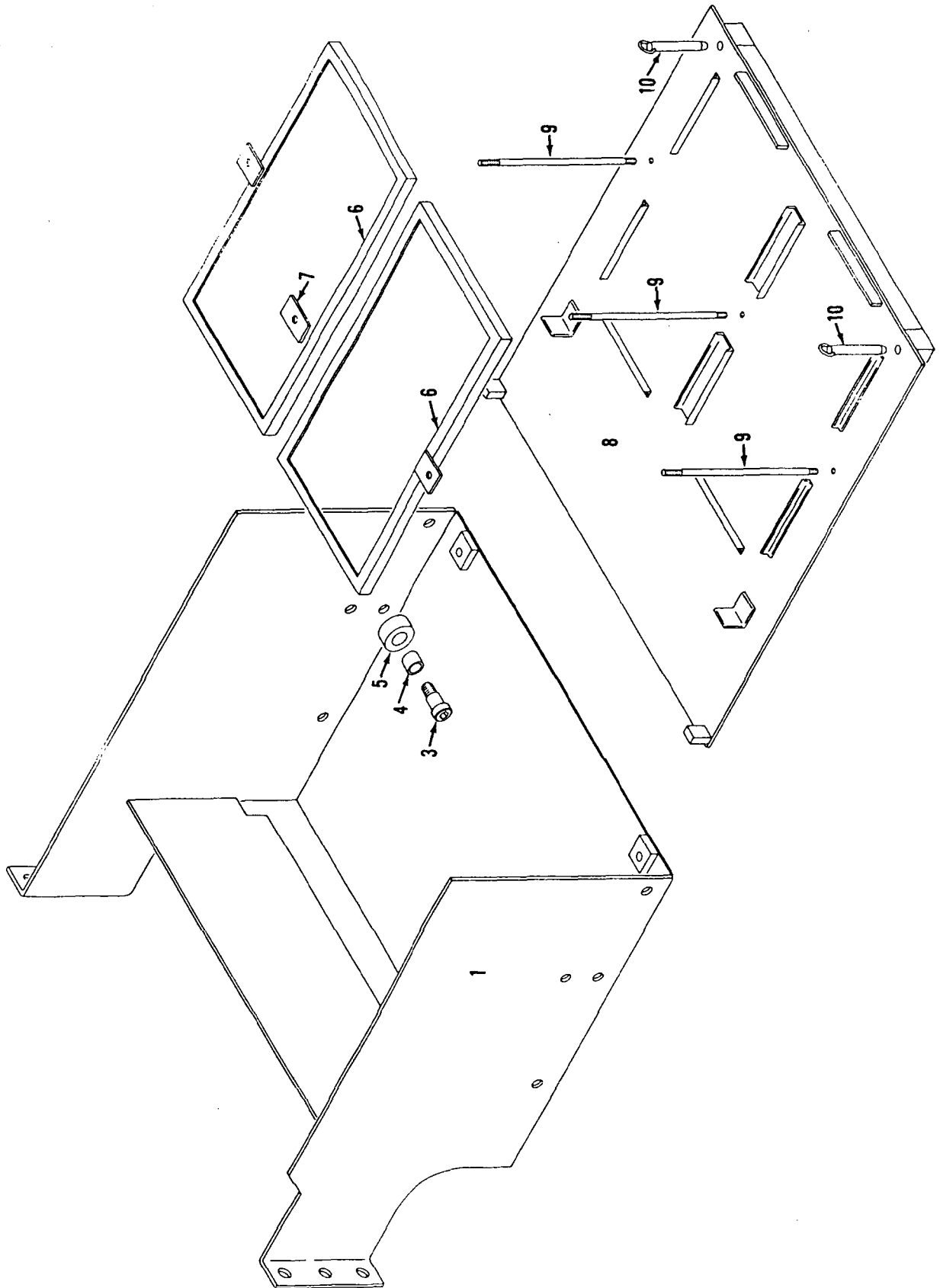
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MANITOWOC ENGINEERING CO.

A Division of The Manitowoc Company, Inc.

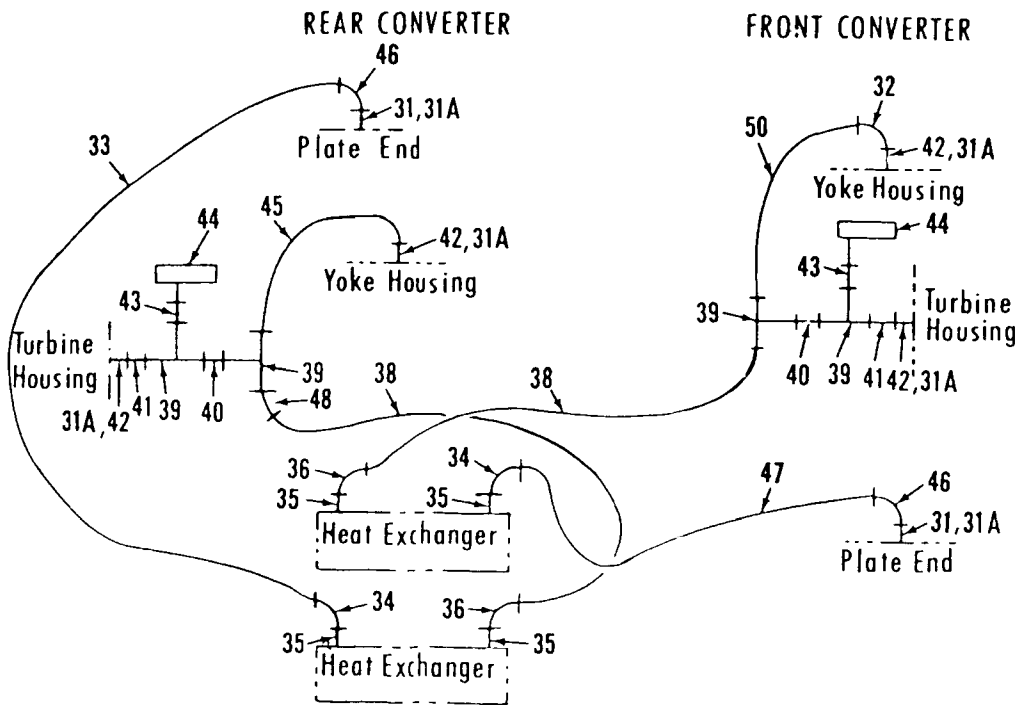
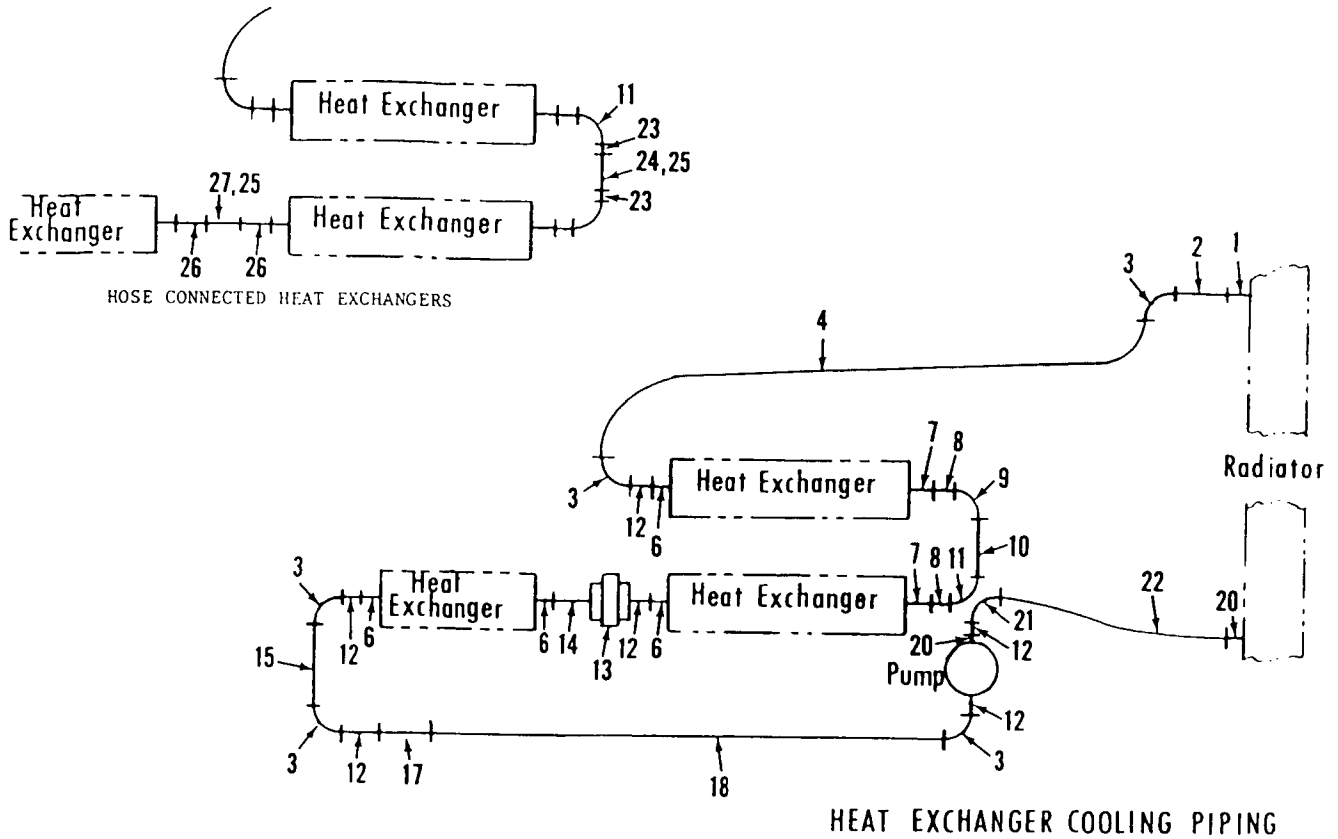
Manitowoc, Wisconsin



4891181

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BATTERY BOX



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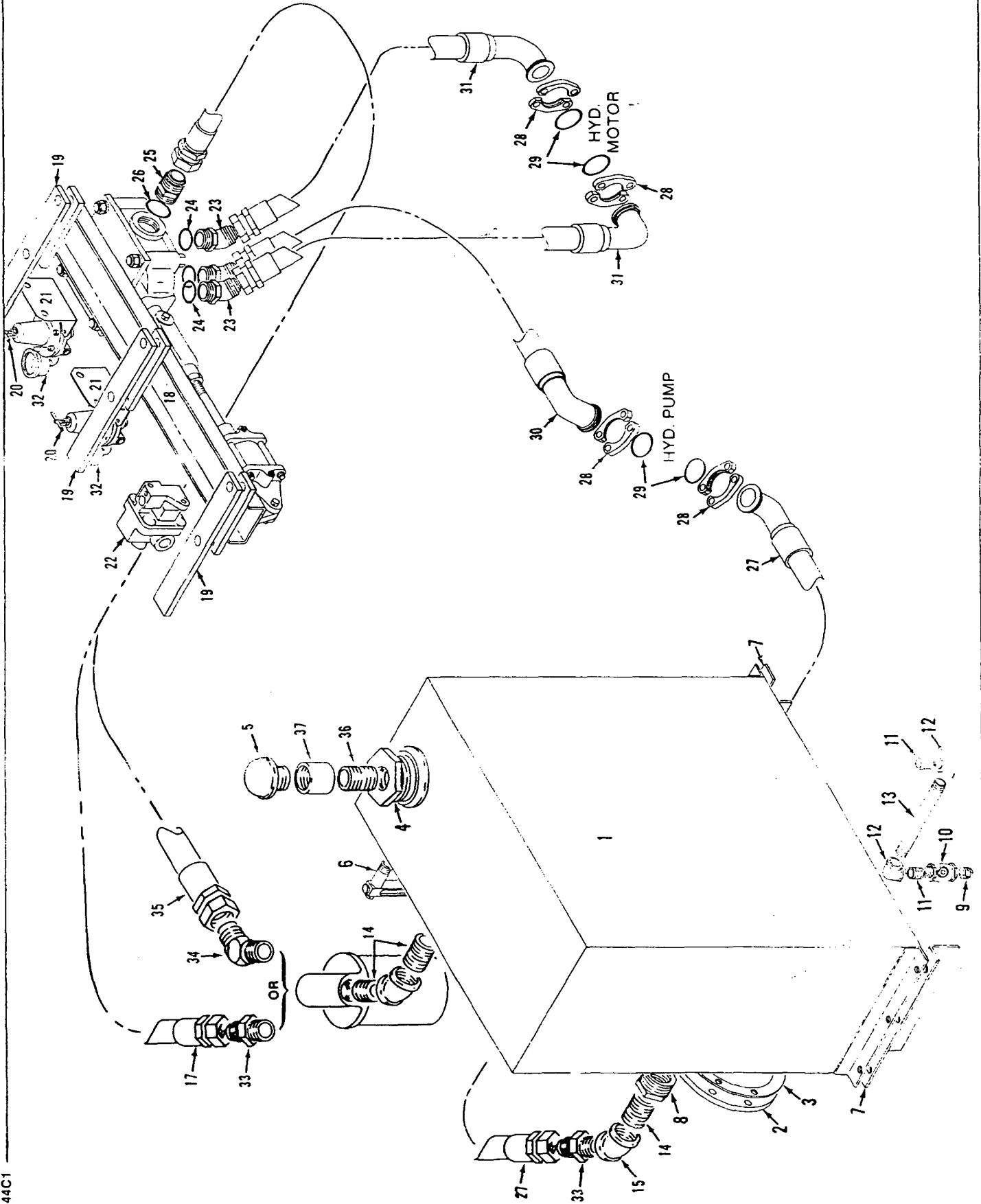
MATERIAL LIST ON BACK

COOLING PIPING

MASIEK

487383

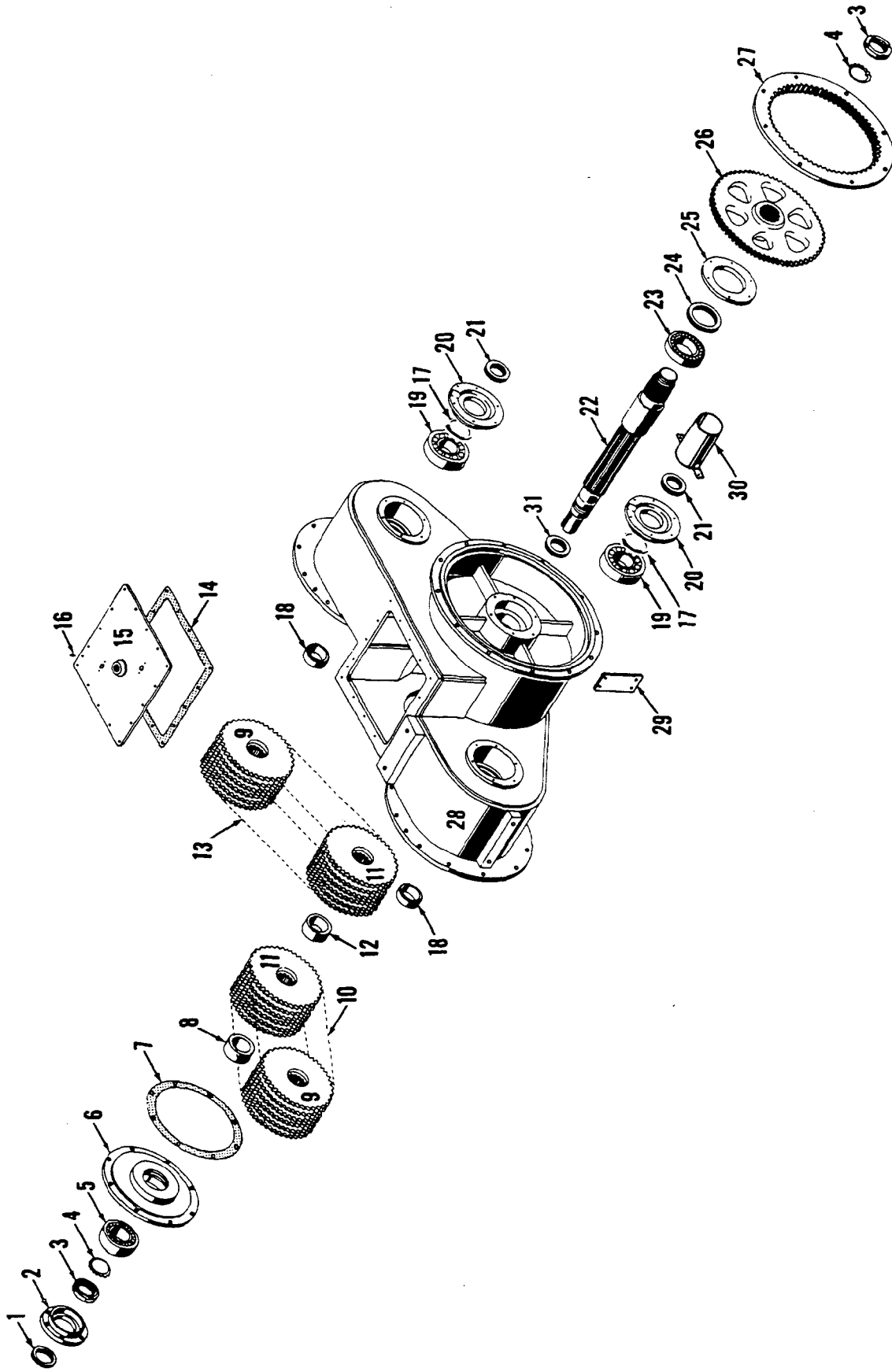




48944C1

MATERIAL LIST ON BACK

FULL RANGE VICON® POWER LOAD LOWERING



42748G1

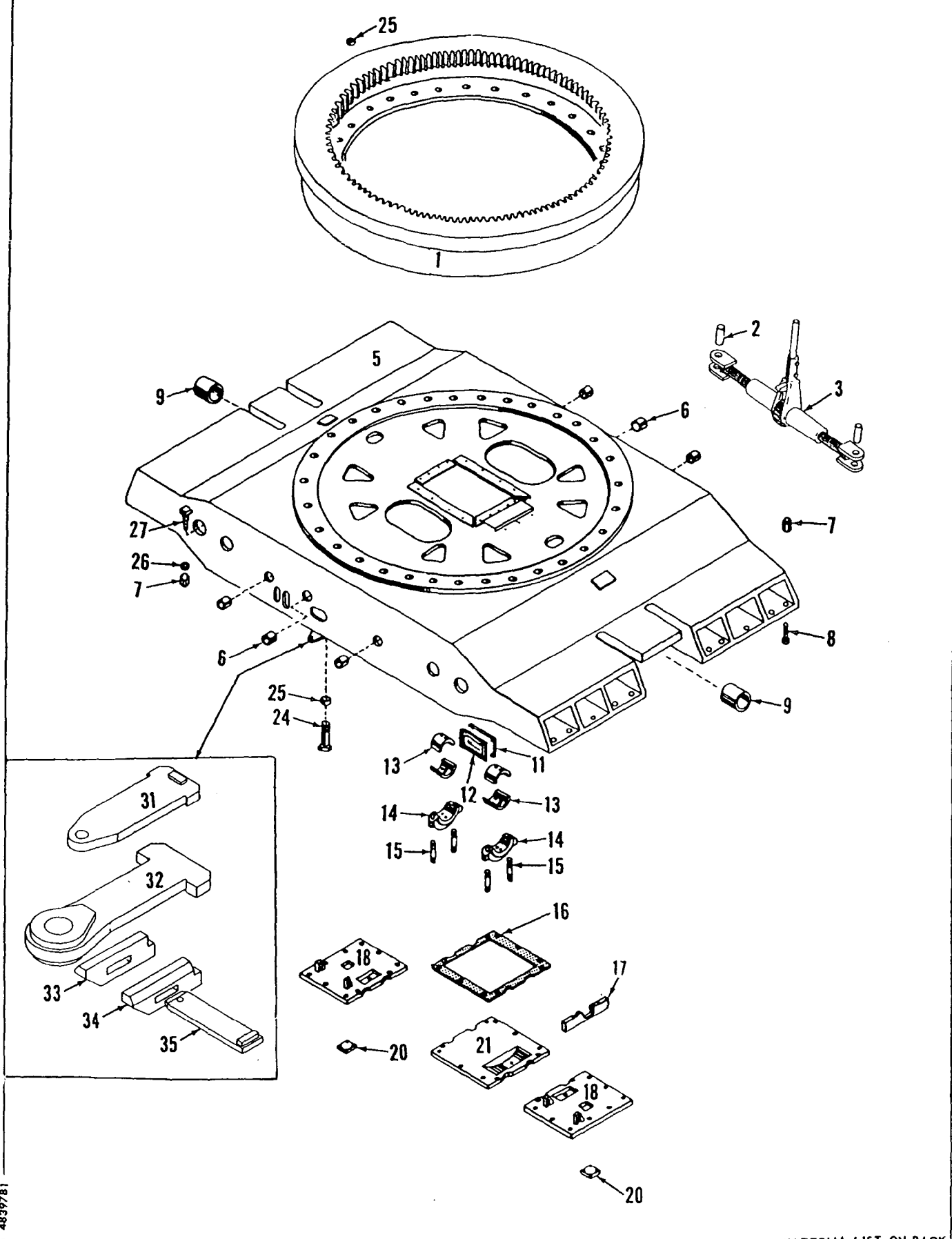
MATERIAL LIST ON BACK

TRANSMISSION CASE ASSEMBLY

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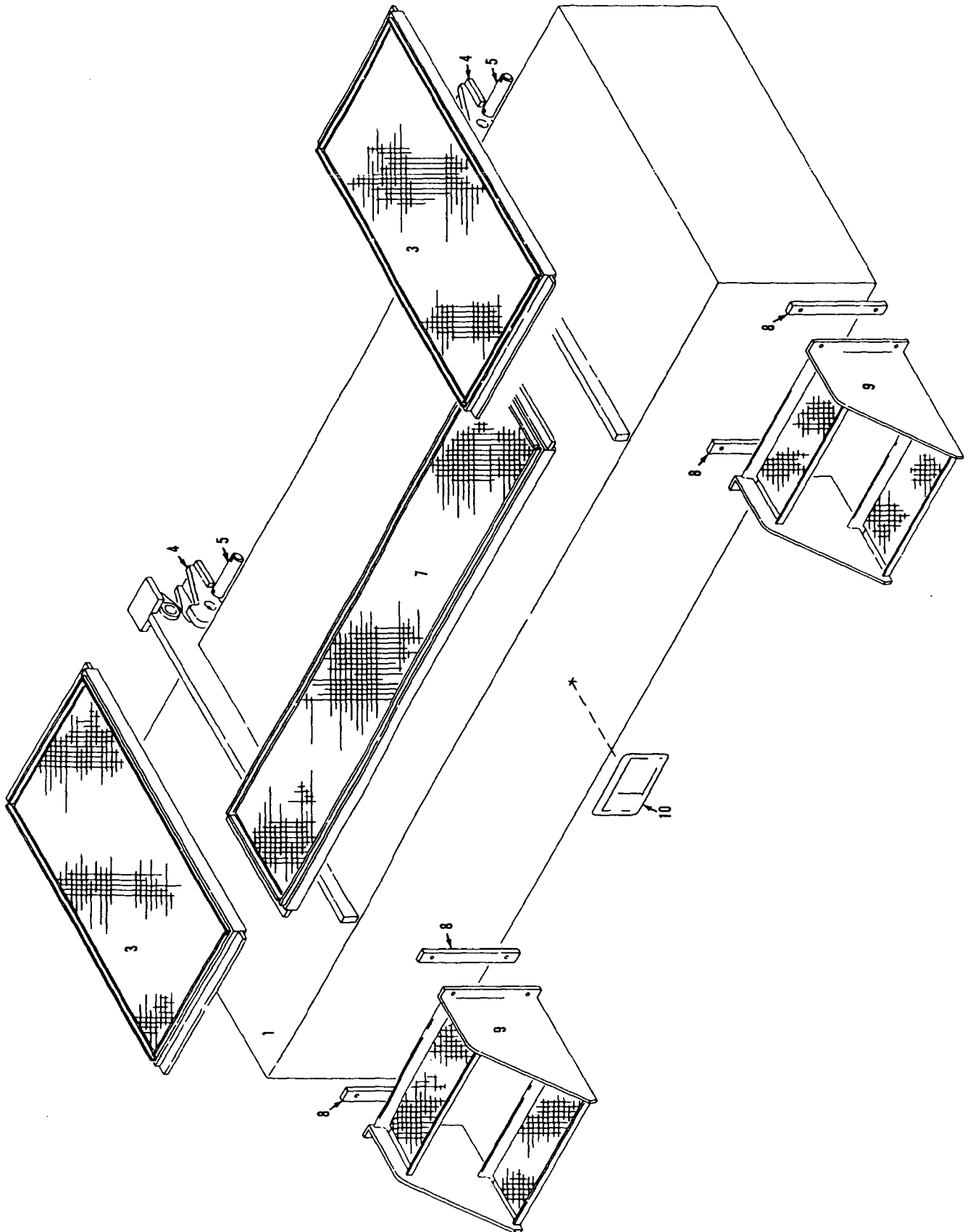
Manitowoc, Wisconsin



4839781

MATERIAL LIST ON BACK

CARBODY



65642C1

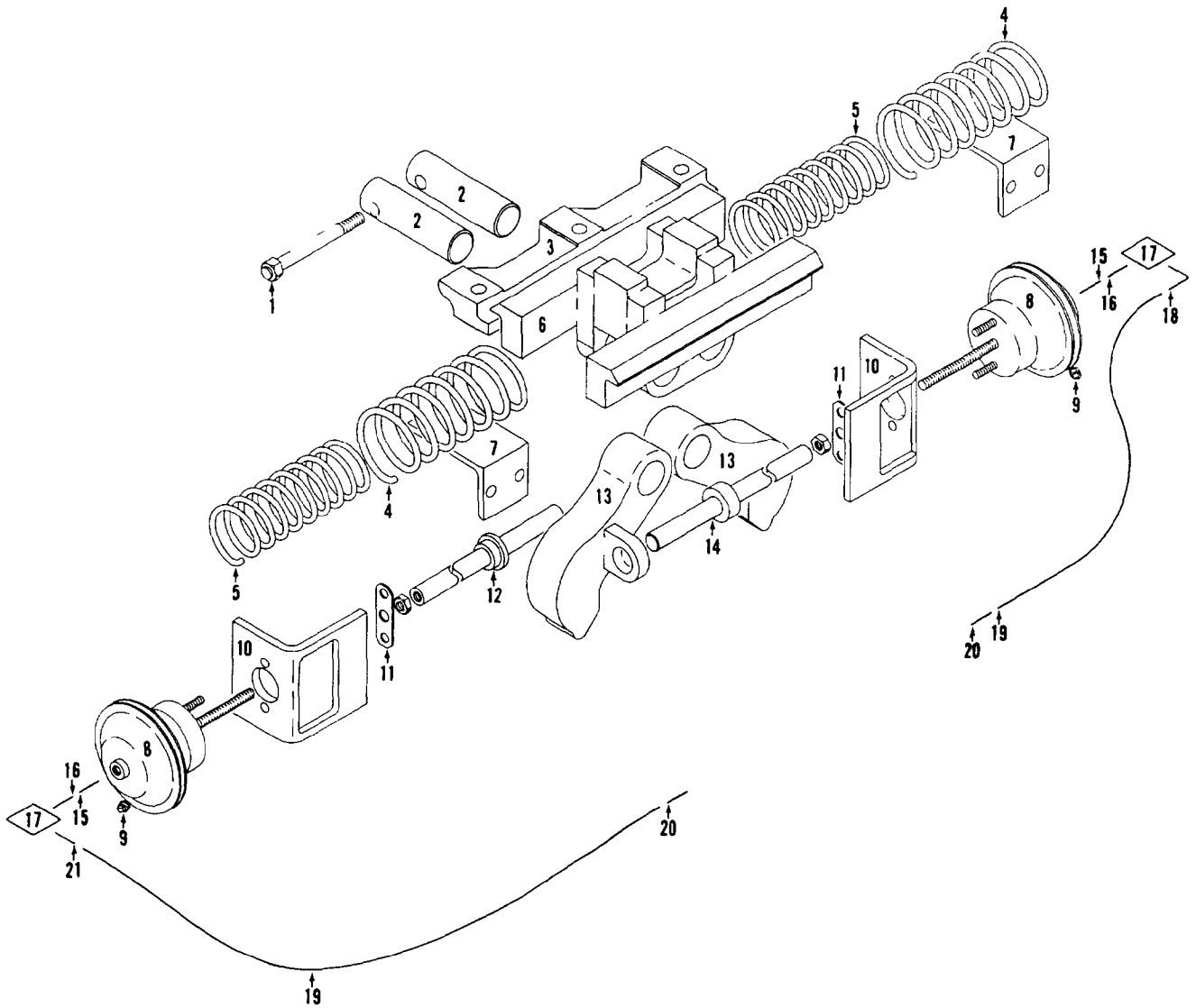
MATERIAL LIST ON BACK

CARBODY COUNTERWEIGHT

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Manitowoc, Wisconsin



190264A1

MATERIAL LIST ON BACK

TRAVEL LOCK

49278-1 Cont.	REV. K	MODEL 4100W
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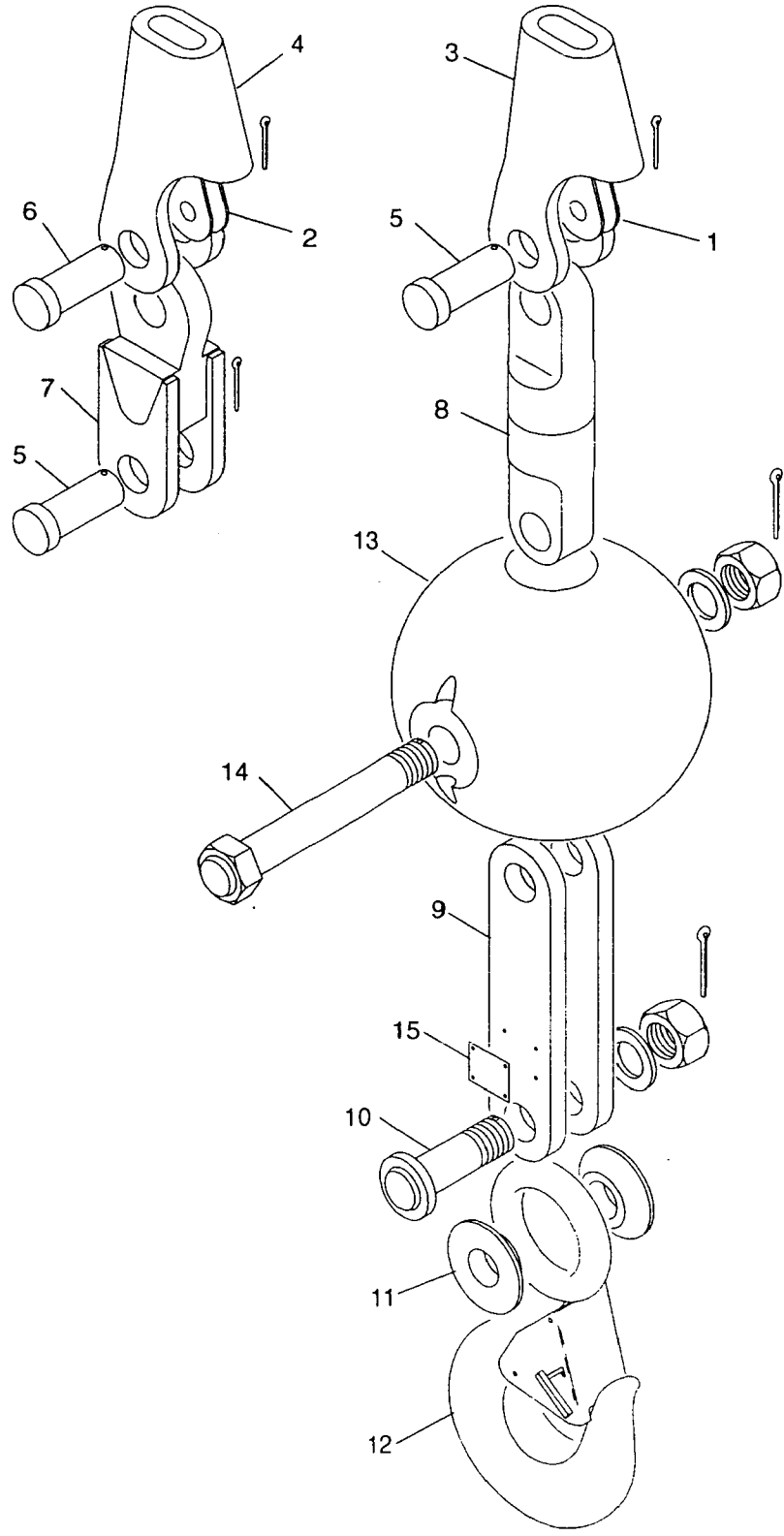
**GANTRY AND BACKHITCH**  
 (Mach. w/16" Boom Hoist Drums)  
 (12 Part Boom Hoist Reeving)

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
45	143745	2	PIN, w/grease fitting and snap ring  NOTE 1: Mach. w/Series 3 Ringer, delete lower sheaves 77006 Ref. #1, w/Bushings 77005 Ref. #2, Shaft Lock 15275 Ref. #4, Shaft 139480 Ref. #19, Guard 139112 Ref. #20 and also Roller Support 139319 Ref. #36, Roller 72350 Ref. #37 and Shaft 139479 Ref. #38 from both sides of gantry. Add the following:	
36A	139922	2	GUARD, Wire Rope w/capscrews and lockwashers  NOTE 2: For Ringer Mast raising, there must be 2 rollers 78576 Ref. #41 in outside position in left guard 182493 Ref. #40A.  NOTE 3: Machines after 9-16-91 design change, delete Ref. No's. 29, 30, 31, 32, 33 and add:	
46	171878	4	WIRE ROPE GUIDE	

REV. K	49278-1
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PLEASE GIVE MACHINE S/N W/ORDER





ASSEMBLY  
**95111**

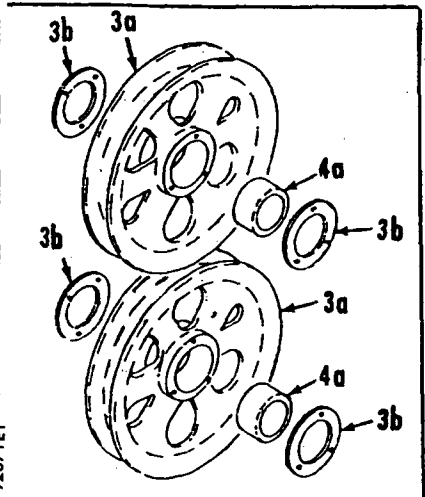
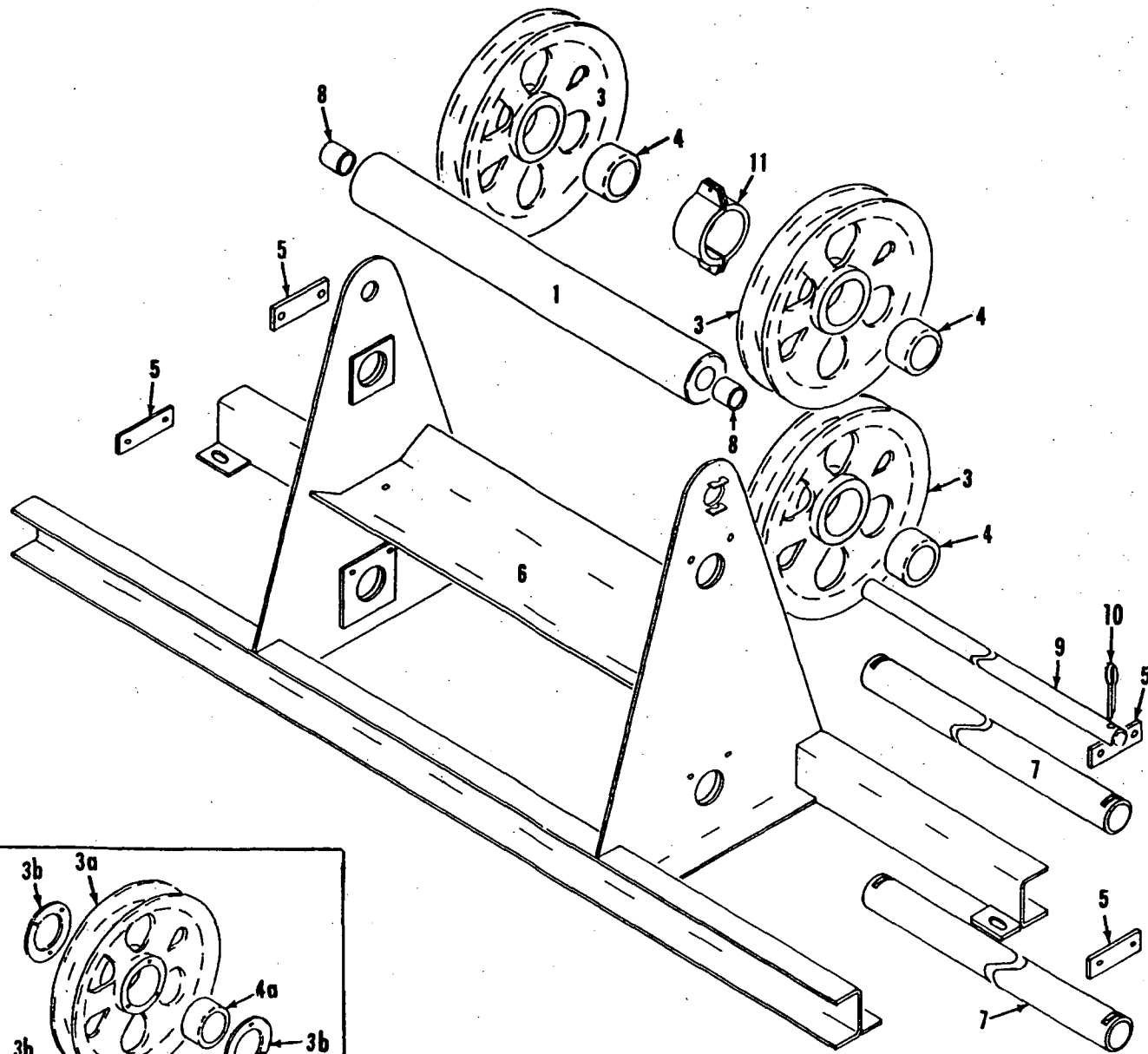
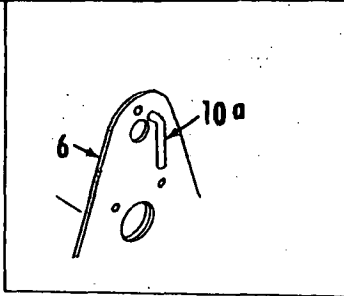
REVISION  
**C**

**HOOK & WEIGHT BALL, 15 TON**

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92671E1

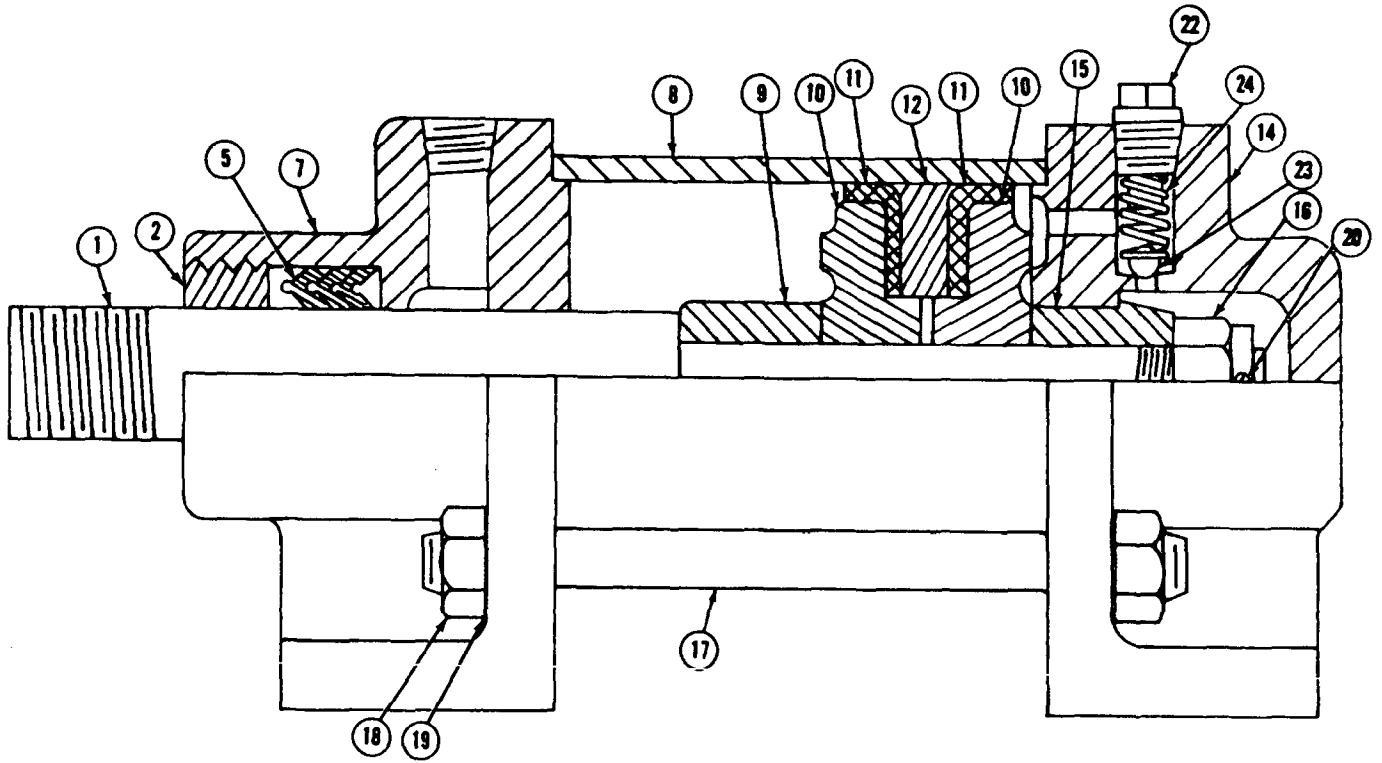
MATERIAL LIST ON BACK

WIRE ROPE GUIDE

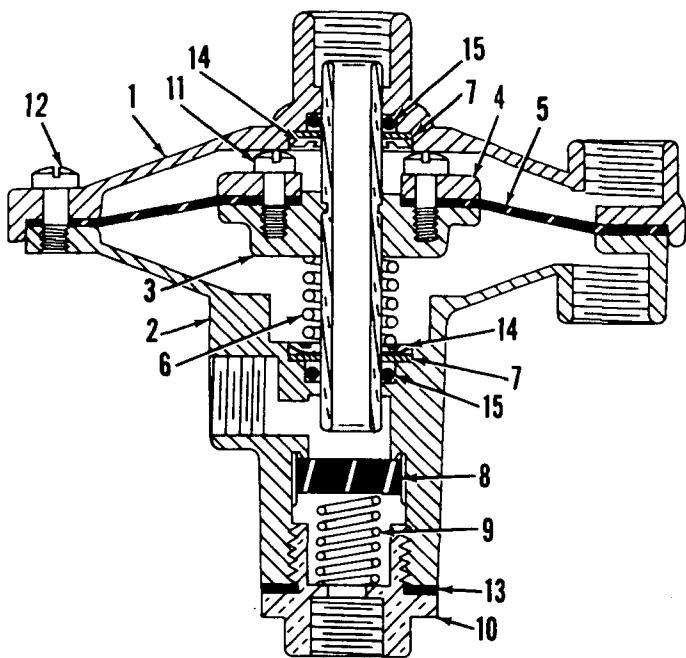
O-Number



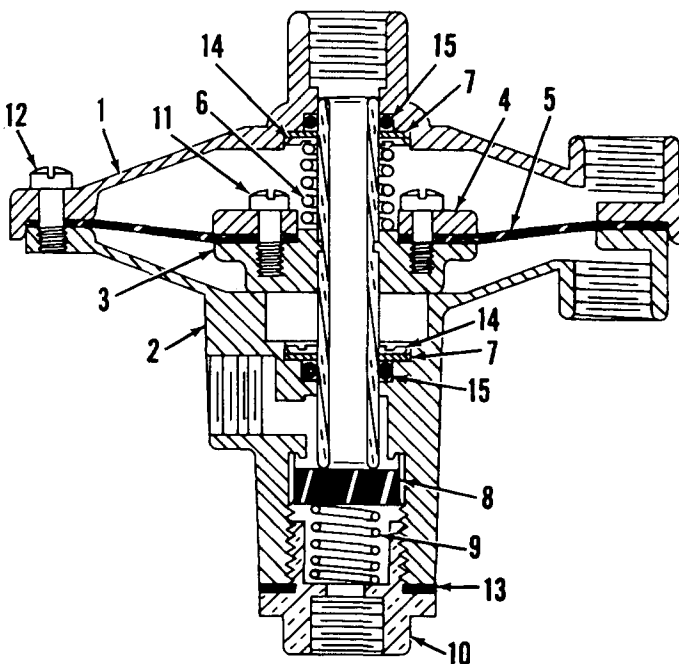
MASTER



MASTER



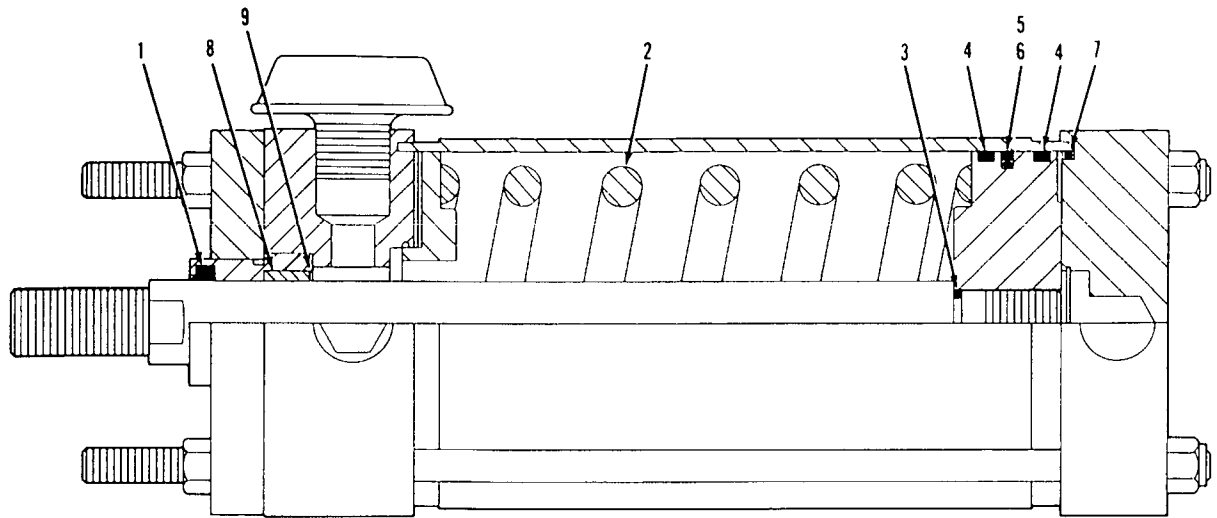
Normally Closed



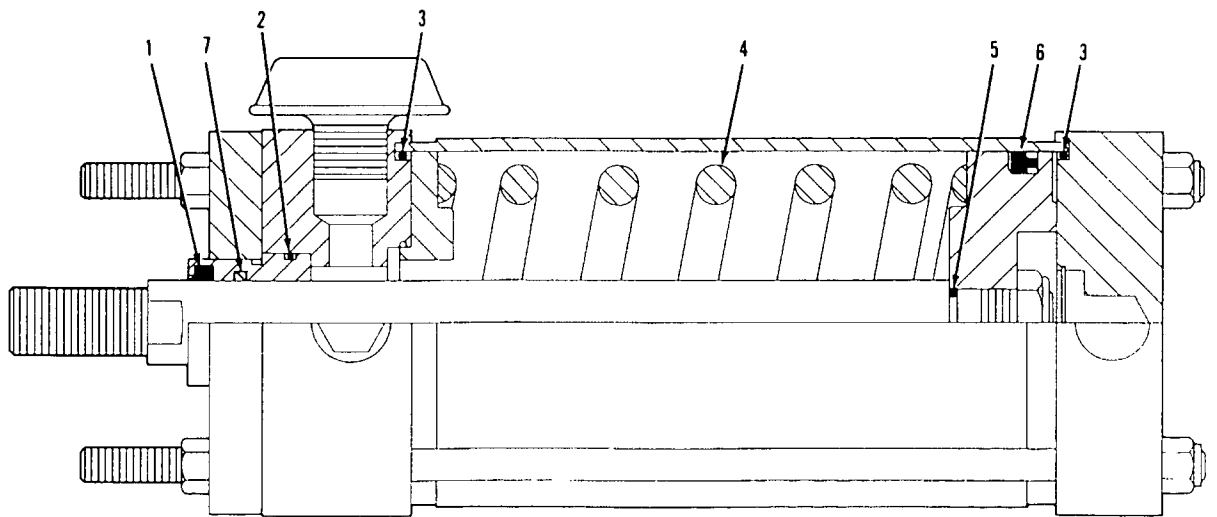
Normally Open

MATERIAL LIST ON BACK

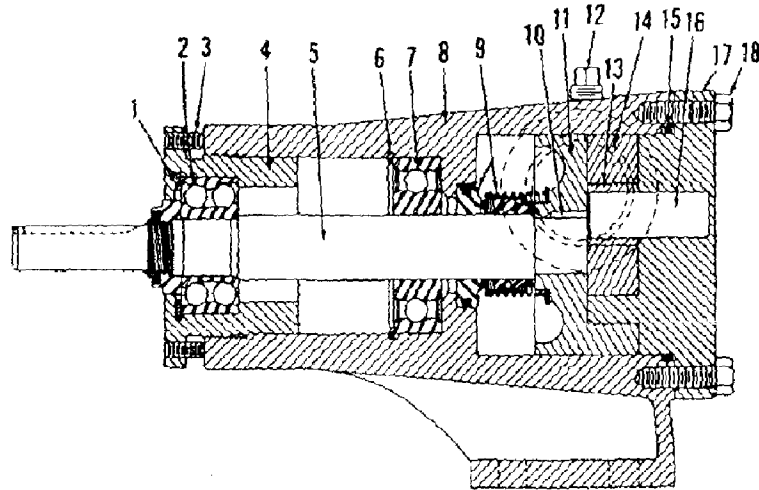
RELAY VALVES



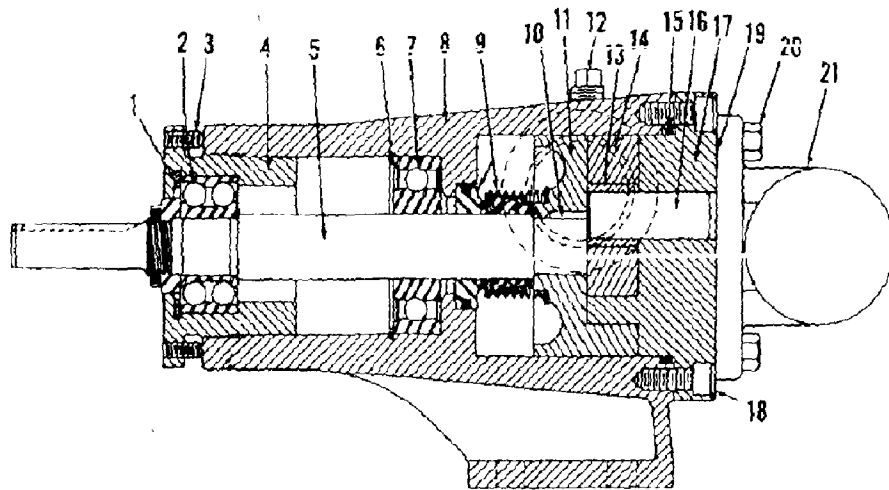
CURRENT PRODUCTION



PAST PRODUCTION



Pump No. 33252

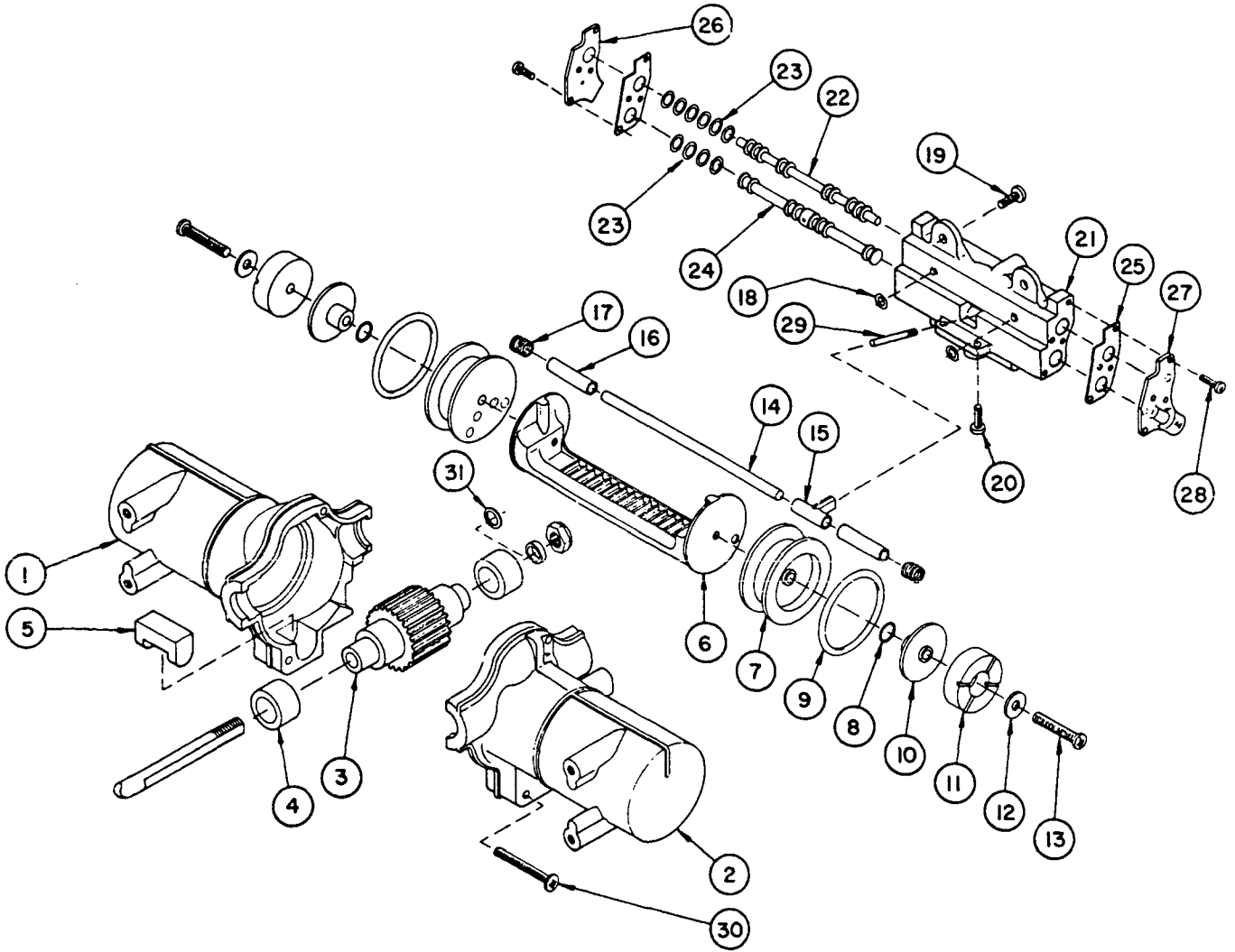


Pump No. 33019

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MODEL: M-550-1-Deg.

MATERIAL LIST ON BACK

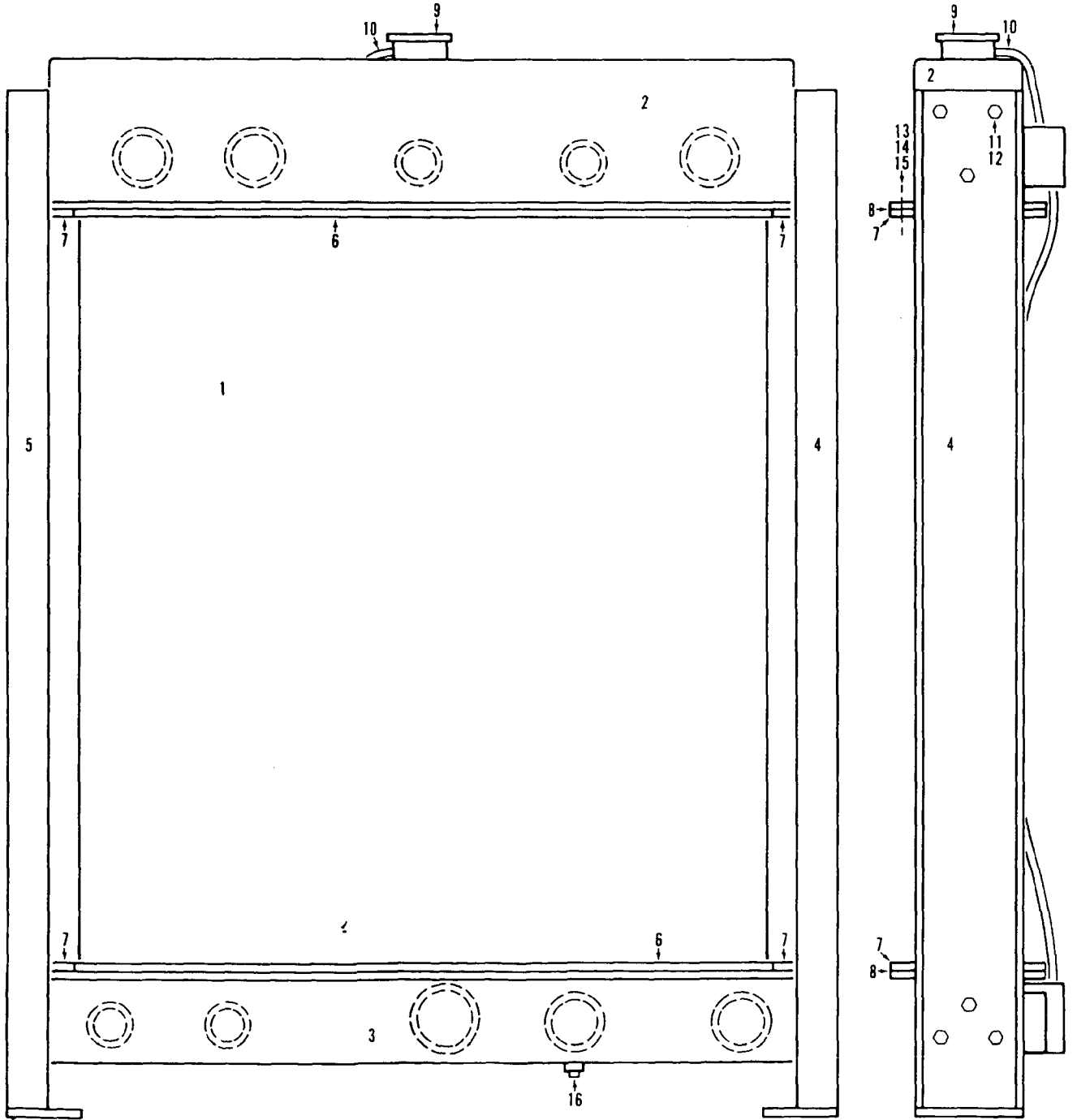
WINDSHIELD WIPER MOTOR

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MASTER

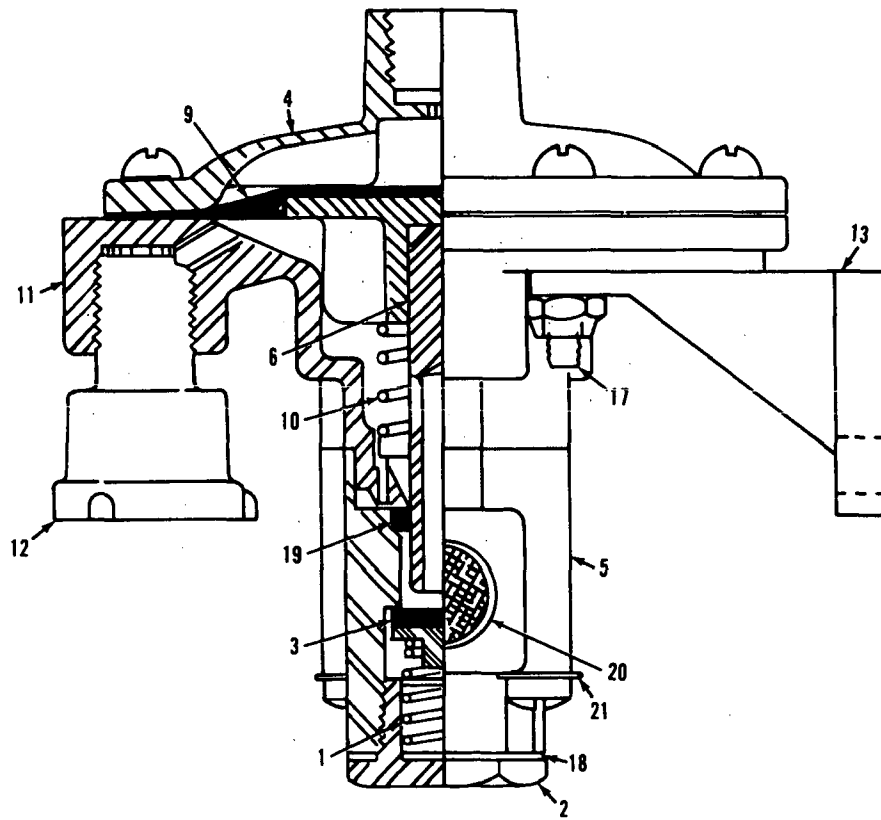


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MASTER



0-472-1A

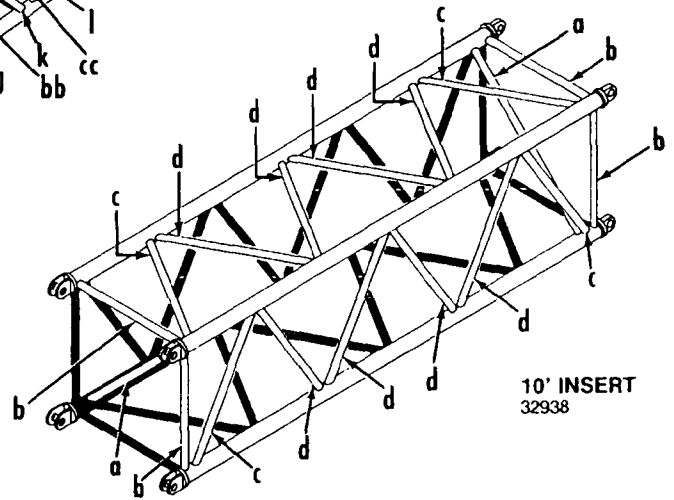
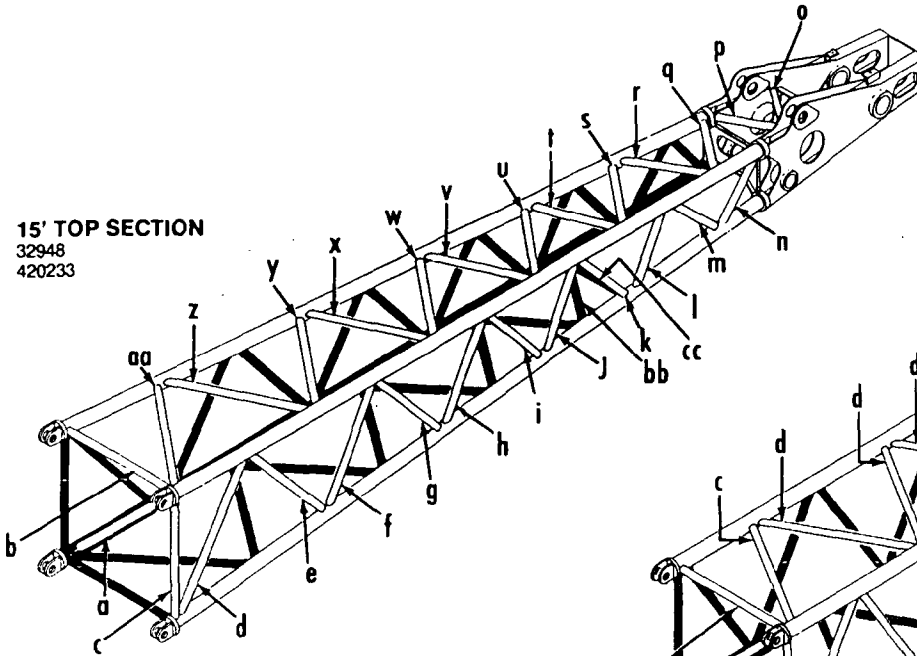
MATERIAL LIST ON BACK

Relay Valve

#123-123A JIB

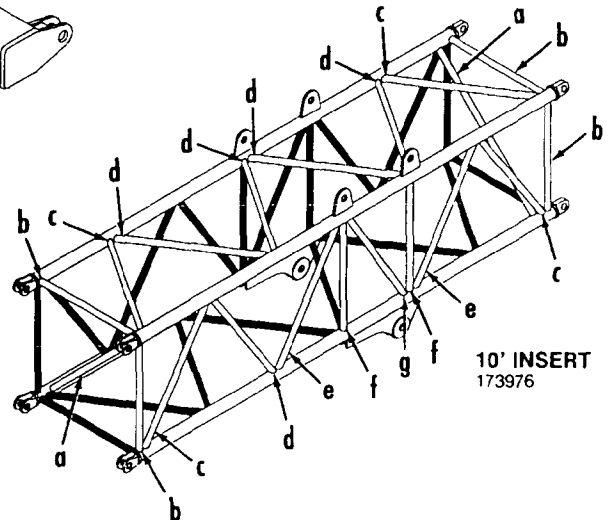
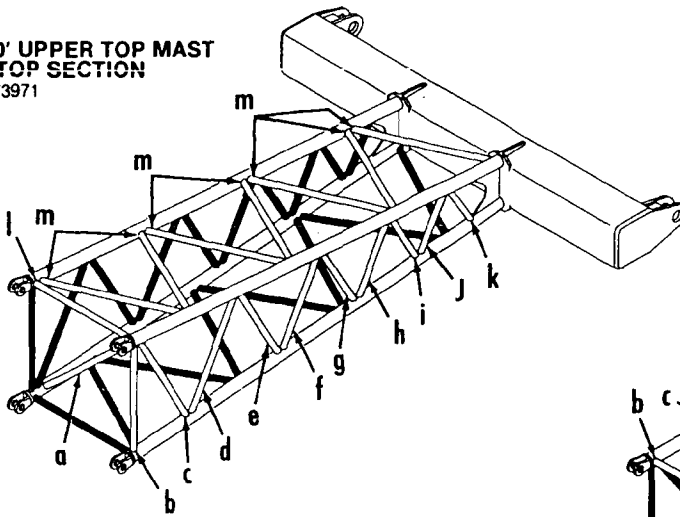
Opposite lacings (black) same unless noted.

**15' TOP SECTION**  
 32948  
 420233



**10' INSERT**  
 32938

**10' UPPER TOP MAST STOP SECTION**  
 173971



**10' INSERT**  
 173976

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