

# Manitowoc

## TRADITIONAL CRANE PARTS MANUAL

This manual has been prepared for and is considered part of

**2900WC**

Model

**29593**

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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## Corrosion and Abrasion

Refer to Figure 3.

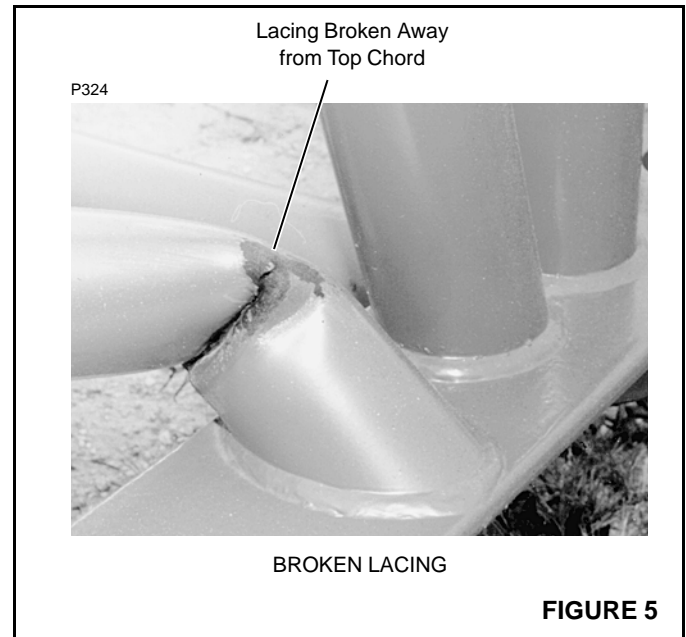
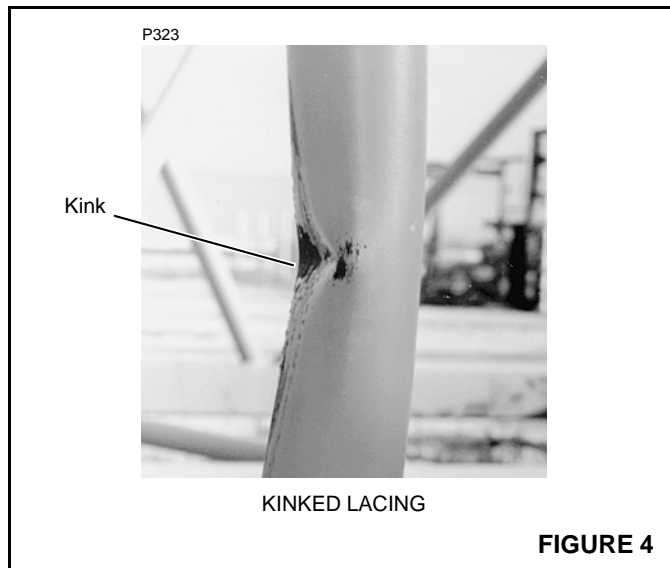
Corrosion and abrasion must not be deeper than 10 percent of the wall thickness, the angle thickness, or the plate thickness.

## Kinks

Refer to Figure 4.

Kinked lacings must be replaced; *do not bend kinked lacings back into alignment.*

If any chord or platework is kinked, contact Manitowoc Crane Care for approved repair instructions. *Do not bend kinked chords or platework back into alignment.*



## Cracks and Breaks

Refer to Figure 5.

Cracked and broken lacings must be replaced; *do not attempt to repair cracked or broken lacings.*

If any chord or platework is cracked or broken, contact Manitowoc Crane Care for approved repair instructions. *Do not attempt to repair cracked or broken chords or platework.*

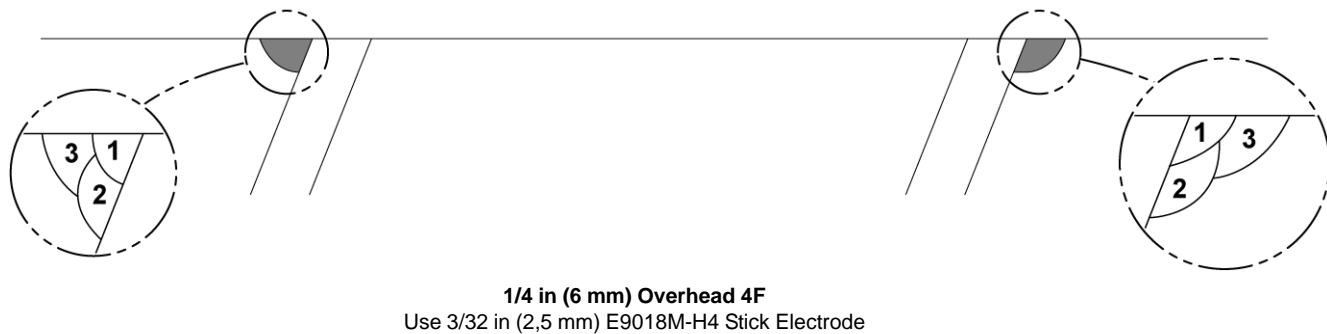
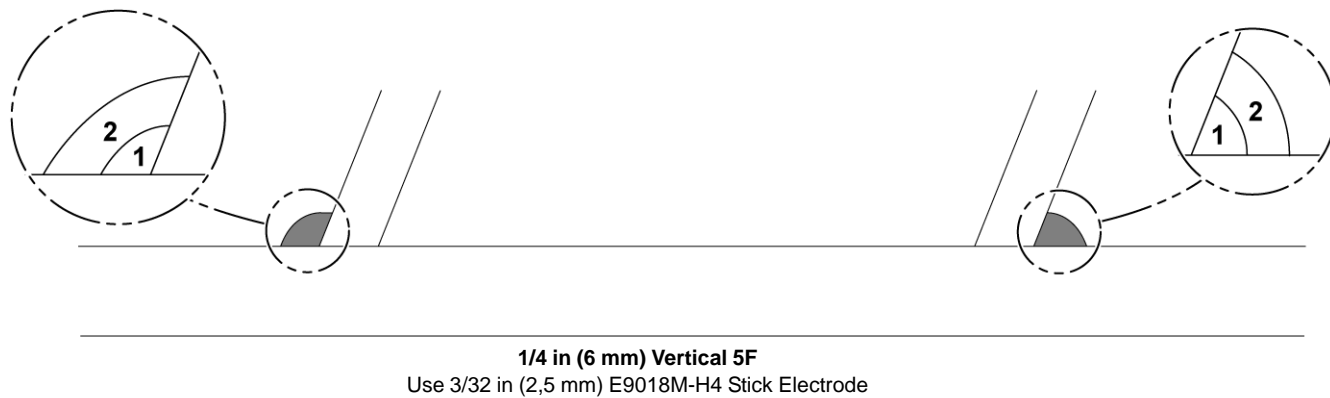
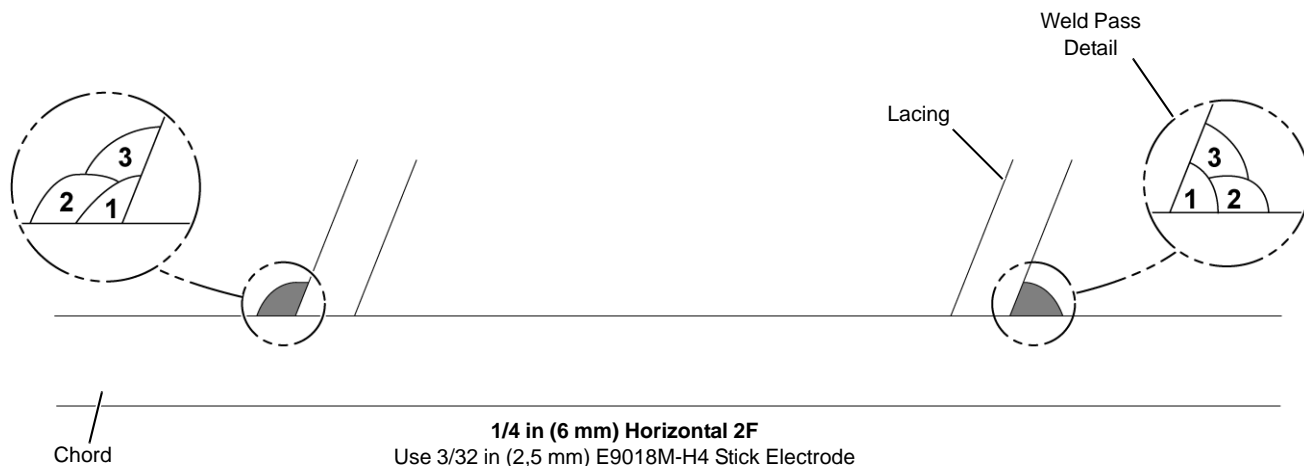


FIGURE 16



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Manitowoc, Wisconsin 54220

WEIGHTS

2900WC - NO. 16 BOOM

DESCRIPTION	APPROX. WEIGHT (IN LBS.)
LIFTCRANE - w/41' No. 16 boom, 36,000# counterweight, 9' folding gantry, 20' extendible crawlers w/hydrostatic drive and 36" treads, hydraulic system to extend and retract crawlers and raise machine, split front drums, full width rear drum, std. swing, ind. boom hoist, Cummins N-855-C250 engine, 14" dia. lagging for right front drum, 2-1/2" dia. lagging for left front drum, boom hoist rope, equalizer, telescopic boom stop, 70 ton load block, 6-1/2 ton hook and weight ball, single sheave upper boom point, and upper wire rope guide. . . . .	126,850*
UPPERWORKS - w/Cummins N-855-C250 engine, std. swing, ind. boom hoist, split front drums, full width rear drum, and right and left drum laggings; <u>LESS</u> boom, gantry, equalizer, load block, weight ball, counterweights, telescopic boom stop, and upper wire rope guide. . . . .	29,220*
UPPERWORKS as above - w/gantry, equalizer, boom hoist rope, and carbody; <u>LESS</u> crawlers . . . . .	49,770*
CARBODY - w/roller path, ring gear, king pin, and hydraulic cylinders to extend and retract crawlers and jacks to raise machine; <u>LESS</u> crawlers. . . . .	17,530
HYDROSTATIC DRIVE CRAWLERS, 20' w/36" treads. . . . .	17,410 each
HYDROSTATIC DRIVE CRAWLERS, 20' w/30" treads. . . . .	15,825 each
COUNTERWEIGHTS	
Inner . . . . .	18,000
Outer . . . . .	18,000
BOOM NO. 16	
Boom Butt - 16' . . . . .	970
Boom Top - 25' (w/lower boom point assembly). . . . .	2,415
Upper Boom Point (single sheave). . . . .	250
Boom Insert - 10' . . . . .	645
Boom Insert - 15' tapered (butt insert) . . . . .	970
Boom Insert - 15' tapered (top insert). . . . .	750
Boom Insert - 20' (w/rope guide roller assembly). . . . .	980
Boom Insert - 20' (w/rope guide roller assembly and jib backstay lugs). . . . .	1,020
Basic Pendant - 25'-5" (2 req'd.) . . . . .	165 each
Pendant - 10' (2 per insert). . . . .	100 each
Pendant - 15' (2 per insert). . . . .	130 each
Pendant - 20' (2 per insert). . . . .	140 each
Pendant Spreader Bar. . . . .	50

\*Weights do not include hoist line, whip line or fuel. (Cont'd.)

32783-1 Cont.	REV. E	MODEL 2900-2900WC
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CAB  
(MACH. W/TANDEM DRUMS)

Run as a Front

MASTER

32783 E1 Cont'd.

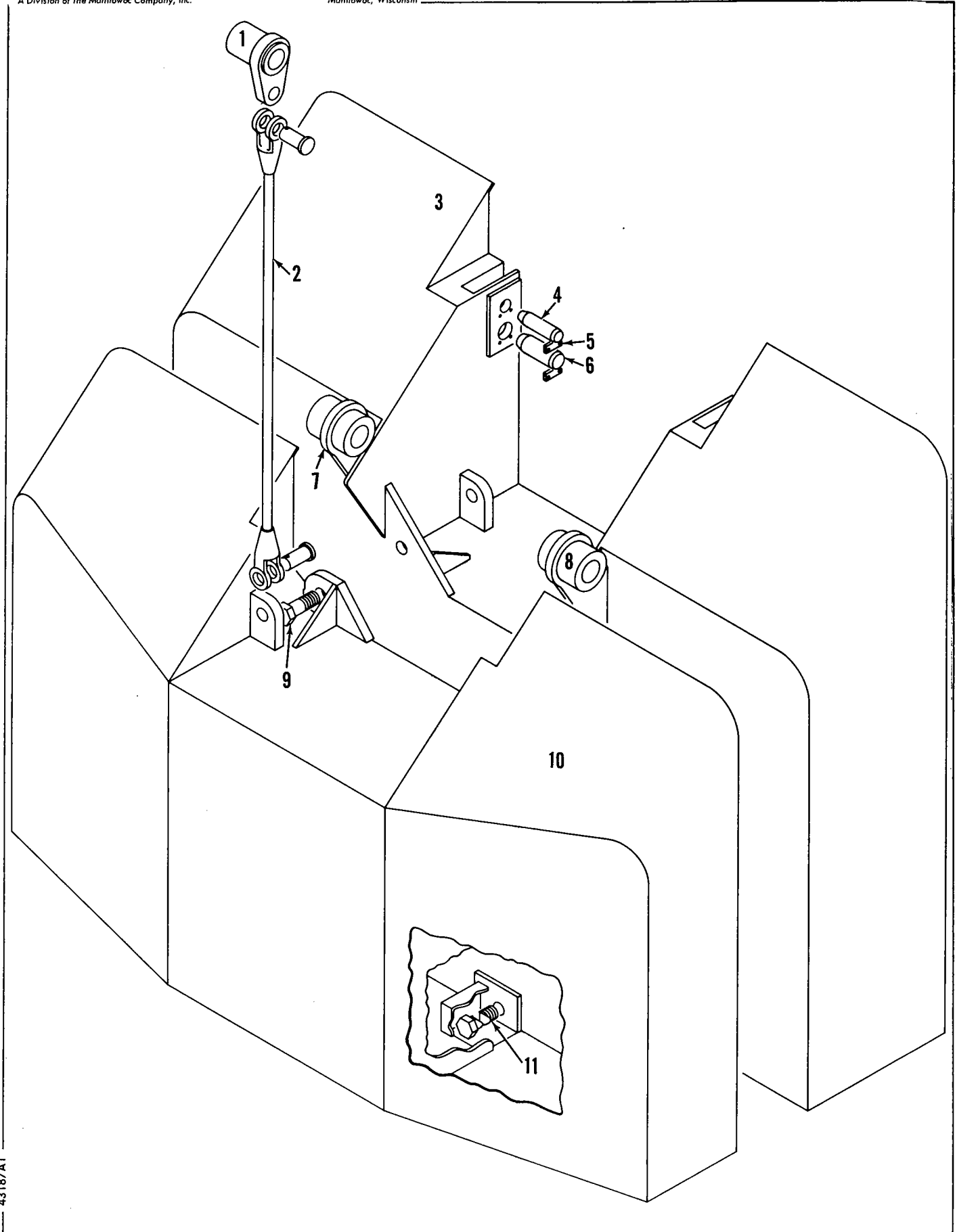
REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
40	180112	1	CABINET, Tool W/padlock	
43	24963-2	1	SHEET, Rear Lower	
32	17834	1	GLASS, Window	
7	605301	1	CHANNEL, Rubber (7'4" - 2.236 m)	
34	31882	1	DOOR, Right Side (See Sheet #2)	
38	17836	1	GLASS, Window	
7	605301	1	CHANNEL, Rubber (9'6" - 2.895 m)	
41	32727	1	EXTENSION, W/capscrews, hex nuts and shake-proof washers	
42		1	PLATE, Cover	
44	30152	1	SHUTTER, Radiator W/hook, chain, stovebolts, hex nuts and lockwashers	
45	91349	1	CLOSING SHEET, Inside Right W/self tap screws and lockwashers	
46	32531	1	SHEET, Upper Inside Right W/mach. screws, stove bolts, hex nuts and lockwashers	
47	72803	1	SHEET, Inside Right Extension W/stove bolts, hex nuts, and lockwashers	
48	19144	1	GLASS, Window	
7	605301	1	CHANNEL, Rubber (8'10" - 2.692 m)	
	91350-6	1	SHEET, Left Inside (Complete) W/door, hinges, door buttons, self tap screws, mach. screws, hex nut, flat washers and lockwashers (W/Out Power Lowering)	
49	91350-2	1	SHEET, Closing	
50		1	ANGLE, Rear	
51		1	ANGLE, Front	
49a	77324	1	CLOSING SHEET, Left Inside W/capscrews and lockwashers (W/Power Lowering)	
52	76276	1	STOP, Latch W/capscrews, hex nuts and lockwashers	
53	76275	1	LATCH, Door W/capscrews, hex nut and lockwasher	
54	94239	1	LADDER, Roof	
	140651	2	BRACKET, Ladder	
	94053	1	HOLDERS, Chart and Manual	
55	93994	1	HOLDER, Chart	
56	181503	1	PLATE, Builder's	
57	139932	1	FRAME, Manual Holder	
56	181503	1	PLATE, Builder's	

REV. E	32783 - 1
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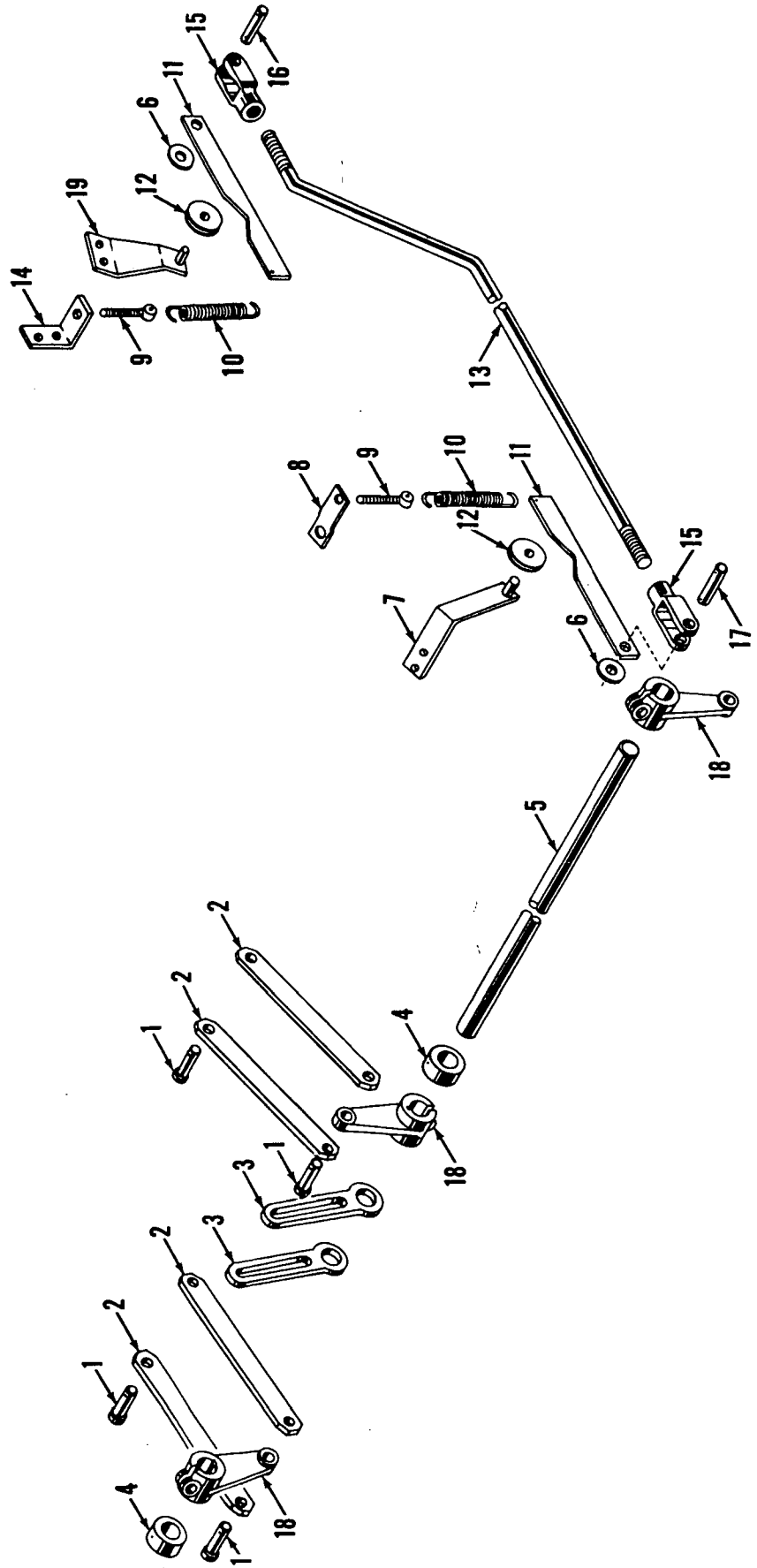
43187A1

MATERIAL LIST ON BACK

COUNTERWEIGHT AND HANDLING ARRANGEMENT



GROUP B - Upperworks Machinery



MASTER

41693 B1

41693 - B - 1

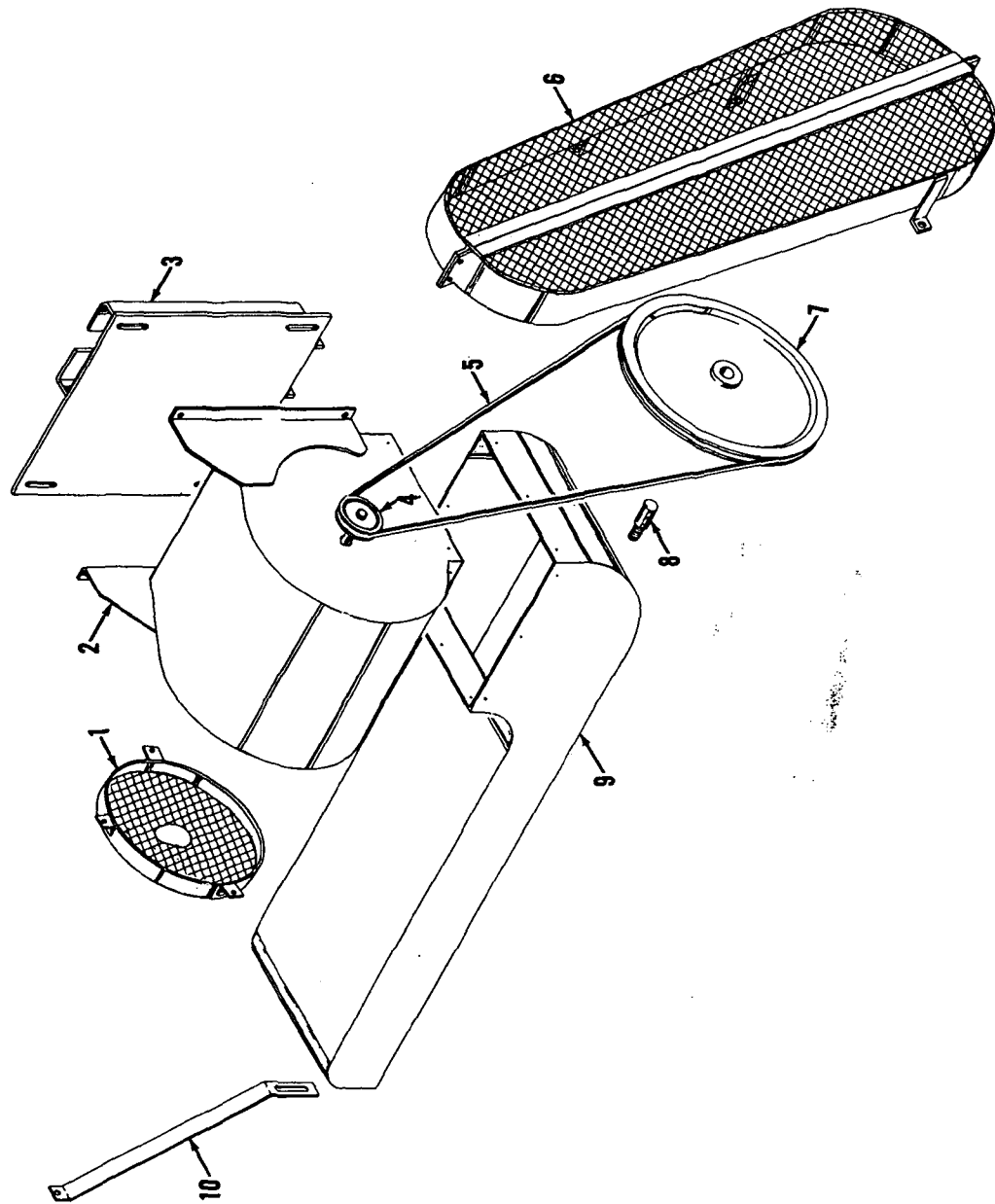
MATERIAL LIST ON BACK

SWING CLUTCH CONTROL ASSEMBLY

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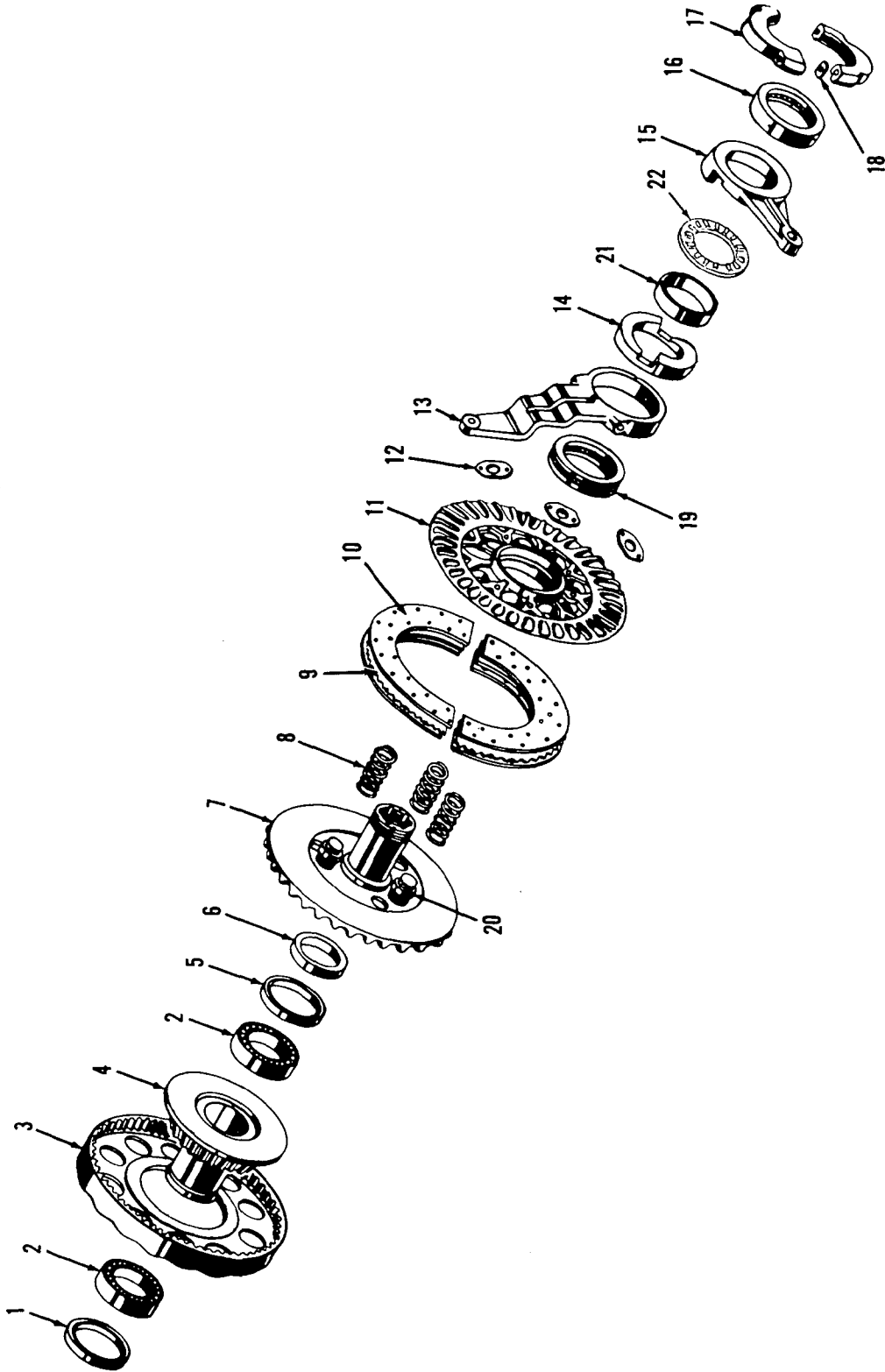
Manitowoc, Wisconsin



42620 -A -1

MATERIAL LIST ON BACK

SWING CLUTCH BLOWER



42497-C2

MASTER

MASTER

42497 C2

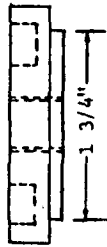
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MAIN DRIVE CLUTCH

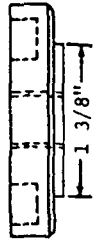
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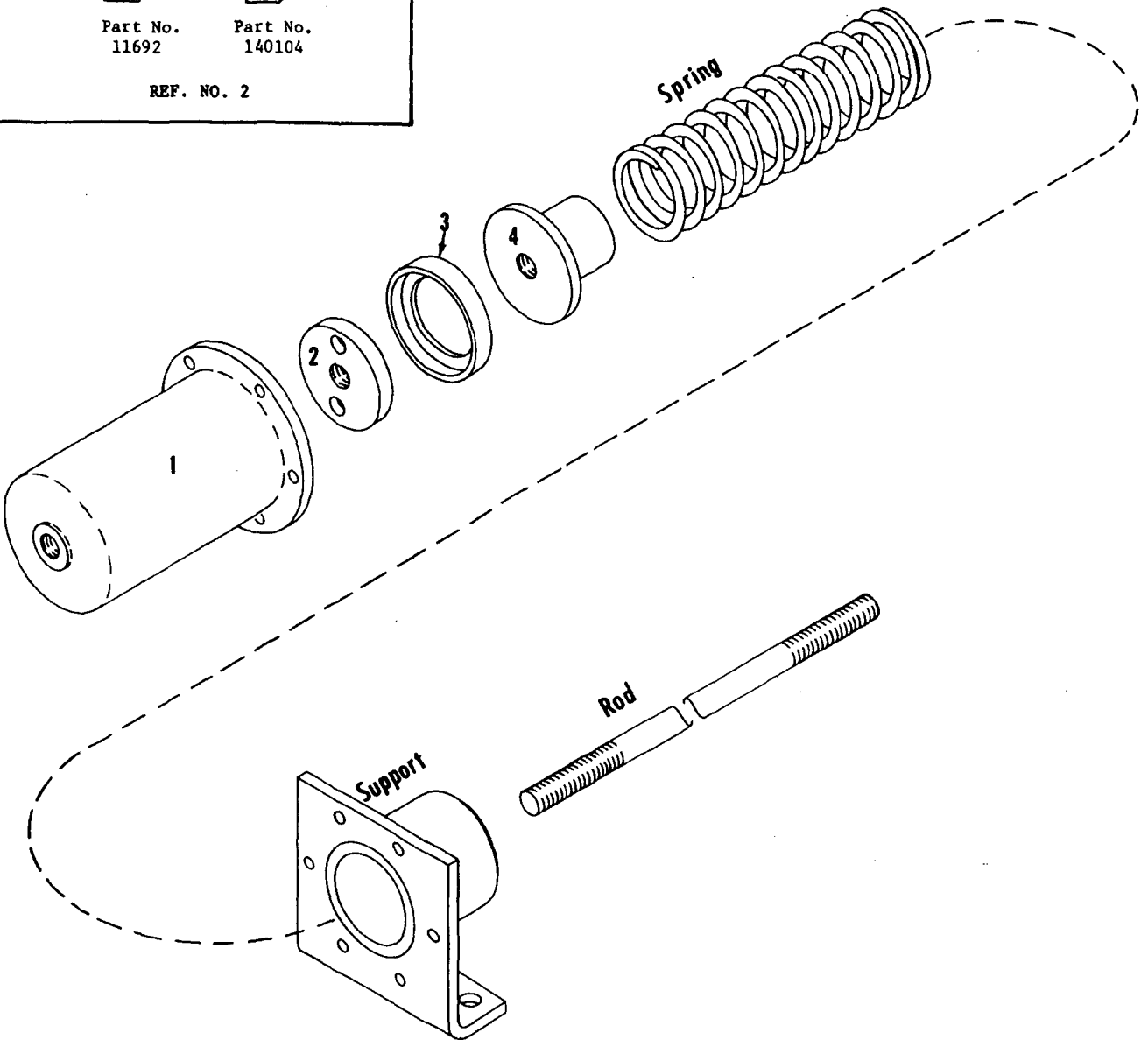


Part No.  
11692



Part No.  
140104

REF. NO. 2



9356081

MATERIAL LIST ON BACK

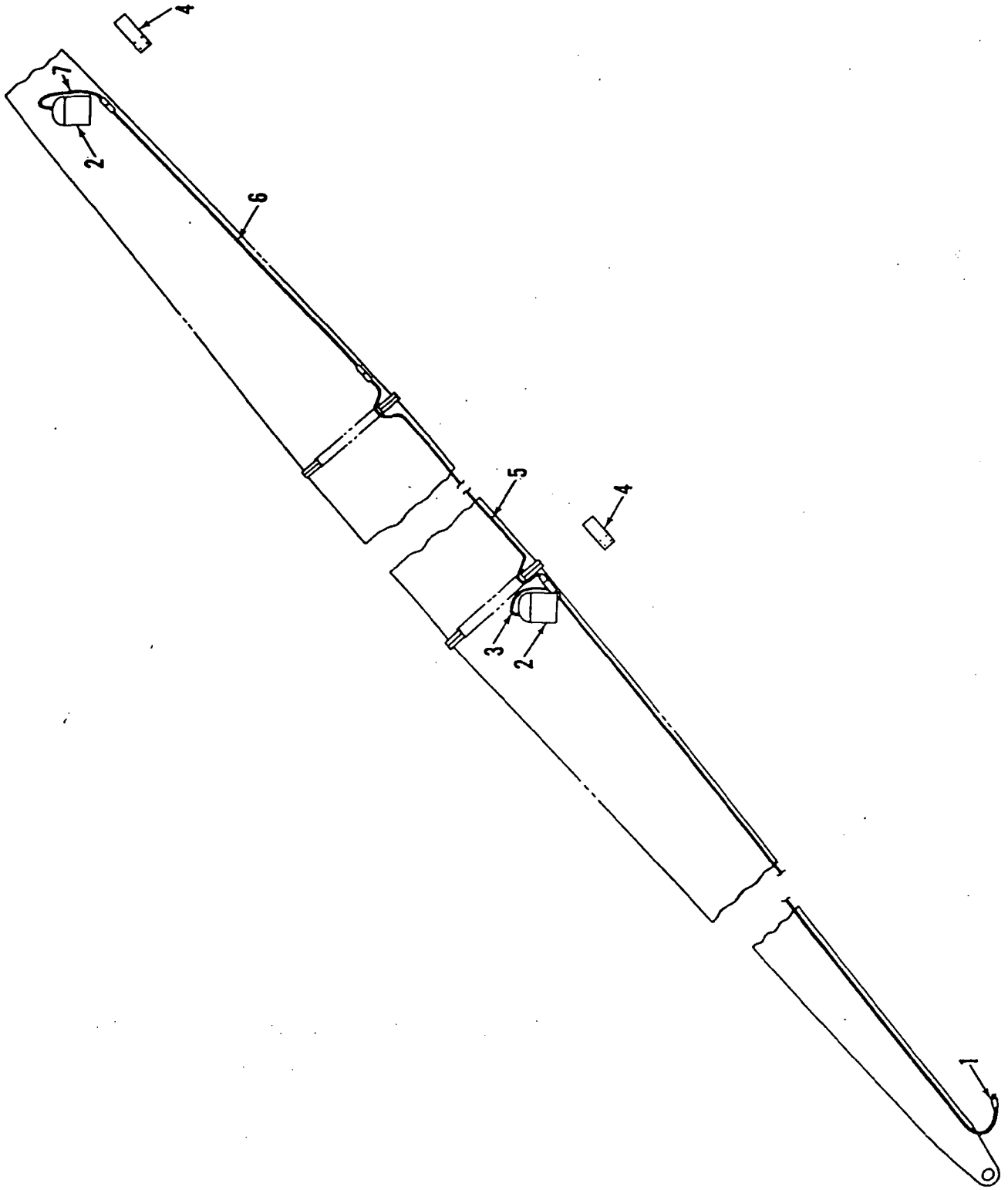
AIR CYLINDER

MASTER

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MASTER

3111781

MATERIAL LIST ON BACK

BOOM WIRING

48101-1 Cont.	REV. D	MODEL 2900WC
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CONTROL CONSOLE

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
39	78858	1	BRACKET, Valve W/capscrews and lockwashers	
40	75107	1	SPACER, Boom Hoist Valve (W/split rear drum only)	
41	673074	1	SWITCH, Pressure	
42	19840	1	HOSE, Flex (4'10" or 1.473 m. long)	
43	511111	1	INJECTOR, Alcohol (optional)	
44	427066	1	FILTER, Air	
45		1	HOSE, Flex	
46	73366	1	BRACKET W/capscrews, hex nuts and lockwashers	
47	73368	1	CLAMP W/capscrews and lockwashers	
48	139240	1	BRACKET, Valve W/capscrews, hex nuts and lockwashers	
49	539575	1	NAMEPLATE ("Left Rear Drum Parking Brake") W/self tap screws	
50	539347	1	NAMEPLATE ("Applied") W/self tap screws	
51	714493	1	VALVE, Left rear drum parking brake control (optional)	
52	539348	1	NAMEPLATE ("Released") W/self tap screws	
53	460252	2	GAUGE, Brake and Clutch Air Pressure	
54	140502	2	BRACKET, Valve	
55	703920	2	VALVE, Regulating	
56	539595	1	NAMEPLATE ("Left Rear Drum Brake")	
57	139240	1	BRACKET, Valve W/capscrews, hex nuts and lockwashers	
58	539597	1	NAMEPLATE ("Left Rear Drum Brake Selector")	
59	539598	1	NAMEPLATE ("Brake Release")	
60	714493	1	VALVE, Brake Selector Valve	
61	539596	1	NAMEPLATE ("Brake Drag")	
62	539594	1	NAMEPLATE ("Left Rear Drum Clutch")	
63	714647	1	VALVE, Shuttle	

Use sheets #0-63, 0-64, 0-69, 0-117B,  
 0-289, (0-290)  
 PLEASE GIVE MACHINE S/N W/ORDER

REV. D	48101 - 1
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Run as Front

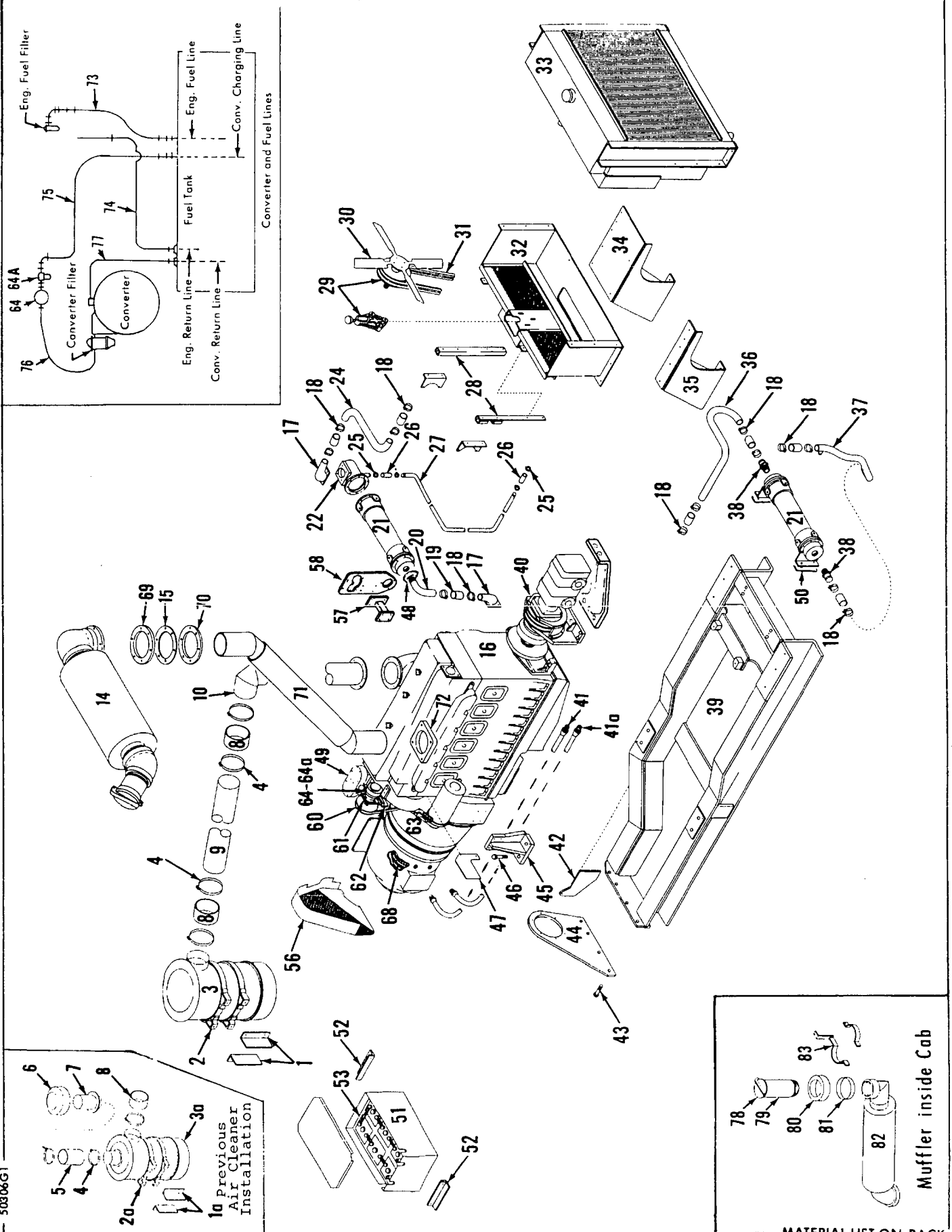
MASTER

48101 DI CONT'D

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POWER PLANT

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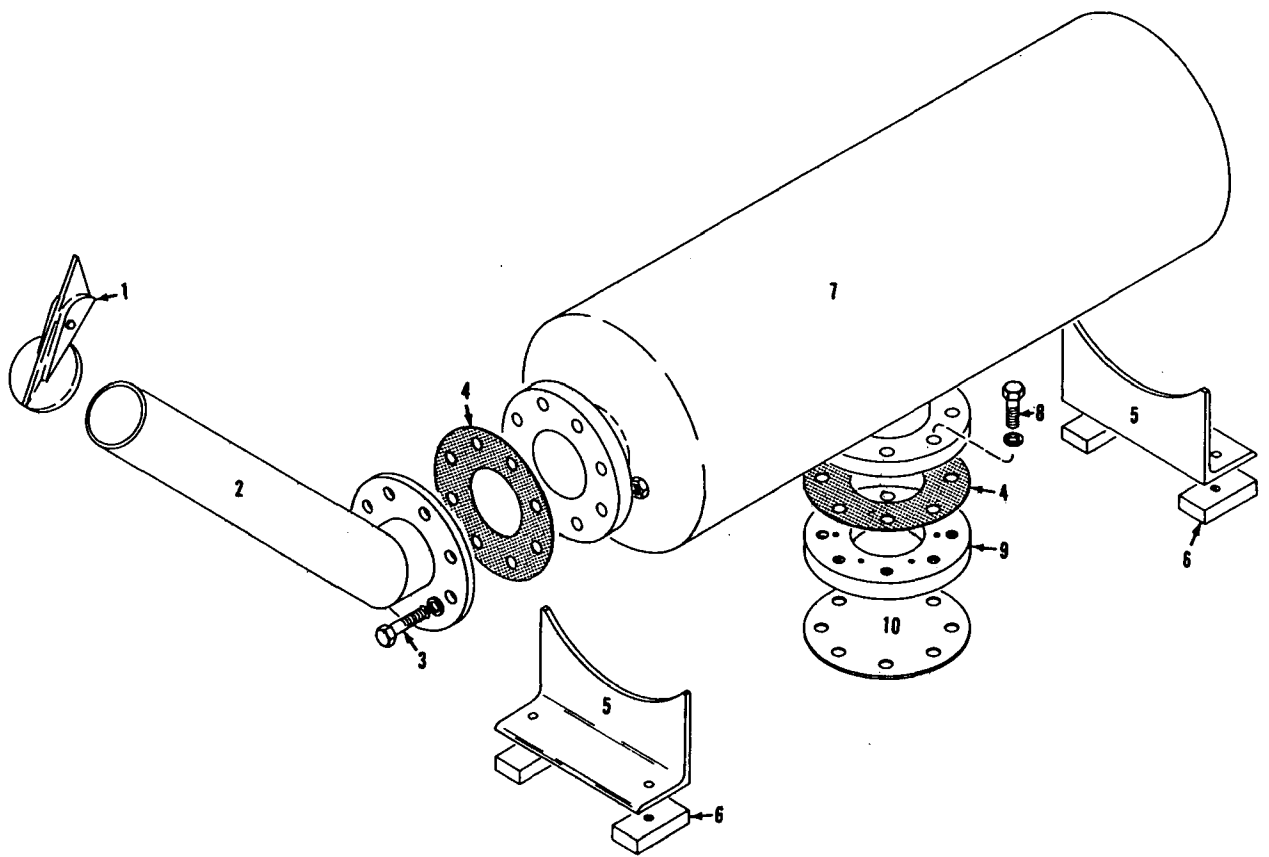
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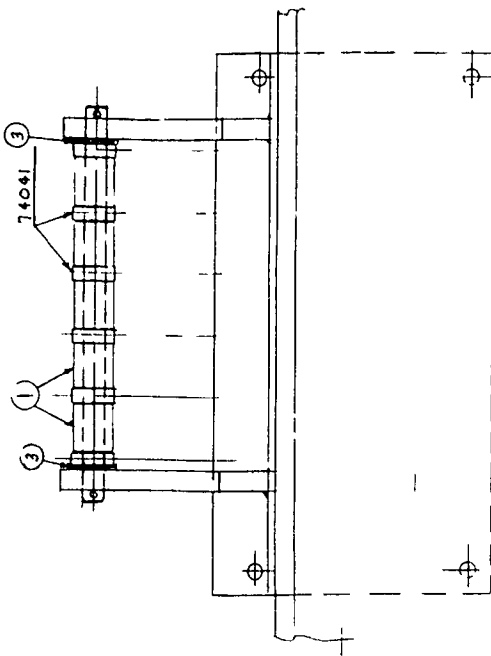
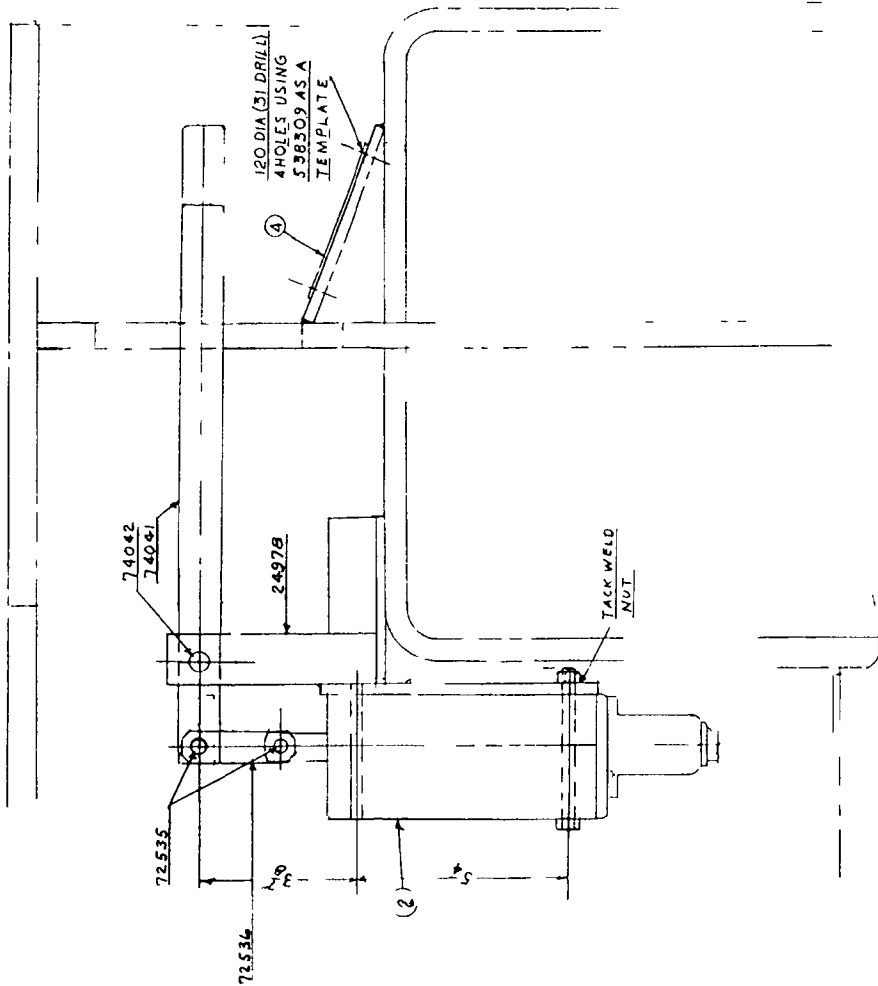


94227A1

MATERIAL LIST ON BACK

EXHAUST STACK

- REQD
- 12 72535 PIN
  - 12 72536 LINK
  - 6 74041 LEVER
  - 1 74042 PIN
  - 1 2497B SUPPORT
- ① 5 I.O.D. 18 I.D. ST. TUBE 1 1/2 L
  - ② 1 705872 3306 H. HVSCO C PLUNGER VALVE
  - ③ AS REQD 4 PLAIN WASHER 709970
  - ④ ① L 538309 NAME PLATE (22543 SHEET 2)



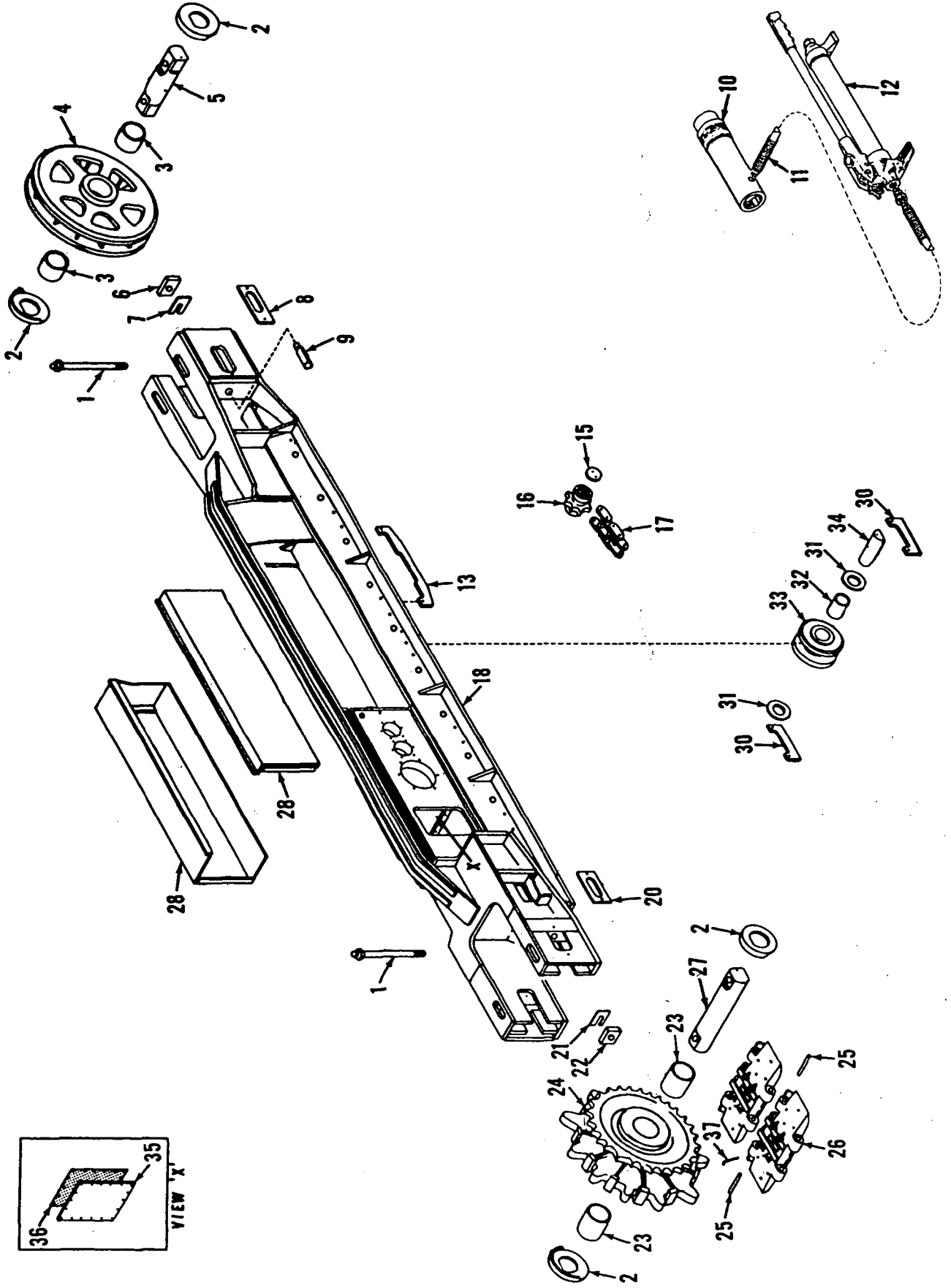
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MANITOWOC 1 0 299800

4 6 63 CONTROL VALVE  
 6 TITLES ASSEMBLY  
 6 ADDED IN CABODY 6 1 0  
 1 2465 COL 32484

MASTER



43947C1

43947

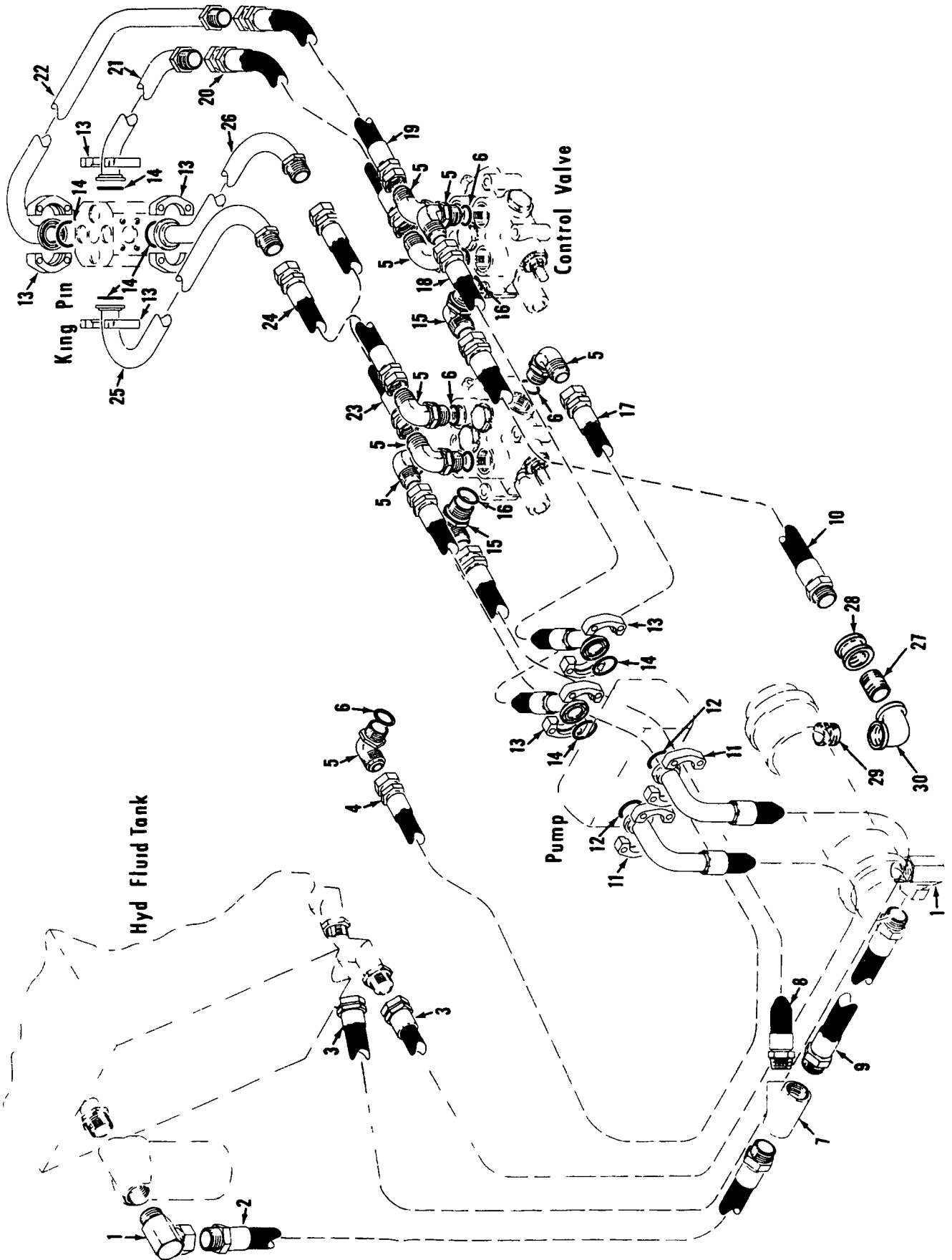
MATERIAL LIST ON BACK

CRAWLER ASSEMBLY

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4934781

MATERIAL LIST ON BACK

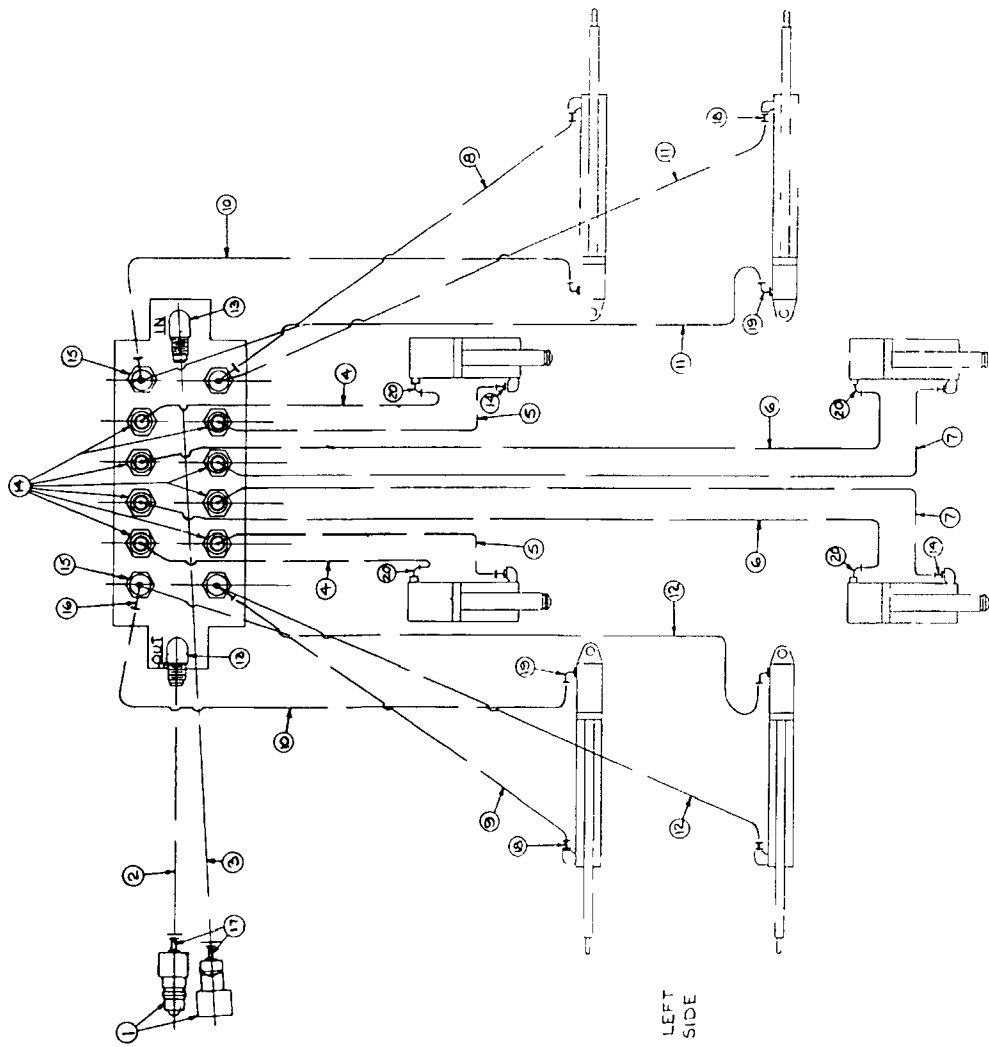
HYDRAULIC LINES IN ROTATING BED

180135

# MASTER

ITEM NO.	NO. REQD	DESCRIPTION	CODE NO.
1	1	QUICK DISCONNECT	375300
2	1	HOSE	486001
3	1	HOSE	486002
4	2	HOSE	486139
5	2	HOSE	486115
6	2	HOSE	486140
7	2	HOSE	485811
8	1	HOSE	485812
9	2	HOSE	485813
10	2	HOSE	485817
11	2	HOSE	485810
12	2	ELBOW	429587
13	1/2	ADAPTER	429583
14	4	REDUCER BUSHING	288153
15	4	TEE	429506
16	2	ADAPTER	429236
17	4	ADAPTER	429590
18	4	ELBOW	429588
19	4	SO ELBOW	429632
20	4	CONTROL VALVE ASSEM	DRW 32484

ALSO REQD 1 CONTROL VALVE ASSEM DRW 32484



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 O. L. O. O. I. P. O. I. O.  
 O. S. O. O. REC. O. W. I.  
 F. I. O. I. O. O. I.

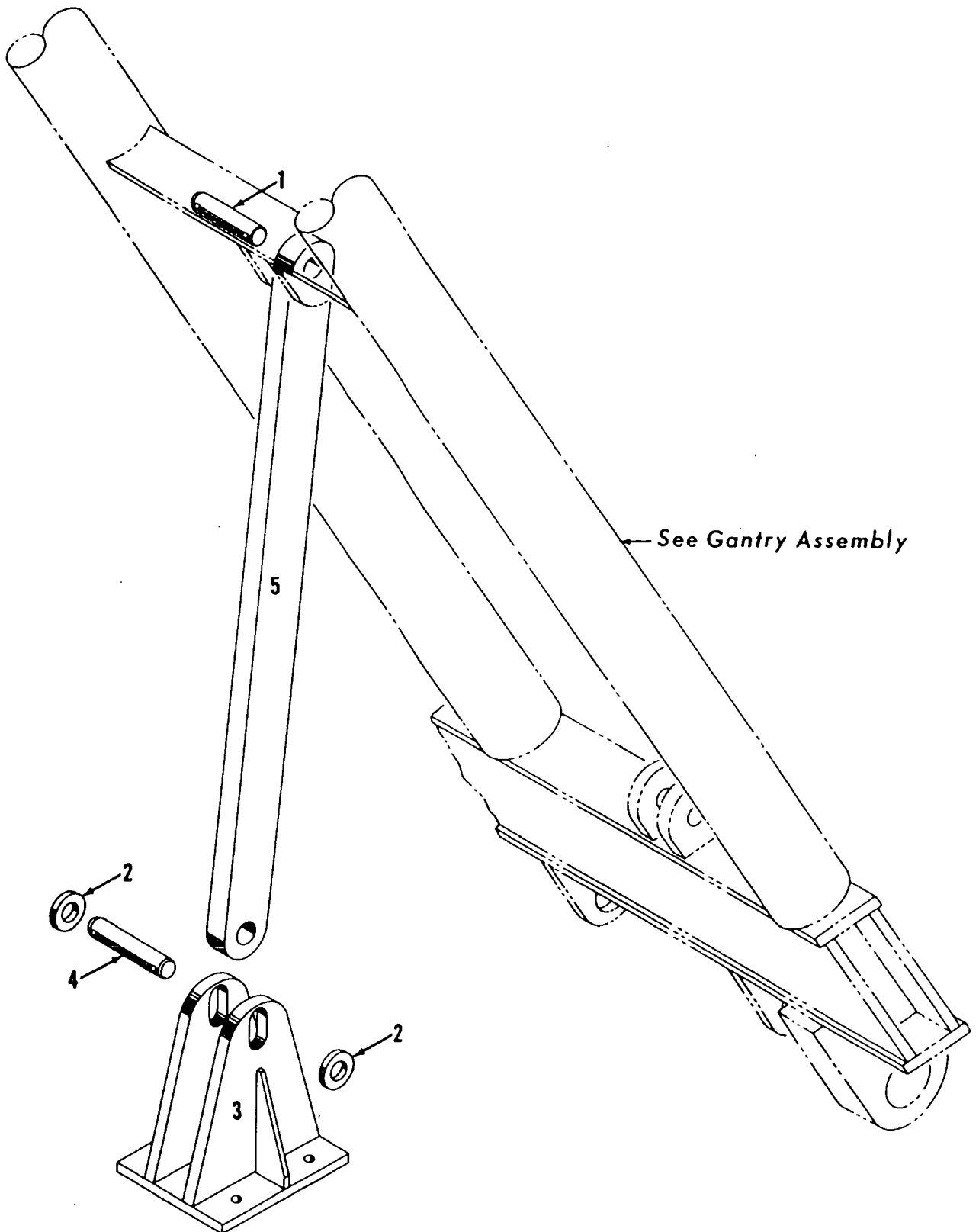
SUPERSEDES HYD. LINE IN JAFEX U. DWG. 4 051

UNLESS NOTED OR 1	MANITOWOC ENGINEERING CO.	HYD. LINES & FITTINGS
DR 1	TO JACKS AND EXTN	
(S)	SIGNATURE	
DATE	DATE	
11 3 67	180135	

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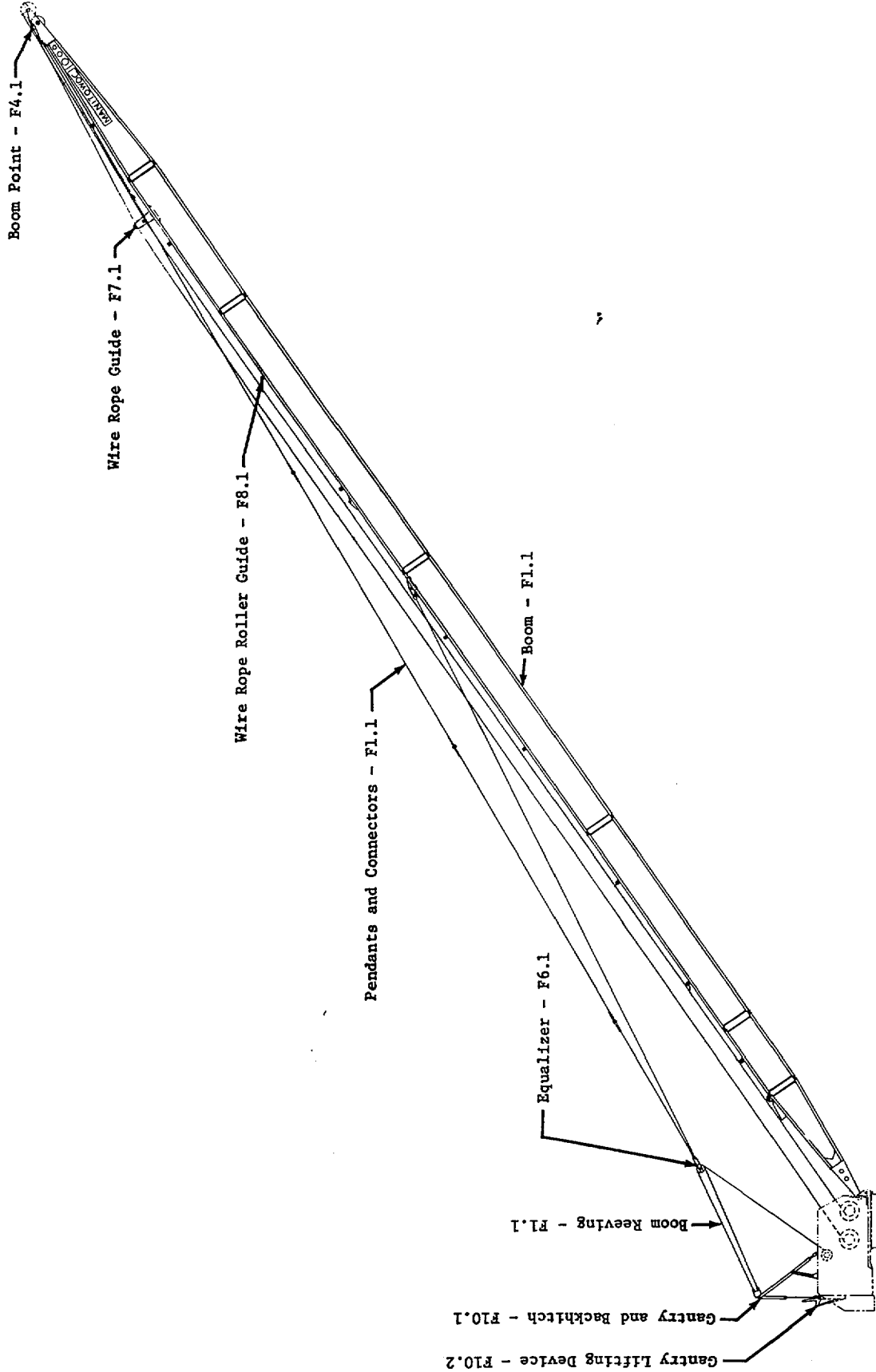


32393-A-1

MATERIAL LIST ON BACK

GANTRY HOLD UP ASSEMBLY

MASTER



FOR PARTS & ILLUSTRATIONS

See Assemblies as named.  
Number refers to Parts Manual Page.

48176A1

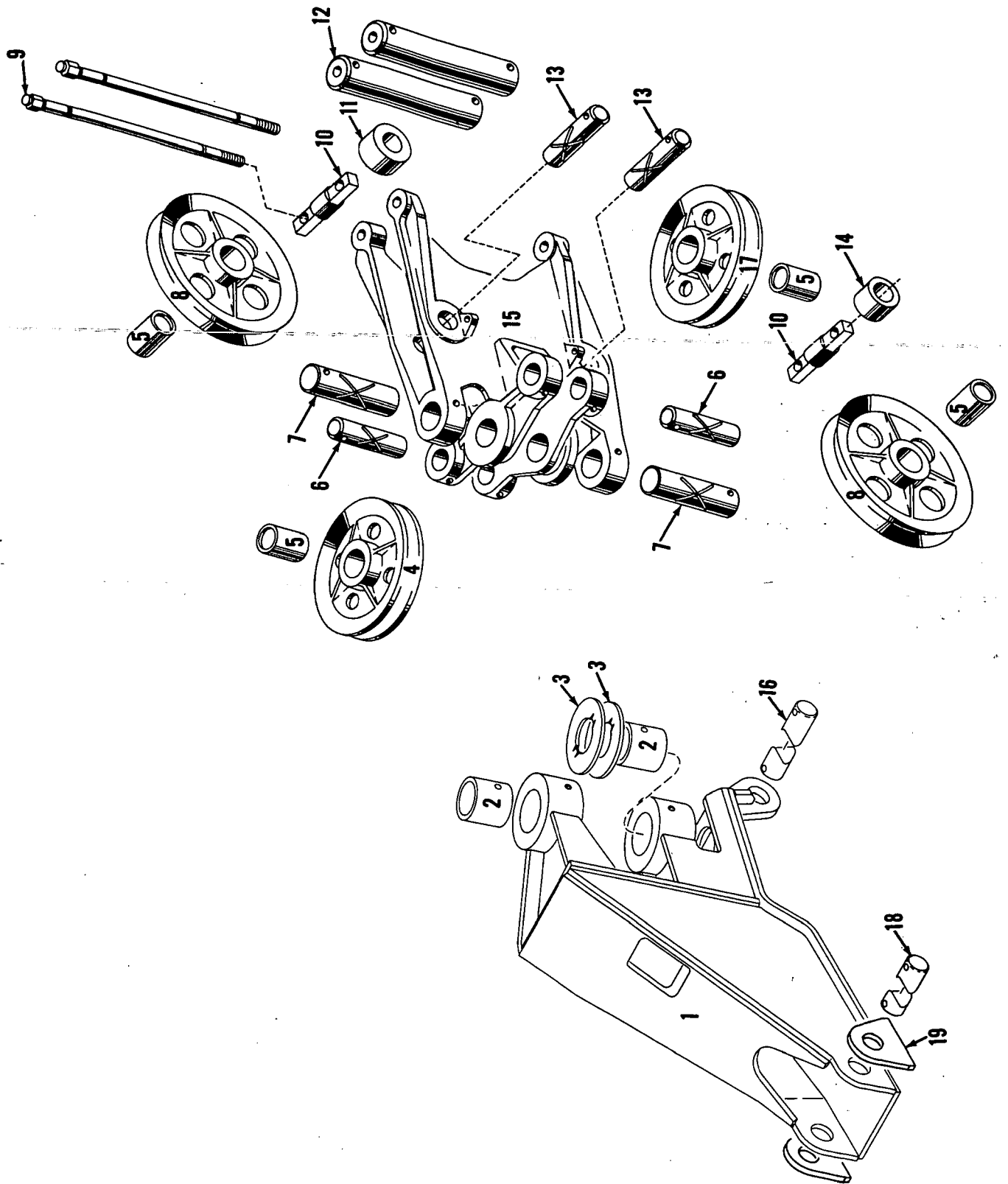
M2900WC

ARRANGEMENT BOOM NO. 18

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43581B1

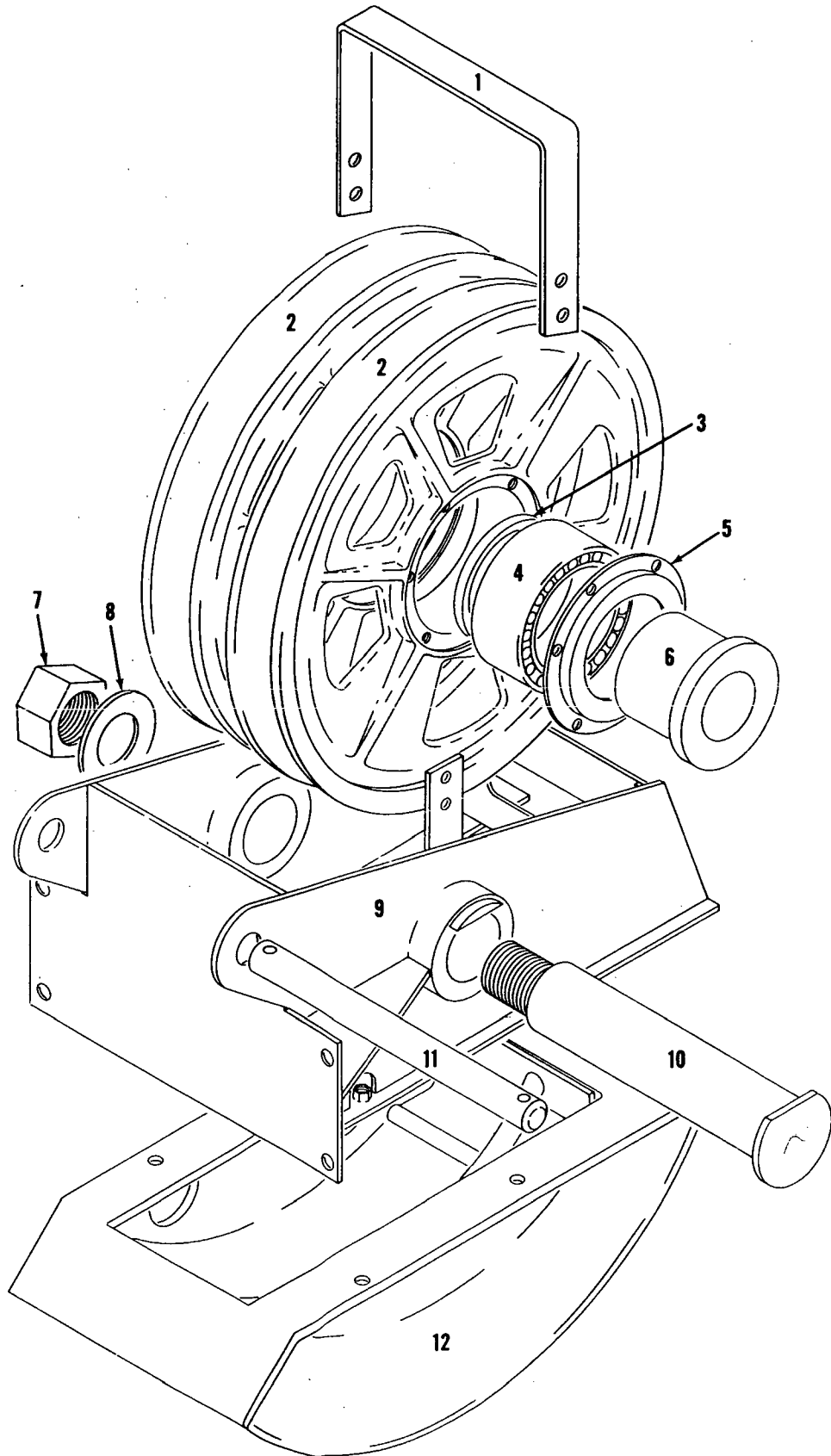
MATERIAL LIST ON BACK

FAIRLEAD ASSEMBLY

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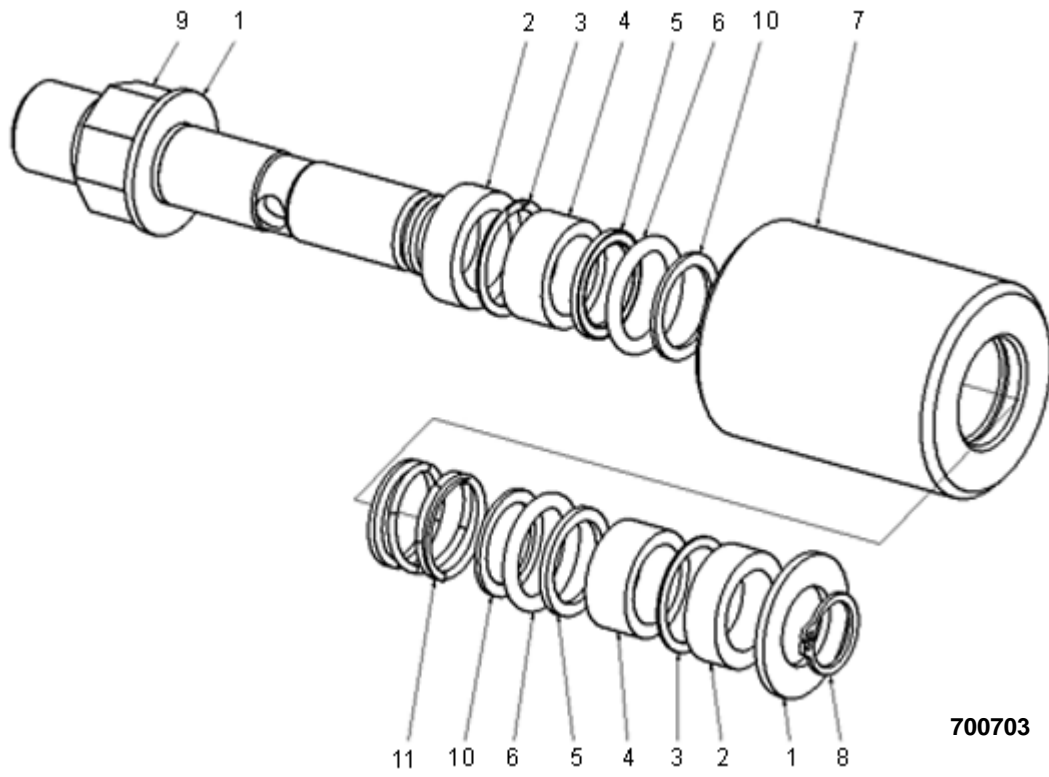
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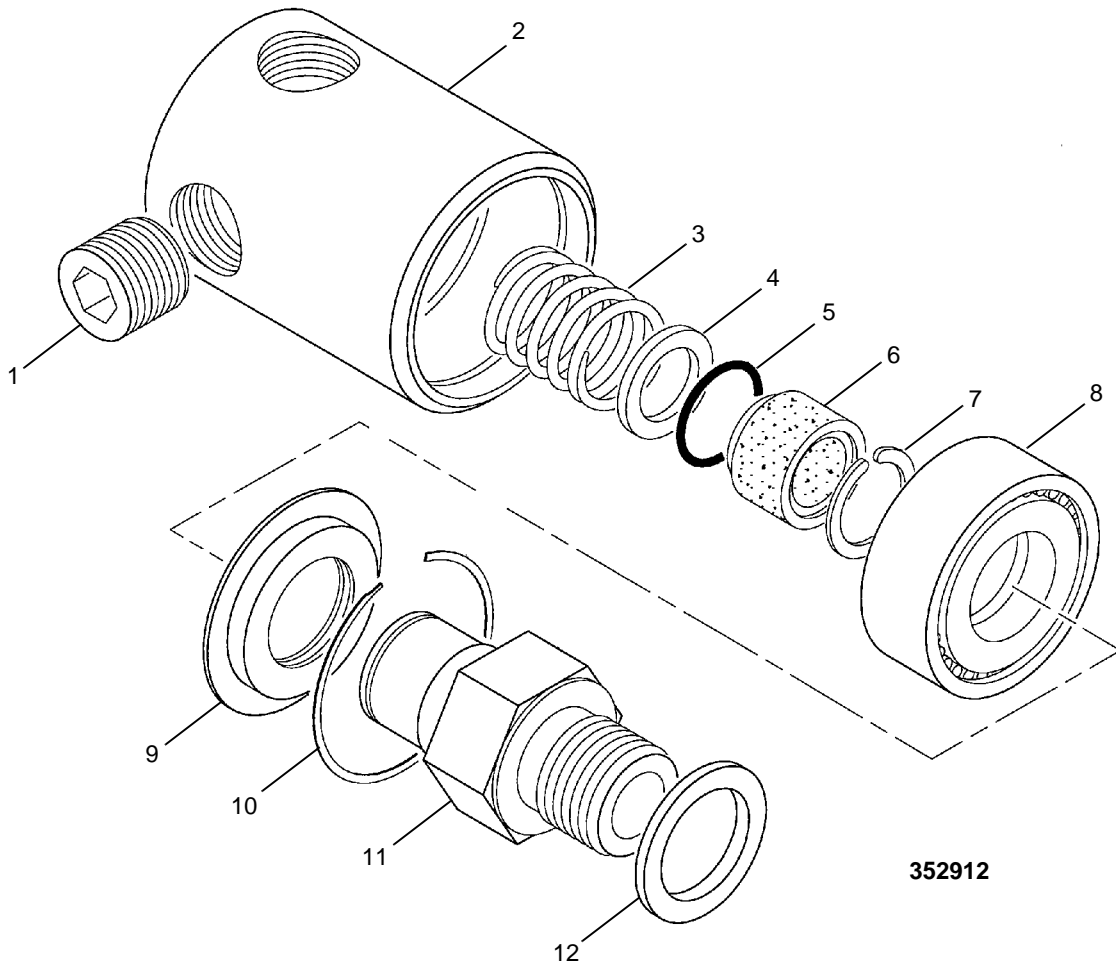
UPPER BOOM POINT

## O-NUMBER NUMERICAL INDEX

PUBLICATION	REV
0-123	A1
0-123	A2
0-147	D2
0-148	-
0-157	C
0-173	A
0-229	A
0-244	A1
0-281	A
0-282	A
0-283	A
0-284	A
0-285	A
0-289	G
0-290	G1
0-296	A
0-305	A
0-316	B1
0-338	A
0-415	B1
0-515	-
0-63	C
0-64	B
0-69	C
0-71	-
0-99	-



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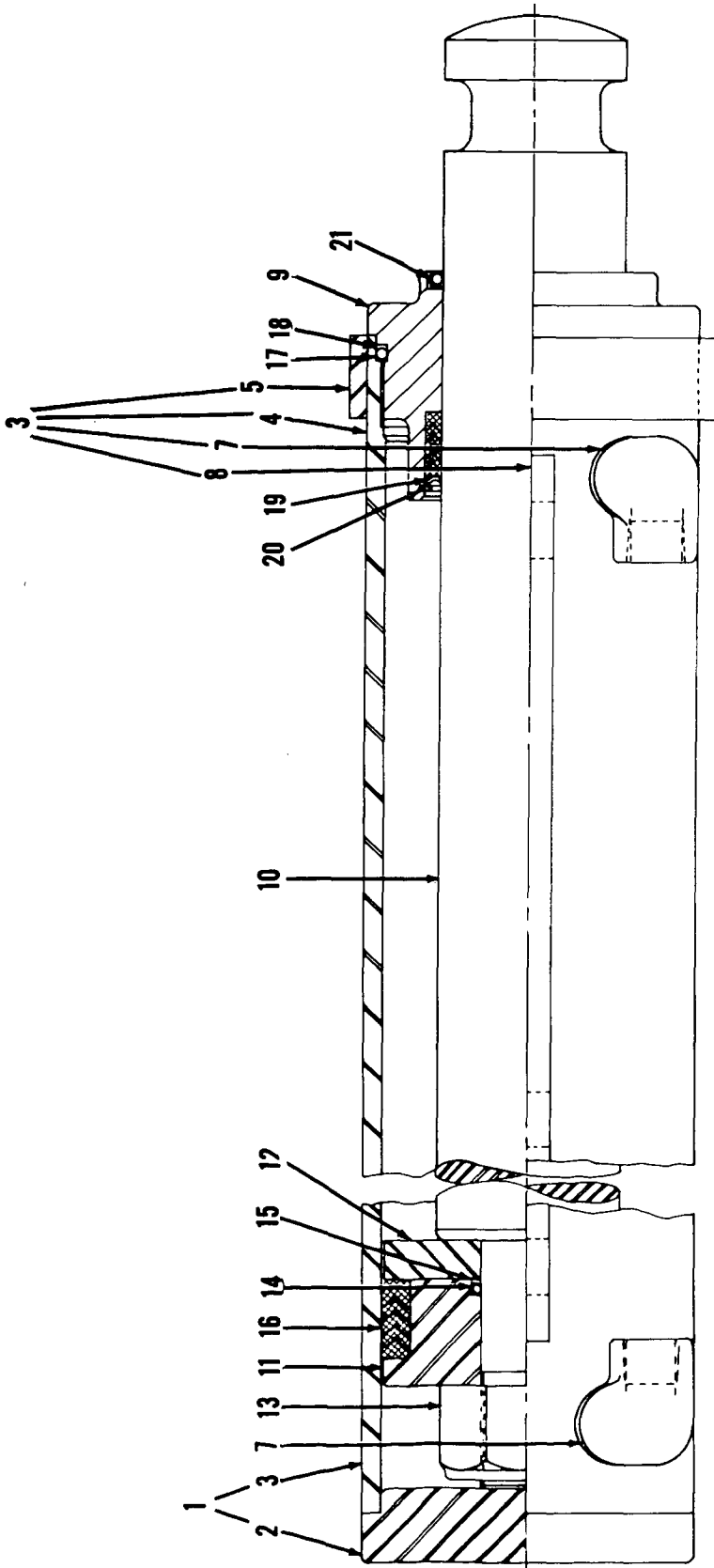
352912

ASSEMBLY	REVISION
<b>O-157</b>	<b>C</b>

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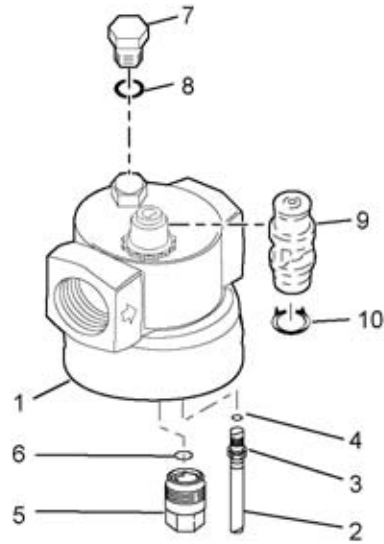
Manitowoc, Wisconsin



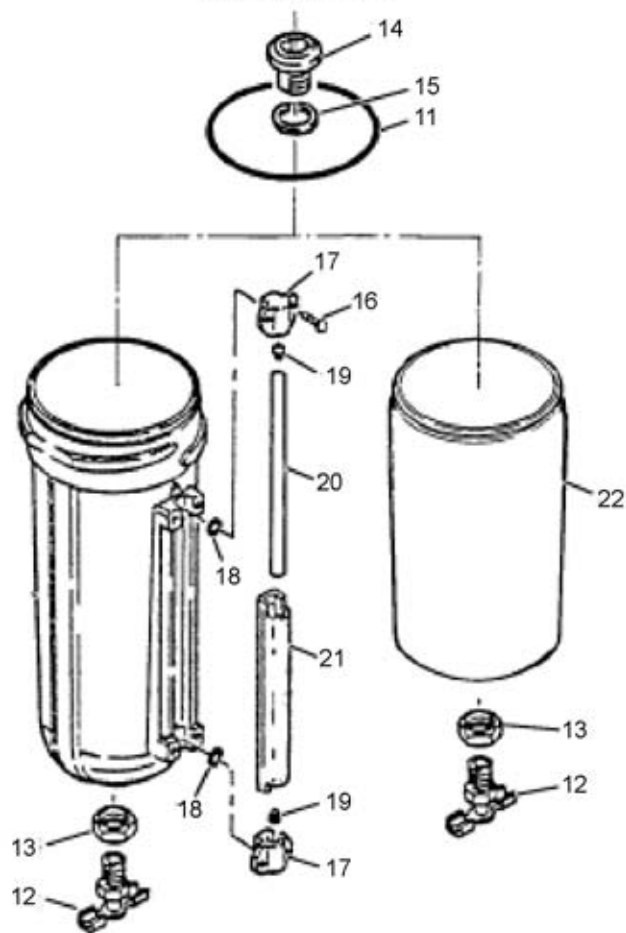
42987A4

MATERIAL LIST ON BACK

JACK

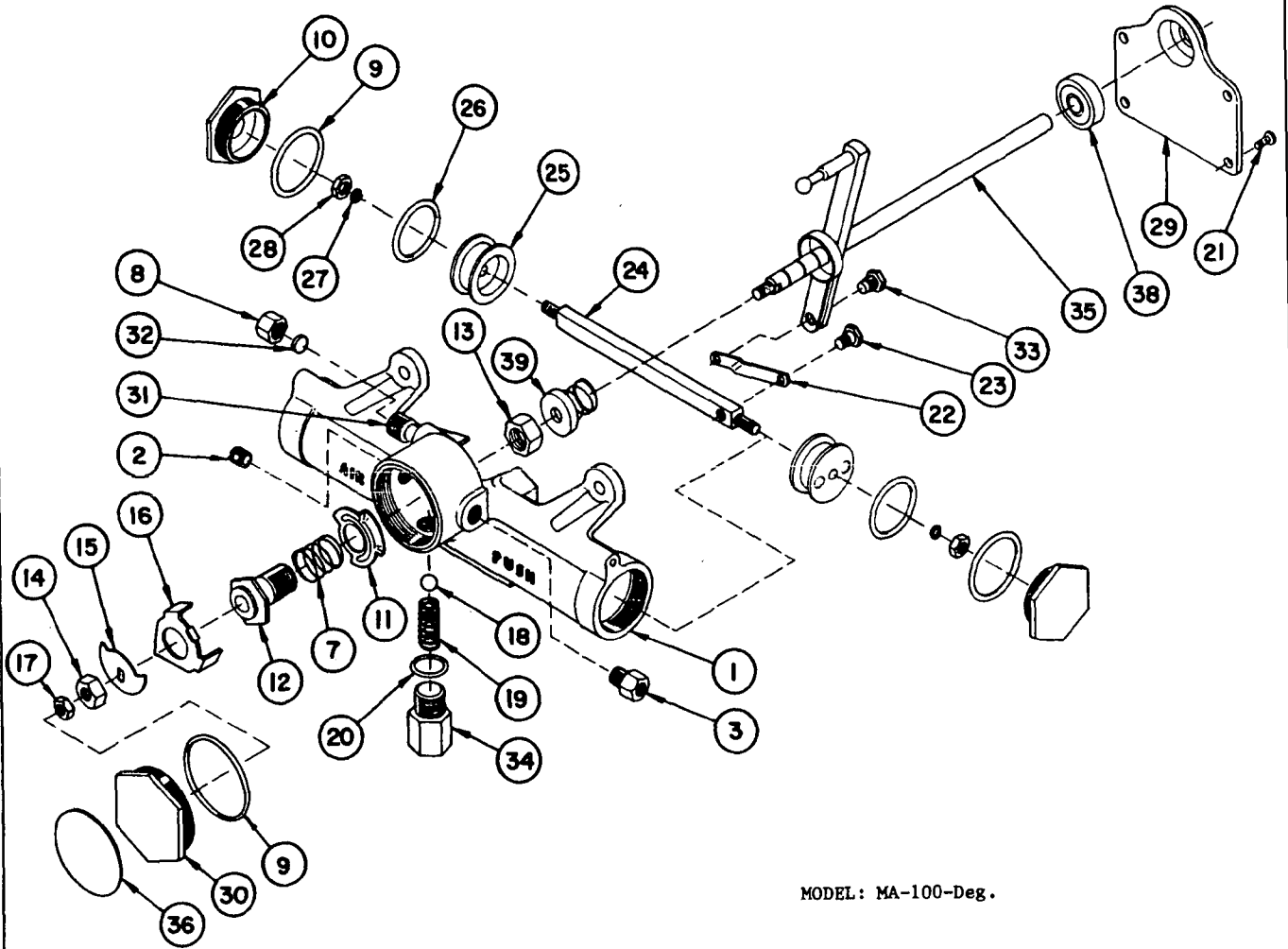


**9880220024**



ASSEMBLY	REVISION
<b>0-290</b>	<b>G</b>

MASTER



MODEL: MA-100-Deg.

MANITOWOC ENGINEERING CO.

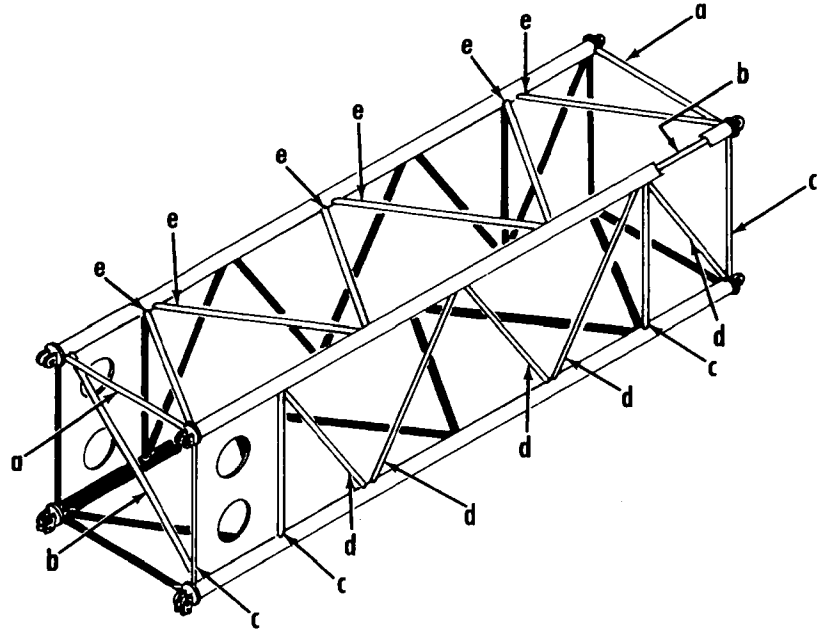
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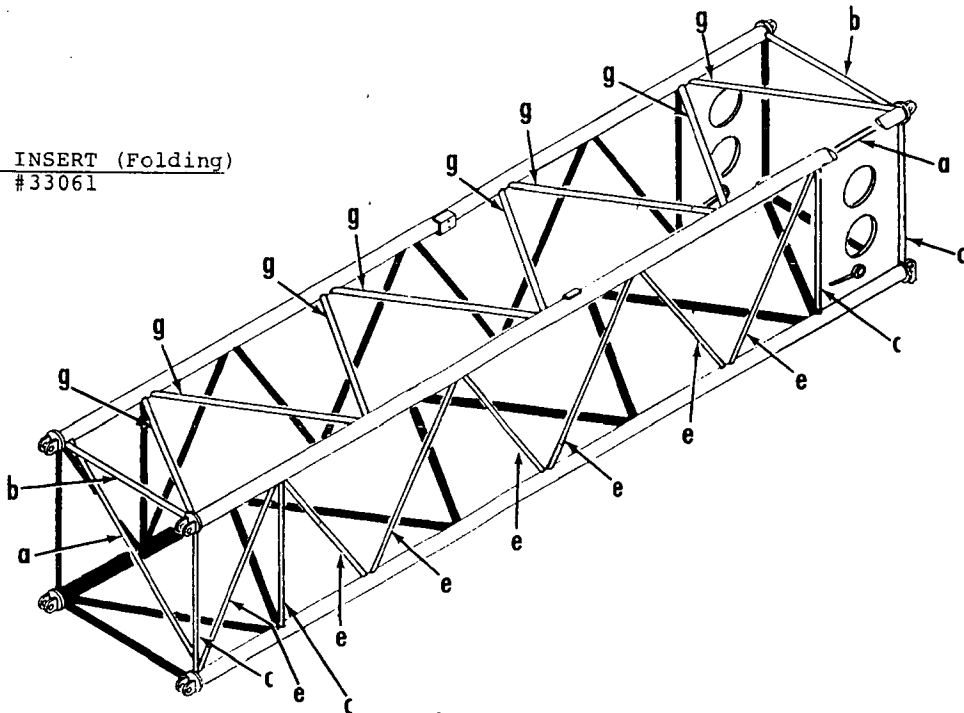
Boom #18 - Inserts (Folding)  
Left Side and Bottom Lacings Black  
Opposite Lacings Same Unless Noted

MASTER

15' INSERT (Folding)  
#33076



20' INSERT (Folding)  
#33061



When ordering give the insert  
number and lacing letter -  
Example - Lacing #33061-E

0-69 - 1 Cont.	REV. C.	MODEL 2300-4600 Incl.
----------------	---------	-----------------------

AIR CONTROL VALVE  
 (MANITOWOC #714493 - WESTINGHOUSE #P59331 NEW : P54424-0101 OLD) (2-HA-1)  
 (MANITOWOC #714418 - WESTINGHOUSE #P59333 NEW : P54424-0301 OLD) (2-HA-LR)

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
13		1	CAM	P54192
14		1	FOLLOWER, Cam	P54197
15		2	SCREW, Truss Head	P49861-3
16		2	LOCKWASHER	506608
17		1	FLANGE, Valve Retaining	P54463
18	714504	1	RING, "0" (15/16" O.D.)*	P49708-16
19		1	GUIDE, Plunger	P54147
20	714506	1	RING, "0" (7/16" O.D.)*	P49708-11
21		1	PLUNGER, Valve	P54146
22	714525	1	SPRING, Exhaust Valve*	P54144
23		1	SEAT, Inlet Valve*	P54145
24	714441	1	RING, "0" (7/8" O.D.)*	P49708-115
25		1	WASHER	P53455-3
26	714442	1	VALVE, Inlet*	P5125
27	714526	1	SPRING, Inlet Valve	539115
28		1	SPACER, Valve	P54794
29		1	SCREEN	P54194
30		1	BODY	P54305
31		2	WASHER	506607
32		2	SCREW, Fillet Head	P49835

\*Recommended to be stocked at all times.

NOTE: Part numbers at right are Westinghouse. Please so specify if ordering.  
 Valve changed approx. July 1969. Check nameplate for identification of valve.

REV. C	0 - 69 -1
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PLEASE GIVE MACHINE S/N W/ORDER

Run as front

MASTER

0-69 Cont.

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