

# Manitowoc

## TRADITIONAL CRANE PARTS MANUAL

This manual has been prepared for and is considered part of

**3900T**

Model

**39960**

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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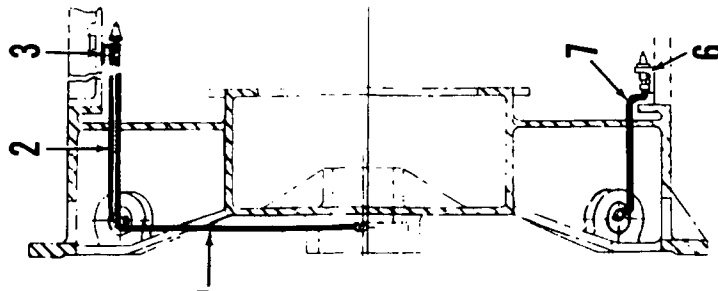
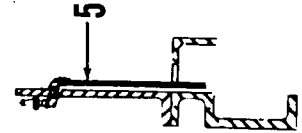
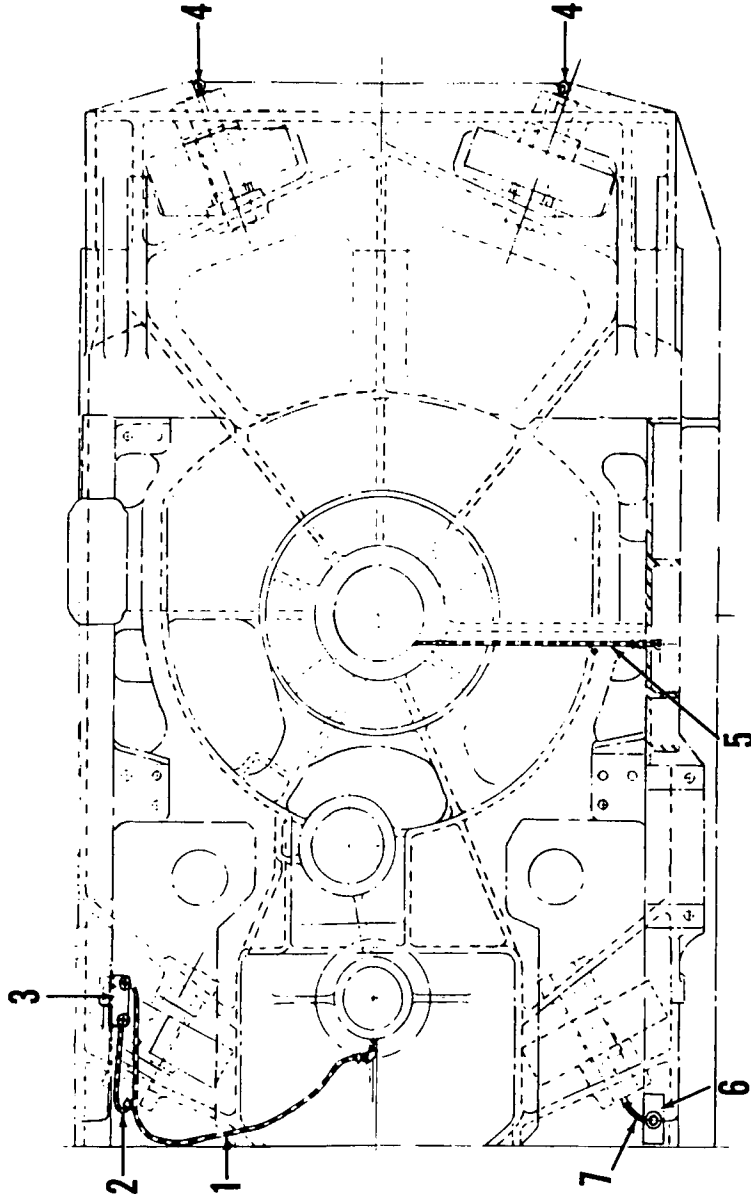


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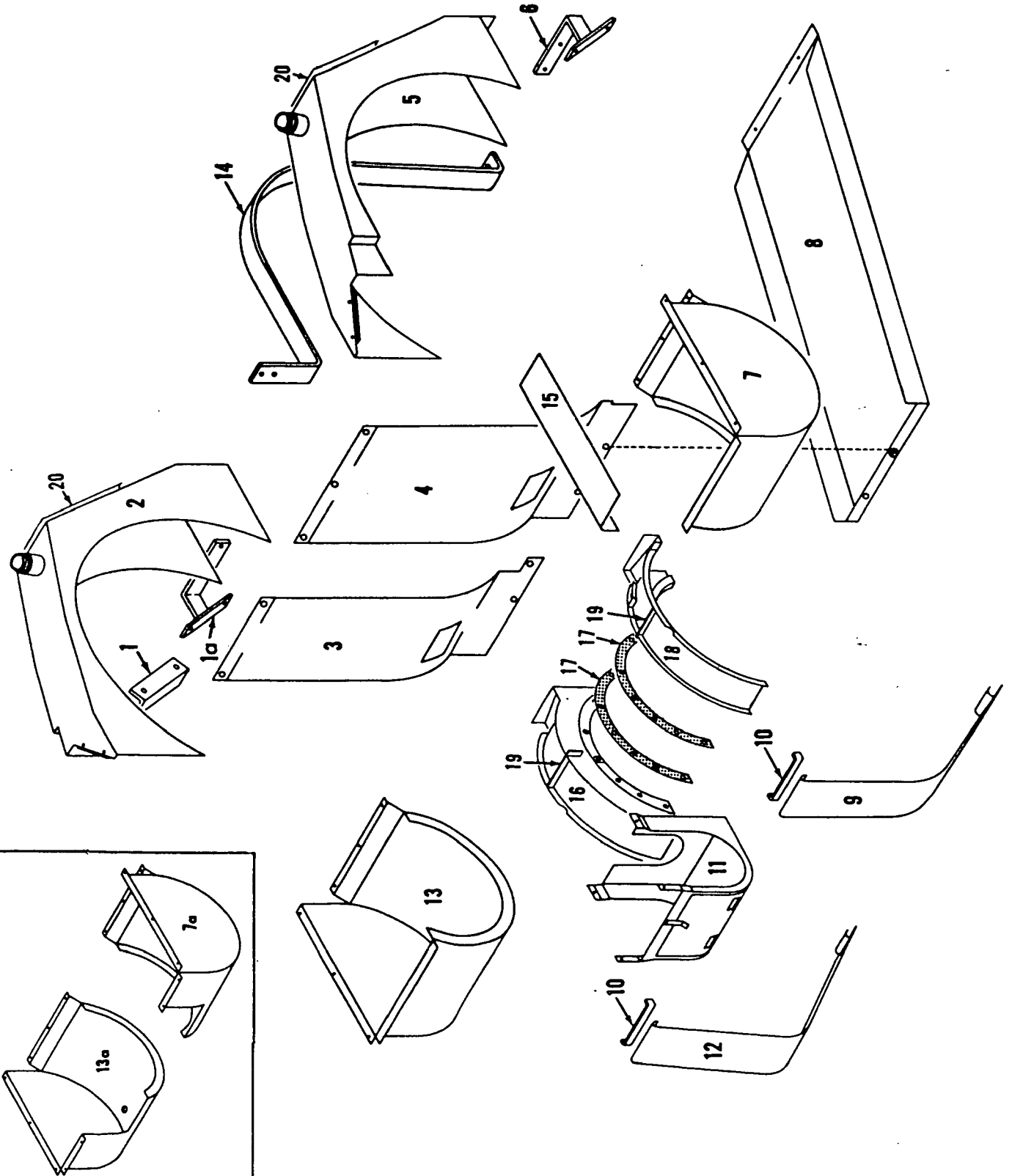


30375-A-1

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ROTATING BED PIPING

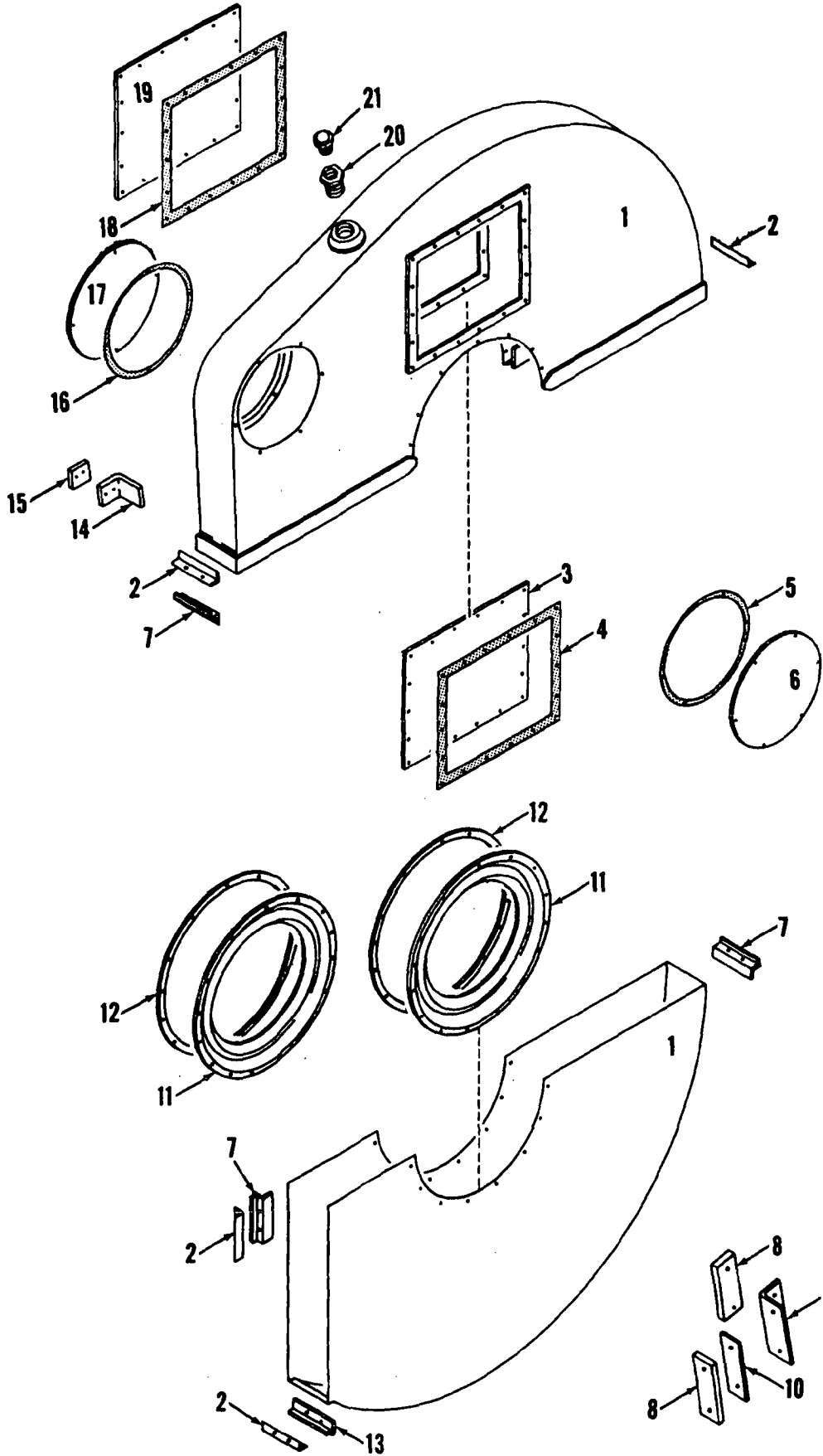
MASTER



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MATERIAL LIST ON BACK

GUARDS



42906 A 2

MATERIAL LIST ON BACK

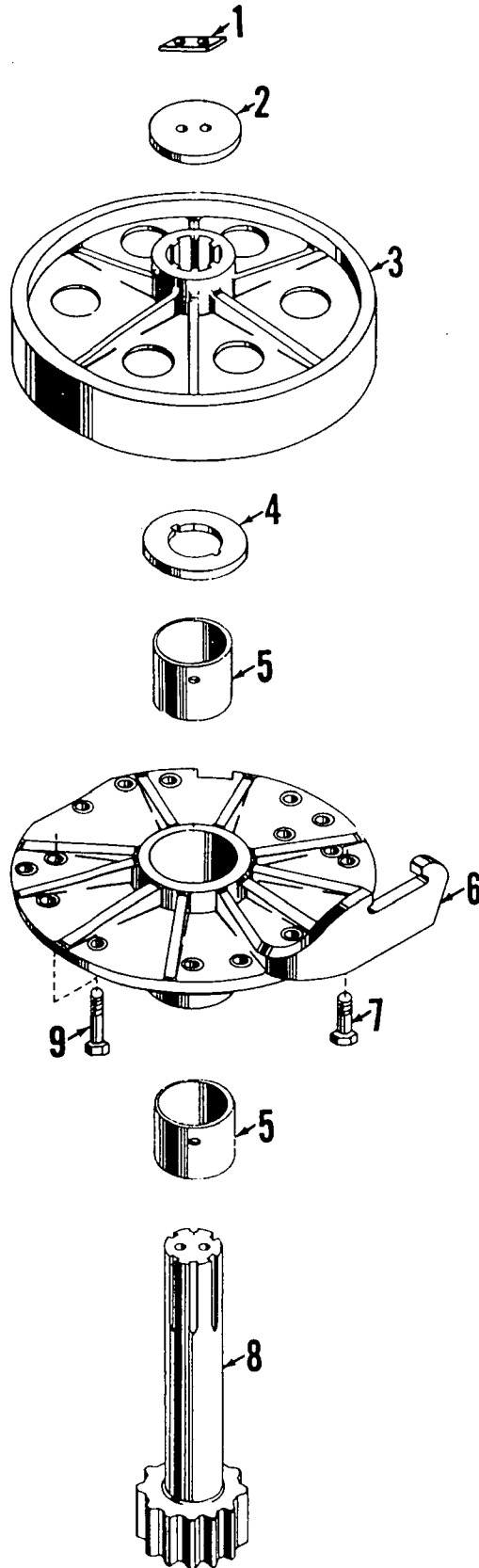
GEAR CASE

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ILLUST. No. 20572 - B-1

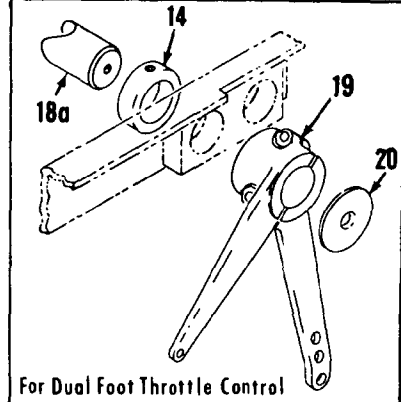
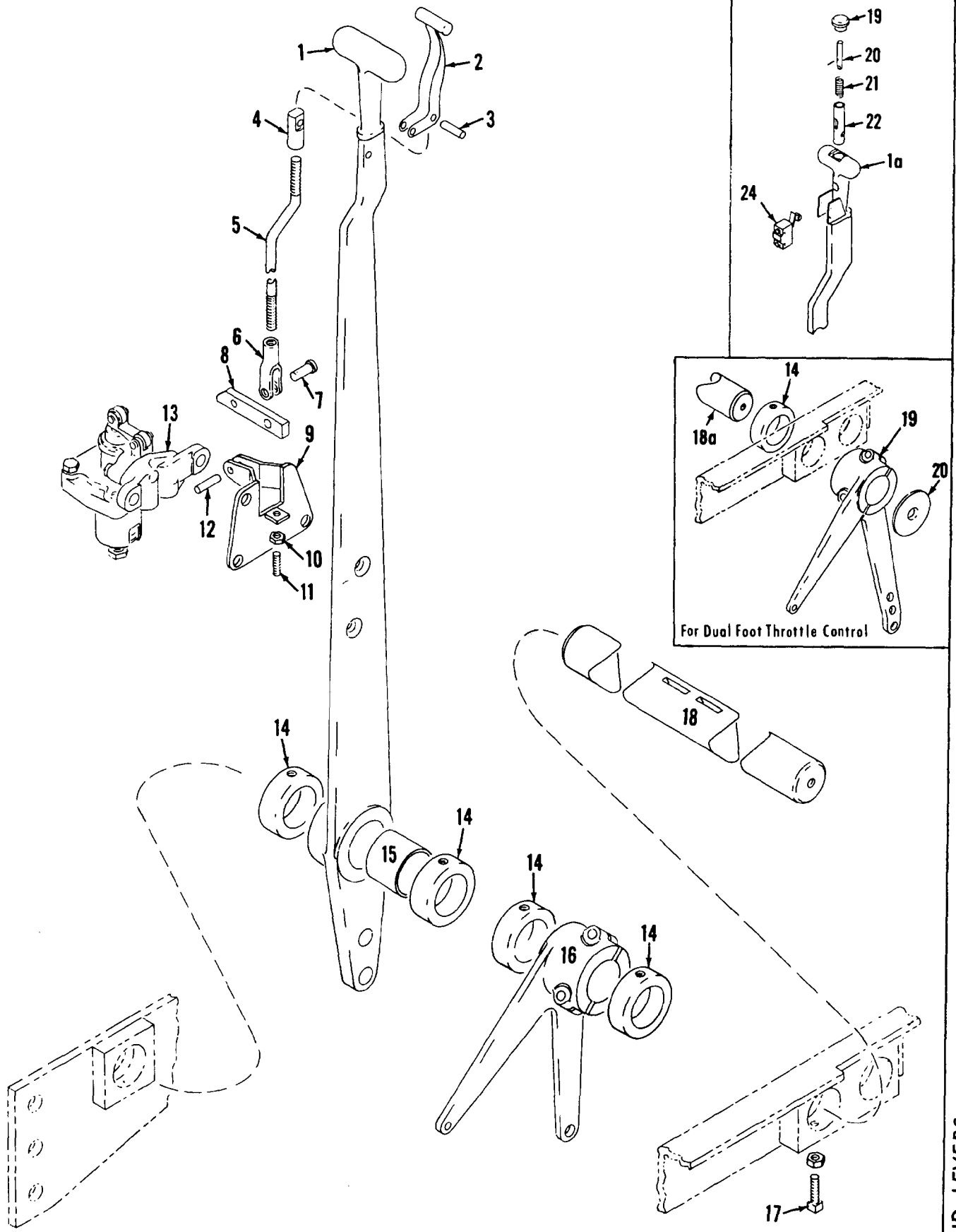
MATERIAL LIST ON BACK

SWING BRAKE SHAFT

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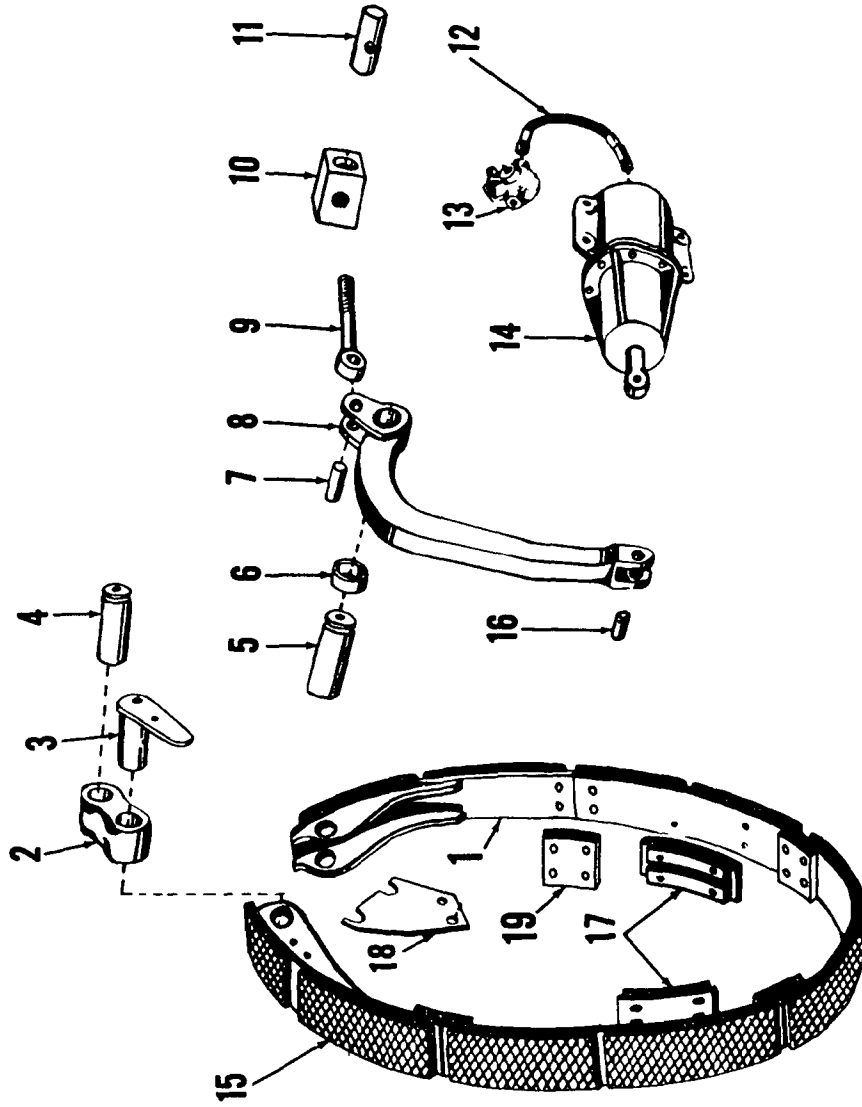


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HAND LEVERS

MASTER



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MATERIAL LIST ON BACK

CLUTCH BAND ASSEMBLY

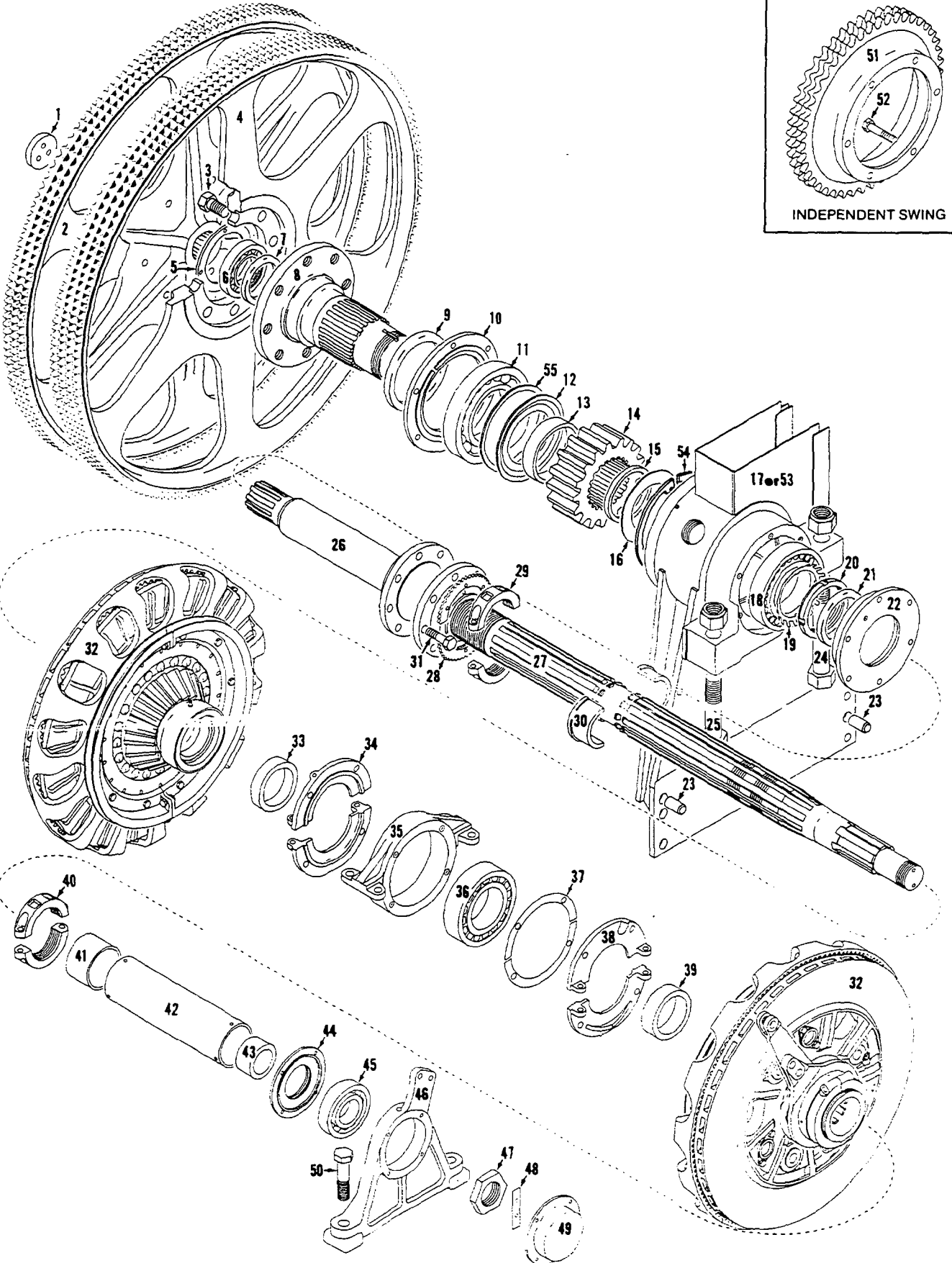
Use 4238 E2 Back

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B13.1



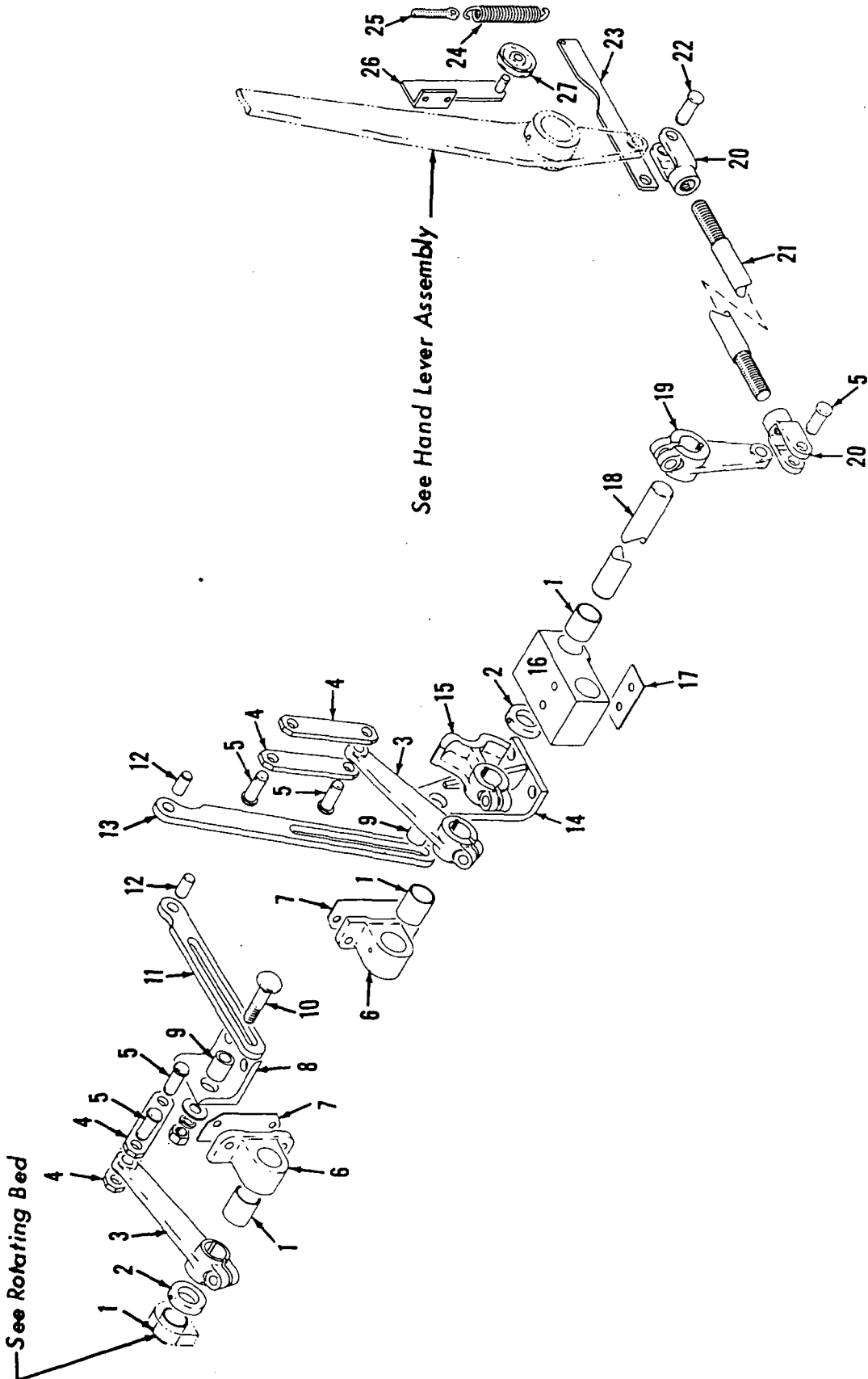
INDEPENDENT SWING

MAIN DRIVE SHAFT

MATERIAL LIST ON BACK

43132B1

MASTER



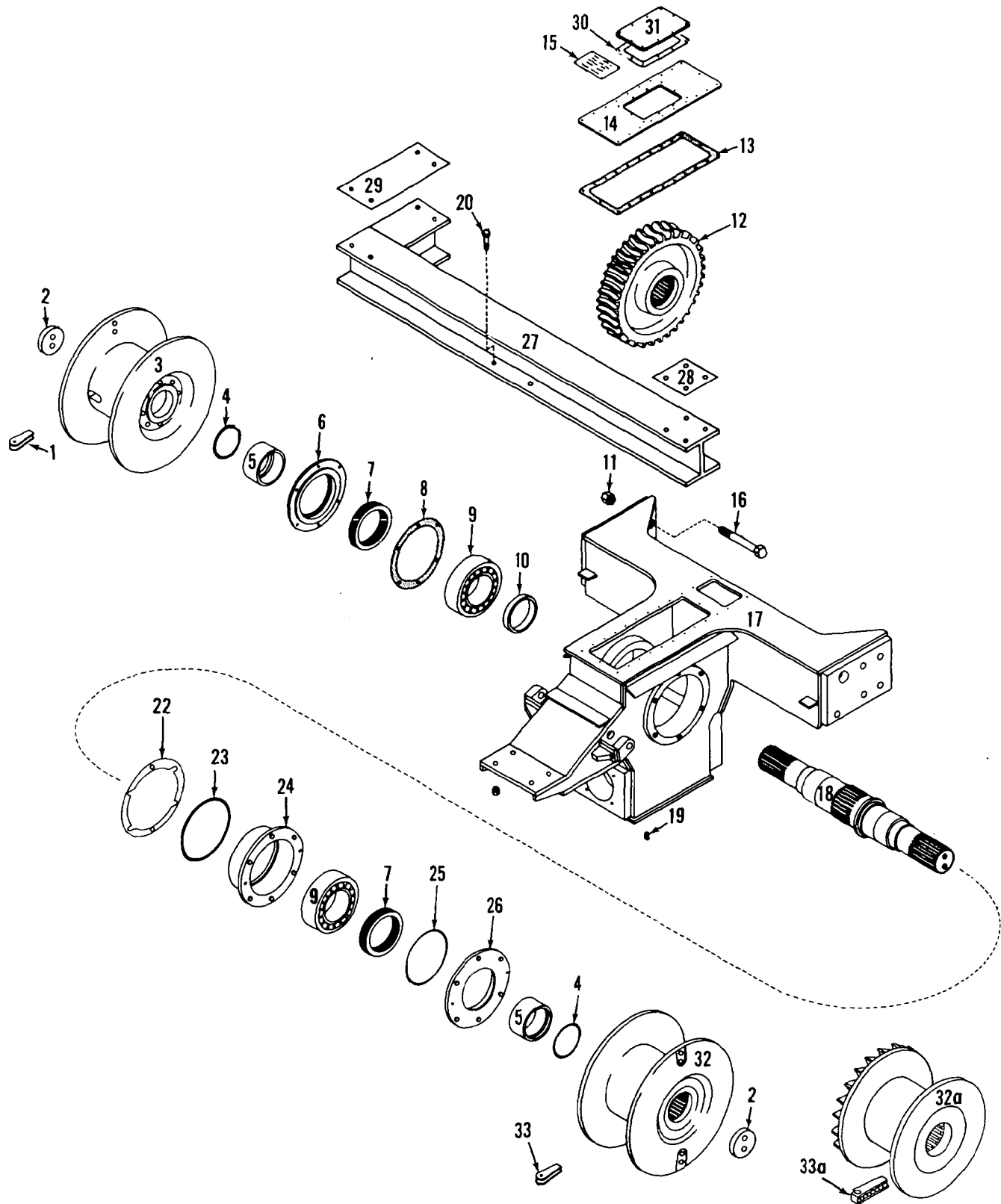
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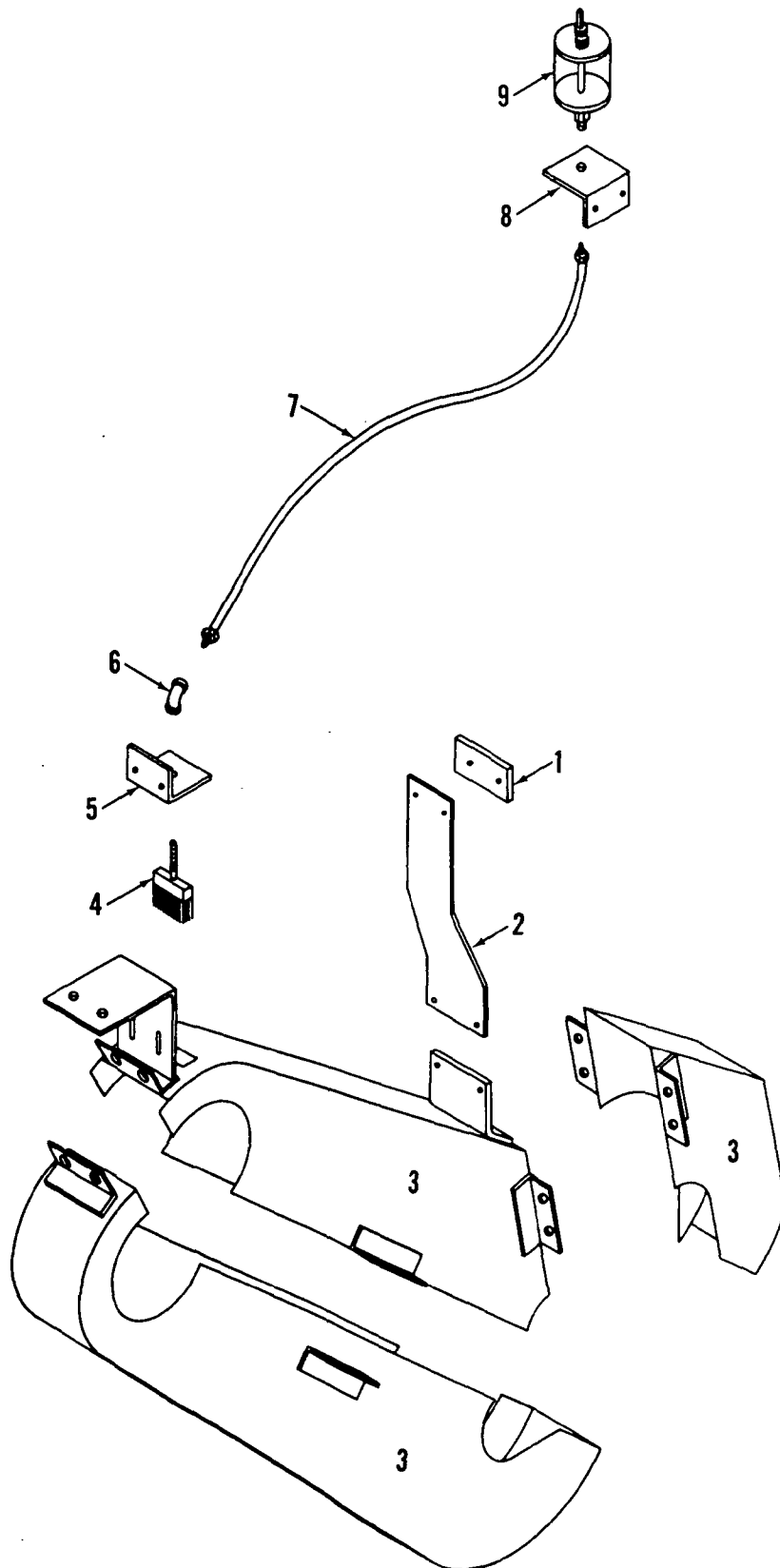
MATERIAL LIST ON BACK

INDEPENDENT BOOM HOIST

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50310B3

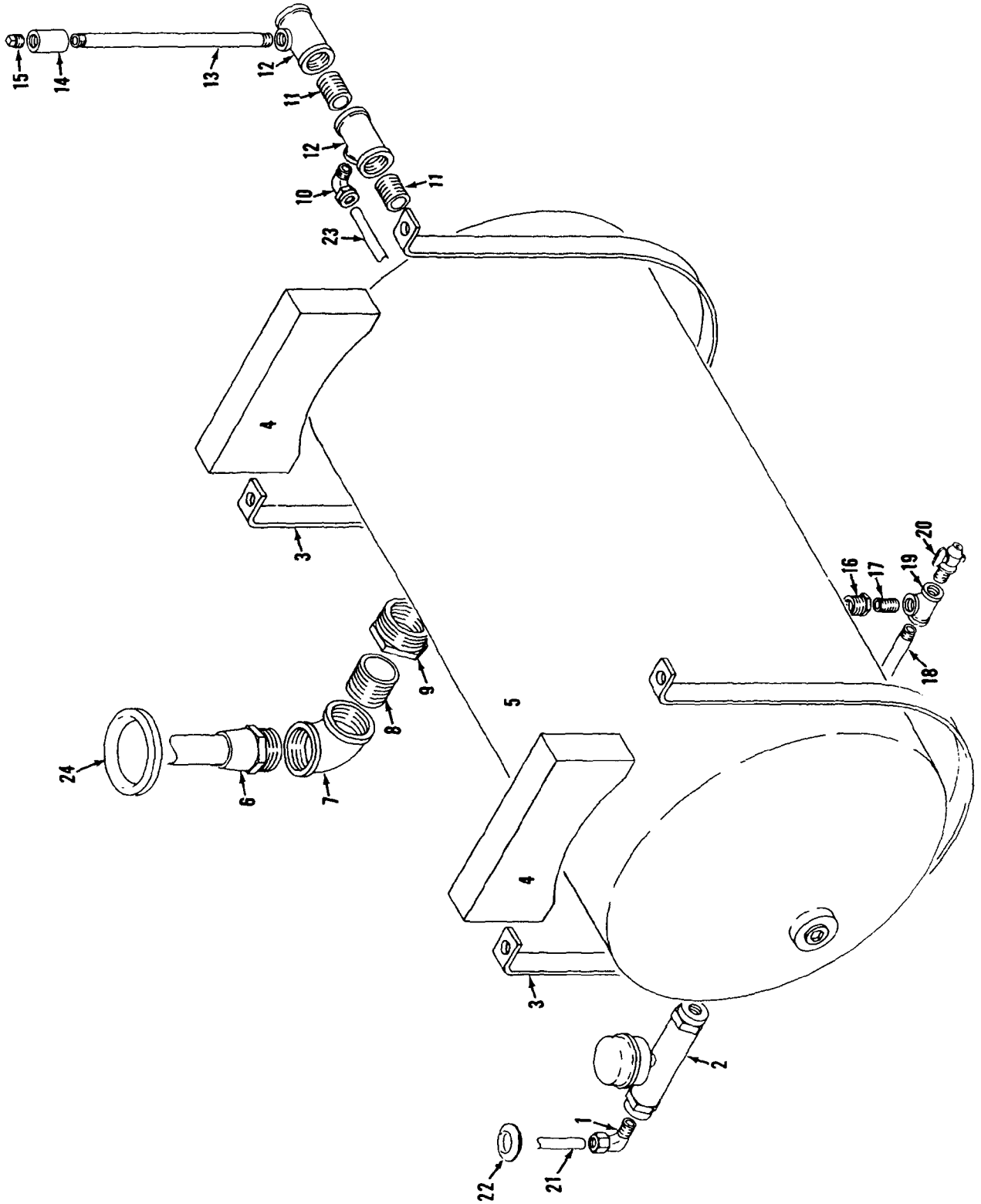
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CHAIN CASE

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4201383

MATERIAL LIST ON BACK

AIR TANK

48013 B3

**PARTS MANUAL ALPHABETICAL INDEX**  
**Group D - Power Components**

DESCRIPTION	PUBLICATION	REV	START DATE	END DATE	GROUP
Converter Control	32600	F1	02/23/62	07/19/77	D0601
Converter Control	43091	G1	05/26/63	08/21/81	D0601
Converter Piping	48090	E1	05/22/67	09/18/80	D0701
Converter Piping	48090	F2	05/22/67	04/18/80	D0701
Converter Piping	48090	B3	05/22/67	09/18/80	D0701
Converter Piping	48090	E4	05/22/67	09/18/80	D0701
Converter Piping	48090	B5	05/22/67	12/20/71	D0701
Engine & Clutch Control	32498	B1	04/04/63	01/22/65	D0501
Exhaust Stack	23643	B1	12/20/47	04/08/65	D0102
Instrument Panel/Engine	90067	C1	05/27/63	12/27/68	D0301
Instrument Panel/Engine	91292	A1	03/31/66	04/01/74	D0301
Power Plant	48048	B1	05/06/67	05/17/68	D0101
Power Plant	48048	B2	05/06/67	04/26/72	D0101
Power Plant	48048	A3	05/06/67	04/26/72	D0101
Power Take Off - Transmission Case	48067	C1	04/24/67	04/15/91	D0401
Power Take Off - Transmission Case	48067	B2	04/24/67		D0401

43091-1 Cont.	REV. G	MODEL VICON 3900T
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FRONT CONVERTER MANUAL CONTROL

REF. NO.	PART NUMBER	QUANTITY REQUIRED	DESCRIPTION OF PART	VENDORS PART NO.
30	96323	1	LEVER, Hand (Electric Control Power Load Lowering)	
30A	93778	1	LEVER, Hand (Electric Control Power Load Lowering)(Superseded by #96323)	
30A	24899	1	LEVER, Hand (w/Boom Hoist Control)	
NOTE 1: As shown above for levers #96319, 96322 and 96323. For levers #93735, 90195, 93777, 93739, 93778 and 24899 delete parts #140334, 143985, 138597 and use the following: (See boxed items)				
4	140197	1	PIN w/cotter pin	
21A	140884	1	PIN w/cotter pin	
22A	18937	1	BAR, Roller	
23	10222	1	WASHER	
27A	229	1	SPRING	
Use one of the following as checked - 96322, 93777, 93739, 96323, 93778, 24899				
			REV. G	43091-1

PLEASE GIVE MACHINE S/N W/ORDER

CP

Run as Front

43091 G1 Cont.

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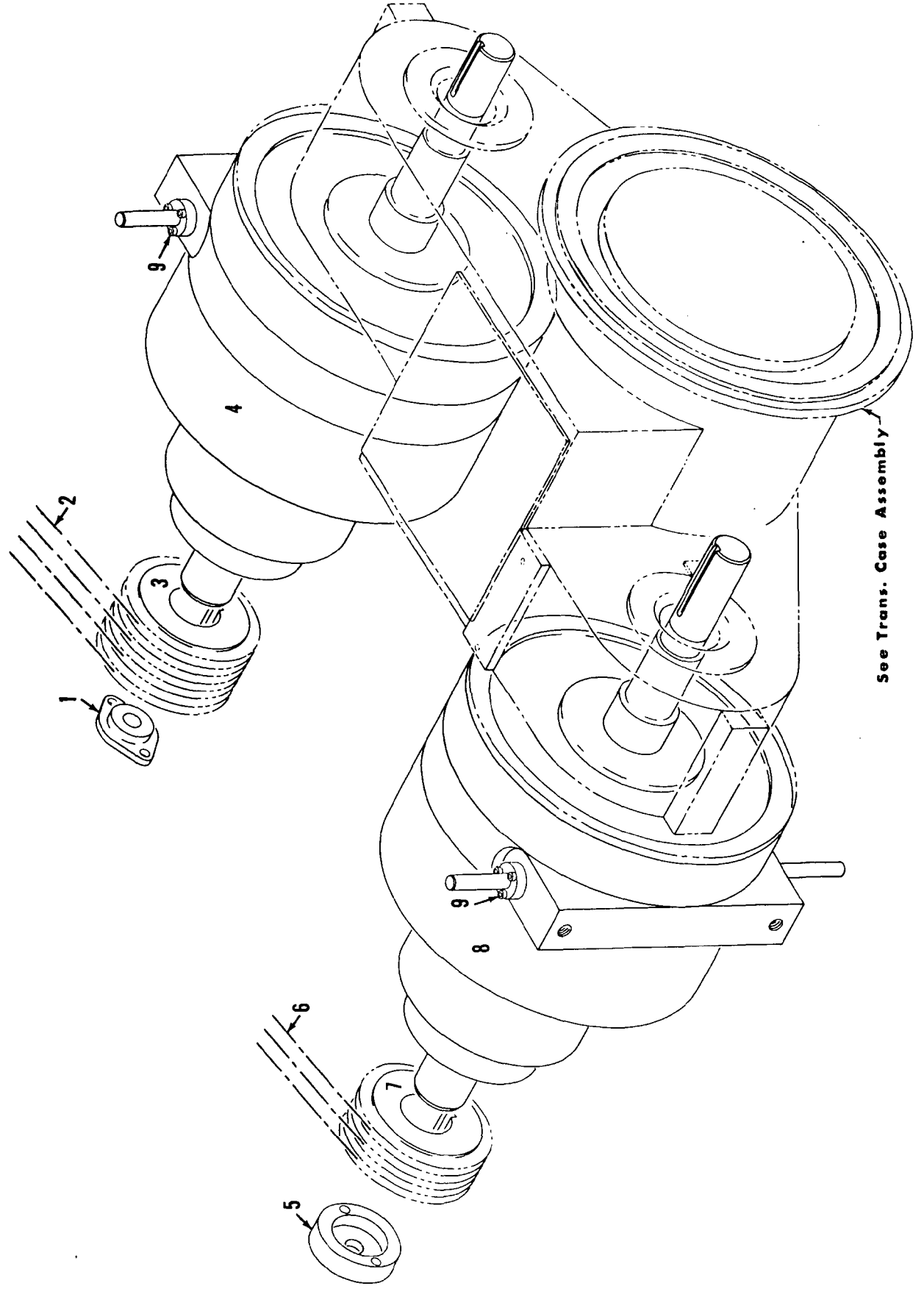
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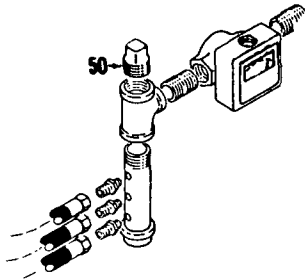
POWER TAKE - OFF ASSEMBLY

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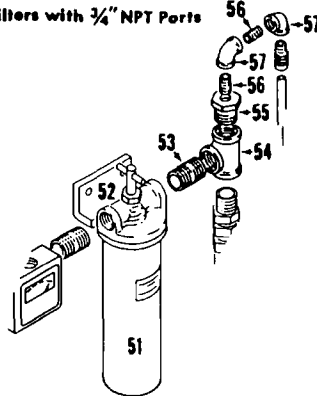
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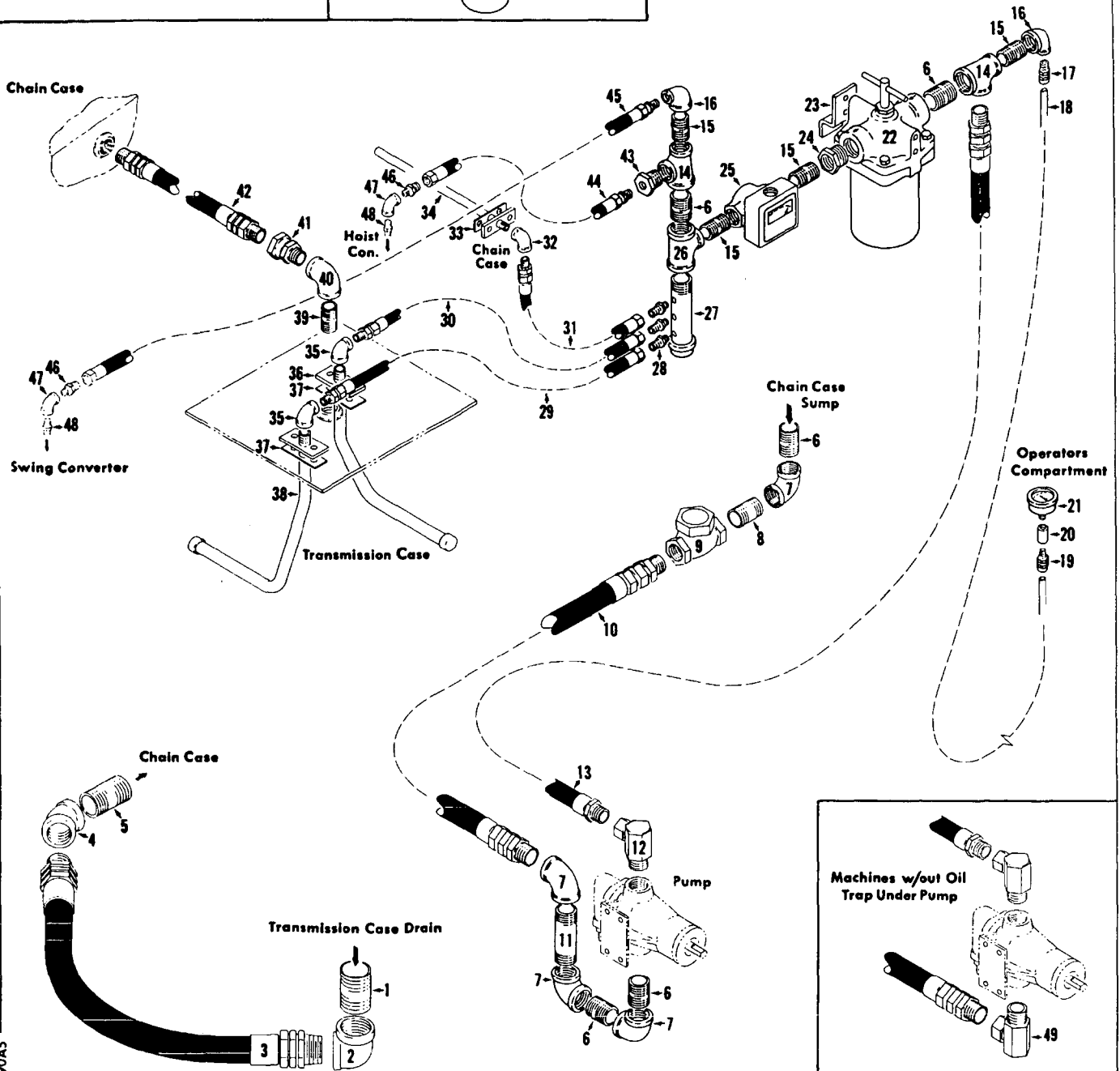
**Machines w/out Forced Oil Lubrication to Converters**



**Filters with 3/4" NPT Ports**



**Chain Case**



**Swing Converter**

**Transmission Case**

**Chain Case Sump**

**Operators Compartment**

**Chain Case**

**Transmission Case Drain**

**Pump**

**Machines w/out Oil Trap Under Pump**

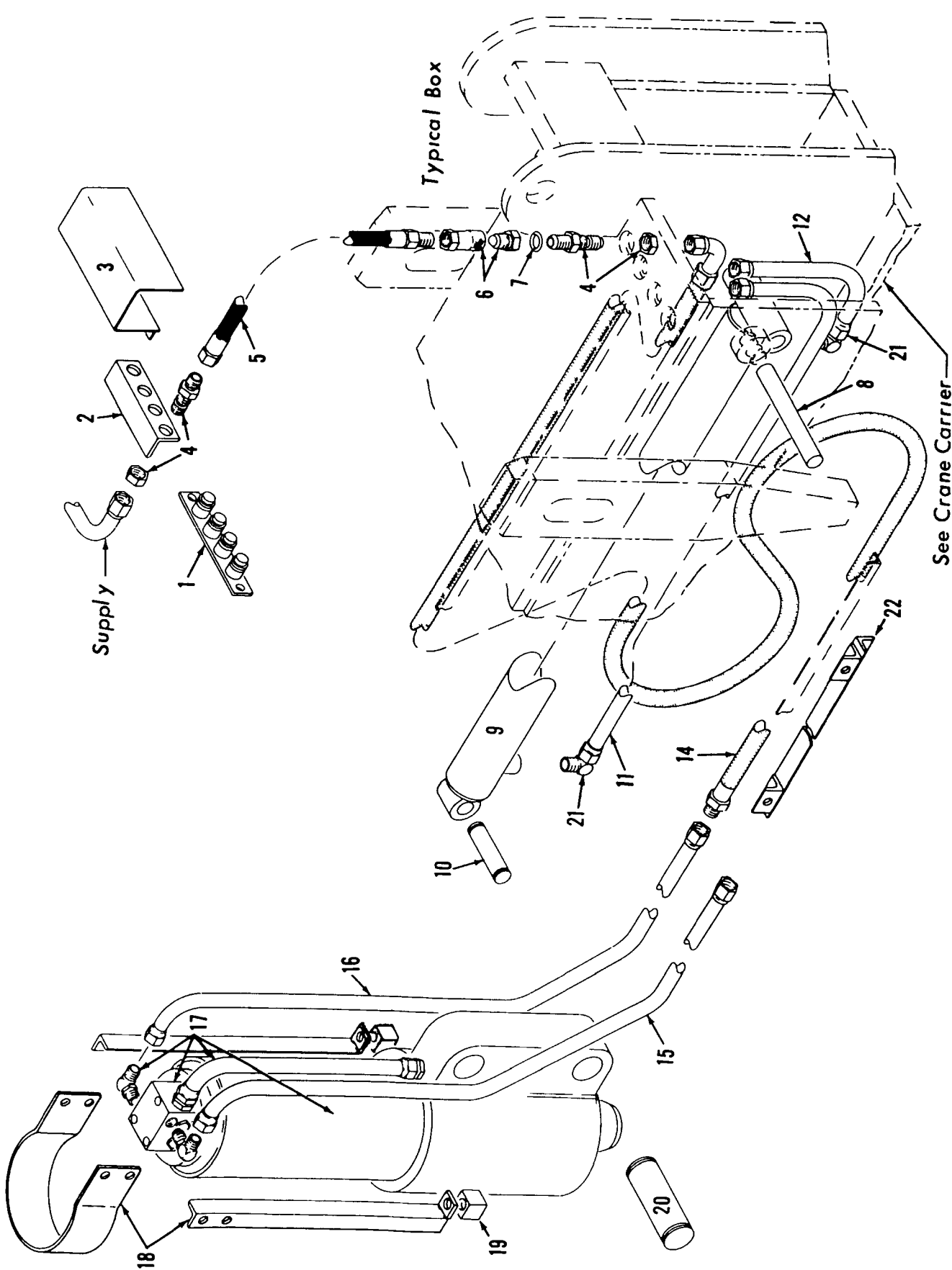
48090A5

**MATERIAL LIST ON BACK**

**LUBRICATION PIPING**

**PARTS MANUAL ALPHABETICAL INDEX**  
**Group E - Lower Structure & Control**

<b>DESCRIPTION</b>	<b>PUBLICATION</b>	<b>REV</b>	<b>START DATE</b>	<b>END DATE</b>	<b>GROUP</b>
Carrier	50323	K1	06/06/63	02/15/79	E2701
Hydraulic Outriggers	50478	B0	05/13/66	05/06/85	E2801
Hydraulic Outriggers	50478	C1	05/13/66	09/15/80	E2801
Hydraulic Outriggers	50478	E2	05/13/66	06/18/73	E2801
Hydraulic Outriggers	50478	-	05/13/66	10/16/08	E2801



5038382

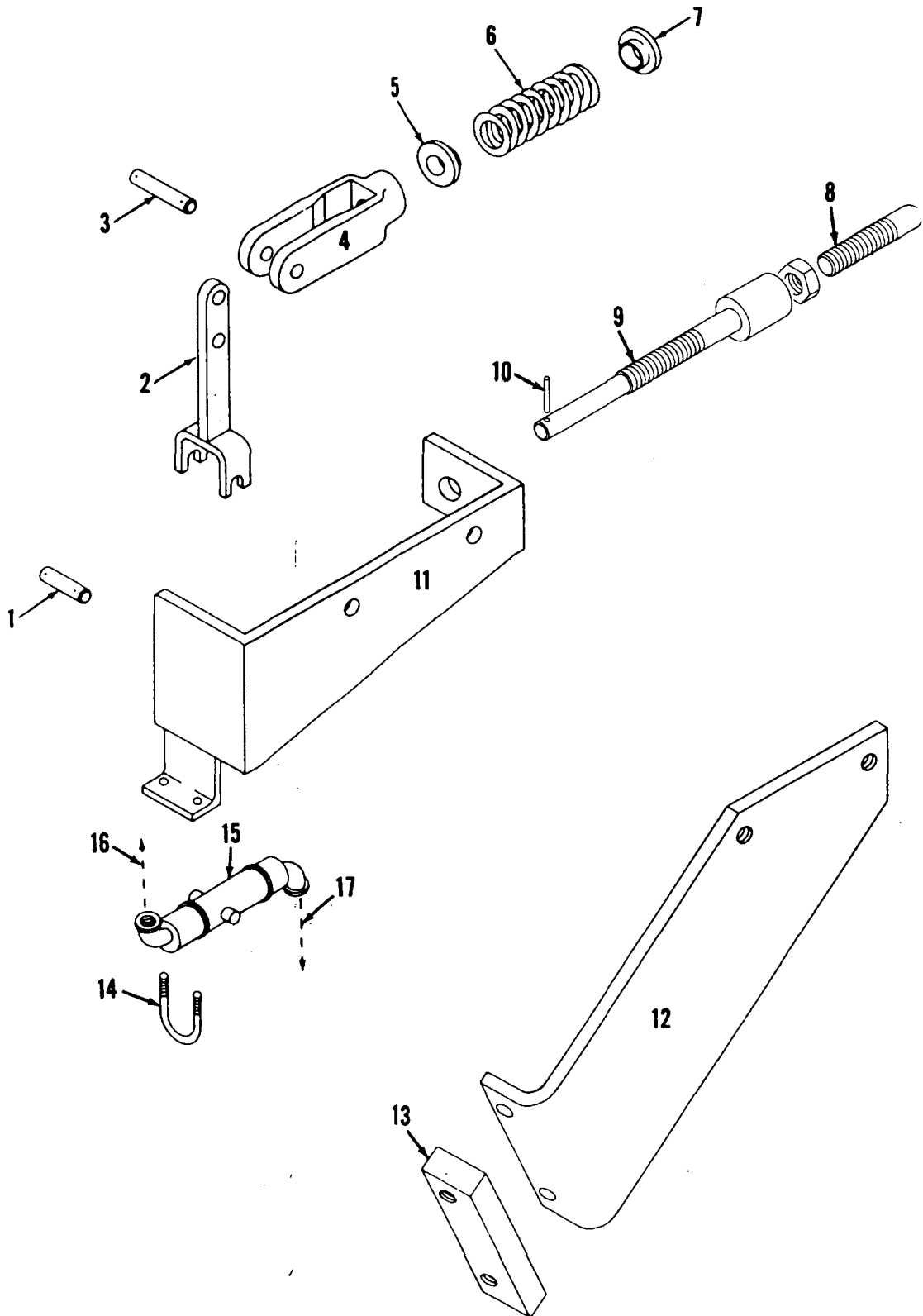
MATERIAL LIST ON BACK

HYDRAULIC OUTRIGGER PIPING

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3285081

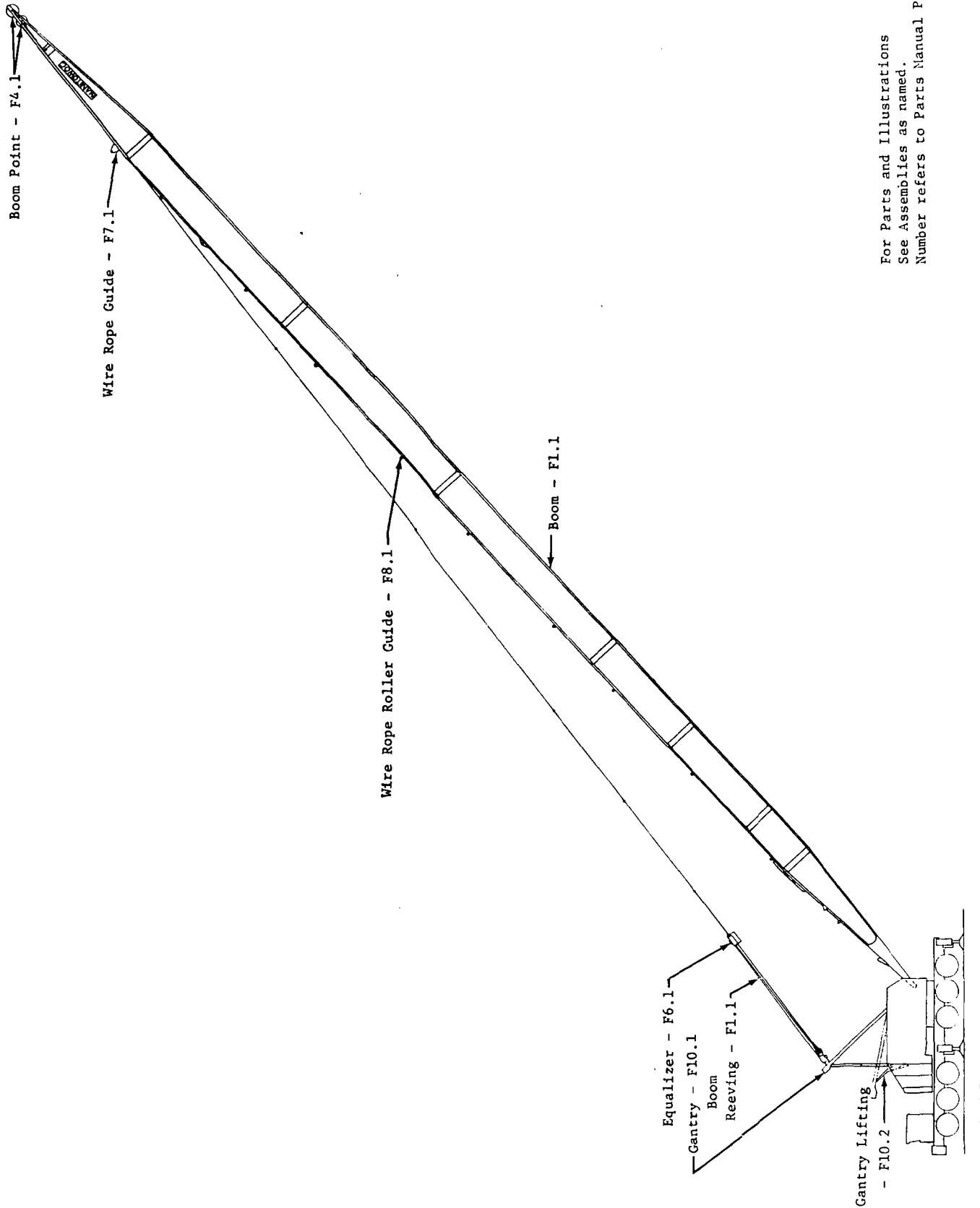
MATERIAL LIST ON BACK

BOOM HOIST AUTOMATIC THROW-OUT

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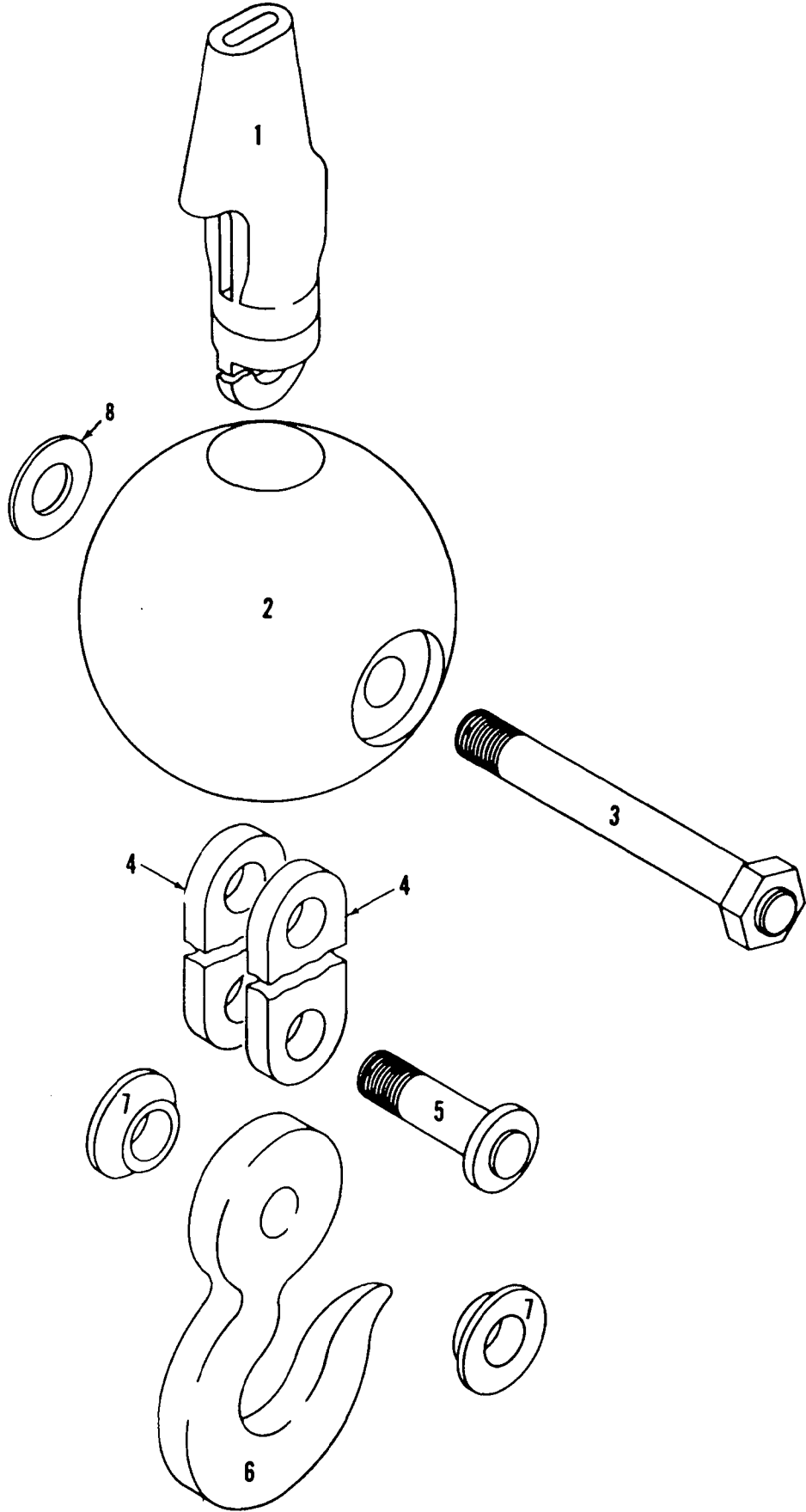


For Parts and Illustrations  
See Assemblies as named.  
Number refers to Parts Manual Page.

48687A1

M3900T

ARRGT. BOOM NO. 9



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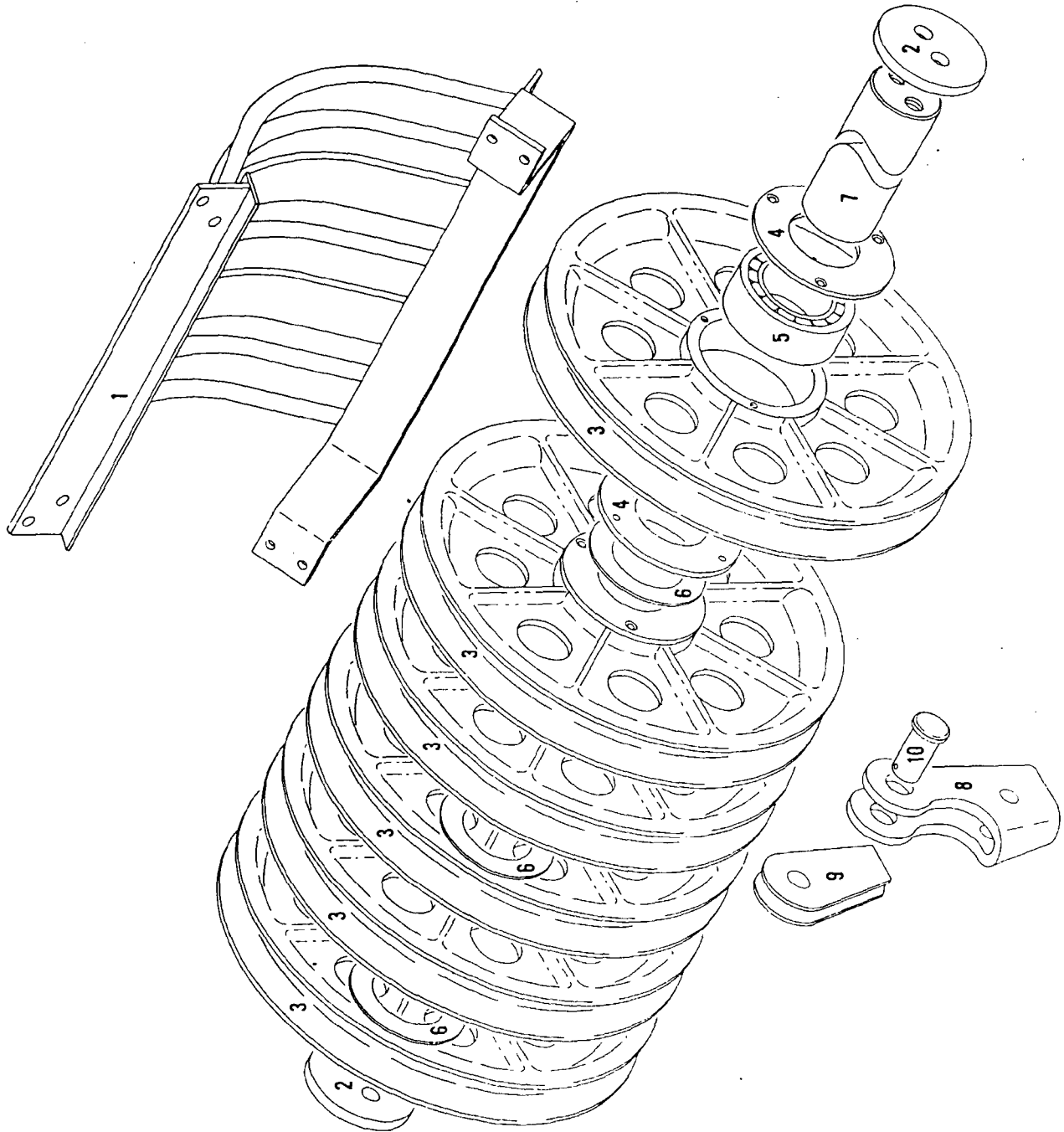
MATERIAL LIST ON BACK

HOO AND WEIGHT BALL

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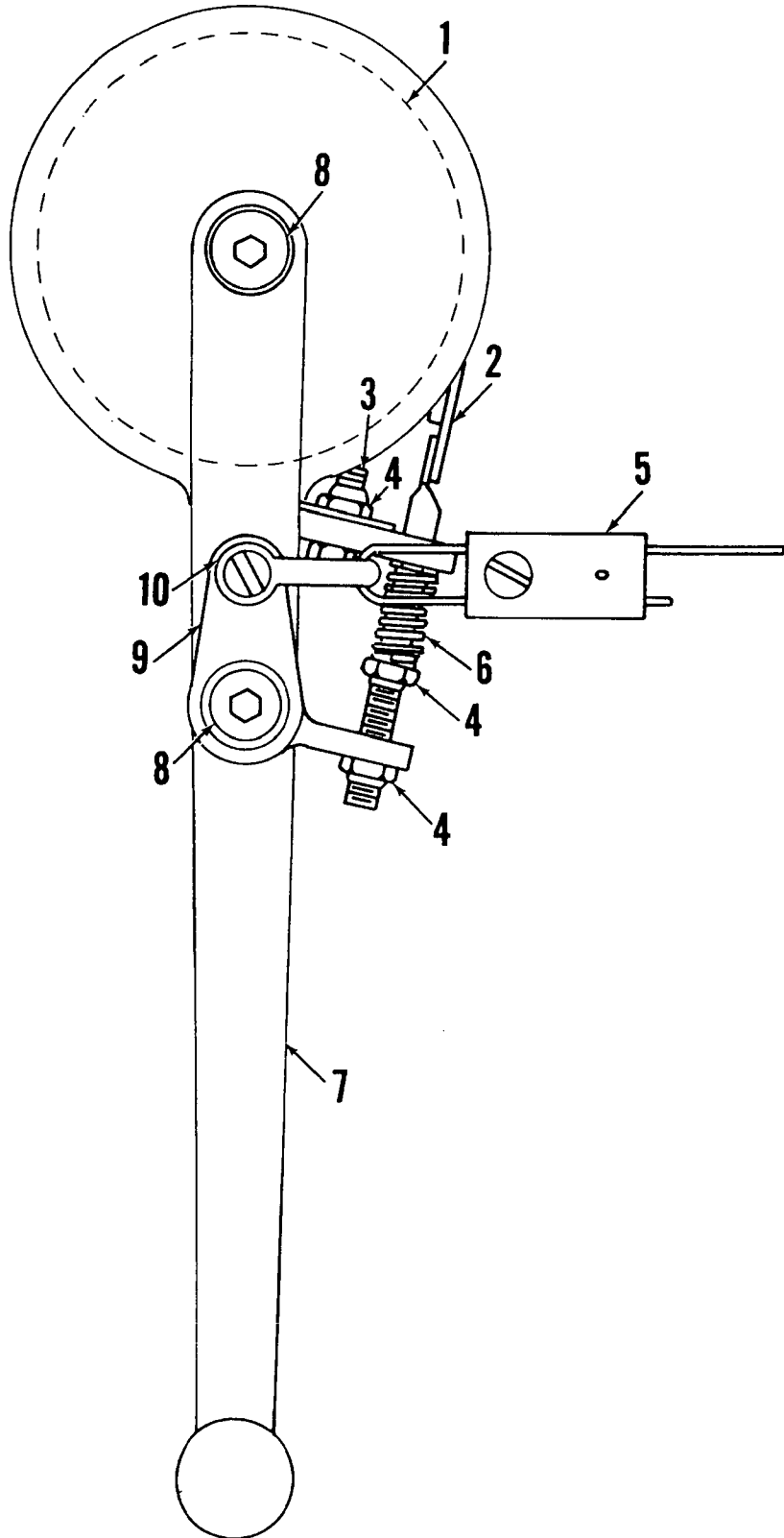
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MATERIAL LIST ON BACK

BOOM POINT SHAFT

## O-NUMBER NUMERICAL INDEX

PUBLICATION	REV
0-147	D2
0-148	-
0-156	D
0-157	C
0-173	A
0-176	-
0-243	A
0-243	A1
0-244	A1
0-246	C1
0-247	B
0-247	B1
0-284	A
0-286	A
0-289	F
0-290	F1
0-304	J1
0-307	-
0-307	F
0-310	A
0-325	B
0-340	E1
0-407	B
0-407	B1
0-451	AA1
0-451	CA1
0-451	DA1
0-458	A
0-461	E1
0-507	-
0-69	C
0-71	-
0-72	B



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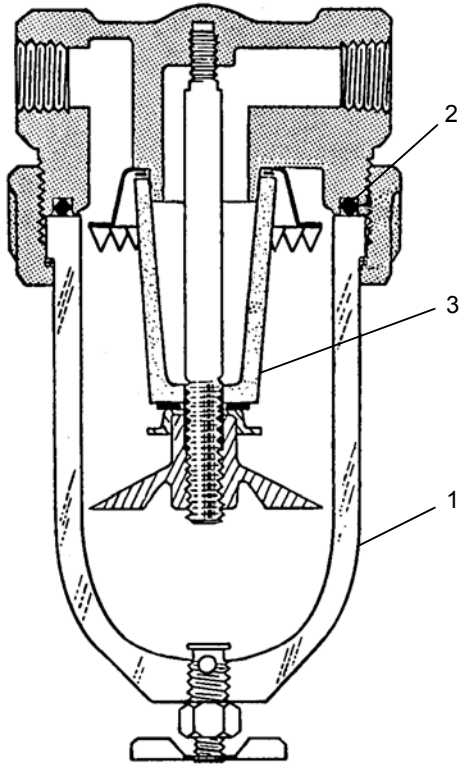
THROTTLE CONTROL ASSEMBLY

O-173

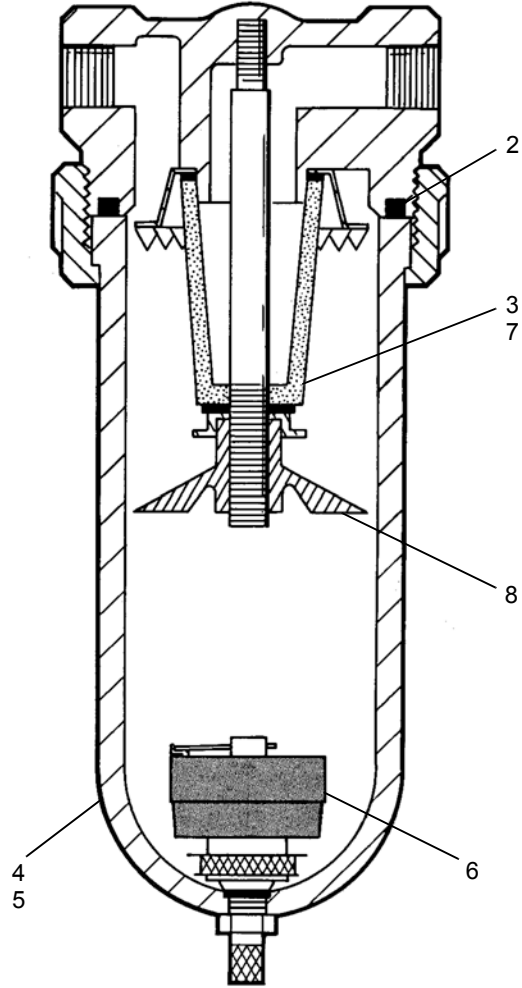
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O-173





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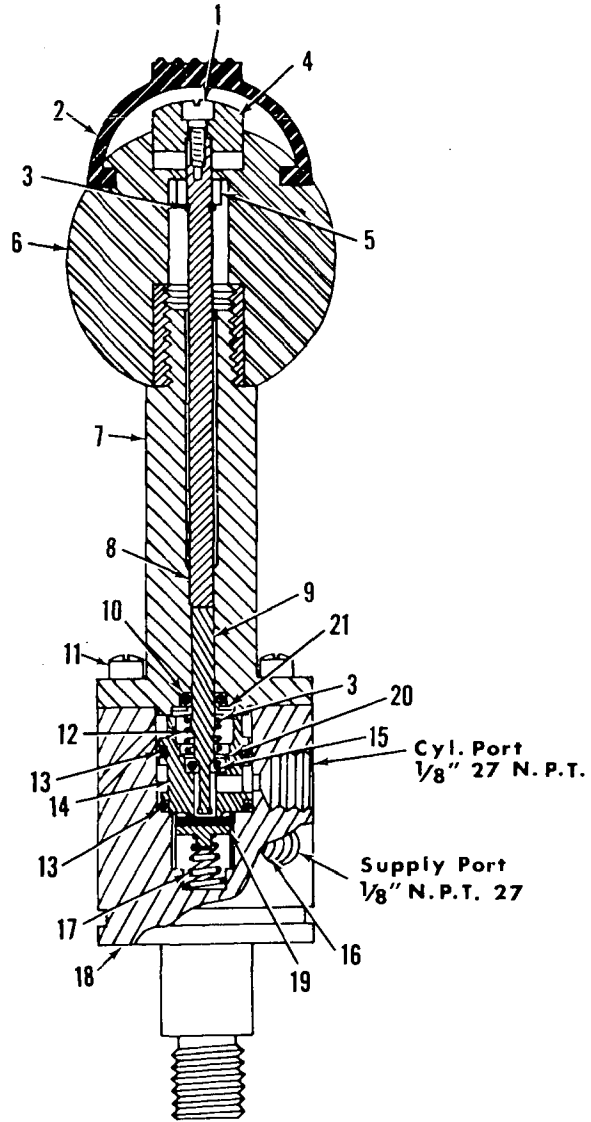
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ASSEMBLY	REVISION
<b>O-289</b>	<b>F</b>

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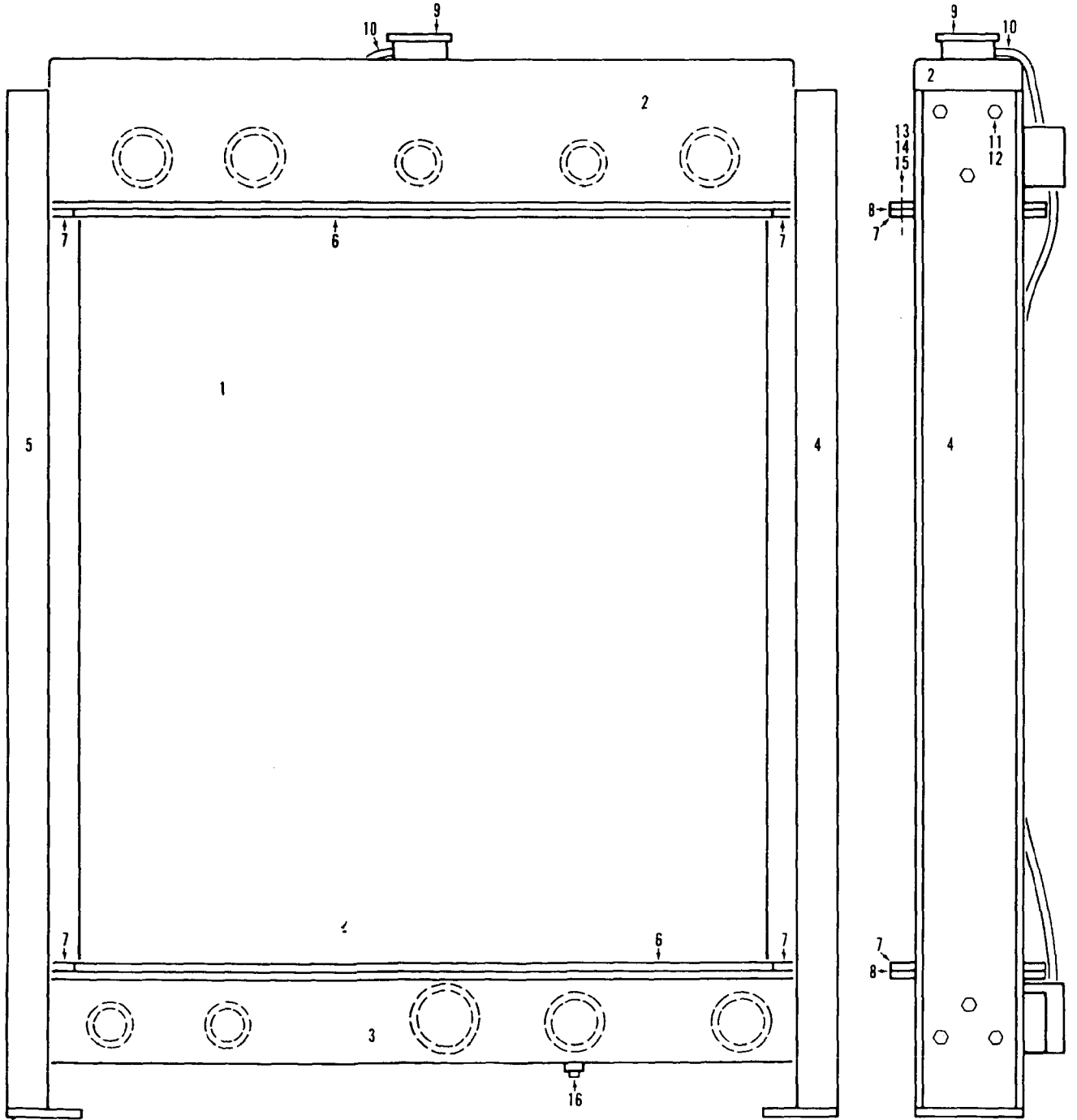


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0-451

MATERIAL LIST ON BACK

RADIATOR

<b>MODEL</b>	3900T
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**HYDRAULIC JACK CYLINDER**  
(10" x 16")  
385296, 385297

ITEM	PART #	QTY.	DESCRIPTION OF PART
			<b>Common Parts</b>
1	703001	1	VALVE, Lock (No Longer Available)
1	81001305	1	VALVE, Check Lock (see Note 2 and 3)
26	90013762	1	BLOCK, Manifold (Dual PO Check)
27	90013763	2	VALVE, Check (pilot operated)
28	90013764	4	PLUG, Expansion (10mm)
29	9926220221	3	PLUG, Expansion (7mm)
30	9926220233	1	PLUG SAE-4
6	9372220049	2	RING, Back-up
7	9372220048	1	O-RING
8	9372220047	2	RING, Wear
9	9372220046	1	SEAL, Piston
11	90013765	8	SCREW, Soc Head Cap (5/8" - 11 x 1-1/2")
12	90013766	1	RING, Split (2 segments)
13	9372220037	1	PISTON
14	90013767	1	HEAD
15	90013768	1	O-RING
16	9372220072	1	RING, Back-up
17	9372221053	1	RING, Lock (3 segments)
18	9372220073	1	RING, Cord
19	90013769	1	PLATE, Cover
20	90013770	6	SCREW, Soc Head Cap (3/8" - 16 x 1")
21	9372220074	1	WIPER, Rod
22	9372220075	1	SEAL, Rod
23	90013771	1	ROD, Piston
24	90013772	1	TUBE, Cylinder
25	428256	1	ELBOW, 90°
	428257	1	KIT, ELBOW REBUILD (for Item No 428256) (not shown)
			<b>Cylinder 385296</b> (add to common parts):
2	90013773	4	SCREW, Cap (5/6" - 18 x 1-3/4")
10	9372221052	1	TUBE, Supply (see Repair Kit 694383)
			<b>Cylinder 385297</b> (add to common parts):
2	90013774	4	SCREW, Cap (5/6" - 18 x 3-3/4")
3	9926220052	1	CARTRIDGE, Relief Valve (see Note 1)
4	90013775	1	O-RING
5	9926220265	1	BODY, Valve
10		1	TUBE, Supply (see Repair Kit 694384)
	499585	1	KIT, Repair
4	90013775	1	O-RING
6	9372220049	2	RING, Back-up
7	9372220048	1	O-RING
8	9372220047	2	RING, Wear

**PLEASE GIVE MACHINE SERIAL NUMBER WITH ORDER**

ASSEMBLY	REVISION
<b>O-461</b>	<b>E</b>

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