



TRADITIONAL CRANE PARTS MANUAL

This manual has been prepared for and is considered part of

3900

Model

39025

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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B. Ordering Lacings without Lacing Drawings

The parts order must contain the following information to ensure that Manitowoc provides you with the correct lacings:

1. Crane serial number (can be found on builders plate in operator's cab.)
2. Boom or jib identification number.
3. Quantity, lacing location, and lacing number.
4. Boom or jib component name (butt, insert, or top) and part number.

NOTE To obtain the lacing location and number, view the boom or the jib from the butt end looking forward. Identify the side on which the damaged lacing is located: left side, top side, right side, or bottom side. Count each lacing up to and including the damaged lacing, starting with **first lacing nearest butt end** of the component as shown in Figure 3.

Do not count a diagonal lacing as the first lacing. Identify diagonal lacing separately; lower end diagonal lacing or upper end diagonal lacing.

ASSISTANCE

If you are in doubt as to which lacings to order, DO NOT GUESS. Contact your nearest Manitowoc distributor for assistance; doing so may prevent the wrong parts from being shipped.

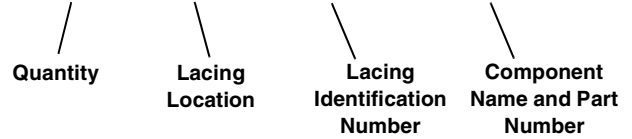
EXAMPLE: Assume you have a number 22 boom and the lacings with circled numbers in Figure 3 are damaged. Your parts order should be similar to the following example:

Crane Serial Number: **00000** (from builders plate).

Boom Identification Number: **#22 Boom**

Required:

- 1 each Top Side Lacing (1) for 30 ft Butt 48153-9
- 1 each Right Side Lacing (5) for 30 ft Butt 48153-9
- 1 each Bottom Side Lacing (3) for 20 ft Insert 33426-3
- 1 each Bottom Side Lacing (6) for 20 ft Insert 33426-3
- 1 each Top Side Lacing (2) for 40 ft Top 50453-2



WELDING INSTRUCTIONS

Refer to folio 1316 for welding instructions.

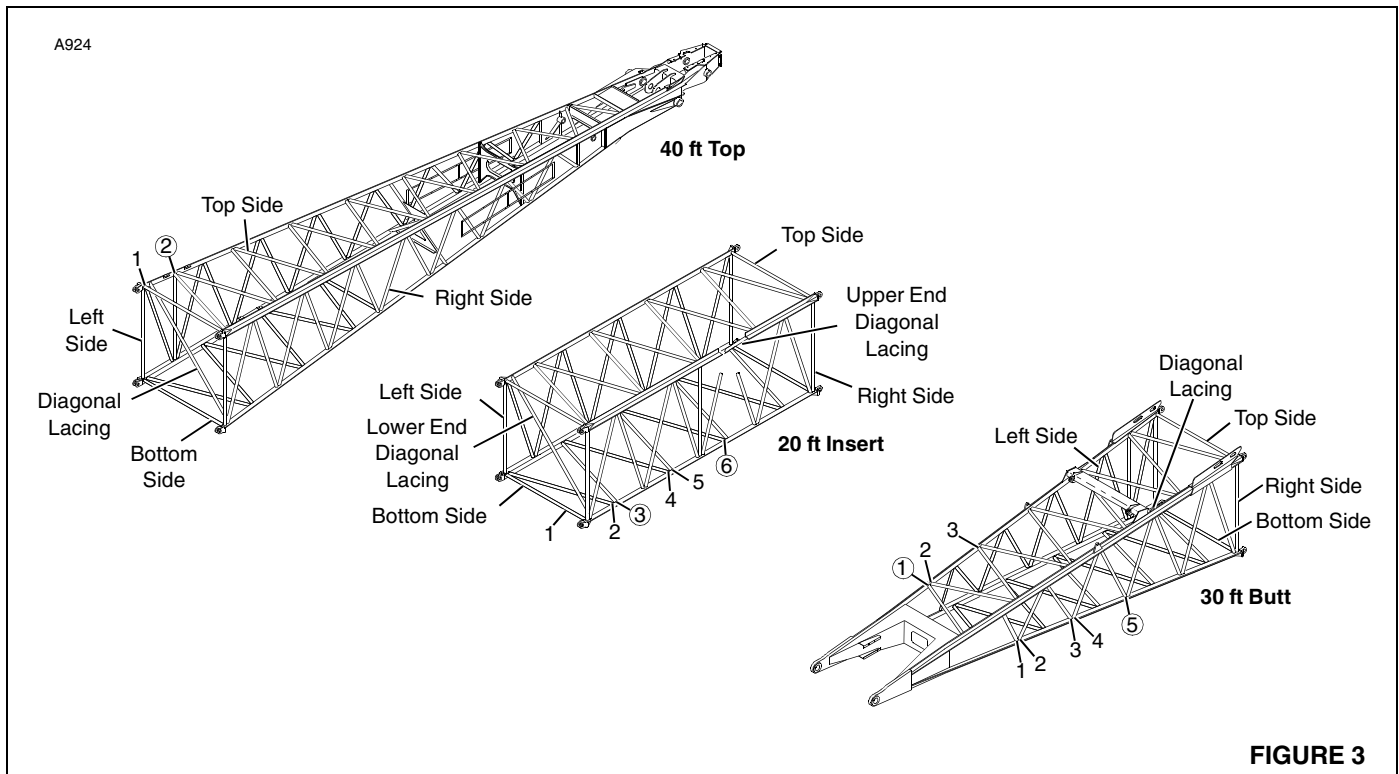


FIGURE 3

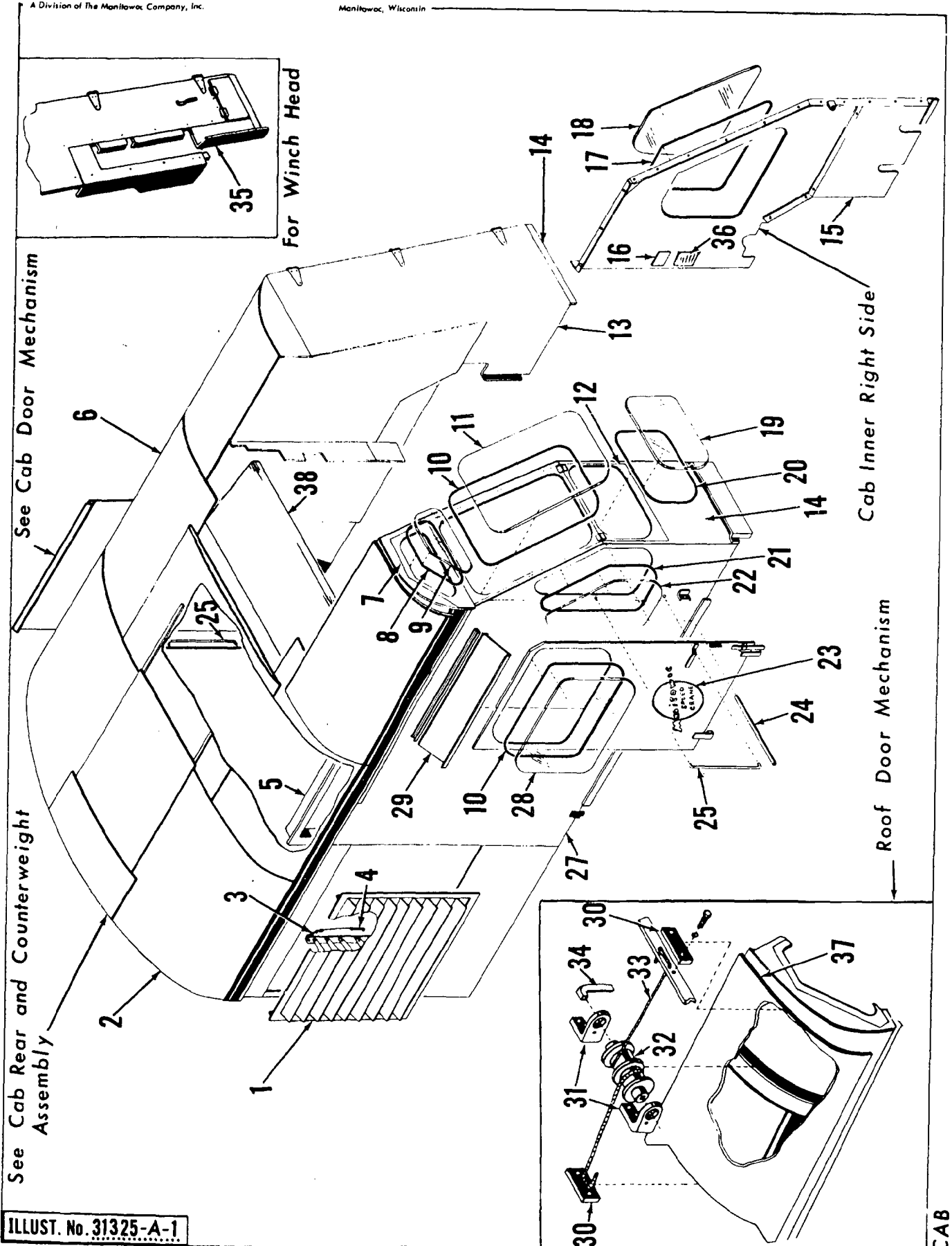
**PARTS MANUAL ALPHABETICAL INDEX
GROUP A - Rotating Structure**

| DESCRIPTION | PUBLICATION | REV | START DATE | END DATE | GROUP |
|---|-------------|-----|------------|----------|-------|
| "A" Frame | 41424 | - | 02/20/52 | 11/12/53 | A0101 |
| Cab | 31325 | A1 | 06/04/52 | 05/04/53 | A0201 |
| Cab | 31325 | A2 | 06/04/52 | 05/04/53 | A0201 |
| Chain & Gear Case | 41446 | A1 | 06/12/52 | 08/17/55 | A0401 |
| Chain & Gear Case | 41446 | A2 | 06/12/52 | 08/17/55 | A0401 |
| Fuel Transfer Pump | 21222 | A1 | 02/15/46 | | A0602 |
| Guards | 30450 | - | 11/10/42 | | A0501 |
| Platform | 40164 | B1 | 02/15/38 | 09/14/55 | A0701 |
| Rotating Bed Lubrication Piping | 30375 | A1 | 06/30/41 | 11/07/72 | A0104 |
| Rotating Bed/Hoist Frame/Transporter Platform | 41378 | - | 12/11/51 | 07/09/53 | A0102 |
| Tool Box | 31050 | A1 | 01/10/50 | 03/14/56 | A0901 |

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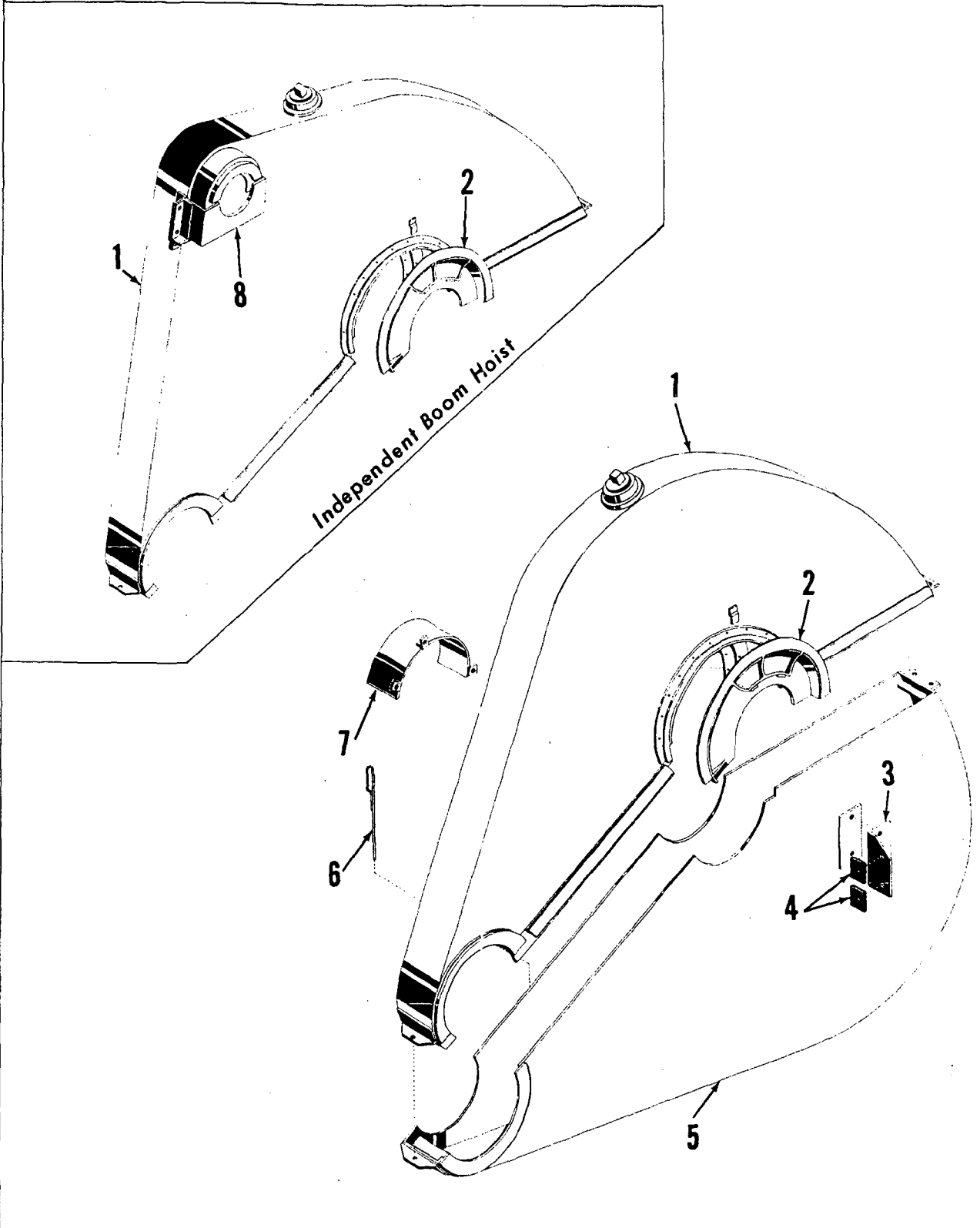
Manitowoc, Wisconsin



ILLUST. No. 31325-A-1

MATERIAL LIST ON BACK

CAB

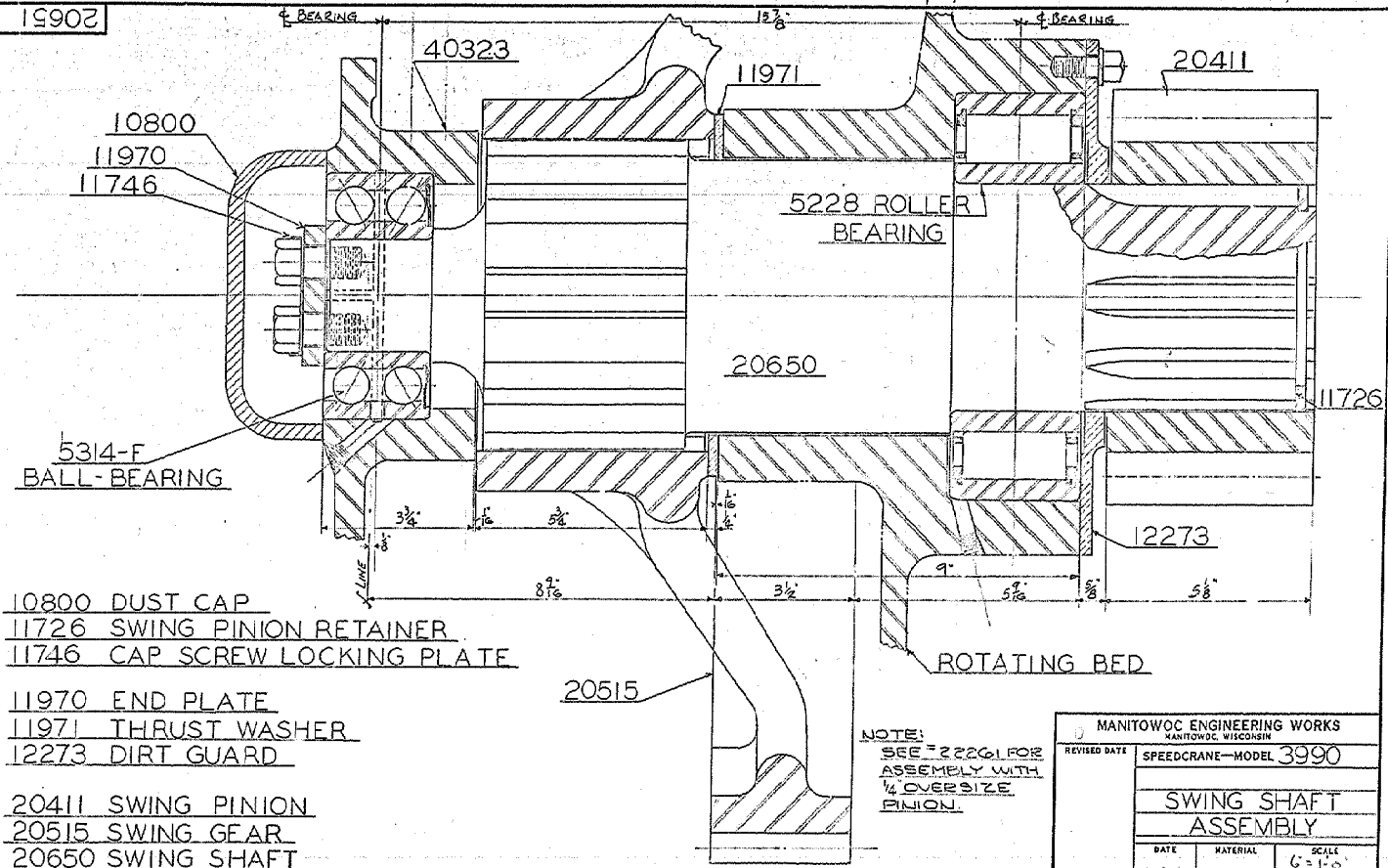


ILLUST. No. 41446-A-1

MATERIAL LIST ON BACK

GEAR CASE

15902



- 10800 DUST CAP
- 11726 SWING PINION RETAINER
- 11746 CAP SCREW LOCKING PLATE
- 11970 END PLATE
- 11971 THRUST WASHER
- 12273 DIRT GUARD
- 20411 SWING PINION
- 20515 SWING GEAR
- 20650 SWING SHAFT
- 40323 SWING SHAFT UPPER BEARING



SUPERSEDED BY 22880

NOTE:
SEE # 22261 FOR
ASSEMBLY WITH
1/4 OVERSIZE
PINION.

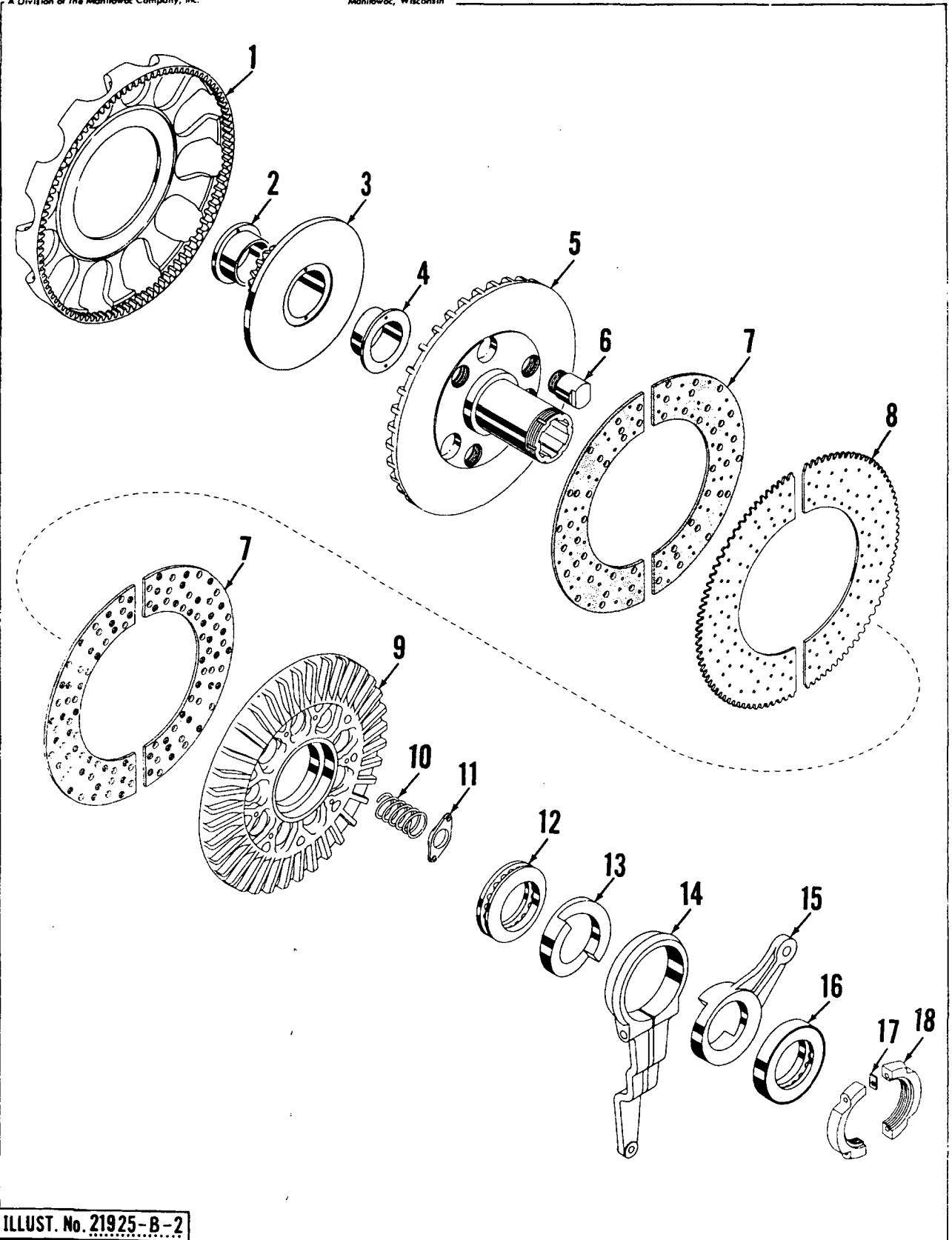
| | | |
|---|-----------------------|------------------|
| MANITOWOC ENGINEERING WORKS MANITOWOC, WISCONSIN | | |
| REVISED DATE | SPEEDCRANE—MODEL 3990 | |
| SWING SHAFT ASSEMBLY | | |
| DATE | MATERIAL | SCALE |
| 11-4-40 | | G = 1" = 6" |
| DLJ JAC CK TK | | PART OR DWG. No. |
| | | 20651 |

FRACTIONAL DIMENSIONS UNLESS OTHERWISE NOTED, ARE TO BE HELD WITHIN PLUS OR MINUS .010"

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ILLUST. No. 21925-B-2

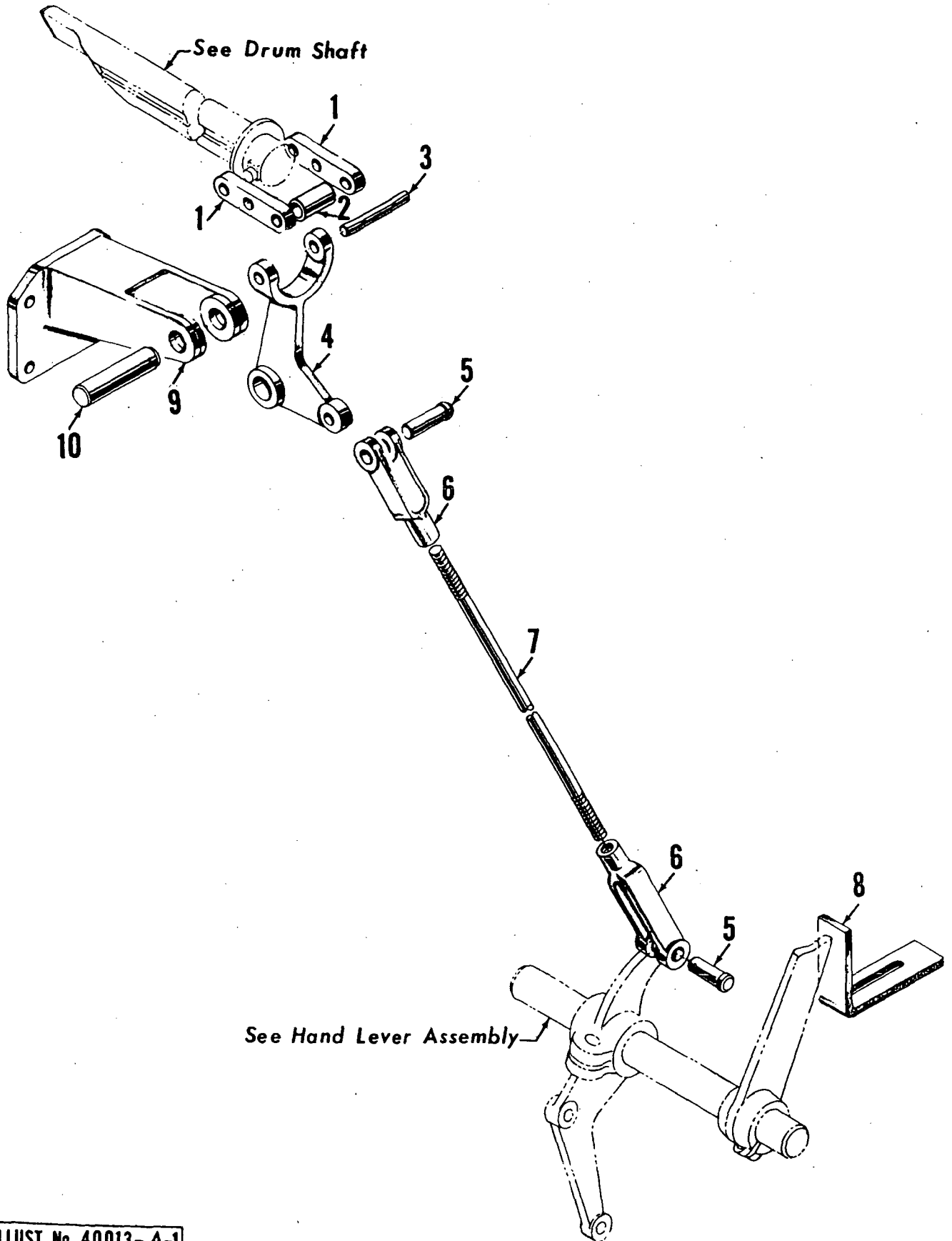
MATERIAL LIST ON BACK

DRIVE SHAFT CLUTCH ASSEMBLY

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ILLUST. No. 40013-A-1

MATERIAL LIST ON BACK

RIGHT DRUM CLUTCH CONTROL

MASTER

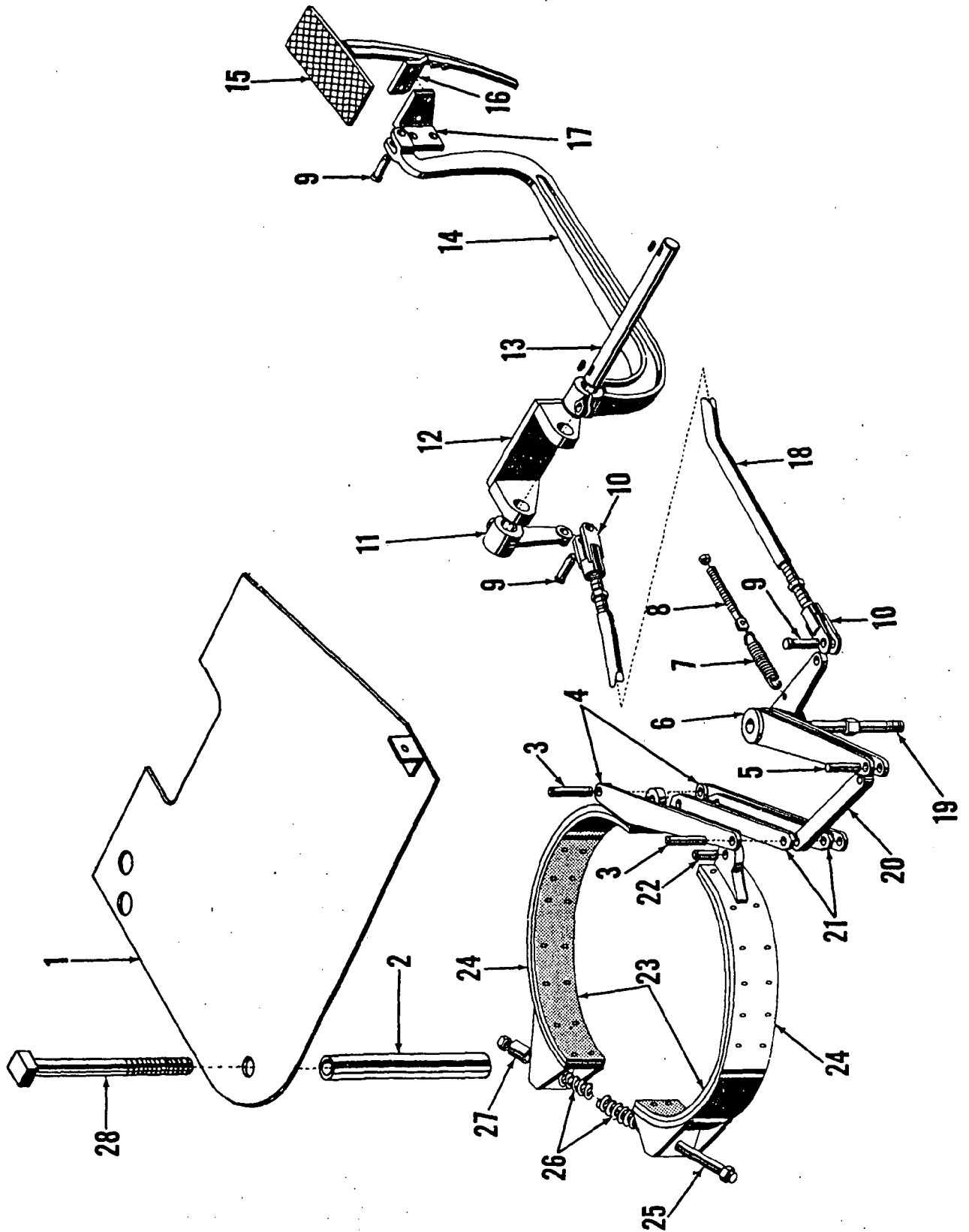
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MASTER

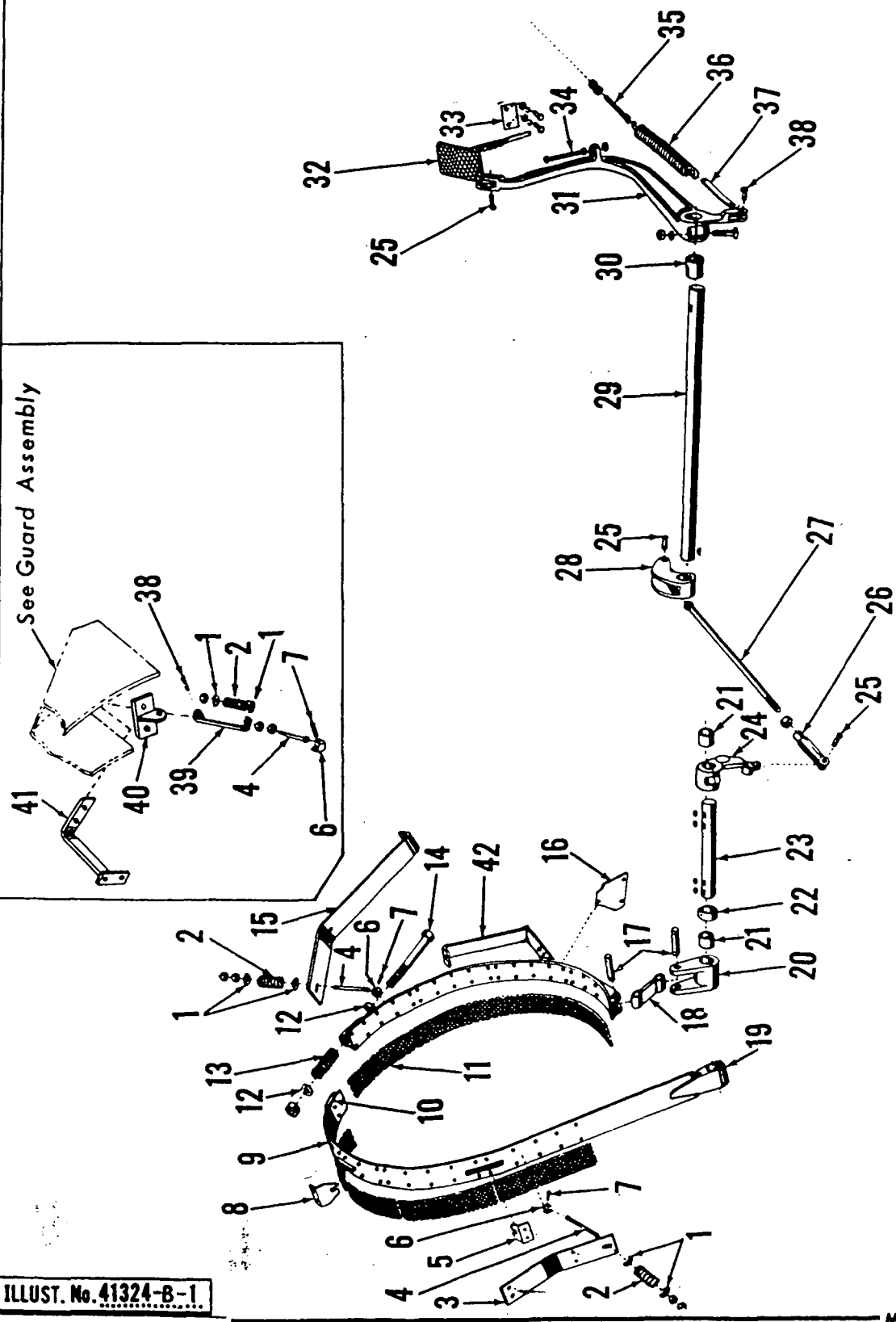


ILLUST. No. 40982-A-1

MATERIAL LIST ON BACK

SWING BRAKE ASSEMBLY

40 3 A1



See Guard Assembly

ILLUST. No. 41324-B-1

MATERIAL LIST ON PAGE

CONTROL - BRAKE - LEFT HAND MANUAL for EXTERNAL CLUTCH DRUM

41324 B1

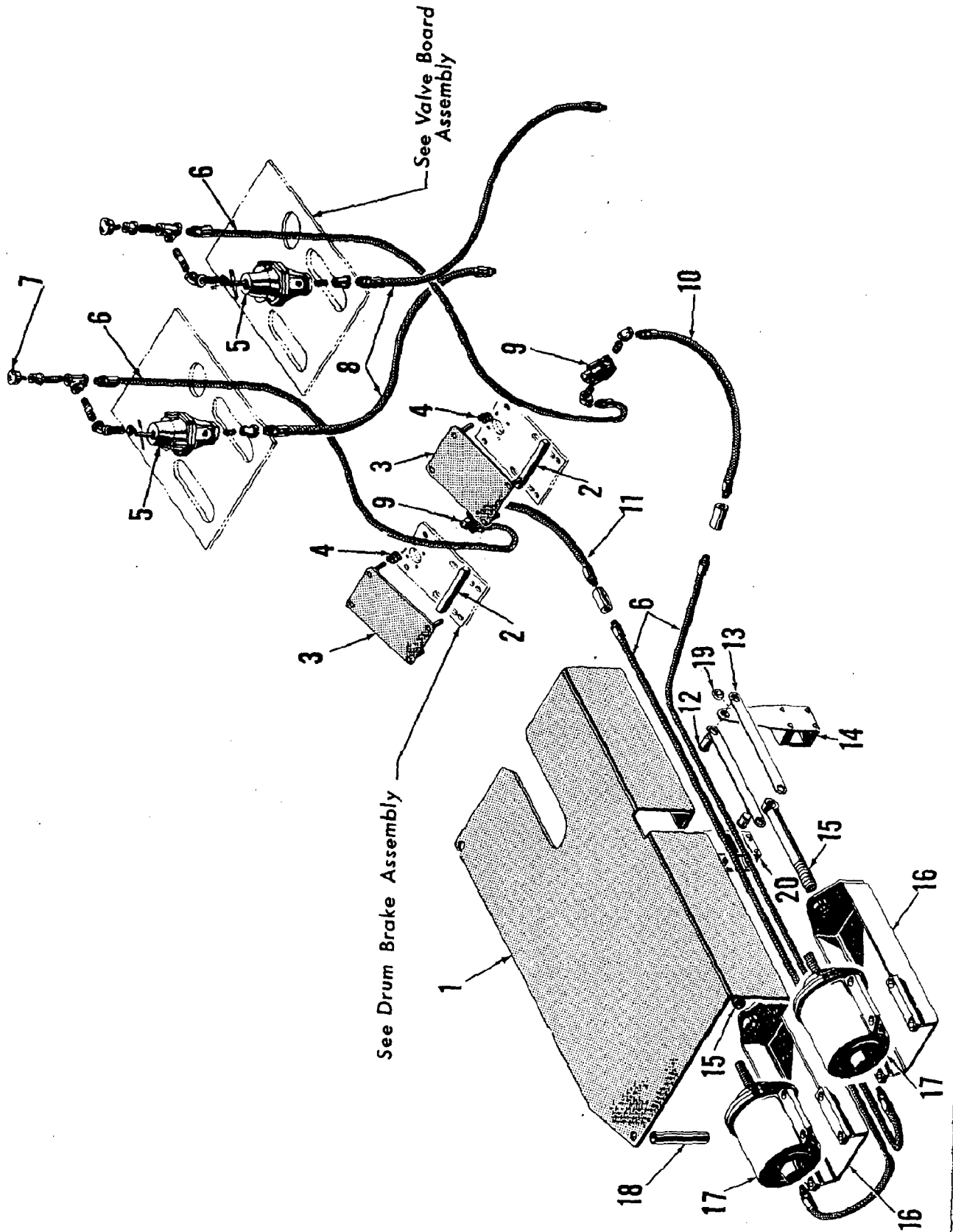
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MASTER

41719 B-1



ILLUST. No. 41719-B-1

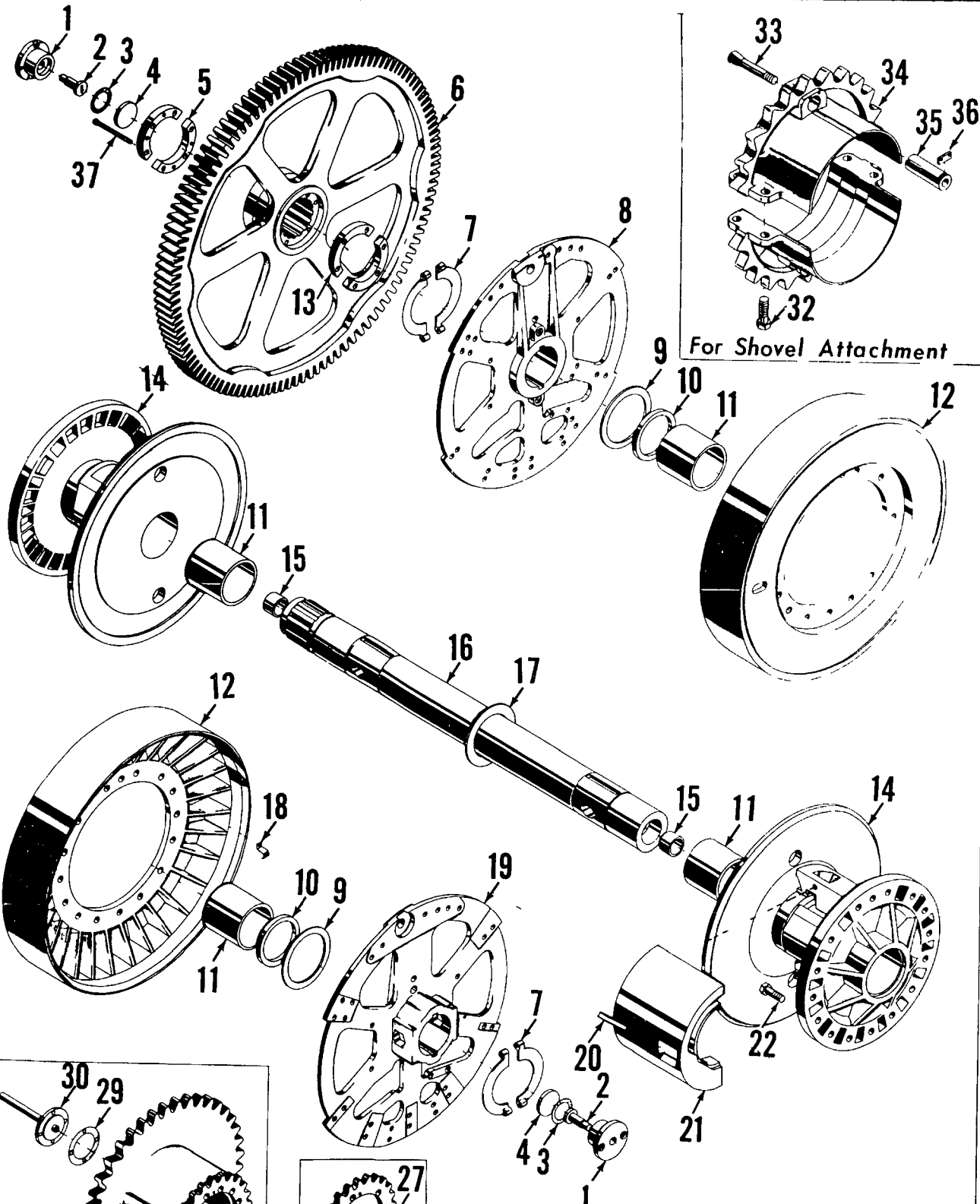
MATERIAL LIST ON BACK

DRUM BRAKE AIR BOOSTER ASSEMBLY

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For Shovel Attachment

For 25,000* Third Drum

ILLUST No 42069 - B-1

For Winchhead

For Manual Control

MATERIAL LIST ON BACK

MASTER

DRUM SHAFT

GROUP C - Air Components & Electrical

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| | | |
|---------------|--------|--|
| 48462-1 Cont. | REV. Q | MODEL 3000W, 3600, 3900, 3900T, 3900W, 4000W |
|---------------|--------|--|

CONTROL CONSOLE

| REF. NO. | PART NUMBER | QUANTITY REQUIRED | DESCRIPTION OF PART | VENDORS PART NO. |
|----------|-------------|-------------------|---|------------------|
| 41 | 715511 | 1 | VALVE, Hydraulic Winch Control | |
| 42 | 139244 | 1 | HANDLE, Valve | |
| 43 | 714440 | 1 | KNOB, Handle | |
| 44 | 715506 | 1 | VALVE, Front or Right Front Drum Control | |
| 44 | 182873 | | VALVE, Right or Right Front Drum Control (Lift Combination Mach. W/out Manual Converter Control) (See Note 5) | |
| 44 | 183210 | | VALVE, Right or Right Front Drum Control (Straight Lift W/out Manual Converter Control) (See Note 5) | |
| 44 | 180848 | | VALVE, Right or Right Front Drum Control (Vicon W/Out Manual Converter Control) (Superseded by #182873 or 183210) | |
| 45 | 137496 | 1 | HANDLE, Valve | |
| 46 | 500812 | 1 | KNOB, Handle | |
| 47 | 714491 | 1 | VALVE, Left Front or Rear Drum Control (See Note 3) | |
| 47 | 182873 | | VALVE, Left Front or Rear Drum Control (Lift Combination W/Out Manual Converter Control) (See Note 5) | |
| 47 | 183210 | | VALVE, Left Front or Rear Drum Control (Straight Lift W/Out Manual Converter Control) (See Note 5) | |
| 47 | 180848 | | VALVE, Left Front or Rear Drum Control (Vicon W/Out Manual Converter Control) (Superseded by #182873 or 183210) | |
| 48 | 714491 | 1 | VALVE, Ind. Boom Hoist Control (M3000W, 3600, 3900, 4000W Vicon) | |
| 48 | 714420 | 1 | VALVE, Ind. Boom Hoist Control (All Non-Vicon and M3900T, 3900W Vicon) (See Note 4 - M3900W W/Hyd. Boom Hoist) | |
| 49 | 76833 | 1 | BRACKET, Quick Release Valve W/capscrews, hex nuts and lockwashers (Vicon) | |
| 50 | 714688 | as req | VALVE, Quick Release | |
| 51 | 92398 | 1 | MANIFOLD, Valve Standard | |
| 52 | 93626 | 1 | NAMEPLATE W/capscrews (M3000W, 3600) | |
| 52 | 93822 | 1 | NAMEPLATE W/capscrews (M3900, 3900T, 3900W, 4000W) | |
| 53 | 139241 | 1 | SPACER (M3000W, 3600, 3900, 3900W, 4000W) | |
| 53a | 139242 | 1 | BRACKET (M3900T only) | |
| 54 | 136217 | 1 | BRACKET, Stand Right | |
| 55 | 139243 | 1 | SPACER W/capscrews (M3900T only) | |
| 56 | 136218 | 1 | BRACKET, Stand Left | |
| 57 | 70188 | 1 | HOSE, Flex (9'4" - 2.845 m long) | |
| 58 | 15054 | 2 | HOSE, Flex (3'4" - 1.016 m long) | |
| 59 | 472025 | 2 | GROMMET, Rubber | |
| 60 | 679106 | 1 | TEE (3/4" x 1/2" x 1/2") | |
| 61 | 288834 | 1 | BUSHING (1/2" x 1/2") | |
| 62 | 673356 | 1 | SWITCH, Pressure (See Note 2) | |
| 63 | 543185 | 2 | NIPPLE (3/4" x 2") | |
| 64 | 511111 | 1 | INJECTOR, Alcohol (Optional) | |
| 65 | 543185 | 1 | NIPPLE (3/4" x 2") (W/Alcohol Injector Only) | |
| 66 | 427130 | 1 | FILTER, Air (See Note 2) | |
| 67 | 406873 | 1 | ELBOW, 90° Reducing (3/4" x 1/2") | |
| 69 | 79017 | 1 | BRACKET W/capscrews, hex nuts and lockwashers (W/Filter Only) | |
| 68 | 667227 | 2 | STRAP, Pipe | |
| 70 | 73366 | 1 | BRACKET W/capscrews, hex nuts and lockwashers (W/Filter and Alcohol Injector) | |
| 71 | 73368 | 1 | CLAMP W/capscrews, hex nuts and lockwashers (W/Filter and Alcohol Injector) | |

| | |
|--------|---------------|
| REV. Q | 48462-1 Cont. |
|--------|---------------|

PLEASE GIVE MACHINE S/N W/ORDER

MANIFOLD

TOTAL 71 PARTS

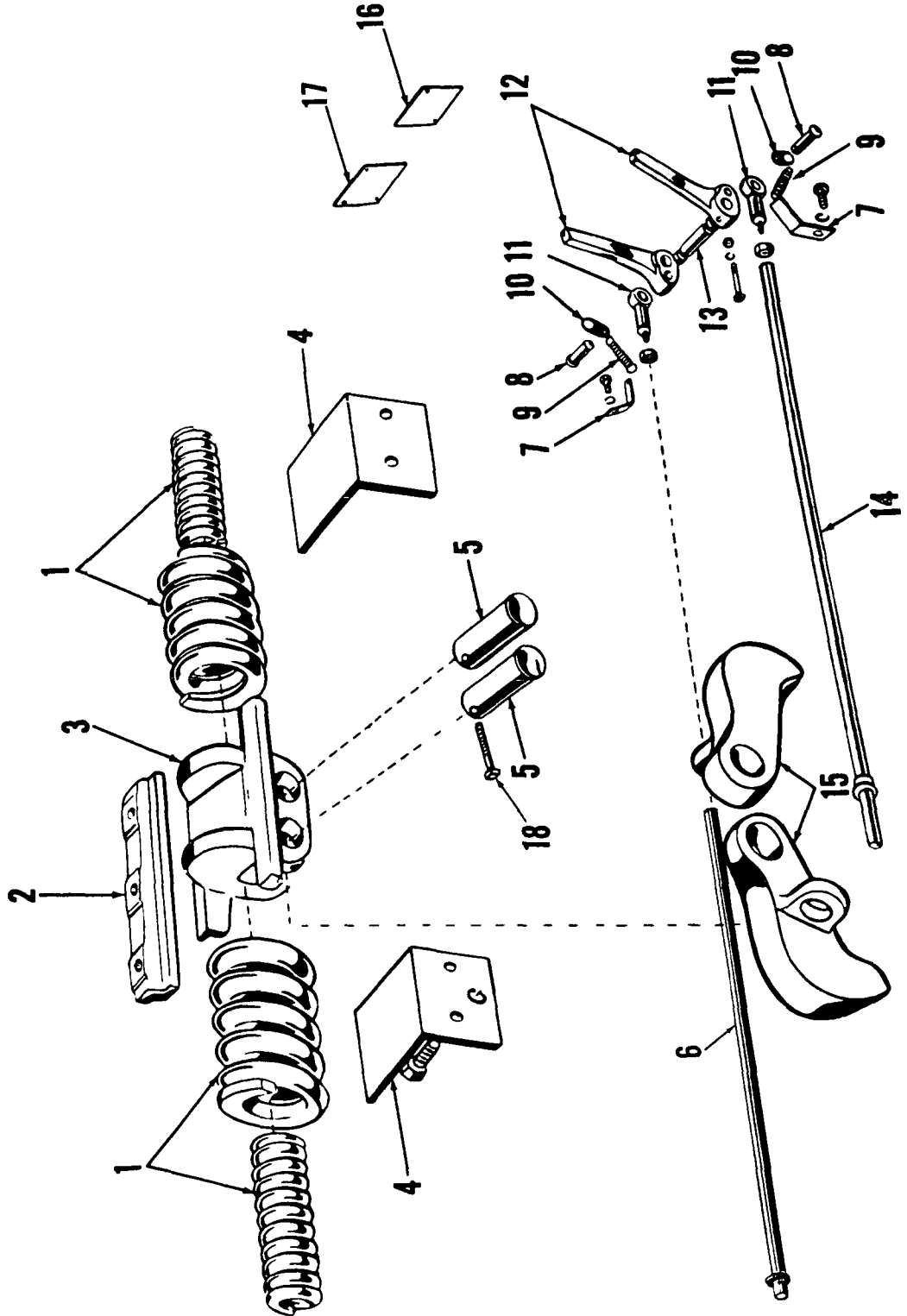
GROUP E - Lower Structure & Control

MASTER

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ILLUST No 31186-A-1

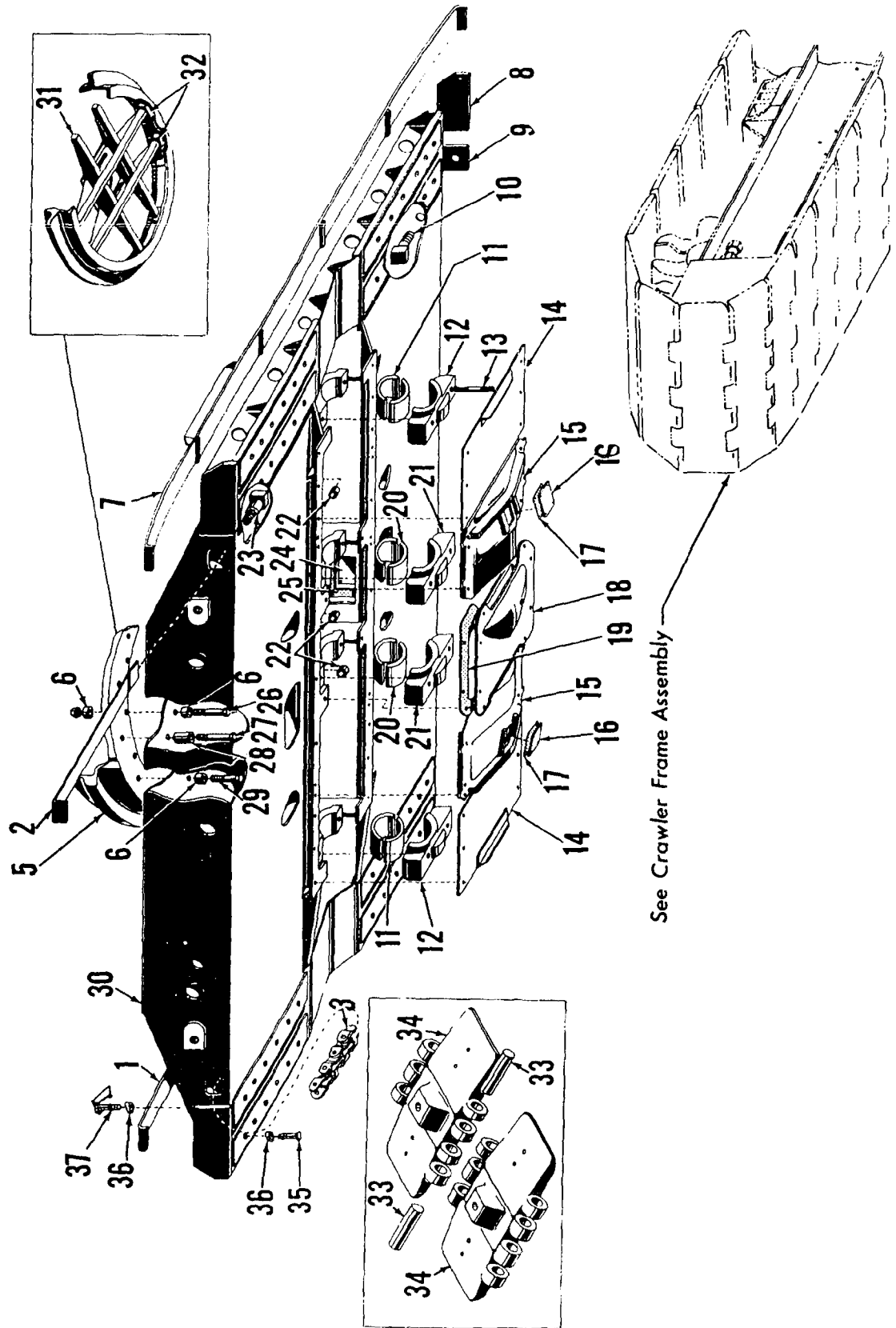
MATERIAL LIST ON BACK

TRAVEL LOCK—MANUAL CONTROL

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See Crawler Frame Assembly

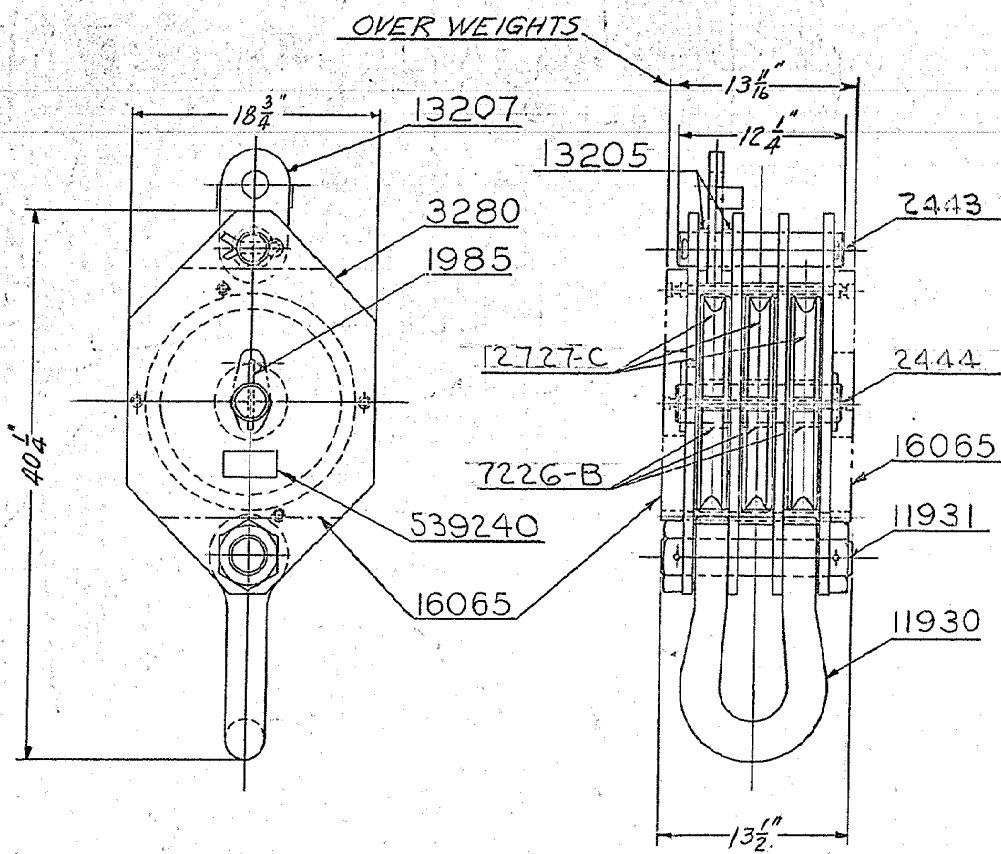
ILLUST. No. 41154-A-1

MATERIAL LIST ON BACK

CARBODY

MASTER

7113 4 A1



NOTE:
ALL DIMENSIONS SHOWN ARE NOMINAL.

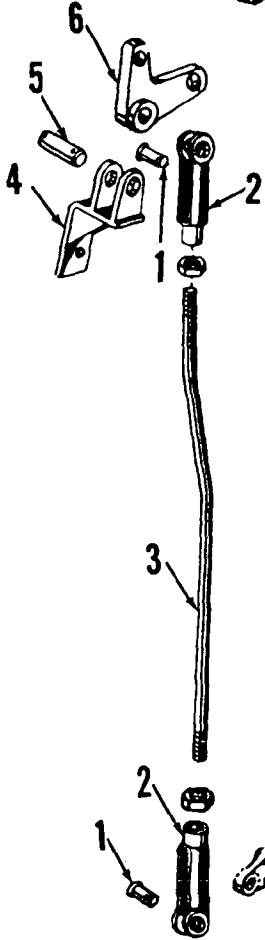
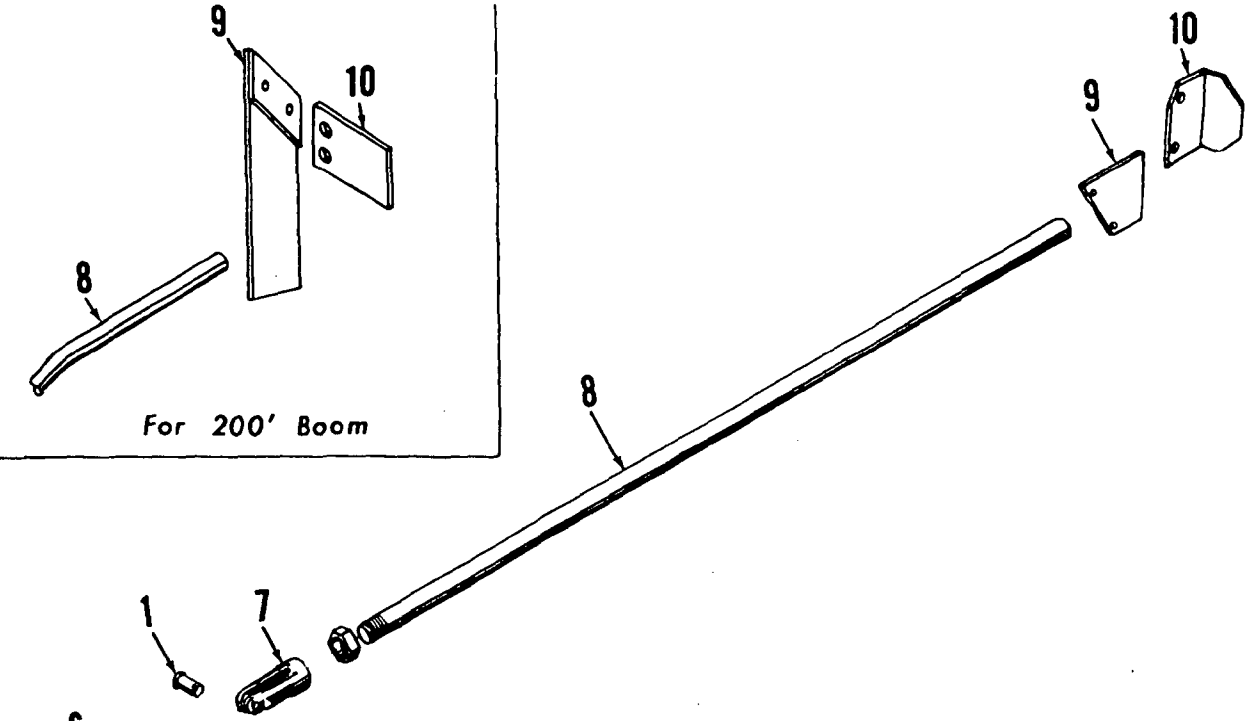
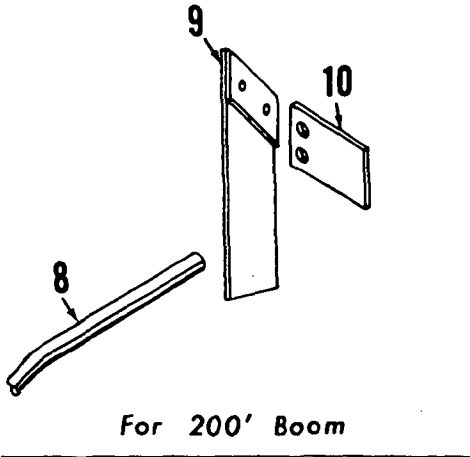
- 1-1985 PIN ANCHOR
- 1-2443 PIN (C)
- 1-2444 SHEAVE PIN (C)
- 1-3280 SIDE PLATE
- 3-12727 SHEAVE (A)
- 3-7226 SHEAVE BUSHING
- 1-11930 SHACKLE
- 1-11931 SHACKLE BOLT
- 2-13205 SPACER (C)
- 1-13207 CABLE ANCHOR LINK (C)
- 2-16065 WEIGHTS (FURNISH ON SPECIAL ORDER ONLY)
- 1-539240 BRASS PL. STAMPED MANITOWOC PART NO. 20493 65 TON CAPACITY - ON DWG. # 24927
- 1-539255 - BRASS PL. (USE WITH W.T. PL.)

SUPERSEDED BY 91024

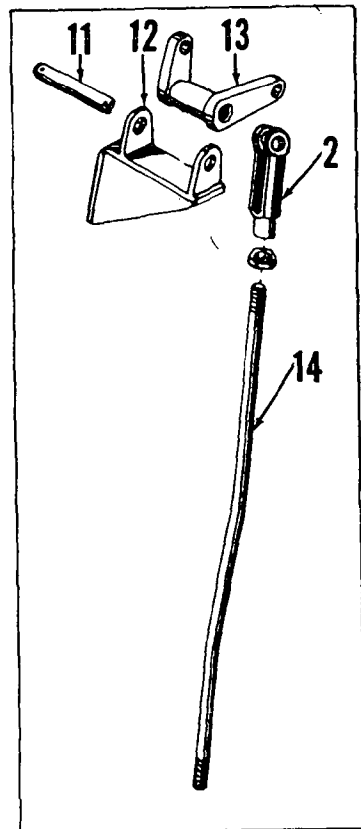
| | | | |
|--|--|---|--|
| 4-3-57 ① WAS 2444 ② WAS 2443 | | MANITOWOC ENGINEERING WORKS | |
| 5-5-59 ① WAS 70200 ② WAS 10199 ③ 13205 & 13207 ADDED | | REVISED DATE 7-23-42 BWS 7-19-48 5-21-43 ① 13205 - 13207 ADD | SPEEDCRANE - MODEL Z900 |
| | | 9-10-47 16065 ADDED | 65-TON LOAD BLOCK ASSEMBLY WITH BUSHED SHEAVES |
| | | 2-15-50 13205 & 13207 DISCONTINUED | DATE 1-26-39 |
| | | | MATERIAL |
| | | | SCALE 1 1/2" = 1'-0" |
| | | | PART OR DRG. NO. 20493 |

FRACTIONAL DIMENSIONS UNLESS OTHERWISE NOTED; ANGLES TO BE KEPT WITHIN TOLERANCES OF MANUFACTURE

MASTER



See Boom Hoist Control Assembly



With Air Controlled Shovel or Combination Crane and Shovel

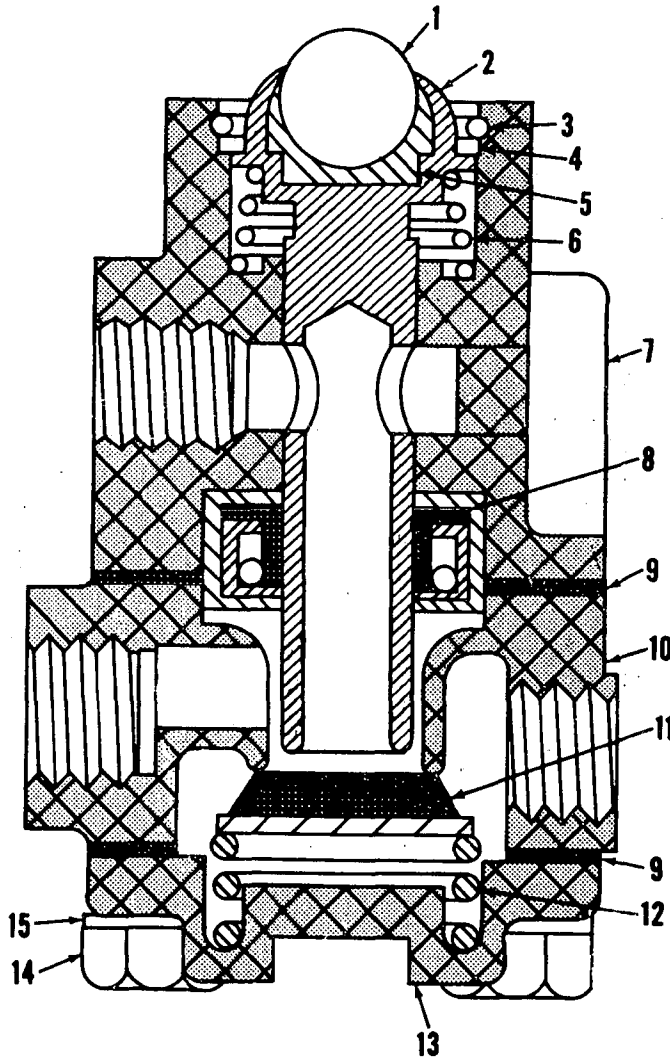
O-Number

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MASTER



0 250 A 1

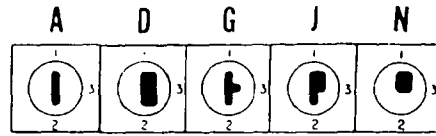
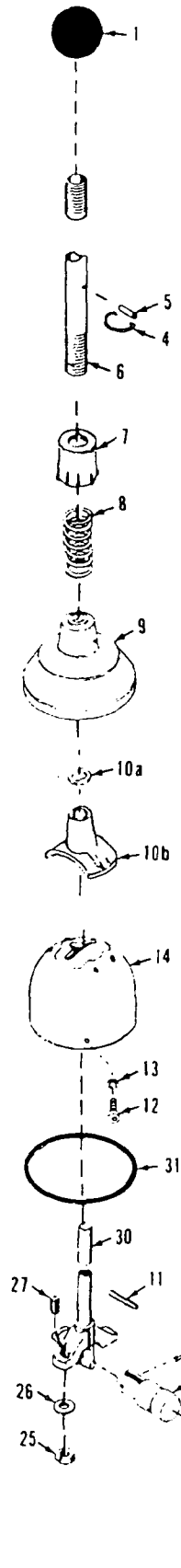
O-250A1

MATERIAL LIST ON BACK

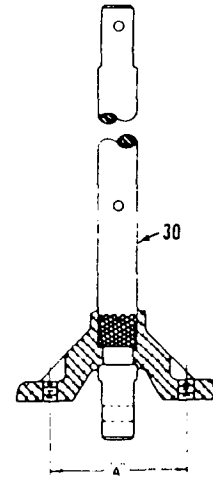
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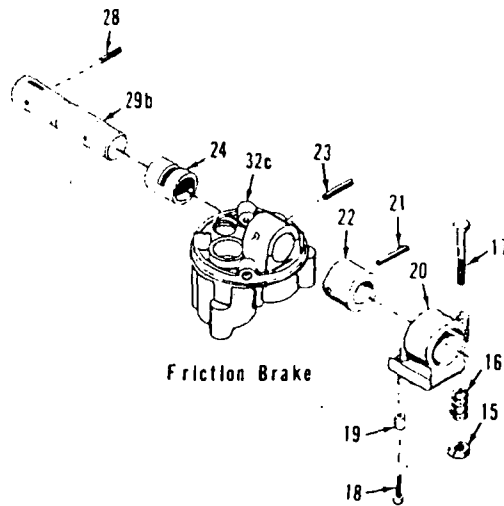
Manitowoc, Wisconsin



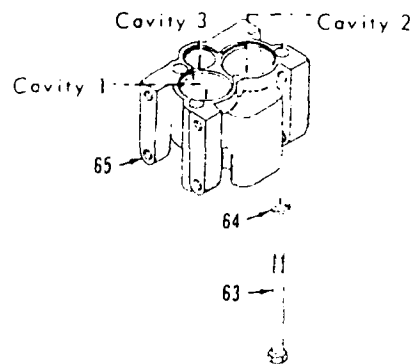
Handle Guide Inserts for Ref. No. 14



Yoke Spacing
Ref. No. 30



Friction Brake



0-441-2B

MATERIAL LIST ON BACK

FLEXAIR VALVE OPERATING MECHANISM

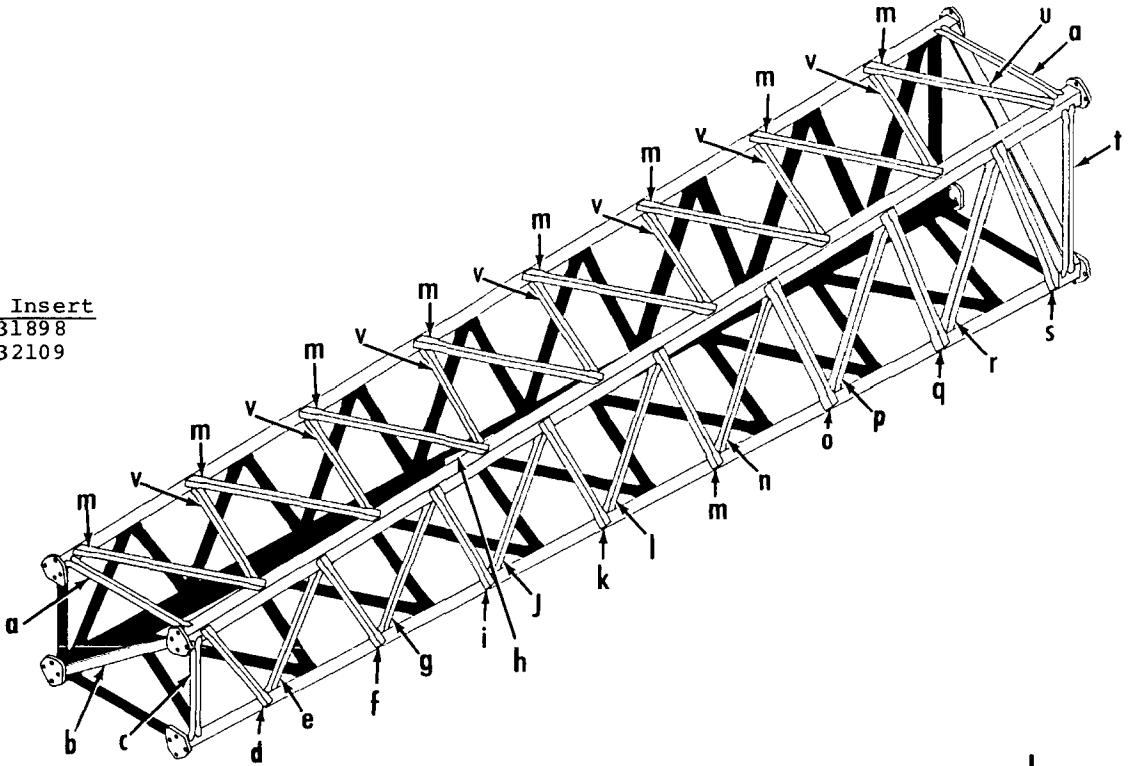
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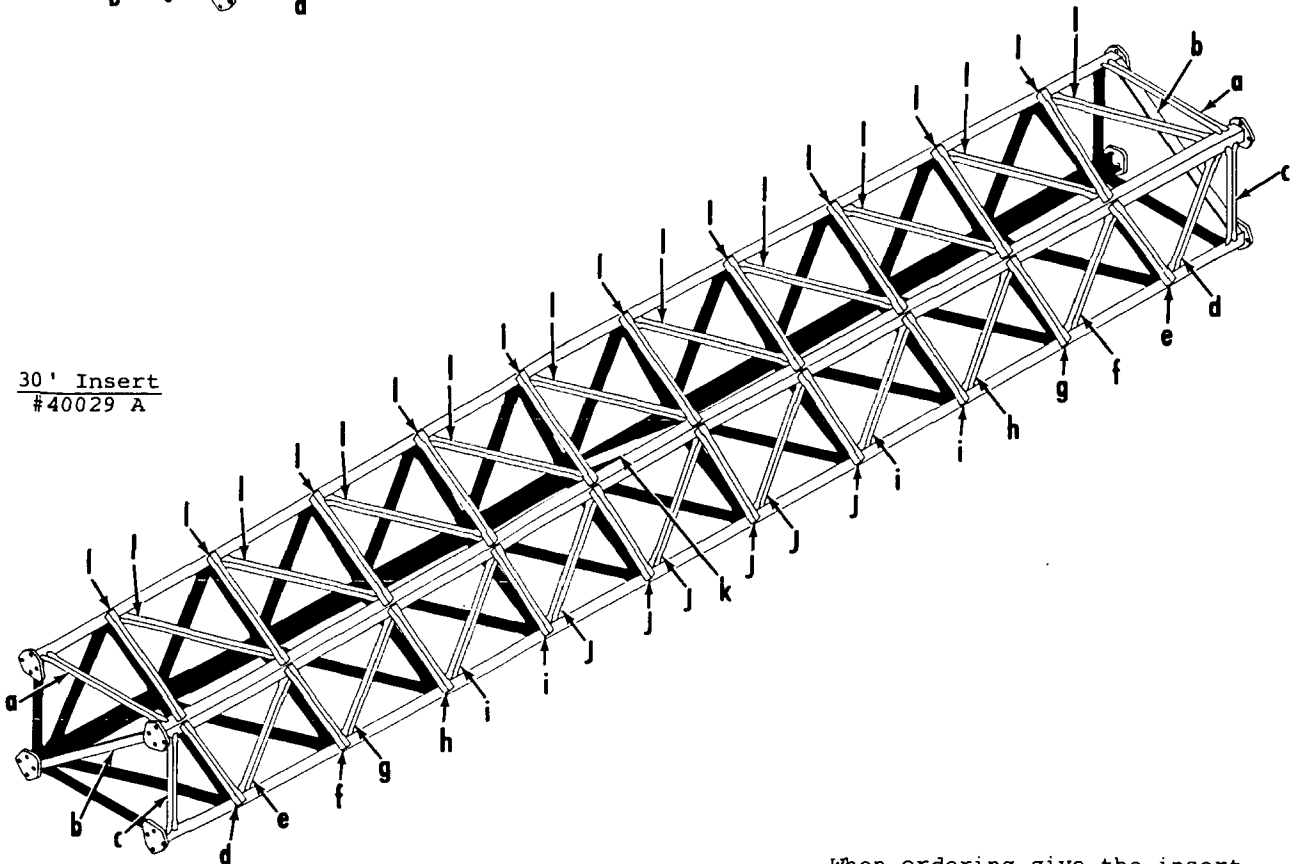
Manitowoc, Wisconsin

Boom #4
Left Side and Bottom Lacings Black
Opposite Lacings Same Unless Noted.

25' Insert
#31898
#32109

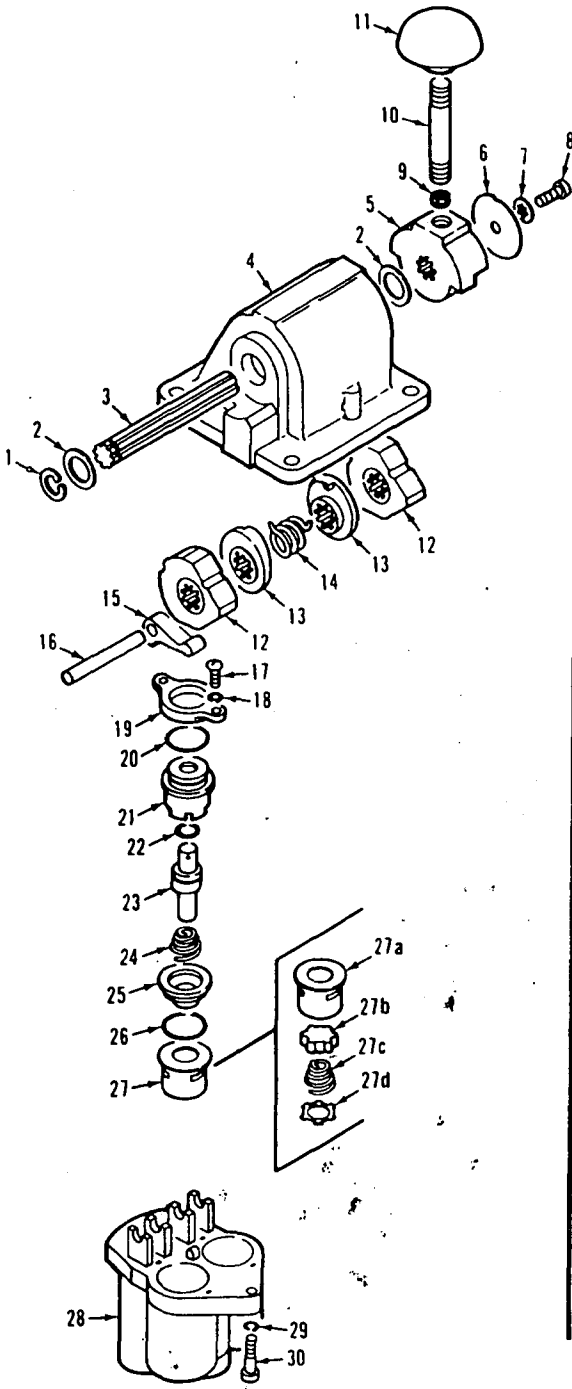


30' Insert
#40029 A

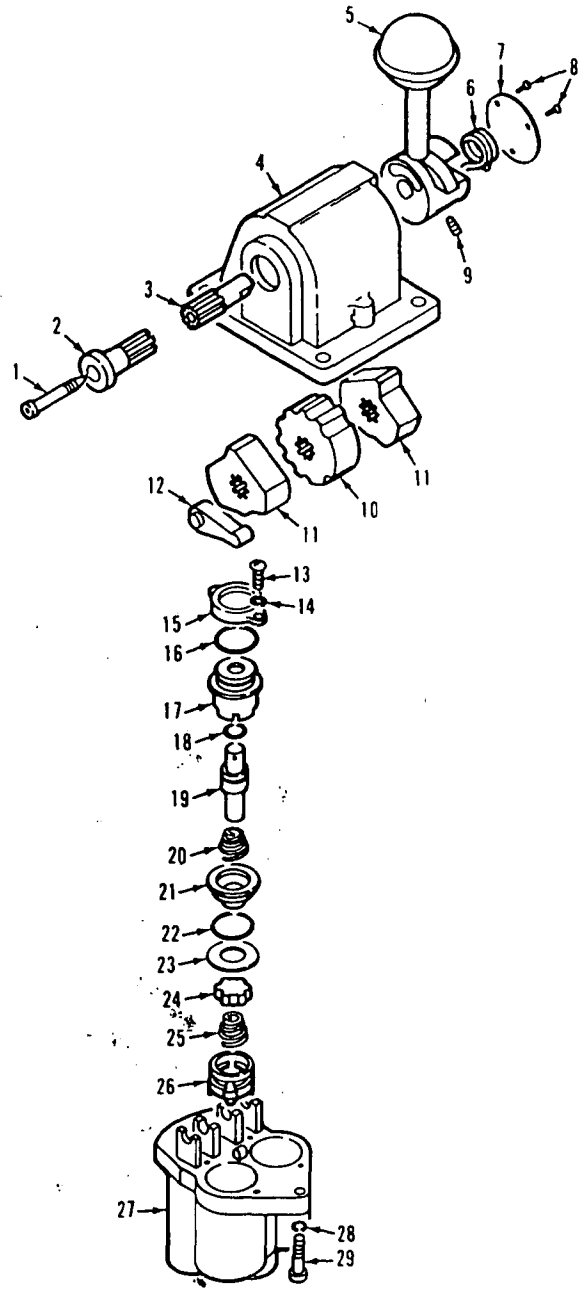


When ordering give the insert
number and lacing letter -
Example - Lacing #32109-E

MASTER

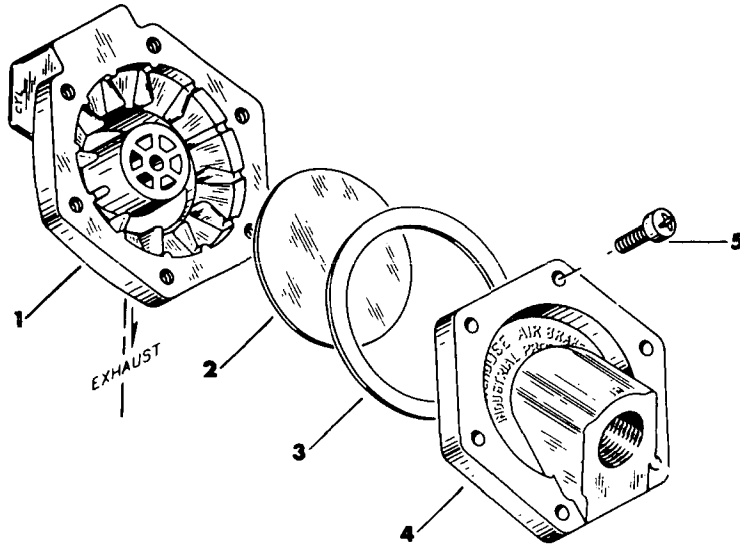


P59339



P54425-0310

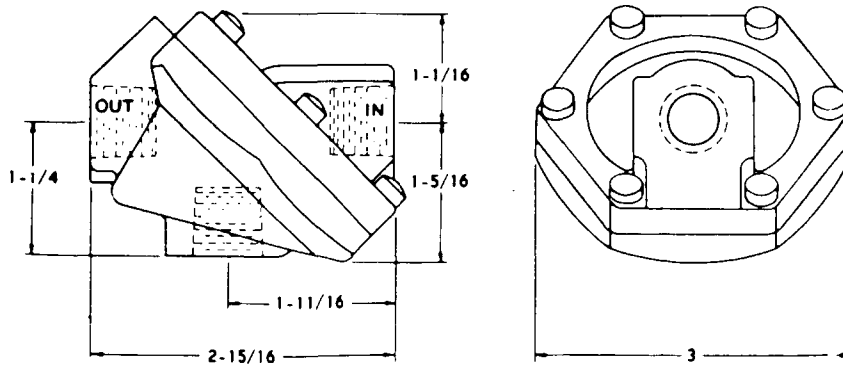
MANITOWOC NO. 714688 - WESTINGHOUSE NO. P52935-3



EXPLODED VIEW

PARTS LIST

| Manitowoc Number | Westinghouse Number | Ref. No. | Description |
|------------------|---------------------|----------|--------------------|
| | P52966 | 1 | Body, Valve |
| 714693 | P5112 | 2 | Diaphragm |
| 714694 | P5111-6 | 3 | Gasket |
| | P52967 | 4 | Cover, Valve |
| | P49502 | 5 | Screw, Washer Head |



OUTLINE VIEW

Used Approx. 1962 to _____. (See Reverse Side of Sheet)

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