



# PARTS LIST AND MAINTENANCE MANUAL

MODEL  
**HO 3/4A4-H**

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**THE GORMAN-RUPP COMPANY • MANSFIELD, OHIO**

GORMAN-RUPP OF CANADA LIMITED • ST. THOMAS, ONTARIO, CANADA

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V X Y



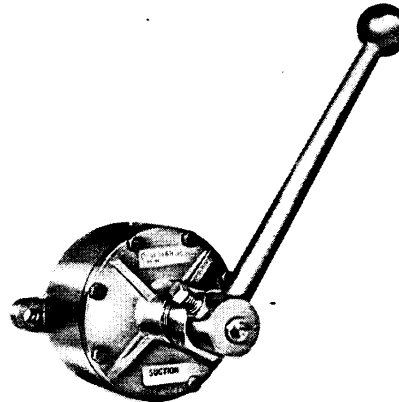
# OSCILLATING HAND PUMP MODELS

HO<sup>3/4</sup>A4-H, HO<sup>3/4</sup>A7-H

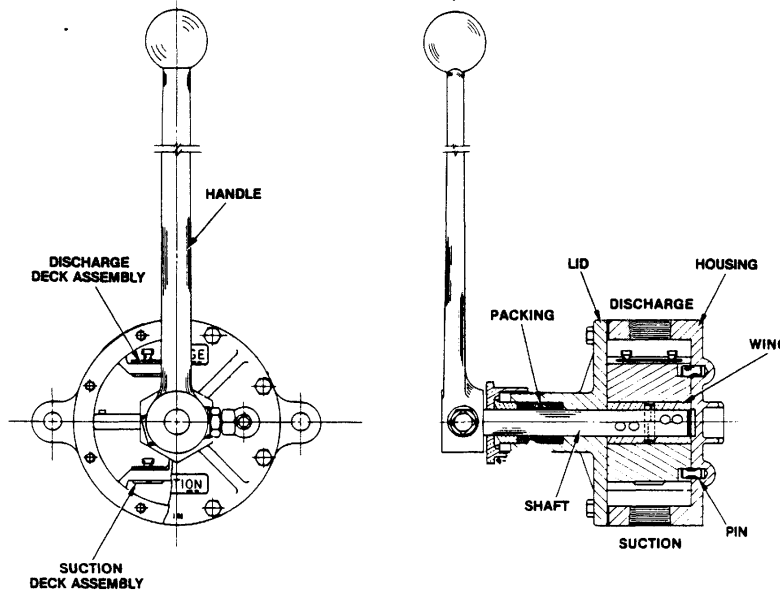
SIZE 3/4"

**PUMP SPECIFICATIONS**

Size: 3/4" x 3/4" NPT-Female  
 Housing: (See Chart)  
 Valve Deck: (See Chart)  
 Shaft: Stainless Steel Type 416  
 Front Lid: (See Chart)  
 Valve: Brass Alloy No. 230  
 Stuffing Box Nut: Brass No. C83600  
 Hand Lever: (See Chart)  
 Gaskets: Paper  
 Wing: Brass No. C83600  
 Hardware-External: Std. Plated Steel (HO<sup>3/4</sup>A4-H)  
 All Brass (HO<sup>3/4</sup>A7-H)  
 Optional Equipment:  
 Barrell Accessory Kit



MODEL	CONSTRUCTION	HOUSING	VALVE DECK	FRONT LID	HAND LEVER
HO <sup>3/4</sup> A4-H	PLAIN FITTED	GRAY IRON NO. 30	GRAY IRON NO. 30	GRAY IRON NO. 30	GRAY IRON NO. 30
HO <sup>3/4</sup> A7-H	ALL BRONZE	BRASS NO. C83600	BRASS NO. C83600	BRASS NO. C83600	BRASS NO. C83600



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**Specification Data**

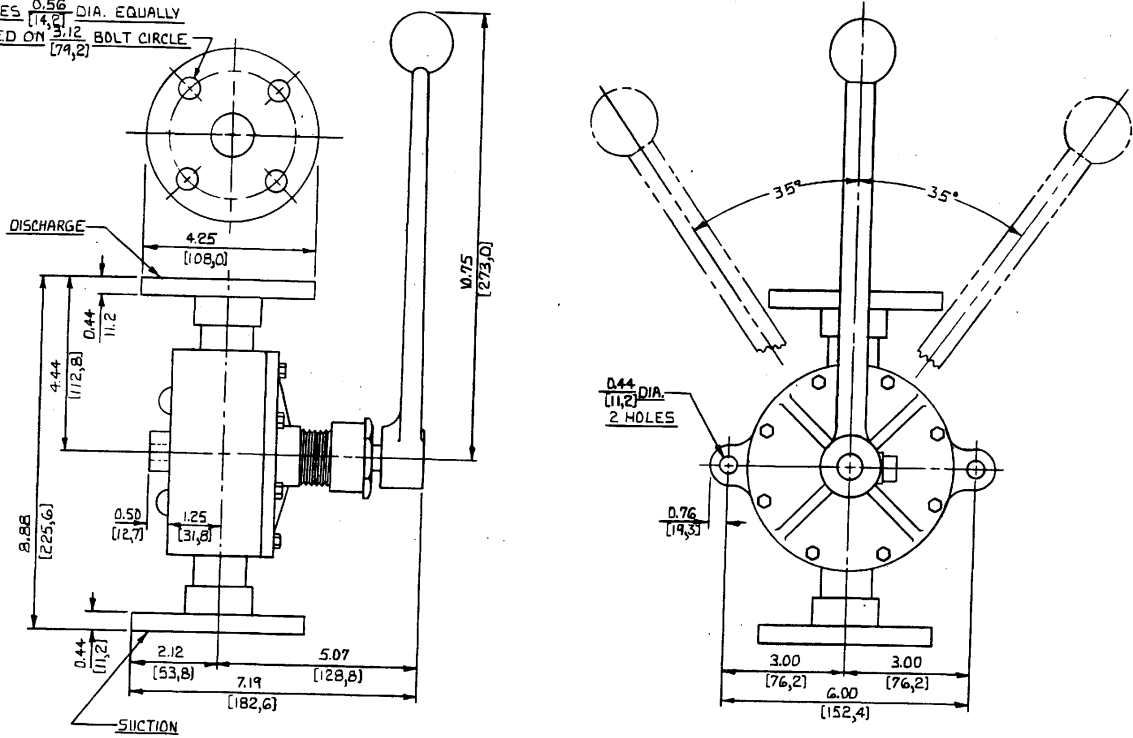
SECTION 510, PAGE 300

**OVERALL DIMENSIONS  
and  
WEIGHTS APPROXIMATE**

**NET WEIGHT  
SHIPPING WEIGHT  
EXPORT CRATE SIZE**

**12 POUNDS  
15 POUNDS  
.3 CUBIC FEET**

4 HOLES 0.56 DIA. EQUALLY  
SPACED ON 3.12 BOLT CIRCLE  
[79,2]

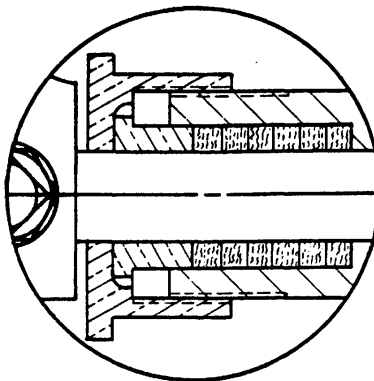


DIMENSIONS:  
INCHES  
(MILLIMETERS)

MODEL	O.D. OF CYLINDER INCHES	I.D. OF CYLINDER INCHES	RATING		P.S.I.
			G.P.M.	Stroke Per Min.	
HO 3/4 A4-H	5	4-1/16	6	60	22
HO 3/4 A7-H					

**PACKED PUMPS**

Packing is Non-Asbestos.  
Gland is Brass No. C83600.  
Maximum Temp. of Liquid Pumped, 300°F\*  
\* Consult Factory for applications with liquids  
in excess of temperature indicated.



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SECTIONAL DRAWING

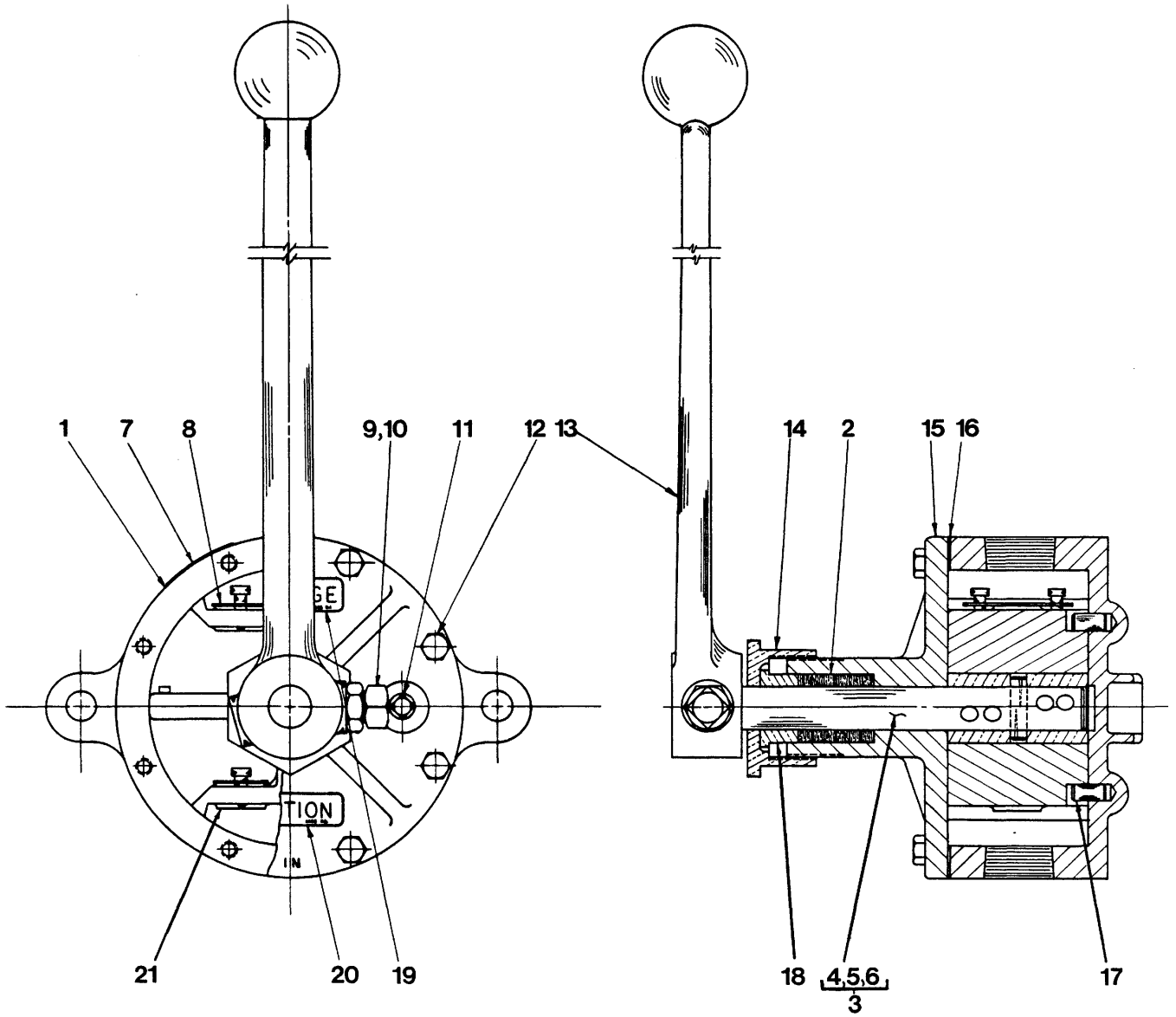


Figure 1. Pump Model HO 3/4A4-H

**PARTS LIST**  
**Pump Model HO 3/4A4-H**  
 (From S/N RH-000628 up)

If your pump serial number is followed by an "N", your pump is **NOT** a standard production model. Contact the Gorman-Rupp Company to verify part numbers.

ITEM NO.	PART NAME	PART NUMBER	MATL CODE	QTY
1	HOUSING	38233-091	10010	1
2	* PACKING	25182-102	-----	6
3	WING AND SHAFT ASSY	<b>46154-004</b>	-----	1
4	-SHAFT	NOT AVAILABLE		1
5	-WING	NOT AVAILABLE		1
6	-GROOVE PIN	NOT AVAILABLE		1
7	NAME PLATE DECAL	38812-065	-----	1
8	DISCHARGE DECK ASSY	46442-501	-----	1
9	SQ HD SETSCREW	G00705	15991	1
10	JAM NUT	AT00007	15991	1
11	FILL PLUG	P00002	<b>14990</b>	1
12	HEX HD CAPSCREW	B00403	15991	8
13	LEVER	** <b>48152-005</b>	10010	1
14	STUFFING BOX NUT	31871-055	14000	1
15	LID	38242-703	10010	1
16	* HOUSING GASKET SET	48211-055	-----	1
17	LOCATING PIN	<b>21154-786</b>	14000	2
18	PACKING GLAND	31513-042	14000	1
19	DISCHARGE STICKER	6588-BJ	00000	1
20	SUCTION STICKER	6588-AG	00000	1
21	SUCTION DECK ASSY	46442-001	-----	1
OPTIONAL:				
	ACCESSORY MOUNTING KIT	48228-003	-----	1

\*INDICATES PARTS RECOMMENDED FOR STOCK  
 \*\* KIT INCLUDES HARDWARE  
 Above Serial Numbers Do Not Apply To Pumps Made In Canada.

CANADIAN SERIAL NO. .... AND UP

**PUMP AND SEAL DISASSEMBLY AND REASSEMBLY**

This pump requires little service due to its rugged, minimum-maintenance design. However, if it becomes necessary to inspect or replace components, follow these instructions which are keyed to the sectional view (see Figure 1) and the accompanying parts list.

**Pump Disassembly**

Before attempting to service the pump, close all connecting valves in the system and remove the suction and discharge piping. Remove the hardware securing the pump to its mounting surface.

Loosen the jam nut (10) and locking screw (9), and slide the pump lever (13) off the shaft.

Remove the capscrews (12), and pull the lid (15), wing and shaft assembly (3), packing (2), packing gland (18), and stuffing box nut (14) out of the housing (1) as a single unit.

**NOTE**

Note the location of suction and discharge labels on the lid compared to the position of the internal valves. This is **very important** for reassembly. The fill plug (11) should be located at 3 o'clock.

Remove the stuffing box nut (14) and packing gland (18). Press the wing and shaft assembly out of the lid. Use a stiff wire with a hooked end to remove the old packing (2).

Lift the suction deck assembly (21) and discharge deck assembly (8) from the housing. Discard the old housing gasket set (16) and clean the mating surfaces.

Inspect the two locator pins (17) for damage. If replacement is required, pull them from the housing.

**Pump Reassembly**

Clean all components with a soft cloth soaked in cleaning solvent.

**WARNING**

```

//////////////////////////////////////
//
// Most cleaning solvents are toxic and flammable. Use //
// them only in a well-ventilated area free from excessive //
// heat, sparks, and flame. Read and follow all prec- //
// autions printed on solvent containers. //
// //
//////////////////////////////////////
```

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Inspect the parts for wear or damage and replace as required. If the shaft or wing are damaged, the complete assembly must be replaced. Individual parts are not sold separately. The same is true of the suction and discharge decks; valves are not sold separately.

If removed, press new locator pins (17) into the housing. Install the suction deck assembly so that the valves are directed **toward** the center of the pump. Install the discharge deck assembly with the valves directed **away** from the center of the pump.

Carefully slide the wing and shaft assembly into the housing. The raised bosses on the wing should be directed upward toward the discharge deck to provide for proper mounting of the lever.

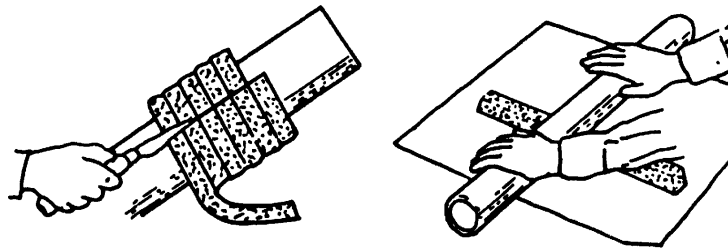
Install the housing gasket set (16), slide the lid over the shaft, and secure with the capscrews (12). **Be sure** the suction label is located over the suction port, where the deck valves are directed toward the center of the pump.

Check the shaft endplay. If endplay is excessive, remove the lid and discard one of the housing gaskets.

Dip new packing rings in non-detergent oil before installation.

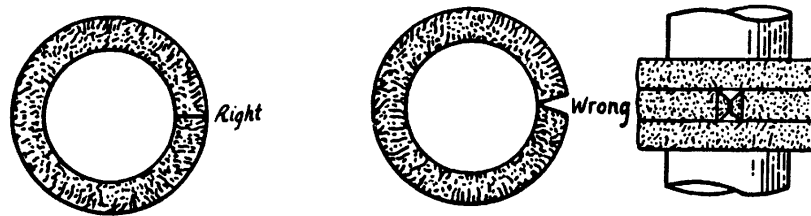
#### NOTE

It is recommended that replacement packing rings pre-cut to the correct width and length, and packaged in sets (see parts list), be ordered from The Gorman-Rupp Company or your Gorman-Rupp distributor. However, if bulk commercial packing will be used in this unit, prepare and install it in accordance with the steps outlines below in order to ensure that the packing will form a tight seal.



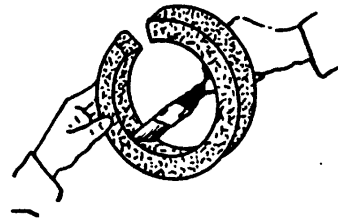
**Step 1:** Determine how much bulk packing will be required to fill the packing cavity, and wrap it around a rod of the same diameter as the shaft. With the packing wrapped around the rod, cut through each turn as shown.

If the cut rings are too thick and will not fit in the packing cavity, place each turn on a clean newspaper and use a length of pipe, as you would a rolling pin, to roll the ring until the thickness has been reduced. **Never** attempt to flatten a packing ring with a hammer.



**Step 2:** It is critical that the ends of the cut packing rings meet in a tight parallel fit to ensure proper sealing. Check this fit; it should be correct if the packing was cut while wrapped around a rod, but if the packing was cut while laid out straight, the ends will meet at an angle. **Never** install a packing ring with an angled gap; pressure on adjacent packing rings will cause them to work into the gap and prevent the angled ring from closing properly around the shaft.

Some channel-type packing with a lead core may require a slight gap between packing ring ends to allow for expansion. Consult the packing manufacturer's installation instructions, and follow his recommendations.



**Step 3:** Lubricate all metallic packings (foil type, lead core, etc.) with the lubricant recommended by the packing manufacturer. In general, swabbing the inside diameter of this type packing with SAE No. 30 non-detergent oil provides sufficient lubrication.

Place each packing ring around the shaft, push it into the bore, and compress it with a blunt-ended sleeve (same diameter as packing gland) and mallet. Each successive layer must be compressed and rotated by 90° to prevent excessive leakage. Add enough packing to fill the lid to within 1/8 inch of the end.

Slide the packing gland over the shaft and tighten the stuffing box nut (14) just enough to compress the packing for a good seal. Overtightening will cause binding of the pump shaft.

Install the pump lever (13) on the shaft, and secure with the setscrew (9) and jam nut (10). Check the pump lever for free movement. If the lever binds, loosen the stuffing box nut.

## LUBRICATION

The packing rings are lubricated by the liquid being pumped.



**For U.S. and International Warranty Information,  
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U.S.: 419-755-1280  
International: +1-419-755-1352**

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