Vac-U-Lift®

HYDRO-PRESS operation, maintenance & parts manual

Model No._____

Owner_____

P.O. Number_____

Shop Order Number_____

Reference Number_____

WARNING

This Vac-U-Lift should not be installed, operated, or maintained by any person who has not read all the contents of these General Instructions. Failure to read and comply with these instructions or any one of the limitations noted herein can result in serious physical injury and/or property damage.

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INTRODUCTION

Your *Vac-U-Lift* Hydro-Press hold-down fixture has been designed to provide dependable service under demanding operating conditions. With reasonable care it will deliver outstanding performance, and have a long, productive life.

The operating instructions included in this manual will help you obtain maximum performance and safety from this equipment. Please read and follow the directions in the maintenance section to assure that your Hydro-Press delivers all the utility which is built into it.

FOR SERVICE INFORMATION and PARTS ORDERS

Additional service information, and replacement parts for your *Vac-U-Lift* Hydro-Press are available from:

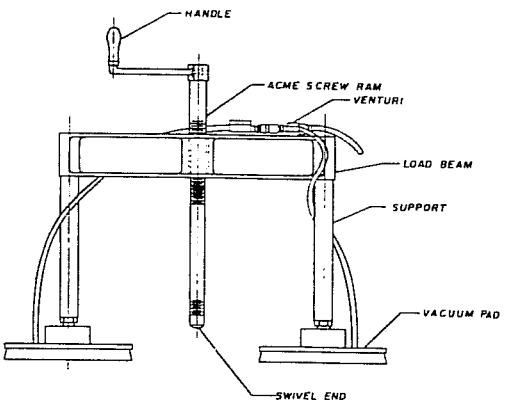
Parts Manager
Industrial Lifters Division of Acco
P.O. Box 298
Salem, Illinois 62881
Phone: (618) 548-0275

When ordering parts, be sure to include the model and serial number of your unit, and the number and description of the parts needed. See the diagrams at right for parts names, or refer to the parts list following component descriptions on pages 4, 5 and 6.

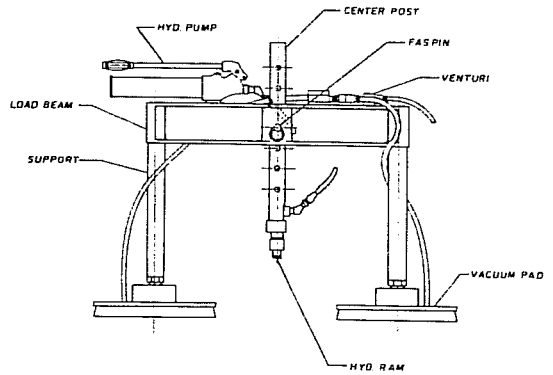
EQUIPMENT DESCRIPTION

The Hydro-Press consists basically of two support columns, a load beam, two vacuum pads, ram, vacuum source and relatively simple controls.

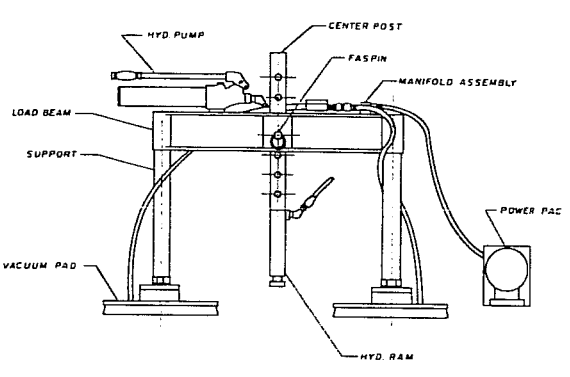
Three basic models are available: one manually operated having 2,400 to 4,000 lbs. pressure capacity, and two hydraulic models having 2,400 to 4,000 and 6,000 to 8,000 lbs. pressure capacity. Principal features of the three models are shown in the diagrams below. Special units are those using different pad configurations or different operating heights.



HAND OPERATED 2400 LBS. - 4000 LBS.



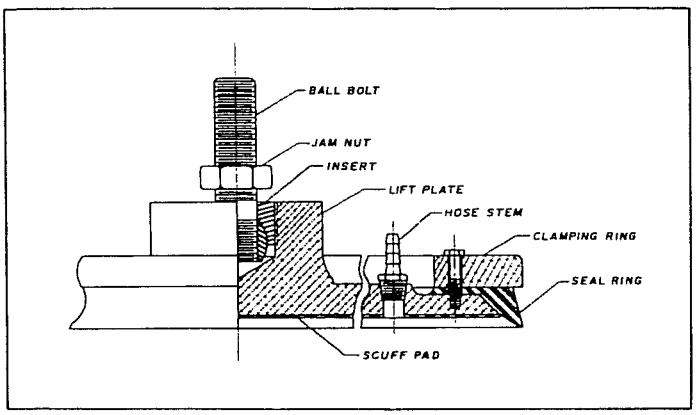
HYDRAULIC 2400 LBS. - 4000 LBS.



HYDRAULIC 6000 LBS. - 8000 LBS.

Vacuum Pads

The size and type of pads depend on size of Hydro-Press. Each pad consists of a lift plate, seal ring, scuff pad, clamping ring, ball bolt, ball bolt insert and jam nut. The No. 10 (circular) pad is used on the 2400 lb.; 7 x 28 pad is used on the 4000 lb. and 6000 lb.; and the 11½ x 26 pad is used on the 8000 lb. Hydro-Press models.
Note: Special units may use other vacuum pads.



Part Description	Part Numbers (Pad Sizes)*		
	#10	7 x 28	11½ x 26
Ball Bolt	24027	24027	24207
Jam Nut	28714	28714	28714
Insert	28585	28585	28505
Lift Plate	24207	24245	24244
Hose Stem	28920	28920	28920
Clamping Ring	24104	24148	24122
Seal Ring	23122	23172	23176
Scuff Pad	24180	24189	29482

*Indicate both pad size and part number when ordering.

Supports

The support is the connection between the vacuum pad and the load beam. The size, length and material depends on the size of vacuum pad used and the working height of the Hydro-Press.

Load Beam

The load beam connects the supports and the ram. Type and size of load beam depends on capacity of the unit. All load beams are made of aluminum to keep unit weight to a minimum.

Ram

An acme screw ram with swivel end and hand crank can be used on the 2400 lb. and 4000 lb. Hydro-Press only. Length will depend on working height of Hydro-Press. A hydraulic ram with a hand-operated hydraulic pump also can be used on the 2400 lb. and 4000 lb. Hydro-Press.
On the 6000 lb. and 8000 lb. Hydro-Press, a hydraulic ram must be used. Size and type of ram and center post depends on size of Hydro-Press used and working height.

Vacuum Source

A Venturi Pac may be used on the 2400-lb. and 4000-lb. Hydro-Press. This consists of a venturi, which uses 2 CFM at 50 P.S.I. plant air, a slide valve, regulator valve, vacuum gauge and mounting bracket. See page 5.
A vacuum pump Power Pac *must* be used on the 6000 lb. and 8000 lb. Hydro-Press. It can, also, be used on the 2400 lb. and 4000 lb. Hydro-Press. The Power Pac consists of a 115 volt AC ⅓ HP, 4 CFM oilless vacuum pump, muffler, filter, power cord, vacuum hose and necessary fittings. See page 4.

Inspection and Testing

Your Hydro-Press should be checked on arrival for shipping damage. Report any damage immediately to carrier's agent.

Assembly

Your unit may have been dissasembled for shipping. It should be reassembled and checked for loose clamps, vacuum hose, nuts, bolts, etc.

Operating Instructions

If your Hydro-Press has a Venturi Power Pac, connect plant air supply to unit. Air supply should be a minimum of 2 CFM at 50 P.S.I. Place vacuum pads on a nonporous material (steel or aluminum plate), open slide valve and adjust regulator valve to give maximum vacuum. Gauge reading should be 23" Hg. or higher. Close slide valve to release vacuum pads. Check hand ram or hydraulic ram to see that it operates. Unit is now ready for use.
If your Hydro-Press has a portable Power Pac, connect the power cord to an outlet supplying 115 volts 60 Hz. (cycle) AC power. Use only extension power cord having three (3) wire grounding to insure operator safety, and heavy enough gauge to carry 10 amperes without excessive voltage drop. Connect vacuum hose from Power Pac to manifold on Hydro-Press. Start unit by turning switch mounted on the Power Pac to the ON position. Place vacuum pads on a non-porous material (steel or aluminum plate), and open slide valve. Gauge reading should be 26" Hg. or higher. Close slide valve to release vacuum pads. Check hand ram or hydraulic ram to see that it operates. Unit is now ready to use.

Periodic Maintenance

Performing the following maintenance will prolong the life of your Hydro-Press:

DAILY: Check seal rings on vacuum pads for cuts, nicks, etc. Check vacuum hoses for leaks.

WEEKLY: Check all hydraulic and vacuum hoses for leaks. If your unit has a portable electric Power Pac, clean muffler and filter.

QUARTERLY: If your unit has a portable electric Power Pac, clean vacuum pump chamber by flushing. See page 4.

CAUTION: DO NOT LUBRICATE PUMP OR MOTOR.

PORTABLE POWER PAC COMPONENTS

Vacuum Pump

The vacuum pump incorporated in the Power Pac is a rotary vane, oilless pump, designed for continuous duty under full vacuum. Operating temperatures up to 230°F. are normal. The vacuum pump vanes are made of hard carbon, are precision ground, and should last 5,000 to 10,000 hours if pump is properly maintained. Cleaning and checking filter and muffler, as well as periodic flushing pump chamber, will prolong vane life.

To flush the pump, remove the filter and muffler assemblies, and while pump is running, add several teaspoonsful of Loctite Safety Solvent, Inhibisol Safety Solvent, Dow Chemical Chlorothane, or equivalent solvent at intake of pump. DO NOT USE KEROSENE. Repeat the flushing procedure again; and when all solvent has passed through the pump, replace the filter and muffler assemblies. CAUTION: FLUSH ONLY IN A WELL-VENTILATED LOCATION AND AWAY FROM ANY OPEN FLAME.

The four vanes can readily be replaced by removing the end plate and exchanging new vanes for worn or broken vanes. Use compressed air to clean out the pump chamber prior to inserting new vanes.

The clearance between the top of the rotor and the pump body should be .002". This may be checked easily with a feeler gauge. The rotor should be turned while the clearance is being checked, so be certain all points of the circumference will clear. If a piece of broken vane should become wedged between the top of the rotor and the pump body, it may increase the top clearance. This may be reduced to .002" (after removing the broken piece and replacing the vane) by tapping gently on the top of the pump body with a miniature hammer.

> CAUTION: NEVER remove the rotor.
> DO NOT loosen the bolts on either the body or mounting brackets as this will alter the preset end clearance.

Filter

It is important to keep the filter clean and in good condition to prevent dirt, moisture, etc., from entering pump chamber. The presence of any of these foreign materials can interfere with the action of the pump vanes or even cause them to break. Maximum system performance can be attained only when the filter is kept clean, as a clogged filter will impede the flow of air into the pump.

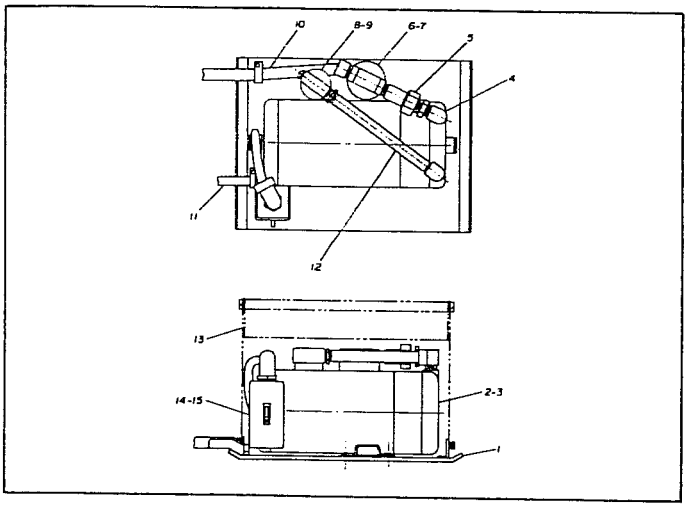
The filter should be cleaned weekly in normal use—daily in a dirty, dusty area. The bronze element may be cleaned by washing in methanol alcohol and blowing dry with compressed air. The bowl should be washed in soap and water.

Muffler

The felt elements should be replaced every month or once a week if used in a dusty, dirty area.

Refer to Component Drawings and Parts Lists on Page 5

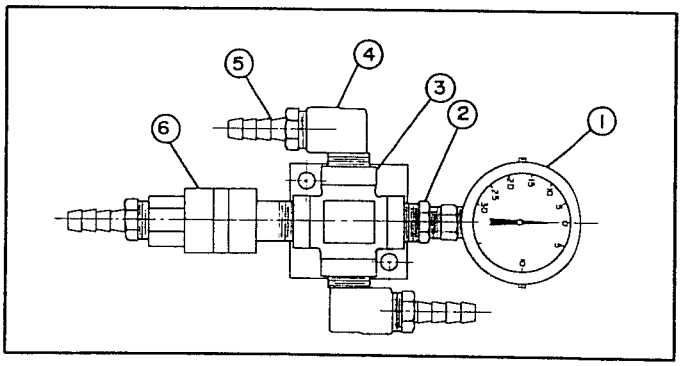
Portable Power Pac



Ref. No.	Part No.	Description	Qty.
0	40501	Power Pac Complete	1
1	26014	Base	1
2	31106	Vacuum Pump	1
3*	26465	Vanes	4
4	21135	Street Elbow	2
5	27554	Check Valve	1
6	28516	Filter	1
7*	28465	Filter Element	1
8	26266	Muffler	1
9	26168	Element—Muffler	1
10	29199	3/8 Vacuum Hose 15 Ft.	1
11	90311	3-16 Connector x 15 Ft.	1
12	28679	Nipple	1
13	28302	Cover	1
14	22807	Starter	1
15	22648	Heater Coil	1

*Recommended Spare Parts Items 3 and 7

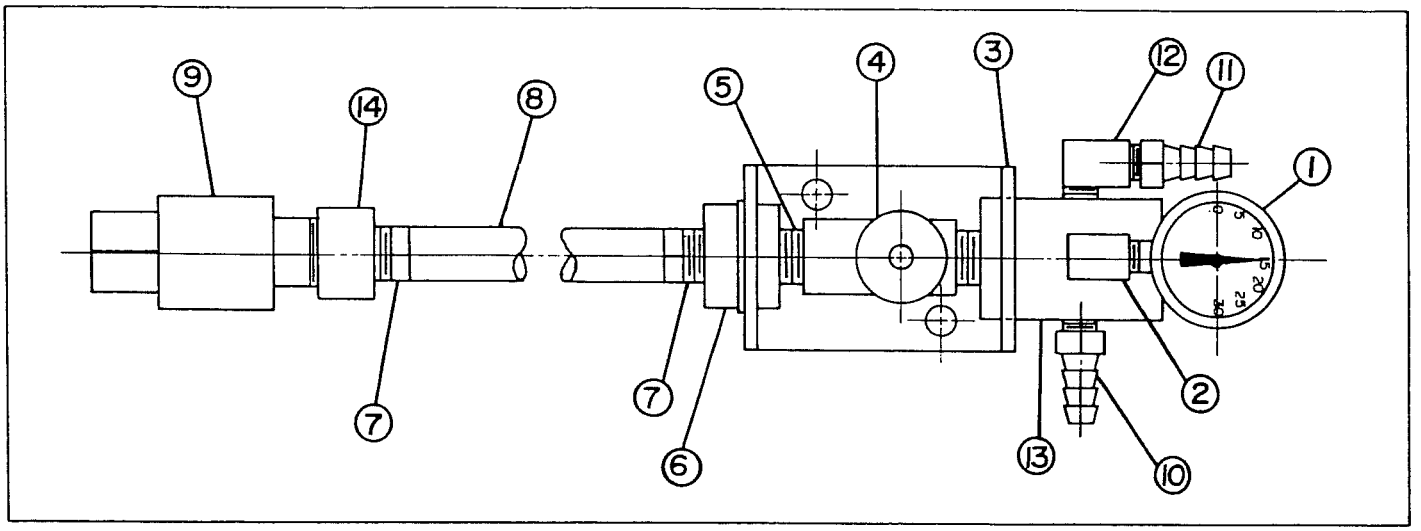
Manifold* for Portable Power Pac



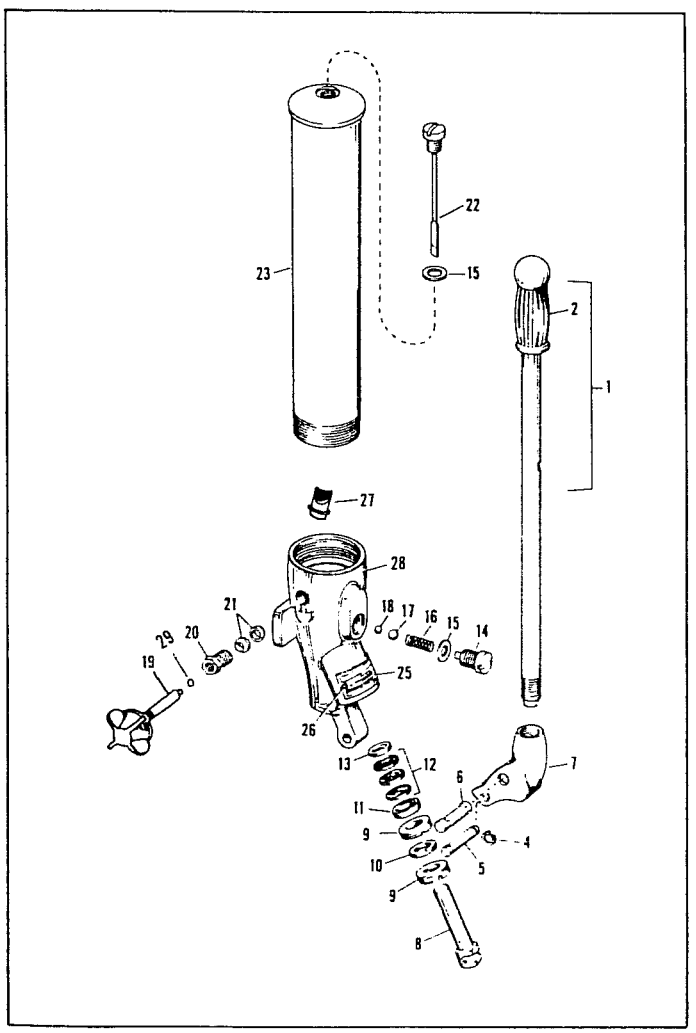
Ref. No.	Part No.	Description	Qty.
1	28608	Vacuum Gauge	1
2		Bushing	1
3	28646	Cross Manifold	1
4		3/8" N.P.T. Street Elbow	2
5	28920	3/8" x 3/8" Hose Stem	3
6	27583	Slide Valve	1

*28645 Complete Manifold

Venturi Power Unit



Hydraulic Pump



Note: Our No. 21103 Repair Kit contains Items 4, 10, 12, 15, 16, 17, 18, 21 and 29 as shown by (*) in the parts list at right.

Venturi Power Unit Parts

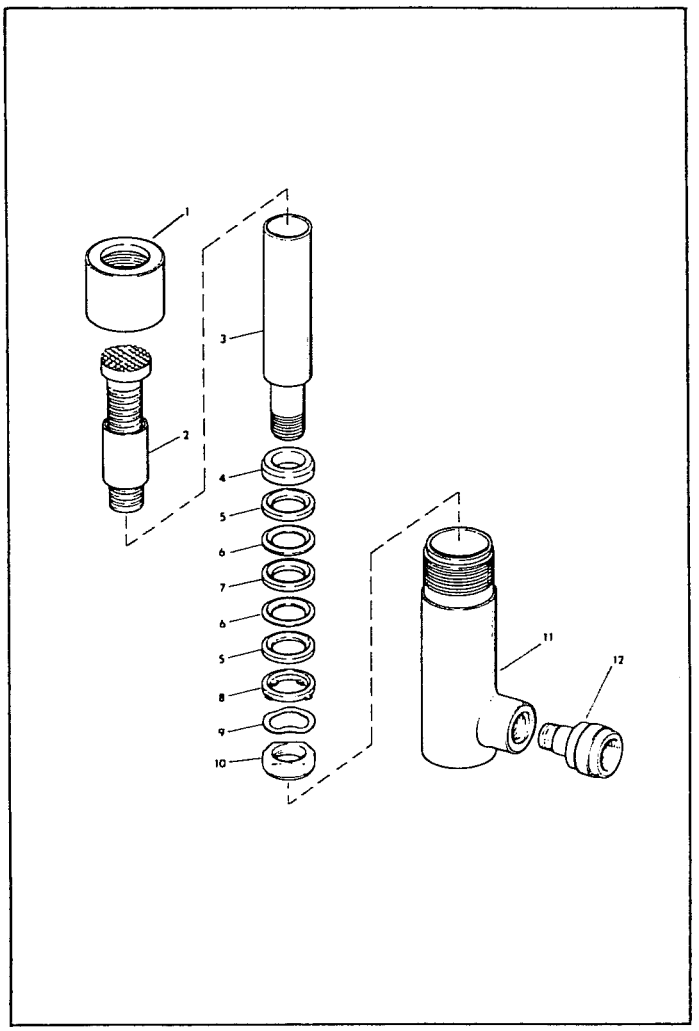
Ref. No.	Part No.	Description	Qty.
0	40512	Complete Unit	
1	28605	Vacuum Gauge	1
2		⅛ N.P.T. Street Elbow	1
3		Mounting Bracket	1
4	27609	Regulator Valve	1
5		¼" All Thread	1
6		Bulkhead Fitting	1
7		¼" Hose Fitting	2
8		¼" Hose x 12" Long	1
9	27583	Slide Valve	1
10		⅛ N.P.T. x ⅜" Hose Stem	1
11		¼ N.P.T. x ⅜" Hose Stem	1
12		⅛" x ¼" Street Elbow	1
13	21272	Venturi	1
14		⅜ N.P.T. x ¼ N.P.T. Coupling	1

Hydraulic Pump Parts

Ref. No.	Part No.	Description	Qty.
0	31310	Complete Pump	1
1		Handle Assembly	1
2		Handle Grip	1
4*		Retaining Ring	2
5		Beam Pin	1
6		Plunger Pin	1
7		Beam	1
8		Pump Plunger	1
9		Packing Nut	2
10*		Pump Packing	1
11		Retaining Sleeve	1
12*		Chevron	3
13		Cup Spreader	1
14		Valve Plug	1
15*		Valve Plug Gasket	2
16*		Spring	1
17*		Ball	1
18*		Ball	1
19		Spindle Assembly	1
20		Release Valve Nut	1
21*		Release Valve Packing	2
22		Filler Plug Assembly	1
23		Reservoir Assembly	1
27		Screen	1
28		Base	1
29*		3/16 Ball	1

2-Ton Hydraulic Ram

Used on 2,400 and 4,000 Lb. Presses Only

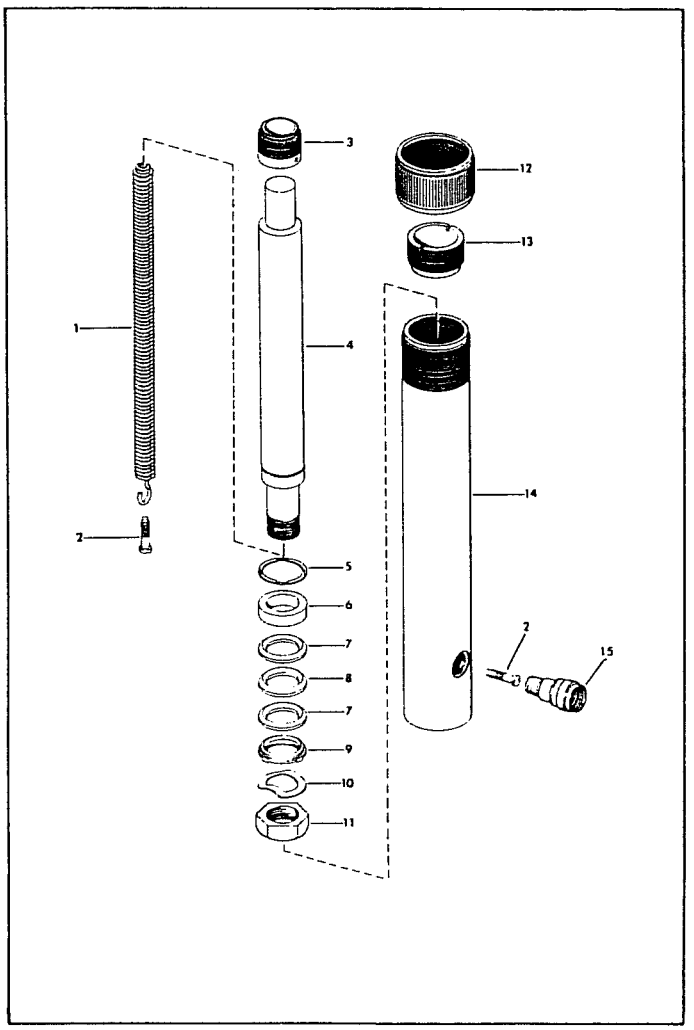


Ref. No.	Part No.	Description	Qty.
0	21107	Complete Ram	1
1		Cap	1
2		Screw w / Sleeve	1
3		Plunger	1
4		Disc	1
5*		Cup	2
6*		Separator	2
7*		Cup	1
8		Spreader	1
9		Spring	1
10		Nut	1
11		Base	1
12		Coupler (Ram End)	1

*21565 Repair Kit contains Items 5, 6, and 7.

4-Ton Hydraulic Ram

Used on 6,000 and 8,000 Lb. Presses Only



Ref. No.	Part No.	Description	Qty.
0	21108	Complete Ram	1
1		Spring	1
2		Screw	2
3		Saddle	1
4		Plunger w / Saddle	1
5		Ring	1
6		Disc	1
7*		Cup	2
8*		Cup	1
9		Spreader	1
10		Spring	1
11		Nut	1
12		Protector	1
13		Ring	1
14		Base	1
15		Coupler (Ram End)	1

*21616 Repair Kit contains Items 7 and 8.

MAINTENANCE SCHEDULE/REPAIR PARTS ORDERS

Date	Maintenance	By

PARTS ORDER RECORD

Part No.	Description	Quantity	By	Date