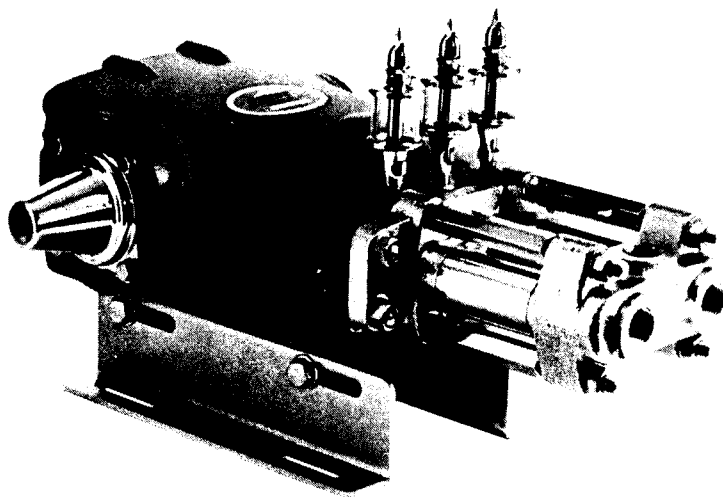




Sleeved Piston Pump Model

1024

HORSEPOWER REQUIREMENTS

Flow		PRESSURE			Pump RPM
		PSI 1000	PSI 2000	PSI 3000	
GPM	L/M	BAR	BAR	BAR	
6.7	—	4.6	9.2	13.8	900
5.0	—	3.4	6.8	10.3	672
3.0	—	2.1	4.1	6.2	403
DETERMINING THE PUMP R.P.M.		Rated G.P.M. = "Desired" G.P.M. Rated R.P.M. "Desired" R.P.M.			
DETERMINING THE REQUIRED H.P.		GPM x PSI = Electric Brake 1460 H.P. Required			
DETERMINING MOTOR PULLEY SIZE		Motor Pulley O.D. = Pump Pulley O.D. Pump R.P.M. Motor R.P.M.			

Note: Consult engine manufacturer when using gas or diesel engine

SPECIFICATIONS

	U.S. Measure
Volume	6.7 G.P.M.
Discharge Pressure	3000 P.S.I.
Max. Inlet Pressure	- 8.5 to + 40 P.S.I.
RPM	900 RPM
Bore	.708"
Stroke	1.457"
Crankcase Capacity	2-3/4 Qts.
Max. Fluid Temperature	140°F
Inlet Ports (1)	1" NPT
Discharge Ports (3)	3/4" NPT
Pulley Mounting	Either side
Shaft Diameter	1.181"
Weight	73.7 Lbs.
Dimensions with Rails	22.20" x 15.04" x 9.84"

INLET CONDITION CHECK-LIST

Inadequate inlet conditions can cause serious malfunctions in the best designed pump. Surprisingly, the simplest of things can cause the most severe problems. Some of these conditions can go unnoticed to the unfamiliar or untrained eye. To help eliminate some of these costly headaches, we have put together a check list of probable cause areas which should be evaluated before operation of any system. Remember, no two systems are alike, so there can be no **ONE** best way to set-up a system. All factors must be carefully considered.

INLET SUPPLY should be adequate to accommodate the maximum flow being delivered by the pump.

- ☐ Avoid closed loop systems, especially at higher temperatures and larger volumes. By-pass should be returned to a holding tank.
- ☐ Low vapor pressure fluids, such as solvents, require a booster pump for adequate inlet supply.
- ☐ Higher viscosity fluids require a positive NPSH for adequate inlet supply.
- ☐ Higher temperature fluids tend to vaporize and require a positive NPSH for adequate supply.
- ☐ When using an inlet holding tank, size it to provide adequate fluid to accommodate the maximum output of the pump, generally a minimum of five times the GPM (however, a combination of system factors can change this requirement significantly); provide adequate baffling in the tank to eliminate air bubbles and turbulence; install diffusers on all return lines to the tank.

INLET LINE SIZE should be adequate to avoid starving the pump.

- ☐ The line should generally be 1-1/2 to 2 times the specified pump inlet port size.
- ☐ The line **MUST** be a FLEXIBLE hose, NOT a rigid pipe, and reinforced on SUCTION systems to avoid collapsing.
- ☐ The simpler the inlet plumbing the less the potential for problems. Keep the length to a minimum, the number of elbows and joints to a minimum (ideally no elbows) and the inlet accessories to a minimum.
- ☐ Use pipe sealant to assure air-tight, positive sealing pipe joints.

INLET PRESSURE should fall within the specifications of the pump. These conditions vary slightly from the plunger to the piston pumps.

- ☐ Higher temperatures require pressurized inlet.
- ☐ Optimum pump performance is achieved with a flooded or pressurized inlet, however, negative feed is possible under ideal conditions.

INLET ACCESSORIES are designed to protect against overpressurization, monitor inlet flow, control contamination, control temperature and provide ease of servicing.

- ☐ All accessories should be sized to avoid restricting the inlet flow.
- ☐ A pressure gauge is recommended to monitor the inlet pressure and should be mounted AS CLOSE TO THE PUMP INLET as possible.
- ☐ All accessories should be compatible with the solution being pumped to avoid malfunction.

BY-PASS TO INLET Care should be exercised when deciding the method of by-pass. It is recommended the by-pass be directed to a baffled reservoir tank, with at least one baffle between the by-pass line and the inlet line to the pump. Although not recommended, by-pass fluid may be returned to the inlet line of the pump if the system is properly designed to protect your pump. When using this method a **PRESSURE REDUCING VALVE** should be installed on the inlet line to avoid excessive pressure to the inlet of the pump. (**REDUCING VALVE SHOULD BE INSTALLED BETWEEN THE BY-PASS CONNECTION AND THE INLET TO THE PUMP**) It is also recommended that a **TEMPERATURE SENSING VALVE** be used to monitor the temperature build-up in the by-pass loop to avoid premature seal failure.

- ☐ A low-pressure, flexible cloth braid (not metal braid) hose should be used from the by-pass connection to the inlet of the pump.
- ☐ It is recommended to use a minimum 24" by-pass hose.
- ☐ On any new installation or during periodic maintenance or troubleshooting, it is recommended that the pressure in the by-pass line be checked to avoid overpressurizing the inlet.

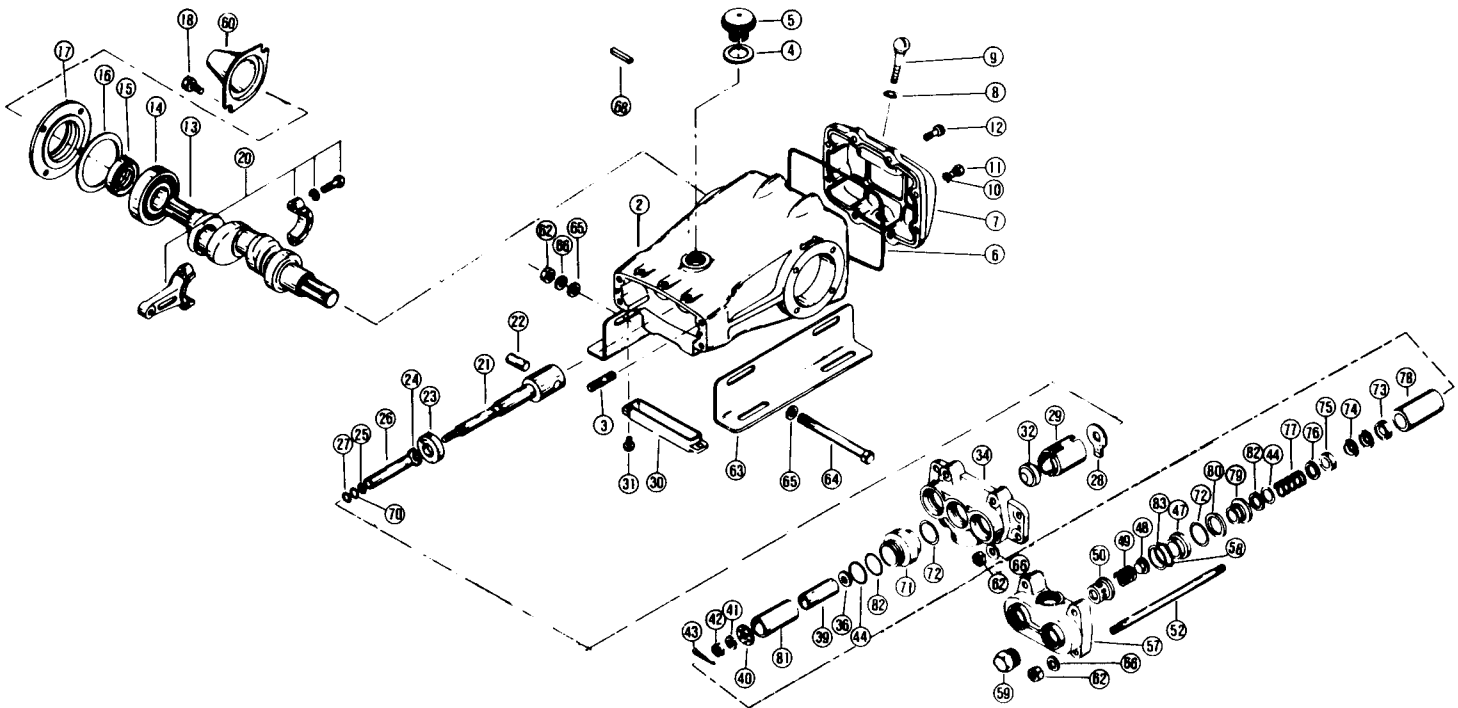
See High Pressure Guide for more information on pump protection and maintenance.

EXPLODED VIEW

April 1986

SLEEVED PISTON

Model 1024



PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY.	ITEM	PART NO.	DESCRIPTION	QTY.
2	27762	Crankcase	1	43	14158	Cotter Pin	3
3	85361	Stud (M12)	4	44	18391	O-ring, Cylinder	6
4	14177	O-ring, Cap	1		11691	O-ring, Cylinder (Viton)	6
5	43211	Oil Filler Cap	1	47	43061	Discharge Valve Seat	3
6	27767	O-ring, Crankcase Cover	1	48	28681	Discharge Valve	3
7	27768	Crankcase Cover	1	49	28682	Valve Spring	3
8	11338	O-ring, Oil Gauge	1	50	43135	Valve Spring Retainer	3
9	27769	Oil Gauge	1	52	85363	Cylinder Bolt	4
10	23170	O-ring, Drain Plug	1	57	43058	Discharge Manifold (B)	1
11	25625	Drain Plug	1	58	43059	Back-up Ring, Dschg. Valve Seat (B)	3
12	80728	Sems Hex Screw (M8 x 25)	8	59	20326	Plug	1
13	27770	Crankshaft	1	60	26516	Shaft Protector	1
14	26512	Bearing	2	62	81060	Hex Nut (M12)	2/8
15	27771	Oil Seal	2	63	27808	Angle Rail	2
16	27772	O-ring, Oil Seal Case	2	64	30902	Hex Cap Screw (1/2 x 6 1/2)	2
17	27773	Oil Seal Case	2	65	30930	Flat Washer 1/2"	4
18	80728	Sems Hex Screw (M8 x 25)	8	66	30908	Lockwasher 1/2"	2/8
20	27776	Connecting Rod	3			Hub w/Screw	1
21	28664	Piston Rod	3	68	50146	Key	1
22	27784	Piston Pin	3		30206	9.75 Sheave AB Dbl. Gr.	1
23	27785	Oil Seal	3	70	28338	Back-up ring, Sleeve	3
24	27786	Barrier Slinger	3	71	28668	Cylinder Adapter (Inlet)	3
25	26531	O-ring, Sleeve (Inner)	3	72	14200	O-ring, Cylinder Adapter	6
	14198	O-ring, Sleeve (Inner) (Viton)	3		11719	O-ring, Cylinder Adapter (Viton)	6
26	27787	Sleeve (M14)	3	73	29586	Female Adapter	3
	43122	Sleeve (M16)	3	74	27047	V-Packing	6
	29052	Sleeve Unchromed (M14)	3	75	29587	Male Adapter	6
	43123	Sleeve Unchromed (M16)	3	76	29635	Washer	6
27	22056	O-ring Sleeve (Outer)	3	77	27045	Spring	3
	11681	O-ring Sleeve (Outer) (Viton)	3	78	28673	Packing Case	3
28	27789	Wick, Oil (M14)	3	79	28674	Cylinder Adapter, Discharge	3
	43126	Wick, Oil (M16)	3	80	28675	Back-up Ring	3
29	27788	Seal Retainer	3	81	29634	Piston (Sleeve-type)	3
30	27790	Oil Pan	1	82	28669	Back-up Ring, D.V.S.	6
31	92519	Hex Head Screw (M6 x 16)	2	83	28820	O-ring, Discharge Valve	3
32	26538	Seal (M14)	3		43102	O-ring, Discharge Valve (Viton)	3
	43124	Seal (M16)	3				
	28770	Seal (Viton) (M14)	3		30258	Seal Kit (M14)	1
	43125	Seal (Viton) (M16)	3		30482	Seal Kit (M16)	1
34	28666	Inlet Manifold	1		30617	Discharge Valve Kit	1
36	28676	Valve Inlet	1		30618	V-Packing Kit	1
39	28678	Piston, Spacer	3		30817	Sleeve & Seal Kit, See Indiv. Parts	1
40	29588	Piston, Retainer	3		30819	Sleeve & Seal Kit (M16) (M8)	1
41	27006	Conical Washer S.S. (M6)	3				
42	27000	Slotted Nut S.S. (M6)	3				

(B) Parts Start with S/N 8770101
(M16) Parts Start with S/N 6790101