

OPERATING INSTRUCTIONS

LEHMAN SLIP-O-MATIC REVERSING PUMPS

(MODELS: M30, RD30, RD630(M))

IMPORTANT:

Do not attempt to use your casting machine or slip pump without reading the operating instructions and fully understanding its operation. Check your machine for damage caused in shipment before attempting to use it.

The reversible pump system used on Lehman Slip-O-Matic casting machines should not be run without liquid in the tank. Serious pump damage can result from running the machine dry.

These models were not designed to mix slip or reclaim trimmings. They will however, provide gentle agitation to keep the slip in ideal casting condition.

WARNING:

The motor on these machines is equipped with a grounded electrical cord. **ALWAYS** be sure the motor is fully grounded. If the receptacle (outlet) you are using is not grounded, it is recommended that you have a ground line installed. **AN UNGROUNDED CORD CAN CAUSE SEVERE ELECTRICAL SHOCK!**

PREPARING YOUR MACHINE FOR USE:

Some models require some very simple assembly. If you need technical assistance with this assembly you may call our service department.

All Slip-O-Matic reversing pump machines have been factory tested using water. As the pump parts dry out, they can become temporarily stuck together. This condition can be easily remedied by reaching inside of the tank and turning the bearing drive assembly by hand to loosen up these parts. **MAKE SURE THE MACHINE IS UNPLUGGED FROM THE ELECTRICAL OUTLET BEFORE REACHING INSIDE OF THE TANK.**

Once the bearing assembly turns freely by hand, put 4 or 5 gallons of water in the tank. Plug the machine into the outlet and turn the switch to the pour position. Run some water through the hose and nozzle and back into the tank to test the pump. After determining that everything is working properly, simply pump the water out and fill the tank with slip.

With the machine full of slip, turn the switch to pour and pump some slip back into the tank to get rid of any air trapped in the pouring hose and to get a feel for the nozzle.

POURING SLIP INTO YOUR MOLDS:

Hold the nozzle over the pour hole, turn the machine on and open the nozzle. Fill the mold slowly to keep the slip from splashing onto the interior walls of the mold. Filling the mold too fast can cause air bubbles in the greenware. The pouring nozzle will allow you to regulate the flow of slip from a small trickle up to a full stream (4 to 6 gpm depending on the viscosity of the slip). Always close your pouring nozzle before turning the motor off to prevent air from entering the hose. Air in the hose will allow the slip to thicken and clog the lines.

DRAINING THE MOLDS:

The pump on the Lehman Slip-O-Matic reverse machine was designed to draw the excess slip from the large molds that are difficult to drain. The machine will not drain the mold all the way to the bottom but it will lighten it up by 80 or 90% making it is much easier to tip over.

To use the reverse feature the slip level must be above the relief valve hole and the pouring hose must be full of slip. Place the drain tube on the end of the nozzle. (The drain tube must fit tightly on the nozzle. If the machine can draw air from anywhere, it will affect the suction capabilities.) Dip the drain tube into the mold so the holes in the end of the tube are slightly submerged in the slip. Turn the switch to the drain position. Follow the slip level down into the mold keeping the end of the tube submerged and being careful not to touch the inside of the piece. The drain tube is designed to draw from the sides as well as from the bottom to prevent damage to the greenware. When you have removed all of the slip you can with the machine, turn the mold over to drain the last remaining bit.

Some air will have been sucked into the hose after draining a mold. This must be expelled before you pour again or it will spatter the sides of the next mold. To remove the air, just pump some slip right back into the tank.

LEAVING THE MACHINE AFTER POURING:

When you are finished pouring for the day, refill the machine; this will keep the slip from drying on the sides of the tank). You can take a few ounces of water and gently pour on top of the slip to create a thin (1/8") moisture seal and cover the machine until you are ready to pour again.

Certain precautions should be taken when leaving the machine for an extended period of time (more than two weeks). It is advisable to pump the slip out of the machine and into resealable containers. Fill the tank with water and pump the water through the machine. This will clean out all of the pump parts as well as the hose and nozzle. You can also take this opportunity to wash down the inside of the tank. Now pump out the dirty water and put in enough clean water to cover the lower pump parts. The machine can be left indefinitely with water in it.

When you are ready to pour again, pump the water out and fill with slip. This procedure will save you hours of cleaning later.

WHY DOES YOUR PUMP WEAR?

The Lehman Slip-O-Matic reversible machine is equipped with a positive displacement pump. This pump consists of two separate parts (a pump rotor and a pump stator). These parts come in direct contact with one another and the slip runs between them. Because of the abrasive nature of slip, these parts are literally being sanded (worn) away every second the machine is running. Therefore, the less the machine is running, the less wear there is on the pump. **Do not run the machine excessively!** When you are not pumping or draining, turn the motor off. Proper setting of the pressure relief valve will also prolong the life of the pump. Relief valve adjustment is described below.

ADJUSTING YOUR PRESSURE RELIEF VALVE:

It is important that the relief valve is set properly at all times. The relief valve may need to be re-adjusted from time to time or when installing a new rotor and stator.

The procedure for adjustment is as follows:

Put slip in the tank to a level just below the relief valve hole in the side of the tank. Loosen the jamb nut on the relief valve and turn the t-handle counter-clockwise to take all of the pressure off of the internal spring. Turn the motor on and open the nozzle to pour right back into the tank. At this point you will probably have a weak flow of slip coming out of the nozzle and nearly a full stream coming back into the tank through the relief valve hole. With the nozzle still open, turn the t-handle clockwise until there is a small trickle (about the diameter of a pencil) coming through the relief valve hole and your flow at the nozzle is increased the desired amount. When this setting is reached, close the nozzle. Now you should have a full flow coming through the relief valve again. Open and close the nozzle a few times to make sure that the setting remains constant. When you have determined that it is correct, tighten the jamb nut back down against the valve housing.

CHANGING THE ROTOR AND STATOR:

To replace the stator on your machine you must start by emptying the slip from the tank. Once empty, remove the bolts that attach the top frame to the tank. The entire mechanical assembly can then be lifted out of the tank. Lay this assembly aside for now. Turn the tank upside down with the casters facing up. The stator is held to the tank with six stainless steel screws and a bead of silicone sealer. Remove the 6 screws, and with a flat knife cut the silicone and gently pry the cup away from the tank. Unscrew the cup off of the threaded tee fitting. Scrape the excess silicone from the tank so you have a clean, smooth surface for the new stator.

You are now ready to re-assemble the machine. Start by putting a bead of silicone sealer on the threads of the tee fitting and the lip of the stator cup that contacts the tank, a good seal is important to the operation of the machine. Screw the cup back onto the tee fitting and bolt the cup back onto the tank. Turn the tank upright.

To replace the rotor, lay the mechanical assembly on a table and loosen the hose clamp that holds the rotor to the pump coupling. The rotor will then pull out of the coupling. Check the coupling for any damage at this time and replace if necessary. Push the new rotor into the coupling and re-tighten the hose clamp. Lift the mechanical assembly back into the tank and bolt it down.

CARE AND MAINTENANCE:

The life of your casting machine will be determined by the care that you give the machine. It is in your best interest to **keep it clean!** A rubber squeegee works great to keep the liquid slip pushed down in the tank. **Do not use a metal scraper to clean the tank, as it will permanently scratch the stainless steel/ fiberglass tank.**

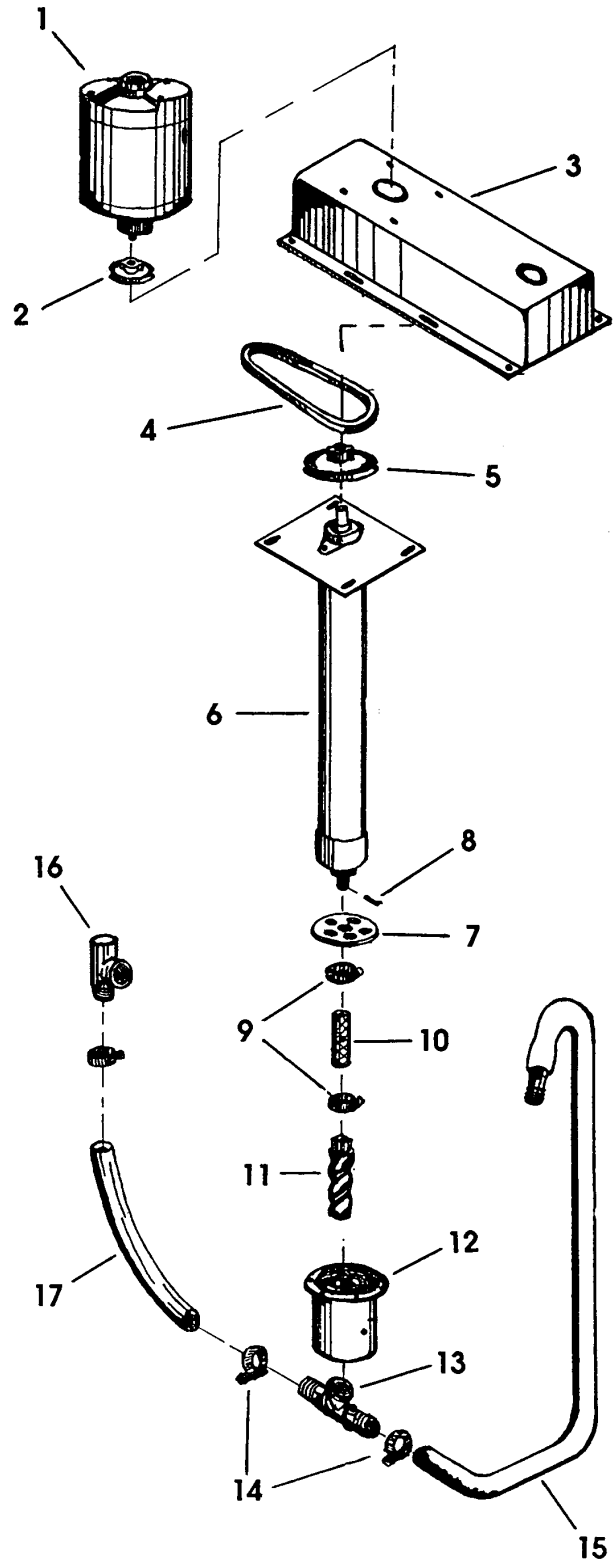
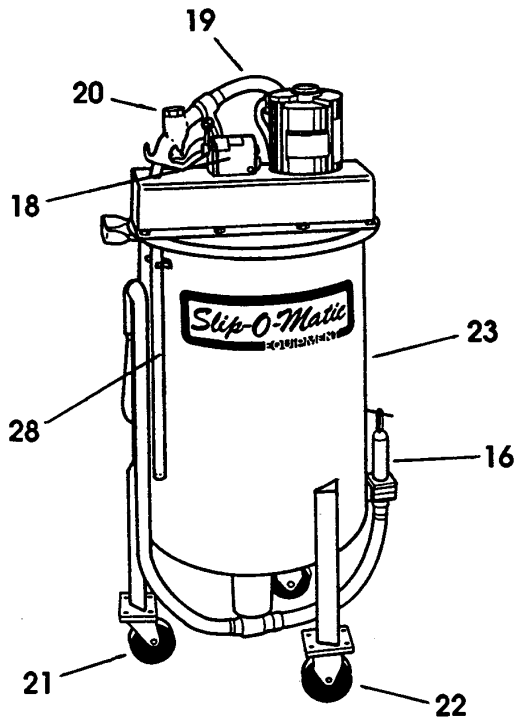
**If you need technical assistance or need to order parts, you may contact our
SERVICE DEPARTMENT at:**

**Lehman Mfg.
304 N. Fairgrounds Rd.
Kentland, IN 47951
(219) 474-6011**

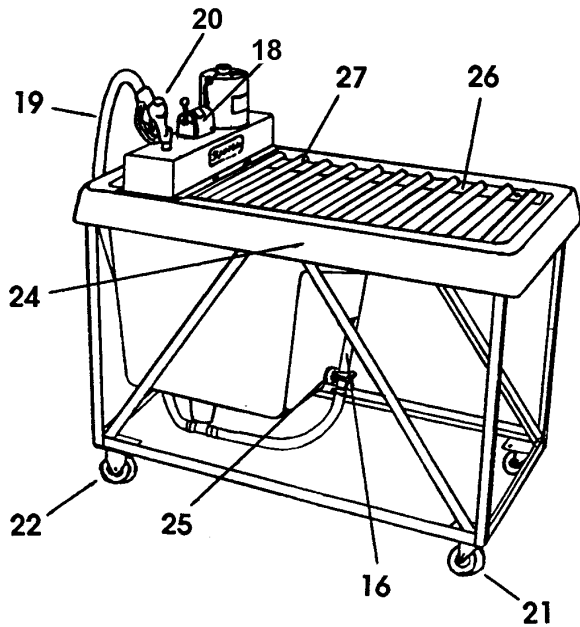
**Our hours are 8am to 5pm CST Monday through Thursday.
Please have your model and serial number ready when you call.**

LEHMAN SLIP-O-MATIC REVERSING PUMP/TANK PARTS LIST

M30



RD30 (PICTURED)
RD630
RD830



NO.	PART DESCRIPTION	M30	RD30	RD630(M)
1	Motor	MGF2054	MGF2054	MGF2054
2	Motor Pulley	3X895	3X895	3X895
3	Top Frame	M846	R3846	R6846
4	V-Belt	4L200	4L200	4L200
5	Pump Pulley	3X917	3X917	3X917
6	Bearing Assembly (w/agitator blade)	M345	RD345	RD345
7	Agitator Blade	M366	M366	M366
8	Drive Pin	M364	M364	M364
9	Hose Clamp	HC6712	HC6712	HC6712
10	Rotor Coupling	M847	RD847	RD847
11	Pump Rotor	FS441	FS441	FS441
12	Pump Stator	FS442-1	FS442-1	FS442-1
13	1" Tee Fitting	M368-1	M368-1	M368-1
14	Hose Clamp	HC6716	HC6716	HC6716
15	Curved Outlet Pipe	M355	R3355	R6355
16	Relief Valve	M13895	M13895	M13895
17	Relief Valve Hose	M357	R3357	R6357
18	Reversing Drum Switch	2X440	2X440	2X440
19	Pouring Hose	M353	R3353	R6353
20	Pouring Nozzle	31002	31002	31002
21	Caster (Swivel)	SM106	SM106	SM106
22	Caster (Rigid)	SM105	SM105	SM105
23	Stainless Steel Tank	M3075	N/A	N/A
24	Fiberglass Tank & Frame	N/A	R3075	R6075
25	Loose Tank Fitting	N/A	5031AN	5031AN
26	Aluminum Dowel Rail (w/Spacers)	N/A	AR3612	AR3008
27	Dowel Rod	N/A	R3101	R6101
28	Drain Tube	M359	M359	M359

PARTS NOT SHOWN

Drain Tube Extension	M360	M360	M360
Plexiglas Tank Covers	M351	M351	M351
Power Cord	1VEP4	1VEP4	1VEP4
Motor to Switch Wiring Harness	M3197	M3197	M3197
Reversing Drum Switch Wired	M2X440W	M2X440W	M2X440W
Caster Mounting Bracket	N/A	N/A	R6107
RD30 Leg	N/A	R32500	N/a

Notes: