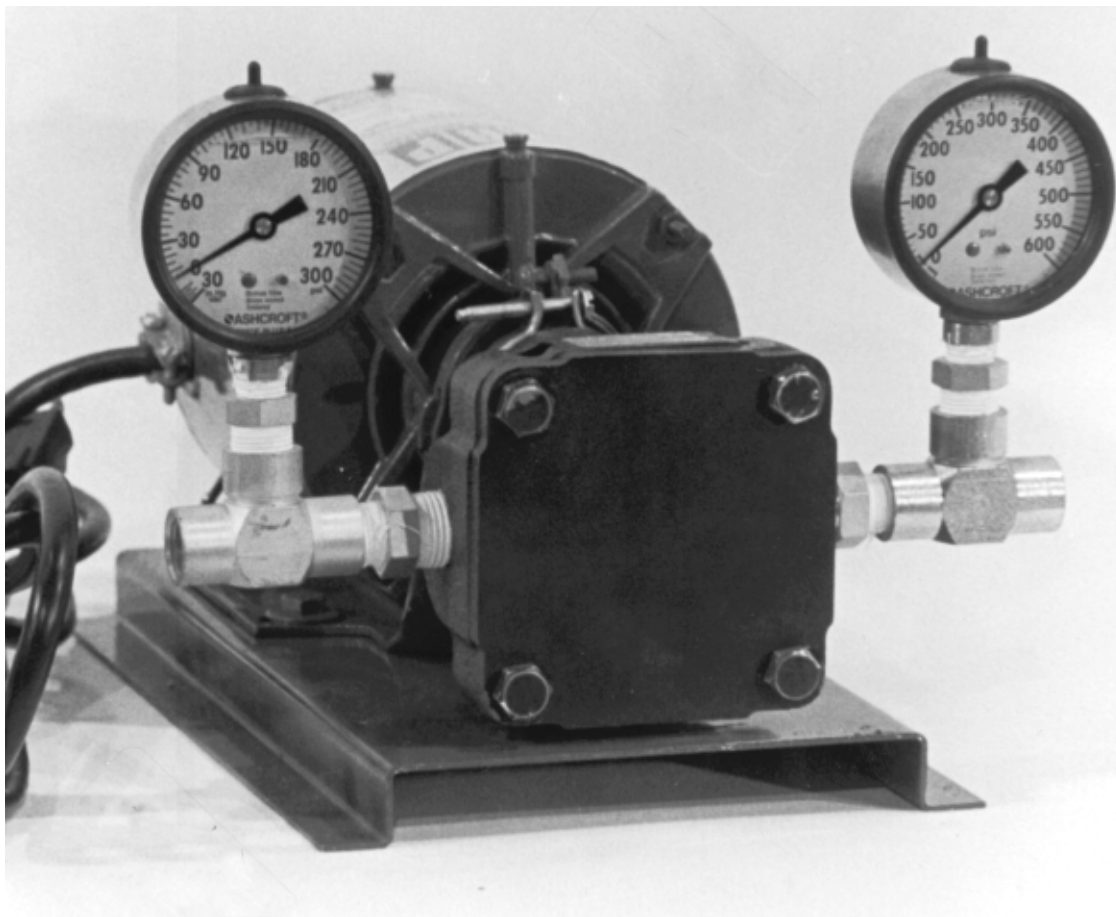


OPERATING INSTRUCTIONS



MODEL LPO REFRIGERATION OIL TRANSFER PUMP

**NATIONAL REFRIGERATION PRODUCTS
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MODEL LPO

INTRODUCTION

This pump has been designed and manufactured for ease of installation and servicing. The LPO is a gear pump rated at 100 PSI working pressure. The LPO is designed to transfer oil.

GENERAL INSTALLATION

LOCATION

Pumps of all types are sensitive to restrictions in the inlet lines. Our pumps are capable of with-standing these restrictions better than most. For best performance, locate the pump as close to the fluid source as possible and minimize the number of elbows and valves. A pipe guide should be used to determine the proper size inlet pipe for the flow rate and viscosity of the oil. The pipe must be at least 3/8" I.D. (inside diameter).

Pumps of this type will work in any position. In the event of a seal leak, avoid mounting the pump vertically with the pump up. Oil may enter the motor causing equipment damage and the possibility of electrical shock.

This pump is self-priming to a degree. As the pump wears, the self-priming ability decreases, so the best possible location for the pump is to be below the oil level of the unit to be pumped.

INLET PLUMBING

All piping must be at least 3/8" I.D. Pump performance depends heavily, on all inlet pipe threads being sealed. Use pipe thread sealant. Inlet hoses must not collapse under 28 inches Hg of vacuum pressure at the anticipated temperature. Keep elbows and valves to a minimum. They are restrictive and can cause constriction and /or cavitation. This may damage the pump.

INLET ACCESSORIES

A strainer is provided to protect the bearings, gears, and seals. Clean strainer mesh bi-weekly!

DISCHARGE PLUMBING

Piping must be rated to exceed the maximum discharge pressure of the pump, and must be at least 3/8" I.D. Piping size should be large enough as not to create excessive restrictions, since this will make the pump work harder than necessary. All threads should be sealed with a pipe sealant to prevent leakage.

ELECTRICAL CHARACTERISTICS

The LPO pump is driven by an electric motor rated at ½ HP, 115 volts, 1 phase and 60 Hz.

SAFETY LIST

To prevent serious bodily injury, you should observe the following basic safety precautions when installing, operating or servicing your pump.

1. **DON'T** run your pump until you have read and understood the installation and maintenance manual.
2. **DON'T** run your pump until you have read and understood all machine and controls associated with the system.
3. **PROTECT** your eyes. Wear safety glasses with side shields at all times.
4. **DON'T** get caught in moving parts. Remove watches, rings, jewelry, neckties, and loose-fitting clothing.
5. **KEEP** your hair away from moving parts.
6. **PROTECT** your feet. Always wear safety shoes with steel toes and oil resistant soles.
7. **GLOVES** are easily caught in moving parts. Take them off before you turn on the pump when the coupling guard is off.
8. **LOOSE** objects can become flying projectiles. Remove all loose items (wrenches, rags, etc.) from pump area before starting.
9. **PROTECT** your hands. Stop the pump completely before you remove a coupling guard.
10. **PROTECT** your hands. Stop the pump before you change or adjust belts, pulleys or gears.
11. **PROTECT** your hands, Keep hands and arms clear of start switch when working on the equipment.
12. **PROTECT** your eyes and the pump. Never use compressed air to remove debris.
13. **PROTECT** your eyes, skin, clothing, Be prepared for leaks upon start-up that may spray out the fluid being pumped.
14. **KEEP** work area well lighted.
15. **PREVENT** objects from flying loose, Securely lock coupling set screws, pump cover screws, all mounting screws, etc.
16. **PREVENT** pump/motor overload. Minimize discharge and suction restrictions. Open all valves before starting pump.
17. **PREVENT** fire. Make sure all joints are sealed and not leaking especially when pumping combustible fluids.
18. **ALWAYS** check connections, valves, screws, electrical connections for tightness before starting the unit.
19. **ALWAYS** be certain pump is secured properly to prevent it from moving or over stressing connections (plumbing and electrical).

WHEN SERVICING PUMP

- **ALWAYS** disconnect power from pump before servicing.
- **ALWAYS** follow instructions in operators and parts manual when changing accessories or parts.
- **NEVER** modify a pump without consulting National Refrigeration Products.
- **PREVENT ELECTRICAL SHOCK.** Most pumps are driven by an electrical motor. Follow all motor manufacturer cautions/instructions.