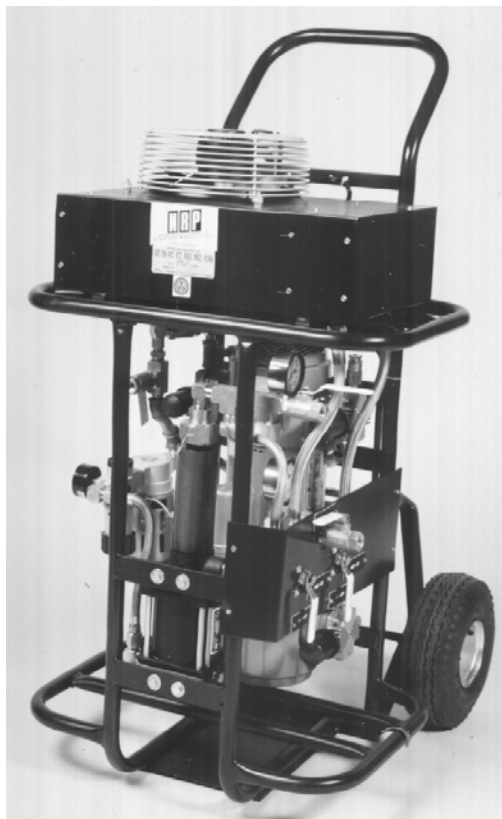


OPERATING INSTRUCTIONS



MODEL LV8 COMMERCIAL REFRIGERANT RECOVERY UNIT

**NATIONAL REFRIGERATION PRODUCTS
985 WHEELER WAY • LANGHORNE, PA 19047
(215) 638-8909 • FAX (215) 638-9270**

MODEL LV8

For safety reasons it is very important to fill all cylinders by weight in accordance with the cylinder supplier's instructions and ARI guidelines.

- The LV8 is a large capacity refrigerant transfer unit for use with R12, R22, R114, R134a, R500 & R502.
- **ALWAYS USE HIGH PRESSURE CYLINDERS WITH 2 VALVES. CYLINDERS MUST BE DOT APPROVED, SUCH AS CYLINDERS SUPPLIED BY NRP.**
- **DO NOT OVERFILL CYLINDERS.** Cylinders should be filled to a maximum of 80% capacity.
- **DO NOT MIX DIFFERENT REFRIGERANTS IN A CYLINDER.** Mixtures can not be separated.
- **ALWAYS WEAR RUBBER GLOVES AND SAFETY GOGGLES WHEN TRANSFERRING REFRIGERANT.**
- **BEFORE FILLING AN EMPTY CYLINDER, ALWAYS EVACUATE THE CYLINDER TO AT LEAST 1000 MICRONS TO REMOVE AIR AND NON-CONDENSABLES. NON-CONDENSABLES WILL INCREASE DISCHARGE PRESSURE DRASTICALLY.**
- **PLEASE EVACUATE OR PURGE THE LV8 RECOVERY UNIT AND HOSES BEFORE YOUR RECOVERY JOB TO AVOID INTRODUCING NON-CONDENSABLES IN THE RECOVERY CYLINDERS.**
- **ALWAYS USE A 163 FILTER DRIER BEFORE THE INLET VALVE OF THE LV8. THIS DRIER WILL CAPTURE PARTICULATE AND WILL PREVENT DAMAGE TO THE REFRIGERANT PUMP, O-RINGS AND INTERNAL SEALS OF THE LV8.**

HOW TO USE THE LV8

The NRP LV8 is simple to use because it will pump either refrigerant liquid or vapor in the same way, shown in Figure 1. There is no need to change the piping or valve settings of the unit. There is no risk of damage by running the pump dry.

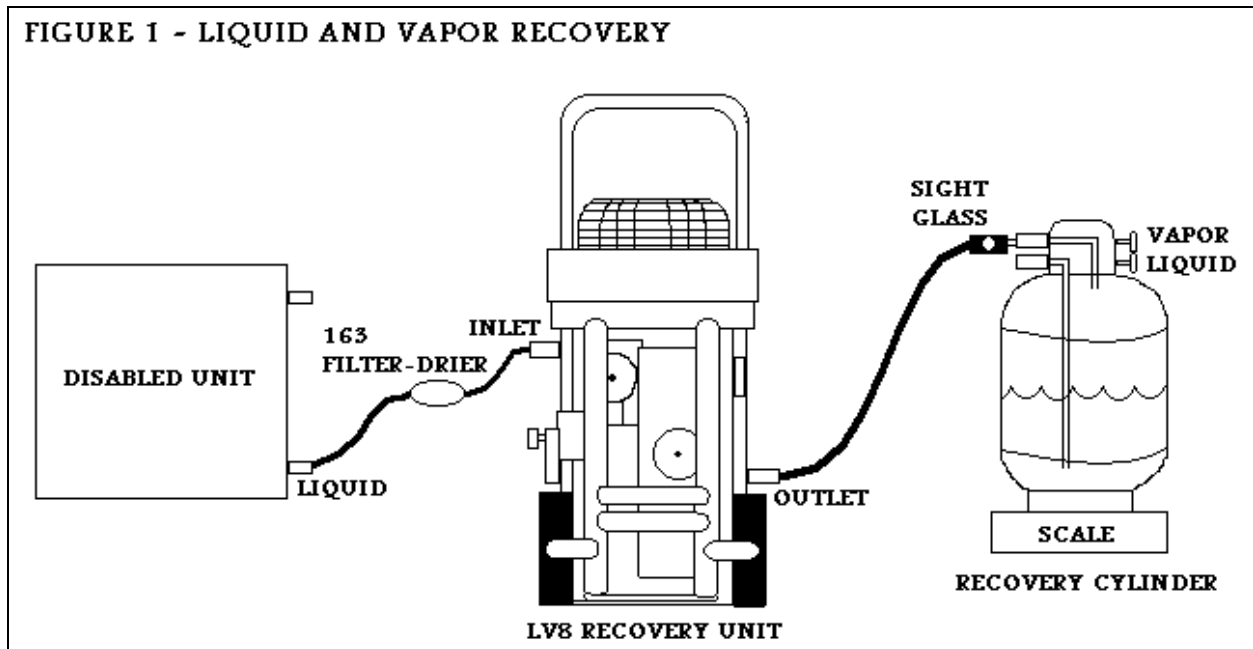
POWER REQUIREMENTS

The LV8 includes its own 1.5 HP oil-less compressor, wired for 230 Volt, single phase, 60 Hertz. When operating with its own compressor, the LV8 does not need an outside air supply. The compressor is turned on or off by the main power switch. The condenser fan is always on when the unit is plugged in.

If there is an outside air supply, the LV8 can be run on plant air. Dry compressed air at 10 CFM at 100 PSI is best and recommended. If there is a lower air pressure or capacity, the pumping capacity of the pump will be reduced.

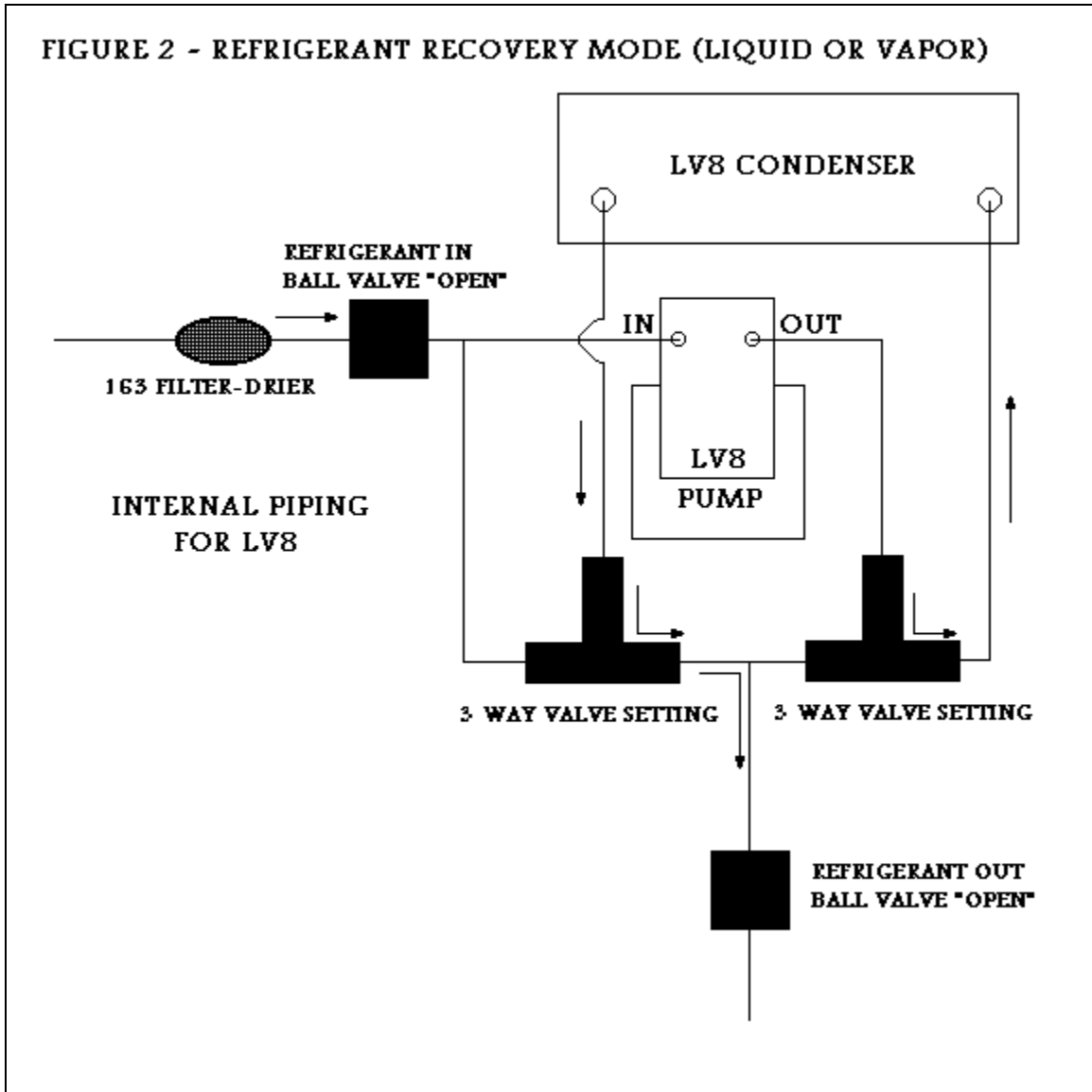
There is a shut-off valve at the air inlet to shut off air to the pump. This allows the pump to be turned on and off. The LV8 must be plugged in to provide power to the condenser fan.

Please drain moisture which accumulates in the moisture separator on the air inlet side of the LV8 to avoid damage to the pump. The air supply to the LV8 is not to be lubricated in any way, and if a rental compressor is being used, make sure that the air supply is coming off the dry or non-lubricated port of the air compressor. Some of the air compressors from equipment rental dealers, used for jackhammers, have an automatic oiler. Make sure not to use that air outlet.



REFRIGERANT RECOVERY ~ (SEE FIGURE 2)

During refrigerant recovery the LV8 valves should be set as shown in Figure 2. Since it is faster to recover refrigerant liquid than vapor, the refrigerant should be removed through the liquid side of the system. A 3/8" flared fitting should be used, with 3/8" refrigerant charging hoses. For convenience use a sight glass in line at the refrigerant outlet of the LV8 condenser. After the liquid has been removed, the left over vapor can be pumped out of the unit until the suction gauge on the LV8 reaches 0 PSIG. The LV8 will pull to a 20" Hg vacuum.

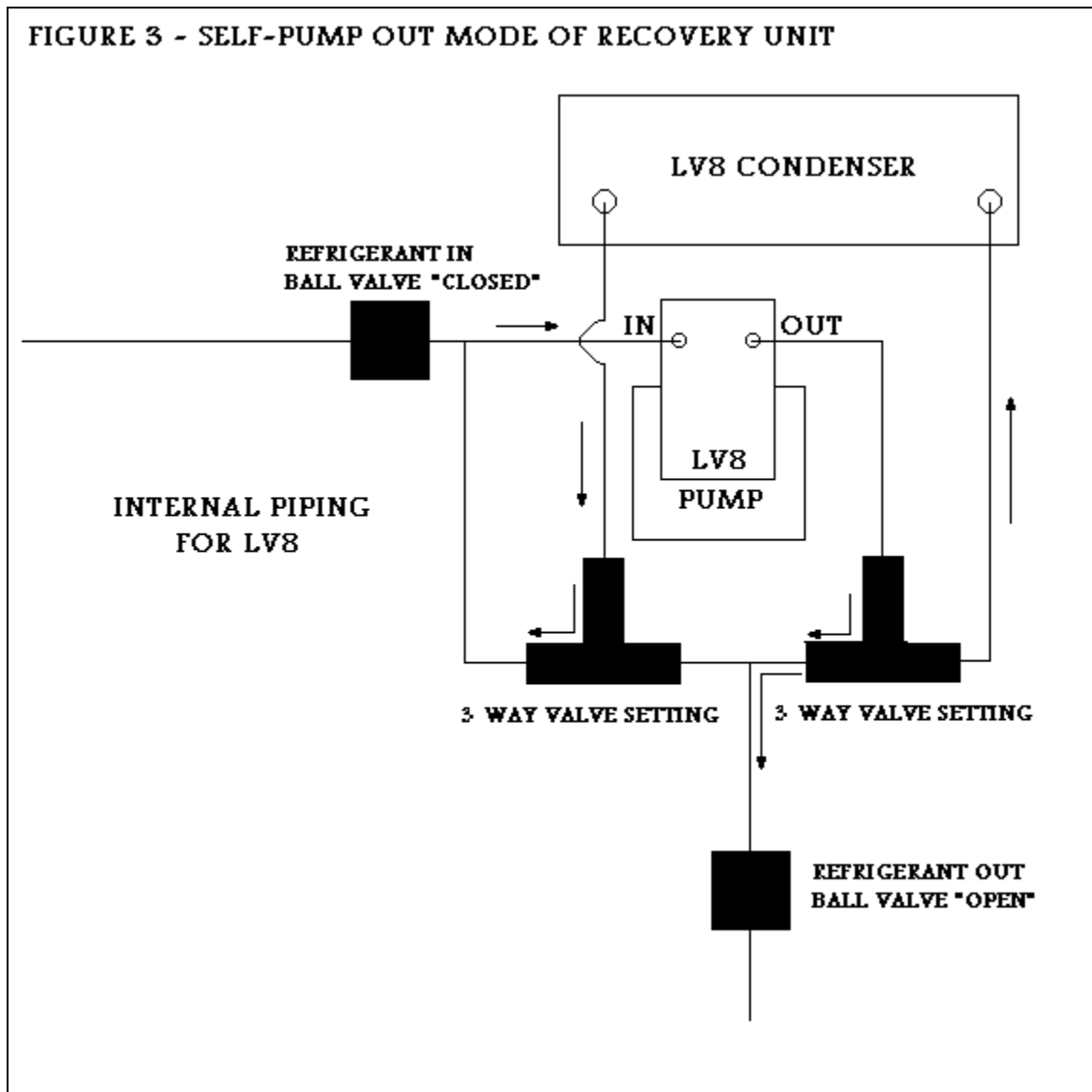


SELF PUMP-OUT OF RECOVERY UNIT (FIGURE 3)

To avoid mixing refrigerant, it is important that at the end of each recovery operation, the refrigerant left in the LV8 recovery unit must be pumped out. This is shown in Figure 3.

The LV8 has a self pump-out system (Patent Pending) which is very easy to use.

1. Close inlet ball valve.
2. Open outlet valve of LV8 and recovery cylinder valve.
3. Turn LV8 power on.
4. When suction pressure gauge on the LV8 reaches 0 PSIG, self pump-out is complete.
5. When self pump-out is complete shut cylinder valve and outlet valve.
6. A total evacuation of the unit can only be obtained by using a vacuum pump.



MAINTENANCE

Caution: Never lubricate this dry oil-less compressor. The Teflon® filled rings are self-lubricating and do not require oil. The motor bearing are grease packed for the life of the bearing.

Warning: TO AVOID EXPLOSIVE HAZARD, DO NOT PUMP COMBUSTIBLE LIQUIDS OR VAPORS WITH THESE UNITS OR USE IN AN AMBIENT THAT CONTAINS COMBUSTIBLE VAPORS OR LIQUIDS.

Under certain ambient temperature of 40°F or lower, the exhaust air from the LV8 can cause ice formation, causing the LV8 to stop pumping. Placing the pump in a warmer area can solve this problem.

After using the LV8 for removing highly contaminated refrigerants, use a few pounds of clean refrigerant to pump through the LV8 to clean out the LV8 pump.

IMPORTANT NOTE:

For trapping of particles, filter-drier size 163 must be installed at the refrigerant inlet of the LV8. The drier should be replaced after each job or as often as required, depending on the amount of rust and particulate which are in the system being pumped out. This will greatly reduce the amount of wear on the internal O-ring seals in the LV8.

THE LV8 AIR COMPRESSOR COMES WITH A PRE-SET SAFETY VALVE. DO NOT MAKE ANY ADJUSTMENTS TO THIS VALVE. IF THE VALVE MALFUNCTIONS REPLACE IT. MAKE SURE THE PRESSURE REGULATOR IS FULLY OPEN WHEN USING THE LV8 AIR COMPRESSOR. OTHERWISE, THIS COMPRESSOR SAFETY VALVE MAY UNLOAD.

WARRANTY

National Refrigeration Products (NRP) Recovery Equipment is warranted to be free of manufacturing defects. NRP will repair or give credit for repair, at NRP's choice, if any NRP Recovery units or accessories have manufacturing defects. Any warranty claim must be submitted in writing within one year of purchase with a copy of the invoice. In no event shall NRP be liable for the cost of the labor charges, lost profits, injury to good will, or any other special or consequential damages for defective goods, late delivery, or non-delivery. There are no warranties which extend beyond the description on the face hereof, and NRP makes no warranty of merchant ability or fitness for specific purpose. Warranty does not cover damage by improper operation or abuse.