## **INSTALLATION & START UP**

**LOCATION:** If the pump is used in dirty or humid conditions, it is recommended that the pump be enclosed.. Do not store or operate in excessively high temperature areas or without proper ventilation.

**MOUNT:** Mount the pump on a rigid, horizontal surface in such a way as to permit drainage of crankcase. An uneven mounting surface will cause damage to the pump. Use appropriate flexible hose to the inlet and discharge ports. Use the proper belts, making sure pulleys are aligned. Excessive belt tension can be harmful to bearings. Check pump before starting to be certain the shaft and bearings are free moving. For G-Series gear reduction applications, pump must have support rail with vibration isolators or an UDOR torque plate installed. Contact UDOR U.S.A. for information.

**PUMP ROTATION:** UDOR Plunger Pumps are designed for clockwise rotation to allow optimum lubrication of the crosshead area. Reverse rotation is acceptable if the crankcase oil level is increased slightly above the center dot to assure proper lubrication.

**LUBRICATION:** Fill the crankcase with UDOR LUBE Premium Pump Oil or SAE 30W non-detergent oil per pump specifications. DO NOT run pump without oil in crankcase. Change oil after initial 50 hour break-in and every 500 hours or 3 months there-after.

**PUMPED FLUIDS:** Some fluids may require a flush between operations or before storing. For information regarding pumping fluids other than water, please contact UDOR U.S.A.

INLET CONDITIONS: Ensure proper inlet flow. DO NOT STARVE THE PUMP OR RUN PUMP DRY!

**DISCHARGE PLUMBING:** DO NOT START PUMP UNLESS A RELIEF VALVE OR UNLOADER VALVE IS INSTALLED. OPEN ALL VALVES BEFORE STARTING THE SYSTEM TO AVOID DEADHEAD OVERPRESSURE CONDITION AND SEVERE DAMAGE TO THE PUMP OR SYSTEM.

**PULSATION DAMPENER:** (Optional) Install dampener directly into discharge line. Make sure the pulsation dampener is properly pre-charged for the system pressure.

**PRESSURE GAUGE:** Install pressure gauge near the discharge outlet of the high pressure manifold. This is extremely important for adjusting pressure regulating devices and for proper sizing of the nozzle or restricting orifice. The pump is rated for a maximum pressure, which should be read at the discharge manifold of the pump, not at the gun or nozzle.

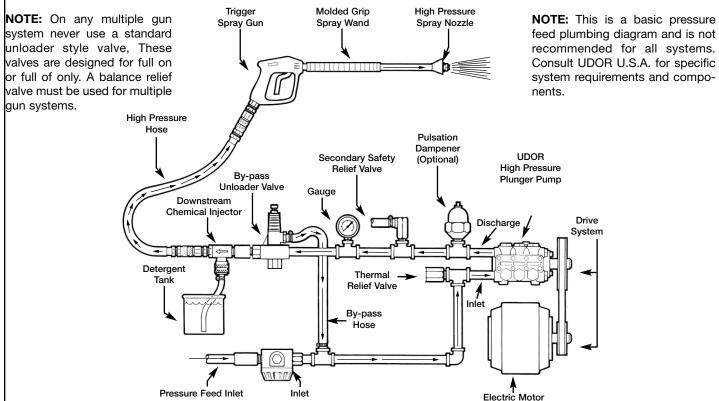
**PRESSURE REGULATOR/UNLOADER VALVE:** A pressure regulator or unloader valve must be installed to prevent over pressurizing and severely damaging the pump if the discharge is turned off or becomes plugged. Pressure regulators / unloader valves should be at minimum pressure setting at start-up. On systems over 2000 PSI, secondary protection, such as a pop-off valve or safety valve, is recommended. Start system with all valves open or in the low pressure setting.

CAUTION: FAILURE TO INSTALL A PRESSURE REGULATING VALVE WILL VOID THE WARRANTY ON THE PUMP.

**NOZZLES:** A worn nozzle will result in loss of pressure. Do not adjust pressure regulating device to compensate for pressure loss. Replace nozzle and reset the regulating device to proper system pressure.

**STORING**: For extended storage or between use in cold climates, drain all pumped fluids from the pump and flush with a 50/50 mixture of anti-freeze and water to prevent freezing and damage to the pump. DO NOT run pump with frozen fluid.

## BASIC PRESSURE FEED HIGH PRESSURE CLEANING SYSTEM PLUMBING DIAGRAM



Filter

Supply Line

Gas/Diesel Engine