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Rotary Piston Pump Troubleshooting Guide

PROBLEM	PROBABLE CAUSE	SOLUTIONS
System ultimate pressure excessively high	Process equipment contaminated by vapor pressure material.	Clean equipment with acetone, alcohol or other. Pump down with vacuum pump overnight.
	Process equipment or pump leaks.	Leak-check process equipment. Repair leaks as necessary.
	Oil flow restricted (oil level should change with pump pressure).	Drain oil, remove and clean external oil piping, clean Y-strainer, and replace external oil filter, if so equipped.
	Vacuum pump oil contaminated.	Change pump oil. See Operator's Manual.
	Discharge valve malfunctioning.	Check valves. See Operator's Manual.
	Vacuum pump shaft seal malfunctioning.	Check shaft seal. See Operator's Manual.
	Vacuum pump internal parts worn or damaged.	Dismantle pump and inspect internal parts. See Operator's Manual.
Excessive piston pump noise at low pressure	Clacking noise of pump discharge.	Open the gas ballast valve. If noise disappears with air bleed, the noise is from the discharge valves and not a concern. Open small bleed at gas ballast valve if it cannot be tolerated due to loss of vacuum.
	Knocking noise.	If the noise is still present with air bleed, the noise may be mechanical due to knocking of rotary internals because of excess wear. Change out rotary internals such as piston, cam and slid pin. Or call Northwest Industrial Repair for service and repair.
Piston pump stalls	Electrical power interrupted.	Check power at motor.
	Belts slipping; pump malfunctioning; pump oil contaminated or pump not sufficiently lubricated.	See Operator's Manual for installation, V-belt drive and changing oil.
	Pump too cold.	See Operator's Manual. Install water jacket heaters if applicable.
	Foreign particles in pump.	Disassemble pump and clean or call Northwest Industrial Repair for service and repair.
Piston pump vibrates	Inlet or outlet connections not flexible.	Use flexible connectors.
	Vibration mounts incorrect or not positioned properly.	Check to ensure that vibration mounts are installed correctly.
Oil in piston pump inlet piping	Piping at incorrect level.	Add inlet elbow.
	Gas ballast valve left open when stopping pump.	Add automatic valve.
	No isolation valve and vent valve.	Add valves.