

Pump Trouble Shooting

Problem:	Cause:	Solution:
Oil leak between crankcase and pumping section.	Worn crankcase piston rod seals.	Replace crankcase piston rod seals.
	Worn O-rings on plunger retainer.	Replace O-rings.
Frequent or premature failure of the packing.	Damaged or worn plunger.	Replace plunger.
	Overpressure to inlet manifold.	Reduce inlet pressure.
	Abrasive material in the fluid being pumped.	Install proper filtration on pump inlet plumbing.
	Excessive pressure and/or temperature of fluid being pumped.	Check pressures and temperature at fluid inlet. Assure they are within the specified temperature and pressure ranges.
	Over pressure of pumps.	Check for restriction in discharge line. Check for proper nozzle size. See Nozzle Chart.
	Machine has been run without water.	Check for adequate water supply.
Pump runs but produces no flow.	Pump is not primed.	Flood suction and restart pump.
	Clogged inlet screen(s).	Clean or replace inlet screens.
Pump fails to prime.	Air is trapped inside pump.	Disconnect discharge hose from pump. Flood suction hose, reattach, and run pump until air has been evacuated.
	Check valve(s) are stuck in closed position.	Clean or replace all check valves.
Pump loses prime, makes a chattering noise, or has pressure thread fractures.	Air leak in suction hose.	Remove suction line and inspect for damage. Replace suction hose.

	Insufficient water supply.	Remove suction line and inspect for a lost liner or debris. Avoid unnecessary bends. Do not kink hose. Increase water supply.
	Clogged suction strainer.	Clean or replace strainer and/or tank.
Low pressure at spray nozzle.	Unloader valve is bypassing.	Properly adjust unloader and make sure bypass seat is not leaking.
	Incorrect nozzle.	Make sure you are using the correct nozzle. See Nozzle Chart.
	Worn Nozzle.	Replace worn nozzle.
	Restricted intake.	Refer to Pump fails to prime / Pump loses prime.
Pump makes too much noise.	Pump is sucking air.	Check suction manifold.
	Inadequate chemical supply.	Check and refill chemical supply.
	Chemical line inlet is above chemical level.	Place chemical inlet below chemical level.
	Chemical line is damaged.	Inspect chemical line for damage. Replace chemical line.
Pressure Gauge Fluctuates	Worn or blocked valves.	Inspect, clean, or replace valves.
	Worn or damaged packing.	Inspect and replace packing.
	Temperature of liquid being pumped is too high.	Reduce temperature of liquid being pumped.
Over pressure when trigger gun is closed.	Leaking in unloader valve with incorrect setting.	Test pressure with gauge. Control the valve and set appropriate pressure level.
Pulsation	Faulty pulsation damper.	Check pre-charge. Recharge or replace is too low.
	Worn or blocked check valves.	Clean or replace check valves.
Low Pressure	Worn Nozzle	Replace nozzle.
	Belt is slipping.	Tighten or replace belt.

	Air leak in inlet plumbing.	Disassemble, reseal, and reassemble.
	Stuck, clogged, or improperly adjusted relief valve	Clean, adjust, or replace relief valve.
	Worn or damaged valve seat.	Replace valve seat.
	Clogged inlet suction strainer.	Clean or replace inlet strainer.
	Worn packing.	Replace seals.
	Abrasives in system.	Install inlet screen and examine check valves for abrasives.
	Inadequate water supply.	Check and increase water supply.
Pump runs rough with very low pressure.	Restricted inlet	Clean or replace inlet filter.
	Air entering inlet plumbing.	Check for an air tight seal. Replace leaking fitting or hose.
	Improper sized inlet plumbing.	Replace with correct sized inlet plumbing per specs.
Water leaking from manifold.	Worn packing.	Replace packing.
	Damaged plunger.	Replace plunger.
	Cracked pump head.	Inspect pump head for damage. Replace pump head.
Oil leaking in area of crankshaft.	Worn crankshaft seal or improperly installed oil seal O-ring.	Removed oil seal retainer and replace damaged O-ring and/or seals.
	Bad bearing.	Replace bearing.
Excessive play in the end of the crankshaft pulley.	Worn main bearing from excessive tension on drive belt.	Replace crankcase bearing and/or tension drive belt.
Water in crankcase	Humid air condensing into water inside crankcase.	Replace oil. Only use 30 weight non-detergent oil.
	Damaged plunger.	Replace plunger.

	Damaged piston rod oil seal.	Replace piston rod oil seals.
Oil leaking from underside of crankcase.	Worn or damaged piston rod seals.	Replace piston rod seals.
Oil leaking from rear portion of crankcase.	Worn or damaged pump housing seals.	Replace pump housing seals.
Knocking noise from pump.	Loose pulley on crankshaft.	Check key and tighten set screw.
	Broken or worn bearing.	Replace bearing.
	Damaged crankshaft.	Replace pump.
	Damaged or broken plunger	Replace plunger and packing.



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