



# Maintenance Checklist

The maintenance of your pump is very important. Use this chart as a reminder to perform the proper daily, weekly and hourly maintenance of your pumps. The back of this chart provides you with a trouble shooting chart which will assist with the diagnosis and maintenance of your pumps.

## Daily

Week of \_\_\_\_\_

Mon Tue Wed Thu Fri Sat Sun

Inspect and clean inlet filters							
Check oil for proper level and consistency (1)							
Check pump for oil leaks (manifold/crankcase and bearings) (2)							
Check pump for water leaks							

1. If oil shows signs of contamination (milky/discolored), change immediately, and replace packings.
2. If the pump shows signs of oil leaks between the crankcase/manifold, change piston rod oil seals immediately. If oil leaks out of the side covers, change side cover oil seals immediately.
3. If water leaks between crankcase/manifold, change packing assembly immediately.  
If water leaks from valve caps, change valve cap O-rings.

## Weekly

Week of \_\_\_\_\_

Check belts and clutch for proper tension and alignment Checked by \_\_\_\_\_

Check unloader/regulator and microswitch for proper operating and by pass pressure Checked by \_\_\_\_\_

Check all fittings for proper tightness to prevent leakage. Tighten loose nuts, bolts and fasteners. Checked by \_\_\_\_\_

## Maintenance Record

Oil Changed (50 hr break, every 500 hrs thereafter) Changed by \_\_\_\_\_

Packing Change As Needed Changed by \_\_\_\_\_

Valve Change As Needed Changed by \_\_\_\_\_

## Observations



# Trouble Shooting

PROBLEM	CAUSE	REMEDY
Pulsation	Valve stuck open	Check all valves, remove foreign matter
Low pressure	Worn nozzle	Replace nozzles, use proper size
	Belt slippage	Tighten or replace; use correct belt
	Air leak in inlet plumbing	Disassemble, reseal and reassemble
	Relief valve stuck, partially plugged or improperly adjusted, valve seat down	Clean, adjust relief valve; check for worn or dirty valve seats. Kit available.
	Inlet suction strainer clogged or improperly sized	Clean, use adequate size. Check more frequently
	Worn packing, abrasives in pumped fluids or severe cavitation, inadequate water	Install proper filter. Suction at inlet manifold must be limited to lifting less than 20 feet of water or 8.5 PSI
	Fouled or dirty inlet discharge valves	Clean discharge and valve assembly
	Worn inlet, discharge valve blocked or dirty	Replace worn valves, valve seats and/or discharge hose
	Leaky discharge hose	
Pump runs extremely rough, pressure low	Restricted inlet or air entering the pump	Proper size inlet plumbing; check for air tight seal plumbing
	Inlet restriction and/or air leaks. Stuck inlet or discharge valve	Replace worn cup or cups, clean out foreign material, replace worn valves
Water leakage from under manifold, slight leakage	Worn packing	Install new packing
	Cracked plunger	Replace plunger(s)
Oil leak between the crankcase and plumbing section	Worn crankcase piston rod seals O-ring on plunger retainer worn	Replace crankcase piston seals. Replace O-rings
Oil leaking in the area of the crankshaft	Worn crankshaft seal or improperly installed oil seal O-ring	Remove oil seal retainer and replace damaged O-ring and/or seals
	Bad bearings	Replace bearing and any spacer or cover damaged by heat
Excessive play in the area of the crankshaft pulley	Worn main bearing from excessive tension on the belt	Replace crankshaft bearing and/or tension drive belt
Water in crankcase	May be caused by humid air condensing into water inside the crankcase	Change oil intervals. Use non-detergent oil
	Worn packing and/or piston rod sleeve O-ring on plunger retainer worn	Replace packing. Replace O-ring
	Cracked plunger	Replace plunger(s)
Oil leaking at underside of crankcase	Worn crankcase piston rod seals	Replace seals
	scored piston rod	Replace piston rod
Oil leaking at the rear portion of the crankcase	Damaged crankcase, rear cover O-ring, drain plug O-ring, or sight glass O-ring	Replace cover O-ring, drain plug O-ring, or sight glass O-ring
Loud knocking noise in pump	Pulley loose on crankshaft	Check key and tighten set screw
	Broken or worn bearing or rod(s)	Replace bearing or rod(s)
	Valve stuck open or shut, or not opening enough	Replace bad valve
	Inadequate water supply to pump inlet	Check inlet feed conditions and adjust accordingly
Frequent or premature failure of the packing	Scored, damaged or worn plunger	Replace plunger(s)
	Over pressure to the 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 pressure and fluid inlet temperature; be sure they are within specified range
	Overpressure of pump	Reduce pressure
	Running pump dry	DO NOT run pump without water
	Upstream chemical injection	Use downstream chemical injection

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