

## General Pump Inspection and Maintenance Schedule for Vertical Turbine Pumps

Excludes motors, engines, gear drives, VFDs, and controls.

For Patterson's packaged pump systems product, refer to the General Pump Inspection and Maintenance Schedule for packaged pump systems.

Any additional inspections, maintenance, or tests required by NFPA- Standards for fire pumps are excluded.

Refer to NFPA Standards for additional requirements for fire pumps.

The symbol (■) used in the table below indicates that the action indicated may not be applicable to a specific pump of a particular type.

For more information regarding inspection and maintenance requirements refer to the Patterson O & M manual supplied with the pump.

Contact Patterson Pump Company if assistance is needed to determine the inspection and service requirements for a specific pump.

Inspect (✓) or service (·) at the indicated calendar time or run time interval – whichever comes first	4 hours	Routinely	Monthly	2000 hours or 3 months	4000 hours or 6 months	8000 hours or 12 months
Replenish grease lubricated sleeve bearing grease per the O & M manual using the manual grease lubricator. Perform every 3 months while idle. (vertical wet pit pumps so equipped) ■	•					
Unusual noise		✓				
Unusual vibration		✓				
Unusual temperature		✓				
Leaks in pump or piping		✓				
Pressure gauge readings		✓				
Visual inspection of equipment general condition		✓				
Anytime a pump is opened, inspect the running clearances and restore them to original specifications if the running clearances have doubled (install new wear rings)		✓ •				
Anytime a pump is opened, inspect the impeller for corrosion or excessive wear.		✓ •				
Packing box – verify slight leakage (if excessive, adjust gland or seal water valve; replace packing if required) ■		✓ •				
Mechanical seal (should be no leakage) ■		✓				
Drain lines are working properly ■		✓				
Coupling integrity ■		✓				
Drive shaft integrity ■		✓				
Verify proper operation of oil drip lubricator (vertical wet pit pumps so equipped) ■			✓			
Verify proper operation of automatic grease lubricator (vertical wet pit pumps so equipped) ■			✓			
Operate the pump (note – for vertical wet pit pumps first verify proper lubrication )			✓			
Tightness of foundation and hold-down bolts				✓		
Check coupling alignment and integrity (maintain records) ■				✓		
Add grease to universal joint shafting u-joint bearings, anti-friction steady bearings (maintain records) ■				•		
Replace packing (all packing; not just the outermost ring) ■					•	
Clean and oil gland bolts (packed pumps) ■					•	
Verify free movement of packing glands (packed pumps) ■					✓	
Universal joint shafting and needle bearings wear check (replace bearings if required) ■					✓ •	
Clean packing box						•
Check and flush seal water and drain piping						•
Perform a comparative field test (flow, pressures, and power) with calibrated instruments. Restore internal running clearances if results are unsatisfactory (install new wear rings).						✓ •
Perform a comparative vibration test						✓
Remove packing and inspect sleeve(s). Replace if worn. (packed pumps) ■						✓ •

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