

Troubleshooting Guide

Liquid Ring Pumps

Symptom	Potential Cause	Possible Solution
Pump does not produce enough vacuum	Pump is not primed.	Prime pump and start under vacuum.
	Service fluid is too low in seal oil tank.	Add seal oil.
	No restriction on inlet of pump.	Close valves to create suction.
	Dilution valve is open.	Close dilution valve.
	Service fluid is not flowing into the pump.	Check for flow restrictions in service fluid lines. Check strainer.
	Pump is rotating in the wrong direction.	Check and change direction if required.
	Vacuum gauge is not working correctly.	Replace vacuum gauge.
	Pump seals may be allowing air into the pump.	Check for leaking and replace seals if required.
	Pump is too small for application.	Replace pump.
	Vacuum relief valve is set too low.	Replace or reset vacuum relief valve.
	Air may be leaking into vapor lines.	Check for air leaks in vapor lines.
Pump is making a growling noise.	Pump internal components are damaged.	Disassemble pump and replace components if required.
	Cavitation is occurring.	Decrease the vacuum.
Pump is leaking.	Insufficient seal fluid flow or excessive seal fluid flow.	Increase/decrease seal fluid flow rate.
	Gaskets are faulty.	Replace gaskets.
	Mechanical seal has been overheated or is faulty.	Replace mechanical seal.
Pump is running too hot.	Oil may be leaking from 1/8" vacuum relief valves in pump housing.	Remove valves and install plugs.
	Seal fluid strainer is plugged restricting seal fluid.	Clean out strainer.
	LRP is not providing enough suction to draw sufficient seal fluid.	Increase seal oil suction. Pipe seal fluid into a higher vacuum port of pump.
	Seal fluid flow rate is too low.	Open seal fluid control valve to allow more seal fluid to enter the pump.
	Seal fluid heat exchanger is not working properly.	Check heat exchanger.

continued

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Excessive discharge pressure built up in seal oil tank	Demister filter is plugged and requires replacement.	Replace demister.
	Seal oil is not being drawn out of demister filter through scavenger line.	Increase vacuum of LRP to allow oil to be sucked through scavenger line. Ensure that scavenger line has sufficient vacuum to draw oil out of the demister filter.
Seal Oil Low Level Alarm	Seal oil temperature may be operating too high causing the oil to evaporate.	Check seal oil operating temperature and increase seal oil flow.
	Seal oil suction line may be plugged causing seal oil to collect in bottom of demister filter.	Check for plugging of seal oil return line and clean or replace if required.

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