

No flow	Under capacity	Irregular discharge	Low discharge pressure	Pump will not prime	Prime lost after starting	Pump stalls when starting	Pump overheats	Motor overheats	Excessive power absorbed	Noise and vibration	Pump element wear	Syphoning	Seizure	Mechanical seal leakage	Mechanical seal leakage	Problem	Solutions
																Incorrect direction of rotation.	Reverse motor.
																Pump not primed.	Expel gas from suction line and pumping chamber and introduce fluid.
																Insufficient NPSH available.	Increase suction line diameter. Increase suction head. Simplify suction line configuration and reduce length. Reduce pump speed.
																Fluid vaporizing in suction line.	Increase suction line diameter. Increase suction head. Simplify suction line configuration and reduce length. Reduce pump speed.
																Air entering suction line.	Remake pipework joints.
																Strainer or filter blocked.	Service fittings.
																Fluid viscosity above rated figure.	Increase fluid temperature. Decrease pump speed. Check seal face viscosity limitations.
																Fluid viscosity below rated figure.	Decrease fluid temperature. Increase pump speed.
																Fluid temp. above rated figure.	Cool the pump casing. Reduce fluid temperature. Check seal face and elastomer temp. limitations.
																Fluid temp. below rated figure.	Heat the pump casing. Increase fluid temperature.
																Unexpected solids in fluid.	Clean the system. Fit strainer to suction line. If solids cannot be eliminated, consider fitting double mechanical seals.
																Discharge pressure above rated figure	Check for obstructions i.e. closed valve. Service system and change to prevent problem recurring. Simplify discharge line to decrease pressure.
																Gland over-tightened	Slacken and re-adjust gland packing.
																Gland under-tightened	Adjust gland packing.
																Seal flushing inadequate.	Increase flush flow rate. Check that flush fluid flows freely into seal area.
																Pump speed above rated figure.	Decrease pump speed.
																Pump speed below rated figure.	Increase pump speed.
																Pump casing strained by pipework.	Check alignment of pipes. Fit flexible pipes or expansion fittings. Support pipework.
																Flexible coupling misaligned.	Check alignment and adjust mountings accordingly.
																Insecure pump driver mountings.	Fit lock washers to slack fasteners and re-tighten.
																Shaft bearing wear or failure.	Refer to pump maker for advice and replacement parts.
																Insufficient gear case lubrication.	Refer to pump maker's instructions.
																Metal to metal contact of pumping element.	Check rated and duty pressures. Refer to pump maker.
																Worn pumping element.	Fit new components.
																Rotor case cover relief valve leakage.	Check pressure setting and re-adjust if necessary. Examine and clean seating surfaces. Replace worn parts.
																Rotor case cover relief valve - chatter.	Check for wear on sealing surfaces, guides etc. Replace if necessary.
																Rotor case cover relief valve incorrectly set.	Re-adjust spring compression - valve should lift approx. 10% above duty pressure.
																Suction lift too high.	Lower pump or raise liquid level.
																Fluid pumped not compatible with materials used.	Use optional materials.
																No barrier in system to prevent flow passing.	Ensure discharge pipework higher than suction tank.
																Pump allowed to run dry.	Ensure system operation prevents this. Fit single or double flushed mechanical seals. Fit flushed packed gland.
																Faulty motor.	Check and replace motor bearings.
																Pumping element missing	Fit pumping element.