

Problem Description	Probable Cause 1	Remedy 2	Probable Cause 2	Remedy 2	Probable Cause 3	Remedy 3	Probable Cause 4	Remedy 4
Pump not achieving design flow rate	Low NPSH	May have noise associated with cause. Recalculate NPSH and re-design as required.	Too High of System Head	Check valving for proper installation and position, Increase line size or reduce fittings, increase impeller diameter.	Plug in inlet line, pump or outline	Check strainers, check and remove chock points, reduce particle length, oversize the pump.	Too low of discharge pressure	Check speed and direction of pump, cavitation due to entrained Gases, check for proper impeller installation
Pump Running – No discharge or Flow	Not Properly Primed	Check priming instructions, check pump rotation, remedy any leaks on pump inlets which are allowing air entrainment.	Suction Lift is too high.	Redesign piping and/or pump, increase suction head and possibly impeller size	Plug in system	Check strainers, check and remove chock points, reduce particle length, oversize the pump.		
Pump operates for a time and loses Prime	Insufficient NSPH	May have noise associated with cause. Recalculate NPSH and re-design as required.	Entrained air	Repair leaks on suction side of pump				
Cavitation- Excess Noise on wet end	Insufficient NSPH	Recalculate NPSH and re-design as required.	Impeller Rubbing	Check and re-set impeller clearance				
Excessive noise on drive end	Overloaded bearings	Check that operating conditions meet allowable suction pressure and maximum Sp.gr.,	Bearing Damage and contamination	Replace Bearing and review lubrication, cleaning and installation practices. Review thrust loading on the bearing.	Brinnelling of bearings	When mounting a bearing be sure pressure is slowly and evenly applied to the inner ring.	False Brinnelling of bearing	Correct source of Vibration, Infrequent use should require regular run test or turning of the shaft.
	Misalignment of bearings	Caused by improper mounting procedures or improperly machined shafts- Assure bores are true, shafts are square with centerline.	Bearing damage by electrical arc	Check all wiring, insulation and rotor windings, if required use a slip ring assembly, assure equipment properly grounded and welding connections are properly done.	Improper lubrication	Review lubrication check list to keep lubricant clean and free of contamination, proper amounts and lubricants are being used,		
Excessive leaking at stuffing box	Loosing packing gland	Adjust packing gland while operating	Excessive wear or improperly lubricated	Replace and review design for lubrication	Shaft is bent	Replace shaft	Shaft or sleeve scored	Replace