



Failure Modes & Failure Effects

COMPONENT	FAILURE MODE	FAILURE EFFECT
Impeller	Unbalance, Thermal Distortion, Erosion/Corrosion, Looseness	Decreased efficiency, Requires Balancing - 3 hrs Downtime, Bearing life reduction, effect on flow geometry changes under thermal distortion, Shaft/Key failure, Replacement
Bearing	Seizing, Improper Fitting, Cage Fracture, Race Defect, Rolling Element Damage, Looseness, Misalignment Within Housing	Bearing life reduction, Failure of shaft, Replacement
Shaft	Shear, Bent, Kink, Crush, Wear, Misalignment, Cracked	Alignment required, Build-up required - 48hrs Downtime, Replacement
Volute	Leakage, Crack, Thermal Strain	Repair by welding - 2 hrs Downtime, Replacement
Key	Looseness, Shear, Crush	Refitting - 7 hrs Downtime, Replacement
Insulation	Erosion, Breakage, Ageing	Heat loss, Replacement