

Reliability Improvement

ReThink Manufacturing · Evidence-led manufacturing improvement

Summary: A cross-lapping machine was experiencing repeated shaft wear. Each occurrence required maintenance intervention, consumed spare parts, and interrupted production. The pattern had continued long enough to be considered normal by the team.

Problem: A cross-lapping machine was experiencing repeated shaft wear. Each occurrence required maintenance intervention, consumed spare parts, and interrupted production. The pattern had continued long enough to be considered normal by the team.

Approach: Previous maintenance had focused on replacing worn components — shafts, bearings, seals. Each replacement addressed the consequence, not the cause. The pattern suggested a systemic design issue rather than a parts quality or maintenance scheduling issue.

The bushing arrangement was unsuitable for the load and speed conditions. The material and geometry of the bushing created friction and wear that no component replacement could permanently resolve — because the underlying design flaw remained.

The support was redesigned with a more appropriate bearing solution matched to the actual load and speed conditions. The new arrangement eliminated the conditions causing wear.

Outcome: Reliability significantly improved. Repeated maintenance visits for this machine ceased.