

Dreisilker Electric Motors, Inc. - Job # 388053

Motor Failure

Cause of Failure: The opposite drive end bearing locked up. The motor was found to have a bent shaft and a bad bearing housing. The bearing was cut in half and it was found to have a condition indicating excessive thrust load (Figure 1). Excessive thrust wear is shown by an even pattern directly on one side of the raceway. It is caused by an axial overload. This could indicate improper mounting of the motor or a problem with the machine. It is possible the shaft was bent during installation or the machine has a problem.

Possible Solution: When mounting the motor on the machine, ensure that the motor shaft and machine mating part is clean and has no burrs. Use an anti-seize to mate the motor shaft and the machine mating part together. When pushing the motor into the mating part of the machine, ensure that the motor is not cocked at an angle to avoid bending the shaft or damaging any other components. Also, ensure that the machine is not overloading the motor or pulling on the motor shaft axially by adjusting the mating couplings with correct spacing.



Figure 1: Excessive Thrust Load on the Opposite Drive End Bearing

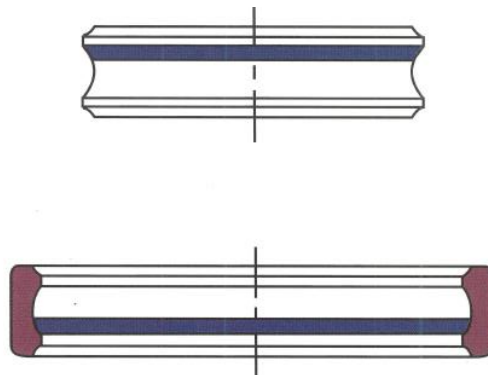


Figure 2: Example of Excessive Thrust Load Wear