



How accurate are the results of bearing life calculations?

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The results that are attained using bearing life calculations are based on theoretically optimal conditions of bearing operations. Such optimal conditions include perfect fitting conditions, perfect shaft alignment, clean environment, stable temperatures, evenly distributed grease, and consistent loading.

It is unlikely that all application conditions are optimal. For example, the fitting conditions might be such that the internal clearance of the bearing is more than the fluid film thickness and would lead to some chattering of the rolling elements. Another example would be that there is a small degree of shaft deflection and, therefore, bearing operates with a slight misalignment. The fact that most application conditions are far from optimal suggests that bearing life calculation results are only estimates.

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