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# *PREMATURE BEARING FAILURES*

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## ABSTRACT

Rolling bearings are commonly used element of machines. The most common things that cut bearings life are: poor fitting, poor lubrication, contamination and fatigue.

Poor fitting usually called as brute force causes lifetime reduction about in 16% of premature failures. Also the availability of the correct fitting tools is the cause for poor fitting. Individual installations may require mechanical, hydraulic or heat application methods for correct and efficient mounting or dismounting.

Poor lubrication also is one of the causes although bearings are mostly 'sealed–for–life' and that's why are installed and stay forgotten. About 36% of premature bearing failures are caused by incorrect specification and inadequate application of the lubricant. Effective lubrication and use of recommended greases by bearing manufacturers can significantly reduce downtime.

Contamination can easily spoil lubricant and that leads to poor lubrication and deterioration of precision part of bearing. The proper isolation from contaminants is needed. About 14% of all premature bearing failures are attributed to contamination problems.

Fatigue is one more important thing in bearing operation. Incorrect operation, overload or negligence can be cause of about 34% of premature bearing faults.

The condition monitoring together with preventive measures can reduce premature failures and downtime.

[*Keywords:* rolling bearing, premature failure, poor lubrication, fatigue, poor mounting, grease contamination.]

## GENERAL

The main goal of this study is to get the review of rolling bearing premature failures. There are many articles concerning to this topic. Also bearing manufacturers are offering solutions to exclude mentioned above problems. The study will help to highlight uninvestigated problems and conditions that shorten bearing lifetime and future direction for investigation.

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