Bearing lubricating procedures

General

In order to better help our customers with their critical lubricant applications, we have prepared this explanation of recommended bearing lubricating procedures. Should a more detailed explanation of the information presented here be required, please contact us.

Although these procedures apply specifically to grease lubricated bearings, the information contained herein may be useful in other similar applications.

Lubricating procedures

The procedure followed in applying a lubricant can be as important as the lubricant selected. Three areas which are of particular importance in the application of a lubricant are:

- Cleaning
- Fill quantity
- Run-in

Note: not all applications require specific attention in the areas of bearing cleaning, lubricant fill quantity or run-in

What are the benefits?

The main objective in using these procedures is to produce a system where the lubricant is operating at its most efficient state. This means that the lubricant is set correctly in the bearing using the proper quantity of product, and that the bearing is operating at the lowest possible steady-state operating temperature. This provides the necessary situation for long life, high speed running without excessive heat generation. Keep in mind that excessive bearing temperatures will decrease both lubricant life, as well as system operating precision.

Important

In order to achieve the full benefits from these procedures, bearings should be run-in in the same direction in which they will operate. It is also advisable to perform the run-in at the actual application site, since the motion associated with shipping / handling / assembly of bearings may affect the results of a well controlled run-in.

High speed precision machine tool spindle bearings which are grease lubricated (without the availability of relubrication) must follow these specific procedures in order to operate successfully. Those applications where the operating parameters have become critical (such as bearings and/or lubricants which are operating close to their rated speeds, or applications which are lubricated-for-life) may also benefit from these procedures. Other less critical applications may also benefit from these procedures, although it is possible to operate successfully without them.

You may find from experience that some applications require more attention than others, or that some applications may allow some steps to be eliminated. It is, therefore, important that you fully document and review each application procedure so that you can achieve future benefits from the information you have accumulated.