Issue 6: Bud's Take on Bearing Storage & Handling

In my years of doing bearing failure presentations I have always enjoyed dealing with operational or service failures. The problem with many service failures is that they are too far gone and we make an educated guess as to what occurred. I always glazed over an addressable topic: Bearing Storage & Handling!

Bearing Storage & Handling Failure Percentages

Most failure papers and presentations spend time on lubrication and fitting practices. These items combine to approximately 80% of all bearing failures. Accounting for only 10% of failures, a lot of time is spent reviewing fatigue failures. This is because fatigue failures can cause immediate equipment failure. Storage and handling also attributes 10% with very little attention payed to these failure causes.

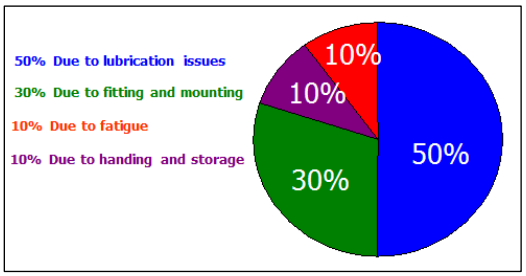

Chart 1: % of Failures in Bearings

By the Book

Most bearing manufacturers dedicate a few paragraphs to the storage and handling of bearings. The items noted are very important yet are considered common sense requiring very little discussion.

Handling: Train operators; protect bearings from rust (low humidity, wearing gloves), handle in clean environment, etc.

Storage: Keep in original packaging, do not store on floor, store where humidity is less than 65% and temperature around 68^0F, do not store in direct sunlight.

Implied by the Book

I believe it is critical to read between the lines to find implied recommendations:

- Placing a dampener between the bearings and shelving to avoid vibration.
- If possible, store bearings flat.
- Do not open boxes until ready to use.
- Minimize handling.
- There is no need to measure bearings.
- Store bearings in neatly organized fashion.

Picture 1: No organization, open boxes, etc.

More thoughts on bearing storage. Imagine providing a tour through your shop and your bearing storage area is a disaster (pic 1). What will that customer think (perception is everything)? Are my motors going to be handled with the same care?

Picture 2: Perception is everything.

If they see a well maintained storage area (pic 2) your customer will know his motors are in good hands.

Missing Element: Shipping

In the overall physical life of the bearing, shipping is an extremely small period of time. It is critical because the product is moving and subject to vibration, environment, handling and other uncontrolled elements.

Bearings should be shipped in a flat position where possible, such as utilizing LTL carriers when weight allows. However, flat position shipping is impossible with small package carriers. At Midpoint Bearing we ensure that our shipments do not damage the contents by adding an impact absorbing dunnage material and by taking care that contents are unable to move within the shipping carton.

Lastly, inspect your incoming packages for proper dunnage. Without proper packaging physical damage to the bearing box may occur. If this happens, inspect the bearing before use. Rarely is a crushed box from a well packed carton damaged to the point of unusable. Common sense applies in this case.

Conclusion:

Storage, handling and shipping combined are normally a very small percentage of the bearings physical life. According to all manufactures 10% of failures are attributed to this small time frame.

My best recommendation is walk out and take a look at how your bearings are stored, implement incoming inspection and know your Bearing Distributor!

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