

Lubrication Checkup: Excessive Failures

Written by By Dr. Lube, aka Ken Bannister
Tuesday, 22 December 2009 14:32



"Dear Dr. Lube: We spend a lot of preventive maintenance time on manual lubrication tasks, yet we still experience an inordinate amount of bearing failures.

Does this mean we have to increase our lubrication regime in order to increase reliability?"

Diagnosis:

The most likely reason for your excessive bearing failure is over-lubrication. "Killing a bearing with kindness" is common in manual-lubrication programs, where grease guns don't have standardized output delivery, where the PM job task simply states, "lubricate as necessary" and where different lubrication personnel are allowed to interpret the bearings' needs. Other possible causes include incorrect PM issue frequency and the mixing of incompatible greases in your bearings if no lubricant consolidation program is in place.

Prescription:

Ideally, bearing cavities should only be filled with 40 to 50% grease. Filling a cavity completely creates a condition known as fluid friction or "churning," whereby the bearing, trying to operate as designed, requires more input energy to move lubricant out of the way. The temperatures of the lubricant and bearing then spike, prematurely reducing the life of both.

Prevention of over-lubrication is best achieved as follows: First ensure that the right lubricant is always used. Consolidating lubricants and identifying the correct one to use on the PM work order, bearing point and grease reservoir or gun will mitigate risk considerably. Once that's done, all grease guns in the plant must be standardized to a single design, ensuring output delivery is the same for every "shot" of grease. Every bearing requirement and application frequency must then be calculated according to size, speed, load and usage and added to the job task—*most companies require professional help with this*. Finally, all maintainers will require training on the proper technique for use of a grease gun.

Alternatively, companies may choose to automate their lubrication with multi-point automatic grease-delivery systems, engineered for specific applications. Automated systems deliver a

Lubrication Checkup: Excessive Failures

Written by By Dr. Lube, aka Ken Bannister
Tuesday, 22 December 2009 14:32

small amount of lubricant to the bearing point on an almost continual basis, resulting in a three-times increase in bearing life, as well as reduced maintenance and decreased lubricant usage.

Both of these approaches will lead to a significant reduction in bearing failure and a decrease in PM activity—*freeing up maintenance teams to perform backlog work you could never find the time to complete previously!*

*Have lubrication questions? Contact Dr. Lube, aka Ken Bannister, who specializes in helping companies build successful lubrication-management programs. Author of the book **Lubrication for Industry***

and the 28th edition

Machinery's Handbook

section on Lubrication, he's also a contributing editor for

MAINTENANCE TECHNOLOGY

and

LUBRICATION MANAGEMENT & TECHNOLOGY

.

E-mail: doctorlube@atpnetwork.com