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Press Release

## The dangers of over-greasing

Greasing bearings is an important process in ensuring smooth and efficient running of machinery but it is not just a matter of slapping on copious quantities of grease, according to fluid management specialist Techenomics. Too much grease can cause as many problems as not enough, which means effective maintenance must include just the right amount.

Techenomics' CEO Chris Adsett says greasing should be carried out on a regular frequency with proper calculations used to determine the amount needed at each re-lubrication. The determining factor is based on the dimensions of the bearing or the bearing housing.

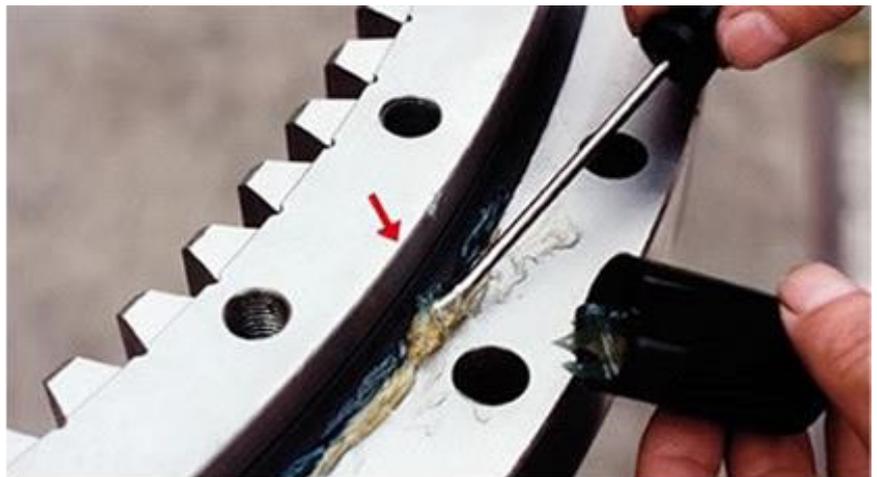
He says over-greasing can lead to high operating temperatures, collapsed seals and in the case of greased electric motors, energy loss and failures.

"Too much grease in a bearing cavity will cause the rotating bearing elements to begin churning the grease, pushing it out of the way, resulting in energy loss and rising temperatures. This leads to rapid oxidation of grease as well as an accelerated rate of oil bleed, which is a separation of the oil from the thickener.

"The heat generated over time along with the oil bleed eventually will cook the grease thickener into a hard, crusty build-up that can impair proper lubrication and even block new grease from reaching the core of the bearing. This can result in accelerated wear of the rolling elements and then component failure."



Chris Adsett, CEO of  
Techenomics International



Taking grease samples

Chris Adsett says seal damage is another negative side effect of over-greasing. "Grease guns can produce up to 15,000 psi and when you over-grease a bearing housing, the lip seals can rupture, allowing contaminants such as water and dirt to access the bearing housing. Keep in mind that lip seals usually fail around 500 psi.

“This excessive pressure can also damage single and double-shielded bearings, causing the shields facing the grease supply to collapse into the bearing race, leading to wear and eventually failure. When too much pressure is generated from a grease gun due to over-greasing, it is easy for the hard, crusty grease formed from high operating temperatures to be broken apart and sent directly into the bearing track.



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“Over-greasing electric motor cavities has the same effect as with any bearing application except that grease can reach the motor windings. When filled completely with grease, an electric motor bearing will generate excessive heat due to churning, resulting in energy loss as well as an accelerated rate of oil bleed and hardening of the grease thickener.

“The high pressure applied from a grease gun can result in grease finding its way between the shaft and inner bearing cap, pressing into the inside of the motor. The result over time is coating of the electric motor windings with grease, which leads to winding insulation and bearing failures.”

The best ways to avoid these problems are to establish a maintenance program, use calculations to determine the correct lubricant amount and frequency of re-lubrication, and utilise feedback instruments. “Each lube point, whether it be a bearing housing or electric motor, should be tracked as an asset, and records kept for scheduling planned maintenance or inspections of the asset. While the initial set-up of a maintenance system may take time and hard work, the end results will have a major impact,” he concludes.

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