

How To Kill A Bearing

Written by Ken Bannister, Contributing Editor
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I continue to be amazed at the shameful way many plants abuse—*make that "kill"*—their bearings. Designed and lubricated in accordance with their actual operating conditions, bearings often outlive their parent machine's usefulness. Unfortunately, there's no thrill in this scenario. So, to bring in some excitement, we overload our equipment, speed it up, run it 24/7 and forego proper maintenance. If, however, you really want to kill a bearing outright, the following *modi operandi* are quite effective.

Tactic #1. Death by Design: Because virtually all bearings must be lubricated, savvy designers will likely specify centralized automatic lubrication systems, knowing they will lubricate bearings better, reduce energy and triple bearing life. Knowing this, we can kill a bearing three times faster (and look like cost-cutting heroes) by encouraging our organizations to opt out of centralized lube systems in favor of grease nipples— *for mere pennies!*

If machines are already in service, we can promote our purchasing departments as cost-cutting heroes by letting them ignore like-for-like replacement policies and specify inferior-quality bearings that cost less. What's the harm; aren't bearings going to die anyway?

Tactic #2. Death by Kindness: Virtually all bearing designs rely on lubricants to stay alive. Paradoxically, the grease gun, designed in 1916 to save bearing lives, has been used to kill them ever since. We can take advantage of this "Lethal Weapon" knowing that by design, a bearing only requires 30% to 50% of its cavity to be filled with grease to provide an optimal lubrication state.

Because most grease gun operators mistakenly believe they must witness grease discharge from the bearing during greasing, once again we can be assured of the bearing's early demise. After all, if a little grease is good, a lot of grease is much better—*right?* To reinforce this concept, let's see to it that our grease gun operators remain untrained on proper procedures.

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Tactic #3. Death by Neglect: Conversely, in the bearing-killing business, a bearing with little or no working lubricant is a highly desirable state. Adopting a neglectful strategy by allowing lubrication PMs to be missed or incomplete is a very effective way to put an end to a bearing.

Tactic #4. Death by Contamination: Because bearings are neither dirt- nor water-tolerant, adopting a number of contamination tactics can effectively (and rapidly) reduce their lives. It's easy.

Never clean your grease gun tip or grease nipple before and after use; never clean and/or change oil filters; never reinstall the fill cap after filling a reservoir; always use shared (non-dedicated) open containers, funnels, hoses, etc. when it comes to storing, transporting and transferring lubricants—*and never clean them after use; always point a water hose directly at a bearing or reservoir* . Don't encourage personnel to do otherwise, either.

Tactic #5. Death by Ignorance: Because many oils and greases are incompatible with each other—*especially synthetics*—staying ignorant about their compatibility is a must if you want to dispatch bearings in short order. Adopting a policy of silence regarding lubricant compatibility and (as noted in Tactic #4 above) improper handling techniques will serve you well in your bearing-killing efforts.

Granted, these five tactics have been offered tongue-in-cheek. Remember, though, that knowing how to kill bearings can help you prevent their early deaths. With more than 70% of rotating equipment failures somehow attributable to ineffective lubrication, isn't it time for our organization to implement a Best Practices lubrication management program?
Good luck. **LMT**

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