Written by Dr. Lube aka Ken Bannister
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Symptom:
"As a greaser for an auto part manufacturer, I've noticed an increase in the number of replaced fractional and low-horsepower motors I now have to grease. Most of the replacement 'offshore' motors all have grease nipples, but they don't seem to last as long as the ones without nipples. Any suggestions for grease amount and schedule for these 'greasable' motors?"

Diagnosis:
This seems to be a common dilemma in light of more fractional and low-hp motors coming from offshore suppliers. The majority of these units are fitted with one or two grease nipples to lubricate the motor's bearings, yet, due to cost and physical motor size, relatively few have any form of lubricant drain positioned opposite the nipple(s).

Normally found in motors of 25 hp and higher—*depending on bearing design and set up-most larger motors have drain relief ports located 180˚ opposite the greasing point*
. When greasing the motor, the lubricator is required to unscrew the relief drain port dust cap prior to lubricating the bearing. If the bearing is over-lubricated—
as it most often is
—the grease is allowed to benignly drain through the unsealed bearing and out the drain port. The lubricator then cleans the port and screws the dust cap back in place.

If the dust cap is in place when the bearing is lubricated—*or no drain relief port exists*—over-lub rication causes excess grease to bypass directly into the motor's windings. This will start to hydraulically retard the motor, causing it to overheat and fail prematurely. Meanwhile, the motor will require a huge amount of additional electrical energy to overcome the fluid friction of the surplus grease.

Prescription:
Lubrication delivery system manufacturers who have been applying lubricants successfully

since the 1920s have always subscribed to the unwritten rule NOT to lubricate motors of 50 hp or less that have sealed bearings. Because a rolling element bearing only requires 40% of its cavity to be filled with grease, "run-to-fail" strategies have proven more effective than "kill-it-with-kindness" over-greasing. With small and fractional hp motors, a very small amount of over-greasing can quickly become problematic. A better approach would be to replace the grease nipple with a plug and run-to-fail. **MT**

Have lubrication questions of your own? Contact Dr. Lube, aka Ken Bannister, who specializes in helping companies throughout industry implement practical and successful lubrication management programs. The noted author of the best-selling book Lubrication for Industry *and of the 28th edition*
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