Written by By Dr. Lube, aka Ken Bannister
Thursday, 25 October 2012 11:24

Symptom:

"Dear Dr. Lube, the automated grease-lubrication systems on our remote, continuously operating pump stations suffered intermittent failures last fall and spring. They seemed to shut down on their own accord, only to start up by themselves after many hours, whereupon they operated perfectly until the next incident (which could be hours or days later). Any suggestions?"

Diagnosis:

The key to unlocking this problem is the specific time of year the failures occur. In spring and fall months, depending on geographical location, temperatures can be erratic—*swinging from very cold to very warm in a matter of hours.*

Due to its viscous nature, the state of a lubricant will change as ambient temperatures change. When the temperature heats up, a lubricant "thins out" and flows freely. As the temperature drops, the lubricant "thickens up" and becomes more resistant to flow.

Heating systems in buildings are typically turned on in the fall and off in the spring. When this is scheduled for specific calendar dates, a facility could still experience extremely cold temperatures in the early to mid-morning hours. Such conditions are enough to thicken a lubricant's viscosity to the point that it stalls a lube pump (especially with pneumatically

operated systems). As the building warms, the lubricant thins to the point that the pump seems to “magically” start working. The common use of NLGI #2 grease only compounds the situation, since most automated lubrication systems are rated for less-viscous NLGI #1 grease.

Prescription:
Check with your lube supplier to ensure that the correct viscosity of grease has been specified for your lubrication-system type and ambient temperatures at the site during those times when they’ve experienced intermittent failure. A lighter grade may be necessary during the winter or transition months.

Review maintenance records to determine the date of the last reservoir fill and ensure that grease was in the reservoir when the system failed. Perform a physical system check to make sure the correct lubricant is currently in use.

If a grade changeout is impractical, wrap the reservoir with a thermostat-controlled blanket wrap heater (similar to a car battery wrap heater) or drum heater, plug it in and use during times of transition between seasons.**MT**

Looking for advice from Dr. Lube? For specific lube questions and/or details about ICML lubrication-certification training (including in-house sessions and an upcoming workshop at MARTS 2013), email: doctorlube@atpnetwork.com. Or, go ahead and contact Ken Bannister directly. Telephone: (519) 469-9173; email: kbannister@engtechindustries.com.