LUBE TIP: COMMON LUBRICATION MISTAKES

5 THINGS TO WATCH OUT FOR

In a study conducted by a major component manufacturer, improper lubrication accounts for 53% of all bearing failures. Bearing failures are a major cause of equipment downtime and significant unnecessary maintenance costs. The majority of failures are caused by: contamination of bushings by dust, dirt and moisture; inadequate amounts of lubricant applied to bearings; or over-lubrication of key pivot points.

Forty-five years of lubrication experience at FLO Components has shown us that there are 5 common lubrication mistakes:

1. Understanding Greases

- Grease is a solid or semi-solid formed when a thickening agent is dispersed in the base oil.
- Special performance additives give greases their final special properties.
- The composition of grease is approx. 85% base oil with 15% thickener and additives.
- Greases are rated in NLGI (National Lubricating Grease Institute) index ranging from 000 to 6 (lightest to heaviest).
- When looking at the rating of a grease, consideration must be given to the Base Oil Viscosity of the lubricant within that grease.
- When selecting a specific grease, other factors may include, pumpability, thermal and mechanical stability, anti-wear, EP additives, oil bleed, oxidation and water resistance.

2. Compatibility of Lubricants

A grease is not "just a grease". When adding a new lubricant, make sure the proposed lubricant is compatible to the current lubricant with respect to thickeners, additives, etc. Check the packaging or contact the lubricant manufacturer or distributor to confirm your lube is acceptable. Incompatibility of greases can create internal frictional forces within the bearing, causing heat and potential bearing failure. With automatic lube systems, if the new lube isn't compatible, you could get plugged lines or metering valves or high pressure leading to system failure. Seal compatibility should also be taken into consideration when selecting or working with a specific grease. Failure may result in wear, damage, downtime and loss of production.

3. Over/Under Lubricating

Many work orders will state a specific number of "shots from a grease gun" to lubricate a bearing. The problem is that grease guns can have different delivery amounts, not only between different manufacturers, but also between different grease gun models from the same manufacturer. For example, a standard grease gun delivery is rated as approximately 30 strokes per oz. Therefore, higher or lower volume grease guns could cause damage to a bearing if you don't take into consideration a calculation of the output per stroke.

Some people's solution is to "keep pumping it in until you see it oozing out of the bearing". Note that too much grease can be just as harmful as too little (not to mention the wasted lubricant, clean-up costs and general housekeeping appearances). The viscosity of a grease can lend itself to more internal friction within a bearing resulting in a buildup of heat. It's like the difference between trying to stir honey compared to trying to stir peanut butter – the heavier the grease, the more friction you get.

4. Application of Greases

Not following proper procedures when manually connecting and disconnecting a grease gun is another common lubrication problem. Hydraulic couplers and fittings are designed to provide a hydraulic seal at any coupler angle up to 15 degrees. Movement beyond this angle will cause the coupler to disengage. A proper procedure should include the following:

a) Wipe fittings clean before lubricating (so as to not introduce contaminants to the bearing).
b) Push coupler onto fitting at slight angle and then center coupler on the fitting.
c) Operate lever gun handle to lubricate, taking care not to damage seals by excessive pressure or lubricant volume.
d) After lubricating, turn coupler at a slight angle to release grip of the coupler jaws.

Improper application could result in the fitting not taking grease properly (messy and wasteful) or frequently damaged fittings and couplers (unnecessary replacement costs and aggravation).

Also important to note is the position of the plunger seal (follower) in the grease gun if you're switching to using grease in bulk instead of cartridges or vice versa. The follower resembles a cup. When the grease gun is assembled for use with bulk lubricant the cup has to open toward the head assembly, or you won't get any suction when trying to fill the gun or the grease will bypass the piston when trying to discharge the gun (if you filled the gun container with a filler pump). To convert the grease gun to allow filling from bulk containers or filler pumps, make sure you extract the follower and spring from the container tube and flip the follower lip from the rear to the front side. (For more detailed information on this topic, refer to our How-to video on YouTube: FLO Lube Tip - How to Fill a Grease Gun from Bulk Containers.)

5. Misunderstanding Auto Lubrication Systems

There are two common misconceptions associated with automatic lubrication systems:
Misconception #1 – Automatic lube systems look after themselves. They don't. Lube systems are another tool designed to help reduce maintenance costs, reduce downtime, improve productivity, increase the life of your equipment, etc. - but someone still has to make sure that all the lines are connected, there are no leaks and the pump and the metering valves are still functioning. Failure to do this can result in bearing failure.

Misconception #2 – Automatic lube systems prime and flush the lines on start-up. They don't. The main purpose of an auto lube system is to replenish the lubricant used in the bearings. A system dispenses small measured amounts of lubricant at frequent specified (timed) intervals – nothing more. Depending on the metering valves to prime and flush the lines on start-up, while the bearings are running can cause pre-mature wear and bearing failure.

Be aware of these common lubrication mistakes and follow the tips outlined in this article and you'll be on your way to a much more problem-free and cost-beneficial lubrication program.

Should you have any questions about proper lubrication procedures or common problems, the lube solutions experts at FLO Components are just a phone call away at 1.800.668.5458.

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