

Leveling Up Lubrication

KM Specialty Pumps help increase lubrication improvements with SKF Lincoln SL-6

Matthew Jaster, Senior Editor

The SKF Lincoln SL-6 metering device is a single-line automatic lubrication system injector. Its proven design is thoroughly updated to meet new demands on maintainability, leakage-protection and long-lasting performance even with harsh extreme pressure greases. Today's manufacturing environment demands less maintenance time, higher productivity demands and little to no tolerance for unplanned production stops.

The end game with an automatic lubrication system is increased productivity. These systems make sure lubricants constantly flow to bearings, pins and bushings. They lubricate machines while in motion, overcoming loads and allowing grease to protect all wear surfaces. The broad output range makes the SL-6 a suitable replacement for injectors with different outputs and the standard dimensions.

Regardless of the application, the principle of single-line lubrication remains the same: a central pump station that automatically delivers lubricants through a single supply line to the lubricant metering device. Each metering device serves only one lubrication point and may be adjusted to deliver the precise amount of grease or oil required. They can be retrofitted to existing applications.

Systems can service one machine, different zones on one machine or even several separate machines. Applications include machine tools, automation, printing machines, on/off-road vehicles, construction and forestry machines, cement industry, food and beverage, rail, steel and more.

Turnkey Systems and Solutions

According to Devin Allen, director of lubrication, KM Specialty Pumps designs, engineers, sales, installs and services SKF Lincoln automated lubrication systems for all types of heavy equipment (ie) "Yellow Iron" including mining equipment such as large draglines and haul trucks, and not to mention railroad track lubrication systems. KM also provides complete turnkey lubrication systems for the pulp and paper, steel, aluminum and the food and beverage industries.

"The SL-6 eliminates the need to connect 3 SL-1 injectors to obtain output required for large bearings and bushing," said Allen. "This leads to adjustability improvements, quicker repairs and less downtime."



The SL-6 provides several design improvements for heavy duty applications.

The benefit of this lubrication system is reduced risk of leakage with improved sealing technology, reducing the risk of bypass. In the unlikely event of failure, the closed design leads bypass lubricant to the bearing. Additionally, there is an interchange ability with SKF Lincoln SL1 and SLV Injectors.

"The broad range of output makes the SL-6 a suitable replacement for injectors with different outputs and the standard dimensions and connections make it easy to fit into an existing system," Allen added.

In the future, Allen would like to see a smaller version of the SL-6 that would replace the SL-32 injector.

SKF Advantages

The SL-6 provides increased performance thanks in part to a new slide valve design and heat-treated stainless-steel construction which increases life significantly with mining greases. The simpler measuring chamber design decreases size, weight and failure modes. A patented quick venting feature of the SL-6 (and SLV) ensures large systems vent even during cold weather.

"We've made several design improvements over Lincoln's quick venting injector," said Bret McCawley, district manager, SKF.

Notably, there's a 360-degree view high visibility indicator pin that makes it easy and obvious to ensure proper function. There's also significant weight reduction by replacing two models with the SL-6—cutting service part inventory in half.

One design change enhancing productivity is the ability to monitor the equipment from far away. "Engineers can easily and quickly see injectors functioning from a safe distance depending on the equipment," McCawley said.

Service and support is provided by SKF's tech service team and application engineering team. "We can size installs correctly, provide consultation and our teams have access to a vast distribution network—KM Specialty Pumps, for example," McCawley said.

Lubrication continues to become more important as the equipment evolves with the trend of more end users

The Right Lubrication Management Program

The facts are simple—less lubricant is better for the environment. Also, an optimally lubricated machine is more energy efficient, with reduced leakage, friction and reduced noise levels. A lubrication solution that can meet environmental demands, as well as extend machine uptime and service intervals for higher productivity is optimal today.

SKF offers a lubrication management program to determine that the right lubricant is provided, in the right quantity, to the right point, and at the right time. With SKF Lubrication management tools, the company can calculate return on investment and discuss lubrication needs.

Common issues in lubrication management are:

Lubricant contamination

Lubricant chemical degradation

Wrong lubricant selection

Insufficient or misleading knowledge

The SKF Lubrication Management program helps prevent these issues—while obtaining reduced costs for labor, unwanted downtime and energy—and spares consumption. Through a structured process, customers can build a lubrication program in five steps:

1. SKF Client Needs Analysis - Lubrication Management

A one-day assessment: SKF consultants will conduct a first assessment in your facilities, to assess the level of maturity of your lubrication program and define the path to follow. This is normally a one-day activity.

2. SKF Lubrication Audit

A one-week assessment: When the level of complexity of the facility is high—or if you have already implemented basic improvements towards a world-class lubrication—a thorough assessment is advised. This is normally a one-week activity.

3. Improvement proposal

Once the required information is gathered, SKF will propose specific activities that will help improve the lubrication program in place—according to your specific goals.

4. Design and implementation

Once discussed and agreed upon, SKF can support you in the implementation of the improvement proposals.

5. Optimization

In order to measure the effectiveness of the program, a reassessment is advised. This usually reveals additional improvement opportunities that will help you close in on your goals.

Consistent lubrication is vital to the life of bearings, gears and chains. Like any mechanical system, moving parts in a food and beverage plant need proper lubrication to function optimally. Contamination, moisture, high temperatures and humidity are all threats to bearing, chain and gear service life. Failure to properly lubricate each lubrication point on every machine can have a negative impact on schedules, maintenance costs and machine performance. Poor lubrication causes about 36 percent of all premature bearing failures, but with the right lubrication solution you can create new opportunities to increase uptime and productivity.

Automatic lubrication systems supply the correct amount of grease at the best time to lubricate—while the bearing is in motion. Frequent lubrication maintains the proper lubricant film to reduce wear, as well as purges the pins and bushings of contaminants.

Friction and wear occur across the entire delivery chain. Efficient lubrication is critical for each rotating machine component, and chains and conveyors need special treatment. Independent from your final product, SKF lubrication solutions support all moving parts in your machines. SKF offers a complete selection of high-performance progressive, single-line, dual-line and chain lubrication systems for the food and beverage industry, which are tailored to the customer's specific requirements.



going to automated systems, McCawley added. “SKF will continue to be a leader in the automatic lubrication space by innovating new products such as the SL-6 and maintaining our product lines.”

Allen emphasized that the MRO space in manufacturing is constantly evolving.

“It’s changing mining, mineral processing, construction and heavy industry. These market segments are finding it increasingly difficult to retain or fill machinery lubrication positions. This is where specialized lubrication companies such as KM Specialty

find a growing market for their turnkey lubrication systems,” said Allen. “Providing a turnkey system for the application along with the specification of lubricants is very important for maintaining a reliable operation for any industry.”

(Additional information for this article was provided by James Verseman, product manager, and Brad Edler, engineering manager)

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