

## APPLICATION

Spherical roller bearings on Rolligons

# LE Grease Cuts Costly Bearing Failures in Alaska

## CUSTOMER TESTIMONIAL

Alaskan Oilfield Services Company

### Customer Profile

This oilfield services company is located on the north slope of Prudhoe Bay, Alaska.

### Application

The company owns 20 John Deere Model 6068/6090 Tier II & III Rolligons. These are custom-made to the tune of roughly \$2 million each and are used for transporting drill rigs to remote sites in Alaska. Each Rolligon has 12 baghouse tires and 24 spherical roller bearings.

### Challenge

Bearing failures can result from several different problems, including improper installation, poor design, misalignment, imbalance, overloading, environmental conditions, wrong lubricant selection, contamination, lubricant degradation, and lack of lubricant. However, 80 percent of bearing failures are caused by just three of those problems: wrong lubricant selection, lubricant degradation, and lubricant contamination. The most damaging contaminants are dirt and moisture.

The Rolligon roller bearings are subject to harsh environmental conditions in Alaska, including -60°F (-51°C) temperatures, extremely high loads, low RPM (8-10), dirt, moisture, and idle time. The grease in use was a mineral grade lithium thickened NLGI 2 EP grease that would wax up when exposed to freezing temperatures,

## CHALLENGE

Extreme conditions were causing 100+ bearing failures per year

## SOLUTION

Almaplex® Ultra-Syn Lubricant (1298)

## RESULTS

- Reduced roller bearing failures by 73%
- Saved approximately \$196,200 per year



## Results

The year before the company switched lubricants, they experienced 114 roller bearing failures in its Rolligon fleet. The year after switching to LE's Almaplex 1298, that failure number was reduced to only 24 – a 73% reduction. At a cost of \$1,450 per bearing and considering parts and labor, the company saved approximately \$196,200.

With 90 fewer bearing failures per year, the table shows annual cost savings for parts, labor and downtime.



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allowing the oil to run out of the thickener and bearing, while at the same time allowing the ingress of dirt and moisture. This led to complete saturation of the bearing and housing, which in turn caused excessive rust, lubricant degradation, bearing starvation, and numerous bearing failures.

### LE Solution

“Bearings can have an infinite life when particles larger than the lubricant film are removed,” according to SKF. Maximizing bearing life requires selecting the right lubricant based on load, environment, temperature and speed, as well as sealing out contaminants such as dirt and moisture. If the right quality and quantity of grease is applied, bearing failure can be significantly reduced, freeing up costly reactive labor hours and downtime.

Lubrication Engineers recommended Almaplex® Ultra-Syn Lubricant (1298), a heavy-duty synthetic NLGI 1 grease containing LE’s proprietary additives Almasol® and Quinplex®. This grease provides optimum performance under extreme operating conditions. It is an aluminum complex thickened grease made with an ISO 460 viscosity synthetic base fluid, a combination that provides high-temperature functionality, low-temperature pumpability, and excellent performance in the presence of water.

Cost Centers	Year Before Switch, Commercial Grease	Year After Switch, Almaplex 1298	Cost Savings
Parts	\$165,300	\$34,800	\$130,500
Labor	\$14,820	\$3,120	\$11,700
Downtime	\$68,400	\$14,400	\$54,000
<b>Total Savings</b>			<b>\$196,200</b>

