



Alfa Laval

Extend Equipment Life and Reliability in Ethanol Production with Alfa Laval's Grease Retainer Upgrade



Service product
Grease Retainer Upgrade

Equipment
Decanter

Customer
Ethanol Plant – Al-Corn Clean
Fuels – Claremont MN

↑ **30-50%**

Increased overhaul intervals

↓ **25-35%**

Reduced grease use per machine

Ethanol plants like Dakota Spirits Distillery in Pierre, South Dakota, are vital to the renewable fuels industry, converting raw agricultural materials—primarily corn—into ethanol fuel and valuable co-products like distillers grains and corn oil. A central part of this process involves solid-liquid separation using high-speed decanter centrifuges to efficiently recover solids from the stillage produced after fermentation.



The challenge

High-speed decanters operate in tough, abrasive conditions, handling high volumes of fibrous, moist solids around the clock. Given this harsh operating environment, Dakota Spirits faced premature bearing wear due to contamination from process liquids or solids, which reduces equipment uptime and impacts overall plant productivity.

Bearing failure is one of the most common causes of costly decanter downtime over time. As a result, ethanol producers like Dakota Spirits face increased maintenance costs and unplanned downtime. Frequent relubrication also creates additional risk and labor costs.

Our solution

Alfa Laval's Grease Retainer upgrade is a simple, yet highly effective, retrofit that protects decanter bearings by improving the sealing and retention of lubrication grease in the bearing assembly. The upgrade works by enhancing grease containment, which reduces the risk of contamination on the conveyor bearings.

It also minimizes the frequency of regreasing, which reduces labor costs and lowers the chance of over- or under-lubrication. This helps to extend bearing service life, even in high-solids and high-temperature conditions. By better protecting the bearings, ethanol plants can achieve longer-lasting decanter performance and greater reliability, without the cost or disruption of full component replacement.

Customer benefit

With the Grease Retainer upgrade, Dakota Spirits has been able to extend bearing life up to two times longer in high-wear environments. They've also extended the time between major overhauls by 30% to 50%, with up to 40% fewer bearing-related shutdowns. And they've saved money by reducing grease usage by 25% to 35% per machine.

Overall, customers like Dakota Spirits have increased bearing protection from moisture, solids and chemical exposure, while reducing maintenance frequency, minimizing downtime and lowering labor costs. Fewer unplanned shutdowns improves plant availability and throughput, while offering a lower total cost of ownership for decanter operation.

In ethanol production, reliability is everything. Alfa Laval's Grease Retainer upgrade is a proven solution that helps plants protect one of their most critical decanter components—the bearings—against premature wear and failure. With a small investment, ethanol producers gain a big boost in uptime, efficiency and peace of mind—maximizing the value of their existing equipment while minimizing operational risks and costs.



Optimize

Our Optimize services keep your equipment ahead of technological advancements, exceeding current standards and future needs. Whether enhancing quality, reducing energy use, or increasing capacity, our new upgrades boost sustainable performance and optimize operations for greater returns.

Contact Alfa Laval

