

Case Study: ON-GUARD Buys Time for Failing Bearing — Avoids Unplanned Downtime

Product Overview

ON-GUARD combines automatic greasing with ultrasound precision and continuous condition monitoring. It tracks bearing friction in real time and applies grease only when needed — not on a timer.

By using both real-time and historical data, ON-GUARD delivers optimal lubrication every time, eliminating over- and under-greasing. The result: extended bearing life, reduced grease waste, and more efficient maintenance with less hands-on time.



A Critical Bearing at Risk

When a 2500-horsepower motor driving a critical boiler system began showing signs of imminent bearing failure through vibration analysis, the timing couldn't have been worse — the facility was just six weeks away from a scheduled plant shutdown.

Replacing the bearing early would have meant an unexpected line stoppage, major production losses, and costly unplanned downtime. But pushing the bearing to last six more weeks without intervention was a gamble.

That's where ON-GUARD came in.

This customer — already a long-time SDT partner — agreed to pilot the newly released ON-GUARD system under a shared goal: maximize the bearing's remaining life by continuously monitoring its condition and lubricating it with precision.

ON-GUARD was installed directly on the bearing and configured to:

- Continuously track friction and impacting levels
- Automatically inject lubricant only when alarm thresholds were breached
- Drip-feed just enough grease to manage wear without over-lubricating

At the same time, the customer continued monitoring the asset using their existing online vibration system. This provided a direct performance comparison and helped validate ON-GUARD's accuracy as a continuous condition monitoring solution.

SDT North America | HearMore@sdtultrasound.com



Head Office:
7677 County road 2, Cobourg, ON, Canada K9A 0X4

US Office:
203 Commerce Blvd, Anderson, SC

1-800-667-5325 (CAN)
1-864-568-0712 (US)

A Closer Look

The figure below shows a four-week time waveform of the motor bearing, as captured in ON-GUARD's lubrication and bearing condition monitoring software.



The red line represents the designated alarm threshold that triggers a greasing event

The blue line shows the overall friction level inherent within the bearing

The orange line displays the amount of grease injected

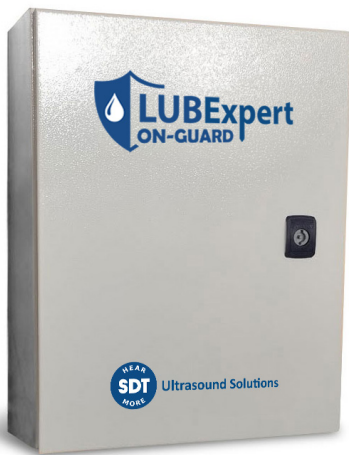
The green line indicates each greasing event as it occurred

By pairing real-time data with just-in-time lubrication, the system successfully managed the bearing's deterioration over the next six weeks — allowing the team to continue production safely and confidently until the scheduled shutdown.

The Result

- No unplanned downtime
- No emergency maintenance
- Precise, data-driven lubrication that bought valuable time

ON-GUARD didn't fix the failure — it helped manage it. And in doing so, it saved the facility from a costly interruption and proved the power of automated, condition-based lubrication.



SDT North America | HearMore@sdtultrasound.com



Head Office:
7677 County road 2, Cobourg, ON, Canada K9A 0X4

US Office:
203 Commerce Blvd, Anderson, SC

1-800-667-5325 (CAN)
1-864-568-0712 (US)