

REVOLUTIONIZING RELIABILITY: HOW ULTRASOUND TECHNOLOGY TRANSFORMED RICH PRODUCTS' MAINTENANCE STRATEGY



ABOUT RICH PRODUCTS

Rich Products, the biggest frozen dough manufacturer in the United States, is a family-owned food company operated around a belief that inspiration can transform a business. They have 75 years of experience and expertise in the kitchen. They cater to various industries including foodservice, retail, in-store bakery, deli and prepared foods, offering a comprehensive range of easy-handling, versatile, and delicious products to meet diverse customer demands. Beyond their portfolio, Rich's collective hearts and minds, global insight, and culinary problem-solving power is focused on providing customers with real solutions – for right now, what's next, and what's ahead.

THE PROBLEM

Rich Products was facing recurring bearing failure issues across their manufacturing facility, leading to costly unplanned downtime. From faulty motors, gearboxes, bearings, conveyors, air compressors, and more, it became evident that they needed to prioritize enhancing their in-house capabilities to prevent unexpected bearing failures.

Their primary obstacle was maintaining older equipment prone to persistent issues. Specifically, their gearboxes were prone to shutting down due to bearing failures. The cause of these failures stemmed from a lack of reliability program and neglect in monitoring their bearings – metal shavings contaminating the oil analysis and gear teeth breaking off, damaging the bearings. Lacking a modern reliability program and ultrasonic tools, their approach remained reactive – only addressing the issue after total failure. This reactive approach perpetuated the same cycle of failure repeatedly. Without a reliability program in place, the equipment would run to failure and create a total shutdown of the line that could last for any amount of time.

THE SOLUTION

The logical next step for Rich Products to put an end to their cyclical bearing failures was to look for ways to detect issues before it's too late. Ultimately, they learned about the power of ultrasound and proceeded to purchase an Ultraprobe 401 Grease Caddy from UE Systems.

The Ultraprobe 401 Grease Caddy completely removes the guesswork of lubrication by allowing users to evaluate the friction in their bearings in real-time. When using this instrument, users can enjoy peace of mind knowing they are applying the right amount of grease, setting their facility up for a more reliable and efficient reliability program.

Using the Ultraprobe 401 Grease Caddy would put Rich Products in a much better position to proactively identify early signs of bearing failure, strategically schedule for downtime, and order the required parts for the fix. With the Ultraprobe 401 Grease Caddy, technicians could simply go throughout their facility and listen to their assets. If the decibel (dB) levels exceed the baseline by +8 dB, that is an indication that the bearings need lubrication. The technician could then pump the exact right amount of grease into the bearings until the dB level returns to baseline in real-time.

This method would not only afford Rich Products the privilege to schedule planned downtime efficiently, but it would also prolong the lifespan of their assets by ensuring proper lubrication.

THE RESULTS

Within just one month of implementing the Ultraprobe 401 Grease Caddy, Rich Products witnessed significant improvements. The Ultraprobe 401 Grease Caddy enabled them to listen to their assets and quickly determined that something was not right with the gearbox. The sound was not the smooth, white noise that they would typically hear in a healthy gearbox, indicating that the bearings were on their way to failure. The Ultraprobe 401 Grease Caddy allowed them to properly lubricate the bearings in real-time, returning the dB level to baseline, buying more time to schedule downtime and plan a full repair.

By shifting from a reactive approach to a proactive approach using ultrasound, Rich Products has gained valuable insight into the potential failure points of their equipment. They are no longer caught in a cycle of constantly putting out small fires before a major breakdown occurs. Instead, they can allocate manpower more efficiently throughout the plant.

Moving forward, Rich Products will continue to expand their newly installed ultrasound program by introducing new ultrasonic tools and getting more of their employees involved. In fact, since they had so much success with the Ultraprobe 401 Grease Caddy, Rich Products turned to another ultrasound instrument from UE Systems for compressed air and gas leaks – the UltraView Camera LD. This camera makes finding and quantifying compressed air and gas leaks easier and faster than ever with its increased sensitivity and wider scanning area. It instantly pinpoints leaks as small as 0.016 l/min. allowing users to pinpoint leak locations and quantify exactly how much energy it is costing them. They found enough air and gas leaks in one day to justify covering the cost of the camera.

In the future, Rich Products would like to extend their success by assisting their other locations in enhancing their reliability programs.

"The Ultraprobe 401 Grease Caddy has been a massive help in transitioning our reliability program from reactive maintenance to proactive maintenance. We are catching bearing issues far earlier than before and it has saved us a lot of time, money, and resources while also extending the life of our bearings."

**Chase Williams and Julian Marable,
Rich Products**

SUMMARY

- **Costly Unplanned Downtime:** Rich Products was facing recurring bearing failure issues across their manufacturing facility, leading to costly unplanned downtime. From faulty motors, gearboxes, bearings, conveyors, air compressors, and more, it became evident that they needed to prioritize enhancing their in-house capabilities to prevent unexpected bearing failures.
- **Ultraprobe 401 Grease Caddy:** The Ultraprobe 401 Grease Caddy completely removes the guesswork of lubrication by allowing users to evaluate the friction in their bearings in real-time. When using this instrument, users can enjoy peace of mind knowing they are applying the right amount of grease, setting their facility up for a more reliable and efficient reliability program.

- **Instant Results:** Within just one month of implementing the Ultraprobe 401 Grease Caddy, Rich Products witnessed significant improvements. The Ultraprobe 401 Grease Caddy enabled them to listen to their assets and quickly determined that something was not right with the gearbox. As a result, they were able to properly lubricate the bearings in real-time, returning the dB level to baseline, buying more time to schedule downtime and plan a full repair.
- **The Shift from Reactive Maintenance to Proactive Maintenance:** By shifting from a reactive approach to a proactive approach using ultrasound, Rich Products has gained valuable insight into the potential failure points

of their equipment. They are no longer caught in a cycle of constantly putting out small fires before a major breakdown occurs. Instead, they can allocate manpower more efficiently throughout the plant.

- **Rich Products' Ultrasound Expansion:** Moving forward, Rich Products will continue to expand their newly installed ultrasound program by introducing new ultrasonic tools and getting more of their employees involved. In fact, Rich Products turned to another ultrasound instrument from UE Systems for compressed air and gas leaks – the UltraView Camera LD. Rich Products aims to extend their success by assisting their other locations in enhancing their reliability programs.

