

Success Story

Uncovering the Mystery Behind Hydraulic Pump Trouble through Condition Monitoring

The Problem

A leading manufacturer of hose fittings operates high performance machinery that can produce 145,000 pieces per month. When it comes to mass production, there's no room for error as a machine breakdown can result in significant downtime and lost revenue. The hypothetical became a real scenario for the manufacturer after a hydraulic pump failed on one of its production machines.

From the moment the issue was detected to replacing the pump and having the equipment fully operational, one week of lost production had occurred. This cost the manufacturer 36,000 hose parts and nearly \$131,000 in downtime. The problem had been resolved, but the reason as to why the hydraulic pump went bad remained a mystery.

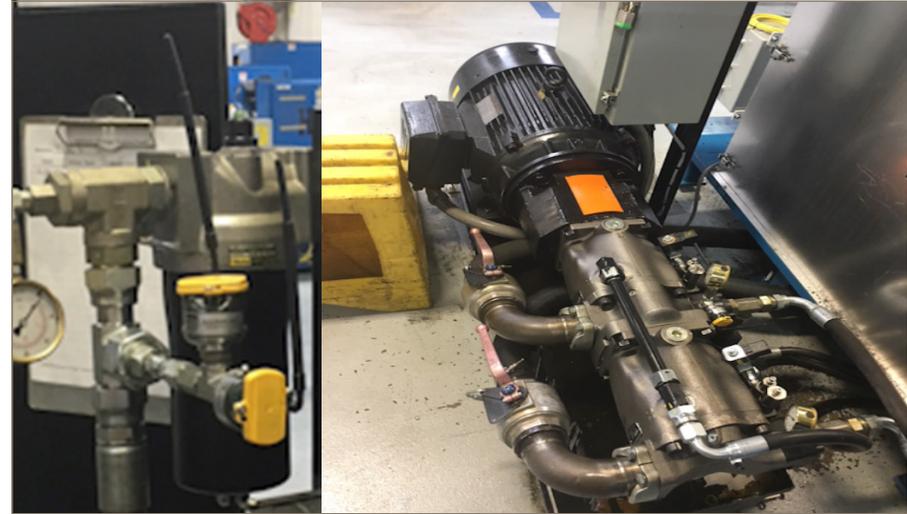
SensoNODE™ Gold is Parker's series of networked wireless sensors developed for uninterrupted condition monitoring for use with cloud or local applications. SensoNODE Gold Sensors monitor assets for changes in pressure, temperature, humidity, flow, current, displacement, analog signal and vibration to help predict problems and prevent downtime, and delivers the information to any Internet-connected device.

Voice of the Machine™ Cloud Software is Parker's cloud-based uninterrupted condition monitoring software that provides machine alerts, status and analytics in real-time. The user-friendly interface makes connecting to sensors uncomplicated and measurements easy-to-read. With customizable dashboards and alarms, you can focus on the data that's most important to you and be alerted when your measurement thresholds are exceeded. Exporting of data is done with a click of one button, which downloads a .csv file to your internet-connected device.

The Solution

To find the root of the problem and prevent future equipment downtime, nine of Parker's SensoNODE™ Gold Sensors were applied to the machine, including to each hydraulic pump and oil chiller to accurately monitor pressure and temperature. Using the wireless sensors with Voice of the Machine™ Cloud Software, workers instantly viewed data and determined a temperature issue with the oil chiller, which led to the discovery of a crack in the manifold. The manifold was replaced and the machine is regularly monitored to ensure temperature and pressure measurements remain within set ranges.

Due to the benefits of Parker's condition monitoring solution, the manufacturer has added SensoNODE Gold Sensors to other machines on the plant floor. Plus, plans are moving forward to equip each manufacturing plant within the company with wireless sensors and Voice of the Machine Cloud Software as a preventive maintenance tool to determine minor issues before they develop into bigger problems.



Success Factors

SensoNODE Gold Sensors are easy to attach and remove, and can be fitted in hard-to-reach areas.

Voice of the Machine™ Cloud Software provides accurate and real-time measurements of pressure and temperature.

Sensors indicate underlying causes before developing into serious problems.

Eliminate lost production and save downtime costs.

Customer Value

SensoNODE Gold Sensors and Voice of the Machine Cloud Software provide workers with the ability to monitor asset conditions and view real-time data to effectively identify and correct any issues. This helps prevent production downtime and reduces costs associated with repairs. In addition, sensors can easily attach anywhere on a machine, even in the most difficult-to-reach locations for more accurate measurements.



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