



Reduce Maintenance Costs with FUCHS Smart Services

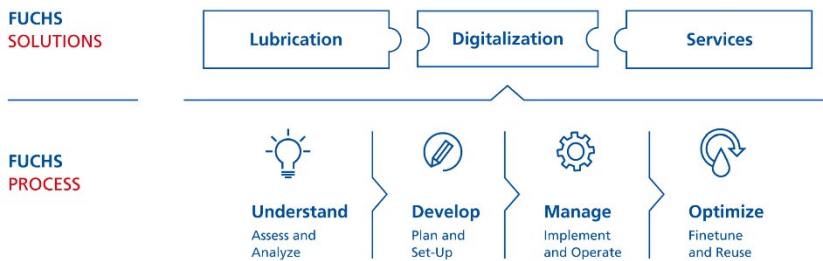
Application: Automotive Parts Manufacturer

Location: USA

Challenge

A customer had been relying on a chemical management organization to control the cost of their lubricants. In an ongoing effort to reduce the cost per gallon for those products, the facility started seeing the impact of commoditizing their lubricant spend. In one specific area of the plant, after replacing their oil with a lower-cost alternative, maintenance identified that their pumps and valves were failing with increased frequency. To contain these failures, they implemented an aggressive oil change strategy, which tied up plant resources and hurt plant productivity. The plant started to see the downstream impacts of poorly selected and maintained lubrication systems. This lubricant commoditization strategy began to negatively impact maintenance costs and process uptime in very significant ways.

Solution



The plant decided to move away from a chemical management strategy and instead pursue a FUCHS Smart Services approach, which combines performance fluids, digital technologies, and a wide range of on-site services to drive down the Total Process Cost. By prioritizing process reliability and a lower Total Cost of Ownership (TCO) our approach consists of four key steps:

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Advantages

Reduced maintenance costs

Extended fluid life

Reduce fluid usage for improved sustainability

CASE STUDY

Step 1 - Understand: To understand what was driving the high failure rate, FUCHS Smart Services initiated an oil analysis program that looked at both oil conditions and contamination levels over time. This analysis identified several issues including high levels of oxidation, improper oils, high levels of contamination, and more.

Step 2 - Develop: Using the oil condition identified in the trend analysis, we were able to prioritize the units that needed to be cleaned out while safely extending certain units passed their time-based schedule. Moving to a condition-based clean-out strategy would help prioritize activity, reduce risk, and better utilize resources.

Step 3 - Manage: The timely use of the oil condition data helped us manage and reduce the unexpected events (pre-mature pump/valve failure), while also reducing the number of preventative oil changes, necessary to keep oil contamination from being the root cause.

Step 4 - Optimize: As more data was collected and correlated to process performance, it became apparent that the oil itself did not have the necessary properties to sustain performance within the application. The rapid depletion of antioxidant additives led to early base oil oxidation which then resulted in sludge and varnish build-up in the system. It was concluded that the poor quality of the oil itself and how it quickly degraded when exposed to contaminants was a major root cause of the premature pump/valve failure.

FUCHS product engineers were able to review the application and recommend a high-quality synthetic fluid. Once approved by the client, the conversion was made.

RENOSAFE FireProtect 46 is a fire-resistant hydraulic fluid with:

- Long service life
- Excellent resistance to ageing & oxidation,
- Low foaming behavior
- Excellent wear protection

Results

Though the price per gallon is higher for the new product, **consumption rates have dropped by over 54%** due to the reduced clean-out frequencies which will continue to drop over time as we use analysis and contamination management strategies to extend fluid life. Additionally, **maintenance and repair costs drop by over \$320,000 YTD**. This does not take into consideration the greater uptime yielded through increased process availability and the freeing up of plant resources. By reducing the volume of oil used, the customer was able to reduce their TCO and operate more sustainably.

The customer's maintenance manager remarked, *"We have not experienced any pump failures since changing to RENOSAFE. Prior to changing, I believe we had swapped out more than a dozen hydraulic pumps since the start of the year. Valve changes have dropped tremendously as well. Downtime due to hydraulic issues on the presses, and the carburizers, has dropped considerably. All changes have been positive since the change to RENOSAFE."*

The FUCHS process relies on performance data collected over time to truly drive down a customer's TCO. Lubrication solutions that combine high-quality lubricants with a service and digitization strategy can bring measurable and sustainable improvement to your plant. Find out how we can help by contacting your local FUCHS Sales Engineer today.