THE SITUATION

Barriere Construction of Louisiana specializes in road construction and paving. They operate two state-of-the-art asphalt production facilities and have been repeatedly recognized with the National Asphalt Pavement Association’s (NAPA) Diamond Achievement Award for environmental excellence.

Barriere’s use of leading-edge technology and sophisticated machinery gives them a unique ability to provide their clients with superior materials, equipment and end results.

Pat Klaman, Total Process Reliability Manager for Barriere, is responsible for tracking and reducing operational costs. Even though Barriere turns its off-road construction equipment every five years or 5000 hours, Pat makes sure they strictly follow OEM-recommended maintenance schedules. This is especially true since the company began to upgrade to Tier 4 equipment with HPCR engines.

THE INVESTIGATION

Research told Pat that transitioning to Tier 4 equipment meant that Barriere would need clean diesel. He conducted a study to find out how often Barriere needed to change its on-board fuel filters. He was not happy with the results because they were not up to OEM expected standards.

He then tested the condition of his diesel as it left on-site bulk tanks and mobile fueling trucks. The test results showed Pat that he had serious problems with water and contamination in his diesel. So Pat called Scott Rongey, Sales Manager at Reliable Industries, a Donaldson Clean Solutions distributor.
THE CHALLENGE
Barriere’s Tier 4 equipment was breaking down due to both on-board fuel filter clogging and fuel injector failures. The company had to get clean, dry diesel into its equipment. Water contamination was a particularly important issue to Barriere, due to high humidity levels throughout Louisiana.

THE CLEAN SOLUTION
Scott recommended that Barriere install inlet and outlet filtration on its bulk fuel tanks and mobile service trucks. Barriere put bulk filtration systems in place on its two 10,000-gallon bulk tanks and 25 mobile service/refueling trucks.

THE RESULT
Service intervals on Barriere equipment have increased from an average of 250 hours to 350 hours for on-board fuel filters. Additionally, in a single year fuel filter “incidents” decreased from 35 to 11. According to Pat, these reductions have saved the company $24,000 in replacement filters alone, not counting the previous problems of lost production time and repair costs.

Pat says that emergency equipment repairs have dropped more than 50%, and he hasn’t lost an engine since the filtering systems were installed. Fuel injection problems have been “non-existent.”

We have been buying more and more Tier 4 engines; and even with that, we have cut emergency repairs in half. (Donaldson) bulk filtration is a whole lot cheaper than downtime.”
- Pat Klaman, Barriere Construction TPR Manager

In HPCR engines, precision is everything. At 30,000+ psi, unfiltered dirt particles act like a tiny sandblaster, gouging the injector and creating inefficient spray-patterns. This can lead to improper idle, increased exhaust emissions, poor fuel economy and, ultimately, engine failure.