



HYDROCLEAR™ Power-D™ Engine Oil Solves Soot Problem

Northern Improvement is a large highway and heavy construction contractor located in Bismarck, North Dakota. The company operates a fleet of some 600 rubber-tire vehicles and more than 200 pieces of off-road equipment from skidders to large track mounted dozers.

Since 1980, the company has used Conoco lubricant products, particularly heavy-duty diesel engine oils, along with other brands. It wasn't until Northern took delivery of some new 1999 Caterpillar vehicles that the company began experiencing some soot build-up problems in the engines of these new machines.

"Because of environmental concerns, newer engines are engineered to leave more soot in the crankcase rather than allowing it to be expelled through the exhaust," states Ray Aberle, Northern Improvement's shop superintendent. "If the engine oil doesn't have an effective additive package that keeps the soot dispersed when the engine is in operation, the result will be extraordinary wear on piston rings, liners and bearings." To be safe you either have to change the oil more frequently or take the chance of reducing engine life.

"Neither of those seemed like a smart economic decision to us," Aberle continued. "So we began testing other oils in these Cat engines and settled on HYDROCLEAR Power-D™ Heavy Duty 15W40 Engine Oil. It gives us excellent soot control and we are very happy with the results. So much so, that we are now switching to HYDROCLEAR Power-D™ brand in all our machinery."

Northern Improvement also uses HYDROCLEAR Power-D™ engine oil in some much older engines. The company has created a unique Plow Train application that incorporates four 1975 heavy-duty Allison Chalmers tractors chained together.

These workhorses are custom-rigged to simultaneously dig a seven-foot deep trench, lay a strand of four-inch PVC pipe, then cover up the trench and move forward. The key to productivity is continuous motion and long hours of steady hard engine use.

"Laying pipe to bring potable water service to small rural municipalities and farms has been a profitable business for us," Aberle said. "Lubrication is an important part of keeping older equipment running longer. And we believe that HYDROCLEAR Power-D™ engine oil is our best bet.

"We were shown results from tests for soot-induced viscosity thickening and engine wear comparing Power-D™ brand to other major engine oil brands. Power-D™ showed minimal viscosity increases even when large amounts of soot were added and less than half the cross-head wear experienced by competitive engine oils, even when the tests were run for double the prescribed length," says Aberle. "The test results were impressive and we are counting on that kind of performance to preserve our older equipment and keep it performing well."

There is one other HYDROCLEAR Power-D™ brand feature that's pretty important to a highway and heavy construction contractor in North Dakota, and that's the engine oil's performance in cold-weather start-ups, says Dorothy Schaettle, ConocoPhillips' Marketer Sales Representative. "Our scientists have done a great job of creating an additive package that preserves the fluidity of the lubricant at low temperatures. HYDROCLEAR Power-D™ engine oil maintains great pumpability at low temperatures because of its pour point of -45 °F."

Northern Improvement has now moved exclusively to Conoco lubricants. The company uses Conoco hydraulic oils, greases and other products to maintain its fleet of off-road and construction vehicles. Ray Aberle says that one of his next projects will be to compute average fuel cost per mile for the company's electronically controlled fleet of trucks now that HYDROCLEAR Power-D™ engine oil is used in all vehicles. We expect he will be as pleased as those who have run such measurements in the past.