



Mobil Fleet Lubricants

Mobil Delvac 1 Synthetic Engine Oil delivers big savings for Jack Cooper Transport.

Delvac 1



"I'm accountable for keeping our cost per mile in line, and since switching to Mobil synthetics that cost has gone down."

Gary Page, Vice President-Maintenance and Equipment



Mobil paves the way for real bottom line gains.



Typical JCT test truck engine parts after 1.1 million road miles

Extended drain intervals, longer equipment life, per truck savings of over \$4,000

Reducing operating expenses, maintaining maximum availability of fleet vehicles, and efficiently managing maintenance resources are top priorities for any trucking company. It's no different for Kansas City-based Jack Cooper Transport Company, whose fleet of 1,050 trucks logs over 56 million miles a year hauling cars for General Motors, Ford and other leading automobile manufacturers.

"We set the record for cars hauled virtually every year," says Gary Page, Vice President-Maintenance and Equipment for JCT. "In order to maintain that pace we've had to find new and better ways to protect our equipment investment and lower costs. There are a lot of factors to consider including engine life, engine performance, fuel economy, drain intervals and oil expense; they're all part of the equation. We turned to ExxonMobil to help us achieve our goals."

Page, and his maintenance field operations manager, Greg Goodson, were aware of Mobil's tradition of innovation and lubrication expertise — as well as Mobil's widely recognized leadership in synthetic lubricants. So they consulted a team of Mobil lubrication engineers who explained that Mobil Delvac 1 synthetic diesel engine oil contains high-quality synthetic base stocks and a unique additive system that provide exceptional wear and deposit protection. With Mobil Delvac 1 engines run cleaner, longer, and with extended drain intervals beyond manufacturer recommendations.

"They said that with Mobil Delvac 1 I could extend my drain intervals to 80,000 miles," Page said. "Frankly, that made me more than a little nervous, especially when you consider each truck hauls up to 80,000 lbs. of automobiles five or six days a week. Plus these trucks have zero aerodynamics, which forces the engines to work even harder. This all creates tortuous service conditions. But when you crunch the numbers, and factor in anticipated savings in maintenance costs, fuel economy, labor, etc., you realize the potential savings are significant."

Page and Goodson decided to try a real-world test. They put Mobil Delvac 1 in a 1989 DDEC II 560 Detroit Diesel Series 60 engine with 350 hp and 11-liter displacement. The oil drain intervals were 80,000 miles with oil filter change-out set at 40,000. Used oil samples were taken at approximately 10,000-mile intervals. The engine logged 1,140,000 miles on long hauls from southern Texas to Florida to Chicago.

JCT leverages Mobil Delvac 1's industry-leading synthetic performance to extend drain intervals to 80,000 miles and extend equipment life by 34%.

Mobil offers the expertise, innovation and performance trucking firms need.

Mobil Delvac 1 helped maintain viscosity in cold temperatures and it stopped the plugging in block heaters.

The test proved that the economics of extended drain intervals are compelling — prompting JCT to switch the entire fleet to Mobil Delvac 1. The extended drain capability of Mobil Delvac 1 has allowed JCT to extend engine life by 34%. In addition, by extending equipment and engine oil life, ExxonMobil has made it possible for JCT to save over \$4,000 per truck.

"We've saved thousands just in oil alone, and then there are the labor savings on top of that," Page says. "To date our overall savings are probably close to \$1 million." At the end of the 1.1 million mile road test in February, 2002, an engine inspection was performed with specific attention to piston deposits, cylinder liners, valve train wear, bearing wear, and cleanliness.

Goodson explains what the engine inspection revealed. "The results were very impressive, way beyond our expectations. The main bearings and rod bearings were in good shape, with the overlay still intact. If it weren't for a blown head gasket we could have easily gone another couple of hundred thousand miles further." Goodson also found a decreasing iron wear rate and a flat lead wear rate indicating that Mobil Delvac 1 did an excellent job of controlling deposits, protecting against corrosive attacks, and maintaining excellent engine wear protection throughout the extended oil drain interval of 80,000 miles.

"We had no major repairs or performance problems with the test truck," Goodson says. "I've seen engines with the same hours of service run on conventional oil at manufacturer recommended drain intervals in a whole lot worse condition. Mobil Delvac 1 just does an exceptional job at handling heat and soot — so much better than conventional oil."

A concurrent oil analysis showed low wear metals accumulation in oil samples, proof that Mobil Delvac 1 maintained excellent engine wear protection.

More gains in store working with Mobil

Mobil's unsurpassed expertise and innovation in synthetic lubricants is paying big dividends for JCT. In fact, Page says that synthetics have contributed more than anything else to achieving maintenance program cost reductions. "We continue to work with ExxonMobil," he says, "as we strive to extend the overhaul life of our Detroit Diesel Series 60 engines from 850,000 miles to over one million miles."



Typical upper piston ring belt
Test engine shows very good piston deposit control with no crownland raking.



Cylinder Liner ID Surface
Liner crosshatch surface clearly visible below the top ring turnaround is a good indicator that the engine maintained low wear, blow-by and good oil consumption control.



Piston Pin Bushing
This piston pin bushing from the test engine shows little or no copper exposure.