

BY DAVID MCFALL

The View from Stuttgart

Daimler headquarters in the Unterturkheim area of Stuttgart, with the distinctive Mercedes-Benz Museum in the foreground.

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It sold 1.6 million vehicles last year (and over 2 million the year before). Its 2009 revenues topped \$107 billion. It has 47 main production locations dotting the globe, from Germany to Jakarta and from Buenos Aires to Portland, Ore. And to manage its global engine oil specifications, Daimler AG has two professionals.

They are Stefan Keppeler, Ph.d., Mercedes-Benz' senior manager for diesel combustion, fuels and lubes, and Michael Schenk, manager, automotive lubricants. Last fall, *Lubes 'n' Greases* visited the two at Daimler headquarters in Stuttgart, Germany, to hear their views on engine oil development and specifications.

Keppeler was quick to spell out their vision for automotive performance. "We have to be 100 percent certain that our oils provide maximum security for our vehicles," he declared. "Engine technology is changing so fast, and the quality demands are so high, that if we do not fit our fuels and lubes technology exactly to our engine design we could run into serious problems. This issue is the most important one."

Besides engine protection, Keppeler also highlighted the importance of "green" issues, saying, "Ninety-nine percent, if not 100 percent, of our engineers are working on environmental issues.

"Engine oil is a vehicle design parameter," he continued. "For example, fuel economy is important. We can reduce fuel consumption by having a good oil — we know that an oil can contribute to fuel economy. One goal for our new factory fill is better fuel economy for the oil, and so we have introduced new fuel economy tests for our oils, in place of the current ACEA M-111 test which is an old design and has nothing to do with today's needs. So we now have developed four new in-house chassis dynamometer tests, using the new European driving cycle. This is how we will differentiate between our oils for both passenger cars and trucks."

One way to increase the fuel economy contribution of engine oils is lowering the viscosity grade, explained Michael Schenk. "We are moving towards a 0W factory fill. We have plans to do that and will probably get there by the end of 2010. We've already approved 0W oils for service fill but not yet for factory fill."

Funds are tight everywhere and Keppeler favors using proven tests to their maximum advantage. For example, the new CEC OM 646 diesel engine oil test was recently approved by ACEA (the association of Europe's automakers) for measuring a single parameter, cam wear. "However," Keppeler pointed out, "we use this test, which is based on our engine, to also evaluate many additional parameters, including cleanliness, engine sludge and bearing, piston-ring and timing-ring wear. Further, our limits are much more severe than they were on the test that the OM 646 replaced."

*Daimler's
logo in 1926*

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