

TECHNOLOGY & MAINTENANCE COUNCIL

Daimler Unveils BlueTec SCR System That Will Be Used for 2010 Engines

By Frederick Kiel
Staff Reporter

ORLANDO, Fla. — Daimler Trucks North America and its engine maker Detroit Diesel Corp. presented their “BlueTec SCR” 2010 technology system, saying it was an entire engine and aftertreatment package designed as one unit optimized for Freightliner and Western Star trucks.

Selective catalytic reduction is the emission-reduction method all truck and engine makers except Navistar Inc. plan to use to meet the Environmental Protection Agency’s 2010 engine exhaust standards.

Elmar Boeckenhoff, DTNA’s senior vice president of engineering and technology, in a presentation at the Technology & Maintenance Council meeting here, said Daimler’s “BlueTec is not just SCR. It includes exhaust gas recirculation, diesel oxidation catalyst, diesel particulate filter, on-board diagnostics and the SCR catalyst in conjunction with Diesel Exhaust Fluid.”

DEF is a mixture of urea and water that reacts with an SCR catalytic converter in a truck’s exhaust system to change nitrogen oxides into nitrogen and water vapor.

Boeckenhoff said that Daimler’s system was “seamlessly integrated with the new Detroit Diesel family of engines that will see virtually no changes to meet the new standards.”

Mark Lampert, DTNA’s senior vice president of sales, said that BlueTec would be offered in a “one-box” and “two-box” system. In the “one-box” system, the various



Elmar Boeckenhoff of Daimler Trucks North America shows parts of the BlueTec emission system to colleague Maria McCullough.

aftertreatment components are combined in a single unit, which Lampert said most over-the-road fleets would probably purchase.

“The Detroit Diesel one-box configuration combines dual compact DPF [diesel particulate filter] and DOC [diesel oxidation catalyst] with a single DEF mixing tube and dual compact SCR catalysts into a single subsystem offering these advantages — perfect packaging, less weight and increased fuel economy,” Boeckenhoff said.

In the “two-box” system, aimed at severe-duty applications, “the DPF and DOC systems are separated from the SCR system,” he said.

Other North American OEMs planning to use SCR — Cummins Inc.; Paccar Inc., maker of Peterbilt and Kenworth trucks; Volvo Trucks

North America; and Mack Trucks Inc. — have not discussed their SCR technologies in detail.

Lampert said that the company has still not reached a decision on the price of its BlueTec SCR systems.

The Daimler statement said that the main difference between the European and North American BlueTec systems is that the North American technology “includes mild EGR” and a diesel particulate filter.

Boeckenhoff said that European emission standards so far have concentrated on reducing NOx, which is why Europe adopted SCR. When EuroVI standards go into effect in 2013-14, bringing Europe’s diesel particulate emissions standards close to North American levels, European BlueTec will be almost the same as in North America.