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Volvo Touts User Experience with SCR Engines for EPA 2010 Emissions

After more than a year in the North American marketplace, Volvo says its No Regen Selective Catalytic Reduction (SCR) technology is performing as expected. Volvo was part of the first heavy-duty truck manufacturing group to receive EPA'10 certification, without the use of emissions credits, and began filling customer orders with production engines in the fall of 2009.

"Volvo was ready with the EPA'10 technology and in production by September 2009," said Ron Huibers, senior vice president of sales and marketing for Volvo Trucks North America. "As soon as we received our EPA certification last November, we were able to get the new trucks in the hands of our customers."

The most tested products in the history of Volvo Trucks North America, Volvo says its EPA'10 trucks with SCR can deliver a 5 percent or more fuel efficiency improvement and near-zero NOx and particulate emissions.

"During the past year, our dealers, customers and drivers have become fans of Volvo's EPA'10 products," Huibers added. "We now have thousands in daily operation with customers, providing significant benefits to the industry in terms of emission reduction, fuel efficiency and overall productivity."

Volvo's EPA'10 solution couples its D11, D13 and D16 engines with SCR exhaust aftertreatment technology.

"Using aftertreatment - removing the targeted oxides of nitrogen or NOx downstream rather than in-cylinder - allows the engine to be retuned for maximum fuel efficiency," said Ed Saxman, Volvo's powertrain product manager.

Fleet Experience

U.S.-based Heritage Transport and Canada-based Challenger Motor Freight were among the first to experience Volvo's EPA'10 solution.

Heritage is a wholly owned subsidiary of Heritage Environmental LLC, a full-service nationwide environmental solutions provider that transports, stores and disposes of hazardous waste materials. Headquartered in Indianapolis, Heritage operates 217 trucks, the majority of which are Class 8 tandem axle box trucks and tandem axle tractors. The company runs a 24-hour/five-days-a-week operation with 115 day cabs and 102 sleepers.

In 2009, Heritage evaluated its options for converting to EPA'10 product. It placed an initial order for nine VN 630s with D13 500-horsepower engines and SCR in August 2009, and will have a total of 32 Volvo EPA'10 trucks operating by the end of this year.

"As a 'green' company, we knew we wanted to be among the very first to embrace the new, cleaner trucks," said Dean DeSantis, president of Heritage Transport. "We came to the conclusion that Volvo's EPA 2010 solution was leading edge, and we certainly wanted to be a company that was on the leading edge of cleaning up the environment."

Environmental Commitment

Challenger, too, saw the early adoption of Volvo's EPA'10 solution as one aspect of its environmental commitment. Headquartered in Cambridge, Ontario, the Challenger Group operates out of a LEED-certified building, is an EPA SmartWay program partner, and uses longer combination vehicles to meet capacity demands while reducing its carbon footprint. The company employs more than 2,300 people and operates approximately 1,500 trucks and 3,300 trailers. It is the largest privately owned truckload carrier in Canada and the sixth largest trucking company in the country.

Challenger put five Volvo SCR-equipped trucks into service for long-haul operations on December 31, 2009. One year later, the company is operating 91 2010 Volvo VNLs. An additional 90 Volvos are on order for 2011.

Like many North American carriers, Challenger's management knew the move to EPA'10 trucks was inevitable - but had reservations. Before signing on, Challenger CEO Dan Einwechter traveled to Europe to experience Volvo's SCR technology and meet with other carriers.

"That really put my mind at ease about SCR," Einwechter said. Challenger's experience with Volvo's SCR technology has been "exceptional," he says.

"While the long-term journey has to be assessed, so far the Volvo EPA'10 engines have been above and beyond what we anticipated," he said.

"Volvo told us that we would have good engine performance, that the fuel economy would improve and that the use of Diesel Exhaust Fluid would pose no problems, even in the very cold temperatures we have in Canada," Einwechter continued. "Volvo said it, and we experienced it. We've had no problems at all."

SCR works by injecting DEF into the exhaust stream only as required. DEF is a mix of two-thirds water and one-third urea, which is a common nitrogen-containing compound. DEF works with the heat of the exhaust and a catalyst to convert NOx into nitrogen and water vapor - two harmless and natural components of the air we breathe, Volvo says.

"The Volvo EPA'10 trucks with SCR are doing a great job for us and the emission system is working just great, trouble free," said Heritage's DeSantis. "We are very pleased that these trucks are delivering excellent fuel economy across the board, and we have the data to support it. We've had no regeneration issues, and frankly, the vehicles have been performing even better than we expected."

Drivers Satisfied

Drivers, too, are satisfied with the new Volvo trucks.

"Other than topping off the DEF every few refuels, the SCR technology is transparent to the driver," explained Saxman.

When the new trucks were introduced at Challenger, the company focused on educating drivers.

"We spent a lot of time with the teams that were driving the five initial trucks," said Einwechter. "These early adopters spread the word and we've been fine with all our drivers."

At Heritage, drivers like the maneuverability, power and tremendous torque that the new trucks provide, as well as the ease of the SCR system. Drivers simply refill DEF at their terminals every two or three days.

Orders for Class 8 trucks equipped with EPA'10 certified Volvo Group engines have already surpassed the 25,000 mark, the company says.