



## 2010 engine test fleets weigh in

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Fleet managers talk about their experiences testing 2010 diesel engines

The 2010 diesel engine EPA emission compliance deadline for new builds is near. Several fleets around the country have been testing the new engine technology. Here's what they have to say about the engines.

### **Good results**

Terry Clouser, director of maintenance for AAA Cooper Transportation says, "We are running three trucks from Volvo with the 2010 SCR engines: a Class 8 single axle with an 11-liter engine with 405 HP, a Class 8 tandem axle with a 13-liter engine with 475 HP and a Class 8 sleeper with a 13-liter engine with 465 HP. The single axle and the sleeper both have the Volvo I-Shift transmissions; the tandem axle has the Freedom shift.

"The 11-liter is getting 6.4 MPG doing both line-haul and city use, putting on about 670-700 miles per day. This unit usually runs about 20 hours a day Monday through Friday. The 13-liter day-cab runs about 750 miles a day line-haul and a short pedal run and is getting 6.2 MPG. The sleeper is running about 5,500 to 6,000 miles a week and is getting 6.1 MPG. The diesel exhaust fluid (DEF) usage is about 3-gal. per 100 gal. of fuel and this is about the average for all three units."

He goes on to say that drivers are very pleased with how the trucks drive. There is no regen to worry about because it is done automatically with the SCR system. "They love the power because this is the most horsepower we have run in a long time. For the most part, these units have had very little down time," he notes. "As far as any engine problem, we have had none.

"The engine seems to be working really well because there is no smoke coming from the exhaust regardless of the amount of throttle you give. The exhaust stack is just as clean as the day it came with absolutely no soot build up at all. We have had very little down time for any engine trouble. Most of the down time is to replace some of the components, which Volvo sends us that upgrade the engine to the highest level for their production engines. They come to our facility often to upgrade the software in the computers."

Clouser adds that they are not having any trouble getting DEF, noting that Volvo has been sending it to them during the testing process. "We have a 275-gal. tote in Dothan and one in Dallas, Texas with pumps and flow meters," he says.

### **Transparent process**

For Penske Truck Leasing, the evaluation of a 2010 Cummins ISB 6.7-liter engine was a transparent process. "This has been one of the more positive experiences we've ever had with a beta evaluation," stated Mike Hasinec, Penske vice president – maintenance systems/support, of placing the 2010 engine in a 2008 M-2 Freightliner. "Penske actively volunteers for OEM evaluations so we can

better understand emerging technology.”

As Kurt Seymour, Penske manager of product compliance and reliability, explained, the Cummins engine was placed into the Freightliner medium-duty straight truck in June 2008, and since then two customers have been using it daily in western Pennsylvania.

“Pittsburgh was selected because of the colder climate and close proximity to the Cummins engineering group in Indiana,” Seymour added.

During the last year, Cummins thoroughly examined the engine every 90 days, adding several upgrades along the way. “Our technicians had no reliability issues, and servicing the engine was transparent,” Hasinec noted.

“Typically, when evaluating a product in its beta phase you can expect to experience some product issues,” Hasinec continued. “That’s the reason for putting a product out in the real world in the beta phase. It allows the manufacturer to work out the bugs before the product is put in production.

“One customer, whose biggest concern is fuel economy, was extremely pleased with the MPG,” Hasinec said. “The industry claims there is a 4% to 6% MPG improvement on the 2010 engines, but our customer experienced a remarkable 10% improvement with the Cummins engine over their existing units.”

Seymour adds, “There was very good performance, and there were no issues with availability of diesel exhaust fluid and the need for supplying the vehicles with DEF often. The consumption rate of DEF was as good as advertised, 2% of the fuel consumption level.

“This is the future, and thanks to this evaluation, we feel we’re better prepared for this new technology,” he said. “More than three dozen new fault codes will be introduced as part of the new onboard diagnostics (OBDII) and infrastructure challenges. We’ll be ready.”

All in all, Penske Truck Leasing issued high grades to the 2010 engine it evaluated and expects to soon introduce more into its fleet. “These engines will be in our fleet in 2010,” Hasinec stated. “This new engine delivers on what has been promised: cleaner air, meeting new emissions standards, and less NOx with better fuel economy.”

Heavy-haul capabilities Bill Vogelsberg, president of Vogelsberg Grain Co., is testing a 2010 Mack SCR 605 HP engine with a torque rating of 2,000 ft.-lbs. on one of his “Michigan train” bulk haul dump trucks. “We think this is a conservative rating,” says Vogelsberg. “The truck is the most powerful one in our fleet right now and we are very pleased with its performance. Titan by Mack is by far the best for fuel economy, power, drivability and overall complete driver satisfaction of all the trucks in the fleet,” he notes. The fleet is a regional hauler with routes that take it around Michigan to Ohio and into Ontario, Canada, which are all within 150 miles of fleet headquarters.

Vogelsberg received the test truck in the middle of January of this year, so it’s been on the road for seven months logging about 45,000 miles. “We were pleasantly surprised that our fuel economy is slightly better with this truck at 4.5 MPG, which is pretty impressive, since the 154,000 lbs. GCW is about 187% more than the typical 80,000 lbs.,” he adds. “So far the truck has been trouble-free and there is nothing for our drivers to do but get in, start the truck and drive. We thought with our stop-and-

go operation we'd have to do regens on the diesel particulate filter, but that has not been the case."

Michigan's cold weather has not been a concern either. The fleet received the trucks during the winter and had no problems with cold starts. The other good news is that the driver likes the truck. The throttle feels better, more responsive and smoother, compared to the other vehicles in the fleet, Vogelsberg adds.

### **Improvements**

Detroit Diesel customer, Dave Miller, vice president of Global Policy and Economic Sustainability for Con-way Freight Inc. says, "Con-way beta tests a number of initiatives, including on-board diagnostics. We know that fuel efficiency will continue to be the name of the game. In 2010, engines using SCR will be about as efficient as they can get. After that, we'll continue to see more aerodynamics designed into the trucks. Then, based on our experience, the only way left to reduce CO<sub>2</sub> will be to reduce fuel consumption by allowing for more efficient truck combinations (longer vehicles and heavier load limits). Our data show hauling more tons per mile can improve fuel efficiency by up to 20%. Other future policies and regulations will be needed to better manage traffic congestion and improve road and bridge infrastructure."

Another Detroit Diesel SCR engine test fleet reports, "I'm satisfied that SCR offers strong fuel economy. At a 2% consumption rate, the cost of fuel plus the cost of diesel exhaust fluid will equal a savings advantage—with no (reliability) fear factor," says Don Streuber, president and CEO of Bison Transport. "Operationally, the difference in paying a few thousand dollars more in engine cost pales compared to a half-mile-per-gal. fuel penalty (of non-SCR engines) over the lifetime of the truck, especially when, like Bison, you average 140,000 miles per truck per year. This impact will only be amplified as the price of fuel goes up. It cannot be ignored. Fuel economy is a top priority in our equipment specification. SCR is proven and we'll take every 3% to 5% advantage we can find. It allows us to give our customers better pricing."

According to Harry Muhlschlegel, chairman and CEO of New Century Transportation Inc., "I'm satisfied and confident and looking forward to the 2010 engines. The engines may cost more, but they will run better with SCR and urea [DEF]. SCR should be a good pre-investment to keeping the trucks longer."

Schneider National is testing Detroit Diesel's SCR technology with BlueTec. Schneider has integrated the two engines into its fleet to collect real-world data and has been sharing that information with Detroit Diesel on a daily basis. So far, the engines have racked up more than 45,000 miles. "By actually field testing the technology, we are putting the units into real-life situations, which ultimately helps Detroit Diesel engineers to identify every possible issue in advance," said Steve Duley, vice-president of purchasing for Schneider National. "We are confident the experience we gain from CDUs will give us additional time to prepare for the transition." According to Duley, more than 90% of the Schneider fleet is powered by Detroit Diesel engines.

### **Engineering tests**

According to Steve Schrier, communications manager for the Navistar Truck Group, "We currently have more than 60 engineering test vehicles with 2010-compliant engines in operation today, logging thousands of miles each and every week. As testing and validation is finalized in preparation for launch, these test vehicles will

have logged millionsof driving miles in real-world conditions.

“As for customer test units, we currently do not have any 2010 vehiclesin customer hands. Since our 2010 solution does not require significantchanges to truck hardware and, at this point, our testing mainlyinvolves engine calibration refinements, we believe the benefit of roadtesting by our own engineering team outweighs the learning obtainedfrom customer field test units.”