



BULLETIN

TO: All Sales Representatives
FROM: Mike Moore, Jeff Resch, and Jim Johnson
DATE: January 6, 2009
RE: Oshkosh Corporation and Daimler Trucks North America, Acting Through Its Affiliate, Detroit Diesel Corporation, Reach Agreement for Supply of 2010 EPA Engines

Oshkosh Corporation will announce this week that Daimler Trucks North America LLC, a Daimler AG Company, will supply engines to the Oshkosh Corporation Fire & Emergency businesses. Daimler will provide the 2010 EPA emissions standards compliant Detroit Diesel DD13™ diesel engines to Pierce Manufacturing, North America's largest manufacturer of fire and rescue apparatus. The DD 13 is an advanced design that offers seamless integration of BlueTec® selective catalytic reduction (SCR) technology without compromising power, fuel economy or performance.

Daimler has manufactured more than 200,000 SCR diesel trucks in Europe and around the world. The Detroit Diesel DD13 is a smart, fuel efficient engine that has demonstrated up to five percent better fuel economy, while delivering serviceability, power and torque on-demand.

To better educate your customers on upcoming changes, the pages that follow are the Pierce published comprehensive guide that addresses many of the SCR and Detroit Diesel DD13 commonly asked questions. This document for your reference will also be posted to DealerNet under Sales Tools\Detroit Diesel.

These are exciting times for Pierce Manufacturing. We truly see 2010 engine changes as an opportunity to again demonstrate our leadership in the fire and emergency market by providing customers choices and high performance solutions.

Good Luck and Good Selling!

Detroit Diesel DD13

Question and Answer Guide

At Pierce Manufacturing, we strive to engineer a higher caliber of performance while providing a broad range of options. That's why we've aligned with Daimler Trucks North America – to provide fire departments the new Detroit Diesel engine that will meet 2010 EPA emission standards.

This highly advanced DD13 engine offers a field-proven Selective Catalytic Reduction (SCR) technology that minimizes fuel emissions to near-zero levels without power, fuel economy or performance compromise.

To better educate the industry on upcoming changes, Pierce has published a comprehensive question and answer guide that addresses many of the SCR and Detroit Diesel DD13 concerns – from simple operational explanations to cost targets and future projections.



Detroit Diesel DD13

Question and Answer Guide

What is SCR?

Selective Catalytic Reduction (SCR) is a technology that injects a urea agent (also known as AdBlue or Diesel Exhaust Fluid [DEF]) into the exhaust stream by way of a catalyst positioned downstream from the Diesel Particulate Filter (DPF). The urea initiates a chemical reaction that converts NOx into harmless nitrogen and water, which is then expelled through the tailpipe.

Is SCR new technology?

SCR is in widespread use in Europe. Over 500,000 heavy trucks are in service with SCR technology.

Why did the engine manufacturers choose SCR?

According to the engine manufacturer, optimizing engine performance favors the production of higher levels of NOx. SCR reduces NOx after it exits the engine, which in turn allows the engine to run better, stay cooler and last longer. Manufacturers using SCR are able to optimize engine performance, with increased hp ratings and 3%-5% better fuel economy.

How will this impact the cost of fire apparatus?

While it's still too early to provide a specific cost, industry experts have estimated the initial SCR system costs to range from \$5,000 to \$15,000.

How will SCR affect my vehicle?

SCR requires a tank to hold the urea solution, a small pump and a catalytic device downstream from the DPF. The tank will be sized based on usage requirements and fuel tank size, generally allowing 2-3 fuel fill-ups before needing to replenish the urea tank. Pierce engineers are developing integrated packaging solutions that will minimize the overall impact of this product.

Where can I buy the urea agent?

Ample distribution of the urea agent in North America will be a certainty as many truckstops are already well along in their preparations to supply the urea solution through either pump stations or containers.

Is there a freezing problem with the urea agent?

Urea freezes at temperatures below 12 degrees Fahrenheit, so the holding tanks will be equipped with immersion heaters for cold climate operations. Many trucks are currently operating in the Arctic with SCR and urea.

I have heard regulations will require the engine to shut down if the urea tank is empty. Is this true?

Since vehicles could continue to function normally without the urea agent, the EPA will require manufacturers to ensure a method of user compliance when using urea. At this time, there is no definitive ruling on how this will be accomplished. Pierce is well aware of the ramifications regarding the de-rate or shutdown of engines in emergency vehicles, and is currently working with the EPA to jointly develop a fire and emergency vehicle solution.

I have heard of another engine manufacturer that will not use SCR. How will they meet the new emissions requirements?

There are alternative technologies to meet the new emissions requirements, such as Massive Exhaust Gas Recirculation (MEGR) technology. MEGR relies on the engine to reduce the emissions level through recirculation of the exhaust gasses. However, according to the engine manufacturer, SCR technology minimizes fuel emissions to near-zero levels without power, fuel economy or performance compromise.

What is the Detroit DD13 engine?

The DD13 is a smaller version of Detroit's DD15 engine. It is an inline 6 configuration that displaces 12.8 liters. According to the engine manufacturer, the DD13 has an extremely wide peak torque range (up to 500 RPM wide), a Jacobs engine brake with up to 546 braking hp, a robust rear gear train and a ribbed cast-iron block to lower the harsh effects of noise and vibration. The DD13 boasts the longest scheduled maintenance intervals in its class, a maintenance-free crankcase breather and a B50 life of 1 million miles. While the peak hp rating for fire apparatus applications has yet to be published, the DD13 has a peak torque rating of 1650 lb-ft. More information on this engine can be found at:

www.detroitdiesel.com/DetroitDiesel/engines/dd13/

Can I buy the DD13 now?

The DD13 will be offered for sale in late 2009 or early 2010 in Pierce® fire apparatus. Until that time, Pierce will continue to offer the popular Detroit S60.

Will Pierce offer engines other than Detroit DD13 in 2010?

Yes! Pierce will offer the new 13 liter Detroit DD13, the new 11.9 liter Cummins ISX and the 9 liter Cummins ISL. This assures a full range of choices to meet the 2010 EPA emission standards.