

VOLVO'S SCR "NO REGEN ENGINE"



No active regeneration. Better fuel efficiency.

Not only does Volvo's SCR solution save you fuel, it makes the driver's job easier and reduces driver management by eliminating the need for active DPF regeneration. When we set out to meet the EPA's 2010 challenge, we committed ourselves to solving the problem in a way that not only satisfied the new requirements, but also made life easier for the drivers that use our product every day.

Active regeneration is a thing of the past.

With Diesel Particulate Filter aftertreatment, the DPF periodically accumulates particulate matter, or soot, which must be eliminated using a process of active or passive regeneration. In passive regeneration, the NOx is actually used to chemically regenerate the soot in a process that is continuous, low temperature, and automatic.

With EPA '07 technology, the available NOx to regenerate the DPF just isn't enough. Engine manufacturers have then had to resort to "active regeneration," where diesel fuel is added to simply oxidize the soot. This process occurs at

a temperature of 1100 degrees or more. The driver must be made aware of high exhaust temperatures when they occur, and must in some cases inhibit or re-enable active regeneration.

For EPA '10, the Volvo SCR solution eliminates soot using only passive regeneration in nearly all applications. This virtual elimination of active regeneration is what we call the "No Regen Engine." For normal on-highway operation, active regeneration has been totally eliminated. No dash lights come on. No special driver training. Reduced fuel consumption. Lower operating costs.

Just say NO to NOx.

The new EPA regulations for 2010 call for an 83% reduction in NOx from 2007's already low levels. Volvo has always welcomed efforts to minimize environmental impact and this new challenge is no different. Volvo has met this standard with a system that delivers near-zero emissions of NOx and particulates, while saving fuel and reducing driver involvement.



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DEF will be available at hundreds of truck stops, as well as all Volvo Truck Dealers nationwide.

How our engineers took an unsolvable problem and solved it.

You don't need an advanced degree to understand the dilemma (although you may need one to try and tackle it). The conundrum is as follows: when a diesel engine combusts fuel, it produces NOx, a pollutant. It also puts out some soot. If an engineer designs an extremely efficient engine that produces little soot, that same engine (unfortunately) will produce even more NOx.

Where there once were two pollutants, there are now nearly zero.

Here's where our SCR solution really shines. We created an unusually efficient engine, which provides the obvious benefits of fuel efficiency and low particulate emissions. To combat the resultant NOx emissions, our system injects Diesel Exhaust Fluid (DEF) downstream from the DPF. The

exhaust gas and the DEF enter a catalytic converter, which turns the NOx into harmless nitrogen gas and water vapor.

DEF will be everywhere drivers are.

The DEF is fed into the system from an on-board tank that is simple to fill. Over 2500 Volvo Truck Dealers, truck stops, and other locations in North America will offer DEF, and the number is growing every day. A driver can travel from the West Coast to the East Coast and halfway back on a single tank of DEF, passing scores of DEF locations in the meantime.

SCR together with the "No Regen Engine": A win-win.

This new system is the only one that meets the EPA's near-zero NOx emissions requirement while at the same time relieving the driver from ever having to worry about active regeneration in normal highway operations. It all happens seamlessly.

This is a placeholder marking the position of the FSC logo on the printed piece.

Logo placement can ONLY be done by the printer once FSC compliance is documented.

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