Active Regeneration

A Filter Solution with no Requirements for Driving Cycle, and Minimum Cleaning Costs

A closed DPF removes at least 95% of the particulate matter in the exhaust gas at all conditions – hot or cold engine, idle or full throttle. But the essential catalytic coating of the filter, that passively burns the trapped particulate matter, and prevents the filter from blocking, does not.

Only at high exhaust temperatures the catalytic reaction – also known as passive regeneration – is triggered. No problem for trucks and buses doing long haulage, but impossible for vehicles operating in inner city environments, small non-road engines, and most stationary applications.

Why Active Regeneration

Dinex introduces a solution for Active Regeneration, based on a full flow diesel burner system. Without any integration with the vehicle, the system monitors the back pressure before the filter. When the conditions required for passive regeneration are present, the AR-system does nothing and has no interaction on the vehicle.

But if the back pressure before the filter rises, it is a sign that the driving cycle is no longer providing the right conditions for passive regeneration, the system will then actively heat up the exhaust gas, and after a few minutes the regeneration of the filter will start, trapped soot will be burned off, and the back pressure will drop. Everything happens automatically thanks to the control software in DiNLOG® unit without any required interaction from the driver.

What is New?

In contrary to current solutions available on the market today, the Dinex full flow diesel burner is not limited by temperature requirements. Theoretically, the technology used in this solution could raise exhaust gas temperature from 0°C, to the point where regeneration is initiated. This makes the Dinex system the first on the market that can guarantee regeneration disregarding driving cycle – the original purpose of Active Regeneration.
The Technology

The system's main-component is the burner, which when activated heats up the exhaust gas and the filter, until regeneration is initiated. Initiation of the burner happens when signals from backpressure and temperature sensors, are showing signs that the filter is blocking up due to low exhaust gas temperature. The DiNLOG® registers all sensor readings, and uses them to control the flow of air from the compressor, and diesel from the fuel tank, into the burner. Initiation happens automatically, as well as the shutting down of the burner when it is no longer needed.

About Regeneration Strategies

Choosing the right technology for your driving cycle is just as essential to the environment, as to your economy. With the new Active Regeneration system, the Dinex product range now covers every imaginable application, with solutions tailored for the individual driving cycle. Use the overview of regeneration strategies below to gain an indication of which strategy is sufficient for your needs, and contact your local Dinex partner to be guided to the right solution for you.