BLUEMAX NOVA SYSTEM

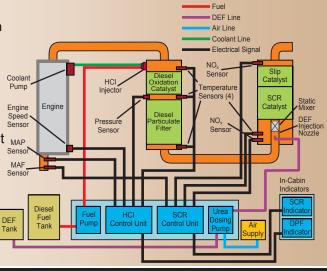
SYSTEM OVERVIEW

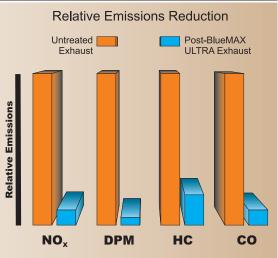
The Nett BlueMAX NOVA[™] is a combination of active diesel particulate filter and urea-SCR system. It is designed to control emissions of both diesel particulate matter and oxides of nitrogen (NO_x) from medium and heavy duty diesel engines in on-road, nonroad and stationary applications. In the Selective Catalytic Reduction (SCR) sub-system, NO_x is reduced over the SCR catalyst through chemical reaction with diesel exhaust fluid (DEF)./DEF is being used for Model Year 2010 and newer on-highway trucks, it is safe and easy to handle. An active diesel particulate filter (DPF) is also used for simultaneous reduction of diesel particulate matter. Active systems are not sensitive to variations in exhaust gas temperature and are a practical diesel particulate control solution for a variety of diesel engines.

The active diesel particulate filter sub-system includes a diesel oxidation catalyst, a diesel particulate filter and an electronic control unit (ECU) that monitors various engine and system components in order to determine exactly when to activate the regeneration procedure. Regeneration is activated by injecting a precise amount MAP of diesel fuel into the exhaust stream which is then oxidized by the diesel oxidation catalyst. The exothermic reaction within the DOC raises the exhaust temperature of the diesel particulate filter oxidizing the soot trapped in the DPF.

SYSTEM EFFICIENCY

The SCR sub-system consists of the SCR catalytic converter, a DEF dosing unit, and the DEF tank (see diagram). The DEF control strategy relies on NO_x concentration measurements by a sensor positioned upstream of the SCR catalyst. Based on the NO_x sensor signal in combination with an engine mass air flow sensor and temperature sensors, the ECU calculates the amount of urea which needs to be injected for optimum/NO_x reductions. The NO_x sensor-based control strategy makes the system very suitable for both original equipment and retrofit applications. System calibration (i.e. engine mapping) is not required and the system can be installed on a wide range of diesel engines, both mechanically and electronically controlled.





The Nett BlueMAX NOVA[™] ECU continuously monitors and measures the performance of all system sensors and components. In the event of malfunction, the ECU will indicate the existence of a problem to the operator via the dashboard indicator.



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