NEWS

Manufacturers of Emission Controls Association

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EXHAUST CONTROL TECHNOLOGY FOR DIESEL ENGINES WILL PLAY A KEY ROLE IN HELPING EPA IMPLEMENT NATIONAL URBAN AIR TOXICS PROGRAM

WASHINGTON, DC -- Commercially available exhaust control technologies will help substantially reduce air toxic emissions targeted by the U.S. EPA's just-announced National Integrated Urban Air Toxics Strategy, according to the Manufacturers of Emission Controls Association (MECA). In a report released today entitled *Demonstration of Advanced Emission Control Technologies Enabling Diesel-Powered Heavy-Duty Engines to Achieve Low Emission Levels*, MECA presented the results of a test program conducted at Southwest Research Institute (SwRI) designed to evaluate the performance of a variety of exhaust control technologies on a current design diesel-powered heavy-duty engine (HDE). The test program demonstrated that employing exhaust controls provides significant reductions in engine-out diesel particulate matter (PM), declared a toxic air contaminant by California, and those hydrocarbon (HC) species considered toxic by health officials, as well as large reductions of NOx emissions which contribute to ground level ozone formation.

EPA's National Air Toxics Strategy identifies mobile sources as an important contributor to the urban air toxic problem in the U.S. and specifically cites exhaust emissions from diesel-powered trucks, buses, and off-road equipment as sources of the problem. Available exhaust control technologies, such as

the diesel oxidation catalyst and the diesel particulate filter, which can dramatically reduce diesel PM and those HC species considered toxic, have been used successfully around the world for a number of years, but until now have been used only on a very limited basis.

"The potential to significantly reduce those diesel emissions considered toxic by health experts by employing exhaust control technologies is enormous," stated MECA's Executive Director, Bruce Bertelsen. "These exhaust control technologies can dramatically cut toxic emissions on both new and existing highway vehicles and off-road equipment. We are seeing a strong and growing interest in using exhaust controls on both diesel-powered light-duty vehicles, such as passenger cars, and heavy-duty vehicles, like trucks, buses, and off-road engines. For example, in Europe, over five million diesel-powered passenger cars have been equipped with diesel oxidation catalysts (DOCs), over 250,000 DOCs have been used on off-road equipment, and over 10,000 DOCs have been retrofitted on urban buses in the U.S. Nearly 5,000 diesel particulate filters (DPFs) have been installed on buses and trucks in Europe and over 2,500 DPFs have been installed on off-road equipment worldwide. Recently, Peugeot-Citroen (PSA) announced that beginning in 2000 the manufacturer will equip passenger cars with DPFs. Employing these proven technologies on diesel engines in the U.S. can be an effective strategy to help the nation meet the ambitious goals of EPA's urban air toxics program."

MECA's comprehensive test program at SwRI evaluated the performance of several different exhaust control technologies on a 1998 model year HDE, including diesel oxidation catalysts, diesel particulate filters, selective catalytic reduction (SCR) technology, fuel-borne catalysts (FBCs) in combination with filters and oxidation catalysts, and combinations of the above technologies. Some of the important findings of the test program include:

- Commercially available diesel oxidation catalysts reduced toxic compounds by over 55% and helped enable the test engine to achieve reduced PM levels that were more than 50 percent below the current 0.1 grams/brake-horsepower hour (g/bhp-hr) standard when operated on commercially available diesel fuel. Use of a fuel-borne catalyst in combination with the DOC provided additional PM reductions.
- Diesel particulate filters reduced toxic compounds by greater than 80 percent and cut PM emissions by greater than 70% when the engine was operated on commercially available diesel fuel.
- Reducing the sulfur level in the fuel greatly enhanced the emission control performance of all catalyst-based PM exhaust control technologies tested. For example, when a DPF was tested on lower sulfur fuel, PM emission levels were reduced to below 0.01 g/bhp-hr or 90 percent below the current PM standard. A DPF tested on zero sulfur fuel reduced PM to a 0.005 g/bhp-hr level.
- SCR technology enabled the engine to achieve emission levels below a 1.5 g/bhp-hr NOx+NMHC level; the current NOx standard is 4.0 g/bhp-hr, and the 2004 standard is 2.5 g/bhp-hr NOx+NMHC.

A copy of the MECA report is available via the Internet at http://www.meca.org or by contacting MECA's Mandy Monk at tel: 202/296-4797 or e-mail: smonk@meca.org.

Founded in 1976, MECA is a national association of companies which manufacture a variety of mobile source emission control equipment for automobiles, trucks, buses, and off-road vehicles and engines, as well as catalytic controls for select stationary sources.

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