MECA Report Documents the Role of Advanced Emission Control Technology in Helping Gasoline-Powered Light-Duty Vehicles Meet the Rigorous EPA Tier 2 and California LEV II Standards

The Manufacturers of Emission Controls Association (MECA), a non-profit association comprised of the world’s leading manufacturers of mobile source emission control technology, today issued a report detailing the important role advanced emission control technology will play in helping gasoline-powered passenger cars, mini-vans, SUVs, and pick-up trucks meet the very stringent U.S. EPA Tier 2 and California LEV II emission standards. Entitled Tier 2/LEV II Emission Control Technologies For Light-Duty Gasoline Vehicles, the report reviews the elements of the Tier 2 and LEV II programs and discusses in detail the advanced emission control technologies and strategies upon which light-duty vehicle manufacturers will rely to help meet the rigorous standards. Included in these key technologies are close-coupled converters, high cell density substrates, and advanced three-way catalyst formulations. The new EPA and California standards will be phased-in beginning with the 2004 model year. The report is available on MECA’s web site at www.meca.org under Resources >> Publications.

MECA Executive Director Dale McKinnon stated, “To achieve the emission requirements of the Tier 2 and LEV II programs, a systems engineering and optimization effort is required, combining advanced engines and advanced engine control strategies with advanced emission control technologies, as well as high quality fuels and lubricants that are compatible with these high emission conversion efficiency components.” McKinnon added, “The current large volume demand for high performance emission control technologies and the future forecasts for growth of these advanced technologies around the globe in light-duty vehicle applications are clear indications that the emission performance benefits associated with advanced emission control technologies, designed and manufactured by MECA’s member companies, are an integral part of the systems approach required to bring light-duty vehicles in compliance with extremely low emission standards like the EPA Tier 2 and California LEV II programs.”
In response to continued public health concerns associated with exhaust emissions from light-duty vehicle exhaust, the U.S. Environmental Protection Agency and the California Air Resources Board established the Tier 2 and LEV II emission regulations, respectively, for light-duty vehicles in the late 1990s. These regulatory programs established a single set of fuel-neutral, vehicle emission certification categories that auto manufacturers can select from for the broad weight range of light-duty cars and trucks that make-up the light-duty vehicle segment (up to 8500 lbs GVW for all light-duty cars and trucks, and up to 10,000 lbs GVW for passenger-carrying trucks). The Tier 2 and LEV II requirements established significantly lower levels of hydrocarbon and NOx emission levels with extended durability requirements (e.g., 120,000 miles) compared to the previous emission regulations for light-duty cars and trucks. As part of these light-duty rulemaking efforts, both California and the EPA also established limits on gasoline fuel sulfur levels, a known catalyst deactivation agent. California’s 15 ppm average gasoline sulfur level requirement begins in 2004 with EPA’s 30 ppm average gasoline sulfur level phase-in beginning in 2005.

To meet the elements of these very rigorous emission reduction programs, the vehicle manufacturers, emission control manufacturers, and the oil industry collectively have invested billions of dollars. The results of this collective effort will be the introduction of gasoline-powered light-duty vehicles that will emit approximately one percent or less of the pollution emitted by light duty vehicles in the 1960s. McKinnon noted, “The systems approach is the hallmark of bringing light-duty gasoline-powered vehicles into the age of ultra-low emissions.”

Founded in 1976, MECA is a national association of companies that manufacture a variety of mobile source emission control equipment for automobiles, trucks, buses, and off-road vehicles and engines, as well as stationary internal combustion engines. For more information on exhaust emission control technology, please visit MECA’s web site at www.meca.org.

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