



Regulatory Announcement

Proposed In-Use Testing Program for Heavy-Duty Diesel Engines and Vehicles

The U.S. Environmental Protection Agency (EPA) is proposing a manufacturer-run, in-use emissions testing program for heavy-duty diesel trucks. This proposal is the first step in implementing a June 2003 settlement agreement between the Engine Manufacturers Association (EMA) and EPA. Under this in-use testing program, manufacturers will measure gaseous and particulate exhaust emissions from diesel engines using portable onboard emission measurement systems. This cooperative effort represents a significant advance in helping to ensure that the benefits of more stringent emission standards are realized under real-world driving conditions.

Background

EPA has issued five rules regarding diesel engines since 1999. These include the 2004 and 2007 Heavy-Duty Diesel Motor Vehicle Engines Rules, Recreational Marine Diesel Engines Rule, Commercial Marine Diesel Engines Rule, and the recently announced nonroad CI engine rule. EMA and some manufacturers challenged parts of the highway and marine rules regarding legal authority and technical feasibility of certain emission standards called the Not-To-Exceed Standards (NTE). EPA, the California Air Resources Board (ARB), and EMA, along with its member companies, have worked cooperatively to reach an agreement. The resulting settlement included provisions for proposing a manufacturer run, in-use emissions testing program.

The new testing program will assess in-use gaseous and particulate exhaust emissions from heavy-duty diesel trucks using portable emission measurement systems for the first time. Previously, engine emissions testing involved removing the engine from the truck and testing the engine in a laboratory on an engine dynamometer. Starting in the mid-1990's EPA facilitated research into portable systems by developing and using prototype systems in its compliance programs. Portable systems were placed inside of vehicles to measure emissions performance during real-world operating conditions. It became clear that these systems offered advantages over conventional approaches to assess in-use exhaust emissions from engines for design improvement, research, modeling, and compliance purposes.

In a largely unprecedented example of proactive government and industry cooperation, prior to any formal rulemaking initiative, manufacturers have agreed to implement this new type of in-use emission testing program. The resulting collaborative program, which advances EPA's clean diesel program, is a significant step forward for both parties in helping ensure that heavy-duty diesel engines comply with applicable emission standards throughout their useful lives while reducing overall compliance burdens.

Key Elements of the Proposed Program

- Fully enforceable program beginning in the 2007 model year, when new "Not-To-Exceed" (NTE) and tailpipe Nox and PM emission standards take effect
- Pilot program for 2005 and 2006 model years which will allow EPA and the manufacturers to gain the necessary experience with in-use testing protocols and generation of in-use test data using portable emission measurement systems.
- Monitors in-use emissions of diesel vehicles with portable emission measurement systems. Pollutants to be measured: Hydrocarbons (HC), Carbon Monoxide (CO), Nitrogen Oxides (NOx) and Particulate Matter (PM).
- Testing will be conducted on in-use vehicles, under real-world driving conditions, within the engine's useful life to monitor for NTE compliance and to help ensure overall compliance with the emission standards.
- Testing conducted and paid for by manufacturers with EPA oversight.
- Addresses a serious, long-standing need for "real-world" in-use testing data.

- The California Air Resources Board will adopt a parallel in-use testing program.
- A nonroad diesel engine in-use testing program patterned after the heavy-duty truck program is expected in the 2010 time frame.

Under the program, manufacturers will test fleet or customer-owned, in-use trucks. Manufacturers will tap into existing customer relationships and create new lines of communication with customers, all of which is expected to fortify the engine development process. This will enhance the manufacturer's ability to catch any problem engines early on, and encourage future engine designs that are cleaner and more durable.

Manufacturers will monitor compliance by testing in-use diesel engines during normal vehicle operation. If noncomplying engines are identified, the manufacturer will test more engines for the purpose of determining if any further action is necessary. EPA will likewise use the in-use data to make independent evaluations about the possible need to pursue further actions. The in-use test data, which have never been collected on this large a scale, will be used by EPA to assure that emission standards are being met, and by manufacturers to improve their engine designs. The data will also be available to the public.

Economic, Health and Environmental Impacts

EPA expects that 14 heavy-duty diesel engine manufacturers will be involved in the program. Total annual costs are estimated at about \$1 million. This proposed in-use emissions testing program is expected to help ensure that the intended health and environmental benefits from recently-adopted emission regulations are realized throughout the entire useful lives of heavy-duty diesel engines.

Public Participation Opportunities

A public hearing will be held on July 15, 2004 at 10:00 AM. The hearing will be held in Washington, D.C. at EPA's office on L Street, N.W.

For inquiries call Richard Wilcox at (734) 214-4390.

For More Information

Please see the Federal Register notice, which is expected to be published within 30 days