

EPA Grants Relief for Fire Trucks and Ambulances; Proposes SCR Maintenance and Short-Term Relief for Nonroad Equipment

With the relief announced by the Administration today, emergency vehicles such as ambulances and fire trucks would no longer face power disruptions related to their diesel emission control systems.

In a proposal mirrored in a direct final action, the U.S. Environmental Protection Agency (EPA) is offering regulatory flexibility for dedicated emergency vehicles and their engines, related to implementation of EPA's 2007/2010 criteria pollutant standards. This fact sheet contains an overview of the emergency vehicle flexibility as well as the other elements of EPA's proposed action: SCR maintenance provisions and regulatory flexibility for nonroad equipment used during emergency responses.

Emergency Vehicle Flexibility

Why is EPA Taking This Action?

Typically, the engines powering our nation's emergency vehicles belong to the same regulated engine families as engines that are installed in similarly sized vehicles sold for other public and private uses. Since MY 2007, EPA's emission standards for diesel engines have spurred wider use of some after-treatment technology that requires routine maintenance for sustained engine performance. The emission control systems built for diesel engines are robust and effective for the majority of the heavy-duty fleet; however, when this maintenance does not occur as designed, many engines are set to cut power to prevent abnormal conditions from causing damage or excess emissions. In this action, EPA is offering engine manufacturers the flexibility to avoid such abnormal conditions and ensure that there will not be emission-related power

loss on emergency vehicles. In doing so, EPA is helping manufacturers to address a potentially serious public safety issue.

What Revisions is EPA Proposing?

EPA is proposing revisions that would allow manufacturers to request and EPA to approve modifications to emissions control systems on new and in-use emergency vehicles so they can be operated as intended, without reduced performance during emergency situations. For new engine or vehicle certifications, these improved controls or settings would generally be approved as auxiliary emission control devices (AECD's). For in-use engines and vehicles, EPA is proposing to allow engine and vehicle manufacturers to submit requests for EPA approval of Emergency Vehicle Field Modifications.

Direct Final Rule

While EPA is accepting comment on all parts of the rule, EPA is also publishing the provisions for dedicated emergency vehicles in a Direct Final Rule. This means that separable emergency vehicle provisions that do not receive adverse comment will become final 60 days from publication in the Federal Register. EPA will withdraw the parts of the direct final rule that receive adverse comments, and respond to all comments as part of a final rule.

Scope of the Rule

This flexibility is being offered for dedicated emergency vehicles, which for the purposes of this action are fire trucks and ambulances with engines subject to EPA's heavy-duty diesel standards. EPA is also offering this flexibility for emergency equipment meaning specialized vehicles for use in fighting aircraft and wildland fires. The flexibility offered in this rule is only available to manufacturers of vehicles and equipment meeting these definitions. The intent is to cover vehicles with demands of duty where it would present unacceptable risks to public health or safety for the driver to lose control of the vehicle due to conditions of the emission control system.

SCR Maintenance

Why is EPA Taking This Action?

Selective Catalytic Reduction (SCR) is now a common technology in the transportation sector. This technology requires use of a diesel exhaust fluid that reacts in the system, is consumed, and must be refilled for the nitrogen oxides (NO_x) reductions to be sustained. When the 2007/2010 standards were adopted, no refill intervals were specified for this fluid used with SCR systems. The need to refill this fluid wasn't even listed as being required, because SCR was not predicted to be this successful of a technology. EPA has determined that it is reasonable to add fluid replenishment to the list of scheduled emission-related maintenance in the regulations, rather than rely on a case-by-case approval as has been done up to now. This action would improve the clarity and transparency of EPA's requirements for maintaining emission control systems.

What Revisions is EPA Proposing?

EPA is proposing to set a fluid refill interval equal to the scheduled oil change interval for light-duty vehicles and light-duty trucks that use SCR.¹ EPA is accepting comment on this in relation to engines that use advanced synthetic oils with extended oil change intervals. EPA is proposing to set a fluid refill interval at least as far (in miles or hours) as the vehicle's fuel capacity for centrally-fueled heavy-duty vocational vehicles such as dump trucks, concrete mixers, and refuse trucks. For all other vehicles that use SCR, the fluid refill interval must provide a range of vehicle operation that is no less than twice the range of vehicle's fuel capacity. Finally, for SCR-equipped nonroad diesel engines, EPA is proposing a fluid refill interval at least as far (in miles or hours) as the vehicle's fuel capacity.

Nonroad Engines in Temporary Emergency Situations

Why is EPA Taking This Action?

Diesel engines in most modern nonroad equipment are subject to EPA's technology-forcing standards, phasing in through 2015. As noted above, when routine emission-control maintenance does not occur as designed, many engines are set to cut power to prevent abnormal conditions from causing damage or excess emissions. Today's proposed action regarding nonroad equipment would allow short-term relief from emissions standards only when such equipment is needed to respond to an emergency such as a flood or hurricane, so that any pre-set emissions or engine protection measures do not prevent the equipment from performing life-saving work.

What Revisions is EPA Proposing?

EPA is proposing revisions that would allow manufacturers to request and EPA to approve AECDs as part of the engine certification process. This flexibility is intended primarily for new engines used for power generation or in construction equipment, though if justified EPA may grant approval for other engines and/or equipment in use. Manufacturers would be responsible for activation of any such AECD as well as reports that document such activation was related to a verifiable emergency.

What are the Economic, Health and Environmental Impacts?

EPA expects the economic effects of this proposal to be small, and to potentially have benefits that are a natural result of easing constraints. No new regulatory burdens would be imposed. For SCR maintenance, EPA is providing regulatory certainty that will allow affected manufacturers to plan their future product development. For emergency vehicles, the societal costs of inaction would appear to be much greater than the potential costs of this action.

We expect any environmental impacts from today's action would be small. Due to the optional and voluntary nature of the flexibilities offered, the emissions impacts will depend on which options and strategies are employed, how many vehicles are modified, and how often the AECD's are turned on. There are no anticipated adverse environmental impacts from the SCR maintenance proposal.

¹ Such as a half-ton diesel pickup truck or a diesel SUV

For More Information

You can access the direct final rule, the proposed rule and related documents on EPA's Office of Transportation and Air Quality (OTAQ) Web site at:

www.epa.gov/otaq/highway-diesel/regs.htm.

For more information on these and related rules, please contact EPA through EPA OTAQ Public Inquiries at:

www.epa.gov/otaq/oms-cmt.htm