

EPA PROPOSES STRINGENT HEAVY-DUTY ENGINE EMISSION STANDARDS AND LOW SULFUR DIESEL FUEL

On May 17, 2000, President Clinton announced a bold initiative to establish stringent standards designed to reduce emissions from on-road heavy-duty trucks and buses by greater than 90 percent and to cut the allowable levels of sulfur in diesel fuel by 97 percent. The EPA proposal was hailed by the states and the environmental and health communities, but severely criticized by the oil industry. EPA noted that its proposal is equivalent to removing 13 million of today's trucks off the road. The Clinton Administration intends to finalize the rule by the end of the year. If adopted as proposed, the rule will result in NOx and PM control technology being installed on every on-road HDE.

Key Elements of the Proposal

The proposed rule has several key elements:

- A sulfur cap of 15 ppm beginning June 1, 2006 for diesel fuel sold for use in highway vehicles
- 0.01 g/bhp-hr PM standard which would take effect with the 2007 model year
- 0.2 g/bhp-hr NOx standard and a 0.14 g/bhp-hr NMHC standard to be phased in beginning with the 2007 model year (2007 MY – 25%, 2008 MY – 50%, 2009 MY – 75%, and 2010 MY – 100%)
- Not-to-exceed standards
- Formaldehyde emission standards and new requirements for crankcase emissions on turbocharged diesel engines
- Tighter standards for heavy-duty vehicles certified as complete vehicles
- Standards requiring a 50 percent reduction in evaporative emissions

Emission Standards

The proposed emission standards for HDEs are shown in Table 1 below. The standards would apply to both diesel and gasoline HDEs. EPA has proposed that the NOx and NMHC standards apply to 100 percent of the 2007 MY gasoline engines (as noted above, EPA has proposed phasing in the NOx and NMHC for diesel engines).

Table 1

Proposed Standards for HDEs	
PM	0.01 g/bhp-hr
NOx	0.20 g/bhp-hr
NMHC	0.14 g/bhp-hr

The proposed standards for complete heavy-duty vehicles (HDVs) would be implemented on the same schedule as for engine standards. For certification of complete vehicles between 8500 and 10,000 pounds gross vehicle weight rating (GVWR), the proposed standards are 0.20 grams per mile (g/mi) for NO_x, 0.02 g/mi for PM, and 0.195 g/mi for NMHC. For vehicles between 10,000 and 14,000 pounds, the proposed standards are 0.4 g/mi for NO_x, 0.02 g/mi for PM, and 0.230 g/mi for NMHC. EPA believes these standards are roughly comparable to the proposed engine-based standards in these size ranges. Note that these standards would not apply to vehicles above 8500 pounds that we classify as medium-duty passenger vehicles as part of our Tier 2 program because of their primary use as passenger vehicles (the final standards for these vehicles are in 65 FR 6698, February 10, 2000). The proposed standards for HDVs are shown in Table 2.

Table 2

Proposed Standards for HDVs			
GVWR	PM	NO_x	NMHC
8,500-10,000	0.02 g/mi	0.2 g/mi	0.195 g/mi
10,000-14,000	0.02 g/mi	0.4 g/mi	0.230 g/mi

EPA also proposed to revise the evaporative emissions standards for heavy-duty engines and vehicles, effective in the 2007 model year. The proposed evaporative emission standards are shown in Table 3.

Table 3

Proposed Evaporative Emission Standards		
GVWR	3-Day Diurnal Test	Supplemental 2-Day Diurnal Test
8,500-14,000	1.4 g/test	1.75 g/test
>14,000	1.9 g/test	2.3 g/test

Diesel Sulfur Limits

EPA proposed the 15 ppm sulfur cap based on its analysis of the need for very low sulfur diesel fuel to enable catalyst-based diesel particulate filters and NO_x adsorber technologies to be used to help meet the stringent proposed standards. EPA also invited comments on other options including: a 5 ppm sulfur cap, a 25 ppm sulfur cap/15 ppm sulfur average, and a 50 ppm sulfur cap/30 ppm average. EPA also invited comments on the phasing-in of the sulfur limit over time and ways to provide compliance flexibility for small refiners.

Costs

EPA estimates that the proposed standards will add about \$1000 to \$1600 per new vehicle, depending on the vehicle size. The agency estimates that cutting sulfur levels from the current 500 ppm level to 15 ppm will add about 3-4 cents per gallon to produce and distribute diesel fuel, but there will be a cost off-set of 1 cent per gallon from vehicle maintenance savings resulting from the use of cleaner diesel fuel.

Public Participation

Public hearings will be held on the following dates:

- June 19, 2000 -- New York City (Crown Plaza Hotel)
- June 20, 2000 -- Chicago (Rosemont Convention Center)
- June 22, 2000 -- Atlanta (Renaissance Atlanta Hotel)
- June 27, 2000 -- Los Angeles (Hyatt Regency)
- June 29, 2000 -- Denver (Doubletree Hotel)

The comment period will close August 14, 2000.

For More Information

The proposed rule and related documents can be found on the Office of Transportation and Air Quality web site at <http://www.epa.gov/otaq/diesel.htm>.

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