

Heavy-Duty Highway Engine: Clean Fuel Fleet Exhaust Emission Standards

	Emissions Category	NMHC+NOx (g/bhp-hr)	CO (g/bhp-hr)	PM (g/bhp-hr)	Formaldehyde (g/bhp-hr)
Federal ^a	LEV (Federal Fuel)	3.8	b	b	b
	LEV (California Fuel)	3.5	b	b	b
	ILEV	2.5	14.4	0.10	0.05
	ULEV	2.5	7.2	0.05	0.025
	ZEV	0	0	0	0

Notes:

- a** These standards have in effect been superseded by newer, more stringent standards in 40 Code of Federal Regulations (CFR) Part 86. See EPA manufacturer guidance letter on Clean-Fuel Vehicle Standards (CCD-05-12, July 21, 2005, which provides guidance on determining the equivalency of vehicle and engine emission standards in the CFR Part 86 standards and Part 88 standards for Clean-Fuel Vehicles.
- b** Exhaust emissions from engines used in heavy-duty low emission vehicles shall meet conventional vehicle standards set forth in Part 86 for total hydrocarbon, carbon monoxide, particulate, and organic material hydrocarbon equivalent.

Code of Federal Regulations (CFR) citations:

- 40 CFR 88.105-94 - Clean-fuel fleet emission standards for heavy-duty engines
- 40 CFR 88.311- 93 & 88.311- 98 - Emission standards for Inherently Low-Emission Vehicles
- 40 CFR 86 Subpart N - The test procedure for the Clean Fuel Fleet standards is the EPA Transient Test Procedure