

APPENDIX F

State of California
AIR RESOURCES BOARD

PROPOSED

CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 2004 AND SUBSEQUENT MODEL HEAVY-DUTY OTTO-CYCLE ENGINES

Adopted: December 27, 2000
Amended: December 12, 2002
Amended: July 26, 2007
Amended: October 17, 2007
Amended: September 27, 2010
Amended: March 22, 2012
Amended: [INSERT DATE OF AMENDMENT]

Note: The proposed amendments to this document are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions compared to the test procedures as adopted March 22, 2012. [No change] indicates proposed federal provisions that are also proposed for incorporation herein without change. Existing intervening text that is not amended in this rulemaking is indicated by “* * *”.

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**CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST
PROCEDURES FOR 2004 AND SUBSEQUENT MODEL
HEAVY-DUTY OTTO-CYCLE ENGINES**

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**Part I. GENERAL PROVISIONS FOR CERTIFICATION AND IN-USE
VERIFICATION OF EMISSIONS**

**Subpart A - General Provisions for Emission Regulations for 1977 and Later
Model Year New Light-Duty Vehicles, Light-Duty Trucks and Heavy-Duty Engines,
and for 1985 and Later Model Year New Gasoline-Fueled, Natural Gas-Fueled,
Liquefied Petroleum Gas-Fueled and Methanol-Fueled Heavy Duty Vehicles**

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**10. Emission standards for Otto-cycle heavy-duty engines and vehicles. [§86.xxx-
10]**

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B. California provisions.

1. Exhaust emissions from new 2004 and later model year Otto-cycle medium- and heavy-duty engines, except for Otto-cycle medium- and heavy-duty engines subject to the alternative standards in 40 CFR §86.005-10(f), shall not exceed:

California Emission Standards for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines^A
(in g/bhp-hr)

Model Year	Emission Category	NMHC + NOx	NMHC	NOx	CO ^H	HCHO	PM
Standards for Heavy-Duty Otto-Cycle Engines Used In 2004 through 2019 <u>2021</u> Model Medium-Duty Vehicles 8,501 to 10,000 pounds GVW^B and 2004 and Subsequent Model Medium-Duty Vehicles 10,001 to 14,000 pounds GVW^C							
2004	ULEV	2.4 or 2.5 with 0.5 NMHC cap ^D	n/a	n/a	14.4	0.05	n/a
	SULEV	2.0	n/a	n/a	7.2	0.025	n/a
2005 through 2007 ^F	ULEV	1.0 ^{D,F}	n/a	n/a	14.4	0.05	n/a
	SULEV	0.5 ^{D,F}	n/a	n/a	7.2	0.025	n/a
2008 and subsequent ^G	ULEV	n/a	0.14 ^F	0.20 ^F	14.4	0.01	0.01
	SULEV	n/a	0.07 ^F	0.10 ^F	7.2	0.005	0.005
Standards for Heavy-Duty Otto-Cycle Engines Used In Heavy-Duty Vehicles Over 14,000 pounds GVW							
2004	n/a	2.4 or 2.5 with 0.5 NMHC cap ^D	n/a	n/a	37.1	0.05 ^E	n/a
2005 through 2007 ^F	n/a	1.0 ^{C,E}	n/a	n/a	37.1	0.05 ^E	n/a
2008 and subsequent ^G	n/a	n/a	0.14 ^F	0.20 ^E	14.4	0.01	0.01

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^B For the ~~2020~~ and subsequent model years, medium-duty vehicles 8,501 to 10,000 pounds GVW must certify to the LEV III primary emission standards and test procedures for complete vehicles specified in section 1961.2, title 13, CCR.

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2. Optional Standards for Complete and Incomplete Heavy-Duty Vehicles.

Manufacturers may request to group complete and incomplete heavy-duty vehicles into the same test group as vehicles certifying to the LEV III exhaust emission standards and test procedures specified in title 13, CCR, §1961.2, so long as those complete and incomplete heavy-duty Otto-cycle vehicles meet the most stringent LEV III standards to which any vehicle within that test group certifies.

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