

APPENDIX B

PROPOSED AMENDMENTS TO THE CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 2004 AND SUBSEQUENT MODEL HEAVY-DUTY DIESEL ENGINES AND VEHICLES

PROPOSED

State of California
AIR RESOURCES BOARD

CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 2004 AND SUBSEQUENT MODEL HEAVY-DUTY DIESEL ENGINES AND VEHICLES

Adopted: December 12, 2002
Amended: July 24, 2003
Amended: September 1, 2006
Amended: July 26, 2007
Adopted: October 17, 2007
Amended: October 14, 2008
Amended: September 27, 2010
Amended: (insert date of finalized 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 last amended September 27, 2010. [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 “* * *”. A complete set of the test procedures, as amended on September 27, 2010, is available at http://www.arb.ca.gov/msprog/onroadhd/hddtps_clean_warranty_12-10.pdf.

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

The following provisions of Subparts A, I, N, S, and T, Part 86, and of Subparts A through K, Part 1065, Title 40, Code of Federal Regulations, as adopted or amended by the U.S. Environmental Protection Agency on the date set forth next to the applicable section listed below, and only to the extent they pertain to the testing and compliance of exhaust emissions from heavy-duty diesel engines and vehicles, are adopted and incorporated herein by this reference as the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," except as altered or replaced by the provisions set forth below.

**PART 86 – CONTROL OF EMISSIONS FROM NEW AND IN-USE HIGHWAY
VEHICLES AND ENGINES**

**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.**

1. General Applicability. [86.xxx-1]

* * * * *

2. Definitions. [§86.xxx-2]

* * * * *

B. California Provisions.

"Administrator" means the Executive Officer of the Air Resources Board.

"Certificate of Conformity" means "Executive Order" certifying vehicles for sale in California.

"Certification" means certification as defined in Section 39018 of the Health and Safety Code.

"EPA" shall also mean Air Resources Board or Executive Officer of the Air Resources Board.

"EPA Enforcement Officer" means the Executive Officer or his delegate.

“Measurement allowance” means accuracy margin.

“Medium-duty engine” means a heavy-duty engine that is used to propel a medium-duty vehicle.

“Medium-duty vehicle” means 2004 through 2006 model year heavy-duty low-emission vehicle, ultra-low-emission vehicle, super-ultra-low-emission vehicle or zero-emission vehicle certified to the standards in title 13, CCR, section 1960.1(h)(2) having a manufacturer's gross vehicle weight rating of 14,000 pounds or less; and any 2004 and subsequent model heavy-duty low-emission, ultra-low-emission, super-ultra-low-emission or zero-emission vehicle certified to the standards in title 13, CCR section 1956.8(h), having a manufacturer's gross vehicle weight rating between 8,501 and 14,000 pounds.

“NTE standard” means NTE emission limit.

“Warranty period” [For guidance see title 13, CCR, §2036].

* * * * *

11. Emission standards for diesel heavy-duty engines and vehicles. [§86.xxx-11]

A. Federal provisions.

* * * * *

B. California provisions.

1. Urban Bus Standards.

* * * * *

6. Heavy-Duty Diesel Engine Idling Requirements.

6.1 Engine Shutdown System. The requirements in this subsection apply to engine manufacturers and original equipment manufacturers, as applicable, that are responsible for the design and control of engine and/or vehicle idle controls.

* * * * *

6.2 Exempt Vehicles. Heavy-duty diesel engines to be used in buses as defined in California Vehicle Code §§ 233, 612 and 642, school buses as defined in California Vehicle Code § 545, recreational vehicles as defined in Health and Safety Code 18010, medium duty vehicles as defined in § 1900(b)(13) of title 13, California Code of Regulations (CCR), military tactical vehicles as defined in §1905 of title 13, CCR, ~~and~~ authorized emergency vehicles as defined in California Vehicle Code § 165, armored cars, as defined in California Vehicle Code § 115, and workover rigs, as defined in § 2449 of title 13, CCR are exempted from these requirements.

* * * * *

II. TEST PROCEDURES

* * * * *

Subpart N - Emission Regulations for New Otto-Cycle and Diesel Heavy-Duty Engines; Gaseous and Particulate Exhaust Test Procedures

* * * * *

86.1370-2007 Not-To-Exceed Test Procedures. ~~July 13, 2005~~ November 8, 2010.

A. Federal Provisions.

* * * * *

4.1 Amend subparagraph (d)(1) as follows: Add the following introductory sentence to subparagraph (d)(1): When operated within the Not-To-Exceed Control Area defined in paragraph (b) of this section, diesel engine emissions shall not exceed the applicable Not-To-Exceed Limits specified below when averaged over any time period greater than or equal to 30 seconds, except where a longer minimum averaging period is required by paragraph (d)(2) of this section.

(i) The emission caps specified in this section shall be rounded to the same number of significant figures as the applicable standards in Part I.11 of these test procedures using ASTM E29-93a.

* * * * *

Subpart T - Manufacturer-Run In-Use Testing Program for Heavy-Duty Diesel Engines

86.1901 What testing requirements apply to my engines that have gone into service? ~~June 14, 2005.~~ November 8, 2010.

86.1905 How does this program work? ~~March 13, 2008~~ November 8, 2010.

1. Subparagraphs (a) through (f). [No change.]

2. Amend subparagraph (g) as follows: For any communication related to this subpart, contact the On-Road Heavy-Duty Diesel Section Manager, Mobile Source Control Division, Air Resources Board, 9528 Telstar Avenue, El Monte, CA 91731.

* * * * *

86.1910 How must I prepare and test my in-use engines? ~~June 14, 2005~~ November 8, 2010.

86.1912 How do I determine whether an engine meets the vehicle-pass criteria?
~~March 13, 2008.~~ November 8, 2010.

* * * * *

86.1920 What in-use testing information must I report to EPA? ~~June 14, 2005~~
November 8, 2010.

1. Amend subparagraph (a) as follows: Send us electronic reports using an approved information format to Chief, Emission Research and Regulatory Development Branch, Mobile Source Control Division, Air Resources Board, 9528 Telstar Avenue, El Monte, California, 91731. If you want to use a different format, send us a written request with justification.

2. Subparagraphs (b) to (c). [No change.]

3. Amend subparagraph (d) as follows: Send us an electronic notification at inuse@arb.ca.gov describing any voluntary vehicle/engine emission evaluation test you intend to conduct ... [No change to remainder of paragraph.]

4. Amend subparagraph (e) as follows: Send us an electronic notification at inuse@arb.ca.gov within 15 days after your initial review of the test data for a selected engine family indicates that three engines in Phase 1 testing have failed to comply with the vehicle-pass criteria. [No change to remainder of paragraph.]

5. Subparagraphs (f) and (g). [No change.]

86.1930 What special provisions apply from 2005 through ~~2009~~ 2010? ~~March 13, 2008~~ November 8, 2010.

~~86.1935 What special provisions may apply as a consequence of a delay in the particulate matter accuracy margin report for portable emission measurement system? March 13, 2008~~

* * * * *

PART 1065 – ENGINE-TESTING PROCEDURES.

* * * * *

Subpart B – Equipment Specifications

* * * * *

1065.140 Dilution for gases and PM constituents. ~~July 13, 2005,~~ November 8, 2010.

* * * * *

Subpart C – Measurement Instruments

* * * * *

1065.260 Flame ionization detector. ~~July 13, 2005,~~ November 8, 2010.

* * * * *

1065.290 PM gravimetric balance. ~~July 13, 2005,~~ November 8, 2010.

1065.295 PM inertial balance for field-testing analysis. ~~July 13, 2005,~~
November 8, 2010.

Subpart D – Calibrations and Verifications

* * * * *

1065.307 Linearity verification. ~~July 13, 2005,~~ November 8, 2010.

* * * * *

1065.340 Diluted exhaust flow (CVS) calibration. ~~July 13, 2005,~~ November 8, 2010.

* * * * *

1065.390 PM balance verifications and weighing process verification. ~~July 13, 2005,~~
November 8, 2010.

* * * * *

Subpart F – Performing an Emission Test in the Laboratory

* * * * *

1065.525 Engine starting, restarting, and shutdown. ~~July 13, 2005,~~
November 8, 2010.

1065.526 Repeating void modes or test intervals. November 8, 2010.

* * * * *

1065.550 Gas analyzer range validation, drift validation, and drift correction.
~~July 13, 2005,~~ November 8, 2010.

* * * * *

Subpart G – Calculations and Data Requirements

* * * * *

1065.640 Flow meter calibration calculations. ~~July 13, 2005,~~ November 8, 2010.

1065.642 SSV, CFV, and PDP molar flow rate calculations. ~~July 13, 2005,~~ November 8, 2010.

* * * * *

1065.660 THC, NMHC, and CH₄ determination. ~~July 13, 2005,~~ November 8, 2010.

* * * * *

Subpart H – Engine Fluids, Test Fuels, Analytical Gases and Other Calibration Standards

* * * * *

1065.750 Analytical gases. ~~July 13, 2005,~~ November 8, 2010.

* * * * *

Subpart J – Field Testing and Portable Emission Measurement Systems

* * * * *

1065.905 General provisions. ~~July 13, 2005,~~ November 8, 2010.

* * * * *

1065.915 PEMS instruments. ~~July 13, 2005,~~ November 8, 2010.

1065.920 PEMS calibrations and verifications. ~~July 13, 2005,~~ November 8, 2010.

1065.925 PEMS preparation for field testing. ~~July 13, 2005,~~ November 8, 2010.

* * * * *

1065.940 Emission calculations. ~~July 13, 2005,~~ November 8, 2010.

* * * * *