

# APPENDIX G

State of California  
**AIR RESOURCES BOARD**

## PROPOSED

### 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  
Amended: October 17, 2007  
Amended: October 14, 2008  
Amended: September 27, 2010  
Amended: October 12, 2011  
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 DIESEL ENGINES AND VEHICLES**

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**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.**

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

\* \* \* \*

**A. California provisions.**

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**5. Standards for Medium-Duty Engines.**

**5.1 Requirements Specific to Heavy-Duty Engines Used in  
Medium-Duty Vehicles 8,501 to 10,000 pounds GVW.** For the 2004  
through ~~2019~~ 2021 model years, a manufacturer of heavy-duty engines used  
in medium-duty vehicles 8,501 to 10,000 pounds GVW may choose to comply  
with the following standards as an alternative to the primary emission  
standards and test procedures specified in title 13, CCR, §1961 or §1961.2,  
as applicable. A manufacturer that chooses to comply with these optional  
heavy-duty standards and test procedures shall specify, in the application for  
certification, an in-use compliance test procedure, as provided in title 13,

CCR, §2139(c). For the 2020~~2~~ and subsequent model years, a manufacturer of heavy-duty engines used in medium-duty vehicles 8,501 to 10,000 pounds GVW must comply with the primary emission standards and test procedures specified in title 13, CCR, §1961.2.

\* \* \* \*

**5.3 Exhaust Emission Standards for Medium-Duty Engines.** The exhaust emissions from new 2004 through ~~2019~~ 2021 model heavy-duty diesel engines used in ultra-low emission and super-ultra-low emission medium-duty diesel vehicles 8,501 to 10,000 pounds GVW and 2004 and subsequent model heavy-duty diesel engines used in ultra-low emission and super-ultra-low emission medium-duty diesel vehicles 10,001 to 14,000 pounds GVW shall not exceed:

<b>Exhaust Emission Standards for 2004 through 2006 Model Medium-Duty ULEVs and SULEVs</b>					
Vehicle Emission Category	NOx + NMHC	CO	PM	HCHO	
ULEV <sup>1</sup> Option A	2.5 (with a 0.5 cap on NMHC)	14.4	0.10	0.050	
ULEV <sup>1</sup> ; Option B	2.4	14.4	0.10	0.050	
<b>Exhaust Emission Standards for 2007 through <del>2019</del> <u>2021</u> Model Medium-Duty ULEVs and SULEVs 8,501-10,000 lbs. GVW and 2007 and Subsequent Model Medium-Duty ULEVs and SULEVs 10,001-14,000 lbs. GVW</b>					
Vehicle Emission Category	NOx	NMHC or NMHCE	CO	PM	HCHO
ULEV <sup>1</sup>	0.20	0.14	15.5	0.01	0.050
SULEV <sup>1</sup>	0.10	0.07	7.7	0.005	0.025

Emissions averaging may be used to meet these standards using the requirements for participation averaging, banking and trading programs, as set forth in Section I.15 of these test procedures.

**5.4 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 diesel

vehicles meet the most stringent LEV III standards to which any vehicle within that test group certifies.

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**II. TEST PROCEDURES**

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

1065.701 General requirements for test fuels. April 30, 2010.

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**B. California provisions.**

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**3. Identification of New Clean Fuels to be Used in Certification Testing.**

Any person may petition the state board to establish by regulation certification testing specifications for a new clean fuel for which specifications for the new clean fuel are not specifically set forth in paragraph §86.1313-98 as amended herein. Prior to adopting such specifications, the state board shall consider the relative cost-effectiveness of use of the fuel in reducing emissions compared to the use of other fuels. Whenever the state board adopts specifications for a new clean fuel for certification testing, it shall also establish by regulation specifications for the fuel as it is sold commercially to the public.

(a) If the proposed new clean fuel may be used to fuel existing motor vehicles, the state board shall not establish certification specifications for the fuel unless the petitioner has demonstrated that:

(1) Use of the new clean fuel in such existing motor vehicles would not increase emissions of NMHC, NOx, and CO, and the potential risk associated with toxic air contaminants, as determined pursuant to the procedures set forth in the “California Test Procedures for Evaluating Substitute Fuels and New Clean Fuels through 2014,” ~~as amended March 22, 2012~~ or the “California Test Procedures for Evaluating Substitute Fuels and New Clean Fuels in 2015 and Subsequent Years,” ~~as adopted March 22, 2012~~ which are incorporated by reference in title 13, CCR, §2317, as applicable. In the case of fuel-flexible vehicles or dual-fuel vehicles that were not

certified on the new clean fuel but are capable of being operated on it, exhaust and evaporative emissions from the use of the new clean fuel shall not increase compared to exhaust and evaporative emissions from the use of gasoline that complies with Title 13, Division 3, Chapter 5, Article 1, California Code of Regulations.

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