ATTACHMENT A-10

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
Amended:	October 17, 2007
Amended:	October 14, 2008
Amended:	September 27, 2010
Amended:	October 12, 2011
Amended:	March 22, 2012

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 "* * * *".

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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.

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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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2. Definitions. [§86.xxx-2]

A. Federal Provisions.

1. **§86.004-2** January 18, 2001. [All federal definitions apply, except as otherwise noted below. Definitions specific to other requirements are contained in separate documents.]

2. **§86.010-2** April 30, 2010. [All federal definitions apply, except as otherwise noted below. Definitions specific to other requirements are contained in separate documents.]

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

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B. 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 model years, a~~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 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.

5.2 **Requirements Specific to Heavy-Duty Engines Used in Medium-Duty Vehicles 10,001 to 14,000 pounds GVW.** For the 2004 and subsequent model years, a manufacturer of heavy-duty engines used in medium-duty vehicles 10,001 to 14,000 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).

5.3 **Exhaust Emission Standards for Medium-Duty Engines.** The exhaust emissions from new 2004 through 2019 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:

Exhaust Emission Standards for 2004 – through 2006 Model Medium-Duty ULEVs and SULEVs				
Vehicle Emission Category	NOx + NMHC	CO	PM	HCHO
ULEV[1] Option A	2.5 (with a 0.5 cap on NMHC)	14.4	0.10	0.050
ULEV[1]; Option B	2.4	14.4	0.10	0.050

Exhaust Emission Standards for 2007 through 2019 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					
Vehicle Emission Category	NOx	NMHC or NMHCE	CO	PM	HCHO
ULEV[1]	0.20	0.14	15.5	0.01	0.050
SULEV[1]	0.10	0.07	7.7	0.005	0.025

[1] 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 Heavy-Duty Vehicles.** Manufacturers may request to group complete 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 heavy-duty diesel vehicles meet the most stringent LEV III standards to which any vehicle within that test group certifies.

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21. Application for certification. [§86.xxx-21]

A. Federal provisions.

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2. **§86.007-21** ~~July 13, 2005~~ August 30, 2006. Amend as follows:

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2.6 Subparagraph (q). [No change.]

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23. Required data. [§86.xxx-23]

A. Federal provisions.

1. **§86.098-23**. ~~October 21, 1997~~ April 30, 2010.

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2. **§86.001-23.** October 21, 1997. [No change, except that the amendments indicated for §86.098-23 above still apply.]

3. **§86.007-23.** ~~January 18, 2001~~ October 30, 2009. [No change, except that the amendments indicated for §86.098-23 above still apply.]

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26. Mileage and service accumulation; emission measurements. [§86.004-26] ~~October 6, 2000~~ July 13, 2005.

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28. Compliance with emission standards. [§86.xxx-28] January 18, 2001.

A. Federal provisions.

1. **§86.004-28**. ~~January 18, 2001~~ August 30, 2006. Amend as follows:

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30. Certification. [§86.xxx-30]

A. Federal provisions

1. **§86.004-30**. ~~October 21, 1997~~ October 6, 2000. Amend as follows:

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2. **§86.007-30**. February 24, 2009. Amend as follows:

1.1 Subparagraphs (a) through (a)(2). [No change.]

1.2 Add the following sentence to subparagraph (a)(3)(i). For heavy-duty engines certified under the provisions of section I.11.B.4 of these test procedures two certificates will be issued, one for each fueling mode. [No change to remainder of paragraph.]

1.3 Subparagraphs (a)(3)(ii) through (b)(2). [No change.]

1.4 Subparagraph (b)(3). Add the following sentence: If, after a review of the request and supporting data, the Executive Officer finds that the request raises a substantial factual issue, he shall provide the manufacturer a hearing in accordance with title 17, CCR, §60040, et seq., with respect to such issue.

1.5 Subparagraph (b)(4). [No change.]

1.6 Subparagraph (b)(4)(i). Add the following phrase at the beginning of the paragraph: Request a hearing under title 17, CCR, §60040, et seq.; or…

1.7 Subparagraph (b)(4)(ii) through (b)(5). [No change.]

1.8 Subparagraph (b)(5)(i). Add the following phrase at the beginning of the paragraph: Request a hearing under title 17, CCR, §60040, et seq.; or…

1.9. Subparagraph (b)(5)(ii) through (c)(5). [No change.]

1.10 Subparagraph (c)(5)(i). Add the following phrase at the beginning of the paragraph: Be made only after the manufacturer concerned has been offered an opportunity for a hearing conducted in accordance with title 17, CCR, §60040, et seq. hereof; and …

1.11 Subparagraph (c)(5)(ii). [No change.]

1.12 Subparagraph (c)(6). Add the following sentence: The manufacturer may request in the form and manner specified in paragraph (b)(3) of this section that any determination made by the Executive Officer under paragraph (c)(1) of this section to withhold or deny certification be reviewed in a hearing conducted in accordance with title 17, CCR, §60040, et seq. If the Executive Officer finds, after a review of the request and supporting data, that the request raises a substantial factual issue, he will grant the request with respect to such issue.

1.13 Subparagraphs (d) through (e). [No change.]

1.14 Delete subparagraph (f) and replace with the following: All medium-duty diesel cycle engines used in vehicles up to 14,000 pounds GVW must have an on-board diagnostic system as required in title 13, CCR §1968 et seq, as applicable.

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38. Maintenance instructions. [§86.xxx-38]

A. Federal provisions

1. **§86.004-38** ~~October 21, 1997~~ June 27, 2003.

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

1.2 Amend subparagraph (g)(1) as follows: (g) Emission control diagnostic service information:

(1) Manufacturers shall furnish or cause to be furnished to any person engaged in the repairing or servicing of motor vehicles or motor vehicle engines, or the Administrator upon request, any and all information needed to make use of the on-board diagnostic system and such other information, including instructions for making emission-related diagnosis and repairs, including, but not limited to, service manuals, technical service bulletins, recall service information, data stream information, bi-directional control information, and training information, unless such information is protected by section 208(c) of the Act or California

Government Code Section 6250, as a trade secret. No such information may be withheld under section 208(c) of the Act or California Government Code Section 6250 if that information is provided (directly or indirectly) by the manufacturer to franchised dealers or other persons engaged in the repair, diagnosing, or servicing of motor vehicles or motor vehicle engines.

1.3 Subparagraphs (g)(2) through (h). [No change.]

2. **§86.007-38** ~~January 18, 2001~~ June 29, 2004.

2.1 Subparagraphs (a) through (h). [No change, except as amended in §86.004-38, above.]

2.2 Amend subparagraph (i) as follows: For each new diesel-fueled engine subject to the standards prescribed in title 13, CCR §1956.8(a), §1956.8(h), and Sec. 86.007-11, as applicable, the manufacturer shall furnish or cause to be furnished to the ultimate purchaser a statement that "This engine must be operated only with low sulfur diesel fuel (that is, diesel fuel meeting ARB specifications for highway diesel fuel, including a 15 ppm sulfur cap)."

3. **§86.010-38** April 30, 2010.

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

3.2 Subparagraph (g). Delete; replace with: Manufacturers of heavy-duty diesel engines used in vehicles weighing 14,000 pounds GVW and less must comply with the motor vehicle service information requirements set forth in title 13, CCR §1969.

3.3 Subparagraph (h). [No change.]

3.4 Amend subparagraph (i) as follows: For each new diesel-fueled engine subject to the standards prescribed in title 13, CCR §1956.8(a), §1956.8(h), and Sec. 86.007-11, as applicable, the manufacturer shall furnish or cause to be furnished to the ultimate purchaser a statement that "This engine must be operated only with low sulfur diesel fuel (that is, diesel fuel meeting ARB specifications for highway diesel fuel, including a 15 ppm sulfur cap)."

3.5 Subparagraph (j). Delete; replace with: Manufacturers of heavy-duty diesel engines used in vehicles over 14,000 pounds GVW must comply with the motor vehicle service information requirements set forth in title 13, CCR §1969.

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40. Heavy-duty engine rebuilding practices. [§86.xxx-40]

A. Federal Provisions.

1. **§86.004-40** ~~October 21, 1997~~ January 18, 2001.

1.1 Add the following sentence to the introductory paragraph: Any deviation from the provisions contained in this section is also a prohibited act under California Vehicle Code section 27156, et seq.

1.2 Subparagraphs (a) through (e). [No change.]

II. TEST PROCEDURES

Subpart I - Emission Regulations for New Diesel-Fueled Heavy-Duty Engines; Smoke Exhaust Test Procedure

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86.884-8 Dynamometer and engine equipment. ~~September 5, 1997~~ July 13, 2005.

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86.884-10 Information. ~~September 5, 1997~~ July 13, 2005.
86.884-11 Instrument checks. December 1~~1~~0, 1984.
86.884-12 Test run. ~~December 16, 1987~~ July 13, 2005.

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86.884-14 Calculations. ~~September 5, 1997~~ January 15, 2004.

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

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86.1305-2010 Introduction; structure of subpart. ~~July 13, 2005~~ September 15, 2011.

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~~86.1321-90 Hydrocarbon analyzer calibration. July 13, 2005.~~

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86.1333-90 Transient test cycle generation. ~~May 4, 1998~~ February 18, 2000.
86.1333-2010 Transient test cycle generation. ~~July 13, 2005~~ June 30, 2008.

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~~86.1337-90 Engine dynamometer test run. April 11, 1989.~~
86.1337-96 Engine dynamometer test run. September 5, 1997.

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86.1360-2007 Supplemental emission test; test cycle and procedures. ~~July 13, 2005~~ June 30, 2008.

A. Federal provisions.

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4. Subparagraph (c). [~~Reserve~~ No change.]

5. Subparagraph (d). Determining the control area. [No change.]

6. Subparagraph (e). [Reserve.]

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86.1362-2007 Steady-state testing with a ramped-modal cycle. ~~July 13, 2005~~ June 30, 2008.

86.1363-2007 Steady-state testing with a discrete-mode cycle. ~~July 13, 2005~~ June 30, 2008.

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Subpart S – General Compliance Provisions for Control of Air Pollution From New and In-Use Light-Duty Vehicles, Light-Duty Trucks, and Complete Otto-Cycle Heavy-Duty Vehicles.

86.1863-07 Optional chassis certification for diesel vehicles. ~~June 17, 2003~~ September 15, 2011.

1. Amend subparagraph (a) as follows: For the 2004 through 2014 model years, aA manufacturer may optionally certify heavy-duty diesel vehicles weighing 14,000 pounds GVWR or less to the emission standards specified in title 13, CCR, §1961. Such vehicles must meet all applicable requirements of the "California 2001 through 2014 Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and ~~for~~ 2009 through 2016 ~~and Subsequent~~ Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," as incorporated by reference in title 13, CCR, §1961(d). For the 2015 through 2019 model years, a manufacturer may optionally certify heavy-duty diesel vehicles weighing 8,500 to 10,000 pounds GVWR or less to the emission standards specified in title 13, CCR, §1961 or §1961.2, as applicable. Such vehicles must meet all applicable requirements of the "California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles," incorporated by reference in section 1961.2, title 13, CCR. For the 2015 and subsequent model years, a manufacturer may optionally certify heavy-duty diesel vehicles weighing 10,001 to 14,000 pounds GVWR or less to the emission standards specified in title 13, CCR, §1961.2. Such vehicles must meet all applicable requirements of the "California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles," incorporated by reference in section 1961.2, title 13, CCR. For the 2020 and subsequent model years, heavy-duty diesel vehicles 8,501 to 10,000 pounds GVW must certify to the primary emission standards and test procedures for complete vehicles specified in section 1961.2, title 13, CCR.

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4. Subparagraphs (h) and (i). [n/a]

PART 1065 – ENGINE-TESTING PROCEDURES.

Subpart A – Applicability and General Provisions

1065.1 Applicability. ~~July 13, 2005~~ September 15, 2011.

1. Amend subparagraph (a) as follows:

1.1. Introductory paragraph. [No change.]

1.2. Subparagraphs (a)(1). [n/a]

1.~~2~~3. Amend subparagraph (a)(~~1~~2) as follows: Model year 2010 and later heavy-duty highway engines we regulate under title 13, CCR, §1956.8. For earlier model years, manufacturers may use the test procedures in this part or those specified in 40 CFR part 86, subpart N, according to §1065.10, as modified by these test procedures.

1.~~3~~4. Subparagraphs (a)(~~2~~3) through (a)(~~4~~8). [n/a]

2. Subparagraph (b). [n/a]

3. Subparagraph (c) through (g). [No change.]

1065.2 Submitting information to EPA under this part. ~~July 13, 2005~~ April 30, 2010.

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

2. Amend subparagraph (e) as follows: See title 13, CCR, section 91011 for provisions related to confidential information. Note that according to this section, emission data shall not be identified as confidential.

3. Subparagraph (f). [No change.]

1065.5 Overview of this part 1065 and its relationship to the standard-setting part. ~~July 13, 2005~~ October 30, 2009.

1065.10 Other procedures. ~~July 13, 2005~~ April 30, 2010.

1065.12 Approval of alternate procedures. ~~July 13, 2005~~ June 30, 2008.

1065.15 Overview of procedures for laboratory and field testing. ~~July 13, 2005~~ September 15, 2011.

1065.20 Units of measure and overview of calculations. ~~July 13, 2005~~ September 15, 2011.

1065.25 Recordkeeping. July 13, 2005.

Subpart B – Equipment Specifications

1065.101 Overview. ~~July 13, 2005~~ June 30, 2008.

1065.110 Work inputs and outputs, accessory work, and operator demand. ~~July 13, 2005~~ June 30, 2008.

1065.120 Fuel properties and fuel temperature and pressure. ~~July 13, 2005~~ June 30, 2008.

1065.122 Engine cooling and lubrication. ~~July 13, 2005~~ June 30, 2008.

1065.125 Engine intake air. ~~July 13, 2005~~ September 15, 2011.

1065.127 Exhaust gas recirculation. July 13, 2005.
1065.130 Engine exhaust. ~~July 13, 2005~~ June 30, 2008.
1065.140 Dilution for gaseous and PM constituents. ~~*July 13, 2005*~~ ~~November 8, 2010~~ September 15, 2011.
1065.145 Gaseous and PM probes, transfer lines, and sampling system components. ~~July 13, 2005~~ April 30, 2010.
1065.150 Continuous sampling. July 13, 2005.
1065.170 Batch sampling for gaseous and PM constituents. ~~July 13, 2005~~ September 15, 2011.
1065.190 PM-stabilization and weighing environments for gravimetric analysis. ~~July 13, 2005~~ September 15, 2011.
1065.195 PM-stabilization environment for in-situ analyzers. ~~July 13, 2005~~ June 30, 2008.

Subpart C – Measurement Instruments

1065.201 Overview and general provisions. ~~July 13, 2005~~ April 30, 2010.
1065.202 Data updating, recording, and control. July 13, 2005.
1065.205 Performance specifications for measurement instruments. ~~July 13, 2005~~ September 15, 2011.

Measurement of Engine Parameters and Ambient Conditions

1065.210 Work input and output sensors. ~~July 13, 2005~~ June 30, 2008.
1065.215 Pressure transducers, temperature sensors, and dewpoint sensors. ~~July 13, 2005~~ June 30, 2008.

Flow-Related Measurements

1065.220 Fuel flow meter. ~~July 13, 2005~~ June 30, 2008.
1065.225 Intake-air flow meter. ~~July 13, 2005~~ September 15, 2011.
1065.230 Raw exhaust flow meter. July 13, 2005.
1065.240 Dilution air and diluted exhaust flow meters. ~~July 13, 2005~~ April 30, 2010.
1065.245 Sample flow meter for batch sampling. July 13, 2005.
1065.248 Gas divider. July 13, 2005.

CO and CO_2 Measurements

1065.250 Nondispersive infra-red analyzer. ~~July 13, 2005~~ September 15, 2011.

Hydrocarbon Measurements

1065.260 Flame ionization detector. ~~*July 13, 2005*~~ ~~November 8, 2010~~ September 15, 2011.
1065.265 Nonmethane cutter. ~~July 13, 2005~~ September 15, 2011.
1065.267 Gas chromatograph. ~~July 13, 2005~~ September 15, 2011.

NOx Measurements

1065.270 Chemiluminescent detector. ~~July 13, 2005~~ September 15, 2011.
1065.272 Nondispersive ultraviolet analyzer. ~~July 13, 2005~~ September 15, 2011.
1065.275 N_2O measurement devices. September 15, 2011.

O_2 Measurements

1065.280 Paramagnetic and magnetopneumatic O_2 detection analyzers. ~~July 13, 2005~~ September 15, 2011.

Air-to Fuel Ratio Measurements

1065.284 Zirconia (ZrO_2) analyzer. ~~July 13, 2005~~ September 15, 2011.

PM Measurements

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~~ September 15, 2011.

Subpart D – Calibrations and Verifications

1065.301 Overview and general provisions. July 13, 2005.
1065.303 Summary of required calibration and verifications. ~~July 13, 2005~~ September 15, 2011.
1065.305 Verifications for accuracy, repeatability, and noise. ~~July 13, 2005~~ April 30, 2010.
1065.307 Linearity verification. ~~*July 13, 2005*~~ ~~November 8, 2010~~ September 15, 2011.
1065.308 Continuous gas analyzer system-response and updating-recording verification. ~~July 13, 2005~~ October 8, 2008.
1065.309 Continuous gas analyzer uniform response verification. ~~July 13, 2005~~ April 30, 2010.

Measurement of Engine Parameters and Ambient Conditions

1065.310 Torque calibration. ~~July 13, 2005~~ June 30, 2008.
1065.315 Pressure, temperature, and dewpoint calibration. ~~July 13, 2005~~ April 30, 2010.

Flow-Related Measurements

1065.320 Fuel-flow calibration. July 13, 2005.
1065.325 Intake-flow calibration. July 13, 2005.
1065.330 Exhaust-flow calibration. July 13, 2005.
1065.340 Diluted exhaust flow (CVS) calibration. ~~*July 13, 2005*~~ ~~November 8, 2010~~ September 15, 2011.
1065.341 CVS and batch sampler verification (propane check). ~~July 13, 2005~~ September 15, 2011.
1065.342 Sample dryer verification. April 30, 2010.
1065.345 Vacuum-side leak verification. ~~July 13, 2005~~ April 30, 2010.

CO and CO_2 Measurements

1065.350 H_2O interference verification for CO_2 NDIR analyzers. ~~July 13, 2005~~ September 15, 2011.
1065.355 H_2O and CO_2 interference verification for CO NDIR analyzers. ~~July 13, 2005~~ April 30, 2010.

Hydrocarbon Measurements

1065.360 FID optimization and verification. ~~July 13, 2005~~ September 15, 2011.
1065.362 Non-stoichiometric raw exhaust FID O2 interference verification. ~~July 13, 2005~~ June 30, 2008.
1065.365 Nonmethane cutter penetration fractions. ~~July 13, 2005~~ October 30, 2009.

NOx Measurements

1065.370 CLD CO_2 and H_2O quench verification. ~~July 13, 2005~~ September 15, 2011.
1065.372 NDUV analyzer HC and H_2O interference verification. ~~July 13, 2005~~ September 15, 2011.
1065.376 Chiller NO_2 penetration. ~~July 13, 2005~~ June 30, 2008.
1065.378 NO_2-to-NO converter conversion verification. ~~July 13, 2005~~ September 15, 2011.

PM Measurements

1065.390 PM balance verifications and weighing process verification. ~~*July 13, 2005*~~ November 8, 2010.
1065.395 Inertial PM balance verifications. July 13, 2005.

Subpart E – Engine Selection, Preparation, and Maintenance

1065.401 Test engine selection. July 13, 2005.
1065.405 Test engine preparation and maintenance. ~~July 13, 2005~~ June 30, 2008.
1065.410 Maintenance limits for stabilized test engines. ~~July 13, 2005~~ June 30, 2008.
1065.415 Durability demonstration. ~~July 13, 2005~~ June 30, 2008.

Subpart F – Performing an Emission Test in the Laboratory

1065.501 Overview. ~~July 13, 2005~~ April 30, 2010.
1065.510 Engine mapping. ~~July 13, 2005~~ September 15, 2011.
1065.512 Duty cycle generation. ~~July 13, 2005~~ October 8, 2008.
1065.514 Cycle-validation criteria. ~~July 13, 2005~~ September 15, 2011.
1065.520 Pre-test verification procedures and pre-test data collection. ~~July 13, 2005~~ September 15, 2011.
1065.525 Engine starting, restarting, and shutdown. ~~*July 13, 2005*~~ ~~November 8, 2010~~ September 15, 2011.
1065.526 Repeating void modes or test intervals. November 8, 2010.
1065.530 Emission test sequence. ~~July 13, 2005~~ September 15, 2011.
1065.545 Validation of proportional flow control for batch sampling. ~~July 13, 2005~~ April 30, 2010.
1065.546 Validation of minimum dilution ratio for PM batch sampling and drift correction. September 15, 2011.
1065.550 Gas analyzer range validation, drift validation, and drift correction. ~~*July 13, 2005*~~ ~~November 8, 2010~~ September 15, 2011.
1065.590 PM sample preconditioning and tare weighing. ~~July 13, 2005~~ June 30, 2008.
1065.595 PM sample post-conditioning and total weighing. ~~July 13, 2005~~ June 30, 2008.

Subpart G – Calculations and Data Requirements

1065.601 Overview. ~~July 13, 2005~~ April 30, 2010.
1065.602 Statistics. ~~July 13, 2005~~ September 15, 2011.
1065.610 Duty cycle generation. ~~July 13, 2005~~ September 15, 2011.
1065.630 1980 international gravity formula. July 13, 2005.

1065.640 Flow meter calibration calculations. ~~*July 13, 2005*~~ ~~November 8, 2010~~ September 15, 2011.

1065.642 SSV, CFV, and PDP molar flow rate calculations. ~~*July 13, 2005*~~ ~~November 8, 2010~~ September 15, 2011.

1065.645 Amount of water in an ideal gas. ~~July 13, 2005~~ September 15, 2011.

1065.650 Emission calculations. ~~July 13, 2005~~ September 15, 2011.

1065.655 Chemical balances of fuel, intake air, and exhaust. ~~July 13, 2005~~ September 15, 2011.

1065.659 Removed water correction. ~~July 13, 2005~~ September 15, 2011.

1065.660 THC and NMHC determination. ~~*July 13, 2005*~~ ~~November 8, 2010~~ September 15, 2011.

1065.665 THCE and NMHCE determination. ~~July 13, 2005~~ June 30, 2008.

1065.667 Dilution air background emission correction. ~~July 13, 2005~~ September 15, 2011.

1065.670 NOx intake-air humidity and temperature corrections. ~~July 13, 2005~~ September 15, 2011.

1065.672 Drift correction. ~~July 13, 2005~~ April 30, 2010.

1065.675 CLD quench verification calculations. ~~July 13, 2005~~ September 15, 2011.

1065.690 Buoyancy correction for PM sample media. ~~July 13, 2005~~ April 30, 2010.

1065.695 Data requirements. ~~July 13, 2005~~ June 30, 2008.

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

1065.701 General requirements for test fuels. ~~July 13, 2005~~ April 30, 2010.

A. Federal provisions.

1. Subparagraph (a). [No change.]

2. Amend subparagraph (b) as follows: *Fuels meeting alternative specifications.* We may allow you to use a different test fuel if you show us and we find that using it does not affect your ability to comply with all applicable emission standards using commercially available fuels.

3. Subparagraph (c). [No change.]

4. Amend subparagraph (d) as follows: *Fuel specifications*. The fuel parameters specified in this subpart depend on measurement procedures that are incorporated by reference.

5. Subparagraph (e). [No change.]

6. Subparagraph (f). [No change.]

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 ~~adopted September 17, 1993~~ amended [INSERT DATE OF AMENDMENT] or the "California Test Procedures for Evaluating Substitute Fuels and New Clean Fuels in 2015 and Subsequent Years," as adopted [INSERT DATE OF ADOPTION], 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.

(2) Use of the new clean fuel in such existing motor vehicles would not result in increased deterioration of the vehicle and would not void the warranties of any such vehicles.

(b) Whenever the state board designates a new clean fuel pursuant to this section, the state board shall also establish by regulation required specifications for the new clean fuel sold commercially in California.

1065.703 Distillate diesel fuel. ~~July 13, 2005~~ April 30, 2010.

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1065.705 Residual fuel. June 30, 2008. [~~Reserved~~ No change.]
1065.710 Gasoline. ~~July 13, 2005~~ June 30, 2008. [n/a]
1065.715 Natural gas. ~~July 13, 2005~~ June 30, 2008.

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2. Subparargraphs (b) through (d). [No change.]

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1065.720 Liquefied petroleum gas. July 13, 2005.

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2. Subparagraphs (b) through (d). [No change.]

1065.740 Lubricants. July 13, 2005.
1065.745 Coolants. July 13, 2005.
1065.750 Analytical gases. ~~*July 13, 2005*~~ November 8, 2010 September 15, 2011.
1065.790 Mass standards. ~~July 13, 2005~~ September 15, 2011.

Subpart I –Testing with Oxygenated Fuels

1065.801 Applicability. July 13, 2005.
1065.805 Sampling system. ~~July 13, 2005~~ June 30, 2008.
1065.845 Response factor determination. ~~July 13, 2005~~ April 30, 2010.
1065.850 Calculations. July 13, 2005.

Subpart J – Field Testing and Portable Emission Measurement Systems

1065.901 Applicability. ~~July 13, 2005~~ June 30, 2008.
1065.905 General provisions. ~~*July 13, 2005*~~ November 8, 2010.
1065.910 PEMS auxiliary equipment for field testing. ~~July 13, 2005~~ April 30, 2010.
1065.915 PEMS instruments. ~~*July 13, 2005*~~ November 8, 2010 September 15, 2011.
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 September 15, 2011.
1065.930 Engine starting, restarting, and shutdown. July 13, 2005.
1065.935 Emission test sequence for field testing. ~~July 13, 2005~~ June 30, 2008.
1065.940 Emission calculations. ~~*July 13, 2005*~~ November 8, 2010.

Subpart K – Definitions and Other Reference Information

1065.1001 Definitions. ~~July 13, 2005~~ September 15, 2011.

1. Amend the definition of “Designated Compliance Officer” as follows:

Designated Compliance Officer means the Executive Officer of the Air Resources Board or a designee of the Executive Officer.

1065.1005 Symbols, abbreviations, acronyms, and units of measure. ~~July 13, 2005~~ September 15, 2011.

1065.1010 Reference materials. ~~July 13, 2005~~ September 15, 2011.