APPENDIX B-3

State of California
AIR RESOURCES BOARD

PROPOSED

Phase 2 Greenhouse Gas Amendments to

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

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: December 6, 2012
Amended: April 18, 2013 (Corrected by Section 100)
Amended: October 21, 2014
Amended: September 2, 2015
Amended: September 1, 2017
Amended: [INSERT DATE OF AMENDMENT]

Note: The existing language, as last amended September 1, 2017, is shown in plain text. 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 1, 2017. “[No change]” indicates federal provisions that are incorporated herein without change. Existing intervening text that is not amended in this rulemaking is indicated by “* * * *”.

Date of Release: December 19, 2017
Date of Hearing: February 8, 2018
NOTE: This document is incorporated by reference in section 1956.8(d), title 13, California Code of Regulations ("CCR") and also incorporates by reference various sections of Title 40, Part 86 of the Code of Federal Regulations, with some modifications. It contains the majority of the requirements necessary for certification of heavy-duty Otto-cycle engines for sale in California, in addition to containing the exhaust emissions standards and test procedures for these Otto-cycle engines. The section numbering conventions for this document are set forth in subparagraph 4 on page 4. Reference is also made in this document to other California-specific requirements that are necessary to complete an application for certification. These other documents are designed to be used in conjunction with this document. They include:

1. “California Evaporative Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles,” (incorporated by reference in section 1976, title 13, CCR);

2. Warranty requirements (sections 2035, et seq., title 13, CCR);

3. OBD II (section 1968, et seq., title 13, CCR, as applicable);

4. “California Test Procedures for Evaluating Substitute Fuels and New Clean Fuels through 2014,” (incorporated by reference in section 2317, title 13, CCR); and


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

The following provisions of Subparts A, N, and P, Part 86, of Subparts A through I, Part 1036, and of Subparts A through KL, Part 1065, and of Subparts A and E, Part 1068, Title 40, Code of Federal Regulations (“CFR”), as adopted or amended by the U.S. Environmental Protection Agency on the date set forth next to the 40 CFR Part 86 section listed below, and only to the extent they pertain to the testing and compliance of exhaust emissions from heavy-duty Otto-cycle engines, are adopted and incorporated herein by this reference as the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles,” with the following exceptions and additions.

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

§86.1 Incorporation by reference. October 25, 2016.


1. General Applicability. [§86.xxx-1]

A. Federal provisions.

* * * * *


* * * *

B. California provisions.

1. These regulations are applicable to all heavy-duty Otto-cycle methanol-fueled, ethanol-fueled, natural-gas-fueled and liquefied-petroleum-gas-fueled dedicated, dual-fuel and multi-fuel engines (and vehicles) except those engines derived from existing diesel engines. For any engine which is not a distinctly Otto-cycle engine nor derived from such, the Executive Officer shall determine whether the engine shall be subject to these regulations or alternatively to the heavy-duty diesel engine regulations, in consideration of the relative similarity of the engine's torque-speed characteristics and vehicle applications with those of Otto-cycle and diesel engines. Reference to dual-fuel vehicles or engines shall also
mean bi-fuel vehicles or engines. For guidance on classifying 2021 and subsequent model heavy duty Otto-cycle engines, used in vehicles which normally exceed 33,000 pounds GVWR, based on primary intended service class, see 40 CFR §1036.140.

2. References in the federal regulations to light-duty vehicles and light-duty trucks do not apply.

3. Any reference to vehicle sales throughout the United States shall mean vehicles and engines sales in California. Any reference to small volume manufacturer shall mean a California small-volume manufacturer as defined in section I.1.A., above.

4. Regulations concerning U.S. EPA hearings, U.S. EPA inspections, specific language on the Certificate of Conformity, evaporative emissions, high-altitude vehicles and testing, particulate and oxides of nitrogen averaging and test group standards applicable in such averaging, alternative useful life, selective enforcement audit, and Certification Short Test shall not be applicable to these procedures, except where specifically noted. The regulations pertaining to evaporative emissions are contained in "California Evaporative Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles," as incorporated in §1976, title 13, CCR.

2. Definitions. [§86.xxx-2]

A. Federal provisions.

All of the definitions in previous CFR sections continue to apply, except as otherwise noted below. Definitions specific to other requirements such as evaporative emissions are contained in those separate documents.

2. §86.010-2. February 24, 2009.
3.1 Amend paragraph as follows: The definitions of §86.010-2 continue to apply to model year 2010 and later model year engines and vehicles. The definitions listed in this section apply beginning with model year 2012. "GHG Urban Bus" means a passenger-carrying vehicle with a load capacity of fifteen or more passengers and intended primarily for intracity operation, i.e. , within the confines of a city or greater metropolitan area. GHG urban bus operation is characterized by short rides and frequent stops. To facilitate this type of operation, more than one set of quick-operating entrance and exit doors would normally be installed. Since fares are usually paid in cash or tokens, rather than purchased in advance in the form of tickets, GHG urban buses would normally have equipment installed for collection of fares. GHG urban buses are also typically characterized by the absence of equipment and facilities for long distance travel, e.g., rest rooms, large luggage compartments, and facilities for stowing carry-on luggage.

B. California provisions.

"Administrator" means the Executive Officer of the Air Resources Board.
“ARB” means Air Resources Board or 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.

“Designated Compliance Officer” means the Executive Officer of the Air Resources Board or his or her delegate.

“EPA” means “Air Resources Board” or the Executive Officer of the Air Resources Board.

“EPA Enforcement Officer” means the Executive Officer of the Air Resources Board or his or her delegate.

“Medium-Duty Engine” means a heavy-duty engine that is used in a medium-duty vehicle.

“Medium-Duty Vehicle” means any 1992 through 2006 model-year heavy-duty low-emission, ultra-low-emission, super-ultra-low-emission or zero-emission vehicle certified to the standards in section 1960.1(h)(2) having a manufacturer’s gross vehicle weight rating of 14,000 pounds or less and any 2000 and subsequent model heavy-duty low-emission, ultra-low-emission, super-ultra-low-emission or zero-emission vehicle certified to the standards in section 1961(a)(1), 1961.2, or 1962 having a manufacturer’s gross vehicle weight rating between 8,500 and 14,000 pounds.

“Optional Low NOx Engine” means a 2015 or subsequent model heavy-duty Otto-cycle engine certified to the optional low NOx emission standards, which are below the 0.20 g/bhp-hr emission standard for 2007 and subsequent model engines. The optional low NOx emission standards are 0.10, 0.05, or 0.02 g/bhp-hr.

“Warranty” means the warranty provisions set forth in title 13, California Code of Regulations §2036.

* * * *

4. Section numbering; construction.


* * * *


Amend the paragraph as follows: If a manufacturer’s request for a hearing is approved, ARB will follow the hearing procedures specified in accordance with title 17, CCR, §60055.1, et seq., with respect to such issue.

7. Maintenance of records; submittal of information; right of entry. [§86.000-7] April 28, 2014. [No change.]

8. Emission standards for light-duty vehicles. §86.xxx-8 [n/a]

9. Emission standards for light-duty trucks. §86.xxx-9 [n/a]
10. Emission standards for Otto-cycle heavy-duty engines and vehicles. [§86.xxx-10]

A. Federal provisions.

1. §86.098-10. April 30, 2010. Amend as follows:
   1.1 Amend subparagraph (a) as follows:
       1.1.1 Delete subparagraph (a)(1) and replace with emission
       1.1.2 Subparagraph (a)(2). [No change.]
       1.1.3 Subparagraph (a)(3). [No change.]
   1.2 Subparagraph (b) [n/a] [See evap TPs]
   1.3 Subparagraph (c) [No change.]
   1.4 Subparagraph (d) [No change.]

2. §86.099-10. [n/a; See evap TPs.]

3. §86.005-10. April 28, 2014. Amend as follows:
   3.1 Subparagraph (a): [No change.]
       [See, also emission standards in I.10.B below]
   3.2 Subparagraph (b) [n/a] [See evap TPs]
   3.3 Subparagraph (c) [No change.]
   3.4 Subparagraph (d) [No change.]
   3.5 Subparagraph (e) [No change.]
   3.6 Subparagraph (f) [No change.]

4. §86.008-10. April 28, 2014 October 25, 2016. Amend as follows:
   4.1 Subparagraph (a): [No change.][See, also emission standards in
       I.10.B below]
       4.1.1. Subparagraphs (a) through (a)(1)(ii)(A). [No change.]
       4.1.2. Amend subparagraph (a)(1)(ii)(B) as follows: Nonmethane-
            hydrocarbon (NMHC) for engines fueled with natural gas or liquefied
            petroleum gas. 0.14 grams per brake horsepower-hour (0.052 grams per
            megajoule).
       4.1.3. Subparagraphs (a)(1)(ii)(C) through (a)(4). [No change.]
   4.2 Subparagraph (b) [n/a] [See evap TPs]
   4.3 Subparagraph (c) [No change.]
   4.4 Subparagraph (d) [No change.]
   4.5 Subparagraph (e) [No change.]
   4.6 Subparagraph (f) [No change.]
   4.7 Subparagraph (g) [No change.]

* * * *

14. Small-volume manufacturers certification procedures. [§86.xxx-14].
    [Note: A small volume manufacturer shall mean a California small volume
    manufacturer as defined in Section I.1.A., above. Any reference to 10,000 units
    shall mean 4,500 units in California based on a three year running average as
    defined in I.1.A., above.]

1. §86.094-14. April 28, 2014 October 25, 2016. Amend as follows:
   1.1 Subparagraphs (a) through (c)(31) [No change.]
1.2 Amend subparagraph (c)(42) as follows: Small volume manufacturers shall include in their records all of the information that EPA requires in §86.094-21. This information will be considered part of the manufacturer’s application for certification. [The last sentence is deleted.]

1.3 Subparagraphs (c)(53) through (c)(7)(i)(B)(c)(3)(ii) [No change.]

1.4 Amend subparagraph (c)(7)(i)(C)(1)(c)(3)(ii)(A) as follows: Manufacturers with aggregated sales of less than 301 motor vehicles and motor vehicle engines per year may use assigned deterioration factors that the Administrator determines and prescribes based on design specifications or sufficient control over design specifications, development data, in-house testing procedures, and in-use experience. [The remainder of the paragraph is the same.]

1.5 Subparagraph (c)(7)(i)(C)(2)(c)(3)(ii)(B) through (c)(13)(i)(c)(7)(i) [No change.]

1.6 Add the following sentence to subparagraph (e)(13)(i)(c)(7)(ii): All running changes that do not adversely affect emissions or the emission control system durability shall be deemed approved unless disapproved by the Executive Officer within 30 days of the implementation of the running change.

1.7 Subparagraph (c)(8) [No change.]


* * * *

25. Maintenance. [§86.xxx-25]

1. §86.004-25. August 8, 2014October 25, 2016. [No change.]

1.1 Subparagraphs (a) through (b)(6)(ii). [No change.]

1.2 Add the following phrase to the last sentence of subparagraph (b)(6)(iii): … or California Vehicle Code §27156, et seq.

1.3 Subparagraphs (b)(7)(i) and (b)(7)(ii). [No change.]

1.4 Add the following sentence to subparagraph (b)(7)(iii): The Executive Officer may also provide the manufacturer a hearing in accordance with title 17, CCR, §60055.1, et seq., with respect to such issue.

1.5 Subparagraphs (c) through (i). [No change.]


27. Special test procedures. [§86.090-27]. April 11, 1989. [No change.]

28. Compliance with emission standards. [§86.xxx-28]

A. Federal provisions.


* * * *
30. Certification.  [§86.xxx-30].
   1. §86.004-30. April 28, 2014. [No change.]
   2. §86.007-30. April 28, 2014October 25, 2016. [No change.]

31. Separate certification.  [§86.079-31]. September 8, 1977. [No change.]

32. Addition of a vehicle or engine after certification.  [§86.079-32].
   September 8, 1977. [No change.]

33. Changes to a vehicle or engine covered by certification.  [§86.079-33].
   September 8, 1977. [No change.]

34. Alternative procedure for notification of additions and changes.  [§86.082-34].
   November 2, 1982. [No change.]

35. Labeling.  [§86.xxx-35]
   A. Federal provisions.
      1. §86.001-3586.095-35 April 6, 1994October 25, 2016.
         1.1 Add the following sentence to the introductory paragraph: The
         labeling requirements of this section shall apply to all new motor vehicle
         engines certified according to the provisions of California Health and Safety Code Section
         43100.
         1.2 Subparagraphs (a)(1) through (a)(3)(iii)(G). [No change.]
         1.3 Amend subparagraph (a)(3)(iii)(H) as follows: An unconditional
         statement of compliance with the appropriate model year California regulations;
         for example, “This engine conforms to California regulations applicable to XXXX
         model year new heavy-duty Otto-cycle engines.” It may also state that the
         engine conforms to any applicable federal or Canadian emission standards for
         new heavy-duty Otto-cycle engines.
         1.4 Subparagraphs (a)(3)(iii)(I) through (i). [No change.]
      2. §86.007-35. February 19, 2015. [No change, except as noted above for
         §86.001-35.]
   B. California Provisions
      1. For 2004 through 2007 model year engines certified to the optional
         standards in §86.005-10(f) the following statement shall also be printed on the label,
         “This engine conforms to the California ULEV standards applicable to 20XX model
         year Heavy-Duty Otto-Cycle Engines.”
      2. For 2015 and subsequent model year Otto- cycle engines certified to the
         Optional Low NOx Engine emission standards, the label shall contain the following
         statement: “This engine conforms to California regulations applicable to XXXX
         model year heavy-duty Otto-cycle engines and is certified to the Optional Low NOx
         Engine emission standard of XXX g/bhp-hr.”

36. Submission of vehicle identification numbers.  [§86.079-36] [n/a]

   [No change.]

* * * * *
Part II. OTHER REQUIREMENTS; TEST PROCEDURES

Subpart N - Exhaust Test Procedures for Heavy-Duty Engines


* * * *
PART 1036 – CONTROL OF EMISSIONS FROM NEW AND IN-USE HEAVY-DUTY HIGHWAY ENGINES

Subpart A – Overview and Applicability

1036.1 Does this part apply for my engines? September 15, 2011October 25, 2016.
   1. Amend subparagraph (a) as follows: Except as specified in § 1036.5, the provisions of this part apply for engines that will be installed in heavy-duty vehicles (including glider vehicles) above 14,000 pounds GVWR for propulsion. These provisions also apply for engines that will be installed in 2019 and earlier model year incomplete heavy-duty vehicles from 8,501 to 10,000 pounds GVWR and in incomplete heavy-duty vehicles from 10,001 to 14,000 pounds GVWR, unless the engine is installed in a vehicle that is covered by an Executive Order under 40 CFR part 86, subpart S.
   2. Subparagraph (b). [No change.]
   3. Delete subparagraph (c).
   4. Subparagraph (d). [No change.]

1036.2 Who is responsible for compliance? September 15, 2011October 25, 2016.

1036.5 Which engines are excluded from this part’s requirements? June 17, 2013October 25, 2016.

1036.10 How is this part organized? September 15, 2011October 25, 2016.

   1. Amend subparagraph as follows: Send all reports and requests for approval to the ARB Designated Compliance Officer, as follows: Chief, Emissions Compliance, Automotive Regulations and Science Division, California Air Resources Board, 9480 Telstar Avenue, Ste. #4, El Monte, CA 91731.

Subpart B – Emission Standards and Related Requirements

1036.100 Overview of exhaust emission standards. September 15, 2011October 25, 2016.

   1. Add the following section to the introductory paragraph: Optional Compliance Via the 2014 MY National Heavy-Duty Engine and Vehicle Greenhouse Gas Program. For the 2014 through 20222020 model years, a manufacturer may elect to demonstrate compliance with this section, §1036.108, for all of its applicable heavy-duty engines by demonstrating compliance with the 2014 MY National Heavy-Duty Engine and Vehicle Greenhouse Gas Program, if it meets the criteria identified below.
   (1) A manufacturer that selects compliance with this option must notify the Executive Officer of that selection, in writing, prior to the start of the applicable model year or December 1, 2014, whichever is later;
(2) The manufacturer must submit to ARB all data that it submitted to U.S. Environmental Protection Agency in accordance with the reporting requirements as required under 40 CFR §1036.205, §1036.250, and §1036.730, for demonstrating compliance with the 2014 MY National Heavy-Duty Engine and Vehicle Greenhouse Gas Program and the U.S. Environmental Protection Agency determination of compliance. With the exception of the 2014 model year, all such data must be submitted within 30 days of receipt of the U.S. Environmental Protection Agency Certificate of Conformity or of the date of submission to the U.S. Environmental Protection Agency, whichever is later, for each model year that a manufacturer selects compliance with this option;

(3) The manufacturer must provide to the Executive Officer separate numbers for each engine family of heavy-duty engines produced and delivered for sale in California each model year and all values used in calculating positive or negative emission credits in §1036.730.

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

3. Add the following language to subparagraph (a)(1)(i): As an option, 2017 through 2027 model year heavy-duty Otto-cycle engines, except in all cases engines used in medium-duty vehicles, may be certified to the Optional Low-CO₂ Emission Standard. The CO₂ emissions from engines certified to the Optional Low-CO₂ Emission Standard may not exceed 490 g/hp-hr. Engines certified to the Optional Low-CO₂ Emission Standard must also comply with the applicable CH₄ and N₂O emission standards set forth in subparagraphs (a)(2) and (a)(3), respectively. In addition, engines certified to the Optional Low-CO₂ Emission Standard and participating in the Innovative Technology Regulation set forth in §§2208 and 2208.1 of title 13, CCR are not eligible to participate in the averaging, banking, and trading program, or to generate credits for certification.

4. Subparagraphs (a)(1)(ii) through (f). [No change.]
1036.205 What must I include in my application? June 17, 2013 October 25, 2016.

1. Subparagraphs (a) through (h). [No change.]
2. Amend subparagraph (i) as follows: Unconditionally certify that all the engines in the engine family are built as described and comply with the requirements of this part, other referenced parts of the CFR, and title 13, CCR, section 1956.8. Note that §1036.235 specifies which engines to test to show that engines in the entire family comply with the requirements of this part.
3. Subparagraphs (j) through (n). [No change.]


1036.301 Measurements related to GEM inputs in a selective enforcement audit. October 25, 2016.

1036.401 In-use testing. September 15, 2011 October 25, 2016.

1036.505 Ramped-modal testing procedures. October 25, 2016.
Subpart G – Special Compliance Provisions

1036.601 What compliance provisions apply to these engines? September 15, 2011 October 25, 2016.

1. Subparagraphs (a) through (a)(2). [No change.]
2. Amend subparagraph (a)(3) as follows: The warranty-related prohibitions in title 13, CCR, sections 2035, 2036, 2037, 2039, 2040, 2041, and 2042, apply to manufacturers of new heavy-duty highway engines in addition to the prohibitions described in 40 CFR 1068.101(b)(6).
3. Subparagraphs (a)(4) through (d). [No change.]

1036.605 GHG exemption for engines used in specialty vehicles. October 25, 2016.


1. Subparagraphs (a) through (c). [No change.]
2. Amend subparagraph (d) as follows: We may seek public comment on your request. However, we will generally not seek public comment on credits/adjustments based on A to B engine dynamometer testing, chassis testing, or in-use testing.
3. Subparagraph (e). [No change.]


1036.620 Alternate CO2 standards based on model year 2011 compression-ignition engines. [n/a; diesel]

1036.625 In-use compliance with family emission limits (FELs). September 15, 2014 October 25, 2016.

1036.630 Certification of engine GHG emissions for powertrain testing. October 25, 2016.

Subpart H – Averaging, Banking, and Trading for Certification


1. Add the following language to subparagraph (a): Engines certified to the Optional Low-CO2 Emission Standards pursuant to 40 CFR §1036.108, as amended September 15, 2011, which is hereby incorporated herein, as modified by these test procedures, and participating in the Innovative Technology Regulation set forth in §§2208 and 2208.1 of title 13, CCR may not generate credits or participate in the averaging, banking, and trading provisions of this subpart.

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


1036.725 What must I include in my application for certification? September 15, 2011
          October 25, 2016.
1036.750 What can happen if I do not comply with the provisions of this subpart? September 15, 2011October 25, 2016.
1036.755 Information provided to the Department of Transportation. [n/a]

Subpart I – Definitions and Other Reference Information


A. Federal Provisions. [All federal definitions apply, except as otherwise noted below.]

B. California Provisions.
   “2014 MY National Heavy-Duty Engine and Vehicle Greenhouse Gas Program” means the national program that applies to new 2014 and subsequent through 2020 model medium- and heavy-duty engines and vehicles to control greenhouse gas emissions, as adopted by the U.S. Environmental Protection Agency (76 Fed. Reg. 57106 (September 15, 2011)), and as subsequently amended on June 17, 2013, as incorporated in and amended by these test procedures.
   “Certificate of Conformity” means an Executive Order certifying vehiclesengines for sale in California.
   “Certification” means relating to the process of obtaining an Executive Order for an engine family that complies with the emission standards and requirements in this part.
   “Designated Compliance Officer” means the Executive Officer of the Air Resources Board or a designee of the Executive Officer.
   “Designated Enforcement Officer” means the Executive Officer of the Air Resources Board or a designee of the Executive Officer.
   “EPA” shall also mean Air Resources Board or Executive Officer of the Air Resources Board.
   “Manufacturer” means any person who manufactures or assembles an engine, vehicle, or piece of equipment for sale in California or otherwise introduces a new engine into commerce in California. This includes importers who import engines or vehicles for resale.
   “U.S. Environmental Protection Agency” means the United States Environmental Protection Agency.
   “We (us, our)” means the Executive Officer and any authorized representatives.


A. Federal Provisions. [No change.]

B. California Provisions.
ARB means Air Resources Board.


A. Federal Provisions. [No change.]

B. California Provisions. The provisions of title 17, CCR section 91000 through 91022 apply for information you consider confidential. Note that according to section 91011, emissions data shall not be identified as confidential.

1. Delete subparagraph (a) and replace as follows: You may request a hearing under certain circumstances, as described elsewhere in this part.
2. Subparagraph (b). [No change.]
3. Amend subparagraph (c) as follows: If we agree to hold a hearing, we will use the procedures specified in 17 CCR sections 60055.1 through 60055.43.

1. Subparagraphs (a) through (d). [No change.]
2. Delete subparagraph (e).

Appendix I to Part 1036 – Default Engine Fuel Maps for § 1036.540
PART 1065 – ENGINE-TESTING PROCEDURES.

Subpart A – Applicability and General Provisions.

1065.1 Applicability. April 28, 2014.
  1. Amend subparagraph (a) as follows:
     1.1. Introductory paragraph. [No change.]
     1.2. Subparagraphs (a)(1). [n/a]
     1.3. Amend subparagraph (a)(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.
     1.4. Subparagraphs (a)(3) through (a)(8). [n/a]
  2. Subparagraph (b). [n/a]
  3. Subparagraph (c) through (h). [No change.]

1065.2 Submitting information to EPAARB under this part. April 28, 2014.
  1. Subparagraphs (a) through (d). [No change.]
  2. Amend subparagraph (e) as follows: See title 17, 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. October 30, 2009.


1065.15 Overview of procedures for laboratory and field testing. April 28, 2014 October 25, 2016.
  1. Subparagraphs (a) through (a)(2)(ii). [No change.]
  2. Delete subparagraph (a)(2)(iii).

1065.20 Units of measure and overview of calculations. April 28, 2014.

Subpart B – Equipment Specifications.

1065.125 Engine intake air. September 15, 2011.

Gaseous and PM probes, transfer lines, and sampling system components. April 28, 2014.


PM-stabilization and weighing environments for gravimetric analysis. September 15, 2011.


Subpart C – Measurement Instruments.

Overview and general provisions. April 28, 2014.


Flow-related measurements


Dilution air and diluted exhaust flow meters. April 28, 2014.


Diesel exhaust fluid flow rate. [n/a]


CO and CO₂ Measurements


Hydrocarbon Measurements


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

2. Delete subparagraph (f).

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

Nonmethane cutter. September 15, 2011.

Fourier transform infrared analyzer. October 25, 2016

1. Amend subparagraph (a) as follows: Application. For engines that run only on
natural gas, you may use a Fourier transform infrared (FTIR) analyzer to measure nonmethane hydrocarbon (NMHC) for continuous sampling. You may use an FTIR analyzer with any gaseous-fueled engine, including dual-fuel engines, to measure CH4, for either batch or continuous sampling (for subtraction from THC).

2. Subparagraph (b). [No change.]

3. Amend subparagraph (c) as follows: Hydrocarbon species for NMHC additive determination. To determine NMHC, measure ethane in addition to those same hydrocarbon species. Determine NMHC as described in §1065.660(b)(4).

4. Amend subparagraph (d) as follows: NMHC CH4 determination from subtraction of CH4 from THC. Determine CH4 as described in §1065.660(d)(2). Determine NMHC from subtraction of CH4 from THC as described in §1065.660(b)(3). Determine CH4 as described in §1065.660(d)(2).

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

1065.269 Photoacoustic analyzer for ethanol and methanol. April 28, 2014.

NOx Measurements

1065.275 N2O measurement devices. April 28, 2014

O2 Measurements


Air-to Fuel Ratio Measurements


PM Measurements

1065.295 PM inertial balance for field-testing analysis. April 28, 2014.

Subpart D – Calibrations and Verifications.

1065.303 Summary of required calibration and verifications. April 28, 2014


Measurement of Engine Parameters and Ambient Conditions

1065.315 Pressure, temperature, and dewpoint calibration. April 28, 2014.

Flow-Related Measurements


CO and CO₂ Measurements

1065.350 H₂O interference verification for CO₂ NDIR analyzers. April 28, 2014.

Hydrocarbon Measurements

1. Subparagraphs (a) through (a)(2). [No change.]
2. Delete subparagraph (a)(3).
3. Subparagraphs (b) through (d). [No change.]
4. Delete subparagraph (f).

1065.366 Interference verification for FTIR analyzers. October 25, 2016
1. Amend subparagraph (a) as follows: Scope and frequency. If you measure CH₄ or NMHC using an FTIR analyzer, verify the amount of interference after initial analyzer installation and after major maintenance.
2. Subparagraph (b). [No change.]

3. Amend subparagraph (c) as follows: System requirements. An FTIR analyzer must have combined interference that is within ±2% of the flow-weighted mean concentration of CH4 or NMHC expected at the standard, though we strongly recommend a lower interference that is within ±1%.

4. Subparagraph (d). [No change.]


NOx Measurements

1065.372 NDUV analyzer HC and H₂O interference verification. September 15, 2011.
1065.378 NO₂-to-NO converter conversion verification. September 15, 2011.

PM Measurements


Subpart E – Engine Selection, Preparation, and Maintenance.


Subpart F – Performing an Emission Test in the Laboratory.

1065.514 Cycle-validation criteria for operation over specified duty cycles. September 15, 2011.
1065.520 Pre-test verification procedures and pre-test collection. April 28, 2014.
1065.526 Repeating void modes or test intervals. April 28, 2014.
Subpart G – Calculations and Data Requirements.

1065.630 Local acceleration of gravity. April 28, 2014.
   1. Subparagraphs (a) through (c)(5). [No change.]
   2. Delete subparagraph (c)(6).
   3. Subparagraphs (d) through (h). [No change.]

   1. Subparagraphs (a) through (a)(2). [No change.]
   2. Delete subparagraph (a)(3).
   3. Subparagraphs (a)(4) through (b).
   4. Delete subparagraph (c).
   5. Subparagraph (d). [No change.]
   6. Delete subparagraph (e).

1065.670 NOx intake-air humidity and temperature corrections. September 15, 2011.
1065.672 Drift correction. April 30, 2010.

Date of Release: December 19, 2017
Date of Hearing: February 8, 2018
Adjusting emission levels to account for infrequently regenerating aftertreatment devices. October 25, 2016


Data requirements. April 28, 2014.

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

* * * *

Diesel exhaust fluid. [n/a]


Subpart I – Testing with Oxygenated Fuels.


Sampling system. April 28, 2014.


Subpart K – Definitions and Other Reference Information.


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.

2. Amend the definition of “Hydrocarbon” as follows: Hydrocarbon (HC) means THC, THCE, NMHC, NMOG, or NMHCE, as applicable. Hydrocarbon generally means the hydrocarbon group on which the emission standards are based for each type of fuel and engine.

3. Delete the definition of “Nonmethane nonethane hydrocarbon (NMNEHC).”


A. Federal Provisions. [No change.]

B. California Provisions.

ARB means Air Resources Board.


Subpart L – Methods for Unregulated and Special Pollutants

Semi-Volatile Organic Compounds

1065.1107  Sample media and sample system preparation; sample system assembly. October 25, 2016.
1065.1109  Post-test sampler disassembly and sample extraction. October 25, 2016.
PART 1068 – GENERAL COMPLIANCE PROVISIONS FOR HIGHWAY, STATIONARY, AND NONROAD PROGRAMS

Subpart A – Applicability and Miscellaneous Provisions

1068.1 Does this part apply to me? October 25, 2016.
1. Subparagraph (a) to (a)(1). [No change.]
2. Amend (a)(2) as follows: This part 1068 applies to heavy-duty motor vehicles and motor vehicle engines used in such vehicles, that are subject to the emission standards in title 13, CCR, section 1956.8.
3. Delete subparagraphs (a)(3) through (d).

1068.20 May ARB enter my facilities for inspections? October 25, 2016.
1. Delete subparagraph (a) and replace with: We may inspect your testing, manufacturing processes, storage facilities (including port facilities for imported engines and equipment or other relevant facilities), or records, as authorized by the California Health and Safety Code, to enforce the provisions of this chapter. Inspectors will have authorizing credentials and will usually limit inspections to normal operating hours.
2. Subparagraph (b). [No change.]
3. Delete subparagraph (c) and replace with: Any ARB Enforcement Officer must be furnished by those in charge of a facility being inspected with such reasonable assistance as may be necessary to discharge any function listed in this paragraph. Each applicant for or recipient of certification is required to cause those in charge of a facility operated for its benefit to furnish such reasonable assistance without charge to the ARB irrespective of whether or not the applicant controls the facility.
4. Delete subparagraph (d) and replace with: The duty to admit or cause to be admitted any ARB Enforcement Officer applies whether or not the applicant owns or controls the facility in question and applies both to domestic and foreign engine and vehicle manufacturers and facilities. The ARB will not attempt to make any inspections that it has been informed that local law forbids. However, if local law makes it impossible to insure the accuracy of data generated at a facility, no informed judgment that an engine or vehicle is certifiable or is covered by an Executive Order can properly be based on the data. It is the responsibility of the engine manufacturer or vehicle manufacturer to locate its testing and manufacturing facilities in jurisdictions where this situation will not arise.

A. Federal Provisions. [All federal definitions apply, except as otherwise noted below.]

Date of manufacture: Delete and replace with:

Date of manufacture means one of the following:
(1) For engines, the date on which the crankshaft is installed in an engine block, with the following exception:

(i) Manufacturers may assign a date of manufacture at a point in the assembly process later than the date otherwise specified under this definition. For example, a manufacturer may use the build date printed on the label or stamped on the engine as the date of manufacture.

Engine: Delete

B. California Provisions.

“Administrator” means the Executive Officer of the Air Resources Board, or a designee of the Executive Officer.

“Certificate of Conformity” means an Executive Order certifying engines for sale in California.

“Certification” means relating to the process of obtaining an Executive Order for an engine family that complies with the emission standards and requirements in this part.

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

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

“Standard-setting part” means the articles of the California Code of Regulations that define emission standards for a particular engine.

“United States” in reference to vehicle or engine sales or vehicle or engine introduced into commerce means the vehicle or engine sales or vehicle or engine introduced into commerce in California.

“We (us, our)” means the Executive Officer and any authorized representatives.

1068.35 Symbols, acronyms, and abbreviations. October 8, 2008.

A. Federal Provisions. [No change.]

B. California Provisions.

ARB means Air Resources Board.


Subpart E – Selective Enforcement Auditing

1068.401 What is a selective enforcement audit? October 25, 2016.
1068.405 What is in a test order? October 25, 2016.
1068.420 How do I know when my engine family fails an SEA? October 25, 2016.
1068.425 What happens if one of my production-line engines/equipment exceeds the emission standards? October 25, 2016.
1068.430 What happens if a family fails an SEA? October 25, 2016.
1068.435 May I sell engines/equipment from a family with a suspended certificate of conformity? October 8, 2008.
1068.445 When may ARB revoke my certificate under this subpart and how may I sell these engines/equipment again? October 8, 2008.
1068.450 What records must I send to ARB? October 25, 2016.
1068.455 What records must I keep? October 8, 2008.