

Appendix B-3

Proposed Amendments to the Heavy-Duty Engine Test Procedures

CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 2027 AND SUBSEQUENT MODEL HEAVY-DUTY ENGINES, VEHICLES AND HYBRID POWERTRAINS

[Note: The entire text of these test procedures set forth below is new language in “normal type” proposed to be incorporated by reference to title 13, California Code of Regulations]

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State of California
AIR RESOURCES BOARD

**CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES
FOR 2027 AND SUBSEQUENT MODEL
HEAVY-DUTY ENGINES, VEHICLES AND HYBRID POWERTRAINS**

Adopted:

NOTE: This document is incorporated by reference in subsection (c) of title 13, California Code of Regulations (CCR), section 1956.8.2. It specifies the requirements for certification of heavy-duty compression-ignition (CI) and spark-ignition (SI) engines, vehicles and hybrid powertrains for sale in California. This document also contains the exhaust emission standards and test procedures for these engines, vehicles and hybrid powertrains.¹ To complete an application for certification, other documents are designed to be used in conjunction with this document. They include:

1. "California Evaporative Emission Standards and Test Procedures for 2026 and Subsequent Model Year Passenger Cars, Light-Duty Trucks, Medium-Duty Vehicles, and Heavy-Duty Vehicles," adopted August 25, 2022 (incorporated by reference in title 13, CCR, section 1976);
2. Warranty requirements (title 13, CCR, sections 2035, et seq., as applicable);
3. Useful life requirements (title 13, CCR, sections 2112, et seq.);
4. On-board diagnostic (OBD) systems (title 13, CCR, section 1968, et seq., as applicable);
5. Heavy-duty (HD) OBD (title 13, CCR, sections 1971.1, et seq., as applicable);
6. "California Test Procedures for Evaluating Substitute Fuels and New Clean Fuels in 2015 and Subsequent Years," as last amended August 25, 2022 (incorporated by reference in title 13, CCR, section 2317);
7. "California Refueling Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles," as last amended August 25, 2022 (incorporated by reference in title 13, CCR, section 1978(b));
8. "California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles," as last amended September 9, 2021 (incorporated by reference in title 17, CCR, section 95663(d));²
9. "California Exhaust Emission Standards and Test Procedures for 2004 through 2026 Model Heavy-Duty Diesel Engines and Vehicles," as last amended **[INSERT DATE OF AMENDMENT]** (incorporated by reference in title 13, CCR, section 1956.8(b)); and
10. "California Exhaust Emission Standards and Test Procedures for 2004 through 2026 Model Heavy-Duty Otto-Cycle Engines and Vehicles, as last amended **[INSERT DATE OF AMENDMENT]** (incorporated by reference in title 13, CCR, section 1956.8(d).

¹ The requirements for engines used in complete vehicles up to 14,000 pounds gross vehicle weight rating (GVWR) are contained in the "California 2026 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles" (incorporated by reference in title 13, CCR, section 1961.4).

² The requirements for medium-duty vehicles up to 14,000 pounds GVWR are contained in the "California 2015 through 2025 Model Year Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Year Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles" (incorporated by reference in title 13, CCR, section 1961.2).

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CALIFORNIA EXHAUST EMISSION STANDARDS AND TEST PROCEDURES FOR 2027 AND SUBSEQUENT MODEL HEAVY-DUTY ENGINES, VEHICLES AND HYBRID POWERTRAINS

The following provisions of Subparts A through I, Part 1036; Subparts A through L, Part 1065; and Subparts A and E, Part 1068, Title 40, Code of Federal Regulations (40 CFR), as adopted or amended by the United States 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 2027 and subsequent model heavy-duty engines, vehicles and hybrid powertrains, are adopted and incorporated herein by this reference as the “California Exhaust Emission Standards and Test Procedures for 2027 and Subsequent Model Heavy-Duty Engines, Vehicles and Hybrid Powertrains,” except as altered or replaced by the provisions set forth below.

References in these test procedures to specific sections of the CFR maintain the same numbering system employed in the CFR. In cases where the entire CFR section is incorporated by reference with no modifications, either no additional notations or the notation “[No change]” is used. In cases where the federal requirements are modified by California requirements, the notation “Amend (or delete) paragraph (____) as follows:” is used. If the federal requirement is not applicable, the notation “[n/a]” is used. In cases where there are California only requirements, the additional California requirements are noted in a separate subsection as “B. California Provisions.”

If a CFR section for a specific model year is set forth in this document, and that CFR section references previous CFR sections, then all previously referenced CFR sections are deemed incorporated into this document unless otherwise noted.

Unless otherwise noted in these test procedures or in title 13, CCR, section 1956.8.2, all applicable provisions and requirements for light heavy-duty engines also apply to medium-duty compression-ignition engines installed in vehicles with gross vehicle weight rating (GVWR) from 10,001 to 14,000 pounds and certified under title 13, CCR, section 1956.8.2.

Unless otherwise noted in these test procedures or in title 13, CCR, section 1956.8.2, all applicable requirements for heavy-duty spark-ignition engines also apply to medium-duty spark-ignition engines installed in vehicles with GVWR from 10,001 to 14,000 pounds and certified under title 13, CCR, section 1956.8.2.

Unless otherwise noted in these test procedures, any reference to the following definitions shall apply to the California provisions:

- “Clean Air Act” or “Act” shall mean the California Health and Safety Code (HSC) or the California Vehicle Code, as applicable.
- “United States Environmental Protection Agency,” “U.S. EPA,” or “EPA” shall mean California Air Resources Board, CARB, ARB, or Executive Officer of CARB.

- “Administrator,” “EPA Program Officer,” “Designated Compliance Officer,” or “We,” “Us”, or “Our” shall mean the Executive Officer of CARB or a designee of the Executive Officer.
- “Manufacturer” shall mean 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. It also includes secondary engine manufacturers.
- “United States” in reference to vehicle or engine sales or vehicle or engine introduced into commerce shall mean the vehicle or engine sales or vehicle or engine introduced into commerce in California, unless otherwise noted.
- “Certificate of Conformity” shall mean an Executive Order of certification for engine, vehicle or hybrid powertrain in California.
- “California sales volume” shall mean the number of new California certified engines or vehicles or powertrains produced and delivered for sale in the State of California in a given model year.

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

Subpart A – Overview and Applicability

§ 1036.1 Applicability. January 24, 2023.

A. Federal Provisions.

1. Amend paragraph (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 gross vehicle weight rating (GVWR).

New 2027 and subsequent model year spark-ignition engines used in incomplete medium-duty vehicles from 10,001 to 14,000 pounds GVWR and all compression-ignition engines installed in medium-duty vehicles from 10,001 to 14,000 pounds GVWR may optionally certify to the exhaust emission standards in this section instead of the primary emission standards and test procedures for complete vehicles in title 13, CCR, sections 1961.2 and 1961.4, as applicable.

A manufacturer that chooses to comply with these heavy-duty engine (HDE) standards and test procedures for medium-duty vehicles shall specify, in the application for certification, an in-use compliance test procedure, as provided in title 13, CCR, section 2139(c). An engine certified for use in a medium-duty vehicle shall not be used in a heavy-duty vehicle over 14,000 pounds GVWR.

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

3. Paragraphs (a)(3) through (b). [n/a]

4. Paragraphs (c) and (d). [No change]

B. California Provisions.

1. Any reference to vehicle or engine sales or vehicle or engine production volume throughout the United States shall mean vehicles or engines that are produced and delivered for sale in California, unless noted otherwise.

2. The regulations pertaining to evaporative emissions are contained in “California Evaporative Emission Standards and Test Procedures for 2026 and Subsequent Model Year Passenger Cars, Light-Duty Trucks, Medium-Duty Vehicles, and Heavy-Duty Vehicles,” incorporated by reference in title 13, CCR, section 1976. All heavy-duty methanol- and gaseous-fueled vehicles and spark-ignition vehicles shall comply with the evaporative requirements in title 13, CCR, section 1976.

§ 1036.2 Compliance responsibility. January 24, 2023.

§ 1036.5 Excluded engines. January 24, 2023.

A. Federal Provisions.

1. Amend paragraph (a) as follows: The provisions of this part do not apply to engines used in medium-duty or heavy-duty vehicles that are subject to regulations

under title 13, CCR, sections 1961.2 and 1961.4.

2. Paragraph (b). [No change]

3. Paragraph (c). [n/a]

4. Paragraphs (d) and (e)(1). [No change]

5. Amend paragraph (e)(2) as follows: Installed in a glider vehicle subject to the “California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles,” incorporated by reference in title 17, CCR, section 95663(d).

§ 1036.10 Organization of this part. January 24, 2023.

§ 1036.15 Other applicable regulations. January 24, 2023.

A. Federal Provisions.

1. Amend paragraph (a) as follows: 40 CFR 86 as last amended on January 24, 2023 describes additional provisions that may apply to engines that are subject to these test procedures. See § 1036.601.

2. Amend paragraph (b) as follows: For guidance, see California Evaporative Emission Standards and Test Procedures for 2026 and Subsequent Model Year Passenger Cars, Light-Duty Trucks, Medium-Duty Vehicles, and Heavy-Duty Vehicles, incorporated by reference in title 13, CCR, section 1976, and California Refueling Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles, incorporated by reference in title 13, CCR, section 1978(b).

3. Amend paragraph (c) as follows: See part 1065 of these test procedures.

4. Amend paragraph (d) as follows: See part 1068 of these test procedures.

5. Paragraph (e). [No change]

§ 1036.30 Submission of information. January 24, 2023.

A. Federal Provisions.

1. Amend paragraph as follows: Unless we specify otherwise, send all reports and requests for approval to CARB’s Designated Compliance Officer, at: Chief, Emissions Certification and Compliance Division, California Air Resources Board, 4001 Iowa Ave., Riverside, CA 92507. See § 1036.825 for additional reporting and recordkeeping provisions.

Subpart B – Emission Standards and Related Requirements

§ 1036.101 Overview of exhaust emission standards. April 22, 2024.

§ 1036.104 Criteria pollutant emission standards – NO_x, HC, PM, and CO.
April 22, 2024.

A. Federal Provisions.

1. Paragraphs (a) through (a)(2). [No change]
2. Amend paragraph (a)(3) as follows: For model years 2027 through 2030, the following off-cycle emission standards apply for compression-ignition medium-duty engines, Light HDEs, Medium HDEs, and Heavy HDEs using the procedures specified in § 1036.530, as follows:

Table 3-1 to Paragraph (a)(3) of § 1036.104 — Compression-Ignition Standards for Off-Cycle Testing of 2027 through 2030 Model Year Engines

Off-Cycle Bin	NO _x	Temperature adjustment ^a	HC (mg/hp·hr)	PM (mg/hp·hr)	CO (g/hp·hr)
Bin 1	10.0 g/hr	$(20.0 - T_{amb}) * 0.33$	-	-	-
Bin 2	58 mg/hp·hr	$(20.0 - T_{amb}) * 2.93$	120	7.5	9

^a T_{amb} is the mean ambient temperature over a shift-day, or equivalent. Adjust the off-cycle NO_x standard for T_{amb} below 20.0 °C by adding the calculated temperature adjustment to the specified NO_x standard. Round the temperature adjustment to the same precision as the NO_x standard for the appropriate bin. If you declare a NO_x family emission limit (FEL) for the engine family, do not apply the FEL scaling calculation from paragraph (c)(3) of this section to the calculated temperature adjustment.

For 2031 and subsequent model years, the following off-cycle emission standards apply for compression-ignition medium-duty engines, Light HDE, Medium HDE, and Heavy HDE using the procedures specified in § 1036.530, as follows:

Table 3-2 to Paragraph (a)(3) of § 1036.104 — Compression-Ignition Standards for Off-Cycle Testing of 2031 and Subsequent Model Year Engines

Off-Cycle Bin	NO _x	Temperature adjustment ^a	HC (mg/hp·hr)	PM (mg/hp·hr)	CO (g/hp·hr)
Bin 1	10.0 g/hr	$(5.0 - T_{amb}) * 0.40$	-	-	-
Bin 2	58 mg/hp·hr	$(5.0 - T_{amb}) * 3.0$	120	7.5	9

^a T_{amb} is the mean ambient temperature over a shift-day, or equivalent. Adjust the off-cycle NO_x standard for T_{amb} below 5.0 °C by adding the calculated temperature adjustment to the specified NO_x standard. Round the temperature adjustment to the same precision as the NO_x standard for the appropriate bin. If you declare a NO_x FEL for the engine family, do not apply the FEL scaling calculation from paragraph (c)(3) of this section to the calculated temperature adjustment.

3. Amend paragraph (b) as follows: For mandatory engine idling requirements, see paragraph B.1 of § 1036.104, below.
4. Paragraphs (c) and (d). [No change]
5. Amend paragraph (e) as follows: *Useful life*. The exhaust emission

standards of this section apply for the applicable useful life, expressed in vehicle miles, or hours of engine operation, or years in service, whichever comes first, as follows:

Table 4 to Paragraph (e) of § 1036.104 — Useful Life by Primary Intended Service Class for Model Year 2027 and Later Heavy-Duty Engines

Primary Intended Service Class	Miles	Years	Hours
Spark-ignition heavy-duty and medium-duty engines	200,000	15	10,000
Medium-duty compression-ignition and Light HDE	270,000	15	13,000
Medium HDE	350,000	12	17,000
Heavy HDE	650,000	11	32,000

6. Paragraph (f). [No change]

B. California Provisions.

1. Medium-Duty and Heavy-Duty Compression-Ignition Engine Idling Requirements.

Except as provided in paragraph B.1.1 of § 1036.104 below, the requirements in this paragraph apply to 2027 and subsequent model compression-ignition engines used in heavy-duty vehicles over 14,000 pounds GVWR and medium-duty vehicles from 10,001 to 14,000 pounds GVWR. Manufacturers may meet the requirements of this paragraph by either demonstrating compliance with the Engine Shutdown System requirements of paragraph B.1.2 of § 1036.104, below or the Clean Idle NOx Emission Standard specified in paragraph B.1.3 of § 1036.104, below.

1.1 Exempt Vehicles. The requirements of this section do not apply to new 2027 and subsequent model medium-duty and heavy-duty engines, as follows:

1.1.1 Natural gas and liquefied petroleum gas fueled compression-ignition engines, and

1.1.2 All compression-ignition engines used in military tactical vehicles as defined in title 13, CCR, section 1905 and authorized emergency vehicles as defined in California Vehicle Code section 165.

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

1.2.1 Requirements. Except as provided in paragraphs B.1.1 and B.1.3 of § 1036.104, all new 2027 and subsequent model-year medium-duty and heavy-duty engines shall be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to

“neutral” or “park,” and the parking brake is engaged. If the parking brake is not engaged, then the engine shutdown system shall shut down the engine after 900 seconds of continuous idling operation once the vehicle is stopped and the transmission is set to “neutral” or “park.” The engine shutdown system must be tamper-resistant and non-programmable. A warning signal, such as a light or sound indicator inside the vehicle cabin, may be used to alert the driver 30 seconds prior to engine shutdown. The engine shutdown system must be capable of allowing the driver to reset the engine shutdown system timer by momentarily changing the position of the accelerator, brake, or clutch pedal, or other mechanism within 30 seconds prior to engine shutdown. Once reset, the engine shutdown system shall restart the engine shutdown sequence described in this paragraph, and shall continue to do so until the engine shuts down or the vehicle is driven.

1.2.2 Engine Shutdown System Override. The engine shutdown system may be overridden, to allow the engine to run continuously at idle, under any of the following conditions:

(1) *If the engine is operating in power take-off (PTO) mode.* The PTO system shall have a switch or a setting that can be switched “on” to override the engine shutdown system and will reset to the “off” position when the vehicle’s engine is turned off or when the PTO equipment is turned off. Subject to advance Executive Officer approval, other methods for detecting or activating PTO operation may be allowed.

(2) *If the vehicle’s engine coolant temperature is below 15.6 °C (or 60 °F).* The engine shutdown system shall automatically be activated once the coolant temperature reaches 15.6 °C (or 60 °F) or above. The engine coolant temperature shall be measured with the engine’s existing engine coolant temperature sensor used for engine protection, if so equipped. Other methods of measuring engine coolant temperature may be allowed, subject to advance Executive Officer approval.

(3) *If an exhaust emission control device is regenerating.* If an exhaust emission control device is regenerating, and keeping the engine running is necessary to prevent aftertreatment or engine damage, the engine shutdown system may be overridden for the duration necessary to complete the regeneration process up to a maximum of 30 minutes. Determination of what constitutes the need for regeneration will be based on data provided by the manufacturer at the time of certification. Regeneration events that may require longer than 30 minutes of engine idling to complete shall require advance Executive Officer approval. At the end of the regeneration process, the engine shutdown system shall automatically be enabled to restart the engine shutdown sequence described in paragraph B.1.2.1. of § 1036.104 above. A vehicle that uses a regeneration strategy under engine idling operating conditions shall be equipped with a dashboard indicator light that, when illuminated, indicates that the exhaust emission control device is regenerating. Other methods of

indicating that the exhaust emission control device is regenerating may be used with advance Executive Officer approval.

(4) *If servicing or maintenance of the engine requires extended idling operation.* The engine's electronic control module may be set to temporarily deactivate the engine shutdown system for up to a maximum of 60 minutes. The deactivation of the engine shutdown system shall only be performed with the use of a diagnostic scan tool. At the end of the set deactivation period, the engine's electronic control module shall reset to restart the engine shutdown system sequence described in paragraph B.1.2.1 above.

1.3 Clean Idle NOx Emission Standard.

1.3.1 Emission Standard. In lieu of the engine shutdown system requirements specified in paragraph B.1.2 of § 1036.104 above, an engine manufacturer may elect to certify its new 2027 and subsequent model year medium-duty and heavy-duty compression-ignition engines to a Clean Idle NOx emission standard. The Clean Idle NOx emission standard shall not exceed 10.0 grams per hour as determined using the Clean Idle test specified in § 1036.525.

1.3.2 Compliance Determination. Compliance with the Clean Idle NOx emission standard will be determined based on testing conducted pursuant to the Clean Idle test specified in § 1036.525. The standard applies separately to each mode of the Clean Idle test. The manufacturer may request an alternative test procedure if the technology used cannot be demonstrated using the procedures in § 1036.525, subject to advance approval of the Executive Officer.

1.3.3 Labeling: An engine manufacturer certifying its engine to the Clean Idle NOx emission standard must also produce a vehicle label, as defined in paragraph B.1 of § 1036.135.

1.4 Optional Alternatives to Main Engine Idling. All new 2027 and subsequent model year medium-duty and heavy duty compression-ignition engines, subject to the requirements of this paragraph, may also be equipped with idling emission reduction devices that comply with the compliance requirements specified in title 13, CCR, section 2485(c)(3).

2. Optional Low NOx Emission Standards for Model Year 2027 and Later Heavy-Duty Engines.

2.1 Heavy-Duty Compression-Ignition Engines. Manufacturers may elect to certify their new 2027 and subsequent model year heavy-duty compression-ignition engines used in vehicles over 14,000 pounds GVWR to the following optional low NOx emission standards in lieu of the primary NOx emission standard applicable for that model year. Engines certified to the optional low NOx emission standards must also comply with the applicable HC, PM, and CO emission standards set forth in paragraph A of § 1036.104.

In addition, engine families that are certified to the optional low NO_x emission standards are not eligible for generating any NO_x credits in the averaging, banking, and trading programs.

Table 5 to Paragraph B.2 of § 1036.104 — Optional Low NO_x Exhaust Emission Standards for Heavy-Duty Compression-Ignition Engines (mg/hp·hr)

Test Procedure(s)	Option 1	Option 2
FTP and SET	10	20
LLC	15	30

2.2 Heavy Duty Spark-Ignition Engines. Manufacturers may elect to certify their new 2027 and subsequent model year heavy-duty spark-ignition engines used in vehicles over 14,000 pounds GVWR to the following optional low NO_x emission standards in lieu of the primary NO_x emission standards applicable for that model year. Engines certified to the optional low NO_x emission standards must also comply with the applicable HC, PM, and CO emission standards set forth in this paragraph A of § 1036.104. In addition, engine families that are certified to the optional low NO_x emission standards are not eligible for generating any NO_x credits in the averaging, banking, and trading program.

Table 6 to Paragraph B.2 of § 1036.104 — Optional Low NO_x Exhaust Emission Standards for Heavy-Duty Spark-Ignition Engines (mg/hp·hr)

Test Procedure	Option 1	Option 2
FTP	10	20
SET	10	20

3. Formaldehyde Exhaust Emission Standards. Formaldehyde exhaust emissions for 2027 and subsequent model year medium-duty and heavy-duty engines shall not exceed, as follows:

3.1 For methanol-fueled heavy-duty engines used in heavy-duty vehicles over 14,000 pounds GVWR: 50 mg/hp·hr;

3.2 For heavy-duty spark-ignition engines used in vehicles over 14,000 pounds GVWR, and engines used in incomplete medium-duty vehicles from 10,001 to 14,000 pounds GVWR: 10 mg/hp·hr; and

3.3 For compression-ignition engines used in medium-duty vehicles from 10,001 to 14,000 pounds GVWR: 50 mg/hp·hr.

§ 1036.108 Greenhouse gas emission standards – CO₂, CH₄, and N₂O.
April 22, 2024.

A. Federal Provisions.

1. Introductory paragraph through (a)(1) introductory paragraph. [No change]

2. Amend paragraph (a)(1)(i) as follows: *Spark-ignition standards*. The CO₂ standard for model year 2027 and later medium-duty and heavy-duty spark-ignition engines that are not Heavy HDE is 627 g/hp·hr. Spark-ignition engines that qualify as Heavy HDE under paragraph (b)(2) of § 1036.140 for model years 2027 and later are subject to the compression-ignition engine standards for Heavy HDE-Vocational or Heavy HDE-Tractor, as applicable. You may certify spark-ignition engines to the compression-ignition standards for the appropriate model year under this paragraph (a). If you do this, those engines are treated as compression-ignition engines for all the provisions of this part.

3. Amend paragraph (a)(1)(ii) as follows: *Compression-ignition standards*. The following CO₂ standards apply for model year 2027 and later medium-duty and heavy-duty compression-ignition engines and spark-ignition engines that qualify as Heavy HDE:

Table 1 to Paragraph (a)(1)(ii) of § 1036.108 – Compression-Ignition CO₂ Standards (g/hp·hr)

Model Years	Medium-Duty Compression-Ignition Engine and Light HDE	Medium HDE-Vocational	Heavy HDE-Vocational	Medium HDE-Tractor	Heavy HDE-Tractor
2027 and later	552	535	503	457	432

4. Amend paragraph (a)(2) as follows: The CH₄ emission standard is 0.10 g/hp·hr when measured over the applicable FTP transient duty cycle specified in § 1036.512. This standard applies to model year 2027 and later compression-ignition engines and spark-ignition engines. Note that this standard applies for all fuel types just like the other standards of this section.

5. Amend paragraph (a)(3) as follows: The N₂O emission standard is 0.10 g/hp·hr when measured over the applicable FTP transient duty cycle specified in § 1036.512. This standard applies to model year 2027 and later compression-ignition engines and spark-ignition engines.

6. Paragraphs (b) and (c). [No change]

7. Amend paragraph (d) as follows: *Useful life*. The exhaust emission standards of this section apply for the useful life, expressed as vehicle miles, or hours of engine operation, or years in service, whichever comes first, as follows:

Table 3 to Paragraph (d) of § 1036.108 – Useful Life by Primary Intended Service Class for Model Year 2027 and Later

Primary Intended Service Class	Miles	Years
Spark-ignition heavy-duty and medium-duty engine	150,000	15
Medium-duty compression-ignition engine and Light HDE	150,000	15
Medium HDE	185,000	10
Heavy HDE ^a	435,000	10

^a Useful life for Heavy HDE is also expressed as 22,000 operating hours. For an individual engine, the useful life is no shorter than 10 years or 100,000 miles, whichever occurs first, regardless of operating hours.

8. Paragraph (e). [No change]

B. California Provisions.

1. 2027 Model Year Compression-Ignition Engines. As an option, 2027 model year heavy-duty compression-ignition engines, except in all cases engines used in medium-duty vehicles, may be certified to the Optional Low-CO₂ Emission Standards. The CO₂ emissions from engines certified to the Optional Low-CO₂ Emission Standards may not exceed the following standards:

Table 4 to Paragraph B.1 of § 1036.108 — Optional Low-CO₂ Emission Standards for 2027 Model Year Heavy-Duty Compression-Ignition Engines (g/hp·hr)

Light HDE vocational	Medium HDE vocational	Heavy HDE vocational	Medium HDE tractor	Heavy HDE tractor
490	474	446	409	387

Engines certified to the Optional Low-CO₂ Emission Standards must also comply with the applicable CH₄ and N₂O emission standards set forth in this § 1036.108. In addition, engines certified to these Optional Low-CO₂ Emission Standards and participating in the Innovative Technology Regulation set forth in title 13, CCR, sections 2208 and 2208.1 are not eligible to participate in the averaging, banking, and trading program, or to generate credits for certification.

2. 2027 Model Year Spark-Ignition Engines. As an option, 2027 model year heavy-duty spark-ignition 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 § 1036.108. In

addition, engines certified to the Optional Low-CO₂ Emission Standard and participating in the Innovative Technology Regulation set forth in title 13, CCR, sections 2208 and 2208.1 are not eligible to participate in the averaging, banking, and trading program, or to generate credits for certification.

§ 1036.110 Diagnostic controls. April 22, 2024

A. Federal Provisions.

1. Amend the introductory paragraph as follows: Onboard diagnostic (OBD) systems must generally detect malfunctions in the emission control system, store trouble codes corresponding to detected malfunctions, and alert operators appropriately. Starting in model year 2027, new engines must have OBD systems as described in CARB's OBD regulations in title 13, CCR, sections 1968.2, 1968.5, 1971.1, and 1971.5, as applicable.

2. Paragraphs (a) and (b). [n/a]

3. Delete paragraph (c) and replace with the following: See paragraph B.1. of § 1036.111 for in-cab display requirements for inducements.

4. Paragraph (d). [n/a]

§ 1036.111 Inducements related to SCR. April 22, 2024.

A. Federal Provisions. [No change]

B. California Provisions.

1. **In-Cab Display Requirements for Inducements.** Design the system to display the following information in the cab:

1.1 For inducements specified in paragraph A of § 1036.111 and for any other Auxiliary Emission Control Device (AECD) that derates engine output related to Selective Catalytic Reduction (SCR) or Diesel Particulate Filter (DPF) systems, indicate the fault code for the detected problem, a description of the fault code, and the current speed restriction. For inducement faults under paragraph A of § 1036.111, identify whether the fault condition is for Diesel Exhaust Fluid (DEF) level, DEF quality, or tampering; for other faults, identify whether the fault condition is related to SCR or DPF systems. If there are additional derate stages, also indicate the next speed restriction and the time remaining until starting the next restriction. If the derate involves something other than restricting vehicle speed, such as a torque derate, adjust the information to correctly identify any current and pending restrictions. The requirements of this paragraph apply for engines installed in heavy-duty vehicles above 10,000 pounds GVWR.

1.2 Identify on demand the total number of diesel particulate filter regeneration events that have taken place since installing the current particulate filter for engines installed in heavy-duty vehicles above 14,000 pounds GVWR.

1.3 Identify on demand the historical and current rate of DEF consumption, such as gallons of DEF consumed per mile or gallons of DEF

consumed per gallon of diesel fuel consumed for engines installed in heavy-duty vehicles above 14,000 pounds GVWR. Design the system to allow the operator to reset the current rate of DEF consumption.

§ 1036.115 Other requirements. April 22, 2024.

A. Federal Provisions.

1. Paragraphs (a) and (b). [No change]
2. Amend paragraph (c) as follows: *Evaporative and refueling emissions*. For guidance, see California Evaporative Emission Standards and Test Procedures for 2026 and Subsequent Model Year Passenger Cars, Light-Duty Trucks, Medium-Duty Vehicles, and Heavy-Duty Vehicles, incorporated by reference in title 13, CCR, section 1976, and California Refueling Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles, incorporated by reference in title 13, CCR, section 1978(b).
3. Paragraphs (d) through (j). [No change]

§ 1036.120 Emission-related warranty requirements. April 22, 2024.

A. Federal Provisions.

1. Paragraph (a) through paragraph (b) introductory paragraph. [No change]
2. Amend Table 1 to Paragraph (b) of § 1036.120 as follows:

Table 1 to Paragraph (b) of § 1036.120 - Warranty by Primary Intended Service Class for Model Year 2027 and Later Engines

Primary intended service class	Mileage	Years	Hours
Spark-ignition medium-duty and HDE	160,000	10	8,000
Compression-ignition medium-duty and Light HDE	210,000	10	10,000
Medium HDE	280,000	10	14,000
Heavy HDE	450,000	10	22,000

3. Amend paragraph (c) as follows: *Components covered*. The emission-related warranty covers all components listed in Part 1068, appendix A, and components from any other system you develop to control emissions, and any emission-related part that can cause the vehicle's on-board diagnostic malfunction indicator light to illuminate. Note that this includes hybrid system components that you specify in a certified configuration. The emission-related warranty covers any components, regardless of the company that produced them, that are the original components or the same design as components from the certified configuration.

4. Paragraphs (d) through (e). [No change]

B. California Provisions.

1. The warranty-related provisions in title 13, CCR, sections 2035, 2036, 2037, 2038, and 2039 are applicable.

§ 1036.125 Maintenance instructions and allowable maintenance. April 22, 2024.

A. Federal Provisions.

1. Introductory paragraph through paragraph (a)(1)(i). [No change]

2. Amend paragraph (a)(1)(ii) as follows: You design and produce your engines with a system we approve that displays a visible signal to alert drivers that maintenance is due, either as a result of component failure or the appropriate degree of engine or vehicle operation. The signal must clearly display “maintenance needed”, “check engine”, or a similar message that we approve. The signal must be continuous while the engine is operating and not be easily eliminated without performing the specified maintenance. Your maintenance instructions must specify resetting the signal after completing the specified maintenance. We must approve the method for resetting the signal. You may not design the system to be less effective at the end of the useful life. If others install your engine in their vehicle, you may rely on installation instructions to ensure proper mounting and operation of the display. Disabling or improperly resetting the system for displaying these maintenance-related signals without performing the indicated maintenance violates the tampering prohibition in California law, including Vehicle Code sections 27156, et seq.

3. Paragraphs (a)(1)(iii) through Table 1 to Paragraph (a)(2) of § 1036.125. [No change]

4. Amend Table 2 to Paragraph (a)(2) of § 1036.125 as follows:

Table 2 to Paragraph (a)(2) of § 1036.125—Minimum Scheduled Maintenance Intervals for Adjustment or Cleaning

Component	Accumulated miles (hours) for components			
	Spark-ignition heavy-duty and Medium-Duty Engine	Compression-Ignition Medium-duty and Light HDE	Medium HDE	Heavy HDE
Spark plugs	25,000 (750)			
EGR-related filters and coolers, fuel injectors, and crankcase ventilation valves and filters	50,000 (1,500)	50,000 (1,500)	50,000 (1,500)	50,000 (1,500)
DEF filters		50,000 (1,500)	50,000 (1,500)	50,000 (1,500)
Ignition wires and coils	50,000 (1,500)			
Oxygen sensors	80,000 (2,400)			
Air injection system components	100,000 (3,000)			
Catalyst system components, EGR system components (other than filters or coolers), particulate filtration system components, and turbochargers	100,000 (3,000)	100,000 (3,000)	100,000 (3,000), then 150,000 (4,500)	100,000 (3,000), then 150,000 (4,500)

5. Paragraphs (a)(3) through (h). [No change]

B. California Provisions.

1. The maintenance instructions or the warranty manual shall not prohibit the use of biodiesel fuel blend up to 20% biodiesel content (B20) that meets the specifications listed in title 4, CCR, section 4148.

2. The Emissions Control System Warranty Statement requirements in title 13, CCR, section 2039 are applicable.

§ 1036.130 Installation instructions for vehicle manufacturers. January 24, 2023.

A. Federal Provisions.

1. Paragraphs (a) and (b)(1). [No change]

2. Amend paragraph (b)(2) as follows: State: "Failing to follow these instructions when installing a certified engine in a heavy-duty motor vehicle violates state law, subject to fines or other penalties as described in the California HSC or the California Vehicle Code, as applicable."

3. Paragraphs (b)(3) through (b)(8). [No change]

4. Amend paragraph (b)(9) as follows: Describe how vehicle manufacturers need to apply Clean Idle Labels to qualifying vehicles as described in paragraph B.1 of 1036.135.

5. Paragraphs (c) through (e). [No change]

§ 1036.135 Labeling. January 24, 2023.

A. Federal Provisions.

1. Paragraphs (a) through (c)(6). [No change]

2. Amend paragraph (c)(7) as follows: State the NO_x FEL to which the engine is certified, if applicable. State also the Clean Idle standard if you certify the engine to the NO_x idling emission standard of paragraph B.1.3 of § 1036.104 or indicate as "AESS" if you certify to the Automatic Engine Shutdown System requirement of paragraph B.1.2 of § 1036.104.

3. Amend paragraph (c)(8) as follows: State: "THIS ENGINE COMPLIES WITH CALIFORNIA REGULATIONS FOR [MODEL YEAR] HEAVY-DUTY HIGHWAY ENGINES." It may also state that the engine conforms to any applicable federal or Canadian emission standards for new heavy-duty engines.

4. Paragraphs (c)(9) through (f). [No change]

B. California Provisions.

1. Clean Idle Labels for Medium-Duty and Heavy-Duty Engine Idling Requirements. For each medium-duty and heavy-duty engine certified to the Clean Idle NO_x emission standard pursuant to paragraph B.1.3 of § 1036.104 or equipped with a certified/verified auxiliary power system (APS) pursuant to title 13, CCR, section 2485(c)(3)(A), a single label shall be produced and affixed, as applicable, on each vehicle equipped with such medium-duty or heavy-duty engine or a verified APS.

1.1 The labeling requirements for engine manufacturers, aftermarket APS manufacturers and installers, and vehicle manufacturers are as follows:

1.1.1 *Engine manufacturers.* The engine manufacturer that has certified an engine to the Clean Idle NO_x emission standard pursuant to paragraph B.1.3 of § 1036.104, or certified/verified an APS pursuant to title 13, CCR, section 2485(c)(3)(A), shall produce the appropriate label for each new engine or APS pursuant to paragraph B.1.2 of § 1036.135, below. The label shall be affixed on the outside of the vehicle pursuant to paragraph B.1.3 of § 1036.135 by the vehicle manufacturer.

1.1.2 *Aftermarket APS manufacturers and installers.* An aftermarket APS manufacturer that has certified/verified an APS pursuant to title 13, CCR, section 2485(c)(3)(A), shall produce the appropriate label for

each APS system pursuant to paragraph B.1.2 of § 1036.135, below. The label shall be affixed on the outside of the vehicle pursuant to paragraph B.1.3 of § 1036.135 by the party that is responsible for installing the APS on the vehicle.

1.1.3 *Vehicle manufacturer.* A vehicle manufacturer that has certified an engine to the Clean Idle NOx emission standard pursuant to paragraph B.1.3 of § 1036.104, or certified/verified an APS pursuant to title 13, CCR, section 2485(c)(3)(A), shall produce and affix the appropriate label on the outside of the vehicle pursuant to paragraphs B.1.2 or B.1.3 of § 1036.135, whichever is applicable.

1.2 **Label Format.** Figure 1 shows a facsimile of the label format for an engine certified to the Clean Idle NOx emission standard pursuant to paragraph B.1.3 of § 1036.104. Figure 2 shows a facsimile of the label format for an engine in a certified/verified APS pursuant to title 13, CCR, section 2485(c)(3)(A). The engine manufacturer, APS manufacturer, or vehicle manufacturer, whichever is applicable, who produces and affixes the label on the vehicle must ensure that the label has the following characteristics:



Figure 1 to Paragraph B.1.2 of § 1036.135 — Facsimile of the Label Format for an Engine Certified to the Clean Idle NOx Emission Standard



Figure 2 to Paragraph B.1.2 of § 1036.135 — Facsimile of the Label Format for an Engine Equipped with a Certified/Verified APS

1.2.1 Oval shape.

1.2.2 Dimensions of no less than 6 inches wide by 4 inches high.

1.2.3 The color of the outer and inner ellipses shall be dark blue and the stars shall be red. The background of the label shall be light blue in color. The size of the stars shall be equal to the size of the characters as specified in paragraph B.1.2.4 of § 1036.135, below.

1.2.4 A vehicle equipped with an engine that is certified pursuant to paragraph B.1.3 of § 1036.104 shall have a label with the word “CERTIFIED,” and below it the phrase “CLEAN IDLE,” as shown in Figure 1. A vehicle equipped with an APS certified/verified pursuant to title 13, CCR, section 2485(c)(3)(A) shall have a label with the word “VERIFIED,” and below it the phrase “CLEAN APS,” as shown in Figure 2. The label information shall be written in the English language with sans serif font, black in color, and in upper case letters. The size of the font shall be at least 7/16 inch (or 32 points) and the spacing of the fonts must be such that the longest phrase (for example, “CLEAN IDLE”) extends from the left edge to the right edge of the inner edge of the inner ellipse, without touching the edges. The label information shall be centrally aligned, both vertically and horizontally.

1.2.5 A hologram as shown in Figure 3 shall be embedded within the proposed label. The hologram must cover the entire label. The hologram shall have the phrase “Clean Skies” repeatedly written from edge to edge of the label boundaries and each phrase shall be separated by a circular bullet. The position of the circular bullet in each line shall be exactly above the space between the words “Clean” and “Skies” on the line below. The color of the font shall be orange. The font size shall be less than or equal to a quarter of the font size of the phrase “CLEAN IDLE” or “CLEAN APS” as specified in paragraph B.1.2.4 of § 1036.135, above. The hologram shall have the map of the State of California as shown in Figure 3, below.



Figure 3 to Paragraph B.1.2 of § 1036.135 — Facsimile of the Background for the Certified Clean Idle and Verified Clean APS Labels

1.3 Label Location and Attachment Requirements

1.3.1 The appropriate label shall be permanently affixed to the exterior on the driver's side of the hood, in an area within one foot by one foot from the top and front edges of the hood. If such an attachment is not feasible, the label may be attached at a different location, subject to advance approval by the Executive Officer.

1.3.2 Each label must be affixed in such a manner that it cannot be removed without destroying or defacing the label. The label must not be affixed to any vehicle component that can easily be detached from the vehicle.

1.3.3 The label and any adhesives used must be designed to withstand, for a period of 10 years, typical environmental conditions. Typical environmental conditions include, but are not limited to, exposure to extreme heat or cold, moisture, engine fuels, lubricants, and coolants.

1.4 The party that certifies/verifies the engine pursuant to paragraph B.1.3 of § 1036.104 or the APS pursuant to title 13, CCR, section 2485(c)(3)(A) shall be the ultimate party responsible for ensuring that the labels are correctly produced. Samples of labels produced pursuant to this subsection must be submitted to the Executive Officer with the applicable certification or verification application.

1.5 Labels on vehicles may also be applied by vehicle manufacturers, distributors, or dealers. However, the party that certified the engine or the APS and produced the labels remains the ultimate party responsible for ensuring that the labels are correctly administered. If the labels are administered by the original equipment manufacturer, dealer, or distributor, the producer of the label shall include its name and a serial number on the label. The location of the producer's name and serial number on the label shall be written in the lower part of the label, in the space vertically centered between the label wording and the inner ellipses, and the font must contrast the label background. The serial numbers of the labels administered must be recorded by the vehicle manufacturer,

distributor, or dealer and reported to the party responsible for producing the labels. This information shall be maintained by the party responsible for producing the labels for a period of 10 years, and shall be made available to the Executive Officer upon request.

1.6 A medium-duty or heavy-duty compression-ignition engine that has been certified pursuant to paragraph B.1.3 of § 1036.104 shall not be modified or altered unless said modification or alteration has been approved by the Executive Officer pursuant to title 13, CCR, sections 2220 through 2225.

1.7 An idling emission reduction device or system that has been certified/verified pursuant to title 13, CCR, section 2485(c)(3)(A) shall not be modified or altered unless said modification or alteration has been approved by the Executive Officer pursuant to title 13, CCR, sections 2470 through 2476.

2. For heavy-duty engines certified to the Optional Low NO_x Engine emission standards in paragraph B.2 of § 1036.104, the label shall contain the following statement: "THIS ENGINE COMPLIES WITH CALIFORNIA REGULATIONS FOR [MODEL YEAR] HEAVY-DUTY HIGHWAY ENGINES AND IS CERTIFIED TO THE OPTIONAL LOW NO_x ENGINE EMISSION STANDARD OF [XXX] g/hp·hr."

§ 1036.140 Primary intended service class and engine cycle. January 24, 2023.

A. Federal Provisions. [No Change]

B. California Provisions.

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

2. Medium-duty vehicle means any heavy-duty vehicle having a manufacturer's GVWR between 8,501 and 14,000 pounds.

§ 1036.150 Interim provisions. April 22, 2024.

A. Federal Provisions.

1. Paragraphs (a) through (c). [n/a]

2. Amend paragraph (d) as follows: *Small manufacturers*. The greenhouse gas standards of this part apply on a delayed schedule for manufacturers meeting the small business criteria specified in 13 CFR 121.201. Apply the small business criteria for NAICS code 336310 for engine manufacturers with respect to gasoline-fueled engines and 333618 for engine manufacturers with respect to other engines; the employee limits apply to the total number employees together for affiliated companies. In addition, qualifying small manufacturers producing engines that run on any fuel other than gasoline, E85, or diesel fuel may delay complying with greenhouse gas standard under this part by one model year; however, small manufacturers may generate emission credits only by certifying all their engine families within a given averaging set to standards that apply for the current model year. Note that engines not yet subject to standards must nevertheless supply fuel maps to vehicle manufacturers as described in paragraph (n) of this section. Note

also that engines produced by small manufacturers are subject to criteria pollutant standards.

3. Paragraph (e). [n/a]
4. Paragraphs (f) through (g)(1). [No change]
5. Amend paragraph (g)(2) as follows: You may use a default additive DF of 0.020 g/hp·hr for N₂O emissions from any engine family.
6. Paragraph (g)(3). [No change]
7. Paragraphs (h) through (j). [n/a]
8. Amend paragraph (k) introductory paragraph as follows: *Limited production volume allowance under ABT*. For model years 2027 through 2029, you may produce and sell a limited number of heavy HDEs that meet the 2023 model year heavy HDE emission standards and requirements, as specified in title 13, CCR, section 1956.8(a)(2)(A). The maximum number of heavy HDEs that you may produce and sell under this limited production allowance is 5% of the annual average of your actual California sales volume of heavy HDEs in model years 2023 through 2025. Emissions deficits and credits must be calculated subject to § 1036.705. Engine certification under this paragraph (k) is subject to the following conditions and requirements:
 9. Amend paragraph (k)(1) as follows: Engines must meet all the standards and other requirements that apply under title 13, CCR, section 1956.8(a)(2)(A) for model year 2023. Engines must be certified in separate engine families that qualify for carryover certification as described in § 1036.235(d). All ABT calculations must comply with the requirements in subpart H of these test procedures.
 10. Paragraph (k)(2). [No change]
 11. Amend paragraph (k)(3) as follows: Label the engine as described in paragraph I.35 of the California Exhaust Emission Standards and Test Procedures for 2004 through 2026 Model Heavy-Duty Diesel Engines and Vehicles, but include the following alternate compliance statement: "THIS ENGINE CONFORMS TO CARB REGULATIONS FOR MODEL YEAR XXXX ENGINES UNDER 13 CCR 1956.8.2(c)-1036.150(k)."
 12. Paragraphs (l) through (n). [n/a]
 13. Delete paragraph (o) and replace with the following: Engines installed in glider vehicles are required to meet the requirements specified in § 1037.635 of the "California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles," incorporated by reference in title 17, CCR, section 95663(d).
 14. Paragraphs (p) introductory paragraph and (p)(1). [No change]
 15. Paragraph (p)(2). [n/a]
 16. Paragraphs (q) and (r). [No change]
 17. Paragraphs (s) through (v). [n/a]
 18. Paragraph (w). [No change]
 19. Paragraph (x). [n/a]
 20. Amend paragraph (y) as follows: *NOx compliance allowance for in-use testing*. A NOx compliance allowance of 15 mg/hp·hr applies for any in-use testing of Medium HDE and Heavy HDE as described in subpart E of this part for model years

2027 through 2034 only. Add the compliance allowance to the NOx standard that applies for each duty cycle and for off-cycle testing, with both field testing and laboratory testing. The NOx compliance allowance does not apply for the bin 1 off-cycle standard. As an example, for manufacturer-run field-testing of a Heavy HDE, add the 15 mg/hp·hr compliance allowance and the 5 mg/hp·hr accuracy margin from § 1036.420 to the 58 mg/hp·hr bin 2 off-cycle standard to calculate a 78 mg/hp·hr NOx standard.

21. Paragraph (z). [No change]

22. Paragraph (aa). [n/a]

Subpart C – Certifying Engine Families

§ 1036.201 General requirements for obtaining a certificate of conformity.
January 24, 2023.

A. Federal Provisions. [No change]

B. California Provisions.

1. If an engine family does not comply with the in-use test requirements in title 13, CCR, sections 2111-2140, warranty reporting requirements in title 13, CCR, sections 2141-2149, or is equipped with an emission control component that exceeds the thresholds specified in title 13, CCR, section 2143, and the component was not redesigned, recalibrated, or manufactured in a different manner to address component features identified to result in exceedance of the thresholds in title 13, CCR, section 2143 for the model year for which an application is requested, a manufacturer cannot request a carryover or carry across application based on data from that engine family. If the emission control component has been identified as causing an engine family to exceed the thresholds specified in title 13, CCR, section 2143 has not been redesigned, recalibrated, or manufactured in a different manner to address component features identified to result in exceedance of such thresholds for the model year for which the application is requested, a manufacturer may only use carryover or carry across data if the manufacturer extends the warranty coverage for that emission control component to the full useful life of the engine family.

§ 1036.205 Requirements for an application for certification. April 22, 2024.

A. Federal Provisions.

1. Introductory paragraph through paragraph (b). [No change]

2. Amend paragraph (c) as follows: Explain in detail how the engine diagnostic system works, describing especially the engine conditions (with the corresponding diagnostic trouble codes) that cause the malfunction indicator to go on as described in CARB's OBD regulations in title 13, CCR, sections 1968.2, 1968.5, 1971.1, and 1971.5, as applicable.

3. Paragraphs (d) through (t). [No change]

4. Amend paragraph (u) as follows: Unconditionally certify that all the engines in the engine family comply with the requirements of this part, other referenced parts of the CFR, the California HSC, or the California Vehicle Code, as applicable. Note that § 1036.235 specifies which engines to test to show that engines in the entire family comply with the requirements of this part.

5. Amend paragraph (v) as follows: Include good-faith estimates of U.S.-directed and California sales volumes. Include a justification for the estimated production volumes if they are substantially different than actual production volumes in earlier years for similar models.

6. Paragraphs (w) through (aa). [No change]

B. California Provisions.

1. If the medium-duty or heavy-duty compression-ignition engine for which certification is being requested incorporates any of the alternative idle emission control strategies contained in title 13, CCR, section 2485(c)(3), then the manufacturer must provide in its application for certification a description of the alternative strategy or technology including the type, brand name, model identification number, and where applicable, emissions data and power rating. In addition, the manufacturer must also provide the appropriate labels to be affixed to the outside of the vehicle as required in paragraph B.1. of § 1036.135.

2. In lieu of testing for formaldehyde emissions for certification, a manufacturer may provide a statement in its application for certification that such engines comply with the applicable standards. Such a statement must be based on previous emission tests, development tests, or other appropriate information.

§ 1036.210 Preliminary approval before certification. January 24, 2023.

§ 1036.225 Amending applications for certification. January 24, 2023.

A. Federal Provisions.

1. Introductory paragraph through paragraph (f). [No change]

2. Amend paragraph (g) as follows: You may produce engines or modify in-use engines as described in your amended application for certification and consider those engines to be in a certified configuration. Modifying a new or in-use engine to be in a certified configuration does not violate the tampering prohibition of California law, including Vehicle Code section 27156, as long as this does not involve changing to a certified configuration with a higher family emission limit.

§ 1036.230 Selecting engine families. April 22, 2024.

§ 1036.235 Testing requirements for certification. January 24, 2023.

A. Federal Provisions.

1. Introductory paragraph through (b)(2) introductory paragraph. [No change]

2. Amend paragraph (b)(2)(i) as follows: If you are certifying the engine for

use in tractors, you must measure CO₂ emissions using the SET duty cycle specified in § 1036.510, and measure CH₄ and N₂O emissions using the FTP transient cycle.

3. Paragraphs (b)(2)(ii) through (g). [No change]

§ 1036.240 Demonstrating compliance with criteria pollutant emission standards.
April 22, 2024.

A. Federal Provisions.

1. Amend paragraph (a) as follows: For purposes of certification, your engine family is considered in compliance with the duty-cycle emission standards in § 1036.104 if all emission-data engines representing that family have test results showing official emission results and deteriorated emission levels at or below these standards (including all corrections and adjustments). This also applies for all test points for emission-data engines within the family used to establish deterioration factors. Note that your FELs are considered to be the applicable emission standards with which you must comply if you participate in the ABT program in subpart H of this part. Use good engineering judgment to demonstrate compliance with off-cycle standards throughout the useful life.

2. Paragraphs (b) through (e). [No change]

§ 1036.241 Demonstrating compliance with greenhouse gas emission standards.
April 22, 2024.

§ 1036.245 Deterioration factors for exhaust emission standards. April 22, 2024.

A. Federal Provisions.

1. Amend the introductory paragraph as follows: This section describes how to determine deterioration factors, either with pre-existing test data or with new emission measurements. Apply these deterioration factors to determine whether your engines will meet the duty-cycle emission standards throughout the useful life as described in § 1036.240. The provisions of this section and the verification provisions of § 1036.246 apply for all engine families starting in model year 2027.

2. Paragraphs (a) through (e). [No change]

B. California Provisions.

1. The data derived from testing to determine the exhaust emission deterioration factors shall be submitted to the Executive Officer for review. If the durability test method is accepted by EPA, it shall also be accepted by CARB, subject to the following condition. If, after certification for the first model year in which the method is used, the Executive Officer determines that a manufacturer's durability test procedures do not conform with good engineering practices, the Executive Officer may require changes to that manufacturer's durability test procedures for subsequent model years. The manufacturer's revised durability test procedures shall be submitted to the Executive Officer for review and approval.

§ 1036.246 Verifying deterioration factors. January 24, 2023.

§ 1036.250 Reporting and recordkeeping for certification. April 22, 2024.

A. Federal Provisions.

1. Amend paragraph (a) as follows: By September 30 following the end of the model year, send CARB's Designated Compliance Officer a report including the total U.S.-directed and California sales volume for engines you produced in each engine family during the model year (based on information available at the time of the report). Report the production by serial number and engine configuration. You may combine this report with reports required under subpart H of this part. We may waive the reporting requirements of this paragraph (a) for small manufacturers.

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

§ 1036.255 EPA oversight on certificates of conformity. January 24, 2023.

A. Federal Provisions.

1. Amend paragraph (a) as follows: If we determine an application is complete and shows that the engine family meets all the requirements of this part as modified by these test procedures, the California HSC, or the California Vehicle Code, as applicable, we will issue an Executive Order for the engine family for that model year. We may make the approval subject to additional conditions.

2. Amend paragraph (b) as follows: We may deny an application for certification if we determine that an engine family fails to comply with emission standards or other requirements of this part as modified by these test procedures, or the California HSC, or the California Vehicle Code, as applicable. We will base our decision on all available information. If we deny an application, we will explain why in writing.

3. Paragraphs (c) through (f). [No change]

Subpart D – Testing Production Engines and Hybrid Powertrains

§ 1036.301 Measurements related to GEM inputs in a selective enforcement audit. April 22, 2024.

Subpart E – In-use Testing

§ 1036.401 Testing requirements for in-use engines. January 24, 2023.

A. Federal Provisions.

1. Amend paragraph (a) as follows: We may perform in-use testing of any engine family subject to the standards of this part, consistent with the "California Exhaust Emission Standards and Test Procedures for 2027 and Subsequent Model Heavy-Duty Engines, Vehicles and Hybrid Powertrains" incorporated by reference in title 13, CCR, section 1956.8.2(c).

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

B. California Provisions.

1. **CARB-run In-Use Compliance (IUC) Program.** The Executive Officer may conduct in-use emissions testing using the test procedures for off-cycle testing in § 1036.530 for compression-ignition engines used in medium-duty vehicles with GVWR from 10,001 to 14,000 pounds and heavy-duty vehicles with GVWR over 14,000 pounds. CARB staff would perform testing and compliance determination according to In-Use Testing procedures in subpart E of Part 1036. For compression-ignition engine families, if the engine family does not pass the criteria in § 1036.425 or § 1036.150, as applicable, the Executive Officer shall notify the manufacturer in writing and discuss the test results, the root causes of failure, and remedial actions. If an influenced recall is decided, the manufacturer shall submit an influenced recall plan in accordance with title 13, CCR, sections 2113 through 2121, within 45 days. The accuracy margin in § 1036.420, the interim compliance allowance in § 1036.150, and the off-cycle temperature adjustment in § 1036.104 are applicable.

2. **CARB-run In-Use Compliance Testing for Idle Emissions.** For compression-ignition engines used in medium-duty vehicles with GVWR from 10,001 to 14,000 pounds and heavy-duty vehicles over 14,000 pounds GVWR that are certified to the idling NOx emission standards specified in paragraph B.1.3 of § 1036.104, the Executive Officer may conduct in-use compliance testing for idle emissions by CARB according to the test procedures specified in paragraph B.1 of § 1036.530. The manufacturer is not required to conduct in-use compliance testing for idle emissions as described in this paragraph. If the engine family does not pass the criteria in § 1036.425 or § 1036.150, as applicable, the Executive Officer shall notify the manufacturer in writing and discuss the test results, the root causes of failure, and remedial actions. If an influenced recall is decided, the manufacturer shall submit an influenced recall plan in accordance with title 13, CCR, sections 2113 through 2121, within 45 days. The accuracy margin in § 1036.420, the interim compliance allowance in § 1036.150, and the off-cycle temperature adjustment in § 1036.104 are applicable.

§ 1036.405 Overview of the manufacturer-run field-testing program. April 22, 2024.

§ 1036.410 Selecting and screening vehicles and engines for testing.
January 24, 2023.

A. Federal Provisions.

1. Paragraphs (a) through (b)(3). [No change]
2. Amend paragraph (b)(4) as follows: The engines have not been misfueled. Do not consider engines misfueled if they have used fuel meeting the provisions in paragraph (c) and paragraph B.1 of § 1036.415.
3. Paragraphs (b)(5) through (c). [No change]

§ 1036.415 Preparing and testing engines. April 22, 2024.

A. Federal Provisions. [No change]

B. California Provisions.

1. You may use any commercially available biodiesel fuel blend up to 20% biodiesel content (B20) that meets the specifications listed in title 4, CCR, section 4148.

§ 1036.420 Pass criteria for individual engines. April 22, 2024.

§ 1036.425 Pass criteria for engine families. January 24, 2023.

§ 1036.430 Reporting requirements. January 24, 2023.

A. Federal Provisions. [No change]

B. California Provisions.

1. The Designated Compliance Officer for reporting requirements is: Chief, Emissions Certification and Compliance Division, California Air Resources Board, 4001 Iowa Ave., Riverside, CA 92507.

§ 1036.435 Recordkeeping requirements. January 24, 2023.

§ 1036.440 Warranty obligations related to in-use testing. January 24, 2023.

A. Federal Provisions.

1. Amend the paragraph as follows: Testing under this subpart that finds an engine exceeding emission standards under this subpart is not by itself sufficient to show a breach of warranty under title 13, CCR, section 2036. A breach of warranty would also require that engines fail to meet one or both of the conditions specified in § 1036.120(a).

Subpart F – Test Procedures

§ 1036.501 General testing provisions. April 22, 2024.

§ 1036.505 Engine data and information to support vehicle certification. April 22, 2024.

A. Federal Provisions.

1. Amend introductory paragraph as follows: You must give vehicle manufacturers information as follows so they can certify their vehicles to greenhouse gas emission standards under the “California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model HDVs,” incorporated by reference in title 17, CCR, section 95663(d).

2. Paragraphs (a) through (d). [No change]

§ 1036.510 Supplemental Emission Test. April 22, 2024.

§ 1036.512 Federal Test Procedure. April 22, 2024.

§ 1036.514 Low Load Cycle. April 22, 2024.

§ 1036.520 Determining power and vehicle speed values for powertrain testing.
April 22, 2024.

§ 1036.525 Clean Idle test. April 22, 2024.

§ 1036.530 Test procedures for off-cycle testing. April 22, 2024.

A. Federal Provisions.

1. Paragraphs (a) through (c)(3)(iii). [No change]

2. Amend paragraph (c)(3)(iv) as follows: The recorded ambient air temperature is below 5 °C for 2027 through 2030 MY engines, below 0 °C for 2031 and subsequent MY engines, or above the temperature calculated using the following equation.

$$T_{max} = -0.0014 \cdot h + 37.78$$

Eq. 1036.530-1

Where:

h = recorded elevation of the vehicle in feet above sea level (h is negative for elevations below sea level).

Example:

h=2679 ft

$$T_{max} = -0.0014 \cdot 2679 + 37.78$$

$$T_{max} = 34.0^{\circ}\text{C}$$

3. Paragraphs (c)(3)(v) through (j). [No change]

B. California Provisions.

1. CARB-run In-Use Compliance Testing for Idle Emissions

1.1 Idle testing may be conducted by CARB using chassis dynamometer in the laboratory or using Portable Emissions Measurement Systems (PEMS).

1.2 The engine warm-up is complete when the engine thermostat controls engine temperature or when the engine coolant's temperature is within 2% of its mean value for at least 2 minutes.

1.3 The vehicle will be tested with properly functioning engine and vehicle accessories such as engine cooling fan, alternator, coolant pump, air compressor, engine oil, fuel pumps, and any other accessory needed for normal operation of the vehicle at idle speed. Additionally, the cab air conditioning system may be set to maximum heating or cooling during the test.

1.4 Emissions data to be analyzed for idle emissions compliance will begin

10 minutes after reaching engine warm-up condition specified in paragraph 1.2 above and after the appropriate vehicle settings described in paragraph 1.3 above are met.

1.5 Emissions shall be measured for a minimum of 30 minutes at an engine idle speed equal to the curb idle speed set by the manufacturer or any other elevated idle speed up to 1,100 revolutions per minute.

1.6 For compliance, the calculated average NOx emissions from the test shall not exceed the sum of the Bin 1 off-cycle emission standard specified in paragraph A.2 of § 1036.104, including the Temperature Adjustment as necessary, and the applicable accuracy margin for in-use testing with PEMS for Bin 1 specified in § 1036.420(a).

§ 1036.535 Determining steady-state engine fuel maps and fuel consumption at idle. June 17, 2024.

§ 1036.540 Determining cycle-average engine fuel maps. April 22, 2024.

§ 1036.543 Carbon balance error verification. April 22, 2024.

§ 1036.545 Powertrain testing. June 17, 2024.

A. Federal Provisions.

1. Amend introductory paragraph as follows: This section describes the procedure to measure fuel consumption and create engine fuel maps by testing a powertrain that includes an engine coupled with a transmission, drive axle, and hybrid components or any assembly with one or more of those hardware elements. Engine fuel maps are part of demonstrating compliance with the “California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model HDVs,” incorporated by reference in title 17, CCR, section 95663(d); the powertrain test procedure in this section is one option for generating this fuel-mapping information as described in § 1036.505. Additionally, this powertrain test procedure is one option for certifying hybrid powertrains to the engine standards in §§ 1036.104 and 1036.108.

2. Paragraphs (a) through (p). [No change]

§ 1036.550 Calculating greenhouse gas emission rates. April 22, 2024.

§ 1036.555 Test procedures to verify deterioration factors. January 24, 2023.

§ 1036.580 Infrequently regenerating aftertreatment devices. April 22, 2024.

Subpart G – Special Compliance Provisions

§ 1036.601 Overview of compliance provisions. November 8, 2024.

A. Federal Provisions.

1. Amend paragraph (a) as follows: Engine and vehicle manufacturers, as well as owners, operators, and rebuilders of engines subject to the requirements of this part, and all other persons, must observe the provisions of this part, the provisions of part 1068, the provisions of the California HSC, or the California Vehicle Code, as applicable. The provisions of part 1068 apply for heavy-duty highway engines as specified in that part, subject to the following provisions:

2. Paragraphs (a)(1) and (a)(2). [No change]

3. Amend paragraph (a)(3) as follows: The warranty-related prohibitions in title 13, CCR, sections 2035, 2036, 2037, 2038, 2039, 2040, 2041, and 2042, apply to manufacturers of new heavy-duty highway engines.

4. Paragraph (b) introductory paragraph. [No change]

5. Paragraph (b)(1). [n/a]

6. Paragraphs (b)(2) through (b)(4). [No change]

7. Paragraph (c). [n/a]

8. Paragraph (d). [No change]

§ 1036.605 Alternate emission standards for engines used in specialty vehicles. April 22, 2024.

§ 1036.610 Off-cycle technology credits and adjustments for reducing greenhouse gas emissions. January 24, 2023.

A. Federal Provisions.

1. Paragraphs (a) through (c). [No change]

2. Amend paragraph (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. Paragraph (e). [No change]

§ 1036.625 In-use compliance with CO₂ family emission limits (FEL). January 24, 2023.

§ 1036.630 Certification of engine greenhouse gas emissions for powertrain testing. April 22, 2024.

Subpart H – Averaging, Banking, and Trading for Certification

§ 1036.701 General provisions. January 24, 2023.

A. Federal Provisions.

1. Add the following language to paragraph (a): Engine families certified to the Optional Low-CO₂ Emission Standards pursuant to paragraph B of § 1036.108, and participating in the Innovative Technology Regulation set forth in title 13, CCR, sections 2208 and 2208.1, may not generate CO₂ credits or participate in the averaging, banking, and trading provisions of this subpart. Engine families that are certified to the optional low NO_x emission standards in paragraph B.2 of § 1036.104 are not eligible for generating any NO_x emission credits.

2. Paragraphs (b) through (i). [No change]

3. Paragraph (j). [n/a]

4. Paragraph (k). [No change]

B. California Provisions.

1. Starting with the 2027 model year, averaging, banking and trading (ABT) calculations for NO_x shall be performed via the national ABT program and using the U.S. production volumes and not the California sales volume. The NO_x account balance for each engine manufacturer at the beginning of the 2027 model year is defined in § 1036.150, and calculated according to § 1036.705. The national ABT program for NO_x would be administered jointly by U.S. EPA and CARB.

2. In addition to the NO_x credit balance in the national ABT program described in paragraph B.1 of § 1036.701, if an engine manufacturer has excess NO_x credits at the end of the 2026 model year in the California-only ABT program as described in I.15.B.3.(l) of the California Exhaust Emission Standards and Test Procedures for 2004 through 2026 Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in title 13, CCR, section 1956.8(b), or I.15.B.2.(k) of the California Exhaust Emission Standards and Test Procedures for 2004 through 2026 Model Heavy-Duty Otto-Cycle Engines and Vehicles, incorporated by reference in title 13, CCR, section 1956.8(d), those excess NO_x credits can be used for certification of 2027 and subsequent model year engine families in California.

2.1. The five-year credit life described in § 1036.740.A.(d) remains applicable.

2.2. Excess NO_x credits from the 2026 model year heavy-duty Otto-cycle averaging set may be carried over for offsetting 2027 and subsequent model year engine families in the spark-ignition heavy-duty engine averaging set.

2.3. Excess NO_x credits from the 2026 model year heavy-duty diesel averaging sets may be carried over for offsetting 2027 and subsequent model year engine families in the corresponding heavy-duty compression-ignition averaging set. For example, excess NO_x credits from the 2026 model year light heavy-duty diesel averaging set may be used to offset deficits for 2027 through 2031 model year light heavy-duty averaging set.

3. There is no ABT program for formaldehyde emissions.

§ 1036.705 Generating and calculating emission credits. April 22, 2024.

§ 1036.710 Averaging. January 24, 2023.

§ 1036.715 Banking. January 24, 2023.

§ 1036.720 Trading. January 24, 2023.

§ 1036.725 Required information for certification. April 22, 2024.

§ 1036.730 ABT reports. April 22, 2024.

§ 1036.735 Recordkeeping. April 22, 2024.

A. Federal Provisions.

1. Paragraphs (a) through (d). [No change]
2. Amend paragraph (e) as follows: We may require you to keep additional records or to send us relevant information not required by this section in accordance with the California HSC or the California Vehicle Code, as applicable.

§ 1036.740 Restrictions for using emission credits. January 24, 2023.

A. Federal Provisions. [No change]

B. California Provisions.

1. Medium-duty compression-ignition engines used in vehicles with GVWR from 10,001 to 14,000 pounds shall be included in the light heavy-duty engine averaging set.
2. Medium-duty spark-ignition engines used in vehicles with GVWR from 10,001 to 14,000 pounds shall be included in the spark-ignition heavy-duty engine averaging set.

§ 1036.745 End-of-year CO₂ credit deficits. January 24, 2023.

§ 1036.750 Consequences for noncompliance. January 24, 2023.

A. Federal Provisions.

1. Paragraphs (a) and (b). [No change]
2. Amend paragraph (c) as follows: We may void the Executive Order for an engine family if you fail to keep records, send reports, or give us information we request.
3. Paragraph (d). [No change]

Subpart I – Definitions and Other Reference Information

§ 1036.801 Definitions. April 22, 2024.

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

Amend “Act” as follows: “Clean Air Act” or “Act” refers to the California HSC or the California Vehicle Code, as applicable.

Amend “Certification” as follows: “Certification” means relating to the process of obtaining an Executive Order for an engine family or hybrid powertrain family that complies with the emission standards and requirements in this part.

Amend “Designated Compliance Officer” as follows: “Designated Compliance Officer” means the Executive Officer of the California Air Resources Board or a designee of the Executive Officer.

Amend “Emergency Vehicle” as follows: “Emergency Vehicle” is defined in California Vehicle Code section 165.

Amend “Manufacturer” as follows: “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. It also includes secondary engine manufacturers.

Amend “We (us, our)” as follows: “We (us, our)” means the Executive Officer or a designee of the Executive Officer.

B. California Provisions.

“Auxiliary power system” or “APS” has the same meaning as defined in title 13, CCR, section 2485(h)(3).

“California sales volume” means the number of new California-certified engines, vehicles or powertrains produced and delivered for sale in the State of California in a given model year.

“Certificate of Conformity” means an Executive Order of certification for engine, vehicle, or hybrid powertrain in California.

“EPA” shall also mean California Air Resources Board, CARB, or Executive Officer of CARB.

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

“Medium-duty vehicle” means any heavy-duty vehicle having a manufacturer’s GVWR between 8,501 and 14,000 pounds.

“Optional Low NOx Engine” means a heavy-duty engine certified to the optional low NOx emission standards in paragraph B.2 of § 1036.104.

“Power take-off” (PTO) means a secondary engine shaft (or equivalent) that provides substantial auxiliary power for purposes unrelated to vehicle propulsion or normal vehicle accessories such as air conditioning, power steering, and basic electrical accessories. A typical PTO uses a secondary shaft on the engine to transmit power to a hydraulic pump that powers auxiliary equipment, such as a

boom on a bucket truck.

§ 1036.805 Symbols, abbreviations, and acronyms. April 22, 2024.

A. Federal Provisions. [No change]

B. California Provisions.

“ARB” or “CARB” means California Air Resources Board or the Executive Officer of the California Air Resources Board.

“CCR” means California Code of Regulations.

§ 1036.810 Incorporation by reference. April 22, 2024.

§ 1036.815 Confidential information. April 22, 2024.

A. Federal Provisions. [No change]

B. California Provisions.

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

§ 1036.820 Requesting a hearing. January 24, 2023.

A. Federal Provisions.

1. Amend paragraph (a) as follows: You may request a hearing under certain circumstances, as described elsewhere in this part. To do this, you must file a written request, including a description of your objection and any supporting data.

2. Paragraph (b). [No change]

3. Amend paragraph (c) as follows: If we agree to hold a hearing, we will use the procedures specified in title 17, CCR, sections 60055.1 et seq.

§ 1036.825 Reporting and recordkeeping requirements. January 24, 2023.

A. Federal Provisions.

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

2. Paragraph (e). [n/a]

Appendix A of Part 1036 – Summary of Previous Emission Standards.
January 24, 2023. [n/a]

Appendix B of Part 1036 – Transient Duty Cycles. January 24, 2023.

Appendix C of Part 1036 – Default Engine Fuel Maps for §1036.540.
January 24, 2023.

PART 1065 – ENGINE-TESTING PROCEDURES

Subpart A – Applicability and General Provisions

§ 1065.1 Applicability. January 24, 2023.

A. Federal Provisions.

1. Paragraph (a) introductory paragraph. [No change]
2. Paragraph (a)(1). [n/a]
3. Amend paragraph (a)(2) as follows: Model year 2027 and later heavy-duty highway engines we regulate under title 13, CCR, section 1956.8.2.
4. Paragraphs (a)(3) through (b). [n/a]
5. Paragraphs (c) through (i). [No change]

§ 1065.2 Submitting information to EPA under this part. June 29, 2021.

A. Federal Provisions.

1. Paragraphs (a) through (d). [No change]
2. Amend paragraph (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. Amend paragraph (f) as follows: Nothing in this part should be interpreted to limit our ability under California law to verify that engines conform to the regulations.

§ 1065.5 Overview of this part 1065 and its relationship to the standard-setting part. January 24, 2023.

§ 1065.10 Other procedures. January 24, 2023.

§ 1065.12 Approval of alternate procedures. April 22, 2024.

§ 1065.15 Overview of procedures for laboratory and field testing. October 25, 2016.

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

§ 1065.25 Recordkeeping. April 28, 2014.

Subpart B – Equipment Specifications

§ 1065.101 Overview. June 30, 2008.

§ 1065.110 Work inputs and outputs, accessory work, and operator demand. June 30, 2008.

- § 1065.120 Fuel properties and fuel temperature and pressure. June 30, 2008.
- § 1065.122 Engine cooling and lubrication. June 30, 2008.
- § 1065.125 Engine intake air. September 15, 2011.
- § 1065.127 Exhaust gas recirculation. July 13, 2005.
- § 1065.130 Engine exhaust. June 29, 2021.
- § 1065.140 Dilution for gaseous and PM constituents. January 24, 2023.
- § 1065.145 Gaseous and PM probes, transfer lines, and sampling system components. January 24, 2023.
- § 1065.150 Continuous sampling. July 13, 2005.
- § 1065.170 Batch sampling for gaseous and PM constituents. April 22, 2024.
- § 1065.190 PM-stabilization and weighing environments for gravimetric analysis. April 22, 2024.
- § 1065.195 PM-stabilization environment for in-situ analyzers. June 30, 2008.

Subpart C – Measurement Instruments

- § 1065.201 Overview and general provisions. April 29, 2014.
- § 1065.202 Data updating, recording, and control. October 25, 2016.
- § 1065.205 Performance specifications for measurement instruments. June 29, 2021.

Measurement of Engine Parameters and Ambient Conditions

- § 1065.210 Work input and output sensors. April 22, 2024.
- § 1065.215 Pressure transducers, temperature sensors, and dewpoint sensors. June 30, 2008.

Flow-Related Measurements

- § 1065.220 Fuel flow meter. June 29, 2021.
- § 1065.225 Intake-air flow meter. June 29, 2021.

- § 1065.230 Raw exhaust flow meter. April 28, 2014.
- § 1065.240 Dilution air and diluted exhaust flow meters. April 28, 2014.
- § 1065.245 Sample flow meter for batch sampling. July 13, 2005.
- § 1065.247 Diesel exhaust fluid flow rate. June 29, 2021.
- § 1065.248 Gas divider. July 13, 2005.

CO and CO₂ Measurements

- § 1065.250 Nondispersive infra-red analyzer. April 28, 2014.

Hydrocarbon, H₂, and H₂O Measurements

- § 1065.255 H₂ measurement devices. April 22, 2024.
- § 1065.257 H₂O measurement devices. April 22, 2024.
- § 1065.260 Flame-ionization detector. January 24, 2023.
- § 1065.265 Nonmethane cutter. September 15, 2011.
- § 1065.266 Fourier transform infrared analyzer. April 22, 2024.
- § 1065.267 Gas chromatograph with a flame ionization detector. April 22, 2024.
- § 1065.269 Photoacoustic analyzer for ethanol and methanol. April 28, 2014.

NO_x, N₂O, and NH₃ Measurements

- § 1065.270 Chemiluminescent NO_x analyzer. April 28, 2014.
- § 1065.272 Nondispersive ultraviolet NO_x analyzer. April 28, 2014.
- § 1065.274 Zirconium dioxide (ZrO₂) NO_x analyzer. January 24, 2023.
- § 1065.275 N₂O measurement devices. April 22, 2024.
- § 1065.277 NH₃ measurement devices. April 22, 2024.

O₂ and Air-To-Fuel Ratio Measurements

- § 1065.280 Paramagnetic and magnetopneumatic O₂ detection analyzers. April 22, 2024.
- § 1065.284 Zirconium dioxide (ZrO₂) air-fuel ratio and O₂ analyzer. April 22, 2024.

PM Measurements

- § 1065.290 PM gravimetric balance. November 8, 2010.
- § 1065.295 PM inertial balance for field-testing analysis. April 28, 2014.
- § 1065.298 Correcting real-time PM measurement based on gravimetric PM filter measurement for field-testing analysis. January 24, 2023.

Subpart D – Calibrations and Verifications

- § 1065.301 Overview and general provisions. January 24, 2023.
- § 1065.303 Summary of required calibration and verifications. June 29, 2021.
- § 1065.305 Verifications for accuracy, repeatability, and noise. January 24, 2023.
- § 1065.307 Linearity verification. January 24, 2023.
- § 1065.308 Continuous gas analyzer system-response and updating-recording verification– for gas analyzers not continuously compensated for other gas species. January 24, 2023.
- § 1065.309 Continuous gas analyzer system-response and updating-recording verification – for gas analyzers continuously compensated for other gas species. January 24, 2023.

Measurement of Engine Parameters and Ambient Conditions

- § 1065.310 Torque calibration. April 28, 2014.
- § 1065.315 Pressure, temperature, and dewpoint calibration. April 22, 2024.

Flow-Related Measurements

- § 1065.320 Fuel-flow calibration. January 24, 2023.

- § 1065.325 Intake-flow calibration. January 24, 2023.
- § 1065.330 Exhaust-flow calibration. January 24, 2023.
- § 1065.340 Diluted exhaust flow (CVS) calibration. October 25, 2016.
- § 1065.341 CVS and PFD flow verification (propane check). April 22, 2024.
- § 1065.342 Sample dryer verification. June 29, 2021.
- § 1065.345 Vacuum-side leak verification. January 24, 2023.

CO and CO₂ Measurements

- § 1065.350 H₂O interference verification for CO₂ NDIR analyzers. April 22, 2024.
- § 1065.355 H₂O and CO₂ interference verification for CO NDIR analyzers.
April 22, 2024.

H₂O Measurements

- § 1065.357 CO₂ interference verification for H₂O FTIR analyzer. April 22, 2024.

Hydrocarbon Measurements

- § 1065.360 FID optimization and verification. April 22, 2024.
- § 1065.362 Non-stoichiometric raw exhaust FID O₂ interference verification.
April 28, 2014.
- § 1065.365 Nonmethane cutter penetration fractions and NMC FID response factors.
April 22, 2024.
- § 1065.366 Interference verification for FTIR analyzers. April 22, 2024.
- § 1065.369 H₂O, CO, and CO₂ interference verification for photoacoustic alcohol
analyzers. April 22, 2024.

NO_x and N₂O Measurements

- § 1065.370 CLD CO₂ and H₂O quench verification. June 29, 2021.
- § 1065.372 NDUV analyzer HC and H₂O interference verification. April 22, 2024.

- § 1065.375 Interference verification for N₂O analyzers. April 22, 2024.
- § 1065.376 Chiller NO₂ penetration. April 28, 2014.
- § 1065.377 Interference verification for NH₃ analyzers. April 22, 2024.
- § 1065.378 NO₂-to-NO converter conversion verification. April 22, 2024.

PM Measurements

- § 1065.390 PM balance verifications and weighing process verification. October 25, 2016.
- § 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. January 24, 2023.
- § 1065.410 Maintenance limits for stabilized test engines. January 24, 2023.
- § 1065.415 Durability demonstration. June 30, 2008.

Subpart F – Performing an Emission Test Over Specified Duty Cycles

- § 1065.501 Overview. January 24, 2023.
- § 1065.510 Engine mapping. June 17, 2024.
- § 1065.512 Duty cycle generation. April 22, 2024.
- § 1065.514 Cycle-validation criteria for operation over specified duty cycles. January 24, 2023.
- § 1065.516 Sample system decontamination and preconditioning. April 28, 2014.
- § 1065.518 Engine preconditioning. April 28, 2014.
- § 1065.520 Pre-test verification procedures and pre-test data collection. April 22, 2024.
- § 1065.525 Engine starting, restarting, and shutdown. September 15, 2011.

- § 1065.526 Repeating of void modes or test intervals. April 28, 2014.
- § 1065.530 Emission test sequence. April 22, 2024.
- § 1065.543 Carbon balance error verification. January 24, 2023.
- § 1065.545 Verification of proportional flow control for batch sampling.
January 24, 2023.
- § 1065.546 Verification of minimum dilution ratio for PM batch sampling.
October 25, 2016.
- § 1065.550 Gas analyzer range verification, and drift verification. April 22, 2024.
- § 1065.590 PM sampling media (e.g., filters) preconditioning and tare weighing.
October 25, 2016.
- § 1065.595 PM sample post-conditioning and total weighing. June 30, 2008.

Subpart G – Calculations and Data Requirements

- § 1065.601 Overview. April 22, 2024.
- § 1065.602 Statistics. April 22, 2024.
- § 1065.610 Duty cycle generation. April 22, 2024.
- § 1065.630 Local acceleration of gravity. January 24, 2023.
- § 1065.640 Flow meter calibration calculations. June 29, 2021.
- § 1065.642 PDP, SSV, and CFV molar flow rate calculations. June 29, 2021.
- § 1065.643 Carbon balance error verification calculations. January 24, 2023.
- § 1065.644 Vacuum-decay leak rate. April 22, 2024.
- § 1065.645 Amount of water in an ideal gas. October 25, 2016.
- § 1065.650 Emission calculations. April 22, 2024.
- § 1065.655 Carbon-based chemical balances of fuel, DEF, intake air, and exhaust.
April 22, 2024.

- § 1065.656 Hydrogen-based chemical balances of fuel, DEF, intake air, and exhaust. June 17, 2024.
- § 1065.659 Removed water correction. June 29, 2021.
- § 1065.660 THC, NMHC, NMNEHC, CH₄, and C₂H₆ determination. April 22, 2024.
- § 1065.665 THCE and NMHCE determination. June 29, 2021.
- § 1065.667 Dilution air background emission correction. January 24, 2023.
- § 1065.670 NO_x intake-air humidity and temperature corrections. April 22, 2024.
- § 1065.672 Drift correction. April 22, 2024.
- § 1065.675 CLD quench verification calculations. January 24, 2023.
- § 1065.680 Adjusting emission levels to account for infrequently regenerating aftertreatment devices. January 24, 2023.
- § 1065.690 Buoyancy correction for PM sample media. October 25, 2016.
- § 1065.695 Data requirements. April 22, 2024.

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

- § 1065.701 General requirements for test fuels. June 29, 2021.

A. Federal Provisions.

1. Paragraph (a). [No change]
2. Amend paragraph (b) as follows: ***Fuels meeting alternate 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. Paragraphs (c) through (d)(1). [No change]
4. Amend paragraph (d)(2) as follows: The fuel parameters specified in this subpart depend on measurement procedures that are incorporated by reference.
5. Paragraphs (e) and (f). [No change]

B. California Provisions.

1. Methanol (M-100) Fuel.

1.1 **Emission test fuel.** For engines and hybrid powertrains that use methanol fuel for exhaust and evaporative emission testing, the certification fuel shall meet the specifications set forth in title 13, CCR, section 2292.1

(Specifications for M-100 Fuel Methanol) as modified by the following:

Table 2 to Paragraph B.1 of § 1065.701 — Methanol (M-100) Fuel Specifications for Emission Testing

Specification	Limit
Methanol	98.0 ± 0.5 vol. percent
Ethanol	1.0 vol. percent max.
Petroleum fuel meeting the specifications of §1065.710	1.0 ± 0.1 vol. percent

1.2 Service accumulation fuel. For engines and hybrid powertrains that use methanol fuel for service accumulation, manufacturers may either use the fuel that meets the applicable specifications set forth in paragraph 1.1 of this section, or use an appropriate commercially available fuel that is representative of the fuel that in-use engines will use.

1.3 Additive requirements. Fuel additives and ignition improvers intended for use in methanol test fuels shall be subject to the approval of the Executive Officer. In order for such approval to be granted, a manufacturer must demonstrate that emissions will not be adversely affected by the use of the fuel additive or ignition improver.

1.4 The specification range of the fuels to be used under this section 1 shall be reported in accordance with § 1036.205.

2. Mixtures of Petroleum and Methanol Fuels (M-85) for Flexible Fuel Vehicles.

2.1 Emission test fuel. For engines and hybrid powertrains that use M-85 fuel for exhaust and evaporative emission testing, the certification fuel shall meet the applicable specifications set forth in title 13, CCR, section 2292.2 (Specifications for M-85 Fuel Methanol), as modified by the following:

Table 3 to Paragraph B.2 of § 1065.701 — M-85 Fuel Specifications for Emission Testing of Flexible Fuel Vehicles

Specification	Limit
Petroleum fuel meeting the specifications of § 1065.710	13-16 vol. percent
Reid vapor pressure	8.0-8.5 psi, using common blending components from the gasoline stream.

2.2 Service accumulation fuel. For engines and hybrid powertrains that use M-85 fuel for service accumulation, manufacturers may either use the fuel

that meets the applicable specifications in paragraph 2.1 of this section, or use an appropriate commercially available fuel that is representative of the fuel that in-use engines will use.

2.3 Additive requirements. Fuel additives and ignition improvers intended for use in M-85 test fuels shall be subject to the approval of the Executive Officer. In order for such approval to be granted, a manufacturer must demonstrate that emissions will not be adversely affected by the use of the fuel additive or ignition improver.

2.4 The specification range of the fuels to be used under this section 2 shall be reported in accordance with § 1036.205.

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

Any person may petition CARB to establish by regulation certification testing specifications for a new clean fuel for which specifications are not specifically set forth in part 1065, subpart H, as amended herein. Prior to adopting such specifications, CARB shall consider the relative cost-effectiveness of use of the fuel in reducing emissions compared to the use of other fuels. Whenever CARB 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.

3.1 If the proposed new clean fuel may be used to fuel existing motor vehicles, CARB shall not establish certification specifications for the fuel unless the petitioner has demonstrated that:

3.1.1 Use of the new clean fuel in such existing motor vehicles would not increase emissions of HC, NO_x, PM, 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 in 2015 and Subsequent Years," which are incorporated by reference in title 13, CCR, section 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, CCR.

3.1.2 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.

3.2 Whenever CARB designates a new clean fuel pursuant to this section, CARB shall also establish by regulation required specifications for the new clean fuel sold commercially in California.

§ 1065.703 Distillate diesel fuel. June 29, 2021.

A. Federal Provisions.

1. Paragraph (a). [No change]
2. Delete paragraph (b) and replace with the following:

(b)(1) Use the ultra low sulfur grade test fuel as specified in Table 1 of 40 CFR § 1065.703.

(b)(2) Diesel test fuel having the specifications listed in the table below may be used in exhaust emission testing as an option to the specifications in Table 1 of 40 CFR § 1065.703. If a manufacturer elects to use this option, the Executive Officer shall conduct exhaust emission testing with diesel fuel having the specifications listed below.

Table 2 to Paragraph (b)(2) of § 1065.703 — Alternate Distillate Diesel Fuel Specifications for Emission Testing

Diesel Fuel Specification	Limit	Test Method^(a)
Natural Cetane Number	47-55	D613-86
Distillation Range, °F		Title 13, CCR, section 2282(g)(3)
IBP	340-420	
10% point	400-490	
50% point	470-560	
90% point	550-610	
EP	580-660	
API Gravity, degrees	33-39	D287-82
Total Sulfur, ppm	7-15	Title 13, CCR, section 2282(g)(3)
Nitrogen Content, ppmw	100-500	Title 13, CCR, section 2282(g)(3)
Total Aromatic Hydrocarbons, vol. %	8-12	Title 13, CCR, section 2282(g)(3)
Polycyclic Aromatic Hydrocarbons, wt. % (max.)	1.4	Title 13, CCR, section 2282(g)(3)
Flashpoint, °F (max)	130	D 93-80
Viscosity @ 40°C, centistokes	2.0-4.1	D 445-83

^(a) ASTM specifications unless otherwise noted. A reference to title 13, CCR, section 2282 means the test method identified in that subsection for the particular property. A test method other than that specified may be used following a determination by the Executive Officer that the other method produces results equivalent to the results of the specified method.

3. Paragraph (c). [No change]

§ 1065.705 Residual and intermediate residual fuel. April 22, 2024.

§ 1065.710 Gasoline. June 29, 2021.

A. Federal Provisions.

1. Paragraph (a). [No change]
2. Delete paragraph (b) and replace with the following:
(b) **Certification Gasoline Fuel Specifications.**

Gasoline having the specifications listed below may be used in exhaust and evaporative emission testing as an option to the specifications in 40 CFR § 1065.710(b). If a manufacturer elects to utilize this option, both exhaust and evaporative emission testing shall be conducted by the manufacturer with gasoline having the specifications listed below, and the Executive Officer shall conduct exhaust and evaporative emission testing with gasoline having the specifications listed below. If a manufacturer elects to utilize gasoline having the specifications in 40 CFR § 1065.710(b), both exhaust and evaporative emission testing shall be conducted by the manufacturer with gasoline having the specifications in 40 CFR § 1065.710(b), and the Executive Officer shall conduct exhaust and evaporative emission testing with gasoline having the specifications in 40 CFR § 1065.710(b).

Table 1-1 to Paragraph (b) of § 1065.710 — Alternate Gasoline Specifications for Emission Testing

Fuel Property^(a)	Limit	Test Method^(b)
Octane (R+M)/2 ^(c)	87-88.4; 91 (min)	D 2699-88, D 2700-88
Sensitivity	7.5 (min)	D 2699-88, D 2700-88
Lead	0-0.01g/gal (max); no lead added	title 13, CCR, section 2253.4(c)
Distillation Range:		title 13, CCR, section 2263 ^(d)
10% point	130-150 °F	
50% point	205-215 °F	
90% point	310-320 °F	
EP, maximum	390 °F	
Residue	2.0 vol. % (max)	
Sulfur	8-11 ppm by wt.	title 13, CCR, section 2263
Phosphorous	0.005 g/gal (max)	title 13, CCR, section 2253.4(c)
RVP	6.9-7.2 psi	title 13, CCR, section 2263
Olefins	4.0-6.0 vol. %	title 13, CCR, section 2263
Total Aromatic Hydrocarbons	19.5-22.5 vol. %	title 13, CCR, section 2263
Benzene	0.6-0.8 vol. %	title 13, CCR, section 2263
C7 Aromatics (toluene)	5.2-6.4 vol. %	D 5769
MTBE	0.05 vol. %	title 13, CCR, section 2263
Ethanol	9.2-10.0 vol. %	title 13, CCR, section 2263
Total Oxygen	3.3-3.7 wt. %	title 13, CCR, section 2263
Additives	Requirements in title 13, CCR, section 2257	title 13, CCR, section 2257
Copper Corrosion	No. 1	D 130-88
Gum, washed	3.0 mg/100 mL (max)	D 381-86
Oxidation Stability	1000 minutes (min)	D 525-88
Specific Gravity	Report ^(e)	
Heat of Combustion	Report ^(e)	
Carbon	Report wt. % ^(e)	
Hydrogen	Report wt. % ^(e)	

^(a) The gasoline must be blended from typical refinery feedstocks.

^(b) ASTM specification unless otherwise noted. A test method other than that specified may be used following a determination by the Executive Officer that the other method produces results equivalent to the results with the specified method.

^(c) For vehicles/engines that require the use of premium gasoline as part of their warranty, the Octane ((R+M)/2) shall be a 91 minimum. All other certification gasoline specifications, as shown in this table, must be met. For all other vehicles/engines, the Octane ((R+M)/2) shall be 87-88.4.

^(d) Although title 13, CCR, section 2263 refers to the temperatures of the 50% and 90% points, this procedure can be extended to the 10% and end point temperatures, and to the determination of the residue content.

^(e) The fuel producer should report this fuel property to the fuel purchaser. Any generally accepted test method may be used and shall be identified in the report.

3. Paragraphs (c) and (d). [No change]

§ 1065.715 Natural gas. April 22, 2024.

A. Federal Provisions.

1. Delete paragraph (a) and replace with the following:

(a)(1) **Emission test fuel.** For dedicated or dual-fueled engines, and hybrid powertrains that use natural gas, the fuel used for exhaust and evaporative emission testing shall meet the specifications listed in title 13, CCR, section 2292.5 (Specifications for Compressed Natural Gas) as modified by the following:

Table 1 to Paragraph (a)(1) of § 1065.715 — Compressed Natural Gas Specifications for Emission Testing

Specification	Limit
Methane	90.0 ± 1.0 mole percent
Ethane	4.0 ± 0.5 mole percent
C ₃ and higher hydrocarbon content	2.0 ± 0.3 mole percent
Oxygen	0.5 mole percent maximum
Inert gases (CO ₂ + N ₂)	3.5 ± 0.5 vol. percent

(a)(2) **Service accumulation fuel.** For dedicated or dual-fueled engines, and hybrid powertrains that use natural gas for service accumulation, manufacturers may either use the fuel that meets the applicable specifications set forth in paragraph (a)(1) of this section, or use an appropriate commercially available fuel that is representative of the fuel that in-use engines will use.

(a)(3) The specification range of the fuels to be used in this section (a)(1) shall be reported in accordance with § 1036.205.

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

§ 1065.720 Liquefied petroleum gas. January 24, 2023.

A. Federal Provisions.

1. Delete paragraph (a) and replace with the following:

(a)(1) **Emission test fuel.** For dedicated or dual-fueled engines, and hybrid powertrains that use liquefied petroleum gas, the fuel used for exhaust and evaporative emission testing shall meet the specifications listed in title 13, CCR, section 2292.6 (Specifications for Liquefied Petroleum Gas) as modified by the following:

Table 1 to Paragraph (a)(1) of § 1065.720 — Liquefied Petroleum Gas Specifications for Emission Testing

Specification	Limit
Propane	93.5 ± 1.0 volume percent
Propene	3.8 ± 0.5 volume percent
Butane and heavier components	1.9 ± 0.3 volume percent

(a)(2) **Service accumulation fuel.** For dedicated or dual-fueled engines, and hybrid powertrains that use liquefied petroleum gas for service accumulation, manufacturers may either use the fuel that meets the applicable specifications set forth in paragraph (a)(1) of this section, or use an appropriate commercially available fuel that is representative of the fuel that in-use engines will use.

(a)(3) The specification range of the fuels to be used in this section (a) shall be measured in accordance with ASTM D2163 and reported in accordance with § 1036.205.

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

§ 1065.725 High-level ethanol-gasoline blends. December 4, 2020.

A. Federal Provisions. [No change]

B. California Provisions.

1. **Ethanol (E-100) Fuel.**

1.1 **Emission test fuel.** For engines and hybrid powertrains that use ethanol fuel for exhaust and evaporative emission testing, the certification fuel shall meet the specifications set forth in title 13, CCR, section 2292.3 (Specification for E-100 Fuel Ethanol), as modified by the following:

Table 1 to Paragraph B.1 of § 1065.725 — Ethanol (E-100) Fuel Specifications for Emission Testing

Specification	Limit
Ethanol	98.0 ± 0.5 vol. percent
Methanol	1.0 vol. percent max.
Petroleum fuel meeting the specifications of § 1065.710	1.0 ± 0.1 vol. percent

1.2 **Service accumulation fuel.** For engines and hybrid powertrains that use ethanol fuel for service accumulation, manufacturers may either use the fuel that meets the applicable specifications set forth in paragraph 1.1 of this section, or use an appropriate commercially available fuel that is representative of the fuel

that in-use engines will use.

1.3 Additive requirements. Fuel additives and ignition improvers intended for use in ethanol test fuels shall be subject to the approval of the Executive Officer. In order for such approval to be granted, a manufacturer must demonstrate that emissions will not be adversely affected by the use of the fuel additive or ignition improver.

1.4 The specification range of the fuels to be used under this section 1 shall be reported in accordance with § 1036.205.

2. Mixtures of Petroleum and Ethanol Fuels (E-85) for Flexible Fuel Vehicles.

2.1 Emission test fuel. For engines and hybrid powertrains that use E-85 fuel for exhaust and evaporative emissions testing, the certification fuel shall meet the applicable specifications set forth in title 13, CCR, section 2292.4 (Specifications for E-85 Fuel Ethanol), as modified by the following:

Table 2 to Paragraph B.2 of § 1065.725 — E-85 Fuel Specifications for Emission Testing of Flexible Fuel Vehicles

Specification	Limit
Petroleum fuel meeting the specifications of § 1065.710	15-21 vol. percent
Reid vapor pressure	8.0-8.5 psi, using common blending components from the gasoline stream.

2.2 Service accumulation fuel. For engines and hybrid powertrains that use E-85 fuel for service accumulation, manufacturers may either use the fuel that meets the applicable specifications in paragraph 2.1 of this section, or use an appropriate commercially available fuel that is representative of the fuel that in-use engines will use.

2.3 Additive requirements. Fuel additives and ignition improvers intended for use in E-85 test fuels shall be subject to the approval of the Executive Officer. In order for such approval to be granted, a manufacturer must demonstrate that emissions will not be adversely affected by the use of the fuel additive or ignition improver.

2.4 The specification range of the fuels to be used under this section 2 shall be reported in accordance with § 1036.205.

§ 1065.735 Diesel exhaust fluid. October 25, 2016.

§ 1065.740 Lubricants. July 13, 2005.

§ 1065.745 Coolants. July 13, 2005.

§ 1065.750 Analytical gases. June 17, 2024.

§ 1065.790 Mass standards. January 24, 2023.

Subpart I –Testing with Oxygenated Fuels

§ 1065.801 Applicability. July 13, 2005.

§ 1065.805 Sampling system. April 22, 2024.

§ 1065.845 Response factor determination. June 30, 2014.

§ 1065.850 Calculations. April 28, 2014.

Subpart J- Field Testing and Portable Emission Measurement Systems

§ 1065.901 Applicability. January 24, 2023.

§ 1065.905 General provisions. June 29, 2021.

§ 1065.910 PEMS auxiliary equipment for field testing. January 24, 2023.

§ 1065.915 PEMS instruments. January 24, 2023.

§ 1065.920 PEMS calibrations and verifications. January 24, 2023.

§ 1065.925 PEMS preparation for field testing. September 15, 2011.

§ 1065.930 Engine starting, restarting, and shutdown. July 13, 2005.

§ 1065.935 Emission test sequence for field testing. April 22, 2024.

§ 1065.940 Emission calculations. November 8, 2010.

Subpart K – Definitions and Other Reference Information

§ 1065.1001 Definitions. April 22, 2024.

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

Amend “Act” as follows: “Clean Air Act” or “Act” refers to the California HSC or the California Vehicle Code, as applicable.

Amend “EPA Program Officer” as follows: “EPA Program Officer” means the

Executive Officer of the California Air Resources Board or a designee of the Executive Officer.

Amend “Manufacturer” as follows: “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. It also includes secondary engine manufacturers.

§ 1065.1005 Symbols, abbreviations, acronyms, and units of measure.
January 24, 2023.

A. Federal Provisions. [No change]

B. California Provisions.

“ARB” or “CARB” means California Air Resources Board.

§ 1065.1010 Incorporation by reference. April 22, 2024.

A. Federal Provisions.

1. Introductory paragraph through paragraph (a). [No change]
2. Amend paragraph (b) introductory paragraph as follows: California Air Resources Board material. The following documents are available from the California Air Resources Board, 4001 Iowa Ave., Riverside, CA 92507, or <https://ww2.arb.ca.gov/>:
3. Paragraphs (b)(1) through (f). [No change]

Subpart L – Methods for Unregulated and Special Pollutants and Additional Procedures

§ 1065.1101 Applicability. April 28, 2014.

Semi-Volatile Organic Compounds

§ 1065.1103 General provisions for SVOC measurement. April 28, 2014.

§ 1065.1105 Sampling system design. October 25, 2016.

§ 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.

§ 1065.1111 Sample analysis. April 28, 2014.

Vanadium Sublimation in SCR Catalysts

§ 1065.1113 General provisions related to vanadium sublimation temperatures in SCR catalysts. January 24, 2023.

§ 1065.1115 Reactor design and setup. January 24, 2023.

§ 1065.1117 Reactor aging cycle for determination of vanadium sublimation temperature. January 24, 2023.

§ 1065.1119 Blank testing. January 24, 2023.

§ 1065.1121 Vanadium sample dissolution and analysis in alumina capture beds. January 24, 2023.

Smoke Opacity

§ 1065.1123 General provisions for determining exhaust opacity. January 24, 2023.

§ 1065.1125 Exhaust opacity measurement system. January 24, 2023.

§ 1065.1127 Test procedure for determining percent opacity. January 24, 2023.

Accelerated Aftertreatment Aging

§ 1065.1131 General provisions related to accelerated aging of compression-ignition aftertreatment for deterioration factor determination. January 24, 2023.

§ 1065.1133 Application selection, data gathering, and analysis. January 24, 2023.

§ 1065.1135 Determination of key aftertreatment system components. January 24, 2023.

§ 1065.1137 Determination of thermal reactivity coefficient. April 22, 2024.

§ 1065.1139 Aging cycle generation. April 22, 2024.

§ 1065.1141 Facility requirements for engine-based aging stands. April 22, 2024.

§ 1065.1143 Requirements for burner-based aging stands. January 24, 2023.

§ 1065.1145 Execution of accelerated aging, cycle tracking, and cycle validation criteria. April 22, 2024.

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? January 24, 2023.

A. Federal Provisions.

1. Paragraphs (a) and (a)(1). [No change]
2. Amend paragraph (a)(2) as follows: This part 1068 applies to heavy-duty motor vehicles and motor vehicle engines used in such vehicles, which are subject to the emission standards in title 13, CCR, section 1956.8.2.
3. Paragraphs (a)(3) through (d). [n/a]

§ 1068.5 How must manufacturers apply good engineering judgment? October 8, 2008.

A. Federal Provisions.

1. Paragraphs (a) through (d). [No change]
2. Paragraph (e). [n/a]

§ 1068.20 May EPA enter my facilities for inspections? October 25, 2016.

A. Federal Provisions.

1. Amend paragraph (a) as follows: 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 California law, to enforce the provisions of this chapter. Inspectors will have authorizing credentials and will usually limit inspections to normal operating hours.
2. Paragraph (b). [No change]
3. Delete paragraph (c) and replace with the following: Any CARB Designated Compliance 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 CARB irrespective of whether or not the applicant controls the facility.
4. Delete paragraph (d) and replace with the following: The duty to admit or cause to be admitted any CARB Designated Compliance 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. CARB will not attempt to make any inspections that it has been informed that local law forbids. However, if local law makes it impossible to ensure 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.

§ 1068.25 What information must I give to EPA? April 30, 2010.

A. Federal Provisions.

1. Amend the introductory paragraph as follows: If you are subject to the requirements of this part, we may require you to give us information to evaluate your compliance with any regulations that apply, as authorized by California law and regulations. This includes the following things:

2. Paragraph (a). [No change]

3. Amend paragraph (b) as follows: You must establish and maintain records, perform tests, make reports and provide additional information that we may reasonably require under California law. This also applies to engines/equipment we exempt from emission standards or prohibited acts. Unless we specify otherwise, you must keep required records for eight years.

4. Amend paragraph (c) as follows: You are responsible for statements and information in your applications for certification or any other requests or reports. If you provide statements or information to someone for submission to CARB, you are responsible for these statements and information as if you had submitted them to CARB yourself. Failure to comply with the requirements of this paragraph is prohibited by California law and regulations.

§ 1068.27 May EPA conduct testing with my engines/equipment? October 25, 2016.

§ 1068.30 Definitions. April 18, 2024.

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

Amend “Clean Air Act” as follows: “Clean Air Act” or “Act” refers to the California HSC or the California Vehicle Code, as applicable.

Amend “Manufacturer” as follows: “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. It also includes secondary engine manufacturers.

Amend “Secondary engine manufacturer” as follows: “Secondary engine manufacturer” means anyone who produces a new engine by modifying a complete or partially complete engine that was made by a different company. For the purpose of this definition, “modifying” does not include making changes that do not remove an engine from its original certified configuration. Secondary engine manufacturing includes, for example, converting automotive engines for use in industrial applications, or land-based engines for use in marine applications. This applies whether it involves a complete or partially complete engine and whether the engine was previously certified to emission standards or

not.

(1) Manufacturers controlled by the manufacturer of the base engine (or by an entity that also controls the manufacturer of the base engine) are not secondary engine manufacturers; rather, both entities are considered to be one manufacturer for purposes of this part.

(2) This definition applies equally to equipment manufacturers that modify engines. Also, equipment manufacturers that certify to equipment-based standards using engines produced by another company are deemed to be secondary engine manufacturers.

(3) Except as specified in paragraph (2) of this definition, companies importing complete engines from outside the United States into California are not secondary engine manufacturers regardless of the procedures and relationships between companies for assembling the engines.

Amend "United States" as follows: "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, unless noted otherwise.

Amend "We (us, our)" as follows: "We (us, our)" means the Executive Officer and any authorized representatives.

B. California Provisions.

"Administrator" means the Executive Officer of the California 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 California Air Resources Board or a designee of the Executive Officer.

"EPA" shall also mean California Air Resources Board, CARB, or Executive Officer of CARB.

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

§ 1068.32 Explanatory terms. October 25, 2016.

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

A. Federal Provisions. [No change]

B. California Provisions.

"ARB" or "CARB" means California Air Resources Board.

§ 1068.45 General labeling provisions. October 25, 2016.

§ 1068.50 Adjustable parameters. January 24, 2023.

§ 1068.95 Incorporation by reference. October 25, 2016.

Subpart B – Prohibited Actions and Related Requirements

§ 1068.101 What general actions does this regulation prohibit? January 24, 2023.

A. Federal Provisions.

1. Amend the introductory paragraph as follows: This section specifies actions that are prohibited and the maximum civil penalties that we can assess for each violation. The maximum penalty values are listed in the California HSC section 43154.

2. Paragraph (a) introductory paragraph. [No change]

3. Amend paragraph (a)(1) as follows: *Introduction into commerce*. You may not sell, offer for sale, or introduce or deliver for sale in California or import into California any new engine/equipment after emission standards take effect for the engine/equipment, unless it is covered by a valid Executive Order for its model year and has the required label or tag. You also may not take any of the actions listed in the previous sentence with respect to any equipment containing an engine subject to this part's provisions unless the engine is covered by a valid Executive Order for its model year and has the required engine label or tag. We may assess a civil penalty for each engine or piece of equipment in violation.

4. Paragraphs (a)(1)(i) through (a)(1)(iv). [No change]

5. Amend paragraph (a)(2) as follows: *Reporting and recordkeeping*. This chapter requires you to record certain types of information to show that you meet our standards. You must comply with these requirements to make and maintain required records. You may not deny us access to your records or the ability to copy your records if we have the authority to see or copy them. Also, you must give us complete and accurate reports and information without delay as required under this chapter. Failure to comply with the requirements of this paragraph is prohibited by California law and regulations.

6. Amend paragraph (a)(3) as follows: *Testing and access to facilities*. You may not keep us from entering your facility to test engines/ equipment or inspect if we are authorized to do so. Also, you must perform the tests we require (or have the tests done for you). Failure to perform this testing is prohibited.

7. Paragraph (b) introductory paragraph. [No change]

8. Amend paragraph (b)(1) as follows: *Tampering*. You may not remove or render inoperative any device or element of design installed on or in engines/equipment in compliance with the regulations prior to its sale and delivery to the ultimate purchaser. You also may not knowingly remove or render inoperative any such device or element of design after such sale and delivery to the ultimate purchaser. This includes, for example, operating an engine without a supply of

appropriate quality urea if the emission control system relies on urea to reduce NOx emissions or the use of incorrect fuel or engine oil that renders the emission control system inoperative. Such actions are prohibited by California law, including Vehicle Code section 27156.

9. Amend paragraph (b)(2) as follows: *Defeat devices*. You may not knowingly manufacture, sell, offer to sell, or install, any component that bypasses, impairs, defeats, or disables the control of emissions of any regulated pollutant, except as explicitly allowed by the standard-setting part. We may assess a civil penalty for each component in violation.

10. Paragraphs (b)(3) and (b)(4). [n/a]

11. Amend paragraph (b)(5) as follows: *Importation*. You may not import an uncertified engine or piece of equipment if it is defined to be new in the standard-setting part with a model year for which emission standards applied. Anyone violating this paragraph (b)(5) is deemed to be a manufacturer in violation of paragraph (a)(1) of this section. We may assess a civil penalty for each engine or piece of equipment in violation. Note the following: is excluded

12. Paragraphs (b)(5)(i) and (b)(5)(ii). [No change]

13. Paragraph (b)(6). [n/a]

14. Paragraphs (b)(7) through (b)(7)(i)(A). [No change]

15. Amend paragraph (b)(7)(i)(B) as follows: The regulations specifically direct you to remove the label.

16. Paragraphs (b)(7)(i)(C) through (c). [No change]

17. Amend paragraph (d) as follows: Exemptions from these prohibitions are described in subpart C of this part and in the standard-setting part.

18. Paragraph (e). [No change]

19. Amend paragraph (f) as follows: The specification of prohibitions and penalties in this part does not limit the prohibitions and penalties described in California law. Additionally, a single act may trigger multiple violations under this section and California law. We may pursue all available administrative, civil, or criminal remedies for those violations even if the regulation references only a single prohibited act in this section.

20. Paragraph (g). [No change]

21. Paragraph (h). [n/a]

§ 1068.103 Provisions related to the duration and applicability of certificates of conformity. October 25, 2016.

A. Federal Provisions.

1. Paragraphs (a) through (c)(1). [No change]

2. Amend paragraph (c)(2) as follows: The engines/equipment may not be sold, offered for sale, introduced into commerce in California, or delivered for introduction into commerce in California before the effective date of the Executive Order.

3. Amend paragraph (c)(3) as follows: You must notify us in your application for certification that you plan to use the provisions of this paragraph (c) and when

you intend to start production. If the standard-setting part specifies mandatory testing for production-line engines, you must start testing as directed in the standard-setting part based on your actual start of production, even if that occurs before we approve your certification. You must also agree to give us full opportunity to inspect and/or test the engines/equipment during and after production. For example, we must have the opportunity to specify selective enforcement audits as allowed by the standard-setting part, the California HSC or the California Vehicle Code, as applicable as if the engines/equipment were produced after the effective date of the certificate.

4. Paragraphs (c)(4) through (g). [No change]

5. Amend paragraph (h) as follows: This paragraph (h) describes the effect of suspending, revoking, or voiding an Executive Order. See the definitions of “suspend,” “revoke,” and “void” in § 1068.30. Engines/equipment produced at a time when the otherwise applicable Executive Order has been suspended or revoked are not covered by an Executive Order. Where an Executive Order is void, all engines/equipment produced under that Executive Order are not and were not covered by an Executive Order. In cases of suspension, engines/equipment will be covered by an Executive Order only if they are produced after the Executive Order is reinstated or a new Executive Order is issued. In cases of revocation and voiding, engines/equipment will be covered by an Executive Order only if they are produced after we issue a new Executive Order. California HSC sections 43151-43153 and § 1068.101(a)(1) prohibit selling, offering for sale, introducing into commerce, delivering for introduction into commerce, and importing engines/equipment that are not covered by an Executive Order, and they prohibit anyone from causing another to violate these prohibitions.

6. Paragraph (i). [No change]

§ 1068.105 What other provisions apply to me specifically if I manufacture equipment needing certified engines? October 25, 2016.

A. Federal Provisions.

1. Introductory paragraph. [No change]

2. Amend paragraph (a) as follows: *Transitioning to new engine-based standards.* If new engine-based emission standards apply in a given model year, your equipment produced in that calendar year (or later) must have engines that are certified to the new standards, except that you may continue to use up normal inventories of engines that were built before the date of the new or changed standards. For purposes of this paragraph (a), normal inventory applies for engines you possess and engines from your engine supplier's normal inventory. (Note: this paragraph (a) does not apply in the case of new remanufacturing standards.) We may require you and your engine suppliers to provide us routine production and/or inventory records that document your normal practices for the preceding eight years. For example, if you have records documenting that your normal inventory practice is to keep on hand a one-month supply of engines based on your upcoming production schedules, and a new tier of standards starts to apply for the 2027 model year, you

may order engines consistent with your normal inventory requirements late in the engine manufacturer's 2026 model year and install those engines in your equipment consistent with your normal production schedule. Also, if your model year starts before the end of the calendar year preceding new standards, you may use engines from the previous model year for those units you completely assemble before January 1 of the year that new standards apply. If emission standards for the engine do not change in a given model year, you may continue to install engines from the previous model year (or any earlier model year for which the same standards apply) without restriction. You may not circumvent the provisions of § 1068.101(a)(1) by stockpiling engines that were built before new or changed standards take effect. Similarly, you may not circumvent the provisions of § 1068.101(a)(1) by knowingly installing engines that were stockpiled by engine suppliers in violation of § 1068.103(f). Note that this allowance does not apply for equipment subject to equipment-based standards. Note that the standard-setting part may impose further restrictions on using up inventories of engines from an earlier model year under this paragraph (a). The requirements of 40 CFR § 1037.601(a)(2), last amended November 8, 2024 are applicable.

3. Paragraphs (b) through (c). [No change]

§ 1068.110 Other provisions for engines/equipment in service. October 25, 2016.

A. Federal Provisions.

1. Paragraphs (a) and (b). [n/a]
2. Paragraphs (c) and (d). [No change]
3. Paragraph (e). [n/a]

§ 1068.120 Requirements for rebuilding engines. October 25, 2016.

A. Federal Provisions.

1. Paragraphs (a) through (e). [No change]
2. Amend (e)(1) as follows: For engines not certified with a Family Emission Limit for calculating credits for a particular pollutant, this means that the same emission standard applied for both model years. This includes supplemental standards such as the off-cycle standards.
3. Paragraphs (e)(2) through (f)(2). [No change].
4. Paragraph (f)(3). [n/a]
5. Amend paragraph (f)(4) as follows: You may never replace a certified engine with an engine rebuilt to a configuration that does not meet CARB emission standards. Note that, for purposes of this paragraph (f)(4), a configuration is considered to meet CARB emission standards if it was previously certified or was otherwise shown to meet emission standards.
6. Amend paragraph (f)(5) as follows: The standard-setting part may apply further restrictions to situations involving installation of used engines to repower equipment. For example, see "California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model HDVs,"

incorporated by reference in title 17, CCR, section 95663(d) for provisions that apply for glider vehicles.

7. Paragraphs (g) through (k). [No change]

Subpart C – Exemptions and Exclusions

§ 1068.201 General exemption and exclusion provisions. October 25, 2016.

A. Federal Provisions.

1. Amend the introductory paragraph as follows: We may exempt new engines/equipment from some or all of the prohibited acts or requirements of this part under provisions described in this subpart. In addition, see § 1068.1 and the standard-setting parts to determine if other engines/equipment are excluded from some or all of the regulations in this chapter.

2. Paragraphs (a) through (i). [No change].

§ 1068.220 Exempting display engines/equipment. January 24, 2023.

§ 1068.240 Exempting new replacement engines. January 24, 2023.

A. Federal Provisions.

1. Introductory paragraph. [No change]

2. Amend paragraph (a) as follows: *General provisions*. You are eligible for the exemption for new replacement engines only if you are a certificate holder.

3. Paragraphs (a)(1) through (b)(2)(i). [No change]

4. Amend paragraph (b)(2)(ii) as follows: In the case of premature engine failure, if the old engine was subject to emission standards, you must make the new replacement engine in a configuration identical in all material respects to the old engine. You may alternatively make the new replacement engine in a configuration identical in all material respects to another certified engine of the same or later model year as long as the engine is not certified with a family emission limit higher than that of the old engine.

5. Paragraphs (b)(2)(iii) and (b)(2)(iv). [No change]

6. Amend paragraph (b)(3) as follows: An old engine block replaced by a new engine exempted under this paragraph (b) may be reintroduced into commerce in California as part of an engine that meets either the current standards for new engines, the provisions for new replacement engines in this section, or another valid exemption. Otherwise, you must destroy the old engine block (or confirm that it has been destroyed), or export the engine block without its emission label. Note that this paragraph (b)(3) does not require engine manufacturers to take possession of the engine being replaced. Owners may arrange to keep the old engine if they demonstrate that the engine block has been destroyed. An engine block is destroyed under this paragraph (b)(3) if it can never be restored to a running configuration.

7. Amend paragraph (b)(4) as follows: If the old engine was subject to emission standards, the replacement engine must meet the appropriate emission

standards. This generally means you must make the new replacement engine in a previously certified configuration.

8. Paragraph (b)(5). [No change]

9. Amend paragraph (b)(5)(i) as follows: Add the following statement if the new engine may only be used to replace an engine that was not subject to any emission standards under this chapter:

THIS REPLACEMENT ENGINE IS EXEMPT UNDER 13 CCR 1956.8.2 and 40 CFR 1068.240. SELLING OR INSTALLING THIS ENGINE FOR ANY PURPOSE OTHER THAN TO REPLACE AN UNREGULATED ENGINE MAY BE A VIOLATION OF CALIFORNIA LAW SUBJECT TO CIVIL PENALTY. THIS ENGINE MAY NOT BE INSTALLED IN EQUIPMENT THAT IS MORE THAN 40 YEARS OLD AT THE TIME OF INSTALLATION.

10. Amend paragraph (b)(5)(ii) as follows: Add the following statement if the new engine may replace an engine that was subject to emission standards:

THIS ENGINE COMPLIES WITH CALIFORNIA EMISSION REQUIREMENTS FOR [Identify the appropriate emission standards (by model year, tier, or emission levels) for the replaced engine] ENGINES UNDER 40 CFR 1068.240 AND 13 CCR 1956.8.2. SELLING OR INSTALLING THIS ENGINE FOR ANY PURPOSE OTHER THAN TO REPLACE A [Identify the appropriate emission standards for the replaced engine, by model year(s), tier(s), or emission levels]] ENGINE MAY BE A VIOLATION OF STATE LAW SUBJECT TO CIVIL PENALTY. THIS ENGINE MAY NOT BE INSTALLED IN EQUIPMENT THAT IS MORE THAN 40 YEARS OLD AT THE TIME OF INSTALLATION. It may also state that the engine conforms to the applicable federal emission standards for the replaced engines.

11. Amend paragraph (b)(6) as follows: Engines exempt under this paragraph (b) may not be introduced into commerce in California before you make the determinations under paragraph (b)(2) of this section, except as specified in this paragraph (b)(6). Where we waive the restriction in this paragraph (b)(6), you must take steps to ensure that the engine is installed consistent with the requirements of this paragraph (b). For example, at a minimum you must report to us annually whether engines we allowed you to ship to a distributor under this paragraph (b)(6) have been placed into service or remain in inventory. After an engine is placed into service, your report must describe how the engine was installed consistent with the requirements of this paragraph (b). Send these reports to CARB's Designated Compliance Officer by the deadlines we specify.

12. Amend paragraph (c) introductory paragraph as follows: *Previous-tier replacement engines without tracking*. You may produce a limited number of new replacement engines that are not from a currently certified engine family under the provisions of this paragraph (c). If you produce new engines under this paragraph (c) to replace engines subject to emission standards, the new replacement engine must be in a configuration identical in all material respects to the old engine. You may make the new replacement engine in a configuration identical in all material respects to another certified engine of the same or later model year as long as the engine is not certified with a family emission limit higher than that of the old engine. The provisions of this paragraph (c) also apply for engines that were originally certified to

the same standards that apply for the current model year if you no longer have an Executive Order to continue producing that engine configuration. This would apply, for example, for engine configurations that were certified in an earlier model year but are no longer covered by an Executive Order. The following provisions apply to engines exempted under this paragraph (c):

13. Amend paragraph (c)(1) as follows: You may produce a limited number of replacement engines under this paragraph (c) representing 0.5 percent of your annual production volumes for each category and subcategory of engines identified in Table 1 to this section or five engines for each category and subcategory, whichever is greater. Calculate this number by multiplying your annual California sales volume by 0.005 and rounding to the nearest whole number. Determine the appropriate production volume by identifying the highest total annual California sales volume of engines from the previous three model years for all your certified engines from each category or subcategory identified in Table 1 to this section, as applicable. In unusual circumstances, you may ask us to base your production limits on California sales volume for a model year more than three years prior. You may include exempted engines as part of your California sales volume. Include engines produced by any affiliated companies and those from any other companies you license to produce engines for you as part of your California sales volume.

Table 1 to Paragraph (c)(1) of § 1068.240 — Engine Category and Subcategory for New Replacement Engines Exempted Without Tracking

Engine category	Standard-setting part ¹	Engine subcategory
Highway CI	title 13, CCR, sections 1956.8 and 1956.8.2, as applicable	disp. < 6.7 L/cyl. 6.7 ≤ disp. < 8.9 L/cyl. disp. ≥ 8.9 L/cyl.

¹ Include an engine as being subject to the identified standard-setting part if it will eventually be subject to emission standards under that part

14. Amend paragraph (c)(2) as follows: Count every exempted new replacement engine from your total California sales volume that you produce in a given calendar year under this paragraph (c), including partially complete engines, except for the following:

15. Paragraphs (c)(2)(i) through (c)(3). [No change]

16. Amend paragraph (c)(3)(i) as follows: In your report include the total number of replacement engines you produce under this paragraph (c) for each category or subcategory, as appropriate, and the corresponding total production volumes determined under paragraph (c)(1) of this section. If you send us a report under this paragraph (c)(3), you must also include the total number of complete and partially complete replacement engines you produced under paragraphs (b) and (e) of this section.

17. Paragraphs (c)(3)(ii) through (c)(4). [No change]

18. Paragraph (c)(5). [n/a]

19. Paragraph (d) introductory paragraph. [No change]

20. Amend paragraph (d)(1) as follows: Provide instructions specifying how to complete the engine assembly such that the resulting engine conforms to the applicable Executive Order. Where a partially complete engine can be built into multiple different configurations, you must be able to identify all the engine models and model years for which the partially complete engine may properly be used for replacement purposes. Your instructions must make clear how the final assembler can determine which configurations are appropriate for the engine they receive.

21. Paragraph (d)(2). [No change]

22. Amend paragraph (d)(2)(i) as follows: If you have a reasonable basis to believe that the fully assembled engine will include the original emission control information label, you may add a removable label to the engine with your corporate name and trademark and the statement: "THIS REPLACEMENT ENGINE IS EXEMPT UNDER 13 CCR 1956.8.2 AND 40 CFR 1068.240." This would generally apply if all the engine models that are compatible with the replacement engine were covered by an Executive Order and they were labeled in a position on the engine or equipment that is not included as part of the partially complete engine being shipped for replacement purposes. Removable labels must meet the requirements specified in § 1068.45.

23. Paragraph (d)(2)(ii) and paragraph (e) introductory paragraph. [No change]

24. Amend paragraph (e)(1) as follows: Where engine-based standards apply, you may produce and deliver short blocks or other partially complete engines from a currently certified engine family as replacement components for in-use equipment powered by engines you originally produced in California. You must be able to identify all the engine models and model years for which the partially complete engine may properly be used for replacement purposes.

25. Amend paragraph (e)(2) as follows: Where equipment-based standards apply, you may produce and deliver engines that are identical to engines covered by a current Executive Order by demonstrating compliance with currently applicable standards where the engines will be installed as replacement engines in California. These engines might be fully assembled, but we would consider them to be partially complete engines because they are not yet installed in the equipment.

26. Amend paragraph (f) as follows. For Table 1 to § 1068.240 refer to paragraph 12 of this section.

§ 1068.260 General provisions for selling or shipping engines that are not yet in their certified configuration. October 25, 2016.

§ 1068.261 Delegated assembly and other provisions related to engines not yet in the certified configuration. January 24, 2023.

A. Federal Provisions.

1. Amend introductory paragraph as follows: This section describes an exemption that allows Executive Order holders to sell or ship engines that are missing certain emission-related components if those components will be installed

by an equipment manufacturer. This section does not apply to equipment subject to equipment-based standards. See the standard-setting part to determine whether and how the provisions of this section apply. (Note: See § 1068.262 for provisions related to manufacturers introducing or delivering for sale into California partially complete engines for which someone else holds the Executive Order.) This exemption is temporary as described in paragraph (f) of this section.

2. Paragraphs (a) through (c)(7). [No change]

3. Amend paragraph (c)(7)(i) as follows: Apply an additional removable label in a way that makes it unlikely that the engine will be installed in equipment other than in its certified configuration. The label must identify the engine as incomplete and include a clear statement that failing to install the aftertreatment device, or otherwise failing to bring the engine into its certified configuration, is a violation of state law subject to civil penalty.

4. Paragraphs (c)(7)(ii) through (d)(3)(ii). [No change]

5. Amend paragraph (d)(3)(iii) as follows: Starting with the 2027 model year, if you sell engines to fewer than 40 equipment manufacturers under the provisions of this section, you may ask us to approve a reduced auditing rate. We may approve an alternate plan that involves audits of each equipment manufacturer on average once every ten model years as long as you show that you have met the auditing requirements in preceding years without finding noncompliance or improper procedures.

6. Paragraphs (d)(3)(iv) through (k). [No change]

§ 1068.262 Shipment of engines to secondary engine manufacturers.
October 25, 2016.

§ 1068.265 Provisions for engines/equipment conditionally exempted from
certification. October 8, 2008.

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.

§ 1068.410 How must I select and prepare my engines/equipment? April 30, 2010.

§ 1068.415 How do I test my engines/equipment? 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.
- § 1068.440 How do I ask EPA to reinstate my suspended certificate? April 30, 2010.
- § 1068.445 When may EPA 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 EPA? January 24, 2023.
- § 1068.455 What records must I keep? October 8, 2008.

Appendix A to Subpart E of Part 1068 – Plans for Selective Enforcement Auditing
October 24, 2023.

Appendix A to Part 1068 – Emission-Related Components. January 24, 2023.

A. Federal Provisions. [No change]

B. California Provisions.

1. In addition to the components listed in the Federal Provisions of Appendix A to Part 1068, any component that can cause the vehicle's on-board diagnostic malfunction indicator light to illuminate is considered as an emission-related component.

Appendix B to Part 1068 – Emission-Related Parameters and Specifications,
January 24, 2023.