

Attachment A-1

Final Regulation Order

Title 13

[Note: This version of the proposed amendments to Title 13 California Code of Regulations (CCR) sections 1956.8, 1971.1, and 1971.5, complies with Government Code sections 11346.2, subdivision (a)(3). The existing, original regulatory language currently adopted into the CCR is shown in “normal type.” The proposed amendments in this rulemaking are shown in underline to indicate additions and strikeout to indicate deletions from the existing regulatory text. Subsections for which no changes are proposed in this rulemaking are indicated with “* * * *.” [Bracketed underline text] that was placeholder text for these amendments’ approval date has been updated with its December 28, 2023, approval date. Vertical lines in the left margins are to flag where changes are proposed for ease of reference and are not part of the proposed amendments. The proposed amendments are being presented in two versions. For ease of readability, and to review the proposed amendments in an Accessible format that can toggle between amendments in strikeout/underline and a “clean” version with amendments incorporated into the regulatory text, please refer to the Word version of this Proposed Regulation Order.]

Chapter 1. Motor Vehicle Pollution Control Devices

- Section 1956.8. Exhaust Emissions Standards and Test Procedures--1985 and Subsequent Model Heavy-Duty Engines and Vehicles, 2021 and Subsequent Zero-Emission Powertrains, and 2022 and Subsequent Model Heavy-Duty Hybrid Powertrains.
- Section 1971.1. On-Board Diagnostic System Requirements--2010 and Subsequent Model-Year Heavy-Duty Engines.
- Section 1971.5. Enforcement of Malfunction and Diagnostic System Requirements for 2010 and Subsequent Model-Year Heavy-Duty Engines.

Final Regulation Order

Amend Sections 1956.8, 1971.1, and 1971.5 of title 13, California Code of Regulations (CCR), to read as follows:

§ 1956.8. Exhaust Emissions Standards and Test Procedures--1985 and Subsequent Model Heavy-Duty Engines and Vehicles, 2021 and Subsequent Zero-Emission Powertrains, and 2022 and Subsequent Model Heavy-Duty Hybrid Powertrains.

(a)(1) through (a)(2)(C)2.b.ii. [No change]

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3. Legacy Engine Option. For 2024, 2025, and 2025~~6~~ model year heavy-duty diesel engine families rated below 525 bhp maximum power as defined in 40 CFR § 1065.510, as amended March 10, 2021 (Pre-publication), incorporated by reference herein, a manufacturer may elect to certify a heavy-duty diesel engine family or families with $0.100 < \text{FTP NO}_x \text{ FEL} \leq 0.20 \text{ g/bhp-hr}$, and $0.005 < \text{FTP PM FEL} \leq 0.01 \text{ g/bhp-hr}$ if it meets the criteria set forth below in subparagraphs a. and b. below:

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- b. A manufacturer is only eligible to utilize this option if it meets all of the criteria identified in subparagraphs i through vi below.

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- iii. Procedure to Offset Deficit Balance. The manufacturer must offset its model year NO_x and PM deficit balance generated by legacy engines by using credits from the heavy-duty zero-emission averaging set described in section § 86.xxx-15.B.3.(j) of the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles,” as incorporated by reference in title 13, CCR, section 1956.8(b).

1. Credits from the Same Averaging Set. If a sufficient quantity of heavy-duty zero-emission NO_x or PM credits are not available, or are only available for a cost exceeding \$4,000 (for enough NO_x or PM credits to offset one medium heavy-duty legacy engine), the manufacturer may submit a plan for Executive Officer approval to use credits from the same averaging set described in section § 86.xxx-15.B.3.(a) of the “California

Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles,” as incorporated by reference in title 13, CCR, section 1956.8(b), to offset any remaining model year deficit balance generated by legacy engines. The plan must include information describing the manufacturer's attempts to purchase heavy-duty zero-emission NOx or PM credits from all manufacturers who have certified heavy-duty zero-emission vehicles or powertrains with CARB and that the manufacturer was denied a fair market offer to purchase such credits (i.e., such credits were only available at a cost exceeding \$4,000 for enough NOx or PM credits to offset one medium heavy-duty legacy engine). The Executive Officer will base his or her determination upon the information included in the plan and the exercise of good engineering judgment that the information substantiates that sufficient heavy-duty zero-emission NOx or PM credits were not available or were only available at a cost exceeding \$4,000 (for enough NOx or PM credits to offset one medium heavy-duty legacy engine).

2. Carryover to the 2026 Model Year. If credits from the same averaging set are not available, the manufacturer may carryover the NOx or PM deficit balance generated by legacy engines until the end of the 2026 model year, provided the manufacturer offsets the remaining legacy engine generated deficit balance times 1.25 with credits from the heavy-duty zero-emission averaging set or the same averaging set described in section § 86.xxx-15.B.3.(a) of the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles,” as incorporated by reference in title 13, CCR, section 1956.8(b) by the end of the 2026 model year. ~~In other words~~ For example, if the deficit carried over from the 2025 model year to the 2026 model year is 1 Mg, the manufacturer would need to offset the deficit with 1.25 Mg by the end of the 2026 model year.
3. Projects Targeted at California Disadvantaged Communities. If at the end of the 2026 model year, a sufficient quantity of heavy-duty zero-emission NOx or PM credits are not available for the manufacturer to offset the remaining legacy engine generated deficit balance times 1.25, the manufacturer must ~~do take~~ take all the ~~following~~ actions in A. to C. below for the remaining NOx or PM balance: For example, if the deficit balance is 1 Mg NOx, the

manufacturer would need to offset the deficit balance with 1.25 Mg NOx.

As an option, the manufacturer may utilize this provision in the 2024 and 2025 model years if a sufficient quantity of heavy-duty zero-emission NOx or PM credits are not available for the manufacturer to offset the remaining legacy engine generated deficit balance times 1.25. For example, if the deficit balance is 1 Mg NOx, the manufacturer would need to offset the deficit balance with 1.25 Mg NOx.

- A. Provide documentation to the Executive Officer substantiating that the manufacturer has attempted to purchase heavy-duty NOx or PM credits from all manufacturers with such credits and was denied a fair market offer; i.e., exceeding \$4,000 for enough NOx or PM credits to offset one medium heavy-duty legacy engine.
- B. Submit a plan for Executive Officer approval for projects targeted at California disadvantaged communities and that are sufficient to offset the excess emissions within five years. The plan must include project descriptions and budgets and a demonstration that the projects will achieve reductions required. The Executive Officer will base his or her determination upon the documentation provided by the manufacturer and the exercise of good engineering judgment that the plan would benefit disadvantaged communities, and would fully offset the excess emissions due to the credit deficit balance within five years. The manufacturer may submit contingency plans to be assessed and approved on the same standard as set forth in this subsection.
- C. At the end of the five-year period, submit information documenting that the excess emissions have been offset. Failure to do so means that legacy engines would be subject to the provisions of § 86.004-15.A.(b)(5) of the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles,” as incorporated by reference in title 13, CCR, section 1956.8(b).

4. Carryover to the 2025 Model Year. The manufacturer may carry over the NOx or PM deficit balance generated by legacy

engines from the 2024 model year to the 2025 model year, provided the manufacturer offsets the deficit balance with credits from the heavy-duty zero-emission averaging set. For example, if the deficit balance carried over from the 2024 model year to the 2025 model year is 1 Mg, the manufacturer would need to offset the deficit with 1 Mg of heavy-duty zero-emission averaging set credits by the end of the 2025 model year.

iv. Legacy Engine Sales Limits. A manufacturer may choose Option 1 or, if eligible, Option 2, and must remain in the same chosen option for model years 2024, 2025, and 2026. Option 2 is only available to a certifying manufacturer if it certifies medium heavy-duty diesel engines in addition to certifying products in another heavy-duty diesel primary intended service class for model years 2024 and 2025. For example, a manufacturer is eligible to use this option if it certifies both medium heavy-duty diesel engines and heavy heavy-duty diesel engines in the 2024 and 2025 model years. For both Options 1 and 2, the legacy engine sales limits in subsections 1 and 2 below are based on the total actual California sales of heavy-duty diesel engines, which is the combined total of all light heavy-duty (including medium-duty engines), medium heavy-duty, and heavy heavy-duty diesel engines that are sold in California.

iv.1. Option 1. For each certifying heavy-duty diesel engine manufacturer, the total California sales volume of legacy engines certified under this provision may not exceed 45 percent of the manufacturer's total actual California sales of heavy-duty diesel engines for 2024 model year, and 25 percent of the manufacturer's total actual California sales of heavy-duty diesel engines for 2025 model year, and 10 percent of the manufacturer's total actual California sales of heavy-duty diesel engines for 2026 model year. For example, a manufacturer that sells a total of 1,000 heavy-duty diesel engines in California in 2024 model year would be allowed to sell up to 450 heavy-duty diesel legacy engines for that model year in California.

If a manufacturer exceeds the legacy engine sales limits in Option 1 for a given model year, the maximum percentage exceeding the allowable sales limits without being considered non-compliant in engine sales is 1 percent above a given legacy engine sales limit. The excess NOx and PM emissions from this percentage of heavy-duty legacy engines exceeding the allowable legacy engine sales limits must be offset at 4 times the deficit balance. For example, if the deficit balance of the

percentage above a given legacy engine sales limit is 1 Mg NOx, the manufacturer would need to offset the deficit with 4 Mg NOx. All legacy engine sales above the legacy engine sales limits in Option 1 plus the 1 percent sales exceedance will be considered non-compliant engine sales. For example, if at the end of 2024 model year, a manufacturer using Option 1 determines that it has sold 1,000 heavy-duty diesel engines in California of which 500 are legacy engines, then the manufacturer must offset the deficit from 450 legacy engines at the normal rate (as used in subsection (a)(2)(C)3.b.iii. Procedure to Offset Deficit Balance) plus the deficit from 10 legacy engines (i.e., 1,000 engines x 1 percent) at 4 times the normal rate. The remaining 40 legacy engines would be considered non-compliant.

2. Option 2. The following requirements apply to each eligible certifying heavy-duty diesel engine manufacturer using Option 2.

A. The total California sales volume of medium heavy-duty diesel legacy engines under this provision may not exceed 60 percent of the manufacturer's total actual California sales of heavy-duty diesel engines for 2024 model year, and 60 percent of the manufacturer's total actual California sales of heavy-duty diesel engines for 2025 model year. No legacy engine sales are allowed in 2026 model year. For example, a manufacturer that sells a total of 1,000 heavy-duty diesel engines in California in 2024 model year would be allowed to sell up to 600 medium heavy-duty diesel legacy engines for that model year in California.

B. The total combined California sales volume of light heavy-duty and heavy heavy-duty diesel legacy engines certified under this provision may not exceed 15 percent of the manufacturer's total actual California sales of heavy-duty diesel engines for 2024 model year and 8 percent of the manufacturer's total actual California sales of heavy-duty diesel engines for 2025 model year. No legacy engine sales are allowed in 2026 model year. For example, a manufacturer that sells a total of 1,000 heavy-duty diesel engines in California in 2024 model year may sell up to 150 light heavy-duty and heavy heavy-duty diesel legacy engines combined for that model year in California.

C. If a manufacturer exceeds the legacy engine sales limits in Option 2 for 2024 or 2025 model years, the maximum percentage exceeding the allowable sales limits without being considered non-compliant is 5 percent for medium heavy-duty diesel engines and 1 percent for the combined light heavy-duty and heavy heavy-duty diesel engines above a given legacy engine sales limit. The excess NOx and PM emissions from these percentages of heavy-duty legacy engines exceeding the allowable legacy engine sales limits must be offset at 4 times the deficit balance. For example, if the deficit balance of the percentage above a given legacy engine sales limit is 1 Mg NOx, the manufacturer would need to offset the deficit with 4 Mg NOx. All legacy engine sales above the legacy engine sales limits in Option 2 plus the allowed percent sales exceedance will be considered non-compliant engine sales. For example, if at the end of 2024 model year, a manufacturer using Option 2 determines that it has sold 1,000 heavy-duty diesel engines in California of which 660 are medium heavy-duty diesel legacy engines and 150 are the combined light heavy-duty and heavy heavy-duty diesel legacy engines, then the manufacturer must offset the deficit from 600 medium heavy-duty diesel legacy engines and 150 light heavy-duty and heavy heavy-duty diesel engines at the normal rate plus the deficit from 50 medium heavy-duty diesel legacy engines (i.e., 1,000 engines x 5 percent) at 4 times the normal rate. The remaining 10 medium heavy-duty diesel legacy engines would be considered non-compliant.

- v. NOx and PM deficits generated by legacy engines are subject to the provisions of § 86.004-15.A.(b)(5) of the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles,” as incorporated by reference in title 13, CCR, section 1956.8(b).
- vi. In order to certify legacy engines in a particular model year, a manufacturer must also certify one or more heavy-duty diesel engine families subject to the standards in title 13, CCR, section 1956.8(a)(2)(C)1 in the same model year. For the 2024 model year, a manufacturer may certify legacy engine families prior to certifying at least one engine family subject to the standards in title 13, CCR, section 1956.8(a)(2)(C)1. Failure to certify a 2024 model year engine family to the standards in title 13, CCR, section

1956.8(a)(2)(C)1 will result in the revocation of all 2024 model year Executive Orders issued for legacy engine families under this provision ab initio.

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(6) *Heavy-Duty Diesel Engine Idling Requirements.*

Except as provided in subsection (6)(B) below, the requirements in this subsection apply to 2008 through 2023 model diesel engines used in heavy-duty vehicles over 14,000 pounds GVWR, and 2024 and subsequent model diesel engines used in medium-duty vehicles from 10,001 to 14,000 pounds GVWR and heavy-duty vehicles over 14,000 pounds GVWR. Manufacturers may meet the requirements of this subsection by either demonstrating compliance with the Engine Shutdown System requirements of subsection (6)(A), below or the optional NOx Idling Emission Standard specified in subsection (6)(C), below.

(A) through (B)2. [No change]

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(C) *Optional NOx idling emission standard.*

1. Emission standard.

- a. In lieu of the engine shutdown system requirements specified in subsection (a)(6)(A) above, an engine manufacturer may elect to certify its new 2008 through 2023 model-year heavy-duty diesel engines and 2024 through 2026 model year heavy-duty diesel engines subject to the provisions specified in subsection (a)(2)(C)2 and 2024 through 2025~~6~~ model year heavy-duty diesel engines subject to the provisions specified in subsection (a)(2)(C)(3) above, to an optional NOx idling emission standard of 30 grams per hour.

* * * *

- (b) *Test Procedures.* The test procedures for determining compliance with standards applicable to 1985 and subsequent model heavy-duty diesel engines and vehicles and 2022 and subsequent model diesel hybrid powertrains, and the requirements for participating in the averaging, banking and trading programs, are set forth in the “California Exhaust Emission Standards and Test Procedures for 1985 through 2003 Model Heavy-Duty Diesel-Engines and Vehicles,” adopted April 8, 1985, as last amended December 12, 2002, the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model

Heavy-Duty Diesel-Engines and Vehicles,” adopted December 12, 2002, as last amended ~~September 9, 2021~~December 28, 2023, and the “California Interim Certification Procedures for 2004 and Subsequent Model Hybrid-Electric and Other Hybrid Vehicles in the Urban Bus and Heavy-Duty Vehicle Classes,” adopted October 24, 2002, as last amended October 21, 2014, which are incorporated by reference herein.

* * * *

- (d) *Test Procedures.* The test procedures for determining compliance with standards applicable to 1987 and subsequent model heavy-duty Otto-cycle engines and vehicles and 2022 and subsequent model Otto-cycle hybrid powertrains, are set forth in the “California Exhaust Emission Standards and Test Procedures for 1987 through 2003 Model Heavy-Duty Otto-Cycle Engines and Vehicles,” adopted April 25, 1986, as last amended December 27, 2000, the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles,” adopted December 27, 2000, as last amended ~~September 9, 2021~~December 28, 2023, and the “California Interim Certification Procedures for 2004 and Subsequent Model Hybrid-Electric and Other Hybrid Vehicles, in the Urban Bus and Heavy-Duty Vehicle Classes,” adopted October 24, 2002, as last amended October 21, 2014, which are all incorporated by reference herein; and the “California Non-Methane Organic Gas Test Procedures for 1993 through 2016 Model Year Vehicles” and the “California Non-Methane Organic Gas Test Procedures for 2017 and Subsequent Model Year Vehicles,” which are incorporated by reference in section 1961.2.

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- (j) Definitions Specific to this Section. The following definitions apply to this section 1956.8.
- (1) “Active Bus” has the same meaning as defined in 13 CCR § 2023(b)(1).
 - (2) “Bus” has the same meaning as defined in 13 CCR § 2023(b)(6).
 - (3) “Bus purchase” or “Purchase” has the same meaning as defined in 13 CCR § 2023(b)(7).
 - (4) “Certified emission level” means the highest deteriorated emission level in an engine family for a given pollutant from the applicable transient and/or steady-state testing, rounded to the same number of decimal places as the applicable standard. Note that there may be two certified emission levels for CO₂ if a family is certified for both vocational and tractor use.

- (5) “Exempt bus” refers to a bus that is equipped with a 2022 and subsequent model year diesel-fueled heavy-duty engine that is certified to both the federal emission standards for 2010 and later model year diesel heavy-duty engines and vehicles as set forth in title 40, Code of Federal Regulations, section 86.007-11, as last amended Oct. 25, 2016, and the federal Greenhouse Gas Emissions and Fuel Economy Standards for Medium- and Heavy-Duty Engines and Vehicles - Phase 2 requirements promulgated at 81 Fed. Reg. 73,478 (October 25, 2016), which are incorporated by reference herein.
- (6) “Family certification level” (FCL) means a CO₂ emission level declared by the manufacturer that is at or above emission test results for all emission-data engines. The FCL serves as the emission standard for the engine family with respect to certification testing if it is different than the otherwise applicable standard. The FCL must be expressed to the same number of decimal places as the emission standard it replaces.
- (7) “Family emission limit” (FEL) means an emission level declared by the manufacturer to serve in place of an otherwise applicable emission standard (other than CO₂ standards) under the Average, Banking, and Trading Program. The FEL must be expressed to the same number of decimal places as the emission standard it replaces, except for legacy engine families. For legacy engine families, the manufacturer has the option to specify the NO_x and/or PM FEL to either 2 or 3 decimal places, for example, a manufacturer can specify a PM FEL of 0.01 g/bhp-hr or 0.005 g/bhp-hr. The FEL serves as the emission standard for the engine family with respect to all required testing except certification testing for CO₂. The CO₂ FEL is equal to the CO₂ FCL multiplied by 1.03 and rounded to the same number of decimal places as the standard (e.g., the nearest whole g/hp-hr for the 2016 CO₂ standards).
- (8) “Heavy-Duty Transient Federal Test Procedure” or “FTP cycle” means the test procedure specified in 40 CFR § 86.007-11(a)(2), as amended October 25, 2016, incorporated by reference herein, for heavy-duty diesel engines, and the test procedure specified in 40 CFR § 86.008-10(a)(2), as amended on October 25, 2016, incorporated by reference herein, for heavy-duty Otto-cycle engines.
- (9) “Heavy heavy-duty engine” means an engine used in a vehicle that normally exceeds 33,000 pounds GVWR. Heavy heavy-duty engines are designed for multiple rebuilds and have cylinder liners. Vehicles in this group are normally tractors, trucks, straight trucks with dual rear axles, and buses used in inter-city, long-haul applications. Otto-cycle engines that are best characterized by this definition share a primary intended

service class with diesel heavy heavy-duty engines. However, gasoline-fueled engines are presumed not to be characterized by this definition; for example, vehicle manufacturers may install some number of gasoline-fueled engines in vehicles with a GVWR that is above 33,000 pounds without causing the engine manufacturer to consider those to be heavy heavy-duty engines.

- (10) “Hybrid powertrain or optionally certified hybrid powertrain” means a group of components that includes an engine, electric motor-generator system, rechargeable energy storage system other than a conventional battery system or conventional flywheel, battery management system, including charge controller and thermal management systems and associated power electronics. Transmissions, final drives, and drive shafts may be included as powertrain components if specified by the hybrid powertrain manufacturer. Supplemental electrical batteries and hydraulic accumulators are examples of hybrid energy storage systems. Note other examples of systems that qualify as hybrid engines or power-trains are systems that recover kinetic energy and use it to power an electric heater in the aftertreatment.
- (11) “Intermediate useful life” means the period of use of 435,000 miles or eight years or 22,000 hours, whichever first occurs, applicable for the intermediate emission standards for oxides of nitrogen for 2027 and subsequent model year heavy heavy-duty diesel engines.
- (12) “Intermediate useful life NO_x standard” means the emissions standards for oxides of nitrogen applicable to the intermediate useful life for 2027 and subsequent model year heavy heavy-duty diesel engines.
- (13) “Legacy engine family” means an engine family certified under the provisions of title 13, CCR, section 1956.8(a)(2)(C)3.
- (14) “Light heavy-duty engine” means an engine used in a vehicle that is normally at or below 19,500 pounds GVWR. Light heavy-duty engines usually are not designed for rebuild and do not have cylinder liners. Vehicle body types in this group might include any heavy-duty vehicle built for a light-duty truck chassis, van trucks, multi-stop vans, and some straight trucks with a single rear axle. Typical applications would include personal transportation, light-load commercial delivery, passenger service, agriculture, and construction.
- (15) “Low-load cycle” means the emission test procedure with the low-load cycle according to section I.11.B.8 of the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-

Duty Diesel Engines and Vehicles,” incorporated by reference in subsection (b).

- (16) “Medium heavy-duty engine” mean an engine used in a vehicle that is normally between 19,501 to 33,000 pounds GVWR. Medium heavy-duty engines may be designed for rebuild and may have cylinder liners. Vehicle body types in this group would typically include school buses, straight trucks with single rear axles, city tractors, and a variety of special purpose vehicles such as small dump trucks, and refuse trucks. Typical applications would include commercial short haul and intra-city delivery and pickup.
- (17) “NOx exempt areas” has the same meaning as defined in 13 CCR § 2023(b)(39).
- (18) “Primary intended service class” means the class that best describes the vehicle for which the manufacturer designs and markets the engine. The three primary intended service classes are light heavy-duty, medium heavy-duty, and heavy heavy-duty.
- (19) “Ramped Modal Cycle” or “RMC cycle” means the supplemental emission test procedure with the steady-state cycle in 40 CFR § 86.1360, as amended October 25, 2016, incorporated by reference herein.
- (20) “Tractor” means a vehicle meeting the definition of “tractor” in 40 CFR § 1037.801, as amended October 25, 2016, incorporated by reference herein, but not classified as a “vocational tractor” under 40 CFR § 1037.630, as amended October 25, 2016, incorporated by reference herein, or relating to such a vehicle.
- (21) “Tractor engine” means an engine certified for use in tractors. Where an engine family is certified for use in both tractors and vocational vehicles, “tractor engine” means an engine that the engine manufacturer reasonably believes will be (or has been) installed in a tractor. Note that the Executive Officer may require a manufacturer to document how it determines that an engine is a tractor engine.
- (22) “Test Procedure” means all aspects of engine testing including, but not limited to, the cycle, preconditioning procedures, equipment specifications, calibrations, calculations, and other protocols and specifications needed to measure emissions.
- (23) “Transit Agency” has the same meaning as defined in 13 CCR § 2023(b)(51).

- (24) "Urban Bus" has the same meaning as defined in 40 CFR § 86.091-2, as amended July 26, 1990, incorporated by reference herein.
- (25) "Vocational engine" means an engine certified for use in vocational vehicles. Where an engine family is certified for use in both tractors and vocational vehicles, "vocational engine" means an engine that the engine manufacturer reasonably believes will be (or has been) installed in a vocational vehicle. Note that the provisions of this part may require a manufacturer to document how it determines that an engine is a vocational engine.
- (26) "Vocational vehicle" means a vehicle meeting the definition of "vocational" vehicle in 40 CFR § 1037.801, as amended October 25, 2016, incorporated by reference herein.
- (27) "Zero-emission powertrain" means an all-electric or hydrogen fuel-cell powertrain assembly, which includes (if applicable) the electric traction motor, system controller, generator, on-board charger, battery management system, thermal management systems, energy storage system (batteries, capacitors, and flywheels), inverter, fuel-cell stack, and the interface at which electrical power is converted to tractive mechanical power or vice-versa (in the case of a regenerative braking system), certified pursuant to the requirements in subsection (a)(8).

Note: Authority cited: Sections 38501, 38505, 38510, 38560, 38580, 39500, 39600, 39601, 40000, 43013, 43018, 43100, 43101, 43102, 43104, 43105, 43106 and 43806, Health and Safety Code; and Section 28114, Vehicle Code. Reference: Sections 38501, 38505, 38510, 38560, 38580, 39002, 39003, 39010, 39017, 39033, 39500, 39600, 39601, 39610, 39650, 39657, 39667, 39701, 40000, 43000, 43000.5, 43009, 43009.5, 43013, 43017, 43018, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43107, 43202, 43204, 43205, 43205.5, 43206, 43210, 43211, 43212, 43213 and 43806, Health and Safety Code; and Section 28114, Vehicle Code.

§ 1971.1. On-Board Diagnostic System Requirements--2010 and Subsequent Model-Year Heavy-Duty Engines.

(a) through (d)(8.3) [No change]

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(8.4) For 2024, 2025, and 2025~~6~~ model year engines certifying to the provisions of title 13, CCR section 1956.8(a)(2)(C)3:

(8.4.1) The manufacturer may implement an OBD system meeting the requirements of section 1971.1 applicable to a 2023 model year engine in lieu of the requirements of section 1971.1 applicable to 2024, 2025, and 2025~~6~~ model year engines, ~~respectively~~; and

(8.4.2) For engines meeting the 2023 model year OBD requirements as allowed in section (d)(8.4.1) above, wherever the requirements in this regulation require a manufacturer to meet a specific phase-in schedule for the 2024, 2025, or 2025~~6~~ model year, the manufacturer shall exclude the engines from the engine volume count used to determine compliance with the required phase-in schedule (e.g., exclude the 2025 model year engines from the percentage of engines that meet or do not meet the specific requirement for the 2025 model year and from the manufacturer's total projected sales volume that the phase-in percentage is based on).

(8.5) For 2024, 2025, and 2026 model year engines certifying to the provisions of title 13, CCR section 1956.8(a)(2)(C)2:

(8.5.1) The manufacturer may implement an OBD system complying with all federal OBD requirements (40 CFR § 86.010-18 as last amended January 24, 2023, incorporated by reference herein) for heavy-duty engines; and

(8.5.2) For engines meeting the OBD requirements as allowed in (d)(8.5.1), wherever the requirements in this regulation require a manufacturer to meet a specific phase-in schedule for the 2024, 2025, or 2026 model year, the manufacturer shall exclude the engines from the engine volume count used to determine compliance with the required phase-in schedule (e.g., exclude the 2026 model year engines from the percentage of engines that meet or do not meet the specific requirement for the 2026 model year and from the manufacturer's total projected sales volume that the phase-in percentage is based on).

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Note: Authority cited: Sections 38501, 38510, 39010, 39600, 39601, 39602.5, 43000.5, 43013, 43018, 43100, 43101, 43104, 43105, 43105.5 and 43106, Health and Safety Code. Reference: Sections 38501, 38505, 38510, 39002, 39003, 39010, 39018, 39021.5, 39024, 39024.5, 39027, 39027.3, 39028, 39029, 39031, 39032, 39032.5, 39033, 39035, 39037.05, 39037.5, 39038, 39039, 39040, 39042, 39042.5, 39046, 39047, 39053, 39054, 39058, 39059, 39060, 39515, 39600, 39601, 39602.5, 43000, 43000.5, 43004, 43006, 43013, 43016, 43018, 43100, 43101, 43102, 43104, 43105, 43105.5, 43106, 43150, 43151, 43152, 43153, 43154, 43155, 43156, 43204, 43211 and 43212, Health and Safety Code.

§ 1971.5. Enforcement of Malfunction and Diagnostic System Requirements for 2010 and Subsequent Model-Year Heavy-Duty Engines.

(a) General.

(1) Applicability.

- (A) These procedures shall be used to assure compliance with the requirements of California Code of Regulations (Cal. Code Regs.), title 13, section 1971.1 for all 2010 and subsequent model year heavy-duty engines equipped with OBD systems that have been certified for sale in California.
- (B) Engines manufactured prior to the 2010 model year are covered by the general enforcement and penalty provisions of the Health and Safety Code, and the specific provisions of Cal. Code Regs., title 13, section 1971 and section 2111 through section 2149.
- (C) For 2024, ~~2025~~, and 2025~~6~~ model year engines certified to the provisions of title 13, CCR section 1956.8(a)(2)(C)3 and with OBD systems meeting the requirements of title 13, CCR section 1971.1 applicable to a 2023 model year engine, a manufacturer shall use the provisions of section 1971.5 applicable to a 2023 model year engine.

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Note: Authority cited: Sections 38501, 38510, 39010, 39600, 39601, 39602.5, 43000.5, 43013, 43016, 43018, 43100, 43101, 43104, 43105, 43105.5, 43106, 43154, 43211 and 43212, Health and Safety Code. Reference: Sections 38501, 38505, 38510, 39002, 39003, 39010, 39018, 39021.5, 39024, 39024.5, 39027, 39027.3, 39028, 39029, 39031, 39032, 39032.5, 39033, 39035, 39037.05, 39037.5, 39038, 39039, 39040, 39042, 39042.5, 39046, 39047, 39053, 39054, 39058, 39059, 39060, 39515, 39600, 39601, 39602.5, 43000, 43000.5, 43004, 43006, 43013, 43016, 43018, 43100, 43101, 43102, 43104, 43105, 43105.5, 43106, 43150, 43151, 43152, 43153, 43154, 43155, 43156, 43204, 43211 and 43212, Health and Safety Code.