

Appendix A-1

Title 13

Proposed 30-Day Modifications to the Proposed Regulation Order

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**Proposed 30-Day Modifications to
Title 13, California Code of Regulations**

Amend Sections 1900, 1956.8, 1961.2, 1965, 1968.2, 1971.1, 1971.5, 2035, 2036, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2121, 2123, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2133, 2137, 2139, 2139.5, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2166, 2166.1, 2167, 2168, 2169, 2170, 2423, and 2485 of title 13, California Code of Regulations. Adopt Sections 2139.5, 2169.1, 2169.2, 2169.3, 2169.4, 2169.5, 2169.6, 2169.7, and 2169.8 of title 13, California Code of Regulations.

Note: The originally proposed regulatory language is shown in ~~strike through~~ to indicate deletions and underline to indicate additions. New deletions and additions to the proposed language that are made public with this notice are shown in ~~double strike through~~ and double underline format, respectively. Subsections for which no changes are proposed in this rulemaking are indicated with [No change] or “* * * * *”. “[INSERT DATE OF AMENDMENT]” is not actual proposed language but is a placeholder for a date that is to be determined upon the amendment’s approval by the California Air Resources Board.

§ 1900. Definitions.

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

(a)(1) *[No change]*

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(2)(A) The exhaust emissions from new 2004 ~~and subsequent~~ through 2023 model heavy-duty diesel engines, heavy-duty natural gas-fueled and liquefied-petroleum-gas-fueled engines derived from diesel-cycle engines, and heavy-duty methanol-fueled diesel engines, and the optional, reduced-emission standards for 2002 ~~and subsequent~~ through 2023 model engines produced beginning October 1, 2002, except in all cases engines used in medium-duty vehicles, shall not exceed:

Exhaust Emission Standards for 2004 and ~~Subsequent~~ Through 2023 Model Heavy-Duty Engines, and Optional, Reduced Emission Standards for 2002 and ~~Subsequent~~ Through 2023 Model Heavy-Duty Engines Produced Beginning October 1, 2002, Other than Urban Bus Model-Year Engines Produced From October 1, 2002 Through 2006^L
(grams per brake horsepower-hour [g/bhp-hr])

<i>Model Year</i>	<i>Oxides of Nitrogen Plus Non-methane Hydrocarbons</i>	<i>Optional Oxides of Nitrogen Plus Non-methane Hydrocarbons</i>	<i>Oxides of Nitrogen</i>	<i>Optional Oxides of Nitrogen</i>	<i>Non-methane hydrocarbons</i>	<i>Carbon Monoxide</i>	<i>Particulates</i>
2004-2006 ^H	2.4 ^{A,C,E,J}	2.5 ^{B,C,E,J}	n/a		n/a	15.5	0.10 ^C
October 1, 2002-2006	n/a	1.8 to 0.3 ^{A,D,F}	n/a		n/a	15.5	0.03 to 0.01 ^G
2007 and subsequent_2023 ^M	n/a	n/a	0.20 ^I		0.14	15.5	0.01 ^K
2015 and Subsequent_2021 (Optional) ^{N,O}	n/a	n/a	n/a	0.10, 0.05, or 0.02	0.14	15.5	0.01
<u>2022-2023 (Optional)^{N,O}</u>	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>	<u>0.10, 0.05, 0.02, or 0.01</u>	<u>0.14</u>	<u>15.5</u>	<u>0.01</u>

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^L For 2007 through 2023 and subsequent model-year urban bus engines, this section applies. For urban bus model-year engines produced from October 1, 2002 through 2006, refer to section 1956.1.

^M For model years between 2007 and 2009, transit agencies purchasing urban buses and/or urban bus engines shall meet the requirements set forth in section 2023.1.

^N Optional Low NOx emission standards. A manufacturer may choose to offer an engine that is 50%, 75%, or 90% (or 95% for 2022 and 2023 model year engines) below the current 0.20 g/bhp-hr NOx emission standards for heavy duty engines. A manufacturer may not include an engine family certified to the optional NOx emission standards in the ABT programs for NOx but may include it for particulates.

^O On-Board Diagnostic (OBD) requirements are to be followed per Title 13, CCR, section 1971.1 with the exception of the NOx emission threshold malfunction criteria for all applicable monitors, in which case a malfunction criterion of 0.4 g/bhp-hr NOx shall be used (i.e., the OBD system is required to detect a malfunction before NOx emissions exceed 0.4 g/bhp-hr).

¹ Seven of the largest heavy-duty diesel engine manufacturers will be implementing measures to reduce emissions beginning October 1, 2002, to meet the requirements of the Heavy-Duty Diesel Engine Settlement Agreements reached with the ARB. The Heavy-Duty Diesel Engine Settlements were agreements reached in response to lawsuits brought by the United States Environmental Protection Agency and violations alleged by the ARB pertaining to excess in-use emissions caused by the use of defeat devices and unacceptable algorithms. Navistar signed its Settlement Agreement on October 22,

1998. Cummins, Detroit Diesel Corporation, Caterpillar, Volvo, Mack and Renault signed their Settlement Agreements on December 15, 1998.

(B) Phase-in Options

1. Early NOx compliant engines. For model years 2007, 2008, and 2009, a manufacturer may, at their option, certify one or more of their engine families to the combined NOx plus NMHC standard or FEL applicable to model year 2006 engines under section 1956.8 (a)(2)(A), in lieu of the separate NOx and NMHC standards or FELs applicable to the 2007 and subsequent through 2023 model years, specified in section 1956.8 (a)(2)(A). Each engine certified under this phase-in option must comply with all other emission requirements applicable to model year 2007 engines. To qualify for this option, a manufacturer must satisfy the U.S.-directed production requirement of certifying no more than 50 percent of engines to the NOx plus NMHC standards or FELs applicable to 2006 engines, as specified in 40 Code of Federal Regulations, part 86, section 86.007-11(g)(1), as adopted January 18, 2001. In addition, a manufacturer may reduce the quantity of engines that are required to be phased-in using the early certification credit program specified in 40 Code of Federal Regulations, part 86, section 86.007-11(g)(2), as adopted January 18, 2001, and the “Blue Sky” engine program specified in 40 Code of Federal Regulations, part 86, section 86.007-11(g)(4), as adopted January 18, 2001.

2. Early PM compliant engines. A manufacturer certifying engines to the 2007 and subsequent through 2023 model year PM standard listed in section 1956.8(a)(2)(A) (without using credits, as determined in any averaging, banking, or trading program described in “California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles,” to comply with the standards) before model year 2007 may reduce the number of engines that are required to meet the 2007 and subsequent through 2023 model year PM standard listed in section 1956.8(a)(2)(A) in model year 2007, 2008 and/or 2009. To qualify for this option, a manufacturer must satisfy the PM emission requirements pursuant to the methods detailed in 40 Code of Federal Regulations, part 86, section 86.007-11 (g)(2)(ii), as adopted January 18, 2001.

(C) 1. Except as provided in subsection (a)(2)(C)2 and (a)(2)(F) below, the The exhaust emissions from new 2024 through 2026 model heavy-duty diesel engines, urban bus engines, heavy-duty natural gas-fueled and liquefied-petroleum-gas-fueled engines derived from diesel-cycle engines, and heavy-duty methanol-fueled diesel engines, in all cases engines used in heavy-duty vehicles over 14,000 pounds GVWR, shall not exceed:

**Exhaust Emission Standards for 2024 through 2026 Model
Light Heavy-Duty Engines, Medium Heavy-Duty Engines and
Heavy Heavy-Duty Engines**
(g/bhp-hr)

<u>Test Procedure</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>
<u>FTP cycle</u>	<u>0.050</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>RMC cycle</u>	<u>0.050</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>Low-load cycle</u>	<u>0.200</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>

<u>Optional Low NOx Exhaust Emission Standards</u> (g/bhp-hr) ^A				
<u>FTP cycle</u>	<u>0.020</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>RMC cycle</u>	<u>0.020</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>Low load cycle</u>	<u>0.080</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>

^AOptional Low NOx emission standards for 2024 through 2026 model heavy-duty engines used in heavy-duty vehicles over 14,000 pounds GVWR. A manufacturer may not include an engine family certified to the optional NOx emission standard in the federal or California ABT programs for NOx but may include it for particulates.

2. 2024 through 2026 model year heavy-duty diesel engines rated at or greater than 525 bhp maximum power as defined in 40 CFR section 1065.510.

a. In lieu of compliance with the requirements specified in subsection (a)(2)(C)1 above, a manufacturer may elect to certify a heavy-duty engine family or families rated at or above 525 bhp by:

i. submitting the federal engine family certification approval (e.g., federal certificate of conformity) for the applicable engine family or families and complying with all federal requirements for heavy-duty engines.

ii. demonstrating compliance with the Heavy-Duty Diesel Engine Idling Requirements for that model year as provided in subparagraph 13 CCR section 1956.8(a)(6), and

iii. providing emission warranty requirements for that model year as specified in 13 CCR section 2036.

b. A manufacturer is only eligible to utilize this option if it meets the criteria identified in subsections (a)(2)(C)2.b.i to ii below.

i. The manufacturer must have certified and sold heavy-duty diesel engines rated at or above 525 bhp maximum power in California for either the 2018 or 2019 model year.

ii. The maximum number of heavy-duty diesel engines covered by engine families certified under this provision that a manufacturer may sell in California in each applicable model year under this provision must not

exceed 1.10 times that manufacturer's 2018 or 2019 model year California sales volume of engines rated at or above 525 bhp, whichever is greater.

(D) Except as provided in subsection (a)(2)(F) below, the ~~The~~ exhaust emissions from new 2027 and subsequent model heavy-duty diesel engines, urban bus engines, heavy-duty natural gas-fueled and liquefied-petroleum-gas-fueled engines derived from diesel-cycle engines, and heavy-duty methanol-fueled diesel engines, in all cases engines used in heavy-duty vehicles over 14,000 pounds GVWR, shall not exceed:

Exhaust Emission Standards for 2027 and Subsequent Model Light Heavy-Duty Engines, and Medium Heavy-Duty Engines
(g/bhp-hr)

<u>Test Procedure</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>
<u>FTP cycle</u>	<u>0.020</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>RMC cycle</u>	<u>0.020</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>Low-load cycle</u>	<u>0.050</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>

Optional Low NOx Exhaust Emission Standards
(g/bhp-hr)^A

<u>FTP and RMC cycles</u>	<u>0.010</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>Low-load cycle</u>	<u>0.025</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>

Exhaust Emission Standards for 2027 Through 2030 Model Heavy Heavy-Duty Engines
(g/bhp-hr)

<u>Test Procedure</u>	<u>Intermediate Useful Life Oxides of Nitrogen^B</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>
<u>FTP cycle</u>	<u>0.020</u>	<u>0.035</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>RMC cycle</u>	<u>0.020</u>	<u>0.035</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>Low-load cycle</u>	<u>0.050</u>	<u>0.090</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>

Optional Low NOx Exhaust Emission Standards
(g/bhp-hr)^A

<u>FTP and RMC cycles</u>	<u>0.010</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>Low-load cycle</u>	<u>0.025</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>

**Exhaust Emission Standards for 2031 and Subsequent Model
Heavy Heavy-Duty Engines
(g/bhp-hr)**

<u>Test Procedure</u>	<u>Intermediate Useful Life Oxides of Nitrogen^B</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>
<u>FTP cycle</u>	<u>0.020</u>	<u>0.040</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>RMC cycle</u>	<u>0.020</u>	<u>0.040</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>Low-load cycle</u>	<u>0.050</u>	<u>0.100</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>

<u>Optional Low NOx Exhaust Emission Standards (g/bhp-hr)^A</u>					
<u>FTP and RMC cycles</u>	<u>0.010</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>	
<u>Low-load cycle</u>	<u>0.025</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>	

^A Optional Low NOx emission standard for 2027 and subsequent model heavy-duty engines used in heavy-duty vehicles over 14,000 pounds GVWR. A manufacturer may not include an engine family certified to the optional NOx emission standard in the federal or California ABT programs for NOx but may include it for particulates.

^B Intermediate Useful Life NOx Standard is applicable at or below 435,000 miles/10 years/22,000 hours interval as specified in section 86.333 2.A.1.2.2(4)(iii)(A) of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in subsection (b).

(E) The exhaust emissions from new 2024 and subsequent model heavy-duty diesel engines, urban bus engines, heavy-duty natural gas-fueled and liquefied-petroleum-gas-fueled engines derived from diesel-cycle engines, and heavy-duty methanol-fueled diesel engines, in all cases engines used in heavy-duty vehicles over 14,000 pounds GVWR, certified to optional low NOx exhaust emission standards shall not exceed:

**Optional Low NOx Exhaust Emission Standards for 2024 and Subsequent Model
Heavy -Duty Diesel Engines
(g/bhp-hr)^A**

<u>Model Year</u>	<u>Test Procedure</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>
<u>2024-2026</u>	<u>FTP and RMC cycles / Low-load cycle</u>	<u>0.020/0.080 or 0.010/0.040</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>2027 and subsequent</u>	<u>FTP and RMC cycles / Low-load cycle</u>	<u>0.010/0.025</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>

^A A manufacturer may not include an engine family certified to the optional NOx emission standard in the federal or California ABT programs for NOx but may include it for particulates.

(F) Transit Agency Diesel-Fueled Bus and Engine Exemption Request

For 2022 and subsequent model diesel-fueled medium heavy-duty or heavy heavy-duty engines used in urban buses, the Executive Officer will approve a Transit Agency Diesel-Fueled Bus and Engine Exemption Request made by a transit agency that meets each of the conditions and requirements in subparagraphs 1 and 2 below. If granted, an exemption request will allow a transit agency to purchase, rent, or lease exempt buses, contract for service with bus service providers to operate exempt buses, or re-power buses with engines that are certified to both the federal emission standards for 2010 and later model year diesel-fueled medium heavy-duty or heavy heavy-duty engines and vehicles, as set forth in title 40, Code of Federal Regulations section 86.007-11, as last amended October 25, 2016, and the 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).

1. Conditions

- a. The transit agency is subject to the Innovative Clean Transit Regulations, California Code of Regulations, title 13, CCR section 2023, et seq.
- b. The transit agency has fulfilled the reporting requirements of the Innovative Clean Transit Regulations specified in California Code of Regulations, title 13, section CCR 2023.8 in the year of submitting the Transit Agency Diesel-Fueled Bus and Engine Exemption Request.
- c. The transit agency has purchased the required number of zero-emission buses in the immediately preceding year, as required by title 13, CCR, section 2023.1, or has been granted an exemption from the purchase of zero-emission bus(es) as specified in section 2023.4.
- d. If the transit agency has bus(es) fueled with compressed natural gas (CNG) in their fleet, the Transit Agency Diesel-Fueled Bus and Engine Exemption Request must include a statement with a supporting explanation from the transit agency that it is cost prohibitive for the transit agency to procure CNG-fueled bus(es) or to fuel and support additional CNG-fueled bus(es) from any established fueling facility to which the transit agency has authority or agreement to access. If the transit agency has authority or agreement to access an established CNG fueling facility, the transit agency must also submit documentation that contains information about the fueling capacity of its established CNG fueling facility and how the transit agency has fully utilized this fueling capacity.
- e. If the transit agency has previously received an Executive Exemption Approval Letter from the Executive Officer as described in section title 13, CCR section 1956.8(a)(2)(F)3, the transit agency must complete the reporting requirements of section 1956.8(a)(2)(F)5.

2. Requirements and Procedures

- a. The transit agency must submit its Transit Agency Diesel-Fueled Bus and Engine Exemption Request to CARB's Executive Officer.
 - b. The Transit Agency Diesel-Fueled Bus and Engine Exemption Request must be submitted by May 1st of the first calendar year in which the exemption is requested.
 - c. The Transit Agency Diesel-Fueled Bus and Engine Exemption Request must identify the number of exempt buses needed for each bus type, and for each bus type how many exempt buses are planned to operate outside of NOx exempt areas.
 - d. If the transit agency requests to apply the exemption request to an existing contract, the Transit Agency Diesel-Fueled Bus and Engine Exemption Request must include a copy of the contract.
 - e. The Transit Agency Diesel-Fueled Bus and Engine Exemption Request must identify the number of exempt buses or re-powered buses that the transit agency requests for each calendar year within the triennial period of the Transit Agency Diesel-Fueled Bus and Engine Exemption Request, where the year the request is submitted is counted as the first calendar year. The requested number of exempted engines or buses for each calendar year must demonstrate compliance with the Innovative Clean Transit regulations' zero-emission bus purchase requirements under title 13, CCR section 2023.1, including any approved purchase exemption request under title 13, CCR section 2023.4.
 - f. At the submission of the Transit Agency Diesel-Fueled Bus and Engine Exemption Request, if any of the requested exempt buses cannot be replaced with zero-emission buses within the triennial period of the Transit Agency Diesel-Fueled Bus and Engine Exemption Request, even if state incentive funding can offset the entire incremental cost of zero-emission bus purchase, the Transit Agency Diesel-Fueled Bus and Engine Exemption Request must include the number of the exempt buses that cannot be replaced with zero-emission buses and an explanation of which reason, under title 13, CCR section 2023.4(c), prevents the transit agency from purchasing zero-emission buses and must also provide the supporting documentation required in 2023.4(c).
3. The Executive Officer will issue an Executive Exemption Approval Letter if all foregoing conditions and requirements in subparagraphs 1 and 2 above are met. The Executive Exemption Approval Letter will allow a triennial quota for the purchase, rent, lease, contract for service, or re-power of exempt buses or engines. The triennial quota expires at the end of the third calendar year of the triennial period.
 4. If the Transit Agency Diesel-Fueled Bus and Engine Exemption Request is approved by the Executive Officer, the transit agency may proceed with engine repower or exempt bus purchase, lease, rental, or contract for service. In the instance where new exempt engines and buses will be purchased or

manufactured under the contract, the Executive Exemption Approval Letter will allow the bus and engine manufacturers to sell exempt engines to and manufacture exempt buses for the transit agency that has obtained the exemption. The transit agency must notify all parties involved of the approval and provide a copy of the issued Transit Agency Diesel-Fueled Bus and Engine Exemption Approval Letter to the engine and bus dealer(s), bus manufacturer(s), and engine manufacturer(s) involved with delivering the exempt buses or engines to the transit agency.

5. The transit agency must report the following information for the prior calendar year to the Executive Officer annually by March 31. The required information pertains to buses/engines delivered in the prior calendar year.:
 - a. A copy of engine or bus purchase order, or purchase contract, as identified in title 13 CCR Section 2023 (b)(7) with the date of purchase or a lease, rental or contract for service agreement;
 - b. A copy of the certificate of conformity issued under 40 CFR section 86.007-30 for each engine family and the model year included in the purchase or a lease, rental or service contract agreement;
 - c. The number of exempt engines and buses delivered to the transit agency or transit service contractor and what bus type(s) were delivered;
 - d. For each exempt engine and bus, provide the engine make, model and engine serial number (ESN), and vehicle identification number (VIN); and
 - e. Documentation of dates of delivery and in service.
6. If any of the requirements, conditions, or criteria of title 13, CCR sections 1956.8(a)(2)(F) 1.c. and 2. are not met after approval was granted, the Executive Officer shall revoke the Executive Exemption Approval Letter. A transit agency may request a hearing to review the Executive Officer's revocation of its Executive Exemption Approval Letter pursuant to the procedures set forth in title 17, CCR section 60055.1 et. seq.

(3) Formaldehyde exhaust emissions from new 1993 and subsequent model methanol-fueled diesel engines, shall not exceed:

<i>Model Year</i>	<i>Formaldehyde (g/bhp-hr)</i>
1993-1995	0.10
1996 and subsequent	0.05

(4) An engine family whose design allows engine operation in either of two distinct alternative fueling modes, where each fueling mode is characterized by use of one fuel or a combination of two fuels and by significantly different emission levels under each mode, may certify to a different NOx or NOx plus NMHC (as applicable depending on model year) standard for each fueling mode, provided it meets the following requirements:

(A) The NO_x or NO_x plus NMHC certification standard used for operation under the higher emitting fueling mode must be one of the standards denoted by footnote H in paragraph (a)(1) and footnote E in paragraph (a)(2).

(B) The NO_x or NO_x plus NMHC certification standard used for operation under the lower emitting fueling mode must be one of the reduced-emission standards denoted by footnote I in paragraph (a)(1) and footnote F in paragraph (a)(2).

(C) The engine family is not used to participate in any manufacturer's averaging, banking or trading program.

(D) The engine family meets all other emission requirements contained in this section.

(E) The higher emitting fueling mode must be intended only for fail-safe vehicle operation when a malfunction or inadvertent fuel depletion precludes operation in the lower emitting fueling mode, as evidenced by a significantly reduced horsepower versus engine speed curve when operating in the higher emitting fueling mode when compared to the similar curve for the lower emitting fueling mode.

(5) No crankcase emissions shall be discharged directly into the ambient atmosphere from any new 2007 or later model year diesel heavy-duty diesel engine, with the following exception: heavy-duty diesel engines equipped with turbochargers, pumps, blowers, or superchargers for air induction may discharge crankcase emissions to the ambient atmosphere if the emissions are added to the exhaust emissions (either physically or mathematically) during all emission testing. Manufacturers using this exception must manufacture the engines so that all crankcase emissions can be routed into a dilution tunnel (or other sampling system approved in advance by the Executive Officer), and must account for deterioration in crankcase emissions when determining exhaust deterioration factors. For the purpose of section 1956.8(a)(2), crankcase emissions that are routed to the exhaust upstream of exhaust aftertreatment during all operation are not considered to be "discharged directly into the ambient atmosphere."

(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 NO_x Idling Emission Standard specified in subsection (6)(C), below.

(A) *[No change]*

* * * *

(B) Exempt Vehicles.

1. 2008 through 2023 model Hheavy-duty diesel engines to be used in buses as defined in California Vehicle Code §§ 233, 612 and 642, school buses as defined in California Vehicle Code § 545, recreational vehicles as defined in Health and Safety Code 18010, medium duty vehicles as defined in § 1900(b)(13) of title 13, California Code of Regulations (CCR), military tactical vehicles as defined in §1905 of title 13, CCR, authorized emergency vehicles as defined in California Vehicle Code § 165, armored cars, as defined in California Vehicle Code § 115, and workover rigs, as defined in § 2449 of title 13, CCR are exempted from these requirements.

2. 2024 and subsequent model heavy-duty engines to be used in military tactical vehicles as defined in title 13, CCR, Section 1905 and authorized emergency vehicles as defined in California Vehicle Code §165 are exempted from these requirements.

(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 and subsequent 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 above, to an optional NOx idling emission standard of 30 grams per hour.

b. Except as provided in subsection (a)(6)(C)1.a above, in H lieu of the engine shutdown system requirements specified in subsection (a)(6)(A) above, an engine manufacturer may elect to certify its new 2024 and subsequent model year heavy-duty diesel engines to the following optional NOx idling emission standards. The optional NOx idling emissions shall not exceed:

Optional NOx Idling Emission Standards for 2024 and Subsequent Model Diesel Engines Used in Medium-Duty Vehicles from 10,001 to 14,000 GVWR and Diesel Engines Used in Heavy-Duty Vehicles Greater than 14,000 Pounds GVWR (grams per hour)

<u>Model Year</u>	<u>Oxides of Nitrogen</u>
<u>2024 – 2026</u>	<u>10</u>
<u>2027 and subsequent</u>	<u>5</u>

2. Compliance Determination:

a. Compliance with ~~this~~ these optional standards will be determined based on testing conducted pursuant to the supplemental NOx idling test cycle and procedures specified in section 86.1360-2007.B.4 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 subsection (b). The manufacturer may request an alternative test procedure if the technology used cannot be demonstrated using the procedures in section 86.1360-2007.B.4, subject to advance approval of the Executive Officer.

b. A manufacturer certifying to the optional NOx idling standard must not increase emissions of CO, PM, or NMHC, determined by comparing results from the supplemental NOx idling test cycle and procedures specified in section 86.1360-2007.B.4 of the referenced “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles” to emission results from the idle mode of the supplemental steady state test cycle or emission results from idle portions of the transient test cycle for heavy duty diesel engines, respectively specified in sections 86-1360-2007 and 86.1327-98 of the referenced “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles.” With advance Executive Officer approval, a manufacturer may use other methods of ensuring that emissions of CO, PM, and NMHC are not adversely affected in meeting the optional NOx requirement. Also, manufacturers shall state in their application for certification that meeting the optional NOx idling requirement will not adversely affect the associated emissions of CO, PM and NMHC.

c. An engine manufacturer certifying its engine to the optional NOx idling emission standard must also produce a vehicle label, as defined in subsection 35.B.4 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 subsection (b).

* * * *

(9) The exhaust emissions from new 2022 and subsequent model optionally certified heavy-duty diesel hybrid powertrains used in heavy-duty vehicles over 14,000 pounds GVWR shall not exceed the emission standards in 13 CCR §1956.8(a).

The exhaust emission standards from new 2022 and subsequent model optionally certified diesel hybrid powertrains used in incomplete vehicles from 10,001 to 14,000 pounds GVWR shall not exceed the emission standards in 13 CCR §1956.8.

* * * *

(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 April 18, 2019[INSERT DATE OF AMENDMENT], 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.

* * * *

(c)(1)(B) The exhaust emissions from new 2005 ~~and subsequent~~ through 2023 model heavy-duty Otto-cycle engines, except for Otto-cycle medium- and heavy-duty engines subject to the alternative standards in 40 CFR §86.005-10(f), shall not exceed:

California Emission Standards for 2005 and ~~Subsequent through 2023~~ Model Heavy-Duty Otto-Cycle Engines ^A
(in g/bhp-hr)

<i>Model Year</i>	<i>Emission Category</i>	<i>NMHC + NOx</i>	<i>NMHC</i>	<i>NOx</i>	<i>CO^G</i>	<i>HCHO</i>	<i>PM</i>
Standards for Heavy-Duty Otto-Cycle Engines Used in 2005 through 2019 Model Incomplete Medium-Duty Vehicles 8,501 to 10,000 pounds GVW^B and 2005 and Subsequent through 2023-Model Incomplete Medium-Duty Vehicles 10,001 to 14,000 pounds GVW^C							
2005 through 2007	ULEV	1.0 ^{D,F}	n/a	n/a	14.4	0.05	n/a
	SULEV	0.5	n/a	n/a	7.2	0.025	n/a
2008 and subsequent-2023	ULEV	n/a	0.14 ^F	0.20 ^F	14.4	0.01	0.01
	SULEV	n/a	0.07 ^F	0.10 ^F	7.2	0.005	0.005
Standards for Heavy-Duty Otto-Cycle Engines Used In Heavy-Duty Vehicles Over 14,000 pounds GVW							
2005 through 2007	n/a	1.0 ^{D,F}	n/a	n/a	37.1	0.05 ^E	n/a
2008 and subsequent-2023	n/a	n/a	0.14 ^F	0.20 ^F	14.4	0.01	0.01
2015 and subsequent-2023 2021 ^{H,I}	Optional	n/a	0.14	0.10, 0.05, or 0.02	14.4	0.01	0.01
<u>2022-2023</u> ^{H,I}	<u>Optional</u>	<u>n/a</u>	<u>0.14</u>	<u>0.10, 0.05, or 0.02</u>	<u>14.4</u>	<u>0.01</u>	<u>0.01</u>

^A These standards apply to petroleum-fueled, alcohol-fueled, liquefied petroleum gas-fueled and natural gas-fueled Otto-cycle engines.

^B For the 2020 and subsequent model years, medium-duty vehicles 8,501 to 10,000 pounds GVW must certify to the primary emission standards and test procedures for complete vehicles specified in section 1961.2, title 13, CCR.

^C A manufacturer of engines used in incomplete medium-duty vehicles may choose to comply with these standards as an alternative to the primary emission standards and test procedures for complete vehicles specified in section 1961 or 1961.2, title 13, CCR. A manufacturer that chooses to comply with these optional heavy-duty engine standards and test procedures shall specify, in the Part I application for certification, an in-use compliance test procedure, as provided in section 2139(c), title 13 CCR.

^D A manufacturer may request to certify to the Option 1 or Option 2 federal NMHC + NOx standards as set forth in 40 CFR § 86.005-10(f). However, for engines used in medium-duty vehicles, the formaldehyde level must meet the standard specified above.

^E This standard only applies to methanol-fueled Otto-cycle engines.

^F A manufacturer may elect to include any or all of its medium- and heavy-duty Otto-cycle engine families in any or all of the emissions ABT programs for HDEs, within the restrictions described in section I.15 of the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines," incorporated by reference in section 1956.8(d). For engine families certified to the Option 1 or 2 federal standards, the FEL must not exceed 1.5 g/bhp-hr. If a manufacturer elects to include engine families certified to the 2005 and ~~subsequent through 2023~~ model year standards, the NOx plus NMHC FEL must not exceed 1.0 g/bhp-hr. For engine families certified to the 2008 and ~~subsequent through 2023~~ model year standards, the FEL is the same as set forth in 40 CFR 86.008-10(a)(1).

^G Idle carbon monoxide: For all Otto-cycle heavy-duty engines utilizing aftertreatment technology, and not certified to the on-board diagnostics requirements of section 1968, et seq, as applicable, the CO emissions shall not exceed 0.50 percent of exhaust gas flow at curb idle.

^H Optional Low NOx emission standards. A manufacturer may choose to offer an engine that is 50%, 75%, or 90% (or 95% for 2022 and 2023 model year engines) below the current 0.20 g/bhp-hr NOx emission standards for heavy duty engines. A manufacturer may not include an engine family certified to the optional NOx emission standards in the ABT programs for NOx but may include it for NMHC.

^I On Board Diagnostic (OBD) requirements are to be followed using Title 13, CCR, section 1971.1 with the exception of the NOx emission threshold malfunction criteria for all applicable monitors, in which case the malfunction criteria shall be as follows:

(A) for monitors that require detection of a malfunction before emissions exceed 1.5 times the applicable NOx standard, a malfunction criterion of 0.3 g/bhp-hr NOx shall be used (i.e., the OBD system is required to detect a malfunction before NOx emissions exceed 0.3 g/bhp-hr).

(B) for monitors that require detection of a malfunction before emissions exceed 1.75 times the applicable NOx standard, a malfunction criterion of 0.35 g/bhp-hr NOx shall be used (i.e., the OBD system is required to detect a malfunction before NOx emissions exceed 0.35 g/bhp-hr).

(C) for monitors that require detection of a malfunction before emissions exceed 3.0 times the applicable NOx standard, a malfunction criterion of 0.6 g/bhp-hr NOx shall be used (i.e., the OBD system is required to detect a malfunction before NOx emissions exceed 0.6 g/bhp-hr).

(c)(1)(C) The exhaust emissions from 2024 and subsequent model Otto-cycle heavy-duty engines, including engines used in incomplete medium-duty vehicles from 10,001-14,000 pounds GVWR, shall not exceed:

Exhaust Emission Standards for 2024 and Subsequent Model Otto-Cycle Heavy-Duty Engines and Otto-Cycle Engines Used in Incomplete Medium-Duty Vehicles from 10,001-14,000 Pounds GVWR (g/bhp-hr)^A

<u>Test Procedure</u>	<u>Model Year</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Formaldehyde</u>	<u>Particulates</u>
FTP cycle	2024 - 2026	0.050	0.14	14.4	0.01	0.005
FTP Cycle	2027 and Subsequent	0.020	0.14	14.4	0.01	0.005

Optional Low NOx Exhaust Emission Standards for 2024 and Subsequent Model Otto-Cycle Heavy-Duty Engines (g/bhp-hr)^B

<u>Test Procedure</u>	<u>Model Year</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Formaldehyde</u>	<u>Particulates</u>
FTP cycle	2024 - 2026	0.020	0.14	14.4	0.01	0.005
	2027 and Subsequent	0.010	0.14	14.4	0.01	0.005

^A A manufacturer of engines used in incomplete medium-duty vehicles from 10,001-14,000 pounds GVWR may choose to comply with these standards as an alternative to the primary emission standards and test procedures for complete vehicles specified in section 1961.2, title 13, CCR. A manufacturer that chooses to comply with these optional heavy-duty engine standards and test procedures shall specify, in the Part I application for certification, an in-use compliance test procedure, as provided in section 2139(c), title 13 CCR. An engine certified for use in a medium-duty vehicle shall not be used in a heavy-duty vehicle over 14,000 pounds GVWR.

~~^B Optional Low NOx emission standard. A manufacturer may not include an engine family certified to the optional NOx emission standard in the federal or California ABT programs for NOx but may include it for Non methane hydrocarbons.~~

(c)(1)(D) The exhaust emissions from new 2024 and subsequent model Otto-cycle heavy-duty engines used in heavy-duty vehicles over 14,000 pounds GVWR, certified to optional low NOx exhaust emission standards shall not exceed:

**Optional Low NOx Exhaust Emission Standards for 2024 and Subsequent Model
Otto-Cycle Heavy-Duty Engines
(g/bhp-hr)^A**

<u>Test Procedure</u>	<u>Model Year</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Formaldehyde</u>	<u>Particulates</u>
<u>FTP cycle</u>	<u>2024 - 2026</u>	<u>0.010 and 0.020</u>	<u>0.14</u>	<u>14.4</u>	<u>0.01</u>	<u>0.005</u>
<u>FTP cycle</u>	<u>2027 and Subsequent</u>	<u>0.010</u>	<u>0.14</u>	<u>14.4</u>	<u>0.01</u>	<u>0.005</u>

^AA manufacturer may not include an engine family certified to the optional NOx emission standard in the federal or California ABT programs for NOx but may include it for Non-methane hydrocarbons.

* * * *

(3) *Optional Standards for 2023 and Earlier Model Complete and Incomplete Heavy-Duty Vehicles that Use Heavy-Duty Otto-Cycle Engines.* For 2023 and earlier model years only, manufacturers may request to group complete and incomplete heavy-duty Otto-cycle vehicles into the same test group as Otto-cycle vehicles certifying to the LEV III exhaust emission standards and test procedures specified in title 13, CCR, §1961.2, so long as those complete and incomplete heavy-duty Otto-cycle vehicles meet the most stringent LEV III standards to which any vehicle within that test group certifies.

(4) Greenhouse Gas Emission Standards for New 2016 and Subsequent Model Heavy-Duty Otto-Cycle Engines.

(A) *CO₂ Emission Standards.*

1. The CO₂ emissions from new 2016 through 2020 model heavy-duty Otto-cycle engines, except in all cases engines used in medium-duty vehicles, shall not exceed 627 g/hp-hr. This standard continues to apply in 2021 and later model years for all Otto-cycle engines that are not heavy heavy-duty engines. An FCL must be specified for each engine family, which may not be less than the certified emission level for the engine family. The FEL for the engine family is equal to the FCL multiplied by 1.03. The FCL serves as the CO₂ emission standard for the engine family with respect to certification and confirmatory testing instead of the standard specified in this subsection (c)(4)(A). The FEL serves as the emission standard for the engine family with respect to all other testing. The requirements for the optional averaging, banking, and trading program and for generating credits are described in the applicable test procedures incorporated by reference in subsection (d).

2. As an option, 2017 through 2027 model year heavy-duty Otto-cycle engines, except in all cases engines used in medium-duty vehicles, may be certified to the Optional Low-CO₂ Emission Standard. The CO₂ emissions from engines certified to the Optional Low-CO₂ Emission Standard may not exceed 490 g/hp-hr. Engines certified to the Optional Low-CO₂ Emission Standard must also comply with the applicable CH₄ and N₂O emission standards set forth in subsections (c)(4)(B)

and (c)(4)(C), respectively. In addition, engines certified to the Optional Low CO₂ Emission Standard and participating in the Innovative Technology Regulation set forth in sections 2208 and 2208.1 are not eligible to participate in the averaging, banking, and trading program, or to generate credits for certification.

3. The CO₂ emissions from new 2021 and subsequent model Otto-cycle engines characterized as heavy heavy-duty engines used in heavy heavy-duty vocational vehicles ~~Otto-cycle engines and new 2021 and subsequent model heavy heavy-duty tractors~~ Otto-cycle engines shall not exceed:

Model Years	Heavy Heavy-Duty – Vocational (g/hp-hr)	Heavy Heavy-Duty – Tractor (g/hp-hr)
2021-2023	513	447
2024-2026	506	436
2027 and later	503	432

(B) The CH₄ emissions from new 2016 and subsequent model heavy-duty Otto-cycle engines, except in all cases engines used in medium-duty vehicles, shall not exceed 0.10 g/hp-hr.

(C) The N₂O emissions from new 2016 and subsequent model heavy-duty Otto-cycle engines, except in all cases engines used in medium-duty vehicles, shall not exceed 0.10 g/hp-hr.

(5) The exhaust emission standards from new 2022 and subsequent model optionally certified heavy-duty Otto-cycle hybrid powertrains used in heavy-duty vehicles over 14,000 pounds GVWR shall not exceed the emission standards in 13 CCR §1956.8(c) for heavy-duty Otto-Cycle engines used in heavy-duty vehicles over 14,000 pounds GVWR.

The exhaust emission standards from new 2022 and subsequent model optionally certified Otto-cycle hybrid powertrains used in incomplete vehicles from 10,001 to 14,000 pounds GVWR shall not exceed the emission standards in 13 CCR §1956.8 for Otto-Cycle engines used in incomplete vehicles from 10,001 to 14,000 pounds GVWR.

(d) 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 ~~December 19, 2018~~ INSERT DATE OF AMENDMENT], the “California Non-Methane Organic Gas Test Procedures,” adopted July 12, 1991, as last amended December 6, 2012, 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.

* * * *

(h) The exhaust emissions from new:

(1) 1992 through 2004 model-year Otto-cycle engines used in incomplete medium-duty low-emission vehicles, ultra-low-emission vehicles, and super-ultra-low-emission vehicles from 8,501 to 14,000 pounds GVWR; and

(2) ~~1992 and subsequent~~ through 2019 model diesel engines used in medium-duty low-emission vehicles, ultra-low-emission vehicles, and super-ultra-low-emission vehicles from 8,501 to 14,000 pounds GVWR, and 2020 through 2023 model diesel engines used in medium-duty ultra-low-emission vehicles, and super-ultra-low-emission vehicles from 10,001 to 14,000 pounds GVWR shall not exceed:

Exhaust Emission Standards for Engines Used in 1992 through 2004 Model Incomplete Otto-Cycle Medium-Duty Low-Emission Vehicles, Ultra-Low-Emission Vehicles, and Super Ultra-Low-Emission Vehicles, and 1992 and Subsequent through 2023 Model Diesel Engines Used in Medium-Duty Low-Emission Vehicles, Ultra-Low-Emission Vehicles, and Super Ultra-Low-Emission Vehicles ^{A,F}
(grams per brake horsepower-hour)

<i>Model Year</i>	<i>Vehicle Emissions Category^B</i>	<i>Carbon Monoxide</i>	<i>NMHC + NOx^C</i>	<i>Non-Methane Hydrocarbons</i>	<i>Oxides of Nitrogen</i>	<i>Formaldehyde</i>	<i>Particulates^D</i>
1992 ^E - 2001	LEV	14.4	3.5 ^K	n/a	n/a	0.050	0.10 ^K
2002-2003 ^E	LEV	14.4	3.0 ^K	n/a	n/a	0.050	0.10 ^K
1992-2003 ^{E,H}	ULEV	14.4	2.5 ^K	n/a	n/a	0.050	0.10 ^K
2004-2006 ^L	ULEV - Opt A	14.4	2.5 ^{I,J,K}	n/a	n/a	0.050	0.10 ^{J,K}
2004-2006 ^L	ULEV - Opt. B	14.4	2.4 ^{I,J,K}	n/a	n/a	0.050	0.10 ^{J,K}
2007 and subsequent through 2023 ^D (diesel only)	ULEV	15.5	n/a	0.14	0.20	0.050	0.01
1992-2006 ^L	SULEV	7.2	2.0 ^K	n/a	n/a	0.025	0.05 ^K
2007 and subsequent through 2023 ^D (diesel only)	SULEV	7.7	n/a	0.07	0.10	0.025	0.005

^A This set of standards is optional. For the 1992 through 2019 model years, manufacturers of engines used in incomplete medium-duty vehicles or diesel engines used in medium-duty vehicles from 8501-10,000 pounds gross vehicle weight rating may choose to comply with these standards as an alternative to the primary emission standards and test procedures specified in section 1960.1, section 1961, or section 1961.2, Title 13, California Code of Regulations. For the 1992 and subsequent through 2023 model years, manufacturers of engines used in incomplete medium-duty vehicles or diesel engines used in medium-duty vehicles from 10,001-14,000 pounds gross vehicle weight rating may choose to comply with these standards as an alternative to the primary emission standards and test procedures specified in section 1960.1, section 1961, or section 1961.2, Title 13, California Code of Regulations. For the 2020 and subsequent model years, both incomplete medium-duty vehicles and medium-duty vehicles that use a diesel engine 8,501 to 10,000 pounds GVW must certify to the primary emission standards and test procedures for complete vehicles specified in section 1961.2, title 13, CCR. Manufacturers that choose to comply with these optional heavy-duty standards and test procedures shall specify, in the application for certification, an in-use compliance test procedure, as provided in section 2139(c), Title 13, California Code of Regulations.

^B "LEV" means low-emission vehicle.

"ULEV" means ultra-low-emission vehicle.

"SULEV" means super ultra-low-emission vehicle.

^C This standard is the sum of the individual non-methane hydrocarbon emissions and oxides of nitrogen emissions. For methanol-fueled engines, non-methane hydrocarbons shall mean organic material hydrocarbon equivalent ("OMHCE").

^D These standards apply only to diesel engines and vehicles.

^E Manufacturers may certify engines used in incomplete medium-duty vehicles or diesel engines used in medium-duty vehicles to these standards to meet the requirements of section 1956.8(g), Title 13, California Code of Regulations.

^F In-use compliance testing shall be limited to vehicles or engines with fewer than 90,000 miles.

^G [Reserved]

^H For engines certified to the 3.5 grams per brake horsepower-hour (g/bhp-hr) LEV standards, the in-use compliance standard shall be 3.7 g/bhp-hr for the first two model years of introduction. For engines certified to the 2002 and 2003 model year LEV standards, the in-use compliance standard shall be 3.2 g/bhp-hr. For engines certified to the 1992 through 2003 model year ULEV standards, the in-use compliance standard shall be 2.7 g/bhp-hr for the first two model years of introduction. For engines certified to the 1992 ~~and subsequent through 2023~~ SULEV standards, the in-use compliance standard shall be 2.2 g/bhp-hr for the first two model years of introduction.

^I Manufacturers have the option of certifying to either option A or B. Manufacturers electing to certify to Option A must demonstrate that the NMHC emissions do not exceed 0.5 g/bhp-hr.

^J Emissions averaging may be used to meet these standards for diesel engines, using the requirements for participation in averaging, banking and trading programs, as set forth in the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," incorporated by reference in section 1956.8 (b), above.

^K Engines of 1998 ~~and subsequent through 2023~~ model years may be eligible to generate averaging, banking and trading credits based on these standards according to the requirements of the averaging, banking and trading programs described in the "California Exhaust Emission Standards and Test Procedures for 1985 through 2003 Model Heavy-Duty Engines and Vehicles" and the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," incorporated by reference in section 1956.8(b), above.

^L For the 2005 and 2006 model years, these emission standards only apply to diesel engines and vehicles.

(3) 2007 and later model year engines subject to (h)(2) have the following Phase-in Options.

(A) Early NO_x compliant engines. For model years 2007, 2008, and 2009, a manufacturer may, at their option, certify one or more of their engine families to the combined NO_x plus NMHC standard or FEL applicable to model year 2006 engines under section 1956.8(h)(2), in lieu of the separate NO_x and NMHC standards or FELs applicable to the 2007 ~~and subsequent through 2023~~ model years, specified in section 1956.8(h)(2). Each engine certified under this phase-in option must comply with all other emission requirements applicable to model year 2007 engines. To qualify for this option, a manufacturer must satisfy the U.S.-directed production requirement of certifying no more than 50 percent of engines to the NO_x plus NMHC standards or FELs applicable to 2006 engines, as specified in 40 Code of Federal Regulations, part 86, section 86.007-11(g)(1), as adopted January 18, 2001. In addition, a manufacturer may reduce the quantity of engines that are required to be phased-in using the early certification credit program specified in 40 Code of Federal Regulations, part 86, section 86.007-11(g)(2), as adopted January 18, 2001, and the "Blue Sky" engine program specified in 40 Code of Federal Regulations, part 86, section 86.007-11(g)(4), as adopted January 18, 2001.

(B) Early PM compliant engines. A manufacturer certifying engines to the 2007 ~~and subsequent through 2023~~ model year PM standard listed in section 1956.8 (h)(2) (without using credits, as determined in any averaging, banking, or trading program described in "California Exhaust Emission Standards and Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," to comply with the standards) before model year 2007 may reduce the number of engines that are

required to meet the 2007 ~~and subsequent~~ through 2023 model year PM standard listed in section 1956.8(h)(2) in model year 2007, 2008 and/or 2009. To qualify for this option, a manufacturer must satisfy the PM emission requirements pursuant to the methods detailed in 40 Code of Federal Regulations, part 86, section 86.007-11(g)(2)(ii), as adopted January 18, 2001.

(4) No crankcase emissions shall be discharged directly into the ambient atmosphere from any new 2007 or later model year diesel heavy-duty diesel engine, with the following exception: heavy-duty diesel engines equipped with turbochargers, pumps, blowers, or superchargers for air induction may discharge crankcase emissions to the ambient atmosphere if the emissions are added to the exhaust emissions (either physically or mathematically) during all emission testing. Manufacturers taking advantage of this exception must manufacture the engines so that all crankcase emission can be routed into a dilution tunnel (or other sampling system approved in advance by the Executive Officer), and must account for deterioration in crankcase emissions when determining exhaust deterioration factors. For the purpose of section 1956.8(h)(2), crankcase emissions that are routed to the exhaust upstream of exhaust aftertreatment during all operation are not considered to be “discharged directly into the ambient atmosphere.”

(5) *Optional Standards for 2023 and Earlier Model Complete and Incomplete Heavy-Duty Vehicles that Use Heavy-Duty Diesel Engines. For 2023 and earlier model years only.* Manufacturers may request to group complete and incomplete heavy-duty diesel vehicles into the same test group as medium-duty diesel vehicles certifying to the LEV III exhaust emission standards and test procedures specified in title 13, CCR, §1961.2, so long as those complete and incomplete heavy-duty diesel vehicles meet the most stringent LEV III standards to which any vehicle within that test group certifies.

* * * *

(7) The exhaust emissions from new 2024 and subsequent model diesel engines used in medium-duty vehicles from 10,001 – 14,000 pounds GVWR, shall not exceed:

Exhaust Emission Standards for 2024 through 2026 Model Diesel Engines Used in Medium-Duty Vehicles from 10,001 – 14,000 pounds GVWR (g/bhp-hr)^A

<u>Test Procedure</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>	<u>Formaldehyde</u>
<u>FTP cycle</u>	<u>0.050</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>	<u>0.050</u>
<u>RMC cycle</u>	<u>0.050</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>	<u>0.050</u>
<u>Low-load cycle</u>	<u>0.200</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>	<u>0.050</u>

Exhaust Emission Standards for 2027 and Subsequent Model Diesel Engines Used in Medium-Duty Vehicles from 10,001 – 14,000 pounds GVWR (g/bhp-hr)^A

<u>Test Procedure</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>	<u>Formaldehyde</u>
<u>FTP cycle</u>	<u>0.020</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>	<u>0.050</u>
<u>RMC cycle</u>	<u>0.020</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>	<u>0.050</u>
<u>Low-load cycle</u>	<u>0.050</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>	<u>0.050</u>

^A A manufacturers of diesel engines used in medium-duty vehicles from 10,001-14,000 pounds gross vehicle weight rating may choose to comply with these standards as an alternative to the primary emission standards and test procedures specified in section 1961.2, title 13, CCR. A manufacturer that chooses to comply with these optional heavy-duty engine standards and test procedures shall specify, in the Part I application for certification, an in-use compliance test procedure, as provided in section 2139(c), title 13, CCR. An engine certified for use in a medium-duty vehicle shall not be used in a heavy-duty vehicle over 14,000 pounds GVWR.

* * * *

~~(i) Optional 50-State Directed Engine Emission Standards for New 2024 through 2026 Model Heavy Duty Diesel and Otto Cycle Engines.~~

~~(1) For a given model year, a manufacturer may participate in the optional standards for new 50-state directed 2024 through 2026 model diesel and Otto cycle heavy duty engines by complying with the requirements in subparagraphs (i)(1)(A), (i)(1)(B), and (i)(1)(C).~~

~~(A) In lieu of compliance with the requirements specified in subparagraph (a)(2)(C) for diesel engines used in heavy duty vehicles over 14,000 pounds GVWR, a manufacturer may optionally certify all its new 50-state directed diesel engines, not to exceed the following emission standards:~~

Optional Exhaust Emission Standards for 50 State-Directed 2024 Through 2026 Model Heavy-Duty Diesel Engines Used in Vehicles over 14,000 Pounds GVWR (g/bhp-hr)

<u>Test Procedure</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>
<u>FTP cycle</u>	<u>0.10</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>RMC cycle</u>	<u>0.10</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>
<u>Low-load cycle</u>	<u>0.30</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>

(B) In lieu of compliance with the requirements specified in subparagraphs (e)(1)(C) for Otto cycle heavy-duty engines, including engines used in incomplete medium-duty vehicles from 10,001 to 14,000 pounds GVWR, a manufacturer may optionally certify all its new 50 state-directed Otto cycle engines, not to exceed the following emission standards:

Optional Exhaust Emission Standards for 50 State-Directed 2024 through 2026 Model Otto-Cycle Heavy-Duty Engines, Including Engines Used in Incomplete Medium-Duty Vehicles from 10,001-14,000 Pounds GVWR^A (g/bhp-hr)

<u>Test Procedure</u>	<u>Model Year</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>	<u>Formaldehyde</u>
<u>FTP cycle</u>	<u>2024-2026</u>	<u>0.10</u>	<u>0.14</u>	<u>14.4</u>	<u>0.005</u>	<u>0.01</u>

^AA manufacturer of engines used in incomplete medium-duty vehicles from 10,001-14,000 pounds GVWR may choose to comply with these standards as an alternative to the primary emission standards and test procedures for complete vehicles specified in section 1961.2, title 13, CCR. A manufacturer that chooses to comply with these optional heavy-duty engine standards and test procedures shall specify, in the Part I application for certification, an in-use compliance test procedure, as provided in section 2139(e), title 13, CCR. An engine certified for use in a medium-duty vehicle shall not be used in a heavy-duty vehicle over 14,000 pounds GVWR.

(C) In lieu of compliance with the requirements specified in subparagraphs (h)(7) for diesel engines used in medium-duty vehicles from 10,001 to 14,000 pounds GVWR, a manufacturer may optionally certify all its new 50 state-directed diesel engines used in medium-duty vehicles from 10,001 to 14,000 pounds GVWR, not to exceed the following emission standards:

**Optional Exhaust Emission Standards for 50 State Directed 2024 through 2026
Model Diesel Engines Used in Medium-Duty Vehicles from 10,001 – 14,000 pounds GVWR
(g/bhp-hr)^A**

<u>Test Procedure</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>	<u>Formaldehyde</u>
<u>FTP cycle</u>	<u>0.10</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>	<u>0.050</u>
<u>RMC cycle</u>	<u>0.10</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>	<u>0.050</u>
<u>Low load cycle</u>	<u>0.30</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>	<u>0.050</u>

~~^A A manufacturer of diesel engines used in medium-duty vehicles from 10,001-14,000 pounds gross vehicle weight rating may choose to comply with these standards as an alternative to the primary emission standards and test procedures specified in section 1961.2, title 13, CCR. A manufacturer that chooses to comply with these optional heavy-duty engine standards and test procedures shall specify, in the Part I application for certification, an in-use compliance test procedure, as provided in section 2130(c), title 13, CCR. 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) A manufacturer certifying to the Optional 50 State Directed Engine Emissions Standards specified in this subparagraph (i) has the option but is not subject to certifying any engine family to the standards in subparagraphs (a)(2)(C), (a)(2)(D), (c)(1)(C), and (h)(7) for the model year the manufacturer seeks certification.~~

~~(3) A manufacturer that chooses to participate in the Optional 50 State Directed Engine Emissions Standards must forgo any credits generated from the U.S. directed production volume.~~

~~(4) A manufacturer participating in the Optional 50 State Directed Engine Emission Standards program must comply with all applicable model year requirements under title 13, CCR, sections 1956.8, 1968.2, 1971.1, 2035, 2036, 2112, and 2130.~~

~~(5) A manufacturer who violates the requirement to certify all diesel and Otto cycle engines produced by the manufacturer to the Optional 50 State Directed Engine Emission Standards in a given model year may not participate in the Optional 50 State Directed Engine Emission Standards for any model years following the model year for which the violation was found.~~

~~(i)(i) **Severability:** If any provision of this section is held to be invalid or unenforceable by any court of competent jurisdiction, such invalidity shall not affect any provisions of this section that can be effected without the invalid provision.~~

~~(i)(k)(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 section 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 section 2023(b)(7).

(44) “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.

(26) “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.

(37) “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. 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).

(48) “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 for heavy-duty diesel engines, and the test procedure specified in 40 CFR §86.008-10(a)(2), as amended on October 25, 2016, for heavy-duty Otto-cycle engines.

(4)(59) “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.

(6)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 powertrains 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 8 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 NOx 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.

(5)(7)13 “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.

(8)14 “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).

(6)(9)15 “Medium heavy-duty engine” means 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.

(16) “NOx exempt areas” has the same meaning as defined in 13 CCR section 2023(b)(39).

(7)(4)17 “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.

(4)18 “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.

~~(8)(1219)~~ “Tractor” means a vehicle meeting the definition of “tractor” in 40 CFR §1037.801, as amended October 25, 2016, but not classified as a “vocational tractor” under 40 CFR §1037.630, as amended October 25, 2016, or relating to such a vehicle.

~~(9)(1320)~~ “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.

~~(4421)~~ “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.

~~(22)~~ “Transit Agency” has the same meaning as defined in 13 CCR section 2023(b)(51)

~~(23)~~ “Urban Bus” has the same meaning as defined in 40 CFR 86.092-21

~~(40)(1524)~~ “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.

~~(11)(1625)~~ “Vocational vehicle” means a vehicle meeting the definition of “vocational” vehicle in 40 CFR §1037.801, as amended October 25, 2016.

~~(12)(1726)~~ “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).

~~(18) “50 state directed engines” means the entire volume of new heavy duty Otto cycle and diesel engines produced by a manufacturer and intended for sale in the United States of America in a given model year, from 2024 through 2026 model years, used in medium-duty vehicles from 10,001 – 14,000 pounds GVWR, heavy-duty vehicles over 14,000 pounds GVWR, and hybrid powertrains that are certified to the standards and test procedures of title 13, CCR, section 1956.8.~~

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, 43202, 43204, 43205, 43205.5, 43206, 43210, 43211, 43212, 43213 and 43806, Health and Safety Code; and Section 28114, Vehicle Code.

§ 1961.2. Exhaust Emission Standards and Test Procedures - 2015 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.

* * * *

(b) *Emission Standards Phase-In Requirements for Manufacturers.*

* * * *

(3) *LEV III Phase-In Requirements for Medium-Duty Vehicles, Other than Medium-Duty Passenger Vehicles.*

(A) *Requirement for Manufacturers Other than Small Volume Manufacturers.* A manufacturer of MDVs, other than a small volume manufacturer, shall certify its MDV fleet according to the following phase-in schedule:

1. *LEV III Phase-in Requirements for Medium-Duty Vehicles Certified to Subsection (a)(1).*

Model Year	Vehicles Certified to §1961.2(a)(1) ¹ (%)				Vehicles Certified to §1956.8(c) or (h) (%)
	LEV II LEV; LEV III LEV395 or LEV630	LEV II ULEV; LEV III ULEV340 or ULEV570	LEV III ULEV250 or ULEV400	LEV III SULEV170 or SULEV230	ULEV
2015	40	60	0	0	100
2016	20	60	20	0	100
2017	10	50	40	0	100
2018	0	40	50	10	100
2019	0	30	40	30	100
2020	0	20	30	50	100
2021	0	10	20	70	100
2022 +	0	0	10	90	100

¹ The LEV II LEV and LEV II ULEV emission categories are only applicable for the 2015 through 2019 model years. The LEV III LEV395, LEV630, ULEV340, and ULEV570 emission categories are only applicable for the 2015 through 2021 model years.

2. LEV III Phase-in Requirements for Incomplete Medium-Duty Vehicles Using Otto-Cycle Engines Certified to Title 13, CCR, Section 1956.8, and Medium-Duty Vehicles Using Diesel Engines Certified to Title 13, CCR, Section 1956.8.

Model Year	Vehicles Using Engines Certified to title 13, CCR, Subsection 1956.8(c)(1)(B) or (h)(2) (%)	Vehicles Using Engines Certified to title 13, CCR, Subsection 1956.8(c)(1)(C) or (h)(7) (%)
2015-2022+2023	100% ULEV	0
2024+	0	100%

~~† If a manufacturer elects to certify to the “Optional 50 State Directed Engine Emission Standards for New 2024 through 2026 Model Heavy Duty Diesel and Otto Cycle Engines,” in section 1956.8, the Optional 50 State Direct Exhaust Emission standards for Otto cycle engines used in incomplete medium-duty vehicles from 10,001-14,000 pounds GVWR and diesel engines used in medium-duty vehicles from 10,001-14,000 pounds GVWR shall apply in lieu of the standards in this table.~~

* * * *

(C) *Alternate Phase-In Schedules for LEV III MDVs.*

* * * *

2. Alternate Phase-In Schedules for LEV III MDVs Certified to Subsection (a)(1) for Manufacturers with a Limited Number of Test Groups. For the 2016 and subsequent model years, a manufacturer that produces and delivers for sale in California four or fewer medium-duty test groups may comply with the following alternate phase-in schedule for LEV III medium-duty vehicles.

a. A manufacturer that produces and delivers for sale in California four medium-duty test groups certified to subsection (a)(1) may comply with the following alternate phase-in schedule for LEV III medium-duty vehicles instead of subsection (b)(3)(A)1.

Model Year	Number of Test Groups Certified to §1961.2(a)(1)				Vehicles Certified to §1956.8(c) or (h) (%)
	LEV II LEV; LEV III LEV395 or LEV630	LEV II ULEV; LEV III ULEV340 or ULEV570	LEV III ULEV250 or ULEV400	LEV III SULEV170 or SULEV230	ULEV
2016-2017	1	2	1	0	100
2018	0	2	2	0	100
2019	0	1	2	1	100
2020	0	1	1	2	100
2021	0	0	1	3	100
2022 +	0	0	0	4	100

b. A manufacturer that produces and delivers for sale in California three medium-duty test groups certified to subsection (a)(1) may comply with the following alternate phase-in schedule for LEV III medium-duty vehicles instead of subsection (b)(3)(A)1.

Model Year	Number of Test Groups Certified to §1961.2(a)(1)				Vehicles Certified to §1956.8(c) or (h) (%)
	LEV II LEV; LEV III LEV395 or LEV630	LEV II ULEV; LEV III ULEV340 or ULEV570	LEV III ULEV250 or ULEV400	LEV III SULEV170 or SULEV230	ULEV
2016	1	2	0	0	100
2017	0	2	1	0	100
2018	0	1	2	0	100
2019-2020	0	1	1	1	100
2021	0	0	1	2	100
2022 +	0	0	0	3	100

c. A manufacturer that produces and delivers for sale in California two medium-duty test groups certified to subsection (a)(1) may comply with the following alternate phase-in schedule for LEV III medium-duty vehicles instead of subsection (b)(3)(A)1.

Model Year	Number of Test Groups Certified to §1961.2(a)(1)				Vehicles Certified to §1956.8(e) or (h) (%)
	LEV II LEV; LEV III LEV395 or LEV630	LEV II ULEV; LEV III ULEV340 or ULEV570	LEV III ULEV250 or ULEV400	LEV III SULEV170 or SULEV230	ULEV
2016	1	1	0	0	100
2017-2019	0	1	1	0	100
2020-2021	0	0	1	1	100
2022 +	0	0	0	2	100

d. A manufacturer that produces and delivers for sale in California one medium-duty test groups certified to subsection (a)(1) may comply with the following alternate phase-in schedule for LEV III medium-duty vehicles instead of subsection (b)(3)(A)1.

Model Year	Number of Test Groups Certified to §1961.2(a)(1)				Vehicles Certified to §1956.8(e) or (h) (%)
	LEV II LEV; LEV III LEV395 or LEV630	LEV II ULEV; LEV III ULEV340 or ULEV570	LEV III ULEV250 or ULEV400	LEV III SULEV170 or SULEV230	ULEV
2016-2018	0	1	0	0	100
2019-2021	0	0	1	0	100
2022 +	0	0	0	1	100

(D) *Identifying a Manufacturer's MDV Fleet.* Each manufacturer's MDV fleet shall be defined as the total number of California-certified MDVs produced and delivered for sale in California. For the purpose of demonstrating compliance with the LEV III phase-in requirements in subsection (b)(3), each manufacturer's MDV fleet must be divided into two separate groups of vehicles – "chassis-certified MDVs" that certify to subsection (a)(1) and "engine-certified MDVs" that use engines certified to the standards in section 1956.8. The phase-in percentages in subsection (b)(3) for vehicles certified to subsection (a)(1) shall be applied to the manufacturers' total production of California chassis-certified medium-duty vehicles delivered for sale in California. The phase-in percentages in subsection (b)(3) for vehicles certified to section 1956.8 shall be applied to the manufacturer's total production of California engine-certified medium-duty vehicles delivered for sale in California. ~~A manufacturer that elects to certify to the optional medium-duty engine standards in subsections 1956.8(e) or (h) shall not count~~

those engines in the manufacturer's total production of California-certified medium-duty vehicles for purposes of this subsection.

* * * *

(4) *SFTP Phase-In Requirements.*

* * * *

(C) *Identifying a Manufacturer's Medium-Duty Vehicle Fleet.* For the 2016 and subsequent model years, each manufacturer's MDV fleet shall be defined as the total number of California-certified MDVs, other than MDPVs, produced and delivered for sale in California. For 2016 and subsequent model years, a manufacturer that elects to certify engines to the optional medium-duty engine emission standards in subsections 1956.8(e) or (h) shall not count those engines in the manufacturer's total production of California-certified medium-duty vehicles for purposes of this subparagraph.

* * * *

(d) *Test Procedures.* The certification requirements and test procedures for determining compliance with the emission standards in this section are set forth in the "California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," as amended December 19, 2018 [INSERT DATE OF AMENDMENT], the "California Non-Methane Organic Gas Test Procedures for 1993 through 2016 Model Year Vehicles," as amended September 2, 2015, and the "California Non-Methane Organic Gas Test Procedures for 2017 and Subsequent Model Year Vehicles," as adopted September 2, 2015, which are all incorporated herein by reference. In the case of hybrid electric vehicles and on-board fuel-fired heaters, the certification requirements and test procedures for determining compliance with the emission standards in this section are set forth in the "California Exhaust Emission Standards and Test Procedures for 2009 through 2017 Model Zero-Emission Vehicles and Hybrid Electric Vehicles, in the Passenger Car, Light-Duty Truck and Medium-Duty Vehicle Classes," incorporated by reference in section 1962.1, and the "California Exhaust Emission Standards and Test Procedures for 2018 and Subsequent Model Zero-Emission Vehicles and Hybrid Electric Vehicles, in the Passenger Car, Light-Duty Truck and Medium-Duty Vehicle Classes," incorporated by reference in section 1962.2.

§ 1965. Emission Control, Smog Index, and Environmental Performance Labels - 1979 and Subsequent Model-Year Motor Vehicles.

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§1968.2. Malfunction and Diagnostic System Requirements--2004 and Subsequent Model-Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles and Engines

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(e) *Monitoring Requirements For Gasoline/Spark-Ignited Engines.*

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(17) *Exceptions to Monitoring Requirements*

* * * *

(17.1) Except as provided in sections (e)(17.1.1) through (17.1.3), ~~(e)(17.1.4)(B) through (C)~~, and (e)(17.1.5) below, upon request of a manufacturer or upon the best engineering judgment of the ARB, the Executive Officer may revise the emission threshold for a malfunction on any diagnostic required in section (e) if the most reliable monitoring method developed requires a higher threshold to prevent false indications of a malfunction.

* * * *

(17.1.4) For medium-duty vehicles certified to an engine dynamometer tailpipe emission standard:

(A) Except as provided for in sections (e)(17.1.4)(B) and (C) below, the manufacturer shall request Executive Officer approval of a malfunction criterion that is equivalent to that proposed for each monitor in section (e). The Executive Officer shall approve the request upon finding that the manufacturer has used good engineering judgment in determining the equivalent malfunction criterion and that the criterion will provide for similar timeliness in detection of malfunctioning components.

(B) Alternate malfunction criteria:

(i) For 2022 and 2023 model year vehicles using engines that meet all the requirements under sections (e)(17.1.4)(B)(i)a. through c. below, the manufacturer shall use the NOx threshold specified in section (e)(17.1.4)(B)(ii) and the PM threshold specified in section (e)(17.1.4)(B)(iii):

a. Certify to an FTP NOx emission standard of 0.10 g/bhp-hr or lower.

b. Certify to an FTP PM emission standard of 0.005 g/bhp-hr or lower.

and

c. Comply with the 1-binned moving average window method for in-use testing as described in section 86.1370.B of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles, incorporated by reference in section 1956.8(d), title 13, CCR.

(ii) For 2024 and subsequent model year vehicles using engines certified to an FTP engine NOx standard applicable for 2024 and subsequent model year engines and at of 0.10 g/bhp-hr or lower, in lieu of the NOx thresholds set forth in sections (e)(1) through (e)(3), (e)(5) through (e)(8), and (e)(11) through (e)(13), the manufacturer shall use the following thresholds for NOx:

a. (i) For monitors in section (e) except for the catalyst monitor required to detect a malfunction before NOx emissions exceed 1.5 times the

~~applicable NOx standard, the manufacturer shall use a NOx threshold of 0.30 g/bhp-hr NOx (i.e., detect a malfunction before NOx emissions exceed 0.30 g/bhp-hr rather than before emissions exceed 1.5 times the applicable NOx standard);~~

~~b.(ii) For catalyst monitors in section (e)(1) required to detect a malfunction before NOx emissions exceed 1.75 times the applicable NOx standard, the manufacturer shall use a NOx threshold of 0.35 g/bhp-hr NOx (i.e., detect a malfunction before NOx emissions exceed 0.35 g/bhp-hr rather than before emissions exceed 1.75 times the applicable NOx standard);~~

~~(iii) For monitors required to detect a malfunction before NOx emissions exceed 3.0 times the applicable NOx standard, the manufacturer shall use a threshold of 0.60 g/bhp-hr NOx (i.e., detect a malfunction before emissions exceed 0.60 g/bhp-hr rather than before emissions exceed 3.0 times the applicable NOx standard);~~

~~(iii)(C) For 2024 and subsequent model year vehicles using engines certified to an FTP engine PM standard applicable for 2024 and subsequent model year engines and at or below 0.005 g/bhp-hr or lower, in lieu of the PM thresholds set forth in sections (e)(1) through (e)(3), (e)(5) through (e)(8), and (e)(11) through (e)(13), the manufacturer shall use a PM threshold of 0.015 g/bhp-hr (e.g., detect a malfunction before PM emissions exceed 0.015 g/bhp-hr rather than before PM emissions exceed 1.5 times the applicable PM standards).~~

(C) Alternate malfunction criteria for engine cooling system thermostat monitor: For 2022 and 2023 model year vehicles using engines that meet the criteria under sections (e)(17.1.4)(B)(i)a. through c. and 2024 and subsequent model year vehicles using engines certified to an FTP engine NOx standard of 0.10 g/bhp-hr or lower or certified to an FTP engine PM standard of 0.005 g/bhp-hr or lower, for the thermostat monitor malfunction criteria specified under section (e)(10.2.1)(A)(ii) where fuel, spark timing, and/or other coolant temperature-based modifications to the engine control strategies would not cause an emissions increase of 50 or more percent of the applicable standards, the manufacturer shall use the following NOx or PM standard:

(i) For engines certified to an FTP engine NOx standard of 0.10 g/bhp-hr or lower, 0.20 g/bhp-hr for the applicable NOx standard.

(ii) For engines certified to an FTP engine PM standard of 0.005 g/bhp-hr or lower, 0.01 g/bhp-hr for the applicable PM standard.

* * * *

(f) *Monitoring Requirements For Diesel/Compression-Ignition Engines.*

* * * *

(17) *Exceptions to Monitoring Requirements*

* * * *

(17.1) Except as provided in sections (f)(17.1.1) through (17.1.4) below, upon request of a manufacturer or upon the best engineering judgment of the ARB, the Executive Officer may revise the emission threshold for a malfunction on

any diagnostic required in section (f) for medium-duty vehicles if the most reliable monitoring method developed requires a higher threshold to prevent false indications of a malfunction. Additionally, upon the request of a manufacturer or upon the best engineering judgment of the ARB, the Executive Officer may revise the emission threshold for a malfunction on any diagnostic required in section (f) for passenger cars, light-duty trucks, and MDPVs certified to a chassis dynamometer tailpipe emission standard if the Executive Officer determines that (1) the most reliable monitoring method developed requires a higher threshold to prevent false indications of a malfunction; (2) a higher threshold is needed under section (e)(17.1) for a corresponding diagnostic in section (e) (e.g., EGR system, misfire, exhaust gas sensor, aftertreatment) for light-duty vehicles; and (3) the threshold for the diagnostic on the diesel vehicle is less than or equal to the threshold required for the corresponding diagnostic on the gasoline vehicle. Additionally, except as specified in section (f)(9.2.1)(A)(iii), for 2007 through 2013 model year light-duty vehicles and 2007 through 2015 model year medium-duty vehicles, the Executive Officer may revise the PM filter malfunction criteria of section (f)(9.2.1) to exclude detection of specific failure modes (e.g., combined failure of partially melted and partially cracked substrates) if the most reliable monitoring method developed requires the exclusion of specific failure modes to prevent false indications of a malfunction.

* * * *

(17.1.3) For medium-duty diesel vehicles (including MDPVs) certified to an engine dynamometer tailpipe emission standard:

(A) Except as provided below in sections (f)(17.1.3)(B)(iii) and (C), the Executive Officer shall approve a malfunction criteria of “the applicable PM standard plus 0.02 g/bhp-hr PM (e.g., unable to maintain PM emissions at or below 0.03 g/bhp-hr if the exhaust emission standard is 0.01 g/bhp-hr) as measured from an applicable cycle emission test” in lieu of “0.03 g/bhp-hr PM as measured from an applicable cycle emission test” wherever required in section (f). The Executive Officer shall also approve a malfunction criteria of “the applicable PM standard plus 0.04 g/bhp-hr PM (e.g., unable to maintain PM emissions at or below 0.05 g/bhp-hr if the exhaust emission standard is 0.01 g/bhp-hr) as measured from an applicable cycle emission test” in lieu of “0.05 g/bhp-hr PM as measured from an applicable cycle emission test” wherever required in section (f).

(B) Alternate malfunction criteria:

(i) For 2022 and 2023 model year vehicles using engines that meet all the requirements under sections (f)(17.1.3)(B)(i)a. through e. below, in lieu of the NOx and PM thresholds set forth in sections (f)(1) through (f)(9), and (f)(12) through (f)(14), the manufacturer shall use the NOx threshold specified in section (f)(17.1.3)(B)(ii) and the PM threshold specified in section (f)(17.1.3)(B)(iii):

a. Certify to an FTP and SET NOx emission standard of 0.10 g/bhp-hr or lower.

- b. Certify to a low load cycle NOx emission standard of 0.30 g/bhp-hr or lower (as described in section I.11.B.8 of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR).
 - c. Certify to an optional idle NOx standard of 10 g/hr (as described in section I.11.B.6.3 of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR).
 - d. Certify to an FTP, SET, and low load cycle (as described in section I.11.B.8 of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR) PM emission standard of 0.005 g/bhp-hr or lower, and
 - e. Comply with the 3-binned moving average window method for in-use testing as described in section 86.1370.B of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR.
- (ii) For 2024 and subsequent model year vehicles using engines certified to an FTP engine NOx standard ~~applicable for 2024 and subsequent model year engines and at~~ of 0.10 g/bhp-hr or lower, in lieu of the NOx thresholds set forth in sections (f)(1), ~~(f)(2), (f)(4)~~ through (f)(9), and (f)(12) through (f)(14), the manufacturer shall use a threshold of 0.40 g/bhp-hr NOx (e.g., detect a malfunction before NOx emissions exceed 0.40 g/bhp-hr rather than before NOx emissions exceed 2.0 times the applicable NOx standard).
- (Ciii) For 2024 and subsequent model year vehicles using engines certified to an FTP engine PM standard ~~applicable for 2024 and subsequent model year engines and at~~ of 0.005 g/bhp-hr or lower, in lieu of the PM thresholds set forth in sections (f)(1), (f)(2), (f)(4) through (f)(9), and (f)(12) through (f)(14), if the manufacturer uses the malfunction criteria “the applicable PM standard plus 0.02 g/bhp-hr PM” in lieu of the 0.03 g/bhp-hr PM threshold set forth in section (f) as allowed in section (f)(17.1.3)(A), the manufacturer shall use a PM threshold of 0.03 g/bhp-hr (e.g., detect a malfunction before PM emissions exceed 0.03 g/bhp-hr rather than before PM emissions exceed the applicable PM standards by more than 0.02 g/bhp-hr).
- (C) Alternate malfunction criteria for engine cooling system thermostat monitor: For 2022 and 2023 model year vehicles using engines that meet the criteria under sections (f)(17.1.3)(B)(i)a. through e. and 2024 and subsequent model year vehicles using engines certified to an FTP engine NOx standard of 0.10 g/bhp-hr or lower or certified to an FTP engine PM standard of 0.005 g/bhp-hr or lower, for the thermostat monitor

malfunction criteria specified under section (f)(11.2.1)(A)(ii) where fuel, injection timing, and/or other coolant temperature-based modifications to the engine control strategies would not cause an emissions increase of 50 or more percent of the applicable standards, the manufacturer shall use the following NOx or PM standard:

- (i) For engines certified to an FTP engine NOx standard of 0.10 g/bhp-hr or lower, 0.20 g/bhp-hr for the applicable NOx standard.
- (ii) For engines certified to an FTP engine PM standard of 0.005 g/bhp-hr or lower, 0.01 g/bhp-hr for the applicable PM standard.

(D) Alternate test-out criteria:

(i) For 2022 and 2023 model year vehicles using engines that meet all the requirements under sections (f)(17.1.3)(D)(i)a. through e. below, the manufacturer shall use the NOx test-out criteria specified in section (f)(17.1.3)(D)(ii) and the PM test-out criteria specified in section (f)(17.1.3)(D)(iii).:

- a. Certify to an FTP and SET NOx emission standard of 0.10 g/bhp-hr or lower.
- b. Certify to a low load cycle NOx emission standard of 0.30 g/bhp-hr or lower (as described in section I.11.B.8 of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR).
- c. Certify to an optional idle NOx standard of 10 g/hr (as described in section I.11.B.6.3 of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR).
- d. Certify to an FTP, SET, and low load cycle (as described in section I.11.B.8 of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR) PM emission standard of 0.005 g/bhp-hr or lower, and
- e. Comply with the 3-binned moving average window method for in-use testing as described in section 86.1370.B of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR.

(ii) For 2024 and subsequent model year vehicles using engines certified to an FTP NOx emission standard of 0.10 g/bhp-hr or lower, in lieu of the NOx test-out criteria specified in sections (f)(1.2.3)(B), (f)(1.2.3)(D), (f)(6.2.6)(C), (f)(9.2.4)(A), (f)(9.2.4)(B), and (f)(15.2.2)(F)(ii), the manufacturer shall use the following criteria to determine if the specific component or function is exempt from the monitoring requirements:

- a. In lieu of the criterion where no malfunction can cause NOx emissions to increase by 15 percent or more of the applicable NOx

standard, the manufacturer shall use the criterion where no malfunction can cause NOx emissions to increase by 0.03 g/bhp-hr or more.

b. In lieu of the criterion where no malfunction can cause NOx emissions to increase by 30 percent or more of the applicable NOx standard, the manufacturer shall use the criterion where no malfunction can cause NOx emissions to increase by 0.06 g/bhp-hr or more.

c. In lieu of the criterion where no malfunction can cause NOx emissions to exceed the applicable NOx standard, the manufacturer shall use the criterion where no malfunction can cause NOx emissions to exceed 0.20 g/bhp-hr.

(iii) For 2024 and subsequent model year vehicles using engines certified to an FTP PM emission standard of 0.005 g/bhp-hr or lower, in lieu of the PM test-out criteria specified in sections (f)(1.2.3)(D), (f)(6.2.6)(C), (f)(9.2.4)(A), and (f)(15.2.2)(F)(ii), the manufacturer shall use the following criteria to determine if the specific component or function is exempt from the monitoring requirements:

a. In lieu of the criterion where no malfunction can cause PM emissions to increase by 15 percent or more of the applicable PM standard, the manufacturer shall use the criterion where no malfunction can cause PM emissions to increase by 0.0015 g/bhp-hr or more.

b. In lieu of the criterion where no malfunction can cause PM emissions to exceed the applicable PM standard, the manufacturer shall use the criterion where no malfunction can cause PM emissions to exceed 0.01 g/bhp-hr.

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NOTE: Authority cited: Sections 38501, 38505, 38510, 39010, 39600, 39601, 39602.5, 43000.5, 43013, 43018, 43100, 43101, 43104, 43105, 43105.5 and 43106, Health and Safety Code; and *Engine Manufacturers Association v. California Air Resources Board* (2014) 231 Cal.App.4th 1022. 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.

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

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(g) Monitoring Requirements For All Engines.

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(5) Exceptions to Monitoring Requirements

(5.1) Upon request of a manufacturer or upon the best engineering judgment of ARB, the Executive Officer may revise the emission threshold for any monitor in sections (e) through (g) if the most reliable monitoring method developed requires a higher threshold to prevent false indications of a malfunction. Additionally, except as specified in section (e)(8.2.1)(C), for 2010 through 2015 model year engines, the Executive Officer may revise the PM filter malfunction criteria of section (e)(8.2.1) to exclude detection of specific failure modes (e.g., partially melted substrates) if the most reliable monitoring method developed requires the exclusion of specific failure modes to prevent false indications of a malfunction.

(5.2) Alternate Malfunction Criteria and Monitoring Test-Out Criteria

(5.2.1) Alternate malfunction criteria for diesel/compression-ignition engines:

(A) For 2010 through 2012 model year diesel engines, in determining the malfunction criteria for diesel engine monitors in sections (e)(1), (3), (4), (5), (8.2.2), (9.2.1)(A), and (e)(10), the manufacturer shall use a threshold of 2.5 times any of the applicable NMHC, CO, or NOx standards in lieu of 2.0 times any of the applicable standards.

(B) For 2015 through 2023 model year diesel engines certified to Optional Low NOx emission standards of 0.10 g/bhp-hr or lower, in lieu of the NOx thresholds set forth in sections (e)(1) or (e)(3) through (e)(11), the manufacturer shall use a threshold of 0.4 g/bhp-hr NOx (e.g., detect a malfunction before NOx emissions exceed 0.4 g/bhp-hr rather than before NOx emissions exceed 2.0 times the applicable NOx standard).

(C) For 2022 and 2023 model year engines that meet all the requirements under sections (g)(5.2.1)(C)(i) through (v) below, in lieu of the NOx and PM thresholds set forth in sections (e)(1) through (e)(11), the manufacturer shall use the NOx threshold specified in section (g)(5.2.1)(D) and the PM threshold specified in section (g)(5.2.1)(E).:

(i) Certify to an FTP and SET NOx emission standard of 0.10 g/bhp-hr or lower.

(ii) Certify to a low load cycle NOx emission standard of 0.30 g/bhp-hr or lower (as described in section I.11.B.8 of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR).

(iii) Certify to an optional idle NOx standard of 10 g/hr (as described in section I.11.B.6.3 of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR).

- (iv) Certify to an FTP, SET, and low load cycle (as described in section I.11.B.8 of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR) PM emission standard of 0.005 g/bhp-hr or lower, and
- (v) Comply with the 3-binned moving average window method for in-use testing as described in section 86.1370.B of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR.
- ~~(C)(D) For 2024 and subsequent model year diesel engines certified to an FTP NOx emission standard applicable for 2024 and subsequent model year engines and at of 0.10 g/bhp-hr or lower, in lieu of the NOx thresholds set forth in sections (e)(1) or (e)(3) through (e)(11), the manufacturer shall use a threshold of 0.40 g/bhp-hr NOx (e.g., detect a malfunction before NOx emissions exceed 0.40 g/bhp-hr rather than before NOx emissions exceed 2.0 times the applicable NOx standard).~~
- ~~(D)(E) For 2024 and subsequent model year diesel engines certified to an FTP PM emission standard applicable for 2024 and subsequent model year engines and at of 0.005 g/bhp-hr or lower, in lieu of the PM thresholds set forth in sections (e)(1) or (e)(3) through (e)(11), the manufacturer shall use a PM threshold of 0.03 g/bhp-hr as measured on the FTP and SET cycles, (i.e.e.g., detect a malfunction before PM emissions exceed 0.03 g/bhp-hr rather than before PM emissions exceed the applicable PM standards by more than 0.02 g/bhp-hr).~~
- ~~(E) For 2022 and 2023 model year diesel engines that certify to:~~
- ~~(i) An FTP and SET NOx emission standard of 0.10 g/bhp-hr or lower, and~~
- ~~(ii) A low load cycle NOx emission standard of 0.30 g/bhp-hr or lower (as described in section I.11.B.8 of California exhaust emission standards and test procedures for 2004 and subsequent model heavy duty diesel engines and vehicles, last amended TBD), and~~
- ~~(iii) An optional idle NOx standard of 10 g/hr (as described in section I.11.B.6.3 of California exhaust emission standards and test procedures for 2004 and subsequent model heavy duty diesel engines and vehicles, last amended TBD), and~~
- ~~(iv) An FTP, SET and low load cycle (as described in section I.11.B.8 of California exhaust emission standards and test procedures for 2004 and subsequent model heavy duty diesel engines and vehicles, last amended TBD) PM emission standard of 0.005 g/bhp-hr or lower, and~~
- ~~(v) Comply with the binned moving average window method for in-use testing as described in section 86.1370.B of California exhaust emission standards and test procedures for 2004 and subsequent model heavy duty diesel engines and vehicles, last amended TBD, in lieu of the NOx thresholds set forth in sections (e)(1) or (e)(3) through (e)(11), the manufacturer shall use a threshold of 0.40 g/bhp-~~

~~hr NOx (e.g., detect a malfunction before NOx emissions exceed 0.40 g/bhp-hr rather than before NOx emissions exceed 2.0 times the applicable NOx standard). Also, in lieu of the PM thresholds set forth in sections (e)(1) or (e)(3) through (e)(11), the manufacturer shall use a PM threshold of 0.03 g/bhp-hr as measured on the FTP and SET cycles, (i.e., detect a malfunction before PM emissions exceed 0.03 g/bhp-hr rather than before PM emissions exceed the applicable PM standards by more than 0.02 g/bhp-hr).~~

(5.2.2) Alternate malfunction criteria For gasoline/spark-ignited engines:

(A) For 2015 through 2023 model year gasoline engines certified to Optional Low NOx emission standards of 0.10 g/bhp-hr or lower, in lieu of the NOx thresholds set forth in sections (f)(1) through (f)(6) and (f)(8) through (f)(9), the manufacturer shall use the following threshold:

(i) For monitors required to detect a malfunction before NOx emissions exceed 1.5 times the applicable NOx standard, the manufacturer shall use a threshold of 0.3 g/bhp-hr NOx (i.e., detect a malfunction before NOx emissions exceed 0.3 g/bhp-hr rather than before emissions exceed 1.5 times the applicable NOx standard).

(ii) For monitors required to detect a malfunction before NOx emissions exceed 1.75 times the applicable NOx standard, the manufacturer shall use a threshold of 0.35 g/bhp-hr NOx (i.e., detect a malfunction before NOx emissions exceed 0.35 g/bhp-hr rather than before emissions exceed 1.75 times the applicable NOx standard).

(iii) For monitors required to detect a malfunction before NOx emissions exceed 3.0 times the applicable NOx standard, the manufacturer shall use a threshold of 0.6 g/bhp-hr NOx (i.e., detect a malfunction before emissions exceed 0.6 g/bhp-hr rather than before emissions exceed 3.0 times the applicable NOx standard).

(B) For 2022 and 2023 model year engines that meet all the requirements under sections (g)(5.2.2)(B)(i) through (iii) below, in lieu of the NOx and PM thresholds set forth in sections (f)(1) through (f)(6) and (f)(8) through (f)(9), the manufacturer shall use the NOx threshold specified in section (g)(5.2.2)(C) and the PM threshold specified in section (g)(5.2.2)(D):

(i) Certify to an FTP NOx emission standard of 0.10 g/bhp-hr or lower,

(ii) Certify to an FTP PM emission standard of 0.005 g/bhp-hr or lower,
and

(iii) Comply with the 1-binned moving average window method for in-use testing as described in section 86.1370.B of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles, incorporated by reference in section 1956.8(d), title 13, CCR.

(B)(C) For 2024 and subsequent model year gasoline engines certified to an FTP engine NOx standard applicable for 2024 and subsequent model year engines and at of 0.10 g/bhp-hr or lower, in lieu of the NOx thresholds set forth in sections (f)(1) through (f)(6) and (f)(8) through (f)(9), the manufacturer shall use the following threshold:

- (i) For monitors required to detect a malfunction before NOx emissions exceed 1.5 times the applicable NOx standard, the manufacturer shall use a threshold of 0.30 g/bhp-hr NOx (i.e., detect a malfunction before NOx emissions exceed 0.30 g/bhp-hr rather than before emissions exceed 1.5 times the applicable NOx standard).
 - (ii) For monitors required to detect a malfunction before NOx emissions exceed 1.75 times the applicable NOx standard, the manufacturer shall use a threshold of 0.35 g/bhp-hr NOx (i.e., detect a malfunction before NOx emissions exceed 0.35 g/bhp-hr rather than before emissions exceed 1.75 times the applicable NOx standard).
 - ~~(iii) For monitors required to detect a malfunction before NOx emissions exceed 3.0 times the applicable NOx standard, the manufacturer shall use a threshold of 0.60 g/bhp-hr NOx (i.e., detect a malfunction before emissions exceed 0.60 g/bhp-hr rather than before emissions exceed 3.0 times the applicable NOx standard).~~
 - ~~(G)(D) For 2024 and subsequent model year gasoline engines certified to an FTP engine PM standard applicable for 2024 and subsequent model year engines and at or below 0.005 g/bhp-hr or lower, in lieu of the PM thresholds set forth in sections (f)(1) through (f)(6) and (f)(8) through (f)(9), the manufacturer shall use a PM threshold of 0.015 g/bhp-hr (i.e., detect a malfunction before PM emissions exceed 0.015 g/bhp-hr rather than before PM emissions exceed 1.5 times the applicable PM standards).~~
- (5.2.3) Alternate malfunction criteria for engine cooling system thermostat monitor:
- (A) Diesel/compression-ignition engines: For 2022 and 2023 model year engines that are certified to Optional Low NOx emission standards of 0.10 g/bhp-hr or lower or that meet the criteria under sections (g)(5.2.1)(C)(i) through (v), and 2024 and subsequent model year engines certified to an FTP engine NOx standard of 0.10 g/bhp-hr or lower or certified to an FTP engine PM standard of 0.005 g/bhp-hr or lower, for the thermostat monitor malfunction criteria specified under section (g)(1.2.1)(A)(ii) where fuel, spark timing, and/or other coolant temperature-based modifications to the engine control strategies would not cause an emissions increase of 50 or more percent of the applicable standards, the manufacturer shall use the following NOx or PM standard:
 - (i) For engines certified to an FTP engine NOx standard of 0.10 g/bhp-hr or lower, 0.20 g/bhp-hr for the applicable NOx standard.
 - (ii) For engines certified to an FTP engine PM standard of 0.005 g/bhp-hr or lower, 0.01 g/bhp-hr for the applicable PM standard.
 - (B) Gasoline/spark-ignited engines: For 2022 and 2023 model year engines that are certified to Optional Low NOx emission standards of 0.10 g/bhp-hr or lower or that meet the criteria under sections (g)(5.2.2)(B)(i) through (iii), 2022 and 2023 model year, and 2024 and subsequent model year engines certified to an FTP engine NOx standard of 0.10 g/bhp-hr or lower or certified to an FTP engine PM standard of 0.005 g/bhp-hr or lower, for the thermostat monitor malfunction criteria specified under section

(g)(1.2.1)(A)(ii) where fuel, spark timing, and/or other coolant temperature-based modifications to the engine control strategies would not cause an emissions increase of 50 or more percent of the applicable standards, the manufacturer shall use the following NOx or PM standard:

(i) For engines certified to an FTP engine NOx standard of 0.10 g/bhp-hr or lower, 0.20 g/bhp-hr for the applicable NOx standard.

(ii) For engines certified to an FTP engine PM standard of 0.005 g/bhp-hr or lower, 0.01 g/bhp-hr for the applicable PM standard.

(5.2.4) Alternate test-out criteria for diesel/compression-ignition engines:

(A) For 2022 through 2023 model year engines certified to Optional Low NOx emission standards of 0.10 g/bhp-hr or lower, in lieu of the NOx test-out criteria specified in sections (e)(3.2.6)(B), (e)(5.2.3)(B)(i), (e)(8.2.4)(A)(iii), (e)(8.2.4)(B)(i), and (g)(3.2.2)(F)(ii), the manufacturer shall use the following criteria to determine if the specific component or function is exempt from the monitoring requirements:

(i) In lieu of the criterion where no malfunction can cause NOx emissions to increase by 15 percent or more of the applicable NOx standard, the manufacturer shall use the criterion where no malfunction can cause NOx emissions to increase by 0.03 g/bhp-hr or more.

(ii) In lieu of the criterion where no malfunction can cause NOx emissions to increase by 30 percent or more of the applicable NOx standard, the manufacturer shall use the criterion where no malfunction can cause NOx emissions to increase by 0.06 g/bhp-hr or more.

(iii) In lieu of the criterion where no malfunction can cause NOx emissions to exceed the applicable NOx standard, the manufacturer shall use the criterion where no malfunction can cause NOx emissions to exceed 0.20 g/bhp-hr.

(B) For 2022 and 2023 model year engines that meet all the requirements under sections (g)(5.2.4)(B)(i) through (v) below, in lieu of the NOx and PM test-out criteria specified in sections (e)(3.2.6)(B), (e)(5.2.3)(B)(i), (e)(8.2.4)(A)(iii), (e)(8.2.4)(B)(i), and (g)(3.2.2)(F)(ii), the manufacturer shall use the NOx criteria specified in section (g)(5.2.4)(C) and the PM criteria specified in section (g)(5.2.4)(D) to determine if the specific component or function is exempt from the monitoring requirements.:

(i) Certify to an FTP and SET NOx emission standard of 0.10 g/bhp-hr or lower.

(ii) Certify to a low load cycle NOx emission standard of 0.30 g/bhp-hr or lower (as described in section I.11.B.8 of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR).

(iii) Certify to an optional idle NOx standard of 10 g/hr (as described in section I.11.B.6.3 of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR).

- (iv) Certify to an FTP, SET, and low load cycle (as described in section I.11.B.8 of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR) PM emission standard of 0.005 g/bhp-hr or lower, and
- (v) Comply with the 3-binned moving average window method for in-use testing as described in section 86.1370.B of California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles, incorporated by reference in section 1956.8(b), title 13, CCR.

(C) For 2024 and subsequent model year engines certified to an FTP NOx emission standard of 0.10 g/bhp-hr or lower, in lieu of the NOx test-out criteria specified in sections (e)(3.2.6)(B), (e)(5.2.3)(B)(i), (e)(8.2.4)(A)(iii), (e)(8.2.4)(B)(i), and (g)(3.2.2)(F)(ii), the manufacturer shall use the following criteria to determine if the specific component or function is exempt from the monitoring requirements:

- (i) In lieu of the criterion where no malfunction can cause NOx emissions to increase by 15 percent or more of the applicable NOx standard, the manufacturer shall use the criterion where no malfunction can cause NOx emissions to increase by 0.03 g/bhp-hr or more.
- (ii) In lieu of the criterion where no malfunction can cause NOx emissions to increase by 30 percent or more of the applicable NOx standard, the manufacturer shall use the criterion where no malfunction can cause NOx emissions to increase by 0.06 g/bhp-hr or more.
- (iii) In lieu of the criterion where no malfunction can cause NOx emissions to exceed the applicable NOx standard, the manufacturer shall use the criterion where no malfunction can cause NOx emissions to exceed 0.20 g/bhp-hr.

(D) For 2024 and subsequent model year engines certified to an FTP PM emission standard of 0.005 g/bhp-hr or lower, in lieu of the PM test-out criteria specified in sections (e)(3.2.6)(B), (e)(8.2.4)(A)(iii), and (g)(3.2.2)(F)(ii), the manufacturer shall use the following criteria to determine if the specific component or function is exempt from the monitoring requirements:

- (i) In lieu of the criterion where no malfunction can cause PM emissions to increase by 15 percent or more of the applicable PM standard, the manufacturer shall use the criterion where no malfunction can cause PM emissions to increase by 0.0015 g/bhp-hr or more.
- (ii) In lieu of the criterion where no malfunction can cause PM emissions to exceed the applicable PM standard, the manufacturer shall use the criterion where no malfunction can cause PM emissions to exceed 0.01 g/bhp-hr.

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NOTE: Authority cited: Sections 39010, 39600, 39601, 39602.5, 43000.5, 43013, 43018, 43100, 43101, 43104, 43105, 43105.5, 43106, 43154, 43211, and 43212,

Health and Safety Code. Reference: Sections 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.

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(b) Testing Procedures for ARB-Conducted Testing.

* * * *

(6) Finding of Nonconformance after Enforcement Testing.

After conducting enforcement testing pursuant to section (b)(4) above, the Executive Officer shall make a finding of nonconformance of the OBD system in the identified engine class under the respective tests for the applicable model year(s) as follows:

(A) OBD Emission Testing.

* * * *

(iii) For 2016 through 2018 model year engines (except as provided for alternate-fueled engines in section (b)(6)(A)(v) below):

* * * *

c. Monitors on engines not covered under sections (b)(6)(A)(iii)a. and b. above shall be considered nonconforming if the emission test results indicate that 50 percent or more of the engines in the test sample group do not properly illuminate the MIL when emissions exceed the following:

1. For deficient emission threshold monitors, any of the applicable following thresholds: (1) 20 percent of the NMHC, CO, or NO_x emission standard above the emission level at which a malfunction was detected when the OBD system was approved by the Executive Officer, (2) 20 percent of the PM malfunction criterion (e.g., 0.0060 g/bhp-hr if the PM malfunction criterion is 0.03 g/bhp-hr) above the emission level at which a malfunction was detected when the OBD system was approved by the Executive Officer, or (3) the applicable emission level for mandatory recall under section (d)(3)(A)(ii).
2. For all other component/system monitors not mentioned in section (b)(6)(A)(iii)c.1. above, the malfunction criteria on any of the applicable standards (i.e., FTP or SET).
3. For engines certified to an FTP NO_x emission standard of 0.10 g/bhp-hr or lower, for criterion (1) under section (b)(6)(A)(iii)c.1. above, in lieu of 20 percent of the NO_x emission standard above the emission level at which a malfunction was detected when the OBD system was approved by the Executive Officer, the criterion shall be 0.04 g/bhp-hr above the emission level at which a malfunction was detected when the OBD system was approved by the Executive Officer.

(iv) For 2019 and subsequent model year engines (except as provided for alternate-fueled engines in section (b)(6)(A)(v) below), any engine shall be considered nonconforming if the results of the tests indicate that 50 percent or more of the engines in the test sample do not properly illuminate the MIL when emissions exceed the following:

- a. For deficient emission threshold monitors, any of the applicable following thresholds: (1) 20 percent of the NMHC, CO, or NO_x

- emission standard above the emission level at which a malfunction was detected when the OBD system was approved by the Executive Officer, (2) 20 percent of the PM malfunction criterion (e.g., 0.0060 g/bhp-hr if the PM malfunction criterion is 0.03 g/bhp-hr) above the emission level at which a malfunction was detected when the OBD system was approved by the Executive Officer, or (3) the applicable emission level for mandatory recall under section (d)(3)(A)(ii).
- b. For all other component/system monitors not mentioned in section (b)(6)(A)(iv)a. above, the malfunction criteria on any of the applicable standards (i.e., FTP or SET).
- c. For engines certified to an FTP NOx emission standard of 0.10 g/bhp-hr or lower, for criterion (1) under section (b)(6)(A)(iv)a. above, in lieu of 20 percent of the NOx emission standard above the emission level at which a malfunction was detected when the OBD system was approved by the Executive Officer, the criterion shall be 0.04 g/bhp-hr above the emission level at which a malfunction was detected when the OBD system was approved by the Executive Officer.
- (v) For alternate-fueled engines, any engine shall be considered nonconforming if the results of the tests indicate that 50 percent or more of the engines in the test sample do not properly illuminate the MIL when emissions exceed the following:
- * * * *
- b. For 2022 and subsequent model year engines:
1. For deficient emission threshold monitors, any of the applicable following thresholds: (1) 20 percent of the NMHC, CO, or NOx emission standard above the emission level at which a malfunction was detected when the OBD system was approved by the Executive Officer, (2) 20 percent of the PM malfunction criterion (e.g., 0.0060 g/bhp-hr if the PM malfunction criterion is 0.03 g/bhp-hr) above the emission level at which a malfunction was detected when the OBD system was approved by the Executive Officer, or (3) the applicable emission level for mandatory recall under section (d)(3)(A)(ii).
 2. For all other component/system monitors not mentioned in section (b)(6)(A)(v)b.1. above, the malfunction criteria on any of the applicable standards (i.e., FTP or SET).
 3. For engines certified to an FTP NOx emission standard of 0.10 g/bhp-hr or lower, for criterion (1) under section (b)(6)(A)(v)b.1. above, in lieu of 20 percent of the NOx emission standard above the emission level at which a malfunction was detected when the OBD system was approved by the Executive Officer, the criterion shall be 0.04 g/bhp-hr above the emission level at which a malfunction was detected when the OBD system was approved by the Executive Officer.
- * * * *

NOTE: Authority cited: Sections 39010, 39600, 39601, 39602.5, 43000.5, 43013, 43018, 43100, 43101, 43104, 43105, 43105.5, 43106, 43154, 43211, and 43212, Health and Safety Code. Reference: Sections 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.

§ 2035. Purpose, Applicability, and Definitions.

(a) Purpose.

The purpose of this article is to interpret and make specific the statutory emissions warranty set forth in Health and Safety Code sections 43205, and 43205.5 by clarifying the rights and responsibilities of individual motor vehicle, ~~and motor vehicle engine, and trailer owners;~~ motor vehicle, and motor vehicle engine, trailer manufacturers, and optionally certified hybrid powertrain manufacturers; and the service industry.

(b) *Applicability.*

This article shall apply to:

~~(1) California-certified 1979 and subsequent model motorcycles, passenger cars, light-duty trucks, medium-duty vehicles, and heavy-duty vehicles, registered in California, regardless of their original point of registration; and~~

(1) (A) California-certified 1979 and subsequent model motorcycles, passenger cars, light-duty trucks, and medium-duty vehicles, registered in California, regardless of their original point of registration;

(B) California-certified 1979 through 2026 model heavy-duty vehicles registered in California, regardless of their original point of registration;

(C) California-certified 2027 and subsequent model heavy-duty vehicles, regardless of whether they are registered in California; ~~and~~

(D) California-certified 2022 ~~and subsequent~~ through 2026 model year heavy-duty hybrid vehicles greater than 14,000 pounds GVWR, or 2022 through 2026 model incomplete hybrid vehicles from 10,001 to 14,000 pounds GVWR, which are equipped with 2022 and subsequent model year hybrid powertrains optionally certified pursuant to title 13, CCR §1956.8, registered in California, regardless of their original point of registration; ~~and~~

(E) California-certified 2027 and subsequent model heavy-duty hybrid vehicles greater than 14,000 pounds GVWR, or 2027 and subsequent model incomplete hybrid vehicles from 10,001 to 14,000 pounds GVWR, which are equipped with hybrid powertrains optionally certified pursuant to title 13, CCR §1956.8, regardless of whether they are registered in California, and

(2) California-certified motor vehicle engines used in such vehicles; and

(3) California-certified 2020 and subsequent model trailers certified in accordance with the provisions of section 95663(c), title 17, California Code of Regulations, regardless of whether they are registered in California.

(c) *Definitions.*

For the purposes of this article, the following definitions shall apply:

(1) "Trailer" means the same definition as that in section 95662(a), title 17, California Code of Regulations.

~~(1)~~(2) "Warrantable condition" means any condition of a vehicle, ~~or engine, or trailer~~ which triggers the responsibility of the manufacturer to take corrective action pursuant to sections 2036, 2037, or 2038.

~~(2)~~(3) "*Warranted Part*" means:

(A) In the case of 1979 through 1989 model year passenger cars, light-duty trucks, and medium-duty vehicles, 1979 and later model year motorcycles and heavy-duty vehicles, except those medium and heavy-duty vehicles in subparagraphs (c)(23)(D) and (c)(23)(E) of this section, and 1990 and subsequent model year passenger cars, light-duty trucks, and medium duty vehicles produced before January 24, 1991, any emission-related part installed on a motor vehicle or motor vehicle engine by the vehicle or engine manufacturer, or installed in a warranty repair, which is included on the "Emissions Warranty Parts List" required by section 2036(f) and approved for the vehicle or engine by the Executive Officer.

(B) In the case of 1990 and subsequent model year passenger cars, light-duty trucks, and medium-duty vehicles other than those identified in subparagraph (A) of this definition, any part installed on a motor vehicle or motor vehicle engine by the vehicle or engine manufacturer, or installed in a warranty repair, which affects any regulated emission from a motor vehicle or engine which is subject to California emission standards.

(C) In the case of heavy-duty vehicles certified to the GHG emission standards of section 95663, title 71, any part included in 40 CFR ~~1037.402120~~, as amended October 25, 2016, which is incorporated by reference herein.

(D) In the case of ~~2022 and subsequent~~ through 2027 model year diesel-powered heavy-duty vehicles greater than 14,000 pounds GVWR which are equipped with ~~2022 and subsequent~~ through 2026 model year heavy-duty diesel engines certified on only diesel fuel, and the ~~2022 and~~

subsequent through 2026 model year heavy-duty diesel engines certified on only diesel fuel in such vehicles, any part:

1. that affects any regulated emission of criteria pollutants from a motor vehicle or motor vehicle engine that is subject to California emission standards, including those parts, at a minimum, that are contained in the “Emissions Warranty Parts List” required by section 2036(f), and
2. that is installed on a motor vehicle or motor vehicle engine by the vehicle or engine manufacturer, or in a warranty repair.

(E) In the case of 2027 and subsequent model year heavy-duty vehicles greater than 14,000 pounds GVWR which are equipped with 2027 and subsequent model year heavy-duty engines, and the 2027 and subsequent model year heavy-duty engines used in such vehicles, any part:

1. that affects any regulated emission of criteria pollutants from a motor vehicle or motor vehicle engine that is subject to California emission standards, including those parts, at a minimum, that are contained in the “Emissions Warranty Parts List” required by section 2036(f), and
2. that is installed on a motor vehicle or motor vehicle engine by the vehicle or engine manufacturer, or in a warranty repair.

(F) In the case of 2022 and subsequent model year heavy-duty hybrid vehicles greater than 14,000 pounds GVWR, or 2022 and subsequent model year incomplete hybrid vehicles from 10,001 to 14,000 pounds GVWR, which are equipped with 2022 and subsequent model year hybrid powertrains optionally certified pursuant to title 13, CCR §1956.8, and the 2022 and subsequent model year hybrid powertrains used in such vehicles, any part:

1. that affects any regulated emission of criteria pollutants from a hybrid vehicle or hybrid powertrain that is subject to California emission standards, including, but not limited to, electric motor-generator system, hybrid rechargeable energy storage system, battery management system, including charge controller and thermal management systems and associated power electronics, and including those parts, at a minimum, that are contained in the “Emissions Warranty Parts List” required by section 2036(f), and

2. that is installed on a hybrid vehicle or hybrid powertrain by the hybrid vehicle or hybrid powertrain manufacturer, or in a warranty repair.

(G) In the case of 2020 and subsequent model year trailers certified to the GHG emission standards of section 95663(c), title 17, any part included in 40 CFR 1037.120, as amended October 25, 2016, which is incorporated by reference herein.

~~(3)~~(4) “Warranty period” means the period of time and mileage that the vehicle, engine, trailer, or part are covered by the warranty provisions.

~~(4)~~(5) “Warranty station” means a service facility authorized by the vehicle or engine, or trailer manufacturer to perform warranty repairs. This shall include all of the manufacturer's dealerships which are franchised to service the subject vehicles, ~~or engines~~, or trailers.

~~(5)~~(6) “Vehicle, ~~or engine~~, or trailer manufacturer” means the manufacturer granted certification for a motor vehicle, ~~or motor vehicle engine~~, or trailer. In the case of motor vehicles for which certification of the exhaust and evaporative emissions control systems is granted to different manufacturers, the warranty responsibility shall be assigned accordingly.

Note: Authority cited: Sections 38501, 38505, 38510, 38560, 39600, and 39601, 43205 and 43205.5 Health and Safety Code. Reference: Sections 38501, 38505, 38510, 38560, 43106, 43204, 43205 and 43205.5, Health and Safety Code.

§ 2036. Defects Warranty Requirements for 1979 Through 1989 Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles; 1979 and Subsequent Model Motorcycles and Heavy-Duty Vehicles; and Motor Vehicle Engines Used in Such Vehicles; and 2020 and Subsequent Model Year Trailers.

(a) Applicability.

This section shall apply to 1979 through 1989 model passenger cars, light-duty trucks, and medium-duty vehicles; 1979 and subsequent model motorcycles and heavy-duty vehicles; and motor vehicle engines used in such vehicles; 2020 and subsequent model year trailers certified to the GHG emission standards of section 95663(c), title 17; and 2022 and subsequent model year heavy-duty hybrid vehicles, or 2022 and subsequent model year incomplete hybrid vehicles from 10,001 to 14,000 pounds GVWRs, equipped with 2022 and subsequent model year hybrid powertrains optionally certified pursuant to title 13, CCR §1956.8, and hybrid powertrains used in such vehicles. The warranty period shall begin on the date the vehicle or trailer is delivered to an ultimate purchaser, or if the vehicle or trailer is first placed in service as a “demonstrator” or “company” car prior to delivery, on the date it is first placed in service.

(b) General Emissions Warranty Coverage.

The manufacturer of each motor vehicle, ~~or motor vehicle engine, or trailer~~ shall warrant to the ultimate purchaser and each subsequent purchaser that the vehicle, ~~or engine, or trailer~~ is:

(1) Designed, built, and equipped so as to conform, at the time of sale, with all applicable regulations adopted by the Air Resources Board pursuant to its authority in chapters 1 and 2, part 5, division 26 of the Health and Safety Code and part 1, division 25.5 of the Health and Safety Code; and

(2) Free from defects in materials and workmanship which cause the failure of a warranted part to be identical in all material respects to that part as described in the vehicle, ~~or engine, or trailer~~ manufacturer's application for certification, ~~including:~~ In addition, for the vehicles specified below in subparagraphs (A) through (C), the manufacturer shall warrant such vehicles are free from defects in materials and workmanship which cause the vehicle's on-board diagnostic malfunction indicator light to illuminate.

(A) for 2022 and subsequent through 2027 model year diesel-powered heavy-duty vehicles greater than 14,000 pounds GVWR which are equipped with 2022 and subsequent through 2026 model year heavy-duty diesel engines certified on only diesel fuel, and 2022 and subsequent through 2026 model year heavy-duty diesel engines certified on only diesel fuel used in such vehicles, ~~any defects in materials or workmanship which cause the vehicle's on-board diagnostic malfunction indicator light to illuminate.~~

(B) for 2027 and subsequent model year heavy-duty vehicles greater than 14,000 pounds GVWR which are equipped with 2027 and subsequent model year heavy-duty engines, and 2027 and subsequent model year heavy-duty engines used in such vehicles; and

(C) for 2022 and subsequent model year heavy-duty hybrid vehicles greater than 14,000 pounds GVWR, or 2022 and subsequent model year incomplete hybrid vehicles from 10,001 to 14,000 pounds GVWR, which are equipped with 2022 and subsequent model year hybrid powertrains optionally certified pursuant to title 13, CCR §1956.8, any defects in materials or workmanship which cause the vehicle's on-board diagnostic malfunction indicator light to illuminate.

(c) Warranty Period.

The warranty period applicable to this section shall be:

* * * *

(4)=(A) In the case of diesel-powered heavy-duty vehicles greater than 14,000 pounds GVWR which are equipped with 2021 and prior model year motor vehicle engines, and motor vehicle engines used in such vehicles, a period of use of ~~five~~ 5 years, 100,000 miles, or 3000 hours of operations, whichever first occurs. However, in no case may this period be less than the basic mechanical warranty that the manufacturer provides (with or without additional charge) to the purchaser of the engine. Extended warranties on select parts do not extend the emissions warranty requirements for the entire engine but only for those parts. In cases where responsibility for an extended warranty is shared between the owner and the manufacturer, the emissions warranty shall also be shared in the same manner as specified in the warranty agreement.

(B) In the case of ~~2022 and subsequent~~ through 2027 model year diesel-powered heavy-duty vehicles greater than 14,000 pounds GVWR which are equipped with ~~2022 and subsequent~~ through 2026 model year motor vehicle heavy-duty diesel engines, and the ~~2022 and subsequent~~ through 2026 model year heavy-duty diesel engines used in such vehicles, the first occurring of either a period of use of ~~five~~ 5 years, or:

110,000 miles for heavy-duty vehicles with engines certified as light heavy-duty engines;

150,000 miles for heavy-duty vehicles with engines certified as medium heavy-duty engines;

350,000 miles for heavy-duty vehicles with engines certified as heavy heavy-duty engines.

However, in no case may these periods be less than the basic mechanical warranty that the manufacturer provides (with or without additional charge) to the purchaser of the engine. Extended warranties on select parts do not extend the emissions warranty requirements for the entire engine but only for those parts. In cases where responsibility for an extended warranty is shared between the owner and the manufacturer, the portion of the emissions warranty extending beyond the minimum mileages listed above shall also be shared in the same manner as specified in the warranty agreement.

The warranty periods in this subparagraph (c)(4)(B) apply only to:

1. warranted parts that affect the regulated emissions of criteria pollutants, as defined in section 2035(c)(2)(D), title 13, CCR, and
2. heavy-duty vehicles with engines certified on only diesel fuel, including engines that have concurrent applications in both dedicated diesel-fueled vehicles and hybrid vehicles.

The warranty periods in subparagraph (c)(4)(A) of this section continue to apply to 2022 through 2027 model year heavy-duty vehicles equipped with 2022 through 2026 model year engines certified to the diesel standards of section 1956.8, title 13, CCR, using alternative fuels (e.g., liquefied or compressed natural gas); ~~with engines certified for use in hybrid vehicles exclusively; with engines certified for use in hybrid vehicles exclusively;~~ and with engines certified for use in dual fuel vehicles.

(C) In the case of 2027 through 2031 model year diesel-powered heavy-duty vehicles greater than 14,000 pounds GVWR which are equipped with 2027 through 2030 model year motor vehicle heavy-duty diesel engines, and the 2027 through 2030 model year heavy-duty diesel engines used in such vehicles, the first occurring of a period of use of 7 years, or:

150,000 miles or 7,000 hours for heavy-duty vehicles with engines certified as light heavy-duty engines;

220,000 miles or 11,000 hours for heavy-duty vehicles with engines certified as medium heavy-duty engines;

450,000 miles or 22,000 hours for heavy-duty vehicles with engines certified as heavy heavy-duty engines.

However, in no case may these periods be less than the basic mechanical warranty that the manufacturer provides (with or without additional charge) to the purchaser of the engine. Extended warranties on select parts do not extend the emissions warranty requirements for the entire engine but only for those parts. In cases where responsibility for an extended warranty is shared between the

owner and the manufacturer, the portion of the emissions warranty extending beyond the minimum mileages listed above shall also be shared in the same manner as specified in the warranty agreement.

The hour periods are effective as limits to warranty only when an accurate hours meter is provided by the engine manufacturer and is reasonably expected to operate properly over the useful life of the engine. The hours meter shall not count standby-idle time (key-on, engine off) as engine operating time for purposes of identifying the end of the warranty period, such as on a vehicle equipped with stop-start technology.

The warranty periods in this subparagraph (c)(4)(C) apply only to:

1. warranted parts that affect the regulated emissions of criteria pollutants, as defined in section 2035(c)(2)(D), title 13, CCR, and

2. heavy-duty vehicles with engines certified to the diesel-cycle standards of section 1956.8, title 13, CCR, including engines that have concurrent applications in both dedicated internal-combustion vehicles and hybrid vehicles.

(D) In the case of 2031 and subsequent model year diesel-powered heavy-duty vehicles greater than 14,000 pounds GVWR which are equipped with 2031 and subsequent model year motor vehicle heavy-duty diesel engines, and the 2031 and subsequent model year heavy-duty diesel engines used in such vehicles, the first occurring of a period of use of 10 years, or:

210,000 miles or 10,000 hours for heavy-duty vehicles with engines certified as light heavy-duty engines;

280,000 miles or 14,000 hours for heavy-duty vehicles with engines certified as medium heavy-duty engines;

600,000 miles or 30,000 hours for heavy-duty vehicles with engines certified as heavy heavy-duty engines.

However, in no case may these periods be less than the basic mechanical warranty that the manufacturer provides (with or without additional charge) to the purchaser of the engine. Extended warranties on select parts do not extend the emissions warranty requirements for the entire engine but only for those parts. In cases where responsibility for an extended warranty is shared between the owner and the manufacturer, the portion of the emissions warranty extending beyond the minimum mileages listed above shall also be shared in the same manner as specified in the warranty agreement.

The hour periods are effective as limits to warranty only when an accurate hours meter is provided by the engine manufacturer and is reasonably expected to operate properly over the useful life of the engine. The hours meter shall not count standby-idle time (key-on, engine off) as engine operating time for purposes of identifying the end of the warranty period, such as on a vehicle equipped with stop-start technology.

The warranty periods in this subparagraph (c)(4)(D) apply only to:

1. warranted parts that affect the regulated emissions of criteria pollutants, as defined in section 2035(c)(2)(D), title 13, CCR, and

2. heavy-duty vehicles with engines certified to the diesel-cycle standards of section 1956.8, title 13, CCR, including engines that have concurrent applications in both dedicated internal combustion vehicles and hybrid vehicles.

* * * *

(8)(A) In the case of heavy-duty vehicles ~~at or above 14,001 pound GVWR~~ greater than 14,000 pounds GVWR which are equipped with 2026 and prior model year motor vehicle engines, and motor vehicle engines used in such vehicles, (except for diesel-powered heavy-duty vehicles, and motor vehicle engines used in such vehicles), a period of use of ~~five~~ 5 years or 50,000 miles, whichever first occurs. However, in no case may this period be less than the basic mechanical warranty period that the manufacturer provides (with or without additional charge) to the purchaser of the engine. Extended warranties on select parts do not extend the emissions warranty requirements for the entire engine but only for those parts. In cases where responsibility for an extended warranty is shared between the owner and the manufacturer, the emissions warranty shall also be shared in the same manner as specified in the warranty agreement.

(B) Reserved.

(C) In the case of 2027 through 2031 model year heavy-duty vehicles greater than 14,000 pounds GVWR which are equipped with 2027 through 2030 model year motor vehicle heavy-duty engines, and the 2027 through 2030 model year heavy-duty engines used in such vehicles, (except for diesel-powered heavy-duty vehicles, and motor vehicle engines used in such vehicles), a period of use of 7 years, 110,000 miles, or 6,000 hours, whichever first occurs.

However, in no case may these periods be less than the basic mechanical warranty that the manufacturer provides (with or without additional charge) to the purchaser of the engine. Extended warranties on select parts do not extend the emissions warranty requirements for the entire engine but only for those parts. In

cases where responsibility for an extended warranty is shared between the owner and the manufacturer, the portion of the emissions warranty extending beyond the minimum mileages listed above shall also be shared in the same manner as specified in the warranty agreement.

The hour period is effective as a limit to warranty only when an accurate hours meter is provided by the engine manufacturer and is reasonably expected to operate properly over the useful life of the engine. The hours meter shall not count standby-idle time (key-on, engine off) as engine operating time for purposes of identifying the end of the warranty period, such as on a vehicle equipped with stop-start technology.

The warranty period in this subparagraph (c)(8)(C) applies only to:

1. warranted parts that affect the regulated emissions of criteria pollutants, as defined in section 2035(c)(2)(E), title 13, CCR, and

2. heavy-duty vehicles with engines certified to the Otto-cycle standards of section 1956.8, title 13, CCR, including engines that have concurrent applications in both dedicated internal-combustion vehicles and hybrid vehicles.

(D) In the case of 2031 and subsequent model year heavy-duty vehicles greater than 14,000 pounds GVWR which are equipped with 2031 and subsequent model year motor vehicle heavy-duty engines, and the 2031 and subsequent model year heavy-duty engines used in such vehicles, (except for diesel-powered heavy-duty vehicles, and motor vehicle engines used in such vehicles), a period of use of 10 years, 160,000 miles, or 8,000 hours, whichever first occurs.

However, in no case may these periods be less than the basic mechanical warranty that the manufacturer provides (with or without additional charge) to the purchaser of the engine. Extended warranties on select parts do not extend the emissions warranty requirements for the entire engine but only for those parts. In cases where responsibility for an extended warranty is shared between the owner and the manufacturer, the portion of the emissions warranty extending beyond the minimum mileages listed above shall also be shared in the same manner as specified in the warranty agreement.

The hour period is effective as a limit to warranty only when an accurate hours meter is provided by the engine manufacturer and is reasonably expected to operate properly over the useful life of the engine. The hours meter shall not count standby-idle time (key-on, engine off) as engine operating time for purposes of identifying the end of the warranty period, such as on a vehicle equipped with stop-start technology.

The warranty period in this subparagraph (c)(8)(D) applies only to:

1. warranted parts that affect the regulated emissions of criteria pollutants, as defined in section 2035(c)(2)(E), title 13, CCR, and

2. heavy-duty vehicles with engines certified to the Otto-cycle standards of section 1956.8, title 13, CCR, including engines that have concurrent applications in both dedicated internal-combustion vehicles and hybrid vehicles.

* * * *

(9) In the case of trailers, a period of use of 5 years (except tires) for GHG emission components, and a period of use of 1 year for tires, for GHG emission components as set forth in 40 CFR 1037.120, as amended October 25, 2016.

(10) In the case of 2022 and subsequent model year hybrid powertrains optionally certified pursuant to title 13, CCR §1956.8, the warranty period shall be as specified below:

(A) In the case of diesel hybrid powertrains, primarily used in vehicles with a GVWR from 14,001 to 19,500 pounds, the warranty period and model year implementation schedules for light heavy-duty diesel engines of this section shall apply to the hybrid powertrains.

(B) In the case of diesel hybrid powertrains primarily used in vehicles with a GVWR from 19,501 to 33,000 pounds, the warranty period and model year implementation schedules for medium heavy-duty diesel engines of this section shall apply to the hybrid powertrains.

(C) In the case of diesel hybrid powertrains primarily used in vehicles with a GVWR greater than 33,000 pounds, the warranty period and model year implementation schedules for heavy heavy-duty diesel engines of this section shall apply to the hybrid powertrains.

(D) In the case of Otto-cycle hybrid powertrains used in vehicles with a GVWR greater than 14,000 pounds, the warranty period and model year implementation schedules for heavy-duty engines, of this section, shall apply to the hybrid powertrains.

(E) In the case of diesel hybrid powertrains used in incomplete vehicles with a GVWR from 10,001 to 14,000 pounds, the warranty period and model year implementation schedules are identical to the warranty period and model year implementation schedules specified for light heavy-duty diesel engines in this section, or for medium duty diesel engines used in such powertrains the warranty

period and model year implementation schedules are as specified in title 13, CCR §2037(b).

(F) In the case of Otto-cycle hybrid powertrains used in incomplete vehicles with a GVWR from 10,001 to 14,000 pounds, the warranty period and model year implementation schedules are identical to the warranty period and model year implementation schedules specified for heavy-duty engines (except for diesel-powered heavy-duty vehicles, and motor vehicle engines used in such vehicles) in this section, or for medium duty engines used in such powertrains the warranty period and model year implementation schedules are as specified in title 13, CCR §2037(b).

(d) Subject to the conditions and exclusions of subsection (j), the warranty on emissions-related parts shall function as follows:

(1) Any warranted part which is not scheduled for replacement as required maintenance in the written instructions required by subsection (e) shall be warranted for the warranty period defined in subsection (c). If any such part fails during the warranty period, it shall be repaired or replaced by the vehicle, ~~or engine,~~ or trailer manufacturer according to subsection (4) below. Any such part repaired or replaced under warranty shall be warranted for the remaining warranty period.

(2)(A) Any warranted part which is scheduled only for regular inspection in the written instructions required by subsection (e) shall be warranted for the warranty period defined in subsection (c). A statement in such written instructions to the effect of “repair or replace as necessary” shall not reduce the period of warranty coverage. Any such part repaired or replaced under warranty shall be warranted for the remaining warranty period.

(B) In the case of ~~2022 and subsequent through 2027~~ model year diesel-powered heavy-duty vehicles greater than 14,000 pounds GVWR in which ~~2022 and subsequent through 2026~~ model year heavy-duty diesel engines are installed, and the ~~2022 and subsequent through 2026~~ model year heavy-duty diesel engines used in such vehicles, any warranted part which is scheduled only for regular inspection in the written instructions required by subsection (e) shall be warranted for the warranty period defined in subsection (c). A statement in such written instructions to the effect of “repair or replace as necessary” shall not reduce the period of warranty coverage. If the regular inspection indicates that a part has failed and needs to be repaired or replaced, any such part shall be repaired or replaced during the applicable warranty period by the vehicle or engine manufacturer according to subsection (4) below. Any such part repaired or replaced under warranty shall be warranted for the remaining warranty period defined in subsection (c).

(C) In the case of all 2027 and subsequent model year heavy-duty vehicles greater than 14,000 pounds GVWR in which 2027 and subsequent

model year heavy-duty engines are installed, and the 2027 and subsequent model year heavy-duty engines used in such vehicles, any warranted part which is scheduled only for regular inspection in the written instructions required by subsection (e) shall be warranted for the warranty period defined in subsection (c). A statement in such written instructions to the effect of “repair or replace as necessary” shall not reduce the period of warranty coverage. If the regular inspection indicates that a part has failed and needs to be repaired or replaced, any such part shall be repaired or replaced during the applicable warranty period by the vehicle or engine manufacturer according to subsection (4) below. Any such part repaired or replaced under warranty shall be warranted for the remaining warranty period defined in subsection (c).

(D) In the case of 2022 and subsequent model year heavy-duty hybrid vehicles greater than 14,000 pound GVWR, or 2022 and subsequent model year incomplete hybrid vehicles from 10,001 to 14,000 pounds GVWR, which are equipped with 2022 and subsequent model year hybrid powertrains optionally certified pursuant to title 13, CCR §1956.8, and the 2022 and subsequent model year hybrid powertrains used in such vehicles, any warranted part which is scheduled only for regular inspection in the written instructions required by subsection (e) shall be warranted for the warranty period defined in subsection (c). A statement in such written instructions to the effect of “repair or replace as necessary” shall not reduce the period of warranty coverage. If the regular inspection indicates that a part has failed and needs to be repaired or replaced, any such part shall be repaired or replaced during the applicable warranty period by the vehicle or engine manufacturer according to subsection (4) below. Any such part repaired or replaced under warranty shall be warranted for the remaining warranty period defined in subsection (c).

(3)(A) Any warranted part which is scheduled for replacement as required maintenance in the written instructions required by subsection (e) shall be warranted for the period of time or mileage, whichever first occurs, prior to the first scheduled replacement point for that part. If the part fails before the first scheduled replacement point, the part shall be repaired or replaced by the vehicle, ~~or engine, or trailer~~ manufacturer according to subsection (4) below. Any such part repaired or replaced under warranty shall be warranted for the remainder of the period prior to the first scheduled replacement point for the part.

(B) In the case of ~~2022 and subsequent~~ through 2027 model year diesel-powered heavy-duty vehicles greater than 14,000 pounds GVWR in which ~~2022 and subsequent~~ through 2026 model year heavy-duty diesel engines are installed, and the ~~2022 and subsequent~~ through 2026 model year heavy-duty diesel engines used in such vehicles, any warranted part which is scheduled for replacement as required maintenance in the written instructions required by subsection (e) shall be replaced by the owner as scheduled according to section 2040, title 13, CCR. However, if the repaired or replaced part fails before a scheduled replacement during the applicable warranty period, the part shall be

repaired or replaced by the vehicle or engine manufacturer according to subsection (4) below. Any such part repaired or replaced under warranty shall be warranted for the remaining warranty period defined in subsection (c).

(C) In the case of all 2027 and subsequent model year heavy-duty vehicles greater than 14,000 pounds GVWR in which 2027 and subsequent model year heavy-duty engines are installed, and the 2027 and subsequent model year heavy-duty engines used in such vehicles, any warranted part which is scheduled for replacement as required maintenance in the written instructions required by subsection (e) shall be replaced by the owner as scheduled according to section 2040, title 13, CCR. However, if the repaired or replaced part fails before a scheduled replacement during the applicable warranty period, the part shall be repaired or replaced by the vehicle or engine manufacturer according to subsection (4) below. Any such part repaired or replaced under warranty shall be warranted for the remaining warranty period defined in subsection (c).

(D) In the case of 2022 and subsequent model year heavy-duty hybrid vehicles greater than 14,000 pound GVWR, or 2022 and subsequent model year incomplete hybrid vehicles from 10,001 to 14,000 pounds GVWR, which are equipped with 2022 and subsequent model year hybrid powertrains optionally certified pursuant to title 13, CCR §1956.8, and the 2022 and subsequent model year hybrid powertrains used in such vehicles, any warranted part which is scheduled for replacement as required maintenance in the written instructions required by subsection (e) shall be replaced by the owner as scheduled according to section 2040, title 13, CCR. However, if the repaired or replaced part fails before a scheduled replacement during the applicable warranty period, the part shall be repaired or replaced by the vehicle or engine manufacturer according to subsection (4) below. Any such part repaired or replaced under warranty shall be warranted for the remaining warranty period defined in subsection (c). The applicable warranty period for the hybrid vehicles and hybrid powertrains shall be determined as specified in subsection (c)(10) of this section.

(4) Repair or replacement of any warranted part under the warranty provisions of this article shall be performed at no charge to the vehicle, ~~or engine, or trailer~~ owner, at a warranty station, except in the case of an emergency when a warranted part or a warranty station is not reasonably available to the vehicle, ~~or engine, or trailer~~ owner. In an emergency, repairs may be performed at any available service establishment, or by the owner, using any replacement part. The manufacturer shall reimburse the owner for his or her expenses including diagnostic charges for such emergency repair or replacement, not to exceed the manufacturer's suggested retail price for all warranted parts replaced and labor charges based on the manufacturer's recommended time allowance for the warranty repair and the geographically appropriate hourly labor rate. Heavy-duty vehicle, ~~and engine, and trailer~~ manufacturers shall establish reasonable emergency repair procedures which may differ from those specified in this subsection. A vehicle, ~~or engine, or trailer~~

owner may reasonably be required to keep receipts and failed parts in order to receive compensation for warranted repairs reimbursable due to an emergency, provided the manufacturer's written instructions advise the owner of his obligation.

(5) Notwithstanding the provisions of subsection (4), warranty services or repairs shall be provided at all of a manufacturer's dealership which are franchised to service the subject vehicles, ~~or engines,~~ or trailers.

(6) The vehicle, ~~or engine,~~ or trailer owner shall not be charged for diagnostic labor which leads to the determination that a warranted part is in fact defective, provided that such diagnostic work is performed at a warranty station.

(7) The vehicle, ~~or engine,~~ or trailer manufacturer shall be liable for damages to other vehicle components proximately caused by a failure under warranty any warranted part.

(8) Throughout the vehicle's, ~~or engine's,~~ or trailer's warranty period defined in subsection (b), the vehicle, ~~or engine,~~ or trailer manufacturer shall maintain a supply of warranted parts sufficient to meet the expected demand for such parts. The lack of availability of such parts or the incompleteness of repairs within a reasonable time period, not to exceed 30 days from the time the vehicle, ~~or engine,~~ or trailer is initially presented to the warranty station for repair, shall constitute an emergency for purposes of subsection (4).

(9) Any replacement part may be used in the performance of any maintenance or repairs. Any replacement part designated by a manufacturer may be used in warranty repairs provided without charge to the vehicle or trailer owner. Such use shall not reduce the warranty obligations of the vehicle, ~~or engine,~~ or trailer manufacturer, except that the vehicle, ~~or engine,~~ or trailer manufacturer shall not be liable under this article for repair or replacement of any replacement part which is not a warranted part (except as provided under subsection (7)).

(10) Any add-on or modified part exempted by the Air Resources Board from the prohibitions of Vehicle Code section 27156 may be used on a vehicle, ~~or engine,~~ or trailer. Such use, in and of itself, shall not be grounds for disallowing a warranty claim made in accordance with this article. The vehicle, ~~or engine,~~ or trailer manufacturer shall not be liable under this article to warrant failures of warranted parts caused by the use of an add-on or modified part.

(11) The Executive Officer may request and, in such case, the vehicle, ~~or engine,~~ or trailer manufacturer shall provide, any documents which describe that manufacturer's warranty procedures or policies.

(e) Commencing with 1980 models sold on or after September 1, 1979, each manufacturer shall furnish with each new vehicle or engine written instructions for the

maintenance and use of the vehicle or engine by the owner, which instructions shall be consistent with this article and applicable regulations in article 2 of this subchapter.

(f)(1) Commencing with 1980 models sold on or after September 1, 1979, each manufacturer shall furnish with each new vehicle or engine a list of the warranted parts installed on that vehicle or engine. The list shall include those parts included on the Air Resources Board "Emissions Warranty Parts List," dated December 14, 1978, as amended on February 22, 1985, and incorporated herein by reference.

(A) In the case of heavy-duty vehicles certified to the GHG emission standards of section 95663, title 17, each manufacturer shall furnish with each new vehicle or engine a list of the warranted parts which includes any part specified in 40 CFR 1037.120, as amended October 25, 2016, incorporated by reference in section 2035(c)(2)(C).

(B) In the case of ~~2022 and subsequent through 2027~~ model year diesel-powered heavy-duty vehicles greater than 14,000 pounds GVWR which are equipped with ~~2022 and subsequent through 2026~~ model year heavy-duty diesel engines certified on only diesel fuel, and the ~~2022 and subsequent through 2026~~ model year heavy-duty diesel engines certified on only diesel fuel used in such vehicles, each manufacturer shall furnish a list that includes any emission-related part that can cause the vehicle's on-board diagnostic malfunction indicator light to illuminate.

(C) In the case of 2027 and subsequent model year heavy-duty vehicles greater than 14,000 pounds GVWR which are equipped with 2027 and subsequent model year heavy-duty engines, and the 2027 and subsequent model year heavy-duty engines used in such vehicles, each manufacturer shall furnish a list that includes any emission-related part that can cause the vehicle's on-board diagnostic malfunction indicator light to illuminate.

(D) In the case of 2022 and subsequent model year heavy-duty hybrid vehicles greater than 14,000 pound GVWR, or 2022 and subsequent model year incomplete hybrid vehicles from 10,001 to 14,000 pounds GVWR, which are equipped with 2022 and subsequent model year hybrid powertrains optionally certified pursuant to title 13, CCR §1956.8, and the 2022 and subsequent model year hybrid powertrains used in such vehicles, each manufacturer shall furnish a list that includes any emission-related part that can cause the vehicle's on-board diagnostic malfunction indicator light to illuminate.

(E) In the case of trailers certified to the GHG emission standards of section 95663(c), title 17, each manufacturer shall furnish with each new trailer a list of the warranted parts which includes any part specified in 40 CFR 1037.120, as amended October 25, 2016, which is incorporated by reference herein.

(g) Except for 1980 and 1981 model motorcycles, each manufacturer shall submit the documents required by sections (e) and (f), with the manufacturer's preliminary application for new vehicle, ~~or engine, or trailer~~ certification for approval by the Executive Officer. The Executive Officer may reject or require modification of the manufacturer's list of warranted parts to ensure that each such list is of proper scope and also may reject or require modification of any of the documents required by subsection (e). Approval by the Executive Officer of the documents required by subsections (e) and (f), shall be a condition of certification. The Executive Officer shall approve or disapprove the documents required by subsections (e) and (f), within 90 days of the date such documents are received from the manufacturer. Any disapproval shall be accompanied by a statement of the reasons therefore. In the event of disapproval, the manufacturer may petition the Board to review the decision of the Executive Officer.

(h) Notwithstanding subsection (f), the Executive Officer may delete any part from a manufacturer's list of warranted parts provided in the manufacturer demonstrates to the Executive Officer's satisfaction that:

(1) Failure of such part will not increase the emissions of any vehicle, ~~or engine, or trailer~~ on which it is installed, and

(2) Any deterioration of driveability or performance which results from failure of the part could not be corrected by adjustments or modifications to other vehicle or trailer components.

(i) Vehicle Inspection Program.

This subsection shall apply to passenger cars, light-duty trucks, medium-duty and heavy-duty vehicles and motorcycles required to be inspected pursuant to any California statutorily authorized motor vehicle emissions inspection and maintenance program. The provisions of this section shall be contained in the warranty statement required pursuant to section 2039.

(1) The owner of a vehicle which fails the inspection during its warranty period may choose to have the vehicle repaired at a warranty station.

(A) If the warranty station identifies that the inspection failure was caused by the failure or malfunction of a warranted part, than the vehicle manufacturer shall be liable for expenses involved in detecting and correcting the part failure or malfunction, unless the warranty station demonstrates that the part failure or malfunction was caused by abuse, neglect, or improper maintenance as specified in subsection (j)(1), or was caused by an adjustment not covered by warranty as specified in subsection (j)(2).

(B) If the warranty station demonstrates that the inspection failure was caused by one or more conditions executed from warranty coverage pursuant to subsection (j), the vehicle owner shall be liable for all diagnostic and repair

expenses. Such expenses shall not exceed the maximum repair costs permissible under the inspection program.

(C) If the warranty station identifies that the inspection failure was caused by one or more defects covered under warranty pursuant to these regulations and in combination with one or more conditions excluded from warranty coverage pursuant to subsection (j), then the vehicle owner shall not be charged for the diagnostic and repair costs related to detecting and repairing the warrantable defects.

(2) In the alternative, the owner of a vehicle which fails an inspection may choose to have the vehicle repaired at other than a warranty station. If a warrantable defect is found, the vehicle owner may deliver the vehicle to a warranty station and have the defect corrected free of charge. The vehicle manufacturer shall not be liable for any expenses incurred at a service establishment not authorized to perform warranty repairs, except in the case of an emergency as specified in subsection (d)(4). If the vehicle owner chooses to have the warrantable defect repaired at other than a warranty station, the upper cost limit pursuant to Health and Safety Code section 44017 shall not apply to the repair.

(j) Exclusions.

(1) The repair or replacement of any warranted part otherwise eligible for warranty coverage under subsection (d) or (i), shall be excluded for such warranty coverage if the vehicle, ~~or engine, or trailer~~ manufacturer demonstrates that the vehicle, ~~or engine, or trailer~~ has been abused, neglected, or improperly maintained, and that such abuse, neglect, or improper maintenance was the direct cause of the need for the repair or replacement of the part.

(2) The following adjustments to warranted parts are excluded from warranty coverage under subsection (d) or (i); the idle air/fuel mixture ratio (for 1979 model passenger cars, and 1979 and 1980 model light-duty trucks and medium-duty vehicles), curb or high idle speed, ignition timing, valve lash, injection timing for diesel-powered vehicles, or any combination thereof.

(3) Except as provided in subsection (1) above, any adjustment of a component which as a factory installed, and properly operating, adjustment limiting device (such as an idle limiter cap) is eligible for warranty coverage under subsection (d) or (i).

Note: Authority cited: Sections 38501, 38505, 38510, 38560, 39600 and 39601, Health and Safety Code. Reference: Sections 38501, 38505, 38510, 38560, 43106, 43204, 43205.5, 44004, 44010, 44011, 44012, 44015 and 44017, Health and Safety Code.

§ 2111. Applicability.

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§ 2112. Definitions.

(a) “Capture rate” means the percentage of in-use vehicles or trailers subject to recall which must be corrected to bring the class or category of vehicles or trailers into compliance. The number of vehicles or trailers subject to recall shall be based on the actual number of vehicles or trailers in use as verified by the Department of Motor Vehicles registration records, or vehicle, ~~or engine,~~ or trailer registration records compiled and prepared by R. L. Polk and Company or a comparable source at the time a recall is initiated.

(b) “Correlation factor” means a pollutant-specific multiplicative factor calculated by a manufacturer for an engine family or test group which establishes a relationship between chassis exhaust emission data, as determined from the test procedures specified in section 1960.1, 1961, or 1961.2, Title 13, California Code of Regulations, and engine exhaust emission data, as determined from the test procedures specified in section 1956.8, Title 13, California Code of Regulations.

(c) “Days”, when computing any period of time, means normal working days on which a manufacturer is open for business, unless otherwise noted.

(d) “Emission-Related Failure” means a failure of a device, system, or assembly described in the approved application for certification which affects any parameter, specification, or component enumerated in Appendix A to this subchapter 2.5 or in 40 CFR 1037.120, last amended on October 25, 2016, incorporated by reference herein, or listed in the Emission Warranty Parts List pursuant to section 2036, Title 13, California Code of Regulations, except for failures of devices, systems and assemblies which the Executive Officer has deleted from the manufacturer's list of warranted parts pursuant to section 2036 (f), Title 13, California Code of Regulations.

(e) “Emission Warranty Claim” means an adjustment, inspection, repair or replacement of a specific emission-related component for which the vehicle, ~~or engine,~~ or trailer manufacturer is invoiced or solicited by a repairing agent for compensation pursuant to warranty provisions, regardless of whether compensation is actually provided.

(f) “Executive Officer” means the Executive Officer of the Air Resources Board or his or her authorized representative.

(g) “Influenced Emission Recall” means an inspection, repair, adjustment, or modification program initiated and conducted by a manufacturer or its agent or representative as a result of in-use enforcement testing or other evidence of noncompliance provided or required by the Board, to remedy any nonconformity for which direct notification of vehicle, ~~or engine,~~ or trailer owners is necessary.

(h) “Nonconformity” or “noncompliance” exists whenever:

(1) a substantial number of a class or category of vehicles, ~~or engines, or trailers~~, although properly maintained and used, experience a failure of the same emission-related component within their useful lives which, if uncorrected, results in the vehicles', ~~or engines', or trailers'~~ failure to meet the applicable standards; or

(2) a class or category of vehicles, ~~or engines, or trailers~~ within their useful lives, although properly maintained and used, on average does not comply with the emission standards prescribed under section 43101 of the Health and Safety Code which are applicable to the model-year of such vehicles, ~~or engines, or trailers~~.

(3) a class or category of vehicles or engines within their useful lives, although properly maintained and used, that do not comply with the in-use emission standards specified in section 1956.8, Title 13, California Code of Regulations and “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles”, incorporated by reference in section 1956.8(b), Title 13, California Code of Regulations.

(4) a class or category of vehicles or engines within their useful lives, although properly maintained and used, that do not comply with the in-use emission standards specified in section 1956.8, Title 13, California Code of Regulations and “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles”, incorporated by reference in section 1956.8(d), Title 13, California Code of Regulations.

(i) “Ordered Emission Recall” means an inspection, repair, adjustment, or modification program required by the Board and conducted by the manufacturer or its agent or representative to remedy any nonconformity for which direct notification of vehicle, ~~or engine, or trailer~~ owners is necessary.

* * * *

(l) “Useful life” means, for the purposes of this article:

* * * *

(9) For 2001 through 2019 model year medium-duty low-emission, ultra-low-emission and super-ultra-low-emission vehicles certified to the primary standards in section 1961(a)(1), and motor vehicle engines used in such vehicles, a period of use of ten years or 120,000 miles, whichever occurs first. For 2001 through 2019 medium-duty low-emission, ultra-low-emission and super-ultra-low-emission vehicles certified to the optional 150,000 mile standards in section 1961(a)(1), and motor vehicle engines used in such vehicles, a period of use of fifteen years or 150,000 miles, whichever occurs first. For all other 1995 ~~and subsequent~~ through 2022-2023 model-year medium-duty vehicles and motor vehicle engines used in such vehicles, and 1992 through 1994 model-year medium-duty low-emission and ultra-low-emission vehicles certified to the standards in Section 1960.1(h)(2), and motor

vehicle engines used in such vehicles, a period of use of eleven years or 120,000 miles, whichever occurs first.

* * * *

(18) For those passenger cars, light-duty trucks, and medium-duty vehicles certified to the standards in section 1961.2 or 1961.3, the useful life shall be ~~fifteen~~ 15 years or 150,000 miles, whichever ~~occurs first~~ occurs. For ~~2023~~2024 and subsequent model-year engines certified to the standards in section 1956.8 for use in medium-duty vehicles with a GVWR from 10,001 to 14,000 pounds certified to the standards in section 1961.2, the useful life shall be 15 years or 150,000 miles, whichever first occurs.

(19)(A) For 2004 and subsequent through 2026 model-year light heavy-duty diesel engines, except ~~2023~~2024 through 2026 model-year engines used in medium-duty vehicles with a GVWR from 10,001 to 14,000 pounds, for carbon monoxide, particulate, and oxides of nitrogen plus non-methane hydrocarbons emissions standards, a period of use of 10 years or 110,000 miles, whichever first occurs, or any alternative useful life period approved by the Executive Officer.

(B) For 2027 through 2030 model-year light heavy-duty diesel engines used in heavy-duty vehicles with a GVWR greater than 14,000 pounds, for carbon monoxide, particulate, oxides of nitrogen, and non-methane hydrocarbons emissions standards, a period of use of 12 years or 190,000 miles, whichever first occurs.

(C) For 2031 and subsequent model-year light heavy-duty diesel engines used in heavy-duty vehicles with a GVWR greater than 14,000 pounds, for carbon monoxide, particulate, oxides of nitrogen, and non-methane hydrocarbons emissions standards, a period of use of 15 years or 270,000 miles, whichever first occurs.

(D) For ~~2023~~2024 and subsequent model-year diesel engines used in medium-duty vehicles with a GVWR from 10,001 to 14,000 pounds, see subparagraph (I)(18) of this section.

* * * *

(20)(A) For 2004 and subsequent through 2026 model-year medium heavy-duty diesel engines, for carbon monoxide, particulate, and oxides of nitrogen plus non-methane hydrocarbons emissions standards, a period of use of ~~ten~~ 10 years or 185,000 miles, whichever first occurs; or any alternative useful life period approved by the Executive Officer.

(B) For 2027 through 2030 model-year medium heavy-duty diesel engines, for carbon monoxide, particulate, oxides of nitrogen, and non-methane

hydrocarbons emissions standards, a period of use of 11 years or 270,000 miles, whichever first occurs.

(C) For 2031 and subsequent model-year medium heavy-duty diesel engines, for carbon monoxide, particulate, oxides of nitrogen, and non-methane hydrocarbons emissions standards, a period of use of 12 years or 350,000 miles, whichever first occurs.

* * * *

~~(21)(A) For 2004 and subsequent through 2026 model-year heavy heavy-duty diesel engines, 2004 and subsequent through 2026 model-year heavy-duty diesel urban buses, 2004 and subsequent through 2026 model-year heavy-duty diesel engines to be used in urban buses, and 2004 and subsequent through 2026 model year hybrid-electric urban buses for carbon monoxide, particulate, and oxides of nitrogen plus non-methane hydrocarbon emissions standards, a period of use of 10 years or 435,000 miles, or 22,000 hours, whichever first occurs, or any alternative useful life period approved by the Executive Officer, except as provided in paragraphs (21)(A)(i) and (21)(A)(ii).~~

~~(A)(i) The useful life limit of 22,000 hours in paragraph ~~(19)~~ (21)(A) of this definition is effective as a limit to the useful life only when an accurate hours meter is provided by the manufacturer with the engine and only when such hours meter can reasonably be expected to operate properly over the useful life of the engine.~~

~~(B)(ii) For an individual engine, if the useful life hours limit of 22,000 hours is reached before the engine reaches 10 years or 100,000 miles, the useful life shall become 10 years or 100,000 miles, whichever ~~occurs~~ first occurs, as required under Clean Air Act section 202(d) (42 U.S.C. 7521(d)).~~

(B) For 2027 through 2030 model-year heavy heavy-duty diesel engines, 2027 through 2030 model-year heavy-duty diesel urban buses, 2027 through 2030 model-year heavy-duty diesel engines to be used in urban buses, and 2027 through 2030 model year hybrid-electric urban buses for carbon monoxide, particulate, oxides of nitrogen, and non-methane hydrocarbons emissions standards, a period of use of 11 years or 600,000 miles, or 30,000 hours, whichever first occurs, except as provided in paragraphs (21)(B)(i) and (21)(B)(ii).

(i) The useful life limit of 30,000 hours in paragraph (21)(B) of this definition is effective as a limit to the useful life only if the manufacturer equips the engine with an hours meter that accurately records and reports the hours that the engine is operated throughout its useful life. The hours meter shall not count standby-idle time (key-on, engine off) as engine operating time for purposes of identifying the end of the useful life period, such as on a vehicle equipped with stop-start technology.

(ii) For an individual engine, if the useful life hours limit of 30,000 hours is reached before the engine reaches 11 years or 450,000 miles, the useful life shall become 11 years or 450,000 miles, whichever first occurs.

(C) For 2031 and subsequent model-year heavy heavy-duty diesel engines, 2031 and subsequent model-year heavy-duty diesel urban buses, 2031 and subsequent model-year heavy-duty diesel engines to be used in urban buses, and 2031 and subsequent model year hybrid-electric urban buses for carbon monoxide, particulate, oxides of nitrogen, and non-methane hydrocarbons emissions standards, a period of use of 12 years or 800,000 miles, or 40,000 hours, whichever first occurs, except as provided in paragraphs (21)(C)(i) and (21)(C)(ii).

(i) The useful life limit of 40,000 hours in paragraph (21)(C) of this definition is effective as a limit to the useful life only if the manufacturer equips the engine with an hours meter that accurately records and reports the hours that the engine is operated throughout its useful life . The hours meter shall not count standby-idle time (key-on, engine off) as engine operating time for purposes of identifying the end of the useful life period, such as on a vehicle equipped with stop-start technology.

(ii) For an individual engine, if the useful life hours limit of 40,000 hours is reached before the engine reaches 12 years or 600,000 miles, the useful life shall become 12 years or 600,000 miles, whichever first occurs.

* * * *

(22)(A) For 2004 and subsequent through 2026 model-year heavy-duty Otto-cycle engines, except 2023 through 2026 model-year engines used in medium-duty vehicles with a GVWR from 10,001 to 14,000 pounds, for carbon monoxide, particulate, and oxides of nitrogen plus non-methane hydrocarbon emissions standards, a period of use of 10 years or 110,000 miles, whichever first occurs.

(B) For 2027 through 2030 model-year heavy-duty Otto-cycle engines used in heavy-duty vehicles with a GVWR greater than 14,000 pounds, for carbon monoxide, particulate, oxides of nitrogen, and non-methane hydrocarbon emissions standards, a period of use of 12 years or 155,000 miles, whichever first occurs.

(C) For 2031 and subsequent model-year heavy-duty Otto-cycle engines used in heavy-duty vehicles with a GVWR greater than 14,000 pounds, for carbon monoxide, particulate, oxides of nitrogen, and non-methane hydrocarbon emissions standards, a period of use of 15 years or 200,000 miles, whichever first occurs.

(D) For 2023 and subsequent model-year Otto-cycle engines used in medium-duty vehicles with a GVWR from 10,001 to 14,000 pounds, see subparagraph-(l)(18) of this section.

(23) For 2022 and subsequent model year hybrid powertrains optionally certified pursuant to title 13, CCR §1956.8, for carbon monoxide, particulate, oxides of nitrogen, and non-methane hydrocarbons emissions standards:

(A) For diesel hybrid powertrains primarily used in vehicles with a GVWR from 14,001 to 19,500 pounds, the periods of use and model year implementation schedules for light heavy-duty diesel engines in §2112 (l)(19) shall apply to the hybrid powertrains.

(B) For diesel hybrid powertrains primarily used in vehicles with a GVWR from 19,501 to 33,000 pounds, the periods of use and model year implementation schedules for medium heavy-duty diesel engines in §2112 (l)(20) shall apply to the hybrid powertrains.

(C) For diesel hybrid powertrains primarily used in vehicles with a GVWR greater than 33,000 pounds, the periods of use and model year implementation schedules for heavy heavy-duty diesel engines in §2112 (l)(21) shall apply to the hybrid powertrains.

(D) For Otto-cycle hybrid powertrains used in vehicles with a GVWR greater than 14,000 pounds, the periods of use and model year implementation schedules for heavy-duty engines in §2112 (l)(22) shall apply to the hybrid powertrains.

(E) In the case of diesel hybrid powertrains used in incomplete vehicles with a GVWR from 10,001 to 14,000 pounds, the periods of use and model year implementation schedules for heavy-duty engines in §2112 (l)(18) or §2112 (l)(19), as applicable, shall apply to the hybrid powertrains.

(F) In the case of Otto-cycle hybrid powertrains used in incomplete vehicles with a GVWR from 10,001 to 14,000 pounds, the periods of use and model year implementation schedules for heavy-duty engines in §2112 (l)(22) shall apply to the hybrid powertrains.

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(m) “Vehicle, ~~or engine, or trailer~~ manufacturer” means the manufacturer granted certification for a motor vehicle, ~~or motor vehicle engine, or trailer.~~

(n) “Voluntary Emission Recall” means an inspection, repair, adjustment, or modification program voluntarily initiated and conducted by a manufacturer or its agent or

representative to remedy any nonconformity for which direct notification of vehicle, or engine, or trailer owners is necessary.

(o) "Trailer" has the same definition as that in section 95662(a), title 17, California Code of Regulations.

* * * *

Note: Authority cited: Sections 38501, 38505, 38510, 38560, 39010, 39600, 39601, 43013, 43018, 43101, 43104, 43105 and 43806, Health and Safety Code; and Section 28114, Vehicle Code. Reference: Sections 38501, 38505, 38510, 38560, 39002, 39003, 39010, 39500, 39601, 43000, 43009.5, 43013, 43018, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43107, 43202, 43204-43205.5, 43206, 43210, 43211, 43212, 43213 and 43806, Health and Safety Code; and Section 28114, Vehicle Code.

§ 2113. Initiation and Approval of Voluntary and Influenced Emission-Related Recalls.

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§ 2114. Voluntary and Influenced Recall Plans.

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§ 2115. Eligibility for Repair.

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§ 2116. Repair Label.

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§ 2117. Proof of Correction Certificate.

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§ 2118. Notification.

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§ 2119. Recordkeeping and Reporting Requirements.

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§ 2121. Penalties.

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§ 2123. Initiation and Notification of Ordered Emission-Related Recalls.

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§ 2125. Ordered Recall Plan.

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§ 2126. Approval and Implementation of Recall Plan.

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§ 2127. Notification of Owners.

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§ 2128. Repair Label.

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§ 2129. Proof of Correction Certificate.

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§ 2130. Capture Rates and Alternative Measures.

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§ 2131. Preliminary Tests.

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§ 2133. Recordkeeping and Reporting Requirements.

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§ 2137. Vehicle, and Engine, and Trailer Selection.

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§ 2139. Testing.

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§ 2139.5. CARB Authority to Test for Heavy-Duty In-Use Compliance

The CARB Executive Officer is authorized to conduct Heavy Duty In-Use Compliance (HDIUC) testing using the appropriate procedures in 40 CFR § 86.1370 and 40 CFR Part 86 Subpart T, as modified by the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles” incorporated by reference in Title 13, California Code of Regulations, section 1956.8(b), and “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles” incorporated by reference in Title 13, California Code of Regulations, section 1956.8(d), to identify engines that fail to conform to the applicable emission standards in Title 13 California Code of Regulations, section 1956.8, and to take corrective action against the manufacturers of such vehicles and engines based on the results of this testing.

Note: Authority cited: Sections 38501, 38505, 38510, 38560, 39600, 39601, 43013, 43018, 43101, 43104 and 43105, Health and Safety Code. Reference: Sections 38501, 38505, 38510, 38560, 39002, 39003, 43000, 43009.5, 43013, 43018, 43100, 43101, 43101.5, 43102, 43103, 43104, 43105, 43106, 43107, 43204-43205.5 and 43211-43213, Health and Safety Code.

§ 2140. Notification and Use of Test Results.

(a) The Executive Officer shall notify the manufacturer in writing if the in-use vehicle or trailer enforcement test results indicate that the test fleet contains three or more failures of the same emission-related component. Upon receipt of the notification, the manufacturer shall submit an emissions information report in accordance with Title 13, California Code of Regulations, Sections 2146 and 2147. The engine family, test group, vehicle family, trailer family, or sub-group manufacturer shall be subject to recall when a specific emission-related failure occurred in three or more test vehicles or trailers, unless the Executive Officer determines from the emissions information report that a recall is unnecessary.

(b) If the results of the in-use vehicle or trailer emission tests conducted pursuant to Section 2139 indicate that the average emissions of the test vehicles or trailers for any pollutant exceed the applicable emission standards specified in Title 13, California Code of Regulations, Sections 1960.1, 1961, 1961.2, 1961.3, 1956.8, 1958, 2412, 2423 or 2442 or in Title 17, California Code of Regulations, Section 95663, the entire vehicle or trailer population so represented shall be deemed to exceed such standards. The Executive Officer shall notify the manufacturer of the test results and upon receipt of the notification, the manufacturer shall have 45 days to submit an influenced recall plan in accordance with Sections 2113 through 2121, Title 13, California Code of Regulations. If no such recall plan is submitted, the Executive Officer may order corrective action including recall of the affected vehicles or trailers in accordance with Sections 2122 through 2135, Title 13, California Code of Regulations.

(c) For purposes of determining compliance with the test procedures in Title 13, California Code of Regulations, section 2139.5, an engine family is considered a failure when if any of the following conditions occur:

(1) for diesel engines, at least ~~3~~ three vehicles tested exceed the three-bin moving average window (3B-MAW) in-use threshold for the same bin and pollutant.

(2) for diesel engines, the arithmetic mean of the ~~average~~ Sum-Over-Sum emissions defined in California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles §86.1370.B.6.6, calculated across the 10 tested vehicles for each individual pollutant and bin, exceed the in-use threshold.

(3) for Otto-cycle engines, at least ~~3~~ three vehicles tested exceed the moving average window (MAW) in-use threshold for the same pollutant.

(4) for Otto-cycle engines, the arithmetic mean of the ~~average~~ Sum-Over-Sum emissions defined in California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles §86.1370.B.1.4 and §86.1370.B.1.5 (if applicable), calculated across the 10 test vehicles for each individual pollutant, exceed the in-use threshold.

Note: Authority cited: Sections 38501, 38505, 38510, 38560, 39600, 39601, 43013, 43018 and 43105, Health and Safety Code.

Reference: Sections 38501, 38505, 38510, 38560, 43000, 43009.5, 43013, 43018, 43101, 43104, 43105, 43106, 43107, 43204-43205.5 and 43211-43213, Health and Safety Code.

§ 2141. General Provisions.

(a) The provisions regarding applicability of the failure reporting procedures and the definitions shall be the same as those set forth in Title 13, California Code of Regulations, Sections 2111 and 2112, except that this Section 2141 does not apply to off-road compression-ignition engines, as defined in Section 2421.

(b) The requirement to file emission warranty information reports and field information reports for a given class or category of vehicles, ~~or engines, or trailers~~ shall be applicable for the warranty period but not to exceed the useful-life period of the vehicles, ~~or engines, or trailers~~ beginning with the 1990 model-year vehicles or engines and beginning 2020 model-year trailers.

(c) The requirement to file an emissions information report for a given class or category of vehicles, ~~or engines, or trailers~~ shall be applicable for the useful-life period of the vehicles, ~~or engines, or trailers.~~

(d) In the case of motor vehicles or engines for which certification of the exhaust and evaporative emission control systems is granted to different manufacturers, the information reporting responsibility in subsections (b) and (c) above shall be assigned to the certifying manufacturer.

(e) For purposes of enforcing or administering any requirement pursuant to this Division 3, Chapter 2, the Executive Officer or an ARB employee or agent upon presentation of credentials, has the right of entry to any premises owned, operated, used, leased, or rented by a person to repair or service any heavy-duty engine, ~~or heavy-duty vehicle, or trailer~~ for which California emissions standards have been adopted and which is situated on the premises for purpose of emission-related maintenance, repair or service. The right-to-entry includes, but is not limited to, verification of manufacturer's warranty reporting and claims through inspecting repair records, records that relate to vehicular, ~~or engine, or trailer~~ emissions, vehicles, ~~and engines, and trailers,~~ and may require the on-premises securing of samples of emissions from a vehicle, ~~or engine, or trailer~~ at any repair facility.

(f) In the case of 2024 and subsequent model year California-certified heavy-duty diesel and Otto-cycle engines, and heavy-duty vehicles,

(1) If a manufacturer files a "Field Information Report" pursuant to title 13, California Code of Regulations section 2145, ~~that manufacturer~~ it must retain ~~all emission-related component(s)~~ the information that it used to analyze obtained and relied upon when analyzing the failure and determined the probable cause of the failure of the component(s) during the time period corresponding to the time component of the useful life period of the engine family or test group. For instance, if a turbocharger failed in an engine family with a useful life of 15 years or 150,000 miles, whichever first occurs, the manufacturer must retain the above specified information during the 15 years. ~~for a minimum of 2 years after the Field~~

Information Report is submitted for an engine family or test group. The Executive Officer shall reserve the right to require manufacturers to submit warranty parts the information to the Executive Officer for analysis during the time period corresponding to the time component of the useful life period of the engine family or test group. If parts the information used to determine the valid failure rate are is not retained or are is unable to be provided to the Executive Officer for analysis upon request, the parts shall be considered failures.

(2) Upon the Executive Officer's request, manufacturers must provide information indicating, for a given emission-related component, how many warranty repairs for that component were performed at each of the manufacturer's authorized repair facilities.

(3) Warranty reports must include an attestation stating that the information provided in the report is accurate and true and must be signed by an authorized manufacturer representative.

(4) A Manufacturer shall apply good engineering judgement:

(A) The manufacturer shall exercise good engineering judgment in making all decisions called for under this subpart, including but not limited to selections, categorizations, determinations, and applications of the requirements of the subpart.

(B) Upon written request by the Executive Officer, the manufacturer shall provide within 15 working days (or such longer period as may be allowed by the Executive Officer) a written description of the engineering judgment in question.

(C) The Executive Officer may reject any such decision by a manufacturer if it is not based on good engineering judgment, or is otherwise inconsistent with the requirements of this subpart.

(D) If the Executive Officer rejects a decision by a manufacturer with respect to the exercise of good engineering judgment, the following provisions shall apply:

1. If the Executive Officer determines that incorrect information was deliberately used in the decision process, that important information was deliberately overlooked, that the decision was not made in good faith, or that the decision was not made with a rational basis, the manufacturer may be subject to penalties pursuant to, but not limited to, Section 43016, Health and Safety Code for failing to comply with this section.

2. If the Executive Officer determines that the manufacturer's decision does not meet the provisions of subsection (f)(4)(D)(1), but that a different decision would reflect a better exercise of good engineering judgment, then the Executive Officer will notify the manufacturer of this concern and the basis thereof.

a. The manufacturer shall have at least 30 days to respond to this notice. The Executive Officer may extend this response period upon request from the manufacturer if it is necessary to generate additional data for the manufacturer's response.

b. The Executive Officer shall make the final ruling after considering the information provided by the manufacturer during the response period. If the Executive Officer determines that the manufacturer's decision was not made using good engineering judgment, he/she may reject that decision and apply the new ruling to future corresponding decisions as soon as practicable.

(E) The Executive Officer shall notify the manufacturer in writing regarding any decision reached under subsection (f)(4)(D)(1) or (f)(4)(D)(2). The Executive Officer shall include in this notification the basis for reaching the determination.

Note: Authority cited: Sections 38501, 38505, 38510, 38560, 39500, 39600, 39601, 43000.5, 43013, and 43105, 43204, 43205.5, and 43214 Health and Safety Code. Reference: Sections 38501, 38505, 38510, 38560, 43000, 43009.5, 43018, 43101, 43104, 43105, 43106, 43107 and 43204-43205.5, Health and Safety Code.

§ 2142. Alternative Procedures.

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§ 2143. Failure Levels Triggering Recall and Corrective Action.

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§ 2144. Emission Warranty Information Report.

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§ 2145. Field Information Report.

(a) On the basis of data obtained and reported pursuant to Section 2144 of these procedures, a manufacturer shall file a field information report not more than 45 days after an emission warranty information report indicates that a cumulative total of unscreened warranty claims for a specific emission-related component is found to exist in excess of the percentage of vehicles or trailers specified in Section 2143, unless the manufacturer has committed to perform a recall by notifying the ARB of its intent in writing within the 45-day period. A recall plan must be submitted within 45 days of that notice.

(b) All field information reports shall be submitted to the Chief, ~~Mobile Source Operations~~ Emissions Certification and Compliance Division, ~~9528 Telstar Avenue, El Monte, CA 91734~~ 4001 Iowa Ave, Riverside, CA 92507, and shall contain the following information in substantially the format outlined below:

(1) The manufacturer's corporate name.

(2) A field information report number assigned by the manufacturer which shall be used in all related correspondence.

(3) A description of each class or category of California-certified vehicles, ~~or engines,~~ or trailers affected including make, model, model-year, engine family, ~~or test group,~~ vehicle family, or trailer family and such other information as may be required to identify the vehicles or engines affected. The description shall include those engine families, ~~or test groups,~~ vehicle families, or trailer families related to the affected engine family, ~~or test group,~~ vehicle family, or trailer family through common certification test data allowed under Title 40 Code of Federal Regulations, Section 86.1839-01, as amended January 17, 2006 ("carry-over" and "carry-across" engine families, ~~or test groups,~~ vehicle families, or trailer families).

(4) A description of the emission-related component that failed or was replaced or repaired under warranty, the failure and the probable cause of the failure.

(5) The number and percentage of vehicles, ~~or engines,~~ or trailers in each engine family, ~~or test group,~~ vehicle family, or trailer family for which a failure of a specific emission-related component was identified. In the case of 2024 and subsequent model year California-certified heavy-duty diesel and Otto-cycle engines, and heavy-duty vehicles, the number and percentage of vehicles or engines in each engine family or test group for which a failure of a specific emission-related component was identified can only be modified within 2 years of submitting a field information report and must be based on the analysis of a new set of components parts. A manufacturer must submit a revised field information report to modify the number and percentage of vehicles or engines in each

engine family or test group for which a failure or a specific emission-related component was identified. The Executive Officer reserves the right to require manufacturers to provide the parts used for analysis for two years after the field information report is submitted, and request information regarding the parts such as, the associated vehicle identification number, associated engine serial number, failure mode for each component part analyzed, mileage at time of failure, and methodology used to determine the failure mode during the time period corresponding to the time component of the useful life period of the engine family or test group.

(6) The total number and percentage of unscreened warranty claims and failures of a specific emission-related component projected to occur during the engine family's, or test group's, vehicle family's, or trailer family's useful life and a description of the method used to project this number.

(7) An estimated date when the failure of a specific emission-related component will reach the levels specified in Section 2143 of these procedures.

Note: Authority cited: Sections 38501, 38505, 38510, 38560, 39500, 39600, 39601, 43000.5, 43013, 43018 and 43105, 43204, 43205.5., and 43214 Health and Safety Code. Reference: Sections 38501, 38505, 38510, 38560, 43000, 43009.5, 43018, 43101, 43104, 43105, 43106, 43107 and 43204-43205.5, Health and Safety Code.

§ 2146. Emissions Information Report.

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§ 2147. Demonstration of Compliance with Emission Standards.

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§ 2148. Evaluation of Need for Recall.

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§ 2149. Notification and Subsequent Action.

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§ 2166. General Provisions.

- (a) The provisions of this article apply to:
- (1) California-certified 2024 and later model year heavy-duty diesel and heavy-duty Otto-cycle engines, and
 - (2) California-certified heavy-duty vehicles using such engines.
- (b) These procedures do not apply to zero-emission powertrains certified under Section 1956.8.
- (c) For the purpose of this Article, the definitions shall be same as those set forth in title 13, California Code of Regulations, sections 2166.1 and 2035(c) (or 2112)
- (d) This article contains procedures for requiring recalls or other corrective action based on failures to comply with performance standards, as evidenced by emissions warranty information. Nothing in this article limits the Executive Officer's authority pursuant to Health and Safety Code to require recalls or other corrective action in other types of situations.
- (e) Each part of this article shall be deemed severable, and in the event that any part of this article is held to be invalid, the remainder of this article shall continue in full force and effect.

Note: Authority cited: Sections, 39500, 39600, 39601, 43000.5, 43013, 43018, 43204, 43205.5, and 43214 Health and Safety Code. Engine Mfrs Assn v. California Air Resources Board, (2014) 231 Cal. App.4th 1022

Reference: Sections 43000, 43100, 43101, 43102, 43106, 43107, 43806, Health and Safety Code.

§ 2166.1. Definitions.

- (a) "Capture rate" means the percentage of in-use vehicles or engines subject to recall which must be corrected to bring the class or category of vehicles or engines into compliance. The number of vehicles subject to recall shall be based on the actual number of vehicles in use as verified by the Department of Motor Vehicles registration records, or vehicle or engine registration records compiled and prepared by R. L. Polk and Company or a comparable source at the time a recall is initiated.
- (b) "Corrective Action" refers to any action taken by the manufacturer to remedy a noncompliance or nonconformity of the specified performance standards. Corrective action may include recall, extended warranty, or other action ordered or deemed necessary by the Executive Officer. The Executive Officer shall require direct notification of corrective action to vehicle or engine owners.
- (c) "Days", when computing any period of time, means business days, unless otherwise noted.
- (d) "Emission control component" or "emission-related component" means a device, system, or assembly that"
- (1) affects any regulated emission of pollutants from a California certified heavy-duty diesel or heavy-duty Otto-cycle engine, or heavy-duty vehicle that is subject to California emission standards, including those parts, at a minimum, that are contained in the "Emissions Warranty Parts List" required by section 2036(f) or
 - (2) can cause the heavy-duty on-board diagnostic malfunction indicator lamp to become illuminated and
 - (3) is part of the certified configuration of a California certified heavy-duty diesel or Otto-cycle engine, or heavy-duty vehicle.
- (e) "Exhaust Gas Recirculation Cooler" means a device that reduces the temperature of gases that have been exhausted from the combustion chamber and are routed back into the engine.
- (f) "Exhaust Gas Recirculation Valve" means a device that reduces emissions by routing exhaust gases from the combustion chamber back into the engine to be mixed with incoming air before or during combustion.
- (g) "Emission-Related Failure" means an in-use failure of a device, component, system, or assembly that can affect an emission control component or emission-related component or system from functioning properly or as approved.
- (h) "Emission Warranty Claim" means an adjustment, inspection, repair or

replacement of a specific emission-related component within the statutory warranty period for which the vehicle or engine manufacturer is invoiced or solicited by a repairing agent for compensation pursuant to Title 13, California Code of Regulations, Division 3, Chapter 1, Article 6 and subject to this Article.

- (i) "Executive Officer" means the Executive Officer of the Air Resources Board or his or her authorized representative.
- (j) "Exhaust after-treatment device" means any device or system designed to reduce emissions from post-combustion exhaust emissions, including those components that transport the exhaust emissions from the engine to the after-treatment device, described in the manufacturer's application for certification, and installed on a vehicle or engine certified for sale in California.
- (k) "Extended Warranty" means corrective action required by the Executive Officer that extends the warranty time and mileage periods for a specific emissions-related component pursuant to this article. The extended warranty shall be at a minimum equal to or more than the applicable certified useful life period of that vehicle or engine. Direct notification of corrective action to vehicle or engine owners shall be required.
- (l) "Fuel Injector" means any device designed to deliver fuel to a cylinder or intake air system.
- (m) "Hydrocarbon Injector" means any device designed to increase exhaust temperatures by injecting fuel into the exhaust stream.
- (n) "Nonconformity" or "noncompliance" exists whenever a class or category of vehicles or engines, although properly maintained and used, experience a failure of the performance standards specified in Section 2143 within their useful lives.
- (o) "On-board computer" means any device that monitors or controls the performance of components that may impact emissions.
- (p) "Quarterly reports" refer to the following calendar periods: January 1- March 31, April 1-June 30, July 1-September 30, October 1-December 31.
- (q) "Recall" means an inspection, repair, adjustment, or modification program initiated and conducted by a manufacturer or its agent or representative to remedy any nonconformity, pursuant to this Article, for which direct notification of vehicle or engine owners shall be required.
- (r) "Systemic Failure" means any emission-control component as defined in this article, found to have valid failures that that exceed the thresholds specified in Section 2143.

- (s) “Turbocharger” means a forced induction device that is turbine-driven and used for the purpose of forcing compressed air into the combustion chamber.
- (t) “Urea Doser” means any device designed to deliver a reductant, such as urea, into the exhaust stream in order to reduce emissions.
- (u) “Valid failure” or “valid failure rate” means an emission-control component or emission-related component that was properly diagnosed and replaced under warranty by an authorized warranty station and represents the true and accurate failures of a specific component after proper analysis and screening of the applicable warranty data authorized and acceptable to the Executive Officer, pursuant to this Article.
- (v) “Vehicle or engine manufacturer” means the manufacturer granted certification for a new California-certified motor vehicle or motor vehicle engine.
- (w) “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 section 1956(a)(8).

Note: Authority cited: Sections, 39500, 39600, 39601, 43000.5, 43013, 43018, 43204, 43205.5, and 43214 Health and Safety Code. Engine Mfrs Assn v. California Air Resources Board, (2014) 231 Cal. App.4th 1022

Reference: Sections 43000, 43100, 43101, 43102, 43106, 43107, 43806, Health and Safety Code.

§ 2167. Required Recall and Corrective Action for Failures of Exhaust After-Treatment Devices, On-Board Computers or Systems, Urea Dosers, Hydrocarbon Injectors, Exhaust Gas Recirculation Valves, Exhaust Gas Recirculation Coolers, Turbochargers, Fuel Injectors.

(a) A manufacturer shall recall an engine family, test group, or subgroup of vehicles or engines and provide an extended warranty for the components that are replaced to correct the systemic failure, as defined in Section 2166.1, of an exhaust after-treatment device, on-board computer or system, urea doser, hydrocarbon injector, exhaust gas recirculation valve, exhaust gas recirculation cooler, turbocharger, fuel injector, or functional equivalent when the number of valid failures meets or exceeds the corrective action thresholds, as determined by the Executive Officer pursuant to Section 2143. The corrective action plan must be submitted to the Executive Officer no later than 90 days after the corrective action threshold specified in Section 2143 has been exceeded.

Note: Authority cited: Sections, 39500, 39600, 39601, 43000.5, 43013, 43018, 43204, 43205.5, and 43214 Health and Safety Code. Engine Mfrs Assn v. California Air Resources Board, (2014) 231 Cal. App.4th 1022
Reference: Sections 43000, 43100, 43101, 43102, 43106, 43107, 43806, Health and Safety Code.

§ 2168. Required Corrective Action and Recall for Emission-Related Component Failures

- (a) A manufacturer shall perform corrective action, including, but not limited to, providing an extended warranty as defined in Section 2166.1, to correct the systemic failure of emission control components other than exhaust after-treatment devices on-board diagnostic computers and systems, urea dosers, hydrocarbon injectors, exhaust gas recirculation valves, exhaust gas recirculation coolers, turbochargers, fuel injectors, or functional equivalents when the number of valid failures meet or exceed the corrective action thresholds, as determined by the Executive Officer pursuant to Section 2143. The corrective action plan must be submitted no later than 90 days after the corrective action threshold specified in Section 2143 has been exceeded.
- (b) A manufacturer shall recall an engine family, test group, or subgroup of vehicles or engines and provide an extended warranty for the components that are replaced to correct the systemic failure, as defined in Section 2166.1, other than an exhaust after-treatment device, on-board computer or system, urea doser, diesel particulate filter fuel injector, exhaust gas recirculation valve, exhaust gas recirculation cooler, turbocharger, or fuel injector, when the number of valid failures for a component meets or exceeds 25% of the sales volume within 5 years. The recall plan must be submitted no later than 90 days after the number of valid failures has exceeded 25%.
- (c) The Executive Officer may determine a recall is necessary pursuant to 2148 for the circumstances specified in (a).

Note: Authority cited: Sections, 39500, 39600, 39601, 43000.5, 43013, 43018, 43204, 43205.5, and 43214 Health and Safety Code. Engine Mfrs Assn v. California Air Resources Board, (2014) 231 Cal. App.4th 1022

Reference: Sections 43000, 43100, 43101, 43102, 43106, 43107, 43806, Health and Safety Code.

§ 2169. Required Recall or Corrective Action Plan.

- (a) A manufacturer shall submit a recall or corrective action plan to the Chief, Emissions Certification and Compliance Division, 4001 Iowa Ave, Riverside, CA 92507, no more than 90 days after the corrective action threshold specified in Section 2143 has been exceeded. ~~The Executive Officer may grant the manufacturer an extension upon good cause shown.~~
- (b) A recall or corrective action plan must contain the following elements:
- (1) A description of each class or category of vehicles or engines to be recalled or subject to corrective action, including the engine family, test group, or sub-group thereof, model year, make, model, and such other information as may be required to identify the vehicles or engines to be recalled or subjected to corrective action.
 - (2) A description of the nonconformity and the specific modifications, alterations, repairs, corrections, adjustments or other changes to be made to bring the vehicles or engines into conformity with the requirements of this article including a brief summary of the data and technical studies which support the manufacturer's decision regarding the specific corrections to be made.
 - (3) A description of the method by which the manufacturer will determine the names and addresses of vehicle or engine owners and the method by which they will be notified.
 - (4) A description of the procedure to be followed by vehicle or engine owners to obtain correction of the nonconformity including the date on or after which the owner can have the nonconformity remedied, the time reasonably necessary to perform the labor required to correct the nonconformity, and the designation of facilities at which the nonconformity can be remedied. The repair shall be completed within a reasonable time designated by the Executive Officer from the date the owner delivers the vehicle or engine for repair. This requirement becomes applicable on the date designated by the manufacturer as the date on or after which the owner can have the nonconformity remedied.
 - (5) If some or all of the nonconforming vehicles or engines are to be remedied by persons other than dealers or authorized warranty agents of the manufacturer, a description of such class of persons and a statement indicating that the participating members of the class will be properly equipped to perform such remedial action.
 - (6) A copy of the letter of notification to be sent to vehicle or engine owners.

- (7) A description of the system by which the manufacturer will ensure that an adequate supply of parts will be available to perform the repair under the recall or corrective action plan including the date by which an adequate supply of parts will be available to initiate the repair campaign, and the method to be used to assure the supply remains both adequate and responsive to owner demand.
- (8) A copy of all necessary instructions to be sent to those persons who are to perform the repair under the recall or corrective action plan.
- (9) Any other information, reports, or data which the Executive Officer may reasonably determine to be necessary to evaluate the recall plan or other corrective action including, but not limited to, a description of the impact of the proposed repairs or adjustments on fuel economy, drivability, performance, and safety of each class or category of vehicles or engines to be recalled and a brief summary of the data, technical studies, or engineering evaluations which support these descriptions.

Note: Authority cited: Sections, 39500, 39600, 39601, 43000.5, 43013, 43018, 43204, 43205.5, and 43214 Health and Safety Code. Engine Mfrs Assn v. California Air Resources Board, (2014) 231 Cal. App.4th 1022

Reference: Sections 43000, 43100, 43101, 43102, 43106, 43107, 43806, Health and Safety Code.

§ 2169.1. Approval and Implementation of Corrective Action Plan.

If the Executive Officer finds that the recall or corrective action plan is designed effectively to correct the nonconformity and complies with the provisions of Section 2169, he or she will so notify the manufacturer in writing. Upon receipt of the approval notice from the Executive Officer, the manufacturer shall commence implementation of the approved plan. Notification of vehicle or engine owners and the implementation of repairs shall commence within 30 days after the recall or corrective action plan is approved ~~unless the manufacturer can show good cause for the Executive Officer to extend the deadline.~~

Note: Authority cited: Sections, 39500, 39600, 39601, 43000.5, 43013, 43018, 43204, 43205.5, and 43214 Health and Safety Code. Engine Mfrs Assn v. California Air Resources Board, (2014) 231 Cal. App.4th 1022

Reference: Sections 43000, 43100, 43101, 43102, 43106, 43107, 43806, Health and Safety Code.

§ 2169.2. Notification of Owners.

- (a) Manufacturers shall notify vehicle or engine owners of a recall or other corrective action by first class mail or by such other means as approved by the Executive Officer. For good cause, the Executive Officer may require the use of certified mail to ensure an effective notification.
- (b) The manufacturer shall use all reasonable means necessary to locate vehicle or engine owners. For good cause, the Executive Officer may require the manufacturer to use motor vehicle registration lists available from commercial sources to obtain the names and addresses of vehicle or engine owners to ensure effective notification.
- (c) The Executive Officer may require subsequent notification by the manufacturer to vehicle or engine owners by first class mail or other reasonable means. For good cause, the Executive Officer may require the use of certified mail to ensure effective notification.
- (d) The notification of vehicle or engine owners shall contain the following:

 - (1) The statement: "The California Air Resources Board has determined that your (vehicle or engine) has an emission control component problem that requires corrective action".
 - (2) A statement that the nonconformity of any such vehicles or engines will be remedied at the expense of the manufacturer.
 - (3) A statement explaining that vehicle owners will be reimbursed if they paid out of pocket to have the nonconformity remedied.
 - (4) A statement that eligibility may not be denied solely on the basis that the vehicle or engine owner used parts not manufactured by the original equipment manufacturer, or had repairs performed by outlets other than the vehicle or engine manufacturer's franchised dealers.
 - (5) A clear description of the components which will be affected by the recall or other corrective action and a general statement of the measures to be taken to correct the nonconformity.
 - (6) A statement that such nonconformity, if not repaired, may cause the vehicle or engine to fail emission tests required under state law.
 - (7) A description of the adverse effects, if any, that an uncorrected nonconformity would have on the performance, fuel economy, or driveability of the vehicle or engine or to the function of other engine components.

- (8) A description of the procedure which the vehicle or engine owner should follow to obtain correction of the nonconformity including the date on or after which the owner can have the nonconformity remedied, the time reasonably necessary to correct the nonconformity, and a designation of the facilities at which the nonconformity can be remedied.
- (9) A statement that a certificate showing that the vehicle or engine has been repaired under the recall program shall be issued by the service facilities and that such a certificate may be required as a condition of vehicle registration or operation, as applicable.
- (10) A card to be used by a vehicle or engine owner in the event the vehicle or engine to be recalled has been sold. Such card should be addressed to the manufacturer, have postage paid, and shall provide a space in which the owner may indicate the name and address of the person to whom the vehicle or engine was sold.
- (11) The statement: "In order to ensure your full protection under the emission warranty made applicable to your (vehicle or engine) by State law, and your right to participate in future recalls, it is recommended that you have your (vehicle or engine) serviced as soon as possible. Failure to do so could be determined to be a lack of proper maintenance of your (vehicle or engine)."
- (12) A telephone number provided by the manufacturer, which may be used to report difficulty in obtaining recall repairs.
- (e) The manufacturer shall not condition eligibility for repair on the proper maintenance or use of the vehicle or engine except for strong or compelling reasons and with approval of the Executive Officer; however, the manufacturer shall not be obligated to repair a component which has been removed or altered so that the recall action cannot be performed without additional cost.
- (f) No notice sent pursuant to Section 2169(b)(8), above, nor any other communication sent to vehicle or engine owners or dealers shall contain any statement, express or implied, that the nonconformity does not exist or will not degrade air quality.
- (g) The manufacturer shall be informed of any other requirements pertaining to the notification under this section which the Executive Officer has determined are reasonable and necessary to ensure the effectiveness of the recall campaign.

Note: Authority cited: Sections, 39500, 39600, 39601, 43000.5, 43013, 43018, 43204, 43205.5, and 43214 Health and Safety Code. Engine Mfrs Assn v. California Air Resources Board, (2014) 231 Cal. App.4th 1022

Reference: Sections 43000, 43100, 43101, 43102, 43106, 43107, 43806, Health and Safety Code.

§ 2169.3. Repair Label.

- (a) The manufacturer shall require those who perform the repair under the recall plan to affix a label to each vehicle or engine repaired or, when required, inspected under the recall plan.
- (b) The label shall be placed in a location as approved by the Executive Officer and shall be fabricated of a material suitable for such location and which is not readily removable.
- (c) The label shall contain the recall campaign number and a code designating the facility at which the repair, or inspection for repair, was performed.

Note: Authority cited: Sections, 39500, 39600, 39601, 43000.5, 43013, 43018, 43204, 43205.5, and 43214 Health and Safety Code. Engine Mfrs Assn v. California Air Resources Board, (2014) 231 Cal. App.4th 1022
Reference: Sections 43000, 43100, 43101, 43102, 43106, 43107, 43806, Health and Safety Code.

§ 2169.4. Proof of Correction Certificate.

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§ 2169.5. Preliminary Tests.

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§ 2169.6. Communication with Repair Personnel.

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§ 2169.7. Recordkeeping and Reporting Requirements.

- (a) Unless otherwise specified by the Executive Officer, the manufacturer shall report on the progress of the recall campaign by submitting subsequent reports for six consecutive quarters commencing with the quarter after the recall campaign begins. Such reports shall be submitted no later than 25 days after the close of each calendar quarter to: Chief, Emissions Certification and Compliance Division, 4001 Iowa Ave, Riverside, CA 92507. For each class or category of vehicle or engine subject to the emission recall campaign, the quarterly report shall contain the following:
- (1) Engine family or test group and emission recall campaign number designated by the manufacturer.
 - (2) Date owner notification was begun, and date completed.
 - (3) Number of vehicles or engines involved in the ~~voluntary or influenced~~ emission recall campaign.
 - (4) Number of vehicles or engines known or estimated to be affected by the nonconformity and an explanation of the means by which this number was determined.
 - (5) Number of vehicles or engines inspected pursuant to the recall plan.
 - (6) Number of inspected vehicles or engines found to be affected by the nonconformity.
 - (7) Number of vehicles or engines receiving repair under the recall plan.
 - (8) Number of vehicles or engines determined to be unavailable for inspection or repair under the recall plan due to exportation, theft, scrapping, or for other reasons (specify).
 - (9) Number of vehicles or engines determined to be ineligible for recall action due to removed or altered components.
 - (10) A listing of the identification numbers of vehicles or engines subject to recall but for whose repair the manufacturer has not been invoiced. This listing shall be supplied in a standardized computer data storage device to be specified by the Executive Officer. The frequency of this submittal may be changed by the Executive Officer depending on the needs of recall enforcement.
 - (11) A copy of any service bulletins transmitted to dealers or other authorized repair facilities which relate to the nonconformity to be corrected and which have not previously been reported.
 - (12) A copy of all communications transmitted to vehicle or engine owners which relate to the nonconformity and which have not previously been submitted.
- (b) If the manufacturer determines that any of the information submitted to the Executive Officer pursuant to (a) above has changed or was incorrect, revised information and an explanatory note shall be submitted. Responses to subsections (a)(5), (6), (7), (8), and (9) above shall be cumulative totals.

(c) The manufacturer shall maintain in a form suitable for inspection, such as computer information storage devices or card files, and shall make available to the Executive Officer or his or her authorized representative upon request, the names and addresses of vehicle or engine owners:

- (1) To whom notification was given;
- (2) Whose vehicles were repaired or inspected under the recall plan; and
- (3) Who were determined not to qualify for such recall action due to removed or altered components.

(d) The information gathered by the manufacturer to compile the reports required by these procedures shall be retained for not less than one year beyond the useful life of the vehicles or engines and shall be made available to authorized personnel of the Air Resources Board upon request.

~~Note: Authority cited: Sections 39600, 39601, 43013, 43018 and 43105, Health and Safety Code. Reference: Health and Safety Code Sections 43000, 43009.5, 43013, 43018, 43101, 43104, 43105, 43106, 43107 and 43204-43205.5, Health and Safety Code.~~

Note: Authority cited: Sections, 39500, 39600, 39601, 43000.5, 43013, 43018, 43204, 43205.5, and 43214 Health and Safety Code. Engine Mfrs Assn v. California Air Resources Board, (2014) 231 Cal. App.4th 1022

Reference: Sections 43000, 43100, 43101, 43102, 43106, 43107, 43806, Health and Safety Code.

§ 2169.8. Extension of Time.

The Executive Officer may grant an extension for extend any deadline, not to exceed 180 days, in the plan if he or she finds in writing that a manufacturer has shown good cause for such extension. determines, based on information submitted by the manufacturer, that a manufacturer has a valid reason for not being able to meet a deadline. In evaluating any request for an extension under this section, the Executive Officer will exercise good engineering judgement, and will consider whether the information submitted by the manufacturer demonstrates that the factors cited by the manufacturer were beyond the control of the manufacturer or not reasonably foreseeable by the manufacturer.

Note: Authority cited: Sections, 39500, 39600, 39601, 43000.5, 43013, 43018, 43204, 43205.5, and 43214 Health and Safety Code. Engine Mfrs Assn v. California Air Resources Board, (2014) 231 Cal. App.4th 1022

Reference: Sections 43000, 43100, 43101, 43102, 43106, 43107, 43806, Health and Safety Code.

§ 2170. Penalties.

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§ 2423. Exhaust Emission Standards and Test Procedures - Off-Road Compression-Ignition Engines.

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§ 2485. Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling.

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