

Appendix A-1
TITLE 13
PROPOSED REGULATION ORDER

Date of Release: June 23, 2020
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PROPOSED REGULATION ORDER

**Amendments to
Title 13, California Code of Regulations**

Amend Sections 1900, 1956.8, 1961.2, 1965, 1968.2, 1971.1, 2035, 2036, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2121, 2123, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2133, 2137, 2139, 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: Amendments to existing sections proposed and subject to comment in this rulemaking are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions. 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.

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§ 1900. Definitions.

(a) The definitions of this section supplement and are governed by the definitions set forth in chapter 2 (commencing with section 39010), part 1, division 26 of the Health and Safety Code, unless a specific definition set forth therein has been revised in section (b) below to conform to federal law pursuant to Health and Safety Code section 39601. The definitions set forth in the applicable model-year new vehicle certification and assembly-line test procedures adopted in this chapter are hereby incorporated by reference.

(b) In addition to the definitions incorporated under subdivision (a), the following definitions shall govern the provisions of this chapter;

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(13) "Medium-duty vehicle" means any pre-1995 model year heavy-duty vehicle having a manufacturer's gross vehicle weight rating of 8,500 pounds or less; any 1992 through 2006 model-year heavy-duty low-emission, ultra-low-emission, super-ultra-low-emission or zero-emission vehicle certified to the standards in section 1960.1(h)(2) having a manufacturer's gross vehicle weight rating of 14,000 pounds or less; any 1995 through 2003 model year heavy-duty vehicle certified to the standards in section 1960.1(h)(1) having a manufacturer's gross vehicle weight rating of 14,000 pounds or less; and any 2000 and subsequent model heavy-duty low-emission, ultra-low-emission, super-ultra-low-emission or zero-emission vehicle certified to the standards in Section 1961(a)(1), 1961.2, 1962, ~~or 1962.1, or 1962.2,~~ having a manufacturer's gross vehicle weight rating between 8,501 and 14,000 pounds.

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Note: Authority cited: Sections 39010, 39600, 39601, 43013, 43018, 43101 and 43104, Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39500, 40000, 43000, 43013, 43018.5, 43100, 43101, 43101.5, 43102, 43103, 43104, 43106 and 43204, Health and Safety Code; and Section 27156, Vehicle Code.

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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])

Model Year	Oxides of Nitrogen Plus Non-methane Hydrocarbons	Optional Oxides of Nitrogen Plus Non-methane Hydrocarbons	Oxides of Nitrogen	Optional Oxides of Nitrogen	Non-methane hydrocarbons	Carbon Monoxide	Particulates
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 ^E
2007 and subsequent through 2023 ^M	n/a	n/a	0.20 ^I		0.14	15.5	0.01 ^K
2015 and Subsequent through 2023 (Optional) ^{N,O}	n/a	n/a	n/a	0.10, 0.05, or 0.02	0.14	15.5	0.01

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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.

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^N Optional Low NOx emission standards. A manufacturer may choose to offer an engine that is 50%, 75%, or 90% 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

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Federal Regulations, part 86, section 86.007-11 (g)(2)(ii), as adopted January 18, 2001.

(C) 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:

<u>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>				
<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 (g/bhp-hr) ^A</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>0.080</u>	<u>0.14</u>	<u>15.5</u>	<u>0.005</u>

^A Optional 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.

(D) 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:

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<u>Exhaust Emission Standards for 2027 and Subsequent Model Light Heavy-Duty Engines, and Medium Heavy-Duty Engines (g/bhp-hr)</u>					
<u>Test Procedure</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>	
FTP cycle	0.020	0.14	15.5	0.005	
RMC cycle	0.020	0.14	15.5	0.005	
Low-load cycle	0.050	0.14	15.5	0.005	
<u>Optional Low NOx Exhaust Emission Standards (g/bhp-hr)^A</u>					
FTP and RMC cycles	0.010	0.14	15.5	0.005	
Low-load cycle	0.025	0.14	15.5	0.005	
<u>Exhaust Emission Standards for 2027 Through 2030 Model Heavy Heavy-Duty Engines (g/bhp-hr)</u>					
<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>
FTP cycle	0.020	0.035	0.14	15.5	0.005
RMC cycle	0.020	0.035	0.14	15.5	0.005
Low-load cycle	0.050	0.090	0.14	15.5	0.005
<u>Optional Low NOx Exhaust Emission Standards (g/bhp-hr)^A</u>					
FTP and RMC cycles	0.010	0.14	15.5	0.005	
Low-load cycle	0.025	0.14	15.5	0.005	
<u>Exhaust Emission Standards for 2031 and Subsequent Model Heavy Heavy-Duty Engines (g/bhp-hr)</u>					
<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>
FTP cycle	0.020	0.040	0.14	15.5	0.005
RMC cycle	0.020	0.040	0.14	15.5	0.005
Low-load cycle	0.050	0.100	0.14	15.5	0.005
<u>Optional Low NOx Exhaust Emission Standards (g/bhp-hr)^A</u>					
FTP and RMC cycles	0.010	0.14	15.5	0.005	
Low-load cycle	0.025	0.14	15.5	0.005	

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^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.xxx-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).

(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 NOx or NOx 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 NOx or NOx 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.

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

(A) *[No change]*

* * * *

(B) Exempt Vehicles.

1. 2008 through 2023 model heavy-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

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its new 2008 and subsequent through 2023 model-year heavy-duty diesel engines to an optional NOx idling emission standard of 30 grams per hour.

b. In 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

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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).

* * * *

(b) *Test Procedures.* The test procedures for determining compliance with standards applicable to 1985 and subsequent model heavy-duty diesel engines and vehicles 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:

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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 H,I	Optional	n/a	0.14	0.10, 0.05, or 0.02	14.4	0.01	0.01

^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.

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^H Optional Low NOx emission standards. A manufacturer may choose to offer an engine that is 50%, 75%, or 90% 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:

<u>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>						
<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>0.050</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>0.020</u>	<u>0.14</u>	<u>14.4</u>	<u>0.01</u>	<u>0.005</u>
<u>Optional Low NOx Exhaust Emission Standards for 2024 and Subsequent Model Otto-Cycle Heavy-Duty Engines (g/bhp-hr)^B</u>						
<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>0.020</u>	<u>0.14</u>	<u>14.4</u>	<u>0.01</u>	<u>0.005</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>

^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.

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(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.

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(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.

(d) The test procedures for determining compliance with standards applicable to 1987 and subsequent model heavy-duty Otto-cycle engines and vehicles 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.

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(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:

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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 - 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 - 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.

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^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 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(h)(2), 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(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 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.

(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

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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:

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<u>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>					
<u>Test Procedure</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>	<u>Formaldehyde</u>
FTP cycle	0.050	0.14	15.5	0.005	0.050
RMC cycle	0.050	0.14	15.5	0.005	0.050
Low-load cycle	0.200	0.14	15.5	0.005	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>					
<u>Test Procedure</u>	<u>Oxides of Nitrogen</u>	<u>Non-methane Hydrocarbons</u>	<u>Carbon Monoxide</u>	<u>Particulates</u>	<u>Formaldehyde</u>
FTP cycle	0.020	0.14	15.5	0.005	0.050
RMC cycle	0.020	0.14	15.5	0.005	0.050
Low-load cycle	0.050	0.14	15.5	0.005	0.050

^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:

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<u>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>				
<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 (c)(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:

<u>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>						
<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>

^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.

(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:

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**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 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.

(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 2139.

(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.

(j) **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) Definitions Specific to this Section. The following definitions apply to this section 1956.8.

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(1) “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.

(2) “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.

(3) “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).

(4) “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)~~(5) “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.

(6) “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.

~~(5)~~(7) “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.

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(8) “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) “Medium heavy-duty engine” mean an engine used in a vehicle that is normally between 19,501 to 33,000 pounds GVWR. Medium heavy-duty engines may be designed for rebuild and may have cylinder liners. Vehicle body types in this group would typically include school buses, straight trucks with single rear axles, city tractors, and a variety of special purpose vehicles such as small dump trucks, and refuse trucks. Typical applications would include commercial short haul and intra-city delivery and pickup.

~~(7)~~(10) “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.

(11) “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)~~(12) “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)~~(13) “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.

(14) “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.

~~(10)~~(15) “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)~~(16) “Vocational vehicle” means a vehicle meeting the definition of “vocational” vehicle in 40 CFR §1037.801, as amended October 25, 2016.

~~(12)~~(17) “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

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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.

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§ 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.

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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%

¹ 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.

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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	400
2018	0	2	2	0	400
2019	0	1	2	1	400
2020	0	1	1	2	400
2021	0	0	1	3	400
2022 +	0	0	0	4	400

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	400
2017	0	2	1	0	400
2018	0	1	2	0	400
2019-2020	0	1	1	1	400
2021	0	0	1	2	400
2022 +	0	0	0	3	400

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.

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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	1	0	0	400
2017-2019	0	1	1	0	400
2020-2021	0	0	1	1	400
2022 +	0	0	0	2	400

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(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
2016-2018	0	1	0	0	400
2019-2021	0	0	1	0	400
2022 +	0	0	0	1	400

(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(c) or (h) shall not count

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~~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(c) 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.

In addition to all other requirements, emission control labels are required by the California certification procedures contained in the “California Motor Vehicle Emission Control and Smog Index Label Specifications for 1978 through 2003 Model Year Motorcycles, Light-, Medium- And Heavy-Duty Engines And Vehicles,” adopted March 1, 1978, as last amended September 5, 2003, which is incorporated herein by reference, the “California 2001 through 2014 Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2009 through 2016 Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty trucks and Medium-Duty Vehicles,” incorporated by reference in §1961(d), the “California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles,” incorporated by reference in §1961.2(d), the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel-Engines and Vehicles,” incorporated by reference in §1956.8(b), the “California Interim Certification Procedures for 2004 and Subsequent Model Hybrid-Electric Vehicles, in the Urban Bus and Heavy-Duty Vehicle Classes,” incorporated by reference in §1956.8(b) and (d), the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines,” incorporated by reference in §1956.8(d), and the “California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles,” incorporated by reference in title 17, CCR, §95663(d).

Smog index labels for passenger cars and light-duty trucks shall conform to the “California Smog Index Label Specifications for 2004 Through 2009 Model Year Passenger Cars and Light-Duty Trucks,” adopted September 5, 2003, as last amended May 2, 2008, which is incorporated herein by reference. Environmental Performance labels for passenger cars, light-duty trucks, and medium-duty passenger vehicles shall conform to the “California Environmental Performance Label Specifications for 2009 and Subsequent Model Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Passenger Vehicles,” adopted May 2, 2008, as last amended September 2, 2015, which is incorporated herein by reference. Environmental Performance labels for medium-duty vehicles, except medium-duty passenger vehicles, shall conform to the “California Environmental Performance Label Specifications for 2021 and Subsequent Model Year Medium-Duty Vehicles, Except Medium-Duty Passenger Vehicles,” adopted December 19, 2018, as last amended [INSERT DATE OF AMENDMENT], which is incorporated herein by reference. Motorcycles shall meet the requirements of Title 40 Code of Federal Regulations section 86.413-78, as last amended October 28, 1977, which is incorporated herein by reference.

Note: Authority cited: Sections 38501, 38505, 38510, 38560, 39600, 39601, 43013, 43018, 43101, 43104, 43105, 43200 and 43200.1, Health and Safety Code. Reference: Sections 39002, 39003, 43000, 43013, 43018.5, 43100, 43101, 43102, 43104, 43107, 43200 and 43200.1, Health and Safety Code.

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

* * * *

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

* * * *

(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) For vehicles using engines certified to an FTP engine NOx standard applicable for 2024 and subsequent model year engines and at 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 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).

(C) For vehicles using engines certified to an FTP engine PM standard applicable for 2024 and subsequent model year engines and at 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).

(17.1.5) For SULEV20 vehicles, in lieu of the NMOG+NOx emission threshold set forth in Table 1 in the beginning of section (e), manufacturers may use a malfunction criterion of 3.25 times the applicable NMOG+NOx standard for the first three model years a vehicle is certified, but no later than the 2025 model year. For example, for SULEV20 vehicles first certified to the SULEV20 standard in the 2024 model year, the manufacturer may use the 3.25 multiplier for the 2024 and 2025 model years and shall use the NMOG+NOx emission threshold set forth in Table 1 in the beginning of section (e) for the 2026 and subsequent model years.

* * * *

(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) 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) For vehicles using engines certified to an FTP engine NOx standard applicable for 2024 and subsequent model year engines and at 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).
- (C) For vehicles using engines certified to an FTP engine PM standard applicable for 2024 and subsequent model year engines and at 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), 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).

* * * *

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

* * * *

(c) *Definitions.*

* * * *

“OBD group” refers to a combination of engines, engine families, or engine ratings that use the same OBD strategies and similar calibrations. A manufacturer is required to submit a grouping plan for Executive Officer review and approval detailing the OBD groups and the engine families and engine ratings within each group for a model year.

“Optional Low NOx emission standard” refers to the ‘Optional Low NOx emission standards’ incorporated by reference in title 13, CCR sections 1956.8(a)(2)(A) and (c)(1)(B) to which the engine is certified.

* * * *

(g) *Monitoring Requirements For All Engines.*

* * * *

(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

(5.2.1) For diesel 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 diesel engines certified to an FTP NOx emission standard applicable for 2024 and subsequent model year engines and at 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) For diesel engines certified to an FTP PM emission standard applicable for 2024 and subsequent model year engines and at 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. 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, incorporated by reference in section 1956.8(b), title 13, CCR), 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, incorporated by reference in section 1956.8(b), title 13, CCR), 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, 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, 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) For gasoline 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 gasoline engines certified to an FTP engine NOx standard applicable for 2024 and subsequent model year engines and at 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).
- (C) For gasoline engines certified to an FTP engine PM standard applicable for 2024 and subsequent model year engines and at 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 (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).

* * * *

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 model year heavy-duty hybrid vehicles greater than 14,000 pound GVWR which are equipped with 2022 and subsequent model year hybrid powertrains optionally certified pursuant to title 13, CCR §1956.8, 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 1037.102, 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 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 heavy-duty hybrid vehicles equipped with 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 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;~~ 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, 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 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 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.

(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 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 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 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.

(a) These procedures shall apply to:

(1) California-certified 1982 and subsequent model-year passenger cars, light-duty trucks, medium-duty vehicles, heavy-duty vehicles, motorcycles, and California-certified 1997 and subsequent model-year off-road motorcycles and all-terrain vehicles, and 2007 and subsequent model-year off-road sport vehicles, off-road utility vehicles, and sand cars, including those federally certified vehicles which are sold in California pursuant to Health and Safety Code section 43102,

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

(3) California-certified 2000 and subsequent model-year off-road compression-ignition engines, ~~and~~

(4) California-certified 2008 model year spark-ignition sterndrive/inboard marine engines with maximum rated power less than or equal to 373 kilowatts complying with the Option 2 requirements in Section 2442(b)(1) and all California-certified 2009 and subsequent model-year spark-ignition sterndrive/inboard marine engines, and

(5) California-certified 2020 and subsequent model year trailers certified in accordance with the provisions of section 95663(c), title 17, California Code of Regulations.

(b) These procedures shall not apply to zero emission vehicles and those vehicles certified under Health and Safety Code section 44201.

(c) The Executive Officer may waive any or all of the requirements of these procedures if he or she determines that the requirement constitutes an unwarranted burden on the manufacturer without a corresponding emission reduction.

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 and 43204-43205.5, Health and Safety Code.

§ 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.

* * * *

(j) "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 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 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 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 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 (I)(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 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 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 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.

* * * *

(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.

(a) When any manufacturer initiates a voluntary emission recall campaign, the manufacturer shall notify the Executive Officer of the recall at least 30 days before owner notification is to begin. The manufacturer shall also submit a voluntary recall plan for approval, as prescribed under Section 2114 of these procedures. A voluntary recall plan shall be deemed approved unless disapproved by the Executive Officer within 20 days after receipt of the recall plan.

(b) When any manufacturer, based on enforcement test results or any other information provided or required by the ARB, proposes to initiate an influenced emission recall campaign, the manufacturer shall submit for approval by the Executive Officer an influenced emission recall plan as prescribed by Section 2114 of these procedures. The plan shall be submitted within 45 days following the receipt of a notification from the ARB that enforcement test results or other information demonstrate a vehicle, ~~or an engine,~~ or a trailer noncompliance.

(c) The Executive Officer shall approve the recall plan if the plan contains the information specified in Section 2114 and is designed to notify the vehicle or trailer owner and correct the nonconformity in an expeditious manner. Notification of vehicle, ~~or engine,~~ or trailer owners and the implementation of recall repairs shall commence no later than the schedule specified under Section 2114(a)(3) and (4), unless the manufacturer can show good cause for the Executive Officer to extend the deadline.

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

§ 2114. Voluntary and Influenced Recall Plans.

(a) The recall plan for both voluntary and influenced recalls shall contain the following information unless otherwise specified:

(1) A description of each class or category of vehicle, ~~or engine, or trailer~~ subject to recall including the number of vehicles, ~~or engines, or trailers~~ to be recalled, the engine family, test group, vehicle family, trailer family, or a subgroup thereof, the model year, the make, the model, and such other information as may be required to identify the vehicles, ~~or engines, or trailers~~ to be recalled.

(2) A description of the nonconformity and the specific modifications, alterations, repairs, adjustments, or other changes to be made to correct the vehicles, ~~or engines, or trailers~~.

(3) A description of the method by which the manufacturer will determine the names and addresses of vehicle, ~~or engine, or trailer~~ owners and the manufacturer's method and schedule for notifying the service facilities and vehicle, ~~or engine, or trailer~~ owners of the recall.

(4) A description of the procedure to be followed by vehicle, ~~or engine, or trailer~~ owners to obtain correction of the nonconformity. This shall include the date on or after which the owner can have the nonconformity remedied, the time reasonably necessary to perform the labor to remedy the nonconformity, and the designation of facilities at which the nonconformity can be remedied.

(5) If some or all of the nonconforming vehicles, ~~or engines, or trailers~~ are to be remedied by persons other than dealers or authorized warranty agents of the manufacturer, a description of such class of persons.

(6) A copy of the letter of notification to be sent to vehicle, ~~or engine, or trailer~~ owners.

(7) A description of the system by which the manufacturer will assure that an adequate supply of parts will be available to perform the repair under the recall 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.

(9) A description of the impact of the proposed repairs or adjustments on fuel economy, driveability, performance and safety of each class or category of vehicles, ~~or engines, or trailers~~ to be recalled and a brief summary of the data, technical studies, or engineering evaluations which support these descriptions.

(10) Under an influenced recall, an estimate of the capture rate from the proposed recall derived from actual data and/or manufacturer experience. A 60 percent capture rate shall be assigned for recalls based exclusively on noncompliance as defined in Section 2112(h)(1), above.

(11) Under an influenced recall based on noncompliance as defined in Section 2112(h)(2), above, a description of the impact of the proposed changes on the average emissions from the vehicles, ~~or engines,~~ or trailers to be recalled. The description shall contain the following:

(A) Average noncompliance emission levels.

(B) Average emission reduction per pollutant resulting from the recall repair. These averages shall be verified by the manufacturer by applying the proposed recall repairs to two or more in-use vehicles, ~~or engines,~~ or trailers representing the average noncompliance emission levels. Only those vehicles, ~~or engines,~~ or trailers with baseline-emission levels within 25 percent of the average emission levels of noncomplying pollutant(s) established under the in-use enforcement test program may be used by manufacturers to verify proposed recall repairs. The Executive Officer may allow the use of vehicles, ~~or engines,~~ or trailers exceeding these limits if none which meet the limits can be reasonably procured. In the case of heavy-duty engines, the average emission levels may be verified using laboratory engines, subject to approval by the Executive Officer.

(C) An estimate of the average emission level per pollutant for the class or category of vehicles, ~~or engines,~~ or trailers after repair as corrected by the estimated capture rate. The estimated average emission level shall comply with the applicable emission standard. The Executive Officer may waive the requirement for average emission compliance with the standards provided the emission level per vehicle or trailer repaired is reduced to its new-vehicle or trailer certification emission level at a minimum capture rate of 60 percent.

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

§ 2115. Eligibility for Repair.

The manufacturer shall not condition eligibility for repair on the proper maintenance or use of the vehicle or trailer except for strong and compelling reasons and with the 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 remedial action cannot be performed without additional cost.

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

§ 2116. Repair Label.

(a) The manufacturer shall require those who perform the repair to affix a label to each vehicle, ~~or engine,~~ or trailer repaired, or, when required, inspected, under the voluntary or influenced recall plan.

(b) The label shall be placed in a location approved by the Executive Officer and shall be fabricated of a material suitable for such location in which it is installed and which is not readily removable.

(c) The label shall contain the recall campaign number and a code designating the campaign facility at which the repair, or inspection for repair, was performed.

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

§ 2117. Proof of Correction Certificate.

The manufacturer shall require those who perform the repair to provide the owner for each vehicle, ~~or engine,~~ or trailer repaired with a certificate, in a format prescribed by the Executive Officer, which indicates that the noncomplying vehicle, ~~or engine,~~ or trailer has been corrected under the recall program. This requirement shall become effective and applicable upon the effective date of a recall enforcement program adopted by the Department of Motor Vehicles or another state agency which requires presentation of proof of correction of a recalled vehicle or trailer prior to issuance of a smog certificate, registration renewal, or other entitlement to use.

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

§ 2118. Notification.

The notification of vehicle, ~~or engine,~~ or trailer owners shall contain the following:

(a) The statement: “Your (vehicle, ~~or engine,~~ or trailer) (is or may be) releasing air pollutants which exceed (California or California and federal) standards,” if applicable as determined by the Executive Officer.

(b) A statement that the nonconformity of any such vehicles, ~~or engines,~~ or trailers will be remedied at the expense of the manufacturer.

(c) A statement that such nonconformity if not repaired may cause the vehicle or engine to fail a vehicle inspection or Smog Check test when such tests are required under state law.

(d) A statement describing the adverse effect, if any, of the uncorrected nonconformity on the performance, fuel economy, or durability of the vehicle, ~~or engine,~~ or trailer.

(e) After the effective date of the recall enforcement program referred to in Section 2117, a statement that a certificate showing that the vehicle or trailer has been repaired under the recall program shall be issued by the service facilities, and that such a certificate will be required as a condition of vehicle or trailer registration or operation, as appropriate.

(f) A card to be used by a vehicle, ~~or engine,~~ or trailer owner in the event the vehicle, ~~or engine,~~ or trailer 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,~~ or trailer was sold or transferred.

(g) The statement: “In order to ensure your full protection under the emission warranty provisions, it is recommended that you have your (vehicle, ~~or engine,~~ or trailer) serviced as soon as possible. Failure to do so could be determined as lack of proper maintenance of your (vehicle, ~~or engine,~~ or trailer.” This statement is not required for off-road motorcycles or all-terrain vehicles.

(h) A telephone number provided by the manufacturer, which may be used to report difficulty in obtaining recall repairs.

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

§ 2119. 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~~Mobile Source Operations~~ Division, ~~9528 Telstar, El Monte, CA 91731~~4001 Iowa Ave, Riverside, CA 92507. For each class or category of vehicle, ~~or engine,~~ or trailer subject to the emission recall campaign, the quarterly report shall contain the following:

- (1) Engine family, ~~or test group,~~ vehicle family, or trailer family and emission recall campaign number designated by the manufacturer.
- (2) Date owner notification was begun, and date completed.
- (3) Number of vehicles, ~~or engines,~~ or trailers involved in the voluntary or influenced emission recall campaign.
- (4) Number of vehicles, ~~or engines,~~ or trailers 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,~~ or trailers inspected pursuant to the voluntary or influenced emission recall plan.
- (6) Number of inspected vehicles, ~~or engines,~~ or trailers found to be affected by the nonconformity.
- (7) Number of vehicles, ~~or engines,~~ or trailers receiving repair under the recall plan.
- (8) Number of vehicles, ~~or engines,~~ or trailers 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,~~ or trailers determined to be ineligible for recall action due to removed or altered components.
- (10) A listing of the identification numbers of vehicles, ~~or engines,~~ or trailers 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,~~ or trailer 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,~~ or trailer owners:

(1) To whom notification was given;

(2) Whose vehicles or trailers 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,~~ or trailers and shall be made available to authorized personnel of the Air Resources Board upon request.

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

§ 2121. Penalties.

Under the influenced recall, failure by a manufacturer to notify the vehicle, ~~or engine, or trailer~~ owners and repair the vehicles, ~~or engines, or trailers~~ in the manner specified in the plan shall constitute a violation of the Executive Officer's order approving the plan and a violation of Health and Safety Code Section 43105. Notwithstanding the above, no penalty shall be imposed for a manufacturer's failure to meet the estimated capture rate except for an influenced recall when the 60-percent capture rate is required pursuant to Section 2114(a)(10) above, in which case a recall pursuant to Section 2123 below may be ordered if the Executive Officer determines that the manufacturer did not show a good faith effort to achieve the capture rate set forth in the recall plan.

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

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

(a) A manufacturer shall be notified whenever the Executive Officer has determined, based on warranty information reports, field information reports, enforcement testing results, or any other information, that a substantial number of a class or category of vehicles, ~~or engines, or trailers~~ produced by that manufacturer, although properly maintained and used, contain a failure in an emission-related component which, if uncorrected, may result in the vehicles', ~~or engines', or trailers'~~ failure to meet applicable standards over their useful lives; or whenever a class or category of vehicles, ~~or engines, or trailers~~ within their useful lives, on average, do not conform to the standards prescribed pursuant to Section 43101 of the Health and Safety Code as applicable to the model year of such vehicles or trailers.

(b) It shall be presumed for purposes of this section that an emission-related failure will result in the exceedance of emission standards unless the manufacturer presents evidence in accordance with the procedures set forth in Title 13, California Code of Regulations, Section 2147 which demonstrates to the satisfaction of the Executive Officer that the failure will not result in exceedance of emission standards over the useful life of the vehicle, ~~or engine, or trailer~~.

(c) The notification shall include a description of each class or category of vehicles, ~~or engines, or trailers~~ encompassed by the determination of nonconformity, shall set forth the factual basis for the determination and shall designate a date at least 45 days from the date of receipt of such notification by which the manufacturer shall submit a plan to remedy the nonconformity.

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

§ 2125. Ordered Recall Plan.

(a) Unless a public hearing is requested by the manufacturer, a recall plan shall be submitted to the Chief, Emissions Certification and Compliance Mobile Source Division, 9528 Telstar Avenue, El Monte, CA 91731 ~~4001 Iowa Ave, Riverside, CA 92507~~, within the time limit specified in the notification. The Executive Officer may grant the manufacturer an extension upon good cause shown.

(b) The recall plan shall contain the following:

(1) A description of each class or category of vehicle, ~~or engine, or trailer~~ to be recalled, including the engine family, test group, vehicle family, trailer family, or sub-group thereof, the model-year, the make, the model, and such other information as may be required to identify the vehicles, ~~or engines, or trailers~~ to be recalled.

(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, or trailers~~ into conformity 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, or trailer~~ owners and the method by which they will be notified.

(4) A description of the procedure to be followed by vehicle, ~~or engine, or trailer~~ 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, or trailer~~ 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, or trailers~~ 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) The capture rate required for each class or category of vehicle, ~~or engine, or trailer~~ to be recalled. Under recalls based on exceedance of emission standards, the capture rate shall be calculated using the following formula:

$$R = \frac{(E_f - E_s) \times 100\%}{\Delta}$$

where: R = capture rate (see section 2112(a), above, for definition).

Δ = average reduction per vehicle or trailer resulting from the recall repair (see subsection (b)(12)(B), below, for determination).

E_f = average noncompliance emission level determined from in-use enforcement testing and other sources.

E_s = emission standard for a particular pollutant.

An 80 percent capture rate shall be required for recalls based exclusively on noncompliance as defined in section 2112(h)(1), above.

(7) The plan may specify the maximum incentives (such as a tune-up or specified quantity of gasoline), if any, the manufacturer will offer to induce vehicle, ~~or engine, or trailer~~ owners to present their vehicles or trailers for repair, as evidence that the manufacturer has made a good faith effort to repair the percentage of vehicles, ~~or engines, or trailers~~ specified in the plan. The plan shall include a schedule for implementing actions to be taken including identified increments of progress towards implementation and deadlines for completing each such increment.

(8) A copy of the letter of notification to be sent to vehicle, ~~or engine, or trailer~~ owners.

(9) A description of the system by which the manufacturer will assure that an adequate supply of parts will be available to perform the repair under the recall 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.

(10) A copy of all necessary instructions to be sent to those persons who are to perform the repair under the recall plan.

(11) A description of the impact of the proposed changes on fuel economy, driveability, performance and safety of each class or category of vehicles, ~~or engines, or trailers~~ to be recalled and a brief summary of the data, technical studies, or engineering evaluations which support these descriptions.

(12) A description of the impact of the proposed changes on the average emissions of the vehicles, ~~or engines, or trailers~~ to be recalled based on noncompliance as defined in section 2112(h)(2), above. The description shall contain the following:

(A) Average noncompliance emission levels.

(B) Average emission reduction or increase per pollutant resulting from the recall repair. These averages shall be verified by the manufacturer by applying the proposed recall repairs to two or more in-use vehicles, or engines, or trailers representing the average noncompliance emission levels. Only those vehicles, or engines, or trailers with baseline emission levels within 25 percent of the average emission levels of noncomplying pollutant(s) established under the in-use enforcement test program may be used by manufacturers to verify proposed recall repairs. The Executive Officer may allow the use of vehicles, or engines, or trailers exceeding these limits if none which meet the limits can be reasonably procured. In the case of heavy-duty engines, the average emission levels may be verified by using laboratory engines, subject to approval by the Executive Officer.

(C) An estimate of the average emission level per pollutant for a class or category of vehicles, or engines, or trailers after repair as corrected by the required capture rate. The estimated average emission level shall comply with the applicable emission standards. If the average emissions levels achieved by applying the average emission reduction per vehicle, or engine, or trailer after repair and the estimated capture rate, do not achieve compliance with the emissions standards, a manufacturer shall propose other measures to achieve average emissions compliance.

(13) Any other information, reports, or data which the Executive Officer may reasonably determine to be necessary to evaluate the recall plan.

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

§ 2126. Approval and Implementation of Recall Plan.

(a) If the Executive Officer finds that the recall plan is designed effectively to correct the nonconformity and complies with the provisions of Section 2125, 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,~~ or trailer owners and the implementation of recall repairs shall commence within 45 days of the receipt of notice unless the manufacturer can show good cause for the Executive Officer to extend the deadline.

(b) If the Executive Officer does not approve the recall plan or the mitigation measures provided in Section 2130 as submitted, the Executive Officer shall order modification of the plan or mitigation measures with such changes and additions as he or she determines to be necessary. The Executive Officer shall notify the manufacturer in writing of the disapproval and the reasons for the disapproval.

(c) The manufacturer may contest the Executive Officer's disapproval by requesting a public hearing pursuant to the procedures set forth in Sections 60040 to 60053, Title 17, California Code of Regulations. As a result of the hearing, the Board may affirm, overturn or modify the Executive Officer's action. In its decision, affirming or modifying, the Board shall specify the date by which the manufacturer shall commence notifying vehicle, ~~or engine,~~ or trailer owners and implementing the required recall repairs.

(d) If no public hearing is requested in accordance with (c) above, the manufacturer shall incorporate the changes and additions required by the Executive Officer and shall commence notifying vehicle, ~~or engine,~~ or trailer owners and implementing the required recall repairs within 60 days of the manufacturer's receipt of the Executive Officer's disapproval.

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

§ 2127. Notification of Owners.

(a) Notification to vehicle, ~~or engine,~~ or trailer owners shall be made by first class mail or by such other means as approved by the Executive Officer provided, that 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,~~ or trailer owners provided, that for good cause, the Executive Officer may require the manufacturer to use motor vehicle or trailer registration lists available from State or commercial sources to obtain the names and addresses of vehicle, ~~or engine,~~ or trailer owners to ensure effective notification.

(c) The Executive Officer may require subsequent notification by the manufacturer to vehicle, ~~or engine,~~ or trailer owners by first class mail or other reasonable means provided, that for good cause, the Executive Officer may require the use of certified mail to ensure effective notification.

(d) The notification of vehicle, ~~or engine,~~ or trailer owners shall contain the following:

(1) The statement: "the California Air Resources Board has determined that your (vehicle, ~~or engine,~~ or trailer) (is or may be) releasing air pollutants which exceed (California or California and Federal) standards. These standards were established to protect your health and welfare from the dangers of air pollution."

(2) A statement that the nonconformity of any such vehicles, ~~or engines,~~ or trailers will be remedied at the expense of the manufacturer.

(3) A statement that eligibility may not be denied solely on the basis that the vehicle, ~~or engine,~~ or trailer owner used parts not manufactured by the original equipment vehicle or trailer manufacturer, or had repairs performed by outlets other than the vehicle, ~~or engine,~~ or trailer manufacturer's franchised dealers.

(4) A clear description of the components which will be affected by the recall action and a general statement of the measures to be taken to correct the nonconformity.

(5) A statement that such nonconformity, if not repaired, may cause the vehicle, ~~or engine,~~ or trailer to fail an emission inspection or Smog Check test when such tests are required under State law.

(6) 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 trailer or to the function of other engine components.

(7) A description of the procedure which the vehicle, ~~or engine,~~ or trailer 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.

(8) After the effective date of the recall enforcement program referred to in Section 2117, above, a statement that a certificate showing that the vehicle or trailer 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 or trailer registration or operation, as applicable.

(9) A card to be used by a vehicle, ~~or engine,~~ or trailer owner in the event the vehicle, ~~or engine,~~ or trailer 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,~~ or trailer was sold.

(10) The statement: "In order to ensure your full protection under the emission warranty made applicable to your (vehicle, ~~or engine,~~ or trailer) by State or Federal law, and your right to participate in future recalls, it is recommended that you have your (vehicle, ~~or engine,~~ or trailer) serviced as soon as possible. Failure to do so could be determined to be a lack of proper maintenance of your (vehicle, ~~or engine,~~ or trailer)." This statement is not required for off-road motorcycles or all-terrain vehicles.

(11) 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 trailer 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 2125(b)(8), above, nor any other communication sent to vehicle, ~~or engine,~~ or trailer 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 38501, 38505, 38510, 38560, 39600, 39601, 43013, 43018 and 43105, Health and Safety Code. Reference: Health and Safety Code Sections 38501, 38505, 38510, 38560, 43000, 43009.5, 43013, 43018, 43101, 43104, 43105, 43106, 43107 and 43204-43205.5, Health and Safety Code.

§ 2128. 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,~~ or trailer 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, inspection for repair, was performed.

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

§ 2129. Proof of Correction Certificate.

The manufacturer shall require those who perform the recall repair to provide the owner of each vehicle, ~~or engine, or trailer~~ repaired with a certificate, through a protocol and in a format prescribed by the Executive Officer, which indicates that the noncomplying vehicle, ~~or engine, or trailer~~ has been corrected under the recall program. This requirement shall become effective and applicable upon the effective date of the recall enforcement program referred to in Section 2117, above.

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

§ 2130. Capture Rates and Alternative Measures.

The manufacturer shall comply with the capture rate specified in the recall plan as determined pursuant to Section 2125(b)(6), above, within six consecutive quarters beginning with the quarter in which the notification of vehicle, ~~or engine, or trailer~~ owners was initiated. If, after good faith efforts, the manufacturer cannot correct the percentage of vehicles or trailers specified in the plan by the applicable deadlines and cannot take other measures to bring the engine family, ~~or test group, vehicle family, or trailer family~~ into compliance with the standards, the manufacturer shall propose mitigation measures to offset the emissions of the unrepaired vehicles or trailers within 45 days from the last report filed pursuant to Section 2133(c), below. The Executive Officer shall approve such measures provided that:

- (a) the emission reductions from the recalled and repaired vehicles, ~~or engines, or trailers~~ and the mitigation measures are equivalent to achieving the capture rate; and
- (b) the emission reductions from the mitigation measures are real and verifiable; and
- (c) the mitigation measures are implemented in a timely manner.

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

§ 2131. Preliminary Tests.

The Executive Officer may require the manufacturer to conduct tests on components and vehicles, ~~or engines,~~ or trailers incorporating a proposed correction, repair, or modification reasonably designed and necessary to demonstrate the effectiveness of the correction, repair, or modification.

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

§ 2133. Recordkeeping and Reporting Requirements.

(a) The manufacturer shall maintain sufficient records to enable the Executive Officer to conduct an analysis of the adequacy of the recall campaign. The records shall include, for each class or category of vehicle, ~~or engine, or trailer~~, but need not be limited to, the following:

- (1) Engine family, test group, vehicle family, or trailer family involved and recall campaign number as designated by the manufacturer.
 - (2) Date owner notification was begun, and date completed.
 - (3) Number of vehicles, ~~or engines, or trailers~~ involved in the recall campaign.
 - (4) Number of vehicles, ~~or engines, or trailers~~ known or estimated to be affected by the nonconformity.
 - (5) Number of vehicles, ~~or engines, or trailers~~ inspected pursuant to the recall plan and found to be affected by the nonconformity.
 - (6) Number of inspected vehicles, ~~or engines, or trailers~~.
 - (7) Number of vehicles, ~~or engines, or trailers~~ receiving repair under the recall plan.
 - (8) Number of vehicles, ~~or engines, or trailers~~ 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, or trailers~~ determined to be ineligible for recall action due to removed or altered components.
 - (10) A listing of the identification numbers of vehicles, ~~or engines, or trailers~~ 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, as specified in subsection (c) below, may be changed by the Executive Officer depending on the needs of recall enforcement.
 - (11) Any service bulletins transmitted to dealers which relate to the nonconformity and which have not previously been submitted.
 - (12) All communications transmitted to vehicle, ~~or engine, or trailer~~ owners which relate to the nonconformity and which have not previously been submitted.
- (b) If the manufacturer determines that the original responses to subsections (a)(3) and (4) of these procedures are incorrect, revised figures and an

explanatory note shall be submitted. Responses to subsections (a)(5), (6), (7), (8), and (9) shall be cumulative totals.

(c) Unless otherwise directed by the Executive Officer, the information specified in subsection (a) of these procedures shall be included in six quarterly reports, beginning with the quarter in which the notification of owners was initiated, or until all nonconforming vehicles, ~~or engines,~~ or trailers involved in the campaign have been remedied, whichever occurs sooner. Such reports shall be submitted no later than 25 days after the close of each calendar quarter.

(d) 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, lists of the names and addresses of vehicle, ~~or engine,~~ or trailer owners:

- (1) To whom notification was given;
- (2) Who received remedial repair or inspection under the recall plan; and
- (3) Who were denied eligibility for repair due to removed or altered components.

(e) The records and reports required by these procedures shall be retained for not less than one year beyond the useful life of the vehicles, ~~or engines,~~ or trailers involved, or one year beyond the reporting time frame specified in subsection (c) above, whichever is later.

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

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

(a) Any vehicle or trailer of an engine family, test group, vehicle family, trailer family, any vehicle of a subgroup of an engine family, or test group, vehicle family, or trailer family, or any engine used in a piece of equipment, manufactured for sale in California, shall be subject to these test procedures during its useful life. A minimum of ten (10) in-use vehicles, or engines, or trailers determined by the ARB to be properly maintained and used will be procured and tested by the ARB or its designated laboratory to represent the emission characteristics of the engine family, test group, vehicle family, trailer family, or subgroup. The ARB may test less than ten (10) in-use vehicles, or engines, or trailers if the manufacturer notifies the ARB in writing that the manufacturer will accept the results from less than ten (10) vehicles, or engines, or trailers as being representative of the engine family, test group, vehicle family, trailer family, or subgroup.

(b) No vehicle, or engine, or trailer shall be accepted by the ARB as a representative vehicle, or engine, or trailer for enforcement testing unless the following criteria are met:

- (1) California certified and registered.
- (2) Odometer indication of less than certified useful-life mileage and vehicle and trailer age within useful-life time period.
- (3) No indication of abuse (e.g., racing, overloading, misfueling, or other misuse), neglect, improper maintenance or other factors that would have a permanent effect on emission performance.
- (4) No major repair to engine or major repair of vehicle and trailer resulting from collision.
- (5) No indication of any problem that might jeopardize the safety of laboratory personnel.
- (6) For off-road compression-ignition engines subject to recall testing, engines shall have an hour meter indication and engine age not exceeding the following periods:
 - (A) For all engines rated under 19 kilowatts, and for constant-speed engines rated under 37 kilowatts with rated speeds greater than or equal to 3,000 revolutions per minute, four years or 2,250 hours of operation, whichever first occurs.
 - (B) For all other engines rated above 19 kilowatts and under 37 kilowatts, five years or 3,750 hours of operation, whichever first occurs.

(C) For all engines rated at or above 37 kilowatts, seven years or 6,000 hours of operation, whichever first occurs.

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

§ 2139. Testing.

After the vehicles or trailers have been accepted and restorative maintenance, if any, has been performed, the ARB or its designated laboratory shall perform the applicable emission tests pursuant to the following:

* * * *

(d) For heavy-duty engines and vehicles, in-use compliance emission tests shall be performed pursuant to section 1956.8, Title 13, California Code of Regulations, “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). For heavy-duty vehicles and trailers certified to the GHG emission standards of section 95663, Title 17, California Code of Regulations, in-use compliance emission tests shall be performed pursuant to section 95663, Title 17, California Code of Regulations.

(e) For motorcycles, in-use compliance emission tests shall be performed pursuant to section 1958, Title 13, California Code of Regulations.

(f) For off-road motorcycles and all-terrain vehicles, in-use compliance tests shall be performed pursuant to section 2412, Title 13, California Code of Regulations. The in-use compliance testing shall use the same test procedure utilized for the specific vehicle's original certification testing.

(g) For off-road compression-ignition engines, in-use compliance tests shall be performed pursuant to Section 2423, Title 13, California Code of Regulations. The in-use compliance testing shall use the same test procedure utilized for the specific engine's original certification testing.

(h) For spark-ignition sterndrive/inboard marine engines, in-use compliance tests shall be performed pursuant to section 2442, Title 13, California Code of Regulations. The in-use compliance testing shall use the same test procedure utilized for the specific engine's original certification testing.

(i) For any emission in-use compliance test performed pursuant to subsections (a) through (h), the ARB may waive a specific test for subsequent vehicle or trailer samples if results from vehicle or trailer samples already tested are deemed sufficient to establish complying emission levels. The ARB shall inform the manufacturer at least 30 days prior to enforcement testing of its vehicles, ~~or engines,~~ or trailers and shall permit a manufacturer representative to observe the enforcement 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.

§ 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.

§ 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:

(1) for diesel engines, at least 3 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 average emissions, calculated across the 10 tested vehicles for each individual pollutant and bin, exceed the in-use threshold for any applicable pollutant of any bin.

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

(4) for Otto-cycle engines, the average emissions, calculated across the 10 test vehicles for each individual pollutant, exceed the in-use threshold for any applicable pollutant.

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 must retain all emission-related component(s) that it used to analyze the failure and probable cause of the failure of the component(s) 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 to the Executive Officer for analysis. If parts used to determine the valid failure

rate are not retained or are unable to be provided to the Executive Officer for analysis, 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.

(a) A vehicle or trailer manufacturer may use an alternative procedure to those specified in Sections 2144(a) and 2145(a), provided the Executive Officer has determined that the alternative procedure will produce substantially equivalent results. In making such a determination, the Executive Officer shall consider the capacity of the alternative procedure to:

- (1) ensure early detection of failing components within the useful life of the vehicles, ~~or engines,~~ or trailers;
- (2) track failing components by engine family, test group, vehicle family, or trailer family;
- (3) assure prompt notification of the Executive Officer when a systematically failing component is indicated;
- (4) provide objective, complete and easily monitored data; and
- (5) be audited by the Executive Officer.

(b) If, in order to comply with the requirements of Section 2142(a), 2144(a) or 2145(a), a manufacturer elects to develop a system based upon a sampling of representative California dealerships, such plan must be reviewed and approved by the Executive Officer prior to its implementation.

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.

§ 2143. Failure Levels Triggering Recall and Corrective Action.

An engine family, test group, a vehicle family, a trailer family or a subgroup shall be subject to a recall when the number of failures of a specific emission-related component exceeds the failure level set forth below, unless the Executive Officer determines from the emission information report that a recall is unnecessary pursuant to the criteria set forth in Section 2148(a) and (b). Vehicles or engines in an engine family or test group ~~are subject to~~ shall be recalled at the following failure levels: 4 percent or 50 (whichever is greater) for 1990 through 1991 model year vehicles or engines; 3 percent or 50 (whichever is greater) for 1992 through 1993 model-year vehicles or engines; and 2 percent or 50 (whichever is greater) for 1994 and subsequent model-year vehicles or engines. 2020 and subsequent model-year trailers are subject to recall at the following rates: 2 percent or 50 (whichever is greater). The Executive Officer may extend the applicability of the 4 or 3 percent failure levels if he/she determines that proceeding to the next lower level will create an excessive administrative burden on the ARB or the vehicle or trailer manufacturers without a corresponding benefit in the reduction of emissions.

In the case of 2024-2026 model year California-certified heavy-duty diesel and Otto-cycle engines, and heavy-duty vehicles, vehicles or engines in an engine family or test group shall be recalled or subject to other corrective action at the following failure levels: 4 percent or 25 (whichever is greater). In the case of 2027-2030 model year California-certified heavy-duty diesel and Otto-cycle engines, and heavy-duty vehicles, vehicles or engines in an engine family or test group shall be recalled or subject to other corrective action at the following failure levels: 4 percent or 25 (whichever is greater) for the first 5 years of the warranty period, and 5 percent or 35 (whichever is greater) for years 6 through 7 of the warranty period. In the case of 2031 and subsequent model year California-certified heavy-duty diesel and Otto-cycle engines, and heavy-duty vehicles, vehicles or engines in an engine family or test group shall be recalled or subject to other corrective action at the following failure levels: 4 percent or 25 (whichever is greater) for the first 5 years of the warranty period, 5 percent or 35 (whichever is greater) for years 6 through 7 of the warranty period, and 7 percent or 50 for years 8 through 10 of the warranty period.

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.

§ 2144. Emission Warranty Information Report.

(a) A manufacturer shall:

(1) Review warranty claim records for each engine family, ~~or test group,~~ vehicle family, or trailer family on a quarterly basis to determine and compile by cumulative total the number of claims made for emission-related components. The data compiled shall be based on all warranty claims, without any prescreening of data as to the validity of the claims. In the case of heavy-duty vehicles or engines, ~~a manufacturer may use nationwide or California data for monitoring warranty claims~~ may be used to determine compliance with Section 2143 requirements of a California-certified engine family or test group which is also certified by the United States Environmental Protection Agency.

(2) Categorize warranty claims for each engine family, ~~or test group,~~ vehicle family, or trailer family by the specific emission control component replaced or repaired.

(3) On the basis of data obtained subsequent to the effective date of these regulations, file an emission warranty information report for each quarter when the cumulative number of unscreened warranty claims for a specific emission-related component or repair represent at least ~~one~~ 1 percent or ~~twenty five~~ 25 (whichever is greater) of the vehicles, ~~or engines, or trailers~~ of a California-certified engine family, ~~or test group,~~ vehicle family, or trailer family.

(4) In the case of 2024 and subsequent model year California-certified heavy-duty diesel and Otto-cycle engines, and heavy-duty vehicles, an emissions warranty information report must be submitted for each quarter when the cumulative number of unscreened warranty claims for a specific emission-related component or repair represents at least 1 percent or 12 (whichever is greater) of the vehicles or engines of a California-certified engine family or test group.

(b) The emission warranty information report shall contain the following information in substantially the format outlined below:

(1) The manufacturer's corporate name.

(2) A description of each class or category of California-certified vehicles, ~~or engines, or trailers~~ affected by a warranty replacement or warranty repair of a specific emission-related component, including model year and engine family, ~~or test group,~~ vehicle family, or trailer family.

(3) 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 warranty

replacement or warranty repair of a specific emission-related component was identified.

(4) A short description of the specific emission-related component that was replaced or repaired under warranty.

(c) Emission warranty information reports shall be submitted not more than 25 days after the close of a calendar quarter. Subsequent to the filing of an emission warranty information report, a manufacturer shall submit quarterly reports updating the number and percentage of emission-related warranty claims with the most recent information, unless a recall has been implemented. Emission warranty information reports and updates shall be submitted to the Chief, ~~Mobile Source~~Emissions Certification and Compliance Division, ~~9528 Telstar Avenue, El Monte, CA 91731~~4001 Iowa Ave, Riverside, CA 92507.

(d) The records described in Section 2144(a)(1) of these procedures and the records used under the alternative procedure described in Section 2142(a) of these procedures shall be made available to the Executive Officer upon request.

(e) In the case of 2024 and subsequent model year California-certified heavy-duty diesel and Otto-cycle engines, and heavy-duty vehicles, manufacturers must submit emission warranty information reports updating the number and percentage of emission-related warranty claims for components that were issued extended warranties throughout the extended warranty period, or, for components that were recalled, throughout the useful life period.

Note: Authority cited: Sections 38501, 38505, 38510, 38560, 39500, 39600, 39601, 43000.5, 43013, 43018, 43105, 43204, 43205.5, and 43214~~43105~~, 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.

§ 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 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 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. 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 analyzed, mileage at time of failure, and methodology used to determine the failure mode.

(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.

(a) A manufacturer shall file an emissions information report:

(1) For 1990 and subsequent model-year vehicles or engines and 2020 and subsequent model-year trailers, when the failure of a specific emission-related component exceeds the percentages specified in Section 2143 of these procedures. An emissions information report shall not be required sooner than 45 days after the field information report has been submitted to the Executive Officer, but must be submitted within 90 days of exceeding the reporting threshold.

(2) ~~Not more than~~ Within 45 days of after the Executive Officer, with cause, ~~requires~~ requiring such a report. For purposes of this section, "cause" shall be based upon any information in ARB possession which indicates that a failure of significant scope is occurring which might necessitate a recall, including but not limited to the in-use enforcement test results specified in Section 2140(a) above, and information gathered from ARB in-use surveillance activities, Smog Check inspections, and consumer complaints.

(3) For 1982 through 1989 model-year vehicles or engines, not more than 15 days after a specific emission-related defect is determined to exist in twenty-five or more vehicles or engines of the same model year. A defect shall be determined in accordance with procedures established by a manufacturer to identify safety-related defects.

(b) No emissions information report shall be required if a manufacturer has committed to perform a recall by notifying the ARB of its intent in writing after the failure of a specific emission-related component exceeds the percentages specified in Section 2143 of these procedures. A recall plan shall be submitted within 45 days of the manufacturer's notification of intent to perform a recall.

(c) All emissions information reports shall be submitted to the Chief, Emissions Certification and Compliance ~~Mobile Source Operations Division, 9528 Telstar Avenue, El Monte, CA 917314001 Iowa Ave, Riverside, CA 92507~~, and shall contain the following information in substantially the format outlined below. For purposes of this section, the term "failure" shall be considered synonymous with the term "defect" for those emissions information reports filed pursuant to subsection (a)(3), above.

(1) The manufacturer's corporate name.

(2) The field information report number from which the failure was first reported, if applicable.

(3) A description of each class or category of California-certified vehicles, ~~or engines, or trailers~~ affected by the failure 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, or trailers~~ affected.

(4) A description of the emission-related component that failed, the failure and the probable cause of failure.

(5) A description of any driveability problems or impact on other vehicle, ~~or engine, or trailer~~ performance factors such as fuel economy and cold starting likely to result from the failure.

(6) For emissions information reports filed pursuant to Section 2146(a)(1) and (2), a description of how emissions will be affected over the useful life of the vehicles, ~~or engines, or trailers~~ due to the failure.

(7) For emissions information reports filed pursuant to Section 2146(a)(1) or (2) for 2024 and later model year California-certified heavy-duty diesel and Otto-cycle engines, and heavy-duty vehicles, and Section 2146(a)(3), an evaluation of the emission impact of the failure and any available emission data which relate to the failure.

(8) For emissions information reports filed pursuant to Section 2146(a)(1) and (2) for 2024 and later model year California-certified heavy-duty diesel and Otto-cycle engines, and heavy-duty vehicles, a description of the manufacturer's corrective action plan and an approximate corrective action implementation date.

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.

§ 2147. Demonstration of Compliance with Emission Standards.

(a) In order to overcome the presumption of noncompliance set forth in Title 13, California Code of Regulations, Section 2123(b), the average emissions of the vehicles, ~~and engines,~~ and trailers with the failed emission-related component must comply with applicable emission standards. A manufacturer may demonstrate compliance with the emission standards by following the procedures set forth in either subsection (b) or subsection (c) of this section.

(b) A manufacturer may test properly maintained in-use vehicles and trailers with the failed emission-related component pursuant to the applicable certification emission tests specified in Title 13, California Code of Regulations, Section 1960.1, 1961, 1961.2, or 1961.3, as applicable, for passenger cars, light-duty trucks, and medium-duty vehicles, Section 1956.8 for heavy-duty engines and vehicles, Section 1958 for motorcycles, and Section 2442 for sterndrive/inboard marine engines, and in Title 17, California Code of Regulations, Section 95663, for heavy-duty vehicles and trailers. The emissions shall be projected to the end of the vehicle's or engine's useful life using in-use deterioration factors. The in-use deterioration factors shall be chosen by the manufacturer from among the following:

(1) "Assigned" in-use deterioration factors provided by the ARB on a manufacturer's request and based on ARB in-use testing; or,

(2) deterioration factors generated during certification, provided adjustments are made to account for vehicle aging, customer mileage-accumulation practices, type of failed component, component failure mode, effect of the failure on other emission-control components, commercial fuel and lubricant quality, and any other factor which may affect the vehicle's or engine's operating conditions; or,

(3) subject to approval by the Executive Officer, a manufacturer-generated deterioration factor. The Executive Officer shall approve such deterioration factor if it is based on in-use data generated from certification emission tests performed on properly maintained and used vehicles in accordance with the procedures set forth in Section 1960.1, 1961, or 1961.2 of Title 13 of the California Code of Regulations, as applicable, for passenger cars, light-duty trucks, and medium-duty vehicles; Section 1956.8 of Title 13 of the California Code of Regulations heavy duty vehicles and engines; Section 1958 of Title 13 of the California Code of Regulations for motorcycles; and Section 95663 of Title 17 of the California Code of Regulations, for heavy-duty vehicles, and if the vehicles from which it was derived are representative of the in-use fleet with regard to emissions performance and are equipped with similar emission control technology as vehicles with the failed component.

(c) In lieu of the vehicle, ~~or engine,~~ or trailer emission testing described in subsection (b) above and subject to prior written approval by the Executive Officer, a manufacturer

may perform an engineering analysis, laboratory testing or bench testing, when appropriate, to demonstrate the effect of the failure.

(d) This Section 2147 does not apply to 2024 and subsequent model year California-certified heavy-duty diesel and Otto-cycle engines, and heavy-duty vehicles.

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.

§ 2148. Evaluation of Need for Recall.

(a) Once the emission information report is filed, the Executive Officer shall evaluate the failure to determine whether a recall is necessary. Factors to be considered shall include but are not limited to the following:

- (1) the validity of the data;
- (2) the emission impact of the failure on individual vehicles, ~~or engines,~~ or trailers;
- (3) the possibility of induced tampering due to driveability problems resulting from the failure;
- (4) the effects of the failure on performance, fuel economy, and safety;
- (5) the failure rates and the timing and extent of a remedy if no recall is required; and
- (6) other factors specific to the failure.

(b) Notwithstanding subsection (a) above, a recall shall not be required if the manufacturer submits information with the emissions information report which demonstrates to the satisfaction of the Executive Officer that the failure:

- (1) is limited to an emission-related component on a substantial percentage of vehicles or trailers and does not represent a pervasive defect in design, application, or execution which is likely to affect a substantial number of such emission-related components during the useful life of the vehicle, ~~or engine,~~ or trailer, and
- (2) is likely to be corrected under the warranty program or other in-use maintenance procedure shortly after the inception of the problem.

(c) If a manufacturer can identify a subgroup of an engine family, ~~or test group,~~ vehicle family, or trailer family which is subject to a failure, a recall may be limited to that subgroup with Executive Officer approval.

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.

§ 2149. Notification and Subsequent Action.

(a) The Executive Officer shall notify the manufacturer of the evaluation results. If the Executive Officer deems a noncompliance exists, a manufacturer shall have 15 days upon receipt of ARB notification to notify the ARB in writing of its intent to perform a recall. A manufacturer may initiate one of the following recalls:

(1) A voluntary recall if the emissions information report submitted was required pursuant to Section 2146(a)(1) or (a)(3) of these procedures;

(2) An influenced recall if the emissions information report submitted was required pursuant to Section 2146(a)(2) of these procedures.

(b) If no notification to perform a voluntary or influenced recall is submitted by the manufacturer within the 15-day period specified in subsection (a) above, the ARB may initiate further investigation which could lead, respectively, to an influenced or ordered recall of the subject vehicles, ~~or engines,~~ or trailers.

(c) Following notification of noncompliance by the ARB, a manufacturer shall submit within 45 days a recall plan in accordance with Section 2113(a) or (b), Title 13, California Code of Regulations.

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, 43204-43205.5, 43211-43213 and 43107, Health and Safety Code.

§ 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 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 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.

The manufacturer shall require those who perform the recall repair to provide the owner of each vehicle or engine repaired with a certificate, through a protocol and in a format prescribed by the Executive Officer, which indicates that the noncomplying vehicle or engine has been corrected under the recall program.

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.

§ 2169.5. Preliminary Tests.

The Executive Officer may require the manufacturer to conduct emissions tests and repeat on-board diagnostic demonstrations as applicable, on components and vehicles or engines incorporating a proposed correction, repair, or modification reasonably designed and necessary to demonstrate the effectiveness of the correction, repair, or modification.

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.

§ 2169.6. Communication with Repair Personnel.

The manufacturer shall provide to the Executive Officer a copy of all communications which relate to the recall plan directed to dealers and other persons who are to perform the repair. Such copies shall be mailed to the Executive Officer contemporaneously with their transmission to dealers and other persons who are to perform the repair under the recall plan.

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.

§ 2169.7. 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 extend any deadline in the plan if he or she finds in writing that a manufacturer has shown good cause for such extension.

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.

Failure by a manufacturer to carry out all recall or corrective action campaigns required by the Executive Officer pursuant to this article shall constitute a violation of this article and Health and Safety Code. A manufacturer may be subject to penalties pursuant to, but not limited to, Section 43016, Health and Safety Code for failing to comply with this article.

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.

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

* * * *

(m) *Stockpiling prohibition.* Manufacturers may not circumvent the provisions of this article by stockpiling engines with a date of manufacture preceding new or changed emission standards by deviating from normal production and inventory practices. For purposes of this paragraph (m), normal production and inventory practices means those practices typically employed for similar engine families in years in which emission standards do not change. The Executive Officer may request the submission of routine production and inventory records from manufacturers that document normal practices for up to eight years to aid in determining whether or not a violation of this section has occurred. Other stockpiling prohibitions in §1068.103 and §1068.105 of the 2011 and Later Test Procedures, Part I-E, apply.

(n) Beginning with the 2024 model year, manufacturers of auxiliary power units installed on tractors subject to GHG emission standards specified in title 17, CCR § 95663(a)(2)(B) must comply with the emission standards and certification requirements specified in §1039.699 of the “California Exhaust Emission Standards and Test Procedures for New 2011 and Later Tier 4 Off-Road Compression-Ignition Engines, Part I-D,” adopted October 20, 2005, as last amended [INSERT DATE OF AMENDMENT], incorporated by reference herein. An “auxiliary power unit” has the definition assigned in §1039.801 of those test procedures.

Note: Authority cited: Sections 39600, 39601, 43013, 43018, 43101 and 43104, Health and Safety Code. Reference: Sections 43013, 43017, 43018, 43101, 43104 and 43211-43212, Health and Safety Code.

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

(a) *Purpose.*

* * * *

(b) *Applicability.* This section applies to any person, business, or government agency that owns, operates, or causes to operate the equipment listed below, at any location in California:

(1) diesel-fueled commercial motor vehicles that operate in the State of California with gross vehicle weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. This specifically includes:

- (A) California-based vehicles; and
- (B) Non-California-based vehicles; and

(2) alternative idle reduction technologies including but not limited to internal combustion engine auxiliary power systems (APS), fuel-fired heaters, battery-electric APSs, and other technologies installed on diesel-fueled commercial motor vehicles.

(c) *Requirements.*

* * * *

(3) *Idle Reduction Technology Compliance Requirements.* As an alternative to idling the primary engine, diesel-fueled engines/vehicles may, as an option, be equipped with alternative technologies, as listed and defined below in subsections (c)(3)(A), (c)(3)(B), and (c)(3)(C). If so equipped, these technologies are subject to the following requirements:

(A) *Internal Combustion APS.*

1. In order to operate in California, an APS utilizing an internal combustion engine must comply with applicable California off-road and/or federal non-road emission standards and test procedures for its fuel type and power category. In addition, diesel-fueled APSs installed on vehicles equipped with primary engines certified to the 2007 and subsequent model year heavy-duty diesel engine standards, pursuant to section 1956.8(a)(2)(A) of title 13, CCR, shall either,

a. be equipped with a verified Level 3 in-use strategy for particulate matter control (see title 13, CCR, sections 2700 to 2710), or

b. have its exhaust routed directly into the vehicle's exhaust pipe, upstream of the diesel particulate matter aftertreatment device, or

c. be certified to the 0.02 g/kW-hr PM emission standard specified in title 13, CCR, section 2423(n) and must comply with the requirements of title 13, CCR, sections 2420 to 2427.

2. With advance Executive Officer approval, a certifying/verifying APS manufacturer may petition for an alternate compliance strategy other than described in (A)1. a. or b. in this subsection above. However, this provision is limited to manufacturers that can demonstrate, to the satisfaction of the Executive Officer, that their alternative strategy is equivalent (or “cleaner”), from an emissions standpoint, compared to the requirement described in (A)1.a. or b. in this subsection above. As an example, strategies that can use the available electric power infrastructure, instead of solely operating a diesel-fueled APS for engine and/or cab heating and cooling, may be able to use such a strategy to demonstrate compliance with these requirements.

* * * *

Note: Authority cited: Sections 39600, 39601, 39614(b)(6)(A), 39658, 39667, 43000.5(d), 43013(b), 43013(h), 43018(b) and 43018(c), Health and Safety Code; and *Western Oil & Gas Assn. v. Orange County Air Pollution Control Dist. (1975)*, 14 Cal.3d.411. Reference: Sections 39002, 39003, 39027, 39500, 39600, 39650, 39655, 39656, 39657, 39658, 39659, 39662, 39665, 39674, 39675, 42400, 42400.1, 42400.2, 42400.3, 42402, 42402.1, 42402.2, 42402.3, 42402.4, 42403.5, 42410, 43013, 43018 and 43704, Health and Safety Code; Sections 305, 336, 350, 440, 445, 545, 546, 642, 680, 21400, 22452, 22515, 27153, 40001 and 40001(b)(5), California Vehicle Code; and Sections 1201, 1900, 1962 and 2480, Title 13, California Code of Regulations.