ENCLOSURE A

PROPOSED 15-DAY MODIFIED TEXT OF THE "LEV III" AMENDMENTS TO THE CALIFORNIA GREENHOUSE GAS AND CRITERIA POLLUTANT EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND TEST PROCEDURES AND TO THE ON-BOARD DIAGNOSTIC SYSTEM REQUIREMENTS FOR PASSENGER CARS, LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY VEHICLES, AND TO THE EVAPORATIVE EMISSION REQUIREMENTS FOR HEAVY-DUTY VEHICLES

The following text contains 15-day modifications to the originally proposed regulatory text for sections 1900, 1961, 1961.2, 1961.3, 1976, 1978, 2112, 2139, 2140, 2147, title 13 of the California Code of Regulations; to the "California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles;" and to the new "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;" to the "California Evaporative Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles;" to the "California Refueling Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles;" and to the "California Test Procedures for Evaluating Substitute Fuels and New Clean Fuels <u>in 2015 and Subsequent Years</u>." Unless otherwise indicated below, the text of the originally proposed amendments is shown in <u>single underline</u> to indicate additions and ~~single strikeout~~ to indicate deletions, except that sections 1961.2 and 1961.3 are new sections, shown without underline for easier reading. The modified language now proposed by staff is shown in <u><u>double underline</u></u> to indicate additions and ~~double strikeout~~ to indicate deletions. Staff is proposing modifications to limited portions of the original proposal; for some portions for which no modifications are proposed, the text has been omitted and the omission indicated by [No change] or "* * * *."

There are no additional proposed modifications to the originally proposed amendments to sections 1956.8, 1960.1, 1961.1, 1965, 1968.2, 1968.5, 2037, 2038, 2062, 2145, 2235, and 2317, title 13, CCR.

1. Amend title 13, CCR, section 1900 to read as follows:

§ 1900. Definitions.

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

* * * *

(22) "Small volume manufacturer" means, with respect to the 2001 and subsequent model-years, a manufacturer with California sales less than 4,500 new passenger cars, light-duty trucks, medium-duty vehicles, heavy-duty vehicles and heavy-duty engines based on the average number of vehicles sold for the three previous consecutive model years for which a manufacturer seeks certification as a small volume manufacturer; however, for manufacturers certifying for the first time in California model-year sales shall be based on projected California sales. A manufacturer's California sales shall consist of all vehicles or engines produced by the manufacturer and delivered for sale in California, except that vehicles or engines produced by the manufacturer and marketed in California by another manufacturer under the other manufacturer's nameplate shall be treated as California sales of the marketing manufacturer. Except as provided in the next paragraph, ~~beginning with~~ for the 2009 through 2017 model years, the annual sales from different firms shall be aggregated in the following situations: (1) vehicles produced by two or more firms, one of which is 10% or greater part owned by another; or (2) vehicles produced by any two or more firms if a third party has equity ownership of 10% or more in each of the firms; or (3) vehicles produced by two or more firms having a common corporate officer(s) who is (are) responsible for the overall direction of the companies; or (4) vehicles imported or distributed by ~~all~~ any firms where the vehicles are manufactured by the same entity and the importer or distributor is an authorized agent of the entity. Notwithstanding the provisions of this paragraph, upon application to the Executive Officer, a manufacturer may be classified as a "small volume manufacturer" for the 2015 through 2017 model years if the Executive Officer determines that it is operationally independent of the firm that owns 10% or more of the applicant or has a greater than 10% equity ownership in the applicant based on the criteria provided in the last paragraph of this subsection (b)(22).

For purposes of compliance with the zero-emission vehicle requirements, heavy-duty vehicles and engines shall not be counted as part of a manufacturer's sales. For purposes of applying the 2005 ~~and subsequent~~ through 2017 model year zero-emission vehicle requirements for small-volume manufacturers under sections 1962(b) and 1962.1(b), the annual sales from different firms shall be aggregated in the case of (1)

vehicles produced by two or more firms, each one of which either has a greater than 50% equity ownership in another or is more than 50% owned by another; or (2) vehicles produced by any two or more firms if a third party has equity ownership of greater than 50% in each firm. Notwithstanding the provisions of this paragraph, upon application to the Executive Officer, a manufacturer may be classified as a "small volume manufacturer" for the 2015 through 2017 model years if the Executive Officer determines that it is operationally independent of the firm that owns 50% or more of the applicant or has a greater than 50% equity ownership in the applicant based on the criteria provided in the last paragraph of this subsection (b)(22).

Except as provided in the next paragraph, f~~F~~or the 2018 and subsequent model years, the annual sales from different firms shall be aggregated in the following situations: (1) vehicles produced by two or more firms, one of which is 33.4% or greater part owned by another; or (2) vehicles produced by any two or more firms if a third party has equity ownership of 33.4% or more in each of the firms; or (3) vehicles produced by two or more firms having a common corporate officer(s) who is (are) responsible for the overall direction of the companies; or (4) vehicles imported or distributed by any firms where the vehicles are manufactured by the same entity and the importer or distributor is an authorized agent of the entity. Notwithstanding the provisions of this paragraph, upon application to the Executive Officer, a manufacturer may be classified as a "small volume manufacturer" for the 2018 and subsequent model years if the Executive Officer determines that it is operationally independent of the firm that owns 33.4% or more of the applicant or has a greater than 33.4% equity ownership in the applicant based on the criteria provided in the last paragraph of this subsection (b)(22).

For the purposes of this paragraph, all manufacturers whose annual sales are aggregated together under the provisions of this subsection (b)(22) shall be defined as "related manufacturers." Notwithstanding such aggregation, the Executive Officer may make a determination of operational independence if all of the following criteria are met for at least 24 months preceding the application submittal: (1) for the three years preceding the year in which the initial application is submitted, the average California sales for the applicant does not exceed 4,500 vehicles per year; (2) no financial or other support of economic value is provided by related manufacturers for purposes of design, parts procurement, R&D and production facilities and operation, and any other transactions between related manufacturers are conducted under normal commercial arrangements like those conducted with other parties, at competitive pricing rates to the manufacturer; (3) related manufacturers maintain separate and independent research and development, testing, and production facilities; (4) related manufacturers do not use any vehicle powertrains or platforms developed or produced by related manufacturers; (5) patents are not held jointly with related manufacturers; (6) related manufacturers maintain separate business administration, legal, purchasing, sales, and marketing departments, as well as autonomous decision-making on commercial matters; (7) the overlap of the Board of Directors between related manufacturers is limited to 25% with no sharing of top operational management, including president, chief executive officer,

chief financial officer, and chief operating officer, and provided that no individual overlapping director or combination of overlapping directors exercises exclusive management control over either or both companies; and (8) parts or components supply between related companies must be established through open market process, and to the extent that the manufacturer sells parts/components to non-related manufacturers, it does so through the open market a competitive pricing. Any manufacturer applying for operational independence must submit to ARB an Attestation Engagement from an independent certified public accountant or firm of such accountants verifying the accuracy of the information contained in the application, as defined by and in accordance with the procedures established in 40 C.F.R. §80.125, as last amended January 19, 2007, which is incorporated herein by reference. The applicant must submit information to update any of the above eight criteria as material changes to any of the criteria occur. If there are no material changes to any of the criteria, the applicant must certify that to the Executive Officer annually. With respect to any such changes, the Executive Officer may consider extraordinary conditions (e.g., changes to economic conditions, unanticipated market changes, etc.) and may continue to find the applicant to be operationally independent. In the event that a manufacturer loses eligibility as a "small volume manufacturer" after a material change occurs, the manufacturer must begin compliance with the primary emissions program in the third model year after the model year in which the manufacturer loses its eligibility. The Executive Officer may, in his or her discretion, re-establish lost "small volume manufacturer" status if the manufacturer shows that it has met the operational independence criteria for three consecutive years.

NOTE: Authority cited: Sections 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.

2. Amend title 13, CCR, section 1961 to read as follows:

§ 1961. Exhaust Emission Standards and Test Procedures - 2004 through 2019 ~~and Subsequent~~ Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.

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(a) *Exhaust Emission Standards.*

(1) *"LEV II" Exhaust Standards*. The following standards are ~~represent~~ the maximum exhaust emissions for the intermediate and full useful life from new 2004 through 2019 ~~and subsequent~~ model-year "LEV II" LEVs, ULEVs, and SULEVs, including fuel-flexible, bi-fuel and dual fuel vehicles when operating on the gaseous or alcohol fuel they are designed to use. ~~:~~ 2015 – 2019 model-year LEV II LEV vehicles may be certified to the NMOG+NOx numerical values for LEV160, LEV395, or LEV630, as applicable, in subsection 1961.2(a)(1) and the corresponding NMOG+NOx numerical values in subsection 1961.2(a)(4), in lieu of the separate NMOG and NOx exhaust emission standards in this subsection (a)(1) and subsection (a)(4); LEV II ULEV vehicles may be certified to the NMOG+NOx numerical values for ULEV125, ULEV340, or ULEV570, as applicable, in subsection 1961.2(a)(1) and the corresponding NMOG+NOx numerical values in subsection 1961.2(a)(4), in lieu of the separate NMOG and NOx exhaust emission standards in this subsection (a)(1) and the corresponding NMOG+NOx numerical values in subsection (a)(4); and LEV II SULEV vehicles may be certified to the NMOG+NOx numerical values for SULEV30, SULEV170, or SULEV230, as applicable, in subsection 1961.2(a)(1) and the corresponding NMOG+NOx numerical values in subsection 1961.2(a)(4), in lieu of the separate NMOG and NOx exhaust emission standards in this subsection (a)(1) and the corresponding NMOG+NOx numerical values in subsection (a)(4).

LEV II Exhaust Mass Emission Standards for New 2004 through 2019 ~~and Subsequent~~ Model LEVs, ULEVs, and SULEVs in the Passenger Car, Light-Duty Truck and Medium-Duty Vehicle Classes

Vehicle Type	*Durability Vehicle Basis (mi)*	*Vehicle Emission Category*	*NMOG (g/mi)*	*Carbon Monoxide (g/mi)*	*Oxides of Nitrogen (g/mi)*	*Formaldehyde (mg/mi)*	*Particulates (g/mi)*
All PCs; LDTs 8500 lbs. GVWR or less Vehicles in this category are tested at their loaded vehicle weight	50,000	LEV	0.075	3.4	0.05	15	n/a
		LEV, Option 1	0.075	3.4	0.07	15	n/a
		ULEV	0.040	1.7	0.05	8	n/a
	120,000	LEV	0.090	4.2	0.07	18	0.01

		LEV, Option 1	0.090	4.2	0.10	18	0.01
		ULEV	0.055	2.1	0.07	11	0.01
		SULEV	0.010	1.0	0.02	4	0.01
	150,000 (Optional)	LEV	0.090	4.2	0.07	18	0.01
		LEV, Option 1	0.090	4.2	0.10	18	0.01
		ULEV	0.055	2.1	0.07	11	0.01
		SULEV	0.010	1.0	0.02	4	0.01
MDVs 8501 - 10,000 lbs. GVWR Vehicles in this category are tested at their adjusted loaded vehicle weight	120,000	LEV	0.195	6.4	0.2	32	0.12
		ULEV	0.143	6.4	0.2	16	0.06
		SULEV	0.100	3.2	0.1	8	0.06
	150,000 (Optional)	LEV	0.195	6.4	0.2	32	0.12
		ULEV	0.143	6.4	0.2	16	0.06
		SULEV	0.100	3.2	0.1	8	0.06
MDVs 10,001-14,000 lbs. GVWR Vehicles in this category are tested at their adjusted loaded vehicle weight	120,000	LEV	0.230	7.3	0.4	40	0.12
		ULEV	0.167	7.3	0.4	21	0.06
		SULEV	0.117	3.7	0.2	10	0.06
	150,000 (Optional)	LEV	0.230	7.3	0.4	40	0.12
		ULEV	0.167	7.3	0.4	21	0.06
		SULEV	0.117	3.7	0.2	10	0.06

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

(1) *Fleet Average NMOG Requirements for Passenger Cars and Light-Duty Trucks.*

(A) The fleet average non-methane organic gas exhaust mass emission values from the passenger cars and light-duty trucks certified to the Tier 1, LEV I, and LEV II standards that are produced and delivered for sale in California each model year from 2001 through 2014 by a manufacturer other than a small volume manufacturer or an independent low volume manufacturer shall not exceed:

FLEET AVERAGE NON-METHANE ORGANIC GAS EXHAUST MASS EMISSION REQUIREMENTS FOR LIGHT-DUTY VEHICLE WEIGHT CLASSES (50,000 mile Durability Vehicle Basis)		
Model Year	*Fleet Average NMOG (grams per mile)*	
	All PCs; LDTs 0-3750 lbs. LVW	*LDTs 3751 lbs. LVW - 8500 lbs. GVW*
2001	0.070	0.098
2002	0.068	0.095
2003	0.062	0.093
2004	0.053	0.085
2005	0.049	0.076
2006	0.046	0.062
2007	0.043	0.055
2008	0.040	0.050
2009	0.038	0.047
2010 through 2014[1] ~~+~~	0.035	0.043

[1] For the 2014 model year only, a manufacturer may comply with the fleet average NMOG+NOx values in subsection 1961.2(b)(1)(A) in lieu of complying with the NMOG fleet average values in this table. A manufacturer must either comply with the NMOG+NOx fleet average requirements for both its PC/LDT1 fleet and its LDT2/MDPV fleet or comply with the NMOG fleet average requirements for both its PC/LDT1 fleet and its LDT2/MDPV fleet. A manufacturer must calculate its fleet average NMOG+NOx values using the applicable full useful standards.

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NOTE: Authority cited: Sections 39500, 39600, 39601, 43013, 43018, 43101, 43104, 43105, and 43106, Health and Safety Code. Reference: Sections 39002, 39003, 39667, 43000, 43009.5, 43013, 43018, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43204, and 43205, Health and Safety Code.

3. Adopt new title 13, CCR, section 1961.2 to read as follows: (Note: the entire text of section 1961.2 set forth below is new language proposed to be added to the California Code of Regulations.)

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

Introduction. This section 1961.2 contains the California "LEV III" exhaust emission standards for 2015 and subsequent model year passenger cars, light-duty trucks, and medium-duty vehicles. A manufacturer must demonstrate compliance with the exhaust standards in subsection (a) applicable to specific test groups, and with the composite phase-in requirements in subsection (b) applicable to the manufacturer's entire fleet.

Before the 2015 model year, a manufacturer that produces vehicles that meet the standards in subsection (a) has the option of certifying the vehicles to those standards, in which case the vehicles will be treated as LEV III vehicles for purposes of the fleet-wide phase-in requirements. Similarly, 2015 - 2019 model-year vehicles may be certified to the "LEV II" exhaust emission standards in subsection 1961(a)(1), in which case the vehicles will be treated as LEV II vehicles for purposes of the fleet-wide phase-in requirements.

A manufacturer has the option of certifying engines used in incomplete and diesel medium-duty vehicles with a gross vehicle weight rating of greater than 10,000 lbs. GVW to the heavy-duty engine standards and test procedures set forth in title 13, CCR, subsections 1956.8(c) and (h). All medium-duty vehicles with a gross vehicle weight rating of less than or equal to 10,000 lbs. GVW, including incomplete otto-cycle medium-duty vehicles and medium-duty vehicles that use diesel cycle engines, must be certified to the LEV III chassis standards and test procedures set forth in this section 1961.2.

Pooling Provision.

For each model year, a manufacturer must demonstrate compliance with this section 1961.2 based on one of two options applicable throughout the model year, either:

Option 1: the total number of passenger cars, light-duty trucks, and medium-duty vehicles that are certified to the California exhaust emission standards in subsection (a) and subsection 1961(a)(1), and are produced and delivered for sale in California; or

Option 2: the total number of passenger cars, light-duty trucks, and medium-duty vehicles that are certified to the California exhaust emission standards in subsection (a) and subsection 1961(a)(1), and are produced and delivered for sale in California, the District of Columbia, and all states that have adopted California's criteria

pollutant emission standards set forth in this section 1961.2 for that model year pursuant to section 177 of the federal Clean Air Act (42 U.S.C. § 7507).

A manufacturer that selects compliance Option 2 must notify the Executive Officer of that selection in writing prior to the start of the applicable model year or must comply with Option 1. Once a manufacturer has selected compliance Option 2, that selection applies unless the manufacturer selects Option 1 and notifies the Executive Officer of that selection in writing before the start of the applicable model year.

When a manufacturer is demonstrating compliance using Option 2 for a given model year, the term "in California" as used in this section 1961.2 means California, the District of Columbia, and all states that have adopted California's criteria pollutant emission standards set forth in this section 1961.2 for that model year pursuant to Section 177 of the federal Clean Air Act (42 U.S.C. § 7507).

(a) *Exhaust Emission Standards.*

(1) *"LEV III" Exhaust Standards*. The following standards are the maximum exhaust emissions for the full useful life from new 2015 and subsequent model year "LEV III" passenger cars, light-duty trucks, and medium-duty vehicles, including fuel-flexible, bi-fuel and dual fuel vehicles when operating on the gaseous or alcohol fuel they are designed to use.~~:~~ 2015 – 2019 model-year LEV II LEV vehicles may be certified to the NMOG+NOx numerical values for LEV160, LEV395, or LEV630, as applicable, in this subsection (a)(1) and the corresponding NMOG+NOx numerical values in subsection (a)(4), in lieu of the separate NMOG and NOx exhaust emission standards in subsections 1961(a)(1) and 1961(a)(4); LEV II ULEV vehicles may be certified to the NMOG+NOx numerical values for ULEV125, ULEV340, or ULEV570, as applicable, in this subsection (a)(1) and the corresponding NMOG+NOx numerical values in subsection (a)(4), in lieu of the separate NMOG and NOx exhaust emission standards in subsections 1961(a)(1) and 1961(a)(4); and LEV II SULEV vehicles may be certified to the NMOG+NOx numerical values for SULEV30, SULEV170, or SULEV230, as applicable, in subsection (a)(1) and the corresponding NMOG+NOx numerical values in subsection (a)(4), in lieu of the separate NMOG and NOx exhaust emission standards in subsections 1961(a)(1) and 1961(a)(4). Such vehicles will be treated as LEV II vehicles for purposes of the fleet-wide phase-in requirements.

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(2) *"LEV III" Particulate Standards.*

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(B) *Particulate Standards for Medium-Duty Vehicles Other than Medium-Duty Passenger Vehicles***.**

1. Beginning in the 2017 model year, a manufacturer, except a small volume manufacturer, shall certify a percentage of its medium-duty vehicle fleet to the following particulate standards ~~according to the following phase-in schedule~~. These standards are the maximum particulate emissions allowed at full useful life. All vehicles certifying to these particulate standards must certify to the LEV III exhaust emission standards set forth in subsection (a)(1). This subsection (a)(2)(B)1 shall not apply to medium-duty passenger vehicles.

~~**LEV III Particulate Emission Standard Values and Phase-in for Medium-Duty Vehicles Other than Medium-Duty Passenger Vehicles**~~

~~**Vehicle Type**~~	~~**Model Year**~~	~~**% of vehicles certified to a 8 mg/mi standard**~~	~~**% of vehicles certified to a 10 mg/mi standard**~~
~~MDVs 8501 - 10,000 lbs. GVWR, excluding MDPVs~~ ~~Vehicles in this category are tested at their adjusted loaded vehicle weight~~	~~2017~~	~~10~~	~~n/a~~
	~~2018~~	~~20~~	~~n/a~~
	~~2019~~	~~40~~	~~n/a~~
	~~2020~~	~~70~~	~~n/a~~
	~~2021 and subsequent~~	~~100~~	~~n/a~~
~~MDVs 10,001 - 14,000 lbs. GVWR~~ ~~Vehicles in this category are tested at their adjusted loaded vehicle weight~~	~~2017~~	~~n/a~~	~~10~~
	~~2018~~	~~n/a~~	~~20~~
	~~2019~~	~~n/a~~	~~40~~
	~~2020~~	~~n/a~~	~~70~~
	~~2021 and subsequent~~	~~n/a~~	~~100~~

LEV III Particulate Emission Standard Values for Medium-Duty Vehicles, Other than Medium-Duty Passenger Vehicles

Vehicle Type[1]	**Particulates (mg/mi)**
MDVs 8501 - 10,000 lbs. GVWR, excluding MDPVs	8
MDVs 10,001 - 14,000 lbs. GVWR	10

[1] Vehicles in these categories are tested at their adjusted loaded vehicle weight.

2. A manufacturer of medium-duty vehicles, except a small volume manufacturer, shall certify at least the following percentage of its medium-duty vehicle fleet to the particulate standards in subsection (a)(2)(B)1 according to the

following phase-in schedule. This subsection (a)(2)(B)2 shall not apply to medium-duty passenger vehicles.

LEV III Particulate Emission Standard Phase-in for Medium-Duty Vehicles, Other than Medium-Duty Passenger Vehicles	
Model Year	**Total % of MDVs certified to the 8 mg/mi PM Standard or to the 10 mg/mi PM Standard, as applicable**
2017	10
2018	20
2019	40
2020	70
2021 and subsequent	100

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(D) *Alternative Phase-in Schedule for Particulate Standards.*

1. *Alternative Phase-in Schedules for the 3 mg/mi Particulate Standard for Passenger Cars, Light-Duty Trucks, and Medium-Duty Passenger Vehicles.* A manufacturer may use an alternative phase-in schedule to comply with the 3 mg/mi particulate standard phase-in requirements as long as equivalent PM emission reductions are achieved by the 2021 model year from passenger cars, light-duty trucks, and medium-duty passenger vehicles. Model year emission reductions shall be calculated by multiplying the percent of PC+LDT+MDPV vehicles meeting the 3 mg/mi particulate standard in a given model year (based on a manufacturer's projected sales volume of vehicles in each category) by 5 for the 2017 model year, 4 for the 2018 model year, 3 for the 2019 model year, 2 for the 2020 model year, and 1 for the 2021 model year. The yearly results for PC+LDT+MDPV vehicles shall be summed together to determine a cumulative total for PC+LDT+MDPV vehicles. The cumulative total must be equal to or greater than 490 in the 2021 model year to be considered equivalent. A manufacturer may add vehicles introduced before the 2017 model year (e.g., the percent of vehicles introduced in 2016 would be multiplied by 5) to the cumulative total.

2. *Alternative Phase-in Schedules for the 1 mg/mi Particulate Standard for Passenger Cars, Light-Duty Trucks, and Medium-Duty Passenger Vehicles.* A manufacturer may use an alternative phase-in schedule to comply with the 1 mg/mi particulate standard phase-in requirements as long as equivalent PM emission reductions are achieved by the 2028 model year from passenger cars, light-duty trucks, and medium-duty passenger vehicles. Model year emission reductions shall be calculated by multiplying the percent of PC+LDT+MDPV

vehicles meeting the 1 mg/mi particulate standard in a given model year (based on a manufacturer's projected sales volume of vehicles in each category) by 4 for the 2025 model year, 3 for the 2026 model year, 2 for the 2027 model year, and 1 for the 2028 model year. The yearly results for PC+LDT+MDPV vehicles shall be summed together to determine a cumulative total for PC+LDT+MDPV vehicles. The cumulative total must be equal to or greater than 500 in the 2028 model year to be considered equivalent. A manufacturer may add vehicles introduced before the 2025 model year (e.g., the percent of vehicles introduced in 2024 would be multiplied by 4) to the cumulative total.

3. *Alternative Phase-in Schedules for the Particulate Standards for Medium-Duty Vehicles Other than Medium-Duty Passenger Vehicles.* A manufacturer may use an alternative phase-in schedule to comply with the particulate standard phase-in requirements as long as equivalent PM emission reductions are achieved by the 2021 model year from medium-duty vehicles other than medium-duty passenger vehicles. Model year emission reductions shall be calculated by multiplying the total percent of MDVs certified to the 8 mg/mi PM standard or to the 10 mg/mi PM standard, as applicable, in a given model year (based on a manufacturer's projected sales volume of vehicles in each category) by 5 for the 2017 model year, 4 for the 2018 model year, 3 for the 2019 model year, 2 for the 2020 model year, and 1 for the 2021 model year. The yearly results for MDVs shall be summed together to determine a cumulative total for MDVs. The cumulative total must be equal to or greater than 490 in the 2021 model year to be considered equivalent. A manufacturer may add vehicles introduced before the 2017 model year (e.g., the percent of vehicles introduced in 2016 would be multiplied by 5) to the cumulative total.

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(6) *Highway NMOG + NOx Standard.* The maximum emissions of non-methane organic gas plus oxides of nitrogen measured on the federal Highway Fuel Economy Test (HWFET; 40 CFR 600 Subpart B, as modified by 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," must not be greater than the applicable LEV III NMOG+NOx standard set forth in subsection (a)(1). Both the sum of the NMOG+NOx emissions and the HWFET standard must be rounded in accordance with ASTM E29-67 to the nearest 0.001 g/mi before being compared.

(7) *Supplemental Federal Test Procedure (SFTP) Off-Cycle Emission Standards.*

(A) *SFTP NMOG+NOx and CO Exhaust Emission Standards for Passenger Cars, Light-Duty Trucks, and Medium-Duty Passenger Vehicles.* Manufacturers shall certify 2015 and subsequent model year LEVs, ULEVs, and SULEVs in the PC, LDT,

and MDPV classes to either the *SFTP NMOG+NOx and CO Stand-Alone Exhaust Emission Standards* set forth in subsection (a)(7)(A)1, or in accordance with the *SFTP NMOG+NOx and CO Composite Exhaust Emission Standards and Fleet-Average Requirements* set forth in subsection (a)(7)(A)2. A manufacturer may also certify 2014 model LEVs, ULEVs, or SULEVs in the PC, LDT, or MDPV classes to LEV III SFTP standards, in which case, the manufacturer shall be subject to the LEV III SFTP emission standards and requirements, including the sales-weighted fleet-average NMOG+NOx composite emission standard applicable to 2015 model vehicles if choosing to comply with the *SFTP NMOG+NOx and CO Composite Exhaust Emission Standards and Fleet-Average Requirements* set forth in subsection (a)(7)(A)2. The manufacturer shall notify the Executive Officer of its selected emission standard type in the Application for Certification of the first test group certifying to SFTP NMOG+NOx and CO emission standards on a 150,000 mile durability basis. Once an emission standard type for NMOG+NOx and CO is selected for a fleet, and the Executive Officer is notified of such selection, the selection must be kept through the 2025 model year for the entire fleet, which includes LEV II vehicles if selecting to comply with subsection (a)(7)(A)2. The manufacturer may not change its selection until the 2026 model year. Test groups not certifying to the 150,000-mile SFTP NMOG+NOx and CO emission standards pursuant to this subsection (a)(7)(A) shall be subject to the 4,000-mile SFTP NMOG+NOx and CO emission standards set forth in subsection 1960.1(r).

1. *SFTP NMOG+NOx and CO Exhaust Stand-Alone Emission Standards*. The following standards are the maximum SFTP NMOG+NOx and CO exhaust emissions through full useful life from 2015 and subsequent model-year LEV III LEVs, ULEVs, and SULEVs when operating on the same ~~any~~ gaseous or liquid fuel they use for FTP certification. In the case of fuel-flexible vehicles, SFTP compliance shall be demonstrated using the LEV III certification gasoline specified in Part II, Section A.100.3.1.2 of 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."

SFTP NMOG+NOx and CO Stand-Alone Exhaust Emission Standards for 2015 and Subsequent Model LEV III Passenger Cars, Light-Duty Trucks, and Medium-Duty Passenger Vehicles

Vehicle Type	*Durability Vehicle Basis (mi)*	*Vehicle Emission Category*[1]	US06 Test *(g/mi)*		*SC03 Test (g/mi)*	
			NMHC + NOx	*CO*	*NMHC + NOx*	*CO*
All PCs; LDTs 0- 8,500 lbs. GVWR; and MDPVs Vehicles in these categories are tested at their loaded vehicle weight (curb weight plus 300 pounds).	150,000	LEV	0.140	9.6	0.100	3.2
		ULEV	0.120	9.6	0.070	3.2
		SULEV (Option A)[2]	0.060	9.6	0.020	3.2
		SULEV	0.050	9.6	0.020	3.2

[1] *Vehicle Emission Category*. Manufacturers must certify all vehicles, which are certifying to a LEV III FTP emission category on a 150,000-mile durability basis, to the emission standards of the equivalent, or a more stringent, SFTP emission category set forth on this table. That is, all LEV III LEVs certified to 150,000-mile FTP emission standards shall comply with the SFTP LEV emission standards in this table, all LEV III ULEVs certified to 150,000-mile FTP emission standards shall comply with the SFTP ULEV emission standards in this table, and all LEV III SULEVs certified to 150,000-mile FTP emission standards shall comply with the SFTP SULEV emission standards in this table.

[2] *Optional SFTP SULEV Standards.* A manufacturer may certify light-duty truck test groups from 6,001 to 8,500 lbs. GVWR and MDPV test groups to the SULEV, option A, emission standards set forth in this table for the 2015 through 2020 model year, only if the vehicles in the test group are equipped with a particulate filter and the manufacturer extends the particulate filter emission warranty mileage to 200,000 miles. Passenger cars and light-duty trucks 0-6,000 lbs. GVWR are not eligible for this option.

2. *SFTP NMOG+NOx and CO Composite Exhaust Emission Standards*. For the 2015 and subsequent model years, a manufacturer selecting this option must certify LEV II and LEV III LEVs, ULEVs, and SULEVs, such that the manufacturer's sales-weighted fleet-average NMOG+NOx composite emission value, does not exceed the applicable NMOG+NOx composite emission standard set forth in the following table. In addition, the CO composite emission value of any LEV III test group shall not exceed the CO composite emission standard set forth in the following table. SFTP compliance shall be demonstrated using the same gaseous or liquid fuel used for FTP certification. In the case of fuel-flexible vehicles, SFTP compliance shall be demonstrated using the LEV III certification gasoline specified in Part II, Section A.100.3.1.2 of 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."

For each test group subject to this subsection, manufacturers shall calculate a Composite Emission Value for NMOG+NOx and, for LEV III test groups, a separate Composite Emission Value for CO, using the following equation:

Composite Emission Value = 0.28 x US06 + 0.37 x SC03 + 0.35 x FTP [Eq. 1]

where "US06" = the test group's NMOG+NOx or CO emission value, as applicable, determined through the US06 test;

"SC03" = the test group's NMOG+NOx or CO emission value, as applicable, determined through the SC03 test; and

"FTP" = the test group's NMOG+NOx or CO emission value, as applicable, determined through the FTP test.

If no vehicles in a test group have air conditioning units, the FTP cycle emission value can be used in place of the SC03 cycle emission value in Equation 1. To determine compliance with the SFTP NMOG+NOx composite emission standard applicable to the model year, manufacturers shall use a sales-weighted fleet average of the NMOG+NOx composite emission values of every applicable test group. The sales-weighted fleet average shall be calculated using a combination of carry-over and new certification SFTP composite emission values (converted to NMOG+NOx, as applicable). LEV II test groups will use their emission values in the fleet average calculation but will not be considered LEV III test groups. Compliance with the CO composite emission standard cannot be demonstrated through fleet averaging. The NMOG+NOx sales-weighted fleet-average composite emission value for the fleet and the CO composite emission value for each test group shall not exceed:

SFTP NMOG+NOx and CO Composite Emission Standards for 2015 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Passenger Vehicles (g/mi) [1]

Model Year	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025+**
All PCs; LDTs 8,500 lbs. GVWR or less; and MDPVs[3]	***Sales-Weighted Fleet Average NMOG+NOx Composite Exhaust Emission Standards***[2,4,5,6]										
	0.140	0.110	0.103	0.097	0.090	0.083	0.077	0.070	0.063	0.057	0.050
Vehicles in this category are tested at their loaded vehicle weight (curb weight plus 300 pounds).	***CO Composite Exhaust Emission Standard***[7]										
	4.2										

[1] *Mileage for Compliance.* All test groups certifying to LEV III FTP emission standards on a 150,000-mile durability basis shall also certify to the SFTP on a 150,000-mile durability basis, as tested in accordance with 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."

[2] *Determining NMOG+NOx Composite Emission Values of LEV II Test Groups.* For ~~carry-over~~ test groups certified to LEV II FTP emission standards, SFTP emission values shall be converted to NMOG+NOx and projected out to 120,000 miles or 150,000 miles (depending on LEV II FTP certification) using deterioration factors or aged components.~~,~~ NMHC emission values for the US06 and SC03 test cycles

shall be converted to NMOG emission values by multiplying by a factor of 1.03. In lieu of deriving a deterioration factor specific to SFTP test cycles, carry-over test groups may use the applicable deterioration factor from the FTP cycle in order to determine the carry-over composite emission values for the purpose of the NMOG+NOx sales-weighted fleet-average calculation. If an SFTP full-useful life emission value is used to comply with SFTP 4k standards, that value may be used in the sales-weighted fleet-average without applying an additional deterioration factor.

[3] MDPVs are excluded from SFTP NMOG+NOx and CO emission standards and the sales-weighted fleet average until they are certified to LEV III FTP 150,000-mile NMOG+NOx and CO requirements.

[4] Test groups shall certify to bins in increments of 0.010 g/mi. Beginning with the 2018 model year, vehicles may not certify to bin values above a maximum of 0.180 g/mi.

[5] *Calculating the sales-weighted average for NMOG+NOx.* For each model year, the manufacturer shall calculate its sales-weighted fleet-average NMOG+NOx composite emission value as follows.

$$\frac{\left[\sum_{i=1}^{n}\left(number\ of\ \ vehicles\ in\ the\ test\ \ group\right)_i \times \left(composite\ value\ of\ \ bin\right)_i\right]}{\sum_{i=1}^{n}\left(number\ of\ \ vehicles\ in\ the\ test\ \ group\right)_i} \qquad \text{[Eq. 2]}$$

where "n" = a manufacturer's total number of PC, LDT, and, if applicable, MDPV certification bins, in a given model year including carry-over certification bins, certifying to SFTP composite emission standards in that model year;

"number of vehicles in the test group" = the number of vehicles produced and delivered for sale in California in the certification test group; and

"Composite Value of Bin" = the numerical value selected by the manufacturer for the certification bin that serves as the emission standard for the vehicles in the test group with respect to all testing for test groups certifying to SFTP on a 150,000-mile durability basis, and the SFTP carry-over composite emission value, as described in footnote 7 of this table, for carry-over LEV II test groups.

[6] *Calculation of Fleet Average Total NMOG+NOx Credits or Debits.* A manufacturer shall calculate the total NMOG+NOx credits or debits, as follows:

[(NMOG+NOx Composite Emission Standard) – (Manufacturer's Sales-Weighted Fleet-Average Composite Emission Value)]
x (Total Number of Vehicles Produced and Delivered for Sale in California in the 0-8,500 lbs GVWR plus MDPVs classes, if applicable) [Eq. 3]

A negative number constitutes total NMOG+NOx debits, and a positive number constitutes total NMOG+NOx credits accrued by the manufacturer for the given model year. Total NMOG+NOx credits earned in a given model year retain full value through the fifth model year after they are earned. At the beginning of the sixth model year, the total NMOG+NOx credits have no value. A manufacturer may trade credits with other manufacturers

A manufacturer shall equalize total NMOG+NOx debits within three model years after they have been incurred by earning NMOG+NOx credits in an amount equal to the total NMOG+NOx debits. If total NMOG+NOx debits are not equalized within the three model-year period, the manufacturer is subject to the Health and Safety Code section 43211 civil penalty applicable to a manufacturer which sells a new motor vehicle that does not meet the applicable emission standards adopted by the state board. The cause of action shall be deemed to accrue when the total NMOG+NOx debits are not equalized by the end of the specified time period. For the purposes of Health and Safety Code section 43211, the number of vehicles not meeting the state board's emission standards is determined by dividing the NMOG+NOx debits for the model year by the NMOG+NOx composite emission standard in effect during the model year in which the debits were incurred.

[7] *Calculating the CO composite emission value.* Composite emission values for CO shall be calculated in accordance with Equation 1 above. Unlike the NMOG+NOx composite emission standards, manufacturers would not be able to meet the proposed CO composite emission standard through fleet averaging: each individual test group must comply with the standard. Test groups certified to 4,000-mile SFTP emission standards are not subject to this CO emission standard.

(B) *SFTP PM Exhaust Emission Standards for Passenger Cars, Light-Duty Trucks, and Medium-Duty Passenger Vehicles.* The following standards are the maximum PM exhaust emissions through the full useful life from 2017 and subsequent model-year LEV III LEVs, ULEVs, and SULEVs in the PC, LDT, and MDPV classes when operating on ~~any~~ the same gaseous or liquid fuel they use for FTP certification. In the case of fuel-flexible vehicles, SFTP compliance shall be demonstrated using the LEV III certification gasoline specified in Part II, Section A.100.3.1.2 of 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." Manufacturers must certify LEVs, ULEVs, and SULEVs in the PC, LDT, and MDPV classes, which are certifying to LEV III FTP PM emission standards in subsection (a)(2) on a 150,000-mile durability basis, to the *SFTP PM Exhaust Emission Standards* set forth in this subsection (a)(7)(B).

SFTP PM Exhaust Emission Standards for 2017 and Subsequent Model LEV III Passenger Cars, Light-Duty Trucks, and Medium-Duty Passenger Vehicles[1]

Vehicle Type	*Test Weight*	*Mileage for Compliance*	*Test Cycle*	*PM (mg/mi)*
All PCs; LDTs 0-6,000 lbs GVWR	Loaded vehicle weight	150,000	US06	10~~.0~~
LDTs 6,001-8,500 lbs GVWR; MDPVs	Loaded vehicle weight	150,000	US06	20~~.0~~

[1] All PCs, LDTs, and MDPVs certified to LEV III FTP PM emission standards in subsection (a)(2) on a 150,000-mile durability basis shall comply with the SFTP PM Exhaust Emission Standards in this table.

(C) *SFTP ~~II~~ NMOG+NOx and CO Exhaust Emission Standards for Medium-Duty Vehicles.* The following standards are the maximum NMOG+NOx and CO composite emission values for full useful life of 2016 and subsequent model-year medium-duty LEV III ULEVs and SULEVs from 8,501 through 14,000 pounds GVWR when operating on ~~any~~ the same gaseous or liquid fuel they use for FTP certification. In the case of flex-fueled vehicles, SFTP compliance shall be demonstrated using the LEV III certification gasoline specified in Part II, Section A.100.3.1.2 of 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." The following composite emission standards do not apply to MDPVs subject to the emission standards presented in subsections (a)(7)(A) and (a)(7)(B).

SFTP NMOG+NOx and CO Composite Exhaust Emission Standards for 2016 and Subsequent Model ULEVs and SULEVs in the Medium-Duty Vehicle Class						
Vehicle Type	*Mileage for Compliance*	*HP/GVWR*[2]	*Test Cycle*[3,4,5]	*Vehicle Emission Category*[5~~6~~]	*Composite Emission Standard*[1] *(g/mi)*	
					NMOG + NOx	*Carbon Monoxide*
MDVs 8,501 - 10,000 lbs GVWR	150,000	≤ 0.024	US06 Bag 2, SC03, FTP	ULEV	0.550	22.0
				SULEV	0.350	12.0
		> 0.024	Full US06, SC03, FTP	ULEV	0.800	22.0
				SULEV	0.450	12.0
MDVs 10,001- 14,000 lbs GVWR	150,000	n/a	Hot 1435 UC (Hot 1435 LA92), SC03, FTP	ULEV	0.550	6.0
				SULEV	0.350	4.0

[1] Manufacturers shall use Equation 1 in subsection (a)(7)(A)2 to calculate SFTP Composite Emission Values for each test group subject to the emission standards in this table. For MDVs 10,001-14,000 lbs. GVWR, the emission results from the UC test shall be used in place of results from the US06 test.

[2] *Power to Weight Ratio.* If all vehicles in a test group have a power to weight ratio at or below a threshold of 0.024, they may opt to run the US06 Bag 2 in lieu of the full US06 cycle. The cutoff is determined by using a ratio of the engine's maximum rated horsepower, as established by the engine manufacturer in the vehicle's Application for Certification, to the vehicle's GVWR in pounds and does not include any horsepower contributed by electric motors in the case of hybrid electric or plug-in hybrid electric vehicles. Manufacturers may opt to test to the full cycle regardless of the calculated ratio; in such case, manufacturers shall meet the emission standards applicable to vehicles with power-to-weight ratios greater than 0.024.

[3] *Test Weight*. Medium-duty vehicles are tested at their adjusted loaded vehicle weight (average of curb weight and GVWR).

[4] *Road Speed Fan.* Manufacturers have the option to use a road speed modulated fan as specified in § 86.107–96(d)(1) instead of a fixed speed fan for MDV SFTP testing.

[5] If a manufacturer provides an engineering evaluation for a test group showing that SC03 emissions are equivalent to or lower than FTP emissions, the FTP emission value may be used in place of the SC03 emission value when determining the composite emission value for that test group.

[5~~6~~] *Vehicle Emission Categories.* For MDVs 8,501-10,000 lbs. GVWR, for each model year, the percentage of MDVs certified to an SFTP emission category set forth in this section 1961.2 shall be equal to or greater than the total percentage certified to the FTP ULEV250, ULEV200, SULEV170, and SULEV150 emission categories; of these vehicles, the percentage of MDVs certified to an SFTP SULEV emission category shall be equal to or greater than the total percentage certified to both the FTP SULEV170 and SULEV150 emission categories. For MDVs 10,001-14,000 lbs. GVWR, for each model year, the percentage of MDVs certified to an SFTP emission category set forth in this section 1961.2 shall be equal to or greater than the total percentage certified to the FTP ULEV400, ULEV270, SULEV230, and SULEV200 emission categories; of these vehicles, the percentage of MDVs certified to an SFTP SULEV emission category shall be equal to or greater than the total percentage certified to both the FTP SULEV230 and SULEV200 emission categories.

(D) *SFTP PM Exhaust Emission Standards for Medium-Duty Vehicles.* The following standards are the maximum PM composite emission values for the full useful life of 2017 and subsequent model-year LEV III LEVs, ULEVs, and SULEVs when operating on ~~any~~ the same gaseous or liquid fuel they use for FTP certification. In the case of fuel-flexible vehicles, SFTP compliance shall be demonstrated using the LEV III certification gasoline specified in Part II, Section A.100.3.1.2 of 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."

The following composite emission standards do not apply to MDPVs subject to the emission standards set forth in subsections (a)(7)(A) and (a)(7)(B).

SFTP PM Exhaust Emission Standards for 2017 and Subsequent Model Medium-Duty Vehicles[1]					
Vehicle Type	*Test Weight*	*Mileage for Compliance*	*Hp/GVWR*[2]	*Test Cycle*[3,4]	*PM (mg/mi)*
MDVs 8,501-10,000 lbs GVWR	Adjusted loaded vehicle weight	150,000	≤ 0.024	US06 Bag 2	7~~.0~~
			>0.024	US06	10~~.0~~
MDVs 10,001-14,000 lbs GVWR	Adjusted loaded vehicle weight	150,000	n/a	Hot 1435 UC (Hot 1435 LA92)	7~~.0~~

[1] Except for MDPVs subject to the emission standards set forth in subsection (a)(7)(B), MDVs certified to 150,000-mile FTP PM emission standards in subsection (a)(2) shall comply with the SFTP PM Exhaust Emission Standards in this table.

[2] *Power to Weight Ratio.* If all vehicles in a test group have a power to weight ratio at or below a threshold of 0.024, they may opt to run the US06 Bag 2 in lieu of the full US06 cycle. The cutoff is determined by using a ratio of the engine's horsepower to the vehicle's GVWR in pounds and does not include any horsepower contributed by electric motors in the case of hybrid electric or plug-in hybrid electric vehicles. Manufacturers may opt to test to the full cycle regardless of the calculated ratio; in such case, manufacturers shall meet the emission standards applicable to vehicles with power-to-weight ratios greater than 0.024.

[3] *Road Speed Fan.* Manufacturers have the option to use a road speed modulated fan as specified in § 86.107–96(d)(1) instead of a fixed speed fan for MDV SFTP testing.

[4] Manufacturers shall use Equation 1 above to calculate SFTP Composite PM Emission Values for each test group subject to the emission standards in this table. For MDVs 8,501-10,000 lbs. GVWR certifying to the US06 Bag 2 PM emission standard, the emission results from the US06 Bag 2 test shall be used in place of results from the full US06 test. For MDVs 10,001-14,000 lbs. GVWR, the emission results from the UC test shall be used in place of results from the US06 test.

(8) *Interim In-Use Compliance Standards*.

(A) *LEV III NMOG+NOx Interim In-Use Compliance Standards.* The following interim in-use compliance standards shall apply for the first two model years that a test group is certified to the LEV III standards.

1. *NMOG+NOx Interim In-Use Compliance Standards for Passenger Cars, Light-Duty Trucks, and Medium-Duty Passenger Vehicles.* For the 2015 through 2019 model years, these standards shall apply.

Emission Category	Durability Vehicle Basis (miles)	LEV III PCs, LDTs, and MDPVs
		NMOG + NOx (g/mi)
LEV160	150,000	n/a
ULEV125	150,000	n/a
ULEV70	150,000	0.~~100~~098
ULEV50	150,000	0.070
SULEV30	150,000	0.04~~0~~2[1]
SULEV20	150,000	0.0~~30~~28[1]

[1]not applicable to test groups that receive PZEV credits

* * * *

(C) SFTP *Interim In-Use Compliance Standards.*

* * * *

2. Test groups certified prior to the 202~~0~~1 model year will be allowed an in-use compliance standard for PM for the first five model years that they are certified to the SFTP PM standard.

* * * *

(10) *Requirement to Generate a Partial ZEV Allowance.* For the 2015 through 2017 model years, a manufacturer that certifies to the LEV III SULEV30 or the LEV III SULEV20 standards ~~shall~~ may also generate a partial ZEV allocation according to the criteria set forth in section C.3 of 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."

* * * *

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

(1) *Fleet Average NMOG + NOx Requirements for Passenger Cars, Light-Duty Trucks, and Medium-Duty Passenger Vehicles.*

(A) The fleet average non-methane organic gas plus oxides of nitrogen exhaust mass emission values from the passenger cars, light-duty trucks, and medium-

duty passenger vehicles that are produced and delivered for sale in California each model year by a manufacturer other than a small volume manufacturer shall not exceed:

FLEET AVERAGE NON-METHANE ORGANIC GAS PLUS OXIDES OF NITROGEN EXHAUST MASS EMISSION REQUIREMENTS FOR PASSENGER CARS, LIGHT-DUTY TRUCKS, AND MEDIUM-DUTY PASSENGER VEHICLES
(150,000 mile Durability Vehicle Basis)

Model Year	*Fleet Average NMOG + NOx (grams per mile)*	
	All PCs; LDTs 0-3750 lbs. LVW	*LDTs 3751 lbs. LVW - 8500 lbs. GVWR; All MDPVs*
2014[1]	0.107	0.128
2015	0.100	0.119
2016	0.093	0.110
2017	0.086	0.101
2018	0.079	0.092
2019	0.072	0.083
2020	0.065	0.074
2021	0.058	0.065
2022	0.051	0.056
2023	0.044	0.047
2024	0.037	0.038
2025+	0.030	0.030

[1] For the 2014 model year, a manufacturer may comply with the fleet average NMOG+NOx values in this table in lieu of complying with the NMOG fleet average values in subsection 1961(a)(b)(1)(A). A manufacturer must either comply with the NMOG+NOx fleet average requirements for both its PC/LDT1 fleet and its LDT2/MDPV fleet or comply with the NMOG fleet average requirements for both its PC/LDT1 fleet and its LDT2/MDPV fleet. A manufacturer must calculate its fleet average NMOG+NOx values using the applicable full useful standards.

1. ~~*Pooling Provision.*~~

~~a. For each model year, a manufacturer must demonstrate compliance with the fleet average requirements in this subsection (b)(1)(A) based on one of two options applicable throughout the model year, either:~~

~~Option 1: the total number of passenger cars, light-duty trucks, and medium-duty passenger vehicles that are certified to the California exhaust emission standards in subsection (a) and subsection 1961(a)(1), and are produced and delivered for sale in California; or~~

~~Option 2: the total number of passenger cars, light-duty trucks, and medium-duty passenger vehicles that are certified to the California exhaust emission standards in subsection (a) and subsection 1961(a)(1), and are produced and delivered for sale in California, the District of Columbia, and all states that have adopted California's criteria pollutant emission standards set forth in this section 1961.2 for that model year pursuant to section 177 of the federal Clean Air Act (42 U.S.C. § 7507).~~

~~b. A manufacturer that selects compliance Option 2 must notify the Executive Officer of that selection in writing prior to the start of the applicable model year or must comply with Option 1.~~

~~c. When a manufacturer is demonstrating compliance using Option 2 for a given model year, the term "in California" as used in this section 1961.2 means California, the District of Columbia, and all states that have adopted California's criteria pollutant emission standards set forth in this section 1961.2 for that model year pursuant to Section 177 of the federal Clean Air Act (42 U.S.C. § 7507).~~

~~d.~~ A manufacturer that selects compliance Option 2 must provide to the Executive Officer separate values for the number of vehicles <u>in each test group</u> produced and delivered for sale in the District of Columbia and for each individual state within the average.

2. *PZEV Anti-Backsliding Requirement*. In the 2018 and subsequent model years, a manufacturer must produce and deliver for sale in California a minimum percentage of its passenger car and light-duty truck fleet that certifies to SULEV30 and SULEV20 standards. This minimum percentage must be equal to the average percentage of PZEVs produced and deliver for sale in California for that manufacturer ~~based~~ for the 2015 through 2017 model year. ~~For the 2018 model year, a~~ <u>A</u> manufacturer may calculate this average percentage using the projected sales for the<u>se</u> ~~2017~~ model year<u>s</u> in lieu of actual sales.

(B) *Calculation of Fleet Average NMOG + NOx Value.*

1. *Basic Calculation.*

a. Each manufacturer's PC and LDT1 fleet average NMOG + NOx value for the total number of PCs and LDT1s produced and delivered for sale in California shall be calculated as follows:

(Σ [Number of vehicles in a test group <u>excluding off-vehicle charge capable hybrid electric vehicles</u> x applicable emission standard] +
Σ [Number of off-vehicle charge capable hybrid electric vehicles in a test group x HEV NMOG+NOx contribution factor]) ÷
Total Number of PCs plus LDT1s Produced and Delivered for sale in California, Including ZEVs and HEVs

b. Each manufacturer's LDT2 and MDPV fleet average NMOG+NOx value for the total number of LDT2s and MDPVs produced and delivered for sale in California shall be calculated as follows:

(Σ [Number of vehicles in a test group <u>excluding off-vehicle charge capable hybrid electric vehicles</u> x applicable emission standard] +
Σ [Number of <u>off-vehicle charge capable</u> hybrid electric vehicles in a test group x HEV NMOG factor]) ÷
Total Number of LDT2s plus MDPVs Produced and Delivered for sale in California, Including ZEVs and HEVs

c. The applicable emission standards to be used in the above equations are as follows:

Model Year	Emission Category	Emission Standard Value[1] (g/mi)	
		All PCs; LDTs 0-3750 lbs. LVW	**LDTs 3751-5750 lbs. LVW; All MDPVs**
2015 and subsequent model year federally-certified vehicles ~~(AB 965 vehicles only)~~[2]	All	Sum of the full useful life NMOG and NOx Federal Emission Standards to which Vehicle is Certified	Sum of the full useful life NMOG and NOx Federal Emission Standards to which Vehicle is Certified
Model Year	**Emission Category**	**All PCs; LDTs 0-3750 lbs. LVW**	**LDTs 3751 lbs. LVW - 8500 lbs. GVWR; All MDPVs**
2015 through 2019 model year vehicles certified to the "LEV II" standards in subsection 1961(a)(1); 2015 and subsequent model year vehicles certified to the "LEV III" standards in subsection 1961.2(a)(1)	LEV II LEVs; LEV160s	0.160	0.160
	LEV II ULEVs; LEV125s	0.125	0.125
	ULEV70s	0.070	0.070
	ULEV50s	0.050	0.050
	LEV II SULEVs; SULEV30s	0.030	0.030
	SULEV20s	0.020	0.020
	LEV II LEVs; LEV395s	n/a	0.395
	LEV II ULEVs	n/a	0.343
	ULEV340s	n/a	0.340
	ULEV250s	n/a	0.250
	ULEV200s	n/a	0.200
	SULEV170s	n/a	0.170
	SULEV150s	n/a	0.150

[1] For LEV III vehicle test groups that meet the extended emission warranty requirements in subsection (a)(9), the applicable emission standard value shall be the emission standard value set forth in this table minus 5 mg/mi.

~~[2] "AB 965 vehicles" are those certified in accordance with the "Guidelines for Certification of 2003 and Subsequent Model Year Federally Certified Light-Duty Motor Vehicles for Sale in California," incorporated by reference in section 2062.~~

2. *NMOG+NOx Contribution Factor for Off-vehicle Charge Capable HEVs.* The HEV NMOG+NOx contribution factor for light-duty off-vehicle charge capable hybrid electric vehicles is calculated as follows:

LEV160 HEV Contribution Factor = 0.160 - [(Zero-emission VMT Allowance) x 0.035]
ULEV125 HEV Contribution Factor = 0.125 - [(Zero-emission VMT Allowance) x 0.055]
ULEV70 HEV Contribution Factor = 0.070 - [(Zero-emission VMT Allowance) x 0.020]
ULEV50 HEV Contribution Factor = 0.050 - [(Zero-emission VMT Allowance) x 0.020]
SULEV30 HEV Contribution Factor = 0.030 - [(Zero-emission VMT Allowance) x 0.010]
SULEV20 HEV Contribution Factor = 0.020 - [(Zero-emission VMT Allowance) x 0.020]

Where the Zero-emission VMT Allowance for off-vehicle charge capable HEVs is determined in accordance with section C.3 of 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" 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," as applicable, except that for the purposes of this subsection (b)(1)(B)2, the maximum allowable Zero-emission VMT Allowance that may be used in these equations is 1.0. This subsection (b)(1)(B)2 shall only apply to off-vehicle charge capable HEVs certified to the LEV III standards set forth in subsection (a)(1).

~~3. *Federally Certified Vehicles.* A vehicle certified to the federal standards for a federal exhaust emissions bin in accordance with section H.1 of 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" shall use the sum of the corresponding LEV II NMOG and NOx emission category value set forth in subsection (b)(1)(B)1.c for the fleet average calculation. If a vehicle is certified to 150,000 mile standards for a federal exhaust emission bin and the corresponding California NMOG+NOx emission category is a LEV III category, it may use the emission standard value for that LEV III category as set forth in subsection (b)(1)(B)1.c.~~

(C) Phase-In *Requirements for Small Volume Manufacturers*.

1. In the 2015 through 20~~19~~21 model years, a small volume manufacturer shall not exceed a fleet average NMOG+NOx value of 0.160 g/mi for PCs and LDTs from 0-3750 lbs. LVW or 0.160 g/mi for LDTs from 3751-5750 lbs. LVW calculated in accordance with subsection (b)(1)(B). In 202~~0~~2 through 2024 model years, a small volume manufacturer shall not exceed a fleet average NMOG+NOx value of 0.125 g/mi for PCs and LDTs from 0-3750 lbs. LVW or 0.125 g/mi for LDTs from 3751 lbs. LVW - 8,500 lbs. GVW and MDPVs calculated in accordance with subsection (b)(1)(B). In 2025 and subsequent model years, a small volume manufacturer shall not exceed a fleet average NMOG+NOx value of 0.070 g/mi for PCs and LDTs from 0-3750 lbs. LVW or 0.070 g/mi for LDTs from 3751 lbs. LVW - 8,500 lbs. GVW and MDPVs calculated in accordance with subsection

(b)(1)(B). For the 2015 through 2021 model years, a small volume manufacturer may certify its vehicles to the LEV II exhaust standards in section 1961. All vehicles certified by a small volume manufacturer for the 2022 and subsequent model years must meet the LEV III exhaust standards in this section 1961.2.

* * * *

(D) *Treatment of ZEVs.* ZEVs classified as LDTs (>3750 lbs. LVW) that have been counted toward the ZEV requirement for PCs and LDTs (0-3750 lbs. LVW) as specified in sections 1962.1 and 1962.~~1~~2 shall be included as LDT1s in the calculation of a fleet average NMOG value.

(2) *LEV III Phase-In Requirement for Passenger Cars, Light-Duty Trucks, and Medium-Duty Passenger Vehicles*. For the 2015 and 2016 model years, the LEV II SULEV emission standards set forth in section 1961(a)(1) that are applicable to PCs, LDTs, and MDPVs shall only apply to those PCs, LDT1s, LDT2s, and MDPVs that certify to SULEV emission standards using "carryover" of emission test data from a previous model year in accordance with U.S. EPA OMS Advisory Circular A/C No. 17F, issued November 16, 1982, and last amended January 21, 1988, incorporated herein by reference. Beginning in the 201~~5~~7 model year, the LEV II SULEV emission standards set forth in section 1961(a)(1) that are applicable to PCs, LDTs, and MDPVs shall only apply to those PCs, LDT1s, LDT2s, and MDPVs that receive partial ZEV allowances in accordance with 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," ~~or 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," as applicable.~~ A manufacturer, other than a small volume manufacturer, must ~~shall~~ certify 100 percent of its PC, LDT, and MDPV fleet to the LEV III standards in subsection (a)(1) in 2020 and subsequent model years. A small volume manufacturer must certify 100 percent of its PC, LDT, and MDPV fleet to the LEV III standards in subsection (a)(1) in 2022 and subsequent model years.

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

(A) A manufacturer of MDVs, other than a small volume manufacturer, shall certify ~~at least the following percentage of~~ its MDV fleet according to the following phase-in schedule:

Model Year	*Vehicles 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
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

* * * *

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

1. A manufacturer that produces and delivers for sale in California four medium-duty test groups may comply with the following alternate phase-in schedule for LEV III medium-duty vehicles.

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

2. A manufacturer that produces and delivers for sale in California three medium-duty test groups may comply with the following alternate phase-in schedule for LEV III medium-duty vehicles.

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

3. A manufacturer that produces and delivers for sale in California two medium-duty test groups may comply with the following alternate phase-in schedule for LEV III medium-duty vehicles.

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	100
2017-2019	0	1	1	0	100
2020-2021	0	0	1	1	100
2022 +	0	0	0	2	100

4. A manufacturer that produces and delivers for sale in California one medium-duty test groups may comply with the following alternate phase-in schedule for LEV III medium-duty vehicles.

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	100
2019-2021	0	0	1	0	100
2022 +	0	0	0	1	100

(~~C~~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. The percentages shall be applied to the manufacturers' total production of California-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 those engines in the

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

(~~D~~E) For a manufacturer that elects to certify to the optional medium-duty engine standards in title 13, CCR subsections 1956.8(c) or (h), all such MDVs, including those produced by a small volume manufacturer, shall be subject to the emissions averaging provisions applicable to heavy-duty diesel or Otto-cycle engines as set forth in the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines," or the "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines, incorporated by reference in subsections 1956.8(b) or (d), as applicable.

* * * *

(c) *Calculation of NMOG + NOx Credits/Debits*

* * * *

(2) *Calculation of Vehicle-Equivalent NMOG + NOx Credits for Medium-Duty Vehicles Other than MDPVs*.

(A) In ~~2015~~2016 and subsequent model years, a manufacturer that produces and delivers for sale in California MDVs, other than MDPVs, in excess of the equivalent requirements for LEV III vehicles certified to the exhaust emission standards set forth in subsection (a)(1), shall receive "Vehicle-Equivalent Credits" (or "VECs") calculated in accordance with the following equation, where the term "produced" means produced and delivered for sale in California:

(1.00) x {[(No. of LEV395s and LEV630s Produced excluding HEVs) +
(No. of LEV395 HEVs x HEV VEC factor for LEV395s) +
(No. of LEV630 HEVs x HEV VEC factor for LEV630s)] –
(No. of LEV395s and LEV630s Required to be Produced)} +

~~{[~~(1.~~2~~14) x {[(No. of ULEV340s and ULEV570s Produced excluding HEVs) +
(No. of ULEV340 HEVs x HEV VEC factor for ULEV340s) +
(No. of ULEV570 HEVs x HEV VEC factor for ULEV570s)] –
(~~Equivalent~~ No. of ULEV340s and ULEV570s Required to be Produced)} +

~~{[~~(1.~~4~~37) x {[(No. of ULEV250s and ULEV400s Produced excluding HEVs) +
(No. of ULEV250 HEVs x HEV VEC factor for ULEV250s) +
(No. of ULEV400 HEVs x HEV VEC factor for ULEV400s)] -
~~[(1.4) x~~ (~~Equivalent~~ No. of ULEV250s and ULEV270s Required to be Produced)~~]~~} +

~~{[~~(1.~~5~~49) x ~~{~~[(No. of ULEV200s and ULEV270s Produced excluding HEVs) +
(No. of ULEV200 HEVs x HEV VEC factor for ULEV200s) +
(No. of ULEV270 HEVs x HEV VEC factor for ULEV270s)] -
~~[(1.5) x~~ (~~Equivalent~~ No. of ULEV200s and ULEV270s Required to be Produced)~~]~~} +

~~{[~~(1.~~6~~57) x ~~{~~[(No. of SULEV170s and SULEV230s Produced excluding HEVs) +
(No. of SULEV170 HEVs x HEV VEC factor for SULEV170s) +
(No. of SULEV230 HEVs x HEV VEC factor for SULEV230s)] -
~~[(1.6) x [(Equivalent~~ No. of SULEV170s and SULEV230s Required to be Produced)~~]~~} +

~~{[~~(1.~~7~~62) x ~~{~~[(No. of SULEV150s and SULEV200s Produced excluding HEVs) +
(No. of SULEV150 HEVs x HEV VEC factor for SULEV150s) +
(No. of SULEV200 HEVs x HEV VEC factor for SULEV200s)] -
~~[(1.7) x [(Equivalent~~ No. of SULEV150s and SULEV200s Required to be Produced)~~]~~} +

[(2.00) x (No. of ZEVs Certified and Produced as MDVs)].

(B) *MDV HEV VEC factor.* The MDV HEV VEC factor is calculated as follows:

For LEV395s: $1+\left[\frac{(LEV395\ standard-ULEV340\ standard)\times Zero-emission\ VMT\ Allowance}{LEV395\ standard}\right]$;

For ULEV340s: $1+\left[\frac{(ULEV340\ standard-ULEV250\ standard)\times Zero-emission\ VMT\ Allowance}{ULEV340\ standard}\right]$;

For ULEV250s: $1+\left[\frac{(ULEV250\ standard-ULEV200\ standard)\times Zero-emission\ VMT\ Allowance}{ULEV250\ standard}\right]$;

For ULEV200s: $1+\left[\frac{(ULEV200\ standard-SULEV170\ standard)\times Zero-emission\ VMT\ Allowance}{ULEV3200\ standard}\right]$;

For SULEV170s: $1+\left[\frac{(SULEV170\ standard-SULEV150\ standard)\times Zero-emission\ VMT\ Allowance}{SULEV170\ standard}\right]$;

For SULEV150s: $1+\left[\frac{(SULEV150\ standard-ZEV\ standard)\times Zero-emission\ VMT\ Allowance}{SULEV150\ standard}\right]$;

For LEV630s: $1+\left[\frac{(LEV630\ standard-ULEV570\ standard)\times Zero-emission\ VMT\ Allowance}{LEV630\ standard}\right]$;

For ULEV570s: $1+\left[\frac{(ULEV570\ standard-ULEV400\ standard)\times Zero-emission\ VMT\ Allowance}{ULEV570\ standard}\right]$;

For ULEV400s: $1+\left[\frac{(ULEV400\ standard-ULEV270\ standard)\times Zero-emission\ VMT\ Allowance}{ULEV400\ standard}\right]$;

For ULEV270s: $1+\left[\frac{(ULEV270\ standard-SULEV230\ standard)\times Zero-emission\ VMT\ Allowance}{ULEV270\ standard}\right]$;

For SULEV230s: $1+\left[\frac{(SULEV230\ standard-SULEV200\ standard)\times Zero-emission\ VMT\ Allowance}{SULEV230\ standard}\right]$

For SULEV200s: $1+\left[\frac{(SULEV200\ standard-ZEV\ standard)\times Zero-emission\ VMT\ Allowance}{SULEV200\ standard}\right]$

where "Zero-emission VMT Allowance" for an HEV is determined in accordance with section C of 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, or 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, as applicable, except that for the purposes of this subsection (c)(2)(B), the maximum allowable Zero-emission VMT Allowance that may be used in these equations is 1.0.

* * * *

(f) Severability. Each provision of this section is severable, and in the event that any provision of this section is held to be invalid, the remainder of both this section and this article remains in full force and effect.

Note: Authority cited: Sections 39500, 39600, 39601, 43013, 43018, 43101, 43104, 43105, and 43106, Health and Safety Code. Reference: Sections 39002, 39003, 39667, 43000, 43009.5, 43013, 43018, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43204, and 43205, Health and Safety Code.

4. Adopt new title 13, CCR, section 1961.3 to read as follows: (Note: the entire text of section 1961.3 set forth below is new language proposed to be added to the California Code of Regulations.)

§ 1961.3. Greenhouse Gas Exhaust Emission Standards and Test Procedures - 2017 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.

* * * *

(a) *Greenhouse Gas Emission Requirements.*

* * * *

(5) *Calculation of Fleet Average Carbon Dioxide Value.*

* * * *

(D) For each model year, a manufacturer must demonstrate compliance with the fleet average requirements in section (a)(1) based on one of two options applicable throughout the model year, either:

Option 1: the total number of passenger cars, light-duty trucks, and medium-duty passenger vehicles that are certified to the California exhaust emission standards in section 1961.3, and are produced and delivered for sale in California; or

Option 2: the total number of passenger cars, light-duty trucks, and medium-duty passenger vehicles that are certified to the California exhaust emission standards in this section 1961.3, and are produced and delivered for sale in California, the District of Columbia, and all states that have adopted California's greenhouse gas emission standards for that model year pursuant to Section 177 of the federal Clean Air Act (42 U.S.C. § 7507).

1. A manufacturer that selects compliance Option 2 must notify the Executive Officer of that selection, in writing, prior to the start of the applicable model year or must comply with Option 1. Once a manufacturer has selected compliance Option 2, that selection applies unless the manufacturer selects Option 1 and notifies the Executive Officer of that selection in writing before the start of the applicable model year.

2. When a manufacturer is demonstrating compliance using Option 2 for a given model year, the term "in California" as used in section 1961.3 means California, the District of Columbia, and all states that have adopted

California's greenhouse gas emission standards for that model year pursuant to Section 177 of the federal Clean Air Act (42 U.S.C. § 7507).

3. A manufacturer that selects compliance Option 2 must provide to the Executive Officer separate values for the number of vehicles in each model type and footprint value produced and delivered for sale in the District of Columbia and for each individual state within the average and the City CO_2 Value and Highway CO_2 exhaust emission values that apply to each model type and footprint value.

* * * *

(6) *Credits for Reduction of Air Conditioning Direct Emissions.* Manufacturers may generate A/C Direct Emissions Credits by implementing specific air conditioning system technologies designed to reduce air conditioning direct emissions over the useful life of their vehicles. A manufacturer may only use an A/C Direct Emissions Credit for vehicles within a model type upon approval of the A/C Direct Emissions Credit for that model type by the Executive Officer. The conditions and requirements for obtaining approval of an A/C Direct Emissions Credit are described in (A) through (F), below.

* * * *

(B) To obtain approval of the A/C Direct Emissions Credit, the manufacturer must demonstrate through an engineering evaluation that the A/C system under consideration reduces A/C direct emissions. The demonstration must include all of the following elements:

- the amount of A/C Direct Emissions Credit requested, in grams of CO_2-equivalent per mile (gCO_2e/mi);
- the calculations identified in section (a)(6)(C) justifying that credit amount;
- schematic of the A/C system;
- specifications of the system components with sufficient detail to allow reproduction of the calculation; and
- ~~a justification that the number of fittings and joints has been minimized and components have been optimized to minimize leakage~~ an explanation describing what efforts have been made to minimize the number of fittings and joints and to optimize the components in order to minimize leakage.

Calculated values must be carried to at least three significant figures throughout the calculations, and the final credit value must be rounded to one tenth of a gram of CO_2-equivalent per mile (gCO_2e/mi).

* * * *

(10) *Greenhouse Gas In-Use Compliance Standards.* The in-use exhaust CO_2 emission standard shall be the combined city/highway exhaust emission value calculated according to the provisions of subsection (a)(5)(A) for the vehicle model type and footprint value multiplied by 1.1 and rounded to the nearest whole gram per mile. For vehicles that are capable of operating on multiple fuels, a separate value shall be determined for each fuel that the vehicle is capable of operating on. These standards apply to in-use testing performed by the manufacturer pursuant to 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."

* * * *

Note: Authority cited: Sections 39500, 39600, 39601, 43013, 43018, 43018.5, 43101, 43104 and 43105, Health and Safety Code. Reference: Sections 39002, 39003, 39667, 43000, 43009.5, 43013, 43018, 43018.5, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43204, 43205, and 43211, Health and Safety Code.

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5. Amend title 13, CCR, section 1976 to read as follows:

§ 1976. Standards and Test Procedures for Motor Vehicle Fuel Evaporative Emissions.

* * * *

(b)(1) Evaporative emissions for 1978 and subsequent model gasoline-fueled, 1983 and subsequent model liquefied petroleum gas-fueled, and 1993 and subsequent model alcohol-fueled motor vehicles and hybrid electric vehicles subject to exhaust emission standards under this article, except petroleum-fueled diesel vehicles, compressed natural gas-fueled vehicles, hybrid electric vehicles that have sealed fuel systems which can be demonstrated to have no evaporative emissions, and motorcycles, shall not exceed the following standards:

* * * *

(G) For 2015 and subsequent model motor vehicles, the following evaporative emission requirements apply:

* * * *

1. A manufacturer must certify all vehicles subject to this section to the emission standards specified in either Option 1 or Option 2 below.

* * * *

b. *Option 2*. The evaporative emissions from 2015 and subsequent model motor vehicles, tested in accordance with the test procedure sequence described in the "California Evaporative Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles," incorporated by reference in section 1976(c), shall not exceed:

* * * *

[5] *Calculation of Hydrocarbon Credits or Debits for the Fleet-Average Option*.

(1) *Calculation of Hydrocarbon Credits or Debits*. For each emission standard category in the model year, a manufacturer shall calculate the hydrocarbon credits or debits, as follows:

[(Applicable Hydrocarbon Emission Standard for the Emission Standard Category) – (Manufacturer's Fleet-Average Hydrocarbon Emission Value for the Emission Standard Category)] X (Total Number of Affected Vehicles)

where "Total Number of Affected Vehicles" = the total number of vehicles in the evaporative families participating in the fleet-average option, which are produced and delivered for sale in California, for the emission standard category of the given model year.

A negative number constitutes hydrocarbon debits, and a positive number constitutes hydrocarbon credits accrued by the manufacturer for the given model year. Hydrocarbon credits earned in a given model year shall retain full value through the fifth model year after they are earned. At the beginning of the sixth model year, the hydrocarbon credits will have no value.

(2) *Procedure for Offsetting Hydrocarbon Debits*. A manufacturer shall offset hydrocarbon debits with hydrocarbon credits for each emission standard category within three model years after the debits have been incurred. If total hydrocarbon debits are not equalized within three model years after they have been incurred, the manufacturer shall be subject to the Health and Safety Code section 43211 civil penalties applicable to a manufacturer which sells a new motor vehicle that does not meet the applicable emission standards adopted by the state board. The cause of action shall be deemed to accrue when the hydrocarbon debits are not equalized by the end of the specified time period. For the purposes of Health and Safety Code section 43211, the number of vehicles not meeting the state board's emission standards shall be determined by dividing the total amount of hydrocarbon debits for the model year in the emission standard category by the applicable hydrocarbon emission standard for the model year in which the debits were first incurred.

Additionally, ~~a manufacturer may use the excess hydrocarbon credits from the emission standard categories of (1) passenger cars and light-duty trucks 6,000 pounds GVWR and under, and 0 - 3,750 pounds LVW and (2) light-duty trucks 6,000 pounds GVWR and under, and 3,751 – 5,750 pounds LVW to equalize the hydrocarbon debits that remain at the end of the three model year offset period of any emission standard category.~~ to equalize the hydrocarbon debits that remain at the end of the three model year offset period: (1) hydrocarbon credits may be exchanged between passenger cars and light-duty trucks 6,000 pounds GVWR and under and 0-3,750 pounds LVW, and light-duty trucks 6,000 pounds GVWR and under and 3,751-5,750 pounds LVW and (2) hydrocarbon credits may be exchanged between light-duty trucks 6,001-8,500 pounds GVWR and medium-duty passenger vehicles, and medium-duty vehicles and heavy-duty vehicles.

[6] *Vehicle Canister Bleed Emission*. Compliance with the canister bleed emission standard shall be determined based on the Bleed Emission Test Procedure described in the "California Evaporative Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles," incorporated by reference in section 1976(c), and demonstrated on a stabilized canister system. Vehicles with a non-integrated refueling canister-only system are exempt from the canister bleed emission standard.

2. *Phase-In Schedule*. For each model year, a manufacturer shall certify, at a minimum, the specified percentage of its vehicle fleet to the evaporative emission standards set forth in section 1976(b)(1)(G)1.a. or section 1976(b)(1)(G)1.b., according to the schedule set forth below. For the purpose of this section 1976(b)(1)(G)2., the manufacturer's vehicle fleet consists of the vehicles produced and delivered for sale by the manufacturer in California that are subject to the emission standards in section 1976(b)(1)(G)1. All 2015 through 2022 model motor vehicles that are not subject to these standards pursuant to the phase-in schedule shall comply with the requirements for 2004 through 2014 model motor vehicles, as described in section 1976(b)(1)(F).

Model Years	*Minimum Percentage of Vehicle Fleet* [(1)(2)]
2015, 2016, and 2017	Average of vehicles certified to section 1976(b)(1)(E) in model years 2012, 2013, and 2014[(3)(4)]
2018 and 2019	60
2020 and 2021	80
2022 and subsequent	100

1 For the 2018 through 2022 model years only, a manufacturer may use an alternate phase-in schedule to comply with the phase-in requirements. An alternate phase-in schedule must achieve equivalent compliance volume by the end of the last model year of the scheduled phase-in (2022). The compliance volume is the number calculated by multiplying the percent of vehicles (based on the manufacturer's projected sales volume of all vehicles) meeting the new requirements in each model year by the number of years implemented prior to and including the last model year of the scheduled phase-in, then summing these yearly results to determine a cumulative total. The cumulative total of the five year (60/60/80/80/100) scheduled phase-in set forth above is calculated as follows: (60*5 years) + (60*4 years) + (80*3 years) + (80*2 years) + (100*1 year) = 1040. Accordingly, the required cumulative total for any alternate phase-in schedule of these emission standards is 1040. The Executive Officer shall consider acceptable any alternate phase-in schedule that results in an equal or larger cumulative total by the end of the last model year of the scheduled phase-in (2022).

2 Small volume manufacturers are not required to comply with the phase-in schedule set forth in this table. Instead, they shall certify 100 percent of their 2022 and subsequent model year vehicle fleet to the evaporative emission standards set forth in section 1976(b)(1)(G)1.a. or section 1976(b)(1)(G)1.b.

3 The percentage of vehicle fleet averaged across the 2015, 2016, and 2017 model years shall be used to determine compliance with this requirement.

~~3~~4 The minimum percentage required in the 2015, 2016, and 2017 model years is determined by averaging the percentage of vehicles certified to the emission standards in section 1976(b)(1)(E) in each of the manufacturer's 2012, 2013, and 2014 model year vehicle fleets. For the purpose of calculating this average, a manufacturer shall use the percentage of vehicles produced and delivered for sale in California for the 2012, ~~and~~ 2013, and 2014 model years~~, and the percentage of projected sales in California for the 2014 model year.~~. A manufacturer may calculate this average percentage using the projected sales for these model years in lieu of actual sales.

3. *Carry-Over of 2014 Model-Year Evaporative Families Certified to the Zero-Fuel Evaporative Emission Standards*. A manufacturer may carry over 2014 model motor vehicles certified to the zero-fuel (0.0 grams per test) evaporative emission standards set forth in section 1976(b)(1)(E) through the 2018 model year and be considered compliant with the requirements of section 1976(b)(1)(G)1. If the manufacturer chooses to participate in the fleet-average option for the highest whole vehicle diurnal plus hot soak emission standard, the following family emission limits are assigned to these evaporative families for the calculation of the manufacturer's fleet-average hydrocarbon emission value.

Vehicle Type	*Highest Whole Vehicle Diurnal + Hot Soak (grams per test)*
Passenger cars	0.300
Light-duty trucks 6,000 lbs. GVWR and under, and 0 - 3,750 lbs. LVW	0.300
Light-duty trucks 6,000 lbs. GVWR and under, and 3,751 – 5,750 lbs. LVW	0.400
Light-duty trucks 6,001 - 8,500 lbs. GVWR	0.500

4. *Pooling Provision*. The following pooling provision applies to the fleet-average option for the Highest Whole Vehicle Diurnal Plus Hot Soak Emission Standard in section 1976(b)(1)(G)1.b. and to the phase-in requirements in section 1976(b)(1)(G)2.

a. For the fleet-average option set forth in section 1976(b)(1)(G)1.b., a manufacturer must demonstrate compliance, for each model year, based on one of two options applicable throughout the model year, either:

Pooling Option 1: the total number of passenger cars, light-duty trucks, medium-duty passenger vehicles, medium-duty vehicles, and heavy-duty vehicles that are certified to the California evaporative emission standards in section 1976(b)(1)(G)1.b., and are produced and delivered for sale in California; or

Pooling Option 2: the total number of passenger cars, light-duty trucks, medium-duty passenger vehicles, medium-duty vehicles, and heavy-duty vehicles that are certified to the California evaporative emission standards in section 1976(b)(1)(G)1.b., and are produced and delivered for sale in California, the District of Columbia, and all states that have adopted California's evaporative emission standards set forth in section 1976(b)(1)(G)1. for that model year pursuant to section 177 of the federal Clean Air Act (42 U.S.C. § 7507).

b. For the phase-in requirements in section 1976(b)(1)(G)2., a manufacturer must demonstrate compliance, for each model year, based on one of two options applicable throughout the model year, either:

Pooling Option 1: the total number of passenger cars, light-duty trucks, medium-duty passenger vehicles, medium-duty vehicles, and

heavy-duty vehicles that are certified to the California evaporative emission standards in section 1976(b)(1)(G)1., and are produced and delivered for sale in California; or

Pooling Option 2: the total number of passenger cars, light-duty trucks, medium-duty passenger vehicles, medium-duty vehicles, and heavy-duty vehicles that are certified to the California evaporative emission standards in section 1976(b)(1)(G)1., and are produced and delivered for sale in California, the District of Columbia, and all states that have adopted California's evaporative emission standards set forth in section 1976(b)(1)(G)1. for that model year pursuant to section 177 of the federal Clean Air Act (42 U.S.C. § 7507).

c. A manufacturer that selects Pooling Option 2 must notify the Executive Officer of that selection in writing before the start of the applicable model year or must comply with Pooling Option 1. Once a manufacturer has selected compliance Option 2, that selection applies unless the manufacturer selects Option 1 and notifies the Executive Officer of that selection in writing before the start of the applicable model year.

d. When a manufacturer is demonstrating compliance using Pooling Option 2 for a given model year, the term "in California" as used in section 1976(b)(1)(G) means California, the District of Columbia, and all states that have adopted California's evaporative emission standards for that model year pursuant to Section 177 of the federal Clean Air Act (42 U.S.C. § 7507).

e. A manufacturer that selects Pooling Option 2 must provide to the Executive Officer separate values for the number of vehicles in each evaporative family produced and delivered for sale in the District of Columbia and for each individual state within the average.

5. Optional Certification for 2014 Model Motor Vehicles. A manufacturer may optionally certify its 2014 model motor vehicles to the evaporative emission standards set forth in section 1976(b)(1)(G)1.

* * * *

Note: Authority cited: Sections 39500, 39600, 39601, 39667, 43013, 43018, 43101, 43104, 43105, 43106 and 43107, Health and Safety Code. Reference: Sections 39002, 39003, 39500, 39667, 43000, 43009.5, 43013, 43018, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43107, 43204 and 43205 Health and Safety Code.

6. Amend title 13, CCR, section 1978 to read as follows:

§1978. Standards and Test Procedures for Vehicle Refueling Emissions.

* * * *

(4) Beginning with model year 2015, all vehicles subject to the refueling emission standards in section 1978(a)(1) shall demonstrate compliance except incomplete vehicles of 14,000 pounds gross vehicle weight rating or less that are ~~optionally certified to complete heavy-duty vehicle standards under the provisions of 40 CFR §86.1801-01(c)(2)~~certified as incomplete vehicles for the purposes of evaporative emissions testing as set forth in the "California Evaporative Emission Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles," incorporated by reference in section 1976.

* * * *

NOTE: Authority cited: Sections 39500, 39600, 39601, 39667, 43013, 43018, 43101, 43104, 43105, and 43106, Health and Safety Code. Reference: Sections 39002, 39003, 39500, 39667, 43000, 43009.5, 43013, 43018, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43204 and 43205, Health and Safety Code.

7. Amend title 13, CCR, section 2112 to read as follows:

§2112. Definitions.

* * * *

(l)(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 years or 150,000 miles, whichever occurs first.

* * * *

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, 43101, 43104, 43105, and 43806, Health and Safety Code; and Section 28114, Vehicle Code. Reference: Sections 39002, 39003, 39500, 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.

8. Amend title 13, CCR, section 2139 to read as follows:

§2139. Testing.

After the vehicles 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:

(a) For passenger cars and light-duty trucks, in-use compliance emission tests shall be performed pursuant to section 1960.1, ~~or~~ 1961, ~~or~~ 1961.2, or 1961.3, Title 13, California Code of Regulations, as applicable.

(b) For medium-duty vehicles certified according to the chassis standards and test procedures specified in section 1960.1, ~~or~~ 1961, ~~or~~ 1961.2, or 1961.3, Title 13, California Code of Regulations and the documents incorporated by reference therein, in-use compliance emission tests shall be performed pursuant to section 1960.1, ~~or~~ 1961, ~~or~~ 1961.2, or 1961.3, Title 13, California Code of Regulations, as applicable.

(c) For medium-duty engines and vehicles certified according to the optional engine test procedures specified in section 1956.8, Title 13, California Code of Regulations and the documents incorporated by reference therein, in-use compliance emission tests shall be performed pursuant to one of the following procedures:

* * * *

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, 43101, 43104 and 43105, Health and Safety Code. Reference: Sections 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.

9. Amend title 13, CCR, section 2140 to read as follows:

§2140. Notification and Use of Test Results.

* * * *

(b) If the results of the in-use vehicle emission tests conducted pursuant to Section 2139 indicate that the average emissions of the test vehicles for any pollutant exceed the applicable emission standards specified in Title 13, California Code of Regulations, Section 1960.1, 1961, 1961.2, 1961.3, 1956.8, 1958, 2412, 2423, or 2442, the entire vehicle 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 in accordance with Sections 2122 through 2135, Title 13, California Code of Regulations.

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018 and 43105, Health and Safety Code. Reference: Sections 43000, 43009.5, 43013, 43018, 43101, 43104, 43105, 43106, 43107, 43204-43205.5 and 43211-43213, Health and Safety Code.

10. Amend title 13, CCR, section 2147 to read as follows:

§2147. Demonstration of Compliance with Emission Standards.

* * * *

(b) A manufacturer may test properly maintained in-use vehicles with the failed emission-related component pursuant to the applicable certification emission tests specified in Title 13, California Code of Regulations, Section 1960.1, ~~or~~ 1961, ~~or~~ 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. 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:

* * * *

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