

APPENDIX A

PROPOSED REGULATION ORDER FOR PHASE 2 GREENHOUSE GAS REGULATIONS

Note: Set forth below are the proposed amendments to title 13, California Code of Regulations (CCR), sections 1956.8, 1961.2, 1965, 2036, 2037, 2065, 2112, and 2141; and to title 17, CCR, sections 95300, 95301, 95302, 95303, 95304, 95305, 95306, 95307, 95311, 95662, and 95663. Proposed amendments to existing sections are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions. Subsections for which no changes are proposed in this rulemaking are indicated with [No change] or “* * * *”.

1. Amend section 1956.8, title 13, CCR, to read as follows:

§ 1956.8. Exhaust Emission Standards and Test Procedures - 1985 and Subsequent Model Heavy-Duty Engines and Vehicles.

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(a)(7) Greenhouse Gas Emission Standards for new 2014 and Subsequent Model Heavy-Duty Diesel Engines, Heavy-Duty Natural Gas-Fueled and Liquefied-Petroleum-Gas-Fueled Engines Derived from Diesel-Cycle Engines, and Heavy-Duty Methanol-Fueled Diesel Engines.

(A) The CO₂ emissions from new 2014 and subsequent model heavy-duty diesel engines, heavy-duty natural gas-fueled and liquefied-petroleum-gas-fueled engines derived from diesel-cycle engines, and heavy-duty methanol-fueled diesel engines, except in all cases engines used in medium-duty vehicles, shall not exceed:

**CO₂ Emission Standards for 2014 and Subsequent Model
Heavy-Duty Diesel Engines^{A, B, C, D}**
(in g/hp-hr)

<i>Model Years</i>	<i>Light heavy-duty – vocational</i>	<i>Medium heavy-duty – vocational</i>	<i>Heavy heavy-duty – vocational</i>	<i>Medium heavy-duty – tractor</i>	<i>Heavy heavy-duty – tractor</i>
2014-2016	600	600	567	502	475
2017 and later – 2020	576	576	555	487	460
2017-2027 (Optional) ^E	490	474	446	409	387
<u>2021-2023</u>	<u>563</u>	<u>545</u>	<u>513</u>	<u>473</u>	<u>447</u>
<u>2024-2026</u>	<u>555</u>	<u>538</u>	<u>506</u>	<u>461</u>	<u>436</u>
<u>2027 and later</u>	<u>552</u>	<u>535</u>	<u>503</u>	<u>457</u>	<u>432</u>

^A *Family Certification Levels.* A Family Certification Level (FCL) must be specified for each engine family, which may not be less than the certified emission level for the engine family. The Family Emission Limit (FEL) for the engine family is equal to the FCL multiplied by 1.03. The FCL serves as the CO₂ emission standard for the engine family with respect to certification and confirmatory testing instead of the standards specified in this subsection (a)(7)(A). The FEL serves as the emission standard for the engine family with respect to all other testing.

^B *Averaging, Banking, and Trading Program and Credits.* The requirements for the optional averaging, banking, and trading program and for generating credits are described in the applicable test procedures incorporated by reference in subsection (b).

^C *Alternate Phase-in Emission Standards.* Alternate phase-in emission standards may be used in lieu of the required CO₂ emission standards in the table above. To qualify for these alternate phase-in emission standards, the manufacturer must begin certifying all of its model year 2013 diesel engines within a given primary intended service class to the applicable alternate emission standards of this footnote (c) and continue through model year 2016. This means that once a manufacturer chooses to certify a primary intended service class to the alternate emission standards of this footnote (c), it is not allowed to opt out of these standards. Engines certified to these alternate emission standards are not eligible for early credits. Note that these alternate emission standards for 2016 and later are the same as the otherwise applicable required emission standards for model year 2017 and later.

<i>Alternate Phase-in CO₂ Emission Standards (in g/hp-hr)</i>					
<i>Model Years</i>	<i>Light heavy-duty – vocational</i>	<i>Medium heavy-duty – vocational</i>	<i>Heavy heavy-duty – vocational</i>	<i>Medium heavy-duty – tractor</i>	<i>Heavy heavy-duty – tractor</i>
2013-2015	618	618	577	512	485
2016	576	576	555	487	460

^D *Alternate Emission Standards Based on 2011 Model Year Engines.* For model years 2014 through 2016, heavy-duty diesel engines may be certified to these alternate emission standards based on 2011 model year engines, if they are not part of an averaging set in which a balance of banked credits remain. These alternate standards are determined from the measured emission rate of the test engine of the applicable baseline 2011 engine family(ies) as described in the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles,” as incorporated by reference in section (b). The alternate CO₂ standard for light and medium heavy-duty vocational-certified engines is equal to the baseline 2011 emission rate multiplied by 0.975. The alternative CO₂ standard for tractor-certified engines and all other heavy heavy-duty engines is equal to the baseline 2011 emission rate multiplied by 0.970.

^E *Optional Low-CO₂ Emission Standards.* Heavy-duty diesel engines certified to these Optional Low-CO₂ Emission Standards must also comply with the applicable methane and nitrous oxide emission standards set forth in subsections (a)(7)(B) and (a)(7)(C), respectively. In addition, engines certified to these Optional

Low-CO₂ Emission Standards and participating in the Innovative Technology Regulation set forth in sections 2208 and 2208.1 are not eligible to participate in the averaging, banking, and trading program, or to generate credits for certification.

(B) The methane (CH₄) emissions from new 2014 and subsequent model heavy-duty diesel engines, heavy-duty natural gas-fueled and liquefied-petroleum-gas-fueled engines derived from diesel-cycle engines, and heavy-duty methanol-fueled diesel engines, except in all cases engines used in medium-duty vehicles, shall not exceed 0.10 g/hp-hr.

(C) The nitrous oxide (N₂O) emissions from new 2014 and subsequent model heavy-duty diesel engines, heavy-duty natural gas-fueled and liquefied-petroleum-gas-fueled engines derived from diesel-cycle engines, and heavy-duty methanol-fueled diesel engines, except in all cases engines used in medium-duty vehicles, shall not exceed 0.10 g/hp-hr.

(b) *Test Procedures.* The test procedures for determining compliance with standards applicable to 1985 and subsequent model heavy-duty diesel engines and vehicles and the requirements for participating in the averaging, banking and trading programs, are set forth in the “California Exhaust Emission Standards and Test Procedures for 1985 through 2003 Model Heavy-Duty Diesel-Engines and Vehicles,” adopted April 8, 1985, as last amended December 12, 2002, the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel-Engines and Vehicles,” adopted December 12, 2002, as last amended September 1, 2017 _____, and the “California Interim Certification Procedures for 2004 and Subsequent Model Hybrid-Electric and Other Hybrid Vehicles in the Urban Bus and Heavy-Duty Vehicle Classes,” adopted October 24, 2002, as last amended October 21, 2014, which are incorporated by reference herein.

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

(A) CO₂ Emission Standards.

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

requirements for the optional averaging, banking, and trading program and for generating credits are described in the applicable test procedures incorporated by reference in subsection (d).

12. As an option, 2017 through 2027 model year heavy-duty Otto-cycle engines, except in all cases engines used in medium-duty vehicles, may be certified to the Optional Low-CO₂ Emission Standard. The CO₂ emissions from engines certified to the Optional Low-CO₂ Emission Standard may not exceed 490 g/hp-hr. Engines certified to the Optional Low-CO₂ Emission Standard must also comply with the applicable CH₄ and N₂O emission standards set forth in subsections (c)(4)(B) and (c)(4)(C), respectively. In addition, engines certified to the Optional Low CO₂ Emission Standard and participating in the Innovative Technology Regulation set forth in sections 2208 and 2208.1 are not eligible to participate in the averaging, banking, and trading program, or to generate credits for certification.

3. The CO₂ emissions from new 2021 and subsequent model heavy heavy-duty vocational Otto-cycle engines and new 2021 and subsequent model heavy heavy-duty tractor Otto-cycle engines shall not exceed:

<u>Model Years</u>	<u>Heavy Heavy-Duty – Vocational</u>	<u>Heavy Heavy-Duty – Tractor</u>
<u>2021-2023</u>	<u>513</u>	<u>447</u>
<u>2024-2026</u>	<u>506</u>	<u>436</u>
<u>2027 and later</u>	<u>503</u>	<u>432</u>

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

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

(d) *Test Procedures.* The test procedures for determining compliance with standards applicable to 1987 and subsequent model heavy-duty Otto-cycle engines and vehicles are set forth in the “California Exhaust Emission Standards and Test Procedures for 1987 through 2003 Model Heavy-Duty Otto-Cycle Engines and Vehicles,” adopted April 25, 1986, as last amended December 27, 2000, the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines and Vehicles,” adopted December 27, 2000, as last amended September 1, 2017 _____, and the “California Interim Certification Procedures for 2004 and Subsequent Model Hybrid-Electric and Other Hybrid Vehicles, in the Urban Bus and Heavy-Duty Vehicle Classes,” adopted October 24, 2002, as last amended October 21, 2014, which are incorporated by reference herein; and the “California Non-Methane Organic Gas Test Procedures for 1993 through

2016 Model Year Vehicles” and the “California Non-Methane Organic Gas Test Procedures for 2017 and Subsequent Model Year Vehicles,” which are incorporated by reference in section 1961.2.

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(h)(6) Greenhouse Gas Emission Standards for New 2014 and Subsequent Model Heavy-Duty Diesel Engines and 2016 and Subsequent Heavy-Duty Otto-Cycle Engines Used in Medium-Duty Low-Emission Vehicles, Ultra-Low-Emission Vehicles, and Super-Ultra-Low-Emission Vehicles.

(A) The CO₂ emissions from new 2014 and subsequent model heavy-duty diesel engines and new 2016 and subsequent heavy-duty Otto-cycle engines used in medium-duty low-emission vehicles, ultra-low-emission vehicles, and super-ultra-low-emission vehicles shall not exceed:

CO₂ Emission Standards for 2014 and Subsequent Model Heavy-Duty Diesel Engines and 2016 and Subsequent Model Heavy-Duty Otto-Cycle Engines Used in Medium-Duty Low-Emission Vehicles, Ultra-Low-Emission Vehicles, and Super-Ultra-Low Emission Vehicles^{A, B}
(in g/hp-hr)

<i>Model Years</i>	<i>Diesel Engines^C</i>	<i>Otto-Cycle Engines</i>
2014	600	-
2015	600	-
2016	600	627
2017 and later- <u>2020</u>	576	627
<u>2021-2023</u>	<u>563</u>	<u>627</u>
<u>2024-2026</u>	<u>555</u>	<u>627</u>
<u>2027 and later</u>	<u>552</u>	<u>627</u>

^A *Family Certification Levels.* An FCL must be specified for each engine family, which may not be less than the certified emission level for the engine family. The FEL for the engine family is equal to the FCL multiplied by 1.03. The FCL serves as the CO₂ emission standard for the engine family with respect to certification and confirmatory testing instead of the standards specified in this subsection (h)(6)(A). The FEL serves as the emission standard for the engine family with respect to all other testing.

^B *Averaging, Banking, and Trading Program and Credits.* The requirements for the optional averaging, banking, and trading program and for generating credits are described in the applicable test procedures incorporated by reference in subsection (b).

^C *Alternate Emission Standards Based on 2011 Model Year Engines.* For model years 2014 through 2016, heavy-duty diesel engines may be certified to these alternate emission standards if they are not part of an averaging set in which a balance of banked credits remain. These alternate standards are determined from the measured emission rate of the test engine of the applicable baseline 2011 engine family(ies) as described in the California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel-Engines and Vehicles, as incorporated by reference in section (b). The alternate CO₂ standard for light heavy-duty vocational-certified engines is equal to the baseline 2011 emission rate multiplied by 0.975.

(B) The CH₄ emissions from new 2014 and subsequent model heavy-duty diesel engines and new 2016 and subsequent heavy-duty Otto-cycle engines used in medium-duty low-emission vehicles, ultra-low-emission vehicles, and super-ultra-low-emission vehicles shall not exceed 0.10 g/hp-hr.

(C) The N₂O emissions from new 2014 and subsequent model heavy-duty diesel engines and new 2016 and subsequent heavy-duty Otto-cycle engines used in medium-duty low-emission vehicles, ultra-low-emission vehicles, and super-ultra-low-emission vehicles shall not exceed 0.10 g/hp-hr.

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

(1) "Certified emission level" means the highest deteriorated emission level in an engine family for a given pollutant from the applicable transient and/or steady-state testing, rounded to the same number of decimal places as the applicable standard. Note that there may be two certified emission levels for CO₂ if a family is certified for both vocational and tractor use.

(2) "Family certification level" (FCL) means a CO₂ emission level declared by the manufacturer that is at or above emission test results for all emission-data engines. The FCL serves as the emission standard for the engine family with respect to certification testing if it is different than the otherwise applicable standard. The FCL must be expressed to the same number of decimal places as the emission standard it replaces.

(3) "Family emission limit" (FEL) means an emission level declared by the manufacturer to serve in place of an otherwise applicable emission standard (other than CO₂ standards) under the Average, Banking, and Trading Program. The FEL must be expressed to the same number of decimal places as the emission standard it replaces. The FEL serves as the emission standard for the engine family with respect to all required testing except certification testing for CO₂. The CO₂ FEL is equal to the CO₂ FCL multiplied by 1.03 and rounded to the same number of decimal places as the standard (e.g., the nearest whole g/hp-hr for the 2016 CO₂ standards).

(4) "Heavy heavy-duty engine" means an engine used in a vehicle that normally exceeds 33,000 pounds GVWR. Heavy heavy-duty engines are designed for multiple rebuilds and have cylinder liners. Vehicles in this group are normally tractors, trucks, straight trucks with dual rear axles, and buses used in inter-city, long-haul applications.

(5) "Light heavy-duty engine" means an engine used in a vehicle that is normally at or below 19,500 pounds GVWR. Light heavy-duty engines usually are not designed for rebuild and do not have cylinder liners. Vehicle body types in this group might include any heavy-duty vehicle built for a light-duty truck chassis, van trucks, multi-stop vans, ~~motor homes and other recreational vehicles~~, and some straight trucks with a single rear axle. Typical applications would include personal transportation, light-load commercial delivery, passenger service, agriculture, and construction.

(6) "Medium heavy-duty engine" mean an engine used in a vehicle that is normally between 19,500~~1~~ to 33,000 pounds GVWR. Medium heavy-duty engines may be designed for rebuild and may have cylinder liners. Vehicle body types in this group would typically include school buses, straight trucks with ~~dual~~ single rear axles, city tractors, and a variety of special purpose vehicles such as small dump trucks, and refuse trucks. Typical applications would include commercial short haul and intra-city delivery and pickup.

(7) "Primary intended service class" means the class that best describes the vehicle for which the manufacturer designs and markets the engine. The three primary intended service classes are light heavy-duty, medium heavy-duty, and heavy heavy-duty.

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

(9) "Tractor engine" means an engine certified for use in tractors. Where an engine family is certified for use in both tractors and vocational vehicles, "tractor engine" means an engine that the engine manufacturer reasonably believes will be (or has been) installed in a tractor. Note that the Executive Officer may require a manufacturer to document how it determines that an engine is a tractor engine.

(10) "Vocational engine" means an engine certified for use in vocational vehicles. Where an engine family is certified for use in both tractors and vocational vehicles, "vocational engine" means an engine that the engine manufacturer reasonably believes will be (or has been) installed in a vocational vehicle. Note that the provisions of this part may require a manufacturer to document how it determines that an engine is a vocational engine.

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

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

2. Amend section 1961.2, title 13, CCR, to read as follows:

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

* * * *

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

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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. Amend section 1965, title 13, CCR, to read as follows:

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

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

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

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

4. Amend section 2036, title 13, CCR, to read as follows:

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

* * * *

(c) Warranty Period.

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

(4.1) In the case of diesel-powered heavy-duty vehicles ~~below~~ from 14,001 to 19,500 pound GVWR (except medium-duty vehicles) certified to the GHG emission standards of section 95663, title 17, and motor vehicle engines used in such vehicles, a period of use of five years or 50,000 miles, whichever first occurs, for GHG emission control components (except tires), as set forth in 40 CFR 1037.120, as adopted November 14, 2011 amended October 25, 2016. The warranty period shall be a period of use of two years or 24,000 miles, whichever first occurs, in the case of tires used in such vehicles. In the case of motor vehicle engines used in such vehicles, the warranty period shall be a period of use of five years or 50,000 miles, whichever first occurs, for GHG emissions.

(4.2) In the case of diesel-powered heavy-duty vehicles ~~at or~~ above 19,500 pound GVWR certified to the GHG emission standards of section 95663, title 17, and motor vehicle engines used in such vehicles, a period of use of five years or 100,000 miles, whichever first occurs, for GHG emission control components (except tires), as set forth in 40 CFR 1037.120, as adopted November 14, 2011 amended October 25, 2016. The warranty period shall be a period of use of two years or 24,000 miles, whichever first occurs, in the case of tires used in such vehicles. In the case of motor vehicle engines used in such vehicles, the warranty period shall be a period of use of five years or 100,000 miles, whichever first occurs, for GHG emissions.

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

(8.1) In the case of heavy-duty vehicles certified to the GHG emission standards of section 95663, title 17, ~~and motor vehicle engines used in such vehicles,~~ (except for diesel-powered heavy-duty vehicles or all medium-duty vehicles, ~~and motor vehicle engines used in such vehicles~~), a period of use of five years or 50,000 miles, whichever first occurs, for GHG emission control components ~~(except tires), as set forth in 40 CFR 1037.120, as adopted November 14, 2011~~ amended October 25, 2016. The warranty period shall be a period of use of two years or 24,000 miles, whichever first occurs, in the case of tires used in such vehicles. In the case of motor vehicle engines used in such vehicles, the warranty period shall be a period of use of five years or 50,000 miles, whichever first occurs, for GHG emissions.

(9) In the case of trailers, a period of use of 5 years (except tires), and a period of use of 1 year for tires, for GHG emission components.

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

5. Amend section 2037, title 13, CCR, to read as follows:

§ 2037. Defects Warranty Requirements for 1990 and Subsequent Model Passenger Cars, Light-Duty Trucks, Medium-Duty Vehicles, and Motor Vehicle Engines Used in Such Vehicles.

(a) Applicability.

This section shall apply to 1990 and subsequent model passenger cars, light-duty trucks, medium-duty vehicles, and motor vehicle engines used in such vehicles. This section shall apply to medium-duty vehicles certified to the GHG emission standards of section 95663, title 17, for GHG emission control components, as set forth in 40 CFR 1037.120, as ~~adopted November 14, 2011~~ amended October 25, 2016. The warranty period shall begin on the date the vehicle is delivered to an ultimate purchaser, or if the vehicle is first placed in service as a “demonstrator” or “company” car prior to delivery, on the date it is first placed in service.

(b) General Emissions Warranty Coverage.

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

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

(2) Free from defects in materials and workmanship which cause the failure of a warranted part to be identical in all material respects to the part as described in the vehicle or engine manufacturer's application for certification, including any defect in materials or workmanship which would cause the vehicle's on-board diagnostic malfunction indicator light to illuminate, for a period of three years or 50,000 miles, whichever first occurs; and

(2.1) For GHG emission control components in Phase 2 medium-duty vehicles (2021 and subsequent model years) certified to the GHG emission standards of section 95663, title 17, free from defects in materials and workmanship which cause the failure of a warranted part to be identical in all material respects to the part as described in the vehicle or engine manufacturer's application for certification, for a period of five years or 50,000 miles (except tires), whichever first occurs, and for tires only, a period of two years or 24,000 miles, whichever first occurs.

(3) Free from defects in materials and workmanship which cause the failure of a warranted part described in section (c) below for seven years or 70,000 miles, whichever first occurs. The requirements of this subsection (3) shall not apply to GHG emission control components in Phase 2 medium-duty vehicles certified to the GHG emission standards of section 95663, title 17.

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Note: Authority cited: Sections 38501, 38505, 38510, 38560, 39600 and 39601, Health and Safety Code.
Reference: Sections 38501, 38505, 38510, 38560, 43106, 43204, 43205, 44004, 44010, 44011, 44012, 44015, and 44017, Health and Safety Code.

6. Amend section 2065, title 13, CCR, to read as follows:

§ 2065. Applicability of Chapter 2 to 2005 and Subsequent Model Year Heavy-Duty Engines and Vehicles.

The requirements of chapter 2, division 3, title 13, California Code of Regulations apply to 2005 and subsequent model year heavy-duty engines and vehicles except as specifically modified by the provisions of the “California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles,” ~~adopted September 1, 2017, which are incorporated herein by reference~~ incorporated by reference in §1956.8(b).

Note: Authority cited: Sections 39600, 39601, 43013, 43101, 43104, 43105, 43210 and 43806, Health and Safety Code. Reference: Sections 39002, 39003, 39500, 43000, 43012, 43013, 43018, 43100, 43101, 43101.5, 43102, 43104, 43106, 43202, 43203, 43204, 43210-43213 and 43806, Health and Safety Code; and Section 28114, Vehicle Code.

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

§ 2112. Definitions.

* * * *

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

* * * *

(19.1) For ~~2001~~2014 and subsequent~~through 2020~~ model-year light heavy-duty diesel engines certified to the Greenhouse Gas emission standards in sections 1956.8(a)(7) and 1956.8(h)(6), title 13, CCR, for carbon dioxide, nitrous oxide, and methane emission standards, a period of use of ten years or 110,000 miles, whichever first occurs, or any alternative useful life period approved by the Executive Officer. For 2021 and subsequent model-year light heavy-duty diesel engines certified to the Greenhouse Gas emission standards in sections 1956.8(a)(7) and 1956.8(h)(6), title 13, CCR, for carbon dioxide, nitrous oxide, and methane emission standards, a period of use of fifteen years or 150,000 miles, whichever first occurs, or any alternative useful life period approved by the Executive Officer.

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

(20.1) For ~~2001~~2014 and subsequent model-year medium heavy-duty diesel engines certified to the Greenhouse Gas emission standards in section 1956.8(a)(7), title 13, CCR, for carbon dioxide, nitrous oxide, and methane emission standards, a period of use of ten years or 185,000 miles, whichever first occurs, or any alternative useful life period approved by the Executive Officer.

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

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

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

(21.1) For 2001~~4~~ and subsequent model-year heavy heavy-duty diesel engines certified to the Greenhouse Gas emission standards in section 1956.8(a)(7), title 13, CCR, for carbon dioxide, nitrous oxide, and methane emission standards, a period of use of ten years or 435,000 miles, or 22,000 hours, whichever first occurs, or any alternative useful life period approved by the Executive Officer, except as provided in paragraphs (21)(A) and (21)(B).

(22) For 2004 and subsequent model-year heavy-duty Otto-cycle engines, for carbon monoxide, particulate, and oxides of nitrogen plus non-methane hydrocarbon emissions standards, a period of use of 10 years or 110,000 miles, whichever first occurs.

(22.1) For 2001~~4~~ and subsequent~~through 2020~~ model-year heavy-duty Otto-cycle engines certified to the Greenhouse Gas emission standards in sections 1956.8(c)(4) and 1956.8(h)(6), title 13, CCR, for carbon dioxide, nitrous oxide, and methane emissions standards, the useful life shall be a period of use of ten years or 110,000 miles, whichever first occurs. For 2021 and subsequent model-year heavy-duty Otto-cycle engines certified to the Greenhouse Gas emission standards in sections 1956.8(c)(4) and 1956.8(h)(6), title 13, CCR, for carbon dioxide, nitrous oxide, and methane emission standards, the useful life shall be a period of use of fifteen years or 150,000 miles, whichever first occurs.

* * * *

(25) For 2014 and subsequent~~through 2020~~ model-year heavy-duty vehicles ~~at or below~~from 8,501 to 19,500 pounds GVWR, certified to the GHG emission standards of section 95663, title 17, CCR, for carbon dioxide, nitrous oxide, and methane emission standards, as applicable, the useful life shall be ten years or 110,000 miles, whichever first occurs. For 2021 and subsequent model-year heavy-duty vehicles from 8,501 to 19,500 pounds GVWR, certified to the GHG emission standards of section 95663, title 17, CCR, for carbon dioxide, nitrous oxide, and methane emission standards, as applicable, the useful life shall be fifteen years or 150,000 miles, whichever first occurs.

(26) For 2014 and subsequent~~through 2020~~ model-year heavy-duty vehicles above 19,500 pounds and at or below 33,000 pounds GVWR, certified to the GHG emission standards of section 95663, title 17, CCR, for carbon dioxide emission standards, the useful life shall be ten years or 185,000 miles, whichever first occurs. For 2021 and subsequent model-year vocational vehicles above 19,500 pounds GVWR using light or medium heavy-duty diesel engines or above 19,500 pounds GVWR using Otto-cycle engines, and for 2021 and subsequent model-year tractors from 26,001 to

33,000 pounds GVWR, certified to the GHG emission standards of section 95663, title 17, CCR, for carbon dioxide emission standards, the useful life shall be ten years or 185,000 miles, whichever first occurs.

(27) For 2014 ~~and subsequent~~through 2020 model-year heavy-duty vehicles above 33,000 pounds GVWR, certified to the GHG emission standards of section 95663, title 17, CCR, for carbon dioxide emissions standards, the useful life shall be ten years or 435,000 miles, whichever first occurs. For 2021 and subsequent model-year vocational vehicles above 19,500 pounds GVWR using heavy heavy-duty diesel engines, and for 2021 and subsequent model-year tractors over 33,000 pounds GVWR, certified to the GHG emission standards of section 95663, title 17, CCR, for carbon dioxide emission standards, the useful life shall be ten years or 435,000 miles, whichever first occurs.

(28) For 2020 and subsequent model-year trailers, certified to the GHG emission standards of section 95663, title 17, CCR, for carbon dioxide emission standards, the useful life shall be ten years.

* * * *

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

8. Amend section 2141, title 13, CCR, to read as follows:

§ 2141. General Provisions.

* * * *

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

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.

9. Amend section 95300, title 17, CCR, to read as follows:

§95300. Purpose.

The purpose of this subarticle is to reduce greenhouse gas emissions from heavy-duty (HD) tractors and ~~53-foot or longer~~ long box-type semitrailers (trailers) that transport freight on a highway within California by establishing emission standards and other requirements applicable to both new 2011 and subsequent model year HD tractors and trailers and to 2010 and earlier model year HD tractors and trailers. The use of compliant aerodynamic technologies and low-rolling resistance tires will ensure reductions of greenhouse gas emissions from affected HD tractors and trailers by reducing the aerodynamic drag and tire rolling resistance forces acting on such HD tractors and trailers.

NOTE: Authority cited: Sections 39600, 39601, 38510, 38560 and 38560.5, Health and Safety Code.
Reference: Sections 39600, 38560, 38560.5 and 38580, Health and Safety Code.

10. Amend section 95301, title 17, CCR, to read as follows:

§95301. Applicability.

- (a) This subarticle applies to owners and drivers of the following equipment when driven on a highway within California, as well as motor carriers, California-based brokers, and California-based shippers that use, or cause to be used, the following equipment on a highway within California:
 - (1) HD tractors that pull ~~53-foot or longer~~ long box-type trailers; and
 - (2) ~~53-foot or longer~~ long box-type trailers that are pulled by HD tractors.
- (b) The requirements in this subarticle do not apply to the following trailers:
 - (1) drop-frame trailers;
 - (2) chassis trailers;
 - (3) curtain-side trailers;
 - (4) livestock trailers;
 - (5) refuse trailers;
 - (6) box-type trailers less than or equal to 503 feet in length;
 - (7) emergency vehicles; and
 - (8) military tactical support vehicles.
 - (9) box-type trailers less than 53 feet in length that were manufactured prior to January 1, 2020.
- (c) In accordance with the provisions of section 95305, *Exemptions*, specified requirements of this subarticle do not apply to:
 - (1) local-haul trailers and the tractors pulling local-haul trailers,
 - (2) local-haul tractors and the trailers pulled by local-haul tractors, and
 - (3) short-haul tractors and the trailers pulled by short-haul tractors,
 - (4) drayage tractors and the trailers pulled by drayage tractors,
 - (5) storage trailers and the tractors pulling storage trailers, and

- (6) empty ~~53-foot or longer~~ long box-type trailers pulled by HD tractors.

Note: Authority cited: Sections 39600, 39601, 38510, 38560 and 38560.5, Health and Safety Code.
Reference: Sections 39600, 38560, 38560.5 and 38580, Health and Safety Code.

11. Amend section 95302, title 17, CCR, to read as follows:

§95302. Definitions.

(a) The following definitions apply to this subarticle:

* * * *

(21.1) *"Federal Phase 2 Regulation"* means the Greenhouse Gas Emission Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles- Phase 2, as adopted by the U.S. Environmental Protection Agency (81 Fed. Reg. 73478 (October 25, 2016))

(22) *"Fleet"* means one or more trailers owned by a person, business, or government agency. A fleet consists of the total number of ~~53-foot or longer~~ long box-type trailers under common ownership or control even if they are part of different subsidiaries, divisions, or other organizational structures of a company or agency.

(23) *"Flow control device"* means a design element that manipulates the air flow around an object by changing the air flow characteristics in order to reduce the pressure force exerted on the vehicle.

(24) *"Freight"* means any item being transported for delivery in a ~~53-foot or longer~~ long box-type trailer. Items that remain in the trailer after all freight is delivered are not considered freight. These include items that are used exclusively to secure items being transported in the trailer, protect items being transported in the trailer, load items being transported in the trailer, or repair the tractor or trailer. Items that are not considered freight could include moving blankets, straps, tool kits, and moving dollies.

* * * *

(35) *"Local-haul trailer"* means a ~~53-foot or longer~~ long box-type trailer that travels exclusively within a 100-mile radius of its local-haul base.

(35.1) *"Long box-type trailer (Long dry-van trailer and Long refrigerated-van trailer)"* means a box-type trailer that is greater than 50.0 feet in length.

* * * *

(39) *"Non-compliant Tractor Pass"* means a temporary permit issued by the Executive Officer in accordance with the requirements of section 95305(h) that allows a HD tractor to pull a ~~53-foot or longer~~ long box-type trailer on a highway within California without meeting the requirements of sections

95303(a) and 95305(b) for a defined time period not to exceed five consecutive days.

* * * *

(42) “Owner” of a tractor or trailer means the person or persons registered as the owner of the tractor or trailer by the California Department of Motor Vehicles or its equivalent in another state, province, or country (presumed at the time of any citation to be the person or persons identified as the owner on the registration document or title carried on the vehicle), except in the following circumstances:

(A) for a tractor or trailer owned by the federal government and not registered in any state or local jurisdiction, the owner means the branch, agency or other organization within the federal government that operates the tractor or trailer, that is required to maintain accountability for the vehicle, or that is shown by the accountable entity to be responsible for the tractor’s or trailer’s maintenance.

(B) for a leased tractor, the person or persons registered as the owner of the tractor or trailer by the California Department of Motor Vehicles or its equivalent in another state, province, or country (usually the lessor) is the owner for purposes of this subarticle, except that the lessee of the tractor is the owner for purposes of this subarticle if the lessor demonstrates that either the lessor provided the lessee with the following statement on a document separate from the lease agreement, or the lease agreement includes the following statement:

“The lessee of this heavy-duty tractor understands that when using a heavy-duty tractor to pull a ~~53-foot or longer-long~~ box-type trailer on a highway within California, the heavy-duty tractor must be compliant with sections 95300 – 95312, title 17, California Code of Regulations, and that it is the responsibility of the lessee to ensure this heavy-duty tractor is compliant. The regulations may require this heavy-duty tractor to have low-rolling-resistance tires that are U.S. Environmental Protection Agency (U.S. EPA) SmartWay Verified Technologies prior to current or future use in California, or may entirely prohibit use of this tractor in California if it is a model year 2011 or later tractor and is not a U.S. EPA SmartWay Certified Tractor.”

(C) for a leased trailer that is leased prior to January 1, 2013, the person or persons registered as the owner of the tractor or trailer by the California Department of Motor Vehicles or its equivalent in another state, province, or country (usually the lessor) is the owner for purposes of this

subarticle, except that the lessee of the trailer is the owner for purposes of this subarticle if both of the following requirements are met:

1. The lessor demonstrates that the lessor provided the lessee with actual written notice that clearly informed the lessee about the requirements of this subarticle and about the lessee's obligation under terms of the lease to ensure the trailer complies with those requirements prior to use of the trailer in California. This requirement may be satisfied if either the lessee is provided with the following statement on a document separate from the lease agreement, or the following statement is included in the lease agreement:

"The lessee of this box-type trailer understands that when using a heavy-duty tractor to pull a ~~53-foot or longer~~ long box-type trailer on a highway within California, the box-type trailer must be compliant with sections 95300 – 95312, title 17, California Code of Regulations, and that it is the responsibility of the lessee to ensure this box-type trailer is compliant. The regulations may require this trailer to have low-rolling-resistance tires and aerodynamic technologies that are U.S. Environmental Protection Agency SmartWay Verified Technologies prior to current or future use in California."

2. The lessor demonstrates and informs the lessee that either:
 - a. the lease agreement does not prohibit the lessee from modifying the trailer to be compliant with the requirements of this subarticle; or
 - b. the lessor provides a reasonable method to exchange the trailer for one that is compliant with this subarticle.

- (D) for a leased trailer that is leased on or after January 1, 2013, the person or persons registered as the owner of the tractor or trailer by the California Department of Motor Vehicles or its equivalent in another state, province, or country (usually the lessor) is the owner for purposes of this subarticle, except that the lessee of the trailer is the owner for purposes of this subarticle if either the lessor demonstrates that the lessor provided the lessee with the following statement on a document separate from the lease agreement prior to entering the lease agreement, or the lease agreement includes the following statement:

"The lessee of this box-type trailer understands that when using a heavy-duty tractor to pull a ~~53-foot or longer~~ long box-type trailer on a highway within California, the box-type trailer must be

compliant with sections 95300 – 95312, title 17, California Code of Regulations, and that it is the responsibility of the lessee to ensure this box-type trailer is compliant. The regulations may require this trailer to have low-rolling-resistance tires and aerodynamic technologies that are U.S. Environmental Protection Agency SmartWay Verified Technologies prior to current or future use in California.”

- (E) For purposes of this subarticle, the terms “lease agreement,” “leased,” “lessor,” and “lessee” mean the same as “rental agreement,” “rented,” “owner of the rented vehicle,” and “renter,” respectively.

* * * *

(43.2) “Phase 2 Certified Trailer” means a trailer that has been certified by the U.S. Environmental Protection Agency in accordance with the provisions of 40 CFR 1037.107 of the Federal Phase 2 Regulation, as they existed on December 22, 2017, or by the California Air Resources Board in accordance with the provisions of section 95663(c), title 17, California Code of Regulations. A trailer exempt under the provisions of 40 CFR 1037.150(v), as it existed on Oct. 25, 2016, which is incorporated by reference herein, or in section 95663(d), title 17, California Code of Regulations; or certified to the non-aero box van trailer standards of 40 CFR 1037.107 of the Federal Phase 2 Regulation, or in accordance with section 95663(c)(1)(B)2.c., title 17, California Code of Regulations, is not considered a “Phase 2 Certified Trailer” for purposes of this regulation.

* * * *

- (58) “*Transfer of Ownership Pass*” means a temporary permit issued by the Executive Officer in accordance with the requirements of section 95305(g) that allows a HD tractor to pull a non-compliant ~~53-foot or longer~~ long box-type trailer on a highway within California without meeting all of the applicable requirements of section 95303(b) for the purpose of delivering that trailer from its current location to the transferee’s location.

* * * *

- (62) “*U.S. EPA SmartWay Certified Trailer*” means a ~~53-foot or longer~~ long box-type trailer that has been certified or designated by the U.S. EPA to meet the technical specifications and requirements of the U.S. EPA SmartWay Transport Partnership Program.

* * * *

Note: Authority cited: Sections 39600, 39601, 38510, 38560 and 38560.5, Health and Safety Code.
Reference: Sections 39600, 38560, 38560.5 and 38580, Health and Safety Code.

12. Amend section 95303, title 17, CCR, to read as follows:

§95303. Requirements and Compliance Deadlines.

(a) Tractor Requirements.

- (1) Except as provided in section 95305, *Exemptions*, beginning January 1, 2010, no 2011 through 2013 model year sleeper-cab tractor pulling a ~~53-foot or longer~~long box-type trailer shall operate on a highway within California unless such tractor is either:
 - (A) a U.S. EPA SmartWay Certified Tractor, or
 - (B) a U.S. EPA SmartWay Certified Tractor that has been modified provided:
 1. the modification is necessary for the tractor to perform its designed job function,
 2. there is no reasonable alternative to the modification that would involve or require a lesser degree of modifications to the tractor, and
 3. the Executive Officer has previously approved the modification.
 - a. An applicant requesting an exemption pursuant to section 95303(a)(1)(B) must submit information to the Executive Officer that describes the proposed modification(s), the need therefor, and the absence or lack of reasonable alternatives to the modification. Such information includes, without limitation, engineering drawings, blueprints, schematics, scientific or technical articles, contract specifications, etc.
 - b. The Executive Officer will approve or disapprove a request for an exemption pursuant to section 95303(a)(1)(B) upon information submitted by an applicant as specified in section 95303(a)(1)(B)3.a. and good engineering judgment.
- (2) Except as provided in section 95305, *Exemptions*, beginning January 1, 2010, no 2011 through 2013 model year HD tractor, including but not limited to sleeper-cab HD tractors, pulling a ~~53-foot or longer~~long box-type trailer shall operate on a highway within California unless such tractor's tires are U.S. EPA SmartWay Verified Technologies.
- (3) Except as provided in section 95305, *Exemptions*, beginning January 1, 2013, no 2010 or previous model year HD tractor, pulling a ~~53-foot or longer~~long

box-type trailer shall operate on a highway within California unless such tractor's tires are U.S. EPA SmartWay Verified Technologies.

(b) *Trailer Requirements.*

(1) *2011 and Subsequent Model Year Dry-Van Trailer Requirements.*

Except as provided in section 95305, *Exemptions*, beginning January 1, 2010, no 2011 or subsequent model-year ~~53-foot or longer~~long dry-van trailer shall travel on a highway within California unless such trailer is either:

(A) a U.S. EPA SmartWay Certified Trailer, or

(B) a Phase 2 certified trailer, or

(C) equipped with both:

1. tires that are either U.S. EPA SmartWay Verified Technologies, or tires with a rolling resistance of 5.1 kilogram/ton or lower as determined by the test procedures specified in 40 CFR 1037.515(b), as it existed on Oct. 25, 2016, which is incorporated by reference herein, or in section 95663(d) title 17, California Code of Regulations; and

2. a dry-van trailer aerodynamic technology or combination of technologies that is either.

a. a U.S. EPA SmartWay Verified Technology or combination of U.S. EPA SmartWay Verified Technologies that has been demonstrated to the U.S. EPA to meet or exceed a 5 percent fuel savings in accordance with the requirements defined by the U.S. EPA SmartWay Partnership Program, or

b. a U.S. EPA SmartWay Verified Technology or combination of U.S. EPA SmartWay Verified Technologies that met the criteria defined in section 95303(b)(1)(~~BC~~)2.a., but has been modified in any manner from the U.S. EPA SmartWay Verified Technology configurations. Only modifications that are required to enable a particular SmartWay technology to be installed on a trailer are allowed. Such modifications must not significantly increase the aerodynamic drag of the base, unmodified SmartWay verified configuration, and the modifications may only be used if prior written approval is obtained from the Executive Officer. The Executive Officer will base his or her approval on information submitted that describes the modification, the need therefor, and any test data or other information that demonstrates the proposed

modifications would not significantly increase the aerodynamic drag of the SmartWay verified configuration, and on good engineering judgment, ~~or~~

- c. an aerodynamic device or combination of devices for which the device manufacturer has obtained a preliminary approval for the measured performance of the device on such trailer, in accordance with the provisions of 40 CFR 1037.211, as it existed on Oct. 25, 2016, which is incorporated by reference herein, or in section 95663(d) title 17, California Code of Regulations, and that measured performance is equal to or greater than 0.40 (delta CdA in square meters), or
- d. an aerodynamic device or combination of devices for which the device manufacturer has obtained a preliminary approval for the measured performance of the device that met the criteria defined in section 95303(b)(1)(C)2.c., but has been modified in any manner from the approved configuration. Only modifications that are required to enable a particular device to be installed on a trailer are allowed. Such modifications must not significantly increase the aerodynamic drag of the base, unmodified approved configuration, and the modifications may only be used if prior written approval is obtained from the Executive Officer. The Executive Officer will base his or her approval on information submitted that describes the modification, the need therefor, and any test data or other information that demonstrates the proposed modifications would not significantly increase the aerodynamic drag of the approved configuration, and on good engineering judgment.

2) *2011 and Subsequent Model Year Refrigerated-Van Trailer Requirements.*

Except as provided in section 95305, *Exemptions*, beginning January 1, 2010, no 2011 or subsequent model year ~~53-foot or longer~~long refrigerated-van trailer shall travel on a highway within California unless such trailer is either:

- (A) a U.S. EPA SmartWay Certified Trailer, or
- (B) a Phase 2 certified trailer, or
- (C) equipped with both:
 - 1. tires that are either U.S. EPA SmartWay Verified Technologies, or tires with a rolling resistance of 5.1 kilogram/ton or lower as determined by the test procedures specified in 40 CFR

1037.515(b), as it existed on October 25, 2016, or in section 95663(d) title 17, California Code of Regulations; and

2. a dry-van trailer or refrigerated-van trailer aerodynamic technology or combination of technologies that is either.
 - a. a U.S. EPA SmartWay Verified Technology or combination of U.S. EPA SmartWay Verified Technologies that has been demonstrated to the U.S. EPA to meet or exceed a 4 percent fuel savings in accordance with the requirements defined by the U.S. EPA SmartWay Partnership Program, or
 - b. a U.S. EPA SmartWay Verified Technology or combination of U.S. EPA SmartWay Verified Technologies that met the criteria defined in section 95303(b)(2)(~~BC~~)2.a., but has been modified in any manner from the U.S. EPA SmartWay Verified Technology configurations. Only modifications that are required to enable a particular SmartWay technology to be installed on a trailer are allowed. Such modifications must not significantly increase the aerodynamic drag of the base, unmodified SmartWay verified configuration, and the modifications may only be used if prior written approval is obtained from the Executive Officer. The Executive Officer will base his or her approval on information submitted that describes the modification, the need therefor, and any test data or other information that demonstrates the proposed modifications would not significantly increase the aerodynamic drag of the SmartWay verified configuration, and on good engineering judgment, or;
 - c. an aerodynamic device or combination of devices for which the device manufacturer has obtained a preliminary approval for the measured performance of the device on such trailer, in accordance with the provisions of 40 CFR 1037.211, as it existed on Oct. 25, 2016, which is incorporated by reference herein, or in section 95663(d) title 17, California Code of Regulations, and that measured performance is equal to or greater than 0.40 (delta CdA in square meters), or
 - d. an aerodynamic device or combination of devices for which the device manufacturer has obtained a preliminary approval for the measured performance of the device that met the criteria defined in section 95303(b)(1)(C)2.c., but has been modified in any manner from the approved configuration. Only modifications that are required to enable a particular device to be installed on a trailer are allowed. Such modifications must

not significantly increase the aerodynamic drag of the base, unmodified approved configuration, and the modifications may only be used if prior written approval is obtained from the Executive Officer. The Executive Officer will base his or her approval on information submitted that describes the modification, the need therefor, and any test data or other information that demonstrates the proposed modifications would not significantly increase the aerodynamic drag of the approved configuration, and on good engineering judgment.

(3) *2010 or Previous Model Year Dry-Van and Refrigerated-Van Trailer Requirements.*

Except as provided in section 95305, *Exemptions*, a 2010 or previous model year ~~53-foot or longer~~long box-type trailer pulled by a HD tractor may not travel on a highway within California unless all of the following requirements are met by the compliance dates specified.

- (A) By January 1, 2017, a 2010 or previous model year ~~53-foot or longer~~long box-type trailer not identified in section 95303(b)(3)(F) must be equipped with tires that are U.S. EPA SmartWay Verified Technologies.
- (B) By January 1, 2013, a 2010 or previous model year ~~53-foot or longer~~long dry-van trailer that is not participating in an optional trailer fleet compliance schedule as defined in section 95307, *Optional Trailer Fleet Compliance Schedules*, must either be

* * * *

- (C) By January 1, 2013, a 2010 or previous model year ~~53-foot or longer~~long refrigerated-van trailer that is not participating in an optional trailer fleet compliance schedule as defined in section 95307, *Optional Trailer Fleet Compliance Schedules*, and not identified in section 95303(b)(3)(F), must either be

* * * *

- (D) For dry-van trailers participating in an optional trailer fleet compliance schedule as defined in section 95307, *Optional Trailer Fleet Compliance Schedules*, a 2010 or previous model year ~~53-foot or longer~~long dry-van trailer must either meet the requirements defined in section 95303(b)(3)(B)1. or the requirements defined in section 95303(b)(3)(B)2.

by the applicable compliance dates in section 95307, *Optional Trailer Fleet Compliance Schedules*.

- (E) For refrigerated-van trailers participating in an optional trailer fleet compliance schedule as defined in section 95307, *Optional Trailer Fleet Compliance Schedules*, a 2010 or previous model year ~~53-foot or longer~~long refrigerated-van trailer must either meet the requirements defined in section 95303(b)(3)(C)1. or the requirements defined in section 95303(b)(3)(C)2. by the applicable compliance dates in section 95307, *Optional Trailer Fleet Compliance Schedules*.
- (F) A 2003 through 2009 model year ~~53-foot or longer~~long refrigerated-van trailer equipped with 2003 or subsequent model year transport refrigeration unit engine must be equipped with tires that are U.S. EPA SmartWay Verified Technologies and either meet the requirements defined in section 95303(b)(3)(C)1. or the requirements defined in section 95303(b)(3)(C)2. by:

* * * *

(c) *Requirements for Drivers.*

- (1) A driver may not operate a HD tractor to pull a ~~53-foot or longer~~long box-type trailer on a highway within California unless both the tractor and the trailer:
 - (A) comply with the applicable requirements and compliance deadlines set forth in sections 95303(a) and 95303(b); and
 - (B) are in good operating condition as defined in section 95304, *Good Operating Condition Requirements*.

* * * *

- (J) if operating a HD tractor pulling a ~~53-foot or longer~~long box-type trailer that is operating under either a Relocation Pass pursuant to section 95305(f), Transfer of Ownership Pass pursuant to section 95305(g), or Non-compliant Tractor Pass pursuant to section 95305(h), the pass approval number, as applicable.
- (3) A driver of a HD tractor pulling a ~~53-foot or longer~~long box-type trailer that is exempt pursuant to section 95305(l) must, upon request, allow authorized enforcement personnel to directly view the inside of the trailer.
- (4) A driver shall not operate a HD tractor to pull a ~~53-foot or longer~~long box-type trailer on a highway within California if the tractor or the trailer has

aerodynamic technologies that are not deployed or not in their operational configuration.

(d) *Requirements for Owners of HD Tractors.*

- (1) An owner of a HD tractor may not use or cause to be used a HD tractor to pull a ~~53-foot or longer~~long box-type trailer on a highway within California unless both the HD tractor and the box-type trailer:
 - (A) comply with the applicable requirements and compliance deadlines set forth in sections 95303(a) and 95303(b); and
 - (B) are in good operating condition as defined in section 95304, *Good Operating Condition Requirements*.

(e) *Requirements for Owners of Box-Type Trailers.*

- (1) An owner of a ~~53-foot or longer~~long box-type trailer must ensure that the ~~53-foot or longer~~long box-type trailer will not be pulled by a HD tractor on a highway within California unless the ~~53-foot or longer~~long box-type trailer:
 - (A) complies with the requirements and compliance deadlines set forth in section 95303(b); and
 - (B) is in good operating condition as defined in section 95304, *Good Operating Condition Requirements*.
- (2) An owner of one or more 2010 or previous model year ~~53-foot or longer~~long box-type trailers that are subject to the requirements of section 95303(b)(3) may elect to follow an alternative compliance schedule, if applicable. Owners that choose to follow an alternative compliance schedule must meet the requirements of section 95307, *Optional Trailer Fleet Compliance Schedules*.

(f) *Requirements for California-based Brokers.*

- (1) A California-based broker must:
 - (A) only dispatch a HD tractor or a ~~53-foot or longer~~long box-type trailer for travel on a highway within California if the tractor or trailer complies with the applicable operating requirements and compliance deadlines set forth in sections 95303(a) and 95303(b);

* * * *

(g) *Requirements for Motor Carriers.*

(1) A motor carrier must:

- (A) only dispatch a HD tractor or a ~~53-foot or longer~~long box-type trailer for travel on a highway within California if the tractor or trailer complies with the applicable operating requirements and compliance deadlines set forth in sections 95303(a) and 95303(b);

* * * *

(h) Requirements for California-based Shippers.

- (1) A California-based shipper must not ship freight from its California facility or facilities in a ~~53-foot or longer~~long box-type trailer pulled by a HD tractor on a highway within California unless the HD tractor and the ~~53-foot or longer~~long box-type trailer comply with the operating requirements and compliance deadlines set forth in sections 95303(a) and 95303(b).

(i) Requirements for California-licensed Vehicle Dealers.

- (1) Any California-licensed vehicle dealer selling a HD tractor or 53-foot or longer box-type trailer subject to this regulation must provide the buyer with the following disclosure in writing:

“A heavy-duty tractor and ~~53-foot or longer~~long box-type trailer operated in California may be subject to the Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Regulation set forth under sections 95300 - 95312, title 17, California Code of Regulations. These vehicles may be required to use low-rolling-resistance tires and meet aerodynamic equipment requirements to reduce greenhouse gas emissions.”

Note: Authority cited: Sections 39600, 39601, 38510, 38560 and 38560.5, Health and Safety Code.
Reference: Sections 39600, 38560, 38560.5 and 38580, Health and Safety Code.

13. Amend section 95304, title 17, CCR, to read as follows:

§95304. Good Operating Condition Requirements.

* * * *

(b) Good Operating Condition Criteria for Trailer Aerodynamic Technologies.

- (1) An aerodynamic technology installed on a box-type trailer must meet the following criteria:
 - (A) The aerodynamic technology must either be installed:
 1. in accordance with the aerodynamic technology manufacturer's specifications such that the technology continues to maintain its verified status in accordance with the requirements of the U.S. EPA SmartWay Transport Partnership Program, or
 2. in a configuration approved by the Executive Officer, or
 3. in the configuration for which the technology manufacturer has obtained a preliminary approval for the measured performance of the device, in accordance with the provisions of 40 CFR 1037.211, as it existed on Oct. 25, 2016, which is incorporated by reference herein, or in section 95663(d) title 17, California Code of Regulations.

* * * *

(c) Requirements for Trailer Labels on Phase 2 Certified Trailers

- (1) A Phase 2 certified trailer must have a permanent and legible label that meets the requirements of 40 CFR 1037.135, as it existed on Oct. 25, 2016, which is incorporated by reference herein, or in section 95663(d) title 17, California Code of Regulations.

Note: Authority cited: Sections 39600, 39601, 38510, 38560 and 38560.5, Health and Safety Code.
Reference: Sections 39600, 38560, 38560.5 and 38580, Health and Safety Code.

14. Amend section 95305, title 17, CCR, to read as follows:

§95305. Exemptions.

(a) *Short-Haul Tractor Exemption Requirements.*

- (1) A short-haul tractor pulling a ~~53-foot or longer~~long box-type trailer on a California highway is exempt from the requirements of sections 95303(a)(1), 95303(a)(2), and 95303(a)(3), as applicable, if the short-haul tractor
 - (A) has been registered in accordance with the requirements of section 95306, *Short-Haul Tractor, Local-Haul Tractor, Local-Haul Trailer, and Storage Trailer Registration Requirements*, and
 - (B) is driven less than 50,000 miles annually, including all miles accrued both inside and outside of California.
- (2) A ~~53-foot or longer~~long box-type trailer is exempt from the requirements of section 95303(b) while it is being pulled by an exempt short-haul tractor.

* * * *

(b) *Local-Haul Tractor Exemption Requirements.*

- (1) A local-haul tractor pulling a ~~53-foot or longer~~long box-type trailer is exempt from the requirements of sections 95303(a)(1)(A), but still must comply with the requirements of sections 95303(a)(2) and 95303(a)(3), as applicable if
 - (A) the local-haul tractor has been registered in accordance with the requirements of section 95306, *Short-Haul Tractor, Local-Haul Tractor, Local-Haul Trailer, and Storage Trailer Registration Requirements*, and
 - (B) the tractor-trailer combination is traveling within 100 miles of the local-haul tractor's local-haul base.
- (2) A 2011 or subsequent model year ~~53-foot or longer~~long box-type trailer is exempt from the requirements of sections 95303(b)(1)(A), 95303(b)(1)(B), 95303(b)(1)(~~BC~~)2., 95303(b)(2)(A), 95303(b)(2)(B), and 95303(b)(2)(~~BC~~)2., but still must comply with the requirements of sections 95303(b)(1)(~~BC~~)1. or 95303(b)(2)(~~BC~~)1. while it is being pulled by an exempt local-haul tractor.
- (3) A 2010 or previous model year ~~53-foot or longer~~long box-type trailer is exempt from the requirements of sections 95303(b)(3)(B) and 95303(b)(3)(C),

but still must comply with the requirements of section 95303(b)(3)(A) while it is being pulled by an exempt local-haul tractor.

* * * *

(c) *Local-Haul Trailer Exemption Requirements.*

- (1) A 2011 or subsequent model year local-haul trailer is exempt from the requirements of sections 95303(b)(1)(A), 95303(b)(1)(B), 95303(b)(1)(~~BC~~)2., 95303(b)(2)(A), 95303(b)(2)(B), and 95303(b)(2)(~~BC~~)2., but still must comply with the requirements of sections 95303(b)(1)(~~BC~~)1. or 95303(b)(2)(~~BC~~)1. if the trailer has been registered in accordance with the requirements of section 95306, *Short-Haul Tractor, Local-Haul Tractor, Local-Haul Trailer, and Storage Trailer Registration Requirements*, and the following conditions are met:

* * * *

(d) *Drayage Tractor-Trailer Exemption Requirements.*

- (1) A drayage tractor pulling a ~~53-foot or longer~~long box-type trailer on a California highway within 100 miles of a port or intermodal railyard, and the trailer it pulls, are exempt from sections 95303(a) and 95303(b), as applicable, provided:

* * * *

(f) *Relocation Pass for Trailers.*

* * * *

- (2) An owner that obtains a Relocation Pass for a ~~53-foot or longer~~long box-type trailer that is not a registered local-haul trailer or registered storage trailer may operate that vehicle on a California highway exempt from the requirements of section 95303(b) for a specified period, as determined by the Executive Officer, not to exceed five consecutive days provided that the following requirements are met:

* * * *

(g) *Transfer of Ownership Pass for Trailers.*

- (1) Either party (the transferor or transferee) involved in the transfer of ownership of a ~~53-foot or longer~~long box-type trailer may obtain a Transfer of Ownership Pass for that trailer up to 30 days prior to the transfer of ownership.
- (2) A ~~53-foot or longer~~long box-type trailer traveling under a Transfer of Ownership Pass for the purpose of delivering such trailer from the transferor to the transferee is temporarily exempt from the requirements of section 95303(b).

* * * *

(h) *Non-compliant Tractor Pass*

- (1) Until January 1, 2015, a HD tractor traveling under a Non-compliant Tractor Pass while pulling a ~~53-foot or longer~~long box-type trailer on a highway within California is temporarily exempt from the requirements of section 95303(a) for a specified period, as determined by the Executive Officer, not to exceed five consecutive days.
- (2) A ~~53-foot or longer~~long box-type trailer pulled by a HD tractor traveling under a Non-compliant Tractor Pass on a highway within California is temporarily exempt from the requirements of section 95303(b) for a specified period, as determined by the Executive Officer, not to exceed five consecutive days.

* * * *

(i) *Trailer Aerodynamic Equipment Compliance Delay*

- (1) An owner of a dry-van or refrigerated-van trailer that is subject to the requirements of section 95303(b) may apply for a Trailer Aerodynamic Equipment Compliance Delay if the trailer is configured such that existing aerodynamic technologies necessary to meet the requirements defined in sections 95303(b)(1)(B)C2. or 95303(b)(3)(B)2. for dry-van trailers, or 95303(b)(2)(B)C2. or 95303(b)(3)(C)2. for refrigerated-van trailers, cannot be installed.

* * * *

- (4) The Executive Officer will respond to the application for a Trailer Aerodynamic Equipment Compliance Delay within 30 days of receipt of the application, and notify the applicant in writing of the decision.

(A) The Executive Officer will review the existing list of U.S. EPA SmartWay verified aerodynamic technologies and determine if any of the existing

technologies can be installed to meet the requirements defined in sections 95303(b)(1)(~~BC~~)2. or 95303(b)(3)(B)2. for dry-van trailers, or 95303(b)(2)(~~BC~~)2. or 95303(b)(3)(C)2. for refrigerated-van trailers.

(B) If the Executive Officer determines that the candidate trailer(s) identified in the application can be equipped with an aerodynamic technology that meets the requirements defined in sections 95303(b)(1)(~~BC~~)2. or 95303(b)(3)(B)2. for dry-van trailers, or 95303(b)(2)(~~BC~~)2. or 95303(b)(3)(C)2. for refrigerated-van trailers , the application will be denied.

* * * *

(j) *Exemption for 2011 or Subsequent Model Year Tractors with Open-shoulder Drive Tires*

- (1) Until January 1, 2013, a 2011 or subsequent model year HD tractor pulling a ~~53-foot or longer~~long box-type trailer subject to the requirements of section 95303(a) may operate on a highway within California with two or more open-shoulder drive tires mounted on the drive axle or axles that are not SmartWay Verified Technologies.

* * * *

(l) *Tractor-Trailer Exemption for Tractors with Open-shoulder Drive Tires*

- (1) A HD tractor and the ~~53-foot or longer~~long box-type trailer it is pulling are exempt from the requirements of sections 95303(a) and 95303(b) if the following conditions are met:

* * * *

(n) *Exemption for New Trailers*

- (1) A ~~53-foot or longer~~long box-type trailer is exempt from the requirements of section 95303(b) for three consecutive months following the month of its manufacture. For example, if the month of manufacture is September 2013, the exemption would apply through December 2013.

Note: Authority cited: Sections 39600, 39601, 38510, 38560 and 38560.5, Health and Safety Code.
Reference: Sections 39600, 38560, 38560.5 and 38580, Health and Safety Code.

15. Amend section 95306, title 17, CCR, to read as follows:

§95306. Short-Haul Tractor, Local-Haul Tractor, Local-Haul Trailer, and Storage Trailer Registration Requirements.

- (a) To qualify for an exemption set forth in sections 95305(a), 95305(b), 95305(c), or 95305(e), the owner of a HD tractor or the owner of a ~~53-foot or longer~~long box-type trailer must submit to the Executive Officer all applicable information and statements identified in sections 95306(b) through (f) .

Note: Authority cited: Sections 39600, 39601, 38510, 38560 and 38560.5, Health and Safety Code.
Reference: Sections 39600, 38560, 38560.5 and 38580, Health and Safety Code

16. Amend section 95307, title 17, CCR, to read as follows:

§95307. Optional Trailer Fleet Compliance Schedules.

(a) Trailer Fleet Compliance Schedule Applicability.

- (1) As specified in section 95303(b)(3), an owner of one or more 2010 or previous model year ~~53-foot or longer~~long box-type trailers may bring such trailers into compliance in accordance with an applicable compliance schedule set forth in this section.

* * * *

- (5) Trailer fleet size determination. For purposes of this section, fleet size is the total of all ~~53-foot or longer~~long box-type trailers within the owner's fleet, including:

* * * *

(d) General Compliance Plan Components.

- (1) Statement of intent: The statement of intent must be provided to the Executive Officer as part of the owner's compliance plan by the applicable compliance plan due date. The statement of intent must include the following:
 - (A) A statement indicating that the trailer owner elects to participate in an optional trailer fleet compliance schedule;
 - (B) A statement identifying the compliance schedule in which the trailer owner elects to participate;
 - (C) For trailer owners electing to participate in the small fleet compliance schedule, a statement affirming that the owner's trailer fleet contains 20 or fewer ~~53-foot or longer~~long box-type trailers;

* * * *

- (M) List of all 2010 and previous model-year ~~53-foot or longer~~long box-type trailers that are subject to the requirements of this subarticle while the owner is participating in an optional trailer fleet compliance schedule:

Note: Authority cited: Sections 39600, 39601, 38510, 38560 and 38560.5, Health and Safety Code.
Reference: Sections 39600, 38560, 38560.5 and 38580, Health and Safety Code.

17. Amend section 95311, title 17, CCR, to read as follows:

§95311. Record Keeping.

- (a) A California-licensed vehicle dealer of a HD tractor or ~~53-foot-long~~ a long box-type trailer that is subject to the disclosure of regulation applicability requirements of section 95303(i) must maintain a record of the disclosure of regulation applicability for three years after the sale.
- (b) A lessor of a HD tractor or a ~~53-foot or longer~~ long box-type trailer that has provided a lessee with a statement or written notice that informs the lessee about the lessee's obligation under terms of the lease to ensure compliance with sections 95300 through 95312, title 17, California Code of Regulations, must maintain a record of this statement or written notice for three years after it is provided to the lessee.

Note: Authority cited: Sections 39600, 39601, 38510, 38560 and 38560.5, Health and Safety Code.

Reference: Sections 39600, 38560, 38560.5 and 38580, Health and Safety Code.

18. Amend section 95662, title 17, CCR, to read as follows:

§95662. Definitions.

(a) The definitions in Section 1900(b), chapter 1, title 13 of the California Code of Regulations (CCR) apply to these procedures with the following additions:

(1) ~~“Diesel” means relating to a type of reciprocating, internal combustion engine that is not an Otto-cycle engine.~~ means a type of engine with operating characteristics significantly similar to the theoretical Diesel combustion cycle. The non-use of a throttle during normal operation is indicative of a diesel engine.

(2) “Day cab” means a type of tractor cab that is not a sleeper cab or a heavy-haul tractor cab.

(3) “Deteriorated emission level” means the emission level that results from applying the appropriate deterioration factor to the official emission result of the emission-data vehicle. Note that where no deterioration factor applies, references in this part to the deteriorated emission level mean the official emission result.

(4) “Gross combination weight rating” (GCWR) means the value specified by the vehicle manufacturer as the maximum weight of a loaded vehicle and trailer, consistent with good engineering judgment. For example, compliance with SAE J2807 is generally considered to be consistent with good engineering judgment, especially for Class 3 and smaller vehicles.

(5) “Gross vehicle weight rating” (GVWR) means the value specified by the vehicle manufacturer as the maximum design loaded weight of a single vehicle, consistent with good engineering judgment.

(6) “Heavy heavy-duty engine” means an engine that is designed for multiple rebuilds and has cylinder liners. Vehicles equipped with these engines are normally tractors, trucks, straight trucks with dual rear axles, and buses used in inter-city, long-haul applications. These vehicles normally exceed 33,000 pounds GVWR.

~~(67)~~ “Heavy-duty engine” means any engine used for (or for which the engine manufacturer could reasonably expect to be used for) motive power in a heavy-duty vehicle.

~~(78)~~ “Heavy-duty vehicle” means any trailer and any motor vehicle above 8,500 pounds GVWR, or that has a vehicle a curb weight above 6,000 pounds, or that has a basic vehicle frontal area greater than 45 square feet, for the purposes of this subarticle only.

(A) "Light heavy-duty vehicle" means a heavy-duty vehicle at or below 19,500 pounds GVWR.

(B) For the purposes of this subarticle only, Phase 1 Otto-cycle and diesel vehicles are classified as follows:

1. "Medium heavy-duty vehicle" (medium HDV) means a heavy-duty vehicle above 19,500 pounds GVWR but at or below 33,000 pounds GVWR.

2. "Heavy heavy-duty vehicle" (heavy HDV) means a heavy-duty vehicle above 33,000 pounds GVWR.

(C) For the purposes of this subarticle only, Phase 2 vehicles are classified as follows:

1. For Otto-cycle vocational vehicles, "medium HDV" means a heavy-duty vehicle above 19,500 pounds GVWR.

2. For diesel vocational vehicles, "medium HDV" means a heavy-duty vehicle above 19,500 pounds GVWR with an installed light or medium heavy-duty engine.

3. For diesel vocational vehicles, "heavy HDV" means a heavy-duty vehicle above 19,500 pounds GVWR with an installed heavy heavy-duty engine.

(9) "Heavy-haul tractor" means a tractor with GCWR greater than or equal to 120,000 pounds. A heavy-haul tractor is not a vocational tractor in Phase 2.

~~(8)~~(10) "Light heavy-duty engine" means an engine that is usually not designed for rebuild and does not have cylinder liners. Vehicle body types equipped with these engines might include any heavy-duty vehicle built from a light-duty truck chassis, van trucks, multi-stop vans, and some straight trucks with a single rear axle. Typical applications would include personal transportation, light-load commercial delivery, passenger service, agriculture, and construction. The GVWR of these vehicles is normally at or below 19,500 pounds.

(11) "Manufacturer" means any person engaged in the manufacturing or assembling of new motor vehicles or new motor vehicle engines, or importing such vehicles or engines for resale, or who acts for and is under the control of any such person in connection with the distribution of new motor vehicles and new motor vehicle engines, but shall not include any dealer with respect to new motor vehicles or new motor vehicle engines received by him in commerce. In general, this term includes any person who manufactures or assembles a vehicle ~~or vehicle~~ (including a trailer or another incomplete vehicle) for sale in California or otherwise introduces a new motor vehicle into commerce in California. This includes importers who import vehicles ~~or vehicles~~ for resale, entities that manufacture glider kits, and entities that assemble glider vehicles.

(12) "Medium heavy-duty engine" means an engine that may be designed for rebuild and may have cylinder liners. Vehicle body types equipped with these engines would typically include school buses, straight trucks with single rear axles, city tractors, and a variety of special purpose vehicles such as small dump trucks, and refuse trucks. Typical applications would include commercial short

haul and intra-city delivery and pickup. Engines in this group are normally used in vehicles whose GVWR ranges from 19,501 to 33,000 pounds.

~~(9)~~(13) "Medium-duty engine" means any heavy-duty engine that is used to propel a medium-duty vehicle.

(14) "Medium-duty passenger vehicle" (MDPV) has the meaning given in title 13, CCR §1900.

~~(10)~~(15) "Medium-duty vehicle" means any heavy-duty low-emission, ultra-low-emission, super-ultra-low-emission or zero-emission vehicle certified to the standards in title 13, CCR ~~section 1956.8(h)~~§§1961(a)(1), 1961.2, 1962, 1962.1, except medium-duty passenger vehicles, having a manufacturer's gross vehicle weight rating between 8,501 and 14,000 pounds.

~~(11)~~(16) "Model year" means one of the following for compliance with this subarticle. Note that manufacturers may have other model year designations for the same vehicle for compliance with other requirements or for other purposes:

(A) For tractors and vocational vehicles with a date of manufacture on or after January 1, 2021, the vehicle's model year is the calendar year corresponding to the date of manufacture; however, the vehicle's model year may be designated to be the year before the calendar year corresponding to the date of manufacture if the engine's model year is also from an earlier year. Note that 40 Code of Federal Regulations (CFR) §1037.601(a)(2), as amended October 25, 2016, limits the extent to which vehicle manufacturers may install engines built in earlier calendar years.

(B) For trailers and for Phase 1 tractors and vocational vehicles with a date of manufacture before January 1, 2021, "model year" means the manufacturer's annual new model production period, except as restricted under this definition and 40 CFR part 85, subpart X, as amended January 24, 1995. It must include January 1 of the calendar year for which the model year is named, may not begin before January 2 of the previous calendar year, and it must end by December 31 of the named calendar year. The model year may be set to match the calendar year corresponding to the date of manufacture.

(A) 1. The manufacturer who holds the Executive Order for the vehicle must assign the model year based on the date when its manufacturing operations are completed relative to its annual model year period. In unusual circumstances where completion of your assembly is delayed, we may allow you to assign a model year one year earlier, provided it does not affect which regulatory requirements will apply.

(B) 2. Unless a vehicle is being shipped to a secondary manufacturer that will hold the Executive Order, the model year must be assigned prior to introduction of the vehicle into California commerce. The certifying manufacturer must redesignate the model year if it does not complete its manufacturing operations within the originally identified model year. A vehicle introduced into California commerce without a model year is deemed to have a model year equal

to the calendar year of its introduction into California commerce unless the certifying manufacturer assigns a later date.

~~(12)~~(17) "Motor vehicle" has the meaning given in Health and Safety Code section 39039.

(18) "Otto-cycle" means relating to a gasoline-fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Otto-cycle engines usually use a throttle to regulate intake air flow to control power during normal operation.

(19) "Phase 1" means relating to the Phase 1 standards specified in title 17, CCR, §95663. For example, a vehicle subject to the Phase 1 standards is a Phase 1 vehicle. Note that there are no Phase 1 standards for trailers.

(20) "Phase 2" means relating to the Phase 2 standards specified in title 17, CCR, §95663.

~~(13)~~21) "Sleeper cab" means a type of tractor cab that has a compartment behind the driver's seat intended to be used by the driver for sleeping, and is not a heavy-haul tractor cab. This includes cabs accessible from the driver's compartment and those accessible from outside the vehicle.

~~(14) "Otto-cycle" means relating to a gasoline-fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Otto-cycle engines usually use a throttle to regulate intake air flow to control power during normal operation.~~

(22) "Tire rolling resistance level" means a value with units of kg/tonne that represents the rolling resistance of a tire configuration. Tire rolling resistance levels are used as modeling inputs under 40 CFR §§1037.515 and 1037.520, as amended October 25, 2016. Note that a manufacturer may use the measured value for a tire configuration's coefficient of rolling resistance, or assign some higher value.

~~(15)~~23) "Tractor" means a truck designed primarily for drawing other motor vehicles and not so constructed as to carry a load other than a part of the weight of the vehicle and the load so drawn~~has the meaning given for "truck tractor" in 49 CFR §571.3.~~ This includes most heavy-duty vehicles specifically designed for the primary purpose of pulling trailers but does not include vehicles designed to carry other loads. For purposes of this definition "other loads" would not include loads carried in the cab, sleeper compartment, or toolboxes. Examples of vehicles that are similar to tractors but that are not tractors under this part include dromedary tractors, automobile haulers, straight trucks with trailers hitches, and

tow trucks. Note that the provisions of this part that apply for tractors do not apply for tractors that are classified as vocational tractors under 40 CFR §1037.630, as amended October 25, 2016.

(24) "Trailer" means a piece of equipment designed for carrying cargo and for being drawn by a tractor when coupled to the tractor's fifth wheel. These trailers may be known commercially as semi-trailers or truck trailers. This definition excludes equipment that serve similar purposes but are not intended to be pulled by a tractor, whether or not they are known commercially as trailers. Trailers may be divided into different types and categories as described in paragraphs (A) through (D) of this definition. The types of equipment identified in paragraph (E) of this definition are not trailers for purposes of this part.

(A) Box vans are trailers with enclosed cargo space that is permanently attached to the chassis, with fixed sides, nose, and roof. Tank trailers are not box vans.

(B) Box vans with self-contained heating, ventilation, and air conditioning (HVAC) systems are refrigerated vans. Note that this includes systems that provide cooling, heating, or both. All other box vans are dry vans.

(C) Trailers that are not box vans are non-box trailers. Note that the standards for non-box trailers in this part 1037 apply only to flatbed trailers, tank trailers, and container chassis.

(D) Box vans with length at or below 50.0 feet are short box vans. Other box vans are long box vans.

(E) The following types of equipment are not trailers for purposes of this part 1037:

1. Containers that are not permanently mounted on chassis.
2. Dollies used to connect tandem trailers.

~~(1625)~~ "Useful life" means the period during which a vehicle is required to comply with all applicable emission standards.

~~(1726)~~ "Vehicle" means, for the purposes of this subarticle only, equipment intended for use on highways that meets the criteria of paragraph (A)~~1. or (A)2.~~ of this definition, as follows:

(A) The following equipment are vehicles:

1. A piece of equipment that is intended for self-propelled use on highways becomes a vehicle when it includes at least an engine, a transmission, and a frame. (Note: For purposes of this definition, any electrical, mechanical, and/or hydraulic devices attached to engines for the purpose of powering wheels are considered to be transmissions.)

2. A piece of equipment that is intended for self-propelled use on highways becomes a vehicle when it includes a passenger compartment attached to a frame with axles.

3. Trailers. A trailer becomes a vehicle when it has a frame with one or more axles attached.

(B) Vehicles other than trailers may be complete or incomplete vehicles as follows:

1. A complete vehicle is a functioning vehicle that has the primary load carrying device or container (or equivalent equipment) attached. Examples of equivalent equipment would include fifth wheel trailer hitches, firefighting equipment, and utility booms.

2. An incomplete vehicle is a vehicle that is not a complete vehicle. Incomplete vehicles may also be cab-complete vehicles. This may include vehicles sold to secondary vehicle manufacturers.

3. The primary use of the terms “complete vehicle” and “incomplete vehicle” are to distinguish whether a vehicle is complete when it is first sold as a vehicle.

4. You may ask us to allow you to certify a vehicle as incomplete if you manufacture the engines and sell the unassembled chassis components, as long as you do not produce and sell the body components necessary to complete the vehicle.

~~(C) Equipment such as trailers that are not self-propelled are not “vehicles” under 40 CFR part 1037.~~

~~(1827)~~ “Vocational tractor” means a vehicle classified as a vocational tractor under 40 CFR §1037.630, as amended October 25, 2016.

(28) “Vocational vehicle” means relating to a vehicle subject to the standards of 40 CFR §1037.105 (including vocational tractors), as amended October 25, 2016.

NOTE: Authority cited: Sections 38501, 38505, 38510, 38560, 39010, 39600, 39601, 43013, 43018, 43101, 43104, and 43105, Health and Safety Code. Reference: Sections 38501, 38505, 38510, 38560, 38580, 39002, 39003, 39600, 39601, 43000, 43009.5, 43013, 43018, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43205, 43205.5, and 43211, Health and Safety Code.

19. Amend section 95663, title 17, CCR, to read as follows:

§95663. Greenhouse Gas Exhaust Emission Standards and Test Procedures for New 2014 and Subsequent Model Heavy-Duty Vehicles.

(a) GHG Exhaust Emission Standards for New 2014 and Subsequent Model Heavy-Duty Vocational Vehicles and Tractors ~~over 14,000 Pounds GVWR~~

(1) Diesel and Otto-Cycle Vocational Vehicles.

(A) Phase 1 Emission Standards. The CO₂ emissions for new 2014 ~~and subsequent~~through 2020 model heavy-duty vocational vehicles shall not exceed:

<u>Phase 1 CO₂ Emission Standards for 2014 Through 2020 Model Vocational Vehicles</u> <u>(g/ton-mile)</u>		
<u>GVWR (pounds)</u>	<u>CO₂ standards (g/ton-mile) for mModel yYears 2014 - 2016</u>	<u>CO₂ standards (g/ton-mile) for mModel yYears 2017 and later - 2020</u>
8,500 < GVWR ≤ 19,500	388	373
19,500 < GVWR ≤ 33,000	234	225
GVWR > 33,000	226	222

1. Averaging, Banking, and Trading and Credits. The requirements for the optional averaging, banking, and trading program and for generating credits are described in the applicable test procedures incorporated by reference in section (ed).
2. Useful Life Requirements. Heavy-duty vocational vehicles must comply with the emission standards in this subsection (a)(1)(A) throughout the full useful life, as follows:
 - a. 110,000 miles or 10 years, whichever comes first, for vehicles at or below 19,500 pounds GVWR.
 - b. 185,000 miles or 10 years, whichever comes first, for vehicles above 19,500 pounds GVWR and at or below 33,000 pounds GVWR.
 - c. 435,000 miles or 10 years, whichever comes first, for vehicles above 33,000 pounds GVWR.

(B) Phase 2 Emission Standards. The CO₂ emissions for new 2021 and subsequent model heavy-duty vocational vehicles shall not exceed the following emission standards. Standards differ based on engine cycle, vehicle size, and intended vehicle duty cycle.

1. Phase 2 CO₂ standards for 2021 through 2023 model vocational vehicles:

<u>Phase 2 CO₂ Emission Standards for 2021 Through 2023 Model Vocational Vehicles (g/ton-mile)</u>					
<u>Engine Cycle</u>	<u>GVWR (pounds)</u>	<u>Vehicle Size</u>	<u>Multi-Purpose Duty Cycle</u>	<u>Regional Duty Cycle</u>	<u>Urban Duty Cycle</u>
<u>Diesel</u>	<u>8,500 < GVWR ≤ 19,500</u>	<u>Light HDV</u>	<u>373</u>	<u>311</u>	<u>424</u>
<u>Diesel¹</u>	<u>19,500 < GVWR</u>	<u>Medium HDV</u>	<u>265</u>	<u>234</u>	<u>296</u>
<u>Diesel²</u>	<u>19,500 < GVWR</u>	<u>Heavy HDV</u>	<u>261</u>	<u>205</u>	<u>308</u>
<u>Otto-Cycle</u>	<u>8,500 < GVWR ≤ 19,500</u>	<u>Light HDV</u>	<u>407</u>	<u>335</u>	<u>461</u>
<u>Otto-Cycle</u>	<u>19,500 < GVWR</u>	<u>Medium HDV</u>	<u>293</u>	<u>261</u>	<u>328</u>

¹Vocational vehicles with installed light or medium heavy-duty engines.

²Vocational vehicles with installed heavy heavy-duty engines.

2. Phase 2 CO₂ standards for 2024 through 2026 model vocational vehicles:

<u>Phase 2 CO₂ Emission Standards for 2024 Through 2026 Model Vocational Vehicles (g/ton-mile)</u>					
<u>Engine Cycle</u>	<u>GVWR (pounds)</u>	<u>Vehicle Size</u>	<u>Multi-Purpose Duty Cycle</u>	<u>Regional Duty Cycle</u>	<u>Urban Duty Cycle</u>
<u>Diesel</u>	<u>8,500 < GVWR ≤ 19,500</u>	<u>Light HDV</u>	<u>344</u>	<u>296</u>	<u>385</u>
<u>Diesel¹</u>	<u>19,500 < GVWR</u>	<u>Medium HDV</u>	<u>246</u>	<u>221</u>	<u>271</u>
<u>Diesel²</u>	<u>19,500 < GVWR</u>	<u>Heavy HDV</u>	<u>242</u>	<u>194</u>	<u>283</u>
<u>Otto-Cycle</u>	<u>8,500 < GVWR ≤ 19,500</u>	<u>Light HDV</u>	<u>385</u>	<u>324</u>	<u>432</u>
<u>Otto-Cycle</u>	<u>19,500 < GVWR</u>	<u>Medium HDV</u>	<u>279</u>	<u>251</u>	<u>310</u>

¹Vocational vehicles with installed light or medium heavy-duty engines.

²Vocational vehicles with installed heavy heavy-duty engines.

3. Phase 2 CO₂ standards for 2027 and subsequent model vocational vehicles:

<u>Phase 2 CO₂ Emission Standards for 2027 and Subsequent Model Vocational Vehicles (g/ton-mile)</u>					
<u>Engine Cycle</u>	<u>GVWR (pounds)</u>	<u>Vehicle Size</u>	<u>Multi-Purpose Duty Cycle</u>	<u>Regional Duty Cycle</u>	<u>Urban Duty Cycle</u>
<u>Diesel</u>	<u>8,500 < GVWR ≤ 19,500</u>	<u>Light HDV</u>	<u>330</u>	<u>291</u>	<u>367</u>
<u>Diesel¹</u>	<u>19,500 < GVWR</u>	<u>Medium HDV</u>	<u>235</u>	<u>218</u>	<u>258</u>
<u>Diesel²</u>	<u>19,500 < GVWR</u>	<u>Heavy HDV</u>	<u>230</u>	<u>189</u>	<u>269</u>
<u>Otto-Cycle</u>	<u>8,500 < GVWR ≤ 19,500</u>	<u>Light HDV</u>	<u>372</u>	<u>319</u>	<u>413</u>
<u>Otto-Cycle</u>	<u>19,500 < GVWR</u>	<u>Medium HDV</u>	<u>268</u>	<u>247</u>	<u>297</u>

¹Vocational vehicles with installed light or medium heavy-duty engines.

²Vocational vehicles with installed heavy heavy-duty engines.

**4. Optional Phase 2 custom chassis CO₂ standards for qualifying
2021 and subsequent model vocational vehicles:**

<u>Optional Phase 2 Custom Chassis CO₂ Emission Standards for 2021 and Subsequent Model Vocational Vehicles (g/ton-mile)</u>			
<u>Vehicle Type¹</u>	<u>Assigned Vehicle Service Class</u>	<u>Model Year 2021-2026</u>	<u>Model Year 2027 and Later</u>
<u>School bus</u>	<u>Medium HDV</u>	<u>291</u>	<u>271</u>
<u>Motor home</u>	<u>Medium HDV</u>	<u>228</u>	<u>226</u>
<u>Coach bus</u>	<u>Heavy HDV</u>	<u>210</u>	<u>205</u>
<u>Other bus²</u>	<u>Heavy HDV</u>	<u>300</u>	<u>286</u>
<u>Refuse hauler</u>	<u>Heavy HDV</u>	<u>313</u>	<u>298</u>
<u>Concrete mixer</u>	<u>Heavy HDV</u>	<u>319</u>	<u>316</u>
<u>Mixed-use vehicle</u>	<u>Heavy HDV</u>	<u>319</u>	<u>316</u>
<u>Emergency vehicle</u>	<u>Heavy HDV</u>	<u>324</u>	<u>319</u>

¹Vehicle types are generally defined in the applicable test procedures incorporated by reference in section (d).

²Additional requirements apply if the Other bus standard is used to certify a GHG urban bus, as described in the applicable test procedures incorporated by reference in section (d).

5. Averaging, Banking, and Trading and Credits. The requirements for the optional averaging, banking, and trading program and for generating credits are described in the applicable test procedures incorporated by reference in section (d), including additional requirements for the optional custom chassis other bus emission standard.
6. Useful Life Requirements. Vocational vehicles must comply with the emission standards in this subsection (a)(1)(B)1. through (a)(1)(B)4. throughout the full useful life, as follows:
 - a. 150,000 miles or 15 years, whichever comes first, for Light HDV.
 - b. 185,000 miles or 10 years, whichever comes first, for Medium HDV.
 - c. 435,000 miles or 10 years, whichever comes first, for Heavy HDV.
7. Air Conditioning Leakage. Loss of refrigerant from air conditioning systems from 2021 and subsequent model vocational vehicles may not exceed a total leakage rate of 11.0 grams per year or a percent leakage rate of 1.50 percent per year, whichever is greater. This applies for all refrigerants.

(2) Diesel and Otto-Cycle Tractors above 26,000 Pounds GVWR.

(A) Phase 1 Emission Standards. The CO₂ emissions for new 2014 and subsequent through 2020 model tractors above 26,000 pounds GVWR shall not exceed:

<u>Phase 1 CO₂ Emission Standards for 2014 Through 2020 Model Tractors (g/ton-mile)</u>			
GVWR (pounds)	Sub-Category	CO₂ standard (g/ton-mile) for mModel yYears 2014 - 2016	CO₂ standard (g/ton-mile) for mModel yYears 2017 and later - <u>2020</u>
26,000 < GVWR ≤ 33,000	Low-Roof (all cab styles)	107	104
	Mid-Roof (all cab styles)	119	115
	High-Roof (all cab styles)	124	120
GVWR > 33,000	Low-Roof Day Cab	81	80
	Low-Roof Sleeper Cab	68	66
	Mid-Roof Day Cab	88	86
	Mid-Roof Sleeper Cab	76	73
	High-Roof Day Cab	92	89
	High-Roof Sleeper Cab	75	72

1. *Averaging, Banking, and Trading Program and Credits.* The requirements for the optional averaging, banking, and trading program and for generating credits are described in the applicable test procedures incorporated by reference in section (ed).
2. *Useful Life Requirements.* Heavy-duty tractors must comply with the emission standards in this subsection (a)(2)(A) throughout the full useful life, as follows:
 - a. 185,000 miles or 10 years, whichever comes first, for vehicles above 26,000 pounds GVWR and at or below 33,000 pounds GVWR.
 - b. 435,000 miles or 10 years, whichever comes first, for vehicles above 33,000 pounds GVWR.

(B) 3. Air Conditioning Leakage. Loss of refrigerant from air conditioning systems from 2014 and later through 2020 heavy-duty tractors may not exceed 1.50 percent per year, except as allowed by subsections (a)(2)(B)1(A)3.a. and (a)(2)(B)2(A)3.b. below.

1.a. For air conditioning refrigerants other than HFC–134a, the leakage rate is adjusted by multiplying it by the global warming potential of the refrigerant and dividing the product by 1430 (which is the global warming potential of HFC–134a).

2.b. If the total refrigerant capacity is less than 734 grams, the leakage rate may exceed 1.50 percent, as long as the total leakage rate does not exceed 11.0 grams per year.

(B) Phase 2 Emission Standards. The CO₂ emissions for new 2021 and subsequent model tractors above 26,000 pounds GVWR shall not exceed:

<u>Phase 2 CO₂ Emission Standards for 2021 and Subsequent Model Tractors (g/ton-mile)</u>				
<u>GVWR (pounds)</u>	<u>Sub-Category</u>	<u>Model Years 2021 - 2023</u>	<u>Model Years 2024 - 2026</u>	<u>Model Year 2027 and later</u>
<u>26,000 < GVWR ≤ 33,000</u>	<u>Low-Roof (all cab styles)</u>	<u>105.5</u>	<u>99.8</u>	<u>96.2</u>
	<u>Mid-Roof (all cab styles)</u>	<u>113.2</u>	<u>107.1</u>	<u>103.4</u>
	<u>High-Roof (all cab styles)</u>	<u>113.5</u>	<u>106.6</u>	<u>100.0</u>
<u>GVWR > 33,000</u>	<u>Low-Roof Day Cab</u>	<u>80.5</u>	<u>76.2</u>	<u>73.4</u>
	<u>Low-Roof Sleeper Cab</u>	<u>72.3</u>	<u>68.0</u>	<u>64.1</u>
	<u>Mid-Roof Day Cab</u>	<u>85.4</u>	<u>80.9</u>	<u>78.0</u>
	<u>Mid-Roof Sleeper Cab</u>	<u>78.0</u>	<u>73.5</u>	<u>69.6</u>
	<u>High-Roof Day Cab</u>	<u>85.6</u>	<u>80.4</u>	<u>75.7</u>
	<u>High-Roof Sleeper Cab</u>	<u>75.7</u>	<u>70.7</u>	<u>64.3</u>
<u>Heavy-Haul Tractors</u>	<u>=</u>	<u>52.4</u>	<u>50.2</u>	<u>48.3</u>

¹Sub-category terms are defined in in the applicable test procedures incorporated by reference in section (d).

1. Averaging, Banking, and Trading Program and Credits. The requirements for the optional averaging, banking, and trading program and for generating credits are described in the applicable test procedures incorporated by reference in section (d).

2. Useful Life Requirements. Heavy-duty tractors must comply with the emission standards in this subsection (a)(2)(B) throughout the full useful life, as follows:
 - a. 185,000 miles or 10 years, whichever comes first, for vehicles above 26,000 pounds GVWR and at or below 33,000 pounds GVWR.
 - b. 435,000 miles or 10 years, whichever comes first, for vehicles above 33,000 pounds GVWR.
3. Air Conditioning Leakage. Loss of refrigerant from air conditioning systems from 2021 and subsequent heavy-duty tractors may not exceed a total leakage rate of 11.0 grams per year or a percent leakage rate of 1.50 percent per year, whichever is greater. This applies for all refrigerants.

(b) GHG Exhaust Emission Standards for New 2014 and Subsequent Model Diesel and Otto-Cycle Medium-Duty Vehicles between 8,501 to 14,000 Pounds GVWR

(1) Diesel and Otto-Cycle Vehicles between 8,501 to 14,000 Pounds GVWR, excluding medium-duty passenger vehicles.

(A) Diesel Fleet-Average Vehicle Emission Standards.

1. CO₂ Fleet-Average Standards. For each model year, a manufacturer's national fleet-average CO₂ emissions for its diesel medium-duty vehicles shall not exceed the CO₂ fleet-average standard. The CO₂ fleet-average standard is calculated ~~by a national production-weighted average of target values and rounded to the nearest 0.1 grams per mile, from the target value for each vehicle subconfiguration (Target_i) and U.S.-directed production volume of each vehicle subconfiguration for the given model year (Volume_i),~~ as follows:

$$\text{Fleet Average Standard} = \frac{\sum[\text{Target}_i \times \text{Volume}_i]}{\sum[\text{Volume}_i]}$$

Round the fleet-average standard to the nearest 0.1 g/mile. The target values, for each vehicle configuration, are calculated as follows:

$$\text{CO}_2 \text{ Target } \left(\frac{\text{g}}{\text{mile}} \right) = 0.0416 \times \text{WF} + 320$$

where WF is the work factor.

$$\text{WF} = 0.75 \times (\text{GVWR} - \text{Curb Weight} + \text{xwd}) + 0.25 \times (\text{GCWR} - \text{GVWR})$$

Where:

xwd = 500 pounds if the vehicle has four-wheel drive or all-wheel drive; xwd = 0 pounds for all other vehicles.

a. Phase-In Provisions and Applicable Target Values.

i. For 2014 through 2020 model new vehicles, Aa manufacturer must choose either Phase 1 Option A or Option B below for phasing in the diesel fleet-average CO₂ target of this subsection (b)(1)(A).

<u>Phase 1 Option A Phase-In Provisions for Diesel Fleet-Average CO₂ Target</u>	
Vehicle model year	Option A CO ₂ target (g/mile)
2014	$[0.0478 \times (WF)] + 368$
2015	$[0.0474 \times (WF)] + 366$
2016	$[0.0460 \times (WF)] + 354$
2017	$[0.0445 \times (WF)] + 343$
2018 and subsequent – 2020	$[0.0416 \times (WF)] + 320$
<u>Phase 1 Option B Phase-In Provisions for Diesel Fleet-Average CO₂ Target</u>	
Vehicle model year	Option B CO ₂ target (g/mile)
2014	$[0.0478 \times (WF)] + 368$
2015	$[0.0474 \times (WF)] + 366$
2016 – 2018	$[0.0440 \times (WF)] + 339$
2019 and subsequent – 2020	$[0.0416 \times (WF)] + 320$

ii. For 2021 and later model new vehicles, a manufacturer must comply with the following Phase 2 CO₂ target values for its applicable diesel vehicle fleet:

<u>Vehicle Model Year</u>	<u>Phase 2 Diesel Fleet-Average CO₂ Target (g/mile)</u>
<u>2021</u>	<u>$0.0406 \times (WF) + 312$</u>
<u>2022</u>	<u>$0.0395 \times (WF) + 304$</u>
<u>2023</u>	<u>$0.0386 \times (WF) + 297$</u>
<u>2024</u>	<u>$0.0376 \times (WF) + 289$</u>
<u>2025</u>	<u>$0.0367 \times (WF) + 282$</u>
<u>2026</u>	<u>$0.0357 \times (WF) + 275$</u>
<u>2027 and later</u>	<u>$0.0348 \times (WF) + 268$</u>

b. *Useful Life Provisions.* A medium-duty vehicle must comply with the emission standards in this subsection (b)(1)(A) throughout its full useful life, of 11 years or 120,000 miles, whichever occurs first, for 2014 through 2020 model year vehicles (Phase 1), and of 15 years or 150,000 miles for 2021 and later model year vehicles (Phase 2).

c. *Production and In-use CO₂ standards.* Each vehicle a manufacturer produces that is subject to the standards of this section has an “in-use” CO₂ standard that is calculated from the test result and that applies for selective enforcement audits and in-use testing. This in-use CO₂ standard for each vehicle is equal to the applicable deteriorated emission level multiplied by 1.10 and rounded to the nearest 0.1 g/mile for Phase 1 vehicles and nearest whole g/mile for Phase 2 vehicles.

2. *N₂O and CH₄ Emission Standards.* The N₂O emissions for new 2014 and subsequent model medium-duty vehicles shall not exceed 0.05 g/mi, and CH₄ emissions for new 2014 and subsequent model medium-duty vehicles shall not exceed 0.05 g/mi. Alternate standards using CO₂ emission credits may be used and are described in the “California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles,” incorporated by reference in section (ed).

(B) *Otto-Cycle ~~Fleet-Average~~ Vehicle Emission Standards.*

1. *CO₂ Fleet-Average Standards.* For each model year, a manufacturer’s national fleet-average CO₂ emissions for its Otto-cycle medium-duty vehicles shall not exceed the CO₂ fleet-average standard. The CO₂ fleet-average standard is calculated ~~by a national production-weighted average of target values and rounded to the nearest 0.1 grams per mile, from the target value for each vehicle subconfiguration (Target_i) and U.S.-directed production volume of each vehicle subconfiguration for the given model year (Volume_i),~~ as follows:

$$\text{Fleet Average Standard} = \frac{\sum[\text{Target}_i \times \text{Volume}_i]}{\sum[\text{Volume}_i]}$$

Round the fleet-average standard to the nearest 0.1 g/mile. The target values, for each vehicle configuration, are calculated as follows:

$$\text{CO}_2 \text{ Target } \left(\frac{\text{g}}{\text{mile}} \right) = 0.0440 \times \text{WF} + 339$$

where WF is the work factor.

$$WF = 0.75 \times (GVWR - \text{Curb Weight} + xwd) + 0.25 \times (GCWR - GVWR)$$

Where:

xwd = 500 pounds if the vehicle has four-wheel drive or all-wheel drive; xwd = 0 pounds for all other vehicles.

a. Phase-In Provisions and Applicable Target Values.

i. For 2014 through 2020 model new vehicles, Aa manufacturer must choose either Phase 1 Option A or Option B below for phasing in the Otto-cycle fleet-average CO₂ target of this subsection (b)(1)(B).

<u>Phase 1</u> Option A Phase-In Provisions for Otto-Cycle Fleet-Average CO₂ Target	
Vehicle model year	Option A CO ₂ target (g/mile)
2014	$[0.0482 \times (WF)] + 371$
2015	$[0.0479 \times (WF)] + 369$
2016	$[0.0469 \times (WF)] + 362$
2017	$[0.0460 \times (WF)] + 354$
2018 and subsequent - 2020	$[0.0440 \times (WF)] + 339$
<u>Phase 1</u> Option B Phase-In Provisions for Otto-Cycle Fleet-Average CO₂ Target	
Vehicle model year	Option B CO ₂ target (g/mile)
2014	$[0.0482 \times (WF)] + 371$
2015	$[0.0479 \times (WF)] + 369$
2016–2018	$[0.0456 \times (WF)] + 352$
2019 and subsequent - 2020	$[0.0440 \times (WF)] + 339$

ii. For 2021 and later model new vehicles, a manufacturer must comply with the following Phase 2 CO₂ target values for its applicable Otto-Cycle vehicle fleet:

<u>Vehicle Model Year</u>	<u>Phase 2 Otto-Cycle Fleet-Average CO₂ Target (g/mile)</u>
<u>2021</u>	<u>$0.0429 \times (WF) + 331$</u>
<u>2022</u>	<u>$0.0418 \times (WF) + 322$</u>
<u>2023</u>	<u>$0.0408 \times (WF) + 314$</u>
<u>2024</u>	<u>$0.0398 \times (WF) + 306$</u>
<u>2025</u>	<u>$0.0388 \times (WF) + 299$</u>
<u>2026</u>	<u>$0.0378 \times (WF) + 291$</u>
<u>2027 and later</u>	<u>$0.0369 \times (WF) + 284$</u>

b. *Useful Life Provisions.* A medium-duty vehicle must comply with the emission standards in this subsection (b)(1)(B) throughout its full useful life, which is 11 years or 120,000 miles, whichever occurs first, for 2014 through 2020 model year vehicles (Phase 1), and of 15 years or 150,000 miles for 2021 and later model year vehicles (Phase 2).

c. *Production and In-use CO₂ standards.* Each vehicle a manufacturer produces that is subject to the standards of this section has an “in-use” CO₂ standard that is calculated from the test result and that applies for selective enforcement audits and in-use testing. This in-use CO₂ standard for each vehicle is equal to the applicable deteriorated emission level multiplied by 1.10 and rounded to the nearest 0.1 g/mile for Phase 1 vehicles and nearest whole g/mile for Phase 2 vehicles.

2. *N₂O and CH₄ Emission Standards.* The N₂O emissions for new 2014 and subsequent model medium-duty vehicles shall not exceed 0.05 g/mi, and CH₄ emissions for new 2014 and subsequent model medium-duty vehicles shall not exceed 0.05 g/mi. Alternate standards using CO₂ emission credits may be used and are described in the applicable test procedures incorporated by reference in section (e*d*).

(C) *Air Conditioning Leakage.*

1. For 2014 to 2020 model Phase 1 vehicles, Loss of refrigerant from air conditioning systems from 2014 and later medium-duty vehicles may not exceed 1.50 percent per year, except as allowed by subsections (b)(1)(C)(1)a. and (b)(1)(C)(2)(1)b. below.

1a. For air condition refrigerants other than HFC–134a, the leakage rate is adjusted by multiplying it by the global warming potential of the refrigerant and dividing the product by 1430 (which is the global warming potential of HFC–134a).

2b. If the total refrigerant capacity is less than 734 grams, the leakage rate may exceed 1.50 percent, as long as the total leakage rate does not exceed 11.0 grams per year.

2. For 2021 and later model Phase 2 vehicles, loss of refrigerant from air conditioning systems may not exceed a total leakage rate of 11.0 grams per year or a percent leakage rate of 1.50 percent per year, whichever is greater. This applies for all refrigerants.

(c) GHG Exhaust Emission Standards for New 2020 and Subsequent Model Trailers

(1) Phase 2 Emission Standards for Trailers. The exhaust emission standards specified in this subsection apply to trailers based on the effect of trailer designs on the performance of the trailer in conjunction with a tractor; this accounts for the effect of the trailer on the tractor's exhaust emissions, even though trailers themselves have no exhaust emissions.

(A) Exclusions. This subsection does not apply to the following trailers:

1. Non-box trailers other than flatbed trailers, tank trailers, and container chassis.

2. Trailers meeting one or more of the following characteristics:

a. Trailers with four or more axles and trailers less than 35 feet long with three axles (i.e., trailers intended for hauling very heavy loads).

b. Trailers intended for temporary or permanent residence, office space, or other work space, such as campers, mobile homes, and carnival trailers.

c. Trailers with a gap of at least 120 inches between adjacent axle centerlines. In the case of adjustable axle spacing, this refers to the closest possible axle positioning.

d. Trailers built before January 1, 2020.

e. Note that the definition of “trailer” in 40 CFR §1037.801, as amended October 25, 2016, excludes equipment that serves similar purposes but are not intended to be pulled by a tractor. This exclusion applies to such equipment whether or not they are known

commercially as trailers. For example, any equipment pulled by a heavy-duty vehicle with a pintle hook or hitch instead of a fifth wheel does not qualify as a trailer under this part.

(B) CO₂ Emission Standards.

1. Definitions of Box Van Types. Different levels of stringency apply for box vans depending on features that may affect aerodynamic performance. A manufacturer may optionally meet less stringent standards for different trailer types, which are characterized as follows:

a. For trailers 35 feet or longer, a manufacturer may designate as “non-aero box vans” those box vans that have a rear lift gate or rear hinged ramp, and at least one of the following side features: side lift gate, side-mounted pull-out platform, steps for side-door access, a drop-deck design, or belly boxes that occupy at least half the length of both sides of the trailer between the centerline of the landing gear and the leading edge of the front wheels. For trailers less than 35 feet long, a manufacturer may designate as “non-aero box vans” any refrigerated box vans with at least one of the side features identified for longer trailers.

b. A manufacturer may designate as “partial-aero box vans” those box vans that have at least one of the side features identified in subsection (c)(1)(B)1.a. Long box vans may also qualify as partial-aero box vans if they have a rear lift gate or rear hinged ramp. Note that this subsection (c)(1)(B)1.b. does not apply for box vans designated as “non-aero box vans” under subsection (c)(1)(B)1.a.

c. “Full-aero box vans” are box vans that are not designated as non-aero box vans or partial-aero box vans under this subsection (c)(1)(B)1.

2. CO₂ Emission Standards.

a. Full-Aero Box Vans. CO₂ standards apply for full-aero box vans as specified in the following table:

<u>Phase 2 CO₂ Emission Standards for Full-Aero Box Vans</u> <u>(g/ton-mile)</u>				
<u>Model Year</u>	<u>Dry Van</u>		<u>Refrigerated Van</u>	
	<u>Short</u>	<u>Long</u>	<u>Short</u>	<u>Long</u>
<u>2020</u>	<u>125.4</u>	<u>81.3</u>	<u>129.1</u>	<u>83.0</u>
<u>2021-2023</u>	<u>123.7</u>	<u>78.9</u>	<u>127.5</u>	<u>80.6</u>
<u>2024-2026</u>	<u>120.9</u>	<u>77.2</u>	<u>124.7</u>	<u>78.9</u>
<u>2027+</u>	<u>118.8</u>	<u>75.7</u>	<u>122.7</u>	<u>77.4</u>

b. *Partial-Aero Box Vans.* CO₂ standards apply for partial-aero box vans as specified in the following table:

<u>Phase 2 CO₂ Emission Standards for Partial-Aero Box Vans</u> <u>(g/ton-mile)</u>				
<u>Model Year</u>	<u>Dry Van</u>		<u>Refrigerated Van</u>	
	<u>Short</u>	<u>Long</u>	<u>Short</u>	<u>Long</u>
<u>2020</u>	<u>125.4</u>	<u>81.3</u>	<u>129.1</u>	<u>83.0</u>
<u>2021+</u>	<u>123.7</u>	<u>80.6</u>	<u>127.5</u>	<u>82.3</u>

c. *Non-Box Trailers and Non-Aero Box Vans.* Non-box trailers and non-aero box vans must meet standards as follows:

i. Trailers must use automatic tire inflation systems or tire pressure monitoring systems with wheels on all axles.

ii. Non-box trailers must use tires with a tire rolling resistance level at or below 5.1 kg/tonne. Model year 2020 non-box trailers may instead use tires with a tire rolling resistance level at or below 6.0 kg/tonne.

iii. Non-aero box vans must use tires with a tire rolling resistance level at or below 4.7 kg/tonne. Model year 2020 non-aero box vans may instead use tires with a tire rolling resistance level at or below 5.1 kg/tonne.

d. *Averaging, Banking, and Trading Program.* The requirements for the optional averaging program, which begins in model year 2027, are described in the applicable test procedures incorporated by reference in section (d). A manufacturer may not use averaging

for non-box trailers, partial-aero box vans, or non-aero box vans that meet standards under subsection (c)(1)(B)2.b. or (c)(1)(b)2.c. of this section, and a manufacturer may not use emission credits for banking or trading for any trailers.

e. *Useful Life Requirements.* A trailer must comply with the applicable emission standard in this subsection throughout the useful life of 10 years.

(C) *Other GHG Emission Standards.* No CH₄, N₂O, or HFC standards apply under this subsection.

(ed) The test procedures for determining compliance with GHG emission standards applicable to 2014 and subsequent model medium- and heavy-duty vehicles are set forth in the “California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles,” adopted October 21, 2014, as last amended _____, and in the “California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, as last amended _____, which ~~is~~ are incorporated by reference herein.

NOTE: Authority cited: Sections 38501, 38505, 38510, 38560, 39010, 39600, 39601, 43013, 43018, 43101, 43104, and 43105, Health and Safety Code. Reference: Sections 38501, 38505, 38510, 38560, 38580, 39002, 39003, 39600, 39601, 43000, 43009.5, 43013, 43018, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43205, 43205.5, and 43211, Health and Safety Code.