

Subpart R—General Provisions for the Voluntary National Low Emission Vehicle Program for Light-Duty Vehicles and Light-Duty Trucks

SOURCE: 62 FR 31242, June 6, 1997, unless otherwise noted.

§ 86.1701–99 General applicability.

(a) The provisions of this subpart may be adopted by vehicle manufacturers pursuant to the provisions specified in § 86.1705. The provisions of this subpart are generally applicable to 1999 and later model year light-duty vehicles and light light-duty trucks to be sold in the Northeast Trading Region, and 2001 and later model year light-duty vehicles and light light-duty trucks to be sold in the United States. In cases where a provision applies only to certain vehicles based on model year, vehicle class, motor fuel, engine type, vehicle emission category, intended sales destination, or other distinguishing characteristics, such limited applicability is cited in the appropriate section or paragraph. The provisions of this subpart shall be referred to as the “National Low Emission Vehicle Program” or “National LEV” or “NLEV.”

(b) All requirements of 40 CFR parts 85 and 86, unless specifically superseded by the provisions of this subpart, shall apply to vehicles under the National LEV Program. Compliance with the provisions of this subpart will be deemed compliance with some of the requirements of 40 CFR parts 85 and 86, as set forth elsewhere in this subpart.

(c) The requirements of this subpart apply to new vehicles manufactured by covered manufacturers through model year 2003. In addition, the requirements of this subpart apply to new vehicles manufactured by covered manufacturers for model years prior to the first model year for which a mandatory federal exhaust emissions program for light-duty vehicles and light light-duty trucks is at least as stringent as the National LEV program with respect to NMOG, NO_x, and CO exhaust emissions, as determined by the Administrator, provided that such a program is promulgated no later than December 15,

2000, and is effective no later than model year 2006.

(d) Adoption of the National LEV program does not impose gasoline or other in-use fuel requirements and is not intended to require any new federal or state regulation of fuels. Vehicles under National LEV will be able to operate on any fuels, including conventional gasoline, that, in the absence of the National LEV program, could be sold under federal or state law.

(e) References in this subpart to engine families and emission control systems shall be deemed to refer to durability groups and test groups as applicable for manufacturers certifying new light-duty vehicles and light-duty trucks under the provisions of subpart S of this part.

(f) The provisions of this subpart are not applicable to 2004 or later model year vehicles, except where specific references to provisions of this subpart are made in conjunction with provisions applicable to such vehicles.

[62 FR 31242, June 6, 1997. Redesignated and amended at 63 FR 966, Jan. 7, 1998; 64 FR 23923, May 4, 1999; 65 FR 6851, Feb. 10, 2000]

§ 86.1702–99 Definitions.

(a) The definitions in subpart A of this part apply to this subpart, except where the same term is defined differently in paragraph (b) of this section.

(b) The following definitions shall apply to this subpart:

Advanced technology vehicle (ATV) means any light-duty vehicle or light light-duty truck that is covered by a federal certificate of conformity or an Executive Order, as defined in § 86.1002, which is either:

(1) A dual fuel, flexible fuel, or dedicated alternatively fueled vehicle certified as a TLEV or more stringent when operated on the alternative fuel;

(2) A ULEV or Inherently Low-Emission Vehicle (ILEV), as defined in 40 CFR 88.302, either conventionally or alternatively fueled;

(3) An HEV or ZEV.

Alcohol fuel means either methanol or ethanol as those terms are defined in this subpart.

All-electric range test means a test sequence used to determine the range of

an electric vehicle or of a hybrid electric vehicle without the use of its auxiliary power unit. The All-Electric Range Test cycle is defined in § 86.1770.

All States Trading Region (ASTR) means the region comprised of all states except the OTC States that have not opted into National LEV pursuant to the opt-in provisions at § 86.1705 or that have opted out of National LEV and whose opt-outs have become effective, as provided at § 86.1707; California; and any state outside the OTR with a Section 177 Program in effect that does not allow National LEV as a compliance alternative.

Averaging sets are the categories of LDVs and LDTs for which the manufacturer calculates a fleet average NMOG value. The four averaging sets for fleet average NMOG value calculation purposes are:

- (1) Class A delivered to a point of first sale in the Northeast Trading Region;
- (2) Class A delivered to a point of first sale in the All States Trading Region;
- (3) Class B delivered to a point of first sale in the Northeast Trading Region;
- (4) Class B delivered to a point of first sale in the All States Trading Region.

Axle ratio means the number of times the input shaft to the differential (or equivalent) turns for each turn of the drive wheels.

Battery pack means any electrical energy storage device consisting of any number of individual battery modules which is used to propel electric or hybrid electric vehicles.

Certification level means the official exhaust emission result from an emission-data vehicle which has been adjusted by the applicable mass deterioration factor and is submitted to the Administrator for use in determining compliance with an emission standard for the purpose of certifying a particular engine family. For those engine families which are certified using reactivity adjustment factors developed by the manufacturer pursuant to appendix XVII of this part, the exhaust NMOG certification level shall include adjustment by the ozone deterioration factor.

Class A comprises LDVs and LDTs 0–3750 lbs LVW that are subject to the provisions of this subpart.

Class B comprises LDTs 3751–5750 lbs LVW that are subject to the provisions of this subpart.

Continually regenerating trap oxidizer system means a trap oxidizer system that does not utilize an automated regeneration mode during normal driving conditions for cleaning the trap.

Conventional gasoline means any certification gasoline which meets the specifications of § 86.113(a). The ozone-forming potential of conventional gasoline vehicle emissions shall be determined by using the methods and gasoline specifications contained in appendix XVII of this part.

Core Stable Standards means the standards and other requirements listed in § 86.1707(d)(9)(i) (A) through (F).

Covered state means a state that meets the conditions specified under § 86.1705(d).

Covered vehicle or engine means a vehicle specified in § 86.1701(a), or an engine in such a vehicle, that is manufactured by a covered manufacturer.

Credits means fleet average NMOG credits as calculated from the amount that the manufacturer's applicable fleet average NMOG value is below the applicable fleet average NMOG standard, times the applicable production for a given model year. NMOG credits have units of g/mi.

Debits means fleet average NMOG debits as calculated from the amount that the manufacturer's applicable fleet average NMOG value is above the applicable fleet average NMOG standard, times the applicable production for a given model year. NMOG debits have units of g/mi.

Dedicated ethanol vehicle means any ethanol-fueled motor vehicle that is engineered and designed to be operated solely on ethanol.

Dedicated methanol vehicle means any methanol-fueled motor vehicle that is engineered and designed to be operated solely on methanol.

Diesel engine means any engine powered with diesel fuel, gaseous fuel, or alcohol fuel for which diesel engine speed/torque characteristics and vehicle applications are retained.

Electric vehicle means any vehicle which operates solely by use of a battery or battery pack. This definition also includes vehicles which are powered mainly through the use of an electric battery or battery pack, but which use a flywheel that stores energy produced by the electric motor or through regenerative braking to assist in vehicle operation.

Element of design means any control system (i.e., computer software, electronic control system, emission control system, computer logic), and/or control system calibrations and/or the results of systems interaction, and/or hardware items on a motor vehicle or motor vehicle engine.

Ethanol means any fuel for motor vehicles and motor vehicle engines that is composed of either commercially available or chemically pure ethanol ($\text{CH}_3\text{CH}_2\text{OH}$) and gasoline as specified in §86.1771 (Fuel Specifications). The required fuel blend is based on the type of ethanol-fueled vehicle being certified and the particular aspect of the certification procedure being conducted.

Ethanol vehicle means any motor vehicle that is engineered and designed to be operated using ethanol as a fuel.

Executive Officer of the California Air Resources Board (ARB), as used in the referenced materials listed in §86.1 and appendix XIII of this part, means the Administrator of the Environmental Protection Agency (EPA).

Existing ZEV Mandate means any state regulation or other law that imposes (or purports to impose) obligations on auto manufacturers to produce, deliver for sale, or sell a certain number or percentage of ZEVs and that was adopted prior to December 16, 1997.

Fleet average NMOG value is the fleet average NMOG value calculated for a particular averaging set, based upon the applicable production for that averaging set.

49 states is the region comprised of the United States excluding California.

Fuel-fired heater means a fuel burning device which creates heat for the purpose of warming the passenger compartment of a vehicle but does not contribute to the propulsion of the vehicle.

Gaseous fuels means liquefied petroleum gas, compressed natural gas, or liquefied natural gas fuels for use in motor vehicles.

Hybrid electric vehicle (HEV) means any vehicle which is included in the definition of a "series hybrid electric vehicle," a "parallel hybrid electric vehicle," or a "battery assisted combustion engine vehicle."

Low emission vehicle (LEV) means any vehicle certified to the low emission vehicle standards specified in this subpart.

Low volume manufacturer, for a particular model year, means any vehicle manufacturer that: Is considered a "small volume manufacturer" by the State of California according to the State of California regulatory definition of "small volume manufacturer", contained in the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996), which is incorporated by reference (see §86.1); and has nationwide sales of light-duty vehicles and light light-duty trucks less than or equal to 40,000 units per model year based on the average number of vehicles sold by the manufacturer for each of the three most recent model years. For manufacturers certifying for the first time, model-year sales shall be based on projected sales.

Methane reactivity adjustment factor means a factor applied to the mass of methane emissions from natural gas fueled vehicles for the purpose of determining the gasoline equivalent ozone-forming potential of the methane emissions.

Methanol means any fuel for motor vehicles and motor vehicle engines that is composed of either commercially available or chemically pure methanol (CH_3OH) and gasoline as specified in §86.1771 (Fuel Specifications). The required fuel blend is based on the type of methanol-fueled vehicle being certified and the particular aspect of the certification procedure being conducted.

Methanol vehicle means any motor vehicle that is engineered and designed to be operated using methanol as a fuel.

Natural gas means either compressed natural gas or liquefied natural gas.

Natural gas vehicle means any motor vehicle that is engineered and designed to be operated using either compressed natural gas or liquefied natural gas.

Non-Core Stable Standards means the standards and other requirements listed in § 86.1707(d)(9)(i) (G) through (L).

Non-methane organic gases (NMOG) means the sum of oxygenated and non-oxygenated hydrocarbons contained in a gas sample as measured in accordance with Chapter 5 of the California Regulatory Requirements Applicable to the National Low Emission Vehicle Program (October, 1996). These requirements are incorporated by reference (see § 86.1).

Non-regeneration emission test means a complete emission test which does not include a regeneration.

Northeast Trading Region (NTR) means the region comprised of the states that meet the conditions specified under § 86.1705(d).

Organic material non-methane hydrocarbon equivalent (or OMNMFCE) for methanol-fueled vehicles means the sum of the carbon mass contribution of non-oxygenated hydrocarbons (excluding methane), methanol, and formaldehyde as contained in a gas sample, expressed as gasoline-fueled hydrocarbons. For ethanol-fueled vehicles, organic material non-methane hydrocarbon equivalent (OMNMFCE) means the sum of carbon mass contribution of non-oxygenated hydrocarbons (excluding methane), methanol, ethanol, formaldehyde and acetaldehyde as contained in a gas sample, expressed as gasoline-fueled hydrocarbons.

Ozone deterioration factor means a factor applied to the mass of NMOG emissions from TLEVs, LEVs, or ULEVs which accounts for changes in the ozone-forming potential of the NMOG emissions from a vehicle as it accumulates mileage.

Ozone Transport Commission States or OTC States means the States of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont and Virginia, and the District of Columbia.

Parallel hybrid electric vehicle means any vehicle which allows power to be delivered to the driven wheels by either

a combustion engine and/or by a battery powered electric motor.

Periodically regenerating trap oxidizer system means a trap oxidizer system that utilizes, during normal driving conditions for cleaning the trap, an automated regeneration mode which can be easily detected.

Point of first sale is the location where the completed light-duty vehicle or light-duty truck is purchased, also known as the final product purchase location. The point of first sale may be a retail customer, dealer, distributor, fleet operator, broker, secondary manufacturer, or any other entity which comprises the point of first sale. In cases where the end user purchases the completed vehicle directly from the manufacturer, the end user is the point of first sale.

Production is the number of vehicles and/or trucks that a manufacturer produces in a given model year that are subject to the provisions of this subpart and are included in the same averaging set.

Reactivity adjustment factor means a fraction applied to the mass of NMOG emission from a vehicle powered by a fuel other than conventional gasoline for the purpose of determining a gasoline-equivalent NMOG emission value. The reactivity adjustment factor is defined as the ozone-forming potential of the exhaust from a vehicle powered by a fuel other than conventional gasoline divided by the ozone-forming potential of conventional gasoline vehicle exhaust.

Regeneration means the process of oxidizing accumulated particulate matter. It may occur continually or periodically.

Regeneration emission test means a complete emission test which includes a regeneration.

Regeneration interval means the interval from the start of a regeneration to the start of the next regeneration.

Section 177 Program means State regulations or other laws, except ZEV Mandates, that apply to any of the following categories of motor vehicles: Passenger cars, light-duty trucks up through 6,000 pounds GVWR, and medium-duty vehicles from 6,001 to 14,000 pounds GVWR if designed to operate on gasoline, as these categories of motor

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vehicles are defined in the California Code of Regulations, Title 13, Division 3, Chapter 1, Article 1, Section 1900.

Series hybrid electric vehicle means any vehicle which allows power to be delivered to the driven wheels solely by a battery powered electric motor, but which also incorporates the use of a combustion engine to provide power to the battery and/or electric motor.

37 States is the trading region comprised of the United States excluding California and the Northeast Trading Region.

Transitional low emission vehicle (TLEV) means any vehicle certified to the transitional low emission vehicle standards specified in this subpart.

Trap oxidizer system means an emission control system which consists of a trap to collect particulate matter and a mechanism to oxidize the accumulated particulate.

Type A hybrid electric vehicle means an HEV which achieves a minimum range of 60 miles over the All-Electric Range Test as defined in § 86.1770.

Type B hybrid electric vehicle means an HEV which achieves a range of 40–59 miles over the All-Electric Range Test as defined in § 86.1770.

Type C hybrid electric vehicle means an HEV which achieves a range of 0–39 miles over the All-Electric Range test and all other HEVs excluding “Type A” and “Type B” HEVs as defined in § 86.1770.

Ultra-low emission vehicle (ULEV) means any vehicle certified to the ultra-low emission vehicle standards specified in this subpart.

Zero-emission vehicle (ZEV) means any vehicle which is certified to produce zero emissions of any criteria pollutants under any and all possible operational modes and conditions. Incorporation of a fuel fired heater shall not preclude a vehicle from being certified as a ZEV provided the fuel fired heater cannot be operated at ambient temperatures above 40 degrees Fahrenheit and the heater is demonstrated to have zero evaporative emissions under any and all possible operational modes and conditions.

ZEV Mandate means any state regulation or other law that imposes (or purports to impose) obligations on auto manufacturers to produce, deliver for

sale, or sell a certain number or percentage of ZEVs.

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§ 86.1703–99 Abbreviations.

(a) The abbreviations in subpart A of this part apply to this subpart.

(b) In addition, the following abbreviations shall apply to this subpart:

ASTR—All States Trading Region
HEV—hybrid electric vehicle.
LEV—low emission vehicle.
NMOG—non-methane organic gases.
NTR—Northeast Trading Region.
OTC—Ozone Transport Commission
TLEV—transitional low emission vehicle.
ULEV—ultra low emission vehicle.
ZEV—zero emission vehicle.

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§ 86.1704–99 Section numbering; construction.

(a) The model year of initial applicability is indicated by the last two digits of the six-digit group of the section number. A section remains in effect for subsequent model years until it is superseded.

(b) A section reference without a model year suffix shall be interpreted to be a reference to the section applicable to the appropriate model year.

[62 FR 31242, June 6, 1997. Redesignated at 63 FR 967, Jan. 7, 1998]

§ 86.1705–99 General provisions; opt-in.

(a) *Covered manufacturers.* Covered manufacturers must comply with the provisions in this subpart, and in addition, must comply with the requirements of 40 CFR parts 85 and 86. A manufacturer shall be a covered manufacturer if:

(1) The manufacturer (or, in the case of joint ventures or similar cooperative arrangements between two or more manufacturers, the participating manufacturers) has opted into the program pursuant to paragraph (c) of this section;

(2) Where a manufacturer has included a condition on opt-in provided for in paragraph (c)(2) of this section, that condition has been satisfied; and