

State of California  
AIR RESOURCES BOARD

CALIFORNIA EXHAUST EMISSIONS STANDARDS AND TEST PROCEDURES  
FOR 1997 AND LATER OFF-HIGHWAY RECREATIONAL VEHICLES AND ENGINES

Adopted: May 26, 1995  
Amended: October 22, 1999  
Amended: <insert date of amendment here>

NOTE: This document incorporates by reference, with noted modifications, sections of Subparts E and F, Part 86, Title 40, Code of Federal Regulations, and sections of Subparts A, B, C, F, and I, Part 1051, Title 40, Code of Federal Regulations. California provisions which replace specific federal provisions are denoted by the words “DELETE” for the federal language and “REPLACE WITH” or “ADD” for the new California language. The symbols “\*\*\*\*” and “...” mean that the federal text that immediately follows the symbols is unchanged and incorporated by reference into the California Standards and Test Procedures. Sections of the federal regulations which are not listed are not part of the California Standards and Test Procedures.

This Document is printed in a style to indicate changes from the existing provisions. All existing language is indicated by plain type. All additions to language are indicated by underline. All deletions to language are indicated by ~~strikeout~~.

CALIFORNIA EXHAUST EMISSIONS STANDARDS AND TEST PROCEDURES  
FOR 1997 AND LATER OFF-HIGHWAY RECREATIONAL VEHICLES AND ENGINES

The following provisions of Subpart E and F, Part 86, Title 40, Code of Federal Regulations, as adopted or amended by the U. S. Environmental Protection Agency on the date listed are adopted and incorporated herein by this reference as the California Exhaust Emission Standards and Test Procedures for 1997 and Later Off-Highway recreational vehicles and engines, except as altered or replaced by the provisions set forth below.

PART 86, CONTROL OF EMISSIONS FROM NEW AND IN-USE HIGHWAY VEHICLES  
AND ENGINES

Subpart E, General Provisions for Emission Regulations for 1978 and Later New Motorcycles

SOURCE: 42 FR 1126, Jan. 5, 1977, unless otherwise noted.

86.401-78 General Applicability. 42 FR 1126, Jan. 5, 1977.

DELETE

86.401-90 General Applicability. 54 FR 14539, Apr. 11, 1989.

(a) DELETE,  
REPLACE WITH:

(a) This subpart applies to all 1997 and later model year off-road motorcycles, all-terrain vehicles, golf carts, and engines used in such vehicles produced on or after January 1, 1997 and all 2007 and later model year off-road sport vehicles, off-road utility vehicles, sand cars, and engines used in such vehicles produced on or after January 1, 2007.

(b) DELETE

(c) DELETE

86.401-2006 General Applicability. 69 FR 2435, Jan. 15, 2004

DELETE

86.401-97 General Applicability. 59 FR 48512, Sept. 21, 1994

DELETE

\* \* \* \*

“Administrator” DELETE,  
REPLACE WITH:

“Administrator” means the Executive Officer of the Air Resources Board, or their designee.

\* \* \* \*

“All-Terrain Vehicle (ATV)” means any ~~motorized~~ off-highway motor vehicle 50 inches (1270 mm) or less in overall width, ~~with an unladen dry weight of 606 pounds (275 kg) or less, that has all of the following features and characteristics:~~ designed to travel on four or more low pressure tires, having a single seat designed to be straddled by the operator ~~and~~ or a single seat designed to be straddled by the operator and a seat for no more than one passenger, having handlebars for steering control, ~~and intended for use by a single operator and no passengers. The vehicle is designed to carry not more than 350 pounds (160 kg) payload, excluding the operator, and is powered by an internal combustion engine. Width and unladen weight shall be exclusive of accessories and optional equipment. A golf cart, off-road sport vehicle, off-road utility vehicle, or sand car is not, for purposes of this regulation, to be classified as an all-terrain vehicle.~~

“Certificate of Conformity” means an Executive Order.

“Certification” means certification as defined in Section 39018 of the Health and Safety Code.

\* \* \* \*

“EPA Enforcement Officer” DELETE,  
REPLACE WITH:

“EPA Enforcement Officer” means an “ARB Enforcement Officer” which means any employee of the Air Resources Board so designated in writing by the Executive Officer of the Air Resources Board or by the Executive Officer’s designee.

\* \* \* \*

“Executive Order” means an order issued by the Executive Officer of the Air Resources Board certifying engines for sale in California.

“Exhaust Emissions” DELETE,  
REPLACE WITH:

“Exhaust Emissions” means substances emitted to the atmosphere from any opening downstream from the exhaust port of an off-highway recreational vehicle.

\* \* \* \*

ADD:

“Golf Cart” means a vehicle used to convey equipment and no more than two persons, including the driver, to play the game of golf in an area designated as a golf course. Golf carts are designed to have an unladen weight of less than 1,300 pounds and carry not more than 100 pounds, excluding passengers, accessories and optional equipment. A golf cart is not used for grounds keeping or maintenance purposes.

\* \* \* \*

“Motorcycle” DELETE,  
REPLACE WITH:

“Motorcycle,” for purposes of these test procedures, means Off-Road Motorcycle, All-Terrain Vehicle, Off-Road Sport Vehicle, Off-Road Utility Vehicle, Sand Car and Engines used in such vehicles.

\* \* \* \*

ADD:

“Off-Highway Recreational Vehicle Engines” or “Engines” are identified as: two-stroke or four-stroke, air-cooled, liquid-cooled, gasoline, diesel, or alternate-fuel powered engines or electric motors that are designed for powering off-road recreational vehicles and engines included in, ~~but not limited to use in,~~ the following: off-road motorcycles, all-terrain vehicles, off-road sport vehicles, off-road utility vehicles, sand cars, and golf carts. All engines and equipment that fall within the scope of the preemption of Section 209(e)(1)(A) of the Federal Clean Air Act, as amended, and as defined by regulation of the Environmental Protection Agency, are specifically not included within this category.

“Off-Road Equipment and Vehicle” means any non-stationary device, powered by an internal combustion engine or electric motor, used primarily off the highways, to propel, move, or draw persons or property including any device propelled, moved, or drawn exclusively by human power, and used in, but not limited to the following applications: Marine Vessels, Construction/Farm Equipment, Locomotives, Utility engines and Lawn and Garden Equipment, Off-Road Motorcycles, and Off-Highway Vehicles.

“Off-Road Motorcycle” means any two or three wheeled vehicle equipped with an internal combustion engine and weighing less than 1,499 pounds. An off-road motorcycle is primarily designed for use off highways. These vehicles are mainly used for recreational riding on dirt trails but are not limited to this purpose.

“Off-Road Sport Vehicle” means any off-highway motor vehicle that has all of the following features and characteristics: designed to travel on four wheels, having bench or bucket seating for one or more persons, having a steering wheel for steering control,

designed for operation over rough terrain, having a rear payload not exceeding 600 pounds, having an internal combustion engine with a displacement less than or equal to one liter, and is capable of speeds 25 miles per hour or more. Vehicles otherwise meeting the definition for sand cars but powered by an engine with a displacement less than or equal to one liter are considered off-road sport vehicles.

“Off-Road Utility Vehicle” means any off-highway motor vehicle that has all of the following features and characteristics: designed to travel on four or more wheels, having bench or bucket seating for two or more persons, having a steering wheel for steering control, designed for operation over rough terrain, having an internal combustion engine with a displacement less than or equal to one liter, having a maximum brake power less than or equal to 30 kilowatts, capable of speeds 25 miles per hour or more, and having either 1) a rear payload of 350 pounds or more, or 2) seating for six or more passengers.

\* \* \* \*

“Sand Car” means any off-highway motor vehicle that has all of the following features and characteristics: designed to travel on four wheels, having bench or bucket seating for one or more persons, having a steering wheel for steering control, designed primarily for operation over sand dunes, and is powered by an internal combustion engine with a displacement greater than one liter. Vehicles otherwise meeting the criteria in the previous sentence that are powered by an engine with a displacement less than or equal to one liter are considered off-road sport vehicles.

\* \* \* \*

“Total Test Distance” DELETE,  
REPLACE WITH:

“Total Test Distance” is defined as the appropriate distance the vehicle should be driven to stabilize the emission characteristics of the engine. The manufacturer shall determine the appropriate distance.

ADD:

“Ultimate Purchaser” means the first person who in good faith purchases or leases a new engine, vehicle, or piece of equipment for purposes other than resale.

\* \* \* \*

“Useful life” DELETE,  
REPLACE WITH:

“Useful life” is defined as follows:

ENGINE DISPLACEMENT  
(in cubic centimeters)

USEFUL LIFE  
(in years and Kilometers)

0 to less than 170  
170 to less than 280  
280 or greater

5 years or 10,000 km  
5 years or 10,000 km  
5 years or 10,000 km

\* \* \* \*

ADD:

“Vehicle Identification Number (VIN)” means an alpha numeric code which has been permanently assigned by the manufacturer to a vehicle. The VIN is unique to each vehicle and may contain information deemed necessary by governing agencies. Unless otherwise noted, the VIN will follow formats specified in the Code of Federal Regulations 49, Chapter V, Parts 565, 566, and 571, section 571.115 – Vehicle Identification Number – Content Requirements.

86.402-98 Definitions. 69 FR 2435, Jan. 15, 2004

DELETE

86.403-78 Abbreviations.

ARB- California Air Resources Board.

\* \* \* \*

Bhp- Brake-horsepower.

Bhp-hr- Brake horsepower-hour.

\* \* \* \*

Hp- Horsepower.

\* \* \* \*

PM- Particulate Matter

\* \* \* \*

86.404-78 Section Numbering

\* \* \* \*

86.405-78 Measurement system.

\* \* \* \*

86.406-78 Introduction, structure of subpart, further information.

DELETE

86.407-78 Certificate of conformity required.

DELETE,  
REPLACE WITH:

Every new off-road motorcycle, all-terrain vehicle, off-road sport vehicle, off-road utility vehicle, sand car, golf cart, and engines used in such vehicles produced for sale, lease, or use, or introduced into commerce in California which is subject to any of the standards prescribed in this subpart is required to be covered by an executive order issued pursuant to this subpart.

86.408-78 General Standards; Increase in Emissions; Unsafe Conditions.

(a) DELETE, “Any system installed on or incorporated in a new motorcycle to enable such vehicle to conform to standards imposed by this subpart:”

REPLACE WITH:

“Any system installed on or incorporated in a new off-road motorcycle, all-terrain vehicle, off-road sport vehicle, off-road utility vehicle, sand car, golf cart or engines used in such vehicles to enable such vehicles to conform to standards imposed by this subpart:”

(b) DELETE,  
REPLACE WITH:

(b) Every manufacturer of new off-road motorcycles, all-terrain vehicles, off-road sport vehicles, off-road utility vehicles, sand cars, and engines used in such vehicles, which subject to any of the standards imposed by this subpart shall test or cause to be tested off-road motorcycles, all-terrain vehicles, off-road sport vehicles, off-road utility vehicles, sand cars, and engines used in such vehicles, in accordance with good engineering practice to ascertain that such test vehicles will meet the requirements of this section for the useful life of the vehicle.

86.409-78 Defeat Devices, Prohibition.

(a) motorcycle DELETE,  
REPLACE WITH:

“off-road motorcycle, all-terrain vehicle, golf cart, off-road sport vehicle, off-road utility vehicle, sand car, and engines used in such vehicles...”

\* \* \* \*

86.410-80 Emission standards for 1980 and later model year motorcycles.  
49 FR 48138, Dec. 10, 1984

DELETE

86.410-90 Emission standards for 1990 and later model year motorcycles. 54 FR 14539, Apr. 11, 1989

(a) DELETE,  
REPLACE WITH:

(a)(1) Exhaust emissions from 1997 and later off-road motorcycles and all-terrain vehicles with engines greater than 90 cc must not exceed:

- (i) Hydrocarbons. 1.2 grams per vehicle kilometer. Compliance is based on a manufacturer's corporate average basis, as provided in (b) below.
- (ii) Carbon Monoxide. 15.0 grams per vehicle kilometer.

(2) Exhaust emissions from 1999 and later off-road motorcycles and all-terrain vehicles with engines 90 cc or less must not exceed:

- (i) Hydrocarbons. 1.2 grams per vehicle kilometer. Compliance is based on a manufacturer's corporate average basis, as provided in (b) below.
- (ii) Carbon Monoxide. 15.0 grams per vehicle kilometer.

(3) Exhaust emissions from 2007 and later off-road sport vehicles, off-road utility vehicles, and sand cars must not exceed:

- (i) Hydrocarbons. 1.2 grams per vehicle kilometer. Compliance is based on a manufacturers corporate average basis, as provided in (b) below.
- (ii) Carbon Monoxide. 15.0 grams per vehicle kilometer.

~~(34)~~ The standards set forth in paragraphs (a)(1), (a)(2), and (a)(3) of this section refer to the exhaust emitted over driving schedules as set forth in subpart F and measured and calculated in accordance with those procedures.

(b) DELETE,  
REPLACE WITH:

(b) Compliance with a standards to be applied as a "corporate average" shall be determined as follows:

$$\frac{\sum_{j=1}^n (PROD)_{jx} (STD)_{jx}}{\sum_{j=1}^n (PROD)_{jx}} = STD_{ca}$$

n = ~~Off-road motorcycle and all-terrain vehicle~~ Off-highway recreational vehicle engine families.

PROD<sub>jx</sub> = Number of units in engine family j produced for sale in California in model year x.

STD<sub>jx</sub> = The manufacturer designated HC exhaust emission standard for engine family j in model year x, which shall be determined by the manufacturer subject to the following conditions: (1) no individual engine family exhaust emission standard shall exceed 2.5 g/km, and (2) no engine family designation or engine family exhaust emission standard shall be amended in a model year after the engine family is certified for the model year, and (3) prior to sale or offering for sale in California, each engine family shall be certified in accordance with these test procedures, and shall be required to meet the manufacturer's designated HC exhaust emission standard as a condition of the certification Executive Order. Prior to certification the manufacturer shall also submit estimated production volumes for each engine family to be offered for sale in California.

STD<sub>ca</sub> = A manufacturer's corporate average HC exhaust emissions from those California off-road motorcycles and all-terrain vehicles subject to the California corporate average HC exhaust emissions standard, as established by an Executive Order certifying the California production for the model year. This order must be obtained prior to the issuance of certification Executive Orders for individual engine families for the model year and shall include but not be limited to the following requirements:

(1) During the manufacturer's production year, for each vehicle produced for sale in California, the manufacturer must provide the following information to the Executive Officer within 30 days after the last day in each calendar quarter:

- (i) vehicle identification numbers and an explanation of the identification code if applicable;
- (ii) model number and engine size of vehicle;
- (iii) the total number of vehicles marketed and produced for sale in California

and their applicable designated emissions standards;

(2) The manufacturer's average HC exhaust emissions shall meet the corporate average standard at the end of the manufacturer's production for the model year.

(3) Production and sale of vehicles which result in noncompliance with the California standard for the model year shall cause a manufacturer to be subject to civil penalties, according to applicable provisions of the Health and Safety Code. All excess emissions resulting from non-compliance with the California standard shall be made up in the following model year.

(4) For a period of up to one year following the end of the model year, for each model the manufacturer shall submit California sales and registration data as it becomes available.

ADD:

(c) As an option to the standards set forth in section (a)(1) above, exhaust emissions from 1997 and later all-terrain vehicle engines and 2007 and later off-road sport vehicles, off-road utility vehicles, and sand cars must not exceed the equivalent to the off-road motorcycle and all-terrain vehicle applicable HC+NO<sub>x</sub> standard in Section 2412(b), CCR, Title 13, using the test procedures set forth in "California Exhaust Emission Standards and Test Procedures for 1995 ~~and Later 2004~~ Small Off-Road Engines", adopted March 20, 1992, and last amended ~~March 26, 1998~~ July 26, 2004, which is hereby incorporated by reference herein. Compliance with the optional HC+NO<sub>x</sub> standard is based on a manufacturer's corporate average basis, as provided in ~~(b) above~~ Section 2412(d), CCR, Title 13.

(d)(1) Emissions from 1997 and later model year golf carts operating in federal ozone non-attainment areas of California must not exceed zero grams hydrocarbon, carbon monoxide, oxides of nitrogen, and particulate matter.

(2) These vehicles must be certified by the Executive Officer pursuant to all applicable regulations set forth in CCR, Title 13, Chapter 9. Emission test procedures are not applicable to these vehicles.

(3) On or after January 1, 1997, manufacturers must not produce for sale in federal ozone non-attainment areas of California new nonzero emission engines for use in golf carts.

(e)(1) As an option to the standards set forth in section (a) above, off-road motorcycles and ATVs, and engines used in such vehicles, that do not meet the emissions standards in section (a) may operate only during certain periods at certain off-highway vehicle (OHV) riding areas. CCR, Title 13, Chapter 9, Article 3, Section 2415 lists these California OHV riding areas and their associated riding seasons for off-highway recreational vehicles that are subject to use restrictions.

(2) These vehicles must be certified by the Executive Officer pursuant to all applicable regulations set forth in CCR, Title 13, Chapter 9. Emission testing is not applicable to these vehicles.

(f) No crankcase emissions shall be discharged into the ambient atmosphere from the following vehicles, or from engines used in such vehicles:

- (1) 1997 and later off-road motorcycles, all-terrain vehicles, and golf carts;
- (2) 2007 and later off-road sport vehicles, off-road utility vehicles, and sand cars.

(g) The Executive Officer may find that any off-road motorcycles, all-terrain vehicles, off-road sport vehicles, off-road utility vehicles, sand cars or engines used in such vehicles certified to comply with California emission standards and test procedures for on-road or other off-road applications are in compliance with these regulations.

86.410-2006 Emission standards for 2006 and later model year motorcycles.  
69 FR 2435, Jan. 15, 2004

DELETE

86.411 - 78 Maintenance instructions, vehicle purchaser.

(a) "motorcycle" DELETE,  
REPLACE WITH:

"off-road motorcycle, all-terrain vehicle, golf cart, off-road sport vehicle, off-road utility vehicle, sand car, and engines used in such vehicles..."

\* \* \* \*

86.412 - 78 Maintenance instructions, submission to Administrator.

\* \* \* \*

(a)(1) DELETE,  
REPLACE WITH:

(a)(1) The manufacturer must provide to the Executive Officer, at least 30 days before being supplied to the ultimate purchaser (unless the Executive Officer consents to a lesser period of time), a copy of the maintenance instructions which the manufacturer proposes to supply to the ultimate purchaser. The instructions must include the periodic and anticipated maintenance contained in the applications for certification or contained in the manufacturers' records. Such instructions must be reasonable and necessary to assure the proper functioning of the vehicle's emission control systems.

\* \* \* \*

b) "motorcycle" DELETE,  
REPLACE WITH:

"off-road motorcycle, all-terrain vehicle, golf cart, off-road sport vehicle, off-road utility vehicle, sand car, and engines used in such vehicles..."

\* \* \* \*

86.413 - 78 Labeling. 42 FR 56737, Oct. 28, 1977

(a) DELETE,  
REPLACE WITH:

(a) All 1997 and later model year off-road motorcycles, all-terrain vehicles, and engines used in such vehicles, except those certified according to 86.410-90(e), and 2007 and later model year off-road sport vehicles, off-road utility vehicles, sand cars, and engines used in such vehicles, have California labeling requirements which shall be consistent with (a) these test procedures, and (b) Title 13, California Code of Regulations, Chapter 9, Section 2413 ~~and the incorporated "California Motor Vehicle Emission Control and Smog Index Label Specifications", adopted March 1, 1978, as last amended June 24, 1996 (as corrected September 20, 1996), which are incorporated herein by reference.~~

(b) DELETE

86.414 - 78 Submission of vehicle identification number.

(a) DELETE,  
REPLACE WITH:

(a) Upon the request by the Executive Officer, the manufacturer of any off-road motorcycle, ~~or all-terrain vehicle,~~ off-road sport vehicle, off-road utility vehicle, or sand car shall, within 30 days, identify by vehicle identification number, the vehicle(s) covered by the executive order.

(b) DELETE,  
REPLACE WITH:

(b)(1) The manufacturer of any off-road motorcycle, ~~or all-terrain vehicle,~~ off-road sport vehicle, off-road utility vehicle, or sand car certified under an Executive Order shall furnish to the Executive Officer, at the beginning of each model year, its vehicle identification-number (VIN) coding system description which identifies such vehicle(s) as covered by the Executive Order.

(b)(2) The (VIN) shall be consistent with the Code of Federal Regulations 49, Chapter V, Parts 565, 566, and 571, section 571.115 – Vehicle Identification Number – Content Requirements, which are incorporated herein by reference, except as noted below.

(b)(3) Manufacturers shall identify all California certified off-road motorcycles ~~and, all-terrain vehicles, off-road sport vehicles, off-road utility vehicles, and sand cars~~ meeting the emission standards in 86.410-90(a) by using any letter or digit other than the letter "C" or the digit "3" in the eighth character of the VIN.

(b)(4) Manufacturers shall exclusively reserve all letters and digits other than the letter "C" or the digit "3" for use in the eighth character of the VIN of California certified off-road motorcycles ~~and, all-terrain vehicles, off-road sport vehicles, off-road utility vehicles, and sand cars~~ meeting the emission standards in 86.410-90(a).

(b)(5) Manufacturers shall use either the letter "C" or the digit "3" for use in the eighth character of the VIN of California off-road motorcycles and all-terrain vehicles meeting the requirements in 86.410-90(e).

(b)(6) In lieu of (b)(3) and (b)(4) above, manufacturers may, at their option, agree to identify off-road motorcycles and all-terrain vehicles that do not meet the emission standards in 86.410-90(a), and do not meet the requirements in 86.410-90(e), and are offered for sale in California, by using the letter "C" or the digit "3" in the eighth character of the VIN.

86.415 - 78 Production vehicles. 49 FR 48138, Dec. 10, 1984.

\* \* \* \*

86.416 - 80 Application for certification. 49 FR 48138, Dec. 10, 1984.

(a) DELETE, "New motorcycles produced by a manufacturer whose projected sales in the United States is 10,000 or more units (for the model year in which certification is sought) are covered by the following:"

REPLACE WITH:

"New off-road motorcycles, all-terrain vehicles, off-road sport vehicles, off-road utility vehicles, sand cars, and engines used in such vehicles are covered by the following:"

\* \* \* \*

(iii) DELETE,  
REPLACE WITH:

(iii) Projected California sales data sufficient to enable the Executive Officer to select a test fleet representative of the vehicles for which certification is requested.

\* \* \* \*

(b) DELETE,

REPLACE WITH:

- (b) For new 1997 and subsequent model golf carts and off-road motorcycles and all-terrain vehicles meeting the requirements of 86.410-90(e) ["the vehicle(s)"], the certification application shall include the following, as applicable:
  - (1) Identification and description of the vehicle(s) covered by the application.
  - (2) Identification of the curb weight and gross vehicle weight rating of the vehicle.
  - (3) Identification and description of the propulsion system for the vehicle (golf carts only).
  - (4) Projected number of vehicles produced and delivered for sale or use in California, and projected California sales.
  - (5) All information necessary for proper and safe operation and maintenance of the vehicle, including recharging information (golf carts only), and other relevant information as determined by the Executive Officer.
  - (6) A copy of the owner's manual must be submitted during certification for approval by the Executive Officer. The manual must include the information as required by subsections (1), (2), (3), and (5) above.

(c) DELETE,  
REPLACE WITH:

- (c)(1) Manufacturers of off-road motorcycles, all-terrain vehicles, off-road sport vehicles, off-road utility vehicles, sand cars, and engines used in such vehicles must submit to the Executive Officer the number of vehicles, and engines used in such vehicles, marketed and produced for sale in California.
- (2) Such data must be submitted on a quarterly basis for all such vehicles and engines identified in the preceding paragraph that have been produced for sale in California on or after January 1, 1997. In addition to the data required under paragraph (c)(1), manufacturers must also provide the model number and VIN of each vehicle or engine sold for use in California and the number sold for use in California for each model. These data must be provided to the Executive Officer within 30 days after the last day in each calendar quarter.

\* \* \* \*

86.417 - 78 Approval of application for certification.

\* \* \* \*

86.418 - 78 Test fleet selection.

(a) DELETE,  
REPLACE WITH:

Test fleet selection and requirements on test vehicles are found in 86.419 to 86.423.

86.419 - 78 Engine displacement, motorcycle classes.

\* \* \* \*

(b)(1) DELETE,  
REPLACE WITH:

(b)(1) Class I - 0 to 169 cc displacement (0 to 10.4 cu. in.).

\* \* \* \*

86.419-2006 Engine Displacement, motorcycle classes. 69 FR 2437, Jan. 15, 2004

DELETE

86.420 - 78 Engine families. 44 FR 48205, Aug. 17, 1979.

\* \* \* \*

86.421 - 78 Test fleet.

\* \* \* \*

(b) DELETE

\* \* \* \*

86.422 - 78 Administrator's fleet.

\* \* \* \*

86.423 - 78 Test vehicles. 49 FR 48138, Dec. 10, 1984.

(a)(1) DELETE,  
REPLACE WITH:

(a)(1) The manufacturer may perform a zero-kilometer exhaust emission test.

\* \* \* \*

(a)(3) DELETE

\* \* \* \*

86.425 - 78 Test procedures.

(a) DELETE,  
REPLACE WITH:

(a) ~~Off-road motorcycle, and all-terrain vehicle, off-road sport vehicle, off-road utility vehicle, and sand car~~ emission test procedures are found in Subpart F. All-terrain vehicles, off-road sport vehicles, off-road utility vehicles and sand cars shall be tested on the Class I cycle, regardless of the engine displacement. With prior approval by the Executive Officer, manufacturers of all-terrain vehicles, off-road sport vehicles, off-road utility vehicles, and sand cars may use the emission test procedures incorporated in California Code of Regulations, Title 13, Sections 2403 to certify their vehicles. The Executive Officer shall grant approval to those manufacturers who provide information and test results showing the appropriate emission standards on the small off-road engine test cycle that are equivalent to the all-terrain vehicle emission standards set forth in 86.410-90(a)(1). The Executive Officer shall consider data submitted by the manufacturer from engines similar to the engine to be certified. This data will include, but not be limited to, the engine size, performance, operating characteristics, and technology used. The data should be statistically valid in order to set the complying emissions standard applicable for the engine family to be certified on the small off-road engine test cycle.

\* \* \* \*

86.426 - 78 Service accumulation. 42 FR 56737, Oct. 28, 1977.

DELETE,  
REPLACE WITH:

Manufacturers shall determine the appropriate service accumulation for their vehicles.

86.427 - 78 Emission tests. 49 FR 48139, Dec. 10, 1984.

(a)(1) DELETE,  
REPLACE WITH:

(a)(1) Each test vehicle shall be driven with all emission control systems installed and operating for a period of time as deemed appropriate by the manufacturer to stabilize the emission characteristics of the engine.

\* \* \* \*

(b) DELETE,  
REPLACE WITH:

(b) All vehicles shall undergo at least two emission tests at intervals specified by the manufacturer. Additional tests may be performed at the manufacturer's option.

(c) DELETE

(d) DELETE

(e) DELETE

\* \* \* \*

86.428 - 80 Maintenance, scheduled; test vehicles.

DELETE,  
REPLACE WITH:

Periodic maintenance on the engine, emission control system, and fuel system of test vehicles shall be scheduled for the same intervals that will be specified in the manufacturer's maintenance instructions furnished to the ultimate purchaser.

86.429 - 78 Maintenance, unscheduled; test vehicles.

\* \* \* \*

86.430-78 Vehicle failure. 49 FR 48139, Dec. 10, 1984.

\* \* \* \*

86.431 - 78 Data submission. 49 FR 48139, Dec. 10, 1984.

(a) DELETE,  
REPLACE WITH:

(a) Data from all tests (including voided tests) performed by a manufacturer shall be included in the applications.

\* \* \* \*

86.432 - 78 Deterioration factor. 49 FR 48139, Dec. 10, 1984.

(a) DELETE,  
REPLACE WITH:

(a) The manufacturer shall determine the appropriate deterioration factors.

\* \* \* \*

(c) DELETE,

REPLACE WITH:

(c) Manufacturers shall determine the appropriate deterioration factor for the designated useful life.

(d) DELETE

\* \* \* \*

(f) DELETE

86.434 - 78 Testing by the Administrator. 49 FR 48139, Dec. 10, 1984.

(a) DELETE,  
REPLACE WITH:

(a) At the conclusion of certification testing by manufacturers, the ARB may require confirmatory testing. The ARB will designate where such testing shall be performed.

\* \* \* \*

86.435 - 78 Extrapolated emission values. 49 FR 48139, Dec. 10, 1984.

DELETE

86.436 - 78 Additional service accumulation. 49 FR 48139, Dec. 10, 1984.

DELETE

86.437 - 78 Certification. 47 FR 49807, Nov. 2, 1982.

(a) DELETE, "New motorcycles produced by a manufacturer whose projected sales in the United States is 10,000 or more units (for the model year in which certification is sought) are covered by the following:"

REPLACE WITH:

"Manufacturers of new off-road motorcycles and all-terrain vehicles produced on or after January 1, 1997, and manufacturers of off-road sport vehicles, off-road utility vehicles, and sand cars produced on or after January 1, 2007, shall submit to the Executive Officer a statement that the test vehicles, for which data are submitted, have been tested, and conform to the requirements of the regulations to their designated useful life."

\* \* \* \*

(b) DELETE

86.438 - 78 Amendments to the application.

\* \* \* \*

86.439 - 78 Alternative procedure for notification of additions and changes. 49 FR 48139, Dec. 10, 1984.

\* \* \* \*

86.440 - 78 Maintenance of records. 49 FR 48140, Dec. 10, 1984.

\* \* \* \*

86.441 - 78 Right of entry.

\* \* \* \*

86.442 - 78 Denial, revocation, or suspension of certification. 42 FR 56738, Oct. 28, 1977.

\* \* \* \*

86.443 - 78 Request for hearing.

\* \* \* \*

86.444 - 78 Hearings on certification.

\* \* \* \*

86.445-2006 What temporary provisions address hardship due to unusual circumstances? 69 FR 2437, Jan. 15, 2004

DELETE

86.446-2006 What are the provisions for extending compliance deadlines for small-volume manufacturers under hardship? 69 FR 2437, Jan. 15, 2004

DELETE

86.447-2006 What are the provisions for exempting motorcycles under 50 cc from the requirements of this part if they use engines certified under other programs? 69 FR 2438, Jan. 15, 2004

DELETE

86.448-2006 What are the provisions for producing motorcycles under 50 cc with

engines already certified under other programs?  
69 FR 2438, Jan. 15, 2004

DELETE

86.449 Averaging Provisions. 69 FR 2439, Jan. 15, 2004

DELETE

Subpart F -- Emission Regulations for 1978 and Later New Motorcycles; Test Procedures

SOURCE: 42 FR 1137, Jan. 5, 1977, unless otherwise noted.

86.501 - 78 Applicability.

\* \* \* \*

86.502 - 78 Definitions.

\* \* \* \*

86.503 - 78 Abbreviations.

DELETE,  
REPLACE WITH:

The abbreviations in 86.403-78 apply to this subpart, with the following additions:

ARB-	California Air Resources Board.
Bhp-	Brake-horsepower.
Bhp-hr-	Brake horsepower-hour.
Hp-	Horsepower.
PM-	Particulate Matter.

86.504 - 78 Section numbering.

\* \* \* \*

86.505 - 78 Introduction; structure of subpart.

\* \* \* \*

86.505 - 2004 Introduction; structure of subpart. 69 FR 2440, Jan. 15, 2004

DELETE

86.508 - 78 Dynamometer. 42 FR 56738, Oct. 28, 1977.

\* \* \* \*

86.509 - 90 Exhaust gas sampling system. 54 FR 14539, Apr. 11, 1989.

\* \* \* \*

86.511 - 90 Exhaust gas analytical system. 54 FR 14539, Apr. 11, 1989.

\* \* \* \*

86.513 - 87 Fuel and engine lubricant specifications. 52 FR 47869, Dec. 16, 1987.

DELETE

86.513 - 90 Fuel and engine lubricant specifications. 54 FR 14544, Apr. 11, 1989.

\* \* \* \*

86.513 - 94 Fuel and engine lubricant specifications. 60 FR 34354, June 30, 1995.

DELETE

86.513 - 2004 Fuel and engine lubricant specifications. 69 FR 2441, Jan. 15, 2004

DELETE

86.514 - 78 Analytical gases.

\* \* \* \*

86.515 - 78 EPA Urban Dynamometer Driving Schedule.

\* \* \* \*

86.516 - 90 Calibrations, frequency and overview. 54 FR 14546, Apr. 11, 1989.

\* \* \* \*

86.518 - 78 Dynamometer calibration.

\* \* \* \*

86.519 - 90 Constant volume sampler calibration. 54 FR 14546, Apr. 11, 1989.

\* \* \* \*

86.521 - 90 Hydrocarbon analyzer calibration. 54 FR 14546, Apr. 11, 1989.

\* \* \* \*

86.522 - 78 Carbon monoxide analyzer calibration.

\* \* \* \*

86.523 - 78 Oxides of nitrogen analyzer calibration. 52 FR 47870, Dec. 16, 1987.

\* \* \* \*

86.524 - 78 Carbon dioxide analyzer calibration.

\* \* \* \*

86.526 - 90 Calibration of other equipment. 54 FR 14551, Apr. 11, 1989.

\* \* \* \*

86.527 - 90 Test procedures, overview. 54 FR 14551, Apr. 11, 1989.

\* \* \* \*

86.528 - 78 Transmissions.

\* \* \* \*

86.529 - 78 Road load force and inertia weight determination.

\* \* \* \*

86.529 - 98 Road load force and inertia weight determination. 63 FR 11849, Mar. 11, 1998

DELETE

86.530 - 78 Test sequence, general requirements.

\* \* \* \*

86.531 - 78 Vehicle preparation.

\* \* \* \*

86.532 - 78 Vehicle preconditioning.

\* \* \* \*

86.535 - 90 Dynamometer procedure. 54 FR 14551, Apr. 11, 1989.

\* \* \* \*

86.536 - 78 Engine starting and restarting.

\* \* \* \*

86.537 - 90 Dynamometer test runs. 54 FR 14551, Apr. 11, 1989.

\* \* \* \*

86.540 - 90 Exhaust sample analysis. 54 FR 14551, Apr. 11, 1989.

\* \* \* \*

86.542 - 90 Records required. 54 FR 14551, Apr. 11, 1989.

\* \* \* \*

86.544 - 90 Calculations; exhaust emissions. 54 FR 14553, Apr. 11, 1989.

The following provisions of Subparts A, B, C, F, and I, Part 1051, Title 40, Code of Federal Regulations, as adopted or amended by the U. S. Environmental Protection Agency on the date listed are adopted and incorporated herein by this reference as the California Exhaust Emission Standards and Test Procedures for 1997 and Later Off-Highway Recreational Vehicles and Engines. The following modifications generally substitute California references for federal references, but do not change any standard, implementation, or test procedure related to the evaporative control requirements found in the incorporated subparts of the federal regulation.

## PART 1051, CONTROL OF EMISSIONS FROM RECREATIONAL ENGINES AND VEHICLES

### Subpart A, Determining How to Follow This Part

1051.5 Which engines are excluded or exempted from this part's requirements?

DELETE

REPLACE WITH:

You may exclude vehicles with compression-ignition engines.

### Subpart B, Emission Standards and Related Requirements

SOURCE: 70 FR 40487, July 13, 2005, unless otherwise noted.

1051.101 What emission standards and other requirements must my vehicles meet?

DELETE.

1051.103 What are the exhaust emission standards for snowmobiles?

DELETE.

1051.105 What are the exhaust emission standards for off-highway motorcycles?

DELETE.

1051.107 What are the exhaust emission standards for all-terrain vehicles (ATVs) and offroad utility vehicles?

DELETE.

1051.110 What evaporative emission standards must my vehicles meet?

DELETE Introductory Text,

REPLACE WITH:

Your new vehicles must meet the emission standards of this section over their full useful life. Note that section 1051.245 of these test procedures allows you to use design-based certification instead of generating new emission data.

(a) DELETE

REPLACE WITH:

(a) Beginning with the 2008 model year, permeation emissions from your vehicle's fuel tank(s) may not exceed 1.5 grams per square-meter per day when measured with the test procedures for tank permeation in subpart F of this part of these test procedures. You may generate or use emission credits under the averaging, banking, and trading (ABT) program, as described in Subpart H, Part 1051, Title 40, Code of Federal Regulations, provided the credits and debits are from vehicles produced for sale in California.

\* \* \* \*

1051.115 What other requirements must my vehicles meet?

DELETE.

1051.120 What emission-related warranty requirements apply to me?

DELETE.

1051.125 What maintenance instructions must I give to buyers?

DELETE.

1051.130 What installation instructions must I give to vehicle manufacturers?

DELETE.

1051.135 How must I label and identify the vehicles I produce?

DELETE.

1051.137 What are the consumer labeling requirements?

DELETE.

1051.145 What provisions apply only for a limited time?

DELETE subparagraphs (a) through (f) and retain subparagraphs (g) and (h).

Subpart C, Certifying Engine Families

SOURCE: 70 FR 40492, July 13, 2005, unless otherwise noted.

1051.201 What are the general requirements for obtaining a certificate of conformity?

DELETE.

1051.205 What must I include in my application?

DELETE.

1051.210 May I get preliminary approval before I complete my application?

DELETE.

1051.220 How do I amend the maintenance instructions in my application?  
DELETE.

1051.225 How do I amend my application for certification to include new or modified vehicles or to change an FEL?  
DELETE.

1051.230 How do I select engine families?  
DELETE.

1051.235 What emission testing must I perform for my application for a certificate of conformity?  
DELETE.

1051.240 How do I demonstrate that my engine family complies with exhaust emission standards?  
DELETE.

1051.243 How do I determine deterioration factors from exhaust durability testing?  
DELETE:

1051.245 How do I demonstrate that my engine family complies with evaporative emission standards?

(a) DELETE.  
REPLACE WITH:

(a) For purposes of certification, your engine family is considered in compliance with the evaporative emission standards in subpart B of these test procedures and 2412(b), Title 13, California Code of Regulations (CCR), if you do either of the following:

(a)(1) DELETE.  
REPLACE WITH:

(a)(1) You have test results showing permeation emission levels from the fuel tanks and fuel lines in the family are at or below the evaporative standards in section 1051.110 of these test procedures and section 2412(b), Title 13, CCR, throughout the useful life.

\* \* \* \*

(c) DELETE.  
REPLACE WITH:

(c) To compare emission levels with the emission standards, apply deterioration factors to the measured emission levels. For permeation emissions, use the following procedures to establish an additive deterioration factor. An additive deterioration factor for a pollutant is the difference between emissions at the end of the useful life and emissions at the low-

hour test point. In these cases, adjust the official emission results for each tested vehicle or engine at the selected test point by adding the factor to the measured emissions. If the factor is less than zero, use zero. Additive deterioration factors must be specified to one more decimal place than the applicable standard:

(1) Section 1051.515 of these test procedures specifies how to test your fuel tanks to develop deterioration factors. Small-volume manufacturers may use assigned deterioration factors that we establish. Apply the deterioration factors as follows:

(i) Calculate the deterioration factor from emission tests performed before and after the durability tests as described in sections 1051.515(c) and (d) of these test procedures, using good engineering judgment. The durability tests described in section 1051.515(d) of these test procedures represent the minimum requirements for determining a deterioration factor. You may not use a deterioration factor that is less than the difference between evaporative emissions before and after the durability tests as described in sections 1051.515(c) and (d) of these test procedures.

(ii) Do not apply the deterioration factor to test results for tanks that have already undergone these durability tests.

(2) Determine the deterioration factor for fuel lines using good engineering judgment.

\* \* \* \*

(e)(1) DELETE.  
REPLACE WITH:

(e)(1) For certification to the evaporative standards specified in section 1051.110(a) of these test procedures and section 2412(b), Title 13, CCR, with the control technologies shown in the following table:

\* \* \* \*

(e)(2) DELETE.  
REPLACE WITH:

(e)(2) For certification to the standards specified in section 1051.110(b) of these test procedures and section 2412(b), Title 13, CCR, with the control technologies shown in the following table:

\* \* \* \*

1051.250 What records must I keep and make available to EPA?  
DELETE.

1051.255 What decisions may EPA make regarding my certificate of conformity?  
DELETE.

Subpart F, Test Procedures

SOURCE: 70 FR 40499, July 13, 2005, unless otherwise noted.

1051.501 What procedures must I use to test my vehicles or engines?

DELETE Introductory Test

(a) DELETE

(b) DELETE

(c) DELETE

REPLACE WITH:

(c) *Permeation testing.* (1) Use the equipment and procedures specified in section 1051.515 of these test procedures to measure fuel tank permeation emissions.

(2) DELETE

REPLACE WITH:

(2) Prior to permeation testing of fuel hose, the hose must be preconditioned by filling the hose with the fuel specified in paragraph (d)(3) of this section, sealing the openings, and soaking the hose for 4 weeks at 23 ±5 °C. To measure fuel-line permeation emissions, use the equipment and procedures specified in SAE J30 (incorporated by reference in section 1051.810 of these test procedures). The measurements must be performed at 23 ±2 °C using the fuel specified in paragraph (d)(3) of this section.

\* \* \* \*

(d)(1) DELETE

(d)(2) DELETE

REPLACE WITH:

(d)(2) *Fuel Tank Permeation.* (i) For the preconditioning soak described in section 1051.515(a)(1) of these test procedures and fuel slosh durability test described in section 1051.515(d)(3) of these test procedures, use the fuel specified in Table 1 of section 1065.710, Title 40, Code of Federal Regulations, blended with 10 percent ethanol by volume. As an alternative, you may use Fuel CE10, which is Fuel C as specified in ASTM D 471–98 (incorporated by reference in section 1051.810 of these test procedures) blended with 10 percent ethanol by volume.

(ii) For the permeation measurement test in section 1051.515(b) of these test procedures, use the fuel specified in Table 1 of section 1065.710, Title 40, Code of Federal Regulations. As an alternative, you may use the fuel specified in paragraph (d)(2)(i) of this section.

(d)(3) DELETE

REPLACE WITH:

(d)(3) Fuel Hose Permeation. Use the fuel specified in Table 1 of section 1065.710, Title 40, Code of Federal Regulations, blended with 10 percent ethanol by volume for permeation testing of fuel lines. As an alternative, you may use Fuel CE10, which is Fuel C as specified in ASTM D 471–98 (incorporated by reference in section 1051.810 of these test procedures) blended with 10 percent ethanol by volume.

(e) DELETE

\* \* \* \*

1051.505 What special provisions apply for testing snowmobiles?

DELETE.

1051.510 What special provisions apply for testing ATV engines? [Reserved]

DELETE.

1051.515 How do I test my fuel tank for permeation emissions?

\* \* \* \*

(a)(1) DELETE.

REPLACE WITH:

(a) Preconditioning fuel soak. To precondition your fuel tank, follow these five steps:

(1) Fill the tank with the fuel specified in section 1051.501(d)(2)(i) of these test procedures, seal it, and allow it to soak at  $28 \pm 5$  °C for 20 weeks. Alternatively, the tank may be soaked for a shorter period of time at a higher temperature if you can show that the hydrocarbon permeation rate has stabilized.

\* \* \* \*

(a)(3) DELETE.

REPLACE WITH:

(a)(3) Fill the fuel tank with the test fuel specified in section 1051.501(d)(2)(ii) of these test procedures to its nominal capacity. If you fill the tank inside the temperature-controlled room or enclosure, do not spill any fuel.

\* \* \* \*

(b)(7) DELETE.

REPLACE WITH:

(b)(7) At the end of the soak period, weigh the sealed fuel tank and record the weight to the nearest 0.1 grams. You may use less precise weights as long as the difference in mass from the start of the test to the end of the test has at least three significant figures. Unless

the same fuel is used in the preconditioning fuel soak and the permeation test run, record weight measurements on five separate days per week of testing. The test is void if a linear plot of tank weight vs. test days for the full soak period for permeation testing specified in paragraph (b)(5) of this section yields a coefficient of determination ( $r^2$ ) below 0.8. The coefficient of determination ( $r^2$ ) is calculated per the following equation:

$$r_y^2 = 1 - \frac{\sum_{i=1}^N [y_i - a_{0y} - (a_{1y} \cdot y_{refi})]^2}{\sum_{i=1}^N [y_i - \bar{y}]^2}$$

In this equation, “N” denotes sample size, “i” denotes an index, “y” denotes a generic measured quantity, the superscript over-bar “ $\bar{}$ ” denotes an arithmetic mean, and the subscript “<sub>ref</sub>” denotes the reference quantity being measured.

\* \* \* \*

(c) DELETE.  
REPLACE WITH:

(c) Determination of final test result. To determine the final test result, apply a deterioration factor to the measured emission level. The deterioration factor is the difference between permeation emissions measured before and after the durability testing described in paragraph (d) of this section. Adjust the baseline test results for each tested fuel tank by adding the deterioration factor to the measured emissions. The deterioration factor determination must be based on good engineering judgment. Therefore, during the durability testing, the test tank may not exceed the fuel tank permeation standard described in section 2412(b), Title 13, CCR, (this is known as “line-crossing”). If the deterioration factor is less than zero, use zero.

\* \* \* \*

(d)(3) DELETE.  
REPLACE WITH:

(d)(3) Slosh testing. Perform a slosh test by filling the tank to 40 percent of its capacity with the fuel specified in section 1051.501(d)(2)(i) of these test procedures and rocking it at a rate of 15 cycles per minute until you reach one million total cycles. Use an angle deviation of +15° to -15° from level. This test must be performed at a temperature of 28 °C ±5 °C.

\* \* \* \*

1051.520 How do I perform exhaust durability testing?  
DELETE.

Subpart I, Definitions and Other Reference Information

SOURCE: 70 FR 40507, July 13, 2005, unless otherwise noted.

1051.801 What definitions apply to this part?

DELETE ALL DEFINITIONS:

ADD:

The definitions in the California Health and Safety Code and in Title 13, CCR, § 2421, shall apply.

ADD:

The definitions in Part 86.402-78 of these test procedures shall apply and shall take precedent in the event of conflict.

ADD:

Act means California Health and Safety Code, Division 26, and corresponding regulations, except where the context indicates otherwise.

ADD:

Clean Air Act means California Health and Safety Code, Division 26, and corresponding regulations, except where the context indicates otherwise.

ADD:

Designated Compliance Officer means the Executive Officer of the Air Resources Board (or the Executive Officer's designee).

ADD:

Designated Enforcement Officer means the Executive Officer of the Air Resources Board (or the Executive Officer's designee).

ADD:

EPA or U.S. EPA means Air Resources Board.

ADD:

We (us, our) means the Executive Officer of the California Air Resources Board and any authorized representatives.

ADD:

You means, within the context of its usage, the target entity to which the regulatory provision applies. This is typically the engine manufacturer, but may occasionally refer to

the equipment manufacturer or other entity as specified.

1051.805 What symbols, acronyms, and abbreviations does this part use?

DELETE.

1051.810 What materials does this part reference?

DELETE Introductory Text

\* \* \* \*

Table 2 Row 2 “SAE J1930, Electrical/Electronic Systems 1051.135 Diagnostic Terms, Definitions, Abbreviations, and Acronyms, May 1998.....”

DELETE.

1051.815 What provisions apply to confidential information?

DELETE.

1051.820 How do I request a hearing?

DELETE.