



**Winston H. Hickox**  
Secretary for  
Environmental  
Protection

# Air Resources Board

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**Alan C. Lloyd, Ph.D.**  
Chairman

9528 Telstar Avenue • P.O. Box 8001 • El Monte, California 91731 • [www.arb.ca.gov](http://www.arb.ca.gov)

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**Gray Davis**  
Governor

## Notice of Public Availability of Modified Text

### PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE CALIFORNIA EXHAUST STANDARDS FOR ON-ROAD MOTORCYCLES

Public Hearing Date: December 10, 1998  
Public Availability Date: September 17, 1999  
Deadline for Public Comment: October 4, 1999

At a public hearing held December 10, 1998, the Air Resources Board (the "Board") considered amendments to section 1958, title 13, California Code of Regulations ("CCR") and the incorporated "Exhaust Emission Standards and Test Procedures - Motorcycles Manufactured on or After January 1, 1978." The purpose of these amendments is to reduce exhaust emissions of hydrocarbons plus oxides of nitrogen (HC+NO<sub>x</sub>) from new on-road motorcycles, to provide manufacturers with flexibility through corporate averaging and early compliance provisions, and to amend the small-volume manufacturer provision. The proposed regulatory action is described in detail in the "Staff Report: Initial Statement of Reasons -- Proposed Amendments to the California On-Road Motorcycle Regulation" (Staff Report), released October 23, 1998.

At the hearing, the Board approved the proposed amendments to section 1958, title 13, CCR (see Enclosure 1), with modifications to the originally proposed regulatory language. The Board also approved a modification to include a new definition for "motorcycle engine" in section 1900, title 13, CCR. These modifications were made available for public comment during a 15-day comment period in a notice dated June 18, 1999 ("first 15-day notice"). In response to the first 15-day notice, a total of two comment letters were submitted, one by the Motorcycle Industry Council and the other from the American Honda Motor Company. The remainder of this notice provides a plain English description of additional modifications to the motorcycle regulation which we are proposing to address the concerns raised by these comment letters (see Enclosure A for the proposed regulatory language modifications).

§ 1958(f)(1)(A) and (B) - The language in the first 15-day notice has been replaced by simplified language in new subparts (A) and (B) to make it clear that small volume manufacturers must comply with the applicable HC-only emission limits in the Table of Standards (§ 1958(b)) until the 2008 Model Year, at which point the small volume manufacturers would be subject to the 1.4 g/km HC+NO<sub>x</sub> (as a corporate average) and 12 g/km CO standards.

§ 1958(f)(2) - The language in the first 15-day notice has been replaced by language which make it clear that the previous small volume manufacturer definition (i.e., those companies making fewer than 5,000 new Class I, II and III motorcycles) remains in effect only for vehicles made in model years 1984 through 1987, while the new 300 unit per year definition for small volume manufacturers applies only to model year 2004 and subsequent years. The proposed modification also changes the first 15-day notice's reference from "§ 1958(f)(1)(B) and (f)(1)(C)" to "§ 1958(f)(1)(A) and (f)(1)(B)" to be consistent with the renumbered subsections.

§ 1958 (g)(1) - The Table of Multipliers (for encouraging early compliance with the 0.8 g/km HC + NOx standard and beyond) has been modified to replace the references to "Tier-2 Compliant" with "Certified at 0.8 g/km HC + NOx or below." The words "or below" were also added to the phrase "Certified at 0.4 g/km HC + NOx" to make it clear that early compliance credits will be granted for overcompliance with these emission levels.

§ 1958 (g)(2) and (3) - New subpart (g)(2) was added to specify that all information requested by the Executive Officer in support of an application for early compliance credits must be provided in writing before the application is approved and any credits are granted. New subpart (g)(3) was added to make it clear that any early compliance credits granted shall be issued through an Executive Order, which will specify the exact amount of credits, their expiration dates, and all enforcement conditions that must be met for the credits to be valid. Also, applicants are required to state on each affected motorcycle's "California Motor Vehicle Emission Control and Smog Index Label" the actual certified HC + NOx emissions level for which the motorcycle or motorcycle engine has been granted early compliance credits.

§ 1965 - We are also proposing to modify the "California Motor Vehicle Emission Control and Smog Index Label Specifications" requirements (§ 1965, title 13, CCR) pertaining to labels for on-road motorcycles to be consistent with the changes we are proposing for § 1958.

The staff has made several other modifications throughout the regulation to correct grammatical and typographical errors, correct references and citations, and clarify the regulation. As noted above, Enclosure A contains the text of the modified regulatory language, with the modifications discussed in this 15-day notice shown by ***bold italic underline*** and deletions shown by ***~~bold italic strikeout~~***.

In accordance with section 11346.8 of the Government Code, the Board directed the Executive Officer to amend sections 1900 and 1958, as approved, after making the modified regulatory language available to the public for comment for a period of at least 15 days, provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make such modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

Only comments relating to the modifications described in this notice will be considered by the Executive Officer. To be considered by the Executive Officer prior to final action, all comments must be submitted in writing to Ms. Patricia Hutchens, Clerk of the Board, Air Resources Board, P.O. Box 2815, Sacramento, California 95812-2815, no later than **October 4, 1999.**

Sincerely,

Robert H. Cross, Chief  
Mobile Source Control Division

Enclosure

# ENCLOSURE A

## Proposed Regulation Order

Amend Title 13, California Code of Regulations, section 1958 to read as follows:

[Note: Proposed amendments for this rulemaking as noticed in the 45-day comment period are shown in **bold underlined** text to indicate additions and ~~strikeout~~ to indicate deletions. Changes proposed at the December 10, 1998 Board Hearing and in the first 15-day notice dated June 18, 1999, are shown in **bold double underlined** text to indicate additions and ~~bold strikeout~~ to indicate deletions. Changes proposed in this second 15-day notice version are shown in ***bold italic underlined*** and ***bold italic strikeout*** for additions and deletions, respectively.]

**§1900(b)(17). “Motorcycle Engine” means an engine which is used to propel a new, street-use motorcycle.**

**§1958. Exhaust Emission Standards and Test Procedures — Motorcycles and Motorcycle Engines Manufactured on or after January 1, 1978.**

(a) This section shall be applicable to motorcycles, **motorcycle engines, and the manufacturers of either motorcycles or motorcycle engines** produced on or after January 1, 1978. Motorcycles **and motorcycle engines** are excluded from the requirements of this section if:

- (1) The engine displacement is less than 50 cubic centimeters, or
- (2) An 80 kilogram (176 pound) driver cannot:
  - (A) start from a dead stop using only the engine, or
  - (B) exceed a maximum speed of 40 kilometers per hour (24.9 miles per hour) on a level paved surface.

- (b) Exhaust emissions from new street-use motorcycles **and motorcycle engines**, subject to registration and sold and registered in this state, shall not exceed:

**Exhaust Emission Table of Standards**  
(grams per kilometer)

Model-Year	Engine <b>Displacement</b> (in cubic centimeters)	<b>Exhaust Emission Standards (grams per kilometer)</b>	
		Hydrocarbon (HC) <b>+ Oxides of Nitrogen (NOx)</b>	Carbon Monoxide
1978 to 1979	50 to less than 170	5.0 (HC only)	17
1978 to 1979	170 to less than 750	5.0 + 0.0155(D-170)* (HC only)	17
1978 to 1979	750 or greater	14 (HC only)	17
1980 to 1981	All (50 cc or larger)	5.0 (HC only)	17
1982 and subsequent	50 cc to 279 cc	1.0 (HC only)	12
1982 through 1985 (manufactured prior to March 1, 1985)	280 cc or greater	2.5 (HC only)	12
1985 (manufactured after February 28, 1985) through 1987	280 cc or greater	1.4 (HC only), applied as a corporate average, ** provided that each engine family shall have only one applicable standard	12
1988 and subsequent through <b>2003</b>	280 cc to 699 cc	1.0 (HC only), applied as a corporate average, ** provided that each engine family shall have only one applicable standard	12
1988 and subsequent through <b>2003</b>	700 cc or greater	1.4 (HC only), applied as a corporate average, ** provided that each engine family shall have only one applicable standard	12
<b>2004 through 2007</b>	<b>280 cc or greater</b>	<b>1.4 (HC + NOx), applied as a corporate average, ** provided that each engine family shall have only one applicable standard</b>	<b>12</b>
<b>2008 and subsequent</b>	<b>280 cc or greater</b>	<b>0.8 (HC + NOx), applied as a corporate average, ** provided that each engine family shall have only one applicable standard</b>	<b>12</b>

\*D = engine displacement of motorcycles in cubic centimeters.

\*\*Compliance with a standard to be applied as a “corporate average” shall be determined as follows:

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

**where,**

- n = Class III motorcycle engine families (**engines with displacement of 280 cc or greater manufactured after February 28, 1985**).
- PROD<sub>jx</sub> = Number of units of Class III engine family j produced for sale in California in model year x
- STD<sub>jx</sub> = The manufacturer designated HC **or HC + NOx** emission standard, **whichever applies**, 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~~
  - (1) **for Model Year 1988 through 2003 motorcycle engines and motorcycles with engine displacement of 280 cc or greater, no individual engine family exhaust emission standard shall exceed 2.5 g/km HC, and**
  - (2) **for Model Year 2004 and subsequent motorcycle engines and motorcycles with engine displacement of 280 cc or greater, no individual engine family exhaust emission standard shall exceed 2.5 g/km HC+NOx, and**
  - (3) 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
  - (4) prior to sale or offering for sale in California, each engine family shall be certified in accordance with Section 1958(c) and shall be required to meet the manufacturer's designated HC **or HC + NOx** standard, **whichever applies**, 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 **or HC + NOx** exhaust emissions, **whichever applies**, from those California motorcycles **or motorcycle engines** subject to the California corporate average HC **or HC + NOx** exhaust emission 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 engine family, the manufacturer shall provide the following information to the Executive Officer within 30 days after the last day in each calendar quarter:

- (aA) vehicle identification numbers and an explanation of the identification code;
  - (bB) the total number of vehicles or motorcycle engines produced for sale in California and their applicable designated emissions standards.
- (2) The manufacturer's average HC or HC + NO<sub>x</sub> exhaust emissions, **whichever applies**, shall meet the applicable corporate average standard at the end of the manufacturer's production for the model year.

[Note: No changes are proposed for Section 1958(b)(3) through (e)]

(f) (1) **Small Volume Manufacturers:** Exhaust emission standards for from Class III motorcycles and motorcycle engines of produced by small volume manufacturers shall not be exceeded are as follows:

- ~~(A) For Model Year 19848 through 2007, Class III motorcycle engines and no motorcycles with engine displacements between 280 cc and 699 cc shall emit no more than 1.0 gram per kilometer hydrocarbon, applied as a corporate average, provided that no engine family shall emit greater than 2.5 grams per kilometer hydrocarbon for the 1984, 1985, 1986, and 1987 model years; Class III motorcycle engines and motorcycles with engine displacements of 700 cc or greater shall emit no more than 1.4 gram per kilometer hydrocarbon, applied as a corporate average, provided that no engine family shall emit greater than 2.5 grams per kilometer hydrocarbon.~~
- ~~(B) For Model Year 2008 and subsequent, Class III no motorcycles and motorcycle engines shall exceed emit no more than 1.4 grams per kilometer HC+NO<sub>x</sub>, applied as a corporate average, provided that no engine family shall emit greater than 2.5 grams per kilometer HC+NO<sub>x</sub>.~~
- (A) For Model Years through 2007, Class III motorcycles and motorcycle engines shall meet the applicable HC-only and CO emission limits specified in the Table of Standards in subsection 1958(b).
- (B) For Model Year 2008 and subsequent, Class III motorcycles and motorcycle engines shall emit no more than 12 grams of CO per kilometer and 1.4 grams per kilometer HC+NO<sub>x</sub>, applied as a corporate average, provided that no engine family shall emit greater than 2.5 grams per kilometer HC + NO<sub>x</sub>.

To obtain certification as a small volume manufacturer pursuant to this subsection, the manufacturer shall submit product information and estimated sales data with the certification application for each engine family sold in California. As a condition of obtaining certification as a small volume manufacturer, the manufacturer shall submit annually to the state board **Executive Officer** a summary of its efforts and progress

toward meeting more stringent hydrocarbon **HC + NO<sub>x</sub>** exhaust emission standards. The summary shall include a description of the manufacturer's current hydrocarbon **HC + NO<sub>x</sub>** emission control development status, along with supporting test data, and future planned development work.

- (2) ~~For purposes of this subsection (f)(1)(A), a small volume manufacturer is one which sells less than 5,000 new Class I, II, and III motorcycles per model year in California. For purposes of subsection (f)(1)(B) and (f)(1)(C), a small volume manufacturer is one which sells no more than 1,000 300 new Class I, II, and III (combined) motorcycles or motorcycle engines for use in model year 2004 or any subsequent model year in California.~~

For purposes of this subsection 1958(f)(2), the following provisions apply:

<i>For Model Years (MY)</i>	<i>Small Volume Manufacturer (SVM) definition is</i>	<i>Applicable Exhaust Emissions Requirements</i>
<i>prior to 1984</i>	<i>not applicable</i>	<i>For all manufacturers, Section 1958(f)(1)(A) and 1958(b) apply.</i>
<i>1984 through 1987</i>	<i>one which sells less than 5,000 new Class I, II, and III motorcycles per model year in California</i>	<i>For SVMs, 2.5 grams per kilometer HC-only and 12 grams per kilometer CO apply only to Class III motorcycles. For all other manufacturers and Class I and II motorcycles, Section 1958(f)(1)(A) and 1958(b) apply.</i>
<i>1988 through 2007</i>	<i>not applicable</i>	<i>For all manufacturers, Section 1958(f)(1)(A) and 1958(b) apply.</i>
<i>2008 and subsequent</i>	<i>one which sells no more than 300 (combined) new Class I, II, and III motorcycles per model year in California, starting with the 2004 MY.</i>	<i>For SVMs, Section 1958(f)(1)(B) applies only to Class III motorcycles. For all other manufacturers and Class I and II motorcycles, Section 1958(b) applies.</i>

**(g) Early-Compliance Credits**

- (1) Manufacturers which sell Class III motorcycles or motorcycle engines in California certified as meeting either a 0.8 g/km or 0.4 g/km HC+NO<sub>x</sub> level prior to Model Year 2008 can receive credits for use in the Model Year 2008 corporate average upon written approval by the Executive Officer. Each unit of Class III motorcycle or motorcycle engine sold between Model Years 1999 and 2008 and which meets the requirements of this subsection shall be multiplied by whichever X multiplier applies, as shown in the following table:**

**Table of Multipliers to Encourage Early Compliance with  
the *Proposed Tier-2 0.8 g/km HC + NOx Standard and Beyond***

<u>Model Year Sold</u>	<u>Multiplier (X) for Use in MY 2008 Corporate Averaging</u>	
	<u><i>Early Tier-2 Compliant Certified at 0.8 g/km HC + NOx or below</i></u>	<u><i>Certified at 0.4 g/km HC+NOx or below</i></u>
<u>1999 through 2004</u>	<u>1.5</u>	<u>3.0</u>
<u>2005</u>	<u>1.375</u>	<u>2.5</u>
<u>2006</u>	<u>1.250</u>	<u>2.0</u>
<u>2007</u>	<u>1.125</u>	<u>1.5</u>
<u>2008 and subsequent</u>	<u>1.0</u>	<u>1.0</u>

Note: Each unit of early *Tier-2* compliant and *0.4 g/km* certified motorcycles and motorcycle engines is counted cumulatively toward the MY 2008 corporate average.

(2) Applications for early compliance credits pursuant to this subsection shall include in writing all emissions data, test protocols, equipment specifications, operating conditions, and any other technical information requested by the Executive Officer.

(3) The Executive Order approving early compliance credits under this subsection shall specify the exact amount of credits granted, the date of expiration for the credits, and all enforcement provisions applicable to the use of early compliance credits. Each motorcycle and each motorcycle that incorporates an engine for which early compliance credits have been granted pursuant to this subsection shall specify on its "California Motor Vehicle Emission Control And Smog Index Label" (Section 1965, Title 13, California Code of Regulations), in addition to all other existing requirements, the actual HC + NOx engine family exhaust emissions level for which the vehicle or engine has been granted early compliance credit.

(h) **Sunset Review**

Within five years from the effective date of adoption or date of implementation, which ever comes later, the Air Resources Board, in consultation with the Secretary for Environmental Protection, shall review the provisions of this section to determine whether it should be retained, revised, or repealed.

Note: Authority cited: Sections 39600, 39601, 43013, 43101, 43104, and 43107, Health and Safety Code. Reference: Sections 39002, 39003, 43000, 43013, 43100, 43101, 43104, and 43107, Health and Safety Code; and Cal. Stats. 83, Ch. 103.

**Proposed Amendments to “Emission Control and Smog Index Label Specifications,”  
incorporated by reference in Section 1965, Title 13, California Code of Regulations**

[No changes are proposed for Section 1. “Purpose.”]

**2. Applicability.**

(a) The specifications for tune-up labels, vehicle emission configuration bar-code labels, and vehicle identification number bar-code labels shall apply to all new 1979 and subsequent model-year passenger cars, light-duty trucks, medium-duty vehicles, heavy-duty engines, and to all new 1982 and subsequent model year motorcycles *and motorcycle engines* certified to the applicable emission standards pursuant to California Health and Safety Code Sections 43100 and 43107. The “unleaded gasoline only” labeling requirements in section 3.(d) do not apply to 1997 and subsequent model year vehicles.

[No changes are proposed for subsections (b) and (c) of this section.]

(d) The responsibility for compliance with these specifications shall rest with the motorcycle, *motorcycle engine*, light-duty vehicle, medium-duty vehicle, or heavy-duty engine manufacturer who certified such vehicles or engines.

**3. Emission Control Labels.**

[No changes are proposed for paragraph 1 of this subsection.]

In selecting an acceptable location, the manufacturer shall consider the possibility of accidental damage (e.g., possibility of tools or sharp instruments coming in contact with the label) and accessibility for a bar-code scanner, as applicable. Each label shall be affixed in such a manner that it cannot be removed without destroying or defacing the label, and shall not be affixed to any part which is likely to be replaced during the vehicle’s useful life. For motorcycles *and motorcycle engines*, passenger cars, light-duty trucks, and medium-duty vehicles, the label(s) shall not be affixed to any equipment which is easily detached from the vehicle.

- (a) The tune-up label shall contain the following information lettered in the English language in block letters and numerals which shall be of a color that contrasts with the background of the label:
- i. The label heading shall read: “Vehicle Emission Control Information” for passenger cars, *and* motorcycles *and motorcycle engines*; “Important Vehicle Information” for light-duty and medium-duty trucks; and “Important Engine Information” for heavy-duty engines.

[No changes are proposed for subsection ii and iii in this section.]

- iv. Engine family identification, model designation, engine displacement (in cubic centimeters or liters), and for all 1993 and subsequent model-year vehicles the statement, “\_\_\_\_\_ (specify OBDI or OBDII, as applicable) certified” or “OBD Exempt” for all 1990 and subsequent model-year vehicles which do not have an Air Resources Board approved on-board diagnostic system. Motorcycles, ***motorcycle engines***, and ZEVs are exempt from these requirements.

[No changes are proposed for subsection v and vi in this section.]

- vii. For motorcycles ***and motorcycle engines*** only, any specific fuel or engine lubricant requirements (e.g., lead content, research octane number, engine lubricant type).

[No changes are proposed for subsection viii in this section].

- ix. An unconditional statement of compliance with the appropriate model-year California regulations; for example, “This vehicle (or engine, as applicable) conforms to California regulations applicable to \_\_ model-year new \_\_ (for 1992 and subsequent model years, specify TLEV, LEV, ULEV, SULEV, or ZEV, as applicable) (specify motorcycles, ***motorcycle engines***, passenger cars, light-duty trucks, medium-duty vehicles, heavy-duty Otto-cycle engines, or heavy-duty diesel engines, as applicable).” For federally certified vehicles certified for sale in California the statement must include the phrase “conforms to U.S. EPA regulations and is certified for sale in California.” For Class III motorcycles ***and motorcycle engines*** for sale in California, the statement must include the phrase “is certified to \_\_HC engine family exhaust emission standard in California.” ***In addition, for Class III motorcycles and motorcycle engines for sale in California that meet the requirements of Section 1958(g) “Early Compliance Credits” (Title 13, CCR), the statement must also include the phrase “is certified to \_\_ (actual certified engine family exhaust emissions level) gram per kilometer HC+NOx engine family exhaust emissions level.”*** For incomplete light-duty truck and incomplete medium-duty vehicles the label shall contain the following statement in lieu of the above:

[No other changes are proposed in the remainder of subsection ix in this section and the remaining sections of the “Emission Control and Smog Index Label Specifications” regulation.]