

§ 86.1544-84

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(13) Idle exhaust CO concentration (dry basis).

(14) Idle exhaust raw CO₂ concentration (if applicable).

(15) Dilute bag sample CO and CO₂ concentrations (if applicable).

(16) Total CVS flow rate with calculated dilution factor for the idle mode (if applicable).

[48 FR 52252, Nov. 16, 1983, as amended at 49 FR 48149, Dec. 10, 1984]

§ 86.1544-84 Calculation; idle exhaust emissions.

(a) The final idle emission test results shall be reported as percent for carbon monoxide on a dry basis.

(b) If a CVS sampling system is used, the following procedure shall apply:

(1) Use the procedures, as applicable, in § 86.1342-84 to determine the dilute wet-basis CO and CO₂ in percent.

(2) Use the procedure, as applicable, in § 86.345-79 to determine the raw dry-basis CO₂ in percent.

(3) Convert the raw dry-basis CO₂ to raw wet-basis. An assumption that the percent of water by volume in the raw sample is equal to the percent of raw dry-basis CO₂ minus 0.5 percent is acceptable. For example:

10.0% dry CO₂ - 0.5% = 9.5% water
(1.00 - 0.095) (10.0% dry CO₂) = 9.05% wet CO₂

(4) Calculate the CVS dilution factor (DF) by:

$$DF = \frac{\text{Raw wet CO}_2 - \text{background CO}_2}{\text{Dilute wet CO}_2 - \text{background CO}_2}$$

(5) Convert the dilute wet-basis CO to dilute dry-basis values. An assumption that the percent of water by volume in the sample bag is 2 percent is acceptable. For example:

Dilute dry CO = (dilute wet CO) / (1.00 - 0.02)

(6) Calculate the raw dry-basis CO values by:

Raw dry CO = (DF) (dilute dry CO)

(c) If the raw exhaust sampling and analysis system specified in § 86.309-79 is used, the percent for carbon monoxide on a dry basis shall be calculated

using the procedure, as applicable, in § 86.345-79.

(Secs. 202, 203, 206, 207, 208, 301a, Clean Air Act, as amended; 42 U.S.C. 7521, 7522, 7525, 7541, 7542, 7601a)

[48 FR 52252, Nov. 16, 1983, as amended at 49 FR 48149, Dec. 10, 1984; 50 FR 10708, Mar. 15, 1985; 51 FR 24613, July 7, 1986]

Subpart Q—Regulations for Altitude Performance Adjustments for New and In-Use Motor Vehicles and Engines

AUTHORITY: Secs. 215 and 301, Clean Air Act, as amended (42 U.S.C. 7550 and 7601).

SOURCE: 45 FR 66956, Oct. 8, 1980, unless otherwise noted.

§ 86.1601 General applicability.

This subpart applies to manufacturers of motor vehicles and motor vehicle engines (hereafter referred to as vehicles) which are subject to the requirements of title II of the Clean Air Act. This subpart applies to the following vehicles:

(a) 1968 and later model year light-duty vehicles and light-duty trucks.

(b) 1970 and later model year heavy-duty engines built after December 31, 1969.

(c) 1978 and later model year motorcycles built after December 31, 1977.

§ 86.1602 Definitions.

The definitions provided in subpart A also apply in this subpart. Additional definitions that apply in this subpart are as follow:

Altitude performance adjustments are adjustments or modifications made to vehicle, engine, or emission control functions in order to improve emission control performance at altitudes other than those for which the vehicles were designed.

Low altitude means any elevation less than or equal to 1,219 meters (4,000 feet).

Manufacturer parts are parts produced or sold by the manufacturer of the motor vehicle or motor vehicle engine.

§ 86.1603 General requirements.

(a) Manufacturers of vehicles specified in § 86.1601 shall submit to the Administrator for approval the following altitude performance adjustment instructions.

(1) Low-altitude adjustment instructions for vehicles certified to meet the appropriate high-altitude emission standards.

(2) High-altitude adjustment instructions for vehicles certified to meet the appropriate low-altitude emission standards.

(b) Manufacturers are not required to submit altitude adjustment instructions for vehicles equipped with systems or devices that compensate (in full or in part) the engine fuel metering system for air density changes. Manufacturers claiming this exemption must submit to the Administrator for approval a notification of the claim specifying the affected vehicles. The notification must also describe the compensating system used.

(c) Manufacturers may request the Administrator to waive the application of this regulation for vehicles which potentially may never be operated at an altitude other than that for which they were designed (such as vehicles which are not offered for sale within the continental United States).

(d) Manufacturers shall meet the requirements of paragraph (a), according to the following schedule:

(1) Altitude adjustment instructions for all 1980 and earlier model year vehicles or engines shall be submitted to the Administrator within one (1) year of the effective date of this regulation.

(2) Altitude adjustment instructions for 1982 and later model year vehicles or engines shall be submitted to the Administrator within 30 days of the issuance of the certificate of conformity for those vehicles or engines. For vehicles or engines certified for the 1981 model year before the publication of this regulation, altitude adjustment instructions shall be submitted within 90 days of the publication of this regulation.

(e) Failure to submit altitude performance adjustment instructions in accordance with this section is a violation of section 203(a)(3) of the Clean Air Act and may result in penalties as

specified in section 205 of the Clean Air Act. The Administrator may grant extensions of the schedule in paragraph (c) if the manufacturer submits a written request to the Administrator specifying the reasons for the need for the extension. Requests for an extension must be received by EPA at least 5 working days prior to the submittal date contained in paragraph (d).

(f) The adjustment instructions (including labels) that the Administrator approves under this subpart shall be made available by the manufacturer at no cost to service outlets and the general public. EPA encourages manufacturers to notify vehicle owners in high-altitude areas of the availability of high-altitude adjustments.

(g) If altitude adjustments are performed according to the instructions approved by the Administrator, they will not be treated as violations of the tampering provisions of section 203(a) of the Act except as described below:

§ 86.1604 Conditions for disapproval.

(a) The Administrator shall not approve altitude performance adjustments that will:

(1) Cause any regulated pollutant emission level to increase if the emission level exceeded the appropriate emission standard before adjustment was made.

(2) Cause any regulated pollutant emission level to exceed the appropriate emission standard if the emission level did not exceed the emission standard before the adjustment was made.

(3) For light-duty vehicles, light-duty trucks, motorcycles, heavy-duty gasoline-fueled engines, cause any reduction of vehicle performance (as evaluated by the manufacturer) such that vehicle drivers will likely complain.

(4) Be of such technical complexity or require such complex, expensive, or exclusive equipment that a competent mechanic in an average service establishment cannot perform the adjustments correctly. Adjustment procedures should not require knowledge or training beyond that required to perform normal engine maintenance. All required equipment must be available to any service establishment at competitive cost.

(5) Require the use of manufacturer parts, unless they are necessary to ensure emission control performance and unless the Administrator grants a waiver under section 207(c)(3)(B) of the Act.

(6) Removes or defeats the parameter adjustment controls for the parameters listed in §§ 86.081-22(e)(1)(i) and 86.082-22(e)(1)(i) for light-duty vehicles and light-duty trucks, and § 86.428-80(d) for motorcycles unless:

(i) The manufacturer determines that it is reasonable to restore the parameter adjustment control in use and provides appropriate instruction as part of the high-altitude performance adjustment instructions, or

(ii) The manufacturer determines that it is not reasonable to restore the parameter adjustment control in use and alternatively includes on the label required in § 86.1606 a statement to the effect that the labeled vehicle can be adjusted but that adjustment to other than manufacturer specification may be considered violation of Federal law.

(b) If the Administrator determines that the altitude performance adjustment instructions cannot be approved, the Administrator shall notify the manufacturer in writing of the disapproval. This notification shall explain the reasons for the disapproval.

(1) Within 20 working days of the date of a notification of disapproval, the manufacturer may file a written appeal to the Administrator. The Administrator may allow additional oral or written testimony prior to rendering a final decision.

(2) If the manufacturer files no appeal with the Administrator, the disapproval becomes final.

(3) Within 30 days following the Administrator's final decision of disapproval, the manufacturer must submit new altitude performance adjustment instructions applying to all of the vehicles for which the disapproved instructions applied. If these new instructions are not submitted within 30 days, EPA may take action under sections 203(a)(3) and 205 of the Act. If the new altitude performance adjustment instructions are disapproved by the Administrator, the manufacturer may follow the appeal procedures under paragraphs (b)(1) and (b)(2) of this section.

(c) If the Administrator makes a final decision to disapprove the new instructions, EPA may take action under sections 203(a)(3) and 205 of the Act.

§ 86.1605 Information to be submitted.

(a) Manufacturers shall submit to the Administrator the text of the altitude performance adjustment instructions to be provided to vehicle owners and service establishments. Each set of altitude performance adjustment instructions must set forth the adjustment procedure (including the installation of the label required by § 86.1606) to be followed and identify the vehicles for which the instructions are applicable. At a minimum, each set of instructions shall identify the vehicle applicability by manufacturer, car line, model year, engine displacement, engine family, and exhaust emission control systems. Manufacturers may specify vehicle applicability in greater detail if necessary, but such specifications must be identifiable to the public and the service industry through vehicle marking or codes.

(b) The manufacturer shall submit to the Administrator the following information about the adjustments:

(1) Specifications of changes in calibrations of any component, including the original and new calibration values or curves;

(2) Descriptions of component additions, including a full description of the new components along with the configurations (sketch or drawing), calibration values, and part numbers;

(3) Descriptions of component replacements, including all items in paragraph (b)(2) of this section, for the new parts. Also, a description of the differences between the original component and the new component with respect to design, calibration, and function;

(4) Descriptions of any special tools necessary to perform the adjustments.

(c) The manufacturer shall submit to the Administrator the following evaluations of the adjustments:

(1) A statement that the conditions of § 86.1604 (a) (1) and (2) are not caused by the adjustment, and supporting information for this statement consisting of technical evaluations (consistent

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with good engineering practice) or emission test data.

(2) A statement that vehicle performance is generally unchanged or improved as result of the adjustments, and supporting information for this statement consisting of technical evaluations or driver evaluations.

(3) Information that shows compliance with section 202(a)(4)(A) of the Act (which prohibits vehicles from causing unreasonable risks to public health, welfare, and safety).

(d) The manufacturer shall submit to the Administrator for approval a copy or sample of the label required by § 86.1606 and a copy of the instructions for installation of the label.

§ 86.1606 Labeling.

(a) The manufacturer shall make available to the public as part of the altitude performance adjustment instructions the labels described in this section. Instructions for installing the labels according to the requirements of this section shall be provided with each label.

(b) The label installation instructions shall indicate the following information.

(1) For light-duty vehicles, light-duty trucks, and heavy-duty engines, the label should be affixed in a readily visible position in the engine compartment and beside (to the extent possible) the existing label which is required under § 86.079-35.

(2) For motorcycles, the label should be affixed in a readily accessible position and beside (to the extent possible) the existing label which is required under § 86.413-78(a)(1).

(3) The instructions shall also indicate that the label should not be affixed to any equipment that can be easily detached from the vehicle.

(c) The label must be constructed such that if installed properly, it cannot be removed without destroying or defacing the label.

(d) The label shall contain the following information lettered in the English language in block letters and numerals, which must be of a color that contrasts with the background of the label:

(1) The label heading: Vehicle Emission Control Information Update;

(2) Full corporate name and trademark of the vehicle manufacturer;

(3) The statement: "This vehicle has been (adjusted) (modified) to improve emission control performance when operated at (high) (low) altitude";

(4) Information on where altitude performance adjustment instructions may be obtained or include the actual altitude performance adjustment instructions;

(5) The new tuneup specifications (if changed from the original label specifications) at the applicable altitude.

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.