

for certification purposes, of all of its light-duty truck engine families included in the NO_x averaging program. It is calculated at the end of the model year by multiplying each family NO_x emission limit by its respective production, summing those terms, and dividing the sum by the total production of the effected families. Those vehicles produced for sale in California or at high altitude shall each be averaged separately from those produced for sale in any other area.

Production-weighted particulate average means the manufacturer's production-weighted average particulate emission level, for certification purposes, of all of its diesel engine families included in the particulate averaging program. It is calculated at the end of the model year by multiplying each family particulate emission limit by its respective production, summing those terms, and dividing the sum by the total production of the effected families. Those vehicles produced for sale in California or at high altitude shall each be averaged separately from those produced for sale in any other area.

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

[50 FR 10648, Mar. 15, 1985]

§ 86.088-10 Emission standards for 1988 and 1989 model year gasoline-fueled heavy-duty engines and vehicles.

(a)(1) Exhaust emissions from new 1988 and later model year gasoline-fueled heavy-duty engines shall not exceed:

(i) For engines intended for use in all vehicles except as provided in paragraph (a)(3) of this paragraph,

(A) *Hydrocarbons*. 1.1 grams per brake horsepower-hour, as measured under transient operating conditions.

(B) *Carbon monoxide*. (1) 14.4 grams per brake horsepower-hour, as measured under transient operating conditions.

(2) *Gasoline-fueled heavy-duty engines utilizing aftertreatment technology*. 0.50 percent of exhaust gas flow at curb idle.

(C) *Oxides of nitrogen*. 10.6 grams per brake horsepower-hour, as measured under transient operating conditions.

(ii) For engines intended for use only in vehicles with a Gross Vehicle Weight Rating of greater than 14,000 pounds,

(A) *Hydrocarbons*. 1.9 grams per brake horsepower-hour, as measured under transient operating conditions.

(B) *Carbon monoxide*. (1) 37.1 grams per brake horsepower-hour as measured under transient operating conditions.

(2) *Gasoline-fueled heavy-duty engines utilizing aftertreatment technology*. 0.50 percent of exhaust gas flow at curb idle.

(C) *Oxides of nitrogen*. 10.6 grams per brake horsepower-hour, as measured under transient operating conditions.

(2) The standards set forth in paragraph (a)(1) of this section refer to the exhaust emitted over the operating schedule set forth in paragraph (f)(1) of appendix I to this part, and measured and calculated in accordance with the procedures set forth in subparts N or P.

(3)(i) A manufacturer may certify one or more gasoline-fueled heavy-duty engine configurations intended for use in all vehicles to the emission standards set forth in paragraph (a)(1)(ii) of this paragraph: *Provided*, That the total model year sales of such configuration(s) being certified to the emission standards in paragraph (a)(1)(ii) of this section represent no more than 5 percent of total model year sales of all gasoline-fueled heavy-duty engines intended for use in vehicles with a Gross Vehicle Weight Rating of up to 14,000 pounds by the manufacturer.

(ii) The configurations certified to the emission standards of paragraph (a)(1)(ii) of this section under the provisions of paragraph (a)(3)(i) of this section shall still be required to meet the evaporative emission standards set forth in paragraphs (b)(1)(i)(A) and (b)(2)(i) of this section.

(b)(1) Evaporative emissions from 1988 and later model year gasoline-fueled heavy-duty vehicles shall not exceed:

(i) *Hydrocarbons*. (A) For vehicles with a Gross Vehicle Weight Rating of up to 14,000 pounds, 3.0 grams per test.

(B) For vehicles with a Gross Vehicle Weight Rating of greater than 14,000 pounds, 4.0 grams per test.

(2)(i) For vehicles with a Gross Vehicle Weight Rating of up to 26,000 pounds, the standards set forth in paragraph (b)(1) of this section refer to a composite sample of fuel evaporative emissions collected under the conditions set forth in subpart M and measured in accordance with those procedures.

(ii) For vehicles with a Gross Vehicle Weight Rating of greater than 26,000 pounds, the standard set forth in paragraph (b)(1)(i)(B) of this section refers to the manufacturer's engineering design evaluation using good engineering practice (a statement of which is required in § 86.088-23(b)(4)(ii)).

(c) No crankcase emissions shall be discharged into the ambient atmosphere from any new 1988 or later model year gasoline-fueled heavy-duty engine.

(d) Every manufacturer of new motor vehicle engines subject to the standards prescribed in this section shall, prior to taking any of the actions specified in section 203(a)(1) of the Act, test or cause to be tested motor vehicle engines in accordance with applicable procedures in subpart N or P of this part to ascertain that such test engines meet the requirements of paragraphs (a) and (c) of this section.

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

[50 FR 10651, Mar. 15, 1985, as amended at 52 FR 47864, Dec. 16, 1987]

§ 86.090-1 General applicability.

(a) The provisions of this subpart apply to: 1990 and later model year new Otto-cycle and diesel light-duty vehicles; 1990 and later model year new Otto-cycle and diesel light-duty trucks; and, 1990 and later model year new Otto-cycle and diesel heavy-duty engines.

(b) *Optional applicability.* A manufacturer may request to certify any heavy-duty vehicle of 10,000 pounds Gross Vehicle Weight Rating or less to the light-duty truck provisions. Heavy-duty engine or vehicle provisions do not apply to such a vehicle.

(c) [Reserved]

(d) *Alternative Durability Program.* For 1990 and later model year light-duty vehicles and light-duty trucks, a manu-

facturer may elect to participate in the Alternative Durability Program. This optional program provides an alternative method of determining exhaust emission control system durability. The general procedures and a description of the programs are contained in § 86.085-13 and specific provisions on test vehicles and compliance procedures are contained in § 86.085-24 and § 86.088-28 respectively.

(e) *Small-Volume Manufacturers.* Special certification procedures are available for any manufacturer whose projected combined U.S. sales of light-duty vehicles, light-duty trucks, and heavy-duty engines in its product line are fewer than 10,000 units for the model year in which the manufacturer seeks certification. In order to certify its product line under these optional procedures, the small-volume manufacturer must first obtain the Administrator's approval. Vehicles produced at facilities leased, operated, controlled, supervised, or is ten percent or greater part owned by the manufacturer shall be counted in calculating the total sales of the manufacturer. The small-volume manufacturer's certification procedures are described in § 86.090-14.

(f) *Optional Procedures for Determining Exhaust Opacity.* (1) The provisions of subpart I apply to tests which are performed by the Administrator, and optionally, by the manufacturer.

(2) Measurement procedures, other than that described in subpart I, may be used by the manufacturer provided the manufacturer satisfies the requirements of § 86.090-23(f).

(3) When a manufacturer chooses to use an alternative measurement procedure it has the responsibility to determine whether the results obtained by the procedure will correlate with the results which would be obtained from the measurement procedure in subpart I. Consequently, the Administrator will not routinely approve or disapprove any alternative opacity measurement procedure or any associated correlation data which the manufacturer elects to use to satisfy the data requirements of subpart I.

(4) If a confirmatory test(s) is performed and the results indicate there is a systematic problem suggesting that the data generated under an optional