

§ 86.601-84

40 CFR Ch. I (7-1-00 Edition)

0.30 ppm; CO<sub>dm</sub> = 8.13 ppm; CO<sub>2d</sub> = 0.037 pct; D<sub>ct</sub> = 5.650 km.

Then:

(i)  $V_{\text{mix}} = [(0.0077934)(12,115)(99.05 - 9.851)(293.15)] / [(101.325)(309.8)] = 78.651 \text{ m}^3 \text{ per test phase.}$

(ii)  $H = [(6.211)(20.5)(3.382)] / [(99.05) - (3.382)(20.5/100)] = 4.378 \text{ grams H}_2\text{O per kg dry air.}$

(iii)  $K_h = 1/[1 - 0.0329(4.378 - 10.71)] = 0.8276$

(iv)  $\text{CO}_e = [1 - 0.01925(0.415) - 0.000323(20.5)](311.23) = 306.68 \text{ ppm.}$

(v)  $\text{CO}_d = [1 - 0.000323(20.5)](8.13) = 8.08 \text{ ppm.}$

(vi)  $\text{DF} = 13.4/[0.415 + (249.75 + 306.68)10^{-4}] = 28.472$

(vii)  $\text{HC}_{\text{conc}} = 249.75 - 4.90(1 - 1/28.472) = 245.02 \text{ ppm.}$

(viii)  $\text{HC}_{\text{mass}} = (78.651)(576.8)(245.02)10^{-6} = 11.114 \text{ grams per test phase.}$

(ix)  $\text{NOx}_{\text{conc}} = 38.30 - 0.30(1 - 1/28.472) = 38.01 \text{ ppm.}$

(x)  $\text{NOx}_{\text{mass}} = (78.651)(1913)(38.01)(0.8276) \times 10^{-6} = 4.733 \text{ grams per test phase.}$

(xi)  $\text{CO}_{\text{conc}} = 306.68 - 8.08(1 - 1/28.472) = 298.88 \text{ ppm.}$

(xii)  $\text{CO}_{\text{mass}} = (78.651)(1164)(298.88)10^{-6} = 27.362 \text{ grams.}$

(xiii)  $\text{CO}_{2\text{conc}} = 0.415 - 0.037(1 - 1/28.472) = 0.3793 \text{ percent.}$

(xiv)  $\text{CO}_{2\text{mass}} = (78.651)(1843)(0.3793)/100 = 549.81 \text{ grams per test phase.}$

(2) For the "stabilized" portion of the cold-start test, assume that similar calculations resulted in HC<sub>mass</sub> = 7.184 grams per test phase; NOx<sub>mass</sub> = 2.154 grams per test phase; CO<sub>mass</sub> = 64.541 grams per test phase; and CO<sub>2mass</sub> = 529.52 grams per test phase. D<sub>s</sub> = 6.070 km.

(3) For the "transient" portion of the hot-start test, assume that similar calculations resulted in HC<sub>mass</sub> = 6.122 grams per test phase; NOx<sub>mass</sub> = 7.056 grams per test phase; CO<sub>mass</sub> = 34.964 grams per test phase; and CO<sub>2mass</sub> = 480.93 grams per test phase. D<sub>ht</sub> = 5.660 km.

(4) For a 1978 motorcycle with an engine displacement equal to or greater than 170 cc (10.4 cu. in):

(i)  $\text{HC}_{\text{wm}} = 0.43 [(11.114 + 7.184)/(5.650 + 6.070)] + 0.57 [(6.122 + 7.184)/(5.660 + 6.070)] = 1.318 \text{ grams per vehicle kilometer.}$

(ii)  $\text{NOx}_{\text{wm}} = 0.43 [(4.733 + 2.154)/(5.650 + 6.070)] + 0.57 [(7.056 + 2.154)/(5.660 +$

6.070)] = 0.700 gram per vehicle kilometer.

(iii)  $\text{CO}_{\text{wm}} = 0.43 [(27.362 + 64.541)/(5.650 + 6.070)] + 0.57 [(34.964 + 64.541)/(5.660 + 6.070)] = 8.207 \text{ grams per vehicle kilometer.}$

(iv)  $\text{CO}_{2\text{wm}} = 0.43 [(549.81 + 529.52)/(5.650 + 6.070)] + 0.57 [(480.93 + 529.52)/(5.660 + 6.070)] = 88.701 \text{ grams per vehicle kilometer.}$

[54 FR 14553, Apr. 11, 1989, as amended at 59 FR 48515, Sept. 21, 1994; 60 FR 34358, June 30, 1995]

**Subpart G—Selective Enforcement Auditing of New Light-Duty Vehicles**

SOURCE: 41 FR 31483, July 28, 1976, unless otherwise noted.

**§ 86.601-84 Applicability.**

For 1984 and later model year light-duty vehicles, all provisions of this subpart are applicable. The provisions of this subpart are not applicable to 1984 and later model year light-duty trucks.

(a) *Section numbering; construction.* (1) The model year of initial applicability is indicated by the two digits following the hyphen of the section number. A section remains in effect for subsequent model years until it is superseded.

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

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

(Secs. 206, 208(a) and 301(a), Clean Air Act, as amended, 42 U.S.C. 7525, 7542(a) and 7601(a))

[49 FR 69, Jan. 3, 1984. Redesignated at 54 FR 2122, Jan. 19, 1989, as amended at 62 FR 31234, June 6, 1997; 64 FR 23922, May 4, 1999]

**§ 86.602-84 Definitions.**

(a) The definitions in this section apply to this subpart.