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(l) For gasoline-fueled engines, calculate the brake-specific emissions and fuel consumption for the complete test as follows:

$$\begin{aligned} BSHC(T) &= 0.35 BSHC(1) = 0.65 BSHC(2) \\ BSCO(T) &= 0.35 BSCO(1) = 0.65 BSCO(2) \\ BSNO_x(T) &= 0.35 BSNO_x(1) = 0.65 BSNO_x(2) \\ WBSFC(T) &= 0.35 WBSFC(1) = 0.65 WBSFC(2) \end{aligned}$$

§ 86.346-79 Alternative NO_x measurement technique.

(a) Oxides of nitrogen (NO_x) may be measured with the following “alternative instrumentation” for both Diesel and gasoline-fueled engines. The “alternative instrumentation” shall consist of:

- (1) A heated sample line maintained above the dew point;
- (2) An NO₂ to NO converter obtaining a sample directly from the heated sample line; and
- (3) A combination per 40 CFR 86.777 or 40 CFR 86.977, whichever is applicable of a water trap, dryer, flow controls, and an NO NDIR analyzer obtaining a sample from the converter.

(b) The provisions of 40 CFR 86 subpart D shall apply to the “alternative instrumentation”, where applicable, with the following exceptions:

- (1) Analyzer specifications found in §§ 86.315, 86.321, and 86.322 do not apply to the “alternative instrumentation”.
- (2) For the purposes of this section, the full-scale value specified in § 86.338 (a)(1) shall be 1,500 ppm for Diesel engines and 2,500 ppm for gasoline-fueled engines.

(c) The “alternative instrumentation” shall be calibrated per § 86.330.

(d) The NO NDIR analyzer shall meet the performance and interference specifications contained in 40 CFR 86.777 or 40 CFR 86.977, whichever is applicable.

(e) The operation of the dryer shall follow good engineering practice such that the test results are not altered. Proper preconditioning of the dryer is allowed.

§ 86.347-79 Alternative calculations for diesel engines.

(a) *This section applies to Diesel engines only.* Gasoline-fueled engines must use the calculations in § 86.345.

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(b) For Diesel engines, the calculations specified in 40 CFR 86.977-15 may be substituted for § 86.345.

(c) The modal *BSFC* and weighted *BSFC* shall be calculated per § 86.345.

(d) If the provisions of this section are used, a CO₂ measurement is not required.

(e) Both 40 CFR 86.977-15(a) and § 86.313 shall apply to air-flow measurements. For the purposes of this section, the air-flow measurement accuracy specified in § 86.313 shall be ±1 percent.

§ 86.348-79 Alternative to fuel H/C analysis.

(a) Fuel H/C analysis need not be performed if the following average H/C ratios are used for all calculations.

- (1) #1B1 Diesel: 1:93
- (2) #1B2 Diesel: 1:80
- (3) Gasoline: 1.85
- (b) [Reserved]

[46 FR 50496, Oct. 13, 1981, and 47 FR 49807, Nov. 2, 1982]

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

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

§ 86.401-90 General applicability.

(a) This subpart applies to 1978 and later model year, new, gasoline-fueled motorcycles built after December 31, 1977, and to 1990 and later model year, new, methanol-fueled motorcycles built after December 31, 1989.

(b) Motorcycles with engine displacements less than 50 cc (3.1 cu in) are excluded from the requirements of this subpart.

(c) Motorcycles are excluded from the requirements of this subpart, if with an 80 kg (176 lb) driver, it cannot:

- (1) Start from a dead stop using only the engine, or
- (2) Exceed a maximum speed of 40 km/h (25 mph) on level paved surfaces.

[54 FR 14539, Apr. 11, 1989]

§ 86.401-2006 General applicability.

This subpart applies to 1978 and later model year, new, gasoline-fueled motorcycles built after December 31, 1977, and to 1990 and later model year, new

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methanol-fueled motorcycles built after December 31, 1989 and to 1997 and later model year, new natural gas-fueled and liquefied petroleum gas-fueled motorcycles built after December 31, 1996 and to 2006 and later model year new motorcycles, regardless of fuel.

[69 FR 2435, Jan. 15, 2004]

§ 86.401-97 General applicability.

(a) This subpart applies to 1978 and later model year, new, gasoline-fueled motorcycles built after 31 December, 1977, and to 1990 and later model year, new, methanol-fueled motorcycles built after 31 December, 1989 and to 1997 and later model year, new, natural gas-fueled and liquefied petroleum gas-fueled motorcycles built after 31 December, 1996.

(b) Motorcycles with engine displacements less than 50 cc (3.1 cu in) are excluded from the requirements of this subpart.

(c) Motorcycles are excluded from the requirements of this subpart, if with an 80 kg (176 lb) driver, it cannot:

(1) Start from a dead stop using only the engine; or

(2) Exceed a maximum speed of 40 km/h (25 mph) on level paved surfaces.

[59 FR 48512, Sept. 21, 1994]

§ 86.402-78 Definitions.

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

Act means part A of title II of the Clean Air Act, 42 U.S.C. 1857 f-1 through f-7, as amended by Pub. L. 91-604.

Administrator means the Administrator of the Environmental Protection Agency or his authorized representative.

Class, see § 86.419.

Crankcase emissions means airborne substances emitted to the atmosphere from any portion of the engine crankcase ventilation or lubrication systems.

Curb mass means the actual or manufacturer's estimated mass of the vehicle with fluids at nominal capacity and with all equipment specified by the Administrator.

Displacement, and *Displacement Class*, see § 86.419.

Engine family means the basic classification unit of a manufacturer's product line used for the purpose of test fleet selection and determined in accordance with § 86.420.

Engine-displacement-system combination means an engine family-displacement-emission control system combination.

EPA Enforcement Officer means any officer or employee of the Environmental Protection Agency so designated in writing by the Administrator (or by his designee).

Exhaust emissions means substances emitted to the atmosphere from any opening downstream from the exhaust port of a motor vehicle engine.

Fuel system means the combination of fuel tank, fuel pump, fuel lines, oil injection metering system, and carburetor or fuel injection components, and includes all fuel system vents.

Loaded vehicle mass means curb mass plus 80 kg (176 lb.), average driver mass.

Model year means the manufacturer's annual production period (as determined by the Administrator) which includes January first of such calendar year. If the manufacturer has no annual production period, the term *model year* shall mean the calendar year.

Motorcycle means any motor vehicle with a headlight, taillight, and stoplight and having: Two wheels, or Three wheels and a curb mass less than or equal to 680 kilograms (1499 pounds).

Oxides of nitrogen means the sum of the nitric oxide and nitrogen dioxide contained in a gas sample as if the nitric oxide were in the form of nitrogen dioxide.

Scheduled maintenance means any adjustment, repair, removal, disassembly, cleaning, or replacement of vehicle components or systems which is performed on a periodic basis to prevent part failure or vehicle malfunction, or anticipated as necessary to correct an overt indication of vehicle malfunction or failure for which periodic maintenance is not appropriate.

Span gas means a gas of known concentration which is used routinely to set the output level of any analyzer.