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40 CFR Ch. I (7-1-04 Edition)

(4) The octane rating of the gasoline used shall be no higher than 4.0 research octane numbers above the minimum recommended by the manufacturer.

(5) The Reid Vapor Pressure of the fuel used shall be characteristic of the motor fuel during the season in which the service accumulation takes place.

(6) If the manufacturer specifies several lubricants to be used by the ultimate purchaser, the Administrator will select one to be used during service accumulation.

(c) The specification range of the fuels and engine lubricants to be used under paragraph (b) of this section shall be reported in accordance with § 86.416.

(d) The same lubricant(s) shall be used for both service accumulation and emission testing.

(e) Fuels not meeting the specifications set forth in this section may be used only with the advance approval of the Administrator.

[51 FR 24611, July 7, 1986, as amended at 52 FR 47869, Dec. 16, 1987]

§ 86.513-90 Fuel and engine lubricant specifications.

(a) Gasoline having the following specifications will be used by the Administrator in exhaust emission testing. Gasoline having the following specifications or substantially equivalent specifications approved by the Administrator, shall be used by the manufacturer for emission testing except that the octane specifications do not apply.

Item	ASTM	Value
Octane, research, minimum	D2699	96
Lead (organic):		
g/liter	D3237	¹ 0.013
(g/U.S. gal.)		¹ (0.050)
Distillation range:		
IBP:		
°C	D86	23.9-35
(°F)		(75-95)
10 pct. point:		
°C	D86	48.9-57.2
(°F)		(120-135)
50 pct. point:		
°C	D86	93.3-110
(°F)		(200-230)
90 pct. point:		
°C	D86	148.9-162.8
(°F)		(300-325)
EP:		
°C max	D86	212.8

Item	ASTM	Value
(°F)		(415)
Sulfur, weight percent, maximum	D1266	0.10
Phosphorus:		
g/liter, max	D3231	0.0013
(g/U.S. gal)		(0.005)
RVP, kPa (psi)	D323	55.2-63.4
		(8.0-9.2)
Hydrocarbon composition:		
Olefins, percent, maximum	D1319	10
Aromatics, percent, maximum	D1319	35
Saturates	D1319	Remainder

¹ Maximum.

(b)(1) Unleaded gasoline and engine lubricants representative of commercial fuels and engine lubricants which will be generally available through retail outlets shall be used in service accumulation.

(2) The octane rating of the gasoline used shall be no higher than 4.0 Research octane numbers above the minimum recommended by the manufacturer.

(3) The Reid Vapor Pressure of the fuel used shall be characteristic of the motor fuel during the season in which the service accumulation takes place.

(4) If the manufacturer specifies several lubricants to be used by the ultimate purchaser, the Administrator will select one to be used during service accumulation.

(c) Methanol fuel used for exhaust and evaporative emission testing and in service accumulation of methanol-fueled motorcycle vehicles shall be representative of commercially available methanol fuel and shall consist of at least 50 percent methanol by volume.

(1) Manufacturers shall recommend the methanol fuel to be used for testing and service accumulation in accordance with paragraph (c).

(2) The Administrator shall determine the methanol fuel to be used for testing and service accumulation.

(d) Other methanol fuels may be used for testing and service accumulation provided:

(1) They are commercially available, and

(2) Information, acceptable to the Administrator, is provided to show that only the designated fuel would be used in customer service, and

(3) Use of a fuel listed under paragraph (a)(3) of this section would have a detrimental effect on emissions or durability, and

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(4) Written approval from the Administrator of the fuel specifications must be provided prior to the start of testing.

(e) The specification range of the fuels and engine lubricants to be used under paragraph (b) of this section shall be reported in accordance with § 86.416.

(f) The same lubricant(s) shall be used for both service accumulation and emission testing.

(g) Fuels not meeting the specifications set forth in this section may be used only with the advance approval of the Administrator.

(h) *Mixtures of petroleum and methanol fuels for flexible fuel motorcycles.* (1) Mixtures of petroleum and methanol fuels used for exhaust and evaporative emission testing and service accumulation for flexible fuel motorcycles shall be within the range of fuel mixtures for which the vehicle was designed.

(2) Manufacturer testing and service accumulation may be performed using only those mixtures (mixtures may be different for exhaust testing, evaporative testing, and service accumulation) expected to result in the highest emissions, provided:

(i) The fuels which constitute the mixture will be used in customer service, and

(ii) Information, acceptable to the Administrator, is provided by the manufacturer to show that the designated fuel mixtures would result in the highest emissions, and

(iii) Written approval from the Administrator of the fuel specifications must be provided prior to the start of testing.

(3) The specification range of the fuels to be used under paragraph (h)(1) of this section shall be reported in accordance with § 86.090 21(b)(3).

[53 FR 476, Jan. 7, 1988, as amended at 54 FR 14546, Apr. 11, 1989]

§ 86.513-94 Fuel and engine lubricant specifications.

(a) *Gasoline.* (1) Gasoline having the following specifications will be used by the Administrator in exhaust emission testing of gasoline-fueled motorcycles. Gasoline having the following specifications or substantially equivalent specifications approved by the Admin-

istrator, shall be used by the manufacturer for emission testing except that the octane specifications do not apply.

Item	ASTM	Value
Octane, research, minimum	D2699	96
Lead (organic): g/liter (g/U.S. gal.)	D3237	¹ 0.013 ¹ (0.050)
Distillation range:		
IBP: °C (°F)	D86	23.9-35 (75-95)
10 pct. point: °C (°F)	D86	48.9-57.2 (120-135)
50 pct. point: °C (°F)	D86	93.3-110 (200-230)
90 pct. point: °C (°F)	D86	148.9- 162.8 (300-325)
EP: max. °C (°F)	D86	212.8 (415)
Sulfur, max. wt. %	D1266	0.10
Phosphorus: max. g/liter (g/U.S. gal.)	D3231	0.0013 (0.005)
RVP kPa (psi)	D323	55.2-63.4 (8.0-9.2)
Hydrocarbon composition:		
Olefins, max., %	D1319	10
Aromatics, max., %	D1319	35
Saturates	D1319	Remainder

¹ Maximum.

(2) Unleaded gasoline and engine lubricants representative of commercial fuels and engine lubricants which will be generally available through retail outlets shall be used in service accumulation.

(3) The octane rating of the gasoline used shall be no higher than 4.0 Research octane numbers above the minimum recommended by the manufacturer.

(4) The Reid Vapor Pressure of the gasoline used shall be characteristic of commercial gasoline fuel during the season in which the service accumulation takes place.

(b) *Methanol fuel.* (1) Methanol fuel used for exhaust and evaporative emission testing and in service accumulation of methanol-fueled motorcycles shall be representative of commercially available methanol fuel and shall consist of at least 50 percent methanol by volume.

(2) Manufacturers shall recommend the methanol fuel to be used for testing and service accumulation in accordance with paragraph (b)(1) of this section.

(3) The Administrator shall determine the methanol fuel to be used for testing and service accumulation.