

§ 86.1313-98

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

that only the designated fuel would be used in customer service; 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 paragraphs (f)(1) and (f)(2) of this section shall be measured in accordance with ASTM D2163-91 and reported in accordance with § 86.094-21(b)(3).

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

[59 FR 48528, Sept. 21, 1994, as amended at 60 FR 34371, June 30, 1995; 62 FR 47125, Sept. 5, 1997]

§ 86.1313-98 Fuel specifications.

Section 86.1313-98 includes text that specifies requirements that differ from § 86.1313-94. Where a paragraph in § 86.1313-94 is identical and applicable to § 86.1313-98, this may be indicated by specifying the corresponding paragraph

and the statement “[Reserved]. For guidance see § 86.1313-94”.

(a) through (b)(1) [Reserved]. For guidance see § 86.1313-94.

(b)(2) Petroleum fuel for diesel engines meeting the specifications in Table N98-2, or substantially equivalent specifications approved by the Administrator, shall be used in exhaust emissions testing. The grade of petroleum fuel used shall be commercially designated as “Type 2-D” grade diesel fuel except that fuel commercially designated at “Type 1-D” grade diesel fuel may be substituted provided that the manufacturer has submitted evidence to the Administrator demonstrating to the Administrator’s satisfaction that this fuel will be the predominant in-use fuel. Such evidence could include such things as copies of signed contracts from customers indicating the intent to purchase and use “Type 1-D” grade diesel fuel as the primary fuel for use in the engines or other evidence acceptable to the Administrator.

TABLE N98-2

Item		ASTM test method No.	Type 1-D	Type 2-D
Cetane Number		D 613	40-54	40-50
Cetane Index		D 976	40-54	40-50
Distillation range:				
IBP	°F	D 86	330-390	340-400
	(°C)		(165.6-198.9)	(171.1-204.4)
10 pct. point	°F	D 86	370-430	400-460
	(°C)		(187.8-221.1)	(204.4-237.8)
50 pct. point	°F	D 86	410-480	470-540
	(°C)		(210.0-248.9)	(243.3-282.2)
90 pct. point	°F	D 86	460-520	560-630
	(°C)		(237.8-271-1)	(293.3-332.2)
EP	°F	D 86	500-560	610-690
	(°C)		(260.0-293.3)	(321.1-365.6)
Gravity	°API	D 287	40-44	32-37
Total sulfur	pct.	D 2622	0.03-0.05	0.03-0.05
Hydrocarbon composition:				
Aromatics, minimum	pct.	D 5186	8	27
Paraffins, Naphthenes, Olefins		D 1319	1	1
Flashpoint, min.	°F	D 93	120	130
	(°C)		(48.9)	(54.4)
Viscosity	centistokes	D 445	1.6-2.0	2.0-3.2

¹ Remainder.

(b)(3) through (e) [Reserved]. For guidance see § 86.1313-94.

[62 FR 47126, Sept. 5, 1997, as amended at 65 FR 8278, Feb. 18, 2000]

§ 86.1314-84 Analytical gases.

(a) Gases for the CO and CO₂ analyzers shall be single blends of CO and CO₂, respectively, using nitrogen as the diluent.

(b) Gases for the hydrocarbon analyzer shall be single blends of propane using air as the diluent.

(c) Gases for the NO_x analyzer shall be single blends of NO named as NO_x with a maximum NO₂ concentration of 5 percent of the nominal value using nitrogen as the diluent.

(d) Fuel for the FID shall be a blend of 40±2 percent hydrogen with the balance being helium. The mixture shall contain less than 1 ppm equivalent carbon response; 98 to 100 percent hydrogen fuel may be used with advance approval of the Administrator.

(e) The allowable zero gas (air or nitrogen) impurity concentrations shall not exceed 1 ppm equivalent carbon response, 1 ppm carbon monoxide, 0.04 percent (400 ppm) carbon dioxide and 0.1 ppm nitric oxide.

(f)(1) "Zero-grade air" includes artificial "air" consisting of a blend of nitrogen and oxygen with oxygen concentrations between 18 and 21 mole percent.

(2) Calibration gases shall be accurate to within ±1 percent of NBS gas standards, or other gas standards which have been approved by the Administrator.

(3) Span gases shall be accurate to within ±2 percent of NBS gas standards, or other gas standards which have been approved by the Administrator.

(g) The use of precision blending devices (gas dividers) to obtain the required calibration gas concentrations is acceptable, provided that the blended gases are accurate to within ±1.5 percent of NBS gas standards, or other gas standards which have been approved by the Administrator. This accuracy implies that primary gases used for blending must be "named" to an accuracy of at least ±1 percent, traceable to NBS or other approved gas standards.

[48 FR 52210, Nov. 16, 1983, as amended at 49 FR 48144, Dec. 10, 1984]

§ 86.1314-94 Analytical gases.

(a) Gases for the CO and CO₂ analyzers shall be single blends of CO and CO₂, respectively, using nitrogen as the diluent.

(b) Gases for the hydrocarbon analyzer shall be:

(1) Single blends of propane using air as the diluent; and

(2) Optionally, for response factor determination, single blends of methanol using air as the diluent.

(c) Gases for the methane analyzer shall be single blends of methane using air as the diluent.

(d) Gases for the NO_x analyzer shall be single blends of NO named as NO_x with a maximum NO₂ concentration of five percent of the nominal value using nitrogen as the diluent.

(e) Fuel for FIDs and HFIDs and methane analyzers shall be a blend of 40 ±2 percent hydrogen with the balance being helium. The mixture shall contain less than 1 ppm equivalent carbon response. 98 to 100 percent hydrogen fuel may be used with advance approval by the Administrator.

(f) The allowable zero gas (air or nitrogen) impurity concentrations shall not exceed 1 ppm equivalent carbon response, 1 ppm carbon monoxide, 0.04 percent (400 ppm) carbon dioxide and 0.1 ppm nitric oxide.

(g)(1) "Zero-grade air" includes artificial "air" consisting of a blend of nitrogen and oxygen with oxygen concentrations between 18 and 21 mole percent.

(2) Calibration gases (not including methanol) shall be traceable to within one percent of NIST (formerly NBS) gas standards, or other gas standards which have been approved by the Administrator.

(3) Span gases (not including methanol) shall be accurate to within two percent of true concentration, where true concentration refers to NIST (formerly NBS) gas standards, or other gas standards which have been approved by the Administrator.

(4) Methanol in air gases used for response factor determination shall:

(i) Be traceable to within ±2 percent of NIST (formerly NBS) gas standards, or other standards which have been approved by the Administrator; and

(ii) Remain within ±2 percent of the labeled concentration. Demonstration of stability shall be based on a quarterly measurement procedure with a precision of ±2 percent (two standard deviations), or other method approved