

§ 86.1213-04

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measured and a continuously proportioned sample of volume shall be collected for analysis. Mass emissions shall be determined from the sample concentration and total flow over the test period.

(ii) The PDP-CVS shall consist of a dilution air filter and mixing assembly, heat exchanger, positive-displacement pump, sampling system, and associated valves, pressure and temperature sensors. The PDP-CVS shall conform to the following requirements:

(A) The gas mixture temperature, measured at a point immediately ahead of the positive-displacement pump, shall be within ± 10 °F of the designed operating temperature at the start of the test. The gas mixture temperature variation from its value at the start of the test shall be limited to ± 10 °F during the entire test. The temperature measuring system shall have an accuracy and precision of ± 2 °F.

(B) The pressure gauges shall have an accuracy and precision of ± 1.6 inches of water (± 0.4 kPa).

(C) The flow capacity of the CVS shall not exceed 350 cfm.

(D) Sample collection bags for dilution air and running loss fuel vapor samples shall be sufficient size so as not to impede sample flow.

(iii) The CFV sample system shall consist of a dilution air filter and mixing assembly, a sampling venturi, a critical flow venturi, a sampling system and assorted valves, and pressure and temperature sensors. The CFV sample system shall conform to the following requirements:

(A) The temperature measuring system shall have an accuracy and precision of ± 2 °F and a response time of 0.100 seconds of 62.5 percent of a temperature change (as measured in hot silicone oil).

(B) The pressure measuring system shall have an accuracy and precision of ± 1.6 inches of water (0.4 kPa).

(C) The flow capacity of the CVS shall not exceed 350 cfm.

(D) Sample collection bags for dilution air and running loss fuel vapor samples shall be of sufficient size so as not to impede sample flow.

(3) An on-line computer system or strip-chart recorder shall be used to record the following additional param-

eters during the running loss test sequence:

(i) CFV (if used) inlet temperature and pressure.

(ii) PDP (if used) inlet temperature, pressure, and differential pressure.

[58 FR 16047, Mar. 24, 1993, as amended at 59 FR 48521, Sept. 21, 1994; 60 FR 34358, June 30, 1995; 60 FR 43898, Aug. 23, 1995]

§ 86.1213-04 Fuel specifications.

The test fuels listed in § 86.1313-04 shall be used for evaporative emission testing.

[66 FR 5168, Jan. 18, 2001]

§ 86.1213-90 Fuel specifications.

(a) Gasoline having the following specifications will be used in emissions testing for gasoline-fueled vehicles.

Item	ASTM	Value
Octane, research, min	D2699	93
Sensitivity, min .....	.....	7.5
Lead (organic), g/U.S. gal	D3237	0.050[1]
(g/liter) .....	.....	(0.013)[1]
Distillation range:		
IBP, °F	D86	75-95
(°C) .....	.....	(23.9-35)
10 pct. point, °F	D86	120-135
(°C) .....	.....	(48.9-57.2)
50 pct. point, °F	D86	200-230
(°C) .....	.....	(93.3-110)
90 pct. point, °F	D86	300-325
(°C) .....	.....	(148.9-162.8)
EP, max. °F	D86	415
(°C) .....	.....	(212.8)
Sulphur, max. wt. pct	D1266	0.10
Phosphorous, max. g/U.S. gal	D3231	0.005
(g/liter) .....	.....	(0.0013)
RVP, psi	D323	8.7-9.2
(kPa) .....	.....	(60.0-63.4)
Hydrocarbon composition:		
Olefins, max. pct	D1319	10
Aromatics, max. pct	D1319	35
Saturates	D1319	[2]

[1] Maximum.
[2] Remainder.

(b)(1) Unleaded gasoline representative of commercial gasoline 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 1.0 Research octane number above the minimum recommended by the manufacturer and have a minimum sensitivity of 7.5 octane numbers, where sensitivity is defined as the Research octane number minus the Motor octane number.