

§ 86.1513-94

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response equal to 90 percent of that step change within 15 seconds or less on the range specified in paragraph (a)(1) of this section. The step change shall be at least 60 percent of full-scale deflection.

(7) The interference gases listed shall individually or collectively produce an analyzer reading less than ±2 percent of full scale on the range specified in paragraph (a)(1) of this section.

Interference gas	Concentration	Applicable analyzer
CO ₂	14 percent	CO
C ₂ H ₆	1 percent	CO
H ₂ O	Saturated vapor at 100° F	CO
NO _x	1,000 ppm	CO
O ₂	5 percent	CO

(8) The analyzer shall be able to meet the specifications in paragraph (a) of this section under the following conditions:

- (i) After a 30 minute warm-up from the prevailing ambient conditions;
 - (ii) Between 0 to 85 percent relative humidity; and
 - (iii) During variations of ±50 percent of nominal sample flow.
- (b) The inclusion of a raw CO₂ analyzer as specified in 40 CFR part 1065 is required in order to accurately determine the CVS dilution factor.

[48 FR 52252, Nov. 16, 1983, as amended at 60 FR 34377, June 30, 1995; 70 FR 40441, July 13, 2005]

§ 86.1513-94 Fuel specifications.

The requirements of this section are set forth in 40 CFR part 1065, subpart H, for heavy-duty engines and in § 86.113-94 for light-duty trucks.

[70 FR 40441, July 13, 2005]

§ 86.1514-84 Analytical gases.

- (a) The final idle emission test results shall be reported as percent for carbon monoxide on a dry basis.
- (b) If the raw CO sampling system specified in 40 CFR part 1065 is used, the analytical gases specified in 40 CFR part 1065, subpart H, shall be used.
- (c) If a CVS sampling system is used, the analytical gases specified in 40 CFR part 1065, subpart H, shall be used.

[48 FR 52252, Nov. 16, 1983, as amended at 51 FR 24613, July 7, 1986; 60 FR 34377, June 30, 1995; 70 FR 40441, July 13, 2005]

§ 86.1516-84 Calibration; frequency and overview.

- (a) Calibrations shall be performed as specified in §§ 86.1518-84 through 86.1526-84.
- (b) At least monthly or after any maintenance which could alter calibration, check the calibration of the CO analyzer. Adjust or repair the analyzer as necessary.
- (c) Water traps, filters, or conditioning columns should be checked before each test.

§ 86.1519-84 CVS calibration.

If the CVS system is used for sampling during the idle emission test, the calibration instructions are specified in 40 CFR part 1065, subpart D, for heavy-duty engines, and § 86.119-78 for light-duty trucks.

[70 FR 40441, July 13, 2005]

§ 86.1522-84 Carbon monoxide analyzer calibration.

- (a) *Initial check.* (1) Follow good engineering practice for instrument start-up and operation. Adjust the analyzer to optimize performance on the range specified in § 86.1511-84(a)(1).
- (2) Calibrate the analyzer with the calibration gas specified in § 86.1514-84.
- (3) Adjust the electrical span network such that the electrical span point is correct when the analyzer reads the calibration gas correctly.
- (4) Determine that the analyzer complies with the specifications in § 86.1511-84.
- (b) *Periodic check.* Follow paragraphs (a) (1), (2), and (3) of this section as specified by § 86.1516-84(b). Adjust or repair the analyzer as necessary.

§ 86.1524-84 Carbon dioxide analyzer calibration.

- (a) The calibration requirements for the dilute-sample CO₂ analyzer are specified in 40 CFR part 1065, subpart D, for heavy-duty engines and § 86.124-78 for light-duty trucks.
- (b) The calibration requirements for the raw CO₂ analyzer are specified in 40 CFR part 1065, subpart D.

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