Environmental Protection Agency

§ 86.107–98

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


§ 86.107–98 Sampling and analytical system.

Section 86.107–98 includes text that specifies requirements that differ from § 86.107–96. Where a paragraph in § 86.107–96 is identical and applicable to § 86.107–98, this may be indicated by specifying the corresponding paragraph and the statement “[Reserved]. For guidance see § 86.107–96.” Where a corresponding paragraph of § 86.107–96 is not applicable, this is indicated by the statement “[Reserved].”

(a)(1)–(a)(3) [Reserved]. For guidance see § 86.107–96.

(a)(4) Refueling emissions test. The requirements detailed in § 86.107–90 (a)(1) shall apply. Alternatively, an enclosure meeting the specifications detailed in § 86.107–98, this may be indicated by specifying the corresponding paragraph and the statement “[Reserved].” Where a corresponding paragraph of § 86.107–96 is not applicable, this is indicated by the statement “[Reserved].”

(a)(4) Refueling emissions test. The requirements detailed in § 86.107–90 (a)(1) shall apply. Alternatively, an enclosure meeting the specifications detailed in § 86.107–98, this may be indicated by specifying the corresponding paragraph and the statement “[Reserved].” Where a corresponding paragraph of § 86.107–96 is not applicable, this is indicated by the statement “[Reserved].”

(b)–(d) [Reserved]. For guidance see § 86.107–96.

(e) Temperature recording system—(1) For all emission testing. A strip chart potentiometric recorder, an on-line computer system, or other suitable means shall be used to record enclosure ambient temperature during all evaporative emission test segments, as well as vehicle fuel tank temperature during the running loss test. The recording system shall record each temperature at least once every minute. The recording system shall be capable of resolving time to ±15 s and capable of resolving temperature to ±0.75 °F (±0.42 °C). The temperature recording system (recorder and sensor) shall have an accuracy of ±3 °F (±1.7 °C). The recorder (data processor) shall have a time accuracy of ±15 s and a precision of ±1 s.

Enclosures shall be equipped with two ambient temperature sensors, connected to provide one average output, located 3 feet above the floor at the approximate mid-length of each side wall of the enclosure and within 3 to 12 inches of each side wall. For diurnal emission testing, an additional temperature sensor shall be located underneath the vehicle to provide a temperature measurement representative of the temperature of the air under the fuel tank. For running loss testing, an ambient temperature sensor shall be located at the inlet to the fan that provides engine cooling. Manufacturers shall arrange that vehicles furnished for testing at federal certification facilities be equipped with temperature sensors for measurement of fuel tank temperature. Vehicles shall be equipped with 2 temperature sensors installed to provide an average liquid fuel temperature. The temperature sensors shall be placed to measure the temperature at the mid-volume of the liquid fuel at a fill level of 40 percent of nominal tank capacity. An additional temperature sensor may be placed to measure vapor temperatures approximately at the mid-volume of the vapor space, though measurement of vapor temperatures is optional during the running loss test. In-tank temperature sensors are not required for the supplemental two-diurnal test sequence specified in § 86.130–96 or for the refueling test specified in § 86.151–98.

(2) Refueling emission testing only. In addition to the enclosure ambient temperature recording system described in paragraph (e)(1) of this section, strip chart recorder(s) or automatic data processor shall be used to record vehicle soak area ambient temperature and dispensed fuel temperature at the nozzle during the test. The temperature recorder(s) or data processor shall record each temperature at least once every 20 seconds (the soak area ambient temperature recorder may be a continuous recording system). The recording system shall be capable of resolving time to ±15 s and be capable of
§ 86.108–00 Dynamometer.

(a) The dynamometer shall simulate the road load force and inertia specified for the vehicle being tested, and shall determine the distance traveled during each phase of the test procedure.

(b) Two types of dynamometer roll configurations are currently approved by the Administrator:

(1) A small twin-roll dynamometer that has a nominal roll diameter of 8.65 inches and a nominal roll spacing of 17 inches; and

(2) An electric dynamometer that has a single roll with a nominal diameter of 48 inches (1.20 to 1.25 meters).

(i) The dynamometer must be capable of dynamically controlling inertia load during the US06 test cycle as a function of a vehicle throttle position signal if a manufacturer desires using the following test option. Any time the duration of throttle operation greater than or equal to 85% of wide open throttle (WOT) is greater than or equal to eight seconds, the test inertia load may be adjusted during any of five EPA specified acceleration events by an amount of load that will eliminate additional throttle operation greater than or equal to 85% of WOT.

(b)(1) The specific US06 schedule acceleration time periods where inertia load adjustments may be applied are:

(i) 49 through 69 seconds;

(ii) 83 through 97 seconds;

(iii) 135 through 165 seconds;

(iv) 315 through 335 seconds; and

(v) 568 through 583 seconds.

(d) An electric dynamometer meeting the requirements of paragraph (b)(2) of this section, or a dynamometer approved as equivalent under paragraph (c) of this section, must be used for all types of emission testing in the following situations:

(i) Gasoline vehicles which are part of an engine family which is designated to meet the phase-in of SFTP compliance required under the implementation schedule of table A00–1 of §86.108–00.