

chance idle mode length is 90 seconds elapsed time (mt=90).

(3) The pass/fail analysis begins after an elapsed time of ten seconds (mt=10). A pass or fail determination is made for the vehicle and the second-chance idle mode is terminated in accordance with paragraphs (d)(3) (i) through (iv) of this section.

(i) The vehicle passes the second-chance idle mode and the test is immediately terminated if, prior to an elapsed time of 30 seconds (mt=30), any measured values are less than or equal to 100 ppm HC and 0.5 percent CO.

(ii) The vehicle passes the second-chance idle mode and the test is terminated at the end of an elapsed time of 30 seconds (mt=30) if, prior to that time, the criteria of paragraph (d)(3)(i) of this section are not satisfied, and the measured values are less than or equal to the applicable short test standards as determined by the procedure described in paragraph (a)(2) of this section.

(iii) The vehicle passes the second-chance idle mode and the test is immediately terminated if, at any point between an elapsed time of 30 seconds (mt=30) and 90 seconds (mt=90), the measured values are less than or equal to the applicable short test standards as determined by the procedure described in paragraph (a)(2) of this section.

(iv) The vehicle fails the second-chance idle mode and the test is terminated if none of the provisions of paragraphs (d)(3) (i), (ii), and (iii) of this section is satisfied by an elapsed time of 90 seconds (mt=90).

[58 FR 58405, Nov. 1, 1993, as amended at 61 FR 40947, Aug. 6, 1996]

§ 85.2216 Loaded test—EPA 81.

(a)(1) *General calendar year applicability.* The test procedure described in this section may be used to establish Emissions Performance Warranty eligibility through December 31, 1993, except as allowed in paragraph (a)(2) of this section.

(2) *Special calendar and model year applicability.* (i) The extended applicability described in paragraphs (a)(2) (ii) through (iv) of this section is restricted to 1995 and earlier model year vehicles or engines.

(ii) In a state for which the Administrator has approved a State Implementation Plan revision providing for the implementation of a basic decentralized program meeting the requirements of part 51, subpart S of this chapter, according to the schedule specified in § 51.373 of this chapter, the test procedure described in this section may be used to establish Emissions Performance Warranty eligibility through December 31, 1993.

(iii) In a state for which the Administrator has approved a State Implementation Plan revision providing for the implementation of a basic centralized program meeting the requirements of part 51, subpart S of this chapter, according to the schedule specified in § 51.373 of this chapter, the test procedure described in this section may be used to establish Emissions Performance Warranty eligibility through June 30, 1994.

(iv) In a state for which the Administrator has approved a State Implementation Plan revision providing for the implementation of an enhanced program meeting the requirements of part 51, subpart S of this chapter, according to the schedule specified in § 51.373 of this chapter, the test procedure described in this section may be used to establish Emissions Performance Warranty eligibility through December 31, 1995.

(b) *General requirements.* Vehicles shall be tested in as-received condition. Engines shall be at normal operating temperature and not overheating (as indicated by gauge, warning light or boiling radiator) with all accessories off. An auxiliary cooling fan is optional.

(c) *Test sequence.* (1) The dynamometer and analyzers shall be warmed-up, in stabilized operating condition and adjusted as required in §§ 85.2216 and 85.2217.

(2) The vehicle shall be placed on the dynamometer.

(3) The sample probe shall be inserted into the tailpipe.

(4) *Optional.* A high speed mode, maximum 50 mph and 30 seconds duration, is permitted if vehicle overheating does not occur.

(5) Drive for automatic or 3rd gear for manual transmissions shall be used. The vehicle shall be operated at 30 ±1

mph roll speed while measuring exhaust HC and CO. Record exhaust concentrations after stabilized readings are obtained or at the end of 30 seconds, whichever occurs first. This process shall be repeated as necessary for multiple exhaust pipes, or hardware which is capable of simultaneously sampling vehicles with multiple tailpipes may be used. Neither multiple readings nor simultaneous sampling hardware is necessary for exhaust systems in which the exhaust pipes originate from a common point.

(6) The vehicle must be idled with transmission in neutral. Record exhaust concentrations after stabilized readings are obtained or at the end of 30 seconds, whichever occurs first. Repeat as specified in paragraph (c)(5) of this section for multiple exhaust pipes, if necessary.

(7) For vehicles with multiple exhaust pipes, the separate results from each pipe for each mode (as specified in paragraphs (c)(5) and (6) of this section) must be numerically averaged for each pollutant, unless hardware which is capable of simultaneously sampling multiple tailpipe vehicles has been used.

(d) Exhaust concentration measurements from both the loaded mode and the idle mode are not required. The short test may be used to evaluate emissions from either mode alone or from both modes, the choice being made by the jurisdiction implementing the inspection program. If exhaust concentrations are not measured on the loaded mode the vehicle shall be operated at the specified test condition for 15 to 30 seconds. If idle exhaust concentrations are not measured, the idle mode may be omitted.

[49 FR 24323, June 12, 1984. Redesignated and amended at 58 FR 58403, 58407, Nov. 1, 1993]

§ 85.2217 Loaded test—EPA 91.

(a) *General requirements*—(1) *Exhaust gas sampling algorithm*. The analysis of exhaust gas concentrations begins ten seconds after the applicable test mode begins. Exhaust gas concentrations must be analyzed at a minimum rate of once every 0.75 seconds. The measured value for pass/fail determinations is a simple running average of the measurements taken over five seconds.

(2) *Pass/fail determination*. A pass or fail determination is made for each applicable test mode based on a comparison of the short test standards contained in §§ 85.2203 and 85.2204, and the measured value for HC and CO as described in paragraph (a)(1) of this section. A vehicle passes the test mode if any pair of simultaneous values for HC and CO are below or equal to the applicable short test standards. A vehicle fails the test mode if the values for either HC or CO, or both, in all simultaneous pairs of values are above the applicable standards.

(3) *Void test conditions*. The test immediately terminates and any exhaust gas measurements are voided if the measured concentration of CO plus CO₂ falls below six percent or the vehicle's engine stalls at any time during the test sequence.

(4) *Multiple exhaust pipes*. Exhaust gas concentrations from vehicle engines equipped with multiple exhaust pipes must be sampled simultaneously.

(5) The test is immediately terminated upon reaching the overall maximum test time.

(b) *Test sequence*. (1) The test sequence consists of a loaded mode using a chassis dynamometer followed immediately by an idle mode as described in paragraphs (c) (1) and (2) of this section.

(2) The test sequence begins only after the requirements described in paragraphs (b)(2) (i) through (v) of this section are met.

(i) The dynamometer must be warmed up, in stabilized operating condition, adjusted, and calibrated in accordance with the procedures of § 85.2233. Prior to each test, variable-curve dynamometers must be checked for proper setting of the road-load indicator or road-load controller.

(ii) The vehicle is tested in as-received condition with all accessories turned off. The engine must be at normal operating temperature (as indicated by a temperature gauge, temperature lamp, touch test on the radiator hose, or other visual observation indicating that overheating has not occurred).

(iii) The vehicle must be operated during each mode of the test with the gear selector in the position described