point shall be used to determine concentration.

§ 86.126–90 Calibration of other equipment.

Other test equipment used for testing shall be calibrated as often as required by the manufacturer or as necessary according to good practice. Specific equipment requiring calibration are the gas chromatograph and flame ionization detector used in measuring methanol and the high pressure liquid chromatograph (HPLC) and ultraviolet detector for measuring formaldehyde.

§ 86.127–00 Test procedures; overview.

Applicability. The procedures described in this and subsequent sections are used to determine the conformity of vehicles with the standards set forth in subpart A or S of this part (as applicable) for light-duty vehicles and light-duty trucks. Except where noted, the procedures of paragraphs (a) through (b) of this section, §86.127–96 (c) and (d), and the contents of §§86.135–94, 86.136–90, 86.137–96, 86.140–94, 86.142–90, and 86.144–94 are applicable for determining emission results for vehicle exhaust emission systems designed to comply with the FTP emission standards, or the FTP emission element required for determining compliance with composite SFTP standards. Paragraphs (f) and (g) of this section discuss the additional test elements of aggressive driving (US06) and air conditioning (SC03) that comprise the exhaust emission components of the SFTP. Section 86.127–96(e) discusses fuel spitback emissions and paragraphs (h) and (i) of this section are applicable to all vehicle emission test procedures. Section 86.127–00 includes text that specifies requirements that differ from §86.127–96. Where a paragraph in §86.127–96 is identical and applicable to §86.127–00, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see §86.127–96.''

(a) The overall test consists of prescribed sequences of fueling, parking, and operating test conditions. Vehicles are tested for any or all of the following emissions:

(1) Gaseous exhaust THC, CO, NO$_X$. CO$_2$ (for petroleum-fueled and gaseous-fueled vehicles), plus CH$_3$OH and HCHO for methanol-fueled vehicles, plus CH$_4$ (for vehicles subject to the NMHC and NMHCE standards).

(2) Particulates.

(3) Evaporative HC (for gasoline-fueled, methanol-fueled and gaseous-fueled vehicles) and CH$_3$OH (for methanol-fueled vehicles). The evaporative testing portion of the procedure occurs after the exhaust emission test; however, exhaust emissions need not be sampled to complete a test for evaporative emissions.

(4) Fuel spitback (this test is not required for gaseous-fueled vehicles).

(b) The FTP Otto-cycle exhaust emission test is designed to determine gaseous THC, CO, CO$_2$, CH$_4$, NO$_X$, and particulate mass emissions from gasoline-fueled, methanol-fueled and gaseous-fueled Otto-cycle vehicles as well as methanol and formaldehyde from methanol-fueled Otto-cycle vehicles, while simulating an average trip in an urban area of 11 miles (18 kilometers). The test consists of engine start-ups and vehicle operation on a chassis dynamometer through a specified driving schedule (see paragraph (a), EPA Urban Dynamometer Driving Schedule, of appendix I to this part). A proportional part of the diluted exhaust is collected continuously for subsequent analysis, using a constant volume (variable dilution) sampler or critical flow venturi sampler.

(c)–(e) [Reserved]. For guidance see §86.127–96.

(f) The element of the SFTP for exhaust emissions related to aggressive driving (US06) is designed to determine gaseous THC, NMHC, CO, CO$_2$, CH$_4$, and NO$_X$ emissions from gasoline-fueled or diesel-fueled vehicles (see §86.158–00 Supplemental test procedures; overview, and §86.159–00 Exhaust emission test procedures for US06 emissions). The test cycle simulates urban driving speeds and accelerations that are not represented by the FTP Urban Dynamometer Driving Schedule simulated trips discussed in paragraph (b) of this section. The test consists of vehicle operation on a chassis dynamometer