

## § 86.106–90

in § 86.113. Analytical gases are specified in § 86.114. The EPA Urban Dynamometer Driving Schedule (UDDS), US06, and SC03 driving schedules, for use in exhaust emission tests, and the New York City Cycle (NYCC), for use with the UDDS in running loss tests, are specified in §§ 86.115, 86.130, 86.159, 86.160, and appendix I to this part.

(b) [Reserved]

[61 FR 54890, Oct. 22, 1996]

### § 86.106–90 Equipment required; overview.

(a) This subpart contains procedures for exhaust emissions tests on petroleum-fueled, and methanol-fueled light-duty vehicles and light-duty trucks, and for evaporative emission tests on gasoline-fueled and methanol-fueled light-duty vehicles and light-duty trucks. Certain items of equipment are not necessary for a particular test, *e.g.*, evaporative enclosure when testing diesel vehicles. Alternate sampling systems may be used if shown to yield equivalent results, and if approved in advance by the Administrator. Equipment required and specifications are as follows:

(1) *Evaporative emission tests, gasoline-fueled and methanol-fueled vehicles.* The evaporative emission test is closely related to and connected with the exhaust emission test. All vehicles tested for evaporative emissions must be tested for exhaust emissions. Further, unless the evaporative emission test is waived by the Administrator under § 86.090–26, all gasoline-fueled and methanol-fueled vehicles must undergo both tests. (Diesel vehicles are excluded from the evaporative emission standard.) Section 86.107 specifies the necessary equipment.

(2) *Exhaust emission tests.* All vehicles subject to this subpart are tested for exhaust emissions. The exhaust from Otto-cycle vehicles is tested for gaseous emissions only, using the CVS concept (§ 86.109). The exhaust from diesel vehicles is tested for both gaseous and particulate emissions. Petroleum-fueled diesel vehicle testing also utilizes the CVS concept of measuring emissions, but requires that a PDP-CVS or CFV with heat exchanger be used, and that it be connected to a dilution tunnel in order to sample particulate emissions (§ 86.110). The exhaust from methanol-fueled diesel vehicles is tested for both gaseous and particulate emissions using the CVS concept (either PDP CVS or CFV as specified in § 86.109 or PDP-CVS or CFV with heat exchanger as specified in § 86.110 may be used) and is connected to a dilution tunnel to sample particulate emissions (§ 86.110) (This equipment may be used with methanol-fueled Otto-cycle vehicles, however, particulates are not measured). All gasoline-fueled and methanol-fueled vehicles are either tested for evaporative emissions or undergo a diurnal heat build. Petroleum-fueled diesel vehicles are excluded from this requirement. Equipment necessary and specifications appear in §§ 86.108 through 86.114.

(3) *Fuel, analytical gas, and driving schedule specifications.* Fuel specifications for exhaust and evaporative emissions testing and for mileage accumulation for petroleum-fueled and methanol-fueled vehicles are specified in § 86.113. Analytical gases are specified in § 86.114. The EPA Urban Dynamometer Driving Schedule (UDDS) for use in petroleum-fueled and methanol-fueled exhaust emissions tests is specified in § 86.115 and appendix I.

(b) [Reserved]

[54 FR 14499, Apr. 11, 1989]

### § 86.106–94 Equipment required; overview.

(a) This subpart contains procedures for exhaust emissions tests on petroleum-fueled, natural gas-fueled, liquefied petroleum gas-fueled and methanol-fueled light-duty vehicles and light-duty trucks, and for evaporative emission tests on gasoline-fueled, natural gas-fueled, liquefied petroleum gas-fueled and methanol-fueled light-duty vehicles and light-duty trucks. Certain items of equipment are not necessary for a particular test, *e.g.*, evaporative enclosure when testing petroleum-fueled diesel vehicles. Alternate sampling systems may be used if shown to yield equivalent results and if approved in advance by the Administrator. Equipment required and specifications are as follows:

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(1) *Evaporative emission tests.* The evaporative emission test is closely related to and connected with the exhaust emission test. All vehicles tested for evaporative emissions must be tested for exhaust emissions. Further, unless the evaporative emission test is waived by the Administrator under § 86.090–26, all vehicles must undergo both tests. (Petroleum-fueled diesel vehicles are excluded from the evaporative emission standard.) Section 86.107 specifies the necessary equipment.

(2) *Exhaust emission tests.* All vehicles subject to this subpart are subject to testing for both gaseous and particulate exhaust emissions using the CVS concept (§ 86.109), except where exemptions or waivers are expressly provided in subpart A of these regulations. Vehicles subject to the “Tier 0” (i.e., phase-out) standards described under subpart A are exempted from testing for methane emissions (except natural gas-fueled vehicles). Otto-cycle vehicles subject to the “Tier 0” standards are waived from testing for particulates. For vehicles waived from the requirement for measuring particulate emissions, use of a dilution tunnel is not required (§ 86.109). The CVS must be connected to the dilution tunnel if particulate emission sampling is required (§ 86.110). Petroleum- and methanol-fueled diesel-cycle vehicle testing requires that a PDP-CVS or CFV with heat exchanger be used. (This equipment may be used with methanol-fueled Otto-cycle vehicles; however, particulates need not be measured for vehicles that are waived from the requirement). All gasoline-fueled, methanol-fueled, natural gas-fueled and liquefied petroleum gas-fueled vehicles are either tested for evaporative emissions or undergo a diurnal heat build. Petroleum-fueled diesel-cycle vehicles are excluded from this requirement. Equipment necessary and specifications appear in §§ 86.108 through 86.114.

(3) *Fuel, analytical gas, and driving schedule specifications.* Fuel specifications for exhaust and evaporative emissions testing and for mileage accumulation are specified in § 86.113. Analytical gases are specified in § 86.114. The EPA Urban Dynamometer Driving Schedule (UDDS) for use in exhaust

emissions tests is specified in § 86.115 and appendix I of this part.

(b) [Reserved]

[56 FR 25760, June 5, 1991, as amended at 59 FR 48504, Sept. 21, 1994]

### § 86.106–96 Equipment required; overview.

(a) This subpart contains procedures for exhaust emission tests on petroleum-fueled, natural gas-fueled, liquefied petroleum gas-fueled, and methanol-fueled light-duty vehicles and light-duty trucks, and for evaporative emission tests on gasoline-fueled, natural gas-fueled, liquefied petroleum gas-fueled, and methanol-fueled light-duty vehicles and light-duty trucks. Certain items of equipment are not necessary for a particular test, e.g., evaporative enclosure when testing petroleum-fueled diesel vehicles. Alternate equipment, procedures, and calculation methods may be used if shown to yield equivalent or superior results, and if approved in advance by the Administrator. Equipment required and specifications are as follows:

(1) *Evaporative emission tests, gasoline-fueled vehicles.* The evaporative emission test is closely related to and connected with the exhaust emission test. All vehicles tested for evaporative emissions must undergo testing according to the test sequences described in § 86.130–96; however, the Administrator may omit measurement of exhaust emissions to test for evaporative emissions. The Administrator may truncate a test after any valid emission measurement without affecting the validity of the test. Further, unless the evaporative emission test is waived by the Administrator under § 86.090–26 or § 86.1810, as applicable, all vehicles must undergo both tests. (Petroleum-fueled diesel vehicles are excluded from the evaporative emission standard.) Section 86.107 specifies the necessary equipment.

(2) *Exhaust emission tests.* All vehicles subject to this subpart are subject to testing for both gaseous and particulate exhaust emissions using the CVS concept (see § 86.109), except where exemptions or waivers are expressly provided in subpart A of this part. Vehicles subject to the “Tier 0” (i.e., phase-out) standards described under subpart