§ 86.1828–01 Emission data vehicle selection.

(a) *FTP and SFTP testing.* Within each test group, the vehicle configuration shall be selected which is expected to be worst-case for exhaust emission compliance on candidate in-use vehicles, considering all exhaust emission constituents, all exhaust test procedures, and the potential impact of air conditioning on test results. The selected vehicle will include an air conditioning engine code unless the worst-case vehicle configuration selected is not available with air conditioning. This vehicle configuration will be used as the EDV calibration.

(b) *Evaporative/Refueling testing.* Vehicles of each evaporative/refueling family will be divided into evaporative/refueling emission control systems.

(1) The vehicle configuration expected to exhibit the highest evaporative and/or refueling emission on candidate in-use vehicles shall be selected for each evaporative/refueling family and evaporative refueling emission system combination from among the corresponding vehicles selected for FTP and SFTP testing under paragraph (a) of this section. Separate vehicles may be selected to be tested for evaporative and refueling testing.

(2) Each test group must be represented by both evaporative and refueling testing (provided that the refueling standards are applicable) before it may be certified. That required testing may have been conducted on a vehicle in another test group provided the tested vehicle is a member of the same evaporative/refueling family and evaporative/refueling emission system combination and it was selected for testing in accordance with the provisions of paragraph (b)(1) of this section.

(3) For evaporative/refueling emission testing, the vehicle(s) selected shall be equipped with the worst-case evaporative/refueling emission hardware available on that vehicle considering such items as canister size and material, fuel tank size and material, purge strategy and flow rates, refueling characteristics, and amount of vapor generation.

(c) *Cold CO testing.* For cold temperature CO exhaust emission compliance for each durability group, the vehicle expected to emit the highest CO emissions at 20 degrees F on candidate in-use vehicles shall be selected from the test vehicles selected in accordance with paragraph (a) of this section.

(d) *Certification Short Test testing.* For CST exhaust emission compliance for each durability group, the vehicle expected to emit the highest CST emissions on candidate in-use vehicles shall be selected from the vehicles selected in accordance with paragraph (a) of this section. The manufacturer may elect to submit a compliance statement in lieu of test data under the provisions of § 86.1829–01.

(e) The manufacturer may select, using good engineering judgement, an equivalent or worst-case configuration in lieu of testing the vehicle selected in paragraphs (a) through (d) of this section. Carryover data satisfying the provisions of § 86.1839–01 may also be used in lieu of testing the configuration selected in paragraphs (a) through (d) of this section.

(f) The manufacturer shall use good engineering judgment in making selections of vehicles under this section.

§ 86.1828–10 Emission data vehicle selection.

Section 86.1828–10 includes text that specifies requirements that differ from § 86.1828–01. Where a paragraph in § 86.1828–01 is identical and applicable to § 86.1828–10, this may be indicated by specifying the corresponding paragraph and the statement ''[Reserved]. For guidance see § 86.1828–01.'' Where a corresponding paragraph of § 86.1828–01 is not applicable, this is indicated by the statement ''[Reserved]''

(a) through (f) [Reserved]. For guidance see § 86.1828–01.

(g) *Cold temperature NMHC testing.* For cold temperature NMHC exhaust emission compliance for each durability group, the manufacturer must select the vehicle expected to emit the highest NMHC emissions at 20 °F on candidate in-use vehicles from the test vehicles specified in § 86.1828–01(a). When the expected worst-case cold temperature NMHC vehicle is also the expected worst-case cold temperature CO vehicle as selected in paragraph (c) of this section, then cold testing is required only for that vehicle; otherwise,

testing is required for both the worst-case cold temperature CO vehicle and the worst-case cold temperature NMHC vehicle.

[72 FR 8566, Feb. 26, 2007]

§ 86.1829–01 Durability and emission testing requirements; waivers.

(a) *Durability demonstration.* (1) One durability demonstration is required for each durability group.

(2) The configuration of the DDV is determined according to the provisions of § 86.1822–01.

(3) The DDV shall be tested and accumulate service mileage according to the provisions of §§ 86.1831–01, 86.1823, 86.1824 and 86.1825. Small volume manufacturers and small volume test groups may optionally meet the requirements of § 86.1838–01.

(b) *Emissions demonstration*—(1) *FTP and SFTP Exhaust Testing*—(i) *Testing at low altitude.* One EDV shall be tested in each test group for exhaust emissions using the FTP and SFTP test procedures of subpart B of this part. The configuration of the EDV will be determined under the provisions of § 86.1828–01 of this subpart.

(ii) *Testing at high altitude.* For high-altitude exhaust emission compliance for each test group, the manufacturer shall follow one of the following two procedures:

(A) One EDV shall be tested in each test group for exhaust emissions using the FTP test procedures of subpart B of this part. The configuration of the EDV will be determined under the provisions of § 86.1828–01; or

(B) In lieu of testing vehicles according to the provisions of paragraph (b)(1)(ii)(A) of this section, a manufacturer may provide a statement in its application for certification that, based on the manufacturer's engineering evaluation of appropriate high-altitude emission testing, all light-duty vehicles, light-duty trucks, and complete heavy-duty vehicles comply with the emission standards at high altitude.

(iii) *Data submittal waivers.* (A) In lieu of testing a methanol-fueled diesel-cycle light truck for particulate emissions a manufacturer may provide a statement in its application for certification that such light trucks comply with the applicable standards. Such a statement shall be based on previous emission tests, development tests, or other appropriate information.

(B) In lieu of testing an Otto-cycle light-duty vehicle, light-duty truck, or heavy-duty vehicle for particulate emissions for certification, a manufacturer may provide a statement in its application for certification that such vehicles comply with the applicable standards. Such a statement must be based on previous emission tests, development tests, or other appropriate information.

(C) A manufacturer may petition the Administrator for a waiver of the requirement to submit total hydrocarbon emission data. If the waiver is granted, then in lieu of testing a certification light-duty vehicle or light-duty truck for total hydrocarbon emissions the manufacturer may provide a statement in its application for certification that such vehicles comply with the applicable standards. Such a statement shall be based on previous emission tests, development tests, or other appropriate information.

(D) A manufacturer may petition the Administrator to waive the requirement to measure particulate emissions when conducting Selective Enforcement Audit testing of Otto-cycle vehicles.

(E) In lieu of testing a gasoline or diesel fueled Tier 2 or interim non-Tier 2 vehicle for formaldehyde emissions when such vehicles are certified based upon NMHC emissions, a manufacturer may provide a statement in its application for certification that such vehicles comply with the applicable standards. Such a statement must be based on previous emission tests, development tests, or other appropriate information.

(F) In lieu of testing a petroleum-fueled heavy-duty vehicle for formaldehyde emissions for certification, a manufacturer may provide a statement in its application for certification that such vehicles comply with the applicable standards. Such a statement must be based on previous emission tests, development tests, or other appropriate information.