

§ 86.094–25.” or “[Reserved]. For guidance see § 86.098–25.”

(a)(1) Applicability. This section applies to light-duty vehicles, light-duty trucks, and heavy-duty engines.

(a)(2) Maintenance performed on vehicles, engines, subsystems, or components used to determine exhaust, evaporative or refueling emission deterioration factors is classified as either emission-related or non-emission-related and each of these can be classified as either scheduled or unscheduled. Further, some emission-related maintenance is also classified as critical emission-related maintenance.

(b) introductory text through (b)(3)(vi)(D) [Reserved]. For guidance see § 86.094–25.

(b)(3)(vi)(E)–(b)(3)(vi)(J) [Reserved]. For guidance see § 86.098–25.

(b)(3)(vii)–(b)(6)(i)(E) [Reserved]. For guidance see § 86.094–25.

(b)(6)(i)(F) [Reserved]. For guidance see § 86.098–25.

(b)(6)(i)(G)–(H) [Reserved]. For guidance see § 86.094–25.

(i) When air conditioning SFTP exhaust emission tests are required, the manufacturer must document that the vehicle’s air conditioning system is operating properly and that system parameters are within operating design specifications prior to test. Required air conditioning system maintenance is performed as unscheduled maintenance and does not require the Administrator’s approval.

[61 FR 54883, Oct. 22, 1996]

**§ 86.000–26 Mileage and service accumulation; emission measurements.**

Section 86.000–26 includes text that specifies requirements that differ from § 86.094–26, § 86.095–26, § 86.096–26 or § 86.098–26. Where a paragraph in § 86.094–26, § 86.095–26, § 86.096–26 or § 86.098–26 is identical and applicable to § 86.000–26, this may be indicated by specifying the corresponding paragraph and the statement “[Reserved]. For guidance see § 86.094–26.” or “[Reserved]. For guidance see § 86.095–26.” or “[Reserved]. For guidance see § 86.096–26.” or “[Reserved]. For guidance see § 86.098–26.”

(a)(1) [Reserved]. For guidance see § 86.094–26.

(a)(2) The standard method of whole-vehicle service accumulation for durability data vehicles and for emission data vehicles shall be mileage accumulation using the Durability Driving Schedule as specified in appendix IV to this part. A modified procedure may also be used if approved in advance by the Administrator. Except with the advance approval of the Administrator, all vehicles will accumulate mileage at a measured curb weight which is within 100 pounds of the estimated curb weight. If the loaded vehicle weight is within 100 pounds of being included in the next higher inertia weight class as specified in § 86.129, the manufacturer may elect to conduct the respective emission tests at higher loaded vehicle weight.

(3) Emission data vehicles. Unless otherwise provided for in § 86.000–23(a), emission-data vehicles shall be operated and tested as described in paragraph (a)(3)(i)(A) of this section; § 86.094–26(a)(3)(i)(B) and (D), § 86.098–26(a)(3)(i)(C) and (a)(3)(ii)(C), and § 86.094–26(a)(3)(ii)(A), (B) and (D).

(i) Otto-cycle. (A) The manufacturer shall determine, for each engine family, the mileage at which the engine-system combination is stabilized for emission-data testing. The manufacturer shall maintain, and provide to the Administrator if requested, a record of the rationale used in making this determination. The manufacturer may elect to accumulate 4,000 miles on each test vehicle within an engine family without making a determination. The manufacturer must accumulate a minimum of 2,000 miles (3,219 kilometers) on each test vehicle within an engine family. All test vehicle mileage must be accurately determined, recorded, and reported to the Administrator. Any vehicle used to represent emission-data vehicle selections under § 86.000–24(b)(1) shall be equipped with an engine and emission control system that has accumulated the mileage the manufacturer chose to accumulate on the test vehicle. Fuel economy data generated from certification vehicles selected in accordance with § 86.000–24(b)(1) with engine-system combinations that have accumulated more than 10,000 kilometers (6,200 miles) shall be factored in accordance with 40 CFR

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600.006–87(c). Complete exhaust (FTP and SFTP tests), evaporative and refueling (if required) emission tests shall be conducted for each emission-data vehicle selection under § 86.000–24(b)(1). The Administrator may determine under § 86.000–24(f) that no testing is required.

(a)(3)(i)(B) [Reserved]. For guidance see § 86.094–26.

(a)(3)(i)(C) [Reserved]. For guidance see § 86.098–26.

(a)(3)(i)(D)–(a)(3)(ii)(B) [Reserved]. For guidance see § 86.094–26.

(a)(3)(ii)(C) [Reserved]. For guidance see § 86.098–26.

(a)(3)(ii)(D)–(a)(4)(i)(B) (4) [Reserved]. For guidance see § 86.094–26.

(a)(4)(i)(C) Complete exhaust emission tests shall be made at nominal test point mileage intervals that the manufacturer determines. Unless the Administrator approves a manufacturer's request to develop specific deterioration factors for aggressive driving (US06) and air conditioning (SC03) test cycle results, tail pipe exhaust emission deterioration factors are determined from only FTP test cycle data. At a minimum, two complete exhaust emission tests shall be made. The first test shall be made at a distance not greater than 6,250 miles. The last shall be made at the mileage accumulation endpoint determined in § 86.094–26 (a)(4)(i) (A) or (B), whichever is applicable.

(a)(4)(i)(D)–(a)(6)(ii) [Reserved]. For guidance see § 86.094–26.

(a)(6)(iii) The results of all emission tests shall be rounded to the number of places to the right of the decimal point indicated by expressing the applicable emission standard of this subpart to one additional significant figure, in accordance with the Rounding-Off Method specified in ASTM E29–90, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications (incorporated by reference; see § 86.1).

(a)(7)–(a)(9)(i) [Reserved]. For guidance see § 86.094–26.

(a)(9)(ii) The test procedures in §§ 86.106 through 86.149 and § 86.158 will be followed by the Administrator. The Administrator may test the vehicles at each test point. Maintenance may be performed by the manufacturer under

such conditions as the Administrator may prescribe.

(a)(9)(iii)–(b)(2) introductory text [Reserved]. For guidance see § 86.094–26.

(b)(2)(i) This paragraph (b)(2)(i) applies to service accumulation conducted under the Standard Self-Approval Durability Program of § 86.094–13(f). The manufacturer determines the form and extent of this service accumulation, consistent with good engineering practice, and describes it in the application for certification. Service accumulation under the Standard Self-Approval Durability Program is conducted on vehicles, engines, subsystems, or components selected by the manufacturer under § 86.000–24(c)(2)(i).

(ii) This paragraph (b)(2)(ii) applies to service accumulation conducted under the Alternative Service Accumulation Durability Program of § 86.094–13(e). The service accumulation method is developed by the manufacturer to be consistent with good engineering practice and to accurately predict the deterioration of the vehicle's emissions in actual use over its full useful life. The method is subject to advance approval by the Administrator and to verification by an in-use verification program conducted by the manufacturer under § 86.094–13(e)(5).

(b)(2)(iii)–(b)(4)(i)(C) [Reserved]. For guidance see § 86.094–26.

(b)(4)(i)(D)–(b)(4)(ii)(D) [Reserved]. For guidance see § 86.095–26.

(b)(4)(iii) [Reserved]

(b)(4)(iv)–(c)(3) [Reserved]. For guidance see § 86.094–26.

(c)(4) [Reserved]. For guidance see § 86.096–26.

(d) introductory text through (d)(2)(i) [Reserved]. For guidance see § 86.094–26.

(d)(2)(ii) The results of all emission tests shall be recorded and reported to the Administrator. These test results shall be rounded, in accordance with the Rounding-Off Method specified in ASTM E29–90, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications (incorporated by reference; see § 86.1), to the number of decimal places contained in the applicable emission standard expressed to one additional significant figure.

**§ 86.000-28**

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(d)(3)-(d)(6) [Reserved]. For guidance see § 86.094-26.

[61 FR 54883, Oct. 22, 1996]

**§ 86.000-28 Compliance with emission standards.**

Section 86.000-28 includes text that specifies requirements that differ from § 86.094-28 or § 86.098-28. Where a paragraph in § 86.094-28 or § 86.098-28 is identical and applicable to § 86.000-28, this may be indicated by specifying the corresponding paragraph and the statement “[Reserved]. For guidance see § 86.094-28.” or “[Reserved]. For guidance see § 86.098-28.”

(a)(1) This paragraph (a) applies to light duty vehicles.

(2) Each exhaust, evaporative and refueling emission standard (and family particulate emission limits, as appropriate) of § 86.000-8 applies to the emissions of vehicles for the appropriate useful life as defined in §§ 86.000-2 and 86.000-8.

(a)(3) [Reserved]. For guidance see § 86.094-28.

(a)(4) Introductory text [Reserved]. For guidance see § 86.098-28.

(a)(4)(i) Separate emission deterioration factors for each regulated exhaust constituent shall be determined from the FTP exhaust emission results of the durability-data vehicle(s) for each engine-system combination. Unless the Administrator approves a manufacturer's request to develop specific deterioration factors for US06 and air conditioning (SC03) test results, applicable FTP deterioration factors will also be used to estimate intermediate and full useful life emissions for all SFTP regulated emission levels. Separate evaporative and/or refueling emission deterioration factors shall be determined for each evaporative/refueling emission family-emission control system combination from the testing conducted by the manufacturer (gasoline-fueled and methanol-fueled vehicles only). Separate refueling emission deterioration factors shall be determined for each evaporative/refueling emission family-emission control system combination from the testing conducted by the manufacturer (petroleum-fueled diesel cycle vehicles not certified under the provisions of § 86.098-28(g) only).

(a)(4)(i)(A)-(a)(4)(i)(B)(2)(i) [Reserved]. For guidance see § 86.094-28.

(a)(4)(i)(B)(2)(ii) These interpolated values shall be carried out to a minimum of four places to the right of the decimal point before dividing one by the other to determine the deterioration factor. The results shall be rounded to three places to the right of the decimal point in accordance with the Rounding-Off Method specified in ASTM E29-90, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications (incorporated by reference; see § 86.1).

(a)(4)(i)(B)(2)(iii)-(a)(4)(i)(B)(2)(iv) [Reserved]. For guidance see § 86.094-28.

(a)(4)(i)(C)-(a)(4)(i)(D)(2) [Reserved]. For guidance see § 86.098-28.

(a)(4)(ii)(A)(1) The official exhaust emission test results for each applicable exhaust emission standard for each emission data vehicle at the selected test point shall be multiplied by the appropriate deterioration factor: *Provided*, that if a deterioration factor as computed in paragraph (a)(4)(i)(B)(2)(ii) of this section is less than one, that deterioration factor shall be one for the purposes of this paragraph. For the SFTP composite standard of (NMHC+NO<sub>x</sub>), the measured results of NMHC and NO<sub>x</sub> must each be multiplied by their corresponding deterioration factors before the composite (NMHC+NO<sub>x</sub>) standard is calculated.

(2) The calculation specified in paragraph (a)(4)(ii)(A)(1) of this section may be modified with advance approval of the Administrator for engine-system combinations which are certified under the Alternative Service Accumulation Durability Program specified in § 86.094-13(e).

(a)(4)(ii)(B)-(a)(4)(ii)(C) [Reserved]. For guidance see § 86.098-28.

(a)(4)(iii) The emissions to compare with the standard (or the family particulate emission limit, as appropriate) shall be the adjusted emissions of § 86.098-28 (a)(4)(ii)(B) and (C) and paragraph (a)(4)(ii)(A) of this section 211a for each emission-data vehicle. For the SFTP composite (NMHC+NO<sub>x</sub>) results, the individual deterioration factors must be applied to the applicable NMHC and NO<sub>x</sub> test results prior to calculating the adjusted composite