

Environmental Protection Agency

§ 86.432-78

§ 86.431-78 Data submission.

(a) Data from all tests (including voided tests) performed by a manufacturer with total projected sales in excess of 10,000 vehicles shall be included in the application.

(b) The manufacturer shall furnish to the Administrator explanation for voiding any test. The Administrator will determine if voiding the test was appropriate based upon the explanation given by the manufacturer. If the Administrator determines that voiding the test was not appropriate, the Administrator may require that the data from that test be used in the calculation of the deterioration factor for emissions.

(c) When unscheduled or anticipated maintenance is performed, a complete record of all pertinent maintenance, including the malfunction diagnosis made, the corrective action taken, and the test data obtained shall be included in the application.

(d) A complete record of all maintenance shall be supplied.

(e) Measure CO₂, N₂O, and CH₄ as described in this paragraph (e) with each zero kilometer certification test (if one is conducted) and with each test conducted at the applicable minimum test distance as defined in § 86.427-78. Use the analytical equipment and procedures specified in 40 CFR part 1065 as needed to measure N₂O and CH₄. Report these values in your application for certification. The requirements of this paragraph (e) apply starting with model year 2011 for CO₂ and 2012 for CH₄. The requirements of this paragraph (e) related to N₂O emissions apply for engine families that depend on NO_x aftertreatment to meet emission standards starting with model year 2013. Small-volume manufacturers (as defined in § 86.410-2006(e)) may omit measurement of N₂O and CH₄; other manufacturers may provide appropriate data and/or information and omit measurement of N₂O and CH₄ as described in 40 CFR 1065.5. Use the same measurement methods as for your other results to report a single value for CO₂, N₂O, and CH₄. Round the final values as follows:

- (1) Round CO₂ to the nearest 1 g/km.
- (2) Round N₂O to the nearest 0.001 g/km.

- (3) Round CH₄ to the nearest 0.001 g/km.

[42 FR 1126, Jan. 5, 1977, as amended at 49 FR 48139, Dec. 10, 1984; 74 FR 56373, Oct. 30, 2009]

§ 86.432-78 Deterioration factor.

(a) Deterioration factors shall be developed for each test vehicle from the emission test results. A separate factor shall be developed for each pollutant. The applicable data to be used in calculating these factors are:

(1) The results from all valid tests conducted by the manufacturer or Administrator at scheduled test intervals.

(2) The results from tests conducted before and after scheduled maintenance unless specifically excluded by the Administrator.

(3) The results from tests conducted before and after unscheduled maintenance, if approval of the maintenance by the Administrator was conditioned on the data being used in the deterioration factor calculation.

(b) Emission results which are less than 0.10 g/km shall be considered to be 0.10 g/km for purposes of this section.

(c) Test results for each pollutant shall be plotted as a function of the service accumulated at the start of the emission test, rounded to the nearest kilometre. These results shall be correlated to a straight line, fit by the method of least squares.

(d) An exhaust emission deterioration factor will be calculated by dividing the predicted emissions at the useful life distance by the predicted emissions at the total test distance. Predicted emissions are obtained from the correlation developed in paragraph (c) of this section.

Factor = Predicted total distance emissions/Predicted total test distance emissions

These interpolated and extrapolated values shall be carried out to 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 ASTM E 29-67.

(e) Deterioration factors computed to be less than 1.000 shall be 1.000.

(f)(1) The manufacturer has the option of applying an outlier test point