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(ii) Repeat the steps in paragraph (d)(1)(ii) of this section. Operate the vehicle over the first 505 seconds of the UDDS. At the end of the deceleration scheduled to occur 505 seconds into the hot-start UDDS, turn off the engine and simultaneously stop all hot-start sampling and recording, including background sampling, and any integrating devices.

(iii) For tests that do not include bag 4 operation, turn the engine off. To include bag 4 measurement, operate the vehicles over the remainder of the UDDS and conclude the testing as described in paragraphs (d)(1)(iii) and (iv) of this section.

(3) This completes the procedure for measuring FTP exhaust emissions. See §1066.801 and subpart J of this part for continuing the test sequence to measure evaporative or refueling emissions.

§ 1066.816 Vehicle preconditioning for FTP testing.

Precondition the test vehicle before the FTP exhaust measurement as described in 40 CFR 86.132.

§ 1066.820 Composite calculations for FTP exhaust emissions.

(a) Determine the mass of exhaust emissions of each pollutant for each FTP test interval as described in §1066.605.

(b) Calculate the final composite gaseous test results as a mass-weighted value, $e_{\text{emission}}-\text{FTPcomp}$, in grams per mile using the following equation:

$$e_{\text{emission}}-\text{FTPcomp} = 0.43 \cdot \left( \frac{m_c}{D_{ct} + D_{cs}} \right) + 0.57 \cdot \left( \frac{m_h}{D_{ht} + D_{hs}} \right)$$

Eq. 1066.820-1

Where:
- $m_c$ = the combined mass emissions determined from the cold-start UDDS test interval (generally known as bag 1 and bag 2), in grams.
- $D_{ct}$ = the measured driving distance from the transient portion of the cold-start test (bag 1), in miles.
- $D_{cs}$ = the measured driving distance from the stabilized portion of the cold-start test (bag 2), in miles.
- $m_h$ = the combined mass emissions determined from the hot-start UDDS test interval in grams. This is the hot-stabilized portion from either the first or second UDDS (bag 2, unless you measure bag 4), in addition to the hot transient portion (bag 3).
- $D_{ht}$ = the measured driving distance from the transient portion of the hot-start test (bag 3), in miles.
- $D_{hs}$ = the measured driving distance from the stabilized portion of the hot-start test (bag 4), in miles. Set $D_{hs} = D_{cs}$ for testing where the hot-stabilized portion of the UDDS is not run.

(c) Calculate the final composite PM test results as a mass-weighted value, $e_{\text{PM}}-\text{FTPcomp}$, in grams per mile as follows:

$$e_{\text{PM}}-\text{FTPcomp} = 0.43 \cdot \left( \frac{m_{PM-\text{UDDS}}}{D_{ct} + D_{cs}} \right) + 0.57 \cdot \left( \frac{m_{PM-\text{hUDDS}}}{D_{ht} + D_{hs}} \right)$$

Eq. 1066.820-2

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§ 1066.830 Supplemental Federal Test Procedures; overview.

Sections 1066.831 and 1066.835 describe the detailed procedures for the Supplemental Federal Test Procedure (SFTP). This testing applies for all vehicles subject to the SFTP standards in 40 CFR part 86, subpart S. The SFTP test procedure consists of FTP testing and two additional test elements—a sequence of vehicle operation with more aggressive driving and a sequence of vehicle operation that accounts for the impact of the vehicle’s air conditioner.

(a) The SFTP standard applies as a composite representing the three test elements. The emission results from the aggressive driving test element (§1066.831), the air conditioning test element (§1066.835), and the FTP test element (§1066.820) are analyzed according to the calculation methodology and compared to the applicable SFTP emission standards as described in 40 CFR part 86, subpart S.

(b) The test elements of the SFTP may be run in any sequence that includes the specified preconditioning steps.

§ 1066.831 Exhaust emission test procedures for aggressive driving.

(a) This section describes how to test using the US06 or LA–92 driving schedule. The US06 driving schedule can be divided into two test intervals—the US06 City cycle comprises the combined portions of the cycle from 1 to 130 seconds and from 495 to 596 seconds, and the US06 Highway cycle comprises the portion of the cycle between 130 and 495 seconds. See §1066.801 for further information on the driving schedules.