

(1) You must test ten additional engines using the test procedures described in §86.1375, unless we require you to test fewer vehicles.

(2) We may give you any of the following additional directions in selecting and testing engines:

(i) We may require you to select a certain subset of your engine family. This may include, for example, engines within a specific power range, engines used in particular applications, or engines installed in vehicles from a particular manufacturer.

(ii) We may direct you to test engines in a way that simulates the type of driving and ambient conditions associated with high emissions experienced during Phase 1 testing.

(iii) We may direct you to test engines in a specific state or any number of contiguous states.

(iv) We may direct you to select engines from the same sources used for previous testing, or from different sources.

(v) We may require that you complete your testing and reporting under Phase 2 within a certain period. This period may not be shorter than three months and must allow a reasonable amount of time to identify and test enough vehicles. We would generally expect this testing to be completed within the overall time period specified in §86.1905(d).

§86.1917 How does in-use testing under this subpart relate to the emission-related warranty in Section 207(a)(1) of the Clean Air Act?

(a) An exceedance of the NTE found through the in-use testing program under this subpart is not by itself sufficient to show a breach of warranty under Clean Air Act section 207(a)(1) (42 U.S.C. 7541(a)(1)). A breach of warranty would also require one of the following things:

(1) That, at the time of sale, the engine or vehicle was designed, built, and equipped in a manner that does not conform in all material respects reasonably related to emission controls to the engine as described in the application for certification and covered by the certificate; or

(2) A defect in materials or workmanship of a component causes the vehicle

or engine to fail to conform to the applicable regulations for its useful life.

(b) To the extent that in-use NTE testing does not reveal such a material deficiency at the time of sale in the design or manufacture of an engine compared with the certified engine, or a defect in the materials and workmanship of a component or part, test results showing an exceedance of the NTE by itself would not show a breach of the warranty under 42 U.S.C. 7541(a)(1).

§86.1920 What in-use testing information must I report to EPA?

(a) Send us electronic reports at *inuse@epa.gov* using an approved information format. If you want to use a different format, send us a written request with justification.

(b) Within 30 days after the end of each calendar quarter, send us reports containing the test data from each engine for which testing was completed during the calendar quarter. Alternatively, you may separately send us the test data within 30 days after you complete testing for an engine. Once you send us information under this section, you need not send that information again in later reports. Prepare your test reports as follows:

(1) For each engine family, describe how you recruited vehicles. Describe how you used any criteria or thresholds to narrow your search or to screen individual vehicles.

(2) Include a summary of the candidate vehicles you have rejected and the reasons you rejected them, whether you base the rejection on the criteria in §86.1908(a) or anything else. If you rejected a candidate vehicle due to misfueling, included the results of any fuel sample tests.

(3) For the test vehicle, include the following background information:

(i) The EPA engine-family designation, and the engine's model number, total displacement, and power rating.

(ii) The applicable test phase (Phase 1 or Phase 2).

(iii) The date EPA selected the engine family for testing.

(iv) The vehicle's make and model and the year it was built.

(v) The vehicle identification number and engine serial number.

(vi) The vehicle's type or application (such as delivery, line haul, or dump truck). Also, identify the type of trailer, if applicable.

(vii) The vehicle's maintenance and use history.

(viii) The known status history of the vehicle's OBD system and any actions the owner or operator took to address OBD trouble codes or MIL illumination over the vehicle's lifetime.

(ix) Any OBD codes or MIL illumination that occur after you accept the vehicle for in-use testing under this subpart.

(x) Any steps you take to maintain, adjust, modify, or repair the vehicle or its engine to prepare for or continue testing, including actions to address OBD trouble codes or MIL illumination. Include any steps you took to drain and refill the vehicle's fuel tank(s) to correct misfueling, and the results of any fuel test conducted to identify misfueling.

(4) For each test, include the following data and measurements:

(i) The date and time of testing, and the test number.

(ii) Shift-days of testing (see § 86.1910(g)), duration of testing, and the total hours of non-idle operation.

(iii) Route and location of testing. You may base this description on the output from a global-positioning system.

(iv) The steps you took to ensure that vehicle operation during testing was consistent with normal operation and use, as described in § 86.1910(e).

(v) Fuel test results, if fuel was tested under § 86.1908 or 86.1910.

(vi) The vehicle's mileage at the start of the test. Include the engine's total lifetime hours of operation, if available.

(vii) Ambient temperature, dewpoint, and atmospheric pressure at the start and finish of each valid NTE event.

(viii) The number of valid NTE events (see § 86.1912(b)).

(ix) Average emissions for each pollutant over each valid NTE event. Describe the method you used to determine NMHC as specified in 40 CFR part 1065, subpart J. See Appendix I of this subpart for an example of graphically summarizing NTE emission results.

(x) Exhaust-flow measurements.

(xi) Vehicle-pass ratios (see § 86.1912(d)).

(xii) Recorded one-hertz test data, including, but not limited to, the following parameters:

(A) Ambient temperature.

(B) Ambient pressure.

(C) Ambient humidity.

(D) Altitude.

(E) Emissions of THC, NMHC, CO, CO₂ or O₂, NO_x, and PM (as appropriate). Report results for CH₄ if it was measured and used to determine NMHC.

(F) Differential back-pressure of any PEMS attachments to vehicle exhaust.

(G) Exhaust flow.

(H) Exhaust aftertreatment temperatures, if the engine meets the specifications of § 86.1370-2007(g).

(I) Engine speed.

(J) Engine brake torque.

(K) Engine coolant temperature.

(L) Intake manifold temperature.

(M) Intake manifold pressure.

(N) Throttle position.

(O) Any parameter sensed or controlled in order to modulate the emission-control system or fuel-injection timing.

(5) For each engine family, identify the applicable requirements, as follows:

(i) The applicable NTE thresholds.

(ii) Vehicle and engine information needed to identify the limited testing regions under § 86.1370-2007(b)(6) and (7).

(iii) Vehicle and engine information needed to identify any approved NTE deficiencies under § 86.007-11(a)(4)(iv).

(6) Include the following summary information after you complete testing with the engine:

(i) State whether the engine meets the vehicle-pass criteria in § 86.1912(f).

(ii) Identify how many engines you have tested from the applicable engine family and how many engines still need to be tested.

(iii) Identify how many engines from an engine family have passed the vehicle-pass criteria and the number that have failed the vehicle-pass criteria (see § 86.1912(f)).

(iv) If possible, state the outcome of Phase 1 testing for the engine family based on the criteria in § 86.1915(b).

(c) In your reports under this section, you must do all the following:

Environmental Protection Agency

§ 86.1930

(1) Include results from all emission testing required under this subpart.

(2) Describe if any testing or evaluations were conducted to determine why a vehicle failed the vehicle-pass criteria in § 86.1912.

(3) Describe the purpose of any diagnostic procedures you conduct.

(4) Describe any instances in which the OBD system illuminated the MIL or set trouble codes. Also describe any approved actions taken to address the trouble codes or MIL.

(5) Describe any instances of misfueling, the approved actions taken to address the problem, and the results of any associated fuel sample testing.

(6) Describe any incomplete or invalid tests that were conducted under this subpart.

(d) Send us an electronic notification at *inuse@epa.gov* describing any voluntary vehicle/engine emission evaluation testing you intend to conduct with portable in-use measurement systems on the same engine families that are being tested under this subpart, from the time that engine family was selected for in-use testing under § 86.1905 until the final results of all testing for that engine family are reported to us under this section.

(e) Send us an electronic notification at *application-ci_cert@epa.gov* within 15 days after your initial review of the test data for a selected engine family indicates that three engines in Phase 1 testing have failed to comply with the vehicle-pass criteria. Similarly, send us an electronic notification at the above electronic address within 3 days after your initial review of the test data for a selected engine family indicates that *any* engine in Phase 2 testing failed to comply with the vehicle-pass criteria.

(f) We may ask you to send us less information in your reports than we specify in this section.

(g) We may require you to send us more information to evaluate whether your engine family meets the requirements of this part, or to help inform potential decisions concerning Phase 2 testing under § 86.1915.

§ 86.1925 What records must I keep?

(a) Organize and maintain your records as described in this section. We

may review your records at any time, so it is important to keep required information readily available.

(b) Keep the following paper or electronic records of your in-use testing for five years after you complete all the testing required for an engine family:

(1) Keep a copy of the reports described in § 86.1920.

(2) Keep any additional records, including forms you create, related to any of the following:

(i) The procurement and vehicle-selection process described in § 86.1908, including the vehicle owner's name, address, phone number, and e-mail address.

(ii) Pre-test maintenance and adjustments to the engine performed under § 86.1910.

(iii) Test results for all void, incomplete, and voluntary testing described in § 86.1920.

(iv) Evaluations to determine why a vehicle failed the vehicle-pass criteria described in § 86.1912.

(3) Keep a copy of the relevant calibration results required by 40 CFR part 1065.

§ 86.1930 What special provisions apply from 2005 through 2007?

We may direct you to test engines under this subpart for emissions other than PM in 2005 and 2006, and for PM emissions in 2006 and 2007. In these interim periods, all the provisions of this subpart apply, with the following exceptions:

(a) We will select engine families for testing of emissions other than PM only when the manufacturer's Statement of Compliance specifically describes the family as being designed to comply with NTE requirements.

(b) If you participate in the test program described in § 86.1935(a), you may limit your testing under Phase 1 to a maximum of five vehicles per selected engine family.

(c) We will not direct you to do the Phase 2 testing in § 86.1915(c), regardless of measured emission levels.

(d) For purposes of calculating the NTE thresholds under § 86.1912(a) for any 2006 and earlier model year engine that is not subject to the emission standards in § 86.007-11, determine the applicable NTE standards as follows: