

§ 1033.415

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(c) Use the same test procedures for in-use testing as were used for certification, except for cases in which certification testing was not conducted with a locomotive, but with a development engine or other engine. In such cases, we will specify deviations from the certification test procedures as appropriate. We may allow or require other alternate procedures, with advance approval.

(d) Set all adjustable locomotive or engine parameters to values or positions that are within the range specified in the certificate of conformity. We may require you to set these parameters to specific values.

(e) We may waive a portion of the applicable test procedure that is not necessary to determine in-use compliance.

§ 1033.415 General testing requirements.

(a) *Number of locomotives to be tested.* Determine the number of locomotives to be tested by the following method:

(1) Test a minimum of 2 locomotives per engine family, except as provided in paragraph (a)(2) of this section. You must test additional locomotives if any locomotives fail to meet any standard. Test 2 more locomotives for each failing locomotive, but stop testing if the total number of locomotives tested equals 10.

(2) If an engine family has been certified using carryover emission data from a family that has been previously tested under paragraph (a)(1) of this section (and we have not ordered or begun to negotiate remedial action of that family), you need to test only one locomotive per engine family. If that locomotive fails to meet applicable standards for any pollutant, testing for that engine family must be conducted as outlined under paragraph (a)(1) of this section.

(3) You may ask us to allow you to test more locomotives than the minimum number described above or you may concede failure before testing 10 locomotives.

(b) *Compliance criteria.* We will consider failure rates, average emission levels and the existence of any defects among other factors in determining whether to pursue remedial action. We may order a recall pursuant to 40 CFR

part 1068 before testing reaches the tenth locomotive.

(c) *Collection of in-use locomotives.* Procure in-use locomotives that have been operated for 50 to 75 percent of the locomotive's useful life for testing under this subpart. Complete testing required by this section for any engine family before useful life of the locomotives in the engine family passes. (NOTE: § 1033.820 specifies that railroads must make reasonable efforts to enable you to perform this testing.)

§ 1033.420 Maintenance, procurement and testing of in-use locomotives.

(a) A test locomotive must have a maintenance history that is representative of actual in-use conditions, and identical or equivalent to your recommended emission-related maintenance requirements.

(1) When procuring locomotives for in-use testing, ask the end users about the accumulated usage, maintenance, operating conditions, and storage of the test locomotives.

(2) Your selection of test locomotives is subject to our approval. Maintain the information you used to procure locomotives for in-use testing in the same manner as is required in § 1033.250.

(b) You may perform minimal set-to-spec maintenance on a test locomotive before conducting in-use testing. Maintenance may include only that which is listed in the owner's instructions for locomotives with the amount of service and age of the acquired test locomotive. Maintain documentation of all maintenance and adjustments.

(c) If the locomotive selected for testing is equipped with emission diagnostics meeting the requirements in § 1033.110 and the MIL is illuminated, you may read the code and repair the malfunction according to your emission-related maintenance instructions, but only to the degree that an owner/operator would be required to repair the malfunction under § 1033.815.

(d) Results of at least one valid set of emission tests using the test procedure described in subpart F of this part is required for each in-use locomotive.

(e) If in-use testing results show that an in-use locomotive fails to comply with any applicable emission standards, you must determine the reason

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for noncompliance and report your findings in the quarterly in-use test result report described in § 1033.425.

§ 1033.425 In-use test program reporting requirements.

(a) Within 90 days of completion of testing, send us all emission test results generated from the in-use testing program. Report all of the following information for each locomotive tested:

- (1) Engine family, and configuration.
- (2) Locomotive and engine models.
- (3) Locomotive and engine serial numbers.
- (4) Date of manufacture or remanufacture, as applicable.
- (5) Megawatt-hours of use (or miles, as applicable).
- (6) Date and time of each test attempt.
- (7) Results of all emission testing.
- (8) Results (if any) of each voided or failed test attempt.
- (9) Summary of all maintenance and/or adjustments performed.
- (10) Summary of all modifications and/or repairs.
- (11) Determinations of noncompliance.
- (12) The following signed statement and endorsement by an authorized representative of your company.

We submit this report under sections 208 and 213 of the Clean Air Act. Our in-use testing conformed completely with the requirements of 40 CFR part 1033. All the information in this report is true and accurate to the best of my knowledge. I know of the penalties for violating the Clean Air Act and the regulations. (Authorized Company Representative)

(b) Report to us within 90 days of completion of testing the following information for each engine family tested:

- (1) The serial numbers of all locomotive that were excluded from the test sample because they did not meet the maintenance requirements of § 1033.420.
- (2) The owner of each locomotive identified in paragraph (b)(1) of this section (or other entity responsible for the maintenance of the locomotive).
- (3) The specific reasons why the locomotives were excluded from the test sample.

(c) Submit the information outlined in paragraphs (a) and (b) of this section electronically using an approved format. We may exempt you from this requirement upon written request with supporting justification.

(d) Send all testing reports and requests for approvals to the Designated Compliance Officer.

Subpart F—Test Procedures

§ 1033.501 General provisions.

(a) Except as specified in this subpart, use the equipment and procedures for compression-ignition engines in 40 CFR part 1065 to determine whether your locomotives meet the duty-cycle emission standards in § 1033.101. Use the applicable duty cycles specified in this subpart. Measure emissions of all the pollutants we regulate in § 1033.101 plus CO₂. The general test procedure is the procedure specified in 40 CFR part 1065 for steady-state discrete-mode cycles. However, if you use the optional ramped modal cycle in § 1033.520, follow the procedures for ramped modal testing in 40 CFR part 1065. The following exceptions from the 1065 procedures apply:

(1) You must average power and emissions over the sampling periods specified in this subpart for both discrete-mode testing and ramped modal testing.

(2) The test cycle is considered to be steady-state with respect to operator demand rather than engine speed and load.

(3) The provisions related to engine mapping and duty cycle generation (40 CFR 1065.510 and 1065.512) are not applicable to testing of complete locomotives or locomotive engines because locomotive operation and locomotive duty cycles are based on operator demand via locomotive notch settings rather than engine speeds and loads. The cycle validation criteria (40 CFR 1065.514) are not applicable to testing of complete locomotives but do apply for dynamometer testing of engines.

(b) You may use special or alternate procedures to the extent we allow as them under 40 CFR 1065.10. In some cases, we allow you to use procedures that are less precise or less accurate than the specified procedures if they do