

§ 1048.415

40 CFR Ch. I (7–1–13 Edition)

compliance with the duty-cycle standards in § 1048.101(a) and (b). We may direct you to measure emissions on the dynamometer using the supplemental test procedures in § 1048.515 to show compliance with the field-testing standards in § 1048.101(c).

(2) Test the selected engines while they remain installed in the equipment. Use the field testing procedures in subpart F of this part. Measure emissions during normal operation of the equipment to show compliance with the field-testing standards in § 1048.101(c). We may direct you to include specific areas of normal operation.

(g) You may ask us to waive parts of the prescribed test procedures if they are not necessary to determine in-use compliance.

(h) Calculate the average emission levels for an engine family from the results for the set of tested engines. Round them to the number of decimal places in the emission standards expressed to one more decimal place.

[67 FR 68347, Nov. 8, 2002, as amended at 73 FR 59239, Oct. 8, 2008]

§ 1048.415 What happens if in-use engines do not meet requirements?

(a) Determine the reason each in-use engine exceeds the emission standards.

(b) If the average emission levels calculated in § 1048.410(h) exceed any of the emission standards that apply, notify us within fifteen days of completing testing on this family. Otherwise follow the reporting instructions in § 1048.420.

(c) We will consider failure rates, average emission levels, and any defects—among other things—to decide on taking remedial action under this subpart (see 40 CFR 1068.505). We may consider the results from any voluntary additional testing you perform. We may also consider information related to testing from other engine families showing that you designed them to exceed the minimum requirements for controlling emissions. We may order a recall before or after you complete testing of an engine family if we determine a substantial number of engines do not conform to section 213 of the Act or to this part. The scope of the recall may include other engine

families in the same or different model years if the cause of the problem identified in paragraph (a) of this section applies more broadly than the tested engine family, as allowed by the Act.

(d) If in-use testing reveals a design or manufacturing defect that prevents engines from meeting the requirements of this part, you must correct the defect as soon as possible for any future production for engines in every family affected by the defect. See 40 CFR 1068.501 for additional requirements related to defect reporting.

(e) You may voluntarily recall an engine family for emission failures, as described in 40 CFR 1068.535, unless we have ordered a recall for that family under 40 CFR 1068.505.

(f) You have the right to a hearing before we order you to recall your engines or implement an alternative remedy (see § 1048.820).

[67 FR 68347, Nov. 8, 2002, as amended at 73 FR 59239, Oct. 8, 2008]

§ 1048.420 What in-use testing information must I report to EPA?

(a) In a report to us within three months after you finish testing an engine family, do all the following:

(1) Identify the engine family, model, serial number, and date of manufacture.

(2) For each engine inspected or considered for testing, identify whether the diagnostic system was functioning.

(3) Describe the specific reasons for disqualifying any engines for not being properly maintained or used.

(4) For each engine selected for testing, include the following information:

(i) Estimate the hours each engine was used before testing.

(ii) Describe all maintenance, adjustments, modifications, and repairs to each test engine.

(5) State the date and time of each test attempt.

(6) Include the results of all emission testing, including incomplete or invalidated tests, if any.

(b) Send electronic reports of in-use testing to the Designated Compliance Officer using an approved information format. If you want to use a different format, send us a written request with justification for a waiver.

Environmental Protection Agency

§ 1048.505

(c) We will send copies of your reports to anyone from the public who asks for them. See §1048.815 for information on how we treat information you consider confidential.

(d) We may ask for more information.

[67 FR 68347, Nov. 8, 2002, as amended at 70 FR 40476, July 13, 2005]

§ 1048.425 What records must I keep?

(a) Organize and maintain your records as described in this section. We may review your records at any time.

(b) Keep paper records of your in-use testing for one full year after you complete all the testing required for an engine family in a model year. You may use any additional storage formats or media if you like.

(c) Keep a copy of the written reports described in §1048.420.

(d) Keep any additional records related to the procurement process.

[67 FR 68347, Nov. 8, 2002, as amended at 70 FR 40476, July 13, 2005]

Subpart F—Test Procedures

§ 1048.501 How do I run a valid emission test?

(a) Use the equipment and procedures for spark-ignition engines in 40 CFR part 1065 to determine whether engines meet the duty-cycle emission standards in §1048.101(a) and (b). Measure the emissions of all the pollutants we regulate in §1048.101 using the sampling procedures specified in 40 CFR part 1065. Measure CO₂, N₂O, and CH₄ as described in §1048.235. Use the applicable duty cycles specified in §§1048.505 and 1048.510.

(b) Section 1048.515 describes the supplemental procedures for evaluating whether engines meet the field-testing emission standards in §1048.101(c).

(c) Use the fuels and lubricants specified in 40 CFR part 1065, subpart H, to perform valid tests for all the testing we require in this part, except as noted in §1048.515. For service accumulation, use the test fuel or any commercially available fuel that is representative of the fuel that in-use engines will use.

(d) In place of the provisions of 40 CFR 1065.405, you may consider emission levels stable without measure-

ment after 50 hours of engine operation.

(e) To test engines for evaporative emissions, use the equipment and procedures specified for testing diurnal emissions as described in 40 CFR 1060.525, subject to the following provisions:

(1) Precondition nonmetal fuel tanks as specified in 40 CFR 1060.520(a) and (b).

(2) For engines equipped with carbon canisters that store fuel vapors that will be purged for combustion in the engine, precondition the canister as specified in 40 CFR 86.132–96(h) and then operate the engine for 60 minutes over repeat runs of the duty cycle specified in Appendix I of this part.

(3) Start the diurnal emission test after the engine is stabilized at room temperatures, but within 36 hours after the engine operation specified in paragraph (e)(2) of this section.

(4) You may not separately measure permeation emissions from nonmetal fuel tanks for subtracting from the diurnal emission measurement.

(5) Note that you may omit testing for evaporative emissions during certification if you certify by design, as specified in §1048.245.

(f) You may use special or alternate procedures to the extent we allow them under 40 CFR 1065.10.

(g) This subpart is addressed to you as a manufacturer, but it applies equally to anyone who does testing for you, and to us when we perform testing to determine if your engines meet emission standards.

[70 FR 40476, July 13, 2005, as amended at 73 FR 59239, Oct. 8, 2008; 74 FR 56510, Oct. 30, 2009]

§ 1048.505 How do I test engines using steady-state duty cycles, including ramped-modal testing?

This section describes how to test engines under steady-state conditions. In some cases, we allow you to choose the appropriate steady-state duty cycle for an engine. In these cases, you must use the duty cycle you select in your application for certification for all testing you perform for that engine family. If we test your engines to confirm that they meet emission standards, we will use the duty cycles you select for your