equal to the emission standard. For example, if N = 5.1 after the fifth test, the sample-size calculation does not allow you to stop testing.

(2) The engine family does not comply according to § 1048.315.

(3) You test 30 engines from the engine family.

(4) You test one percent of your projected annual U.S.-directed production volume for the engine family, rounded to the nearest whole number. Do not count an engine under this paragraph (g)(4) if it fails to meet an applicable emission standard. You may stop testing after you test one percent of your production volume even if you have not tested the number of engines specified in paragraph (b) of this section. For example, if projected volume is 475 engines, test two engines in each of the first two quarters and one engine in the third quarter to fulfill your testing requirements under this section for that engine family.

(5) You choose to declare that the engine family does not comply with the requirements of this subpart.

(h) If the sample-size calculation allows you to stop testing for one pollutant but not another, you must continue measuring emission levels of all pollutants for any additional tests required under this section. However, you need not continue making the calculations specified in this section for the pollutant for which testing is not required. This paragraph (h) does not affect the number of tests required under this section or the remedial steps required under § 1048.320.

* * * * *

74. Section 1048.315 is amended by revising paragraphs (a) and (b) to read as follows:

§ 1048.315 How do I know when my engine family fails the production-line testing requirements?

* * * * *

(a) Calculate your test results as follows:

(1) *Initial and final test results.* Calculate and round the test results for each engine. If you do several tests on an engine, calculate the initial test results, then add them together and divide by the number of tests and round for the final test results on that engine.

(2) *Final deteriorated test results.* Apply the deterioration factor for the engine family to the final test results (see § 1048.240(c)).

(3) *Round deteriorated test results.* Round the results to the number of decimal places in the emission standard expressed to one more decimal place.

(b) Construct the following CumSum Equation for each engine family for $HC+NO_X$ and CO emissions:

$C_i = \text{Max}\ [0 \text{ or } C_{i-1} + X_i - (STD + 0.25 \times \sigma)]$

Where:

C_i = The current CumSum statistic.

C_{i-1} = The previous CumSum statistic. For the first test, the CumSum statistic is 0 (i.e., $C_1 = 0$).

X_i = The current emission test result for an individual engine.

STD = Emission standard.

* * * * *

75. Section 1048.325 is amended by revising the section heading and paragraph (c) to read as follows:

§ 1048.325 What happens if an engine family fails the production-line testing requirements?

* * * * *

(c) Up to 15 days after we suspend the certificate for an engine family, you may ask for a hearing (see § 1048.820). If we agree before a hearing occurs that we used erroneous information in deciding to suspend the certificate, we will reinstate the certificate.

* * * * *

76. Section 1048.345 is amended by revising paragraphs (a)(4), (a)(5), (a)(8), and (c) to read as follows:

§ 1048.345 What production-line testing records must I send to EPA?

* * * * *

(a) * * *

(4) Describe each test engine, including the engine family's identification and the engine's model year, build date, model number, identification number, and number of hours of operation before testing.

(5) Identify how you accumulated hours of operation on the engines and describe the procedure and schedule you used.

* * * * *

(8) Provide the CumSum analysis required in § 1048.315 and the sample-size calculation required in § 1048.310 for each engine family.

* * * * *

(c) An authorized representative of your company must sign the following statement:

We submit this report under Sections 208 and 213 of the Clean Air Act. Our production-line testing conformed completely with the requirements of 40 CFR part 1048. We have not changed production processes or quality-control procedures for test engines in a way that might affect emission controls. 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)

* * * * *

77. Section 1048.350 is amended by revising paragraphs (b) and (e) to read as follows:

§ 1048.350 What records must I keep?

* * * * *

(b) Keep paper records of your production-line testing for eight years 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.

* * * * *

(e) If we ask, you must give us projected or actual production figures for an engine family. We may ask you to divide your production figures by maximum engine power, displacement, fuel type, or assembly plant (if you produce engines at more than one plant).

* * * * *

Subpart E—[Amended]

78. Section 1048.410 is amended by revising paragraph (e) to read as follows:

§ 1048.410 How must I select, prepare, and test my in-use engines?

* * * * *

(e) You may do repeat measurements with a test engine; however, you must conduct the same number of tests on each engine.

* * * * *

79. Section 1048.415 is amended by revising paragraphs (c) and (d) to read as follows:

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

* * * * *

(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.

* * * * *

Subpart F—[Amended]

80. Section 1048.501 is amended by removing paragraph (h), removing and reserving paragraph (e), and revising paragraph (c) to read as follows:

§ 1048.501 How do I run a valid emission test?

* * * * *

(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.

* * * * *

81. Section 1048.505 is amended by revising paragraphs (a) and (b)(1) to read as follows:

§ 1048.505 What transient duty cycles apply for laboratory testing?

* * * * *

(a) You may perform steady-state testing with either discrete-mode or ramped-modal cycles, as follows:

(1) For discrete-mode testing, sample emissions separately for each mode, then calculate an average emission level for the whole cycle using the weighting factors specified for each mode. Calculate cycle statistics for each mode and compare with the specified values in 40 CFR 1065.514 to confirm that the test is valid. Operate the engine and sampling system as follows:

(i) *Engines with lean NO_X aftertreatment.* For lean-burn engines that depend on aftertreatment to meet the NO_X emission standard, operate the engine for 5–6 minutes, then sample emissions for 1–3 minutes in each mode.

(ii) *Engines without lean NO_X aftertreatment.* For other engines, operate the engine for at least 5 minutes, then sample emissions for at least 1 minute in each mode.

(2) For ramped-modal testing, start sampling at the beginning of the first mode and continue sampling until the end of the last mode. Calculate emissions and cycle statistics the same as for transient testing as specified in 40 CFR part 1065, subpart G.

(b) * * *

(1) For engines from an engine family that will be used only in variable-speed applications, use one of the following duty cycles:

(i) The following duty cycle applies for discrete-mode testing:

TABLE 1 TO § 1048.505

C2 mode No.	Engine speed [1]	Observed torque [2]	Weighting factors
1	Maximum test speed	25	0.06
2	Intermediate test	100	0.02
3	Intermediate test	75	0.05
4	Intermediate test	50	0.32
5	Intermediate test	25	0.30
6	Intermediate test	10	0.10
7	Idle	0	0.15

[1] Speed terms are defined in 40 CFR part 1065.
[2] The percent torque is relative to the maximum torque at the given engine speed.

(ii) The following duty cycle applies for ramped-modal testing:

TABLE 2 TO § 1048.505

RMC mode	Time in mode (seconds)	Engine speed [1 2]	Torque (percent) [2 3]
1a Steady-state	119	Warm Idle	0.
1b Transition	20	Linear Transition	Linear Transition.
2a Steady-state	29	Intermediate Speed	100.
2b Transition	20	Intermediate Speed	Linear Transition.
3a Steady-state	150	Intermediate Speed	10.
3b Transition	20	Intermediate Speed	Linear Transition.
4a Steady-state	80	Intermediate Speed	75.
4b Transition	20	Intermediate Speed	Linear Transition.
5a Steady-state	513	Intermediate Speed	25.
5b Transition	20	Intermediate Speed	Linear Transition.
6a Steady-state	549	Intermediate Speed	50.
6b Transition	20	Linear Transition	Linear Transition.
7a Steady-state	96	Maximum test speed	25.
7b Transition	20	Linear Transition	Linear Transition.
8 Steady-state	124	Warm Idle	0.

[1] Speed terms are defined in 40 CFR part 1065.
[2] Advance from one mode to the next within a 20-second transition phase. During the transition phase, command a linear progression from the torque setting of the current mode to the torque setting of the next mode.
[3] The percent torque is relative to maximum torque at the commanded engine speed.

* * * * *

82. Section 1048.510 is amended by revising paragraphs (a) and (c)(1) to read as follows:

§ 1048.510 What transient duty cycles apply for laboratory testing?

(a) Starting with the 2007 model year, measure emissions by testing the engine on a dynamometer with the duty cycle described in Appendix II to determine whether it meets the transient emission standards in § 1048.101(a).

* * * * *

(c) * * *

(1) Operate the engine for the first 180 seconds of the appropriate duty cycle, then allow it to idle without load for 30 seconds. At the end of the 30-second idling period, start measuring emissions as the engine operates over the prescribed duty cycle. For severe-duty engines, this engine warm-up procedure may include up to 15 minutes of operation over the appropriate duty cycle.

* * * * *

Subpart G—[Amended]

83. Section 1048.605 is amended by revising paragraph (d)(7)(ii) to read as follows:

§ 1048.605 What provisions apply to engines certified under the motor-vehicle program?

* * * * *

(d) * * *

(7) * * *

(ii) List the engine or equipment models you expect to produce under this exemption in the coming year and describe your basis for meeting the sales restrictions of paragraph (d)(3) of this section.

* * * * *

84. Section 1048.610 is amended by revising paragraphs (d)(7)(ii) and (g) to read as follows:

§ 1048.610 What provisions apply to vehicles certified under the motor-vehicle program?

* * * * *

(d) * * *

(7) * * *

(ii) List the equipment models you expect to produce under this exemption in the coming year and describe your basis for meeting the sales restrictions of paragraph (d)(3) of this section.

* * * * *

(g) *Participation in averaging, banking and trading.* Vehicles adapted for nonroad use under this section may generate credits under the ABT provisions in 40 CFR part 86. These vehicles must be included in the calculation of the applicable fleet average in 40 CFR part 86.

85. Section 1048.615 is amended by revising paragraphs (a)(1), (a)(3) and (d) to read as follows:

§ 1048.615 What are the provisions for exempting engines designed for lawn and garden applications?

* * * * *

(a) * * *

(1) The engine must have a total displacement of 1000.0 cc or less.

* * * * *

(3) The engine must be in an engine family that has a valid certificate of conformity showing that it meets emission standards for Class II engines under 40 CFR part 90 or 1054 for the appropriate model year.

* * * * *

(d) Engines exempted under this section are subject to all the requirements affecting engines under 40 CFR part 90 or 1054. The requirements and restrictions of 40 CFR part 90 or 1054 apply to anyone manufacturing these engines, anyone manufacturing equipment that uses these engines, and all other persons in the same manner as if these engines had a total maximum engine power at or below 19 kW.

86. Section 1048.630 is revised to read as follows:

§ 1048.630 What are the provisions for exempting engines used solely for competition?

(a) We may grant you an exemption from the standards and requirements of this part for a new engine on the grounds that it is to be used solely for competition. The requirements of this part, other than those in this section, do not apply to engines that we exempt for use solely for competition.

(b) We will exempt engines that we determine will be used solely for competition. The basis of our determination is described in paragraphs (c) and (d) of this section. Exemptions granted under this section are good for only one model year and you must request renewal for each subsequent model year. We will not approve your renewal request if we determine the engine will not be used solely for competition.

(c) Engines meeting all the following criteria are considered to be used solely for competition:

(1) Neither the engine nor any equipment containing the engine may be displayed for sale in any public dealership or otherwise offered for sale to the general public.

(2) Sale of the equipment in which the engine is installed must be limited to professional competition teams, professional competitors, or other qualified competitors. Keep records documenting this, such as a letter requesting an exempted engine.

(3) The engine and the equipment in which it is installed must have performance characteristics that are substantially superior to noncompetitive models.

(4) The engines are intended for use only as specified in paragraph (e) of this section.

(d) You may ask us to approve an exemption for engines not meeting the applicable criteria listed in paragraph (c) of this section as long as you have clear and convincing evidence that the engines will be used solely for competition.

(e) Engines are considered to be used solely for competition only if their use is limited to competition events sanctioned by a state or federal government agency or another widely recognized public organization with authorizing permits for participating competitors. Operation of such engines may include only competition events or trials to qualify for competition events. Authorized attempts to set performance records (and the associated official trials) are also considered competition events. Engines will not be considered to be used solely for competition if they are ever used for any recreational or other noncompetitive purpose. Any use of exempt engines in recreational events is a violation of 40 CFR 1068.101.

(f) You must permanently label engines exempted under this section to clearly indicate that they are to be used only for competition. Failure to properly label an engine will void the exemption for that engine.

(g) If we request it, you must provide us any information we need to determine whether the engines or equipment are used solely for competition. This would include documentation regarding the number of engines and the ultimate purchaser of each engine. Keep these records for five years.

Subpart I—[Amended]

87. Section 1048.801 is amended as follows:

a. By revising the definitions for ''Constant-speed operation'', ''Designated Compliance Officer'', ''Emission-control system'', ''Maximum engine power'', ''Nonmethane hydrocarbon'', ''Official emission result'', ''Oxides of nitrogen'',''Small-volume engine manufacturer'', ''Steady-state'', ''Total hydrocarbon equivalent'', and ''Useful life''.

b. By revising paragraph (1) of the definition for ''New nonroad engine''.

c. By adding text to paragraph (5)(ii) of the definition for ''Model year''.

d. By adding a definition of ''Engine'' and adding a paragraph (5)(iii) to the definition for ''Model year''.

§ 1048.801 What definitions apply to this part?

* * * * *

Constant-speed operation has the meaning given in 40 CFR 1065.1001.

* * * * *

Designated Compliance Officer means the Manager, Heavy-Duty and Nonroad Engine Group (6405–J), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

* * * * *

Emission-control system means any device, system, or element of design that controls or reduces the emissions of regulated pollutants from an engine.

* * * * *

Engine has the meaning given in 40 CFR 1068.30. This includes complete and partially complete engines.

* * * * *

Maximum engine power has one of the following meanings:

(1) For engines at or below 50 kW, maximum engine power has the meaning given in 40 CFR 90.3 for 2010 and earlier model years and in 40 CFR 1054.140 for 2011 and later model years.

(2) For engines above 50 kW, maximum engine power has the meaning given in 40 CFR 1039.140.

* * * * *

Model year means one of the following things: * * *

(5) * * *

(ii) For imported engines described in paragraph (5)(ii) of the definition of ''new nonroad engine,'' *model year* means the calendar year in which the engine is modified.

(iii) For imported engines described in paragraph (5)(iii) of the definition of ''new nonroad engine,'' model year means the calendar year in which the importation occurs.

* * * * *

New nonroad engine means any of the following things:

(1) A freshly manufactured nonroad engine for which the ultimate purchaser has never received the equitable or legal title. This kind of engine might commonly be thought of as ''brand new.'' In the case of this paragraph (1), the engine is new from the time it is produced until the ultimate purchaser receives the title or the product is placed into service, whichever comes first.

* * * * *

Nonmethane hydrocarbon has the meaning given in 40 CFR 1065.1001.

* * * * *

Official emission result means the measured emission rate for an emission-data engine on a given duty cycle before the application of any deterioration factor.

* * * * *

Oxides of nitrogen has the meaning given in 40 CFR 1065.1001.

* * * * *

Small-volume engine manufacturer means one of the following:

(1) An engine manufacturer with U.S.-directed production volumes of engines subject to the requirements of this part totaling no more than 2,000 units in any year. For manufacturers owned by a parent company, this production limit applies to the production of the parent company and all its subsidiaries.

(2) An engine manufacturer with fewer than 200 employees. This includes any employees working for parent or subsidiary companies.

* * * * *

Steady-state has the meaning given in 40 CFR 1065.1001.

* * * * *

Total hydrocarbon equivalent has the meaning given in 40 CFR 1065.1001.

* * * * *

Useful life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. It is the period during which a new nonroad engine is required to comply with all applicable emission standards. See § 1048.101(g). If an engine has no hour meter, the specified number of hours does not limit the period during which an in-use engine is required to comply with emission standards, unless the degree of service accumulation can be verified separately.

* * * * *

88. Section 1048.810 is amended by revising paragraph (b) before the table to read as follows:

§ 1048.810 What materials does this part reference?

* * * * *

(b) *SAE material.* Table 2 of this section lists material from the Society of Automotive Engineers that we have incorporated by reference. The first column lists the number and name of the material. The second column lists the sections of this part where we reference it. Anyone may purchase copies of these materials from the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096 or www.sae.org. Table 1 follows:

* * * * *

89. A new § 1048.825 is added to read as follows:

§ 1048.825 What reporting and recordkeeping requirements apply under this part?

Under the Paperwork Reduction Act (44 U.S.C. 3501 et seq), the Office of Management and Budget approves the reporting and recordkeeping specified in the applicable regulations. The following items illustrate the kind of reporting and recordkeeping we require for engines and equipment regulated under this part:

(a) We specify the following requirements related to engine certification in this part 1048:

(1) In § 1048.20 we require manufacturers of stationary engines to label their engines in certain cases.

(2) In § 1048.135 we require engine manufacturers to keep certain records related to duplicate labels sent to equipment manufacturers.

(3) In § 1048.145 we include various reporting and recordkeeping requirements related to interim provisions.

(4) In subpart C of this part we identify a wide range of information required to certify engines.

(5) In §§ 1048.345 and 1048.350 we specify certain records related to production-line testing.

(6) In §§ 1048.420 and 1048.425 we specify certain records related to in-use testing.

(7) In subpart G of this part we identify several reporting and recordkeeping items for making demonstrations and getting approval related to various special compliance provisions.

(b) [Reserved]

(c) We specify the following requirements related to testing in 40 CFR part 1065:

(1) In 40 CFR 1065.2 we give an overview of principles for reporting information.

(2) In 40 CFR 1065.10 and 1065.12 we specify information needs for establishing various changes to published test procedures.

(3) In 40 CFR 1065.25 we establish basic guidelines for storing test information.

(4) In 40 CFR 1065.695 we identify data that may be appropriate for collecting during testing of in-use engines using portable analyzers.

(d) We specify the following requirements related to the general compliance provisions in 40 CFR part 1068:

(1) In 40 CFR 1068.5 we establish a process for evaluating good engineering judgment related to testing and certification.

(2) In 40 CFR 1068.25 we describe general provisions related to sending and keeping information

(3) In 40 CFR 1068.27 we require manufacturers to make engines available for our testing or inspection if we make such a request.

(4) In 40 CFR 1068.105 we require equipment manufacturers to keep certain records related to duplicate labels from engine manufacturers.

(5) In 40 CFR 1068.120 we specify recordkeeping related to rebuilding engines.

(6) In 40 CFR part 1068, subpart C, we identify several reporting and recordkeeping items for making demonstrations and getting approval related to various exemptions.

(7) In 40 CFR part 1068, subpart D, we identify several reporting and recordkeeping items for making demonstrations and getting approval related to importing engines.

(8) In 40 CFR 1068.450 and 1068.455 we specify certain records related to testing production-line engines in a selective enforcement audit.

(9) In 40 CFR 1068.501 we specify certain records related to investigating and reporting emission-related defects.

(10) In 40 CFR 1068.525 and 1068.530 we specify certain records related to recalling nonconforming engines.

Appendix I to Part 1048 [Removed]

90. Appendix I to part 1048 is removed and reserved.

PART 1051—CONTROL OF EMISSIONS FROM RECREATIONAL ENGINES AND VEHICLES

91. The authority citation for part 1051 continues to read as follows:

Authority: 42 U.S.C. 7401–7671q.

Subpart A—Amended]

92. Section 1051.1 is amended by revising paragraph (a)(4) to read as follows:

§ 1051.1 Does this part apply for my vehicles or engines?

(a) * * *

(4) Offroad utility vehicles with engines with displacement less than or equal to 1000 cc, maximum engine power less than or equal to 30 kW, and maximum vehicle speed higher than 25 miles per hour. Offroad utility vehicles that are subject to this part are subject to the same requirements as ATVs. This means that any requirement that applies to ATVs also applies to these offroad utility vehicles, without regard to whether the regulatory language mentions offroad utility vehicles.

* * * * *

93. A new § 1051.2 is added to read as follows:

§ 1051.2 Who is responsible for compliance?

The regulations in this part 1051 contain provisions that affect both vehicle manufacturers and others. However, the requirements of this part are generally addressed to the vehicle manufacturer. The term ''you'' generally means the vehicle manufacturer, as defined in § 1051.801, especially for issues related to certification (including production-line testing, reporting, etc.).

94. Section 1051.5 is amended by revising paragraph (a) to read as follows:

§ 1051.5 Which engines are excluded from this part's requirements?

(a)(1) You may exclude vehicles with compression-ignition engines. See 40 CFR parts 89 and 1039 for regulations that cover these engines.

(2) Vehicles with a combined total vehicle dry weight under 20.0 kilograms are excluded from this part. Spark-ignition engines in these vehicles must instead meet emission standards specified in 40 CFR parts 90 and 1054. See 40 CFR 90.103(a) and the definition of *handheld* in 40 CFR 1054.801.

* * * * *

95. Section 1051.10 is amended by revising the introductory text to read as follows:

§ 1051.10 How is this part organized?

This part 1051 is divided into the following subparts:

* * * * *

96. Section 1051.25 is amended by revising paragraphs (a) and (c) to read as follows:

§ 1051.25 What requirements apply when installing certified engines in recreational vehicles?

(a) If you manufacture recreational vehicles with engines certified under § 1051.20, you must certify your vehicle with respect to the evaporative emission standards in § 1051.110, but you need not certify the vehicle with respect to exhaust emissions under this part. The vehicle must nevertheless meet all emission standards with the engine installed.

* * * * *

(c) If you obscure the engine label while installing the engine in the vehicle such that the label cannot be read during normal maintenance, you must place a duplicate label on the vehicle as described in 40 CFR 1068.105.

Subpart B—[Amended]

97. Section 1051.115 is amended by revising the section heading and introductory text to read as follows:

§ 1051.115 What other requirements apply?

Vehicles that are required to meet the emission standards of this part must meet the following requirements:

* * * * *

98. Section 1051.120 is amended by revising paragraph (c) to read as follows:

§ 1051.120 What emission-related warranty requirements apply to me?

* * * * *

(c) *Components covered.* The emission-related warranty covers all components whose failure would increase an engine's emissions of any pollutant, including those listed in 40 CFR part 1068, Appendix I, and those from any other system you develop to control emissions. The emission-related warranty covers these components even if another company produces the component. Your emission-related warranty does not cover components whose failure would not increase an engine's emissions of any pollutant.

* * * * *

99. Section 1051.125 is amended by revising paragraph (d) to read as follows:

§ 1051.125 What maintenance instructions must I give to buyers?

* * * * *

(d) *Noncritical emission-related maintenance.* Subject to the provisions of this paragraph (d), you may schedule any amount of emission-related inspection or maintenance that is not covered by paragraph (a) of this section (i.e., maintenance that is neither explicitly identified as critical emission-related maintenance, nor that we approve as critical emission-related maintenance). Noncritical emission-related maintenance generally includes changing spark plugs, re-seating valves, or any other emission-related maintenance on the components we specify in 40 CFR part 1068, Appendix I. You must state in the owners manual that these steps are not necessary to keep the emission-related warranty valid. If operators fail to do this maintenance, this does not allow you to disqualify those vehicles from in-use testing or deny a warranty claim. Do not take these inspection or maintenance steps during service accumulation on your emission-data vehicles.

* * * * *

100. Section 1051.135 is amended by removing and reserving paragraph (f)

and revising paragraphs (c)(6) and (c)(7) to read as follows:

§ 1051.135 How must I label and identify the vehicles I produce?

* * * * *

(c) * * *

(6) State the date of manufacture [MONTH and YEAR]; however, you may omit this from the label if you stamp or engrave it on the engine or vehicle.

(7) State the exhaust emission standards or FELs to which the vehicles are certified (in g/km or g/kW-hr). Also, starting in the 2009 model year, state the FEL that applies for the fuel tank if it is different than the otherwise applicable standard.

* * * * *

101. Section 1051.137 is amended by revising the introductory text read as follows:

§ 1051.137 What are the consumer labeling requirements?

Label every vehicle certified under this part with a removable hang-tag showing its emission characteristics relative to other models. The label should be attached securely to the vehicle before it is offered for sale in such a manner that it would not be accidentally removed prior to sale. Use the applicable equations of this section to determine the normalized emission rate (NER) from the FEL for your vehicle. If the vehicle is certified without a family emission limit that is different than the otherwise applicable standard, use the final deteriorated emission level. Round the resulting normalized emission rate for your vehicle to one decimal place. If the calculated NER value is less than zero, consider NER to be zero for that vehicle. We may specify a standardized format for labels. At a minimum, the tag should include: The manufacturer's name, vehicle model name, engine description (500 cc two-stroke with DFI), the NER, and a brief explanation of the scale (for example, note that 0 is the cleanest and 10 is the least clean).

* * * * *

102. A new § 1051.140 is added to read as follows:

§ 1051.140 What is my vehicle's maximum engine power and displacement?

This section describes how to quantify your vehicle's maximum engine power and displacement for the purposes of this part.

(a) An engine configuration's maximum engine power is the maximum brake power point on the nominal power curve for the engine configuration, as defined in this section. Round the power value to the nearest 0.5 kilowatts. The nominal power curve of an engine configuration is the relationship between maximum available engine brake power and engine speed for an engine, using the mapping procedures of 40 CFR part 1065, based on the manufacturer's design and production specifications for the engine. This information may also be expressed by a torque curve that relates maximum available engine torque with engine speed.

(b) An engine configuration's displacement is the intended swept volume of the engine rounded to the nearest 0.5 cubic centimeter. The swept volume of the engine is the product of the internal cross-section area of the cylinders, the stroke length, and the number of cylinders. For example, for a one-cylinder engine with a circular cylinder having an internal diameter of 6.00 cm and a 6.25 cm stroke length, the rounded displacement would be: $(1) \times (6.00/2)^2 \times (\pi) \times (6.25) = 176.5$ cc. Calculate the engine's intended swept volume from the design specifications for the cylinders using enough significant figures allow determination of the displacement to the nearest 0.1 cc.

(c) The nominal power curve and intended swept volume must be within the range of the actual power curves and swept volumes of production engines considering normal production variability. If after production begins it is determined that either your nominal power curve or your intended swept volume does not represent production engines, we may require you to amend your application for certification under § 1051.225.

Subpart C—[Amended]

103. Section 1051.201 is amended by revising paragraph (a) to read as follows:

§ 1051.201 What are the general requirements for obtaining a certificate of conformity?

(a) You must send us a separate application for a certificate of conformity for each engine family. A certificate of conformity is valid starting with the indicated effective date, but it is not valid for any production after December 31 of the model year for which it is issued. No certificate will be issued after December 31 of the model year.

* * * * *

104. Section 1051.205 is amended by revising paragraphs (b), (o)(1), (t), and (w) to read as follows:

§ 1051.205 What must I include in my application?

* * * * *

(b) Explain how the emission control systems operate. Describe the evaporative emission controls. Also describe in detail all system components for controlling exhaust emissions, including all auxiliary emission control devices (AECDs) and all fuel-system components you will install on any production or test vehicle or engine. Identify the part number of each component you describe. For this paragraph (b), treat as separate AECDs any devices that modulate or activate differently from each other. Include sufficient detail to allow us to evaluate whether the AECDs are consistent with the defeat device prohibition of § 1051.115.

* * * * *

(o) * * *

(1) Present exhaust emission data for hydrocarbons (such as NMHC or THCE, as applicable), NO_X, and CO on an emission-data vehicle to show your vehicles meet the exhaust emission standards as specified in subpart B of this part. Show emission figures before and after applying deterioration factors for each vehicle or engine. If we specify more than one grade of any fuel type (for example, a summer grade and winter grade of gasoline), you need to submit test data only for one grade unless the regulations of this part specify otherwise for your engine.

* * * * *

(t) Include good-faith estimates of U.S.-directed production volumes. Include a justification for the estimated production volumes if they are substantially different than actual production volumes in earlier years for similar models.

* * * * *

(w) Name an agent for service located in the United States. Service on this agent constitutes service on you or any of your officers or employees for any action by EPA or otherwise by the United States related to the requirements of this part.

105. Section 1051.220 is amended by revising the introductory text to read as follows:

§ 1051.220 How do I amend the maintenance instructions in my application?

You may amend your emission-related maintenance instructions after you submit your application for certification, as long as the amended instructions remain consistent with the provisions of § 1051.125. You must send the Designated Compliance Officer a request to amend your application for certification for an engine family if you want to change the emission-related

maintenance instructions in a way that could affect emissions. In your request, describe the proposed changes to the maintenance instructions. We will disapprove your request if we determine that the amended instructions are inconsistent with maintenance you performed on emission-data vehicles. If operators follow the original maintenance instructions rather than the newly specified maintenance, this does not allow you to disqualify those engines from in-use testing or deny a warranty claim.

* * * * *

106. Section 1051.225 is revised to read as follows:

§ 1051.225 How do I amend my application for certification to include new or modified vehicle configurations or to change an FEL?

Before we issue you a certificate of conformity, you may amend your application to include new or modified vehicle configurations, subject to the provisions of this section. After we have issued your certificate of conformity, you may send us an amended application requesting that we include new or modified vehicle configurations within the scope of the certificate, subject to the provisions of this section. You must amend your application if any changes occur with respect to any information included in your application.

(a) You must amend your application before you take any of the following actions:

(1) Add a vehicle configuration to an engine family. In this case, the vehicle configuration added must be consistent with other vehicle configurations in the engine family with respect to the criteria listed in § 1051.230.

(2) Change a vehicle configuration already included in an engine family in a way that may affect emissions, or change any of the components you described in your application for certification. This includes production and design changes that may affect emissions any time during the engine's lifetime.

(3) Modify an FEL for an engine family, as described in paragraph (f) of this section.

(b) To amend your application for certification, send the Designated Compliance Officer the following information:

(1) Describe in detail the addition or change in the vehicle model or configuration you intend to make.

(2) Include engineering evaluations or data showing that the amended engine family complies with all applicable requirements. You may do this by showing that the original emission-data vehicle is still appropriate for showing that the amended family complies with all applicable requirements.

(3) If the original emission-data vehicle for the engine family is not appropriate to show compliance for the new or modified vehicle configuration, include new test data showing that the new or modified vehicle configuration meets the requirements of this part.

(c) We may ask for more test data or engineering evaluations. You must give us these within 30 days after we request them.

(d) For engine families already covered by a certificate of conformity, we will determine whether the existing certificate of conformity covers your new or modified vehicle configuration. You may ask for a hearing if we deny your request (see § 1051.820).

(e) For engine families already covered by a certificate of conformity, you may start producing the new or modified vehicle configuration any time after you send us your amended application, before we make a decision under paragraph (d) of this section. However, if we determine that the affected vehicles do not meet applicable requirements, we will notify you to cease production of the vehicles and may require you to recall the vehicles at no expense to the owner. Choosing to produce vehicles under this paragraph (e) is deemed to be consent to recall all vehicles that we determine do not meet applicable emission standards or other requirements and to remedy the nonconformity at no expense to the owner. If you do not provide information required under paragraph (c) of this section within 30 days, you must stop producing the new or modified vehicle configuration.

(f) You may ask us to approve a change to your FEL in certain cases after the start of production. The changed FEL may not apply to vehicles you have already introduced into commerce, except as described in this paragraph (f). If we approve a changed FEL after the start of production, you must include the new FEL on the emission control information label for all vehicles produced after the change. You may ask us to approve a change to your FEL in the following cases:

(1) You may ask to raise your FEL for your engine family at any time. In your request, you must show that you will still be able to meet the emission standards as specified in subparts B and H of this part. If you amend your application by submitting new test data to include a newly added or modified vehicle, as described in paragraph (b)(3) of this section, use the appropriate FELs with corresponding production volumes to calculate your average emission level for the model year, as described in subpart H of this part. If you amend your application without submitting new test data, you must use the higher FEL for the entire family to calculate your average emission level under subpart H of this part.

(2) You may ask to lower the FEL for your engine family only if you have test data from production engines showing that the engines have emissions below the proposed lower FEL. The lower FEL applies only to engines you produce after we approve the new FEL. Use the appropriate FELs with corresponding production volumes to calculate your average emission level for the model year, as described in subpart H of this part.

107. Section 1051.230 is amended by revising the paragraphs (a) and (e)(1) to read as follows:

§ 1051.230 How do I select engine families?

(a) For purposes of certification, divide your product line into families of vehicles as described in this section. Except as specified in paragraph (f) of this section, you must have separate engine families for meeting exhaust and evaporative emissions. Your engine family is limited to a single model year.

* * * * *

(e) * * *

(1) In unusual circumstances, you may group such vehicles in the same engine family if you show that their emission characteristics during the useful life will be similar.

* * * * *

108. Section 1051.235 is amended by revising paragraph (d)(1)(i) to read as follows:

§ 1051.235 What emission testing must I perform for my application for a certificate of conformity?

* * * * *

(d) * * *

(1) * * *

(i) The engine family from the previous model year differs from the current engine family only with respect to model year or other characteristics unrelated to emissions. You may also ask to add a configuration subject to § 1051.225.

* * * * *

109. Section 1051.240 is amended by revising paragraph (c)(1) to read as follows:

§ 1051.240 How do I demonstrate that my engine family complies with exhaust emission standards?

* * * * *

(c) * * *

(1) For vehicles that use aftertreatment technology, such as catalytic converters, use a multiplicative deterioration factor for exhaust emissions. A multiplicative deterioration factor is the ratio of exhaust emissions at the end of the useful life and exhaust emissions at the low-hour test point. In these cases, adjust the official emission results for each tested vehicle or engine at the selected test point by multiplying the measured emissions by the deterioration factor. If the factor is less than one, use one. Multiplicative deterioration factors must be specified to three significant figures.

* * * * *

110. Section 1051.243 is amended by revising the introductory text and paragraph (b)(6) to read as follows:

§ 1051.243 How do I determine deterioration factors from exhaust durability testing?

Establish deterioration factors to determine whether your engines will meet exhaust emission standards for each pollutant throughout the useful life, as described in subpart B of this part and § 1051.240. This section describes how to determine deterioration factors, either with pre-existing test data or with new emission measurements.

* * * * *

(b) * * *

(6) You may use other testing methods to determine deterioration factors, consistent with good engineering judgment, as long as we approve those methods in advance.

* * * * *

111. Section 1051.245 is amended by revising paragraph (e)(1) to read as follows:

§ 1051.245 How do I demonstrate that my engine family complies with evaporative emission standards?

* * * * *

(e) * * *

(1) For certification to the standards specified in § 1051.110(a) with the control technologies shown in the following table:

TABLE 1 OF § 1051.245.—DESIGN-CERTIFICATION TECHNOLOGIES FOR CONTROLLING TANK PERMEATION

If the tank permeability control technology is. . .	Then you may design-certify with a tank emission level of. . .
(i) A metal fuel tank with no non-metal gaskets or with gaskets made from a low-permeability material.	1.5 g/m^2/day.
(ii) A metal fuel tank with non-metal gaskets with an exposed surface area of 1000 mm^2 or less. 1.5	1.5 g/m^2/day.

* * * * *

112. Section 1051.250 is amended by redesignating paragraphs (a) through (d) as paragraphs (b) through (e), respectively, and adding a new paragraph (a) to read as follows:

§ 1051.250 What records must I keep and make available to EPA?

(a) If you produce vehicles under any provisions of this part that are related to production volumes, send the Designated Compliance Officer a report within 30 days after the end of the model year describing the total number of vehicles you produced in each engine family. For example, if you use special provisions intended for small-volume manufacturers, report your production volumes to show that you do not exceed the applicable limits.

* * * * *

Subpart D—[Amended]

113. Section 1051.301 is amended by revising paragraphs (a), (c), (e), and (h) introductory text to read as follows:

§ 1051.301 When must I test my production-line vehicles or engines?

(a) If you produce vehicles that are subject to the requirements of this part, you must test them as described in this subpart, except as follows:

(1) Small-volume manufacturers may omit testing under this subpart.

(2) We may exempt engine families with a projected U.S.-directed production volume below 150 units from routine testing under this subpart. Request this exemption in the application for certification and include your basis for projecting a production volume below 150 units. You must promptly notify us if your actual production exceeds 150 units during the model year. If you exceed the production limit or if there is evidence of a nonconformity, we may require you to test production-line engines under this subpart, or under 40 CFR part 1068, subpart E, even if we have approved an exemption under this paragraph (a)(2).

* * * * *

(c) Other regulatory provisions authorize us to suspend, revoke, or void your certificate of conformity, or order recalls for engine families without regard to whether they have passed these production-line testing requirements. The requirements of this subpart do not affect our ability to do selective enforcement audits, as described in part 1068 of this chapter. Individual vehicles and engines in families that pass these production-line testing requirements must also conform to all applicable regulations of this part and part 1068 of this chapter.

* * * * *

(e) If you certify an engine family with carryover emission data, as described in § 1051.235(c), and these equivalent engine families consistently pass the production-line testing requirements over the preceding two-year period, you may ask for a reduced testing rate for further production-line testing for that family. The minimum testing rate is one vehicle or engine per engine family. If we reduce your testing rate, we may limit our approval to any number of model years. In determining whether to approve your request, we may consider the number of vehicles or engines that have failed the emission tests.

* * * * *

(h) Vehicles certified to the following standards are exempt from the production-line testing requirements of this subpart if no engine families in the averaging set have family emission limits that are different than the otherwise applicable standard:

* * * * *

114. Section 1051.305 is amended by adding introductory text and revising paragraph (d) to read as follows:

§ 1051.305 How must I prepare and test my production-line vehicles or engines?

This section describes how to prepare and test production-line vehicles or engines. Test the engine if your vehicle is certified to g/kW-hr standards; otherwise test the vehicle. You must assemble the test vehicle or engine in a way that represents the assembly procedures for other vehicles or engines in the engine family. You must ask us to approve any deviations from your normal assembly procedures for other production vehicles or engines in the engine family.

* * * * *

(d) *Setting adjustable parameters.* Before any test, we may require you to adjust any adjustable parameter to any

setting within its physically adjustable range.

(1) We may require you to adjust idle speed outside the physically adjustable range as needed, but only until the vehicle or engine has stabilized emission levels (see paragraph (e) of this section). We may ask you for information needed to establish an alternate minimum idle speed.

(2) We may specify adjustments within the physically adjustable range by considering their effect on emission levels, as well as how likely it is someone will make such an adjustment with in-use vehicles.

(3) We may specify an air-fuel ratio within the adjustable range specified in § 1051.115(d).

* * * * *

115. Section 1051.310 is amended by revising paragraphs (a), (b), (c) introductory text, (c)(2), (f), (g), and (h) to read as follows:

§ 1051.310 How must I select vehicles or engines for production-line testing?

(a) Test engines from each engine family as described in this section based on test periods, as follows:

(1) For engine families with projected U.S.-directed production volume of at least 1,600, the test periods are consecutive quarters (3 months). However, if your annual production period is less than 12 months long, you may take the following alternative approach to define quarterly test periods:

(i) If your annual production period is 120 days or less, the whole model year constitutes a single test period.

(ii) If your annual production period is 121 to 210 days, divide the annual production period evenly into two test periods.

(iii) If your annual production period is 211 to 300 days, divide the annual production period evenly into three test periods.

(iv) If your annual production period is 301 days or longer, divide the annual production period evenly into four test periods.

(2) For engine families with projected U.S.-directed production volume below 1,600, the whole model year constitutes a single test period.

(b) Early in each test period, randomly select and test an engine from the end of the assembly line for each engine family.

(1) In the first test period for newly certified engines, randomly select and test one more engine. Then, calculate the required sample size for the model year as described in paragraph (c) of this section.

(2) In later test periods of the same model year, combine the new test result with all previous testing in the model year. Then, calculate the required sample size for the model year as described in paragraph (c) of this section.

(3) In the first test period for engine families relying on previously submitted test data, combine the new test result with the last test result from the previous model year. Then, calculate the required sample size for the model year as described in paragraph (c) of this section. Use the last test result from the previous model year only for this first calculation. For all subsequent calculations, use only results from the current model year.

(c) Calculate the required sample size for each engine family. Separately calculate this figure for HC, NO_X (or $HC + NO_X$), and CO. The required sample size is the greater of these calculated values. Use the following equation:

$$N = [(t_{95} \times \sigma)/(x - STD)]^2 + 1$$

Where:

N = Required sample size for the model year.

t_{95} = 95% confidence coefficient, which depends on the number of tests completed, n, as specified in the table in paragraph (c)(1) of this section. It defines 95% confidence intervals for a one-tail distribution.

x = Mean of emission test results of the sample.

STD = Emission standard (or family emission limit, if applicable).

σ = Test sample standard deviation (see paragraph (c)(2) of this section).

* * * * *

(2) Calculate the standard deviation, σ, for the test sample using the following formula:

$$\sigma = [\Sigma(X_i - x)^2/(n-1)]^{1/2}$$

Where:

X_i = Emission test result for an individual vehicle or engine.

n = The number of tests completed in an engine family.

* * * * *

(f) Distribute the remaining tests evenly throughout the rest of the year. You may need to adjust your schedule for selecting vehicles or engines if the required sample size changes. If your scheduled quarterly testing for the remainder of the model year is sufficient to meet the calculated sample size, you may wait until the next quarter to do additional testing. Continue to randomly select vehicles or engines from each engine family.

(g) Continue testing until one of the following things happens:

(1) After completing the minimum number of tests required in paragraph (b) of this section, the number of tests completed in an engine family, n, is greater than the required sample size, N, and the sample mean, x, is less than or equal to the emission standard. For example, if N = 5.1 after the fifth test, the sample-size calculation does not allow you to stop testing.

(2) The engine family does not comply according to § 1051.315.

(3) You test 30 vehicles or engines from the engine family.

(4) You test one percent of your projected annual U.S.-directed production volume for the engine family, rounded to the nearest whole number. Do not count a vehicle or engine under this paragraph (g)(4) if it fails to meet an applicable emission standard.

(5) You choose to declare that the engine family does not comply with the requirements of this subpart.

(h) If the sample-size calculation allows you to stop testing for one pollutant but not another, you must continue measuring emission levels of all pollutants for any additional tests required under this section. However, you need not continue making the calculations specified in this section for the pollutant for which testing is not required. This paragraph (h) does not affect the number of tests required under this section or the remedial steps required under § 1051.320.

* * * * *

116. Section 1051.315 is amended by revising paragraphs (a), (b), and (g) to read as follows:

§ 1051.315 How do I know when my engine family fails the production-line testing requirements?

* * * * *

(a) Calculate your test results as follows:

(1) *Initial and final test results.* Calculate and round the test results for each engine. If you do several tests on an engine, calculate the initial test results, then add them together and divide by the number of tests and round for the final test results on that engine.

(2) *Final deteriorated test results.* Apply the deterioration factor for the engine family to the final test results (see § 1051.240(c)).

(3) *Round deteriorated test results.* Round the results to the number of decimal places in the emission standard expressed to one more decimal place.

(b) Construct the following CumSum Equation for each engine family for HC, NO_X ($HC+NO_X$), and CO emissions:

$$C_i = \text{Max}\ [0 \text{ or } C_{i-1} + X_i - (STD + 0.25 \times \sigma)]$$

Where:

C_i = The current CumSum statistic.

C_{i-1} = The previous CumSum statistic. For the first test, the CumSum statistic is 0 (*i.e.*, C1 = 0).
X_i = The current emission test result for an individual vehicle or engine.
STD = Emission standard (or family emission limit, if applicable).

* * * * *

(g) If the CumSum statistic exceeds the Action Limit in two consecutive tests, the engine family fails the production-line testing requirements of this subpart. Tell us within ten working days if this happens. You may request to amend the application for certification to raise the FEL of the engine family as described in § 1051.225(f).

* * * * *

117. Section 1051.325 is amended by revising the section heading and paragraphs (c) and (e) to read as follows:

§ 1051.325 What happens if an engine family fails the production-line testing requirements?

* * * * *

(c) Up to 15 days after we suspend the certificate for an engine family, you may ask for a hearing (see § 1051.820). If we agree before a hearing occurs that we used erroneous information in deciding to suspend the certificate, we will reinstate the certificate.

* * * * *

(e) You may request to amend the application for certification to raise the FEL of the engine family before or after we suspend your certificate if you meet the requirements of § 1051.225(f). We will approve your request if it is clear that you used good engineering judgment in establishing the original FEL.

118. Section 1051.345 is amended by revising paragraphs (a)(4), (a)(8), and (c) to read as follows:

§ 1051.345 What production-line testing records must I send to EPA?

* * * * *

(a) * * *

(4) Describe each test vehicle or engine, including the engine family's identification and the vehicle's model year, build date, model number, identification number, and number of hours of operation before testing.

* * * * *

(8) Provide the CumSum analysis required in § 1051.315 and the sample-size calculation required in § 1051.310 for each engine family.

* * * * *

(c) An authorized representative of your company must sign the following statement:

We submit this report under Sections 208 and 213 of the Clean Air Act. Our production-line testing conformed completely with the requirements of 40 CFR part 1051. We have not changed production processes or quality-control procedures for test engines (or vehicles) in a way that might affect emission controls. 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)

* * * * *

119. Section 1051.350 is amended by revising paragraphs (b) and (e) to read as follows:

§ 1051.350 What records must I keep?

* * * * *

(b) Keep paper records of your production-line testing for eight years 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.

* * * * *

(e) If we ask, you must give us projected or actual production figures for an engine family. We may ask you to divide your production figures by maximum engine power, displacement, fuel type, or assembly plant (if you produce vehicles or engines at more than one plant).

* * * * *

Subpart F—[Amended]

120. Section 1051.505 is amended by revising paragraphs (a)(1) and (a)(2) to read as follows:

§ 1051.505 What special provisions apply for testing snowmobiles?

* * * * *

(a) * * *

(1) For discrete-mode testing, sample emissions separately for each mode, then calculate an average emission level for the whole cycle using the weighting factors specified for each mode. In each mode, operate the engine for at least 5 minutes, then sample emissions for at least 1 minute. Calculate cycle statistics for each mode and compare with the specified values in 40 CFR 1065.514 to confirm that the test is valid.

(2) For ramped-modal testing, start sampling at the beginning of the first mode and continue sampling until the end of the last mode. Calculate emissions and cycle statistics the same as for transient testing as specified in 40 CFR part 1065, subpart G.

* * * * *

Subpart G—[Amended]

121. Section 1051.605 is amended by revising paragraph (d)(7)(ii) to read as follows:

§ 1051.605 What provisions apply to engines already certified under the motor-vehicle program or the Large Spark-ignition program?

* * * * *

(d) * * *

(7) * * *

(ii) List the engine or vehicle models you expect to produce under this exemption in the coming year and describe your basis for meeting the sales restrictions of paragraph (d)(3) of this section.

* * * * *

122. Section 1051.610 is amended by revising paragraphs (d)(7)(ii) and (g) to read as follows:

§ 1051.610 What provisions apply to vehicles already certified under the motor-vehicle program?

* * * * *

(d) * * *

(7) * * *

(ii) List the vehicle models you expect to produce under this exemption in the coming year and describe your basis for meeting the sales restrictions of paragraph (d)(3) of this section.

* * * * *

(g) *Participation in averaging, banking and trading.* Vehicles adapted for recreational use under this section may not generate or use emission credits under this part 1051. These vehicles may generate credits under the ABT provisions in 40 CFR part 86. These vehicles must use emission credits under 40 CFR part 86 if they are certified to an FEL that exceeds an emission standard that applies.

123. Section 1051.635 is amended by revising paragraph (a) to read as follows:

§ 1051.635 What provisions apply to new manufacturers that are small businesses?

(a) If you are a small business (as defined by the Small Business Administration at 13 CFR 121.201) that manufactures recreational vehicles, but does not otherwise qualify for the small-volume manufacturer provisions of this part, you may ask us to designate you to be a small-volume manufacturer. You may do this whether you began manufacturing recreational vehicles before, during, or after 2002.

* * * * *

124. A new § 1051.650 is added to read as follows:

§ 1051.650 What special provisions apply for converting a vehicle to use an alternate fuel?

(a) Converting a certified new vehicle to run on a different fuel violates 40 CFR 1068.101(a)(1) if the modified vehicle is not covered by a certificate of conformity.

(b) Converting a certified vehicle that is not new to run on a different fuel violates 40 CFR 1068.101(b)(1) if the modified vehicle is not covered by a certificate of conformity. We may specify alternate certification provisions consistent with the requirements of this part.

Subpart H—[Amended]

125. Section 1051.701 is amended by revising paragraph (a) and adding paragraph (h) to read as follows:

§ 1051.701 General provisions.

(a) You may average, bank, and trade emission credits for purposes of certification as described in this subpart to show compliance with the standards of this part. To do this you must certify your engines to Family Emission Limits (FELs) and show that your average emission levels for all your engine families together are below the emission standards in subpart B of this part, or that you have sufficient credits to offset a credit deficit for the model year (as calculated in § 1051.720).

* * * * *

(h) Families that use emission credits for one pollutant may not generate positive emission credits for another pollutant.

126. Section 1051.720 is amended by revising paragraph (a)(2) to read as follows:

§ 1051.720 How do I calculate my average emission level or emission credits?

(a) * * *

(2) For vehicles that have standards expressed as g/kW-hr and a useful life in kilometers, convert the useful life to kW-hr based on the maximum power output observed over the emission test and an assumed vehicle speed of 30 km/hr as follows: UL (kW-hr) = UL (km) × Maximum Engine Power (kW) ÷ 30 km/hr. (**Note:** It is not necessary to include a load factor, since credit exchange is not allowed between vehicles certified to g/kW-hr standards and vehicles certified to g/km standards.)

* * * * *

127. Section 1051.730 is amended by revising paragraphs (b)(4) and (b)(5) to read as follows:

§ 1051.730 What ABT reports must I send to EPA?

* * * * *

(b) * * *

(4) The projected and actual production volumes for the model year with a point of retail sale in the United States, as described in § 1051.701(d). If you changed an FEL during the model year, identify the actual production volume associated with each FEL.

(5) For vehicles that have standards expressed as g/kW-hr, maximum engine power for each vehicle configuration, and the production-weighted average engine power for the engine family.

* * * * *

128. Section 1051.735 is amended by revising paragraph (b) to read as follows:

§ 1051.735 What records must I keep?

* * * * *

(b) Keep the records required by this section for at least eight years after the due date for the end-of-year report. You may not use emission credits on any engines if you do not keep all the records required under this section. You must therefore keep these records to continue to bank valid credits. Store these records in any format and on any media, as long as you can promptly send us organized, written records in English if we ask for them. You must keep these records readily available. We may review them at any time.

* * * * *

Subpart I—[Amended]

129. Section 1051.801 is amended as follows:

a. By removing the definition for ''Maximum test power''.

b. By revising the definitions for ''Designated Compliance Officer'', ''Emission-control system'', ''Maximum engine power'', ''Nonmethane hydrocarbon'', ''Official emission result'', ''Recreational'', and ''Total hydrocarbon equivalent''.

c. By revising paragraphs (1)(ii) and (3) of the definition for ''Model year'' and paragraphs (1) and (3) of the definition for ''New''.

d. By adding paragraph (5)(iii) to the definition for ''Model year''.

e. By adding a definition for ''Low-permeability material''.

§ 1051.801 What definitions apply to this part?

* * * * *

Designated Compliance Officer means one of the following things:

(1) For snowmobiles, *Designated Compliance Officer* means the Manager, Heavy-Duty and Nonroad Engine Group (6405-J), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

(2) For all other vehicles, *Designated Compliance Officer* means the Manager, Light-Duty Engine Group, U.S. Environmental Protection Agency, 2000 Traverwood Drive, Ann Arbor, MI 48105.

* * * * *

Emission-control system means any device, system, or element of design that controls or reduces the emissions of regulated pollutants from an engine.

* * * * *

*Low-permeability materia*l has the meaning given in 40 CFR 1060.801.

* * * * *

Maximum engine power has the meaning given in 40 CFR 90.3 for 2010 and earlier model years and in § 1051.140 for 2011 and later model years.

* * * * *

Model year means one of the following things:

(1) * * *

(ii) Your annual new model production period if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year. For seasonal production periods not including January 1, model year means the calendar year in which the production occurs, unless you choose to certify the applicable emission family with the following model year. For example, if your production period is June 1, 2010 through November 30, 2010, your model year would be 2010 unless you choose to certify the emission family for model year 2011.

* * * * *

(3) For a nonroad engine that has been previously placed into service in an application covered by 40 CFR part 90, 91, 1048, or 1054, where that engine is installed in a piece of equipment that is covered by this part 1051, *model year* means the calendar year in which the engine was originally produced (see definition of ''new,'' paragraph (3)).

* * * * *

(5) * * *

(iii) For imported engines described in paragraph (5)(iii) of the definition of ''new,'' *model year* means the calendar year in which the importation occurs.

* * * * *

New means relating to any of the following things:

(1) A freshly manufactured vehicle for which the ultimate purchaser has never received the equitable or legal title. This kind of vehicle might commonly be thought of as ''brand new.'' In the case of this paragraph (1), the vehicle is new from the time it is produced until the

ultimate purchaser receives the title or the product is placed into service, whichever comes first.

* * * * *

(3) A nonroad engine that has been previously placed into service in an application covered by 40 CFR part 90, 91, 1048, or 1054, where that engine is installed in a piece of equipment that is covered by this part 1051. The engine is no longer new when it is placed into service in a recreational vehicle covered by this part 1051. For example, this would apply to a marine propulsion engine that is no longer used in a marine vessel.

* * * * *

Nonmethane hydrocarbon has the meaning given in 40 CFR 1065.1001.

* * * * *

Official emission result means the measured emission rate for an emission-data vehicle on a given duty cycle before the application of any deterioration factor.

* * * * *

Recreational means, for purposes of this part, relating to snowmobiles, all-terrain vehicles, off-highway motorcycles, and other vehicles that we regulate under this part. Note that 40 CFR parts 90 and 1054 apply to engines used in other recreational vehicles.

* * * * *

Total hydrocarbon equivalent has the meaning given in 40 CFR 1065.1001.

* * * * *

130. Section 1051.810 is amended by revising paragraph (a) to read as follows:

§ 1051.810 What materials does this part reference?

* * * * *

(a) *ASTM material.* Table 1 of this section lists material from the American Society for Testing and Materials that we have incorporated by reference. The first column lists the number and name of the material. The second column lists the sections of this part where we reference it. Anyone may purchase copies of these materials from the American Society for Testing and Materials, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428 or *www.astm.com*. Table 1 follows:

TABLE 1 OF § 1051.810.—ASTM MATERIALS

Document number and name	Part 1051 reference
ASTM D471–98, Standard Test Method for Rubber Property—Effect of Liquids	1051.501

* * * * *

131. A new § 1051.825 is added to read as follows:

§ 1051.825 What reporting and recordkeeping requirements apply under this part?

Under the Paperwork Reduction Act (44 U.S.C. 3501 et seq), the Office of Management and Budget approves the reporting and recordkeeping specified in the applicable regulations. The following items illustrate the kind of reporting and recordkeeping we require for vehicles regulated under this part:

(a) We specify the following requirements related to certification in this part 1051:

(1) In §§ 1051.20 and 1051.25 we describe special provisions for manufacturers to certify recreational engines instead of vehicles.

(2) [Reserved]

(3) In § 1051.145 we include various reporting and recordkeeping requirements related to interim provisions.

(4) In subpart C of this part we identify a wide range of information required to certify vehicles.

(5) In §§ 1051.345 and 1051.350 we specify certain records related to production-line testing.

(6) [Reserved]

(7) In § 1051.501 we specify information needs for establishing various changes to published vehicle-based test procedures.

(8) In subpart G of this part we identify several reporting and recordkeeping items for making demonstrations and getting approval related to various special compliance provisions.

(9) In §§ 1051.725, 1051.730, and 1051.735 we specify certain records related to averaging, banking, and trading.

(b) [Reserved]

(c) We specify the following requirements related to testing in 40 CFR part 1065:

(1) In 40 CFR 1065.2 we give an overview of principles for reporting information.

(2) In 40 CFR 1065.10 and 1065.12 we specify information needs for establishing various changes to published engine-based test procedures.

(3) In 40 CFR 1065.25 we establish basic guidelines for storing test information.

(4) In 40 CFR 1065.695 we identify data that may be appropriate for collecting during testing of in-use engines or vehicles using portable analyzers.

(d) We specify the following requirements related to the general compliance provisions in 40 CFR part 1068:

(1) In 40 CFR 1068.5 we establish a process for evaluating good engineering judgment related to testing and certification.

(2) In 40 CFR 1068.25 we describe general provisions related to sending and keeping information.

(3) In 40 CFR 1068.27 we require manufacturers to make engines or vehicles available for our testing or inspection if we make such a request.

(4) In 40 CFR 1068.105 we require manufacturers to keep certain records related to duplicate labels from engine manufacturers.

(5) In 40 CFR 1068.120 we specify recordkeeping related to rebuilding engines.

(6) In 40 CFR part 1068, subpart C, we identify several reporting and recordkeeping items for making demonstrations and getting approval related to various exemptions.

(7) In 40 CFR part 1068, subpart D, we identify several reporting and recordkeeping items for making demonstrations and getting approval related to importing engines or vehicles.

(8) In 40 CFR 1068.450 and 1068.455 we specify certain records related to testing production-line engines in a selective enforcement audit.

(9) In 40 CFR 1068.501 we specify certain records related to investigating and reporting emission-related defects.

(10) In 40 CFR 1068.525 and 1068.530 we specify certain records related to recalling nonconforming vehicles.

132. A new part 1054 is added to subchapter U of chapter I to read as follows:

PART 1054—CONTROL OF EMISSIONS FROM NEW, SMALL NONROAD SPARK-IGNITION ENGINES AND EQUIPMENT

Subpart A—Overview and Applicability

Sec.

Authority: 42 U.S.C. 7401–7671q.

Subpart A—Overview and Applicability

§ 1054.1 Does this part apply for my engines and equipment?

(a) Except as provided in § 1054.5, the regulations in this part 1054 apply as follows:

(1) The requirements of this part related to exhaust emissions apply to new, spark-ignition engines with maximum engine power at or below 19 kW. This includes auxiliary marine spark-ignition engines.

(2) The requirements of this part related to evaporative emissions apply as specified in 40 CFR part 1054.110 to fuel systems used with engines subject to exhaust emission standards in this part if the engines use a volatile liquid fuel (such as gasoline).

(3) This part 1054 applies starting with the model years noted in the following table:

TABLE 1 OF § 1054.1.—ART 1054 APPLICABILITY BY MODEL YEAR

Engine type	Engine displacement	Model year
Handheld	all	2010
Nonhandheld	displacement < 225 cc.	2012
Nonhandheld	displacement ≥ 225 cc.	2011

(4) This part 1054 applies for other spark-ignition engines as follows:

(i) The provisions of paragraph (c) of this section apply for the applicable model years shown in Table 1 of this section.

(ii) The provisions of §§ 1054.620 and 1054.801 apply for engines used solely for competition beginning January 1, 2009.

(iii) The provisions of §§ 1054.660 and 1054.801 apply for engines used in emergency rescue equipment beginning January 1, 2010.

(5) We specify provisions in § 1054.145(e) and (f) and in § 1054.740 that allow for meeting the requirements of this part before the dates shown in Table 1 of this section. Engines, fuel-system components, or equipment certified to these standards are subject to all the requirements of this part as if these optional standards were mandatory.

(b) Although the definition of nonroad engine in 40 CFR 1068.30 excludes certain engines used in stationary applications, stationary engines are required under 40 CFR part 60 to comply with this part starting with the model years shown in Table 1 of this section.

(c) See 40 CFR part 90 for requirements that apply to engines not yet subject to the requirements of this part 1054.

(d) In certain cases, the regulations in this part 1054 apply to engines with maximum engine power above 19 kW that would otherwise be covered by 40 CFR part 1048 or 1051. See 40 CFR 1048.615 and 1051.145(a)(3) for provisions related to these allowances.

§ 1054.2 Who is responsible for compliance?

The requirements and prohibitions of this part apply to manufacturers of engines and fuel-system components as described in § 1054.1. The requirements of this part are generally addressed to manufacturers subject to this part's requirements. The term ''you'' generally means the certifying manufacturer. For provisions related to exhaust emissions, this generally means the engine manufacturer, especially for issues related to certification (including production-line testing, reporting, etc.). For provisions related to certification with respect to evaporative emissions, this generally means the equipment manufacturer or fuel-system component manufacturer. Equipment manufacturers must meet applicable requirements as described in § 1054.20.

§ 1054.5 Which nonroad engines are excluded from this part's requirements?

This part does not apply to the following nonroad engines:

(a) Engines that are certified to meet the requirements of 40 CFR part 1051 (for example, engines used in snowmobiles and all-terrain vehicles). Engines that are otherwise subject to 40 CFR part 1051 but not required to be certified (such as engines exempted under 40 CFR part 1051) are also excluded from this part 1054, unless the regulations in 40 CFR part 1051 specifically require them to comply with the requirements of this part 1054.

(b) Engines that are certified to meet the requirements of 40 CFR part 1048, subject to the provisions of § 1054.615.

(c) Propulsion marine engines. See 40 CFR parts 91 and 1045. Note that the evaporative emission standards of this part also do not apply with respect to auxiliary marine engines as described in § 1054.110.

(d) Engines used in reduced-scale models of vehicles that are not capable of transporting a person.

§ 1054.10 How is this part organized?

This part 1054 is divided into the following subparts:

(a) Subpart A of this part defines the applicability of this part 1054 and gives an overview of regulatory requirements.

(b) Subpart B of this part describes the emission standards and other requirements that must be met to certify engines under this part. Note that § 1054.145 discusses certain interim requirements and compliance provisions that apply only for a limited time.

(c) Subpart C of this part describes how to apply for a certificate of conformity.

(d) Subpart D of this part describes general provisions for testing production-line engines.

(e) Subpart E of this part describes general provisions for testing in-use engines.

(f) Subpart F of this part describes how to test your engines (including references to other parts of the Code of Federal Regulations).

(g) Subpart G of this part and 40 CFR part 1068 describe requirements, prohibitions, and other provisions that apply to engine manufacturers, equipment manufacturers, owners, operators, rebuilders, and all others.

(h) Subpart H of this part describes how you may generate and use exhaust and evaporative emission credits to certify your engines and equipment.

(i) Subpart I of this part contains definitions and other reference information.

§ 1054.15 Do any other regulation parts apply to me?

(a) Part 1060 of this chapter describes standards and procedures that apply for evaporative emissions from engines fueled by gasoline or other volatile liquid fuels and the associated fuel systems. See § 1054.110 for information about how that part applies.

(b) Part 1065 of this chapter describes procedures and equipment specifications for testing engines. Subpart F of this part 1054 describes how to apply the provisions of part 1065 of this chapter to determine whether engines meet the emission standards in this part.

(c) The requirements and prohibitions of part 1068 of this chapter apply to everyone, including anyone who manufactures, imports, installs, owns, operates, or rebuilds any of the engines subject to this part 1054, or equipment containing these engines. Part 1068 of this chapter describes general provisions, including these seven areas:

(1) Prohibited acts and penalties for engine manufacturers, equipment manufacturers, and others.

(2) Rebuilding and other aftermarket changes.

(3) Exclusions and exemptions for certain engines.

(4) Importing engines.

(5) Selective enforcement audits of your production.

(6) Defect reporting and recall.

(7) Procedures for hearings.

(d) Other parts of this chapter apply if referenced in this part.

§ 1054.20 What requirements apply to my equipment?

(a) If you manufacture equipment using engines certified under this part, your equipment must meet all applicable emission standards with the engine and fuel system installed.

(b) Except as specified in paragraph (f) of this section, all equipment subject to the exhaust standards of this part must meet the evaporative emission standards of 40 CFR part 1060, as described in § 1054.110.

(c) Except as specified in paragraph (f) of this section, identify and label equipment you produce under this section consistent with the requirements of § 1054.135.

(d) You may need to certify your equipment or fuel systems as described in 40 CFR 1060.1 and 1060.601.

(e) You must follow all emission-related installation instructions from the certifying manufacturers as described in § 1054.130, 40 CFR 1060.130, and 40 CFR 1068.105. If you do not follow the installation instructions, we may consider your equipment to be not covered by the certificates of conformity. Introduction of such equipment into U.S. commerce violates 40 CFR 1068.101.

(f) Motor vehicles and marine vessels may contain engines subject to the exhaust emission standards in this part 1054. Evaporative emission standards apply to these products as follows:

(1) Marine vessels using spark-ignition engines are subject to the requirements of 40 CFR part 1045. The vessels are not required to comply with the evaporative emission standards and related requirements of this part 1054.

(2) Motor vehicles are subject to the requirements of 40 CFR part 86. They are not required to comply with the evaporative emission standards and related requirements of this part 1054.

Subpart B—Emission Standards and Related Requirements

§ 1054.101 What exhaust emission standards and requirements must my engines meet?

(a) You must show that your engines meet the following exhaust emission standards, except as specified in paragraphs (b) through (d) of this section:

(1) Handheld engines must meet the exhaust emission standards in § 1054.103.

(2) Nonhandheld engines must meet the exhaust emission standards in § 1054.105.

(3) All engines must meet the requirements in § 1054.115.

(b) Emission standards regulating HC and NO_X exhaust emissions are optional for wintertime engines. However, if you certify an emission family to such standards, those engines are subject to all the requirements of this part as if these optional standards were mandatory.

(c) Any engines certified to the nonhandheld emission standards in § 1054.105 may be used in either handheld or nonhandheld equipment. Engines at or above 80 cc certified to the handheld emission standards in § 1054.103 may not be used in nonhandheld equipment. For purposes of the requirements of this part, engines below 80 cc are considered handheld engines but may be installed in either handheld or nonhandheld equipment. See § 1054.701(c) for special provisions related to emission credits for engine families with displacement below 80 cc where those engines are installed in nonhandheld equipment.

(d) Two-stroke snowthrower engines may meet exhaust emission standards that apply to handheld engines with the same engine displacement.

(e) It is important that you read § 1054.145 to determine if there are other interim requirements or interim compliance provisions that apply for a limited time.

§ 1054.103 What exhaust emission standards must my handheld engines meet?

(a) *Emission standards.* Exhaust emissions from your handheld engines may not exceed the emission standards in Table 1 of this section. Measure emissions using the applicable steady-state test procedures described in subpart F of this part.

TABLE 1 OF § 1054.103.—PHASE 3 EMISSION STANDARDS FOR HANDHELD ENGINES (G/KW-HR)

Engine displacement class	$HC+NO_X$	CO
Class III	50	805
Class IV	50	805
Class V	72	603

(b) *Averaging, banking, and trading.* You may generate or use emission credits under the averaging, banking, and trading (ABT) program for $HC+NO_X$ emissions as described in subpart H of this part. To generate or use emission credits, you must specify a family emission limit for each engine family you include in the ABT program. These family emission limits serve as the emission standards for the engine family with respect to all required testing instead of the standards specified in this section. An engine family meets emission standards even if its family emission limit is higher than the standard, as long as you show that the whole averaging set of applicable engine families meets the emission standards using emission credits and the engines within the family meet the family emission limit. The following are the maximum values you may specify for family emission limits:

(1) 336 g/kW-hr for Class III engines.

(2) 275 g/kW-hr for Class IV engines.

(3) 186 g/kW-hr for Class V engines.

(c) *Fuel types.* The exhaust emission standards in this section apply for engines using the fuel type on which the engines in the emission family are designed to operate. You must meet the numerical emission standards for hydrocarbons in this section based on the following types of hydrocarbon emissions for engines powered by the following fuels:

(1) Alcohol-fueled engines: THCE emissions.

(2) Natural gas-fueled engines: NMHC emissions.

(3) Other engines: THC emissions.

(d) *Useful life.* Your engines must meet the exhaust emission standards in paragraph (a) of this section over their full useful life as described in § 1054.107.

(e) *Applicability for testing.* The emission standards in this subpart apply to all testing, including certification, production-line, and in-use testing.

§ 1054.105 What exhaust emission standards must my nonhandheld engines meet?

(a) *Emission standards.* Exhaust emissions from your engines may not exceed the emission standards in this paragraph (a). Measure emissions using the applicable steady-state test procedures described in subpart F of this part.

TABLE 1 OF § 1054.105—PHASE 3 EMISSION STANDARDS FOR NONHANDHELD ENGINES (G/KW-HR)

Engine displacement class	$HC+NO_X$	Primary CO standard	CO standard for marine generator engines
Class I	10.0	610	5.0
Class II	8.0	610	5.0

(b) *Averaging, banking, and trading.* You may generate or use emission credits under the averaging, banking, and trading (ABT) program for $HC+NO_X$ emissions as described in subpart H of this part. To generate or use emission credits, you must specify a family emission limit for each engine family you include in the ABT program. These family emission limits serve as the emission standards for the engine family with respect to all required testing instead of the standards specified in this section. An engine family meets emission standards even if its family emission limit is higher than the standard, as long as you show that the whole averaging set of applicable engine families meets the emission standards using emission credits, and the engines within the family meet the family emission limit. You may not specify a family emission limit that exceeds the Phase 2 standards specified in 40 CFR 90.103 and summarized in Appendix I of this part.

(c) *Fuel types.* The exhaust emission standards in this section apply for engines using the fuel type on which the engines in the emission family are designed to operate. You must meet the numerical emission standards for hydrocarbons in this section based on the following types of hydrocarbon emissions for engines powered by the following fuels:

(1) Alcohol-fueled engines: THCE emissions.

(2) Natural gas-fueled engines: NMHC emissions.

(3) Other engines: THC emissions.

(d) *Useful life.* Your engines must meet the exhaust emission standards in paragraph (a) of this section over their full useful life as described in § 1054.107.

(e) *Applicability for testing.* The emission standards in this subpart apply to all testing, including certification, production-line, and in-use testing.

§ 1054.107 What is the useful life period for meeting exhaust emission standards?

This section describes an engine family's useful life, which is the period during which a new engine is required to comply with all applicable emission standards.

(a) Determine the useful life period for exhaust requirements as follows:

(1) Except as specified in paragraphs (a)(2) and (3) of this section, the useful life period for exhaust requirements is the number of engine operating hours from Table 1 of this section that most closely matches the expected median in-use life of your engines. The median in-use life of your engine is the shorter of the following values:

(i) The median in-use life of equipment into which the engine is expected to be installed.

(ii) The median in-use life of the engine without being scrapped or rebuilt.

TABLE 1 TO § 1054.107.—NOMINAL USEFUL LIFE PERIODS

Class or category	Useful life hour value
Handheld	50, 125, or 300.
Class I	125, 250, or 500.
Class II	250, 500, or 1,000.

(2) You may select a longer useful life for nonhandheld engines than that specified in paragraph (a)(1) of this section in 100-hour increments not to exceed 3,000 hours for Class I engines or 5,000 hours for Class II engines. For engine families generating emission credits, you may do this only with our approval.

(3) The minimum useful life period for engines with maximum engine power above 19 kW is 1,000 hours (see § 1054.1(d)).

(4) Keep any available information to support your selection and make it available to us if we ask for it. We may require you to certify to a different useful life value from the table if we determine that the selected useful life value is not justified by the data. We may consider any relevant information, including your product warranty statements and marketing materials regarding engine life, in making this determination. We may void your certificate if we determine that you intentionally selected an incorrect value. Support your selection based on any of the following information:

(i) Surveys of the life spans of the equipment in which the subject engines are installed.

(ii) Engineering evaluations of field aged engines to ascertain when engine performance deteriorates to the point where usefulness and/or reliability is impacted to a degree sufficient to necessitate overhaul or replacement.

(iii) Failure reports from engine customers.

(iv) Engineering evaluations of the durability, in hours, of specific engine technologies, engine materials, or engine designs.

§ 1054.110 What evaporative emission standards must my equipment meet?

Except as specified in § 1054.20, new equipment using engines that run on a volatile liquid fuel (such as gasoline) must meet the evaporative emission requirements of 40 CFR part 1060 over a useful life of five years. The requirements of 40 CFR part 1060 that apply are considered also to be requirements of this part 1054. These standards apply starting in the 2011 model year for equipment using Class II engines and in the 2012 model year for equipment using Class I engines. These standards apply for handheld equipment as specified in this section. Note that 40 CFR 1060.240 allows you to use design-based certification instead of generating new emission data. Marine vessels using auxiliary marine engines subject to this part must meet the evaporative emission requirements in 40 CFR 1045.107 instead of the requirements in this section.

(a) *Fuel line permeation.* Nonmetal fuel lines must meet the permeation requirements for EPA NRFL or EPA CWFL fuel lines as specified in 40 CFR 1060.102. These requirements apply for handheld equipment starting in the 2012 model year, except that they apply starting in the 2013 model year for emission families involving cold-weather equipment and all small-volume emission families. Handheld equipment manufacturers may generate or use emission credits to show compliance with the requirements of this paragraph (a) under the averaging, banking, and trading program described in subpart H of this part. Metal fuel lines are not subject to emission standards.

(b) *Tank permeation.* Fuel tanks must meet the permeation requirements specified in 40 CFR 1060.103. These requirements apply for handheld equipment starting in the 2010 model year, except that they apply starting in the 2011 model year for structurally integrated nylon fuel tanks and in the 2013 model year for all small-volume emission families. (**Note:** 40 CFR 90.129 specifies emission standards for 2009 model year handheld engines and equipment.) Equipment manufacturers may generate or use emission credits to show compliance with the requirements of this paragraph (b) under the averaging, banking, and trading program as described in subpart H of this part. Starting in the 2014 model year for Class II equipment and in the 2015 model year for Class I and handheld equipment, the following caps on family emission limits apply:

(1) Except as specified in paragraphs (b)(2) and (3) of this section, you may not specify a family emission limit that exceeds 5.0 g/m^2/day for testing at a nominal temperature of 28 °C, or 8.3 g/m^2/day for testing at a nominal temperature of 40 °C.

(2) For structurally integrated nylon fuel tanks, you may not specify a family emission limit that exceeds 3.0 g/m^2/

day for testing at a nominal temperature of 28 °C, or 5.0 g/m²/day for testing at a nominal temperature of 40 °C.

(3) For small-volume emission families, you may not specify a family emission limit that exceeds 8.0 g/m²/day for testing at a nominal temperature of 28 °C, or 13.3 g/m²/day for testing at a nominal temperature of 40 °C. This also applies to structurally integrated nylon fuel tanks used in small-volume emission families.

(4) The cap on family emission limits does not apply to fuel caps that are certified separately to meet permeation standards.

(c) *Running loss.* Nonhandheld equipment must meet the running loss requirements specified in 40 CFR 1060.104. This paragraph (c) does not apply with respect to engines below 80 cc.

(d) *Diffusion emissions.* Nonhandheld equipment must meet the diffusion emission requirements specified in 40 CFR 1060.105. This paragraph (d) does not apply with respect to engines below 80 cc.

(e) *Other requirements.* The requirements of 40 CFR 1060.101(e) and (f) apply to equipment manufacturers even if they do not obtain a certificate.

§ 1054.115 What other requirements apply?

The following requirements apply with respect to engines that are required to meet the emission standards of this part:

(a) *Crankcase emissions.* Crankcase emissions may not be discharged directly into the ambient atmosphere from any engine throughout its useful life, except as follows:

(1) Snowthrower engines may discharge crankcase emissions to the ambient atmosphere if the emissions are added to the exhaust emissions (either physically or mathematically) during all emission testing. If you take advantage of this exception, you must do the following things:

(i) Manufacture the engines so that all crankcase emissions can be routed into the applicable sampling systems specified in 40 CFR part 1065.

(ii) Account for deterioration in crankcase emissions when determining exhaust deterioration factors.

(2) For purposes of this paragraph (a), crankcase emissions that are routed to the exhaust upstream of exhaust aftertreatment during all operation are not considered to be discharged directly into the ambient atmosphere.

(b) *Adjustable parameters.* Engines that have adjustable parameters must meet all the requirements of this part for any adjustment in the physically adjustable range. An operating parameter is not considered adjustable if you permanently seal it or if it is not normally accessible using ordinary tools. We may require that you set adjustable parameters to any specification within the adjustable range during any testing, including certification testing, production-line testing, or in-use testing. You may ask us limit idle-speed or carburetor adjustments to a smaller range than the physically adjustable range if you show us that the engine will not be adjusted outside of this smaller range during in-use operation without significantly degrading engine performance.

(c) *Altitude adjustments.* Engines must meet applicable emission standards for valid tests conducted under the ambient conditions specified in 40 CFR 1065.520. Except as specified in § 1054.145(c), engines must meet applicable emission standards at barometric pressures ranging from 94.0 to 103.325 kPa in the standard configuration. This generally includes all altitudes up to about 2,000 feet above sea level. You may rely on an altitude kit that you specify in your application for certification to comply at lower pressures. You must identify the altitude range for which you expect proper engine performance and emission control with and without the altitude kit in the owners manual; you must also state that operating the engine with the wrong engine configuration at a given altitude may increase its emissions and decrease fuel efficiency and performance. See § 1054.145(c) for special provisions that apply for handheld engines.

(d) *Prohibited controls.* You may not design your engines with emission-control devices, systems, or elements of design that cause or contribute to an unreasonable risk to public health, welfare, or safety while operating. For example, this would apply if the engine emits a noxious or toxic substance it would otherwise not emit that contributes to such an unreasonable risk.

(e) *Defeat devices.* You may not equip your engines with a defeat device. A defeat device is an auxiliary emission control device that reduces the effectiveness of emission controls under conditions that the engine may reasonably be expected to encounter during normal operation and use. This does not apply for altitude kits installed or removed consistent with § 1054.655. This also does not apply to auxiliary emission control devices you identify in your certification application if any of the following is true:

(1) The conditions of concern were substantially included in the applicable duty-cycle test procedures described in subpart F of this part.

(2) You show your design is necessary to prevent engine (or equipment) damage or accidents.

(3) The reduced effectiveness applies only to starting the engine.

§ 1054.120 What emission-related warranty requirements apply to me?

The requirements of this section apply to the certifying manufacturer(s). See 40 CFR part 1060 for the warranty requirements related to evaporative emissions.

(a) *General requirements.* You must warrant to the ultimate purchaser and each subsequent purchaser that the new engine, including all parts of its emission control system, meets two conditions:

(1) It is designed, built, and equipped so it conforms at the time of sale to the ultimate purchaser with the requirements of this part.

(2) It is free from defects in materials and workmanship that may keep it from meeting these requirements.

(b) *Warranty period.* Your emission-related warranty must be valid during the periods specified in this paragraph (b). You may offer an emission-related warranty more generous than we require. The emission-related warranty for the engine may not be shorter than any published warranty you offer without charge for the engine. Similarly, the emission-related warranty for any component may not be shorter than any published warranty you offer without charge for that component. If an engine has no hour meter, we base the warranty periods in this paragraph (b) only on the engine's age (in years). The warranty period begins when the engine is placed into service. The minimum warranty periods are as follows:

(1) The minimum warranty period is two years except as allowed under paragraph (b)(2) or (3) of this section.

(2) We may establish a shorter warranty period for handheld engines subject to severe service in seasonal equipment if we determine that these engines are likely to operate for a number of hours greater than the applicable useful life within 24 months. You must request this shorter warranty period in your application for certification or in an earlier submission.

(3) For engines equipped with hour meters, you may deny warranty claims for engines that have accumulated a number of hours greater than 50 percent of the applicable useful life.

(c) *Components covered.* The emission-related warranty covers all

components whose failure would increase an engine's emissions of any pollutant, including those listed in 40 CFR part 1068, Appendix I, and those from any other system you develop to control emissions. The emission-related warranty covers these components even if another company produces the component. Your emission-related warranty does not cover components whose failure would not increase an engine's emissions of any pollutant.

(d) *Limited applicability.* You may deny warranty claims under this section if the operator caused the problem through improper maintenance or use, as described in 40 CFR 1068.115.

(e) *Owners manual.* Describe in the owners manual the emission-related warranty provisions from this section that apply to the engine. Include instructions for obtaining warranty service consistent with the requirements of paragraph (f) of this section.

(f) *Requirements related to warranty claims.* You are required at a minimum to meet the following conditions to ensure that owners will be able to promptly obtain warranty repairs:

(1) You must provide and monitor a toll-free telephone number and an e-mail address for owners to receive information about how to make a warranty claim, and how to make arrangements for authorized repairs.

(2) You must provide a source of replacement parts within the United States. For parts that you import, this requires you to have at least one distributor within the United States.

(3) This paragraph (f)(3) applies for all engines except as specified in paragraph (f)(4) of this section. You may limit warranty repairs to authorized service centers for owners located within 100 miles of an authorized service center. For owners located more than 100 miles from an authorized service center, you must state in your warranty that you will either pay for shipping costs to and from an authorized service center, provide for a service technician to come to the owner to make the warranty repair, or pay for the repair to be made at a local nonauthorized service center.

(4) In remote locations, the provisions of paragraph (f)(3) of this section apply, except that the requirement to take extra measures to honor warranty claims may be based on a distance greater than 100 miles. For example, in sparsely populated areas in Montana, it may be acceptable to take the extra steps to honor warranty claims only for owners located more than 200 miles from an authorized service center. However, you may not specify a this greater distance for servicing engines for more than 10 percent of owners.

§ 1054.125 What maintenance instructions must I give to buyers?

Give the ultimate purchaser of each new engine written instructions for properly maintaining and using the engine, including the emission control system as described in this section. The maintenance instructions also apply to service accumulation on your emission-data engines as described in § 1054.245 and in 40 CFR part 1065.

(a) *Critical emission-related maintenance.* Critical emission-related maintenance includes any adjustment, cleaning, repair, or replacement of critical emission-related components. This may also include additional emission-related maintenance that you determine is critical if we approve it in advance. You may schedule critical emission-related maintenance on these components if you meet the following conditions:

(1) You demonstrate that the maintenance is reasonably likely to be done at the recommended intervals on in-use engines. We will accept scheduled maintenance as reasonably likely to occur if you satisfy any of the following conditions:

(i) You present data showing that any lack of maintenance that increases emissions also unacceptably degrades the engine's performance.

(ii) You present survey data showing that at least 80 percent of engines in the field get the maintenance you specify at the recommended intervals. If the survey data show that 60 to 80 percent of engines in the field get the maintenance you specify at the recommended intervals, you may ask us to consider additional factors such as the effect on performance and emissions. For example, we may allow you to schedule fuel-injector replacement as critical emission-related maintenance if you have survey data showing this is done at the recommended interval for 65 percent of engines and you demonstrate that performance degradation is roughly proportional to the degradation in emission control for engines that do not have their fuel injectors replaced.

(iii) You provide the maintenance free of charge and clearly say so in maintenance instructions for the customer.

(iv) You otherwise show us that the maintenance is reasonably likely to be done at the recommended intervals.

(2) You may not schedule critical emission-related maintenance within the useful life period for aftertreatment devices, pulse-air valves, fuel injectors, oxygen sensors, electronic control units, superchargers, or turbochargers, except as specified in paragraph (b) or (c) of this section.

(b) *Recommended additional maintenance.* You may recommend any additional amount of maintenance on the components listed in paragraph (a) of this section, as long as you state clearly that these maintenance steps are not necessary to keep the emission-related warranty valid. If operators do the maintenance specified in paragraph (a) of this section, but not the recommended additional maintenance, this does not allow you to disqualify those engines from in-use testing or deny a warranty claim. Do not take these maintenance steps during service accumulation on your emission-data engines.

(c) *Special maintenance.* You may specify more frequent maintenance to address problems related to special situations, such as atypical engine operation. You must clearly state that this additional maintenance is associated with the special situation you are addressing.

(d) *Noncritical emission-related maintenance.* Subject to the provisions of this paragraph (d), you may schedule any amount of emission-related inspection or maintenance that is not covered by paragraph (a) of this section (*i.e.*, maintenance that is neither explicitly identified as critical emission-related maintenance, nor that we approve as critical emission-related maintenance). Noncritical emission-related maintenance generally includes changing spark plugs, changing air filters, re-seating valves, or any other emission-related maintenance on the components we specify in 40 CFR part 1068, Appendix I. You must state in the owners manual that these steps are not necessary to keep the emission-related warranty valid. If operators fail to do this maintenance, this does not allow you to disqualify those engines from in-use testing or deny a warranty claim. Do not take these inspection or maintenance steps during service accumulation on your emission-data engines.

(e) *Maintenance that is not emission-related.* For maintenance unrelated to emission controls, you may schedule any amount of inspection or maintenance. You may also take these inspection or maintenance steps during service accumulation on your emission-data engines, as long as they are reasonable and technologically necessary. This might include adding engine oil, changing fuel or oil filters, servicing engine-cooling systems, and adjusting idle speed, governor, engine bolt torque, valve lash, or injector lash. You may perform this nonemission-

related maintenance on emission-data engines at the least frequent intervals that you recommend to the ultimate purchaser (but not the intervals recommended for severe service).

(f) *Source of parts and repairs.* State clearly on the first page of your written maintenance instructions that a repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems. Your instructions may not require components or service identified by brand, trade, or corporate name. Also, do not directly or indirectly condition your warranty on a requirement that the engine be serviced by your franchised dealers or any other service establishments with which you have a commercial relationship. You may disregard the requirements in this paragraph (f) if you do one of two things:

(1) Provide a component or service without charge under the purchase agreement.

(2) Get us to waive this prohibition in the public's interest by convincing us the engine will work properly only with the identified component or service.

(g) *Payment for scheduled maintenance.* Owners are responsible for properly maintaining their engines. This generally includes paying for scheduled maintenance. However, manufacturers must pay for scheduled maintenance during the useful life if it meets all the following criteria:

(1) Each affected component was not in general use on similar engines before 1997.

(2) The primary function of each affected component is to reduce emissions.

(3) Failure to perform the maintenance would not cause clear problems that would significantly degrade the engine's performance.

(h) *Owners manual.* Explain the owner's responsibility for proper maintenance in the owners manual.

§ 1054.130 What installation instructions must I give to equipment manufacturers?

(a) If you sell an engine for someone else to install in a piece of equipment, give the engine installer instructions for installing it consistent with the requirements of this part. Include all information necessary to ensure that an engine will be installed in its certified configuration.

(b) Make sure these instructions have the following information:

(1) Include the heading: ''Emission-related installation instructions''.

(2) State: ''Failing to follow these instructions when installing a certified engine in nonroad equipment violates federal law (40 CFR 1068.105(b)), subject to fines or other penalties as described in the Clean Air Act.''.

(3) Describe the instructions needed to properly install the exhaust system and any other components. Include instructions consistent with the requirements of § 1054.655 related to altitude kits.

(4) Describe the steps needed to control evaporative emissions in accordance with certificates of conformity that you hold. Include instructions for connecting fuel lines as needed to prevent running loss emissions, if applicable. Such instructions must include sufficient detail to ensure that running loss control will not cause the engine to exceed exhaust emission standards. For example, you may specify a maximum vapor flow rate under normal operating conditions. Also include notification that the installer must meet the requirements of § 1054.110 and 40 CFR part 1060.

(5) Describe any limits on the range of applications needed to ensure that the engine remains in its certified configuration after installation. For example, if you certify engines only for rated-speed applications tell equipment manufacturers that the engine must not be installed in equipment involving intermediate-speed operation. Also, if your wintertime engines are not certified to the otherwise applicable $HC+NO_X$ standards, tell equipment manufacturers that the engines must be installed in equipment that is used only in wintertime.

(6) Describe any other instructions to make sure the installed engine will operate according to design specifications in your application for certification. For example, this may include specified limits for catalyst systems, such as exhaust backpressure, catalyst location, and temperature profiles during engine operation.

(7) State: ''If you install the engine in a way that makes the engine's emission control information label hard to read during normal engine maintenance, you must place a duplicate label on the equipment, as described in 40 CFR 1068.105.''.

(c) You do not need installation instructions for engines you install in your own equipment.

(d) Provide instructions in writing or in an equivalent format. For example, you may post instructions on a publicly available website for downloading or printing. If you do not provide the instructions in writing, explain in your application for certification how you will ensure that each installer is informed of the installation requirements.

§ 1054.135 How must I label and identify the engines I produce?

The provisions of this section apply to engine manufacturers.

(a) Assign each engine a unique identification number and permanently affix, engrave, or stamp it on the engine in a legible way.

(b) At the time of manufacture, affix a permanent and legible label identifying each engine. The label must be—

(1) Attached so it is not removable without being destroyed or defaced.

(2) Secured to a part of the engine needed for normal operation and not normally requiring replacement.

(3) Durable and readable for the engine's entire life.

(4) Written in English.

(c) The label must—

(1) Include the heading ''EMISSION CONTROL INFORMATION''.

(2) Include your full corporate name and trademark. You may identify another company and use its trademark instead of yours if you comply with the provisions of § 1054.640.

(3) Include EPA's standardized designation for the emission family (and subfamily, where applicable).

(4) State the following based on the useful life requirements in § 1054.107: ''EMISSIONS COMPLIANCE PERIOD= [identify applicable useful life period] HOURS''.

(5) State the engine's displacement (in cubic centimeters); however, you may omit this from the label if all the engines in the emission family have the same per-cylinder displacement and total displacement.

(6) State the date of manufacture [MONTH and YEAR]; however, you may omit this from the label if you stamp or engrave it on the engine.

(7) State the FEL to which the engine is certified (in g/kW-hr) if certification depends on the ABT provisions of subpart H of this part.

(8) Identify the emission control system. Use terms and abbreviations consistent with SAE J1930 (incorporated by reference in § 1054.810). You may omit this information from the label if there is not enough room for it and you put it in the owners manual instead.

(9) List specifications and adjustments for engine tuneups; however, you may omit this information from the label if there is not enough room for it and you put it in the owners manual instead.

(10) Identify the altitude at which an altitude kit should be installed if you specify an altitude kit under § 1054.115(c). You may omit this

information from the label if there is not enough room for it and you put it in the owners manual instead.

(11) Identify the fuel type and any requirements for fuel and lubricants; however, you may omit this information from the label if there is not enough room for it and you put it in the owners manual instead.

(12) State: ''THIS ENGINE COMPLIES WITH U.S. EPA REGULATIONS FOR [MODEL YEAR] SPARK-IGNITION ENGINES.''.

(13) If your nonhandheld engines are certified for use only at rated speed or only at intermediate speed, add the statement: ''CERTIFIED FOR [rated-speed or intermediate-speed] APPLICATIONS ONLY'' or ''CERTIFIED FOR [identify nominal engine speed or range of speeds for testing] OPERATION ONLY''.

(14) For wintertime engines state: ''FOR WINTERTIME USE ONLY''.

(d) If others install your engine in their equipment in a way that obscures the engine label such that the label cannot be read during normal maintenance, we require them to add a duplicate label on the equipment (see 40 CFR 1068.105); in that case, give them the number of duplicate labels they request and keep the following records for at least five years:

(1) Written documentation of the request from the equipment manufacturer.

(2) The number of duplicate labels you send for each engine family and the date you sent them.

(e) You may add information to the emission control information label as follows:

(1) You may identify other emission standards that the engine meets or does not meet (such as California standards).

(2) You may add other information to ensure that the engine will be properly maintained and used.

(3) You may add appropriate features to prevent counterfeit labels. For example, you may include the engine's unique identification number on the label.

(f) You may ask us to approve modified labeling requirements in this part 1054 if you show that it is necessary or appropriate. We will approve your request if your alternate label is consistent with the requirements of this part.

(g) Integrated equipment manufacturers may meet the labeling requirements of this section by including all the specified information on the equipment label required by 40 CFR part 1060.

§ 1054.136 How must I permanently label the equipment I produce?

The provisions of this section apply to equipment manufacturers.

(a) You must comply with the equipment labeling requirements of 40 CFR part 1060.

(b) If you obscure the engine label while installing the engine in the equipment such that the label will be hard to read, you must place a duplicate label on the equipment consistent with the requirements of 40 CFR 1068.105.

(c) You may include the information required by § 1054.135 on the equipment label required by 40 CFR part 1060.

§ 1054.140 What is my engine's maximum engine power and displacement?

This section describes how to quantify your engine's maximum engine power and displacement for the purposes of this part.

(a) An engine configuration's maximum engine power is the maximum brake power point on the nominal power curve for the engine configuration, as defined in this section. Round the power value to the nearest 0.1 kilowatts for nonhandheld engines and to the nearest 0.01 kilowatts for handheld engines. The nominal power curve of an engine configuration is the relationship between maximum available engine brake power and engine speed for an engine, using the mapping procedures of 40 CFR part 1065, based on the manufacturer's design and production specifications for the engine. This information may also be expressed by a torque curve that relates maximum available engine torque with engine speed.

(b) An engine configuration's displacement is the intended swept volume of all the engine's cylinders. The swept volume of the engine is the product of the internal cross-section area of the cylinders, the stroke length, and the number of cylinders. Calculate the engine's intended swept volume from the design specifications for the cylinders using enough significant figures to allow determination of the displacement to the nearest 0.1 cc. Determine the final value by rounding to the nearest cubic centimeter. For example, for a one-cylinder engine with circular cylinders having an internal diameter of 6.00 cm and a 6.25 cm stroke length, the rounded displacement would be: $(1) \times (6.00/2)^2 \times (\pi) \times (6.25) = 177$ cc.

(c) The nominal power curve and intended swept volume must be within the range of the actual power curves and swept volumes of production engines considering normal production variability. If after production begins it is determined that either your nominal power curve or your intended swept volume does not represent production engines, we may require you to amend your application for certification under § 1054.225.

(d) Each engine produced under the provisions of § 1054.1(d) must have a total displacement at or below 1000.0 cc after rounding to the nearest 0.1 cc.

§ 1054.145 Are there interim provisions that apply only for a limited time?

The provisions in this section apply instead of other provisions in this part.

(a) *Delayed Phase 3 implementation for engine manufacturers.* Small-volume engine manufacturers may delay complying with otherwise applicable Phase 3 emission standards and requirements subject to the following conditions:

(1) You may delay meeting the Phase 3 exhaust emission standards until 2013 for Class II engines and until 2014 for Class I engines.

(2) You must certify your engines exempted under this section to the Phase 2 standards and requirements from specified in 40 CFR 90.103 and summarized in Appendix I of this part. You must meet the labeling requirements in 40 CFR 90.114, but use the following compliance statement instead of the compliance statement in 40 CFR 90.114(c)(7): ''THIS ENGINE COMPLIES WITH U.S. EPA REGULATIONS FOR [CURRENT MODEL YEAR] NONROAD ENGINES UNDER 40 CFR 1054.145(a).''.

(3) After the delays indicated in paragraph (a)(1) of this section, you must comply with the same standards and requirements as all other manufacturers, except as noted elsewhere in this section.

(4) The provisions of this paragraph (a) may not be used to circumvent the requirements of this part.

(5) You may generate early credits during this two-year period as described under § 1054.740 as if the emission standards applied starting in the 2013 model year for Class II engines and in the 2014 model year for Class I engines.

(b) *Delayed Phase 3 implementation for equipment manufacturers.* Special provisions apply to small-volume equipment manufacturers. The provisions of § 1054.625 describe how manufacturers may produce certain numbers of equipment using Class II engines that meet Phase 2 standards during the first four years that the Phase 3 standards apply.

(c) *Special provisions for handheld engines.* The following provisions apply for handheld engines:

(1) You may use the provisions in 40 CFR 90.104(g) to rely on assigned deterioration factors for small-volume equipment manufacturers and for small-volume equipment families.

(2) You may use the test procedures in 40 CFR part 90 instead of those in subpart F of this part for the 2010 and 2011 model years. This applies for certification, production-line, and in-use testing. You may continue to use test data based on the test procedures in 40 CFR part 90 for engine families in 2012 and later model years, provided that we allow you to use carryover emission data under 40 CFR 1054.235(d) for your emission family.

(3) You may perform maintenance on emission-data engines during service accumulation as described in 40 CFR part 90.

(4) Engines subject to Phase 3 emission standards must meet the standards at or above barometric pressures of 96.0 kPa in the standard configuration. This is intended to allow testing under most weather conditions at all altitudes up to 1,100 feet above sea level. In your application for certification, identify the altitude above which you rely on an altitude kit to meet emission standards and describe your plan for making information and parts available such that you would reasonably expect that altitude kits would be widely used at all such altitudes.

(d) *Alignment of model years for exhaust and evaporative standards.* Evaporative emission standards generally apply based on the model year of the equipment, which is determined by the equipment's date of final assembly. However, in the first year of new emission standards, equipment manufacturers may apply evaporative emission standards based on the model year of the engine as shown on the engine's emission control information label. For example, for the fuel line permeation standards starting in 2012, equipment manufacturers may order a batch of 2011 model year engines for installation in 2012 model year equipment, subject to the anti-stockpiling provisions of 40 CFR 1068.105(a). The equipment with the 2011 model year engines would not need to meet fuel line permeation standards, as long as the equipment is fully assembled by December 31, 2012.

(e) *Early compliance with evaporative emission standards—nonhandheld equipment manufacturers.* You may produce nonhandheld equipment that does not meet the otherwise applicable evaporative emission standards without violating the prohibition in 40 CFR 1068.101(a)(1) if you earn evaporative allowances, as follows:

(1) You may earn an evaporative allowance from each piece of equipment certified to California's evaporative emission standards by producing it before the requirements of this part start to apply and selling it outside of California. You may use an evaporative allowance by selling one piece of equipment that does not meet any EPA evaporative emission standards even though it is subject to the EPA standards.

(2) You may earn an evaporative allowance with respect to fuel tank permeation from each piece of equipment certified to EPA's evaporative emission standards by selling it outside of California or in an application that is preempted from California's standards before EPA's fuel tank permeation standards start to apply. You may use an evaporative allowance by selling one piece of equipment with a fuel tank that does not meet the otherwise applicable EPA emission standards even though it is subject to the EPA standards. For example, you can earn an evaporative allowance by selling a low-permeation fuel tank for Class II equipment before the 2011 model year, in which case you could sell a piece of Class II equipment in 2011 with a high-permeation fuel tank. You may not generate allowances under this paragraph (e)(2) based on your sales of metal fuel tanks.

(3) Evaporative allowances you earn under this paragraph (e) from equipment with Class I engines may be used only for other equipment with Class I engines. Similarly, evaporative allowances you earn under this paragraph (e) from equipment with Class II engines may be used only for other equipment with Class II engines.

(4) You must label any equipment using allowances under this paragraph (e) with the following statement: ''EXEMPT FROM EMISSION STANDARDS UNDER 40 CFR 1054.145(e).''.

(5) You may not use the allowances you generate under this paragraph (e) for 2014 and later model year equipment with Class II engines or for 2015 and later model year equipment with Class I engines.

(f) *Early banking for evaporative emission standards—handheld equipment manufacturers.* You may earn emission credits for handheld equipment you produce before the evaporative emission standards of § 1054.110 apply. To do this, your equipment must use fuel tanks with a family emission limit below 1.5 g/m^2/day or fuel lines with a family emission limit below 15 g/m^2/day. Calculate your credits as described in § 1054.706 based on the difference between the family emission limit and the applicable emission rates specified in this paragraph (f).

(g) *Useful life for evaporative emission standards.* A useful life period of two years applies for fuel tanks or fuel caps certified to meet the permeation emission standards in § 1054.110(b) in 2013 and earlier model years. However, for fuel tanks with a family emission limit above or below the otherwise applicable standard, calculate emission credits under § 1054.706 based on a useful life of five years.

(h) *Use of California data for handheld fuel tank permeation.* If you certified handheld fuel tanks to the permeation standards in 40 CFR 90.129 based on emission measurements for demonstrating compliance with emission standards for California, you may continue to use this data as the basis for demonstrating compliance with the requirements of § 1054.110(b) for the 2010 and 2011 model years, provided that we allow you to use carryover emission data under 40 CFR 1060.235(e) for your emission family.

Subpart C—Certifying Emission Families

§ 1054.201 What are the general requirements for obtaining a certificate of conformity?

Engine manufacturers must certify their engines with respect to the exhaust emission standards in this part. Manufacturers of engines, equipment, or fuel-system components may need to certify their products with respect to evaporative emission standards as described in 40 CFR 1060.1 and 1060.601. The following general requirements apply for obtaining a certificate of conformity:

(a) You must send us a separate application for a certificate of conformity for each emission family. A certificate of conformity is valid starting with the indicated effective date, but it is not valid for any production after December 31 of the model year for which it is issued. No certificate will be issued after December 31 of the model year. If you certify with respect to both exhaust and evaporative emissions, you must submit separate applications.

(b) The application must contain all the information required by this part and must not include false or incomplete statements or information (see § 1054.255).

(c) We may ask you to include less information than we specify in this

subpart, as long as you maintain all the information required by § 1054.250.

(d) You must use good engineering judgment for all decisions related to your application (see 40 CFR 1068.5).

(e) An authorized representative of your company must approve and sign the application.

(f) See § 1054.255 for provisions describing how we will process your application.

(g) We may require you to deliver your test engines to a facility we designate for our testing (see § 1054.235(c)).

§ 1054.205 What must I include in my application?

This section specifies the information that must be in your application, unless we ask you to include less information under § 1054.202(c). We may require you to provide additional information to evaluate your application. The provisions of this section apply to integrated equipment manufacturers and engine manufacturers selling loose engines. Nonintegrated equipment manufacturers must follow the requirements of 40 CFR part 1060.

(a) Describe the emission family's specifications and other basic parameters of the engine's design and emission controls. List the fuel type on which your engines are designed to operate (for example, all-season gasoline). List each distinguishable engine configuration in the emission family. For each engine configuration in which the maximum modal power of the emission-data engine is at or above 15 kW, list the maximum engine power and the range of values for maximum engine power resulting from production tolerances, as described in § 1054.140.

(b) Explain how the emission control systems operate. Describe the evaporative emission controls and show how your design will prevent running loss emissions, if applicable. Also describe in detail all system components for controlling exhaust emissions, including all auxiliary emission control devices (AECDs) and all fuel-system components you will install on any production or test engine. Identify the part number of each component you describe (or the alphanumeric designation for catalysts described in § 1054.610, if applicable). For this paragraph (b), treat as separate AECDs any devices that modulate or activate differently from each other. Include sufficient detail to allow us to evaluate whether the AECDs are consistent with the defeat device prohibition of § 1054.115. For example, if your engines will routinely experience in-use operation that differs from the specified duty cycle for certification, describe how the fuel-metering system responds to varying speeds and loads not represented by the duty cycle.

(c) [Reserved]

(d) Describe the engines, equipment, and fuel system components you selected for testing and the reasons for selecting them.

(e) Describe the test equipment and procedures that you used, including any special or alternate test procedures you used. For handheld engines, describe how you selected the value for rated speed.

(f) Describe how you operated the emission-data engine before testing, including the duty cycle and the number of engine operating hours used to stabilize emission levels. Explain why you selected the method of service accumulation. Describe any scheduled maintenance you did.

(g) List the specifications of the test fuel to show that it falls within the required ranges we specify in 40 CFR part 1065.

(h) Identify the emission family's useful life. Describe the basis for selecting useful life values with respect to exhaust emissions (see § 1054.107).

(i) Include the maintenance and warranty instructions you will give to the ultimate purchaser of each new engine (see §§ 1054.120 and 1054.125).

(j) Include the emission-related installation instructions you will provide if someone else installs your engines in nonroad equipment (see § 1054.130).

(k) Describe your emission control information label (see § 1054.135).

(l) Identify the emission standards or FELs for the emission family.

(m) Identify the emission family's deterioration factors and describe how you developed them (see § 1054.245). Present any emission test data you used for this.

(n) State that you operated your emission-data engines as described in the application (including the test procedures, test parameters, and test fuels) to show you meet the requirements of this part.

(o) Present emission data to show that you meet emission standards, as follows:

(1) Present emission data for hydrocarbons (such as THC or THCE, as applicable), NO_X, and CO on an emission-data engine to show your engines meet the applicable exhaust emission standards as specified in § 1054.101. Show emission figures before and after applying deterioration factors for each engine. Include test data from each applicable duty cycle specified in § 1054.505(b). If we specify more than one grade of any fuel type (for example, low-temperature and all-season gasoline), you need to submit test data only for one grade, unless the regulations of this part specify otherwise for your engine.

(2) Present evaporative test data for hydrocarbons to show your engine or equipment meets the evaporative emission standards we specify in subpart B of this part. If you did not perform the testing, identify the source of the test data.

(3) Note that §§ 1054.235 and 1054.245 allow you to submit an application in certain cases without new emission data.

(p) Report all test results, including those from invalid tests, whether or not they were conducted according to the test procedures of subpart F of this part. If you measure CO_2, report those emission levels. We may ask you to send other information to confirm that your tests were valid under the requirements of this part and 40 CFR parts 1060 and 1065.

(q) Describe all adjustable operating parameters (see § 1054.115(b)), including production tolerances. Include the following in your description of each parameter:

(1) The nominal or recommended setting.

(2) The intended physically adjustable range.

(3) The limits or stops used to establish adjustable ranges.

(4) Information showing why the limits, stops, or other means of inhibiting adjustment are effective in preventing adjustment of parameters on in-use engines to settings outside your intended physically adjustable ranges.

(r) Describe how your engines comply with emission standards at varying atmospheric pressures. Include a description of altitude kits you design to comply with the requirements of § 1054.115(c). Identify the part number of each component you describe. Identify the altitude range for which you expect proper engine performance and emission control with and without the altitude kit. State that your engines will comply with applicable emission standards throughout the useful life with the altitude kit installed according to your instructions. Describe any relevant testing, engineering analysis, or other information in sufficient detail to support your statement. In addition, describe your plan for making information and parts available such that you would reasonably expect that altitude kits would be widely used in the high-altitude counties specified in Appendix III of this part. For example,

engine owners should have ready access to information describing when an altitude kit is needed and how to obtain this service. Similarly, parts and service information should be available to qualified service facilities in addition to authorized service centers if that is needed for owners to have such altitude kits installed locally.

(s) If your engines are subject to handheld emission standards on the basis of meeting weight limitations described in the definition of ''handheld,'' describe your analysis showing that you meet the applicable weight-related restrictions.

(t) State whether your certification is limited for certain engines. If this is the case, describe how you will prevent use of these engines in applications for which they are not certified. This applies for engines such as the following:

(1) Wintertime engines not certified to the otherwise applicable $HC+NO_X$ standard.

(2) Two-stroke snowthrower engines using the provisions of § 1054.101(d).

(u) Unconditionally certify that all the engines in the emission family comply with the requirements of this part, other referenced parts of the CFR, and the Clean Air Act.

(v) Include good-faith estimates of U.S.-directed production volumes. Include a justification for the estimated production volumes if they are substantially different than actual production volumes in earlier years for similar models.

(w) Describe how you meet the requirements for posting bond as specified in §§ 1054.685 and 1054.690, or describe why those requirements do not apply.

(x) Include the information required by other subparts of this part. For example, include the information required by § 1054.725 if you participate in the ABT program.

(y) Include other applicable information, such as information specified in this part or 40 CFR part 1068 related to requests for exemptions.

(z) Name an agent for service located in the United States. Service on this agent constitutes service on you or any of your officers or employees for any action by EPA or otherwise by the United States related to the requirements of this part.

(aa) For imported engines or equipment, identify the following:

(1) The port(s) at which you will import your engines or equipment.

(2) The names and addresses of the agents you have authorized to import your engines or equipment.

(3) The location of test facilities in the United States where you can test your engines if we select them for testing under a selective enforcement audit, as specified in 40 CFR part 1068, subpart E.

§ 1054.210 May I get preliminary approval before I complete my application?

If you send us information before you finish the application, we will review it and make any appropriate determinations, especially for questions related to emission family definitions, auxiliary emission control devices, deterioration factors, useful life, testing for service accumulation, maintenance, and delegated final assembly. Decisions made under this section are considered to be preliminary approval, subject to final review and approval. We will generally not reverse a decision where we have given you preliminary approval, unless we find new information supporting a different decision. If you request preliminary approval related to the upcoming model year or the model year after that, we will make best-efforts to make the appropriate determinations as soon as practicable. We will generally not provide preliminary approval related to a future model year more than two years ahead of time.

§ 1054.220 How do I amend the maintenance instructions in my application?

You may amend your emission-related maintenance instructions after you submit your application for certification, as long as the amended instructions remain consistent with the provisions of § 1054.125. You must send the Designated Compliance Officer a written request to amend your application for certification for an engine family if you want to change the emission-related maintenance instructions in a way that could affect emissions. In your request, describe the proposed changes to the maintenance instructions. We will disapprove your request if we determine that the amended instructions are inconsistent with maintenance you performed on emission-data engines. If operators follow the original maintenance instructions rather than the newly specified maintenance, this does not allow you to disqualify those engines from in-use testing or deny a warranty claim.

(a) If you are changing the specified maintenance in a way that could affect emissions, you may distribute the new maintenance instructions to your customers only after we approve your request.

(b) You need not request approval if you are making only minor corrections (such as correcting typographical mistakes), clarifying your maintenance instructions, or changing instructions for maintenance unrelated to emission control.

§ 1054.225 How do I amend my application for certification to include new or modified engines or fuel systems or change an FEL?

Before we issue you a certificate of conformity, you may amend your application to include new or modified engine or fuel-system configurations, subject to the provisions of this section. After we have issued your certificate of conformity, you may send us an amended application requesting that we include new or modified configurations within the scope of the certificate, subject to the provisions of this section. You must amend your application if any changes occur with respect to any information included in your application.

(a) You must amend your application before you take any of the following actions:

(1) Add an engine or fuel-system configuration to an emission family. In this case, the configuration added must be consistent with other configurations in the emission family with respect to the criteria listed in § 1054.230.

(2) Change a configuration already included in an emission family in a way that may affect emissions, or change any of the components you described in your application for certification. This includes production and design changes that may affect emissions any time during the engine's lifetime.

(3) Modify an FEL for an emission family with respect to exhaust emissions as described in paragraph (f) of this section.

(b) To amend your application for certification, send the Designated Compliance Officer the following information:

(1) Describe in detail the addition or change in the model or configuration you intend to make.

(2) Include engineering evaluations or data showing that the amended emission family complies with all applicable requirements. You may do this by showing that the original emission-data engine or emission-data equipment is still appropriate for showing that the amended family complies with all applicable requirements.

(3) If the original emission-data engine or emission-data equipment for the emission family is not appropriate to show compliance for the new or modified configuration, include new

test data showing that the new or modified configuration meets the requirements of this part.

(c) We may ask for more test data or engineering evaluations. You must give us these within 30 days after we request them.

(d) For emission families already covered by a certificate of conformity, we will determine whether the existing certificate of conformity covers your new or modified configuration. You may ask for a hearing if we deny your request (see § 1054.820).

(e) For emission families already covered by a certificate of conformity, you may start producing the new or modified configuration anytime after you send us your amended application and before we make a decision under paragraph (d) of this section. However, if we determine that the affected configurations do not meet applicable requirements, we will notify you to cease production of the configurations and may require you to recall the engine or equipment at no expense to the owner. Choosing to produce engine under this paragraph (e) is deemed to be consent to recall all engines or equipment that we determine do not meet applicable emission standards or other requirements and to remedy the nonconformity at no expense to the owner. If you do not provide information required under paragraph (c) of this section within 30 days, you must stop producing the new or modified engine or equipment.

(f) You may ask us to approve a change to your FEL with respect to exhaust emissions in certain cases after the start of production. The changed FEL may not apply to engines you have already introduced into U.S. commerce, except as described in this paragraph (f). If we approve a changed FEL after the start of production, you must include the new FEL on the emission control information label for all engines produced after the change. You may ask us to approve a change to your FEL in the following cases:

(1) You may ask to raise your FEL for your emission family at any time. In your request, you must show that you will still be able to meet the emission standards as specified in subparts B and H of this part. If you amend your application by submitting new test data to include a newly added or modified engine, as described in paragraph (b)(3) of this section, use the appropriate FELs with corresponding production volumes to calculate your production-weighted average FEL for the model year, as described in subpart H of this part. If you amend your application without submitting new test data, you must use the higher FEL for the entire family to calculate your production-weighted average FEL under subpart H of this part.

(2) You may ask to lower the FEL for your emission family only if you have test data from production engines showing that emissions are below the proposed lower FEL. The lower FEL applies only to engines you produce after we approve the new FEL. Use the appropriate FELs with corresponding production volumes to calculate your production-weighted average FEL for the model year, as described in subpart H of this part.

§ 1054.230 How do I select emission families?

(a) For purposes of certification, divide your product line into families of engines that are expected to have similar emission characteristics throughout the useful life as described in this section. You must have separate emission families for meeting exhaust and evaporative emissions. Your emission family is limited to a single model year.

(b) Group engines in the same emission family for exhaust emissions if they are the same in all the following aspects:

(1) The combustion cycle and fuel.

(2) The cooling system (liquid-cooled vs. air-cooled).

(3) Valve configuration (side-valve vs. overhead valve).

(4) Method of air aspiration (for example, turbocharged vs. naturally aspirated).

(5) The number, location, volume, and composition of catalytic converters.

(6) The number, arrangement, and approximate bore diameter of cylinders.

(7) Engine class, as defined in § 1054.801.

(8) Method of control for engine operation, other than governing (mechanical or electronic).

(9) The numerical level of the emission standards that apply to the engine.

(10) Useful life.

(c) For evaporative emissions, group engines into emission families as described in 40 CFR 1060.230.

(d) You may subdivide a group that is identical under paragraph (b) or (c) of this section into different emission families if you show the expected emission characteristics are different during the useful life.

(e) You may group engines that are not identical with respect to the things listed in paragraph (b) or (c) of this section in the same emission family, as follows:

(1) In unusual circumstances, you may group such engines in the same emission family if you show that their emission characteristics during the useful life will be similar.

(2) If you are a small-volume engine manufacturer, you may group any nonhandheld engines with the same useful life that are subject to the same emission standards into a single emission family.

(3) The provisions of this paragraph (e) do not exempt any engines from meeting all the applicable standards and requirements in subpart B of this part.

(f) Select test engines from the emission family as described in 40 CFR 1065.401. Select test components related to evaporative emission control systems that are most likely to exceed the applicable emission standards. For example, select a fuel tank with the smallest average wall thickness (or barrier thickness, as appropriate) of those tanks you include in the same family.

(g) You may combine engines from different classes into a single emission family under paragraph (e)(1) of this section if you certify the emission family to the more stringent set of standards from the two classes in that model year.

§ 1054.235 What exhaust emission testing must I perform for my application for a certificate of conformity?

This section describes the exhaust emission testing you must perform to show compliance with the emission standards in §§ 1054.103 and 1054.105. See §§ 1054.240 and 1054.245 and 40 CFR part 1065, subpart E, regarding service accumulation before emission testing.

(a) Select an emission-data engine from each engine family for testing as described in 40 CFR 1065.401. Select a configuration that is most likely to exceed the $HC+NO_X$ standard, using good engineering judgment. Consider the emission levels of all exhaust constituents over the full useful life of the engine when operated in nonroad equipment. Configurations must be tested as they will be produced, including installed governors, whether you or the equipment manufacturer installs the governor.

(b) Test your emission-data engines using the procedures and equipment specified in subpart F of this part.

(c) We may measure emissions from any of your test engines or other engines from the emission family, as follows:

(1) We may decide to do the testing at your plant or any other facility. If we do this, you must deliver the test engine to a test facility we designate. The test engine you provide must include appropriate manifolds, aftertreatment

devices, electronic control units, and other emission-related components not normally attached directly to the engine block. If we do the testing at your plant, you must schedule it as soon as possible and make available the instruments, personnel, and equipment we need.

(2) If we measure emissions on one of your test engines, the results of that testing become the official emission results for the engine.

(3) We may set the adjustable parameters of your emission-data engine to any point within the physically adjustable ranges (see § 1054.115(b)).

(4) We may calibrate your emission-data engine within normal production tolerances for anything we do not consider an adjustable parameter.

(d) You may ask to use emission data from a previous model year instead of doing new tests, but only if all the following are true:

(1) The emission family from the previous model year differs from the current emission family only with respect to model year or other characteristics unrelated to emissions. You may also ask to add a configuration subject to § 1054.225.

(2) The emission-data engine from the previous model year remains the appropriate emission-data engine under paragraph (b) of this section.

(3) The data show that the emission-data engine would meet all the requirements that apply to the emission family covered by the application for certification. For engines originally tested under the provisions of 40 CFR part 90, you may consider those test procedures to be equivalent to the procedures we specify in subpart F of this part.

(e) We may require you to test a second engine of the same or different configuration in addition to the engine tested under paragraph (b) of this section.

(f) If you use an alternate test procedure under 40 CFR 1065.10 and later testing shows that such testing does not produce results that are equivalent to the procedures specified in subpart F of this part, we may reject data you generated using the alternate procedure.

§ 1054.240 How do I demonstrate that my emission family complies with exhaust emission standards?

(a) For purposes of certification, your emission family is considered in compliance with the emission standards in § 1054.101(a) if all emission-data engines representing that family have test results showing deteriorated emission levels at or below these standards. Note that your FELs are considered to be the applicable emission standards with which you must comply if you participate in the ABT program in subpart H of this part.

(b) Your emission family is deemed not to comply if any emission-data engine representing that family has test results showing a deteriorated emission level above an applicable emission standard for any pollutant.

(c) Determine a deterioration factor to compare emission levels from the emission-data engine with the applicable emission standards. Section 1054.245 specifies how to test engines to develop deterioration factors that represent the expected deterioration in emissions over your engines' full useful life. Calculate a multiplicative deterioration factor as described in § 1054.245(b). If the deterioration factor is less than one, use one. Specify the deterioration factor to one more significant figure than the emission standard. You may use assigned deterioration factors that we establish for up to 10,000 nonhandheld engines from small-volume emission families in each model year, except that small-volume engine manufacturers may use assigned deterioration factors for all their engine families.

(d) Adjust the official emission results for each tested engine at the selected test point by multiplying the measured emissions by the deterioration factor, then rounding the adjusted figure to the same number of decimal places as the emission standard. Compare the rounded emission levels to the emission standard for each emission-data engine. In the case of $HC+NO_X$ standards, add the emission results and apply the deterioration factor to the sum of the pollutants before rounding. However, if your deterioration factors are based on emission measurements that do not cover the engine's full useful life, apply deterioration factors to each pollutant and then add the results before rounding.

(e) The provisions of this paragraph (e) apply only for engine families with a useful life at or below 300 hours. To apply the deterioration factor to engines other than the original emission-data engine, they must be operated for the same number of hours before starting emission measurements that you used for the original emission-data engine, within one hour. For example, if the original emission-data engine operated for 8 hours before the low-hour emission test, operate the other test engines for 7 to 9 hours before starting emission measurements.

§ 1054.245 How do I determine deterioration factors from exhaust durability testing?

Establish deterioration factors to determine whether your engines will meet the exhaust emission standards for each pollutant throughout the useful life, as described in subpart B of this part and § 1054.240. This section describes how to determine deterioration factors, either with pre-existing test data or with new emission measurements.

(a) You may ask us to approve deterioration factors for an emission family based on emission measurements from similar engines if you have already given us these data for certifying other engines in the same or earlier model years. Use good engineering judgment to decide whether the two engines are similar.

(b) If you are unable to determine deterioration factors for an emission family under paragraph (a) of this section, select engines, subsystems, or components for testing. Determine deterioration factors based on service accumulation and related testing. Include consideration of wear and other causes of deterioration expected under typical consumer use. Determine deterioration factors as follows:

(1) You must measure emissions from the emission-data engine at a low-hour test point and the end of the useful life, except as specifically allowed by this paragraph (b). You may also test at evenly spaced intermediate points. Collect emission data using measurements to one more decimal place than the emission standard.

(2) Operate the engine over a representative duty cycle for a period at least as long as the useful life (in hours). You may operate the engine continuously. You may also use an engine installed in nonroad equipment to accumulate service hours instead of running the engine only in the laboratory.

(3) You may perform maintenance on emission-data engines as described in § 1054.125 and 40 CFR part 1065, subpart E.

(4) Calculate your deterioration factor as follows:

(i) If you measure emissions at only two points to calculate your deterioration factor by dividing measured exhaust emissions at the end of the useful life by measured exhaust emissions at the low-hour test point.

(ii) If you measure emissions at three or more points, use a linear least-squares fit of your test data, but treat the low-hour test point as occurring at hour zero. Your deterioration factor is the ratio of the calculated emission level at

the point representing the full useful life to the calculated emission level at zero hours.

(5) If you test more than one engine to establish deterioration factors, average the deterioration factors from all the engines before rounding.

(6) If your durability engine fails between 80 percent and 100 percent of useful life, you may use the last emission measurement as the test point representing the full useful life, provided it occurred after at least 80 percent of the useful life.

(7) If your useful life is 1,000 hours or longer and your durability engine fails between 50 percent and 100 percent of useful life, you may extrapolate your emission results to determine the emission level representing the full useful life, provided emissions were measured at least once after 50 percent of the useful life.

(8) Use good engineering judgment for all aspects of the effort to establish deterioration factors under this paragraph (b).

(9) You may use other testing methods to determine deterioration factors, consistent with good engineering judgment, as long as we approve those methods in advance.

(c) Include the following information in your application for certification:

(1) If you use test data from a different emission family, explain why this is appropriate and include all the emission measurements on which you base the deterioration factor.

(2) If you do testing to determine deterioration factors, describe the form and extent of service accumulation, including the method you use to accumulate hours.

§ 1054.250 What records must I keep and what reports must I send to EPA?

(a) If you produce engines under any provisions of this part that are related to production volumes, send the Designated Compliance Officer a report within 30 days after the end of the model year describing the total number of engines you produced in each engine family. For example, if you use special provisions intended for small-volume engine manufacturers, report your production volumes to show that you do not exceed the applicable limits.

(b) Organize and maintain the following records:

(1) A copy of all applications and any summary information you send us.

(2) Any of the information we specify in § 1054.205 that you were not required to include in your application.

(3) A detailed history of all emission-data equipment. For each engine, describe all of the following:

(i) The emission-data engine's construction, including its origin and buildup, steps you took to ensure that it represents production engines, any components you built specially for it, and all the components you include in your application for certification.

(ii) How you accumulated engine operating hours (service accumulation), including the dates and the number of hours accumulated.

(iii) All maintenance, including modifications, parts changes, and other service, and the dates and reasons for the maintenance.

(iv) All your emission tests, including documentation on routine and standard tests, as specified in part 40 CFR part 1065, and the date and purpose of each test.

(v) All tests to diagnose engine or emission control performance, giving the date and time of each and the reasons for the test.

(vi) Any other significant events.

(4) Production figures for each emission family divided by assembly plant.

(5) Keep a list of engine identification numbers for all the engines you produce under each certificate of conformity.

(c) Keep data from routine emission tests (such as test cell temperatures and relative humidity readings) for one year after we issue the associated certificate of conformity. Keep all other information specified in paragraph (a) of this section for eight years after we issue your certificate.

(d) Store these records in any format and on any media, as long as you can promptly send us organized, written records in English if we ask for them. You must keep these records readily available. We may review them at any time.

(e) Send us copies of any engine maintenance instructions or explanations if we ask for them.

§ 1054.255 What decisions may EPA make regarding my certificate of conformity?

(a) If we determine your application is complete and shows that the emission family meets all the requirements of this part and the Act, we will issue a certificate of conformity for your emission family for that model year. We may make the approval subject to additional conditions.

(b) We may deny your application for certification if we determine that your emission family fails to comply with emission standards or other requirements of this part or the Act. Our decision may be based on a review of all information available to us. If we deny your application, we will explain why in writing.

(c) In addition, we may deny your application or suspend or revoke your certificate if you do any of the following:

(1) Refuse to comply with any testing or reporting requirements.

(2) Submit false or incomplete information (paragraph (e) of this section applies if this is fraudulent).

(3) Render inaccurate any test data.

(4) Deny us from completing authorized activities (see 40 CFR 1068.20). This includes a failure to provide reasonable assistance.

(5) Produce engines or equipment for importation into the United States at a location where local law prohibits us from carrying out authorized activities.

(6) Fail to supply requested information or amend your application to include all engines or equipment being produced.

(7) Take any action that otherwise circumvents the intent of the Act or this part.

(d) We may void your certificate if you do not keep the records we require or do not give us information as required under this part or the Act.

(e) We may void your certificate if we find that you intentionally submitted false or incomplete information.

(f) If we deny your application or suspend, revoke, or void your certificate, you may ask for a hearing (see § 1054.820).

Subpart D—Production-line Testing

§ 1054.300 Applicability.

This subpart specifies requirements for engine manufacturers to test their production engines for exhaust emissions to ensure that the engines are being produced as described in the application for certification. The production-line verification described in 40 CFR part 1060, subpart D, applies for equipment and components for evaporative emissions.

§ 1054.301 When must I test my production-line engines?

(a) If you produce engines that are subject to the requirements of this part, you must test them as described in this subpart, except as follows:

(1) Small-volume engine manufacturers may omit testing under this subpart.

(2) We may exempt small-volume emission families from routine testing under this subpart. Request this exemption in the application for certification and include your basis for projecting a production volume below 5,000 units. You must promptly notify us if your actual production exceeds 5,000 units during the model year. If

you exceed the production limit or if there is evidence of a nonconformity, we may require you to test production-line engines under this subpart, or under 40 CFR part 1068, subpart E, even if we have approved an exemption under this paragraph (a)(2).

(b) We may suspend or revoke your certificate of conformity for certain engine families if your production-line engines do not meet the requirements of this part or you do not fulfill your obligations under this subpart (see §§ 1054.32fs5 and 1054.340).

(c) Other regulatory provisions authorize us to suspend, revoke, or void your certificate of conformity, or order recalls for engine families without regard to whether they have passed these production-line testing requirements. The requirements of this subpart do not affect our ability to do selective enforcement audits, as described in 40 CFR part 1068. Individual engines in families that pass these production-line testing requirements must also conform to all applicable regulations of this part and 40 CFR part 1068.

(d) You may ask to use an alternate program for testing production-line engines. In your request, you must show us that the alternate program gives equal assurance that your products meet the requirements of this part. We may waive some or all of this subpart's requirements if we approve your alternate program.

(e) If you certify an engine family with carryover emission data, as described in § 1054.235(c), and these equivalent engine families consistently pass the production-line testing requirements over the preceding two-year period, you may ask for a reduced testing rate for further production-line testing for that family. The minimum testing rate is one engine per engine family. If we reduce your testing rate, we may limit our approval to any number of model years. In determining whether to approve your request, we may consider the number of engines that have failed the emission tests.

(f) We may ask you to make a reasonable number of production-line engines available for a reasonable time so we can test or inspect them for compliance with the requirements of this part. See 40 CFR 1068.27.

§ 1054.305 How must I prepare and test my production-line engines?

This section describes how to prepare and test production-line engines. You must assemble the test engine in a way that represents the assembly procedures for other engines in the engine family. You must ask us to approve any deviations from your normal assembly procedures for other production engines in the engine family.

(a) *Test procedures.* Test your production-line engines using the applicable testing procedures in subpart F of this part to show you meet the emission standards in subpart B of this part.

(b) *Modifying a test engine.* Once an engine is selected for testing (see § 1054.310), you may adjust, repair, prepare, or modify it or check its emissions only if one of the following is true:

(1) You document the need for doing so in your procedures for assembling and inspecting all your production engines and make the action routine for all the engines in the engine family.

(2) This subpart otherwise specifically allows your action.

(3) We approve your action in advance.

(c) *Engine malfunction.* If an engine malfunction prevents further emission testing, ask us to approve your decision to either repair the engine or delete it from the test sequence.

(d) *Setting adjustable parameters.* Before any test, we may require you to adjust any adjustable parameter to any setting within its physically adjustable range.

(1) We may require you to adjust idle speed outside the physically adjustable range as needed, but only until the engine has stabilized emission levels (see paragraph (e) of this section). We may ask you for information needed to establish an alternate minimum idle speed.

(2) We may specify adjustments within the physically adjustable range by considering their effect on emission levels, as well as how likely it is someone will make such an adjustment with in-use equipment.

(3) We may specify an air-fuel ratio within the adjustable range specified in § 1054.115(b).

(e) *Stabilizing emission levels.* Use good engineering judgment to operate your engines before testing such that deterioration factors can be applied appropriately. Determine the stabilization period as follows:

(1) For engine families with a useful life at or below 300 hours, operate the engine for the same number of hours before starting emission measurements that you used for the emission-data engine, within one hour. For example, if the emission-data engine operated for 8 hours before the low-hour emission test, operate the test engines for 7 to 9 hours before starting emission measurements.

(2) For engine families with a useful life above 300 hours, operate each engine for no more than the greater of two periods:

(i) 12 hours.

(ii) The number of hours you operated your emission-data engine for certifying the engine family (see 40 CFR part 1065, subpart E, or the applicable regulations governing how you should prepare your test engine).

(f) *Damage during shipment.* If shipping an engine to a remote facility for production-line testing makes necessary an adjustment or repair, you must wait until after the initial emission test to do this work. We may waive this requirement if the test would be impossible or unsafe, or if it would permanently damage the engine. Report to us, in your written report under § 1054.345, all adjustments or repairs you make on test engines before each test.

(g) *Retesting after invalid tests.* You may retest an engine if you determine an emission test is invalid under subpart F of this part. Explain in your written report reasons for invalidating any test and the emission results from all tests. If you retest an engine, you may ask us to substitute results of the new tests for the original ones. You must ask us within ten days of testing. We will generally answer within ten days after we receive your information.

§ 1054.310 How must I select engines for production-line testing?

(a) Test engines from each engine family as described in this section based on test periods, as follows:

(1) For engine families with projected U.S.-directed production volume of at least 1,600, the test periods are consecutive quarters (3 months). However, if your annual production period is less than 12 months long, you may take the following alternative approach to define quarterly test periods:

(i) If your annual production period is 120 days or less, the whole model year constitutes a single test period.

(ii) If your annual production period is 121 to 210 days, divide the annual production period evenly into two test periods.

(iii) If your annual production period is 211 to 300 days, divide the annual production period evenly into three test periods.

(iv) If your annual production period is 301 days or longer, divide the annual production period evenly into four test periods.

(2) For engine families with projected U.S.-directed production volume below

1,600, the whole model year constitutes a single test period.

(b) Early in each test period, randomly select and test an engine from the end of the assembly line for each engine family.

(1) In the first test period for newly certified engines, randomly select and test one more engine. Then, calculate the required sample size for the model year as described in paragraph (c) of this section.

(2) In later test periods of the same model year, combine the new test result with all previous testing in the model year. Then, calculate the required sample size for the model year as described in paragraph (c) of this section.

(3) In the first test period for engine families relying on previously submitted test data, combine the new test result with the last test result from the previous model year. Then, calculate the required sample size for the model year as described in paragraph (c) of this section. Use the last test result from the previous model year only for this first calculation. For all subsequent calculations, use only results from the current model year.

(c) Calculate the required sample size for each engine family. Separately calculate this figure for $HC+NO_X$ and CO. The required sample size is the greater of these calculated values. Use the following equation:

$$N = [(t_{95} \times \sigma)/(x - STD)]^2 + 1$$

Where:

N = Required sample size for the model year.

t_{95} = 95% confidence coefficient, which depends on the number of tests completed, n, as specified in the table in paragraph (c)(1) of this section. It defines 95% confidence intervals for a one-tail distribution.

x = Mean of emission test results of the sample.

STD = Emission standard (or family emission limit, if applicable).

σ = Test sample standard deviation (see paragraph (c)(2) of this section).

(1) Determine the 95% confidence coefficient, t_{95}, from the following table:

n	t_{95}	n	t_{95}	n	t_{95}
2	6.31	12	1.80	22	1.72
3	2.92	13	1.78	23	1.72
4	2.35	14	1.77	24	1.71
5	2.13	15	1.76	25	1.71
6	2.02	16	1.75	26	1.71
7	1.94	17	1.75	27	1.71
8	1.90	18	1.74	28	1.70
9	1.86	19	1.73	29	1.70
10	1.83	20	1.73	30+	1.70
11	1.81	21	1.72	.....	.....

(2) Calculate the standard deviation, σ, for the test sample using the following formula:

$$\sigma = [\Sigma(X_i - x)^2/(n - 1)]^{1/2}$$

Where:

X_i = Emission test result for an individual engine.

n = The number of tests completed in an engine family.

(d) Use final deteriorated test results to calculate the variables in the equations in paragraph (c) of this section (see § 1054.315(a)).

(e) After each new test, recalculate the required sample size using the updated mean values, standard deviations, and the appropriate 95-percent confidence coefficient.

(f) Distribute the remaining engine tests evenly throughout the rest of the year. You may need to adjust your schedule for selecting engines if the required sample size changes. If your scheduled quarterly testing for the remainder of the model year is sufficient to meet the calculated sample size, you may wait until the next quarter to do additional testing. Continue to randomly select engines from each engine family.

(g) Continue testing until one of the following things happens:

(1) After completing the minimum number of tests required in paragraph (b) of this section, the number of tests completed in an engine family, n, is greater than the required sample size, N, and the sample mean, x, is less than or equal to the emission standard. For example, if N = 5.1 after the fifth test, the sample-size calculation does not allow you to stop testing.

(2) The engine family does not comply according to § 1054.315.

(3) You test 30 engines from the engine family.

(4) You test one percent of your projected annual U.S.-directed production volume for the engine family, rounded to the nearest whole number. Do not count an engine under this paragraph (g)(4) if it fails to meet an applicable emission standard.

(5) You choose to declare that the engine family does not comply with the requirements of this subpart.

(h) If the sample-size calculation allows you to stop testing for one pollutant but not another, you must continue measuring emission levels of all pollutants for any additional tests required under this section. However, you need not continue making the calculations specified in this section for the pollutant for which testing is not required. This paragraph (h) does not affect the number of tests required under this section or the remedial steps required under § 1054.320.

(i) You may elect to test more randomly chosen engines than we require under this section. Include these engines in the sample-size calculations.

§ 1054.315 How do I know when my engine family fails the production-line testing requirements?

This section describes the pass-fail criteria for the production-line testing requirements. We apply these criteria on an emission-family basis. See § 1054.320 for the requirements that apply to individual engines that fail a production-line test.

(a) Calculate your test results as follows:

(1) *Initial and final test results.* Calculate and round the test results for each engine. If you do several tests on an engine, calculate the initial test results, then add them together and divide by the number of tests and round for the final test results on that engine.

(2) *Final deteriorated test results.* Apply the deterioration factor for the engine family to the final test results (see § 1054.240(c)).

(3) *Round deteriorated test results.* Round the results to the number of decimal places in the emission standard expressed to one more decimal place.

(b) Construct the following CumSum Equation for each engine family for $HC+NO_X$ and CO emissions:

$$C_i = \text{Max } [0 \text{ or } C_{i-1} + X_i - (STD + 0.25 \times \sigma)]$$

Where:

C_i = The current CumSum statistic.
C_{i-1} = The previous CumSum statistic. For the first test, the CumSum statistic is 0 (i.e. $C_1 = 0$).
X_i = The current emission test result for an individual engine.
STD = Emission standard (or family emission limit, if applicable).

(c) Use final deteriorated test results to calculate the variables in the equation in paragraph (b) of this section (see § 1054.315(a)).

(d) After each new test, recalculate the CumSum statistic.

(e) If you test more than the required number of engines, include the results from these additional tests in the CumSum Equation.

(f) After each test, compare the current CumSum statistic, C_i, to the recalculated Action Limit, H, defined as $H = 5.0 \times \sigma$.

(g) If the CumSum statistic exceeds the Action Limit in two consecutive tests, the engine family fails the production-line testing requirements of this subpart. Tell us within ten working days if this happens. You may request to amend the application for certification to raise the FEL of the entire engine family as described in § 1054.225(f).

(h) If you amend the application for certification for an engine family under § 1054.225, do not change any previous calculations of sample size or CumSum statistics for the model year.

§ 1054.320 What happens if one of my production-line engines fails to meet emission standards?

(a) If you have a production-line engine with final deteriorated test results exceeding one or more emission standards (see § 1054.315(a)), the certificate of conformity is automatically suspended for that failing engine. You must take the following actions before your certificate of conformity can cover that engine:

(1) Correct the problem and retest the engine to show it complies with all emission standards.

(2) Include in your written report a description of the test results and the remedy for each engine (see § 1054.345).

(b) You may request to amend the application for certification to raise the FEL of the entire engine family at this point (see § 1054.225).

§ 1054.325 What happens if an engine family fails the production-line testing requirements?

(a) We may suspend your certificate of conformity for an engine family if it fails under § 1054.315. The suspension may apply to all facilities producing engines from an engine family, even if you find noncompliant engines only at one facility.

(b) We will tell you in writing if we suspend your certificate in whole or in part. We will not suspend a certificate until at least 15 days after the engine family fails. The suspension is effective when you receive our notice.

(c) Up to 15 days after we suspend the certificate for an engine family, you may ask for a hearing (see § 1054.820). If we agree before a hearing occurs that we used erroneous information in deciding to suspend the certificate, we will reinstate the certificate.

(d) Section 1054.335 specifies steps you must take to remedy the cause of the engine family's production-line failure. All the engines you have produced since the end of the last test period are presumed noncompliant and should be addressed in your proposed remedy. We may require you to apply the remedy to engines produced earlier if we determine that the cause of the failure is likely to have affected the earlier engines.

(e) You may request to amend the application for certification to raise the FEL of the engine family before or after we suspend your certificate if you meet the requirements of § 1054.225(f). We will approve your request if the failure is not caused by a defect and it is clear that you used good engineering judgment in establishing the original FEL.

§ 1054.330 May I sell engines from an engine family with a suspended certificate of conformity?

You may sell engines that you produce after we suspend the engine family's certificate of conformity under § 1054.315 only if one of the following occurs:

(a) You test each engine you produce and show it complies with emission standards that apply.

(b) We conditionally reinstate the certificate for the engine family. We may do so if you agree to recall all the affected engines and remedy any noncompliance at no expense to the owner if later testing shows that the engine family still does not comply.

§ 1054.335 How do I ask EPA to reinstate my suspended certificate?

(a) Send us a written report asking us to reinstate your suspended certificate. In your report, identify the reason for noncompliance, propose a remedy for the engine family, and commit to a date for carrying it out. In your proposed remedy include any quality control measures you propose to keep the problem from happening again.

(b) Give us data from production-line testing that shows the remedied engine family complies with all the emission standards that apply.

§ 1054.340 When may EPA revoke my certificate under this subpart and how may I sell these engines again?

(a) We may revoke your certificate for an engine family in the following cases:

(1) You do not meet the reporting requirements.

(2) Your engine family fails to comply with the requirements of this subpart and your proposed remedy to address a suspended certificate under § 1054.325 is inadequate to solve the problem or requires you to change the engine's design or emission control system.

(b) To sell engines from an engine family with a revoked certificate of conformity, you must modify the engine family and then show it complies with the requirements of this part.

(1) If we determine your proposed design change may not control emissions for the engine's full useful life, we will tell you within five working days after receiving your report. In this case we will decide whether production-line testing will be enough for us to evaluate the change or whether you need to do more testing.

(2) Unless we require more testing, you may show compliance by testing production-line engines as described in this subpart.

(3) We will issue a new or updated certificate of conformity when you have met these requirements.

§ 1054.345 What production-line testing records must I send to EPA?

Do all the following things unless we ask you to send us less information:

(a) Within 30 calendar days of the end of each test period, send us a report with the following information:

(1) Describe any facility used to test production-line engines and state its location.

(2) State the total U.S.-directed production volume and number of tests for each engine family.

(3) Describe how you randomly selected engines.

(4) Describe each test engine, including the engine family's identification and the engine's model year, build date, model number, identification number, and number of hours of operation before testing.

(5) Identify how you accumulated hours of operation on the engines and describe the procedure and schedule you used.

(6) Provide the test number; the date, time and duration of testing; test procedure; initial test results before and after rounding; final test results; and final deteriorated test results for all

tests. Provide the emission results for all measured pollutants. Include information for both valid and invalid tests and the reason for any invalidation.

(7) Describe completely and justify any nonroutine adjustment, modification, repair, preparation, maintenance, or test for the test engine if you did not report it separately under this subpart. Include the results of any emission measurements, regardless of the procedure or type of engine.

(8) Provide the CumSum analysis required in § 1054.315 and the sample-size calculation required in § 1054.310 for each engine family.

(9) Report on each failed engine as described in § 1054.320.

(10) State the date the test period ended for each engine family.

(b) We may ask you to add information to your written report so we can determine whether your new engines conform with the requirements of this subpart.

(c) An authorized representative of your company must sign the following statement:

We submit this report under sections 208 and 213 of the Clean Air Act. Our production-line testing conformed completely with the requirements of 40 CFR part 1054. We have not changed production processes or quality-control procedures for test engines in a way that might affect emission controls. 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)

(d) Send electronic reports of production-line 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.

(e) We will send copies of your reports to anyone from the public who asks for them. Section 1054.815 describes how we treat information you consider confidential.

§ 1054.350 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 production-line testing for eight years 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 § 1054.345.

(d) Keep the following additional records:

(1) A description of all test equipment for each test cell that you can use to test production-line engines.

(2) The names of supervisors involved in each test.

(3) The name of anyone who authorizes adjusting, repairing, preparing, or modifying a test engine and the names of all supervisors who oversee this work.

(4) If you shipped the engine for testing, the date you shipped it, the associated storage or port facility, and the date the engine arrived at the testing facility.

(5) Any records related to your production-line tests that are not in the written report.

(6) A brief description of any significant events during testing not otherwise described in the written report or in this section.

(7) Any information specified in § 1054.345 that you do not include in your written reports.

(e) If we ask, you must give us a more detailed description of projected or actual production figures for an engine family. We may ask you to divide your production figures by maximum engine power, displacement, fuel type, or assembly plant (if you produce engines at more than one plant).

(f) Keep a list of engine identification numbers for all the engines you produce under each certificate of conformity. Give us this list within 30 days if we ask for it.

(g) We may ask you to keep or send other information necessary to implement this subpart.

Subpart E—In-use Testing

§ 1054.401 General provisions.

We may perform in-use testing of any engine or equipment subject to the standards of this part.

Subpart F—Test Procedures

§ 1054.501 How do I run a valid emission test?

(a) *Applicability.* 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 or equipment meet emission standards.

(b) *General requirements.* Use the equipment and procedures for spark-ignition engines in 40 CFR part 1065 to determine whether engines meet the exhaust emission standards, as follows:

(1) Measure the emissions of all regulated pollutants as specified in § 1054.505 and 40 CFR part 1065. Note that this subpart F generally specifies test procedures for engines that are designed to operate without throttle control at a nominally constant speed (or a user-selectable speed); see 40 CFR 1065.10 for instructions for using alternate procedures if following the specified procedures would result in emission measurements that do not represent in-use emissions.

(2) Use the fuels and lubricants specified in 40 CFR part 1065, subpart H, for all the testing we require in this part. For service accumulation, use the test fuel or any commercially available fuel that is representative of the fuel that in-use engines will use.

(3) Perform testing under the ambient conditions specified in 40 CFR 1065.520. Emissions may not be corrected for the effects of test temperature, pressure, or humidity.

(4) 40 CFR 1065.405 describes how to prepare an engine for testing, including steps to ensure that emission levels are stabilized. For engine families with a useful life of 300 hours or less, the following provisions apply:

(i) We will not approve a stabilization period longer than 12 hours even if you show that emissions are not yet stabilized.

(ii) Identify the number of hours you use to stabilize engines for low-hour emission measurements. You may consider emissions stable at any point less than 12 hours. For example, you may choose a point at which emission levels reach a low value before the effects of deterioration are established.

(5) Prepare your engines for testing by installing a governor that you normally use on production engines, consistent with §§ 1054.235(b) and 1054.505.

(6) During testing, supply the engine with fuel in a manner consistent with how it will be supplied with fuel in use. If you sell engines with complete fuel systems and your production engines will be equipped with a vapor line that routes running loss vapors into the engine's intake system, you must measure exhaust emissions using a complete fuel system representing a production configuration that sends fuel vapors to the test engine's intake system in a way that represents the expected in-use operation.

(c) *Special and alternate procedures.* If you are unable to run the test cycle specified in this part for your engine, use an alternate test cycle that will result in a cycle-weighted emission measurement equivalent to the expected average in-use emissions. This cycle must be approved under 40 CFR 1065.10. You may use other special or alternate procedures to the extent we allow them under 40 CFR 1065.10.

(d) *Wintertime engines.* You may test wintertime engines at the ambient

temperatures specified in 40 CFR 1065.520, even though this does not represent in-use operation for these engines (40 CFR 1065.10(c)(1)).

§ 1054.505 How do I test engines?

(a) This section describes how to test engines under steady-state conditions. For handheld engines you must perform tests with discrete-mode sampling. For nonhandheld engines we allow you to perform tests with either discrete-mode or ramped-modal testing methods. You must use the same modal testing method for certification and all other testing you perform for an engine family. If we test your engines to confirm that they meet emission standards, we will use the modal testing method you select for your own testing. We may also perform other testing as allowed by the Clean Air Act. Conduct duty-cycle testing as follows:

(1) For discrete-mode testing, sample emissions separately for each mode, then calculate an average emission level for the whole cycle using the weighting factors specified for each mode. In each mode, operate the engine for at least 5 minutes, then sample emissions for at least 1 minute. Calculate cycle statistics for each mode and compare with the specified values in 40 CFR 1065.514 to confirm that the test is valid.

(2) For ramped-modal testing, start sampling at the beginning of the first mode and continue sampling until the end of the last mode. Calculate emissions and cycle statistics the same as for transient testing as specified in 40 CFR part 1065, subpart G.

(b) Measure emissions by testing the engine on a dynamometer with the test procedures for constant-speed engines in 40 CFR part 1065 while using one of the steady-state duty cycles listed in this paragraph (b) to determine whether it meets the exhaust emission standards specified in § 1054.101(a). This requirement applies for all engines, including those not meeting the definition of ''constant-speed engine'' in 40 CFR 1065.1001.

(1) For handheld engines, use the two-mode duty cycle described in paragraph (a) of Appendix II of this part.

(2) For nonhandheld engines, use the six-mode duty cycle or the corresponding ramped-modal cycle described in paragraph (b) of Appendix II of this part. Control engine speeds and torques during idle mode as specified in paragraph (c) of this section and during full-load operating modes as specified in paragraph (d) of this section. For all other modes, control torque as needed to meet the cycle-validation criteria in 40 CFR 1065.514; control the engine speed to within 5 percent of the nominal speed specified in paragraph (d) of this section or let the installed governor (in the production configuration) control engine speed. The governor may be adjusted before emission sampling to target the nominal speed identified in paragraph (d) of this section, but the installed governor must control engine speed throughout the emission-sampling period whether the governor is adjusted or not. (**Note:** Ramped-modal testing involves continuous sampling, so governor adjustments may not occur during such a test.)

(c) During idle mode for nonhandheld engines, operate the engine with the following parameters:

(1) Allow the engine to operate at the idle speed determined by the installed governor. If any production engines from the engine family have a user-selectable idle speed, operate the engine with an installed governor that controls engine speed to the lowest speed setting from the engine family.

(2) Keep engine torque under 5 percent of maximum test torque.

(3) You must conduct testing at the idle mode even if the allowable torque values overlap with those for another specified mode.

(d) Establish full-load operating parameters for nonhandheld engines as follows:

(1) In normal circumstances, select a test speed of either 3060 rpm or 3600 rpm that is most appropriate for the engine family. If all the engines in the engine family are used in intermediate-speed equipment, select a test speed of 3060 rpm. The test associated with intermediate-speed operation is referred to as the A Cycle. If all the engines in the engine family are used in rated-speed equipment, select a test speed of 3600 rpm. The test associated with rated-speed operation is referred to as the B Cycle. If an engine family includes engines used in both intermediate-speed equipment and rated-speed equipment, select the test speed for emission-data engines that will result in worst-case emissions. In unusual circumstances, you may ask to use a test speed different than that specified in this paragraph (d)(1) if it better represents in-use operation.

(2) Operate the engine ungoverned at wide-open throttle at the test speed established in paragraph (d)(1) of this section until the engine reaches thermal stability as described in 40 CFR 1065.530(a)(2)(ii). Record the torque value after stabilization. Use this value for the full-load torque setting and for denormalizing the rest of the duty cycle.

(3) The provisions of this paragraph (d) apply instead of the engine mapping procedures in 40 CFR 1065.510.

(e) See 40 CFR part 1065 for detailed specifications of tolerances and calculations.

§ 1054.520 What testing must I perform to establish deterioration factors?

Sections 1054.240 and 1054.245 describe the required methods for testing to establish deterioration factors for an emission family.

Subpart G—Special Compliance Provisions

§ 1054.601 What compliance provisions apply to these engines?

Engine and equipment manufacturers, as well as owners, operators, and rebuilders of engines subject to the requirements of this part, and all other persons, must observe the provisions of this part, the requirements and prohibitions in 40 CFR part 1068, and the provisions of the Act.

§ 1054.610 What is the exemption for delegated final assembly?

(a) The provisions of 40 CFR 1068.260 related to delegated final assembly do not apply for handheld engines certified under this part 1054. The provisions of this section apply for nonhandheld engines instead of the provisions of 40 CFR 1068.260 related to delegated final assembly.

(b) Shipping an engine separately from emission-related components that you have specified as part of its certified configuration will not be a violation of the prohibitions in 40 CFR 1068.101(a)(1) if you follow the provisions of paragraphs (c) through (e) of this section. These provisions apply without request; however, note that engines produced under this section may be subject to higher bond payments under § 1054.690.

(c) If you do not manufacture the equipment in which the engine will be installed, you must meet all the following conditions with respect to aftertreatment components:

(1) Apply for and receive a certificate of conformity for the engine and its emission control system before shipment.

(2) Provide installation instructions in enough detail to ensure that the engine will be in its certified configuration if someone follows these instructions. Provide the installation instructions in a timely manner, generally directly after you receive an order for shipping engines or earlier. If you apply temporary labels as described in paragraph (c)(7)(i) of this section, include an instruction for the

equipment manufacturer to remove the temporary label after installing the appropriate aftertreatment component.

(3) Have a contractual agreement with each equipment manufacturer obligating the equipment manufacturer to complete the engine assembly so it is in its certified configuration when final assembly is complete. The contractual agreement must include a commitment that the equipment manufacturer will do the following things:

(i) Purchase the aftertreatment components you have specified in your application for certification.

(ii) Provide the affidavits required under paragraph (c)(4) of this section.

(iii) Provide production records that demonstrate compliance with your instructions. This may involve records to document purchases of aftertreatment components.

(iv) Perform or allow audits as described in paragraph (c)(10) of this section.

(4) Take appropriate additional steps to ensure that all engines will be in their certified configuration when installed by the equipment manufacturer. At a minimum, you must obtain annual affidavits from every equipment manufacturer to whom you sell engines under this section. The affidavits must identify the part numbers of the aftertreatment devices (or the corresponding alphanumeric designation established under paragraph (c)(8) of this section) that the equipment manufacturer installs on each engine model they purchase from you under this section and include confirmation that the number of aftertreatment devices received were sufficient for the number of engines involved.

(5) Describe in your application for certification how you plan to use the provisions of this section and any steps you plan to take under paragraph (c)(4) of this section.

(6) Keep records to document how many engines you produce under this exemption. Also, keep records to document your contractual agreements under paragraph (c)(3) of this section. Keep all these records for five years after the end of the model year and make them available to us upon request.

(7) Make sure the engine has the emission control information label we require under the standard-setting part. Include additional labeling using one of the following approaches:

(i) Apply an additional temporary label or tag in a way that makes it unlikely that the engine will be installed in equipment other than in its certified configuration. The label or tag must identify the engine as incomplete and include a clear statement that failing to install the aftertreatment device, or otherwise bring the engine into its certified configuration, is a violation of federal law subject to civil penalty.

(ii) Add the statement ''DELEGATED ASSEMBLY'' to the permanent emission control information label.

(iii) Add an alphanumeric code that you identify in your application for certification to the permanent emission control information label and include additional label features such as coloring or shading to ensure that the equipment manufacturer will recognize that the engine needs an aftertreatment component to be in its certified configuration.

(8) Engine manufacturers must establish an alphanumeric designation to identify each unique catalyst design (including size, washcoat, precious metal loading, supplier, and any other appropriate factors). Include this alphanumeric designation in the application for certification as described in § 1054.205. Engine manufacturers must also give instructions as appropriate to ensure that the external surface of the exhaust system includes stamping or other means to permanently display this designation and that it will be readily visible as much as possible when the equipment is fully assembled, consistent with the objective of verifying the identity of the installed catalyst.

(9) You must have written confirmation that the vehicle manufacturer has ordered the appropriate type of aftertreatment components for an initial shipment of engines under this section. For the purpose of this paragraph, initial shipment means the first shipment of engines in a model year to a given equipment manufacturer for a given engine model. You must receive the written confirmation within 30 days of shipment. If you do not receive written confirmation within 30 days, you may not ship any more engines from that engine family to that equipment manufacturer until you have the written confirmation. Note that it may be appropriate to obtain subsequent written confirmations to ensure compliance with this section, as described in paragraph (c)(4) of this section.

(10) You must perform or arrange for audits of equipment manufacturers as follows:

(i) If you sell engines to 48 or more equipment manufacturers under the provisions of this section, you must annually perform or arrange for audits of twelve equipment manufacturers to whom you sell engines under this section. To select individual equipment manufacturers, divide all the affected equipment manufacturers into quartiles based on the number of engines they buy from you; select equal numbers of equipment manufacturers from each quartile each model year as much as possible. Vary the equipment manufacturers selected for auditing from year to year, though audits may be repeated in later model years if you find or suspect that a particular equipment manufacturer is not properly installing aftertreatment devices.

(ii) If you sell engines to fewer than 48 equipment manufacturers under the provisions of this section, set up a plan to perform or arrange for audits of each equipment manufacturer on average once every four model years.

(iii) Starting with the 2019 model year, you may ask us to approve a reduced auditing rate if you sell engines to fewer than 120 equipment manufacturers under the provisions of this section. We may approve an alternate plan that involves performing or arranging for audits of each equipment manufacturer on average once every ten model years, as long as you show that you have met the auditing requirements in preceding years without finding noncompliance or improper procedures. You may also ask us to approve a reduced auditing rate after you have audited all affected equipment manufacturers at least once.

(iv) To meet these audit requirements, you or your agent must at a minimum either review the equipment manufacturers production records and procedures, inspect the equipment manufacturer's production operations, or inspect the final assembled products. You or your agent must review the available information as needed to demonstrate that the equipment manufacturer is complying with your installation instructions. This must include confirmation that the number of aftertreatment devices shipped was sufficient for the number of engines involved. Inspection of final assembled products may occur at any point in the product distribution system after the exemption defined in this section expires. For example, you or your agent may inspect products at the equipment manufacturer's assembly or storage facilities, at regional distribution centers, or at retail locations.

(v) You must keep records of these audits for five years after the end of the model year.

(11) In your application for certification, give a detailed plan for performing audits as described in paragraph (c)(10) of this section.

(12) If one of your engines produced under this section is selected for

production-line testing, you must arrange to get a randomly selected aftertreatment component that will be used with the engine; you may not use aftertreatment components from your own inventory. You may obtain such aftertreatment components from any point in the normal distribution from the aftertreatment component manufacturer to the equipment manufacturer. Keep records showing how you randomly selected these aftertreatment components, consistent with the requirements of § 1054.305.

(d) If you manufacture engines and install them in equipment you also produce, you must take steps to ensure that your facilities, procedures, and production records are set up to ensure that equipment and engines are assembled in their proper certified configurations. You may demonstrate compliance with this requirement by maintaining a database showing how you pair aftertreament components with the appropriate engines.

(e) The following provisions apply if you ship engines without air filters or other portions of the air intake system such that the shipped engine is not in its certified configuration (for example, if you identify specific part numbers of air filters needed to ensure that the engine will meet emission standards but do not include those with the shipped engine):

(1) If you are using the provisions of this section to ship an engine without aftertreatment, apply all the provisions of this section to ensure that each engine, including its intake system, is in its certified configuration before it reaches the ultimate purchaser.

(2) If you are not using the provisions of this section to ship an engine without aftertreatment, shipping an engine without air-intake components that you have specified as part of its certified configuration will not be a violation of the prohibitions in 40 CFR 1068.101(a) if you follow the provisions specified in paragraphs (c)(1) through (7) of this section. If we find there is a problem, we may require you to perform audits as specified in paragraph (c)(10) of this section.

(f) Once the equipment manufacturer takes possession of an engine exempted under this section and the engine reaches the point of final equipment assembly, the exemption expires and the engine is subject to all the prohibitions in 40 CFR 1068.101(a)(1).

(g) You may use the provisions of this section for engines you sell to a distributor, subject to the following provisions:

(1) You may establish a contractual arrangement in which you designate the distributor to be your agent in all matters related to compliance with the requirements of this section.

(2) Without the contractual arrangement specified in paragraph (g)(2) of this section, a participating distributor is considered to be the equipment manufacturer for all applicable requirements and prohibitions. Such distributors must bring engines into their final certified configuration. This may include shipping the engine with the appropriate catalyst and air filter, but without completing the assembly with all the components. The exemptions expire for such engines when the distributor no longer has control of them.

(h) You must notify us within 15 days if you find from an audit or another source that engines produced under this section are not in their certified configuration at the point of final assembly. If this occurs, send us a report within 90 days of the audit describing the circumstances related to the noncompliance.

(i) We may suspend, revoke, or void an exemption under this section, as follows:

(1) We may suspend, revoke, or void your exemption for a specific equipment manufacturer if any of the engines are not in their certified configuration after installation in that manufacturer's equipment, or if we determine that the equipment manufacturer has otherwise failed to comply with the requirements of this section.

(2) We may suspend, revoke, or void your exemption for the entire engine family if we determine that you have failed to comply with the requirements of this section. If we make an adverse decision with respect to the exemption for any of your engine families under this paragraph (i), this exemption will not apply for future certificates unless you demonstrate that the factors causing the noncompliance do not apply to the other engine families.

(3) We may void your exemption for the entire engine family if you intentionally submit false or incomplete information or fail to keep and provide to EPA the records required by this section. Note that all records and reports required under this section (whether generated by the engine manufacturer, equipment manufacturer, or others) are subject to the prohibition in 40 CFR 1068.101(a)(2), which prohibits the submission of false or incomplete information. For example, the affidavits required by this section are considered a submission.

(j) You are liable for the in-use compliance of any engine that is exempt under this section.

(k) It is a violation of the Act for any person to introduce into U.S. commerce a previously exempted engine, including as part of equipment, without complying fully with the installation instructions.

(l) [Reserved]

(m) You may ask us to provide a temporary exemption to allow you to complete production of your engines at different facilities, as long as you maintain control of the engines until they are in their certified configuration. We may require you to take specific steps to ensure that such engines are in their certified configuration before reaching the ultimate purchaser. You may request an exemption under this paragraph (m) in your application for certification, or in a separate submission.

§ 1054.612 What special provisions apply for equipment manufacturers modifying certified engines?

(a) *General provisions.* If you buy certified nonhandheld engines for installation in equipment you produce, but you install the engines such that they use intake or exhaust systems that are not part of the originally certified configuration, you become the engine manufacturer for those engines and must certify that they will meet emission standards. We will allow you to utilize the provisions for simplified certification specified in paragraph (b) of this section, as long as your design stays within the overall specifications from the original engine manufacturer (such as exhaust backpressure) and you use a catalyst as described in the original engine manufacturer's application for certification.

(b) *Simplified certification.* You must perform testing with an emission-data engine to show that you meet exhaust emission standards; however, you may use the deterioration factor from the original engine manufacturer. The production-line testing requirements in subpart D of this part do not apply for engines certified under this section. You must meet all the other requirements that apply to engine manufacturers for engines subject to standards under this part. The engine's model year is determined by its date of final assembly. The engine family must have the same useful life value specified by the original engine manufacturer for that engine. In your application for certification describe any differences between the original engine manufacturer's design and yours and explain why the deterioration data

generated by the original engine manufacturer is appropriate for your configuration.

(c) *Engine exemption.* As an engine manufacturer, you may produce nonconforming engines for equipment manufacturers as allowed under this section. You do not have to request this exemption for your engines, but you must have written assurance from equipment manufacturers that they need a certain number of exempted engines under this section. Add a label or tag to the engine with at least the following information:

(1) The heading ''EMISSION CONTROL INFORMATION''.

(2) Your corporate name and trademark.

(3) Engine displacement (in cubic centimeters).

(4) The following statement: ''THIS ENGINE IS TEMPORARILY EXEMPT FROM EMISSION STANDARDS AND RELATED REQUIREMENTS UNDER 40 CFR 1054.612.''.

§ 1054.615 What is the exemption for engines certified to standards for Large SI engines?

(a) An engine is exempt from the requirements of this part if it is in an emission family that has a valid certificate of conformity showing that it meets emission standards and other requirements under 40 CFR part 1048 for the appropriate model year.

(b) The only requirements or prohibitions from this part that apply to an engine that is exempt under this section are in this section. See paragraph (f) of this section to determine what evaporative requirements apply for equipment using these engines.

(c) If your engines do not have the certificate required in paragraph (a) of this section, they will be subject to the provisions of this part. Introducing these engines into U.S. commerce without a valid exemption or certificate of conformity violates the prohibitions in 40 CFR 1068.101(a).

(d) Engines exempted under this section are subject to all the requirements affecting engines under 40 CFR part 1048. The requirements and restrictions of 40 CFR part 1048 apply to anyone manufacturing these engines, anyone manufacturing equipment that uses these engines, and all other persons in the same manner as if these were nonroad spark-ignition engines above 19 kW.

(e) Engines exempted under this section may not generate or use emission credits under this part 1054.

§ 1054.620 What are the provisions for exempting engines used solely for competition?

The provisions of this section apply for new engines and equipment built on or after January 1, 2009.

(a) We may grant you an exemption from the standards and requirements of this part for a new engine on the grounds that it is to be used solely for competition. The requirements of this part, other than those in this section, do not apply to engines that we exempt for use solely for competition.

(b) We will exempt engines that we determine will be used solely for competition. The basis of our determination is described in paragraphs (c) and (d) of this section. Exemptions granted under this section are good for only one model year and you must request renewal for each subsequent model year. We will not approve your renewal request if we determine the engine will not be used solely for competition.

(c) Engines meeting all the following criteria are considered to be used solely for competition:

(1) Neither the engine nor any equipment containing the engine may be displayed for sale in any public dealership or otherwise offered for sale to the general public.

(2) Sale of the equipment in which the engine is installed must be limited to professional competition teams, professional competitors, or other qualified competitors.

(3) The engine and the equipment in which it is installed must have performance characteristics that are substantially superior to noncompetitive models.

(4) The engines are intended for use only as specified in paragraph (e) of this section.

(d) You may ask us to approve an exemption for engines not meeting the criteria listed in paragraph (c) of this section as long as you have clear and convincing evidence that the engines will be used solely for competition.

(e) Engines are considered to be used solely for competition only if their use is limited to competition events sanctioned by a state or federal government agency or another widely recognized public organization with authorizing permits for participating competitors. Operation of such engines may include only competition events or trials to qualify for competition events. Authorized attempts to set performance records (and the associated official trials) are also considered competition events. Engines will not be considered to be used solely for competition if they are ever used for any recreational or other noncompetitive purpose. Any use of exempt engines in recreational events is a violation of 40 CFR 1068.101.

(f) You must permanently label engines exempted under this section to clearly indicate that they are to be used only for competition. Failure to properly label an engine will void the exemption for that engine.

(g) If we request it, you must provide us any information we need to determine whether the engines are used solely for competition. This would include documentation regarding the number of engines and the ultimate purchaser of each engine as well as any documentation showing an equipment manufacturer's request for an exempted engine. Keep these records for five years.

§ 1054.625 What requirements apply under the Transition Program for Equipment Manufacturers?

The provisions of this section allow equipment manufacturers to produce equipment with Class II engines that are subject to less stringent exhaust emission standards after the Phase 3 emission standards begin to apply. To be eligible to use these provisions, you must follow all the instructions in this section. See § 1054.626 for requirements that apply specifically to companies that manufacture equipment outside the United States and to companies that import such equipment without manufacturing it. Engines and equipment you produce under this section are exempt from the prohibitions in 40 CFR 1068.101(a)(1) with respect to exhaust emissions, subject to the provisions of this section. Equipment exempted under this section must meet all applicable requirements related to evaporative emissions, except as described in § 1054.627.

(a) *General.* If you are an equipment manufacturer, you may introduce into U.S. commerce limited numbers of nonroad equipment with Class II engines exempted under this section. You may use the exemptions in this section only if you have primary responsibility for designing and manufacturing equipment and your manufacturing procedures include installing some engines in this equipment. Consider all U.S.-directed equipment production in showing that you meet the requirements of this section, including those from any parent or subsidiary companies and those from any other companies you license to produce equipment for you. If you produce a type of equipment that has more than one engine, count each engine separately. These provisions are available during the first four model

years that the Phase 3 exhaust emission standards apply.

(b) *Allowances.* Calculate how many pieces of equipment with exempted engines you may produce under this section by determining your total U.S.-directed production volume of equipment with Class II engines from January 1, 2007 through December 31, 2009, calculating your annual average production, and multiplying this total by 0.3. The same calculation applies for small-volume equipment manufacturers, except that average annual production is multiplied by 2.0. For companies with no eligible production in a given year, calculate annual average production based only on those years in which you produce equipment with Class II engines for sale in the United States. Use these allowances for equipment using model year 2011 and later Class II engines. You may use these allowances for equipment you produce before December 31, 2014.

(c) *Access to exempted engines.* You may use one of the following approaches to get exempted engines under this section:

(1) Request a certain number of exempted Class II engines from the engine manufacturer as described in paragraph (j)(1) of this section.

(2) You may make arrangements with the engine manufacturer to receive an engine without an exhaust system and install exhaust systems without aftertreatment that would otherwise be required to meet Phase 3 standards, as described in paragraph (j)(2) of this section. You must follow the engine manufacturer's instructions for installing noncatalyzed mufflers. You must keep records to show which engines you modify as described in this paragraph (c)(2) and make them available to the engine manufacturer for any auditing under the provisions of § 1054.610. If you do not place the label we specify in paragraph (f) of this section adjacent to the engine manufacturer's emission control information label, you must place an additional permanent label as close as possible to the engine's emission control information label where it will be readily visible in the final installation with at least the following items:

(i) Your corporate name and trademark.

(ii) The following statement: ''THIS ENGINE MEETS PHASE 2 STANDARDS UNDER § 1054.625(c)(2).''.

(d) *Inclusion of engines not subject to Phase 3 standards.* The following provisions apply to engines that are not subject to Phase 3 standards:

(1) If you use the provisions of 40 CFR 1068.105(a) to use up your inventories of engines not certified to new emission standards, do not include these units in your count of equipment with exempted engines under paragraph (g)(2) of this section.

(2) If you install engines that are exempted from the Phase 3 standards for any reason, other than for equipment-manufacturer allowances under this section, do not include these units in your count of equipment with exempted engines under paragraph (g)(2) of this section. For example, if we grant a hardship exemption for the engine manufacturer, you may count these as compliant engines under this section. This paragraph (d)(2) applies only if the engine has a permanent label describing why it is exempted from the Phase 3 standards.

(e) *Standards.* If you produce equipment with exempted engines under this section, the engines must meet the Phase 2 emission standards specified in 40 CFR part 90.

(f) *Equipment labeling.* You must add a permanent label, written legibly in English, to the engine or another readily visible part of each piece of equipment with exempted engines you produce under this section. This label, which supplements the engine manufacturer's emission control information label, must include at least the following items:

(1) The label heading ''EMISSION CONTROL INFORMATION''.

(2) Your corporate name and trademark.

(3) The calendar year in which the equipment is manufactured.

(4) The name, e-mail address, and phone number of a person to contact for further information.

(5) The following statement: THIS EQUIPMENT [or identify the type of equipment] HAS AN ENGINE THAT MEETS U.S. EPA EMISSION STANDARDS UNDER 40 CFR 1054.625.

(g) *Notification and reporting.* You must notify us of your intent to produce equipment under the provisions of this section and send us an annual report to verify that you are not exceeding the production limits for equipment with exempted engines, as follows:

(1) Send the Designated Compliance Officer and the Designated Enforcement Officer a written notice of your intent by June 30, 2010 including all the following:

(i) Your company's name and address, and your parent company's name and address, if applicable. Also identify the names of any other companies operating under the same parent company.

(ii) Whom to contact for more information.

(iii) The calendar years in which you expect to use the exemption provisions of this section.

(iv) The name and address of the company that produces the engines you will be using for the equipment exempted under this section.

(v) How many pieces of equipment with exempted engines you may sell under this section, as described in paragraph (b) of this section. Include your production figures for the period from January 1, 2007 through December 31, 2009, including figures broken down by equipment model and calendar year. You may send corrected figures with lower production volumes anytime after your initial notification. To make a correction for higher production volumes, send us the corrected figures by September 30, 2010. We may ask you to give us additional information to confirm your production figures.

(2) For each year that you use the provisions of this section, send the Designated Compliance Officer and the Designated Enforcement Officer a written report by March 31 of the following year. Identify in your report how many pieces of equipment with exempted engines you sold in the preceding year, based on actual U.S.-directed production information. If you produce equipment in the 2010 calendar year with exempted engines from the 2011 model year, include these units in your March 31, 2012 report. Also identify cumulative figures describing how many pieces of equipment with exempted engines you have produced for all the years you used the provisions of this section.

(3) If you send your initial notification under paragraph (g)(1) of this section after the specified deadline, we may approve your use of allowances under this section. In your request, describe why you were unable to meet the deadline.

(h) *Recordkeeping.* Keep the following records of all equipment with exempted engines you produce under this section until at least December 31, 2019:

(1) The model number for each piece of equipment.

(2) Detailed figures for determining how many pieces of equipment with exempted engines you may produce under this section, as described in paragraph (b) of this section.

(3) The notifications and reports we require under paragraph (g) of this section.

(i) *Enforcement.* Producing more exempted engines or equipment than we allow under this section or installing engines that do not meet the emission standards of paragraph (e) of this section violates the prohibitions in 40 CFR

1068.101(a)(1). You must give us the records we require under this section if we ask for them (see 40 CFR 1068.101(a)(2)).

(j) *Provisions for engine manufacturers.* As an engine manufacturer, you may produce exempted engines without request under this section using one of the following approaches:

(1) The provisions of this paragraph (j)(1) apply if you do not use the delegated-assembly provisions of § 1054.610 for any of the engines in an engine family. You must have written assurance from equipment manufacturers or your authorized distributors that they need a certain number of exempted engines under this section. Keep these records for at least five years after you stop producing engines under this section. The engines must meet the emission standards in paragraph (e) of this section and you must meet all the requirements of 40 CFR 1068.265. You must label the engines using one of the following approaches:

(i) Meet the labeling requirements in 40 CFR 90.114, but add the following statement instead of the compliance statement in 40 CFR 90.114(b)(7): THIS ENGINE MEETS U.S. EPA EMISSION STANDARDS UNDER 40 CFR 1054.625 AND MUST BE USED ONLY UNDER THOSE FLEXIBILITY PROVISIONS.

(ii) Meet the labeling requirements in § 1054.135 for Phase 3 engines and add the separate label described in paragraph (c)(2) of this section.

(2) The following provisions apply if you notify us that you plan to use the delegated-assembly provisions of § 1054.610 for one or more equipment manufacturers for an engine family:

(i) Include test data in your application for certification showing that your engines will meet the standards specified in paragraph (e) of this section if they have a noncatalyzed muffler in place of the aftertreatment that is part of the certified configuration. This may be based on emission measurements from previous model years if the data is still appropriate for the current engine configuration.

(ii) Produce all your engines with the emission control information label we specify in § 1054.135. The engines must also have the label we specify in § 1054.610(c)(7), with additional information summarizing the equipment manufacturers obligations under paragraph (c)(2) of this section.

(iii) Include in the installation instructions required under § 1054.610 any appropriate instructions or limitations on installing noncatalyzed mufflers to ensure that the fully assembled engine will meet the emission standards specified in paragraph (e) of this section. You may identify an appropriate range of backpressures, but this may not involve any instructions related to changing the fuel system for different fueling rates.

(iv) If your engine family generates exhaust emission credits under subpart H of this part, you must multiply the credits calculated under § 1054.705 by 0.9. This is based on the expectation that equipment manufacturers will modify 10 percent of the engines to no longer meet Phase 3 standards.

(k) *Additional exemptions for mid-sized companies.* If your average annual production of equipment with Class II engines as described in paragraph (b) of this section is between 5,000 and 50,000 units, you may request additional engine allowances under this section. To do this, notify us by January 31, 2010 if you believe the provisions of this section will not allow you to sell certain equipment models starting in the 2011 model year. In your notification, show us that you will be able to produce a number of Class II equipment models representing at least half your total U.S.-directed production volume in the 2011 model year that will be compliant with all Phase 3 exhaust and evaporative emission standards. Also describe why you need more allowances under this section to accommodate anticipated changes in engine designs resulting from engine manufacturers'' compliance with changing exhaust emission standards. Include a proposal for the number of additional allowances you would need, with supporting rationale. We may approve allowances up to a total of 100 percent of the average annual U.S.-directed production volume you report under paragraph (b) of this section (in place of the 30 percent that is otherwise allowed).

§ 1054.626 What special provisions apply to equipment imported under the Transition Program for Equipment Manufacturers?

This section describes requirements that apply to equipment manufacturers using the provisions of § 1054.625 for equipment produced outside the United States. Note that § 1054.625 limits these provisions to equipment manufacturers that install some engines and have primary responsibility for designing and manufacturing equipment. Companies that import equipment into the United States without meeting these criteria are not eligible for allowances under § 1054.625. Such importers may import equipment with exempted engines only as described in paragraph (b) of this section.

(a) As a foreign equipment manufacturer, you or someone else may import equipment with exempted engines under this section if you comply with the provisions in § 1054.625 and commit to the following:

(1) Give any EPA inspector or auditor complete and immediate access to inspect and audit, as follows:

(i) Inspections and audits may be announced or unannounced.

(ii) Inspections and audits may be performed by EPA employees or EPA contractors.

(iii) You must provide access to any location where—

(A) Any nonroad engine, equipment, or vehicle is produced or stored.

(B) Documents related to manufacturer operations are kept.

(C) Equipment, engines, or vehicles are tested or stored for testing.

(iv) You must provide any documents requested by an EPA inspector or auditor that are related to matters covered by the inspections or audit.

(v) EPA inspections and audits may include review and copying of any documents related to demonstrating compliance with the exemptions in § 1054.625.

(vi) EPA inspections and audits may include inspection and evaluation of complete or incomplete equipment, engines, or vehicles, and interviewing employees.

(vii) You must make any of your employees available for interview by the EPA inspector or auditor, on request, within a reasonable time period.

(viii) You must provide English language translations of any documents to an EPA inspector or auditor, on request, within 10 working days.

(ix) You must provide English-language interpreters to accompany EPA inspectors and auditors, on request.

(2) Name an agent for service located in the United States. Service on this agent constitutes service on you or any of your officers or employees for any action by EPA or otherwise by the United States related to the requirements of this part.

(3) The forum for any civil or criminal enforcement action related to the provisions of this section for violations of the Clean Air Act or regulations promulgated thereunder shall be governed by the Clean Air Act.

(4) The substantive and procedural laws of the United States shall apply to any civil or criminal enforcement action against you or any of your officers or employees related to the provisions of this section.

(5) Provide the notification required by § 1054.625(g). Include in the notice of intent in § 1054.625(g)(1) a

commitment to comply with the requirements and obligations of § 1054.625 and this section. This commitment must be signed by the owner or president.

(6) You, your agents, officers, and employees must not seek to detain or to impose civil or criminal remedies against EPA inspectors or auditors, whether EPA employees or EPA contractors, for actions performed within the scope of EPA employment related to the provisions of this section.

(7) By submitting notification of your intent to use the provisions of § 1054.625, producing and exporting for resale to the United States nonroad equipment under this section, or taking other actions to comply with the requirements of this part, you, your agents, officers, and employees, without exception, become subject to the full operation of the administrative and judicial enforcement powers and provisions of the United States as described in 28 U.S.C. 1605(a)(2), without limitation based on sovereign immunity, for conduct that violates the requirements applicable to you under this part 1054—including such conduct that violates 18 U.S.C. 1001, 42 U.S.C. 7413(c)(2), or other applicable provisions of the Clean Air Act—with respect to actions instituted against you and your agents, officers, and employees in any court or other tribunal in the United States.

(8) Any report or other document you submit to us must be in the English language, or include a complete translation in English.

(9) You must post a bond to cover any potential enforcement actions under the Clean Air Act before you or anyone else imports your equipment with exempted engines under this section, as specified in § 1054.690. Use the bond amount specified in § 1054.690 without adjusting for inflation. Note that you may post a single bond to meet the requirements of this section and § 1054.690 together.

(b) The provisions of this paragraph (b) apply to importers that do not install engines into equipment and do not have primary responsibility for designing and manufacturing equipment. Such importers may import equipment with engines exempted under § 1054.625 only if each engine is exempted under an allowance provided to an equipment manufacturer meeting the requirements of § 1054.625 and this section. You must notify us of your intent to use the provisions of this section and send us an annual report, as follows:

(1) Before January 1 of the first year you intend to use the provisions of this section, send the Designated Compliance Officer and the Designated Enforcement Officer a written notice of your intent, including:

(i) Your company's name and address, and your parent company's name and address, if applicable.

(ii) The name and address of the companies that produce the equipment and engines you will be importing under this section.

(iii) Your best estimate of the number of units you will import under this section in the upcoming calendar year, broken down by equipment manufacturer.

(2) For each year that you use the provisions of this section, send the Designated Compliance Officer and the Designated Enforcement Officer a written report by March 31 of the following year. Include in your report the total number of engines you imported under this section in the preceding calendar year, broken down by engine manufacturer and by equipment manufacturer.

§ 1054.627 How does the Transition Program for Equipment Manufacturers relate to evaporative emissions?

The provisions of this section allow equipment manufacturers to produce equipment that does not comply with certain requirements related to evaporative emissions in conjunction with the Transition Program for Equipment Manufacturers in § 1054.625.

(a) You may use the provisions of this section only after you have used up any available allowances under § 1054.145(e).

(b) For any equipment using Class II engines that you produce under the flexibility provisions of § 1054.625, the following special provisions apply with respect to evaporative emissions:

(1) You may use rotation-molded fuel tanks that do not meet requirements related to the fuel tank permeation standards specified in § 1054.110. You may not apply the provisions of this paragraph (b)(1) to fuel tanks that are not rotation-molded.

(2) You may produce equipment that does not meet requirements related to the running loss standard specified in § 1054.110.

(3) If you use the provisions of this section, add the following statement to the label specified in § 1054.625(f):

THIS EQUIPMENT [or identify the type of equipment] IS EXEMPT FROM [fuel tank permeation or running loss standards, as applicable] UNDER 40 CFR 1054.627.

(c) You may not use the provisions of this section for equipment that you do not produce under the flexibility provisions of § 1054.625.

§ 1054.630 What provisions apply for importation of individual items for personal use?

(a) Any individual may import previously used nonconforming engines for purposes other than resale, but no more than once in any five-year period. This may include up to three nonconforming engines imported at the same time. To import engines under this section, provide to the Customs official the following information:

(1) Identify your name, address, and telephone number.

(2) If you are importing engines under this section on behalf of another person, identify the ultimate engine owner's name, address, and telephone number.

(3) Identify the total number of engines you are importing and specify the make, model, identification number, and original production year of each engine.

(4) State: ''I am importing these previously used engines for personal use. I have not imported any engines under the provisions of 40 CFR 1054.630 within the previous five years. I am not importing these engines for purpose of resale. I authorize EPA enforcement officers to inspect my engines and my facilities as permitted by the Clean Air Act.''.

(b) We may require you to send us additional information, but you do not need written approval from us to import engines under this section. We will also not require a U.S. Customs Service bond for engines you import under this section.

(c) The provisions of this section may not be used to circumvent emission standards that apply to new engines under this part. For example, you may not purchase new engines and use them in a trivial manner outside of the United States to qualify for importation under this section.

(d) If you violate the provisions of this section, or submit false information to obtain this exemption, you will be subject to civil penalties as specified in 40 CFR 1068.101(a)(2) and (b)(5).

§ 1054.635 What special provisions apply for small-volume engine and equipment manufacturers?

This section describes how we apply the special provisions in this part for small-volume engine and equipment manufacturers.

(a) If you qualify under paragraph (1) or (2) of the definition of small-volume engine manufacturer or under paragraph (1) or (2) of the definition small-volume equipment manufacturer in § 1054.801, the small-volume provisions apply as specified in this part.

(b) If you are a small business (as defined by the Small Business

Administration at 13 CFR 121.201) that manufactures nonroad spark-ignition engines or equipment, but you do not qualify under paragraph (1) or (2) of the definition of small-volume engine manufacturer or under paragraph (1) or (2) of the definition of small-volume equipment manufacturer in § 1054.801, you may ask us to designate you to be a small-volume engine or equipment manufacturer. You may do this whether you began manufacturing engines before, during, or after 2007. We may set other reasonable conditions that are consistent with the intent of this section and the Act.

(c) If you use any of the provisions of this part that apply specifically to small-volume manufacturers and we find that you exceed the production limits or otherwise do not qualify as a small-volume manufacturer, we may consider you to be in violation of the requirements that apply for companies that are not small-volume manufacturers for those engines produced in excess of the specified production limits.

§ 1054.640 What special provisions apply to branded engines?

The following provisions apply if you identify the name and trademark of another company instead of your own on your emission control information label, as provided by § 1054.135(c)(2):

(a) You must have a contractual agreement with the other company that obligates that company to take the following steps:

(1) Meet the emission warranty requirements that apply under § 1054.120. This may involve a separate agreement involving reimbursement of warranty-related expenses.

(2) Report all warranty-related information to the certificate holder.

(b) In your application for certification, identify the company whose trademark you will use and describe the arrangements you have made to meet your requirements under this section.

(c) You remain responsible for meeting all the requirements of this chapter, including warranty and defect-reporting provisions.

§ 1054.645 What special provisions apply for converting an engine to use an alternate fuel?

(a) Converting a certified new engine to run on a different fuel violates 40 CFR 1068.101(a)(1) if the modified engine is not covered by a certificate of conformity.

(b) Converting a certified engine that is not new to run on a different fuel violates 40 CFR 1068.101(b)(1) if the modified engine is not covered by a certificate of conformity. We may specify alternate certification provisions consistent with the requirements of this part.

(c) Engines may be certified as required in this section based on the certification procedures for new engines or on those for aftermarket parts specified in 40 CFR part 85, subpart V.

§ 1054.650 What special provisions apply for adding or changing governors?

The special provisions in this section apply for engines that will not have constant-speed governors when installed in equipment. Paragraph (a) of this section also applies for any engines shipped without installed governors.

(a) The representative-testing requirements of 40 CFR 1065.10(c)(1) related to in-use duty cycles do not apply to engines you produce and ship without constant-speed governors if you comply with all the following requirements:

(1) You must have test data showing that the effectiveness of the engine's emission controls over the expected range of in-use operation will be similar to that measured over the specified duty cycle. Alternatively, if your emission controls depend on maintaining a consistent air-fuel ratio, you may demonstrate that the engine is calibrated to maintain a consistent air-fuel ratio over the expected range of in-use operation.

(2) Describe in your application for certification the data and analysis that supports your conclusion.

(b) As a distributor or equipment manufacturer, it is not a violation of the tampering provisions in 40 CFR 1068.101(b)(1) for you to remove a constant-speed governor that is covered by a certificate of conformity, as long as you meet all the following requirements:

(1) You must have a reasonable technical basis for believing that the effectiveness of the modified engine's emission controls over the expected range of in-use operation will be similar to that measured over the specified duty cycle. This may require that you have test data. You are not required to apply for a new certificate of conformity.

(2) You must notify the engine manufacturer before modifying the engine. You must follow any instructions from the engine manufacturer related to the emission control system.

(3) You may not make any other changes to the engine that would remove it from its certified configuration.

(4) You must keep record of the number of engines you modify in each model year, a description of your procedures for modifying engines (including part numbers of the parts you install), and a description of the reasonable technical basis described in paragraph (b)(1) of this section. Keep these records for five years after you modify the engines. Store these records in any format and on any media, as long as you can promptly send us organized, written records in English if we ask for them. You must keep these records readily available. We may review them at any time.

§ 1054.655 What special provisions apply to installing and removing altitude kits?

(a) An action for the purpose of installing or removing altitude kits and performing other changes to compensate for changing altitude is not considered a prohibited act under 40 CFR 1068.101(b), as long as it is done consistent with the provisions of this section.

(b) You may install or remove an altitude kit as long as you are using replacement parts that are specified in the engine manufacturer's application for certification.

§ 1054.660 What are the provisions for exempting emergency rescue equipment?

The provisions of this section apply for new equipment built on or after January 1, 2009.

(a) Equipment manufacturers may introduce into U.S. commerce equipment that is not certified to current emission standards under the following conditions if the equipment will be used solely in emergency rescue situations:

(1) You must determine annually that no engines certified to current emission standards are available to power the equipment safely and practically. We may review your records supporting this determination at any time.

(2) You may not use exempted engines to power generators, alternators, compressors, or pumps.

(3) If engines that meet less stringent emission standards are capable of powering your equipment safely and practically, you must use them as a condition of this exemption. You must use available engines meeting the most stringent standards feasible.

(4) You must send the engine manufacturer a written request for each exempted equipment model.

(5) You must notify the Designated Compliance Officer of your intent to use the provisions of this section. We may require you to notify us annually or to send us annual reports describing how you meet the conditions of this section.

(b) For the purposes of this section, ''emergency rescue situations'' means

firefighting or other situations in which a person is retrieved from imminent danger.

(c) As an engine manufacturer, you may produce exempt engines under this section without our prior approval if you have a written request for an exempted engine for use in emergency rescue equipment from the equipment manufacturer. You must permanently label engines exempted under this section to clearly indicate that they are to be used solely for emergency rescue equipment. Failure to properly label an engine will void the exemption.

(d) We may discontinue an exemption under this section if we find that engines are not used solely for emergency rescue equipment or if we find that a certified engine is available to power the equipment safely and practically.

§ 1054.685 What are my recall responsibilities?

(a) You are responsible to meet all applicable recall requirements in 40 CFR 1068, subpart F. You must also meet the additional requirements of this section.

(b) You must demonstrate at the time of certification that you will be able to meet these requirements. Except as allowed in paragraph (c) of this section, your demonstration must include at least one of the following:

(1) You have assembly facilities in the United States that are available for processing recall repairs.

(2) You have a repair network in the United States capable of processing recall repairs. To qualify under this paragraph (b)(2), you must have at least 100 authorized repair facilities in the United States or at least one such facility for each 5000 engines you sell in the United States, whichever is less.

(c) If you do not have the assembly or repair facilities required under paragraph (b) of this section, you may instead rely on independent contractors that you name in your application for certification to perform recalls, but you must provide assurance that you can fulfill recall obligations, such as posting bond.

§ 1054.690 What are the bond requirements for importing certified engines and equipment?

As specified in this section, we are considering whether to require you to post a bond if you introduce into U.S. commerce engines that are subject to the standards of this part. See paragraph (f) of this section for the requirements related to selling or importing engines that have been certified by someone else.

(a) Prior to introducing engines into U.S. commerce, you must post a bond to cover any potential compliance or enforcement actions under the Clean Air Act unless you demonstrate to us that you will meet any compliance-or enforcement-related obligations. For example, it would be a sufficient demonstration if you show that you have manufactured or imported engines for the U.S. market for a significant period of time without failing a test conducted by EPA officials or having been found by the EPA not to be in compliance with applicable regulations.

(b) The value of the bond is based on the per-engine bond values shown in Table 1 of this section and on the U.S.-directed production volume from each displacement grouping for the calendar year. For example, if you have projected U.S.-directed production volumes of 10,000 engines with 180 cc displacement and 5,000 engines with 400 cc displacement in 2013, the appropriate bond amount is $500,000. Adjust the value of the bond as follows:

(1) If your estimated or actual U.S.-directed production volume in any later calendar year increases beyond the level appropriate for your current bond payment, you must post additional bond to reflect the increased volume within 90 days after you change your estimate or determine the actual production volume. You may not decrease your bond.

(2) The per-engine bond values listed are in 2008 dollars. Adjust these values in 2010 and later calendar years by comparing the Consumer Price Index values published by the Bureau of Labor Statistics for the preceding June and June 2008 (see *ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt*). Round calculated values to the nearest dollar.

(3) If you sell engines without aftertreatment components under the provisions of § 1054.610, you must increase the per-engine bond values for the current year by 20 percent. Round calculated values to the nearest dollar.

TABLE 1 TO § 1054.690—PER-ENGINE BOND VALUES

For engines with displacement falling in the following ranges. . .	The per-engine bond value is . . .
Disp. < 225 cc	$25
225 ≤ Disp. < 740 cc	50
740 ≤ Disp. ≤ 1,000 cc	100
Disp. > 1,000 cc	200

(c) You may meet the bond requirements of this section by obtaining a bond from a third-party surety that is cited in the U.S. Department of Treasury Circular 570, ''Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies'' (*http://www.fms.treas.gov/c570/c570.html#certified*). You must maintain this bond for 5 years.

(d) If you forfeit some or all of your bond in an enforcement action, you must post any appropriate bond for continuing sale within 90 days after you forfeit the bond amount.

(e) You will forfeit the proceeds of the bond posted under this section if you need to satisfy any United States administrative final order or judicial judgment against you arising from your conduct in violation of this chapter, including such conduct that violates 18 U.S.C. 1001, 42 U.S.C. 7413(c)(2), or other applicable provisions of the Clean Air Act.

(f) This paragraph (f) applies if you sell, or import for resale, engines that have been certified by someone else (or equipment containing such engines).

(1) You and the certificate holder are each responsible for compliance with the requirements of this part and the Clean Air Act. For example, we may require you to comply with the warranty requirements in the standard-setting part.

(2) You do not need to post bond if the certificate holder complies with the bond requirements of this section.

§ 1054.695 What restrictions apply to assigning a model year to imported engines and equipment?

This section includes limitations on assigning a model year to engines and equipment that are imported in a year later than the model year in which they were manufactured, except as specified in paragraph (e) of this section.

(a) The term ''model year'' is defined in each of the standard-setting parts. These definitions may vary slightly to address the different categories of engines and equipment. Except as specified in paragraphs (b) and (c) of this section, the emission standards and other emission-related requirements that apply for an imported engine or piece of equipment are determined by the model year as defined in the applicable standard-setting part and the provisions of 40 CFR 1068.105(a).

(b) This paragraph (b) applies for the importation of new engines and new equipment in any calendar year that is more than one year after the named model year of the engine or equipment where emission requirements applying to current engines are different than for engines or equipment in the named model year. Regardless of what other provisions of this subchapter U specify

for the model year of the engine or equipment, such engines and equipment are deemed to have an applicable model year no more than one year earlier than the calendar year in which they are being imported. For example, a new engine identified as a 2007 model-year product that is imported on January 31, 2010 will be treated as a 2009 model-year engine; the same engine will be treated as a 2010 model-year engine if it is imported any time in calendar year 2011.

(c) If you claim that an engine or piece of equipment is not subject to standards—or is subject to standards less stringent than those currently in place—based on its original manufacture date because it has already been placed into service, you must provide clear and convincing evidence that it has already been placed into service. Such evidence must generally include, but not be limited to, documentary evidence of purchase and maintenance history and visible wear that is consistent with the reported manufacture date. Importing products for resale or importing more than one engine or piece of equipment at a time would generally require a greater degree of evidence under this paragraph (c). If you do not satisfactorily demonstrate that the engine has already been placed into service, the provisions of paragraph (b) of this section apply.

(d) Nothing in this section should be interpreted to allow circumvention of the requirements of this part by misstating or mislabeling the model year of engines or equipment. For example, this section does not permit engines imported in the same year as manufactured to be treated as an engine manufactured in the previous year. To verify compliance with the provisions of this section, we may require you to verify the original manufacture date of the engine or equipment based on manufacturing records, title-transfer documents, service records, or other documentation.

(e) If all the current emission requirements are the same as in the named model year, the provisions of this section do not apply.

Subpart H—Averaging, Banking, and Trading for Certification

§ 1054.701 General provisions.

(a) You may average, bank, and trade (ABT) emission credits for purposes of certification as described in this subpart to show compliance with the standards of this part. Participation in this program is voluntary.

(b) The definitions of subpart I of this part apply to this subpart. The following definitions also apply:

(1) *Actual emission credits* means emission credits you have generated that we have verified by reviewing your final report.

(2) *Averaging set* means a set of engines (or equipment) in which emission credits may be exchanged only with other engines (or equipment) in the same averaging set.

(3) *Broker* means any entity that facilitates a trade of emission credits between a buyer and seller.

(4) *Buyer* means the entity that receives emission credits as a result of a trade.

(5) *Family* means engine family for exhaust credits or emission family for evaporative credits.

(6) *Reserved emission credits* means emission credits you have generated that we have not yet verified by reviewing your final report.

(7) *Seller* means the entity that provides emission credits during a trade.

(8) *Standard* means the emission standard that applies under subpart B of this part for engines or fuel-system components not participating in the ABT program of this subpart.

(9) *Trade* means to exchange emission credits, either as a buyer or seller.

(c) The use of emission credits is limited to averaging sets, as follows:

(1) You may not average or exchange exhaust credits with evaporative credits, or vice versa.

(2) Handheld engines and nonhandheld engines are in separate averaging sets with respect to exhaust emissions except as specified in § 1054.740(e). You may use emission credits generated under 40 CFR part 90 for handheld engines subject to the standards in § 1054.103 only if you can demonstrate that those credits were generated by handheld engines, except as specified in § 1054.740(e). You may use emission credits generated under 40 CFR part 90 for nonhandheld engines only if you can demonstrate that those credits were generated by nonhandheld engines, subject to the provisions of § 1054.740.

(3) Equipment using handheld engines, Class I engines, and Class II engines are in separate averaging sets with respect to evaporative emissions. You may not average or exchange evaporative credits between any of these averaging sets.

(4) You may combine evaporative emission credits for fuel tanks and fuel lines for handheld equipment.

(5) For purposes of calculating emission credits under this subpart, engines with displacement below 80 cc are presumed to be handheld engines. You may treat these as nonhandheld engines for calculating exhaust or evaporative emission credits only for those engines you can demonstrate will be installed in nonhandheld equipment. For example, if 50 percent of engines in an emission family will be used in nonhandheld equipment, you may calculate the emission credits for 50 percent of the engines to be nonhandheld credits using the appropriate calculation methods.

(d) You may not generate evaporative credits based on permeation measurements from metal fuel tanks.

(e) You may not use emission credits generated under this subpart to offset any emissions that exceed an FEL or standard. This applies for all testing, including certification testing, in-use testing, selective enforcement audits, and other production-line testing. However, if exhaust emissions from an engine exceed an exhaust FEL or standard (for example, during a selective enforcement audit), you may use emission credits to recertify the family with a higher FEL that applies only to future production.

(f) Emission credits may be used in the model year they are generated (averaging) and in future model years (banking). Emission credits may not be used for past model years.

(g) You may increase or decrease an exhaust FEL during the model year by amending your application for certification under § 1054.225.

§ 1054.705 How do I generate and calculate exhaust emission credits?

The provisions of this section apply for calculating exhaust emission credits. You may generate exhaust emission credits only if you are a certifying engine manufacturer.

(a) For each participating family, calculate positive or negative emission credits relative to the otherwise applicable emission standard. Calculate positive emission credits for a family that has an FEL below the standard. Calculate negative emission credits for a family that has an FEL above the standard. Sum your positive and negative credits for the model year before rounding. Round calculated emission credits to the nearest kilogram (kg), using consistent units throughout the following equation:

$$\text{Emission credits (kg)} = (\text{Std} - \text{FEL}) \times (\text{Volume}) \times (\text{Power}) \times (\text{UL}) \times (\text{LF}) \times (10^{-3})$$

Where:

Std = the emission standard, in g/kW-hr.
FEL = the family emission limit for the family, in g/kW-hr.

Volume = the number of engines eligible to participate in the averaging, banking, and trading program within the given family during the model year, as described in paragraph (c) of this section.
Power = the maximum modal power of the emission-data engine as calculated from the applicable test procedure described in subpart F of this part, in kilowatts.
UL = the useful life for the given family, in hours.
LF = load factor. Use 0.47 for nonhandheld engines and 0.85 for handheld engines. We may specify a different load factor if we approve the use of special test procedures for an engine family under 40 CFR 1065.10(c)(2), consistent with good engineering judgment.

(b) [Reserved]

(c) In your application for certification, base your showing of compliance on projected production volumes for engines intended for sale in the United States. As described in § 1054.730, compliance with the requirements of this subpart is determined at the end of the model year based on actual production volumes for engines intended for sale in the United States.

Do not include any of the following engines or equipment to calculate emission credits:

(1) Engines exempted under subpart G of this part or under 40 CFR part 1068.

(2) Engines intended for export, unless there is reason to believe that the engines will be later imported into the United States after installation in equipment.

(3) Engines that are subject to state emission standards for that model year. However, this restriction does not apply if we determine that the state standards and requirements are equivalent to those of this part and that engines sold in such a state will not generate credits under the state program. For example, you may not include engines certified for California if it has more stringent emission standards for these engines or those engines generate or use emission credits under the California program.

(4) Engines not subject to the requirements of this part, such as those excluded under § 1054.5.

(5) Any other engines, where we indicate elsewhere in this part 1054 that they are not to be included in the calculations of this subpart.

§ 1054.706 How do I generate and calculate evaporative emission credits?

The provisions of this section apply for calculating evaporative emission credits. This applies for fuel line permeation for handheld equipment and for fuel tank permeation from all equipment. You may generate credits only if you are a certifying equipment manufacturer.

(a) For each participating family, calculate positive or negative emission credits relative to the otherwise applicable emission standard. Calculate positive emission credits for a family that has an FEL below the standard. Calculate negative emission credits for a family that has an FEL above the standard. Sum your positive and negative credits for the model year before rounding. Round calculated emission credits to the nearest kilogram (kg), using consistent units throughout the following equation:

$$\text{Emission credits (kg)} = (\text{Std} - \text{FEL}) \times (\text{Total Area}) \times (\text{UL}) \times (\text{AF}) \times (365) \times (10^{-3})$$

Where:

Std = the emission standard, in g/m^2/day.
FEL = the family emission limit for the family, in g/m^2/day, as described in paragraph (b) of this section.
Total Area = The combined internal surface area of all fuel tanks or fuel lines in the family, in m^2.
UL = the useful life for the given family, in years.
AF = adjustment factor. Use 0.60 for fuel tank permeation testing performed at 40 °C; use 1.0 for all other testing.

(b) For calculating credits under paragraph (a) of this section, determine the FEL for fuel lines based on measured emission levels. Determine the FEL for fuel tanks using any of the following values:

(1) The FEL to which the fuel tank is certified, as long as the FEL is at or below 3.0 g/m^2/day.

(2) 10.4 g/m^2/day. However, if you use this value to establish the FEL for any of your fuel tanks, you must use this value to establish the FEL for every tank not covered by paragraph (b)(1) of this section.

(3) The measured permeation rate of the fuel tank or the measured permeation rate of a thinner-walled tank of the same material. However, if you use this approach to establish the FEL for any of your fuel tanks, you must establish an FEL based on emission measurements for every tank not covered by paragraph (b)(1) of this section.

(c) To qualify for generating emission credits with structurally integrated nylon fuel tanks used with handheld equipment, the FEL must be at or below 1.5 g/m^2/day for testing at a nominal temperature of 28 °C, or 2.5 g/m^2/day for testing at a nominal temperature of 40 °C. Calculate positive emission credits under this section relative to an emission standard of 1.5 g/m^2/day. Calculate negative emission credits under this section relative to an emission standard of 2.5 g/m^2/day.

(d) To qualify for generating emission credits with fuel lines for cold-weather equipment, the FEL must be at or below 15 g/m^2/day. Calculate positive emission credits under this section relative to an emission standard of 15 g/m^2/day. Calculate negative emission credits under this section relative to an emission standard of 175 g/m^2/day.

(e) In your application for certification, base your showing of compliance on projected production volumes for engines intended for sale in the United States. As described in § 1054.730, compliance with the requirements of this subpart is determined at the end of the model year based on actual production volumes for engines intended for sale in the United States. Do not include any of the following equipment to calculate emission credits:

(1) Equipment exempted under subpart G of this part or under 40 CFR part 1068.

(2) Equipment intended for export.

(3) Equipment that is subject to state emission standards for that model year. However, this restriction does not apply if we determine that the state standards and requirements are equivalent to those of this part and that equipment sold in such a state will not generate credits under the state program. For example, you may not include equipment certified for California if it has more stringent emission standards for these equipment or that equipment generates or uses emission credits under the California program.

(4) Equipment not subject to the requirements of this part, such as those excluded under § 1054.5.

(5) Any other equipment, where we indicate elsewhere in this part 1054 that they are not to be included in the calculations of this subpart.

§ 1054.710 How do I average emission credits?

(a) Averaging is the exchange of emission credits among your families. You may average emission credits only within the same averaging set.

(b) You may certify one or more families to an FEL above the emission standard, subject to the FEL caps and other provisions in subpart B of this part, if you show in your application for certification that your projected balance of all emission-credit transactions in that model year is greater than or equal to zero.

(c) If you certify a family to an FEL that exceeds the otherwise applicable standard, you must obtain enough emission credits to offset the family's deficit by the due date for the final report required in § 1054.730. The

emission credits used to address the deficit may come from your other families that generate emission credits in the same model year, from emission credits you have banked, or from emission credits you obtain through trading.

§ 1054.715 How do I bank emission credits?

(a) Banking is the retention of emission credits by the manufacturer generating the emission credits for use in averaging or trading in future model years. You may use banked emission credits only within the averaging set in which they were generated, except as described in this subpart.

(b) In your application for certification, designate any emission credits you intend to bank. These emission credits will be considered reserved credits. During the model year and before the due date for the final report, you may redesignate these emission credits for averaging or trading.

(c) You may use banked emission credits from the previous model year for averaging or trading before we verify them, but we may revoke these emission credits if we are unable to verify them after reviewing your reports or auditing your records.

(d) Reserved credits become actual emission credits only when we verify them in reviewing your final report.

§ 1054.720 How do I trade emission credits?

(a) Trading is the exchange of emission credits between manufacturers. You may use traded emission credits for averaging, banking, or further trading transactions. Traded emission credits may be used only within the averaging set in which they were generated, except as described in this subpart.

(b) You may trade actual emission credits as described in this subpart. You may also trade reserved emission credits, but we may revoke these emission credits based on our review of your records or reports or those of the company with which you traded emission credits. You may trade banked credits to any certifying engine or equipment manufacturer.

(c) If a negative emission credit balance results from a transaction, both the buyer and seller are liable, except in cases we deem to involve fraud. See § 1054.255(e) for cases involving fraud. We may void the certificates of all families participating in a trade that results in a manufacturer having a negative balance of emission credits. See § 1054.745.

§ 1054.725 What must I include in my application for certification?

(a) You must declare in your application for certification your intent to use the provisions of this subpart for each family that will be certified using the ABT program. You must also declare the FELs you select for the family for each pollutant for which you are using the ABT program. Your FELs must comply with the specifications of subpart B of this part, including the FEL caps. FELs must be expressed to the same number of decimal places as the emission standard.

(b) Include the following in your application for certification:

(1) A statement that, to the best of your belief, you will not have a negative balance of emission credits for any averaging set when all emission credits are calculated at the end of the year.

(2) Detailed calculations of projected emission credits (positive or negative) based on projected production volumes. If your family will generate positive emission credits, state specifically where the emission credits will be applied (for example, to which family they will be applied in averaging, whether they will be traded, or whether they will be reserved for banking). If you have projected negative emission credits for a family, state the source of positive emission credits to offset the negative emission credits. Describe whether the emission credits are actual or reserved and whether they will come from averaging, banking, trading, or a combination of these. Identify from which of your families or from which manufacturer the emission credits will come.

§ 1054.730 What ABT reports must I send to EPA?

(a) If any of your families are certified using the ABT provisions of this subpart, you must send an end-of-year report within 90 days after the end of the model year and a final report within 270 days after the end of the model year. We may waive the requirement to send the end-of year report, as long as you send the final report on time.

(b) Your end-of-year and final reports must include the following information for each family participating in the ABT program:

(1) Family designation.

(2) The emission standards that would otherwise apply to the family.

(3) The FEL for each pollutant. If you changed an FEL during the model year, identify each FEL you used and calculate the positive or negative emission credits under each FEL. Also, describe how the FEL can be identified for each engine you produced. For example, you might keep a list of engine or equipment identification numbers that correspond with certain FEL values.

(4) The projected and actual production volumes for the model year with a point of retail sale in the United States, as described in §§ 1054.705(c) and 1054.706(c). For fuel tanks and fuel lines, state the production volume in terms of total surface area. If you changed an engine's FEL during the model year, identify the actual production volume associated with each FEL.

(5) The maximum modal power of the emission-data engine or the appropriate internal surface area of the fuel tank or fuel line.

(6) Useful life.

(7) Calculated positive or negative emission credits for the whole family. Identify any emission credits that you traded, as described in paragraph (d)(1) of this section.

(c) Your end-of-year and final reports must include the following additional information:

(1) Show that your net balance of emission credits from all your participating families in each averaging set in the applicable model year is not negative.

(2) State whether you will reserve any emission credits for banking.

(3) State that the report's contents are accurate.

(d) If you trade emission credits, you must send us a report within 90 days after the transaction, as follows:

(1) As the seller, you must include the following information in your report:

(i) The corporate names of the buyer and any brokers.

(ii) A copy of any contracts related to the trade.

(iii) The families that generated emission credits for the trade, including the number of emission credits from each family.

(2) As the buyer, you must include the following information in your report:

(i) The corporate names of the seller and any brokers.

(ii) A copy of any contracts related to the trade.

(iii) How you intend to use the emission credits, including the number of emission credits you intend to apply to each family (if known).

(e) Send your reports electronically 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.

(f) Correct errors in your end-of-year report or final report as follows:

(1) You may correct any errors in your end-of-year report when you prepare the

final report, as long as you send us the final report by the time it is due.

(2) If you or we determine within 270 days after the end of the model year that errors mistakenly decrease your balance of emission credits, you may correct the errors and recalculate the balance of emission credits. You may not make these corrections for errors that are determined more than 270 days after the end of the model year. If you report a negative balance of emission credits, we may disallow corrections under this paragraph (f)(2).

(3) If you or we determine anytime that errors mistakenly increase your balance of emission credits, you must correct the errors and recalculate the balance of emission credits.

§ 1054.735 What records must I keep?

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

(b) Keep the records required by this section for at least eight years after the due date for the end-of-year report. You may not use emission credits for any engines or equipment if you do not keep all the records required under this section. You must therefore keep these records to continue to bank valid credits. Store these records in any format and on any media, as long as you can promptly send us organized, written records in English if we ask for them. You must keep these records readily available. We may review them at any time.

(c) Keep a copy of the reports we require in §§ 1054.725 and 1054.730.

(d) Keep the following additional records for each engine or piece of equipment you produce that generates or uses emission credits under the ABT program:

(1) Family designation.

(2) Engine or equipment identification number.

(3) FEL and useful life.

(4) Build date and assembly plant.

(e) We may require you to keep additional records or to send us relevant information not required by this section.

§ 1054.740 What special provisions apply for generating and using emission credits?

(a) You may generate Phase 3 emission credits from 2008 through 2011 model year Class I engines if you voluntarily meet the Phase 3 exhaust emission standards specified in § 1054.105. Divide these into transitional and enduring emission credits as follows:

(1) Transitional credits are based on reducing emissions from Phase 2 levels down to Phase 3 levels. Calculate the value of transitional emission credits as described in § 1054.705, based on setting STD equal to 15.0 g/kW-hr and FEL equal to 10.0 g/kW-hr. You may use these transitional credits only for Class I engines in 2012 through 2014 model years. You may not use these transitional credits for Class II engines.

(2) Enduring credits are based on reducing emissions below Phase 3 levels. Calculate the value of enduring credits as described in § 1054.705, based on setting STD equal to 10.0 g/kW-hr and FEL to the value of the family emission limit you select for the engine family. You may use these enduring credits for any nonhandheld engines certified to the Phase 3 standards under this part, except as specified in paragraph (d) of this section.

(b) You may generate Phase 3 emission credits from 2008 through 2010 model year Class II engines if you voluntarily meet the Phase 3 exhaust emission standards specified in § 1054.105. Divide these into transitional and enduring emission credits as follows:

(1) Transitional credits are based on reducing emissions from Phase 2 levels down to Phase 3 levels. Calculate the value of transitional emission credits as described in § 1054.705, based on setting STD equal to 11.0 g/kW-hr and FEL equal to 8.0 g/kW-hr. You may use these transitional credits only for Class II engines in 2011 through 2013 model years. You may not use these transitional credits for Class I engines.

(2) Enduring credits are based on reducing emissions below Phase 3 levels. Calculate the value of enduring credits as described in § 1054.705, based on setting STD equal to 8.0 g/kW-hr and FEL to the value of the family emission limit you select for the engine family. You may use these enduring credits for any nonhandheld engines certified to the Phase 3 standards under this part, except as specified in paragraph (d) of this section

(c) You may use emission credits generated by nonhandheld engines subject to Phase 2 emission standards under 40 CFR part 90 to demonstrate compliance with the Phase 3 exhaust emission standards, but only after you have exhausted all credits from engines meeting Phase 3 standards, subject to the conditions of paragraph (d) of this section. You may use these Phase 2 emission credits only in the 2012 and 2013 model years for Class I engines and only in the 2011 through 2013 model years for Class II engines. Determine a maximum number of Phase 2 emission credits for demonstrating compliance with the Phase 3 standards for a given engine class (Class I or Class II) as follows:

(1) Calculate a Phase 2 credit allowance for each engine class based on production information for model years 2007, 2008, and 2009 using the following equation:

Credit allowance (kg) = (Emissions Delta) × (Volume) × (Avg. Power) × (Avg. UL) × (LF) × (10^{-3})

Where:

Emissions Delta = 1.6 g/kW-hr for Class I and 2.1 g/kW-hr for Class II.

Volume = the number of engines eligible to participate in the averaging, banking, and trading program, as described in § 1054.705(c), based on actual U.S.-directed production volumes.

Avg. Power = the production-weighted average value of the maximum modal power for all engine families in the engine class, as described in § 1054.705(a), in kilowatts.

Avg. UL = the production-weighted average value of the useful life for all engine families in the engine class, in hours.

LF = load factor. Use 0.47.

(2) Do not include wintertime engines in the calculation of credit allowances unless they are certified to meet the otherwise applicable $HC+NO_X$ emission standard.

(3) Calculate the average annual Phase 2 credit allowance for each engine class over three model years as specified in paragraph (c)(1) of this section. The resulting value is the maximum number of Phase 2 emission credits you may use under this paragraph (c) for each engine class.

(4) For 2013 and earlier model years, include in the reports described in § 1054.730 the total allowable number of Phase 2 emission credits and your cumulative totals of Phase 2 credits you have used to comply with the requirements of this part.

(d) If you generate enduring emission credits from Class I engines under paragraph (a) of this section, you may not use these for Class II engines in the 2011 or 2012 model year. Similarly, If you generate enduring emission credits from Class II engines under paragraph (b) of this section, you may not use these for Class I engines in the 2012 model year. These restrictions also apply for emission credits you generate for engines subject to the standards of this part in the 2011 or 2012 model year.

(e) You may use Phase 2 or Phase 3 emission credits from nonhandheld engines to demonstrate compliance with the Phase 3 standards for handheld engines subject to the following restrictions:

(1) The handheld engine family must be certified in 2008 and all later model years using carryover of emission data

from an engine family that was most recently certified with new emission data in 2007 or an earlier model year.

(2) The handheld engine family's FEL may not increase above the level selected for the 2007 model year in later years, unless such an increase is based on emission data from production engines.

§ 1054.745 What can happen if I do not comply with the provisions of this subpart?

(a) For each family participating in the ABT program, the certificate of conformity is conditional upon full compliance with the provisions of this subpart during and after the model year. You are responsible to establish to our satisfaction that you fully comply with applicable requirements. We may void the certificate of conformity for a family if you fail to comply with any provisions of this subpart.

(b) You may certify your family to an FEL above an emission standard based on a projection that you will have enough emission credits to offset the deficit for the family. However, we may void the certificate of conformity if you cannot show in your final report that you have enough actual emission credits to offset a deficit for any pollutant in a family.

(c) We may void the certificate of conformity for a family if you fail to keep records, send reports, or give us information we request.

(d) You may ask for a hearing if we void your certificate under this section (see § 1054.820).

Subpart I—Definitions and Other Reference Information

§ 1054.801 What definitions apply to this part?

The following definitions apply to this part. The definitions apply to all subparts unless we note otherwise. All undefined terms have the meaning the Act gives to them. The definitions follow:

Act means the Clean Air Act, as amended, 42 U.S.C. 7401–7671q.

Adjustable parameter means any device, system, or element of design that someone can adjust (including those which are difficult to access) and that, if adjusted, may affect emissions or engine performance during emission testing or normal in-use operation. This includes, but is not limited to, parameters related to injection timing and fueling rate. You may ask us to exclude a parameter that is difficult to access if it cannot be adjusted to affect emissions without significantly degrading engine performance, or if you otherwise show us that it will not be adjusted in a way that affects emissions during in-use operation.

Aftertreatment means relating to a catalytic converter, particulate filter, thermal reactor, or any other system, component, or technology mounted downstream of the exhaust valve (or exhaust port) whose design function is to decrease emissions in the engine exhaust before it is exhausted to the environment. Exhaust-gas recirculation (EGR) and turbochargers are not aftertreatment.

Amphibious vehicle means a vehicle with wheels or tracks that is designed primarily for operation on land and secondarily for operation in water.

Applicable emission standard or *applicable standard* means an emission standard to which an engine is subject; or, where an engine has been or is being certified another standard or FEL, applicable emission standards means the FEL and other standards to which the engine has been or is being certified. This definition does not apply to subpart H of this part.

Auxiliary emission control device means any element of design that senses temperature, motive speed, engine RPM, transmission gear, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system.

Brake power means the usable power output of the engine, not including power required to fuel, lubricate, or heat the engine, circulate coolant to the engine, or to operate aftertreatment devices.

Calibration means the set of specifications and tolerances specific to a particular design, version, or application of a component or assembly capable of functionally describing its operation over its working range.

Certification means relating to the process of obtaining a certificate of conformity for an emission family that complies with the emission standards and requirements in this part.

Certified emission level means the highest deteriorated emission level in an emission family for a given pollutant from either transient or steady-state testing.

Class I means relating to nonhandheld engines with total displacement below 225 cc. See § 1054.101 for special provisions that apply for engines with total displacement below 80 cc.

Class II means relating to nonhandheld engines with total displacement at or above 225 cc.

Class III means relating to handheld engines with total displacement below 20 cc.

Class IV means relating to handheld engines with total displacement at or above 20 cc but below 50 cc.

Class V means relating to handheld engines with total displacement at or above 50 cc.

Cold-weather equipment includes the following types of handheld equipment: Chainsaws, cut-off saws, clearing saws, brush cutters with engines at or above 40cc, commercial earth and wood drills, and ice augers. This includes earth augers if they are also marketed as ice augers.

Crankcase emissions means airborne substances emitted to the atmosphere from any part of the engine crankcase's ventilation or lubrication systems. The crankcase is the housing for the crankshaft and other related internal parts.

Critical emission-related component means any of the following components:

(1) Electronic control units, aftertreatment devices, fuel-metering components, EGR-system components, crankcase-ventilation valves, all components related to charge-air compression and cooling, and all sensors and actuators associated with any of these components.

(2) Any other component whose primary purpose is to reduce emissions.

Designated Compliance Officer means the Manager, Heavy-Duty and Nonroad Engine Group (6405–J), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

Designated Enforcement Officer means the Director, Air Enforcement Division (2242A), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW.,Washington, DC 20460.

Deteriorated emission level means the emission level that results from applying the appropriate deterioration factor to the official emission result of the emission-data engine.

Deterioration factor means the relationship between emissions at the end of useful life and emissions at the low-hour test point. See §§ 1054.240 and 1054.245.

Discrete-mode means relating to the discrete-mode type of steady-state test described in § 1054.505.

Displacement has the meaning given in § 1054.140.

Dry weight means the weight of the equipment as sold, without fuel, oil, or engine coolant.

Emission control system means any device, system, or element of design that controls or reduces the emissions of regulated pollutants from an engine.

Emission-data engine means an engine that is tested for certification.

This includes engines tested to establish deterioration factors.

Emission-data equipment means an engine, piece of equipment, or fuel system component that is tested for certification. This includes units tested to establish deterioration factors.

Emission-related maintenance means maintenance that substantially affects emissions or is likely to substantially affect emission deterioration.

Engine has the meaning given in 40 CFR 1068.30. This includes complete and partially complete engines.

Engine configuration means a unique combination of engine hardware and calibration within an emission family. Engines within a single engine configuration differ only with respect to normal production variability.

Emission family has the meaning given in § 1054.230. We may refer to emission families as ''engine families'' where provisions relate only to exhaust emissions from engines.

Engine manufacturer means the manufacturer of the engine. See the definition of ''manufacturer'' in this section.

Equipment includes engines and fuel system components installed in equipment.

Equipment manufacturer means a manufacturer that assembles nonroad equipment. All nonroad equipment manufacturing entities under the control of the same person are considered to be a single nonroad equipment manufacturer.

Evaporative means relating to fuel emissions controlled by 40 CFR part 1060. This generally includes emissions that result from permeation of fuel through the fuel-system materials, from ventilation of the fuel system.

Excluded means relating to an engine that either:

(1) Has been determined not to be a nonroad engine, as specified in 40 CFR 1068.30; or

(2) Is a nonroad engine that, according to § 1054.5, is not subject to this part 1054.

Exempted has the meaning given in 40 CFR 1068.30.

Exhaust-gas recirculation means a technology that reduces emissions by routing exhaust gases that had been exhausted from the combustion chamber(s) back into the engine to be mixed with incoming air before or during combustion. The use of valve timing to increase the amount of residual exhaust gas in the combustion chamber(s) that is mixed with incoming air before or during combustion is not considered exhaust-gas recirculation for the purposes of this part.

Family emission limit (FEL) means an emission level declared by the manufacturer to serve in place of an otherwise applicable emission standard under the ABT program in subpart H of this part. The family emission limit must be expressed to the same number of decimal places as the emission standard it replaces. The family emission limit serves as the emission standard for the emission family with respect to all required testing.

Fuel line means hose or tubing designed to contain liquid fuel. This does not include any of the following:

(1) Fuel tank vent lines.

(2) Segments of hose or tubing whose external surface is normally exposed to liquid fuel inside the fuel tank.

(3) Hose or tubing designed to return unused fuel from the carburetor to the fuel tank for handheld engines.

(4) Primer bulbs that contain liquid fuel only for priming the engine before starting.

Fuel system means all components involved in transporting, metering, and mixing the fuel from the fuel tank to the combustion chamber(s), including the fuel tank, fuel tank cap, fuel pump, fuel filters, fuel lines, carburetor or fuel-injection components, and all fuel-system vents.

Fuel type means a general category of fuels such as gasoline or natural gas. There can be multiple grades within a single fuel type, such as low-temperature or all-season gasoline.

Generator-set engine means an engine used primarily to operate an electrical generator or alternator to produce electric power for other applications.

Good engineering judgment has the meaning given in 40 CFR 1068.30. See 40 CFR 1068.5 for the administrative process we use to evaluate good engineering judgment.

Handheld means relating to equipment that meets any of the following criteria:

(1) It is carried by the operator throughout the performance of its intended function.

(2) It is designed to operate multipositionally, such as upside down or sideways, to complete its intended function.

(3) It has a combined engine and equipment dry weight under 15.0 kilograms, has no more than two wheels, and at least one of the following attributes is also present:

(i) The operator provides support or carries the equipment throughout the performance of its intended function. Carry means to completely bear the weight of the equipment, including the engine. Support means to hold a piece of equipment in position to prevent it from falling, slipping, or sinking, without carrying it.

(ii) The operator provides support or attitudinal control for the equipment throughout the performance of its intended function. Attitudinal control involves regulating the horizontal or vertical position of the equipment.

(iii) The engine powers a pump or is a generator-set engine.

(4) It is a one-person auger, with a combined engine and equipment dry weight under 21.0 kilograms.

(5) It is used in a recreational application with a combined total vehicle dry weight under 20.0 kilograms. Note that snowmobiles, offroad motorcycles, and all terrain vehicles are regulated under 40 CFR part 1051 and marine vessels are regulated under 40 CFR part 1045.

Hydrocarbon (HC) means the hydrocarbon group on which the emission standards are based for each fuel type, as described in subpart B of this part.

Identification number means a unique specification (for example, a model number/serial number combination) that allows someone to distinguish a particular engine from other similar engines.

Integrated equipment manufacturer means an equipment manufacturer that also manufactures the engines for its equipment. Equipment manufacturers that manufacture the engines for some but not all of their equipment are considered to be integrated manufacturers for that equipment using the manufacturer's own engines.

Intermediate-speed equipment means nonroad equipment in which the installed engine is intended for operation at speeds substantially below 3600 rpm.

Low-hour means relating to an engine that is considered to have stabilized emissions and represents the undeteriorated emission level. A low-hour engine typically operates no more than a few hours beyond the minimum stabilization period. However, a low-hour engine could have more hours, as long as emissions remain stable. In the absence of other information, a low-hour engine with a useful life of 300 hours or less would generally have operated 12 to 15 hours and a low-hour engine with a longer useful would generally have operated no more than 24 hours.

Manufacture means the physical and engineering process of designing, constructing, and assembling an engine or piece of equipment.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who

manufactures an engine, vehicle, vessel, or piece of equipment for sale in the United States or otherwise introduces a new nonroad engine or piece of equipment into U.S. commerce. This includes importers who import engines, equipment, or vehicles for resale, but not dealers. All manufacturing entities under the control of the same person are considered to be a single manufacturer.

Marine engine means a nonroad engine that is installed or intended to be installed on a vessel. This includes a portable auxiliary marine engine only if its fueling, cooling, or exhaust system is an integral part of the vessel. There are two kinds of marine engines:

(1) Propulsion marine engine means a marine engine that moves a vessel through the water or directs the vessel's movement.

(2) Auxiliary marine engine means a marine engine not used for propulsion.

Marine generator engine means an auxiliary marine engine used primarily to operate an electrical generator or alternator to produce electric power.

Marine vessel has the meaning given in 1 U.S.C. 3, except that it does not include amphibious vehicles. The definition in 1 U.S.C. 3 very broadly includes every craft capable of being used as a means of transportation on water.

Maximum engine power has the meaning given in § 1054.140.

Maximum test speed has the meaning given in 40 CFR 1065.1001.

Maximum test torque has the meaning given in 40 CFR 1065.1001.

Model year has the meaning given in 40 CFR part 1060 for equipment and means one of the following things for engines:

(1) For freshly manufactured engines (see definition of ''new nonroad engine,'' paragraph (1)), model year means your annual new model production period. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year. For seasonal production periods not including January 1, model year means the calendar year in which the production occurs, unless you choose to certify the applicable emission family with the following model year. For example, if your production period is June 1, 2010 through November 30, 2010, your model year would be 2010 unless you choose to certify the emission family for model year 2011.

(2) For an engine that is converted to a nonroad engine after being placed into service as a motor-vehicle engine or a stationary engine, model year means the calendar year in which the engine was originally produced (see definition of ''new nonroad engine,'' paragraph (2)).

(3) For a nonroad engine excluded under § 1054.5 that is later converted to operate in an application that is not excluded, model year means the calendar year in which the engine was originally produced (see definition of ''new nonroad engine,'' paragraph (3)).

(4) For engines that are not freshly manufactured but are installed in new nonroad equipment, model year means the calendar year in which the engine is installed in the new nonroad equipment (see definition of ''new nonroad engine,'' paragraph (4)).

(5) For imported engines:

(i) For imported engines described in paragraph (5)(i) of the definition of ''new nonroad engine,'' *model year* has the meaning given in paragraphs (1) through (4) of this definition.

(ii) For imported engines described in paragraph (5)(ii) of the definition of ''new nonroad engine,'' *model year* means the calendar year in which the engine is assembled in its final certified configuration.

(iii) For imported engines described in paragraph (5)(iii) of the definition of ''new nonroad engine,'' *model year* means the calendar year in which the importation occurs.

Motor vehicle has the meaning given in 40 CFR 85.1703(a).

New nonroad engine means any of the following things:

(1) A freshly manufactured nonroad engine for which the ultimate purchaser has never received the equitable or legal title. This kind of engine might commonly be thought of as ''brand new.'' In the case of this paragraph (1), the engine is new from the time it is produced until the ultimate purchaser receives the title or the product is placed into service, whichever comes first.

(2) An engine originally manufactured as a motor-vehicle engine or an uncertified stationary engine that is later installed or intended to be installed in a piece of nonroad equipment. In this case, the engine is no longer a motor-vehicle or stationary engine and becomes a ''new nonroad engine.'' The engine is no longer new when it is placed into nonroad service.

(3) A nonroad engine that has been previously placed into service in an application we exclude under § 1054.5, where that engine is installed in a piece of equipment that is covered by this part 1054. The engine is no longer new when it is placed into nonroad service covered by this part 1054. For example, this would apply to a marine-propulsion engine that is no longer used in a marine vessel.

(4) An engine not covered by paragraphs (1) through (3) of this definition that is intended to be installed in new nonroad equipment. The engine is no longer new when the ultimate purchaser receives a title for the equipment or the product is placed into service, whichever comes first. This generally includes installation of used engines in new equipment.

(5) An imported nonroad engine, subject to the following provisions:

(i) An imported nonroad engine covered by a certificate of conformity issued under this part that meets the criteria of one or more of paragraphs (1) through (4) of this definition, where the original engine manufacturer holds the certificate, is new as defined by those applicable paragraphs.

(ii) An imported nonroad engine covered by a certificate of conformity issued under this part, where someone other than the original engine manufacturer holds the certificate (such as when the engine is modified after its initial assembly), becomes new when it is imported. It is no longer new when the ultimate purchaser receives a title for the engine or it is placed into service, whichever comes first.

(iii) An imported nonroad engine that is not covered by a certificate of conformity issued under this part at the time of importation is new, but only if it was produced during or after the 1997 model year. This addresses uncertified engines and equipment initially placed into service that someone seeks to import into the United States. Importation of this kind of engine (or equipment containing such an engine) is generally prohibited by 40 CFR part 1068.

New nonroad equipment means either of the following things:

(1) A nonroad piece of equipment for which the ultimate purchaser has never received the equitable or legal title. The product is no longer new when the ultimate purchaser receives this title or the product is placed into service, whichever comes first.

(2) A nonroad piece of equipment with an engine that becomes new while installed in the equipment. For example a complete piece of equipment that was imported without being covered by a certificate of conformity would be new nonroad equipment because the engine would be considered to be new at the time of importation.

Noncompliant engine or noncompliant equipment means an engine or equipment that was originally covered by a certificate of conformity but is not in the certified configuration

or otherwise does not comply with the conditions of the certificate.

Nonconforming engine or nonconforming equipment means an engine or equipment not covered by a certificate of conformity that would otherwise be subject to emission standards.

Nonhandheld means relating to an engine subject to the standards of this part that is not a handheld engine.

Nonintegrated equipment manufacturer means an equipment manufacturer that is not an integrated equipment manufacturer. Equipment manufacturers that manufacture the engines for some but not all of their equipment are considered to be nonintegrated manufacturers for that equipment using a different engine manufacturer's engines.

Nonmethane hydrocarbon has the meaning given in 40 CFR 1065.1001. This generally means the difference between the emitted mass of total hydrocarbons and the emitted mass of methane.

Nonroad means relating to nonroad engines or equipment that includes nonroad engines.

Nonroad engine has the meaning given in 40 CFR 1068.30. In general this means all internal-combustion engines except motor vehicle engines, stationary engines, engines used solely for competition, or engines used in aircraft.

Official emission result means the measured emission rate for an emission-data engine on a given duty cycle before the application of any deterioration factor.

Overhead valve means relating to a four-stroke spark-ignition engine in which the intake and exhaust valves are located above the combustion chamber within the cylinder head. Such engines are sometimes referred to as ''valve-in-head'' engines.

Owners manual means a document or collection of documents prepared by the engine manufacturer for the owner or operator to describe appropriate engine maintenance, applicable warranties, and any other information related to operating or keeping the engine. The owners manual is typically provided to the ultimate purchaser at the time of sale.

Oxides of nitrogen has the meaning given in 40 CFR part 1065.1001

Percent has the meaning given in 40 CFR 1065.1001.

Permeation emissions means fuel that escapes from the fuel system by diffusing through the walls of fuel-system components.

Phase 1 means relating to the Phase 1 emission standards described in 40 CFR 90.103.

Phase 2 means relating to the Phase 2 emission standards described in 40 CFR 90.103.

Phase 3 means relating to the Phase 3 exhaust emission standards described in § 1054.105.

Placed into service means put into initial use for its intended purpose.

Pressurized oil system means a system designed to deliver lubricating oil to internal engine components, including a step to circulate oil through a filter.

Ramped-modal means relating to the ramped-modal type of steady-state test described in § 1054.505.

Rated speed means one of the following:

(1) For ungoverned handheld engines, *rated speed* means the most common engine speed for full-load operation with in-use engines from a given engine family.

(2) For governed handheld engines, *rated speed* means *maximum test speed*, as defined in 40 CFR 1065.1001.

(3) For nonhandheld engines, *rated speed* has the meaning given in § 1054.505(d).

Rated-speed equipment means nonroad equipment in which the installed engine is intended for operation at a rated speed that is nominally 3600 rpm or higher.

Recreational application means an application in which a vehicle is ridden primarily for pleasure. Note that engines used in reduced-scale model vehicles that cannot be ridden (such as model airplanes) are excluded from this part under § 1054.5.

Revoke has the meaning given in 40 CFR 1068.30. In general this means to terminate the certificate or an exemption for an engine family.

Round has the meaning given in 40 CFR 1065.1001.

Running loss emissions has the meaning given in 40 CFR 1060.801.

Scheduled maintenance means adjusting, repairing, removing, disassembling, cleaning, or replacing components or systems periodically to keep a part or system from failing, malfunctioning, or wearing prematurely. It also may mean actions you expect are necessary to correct an overt indication of failure or malfunction for which periodic maintenance is not appropriate.

Side valve means relating to a four-stroke spark-ignition engine in which the intake and exhaust valves are located to the side of the cylinder, not within the cylinder head. Such engines are sometimes referred to as ''L-head'' engines.

Small-volume emission family means any emission family whose U.S.-directed production volume in a given model year is projected at the time of certification to be no more than 5,000 engines.

Small-volume engine manufacturer means one of the following:

(1) For handheld engines, an engine manufacturer that had U.S.-directed production volume of handheld engines of no more than 25,000 handheld engines in any calendar year. For manufacturers owned by a parent company, this production limit applies to the production of the parent company and all its subsidiaries.

(2) For nonhandheld engines, an engine manufacturer that had U.S.-directed production volume of no more than 10,000 nonhandheld engines in any calendar year. For manufacturers owned by a parent company, this production limit applies to the production of the parent company and all its subsidiaries.

(3) An engine manufacturer that we designate to be a small-volume engine manufacturer under § 1054.635.

Small-volume equipment manufacturer means one of the following:

(1) For handheld equipment, an equipment manufacturer that had a U.S.-directed production volume of no more than 25,000 pieces of handheld equipment in any calendar year. For manufacturers owned by a parent company, this production limit applies to the production of the parent company and all its subsidiaries.

(2) For nonhandheld equipment, an equipment manufacturer with annual average U.S.-directed production volumes of no more than 5,000 pieces of nonhandheld equipment in 2007 through 2009. For manufacturers owned by a parent company, this production limit applies to the production of the parent company and all its subsidiaries.

(3) An equipment manufacturer that we designate to be a small-volume equipment manufacturer under § 1054.635.

Snowthrower engine means an engine used exclusively to power snowthrowers.

Spark-ignition means relating to a gasoline-fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark-ignition engines usually use a throttle to regulate intake air flow to control power during normal operation.

Steady-state means relating to emission tests in which engine speed and load are held at a finite set of essentially constant values. Steady-state tests are either discrete-mode tests or ramped-modal tests.

Structurally integrated nylon fuel tank has the meaning given in 40 CFR 1060.801.

Subchapter U means the portion of the Code of Federal Regulations including 40 CFR parts 1000 through 1299.

Suspend has the meaning given in 40 CFR 1068.30. In general this means to temporarily discontinue the certificate or an exemption for an engine family.

Test engine means an engine in a test sample.

Test sample means the collection of engines selected from the population of an emission family for emission testing. This may include testing for certification, production-line testing, or in-use testing.

Tethered gas cap means a gas cap that is loosely but permanently connected to the fuel tank.

Thermal reactor means a hot surface in the engine exhaust system that has the effect of significantly lowering emissions of one or more regulated pollutants. Hot surfaces that have an inconsequential effect on emissions are not thermal reactors.

Total hydrocarbon has the meaning given in 40 CFR 1065.1001. This generally means the combined mass of organic compounds measured by the specified procedure for measuring total hydrocarbon, expressed as a hydrocarbon with a hydrogen-to-carbon mass ratio of 1.85:1.

Total hydrocarbon equivalent has the meaning given in 40 CFR 1065.1001. This generally means the sum of the carbon mass contributions of non-oxygenated hydrocarbons, alcohols and aldehydes, or other organic compounds that are measured separately as contained in a gas sample, expressed as exhaust hydrocarbon from petroleum-fueled locomotives. The hydrogen-to-carbon ratio of the equivalent hydrocarbon is 1.85:1.

Ultimate purchaser means, with respect to any new nonroad equipment or new nonroad engine, the first person who in good faith purchases such new nonroad equipment or new nonroad engine for purposes other than resale.

United States has the meaning given in 40 CFR 1068.30.

Upcoming model year means for an emission family the model year after the one currently in production.

U.S.-directed production volume means the number of engine units, subject to the requirements of this part, produced by a manufacturer for which the manufacturer has a reasonable assurance that sale was or will be made to ultimate purchasers in the United States.

Useful life means the period during which the engine and equipment are designed to properly function in terms of power output and intended function without being remanufactured, specified as a number of hours of operation. It is the period during which a new nonroad engine is required to comply with all applicable emission standards. See §§ 1054.107 and 1054.110. If an engine has no hour meter, the specified number of hours does not limit the period during which an in-use engine is required to comply with emission standards, unless the degree of service accumulation can be verified separately.

Variable-speed engine means an engine that is not a constant-speed engine.

Vessel means marine vessel.

Void has the meaning given in 40 CFR 1068.30. In general this means to invalidate a certificate or an exemption both retroactively and prospectively.

Volatile liquid fuel means any fuel other than diesel or biodiesel that is a liquid at atmospheric pressure and has a Reid Vapor Pressure higher than 2.0 pounds per square inch.

We (us, our) means the Administrator of the Environmental Protection Agency and any authorized representatives.

Wide-open throttle means maximum throttle opening.

Wintertime engine means an engine used exclusively to power equipment that is used only in wintertime, such as snowthrowers and ice augers.

§ 1054.805 What symbols, acronyms, and abbreviations does this part use?

The following symbols, acronyms, and abbreviations apply to this part:

ABT Averaging, banking, and trading.
cc cubic centimeters.
CFR Code of Federal Regulations.
CO carbon monoxide.
CO_2 carbon dioxide.
EPA Environmental Protection Agency.
FEL Family Emission Limit.
g gram.
HC hydrocarbon.
hr hour.
kPa kilopascals.
kW kilowatts.
NARA National Archives and Records Administration.
NIST National Institute of Standards and Technology.
NMHC nonmethane hydrocarbons.
NO_X oxides of nitrogen (NO and NO_2).
psig pounds per square inch of gauge pressure.
RPM revolutions per minute.
SAE Society of Automotive Engineers.
THC total hydrocarbon.
THCE total hydrocarbon equivalent.
U.S.C. United States Code.

§ 1054.810 What materials does this part reference?

Documents listed in this section have been incorporated by reference into this part. The Director of the Federal Register approved the incorporation by reference as prescribed in 5 U.S.C. 552(a) and 1 CFR part 51. Anyone may inspect copies at the U.S. EPA, Air and Radiation Docket and Information Center, 1301 Constitution Ave., NW., Room B102, EPA West Building, Washington, DC 20460 or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

(a) *SAE material.* Table 1 of this section lists material from the Society of Automotive Engineers that we have incorporated by reference. The first column lists the number and name of the material. The second column lists the sections of this part where we reference it. Anyone may purchase copies of these materials from the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096 or *www.sae.org.* Table 1 follows:

TABLE 1 TO § 1054.810.—SAE MATERIALS

Document number and name	Part 1054 reference
SAE J30, Fuel and Oil Hoses, June 1998	1054.245, 1054.501
SAE J1930, Electrical/Electronic Systems Diagnostic Terms, Definitions, Abbreviations, and Acronyms, revised May 1998	1054.135
SAE J2260, Nonmetallic Fuel System Tubing with One or More Layers, November 1996	1054.245

(b) *ASTM material.* Table 2 of this section lists material from the American Society for Testing and Materials that we have incorporated by reference. The first column lists the number and name of the material. The second column lists the sections of this part where we reference it. Anyone may purchase copies of these materials from the American Society for Testing and Materials, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428 or *www.astm.org.* Table 2 follows:

TABLE 2 TO § 1054.810—ASTM MATERIALS

Document number and name	Part 1054 reference
ASTM D471–98, Standard Test Method for Rubber Property—ffect of Liquids	1054.501
ASTM D814–95 (reapproved 2000), Standard Test Method for Rubber Property—Vapor Transmission of Volatile Liquids	1054.245

§ 1054.815 What provisions apply to confidential information?

(a) Clearly show what you consider confidential by marking, circling, bracketing, stamping, or some other method.

(b) We will store your confidential information as described in 40 CFR part 2. Also, we will disclose it only as specified in 40 CFR part 2. This applies both to any information you send us and to any information we collect from inspections, audits, or other site visits.

(c) If you send us a second copy without the confidential information, we will assume it contains nothing confidential whenever we need to release information from it.

(d) If you send us information without claiming it is confidential, we may make it available to the public without further notice to you, as described in 40 CFR 2.204.

§ 1054.820 How do I request a hearing?

(a) You may request a hearing under certain circumstances, as described elsewhere in this part. To do this, you must file a written request, including a description of your objection and any supporting data, within 30 days after we make a decision.

(b) For a hearing you request under the provisions of this part, we will approve your request if we find that your request raises a substantial factual issue.

(c) If we agree to hold a hearing, we will use the procedures specified in 40 CFR part 1068, subpart G.

§ 1054.825 What reporting and recordkeeping requirements apply under this part?

Under the Paperwork Reduction Act (44 U.S.C. 3501 *et seq*), the Office of Management and Budget approves the reporting and recordkeeping specified in the applicable regulations. The following items illustrate the kind of reporting and recordkeeping we require for engines and equipment regulated under this part:

(a) We specify the following requirements related to engine certification in this part 1054:

(1) In § 1054.20 we require equipment manufacturers to label their vessels if they are relying on component certification.

(2) In § 1054.135 we require engine manufacturers to keep certain records related to duplicate labels sent to equipment manufacturers.

(3) In § 1054.145 we include various reporting and recordkeeping requirements related to interim provisions.

(4) In subpart C of this part we identify a wide range of information required to certify engines.

(5) In §§ 1054.345 and 1054.350 we specify certain records related to production-line testing.

(6) [Reserved]

(7) In subpart G of this part we identify several reporting and recordkeeping items for making demonstrations and getting approval related to various special compliance provisions.

(8) In §§ 1054.725, 1054.730, and 1054.735 we specify certain records related to averaging, banking, and trading.

(b) We specify the following requirements related to equipment and component certification in 40 CFR part 1060:

(1) In 40 CFR 1060.20 we give an overview of principles for reporting information.

(2) In 40 CFR part 1060, subpart C, we identify a wide range of information required to certify products.

(3) In 40 CFR 1060.301 we require manufacturers to make engines or equipment available for our testing if we make such a request.

(4) In 40 CFR 1060.505 we specify information needs for establishing various changes to published test procedures.

(c) We specify the following requirements related to testing in 40 CFR part 1065:

(1) In 40 CFR 1065.2 we give an overview of principles for reporting information.

(2) In 40 CFR 1065.10 and 1065.12 we specify information needs for establishing various changes to published test procedures.

(3) In 40 CFR 1065.25 we establish basic guidelines for storing test information.

(4) In 40 CFR 1065.695 we identify data that may be appropriate for collecting during testing of in-use engines using portable analyzers.

(d) We specify the following requirements related to the general compliance provisions in 40 CFR part 1068:

(1) In 40 CFR 1068.5 we establish a process for evaluating good engineering judgment related to testing and certification.

(2) In 40 CFR 1068.25 we describe general provisions related to sending and keeping information.

(3) In 40 CFR 1068.27 we require manufacturers to make engines available for our testing or inspection if we make such a request.

(4) In 40 CFR 1068.105 we require equipment manufacturers to keep certain records related to duplicate labels from engine manufacturers.

(5) In 40 CFR 1068.120 we specify recordkeeping related to rebuilding engines.

(6) In 40 CFR part 1068, subpart C, we identify several reporting and recordkeeping items for making demonstrations and getting approval related to various exemptions.

(7) In 40 CFR part 1068, subpart D, we identify several reporting and recordkeeping items for making demonstrations and getting approval related to importing engines.

(8) In 40 CFR 1068.450 and 1068.455 we specify certain records related to testing production-line engines in a selective enforcement audit.

(9) In 40 CFR 1068.501 we specify certain records related to investigating and reporting emission-related defects.

(10) In 40 CFR 1068.525 and 1068.530 we specify certain records related to recalling nonconforming engines.

Appendix I to Part 1054—Summary of Previous Emission Standards

The following standards apply to nonroad spark-ignition engines produced before the model years specified in § 1054.1:

(a) *Handheld engines.* Phase 1 and Phase 2 standards apply for handheld engines as specified in 40 CFR 90.103 and summarized in the following tables:

TABLE 1 TO APPENDIX I.—PHASE 1 EMISSION STANDARDS FOR HANDHELD ENGINES (g/kW-hr) [a]

Engine displacement class	HC	NO_X	CO
Class III	295	5.36	805
Class IV	241	5.36	805
Class V	161	5.36	603

[a] Phase 1 standards are based on testing with new engines only.

TABLE 2 TO APPENDIX I.—PHASE 2 EMISSION STANDARDS FOR HANDHELD ENGINES (g/kW-hr) [a]

Engine displacement class	$HC+NO_X$	CO
Class III	50	805
Class IV	50	805
Class V	72	603

[a] The standards shown are the fully phased-in standards. See 40 CFR 90.103 for standards that applied during the phase-in period.

(b) *Nonhandheld engines.* Phase 1 and Phase 2 standards apply for nonhandheld engines as specified in 40 CFR 90.103 and summarized in the following tables:

TABLE 3 TO APPENDIX I.—PHASE 1 EMISSION STANDARDS FOR NONHANDHELD ENGINES (g/kW-hr) [a]

Engine displacement class	$HC+NO_X$	CO
Class I	16.1	519
Class II	13.4	519

[a] Phase 1 standards are based on testing with new engines only.

TABLE 4 TO APPENDIX I.—PHASE 2 EMISSION STANDARDS FOR NONHANDHELD ENGINES (g/kW-hr)

Engine displacement class	$HC+NO_X$	$NMHC+NO_X$	CO
Class I–A	50	.....	610
Class I–B	40	37	610
Class I	16.1	14.8	610
Class II [a]	12.1	11.3	610

[a] The Class II standards shown are the fully phased-in standards. See 40 CFR 90.103 for standards that applied during the phase-in period.

Appendix II to Part 1054—Duty Cycles for Laboratory Testing

(a) Test handheld engines with the following steady-state duty cycle:

G3 mode number	Engine speed [a]	Torque (percent) [b]	Weighting factors
1	Rated speed.	100	0.85
2	Idle speed.	0	0.15

[a] "Rated speed" is defined in § 1054.801; "Idle speed" is defined in 40 CFR part 1065.1001.

[b] The percent torque is relative to maximum test torque.

(b) Test nonhandheld engines with one of the following steady-state duty cycles:

(1) The following duty cycle applies for discrete-mode testing:

G2 mode number [a]	Torque (percent) [b]	Weighting factors
1	100	0.09
2	75	0.2
3	50	0.29
4	25	0.3
5	10	0.07
6	0	0.05

[a] Control engine speed as described in § 1054.505. Control engine speed for Mode 6 as described in § 1054.505(c) for idle operation.

[b] The percent torque is relative to the value established for full-load torque, as described in § 1054.505.

(2) The following duty cycle applies for ramped-modal testing:

RMC mode [a]	Time in mode (seconds)	Torque (percent) [b, c]
1a Steady-state	41	0
1b Transition	20	Linear Transition
2a Steady-state	135	100
2b Transition	20	Linear Transition
3a Steady-state	112	10
3b Transition	20	Linear Transition
4a Steady-state	337	75
4b Transition	20	Linear Transition
5a Steady-state	518	25
5b Transition	20	Linear Transition
6a Steady-state	494	50
6b Transition	20	Linear Transition